

Designation: C1433M – 18

Standard Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers (Metric)¹

This standard is issued under the fixed designation C1433M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers single-cell precast reinforced concrete box sections cast monolithically and intended to be used for the construction of culverts and for the conveyance of storm water industrial wastes and sewage.

1.2 This specification is the SI companion to Specification C1433.

NOTE 1—This specification is primarily a manufacturing and purchasing specification. However, standard designs are included and the criteria used to develop these designs are given in Appendix X1. The successful performance of this product depends upon the proper selection of the box section, bedding, backfill, and care that the installation conforms to the construction specifications. The purchaser of the precast reinforced concrete box sections specified herein is cautioned that he must properly correlate the loading conditions and the field requirements with the box section specified and provide for inspection at the construction site.

1.3 This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

2. Referenced Documents

- 2.1 ASTM Standards:²
- A615/A615M Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
- A1064/A1064M Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
- A706/A706M Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement
- C31/C31M Practice for Making and Curing Concrete Test

Specimens in the Field

C33/C33M Specification for Concrete Aggregates

- C39/C39M Test Method for Compressive Strength of Cylindrical Concrete Specimens
- C150/C150M Specification for Portland Cement
- C260/C260M Specification for Air-Entraining Admixtures for Concrete
- C309 Specification for Liquid Membrane-Forming Compounds for Curing Concrete
- C494/C494M Specification for Chemical Admixtures for Concrete
- C497M Test Methods for Concrete Pipe, Manhole Sections, or Tile (Metric)

C595/C595M Specification for Blended Hydraulic Cements

C618 Specification for Coal Fly Ash and Raw or Calcined

- Natural Pozzolan for Use in Concrete
- C822 Terminology Relating to Concrete Pipe and Related Products
- C989/C989M Specification for Slag Cement for Use in Concrete and Mortars
- C990 Specification for Joints for Concrete Pipe, Manholes,
- and Precast Box Sections Using Preformed Flexible Joint Sealants
- C1017/C1017M Specification for Chemical Admixtures for Use in Producing Flowing Concrete
- C1116/C1116M Specification for Fiber-Reinforced Concrete
- C1602/C1602M Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
- C1619 Specification for Elastomeric Seals for Joining Concrete Structures
- C1675 Practice for Installation of Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers
- C1677 Specification for Joints for Concrete Box, Using Rubber Gaskets
- 2.2 AASHTO Standards:³

Standard Specifications for Highway Bridges

¹ This specification is under the jurisdiction of ASTM Committee C13 on Concrete Pipe and is the direct responsibility of Subcommittee C13.07 on Acceptance Specifications and Precast Concrete Box Sections.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American Association of State Highway and Transportation Officials (AASHTO), 444 N. Capitol St., NW, Suite 249, Washington, DC 20001.

3. Terminology

3.1 *Definitions*—For definitions of terms relating to concrete pipe, see Terminology C822.

4. Types

4.1 Precast reinforced concrete box sections manufactured in accordance with this specification shall be one of two types identified in Tables 1 and 2, and shall be designated by type, span, rise, and design earth cover.

5. Basis of Acceptance

5.1 Acceptability of the box sections produced in accordance with Section 7 shall be determined by the results of the concrete compressive strength tests described in Section 11, by the material requirements described in Section 6, and by inspection of the finished box sections.

5.2 Box sections shall be considered ready for acceptance when they conform to the requirements of this specification.

6. Material

6.1 *Reinforced Concrete*—The reinforced concrete shall consist of cementitious materials, mineral aggregates, admixtures if used, and water in which steel has been embedded in such a manner that the steel and concrete act together.

6.2 Cementitious Materials:

6.2.1 *Cement*—Cement shall conform to the requirements for portland cement of Specification C150/C150M or shall be portland blast-furnace slag cement, portland-limestone cement, or portland-pozzolan cement conforming to the requirements of Specification C595/C595M, except that the pozzolan constituent in the Type IP portland pozzolan cement shall be fly ash.

6.2.2 *Fly Ash*—Fly ash shall conform to the requirements of Specification C618, Class F or Class C.

6.2.3 *Slag Cement*—Slag cement shall conform to the requirements of Grade 100 or 120 of Specification C989/C989M.

6.2.4 Allowable Combinations of Cementitious Materials— The combination of cementitious materials used in the concrete shall be one of the following:

6.2.4.1 Portland cement only,

6.2.4.2 Portland blast-furnace slag cement only,

6.2.4.3 Portland-pozzolan cement only,

6.2.4.4 Portland-limestone cement only,

6.2.4.5 A combination of portland cement or portland-limestone cement and fly ash,

6.2.4.6 A combination of portland cement or portland-limestone cement, and slag cement,

6.2.4.7 A combination of portland cement or portlandlimestone, slag cement, and fly ash, or

6.2.4.8 A combination of portland-pozzolan cement and fly ash.

6.3 *Aggregates*—Aggregates shall conform to Specification C33/C33M, except that the requirements for gradation shall not apply.

6.4 *Admixtures*—The following admixtures and blends are allowable:

6.4.1 Air-entraining admixture conforming to Specification C260/C260M;

6.4.2 Chemical admixture conforming to Specification C494/C494M;

6.4.3 Chemical admixture for use in producing flowing concrete conforming to Specification C1017/C1017M; and

6.4.4 Chemical admixture or blend approved by the owner. 6.5 *Steel Reinforcement*—Reinforcement shall consist of welded wire reinforcement conforming to Specification A1064/A1064M. Circumferential reinforcement areas in Tables 1 and 2 are based solely on the use of welded wire

reinforcement, refer to 12.6 if alternate steel designs utilizing steel bars, Grade 420, in conjunction with or in lieu of welded wire reinforcement are to be submitted for the owner's approval. Longitudinal distribution reinforcement shall be allowed to consist of welded wire reinforcement or deformed billet-steel bars conforming to either Specification A615/A615M, Grade 420, or Specification A706/A706M, Grade 420.

6.6 *Fibers*—Synthetic fibers and nonsynthetic fibers shall be allowed to be used, at the manufacturer's option, in concrete pipe as a nonstructural manufacturing material. Synthetic fibers (Type II and Type III) and nonsynthetic fiber (Type 1) designed and manufactured specifically for use in concrete and conforming to the requirements of Specification C1116/C1116M shall be accepted.

6.7 *Water*—Water used in the production of concrete shall be potable or non-potable water that meets the requirements of Specification C1602/C1602M.

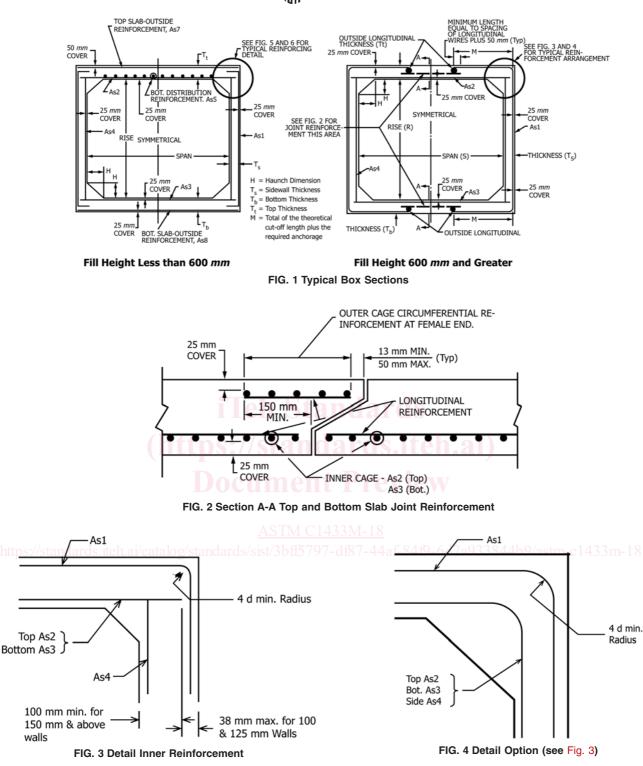
7. Design

7.1 *Design Tables*—The box section dimensions, compressive strength of the concrete, and reinforcement details shall be as prescribed in Table 1 or Table 2 and Figs. 1-4, subject to the provisions of Section 12. Table 1 sections are designed for combined earth dead load and AASHTO HS20 live load conditions. Table 2 sections are designed for combined earth dead load and interstate live load conditions when the interstate live load ing exceeds the HS20 live loading. Criteria used to develop Tables 1 and 2 are given in Appendix X1.

NOTE 2—The tabular designs in this specification were prepared according to AASHTO Standard Specifications for Highway Bridges, 1997 Edition.

7.2 Modified and Special Designs for Monolithic Structures—The manufacturer shall request approval by the purchaser of modified designs which differ from the designs in Section 7.1, or special designs for sizes and loads other than those shown in Tables 1 and 2. When spans are required that exceed those prescribed in Table 1 or Table 2, the design shall be based on the criteria given in Appendix X1. In addition, the span shall be designed to have adequate stiffness to limit deflection as given in Section 8.9 of AASHTO Standard Specification for Highway Bridges (latest edition).

Note 3—Construction procedures, such as heavy equipment movement or stockpiling of material over or adjacent to a box structure, can induce higher loads than those used for the structure's final design. These construction and surcharge loads are approved as long as the final steel areas in the box are larger than those the box will experience in the final installation condition. The design engineer should take into consideration the potential for higher loads induced by construction procedures in 🖽 C1433M – 18

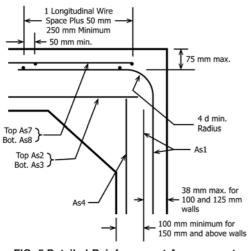


determining the final design of the box structure.

