



Design Workshop 2017

Development Aspects Of Design Estimates
For The Construction (Reconstruction)
Objects In Accordance With The Provisions
Of The Current Legislation Of Ukraine
(On The Example Of Berths №№ 11-17 Of
Chernomorsk Port)

Design & Engineering Works

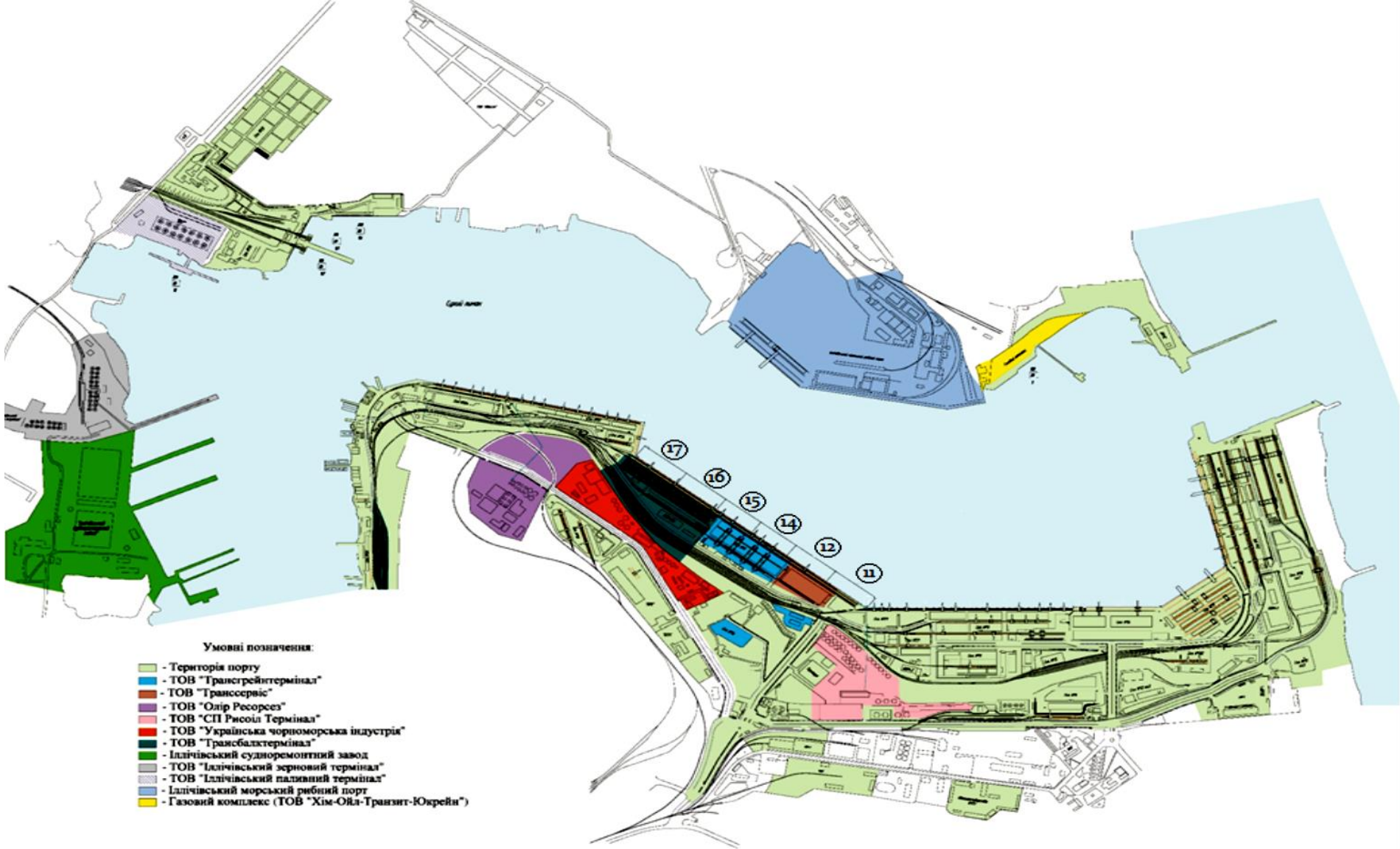


For the period from 2013 to 2016 there were completed:

