35447

Exhibit A

Report to City Council

5 Story Wood Frame Construction

I. Introduction

The Bureau of Buildings, working with a committee of citizens (including a builder, architect, and engineer) and with representatives of affected agencies, has developed a proposal which would allow for five story wood frame ("Type V") construction for apartment buildings. Currently, the Oregon Structural Specialty Code (the state's adopted version of the Uniform Building Code) only permits four stories of typical wood frame construction for such buildings. Our committee is recommending that the City Council request approval by the State Building Codes Administrator of a local amendment to the Structural Code to allow five story wood-frame construction.

It is the view of the Committee that the proposal to allow five story frame construction (Type V-1 Hour) would serve some key public policy objectives to create more affordable, high density housing opportunities in the Central City and along transit corridors. Wood frame construction is more economical to build than masonry or steel frame construction. By allowing an additional story of frame construction, the cost of housing would be reduced on the order of $5,200 per unit in construction costs alone.

The proposal includes measures which must be taken in the design, construction, and permitting/inspection of these buildings to insure compliance with the City's fire and life safety objectives. In fashioning these measures, we have borrowed from the Seattle 5 story frame provision (Seattle has allowed five story frame construction for the last 20 years). In addition, our proposed safeguards represent extensive input from the Fire Marshal as well as Bureau of Buildings' officials.

We anticipate that the vast majority of developments which take advantage of the five story frame construction provision will be located either in the Central City, or in select locations near transit stations. No changes are proposed to the zoning code's allowed height limits in Portland; this measure simply allows for a more affordable type of construction in areas where five story residential buildings are already allowed.

The balance of this report explains the reasons for the proposed code change, and addresses technical considerations raised during the committee's deliberations. The following documents are attached to this report:

A. Proposed Amendments to Title 24
B. Review and Approval Procedures

C. Memorandum from Clay, et al, regarding Policy Rationale for Proposal
D. Comparative construction cost estimates by Walsh Construction Company
E. Type V Technical Committee Membership List

II. Policy Background

There are a number of State, regional, and local policies which bear on the proposal to allow for an additional story of frame construction. Attachment C provides a more detailed analysis of these policies and how they relate to the proposal. The following comments summarize the policy issues.

There are two Statewide land use planning goals which bear directly on this proposal. Goal 10 obligates city plans to accommodate housing for all incomes, including affordable units. Goal 14, Urban Development, mandates efficient use of urban lands, through such measures as the Urban Growth Boundary.

Recognizing the pressing need for special growth management techniques, the State Department of Land Conservation and Development (DLCD) has promulgated a Metropolitan Housing Rule for the Portland region. This administrative rule mandates a density of 10 units per net buildable acre for vacant land for the largest cities in the region. This is about 50% higher than existing residential density. The rule also requires that sufficient buildable land be set aside to accommodate 50% of new residential construction for multi-family. A problem with achieving implementation of the Metro Housing Rule is termed underbuilding to allowed densities. Type V-wood frame construction will address this problem. Goal 10 also includes a guideline calling for building and construction code revisions which help a community to achieve housing objectives.

The State of Oregon has also adopted a Transportation Planning Rule (TPR) which mandates reduced reliance on single occupancy vehicles. To achieve this end, the TPR calls for development which accommodates higher transit use. Without question, the development of higher density housing (and provisions which make such development more economically feasible) will reduce reliance on automobiles, since this development will be located either near centers of employment (i.e., the Central City) and/or in close proximity to good transit.

As part of the METRO 2040 planning process, METRO has adopted a growth strategy that advocates for building "up" rather than "out". That is, the regional vision calls for generally retaining the existing Urban Growth Boundary over the next 50 years, by channeling most growth into existing urban centers. The region's response to population growth is to create higher density, rather than increased suburban sprawl.

5 Story Wood Frame Construction
Report and Recommendation

In response to the Metro 2040 Plan, the City's Livable City Project Initiative established a target of 50,000 new housing units to be built in the City over the next 20 years. This translates to an annual net housing production level of 2,500 units per year, a considerable increase over the current level of about 1100 units per year.

The target number of housing units for the Central City was recently increased from 5,000 units to 15,000 units, as part of the Livable City Housing Initiative. Of this amount, some 5,500 units are slated for the River District of the Central City alone. A provision allowing five stories of wood frame construction is crucial to the establishment of this new, high density urban neighborhood. As an example, GSL Properties, Inc.'s project planned at Union Station relies on the five story provision to attain the 725 units proposed under this multi-phase project. Without the five story provision, there is serious question as to whether we will achieve either the 725 units proposed at Union Station, *or* the 5,500 units slated for the River District.

All of these policies advocate for the creation of higher density housing within established urban settings, particularly in close proximity to employment centers and/or transit. In addition, the City has recognized that a careful review of the regulatory climate is a necessary component to the achievement of these goals. Under the Housing Goal of the Comprehensive Plan, and in accordance with the Comprehensive Housing Affordability Strategy (CHAS), policies call for an ongoing examination of codes to determine opportunities for streamlining to accommodate high density, affordable housing.