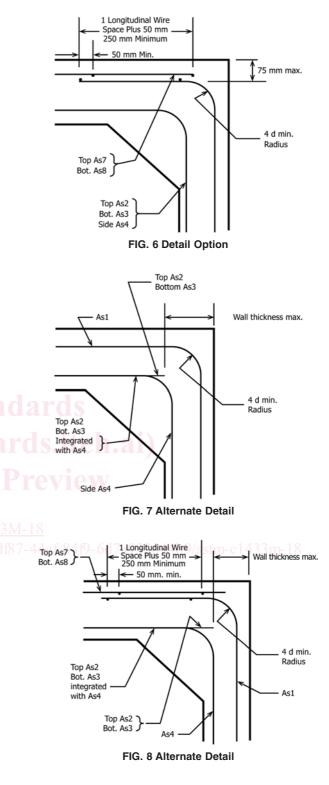
7.3 Placement of Reinforcement—The cover of concrete over the circumferential reinforcement shall be 25 mm, subject to the provisions of Section 12. The inside circumferential reinforcement shall extend into the tongue portion of the joint and the outside circumferential reinforcement shall extend into the groove portion of the joint. The clear distance of the end

circumferential wires shall be not less than 13 mm nor more than 50 mm from the ends of the box section. Reinforcement shall be assembled utilizing any combination of single or multiple layers of welded-wire reinforcement. Multiple layers shall not be separated by more than the thickness of one longitudinal wire plus 6 mm. The multiple layers shall be fastened together to form a single cage. All other specification requirements such as laps, welds, and tolerances of placement in the wall of the box section shall apply to this method of fabricating a reinforcement cage. A common reinforcement unit may be utilized for both A_{s2} (or A_{s3}) and A_{s4} , and also for both A_{s7} (or A_{s8}) and A_{s1} , with the largest area requirement governing, bending the reinforcement at the corners and waiving the extension requirements of Fig. 3 (see Fig. 5). When a single cage of multiple circumferential steel areas is used for A_{s2} (or A_{s3}) and A_{s4} reinforcement, the slab or wall requiring the larger steel area shall have this additional circumferential steel extending for the full length of the slab or wall. The welded-wire reinforcement shall be composed of circumferential and longitudinal wires meeting the spacing requirements of 7.4 and shall contain sufficient longitudinal wires extending through the box section to maintain the shape and position of reinforcement. Longitudinal distribution reinforcement may be welded-wire reinforcement or deformed billet-steel bars and shall meet the spacing requirements of 7.4. The ends of the longitudinal distribution reinforcement shall not be more than 2 in. from the ends of the box section. The exposure of the ends of longitudinals, stirrups, and spacers used to position the reinforcement shall not be a cause for rejection.

7.4 Laps, Welds, and Spacing-Splices in the circumferential reinforcement shall be made by lapping. The overlap measured between the outermost longitudinal wires of each reinforcement sheet shall not be less than the spacing of the longitudinal wires plus 50 mm but not less than 250 mm. If A_{s1} is extended to the middle of either slab and connected, welded splices are not prohibited in the connection. When used, A_{s7} and A_{s8} shall be lapped with A_{s1} as shown in Figs. 5 and 6 (see also Fig. 7 and Fig. 8). If welds are made to circumferential reinforcement, they shall be made only to selected circumferential wires that are not less than 450 mm apart along the longitudinal axis of the box section. Also, when spacers are welded to circumferential wires, they shall be welded only to these selected circumferential wires. There shall be no welding to other circumferential wires, except it is not prohibited for A_{s4} to be lapped and welded at any location or connected by welding at the corners to A_{s2} and A_{s3} . No welds shall be made to A_{s2} or A_{s3} circumferential wires in the middle third of the span (see Fig. 9 for welding restrictions). When distribution







reinforcement is to be fastened to a cage by welding, it shall be welded only to longitudinal wires and only near the ends of the box section. If welds are made to Grade 420 reinforcing bars, weldable bars conforming to Specification A706/A706M shall be used. The spacing center to center of the circumferential wires shall not be less than 50 mm nor more than 100 mm. The spacing center to center of the longitudinal wires shall not be more than 200 mm.

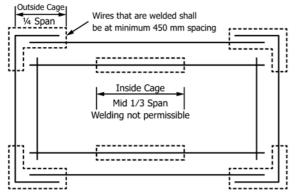


FIG. 9 Critical Zones of High Stress Where Welding is Restricted

8. Installation

8.1 The successful performance of this product depends upon proper installation as the soil/structure interaction is considered in the design. The effects of this interaction are highlighted in Note 1 and Note 3. The precast reinforced concrete box section/soil system shall be constructed to conform to Practice C1675 for the installation conditions assumed for design and in accordance with the dimensions and requirements specified or shown on the plans. The tabular steel designs in this Standard assume compacted sidefill. See Appendix X1 for additional details on design assumptions used to develop the design tables.

9. Joints

9.1 The precast reinforced concrete box sections shall be produced with tongue and groove ends. The ends shall be of such design and the ends of the box sections so formed that the sections can be laid together to make a continuous line of box sections compatible with the permissible variations given in Section 12.

9.2 Joints may conform to the requirements of Specification C990, Specification C1677, or other established joint type as approved by the owner including, but not limited to, mortar, sealant, or fabric-wrapped joints. For joints conforming to Specification C1677, the gasket shall be in accordance with Specification C1619, Class C requirements or for oil-resistant properties, the gasket shall meet Class D requirements.

9.3 Outer cage circumferential reinforcement as shown in Figs. 1 and 2 shall be placed in the top and bottom slabs at the groove portion of the joint when A_{s1} is not continuous over the span. The minimum area of such reinforcement in square millimeters per linear meter of box section length shall be the same as the areas specified for A_{s4} in Tables 1 and 2.

10. Manufacture

10.1 *Mixture*—The aggregates shall be sized, graded, proportioned, and mixed with such proportions of cementitious materials and water as will produce a thoroughly-mixed concrete of such quality that the pipe will conform to the test and design requirements of this specification. All concrete shall have a water-cementitious materials ratio not exceeding 0.53 by weight. Cementitious materials shall be as specified in 6.2

and shall be added to the mix in a proportion not less than 280 kg/m³ unless mix designs with a lower cementitious materials content demonstrate that the quality and performance of the pipe meet the requirements of this specification.

10.2 *Curing*—The box sections shall be cured for a sufficient length of time so that the concrete will develop the specified compressive strength in 28 days or less. Any one of the following methods of curing or combinations thereof shall be allowed to be used:

10.2.1 *Steam Curing*—The box sections shall be allowed to be low pressure, steam-cured by a system that will maintain a moist atmosphere.

10.2.2 *Water Curing*—The box sections shall be allowed to be water-cured by any method that will keep the sections moist.

10.2.3 *Membrane Curing*—A sealing membrane conforming to the requirements of Specification C309 may be applied and shall be left intact until the required concrete compressive strength is attained. The concrete temperature at the time of application shall be within 6°C of the atmospheric temperature. All surfaces shall be kept moist prior to the application of the compounds and shall be damp when the compound is applied.

10.3 *Forms*—The forms used in manufacture shall be sufficiently rigid and accurate to maintain the box section dimensions within the permissible variations given in Section 12. All casting surfaces shall be of smooth nonporous material.

10.4 *Handling*—Handling devices or holes shall be permitted in each box section for the purpose of handling and laying.

11. Physical Requirements

11.1 *Type of Test Specimen*—Compression tests for determining concrete compressive strength shall be allowed to be made on either standard rodded concrete cylinders or concrete cylinders compacted and cured in like manner as the box sections, or on cores drilled from the box section.

11.2 Compression Testing of Cylinders:

11.2.1 Cylinders shall be obtained and tested for compressive strength in accordance with the provisions of Practice C31/C31M and Test Method C39/C39M, except that the cylinders may be prepared by methods comparable to those used to consolidate and cure the concrete in the actual box section manufactured. Cylindrical specimens of sizes other than 150 by 300 mm may be used provided all other requirements of Practice C31/C31M are met. If the concrete is of a consistency too stiff for compaction by rodding or internal vibration, the alternate method described in Section II of Test Methods C497M may be used. Cylinders shall be exposed to the same curing conditions as the manufactured box sections and shall remain with the sections until tested.

11.2.2 Prepare not less than three test cylinders from each concrete mix used within a group (one day's production) of box sections.

11.2.3 Acceptability on the Basis of Cylinder Test Results:

11.2.3.1 When the average compressive strength of all cylinders tested is equal to or greater than the design concrete strength, not more than 10% of the cylinders tested have a compressive strength less than the design concrete strength,

and no cylinder tested has a compressive strength less than 80 % of the design concrete strength, the lot shall be accepted.

11.2.3.2 When the compressive strength of the cylinders tested does not conform to the acceptance criteria stated in 11.2.3.1, the acceptability of the lot shall be determined in accordance with the provisions of 11.3.

11.3 Compression Testing of Cores:

11.3.1 Cores shall be obtained and tested for compressive strength in accordance with the provisions of Test Methods C497M.

11.3.2 Three cores shall be cut from a section selected at random from each group of 15 box sections or fraction thereof of a single size from each continuous production run.

