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1  <?xml version="1.0" encoding="UTF-8"?>
2  <xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified" version="1.0">
3    <xs:annotation>
4      <xs:documentation>
5        This schema defines the travel time export from the Amsterdam Travel Time system!
6      </xs:documentation>
7    </xs:annotation>
8    <xs:simpleType name="payloadTypeEnum" final="restriction">
9      <xs:annotation>
10        <xs:documentation>
11          Various types of payloads exposed by the system.
12        </xs:documentation>
13      </xs:annotation>
14      <xs:restriction base="xs:NMTOKEN">
15        <xs:enumeration value="travelTime"/>
16        <xs:enumeration value="individualTravelTime"/>
17        <xs:enumeration value="trafficFlow"/>
18      </xs:restriction>
19    </xs:simpleType>
20    <xs:simpleType name="travelTimeTypeEnum" final="restriction">
21      <xs:annotation>
22        <xs:documentation>
23          Various types of travel times exposed by the system.
24        </xs:documentation>
25      </xs:annotation>
26      <xs:restriction base="xs:NMTOKEN">
27        <xs:enumeration value="raw"/>
28        <xs:enumeration value="representative"/>
29        <xs:enumeration value="processed"/>
30        <xs:enumeration value="predicted"/>
31        <xs:enumeration value="actual"/>
32      </xs:restriction>
33    </xs:simpleType>
34    <xs:simpleType name="measurementSiteTypeEnum" final="restriction">
35      <xs:annotation>
36        <xs:documentation>
37          Various types of measurement sites.
38        </xs:documentation>
39      </xs:annotation>
40      <xs:restriction base="xs:NMTOKEN">
41        <xs:enumeration value="location">
42          <xs:annotation>
43            <xs:documentation>
44              A location refers to a point location in the road network from which data (vehicle passages) are collected.
45              A location consists of one or more camera-lane pairs.
46              The Amsterdam Travel time system delivers vehicle count per location per lane per vehicle category under the
47              trafficflow publication.
48            </xs:documentation>
49          </xs:annotation>

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50     <xs:enumeration value="section">
51         <xs:annotation>
52             <xs:documentation>
53                 A section refers to a traversible route between two locations.
54                 The Amsterdam Travel time system delivers the following for the sections defined in the system
55                 a. Raw, representative and processed travel time values under the traveltime publication.
56                 b. Individual travel time values under the individualtraveltime publication
57             </xs:documentation>
58         </xs:annotation>
59     </xs:enumeration>
60     <xs:enumeration value="trajectory">
61         <xs:annotation>
62             <xs:documentation>
63                 A trajectory refers to a traversible route created using one or more sections.
64                 The Amsterdam Travel time system delivers teh following for teh trajectories defined in the system
65                 a. Processed, predicted and actual under the traveltime publication.
66             </xs:documentation>
67         </xs:annotation>
68     </xs:enumeration>
69 </xs:restriction>
70 </xs:simpleType>
71 <xs:simpleType name="trafficAlarms" final="restriction">
72     <xs:annotation>
73         <xs:documentation>
74             Pattern definition for the alaram identifier.
75             ALARM matches the characters ALARM literally (case sensitive). \d matches a digit (equal to [0-9]). {3} Quantifier –
             Matches exactly 3 times
76         </xs:documentation>
77     </xs:annotation>
78     <xs:restriction base="xs:string">
79         <xs:pattern value="ALARM[0-9][0-9][0-9]" />
80     </xs:restriction>
81 </xs:simpleType>
82 <xs:simpleType name="estimationTypeEnum" final="restriction">
83     <xs:annotation>
84         <xs:documentation>
85             The type of estimation used to arrive at the computed travel time
86         </xs:documentation>
87     </xs:annotation>
88     <xs:restriction base="xs:NMTOKEN">
89         <xs:enumeration value="best" />
90         <xs:enumeration value="estimated" />
91         <xs:enumeration value="instantaneous" />
92         <xs:enumeration value="reconstituted" />
93     </xs:restriction>
94 </xs:simpleType>
95 <xs:simpleType name="CameraStatusEnum">
96     <xs:restriction base="xs:string">
97         <xs:enumeration value="on">
98             <xs:annotation>

