

DESIGNING 1/16th SCALE RC BATTLEFIELDS

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We have had an outdoor field for over 10 years now (20 years in summer of 2019), and have learned a lot in that time. The most compelling thing we learned is....BUILD INSIDE, NOT OUTSIDE!!!! And although we would like to accomplish this, it may not always be practical. But whatever you do, having a permanent battlefield is an absolute "must" in order to maintain an active club.

Here are some other points for you to ponder:

1. The first question to answer is: What war front will the battlefield represent? And what time frame? Or will it be generic? For example, FRAG chose to model Normandy during July-Aug. 1944, about 30-40 miles inward of the beaches. We wanted hedge rows to hide in and a decent sized village to drive through.
2. Our field is 60' wide x120' deep and it's still not wide enough. If we did it over again, we'd make the width 80-100 feet. However, our space is constricted by natural features so it is what it is.
3. We edged our actual battlefield with 4"x4"x12' pressure-treated landscape timbers. This initially worked well, but over the years the ends have curled up on many and are now not flat. Doesn't look good and we sometimes trip. Go with RR ties or something that will not warp. We have a 6 foot chain link fence with 3 rows of barbed wire on top, all around the site. This was set 6-8 feet back from the landscape timbers, and the resulting pathway is covered in fine pea gravel for drainage purposes. Also make sure this pathway is level and devoid of things that tankers (and the public) can trip over. Tankers tend to have their eyes on their tank on the field and not watching where they are walking. Even though one might think the fence height and barbed wire would provide adequate security, we have still had people climb over and steal things like a wooden RR trestle. Teens also have climbed in and painted the shed with graffiti. So expect some vandalism from time to time.
4. The public is invited to watch our battles, and some (especially their kids) tend to wander into the battlefield. This is a problem mainly because they can cause damage by not looking where they walk, so devise some method of keeping them out of the field. Caution tape or a rope around the actual field can work.
5. Our greatest challenge is site cleanup each time before a battle. We did not put down any weed barrier material and should have. Almost every time, we have to get on our hands and knees and pull weeds. This takes a lot of time and even though we spray weed killer each spring, it doesn't totally solve the problem. We also must remove leaves, mostly in the spring and late fall. We were happy to have a lot of Cottonwood trees along the west property line because they blocked the sun, but they do create havoc when the leaves fall & little white cotton buds bloom in the spring. You will need shade during battle days, but avoid Cottonwood trees.
6. For 2-3 years we hauled all the setup items (buildings and dioramas) in every month. That got old and we eventually had way too much, so we built two 8x12 ft. sheds inside the fence. One is totally full and the other is getting there. We have over 50 buildings so the sheds make it very easy for setup and teardown. And yes we have had people try to break into it, but so far they have failed.
7. We built about 40 foot of waist high wood workbenches (24" deep), and covered the surface with plastic material to ward off water puddles and rotting. Only a couple have needed replaced so far. We should have built some kind of roof over this area or a full enclosure, because every now and then rain will sneak up real quick and then we hustle like hell to grab tarps to throw over the models, not to mention all the buildings out on the field. This is another very good reason to build inside.

8. We have no onsite electric or toilet facilities. Toilets are within a block at a community center which isn't so bad, but we still have to charge 7.2v batteries from 12v auto batteries. Buy an extra one to set on the work tables and keep it charged.

9. We purchased about a 1000 plastic trees over the first 4 years and over time some have become brittle and faded. They are still useable, but we periodically have to clean the dead leaves from them and spider webs, and spray paint them green. In the last couple years we began to buy up old indoor Christmas trees and use the individual limbs as in-fill with our existing trees. If you do this, be sure to buy Christmas trees that are not pre-lit. Cutting off all that wiring and mini bulbs is a lot of work. We made hedge rows by taking 2x4s varying in 2 to 4 feet in lengths, painted them green, then stapled strands of Christmas garland in place and inserted a few trees into drilled holes. These assemblies are then buried in the ground end to end to make the sides of roadways thru bocage country.

10. Be sure you have either no hills that are excessively high or just make a rule that no tank can shoot from the top of a hill, because this is certainly a disadvantage to all below. In theory a real tank probably could not drive up there anyhow because of all the trees to get thru. That said, we have a lot of hills (covered with the plastic trees) that block line of sight. They force tanks to drive around or over if there is a mountain trail. There is also the bocage country and then some open areas like the Russian steppes. We fight a variety of battles all over the field.....most center about the village and RR yards (35 buildings), some are around the French Farmhouse Complex and some are in the far north around the abandoned airfield. In 2017 we started issuing written battle orders to each team. The orders they got depended on a roll of the dice, so defenders could easily be preparing in the wrong direction from where the attack will come. Each team communicates with radio headsets.

11. Our field features include 2 rivers, 1 main one with a couple side branches, and 1 at the far north area where the abandoned air field is located. Most of the rivers are too steep for any tank to navigate, which forces the use of bridges, but in some areas a tank can drive in the "dry creek bed" and move around the battlefield. Bridges are cast in concrete, so we can walk on them when setting up or retrieving tanks. We have added a good number of Dragon's Teeth (poured in concrete) to constrict where tanks may drive, and we use light brown colored plastic caps the size of a quarter as land mines, placed 9 at a time in patterns where tanks will drive over. You'd be surprised how they disappear from sight when you are concentrating on driving around the field and hiding from the enemy. If you run over one.....you are dead.....but the catch is....only if the referee or an opponent sees you run over it. You'd also be surprised how many defenders forget where they put them and they become dead too, assuming an attacker saw them run over one.