Oregon Revised Statute requires in Chapter 455 that the state building code be uniform throughout the state. Municipalities are restricted from amending the state building code except when authorized by the Director of the Department of Consumer and Business Services. Section 455.040(1) goes on to state that "the director shall encourage experimentation, innovation and cost effectiveness by municipalities in the adoption of ordinances, rules or regulations which conflict with the state building code." Based on this statute, the City must submit this proposal to the State for approval before it is implemented. We believe that this proposal more than meets the minimal criteria, contained in statute, for approval of a local amendment to the state building code.

The creation of building code requirements and enforcement procedures which allow for more economical construction will allow for more dwelling units to be built at more affordable rents while, simultaneously, maintaining adequate fire and life safety safeguards. The proposal, once approved by the State, will allow Portland to meet State and regional land use and housing goals and would promote an innovative approach to construction regulations intended by the State Building Code.

III. Economic Considerations

There is a demonstrable demand for housing in Portland's Central City. Current occupancy levels for recently-built residential development is about 98%. This is true whether the project serves low income (examples: St. James, 12th & Market, Alder House), middle income (examples: University Park, Essex House, River Place), upper income, or a mix. There is strong demand for both rental and ownership products.

A. Cost of Land

Running up against this demand is the high cost of residential development. Land prices in the downtown area vary between $ 20 and $ 50 per square foot. This compares with approximately $ 2 to $5 per square foot in suburban locations. This tenfold difference in land costs obviously severely impacts the development of new housing in the central city areas of Portland.

B. Cost of Construction

The high cost of land, coupled with the high demand for housing in the city, means that for downtown housing to be affordable (i.e., competitive with suburban locations), higher densities must be achieved. These factors also mean that most parking must be provided in structures (the high price of land, coupled with strong planning policies, rule out the suburban option of surface parking). The available construction techniques for such buildings are wood frame (limited to 4 stories), masonry and/or steel (limited to 12 stories or by zoning) or a combined construction building of a first story of masonry and followed by four stories of wood frame. When one story is used for parking, the space available to apartment use and the cost per apartment is increased.

These considerations account for the fact that virtually all of the middle income projects (not to mention affordable projects) built in Portland's Central City in the last fifteen years have required some level of subsidy. Subsidies might take the form of land write downs, gap financing, construction of infrastructure, etc.

There is thus a compelling public argument for the proposal to allow five stories of frame construction. The cost of wood frame, residential construction is about $55 per square foot. This is about $8 less than the cost of masonry or steel construction for the same building. Significant cost savings can be achieved by allowing the additional floor of frame construction. To take an example, if the University Park apartments were built today, this four story, 128 unit project would cost roughly $4,575,000, based on a construction cost of $55 per square foot. To add a fifth floor under the current code would require masonry or steel frame construction, resulting in a total building construction cost of about $ 6,550,000 (based on a cost of $63 per square foot). If, on the other hand, five floors of frame construction were allowed, the construction cost would

be about $ 5,730,000. These cost comparisons only address construction costs, the true savings are significantly greater when the cost of financing a project are taken into consideration. These savings translate to a lower per unit cost, thus allowing for more affordable housing.

C. Urban Fabric and Existing Infrastructure.

As has been previously mentioned, Portland hopes to encourage the development of these buildings in the Central City and near transit stations. These locales are characterized by high levels of pedestrian activity and by a need to have housing, shops and services within close proximity. While it is expected that many residents may not have cars, there is still a need for parking. Thus to encourage this mixture of uses, to have a lively neighborhood character and to allow the provision of services in close proximity to the housing, we have prepared standards which allow and encourage mixed use projects. Not only does the mix of uses address this need, but the mix also makes the buildings and the development of affordable housing in the Central City more economically viable. The cost of providing parking in structures is high. Allowing limited retail and services in these buildings can work to offset these higher costs.

For the most part, those areas of the City which presently have zoning which would permit taller development are the same areas where the infrastructure systems (streets, water, sewer, etc.) are complete. In addition, most of these systems have sufficient capacity in place to support a higher density of construction.

IV. Technical Considerations

As compelling as the arguments are which favor the proposal to allow five stories of wood frame construction, the City also recognizes that this proposal can only be approved if adequate attention is paid to public safety issues. These issues include the safety of occupants during fire or other emergency situation; the ability of the Fire Bureau to have reasonable access around and into the building to perform its functions; experience with this construction technique in other locales, primarily Seattle; and unique structural engineering and inspection considerations for wood structures of this size. As noted above, we have consulted extensively with appropriate staff at the Building Bureau and Fire Bureau, and we have also consulted with officials in Seattle who administer that city's building code. This section summarizes key issues related to safety and technical considerations.

Fire and Life Safety

The Fire Bureau has discussed this proposed concept in depth. Primary among their concerns are making sure that these buildings include built-in fire prevention/protection systems including automatic sprinkler systems as well as adequate access to the building by Bureau personnel in the event of a fire emergency. The proposal was discussed with a number of Bureau staff, including the battalion chiefs of the battalions which cover the areas where the zoning heights would allow this construction. Standards considered were the overall size and height of buildings, building location relative to streets or other fire-fighting staging areas, access to roofs and building courtyards as well as the potential regulation of the placement of landscape amenities and building service wiring. The Fire Bureau believes that its concerns can be adequately addressed by a coordinated set of code amendments and bureau policies.

