

**CUT-AND-COVER
TUNNEL**

EARTHWORKS

STRUCTURE

INFRASTRUCTURE

DRAINAGE

TUNNEL

EARTHWORKS

TUNNEL SUPORT

**STRUCTURE
(CLADDING +
COUNTERVAULT)**

**INFRASTRUCTURE
(BACKFILLING OF
SLABS AND
PAVEMENTS)**

DRAINAGE

BRIDGE

EARTHWORKS

STRUCTURE

SUPERSTRUCTURE

DRAINAGE

BUILDING

EARTHWORKS

STRUCTURE

ARCHITECTURE

MEP

ROAD

EARTHWORKS

STRUCTURE

INFRASTRUCTURE

DRAINAGE

AFFECTED SERVICES

WATER SUPPLY

SEWERAGE

GAS

ELECTRICITY

TELCO

**CUT-AND-COVER
TUNNEL**

EARTHWORKS

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcFacility (CUT-AND-COVER TUNNEL)

**IfcFacilitypart (CUT-AND-COVER
TUNNEL < 25)**

IfcEarthworksCut (Desmonte xx)

IfcEarthworksCut (Zanja xx)

IfcEarthworksFill (Terraplén xx)

⋮

**IfcFacilitypart (CUT-AND-COVER
TUNNEL 45-55)**

**IfcFacilitypart (CUT-AND-COVER
TUNNEL x-x)**

**IfcFacilitypart (CUT-AND-COVER
TUNNEL x-x)**

**CUT-AND-COVER
TUNNEL**

STRUCTURE

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcFacility (CUT-AND-COVER TUNNEL)

**IfcFacilitypart (CUT-AND-COVER
TUNNEL < 25)**

IfcPile (Pilote)

IfcFooting (Encepado)

IfcWall (Muro)

⋮

**IfcFacilitypart (CUT-AND-COVER
TUNNEL 45-55)**

**IfcFacilitypart (CUT-AND-COVER
TUNNEL x-x)**

**IfcFacilitypart (CUT-AND-COVER
TUNNEL x-x)**

**CUT-AND-COVER
TUNNEL**

INFRASTRUCTURE

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcFacility (CUT-AND-COVER TUNNEL)

**IfcFacilitypart (CUT-AND-COVER
TUNNEL < 25)**

IfcSlab (Losa relleno)

IfcFooting (Acera y pasillo)

IfcXxx (Xxxx)

⋮

**IfcFacilitypart (CUT-AND-COVER
TUNNEL 45-55)**

**IfcFacilitypart (CUT-AND-COVER
TUNNEL x-x)**

**IfcFacilitypart (CUT-AND-COVER
TUNNEL x-x)**

**CUT-AND-COVER
TUNNEL ORTUELLA**

DRAINAGE

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcFacility (CUT-AND-COVER TUNNEL)

**IfcFacilitypart (CUT-AND-COVER
TUNNEL < 25)**

IfcPipeFitting (Tubo DRAINAGE)

**IfcDistributionChamberElement
(Acera y pasillo)**

IfcXxx (Xxxx)

⋮

**IfcFacilitypart (CUT-AND-COVER
TUNNEL 45-55)**

**IfcFacilitypart (CUT-AND-COVER
TUNNEL x-x)**

**IfcFacilitypart (CUT-AND-COVER
TUNNEL x-x)**

TUNEL

EARTHWORKS

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcFacility (TUNEL)

IfcFacilitypart (I > 65)

IfcEarthworksCut (Desmonte xx)

IfcEarthworksCut (Zanja xx)

IfcEarthworksFill (Terraplén xx)

⋮

IfcFacilitypart (II 45-55)

IfcFacilitypart (III 35-45)

IfcFacilitypart (xxxx)

TUNEL

TUNNEL SUPORT

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcFacility (TUNEL)

IfcFacilitypart (I > 65)

IfcTendon (Bulones)

IfcPile (paraguas microp)

IfcCovering (hormigón proyectado)

⋮

IfcFacilitypart (II 45-55)

IfcFacilitypart (III 35-45)

IfcFacilitypart (xxxx)

TUNEL

**STRUCTURE
(CLADDING +
COUNTERVAULT)**

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcFacility (TUNEL)

IfcFacilitypart (I > 65)

IfcFooting (Contrabóveda)

IfcFooting (TACÓN)

IfcXxx (Xxxx)

⋮

IfcFacilitypart (II 45-55)

IfcFacilitypart (III 35-45)

IfcFacilitypart (xxxx)

TUNEL

**INFRASTRUCTURE
(BACKFILLING OF
SLABS AND
PAVEMENTS)**

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcFacility (TUNEL)

IfcFacilitypart (I > 65)

IfcSlab (Losa relleno)

IfcFooting (Acera y pasillo)

IfcXxx (Xxxx)

⋮

IfcFacilitypart (II 45-55)

IfcFacilitypart (III 35-45)

IfcFacilitypart (xxxx)

TUNEL

DRAINAGE

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcFacility (TUNEL)

IfcFacilitypart (I > 65)

IfcPipeFitting (Tubo Drenaje)

IfcDistributionChamberElement
(Arqueta)

⋮

IfcFacilitypart (II 45-55)

IfcFacilitypart (III 35-45)

IfcFacilitypart (xxxx)

PUENTE

EARTHWORKS

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcBridge (PUENTE)

IfcFacilityPart (excavacion)

IfcEarthworksCut (Desmonte xx)

IfcEarthworksCut (Zanja xx)

IfcEarthworksFill (Terraplén xx)

⋮

PUENTE

STRUCTURE

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcBridge (PUENTE)

IfcBridgePart (Cota-xx)

IfcFooting (Zapata xx)

IfcColumn (Pilar xx)

⋮

IfcBridgePart (Cota+xx)

IfcElementAssembly (Tablero)

⋮

PUENTE

SUPERSTRUCTURE

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcBridge (PUENTE)

IfcBridgePart (COTA +30)

IfcSlab (hormigón relleno)

IfcFooting (Acera y pasillo)

IfcTrackElement(Traviesas)

PUENTE

DRAINAGE

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcBridge (PUENTE)

IfcBridgePart (Cota -2)

IfcPipeSegment (Tubo DRAINAGE)

⋮

IfcBridgePart (Cota +30)

EDIFICIO

EARTHWORKS

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcBuilding (SE 01)

IfcFacilityPart (excavacion)

IfcEarthworksCut (Desmonte xx)

IfcEarthworksCut (Zanja xx)

IfcEarthworksFill (Terraplén xx)

⋮

EDIFICIO

STRUCTURE

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcBuilding (SE 01)

IfcBuildingStorey (cota +0)

IfcFooting (Zapata xx)

IfcSlab (Losa xx)

IfcColumn (Pilar xx)

⋮

IfcBuildingStorey (cota +xx)

IfcBuildingStorey (cota +xx)

EDIFICIO

ARCHITECTURE

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcBuilding (SE 01)

IfcBuildingStorey (cota +0)

IfcWall (Fachada xx)

IfcRoof (Cubierta)

IfcDoor (Puerta xx)

⋮

IfcBuildingStorey (cota +xx)

IfcBuildingStorey (cota +xx)

EDIFICIO

MEP

IfcProject (PROYECTO)

IfcSite (EMPLAZAMIENTO)

IfcBuilding (SE 01)

IfcBuildingStorey (cota +0)

IfcPipeSegment (Tubo fontaneria)

IfcFlowTerminal (Acometida)

IfcTransformer (Transformador)

⋮

IfcBuildingStorey (cota +xx)

IfcBuildingStorey (cota +xx)