12. In the early years we just put down G scale track (2.75" between the rails) for our railroad feature. This actually worked out to European narrow gauge in 1/16th scale and was not very accurate for Normandy. So, in 2009 we took it up and started to relay the track in European standard gauge size, which is 3&5/8" between the rail. This meant cutting the G scale track in half, nailing both sides to a long plywood board (5.5" wide) and filling in the center area with proper shaped wood ties. These did not last very well due to periodic snows and tank treads tearing things up. Eventually we made a jig, cut new wood ties from old fencing slats, and stapled the rails down. The sun, rain and snow still takes a toll over time so this idea needs improvement.

13. Other features you might want to consider are a RR tunnel, lots of small stones here and there to create natural outcroppings, and lots of dioramas that can be moved around. We have cast sandbags and walls from resin and then glued these to 1/2' plywood boards in sizes vary from 12"x6", 12"x12" and up. Behind these walls and sandbags we glued soldiers, guns, boxes, cans etc etc., even Pak 40s and 88s. These dioramas can be set at many different places on the battlefield for authenticity. In 2016 we built 5 active shooting gun bunkers, which are equipped with TBUs, IR emitters, and full sound systems. The bunkers feature (1) German 88 set inside a concrete bunker like found along the Normandy beaches, (2) German 88s set inside houses, (1) German 88 set behind sandbags with a stone shed behind to hide the electronics, and (1) scratch built American

M5 3" AT gun set behind a wall with a wood shed behind to hide the electronics. These are set up around the village and operated first by defenders before they can operate their tanks. Each one is aimed thru a miniature camera viewed on a 7" LCD screen. We also have cast various designed long walls out of concrete. These are permanently placed on the field since they can withstand the weather. Doing this also shortens setup time.

14. Be sure that you build contours and grades into the field. Don't just make it flat. Our elevation drops about 3 feet from front to back and we have many hills and valleys to drive thru. As far as fill dirt goes, try to use what we call here in America....."structural fill". This material has some degree of clay in it which helps to hold it in place and it is free of small pebbles which can cause tank tracks to derail.

15. The last thing we want to mention is that we cast concrete pads (3" deep) in the shape of each building outline (these are foundations in a sense). These were leveled with the earth which makes the structure set at a proper vertical angle, and it also makes it easy to place a building as they only go on their respective numbered pads. Around the pads we poured more concrete and made streets and sidewalks. Once poured and before hardening, we ran a home made tool over the concrete to cast in brick and cobblestone patterns. These are painted a light reddish and yellowish color and it really enhances the feeling of a village.

So, hope all this gives you some good ideas and provides some warnings about what not to do. Let's hope that eventually all the clubs can find indoor areas for their battlefields.....which would make life so much easier... 🍊 I have attached some pictures to illustrate some of what I have mentioned.



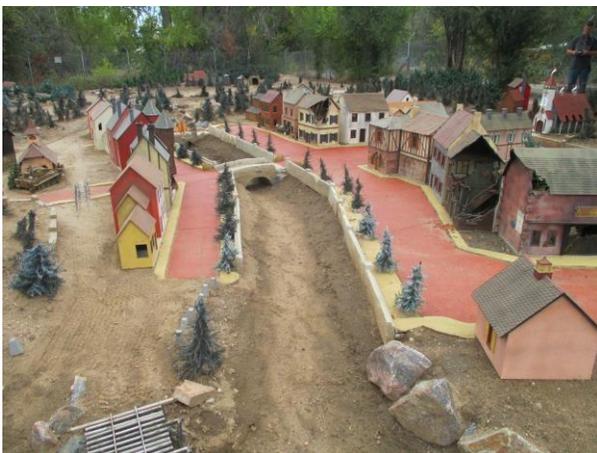
Conc. Walls



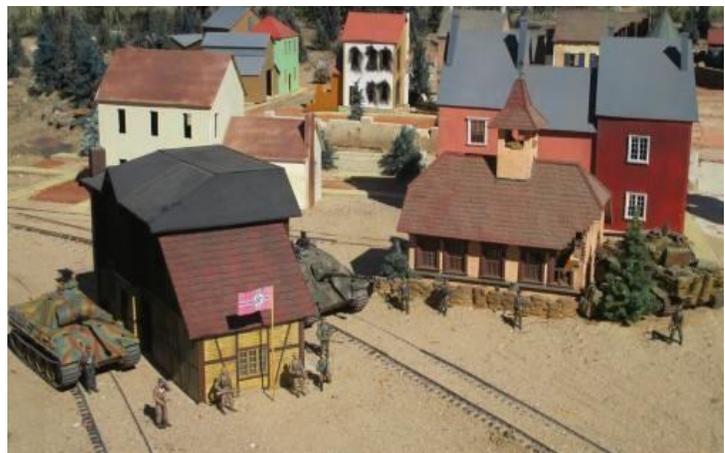
Pads & Sidewalks



Conc. Bridge



River, Streets, Sidewalks, Bldgs



RR Yard



Conc Wall, Church, Static Gun



Barn w/ space inside for tank to hide



RR Track, Telephone Poles, River Bed, Bridge, Trees, Village



French Farm Complex, Conc. Wall w/ area to shoot over
Space in rear now features another river, more trees and an abandoned airfield.



Railroad Yard, Tunnel, Conc. Wall, Plastic Trees



Chain Link Fence, Flags, Parking, Member work benches in far rear



First Shed



Conc. Wall, Bridge, 88 AT Gun, and Lots of Rocks