

“smart” CHECK LIST©

Notes:

1. This document might be outdated. Check the header area for revision date. Please download the latest version at <http://www.byunpartners.com/Documents/checklist.pdf>
This document can also be found with following QR code.



Figure 1: QR code of this document, iPad friendly.


2. Please use this checklist to stimulate your thought. Add, delete, and revise as needed and submit to spec writer. By no means this check list has everything you need for your project. However, this check list should be completed prior to embarking on writing specification. Undoubtedly you will find items required for your project beyond this check list.
3. The specification describes in word “What” the product is. Drawings show “where” the product is used. Need to distinguish if the product has more than one variation. For example GL-1 and GL-2 for different types of glazing.
4. If the specification is to have any real value, project managers must have the opportunity to provide relevant project information to the specification writer.
5. Who should write the spec? If it is on consultants’ drawings, consultants should write it. If it says “See Architectural” then architectural drawings should detail this up and I will further elaborate on spec.
6. Stop. Read the whole documents before filling in the blank spaces.
7. Put question marks for items that are pending or not sure.
8. Again, not all items used in the project are in this lists. Feel free to add for your project.
9. Remember, we can’t be accurate if we are confused.
10. Sustainable Design: Product or product category with  a symbol in front indicates it contributes to one or more LEED, HPI, or CHPS credit category.
11. Before returning completed form back the spec writer, first have it reviewed by the project Architect of Record.
12. Section number are identified with CSI 2004 Format first and 1995 in parenthesis. 024119 (01732).
13. Short spec: Not recommended. Write full specs to get the maximum protection.
14. “smart” because you can look up listed products directly from this document by hyperlink (internet connection required).
15. Feel free to make any suggestions you might have to make this checklist a better tool.
16. This checklist is used for giving you an accurate spec fee proposal. Please be as complete as possible. More sections I need to write, higher the fee.
17. “People don’t want to buy a quarter-inch drill, they want a quarter-inch hole”. The checklist is a valuable listening tool for spec writer.
18. Spec writers are “generalist” (including me). I write 50 or more architectural sections per project and I don’t know everything. Don’t be afraid to seek help from the specific manufacturer. They are the “specialist” in their products.
19. I DO NOT know and I DO NOT pretend to know “door hardware”. Please hire a door hardware consultant.
20. I am really fast but I do attend seminars regularly and I will be out of the office. Please plan accordingly.
21. Do email manufacturer’s CSI 3-part specs if you have them. But, first edit them. I can’t choose options for you. You are the designer.
 - o Unless, you want me to pick options I like. (Not recommend). Same applies when you email me manuf cutsheets. Select all the options YOU like before emailing them to me.
22. Kick-off meeting is required for all new PM and new client. We can do this over the phone. Should take about an hour. Spec Kick-Off Meeting Agenda: <http://www.byunpartners.com/Documents/SpecKickOffMeeting.pdf>. We can do this before or after signing of proposal.
23. Thank you, thank you, and thank you.

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Project Summary

Project Name	
Project Number	
Client Name	
PM/PA Name	
Scope of Work (Text for Section 01100)	Short summary. Best to be generic. Not too detailed where it becomes scope of work issue where it contradict drawings.
This project is very similar to previous project	Project number: _____ Project name: _____ <input type="checkbox"/> No similar project in the past.
Construction Type	<input type="checkbox"/> Design – Bid – Build (traditional) <input type="checkbox"/> Design – Build
Contract Type	<input type="checkbox"/> Lease – Lease Back
Construction Cost - estimated	\$ _____
Header information	Anything you want. (But make it short and simple). Do not include phase or date (it will be in the spec cover) Do not put lines or any other embellishments. (consultants will not follow and they are time wasters)
Footer information	Reserved for section number, section title, and page numbers. Do not change footer at all. Only revise header – and they should be simple.
Construction Administration	<input type="checkbox"/> by Architect <input type="checkbox"/> by Construction Manager <input type="checkbox"/> By Owner’s rep.
Submittal method during CA	Electronic: <input type="checkbox"/> Submittal Exchange <input type="checkbox"/> Email <input type="checkbox"/> Other _____ <input type="checkbox"/> Paper based.
Architect of Record	Name: _____
CalGreen Code Applicable?	<input type="checkbox"/> Yes, follow this City code: _____ <input type="checkbox"/> No, because: _____
General Condition (GC)	<input type="checkbox"/> AIA A201 <input type="checkbox"/> Custom by Owner/District I need to see current (or at least previous project) GC to coordinate Div 1 sections.
Client Standards	<input type="checkbox"/> Preferred products (Need a copy w/project specific markup. Better than using the checklist) Incorporate products on the drawings as contractor will never see the client standards. <input type="checkbox"/> None.
Master	<input type="checkbox"/> Use client’s master (attached- electronic) <input type="checkbox"/> AIA Masterspec (Default) <input type="checkbox"/> SpecsIntact (military) <input type="checkbox"/> LAUSD <input type="checkbox"/> SDUSD <input type="checkbox"/> VA <input type="checkbox"/> Other _____
Spec Format	CSI 2004 format (6 digit section number). 49 divisions. – Default. Please note that CSI 1995 format (5 digit section number). 16 divisions. – No longer supported (AIA MasterSpec no longer updated).
Special Requirements	<input type="checkbox"/> USGBC - LEED . Level: _____ (Email score card) <input type="checkbox"/> CHPS <input type="checkbox"/> DSA <input type="checkbox"/> OSHPD <input type="checkbox"/> None.
USGBC - LEED	Please review AIA Document B214: Standard Form of Archi Services-LEED. Some pertinent points (Articles) in the document 2.2 Architect to submit certification to Owner. 2.4 Architect to prepare LEED points targeted. 2.5.4 Architect to register and pay. But reimbursable expense. 2.6 Spec to define contractor’s responsibilities and documentation requirements. 3.1 Additional services. 4.1 Owner’s responsibilities. 5.1 Architect’s compensation from Owner. Special note: There is no provision/damages if project can’t get LEED. – A legal issue.
Deferred Approvals	<input type="checkbox"/> Fire Sprinklers <input type="checkbox"/> Elevator <input type="checkbox"/> Other: _____ <input type="checkbox"/> None
Fire-Rated Assemblies	Fire-rated construction for Elec, Mech, and Storage Rooms: <input type="checkbox"/> Yes <input type="checkbox"/> No Fire-rated construction for Area Separations: <input type="checkbox"/> Yes <input type="checkbox"/> No All gypsum board will be Type X 5/8 inch regardless of fire-ratings required. Identify all fire-rated doors in the Door Schedule and fire-rated windows in the Window Schedule.
Building Type	<input type="checkbox"/> Type I <input type="checkbox"/> Type 3 <input type="checkbox"/> Type V <input type="checkbox"/> Type VB <input type="checkbox"/> Other: _____

	<input type="checkbox"/> CMU <input type="checkbox"/> Concrete
Stud Framing	<input type="checkbox"/> Steel framing (sections 05400 by structural consultant & 09111 by Architect) <input type="checkbox"/> Wood framing (section 06100 by structural consultant)
Building	<input type="checkbox"/> Single story <input type="checkbox"/> Two stories <input type="checkbox"/> [] stories
Alternates (ALT)	<input type="checkbox"/> As indicated on Drawings <input type="checkbox"/> None <input type="checkbox"/> List:____ Definition: 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 specified.
Allowances (ALLOW)	<input type="checkbox"/> As indicated on Drawings <input type="checkbox"/> None <input type="checkbox"/> List:____ Types: <input type="checkbox"/> Lump-sum allowances. You have to specify the dollar amount. <input type="checkbox"/> Unit-cost allowances. (Also require unit price section) <input type="checkbox"/> Quantity allowances. (Also require unit price section) <input type="checkbox"/> Contingency allowances. <input type="checkbox"/> Testing and inspecting allowances.
Unit Price	<input type="checkbox"/> As indicated on Drawings <input type="checkbox"/> None <input type="checkbox"/> List:____ Definition: Unit price is 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.
Units of Measure	<input type="checkbox"/> Inch, Feet/Pounds only (default) <input type="checkbox"/> Metric only <input type="checkbox"/> Both
Project Meeting Attendance by Architect	Required number of meetings _____ (provide copy of language) Scheduled visits required _____ (provide copy of language) *Verify with Owner/Architect Contract
Coordinate with Mechanical Consultant (for their energy calc)	<input type="checkbox"/> Fenestration: U-factor: _____ SHGC: _____ <input type="checkbox"/> Skylight: U-factor: _____ SHGC: _____ Insulation: (Identify on Drawings) Roof <input type="checkbox"/> R-30 <input type="checkbox"/> Other: _____ Exterior Walls <input type="checkbox"/> R-13 <input type="checkbox"/> R-19 <input type="checkbox"/> Other: _____
Project Team: NOTE: Creation of signature page and routing of it is not part of spec fee. Route them internally.	List only consultant that will be providing CSI 3-part specs here: <input type="checkbox"/> Civil: _____ <input type="checkbox"/> LEED: _____ <input type="checkbox"/> Landscape: _____ <input type="checkbox"/> CxA: _____ <input type="checkbox"/> Structural: _____ <input type="checkbox"/> Mechanical: _____ <input type="checkbox"/> Electrical: _____ <input type="checkbox"/> Plumbing: _____ Hardware: <input type="checkbox"/> Allegion (IRCO) <input type="checkbox"/> Assa Abloy <input type="checkbox"/> AHC (John Elmore) for fee. <input type="checkbox"/> Stanley <input type="checkbox"/> In-House <input type="checkbox"/> Communication: _____ <input type="checkbox"/> Audio Visual: <input type="checkbox"/> Kitchen Equipment: _____ <input type="checkbox"/> Interior Designer: Others: _____ Consultants Deliverables: All consultants providing CSI 3-part specifications shall email all spec sections in PDF and will be inserted as-is. (Do NOT combine them into one file). No markups. No word processing will be provided by me. Also provide their spec section Table of Contents. File naming convention: Section number space section title. i.e. 072010 Building Insulation (Do NOT put spaces between section numbers – 07 20 10)
Print Instructions	<input type="checkbox"/> Electronic (pdf, FTP) <input type="checkbox"/> Print Double Sided (default) <input type="checkbox"/> Print Single Sided
Font Type/Size	<input type="checkbox"/> Times New Roman/11 pt. (default) <input type="checkbox"/> Other:____
Special Instructions	

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Before returning completed form back the spec writer, first have it reviewed by the project Architect of Record.

DEMOLITION

Demolition	<input type="checkbox"/> Partial interior demolition - Selective Demo 024119 (01732). – Architectural. <input type="checkbox"/> Complete demolition of building - Building Demo 024116 (02221) – By Structural Engineer. <input type="checkbox"/> Site demolition. – By Civil engineer. <input type="checkbox"/> Abatement contractor – Separate contract. <input type="checkbox"/> Abatement is part of this contract – Need to cross-reference Abatement report.
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JOINT SEALANTS

Sealants	<input type="checkbox"/> Through-penetration firestop - 078413 (07841). <input type="checkbox"/> Fire-resistive joints - 078446 (07841). Standard - 079200 (07920). Application: <input type="checkbox"/> Interior <input type="checkbox"/> Exterior Substrates: <input type="checkbox"/> Metal <input type="checkbox"/> Wood <input type="checkbox"/> Gypsum <input type="checkbox"/> Other: _____
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WATERPROOFING

<p>Foundation Prep (Soils report should be reviewed for recommendations)</p>	<p>Underslab Vapor Barrier – 033005 (07113): Manufacturers: <input type="checkbox"/> Stego 15 mil <input type="checkbox"/> Perminator WR Meadow <input type="checkbox"/> Other: _____ 15 mil sheet, Class A (default): <input type="checkbox"/> By Structural (default). <input type="checkbox"/> By Architect * ASTM E 1745 sets three performance classes for plastic water-vapor retarders: Classes A, B, and C. The maximum water-vapor Permeance value of 0.3 perms is the same for each class. Two durability tests differentiate each class. Class A sets the highest, and Class C the lowest, tensile strength and puncture-resistance requirements. Neither thickness nor type of plastic is governed by ASTM E 1745.</p>
<p>Waterproofing - 071326 (07131) [Normally for below grade]</p>	<p>Dampproofing - 071113 (07115): Fluid applied to footing etc. <input type="checkbox"/> Sealmastic Type II Fibered by W.R. Meadows. <input type="checkbox"/> Other: _____</p> <p>Vertical Application: <input type="checkbox"/> Self-adhering sheet waterproofing (Bituthene 3000 by Grace) with drainage mat and then back-fill. <input type="checkbox"/> Blind-side - drainage mat and sheet waterproofing (Preprufe 160R HDPE by Grace). Drainage Panel: <input type="checkbox"/> Hydroduct 220 by Grace. Perimeter Drain: <input type="checkbox"/> Hydroduct Coil 600 by Grace. <input type="checkbox"/> Plumbing pipe by civil.</p> <p>Horizontal Application: <input type="checkbox"/> Between slabs: Sheet waterproofing. (Bituthene 3000 by Grace) <input type="checkbox"/> Foundation below slab: Upside-down Preprufe 300 HDPE in water table. (3x \$ Florprufe) <input type="checkbox"/> Foundation below slab: Florprufe 120. (21 mil, more of vapor barrier).</p>

STRUCTURAL CONSULTANT (coordination)




Best to have separate sections for structural vs architectural (it is usually more convenient to segregate requirements for structural and architectural into a separate Section; not to over-write each other).

<p>Cast-In-Place Concrete - 033000 (03300),- by Structural</p>	<p>Only structural items specified here by structural engineer. Non-structural items should be included as “default” in case there is no “Architectural concrete finishing” companion section. This section should cover: Cast-in-place, normal-weight and structural lightweight concrete for general building construction including related formwork, steel and fiber reinforcement, concrete materials and admixtures, vapor retarders, concrete mixture requirements, placement, as-cast and applied finishes, curing, and field quality control.</p>
<p>Architectural Concrete Finishing – 033500 - by Architect</p>	<p>This section “supplements” Cast-in-place concrete” to specify anything non-structural. Architectural Forms: <input type="checkbox"/> Special form-facing materials <input type="checkbox"/> Special form liners Architectural Aggregates: <input type="checkbox"/> Special aggregates Integral color admixture: Color: _____ <input type="checkbox"/> Chameleon by Davis Color. <input type="checkbox"/> Chromix by L.M. Scofieldx. <input type="checkbox"/> Chem-Masters Exposee H. Concrete Finishes: <input type="checkbox"/> Sacking. <input type="checkbox"/> Rubbed finish. <input type="checkbox"/> Steel Trowel finish. <input type="checkbox"/> Float finish. <input type="checkbox"/> Fine- Broom Finish <input type="checkbox"/> Broom Finish (default walkway finish for DSA projects) <input type="checkbox"/> Rough slab finish. Decorative: <input type="checkbox"/> Stamped (paver look) <input type="checkbox"/> Bushhammer finish. (surfaces are produced by pneumatic tools) <input type="checkbox"/> Match Architect’s sample. <input type="checkbox"/> Other: _____</p>
<p>034100 Precast Structural Concrete – 034100 - by structural</p>	<p>Only structural items specified here by structural engineer. This Section specifies precast, conventionally reinforced and prestressed, structural concrete units with standard commercial structural finishes as well as commercial architectural finishes, thinbrick facings, and stone facings. Flat-wall, precast structural concrete panels that are insulated are also included.</p>
<p>Precast Architectural Concrete – 034500 – by Architect</p>	<p>This section “supplements” Precast Structural Concrete” to specify anything non-structural. <input type="checkbox"/> Architectural finishes <input type="checkbox"/> Thinbrick facings <input type="checkbox"/> Stone facings. <input type="checkbox"/> Precast structural concrete panels that are insulated <input type="checkbox"/> Other: _____</p>
<p>Concrete Unit Masonry - - 042200 -by structural</p>	<p>Only structural items specified here by structural engineer. Section specifies single-wythe, concrete unit masonry for load-bearing and non-load-bearing applications. Precision CMU should be default.</p>
<p>Unit Masonry Finishes – 042211 -by Architect</p>	<p>This section “supplements” Unit Masonry” to specify anything non-structural. <input type="checkbox"/> Integral colored CMU. <input type="checkbox"/> Integral water repellents – DryBlock by WR Grace. <input type="checkbox"/> Clear sealer. – applied in the field.</p>

	<input type="checkbox"/> Split faced CMU <input type="checkbox"/> Factory shotblast CMU. <input type="checkbox"/> Field sandblast CMU. <input type="checkbox"/> Other: _____
Structural Steel – by Structural	<input type="checkbox"/> Structural Steel - 051200 (05120) <input type="checkbox"/> None. <input type="checkbox"/> Exterior Cold-form - 054000 (05400) - by structural consultant <input type="checkbox"/> Interior metal studs - 092216 (09111) by Architect
051213 – Architecturally Exposed Structural Steel (AESS) Framing – 051213 – by Architect	<p>AESS Levels:</p> <input type="checkbox"/> AESS 1: Structural Steel designated as “AESS 1 in the contract documents and conforming to ANSI/AISC 303-16, Chapter 10 definition of AESS1. These are basic elements with workmanship requirements exceeding those in non AESS construction. <input type="checkbox"/> AESS 2: Structural Steel designated as “AESS 2 in the contract documents and conforming to ANSI/AISC 303-16, Chapter 10 definition of AESS2. These are feature elements viewed at a distance greater than 20 feet. The art of metalworking is intended to be visible to the viewer. <input type="checkbox"/> AESS 3 (default): Structural Steel designated as “AESS 3 in the contract documents and conforming to ANSI/AISC 303-16, Chapter 10 definition of AESS3. These are feature elements viewed at a distance less than 20 feet. The art of metalworking is intended to be visible to the viewer. <input type="checkbox"/> AESS 4: Structural Steel designated as “AESS 4 in the contract documents and conforming to ANSI/AISC 303-16, Chapter 10 definition of AESS4. These are showcase elements with special surface and edge treatment beyond fabrication. The intent is the form is the only feature showing in an element. <input type="checkbox"/> AESS C: Structural Steel designated as “AESS C in the contract documents and conforming to ANSI/AISC 303-16, Chapter 10 definition of AESS C. These are custom AESS elements with characteristics described in the contract documents. AESS normally gets field coating of High Performance Coatings – See Section 099600 High-Performance Coatings.
Steel Decking - -053100 -by structural	Only structural items specified here by structural engineer. Section specifies structural steel deck.
Architectural Deck System – 053123 -by Architect	This section “supplements” Steel Decking” to specify anything non-structural. Architecturally Exposed - Decorative type by Epic: <input type="checkbox"/> Epicore ER2RA , acoustical, NRC 0.95. <input type="checkbox"/> Epicore 3.5A by Epic <input type="checkbox"/> New Millennium. <input type="checkbox"/> Other: _____
Rough Carpentry -061000 -by structural	Only structural items specified here by structural engineer. Section specifies wood framing.
Miscellaneous Rough Carpentry– 061053 -by Architect	This section is used for metal framed building where Rough Carpentry section is not used. <input type="checkbox"/> Rooftop equipment bases and support curbs. <input type="checkbox"/> Wood blocking and nailers. <input type="checkbox"/> Plywood backing panels. <input type="checkbox"/> Other: _____

ROOFING

Huge Disclaimer: Roofing/Waterproofing Systems are specialized assemblies that are beyond my expertise. Please contact your favorite manufacturer and seek help with specs and drawing details. Do not design them in a vacuum (you will have change orders). Have the manufacturer’s rep edit their standard spec for your project. I can’t edit their spec (again, you will have change orders if you have me edit).