11.3.3 Acceptability by Core Tests:

11.3.3.1 The compressive strength of the concrete in each group of box sections is acceptable when concrete compressive strength, defined as the average of three cores taken at random from the subject group, is equal to or greater than 85 % of the required strength of the concrete with no one core less than 75 % of the required strength.

11.3.3.2 If the compressive strength of the three cores does not meet the requirements of 11.3.3.1, the sections from which the cores were taken shall be rejected. Two box sections from the remainder of the group shall be selected at random and one core shall be taken from each. If both cores have a strength equal to or greater than 85 % of the required strength of the concrete, the remainder of the group is acceptable. If the compressive strength of either of the two cores tested is less than 85 % of the required strength of the concrete, the remainder of the group of box section shall be rejected or, at the option of the manufacturer, each box section of the entire group shall be cored and accepted individually, and any of these box sections that have cores with less than 85 % of the required strength of the concrete shall be rejected.

11.4 *Plugging Core Holes*—The core holes shall be plugged and sealed by the manufacturer in a manner such that the box section will meet all of the test requirements of this specification. Box sections so sealed shall be considered as satisfactory for use.

11.5 *Test Equipment*—Every manufacturer furnishing box sections under this specification shall furnish all facilities and personnel necessary to carry out the tests required.

12. Permissible Variations

12.1 Internal Dimensions—The internal dimensions measured between parallel faces of the span or rise at any point perpendicular to the face of the measured section shall not vary by more than 1 % or 51 mm from the design dimensions, whichever is less, for dimensions greater than 1200 mm and shall not vary by more than 13 mm for dimensions less than or equal to 1200 mm. Measurements shall be taken at the midpoint of the span or rise and 300 mm from each end of the section. The haunch dimensions shall not vary more than 6 mm from the design dimensions.

12.2 *Slab and Wall Thickness*—The slab and wall thickness shall not be less than that shown in the design by more than

5 % or 5 mm, whichever is greater. A thickness more than that required in the design shall not be a cause for rejection.

12.3 Length of Opposite Surfaces—Variations in laying lengths of two opposite surfaces of the box section shall not be more than 10 mm/m of internal span, with a maximum of 16 mm for all sizes through 2100 mm internal span, and a maximum of 19 mm for internal spans greater than 2100 mm, except where beveled ends for laying of curves are specified by the purchaser.

12.4 *Length of Section*—The underrun in length of a section shall not be more than 10 mm/m of length with a maximum of 13 mm in any box section.

12.5 Position of Reinforcement—The maximum variation in the position of the reinforcement for 125 mm or less slab and wall thickness shall be ± 10 mm, and for greater than 125 mm slab and wall thickness shall be ± 13 mm. In no case, however, shall the cover over the reinforcement be less than 16 mm, as measured to the internal surface or the external surface except the cover over the reinforcement for the external surface of the top slab for boxes with under 0.6 m of cover shall not be less than 40 mm. The preceding minimum cover limitation does not apply at the mating surfaces of the joint.

12.6 Area of Reinforcement—The areas of steel reinforcement shall be the design steel areas as shown in Tables 1 and 2. Steel areas greater than those required shall not be cause for rejection. The permissible variation in diameter of any wire in finished reinforcement shall conform to the tolerances prescribed for the wire before fabrication by Specification A1064/A1064M as applicable. If steel bars (Grade 420) are used in lieu of welded wire reinforcement, the steel areas presented in Tables 1 and 2 shall be increased to account for the difference in steel yield strength, steel spacing, concrete cover, and crack control between the welded wire reinforcement and steel bars.

8712.7 Haunch Dimensions—The vertical and horizontal dimensions shall be equal to the side wall thickness. If haunches with other dimensions are used, a special reinforcement design for the actual dimensions shall be completed. In lieu of performing a special design, for the specific case where the actual haunch dimensions are larger than the standard dimensions and vertical and horizontal haunch dimensions are equal, the A_{s1} steel area shall be increased 1 % for every 5 % increase in the haunch dimension over that specified in Table 1 or Table 2 and A_{s2} and A_{s3} shall be reduced by an equal percentage.

13. Repairs

13.1 Box sections shall be repaired, if necessary, because of imperfections in manufacture or handling damage and will be acceptable if, in the opinion of the purchaser, the repaired box section conforms to the requirements of this specification.

14. Inspection

14.1 The quality of materials, the process of manufacture, and the finished box sections shall be subject to inspection by the purchaser.

15. Rejection

15.1 Box sections shall be subject to rejection on account of failure to conform to any of the specification requirements.

Individual box sections shall be allowed to be rejected because of any of the following:

15.1.1 Fractures or cracks passing through the wall, except for a single end crack that does not exceed the depth of the joint,

15.1.2 Defects that indicate mixing and molding not in compliance with 10.1, or honeycombed or open texture that would adversely affect the function of the box sections, and

15.1.3 Damaged ends, where such damage would prevent making a satisfactory joint.

16. Marking

16.1 The following information shall be legibly marked on each box section by indentation, waterproof paint, or other approved means: 16.1.1 Box section span, rise, table number, maximum and minimum design earth cover, and specification designation,

16.1.2 Date of manufacture, and

16.1.3 Name or trademark of the manufacturer.

16.2 Each section shall be clearly marked by indentation on either the inner or outer surface during the process of manufacture so that the location of the top will be evident immediately after the forms are stripped. In addition, the word "top" shall be lettered with waterproof paint on the inside top surface.

TABLE 1 Design Requirements for Precast Concrete Box Sections Under Earth Dead and HS20 Live Load Conditions

NOTE 1—Design earth covers and reinforcement areas are based on the weight of a column of earth over the width of the box section as defined in Appendix X1.

NOTE 2—Concrete design strength 35 MPa.

NOTE 3—The design earth cover indicated is the height of fill above the top of the box section. Design requirements are based on the material and soil properties, loading data, and typical section as included in Appendix X1. For alternative or special designs, see 7.2.

Note 4—Design steel area in millimetres per linear metre of box section at those locations which are indicated on the typical section included in Fig. 1.

NOTE 5—The top section designation, for example, 900 by 600 by 100 mm indicates (interior horizontal span in millimetres) by (interior vertical rise in millimetres) by (wall and slab thickness in millimetres).

NOTE 6—In accordance with the acceptance criteria in 7.2, the manufacturer may interpolate the steel area requirements for fill heights between noted increments or may submit independent designs.

							by 600 b	oy 100 mm	•					
Span	Rise	Тор	Bottom	Side	Haunc <mark>h</mark>	Design Earth Cover	nf	Pre		rential Reinf	orcement Are	eas, mm²/m		
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
900	600	175	150	100	100	0-0.6	360	810	450	220	410	360	300	
900	600	100	100	100	100	0.6-0.9	280	450	450	220				790
900	600	100	100	100	100	0.9-1.5 STM	220	220	220	220				790
900	600	100	100	100	100	3 3 1111	220	220	220	220				790
900	600	100	100 h	100	a 0100 ta	ndards4.6st/3bff5	220	873004	- 8 300 -	6072203				8 790
900	600	100	100	100	100	6.1	240	390	410	220				790
900	600	100	100	100	100	7.6	300	490	490	220				790
900	600	100	100	100	100	9.1	360	580	580	220				790
900	600	100	100	100	100	10.7	430	660	660	220				790
							by 900 b	oy 100 mm						
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover				rential Reinf	orcement Are	eas, mm²/m		
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
900	900	175	150	100	100	0-0.6	360	850	490	220	430	360	300	
900	900	100	100	100	100	0.6-0.9	220	530	530	220				790
900	900	100	100	100	100	0.9-1.5	220	220	240	220				790
900	900	100	100	100	100	3	220	240	240	220				790
900	900	100	100	100	100	4.6	220	320	340	220				790
900	900	100	100	100	100	6.1	220	430	430	220				790
900	900	100	100	100	100	7.6	220	510	530	220				790
900	900	100	100	100	100	9.1	260	620	620	220				790
900	900	100	100	100	100	10.7	300	700	720	220				790
) by 600 l	by 125 mm	1					
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover			Circumfe		orcement Are			
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
1200	600	190	150	125	125	0-0.6	390	850	430	260	430	390	300	
1200	600	125	125	125	125	0.6-0.9	450	490	430	260				970
1200	600	125	125	125	125	0.9-1.5	260	260	260	260				970
1200	600	125	125	125	125	3	260	260	280	260				970
1200	600	125	125	125	125	4.6	300	360	390	260				970
1200	600	125	125	125	125	6.1	410	490	490	260				970
1200	600	125	125	125	125	7.6	490	600	600	260				970
1200	600	125	125	125	125	9.1	600	700	700	260				970
1200	600	125	125	125	125	10.7	700	810	830	260				970
) by 900	by 125 mm						
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover				rential Reinf	orcement Are	eas, mm²/m		
mm	mm	mm	mm	mm	mm		A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm

