Landscape Architecture and Site Planning – Basic Fundamentals
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Module-04 Lecture-18
Behavioral Principle

Hello. Have you enjoyed my earlier lecture about the behavior of the users? Now let us go to next step to discuss about the spatial form. Basically, whether it is architectural space or landscape space, they are bounded by three different planes, it is fundamental. But why I am discussing? The reason is that even if we are outdoor for landscape projects, we are not free from these three planes any way.

When you are within the architectural space if you remember that in my earlier lectures I have said that architectural space has indoor artificial converging or concentrate where the landscape space is outdoor, natural. The domain of the landscape space is very, very wide. So what happens is when we try to view the space in the landscape, it goes a little out of bound. But however, whatever is the dimension, we are not free from these three planes.

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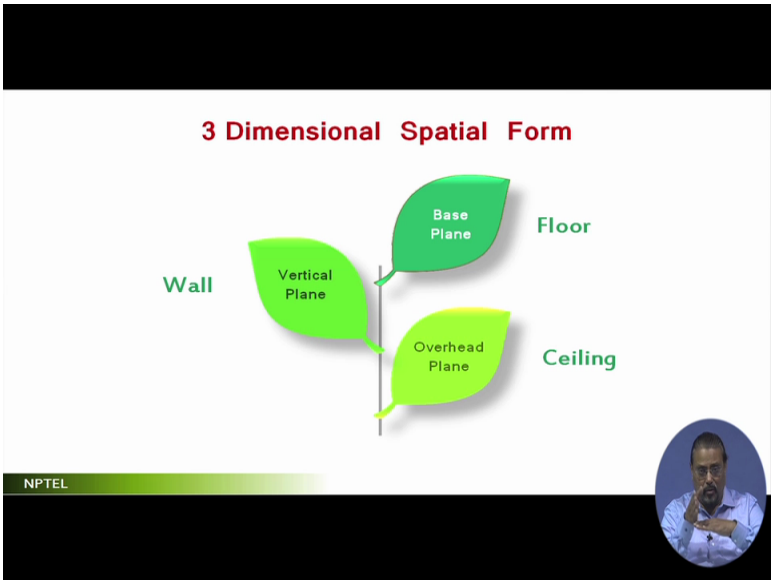

Basically there are three planes. The first is the base plane, I will explain and which is representing like floor. In a building, it is a floor. The next one is vertical plane, straight like this. In a building, it is wall. And then the third one is overhead plane. In a building, it is ceiling. You

can always comprehend this if you are an architect or engineer or even the of any discipline. You can comprehend this very easily with respect to an architectural space, floor, wall and overhead plane. That makes three planes which ultimately makes a box which becomes architectural space, very correct.

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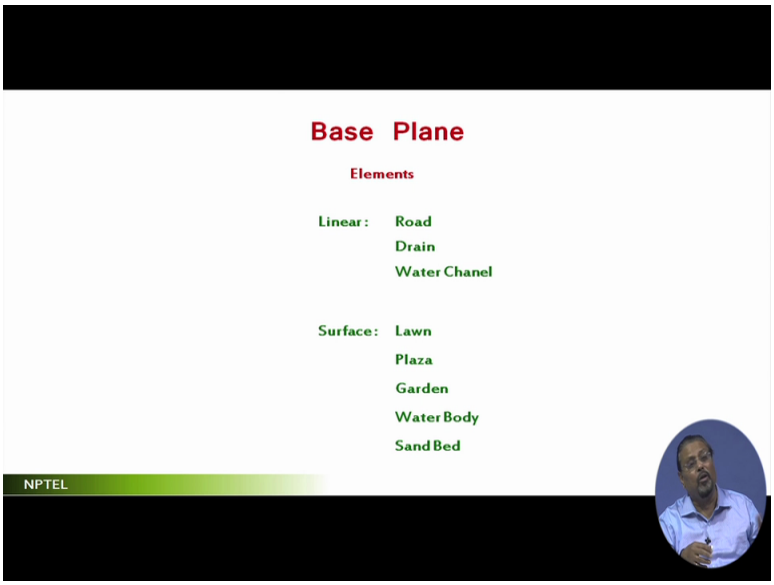

Now let us look at this in elements form, in elemental form. In landscape, what happens? In landscape, what is a base plane? If you go outdoor, it is the grass lawn. What you have as a vertical plane? A fence. What you have overhead plane? Maybe a pergola. So things are there only in different form with different material or different elements. So here I am trying to focus more on the landscape spaces that the elements. Essentially, what are the linear elements? Basically, there are two kinds of elements that we will find here.

One is a linear element and another is the spatial element, okay, the space wise. Linear elements in landscapes are like roads, base plane. How would you consider what is lying in the base plane? Anything below your feet, anything below your feet. If you are the user, below your feet. Anything that goes slightly above and ultimately goes over your head, it is because overhead plane.

What happens to that space which starts with the base plane, then ultimately remains continuous and ultimately goes to vertical plane and overhead plane, hybrid, it is hybrid because you will not be able to find out really where it changed.

