

ADDENDUM #1

Parks Garage Senior Center Renovations – Bid #2017-032

City of Auburn, Maine

17 February 2017

Please include the following recommended changes:

GENERAL ITEMS:

1. The mandatory Pre-Bid meeting was mandatory for General Contractors submitting bids for this project to the City of Auburn, Maine. While Subcontractors are encouraged to attend the Pre-Bid meeting to view the scope of work, it was not mandatory for Subcontractors to attend.
2. Refer to the attached Pre-Bid Meeting Minutes for items discussed and individuals present at the mandatory Pre-Bid meeting.

CHANGES TO THE SPECIFICATIONS:

1. **Bid Proposal Form : DELETE** the Bid Proposal Form in its entirety. **REPLACE** with the attached revised Bid Proposal Form. Note: The revised form includes the addition of an acknowledgement line for issued addendum numbers & addendum dates.
2. **Section 26 05 00 – Basic Electrical Materials And Methods: DELETE** this specification section in its entirety. **REPLACE** with the attached revised specification section 26 05 00. Note: Changes include revisions to the General Scope of the Work to be provided.

CHANGES TO THE DRAWINGS:

1. **INSERT** the attached SK-1 drawing showing the Storefront Door #01 elevation.
2. **Drawing A5.1: DELETE** drawing A5.1 in its entirety. **REPLACE** with the attached revised drawing A5.1. Revisions include modifications to Section E.

CLARIFICATIONS AND QUESTIONS ASKED BY BIDDERS:

1. *Question:* Where in the bidding info does it clarify how many power receptacles are to be installed in the new wall in the garage area?
Answer: Refer to the attached revised specification section 26 05 00, part 1.4, A for the general scope of work; and drawing A1.1 for exit and emergency light locations.
2. *Question:* Are we to install power for the items in the kitchen that are labelled as NIC?
Answer: Yes, refer to the attached revised specification section 26 05 00, part 1.4, A.

3. *Question:* Is the existing switching for the garage lighting to remain as is?

Answer: Install new light switches to control the garage light circuits (room 109) by door 13 for the 2 circuits that are currently switched by the breakers in the electric panel.

4. *Question:* Are the fans EF-1 and EF-2 furnished and installed by the Mechanical Subcontractor and wired by the Electrical Subcontractor?

Answer: Yes.

5. *Question:* Are we to use the wiring methods presently in use within the building?

Answer: All new electrical work is to be in compliance with the 2014 NEC & the AHJ.

6. *Question:* Could you provide a elevation drawing for storefront door #1? My door supplier was wondering if it had a transom to match the other storefront?

Answer: Refer to the attached drawing SK-1 showing the Storefront Door #01 Elevation.

7. *Question:* On Construction Summary it says a bid bond is needed, but in the specs under project description, it says one is not. Could you please confirm whether or not we need to get a bid bond.

Answer: No bid bond is needed as stated in the specifications.

8. *Question:* Is it possible to use Steel stud framing for wall types 1, 2 and 3 in lieu of wood framing?

Answer: The type 2 & 3 walls are existing wood framing except for the new framing to be added in the dormer area of the Type 3 wall. Steel stud framing will be acceptable for the Type 1 walls and Type 3 dormer area provided it is the correct gauge for the stud length and installed in accordance with the stud manufacturer.

Attachments:

1. Pre-Bid Meeting Minutes
2. Revised Bid Proposal Form
3. Revised Specification section 26 05 00 – Basic Electrical Materials And Methods
4. Drawing SK-1 – Storefront Door #01 Elevation
5. Revised Drawing A5.1

END OF ADDENDUM #1

Project:	City of Auburn, Maine – Parks Garage Senior Center Renovation Project	Date:	February 14, 2017
Project No.	CCPG #1001	Bid No.	2017-032
Meeting:	Pre-Bid Meeting	Time:	9:00 a.m.
Location:	Parks Garage, Auburn, Maine		

<u>Attendees</u>	<u>Company</u>	<u>E-Mail</u>
Derek Boulanger	City of Auburn, Facilities Manager/Purchasing Agent	dboulanger@auburnmaine.gov
Mitch Daigle	Cordjia Capital Projects Group, LLC	mdaigle@cordjiacpg.com
Roger Soucy	Crapott's Corp.	crapottscorp@roadrunner.com
Tyler Coffin	Doten's Construction	doten@dotens.com
Denny Paradis	Roy I. Snow, Inc.	dennis.paradis@roysnow.com
Mark McPheters	T. Buck Construction, Inc.	mark@tbuckcon.net
Mike DiMatteo	DiMatteo Const. Management	dimatteocms@yahoo.com
Mike Barrett	Monadnock Commercial Building Co.	dan_callahan@comcast.net
Brock Starbird	Gordon Contracting, Inc.	brock@gcmaine.com
Tony Reny	DeBlois Electric, Inc.	treny@debloiselectric.com

Copy of Meeting Minutes sent to: Attendees Names listed above.

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| 1. | <p>Bid opening will be at 2:00 pm on February 23, 2017 at 60 Court Street, Auburn, Maine. Bids must be delivered and stamped received prior to the 2:00 pm deadline.</p> <p>All bid questions and RFI's must be submitted in writing to both Mr. Mitch Daigle of Cordjia Capital Projects Group ("Cordjia") and Mr. Derek Boulanger of the City of Auburn ("COA" or "Owner") prior to 2:00 pm on February 17, 2017. Email is preferred, but it is the responsibility of the contractor to confirm that the email correspondence has been received.</p> <p>Addendums and clarifications will be issued to the contractor's email addresses that were provided on the pre-bid sign in sheet. The contractors should ensure that whoever this email address belongs to knows to distribute the addendums and clarifications to the correct person. Please allow read receipts for emails. The final addendum (if any) will be issued by 2:00 pm on February 20, 2017.</p> <p>The BID PROPOSAL FORM must acknowledge all addendums issued and have the addendum number(s) and date(s) indicated and the submitted bid package shall include the SCHEDULE OF VALUES FORM.</p> |
| 2. | <p>Points of contact are as follows:</p> <p><u>Technical Inquiries:</u> Mr. Mitch Daigle - Cordjia; Office: 207-236-9970; Mobile: 207-333-2226; Email: mdaigle@cordjiacpg.com</p> <p><u>Bidding Inquiries & Access to the Building:</u> Mr. Derek Boulanger – City of Auburn (COA); Office: 330-6601, ext. 1135; Email: dboulanger@auburnmaine.gov</p> |

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ID	Discussion / Remark
3.	The selected contractor shall provide a copy of all certificates of insurance with limits pursuant to the City of Auburn's requirements prior to commencing the work.
4.	Permits are the contractor's responsibility for their scope of work and shall be included in the bid. The Authority Having Jurisdiction (AHJ) shall be contacted for verification of any applicable permitting requirements and fees. The Building Permit Fee will be waived. It is the responsibility of the contractor to verify all permit requirements with the AHJ.
5.	All new work completed under this contract shall be in compliance with MUBEC, NEC 2014 and all other applicable Local, State and Federal regulations.
6.	The selected contractor is expected to start the work once a notice of award has been issued and substantially complete the work no later than June 30, 2017 (110 calendar days).
7.	This project is subject to compliance with all requirements of the Occupational Safety and Health Administration (OSHA), Volume 36, No. 105 of the Federal Register; U.S. Department of Labor published Saturday, May 29, 1971, as amended.
8.	There is adequate space at the project site and designated parking areas, dumpster locations and storage and mobilization areas will be further discussed prior to construction with the selected contractor.
9.	It will be the contractor's responsibility for the proper legal disposal of all construction waste.
10.	The only COA personnel that is authorized to approve a change to the bid documents is Mr. Derek Boulanger. If a condition arises that warrants a change order it must be pre-approved by Mr. Derek Boulanger. No exceptions.
11.	The selected contractor shall submit as soon as possible to the COA and before any material or equipment is purchased, the manufacturer's data, catalog cuts, samples, or other information as required for the submittal items listed in the contract documents.
12.	The selected contractor will be responsible for direct coordination with the Owner and the Owner's other contractors for work that may be executed under separate contract.

