

# Senate Bill 2 Rapid Visually Screening Protocol Handbook

Benson High School, Portland



June 14, 2006



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## Protocol for Rapid Visual Screening

This Handbook is provided as a guide for completion of this work. It will not answer all questions. Please contact Don Lewis or Natalie Richards if there are major issues in the field

### **Introduction to Senate Bill #2 and Rapid Visual Screening-**

<http://www.oregongeology.com/sub/projects/rvs/default.htm>

#### **Project Overview**

Oregon Senate Bill 2 directs DOGAMI, in consultation with project partners (see below), to develop a statewide seismic needs assessment that includes seismic safety surveys of K-12 public school buildings and community college buildings that have a capacity of 250 or more persons, hospital buildings with acute inpatient care facilities, fire stations, police stations, sheriffs' offices and other law enforcement agency buildings.

The statewide needs assessment will consist of rapid visual screenings (RVS) of these buildings in accordance with [FEMA-154, 2002 Edition](#), or an equivalent standard adopted by DOGAMI; information gathering to supplement RVS; and ranking of RVS results into risk categories. The results will be posted on a publicly accessible web site.

**Rapid Visual Screening-**All Rapid Visual screenings will follow the procedures discussed in FEMA 154 Edition 2, July 2005. The manual for Rapid Visual Screening using FEMA 154 is provided in each computer system to use as a reference.

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### **Checklist of equipment**

Please treat all equipment with care.

- Notebook of Planviews, lists of sites/buildings including Multi-buildings school information
- Vest
- Clip board
- Tablet with stylus- Make and Model, screen protector, black tablet holder,
- Logitech QuickCam for Notebook Pro
- Printer- HP and Model with power supply, printer manual one replacement cartridge for black and color and paper
- 2- Bonzai Secure Digital cards with one USB Flash Drive
- GPS unit
- Surge Protector
- Auto/Air Adapter- Power<sup>2</sup>
- Personal Cell Phone
- FEMA 155 manual
- USB Cable
- Duracell battery charger with batteries
- 1 black and 1 yellow Modem cords

Each team leader (Carol Hasenberg, Tom Miller and Christine Theodoropoulos) will assure that all equipment listed above is returned in good working order to DOGAMI

Equipment breakdowns- If your computer breaks down in the field, call DOGAMI. If we need to provide a backup, FED Ex it in computer appropriate packaging back to DOGAMI care of:

Natalie Richards, PE  
SB2 Project Coordinator  
DOGAMI

800 NE Oregon St, #28  
Suite #965  
Portland, OR 97232  
971-673-0481  
natalie.richards@dogami.state.or.us

DOGAMI will FED EX a backup computer we have and fix the other. If there is no backup available, conduct RVS surveys using paper the forms provided then they will have to be input into the database at a later date.

Once a backup is available, DOGAMI will contact you about getting you the computer equipment.

It is very important to treat the computers as fragile and important equipment.

- Do not leave them at a eating establishment,
- Do not place them in adverse conditions either hot or cold,
- Do not eat or drink close to them to prevent something spilling on them
- Please use common sense and treat them as if they were your own equipment.

### **Information that needs to be downloaded onto tablets-**

- Maps-
  - County
  - City
  - Planviews
- RVS Protocol Handbook
- Travel/Misc Voucher for cell phones and disposable camera

- FEMA 154 manuals
- List of Sites- County, Unique ID, Name Address, Year, Year remodeled, site access issues #
- Flyers
- Worksheet which is the Tablet forms in case there is rain.
- Multi-building schools with scans

**Database download procedure to get site information** –Will be ADDED here

### **Conducting RVS-**

Follow guidance provided during the training session 6/21-23/2006 and all procedures explained in Rapid Visual Screening of Buildings for Potential Seismic Hazards- FEMA 154-CD, Edition 2/July 2005 which has been installed on your computers systems as a reference.

- Monday mornings check DOGAMI email or contact Natalie, Jared or Don between 8:00-9:00 for any updates.
- Please plan ahead each week using the information provided by county or the Site Contact information in the tablets and check for access issue that require coordination.
- Complete RVS survey (see instructions below)
- Save all information as you go
- Back up by double clicking the icon on desktop which brings up a MSDOS screen and automatically backs up to the Secure Digital Card in D:\ Place this in a safe place where it can't get destroyed by heat or cold.
- At the end of the day, print out forms completed (No pictures) that day and store them in the plastic box provided
- Download all data on Fridays and contact DOGAMI if there are issues
- Every Friday, Carol, Christina, Tom and Bill will meet with Natalie either in person or by conference call to discuss the progress and plan for the next week. Natalie will contact Emergency Managers by email and have Deb Schueller update the website as changes are needed.

### **Screen or Not to Screen buildings- That is the question**

- If the building meets any of the following, it will be RVS screened:
  - 250 students?
  - In Use Daily?
  - Cafeteria
  - Gym
  - Swimming Pool Complex
  - Auditorium
  - 10,000 sq ft → 3 houses or 50 ft by 200 ft
- Don't Screen if:
  - All schools are not being surveyed so please call Natalie if you have questions about schools
  - Modular units at schools
  - Maintenance building or bus shelters
  - Tribal buildings on tribal land

### **Rain Protocol**

The Fijitsu computer tablets **CANNOT** be used in the rain.

A paper copy of the tablet form is provided on the Appendix and will need to be filled out then transferred to the tablet for downloading to the database at some point.

A disposable camera will need to be bought to provide pictures. Maintain a written log of the photographs providing the same information that you would in the Tablet for each picture.