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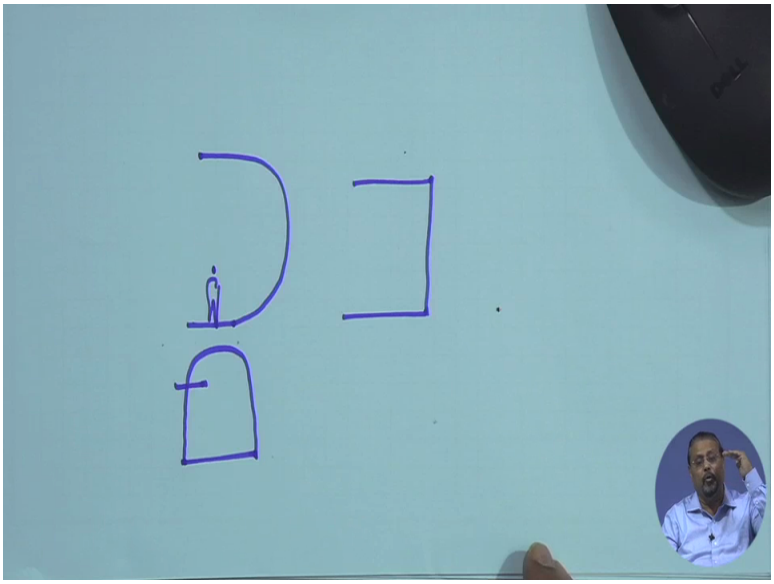

I will just draw one sketch to demonstrate that. I am saying in architectural terms. Suppose you have a plane on which you are standing which has a side like this and ultimately I think like this and a person is standing here. I can understand very easily base plane, vertical plane and overhead plane. But what happens to this? When did the vertical plane change, sorry, base plane changed to the vertical plane and when did the vertical plane changed to overhead plane? You do not be, do not try to be critical on this, not necessary. It is not wise to be critic on this. Just for our own convenience, let us call this hybrid. No problem.

I might find some element which is this and then the vertical plane goes and ultimately comes like this, possible. I will not be trying to be critical that at which point it changed from this plane to this plane, no need, that is meaningless. So idea is that if you have anything below your feet is the base plane, anything on your sides, all four sides are the vertical plane and anything above your head is the overhead plane. Okay.

So in that context, the linear form or the base plane is road, drains, water channel, etcetera. And in terms of surface, it is lawn, plaza, garden, water body, sand bed. Think of anything, I have just given you few examples. Most of examples you can find out yourself. I did not want to clutter with lots of examples that is available. We have lots of examples but here these are the examples which I have picked up here. Those are the elements I have picked up here which becomes very easily perceivable by you. Okay, that is a base plane.

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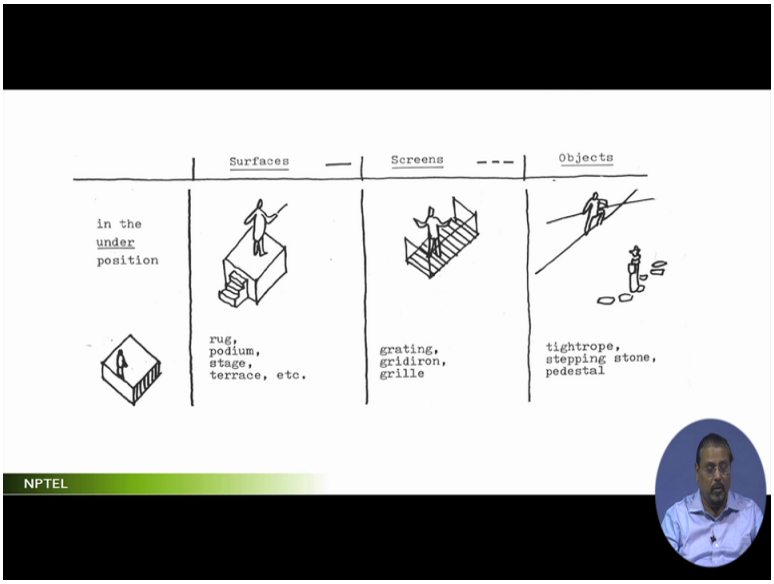

Let us look at this. Here, it is a borrowed sketch. Why I have borrowed this? Because this is probably the best possible representation I found. If I would have tried to re-sketch something, I would have almost fallen in the same kind of illustrations, these illustrations which I like very much and really speaks of.

So the plane which is in the under position, that means whether you are standing on a podium over this or you are standing on a such higher podium or you are standing on a elevated balcony or grilles or even you are walking on a tight rope. This is linear, this is spatial, this is spatial, this is spatial. So basically what happens is, do you walk on the water on the canal? No. But do you sail on the canal? If you do, you are on the boat, the water is at the base, this is how you look at it. Okay.

Point is in the under position, the surfaces, screens and objects, what does it mean? Basically you may have a very clear surface or you may have something which is perforated; grating, gridiron, grilles and all that. Or, you may have such podium stage, terraces or whatever. And here, tight rope, stepping stone, pedestals. Sometime I will tell you, even the bollard, top of the bollard also becomes a base plane for somebody.

Now what happens is we have observed that people have, basically who is trying to express this? The users. Users say what is the utility of this and how it is to be viewed. If somebody, you do not do it but if somebody has walked over a tight rope, then it becomes a base plane. If suppose

you are standing below and watching, then what is this plane? Overhead plane to you. It is always with a point of reference, point of reference to a person who is using.

For the tight rope walker, this is the base plane and if you are seeing from below, this is your overhead plane. This is interesting, linear overhead plane. I hope my point is made.

