

7 スキーマ

道路中心線形データ交換標準（案）基本道路中心線形編 Ver.1.0 のスキーマを以下に示す。

```

<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema      xmlns:xsd="http://www.w3.org/2001/XMLSchema"      elementFormDefault="qualified"
attributeFormDefault="unqualified" version="0.991">
  <xsd:element name="RoadGmxml">
    <xsd:annotation>
      <xsd:documentation>Road Design Data XML Schema</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="ProjectInfo"/>
        <xsd:element ref="CRSs"/>
        <xsd:element ref="RoadGm" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:complexType>
    <xsd:key name="CRS">
      <xsd:selector xpath="CRSs/CRS"/>
      <xsd:field xpath="@CRSName"/>
    </xsd:key>
    <xsd:keyref name="RefCRS" refer="CRS">
      <xsd:selector xpath="RoadGeometry/Alignments/Alignment"/>
      <xsd:field xpath="@RefCRS"/>
    </xsd:keyref>
  </xsd:element>
  <xsd:element name="ProjectInfo">
    <xsd:annotation>
      <xsd:documentation>プロジェクト情報</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element name="ProjectName" type="xsd:string">
          <xsd:annotation>
            <xsd:documentation>件名</xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="CreatorInfo">
          <xsd:annotation>
            <xsd:documentation>データ作成者情報</xsd:documentation>
          </xsd:annotation>
          <xsd:complexType>
            <xsd:choice maxOccurs="unbounded">
              <xsd:element name="Company" type="xsd:string">
                <xsd:annotation>
                  <xsd:documentation>会社名</xsd:documentation>
                </xsd:annotation>
              </xsd:element>
              <xsd:element name="Person" type="xsd:string">
                <xsd:annotation>
                  <xsd:documentation>作成者名</xsd:documentation>
                </xsd:annotation>
              </xsd:element>
            </xsd:choice>
          </xsd:complexType>
        </xsd:element>
        <xsd:element name="CreateDate" type="xsd:date">
          <xsd:annotation>
            <xsd:documentation>データ作成日</xsd:documentation>
          </xsd:annotation>
        </xsd:element>
        <xsd:element name="ProjectPhase">
          <xsd:annotation>
            <xsd:documentation>事業段階</xsd:documentation>
          </xsd:annotation>
          <xsd:simpleType>
            <xsd:restriction base="xsd:string">
              <xsd:enumeration value="概略"/>
              <xsd:enumeration value="予備"/>
              <xsd:enumeration value="詳細"/>
              <xsd:enumeration value="施工"/>
            </xsd:restriction>
          </xsd:simpleType>
        </xsd:element>
        <xsd:element name="Note" type="xsd:string">

```

```

        <xsd:annotation>
          <xsd:documentation>注記</xsd:documentation>
        </xsd:annotation>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
<xsd:element name="CRSs">
  <xsd:annotation>
    <xsd:documentation>座標参照系セット</xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element name="CRS" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation>座標参照系</xsd:documentation>
        </xsd:annotation>
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="GeodeticDatum">
              <xsd:annotation>
                <xsd:documentation>測地原子</xsd:documentation>
              </xsd:annotation>
              <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                  <xsd:enumeration value="JGD2000"/>
                  <xsd:enumeration value="TD"/>
                  <xsd:enumeration value="WGS84"/>
                </xsd:restriction>
              </xsd:simpleType>
            </xsd:element>
            <xsd:element name="VerticalDatum">
              <xsd:annotation>
                <xsd:documentation>鉛直原子</xsd:documentation>
              </xsd:annotation>
              <xsd:complexType>
                <xsd:attribute name="StdName" type="xsd:string" use="required">
                  <xsd:annotation>
                    <xsd:documentation>基準名</xsd:documentation>
                  </xsd:annotation>
                </xsd:attribute>
                <xsd:attribute name="DifferToTP" type="xsd:double" use="required">
                  <xsd:annotation>
                    <xsd:documentation>TP との標高差</xsd:documentation>
                  </xsd:annotation>
                </xsd:attribute>
              </xsd:complexType>
            </xsd:element>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
      <xsd:element name="HorizontalCoordinateSystem">
        <xsd:annotation>
          <xsd:documentation>水平座標系</xsd:documentation>
        </xsd:annotation>
        <xsd:simpleType>
          <xsd:restriction base="xsd:string">
            <xsd:enumeration value="1(X,Y)"/>
            <xsd:enumeration value="2(X,Y)"/>
            <xsd:enumeration value="3(X,Y)"/>
            <xsd:enumeration value="4(X,Y)"/>
            <xsd:enumeration value="5(X,Y)"/>
            <xsd:enumeration value="6(X,Y)"/>
            <xsd:enumeration value="7(X,Y)"/>
            <xsd:enumeration value="8(X,Y)"/>
            <xsd:enumeration value="9(X,Y)"/>
            <xsd:enumeration value="10(X,Y)"/>
            <xsd:enumeration value="11(X,Y)"/>
            <xsd:enumeration value="12(X,Y)"/>
            <xsd:enumeration value="13(X,Y)"/>
            <xsd:enumeration value="14(X,Y)"/>
            <xsd:enumeration value="15(X,Y)"/>
            <xsd:enumeration value="16(X,Y)"/>
            <xsd:enumeration value="17(X,Y)"/>
            <xsd:enumeration value="18(X,Y)"/>
          </xsd:restriction>
        </xsd:simpleType>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>

