

Planning the Station Site for Expansion



an article by
Ken Newell, AIA, LEED AP BD+C



Stewart · Cooper · Newell
Architects

Planning the Station Site for Expansion

“Most stations will have two or more major additions and renovations during their life spans.”



By Ken Newell

It is a safe bet that when most departments are building a new station they never consider the possibility that one day they will need to expand the facility. The thought seems to be, “If we’re spending this much on a new station, surely we’re building all we’ll ever need”. However, most stations will have two or more major additions and renovations during their life spans. It only makes sense to plan for those future additions while planning the original facility. Having a design professional with that foresight is critical to your planning process.

growth. Lay out driveways and parking lots that can easily be expanded. When a by-pass lane is designed into the apparatus site circulation configuration, it not only provides convenience for moving apparatus on site and extra parking for large visiting vehicles, but it may also prove to provide needed space in the future for adding apparatus bays.

A common mistake is to locate necessary features too close to the street right-of-way. It is predictable that roadways will widen in the next 75 years. Locating too close to the right-of-way means that someday you will likely lose important parking lots or outside apparatus staging areas.

Site Expandability

With the ever increasing cost of land, most departments limit their property acquisition to the minimum necessary to fulfill the immediate need. When evaluating potential station sites consideration should be given to purchasing more acreage than is currently needed. Property costs will probably never be lower than now, so take advantage of the market, if the budget will allow. If you are already in the station and an adjacent parcel becomes available, consider the opportunity of purchasing. Even if your department never needs the extra land for expansion, you can likely sell the additional parcel for a profit in the future.



Site utilities, such as water, sewer, gas, etc., can be increased in capacity with the first project to insure that your future needs will be met without incurring the expense of complete upgrades. Larger meters, taps, and lines are not inexpensive. But they’ll only be more costly in the future.

The placement of your new facilities on the site will prove critical in your ability to expand later on. If your site is at all larger than needed for the original facility, make sure you position built items so that the features that will potentially expand in the future have the room to do so. Make sure that the space between the portions of the building and driveways, parking lots, or other site features are adequate to satisfy future

Other future related activities may be planned for the site. Many of these activities may not be connected or even related to the station itself. Maintenance or storage facilities, training grounds or buildings, and helicopter pads are all potential activities that may be in your long-range expansion plans. Plan the eventual locations of these activities so that immediate placement of utilities, drives, parking lots, etc. can best serve the future plans with little or no disruption. A simple and inexpensive initial construction item is to put multiple, empty conduits under all driveway and parking lot intersections. This will make it possible to install all sorts of future utilities and lines without cutting and patching paved surfaces.

Planning the Station Site for Expansion *continued...*

One of the challenges often encountered in the station site design process is the State or local Department of Transportation allowing multiple or wide curb cuts for emergency vehicle egress to the public roadway. Therefore, if you are planning for the future addition of vehicle bays that will egress straight out to the public roadway, you may need to consider making the initial curb cut wide enough for your future goals. This may let you avoid asking for a future widened curb cut in the future when the reviewing authority is not as agreeable.

Consider oversizing the above ground or below ground storm water detention capacity so that it is more likely to accommodate the increased future quantities necessitated by facility expansions. Also, give thought to where you are planning future expansions so that your landscape design in today's project is not wasted in the future. For instance, unless the landscape ordinance requires it, do not plant large specimen trees where future bays will be added, making it necessary to cut them down when the additions are made.



If expansion is a major consideration while planning a new facility, these and many other ideas will become apparent.