Send a copy of the form, the log and the disposable camera for development to DOGAMI:  
800 NE Oregon St, #28  
Suite 965  
Portland, OR 97232

Please keep the receipt for the disposable camera and provide it on the cell phone miscellaneous voucher for reimbursement.

The GPS unit can be used in the rain so the coordinates can be acquired and written down on the tablet form.

This screening can also be completed in your car along with photographs if they are easy to decipher.

# RAPID VISUAL SURVEY PROCEDURE

## 1.0 Site Info – General setup

When you first get to a site, turn on the GPS unit, set it on the dashboard or the hood of the car (but out from under trees), and let it acquire satellites (it sometimes takes the unit ~10 min to acquire the satellites and then get the accuracy down to 20 ft. or less). Once the GPS unit has gone through it's boot up screens and satellites are acquired and accuracy to 20ft or less, the screen will look like the example in Figure 1.

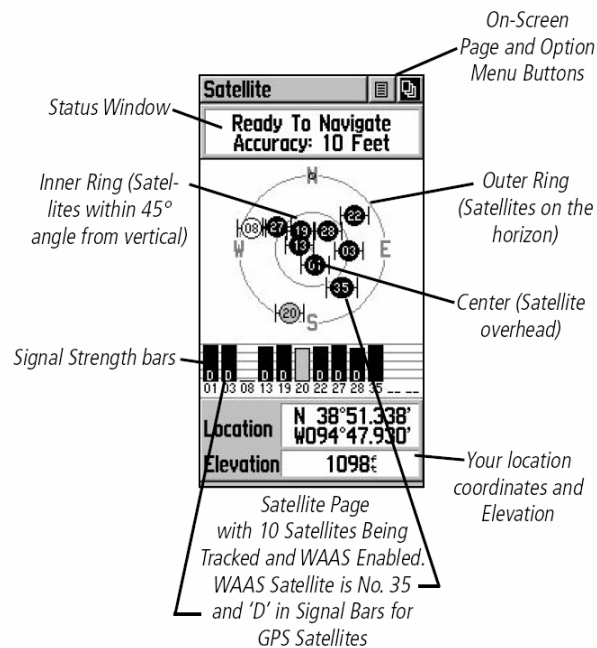


Figure 1: Example of GPS screen after boot-up.

Get out the paper **Plan View Map** (air photo of the site, Figure 2). Find your location and identify the building, buildings, and/or building entities to be surveyed. Review the additional information (building construction dates, etc Figure 3), which will be similar to example below and finalize the identification of the buildings/entities to be surveyed.

Establish a plan of surveying. Take a quick walk around the site and identify all the buildings/entities which will be surveyed. Outline each of the areas in pencil or visually on the plan view map (see example in Figure 3 with yellow outlines of buildings).

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Figure 2: Plan view map or air photo of the site



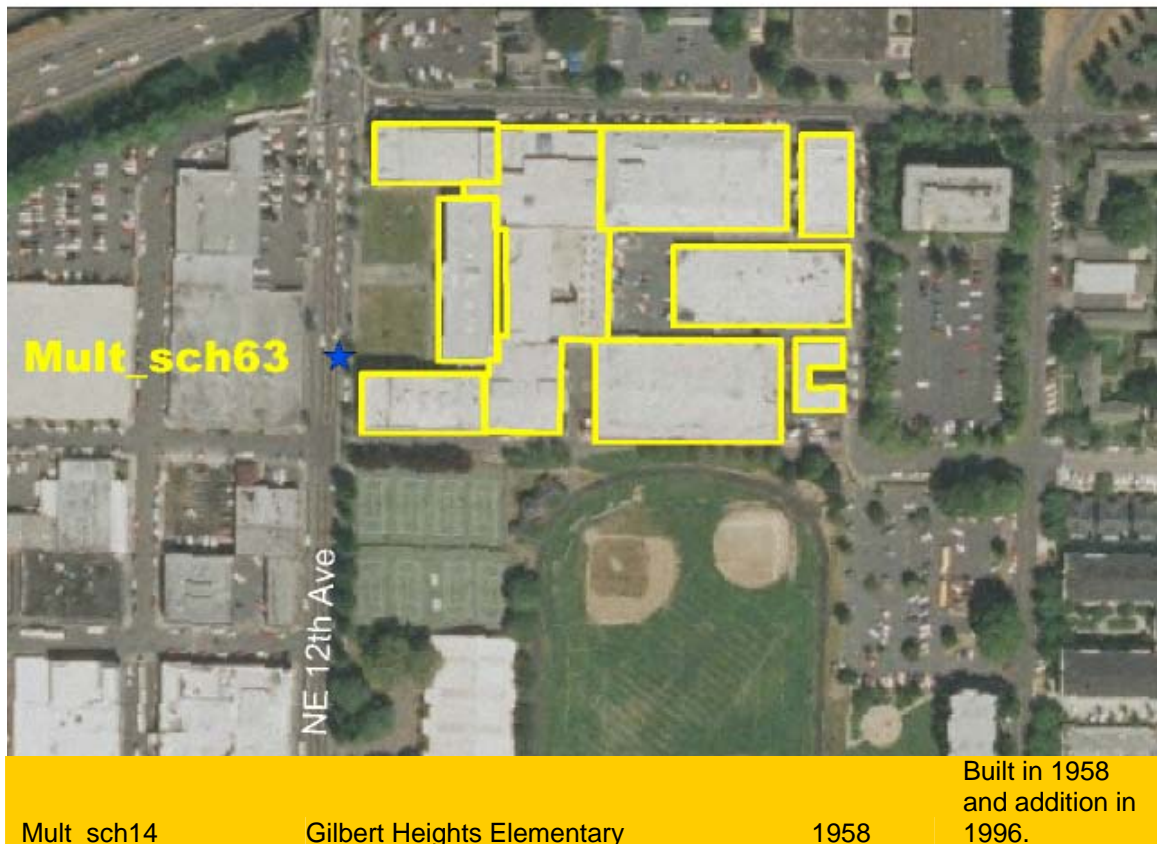


Figure 3: Plan view map or air photo of the site with buildings/entities to be surveyed outlined in yellow and additional information table.