<p>Roofing Fire: <input type="checkbox"/> (UL Class A) Wind: <input type="checkbox"/> I-75 Factory Mutual (FM): <input type="checkbox"/></p>	<p>Slope Type: Low (flat) Roofs: Single-Ply 075419 (07540) Thermoplastic Membrane Roofing  <input type="checkbox"/> Sarnafil - default, <input type="checkbox"/> Cool Zone by Duro-last <input type="checkbox"/> Sure-Flex by Carlisle Attach membrane: <input type="checkbox"/> Adhesively (G410 Sarnafil)-feltback to densdeck (default) concrete, wood, metal deck. <input type="checkbox"/> Mechanically (S327 Sarnafil) - with plates for wood or metal deck.</p>
	<p>Slope Type: Low (flat) Roofs: Built-up <input type="checkbox"/> 075113 (07511) Built-Up Asphalt Roofing (GAF, Tremco) Roof Deck (check Structural dwg.): <input type="checkbox"/> Sloped to drain <input type="checkbox"/> Not sloped (Need tapered insulation). <input type="checkbox"/> 1/4 inch (default, per code) <input type="checkbox"/> 1/2 inch. Roof Deck Type: (Ask for taper board plan in advance from Sarnafil) <input type="checkbox"/> Metal Deck <input type="checkbox"/> Structural Concrete Deck <input type="checkbox"/> Light Weight Concrete Deck <input type="checkbox"/> Plywood Deck</p>
	<p>Slope Type: Low (flat) Roofs: 075713 Sprayed Polyurethane Foam Roofing <input type="checkbox"/> Acrylic elastomer coating by General Coatings. <input type="checkbox"/> Acrylic elastomer coating by BASF.</p>
	<p>Slope Type: Sloped Roofs: Metal Roofing Metal Roof Panels 074113 (07411) - (min 24 gage): <input type="checkbox"/>  metal soffit panels Product selection depends on roof slope and substrate. See AEP-Span literature for various slope recommendations. Slope: <input type="checkbox"/> 3:12 (watershed) <input type="checkbox"/> 1:12 (watershed) <input type="checkbox"/> 1/4:12 (watertight) Type/Substrate: <input type="checkbox"/> Architectural/Solid deck <input type="checkbox"/> Structural/Open frame - capable of spanning between supports. <input type="checkbox"/> 16" Select Seam Narrow Batten non-structural by AEP Span. <input type="checkbox"/> 16-1/2" Craftsman Series non-structural by MBCI. <input type="checkbox"/> 24" Snap-Seam structural batten by AEP Span.</p>
	<p>Slope Type: Sloped roofs: Asphalt Roofing Asphalt Shingles 073113 (07311)  <input type="checkbox"/> Timberline Color Series by GAF. <input type="checkbox"/> Landmark Shingles by CertainTeed. Underlayment: <input type="checkbox"/> Ice and Water Shield by Grace for critical areas.</p>
	<p>Slope Type: Sloped roofs: Clay Roof Tiles 073213 (07321) Profile: <input type="checkbox"/> Mission 2000 two-piece by Redland <input type="checkbox"/> Other: _____ Underlayment: Ice and Water Shield by Grace for critical areas.</p>
<p>Soffit</p>	<p><input type="checkbox"/> As exposed <input type="checkbox"/> Metal Panel <input type="checkbox"/> Portland cement plaster <input type="checkbox"/> None</p>
<p>Ridge Vents</p>	<p><input type="checkbox"/> Needed <input type="checkbox"/> Not needed (no sloped roof)</p>
<p>Integral Thermal Insulation w/ Roofing</p>	<p>Indicate R value on Drawings. Roof: <input type="checkbox"/> R-30 <input type="checkbox"/> Other: R-_____ Insulation: <input type="checkbox"/> Rigid type over metal deck (default, 5 to 6 inches.) <input type="checkbox"/> Batt insulation from ceiling side (10 inches for R-30) <input type="checkbox"/> Remodel - Use existing insulation.</p>
<p>Building Insulation - 072100 (07210) Batt insulation thickness: R-11, 13: 3-1/2 inch thick. R-19: 6-1/4 inch thick. R-30: 10 inches.</p>	<p>Indicate R value on <input type="checkbox"/> Drawings (default) <input type="checkbox"/> Specs (not recommended). Batt insulation: <input type="checkbox"/> Walls. <input type="checkbox"/> Ceiling, attached to deck. <input type="checkbox"/> Sound insulation (R-11). <input type="checkbox"/> Sprayed-sound insulation (K-13), integral color. Continuous insulation (rigid foam on exterior side): <input type="checkbox"/> 2 inch <input type="checkbox"/> _____ Exterior Wall: <input type="checkbox"/> R-19 <input type="checkbox"/> Other: R-_____ Interior partitions: <input type="checkbox"/> R-11 <input type="checkbox"/> R-19 (for sound) <input type="checkbox"/> Other: R-_____</p>

	Spray foam insulation: <input type="checkbox"/> R-value of 6.75 per inch, ICYNENE MD-C-200 . Rigid Insulation: <input type="checkbox"/> Wall – Z mate Rigid insulation with Z metal furring channels . <input type="checkbox"/> Remodel - Use existing insulation. <input type="checkbox"/> Recycled jeans See roofing for insulation integral part of roofing system.
Coping for Parapet	<input type="checkbox"/> Metal, integral with roofing (verify with roof manufacturer) <input type="checkbox"/> Metal, factory manufactured, Section - 077100 (07710) Manufactured Roof Specialties. <input type="checkbox"/> Portland Cement Plaster. <input type="checkbox"/> Other: _____
	<input type="checkbox"/> Flexible flashing - 076500 (07650) underneath metal coping, door and wall Openings (Vycor Plus by Grace).
Fascia without Parapet	<input type="checkbox"/> Integral with roofing (verify with roofing manufacturer). <input type="checkbox"/> Factory manufactured. <input type="checkbox"/> Other: _____
Scupper, Downspout, Downspout Boot, Splash Block	Scuppers: <input type="checkbox"/> Scupper only at parapet. <input type="checkbox"/> Scupper, leader, downspout. Gutters: Shape: As indicated on Drawings. Type: <input type="checkbox"/> Hanging <input type="checkbox"/> Box/Built-in (internal, not exposed to view). Specified in: <input type="checkbox"/> Integral with metal roofing (match metal roofing). Sheet metal - 076200 (07620): <input type="checkbox"/> Galv steel <input type="checkbox"/> copper. Extra: <input type="checkbox"/> Wire mesh cover to protect from leaves <input type="checkbox"/> Strainer to prevent clogging. Downspout Material: <input type="checkbox"/> Schedule 40 black pipes (show diameter on dwg.). Sheet metal - 076200 (07620): <input type="checkbox"/> Galv steel <input type="checkbox"/> copper. Location: <input type="checkbox"/> Internal (not exposed to view) pipe by plumbing consult. <input type="checkbox"/> Exposed. Termination: <input type="checkbox"/> Tied to perimeter drain (Civil). Splash block: <input type="checkbox"/> Downspout, and boot (elbow). <input type="checkbox"/> Internal pipe (Civil), and boot (elbow).
Roofing	<input type="checkbox"/> New Roofing <input type="checkbox"/> Re-Roofing <input type="checkbox"/> Patch and repair
Re-Roofing	<input type="checkbox"/> Complete tear off - including roof deck. <input type="checkbox"/> Tear off - not including roof deck. <input type="checkbox"/> Other: _____
Patch and Repair	<input type="checkbox"/> Because roof is leaking. <input type="checkbox"/> Because roof equipment require patching. <input type="checkbox"/> Other: _____

ROOF ACCESSORIES/SKYLIGHTS

<p>Skylights <input type="checkbox"/> on flat roof <input type="checkbox"/> on slope roof <input type="checkbox"/> on ridge</p>	<p>Unit (factory unit) - 086200 (08620): Bristolite: <input type="checkbox"/> GAL (insulated glazing) <input type="checkbox"/> AL-CM: <input type="checkbox"/> acrylic single dome <input type="checkbox"/> acrylic double dome Velux: <input type="checkbox"/> FCM (fixed, site-built curb mount for 0 to 60 degree slope) Other: _____ Glazing: <input type="checkbox"/> Acrylic <input type="checkbox"/> Glass <input type="checkbox"/> Polycarbonate <input type="checkbox"/> Kalwall Aluminum Frame: <input type="checkbox"/> clear anodized <input type="checkbox"/> color anodized <input type="checkbox"/> Kynar Operations: <input type="checkbox"/> Fixed <input type="checkbox"/> Operable - manual <input type="checkbox"/> Operable - electric. Shapes: <input type="checkbox"/> Dome <input type="checkbox"/> Pyramid <input type="checkbox"/> As indicated. Curb (8 inch min height for flat roof): <input type="checkbox"/> Site built <input type="checkbox"/> Integral with skylight (not recommended, prone to leaks) Size: <input type="checkbox"/> As indicated on dwg (standard size from mfg.) <input type="checkbox"/> Custom size</p>
<p>Tubular Skylights – 086210 (08625)</p>	<p>Metal Framed (site fabricated) - 086300 (08630): <input type="checkbox"/> US Aluminum /CRL <input type="checkbox"/> Kawneer <input type="checkbox"/> Other: _____ <input type="checkbox"/> Rafter <input type="checkbox"/> Perlin Glass: <input type="checkbox"/> Laminated <input type="checkbox"/> Insulated <input type="checkbox"/> Tinted glass <input type="checkbox"/> Acrylic Frame: <input type="checkbox"/> Aluminum Cap Aluminum Frame: <input type="checkbox"/> clear anodized <input type="checkbox"/> color anodized <input type="checkbox"/> Kynar Operations: <input type="checkbox"/> Fixed <input type="checkbox"/> Operable - manual <input type="checkbox"/> Operable - electric.</p>
<p>Photovoltaics – 136100 (13600)</p>	<p><input type="checkbox"/> Solatube <input type="checkbox"/> Tru-lite <input type="checkbox"/> SunTunnel by Velux <input type="checkbox"/> Other: _____ Total Wattage: _____ Physical size: <input type="checkbox"/> As indicated on Dwg. <input type="checkbox"/> Battery backup <input type="checkbox"/> Net metering. Location: <input type="checkbox"/> low-sloped roof <input type="checkbox"/> sloped roof <input type="checkbox"/> Sun shade <input type="checkbox"/> on ground.</p>
<p>Roof Accessories - 077200 (07720)</p>	<p>Aluminum vertical ladder access specified in 055134 (05501). Hatch: Access hatch with ladder safety post: <input type="checkbox"/> Type S by Bilco. Size as indicated on Drawings. Other: _____ Smoke Vents: (lets smoke out during fire): <input type="checkbox"/> Galv steel <input type="checkbox"/> Acoustical STC 45 <input type="checkbox"/> Lumivent, polycarbonate skylight by Bilco. Gravity Relief Ventilators: <input type="checkbox"/> Greenheck Model GRS. Other: _____ <input type="checkbox"/> Roof Curbs: Do not act as structural members. Used to support lighter loads such as packaged air-handling units. (<input type="checkbox"/> Site Built <input type="checkbox"/> Manufactured Unit) <input type="checkbox"/> Equipment Supports: Act as structural members. Used to support heavier loads such as larger custom air-handling units. (By structural consultant) <input type="checkbox"/> Equipment Isolators. (By Structural consultant)</p>
<p>Roof Access Ladder: can be either site fabricated by iron worker(055000) or manufactured item (055134)</p>	<p>055000 (05500) Metal Fabrications: <input type="checkbox"/> Field painted steel, galvanized exterior. (Default) <input type="checkbox"/> Other: _____ 055134 Aluminum ladders: <input type="checkbox"/> Vertical – O’Keeffe Model 501. <input type="checkbox"/> Vertical - Sure Step Model CL (Channel Ladder) by Royalite. <input type="checkbox"/> Over the parapet ladders - O’Keeffe Model 522. Interior Type: <input type="checkbox"/> 90 degree vertical <input type="checkbox"/> Incline Exterior Type: <input type="checkbox"/> 90 degree vertical <input type="checkbox"/> Incline <input type="checkbox"/> Vertical w/ over parapet. <input type="checkbox"/> Fall-protection cage (surrounding the ladder). <input type="checkbox"/> Security Door (lockable to deter access to ladder) – O’Keeffe accessories. <input type="checkbox"/> Attic access pull-down ladders - Model SS/AL-by Precision Ladders (Super Simplex).</p>
<p>Louvers and Vents - 089000 (10200)</p>	<p><input type="checkbox"/> Aluminum Storm Louvers by C/S Specialties. <input type="checkbox"/> #413-SXP (galvanized steel) non-drainable, 4 inch deep by Industrial Louvers. <input type="checkbox"/> #450XP would be same as #413SXP but in aluminum. <input type="checkbox"/> #258 (aluminum, not available in galvanized steel), drainable by Industrial Louvers. <input type="checkbox"/> K609HP, clear anodized by Airolite.</p>

	Finish: <input type="checkbox"/> Factory powder coat (recommended) <input type="checkbox"/> Field painted.
Equipment Screens – 074223 (07413)	<input type="checkbox"/> Envisor by Cityscapes <input type="checkbox"/> Marquee II by McElroy <input type="checkbox"/> Other: _____ <input type="checkbox"/> Custom grille work. <input type="checkbox"/> Portland cement plaster <input type="checkbox"/> Site fabricate from metal wall panels and channels.

EXTERIOR


CMU	Unit Masonry Finishes - 042011 (04811) (Exterior side) - also could be specified in structural consultant's Masonry spec section. <input type="checkbox"/> Painted CMU finish - 099100 (09910). <input type="checkbox"/> Sealed CMU finish - 042011 (04811), light- sand blast prior to sealing CMU. (Just cleaning doesn't quite do the job.) <input type="checkbox"/> Anti-Graffiti CMU finish - 099623 (09966) <input type="checkbox"/> Glazed block. <input type="checkbox"/> Glass block. Plaster Finish: <input type="checkbox"/> Plaster directly on CMU for site wall. <input type="checkbox"/> Plaster over metal lath and building paper on CMU for occupied spaces)
Stone Masonry – 044300 (04860)	Natural stones Stone Type: <input type="checkbox"/> Santa Barbara Sandstone <input type="checkbox"/> Granite <input type="checkbox"/> Lime Stone <input type="checkbox"/> Other: Attachment Method: <input type="checkbox"/> Adhered <input type="checkbox"/> Anchored Frame work: <input type="checkbox"/> CMU <input type="checkbox"/> Concrete <input type="checkbox"/> Stud <input type="checkbox"/> Other: _____
Brick Masonry 042113 (04210)	Brick Type: <input type="checkbox"/> Modular <input type="checkbox"/> Standard <input type="checkbox"/> Norman <input type="checkbox"/> Commercial Jumbo <input type="checkbox"/> Jumbo Method 1: Brick over solid: <input type="checkbox"/> Concrete <input type="checkbox"/> CMU <input type="checkbox"/> Plywood <input type="checkbox"/> Dens-Glass Method 2: Two layers of brick with air gap (cavity).
Manufactured Stone Veneer Assemblies - 047310 (04861)	Man-made stones <input type="checkbox"/> El Dorado Stones <input type="checkbox"/> Cultured Stone by Boral <input type="checkbox"/> Coronado Name and Color: _____ Frame work: <input type="checkbox"/> CMU <input type="checkbox"/> Concrete <input type="checkbox"/> Stud <input type="checkbox"/> Other: _____ Attachment: <input type="checkbox"/> Adhered <input type="checkbox"/> Anchored Trims: <input type="checkbox"/> Window sill stone. <input type="checkbox"/> Cap stone
Thin Brick Veneer – 042114 (04814)	<input type="checkbox"/> Think Brick: 1/2 x 2-1/2 x 8 inches by H.C. Muddox <input type="checkbox"/> Method: Adhered to exterior sheathing of wood-framed exterior walls.
Framing	Structural: <input type="checkbox"/> Steel Stud - 054000 (05400). <input type="checkbox"/> Wood Studs - 061000 (06100). Non-Structural: <input type="checkbox"/> Non-load bearing steel framing - 092216 (09111). <input type="checkbox"/> Miscellaneous Carpentry - 061053 (06105).
Portland Cement Plaster (Stucco) - 092400 (09220)	Backing: <input type="checkbox"/> Plywood Sheathing - 061000 (06100) by structural. <input type="checkbox"/> Glass-mat gypsum sheathing (GP DensGlass) – Sheathing 061600 (06160) <input type="checkbox"/> Metal lath and Building paper. <input type="checkbox"/> Finish Texture: _____ <input type="checkbox"/> Integral color only <input type="checkbox"/> Integral color and field painted (looks nice but field painting is not recommended, voids warranty on plaster finish). <input type="checkbox"/> Patch and repair only for remodeling. Soffit: <input type="checkbox"/> Exposed. <input type="checkbox"/> Prestige by AEP Span (metal <input type="checkbox"/> solid or <input type="checkbox"/> perforated). Metal Trim: Zinc-Coated (Galvanized) Steel (default). <input type="checkbox"/> Special Aluminum Reveals (Fry Reglet , need to note model on drawings)
EIFS – 072419 (07241)	<input type="checkbox"/> System with water drainage.
Metal Wall Panels - 074113 (07412)	<input type="checkbox"/> CS-200, concealed aluminum, Concept Series by Centria. <input type="checkbox"/> Flat - Model IW-10A by Centria. <input type="checkbox"/> Corrugated, Mini-V-Beam profile in 4-9/16" wide panels; lapped edges by AEP-Span. <input type="checkbox"/> Belvedere Rib Panel System, BWR360 by ATAS. <input type="checkbox"/> Flexbeam by Flexospan. Finish: <input type="checkbox"/> Solid factory Kynar coated galvanized steel. Perforated metal panels: <input type="checkbox"/> Kynar gal. steel <input type="checkbox"/> Aluminum <input type="checkbox"/> Stainless steel <input type="checkbox"/> Matching soffit panels. <input type="checkbox"/> Thermal batt insulation between studs from interior side.
Siding - 074600 (07460)	James Hardie

	<input type="checkbox"/> Vertical Siding <input type="checkbox"/> Lap Siding <input type="checkbox"/> American Fiber Cement <input type="checkbox"/> TruExterior by Boral <input type="checkbox"/> CeraClad <input type="checkbox"/> Other: _____ Substrates: <input type="checkbox"/> Plywood and moisture barrier <input type="checkbox"/> CMU <input type="checkbox"/> Other: _____
Exterior covered walkway	Material: <input type="checkbox"/> Metal Roof Panel <input type="checkbox"/> Same as Metal Roof Panel. <input type="checkbox"/> Other: _____
Sun Shade Devices	Fixed Sun Screens – 107113 (10711) Coordinate with windows and storefronts. <input type="checkbox"/> Sun Shade integral with Series 2600 Window by EFCO . <input type="checkbox"/> 20” tapered section by EFCO . <input type="checkbox"/> Model ST Series by Industrial Louvers , Kynar 2-coat finish. <input type="checkbox"/> 8” Airfoil and 1-1/2 x 12 inch box outrigger by C/S . Other: _____
Trellis panels – 108200 (10820)	<input type="checkbox"/> Greenscreen <input type="checkbox"/> CableRail by Feeney <input type="checkbox"/> Other: _____
Trellis walkway 06151	Need to detail on Drawings. <input type="checkbox"/> Cedar <input type="checkbox"/> Redwood <input type="checkbox"/> Pressure treated wood <input type="checkbox"/> Composite wood (see below) <input type="checkbox"/> Other: _____
Composite Wood – 065114 (06512)	<input type="checkbox"/> Trex <input type="checkbox"/> Nexwood <input type="checkbox"/> Eon <input type="checkbox"/> TimberTech <input type="checkbox"/> Resysta <input type="checkbox"/> Other: _____ These are combustible. Can't be used in Type I construction. Application: <input type="checkbox"/> Deck <input type="checkbox"/> Exterior decorative item
Awnings – 107313 (10531)	Awning is framed fabric extension projecting from and affixed to structure. Unlike canopies, awnings have no supporting ground poles. Unlike rectangular-shaped marquees that are supported by exposed rigid poles from above, awning fabrics incorporate and cover over any supporting framework and they are not limited to two dimensions. Type: <input type="checkbox"/> Fixed awnings. Retractable awnings: <input type="checkbox"/> Manually operated <input type="checkbox"/> Motorized. Fabric Material: <input type="checkbox"/> Glen Raven-Sunbrella <input type="checkbox"/> firesist HUV by Glen Raven-Sunbrella (fire-retardant). <input type="checkbox"/> Weathertyte Lite by Tri Vantage. (fire-retardant) <input type="checkbox"/> Other: _____ Metal frame: <input type="checkbox"/> Wrought iron <input type="checkbox"/> Aluminum <input type="checkbox"/> Other: _____
Canopy - 107316 (10533)	Basis of Design: _____ <input type="checkbox"/> Custom, coordinate with structural. <input type="checkbox"/> Tempered glass. <input type="checkbox"/> Stainless steel cables. Skin: <input type="checkbox"/> Painted galvanized steel. <input type="checkbox"/> Aluminum <input type="checkbox"/> Stainless steel Finishes: _____
Theater Marquee 10437	<input type="checkbox"/> Theater Marquee
Unit Pavers – 321316 (02780)	Basis of Design: <input type="checkbox"/> Concrete. <input type="checkbox"/> Brick. Installation: <input type="checkbox"/> Sand bed <input type="checkbox"/> Mortar bed. Edging Options: <input type="checkbox"/> Precast <input type="checkbox"/> Cast-In-Place.
Site Paving	Asphalt Paving – 321216 (02741) <input type="checkbox"/> Normally specified by Civil Consultant Concrete pavement – 321313 (02751) <input type="checkbox"/> Normally specified by Civil Consultant Pavement Marking 02752 <input type="checkbox"/> By Civil consultant. <input type="checkbox"/> By Architect. Detectable Warning Surfaces 02753 <input type="checkbox"/> By Civil consultant. <input type="checkbox"/> By Architect.
Porous Paving	<input type="checkbox"/> Porous Unit Paving – 321443 (02781) <input type="checkbox"/> Porous Site-Cast Paving -
Exterior Signs	Signage – 101400 (10431) <input type="checkbox"/> Building name/number signs <input type="checkbox"/> Parking signs. (Symbols of accessibility, accessible direction, etc.) <input type="checkbox"/> Traffic signs. (Stop, Yield, Do Not Enter, etc.).
Fences and Gates	<input type="checkbox"/> Temporary fencing during construction only - 015000 (01500)