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1200	900	190	150	125	125	0-0.6	390	960	490	260	470	390	300	
1200	900	125	125	125	125	0.6-0.9	340	600	530	260				970
1200	900	125	125	125	125	0.9-1.5	260	260	280	260				970
1200	900	125	125	125	125	3	260	300	320	260				970
1200	900	125	125	125	125	4.6	260	430	430	260				970
1200	900 900	125 125	125 125	125 125	125	6.1	300 360	550 680	550	260 260				970
1200 1200	900 900	125	125	125	125 125	7.6 9.1	360 450	810	680 810	260 260				970 970
1200	900	125	125	125	125	10.7	430 530	940	940	260				970 970
1200	000	120	120	120	120		0 by 1200 b			200				0/0
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover				ential Reinfo	rcement Are	as, mm²/m		
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
1200	1200	190	150	125	125	0-0.6	390	1000	530	260	490	390	300	
1200	1200	125	125	125	125	0.6-0.9	280	660	600	260				970
1200	1200	125	125	125	125	0.9-1.5	260	300	320	260				970
1200	1200	125	125	125	125	3	260	320	340	260				970
1200 1200	1200 1200	125 125	125 125	125 125	125 125	4.6 6.1	260 260	450 580	470 600	260 260				970 970
1200	1200	125	125	125	125	7.6	300	700	720	260				970 970
1200	1200	125	125	125	125	9.1	360	830	850	260				970
1200	1200	125	125	125	125	10.7	430	960	980	260				970
							00 by 900 b							
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover			Circumfere	ential Reinfo	rcement Are	as, mm²/m		
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
1500	900	200	175	150	150	0-0.6	410	940	470	300	450	410	360	
1500	900	150	150	150	150	0.6-0.9	450	620	470	300				1150
1500	900	150	150	150	150	0.9-1.5	300	300	300	300				920
1500	900	150	150	150	150	3	300	360	360	300				920
1500 1500	900 900	150 150	150 150	150 150	150 150	4.6 6.1	360 450	510 660	510 660	300 300				890 890
1500	900 900	150	150	150	150	7.6	450 550	810	810	300				890
1500	900	150	150	150	150	9.1	660	960	960	300				890
1500	900	150	150	150	150	10.7	790	1100	1130	300				890
	000						0 by 1200 k							
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover	itait	uar		ential Reinfo	rcement Are	as, mm²/m		
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
1500	1200	200	175	150	150	0-0.6	410	1020	510	300	470	410	360	
1500	1200	150	150	150	150	0.6-0.9	390	700	530	300				1150
1500	1200	150	150	150	150	0.9-1.5	300	340	340	300				1150
1500	1200	150	150	150	150	3	300	410	410	300				920
1500 1500	1200 1200	150 150	150 150	150 150	150 150	JOC 4.6 6.1	300 390	550 700	580 720	300 300				890 890
1500	1200	150	150	150	150	7.6	450	870	890	300				890
1500	1200	150	150	150	150	9.1	550	2120	2120	300				890
1500	1200	150	150	150	150	10.7 STV	64022	1190	1210	300				890
							00 by 1500 b							
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover	5797-df	87-44a			rcement Are	as, mm²/m	33m-1	8
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
1500	1500	200	175	150	150	0-0.6	410	1060	550	300	510	410	360	
1500	1500	150	150	150	150	0.6-0.9	340	750	600	300				1150
1500	1500	150	150	150	150	0.9-1.5	300	360	390	300				1150
1500	1500	150	150	150	150	3	300	430	450	300				1150
1500 1500	1500 1500	150 150	150 150	150 150	150 150	4.6 6.1	300 320	580 750	600 770	300 300				920 890
	1500	150 150	150 150	150 150	150 150	6.1 7.6	320 410	750 890	940	300				890 890
1500	1500	150	150	150	150	9.1	470	1060	1080	300				890
1500	1500	150	150	150	150	10.7	560	1230	1250	300				890
							00 by 900 b							
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover	.,			ential Reinfo	rcement Are	as, mm²/m		
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
1800	900	200	175	175	175	0-0.6	490	960	430	360	410	410	360	
1800	900	175	175	175	175	0.6-0.9	510	640	430	360				1100
1800	900	175	175	175	175	0.9-1.5	360	360	360	360				1020
1800	900	175	175	175	175	3	360	430	430	360				1000
1800	900	175	175	175	175	4.6	490	580	600	360				970
1800	900	175	175	175	175	6.1	640 770	750	770	360				970
1800 1800	900 900	175 175	175 175	175 175	175 175	7.6 9.1	770 920	940 1100	940 1100	360 360				970 970
1800	900 900	175 175	175 175	175 175	175 175	9.1 10.7	920 1060	1100 1270	1100 1270	360 360				970 970
1000	300	175	1/0	175	175		00 by 1200 l			500				5/0
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover		., IIII		ential Reinfo	rcement Are	as. mm²/m		
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
						0-0.6	410	1040	490	360	450	410	360	,
1800	1200	200	175	175	175	0-0.0		1040	400					
1800 1800		200 175	175 175	175 175	175	0.6-0.9	450	700	490	360			000	1100
	1200													1100 1020
1800 1800 1800	1200 1200 1200 1200	175 175 175	175 175 175	175 175 175	175 175 175	0.6-0.9 0.9-1.5 3	450 360 360	700 360 470	490 360 490	360 360 360				1020 1000
1800 1800 1800	1200 1200 1200	175 175	175 175	175 175	175 175	0.6-0.9 0.9-1.5	450 360	700 360	490 360	360 360				1020