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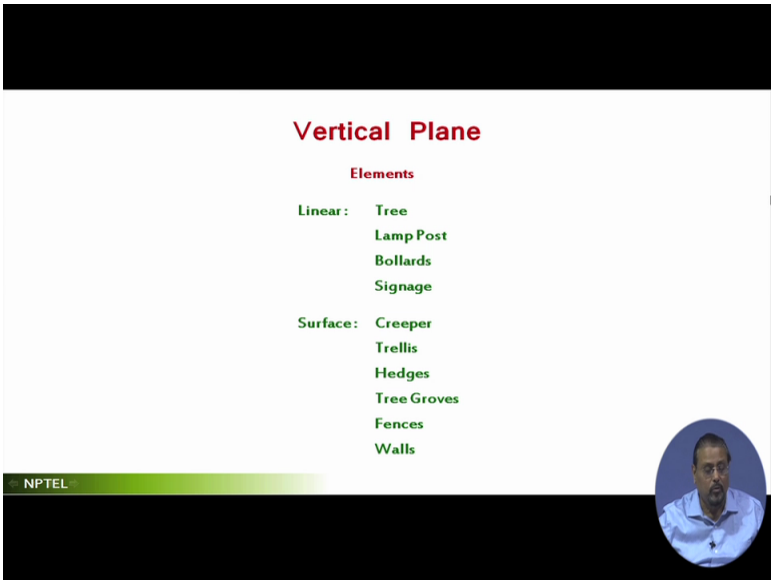

Then comes the vertical plane. Elements, linear and surficial, let us see. Vertical plane elements are, in linear form are tree, lamp post, bollards, signage. What does it mean? Dimensionally, the height is much greater than its other dimensions, that is not zero. I will tell you length and width, that or the width or depth, this dimension is not zero. But the height is considerably large when we consider this as a linear vertical element. Tree, how come tree becomes a vertical element? Interestingly, tree becomes different type of elements, it can fit in all those kind of elements. I will tell you how but before that, let me explain this.

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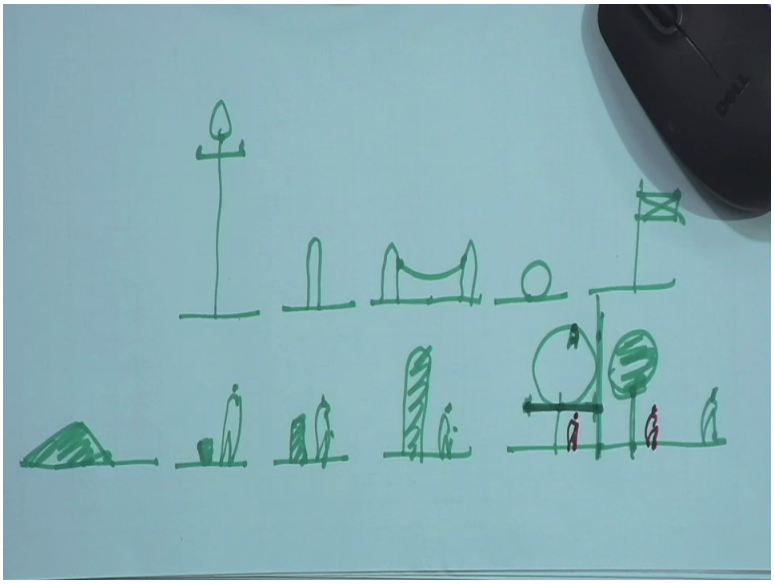

A lamp post, okay, a bollard or whichever, even I will tell you this I have drawn for one side. If suppose there is a bollard here, the next bollard is here and there is a chain hanging from here to here, this is also a vertical plane, mind it. In a landscape, we have plenty of this. You must have seen in many places, the bollard is nothing but a sphere, also a vertical plane. Only thing what matters is the scale. Signage, you have a signage here, the post becomes a vertical plane, also this becomes a vertical plane.

So essentially, theoretically what it is? If you are viewing it from a particular position and if you are seeing that it is standing upright from the ground to the upper level where your eye heads, it is a vertical plane. If your eye does not head at your eye level and it is at a very lower level, still it is a vertical plane. So let me just try to give you that, clarify that idea. Few sections I will draw. A small hedge where your height is considerably high, vertical plane. The hedge is increased, your height is still at the same level, vertical plane.

A wall covered with hedges and creepers, your height is still here, vertical plane. So basically what happens is anything that is protruding or rather upright over the ground, vertically up is a vertical plane. Now tree, how can this be a vertical plane? It is hanging on to this side by so much. How can this be vertical plane?

Imagine seeing a tree from a distance at this particular point. If you see from here, you will find, you will see a projected view of this which will look like, now again, projected view, mind it. I

am drawing a projected view now in which you will be seeing a plate of green and a stick over it, below it. This is what is the vertical plane. So it is not necessarily geometrically how much verticality it is. Another the hill, follow this very carefully, the hill at a distance, is it a plane? Is it a triangular plane?

No, it is a three dimensional geometry. But the thing is when you are seeing it, you are seeing this as a plane. So the point is it is which plane you are referring to, the position of that particular element which is being created an image in your retina, that is it. A two dimensional representation of an element which you consider as vertical, that is vertical plane. Scale-wise, if you are very close to a narrow, low height hedge, low degree of vertical plane. A slightly raised, higher degree. Above you is dominating vertical plane. Next to this is a vertical plane.