	<p>Chain-Link Fences and Gates – 323113 (02821) Finish: <input type="checkbox"/> Galvanized <input type="checkbox"/> PVC over galvanized. Fences: <input type="checkbox"/> 9 gage (standard industrial) <input type="checkbox"/> 6 gage (heavy industrial). Gates: <input type="checkbox"/> Manual <input type="checkbox"/> Motorized. <input type="checkbox"/> Swing Sliding: <input type="checkbox"/> Cantilevered <input type="checkbox"/> Overhead <input type="checkbox"/> Floor Track. Accessories: <input type="checkbox"/> Privacy slats <input type="checkbox"/> Wind screens.</p> <p>Ornamental Metal Fences and Gates – 323119 (02826) Fences: Ameristar: <input type="checkbox"/> Montage Plus <input type="checkbox"/> Aegis II <input type="checkbox"/> Montage II Master Halco: <input type="checkbox"/> Classic Premier. Ametco: <input type="checkbox"/> Shadow 100. Gates: <input type="checkbox"/> Manual <input type="checkbox"/> Motorized. <input type="checkbox"/> Swing Sliding: <input type="checkbox"/> Cantilevered <input type="checkbox"/> Overhead <input type="checkbox"/> Floor Track.</p>
<p>Site Furnishings – 129300 (02870) <input type="checkbox"/> by Architect <input type="checkbox"/> by Landscape consultant</p>	<p>Benches: <input type="checkbox"/> Concrete <input type="checkbox"/> Wood <input type="checkbox"/> Metal <input type="checkbox"/> Other: ____ Bike racks: <input type="checkbox"/> DV215 Series Varsity Bike Docks by Ground Control Systems <input type="checkbox"/> Dero <input type="checkbox"/> Dumor <input type="checkbox"/> Belson <input type="checkbox"/> Description:_____ Finish: <input type="checkbox"/> Factory powder-coated. Color: <input type="checkbox"/> As selected by Architect. Bollards: <input type="checkbox"/> Metal pipe, Finish: <input type="checkbox"/> Field painted. Color: <input type="checkbox"/> As selected by Architect. <input type="checkbox"/> Concrete filled metal <input type="checkbox"/> Precast Concrete (select model number from Wausau) <input type="checkbox"/> Lighted (by electrical consultant - coordinate)</p>
<p>Metal fabrications 055000</p>	<p>Skateboard Deterrents <input type="checkbox"/> Fixed Angle Skate Deterrents - FA135 by Barrett Robinson <input type="checkbox"/> Model NO. 161-1003 Skate Stopping Clip by The Park Catalog</p>
<p>Site Gratings - 055300 (05530)</p>	<p>Metal gratings: <input type="checkbox"/> Removable Welded Steel Grating: Series GW-2 by McNichols. <input type="checkbox"/> Trench Grates: OT-24 by Urban Accessories.</p>
<p>Flagpoles – 107500 (10350)</p>	<p><input type="checkbox"/> 30 ft mill finished aluminum, Straight shaft, 6 inch diameter with internal halyard by American. Other: _____</p>
<p>Entrance Floor Mats - 124813 (12484) (Normally required for LEED)</p>	<p><input type="checkbox"/> Pedimat by C/S. Outside of building: <input type="checkbox"/> Recessed with frame. <input type="checkbox"/> Surface-applied w/out frame. Inside the building: <input type="checkbox"/> Recessed with frame. <input type="checkbox"/> Surface-applied w/out frame. Carpet type: <input type="checkbox"/> Inside</p>
<p>Foot Grilles - 124816 (12485)</p>	<p>Stainless Steel: Location: <input type="checkbox"/> Outside <input type="checkbox"/> Inside</p>
<p>Traffic Coatings – 071800 (07180)</p>	<p>Material: Polyurethane Coatings. Pedestrian grade: <input type="checkbox"/> Elastatex 500 Urethane Deck by Dex-O-Tex. <input type="checkbox"/> Décor-Flor Broadcast Epoxy Floor by Dex-O-Tex <input type="checkbox"/> Sikalastic 710/715 Traffic System by Sika. Other: _____ Vehicle grade: <input type="checkbox"/> Auto Dex 500 by Dex-O-Tex. Other: _____</p>
<p>Playground <input type="checkbox"/> by Architect <input type="checkbox"/> by Landscape consultant</p>	<p><input type="checkbox"/> Playground surfaces – 321816 (02791). Seamless: <input type="checkbox"/> Spectra Pour CA by SpectraTurf. <input type="checkbox"/> Playground equipment - 116800 (02881). <input type="checkbox"/> Watertable. <input type="checkbox"/> Sandtable. <input type="checkbox"/> Other: _____</p>
<p>Site Enclosures (not on roof) - 055000 metal fabrications</p>	<p><input type="checkbox"/> Trash Enclosures <input type="checkbox"/> Electrical Equipment Enclosures Walls: <input type="checkbox"/> CMU (by structural consultant) <input type="checkbox"/> Chain-link fence <input type="checkbox"/> Steel decorative fence. Gate: <input type="checkbox"/> Chain-link fence <input type="checkbox"/> Steel decorative fence <input type="checkbox"/> Steel corrugated metal <input type="checkbox"/> w/louvered gate.</p>
<p>Detectable Warning - Surfaces 320120</p>	<p>Surface applied system (Raised truncated domes): <input type="checkbox"/> Model A6003648 by Armorcast Products Company. <input type="checkbox"/> Vitrified Polymer Composite (VPC) Cast In Place Detectable/Tactile Warning Surface Tile based on Armor-Tile by Engineered Plastics Inc.</p>


	<input type="checkbox"/> TekWay Dome-Tiles by StongGo Industries . Other: _____
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INTERIOR

<p>Expansion Joint Covers Assemblies – 079500 (05811)</p>	<p><input type="checkbox"/> Exterior roof, 661 Series, curb mounted welded to 651-A09 covering J1100 compression seal (equal in height on both sides) by InPro. <input type="checkbox"/> Non-rated <input type="checkbox"/> Rated <input type="checkbox"/> Exterior, 651-A09 aluminum - surface mount (wall/wall ceiling/ceiling) by InPro. <input type="checkbox"/> Non-rated <input type="checkbox"/> Rated <input type="checkbox"/> Interior, Wall to Wall system: 612 Series - Flush Mount, Polyurethane by InPro. Floor to floor: <input type="checkbox"/> Non-rated <input type="checkbox"/> Rated <input type="checkbox"/> Drip-proof Material: <input type="checkbox"/> Aluminum <input type="checkbox"/> Polyurethane. Floor to wall: <input type="checkbox"/> Non-rated <input type="checkbox"/> Rated <input type="checkbox"/> Material: <input type="checkbox"/> Aluminum <input type="checkbox"/> Polyurethane. Wall to wall: <input type="checkbox"/> Non-rated <input type="checkbox"/> Rated Material: <input type="checkbox"/> Aluminum <input type="checkbox"/> Polyurethane.</p>
<p>Rough Carpentry – 061000 (06100) (Normally by structural consultant)</p>	<p><input type="checkbox"/> Coordinate with structural. <input type="checkbox"/> Plywood Sheathing: See structural drawing for thickness. <input type="checkbox"/> 3/4 inch Fire-retardant plywood on framing. <input type="checkbox"/> Plywood backer boards.</p>
<p>Non-load bearing metal framing – 092216 (09111)</p>	<p><input type="checkbox"/> Steel studs and runners. <input type="checkbox"/> Slip-type head joints. <input type="checkbox"/> Flat strap and backing plate. <input type="checkbox"/> Cold-rolled channel bridging. <input type="checkbox"/> Hat-shaped, rigid furring channel. <input type="checkbox"/> Resilient furring channel. <input type="checkbox"/> Cold-rolled furring channel. <input type="checkbox"/> Z-Shaped furring. <input type="checkbox"/> Wire hangers, brace, and tie. <input type="checkbox"/> Carrying channel.</p>
<p>Miscellaneous Carpentry – 061053 (06105)</p>	<p>Used when Rough Carpentry section is not specified but some interior wood studs are needed. <input type="checkbox"/> Coordinate with structural. <input type="checkbox"/> Plywood backer boards.</p>
<p>Wood base, Wood chair rails, Wood door frames – 064023 (06402)</p>	<p><input type="checkbox"/> Wood base, profile: _____ <input type="checkbox"/> Wood chair rails, profile: _____ <input type="checkbox"/> Wood door frames.</p>
<p>Casework – 064023 (06402) North American Architectural Woodwork Standards, latest edition (NAAWS). – formally Woodwork Institute (WI)</p>	<p>Standards: <input type="checkbox"/> NAAWS (formally WI) (default, CCP shop drawing and certificate.) <input type="checkbox"/> AWI. (for projects outside of Oregon, California, Nevada, and Arizona) Grade: <input type="checkbox"/> Premium <input type="checkbox"/> Custom. Countertops: <input type="checkbox"/> Plastic Laminate (default) <input type="checkbox"/>  Recycled Glass/Concrete. Solid Surfacing: <input type="checkbox"/> Corian by Dupont <input type="checkbox"/> LG <input type="checkbox"/> _____ Quartz Surfacing: <input type="checkbox"/> Caesarstone <input type="checkbox"/> Zodiaq by Dupont <input type="checkbox"/> Silestone by Consentino <input type="checkbox"/> ____ Real Stone: <input type="checkbox"/> Granite Note: See Laboratory Casework section for Epoxy Resin tops. Cabinets: <input type="checkbox"/> Plastic Laminate. <input type="checkbox"/> Wood veneer stained <input type="checkbox"/> Solid Wood Painted. Custom lockers (not manufactured item): <input type="checkbox"/> P-lam <input type="checkbox"/> Wood veneer <input type="checkbox"/> _____ Reception Counters: <input type="checkbox"/> Plastic Laminate (default) <input type="checkbox"/> Wood veneer Solid Surfacing: <input type="checkbox"/> Corian <input type="checkbox"/> Quartz <input type="checkbox"/> Granite Teaching walls: <input type="checkbox"/> Plastic Laminate. <input type="checkbox"/> Wood veneer. Configuration: Door and Drawer Front Style: Flush overlay. <input type="checkbox"/> Swing doors <input type="checkbox"/> Sliding doors <input type="checkbox"/> Drawers <input type="checkbox"/> Swing glass doors <input type="checkbox"/> Sliding glass doors <input type="checkbox"/> Hopper doors. <input type="checkbox"/> Non-magnetic hardware (MRI rooms)</p>
<p>Floor Tile</p>	<p>See Flooring</p>
<p>Sprayed fire proofing – 078100 (07811)</p>	<p>Cementitious sprayed-on fireproofing: <input type="checkbox"/> Grace <input type="checkbox"/> Isolatek Conditions: <input type="checkbox"/> Concealed <input type="checkbox"/> Exposed <input type="checkbox"/> Exposed and field painted. <input type="checkbox"/> Intumescent fire-resistive coating on Exposed (expensive option).</p>

<p>Bulletin Boards – 101200 (10125)</p>	<p>Bulletin boards differ from tackboards; bulletin boards are enclosed in cabinets, and tackboards are not. <u>Claridge:</u> <input type="checkbox"/> Imperial Series <input type="checkbox"/> Contemporary Series <input type="checkbox"/> Rival Series <input type="checkbox"/> Large Contemporary Series <input type="checkbox"/> Revere Series <input type="checkbox"/> Classic Series <input type="checkbox"/> Universal Series <input type="checkbox"/> Deluxe Series</p>
<p>Display Cases – 101200 (10125) (including for trophy)</p>	<p><u>Claridge</u>, aluminum, recessed: <input type="checkbox"/> 370 Series: 3-1/2 inch angel face front. <input type="checkbox"/> 1370 Series: 2 inch radius face front. <input type="checkbox"/> 3370 Series: 3-1/2 inch fluted face front. Display Case Type: <input type="checkbox"/> Recessed <input type="checkbox"/> Surface-Mounted <input type="checkbox"/> Freestanding <input type="checkbox"/> Non-illuminated <input type="checkbox"/> Illuminated. <input type="checkbox"/> Include wood box frame. <input type="checkbox"/> No box frame, box will be site built.</p>
<p>Toilet compartments – 102113 (10155)</p>	<p><input type="checkbox"/> <u>HDPE plastic by Hiny Hinders - Santana/Scranton</u> <input type="checkbox"/> Steel (factory baked enamel). <input type="checkbox"/> Plastic-laminate <input type="checkbox"/> Other: _____ Color: _____ (Santana recently eliminated many colors). Note: Solid Phenolic (Trespa) type is not recommended (custom, need to design all the fittings, not ready made system) Installation: <input type="checkbox"/> Floor mounted - overhead braced. <input type="checkbox"/> Floor to ceiling. <input type="checkbox"/> Ceiling hung.</p>
<p>Directories – 101300 (10410)</p>	<p><input type="checkbox"/> Non-illuminated <input type="checkbox"/> Illuminated.</p>
<p>Lockers</p>	<p>Metal Lockers - 105113 (10505) <input type="checkbox"/> Welded. (expensive, better quality) <input type="checkbox"/> Knock-down. (cheaper, lower quality) Accessories: <input type="checkbox"/> locker benches. <input type="checkbox"/> Locker installed over concrete curb. Wood Lockers - Best to pick a model number from manuf. – 105116 (10506) <input type="checkbox"/> Veneer Wood Lockers <input type="checkbox"/> Plastic Laminate Lockers <input type="checkbox"/> Plastic (HDPE) Lockers</p>
<p>Fire Extinguishers and Cabinets – 104416 (10520)</p>	<p>Fire Extinguishers: <input type="checkbox"/> Multipurpose (2A-10B:C) <input type="checkbox"/> Type K for kitchen. Cabinets by <u>J.L Industries:</u> <input type="checkbox"/> <u>Panorama Series:</u> Frameless Acrylic Door. <input type="checkbox"/> <u>Ambassador Series:</u> Steel Trim and Door. <input type="checkbox"/> <u>Academy Series:</u> Aluminum Trim and Door. <input type="checkbox"/> <u>Cosmopolitan Series:</u> Stainless Steel Trim and Door. <input type="checkbox"/> <u>Embassy Series:</u> Decorative Trimless Recessed Cabinet. <input type="checkbox"/> <u>Cavalier Series:</u> Decorative Bronze or Brass Cabinet. <input type="checkbox"/> <u>Clear VU Series:</u> Acrylic Bubble and Aluminum or Steel Cabinet. <input type="checkbox"/> <u>Corner VU Series:</u> Steel, Stainless Steel and Aluminum Cabinet. <input type="checkbox"/> <u>Classic Series:</u> Economy Galvanized Cabinet. <input type="checkbox"/> <u>Economyline Series:</u> Economy Surface-Mounted Cabinet. <input type="checkbox"/> <u>Decorline Series:</u> Economy Steel or Aluminum Cabinet. Cabinets by particular model numbers: <input type="checkbox"/> #1025W17 aluminum (10-1/2 x 24 x 6” deep) by JL. <input type="checkbox"/> #1015W17 steel. <input type="checkbox"/> #FX1025W17, or #FX1015W17 for fire rated type. <input type="checkbox"/> #1015W12 steel, (10-1/2 x 24 x 6” deep) Ambassador by JL. <input type="checkbox"/> 1600 Series by JL. Cabinets by <u>Larsen’s.</u> <input type="checkbox"/> <u>Gemini Series cabinet by Larsen’s.</u> <input type="checkbox"/> <u>Architectural Series cabinet by Larsen’s.</u> <input type="checkbox"/> <u>Occult by Larsen.</u> <input type="checkbox"/> Steel <input type="checkbox"/> Stainless steel <input type="checkbox"/> Other: _____ Cabinet Door: <input type="checkbox"/> Break Glass <input type="checkbox"/> Acrylic. <input type="checkbox"/> Other: _____ <input type="checkbox"/> Hook only</p>
<p>Payphones - 101700</p>	<p>Telephone enclosure: Stainless steel, Type 304, perforated interior.</p>

(10750)	<input type="checkbox"/> Product: # 1305 by ASI . Other: _____
Library Stack System – 115123 (11054)	Manufacturers: <input type="checkbox"/> Montel <input type="checkbox"/> Spacesaver Operation: <input type="checkbox"/> Manual <input type="checkbox"/> Electrical
Projection Screens – 115213 (11132)	<input type="checkbox"/> Silhouette M (black case) by Draper. <input type="checkbox"/> Series D front projection by Draper. <input type="checkbox"/> Luma 2 : 72" x 96", manual by Draper. <input type="checkbox"/> Luma 2 – Heavy Duty Spring Roller Operated Projection Screen by Draper <input type="checkbox"/> Manually operated ceiling mounted screen; Luma by Draper. <input type="checkbox"/> Targa : 105" x 140", motorized by Draper. <input type="checkbox"/> Artisan Series E: 72" x 96" with Natural maple finish case - ceiling mount. <input type="checkbox"/> Access/Series M, 96 by 96 inches, optional 12 inch extra drop, optional High contrast Grey viewing surface, manual by Draper. <input type="checkbox"/> Tensioned Cosmopolitan Electrol by Da-Lite , wall mounted, Da-Mat screen, 108 x 144 feet, 3 foot black drop, electrically operated. Operation: <input type="checkbox"/> Manual pull-down. <input type="checkbox"/> Electrically operated. Size: <input type="checkbox"/> As indicated. Mounts: <input type="checkbox"/> on hard ceilings <input type="checkbox"/> on suspended ceilings. <input type="checkbox"/> None. <input type="checkbox"/> Lectern w/controls of light, projection screen, shade, projector.
Projector Mount Bracket - 115213 (11132)	<input type="checkbox"/> PRG Precision Gear mount by Peerless. <input type="checkbox"/> Aero 2636 , hard-lid ceilings by Draper. <input type="checkbox"/> CMJ 455 variable position suspended ceiling kit by Peerless. <input type="checkbox"/> LCD LOC II by BMS . Television Mount: <input type="checkbox"/> Bretford TWPW 27R-BK with safety belt and VCR bracket. Others: _____
Assistive Listening Devices – 115217 (11521)	<input type="checkbox"/> Sound Mate #SMP-2 by Telex. <input type="checkbox"/> ASL equipment by Listen Technologies. <input type="checkbox"/> Other: _____
Laboratory Fume Hoods – 115313 (11610)	Fume hoods can't be turned off. Integral part of HVAC system. <input type="checkbox"/> SafeAire II HOPEC IV by Fisher Hamilton <input type="checkbox"/> Supreme Air fume hood by Kewaunee . <input type="checkbox"/> Other: _____
Laboratory Casework – 123553 (12360)	<input type="checkbox"/> Casework: Signature Series , contemporary full overlay, Style 05 by Kewaunee. <input type="checkbox"/> Work surfaces: Epoxy Resin Tops, Kemresin by Kewaunee. <input type="checkbox"/> Other: _____
117610 (11761) View Boxes (X-Ray Illuminators)	<input type="checkbox"/> Surface mounted <input type="checkbox"/> Recessed mounted. <input type="checkbox"/> Series T-S-4-44-120V-DB400-HGP by Vista . <input type="checkbox"/> 4X Hi-Lo by IMRT Phantoms <input type="checkbox"/> Other: _____
Seating	Fixed Audience Seating – 126100 (12610): <input type="checkbox"/> University Seating with PowerUp base and 1000 non-upholster seat by KI. <input type="checkbox"/> Custom Wood back by Irwin . <input type="checkbox"/> Other: _____ Telescoping Stands – 126600 (12660): Manufacturers: <input type="checkbox"/> Hussey <input type="checkbox"/> Interkal <input type="checkbox"/> Irwin <input type="checkbox"/> Others: _____
Emergency Key Box 104116 (10524)	Type: Fireman's: <input type="checkbox"/> Key box – 3200 Series (holds up to 10 keys) "Knox Box" by Knox. <input type="checkbox"/> Switch: Knox Key Switch .
Metal Shelving – 105613 (10671)	<input type="checkbox"/> RiveTier boltless, open metal shelving by Western Pacific Storage. <input type="checkbox"/> Other: _____
105500 Postal Specialties	Tenant Mailboxes: <input type="checkbox"/> 3700 Series Front-Loading by Salsbury Industries. <input type="checkbox"/> Versatile 4C Front-load Horizontal Mailbox Suite F by Florence <input type="checkbox"/> Versatile 4C Front Load Mailbox, 4CADD-10 by Florence <input type="checkbox"/> ADA-4209 by Jensen
105626 (10562) Mobile Storage Shelving	Manufacturer: <input type="checkbox"/> Aurora <input type="checkbox"/> Montel <input type="checkbox"/> Spacesaver Track: <input type="checkbox"/> Recessed <input type="checkbox"/> Surface mounted. If surface mounted, fill between tracks with: <input type="checkbox"/> Plywood sub-floor <input type="checkbox"/> Concrete. End panels: <input type="checkbox"/> Laminate <input type="checkbox"/> Steel.

