

## Improving Caltrans' XML file of Advertised Projects

*Adding necessary fields and moving towards a standardized, agcXML format.*

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Caltrans currently provides an XML bid of advertised projects here:

[http://www.dot.ca.gov/hq/esc/oe/weekly\\_ads/advertised.php](http://www.dot.ca.gov/hq/esc/oe/weekly_ads/advertised.php)

It is updated at 9am every morning: (see this page for more info: <http://www.dot.ca.gov/hq/esc/oe/updates.php>)

The file is structured in this format:

```
<projects>
<project ea="" typeofwork="" road="" addate="" biddate="" openlocation="" est="" title="" workdays="" dvbe="" biddercost="" nonbidcost="">
<project ea="" typeofwork="" road="" addate="" biddate="" openlocation="" est="" title="" workdays="" dvbe="" biddercost="" nonbidcost="">
</projects>
```

The root element is "Projects", and it contains a number of "Project" subelements. In the example above we are showing two empty "Project" subelements. The actual Caltrans XML file contains a "Project" subelement for every project that is up for bid.

All the data for the project that is up for bid is contained as an attribute of that subelement. In the format above, you can see the "Project" subelement has the attributes: "ea", "typeofwork", "road", and so on. These are the data fields about the project up for bid. It is somewhat non-standard for the data to be contained in the attributes instead of as subelements of "Project", but the data is still easily accessible.

This data structure can be easily translated into a spreadsheet to view it in a format we are more familiar with:

ea	typeofwork	road	addate	biddate	openlocation	est	title	workdays	dvbe	biddercost	nonbidcost
01-439814	Construct culverts and drainage facilities.	01-Hum-299-R25.9/R28.4	03/02/2009	04/01/2009	Sacramento	\$270,000.00	Humboldt County	35	5	\$20	\$13
01-447504	Upgrade Fish Passage Facility.	01-Men-101-131.0	03/30/2009	04/28/2009	Sacramento	\$437,000.00	Mendocino County	70		\$21	\$14
01-467504	Place seal coat and delineation on existing pavement.	01-Lak-175-8.3/19.5	02/23/2009	03/24/2009	Sacramento	\$490,000.00	Lake County	20	5	\$20	\$13

This XML bid file format is a great step forward, and is very useful as it is. It could however be improved by adding some additional fields and publishing the data in an industry agreed-upon format such as agcXML ([http://iweb.agc.org/iweb/Purchase/ProductDetail.aspx?Product\\_code=AGCXML](http://iweb.agc.org/iweb/Purchase/ProductDetail.aspx?Product_code=AGCXML)). If Caltrans followed the agcXML standard, the bid file could be more easily imported into Bid Management Applications offered by vendors of software intended for contractors and their agents. Caltrans has the opportunity to be a prototype for other project owners to follow.

Here is a data dictionary of the fields currently offered by Caltrans:

<b>field name</b>	<b>description</b>
ea	contract number / IFB number
typeofwork	project description
road	road location (made of district, county, and other codes)
addate	date added
biddate	bid date
openlocation	location related field, looks to be city
est	engineer's estimate
title	location of work
workdays	days to complete
dvbe	percentage of work to be subbed to DVBE firms
biddercost	cost of plans for bidders
nonbidcost	cost of plans for non bidders

Here is a data dictionary of fields that we'd like Caltrans to add to increase the value of their XML bid file:

**Description**

Owner's representative name

Owner's representative email

Owner's representative phone number

Bid Time

Bid Percent

Liquidated Damages

Attachment 1: Comparative Analysis of Caltrans XML bid file and the agcXML schemas v1.0.

Caltrans XML field Name	description	acgXML field name	comments
ea	contract number	Project.ProjectId, InvitationToBid.Project.InvitationForBidNumber	caltrans uses contract # as IFB # as well
typeofwork	project description	Project.Description	
road	road location (made of district, county, and other codes)	Address.RoadLocation.County Address.RoadLocation.NearestCity1 Address.RoadLocation.NearestCity2 Address.RoadLocation.State Address.RoadLocation.RoadName Address.RoadLocation.CrossStreetStart Address.RoadLocation.CrossStreetEnd Address.RoadLocation.MileMar	these fields don't exist in agcXML v1.0  As an easy alternative, we are just sticking the road location into InvitationToBid.Project.Address.AddressLine1.
addate	date added	InvitationToBid.Project.DateBidPosted	this field doesn't exist in agcXML v1.0
biddate	bid date	InvitationToBid.Project.BidDate	this field doesn't exist in agcXML v1.0
openlocation	contains sac or irvine, looks to be office bid came from	InvitationToBid.Project.Address.AddressLine1	Not the best place to map the field to
est	engineer's estimate	InvitationToBid.Project.EngineersEstimate	this field doesn't exist in agcXML v1.0
title	location of work	InvitationToBid.Project.Name	
workdays	days to complete	InvitationToBid.Project.DaysToComplete	this field doesn't exist in agcXML v1.0
dvbe	percentage of work to be subbed to DVBE firms	InvitationToBid.MinorityGoal	This field doesn't exist in agcXML v1.0  This should probably have a more robust definition, allowing multiple minority goals with descriptions and amounts.
biddercost	cost of plans for bidders		This may not be material enough to include in the bid data
nonbidcost	cost of plans for non bidders		This may not be material enough to include in the bid data
<not provided by Caltrans>	Owner's representative name	Organization.Owner.OwnerRepresentative.PrefixTitles + Organization.Owner.OwnerRepresentative.GivenName + Organization.Owner.OwnerRepresentative.MiddleNames + Organization.Owner.OwnerRepresentative.FamilyNames + Organization.Owner.OwnerRepresentative.Suffi	
<not provided by Caltrans>	Owner's representative email	Organization.Owner.OwnerRepresentative.TelecomAddress.Email	
<not provided by Caltrans>	Owner's representative phone number	Organization.Owner.OwnerRepresentative.TelecomAddress.Telephone	
<not provided by Caltrans>	Bid Time	InvitationToBid.Project.BidTime	this field doesn't exist in agcXML v1.0
<not provided by Caltrans>	Bid Percent	InvitationToBid.Project.BidPercent	this field doesn't exist in agcXML v1.0
<not provided by Caltrans>	Liquidated Damages	InvitationToBid.Project.LiquidatedDamages	this field doesn't exist in agcXML v1.0
	orange = fields we'd like caltrans to add	red = fields we'd like agcXML to add	
		NOTE: the "InvitationToBid" use case or schema don't exist in agcXML v1.0	