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99         <xs:documentation>camera is active for travel-time system and functioning</xs:documentation>
100     </xs:annotation>
101 </xs:enumeration>
102 <xs:enumeration value="off">
103     <xs:annotation>
104         <xs:documentation>camera is not active for travel-time system</xs:documentation>
105     </xs:annotation>
106 </xs:enumeration>
107 <xs:enumeration value="outage">
108     <xs:annotation>
109         <xs:documentation>camera is active for travel-time system, but malfunctioning</xs:documentation>
110     </xs:annotation>
111 </xs:enumeration>
112 </xs:restriction>
113 </xs:simpleType>
114 <xs:simpleType name="severityEnum">
115     <xs:restriction base="xs:string">
116         <xs:enumeration value="low"/>
117         <xs:enumeration value="medium"/>
118         <xs:enumeration value="high"/>
119     </xs:restriction>
120 </xs:simpleType>
121 <xs:element name="amsterdamTravelTimes">
122     <xs:complexType>
123         <xs:sequence>
124             <xs:element ref="payloadPublication"/>
125         </xs:sequence>
126     </xs:complexType>
127 </xs:element>
128 <xs:element name="payloadPublication">
129     <xs:complexType>
130         <xs:sequence>
131             <xs:element ref="publicationReference" minOccurs="1" maxOccurs="1"/>
132             <xs:element ref="publicationTime" minOccurs="1" maxOccurs="1"/>
133             <xs:element ref="measurementPeriod" minOccurs="1" maxOccurs="1"/>
134             <xs:element ref="siteMeasurements" minOccurs="0" maxOccurs="unbounded"/>
135         </xs:sequence>
136         <xs:attribute name="type" use="required" type="payloadTypeEnum">
137             <xs:annotation>
138                 <xs:documentation>
139                     The type of publication. Refer payloadTypeEnum for details
140                 </xs:documentation>
141             </xs:annotation>
142         </xs:attribute>
143     </xs:complexType>
144 </xs:element>
145 <xs:element name="publicationReference">
146     <xs:complexType>
147         <xs:annotation>
148             <xs:documentation>
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149         The publication identification details.
150     </xs:documentation>
151 </xs:annotation>
152 <xs:attribute name="id" use="required" type="xs:string">
153     <xs:annotation>
154         <xs:documentation>
155             Unique publication identifier. The ID is a unique for data set delivered by the system and shall remain unchanged
             throughout the system lifetime
156         </xs:documentation>
157     </xs:annotation>
158 </xs:attribute>
159 <xs:attribute name="version" use="required" type="xs:decimal">
160     <xs:annotation>
161         <xs:documentation>
162             The version of the publication. Incremented (+1) every time section and/or route definition are modified.i.e.,
163             a. New section(s) and/or trajectory(ies) are activated
164             b. Existing section(s) and/or trajectory(ies) are deactivated
165             c. Existing section(s) and/or trajectories are modified
166         </xs:documentation>
167     </xs:annotation>
168 </xs:attribute>
169 </xs:complexType>
170 </xs:element>
171 <xs:element name="publicationTime" type="xs:dateTime">
172     <xs:annotation>
173         <xs:documentation>
174             The date time the latest version (refer attribute "version") for this publication was published in UTC format: ISO
             8601 [https://en.wikipedia.org/wiki/ISO\_8601]
175         </xs:documentation>
176     </xs:annotation>
177 </xs:element>
178 <xs:element name="measurementPeriod">
179     <xs:complexType>
180         <xs:annotation>
181             <xs:documentation>
182                 The period against which the statistics were reported. The period is defined either using the
                 measurementStartTime-duration pair or measurementStartTime-measurementendTime pair.
183                 A default measurement period of 60s is assumed, if duration and measurementEndTime elements are not present.
184             </xs:documentation>
185         </xs:annotation>
186         <xs:sequence>
187             <xs:element ref="measurementStartTime" minOccurs="1" maxOccurs="1"/>
188             <xs:element ref="measurementEndTime" minOccurs="0" maxOccurs="1"/>
189             <xs:element ref="duration" minOccurs="0" maxOccurs="1"/>
190         </xs:sequence>
191     </xs:complexType>
192 </xs:element>
193 <xs:element name="measurementStartTime" type="xs:dateTime">
194     <xs:annotation>
195         <xs:documentation>