```

```

        <xsd:enumeration value="19(X,Y)"/>
        <xsd:enumeration value="(B,L)"/>
    </xsd:restriction>
</xsd:simpleType>
</xsd:element>
<xsd:element name="VerticalCoordinateSystem" default="H">
    <xsd:annotation>
        <xsd:documentation>鉛直座標系</xsd:documentation>
    </xsd:annotation>
    <xsd:simpleType>
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="H"/>
            <xsd:enumeration value="h"/>
        </xsd:restriction>
    </xsd:simpleType>
</xsd:element>
<xsd:element name="Remark" type="xsd:string" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation>座標系注意点</xsd:documentation>
    </xsd:annotation>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="CRSName" type="xsd:string" use="required">
    <xsd:annotation>
        <xsd:documentation>座標系名称</xsd:documentation>
    </xsd:annotation>
</xsd:attribute>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
</xsd:complexType>
<xsd:unique name="UqName">
    <xsd:selector xpath="CRS"/>
    <xsd:field xpath="@CRSName"/>
</xsd:unique>
</xsd:element>
<xsd:element name="RoadGm">
    <xsd:annotation>
        <xsd:documentation>道路構築物情報</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="GmPntsGrp" minOccurs="0">
                <xsd:annotation>
                    <xsd:documentation>座標点グループ</xsd:documentation>
                </xsd:annotation>
                <xsd:complexType>
                    <xsd:sequence>
                        <xsd:element name="GmPnts" maxOccurs="unbounded">
                            <xsd:annotation>
                                <xsd:documentation>座標点リスト</xsd:documentation>
                            </xsd:annotation>
                            <xsd:complexType>
                                <xsd:sequence>
                                    <xsd:element name="GmPnt" type="GmPntType" maxOccurs="unbounded">
                                        <xsd:annotation>
                                            <xsd:documentation>座標点</xsd:documentation>
                                        </xsd:annotation>
                                    </xsd:element>
                                </xsd:sequence>
                            </xsd:complexType>
                        </xsd:element>
                        <xsd:attribute name="Name" type="xsd:string" use="required">
                            <xsd:annotation>
                                <xsd:documentation>名称</xsd:documentation>
                            </xsd:annotation>
                        </xsd:attribute>
                        <xsd:attribute name="Note" type="xsd:string" use="optional">
                            <xsd:annotation>
                                <xsd:documentation>注記</xsd:documentation>
                            </xsd:annotation>
                        </xsd:attribute>
                    </xsd:complexType>
                </xsd:element>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>