Turn on the computer tablet, open the access database (shortcut on the desktop).

In the main RVS screen select “NEW RVS”. The first page of an empty form will come up on your screen.

## 1.1 Verify-Enter Site Information

### ***OPEN TAB: Site/Building Info***

Find the **Unique Site ID** box (at the top along the upper tool bar) and toggle down to your present site location (ex. Mult\_sch63). Make sure that the site ID number on the form matches the site ID number on the Plan View Map. Confirm that the **Site Name**, **Site Street Address**, **Site City** boxes all contain the correct information. If it isn’t correct, then correct the information.

Collect the GPS reading (see GPS procedure for details) for SITE at the main intersection of the main street and the entrance to the site. This should also be the most likely location for the site’s postal street address as shown in Figure 4 (ex: the intersection of the main street and the front sidewalk, the intersection of the main entrance driveway to the campus, see example below with

red dot at SITE GPS location). Enter **Field Site GPS X (E-W), GPS Y (N-S), and Point ID** in the appropriate places on the form. Mark the spot of that reading on your Site Plan View map.

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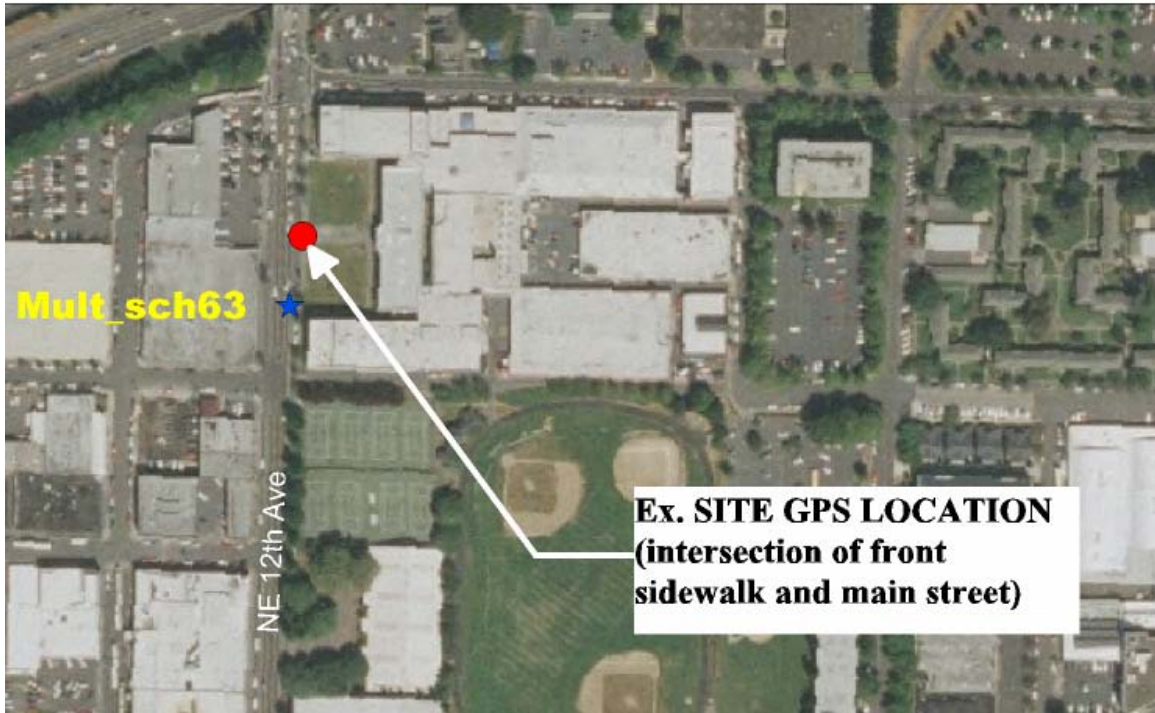


Figure 4: Example of SITE GPS location.

## 2.0 Building/Entity Specific RVS

### ***TAB: Site/Building Info***

Now toggle down to **Unique Building ID** box (about ½ way down the form) and select the unique building ID + the letter **A** (first building/entity). Outline the building/entity on the Plan View Map and mark it with the correct building/entity letter (see example outline and building/building entity letter in red), so that it matches the A area as shown in Figure5. Then verify/correct the information in the **BLDG Name, BLDG Street Address, BLDG City** boxes. If it isn't correct, then correct the information.

Collect a GPS reading for building/entity A at the main front door or main entrance to the building/entity (see example Figure 6 with red dots at each building/entity main entrance). Enter the GPS information into the **Field BLDG GPS X(E-W), GPS Y (N-S), and Point ID** boxes on the form. Mark the spot of that reading on your Site Plan View map.