Mixed Occupancy

It was acknowledged that most such buildings, if allowed, would be built in the denser, more pedestrian-oriented areas of the City. Planning, as well as the economic, factors affecting development in these areas would show a strong push toward mixed occupancy buildings, allowing not only parking on lower levels, but also supportive retail, business and service uses. The building code already contains detailed provisions addressing mixed occupancy as well as mixed construction buildings. This proposal would be a refinement of those existing provisions.

Design, Construction and Inspection

The final key technical consideration in allowing 5-story wood frame construction is the need to have designs, approved plans and inspections clearly reflect the unique engineering and construction characteristics of wood. The Bureau of Buildings is confident that with specific detailing on plans and special attention to details during inspection, that such buildings can be constructed safely, constructed to be safe for their occupants and constructed to endure. As with the Fire Bureau considerations, the Bureau of Buildings believes that a combination of code amendments and bureau policies will be sufficient to address these concerns. While most issues will be addressed through special detailing on the plans, the policies will call for additional, special inspections of some of the construction details.

Recommendation

The Fire and Building Bureaus, on behalf of the Five-story Construction Technical Advisory Committee, recommends that the City Council amend the City Code (Title 24) to allow five story wood frame construction (Attachment A). We further recommend that we be directed to issue a

joint bureau policy detailing the design, construction and inspection criteria which such buildings must comply (a draft is contained in Attachment B). Finally, we recommend that the Council direct the Bureau of Buildings to request approval by the Oregon Department of Consumer and Business Affairs (Building Codes Division) of this proposal as a local amendment to the Oregon Structural Specialty Code.

Upon approval of this proposal by City Council and the State, the two bureaus, working with the Portland Development Commission will be working with members of the Technical Committee to prepare a Developers' handbook. The handbook will provide a guide to assist developers through the special requirements for using the five story amendment. We believe such a handbook will make realizing the potential benefits of this proposal more likely.

ATTACHMENT A

Add a new chapter to Title 24, as follows:

24.90 SPECIAL DESIGN STANDARDS FOR FIVE STORY MULTI-FAMILY BUILDINGS

24.90.010 General. The provisions of this chapter may be used to design and construct multi-family residential buildings in addition to complying with the Oregon Structural Specialty Code as adopted in Section 24.10.040. Buildings designed and constructed under this chapter shall comply with all provisions of this chapter. Where a provision in this chapter is in conflict with the Structural Specialty Code, the provision of this chapter shall take precedence.

24.90.020 Construction. A. Single Construction. Buildings complying with this chapter shall be of Type V-1 Hour construction.

B. Mixed Construction. Buildings complying with this chapter may be designed and constructed where the basement or first story is constructed of Type I construction and the top 5 stories are of Type V-1 Hour construction. The Type I construction shall be separated from the building above with a three-hour occupancy separation.

C. Construction Types. Type I and Type V-1 Hour construction shall be as specified in the Structural Specialty Code.

24.90.030 Occupancy. The occupancy of the top 4 stories of buildings shall be limited to Group R, Division 1 apartment occupancies. Occupancies located in other stories shall be limited to:

- Group A, Division 3 and Group B, Division 2 drinking and dining establishments and assembly areas for the common use of residents;
- Group B, Division 2 offices and retail stories;
- Group E, Division 3 day care occupancies; and
- Group B, Division 1 parking occupancies.

In mixed construction buildings, Group B, Division 1 parking occupancies shall be limited to the portion of the building constructed to Type I standards.

24.90.040 Sprinkler Protection. The building shall be protected throughout by an automatic sprinkler system complying with U.B.C. Standard No. 38-1 (NFPA 13).

24.90.050 Height. The maximum height of each section of either a single or mixed construction building shall be 65 feet. The height shall be measured from the apparatus set up point to the highest point of coping of a flat roof, the deck of a mansard roof; or the average height of the highest gable of a pitched or hipped roof associated with the building facade. The height of building sections with no fire apparatus access shall not exceed the height of adjacent sections.

24.90.060 Fire Fighting Access. Access to the building for fire fighting and related purposes shall be provided as follows:

A. A minimum of two of the exterior facades of the building shall be accessible by a ladder truck, according to standards promulgated by the Bureau of Buildings and Fire Bureau.

B. Interior courtyards shall be not less than 30 feet in any interior dimension

C. Unless the roof has a slope greater than 4 vertical in 12 horizontal, all stairways shall extend to the roof surface.

D. Each stairway shall include a Class I or III standpipe complying with Section 3805 of the Structural Specialty Code.

24.90.070 Design, Construction and Inspection. The Bureau of Buildings and Bureau of Fire shall jointly issue a policy addressing the permit application and approval criteria, electrical and plumbing standards, structural observation requirements and special inspection requirements appropriate to these buildings.