Now if I try to give an example, notice it. I will come to, then I will come to overhead plane but still I think this is a time I should clarify. If you are standing below a tree or away from a tree, I am drawing it, human figure in a different scale so that it becomes matching. If you stand below a tree, then which one is vertical plane? And if you are standing away from the tree, which one is the vertical plane with respect to tree? Interestingly, if you stand here, the tree becomes a vertical plane. If you stand below, the tree becomes a overhead plane.

And if you have climbed that particular tree and you are sitting at the top of this, then your tree is a base plane. Is it clear now? I hope. It is always a point of reference from which you are saying this is base, this is vertical and this is overhead. Very, very important one because you are creating special results in your landscape.

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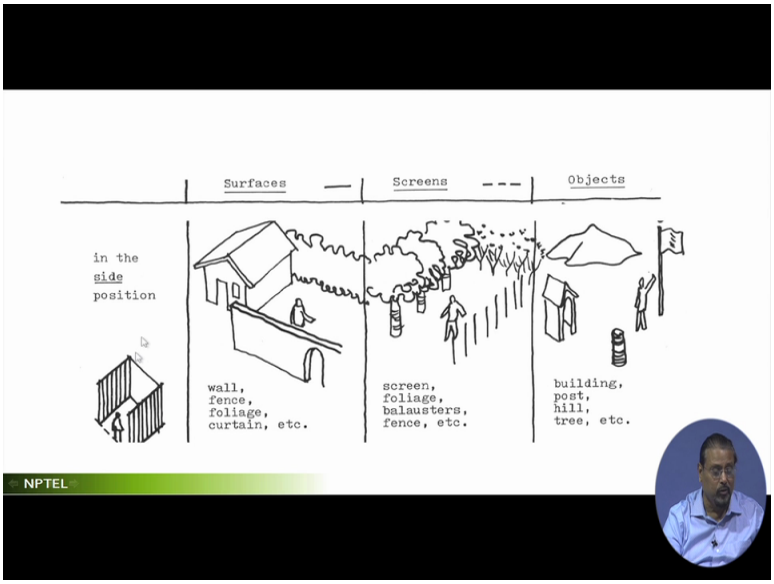

An example here, same borrowed illustration. The surfaces may be solid, it may be screens, perforated or it may be objects. This is what I have just tried to explain, dealt now that this is on the side positions. So what happens is you have four sides. So essentially in a landscape you have one base plane, four vertical planes and one overhead plane, that makes a space. In an architectural space, you have one base plane, four vertical planes and one overhead plane, that makes a space.

Only thing, the character differs because of the elements, because of the scale and because of the viewpoints and the reference domain. Okay. So here if it is surface, look, this building is a three-dimensional geometry but to a viewer this surface, projected geometry of this is the vertical plane. This wall is a two-dimensional geometry almost with a little bit of three-dimensionality in terms of width or thickness but to this user, it is a vertical plane.

Look at the foliage, foliage has a very strong three-dimensional geometry, it will be multilayer of trees. But when from the reference domain, it is a overall projected effect, so you see one vertical, another vertical, another vertical. Now if you replace all these other two verticals with the plantations, it becomes a pure landscape positions with a verticalities. And if you replace this particular vegetation with wall, it becomes a pure architectural form. That is, there lies a real catch of the whole thing but fundamentally, the space.

Okay. How about this, screens? What is the meaning of screening? It is a perforations. How much perforations? If suppose we would have had a fencing over here, now this fence is very simply drawn that with all vertical elements and the tree here and tree here. This tree and this tree is not same but this particular position, you have more perforations of that. So if suppose you stand at this particular point, you see a projected image of that, so ultimately that is vertical plane.

How about this? I have just given an example of the hill, you remember. I have given the example of the (boll) bollard also here or post, I have also given the example of a signage. Do you understand now? Is it clear to you? This is exactly the point that when you are trying to create a space, do not disregard different planes that you are creating. Basically what you do is you are creating something out of nothing. A landscape that you are trying to create is something out of nothing. And the something as a, you people will say, users will say it is a landscape based on what material that we have used. And the people who will say that this is not a landscape space, it depends on that what is a kind of non-natural material that you have used. Okay.

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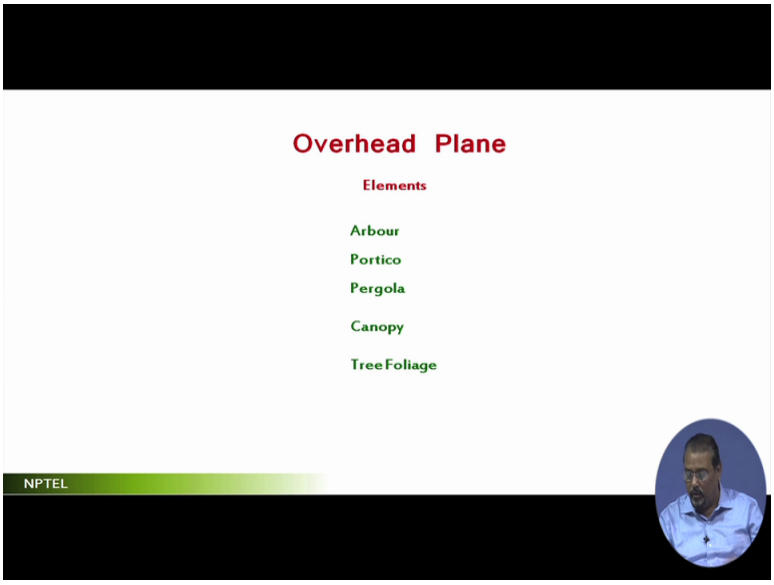

Now next one is overhead plane, let us go to this. See basically, what are overhead planes? Something which is above your head.

