Work Specifications

Carpentry trade
Ny Dyginstitution I Kragelund
Engesvangvej, 8600 Denmark

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Project specific specifications

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2. Scope
The project is a new construction for the kindergarten in Kragelund. The carpentry works include all of the carpentry work in the building. See further content for more information.

2.1. General information
The work comprises the building components and other services stated in point 2.2, which are described in more detail in the work specifications or in the drawings.

In addition, the work comprises the stipulations in the Case Specifications and any services required in tender forms, for example extra work or omissions that can be connected to the current works.

2.2. Building components
The work comprises all works and deliveries that are necessary for the full completion of building components.

The work encompasses the following building components:

- Mounting the roof elements and taking care or attachment to other building components
- Windows, joints
- Internal and external doors, joints
- Mounting of suspended ceilings

The following components, which are part of the finished construction and are delivered by the employer/ or other contractor, are mounted as part of the current works:

- IPE beams by the blacksmith trade
- Internal and external walls by the concrete trade
- Skylight for the roof, by the skylight producer

2.3. Design and detail design
No design work is included.

2.4. The building site
The carpentry trade has to:

- Provide the closing-off of the covering/protection for the holes of the building (see chapter 4.6.4 in the Case specification)
- Establish, maintain and remove screens and other provisions towards streets, around buildings etc. that are set up in the interest of public safety (see chapter 4.6.8 in the Case specification)
- Deliver, set-up, maintain, move and remove the interim staircases and gangways, etc. (see chapter 4.7.3 in the Case specification)
- Supply the first aid box and has the responsibility of ensuring that it, at all times, has the necessary minimum content of items cf. The Factory Inspection's requirements. The First Aid Box is situated in the main facility and is accessible when work is being done on site (see chapter 4.8.8 in the Case specification)
- Supply firefighting equipment and materials (see chapter 4.8.9 in the Case specification)

2.5 Health and Safety

- Provide the closing-off of the covering/protection for the holes of the building (see chapter 4.6.4 in the Case specification)
- Establish, maintain and remove screens and other provisions towards streets, around buildings etc. that are set up in the interest of public safety (see chapter 4.6.8 in the Case specification)
- Deliver, set-up, maintain, move and remove the interim staircases and gangways, etc. (see chapter 4.7.3 in the Case specification)
- Supply the first aid box and has the responsibility of ensuring that it, at all times, has the necessary minimum content of items cf. The Factory Inspection's requirements. The First Aid Box is situated in the main facility and is accessible when work is being done on site (see chapter 4.8.8 in the Case specification)
- Supply firefighting equipment and materials (see chapter 4.8.9 in the Case specification)

2.6 The surrounding environment

No noise and vibrations between 18:00 and 7:00 on working days, and no noise during weekends

2.7. Quality Assurance

2.7.1. General information

It is assumed that you select a tolerance class for all building elements, such as normal or reinforced (NT or ST), ensuring consistency between the building elements. The installer must ensure the elements against moisture impact and a short term storage on site as well as during and after installation. Long-term storage and moisture exposure is a risk of attack by mold. Performance requirement for the width is ± 3 mm between elements and for the length it is ± 7 mm. (http://www.tolerancer.dk/trae/udvendige-konstruktioner-ogbeklaedning/tagkonstruktion/traeelementer/) For installation of windows and doors is assumed see. DS 1003 Window. Module size a join of "10 mm" - in practice 11 mm. DS 1003 indicates the window or fade element tolerance of ± 2 mm. Annex to DS 1003 specifies the installation hole tolerance of ± 5 mm. Upon receipt of window and door elements must be ensured that the elements are recommended on a flat, dry surface and that they are hedged properly for protection against precipitation. (http://www.tolerancer.dk/trae/doere-vinduerog-glas-eller-alufacader/) Acoustic celling panels should have a normal class tolerance of ± 3 mm / 2 m. (http://www.tolerancer.dk/trae/indvendige-arbejder/lofter/)

2.7.2. Documentation of quality

The quality or the tolerances can be measured using a straight edge tool and tape measure. Also, the quality for these works should be documented by taking pictures of different work phases and by keeping the producers data sheets.

2.7.3. O&M (Operation and Maintenance)-documentation

The correct maintenance of a roof will reduce the impact on materials and constructions and thereby increase the life time. As a general rule should be checked spring and autumn:

- clogged drains and gutters
- rocks, broken glass, and the like foreign objects
- growths that can grow over the stern edge and leaves that can become a breeding ground for plant growth

- damage to flashings at the edges, skylights, hoods and drains
- damage in roof coating

2.8. Planning and scheduling of work
The construction work is scheduled to start on 20.03.2017. For a more detailed time schedule of the work, refer to C12_N01 – Tender time schedule

2.9. Samples
The following samples, for the benchmarking of outcome product requirements, must be made:
None

3. General Specifications

3.1. Reference
All references made in this work specifications can be found on the Dropbox project web, in the folder called A6_DetailDesign 2.

3.1.1. Norms and standards
The norms and standards mentioned below, in their latest editions and with any enclosures are valid for the works of carpentry with any amendments, additions and omissions that are stated in these work specifications and on the drawings. The notes and directions, etc. stated in the references are to be construed as requirements that only can be deviated from if they are stated in these work specifications and/or on the drawings, or agreed with the project management.

- Standard norms and good building practices are used (Byg-Erfra, tolerance.dk, Sbi, etc.)

3.1.2. Directions/instructions
Where the directions, reports and other documents in their latest edition, with any enclosures and together with the project documents, are made valid for the works, the stated recommendations, directions, procedures, advice, etc., must be construed as demands.