ATTACHMENT B

Joint Policy and Procedure

Issued by: **Bureau of Buildings**
Bureau of Fire

Topic: **5 story Wood-frame Multi-Family Residential Buildings**

Subject: **Design, Construction and Inspection Criteria**

A. Pre-application Design Conference

Prior to submitting a permit application to construct a building under Chapter 24.90 of the City Code, the applicant shall have a pre-application design conference with the Bureau of Buildings and the Bureau of Fire to review preliminary design considerations for the proposed building and to discuss the requirements of Chapter 24.90, requirements of this policy and related requirements of other construction codes. The applicant should include the designer who will be primarily responsible for the design in this conference.

B. Fire Bureau Access

Intent: A minimum of 1/2 of the living units with windows facing the exterior of the building in areas other than courtyards, need to be accessible with a 100 foot aerial ladder. Access shall be to a minimum of two sides of the building.

To be considered accessible for fire-fighting purposes the Fire Bureau must find the design and construction of a 5 story wood-frame apartment building to be consistent with all of the following criteria:

1. As required by Chapter 24.90, a minimum of two of the exterior facades of the building shall be accessible from fire-fighting apparatus (ladder truck) set up point(s). In general, the number of set up points should be minimized and the number of apartments within the ladder reach should be maximized.

2. For each accessible face of the building, one apparatus set up point shall be available for each 200 feet of building facade or fraction thereof.

3. At least 50 percent of all living units which have windows on the exterior facades of the building must be within reach of apparatus located at approved set points. Living units which only have windows on exterior courtyards are not included in this determination.

4. The building facade shall be within 21 feet of the closest edge (curb) of the access road.

5. The access road can be either a public street, or an area of the property set aside for access road purposes. The access road width must be consistent with Fire Bureau standards as outline in Fire Bureau Code Enforcement Policy B-1.

   Exception: Where a dead end access road continues more than 150 beyond the apparatus set-up point, the width of such road shall be not less than 30 feet from the set-up point to the end of the road.

6. Access roads must be paved and support the weight of the apparatus. The ASHTO25 design load standards for elevated or bridge type structures shall be used.

7. Trees planted between the curb of the access road and the building facade shall be selected from species not anticipated to grow taller than the horizontal plane at a height equal to the distance between the tree and closest apparatus set up point plus 5 feet.

8. The location of overhead wires along building facades shall be subject to the approval of the Fire Bureau.

C. Electrical and Plumbing Standards

1. The design of the electrical systems of the building shall comply with the Electrical Code as required for other building of similar size and number of stories. Wiring will need to be within conduit.

2. The design of the plumbing systems of the building shall comply with the Plumbing Code as required for other buildings of similar size and number of stories. Plastic piping systems will be permitted when complying with installation standards for such material.

D. Plans and Specifications

Plans and specifications submitted with permit applications for 5 story wood-frame buildings shall include the following:

1. A clear indication of all shear wall locations.

2. A clear indication of all holddown locations and details showing the holddown installation(s).

3. Address the shrinkage of the wood members and the limitations of stress perpendicular to the grain.

4. Within the structural notes, address the vertical and horizontal design loads, the specification of the grade of the wood elements, and the size and spacing of the nails in all structural connections including the vertical and horizontal plywood and gypsum board diaphragms.

5. Within the structural notes, address the requirement for structural observation by the engineer or architect of record and the requirement for special inspection of specified diaphragms and holddown installations.

6. All framing and associated structural details shall be separately drawn from architectural plans and details produced and sealed by the engineer or architect of record for the project who shall be licensed as an engineer by the State of Oregon.

E. Changes and Revisions

Changes or revisions to the design of the building which affect the specific standards of Chapter 24.90 or those contained in this policy shall be subject to the approval of the Bureaus as a revision to the approved plans.

F. Structural Observation and Special Inspection

In addition to any other special inspection required for the construction, 5 story wood frame buildings shall be subject to structural observation and special inspection as specified below:

1. Structural Observation as defined in Section 220 of the 1994 Uniform Building Code shall be provided by the engineer or architect of record. The engineer or

architect shall submit a statement to the Bureau of Buildings stating that the site visits have been made and whether or not any observed deficiencies have been corrected to conform to the approved plans and specifications, or to revisions approved by the Bureau. Such statement shall be submitted to the Bureau and accepted by the Bureau prior to issuance of the Certificate of Occupancy.

2. Special Inspection. the owner, or the engineer or architect of record acting as the owner's agent shall employ a special inspector to inspect the shear walls to verify that they conform to the approved plans in the following areas:

2.1 The grade of plywood used in the vertical and horizontal diaphragms;

2.2. The nail size and pattern of the diaphragms;

2.3 The location and length of all shear walls;

2.4 The holddown installations at all shear wall locations;

2.5 The diaphragm chord details;

2.6 The base plate bolting;

2.7 The blocking to top plate nailing; and

2.8 Other features as determined necessary in the approved plans for the building or in the preconstruction meeting.

A preconstruction meeting with the contractor, building inspector and special inspector shall occur to discuss the requirements of this section prior to start of any wood frame construction.