	Shelving: <input type="checkbox"/> Cantilevered <input type="checkbox"/> 4-post. <input type="checkbox"/> Steel tops required. How many shelves per unit? <input type="checkbox"/> 4 <input type="checkbox"/> As indicated on Drawings. How deep are the shelves? <input type="checkbox"/> As indicated on Drawings. How high are shelves? <input type="checkbox"/> As indicated on Drawings.
Loading Dock Equipment – 111300 (11160)	<input type="checkbox"/> Hydraulic dock leveler by Kelly . 6 by 7 feet nominal size. <input type="checkbox"/> Laminated dock bumpers. <input type="checkbox"/> Scissors lift by Ecoa . <input type="checkbox"/> Other: _____
Time Clocks 119400 (11940)	<input type="checkbox"/> Series 4000 Terminal by Kronos .
Cubicle Curtains and Tracks – 102123 (10191)	<input type="checkbox"/> Curtains: Use InPro Catalog to pick pattern. Look for “Use for” to determine if the fabric selected is suitable for cubical curtains. <input type="checkbox"/> Tracks: Series 19100 track system Salisbury. <input type="checkbox"/> IV tracks <input type="checkbox"/> Curtain: Salisbury. <input type="checkbox"/> Hangers
Gymnasium Equipment - 116623	<input type="checkbox"/> Basketball equipment: <input type="checkbox"/> Forward Fold Backstop: Model 90949000 by Porter <input type="checkbox"/> Side Fold Backstop: Model 90955000 by Porter <input type="checkbox"/> Electric Winch: Model 712/713 by Porter. <input type="checkbox"/> Scoreboard: <input type="checkbox"/> BB-2103 by Daktronics <input type="checkbox"/> School Logo –also indicate on drawings. <input type="checkbox"/> Shot-Clocks: BB-2114 by Daktronics <input type="checkbox"/> Safety Wall Pad: 00560 ImpactSafe by Porter. <input type="checkbox"/> Volleyball floor sleeves:#00870100 3-1/2” I.D. volleyball floor sleeves with brass cover by Porter.
Telescoping Stands - 126600	Indoor type in gym <input type="checkbox"/> Manually operated type. <input type="checkbox"/> MAXAM Telescopic Gym Seat System by Hussey <input type="checkbox"/> Motorized type. <input type="checkbox"/> 2 colors on face in stacked position, which allows for school name or initials. 
Bleachers - 133416	Outdoor type

INTERIOR CEILINGS

Exposed ceilings	<input type="checkbox"/> As is <input type="checkbox"/> Field Paint <input type="checkbox"/> Epic metal deck (pre-finished surface)
Hard ceilings	<input type="checkbox"/> Gypsum board - 092900 (09250) <input type="checkbox"/> Match existing. <input type="checkbox"/> Manufactured Grid Suspension System for Ceilings (available from Armstrong, USG, etc)
Dropped ceilings	Acoustical Panel Ceilings – 095113 (09511) <input type="checkbox"/> F Fissured, square edge by USG. <input type="checkbox"/> Vinyl Faced Sheetrock Brand Lay-In Ceiling Tile with ClimaPlus performance by USG for Kitchen. Sizes: <input type="checkbox"/> 2 by 2. <input type="checkbox"/> 2 by 4. Hang from Roof Deck of Types: <input type="checkbox"/> Concrete <input type="checkbox"/> Metal Deck <input type="checkbox"/> Concrete filled metal deck MRI rooms ceiling grids: <input type="checkbox"/> Aluminum <input type="checkbox"/> Stainless steel
Acoustical tile over hard ceilings	Acoustical Tile Ceilings – 095123 (09512) <input type="checkbox"/> 1 by 1. <input type="checkbox"/> Match existing. <input type="checkbox"/> Tectum panels screw mounted on gypsum board ceilings. <input type="checkbox"/> Other _____
Decorative ceiling accents	Suspended Decorative Grids – 095436 (09580) <input type="checkbox"/> Metalworks by Armstrong. <input type="checkbox"/> Serpentina by Armstrong. <input type="checkbox"/> Other: _____




INTERIOR WALLS



<p>CMU walls</p>	<p>Masonry - 042000 (04200) (Interior side) Interior: <input type="checkbox"/> As is. <input type="checkbox"/> Painted CMU finish <input type="checkbox"/> Exposed, sandblast. Exterior: <input type="checkbox"/> As is. <input type="checkbox"/> Sealed CMU finish <input type="checkbox"/> Anti-Graffiti CMU finish</p>
<p>Gypsum Walls <input type="checkbox"/> Partitions. <input type="checkbox"/> Ceilings.</p>	<p>Gypsum Board – 092900 (09250) <input type="checkbox"/> Type X, 5/8 inch (Default). <input type="checkbox"/> Type C, 5/8 inch, DensArmorPlus over Certainteed MemBrain vapor barrier with unfaced batt for walls – Mold-prevention. <input type="checkbox"/> Type C, 5/8 inch DensArmorPlus FireCore at ceilings. <input type="checkbox"/> Flexible type – curved application <input type="checkbox"/> Acoustical Gypsum (SoundBreak by National Gypsum). <input type="checkbox"/> Water Resistant (Paint finishes toilet room walls, not for tile backer). <input type="checkbox"/> Abuse-Resistant Gypsum Board (At high traffic area prone to wall damage). <input type="checkbox"/> Cementitious Backer Board (specified in section 093100 Tiles for tile substrate). <input type="checkbox"/> Gypsum Sheathing - Dens-Glass – 061600 (06160) Following Gypsum Finishes are Needed: <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 (for flat paint only) <input type="checkbox"/> Level 5 (all other paint gloss) Trim: <input type="checkbox"/> metal <input type="checkbox"/> vinyl Metal reveals: <input type="checkbox"/> Fry Reglet</p>
<p>Shaft-walls</p>	<p>Gypsum shaft-wall assemblies - 092116 (09265) <input type="checkbox"/> Metal CH Stud (able to be installed from one side only) <input type="checkbox"/> Stair-well shaft. <input type="checkbox"/> Elevator shaft <input type="checkbox"/> Plumbing chase (contractor’s option)</p>
<p>Wood paneling</p>	<p>Paneling – 064200 (06420) <input type="checkbox"/> Plastic Laminate. <input type="checkbox"/> Wood veneer. <input type="checkbox"/> Marlite. <input type="checkbox"/> Other: _____</p>
<p>Fiber Reinforced Plastic (FRP) Panels</p>	<p>FRP Panels – 068200 (06820): Used in kitchen/restroom walls rather than using ceramic tiles to save money. <input type="checkbox"/> Marlite (White, default) <input type="checkbox"/> Crane Composites (formerly Kemlite) <input type="checkbox"/> Other: _____</p>
<p>Fiber Reinforced Laminate (FRL) Panels</p>	<p><input type="checkbox"/> Panolam – 068300: Similar to FRP panel above. <input type="checkbox"/> Other: _____</p>
<p>GRG fabrication – 092713 (09271)</p>	<p>Glass-Reinforced Gypsum fabrication: <input type="checkbox"/> GP <input type="checkbox"/> DEC</p>
<p>Medium Density Fiber (MDF) board</p>	<p>Interior Architectural Woodwork – 064023 (06402) <input type="checkbox"/> 5/8 inch MDF wall finish rather than using gypsum board as finish on framing. Use in service corridors for durability.</p>
<p>101100 Visual Display Surfaces - Marker board, chalkboard, tackboard (check with District for pre-approved products)</p>	<p>Visual Surfaces – 101100 (10101): Marker board: <input type="checkbox"/> Series 555 by Polyvision. (indicate size on drawings 4’x8’) <input type="checkbox"/> LCS-II by Claridge (low gloss, double as projection screen). Surface color: white. Other: _____ Chalkboard: <input type="checkbox"/> Series 555 by Polyvision. (indicate size on drawings 4’x8’) Surface color: <input type="checkbox"/> green <input type="checkbox"/> black <input type="checkbox"/> grey <input type="checkbox"/> as selected Other: _____ Tackboard: indicate size on drawings 4’x8’ <input type="checkbox"/> Vinyl covered (default) <input type="checkbox"/> Fabric covered <input type="checkbox"/> unfaced, color cork <input type="checkbox"/> unfaced, natural cork Other: _____ Combo Units: <input type="checkbox"/> Other: _____ Marker Walls: <input type="checkbox"/> Other: _____ Tack Walls (non-acoustical): <input type="checkbox"/> Fabric <input type="checkbox"/> vinyl Other: _____ <input type="checkbox"/> Custom (not manufactured item) Teaching Wall (specified in 06402 Interior Architectural Woodwork) Include: <input type="checkbox"/> Markerboard <input type="checkbox"/> Chalkboard <input type="checkbox"/> Tackboard Frame: Clear anodized aluminum (default)</p>

<p>101117 Electronic Markerboards – interactive white board</p>	<p><input type="checkbox"/> Simplicity Touch IFP by Recordex. <input type="checkbox"/> Other: _____</p>
<p>Display Cases – 101200 (10125)</p>	<p>Trophy Cases: Claridge. <input type="checkbox"/> Model 3370 with fluted face front. <input type="checkbox"/> Model 3370</p>
<p>Wall Coverings – 097200(09720)</p>	<p>Vinyl coated fabric: <input type="checkbox"/> Type II wall covering for tackboard with Teflon by Koroseal.</p>
<p>Tackable wall surface (Site Fabricated)</p>	<p>Fabric-Wrapped Panels – 097723 (09771) Basis of Design Product: _____ <input type="checkbox"/> Tackable board or wall – 101100 (10101) fabricated at factory, not site fabricated. <input type="checkbox"/> Site fabricated tackable panels, Fabricmate. <input type="checkbox"/> Site fabricated acoustical panels Thickness: <input type="checkbox"/> 1/2 inch: Tackable (0.45 NRC) <input type="checkbox"/> 1 inch: Acoustical. (0.80 NRC) Fabric: Replaceable fabric. Fabric is not integral with board (easier to replace and repair). <input type="checkbox"/> Guilford of Maine, FR701, Style 2100. <input type="checkbox"/> Maharam Stretched-Fabric Wall Systems 09773 <input type="checkbox"/> Site fabricated, Fabricmate. <input type="checkbox"/> Other: _____</p>
<p>Acoustical wall surface</p>	<p>Acoustical Wall Panels - 098433 (09841) <input type="checkbox"/> Essi Acoustical. <input type="checkbox"/> Soundsoak by Armstrong. <input type="checkbox"/> M-90 by Empire Acoustical Systems. <input type="checkbox"/> QuietPerf by Noise Barriers. <input type="checkbox"/> Sono-Con SC-6P by Phoenix-E. (equal to QuietPerf) <input type="checkbox"/> Other: _____</p>
<p>Wall guards</p>	<p>Wall Guards – 102600 (10265) Corner guards: <input type="checkbox"/> PVC <input type="checkbox"/> Stainless steel <input type="checkbox"/> Other: _____ Chair Rail: <input type="checkbox"/> Korowood Chair rails model BW90 by Korogard. <input type="checkbox"/> CR-3 Chair rail (maple stain to be selected) by InPro Sheet wall protection: <input type="checkbox"/> Rigid sheet vinyl by In Pro Corp. <input type="checkbox"/> Other: _____</p>
<p>Room Signs - 101400 (10431)</p>	<p>Panel signs (room signs including ADA toilet signs) <input type="checkbox"/> Best Signs <input type="checkbox"/> Other: _____</p>
<p>102219 Demountable Partitions</p>	<p>Manufacturers: <input type="checkbox"/> Dirtt <input type="checkbox"/> Genius by KI <input type="checkbox"/> SteelCase <input type="checkbox"/> Modular Walls by Herman Miller. <input type="checkbox"/> Other: _____</p>

INTERIOR FLOORING

<p>Self Leveling Underlayment - 035400</p>	<p>Cement Based: <input type="checkbox"/> Dek C-Ment by Maxxon. Hydraulic Cement Based: <input type="checkbox"/> K15 by Ardex. Gypsum Based: <input type="checkbox"/> Commercial Topping by Maxxon. <input type="checkbox"/> LEVELROCK 3500 by USG. <input type="checkbox"/> Flo-Top by Euclid Chemical Company Acoustical Mat: <input type="checkbox"/> Acousti-Mat by Maxxon. <input type="checkbox"/> Levelrock Brand Sound Reduction Mat by USG</p>
<p>Concrete Floor Sealer - 071910 (07190)</p>	<p>Cheap way to seal concrete floors in back of office to prevent dusting (mech room, electrical room, etc.) <input type="checkbox"/> Clear Sealer only: Cementone Clear Sealer by Scofield. Exposed to view where staining is required. <input type="checkbox"/> Concrete stain and sealer: Lithochrome Chemstain Classic Stain by Scofield.</p>
<p>Polished Concrete Finishing - 033517</p>	<p>Manufacturers: <input type="checkbox"/> Consolideck Cleaner/Degreaser by Prosoco. <input type="checkbox"/> PermaShine by LM. <input type="checkbox"/> RetroPlate 99 by Advanced Floor Products. <input type="checkbox"/> PC-T by Ardex <input type="checkbox"/> FormulaOne by Scofield. Level of Shine: <input type="checkbox"/> Level 1 - Low Gloss: Honed/matte finish, polished up to and including 400 grit resin diamonds, a gloss reading of 10-20. <input type="checkbox"/> Level 2 - Medium Gloss: Moderate gloss finish, polished up to and including 800 grit resin diamonds, a gloss reading of 20-30. <input type="checkbox"/> Level 3 (default): High Gloss: High gloss/Mirror finish, polished up to and including 1,600/1,800 grit resin diamonds, gloss reading of 30-50. <input type="checkbox"/> Level 4 (too shiny, maintenance issue): Very High Gloss: Polished up to and including a 3,000 grit resin diamonds, gloss reading 60+. <input type="checkbox"/> Integral Color: _____ <input type="checkbox"/> none. <input type="checkbox"/> Stained Color: _____ <input type="checkbox"/> none.</p>
<p>Resilient Floor Tile - 096519 (09651) (need to distinguish from “tile” vs “sheet” as they are specified in different sections)</p>	<p>Solid Vinyl Tile <input type="checkbox"/> Lightwood, 6” planks by Toli. <input type="checkbox"/> SafeTcork by Roppe. <input type="checkbox"/> Other: _____ Luxury Vinyl Tile (LVT). <input type="checkbox"/> Natural Creations - EarthCuts by Armstrong. <input type="checkbox"/> Natural Creations - ArborArt by Armstrong. <input type="checkbox"/> Contour Series Luxury Vinyl Tile by Tandus/Centiva. <input type="checkbox"/> Uncommon Ground 4 by Shaw Hard Surface <input type="checkbox"/> Main Street Residential LVP by Urban Surfaces <input type="checkbox"/> Select LVT, Amtico Collection by Mannington <input type="checkbox"/> Town & Country Series by Hallmark Flooring <input type="checkbox"/> Other: _____ Composition Tile <input type="checkbox"/> Marmoleum Composition Tile (MCP) by Forbo Rubber Floor Tile <input type="checkbox"/> ECOstone flooring by ECOsurfaces <input type="checkbox"/> ECOrocks flooring by ECOsurfaces <input type="checkbox"/> Metallurgy Resilient Rubber Tile Flooring by Johnsonite <input type="checkbox"/> Minerality Rubber Floor Tiles by Johnsonite <input type="checkbox"/> Other: _____ Vinyl Composition Tile (VCT) <input type="checkbox"/> Excelon - Imperial Texture by Armstrong. <input type="checkbox"/> Excelon - StoneTex by Armstrong.</p>

	<input type="checkbox"/> Excelon Flooring, Raffia by Armstrong <input type="checkbox"/> Excelon Flooring, ChromaSpin by Armstrong <input type="checkbox"/> Essentials by Mannington <input type="checkbox"/> Touchstone by Mannington <input type="checkbox"/> Quartz tile by Altro. <input type="checkbox"/> Other: _____ Recycled Vinyl Tile <input type="checkbox"/> Eco surfaces  <input type="checkbox"/> Other: _____
Vinyl sheet - 096516 (09652)	<input type="checkbox"/> Classic Corlon by Armstrong with integral base. <input type="checkbox"/> Connection Corlon by Armstrong : <input type="checkbox"/> Medintech by Armstrong . <input type="checkbox"/> Mature by TOLI . <input type="checkbox"/> Other: _____ Wall Base: <input type="checkbox"/> integral base <input type="checkbox"/> Resilient base <input type="checkbox"/> Wood base
Linoleum -096517 (09654) 	<input type="checkbox"/> Marmorette by Armstrong . <input type="checkbox"/> Granette with NATURCote by Armstrong <input type="checkbox"/> Marmoleum Dual Tile by Forbo . <input type="checkbox"/> Marmoleum Real by Forbo <input type="checkbox"/> Marmoleum Dual [Tile] [Sheet] by Forbo <input type="checkbox"/> Marmoleum Composition Tile (MCT) Linoleum Floor by Forbo <input type="checkbox"/> Harmonium xf by Johnsonite. <input type="checkbox"/> Veneto Collection by Tarkett. <input type="checkbox"/> Other: _____ Wall Base: <input type="checkbox"/> integral base <input type="checkbox"/> Resilient base <input type="checkbox"/> Wood base
Static dissipative - 096536 (09661)	<input type="checkbox"/> Rubber Tile: Mega al, Article 200, smooth surface, 24 x 24 by Noraplan . <input type="checkbox"/> Rubber Sheet: Noraplan mega al, Article 100, roll size by Noraplan. <input type="checkbox"/> Rubber Tile for Access Floor Panels: Mega al, Article 296, smooth surface, 24 x 24 by Noraplan. <input type="checkbox"/> Other: _____
Resinous (Epoxy) Flooring - 096723 (09672)	Stonhard Products <input type="checkbox"/> Stonshield HRI [restrooms]. <input type="checkbox"/> Stonshield GSI [Higher end restrooms cost 20% more installed than HRI]. <input type="checkbox"/> Stonclad GS [warming kitchens]. <input type="checkbox"/> Stonclad UT [full service kitchens]. Dex-O-Tex <input type="checkbox"/> Cheminert K with Quick-glaze top coat. <input type="checkbox"/> Décor-flor. <input type="checkbox"/> Terracolor. <input type="checkbox"/> Other: _____
Carpet 	Carpet (sheet) - 096816 (09680): <input type="checkbox"/> LMUSD: Lucia Mar with UltraLoc MP backing by Shaw . <input type="checkbox"/> No Rules Collection by Shaw . <input type="checkbox"/> Double Knit by Shaw . <input type="checkbox"/> http://www.tandus.com/product-catalog/flooring/plateau_51081.html . <input type="checkbox"/> Travertine 40009 by Tandus . <input type="checkbox"/> Charlemont by Bentley Prince Street <input type="checkbox"/> UPC by Bentley Prince Street <input type="checkbox"/> CYP 42 by Durkan <input type="checkbox"/> Kami by Mannington . <input type="checkbox"/> Surreal MC007 by Mohawk . <input type="checkbox"/> Faculty IV by Lees . Bello III by LEES. <input type="checkbox"/> Other: _____ Carpet Tile - 096813 (09681): <input type="checkbox"/> Entropy by Interface . <input type="checkbox"/> Braided by Interface . <input type="checkbox"/> Silurian GlasBac Tile by Interface .