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1800	1200	175	175	175	175	6.1	530	830	850	360				970
1800	1200	175	175	175	175	7.6	640	1020	1040	360				970
1800	1200	175	175	175	175	9.1	770	1210	1230	360				970
1800	1200	175	175	175	175	10.7	890	1400	1420	360				970
Span	Rise	Top	Bottom	Side	Haunch	Design Earth Cover	by 1500	by 175 mm	Circumfo	rontial Dainf	orcement Are	00 mm ² /m		
Span mm	mm	Top mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
1800	1500	200	175	175	175	0-0.6	410	1110	530	360	470	410	360	141, 11111
1800	1500	175	175	175	175	0.6-0.9	410	770	550	360				1330
1800	1500	175	175	175	175	0.9-1.5	360	410	410	360				1100
1800	1500	175	175	175	175	3	360	490	510	360				1000
1800	1500	175	175	175	175	4.6	360	680	700	360				970
1800	1500	175	175	175	175	6.1	470	870	910	360				970
1800	1500	175	175	175	175	7.6	550	1080	1110	360				970
1800	1500	175	175	175	175	9.1	660	1270	1300	360				970
1800	1500	175	175	175	175	10.7	770	1460 by 175 mm	1510	360				970
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover	by 1000	<i>by</i> 175 mm	Circumfe	rential Reinf	orcement Are	as. mm²/m		
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
1800	1800	200	175	175	175	0-0.6	410	1140	580	360	490	410	360	,
1800	1800	175	175	175	175	0.6-0.9	360	810	600	360				1330
1800	1800	175	175	175	175	0.9-1.5	360	430	430	360				1330
1800	1800	175	175	175	175	3	360	510	550	360				1100
1800	1800	175	175	175	175	4.6	360	700	750	360				1000
1800	1800	175	175	175	175	6.1	410	910	940	360				970
1800 1800	1800 1800	175 175	175 175	175 175	175 175	7.6 9.1	490 580	1110 1300	1150 1340	360 360				970 970
1800	1800	175	175	175	175	10.7	680	1510	1550	360				970 970
1000	1000	175	175	175	175			by 200 mm	1000	000				570
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover		-,	Circumfe	rential Reinf	orcement Are	as, mm²/m		
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
2100	1200	200	200	200	200	0-0.6	550	1040	450	410	410	410	410	
2100	1200	200	200	200	200	0.6-0.9	510	700	470	410				1200
2100	1200	200	200	200	200	0.9-1.5	410	410	410	410				1100
2100	1200	200 200	200 200	200	200 200	3	410	530	530 740	410				1100
2100 2100	1200 1200	200 200	200	200 200	200	4.6 6.1	550 700	720 940	960	410 410				1050 1050
2100	1200	200	200	200	200	7.6	850	1150	1170	410				1050
								1150		410				1000
2100	1200	200	200	200	200	9.1	1000	1360	1380	410				1050
2100 2100	1200 1200	200 200	200 200	200 200	200 200	9.1 10.7	1000 1170	1360 1590	1380 1590	410 410				1050 1050
	1200				200	10.7	1170		1590	410	,			
2100 Span	1200 Rise	200 Top	200 Bottom	200 Side	200 Haunch	10.7 2100 Design Earth Cover	1170 by 1500	1590 by 200 mm	1590 Circumfer	410 rential Reinf	orcement Are			1050
2100 Span mm	1200 Rise mm	200 Top mm	200 Bottom mm	200 Side mm	200 Haunch mm	10.7 2100 Design Earth Cover m	1170 9 by 1500 A _{s1}	1590 by 200 mm A _{s2}	1590 Circumfer A _{s3}	410 rential Reinf A _{s4}	A _{s5}	A _{s7}	A _{s8}	
2100 Span mm 2100	1200 Rise mm 1500	200 Top mm 200	200 Bottom mm 200	200 Side mm 200	200 Haunch mm 200	10.7 2100 Design Earth Cover m 0-0.6	1170 by 1500 <u>A_{s1}</u> 490	1590 by 200 mm A _{s2} 1110	1590 Circumfer A _{s3} 510	410 rential Reinf A _{s4} 410			A _{s8} 410	1050 "M," mm
2100 Span mm 2100 2100	1200 Rise mm 1500 1500	200 Top mm 200 200	200 Bottom mm 200 200	200 Side mm 200 200	200 Haunch mm 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9	1170 by 1500 <u>A_{s1}</u> 490 470	1590 by 200 mm A _{s2} 1110 770	1590 Circumfer A _{s3} 510 530	410 rential Reinf A _{s4} 410 410	A _{s5}	A _{s7}		1050 "M," mm 1500
2100 Span mm 2100 2100 2100	1200 Rise mm 1500 1500 1500	200 Top mm 200 200 200	200 Bottom mm 200 200 200	200 Side mm 200 200 200	200 Haunch mm 200 200 200	10.7 2100 Design Earth Cover 0-0.6 0.6-0.9 0.9-1.5	1170 by 1500 A _{s1} 490 470 410	1590 by 200 mm A _{s2} 1110 770 430	1590 Circumfer A _{s3} 510 530 430	410 rential Reinf A _{s4} 410 410 410	A _{s5} 450	A _{s7} 410	410	1050 "M," mm 1500 1100
2100 Span mm 2100 2100	1200 Rise mm 1500 1500	200 Top mm 200 200	200 Bottom mm 200 200	200 Side mm 200 200	200 Haunch mm 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9	1170 by 1500 <u>A_{s1}</u> 490 470	1590 by 200 mm A _{s2} 1110 770	1590 Circumfer A _{s3} 510 530	410 rential Reinf A _{s4} 410 410	A _{s5}	A _{s7} 410	410	1050 "M," mm 1500 1100
2100 Span mm 2100 2100 2100 2100	1200 Rise mm 1500 1500 1500 1500	200 Top mm 200 200 200 200	200 Bottom mm 200 200 200 200 200	200 Side mm 200 200 200 200	200 Haunch mm 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 ndards 3 3 3 5 6	1170 by 1500 A _{s1} 490 470 410 7410	1590 by 200 mm A _{s2} 1110 770 430 580	1590 Circumfer A _{s3} 510 530 430 600	410 rential Reinf A _{s4} 410 410 410 607410	A _{s5} 450	A _{s7} 410	410	1050 "M," mm 1500 1100 8 1100
2100 Span mm 2100 2100 2100 2100 2100 2100	1200 Rise mm 1500 1500 1500 1500 1500	200 Top mm 200 200 200 200 200 200	200 Bottom 200 200 200 rd 200 200 200	200 Side mm 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 0.9-1.5 1.6	1170 by 1500 A _{s1} 490 470 410 7 410 490	1590 by 200 mm A _{s2} 1110 770 430 580 790	1590 Circumfer A _{s3} 510 530 430 600 810	410 rential Reinf A _{s4} 410 410 410 607410 410	A _{s5} 450	A _{s7} 410	410	1050 "M," mm 1500 1100 8 1100 1050
2100 Span mm 2100 2100 2100 2100 2100 2100 2100 2	1200 Rise mm 1500 1500 1500 1500 1500 1500	200 Top mm 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 0.9-1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	1170 by 1500 A _{s1} 490 470 410 7 410 490 620	1590 by 200 mm A _{s2} 1110 770 430 580 790 1020	1590 Circumfer A _{s3} 510 530 430 600 810 1040	410 rential Reinf A _{s4} 410 410 410 60 7410 410 410 410 410	A _{s5} 450	A _{s7} 410	410	1050 "M," mm 1500 1100 8 1100 1050 1050
2100 Span mm 2100 2100 2100 2100 2100 2100 2100 2	1200 Rise mm 1500 1500 1500 1500 1500 1500 1500	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1 0.6 0.9 0.9-1.5 0.6 0.9 0.9-1.5 0.6 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9	1170 by 1500 A _{s1} 490 470 410 410 490 620 740 870 1000	1590 by 200 mm A _{s2} 1110 430 580 790 1020 1230 1460 1700	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720	410 rential Reinf A ₈₄ 410 410 410 410 410 410 410 410	A _{s5} 450	A _{s7} 410	410	1050 "M," mm 1500 1100 8 1100 1050 1050 1050
2100 Span mm 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100	1200 Rise mm 1500 1500 1500 1500 1500 1500 1500 1	200 Top mm 200 200 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1 10.7 2100	1170 by 1500 A _{s1} 490 470 410 410 490 620 740 870 1000	1590 by 200 mm A _{s2} 1110 770 430 580 790 1020 1230 1460	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720	410 rential Reinf A _{s4} 410 410 410 410 410 410 410 410	A _{s5} 450 3844b9/a	A _{s7} 410 stm-c14	410 433m-1	1050 "M," mm 1500 1100 8 1100 1050 1050 1050 1050
2100 Span mm 2100 21	1200 Rise mm 1500 1500 1500 1500 1500 1500 1500 1	200 Top mm 200 200 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	1170 b y 1500 A _{s1} 490 470 410 410 410 490 620 740 870 1000 by 1800	1590 by 200 mm A _{s2} 1110 770 430 580 790 1020 1230 1230 1460 1700 by 200 mm	1590 Circumfer A _{s3} 510 530 430 600 - 810 1040 1250 1490 1720 Circumfer	410 rential Reinf A _{s4} 410 410 410 410 410 410 410 410	A _{s5} 450 3 844b9/a	A _{s7} 410 stm-c14 as, mm²/m	410 433m-1	1050 "M," mm 1500 1100 8 1100 1050 1050 1050 1050 1050
2100 Span mm 2100 2100 2100 2100 2100 2100 2100 2100 Span mm	1200 Rise mm 1500 1500 1500 1500 1500 1500 1500 Rise mm	200 Top mm 200 200 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 0.9-1.5 0.9-1.5 0.9.1 10.7 2100 Design Earth Cover m	1170 by 1500 A _{s1} 490 470 410 410 400 620 740 870 1000 by 1800 A _{s1}	1590 by 200 mm A _{s2} 1110 430 580 790 1020 1230 1460 1700 by 200 mm A _{s2}	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3}	410 rential Reinf A _{s4} 410 410 410 410 410 410 410 410	A _{s5} 450 3844b9/a forcement Are A _{s5}	A _{s7} 410 stm-c14 as, mm ² /m A _{s7}	410 433m-1 	1050 "M," mm 1500 1100 8 1100 1050 1050 1050 1050
