

Annex A

(normative)

XML schema documentation

The following clauses contain discussion of the elements and attributes included in the XML schema.

In the clauses below, an element is referred to as a “sub-element” when it is included in another element, e.g., Election is a sub-element of ElectionReport. “Includes” is used to denote that an element contains another element as a sub-element, e.g., ElectionReport includes Election. “References” is used to denote one element linking to a second element via the second element’s ObjectId attribute, e.g., Candidate references Party.

A.1 Elements

A.1.1 BallotSelection and xsi:types BallotMeasureSelection, CandidateSelection, and PartySelection

Used for the ballot selections in a contest (e.g., for candidates, for ballot measures) and to generally link them to vote counts. Contest includes BallotSelection.

There are three types of ballot selections that get used according to the contest type:

- BallotMeasureSelection, used if the contest type is for a ballot measure, including for retentions (see Clause A.1.1.1)
- CandidateSelection, used if the contest type is for one or more candidates, to link the ballot selection to the candidate elements and endorsement parties (see Clause A.1.1.2).
- PartySelection, used if the contest type is for a party, e.g., for a straight party contest (see Clause A.1.1.3)

BallotSelection references these as xsi:types. Accordingly, the syntax for each of the types is:

```
<BallotSelection xsi:type="BallotMeasureSelection" ... />  
<BallotSelection xsi:type="CandidateSelection" ... />  
<BallotSelection xsi:type="PartySelection" ... />
```

BallotSelection includes VoteCounts for associating vote counts with the ballot selection. BallotSelection “wraps” occurrences of VoteCounts elements in a container element for the purpose of making large instance files easier to manipulate in XML viewers and editors.

Attributes:

Attribute	Required	Type	Description
objectId	yes	xsd:ID	Unique identifier for this XML object.

Table A.1— Attributes for BallotSelection

Elements:

Element	Multiplicity	Type	Description
VoteCounts	0 or 1	VoteCounts	For associating votes with the ballot selection.

Table A.2— Elements for BallotSelection

Definition:

```
<xsd:complexType name="BallotSelection" abstract="true">
  <xsd:sequence>
    <xsd:element name="VoteCountsCollection" minOccurs="0" maxOccurs="unbounded">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="VoteCounts" type="VoteCounts" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
</xsd:complexType>
```

A.1.1.1 BallotMeasureSelection (extension base BallotSelection)

For a ballot selection in a ballot measure contest, including for judicial retention contests. It is an xsi:type of BallotSelection and inherits BallotSelection’s attributes and elements. Its syntax is:

```
<BallotSelection xsi:type="BallotMeasureSelection" ... />
```

Attributes: (NOTE—see Table A.1— Attributes for BallotSelection)

Attribute	Required	Type	Description
selection	yes	xsd:string	For the string used to vote for or against the ballot measure, e.g., "yes", "no".

Table A.3—Attributes for BallotMeasureSelection

Elements: none. (NOTE—see Table A.2— Elements for BallotSelection)

Definition:

```
<xsd:complexType name="BallotMeasureSelection">
  <xsd:complexContent>
    <xsd:extension base="BallotSelection">
      <xsd:attribute name="selection" type="xsd:string" use="required"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

A.1.1.2 CandidateSelection (extension base BallotSelection)

For the ballot selections in a candidate contest, including for write-ins. It is an xsi:type of BallotSelection and inherits BallotSelection’s attributes and elements. References to multiple Candidate elements can be included when the contest involves a ticket, e.g., the Presidential ticket. Its syntax is:

```
<CandidateSelection xsi:type="BallotSelection" ... />
```

EndorsementPartyId is used to reference any associated endorsement parties other than the specific party of the candidate (Candidate references Party for that purpose). For example, if a Republican candidate is also endorsed by the Libertarian party, use EndorsementPartyId to reference the Libertarian party.

When multiple candidates are referenced for a ticket and the ordering of the candidates is important to preserve, it is expected that the generating application will list the occurrences of CandidateId according to the ordering scheme in place.

Attributes: (NOTE—see Table A.1— Attributes for BallotSelection)

Attribute	Required	Type	Description
IsWriteIn	no	xsd:boolean	Indicates whether the candidate is a write-in, e.g., “yes” or “no”. Assumed to be “no” if not present.

Table A.4— Attributes for CandidateSelection

Elements: (NOTE—see Table A.2— Elements for BallotSelection)

Element	Multiplicity	Type	Description
CandidateId	0 or more	xsd:IDREF	Unique identifier for a Candidate element. For associating a candidate with the candidate selection on the ballot. The multiplicity is unlimited for cases where the ballot selection is for multiple candidates, e.g., a ticket.
EndorsementPartyId	0 or more	xsd:IDREF	Unique identifier for a Party element. For associating one or more endorsing parties with the candidate selection.

Table A.5— Elements for CandidateSelection

Definition:

```
<xsd:complexType name="CandidateSelection">
  <xsd:complexContent>
    <xsd:extension base="BallotSelection">
      <xsd:sequence>
        <xsd:element name="CandidateId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="EndorsementPartyId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
      <xsd:attribute name="IsWriteIn" type="xsd:boolean"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

A.1.1.3 PartySelection (extension base BallotSelection)

For a ballot selection involving a party such as for a straight party selection on the ballot. It is an xsi:type of BallotSelection and inherits BallotSelection’s attributes and elements. Its syntax is:

```
<BallotSelection xsi:type="PartySelection" ... />
```

Attributes: none. (NOTE—see Table A.1— Attributes for BallotSelection)

Elements: (NOTE—see Table A.2— Elements for BallotSelection)

Element	Multiplicity	Type	Description
PartyId	0 or more	xsd:IDREF	Unique identifier for a Party element. For associating one or more parties with the party selection.

Table A.6— Elements for CandidateSelection

Definition:

```
<xsd:complexType name="PartySelection">
  <xsd:complexContent>
    <xsd:extension base="BallotSelection">
      <xsd:sequence>
        <xsd:element name="PartyId" type="xsd:IDREF" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

A.1.2 BallotStyle and OrderedContest

For defining a ballot style composed of contests and their ballot selections, and associating it with a GpUnit element defined for a precinct or other geo-political unit that the ballot is unique to. Election includes BallotStyle.

To preserve any rotation associated with the ballot, it is expected that the generating application will list the occurrences of OrderedContest and OrderedBallotSelectionId in the order as on the ballot for the associated geo-political unit.

Attributes for BallotStyle:

Attribute	Required	Type	Description
objectId	yes	xsd:ID	Unique identifier for this XML object.
Id	no	xsd:string	ID for use as needed, e.g., for a mandated ID scheme.

Table A.7— Attributes for BallotStyle

Elements for BallotStyle:

Element	Multiplicity	Type	Description
GpUnitId	1	xsd:IDREF	Unique identifier for a GpUnit element. For associating a specific geo-political unit with the ballot style.
ImageUri	0 or more	xsd:anyURI	URI for a ballot image.
OrderedContest	0 or more	OrderedContest	For associating contests in the order as listed on ballot.
PartyId	0 or more	xsd:IDREF	Unique identifier for a Party element. For associating a party with the ballot style.

Table A.8— Elements for BallotStyle

Definition for BallotStyle:

```
<xsd:complexType name="BallotStyle">
  <xsd:sequence>
    <xsd:element name="ImageUri" type="xsd:anyURI" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="OrderedContest" type="OrderedContest" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="PartyId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="GpUnitId" type="xsd:IDREF" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="Id" type="xsd:string"/>
</xsd:complexType>
```

Attributes for OrderedContest:

Attribute	Required	Type	Description
objectId	yes	xsd:ID	Unique identifier for this XML object.

Table A.9— Attributes for OrderedContest

Elements for OrderedContest:

Element	Multiplicity	Type	Description
OrderedBallotSelectionId	0 or more	xsd:IDREF	Unique identifier for a BallotSelection element. For associating ballot selections with the contest.
ContestId	1	xsd:IDREF	Unique identifier for a Contest element. For associating a contest on the ballot.

Table A.10— Elements for OrderedContest

Definition for OrderedContest:

```
<xsd:complexType name="OrderedContest">
  <xsd:sequence>
    <xsd:element name="ContestId" type="xsd:IDREF"/>
    <xsd:element name="OrderedBallotSelectionId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

A.1.3 Candidate

For defining information about a candidate in a contest. CandidateSelection references occurrences of Candidate to associate one or more candidates with a ballot selection. Election includes Candidate.

When including Code, if the code type is not listed in enumeration CodeType, use “Other” and include the code type (that is not listed in the enumeration) in OtherType.

Attributes:

Attribute	Required	Type	Description
objectId	yes	xsd:ID	Unique identifier for this XML object.
fileDate	no	xsd:dateTime	Date and time when the candidate filed for the contest.
id	no	xsd:string	ID for use as needed, e.g., for a mandated ID scheme.
isIncumbent	no	xsd:boolean	Boolean to indicate whether the candidate is the incumbent for the office associated with the contest. Assumed to be “no” if not present.
isTopTicket	no	xsd:boolean	Boolean to indicate whether the candidate is the top of a ticket that includes multiple candidates. Assumed to be “no” if not present.
postElectionStatus	no	CandidatePostElectionStatus	Final status of the candidate, e.g., winner, withdrawn, etc.
preElectionStatus	no	CandidatePreElectionStatus	Registration status of the candidate, e.g., filed, qualified, etc.
sequenceOrder	no	xsd:integer	For an order in which the candidate can be listed on the ballot or in results. If not present, no order is assumed.

Table A.11— Attributes for Candidate

Elements:

Element	Multiplicity	Type	Description
BallotName	1	InternationalizedText	For the candidate's name as listed on the ballot.
Code	0 or more	Code	For associating codes with the contest.
Party	0 or 1	xsd:IDREF	Unique identifier for a Party element. For associating a party with the candidate.
Person	0 or 1	xsd:IDREF	Unique identifier for a Person element. For associating more detailed information about the candidate.

Table A.12— Elements for Candidate

Definition:

```

<xsd:complexType name="Candidate">
  <xsd:sequence>
    <xsd:element name="BallotName" type="InternationalizedText"/>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="PartyId" type="xsd:IDREF" minOccurs="0"/>
    <xsd:element name="PersonId" type="xsd:IDREF" minOccurs="0"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
  <xsd:attribute name="FileDate" type="xsd:dateTime"/>
  <xsd:attribute name="Id" type="xsd:string"/>
  <xsd:attribute name="IsIncumbent" type="xsd:boolean"/>
  <xsd:attribute name="IsTopTicket" type="xsd:boolean"/>
  <xsd:attribute name="PostElectionStatus" type="CandidatePostElectionStatusesType"/>
  <xsd:attribute name="PreElectionStatus" type="CandidatePreElectionStatusesType"/>
  <xsd:attribute name="SequenceOrder" type="xsd:integer"/>
</xsd:complexType>

```

A.1.4 Code

For associating a jurisdiction’s codes, i.e., identifiers, with objects such as candidates, offices, or geo-political units such as counties, towns, precincts, etc. Multiple occurrences of Code can be used to associate multiple codes, e.g., if there is a desire to associate multiple codes with a particular object (FIPS as well as OCD-IDs), as follows:

```

<GpUnit xsi:type="State" Name="WV" ... >
  <Code Type="Fips" Value="54"/>
  <Code Type="ocdId" Value="ocd-division/country:us/state:wv"/>
  ...
</GpUnit>

```

For elements that include Code, if the code type is not listed in enumeration CodeType, use “Other” and include the code type (that is not listed in the enumeration) in OtherType, e.g.,

```

<Code Type="Other" Value="101-A" OtherType="Ohio County Precincts">

```

Attributes:

Attribute	Required	Type	Description
OtherType	no	xsd:string	Used when CodeType is “Other”.
Value	yes	xsd:string	Code used by the jurisdiction.
Type	yes	CodeType	A code type, e.g., FIPS.

Table A.13— Attributes for Code

Elements: none.

Definition:

```

<xsd:complexType name="Code">
  <xsd:attribute name="OtherType" type="xsd:string"/>
  <xsd:attribute name="Type" type="Codes" use="required"/>
  <xsd:attribute name="Value" type="xsd:string" use="required"/>
</xsd:complexType>

```

A.1.5 ContactInformation

For defining contact information about objects such as persons, boards of authorities, organizations, etc. Person, GpUnit, and Office include ContactInformation.

Multiple occurrences of AddressLine are used to build an address of the contact. It is expected that the generating application will list the name of the person/organization in the first occurrence of AddressLine, with subsequent ordered occurrences for street address, city, state, zip code, etc.

Attributes: none.