- **255 agreements** with design organizations for the **total amount of 124.9 million UAH or 12 million USD** for carrying out design, survey, compilation of technical documents, development of separate sections of the design, in particular EIA and monitoring
- For 2017-2018 years it is planned - **110.1 million UAH or 4 million USD**, including:

| | | | |
|---------------------------|--|---------------------------|---|
| Chernomorsk branch | <ul style="list-style-type: none"> - Reconstruction of the hydrotechnical part of berths №№ 11-17, external power supply - Construction of a road-way settlement and organization of a section of a car fleet | Delta-pilot branch | <ul style="list-style-type: none"> - Reconstruction of the Bug-Dnieper-Lyman Canal - Reconstruction of the structure "Protective dam of the IGC GHG Danube - Black Sea" |
| Nikolaev branch | <ul style="list-style-type: none"> - Construction of the berth № 8 and reconstruction of the berth № 7 - Reconstruction of railways, engineering networks and transformer substations | Mariupol branch | <ul style="list-style-type: none"> - Reconstruction of the hydraulic part of the berths №№ 3, 4, 14 |
| Yuzhny branch | <ul style="list-style-type: none"> - Construction of a base for port fleet and search and rescue boat - Reconstruction of water approaches, shunting zones and operational depths of water areas near the berths taking into account the perspective cargo turnover of Yuzhny seaport - Reconstruction of the complex of berths №№ 5, 6, 7, 8 | Izmail branch | <ul style="list-style-type: none"> - Reconstruction of the berth № 3 |
| | | Odessa branch | <ul style="list-style-type: none"> - Development of the railway industry of the port and car entrances - Reconstruction of the passenger complex |

Development Plan of Chernomorsk Seaport





Chernomorsk Seaport



The area of the inner water area

494 ha (I and II buckets)



The total length of the berthing front

5 246 m



External raid (radius of 4.5 miles)

11 535 ha



Project depths at berths

from 7,5 to 13,5 m



Total capacity in the water area

37,5 million tons per year



Depths:

on the approach channel - 14,5 m
in the water area - 9,75 - 14,5 m
the depth of the external raid - 17,0 – 23,0 m



Production area –

approximately 500 ha

There are 27 berths of different designs (a bolverk, an overpass) on the balance of the Chernomorsk Seaport Authority, most of which are from 1960 years of construction and the average lifetime of more than 50 years



Situation plan before reconstruction (6 berths)

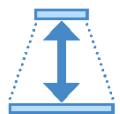


Modern technical condition of berths №№ 11-17



| Berth | Length, m | Design depth at the border, m | Category of loads | Technical condition |
|------------|-----------|-------------------------------|-------------------|---------------------------------|
| Berth № 11 | 200,0 | 11,5 | 1 | satisfactory |
| Berth № 12 | 200,0 | 11,5 | 1 | satisfactory, needs repair work |
| Berth № 14 | 175,0 | 11,5 | 1 | satisfactory, needs repair work |
| Berth № 15 | 175,0 | 11,5 | 1 | satisfactory, needs repair work |
| Berth № 16 | 200,0 | 11,5 | 1 | satisfactory, needs repair work |
| Berth № 17 | 200,0 | 11,5 | 1 | satisfactory, needs repair work |

Estimated vessel:
"Soviet artist"