2100 Span mm 2100 20	1200 Rise mm 1500 1500 1500 1500 1500 1500 1500 1	200 Top mm 200 200 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 ndard 3 1/3 bff 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6	1170 by 1500 A _{s1} 490 470 410 410 400 620 740 870 1000 by 1800 A _{s1} 450	1590 by 200 mm A _{s2} 1110 430 580 790 1020 1230 1460 1230 1460 1700 by 200 mm A _{s2} 1150	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 1490 1720 Circumfer A _{s3} 550	410 rential Reinf A _{s4} 410 410 410 410 410 410 410 410	A _{s5} 450 3 844b9/a	A _{s7} 410 stm-c14 as, mm²/m	410 433m-1	1050 "M," mm 1500 1100 8 1100 1050 1050 1050 1050 1050 1050 1050
2100 Span mm 2100 2100 2100 2100 2100 2100 2100 2100 Span mm	1200 Rise mm 1500 1500 1500 1500 1500 1500 1500 1	200 Top mm 200 200 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 0.9-1.5 0.9-1.5 0.9.1 10.7 2100 Design Earth Cover m	1170 by 1500 A _{s1} 490 470 410 410 400 620 740 870 1000 by 1800 A _{s1}	1590 by 200 mm A _{s2} 1110 430 580 790 1020 1230 1460 1700 by 200 mm A _{s2}	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3}	410 rential Reinf A _{s4} 410 410 410 410 410 410 410 410	A _{s5} 450 3844b9/a forcement Are A _{s5}	A _{s7} 410 stm-c14 as, mm ² /m A _{s7}	410 433m-1 	1050 "M," mm 1500 1100 8 1100 1050 1050 1050 1050 1050
2100 Span mm 2100 20	1200 Rise mm 1500 1800 18	200 Top mm 200 200 200 200 200 200 200 200 200	200 Bottom 200 200 200 200 200 200 200 200 200 20	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 0.0 0.9-1.5 0.0 0.9-1.5 0.0 0.0 0.9-1.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	1170 by 1500 A _{s1} 490 470 410 410 400 620 740 870 1000 by 1800 A _{s1} 450 430	1590 by 200 mm A _{s2} 1110 770 430 580 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830	1590 Circumfee A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfee A _{s3} 550 580	$\begin{array}{c} 410 \\ \hline \\ Reinf \\ A_{s4} \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ \hline \\ rential Reinf \\ A_{s4} \\ 410 \\ 410 \\ 410 \\ \end{array}$	A _{s5} 450 3844b9/a forcement Are A _{s5}	A _{s7} 410 stm-c14 as, mm ² /m A _{s7}	410 433m-1 	1050 "M," mm 1500 1100 8 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800 18	200 Top mm 200 200 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6	1170 by 1500 A _{s1} 490 470 410 490 620 740 870 1000 by 1800 A _{s1} 450 430 410 410 410 430	1590 by 200 mm A _{s2} 1110 430 580 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830	1590 Circumfer A _{s3} 510 530 430 600 - 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850	$\begin{array}{c} 410 \\ \hline \\ rential Reinf \\ \hline A_{s4} \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ 410 \\ \hline \\ rential Reinf \\ \hline A_{s4} \\ 410$	A _{s5} 450 3844b9/a forcement Are A _{s5}	A _{s7} 410 stm-c14 as, mm ² /m A _{s7}	410 433m-1 	1050 "M," mm 1500 1100 8 1100 1050 1050 1050 1050 1050 1050 1050 1050 1050 1050 1050 1050 1050 1050
2100 Span mm 2100	1200 Rise mm 1500 1800	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 10.7	1170 by 1500 A _{s1} 490 470 410 400 620 740 870 1000 by 1800 A _{s1} 450 430 410 410 410 4550	1590 by 200 mm A _{s2} 1110 430 580 790 1020 1230 1230 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850 1080	410 rential Reinf A _{s4} 410 410 410 410 410 410 410 410	A _{s5} 450 3844b9/a forcement Are A _{s5}	A _{s7} 410 stm-c14 as, mm ² /m A _{s7}	410 433m-1 	1050 "M," mm 1500 1100 8 1100 1050 1050 1050 1050 1050 1050 1050 1050 1050 1050 1050 1000 1200 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800	200 Top mm 200 200 200 200 200 200 200	200 Bottom 200 200 200 200 200 200 200 200 200 20	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 0.6 0.6 0.6 0.6 0.6 0.9 0.9-1.5 10.7 10.6 10.6 10.6 10.7 10.	1170 by 1500 A _{s1} A _{s1} 410 410 400 620 740 870 1000 by 1800 by 1800 A _{s1} 450 430 410 410 430 550 660	1590 by 200 mm A _{s2} 1110 770 430 580 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1300	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850 1080 1320	410 rential Reinf A _{s4} 410 410 410 410 410 410 410 410	A _{s5} 450 3844b9/a forcement Are A _{s5}	A _{s7} 410 stm-c14 as, mm ² /m A _{s7}	410 433m-1 	1050 "M," mm 1500 1100 8 1100 1050 1050 1050 1050 1050 1050 1050 1050 1050 1200 1100 1050 1
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2100 Span mm 2100	1200 Rise mm 1500 1800	200 Top mm 200 200 200 200 200 200 200	200 Bottom 200 200 200 200 200 200 200 200 200 20	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 0.6 0.6 0.6 0.7 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9	1170 by 1500 A _{s1} 490 470 410 400 620 740 870 1000 by 1800 A _{s1} 450 430 410 430 430 410 430 660 770 890	1590 by 200 mm A _{s2} 1110 430 580 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1300 1530 1760	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850 1080 1320	410 rential Reinf A _{s4} 410 410 410 410 410 410 410 410	A _{s5} 450 3844b9/a forcement Are A _{s5}	A _{s7} 410 stm-c14 as, mm ² /m A _{s7}	410 433m-1 	1050 "M," mm 1500 1100 8 1100 1050 1050 1050 1050 1050 1050 1050 1050 1050 1200 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 0.6 0.6 0.6 0.7 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9	1170 by 1500 A _{s1} 490 470 410 400 620 740 870 1000 by 1800 A _{s1} 450 430 410 430 430 410 430 660 770 890	1590 by 200 mm A _{s2} 1110 770 430 580 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1300 1530	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850 1080 1320 1550 1800	410 rential Reinf A _{s4} 410 410 410 410 410 410 410 410	A _{s5} 450 3844b9/a forcement Are A _{s5}	$\frac{A_{s7}}{410}$ stm-c14 $\frac{as, mm^2/m}{A_{s7}}$	410 433m-1 <u>A_{s8}</u> 410	1050 "M," mm 1500 1100 8 1100 1050 1050 1050 1050 1050 1050 1200 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800 18	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 200 2	1170 by 1500 A _{s1} 490 470 410 400 620 740 870 1000 by 1800 A _{s1} 450 430 410 430 430 410 430 660 770 890	1590 by 200 mm A _{s2} 1110 430 580 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1300 1530 1760	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850 1080 1320 1550 1800	410 rential Reinf A _{s4} 410 410 410 410 410 410 410 410	<u>A_{s5}</u> 450 3844b9/a <u>forcement Are</u> <u>A_{s5}</u> 470	$\frac{A_{s7}}{410}$ stm-c14 $\frac{as, mm^2/m}{A_{s7}}$	410 433m-1 <u>A_{s8}</u> 410	1050 "M," mm 1500 1100 8 1100 1050 1050 1050 1050 1050 1050 1200 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800 18	200 Top mm 200 200 200 200 200 200 200	200 Bottom 200 200 200 200 200 200 200 200 200 20	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 4.6 0.6-0.9 0.9-1.5 3 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.9-1.5 0.5 0.9-1	1170 by 1500 A _{s1} 490 470 410 400 620 740 870 1000 by 1800 A _{s1} 450 430 410 410 430 660 770 890 by 2100 A _{s1} 470 470 470 470 470 470 470 470	1590 by 200 mm A _{s2} 1110 770 430 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1300 1530 1760 by 200 mm A _{s2} 1190	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850 1080 1320 1550 1800 Circumfer A _{s3} 580	410 rential Reinf A _{s4} 410 410 410 410 410 410 410 410	A _{s5} 450 3844b9/a 50 60 60 60 60 60 60 60 60 60 60 60 60 60	A _{s7} 410 stm-c14 as, mm ² /m A _{s7} 410 as, mm ² /m	410 433m-1 <u>A_{s8}</u> 410	1050 "M," mm 1500 1100 8 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800 18	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0.0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 0.1 0.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 0.