Elements:

Attribute	Multiplicity	Type	Description
AddressLine	0 or more	xsd:string	For associating an address with the contact.
Email	0 or more	xsd:string	Email address associated with the contact.
Fax	0 or more	xsd:string	Fax number associated with the contact.
Name	0 or 1	xsd:string	Name associated with the contact.
Phone	0 or more	xsd:string	Phone number associated with the contact.
Schedule	0 or more	Schedule	For associating a schedule with the contact.
Uri	0 or more	xsd:anyURI	URI associated with the contact.

Table A.14— Elements for ContactInformation

Definition:

```
<xsd:complexType name="ContactInformation">
  <xsd:sequence>
    <xsd:element name="Name" type="xsd:string" minOccurs="0"/>
    <xsd:element name="AddressLine" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Email" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Fax" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Phone" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Schedule" type="Schedule" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Uri" type="xsd:anyURI" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
```

A.1.6 Contest and xsi:types BallotMeasureContest, CandidateContest, PartyContest, and RetentionContest

For defining a contest and, ultimately, linking the contest to the associated candidates or ballot measures. Election includes Contest. There are four types of contests defined:

- BallotMeasureContest, used for a contest involving a ballot measure or judicial retention (see Clause A.1.6.1)
- CandidateContest, used for a contest involving one or more candidates for an office (see Clause A.1.6.2)
- PartyContest, used for a contest for a straight party selection on the ballot (see Clause A.1.6.3)
- RetentionContest, used for a judicial or other type of retention contest (see Clause A.1.6.4)

Contest references these as xsi:types. Accordingly, the syntax for each of the types is:

```
<Contest xsi:type="BallotMeasureContest" ... />
<Contest xsi:type="CandidateContest" ... />
<Contest xsi:type="PartyContest" ... />
<Contest xsi:type="RetentionContest" ... />
```

The elements above are used to include relevant information for that type of contest, e.g., CandidateContest is used to include information such as the associated office and the number of candidates that can be voted for.

Contest includes a required JurisdictionalScopeId reference to a GpUnit defined for the geographical scope of the contest. For example, in a state senate contest, JurisdictionalScopeId would reference a GpUnit

ReportingUnit element defined for the district associated with the contest (Office also includes an optional reference that serves the same purpose).

Contest also includes SummaryCounts for providing a summary of miscellaneous counts associated with the contest, including total number of ballots cast containing the contest, total number of overvotes, undervotes, or write-ins. The summary counts can be associated with the contest as a whole, or with precincts or other lower-level reporting units by using multiple occurrences of GpUnitId.

When including Code, if the code type is not listed in enumeration CodeType, use “Other” and include the code type (that is not listed in the enumeration) in OtherType.

Attributes:

Attribute	Required	Type	Description
ObjectId	yes	xsd:ID	Unique identifier for this XML object.
Abbreviation	no	xsd:string	Abbreviation for the contest.
HasRotation	no	xsd:boolean	Boolean to indicate whether the selections in the contest are rotated. Assumed to be “no” if not present.
Name	yes	xsd:string	Name of the contest, not necessarily as it appears on the ballot (use BallotTitle for this).
OtherVoteVariationType	no	xsd:string	For use when VoteVariationType is “Other”.
SequenceOrder	no	xsd:integer	Order in which the candidates are listed on the ballot. If not present, no order is assumed.
SubUnitsReported	no	xsd:integer	Number of subunits, e.g., precincts, that have completed reporting votes for this contest.
TotalSubUnits	no	xsd:integer	Total number of subunits, e.g., precincts, that have this contest on the ballot.
VoteVariationType	no	voteVariationType	Vote variation associated with the contest, e.g., N-of-M.

Table A.15— Attributes for Contest

Elements:

Element	Multiplicity	Type	Description
BallotSelection	0 or 1	BallotSelection	For associating a ballot selection for the contest, i.e., a candidate, a ballot measure.
BallotSubTitle	0 or 1	InternationalizedText	Subtitle of the contest as it appears on the ballot.
BallotTitle	0 or 1	InternationalizedText	Title of the contest as it appears on the ballot.
Code	0 or more	Code	For associating a code with the contest.
JurisdictionalScopeId	1 or more	xsd:IDREF	Unique identifier for a GpUnit element. For associating the contest with a reporting unit that represents the geographical scope of the contest, e.g., a district, etc.
SummaryCounts	0 or more	SummaryCounts	Vote summary counts (overvotes, undervotes, total ballots, etc.) optionally broken down by device type and ballot class, optionally broken down by lower-level reporting units such as precincts.

Table A.16— Elements for Contest

Definition:


```

<xsd:complexType name="Contest" abstract="true">
  <xsd:sequence>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="BallotTitle" type="InternationalizedText" minOccurs="0"/>
    <xsd:element name="BallotSubTitle" type="InternationalizedText" minOccurs="0"/>
    <xsd:element name="BallotSelection" type="BallotSelection" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="JurisdictionalScopeId" type="xsd:IDREF"/>
    <xsd:element name="SummaryCounts" type="SummaryCounts" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
  <xsd:attribute name="Abbreviation" type="xsd:string"/>
  <xsd:attribute name="HasRotation" type="xsd:boolean"/>
  <xsd:attribute name="Name" type="xsd:string" use="required"/>
  <xsd:attribute name="OtherVoteVariationType" type="xsd:string"/>
  <xsd:attribute name="SequenceOrder" type="xsd:integer"/>
  <xsd:attribute name="SubUnitsReported" type="xsd:integer"/>
  <xsd:attribute name="TotalSubUnits" type="xsd:integer"/>
  <xsd:attribute name="VoteVariationType" type="VoteVariationType"/>
</xsd:complexType>

```

A.1.6.1 BallotMeasureContest (extension base Contest)

For ballot measure (i.e., referenda or a tax measure) and judicial retention contests. It is an xsi:type of Contest and inherits Contest’s attributes and elements. Its syntax is:

```
<Contest xsi:type="BallotMeasureContest" ... />
```

Attributes: (NOTE—see Table A.15— Attributes for Contest)

Attribute	Required	Type	Description
Type	yes	BallotMeasureType	For indicating the type of ballot measure.
otherType	no	xsd:string	Used when BallotMeasureType is “Other”.

Table A.17—Attributes for BallotMeasureContest

Elements: (NOTE—see Table A.16— Elements for Contest)

Element	Multiplicity	Type	Description
ConStatement	0 or 1	InternationalizedText	For a statement on the ballot associated with a “no” vote.
EffectOfAbstain	0 or 1	InternationalizedText	For a statement on the ballot detailing the effect of abstaining from voting on the ballot measure.
FullText	0 or 1	InternationalizedText	For full text on the ballot of the ballot measure.
PassageThreshold	0 or 1	InternationalizedText	For a statement on the ballot of the number or percentage of votes needed to approve or pass the ballot measure.
ProStatement	0 or 1	InternationalizedText	For a statement on the ballot associated with a “yes” vote.
SummaryText	0 or 1	InternationalizedText	For a summary on the ballot of the ballot measure.

Table A.18—Elements for BallotMeasureContest

Definition:

```

<xsd:complexType name="BallotMeasureContest">
  <xsd:complexContent>
    <xsd:extension base="Contest">
      <xsd:sequence>
        <xsd:element name="SummaryText" type="InternationalizedText" minOccurs="0"/>
        <xsd:element name="FullText" type="InternationalizedText" minOccurs="0"/>
        <xsd:element name="ProStatement" type="InternationalizedText" minOccurs="0"/>
        <xsd:element name="ConStatement" type="InternationalizedText" minOccurs="0"/>
        <xsd:element name="EffectOfAbstain" type="InternationalizedText" minOccurs="0"/>
        <xsd:element name="PassageThreshold" type="InternationalizedText" minOccurs="0"/>
      </xsd:sequence>
      <xsd:attribute name="OtherType" type="xsd:string"/>
      <xsd:attribute name="Type" type="BallotMeasureType" use="required"/>
    </xsd:extension>
  </complexContent>
</xsd:complexType>

```

```
</xsd:complexContent>
</xsd:complexType>
```

A.1.6.2 CandidateContest (extension base Contest)

For a contest that involves selecting one or more candidates. It is an xsi:type of Contest and inherits Contest's attributes and elements. Its syntax is:

```
<Contest xsi:type="CandidateContest" ... />
```

CandidateContest references Office. For cases when the contest is associated with multiple offices, e.g., Governor and Lt. Governor, and the order of the offices is important to preserve, it is expected that the generating application will list the references to Office according to the ordering scheme in place.

Attributes: (NOTE—see Table A.15— Attributes for Contest)

Attribute	Required	Type	Description
NumberElected	yes	xsd:integer	Number of candidates that are elected in the contest ("N" of N-of-M).
VotesAllowed	yes	xsd:integer	Maximum number of votes/write-ins per voter in this contest.

Table A.19— Attributes for CandidateContest

Elements: (NOTE—see Table A.16— Elements for Contest)

Element	Multiplicity	Type	Description
officeId	0 or 1	xsd:IDREF	Unique identifier for an Office element. For associating an office description with the contest.
PrimaryPartyId	0 or 1	xsd:IDREF	Unique identifier for a Party element. For associating a party with the contest.

Table A.20— Elements for CandidateContest

Definition:

```
<xsd:complexType name="CandidateContest">
  <xsd:complexContent>
    <xsd:extension base="Contest">
      <xsd:sequence>
        <xsd:element name="OfficeId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="PrimaryPartyId" type="xsd:IDREF" minOccurs="0"/>
      </xsd:sequence>
      <xsd:attribute name="NumberElected" type="xsd:integer"/>
      <xsd:attribute name="VotesAllowed" type="xsd:integer" use="required"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

A.1.6.3 PartyContest (extension base Contest)

For a contest that involves choosing a party, typically for a straight party selection on the ballot. It is an xsi:type of Contest. Its syntax is:

```
<Contest xsi:type="PartyContest" ... />
```

Attributes: none. (NOTE—see Table A.15— Attributes for Contest)

Elements: none. (NOTE—see Table A.16— Elements for Contest)

Definition:

```
<xsd:complexType name="PartyContest">
  <xsd:complexContent>
```

```

    <xsd:extension base="Contest"/>
  </xsd:complexContent>
</xsd:complexType>

```

A.1.6.4 RetentionContest (extension base BallotMeasureContest and Contest)

For a contest for judicial retention or other types of retention in which additional information about the candidate or the office is necessary. Retention contests are treated essentially as ballot measure contests, however RetentionContest differs from BallotMeasureContest in that it can include a reference to a candidate or the associated office (if no such references are required, BallotMeasureContest can possibly be used).

RetentionContest is an xsi:type of Contest and also uses BallotMeasureContest as an extension base. Thus, it inherits attributes and elements from both Contest and BallotMeasureContest. Its syntax is:

```
<Contest xsi:type="RetentionContest" ... />
```

Attributes: none. (NOTE—see Table A.15— Attributes for Contest)

Elements: (NOTE—see Table A.16— Elements for Contest)

Element	Multiplicity	Type	Description
CandidateId	1	xsd:IDREF	Unique identifier for a Candidate element. For associating a candidate with the retention contest.
officeId	0 or 1	xsd:IDREF	Unique identifier for an Office element. For associating an office description with the retention contest.

Table A.21— Elements for RetentionContest

Definition:

```

<xsd:complexType name="RetentionContest">
  <xsd:complexContent>
    <xsd:extension base="BallotMeasureContest">
      <xsd:sequence>
        <xsd:element name="CandidateId" type="xsd:IDREF"/>
        <xsd:element name="OfficeId" type="xsd:IDREF" minOccurs="0"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

```

A.1.7 CountStatus

For reporting on the counting status of various types of ballots or other items, i.e, whether counts are in progress, not yet started, complete, etc. Election and GpUnit include CountStatus.

Attributes:

Attribute	Required	Type	Description
otherType	no	xsd:string	Used when CodeType is "Other".
Status	yes	ReportingStatus	Code used by the jurisdiction.
Type	yes	CountItemType	A code type, e.g., FIPS.

Table A.22—Attributes for CountStatus

Elements: none.

Definition:

```
<xsd:complexType name="CountStatus">
```

```

<xsd:attribute name="OtherType" type="xsd:string"/>
<xsd:attribute name="Status" type="ReportingStatus" use="required"/>
<xsd:attribute name="Type" type="CountItemType" use="required"/>
</xsd:complexType>

```

A.1.8 Counts (abstract)

Counts is used only as an extension base for the following elements and is otherwise not referenced directly:

- SummaryCounts, for reporting on contest and geo-political unit summary vote counts (see Clause A.1.20)
- VoteCounts, for reporting on contest vote counts (see Clause A.1.21)

These elements inherit the attributes and elements of Counts. Counts provides the capability to filter vote counts by device characteristics or by various types of ballots or write-ins, or to link the counts to a GpUnit such as a precinct.

Attributes:

Attribute	Required	Type	Description
otherType	no	xsd:string	Used when Type is “Other”.
Type	no	CountItemType	The type of count being used as a filter on the vote counts, e.g., election day, early voting, etc.

Table A.23— Attributes for Counts

Elements:

Element	Multiplicity	Type	Description
Device	0 or 1	Device	For filtering the vote counts by device type.
Gpunit	0 or 1	xsd:IDREF	Unique identifier for a GpUnit element. For associating counts with a geo-political unit, e.g., a precinct, a county, a township, etc.

Table A.24— Elements for Counts

Definition:

```

<xsd:complexType name="Counts" abstract="true">
  <xsd:sequence>
    <xsd:element name="Device" type="Device" minOccurs="0"/>
    <xsd:element name="GpUnitId" type="xsd:IDREF" minOccurs="0"/>
  </xsd:sequence>
  <xsd:attribute name="OtherType" type="xsd:string"/>
  <xsd:attribute name="Type" type="CountItemType"/>
</xsd:complexType>

```

A.1.9 Device

For filtering vote counts by various attributes associated with devices. GpUnit and SummaryCounts/VoteCounts include Device.

If manual counting of ballots is being employed, use DeviceType enumeration value “ManualCount”.

Attributes:

Attribute	Required	Type	Description
Manufacturer	no	xsd:string	Manufacturer of the device.
Model	no	xsd:string	Manufacturer's device model, used to filter on, e.g., a specific model of DRE or other device type.
Type	yes	DeviceType	Enumerated type of device, e.g., DRE, opscan-precinct, etc.

Table A.25— Attributes for Device

Elements: none.

Definition:

```
<xsd:complexType name="Device">
  <xsd:attribute name="Manufacturer" type="xsd:string"/>
  <xsd:attribute name="Model" type="xsd:string"/>
  <xsd:attribute name="Type" type="DeviceType"/>
</xsd:complexType>
```

A.1.10 Election

For defining the status of the election and associated information such as candidates, contests, and vote counts.

Election includes the major elements that are specific to an election: BallotStyle, Candidate, and Contest. Election “wraps” occurrences of these elements in container elements for the purpose of making large instance files easier to manipulate in XML viewers and editors.

Election includes a required ElectionScopeId reference to a GpUnit for the purpose of identifying the geographical scope of the election. For example, for an election within a county, ElectionScopeId would include a reference to a GpUnit ReportingUnit defined for the county.

Attributes:

Attribute	Required	Type	Description
Date	yes	xsd:date	Calendar date of the election, e.g., "November 4, 2014".
EndDate	no	xsd:date	For an election that spans a period of days.
Type	yes	ElectionType	Enumerated type of election, e.g., partisan primary, open primary, etc.

Table A.26— Attributes for Election

Elements:

Element	Multiplicity	Type	Description
BallotStyle	0 or more	BallotStyle	For defining ballot styles associated with the election.
Candidate	0 or more	Candidate	For defining candidates associated with the election.
Code	0 or more	Code	For associating a code with the election.
ContactInformation	0 or more	ContactInformation	For associating various contact information with the election.
Contest	0 or more	Contest	For defining contests associated with the election.
CountStatus	0 or more	CountStatus	For providing various counting status on types of ballots or other items.
ElectionScopeId	1	xsd:IDREF	Unique identifier for a GpUnit element. For associating the election with a reporting unit that represents the geographical scope of the election, e.g., a state, a county, etc.
Name	1	InternationalizedText	The name of the election, can be used as the name of the election on the ballot.

Table A.27— Elements for Election

Definition:

```

<xsd:complexType name="Election">
  <xsd:sequence>
    <xsd:element name="Name" type="InternationalizedText"/>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="ContactInformation" type="ContactInformation" minOccurs="0"/>
    <xsd:element name="ElectionScopeId" type="xsd:IDREF"/>
    <xsd:element name="CountStatus" type="CountStatus" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="BallotStyleCollection" minOccurs="0">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="BallotStyle" type="BallotStyle" minOccurs="1"maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="CandidateCollection" minOccurs="0">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="Candidate" type="Candidate" minOccurs="1" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="ContestCollection" minOccurs="0">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="Contest" type="Contest" minOccurs="1" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="Date" type="xsd:date" use="required"/>
  <xsd:attribute name="EndDate" type="xsd:date"/>
  <xsd:attribute name="Type" type="ElectionType" use="required"/>
</xsd:complexType>

```

A.1.11 ElectionReport

The root element; for defining items pertaining to the status and format of the report and when it was generated. The optional Signature element is used for an XML digital signature, which is described in the normative reference in Clause 2. Signature must be the last element of ElectionReport.

ElectionReport includes the major elements that are not necessarily specific to an election and therefore can exist in a pre-election report: GpUnit, Party, Person, and Election. Like Election, ElectionReport “wraps” occurrences of the elements, excepting Election, in container elements for the purpose of making the instance files easier to manipulate in XML viewers and editors.

When a particular ordering of political parties is important to preserve, it is expected that the generating application will define the Party elements according to the ordering scheme in place.

Attributes:

Attribute	Required	Type	Description
GeneratedDate	yes	xsd:dateTime	Identifies the date and time that the election report was generated.
Format	yes	ReportDetailLevel	Detail level of the report, e.g., contest summary, precinct level results, etc.
IsTest	no	xsd:boolean	Used to indicate whether the report is a test report. Assumed to be “no” if not present.
Issuer	yes	xsd:string	Identification of the report issuer.
IssuerAbbreviation	yes	xsd:string	An abbreviation of the report issuer such as the 2-character U.S. Census Bureau abbreviation of the state whose results are being reported, e.g., AL, TX, MN, etc.
Sequence	yes	xsd:integer	If this report is part of a sequence of files, its number in the sequence. Otherwise 0.
SequenceEnd	yes	xsd:integer	Indicates the upper bound of the sequence.
Status	yes	ResultsStatus	Status of the election report, e.g., test mode, unofficial, etc.
TestType	no	xsd:string	A description of the type of test, e.g., pre-election, logic and accuracy, etc.
VendorApplicationID	yes	xsd:string	An identifier of the vendor application generating the election report, e.g., X-EMS version 3.1.a.

Table A.28— Attributes for ElectionReport

Elements:

Element	Multiplicity	Type	Description
Code	0 or more	Code	For associating a code with the report.
Election	0 or more	Election	For associating elections with the report.
GpUnit	0 or more	GpUnit	For associating geo-political units with the report.
Notes	0 or 1	xsd:string	For including an arbitrary message with the report.
Office	0 or more	Office	For associating offices with the report.
OfficeGroup	0 or more	OfficeGroup	For associating a name for a grouping of offices with the report.
Party	0 or more	Party	For associating parties with the report.
Person	0 or more	Person	For associating persons with the report.
Signature	0 or 1	Signature	Reference to the Signature element of the W3C digital signature schema imported into this schema.

Table A.29— Elements for ElectionReport

Definition:

```

<xsd:complexType name="ElectionReport">
  <xsd:sequence>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Notes" type="xsd:string" minOccurs="0"/>
    <xsd:element name="GpUnitCollection" minOccurs="0">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="GpUnit" type="GpUnit" minOccurs="1" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="PartyCollection" minOccurs="0">
      <xsd:complexType>
        <xsd:sequence>

```

```

        <xsd:element name="Party" type="Party" minOccurs="1" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="PersonCollection" minOccurs="0">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element name="Person" type="Person" minOccurs="1" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="OfficeCollection" minOccurs="0">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element name="Office" type="Office" minOccurs="1" maxOccurs="unbounded"/>
        <xsd:element name="OfficeGroup" type="OfficeGroup" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="Election" type="Election" minOccurs="0"/>
  <xsd:element ref="ds:Signature" minOccurs="0"/>
</xsd:sequence>
<xsd:attribute name="Format" type="ReportDetailLevel" use="required"/>
<xsd:attribute name="GeneratedDate" type="xsd:dateTime" use="required"/>
<xsd:attribute name="IsTest" type="xsd:boolean"/>
<xsd:attribute name="Issuer" type="xsd:string" use="required"/>
<xsd:attribute name="IssuerAbbreviation" type="xsd:string" use="required"/>
<xsd:attribute name="Sequence" type="xsd:integer" use="required"/>
<xsd:attribute name="SequenceEnd" type="xsd:integer" use="required"/>
<xsd:attribute name="Status" type="ResultsStatus" use="required"/>
<xsd:attribute name="TestType" type="xsd:string"/>
<xsd:attribute name="VendorApplicationId" type="xsd:string" use="required"/>
</xsd:complexType>

```

A.1.12 GpUnit and xsi:types ReportingDevice and ReportingUnit

For defining geo-political units such as cities, districts, jurisdictions, precincts or split precincts, for the purpose of associating contests, offices, vote counts, and other information with the geographies. ElectionReport includes GpUnit.

There are 2 types of GpUnits:

- ReportingDevice, for associating vote counts with a specific vote-capture device (see Clause A.1.12.1)
- ReportingUnit, for associating vote counts with geo-political units such as cities, districts, counties, precincts, etc. (see Clause A.1.12.2)

GpUnit references these as xsi:types. Accordingly, the syntax for each of the types is:

```

<GpUnit xsi:type="ReportingDevice" ... />
<GpUnit xsi:type="ReportingUnit" ... />

```

Election and Contest contain a required reference to a GpUnit defined as the jurisdiction of the election, or contest respectively; Office contains a similar reference that is optional.

SummaryCounts and VoteCounts reference GpUnit to link vote or summary counts to GpUnits defined for, e.g., precincts or other types of geo-political units. GpUnit includes SummaryCounts so as to provide summary counts for the corresponding geo-political unit (again, likely a precinct or lower-level geography).

BallotStyle references GpUnit to link a ballot style to its corresponding geo-political unit (again, likely a precinct).

When including Code, if the code type is not listed in enumeration CodeType, use “Other” and include the code type (that is not listed in the enumeration) in OtherType.

Attributes:

Attribute	Required	Type	Description
objectId	yes	xsd:ID	Unique identifier for this XML object.
Name	no	xsd:string	Name of the geo-political unit.

Table A.30— Attributes for GpUnit

Elements:

Element	Multiplicity	Type	Description
Code	0 or more	Code	For associating a code with the GpUnit, e.g., a district’s or county’s code
ComposingGpUnitId	0 or more	xsd:IDREF	Unique identifier for a GpUnit element. For creating a reference within a GpUnit to another GpUnit that composes the GpUnit or that is contained with the GpUnit.
SummaryCounts	0 or more	SummaryCounts	Ballot summary counts (overvotes, undervotes, total ballots, etc.) optionally broken down by device type and ballot class.

Table A.31— Elements for GpUnit

Definition:

```
<xsd:complexType name="GpUnit" abstract="true">
  <xsd:sequence>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="ComposingGpUnitId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="SummaryCounts" type="SummaryCounts" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
  <xsd:attribute name="Name" type="xsd:string"/>
</xsd:complexType>
```

A.1.12.1 ReportingDevice (extension base GpUnit)

For reporting counts associated with a specific vote-capture device. It is an xsi:type of GpUnit and inherits GpUnit’s attributes and elements (see Clause A.1.12). Its syntax is:

```
<GpUnit xsi:type="ReportingDevice" ... />
```

ReportingDevice identifies a specific vote-capture device using the SerialNumber attribute, and then includes Device to identify other characteristics of the device such as manufacturer and model.

Attributes: (NOTE—see Table A.30— Attributes for GpUnit)

Attribute	Required	Type	Description
SerialNumber	no	xsd:string	A serial number or otherwise identifier associated with the device.

Table A.32— Attributes for ReportingDevice

Elements: (NOTE—see Table A.31— Elements for GpUnit)

Element	Multiplicity	Type	Description
Device	0 or 1	Device	For filtering the vote counts by device type, model, and manufacturer.

Table A.33— Elements for ReportingDevice

Definition:

```
<xsd:complexType name="ReportingDevice">  
  <xsd:complexContent>  
    <xsd:extension base="GpUnit">  
      <xsd:sequence>  
        <xsd:element name="Device" type="Device" minOccurs="0"/>  
      </xsd:sequence>  
      <xsd:attribute name="SerialNumber" type="xsd:string"/>  
    </xsd:extension>  
  </xsd:complexContent>  
</xsd:complexType>
```

A.1.12.2 ReportingUnit (extension base GpUnit)

For defining a geo-political unit such as state, county, township, precinct, etc., using the ReportingUnit enumeration. It is an xsi:type of GpUnit and inherits GpUnit’s attributes and elements (see Clause A.1.12). Its syntax is:

```
<GpUnit xsi:type="ReportingUnit" ... />
```

ReportingUnit optionally references Person to associate one or more authorities for the reporting unit. ReportingUnit also includes ContactInformation to provide contact addresses for the reporting unit, such as an address of a vote center.

If the reporting unit type is not listed in enumeration ReportingUnitType, use “Other” and include the reporting unit type (that is not listed in the enumeration) in OtherType.

Attributes: (NOTE—see Table A.30— Attributes for GpUnit)

Attribute	Required	Type	Description
IsElectoralDistrict	no	xsd:boolean	Boolean to indicate whether the reporting unit is an electoral district; assumed to be “no” if not present. Assumed to be “no” if not present.
OtherType	no	xsd:string	For use when ReportingUnitType is “Other”.
SubUnitsReported	no	xsd:integer	Number of associated subunits such as precincts that have completed reporting.
TotalSubUnits	no	xsd:integer	Total number of associated subunits such as precincts.
Type	yes	ReportingUnitType	Enumerated type of reporting unit, e.g., state, county, district, precinct, etc.
VotersParticipated	no	xsd:integer	Number of voters who have participated in the election, i.e., shown up at the polls, including those who did not cast ballots.
VotersRegistered	no	xsd:integer	Number of registered voters residing within the boundaries of the geo-political unit.

Table A.34— Attributes for ReportingUnit

Elements: (NOTE—see Table A.31— Elements for GpUnit)

Element	Multiplicity	Type	Description
AuthorityId	0 or more	xsd:IDREF	The ObjectID of one or more Person elements describing an authority responsible for the reporting unit.
ContactInformation	0 or 1	ContactInformation	For associating contact information with the reporting unit.
CountStatus	0 or more	CountStatus	For providing various counting status on types of ballots or other items.
PartyRegistration	0 or more	PartyRegistration	For associating a count of registered voters per party with the geo-political unit.
SpatialDimension	0 or 1	SpatialDimension	For describing the reporting unit's spatial extent (a polygon that shows the related area).

Table A.35— Elements for ReportingUnit

Definition:

```

<xsd:complexType name="ReportingUnit">
  <xsd:complexContent>
    <xsd:extension base="GpUnit">
      <xsd:sequence>
        <xsd:element name="AuthorityId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="ContactInformation" type="ContactInformation" minOccurs="0" maxOccurs="1"/>
        <xsd:element name="CountStatus" type="CountStatus" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="PartyRegistration" type="PartyRegistration" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="SpatialDimension" type="SpatialDimension" minOccurs="0"/>
      </xsd:sequence>
      <xsd:attribute name="IsElectoralDistrict" type="xsd:boolean"/>
      <xsd:attribute name="OtherType" type="xsd:string"/>
      <xsd:attribute name="SubUnitsReported" type="xsd:integer"/>
      <xsd:attribute name="TotalSubUnits" type="xsd:integer"/>
      <xsd:attribute name="Type" type="ReportingUnitType" use="required"/>
      <xsd:attribute name="VotersParticipated" type="xsd:integer"/>
      <xsd:attribute name="VotersRegistered" type="xsd:integer"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

```

A.1.13 InternationalizedText and LanguageString

For strings that can contain text in one of a number of different languages, for use with text that can be included on the ballot. The Identifier attribute can be used to assign an identifier to the text as desired.

LanguageString uses the xsd:language type such that the Language attribute must be set to a value that identifies the language. An example of usage for the string “This is content in Spanish” is as follows:

```

<InternationalizedText>
  <LanguageString Language="es">Este es el contenido en Español.</LanguageString>
</InternationalizedText>

```

Values for Language include:

- en – English
- en-US – U.S. English
- en-GB – U.K. English
- fr – French
- es – Spanish
- zh – Chinese
- ja – Japanese
- ko – Korean

Attributes for InternationalizedText:

Attribute	Required	Type	Description
Identifier	no	xsd:string	For assigning an identifier to the international text string.

Table A.36— Attributes for InternationalizedText

Elements for InternationalizedText:

Element	Multiplicity	Type	Description
LanguageString	1 or more	LanguageString	A string of text, i.e., possibly non-English.

Table A.37— Elements for InternationalizedText

Definition for InternationalizedText:

```
<xsd:complexType name="InternationalizedText">
  <xsd:sequence>
    <xsd:element name="LanguageString" type="LanguageString" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="Identifier" type="xsd:string"/>
</xsd:complexType>
```

Attributes for LanguageString:

Attribute	Required	Type	Description
Language	yes	xsd:language	Identification of the language, e.g., “es”.

Table A.38— Attributes for LanguageString

Elements for LanguageString: none.

Definition for LanguageString:

```
<xsd:complexType name="LanguageString">
  <xsd:simpleContent>
    <xsd:extension base="xsd:string">
      <xsd:attribute name="Language" type="xsd:language" use="required"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
```

A.1.14 Office, OfficeGroup, and Term

For defining the office associated with a contest and/or a district, and for associating a name with a grouping of offices. ElectionReport includes Office and OfficeGroup. CandidateContest and RetentionContest reference Office.

Office includes Term for defining details about the term of an office such as start/end dates and the type of term. Office includes an optional JurisdictionalCodeId reference to a GpUnit for the purpose of identifying the geographical scope of the office. For example, for an office for a state senate seat, JurisdictionalCodeId would include a reference to the GpUnit ReportingUnit defined for the district associated with that office.

OfficeGroup includes references to Office elements and a name to identify the grouping of references, e.g., “Judicial” or “Statewide”, etc. SubOfficeGroup can be used to create a nested hierarchy of groupings.

Attributes for Office:

Attribute	Required	Type	Description
ObjectID	yes	xsd:ID	Unique identifier for this XML object.
FilingDeadline	no	xsd:dateTime	Date and time when a candidate must have filed for the contest for the office.
IsPartisan	no	xsd:boolean	Boolean to indicate whether the office is partisan, e.g., “yes” or “no”. Assumed to be “no” if not present.

Table A.39— Attributes for Office

Elements for Office:

Element	Multiplicity	Type	Description
Code	0 or more	Code	For associating a code with the office.
ContactInformation	0 or 1	ContactInformation	For associating various contact information with the office.
JurisdictionalScopeId	0 or more	xsd:IDREF	Unique identifier for a GpUnit element. For associating the office with a reporting unit that represents the geographical scope of the contest, e.g., a district, etc.
Name	1	InternationalizedText	Name of the office; can appear on the ballot.
OfficeHolderId	0 or more	xsd:IDREF	Unique identifier for a Candidate element defined for the office holder.
Term	0 or 1	Term	For specifying information about the term of the office.

Table A.40— Elements for Office

Definition for Office:

```
<xsd:complexType name="Office">
  <xsd:sequence>
    <xsd:element name="Name" type="InternationalizedText"/>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Term" type="Term" minOccurs="0"/>
    <xsd:element name="JurisdictionalScopeId" type="xsd:IDREF" minOccurs="0"/>
    <xsd:element name="OfficeHolderId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="ContactInformation" type="ContactInformation" minOccurs="0" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectID" type="xsd:ID" use="required"/>
  <xsd:attribute name="FilingDeadline" type="xsd:dateTime"/>
  <xsd:attribute name="IsPartisan" type="xsd:boolean"/>
</xsd:complexType>
```

Attributes for Term:

Attribute	Required	Type	Description
EndDate	yes	xsd:date	End date for the current term of the office.
StartDate	no	xsd:date	Start date for the current term of the office.
Type	no	officeTermType	Enumerated type of term, e.g., full term, unexpired term, etc.

Table A.41— Attributes for Term

Elements: none.

Definition for Term:

```
<xsd:complexType name="Term">
```

```

<xsd:attribute name="EndDate" type="xsd:date"/>
<xsd:attribute name="StartDate" type="xsd:date"/>
<xsd:attribute name="Type" type="OfficeTermType"/>
</xsd:complexType>

```

Attributes for OfficeGroup:

Attribute	Required	Type	Description
Name	yes	xsd:string	Name of the office grouping.

Table A.42— Attributes for OfficeGroup

Elements for OfficeGroup:

Element	Multiplicity	Type	Description
officeId	1 or more	xsd:IDREF	Unique identifier for an Office element. For associating a name with a grouping of Office elements.
officeSubGroup	0 or more	OfficeGroup	For defining a nested hierarchy of Office element groupings.

Table A.43— Elements for OfficeGroup

Definition for OfficeGroup:

```

<xsd:complexType name="OfficeGroup">
  <xsd:sequence>
    <xsd:element name="OfficeId" type="xsd:IDREF" minOccurs="1" maxOccurs="unbounded"/>
    <xsd:element name="SubOfficeGroup" type="OfficeGroup" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="Name" type="xsd:string" use="required"/>
</xsd:complexType>

```

A.1.15 Party and xsi:type Coalition

Used to describe a political party that can then be referenced in other elements. ElectionReport includes Party, Candidate, PartyContest, PartyRegistration, and Person reference Party.

The Color attribute specifies a 6-digit RGB code displayable using HTML. For example, the color green is encoded as:

```
<Party color="00FF00" ... />
```

Party is also used to define Coalitions by using the Coalition xsi:type, with the following syntax:

```
<Party xsi:type="Coalition" ... />
```

See Clause A.1.15.1 for more information about defining Coalitions.

Attributes:

Attribute	Required	Type	Description
objectId	yes	xsd:ID	Unique identifier for this XML object.
Abbreviation	no	xsd:string	Short name for the party, e.g., "DEM".
Color	no	HTMLColorString	For associating an HTML RGB color coding with the party.
LogoUri	no	xsd:anyUri	A URI to the party's graphical logo.

Table A.44— Attributes for Party

Elements:

Element	Multiplicity	Type	Description
Code	0 or more	Code	For associating a code with the party.
Name	1	InternationalizedText	Official full name of the party, e.g., "Republican"; can appear on the ballot.

Table A.45—Elements for Party

Definition:

```
<xsd:complexType name="Party">
  <xsd:sequence>
    <xsd:element name="Name" type="InternationalizedText"/>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
  <xsd:attribute name="Abbreviation" type="xsd:string"/>
  <xsd:attribute name="Color" type="HTMLColorString"/>
  <xsd:attribute name="LogoUri" type="xsd:anyURI"/>
</xsd:complexType>
```

A.1.15.1 Coalition (extension base Party)

For defining a coalition, i.e., a collection of parties organized for the purpose of endorsing a candidates in a contest. It is an xsi:type of Party and inherits Party's attributes and elements (see Clause A.1.15). Its syntax is:

```
<Party xsi:type="Coalition" ... />
```

Coalition elements are created by defining Party elements from ElectionReport, but using the above syntax. Thus, coalition elements can be referenced via any references to Party included in other elements, e.g., Candidate or CandidateSelection. Coalition elements themselves are composed of multiple occurrences of party references with a reference to the associated contest(s).

Attributes: none. (NOTE—see Table A.44— Attributes for Party)

Elements: (NOTE—see Table A.45—Elements for Party)

Attribute	Multiplicity	Type	Description
ContestId	0 or more	xsd:IDREF	Unique identifier for a Contest element. For associating contests with the coalition.
Party	0 or 1	xsd:IDREF	Unique identifier for a Party element. For associating parties with the coalition.

Note: see also Table A.45—Elements for Party

Table A.46— Elements for Coalition

Definition:

```
<xsd:complexType name="Coalition">
  <xsd:complexContent>
    <xsd:extension base="Party">
```

```

<xsd:sequence>
  <xsd:element name="ContestId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
  <xsd:element name="PartyId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
</xsd:sequence>
</xsd:extension>
</xsd:complexContent>
</xsd:complexType>

```

A.1.16 PartyRegistration

For tracking the number of registered voters per party per geo-political unit, i.e., for reporting on the number of registered voters of a particular party in a district or other type of reporting unit. Referenced by ReportingUnit.

Attributes:

Attribute	Required	Type	Description
Count	yes	xsd:integer	A count for tracking the number of registered voters.

Table A.47— Attributes for PartyRegistration

Elements:

Element	Multiplicity	Type	Description
PartyId	1	xsd:IDREF	Unique identifier for a Party element. For associating a political party with the count.

Table A.48— Elements for PartyRegistration

Definition:

```

<xsd:complexType name="PartyRegistration">
  <xsd:sequence>
    <xsd:element name="PartyId" type="xsd:IDREF"/>
  </xsd:sequence>
  <xsd:attribute name="Count" type="xsd:integer" use="required"/>
</xsd:complexType>

```

A.1.17 Person

For defining information about a person; the person may be a candidate, election official, authority for a reporting unit, etc. ElectionReport includes Person. Candidate and GpUnit reference Person. Person optionally includes ContactInformation to associating contact information.

Multiple occurrences of the MiddleName element can be used as needed, e.g., for names such as “John Andrew Winston Smith”, as follows:

```

<Person objectId="P12321">
  <FirstName>John</FirstName>
  <MiddleName>Andrew</MiddleName>
  <MiddleName>Winston</MiddleName>
  <LastName>Smith</LastName>
</Person>

```

Attributes:

Attribute	Required	Type	Description
objectId	yes	xsd:ID	Unique identifier for this XML object.
DateOfBirth	no	xsd:date	Person's date of birth.

Table A.49— Attributes for Person

Elements:

Element	Multiplicity	Type	Description
ContactInformation	0 or more	Contact	For associating contact information with the person.
FirstName	0 or 1	xsd:string	Person's first (given) name.
FullName	0 or 1	InternationalizedText	Person's full name.
Gender	0 or 1	xsd:string	Person's gender.
LastName	0 or 1	xsd:string	Person's last (family) name.
MiddleName	0 or more	xsd:string	Person's middle name.
Nickname	0 or 1	xsd:string	Nickname associated with the person.
PartyId	0 or 1	xsd:IDREF	Unique identifier for a Party element. For associating a political party with the person.
Prefix	0 or 1	xsd:string	A prefix associated with the person, e.g., Mr.
Profession	0 or 1	InternationalizedText	Person's profession.
Suffix	0 or 1	xsd:string	A suffix associated with the person, e.g., Jr.
Title	0 or 1	InternationalizedText	A title associated with the person.

Table A.50— Elements for Person

Definition:

```

<xsd:complexType name="Person">
  <xsd:sequence>
    <xsd:element name="ContactInformation" type="ContactInformation" minOccurs="0"maxOccurs="unbounded"/>
    <xsd:element name="FirstName" type="xsd:string" minOccurs="0"/>
    <xsd:element name="FullName" type="InternationalizedText" minOccurs="0"/>
    <xsd:element name="Gender" type="xsd:string" minOccurs="0"/>
    <xsd:element name="LastName" type="xsd:string" minOccurs="0"/>
    <xsd:element name="MiddleName" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Nickname" type="xsd:string" minOccurs="0"/>
    <xsd:element name="PartyId" type="xsd:IDREF" minOccurs="0"/>
    <xsd:element name="Prefix" type="xsd:string" minOccurs="0"/>
    <xsd:element name="Profession" type="InternationalizedText" minOccurs="0"/>
    <xsd:element name="Suffix" type="xsd:string" minOccurs="0"/>
    <xsd:element name="Title" type="InternationalizedText" minOccurs="0"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
  <xsd:attribute name="DateOfBirth" type="xsd:date"/>
</xsd:complexType>

```

A.1.18 Schedule and Hours

For defining a schedule associated with a particular election office or location. ContactInformation includes Schedule.

Hours is used to specify a specific day and hours on that day, including the time zone. Multiple occurrences of Hours can be used if the schedule includes a range of days and hours, for example, for specific hours on a Wednesday and Thursday:

```

<Schedule startDate="2015-05-15">
  <Hours Day="Friday" StartTime="09:00:00-05:00" EndTime="17:00:00-05:00"/>
  <Hours Day="Saturday" StartTime="09:00:00-05:00" EndTime="21:00:00-05:00"/>
</Schedule>

```

Attributes for Schedule:

Attribute	Required	Type	Description
EndDate	no	xsd:date	For the ending date.
IsOnlyByAppointment	no	xsd:boolean	Assumed to be “no” if not present.
IsOrByAppointment	no	xsd:boolean	Assumed to be “no” if not present.
IsSubjectToChange	no	xsd:boolean	Assumed to be “no” if not present.
StartDate	no	xsd:date	For the starting date.

Table A.51— Attributes for Schedule

Elements for Schedule:

Element	Multiplicity	Type	Description
Hours	0 or more	Hours	For specifying a range of hours for a schedule.

Table A.52— Elements for Schedule

Definition for Schedule:

```
<xsd:complexType name="Schedule">
  <xsd:sequence>
    <xsd:element name="Hours" type="Hours" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="EndDate" type="xsd:date"/>
  <xsd:attribute name="IsOnlyByAppointment" type="xsd:boolean"/>
  <xsd:attribute name="IsOrByAppointment" type="xsd:boolean"/>
  <xsd:attribute name="IsSubjectToChange" type="xsd:boolean"/>
  <xsd:attribute name="StartDate" type="xsd:date"/>
</xsd:complexType>
```

Attributes for Hours:

Attribute	Required	Type	Description
Day	no	DayType	Day of week or weekend.
EndTime	yes	TimewithZone	End time of the schedule.
StartTime	yes	TimewithZone	Start time of the schedule.

Table A.53—Attributes for Hours

Elements: none.

Definition for Hours:

```
<xsd:complexType name="Hours">
  <xsd:attribute name="Day" type="DayType"/>
  <xsd:attribute name="EndTime" type="TimewithZone" use="required"/>
  <xsd:attribute name="StartTime" type="TimewithZone" use="required"/>
</xsd:complexType>
```

A.1.19 SpatialDimension and SpatialExtent

For defining a GpUnit’s spatial layout, e.g., a map or a spatial extent (a polygon that shows the related area) for various purposes, including to visualize election results, to understand the composition of districts, or to determine whether GpUnits are properly related. ReportingUnit includes SpatialDimension.

SpatialDimension includes SpatialExtent for defining the GpUnit’s spatial extent data and the format used for the spatial extent.

Attributes for SpatialDimension:

Attribute	Required	Type	Description
MapUri	no	anyURI	Typically a URL to a map of the GpUnit.

Table A.54— Attributes for SpatialDimension

Elements for SpatialDimension:

Element	Multiplicity	Type	Description
SpatialExtent	0 or more	SpatialExtent	For associating the GpUnit's spatial extent information.

Table A.55— Elements for SpatialDimension

Definition for SpatialDimension:

```
<xsd:complexType name="SpatialDimension">
  <xsd:sequence>
    <xsd:element name="SpatialExtent" type="SpatialExtent" minOccurs="0"/>
  </xsd:sequence>
  <xsd:attribute name="MapUri" type="xsd:anyURI"/>
</xsd:complexType>
```

Attributes for SpatialExtent:

Attribute	Required	Type	Description
Format	yes	GeoSpatialFormat	Enumerated type for the format used, e.g., GML, KML, WKT, SHP, etc.

Table A.56— Attributes for SpatialExtent

Elements for SpatialExtent:

Element	Occurs	Type	Description
Coordinates	1	xsd:string	The data coordinates constituting the spatial extent.

Table A.57— Elements for SpatialExtent

Definition for SpatialExtent:

```
<xsd:complexType name="SpatialExtent">
  <xsd:sequence>
    <xsd:element name="Coordinates" type="xsd:string"/>
  </xsd:sequence>
  <xsd:attribute name="Format" type="GeoSpatialFormat" use="required"/>
</xsd:complexType>
```

A.1.20 SummaryCounts (extension base Counts)

For reporting on contest-wide or geo-political unit-wide summary counts. Includes Counts as an extension base and thus inherits attributes and elements from Counts (see Clause A.1.8).

Contest includes SummaryCounts for providing a geographical scope-wide summary of miscellaneous counts associated with a contest, including total number of ballots cast containing the contest, total number of overvotes, undervotes, and write-ins. SummaryCounts can optionally reference GpUnits defined for lower level reporting units, e.g., precincts, so as to associate summary counts with each precinct or other lower-level reporting units within the scope of the contest.

GpUnit includes SummaryCounts for the purpose of providing summary counts specific to that GpUnit, e.g., a GpUnit defined for a district can include SummaryCounts for this purpose. SummaryCounts, in this case, would not reference other GpUnits.

In extension base Counts, if the type of count item is not listed in enumeration CountItemType, use “Other” and include the type (that is not listed in the enumeration) in OtherType.

Attributes: (NOTE—see also Table A.23— Attributes for Counts)

Attribute	Required	Type	Description
BallotsCast	no	xsd:integer	Number of ballots cast, either in a contest or associated with a geo-political Unit.
BallotsOutstanding	no	xsd:integer	Number of ballots not yet counted.
BallotsRejected	no	xsd:integer	Number of ballots rejected.
Overvotes	no	xsd:integer	Number of overvotes, either in a contest or associated with a geo-political unit.
Undervotes	no	xsd:integer	Number of undervotes, either in a contest or associated with a geo-political unit.
writeIns	no	xsd:integer	Number of write-ins cast, either in a contest or associated with a geo-political unit.

Table A.58— Attributes for SummaryCounts

Elements: none. (NOTE— see Table A.24— Elements for Counts)

Definition:

```
<xsd:complexType name="SummaryCounts">
  <xsd:complexContent>
    <xsd:extension base="Counts">
      <xsd:attribute name="BallotsCast" type="xsd:integer"/>
      <xsd:attribute name="BallotsOutstanding" type="xsd:integer"/>
      <xsd:attribute name="BallotsRejected" type="xsd:integer"/>
      <xsd:attribute name="Overvotes" type="xsd:integer"/>
      <xsd:attribute name="Undervotes" type="xsd:integer"/>
      <xsd:attribute name="writeIns" type="xsd:integer"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
```

A.1.21 VoteCounts (extension base Counts)

For reporting on vote counts for ballot selections in a contest. BallotSelection includes VoteCounts.

VoteCounts includes Counts as an extension base and thus inherits attributes and elements from Counts (see Clause A.1.8). In extension base Counts, if the type of count item is not listed in enumeration CountItemType, use “Other” and include the type (that is not listed in the enumeration) in OtherType.

Attributes: (NOTE—see Table A.23— Attributes for Counts)

Attribute	Required	Type	Description
Count	yes	xsd:float	Count of contest votes cast; can include a fractional component in special cases.

Table A.59—Attributes for VoteCounts

Elements: none. (NOTE—see Table A.24— Elements for Counts)

Definition:

```

<xsd:complexType name="VoteCounts">
  <xsd:complexContent>
    <xsd:extension base="Counts">
      <xsd:attribute name="Count" type="xsd:float" use="required"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

```

A.2 Enumerations

A.2.1 BallotMeasureType

Enumeration for types of ballot measures in BallotMeasureContest.

Name	Description
BallotMeasure	For a standard “yes” or “no” question on the ballot.
Initiative	For an initiative.
Referendum	For a referendum.
Retention	For a judicial retention-style contest
Other	Used when the type of ballot measure is not included in this enumeration.

Table A.60—Values for BallotMeasureType

Definition:

```

<xsd:simpleType name="BallotMeasureType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="BallotMeasure"/>
    <xsd:enumeration value="Initiative"/>
    <xsd:enumeration value="Referendum"/>
    <xsd:enumeration value="Retention"/>
    <xsd:enumeration value="Other"/>
  </xsd:restriction>
</xsd:simpleType>

```

A.2.2 CandidatePostElectionStatus

Enumeration for various post-election statuses applicable to a candidate in Candidate.

Name	Description
AdvancedToRunoff	For candidates who have advanced to a runoff.
ProjectedWinner	For a projected contest winner.
winner	For the official contest winner or one of N contest winners for N-of-M voting.
withdrawn	For candidates who have withdrawn from the contest.
writeIn	For when the candidate is a write-in.

Table A.61— Values for CandidatePostElectionStatus

Definition:

```

<xsd:simpleType name="CandidatePostElectionStatus">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="AdvancedToRunoff"/>
    <xsd:enumeration value="ProjectedWinner"/>
    <xsd:enumeration value="winner"/>
    <xsd:enumeration value="withdrawn"/>
  </xsd:restriction>
</xsd:simpleType>

```

A.2.3 CandidatePreElectionStatus

Enumeration for various pre-election statuses applicable to a candidate in Candidate.

Name	Description
Filed	For candidates who have filed with the election authority but not necessarily qualified.
Qualified	For candidates who are qualified by the election authority to be on the ballot for a contest.
Withdrawn	For candidates who have withdrawn from the contest.
writeIn	For when the candidate is a write-in.

Table A.62— Values for CandidatePreElectionStatus

Definition:

```
<xsd:simpleType name="CandidatePreElectionStatus">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Filed"/>
    <xsd:enumeration value="Qualified"/>
    <xsd:enumeration value="Withdrawn"/>
    <xsd:enumeration value="writeIn"/>
  </xsd:restriction>
</xsd:simpleType>
```

A.2.4 CodeType

Enumeration for election data-related codes in Code.

Name	Description
Fips	For FIPS codes.
LocalLevel	For a code that is specific to a county or other similar locality.
NationalLevel	For a code that is used at the national level other than FIPs or OcdId.
ocdId	For Open Civic Data identifiers.
StateLevel	For a code that is specific to a state.
other	Used when the type of code is not included in this enumeration.

Table A.63—Values for CodeType

Definition:

```
<xsd:simpleType name="CodeType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Fips"/>
    <xsd:enumeration value="LocalLevel"/>
    <xsd:enumeration value="NationalLevel"/>
    <xsd:enumeration value="ocdId"/>
    <xsd:enumeration value="StateLevel"/>
    <xsd:enumeration value="Other"/>
  </xsd:restriction>
</xsd:simpleType>
```

A.2.5 CountItemStatus

Enumeration for various counting-related statuses for types of ballots or write-ins in CountStatus.

Name	Description
Completed	For counts that are complete.
InProcess	For counts that are in process
NotProcessed	When the counting has not started or is not underway.
Unknown	When the status of the counting is unknown.

Table A.64—Values for CountItemStatus

Definition:

```
<xsd:simpleType name="CountItemStatus">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Completed"/>
    <xsd:enumeration value="InProcess"/>
    <xsd:enumeration value="NotProcessed"/>
    <xsd:enumeration value="Unknown"/>
  </xsd:restriction>
</xsd:simpleType>
```

A.2.6 CountItemType

Enumeration for the items that are counted during the course of an election and for which the status of the counts are of interest. The items consist of types of ballots and write-ins.

Name	Description
Absentee	For any/all types of absentee, generally when absentee is not broken out into specific types.
AbsenteeFwab	A type of absentee; for Federal Write-in Absentee Ballots.
AbsenteeInPerson	A type of absentee; for absentee ballots cast in-person, e.g., at a county office.
AbsenteeMail	A type of absentee; for postal mail absentee ballots.
Early	For ballots cast during early voting periods.
ElectionDay	For ballots cast on election day.
Provisional	For challenged ballots.
Total	For the total of all ballot types.
Uocava	For ballots from UOCAVA voters.
writeIn	For write-ins on ballots.
other	Used when the item is not listed in this enumeration.

Table A.65— Values for CountItemType

Definition:

```
<xsd:simpleType name="CountItemType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Absentee"/>
    <xsd:enumeration value="AbsenteeFwab"/>
    <xsd:enumeration value="AbsenteeInPerson"/>
    <xsd:enumeration value="AbsenteeMail"/>
    <xsd:enumeration value="Early"/>
    <xsd:enumeration value="ElectionDay"/>
    <xsd:enumeration value="Other"/>
    <xsd:enumeration value="Provisional"/>
    <xsd:enumeration value="Total"/>
    <xsd:enumeration value="Uocava"/>
    <xsd:enumeration value="writeIn"/>
  </xsd:restriction>
</xsd:simpleType>
```

A.2.7 DayType

Enumeration for the day(s) in a schedule in Schedule.

Name	Description
Sunday	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
weekday	Used for any day of the week.
weekend	Used for both Saturday and Sunday.
All	Used for all days of the week.

Table A.66— Values for DayType

Definition:

```

<xsd:simpleType name="DayType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Sunday"/>
    <xsd:enumeration value="Monday"/>
    <xsd:enumeration value="Tuesday"/>
    <xsd:enumeration value="Wednesday"/>
    <xsd:enumeration value="Thursday"/>
    <xsd:enumeration value="Friday"/>
    <xsd:enumeration value="Saturday"/>
    <xsd:enumeration value="weekday"/>
    <xsd:enumeration value="weekend"/>
    <xsd:enumeration value="All"/>
  </xsd:restriction>
</xsd:simpleType>

```

A.2.8 DeviceType

Enumeration for the type of device in Device.

Name	Description
Electronic	For DRE (Direct Record Electronic) and touchscreen devices such as tablets.
Lever	For lever machines.
ManualCount	For hand-counted paper ballots.
MixedSystems	For devices, e.g., that print voter choices on an optical scan ballot (hybrid of a DRE and an optical scan system)
OpscanCentral	For an optical scanner used at a central office with no opportunity for voter correction of mistakes.
OpscanPrecinct	For an optical scanner used at a precinct or other location where voter correction of mistakes such as overvotes is possible.
PunchCard	For punch card devices.
unknown	Used when the type of device is unknown.
other	Used when the device type is not listed in this enumeration.

Table A.67— Values for DeviceType

Definition:

```

<xsd:simpleType name="DeviceType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Electronic"/>
    <xsd:enumeration value="Lever"/>
    <xsd:enumeration value="ManualCount"/>
    <xsd:enumeration value="MixedSystems"/>
    <xsd:enumeration value="OpscanCentral"/>
    <xsd:enumeration value="OpscanPrecinct"/>
  </xsd:restriction>
</xsd:simpleType>

```



```

    <xsd:enumeration value="PunchCard"/>
    <xsd:enumeration value="Unknown"/>
    <xsd:enumeration value="Other"/>
  </xsd:restriction>
</xsd:simpleType>

```

A.2.9 ElectionType

Enumeration for the type of election in ElectionReport.

Name	Description
General	For the election held typically on the national day for elections (e.g., the Tuesday after the 1 st Monday in November).
PartisanPrimaryClosed	For a primary election that is for a specific party where voter eligibility is based on registration.
PartisanPrimaryOpen	For a primary election that is for a specific party where voter declares desired party or chooses in private.
Primary	For a primary election, type not specified such as nonpartisan.
Runoff	For an election to decide a prior contest that ended with no candidate receiving a majority of the votes.
Special	For an election held out of sequence for special circumstances, e.g., to fill a vacated office.
other	Used when the election type is not listed in this enumeration.

Table A.68— Values for ElectionType

Definition:

```

<xsd:simpleType name="ElectionType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="General"/>
    <xsd:enumeration value="PartisanPrimaryClosed"/>
    <xsd:enumeration value="PartisanPrimaryOpen"/>
    <xsd:enumeration value="Primary"/>
    <xsd:enumeration value="Runoff"/>
    <xsd:enumeration value="Special"/>
    <xsd:enumeration value="Other"/>
  </xsd:restriction>
</xsd:simpleType>

```

A.2.10 GeoSpatialFormat

Enumeration for geospatial vector data formats used in geographic information system (GIS) software, used in SpatialExtent.

Name	Description
GeoJson	For GeoJSON open standard format.
Gml	For Geography Markup Language format.
Kml	For Keyhole Markup Language format.
Shp	For the shape file format associated with ESRI.
wkt	For Well-known Text format.

Table A.69— Values for GeoSpatialFormat

Definition:

```

<xsd:simpleType name="GeoSpatialFormat">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="GeoJson"/>
    <xsd:enumeration value="Gml"/>
    <xsd:enumeration value="Kml"/>
  </xsd:restriction>
</xsd:simpleType>

```

```

    <xsd:enumeration value="Shp"/>
    <xsd:enumeration value="wkt"/>
  </xsd:restriction>
</xsd:simpleType>

```

A.2.11 OfficeTermType

Enumeration for the office term type in Office.

Name	Description
FullTerm	When the officeholder's term began at the beginning of the full term of the office, e.g., 6 years for U.S. Senate.
UnexpiredTerm	When the officeholder's term began at some date after the beginning of the full term of the office, generally because the previous officeholder vacated the office before the fullterm expired.

Table A.70— Values for OfficeTermType

Definition:

```

<xsd:simpleType name="OfficeTermType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="FullTerm"/>
    <xsd:enumeration value="UnexpiredTerm"/>
  </xsd:restriction>
</xsd:simpleType>

```

A.2.12 ReportDetailLevel

Enumeration for the detail level of the election results report in Election.

Name	Description
PrecinctLevel	For reports that contain counts from precincts in the reporting jurisdiction.
SummaryContest	For reports that contain only aggregated counts.

Table A.71— Values for ReportDetailLevel

Definition:

```

<xsd:simpleType name="ReportDetailLevel">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="PrecinctLevel"/>
    <xsd:enumeration value="SummaryContest"/>
  </xsd:restriction>
</xsd:simpleType>

```

A.2.13 ReportingUnitType

Enumeration for the type of geo-political unit in ReportingUnit.

Name	Description
BallotBatch	Used for reporting batches of ballots that may cross precinct boundaries.
City	Used for a city that reports results and/or for a district that encompasses the city.
CityCouncil	Used for city council districts.
CombinedPrecinct	Used for one or more precincts that have been combined for the purposes of reporting. Used for "Ward" if "Ward" is used interchangeably with "CombinedPrecinct".
Congressional	Used for U.S. Congressional districts.
County	Used also for "Parish", and/or used for a district that encompasses the county (or parish).
CountyCouncil	Used for county council districts.
DropBox	
Judicial	Used for judicial districts.
Municipality	Used as applicable for various units such as towns, townships, villages that report votes.
National	Used for a reporting unit at the national level.
PollingPlace	Used for a polling place.
Precinct	Used also for "Ward" or "District" when these terms are used to mean the same thing as "Precinct".
School	Used for a school district.
Special	Used for a special district.
Split precinct	Used for splits of precincts.
State	Used for a state and/or for a district that encompasses the state.
StateHouse	Used for a state house or assembly district.
StateSenate	Used for a state senate district.
Town	Used in some New England states.
Township	Used in some mid-western states.
Utility	Used for a utility district.
Village	Used for villages that report votes.
VoteCenter	Used for a vote center.
Ward	Used for combinations or groupings of precincts or other units – use "Precinct" or "CombinedPrecinct" if this term is being used interchangeably.
Water	Used for a water district.
Other	Used for other types of reporting units not included in this enumeration.

Table A.72— Values for ReportingUnitType

Definition:

```

<xsd:simpleType name="ReportingUnitType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="BallotBatch"/>
    <xsd:enumeration value="City"/>
    <xsd:enumeration value="CityCouncil"/>
    <xsd:enumeration value="CombinedPrecinct"/>
    <xsd:enumeration value="Congressional"/>
    <xsd:enumeration value="County"/>
    <xsd:enumeration value="CountyCouncil"/>
    <xsd:enumeration value="DropBox"/>
    <xsd:enumeration value="Judicial"/>
    <xsd:enumeration value="Municipality"/>
    <xsd:enumeration value="National"/>
    <xsd:enumeration value="PollingPlace"/>
    <xsd:enumeration value="Precinct"/>
    <xsd:enumeration value="School"/>
    <xsd:enumeration value="Special"/>
    <xsd:enumeration value="SplitPrecinct"/>
    <xsd:enumeration value="State"/>
    <xsd:enumeration value="StateHouse"/>
    <xsd:enumeration value="StateSenate"/>
    <xsd:enumeration value="Town"/>
    <xsd:enumeration value="Township"/>
    <xsd:enumeration value="Utility"/>
    <xsd:enumeration value="Village"/>
    <xsd:enumeration value="VoteCenter"/>
  </xsd:restriction>
</xsd:simpleType>

```

```

    <xsd:enumeration value="ward"/>
    <xsd:enumeration value="water"/>
    <xsd:enumeration value="other"/>
  </xsd:restriction>
</xsd:simpleType>

```

A.2.14 ResultsStatus

Enumeration for the status of the election results in ElectionReport.

Name	Description
Certified	For results that have been certified by the election authority.
Correction	For results that are a correction to an earlier report.
PreElection	For a pre-election data.
Recount	For results that are a recount of an earlier election.
UnofficialComplete	For results that are unofficial and complete, e.g., the complete election night results.
UnofficialPartial	For results that are unofficial and partial, e.g., partial election night results.

Table A.73— Values for ResultsStatus

Definition:

```

<xsd:simpleType name="ResultsStatus">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="Certified"/>
    <xsd:enumeration value="Correction"/>
    <xsd:enumeration value="PreElection"/>
    <xsd:enumeration value="Recount"/>
    <xsd:enumeration value="UnofficialComplete"/>
    <xsd:enumeration value="UnofficialPartial"/>
  </xsd:restriction>
</xsd:simpleType>

```

A.2.15 VoteVariationType

Enumeration for contest algorithm or rules in Contest. See Clause 3 for definitions.

Name	Description
1ofM	For 1 of M voting.
Approval	For approval voting.
Borda	For the Borda count voting.
Cumulative	For cumulative voting.
Majority	For majority voting.
Measure	For a ballot measure.
NofM	For N of M voting.
Plurality	For plurality voting.
Range	For range voting.
RCV	For ranked choice voting.
SuperMajority	For super majority voting.
other	Used when the vote variation type is not included in this enumeration.

Table A.74— Values for VoteVariationType

Definition:

```

<xsd:simpleType name="VoteVariationType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="1ofM"/>

```