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13.	The Owner's business operations must continue throughout the entire construction period. It is the contractor's responsibility to coordinate construction activities with the Owner.
14.	The contractor shall continuously maintain adequate protection of all work from damage and shall protect the property from injury or loss for the duration of this contract, and shall make good any such damage, injury or loss. Maintain the building water-tight.
15.	All construction materials shall be new, with the exception of materials designated for reuse, and shall be installed in accordance with the manufacturer in order to maintain the manufacturer's warranty.
16.	After the general scope overview and project presentation meeting, the contractors were allowed to view the premises which included all project proximities both interior and exterior as required. The contractors are informed to call or email Mr. Derek Boulanger in advance for arrangement of additional site visits.
17.	<p>Specific Work Conditions & Clarifications:</p> <ul style="list-style-type: none"> a. The access around the building must be kept clear at all times for emergency vehicles. b. The selected contractor will be responsible for their own jobsite security. c. The Owner will remove all equipment and materials from the work area prior to the start of work. The contractor must notify the Owner that the work area needs to be cleared at least 72 hours in advance of the need to move furnishings, equipment, materials, etc. d. Contractors will have access to the site between 7:00 AM and 6:00 PM (flexible). The Owner may provide special access on late weekdays, weekends, and holidays by special request with a minimum of 48 hours advance notice and approval by the Owner. e. No power or utility cutoff (if required) will be permitted without 3 days advance notice and approval by the Owner. f. Construction debris not immediately contained in a proper disposal container will not be tolerated at any time during the duration of this project. g. Smoking and tobacco products are allowed on the building grounds provided it occurs at the designated smoking area. Waste must be properly disposed of or taken off-site.

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	<ul style="list-style-type: none"> h. The selected contractor is to provide all equipment and materials required for the prosecution of the work whether or not indicated in the contract documents at no additional cost to the Owner. i. The selected contractor is not required to provide a jobsite trailer unless they choose to do so. The contractor may use the onsite bathroom facilities. The Owner reserves the right to revoke such use should a problem occur. j. The selected contractor will be required to submit a construction schedule and a schedule of values within 10 days of notice of award. k. The Owner will supply power, water and general heating of the building. Should the use of such utilities become excessive, the Owner reserves the right to revoke such use. Any temporary electric panels or connections shall be supplied by the contractor. l. The selected contractor will be required to supply additional temporary heating as required. m. The City provides plowing of the alley in front of the building. The selected contractor will be responsible to provide their own general snow removal as required. n. It was noted that the floor in the existing shower room slopes up toward the shower stall. The selected contractor will be required to remove the sloped floor as necessary to provide for a level new floor in the new woman's restroom. o. One additional electric receptacle shall be provided approximately at the location of the existing mop basin that is to be removed. p. The selected contractor will be required to coordinate with the Owner when locating all new electric receptacles. q. It was noted that the lighting circuits for the garage, room 109, are currently switched by the breakers in the electric panel. New light switches will need to be provided by door 13 in the garage for the existing garage lighting.
18.	The selected contractor shall request inspections as designated by the Owner, in writing (email is acceptable) seven (7) days prior to the desired date. The punch-list inspection is to confirm that all equipment is in place and is functioning in accordance with the construction documents and noted items should be cosmetic and minor in nature.

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19.	The contractor shall submit closeout documentation (Redline Drawings and O&M Manuals) to the COA prior to claim for final Application for Payment. Closeout procedures will be strictly enforced and the progress of closeout documentation will be checked at regular intervals during construction.
20.	The bid drawings are diagrammatic in nature and the original construction drawings for this facility will be made available to the contractors for verification of existing conditions which must be verified in the field by the contractor. The original construction drawings can be downloaded from the COA website at: http://www.auburnmaine.gov/pages/business/bid-2017-023
21.	Attachments: <ul style="list-style-type: none"> a. Pre-Bid Meeting Sign-In Sheet.



Mitch Daigle
VP & Senior Project Manager
Cordjia Capital Projects Group, LLC

Pre-Bid Meeting Sign-In**February 14, 2017****Time: 9:00 am**

Client:	City of Auburn, Maine
Project:	Parks Garage Senior Center Renovation Project – Bid # 2017-032

	Name	Company Name	Email Address	Phone Number
1.	Derek Boulanger	City of Auburn, Facilities Manager	dboulanger@auburnmaine.gov	207-333-6601, ext. 1135
2.	Mitchell Daigle	Cordjia Capital Projects Group	mdaigle@cordjiacpg.com	207-236-9970
3.	MIKE DIMATTEO	DIMATTEO CONST. MGMT	DIMATTEOCKS@YAHOO.COM	767-7410
4.	Tyler Coffin	Doten's Construction	Doten@dotens.com	865-4412
5.	MARK McPETERS	T. BUCK CONSTRUCTION	MARK@TBUCKCON.NET	783-6223
6.	Roger Soucy	Crapott's Corp	crapottscorp@roadrunner.com	897-4264
7.	Denny Paradis	Roy I. Snow, Inc.	dennis.paradis@roysnow.com	782-3734
8.	Brock Starbird	Gordon Contracting Inc	Brock@GCMaine.com	478-9248
9.	MIKE BARRETT	MONADNOCK	DAN_CALLAHAN@COMCAST.NET	(603) 965-5262
10.	Tony Reny	DeBlois Elec. Inc	TAREN@DEBLOISELECTRIC.COM	

BID PROPOSAL FORM

Parks Garage Senior Center Renovations Project – Bid #2017-023

Due: Thursday, February 23, 2017 at 2:00 PM

To: City of Auburn
Derek Boulanger, Facilities Manager/Purchasing Agent
60 Court Street
Auburn, ME 04210

The undersigned individual/firm/business guarantees this price for Thirty days (30) from the bid due date. The undersigned submits this proposal without collusion with any other person, individual, firm, or agency. The undersigned ensures the authority to act on behalf of the corporation, partnership, or individual they represent; and has read and agreed to all of the terms, requests, or conditions written herein by the City of Auburn. By signing this bid form, the firm listed below hereby affirms that its bid meets the minimum specifications and standards as listed above **and as amended in Addendums #_____ Dated_____.**

Signature _____ Name (print) _____

Title _____ Company _____

Address _____

Telephone No. _____ Fax No. _____

Email Address: _____

STATE OF MAINE

_____, SS.

Date: _____

Personally appeared _____ and acknowledged the foregoing instrument to be his/her free act and deed in his/her capacity and the free act and deed of said company.

