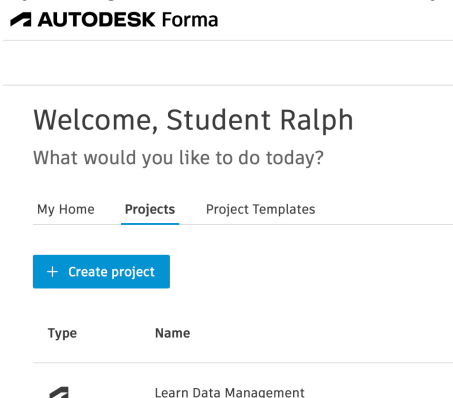


Practice exercise – Answer Key

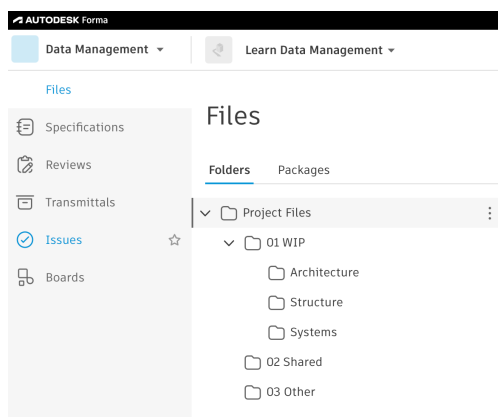
Explore specifications in Forma Data Management

The following steps were completed in the videos for **Module 1: Manage files and specifications in Forma Data Management**. If you followed along in the videos, you are ready to start the exercise that follows these steps. If you have *not* already performed these steps, make sure to complete them first:

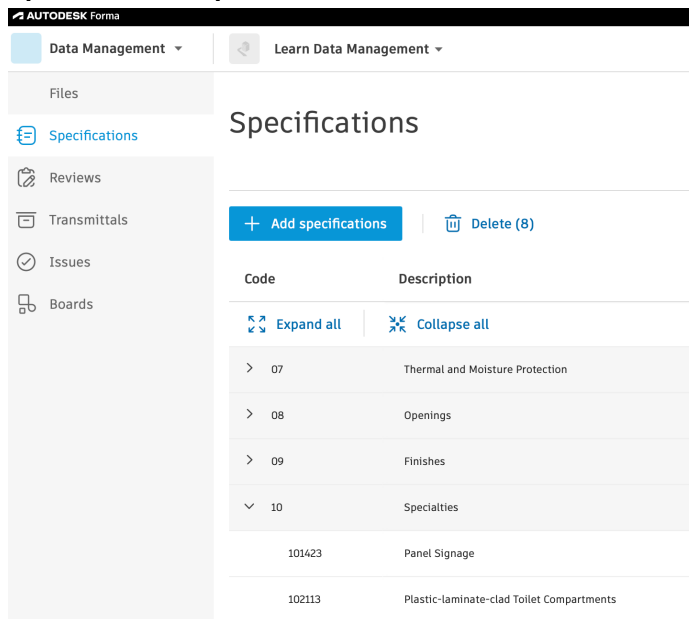
1. You gained access to the Learn Build Project on Autodesk Forma for Construction by using the invitation sent to you by your instructor.



2. You created a folder structure in Data Management to include 01 WIP, 02 Shared, and 03 Other.



3. You uploaded the files from the dataset folder you downloaded for this course into the corresponding folder on Data Management.
 - a. You uploaded the **Architectural Model.rvt** file from the Version 1 folder in the dataset folder to the Architecture folder on Data Management.
 - b. You uploaded the **Structural Model.rvt** and **Structural Sheets.pdf** files from the Version 1 folder in the dataset folder to the Structure folder on Data Management.
 - c. You uploaded the **Systems Model.rvt** file from the Version 1 folder in the dataset folder to the Architecture folder on Data Management.
 - d. You uploaded the other files on the dataset folder into the 03 Other folder on Data Management.
4. You used the Specifications tool to extract the MasterFormat sections from the **Specifications.pdf** file in the dataset folder.