35447
DRAFT

MEMORANDUM

DATE: June 27, 1995

TO: Chuck Stalsberg, Bureau Buildings

FROM: Bob Clay, Bureau of Planning
Thomasina Gabriele, Gabriele Development Services
John Southgate, Portland Development Commission

SUBJECT: Policy Rationale for Type V Code Change

The purpose of this memorandum is to summarize the policy rationale for a change to the Portland Building Code to allow five-story wood frame (Type V) construction. The primary reasons for the proposed code change are to allow for the development of affordable housing, and to stimulate higher residential densities in close proximity to transit and jobs. With assistance from Mike Saba, Senior Planner with the Bureau of Planning, we have prepared this summary of State, City, and Regional policies in support of these purposes.

We note at the outset that Type V construction is significantly more cost effective than masonry construction. According to an analysis prepared by Bob Forster at Walsh Construction, Type V construction costs about $8 per square foot less than Type II construction. This represents a savings of about 15%.

The balance of this memorandum lists the relevant policies with comment where appropriate.

Statewide Goals 10 & 14: There are two statewide land use planning goals which bear directly on the proposed code revision. Goal 10, Housing, affirms an obligation that cities plan for the accommodation of housing for all incomes, including affordable units. Goal 14, Urban Development, mandates the efficient use of urban lands, through such measures as the Urban Growth Boundary.

Recognizing the pressing need for special growth management techniques, the State Department of Land Conservation and Development (DLCD) has promulgated a Metropolitan Housing Rule for the Portland region. This administrative rule mandates a density of 10 units per net buildable acre of vacant land, which is about 50% higher than the existing residential density in Portland. Goal 10 also includes a guideline calling for building and construction code revisions which help a community in achieving its housing objectives.

State Transportation Planning Rule: The State has also adopted a Transportation Planning Rule (TPR) which mandates reductions in vehicle miles travelled, primarily by reducing reliance on single occupancy vehicles. The Rule acknowledges the close link between transit use and development patterns. The development of higher residential densities in the Central City and along transit lines will mean that fewer people will need to rely on cars to get to jobs and other centers of activity.

At the regional level, METRO has adopted the **Region 2040 Plan**. This multi-year, regional planning effort identifies growth strategies for the Portland metropolitan area over the next 50 years. Interestingly, METRO originally projected a regional population increase of 500,000 between the years 1994 and 2015. More recent projections anticipate a population growth of 720,000 during this period.

The 2040 Plan calls for a growth strategy that emphasizes higher densities within the existing Urban Growth Boundary (UGB), i.e., growing "up" rather than "out". Therefore, METRO has reinforced the need to build at higher densities, particularly in existing urban centers such as the Central City, along transit corridors, and in town centers and regional centers.

Comprehensive Plan Housing Goal 4: The Portland Comprehensive Plan (adopted by Portland City Council in 1980) includes Housing Goal 4, which states:

> *Provide for a diversity in the type, density and location of housing within the City consistent with the adopted City Housing Policy in order to provide an adequate supply of safe, sanitary housing at price and rent levels appropriate to the varied financial capabilities of city residents.*

More specifically, Policy 4.3 - New Housing Production - states:

> *Assist the private sector in maintaining an adequate supply of single- and multi-family housing units. This shall be accomplished by relying primarily on the homebuilding industry and private sector solutions, supported by the elimination of unnecessary regulations.*

Relevant objectives of Policy 4.3 include:

> *Objective G. To clarify, expedite and streamline, to the extent possible, land use and permit regulations, including the elimination of unnecessary and costly local government regulations and standards.*
>
> *Objective I. To eliminate any city regulations, standards, fees or other indirect costs which are not required to protect the public safety and welfare.*
>
> *Objective K. To encourage, on a case-by-case basis, innovative housing construction technologies with the objective of decreasing the costs of development and encouraging diversity.*

Comment: Clearly, these policies support the code change which will allow private, public, and non-profit housing developers to construct more units at a lower per unit cost. Note also that we are not proposing the elimination of *unnecessary* regulations. Rather, we advocate the modification to the story limit for Type V construction *subject to* the inclusion of suitable safeguards.

Downtown Plan: The Downtown Plan was adopted in 1972, updated in 1980 and reaffirmed by the 1988 Central City Plan. The Downtown Plan includes the following general goal with regard to housing:

> *To give a high priority to increasing the number of residential accommodations in the Downtown area for a mix of age and income groups, taking into consideration differing life styles; and to provide a "quality" environment in which people can live recognizing that residents of Downtown and adjacent areas are essential to the growth, stability and general health of a metropolitan city.*

The Downtown Housing Policy and Program (adopted October 3, 1979) refines this general goal with the following language:

> *Create middle-income housing and encourage new high-income housing.*
>
> *Encourage innovative housing unit design.*

The Central City Plan: Policy 3 of the Central City Plan states:

> *Maintain the Central City's status as Oregon's principal high density housing area by keeping housing production in pace with new job creation.*

Specific objectives of this policy are:

A. *Promote the construction of at least 15,000 new housing units in the Central City by the year 2010.*

C. *Encourage the development of housing in a wide range of types and prices and rent levels.*

D. *Foster the growth of housing to help reinforce the Central City as a lively urban area, especially during evenings.*

Comment: While the proposed amendment to allow five-story wood frame construction will potentially affect a number of locations throughout the City, we anticipate that the primary focus of such activity will be the Central City, including downtown Portland, the Lloyd District, the River District (i.e., north Downtown), Goose Hollow and perhaps parts of Northwest Portland. We also anticipate that this kind of development will occur in proximity to light rail transit stations. The limited scope of the potential applicability of the proposed amendment is partly a function of development standards in the Zoning Code; outside of the Central City, most areas are zoned for buildings lower than five stories. It is also a function of the market. Planning and design work for a considerable amount of housing development is currently underway.