Notary Public

Print Name

Commission Expires

SECTION 26 05 00
BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Existing work
 - 2. Grounding and bonding
 - 3. Connection of utilization equipment
 - 4. Supports
 - 5. Identification
 - 6. Conduit and fittings
 - 7. Electrical boxes
 - 8. Wire and cable
 - 9. Electrical tape
 - 10. Terminations
 - 11. Wiring devices
 - 12. Firestopping

1.3 REFERENCES

- A. Conform to requirements of National Electrical Code (NEC) ANSI-C1/NFPA 70-2014.

1.4 COORDINATION

- A. Obtain and review shop drawings, product data, and manufacturer's instructions for equipment furnished under other sections to determine connection locations and requirements.
- B. Sequence rough-in of electrical connections to coordinate with installation and start up of equipment furnished under other sections.
- C. All work shall be in accordance with the laws, rules, codes, and regulations set forth by Local, State, and Federal authorities having jurisdiction.

1.5 WORK TO BE PROVIDED UNDER THIS DIVISION

A. General Scope:

The Work shall be complete from point of service to each outlet or device with all accessory construction and materials required to make each item of equipment or system complete and ready for operation. The work shall include but not be limited to the following. The Electrical Subcontractor shall provide:

1. Feeder and Branch Circuit Wiring: Provide feeder and branch circuits and devices for power to equipment and convenience receptacles. This includes branch wiring to system control panels furnished under other sections.
2. Motor Circuit Wiring: Provide all motor wiring, safety disconnects, and motor starters unless integral with equipment.
3. Emergency Lighting Systems: Provide complete emergency lighting system including emergency fixtures, exit signs, remote lamps, trim and accessories for new fixtures as indicated on the drawings.
4. **Exhaust Fans: Remove one restroom exhaust fan, one wall exhaust fan and one vehicle exhaust fan and circuits completely back to the panel. Remove two existing restroom exhaust fans and reconnect the new exhaust fans (EF-1 & EF-2).**
5. **Convenience Receptacles: Install two new GFCI receptacles above the kitchen countertop in room 107, one new receptacle for a refrigerator and one new GFCI receptacle for a dishwasher in room 107, three new convenience receptacles in the new wall partition to be installed in room 103 and one new convenience receptacle in the approximate location of the existing mop basin that is to be removed.**
6. Restroom Receptacle: Relocate one receptacle in room 104.
7. HVAC: Install new circuit(s), disconnect(s) and convenience receptacle(s) as required to the new exterior pad mounted DX condenser unit (CU-1) and to the indoor unit (F-1 & CC-1).
8. Automatic Entrance: Provide power to a new automatic entrance at door 01.
9. Overhead Door: Remove overhead door operator circuit completely back to the panel.
10. **Garage Lighting (Room 109): Install new light switches to control the garage light circuits by door #13 for the 2 circuits that are currently switched by the breakers in the electric panel.**

PART 2 - PRODUCTS

2.1 BASIC MATERIALS

- A. Steel Channel: Galvanized or painted steel.
- B. Anchors:
1. Masonry Anchors: Rawl-Stud, Lok-Bolt, Saber-Tooth, or equal by Arro, Diamond, or Redhead.
 2. Hollow-Wall Anchors: Toggle bolt by Rawl or equal by Arro, Diamond, or Redhead.
 3. Anchors shall have sufficient holding power for intended use.
 4. Plastic anchors and powder actuated anchors are not permitted.
- C. Miscellaneous Hardware: Treat for corrosion resistance.

2.2 METAL CONDUIT

A. Acceptable Manufacturers:

1. Allied Tube and Conduit
2. Wheatland Tube Company
3. Jones and Laughlin
4. Republic Steel
5. Triangle PWC

B. Conduit:

1. Metal Conduit and Tubing: Hot dipped galvanized or sheradized steel.
2. Flexible Conduit: Galvanized steel.
3. Liquidtight Flexible Metallic Conduit: Flexible conduit with PVC jacket.

2.3 PLASTIC CONDUIT

A. Acceptable Manufacturers:

1. Carlon
2. National
3. American Pipe & Plastics, Inc.

B. Plastic Conduit:

1. Plastic Conduit: NEMA TC 2; PVC. Use Schedule 40 conduit.

2.4 FITTINGS

A. Manufacturers:

1. Appleton
2. Bridgeport
3. O-Z/Gedney
4. Raco
5. Steel City
6. Thomas and Betts
7. Carlon
8. American Pipe & Plastics, Inc.

B. Conduit Fittings:

1. Metal Fittings and Conduit Bodies: NEMA FB 1.
2. Plastic Fittings and Conduit Bodies: NEMA TC 3.
3. Fittings and Conduit Bodies for RSC: Galvanized steel or malleable iron, couplings and fittings threaded.
4. Fittings for EMT: Watertight compression or set screw type as appropriate for the application.

5. Conduit Bodies for EMT: Cast aluminum, galvanized iron or malleable iron bodies.
6. Insulated Bushings: Appleton "BBU".
7. Grounding Bushings: O-Z/Gedney "BLG".
8. Conduit Sealing Bushings: OZ Gedney Type CSB, or approved equal.
9. Fittings for Liquidtight Flexible Metallic Conduit: Galvanized steel or malleable iron, couplings and fittings threaded.
10. Conduit Clamps: Galvanized malleable iron equivalent to O-Z/Gedney 14-G and 15-G Series with clamp back spacer for RSC, and single hole #15-75G malleable or #15-75S galvanized steel clips for EMT.

2.5 ELECTRICAL BOXES

A. Manufacturers:

1. Appleton
2. Crouse Hinds
3. Hoffman
4. Killark
5. Lee Products
6. Raco
7. Square D
8. Steel City

B. Boxes:

1. Sheet Metal: NEMA OS 1; galvanized steel, 4" x 4" x 2" with raised plaster ring and non-gangable 3" H x 3 1/2" D x 2" W per section masonry boxes. Gangable or sectionalizing boxes are not permitted.
2. Cast Metal: Aluminum or cast alloy, deep type "FD", gasket cover, threaded hubs, "Bell" boxes not permitted.

C. Mounting Brackets and Adjustable Ceiling Channels: Galvanized steel of substantial construction to support boxes by bridging between hollow wall studs or ceiling channels, like Caddy #SGB24 screw gun bracket, Caddy #H4 mounting bracket, and B-Line #BA-12 box hanger, or approved equal.

D. Hinged Cover Enclosures: NEMA 250, Type 1, steel enclosure with manufacturer's standard enamel finish and continuous hinge cover, held closed by flush latch operable by screwdriver.

2.6 WIRE AND CABLE

A. Manufacturers:

1. Anaconda
2. Rome Cable
3. General Cable
4. Okonite
5. Phelps Dodge Cable
6. Southwire
7. Triangle PWC

B. Building Wire:

1. Feeders and Branch Circuits 6 AWG and Smaller: Annealed copper conductor, 600 volt insulation, THHN/THWN or XHHW, stranded conductor; use compression set terminals.
2. Control Circuits: Copper, stranded conductor, 600 volt insulation, THHN/THWN.

C. Metal Clad Cable:

1. Metal Clad Cable, Size 12 through 10 AWG: Interlocked galvanized steel armor, stranded annealed copper conductor, 600 volt insulation, rated 60E C, with separate green ground wire, NEC Type MC.

