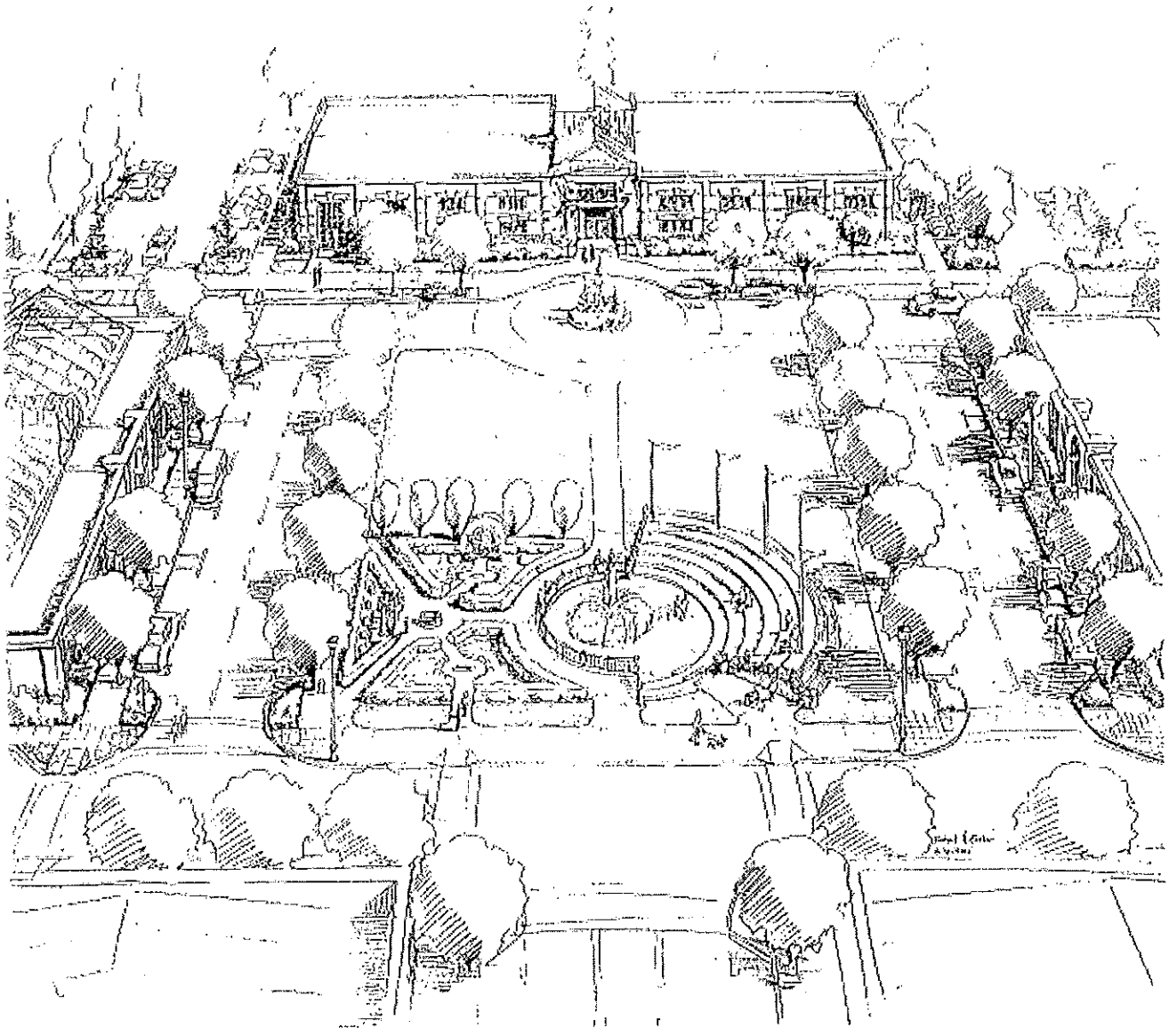
CITY OF BOARDMAN

MAIN STREET "DOWNTOWN" DEVELOPMENT PLAN



2000-2001

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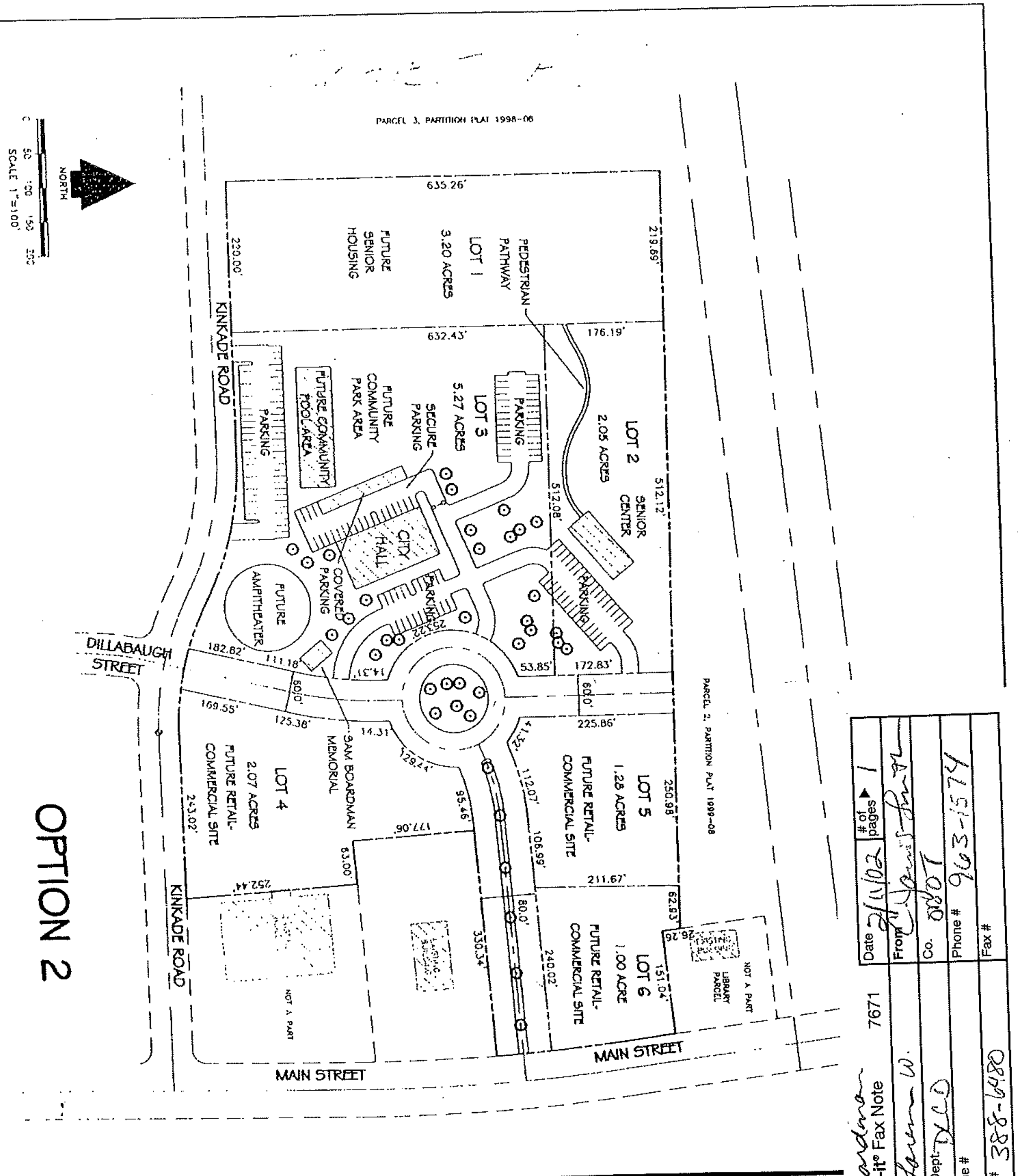


SHEET NUMBER	PROJECT NUMBER	VIC004
1	DATE:	5-14-01
	DRAWN BY:	J. STORMO
	DESIGNED BY	J. STORMO

CITY OF BOARDMAN

DOWNTOWN DEVELOPMENT PLAN

OPTION #2

PINNACLE ENGINEERING ASSOCIATES CORPORATION

CONTENTS

I. PROJECT OVERVIEW & EXISTING CONDITIONS

PROJECT DESCRIPTION AND BACKGROUND

Boardman was incorporated in 1927. With construction of the John Day Dam in the early 1960's, the town was moved to its current location on higher ground. Interstate 84 runs east-west through the town, dividing the city roughly one-third to the north, along the Columbia River, and two-thirds south. The Port of Morrow, one of the nation's largest inland ports, has a significant amount of industrial land along the Columbia River in Boardman, and uses the Columbia River, rail lines, and the Interstate for it's shipping.

Historically, most of the City's development has occurred on the north side of the I-84/Main Street interchange. However, in the past 10 years, the residential land on the north side has been building out and more residential development has been occurring on the south side. The north and south sides of the City of Boardman are served by two interchanges – one at the west end of town, which serves most of the commercial and residential development, and one at the east end of town that primarily serves the Port of Morrow and the industrial area. These State facilities pose unique issues for transportation and land use in the City.

During development of the TSP, the west interchange (Main Street) and local streets that are in the vicinity of on- and off ramps were identified as a major point of current traffic conflict and a constraint to future development. Land use and transportation solutions were examined that could mitigate current problems and prevent having to rebuild/expand the interchange or redesign the interchange. There are several potential improvements that might improve current and future operations of the I-84/Main Street interchange. These will be assessed to develop appropriate mitigation for the interchange; current and future operations of Main Street must be assessed to determine what might be improved.

One of the solutions identified was to focus future commercial development in a downtown area south of the freeway on 75 acres of privately owned, for-sale land which is zoned for commercial use, and which is currently undeveloped and completely vacant. The Preferred downtown area is within the influence area I-84/Main Street interchange. The interchange might be impacted by solutions or projects identified in the downtown development plan. The project will address these issues and assist the community in developing a traditional compact, mixed use downtown with a park or plaza and a grid system pattern of blocks and streets with sidewalks and multi-use paths.

The downtown design will be integrated with the Governor's Community Development Objectives and ensure connectivity to future community facilities. The Contractor shall produce a coordinated and cohesive downtown development plan to guide infrastructure improvement. The downtown development study area must include enough of the adjacent area to understand the context of the site, existing commercial development, and potential pedestrian destinations, activity centers, and schools. The interchange is part of the downtown development study area and must also include existing parallel roadways and potential connecting roadways.

The downtown development plan must provide accessibility to all modes of travel, accommodate and facilitate business development, intensify land uses, and enhance circulation. The downtown development plan must identify focus areas in the downtown and provide a vision for a future downtown consistent with the scale of the community.

The project is timely in many respects. Boardman is one of the fastest growing cities in the state with 102% population increase since the 1990 census. The City currently has two new subdivisions under construction, with four additional subdivisions in the planning stages of development. All of these are on the South side. The Port of Morrow is very active in attracting new Industry. Construction is currently underway for the new Tillamook Cheese Plant and the Blue Mountain Community College Boardman Campus.

With continued growth will come demands for increased commercial development. The City will be achieving a size and scale to attract retail and service uses that the local residents now have to drive to other cities to obtain. The current zoning permits a scattered pattern of commercial development that, if not addressed, will contribute to a lack of community focus and disconnected, auto-oriented development, as well as traffic conflicts centered around the freeway interchanges. The momentum has been established – it is critical to follow through to develop a specific downtown master plan and implementation strategy.

PROJECT OBJECTIVES AND TRANSPORTATION RELATIONSHIPS/BENEFITS

The following project objectives and transportation relationships/benefits were identified by the City of Boardman and ODOT during development of the initial project description and statement of work.

- Strengthen the capability of Boardman to effectively manage growth and comply with the Transportation Planning Rule (TPR), integrate transportation and land use planning, and encourage transportation-efficient land uses.
- Address the 1999 Oregon Highway Plan (OHP) and access management standards, Policy 3C Interchange Access Management Areas, and Policy 1G Major Improvements Policy.
- Make more efficient use of the transportation infrastructure by separating local traffic from freeway-related traffic, thereby preventing or postponing reconstruction of the current interchange/overpass and on and off-ramps.
- Reduce reliance on the automobile by developing the City's commercial/retail focal point in the area of future residential development and connecting it with a grid system of streets, bikeways and pedestrian paths.
- Reduce traffic around the freeway interchange and the local street system that immediately serves and connects with the freeway system by encouraging future locally oriented commercial uses to develop away from the areas of conflict and by creating alternate travel routes.
- Improve transportation safety by separating local and freeway-oriented traffic, which also includes a large proportion of trucks that are accessing the Port of Morrow or utilizing traveler services at the interchange on Main Street.
- Improve local transportation network connectivity by developing a plan that includes a grid system pattern of streets in the south Boardman area, and links current and future community facilities and the Port of Morrow.
- Direct commercial development in a concentrated, localized, mutually beneficial, and aesthetically pleasing pattern.
- Establish a stronger community identity.
- Increase the overall livability in Boardman, thereby making it a more attractive place to reside.
- Reduce commuter-related traffic.
- Adoption and implementation of the City of Boardman TSP in compliance with OAR 660-012-0015(3) and 660-012-045.

EXISTING CONDITIONS

The existing conditions base map (page 7) identifies primary elements that form the city of Boardman. This includes identification of the following features and elements:

- **The Columbia River** – The Columbia River, the impetus behind the origination of Boardman, forms Boardman's strong northern boundary. The river dictated development of Boardman to occur in a southerly direction from the river. The southerly direction for growth and development was further advanced by the construction of the John Day Dam in the early 1960's which forced the town to move south to higher grounds.

- **Interstate 84** – The east-west oriented Interstate 84 bisects Boardman, dividing it geographically with one-third located north of I-84 between the interstate and the river, and two-thirds located south of I-84. The interstate is the primary access in and out of Boardman. It is inevitable that future growth and development in Boardman must occur south of I-84 due to the fact that "north" Boardman is largely developed and the larger "south" Boardman is largely undeveloped.

- **North Boardman** – The city, north of I-84 is largely developed with a mix of residential, commercial, public and institutional, and industrial uses. This area comprises approximately one-third of the geographical area of Boardman and the Urban Growth Boundary (UGB). The north-south oriented Main Street is the center of commercial activity with commercial uses expanding one-to-two blocks west of Main Street. The area west of the Main Street commercial area (and north of I-84) is primarily residential that consists of older single family housing stock with an established neighborhood character.

  East of Main Street (north of I-84) consists of a mix of residential, institutional, public, and industrial uses including single family and multi-family (apartments) residential, the Riverside High School, I-84 frontage road use including Blue Mountain Community College Campus which recently constructed an initial building, a soccer field and undeveloped property, and the Port of Morrow which occupies a large area and has significant area employment in the northeast section of Boardman.

  The riverfront includes a large park with boat launch, camping, RV, and bicycle/pedestrian pathway.

- **I-84/Main Street Interchange** – The interchange is the primary traffic generator and access to both the north and south sides of Boardman. This is one of two I-84 interchanges in Boardman with the other interchange located at the east end of the city and providing primary access to the Port of Morrow. As future growth and development occurs in Boardman this interchange will incur additional traffic. Future interchange capacity and safety issues will need to be address as growth occurs including the potential need to close frontage roads that intersect with Main Street in close proximity to the interchange ramps. A more detailed description of the I-84/Main Street interchange and traffic conditions is provided in the Opportunities & Constraints section of this report.

- **Olson Road Future Interstate Overpass** – Olson Road is a north-south oriented street on both the north and south sides of I-84. Currently there is no connection between the north and south sides of the interstate. Previous discussions and plans, including the city's Transportation System Plan identify a future I-84 overpass on Olson road.

- **Main Street** – As identified above, Main Street is the primary north-south oriented street that provides access throughout Boardman from I-84, access to existing commercial uses, and the primary local street providing access to residential areas. This is true on the developing south side of I-84 as well as the north side. South of I-84, Main Street currently includes freeway-oriented commercial uses in close proximity to the freeway, and residential serving uses further south of I-84, i.e. grocery store,

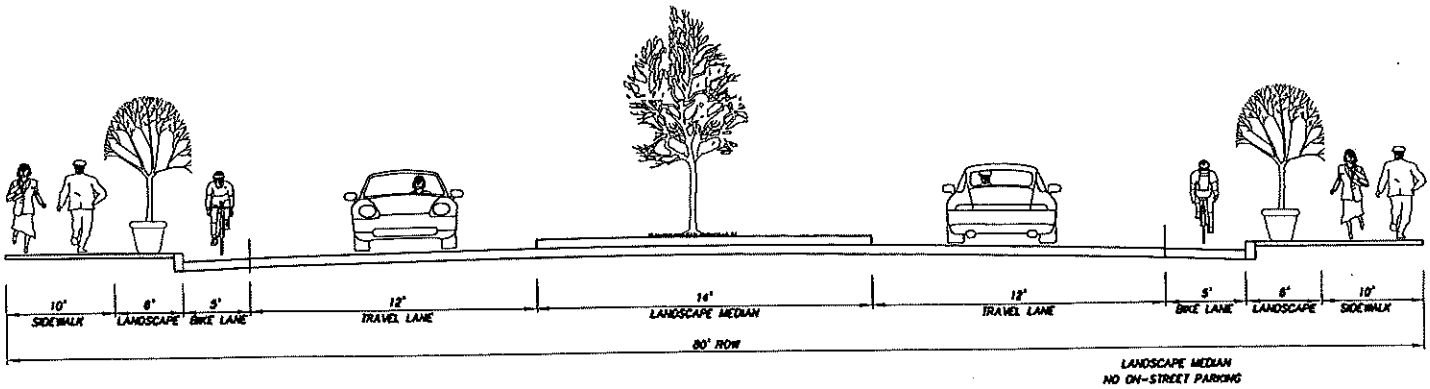
library, and auto-parts store. The majority of the Main Street frontage, south of I-84 is currently undeveloped.

- **BPA Power Line Easement** – The BPA easement is a primary physical element that includes a major transmission line and approximately 150-feet wide. The easement generally parallels the interstate approximately 600 feet south of the interstate through Boardman. Development is restricted within the BPA easement.

- **South Boardman** – South of I-84 is the developing part of Boardman, primarily due to the northern part of Boardman being mostly developed. The large area of the city, south of I-84, is largely undeveloped and will incur a significant amount of development in the future. The City, through previous planning efforts, has zoned the south Boardman area with commercial zoning on both the east and west sides of Main Street and surrounded by residential zoning. Single family residential development has occurred and the elementary school is located in this area on Wilson Road west of Main Street.

- **Two Potential New Downtown Sites** – Previous community visioning and planning efforts identified an undeveloped 75-acre site, located south of I-84 and east of Main Street as a future focus for commercial development. Based on the results of the initial project meetings with the Project Management Team and the Advisory Committee, an undeveloped commercial-zoned area located on the west side of Main Street (south of I-84) was also identified as a potential, future commercial development site. The Existing Conditions Base Map (following page) identifies both of these potential downtown development sites.

Following the initial meetings and preparation of the existing conditions base map, Advisory Committee members followed up with the potential for downtown and public use development west of Main Street. It was determined, at that time, that it was more feasible for new downtown/public development to occur east of Main Street. Therefore, following the completion of the Existing Conditions Base Map and Opportunities & Constraints, the focus of the Alternative Design Concepts shows downtown-commercial-public development along Main Street and east of Main Street.