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Figure 5: Example of Outlines building/entity A

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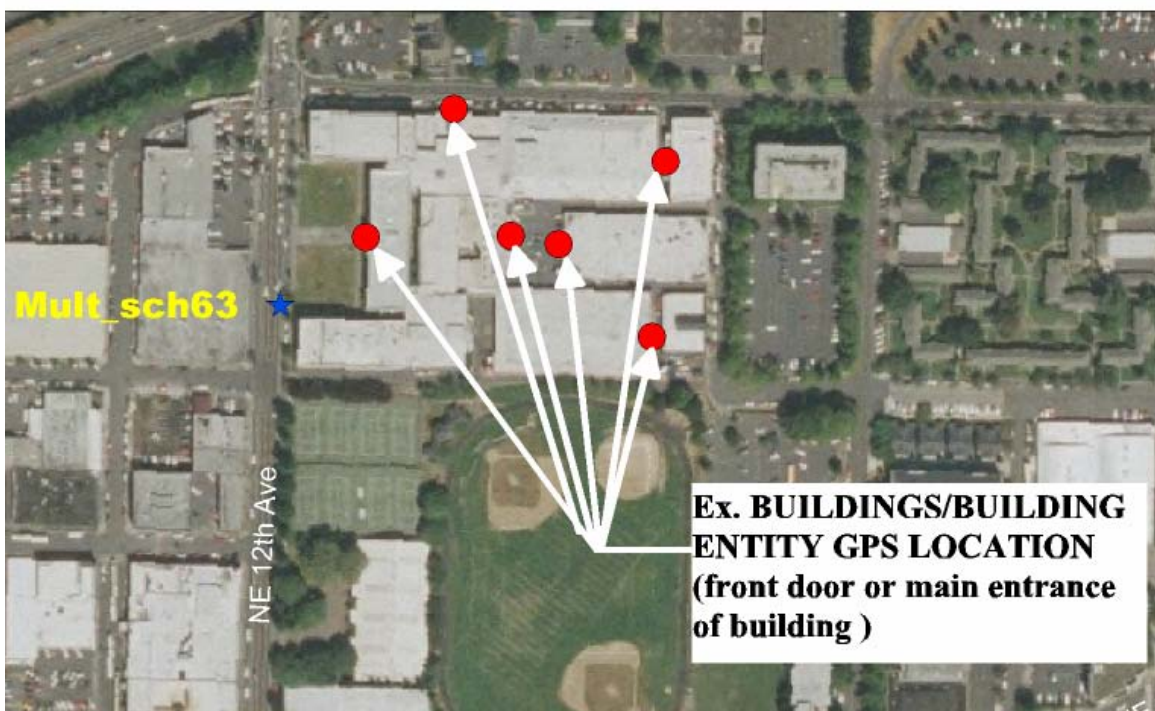


Figure 6: Examples of GPS locations for each building/entity

Fill in the answers to the **BLDG Status**, **Nbr Stories**, and **Occupancy** boxes. Take photos to document (see photo acquisition description later in this document).

If you see a construction date on the building somewhere or can somehow verify the exact build date in the field put that in the **Field Verified Built** box (photo document). If you cannot quickly identify the exact build date, then, fill out the **Est Decade Built** box. This box is required, even if you have a field verified exact year built.


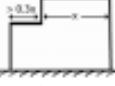
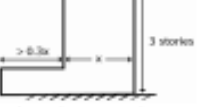
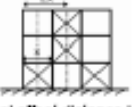
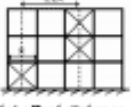


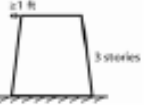
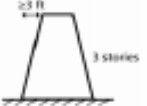
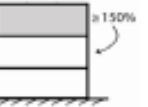
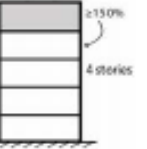

Click the boxes next to **Desig Community Shelter**, **Basement**, and **Pounding Potential** (photo document) to change the answer to yes. Do this only if you are able to quickly verify the information in the field.

***OPEN TAB: Building Survey***

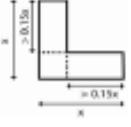

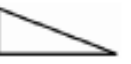
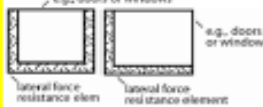



Use the pull down list to answer the **Primary Structural Type** (first guess). Choose a corresponding **Certainty**. If you are not 100% sure of the Primary Structural type, then choose the **Secondary** (second guess) and **Tertiary** (third guess) **Structural Types**. Choose the corresponding **Certainties** for each of these building types. Photo document all choices for type and certainties.

Choose any of the **Vertical Irreg** and **Severity** (see matrix below for Severity), **Plan Irreg** and **Severity** (see matrix below), **Poor Condition**, and **Falling Hazards** questions that apply to the building/entity. You have 3 boxes to enter data for these characteristics, if needed. Photo document all choices.

## Vertical Irregularity

Type of Irregularity	Choices in Lookup Table (pull down menu)	Low (minor)	Minimum Cutoff for Moderate	Moderate (yes)	Minimum Cutoff for High	High
Soft Story	Soft Story		 <p>Stiffness of one story is dramatically less than most of the other stories (FEMA 154)</p>			
Elevation Setback	Step in Elevation View: Single Change, 2 to 3 Changes, Very Irregular Changes, (adjacent building/entry)		 <p>Horizontal distance of setback is greater than 30% of horizontal distance of adjacent story (IBC 2003)</p>		 <p>Horizontal distance of setback is greater than 30% of horizontal distance of adjacent story (IBC 2003) AND height above setback is</p>	
Vertical Lateral-Force-Resistance Element Displacement in Plane	Vertical Lateral-Force-Resistance Element Displacement in Plane		 <p>Horizontal offset distance is equal to or greater than the horizontal length of the vertical lateral-force-resistance element (IBC 2003)</p>		 <p>Horizontal offset distance is equal to or greater than 2 times the horizontal length of the vertical lateral-force-resistance element.</p>	
Sloped Site	Building On Hill or Sloped Site		 <p>Slope across building rises at least one story (FEMA 154)</p>		 <p>Slope across building rises greater than 1.5 story</p>	
Sloped or Inclined Walls	Sloped or Inclined Walls		 <p>Walls have an out of plane slope greater than 1 foot per 3 stories AND less than 3 feet per 3 stories</p>		 <p>Walls have an out of plane slope greater than 1 foot per 1 story</p>	
Vertical Mass Irregularity	Vertical Mass Irregularity		 <p>Mass of story or object greater than 150% of adjacent story (IBC 2003)</p>		 <p>Building 4 or more stories AND mass of story or object is greater than 150% of adjacent story</p>	
Cripple Wall	Cripple Wall		 <p>Building has cripple walls</p>			
Short Columns	Short Columns		<p>Lateral load-carrying columns of mixed heights</p>			
Vertical Change in Structural Type	Vertical Change in Structural Type (stiff over stiff), (soft over stiff), (stiff over soft), (soft over soft)		<p>Building has a vertical change in structural type</p>			