	<input type="checkbox"/> FLOR by Interface. <input type="checkbox"/> Super Flor by Interface. <input type="checkbox"/> Surreal MC007 by Mohawk. <input type="checkbox"/> Stimulus, P/6565 blip by Milliken. <input type="checkbox"/> Savanna by Milliken. <input type="checkbox"/> Radiance by Shaw. <input type="checkbox"/> Disperse Tile by Shaw. <input type="checkbox"/> No Rules Collection by Shaw. <input type="checkbox"/> Diffuse by Shaw. <input type="checkbox"/> Fade Tile by Shaw. <input type="checkbox"/> Brainstorm #03387, ER3 Modular by Tandus. <input type="checkbox"/> Landscape Colours by Tandus. <input type="checkbox"/> Abrasive Action by Tandus (interior walk-off mat) <input type="checkbox"/> Other: _____
Wall Base	Rubber Base - 096513 (09651): <input type="checkbox"/> Type TS by Burke. (TS more expensive than TP type) <input type="checkbox"/> Type TP by Johnsonite. Style: _____ <input type="checkbox"/> Resilient flooring: Cove (with top-set toe) <input type="checkbox"/> Carpet: Straight (toeless). Base Height: As indicated. <input type="checkbox"/> Wood base – 064023 (06402)
Wood Flooring - 096400 (09640):	Basis of Design Product: _____ Material: <input type="checkbox"/> Solid wood. Engineered (laminates): <input type="checkbox"/> Armstrong <input type="checkbox"/> Pergo <input type="checkbox"/>  Bamboo : <input type="checkbox"/> Calibamboo. <input type="checkbox"/> Re-claimed wood planks. Width: <input type="checkbox"/> Strip, 1-1/2 to 2-1/4 inches wide, random lengths. <input type="checkbox"/> Plank, 3 to 8 inches wide, random lengths. <input type="checkbox"/> Parquet. Species: _____ Wood Finish: <input type="checkbox"/> Field Finished: Solid (traditional) <input type="checkbox"/> Factory Finished. Attachment Method: <input type="checkbox"/> Glue <input type="checkbox"/> Nailed Substrate: <input type="checkbox"/> Wood <input type="checkbox"/> Concrete Wall base: <input type="checkbox"/> Matching Wood <input type="checkbox"/> Rubber base
Wood Athletic Flooring - 096466	<input type="checkbox"/> AacerCush I+ by Aacer. <input type="checkbox"/> Game lines <input type="checkbox"/> School Logo –also indicate on drawings.
Concrete moisture barrier	Concrete Moisture Barrier - 071920 (07191) Applied when moisture test fails. Need to bead blast floor prior to application.
Concrete moisture test	Concrete Moisture Test - 014150 (01415) Test Prior to installing carpet, resilient floor over concrete.
Access flooring  - 096900 (10270)	Equipment Room: <input type="checkbox"/> Panel: RWC100 (1000 lbf concentrated load) concrete filled, cornerbolt steel panel. Understructure: M285 pedestal, B800 base, BG-4 steel stringer, 4x4' rigid grid system stringer system by Maxcess. MRI Room: <input type="checkbox"/> Panel: H-24/60 (1750 lbf concentrated load), solid aluminum. Other: _____ Pedestal Height: As indicated. (12 inches-default, confirm floor is depressed) Laminated Floor Tile for access flooring: <input type="checkbox"/> Nevamar Company, LLC, with Maxcess SpecTrim edges. Floor coverings: <input type="checkbox"/> VCT <input type="checkbox"/> Solid vinyl tile <input type="checkbox"/> Static-control <input type="checkbox"/> raw (none). Type: <input type="checkbox"/> Steel (cheaper) <input type="checkbox"/> Aluminum (more expensive, MRI rooms)

TILE – 093000 (09310)

Ask for [TCNA's TCA manual](#) if you don't have one.

Tile Manufacturers	<input type="checkbox"/> Daltile/American Olean <input type="checkbox"/> Crossville <input type="checkbox"/> Interceramic
Grout/Mortar Manufacturers	<input type="checkbox"/> Custom <input type="checkbox"/> Mapei <input type="checkbox"/> Laticrete
Floor Thickset (coordinate 2" slab depression with structural) Location: <input type="checkbox"/> On grade <input type="checkbox"/> Upper floors. (Callout installation methods by TCNA numbers.)	Basis of Design style, color, manuf: _____ Type: <input type="checkbox"/> Unglazed Ceramic Mosaic Tile <input type="checkbox"/> Other: Size: <input type="checkbox"/> 2x2 inches <input type="checkbox"/> As indicated on Drawings. Substrate: <input type="checkbox"/> Concrete flooring <input type="checkbox"/> Plywood flooring Concern with floor deflection? <input type="checkbox"/> Yes <input type="checkbox"/> No. Thickset (2 inch depression required): <input type="checkbox"/> TCNA #F121 (w/waterproofing) <input type="checkbox"/> TCNA #F132 (no waterproofing) Thinset: <input type="checkbox"/> TCNA #F122 (w/waterproofing) <input type="checkbox"/> TCNA #F113 (no waterproofing) Shower: <input type="checkbox"/> TCNA #B415 (waterproof membrane, with TCNA W244 wall). Use thinset method for remodeling tiled floors, unless new floor drain (by plumbing consultant) is also needed.
Base	Basis of Design type, color, manuf: _____
Walls	Basis of Design style, color, manuf: _____ Type: <input type="checkbox"/> Field Glazed Ceramic Tile <input type="checkbox"/> Accent Glazed Ceramic Tile <input type="checkbox"/> Other: Size: <input type="checkbox"/> 4x4 inches <input type="checkbox"/> As indicated on Drawings. Thinset: <input type="checkbox"/> TCNA #W244 (with or without water barrier) <input type="checkbox"/> Tile over cement board. <input type="checkbox"/> Gypsum board and painted above wainscot tiles.
Threshold at Tile transition	Stone thresholds: <input type="checkbox"/> Marble <input type="checkbox"/> Granite <input type="checkbox"/> Solid polymer thresholds.
Ceiling	<input type="checkbox"/> TCNA #SR614 (installation over fiber-reinforced gypsum board over waterproof membrane).

WINDOWS


Sound rated	General: If needed indicate STC values where required for each windows types.
Steel Windows- Hollow Metal (Cold formed) - 085123 (08510) <input type="checkbox"/> Exterior <input type="checkbox"/> Interior	Coordinate this item with 08110 Steel door and frames.
	Fire-rated: <input type="checkbox"/> 20 min. <input type="checkbox"/> 40 min <input type="checkbox"/> 60 min <input type="checkbox"/> Non-fire-rated.
	Basis of design: <input type="checkbox"/> DV Fyre-Tec. <input type="checkbox"/> Optimum. <input type="checkbox"/> HM door manufacturers
	<input type="checkbox"/> Fixed. <input type="checkbox"/> Sliding <input type="checkbox"/> Casement <input type="checkbox"/> Awning <input type="checkbox"/> Other:
	Glazing Type: Cross-reference – 088000 (08800) for actual glazing type. <input type="checkbox"/> clear insulated. <input type="checkbox"/> clear insulated w/ low-e <input type="checkbox"/> single pane <input type="checkbox"/> other: _____
	Finish: <input type="checkbox"/> Standard field paint - 099100 (09910) <input type="checkbox"/> Factory finished. <input type="checkbox"/> High Performance field paint – 099600 (09960)
Steel Windows - Solid Steel (Hot rolled) - 085123 (08510) – every expensive. <input type="checkbox"/> Exterior <input type="checkbox"/> Interior	Fire-rated: <input type="checkbox"/> 20 min. <input type="checkbox"/> 40 min <input type="checkbox"/> 60 min <input type="checkbox"/> Non-fire rated.
	Basis of Design: <input type="checkbox"/> Jamestown 175, 1-3/4" deep by Hope's Windows, Inc. <input type="checkbox"/> Torrance Steel Window <input type="checkbox"/> Other: _____
	<input type="checkbox"/> Fixed. <input type="checkbox"/> Sliding <input type="checkbox"/> Casement <input type="checkbox"/> Awning <input type="checkbox"/> Single Hung <input type="checkbox"/> Double Hung <input type="checkbox"/> Projected <input type="checkbox"/> Other: _____
	Glazing Type: Cross-reference – 088000 (08800) for actual glazing data. <input type="checkbox"/> clear insulated. <input type="checkbox"/> clear insulated w/ low-e <input type="checkbox"/> single <input type="checkbox"/> other: _____
	<input type="checkbox"/> Standard field painted – 099100 (09910) <input type="checkbox"/> Factory painted. <input type="checkbox"/> High Performance Coatings field painted – 099600 (09960)
	<input type="checkbox"/> Fixed. <input type="checkbox"/> Sliding <input type="checkbox"/> Casement <input type="checkbox"/> Awning <input type="checkbox"/> Single Hung <input type="checkbox"/> Double Hung <input type="checkbox"/> Projected <input type="checkbox"/> Other: _____
Aluminum Windows - 085113 (08520) <input type="checkbox"/> Exterior <input type="checkbox"/> Interior	Glazing Type: Cross-reference 08800 for actual glazing data. <input type="checkbox"/> Clear insulated. <input type="checkbox"/> clear insulated w/ low-e <input type="checkbox"/> single <input type="checkbox"/> other: _____
	<input type="checkbox"/> Clear anodized <input type="checkbox"/> Color anodized: _____
	<input type="checkbox"/> 2-coat Kynar 70% <input type="checkbox"/> 2-coat Kynar 70% Mica <input type="checkbox"/> 3-coat Kynar 70% Color: _____
	Better to cross-reference other section to match if possible.
Wood Windows – 085200 (08550) <input type="checkbox"/> Exterior <input type="checkbox"/> Interior	Category: <input type="checkbox"/> Stock windows. <input type="checkbox"/> Custom windows as detailed on Drawings [to match existing].
	Types: <input type="checkbox"/> Fixed. <input type="checkbox"/> Sliding <input type="checkbox"/> Casement <input type="checkbox"/> Awning <input type="checkbox"/> Single Hung <input type="checkbox"/> Double Hung <input type="checkbox"/> Projected <input type="checkbox"/> Other: _____
	Muntin bars: <input type="checkbox"/> True divided lites <input type="checkbox"/> Simulated divided lites
	Glazing: <input type="checkbox"/> clear insulated <input type="checkbox"/> clear insulated w/low -e <input type="checkbox"/> single pane.
Clerestory Windows	Glazing: <input type="checkbox"/> Glass <input type="checkbox"/> Kalwall .
	Type: <input type="checkbox"/> Fixed <input type="checkbox"/> None. Operable: <input type="checkbox"/> Manual <input type="checkbox"/> Electrical <input type="checkbox"/> None. Same window as: _____
Window Wall	Glazing: <input type="checkbox"/> Glass <input type="checkbox"/> Kalwall .
Aluminum Frames - 081216	Consider using this section for “interior” applications of entrances and storefront. Much cheaper compare to exterior types and unnecessary.
	Storefronts: Wilson Partitions . (Part of Arcadia Windows) <input type="checkbox"/> Series 525 with 2 inch trim.
	Western Integrated Materials, Inc. <input type="checkbox"/> Series 487 with 2 inch trim. <input type="checkbox"/> Series 725 with 2 inch trim.
	<input type="checkbox"/> Modulex, Inc : Division of Pacific National Group.
	<input type="checkbox"/> RACO Interior Products, Inc.
	<input type="checkbox"/> Other: _____
	Doors: <input type="checkbox"/> Wide stile <input type="checkbox"/> Medium stile <input type="checkbox"/> Narrow stile
	Finish: <input type="checkbox"/> Clear anodized <input type="checkbox"/> Color anodized: _____
	<input type="checkbox"/> 2-coat Kynar 70% <input type="checkbox"/> 2-coat Kynar 70% Mica <input type="checkbox"/> 3-coat Kynar 70% Color: _____
	Better to cross-reference other section to match if possible. Glazing:

<p>Storefront - 084113 (08411)</p> <p><input type="checkbox"/> Exterior <input type="checkbox"/> Interior</p> <p>Glazing: Storefront: <input type="checkbox"/> Clear insulated <input type="checkbox"/> Clear insulated & e-coat</p> <p>Door: <input type="checkbox"/> Clear 1/4 inch single. <input type="checkbox"/> Insulated glazing on doors (rare).</p>	<p><input type="checkbox"/> Tempered, single pane. <input type="checkbox"/> Clear insulated <input type="checkbox"/> clear insulated w/low -e</p> <p>Storefront (Window): <input type="checkbox"/> Trifab Versaglaze 451, Non-thermal, 2" x 4-1/2" by Kawneer. <input type="checkbox"/> AFG451 Series, 2" x 4-1/2" by Arcadia. <input type="checkbox"/> TC470 Series, 2-1/4 by 4-1/2 inch by Arcadia. <input type="checkbox"/> 451-S, 2 by 4-3/4 inch by US Aluminum. Other: _____</p> <p>Swing Door: <input type="checkbox"/> Wide (5 inch), Tuffline 500 by Kawneer. <input type="checkbox"/> Medium (3-1/2 inch) Tuffline 350 by Kawneer. <input type="checkbox"/> Narrow (2-1/8 inch) 190 by Kawneer. <input type="checkbox"/> WS512 Series, Wide Stile Door 1-3/4" by Arcadia. <input type="checkbox"/> Model 850, 5 inch wide stiles, heavy-duty doors by US Aluminum <input type="checkbox"/> Model 800, 3-1/2 inch medium stile, heavy-duty doors by US Aluminum <input type="checkbox"/> Other: _____</p> <p>Note: Tuffline is 3 times more expensive than regular line but so much better. Door wall thickness: <input type="checkbox"/> Heavy (Tuffline, 0.188 inch) <input type="checkbox"/> Standard (0.125 inch) Wall Frame: <input type="checkbox"/> Heavy <input type="checkbox"/> Standard <input type="checkbox"/> Swing, tempered, full glazing (1/4 inch clear single glazing) Finish: <input type="checkbox"/> Clear anodized <input type="checkbox"/> Kynar 70 %: Color: _____ Transom: <input type="checkbox"/> Single <input type="checkbox"/> Insulated <input type="checkbox"/> Tinted <input type="checkbox"/> None Sidelight: <input type="checkbox"/> Single <input type="checkbox"/> Insulated <input type="checkbox"/> Tinted <input type="checkbox"/> None Finish: <input type="checkbox"/> Clear anodized <input type="checkbox"/> Color anodized: _____ <input type="checkbox"/> 2-coat Kynar 70% <input type="checkbox"/> 2-coat Kynar 70% Mica <input type="checkbox"/> 3-coat Kynar 70%</p> <p><input type="checkbox"/> Sliding Aluminum Framed Glass Door – 083213 (08163)</p>
<p>Glazed Aluminum Curtain Walls – 084413 (08911)</p>	<p>Arcadia: <input type="checkbox"/> OPG-1500 Thermal, 2 1/4" X 5-1/2" for 1/4" – 1-1/8" Glass. <input type="checkbox"/> OPG-1900 Thermal, 2-1/4" x 7". <input type="checkbox"/> OPG-1800, 2-1/4" x 7". <input type="checkbox"/> OPG-3000 Thermal, 2 1/4" X 10" for 1/4" – 1-1/8" Glass. <input type="checkbox"/> OPG-3010 Thermal, 3" X 10" for 1/4" – 1-1/8" Glass. <input type="checkbox"/> OPG-6000, 2-1/4" x 6". 2 and 4 sided structural glazing.</p> <p>Kawneer: <input type="checkbox"/> 1600 Wall System 1 <input type="checkbox"/> Series 1600 Wall System 2 <input type="checkbox"/> 1600UT (Ultra Thermal) System 1 <input type="checkbox"/> 1620 SSG <input type="checkbox"/> Clearwall – Screw Spline <input type="checkbox"/> Clearwall – Shear Block <input type="checkbox"/> System 5600, 2-1/4 inch system by EFCO. <input type="checkbox"/> Other: _____ <input type="checkbox"/> Matching aluminum sunshades: <input type="checkbox"/> Outrigger type <input type="checkbox"/> Other: _____</p> <p>Finish: <input type="checkbox"/> Clear anodized <input type="checkbox"/> Color anodized: _____ <input type="checkbox"/> 2-coat Kynar 70% <input type="checkbox"/> 2-coat Kynar 70% Mica <input type="checkbox"/> 3-coat Kynar 70%</p>
<p>WindowWall (can be combined into Curtainwall or Storefront section)</p>	<p>Arcadia: <input type="checkbox"/> AG601 (center glazed) and AFG601 (offset glazed) Series: 2"x6". <input type="checkbox"/> AFG7251 Series: 2-1/2"x7-1/4". <input type="checkbox"/> TC 770 Series: 2-1/2"x7".</p> <p>Finish: <input type="checkbox"/> Clear anodized <input type="checkbox"/> Color anodized: _____ <input type="checkbox"/> 2-coat Kynar 70% <input type="checkbox"/> 2-coat Kynar 70% Mica <input type="checkbox"/> 3-coat Kynar 70%</p>
<p>Glazing – 088000 (08800)</p>	<p>Need values from Mechanical Consultant. Windows: Insulated, 1 inch total (2 pane of 1/4 and 1/2 of air space) Low e coating on #2 surface (default) <input type="checkbox"/> #3 surface.</p>

	<p>Clear, insulated, low-e glazing:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Solarban 60 (low -e coating) by Vitro. SHGC .39 <input type="checkbox"/> SN68 (low -e coating) by Guardian. SHGC .38 <input type="checkbox"/> Solarban 67 (low -e coating) by Vitro. <input type="checkbox"/> Solarban 70XL (low -e coating) by Vitro. SHGC .28 <input type="checkbox"/> SNX 62/27 (low -e coating) by Guardian. SHGC .27 <input type="checkbox"/> Solarban 90 by Vitro. SHGC .23 <input type="checkbox"/> SNX51/23 by Guardian. SHGC .23 <input type="checkbox"/> Solarban R100 by Vitro. SHGC .23 <input type="checkbox"/> SNR43 by Guardian. SHGC .23 <input type="checkbox"/> Other: _____ <p>Tinted, low-e glazing:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Tint Color: _____ <input type="checkbox"/> Solarban 60 (low -e coating) by Vitro. <input type="checkbox"/> Solarban 67 (low -e coating) by Vitro. <input type="checkbox"/> Solarban 70XL (low -e coating) by Vitro. <input type="checkbox"/> Other: _____
<p>Flexible Sheet Flashing - 076500 (07650)</p>	<p>Use at all openings to minimize water intrusions.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Vycor Plus by WR Grace. <input type="checkbox"/> Tyvek flashing system, commercial by DuPont. <input type="checkbox"/> Other: _____
<p>Horizontal louver blinds - 122113 (12491)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Riviera, 1 inch wide aluminum by Levolor. <input type="checkbox"/> Riviera, 2 inch wide aluminum by Levolor. <input type="checkbox"/> CD60, 1 inch wide aluminum by Hunter Douglas. <input type="checkbox"/> Chalet Woods, 2 inch wide Basswood by Hunter Douglas. <input type="checkbox"/> EverWood, 2 inch wide composite wood by Hunter Douglas. <input type="checkbox"/> Other: _____
<p>Vertical louver blinds - 122116 (12492)</p>	<p>Basis of Design: _____</p>
<p>Roller Window Shades - 122413 (12494)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> 0706 Oyster Blackout by MechoShade. <input type="checkbox"/> Thermo Veil Basketweave Collection, 1300 Series by MechoShade. <input type="checkbox"/> Vimco by Lutron. <input type="checkbox"/> Electrically Operated Roller Shades Sivoia QED by Lutron. <p>Operation: <input type="checkbox"/> Manual pull-chain <input type="checkbox"/> Electrically operated.</p> <p>Configuration:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Solar: ThermoVeil 1300 Series basket weave by MechoShade. <input type="checkbox"/> Blackout: ThermoVeil 700 Series for A/V by MechoShade. <input type="checkbox"/> Dual shade (both solar and blackout) <input type="checkbox"/> Other: _____ <p>Single shades bracket: <input type="checkbox"/> SlimLine <input type="checkbox"/> Standard <input type="checkbox"/> Pocket Extended <input type="checkbox"/> Extended.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Double shades #10, blackout rear, sunscreen front. <input type="checkbox"/> Double shades #15, blackout top, sunscreen bottom. <p>Mounting: <input type="checkbox"/> Surface mounted <input type="checkbox"/> Surface mounted with fascia</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recess mounted with ceiling pocket and fascia <input type="checkbox"/> Recess mounted without ceiling pocket or fascia.

DOORS

(Please forward Door Schedule sheet in pdf whenever changes are made.)