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196         The time recorded here is the starting time of the supply period in UTC format: ISO 8601
197         [https://en.wikipedia.org/wiki/ISO_8601]
198     </xs:documentation>
199 </xs:annotation>
200 </xs:element>
201 <xs:element name="measurementEndTime" type="xs:dateTime">
202     <xs:annotation>
203         <xs:documentation>
204             The time recorded here is the ending time of the supply period in UTC format: ISO 8601
205             [https://en.wikipedia.org/wiki/ISO_8601]
206         </xs:documentation>
207     </xs:annotation>
208 </xs:element>
209 <xs:element name="duration" type="xs:integer">
210     <xs:annotation>
211         <xs:documentation>
212             The duration element provides the measurement frequency at which the trave time values are calculated/exported.
213         </xs:documentation>
214     </xs:annotation>
215 </xs:element>
216 <xs:element name="siteMeasurements">
217     <xs:complexType>
218         <xs:annotation>
219             <xs:documentation>
220                 The sitemeasurements element include the traffic data per measurement site (location/section/trajectory).
221                 The element shall be repeated for each measurement site (location/section/trajectory) for which data is avialable
222                 for a measurement period.
223                 If there are no active sites or none of the site have valid data to be delivered, the element will not be included
224                 in the measurement file
225             </xs:documentation>
226         </xs:annotation>
227     </xs:complexType>
228     <xs:sequence>
229         <xs:element ref="measurementSiteReference" minOccurs="1" maxOccurs="1"/>
230         <xs:element ref="travelTimeData" minOccurs="0" maxOccurs="unbounded"/>
231         <xs:element ref="individualTravelTimeData" minOccurs="0" maxOccurs="unbounded"/>
232         <xs:element ref="trafficFlowData" minOccurs="0" maxOccurs="unbounded"/>
233         <xs:element ref="trafficAlarms" minOccurs="0" maxOccurs="1"/>
234         <xs:element ref="situations" minOccurs="0" maxOccurs="1"/>
235     </xs:sequence>
236 </xs:element>
237 <xs:element name="measurementSiteReference">
238     <xs:complexType>
239         <xs:annotation>
240             <xs:documentation>
241                 The measuremenetsitereference element describes the measurement site (section or trajectory) against which the
242                 values are reported
243             </xs:documentation>
244         </xs:annotation>
245     </xs:complexType>
246 </xs:element>

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241     <xs:element ref="measurementSiteName" minOccurs="1" maxOccurs="1"/>
242     <xs:element ref="measurementSiteType" minOccurs="1" maxOccurs="1"/>
243     <xs:element ref="length" minOccurs="0" maxOccurs="1"/>
244     <xs:element ref="locationContainedInItinerary" minOccurs="0" maxOccurs="1"/>
245     <xs:element ref="location" minOccurs="0" maxOccurs="1"/>
246 </xs:sequence>
247 <xs:attribute name="id" use="required" type="xs:string">
248     <xs:annotation>
249         <xs:documentation>
250             The unique identifier for a measurement site.
251         </xs:documentation>
252     </xs:annotation>
253 </xs:attribute>
254 <xs:attribute name="version" use="required" type="xs:decimal">
255     <xs:annotation>
256         <xs:documentation>
257             The version of the measurement site. The version is updated (+1), follwong an update to any of the site's
                attributes.
258         </xs:documentation>
259     </xs:annotation>
260 </xs:attribute>
261 </xs:complexType>
262 </xs:element>
263 <xs:element name="measurementSiteName" type="xs:string">
264     <xs:annotation>
265         <xs:documentation>
266             An optional readable name for the measurement site.
267         </xs:documentation>
268     </xs:annotation>
269 </xs:element>
270 <xs:element name="measurementSiteType" type="measurementSiteTypeEnum">
271     <xs:annotation>
272         <xs:documentation>
273             Measurement site type. A measurement site can be either a lcoation, a section or a trajectory (Refer
                measurementSiteTypeEnum) .
274         </xs:documentation>
275     </xs:annotation>
276 </xs:element>
277 <xs:element name="length" type="xs:integer">
278     <xs:annotation>
279         <xs:documentation>
280             This element contains information about the length (in meters) of the measurement site. Applicable only for sections
                and trajectories
281         </xs:documentation>
282     </xs:annotation>
283 </xs:element>
284 <xs:element name="locationContainedInItinerary">
285     <xs:complexType>
286     <xs:annotation>
287         <xs:documentation>