Livable City Housing Initiative: In December of 1994, the City Council established the Livable City Housing Council, charging it with the task of assuring that in the next 20 years, 50,000 new housing units will be built in the City of Portland that people will want to live in, that people can afford to pay for, and that the development community can afford to build.

The Housing Council is also charged with the task of developing and implementing a strategy for each market segment that:

- Establishes mechanisms to direct private and public capital
- Targets sites; and
- Assures quick and uncomplicated permitting.

50,000 units is an aggressive target. It means that on average, the City expects to see 2500 units built per year. By comparison, the average between 1985 and 1994 was about 1100 units per year. While not all of these units will be in mid-rise or high-rise multi-family developments, there is a clear demand for such housing. A code change allowing an additional floor of Type V construction will certainly be utilized by developers as they strive to meet this demand.

The **Central City 2000 Task Force** was formed by City Council in 1994. The Task Force is taking the lead on fulfilling the City's aim to develop 15,000 new housing units in the Central City over the next twenty years. Specifically, the Task Force is charged with the following mission:

> *Promote near-term development within the Central City.*
>
> *Prepare public-private development strategies for participating Central City Districts which define the major elements of a development program for the District and the associated public and private funding and implementation responsibilities.*

Recommend District development strategies to the City of Portland, other public entities and private investors.

Assist in securing the necessary public funding.

Encourage the appropriate parties to undertake other steps which are necessary to attain the development objectives of the Central City.

Comments: We believe that the proposed Type V code revision is consistent with several of these purposes. It will be supportive of several imminent development projects which incorporate five-story wood frame construction. It would also serve as a primary illustration of the public sector taking responsibility to assist in new residential development, responding to the "public-private" partnership mandated by Council.

The **River District Plan** is the most advanced planning effort in the City's program to stimulate new residential development in the Central City area. The River District Plan calls for the construction of approximately 5,500 new housing units, primarily on abandoned rail yards and waterfront property. The first large scale project will be the 725 unit development at Union Station. The first phase (approximately 400 units) is slated for ground breaking next spring. The schematic drawings identifies portions of three buildings which would entail five stories of frame construction. We are working with the project architects and developer to assure that these buildings comply with the special conditions which we are contemplating for this type of construction.

A key component of the River District Plan is the **River District Housing Implementation Strategy** (H.I.S.). Adopted by City Council in December of 1994, the H.I.S. mandates that the housing mix in the River District is to serve "a variety of household incomes which will reflect the diversity of the City of Portland as a whole". Recognizing that the construction of new housing units for affordable incomes is probably unfeasible without some level of assistance, the River District Steering Committee has included the Type V code revision as one of its priorities in implementing the H.I.S.

Comprehensive Housing Affordability Strategy (CHAS): The CHAS was adopted in 1991. As its name implies, it is a comprehensive policy document relating to the development of affordable housing. Relevant language from the CHAS includes the following:

Goal E, Rental Production: Increase the supply of affordable rental housing throughout the County.

Strategy E.9: Evaluate existing and proposed amendments to building and zoning codes for impact on the development and operating costs of housing and identify conditions under which code exceptions are appropriate.

Comments: These directives are clearly relevant to the proposed code change. As discussed at the beginning of this memorandum, allowing five stories of wood frame construction will reduce the per unit cost of housing, enhancing opportunities for additional affordable housing.

In conclusion, the City of Portland (along with METRO and the State of Oregon) has adopted a variety of policy directives over the years which support the proposed code revision to allow five-story wood frame construction. There are few if any issues of such great importance to City Council as the provision of ample housing opportunities for a broad diversity of income levels. Moreover, the provision of these opportunities fits neatly into other broad planning objectives of Council, including transit-supportive patterns of development, proximity of housing to employment centers, reduced reliance on the automobile, and capturing a good share of regional growth. By reducing the per unit cost of housing, the five-story Type V provision would support all of these Council objectives.

cc: Type-Five Technical Advisory Committee

Ted Chilless	Margaret Mahoney
Fred Deis	Tim Rippey
Jed Sampson	Bob Forster
Jim Schwager	

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MEMORANDUM

August 2, 1995

TO: Mr. Chuck Stalsberg
City of Portland Bureau of Buildings

FR: Bob Forster RDF

RE: Cost Comparison Between Five-Story Type II and Type V-1 Hour Structural Frames

In an effort to compare costs between Type II and Type V 1 hour structural frames, I have taken a typical apartment building wing of 3,888 s.f. per floor and attempted to price the various components that differentiate these building types.

My basic wing is assumed to come off spread footings and slab on grade which would be common to both types of structures. Quantity take offs for a typical floor are as follows:

Typical exterior wall	144 l.f.
End wall	54 l.f.
Bearing party wall	160 l.f.
Interior wall	542 l.f.
Floor and roof systems	3,888 s.f.