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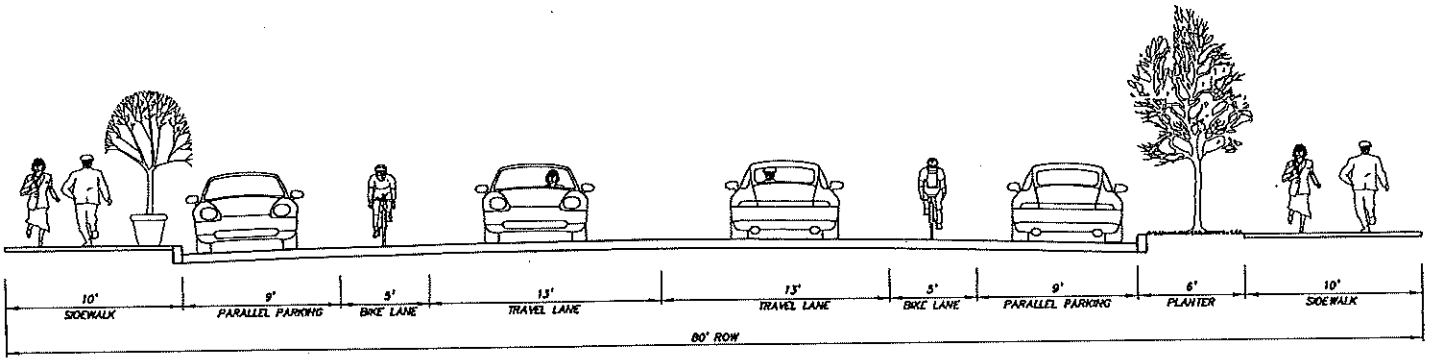

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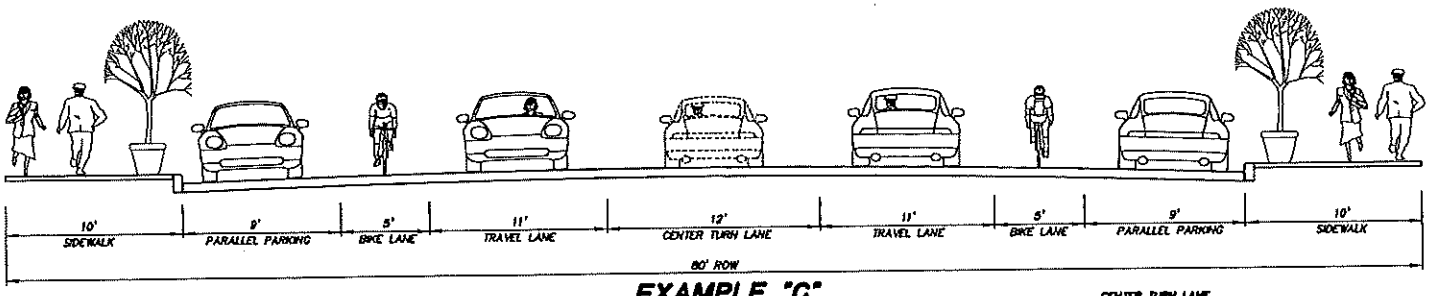

EXAMPLE "C"

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TRILAND DESIGN GROUP, INC.
PLANNING · CIVIL ENGINEERING · LAND SURVEYING

EXAMPLE MAIN STREET
CROSS SECTION
BOARDMAN, OREGON

PREPARED FOR:
CITY OF BOARDMAN

Project:	00015
Designed:	
Drawn:	SAE
Scale:	NTS
Date:	11/13/00
Sheet:	1 of 1

II. OPPORTUNITIES & CONSTRAINTS

EXISTING CONTEXT AND PHYSICAL FEATURES

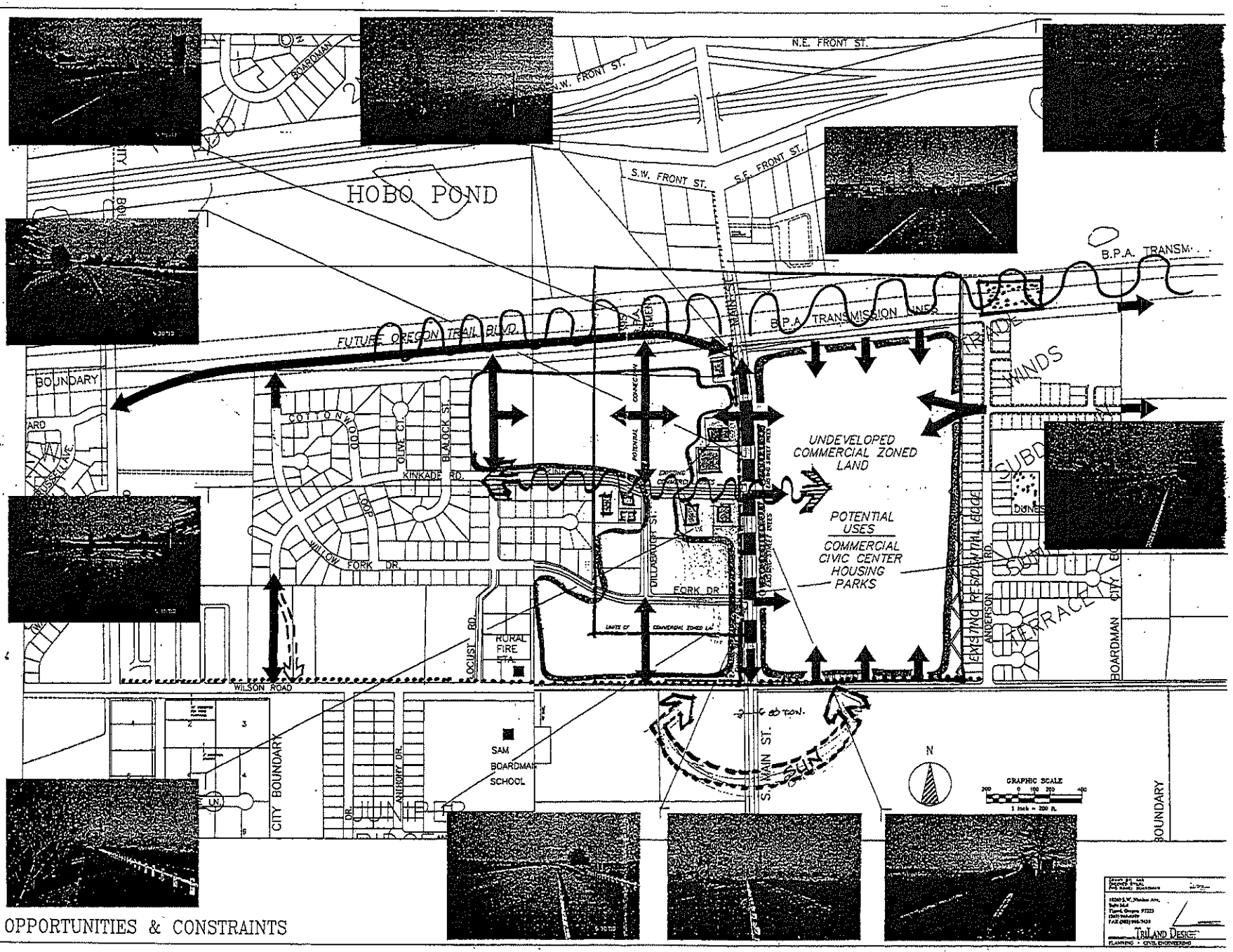
This subsection provides a focus and more detailed description of the general area identified as the location of for the new Main Street "Downtown" development. This area is generally described as being south of I-84 to Wilson Road, both east and west of Main Street. The following table identifies key physical and regulatory features. Constraints and opportunities of each featured is described. The Opportunities & Constraints Diagram, enclosed at the end of this section, provides identification of these features.

Existing Features	Constraints	Opportunities
BPA Easement/Transmission Line	• Restricted development – no buildings, permission required from BPA for any use • Caution/potential adverse impacts of being near transmission lines	• Potential usage as linear park with multi-modal pathways for pedestrians, bicyclists, skaters, scooters, etc. • Potential play fields, skate board park, BMX track, and other active recreation facilities • Potential parking although be cautious of "shock" when touching car after if has been parked under the transmission lines for 2+ hours.
Main Street – I-84 south to Wilson Road		• Primary north-south access for autos, bicyclists, and pedestrians. • Opportunity for access to adjacent properties (with appropriate access spacing standards. • Adequate right-of-way width or opportunity to expand ROW if needed.
Commercial Zoned Land	• Surplus of undeveloped commercial zoned land restricts development of other uses, i.e. residential. Rezoning of some property will likely be required in the future to "fit" with market conditions. Property owners may be resistant to perceived "downzoning" from commercial to other zoning districts.	• Large undeveloped commercial zoned land provides ample opportunity for future commercial development. • Ample undeveloped commercial zoned land on both sides of Main Street allows flexibility for location and varied types of commercial development.
Undeveloped Land East of Main Street	• Current lack of infrastructure, i.e. streets, water, sewer, stormwater drainage. • Privately owned lessens probability of land being developed as planned by the City. • Land acquisition for public uses dependent upon property owners willingness to sell, trade, etc.	• Totally undeveloped provides opportunity for master plan with limited restrictions. • Single ownership • Access (through existing streets) provided on north, south, and west sides. • Limited natural features restrict design/development potential.

Existing Features	Constraints	Opportunities
Existing Main Street Buildings	• Grocery store, auto parts store, library, etc. buildings limit opportunity for completely new design/master plan.	• Established retail and public uses in place. Provides opportunity to develop additional commercial and public uses around existing uses – creating commercial village and/or public use focus.
Existing and Planned Public Facilities	The 395' wide BPA easement extends east-west along the north side of the proposed downtown area. Development of most structures, i.e. buildings, is prohibited in this easement. There are potential safety concerns associated with human activity under and near the transmission lines. The public library is the other existing public facility. The library site is adjacent to the BPA easement and may impact the extension of Oregon Trail Blvd.	The BPA easement will be maintained as open space. There are opportunities to provide additional public facilities within the easement, i.e. extending Oregon Trail Blvd., providing park and recreation facilities such as play fields, multi-use path, and parking. The fire station is currently located in this general area on the north side of Wilson Road, east of Locust Rd. New and relocated public facilities can be incorporated into the new downtown area, i.e. city hall, community center, swimming pool, police/fire station, post office, park/public plaza, etc.
Community Features	Currently, there are no significant and identifiable community features in this area.	As noted above, there are opportunities to incorporate community features in the new downtown area. Community features could become the focal point and a central attraction of the new downtown area, i.e. a civic/public plaza surrounded by public, commercial, and residential uses.
Streets and Accessways	Main Street is a collector street. Development of this area needs to recognize that Main Street will continue to function as a collector street and not adversely impact through-traffic needs. The 75-acre parcel east of Main St. is currently "landlocked" on the east side, prohibiting access to Anderson Rd. unless property acquisition or easement(s) occur.	The limited number of existing streets, especially on the east side of Main Street provides flexibility in street design and access. The establishing grid system west of Main Street (Kinkade, Willow Fork, Dillabaugh, Locust, and Wilson streets) makes it logical to further develop this area with a street grid system.

		The large parcels of land and limited number of existing access points on Main, Wilson, and Oregon Trail Blvd. enables the City to establish and implement access management in this area.
Neighborhood Boundaries	The Trade Winds and Sunridge Terrace Subdivisions, located on the east side of the 75-acre parcel (east of Main St.) currently does not provide any public connections between Oregon Trail Blvd. and Wilson Rd.	Opportunity to develop the 75-acre site east of Main Street with compatible uses on the east side adjacent to the two subdivisions. This may include public access (vehicular and/or pedestrian/ bicycle) connecting the new development to Anderson Rd.
Pedestrian Generators		Existing pedestrian generators located west of Main Street include the elementary school and commercial uses on Main Street, i.e. Sentry Market. The library can be considered a pedestrian generator – located on Main Street and connected to the elementary school and residential areas by the existing multi-use pathway on Main Street and Wilson Road.
Schools		The existing elementary school is located on the south side of Wilson Road near residential areas and in proximity to the commercial zoned area.
Walking distance to nearby destinations		There is approximately .6 mile between the library and elementary school via the existing multi-use pathway with the market located between these two destinations. Residential areas are within ½ mile of the market and library.
Logical Block and Building Placement Configurations		The west side of Main Street is developing with a street grid system. This should be continued as development occurs, creating logical and easily accessible streets and parcels of land. The generally level topography does not restrict street layout.

Existing Features	Constraints	Opportunities
Drainage Features	There are limited drainage features. As development in this area occurs, a comprehensive drainage system needs to be developed to serve this entire area.	
Significant Vegetation	Significant vegetation is missing in this area.	Street trees have been planted along the east side of Main Street.
Parking	Existing parking is located between Main Street and buildings along the west side of Main Street. This creates an "auto-dominated" character.	The large undeveloped area enables adequate capacity and location of parking to occur with development. Parking should generally be located behind and to the sides of building in order to create a pedestrian friendly environment.
Traffic Control Facilities		Traffic control facilities in this area are currently limited to stop signs at Main St./Wilson Rd. and local street connecting to Main St.
Multi-use Pathway		Opportunity to expand the existing multi-use pathway located on Main St. and Wilson Rd. throughout this area including the BPA easement.
Infrastructure	The generally flat area requires consideration and design of a comprehensive storm drainage system concurrent with development.	
Land Use Concerns		The existing zoning presents a logical and compatible land use system. Commercial zoned land is generally surrounded by residential land, providing an opportunity for commercial development to occur in proximity to residential areas. Opportunity to provide downtown mixed use development which will create a walkable, pedestrian friendly environment, and reduce automobile dependency.
Urban Design Issues and Redevelopment Opportunities	Currently, there are no significant urban design features.	The largely undeveloped land in this area presents the opportunity to establish a cohesive development pattern with design standards. The limited number of existing structures (west side of Main St.) can be redeveloped to "fit" in with the new downtown area.



OPPORTUNITIES & CONSTRAINTS

EXISTING TRAFFIC AND ROADWAY CONDITIONS

This section summarizes our assessment of existing traffic and roadway conditions along Main Street. The study area for this project is along Main Street from south of the interchange with I-84 to Wilson Road. The objective of this task is to establish baseline traffic conditions and operational issues that will be used to assess future traffic volumes and needs throughout the study area. Major findings of this assessment include:

1. The Boardman Transportation System Plan (June 1999) reported that volumes along Main Street tend to peak on weekday afternoons from 4-5 PM. However, our observations and comments from City staff indicate another peak period earlier between 2-3 PM when the schools lets out. To quantify these concerns, traffic operations were observed during the traditional 4-6 PM peak hours as well as near the schools during these earlier times for both schools. Capacity analyses at these intersections found that they operate at LOS B or better during the 4-5 PM Peak Hour.
2. An extensive multi-use pedestrian and bicycle path runs along Main Street (west side) and Wilson Road (north side) throughout the study area.
3. Most streets in the study area do not have on-street parking. The only major obvious off-street parking area is the lot for the supermarket along Main Street.
4. During the last three years, 2 accidents were reported near the intersection of Main Street and Kinkade Road and another accident was reported near the Main Street and Wilson Road intersection. To improve traffic safety, the intersection of Main Street and Wilson Road was recently converted to all-way stop control.
5. Key traffic operational issues appear to be capacity at the Main Street/I-84 Interchange at projected future traffic volumes.

The following paragraphs document the information reviewed, analyses, results, and major findings.

STUDY AREA

The project's study area is along Main Street from south of the I-84 Interchange to Wilson Road. Attached are photos of the key study area roadways. Figure II-2 shows existing traffic control configurations at key intersections throughout the study area.

Area Land Uses

The project's study area encompasses the proposed Boardman downtown area. All the land in this area is zoned for residential or commercial uses. Along Main Street are freeway commercial uses just south of the interchange, a commercial area containing a Sentry Supermarket and professional offices near Kinkade Road, and residential areas to the west. Most the land east of Main Street is vacant and a new subdivision is under construction. Other main traffic generators include the City Hall, Police Station, High School and other freeway commercial uses just north of the interchange, and the elementary schools and daycare along Wilson Road, west of Main Street. It should also be noted that Boardman has a public park/recreation area along the Columbia River to the north, which includes a boat launch.

Roadway Characteristics

Table 1 presents the characteristics of Main Street and key minor streets through the study area. Main Street contains two lanes (one in each direction) and is 28 feet wide and does not contain any marked turn lanes at the minor streets. Parking is not permitted along Main Street or Wilson Road.

Pedestrian and Bicycling Facilities

Boardman has a multi-use path (for pedestrians and bicyclists) along the west side of Main Street and the north side of Wilson Road throughout the study area as shown on Figure II-3 and the attached pictures. Most the minor streets have sidewalks along both sides. Most of the street corners along these streets also have handicap ramp treatments. No bicycle lanes are marked in the study area. Few pedestrians and/or bicyclists observed during our site visits, except in the immediate areas of the schools.

Other Features

The City of Boardman has one main route to/from I-84. This access is along Main Street to the interchange with I-84 at the north part of the study area. Interstate 84 is also accessible about 6 miles to the east along Wilson Road and about 4 miles to the west along Kunze Road south of the study area.

Existing Traffic Volumes and Peak Hour Operations

Traffic Volumes

This study will rely on several sources of traffic volume data that include ODOT daily traffic counts at the I-84 ramps, PM peak hour counts from the original Transportation Systems Plan(TSP) performed in 1998 and PM peak hour counts conducted by CTS Engineers during 2000. Daily traffic volumes were estimated from the PM peak hour counts. All of these volumes are summarized on Figure II-3. CTS also conducted peak 15-minute counts when the schools let out in an effort to quantify observed volumes during the 2-3 PM hour. Figure II-3 also summarizes these data. Comparing the 1998 volumes to more recent 2000 volumes indicates that they are similar, although overall the more recent counts are generally higher. The most of the 2000 traffic volume counts were taken in May, which is considered a peak month for this area. These volumes will be used as the basis for future volume estimates as they represent typical peak hour peak month traffic volumes. Traffic volumes during the school release times appear to be very intense for about 15 minutes, but dissipate afterwards. While these may represent a peak 15 minutes, the basis of the analysis should be for a peak hour that occurs thought the year. Finally, along Main Street, less than 3 percent of vehicles were large trucks, although some recreational vehicles and horses were observed. However, at the interchange a higher percent of trucks (approximately 5%) was counted.

Peak Hour Traffic Operations

Traffic conditions at key intersections were analyzed during the critical PM peak hours based on the volumes shown in Figure II-3. Intersection operational analyses were conducted using the procedures in the 1997 Highway Capacity Manual (HCM) for evaluating signalized and unsignalized intersections, which describe the traffic operations of an intersection in terms of its Level of Service (LOS). The Level of Service (LOS) criteria range from "A", which indicates little, if any, delay, to "F", which indicates that vehicles experience long delays. Tables 2 and 2A show the results of the intersection capacity analyses for both the 1998 and 2000 traffic volumes. These analyses indicate that these intersections operate at LOS B or better during the PM peak periods. The 1999 Oregon Highway Plan uses volume to capacity ratios (v/c) to evaluate mobility deficiencies and needs. V/C is the ratio of peak hour traffic volume to maximum hourly volume of vehicles that a roadway section can pass. In other words, v/c measures the percentage of the capacity of the roadway section that is utilized during the peak hour. The maximum acceptable v/c ratio for District/Local Interest Roads outside the Portland Metro is 0.80.

Table 1: 1998 Levels of Service

Intersection	Weekday PM Peak Hour		
	Unsignalized Intersection		
	Avg Vehicle Delay (Sec/Veh)	LOS	v/c
Main Street/I-84 Westbound Ramp WB Approach	8.4	B	0.23
Main Street/I-84 Eastbound Ramp EB Approach	8.7	B	0.05
South Main Street/Front Street EB Approach	7.5	B	0.07
South Main Street/Wilson Road SB Approach	4.8	A	0.24

Table 2A: 2000 Levels of Service

Intersection	Weekday PM Peak Hour		
	Unsignalized Intersection		
	Avg Vehicle Delay (Sec/Veh)	LOS	v/c
Main Street/I-84 Westbound Ramp WB Approach	12.4	B	0.16
Main Street/I-84 Eastbound Ramp EB Approach	12.6	B	0.14
South Main Street/Kinkade Road EB Approach	10.6	B	0.11

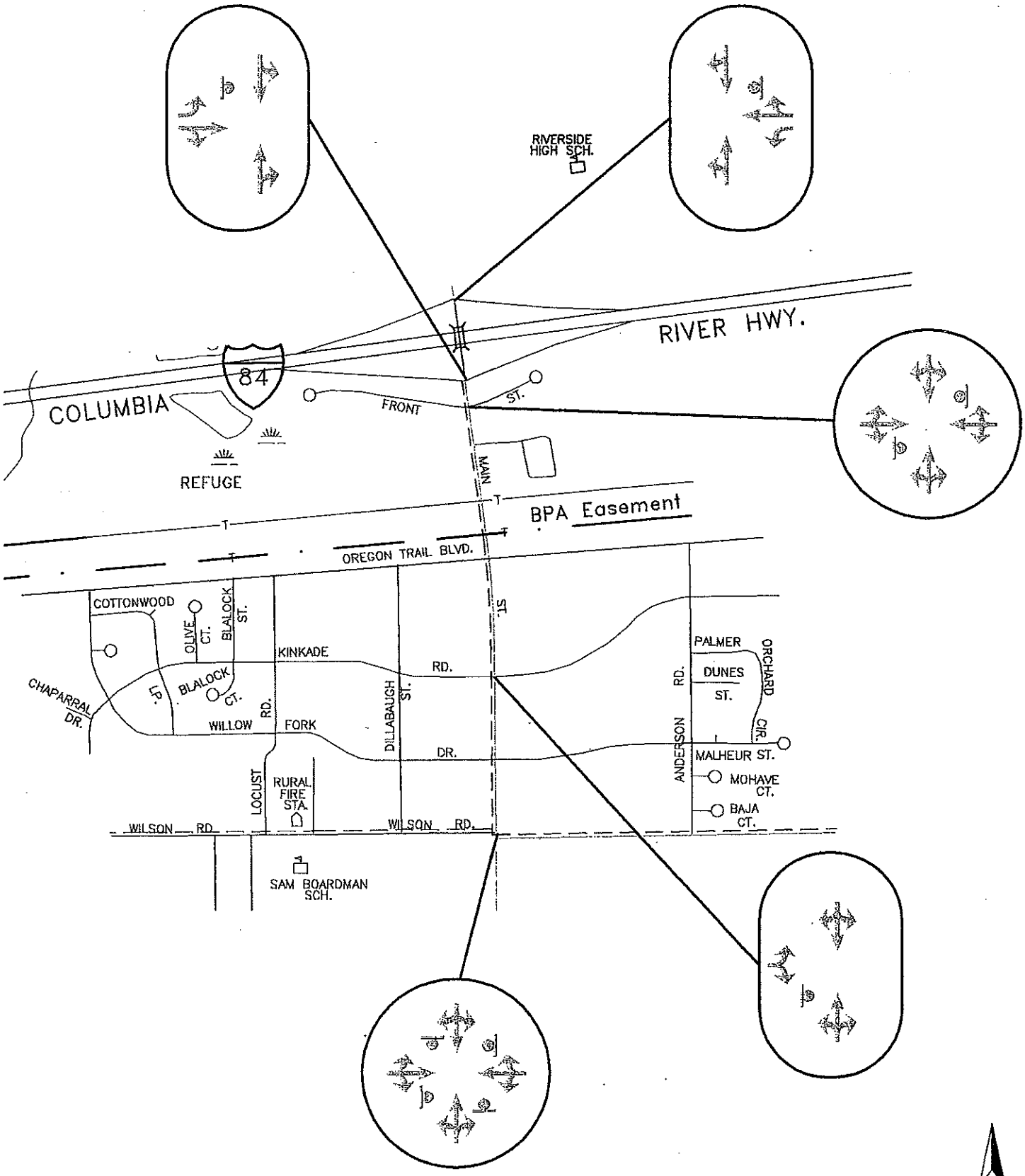
Traffic Safety

Accident records for the most recent three years of available data (January 1997 to December 1999) were obtained from ODOT files for Main Street. These data are summarized on Figure II-4. During this period, only three accidents were reported. Of these, 2 occurred at the intersection of Main Street and Kinkade Road. The other accident reported occurred at the intersection of Main Street and Wilson Road. According to the 1999 TSP, this was a problem intersection. It should be noted that the TSP recommended that a safety improvement occur at this intersection. Specifically, it should be converted to all way stop controlled intersection. This improvement was in place by the spring of 2000. For reference, the past traffic safety analysis from the TSP is attached to this memorandum.

Transportation Issues

In reviewing the TSP and in our discussion with City officials and members of the technical advisory committee (TAC) transportation issues through the study area are limited. One issue is the future capacity of the interchange and at what level of future traffic will traffic signal be needed at the ramp intersections. The future traffic analysis in the TSP reveal that the westbound I-84 ramp is more critical that than the eastbound ramp. People also commented about traffic congestion when the schools let out. Our observations found that traffic volumes are relatively high for about 15 minutes during these periods, but dissipate shortly afterwards.