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288     The element locationContainedInItinerary is used to be able to record a sorted list of measurement locations which
289     forms the measurement site.
290     The element is used only for describing measurement site of type section or trajectories.
291     A maximum of two locations should be present if the measurement site is of type "section" (start and end location).
292     The no: of locations is unbounded if the measurement site is of type "trajectory" (start location, end location and
293     all via locations)
294     </xs:documentation>
295     </xs:annotation>
296     <xs:sequence>
297       <xs:element ref="location" minOccurs="2" maxOccurs="unbounded"/>
298     </xs:sequence>
299   </xs:complexType>
300 </xs:element>
301 <xs:element name="location">
302   <xs:complexType>
303     <xs:annotation>
304       <xs:documentation>
305         The location element describe a point location that is part of the measurement site.
306       </xs:documentation>
307     </xs:annotation>
308     <xs:sequence>
309       <xs:element ref="lane" minOccurs="1" maxOccurs="unbounded" />
310     </xs:sequence>
311     <xs:attribute name="index" use="optional" type="xs:integer">
312       <xs:annotation>
313         <xs:documentation>
314           The index attribute indicates the order of measurement location in the itinerary. Optional, if the measurement
315           site is a point location.
316         </xs:documentation>
317       </xs:annotation>
318     </xs:attribute>
319   </xs:complexType>
320 </xs:element>
321 <xs:element name="lane">
322   <xs:complexType>
323     <xs:annotation>
324       <xs:documentation>
325         The lane element describes a specific lane in the measurement location.
326       </xs:documentation>
327     </xs:annotation>
328     <xs:sequence>
329       <xs:element ref="camera" maxOccurs="unbounded"/>
330     </xs:sequence>
331     <xs:attribute name="specificLane" use="required" type="xs:string">
332       <xs:annotation>
333         <xs:documentation>
334           Indicative name for the lane (lane1, lane2, lane3 ... lane9 etc) used in the Amsterdam Travel Time system.
335           The actual lane number is available under the element lanenr with respect to the camera view direction at the
336           measurement location.
337         </xs:documentation>

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334     </xs:annotation>
335   </xs:attribute>
336 </xs:complexType>
337 </xs:element>
338 <xs:element name="camera">
339   <xs:complexType>
340     <xs:annotation>
341       <xs:documentation>
342         The camera element describes a single camera at a measurement location
343       </xs:documentation>
344     </xs:annotation>
345     <xs:sequence>
346       <xs:element ref="coordinates" minOccurs="0" maxOccurs="1"/>
347       <xs:element ref="laneNumber" minOccurs="1" maxOccurs="1"/>
348       <xs:element ref="status" minOccurs="0" maxOccurs="1"/>
349       <xs:element ref="viewDirection" minOccurs="1" maxOccurs="1"/>
350     </xs:sequence>
351     <xs:attribute name="id" use="required" type="xs:string">
352       <xs:annotation>
353         <xs:documentation>
354           The unique camera identifier (defined by the ANPR data supplier). Format: UUIDv4
355         </xs:documentation>
356       </xs:annotation>
357     </xs:attribute>
358   </xs:complexType>
359 </xs:element>
360 <xs:element name="coordinates">
361   <xs:complexType>
362     <xs:attribute name="latitude" use="required" type="xs:decimal">
363       <xs:annotation>
364         <xs:documentation>
365           Latitude (WGS84) in degrees. (+/- 90 degrees; North = positive; South = negative) Examples:
366             -90deg (south)      = -90.0000000
367             0deg0min1sec (north) =  0.0000016
368             50deg50min (north)  =  50.8333333
369         </xs:documentation>
370       </xs:annotation>
371     </xs:attribute>
372     <xs:attribute name="longitude" use="required" type="xs:decimal">
373       <xs:annotation>
374         <xs:documentation>
375           Longitude (WGS84) in degrees. (+/- 180 degrees; East = positive; West = negative). Examples:
376             -180deg (west)      = -180.0000000
377             0deg0min1sec (east) =  0.0000016
378         </xs:documentation>
379       </xs:annotation>
380     </xs:attribute>
381   </xs:complexType>
382 </xs:element>
383 <xs:element name="laneNumber" type="xs:integer">