Once these step are completed, you will be ready to start the exercise. You will apply the skills learned in this module to navigate and review project specifications in Data Management. Using the specifications you previously uploaded, you will locate information, search for specific content, and filter the specification documents to quickly find the details you need.

Learning objectives:

By the end of this exercise, you should be able to:

- Navigate project specifications in Data Management.
- Locate information using the search tool.
- Filter specification documents to find relevant content.
- Identify information within project specifications to answer project-related questions.

Success criteria:

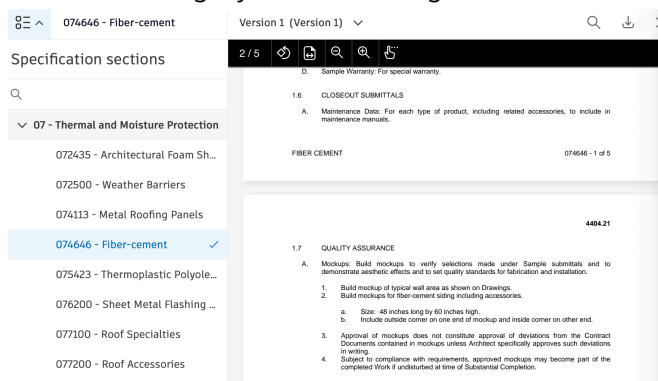
- Specifications are successfully accessed and reviewed in Data Management.
- Information is located within specifications using the search tool.
- Specification content is filtered to quickly find relevant information.
- Exercise questions are completed and answers are submitted for review.

Answer the following questions based on the specifications uploaded to Forma Data Management.

- What is the size of the fiber-cement siding mockup that should be build according to section 074646?

Answer Key

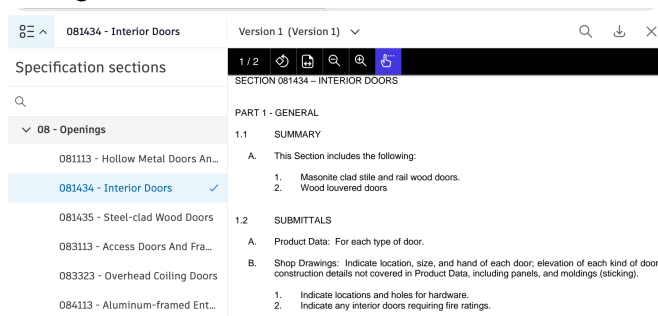
48 inches long by 60 inches high.



- What should be included in the submittals for each interior door type?

Answer Key

For each door type, the submittal should include shop drawings to indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data, including panels, and moldings (sticking). They should also indicate locations and holes for hardware and any interior doors requiring fire ratings.



3. What is the nominal insulation thickness in inches that should be used on a one-inch pipe? Include the specification reference.

Answer Key

The nominal insulation thickness for one-inch pipe is 1.345 inches according to section 221005, part 2, paragraph B, bullet point 7.

221005 - Plumbing Piping

Specification sections

084113 - Aluminum-framed Ent...

085313 - Vinyl Windows

087100 - Door Hardware

088000 - Glazing

088300 - Mirrors

09 - Finishes

10 - Specialties

12 - Furnishings

14 - Conveying Equipment

21 - Fire Suppression

22 - Plumbing

220548 - Vibration And Seismic ...

220553 - Identification For Plu...

221005 - Plumbing Piping

224000 - Plumbing Fixtures

23 - Heating

26 - Electrical

Version 1 (Version 1)

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B. *Structure as manufactured by Perma Pipe* Poly-MI prefabricated and pre insulated piping system composed of straight sections only. Fittings, anchors and other accessories shall be factory fabricated to join dimensions and designed to minimize the number of field welds, composed of integral welded HDPE outer jacket, polyurethane foam insulation and steel carrier pipe, as herein specified. Each system shall be subjected to analysis by the piping system manufacturer to determine stress on the carrier pipe and anticipated thermal movement of the service pipe. The system design shall be in strict conformance with ANSI B-31.1 latest edition.