Displacement – 30 900 t

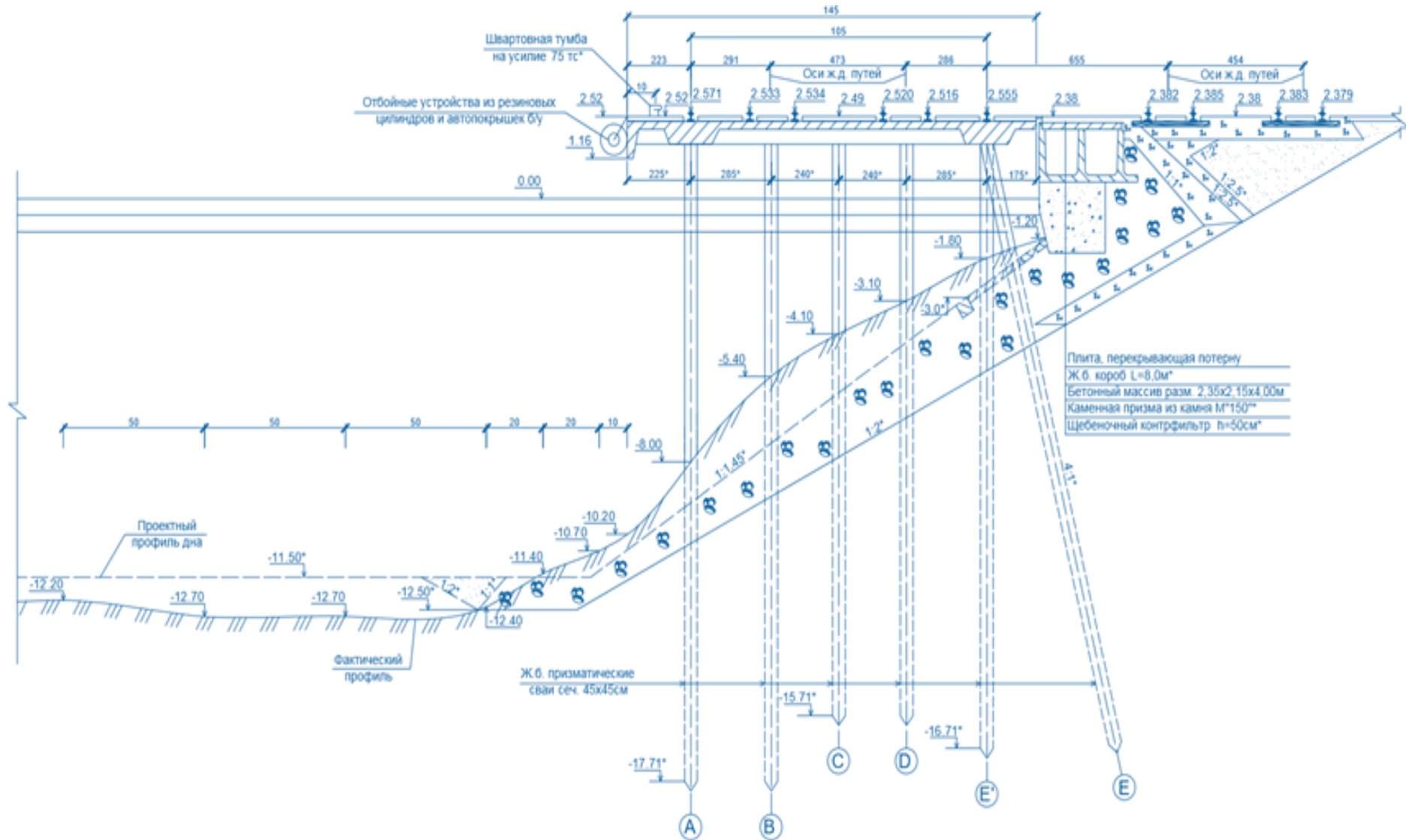


Length – 185,2 m



Immersion with cargo – 9,8 m

Existing constructive decision of reconstructed berths





Situation plan after reconstruction (3 berths)





Technical parameters of berths №№ 11 - 17 after reconstruction

| Berth | Length, m | Design depth at the border, m | Category of loads | Estimated vessel |
|----------------|-----------|---|-------------------|------------------|
| Berths № 11-12 | 400,0 | | 0 | CH-20 CH-80 |
| Berths № 14-15 | 350,0 | 15,0 (with a perspective up to 16,0) | 0 | CH-15 CH-100 |
| Berths № 16-17 | 400,0 | | 1 | CH-20 CH-100 |