```

<xsd:enumeration value="Approval"/>
<xsd:enumeration value="Borda"/>
<xsd:enumeration value="Cumulative"/>
<xsd:enumeration value="Majority"/>
<xsd:enumeration value="Measure"/>
<xsd:enumeration value="NoFM"/>
<xsd:enumeration value="Other"/>
<xsd:enumeration value="Plurality"/>
<xsd:enumeration value="Proportional"/>
<xsd:enumeration value="Range"/>
<xsd:enumeration value="Rcv"/>
<xsd:enumeration value="SuperMajority"/>
</xsd:restriction>
</xsd:simpleType>

```

A.3 Primitives

A.3.1 HTMLColorString

For a string containing a 6-digit Red-Green-Blue (RGB) code that can be displayed using HTML, used in Party to associate a web-displayable color with the party. The RGB code is specified in hexadecimal, such that the RGB code for the color green is “00FF00” (“#00” + “#FF” + “#00”).

Definition:

```

<xsd:simpleType name="HtmlColorString">
  <xsd:restriction base="xsd:string">
    <xsd:pattern value="[0-9a-f]{6}"/>
  </xsd:restriction>
</xsd:simpleType>

```

A.3.2 Primitive TimeWithZone

For defining a time pattern that requires using a time zone, used in Hours for defining a schedule.

Hh:mm:ss+05

Definition:

```

<xsd:simpleType name="TimewithZone">
  <xsd:restriction base="xsd:time">
    <xsd:pattern value="((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9]|(24:00:00))(Z|[+-]((0[0-9]|1[0-3]):[0-5][0-9]|14:00)))/>
  </xsd:restriction>
</xsd:simpleType>

```

A.4 Complete schema listing

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns="http://vote.nist.gov/election_results_reporting.xsd"
xmlns:ds="http://www.w3.org/2000/09/xmldsig#" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://vote.nist.gov/election_results_reporting.xsd" elementFormDefault="qualified"
version="1.0">
  <!-- ===== Imports ===== -->
  <xsd:import namespace="http://www.w3.org/2000/09/xmldsig#"
schemaLocation="http://www.w3.org/2000/09/xmldsig#"/>
  <!-- ===== Roots ===== -->
  <xsd:element name="ElectionReport" type="ElectionReport"/>
  <!-- ===== Primitives ===== -->
  <xsd:simpleType name="HtmlColorString">
    <xsd:restriction base="xsd:string">
      <xsd:pattern value="[0-9a-f]{6}"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="TimewithZone">
    <xsd:restriction base="xsd:time">
      <xsd:pattern value="((([01][0-9]|2[0-3]):[0-5][0-9]:[0-5][0-9]|(24:00:00))(Z|[+-]((0[0-9]|1[0-
3]):[0-5][0-9]|14:00)))/>
    </xsd:restriction>
  </xsd:simpleType>
  <!-- ===== Enumerations ===== -->
  <xsd:simpleType name="BallotMeasureType">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="BallotMeasure"/>
      <xsd:enumeration value="Initiative"/>
      <xsd:enumeration value="Referendum"/>
      <xsd:enumeration value="Retention"/>
      <xsd:enumeration value="Other"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="CandidatePostElectionStatus">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="AdvancedToRunoff"/>
      <xsd:enumeration value="ProjectedWinner"/>
      <xsd:enumeration value="Winner"/>
      <xsd:enumeration value="Withdrawn"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="CandidatePreElectionStatus">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="Filed"/>
      <xsd:enumeration value="Qualified"/>
      <xsd:enumeration value="Withdrawn"/>
      <xsd:enumeration value="WriteIn"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="CodeType">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="Fips"/>
      <xsd:enumeration value="LocalLevel"/>
      <xsd:enumeration value="NationalLevel"/>
      <xsd:enumeration value="OcdId"/>
      <xsd:enumeration value="StateLevel"/>
      <xsd:enumeration value="Other"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="CountItemStatus">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="Completed"/>
      <xsd:enumeration value="InProgress"/>
      <xsd:enumeration value="NotProcessed"/>
      <xsd:enumeration value="Unknown"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="CountItemType">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="Absentee"/>
      <xsd:enumeration value="AbsenteeFwab"/>
      <xsd:enumeration value="AbsenteeInPerson"/>
      <xsd:enumeration value="AbsenteeMail"/>
      <xsd:enumeration value="Early"/>
      <xsd:enumeration value="ElectionDay"/>
      <xsd:enumeration value="Provisional"/>
      <xsd:enumeration value="Total"/>
      <xsd:enumeration value="Uocava"/>
      <xsd:enumeration value="WriteIn"/>
      <xsd:enumeration value="Other"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:simpleType name="DayType">
    <xsd:restriction base="xsd:string">
      <xsd:enumeration value="Sunday"/>
      <xsd:enumeration value="Monday"/>
      <xsd:enumeration value="Tuesday"/>
      <xsd:enumeration value="Wednesday"/>
      <xsd:enumeration value="Thursday"/>
    </xsd:restriction>
  </xsd:simpleType>

```

```

        <xsd:enumeration value="Friday"/>
        <xsd:enumeration value="Saturday"/>
        <xsd:enumeration value="weekday"/>
        <xsd:enumeration value="weekend"/>
        <xsd:enumeration value="All"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="DeviceType">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="Electronic"/>
        <xsd:enumeration value="Lever"/>
        <xsd:enumeration value="ManualCount"/>
        <xsd:enumeration value="MixedSystems"/>
        <xsd:enumeration value="OpScanCentral"/>
        <xsd:enumeration value="OpScanPrecinct"/>
        <xsd:enumeration value="PunchCard"/>
        <xsd:enumeration value="Unknown"/>
        <xsd:enumeration value="Other"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="ElectionType">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="General"/>
        <xsd:enumeration value="PartisanPrimaryClosed"/>
        <xsd:enumeration value="PartisanPrimaryOpen"/>
        <xsd:enumeration value="Primary"/>
        <xsd:enumeration value="Runoff"/>
        <xsd:enumeration value="Special"/>
        <xsd:enumeration value="Other"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="GeoSpatialFormat">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="GeoJson"/>
        <xsd:enumeration value="Gml"/>
        <xsd:enumeration value="Kml"/>
        <xsd:enumeration value="Shp"/>
        <xsd:enumeration value="wkt"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="OfficeTermType">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="FullTerm"/>
        <xsd:enumeration value="UnexpiredTerm"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="ReportDetailLevel">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="PrecinctLevel"/>
        <xsd:enumeration value="SummaryContest"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="ReportingUnitType">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="BallotBatch"/>
        <xsd:enumeration value="City"/>
        <xsd:enumeration value="CityCouncil"/>
        <xsd:enumeration value="CombinedPrecinct"/>
        <xsd:enumeration value="Congressional"/>
        <xsd:enumeration value="County"/>
        <xsd:enumeration value="CountyCouncil"/>
        <xsd:enumeration value="DropBox"/>
        <xsd:enumeration value="Judicial"/>
        <xsd:enumeration value="Municipality"/>
        <xsd:enumeration value="National"/>
        <xsd:enumeration value="PollingPlace"/>
        <xsd:enumeration value="Precinct"/>
        <xsd:enumeration value="School"/>
        <xsd:enumeration value="Special"/>
        <xsd:enumeration value="SplitPrecinct"/>
        <xsd:enumeration value="State"/>
        <xsd:enumeration value="StateHouse"/>
        <xsd:enumeration value="StateSenate"/>
        <xsd:enumeration value="Town"/>
        <xsd:enumeration value="Township"/>
        <xsd:enumeration value="Utility"/>
        <xsd:enumeration value="Village"/>
        <xsd:enumeration value="VoteCenter"/>
        <xsd:enumeration value="Ward"/>
        <xsd:enumeration value="Water"/>
        <xsd:enumeration value="Other"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="ResultsStatus">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="Certified"/>
        <xsd:enumeration value="Correction"/>
        <xsd:enumeration value="PreElection"/>
        <xsd:enumeration value="Recount"/>
        <xsd:enumeration value="UnofficialComplete"/>
        <xsd:enumeration value="UnofficialPartial"/>
    </xsd:restriction>

```

```

</xsd:simpleType>
<xsd:simpleType name="VoteVariationType">
  <xsd:restriction base="xsd:string">
    <xsd:enumeration value="lofm"/>
    <xsd:enumeration value="Approval"/>
    <xsd:enumeration value="Borda"/>
    <xsd:enumeration value="Cumulative"/>
    <xsd:enumeration value="Majority"/>
    <xsd:enumeration value="Measure"/>
    <xsd:enumeration value="Nofm"/>
    <xsd:enumeration value="Plurality"/>
    <xsd:enumeration value="Proportional"/>
    <xsd:enumeration value="Range"/>
    <xsd:enumeration value="Rcv"/>
    <xsd:enumeration value="SuperMajority"/>
    <xsd:enumeration value="Other"/>
  </xsd:restriction>
</xsd:simpleType>
<!-- ===== Interfaces Defined ===== -->
<!-- ===== Interfaces Extended ===== -->
<!-- ===== Classes ===== -->
<xsd:complexType name="BallotMeasureContest">
  <xsd:complexContent>
    <xsd:extension base="Contest">
      <xsd:sequence>
        <xsd:element name="SummaryText" type="InternationalizedText" minOccurs="0"/>
        <xsd:element name="FullText" type="InternationalizedText" minOccurs="0"/>
        <xsd:element name="ProStatement" type="InternationalizedText" minOccurs="0"/>
        <xsd:element name="ConStatement" type="InternationalizedText" minOccurs="0"/>
        <xsd:element name="EffectOfAbstain" type="InternationalizedText" minOccurs="0"/>
        <xsd:element name="PassageThreshold" type="InternationalizedText" minOccurs="0"/>
      </xsd:sequence>
      <xsd:attribute name="OtherType" type="xsd:string"/>
      <xsd:attribute name="Type" type="BallotMeasureType" use="required"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="BallotMeasureSelection">
  <xsd:complexContent>
    <xsd:extension base="BallotSelection">
      <xsd:attribute name="Selection" type="xsd:string" use="required"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="BallotSelection" abstract="true">
  <xsd:sequence>
    <xsd:element name="VoteCountsCollection" minOccurs="0" maxOccurs="unbounded">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="VoteCounts" type="VoteCounts" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
</xsd:complexType>
<xsd:complexType name="BallotStyle">
  <xsd:sequence>
    <xsd:element name="OrderedContest" type="OrderedContest" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="GpUnitId" type="xsd:IDREF" maxOccurs="unbounded"/>
    <xsd:element name="ImageUri" type="xsd:anyURI" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="PartyId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="Id" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="Candidate">
  <xsd:sequence>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="BallotName" type="InternationalizedText"/>
    <xsd:element name="PartyId" type="xsd:IDREF" minOccurs="0"/>
    <xsd:element name="PersonId" type="xsd:IDREF" minOccurs="0"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
  <xsd:attribute name="FileDate" type="xsd:dateTime"/>
  <xsd:attribute name="Id" type="xsd:string"/>
  <xsd:attribute name="IsIncumbent" type="xsd:boolean"/>
  <xsd:attribute name="IsTopTicket" type="xsd:boolean"/>
  <xsd:attribute name="PostElectionStatus" type="CandidatePostElectionStatus"/>
  <xsd:attribute name="PreElectionStatus" type="CandidatePreElectionStatus"/>
  <xsd:attribute name="SequenceOrder" type="xsd:integer"/>
</xsd:complexType>
<xsd:complexType name="CandidateContest">
  <xsd:complexContent>
    <xsd:extension base="Contest">
      <xsd:sequence>
        <xsd:element name="OfficeId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="PrimaryPartyId" type="xsd:IDREF" minOccurs="0"/>
      </xsd:sequence>
      <xsd:attribute name="NumberElected" type="xsd:integer"/>
      <xsd:attribute name="VotesAllowed" type="xsd:integer" use="required"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