Figure II-2: Existing Traffic Controls And Lane Configurations at Study Area Intersections



Multi-Use Path — — — —

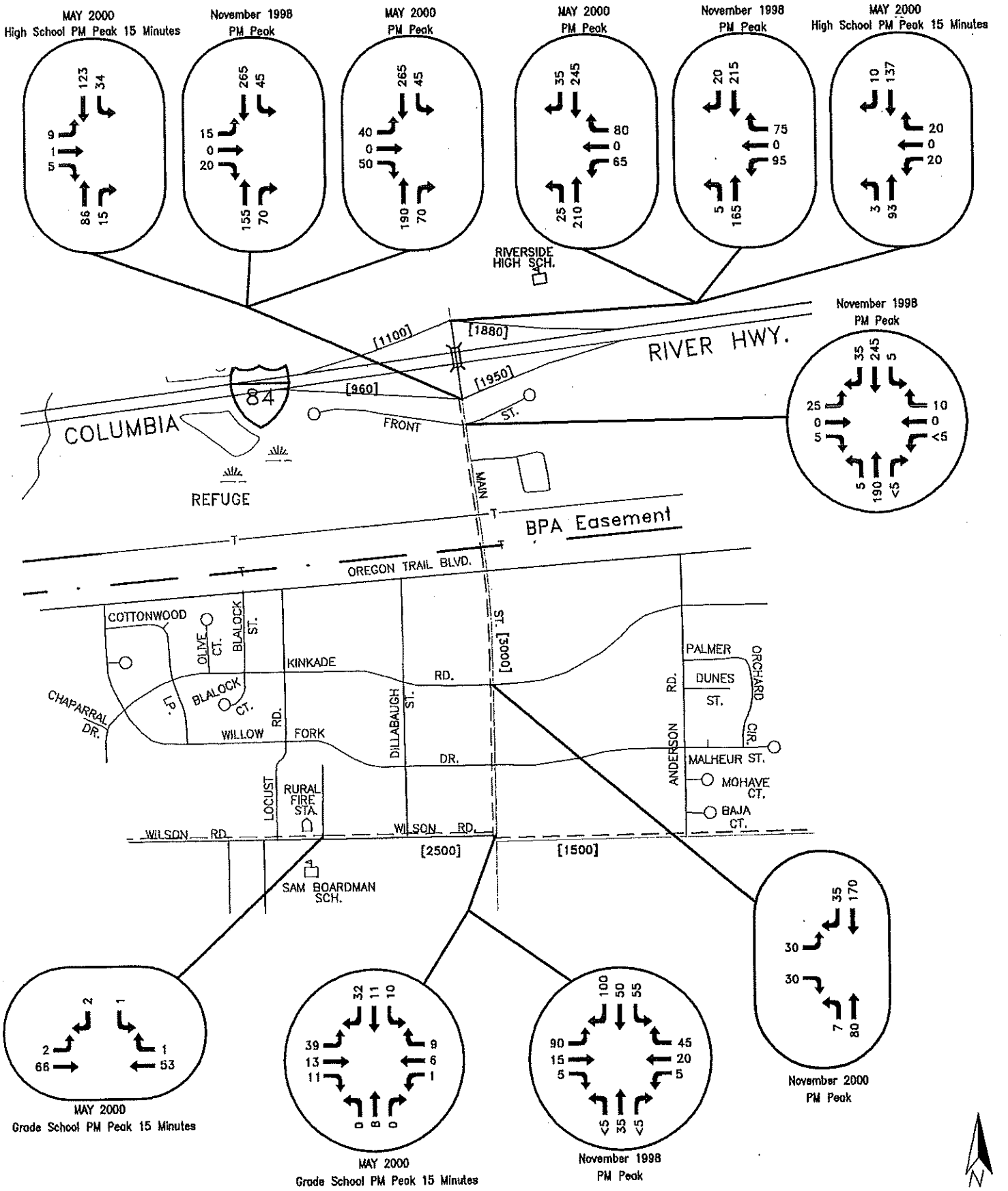
Stop Sign

Drawing not to scale.

Boardman TSP

cts *Engineers, Inc.*

Figure II-3: Recent Peak Hour Traffic Volumes

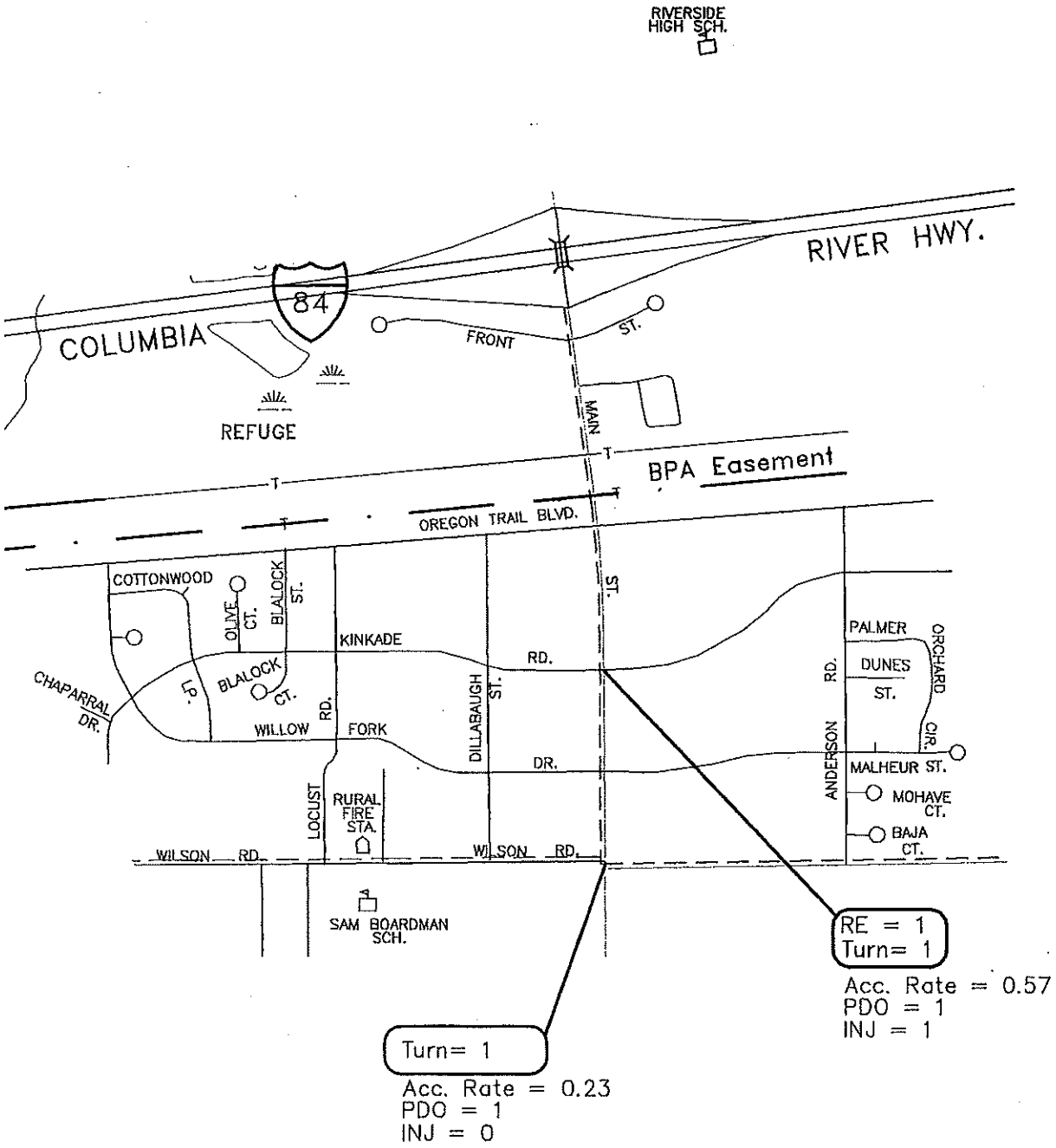


Annual Daily Traffic [ADT]

Drawing not to scale.

cts Engineers, Inc.

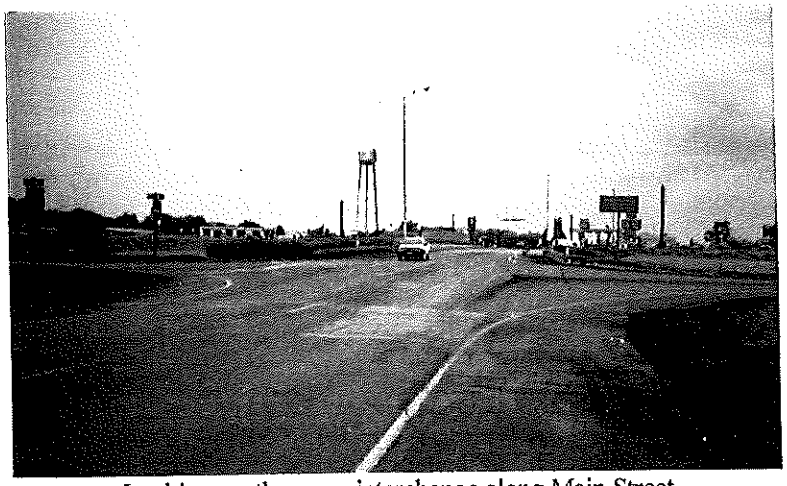
Figure II-4: Recent Accidents (January 1997 to December 1999)



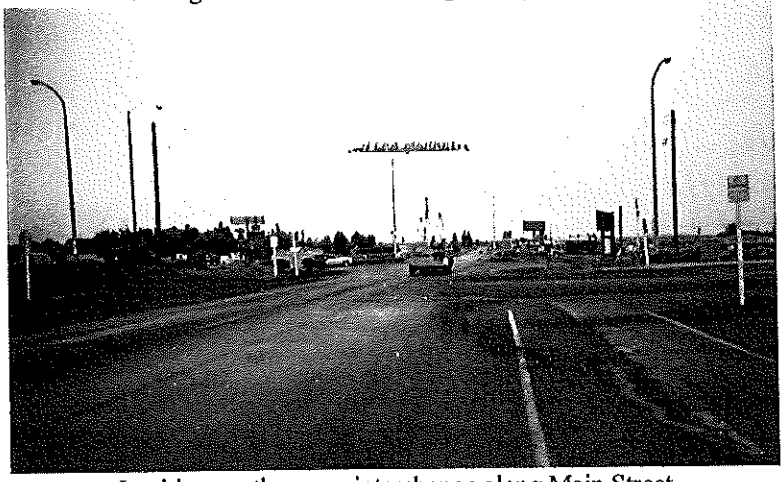
KEY: RE = Rearend
S/S = Sideswipe
Fix Obj = Fixed Object
PDO = Property Damage
INJ = Injury

ACC. Rate = Average Accident Rate Per Million Entering Vehicles

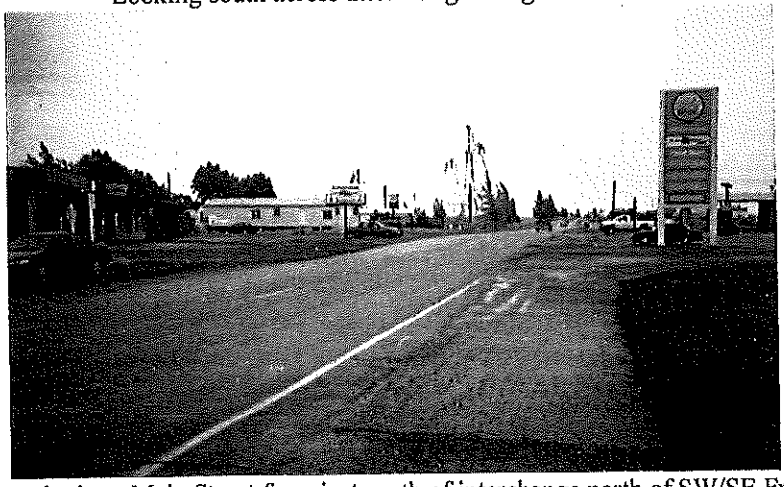
Drawing not to scale.



Looking north across interchange along Main Street



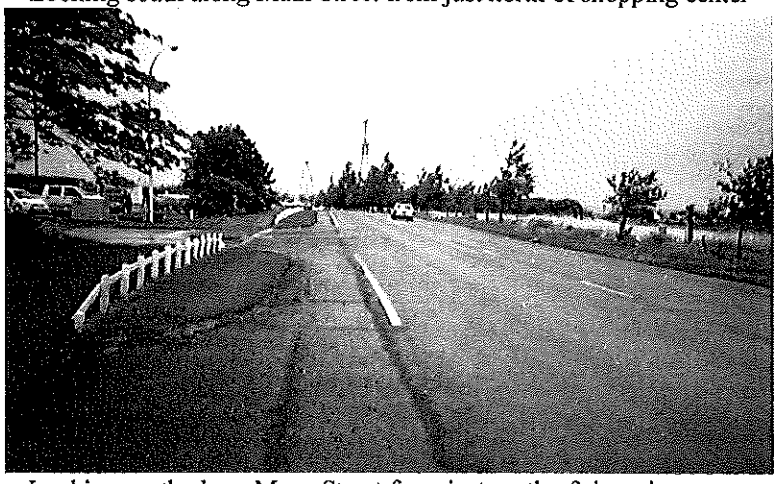
Looking south across interchange along Main Street



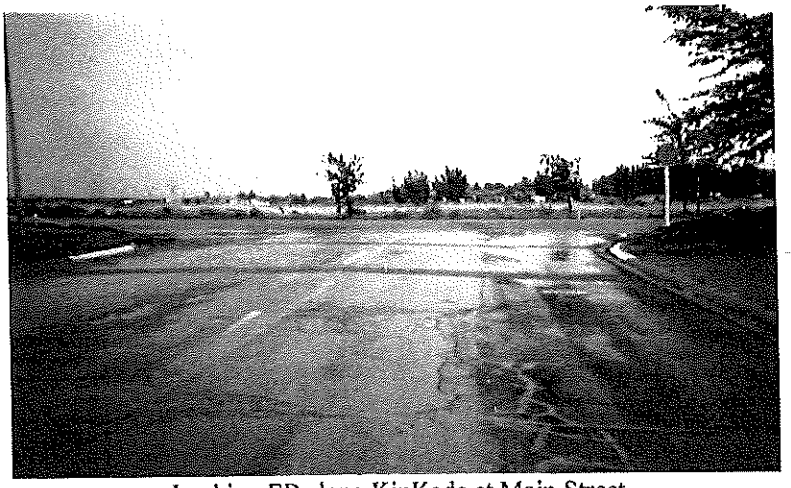
Looking south along Main Street from just south of interchange north of SW/SE Front Street

Looking EB along SW/SE Front Street across Main Street

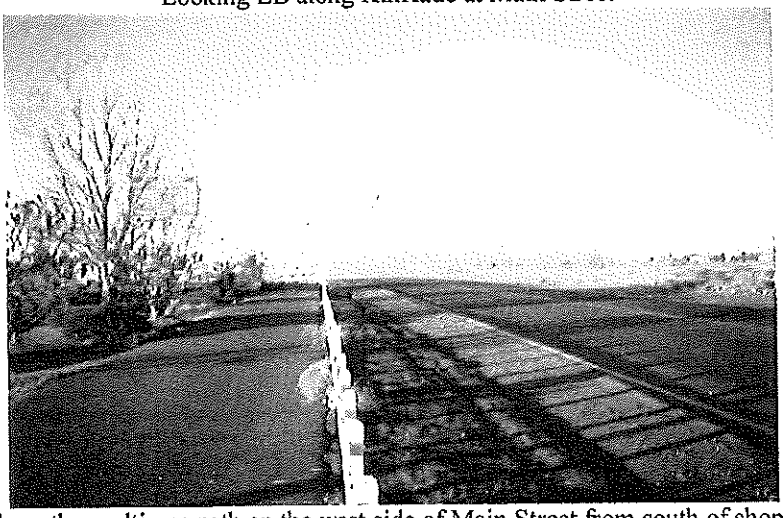
Looking south along Main Street from just north of shopping center



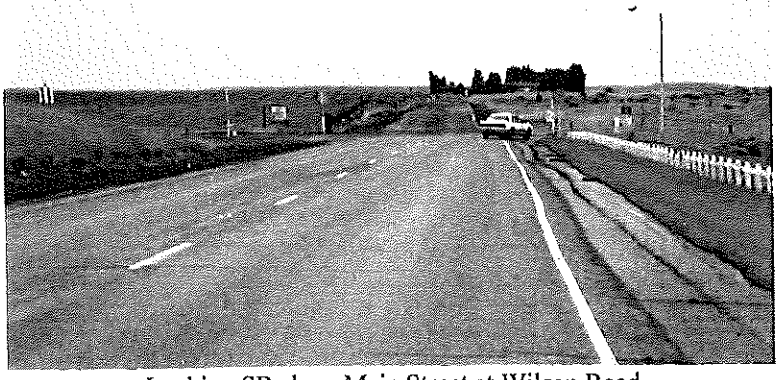
Looking north along Maon Street from just north of shopping center



Looking EB along KinKade at Main Street



Looking along the multi-use path on the west side of Main Street from south of shopping center



Looking SB along Main Street at Wilson Road

Looking WB along Wilson Road at Main Street (note school at far left)

MARKET ANALYSIS AND DRAFT DEVELOPMENT PROGRAM

Boardman is somewhat unique in that the number of people employed in Boardman exceeds the population. This is primarily due to the large employment base of the Port of Morrow located within Boardman, and the limited housing that is currently available for employees and their families. Existing commercial uses are limited to those areas just north and south I-84 on Main Street. Commercial uses generally consists of restaurants, gas stations, motels, and other tourist related retail uses. A grocery store, auto parts, library and a few other service oriented uses are located along the west side of Main Street, south of I-84.

The subject site, located south of I-84 has a significant amount of undeveloped land including the 75-acre site east of Main Street between Oregon Trail Blvd. and Wilson Road that is zoned commercial, and commercially zoned land west of Main Street between existing uses and immediate west of the existing uses, i.e. grocery store, auto parts, library, etc. In addition, there is considerable residential zoned land east, west, and south of the commercial zoned land that is undeveloped.

The following summary is based on a preliminary review and recommendations of a market analyst, John Ingle of Palmer, Groth, and Pietka. These observations and conclusions should not be based on statistical analysis, but should be viewed based on Mr. Ingle's professional expertise and familiarity with Boardman and the surrounding area.

A general land use concept and development program for the 75-acre commercial zoned site located east of Main Street was described and reviewed with Mr. Ingle. The land use plan, enclosed in the Concept Plan Section, includes a mix of public, retail, office, multi-family, and single family uses. The concept land use plan generally shows the potential for approximately 30,000 square feet of retail space, 23,000 square feet of office, 225 single family dwellings on 40-acres, and 125 multi-family dwelling units. The market analysts preliminary comments are provided below.

Generally, the distribution of land uses appears appropriate.

Housing

Show as big a variety as possible for housing. The more diverse types of multi-family housing we can show, the more opportunities there will be, and therefore, the more realistic the market conditions will be.

The amount of housing (dwelling units) shown on the plan indicates that it will likely take about 20 years for that absorption to occur.

±16 units per apartment complex is appropriate.

Consider an assisted living facility, preferably near the public uses and retail uses.

If residential rents are about $100 cheaper than comparable residential dwellings in Hermiston, people that work in Boardman will likely live in Boardman. Because Hermiston is more service oriented, people will likely live in Hermiston and commute to Boardman if rents are similar.

Show 20-30 townhouse units. This is attractive because it addresses affordability (less expensive than buying a single family dwelling) and attractive for investment.

Add as much open space in the residential areas as possible (to make the housing more realistic from a market standpoint).

Retail/Office

Orient offices closer to public offices, i.e. title company, attorneys, etc. near public offices.

Consider flipping the grocery store to the east side of Main Street as a retail anchor with accompanying neighborhood villages uses or, flip retail uses to west side creating neighborhood village near/around the existing grocery store.

There are limited retail opportunities. Do not show specific retail uses that would just replace (displace) an existing retail use. Consider retail uses that are in Boardman now, but would attract people, i.e.

farm supply, hardware, outlet mall, bars, rifle range, bass fishing, etc.

Offices sizes shown on the plan make sense.

Landmarks/Special Events
Attract visitors by providing landmark, i.e. this is a hot stretch, possibly a Boardman Waterpark/Pioneer Park – a waterslide visible from the freeway at the community swimming pool. Combine with a park, i.e. Pioneer Park.

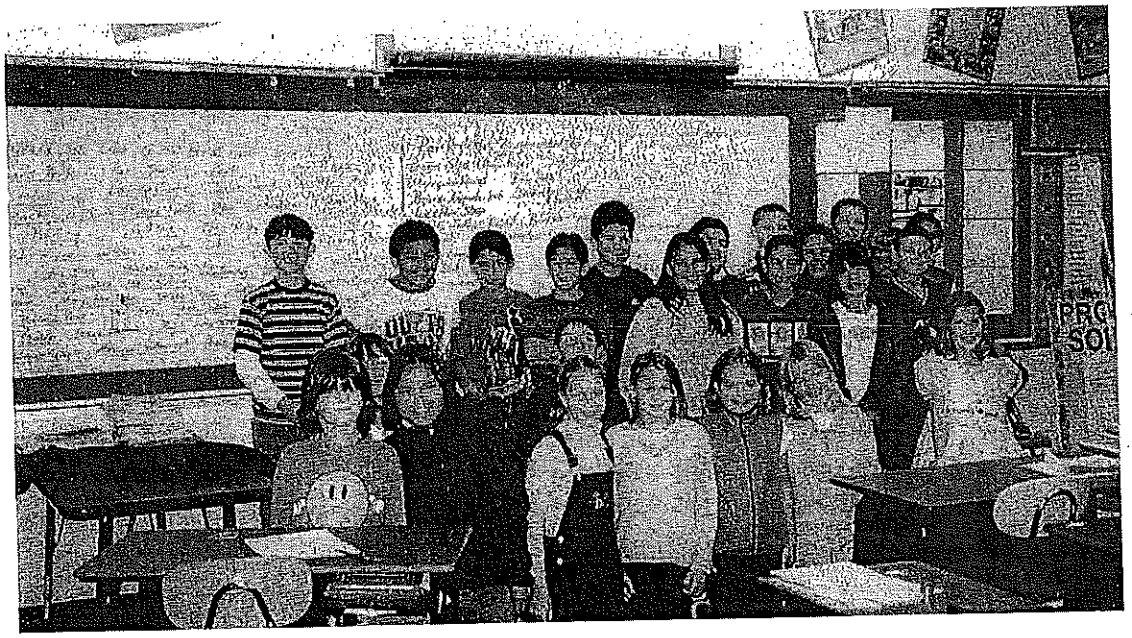
Consider special events that would attract people, i.e. didn't Dodge City Restaurant once have a small arena for rodeo events at one time?

Other
Isn't there a petroglyph in Boardman?

III. NOVEMBER 16, 2000 PUBLIC MEETINGS & DESIGN CHARRETTES

On November 16 2000, a Project Management Team Meeting, Youth Charrette, and Community Kick-Off Meeting/Charrette were conducted. Summaries of the Youth Design Charrette and Community Kick-off Meeting/Design Charrette are provided below.

YOUTH DESIGN CHARRETTE



The 4th grade class list of desired uses and elements for Boardman's New Downtown:

What would you like to do in a new downtown?