Parameters of estimated vessels

| Characteristics | CH-15 | CH-20 | CH-70 | CH-100 |
|-----------------------|-------|-------|-------|--------|
| Deadweight, ths. tons | 14,3 | 20,0 | 70,0 | 100,0 |
| Max length, m | 134,0 | 166,0 | 240,0 | 260,0 |
| Beam, m | 21,2 | 30,0 | 32,0 | 43,0 |
| Draft, m | 7,9 | 9,4 | 12,5 | 13,6 |

Legislation



All objects are divided into the following classes of consequences (responsibilities):

- Slight consequences – CC1
- Average consequences – CC2
- Significant consequences – CC3

Design is carried out in three stages:

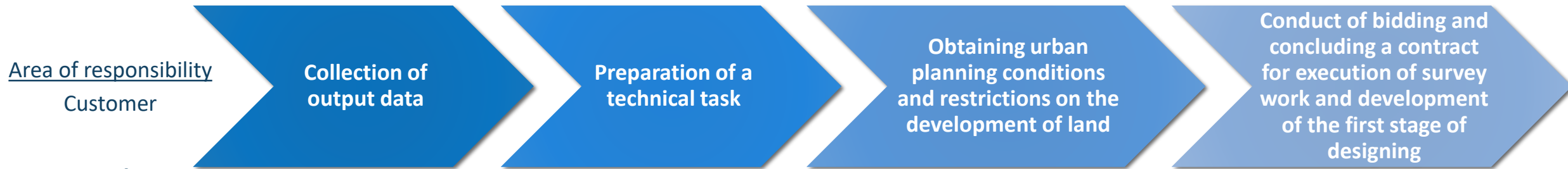
- Feasibility study – subject to approval
- Project (P) – stage of assertion
- Working documentation (W) – stage of construction

Main documents

- In accordance with the current legislation of Ukraine, state construction norms, standards and rules of Ukraine, in particular:
- Law of Ukraine "On Regulation of Urban Development"
 - Law of Ukraine "On Architectural Activities"
 - Procedure for approving construction designs and conducting their examination, approved by the Decree of the Cabinet of Ministers of Ukraine dated May 11, 2011 № 560
 - The procedure for the development of project documentation, approved by the order of the Ministry of Regional Development dated May 16, 2011 № 45
 - Law of Ukraine "On Environmental Impact Assessment":
 - ❖ The first category of types of planned activities and **objects that may have significant environmental impacts and are subject to an environmental impact assessment** includes:
 - Construction of hydraulic structures of sea and river ports, which can handle vessels with a tonnage of over 1,350 tons
 - SCN A.2.2-3-2014 "Structure and content of project documentation for construction"