Sound rated	General: If needed indicate STC values where required for each door types.
Steel Doors and Frames - 081113 (08110)  Interior: <input type="checkbox"/> 18 gage doors w/ 16 gage welded frames. (knock-down for LMUSD) Exterior: <input type="checkbox"/> 16 gage doors w/ 16 gage welded frames. (14 gage frame for LMUSD)	Manufacturers: <input type="checkbox"/> Steelcraft <input type="checkbox"/> Ceco <input type="checkbox"/> Curries <input type="checkbox"/> Timely (factory-finished frames) <input type="checkbox"/> Other: _____ Fire-rated: <input type="checkbox"/> 20 min. <input type="checkbox"/> 45 min <input type="checkbox"/> 60 min <input type="checkbox"/> 1-1/2 hr <input type="checkbox"/> Non fire rated Glazing (1/4" default) at: <input type="checkbox"/> Narrow lite. <input type="checkbox"/> Half. <input type="checkbox"/> Full <input type="checkbox"/> None <input type="checkbox"/> Safety glazing for fire-rated. (Wire glass is not allowed.) <input type="checkbox"/> 1-way security mirror glazing. Louver: <input type="checkbox"/> at bottom. <input type="checkbox"/> Full panel <input type="checkbox"/> Size as indicated <input type="checkbox"/> Fusible link for fire-rated. <input type="checkbox"/> Transom louvers (10200) Transom Glazing Type: <input type="checkbox"/> Insulated <input type="checkbox"/> Single <input type="checkbox"/> None Sidelight Glazing Type: <input type="checkbox"/> Insulated <input type="checkbox"/> Single <input type="checkbox"/> None <input type="checkbox"/> Factory primed for field painted - 099100 (09910) -default. <input type="checkbox"/> Factory primed for field high performance coatings - 099600 (09960) <input type="checkbox"/> Factory finished w/ powdered or enamel.
Flush Wood Doors – 081416 (08211) [Need to distinguish flush vs stile and rail when both are in project] <input type="checkbox"/> Exterior (no warranty) <input type="checkbox"/> Interior (lifetime-warranty) Special: <input type="checkbox"/> Pocket Doors <input type="checkbox"/> Sliding Doors	Manufacturers: <input type="checkbox"/> Masonite (Marshfield-Algoma) <input type="checkbox"/> Eggers Industries (VT industries) <input type="checkbox"/> Haley Brothers <input type="checkbox"/> Other: _____ Fire-rated: <input type="checkbox"/> 20 min. <input type="checkbox"/> 40 min <input type="checkbox"/> 60 min <input type="checkbox"/> Non fire rated Face material: <input type="checkbox"/> Plastic Laminate. <input type="checkbox"/> High-Impact. (C/S) <input type="checkbox"/> Medium Density Overlay (MDO) -field painted. Veneers: <input type="checkbox"/> plain sliced white maple <input type="checkbox"/> plain sliced white birch <input type="checkbox"/> Other: _____ Solid Core (default): <input type="checkbox"/> Structural composite lumber (SCL – default. Better than SLC) <input type="checkbox"/> Staved lumber core (SLC) <input type="checkbox"/> Particle board (normally for cheap construction) <input type="checkbox"/> Fire-Resistant composite core (default for fire-rated doors) Hollow Core: default for closet doors. Louvers at: <input type="checkbox"/> Bottom <input type="checkbox"/> Full panel <input type="checkbox"/> Size as indicated <input type="checkbox"/> None <input type="checkbox"/> Fusible link for fire-rated. Louver material: <input type="checkbox"/> Galvanized steel <input type="checkbox"/> Clear anodized <input type="checkbox"/> Color anodized. <input type="checkbox"/> Wood, matching door face <input type="checkbox"/> Closet Bi-fold Doors. <input type="checkbox"/> Closet sliding Doors. <input type="checkbox"/> Sliding barn doors <input type="checkbox"/> Pocket Sliding Doors. <input type="checkbox"/> Lead lined doors. Glazing: <input type="checkbox"/> Vision glazing. <input type="checkbox"/> Full glazing. <input type="checkbox"/> None <input type="checkbox"/> Safety glazing for fire-rated. (wire glass is not allowed) Frame: <input type="checkbox"/> Hollow Metal <input type="checkbox"/> Wood <input type="checkbox"/> Aluminum
Stile and Rail Doors – 081433 (08212) (swinging) <input type="checkbox"/> Exterior (no warranty) <input type="checkbox"/> Interior (lifetime-warranty)	Manufacturers: <input type="checkbox"/> Masonite (Marshfield-Algoma) <input type="checkbox"/> Eggers Industries (VT industries) <input type="checkbox"/> Haley Brothers <input type="checkbox"/> Other: _____ Fire-rated: <input type="checkbox"/> 20 min. <input type="checkbox"/> 40 min <input type="checkbox"/> 60 min <input type="checkbox"/> Non fire rated Glazing: <input type="checkbox"/> Vision glazing. <input type="checkbox"/> Full glazing. <input type="checkbox"/> Half <input type="checkbox"/> None <input type="checkbox"/> Safety glazing for fire-rated. (wire glass is not allowed) Louvers at: <input type="checkbox"/> Bottom <input type="checkbox"/> Full panel <input type="checkbox"/> Size as indicated <input type="checkbox"/> None <input type="checkbox"/> Fusible link for fire-rated. Construction: <input type="checkbox"/> Stile and Rail <input type="checkbox"/> Raised-Panel <input type="checkbox"/> Flat-Panel Face: <input type="checkbox"/> Plastic Laminate Veneers: <input type="checkbox"/> plain sliced white maple <input type="checkbox"/> plain sliced white birch <input type="checkbox"/> medium density overlay (MDO)-field painted. Frame: <input type="checkbox"/> Hollow Metal <input type="checkbox"/> Wood <input type="checkbox"/> Aluminum <input type="checkbox"/> Stile and Rail Doors (sliding): 08263
083213 Sliding Aluminum-	<input type="checkbox"/> HSW45Aluminum framed single track sliding system by Nanawall

Framed Glass Doors	<input type="checkbox"/> HSW60 thermally broken aluminum framed single track sliding by Nanawall
083214 Folding Aluminum-Framed Glass Doors	<input type="checkbox"/> SL45 Aluminum Framed Folding System by Nanawall <input type="checkbox"/> SL60 Aluminum Framed Folding System by Nanawall <input type="checkbox"/> SL70 Aluminum Framed Folding System by Nanawall
Automatic Entrance Doors - 084229 (08460) <input type="checkbox"/> Exterior. <input type="checkbox"/> Interior.	Following furnish aluminum doors, operators, and sensors as one system. Manufacturers: <input type="checkbox"/> Horton <input type="checkbox"/> Door-O-Matic <input type="checkbox"/> Stanley <input type="checkbox"/> Other: _____ Door type: <input type="checkbox"/> Sliding <input type="checkbox"/> Swing (Need guard rail) Finish: <input type="checkbox"/> Clear anodized <input type="checkbox"/> Other: _____ <input type="checkbox"/> Match storefront or windows system finish. (difficult to Kynar)
All-Glass Entrance and Storefronts-084126 (08450)	Manufacturers: <input type="checkbox"/> CRL <input type="checkbox"/> Dormakaba <input type="checkbox"/> Klein <input type="checkbox"/> Other: _____ Stainless Steel Fitting: <input type="checkbox"/> Patch fittings <input type="checkbox"/> Continuous rail fittings <input type="checkbox"/> Exit Devices
FRP Doors 08221	<input type="checkbox"/> Fiberglass reinforced plastic doors and frames
Sound-control doors 08346	<input type="checkbox"/> STC: _____
Overhead Doors <input type="checkbox"/> Exterior <input type="checkbox"/> Interior	<p>Overhead Coiling Doors - 083323 (08331)</p> <p>Cornell:</p> <input type="checkbox"/> ESD 10 : rolling service doors. <input type="checkbox"/> ESD 20 : insulated doors. <input type="checkbox"/> ERD 11 : Smokeshield Smoke and fire rated coiling doors. <input type="checkbox"/> ERD 21 : Smokeshield Firemiser insulated fire doors. <p>Options:</p> <input type="checkbox"/> Non-insulated <input type="checkbox"/> Insulated <input type="checkbox"/> Non-rated <input type="checkbox"/> Rated Manual: <input type="checkbox"/> Push-up <input type="checkbox"/> Crank <input type="checkbox"/> Chain <input type="checkbox"/> Motorized Mounting: <input type="checkbox"/> Face of Wall <input type="checkbox"/> Between Jambs <hr/> <p>Counter Doors 08323 (08331):</p> <p>Cornell:</p> <input type="checkbox"/> ESC 10 : rolling counter doors. <input type="checkbox"/> ESC 20 : rolling counter doors with integral frames. <input type="checkbox"/> ERC 11 : Rolling counter fire door. <input type="checkbox"/> ERC 20 : Rolling counter fire door with integral frame. <input type="checkbox"/> Overhead Door: 650 Series counter doors. <p>Options:</p> <input type="checkbox"/> with integral counter <input type="checkbox"/> without integral counter. <input type="checkbox"/> Non-rated <input type="checkbox"/> Rated Manual: <input type="checkbox"/> Push-up <input type="checkbox"/> Crank <input type="checkbox"/> Chain <input type="checkbox"/> Motorized Mounting: <input type="checkbox"/> Face of Wall <input type="checkbox"/> Between Jambs <hr/> <p>Overhead Coiling Grilles - 083326 (08334)</p> <input type="checkbox"/> ESG 10 by Cornell: open curtain rolling grilles. <input type="checkbox"/> ERG-IBC by Cornell: CrossingGard emergency Response Grille. Manual: <input type="checkbox"/> Push-up <input type="checkbox"/> Crank <input type="checkbox"/> Chain <input type="checkbox"/> Motorized Mounting: <input type="checkbox"/> Face of Wall <input type="checkbox"/> Between Jambs <hr/> <p>Overhead Sectional Doors 083613 (08361)</p> <p>* Cornell (cookson) does not make sectional doors.</p> <input type="checkbox"/> Aluminum 511 glazed panels by Overhead Door <input type="checkbox"/> Model 3216, Thermally-Broken Insulated Steel Back by CHI . Glazing: <input type="checkbox"/> Tempered Glass <input type="checkbox"/> Insulated glass (14 feet wide max) <input type="checkbox"/> Plexiglas <input type="checkbox"/> Clear Lexan Operation: <input type="checkbox"/> Pull Rope <input type="checkbox"/> Chain <input type="checkbox"/> Motorized Finish: <input type="checkbox"/> Clear anodized (standard) <input type="checkbox"/> Bronze anodized <input type="checkbox"/> Powdered coated Spring Cycle Duty: <input type="checkbox"/> 10k (standard) <input type="checkbox"/> 25k <input type="checkbox"/> 50k <input type="checkbox"/> 75k <input type="checkbox"/> 100k Finish: <input type="checkbox"/> Factory powdered coated galvanized steel (default). <input type="checkbox"/> Stainless steel. <input type="checkbox"/> Clear anodized aluminum.

	<input type="checkbox"/> Color anodized aluminum, color: _____
Access Doors and Frames - 083113 (08311) <input type="checkbox"/> Exterior <input type="checkbox"/> Interior	<input type="checkbox"/> Fire-rated <input type="checkbox"/> Non-fire-rated.
	<input type="checkbox"/> Walls. <input type="checkbox"/> Ceilings. <input type="checkbox"/> Insulated. <input type="checkbox"/> Non-insulated.
	<input type="checkbox"/> Exposed flange. <input type="checkbox"/> Flange covered with joint compound for gypsum wall.
	<input type="checkbox"/> Field painted, factory primed steel. (default) <input type="checkbox"/> Stainless steel.
083328 Elevator Door Smoke Containment System	Plastic 083493 (07870): <input type="checkbox"/> M200 by SmokeGuard Metal Door 08301: <input type="checkbox"/> Total Door System
083700 Horizontal Sliding Accordion-Type Fire Doors	<input type="checkbox"/> Horizontal sliding accordion-type fire doors by Won-Door
083800 Traffic Doors	<input type="checkbox"/> Food service (traffic) doors by Eliason
Door Hardware – 087100 (08710)	Consultant coordination: Send floor plans and door schedule, finish requirement to door hardware consultant. Owner’s Lock Preference: <input type="checkbox"/> email to door hardware consultant if any. Schlage: <input type="checkbox"/> Primus <input type="checkbox"/> Generic. Sargent: <input type="checkbox"/> Primus <input type="checkbox"/> Generic. Door hardware consultant to provide CSI 3-part spec with Hardware Sets. Coordinate with electrical requirements for items below. <input type="checkbox"/> Low energy door operators (accessible push button type for regular doors) <input type="checkbox"/> Magnetic door holders
Automatic Door Operators 087113 (08716)	Doors are not supplied, only operators. This section can be combined with 087100 – Part of Hardware Set by Door Hardware Consultant. – Indicate this on Door Schedule. <input type="checkbox"/> Low energy door operators (accessible push button type)
Fences and Gates	Include gates in the Door Hardware Schedule. - Door hardware consultant need to provide keying requirements.
Operable Panel Partitions - 102226 (10651)	<input type="checkbox"/> Paired panel Model #632 by Hufcor . <input type="checkbox"/> Paired panel Series 6500 by Hufcor . <input type="checkbox"/> Alpha Series by Advanced Equipment Corp. <input type="checkbox"/> Classic Elite by Skyfold . Type: <input type="checkbox"/> Manual. <input type="checkbox"/> Electrically operated. STC Rating: _____ Pocket doors: <input type="checkbox"/> Pocket Door is by others (partition manufacturers don’t make them) <input type="checkbox"/> None.
ICU/CCU Doors 084243 (08343)	Manual <input type="checkbox"/> Sliding <input type="checkbox"/> Swinging Finish: <input type="checkbox"/> Match storefront or windows system finish. <input type="checkbox"/> Other: _____

PAINTING

<p>Paint (best to select colors from one manufacturer)</p>	<p><input type="checkbox"/> Dunn-Edwards. <input type="checkbox"/> Sherwin Williams. <input type="checkbox"/> PPG <input type="checkbox"/> Kelly-Moore. <input type="checkbox"/> Vista Paint. <input type="checkbox"/> Benjamin-Moore <input type="checkbox"/> Other: _____</p>
<p>Exterior Paint - 099100 (09910)</p>	<p>CMU: <input type="checkbox"/> Semi-gloss Concrete: <input type="checkbox"/> Semi-gloss Portland Cement Plaster: <input type="checkbox"/> Standard latex paint <input type="checkbox"/> Elastomeric paint: Tnemec 156 Enviro-Crete by Tnemec. Gloss: <input type="checkbox"/> Flat <input type="checkbox"/> Semi-gloss Metal: <input type="checkbox"/> Semi-gloss <input type="checkbox"/> Gloss Wood: <input type="checkbox"/> Painted. <input type="checkbox"/> Stained and clear finish <input type="checkbox"/> Clear finish.</p>
<p>Interior Paint - 099100 (09910)</p>	<p>CMU: <input type="checkbox"/> Semi-gloss Concrete: <input type="checkbox"/> Semi-gloss Metal: <input type="checkbox"/> Semi-gloss <input type="checkbox"/> Gloss Gypsum Board: Ceiling: <input type="checkbox"/> Semi-gloss <input type="checkbox"/> Eggshell <input type="checkbox"/> Flat Walls: <input type="checkbox"/> Semi-gloss <input type="checkbox"/> Eggshell Gypsum Veneer: <input type="checkbox"/> Semi-gloss <input type="checkbox"/> Flat Glass-Reinforced Gypsum(GRG): <input type="checkbox"/> Semi-gloss <input type="checkbox"/> Flat Wood: <input type="checkbox"/> Painted. <input type="checkbox"/> Stained and clear finish <input type="checkbox"/> Clear finish.</p>
<p>High Performance Coatings - Field painted - 099600 (09960)</p>	<p>Need to indicate on drawing where high performance paint vs regular paint will be applied. Plaster: See Exterior Paint above. Metals: <input type="checkbox"/> Gypsum board (Epoxy): 113 by Tnemec. <input type="checkbox"/> CMU walls (Epoxy): Stoneglaze by Stonhard. <input type="checkbox"/> Galvanized and Ferrous Metal Finish: Aliphatic Acrylic Urethane (Semi-gloss finish) <input type="checkbox"/> Metallic Finish: Endura-Shield 1077, spray-applied by Tnemec. <input type="checkbox"/> Non-Metallic Finish: Endura-Shield 1075 by Tnemec.</p>
<p>Factory Finishes - specified in each section (Some common options, check with manufacturers)</p>	<p>Steel: <input type="checkbox"/> Factory primer only for field finish. <input type="checkbox"/> Powdered coated. <input type="checkbox"/> Enamel. Galvanized Steel: <input type="checkbox"/> Hot-dipped galvanized. <input type="checkbox"/> Zinc coated. Aluminum: Kynar (fluoropolymer): <input type="checkbox"/> 2 coat (primer & finish) <input type="checkbox"/> 3 coat (add clear coat) Anodized: <input type="checkbox"/> Clear anodized <input type="checkbox"/> Colored anodized, color:</p>
<p>Anti-Graffiti Coating System - 099623 (09966)</p>	<p>Non-sacrificial Anti-Graffiti Coating System: Clear Urethane based system: Textured Coatings of America. <input type="checkbox"/> Clear <input type="checkbox"/> Opaque.</p>

STAIRS/ELEVATORS

Identify a stair number when more than one stair exists for a project. (Do the same for elevators)

Huge Disclaimer: Elevators/Lifts are specialized equipment that is beyond my expertise. Please contact your favorite manufacturer and seek help with specs and drawing details. Do not design them in a vacuum (you will have change orders). Have the elevator rep edit their standard spec for your project. I can't edit their spec (again, you will have change orders if you have me edit).