- Skateboard Park
- Radio Shack
- Park
- 4-wheeler monster track
- Macy's Store
- Chuck Cheese
- Silverwood
- Scotts – Bike Store
- BMX/Go Cart Track
- Soccer Field
- Zoo Museum
- Bicycle/Skate Repair Shop
- Mall
- Bowling
- Six Flags
- Toy-R-Us
- Hotels
- Sears
- Block Buster Video Store
- Water Park
- Disney Store
- Train Stops
- Gift Shop
- Comic Shop
- Skating Rink
- Skiing and Snowboarding
- Stop Lights
- Doughnut Shop
- Candy Store
- McDonalds
- Ice Skating
- Football Team
- Movie Theater
- Skate Shop
- Wal-Mart
- Chinese Restaurant
- Airport
- Pokemon Store
- 99 Cent Store
- Pet Shop
- Community Theater – Plays
- Community Center
- Indoor Swimming Pool
- King Supers
- More Streets
- Arcade
- Bigger School
- Mexican Restaurant
- Hockey Rink
- Cookie Store - Tree

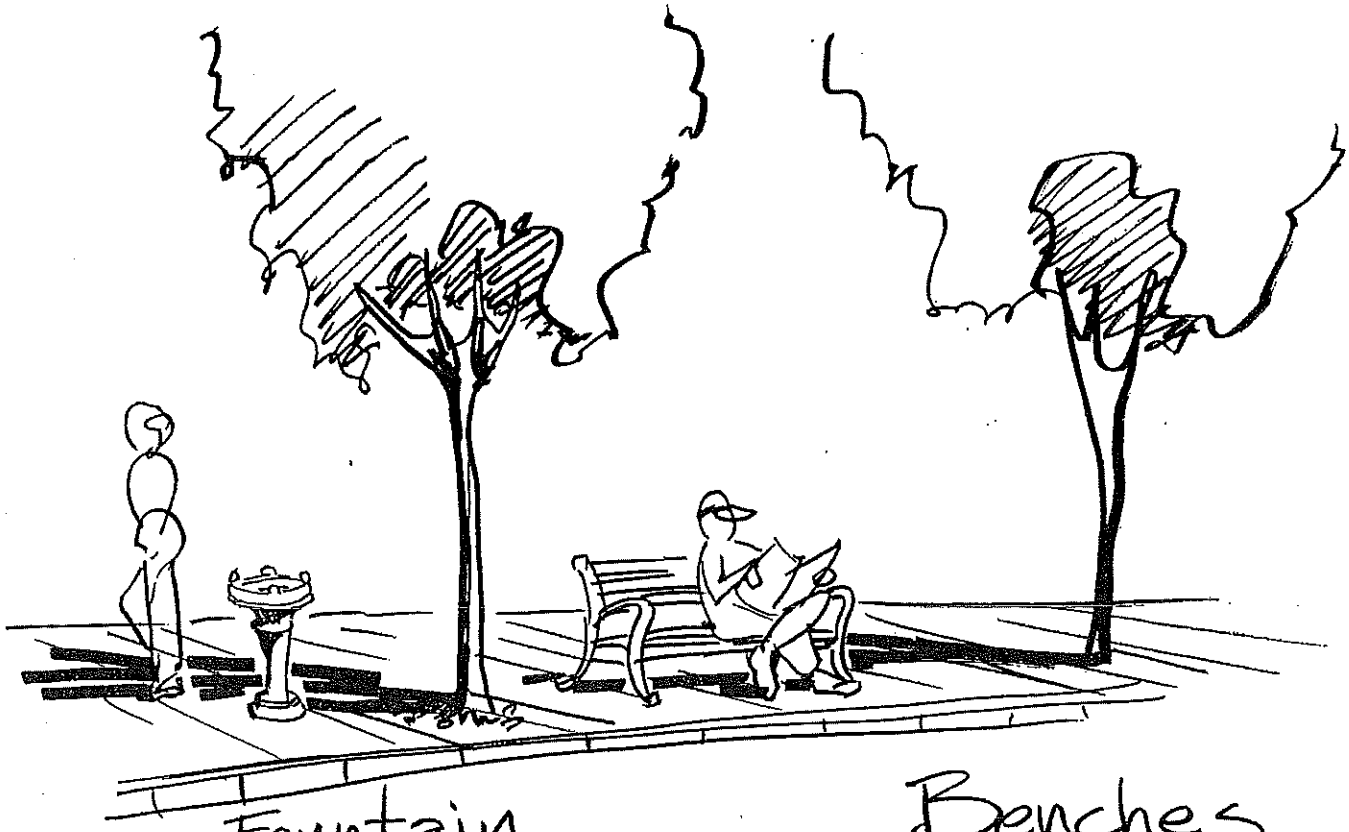
What would you like to see?

- Park
- Skateboard Park
- Bigger Slide (Tall, Huge-Huge)
- Merry-Go-Round
- Bike Path
- Basketball Court & Supplies
- Bears-Animals-Zoo
- Ice Cream Shop
- Public Football Field
- Bars for flips
- Tetherball
- Pyramid
- Monkey Cages – Bars
- Pyramid
- Tire Swings
- Cotton Candy Shop

How do you want to get to the new downtown?

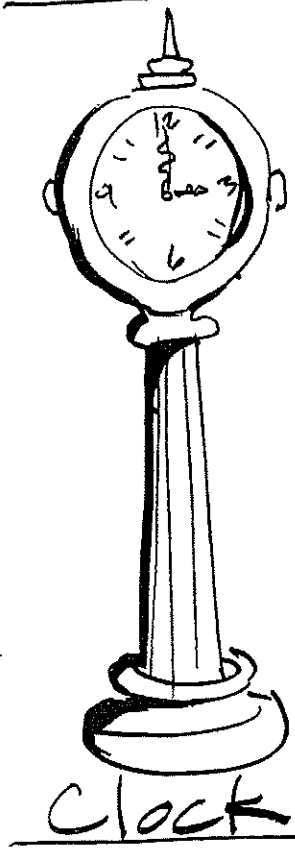
- Community Bus
- Subway Car
- Go-Cart
- Scooter
- Bike
- Rollerblades
- Parents drive
- Walk
- Skateboard
- Jogging-Run

The 4th grade class also prepared sketches of their "new downtown". One example is provided below.



Fountain

Benches
Shade



Clock

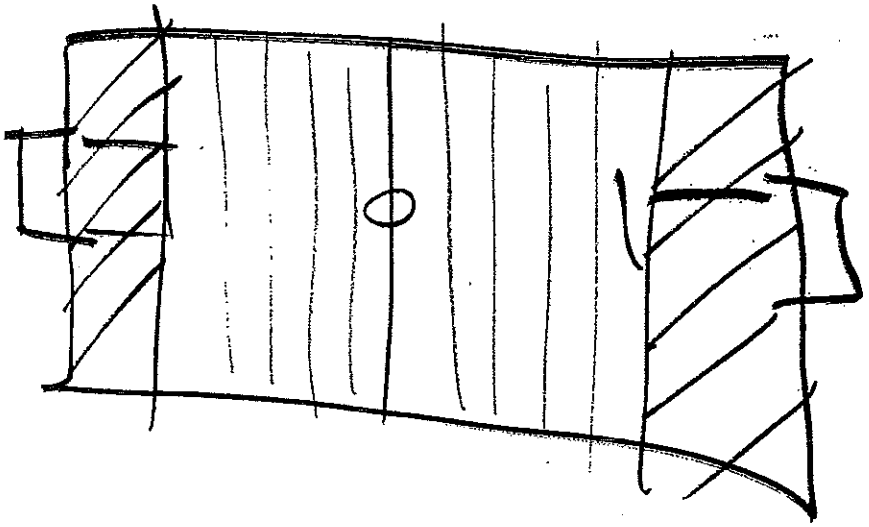
Furniture Diagrams

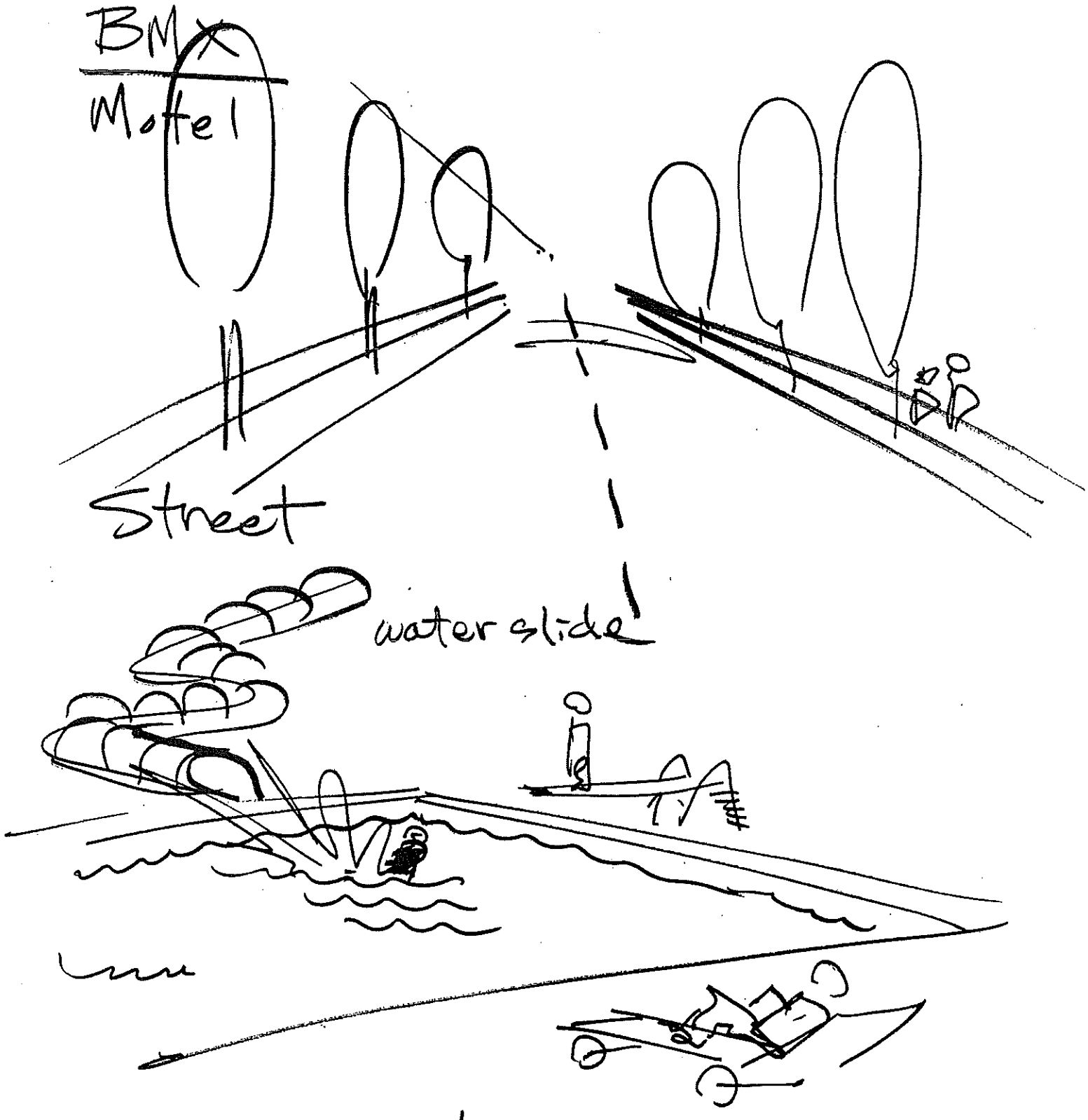
22

Boardman

Skate Park

Football





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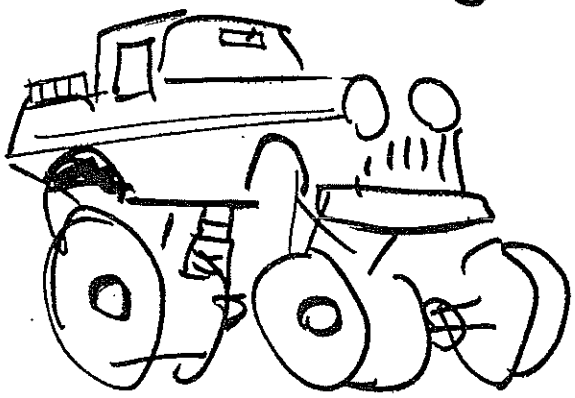
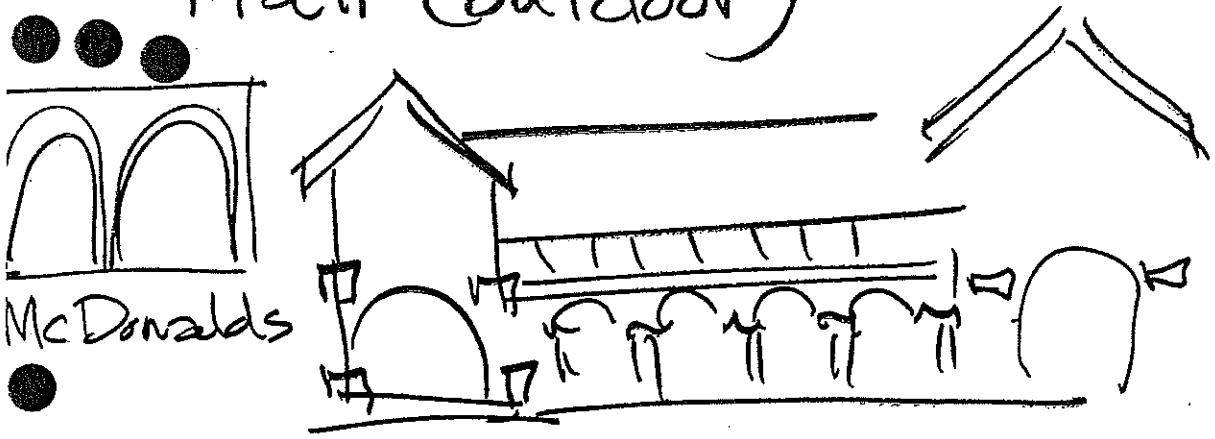
Monster trucks (Not downtown)

Museum

Snow boarding

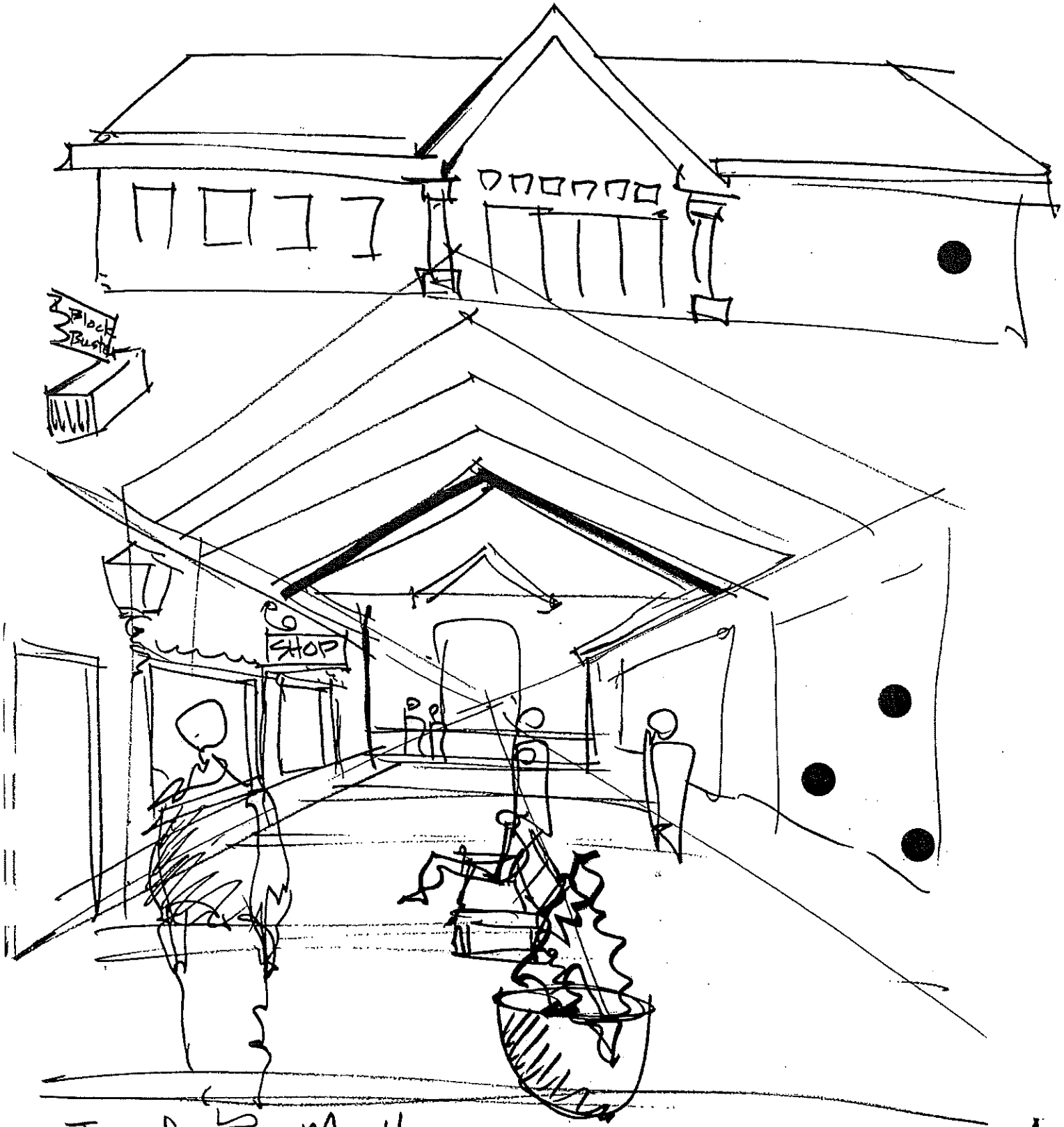


Mall (outdoor)



3

Community Center (downtown)

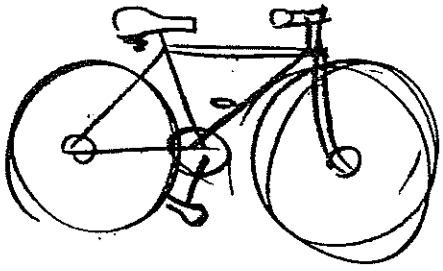


Indoor Mall

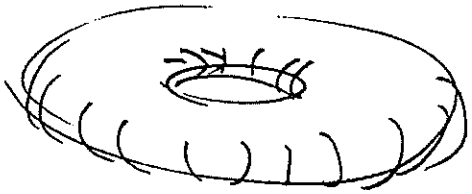
4

99¢ store ✓
Comic books ✓
Restaurants ✓
Bike Shop
Donut shop ✓
New Bank
Ice Cream ✓
Power Plant
Bike racks

IceCream

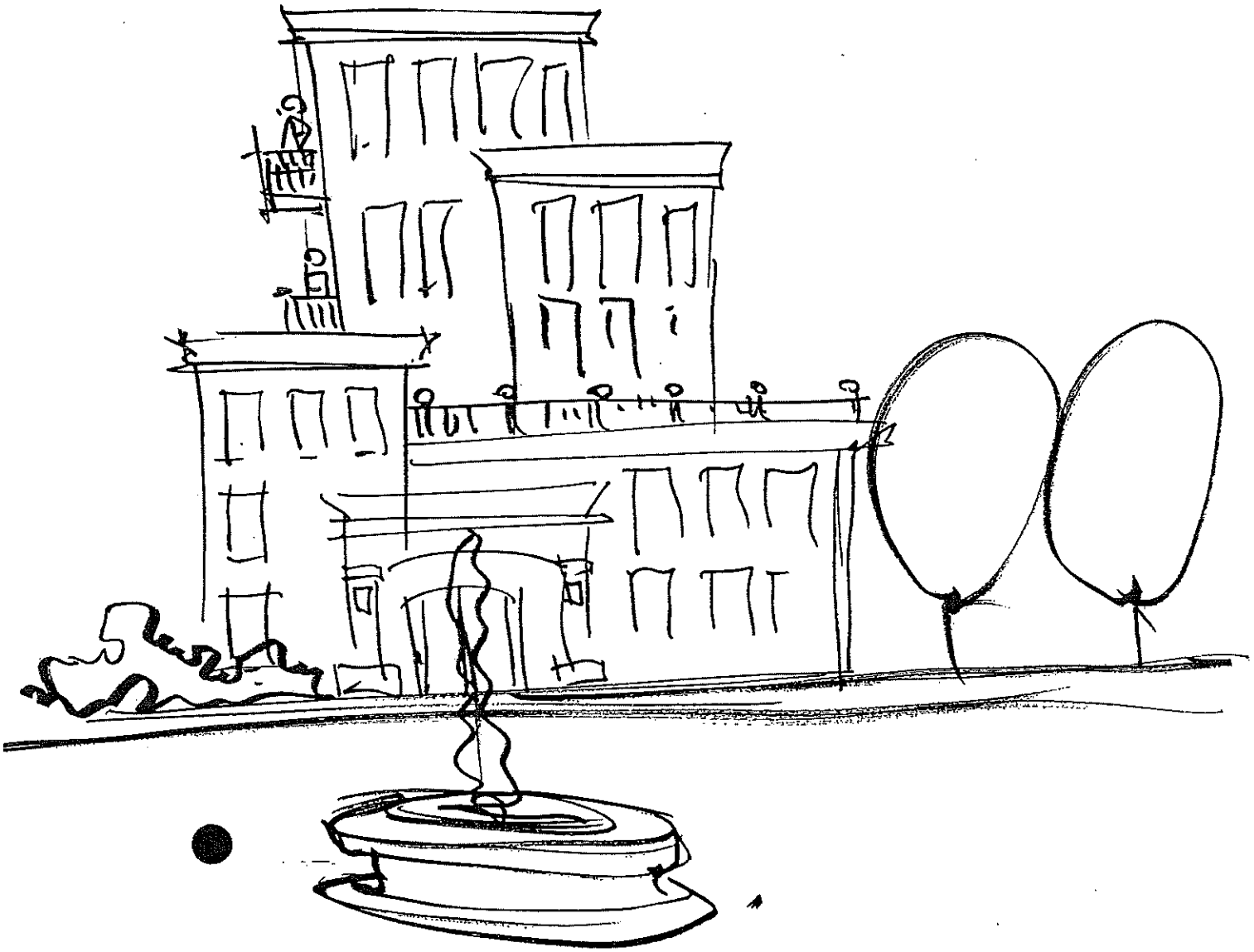


Bike



Donut

High rise building Hotel



6

COMMUNITY KICK-OFF MEETING/DESIGN CHARRETTE

The Existing Conditions Base Map, Opportunities and Constraints Analysis Diagram, Photographs of Existing Conditions, and Youth Design Charrette Sketches were displayed and discussed. The Kick-Off Meeting/Community Design Charrette included a presentation that showed participants several examples of downtown designs. The presentation was a collection of slides taken from the ODOT Patterns Book and from TriLand Design Group and Foster Consultants slide collections.