Pre-design stage

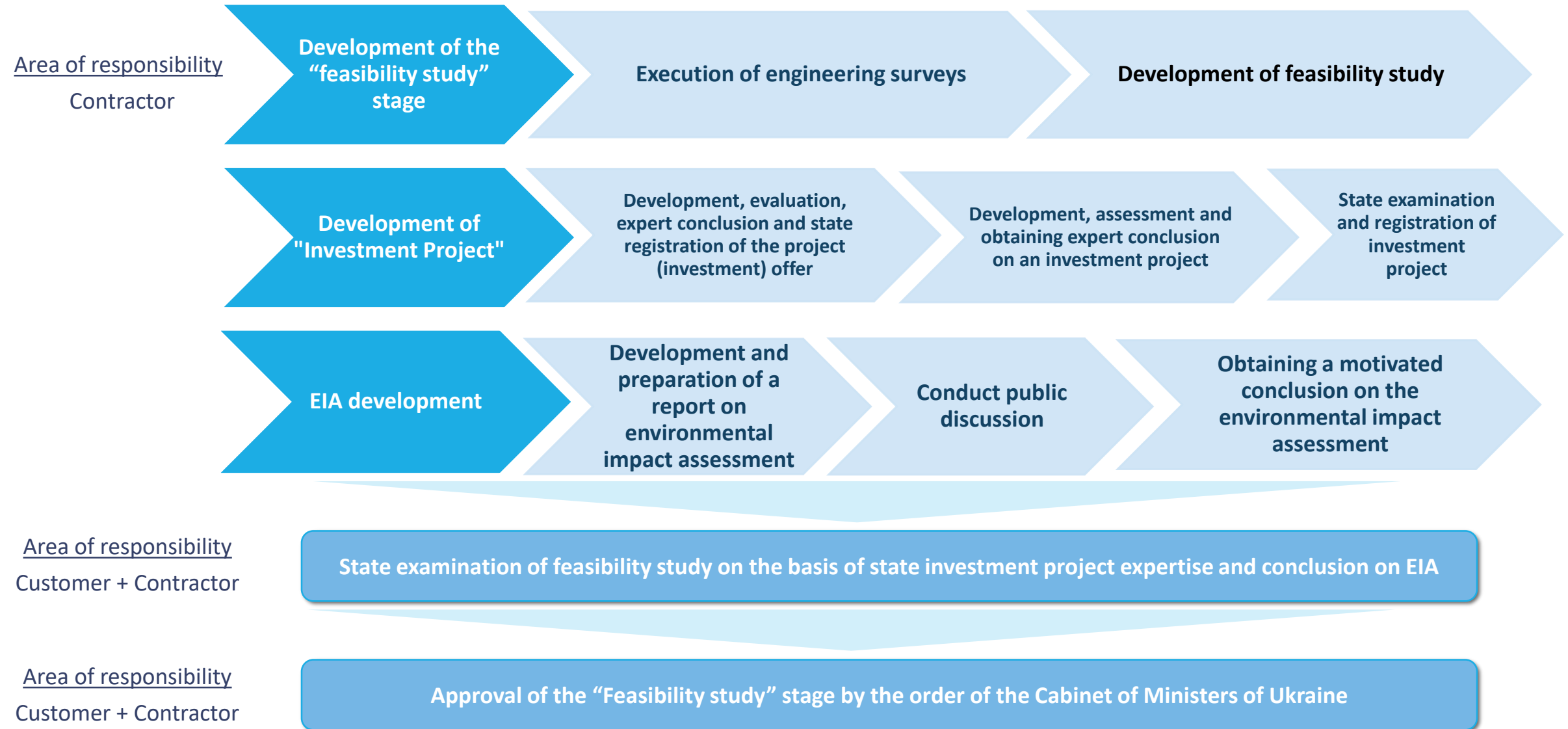


Regulations:

- Law of Ukraine "On Regulation of Urban Development"
- Law of Ukraine "On Architectural Activities"
- Law of Ukraine "On Environmental Impact Assessment"
- Law of Ukraine "On Investment Activity" with bylaws and regulatory documents
- Law of Ukraine "On Public Procurement"
- Procedure for approving construction designs and conducting their examination, approved by the Decree of the Cabinet of Ministers of Ukraine dated May 11, 2011 № 560
- The procedure for the development of project documentation, approved by the order of the Ministry of Regional Development dated May 16, 2011 № 45
- SCN A.2.2-3-2014 "Structure and content of project documentation for construction"
- SCN A.2.1-1-2014 "Engineering surveys for construction"
- SSU B A.2.2-7: 2010 «Designing. Main provisions". Section of engineering and technical measures of civil defense (civil defense) in the project documentation of objects »
- And other