2.7 TAPE AND TERMINATIONS

A. Manufacturers, Tape:

1. 3M Co., Scotch #33 and #88

B. Manufacturers, Terminations:

1. Dossert
2. Ideal
3. 3M Co.
4. Thomas and Betts

C. Wire Connection Devices/Terminations: Compression set or twist-on type with integral molded insulation and internal metallic compression ring or spiral screw-on connecting device. Twist-on type shall be like Ideal "Wing Nut" series. Push-on type wire terminals are not acceptable.

D. Wire Terminals, Butt Splices: Crimp set with integral insulated sleeve, electro tin plated, fully annealed copper.

2.8 WIRING DEVICES AND WALL PLATES

A. Manufacturers:

1. Bryant
2. Hubbell
3. Arrow-Hart
4. Pass and Seymour
5. General Electric
6. Leviton

B. Wall Switch: AC general use, specification grade, quiet operating snap switch rated 20 amperes and 120/277 volts AC, with plastic toggle handle, white color, Hubbell Model 1221.

C. Receptacle:

1. Provide straight blade receptacles to NEMA WD 1.

2. Provide locking blade receptacles to NEMA WD 5.
 3. Convenience Receptacle Configuration, general use: Type 5-20 R, specification grade, plastic face, white color, Bryant Model 5352.
 4. GFCI Receptacle, general use: Specification grade duplex convenience receptacle with integral ground fault current interrupter, white color, Bryant Model GFR53FT.
 5. Isolated Ground Receptacle: Specification grade back and side wired, orange face, Bryant Model 5262-IG.
 6. Specific Purpose Receptacle: Configuration indicated on drawings with ivory nylon face.
- D. Decorative Cover Plate: White color, smooth rigid nylon or high impact plastic.
- E. Weatherproof Covers: Die cast aluminum, gasketed, duplex receptacle cover, weatherproof when attachment plug is inserted.

2.9 FIRESTOPPING MATERIALS

- A. Use only through-penetration firestop products that have been tested for specific fire resistance rated conditions conforming to construction assembly type, penetrating item type, annular space requirements, and fire rating required for the application:
1. Latex Sealants: Single component latex formulations that when cured do not re-emulsify during exposure to moisture.
 2. Firestop Devices: Factory assembles steel collars lined with intumescent material sized to fit a specific outside diameter of penetrating item.
 3. Firestop Putty: Intumescent, non-hardening, water resistant putties containing no solvents, inorganic fibers or silicone compounds.
 4. Wrap Strips: Single component intumescent elastomeric strips faced on both sides with a plastic film.
 5. Firestop Pillows: Re-useable, non-curing, mineral fiber core encapsulated with an intumescent coating contained in a flame retardant poly bag.
 6. Silicone Sealants: Moisture curing, single component, silicone elastomeric sealant for horizontal surfaces (pourable or non-sag) or vertical surface (non-sag).
 7. Silicone Foam: Multi-component, silicone based, liquid elastomers that when mixed expand and cure in place to produce a flexible, non-shrinking foam.
- B. Firestop systems shall be UL classified and rated for the type of construction where it is applied.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Verify that the interior of the building has been physically protected from weather.
- B. Verify that supporting surfaces are ready to receive work.
- C. All electrical work shall be completed by a master electrician that is licensed in the State of Maine.
- D. Make electrical connections to utilization equipment in accordance with equipment manufacturer's instructions.

1. Verify that wiring and outlet rough-in work is complete and that utilization equipment is ready for electrical connection, wiring, and energization.
2. Make wiring connections in control panel or in wiring compartment of prewired equipment. Provide interconnecting wiring where indicated.

3.2 GROUNDING

- A. Maintain isolation between neutral and ground conductors in accordance with NEC.
- B. Install grounding system so all conductive materials operate at ground potential and there is a low impedance path to ground in the event of a fault.
- C. Test grounding system for resistance to earth using fall-to-potential method in accordance with IEEE Std. 81. Maximum ground to earth resistance shall not exceed 25 ohms.

3.3 SUPPORT SYSTEMS

- A. Install support systems sized and fastened to accommodate weight of equipment and conduit, including wiring, which they carry.
 1. Fasten hanger rods, conduit clamps, and outlet and junction boxes to building structure using expansion anchors, beam clamps, and spring steel clips as appropriate for the application.
 2. Use toggle bolts or hollow wall fasteners in hollow masonry, plaster, or gypsum board partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion anchor on concrete surfaces; sheet metal screws in sheet metal studs; and wood screws in wood construction.
 3. Do not fasten supports to piping, ceiling support wires, ductwork, mechanical equipment, or conduit.
 4. Do not use powder actuated anchors.
 5. Do not drill structural wood or steel members.

3.4 CONDUIT

- A. Size raceways for conductor type installed or for type THW conductors, whichever is larger.
 1. Minimum Size Conduit: 3/4".
- B. Install all conduits concealed in walls or above finished ceilings except where specifically indicated to be surface mounted. Arrange conduit to maintain headroom and to present neat appearance. Install conduit in accordance with the following:
 1. Route exposed raceway parallel and perpendicular to walls and adjacent piping.
 2. Maintain minimum 6" clearance to piping and 12" clearance from parallel runs of flues, steam pipes, and heating appliances. Install horizontal raceway runs above water piping.
 3. Complete raceway installation before installing conductors.
 4. Maintain required fire, acoustic, and vapor barrier rating when penetrating walls, floors, and ceilings. Where indicated on drawings, sleeve penetrations through concrete walls, floors, and ceilings.

5. Route conduit through roof openings for piping and ductwork where possible; otherwise, route through roof with pitch pocket.
6. Group in parallel runs where practical and install on steel channel support system. Maintain spacing between raceways or derate circuit ampacities to NFPA 70 requirements.
7. Use conduit hangers and clamps; do not fasten with wire or perforated pipe straps.
8. Use conduit bodies to make sharp changes in direction.
9. Terminate conduit stubs and box connections with insulated bushings.
10. Steel conduit joints shall be threaded; clamp on or set screw fittings are not permitted.
11. Use suitable caps to protect installed raceway against entrance of dirt and moisture.
12. Provide No. 12 AWG insulated conductor or suitable pull string in empty raceways, except sleeves and nipples.
13. Install expansion joints where raceway crosses building expansion joints, and where necessary to compensate for thermal expansion.
14. Install plastic conduit and tubing in accordance with manufacturer's instructions; thermoweld or cement PVC joints.
15. Use flexible or liquidtight conduit, short as possible, maximum 72 inches, for motor and equipment hookup; always include a separate green ground wire.
16. Use liquidtight conduit for flexible connections in damp or wet locations.
17. Install conduit so condensation will drain and not be trapped.
18. Prevent lodgement of dirt, trash, and mortar; swab all raceways prior to installation of wire and cable.
19. Paint surface mounted conduit the color of the surface being mounted too.