## Plan Irregularity

Type of Irregularity	Choices in Lookup Table (pull down menu)	Low (minor)	Minimum Cutoff for Moderate	Moderate (yes)	Minimum Cutoff for High	High
Reentrant Corners	Reentrant Corners: L Shaped, T Shaped, U Shaped, E Shaped, H Shaped, Other, (adjacent building/entity)		 <p>Both projections (from the reentrant corner) are greater than 15% of the total length in that direction (IBC 2003)</p>			
Large diaphragm openings or O shaped	Large Diaphragm or Central Opening		 <p>Opening is greater than 50% of the gross enclosed area (IBC 2003)</p>			
Torsion Based on Shaped	Torsion: Building Shape		 <p>Building has less than or greater than 90 deg corners</p>			
Torsion Based on Change in Force-Resistant Elements	Torsion: Eccentric Stiffness		 <p>Eccentric stiffness. Primary Lateral-Force-Resistance Elements are at 90 deg and at least one is non-parallel (IE elements have a C shape or L shape)</p>			
Lateral-Force-Resistance in One Direction Only	Lateral-Force-Resistance in One Direction Only		 <p>Lateral-Force-Resistance is only in one direction</p>			
Discontinuous Lateral-Force-Resistance Elements (Out of Plane Element)	Out of Plane Lateral-Force-Resistance Element		 <p>Lateral-Force-Resistance Element is out of plane or has offsets</p>			
Nonparallel System	Nonparallel System		 <p>Vertical Lateral-Force-Resistance Elements are not Parallel or symmetric to major axes of the lateral system</p>			

**Detailed Eval Required** box will default to unknown because a final score is not complicated or a Primary structural type cannot be determined through a RVS, at which the screener should select *Yes – Field recommended detailed evaluation.*

Select your name from the drop down list in the **Screener** field.

Add Comments. However, please keep these entries to a minimum, because they will not be searchable or sortable.

## 2.1 Photo Acquisition

### *OPEN TAB: Images*

To add an image or photo, first select the “+” button in the upper right hand corner of the screen. Then double click in the photo viewing area (should be blank-green at this point). A window will appear titled *Acquire*. Click/select the “acquire” button. A window will now appear titled *Logitech Camera* with a “live” video feed from lens of the camera. Aim the camera at your chosen object and click/select “*Take Picture*”. Then on the *Acquire* window click “OK”. Clicking “OK” actually “takes” the picture and stores in the database.

After you acquire/take the image, select the **Aspect** box. This field should be the direction that the side of the building-entity is facing (ex. “N” would mean that north facing wall). The **Date** box will be auto filled. Select the **Image Type** from the drop down list that is the closest match to the photo. Fill in Comments if necessary.

To review existing images use the “<” and “>” buttons in the upper right hand corner.

To zoom in on photo after it is acquired, hold down the “shift” button and click on image. To zoom out hold down the “Ctrl” button. You will not be able to zoom in or out before you acquire the picture (no zoom lens on the camera).

When you are completely finished with Building/Entity, select the “Save and Exit” button up at the top left of the Info Bar across the top of the form. Choosing this will save the information for that building to the database. You should move on to the next building/entity type at this point. You can review the data from the previous building by selecting Review RVS data from the main access menu.

## 3.0 Reviewing Existing RVS Data

In the main RVS screen select “Review Existing RVS”. The first page of an empty form will come up on your screen. First select the Site Filter from the top menu. This is the Site Unique ID. Make sure you are looking at the correct unique building ID.

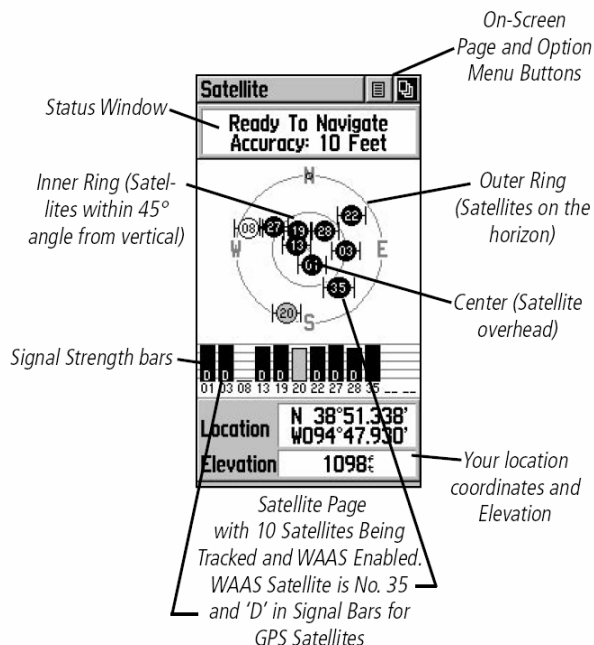
Information can now be reviewed and edited.