At the Community Kick-Off Meeting/Charrette there was considerable discussion on whether or not future commercial/downtown uses should develop south of I-84 or occur along the north I-84 frontage. Near the end of the meeting/charrette, participants were asked to place a "dot" on a map of Boardman where they preferred the downtown develop. Eight of the nine participants identified the preferred location for the future downtown to be south of I-84 near Main Street.

Four alternative concept diagrams were described which showed how the downtown could develop south of Main Street. This included:

#1 Linear Concept Diagram with development focusing on the both sides of the Main Street frontage;

#2 Nodal Concept Diagram with development focusing around a central public space located on the east side of Main Street across from Kinkade Street;

#3 Perpendicular Concept Diagram with development occurring along a new east-west oriented street, east of Main Street.

#4 Linear/Perpendicular Concept Diagram that has development occurring along the existing Main Street frontage and on a new east-west oriented street perpendicular to and east of Main Street.

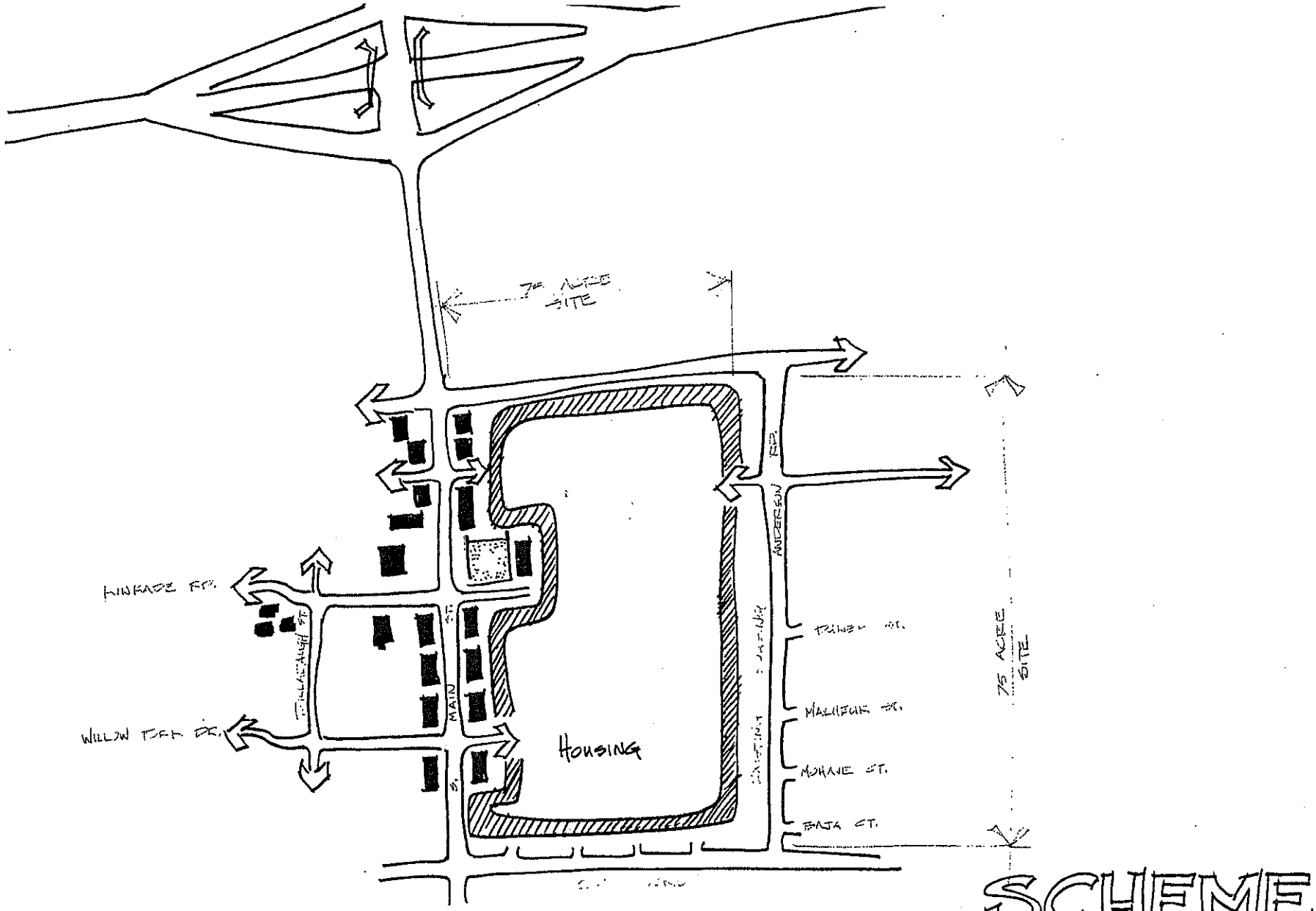
Preferred Concept Diagram
Discussion resulted in participants placing "dots" on their preferred diagram. Participants concluded that they preferred an alteration to the #4 Linear/Perpendicular Concept. This preferred concept has development occurring along the existing Main Street frontage and on a new east-west oriented street perpendicular to Main Street on both the east and west sides. The east-west street would be along Kinkade Road which would extend east of Main Street.

Comparative Analysis Of Concept Diagrams
Descriptions are prefaced with one of four symbols:
++ This indicates the Concept is very conducive and compatible with the identified Element
+ The Concept is somewhat conducive and compatible with the identified Element.
- The Concept is not conducive and compatible with the identified Element.
-- The Concept is definitely not conducive and compatible with the identified Element.

Element	Linear Concept	Nodal Concept	Perpendicular Concept	Linear/ Perpendicular Concept
The need for Main Street to be a collector street and accommodate through-traffic.	-- Focuses development along Main Street frontage, competing with the needs of through traffic.	- Provides some development off Main Street however the focus of development is along Main Street.	++ Focuses development perpendicular to Main Street thereby enabling Main Street to function as a collector street.	+ Distributes development along both Main Street and perpendicular to Main Street.

Element	Linear Concept	Nodal Concept	Perpendicular Concept	Linear/ Perpendicular Concept
Provides a mix of land uses and compatible land use pattern	- - Provides downtown development in a lineal pattern along Main Street with housing separated form the downtown.	- Although some "downtown" uses shown off Main Street, still concentrates commercial development on Main Street.	++ Clearly demonstrates commercial uses in the middle and surrounded by residential development in proximity to commercial uses.	++ Clearly demonstrates commercial uses in the middle and surrounded by residential development in proximity to commercial uses.
Multi-modal	+/- Development is focused on Main St. resulting in autos, bicyclists, and pedestrians concentrating on Main St. This is positive toward creating a multi-modal area if adequate facilities are provided, i.e. wide sidewalks buffered from autos. It could create conflicts amongst different transportation modes if adequate facilities are not provided.	+ Similar to Linear Concept although a central square will likely attract more pedestrians and bicyclists.	++ Multi-modal opportunities increase by locating a new "Main Street" in proximity to housing.	++ Multi-modal opportunities increase by locating a new "Main Street" in proximity to housing.
Parking	Each concept promotes parking located behind buildings in order to prohibit parking lots between streets and buildings, and create a pedestrian-friendly environment.			
Infrastructure	++ Main St. is the "central artery" for transportation, water, sewer, storm drainage, and other utilities	+ Infrastructure costs increase slightly (from the Linear Concept) due to the creation of the square.	- Major infrastructure must be constructed perpendicular to Main Street.	-- Infrastructure must be provided along both Main Street and the new perpendicular street.

In conclusion, the Perpendicular Concept and Linear/Perpendicular Concept have more positive attributes and the Linear Concept and Nodal Concept regarding accommodation of Main Street as a collector street, providing a mix of land uses and compatible land use pattern, and providing a multi-modal environment. Infrastructure costs may be less expensive with the Linear Concept. In each Concept, commercial and residential uses are fairly equal therefore not creating more or less population or employment in one Concept over another. The resulting development program needs to assure that excessive commercial development is not allowed given the existing commercial zoning. Excessive commercial zoning could result in "piece-meal" commercial development and therefore preclude the desire to create a compact, identifiable downtown.

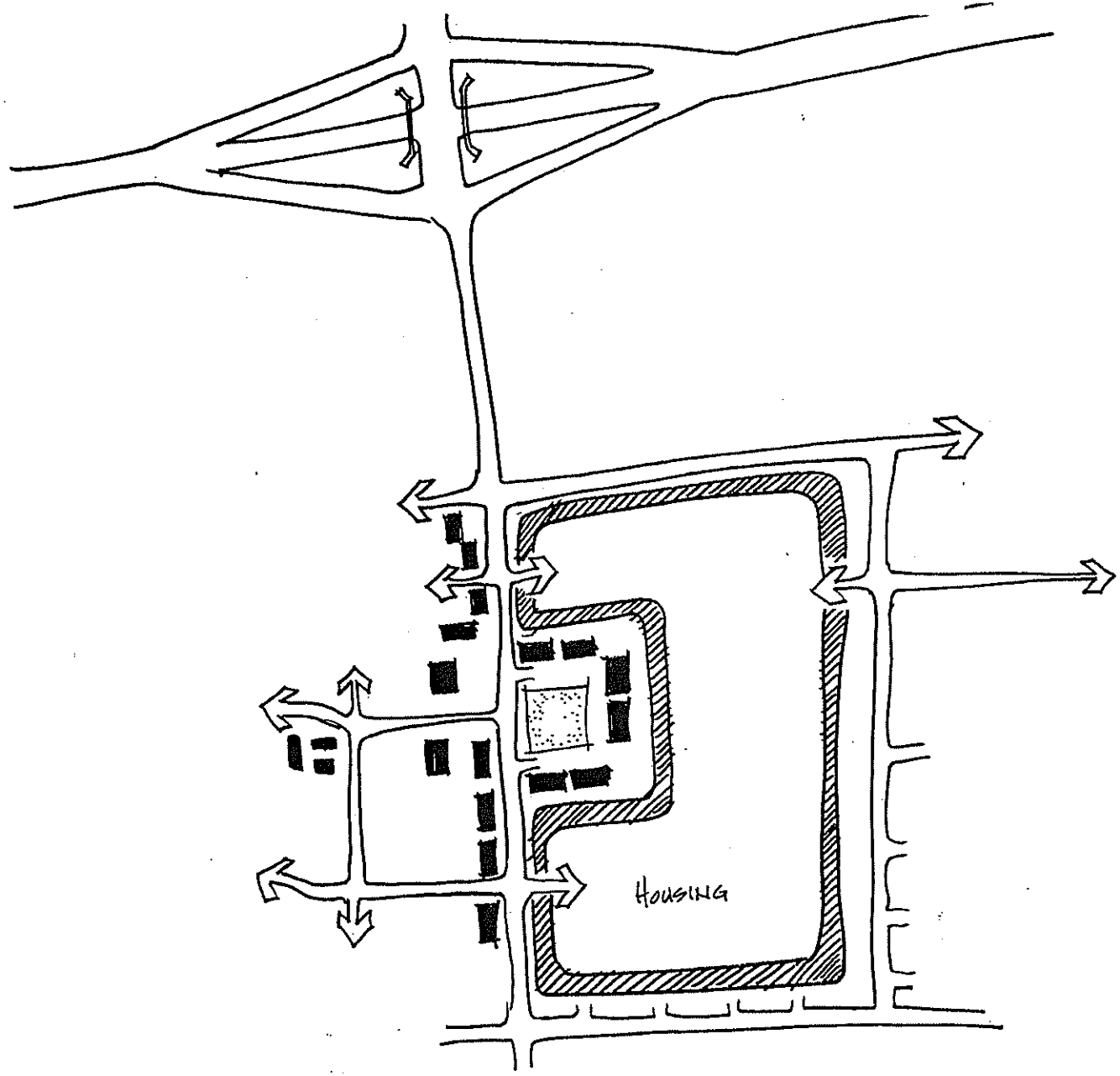


SCHEME 1

LINEAR CONCEPT

BOARDMAN DOWNTOWN DEVELOPMENT PLAN

TRILAND DESIGN GROUP, INC. • FOSTER CONSULTANTS 11-16-2000

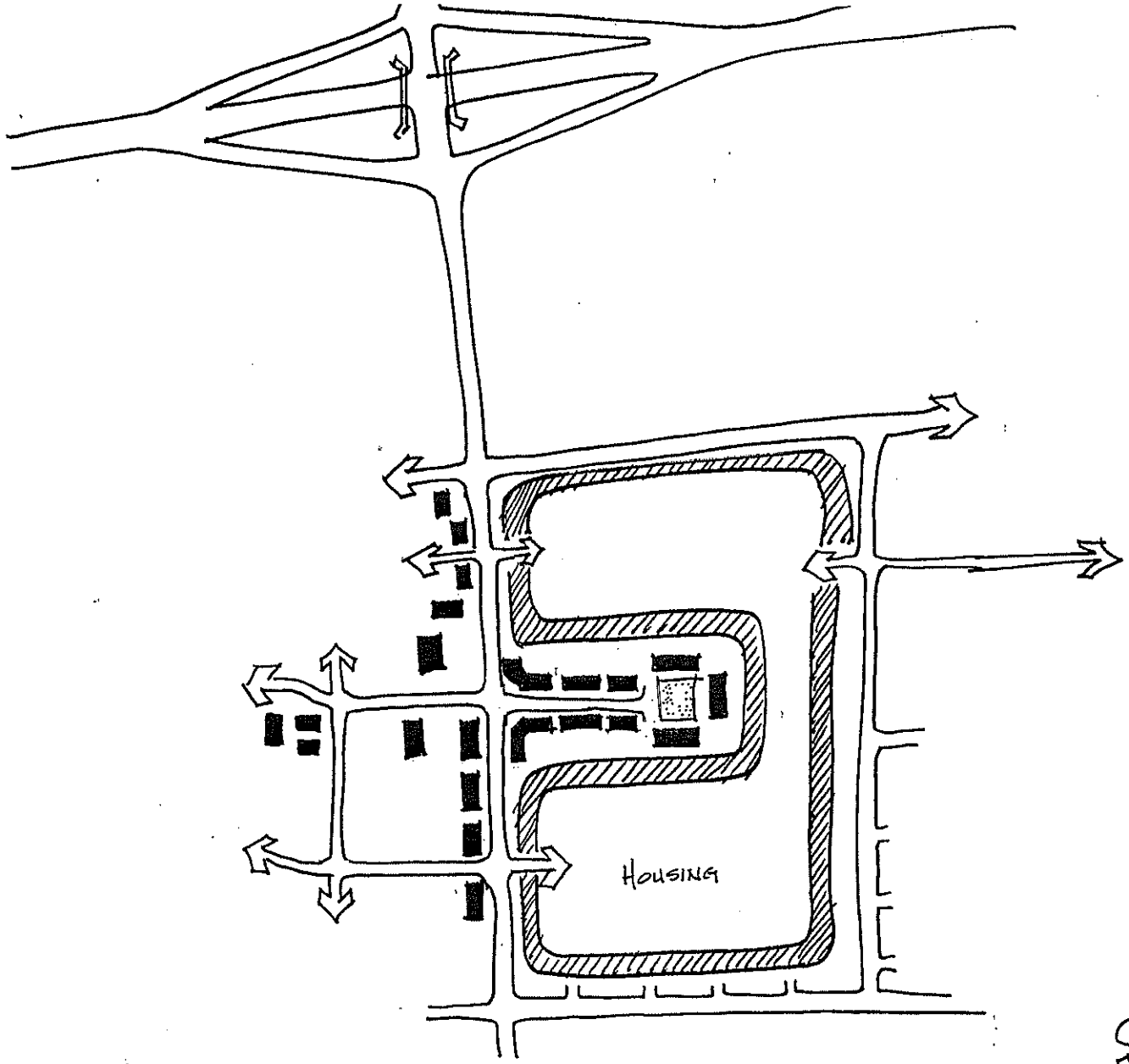


SCHEME 2

NODAL CONCEPT

BOARDMAN DOWNTOWN DEVELOPMENT PLAN

TRILAND DESIGN GROUP, INC. & FOSTER CONSULTANTS 11-16-2000

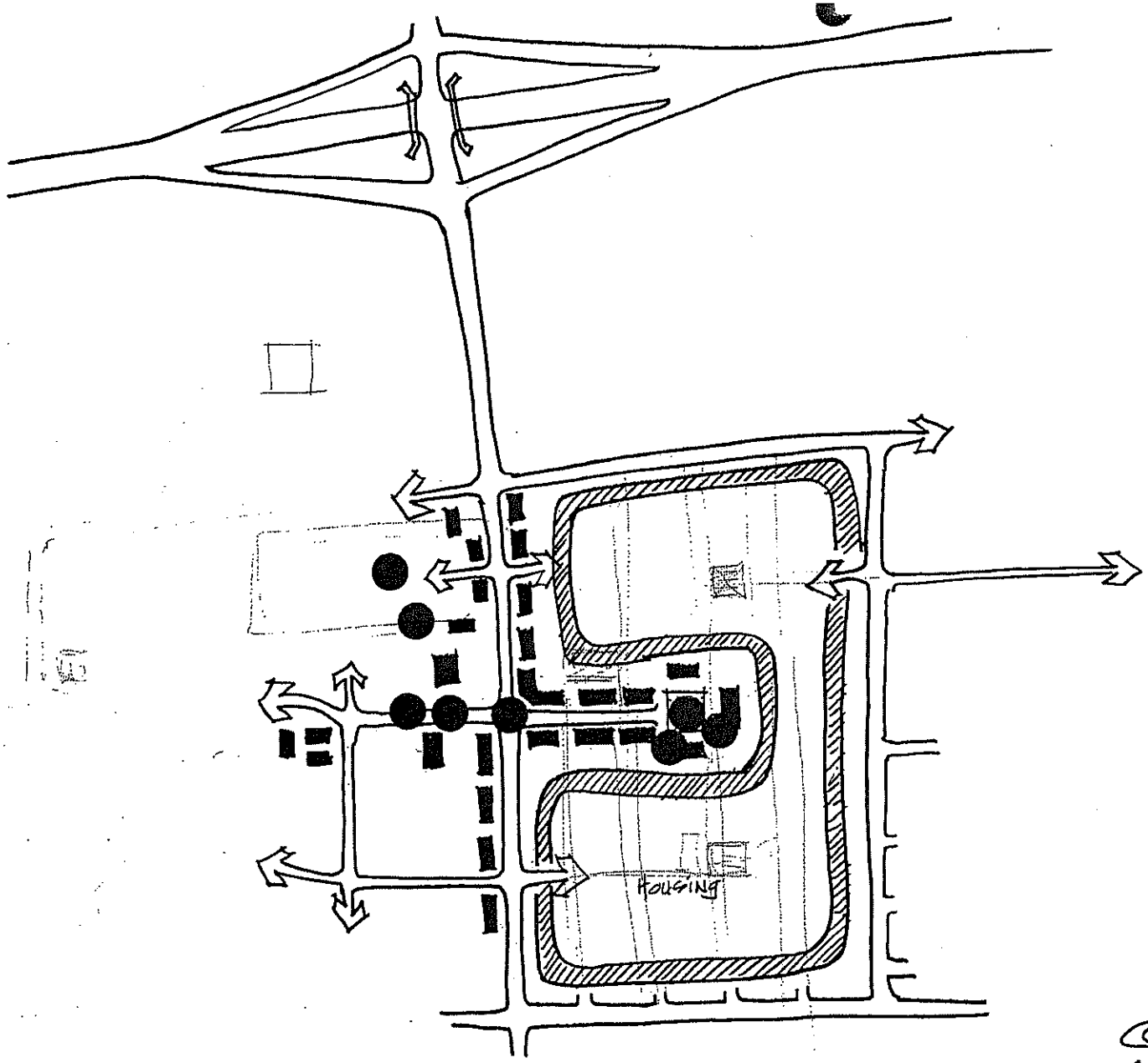


SCHEME 3

PERPENDICULAR CONCEPT

BOARDMAN DOWNTOWN DEVELOPMENT PLAN

TRILAND DESIGN GROUP, INC. & FOSTER CONSULTANTS 11-16-2000



SCHEME 4

LINEAR/PERPENDICULAR CONCEPT

BOARDMAN DOWNTOWN DEVELOPMENT PLAN

TRILAND DESIGN GROUP, INC. & FOSTER CONSULTANTS

11-16-2000

IV. CONCEPTUAL DESIGNS/SITE PLANS

LAND USE PLAN DESCRIPTION

Based on the results of the public meetings and design charrettes, three alternative conceptual designs/site plans were developed. The alternative concepts, described below, focus on:

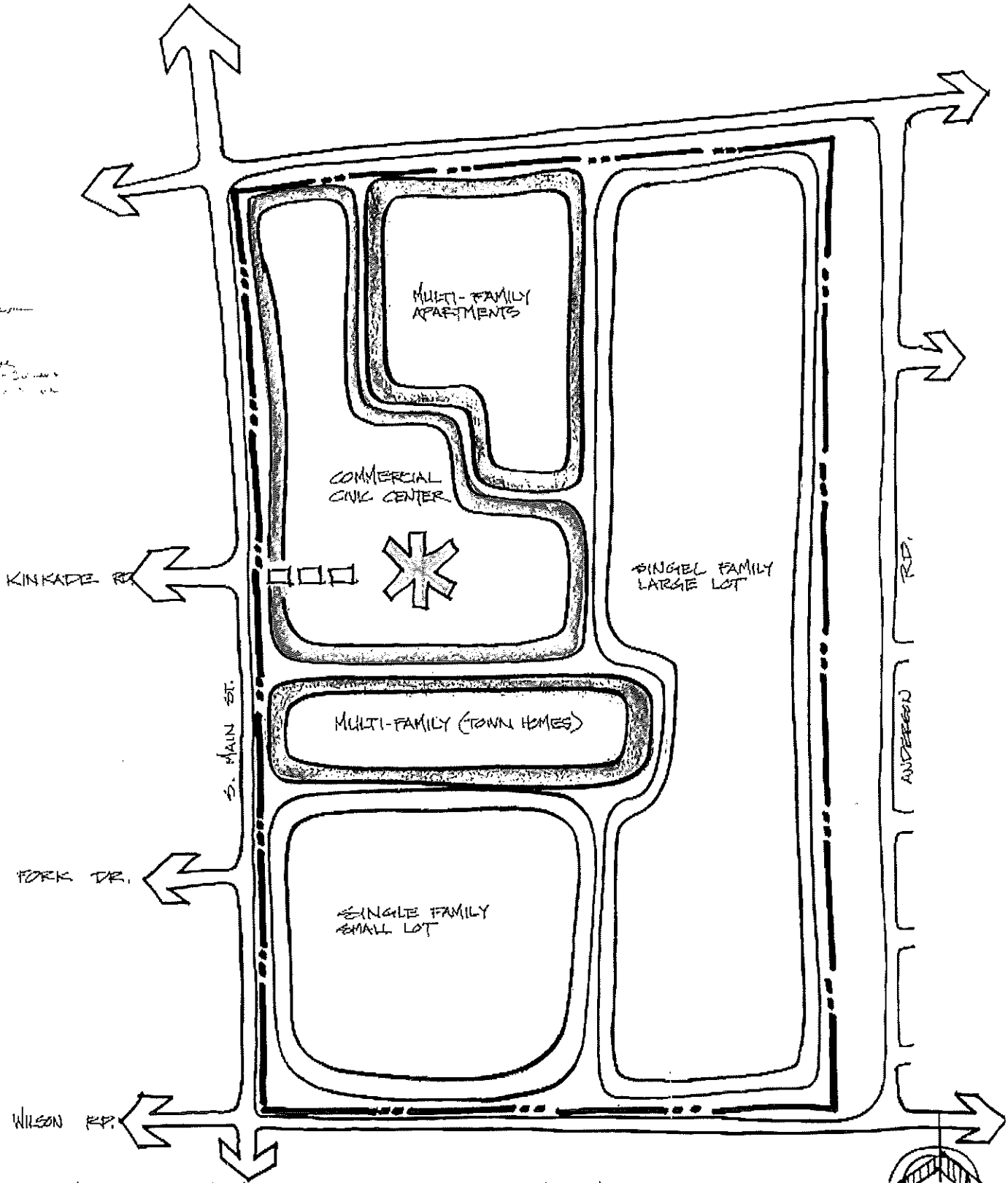
- potential development of existing Main Street,
- the 75-acre site located east of Main Street,
- a new "main street" perpendicular to the existing Main Street that can be either east, west, or both east-west of Main Street.