C. *Outer jacket* High density polyethylene (HDPE) compound, per ASTM D1248, Type 3, Class C.

2. *Insulation:* Polyurethane foam with the following minimum characteristics: K Factor 0.14 Btu-in./sq ft per ft per ft, at 75 degrees F. Density 2 pcf closed cell - 95-95% in conformance with MIL-1-2172 and ASTM D5911 completely filling the annular space between carrier pipe and jacketing. Minimum insulation shall be in accord with Table 1. Exposed insulation at unit ends shall be sealed with a factory applied vapor barrier.

a. To ensure no voids are present, all insulation shall be infrared inspected.

b. Visually checked prior to application of the protective jacket.

3. *Carrier Pipe:* Internal piping shall be copper type K with silver brazed joints.

4. *Fittings:* Fittings will conform to pipe type and will be silver brazed for pressure piping to straight lengths in pre-plant.

5. *Insulation of connector joints:* After welding and testing, joints shall be insulated with insulation and jacketing materials furnished by manufacturer. The installer shall seal the field joint area with a heat shrinkable adhesive backed sleeve. Backfilling shall not begin until the heat shrink sleeve has cooled.

6. *Anchor:* 1/4 in. thick steel plate prefabricated anchor is attached to internal pipe and sealed to pipe jacketing at locations shown on drawings.

7. *Field tests:* Manufacturer's warranty to have their products approved as an equal on the project shall comply with the following: Supply to Engineer at submittal time, a letter of certification from an independent testing laboratory that their products have been tested, approval under the following test criteria:

a. *Casing and end seal testing and certification:* Test and certification procedures shall demonstrate that casing and end seals are capable of resisting penetration of water into casing and insulation at 20 feet of head pressure, measured above the highest point of the test sample, subjected over the entire surface of 8 foot casing test sample for not less than 24 hours.

Nominal Pipe Size (in.)	Minimal Insulation Thickness (in.)	Jacket size (in.)
1	1.345	4HDPE
1-1/4	1.17	4HDPE
1-1/2	1.05	4HDPE
2	1.81	8HDPE

4. What sections in the specifications discuss information related to windows?

Answer Key

Sections 07, 08, 09, 10, and 12.

Specifications

Search results

Deleted Items

Publish Log

Settings

Search and filter (1)

Code	Description	Number of versions	Version set	Issuance date	Receive
07	Thermal and Moisture Protection				
08	Openings				
09	Finishes				
10	Specialties				
12	Furnishings				

Search

Clear all

windows

Show detailed content view

Filters

Code

Select...

Version set

Select...

Issuance date

Select...

5. What two sections in Division 10 in the specifications discuss information related to concrete?

Answer Key

Sections 105500 and 1071114.

Specifications > Search results

Deleted Items Publish log Settings

Search and filter (2)

Code	Description	Number of versions	Version set	Issuance date	Receive
10	Specialties				
105500	Postal Specialties	1	Version 1	Jul 2, 2026	
107114	Decorative Faade Screen Structure	1	Version 1	Jul 2, 2026	

Search

Concrete

Show detailed content view

Filters (1) Clear

Code

- 106200 - Vinyl Coated Wire She...
- 107114 - Decorative Faade Scre...
- 107314 - Aluminum Awnings

07 - Thermal and Moisture Protection

08 - Openings

09 - Finishes

10 - Specialties

12 - Furnishings

14 - Conveying Equipment

Clear

6. What is the thickness of gypsum board type X?

Answer Key

The thickness of gypsum board type X is 5/8 inch.

Learn Data Management - Used for recording

Search all specifications

Search results

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C. Gypsum Board, Type X: ASTM C 1396/C 1396M.

- Thickness: 5/8 inch.
- Long Edges: Tapered.

D. Flexible Gypsum Board: ASTM C1396/C1396M. Manufactured to bend to fit radii and to be more flexible than standard regular-type gypsum board of same thickness.

- Thickness: 1/4 inch.
- Long Edges: Tapered.

E. Gypsum Ceiling Board: ASTM C 1396/C 1396M.

- Thickness: 1/2 inch.
- Long Edges: Tapered.

F. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.

- Thickness: As indicated.
- Long Edges: Tapered.
- Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

Search

type x

Filters

Code

Select...

Version set

Select...

Issuance date

Select...