To choose a different unique site ID, select the “turn off filter” button, which is next to the Site Filter up at the top menu bar. Now select a new unique site ID in the site filter.

## 4.0 GPS Data Collection

To turn the unit on and off, hold down the lower button on the right side of the unit for a couple of seconds.

Turn the GPS unit on as the first thing that you do when you arrive at a site. The GPS will automatically go through several screens about warnings, etc and then end up on the **Satellite** screen (see example below). This screen will tell you how many satellites the unit current has connected and the strength of the signal. Wait until the **Accuracy** reading is down around 20' or less. That is about as good as the reading will ever get.



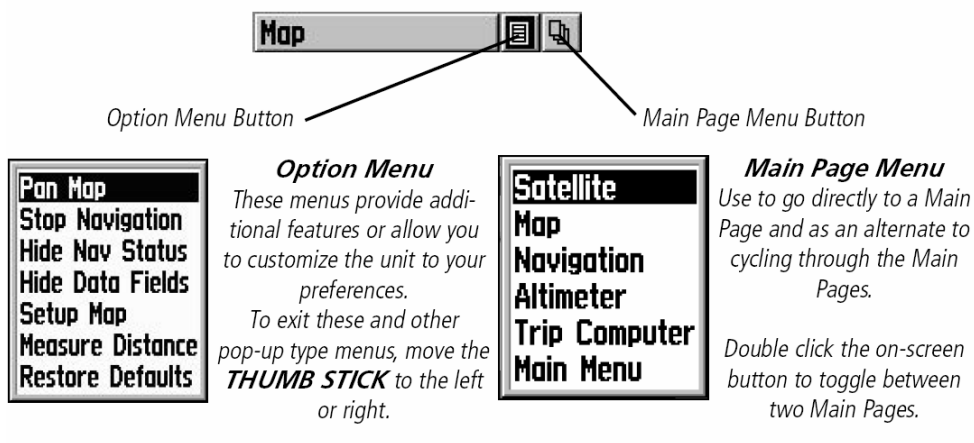
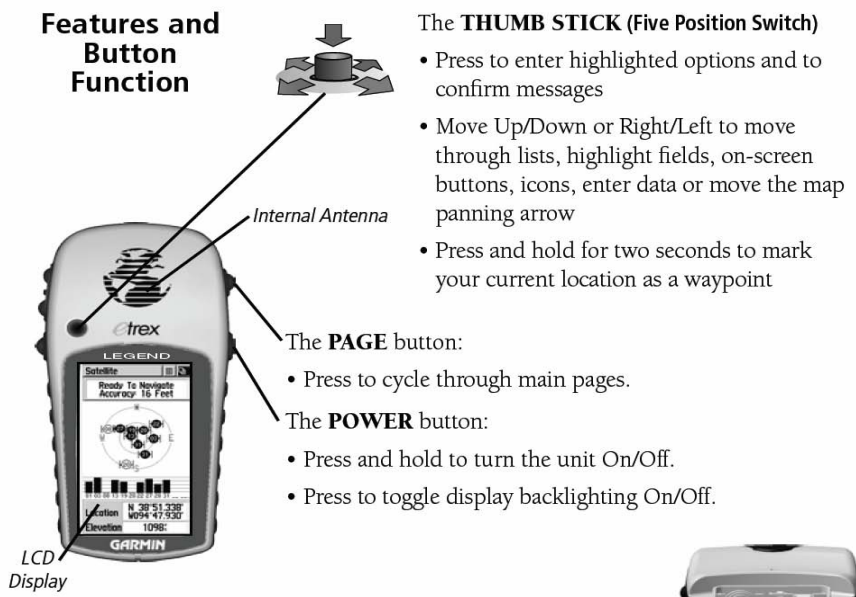
To collect a GPS point and input it into the database, you need three numbers: **Point ID**, **GPS X (E-W)**, and **GPS Y (N-S)**.

TBD

The Point Id is automatically numbered by the Etrex GPS unit.



When ready to collect a point, check that at least 3 satellites have been connected. Using the black mouse-like button on upper left hand corn of the unit's front (Thumb-Stick), push it in once, and a drop down menu will appear. Scroll down to **Main** and click in/select.



In the main menu, scroll up to “**Mark**” and click in/select.



Now you will be looking at the current Etrex automatically chosen **Point ID** at the top in the flag that the little man/person is holding. At the bottom of the screen you will see a display of the current longitude location information (GPS Y (ex. N 45.52899) and GPS X (ex. W 122.65733)).



Now, on the computer tablet in the access database type in the new **Point ID** and the X (E-W) and Y (N-S) coordinates that you see at the bottom of the little man screen. Please record the number to 4 places beyond the decimal point (ex. 122.2342). That will give us sufficient data to plot an accurate location.

Back on the GPS unit, scroll down to **OK** (at the bottom) of the little man screen and click in/select. This will save the point to the memory of the GPS, and it can be downloaded later as a backup to the typed numbers.

To get back to the *Satellite* screen on the GPS, just use the mouse to scroll up to the top menu bar and click/select the multipage looking icon and scroll down to *Satellite*. To get between the *Main* and *Satellite* screens you can also use the upper right hand button to toggle through all the primary screens

The GPS units also come with an instruction booklet if you want to read about reviewing the saved GPS points and about deleting GPS points that you recorded by mistake.