```

```

    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
<xsd:element name="Alignments">
  <xsd:annotation>
    <xsd:documentation>道路中心線形セット</xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element name="Alignment" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation>道路中心線形</xsd:documentation>
        </xsd:annotation>
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="Horizontal">
              <xsd:annotation>
                <xsd:documentation>平面線形</xsd:documentation>
              </xsd:annotation>
              <xsd:complexType>
                <xsd:sequence>
                  <xsd:element name="StationEquation">
                    <xsd:annotation>
                      <xsd:documentation>測点定義</xsd:documentation>
                    </xsd:annotation>
                    <xsd:complexType>
                      <xsd:sequence>
                        <xsd:element name="Interval">
                          <xsd:annotation>
                            <xsd:documentation>測点間隔</xsd:documentation>
                          </xsd:annotation>
                          <xsd:complexType>
                            <xsd:attribute name="Main" type="xsd:double" use="required">
                              <xsd:annotation>
                                <xsd:documentation>主測点間隔</xsd:documentation>
                              </xsd:annotation>
                            </xsd:attribute>
                            <xsd:attribute name="Sub" type="xsd:double" use="optional">
                              <xsd:annotation>
                                <xsd:documentation>副測点間隔</xsd:documentation>
                              </xsd:annotation>
                            </xsd:attribute>
                          </xsd:complexType>
                        </xsd:element>
                      <xsd:element name="Brake" minOccurs="0" maxOccurs="unbounded">
                        <xsd:annotation>
                          <xsd:documentation>ブレーキ</xsd:documentation>
                        </xsd:annotation>
                        <xsd:complexType>
                          <xsd:attribute name="BeforeStationNO" type="xsd:integer" use="optional">
                            <xsd:annotation>
                              <xsd:documentation>ブレーキ前測点番号</xsd:documentation>
                            </xsd:annotation>
                          </xsd:attribute>
                          <xsd:attribute name="BeforeAddDist" type="xsd:double" use="optional">
                            <xsd:annotation>
                              <xsd:documentation>ブレーキ前測点追加距離</xsd:documentation>
                            </xsd:annotation>
                          </xsd:attribute>
                          <xsd:attribute name="CumulativeDist" type="xsd:double" use="required">
                            <xsd:annotation>
                              <xsd:documentation>累加距離標</xsd:documentation>
                            </xsd:annotation>
                          </xsd:attribute>
                          <xsd:attribute name="AfterStationNO" type="xsd:integer" use="required">
                            <xsd:annotation>
                              <xsd:documentation>ブレーキ後測点番号</xsd:documentation>
                            </xsd:annotation>
                          </xsd:attribute>
                          <xsd:attribute name="AfterAddDist" type="xsd:double" use="required">
                            <xsd:annotation>
                              <xsd:documentation>ブレーキ後測点追加距離</xsd:documentation>
                            </xsd:annotation>
                          </xsd:attribute>
                        </xsd:complexType>
                      </xsd:element>
                    </xsd:sequence>
                  </xsd:element>
                </xsd:sequence>
              </xsd:complexType>
            </xsd:element>
          </xsd:sequence>
        </xsd:complexType>
      </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>

```

```

        </xsd:annotation>
        </xsd:attribute>
        </xsd:complexType>
    </xsd:element>
</xsd:sequence>
</xsd:complexType>
</xsd:element>
<xsd:element name="ElementPnts">
    <xsd:annotation>
        <xsd:documentation>主要点リスト</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="ElementPnt" type="GmPntType" minOccurs="2"
maxOccurs="unbounded">
                <xsd:annotation>
                    <xsd:documentation>主要点</xsd:documentation>
                </xsd:annotation>
            </xsd:element>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="PIs" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation>IP 点リスト</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="PI" type="GmPntType" minOccurs="0"
maxOccurs="unbounded">
                <xsd:annotation>
                    <xsd:documentation>IP 点</xsd:documentation>
                </xsd:annotation>
            </xsd:element>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="IntermediatePnts" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation>中間点リスト</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="IntermediatePnt" minOccurs="2"
maxOccurs="unbounded">
                <xsd:annotation>
                    <xsd:documentation>中間点</xsd:documentation>
                </xsd:annotation>
            <xsd:complexType>
                <xsd:complexContent>
                    <xsd:extension base="GmPntType">
                        <xsd:attribute name="CumulativeDist" type="xsd:double"
use="required"/>
                        <xsd:attribute name="TangentDirectionAngle" type="xsd:string"
use="optional"/>
                    </xsd:extension>
                </xsd:complexContent>
            </xsd:complexType>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="GmElement" maxOccurs="unbounded"/>
<xsd:element name="Superelevation" minOccurs="0">
    <xsd:annotation>
        <xsd:documentation>片勾配摺り付け</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="CPVI" minOccurs="0" maxOccurs="unbounded">
                <xsd:annotation>
                    <xsd:documentation>横断勾配変移線</xsd:documentation>