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384 <xs:annotation>
385 <xs:documentation>
386     Lanenumber, calculated from the 'middle' of the road.
387     lane direction is indicated by being positive (regular traffic should be moving away from the camera).
388     Or being negative (regular traffic should be moving towards the camera). F.ex.:
389     - Left lane with regular traffic moving away from the camera is number: 1
390     - Left lane with regular traffic moving towards the camera is number: -1
391 </xs:documentation>
392 </xs:annotation>
393 </xs:element>
394 <xs:element name="status" type="CameraStatusEnum">
395 <xs:annotation>
396 <xs:documentation>
397     The status element is used to indicate the status of the camera during the measurement period.
398 </xs:documentation>
399 </xs:annotation>
400 </xs:element>
401 <xs:element name="viewDirection" type="xs:integer">
402 <xs:annotation>
403 <xs:documentation>
404     The direction the camera is looking in, expressed in degrees. 0 and every 22,5 degrees are valid values.
405     0 equals looking North, 180 degrees equals to South, 90 degrees to East, 270 degrees to West.
406 </xs:documentation>
407 </xs:annotation>
408 </xs:element>
409 <!-- Elements to describe the travel time data -->
410 <xs:element name="travelTimeData">
411 <xs:complexType>
412 <xs:annotation>
413 <xs:documentation>
414     The measuredData element is used to describe the statistics computed for a measurement site. Repeated for each
415     measurement site.
416 </xs:documentation>
417 </xs:annotation>
418 <xs:sequence>
419 <xs:element ref="dataError" minOccurs="0"/>
420 <xs:element ref="travelTime" minOccurs="1" maxOccurs="1"/>
421 <xs:element ref="trafficSpeed" minOccurs="1" maxOccurs="1"/>
422 <xs:element ref="numberOfInputValuesUsed" minOccurs="0" maxOccurs="1"/>
423 </xs:sequence>
424 <xs:attribute name="dataQuality" use="optional" type="xs:decimal">
425 <xs:annotation>
426 <xs:documentation>
427     Quality of the computed travel time/speed (0...100%)
428 </xs:documentation>
429 </xs:annotation>
430 </xs:attribute>
431 <xs:attribute name="estimationType" use="optional" type="estimationTypeEnum">
432 <xs:annotation>
433 <xs:documentation>

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433         The type of estimation used, one of estimationtypeenum (for e.g. best, extrapoated)
434     </xs:documentation>
435 </xs:annotation>
436 </xs:attribute>
437 <xs:attribute name="numberOfInputValuesUsed" use="optional" type="xs:integer" default="0">
438     <xs:annotation>
439         <xs:documentation>
440             The total no: of samples (individual travel times) used to compute the travel time.
441         </xs:documentation>
442     </xs:annotation>
443 </xs:attribute>
444 <xs:attribute name="travelTimeType" use="required" type="travelTimeTypeEnum">
445     <xs:annotation>
446         <xs:documentation>
447             Travel time type. One of travelTimeTypeEnum.
448         </xs:documentation>
449     </xs:annotation>
450 </xs:attribute>
451 </xs:complexType>
452 </xs:element>
453 <xs:element name="dataError" type="xs:boolean" default="false">
454     <xs:annotation>
455         <xs:documentation>
456             Optional elemnt to indicate whether there were errors in the travel time computation or there are alarm reported
             against this site.
457         </xs:documentation>
458     </xs:annotation>
459 </xs:element>
460 <xs:element name="travelTime" type="xs:integer" default="-1">
461     <xs:annotation>
462         <xs:documentation>
463             The computed travel time in seconds.
464         </xs:documentation>
465     </xs:annotation>
466 </xs:element>
467 <xs:element name="trafficSpeed" type="xs:integer">
468     <xs:annotation>
469         <xs:documentation>
470             The computed driving speed in kmph.
471         </xs:documentation>
472     </xs:annotation>
473 </xs:element>
474 <xs:element name="numberOfInputValuesUsed">
475     <xs:complexType>
476     <xs:annotation>
477         <xs:documentation>
478             The numberOfInputValuesUsed elemenet provides the no: of samples (indiviual travel times) per vehicle category used
             in the travel time calculation.
479         </xs:documentation>
480     </xs:annotation>