## Building Type and Decade

DECADE BUILT VS. BUILDING TYPE FOR PORTLAND BUILDINGS													
Does not include single family residences.													
DECADE	C1	C2	C3	PC1	PC2	RM	S1	S2	S3	S4	URM	W	TOTAL
1850												1	1
1860												3	3
1870		3								1	14	4	22
1880	1	8	1			3				1	38	70	122
1890	7	21	2	1		7			3	2	77	173	293
1900	9	46	10	1		15	2		1	3	175	619	881
1910	18	190	10	1	1	26	7	1	5	9	323	488	1079
1920	36	722	15	8	1	69	3	2	19	10	349	794	2028
1930	2	237	5	4	1	40	2		18	3	78	281	671
1940	9	354	4	17	1	161	2	1	85	3	133	838	1608
1950	12	346	5	132	1	360	14	6	97	12	95	881	1961
1960	41	149	7	194	16	521	14	10	143	24	13	1185	2317
1970	71	108	6	246	17	377	27	5	168	29	1	1681	2736
1980	135	60	1	220	20	240	34	7	133	24	6	851	1731
1990	5	9	1	60	1	74	17	4	40	4	4	301	520
DECADE BUILT VS. BUILDING TYPE FOR NON-PORTLAND BUILDINGS													
Does not include single family residences.													
DECADE	C1	C2	C3	PC1	PC2	RM	S1	S2	S3	S4	URM	W	TOTAL
1850												2	2
1860				2								2	4
1870						1					1		2
1890												11	11
1900		5				4					4	29	42
1910		13				5			3		8	116	145
1920	3	34	2	1		22	4	1	9	1	23	253	353
1930	1	34				28	16		9		4	213	305
1940	2	52		4		105	2		15	3	14	485	682
1950	4	37	1	34		162	30		47	1		678	994
1960	10	38	2	52	1	237	48		103	3	1	2027	2522
1970	23	45		156		307	167		203	4		6649	7554
1980	19	31		161	6	186	223		117	19		4334	5096
1990	13	6		77		127	300	1	57	4		1741	2326

## RVS Screening Form

RVS Screening Form - SB 2		+	+
Unique Site ID:	<input type="text"/>	Date	<input type="text"/>
<div style="display: flex; border-bottom: 1px solid black;"> <div style="margin-right: 10px;">Site/Building Info</div> <div style="margin-right: 10px;">Building Survey</div> <div>Images</div> </div>			
Site Name: <input style="width: 80%;" type="text"/> Site Street Address: <input style="width: 80%;" type="text"/> Site City: <input style="width: 40%;" type="text"/> Preliminary Site GPS X: <input style="width: 20%;" type="text"/> Preliminary Site GPS Y: <input style="width: 20%;" type="text"/> Field Site GPS X: <input style="width: 20%;" type="text"/> Field Site GPS Y: <input style="width: 20%;" type="text"/> Field Site GPS Point ID: <input style="width: 20%;" type="text"/> ODE DB Year Built: <input style="width: 20%;" type="text"/> <input type="checkbox"/> Addition/Renovation Year Addition/Renovation: <input style="width: 20%;" type="text"/>			
Unique Building ID: <input style="width: 30%;" type="text"/> BLDG Name: <input style="width: 60%;" type="text"/> BLDG Street Address: <input style="width: 60%;" type="text"/> Upgrade: <input style="width: 20%;" type="text"/> BLDG City: <input style="width: 20%;" type="text"/> Building EF Class: <input style="width: 20%;" type="text"/> Field BLDG GPS X: <input style="width: 20%;" type="text"/> Field BLDG GPS Y: <input style="width: 20%;" type="text"/> Field BLDG GPS Point ID: <input style="width: 20%;" type="text"/> BLDG Status: <input style="width: 20%;" type="text"/> Number Stories: <input style="width: 20%;" type="text"/> Field Verified Built: <input style="width: 20%;" type="text"/> Est Decade Built: <input style="width: 20%;" type="text"/> <input type="checkbox"/> BLDG Plan View Labeled and Outlined <input type="checkbox"/> Design Community Shelter <input type="checkbox"/> Basement <input type="checkbox"/> Pounding Potential			

<b>Bldgstatus</b> <input type="checkbox"/> In Use <input type="checkbox"/> Demo <input type="checkbox"/> Vacant/Demolished	<b>NbrBldgstories</b> <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10+	<b>BldgOccupancyType</b> <input type="checkbox"/> Government <input type="checkbox"/> Emergency Services <input type="checkbox"/> School <input type="checkbox"/> Residential <input type="checkbox"/> Industrial <input type="checkbox"/> Assembly <input type="checkbox"/> Historic <input type="checkbox"/> Commercial <input type="checkbox"/> Office	<b>EstDecadeBuilt</b> <input type="checkbox"/> Pre 1900 <input type="checkbox"/> 1900 <input type="checkbox"/> 1910 <input type="checkbox"/> 1920 <input type="checkbox"/> 1930 <input type="checkbox"/> 1940 <input type="checkbox"/> 1950 <input type="checkbox"/> 1960 <input type="checkbox"/> 1970 <input type="checkbox"/> 1980 <input type="checkbox"/> 1990 <input type="checkbox"/> 2000
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<b>UpgradeRehab</b> <input type="checkbox"/> Structural-Partial <input type="checkbox"/> Non-Structural <input type="checkbox"/> Structural-Full
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Building_EF_Class_Use			
ER	K-12	College	Hospital
<input type="checkbox"/> Fire <input type="checkbox"/> Police <input type="checkbox"/> Emergency Op. Center <input type="checkbox"/> Police & EOC <input type="checkbox"/> Fire & EOC <input type="checkbox"/> Fire & Police <input type="checkbox"/> Fire, Police, & EOC	<input type="checkbox"/> Single Building <input type="checkbox"/> Assembly <input type="checkbox"/> Classrooms <input type="checkbox"/> Gymnasium <input type="checkbox"/> Office <input type="checkbox"/> Library <input type="checkbox"/> Cafeteria	<input type="checkbox"/> Single Building <input type="checkbox"/> Classrooms <input type="checkbox"/> Assembly <input type="checkbox"/> Gymnasium <input type="checkbox"/> Office <input type="checkbox"/> Library <input type="checkbox"/> Dormitory <input type="checkbox"/> Cafeteria	<input type="checkbox"/> Small (<50 beds) <input type="checkbox"/> Medium (50-150 beds) <input type="checkbox"/> Large (150 beds)