Attachment 1 lists the differing components of the two types, assigns unit prices to each component, and arrives at an overall cost per square foot on the variables in the two systems. The Type V-1 Hour system nets out to be $8 less costly per square foot of living space than Type II based on my unit pricing of the hypothetical building wing.

Our total structure cost on 4-story, Type V-1 Hour buildings is averaging about $55 per square foot; the $8 per square foot differential cost translates to a 15% difference for the total structure. Clearly, Type V-1 Hour, 5-story buildings would make inner city apartment housing more affordable.

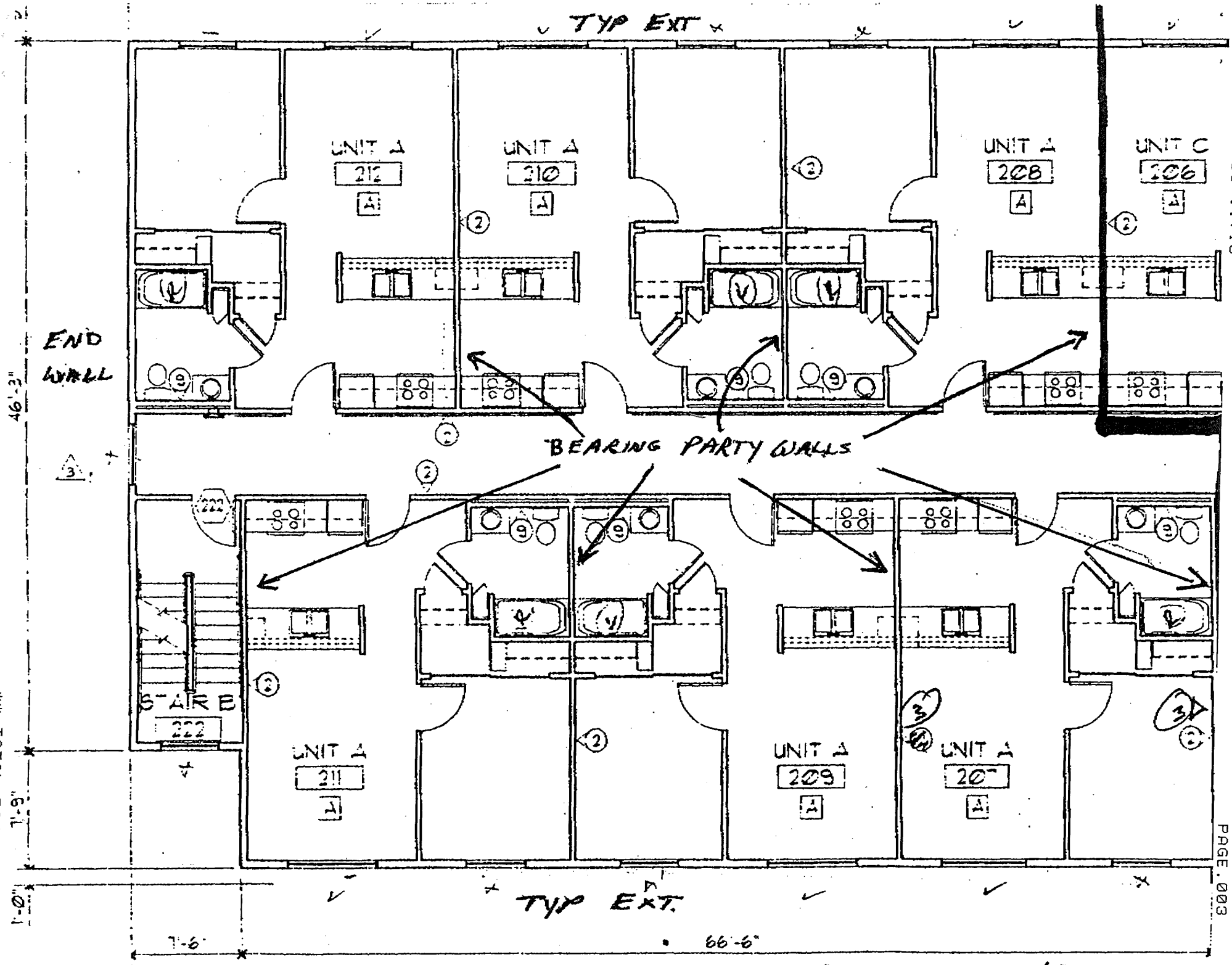
BF/rmf
Enc.