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1170 by 1500 A _{s1} 490 470 410 740 870 1000 by 1800 A _{s1} 450 450 660 770 890 by 2100 A _{s1} 470	1590 by 200 mm A _{s2} 1110 430 580 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1300 1530 1760 by 200 mm A _{s2} 1190 870	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850 1320 1320 1550 1800 Circumfer A _{s3} 580 620	$\begin{array}{c} 410 \\ \hline \\ \text{rential Reinf} \\ \hline \\ A_{s4} \\ 410 \\$	$\frac{A_{s5}}{450}$ 3844b9/a $\frac{1}{50}$ $\frac{1}{$	$\frac{A_{s7}}{410}$ stm-cl4 $\frac{as, mm^2/m}{A_{s7}}$ 410 $\frac{A_{s7}}{410}$	410 433m-1 <u>A_{s8}</u> 410	1050 "M," mm 1500 1100 8 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800 18	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 0.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 0.6 0.9 0.9-1.5 3 4.6 0.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 0.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 0.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 0.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 0.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 0.1 0.7 2100 0.9-1.5 3 4.6 0.1 0.7 2100 0.9-1.5 3 0.6 0.9 0.9-1.5 3 0.9-1.5 0.9-1 10.7 2100 0.9-1.5 0.9-1 10.7 2100 0.9-1.5 0.9-1.5 0.9-1 10.7 2100 0.9-1.5 0.9-1	1170 by 1500 A _{s1} 490 410 410 400 620 740 870 1000 by 1800 A _{s1} 450 660 770 890 by 2100 A _{s1} 470 470 430 430 410 430 550 660 770 890 by 2100 470 470 470 470 470 470 470 4	1590 by 200 mm A _{s2} 1110 430 580 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1530 1760 by 200 mm A _{s2} 1190 870 490	1590 Circumfer A _{s3} 510 530 430 800 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850 1080 1320 1550 1800 Circumfer A _{s3} 550 580 620 490	$\begin{array}{c} 410 \\ \hline \\ rential Reinf \\ A_{s4} \\ 410 \\ $	$\frac{A_{s5}}{450}$ 3844b9/a $\frac{1}{50}$ $\frac{1}{$	$\frac{A_{s7}}{410}$ stm-cl4 $\frac{as, mm^2/m}{A_{s7}}$ 410 $\frac{A_{s7}}{410}$	410 433m-1 <u>A_{s8}</u> 410	1050 "M," mm 1500 1100 8 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800 2100 2100 2100 2100 2100 2100	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.6 9.1 10.7 2100 0.9-1.5 3 3 10.7 0.9-1.5 3 3 10.7 0.9-1.5 3 10.7 0.9-1.5 3 10.7 0.9-1.5 3 10.7 0.9-1.5 3 10.7 0.9-1.5 3 10.7 0.9-1.5 3 10.7 0.9-1.5 3 10.7 0.9-1.5 10.7 0.9-1.5 10.7 0.9-1.5 10.7 0.9-1.5 10.7 0.9-1.5 10.7 0.9-1.5 10.7 0.9-1.5 10.7	1170 by 1500 A _{s1} 490 470 410 490 620 740 870 1000 by 1800 A _{s1} 450 450 430 430 410 430 430 430 410 430 550 660 770 890 by 2100 A _{s1} 477 470 470 470 470 470 470 470	1590 by 200 mm A _{s2} 1110 430 (8 7580 1020 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1300 1530 1760 by 200 mm A _{s2} 1190 830 470 600 830 1060 1530 1760	1590 Circumfer A _{s3} 510 530 430 800 810 1040 1250 1490 1720 Circumfer A _{s3} 550 550 550 550 550 550 550 1080 1080 1320 1550 1800 Circumfer A _{s3} 580 620 490 660	$\begin{array}{r} 410 \\ \hline \\ rential Reinf \\ \hline A_{s4} \\ 410 $	$\frac{A_{s5}}{450}$ 3844b9/a $\frac{1}{50}$ $\frac{1}{$	$\frac{A_{s7}}{410}$ stm-cl4 $\frac{as, mm^2/m}{A_{s7}}$ 410 $\frac{A_{s7}}{410}$	410 433m-1 <u>A_{s8}</u> 410	1050 "M," mm 1500 1100 8 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800 2100 2100 2100 2100 2100 2100 2100	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 6.6-0.9 0.9-1.5 3 4.6 6 0.8 0.9-1.5 0.9 0.9-1.5 0.9-1.5 0 0.9-1.5 0 0.9-1.5 0 0.9-1.5	1170 by 1500 A _{s1} 490 470 410 490 620 740 870 1000 by 1800 A _{s1} 450 430 450 430 410 410 410 410 430 550 660 770 890 by 2100 A _{s1} 470 470 470 470 470 470 470 470	1590 by 200 mm A _{s2} 1110 430 (8 7580 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1300 1300 1300 1300 1300 1300 13	1590 Circumfer A _{s3} 510 530 430 800 810 1040 1250 1250 1720 Circumfer A _{s3} 550 580 470 640 850 1080 1320 1550 1800 Circumfer A _{s3} 580 620 490 660 890	$\begin{array}{c} 410 \\ \hline rential Reinf \\ \hline A_{s4} \\ 410 \\ $	$\frac{A_{s5}}{450}$ 3844b9/a $\frac{1}{50}$ $\frac{1}{$	$\frac{A_{s7}}{410}$ stm-cl4 $\frac{as, mm^2/m}{A_{s7}}$ 410 $\frac{A_{s7}}{410}$	410 433m-1 <u>A_{s8}</u> 410	1050 "M," mm 1500 1100 8 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 1.5 3 4.6 6.1 7.6 9.1 1.5 3 4.6 6.1 7.6 9.1 1.5 3 4.6 6.1 7.6 9.1 1.5 3 4.6 6.1 7.5 3 4.6 6.1 7.5 3 4.6 6.1 7.5 3 4.6 6.1	1170 by 1500 A _{s1} 410 410 410 400 620 740 870 1000 by 1800 600 740 870 1000 by 1800 600 770 890 660 770 890 0 by 2100 660 770 890 0 by 2100 620 770 870 100 100 100 100 100 100 100 1	1590 by 200 mm A _{s2} 1110 770 430 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1300 1530 1760 by 200 mm A _{s2} 1190 870 490 620 850 1080	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850 1080 1320 1550 1800 1320 1550 1800 640 850 1080 1320 1550 1800 1320 1550 1800 1320 1550 1800 1320 1640 1320 1040 1320 1040 1320 1040 1320 1040 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1490 1720 1720 1490 1720 1490 1720 1640 1040 1720 1640 1720 1720 1640 1720 1640 1720 1640 1720 1640 1720 1720 1640 1720 1640 1720 1640 1720 1640 1720 1640 1720 1640 1750 1800 1320 1550 1800 1320 1550 1800 1320 1550 1800 1320 1550 1800 1320 1550 1800 1320 1550 1800 1320 1550 1800 1320 1550 1800 1320 1550 1800 1320 1580 1800 1320 1580 1800 1320 1580 1800 1320 1580 1800 1320 1580 1800 1990 1990 1990 1090	$\begin{array}{r} 410 \\ \hline \\ A_{s4} \\ \hline \\ 410 \\ $	$\frac{A_{s5}}{450}$ 3844b9/a $\frac{1}{50}$ $\frac{1}{$	$\frac{A_{s7}}{410}$ stm-cl4 $\frac{as, mm^2/m}{A_{s7}}$ 410 $\frac{A_{s7}}{410}$	410 433m-1 <u>A_{s8}</u> 410	1050 "M," mm 1500 1100 8 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m	1170 by 1500 A _{s1} 490 470 410 740 870 1000 by 1800 A _{s1} 450 430 410 410 430 550 660 770 890 by 2100 A _{s1} 470 470 470 470 510 600	1590 by 200 mm A _{s2} 770 430 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1300 1530 1760 by 200 mm A _{s2} 1190 870 490 620 850 1080 1320	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850 1080 1320 1550 1800 Circumfer A _{s3} 580 620 490 620 490 620 490 620 490 620 490 620 490 620 490 620 490 620 490 620 490 620 490 620 490 1320 1350 620 490 1320 1350 620 490 1320 1320 1350 620 490 1320 1350 620 490 1320 1350 1350 1350 1350 1350 1350 1320 1350 1300 1000 1000 1000 1000 1000 1	$\begin{array}{r} 410 \\ \hline \\ A_{s4} \\ 410 $	$\frac{A_{s5}}{450}$ 3844b9/a $\frac{1}{50}$ $\frac{1}{$	$\frac{A_{s7}}{410}$ stm-cl4 $\frac{as, mm^2/m}{A_{s7}}$ 410 $\frac{A_{s7}}{410}$	410 433m-1 <u>A_{s8}</u> 410	1050 "M," mm 1500 1100 8 1100 1050 1
2100 Span mm 2100	1200 Rise mm 1500 1800 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 10.7 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 10.7 2100 0.9-1.5 3 4.6 6.1 7.6 9.1 1.5 3 4.6 6.1 7.6 9.1 1.5 3 4.6 6.1 7.6 9.1 1.5 3 4.6 6.1 7.6 9.1 1.5 3 4.6 6.1 7.5 3 4.6 6.1 7.5 3 4.6 6.1 7.5 3 4.6 6.1	1170 by 1500 A _{s1} 410 410 410 400 620 740 870 1000 by 1800 600 740 870 1000 by 1800 600 770 890 660 770 890 0 by 2100 660 770 890 0 by 2100 620 770 870 100 100 100 100 100 100 100 1	1590 by 200 mm A _{s2} 1110 770 430 790 1020 1230 1460 1700 by 200 mm A _{s2} 1150 830 470 600 830 1060 1300 1530 1760 by 200 mm A _{s2} 1190 870 490 620 850 1080	1590 Circumfer A _{s3} 510 530 430 600 810 1040 1250 1490 1720 Circumfer A _{s3} 550 580 470 640 850 1080 1320 1550 1800 1320 1550 1800 1320 1550 1800 1320 1650 1800 1320 1650 1800 1320 1550 1800 1320 1660 850 1080 1320 1320 1080 1320 1080 1320 1080 1320 1080 1320 1080 1320 1080 1320 1080 1320 1080 1320 1300 1320 1300 1320 1300 1320 1300 1320 1350 1300 1320 1300 1320 1300 1320 1300 1320 1300 1320 1300 1320 1350 1300 1320 1320 1350 1300 1320 1320 1350 1300 1320 1350 1300 1320 1350 1300 1320 1300 1320 1350 1300 1320 1300 1320 1300 1320 1300 1320 1300	$\begin{array}{r} 410 \\ \hline \\ A_{s4} \\ \hline \\ 410 \\ $	$\frac{A_{s5}}{450}$ 3844b9/a $\frac{1}{50}$ $\frac{1}{$	$\frac{A_{s7}}{410}$ stm-cl4 $\frac{as, mm^2/m}{A_{s7}}$ 410 $\frac{A_{s7}}{410}$	410 433m-1 <u>A_{s8}</u> 410	1050 "M," mm 1500 1100 8 1100 1050 1