3.5 BOXES

A. General:

1. Install electrical boxes where shown on the drawings, and as required for splices, taps, wire pulling, equipment connections, and regulatory requirements.
2. Locate and install electrical boxes to maintain headroom and to present neat mechanical appearance.
3. Align wall mounted outlet boxes for switches, thermostats, and similar devices.
4. Coordinate mounting heights and locations of outlets above counters, benches, and back splashes.
5. Install lighting outlets to locate luminaires as shown on electrical plan.
6. Use expansion anchors, shields, or toggle bolts to fasten boxes in place. Do not use explosive powder driven anchors, except where specifically permitted by Engineer. Do not use nails or wire for permanent support.
7. Secure boxes to interior wall and partition studs, accurately positioned to allow for surface finish thickness; select raised cover depth to assure proper fit.
8. Do not install boxes back-to-back in walls; provide 6" separation, minimum; except provide 24" separation, minimum in acoustic rated walls.
9. Use hinged cover enclosure for interior pull and junction boxes larger than 12 inches in any dimension. Install in an accessible location that will allow easy access.
10. Field punch openings in pull boxes using punch/dies of appropriate size. Provide knockout closures for unused openings.

B. Surface mounted applications:

1. Use cast "FD" outlet boxes for all surface mounted applications to 10 feet above finished floor, and for exterior and wet locations.
2. Where pull boxes must be installed in finished areas, consult Engineer to select location, style, and finish. The location shall always be as inconspicuous as possible.

C. Concealed above ceilings:

1. Install 4" x 4" x 2" or larger steel boxes for general wiring.
2. Octagon boxes, 3 1/2" or 4" by 1 1/2" or larger depth, are permitted for flush mounted lighting fixture outlets, use adjustable steel channel fasteners for support.
3. Locate and install electrical boxes to allow access. Provide access panels where required for practical access, and as required by the NEC.

D. Concealed in GWB or plaster walls:

1. Install 4" x 4" x 2" steel box; select raised plaster ring and set box so that outer edge is not less than 1/8" below finished wall surface.
2. Use stamped steel mounting bracket for flush outlet/device boxes in hollow stud wall.
3. Align wall mounted outlet boxes for switches, thermostats, and similar devices.
4. Coordinate mounting heights and locations of outlets above counters, benches, and back splashes.

3.6 INSTALLATION OF WIRES AND CABLES

- A. Verify that interior of building has been physically protected from weather, that mechanical work which is likely to injure conductors has been completed and completely and thoroughly swab raceway system before installing conductors.
- B. Use wire not smaller than 12 AWG for power and lighting circuits, and not smaller than 14 AWG for control wiring.
 1. Use 10 AWG conductor for 20 ampere, 120 volt branch circuit home runs longer than 75 feet; and for 20 ampere, 277 volt branch circuit home runs longer than 200 feet.
- C. Neatly train and secure wiring inside boxes, equipment, and panelboards.
- D. Use UL listed wire pulling lubricant for pulling 4 AWG and larger wires.
- E. Install wiring according to the Wiring Standard. Protect and support exposed cables (where allowed) above accessible ceilings to keep them from resting on ceiling tiles. Use channel, or running boards as necessary to provide support. Do not support wiring on ceiling support wires, unless ceiling installer has provided certification that ceiling support system is rated to carry the additional load of the cables. Install cables to run parallel and perpendicular to building lines; do not run diagonally, leave ample slack cable at turns.
- F. Make splices, taps, and terminations to carry full ampacity of conductors without perceptible temperature rise.
- G. Terminate spare conductors with electrical tape.

- H. Color code all service, feeder, branch, control, and signalling circuit conductors. Color shall be green for grounding conductors and white for neutrals, except where neutrals of more than one system are installed in same raceway or box, the other neutral shall be white with a colored (not green) stripe. Color code ungrounded conductors operating at 120 volts to ground black, red, and blue for Phases A, B, and C and at 277 volts, brown, orange, and yellow respectively.
- I. Terminate all wire joints #10 AWG or smaller with crimp set or twist-on wire terminating device. Use crimp set or bolted "Burndy" or suitable alternate bolted or crimp set device for conductors larger than #10 AWG.
- J. Cover all joints made with non-insulated connecting devices with electrical tape; use Type #88 at any time or #33 whenever the temperature of the joint or the room. Triple wrap joints, each wrap having a 50% overlay.

3.7 DEVICES

- A. Install wiring devices in accordance with manufacturer's instructions.
 - 1. Install wall switches 48" above floor, OFF position down.
 - 2. Install wall dimmers 48" above floor. Derate ganged dimmers as instructed by manufacturer. Do not use common neutral.
 - 3. Install convenience receptacles 18" above floor, 6" above counters and backsplash or as indicated, with grounding pole on top.
 - 4. Install cord and attachment plug caps on equipment. Size cord for connected load and rating of branch circuit overcurrent protection.

3.8 FIRESTOPPING

- A. Install through penetration firestop systems in accordance with firestop system manufacturer's written installation instructions for products and applications indicated.
- B. Engage an experienced installer who is trained, certified, licensed, or otherwise qualified by the firestop system manufacturer to install the firestop products.
- C. Coordinate construction of openings and penetrating items to ensure that firestop systems are installed according to specified requirements.
- D. Provide firestop systems that are compatible with one another, with the substrates forming openings, with the items penetrating the firestop system, and under the conditions of service for the application being considered.
- E. Provide components for each firestop system that are needed to install fill materials. Use only components specified by the firestop system manufacturer and approved by the qualified testing agency for the designated system.
- F. Keep areas of work accessible until inspection by the AHJ has been completed.
- G. Inspecting Agency: Owner may engage a qualified independent inspecting agency to inspect the completed firestop system. The independent agency shall comply with ASTM E 2174

requirements including inspecting personnel qualifications, method of conducting inspections, and preparation of test reports.

- H. Where deficiencies are found, repair or replace the firestop systems so that they comply with requirements. Proceed with enclosing firestop systems with other construction only after inspection reports are issued and the firestop installations comply with requirements.
- I. Protect the firestop system during and after installation to insure that the systems do not deteriorate and are not damaged during the remaining period of construction. In the event damage or deterioration occurs, remove affected firestop system and replace with new materials in compliance with this specification.

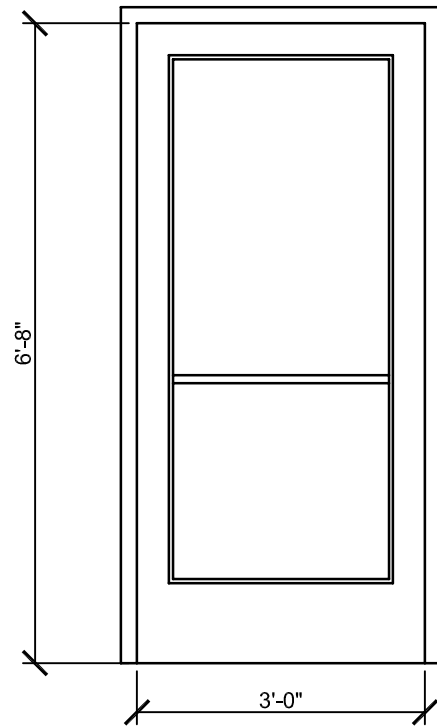
3.9 IDENTIFICATION

- A. Identify electrical distribution and control equipment, and loads served, to meet regulatory requirements and as scheduled.
 - 1. Degrease and clean surfaces to receive nameplates and tape labels.
 - 2. Secure nameplates to equipment fronts using screws, rivets, or adhesive, with edges parallel to equipment lines. Secure nameplate to inside face of recessed panelboard doors in finished locations.
 - 3. Use embossed tape nameplates with 3/16" lettering to identify individual switches and circuit breakers, wall switches, receptacle circuits, and loads served.
 - 4. Use lamicoid nameplates with minimum 1/4" lettering to identify distribution and control equipment.
 - 5. Nameplate information shall suitably identify the device or circuit. Any nameplate that is not suitably descriptive in the opinion of the Engineer shall be replaced as directed.
- B. Install wire markers on each conductor in panelboard gutters, pull boxes, outlet and junction boxes, and at load connections.
 - 1. Use branch circuit or feeder number to identify power and lighting circuits.
 - 2. Use control wire number as indicated on schematic and interconnection diagrams and equipment manufacturer's shop drawings to identify control wiring.