```

```

</xsd:annotation>
<xsd:complexType>
  <xsd:sequence minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="SPVIPnt">
      <xsd:annotation>
        <xsd:documentation>片勾配変移点</xsd:documentation>
      </xsd:annotation>
      <xsd:complexType>
        <xsd:attribute name="StationNO" type="xsd:integer" use="required">
          <xsd:annotation>
            <xsd:documentation>測点番号</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="AddDist" type="xsd:double" use="required">
          <xsd:annotation>
            <xsd:documentation>追加距離</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="CumulativeDist" type="xsd:double"
use="required">
          <xsd:annotation>
            <xsd:documentation>累加距離標</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="Grade" type="xsd:double" use="required">
          <xsd:annotation>
            <xsd:documentation>横断勾配</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="VCL" type="xsd:double" use="optional">
          <xsd:annotation>
            <xsd:documentation>緩衝縦断曲線長</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="VCR" type="xsd:double" use="optional">
          <xsd:annotation>
            <xsd:documentation>緩衝縦断曲線半径</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
      </xsd:complexType>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="IsSide" type="IsSide" use="required">
    <xsd:annotation>
      <xsd:documentation>片勾配を示す位置</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="Name" type="xsd:string" use="required">
  <xsd:annotation>
    <xsd:documentation>名称</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="StartStationNO" type="xsd:integer" use="required">
  <xsd:annotation>
    <xsd:documentation>開始測点番号</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="StartAddDist" type="xsd:double" use="required">
  <xsd:annotation>
    <xsd:documentation>開始点追加距離</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="CumulativeDist" type="xsd:double" use="required">
  <xsd:annotation>
    <xsd:documentation>累加距離標</xsd:documentation>
  </xsd:annotation>

```

```

</xsd:attribute>
<xsd:attribute name="EndStationNO" type="xsd:integer" use="required">
  <xsd:annotation>
    <xsd:documentation>終了測点番号</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="EndAddDist" type="xsd:double" use="required">
  <xsd:annotation>
    <xsd:documentation>終了点追加距離</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="Length" type="xsd:double" use="required">
  <xsd:annotation>
    <xsd:documentation>総延長</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="Method" type="xsd:string" use="required">
  <xsd:annotation>
    <xsd:documentation>線形計算手法名</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="Note" type="xsd:string" use="optional">
  <xsd:annotation>
    <xsd:documentation>注記</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
</xsd:complexType>
<xsd:keyref name="RefPnt" refer="KeyPnt">
  <xsd:selector xpath="GmElement/*"/>
  <xsd:field xpath="@RefPnt"/>
</xsd:keyref>
<xsd:key name="KeyPnt">
  <xsd:annotation>
    <xsd:documentation>主要点名称の一意性チェック</xsd:documentation>
  </xsd:annotation>
  <xsd:selector xpath="ElementPnts/ElementPnt"/>
  <xsd:field xpath="@Name"/>
</xsd:key>
</xsd:element>
<xsd:element name="Vertical" maxOccurs="unbounded">
  <xsd:annotation>
    <xsd:documentation>縦断線形</xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element name="PVI" minOccurs="2" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation>縦断勾配変移線</xsd:documentation>
        </xsd:annotation>
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="PVIPnt">
              <xsd:annotation>
                <xsd:documentation>縦断勾配変移点</xsd:documentation>
              </xsd:annotation>
              <xsd:complexType>
                <xsd:attribute name="StationNO" type="xsd:integer" use="required">
                  <xsd:annotation>
                    <xsd:documentation>測点番号</xsd:documentation>
                  </xsd:annotation>
                </xsd:attribute>
                <xsd:attribute name="AddDist" type="xsd:double" use="required">
                  <xsd:annotation>
                    <xsd:documentation>追加距離</xsd:documentation>
                  </xsd:annotation>
                </xsd:attribute>
                <xsd:attribute name="CumulativeDist" type="xsd:double" use="required">
                  <xsd:annotation>
                    <xsd:documentation>累加距離標</xsd:documentation>
                  </xsd:annotation>
                </xsd:attribute>
                <xsd:attribute name="E" type="xsd:double" use="required">