<p>Metal Fabrication 055000 (05500)</p>	<p>Bollards: <input type="checkbox"/> Fixed, utility type, steel tube with concrete fill. <input type="checkbox"/> Removable bollards. Extruded Abrasive Metal Nosings (at stairs): <input type="checkbox"/> Type 24 by American Safety Tread <input type="checkbox"/> Type 24 Spectra by Wooster Products Inc.</p>
<p>Cast-In-Place Concrete - 033000 (03300)</p>	<p><input type="checkbox"/> Concrete stairs - Coordinate with structural.</p>
<p>Metal Stairs - 055100 (05511) <input type="checkbox"/> Exterior. <input type="checkbox"/> Interior.</p>	<p><input type="checkbox"/> Site fabricated. <input type="checkbox"/> Railing as indicated on Drawings. <input type="checkbox"/> Field poured concrete treads (concrete filled metal pan).</p>
<p>Prefabricated Steel Stair System - 055112 (05512) <input type="checkbox"/> Exterior. <input type="checkbox"/> Interior.</p>	<p><input type="checkbox"/> Coordinate with structural for landing attachment to structure. <input type="checkbox"/> American Stairs (Basis of Design). Sharon Stair is equal. <input type="checkbox"/> Picket (default) <input type="checkbox"/> Multiple (5) strand round design. <input type="checkbox"/> Field poured concrete treads. <input type="checkbox"/> Abrasive nosing. (05500) <input type="checkbox"/> Field painted. (09910)</p>
<p>Pipe and Tube Railings - 055213 (05521) <input type="checkbox"/> Exterior. <input type="checkbox"/> Interior.</p>	<p><input type="checkbox"/> Interior: Field painted steel. <input type="checkbox"/> Exterior: Field painted galvanized steel. <input type="checkbox"/> Stainless steel used for : Wing wall for drinking fountains <input type="checkbox"/> in this section. <input type="checkbox"/> Toilet Accessories Section 102800 (10801) ready-made wing-wall from stainless-steel grab bars. <input type="checkbox"/> Wing wall for automatic entrance doors. <input type="checkbox"/> Wing wall below relocatable HVAC unit.</p>
<p>Ornamental Railings - 057300 (05721) <input type="checkbox"/> Exterior. <input type="checkbox"/> Interior.</p>	<p><input type="checkbox"/> Standard catalog items by Julius Blum. Railing: <input type="checkbox"/> Factory finished steel <input type="checkbox"/> Factory prime, field finished steel <input type="checkbox"/> Stainless steel <input type="checkbox"/> Aluminum -clear anodized. <input type="checkbox"/> Bronze Options: <input type="checkbox"/> Glass infill. <input type="checkbox"/> Wood handrail cap <input type="checkbox"/> Wrought iron railings <input type="checkbox"/> Stainless steel inset.</p>
<p>Ladders <input type="checkbox"/> Exterior. <input type="checkbox"/> Interior.</p>	<p><input type="checkbox"/> Field painted steel. Galvanized steel at exterior – 055000 (05500) <input type="checkbox"/> Aluminum ladders - 055134 (05501) by Alaco. <input type="checkbox"/> Other: _____</p>
<p>Hydraulic Elevators - 142400 (14240) (Get help from Elevator Rep.)</p>	<p>Indicated the following on the Drawings: <input type="checkbox"/> Number of stops. <input type="checkbox"/> Total travel height. <input type="checkbox"/> Size. <input type="checkbox"/> Custom call buttons. <input type="checkbox"/> Light fixtures. Basis of Design: <input type="checkbox"/> Kone <input type="checkbox"/> Otis <input type="checkbox"/> ThyssenKrupp <input type="checkbox"/> Schindler <input type="checkbox"/> Republic (Non-proprietary) in Goleta. Elevator consultant: <input type="checkbox"/> Lerch Bates For Otis Elevators: <input type="checkbox"/> Travel under 20 feet: Holeless Hydraulic Elevator. <input type="checkbox"/> Travel from 15 to 44 feet 1 inch: Telescopic Holeless Hydraulic Elevator. <input type="checkbox"/> Travel from 26 to 60 feet: Roped Holeless Hydraulic Elevator—where existing conditions include waterfront, hard-to-drill substrate, hazardous in-ground material or other conditions that make it expensive to drill well holes. <input type="checkbox"/> Travel from 15 to 60 feet: Holed Hydraulic Elevator – where it is cost effective to drill well holes. <input type="checkbox"/> Travel from 50 to 300 feet: Gen2 Machine Room-less System by Otis.</p>
<p>Electric Traction Elevators - 142100 (14210)</p>	<p><input type="checkbox"/> EcoSpace, gearless system by Kone. <input type="checkbox"/> Travel over 120 feet: Elevonic High-Rise Gearless System.</p>

Stairway Chairlifts - 144119	Stair lift for straight stairways: <input type="checkbox"/> XPRESS II by Garaventa . Other: ____
Wheelchair Lifts – 144200 (14420) <input type="checkbox"/> Interior <input type="checkbox"/> Exterior	<input type="checkbox"/> Model Genesis GVL-OP-42; 45 inches maximum lifting height by Garaventa. <input type="checkbox"/> Acme screw lift: CDE 2 gate by National Wheel-O-Vator/ThyssenKrupp. <input type="checkbox"/> Porch lift Model PL-EZE (enclosure) by Access/ThyssenKrupp. <input type="checkbox"/> PL-S by Access/ThyssenKrupp. Indicated the following on the Drawings: <input type="checkbox"/> Number of stops. <input type="checkbox"/> Total travel height. <input type="checkbox"/> Platform size. Configuration: <input type="checkbox"/> Straight-thru <input type="checkbox"/> 90 degree exit <input type="checkbox"/> Both. <input type="checkbox"/> National Wheel-O-Vator/ThyssenKrupp <input type="checkbox"/> Access/ThyssenKrupp

TOILET ACCESSORIES - 102800 (10801)
B-Bobrick Model Number (W x H x D)

- A. Coordinate with Owner if toilet accessories will be Owner Furnished Owner Install (OFOI) or Owner Furnished Contractor Install (OFCI). Some jurisdiction requires showing at least the accessible accessories to check for compliance.
- B. Get accessories pre-approved by client on each project, unless it's another project with same client and we're using exactly the same accessories.
- C. Accessories Schedule should be indicated on Drawings. Identify where each model will be located, showing height requirements. Spec section will cross-reference drawings.
- D. Spec section will not repeat the model numbers. You may revised/delete/add items as needed without affecting specs.**
- E. Bobrick Series Names: (Price Index)
 - 1. Stainless steel: Contra (1.8), Trimline (1.5), and Classic (1.0).
 - 2. Plastic: Matrix (0.6)
- F. Toilet tissue dispensers in accessible toilet compartment shall be recessed, or semi-recessed so as not to project more than 3 inches from face of wall per DSA Policy 99-07.
- G. Indicate items that will be OFCI or OFOI.

Here are some model numbers you can use:

	Surface Mount	Recess Mount
Toilet Seat Cover Dispenser	<input type="checkbox"/> Surface Mount: Classic B-221 , Dispense 250 (15-3/4 x 11 x 2) <input type="checkbox"/> Surface Mount: Contura B-4221 .	<input type="checkbox"/> Recessed: Classic B-301 , Dispense 500 (15-5/8 x 11 x 2-5/8) \$60. <input type="checkbox"/> Recessed: Classic B-3013 , Dispense 500 (15-5/8 x 11-1/4) \$150
Toilet Tissue Dispenser	<input type="checkbox"/> Surface Mount: Contura B-4288 . <input type="checkbox"/> Surface Mount: Single-roll B-66997 , Satin finish. <input type="checkbox"/> Surface Mount: Classic B-2888 , holds two rolls.	<input type="checkbox"/> Semi-Recessed: Classic Multi-roll B-3888 (6-1/16 x 11-1/16 x 3-3/16, project out 2-3/4) <input type="checkbox"/> Semi-Recessed: Classic Single-roll B-6677 (5 1/2" W x 5 1/4" H x 3 3/8" min. depth)
Toilet Seat Cover and Tissue Dispenser Combo	<input type="checkbox"/> Partition Mount: B-3471 . <input type="checkbox"/> Surface Mount: B-3479 .	<input type="checkbox"/> Recessed Mount: Classic B-3474 .
Toilet Seat Cover and Tissue Dispenser Sanitary Napkin Disposal Combo		<input type="checkbox"/> Recessed Mount: Classic B-3571 .
Paper Towel Dispenser	<input type="checkbox"/> Surface Mount: Classic B-262 (10-3/4 x 14 x 4) <input type="checkbox"/> Surface Mount: Classic B-2620 , similar to B-262 , but with knob-latch.	<input type="checkbox"/>
Touchless Paper Towel Dispenser	Georgia Pacific enMotion : <input type="checkbox"/> Surface Mount <input type="checkbox"/>	Recessed Mount <input type="checkbox"/> Stainless steel <input type="checkbox"/> Plastic
Paper Towel Dispenser/Waste Receptacle Combo	<input type="checkbox"/>	<input type="checkbox"/> Recessed: Classic B-369 <input type="checkbox"/> Recessed: Classic B-3944 <input type="checkbox"/> Semi-Recessed: Classic B-3961 (15-5/16 x 54-1/8 x 4-1/8)
Waste Receptacle - Wall Mount	<input type="checkbox"/> Surface Mount: Classic B-275 .	<input type="checkbox"/> Semi-Recessed: Classic B-3644 (15-5/16 x 28-3/4 x 4) <input type="checkbox"/> Contura B-43644
Waste Receptacle – Floor Mount	<input type="checkbox"/> B-2250 with cover <input type="checkbox"/> B-2260 Open-top, No Cover <input type="checkbox"/> B-2280 Open-top, No Cover	<input type="checkbox"/>

Counter Under-mount	<input type="checkbox"/> Circular Waste Chute B-529	
Sanitary Napkin Vendor	<input type="checkbox"/> Surface Mount: Classic B-352 (12-1/2 x 26-3/8 x 4 to 6-3/8) <input type="checkbox"/> Surface Mount: Trimline B-2800 (14-7/8 x 25-3/8 x 4-3/4)	<input type="checkbox"/>
Sanitary Napkin Disposal	<input type="checkbox"/> Surface Mount: Classic B-254 (10-11/16 x 15-1/8 x 4-1/16) <input type="checkbox"/> Surface Mount: Contra B-270 . <input type="checkbox"/> Partition Mount: Classic B-354 .	<input type="checkbox"/> Recessed: Contura B-4353 . <input type="checkbox"/> Recessed: Classic B-353 .
Soap dispenser	<input type="checkbox"/> Surface Mount: Classic B-132 (4-13/16 x 8-1/8 x 3-7/8) \$45. <input type="checkbox"/> Surface Mount: Classic B-2111 (8 1/8 x 4 3/4 x 3 1/2) vertical \$30. <input type="checkbox"/> Surface Mount: Classic B-2112 (horizontal) <input type="checkbox"/> Surface Mount: Contura B-4112 . \$44.	<input type="checkbox"/> Recessed: Contura B-4063 .
Framed Mirror	<input type="checkbox"/> B-290 (Pick one of the standard sizes, 30 x 42 is not standard)	
Framed Mirror w/ Shelf	<input type="checkbox"/> B-292 same as 290 but with shelf	
Channel Framed Mirror w/ Shelf	<input type="checkbox"/> B-166	
Channel Framed Mirror	<input type="checkbox"/> B-165	
Grab Bar	<input type="checkbox"/> Straight, 1-1/4 diameter, B-5806 (12, 18, 24, 30, 36, 42, 48), concealed with flange mount. <input type="checkbox"/> Straight, 1-1/2 diameter, B-6106 (18 to 48), exposed mount. <input type="checkbox"/> Straight, 1-1/2 diameter, B-6806 (18 to 48), concealed with flange mount. <input type="checkbox"/> Straight, 1-1/2 diameter, B-6806.99 (18 to 48), concealed with flange mount with satin, peened nonslip gripping surface. <input type="checkbox"/> L shape, Wheelchair Toilet Compartment, B-5837 (36 x 54) <input type="checkbox"/> L shape, Tub/Shower/Toilet, B-58616 (32 x 28) <input type="checkbox"/> L shape, Tub/Shower/Toilet, B-6861. <input type="checkbox"/> Drinking Fountain Wing Wall: 3800 Series, Type 75 by ASI.	
Diaper Changing Station	<input type="checkbox"/> Surface: Bobrick/Koala Kare KB110-SSWM .	<input type="checkbox"/> Semi-Recessed: B-2210 (30-3/4 x 18-3/4 x 2-1/2)

		<input type="checkbox"/> Recessed: Bobrick/Koala Kare KB100-00ST .
Robe Hook	<input type="checkbox"/> B-7671 Bright polished, Single (2 by 2 flange, project out 1-5/8). <input type="checkbox"/> B-76717 Satin-finish.	
Hat and Coat Hook	<input type="checkbox"/> B-682 Bright polished. <input type="checkbox"/> B-6827 Satin finish.	
Electric Hand Dryer	<input type="checkbox"/> Push button activation: Model A by World Dryer . <input type="checkbox"/> Motion activation: Model XA5 by World Dryer.	<input type="checkbox"/> Motion activation: Bobrick B-750 .
Mop and Broom Holder	<input type="checkbox"/> B-223 x 24, 3 Holder (24 inches) <input type="checkbox"/> B-223 x 36, 4 Holder (36 inches)	
Shower Soap Dish		<input type="checkbox"/> Recessed: B-4390 .
Folding Shower Seat	<input type="checkbox"/> B-5181 Reversible Solid Phenolic (33 x project out 22-5/16) <input type="checkbox"/> B-5191 Shower Seat Solid Phenolic (18 x project out 15-13/16) <input type="checkbox"/> B-517 Padded Shower Seat. <input type="checkbox"/> Bradley-9569 Reversible Solid Phenolic (34-1/2 x project out 22) good for 36 inch minimum requirements of UBC Figure 11B-2A Roll-In Shower.	
ADA Accessible Signage	<input type="checkbox"/> Section 10431	
By Plumbing consultant	<input type="checkbox"/> Hi/Lo Drinking Fountain, Vanity, Toilet, Urinal, Faucets	

SPECIAL CONSTRUCTION

<p>Cold Storage Rooms</p>	<p><input type="checkbox"/> by food service equipment consultant Installation: <input type="checkbox"/> Outdoor <input type="checkbox"/> Indoor Type: <input type="checkbox"/> Freezer <input type="checkbox"/> Refrigerator Manufacturer: _____</p>
<p>Food Service Equipment – 114000 (11400)</p>	<p><input type="checkbox"/> As listed on Drawings (by food service equipment consultant)</p>
<p>Appliances – 113100 (11451)</p>	<p>Cooktop: <input type="checkbox"/> Electric <input type="checkbox"/> Gas Oven: <input type="checkbox"/> Electric <input type="checkbox"/> Gas <input type="checkbox"/> Exhaust Hood <input type="checkbox"/> Refrigerator <input type="checkbox"/> Freezer <input type="checkbox"/> Dishwasher <input type="checkbox"/> Microwave Oven</p>
<p>Pre-Engineered buildings - 133500</p>	<p>Pre-engineered (metal) building systems: Structural steel framing system. Metal roof system. Metal trim. Basis of Design: <input type="checkbox"/> Butler</p>
<p>Modular Class Room Buildings (relocatables) – Not a section but scope of work</p>	<p><input type="checkbox"/> Relocate existing modular class room buildings. <input type="checkbox"/> Refurbish existing modular class room buildings. <input type="checkbox"/> _____</p>

DIVISION 1 SECTIONS

Mock-ups	See next page
	Project management and Coordination - 013100 (01310). Conduct progress meetings at intervals of: <input type="checkbox"/> Weekly <input type="checkbox"/> Bi-Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Regular.
Submittals	Submittal Procedures - 013300 (01330) Process Time: 21 days. Architect will request for more time if needed. Shop Drawings: <input type="checkbox"/> 1 set of reproducible Mylars and 3 sets of prints. <input type="checkbox"/> 4 sets of prints (no Mylars). (No one uses Mylars any more) <input type="checkbox"/> Submittal Exchange – web based project management. <input type="checkbox"/> Email - PDFs
Warranty starts	<input type="checkbox"/> at Substantial Completion <input type="checkbox"/> Other: _____
Contractor Working Hours	Summary - 011000 (01100) <input type="checkbox"/> 8 am - 5 pm <input type="checkbox"/> per General Conditions <input type="checkbox"/> per Supplementary Conditions.
Temporary Facilities – Utilities.	Temporary Facilities and Controls - 015000 (01500) <input type="checkbox"/> Usage paid and provided for by: <input type="checkbox"/> Use existing at no cost to contractor. Sewer Service: <input type="checkbox"/> Contractor <input type="checkbox"/> Owner <input type="checkbox"/> Owner but will be billed. Water Service: <input type="checkbox"/> Contractor <input type="checkbox"/> Owner <input type="checkbox"/> Owner but will be billed. Sanitary Facilities: <input type="checkbox"/> Contractor <input type="checkbox"/> Owner <input type="checkbox"/> Owner but will be billed. <input type="checkbox"/> Portable Chain-Link Fencing. (nothing fancy; whatever contractor has) <input type="checkbox"/> Wind Screen Fabric: Green. (added cost)
Temporary Trailer (015000) (They cost money. See if you can use existing space for meetings)	<input type="checkbox"/> Need it <input type="checkbox"/> Not need it <input type="checkbox"/> Use existing structure, location to be determined. Used by: <input type="checkbox"/> IOR <input type="checkbox"/> CM <input type="checkbox"/> Architect <input type="checkbox"/> Owner Equipment in Temp Trailer – List below: <input type="checkbox"/> See General Conditions (With the current use of cell phones, equipment has become less important) <input type="checkbox"/> Conference Desk (1)/ chairs (10 minimum). <input type="checkbox"/> Filing cabinet. <input type="checkbox"/> Phone. <input type="checkbox"/> Computer. <input type="checkbox"/> Cable/DSL broadband Internet connection. <input type="checkbox"/> Water service. <input type="checkbox"/> Other: _____
Project Identification and Temporary Signs (015000)	<input type="checkbox"/> Need it (default) <input type="checkbox"/> Not need it : Provide Project identification. Install signs where directed to inform public and individuals seeking entrance to Project. Unauthorized signs are not permitted. Provide temporary, directional signs for construction personnel and visitors. Maintain and touchup signs so they are legible at all times. Provide a 4'-0" x 8'-0" project sign constructed of 1/2 inch plywood or 10 mil corrugated mounted to 4"x4" posts 8'-0" long set 2'-0" deep into earth. Project sign shall include a graphic of the building (available from the Architect), Architect, Consultants, Owner, project, funding members with titles, and Contractor with contact information for the contractor. Text and layout shall be submitted for approval prior to installation. Location of project sign shall be coordinated with Owner's representative. Delete below if not attached. <input type="checkbox"/> Project sign is attached at end of section.

THEATER PROJECTS

DIVISION 6 - WOOD AND PLASTICS

06401 Architectural Woodwork - new or refurbish/restoration

DIVISION 8 - DOORS AND WINDOWS

08346 Sound-Control Door Assemblies

DIVISION 9 – FINISHES

09000 Sound Absorptive Acoustical Finish System

09210 Gypsum Plaster

09215 Gypsum Veneer Plaster

09645 Stage-Floor Assemblies - new or refurbish

DIVISION 11 – EQUIPMENT

11066 Rigging - by AV consultant

11525 Projection Screen - by AV consultant

DIVISION 12 - FURNISHINGS

12710 Theater Seating – new or refurbish

GREENHOUSE

Basis of Design	<input type="checkbox"/> Winandy Greenhouse Company 2211 Peacock Road Richmond Indiana (765) 935-2111 http://www.winandygreenhouse.com <input type="checkbox"/> Other _____
Style	<input type="checkbox"/> Free-standing <input type="checkbox"/> Gable Connect <input type="checkbox"/> Lean-to <input type="checkbox"/> Gutter Connected
Greenhouse Skin	Glass (pane): <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple. <input type="checkbox"/> Polycarbonate panels: 8mm 16mm (5/8") Corrugated <input type="checkbox"/> Acrylic panels: 8mm 16mm (5/8") Corrugated <input type="checkbox"/> Other _____
Side Wall Design Operator:	<input type="checkbox"/> Manual <input type="checkbox"/> Motorized
Roof Ventilators	<input type="checkbox"/> None <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> Other _____
Screens	<input type="checkbox"/> Yes <input type="checkbox"/> No
Heating	<input type="checkbox"/> gas unit heaters <input type="checkbox"/> oil unit heaters <input type="checkbox"/> hydronic heating <input type="checkbox"/> electric heaters
Growth light	<input type="checkbox"/> Yes <input type="checkbox"/> No
Shade/energy curtains	<input type="checkbox"/> Yes <input type="checkbox"/> No
Fire retardant	<input type="checkbox"/> Yes <input type="checkbox"/> No
Controls	<input type="checkbox"/> none <input type="checkbox"/> computer interface <input type="checkbox"/> weather station and computer interface <input type="checkbox"/> weather station

REHABILITATION OF HISTORIC BUILDINGS

	02071 Selective Historical Demolition
	03450 Glass Fiber Reinforced Cement (GFRC)
	Masonry Restoration & Cleaning (painted brick masonry)
	Masonry Repair and Repointing
	05511 Metal Restoration & Cleaning (architectural cast iron)
	06401 Architectural Woodwork Restoration
	07601 Sheet Metal Restoration & Cleaning (architectural sheet metal)
	08701 Finish Hardware Restoration & Cleaning
	09900 Painting

MOCK-UPS

General rule for mockups.

1. They cost money.
2. If the components are from architectural binder; such as Arcadia, Kawneer etc are already tested. If we have custom curtainwall etc. we have need to have a mockup since they are not yet tested at the factory.
3. There is no one spec section for mockup. They are in different spec sections. Windows, curtainwalls, panels, doors, etc.
4. Elevation on drawings should indicate the components involved. Show as dotted line the extent of mockup. Need to decide if the mockup is part of the building or separate from the building.
5. What is the purpose of mockup? Water or air test or just for aesthetics. Different cost are associated for each. (I will include mockup topic in “kickoff Meeting”.

Here is excerpt in Section 084413 glazed Aluminum curtain Walls.

MOCKUPS

- A. Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
 1. Build mockup of typical wall area as shown on Drawings.
 2. Testing shall be performed on mockups in accordance with requirements in "Field Quality Control" Article.
 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

FIELD QUALITY CONTROL

- A. Testing Agency: **[Owner will engage] [Engage]** a qualified testing agency to perform tests and inspections.
- B. Test Area: Perform tests on **[one bay at least 30 feet, by one story] [representative areas of glazed aluminum curtain walls] [mockups] <Insert requirements>**.
- C. Field Quality-Control Testing: Perform the following test on **[representative areas of glazed aluminum curtain walls] [mockups] <Insert requirements>**.
 1. Water-Spray Test: Before installation of interior finishes has begun, areas designated by Architect shall be tested in accordance with AAMA 501.2 and shall not evidence water penetration.
 - a. Perform a minimum of **[two] [three] <Insert number>** tests in areas as directed by Architect.
 - b. Perform tests in each test area as directed by Architect. Perform at least three tests, prior to **[10, 35, and 70 percent completion] <Insert requirements>**.