3.10 FIELD QUALITY CONTROL

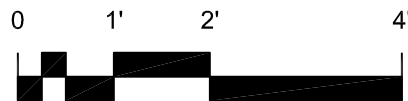
- A. Perform field inspection and testing of wiring as follows:
 - 1. Inspect wire and cables for physical damage and proper connection.
 - 2. Torque test conductor connections and terminations to manufacturer's recommended values.
 - 3. Verify proper phasing connections; check rotation of all motors.
- B. Perform field inspection and testing of devices as follows:
 - 1. Test for proper polarity and ground continuity.
 - 2. Test GFCI operation according to manufacturer's written instructions.
 - 3. Replace defective units and retest.

END OF SECTION 26 05 00



DOOR 01 ELEVATION

SK-1



SCALE: 1/2" = 1'-0"



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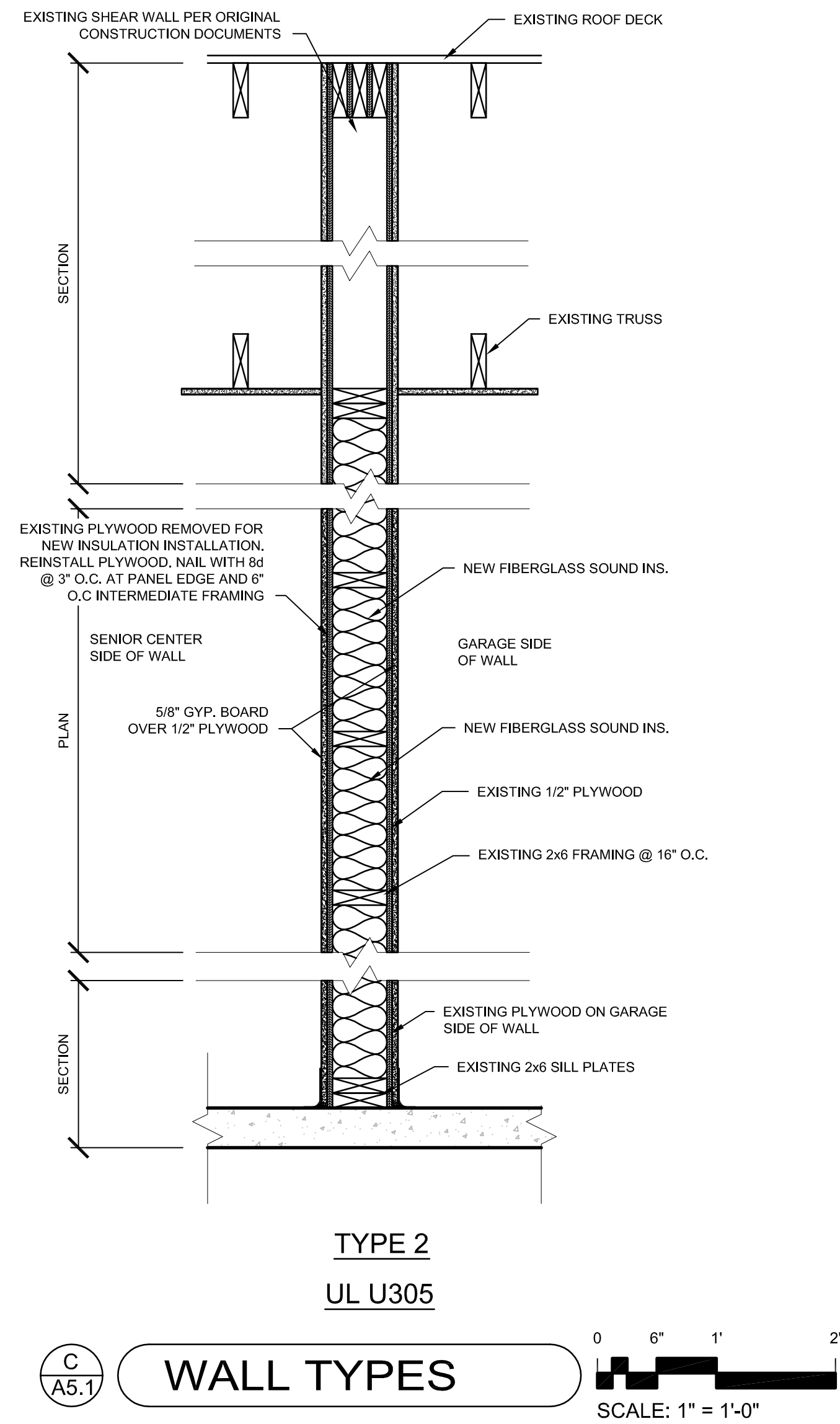
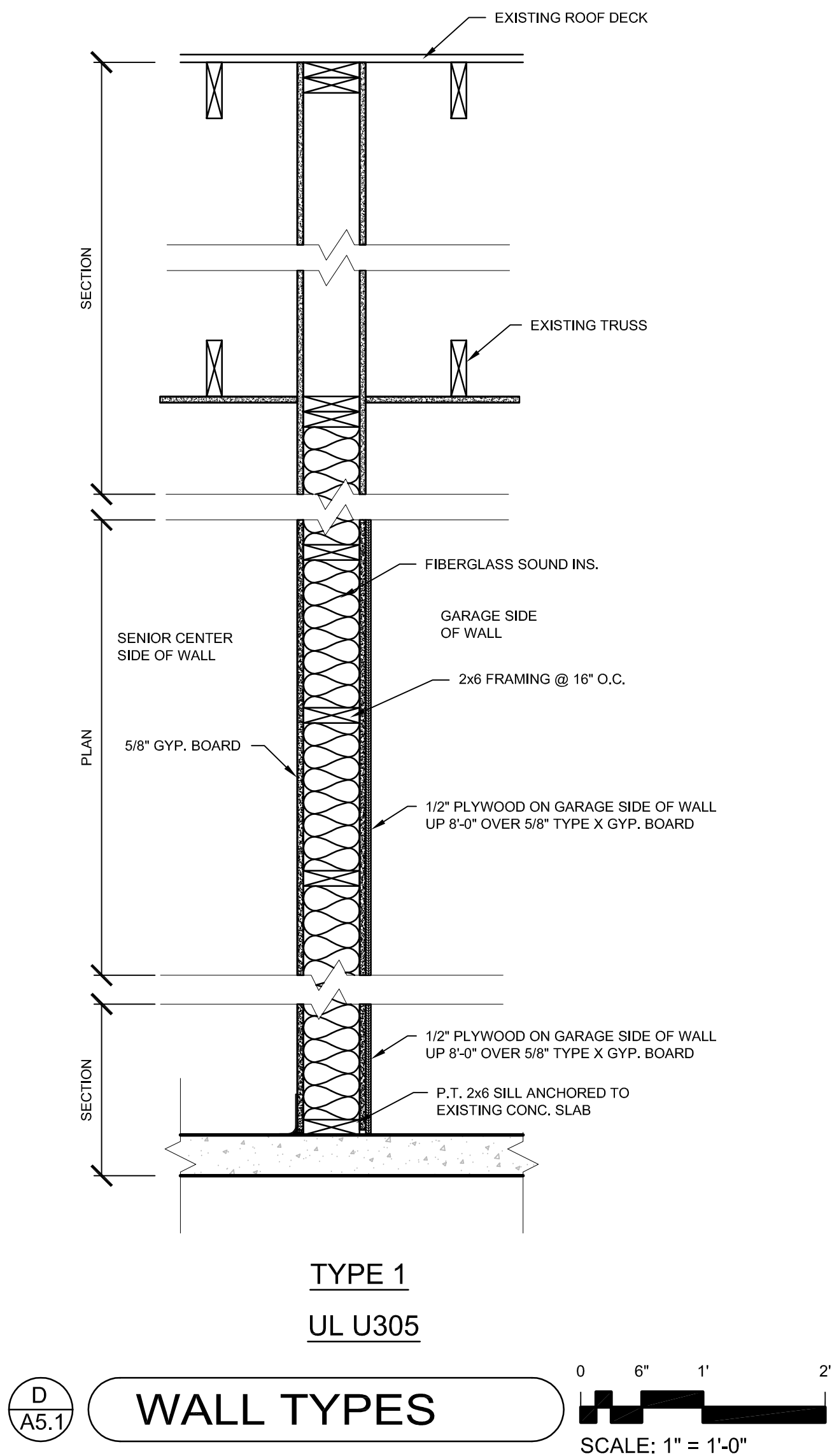
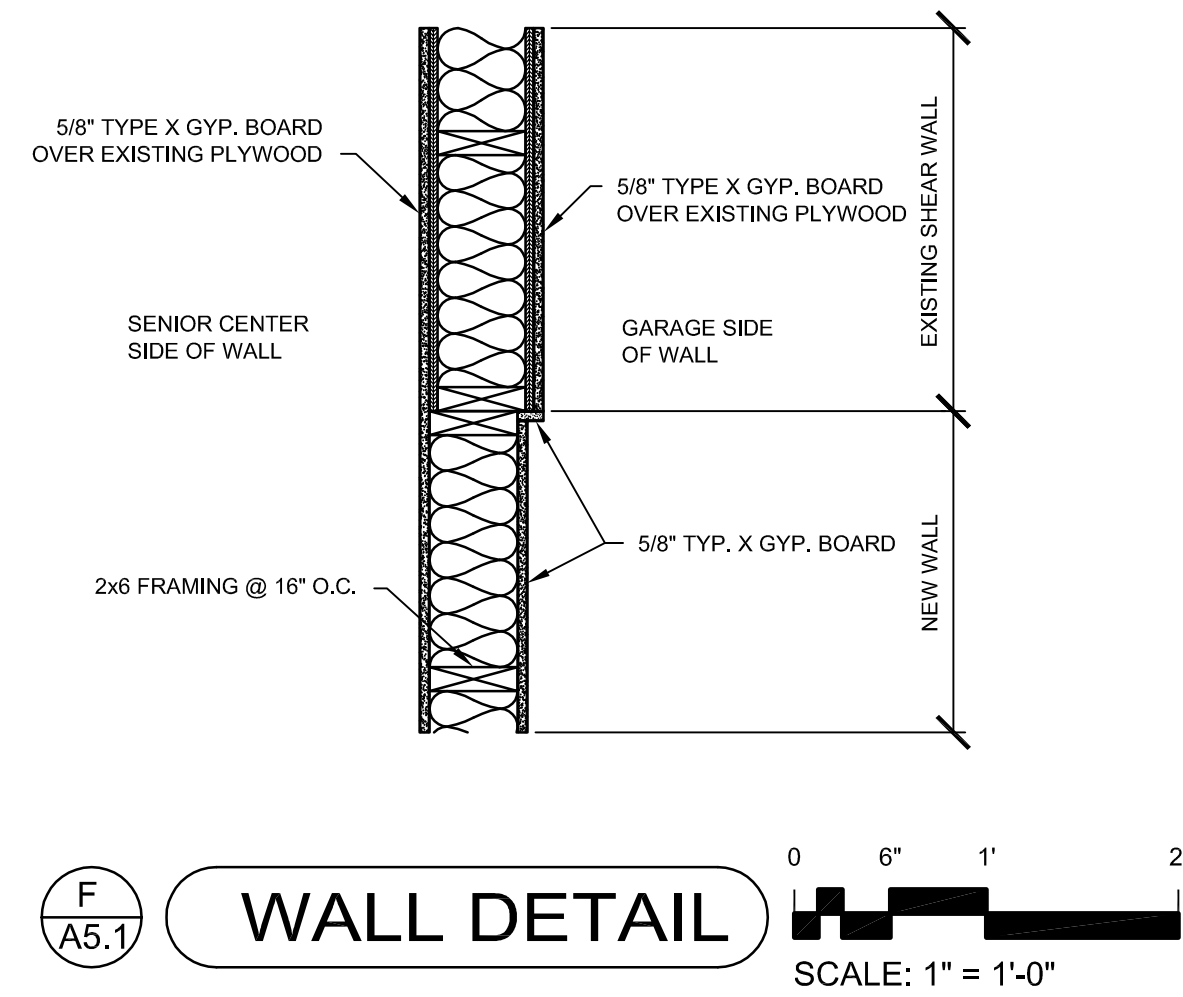
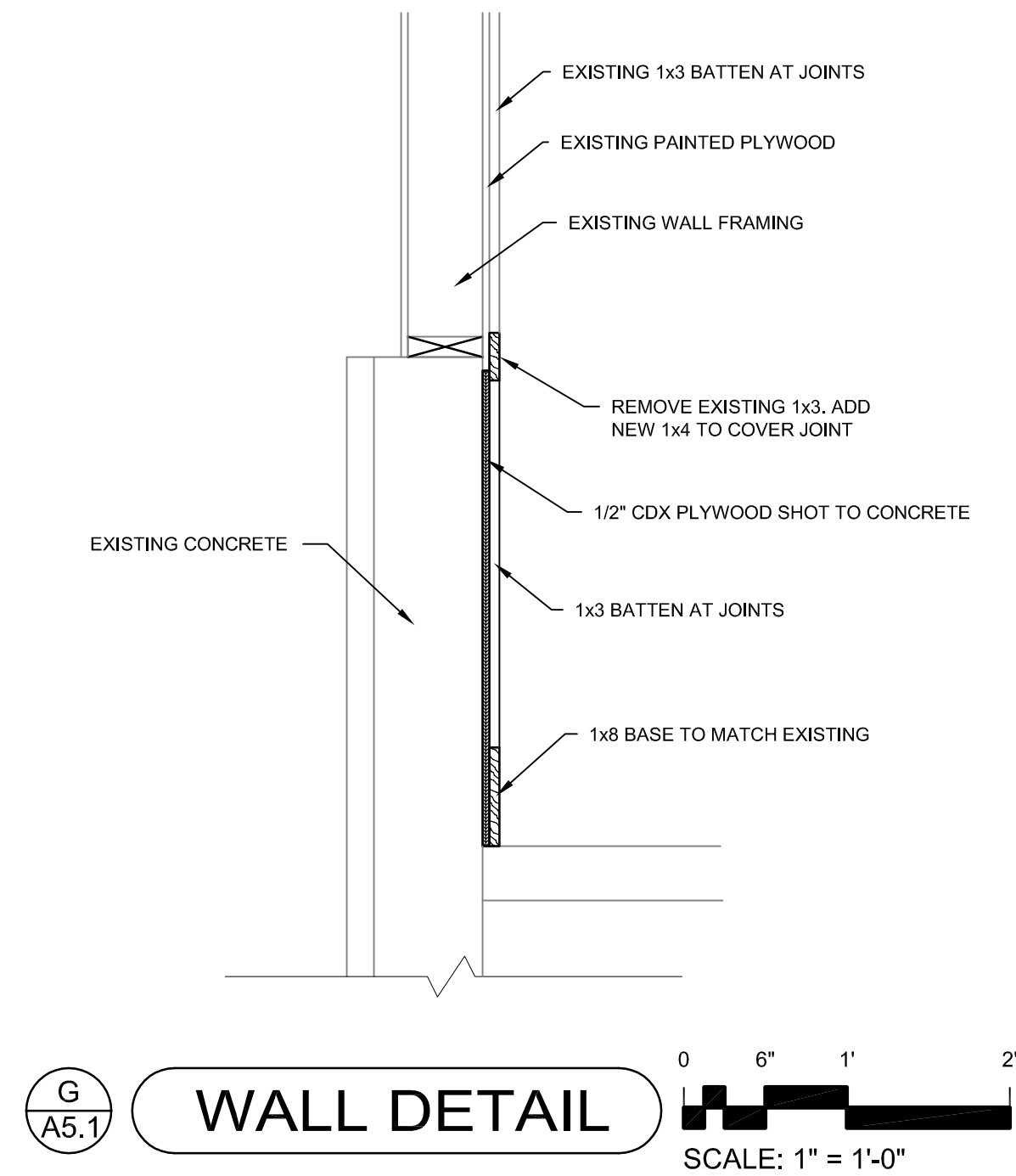
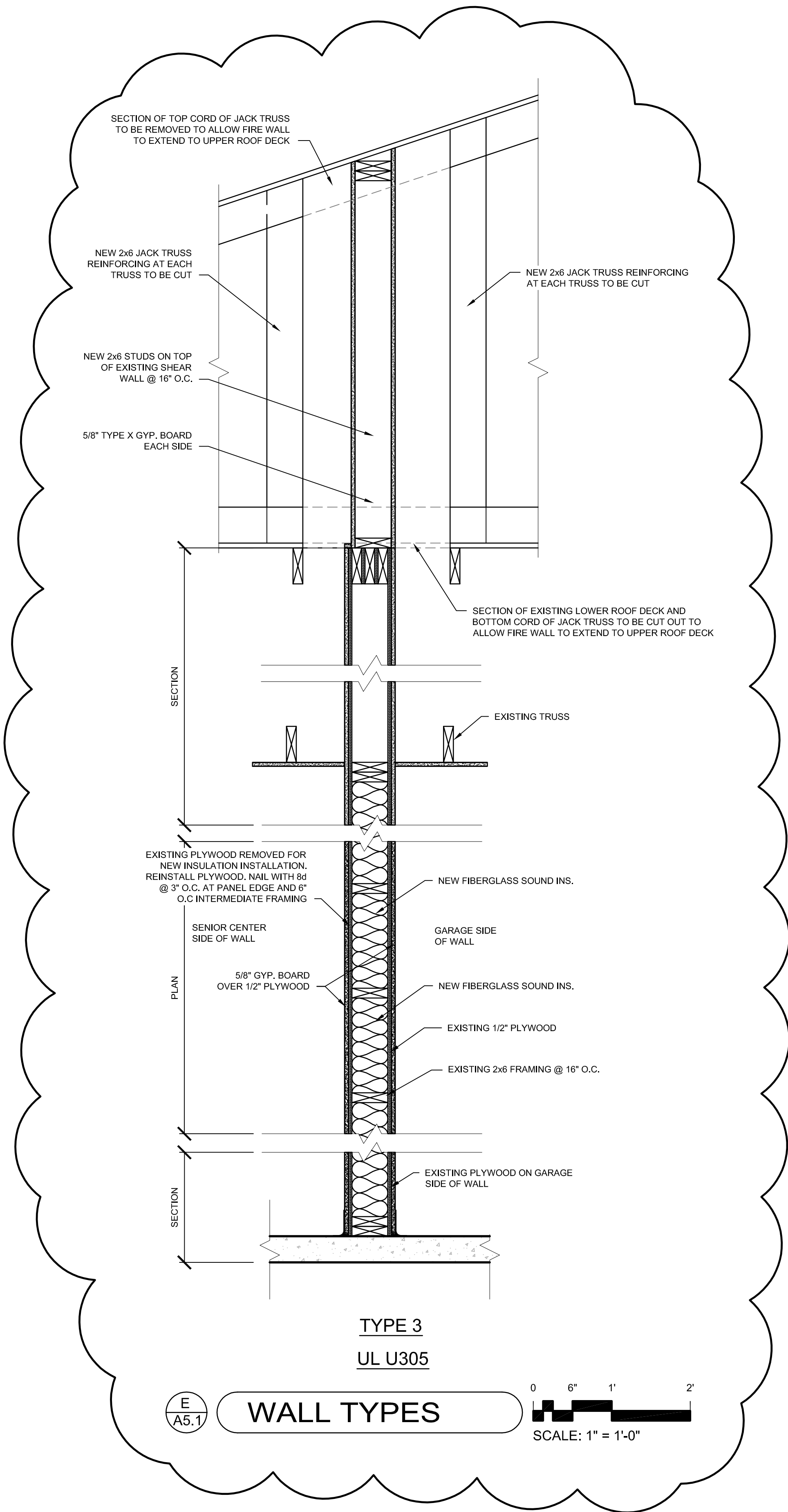
FAX: (207) 594 - 5370