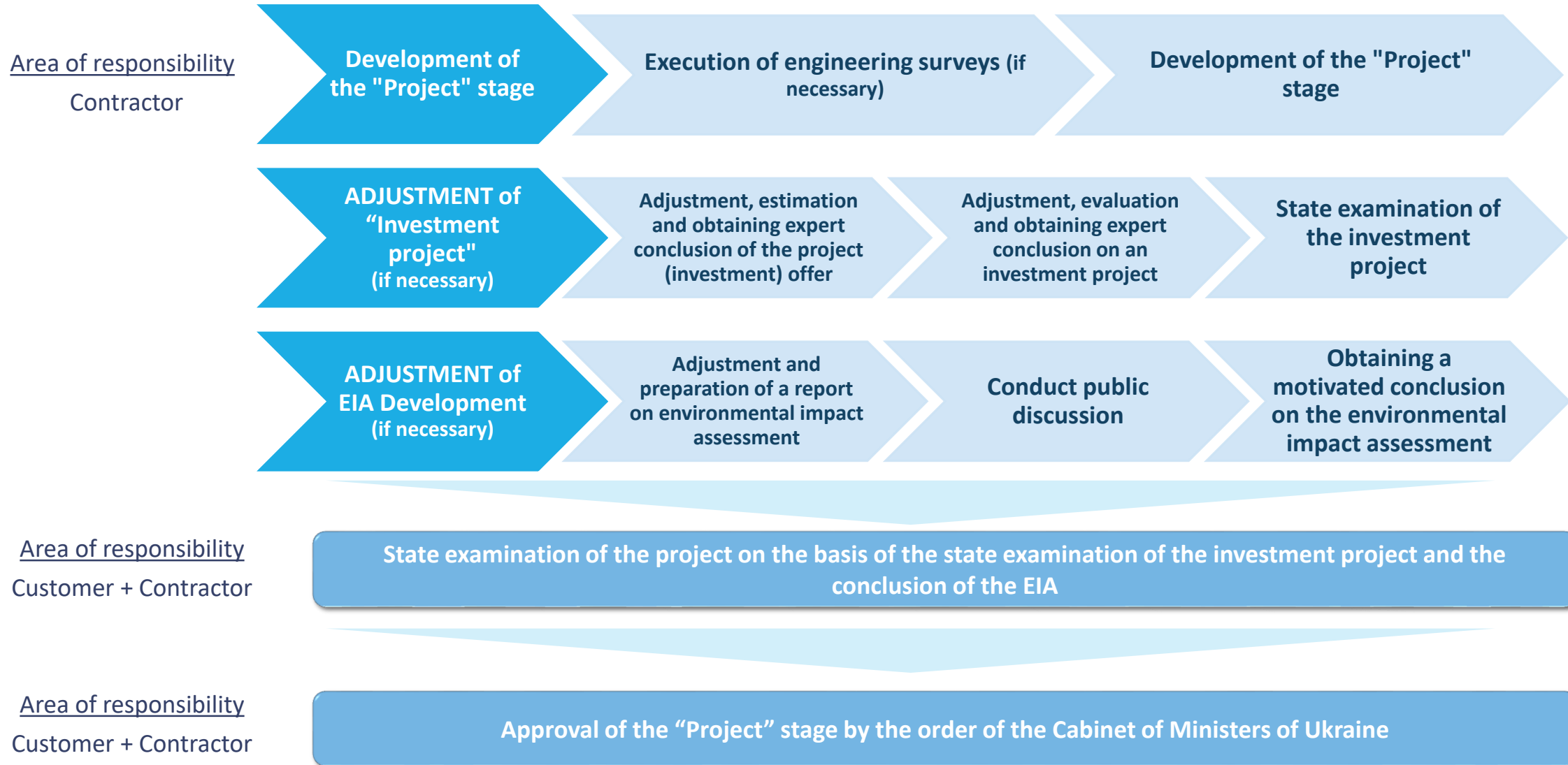


First stage of design: “Feasibility Study”





First stage of design: "Project"