35447

Cost Comparison Between Five–Story Type II and Type V–1 Hour Structural Frames
August 2, 1995

Type II					Type V–1 Hour			
Component	System Description	Total Units	Unit Cost	Total Cost	System Description	Total Units	Unit Cost	Total Cost
Exterior Wall	18 ga. stud w/gyp.	720 lf	$32/lf	$23,040	2x6 w/gyp.	720	$16	$11,520
End Wall	8" CMU		$72/lf					
	R–19 rigid insulation		12/lf		2x6 w/gyp.	270	16	4,320
	5 floors @ 54 lf	270 lf	$84/lf	22,680				
Bearing Prty Wall	8" CMU		$72/lf		2x6 wall		$16	
	2 layers drywall		12/lf		2 layers drywall		12	
	5 floors @ 160 lf	800 lf	$84/lf	67,200	RC channel 1 side		4	
						800 lf	$32	25,600
Interior Wall	25 ga. metal stud	2,710 lf	$6/lf	16,260	2x4 stud	2,710	$8	21,680
Floor System	2" topping slab		$1.25/sf		3/4 gypcrete		0.60	
	8" core floor		3.75/sf		3/4 ply		0.50	
	erection		.75		11–7/8 TJI		0.75	
	grouting		.25		labor		1.25	
	4 floors @ 3,888 sf	15,552 sf	$6/sf	93,312		15,552	3.10	48,211
Roof/Top Floor Ceiling	8" core floor		3.75		1/2" ply		0.30	
	erection		0.75		truss		1.10	
	grouting		0.25		labor		1.50	
	built–up roof		1.50		comp roof		0.70	
	suspended drywall ceiling		2.00		2 layers drywall		1.25	
		3,888 sf	8.25	32,076		3,888	4.85	18,857
Total Calculations		15,552		254,568		15,552		130,188
			$16.37/sf				$8.37/sf	

BF/mf



HYPOTHETICAL WING

1/8" = 1 FOOT

5 Story Wood Construction Technical Committee
May 5, 1995
A:\5story

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RESOLUTION No. 35447

Direct the Bureau of Buildings to Seek State Approval of a Local Amendment to the Building Code. (Resolution)

WHEREAS, Statewide Land Use Planning Goal 10 obligates cities to plan for housing for all incomes, and Statewide Goal 14 mandates the efficient use of urban lands; and

WHEREAS, the State Transportation Planning Rule mandates reduced reliance on single occupancy vehicles, through measures such as higher residential densities in close proximity to transit and employment opportunities; and

WHEREAS, the METRO 2040 planning process advocates growth strategies which favor intensive, transit-supportive development in existing urban areas rather than continued sprawl; and

WHEREAS, the City has adopted a number of planning goals which also call for higher residential densities and for a mix of incomes, in proximity to transit and in Central City locations. These City-adopted plans include the Central City Plan, the River District Plan, the Livable City Plan, the Comprehensive Housing Affordability Strategy, and Goal 4 of the Comprehensive Plan; and

WHEREAS, the City has also adopted policies calling for the ongoing examination of codes to determine opportunities for streamlining the requirements for high density, affordable housing; and

WHEREAS, the Building Bureau has worked with the Fire Bureau and with members of the development community, the construction industry, the housing community, and the architectural community to investigate the possibility of amending Title 24 to allow five stories of Type V, one hour, wood frame construction; and

WHEREAS, the Building Bureau and its technical committee has determined that allowing five stories of wood frame construction will result in significant per unit cost savings for residential development; and

WHEREAS, the cost of high density residential development is much higher in downtown Portland than in suburban areas due to higher land costs and the need for structured as opposed to surface parking; and

WHEREAS, the proposal to allow an additional floor of wood frame construction will have no bearing whatsoever on height limits and allowed densities as prescribed by the zoning code; and

35447

WHEREAS, the Building Bureau and its technical committee have drafted language which includes safeguards to assure public safety for five story wood frame construction, including additional fire and life safety provisions, additional structural requirements, and additional inspection requirements; and

WHEREAS, the State building Codes Administrator is authorized to allow local amendments to the Statewide Uniform Building Code (U.B.C.);

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Portland, that the Council hereby accepts the report of the Building Bureau, and hereby directs the Bureau of Buildings to request that the State Building Codes Administrator grant a local amendment to the State of Oregon Structural Specialty Code, allowing five stories of Type V one hour, wood frame construction, in accordance with the draft code and policy attached hereto.

SEP 20 1995

Adopted by the Council,

Barbara Clark
Auditor of the City of Portland
By Britta Olson
Deputy

Commissioner Gretchen Miller Kafoury
Chuck Stalsberg:jp
September 13, 1995

Agenda No. 1545

RESOLUTION NO. 35447

Title

Direct the Bureau of Buildings to Seek State Approval of a Local Amendment to the Building Code (Resolution)

INTRODUCED BY	DATE FILED: SEP 15 1995
Commissioner Gretchen M. Kafoury	Barbara Clark Auditor of the City of Portland
NOTED BY COMMISSIONER	
Affairs	By: Cay Kershner Deputy
Finance and Administration	
Safety	For Meeting of:
Utilities	
Works	ACTION TAKEN:
BUREAU APPROVAL	
Bureau: Buildings	
Prepared by Date Sept. 13, 1995 Chuck Stalsberg:jp	
Budget Impact Review: ___ Completed _X_ Not Required	
Bureau Head: Margaret M. Mahoney	

AGENDA		FOUR-FIFTHS AGENDA	COMMISSIONERS VOTED AS FOLLOWS:		
				YEAS	NAYS
Consent X	Regular	Blumenauer	Blumenauer	✓	
NOTED BY		Hales	Hales	✓	
City Attorney		Kafoury	Kafoury	✓	
City Auditor		Lindberg	Lindberg	—	—
City Engineer		Katz	Katz	✓	