The location, development program, and physical framework used to prepare the alternative concepts was based on:

- the development program established by the TriLand Team including review and input from a market analyst,
- Incorporating the 75-acre preferred site established in the Transportation System Plan for the downtown location;
- The citizen's preferred Linear/Perpendicular Concept Diagram identified in the public meeting/design charrette that has development occurring along the existing Main Street frontage and on a new east-west oriented street perpendicular to Main Street on both the east and west sides.

Prior to developing the alternative concepts, a land use plan was prepared that identifies the general location, development program, and physical framework used to prepare the alternative concepts. The Land Use Plan includes the following components:

Land Use	Location	Size ±	Density/Sq. Ft.
Commercial/Civic Center	Along the east side of Main Street from Oregon Trail Blvd. to just south of Kinkade Road. The Commercial/Civic Center then extends up to 750 feet east, into the 75-acre site. It can also extend west along Kinkade Road.	15-20 acres	Retail: 30,000 – 35,000 sq. ft. Office: 20,000 – 25,000 sq. ft. Civic: 6-8 acres
Multi-Family (Apartments)	North-central part of site, south of Oregon Trail Blvd. East and north of the commercial/civic ctr.	7-12 acres	70-90 units
Multi-Family (Townhomes)	South of the commercial/civic ctr. East of Main St. between Kinkade Rd. and Willow Fork Dr.	5-10 acres	50-60 units
Single Family – Large Lot	Along the east side of the 75-acre site from Oregon Trail Blvd. to Wilson Road.	13-18 acres	70-80 lots 6,500 sq. ft. lots
Single Family – Small Lot	Southwest portion of the 75-acre site adjacent to Main St. and Wilson Rd.	12-15 acres	80-90 lots 5,000 sq. ft. lots



LAND USE PLAN

BOARDMAN, OREGON
TRILAND DESIGN GROUP INC.
FOSTER CONSULTANTS

KEY PLAN COMPONENTS

Key plan components that are consistent in each alternative are described below and illustrated in the enclosed birds-eye renderings and a perspective that illustrate the civic center, improvements to existing Main Street, and the new commercial "main street".

The Civic Center

In each alternative concept, the Civic Center is located one-block east of Main Street via an extended Kinkade Road. From Main Street, one sees the new City Hall/Library building with a Civic Square in the foreground. The Civic Square is a village green with gardens, amphitheater/fountain, and skateboard park. Civic buildings are located north and south of the Civic Square and include a community center/swimming pool, police station, and post office. The Civic Square is bordered by a loop street that provides access to the square and the civic buildings. The loop street can be either a one-way or two-way loop with parking. Off-street parking is provided behind the civic buildings.

Commercial Uses

Retail and office uses front Main Street and along the extended Kinkade Road which provides a new "main street" between existing Main Street and the Civic Center. The retail uses along Kinkade Road can also extend west of Main Street along the existing street. Retail uses are located at the street level with office or residential uses located on the second level. Buildings are located adjacent to sidewalks with parking located behind the buildings.

Streetscape elements are recommended along the new "main street" (extension and development of Kinkade Road). Streetscape elements includes building facades adjacent to the sidewalk. Wide sidewalks (10-14 feet) with "furniture zone" located adjacent to the curb with planters, street trees, benches, street lights, trash receptacles.

Office and service-related uses are located in the northwest part of the site, adjacent to Main Street and Oregon Trail Blvd.

Residential Uses

The multi-family areas can have a range of uses, i.e. apartments, townhouses, condominiums, assisted living, and other types of multi-family housing. The single family area located along the east side has 6,500 to 7,000 square foot lots with no alleys. The small lot tract located at the south end of the site show 5,000 square foot lots than can be single family, duplex, and zero lot line units. Dwelling would be located near the street creating a pedestrian friendly atmosphere with alleys provided for accessing garages located at the back of lots. Both multi-family and single family areas include parks, green spaces, and pedestrian connections.

Main Street

The existing Main Street, in each alternative concept, has street level retail uses occurring along the street frontage. Buildings, along the east side, are to be located close to the street, adjacent to the sidewalks with off-street parking provided behind the buildings. This concept is also recommended on the west side of Main Street, as infill of vacant parcels and redevelopment of developed properties occurs. Main Street is recommended to have four travel lanes with a tree-lined median and center turn-lanes at intersections. Curb extensions (bulb-outs) are to be provided at intersections providing a safer and enhanced pedestrian friendly atmosphere. Main Street could have parallel parking and bus pull-outs which could become additional travel lanes in the future if traffic volumes justify increasing capacity. A landscaped planter with street trees is located adjacent to the curb on both sides of Main Street. (Refer to the enclosed birds-eye rendering of Main Street.)

ALTERNATIVE CONCEPT DESIGNS/SITE PLANS

The three alternative concepts are described on the following pages. Each alternative includes:

- Brief description of the circulation system;
- Land Use & Circulation Diagram which identifies the different land uses and primary street system;
- Site Plan that illustrates specific land uses, building footprints, lots, parks, and circulation.

The Grid Concept

The Grid Concept is based on a street grid that has streets oriented north-south and east-west. The Grid extends existing Kinkade Road and Willow Fork Drive, the east-west oriented streets, located west of Main Street to the east, into the 75-acre site. New streets are incorporated into the Grid and connecting to the existing Main Street, Oregon Trail Blvd., and Wilson Road. The Grid also has one street connecting east to Anderson Road through the new subdivision. The Grid provides an easy-to-understand circulation system with multiple connections for motorists, bicyclists, and pedestrians.

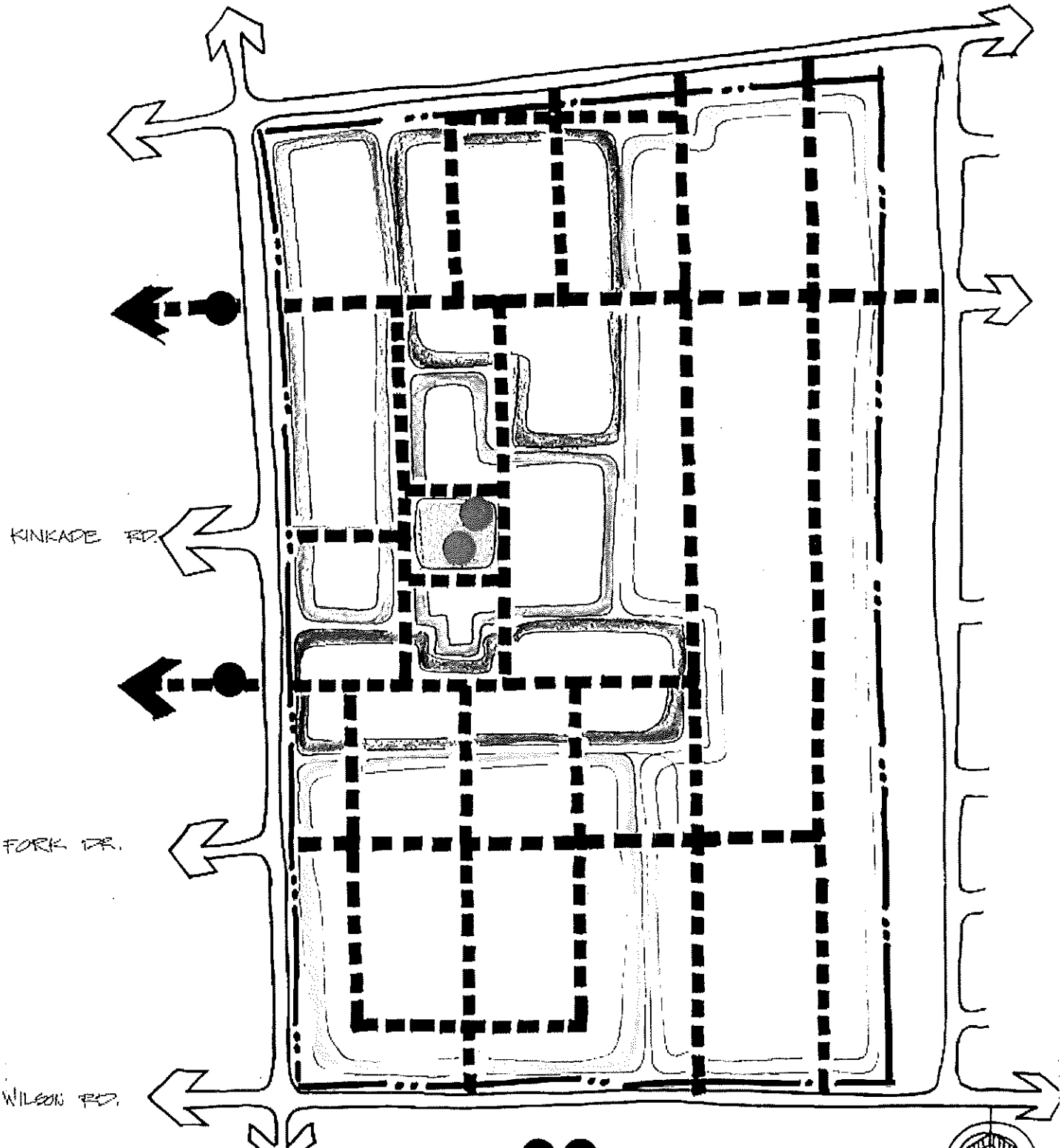
The Crescent Concept

The Crescent creates a long, sweeping semi-circle street through the site that provides primary access to residential uses. The Crescent street connects Main Street at the north end of the site near the existing library site, and aligns with Willow Fork Drive near the south end of the site. Angled streets, with a northeast-southwest and northwest-southeast orientations, bisect the Crescent street. The angled streets connect to a grid street system or north-south/east-west oriented streets.

The Crescent street system creates irregular-shaped parcels which is beneficial in providing green spaces and pocket parks. The irregular-shaped parcels can make it more difficult to develop standard rectangular buildings and off-street parking. The Crescent street system likely increases infrastructure costs, i.e. construction of water and sewer lines due to the curving street.

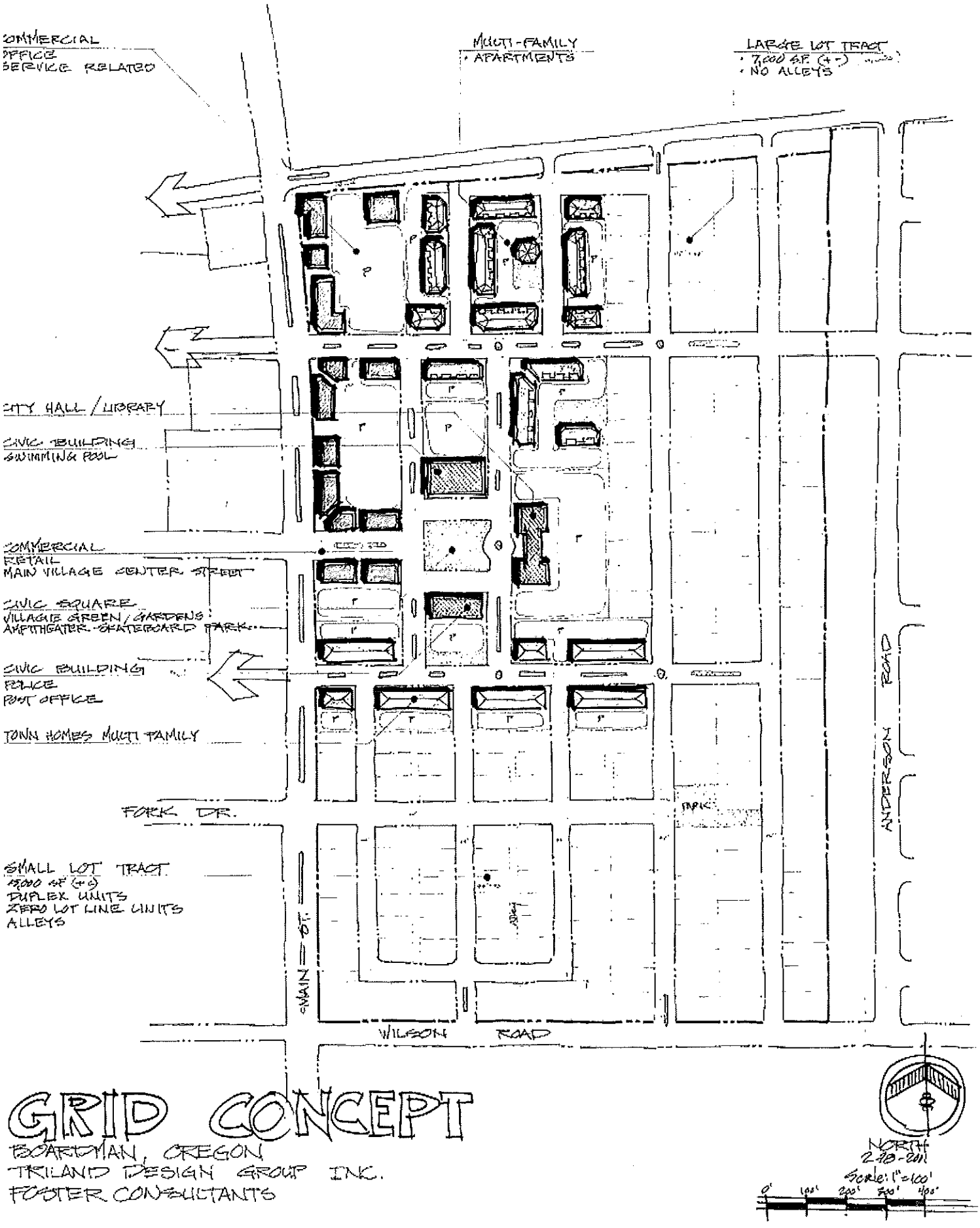
The Amphitheater Concept

The Amphitheater Concept is named because the street system, from a plan view, creates an amphitheater-look with "V" shaped streets. Kinkade Road extends one block east of Main Street and terminates into the Civic Square. Two street angle off the end of Kinkade in a northeast and southeast direction. These streets connect to north-south/east-west oriented streets. The Amphitheater Concept creates several irregularly shaped parcels.



GRID CONCEPT

BOARDMAN, OREGON
TRILAND DESIGN GROUP INC.
BASTER, CONSULTANTS



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BOARDMAN, OREGON
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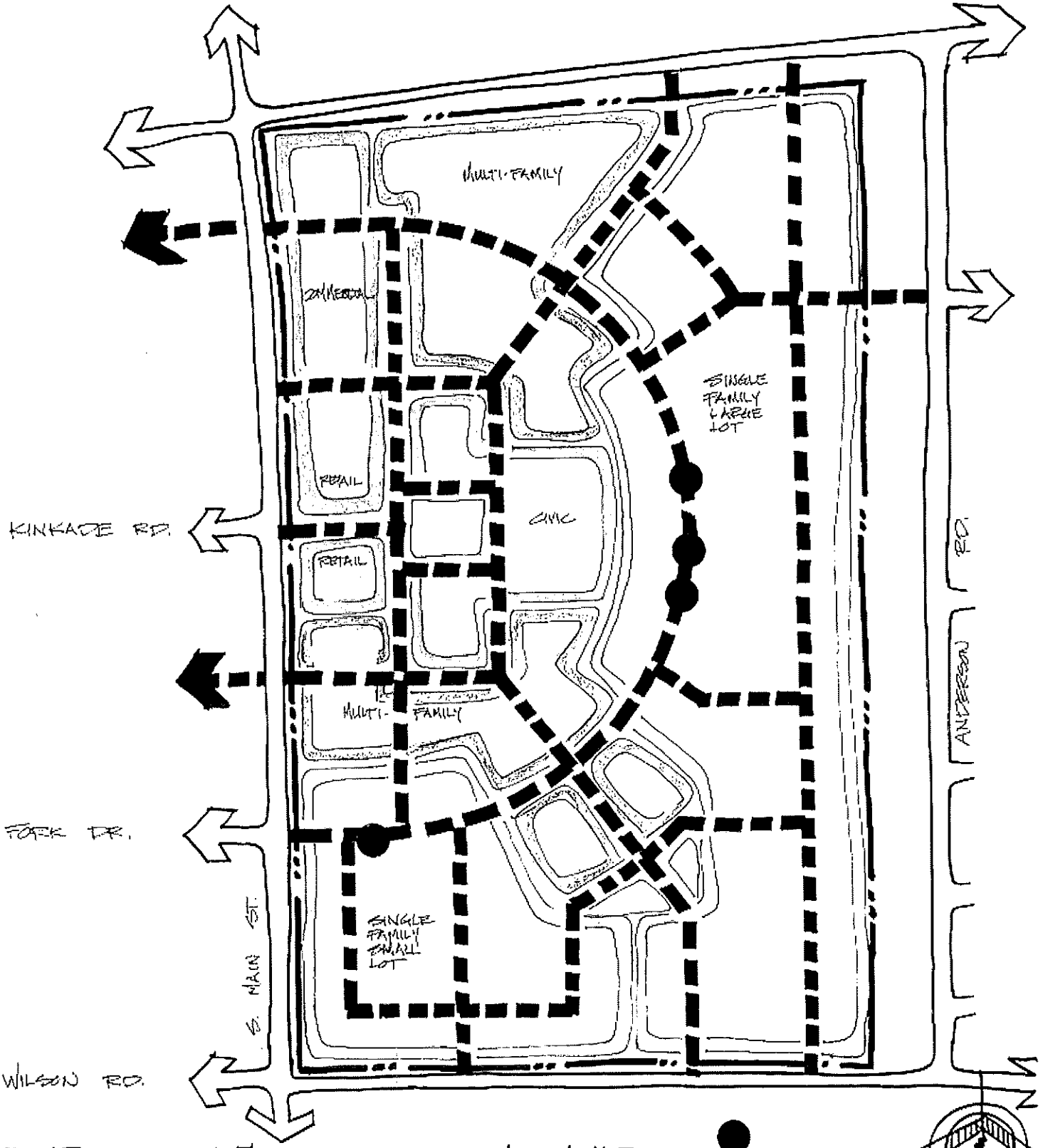
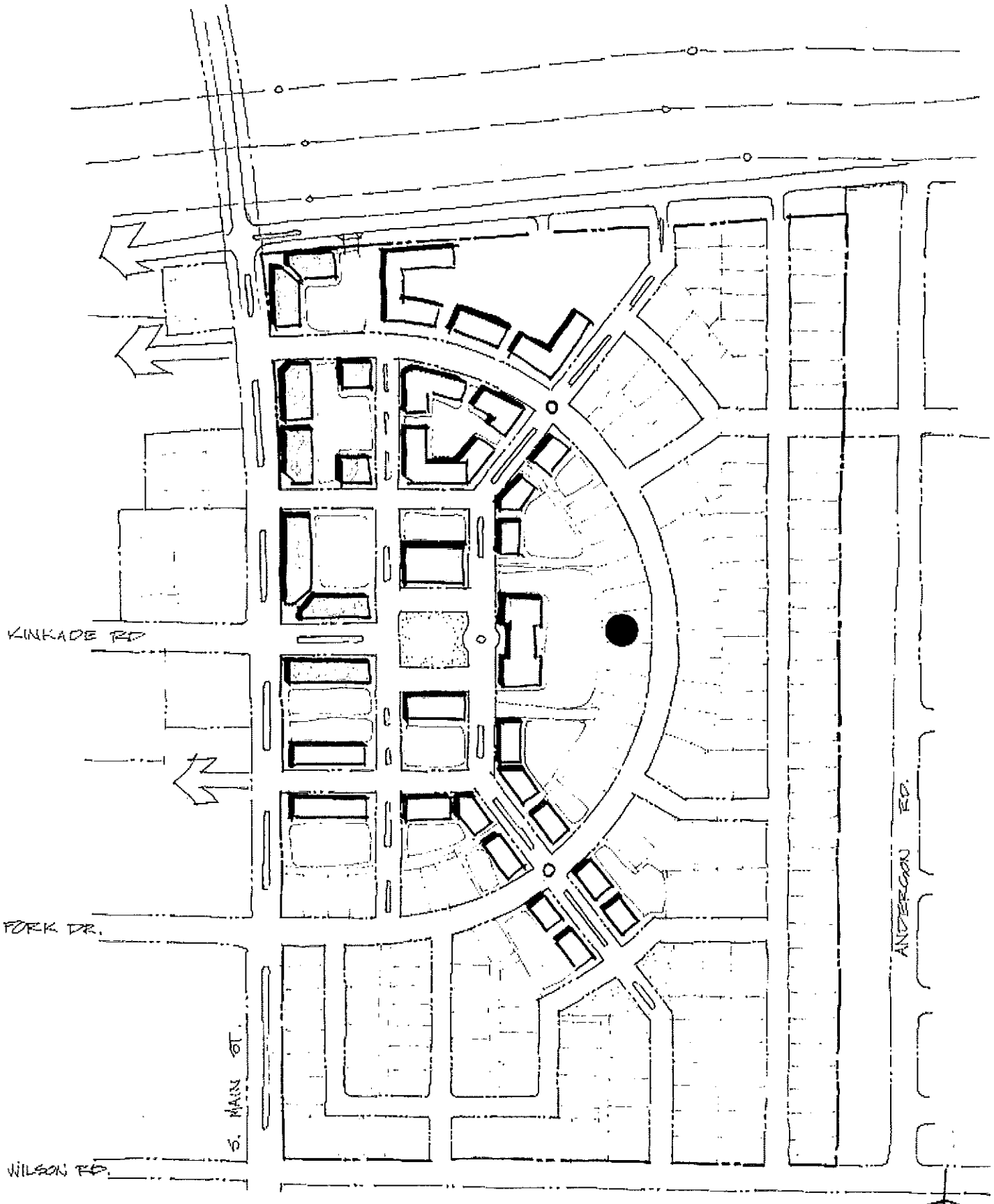