Regulatory background of design stages



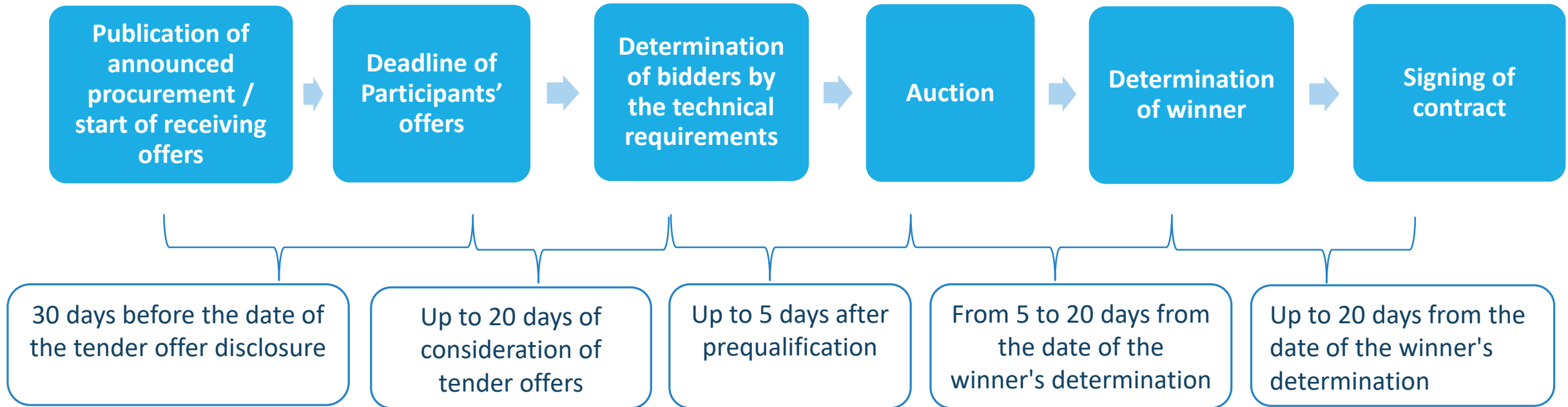
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- SCN A.2.2-3-2014 "Structure and content of project documentation for construction"
- SCN A.2.1-1-2014 "Engineering surveys for construction"
- "Procedure and criteria for assessing the economic efficiency of project (investment) offers and investment projects, approved by the Decree of the Cabinet of Ministers of Ukraine dated July 18, 2012 № 684
- "Procedure for maintaining the State Register of investment projects and project (investment) offers", approved by the Decree of the CMU dated July 18, 2012 № 650
- And other

Issues :

- The order of development, examination and approval of the "Project" stage, investment project and EIA are not agreed upon at the legislative level
- Long terms of examination, obtaining conclusions, registration, approval and assertion of the PROJECT stage

International bidding – 60 calendar days



The bank guarantee is required in two cases

1. Electronic bank guarantee as a security for tender offer
(Article 24 of the Law of Ukraine "On Public Procurement") shall be provided by the Participant in the tender offer and can not exceed **0.5%** of the expected value of procurement

2. Paper Bank Guarantee, as a security of the contract execution for procurement
(Article 26 of the Law of Ukraine "On Public Procurement") shall be provided by the Participant before the conclusion of the procurement contract and can not exceed 5% of the value of the contract

Main qualification requirements for the designer



1. Qualification

➤ Availability of workers with the appropriate qualifications, who have the necessary knowledge and experience to perform the work; to comply with the requirements of the Law "On Architectural Activities", the Law "On the Regulation of Urban Development", the Procedure for the Development of Project Design Documents for the Construction of Objects, approved by the Order of the Ministry of Regional Development of Ukraine dated May 16, 2011 № 45, and other existing normative legal acts of Ukraine;

Mandatory availability of relevant qualification certificates, including:

- Design engineer of surveys;
 - Leading engineer-designer of mechanical resistance and stability;
 - Leading Expert on the Technical Inspection of Buildings and Structures;
 - The other relevant permission documentation for certain types of work, in accordance with the requirements of the current legislation of Ukraine
- Certificate of recognition of the Register of Shipping of Ukraine

2. Experience

➤ Availability of documented experience in the design of berthing hydraulic structures (freight):

- The experience of designing hydrotechnical structures (berths) - a certificate in an arbitrary form;
- The presence of customer reviews of similar types of work dated not earlier than 2015

3. Licensed software

Necessary for design surveying

4. Equipment and material and technical base

Necessary for design surveying

5. Permission for the performance of high hazard works

➤ The presence of appropriate permits for the execution of high hazard works stipulated by the Decree of the Cabinet of Ministers of Ukraine dated October 26, 2011 №1107 "The procedure for issuing permits for the performance of work of increased danger and for operation (application) of machines, mechanisms, equipment of increased danger" and the order of the State Committee for the Study of the Issuance of Permits dated December 26, 2011 № 115, necessary for the execution of works that are the subject of procurement, in particular:

- Earthworks, which are carried out at depths exceeding 2 meters or in the zone of underground communications or under water;
- Diving work



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