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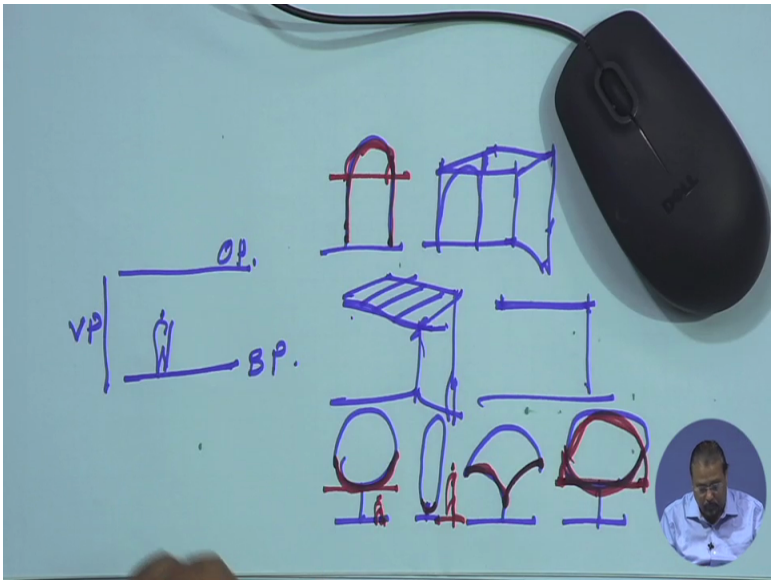

If you are standing here, I have just given that demonstration earlier, I am just reiterating it that you are standing here. This particular line is the base plane, BP. Anything that you are seeing on this, this is basically vertical plane. Anything above you is the overhead plane. So examples that I have listed here: arbor, portico, pergola, canopy, tree foliage. Let me just try to draw very quick sketch of it. Arbor is this, portico is this. Pergola is this, do not bother about the quality of sketch because I am doing it very, very fast. Okay. Pergola is this. Okay. Canopy is almost like a portico here. Okay. Portico generally will have, usually will have two sides of support. And the canopy would be mostly overhangs. Okay. And the tree foliage is as I said this.

Now see, if suppose I have a tree which is of this form. If I have a tree which is of this form or else I have a tree which is very well designed, when I will discuss about all those vegetations, you will find an interesting discussion will emerge on these shapes and forms. But the thing is here let us try to identify where is overhead plane. For this, it is not a problem because here we have this as the overhead which blended with this.

So if I say only this much, it is overhead plane; rest is vertical plane. But here I will be citing the same example in my hybrid because this is hybrid. Okay. And here basically this base which will be a ‘projected I’ here in the view of the users is basically the overhead plane. In this, unfortunately we do not have any overhead plane. Yes, it is there but you do not realize it

because it is so low and you are at this height that you really do not get a chance to see where the overhead plane is. Okay.

And in this what happens is you see a plane like this. In this you have seen, in fact, I was trying to draw this in this form, this is overhead plane. So I hope that idea of base plane, overhead plane and the vertical plane is clear.

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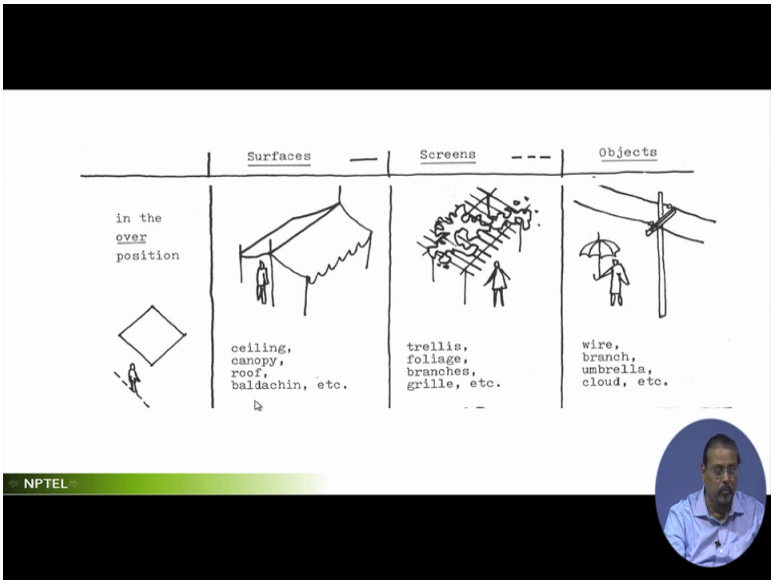

Then the next, this idea now we will give you that you are at this particular reference level of the base and here is the overhead plane at this point. Even a tent without any wall is overhead plane. So actually these pictures are essentially very clear. Ceiling, canopy, roof and baldachin or say shamyana in Hindi that we call, all these are nothing but the all sides are open, is overhead plane. And the screens means pergola with creepers and all this, a trellis, foliage, trellis of different kind, this is a horizontal trend. Trellis, foliage, branches, grilles etcetera, they are also screens. That means same perforated.