RVS Screening Form - SB 2

Unique Site ID:  Date  Contact

Site/Building Info Building Survey Images

PRIMARY Structural Type  Certainty

SECONDARY Structural Type  Certainty

TERTIARY Structural Type  Certainty

•PRIMARY STRUCTURE CHARACTERISTICS

Vertical Irreg	<input type="text"/>	Vertical Irreg	<input type="text"/>	Vertical Irreg	<input type="text"/>
Severity	<input type="text"/>	Severity	<input type="text"/>	Severity	<input type="text"/>
Plan Irreg	<input type="text"/>	Plan Irreg	<input type="text"/>	Plan Irreg	<input type="text"/>
Severity	<input type="text"/>	Severity	<input type="text"/>	Severity	<input type="text"/>
Poor Condition	<input type="text"/>	Poor Condition	<input type="text"/>	Poor Condition	<input type="text"/>
Falling Hazard	<input type="text"/>	Falling Hazard	<input type="text"/>	Falling Hazard	<input type="text"/>

Detailed Eval Required:  Screener:

Comments

P	S	T	Structural Type
			S3 Light metal bldgs
			RM2 Reinforced masonry bldgs with rigid floor and roof diaphragms
			C1 Concrete moment-resisting frame bldgs
			S4 Steel frame bldgs with cast-in-place concrete shear walls
			PC2 Precast concrete frame bldgs
			C2 Concrete shear-wall bldgs
			W2 Light wood-frame bldgs larger than 5,000 square feet
			MH Mobile Homes
			URM Unreinforced masonry bearing-wall bldgs
			W1 Light wood-frame residential and commercial bldgs smaller than or equal to 5,000 square feet
			S5 Steel frame blgs with unreinforced masonry infill walls
			PC1 Tilt-up bldgs
			RM1 Reinforced masonry bldgs with flexible floor and roof diaphragms
			C3 Concrete frame bldgs with unreinforced masonry infill walls
			S1 Steel moment-resisting frame bldgs
			S2 Braced steel frame bldgs
P	S	T	Certainty
			0-25%
			25-50%
			50-75%

		75-100%
		100%

P	S	T	Vertical Irregularity
			None
			Steps in Elevation View: Single Change
			Steps in Elevation View: 2 to 3 Changes
			Steps in Elevation View: Very Irregular Changes
			Steps in Elevation View: Single Change (Adjacent Building/Entity)
			Steps in Elevation View: 2 to 3 Changes (Adjacent Building/Entity)
			Steps in Elevation View: Very Irregular Changes (Adjacent Building/Entity)
			Sloped or Inclined Walls
			Building On Hill or Sloped Site
			Soft Story
			Short Columns
			Cripple Walls
			Vertical Change in Structural Type (Stiff over Stiff)
			Vertical Change in Structural Type (Stiff over Soft)
			Vertical Change in Structural Type (Soft over Stiff)
			Vertical Change in Structural Type (Soft over Soft)
			Vertical Mass Irregularity
			Vertical Lateral-Force-Resistance Element Displacement In Plane
P	S	T	Severity
			Low-minor

		Medium-yes
		High

P	S	T	Plan Irregularity
			None
			Reentrant Corners: L Shaped
			Reentrant Corners: T shaped
			Reentrant Corners: U shaped
			Reentrant Corners: E Shaped
			Reentrant Corners: H Shaped
			Reentrant Corners: Other
			Reentrant Corners: L Shaped (Adjacent Build/Entity)
			Reentrant Corners: T shaped (Adjacent Build/Entity)
			Reentrant Corners: U shaped (Adjacent Build/Entity)
			Reentrant Corners: E Shaped (Adjacent Build/Entity)
			Reentrant Corners: H Shaped (Adjacent Build/Entity)
			Reentrant Corners: Other (Adjacent Build/Entity)
			Large Diaphragm or Central Opening
			Lateral-Force-Resistance in One Direction Only
			Non-Parallel System
			Out of Plane Lateral-Force-Resistance Elements
			Torsion: Building Shape
			Torsion: Eccentric Stiffness
			None
P	S	T	Severity
			Low-minor
			Medium-yes
			High

P	S	T	Poor Condition
			None
			Cracks
			Poor Masonry
			Poor Concrete
			Differential Settlement with Damage
			Differential Settlement
			Poor masonry joint condition
			Open cracks in structural members

P	S	T	Falling Hazard
			None
			Unreinforced Chimneys
			Parapets: General
			Parapets: Unreinforced Across Front of Building
			Parapets: Unreinforced Around Entire Building
			Parapets: Unreinforced Over Exit
			Parapets: Any >6 ft height
			Heavy Cladding (thick stone or concrete)
			Other: General
			Other: Light Cladding
			Other: Smokestack
			Other: Heavy cornice or other overhead decoration
			Other: Ornamental Hazard Over Exit
			Other: Brick Veneer