

K2 Study

The Kendall Square (“K2”) portion of the “K2C2” Planning Study ([final report published in 2013, available on the CDD web site](#)) put forth a vision for to transform the heart of Kendall Square to a more dynamic public realm with a broader and more diverse range of activities that are welcoming to the broader community. Future commercial, residential and institutional growth, accompanied by retail, cultural uses and public space, would be harnessed to serve the following goals and objectives:



1. Nurture Kendall’s Innovation Culture

- *Expand opportunities for Kendall Square knowledge economy to continue to grow.*
- *Foster a strong connection between the MIT campus and the rest of Kendall Square. Enable MIT to develop in a manner consistent with its academic and research mission, so that it continues to be a magnet attracting innovative businesses to the area.*
- *Support a vibrant environment for creative interaction.*
- *Three themes (below) working together supporting the central theme of nurturing Kendall’s innovation culture.*

2. Create great places

- *Support open space and recreation needs of a growing neighborhood.*
- *Create lively, walkable streets.*
- *Expand opportunities for Kendall’s diverse community to interact.*
- *Development and public place improvements must happen in tandem.*

3. Promote environmental sustainability

- *Expand convenient, affordable transportation and access choices.*
- *Enhance streets as public places.*
- *Create a healthier natural environment.*
- *Reduce resource consumption, waste and emissions.*
- *Leverage the environmental and economic benefits of compact development.*

4. Mix living, working, learning and playing

- *Leverage community and innovation benefits of mixed-use environment.*
- *Focus intensity around transit.*
- *Minimize development pressures on traditional neighborhoods.*
- *Continue to support city and state economic development.*

Elements of Zoning Petition

Most of the substantial changes proposed in the CRA's petition respond directly to the recommendations in the K2 study. In some areas a different or new approach is suggested to respond to evolving discussions since the K2 study or issues that were not fully addressed in the study. The following list summarizes elements of the petition that are largely consistent with the K2 study, and the elements that diverge from or expand on the K2 study are discussed further below.

Additional Development (14.30):

The ultimate effect of the proposed rezoning is to increase the allowed development in the MXD district at the level recommended in the K2 study: an increase of 1,000,000 square feet in total allowed Gross Floor Area (GFA), with at least 400,000 square feet of that increase devoted to residential uses and up to 600,000 square feet devoted to non-residential uses.

This additional development does not include the 200,000 square feet of required residential development in the approved Ames Street Residential project (thus resulting in a total residential requirement of 600,000 square feet), but does include the 60,000 square feet of non-residential development authorized by the City Council's adoption of the Whitehead Institute rezoning petition earlier this year.

The zoning language itself is a bit complicated due to the fact that the allowed GFA in the district has been raised in increments over the past decade or so through variances and targeted zoning changes. However, the overall effect is to set a new benchmark for development consistent with the K2 study while minimizing potential non-conformity problems that might be created for development that has already been permitted or built.

Innovation Space (14.32.5):

Consistent with the K2 study recommendations, a portion of existing or new development would need to be designated as "innovation space," which could take a variety of forms but would provide workspace and shared resources for individuals and small companies on short-term leases. The minimum area devoted to innovation space would be 5% of new office or commercial lab GFA, so the potential for 30,000 square feet or more of innovation space would be generated by the petition.

Middle-Income Housing (14.35):

The K2 study identified middle-income housing (for households earning 80% to 120% of area median income) as a need in Kendall Square and recommended an incentive-based approach to encourage new middle-income housing development. The incentive would allow residential development to exceed 250 feet – the recommended baseline height limit in the Kendall Square area – in exchange for providing an amount of middle-income housing equal to 25% of the residential floor area above 250 feet in height. The zoning petition includes this incentive provision, although with a difference in the overall height allowance (discussed further below).

The topic of middle-income housing has been an ongoing and evolving topic of discussion since the K2 study, both within Kendall Square and on a citywide level. In the Planning Board’s discussion of the PUD-KS (Volpe) zoning, the Board favored a simpler approach that set a minimum requirement for middle-income housing, rather than an optional incentive, while still maintaining allowances for increased residential building height. While there is no clear answer to which approach is best, more knowledge will be gained through ongoing citywide housing studies and direct experience in the production and marketing of middle-income units.