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481     <xs:sequence>
482       <xs:element ref="category" minOccurs="0" maxOccurs="unbounded" />
483     </xs:sequence>
484   </xs:complexType>
485 </xs:element>
486 <xs:element name="category">
487   <xs:complexType>
488     <xs:annotation>
489       <xs:documentation>
490         The element category is used to describe a category and the no: of samples based in this category.
491       </xs:documentation>
492     </xs:annotation>
493     <xs:attribute name="count" use="required" type="xs:integer">
494       <xs:annotation>
495         <xs:documentation>
496           No: of samples under a vehicle category.
497         </xs:documentation>
498       </xs:annotation>
499     </xs:attribute>
500     <xs:attribute name="type" use="required" type="xs:string">
501       <xs:annotation>
502         <xs:documentation>
503           The vehicle category. Reference: https://www.rdw.nl/zakelijk/paginas/nationale-kleine-serie-typegoedkeuring
504         </xs:documentation>
505       </xs:annotation>
506     </xs:attribute>
507   </xs:complexType>
508 </xs:element>
509 <xs:element name="trafficAlarms">
510   <xs:complexType>
511     <xs:annotation>
512       <xs:documentation>
513         The trafficalarms element is used to describe the various alarms reported by the system.
514         A traffic alarm is reported by the system when it detects deviations in the traffic conditions.
515         The child element alram is repeasted for each active alarm in the system
516       </xs:documentation>
517     </xs:annotation>
518     <xs:sequence>
519       <xs:element ref="alarm" minOccurs="1" maxOccurs="unbounded"/>
520     </xs:sequence>
521   </xs:complexType>
522 </xs:element>
523 <xs:element name="alarm">
524   <xs:complexType>
525     <xs:annotation>
526       <xs:documentation>
527         The alarm element describe a single alarm available in the system
528       </xs:documentation>
529     </xs:annotation>
530     <xs:attribute name="description" use="optional" type="xs:string">

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531     <xs:annotation>
532         <xs:documentation>
533             Free text to describe the alarm.
534         </xs:documentation>
535     </xs:annotation>
536 </xs:attribute>
537 <xs:attribute name="id" use="required" type="trafficAlarms">
538     <xs:annotation>
539         <xs:documentation>
540             Unique identifier for an alarm defined in the system.
541         </xs:documentation>
542     </xs:annotation>
543 </xs:attribute>
544 </xs:complexType>
545 </xs:element>
546 <xs:element name="situations">
547     <xs:complexType>
548         <xs:annotation>
549             <xs:documentation>
550                 The situations element is used to describe any manual status reported against the measurement site by the
551                 authorized authorities.
552                 Each situation reported is described using a situation element
553             </xs:documentation>
554         </xs:annotation>
555         <xs:sequence>
556             <xs:element ref="situation" minOccurs="1" maxOccurs="unbounded"/>
557         </xs:sequence>
558     </xs:complexType>
559 </xs:element>
560 <xs:element name="situation">
561     <xs:complexType>
562         <xs:annotation>
563             <xs:documentation>
564                 The situation element describes a situation reported. Other or related situation(s) shall be specified in a
565                 seperated situation tag
566             </xs:documentation>
567         </xs:annotation>
568         <xs:sequence>
569             <xs:element ref="description" minOccurs="1" maxOccurs="1"/>
570             <xs:element ref="severity" minOccurs="0" maxOccurs="1"/>
571             <xs:element ref="validityPeriod" minOccurs="0" maxOccurs="1"/>
572         </xs:sequence>
573     </xs:complexType>
574 </xs:element>
575 <xs:element name="description" type="xs:string">
576     <xs:annotation>
577         <xs:documentation>
578             Free text describing the reported situation
579         </xs:documentation>
580     </xs:annotation>