And objects like say if you are standing on the, in the midst of field and then you have an umbrella, the umbrella becomes your overhead plane. If you are standing next to this particular post without the umbrella, then these particular cables become your overhead plane. So the point is what is a strength of these planes, that depends on what material you are using and how you are using. This point has to be very, very clear in your mind. Now the situation is that when I am planning, what am I going to do? I am going to combine all these things together.

In the landscape what happens is that you are, you enter a space very wide, it is so wide that the vertical planes are, planes become, it is there but not that significant. So what happens in such kind cases, where is a vertical plane and which one is a base plane, which one is the overhead plane?

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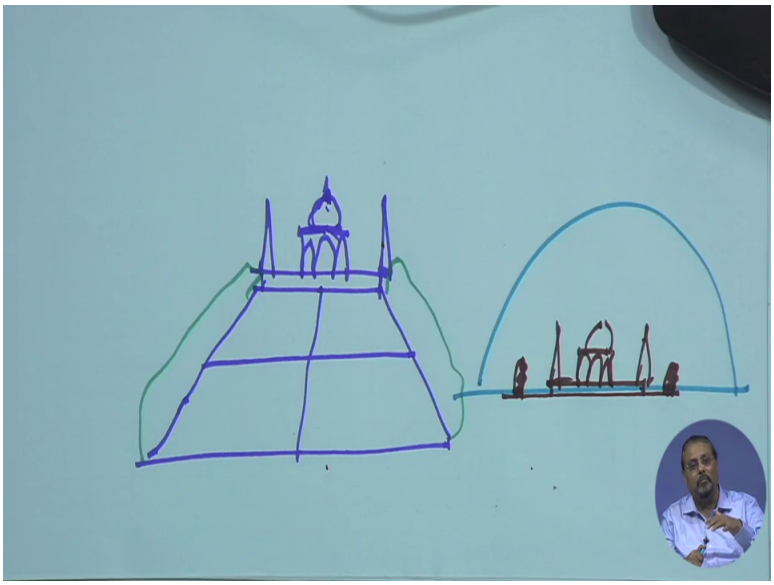

Look at this very interesting point. A large, recall that Mogul gardens, Taj Mahal, the garden in front, recall that. I am sure you have seen the example in my earlier illustrations as well as from the reference you can see. And the Taj Mahal, I am not trying to draw the Taj Mahal in total correctness because that I do not dare with this short time but still it is okay. Now at the edge, we have vegetation. Which one is the base plane here? Base plane is this, this one. This particular thing is a base plane. Look at the whole plan of this, even the top of this, roof plan of this and the podium also becomes a base plane.

You recollect I think in Mogul garden example I have given one plan of Taj Mahal, please reopen that and see, you will understand. The park, then front garden and then the mausoleum and also the guest house and other things, that makes a whole plan. So that is entirely a base plane, so (basic) base plane. So what happens, I would try to say this in this forum that your base plane is nothing but the planned form, keep that in mind. It will be very easy to remember, very easy to retrieve.

Whenever you are making a plan, you are putting everything in that. Each element may have its own different heights but you are looking from the top. So your overall base plane represents your plan. When the base plane becomes different? When you walk into that particular site, not seeing in the planned form. Now you have gone in, standing over there, trying to see everything in 3D because when you are looking at the plan, it is in 2D.

And when you are going into that and I am trying to see this, you are in 3D. And in 3D, then whatever was lying earlier in your base plane as a part of the plan, now stands out as the wall or the vegetation or a building or a fountain. What would be the, what would be the representation of a fountain in your plan or base plane? A dot. But in 3D, it becomes a good vertical elements.

Okay. In such cases, if I try to represent, look at this section. If I draw a section through this, then I do see in scale the vegetations over here. Okay. At a distance, I am seeing the Taj Mahal with a mirror reps. What I am seeing here? It is a vertical plane. What I am seeing here? It is a base plane. Where lies my overhead plane? Where did it go to? Do not underestimate the role of overhead plane here. This is the real crux of the landscape design. The entire hemispherical dome, the clouds, the sky, the blue sky is our overhead plane.

If you experience that Taj Mahal, if you ever get a chance, I suggest that please go to that garden and see yourself and at that time recollect my lectures and follow through. If you are standing in the midst of a Mogul garden, at the Taj Mahal's garden, in the night what is the color of your overhead plane? Black. In the sunny day, blue. In the monsoon, grey. In the twilight, scarlet orange. Means what? Your entire plane which you are not being able to touch or do anything is playing so much role in your entire landscape environment creation, you just cannot imagine.

The point is pay attention to all these elements and do justice. I do not know whether you have seen this same Taj Mahal standing in the midst of this garden in a twilight time early morning or on a moonlight night. I have seen the tourist, they go there and they enjoy that particular landscape in the moonlight night and they wait for the season so that they see it. So what happens is the plane is one or sets of, set of planes are one but the whole (())(24:47) that is created by virtue of lights, season, air flow, temperature, sunshine or sky clearance, that makes a overall condition.