Active Ground Floors (14.37):

The proposal includes the K2 study recommendation requiring new buildings to incorporate active ground floor uses, which include retail and other functions that are inviting to the public, not residential or commercial lobbies or facilities for building service and loading. The zoning would require 75% of new building frontage on major streets (Broadway, Main Street and Ames Street) to have active ground floors, which is an aggressive standard that ensures a nearly continuous active streetfront. However, the petition adds a slight modification that the requirement for new buildings may be reduced if existing buildings are retrofitted to add active ground floors on major streets. This type of retrofit should be encouraged, but a case-by-case review and approval process may be beneficial to ensure that any tradeoffs between existing and new development would serve the overall district goals.

Parking (14.50):

Consistent with the K2 study recommendations, the parking requirements in the district are proposed to be “flipped” so that maximum “parking caps” are imposed rather than minimum requirements for new development. The zoning for the district already includes provisions to provide parking and loading more flexibly through pooled and shared arrangements.

The key difference is that while the K2 study recommended a minimum residential parking requirement of 0.5 space per housing unit, the petition proposes a minimum of 0.25 space per unit. Because the 0.5 space per unit figure was decided based on observed demand and experience with actual residential developments in Kendall Square, more discussion will be needed to assess whether 0.25 space per unit is a supportable standard. It is possible that residential parking demand can be better met through shared parking arrangements within existing commercial garages.

Sustainability (14.74):

The petition incorporates most of the sustainable design standards recommended in the K2 study, including requirements to design buildings to a LEED Gold level, monitor energy use, manage water on the site, use cool roofs and mitigate of noise from rooftop mechanical systems. It also requires study of on-site energy and district energy solutions. Some of the standards of the K2 study have been (or will soon be) superseded by other citywide standards, including the Building Energy Use Disclosure Ordinance (BEUDO) and the recommendations in the Net Zero Action Plan.

One additional provision that was not contemplated in the K2 study is the proposed requirement that all new buildings be “solar-ready,” meaning that they could accommodate solar energy systems in the

future even if they are not installed initially. However, the petition does not include the recommended provision to study the feasibility of new buildings utilizing the existing district steam energy system.

Elements of Petition that Diverge from K2 Study Recommendations

The following provisions of the current petition represent more significant departures from the K2 study recommendations. The differences reflect ongoing discussions on various topics that have occurred since the completion of the K2 study, or in some cases reflect the particular circumstances that apply uniquely to the MXD district.

Height (14.34):

The K2 study recommends retaining the current 250 foot base height limit in the MXD district, but allowing residential buildings (in accordance with the middle-income housing incentive discussed above) to reach a maximum of 300 feet. The petition takes a somewhat different approach, lowering the allowed height in the northernmost portions of the district to 200 feet, while increasing the allowed height for residential buildings to 350 feet, up to a maximum of two buildings, and provided the middle-income housing provisions are met. Another difference is that the petition sets a floorplate limitation of 24,000 square feet for portions of buildings above 250 feet, while the K2 study (through the Kendall Square Design Guidelines) suggests floorplates with maximum 160' x 65' or 90' x 90' dimensions, resulting in floorplates of around 8,100-10,400 square feet. Some of these changes reflect ongoing discussions around height, including discussions of the PUD-KS (Volpe site) zoning proposal.

Affordable Housing (14.36):

The K2 study recommended maintaining citywide inclusionary housing requirements as they pertain to affordable units for low and moderate-income households (earning up to 80% of area median income). The current inclusionary housing requirements (which are being studied for possible revision at a citywide level) are structured with a compensating density “bonus,” which changes the overall percentage of units required to be affordable, usually resulting in new housing projects with a total net affordability set-aside of 11-12%. The petition proposes a simpler formulation that 15% of total new housing is reserved as affordable to low and moderate-income households, without the provision of a bonus and with the calculation to be made based on floor area rather than units, to allow for larger affordable units to be provided. This is different from the K2 study but reflects some evolving discussions around affordable housing requirements.

Open Space (14.42 and 14.43):

The K2 study recommends retaining the current zoning requirement to provide a minimum of 100,000 square feet of public open space within the MXD district, which is consistent with the current petition. However, the petition goes beyond that recommendation to suggest additional changes to the district open space requirements. It adds a requirement that total publicly accessible open space (whether publicly or privately owned) meet a minimum of 15% of land in the district (which would result in approximately 135,000 square feet of open space minimum) and be designed to contribute to the overall open space network in the area. It also removes the requirement to provide a specific amount of

open space on each lot within the district, but requires each new project to “contribute” to the open space system in a manner that is not explicitly detailed in the zoning but is described in the KSURP. More information from the CRA would help enable further discussion of this approach, including a cataloguing of existing public and publicly accessible open space in the district as well as a plan showing open space improvements that might be anticipated in the surrounding area.