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Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover					rcement Are			
mm	mm	mm	mm	mm	 	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
2400 2400	1200 1200	200 200	200 200	200 200	200 200	0-0.6 0.6-0.9	660 640	1130 830	490 530	410 410	430	410	410	1270
2400	1200	200	200	200	200	0.9-1.5	430	470	470	410				1150
2400	1200	200	200	200	200	3	580	660	680	410				1150
2400	1200	200	200	200	200	4.6	790	910	940	410				1050
2400	1200	200	200	200	200	6.1	1000	1210	1210	410				1050
2400	1200	200	200	200	200	7.6	1230	1440	1460	410				1050
							0 by 1500 l	by 200 mm				0.		
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover	•	•			rcement Are		•	66 A 22
mm 2400	mm 1500	mm 200	 200	mm 200	 200		A _{s1} 600	A _{s2} 1210	A _{s3} 530	A _{s4} 410	A _{s5} 450	A _{s7} 410	A _{s8} 410	"M," mm
2400	1500	200	200	200	200	0.6-0.9	580	890	600	410	450	410	410	1270
2400	1500	200	200	200	200	0.9-1.5	410	510	510	410				1270
2400	1500	200	200	200	200	3	510	700	740	410				1150
2400	1500	200	200	200	200	4.6	700	980	1020	410				1050
2400	1500	200	200	200	200	6.1	890	1270	1300	410				1050
2400	1500	200	200	200	200	7.6	1080	1550	1590	410				1050
						240	0 by 1800 l	by 200 mm						
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover			Circumfere	ntial Reinfo	rcement Are	as, mm²/m		
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
2400	1800	200	200	200	200	0-0.6	550	1250	600	410	470	410	410	
2400	1800	200	200	200	200	0.6-0.9	530	960	640	410				1400
2400	1800	200	200	200	200	0.9-1.5	410	550	550	410				1270
2400	1800	200	200	200	200	3	470	740	790	410				1150
2400 2400	1800 1800	200 200	200 200	200 200	200 200	4.6 6.1	640 810	1040 1340	1080 1380	410 410				1050 1050
2400	1800	200	200	200	200	7.6	980	1630	1680	410				1050
2400	1000	200	200	200	200			by 200 mm	1000	410				1050
Span	Rise	Тор	Bottom	Side	Haunch	Design Earth Cover			Circumfere	ntial Reinfo	rcement Are	as, mm²/m		
mm	mm	mm	mm	mm	mm	m	A _{s1}	A _{s2}	A _{s3}	A _{s4}	A _{s5}	A _{s7}	A _{s8}	"M," mm
2400	2100	200	200	200	200	0-0.6	510	1320	640	410	490	410	410	
2400	2100	200	200	200	200	0.6-0.9	490	1000	700	410				1660
2400	2100	200	200	200	200	0.9-1.5	410	580	600	410				1400
2400	2100	200	200	200	200		430	790	830	410				1150
2400 2400	2100	200 200	200 200	200	200	4.6 6.1	600	1080	1130	410				1050
	2100 2100			200 200	200		740 890	1380 1700	1440	410 7 410				1050 1050
2400	2100	200	200	200	200	7.6 00 0	890	1700 by 200 mm	1440	410 410				1050
						7.6 00 0	890 0 by 2400 l	1700 by 200 mm	1740 Circumfere	410	rcement Are			1050
2400 Span mm	2100 Rise mm	200 Top mm	200 Bottom mm	200 Side mm	200 Haunch mm	7.6 2400 Design Earth Cover m	890 0 by 2400 l A _{s1}	1700 by 200 mm A _{s2}	1740 Circumfere A _{s3}	410 ntial Reinfo A _{s4}	A _{s5}	A _{s7}	A _{s8}	
2400 Span mm 2400	2100 Rise mm 2400	200 Top mm 200	200 Bottom mm 200	200 Side mm 200	200 Haunch mm 200	7.6 2400 Design Earth Cover m 0-0.6	890 0 by 2400 l <u>A_{s1}</u> 470	1700 by 200 mm A _{s2} 1360	1740 Circumfere A _{s3} 680	410 ntial Reinfo A _{s4} 410			A _{s8} 410	1050 "M," mm
2400 Span mm 2400 2400	2100 Rise mm 2400 2400	200 Top mm 200 200	200 Bottom mm 200 200	200 Side mm 200 200	200 Haunch mm 200 200	7.6 2400 Design Earth Cover m 0-0.6 0.6-0.9	890 0 by 2400 l <u>A_{s1}</u> 470 470	1700 by 200 mm A _{s2} 1360 1040	1740 Circumfere A _{s3} 680 740	410 <u>ntial Reinfo</u> <u>A_{s4}</u> 410 410	A _{s5} 510	A _{s7} 410	410	1050 "M," mm 1660
2400 Span mm 2400 2400 2400	2100 Rise mm 2400 2400 2400	200 Top mm 200 200 200	200 Bottom mm 200 200 200	200 Side mm 200 200 200	200 Haunch mm 200 200 a 200	7.6 2400 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5	890 by 2400 I <u>A_{s1}</u> 470 470 410	1700 by 200 mm <u>A_{s2}</u> 1360 1040 620	1740 Circumfere A _{s3} 680 740 640	7 410 ntial Reinfo A _{s4} 410 410 410 4741033	A _{s5} 510	A _{s7}	410	1050 "M," mm 1660 8 1660
2400 Span mm 2400 2400 2400 2400	2100 Rise mm 2400 2400 2400 2400	200 Top mm 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200	200 Side mm 200 200 200 200 200	200 Haunch mm 200 200 a 200 200 200	7.6 2400 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3	890 by 2400 I <u>A_{s1}</u> 470 470 410 410	1700 by 200 mm A _{s2} 1360 1040 620 810	Circumfere A _{s3} 680 740 640 870	7 410 ntial Reinfo A _{s4} 410 410 410 410 410 410 410	A _{s5} 510	A _{s7} 410	410	1050 "M," mm 1660 1660 1270
2400 Span mm 2400 2400 2400 2400 2400	2100 Rise mm 2400 2400 2400 2400 2400	200 Top mm 200 200 200 200 200 200	200 Bottom mm 200 200 Clock 200 200 200 200	200 Side mm 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200	7.6 2400 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6	890 by 2400 l A _{s1} 470 470 470 410 550	1700 by 200 mm A _{s2} 1360 1040 620 810 1100	I740 Circumfere A _{s3} 680 740 640 - 6 870 1170	7 410 ntial Reinfo A _{s4} 410 410 410 410 410 410 410	A _{s5} 510	A _{s7} 410	410	1050 "M," mm 1660 1660 1270 1150
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2400 Span mm 2400 2400 2400 2400 2400 2400 2400 2	2100 Rise mm 2400 2500 1500 1500 1500 1500 1500 1500 1500 1500	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	7.6 2400 Design Earth Cover m 0-0.6 0.6-0.9 1.5 3 4.6 6.1 7.6 2700 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5	890 b by 2400 l A _{s1} 470 470 410 550 700 850 D by 1500 l A _{s1} 620 620 470	1700 by 200 mm A _{s2} 1360 1040 620 al 810 1100 1400 1720 by 225 mm A _{s2} 1130 870 530	1740 Circumfere A _{s3} 680 740 640 870 1170 1490 1780 Circumfere A _{s3} 530 580 550	$\begin{array}{r} 410\\ \hline \\ ntial Reinfo \\ \hline A_{s4} \\ 410 \\ $	A _{s5} 510 844b9/a rcement Are A _{s5}	A _{s7} 410 (stm-c14) (as, mm ² /m A _{s7}	410 33m-1 	1050 "M," mm 1660 8 1660 1270 1150 1150 1050 "M," mm 1380 1250
2400 Span mm 2400 2400 2400 2400 2400 2400 2400 2	2100 Rise mm 2400 2400 2400 2400 2400 2400 2400 2400 1500 1500 1500	200 Top mm 200 200 200 200 200 200 200 200 200	200 Bottom 200 200 200 200 200 200 200 200 200 20	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	7.6 2400 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 2700 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3	890 b y 2400 l A _{s1} 470 470 470 470 50 50 50 50 50 50 50 50 50 5	1700 by 200 mm <u>A_{s2}</u> 1360 1040 620 810 1100 1400 1720 by 225 mm <u>A_{s2}</u> 1130 870 530 770	1740 Circumfere A _{s3} 680 740 640 870 1170 1490 1780 Circumfere A _{s3} 530 550 810	410 ntial Reinfo A _{s4} 410 410 410 410 410 410 410 410	A _{s5} 510 844b9/a rcement Are A _{s5}	A _{s7} 410 (stm-c14) (as, mm ² /m A _{s7}	410 33m-1 	1050 "M," mm 1660 1660 1270 1150 1150 1050 "M," mm 1380 1250 1250
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2400 Span mm 2400 2400 2400 2400 2400 2400 2400 2	2100 Rise mm 2400 2400 2400 2400 2400 2400 2400 2400 2400 2400 15	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	7.6 2400 Design Earth Cover m 0-0.6 0.6-0.9 1.5 3 4.6 6.1 7.6 2700 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 2700 Design Earth Cover m	890 9 by 2400 l A _{s1} 470 470 7 410 410 550 7 410 620 620 470 620 620 470 620 850 1080 1320 0 by 1800 l A _{s1} 580 550	1700 by 200 mm A _{s2} 1360 1040 620 810 1100 120 by 225 mm A _{s2} 1130 870 530 770 1080 1380 1700 by 225 mm A _{s2} 1130 870 530 770 1080 1380 1700 by 225 mm A _{s2} 1190 940	1740 Circumfere A _{s3} 680 740 640 870 1170 1490 1780 Circumfere A _{s3} 530 580 550 810 1100 1420 1720 Circumfere A _{s3} 580 640	410 ntial Reinfo A _{s4} 410 470 470 470 470 470 470 470 470 470 470 470 470 470 470	$\frac{A_{s5}}{510}$ 844b9/a recement Are $\frac{A_{s5}}{470}$ rcement Are $\frac{A_{s5}}{470}$	A _{s7} 410 (stm-c14) (as, mm ² /m A _{s7} 470 (as, mm ² /m A _{s7}	410 33m-1 <u>A_{s8}</u> 470	1050 "M," mm 1660 1660 1270 1150 1150 1150 1150 1250 1250 1250 1250 1120 1120 1120 1120 1120 1120
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2400 Span mm 2400 2400 2400 2400 2400 2400 2400 2	2100 Rise mm 2400 1500 1800	200 Top mm 200 200 200 200 200 200 200	200 Bottom mm 200 200 200 200 200 200 200 200 200	200 Side mm 200 200 200 200 200 200 200 200 200	200 Haunch mm 200 200 200 200 200 200 200 200 200	7.6 2400 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 2700 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 4.6 6.1 7.6 2700 Design Earth Cover m 0-0.6 0.6-0.9 0.9-1.5 3 3	890 9 by 2400 l A _{s1} 470 470 7 410 410 550 700 850 0 by 1500 l A _{s1} 620 620 470 620 620 470 620 850 1080 1320 0 by 1800 l A _{s1} 550 470 550 550 470 580	1700 by 200 mm <u>A_{s2}</u> 1360 1040 810 1100 1400 1000	1740 Circumfere A _{s3} 680 740 640 870 1170 1490 1780 Circumfere A _{s3} 530 580 550 810 1100 1420 1720 Circumfere A _{s3} 580 640 600 670	410 ntial Reinfo A _{s4} 410 470 470 470 470 470 470 470 470 470 470 470 470 470 470 470 470 470 470	$\frac{A_{s5}}{510}$ 844b9/a recement Are $\frac{A_{s5}}{470}$ rcement Are $\frac{A_{s5}}{470}$	A _{s7} 410 (stm-c14) (as, mm ² /m A _{s7} 470 (as, mm ² /m A _{s7}	410 33m-1 <u>A_{s8}</u> 470	1050 "M," mm 1660 1270 1150 1150 1050 1250 1250 1250 1120 1120 1120 1120 1120 1120 1120 1120 1120 1120 1120
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