So when you are thinking about the planes, do not be very regimentally thinking about, “Oh, I have a vertical plane, I have base plane, I have overhead plane.” No, because you are creating a three-dimensional entity. And that three-dimensional entity which you are offering to the users and that three-dimensional entity which will live there for years and users will come to that, enjoy that particular three-dimensional entity at different time of the day, at different day of the week, at different seasons. So things will, your whole landscape will behave differently, rather manifest differently at different point of time, this you have to really take note of.

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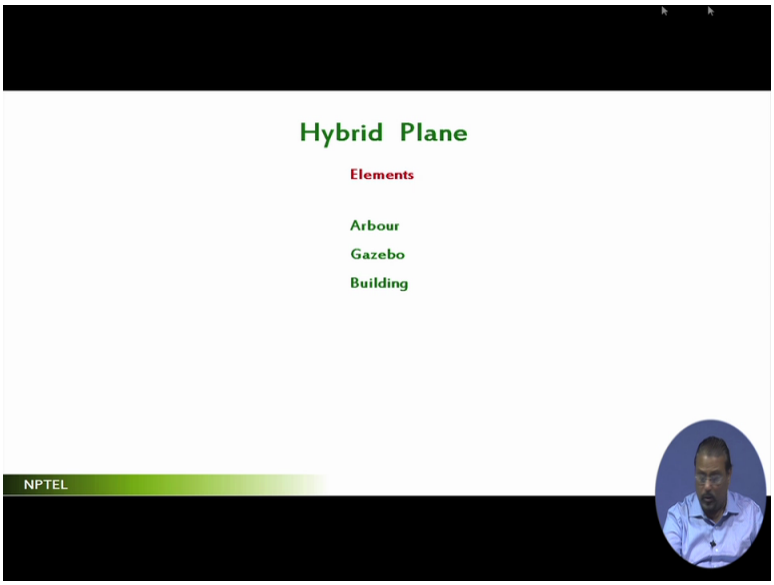

The last one which I would say in this is the hybrid plane.

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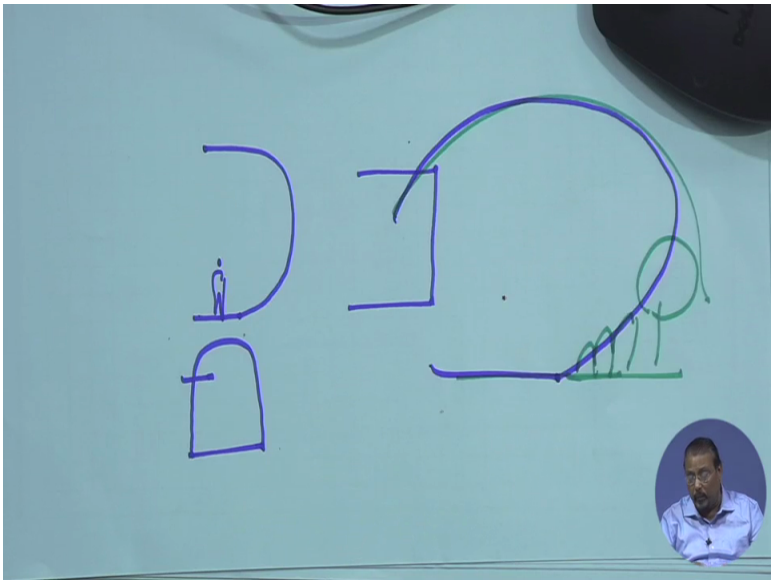

You recall that I had given a sketch showing, yeah, you recall this, the hybrid. So the thing is whenever you have the ground, you have the vertical plane and you have the overhead plane, all together makes it a hybrid. And you have all opportunities to create, so basically I will give an example, very rudimentary landscape example for this which will probably help you. Imagine that this is the base and then you have a different layer of vegetations placed over here. And then at the end, there are trees. Okay. And then, the sky over. What is a vertical plane, the projected vertical plane? Basically the projected vertical plane is this.

This is the overhead plane coming down to this and this is becoming vertical plane and then the base plane. This is what is replica of this. So you can create anything as long as you are fundamentally clear. Okay. The examples I have given.

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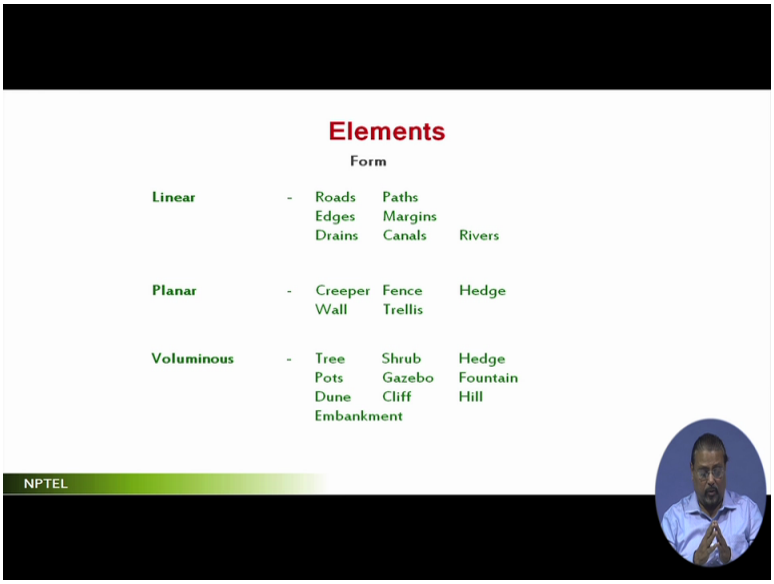