```

```

        <xsd:annotation>
          <xsd:documentation>変移点高</xsd:documentation>
        </xsd:annotation>
      </xsd:attribute>
    <xsd:attribute name="VCL" type="xsd:double" use="optional">
      <xsd:annotation>
        <xsd:documentation>縦断曲線長</xsd:documentation>
      </xsd:annotation>
    </xsd:attribute>
    <xsd:attribute name="VCR" type="xsd:double" use="optional">
      <xsd:annotation>
        <xsd:documentation>縦断曲線半径</xsd:documentation>
      </xsd:annotation>
    </xsd:attribute>
  </xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="PVType" use="required">
  <xsd:annotation>
    <xsd:documentation>変移点が始点・中間点・終点の何れかであるか
  </xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:simpleType>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="始点"/>
    <xsd:enumeration value="中間点"/>
    <xsd:enumeration value="終点"/>
  </xsd:restriction>
</xsd:simpleType>
</xsd:attribute>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="Name" type="xsd:string" use="required">
  <xsd:annotation>
    <xsd:documentation>名称</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="RefHorizontalName" type="xsd:string" use="required">
  <xsd:annotation>
    <xsd:documentation>参照平面線形名</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="StartStationNO" type="xsd:integer" use="required">
  <xsd:annotation>
    <xsd:documentation>開始測点番号</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="StartAddDist" type="xsd:double" use="required">
  <xsd:annotation>
    <xsd:documentation>開始点追加距離</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="CumulativeDist" type="xsd:double" use="required">
  <xsd:annotation>
    <xsd:documentation>累加距離標</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="EndStationNO" type="xsd:integer" use="required">
  <xsd:annotation>
    <xsd:documentation>終了測点番号</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="EndAddDist" type="xsd:double" use="required">
  <xsd:annotation>
    <xsd:documentation>終了点追加距離</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="Length" type="xsd:double" use="optional">
  <xsd:annotation>
    <xsd:documentation>総延長</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>

```

```

        </xsd:attribute>
        <xsd:attribute name="Note" type="xsd:string" use="optional">
          <xsd:annotation>
            <xsd:documentation>注記</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
      </xsd:complexType>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="Name" type="xsd:string" use="required">
    <xsd:annotation>
      <xsd:documentation>名称</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
  <xsd:attribute name="RefCRS" type="xsd:string" use="required">
    <xsd:annotation>
      <xsd:documentation>参照座標系</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
  <xsd:attribute name="Note" type="xsd:string" use="optional">
    <xsd:annotation>
      <xsd:documentation>注記</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
</xsd:complexType>
<xsd:key name="HorizName">
  <xsd:annotation>
    <xsd:documentation>平面線形名称の一意性チェック</xsd:documentation>
  </xsd:annotation>
  <xsd:selector xpath="Horizontal"/>
  <xsd:field xpath="@Name"/>
</xsd:key>
<xsd:unique name="VertiName">
  <xsd:annotation>
    <xsd:documentation>純段線形名称の一意性チェック</xsd:documentation>
  </xsd:annotation>
  <xsd:selector xpath="Vertical"/>
  <xsd:field xpath="@Name"/>
</xsd:unique>
<xsd:keyref name="VHName" refer="HorizName">
  <xsd:annotation>
    <xsd:documentation>縦断線形に対応する平面線形の存在チェック</xsd:documentation>
  </xsd:annotation>
  <xsd:selector xpath="Vertical"/>
  <xsd:field xpath="@RefHorizontalAlignment"/>
</xsd:keyref>
</xsd:element>
</xsd:sequence>
</xsd:complexType>
</xsd:element>
<xsd:element name="ExVerticalSurfaceLines" minOccurs="0">
  <xsd:annotation>
    <xsd:documentation>縦断地盤線リスト</xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element name="ExVerticalSurfaceLine" maxOccurs="unbounded">
        <xsd:annotation>
          <xsd:documentation>縦断地盤線</xsd:documentation>
        </xsd:annotation>
        <xsd:complexType>
          <xsd:sequence>
            <xsd:element name="ExVerticalSurfaceLinePnt" minOccurs="2" maxOccurs="unbounded">
              <xsd:annotation>
                <xsd:documentation>縦断地盤線構成点</xsd:documentation>
              </xsd:annotation>
              <xsd:complexType>
                <xsd:attribute name="StationNO" type="xsd:integer" use="required">
                  <xsd:annotation>
                    <xsd:documentation>測点番号</xsd:documentation>
                  </xsd:annotation>
                </xsd:attribute>
              </xsd:complexType>
            </xsd:sequence>
          </xsd:complexType>
        </xsd:element>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
</xsd:sequence>