PARKS GARAGE SENIOR CENTER RENOVATIONS

48 Pettingill Park Road, Auburn, Maine

Bid No. 2017-023

**City of Auburn, Maine
60 Court Street
Auburn, Maine 04210**



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SENIOR CENTER
RENOVATIONS**
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60 Court Street
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Legend:

REGISTERED ARCHITECT
JOHN E. HANSEN
STATE OF MAINE

Consultant Name and Address:
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Drawing Status:
☐ CONCEPT DESIGN
☐ 30% DESIGN DEVELOPMENT
☐ 60% DESIGN DEVELOPMENT
☐ 90% DESIGN DEVELOPMENT
☒ 100% BID DOCUMENT
☐ 100% CONSTRUCTION DOCUMENT
☐ RECORD DOCUMENT
NO DRAWING SHALL BE RECOGNIZED AS A CONSTRUCTION DOCUMENT UNLESS IT BEARS A SIGNED REGISTRATION SEAL.

Sheet Title:
**PROPOSED
DETAILS**

1	WALL TYPE 3 CORRECTION	2/17/17
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No.	Revision/Issue	Date
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Design by:	JEH	Checked by:	MAD
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Drawn by:	CMC	Approved by:	BMB
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Project No:	1001	Date:	JANUARY 27, 2017
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Sheet Number:

A5.1