```



```

</xsd:complexType>
<xsd:complexType name="CandidateSelection">
  <xsd:complexContent>
    <xsd:extension base="BallotSelection">
      <xsd:sequence>
        <xsd:element name="CandidateId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="EndorsementPartyId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
      <xsd:attribute name="IsWriteIn" type="xsd:boolean"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="Coalition">
  <xsd:complexContent>
    <xsd:extension base="Party">
      <xsd:sequence>
        <xsd:element name="ContestId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="PartyId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="Code">
  <xsd:attribute name="OtherType" type="xsd:string"/>
  <xsd:attribute name="Type" type="CodeType" use="required"/>
  <xsd:attribute name="Value" type="xsd:string" use="required"/>
</xsd:complexType>
<xsd:complexType name="ContactInformation">
  <xsd:sequence>
    <xsd:element name="Name" type="xsd:string" minOccurs="0"/>
    <xsd:element name="AddressLine" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Email" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Fax" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Phone" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Schedule" type="Schedule" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Uri" type="xsd:anyURI" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Contest" abstract="true">
  <xsd:sequence>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="BallotTitle" type="InternationalizedText" minOccurs="0"/>
    <xsd:element name="BallotSubTitle" type="InternationalizedText" minOccurs="0"/>
    <xsd:element name="BallotSelection" type="BallotSelection" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="JurisdictionalScopeId" type="xsd:IDREF"/>
    <xsd:element name="SummaryCounts" type="SummaryCounts" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
  <xsd:attribute name="Abbreviation" type="xsd:string"/>
  <xsd:attribute name="HasRotation" type="xsd:boolean"/>
  <xsd:attribute name="Name" type="xsd:string" use="required"/>
  <xsd:attribute name="OtherVoteVariationType" type="xsd:string"/>
  <xsd:attribute name="SequenceOrder" type="xsd:integer"/>
  <xsd:attribute name="SubUnitsReported" type="xsd:integer"/>
  <xsd:attribute name="TotalSubUnits" type="xsd:integer"/>
  <xsd:attribute name="VoteVariationType" type="VoteVariationType"/>
</xsd:complexType>
<xsd:complexType name="CountStatus">
  <xsd:attribute name="OtherType" type="xsd:string"/>
  <xsd:attribute name="Status" type="CountItemStatus" use="required"/>
  <xsd:attribute name="Type" type="CountItemType" use="required"/>
</xsd:complexType>
<xsd:complexType name="Counts" abstract="true">
  <xsd:sequence>
    <xsd:element name="Device" type="Device" minOccurs="0"/>
    <xsd:element name="GpUnitId" type="xsd:IDREF" minOccurs="0"/>
  </xsd:sequence>
  <xsd:attribute name="OtherType" type="xsd:string"/>
  <xsd:attribute name="Type" type="CountItemType"/>
</xsd:complexType>
<xsd:complexType name="Device">
  <xsd:attribute name="Manufacturer" type="xsd:string"/>
  <xsd:attribute name="Model" type="xsd:string"/>
  <xsd:attribute name="Type" type="DeviceType"/>
</xsd:complexType>
<xsd:complexType name="Election">
  <xsd:sequence>
    <xsd:element name="Name" type="InternationalizedText"/>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="ContactInformation" type="ContactInformation" minOccurs="0"/>
    <xsd:element name="ElectionScopeId" type="xsd:IDREF"/>
    <xsd:element name="CountStatus" type="CountStatus" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="BallotStyleCollection" minOccurs="0">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="BallotStyle" type="BallotStyle" minOccurs="1" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="CandidateCollection" minOccurs="0">
      <xsd:complexType>
        <xsd:sequence>

```

```

        <xsd:element name="Candidate" type="Candidate" minOccurs="1" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="ContestCollection" minOccurs="0">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element name="Contest" type="Contest" minOccurs="1" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
</xsd:sequence>
<xsd:attribute name="Date" type="xsd:date" use="required"/>
<xsd:attribute name="EndDate" type="xsd:date"/>
<xsd:attribute name="Type" type="ElectionType" use="required"/>
</xsd:complexType>
<xsd:complexType name="ElectionReport">
  <xsd:sequence>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Notes" type="xsd:string" minOccurs="0"/>
    <xsd:element name="GpUnitCollection" minOccurs="0">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="GpUnit" type="GpUnit" minOccurs="1" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="PartyCollection" minOccurs="0">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="Party" type="Party" minOccurs="1" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="PersonCollection" minOccurs="0">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="Person" type="Person" minOccurs="1" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="OfficeCollection" minOccurs="0">
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="Office" type="Office" minOccurs="1" maxOccurs="unbounded"/>
          <xsd:element name="OfficeGroup" type="OfficeGroup" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
    <xsd:element name="Election" type="Election" minOccurs="0"/>
    <xsd:element ref="ds:Signature" minOccurs="0"/>
  </xsd:sequence>
  <xsd:attribute name="Format" type="ReportDetailLevel" use="required"/>
  <xsd:attribute name="GeneratedDate" type="xsd:dateTime" use="required"/>
  <xsd:attribute name="IsTest" type="xsd:boolean"/>
  <xsd:attribute name="Issuer" type="xsd:string" use="required"/>
  <xsd:attribute name="IssuerAbbreviation" type="xsd:string" use="required"/>
  <xsd:attribute name="Sequence" type="xsd:integer" use="required"/>
  <xsd:attribute name="SequenceEnd" type="xsd:integer" use="required"/>
  <xsd:attribute name="Status" type="ResultsStatus" use="required"/>
  <xsd:attribute name="TestType" type="xsd:string"/>
  <xsd:attribute name="VendorApplicationId" type="xsd:string" use="required"/>
</xsd:complexType>
<xsd:complexType name="GpUnit" abstract="true">
  <xsd:sequence>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="ComposingGpUnitId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="SummaryCounts" type="SummaryCounts" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
  <xsd:attribute name="Name" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="Hours">
  <xsd:attribute name="Day" type="DayType"/>
  <xsd:attribute name="EndTime" type="TimewithZone" use="required"/>
  <xsd:attribute name="StartTime" type="TimewithZone" use="required"/>
</xsd:complexType>
<xsd:complexType name="InternationalizedText">
  <xsd:sequence>
    <xsd:element name="LanguageString" type="LanguageString" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="Identifier" type="xsd:string"/>
</xsd:complexType>
<xsd:complexType name="LanguageString">
  <xsd:simpleContent>
    <xsd:extension base="xsd:string">
      <xsd:attribute name="Language" type="xsd:language" use="required"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="Office">
  <xsd:sequence>

```

```

    <xsd:element name="Name" type="InternationalizedText"/>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Term" type="Term" minOccurs="0"/>
    <xsd:element name="JurisdictionalScopeId" type="xsd:IDREF" minOccurs="0"/>
    <xsd:element name="OfficeHolderId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="ContactInformation" type="ContactInformation" minOccurs="0"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
  <xsd:attribute name="FilingDeadline" type="xsd:dateTime"/>
  <xsd:attribute name="IsPartisan" type="xsd:boolean"/>
</xsd:complexType>
<xsd:complexType name="OfficeGroup">
  <xsd:sequence>
    <xsd:element name="OfficeId" type="xsd:IDREF" minOccurs="1" maxOccurs="unbounded"/>
    <xsd:element name="SubOfficeGroup" type="OfficeGroup" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="Name" type="xsd:string" use="required"/>
</xsd:complexType>
<xsd:complexType name="OrderedContest">
  <xsd:sequence>
    <xsd:element name="ContestId" type="xsd:IDREF"/>
    <xsd:element name="BallotSelectionId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
</xsd:complexType>
<xsd:complexType name="Party">
  <xsd:sequence>
    <xsd:element name="Name" type="InternationalizedText"/>
    <xsd:element name="Code" type="Code" minOccurs="0" maxOccurs="unbounded"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
  <xsd:attribute name="Abbreviation" type="xsd:string"/>
  <xsd:attribute name="Color" type="HtmlColorString"/>
  <xsd:attribute name="LogoUri" type="xsd:anyURI"/>
</xsd:complexType>
<xsd:complexType name="PartyContest">
  <xsd:complexContent>
    <xsd:extension base="Contest"/>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="PartyRegistration">
  <xsd:sequence>
    <xsd:element name="PartyId" type="xsd:IDREF"/>
  </xsd:sequence>
  <xsd:attribute name="Count" type="xsd:integer" use="required"/>
</xsd:complexType>
<xsd:complexType name="PartySelection">
  <xsd:complexContent>
    <xsd:extension base="BallotSelection">
      <xsd:sequence>
        <xsd:element name="PartyId" type="xsd:IDREF" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="Person">
  <xsd:sequence>
    <xsd:element name="ContactInformation" type="ContactInformation" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="FirstName" type="xsd:string" minOccurs="0"/>
    <xsd:element name="FullName" type="InternationalizedText" minOccurs="0"/>
    <xsd:element name="Gender" type="xsd:string" minOccurs="0"/>
    <xsd:element name="LastName" type="xsd:string" minOccurs="0"/>
    <xsd:element name="MiddleName" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
    <xsd:element name="Nickname" type="xsd:string" minOccurs="0"/>
    <xsd:element name="PartyId" type="xsd:IDREF" minOccurs="0"/>
    <xsd:element name="Prefix" type="xsd:string" minOccurs="0"/>
    <xsd:element name="Profession" type="InternationalizedText" minOccurs="0"/>
    <xsd:element name="Suffix" type="xsd:string" minOccurs="0"/>
    <xsd:element name="Title" type="InternationalizedText" minOccurs="0"/>
  </xsd:sequence>
  <xsd:attribute name="ObjectId" type="xsd:ID" use="required"/>
  <xsd:attribute name="DateOfBirth" type="xsd:date"/>
</xsd:complexType>
<xsd:complexType name="ReportingDevice">
  <xsd:complexContent>
    <xsd:extension base="GpUnit">
      <xsd:sequence>
        <xsd:element name="Device" type="Device" minOccurs="0"/>
      </xsd:sequence>
      <xsd:attribute name="SerialNumber" type="xsd:string"/>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="ReportingUnit">
  <xsd:complexContent>
    <xsd:extension base="GpUnit">
      <xsd:sequence>
        <xsd:element name="AuthorityId" type="xsd:IDREF" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="ContactInformation" type="ContactInformation" minOccurs="0"/>
        <xsd:element name="CountStatus" type="CountStatus" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="PartyRegistration" type="PartyRegistration" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element name="SpatialDimension" type="SpatialDimension" minOccurs="0"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>

```

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        <xsd:attribute name="IsElectoralDistrict" type="xsd:boolean"/>
        <xsd:attribute name="OtherType" type="xsd:string"/>
        <xsd:attribute name="SubUnitsReported" type="xsd:integer"/>
        <xsd:attribute name="TotalSubUnits" type="xsd:integer"/>
        <xsd:attribute name="Type" type="ReportingUnitType" use="required"/>
        <xsd:attribute name="VotersParticipated" type="xsd:integer"/>
        <xsd:attribute name="VotersRegistered" type="xsd:integer"/>
    </xsd:extension>
</xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="RetentionContest">
    <xsd:complexContent>
        <xsd:extension base="BallotMeasureContest">
            <xsd:sequence>
                <xsd:element name="CandidateId" type="xsd:IDREF"/>
                <xsd:element name="OfficeId" type="xsd:IDREF" minOccurs="0"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="Schedule">
    <xsd:sequence>
        <xsd:element name="Hours" type="Hours" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
    <xsd:attribute name="EndDate" type="xsd:date"/>
    <xsd:attribute name="IsOnlyByAppointment" type="xsd:boolean"/>
    <xsd:attribute name="IsOrByAppointment" type="xsd:boolean"/>
    <xsd:attribute name="IsSubjectToChange" type="xsd:boolean"/>
    <xsd:attribute name="StartDate" type="xsd:date"/>
</xsd:complexType>
<xsd:complexType name="SpatialDimension">
    <xsd:sequence>
        <xsd:element name="SpatialExtent" type="SpatialExtent" minOccurs="0"/>
    </xsd:sequence>
    <xsd:attribute name="MapUri" type="xsd:anyURI"/>
</xsd:complexType>
<xsd:complexType name="SpatialExtent">
    <xsd:sequence>
        <xsd:element name="Coordinates" type="xsd:string"/>
    </xsd:sequence>
    <xsd:attribute name="Format" type="GeoSpatialFormat" use="required"/>
</xsd:complexType>
<xsd:complexType name="SummaryCounts">
    <xsd:complexContent>
        <xsd:extension base="Counts">
            <xsd:attribute name="BallotsCast" type="xsd:integer"/>
            <xsd:attribute name="BallotsOutstanding" type="xsd:integer"/>
            <xsd:attribute name="BallotsRejected" type="xsd:integer"/>
            <xsd:attribute name="Overvotes" type="xsd:integer"/>
            <xsd:attribute name="Undervotes" type="xsd:integer"/>
            <xsd:attribute name="WriteIns" type="xsd:integer"/>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="Term">
    <xsd:attribute name="EndDate" type="xsd:date"/>
    <xsd:attribute name="StartDate" type="xsd:date"/>
    <xsd:attribute name="Type" type="OfficeTermType"/>
</xsd:complexType>
<xsd:complexType name="VoteCounts">
    <xsd:complexContent>
        <xsd:extension base="Counts">
            <xsd:attribute name="Count" type="xsd:float" use="required"/>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
</xsd:schema>

```