```

```

        <xsd:attribute name="AddDist" type="xsd:double" use="required">
          <xsd:annotation>
            <xsd:documentation>追加距離</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="CumulativeDist" type="xsd:double" use="required">
          <xsd:annotation>
            <xsd:documentation>累加距離標</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="E" type="xsd:double" use="required">
          <xsd:annotation>
            <xsd:documentation>標高</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
      </xsd:complexType>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="Name" type="xsd:string" use="optional">
    <xsd:annotation>
      <xsd:documentation>名稱</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
  <xsd:attribute name="RefHorizontalName" type="xsd:string" use="required">
    <xsd:annotation>
      <xsd:documentation>参照平面線形</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
  <xsd:attribute name="Note" type="xsd:string" use="optional">
    <xsd:annotation>
      <xsd:documentation>注記</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
</xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="RouteName" type="xsd:string" use="required">
  <xsd:annotation>
    <xsd:documentation>路線名</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="Classification" use="required">
  <xsd:annotation>
    <xsd:documentation>道路規格</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:simpleType>
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="第 1 種第 1 級"/>
    <xsd:enumeration value="第 1 種第 2 級"/>
    <xsd:enumeration value="第 1 種第 3 級"/>
    <xsd:enumeration value="第 1 種第 4 級"/>
    <xsd:enumeration value="第 2 種第 1 級"/>
    <xsd:enumeration value="第 2 種第 2 級"/>
    <xsd:enumeration value="第 3 種第 1 級"/>
    <xsd:enumeration value="第 3 種第 2 級"/>
    <xsd:enumeration value="第 3 種第 3 級"/>
    <xsd:enumeration value="第 3 種第 4 級"/>
    <xsd:enumeration value="第 3 種第 5 級"/>
    <xsd:enumeration value="第 4 種第 1 級"/>
    <xsd:enumeration value="第 4 種第 2 級"/>
    <xsd:enumeration value="第 4 種第 3 級"/>
    <xsd:enumeration value="第 4 種第 4 級"/>
  </xsd:restriction>
</xsd:simpleType>
</xsd:attribute>
<xsd:attribute name="DesignSpeed" use="required">
  <xsd:annotation>
    <xsd:documentation>設計速度</xsd:documentation>
  </xsd:annotation>

```

```

<xsd:simpleType>
  <xsd:restriction base="xsd:integer">
    <xsd:enumeration value="120"/>
    <xsd:enumeration value="100"/>
    <xsd:enumeration value="80"/>
    <xsd:enumeration value="60"/>
    <xsd:enumeration value="50"/>
    <xsd:enumeration value="40"/>
    <xsd:enumeration value="30"/>
    <xsd:enumeration value="20"/>
  </xsd:restriction>
</xsd:simpleType>
</xsd:attribute>
<xsd:attribute name="TrafficVolume" type="xsd:integer" use="optional">
  <xsd:annotation>
    <xsd:documentation>設計交通量</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
</xsd:complexType>
<xsd:key name="GmPnt">
  <xsd:selector xpath="GmPntGrp/GmPnts/GmPnt"/>
  <xsd:field xpath="@Name"/>
</xsd:key>
<xsd:keyref name="RefIPnt" refer="GmPnt">
  <xsd:selector xpath="Alignments/Alignment/Horizontal/PIs/PI"/>
  <xsd:field xpath="@RefIPnt"/>
</xsd:keyref>
<xsd:keyref name="RefSPnt" refer="GmPnt">
  <xsd:selector xpath="Alignments/Alignment/Horizontal/GmElement/*/"/>
  <xsd:field xpath="@RefSPnt"/>
</xsd:keyref>
<xsd:keyref name="RefEPnt" refer="GmPnt">
  <xsd:selector xpath="Alignments/Alignment/Horizontal/GmElement/*/"/>
  <xsd:field xpath="@RefEPnt"/>
</xsd:keyref>
<xsd:key name="KeyAlignName">
  <xsd:annotation>
    <xsd:documentation>線形名称の一意性チェック</xsd:documentation>
  </xsd:annotation>
  <xsd:selector xpath="Alignments/Alignment"/>
  <xsd:field xpath="@Name"/>
</xsd:key>
</xsd:element>
<xsd:simpleType name="IsSide">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="非分離左側線外側車道縁"/>
    <xsd:enumeration value="非分離右側線外側車道縁"/>
    <xsd:enumeration value="分離左側線線内側車道縁"/>
    <xsd:enumeration value="分離左側線線外側車道縁"/>
    <xsd:enumeration value="分離右側線内側車道縁"/>
    <xsd:enumeration value="分離右側線外側車道縁"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="Direction">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="cw"/>
    <xsd:enumeration value="ccw"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:attributeGroup name="PntAttrg">
  <xsd:attribute name="x" type="xsd:double" use="required">
    <xsd:annotation>
      <xsd:documentation>x 座標</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
  <xsd:attribute name="y" type="xsd:double" use="required">
    <xsd:annotation>
      <xsd:documentation>y 座標</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
  <xsd:attribute name="E" type="xsd:double" use="optional">
    <xsd:annotation>