CRESCENT CONCEPT

BOARDMAN, OREGON
TRILAND DESIGN GROUP INC.
FOSTER CONSULTANTS



CRESCENT CONCEPT

SCAPEMAN, OREGON
RILAND DESIGN GROUP INC.
OTHER CONSULTANTS

NORTH
2-8-2001
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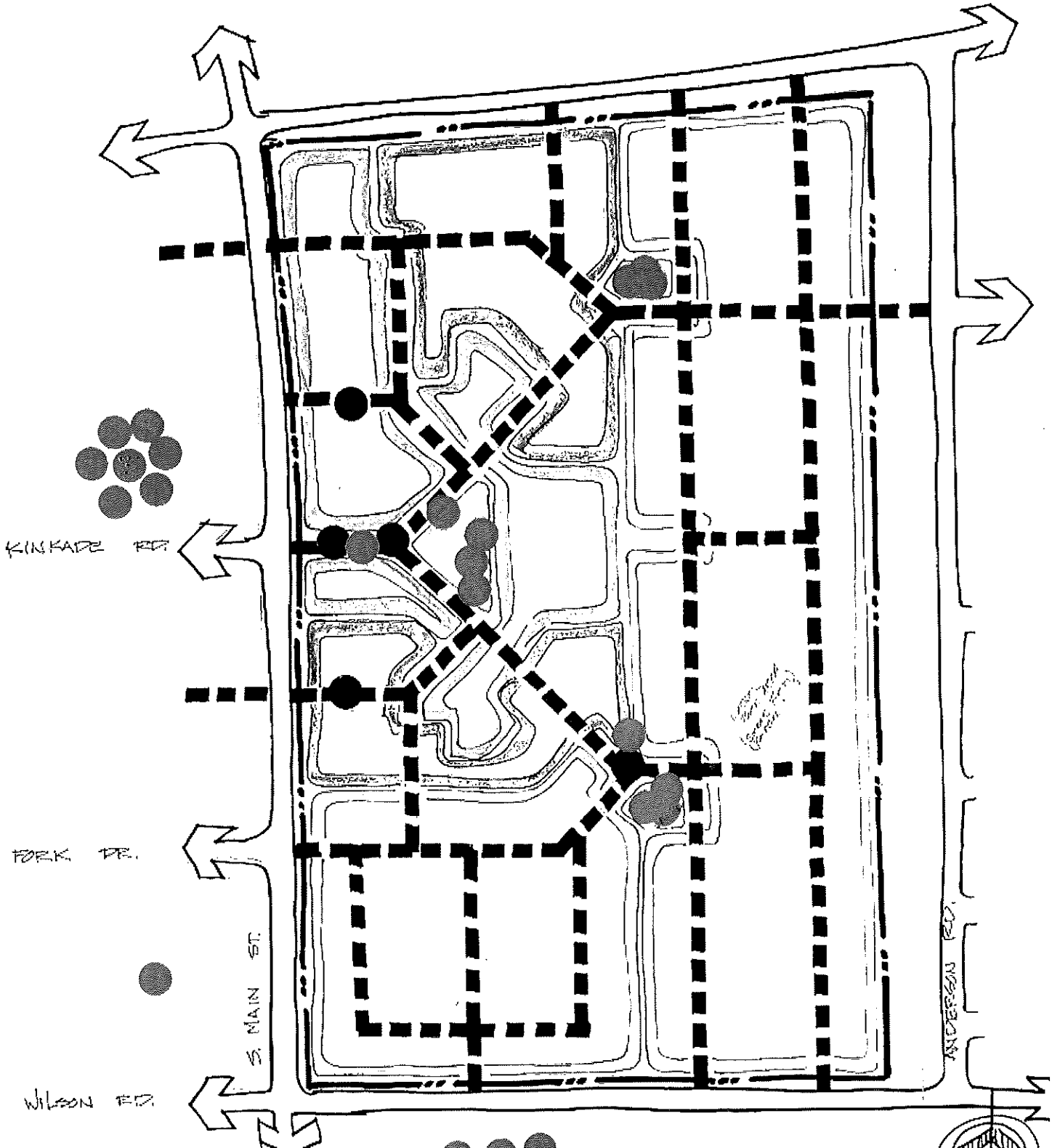
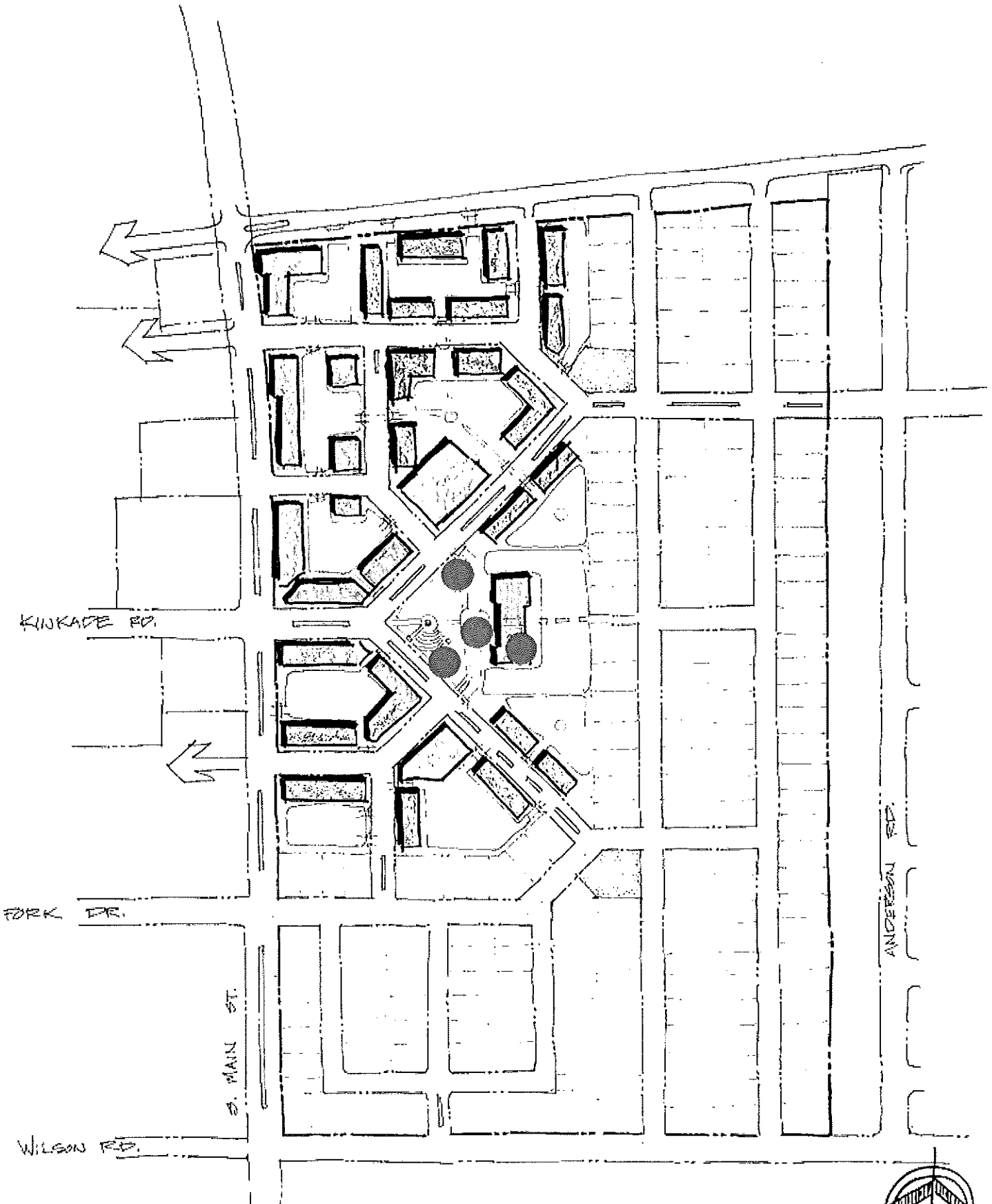


AMPITHEATER CONCEPT

BOARDMAN, OREGON
TRILAND DESIGN GROUP INC.
FOSTER CONSULTANTS



AMPITHEATER CONCEPT

BOARDMAN, OREGON
TRILAND DESIGN GROUP INC.
EXTER CONSULTANTS

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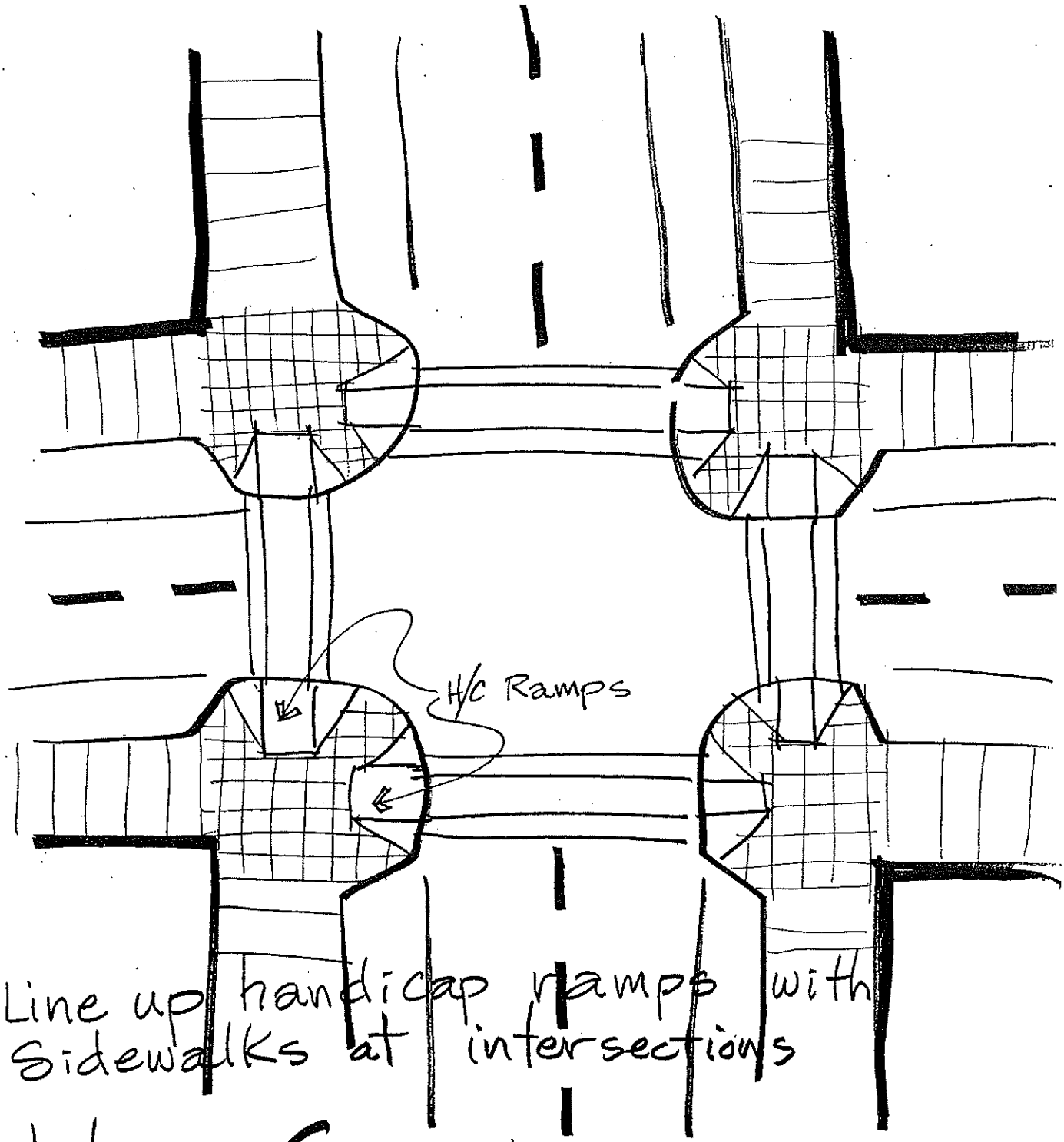
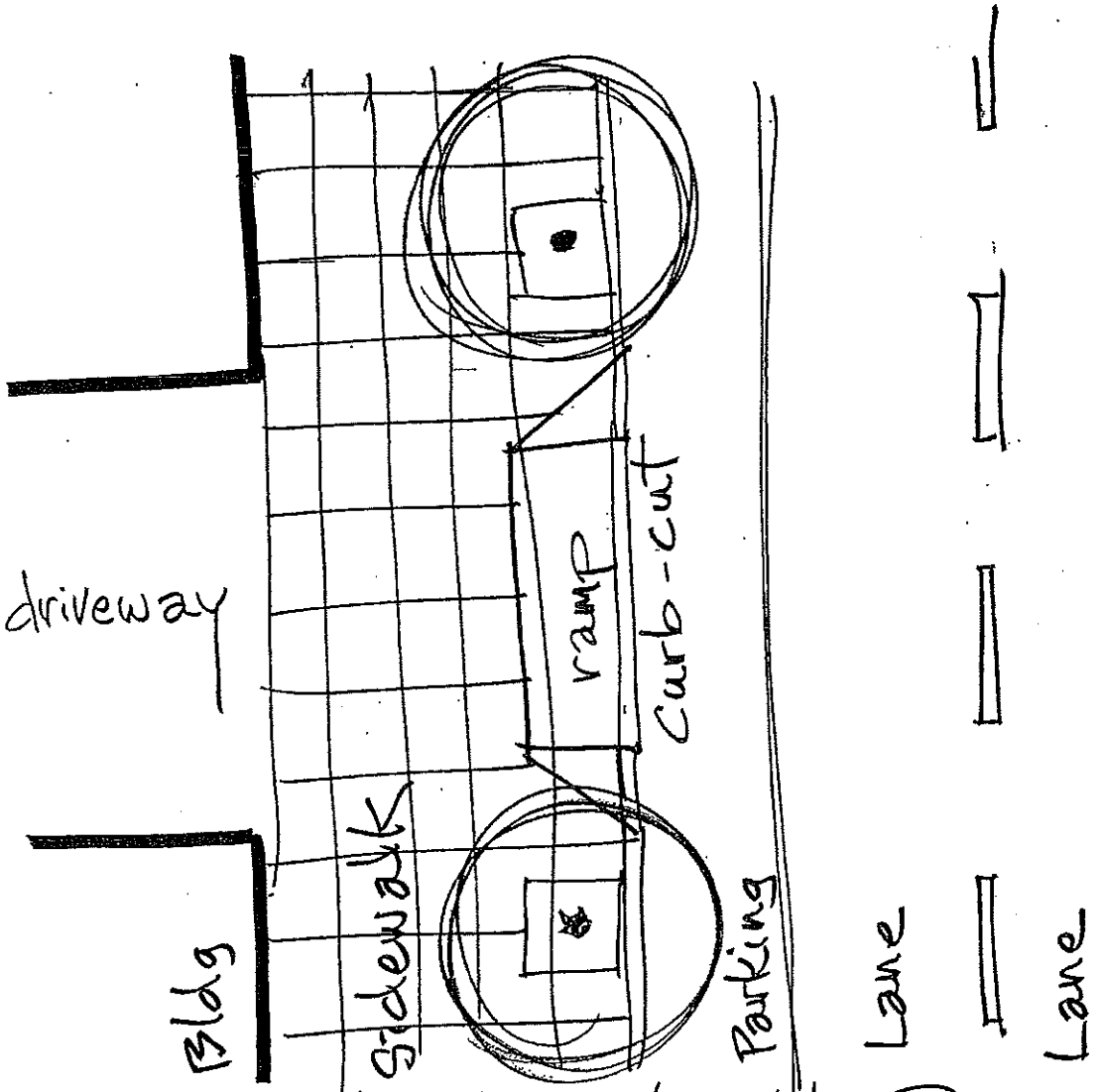


- Line up handicap ramps with sidewalks at intersections

Urban Concepts Diagrams



- Sidewalk Priority At Driveways
- Curb cuts/ramps in Furniture Zone
- Non striped parallel parking for more cars per lineal bay

Urban Concept Diagrams

V. SITE PLAN WORKSHOP

February 8, 2001, 4:00 p.m.
Boardman City Hall

A project status report was described that included a summary of previous public meetings, development of alternative concept diagrams, and selection, by the public, of a preferred concept diagram that was used to develop the conceptual designs/site plans described above in Section IV. The Conceptual Designs/Site Plans were described. The Conceptual Designs/Site Plans illustrate the streets system, buildings, landscape treatments, streetscape design, and pedestrian and bicycle facilities in plan view and perspectives/sketch vignettes. A primary purpose for the Site Plan Workshop was to solicit input from the public and reach consensus on a preferred conceptual design that will be used to prepare the final recommended plan. A summary of comments, questions, and identification of the preferred conceptual design is provided below.

- The plan must have the ability to expand retail uses if something "big" occurs, e.g. the race track. Retail uses could be extended along Main Street, as well as within the commercial zoned land. There is also opportunity to provide mixed uses where retail establishments would be on the first level of buildings with residential use on the upper level(s). There may be funds (grants) available for development of buildings with "joint uses".

- The Grid Concept is better from the standpoint of a developer purchasing land because development parcels are rectangular and the developer has a better sense of available parcels (than the Crescent Plan or Amphitheater Plan). The Grid Concept provides better flexibility for dividing land and, therefore, may be more salable.

- Parks need to be incorporated in neighborhood development.

- The plan needs to be flexible to adapt to market conditions.

- The Grid Concept provides limited opportunity for building design other than rectangular shaped buildings.

- The Amphitheater Concept provides the opportunity for creative shaped parcels and building design.

- The Crescent Concept would be more expensive to construct infrastructure, i.e. water and sewer.

- The Grid Concept likely has the most pavement.

- There was informal consensus that the Amphitheater Concept was the preferred concept, primarily due to the ability to have creative-shaped parcels to be used for development as well as for open space.

- There was discussion on limiting access on/off Main Street. Maybe side street access off Main Street should be limited to the existing streets (intersections), i.e. Oregon Trail Blvd., Kinkade Road, and Willow Fork Drive. Property accessing Main Street may be limited to right-in/right-out only. There was also discussion that more intersections may be better for providing adequate circulation. These issues will be discussed with the traffic engineer.

- No parking is preferred on Main Street. People generally believe that Main Street will remain the primary north-south access and through traffic will flow better is parking is prohibited or limited on Main Street. There is also an option to initially provide parallel parking on Main Street with the option to eliminate the parking for additional travel lanes is required due to traffic conditions in the future.

- Circulation around the "Civic Loop" needs to be evaluated. Are turning radii adequate for large vehicles, i.e. trucks and buses? The loop could be a one-way loop.

- Ensure adequate traffic patterns will be maintained as development occurs. The preliminary development program identifies the potential for approximately 1200 additional residents, which is one-third of the existing Boardman area population.

- There was discussion whether or not the Concept Plans ignored the possibility that the new downtown could be developed on the west side of Main Street. It was explained that consensus achieved at the previous public meeting was to look at Kinkade Road, the new "main street", having the flexibility to develop on either or both sides of Main Street. Kinkade Road, west of Main Street, could be developed as the new main street and downtown site. The civic uses could be developed on the west side of Main Street as well as the east side. There are approximately 18-acres available for commercial development given the existing zoning and developable land.

Participants were asked to place "red and black dots" on the plans and renderings. "Red dots" indicated the plan or elements of the plans that the public liked while "black dots" indicated a negative feeling. The results gave a strong indication that the Amphitheater Concept is the preferred plan to follow when developing the final plan. Please refer to the Site Plans and renderings to see where the dots were placed.

A question to be determined is whether the final plan should be developed for the east or west side of Main Street. While flexibility is good, some specific direction regarding location of the final plan is needed from the community. This will provide community direction for pursuing acquisition of land for the civic uses. Following the Site Plan Workshop City staff held discussions with the Project Management Team and with members of the community to identify the preferred location for the new downtown and the civic center. This resulted in the preferred location for the civic center being a seven acre parcel located west of Main Street near Wilson Road, and the new downtown being developed, primarily, west of Main Street. The TriLand Team will now work with the City and ODOT to determine if this preferred location accommodates the civic center and the Amphitheater Concept.

VI. PREFERRED MAIN STREET "DOWNTOWN" DEVELOPMENT PLAN

This section provides a description of the preferred Boardman Main Street "Downtown" Development Plan. The preferred plan is a result of a planning process that included an inventory of existing conditions, identification of opportunities and constraints, development of alternative conceptual designs and site plans, and public involvement.

Public input was instrumental in development of the preferred plan. Technical and community input was provided through Project Management Team meetings, Advisory Committee (Boardman Downtown Development Association) meetings, a youth design charrette, a community design charrette, and public workshops.