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579 </xs:element>
580 <xs:element name="severity" type="severityEnum">
581   <xs:annotation>
582     <xs:documentation>
583       The severity of the situation
584     </xs:documentation>
585   </xs:annotation>
586 </xs:element>
587 <xs:element name="validityPeriod">
588   <xs:complexType>
589     <xs:annotation>
590       <xs:documentation>
591         The period the reported situation is valid
592       </xs:documentation>
593     </xs:annotation>
594     <xs:sequence>
595       <xs:element ref="startOfPeriod" minOccurs="0"/>
596       <xs:element ref="endOfPeriod" minOccurs="0"/>
597     </xs:sequence>
598   </xs:complexType>
599 </xs:element>
600 <xs:element name="startOfPeriod" type="xs:dateTime">
601   <xs:annotation>
602     <xs:documentation>
603       The start of a period (in UTC) in which the situation is or becomes valid
604     </xs:documentation>
605   </xs:annotation>
606 </xs:element>
607 <xs:element name="endOfPeriod" type="xs:dateTime">
608   <xs:annotation>
609     <xs:documentation>
610       The end of a period (in UTC) till which the situation is valid
611     </xs:documentation>
612   </xs:annotation>
613 </xs:element>
614 <!-- Elements to describe the individual travel times -->
615 <xs:element name="individualTravelTimeData">
616   <xs:complexType>
617     <xs:sequence>
618       <xs:element ref="licensePlate" minOccurs="1" maxOccurs="1"/>
619       <xs:element ref="vehicleCategory" minOccurs="1" maxOccurs="1"/>
620       <xs:element ref="startDetectionTime" minOccurs="1" maxOccurs="1"/>
621       <xs:element ref="endDetectionTime" minOccurs="1" maxOccurs="1"/>
622       <xs:element ref="travelTime" minOccurs="1" maxOccurs="1"/>
623       <xs:element ref="trafficSpeed" minOccurs="1" maxOccurs="1"/>
624     </xs:sequence>
625   </xs:complexType>
626 </xs:element>
627 <xs:element name="licensePlate" type="xs:string">
628   <xs:annotation>

```

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629     <xs:documentation>
630         The unique vehicle registration against which the individual travel time is computed.
631     </xs:documentation>
632 </xs:annotation>
633 </xs:element>
634 <xs:element name="vehicleCategory" type="xs:string">
635     <xs:annotation>
636     <xs:documentation>
637         The category to which the vehicle belongs to. Reference:
638         [https://www.rdw.nl/zakelijk/paginas/nationale-kleine-serie-typegoedkeuring]
639     </xs:documentation>
640     </xs:annotation>
641 </xs:element>
642 <xs:element name="startDetectionTime" type="xs:dateTime">
643     <xs:annotation>
644     <xs:documentation>
645         The date time the vehicle was detected at the start lcoation of the measurement site (section) in UTC format.
646     </xs:documentation>
647     </xs:annotation>
648 </xs:element>
649 <xs:element name="endDetectionTime" type="xs:dateTime">
650     <xs:annotation>
651     <xs:documentation>
652         The date time the vehicle was detected at the end lcoation of the measurement site (section) in UTC format.
653     </xs:documentation>
654     </xs:annotation>
655 </xs:element>
656 <!-- Elements to describe the traffic flow data -->
657 <xs:element name="trafficFlowData">
658     <xs:complexType>
659     <xs:sequence>
660         <xs:element ref="measuredFlow" minOccurs="0" maxOccurs="unbounded"/>
661     </xs:sequence>
662 </xs:complexType>
663 </xs:element>
664 <xs:element name="measuredFlow">
665     <xs:annotation>
666     <xs:documentation>
667         The measuredflow elemenst describes the intensity data computed for a specific lane in the measurement location.
668         The element is repeated for each lane present at the location.
669     </xs:documentation>
670     </xs:annotation>
671 <xs:complexType>
672     <xs:sequence>
673         <xs:element ref="vehicleFlow" minOccurs="1" maxOccurs="1"/>
674         <xs:element ref="numberOfInputValuesUsed" minOccurs="0" maxOccurs="1"/>
675     </xs:sequence>
676     <xs:attribute name="specificLane" use="required" type="xs:string">
677     <xs:annotation>
678     <xs:documentation>

```

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678         Indicative name for the lane (lane1, lane2, lane3 ... lane9 etc) used in the Amsterdam Travel Time system.
679         Refer the lane element for the detailed lane definition.
680     </xs:documentation>
681 </xs:annotation>
682 </xs:attribute>
683 </xs:complexType>
684 </xs:element>
685 <xs:element name="vehicleFlow" type="xs:integer">
686     <xs:annotation>
687         <xs:documentation>
688             The vehicleflow element provides the toatal no: of vehicle detections at the measurement site (location) for the
             measurement period.
689         </xs:documentation>
690     </xs:annotation>
691 </xs:element>
692 </xs:schema>
693
```