2. Air Leakage: ASTM E783 at 1.5 times the rate specified for laboratory testing in "Performance Requirements" Article but not more than 0.09 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft..
 - a. Perform a minimum of [two] [three] <Insert number> tests in areas as directed by Architect.
 - b. Perform tests in each test area as directed by Architect. Perform at least three tests, prior to [10, 35, and 70 percent completion] <Insert requirements>.
 3. Water Penetration: ASTM E1105 at a minimum [uniform] [and] [cyclic] static-air-pressure differential of 0.67 times the static-air-pressure differential specified for laboratory testing in "Performance Requirements" Article, but not less than 6.24 lbf/sq. ft., and shall not evidence water penetration.
- D. Structural-Sealant Adhesion: Test structural sealant in accordance with recommendations in ASTM C1401, Destructive Test Method A, "Hand Pull Tab (Destructive)," Appendix X2.
1. Test a minimum of [two] [four] [six] <Insert number> areas on each building facade.
 2. Repair installation areas damaged by testing.
- E. Glazed aluminum curtain walls will be considered defective if they do not pass tests and inspections.
- F. Prepare test and inspection reports.

ASTM Excerpt

ASTM E783-02(2010)

Standard: ASTM E783-02(2010) – Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors

Scope: This method provides a field test procedure for determining the air leakage rates of installed exterior windows and doors.

Applicable Products: Applicable to exterior windows and doors.

Test Procedure: A polyethylene sheet is sealed over the exterior surface of the test specimen. Air is evacuated / introduced from the chamber to produce the required pressure differential. The amount of airflow (cfm) required to maintain the pressure differential is recorded (extraneous air leakage). Subsequently, the polyethylene sheet is removed from the exterior surface of the specimen. As a result, air infiltrating through the specimen changes the pressure inside the chamber. Adjustments are made to the test equipment to maintain the pressure differential, and the increased airflow is recorded (total airflow). The extraneous air leakage is subtracted from the total airflow resulting in a net airflow amount entering through the specimen. The amount of net airflow is divided by the square footage of the specimen and compared to the maximum allowable air infiltration rate cfm/ft².

End Result: Upon the completion of a successful test, the product meets the performance criteria for air infiltration resistance. or does not meet criteria and further remediation may be required to pass.

ASTM E1105-15

Standard: ASTM E1105-15 – Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Wall by Uniform or Cyclic Static Air Pressure

Scope: This test method covers the determination of the resistance of installed exterior windows, curtain walls, skylights and doors to water penetration when water is applied to the outdoor face and exposed edges simultaneously with a static air pressure at the outdoor face higher than the pressure at the indoor face.

Applicable Products: Applicable to curtain walls, windows, skylights, window walls and doors.

Test Procedure:

ASTM E1105, Procedure A – Water penetration testing is conducted at the specified air pressure differential while simultaneously spraying water on to the exterior face of the assembly at the required rate of 5 gph/ft². During testing, the interior face of the test area is inspected for water leakage. Testing continues for 15 minutes.

ASTM E1105, Procedure B – Water penetration testing is conducted at the specified air pressure differential. Four cycles are employed during the test unless otherwise requested. Each cycle consists of 5 minutes with the air pressure applied and 1 minute with the air pressure released. Water is applied continuously at the required rate of 5gph/ft². During testing, the interior face of the test area is inspected for water leakage.

End Result: Upon the completion of a successful test, the product meets the performance criteria for water penetration resistance or does not meet criteria and further remediation may be required to pass.

AAMA 501.2-15

Standard: AAMA 501.2-15 – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems

Scope: This test is utilized to provide quality assurance and diagnostic field water penetration check method for installed storefronts, curtain walls and sloped glazing systems.

Applicable Products: Applicable to curtain walls, storefronts, window walls, sloped glazing systems, skylights, atriums, WRB/AVB, coping, fascia and soffit.

Test Procedure: Water is applied using a hand-held spray assembly employing a type B25 #6.030 nozzle, pressure gauge, control valve and a 3/4" hose. The water flow is adjusted to produce 30 psi at the nozzle. Water is directed at the joint under test, perpendicular to the face of the specimen. The nozzle is moved slowly back and forth above the joint, at a distance of one foot, for a period of five minutes for each five feet of joint. An observer on the inside checks for water leakage and documents the results.

End Result: The product tested meets the performance criteria for water penetration resistance or does not meet criteria and further remediation may be required to pass.

NFPA 285

NFPA 285: Flame Propagation in Exterior Walls

Late morning on a winter day, a contracting crew was up on the roof of a building performing welding and cutting on a steel fabrication that was to become a catwalk for a window washing system. The hot work, unfortunately, ignited adjacent polyurethane-coated foam plastic trim and the fire spread laterally and vertically down the exterior face of the building. The outcome of the January 25, 2008, fire at the Monte Carlo Resort and Casino in Las Vegas, Nevada, was a \$100 million price tag for damage and lost business. Fortunately there were no deaths, but 17 people were sent to hospitals for injuries.

The Monte Carlo fire illustrates the growing problem with incorporating combustible foam plastics within exterior wall assemblies. Large continuous planes of combustible material allow a fire to spread quickly horizontally and vertically to other areas of a building. Due to this fire propagation potential, the *International Building Code (IBC)* requires wall assemblies that integrate combustible plastics and most recently combustible water-resistive barriers be tested in accordance with the National Fire Protection Association's (NFPA) standard 285, *Standard Method of Test for the Evaluation of Flammability Characteristics of Exterior Nonload-bearing Wall Assemblies Containing Combustible Components*.

NFPA 285 and the IBC

Even though the standard's scope applies to nonload-bearing walls as its title implies, the IBC's requirements for testing does not differentiate between load-bearing and nonload-bearing walls—all wall assemblies with combustible materials (with some exceptions) are required to be tested. The 2012 IBC includes six provisions where NFPA 285 testing is specifically required:

- *Section 1403.5*: For combustible water-resistive barriers in buildings over 40 feet in height of Type I, II, III, or IV construction. This is a new requirement in the 2012 IBC.
- *Section 1407.10.4*: For metal composite materials (MCM) used on buildings of Type I, II, III, and IV construction. Section 1407.11 of the IBC provides alternate conditions that do not require compliance with NFPA 285, such as using MCM not higher than 40 feet and having a fire separation distance of more than 5 feet. If the fire separation distance is 5 feet or less, then only 10% of the wall area can include MCM.
- *Section 1409.10.4*: For high-pressure decorative exterior-grade compact laminates (HPL) exterior wall coverings used on buildings of Type I, II, III, and IV construction. Section 1409.11 of the IBC provides alternate conditions that do not require compliance with NFPA 285, such as using HPL not higher than 40 feet and having a fire separation distance of more than 5 feet. If the fire separation distance is 5 feet or less, then only 10% of the wall area can include HPL. These are new requirements in the 2012 IBC.
- *Section 1509.6.2*: Combustible mechanical equipment screens used on buildings of Type I, II, III, and IV buildings.
- *Section 2603.5.5*: Exterior walls of buildings of Type I, II, III, and IV construction of any height incorporating foam plastic insulation, except for one-story sprinklered buildings.

- *Section 2612.5*: For fiberglass-reinforced polymer (FRP) exterior wall coverings. This section references Section 2603.5, which means NFPA 285 is required for Type I, II, III, and IV buildings that are more than two stories and higher. However, this section does offer two exceptions that would not require NFPA 285 testing.

Noticeably missing in the list of requirements above are exterior insulation and finish systems (EIFS). That is because EIFS were not directly addressed in the IBC until the 2009 edition. Prior to the 2009 IBC, EIFS were regulated by the foam plastic insulation requirements of Chapter 26. In the 2009 IBC, EIFS were directly incorporated into the code in Section 1408, which requires compliance with ASTM E 2586, *Standard Specification for PB Exterior Insulation and Finish Systems*. Since ASTM E 2586 requires EIFS to pass NFPA 285, Section 1408 essentially supplants the foam insulation requirements of Chapter 26 for EIFS.

The IBC has always referenced NFPA 285 for foam plastic insulation; however, *Uniform Building Code* (UBC) Standard 26-4, *Method of Test for the Evaluation of Flammability Characteristics of Exterior, Nonload-Bearing Wall Panel Assemblies Using Foam Plastic Insulation*, was permitted by the 2000 IBC and, prior to the IBC, the UBC. The 1997 UBC introduced UBC Standard 26-9, *Method of Test for the Evaluation of Flammability Characteristics of Exterior, Nonload-bearing Wall Assemblies Containing Combustible Components Using the Intermediate-scale, Multistory Test Apparatus*, which eventually became NFPA 285. The significant difference between UBC Standards 26-4 and 26-9 was that 26-4 was based on a full-scale mockup of the wall assembly, whereas 26-9 (and subsequently NFPA 285) is based on a smaller, intermediate-scale mockup.

Impact of NFPA 285 on Building Design

Since some form of fire propagation requirements for combustible materials in exterior walls have been in the code for over thirty years, why is it that design professionals are just now learning about NFPA 285? The answer is rather simple: energy codes are requiring higher performance from building envelopes, and the best method to improve thermal performance is providing continuous insulation. Continuous insulation interrupts the thermal bridging created by common exterior wall construction. When EIFS were introduced in the 1970s, they were the only foam plastic insulations used in this manner. When the codes caught up with the new technology in the 1980s and developed testing standards, EIFS manufacturers immediately sought testing for their systems. However, with few manufacturers and a limited number of common substrates, it was easier to test most, if not all, of the typical EIFS assemblies at the time.

It is important to stress that the NFPA 285 test is an assembly test and not a material component test. With the constant introduction of new exterior wall coverings, the implementation of the 'rain screen principle,' and the increasing requirements for improved thermal performance, the building exterior envelope suddenly became a very complex assembly with thousands of possible combinations, thereby making it cost-prohibitive for a manufacturer to test every probable wall assembly. If an assembly can be found that has passed the NFPA 285 test, then the assembly must be designed and built exactly as it was tested. Therefore, the designer must use all of the proprietary products that are indicated in the tested assembly—any change in the assembly, regardless of how minor, will require a new test.

With this wide variety of potential exterior wall assemblies to choose from, the design professional must now consider one of the following options to remain compliant with the building code:

- Design a building using Type V construction;

- Design a sprinklered building with only one story above grade plane;
- Design an exterior wall assembly that has no combustible materials;
- Design a building using MCM and HPL that is more than 5 feet from the lot line and is less than 40 feet in height and includes no foam insulation or combustible water-resistive barrier;
- Select a tested wall assembly from the few assemblies that are available; or,
- Design a wall assembly and have it tested.

Some of the options mentioned above may not be immediately available to the design professional due to a building's design program (*i.e.* size and types of spaces required), available site area, or project budget. For example, designing a 100,000 sq. ft. office building on a tight urban site will likely eliminate the first two options. The third option, although achievable, will require some additional research time on part of the design team; however, to obtain equal energy performance using noncombustible materials (*e.g.* mineral wool insulation) will require thicker wall assemblies that may pose some design challenges. The fourth option is probable, but the use of foam plastic insulation or combustible water-resistive barriers (both are common with these exterior wall coverings) may require testing anyway. Resorting to the fifth option will limit the number of material and assembly options on a designer's palette. Lastly, the project budget may eliminate the sixth option, since project-specific testing can be very expensive.

The NFPA 285 Test

As mentioned earlier, the NFPA 285 test is conducted on an intermediate-scale mockup. A mockup is an exact fabrication of a proposed assembly. For the NFPA 285 test, the mockup is attached to a test apparatus that consists of a three-walled, two-story structure with an overall height of 15'-8". Each story contains a test room—each having dimensions of 10 feet wide by 10 feet deep by 7 feet high. The apparatus is constructed of steel, concrete, and concrete masonry units. The interior wall and ceiling surfaces of the first story are covered with a layer of Type X gypsum board over ceramic fiber insulation. The floor of the first story is covered by two layers of gypsum board.

The mockup test specimen is constructed on the open face of the test apparatus or on a portable frame that is moved into place and attached to the test apparatus. The size of the mockup is 17'-6" high by 13'4" wide and must include a window opening approximately 30 inches high by 78 inches wide that is centered horizontally in relation to the first story test room's side walls. The sill height of the window opening must be 30 inches. Thermocouples, which are used to measure temperature, are attached to the exterior face of the mockup, the interior of the mockup assembly, and the interior face of the mockup at the locations indicated in the test standard. Thermocouples are also attached to the ceiling of the first-story test room.

The test procedure includes two burners: a fixed gas burner in the center of the first-story test room and a portable gas burner that is placed in the window opening. The room burner is ignited and must achieve a first-story room temperature of 1151 deg. F within the first 5 minutes. At that time, the window burner is ignited and both continue to burn for another 25 minutes for a total 30-minute test period and achieving an average first-story room temperature of 1648 deg. F.

After the test, the mockup is dismantled and visually observed. The assembly fails if flame propagation exceeds the limits indicated in the standard. Flame propagation is determined in

three locations of the mockup: the exterior face of the assembly, core components of the assembly, and the areas beyond the first-story test room.

- *Exterior face of assembly:* Flame propagation is determined 1) if the flames reach a height of 10 feet or greater above the window opening, 2) if the flames extend laterally a distance of 5 feet or greater from the centerline of the window opening, or 3) if any of the thermocouples at the roof line record a temperature of 1000 deg. F or higher.
- *Core components of assembly:* Assemblies with wall coverings greater than ¼" thick, or ¼" thick or less with no air cavity, cannot have combustible components that exceed 750 deg. F at thermocouples near the assembly perimeter at the second-story test room. Assemblies with wall coverings ¼" thick or less and having an air space cannot have temperatures in the air cavity exceeding 1000 deg. F or in the insulation exceeding 750 deg. F at thermocouples near the assembly perimeter at the second-story test room.
- *Areas beyond the first-story test room:* Flame propagation is determined if flames on the exterior surface extend beyond the side walls of the apparatus or flames occur beyond the intersection of the wall assembly and the side walls of the apparatus. Assemblies with wall coverings greater than ¼" thick, or ¼" thick or less with no air cavity, cannot have combustible components that exceed 750 deg. F at thermocouples located in line with side walls. Assemblies with wall coverings ¼" thick or less and having an air space cannot have temperatures in the air cavity exceeding 1000 deg. F or in the insulation exceeding 750 deg. F at thermocouples located in line with side walls.

There are two other conditions that will also warrant a failing report for a NFPA 285 test. The first condition is when any thermocouple that is located within 1 inch of the interior wall surface at the second-story test room exceeds 500 deg. F. The second condition is when flames occur in the second-story test room.

The Future of NFPA 285 in the IBC

The 2015 IBC will likely include a reference to the 2012 edition of NFPA 285. There are some changes in the 2012 edition, which include expanded conditions of acceptance that may impact some assemblies previously tested under the 2006 edition.

For water-resistive barriers, the 2015 IBC will include some changes that will help relax the requirement for NFPA 285 testing for combustible barriers. Based on a public comment during the IBC final action hearings in 2012, Section 1403.5 will add the following three exceptions:

- *Exception 1:* "Walls in which the water-resistive barrier is the only combustible component and the exterior wall has a wall covering of brick, concrete, stone, terra cotta, stucco, or steel with thicknesses in accordance with Table 1405.2."
- *Exception 2:* "Walls in which the water-resistive barrier is the only combustible component and the water-resistive barrier has a Peak Heat Release Rate of less than 150 kW/m², a Total Heat Release of less than 20 MJ/m² and an Effective Heat of Combustion of less than 18 MJ/kg as determined in accordance with ASTM E 1354 and has a flame spread index of 25 or less and a smoke-developed index of 450 or less as determined in accordance with ASTM E 84 or UL 723. The ASTM E 1354 test

shall be conducted on specimens at the thickness intended for use, in the horizontal orientation and at an incident radiant heat flux of 50 kW/m²."

- *Exception 3:* "Windows and doors and flashing for windows and doors shall not be considered to be part of a water resistive barrier for purposes of this section."

Unfortunately, the publication of the 2015 IBC is still a couple of years away with many jurisdictions likely not adopting it until a few years after that. However, using Section 104.11 for alternative materials, designs, and methods, a design professional could request a code modification allowing the use of the approved exceptions prior to the publication and adoption of the 2015 IBC.

Unlike assemblies tested by Underwriters Laboratories, which are included in its online certifications directory, the reports for successful NFPA 285-tested assemblies are retained solely by the manufacturer. Therefore, the design professional must seek out tested assemblies through manufacturers without the convenience of a directory of approved assemblies. Hopefully, some form of directory for NFPA 285-tested assemblies will be compiled by a professional, manufacturer, or trade association. With a consolidated directory of NFPA 285-tested assemblies, design professionals could easily select code-compliant exterior wall assemblies, thereby avoiding incidents such as the Monte Carlo fire, which, as it turns out, was not constructed of foam plastic materials tested per UBC Standard 26-4, the applicable standard at the time of its construction.

Tyvek® Materials Meet NFPA 285 Exterior Wall Standards

Tyvek® Materials Tested

All Tyvek® air and water barrier system products have been tested and proven compliant in a variety of wall assemblies incorporating a variety of typical sheathings, framing studs, exterior insulations, and cladding types.

They are:

DuPont™ Tyvek® CommercialWrap®

DuPont™ Tyvek® CommercialWrap® D

DuPont™ Tyvek® Fluid Applied WB

As part of a two-story burn test to determine the flammability characteristics of exterior, non-load-bearing wall assemblies, each Tyvek® air and water barrier was part of an assembly that passed NFPA 285 testing.

The wall assemblies were tested and shown to resist flame propagation vertically or laterally beyond an acceptable distance from the flame source, on or within the wall assembly.

Understanding NFPA 285

In 1998, the National Fire Protection Association (NFPA) established the NFPA 285 "Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components."

NFPA 285 provides a determination of vertical fire performance for exterior wall assemblies, which is verified by actual testing. It is intended to help builders reduce the potential for upward spread of fire through wall.

The requirement for a weather-resistive barrier is as follows:

WRB (Weather-Resistive Barrier) Code Requirement: 1403.5 Vertical and Lateral Flame Propagation – Exterior walls on buildings of Type I, II, III, or IV construction that are greater than 40 feet (12.192m) in height above grade plane, and contain a combustible water-resistive barrier, shall be tested in accordance with, and comply with the acceptance criteria of NFPA 285.

[NFPA 285](#)

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Improvements to the building envelope through the use of continuous insulation solutions have played a major

role in mainstreaming high-performance construction practices that meet the requirements of commercial building energy codes. To meet the demands of today’s builds, architectural and design professionals must balance energy efficiency with whole building performance considerations, including fire safety. With respect to wall assemblies in Type I-IV Construction, understanding and properly implementing NFPA 285 can be a critical component for designing a compliant, high-performance building envelope.

NFPA 285 is a fire test standard that measures the flammability characteristics of exterior wall assemblies. More specifically, and according to the National Fire Protection Association (NFPA), it “provides a standardized fire test procedure for evaluating the suitability of exterior, non-load bearing wall assemblies and panels used as components of curtain wall assemblies that are constructed using combustible materials or that incorporate combustible components for installation on buildings where the exterior walls are required to be non-combustible.” While the individual products used in the wall assembly carry product-specific fire tests, it is important that entire wall assemblies are tested to meet approved fire performance requirements and ensure the safety of the building occupants.

The NFPA 285 test is performed on both load-bearing and non-load-bearing wall assemblies. It requires a wall assembly mockup spanning two stories (18’ high) with a test room on each floor. A single window opening is provided in the first-story room where a test burner is located. This burner is ignited in order to simulate an interior room fire. A second burner located on the exterior side of the test wall further enhances the flames to the window header. The test simulates a common, real-world interior fire scenario that reaches flashover, breaches a window, and spreads upward along the wall face. The test examines fire performance of the entire wall assembly, including within the wall assembly. It’s important to note also that the test is conducted without any interior fire suppression system.

To pass the NFPA 285 test, flame propagation cannot occur on or within the wall assembly beyond a certain distance either vertically or laterally from the area of flame plume impingement. Thermocouples are placed throughout the wall assembly to measure temperatures. Exceeding defined temperature limits results in a test failure. Additional requirements include:

No flame propagation in second-floor room;

The inside wall assembly thermocouples shall not exceed 1000°F rise during the 30-minute test;

External flames shall not reach 10’ above the top of the window; and

The external flame shall not reach 5’ laterally from the center line of the window.

It is a common misconception that only foam insulation products trigger NFPA 285. While any wall containing foam plastic insulation in Types I-IV Construction must comply with the test requirements, the use of other wall assembly configurations may also need to pass NFPA 285. These assemblies can include those constructed with combustible claddings and weather resistant barriers.

Since 2000, NFPA 285 has been in the International Building Code (IBC) and has gained attention due to the increased diversity in exterior wall systems and greater compliance with building energy efficiency standards. To learn more about NFPA 285, please refer to the National Fire Protection Association.

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