- According to http://www.taasinge.dk/salg-proces/levering-montage/

3.2 Materials and products
The required documentation for the materials and products used, for example in the form of product certificates, receipts, etc., must be presented for the project management for their approval. The following materials and products must not be delivered onto the building site before the project management's documentation for them are available:

Materials and products of specific brands can be prescribed for the works. Other product brands can be used if they are on the same footing as the ones prescribed. Documentation for this must be presented to the project management.

3.3 Execution of works
Prior to assembly, it is recommended to mark module lines on the support substrate. The elements are normally mounted with a gap width tolerance of 8 mm + - 5 mm. In order to avoid air flows through the assembly, it is important that all joints and connections to other building components is carried out air-tight at the level of the damp proof membrane. Connections to the building (components) will be completed at

the construction site when anchoring is performed, typically in the form of joint seal, insulation and installation of exterior closing piece. Ventilation openings in roof structures must always be supplied with netting in order to avoid the intrusion of insects, birds and drifting snow. In the case of ventilated as well as non-ventilated roof structures it is required moist air from the inside must be prevented from entering the roof structure.

3.4. Control

The following Tender Control Plan must be worked into the contractor's Control Plan.

Tender Control Plan							
No.	Subject	Reference	Method	Extent	Time	Aceptation criteria	Demand for documentation
1	Placing IPE beams	Beam Plan	Visual/ measuring	Normal control	After the load-bearing walls have been put up.	Tolerance of 5mm +- 2mm	Data sheets.
2	Mounting the roof elements	According to producer: http://www.kalzip.com/kalzip/eur/home/default.aspx	Visual/ measuring	Normal control	After theIPE beams have been put up.	The elements are normally mounted with a gap width tolerance of 8mm +- 5mm	Data sheets.
3	Attachment to other constructions/DPM	Byg-Erfa (39) 111122 "Damp proof membranes and sealants"	Visual/ measuring	Normal control	After the roof mounting process	In order to avoid air flows through the assembly, it is important that all joints and connections to other building components is carried out air-tight at the level of the damp proof membrane. Extended quality control on the tightness of the DPM should be done	Data sheets.
4	Finishing sealing/joining	According to producer: http://www.kalzip.com/kalzip/eur/home/default.aspx	Visual/ measuring	Normal control	After the anchoring/attachment to the load-bearing constructions is performed.	Joint seal, insulation and intallation of exterior closing pieces need to be done	Data sheets.

3.5 Relation to other works

For installation of windows and doors is assumed see. DS 1003 Window. Module size a join of "10 mm" - in practice 11 mm. DS 1003 indicates the window or fade element tolerance of ± 2 mm. Annex to DS 1003 specifies the installation hole tolerance of ± 5 mm

3.6. Work environment

Refer to the C08_N01 – Case specification

4. Building Component Specifications

Building Component ID, the title for the building component specifications

For building component specification, see file I100_C11_N01 – Building component specification

- **Extent and location**

The carpentry contractor's work includes the external doors and glass facades (located on all sides of the building), the ceiling works (suspended ceiling) and the roof, which is covering the entire building from above.

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- **References to drawings**

Location plan	F6	H0	N01	I100_F6_H0_N01
Situation Plan	F6	H0	N02	I100_F6_H0_N02
Building site plan	F6	H0	N03	I100_F6_H0_N03
Ground floor plan	F6	H1	N01	I100_F6_H1_N01
Beam plan	F6	H1	N02	I100_F6_H1_N02
Roof plan	F6	H1	N03	I100_F6_H1_N03
Roof plan DD2	F6	H1	N04	I100_F6_H1_N04
North &South Elevation	F6	H2	N01	I100_F6_H2_N01
West &East elevation	F6	H2	N02	I100_F6_H2_N02
Cross section	F6	H3	N01	I100_F6_H3_N01
Longitudinal section	F6	H3	N02	I100_F6_H3_N02
D-01 Curtain wall to roof	F6	H5	N01	I100_F6_H5_N01
D-02 Roof overhang	F6	H5	N02	I100_F6_H5_N02
D-03 Roof with external wa	F6	H5	N03	I100_F6_H5_N03
D-04 Drainage of roof	F6	H5	N04	I100_F6_H5_N04
D-05 Roof with Kryb wall	F6	H5	N05	I100_F6_H5_N05
D-06 Roof withexhaust pip	F6	H5	N06	I100_F6_H5_N06
D-07 Roof with skylitght	F6	H5	N07	I100_F6_H5_N07

- **Adjoining building components**

The adjoining building components include:

- Concrete internal walls
- concrete external walls
- IPE steel beams

- **Design**

None

- **Materials and products**

- Steel roof http://www.kalzip.com/kalzip/eur/home/default.aspx
- Ceiling http://www.gyproc.ie/sites/default/files/07%20CASOLINE%20MF.pdf
- Skylight Ridgelight 25 - 40° or similar http://velcdn.azureedge.net/~/media/marketing/master/velux%20modular%20skylights%20professional/pdfs/velux_modular_skylights_technical_handbook.pdf

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- **Execution**

Prior to assembly, it is recommended to mark module lines on the support substrate. The elements are normally mounted with a gap width tolerance of 8 mm + - 5 mm. In order to avoid air flows through the assembly, it is important that all joints and connections to other building components is carried out air-tight at the level of the damp proof membrane. Connections to the building (components) will be completed at the construction site when anchoring is performed, typically in the form of joint seal, insulation and installation of exterior closing piece. Ventilation openings in roof structures must always be supplied with netting in order to avoid the intrusion of insects, birds and drifting snow. In the case of ventilated as well as non-ventilated roof structures it is required moist air from the inside must be prevented from entering the roof structure.

- **Surfaces**

Metal roof covering

- **Tests and samples**

No tests (mock-up) or samples are to be given

- **Quality Control**

Extended quality control should be done on:

- The tightness of the DPM
- Tightness of fire board