Then comes the question of form, elements of, elements in terms of form. There are few elements or rather I would say there are different forms, linear and planar and volumetric or voluminous. Now, I would say you use volumetric as a point, as a reference. I have tried to select elements which are very much common in our landscape. In linear form, we have roads, paths, edges, margins, drains, canals, rivers. When I will discuss about the elements in different course of time, I will give examples of all these things. In fact, I am planning to give one particular, assign one particular lecture on all kinds of elements to be discussed, very focused, okay.

And that the planar one in which creeper, fence, hedge, wall, trellis. And the voluminous or volumetric ones is tree, shrubs, hedges, pots, gazebo, fountain, dune, cliff, hill, embankment. Now these are different forms of that particular element which ultimately contributes to our planes.

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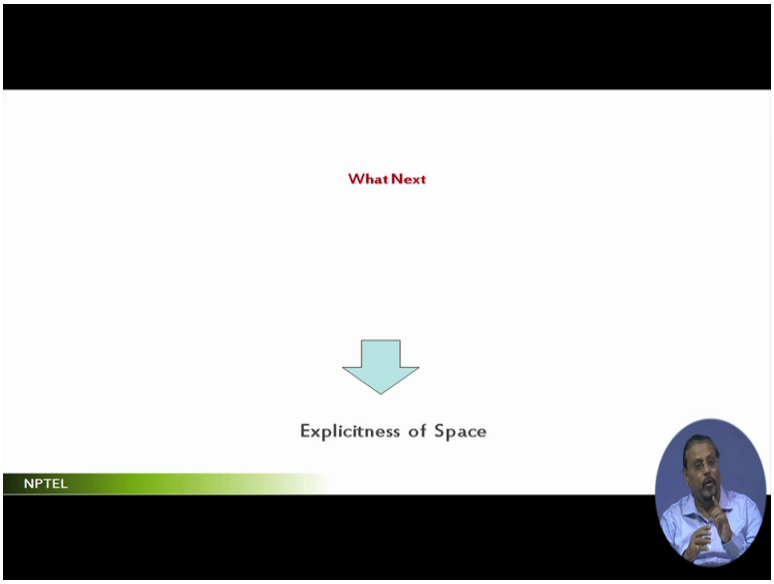

What next? See the thing is, basically what we have discussed so far is what is a different kind in a spatial form. First is the behavioral issues and then comes the spatial form. The space is created by all these planes but there are something beyond. It is not very rudimentary saying that I have a plane, base plane, then I have vertical planes and then I have overhead plane, so I have just done justice by putting some elements to it. No, it is not. It is basically how people are going to react to this particular space. It depends on what is the scale of the space and what is the explicitness of the space, how explicit the space is.

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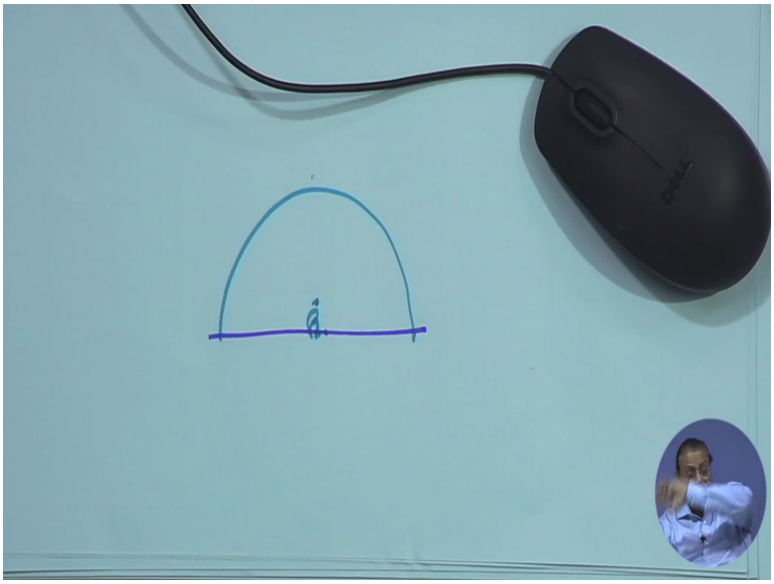

If I truly, if I try to correlate with whatever just now I have said, it is if I have a situation in which this is the sky, you are standing here, which one is the overhead plane? Where is a base plane? Okay, you will say this is a base plane. Where is a vertical plane? Sky meeting the horizon and from there it is rising and ultimately going overhead and ultimately meeting the other side is horizon. Where is the vertical plane? Point is when you view it, you view it with, not with very rudimentary or very straightforward points, you try to understand the essence of it.

And interestingly in the next lecture that I am going to discuss for the next day in which you will find that how we consider a space created with base of vertical and overhead planes and how explicit it is. And then I will go on. Thank you very much. Enjoy it. Any questions that you have, please write your questions in the forum so that I can always clarify further. I hope these points are placed in a manner which is very easy to understand for you, by you, so enjoy it. Thank you.