

Appendix A: Peripheral Campuses Standards

A. UNT Research Park Supplemental Design Standards

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(Note: This list is not comprehensive but covers most common issues at the Research Park. Refer to the Design and Construction Guidelines for all other requirements.)

General

1. A pre-construction meeting is required prior to the beginning of any construction project at the Research Park. The Facilities Construction office will perform the oversight and coordination of the work.

Building Design & Interior Lay-out

2. Both floors of Wing E and Wing F will have a perimeter 8' to 10' wide corridor running along the exterior walls on the west, south and east sides. This is how the building is designed to allow for direct travel to fire exits, access to mechanical rooms, and to allow natural light into the interior space. The main "trunk" ducts also run down this hallway.
3. A perimeter 8' to 10' wide corridor must be maintained for access to all mechanical room to allow for maintenance
4. No rooms on exterior walls in Wing E, F and B.
5. Whenever possible, transportation/delivery vehicles (such as golf carts and fork lifts) will use the tunnel system to move from one part of the building to another. The first and second floor concourse will be reserved for pedestrians only, as much as possible.
6. It would be a violation of fire code to allow storage in the tunnel system. The tunnels will remain clear as vehicular access to freight elevators and also access to elevator machine rooms.

Finishes & Hardware

7. Use university standard "Best" door hardware throughout.
8. Color and finish selections should either match existing or follow the new standard finishes "pallet" developed for the Research Park.

MEP General

9. All new conduit, ducts, pipes, etc. installed in the open ceiling cavity to be painted to match existing.
10. Manufacturer for equipment such as circuit panels, switchboards, and variable frequency drives should be Square-D.

Mechanical

11. The building has a process-cooling loop that will be maintained at 60° F for lab cooling water requirements. Existing HVAC chilled water lines are reserved for HVAC use only.
12. The building has a central compressed air system for building wide use. Pneumatic air connections shall have building standard taps (check valves, valves & filters).
13. Existing HVAC & Lighting Control System is T.A.C. T.A.C. will provide controls for any mechanical remodeling.
14. Existing VAV boxes in an area that is to be remodeled should be replaced as part of the project.
15. All new VAV boxes must have 277 or 480 VAC electric reheat, and TAC controls. Preferred Manufacture will be Trane, Price is acceptable substitute based on price and availability.
16. Installation of MEP equipment such as VAV boxes and ductwork may require full or partial shutdown of building systems. Prior to the beginning of the work the shutdown must be fully coordinated through the Facilities Construction office.
17. All new Air Handler Units shall be direct drive. All new AHU's and FCU's shall be manufactured by Trane unless the unit is a specialty unit that is not available through this manufacturer.

Electrical

18. All building original light fixtures need to be replaced with single voltage / 277vac electronic ballast fluorescent fixtures with T-8 lamps. If a decision is made to upgrade any original lighting

fixtures, ballast must be replaced with single voltage ballasts only. No dual voltage ballasts. No 8" fixtures will be retrofitted to T-8, All 8" fixtures must be replaced. T-12 lamps must be properly disposed of in accordance with EPA guidelines 40 CFR.

19. All building columns are also electrical power chases. The design should take this into consideration so that power is supplied from these columns wherever possible and the use of "power-poles" is kept to a minimum.
20. All electrical receptacle and voice/data cover plates shall be smooth nylon, color: ivory.
21. All lighting in Areas A, B, D, E, F, G and M are on our Energy Management System (EMS), each area is divided into lighting zones. All remodel projects must take this into consideration and maintain the lighting zone. Or alter the existing lighting zones as appropriate to meet the needs of the end user and Facilities.
22. All electrical wiring should be run in high voltage tray in flexible conduit only. Conduit should be tied at intervals per N.E.C. No EMT, IMC, or rigid conduit will be run or laid in cable trays.
23. All hallway electrical receptacles circuits must be on separate electrical circuits from offices.
24. Rooms or Labs that house EMI Sensitive Equipment must be isolated from any electrical power or lighting circuits including circuit neutral conductors that do not direct feed power necessary for the operation of the room or Lab. This would necessitate the removal of all lighting circuits, their neutral conductor, and grounding conductors from the existing lighting grid as they pass through said rooms or Labs, and rerouting them around rooms or Labs as necessary to retain our lighting control zones. Also all traveler conductors necessary for 3 way lighting control switches must be installed in separate conduit and routed outside said rooms or Labs. 3 way switching should be eliminated from Rooms or Labs that house EMI Sensitive Equipment whenever possible

Data & Communications

25. Any existing abandoned datacom cable in existing datacom cable trays will need to be removed prior to the installation of new datacom wiring as part of the remodeling project.
26. Datacom work that will be included as part of each remodel project at the Research Park will include: cable from the MDF to the IDF for that area, the equipment in the IDF for the area, and the drops to each service point as well as the HVAC and power in the IDF.
27. Each IDF room must be cooled 24/7, therefore a separate air handler unit needs to be provided for each room. The AHU should be connected into the existing chilled water loop system. The capacity of this unit will be 1.5 tons (600 CFM). The bottom of the unit should be mounted at 8'-0" AFF with a supply duct connecting to a supply register at 18" AFF. Also provide a thermostat to the unit in the room and a secondary galvanized steel emergency condensate drain pan. The drain line should be piped to discharge at a location where no equipment will get wet and where any discharge will be quickly detected. Each of the two (2) drain lines should be piped to separate drains.
28. All datacom wiring will be by owner. Contractor will provide conduit and j-boxes at each outlet location.
29. Power for all MDF and IDF rooms including power for lighting must be on a separate independent circuit from other building power functions.

Cable Trays

30. Cable tray usage: Fire alarm & energy management shall use the north and west sides of the cable tray. Telecom shall use the south and east side. Each trade must keep to their respective side and all cable shall be neatly tied at all times.
31. Where control cable leaves a low voltage cable tray in an open ceiling area, it will immediately transition into EMT conduit. Above lay in ceilings j-hooks are acceptable as long as cables are kept neat and orderly. No control cable will be allowed to lie on top of any lay-in ceiling.
32. Use only MC type cable in electrical cable trays.
33. Cable trays should not be used to support anything. If an exception is necessary it must first be approved by UNT, then it should be kept to a minimum.
34. When attaching to a cable tray use beam clamps bolted to the outside lower flange of the cable tray. Then attach the object you wish to support to the beam clamp with all thread and the appropriate hanger.

35. When transitioning from MC cable to conduit, attach a 4x4 electrical box to the outside of cable tray. This can be done by drilling the appropriate sized hole through the side of the tray and using a close nipple, lock nuts, nylon bushing on the box side, and a ridged conduit coupling on the inside of the tray to connect the MC connector to. This not only secures the box to the tray, it also creates a path for the wiring. If needed, a bolt on beam clamp only should provide additional support for the 4x4 box. At no time should anything be attached to a cable tray with a screw.
36. If it becomes necessary to seal a cable tray where it penetrates a wall, the plug must be made of a material that can be removed intact and replaced easily to allow for the addition or removal of cable in the future.

Plumbing

37. All plumbing waste and vent pipes are to be cast iron.
38. Trenching of the slab for waste lines is to be kept at a minimum.
39. All water supply lines to be copper.
40. Limit the number of roof penetrations for plumbing vent pipes. Where possible vent pipes should penetrate roof/ceiling at the mechanical rooms, however keep in mind that the max. Horizontal travel distance allowed for vent pipes is 20'.
41. No wax seals at wall mounted toilets and urinals.
42. The standard for water heaters is to use instant heat type under-sink water heaters. No water heaters installed above ceiling or in remote locations.