In general, this approach is reflective of the City’s broader goal to expand and improve open space in Kendall Square in a way that enhances the system as an interconnected whole, not just creates more of the stand-alone open spaces that are typical of the district as it exists today.

Development Review Procedures (14.32.2 and 14.73):

One of the more complex issues raised by the proposed petition, which was not explored in detail through the K2 study, is the process by which additional development would be reviewed and approved.

Across most of the city, the Planning Board has jurisdiction over large development review and permitting. The Board applies the specific plans and regulations for particular districts along with broader development policies, practices and objectives established by the city to gauge whether proposals meet the city’s planning goals and how they might be improved.

There are two levels at which the Planning Board conducts its review. For large-scale developments involving multiple building sites, phased construction and (often) public improvements, review is conducted at the master plan level where the Board considers the arrangement of buildings, open spaces and circulation routes, the distribution of building scale and massing, and the mix and distribution of uses. At the scale of individual buildings, where the large-scale development characteristics are determined either by the base zoning requirements or by a previously approved master plan, the Board reviews the design at a more detailed level to assess its urban design character and to consider ways to mitigate impacts on surrounding uses.

The MXD district is unusual because throughout most of its history, development review has been under the jurisdiction of the CRA rather than the Planning Board, both at the master plan level and at the level of individual building review. The Planning Board has had limited involvement in review, except that in recent years some individual buildings within the MXD have been made subject to Planning Board special permit review. However, it is difficult for the Board to have significant input on development proposals when its role is limited to building-level design review (which overlaps with the CRA’s jurisdiction) without being involved in larger-scale development planning.

The K2 study recommended a zoning regime that would make new development in the MXD subject to the PUD review and permitting procedures in Article 12.000 (which would also, in effect, incorporate the transportation and urban design review provisions in Article 19.000). While this would give the Planning Board a much stronger role in development review, it could complicate the conformity status of existing development within the district, and does not resolve the overlapping jurisdiction with the CRA. The petition attempts to take a more nuanced approach that balances the responsibilities of the CRA and Planning Board in the review process.

The first level of review would be an Infill Development Concept Plan, which is similar to a PUD Development Proposal except that it would focus only on new development that exceeds the current zoning limitations. Such a Concept Plan would identify the new development sites within the district and would study macro-level development characteristics and impacts including phasing, transportation, housing, open space, infrastructure, shadow and wind impacts and sustainability. The CRA would submit the plan and it would require Planning Board approval by granting a special permit applying the review standards of Articles 12.000 (PUDs) and Article 19.000 (Project Review). Only one public hearing would be required instead of the two required for a PUD application. The special permit would authorize development to proceed in accordance with the plan, but amendments could be reviewed and approved in the future.

The next level would be design review of individual projects, which is proposed to be conducted through a joint Interagency Review Process with representation from the Planning Board and CRA. Some of the details are described in the KSURP; however, more details about the review process could be incorporated into the conditions of the Infill Development Concept Plan special permit.

Fund Commitments:

The K2 study recommends that new commercial development be required to contribute funds, at a rate of \$10 per square foot, to support open space programming, transit improvements and workforce readiness programs. These were identified as significant objectives for Kendall Square, and the reason for the fund requirement is the idea that these objectives would best be met by collective participation from all property developers rather than by individual developers acting on their own. The Kendall Square Fund would be overseen by a committee with representation from City government, area residents, property owners and business interests.

The proposed zoning does not include requirements for fund contributions (with the exception of the current zoning adopted in the Whitehead Institute petition, which would require a \$10 per square foot contribution only for that 60,000 square-foot addition). However, the KSURP amendment proposes establishing separate funds for open space programming and transit improvements under the authority of the CRA. Rather than a set dollar amount, contributions would be negotiated as part of the CRA's ability to negotiate development fees.

While the proposed approach addresses some of the objectives of the K2 study, the proposed mechanism by which the funds will be collected, governed and used should be subject to further public discussion.