```

```

    <xsd:documentation>標高</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
</xsd:attributeGroup>
<xsd:complexType name="GmCurveType">
  <xsd:annotation>
    <xsd:documentation>線タイプ</xsd:documentation>
  </xsd:annotation>
  <xsd:choice maxOccurs="unbounded">
    <xsd:element name="Line" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation>直線</xsd:documentation>
      </xsd:annotation>
      <xsd:complexType>
        <xsd:attribute name="Name" type="xsd:string" use="optional">
          <xsd:annotation>
            <xsd:documentation>名称</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="Length" type="xsd:double" use="optional">
          <xsd:annotation>
            <xsd:documentation>直線長</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="Curve" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation>円曲線</xsd:documentation>
      </xsd:annotation>
      <xsd:complexType>
        <xsd:attribute name="Name" type="xsd:string" use="optional">
          <xsd:annotation>
            <xsd:documentation>名称</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="Direction" type="Direction" use="required">
          <xsd:annotation>
            <xsd:documentation>進行方向に対する回転方向</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="Radius" type="xsd:double" use="required">
          <xsd:annotation>
            <xsd:documentation>円曲線半径</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="Length" type="xsd:double" use="optional">
          <xsd:annotation>
            <xsd:documentation>曲線長</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="Clothoid" minOccurs="0" maxOccurs="unbounded">
      <xsd:annotation>
        <xsd:documentation>クロソイド</xsd:documentation>
      </xsd:annotation>
      <xsd:complexType>
        <xsd:attribute name="Name" type="xsd:string" use="optional">
          <xsd:annotation>
            <xsd:documentation>名称</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="Direction" type="Direction" use="required">
          <xsd:annotation>
            <xsd:documentation>進行方向に対する回転方向</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
        <xsd:attribute name="StartRadius" type="xsd:double" use="required">
          <xsd:annotation>
            <xsd:documentation>開始半径：直線の場合は 0.0</xsd:documentation>
          </xsd:annotation>
        </xsd:attribute>
      </xsd:complexType>
    </xsd:element>
  </xsd:choice>

```

```

</xsd:attribute>
<xsd:attribute name="EndRadius" type="xsd:double" use="required">
  <xsd:annotation>
    <xsd:documentation>終了半径：直線の場合は 0.0</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="A" type="xsd:double" use="required">
  <xsd:annotation>
    <xsd:documentation>クロソイドパラメータ</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attribute name="Length" type="xsd:double" use="optional">
  <xsd:annotation>
    <xsd:documentation>緩和曲線長</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
</xsd:complexType>
</xsd:element>
</xsd:choice>
<xsd:attribute name="Name" type="xsd:string" use="required">
  <xsd:annotation>
    <xsd:documentation>名称</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
</xsd:complexType>
<xsd:complexType name="GmPntType">
  <xsd:annotation>
    <xsd:documentation>点タイプ</xsd:documentation>
  </xsd:annotation>
  <xsd:attribute name="Name" type="xsd:string" use="required">
    <xsd:annotation>
      <xsd:documentation>名称</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
  <xsd:attributeGroup ref="PntAttrg"/>
  <xsd:attribute name="Note" type="xsd:string" use="optional">
    <xsd:annotation>
      <xsd:documentation>注記</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
</xsd:complexType>
</xsd:schema>

```