A description of the preferred plan is provided below and includes the following descriptions and diagrams:

- **A Flexible Plan**
- **Flexible Land Use Diagram**
- **Land Use Development Program**
- **Land Use Plan**
- **Land Use Plan Diagram**
- **Final Development Site Plan**
- **Public Plaza Birds-Eye Rendering**
- **Street Design Standards**
- **Main Street Birds-Eye Rendering**
- **Streetscape Elements**
- **Retail Street Perspective**
- **Traffic Projections And Analysis**
- **Conceptual Infrastructure Plans**
- **Cost Estimates and Implementation Strategies**
- **Review of Original Project Objectives & Transportation Relationships/Benefits**

A FLEXIBLE PLAN

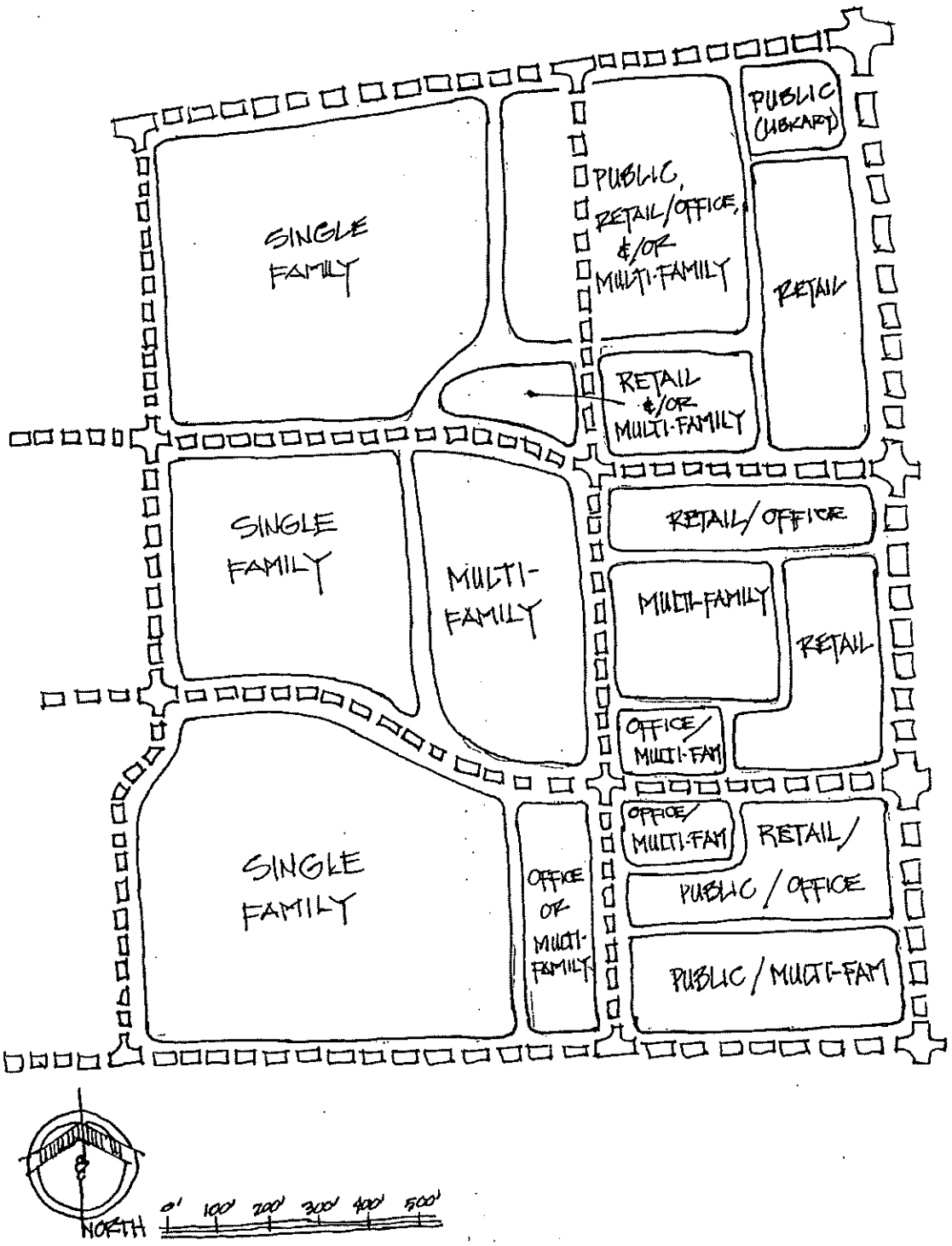
Developing a flexible plan that can be adjusted to market conditions and development opportunities is the key to implementing a successful plan. The Boardman community identified the need to create a flexible plan. The preferred plan is a flexible plan. In order to adequately describe and illustrate the preferred plan it is necessary to develop a site specific plan. Therefore, the preferred plan is developed for the existing area located west of Main Street, south of (future) Oregon Trail Blvd., north of Wilson Road, and east of Locust Road.

However, the intent of this plan is to provide the flexibility to relocate various land uses throughout the downtown district while maintaining the mix of uses described in the land use development program. Therefore, the downtown plan could be relocated to the east side of Main Street as shown in the alternative conceptual site plans; or the mix of land uses can be relocated on the west side of Main Street.

Key components that create flexibility in the preferred plan are identified below:

- The plan is developed on a grid street concept that capitalizes upon the existing street framework. The grid street framework creates several land parcels that are conducive to development because of the typical rectangular shape;
- A land use development program is established that provides an appropriate mix of retail, office, residential, and public uses. The land use mix can be adjusted to reflect current market conditions and development opportunities.
- A locational relationship amongst the mix of land uses is established. In other words, there are appropriate locations for the different land uses:
  - Retail and office uses are appropriately located along Main Street and on Kinkade Road and Willow Fork Road between Main Street and Dillabaugh Street.
  - Residential dwellings are allowed on the second level of ground level retail and office uses.

- Multi-family residential uses, i.e. apartments, townhouses, condominiums, are permitted adjacent to retail and office uses;
- Transitional areas, shown as office and retail uses on the preferred plan, would also be appropriate for residential use.
- Residential uses are appropriately located near existing and developing residential uses located west of Locust Road.
- Public uses, i.e. city hall, public plaza, community center, parks, etc., can be appropriately located within the commercial uses, between the commercial and residential uses, or within the residential uses.



FLEXIBLE LAND USE DIAGRAM

CITY of BOARDMAN, OREGON

TRIAND DESIGN GROUP (503) 968-6589
FOSTER CONSULTANTS (503) 635-6190

LAND USE DEVELOPMENT PROGRAM

The preferred plan encompasses approximately 75 acres between Main Street and Locust Road, and (future) Oregon Trail Blvd. and Wilson Road. The following table identifies the land use development program including a range of total square footage for retail, office, public/civic buildings, and park space; and number of dwelling units for multi-family and single family uses.

Land Use	Square Footage	Dwelling Units
Retail	50,000-80,000	
Office	32,000-80,000	
Public/Civic Buildings*	68,000-83,000	
Multi-Family Residential		160-280 units
Single Family Residential		130-150 units
Open Space	100,000	
Off-Street Parking	900-1,000 spaces	

* Public/Civic Buildings includes a city hall (14,000-28,000 SF), community center (46,000 SF), and one other building for public use (8,000-9,000 SF).

There are several transitional development areas identified on the Flexible Land Use Diagram (above) that are appropriate for more than one land use, depending on market conditions and development opportunities.

LAND USE PLAN

As described and illustrated above, the preferred Main Street "Downtown" Development Plan provides flexibility in that the mix of land uses can be arranged in several different configurations while providing a compatible arrangement of uses. In order to better describe the preferred plan, one specific arrangement of land uses is shown on the following Land Use Diagram and Final Development Plan. A description of key elements of the preferred plan is provided below and followed by the Land Use Diagram.

The "Downtown" Location

There was considerable discussion in the public workshops regarding the location of the new "downtown". The alternatives focused on locating the downtown on the east side of Main Street however the community expressed the desire and need to extend or relocate the downtown on the west side of Main Street. For the preferred plan, the decision was made to locate the downtown on the west side of Main Street.

The Grid Concept

Based on the decision to located downtown on the west side of Main Street, the grid street concept was selected due to the existing grid street framework formed by existing Main Street, Kinkade Road, Willow Fork Road, Dillabaugh Street, Locust Road, and planned Oregon Trail Blvd. extension. The preferred plan maintains and extends this grid system.

Commercial Uses

The following Land Use Diagram identifies a logical land use order by providing commercial uses along the Main Street frontage and adjacent to existing commercial development along Main Street. Retail and office uses continue along the Kinkade Road and Willow Fork Road frontages which are the collector streets that are perpendicular and connect to Main Street.

Civic Center

The plan identifies a civic center that generally consists of a public plaza/village square, city hall, community center, and additional uses combined with the new city hall and/or in a new adjacent building. Additional civic uses could include a post office, police station, library, or other related facilities.

The Civic Center is shown west of Main Street between Willow Fork Road and Wilson Road. This

is a particular land use that has flexibility in it's location. The Civic Center could be located in practically any location between Main Street and east of Dillabaugh Street because it is appropriate to surround it with retail, office, and multi-family housing. All of these uses are compatible with the civic uses.

Multi-Family Residential
The land use plan generally locates multi-family residential uses just west of and integrated with the retail uses. The Dillabaugh Street corridor, the first collector street west and perpendicular to Main Street, shows multi-family uses on both sides. The close proximity of the multi-family uses with the retail uses provides a convenient and short trip, via walking, bicycling, or driving between the higher density housing and retail uses. Additionally, second level residential dwellings are encourage to be located above ground level retail and office uses.

Development of multi-family housing will likely occur at a faster rate if a range of housing opportunities are allowed. Therefore, the plan recommends that permitted multi-family uses include apartments, townhouses, condominiums, assisted living facilities, and other types of housing.

Single Family Residential
Single family residential uses are provided in the western portion of the site. This is consistent with the existing and developing single family development located along both sides of Locust Road.

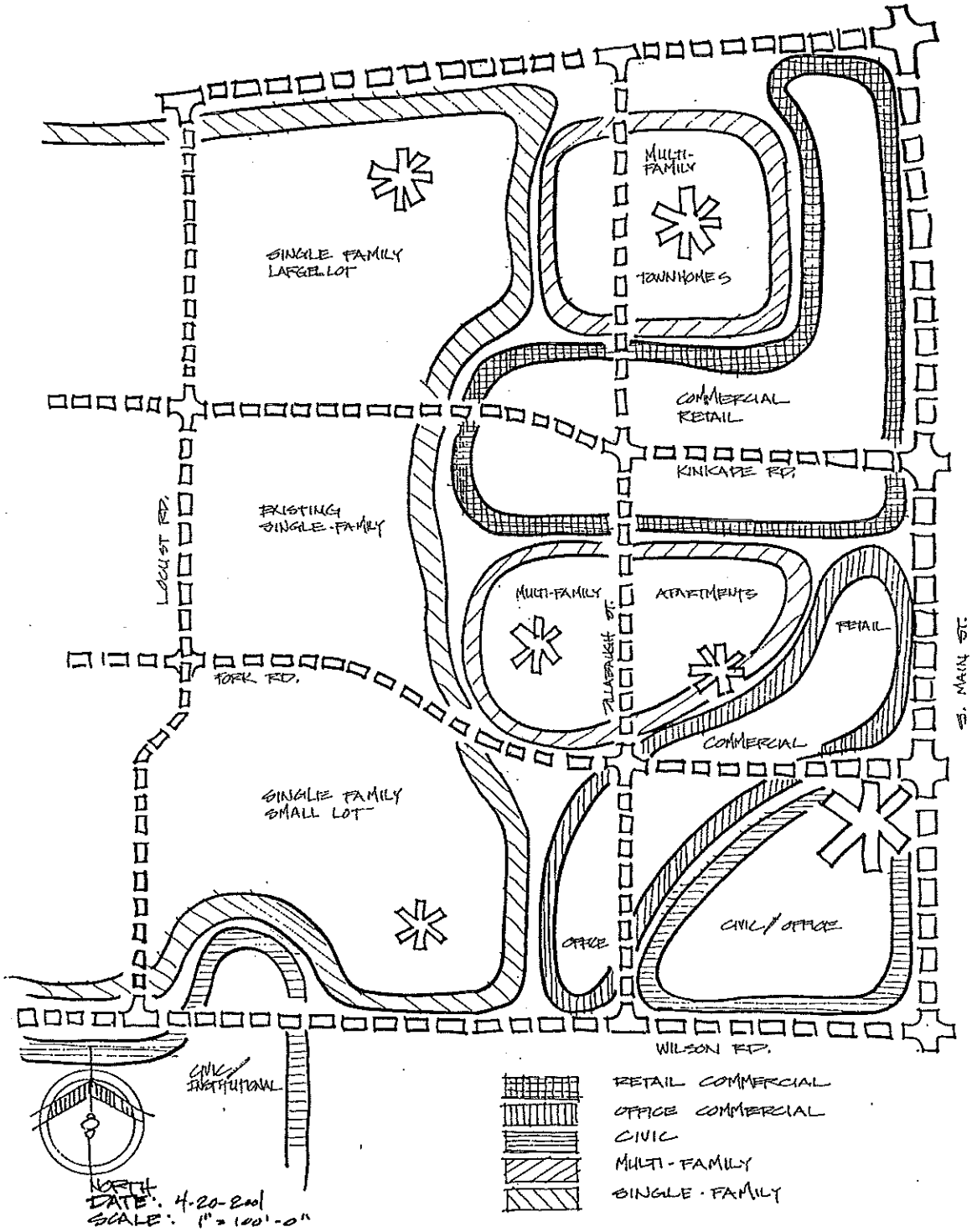
Open Space
In addition to the civic plaza/village square, the preferred plan identifies smaller parks to be located in each major land use group. This provides nearby outdoor recreation opportunities (active or leisure) for residents, workers, and visitors, and also provides views of open space from buildings. The open spaces should be connected to the overall pedestrian system via sidewalks and pathways.

Parking Behind Buildings
A consistent theme provided in the preferred plan is to located buildings adjacent to street frontages with parking located behind buildings. This will provide a pedestrian friendly street system that is not so dominated by automobiles.

Pedestrian/Bicycle System
The plan provides a connected pedestrian and bicycle system that links residential, commercial, and public/open spaces uses. This is primarily accomplished by providing sidewalks along streets, bicycle lanes on Main Street and shared bicycle/travel lanes on collector streets, i.e. Kinkade Road, Willow Fork Road, Dillabaugh Street, Locust Road, and the future Oregon Trail Blvd. Each development parcel is recommended to have an internal pedestrian system that connects buildings, parking, and the external pedestrian sidewalk system. In additional crosswalks and curb extensions are recommended on streets between and including Main Street and Dillabaugh Street.

The plan also recommends that an extended pedestrian/bicycle system be incorporated along the entire length of the Oregon Trail Blvd./BPA Easement with connections to residential, commercial, and open space uses.

The Village Square
The village square is to be located in front of the new civic building(s) and provide an open space and community gathering place. The village square is envisioned to include an amphitheater, fountain, lawn and gardens. The amphitheater can be used for performances, i.e. music and plays, speaking, outdoor classroom, arts and crafts shows, and other special events. The fountain is envisioned to be incorporated with the amphitheater and turned on and off as appropriate with the current event and usage. The fountain provides an attractive visual and listening attraction as well as providing an opportunity to play and cool during warm weather. The lawn and gardens provide a leisure area and attraction for residents and visitors.

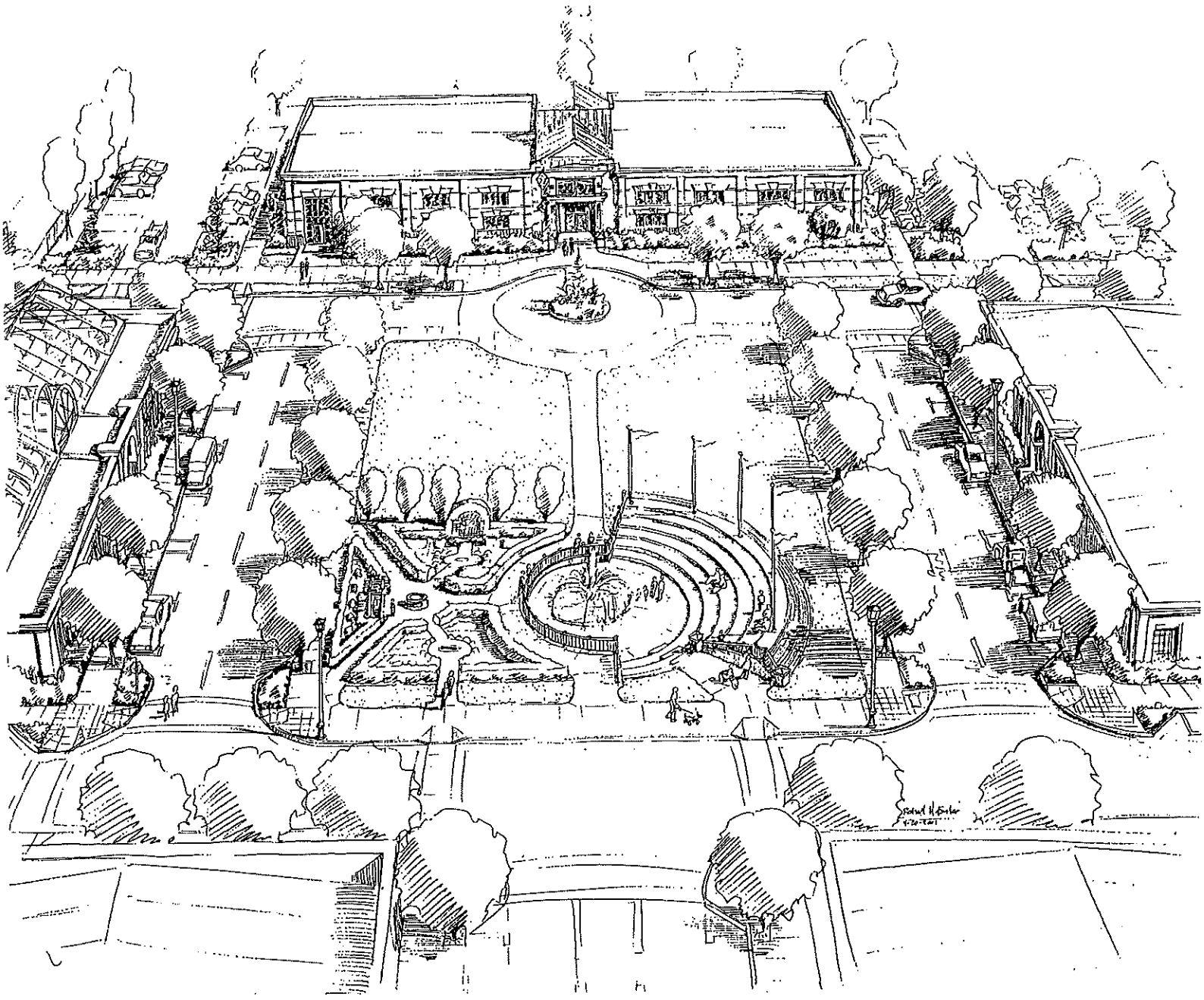


DATE: 4-20-2001
SCALE: 1" = 100'-0"

LAND USE DIAGRAM

CITY of BOARDMAN, OREGON

TRILAND DESIGN GROUP (503) 968-6539
FOSTER CONSULTANTS (503) 635-6190



STREET DESIGN STANDARDS

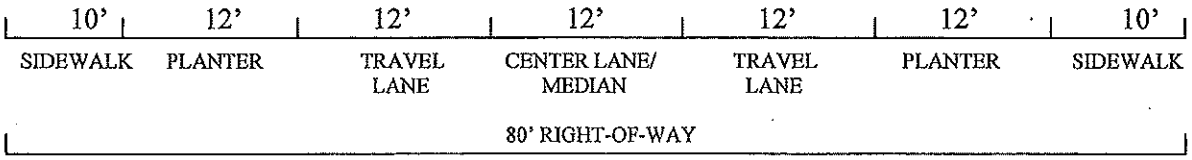
Alternative downtown street design standards includes standards for arterial and collector streets.

The arterial and collector streets each include two alternative street design standards:

- Typical standards
- Standards developed by and being considered by the City;

Arterial – Main Street Standard

Main Street is recommended to have an 80 foot right-of-way that will include two travel lanes with a tree-lined median and center turn-lanes at intersections. Sidewalks and planter strip will be located on both sides of the street. Curb extensions (bulb-outs) are to be provided at intersections which will provide a safer and enhanced pedestrian friendly atmosphere.

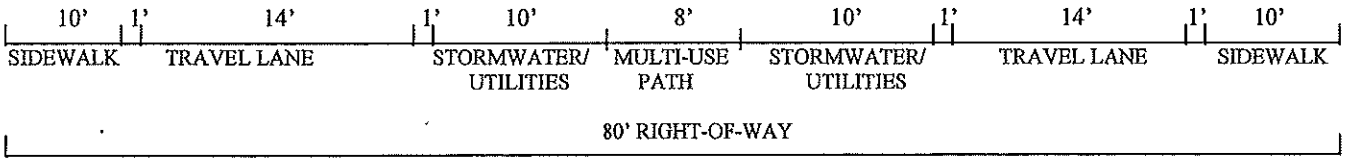


MAIN STREET – OREGON TRAIL BLVD. TO WILSON ROAD

If traffic volumes justify increasing capacity in the future, the 80 foot right-of-way will allow for additional travel lanes (4 lanes). The landscaped planter strip could be reduced to allow the additional travel lanes however, it is recommend to maintain a limited planter strip with street trees should this occur.

Arterial – City Developed Alternative

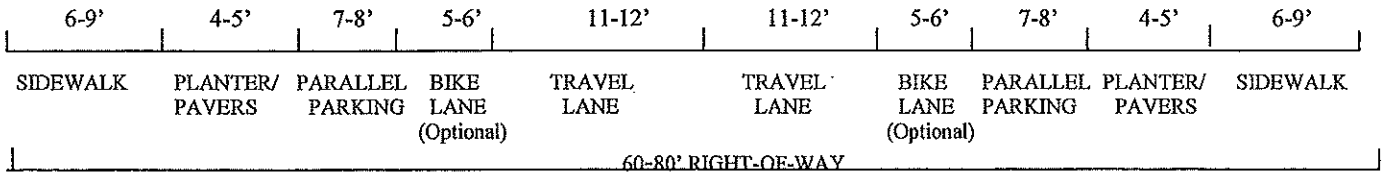
The City-developed arterial standard includes two travel lanes separated by a 28' curbed median that includes an 8' multi-use path and 10' stormwater/utility strips on both sides of the multi-use path. Sidewalks are provided on both sides.



Downtown Collectors – Kinkade Road, Willow Fork Road, Dillabaugh Street, Locust Road, Oregon Trail Blvd.

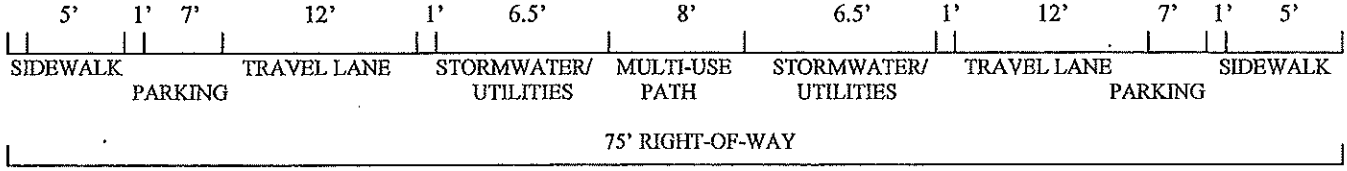
Collector streets should have a minimum 60 foot right-of-way and are recommended to have two travel lanes with parallel parking, landscape strip with street trees, and sidewalk. The travel lanes should include a shared bicycle lane. (Oregon Trail Blvd. may have a different cross section that includes a landscaped median similar to that constructed east of Main Street.)

The typical collector street design standard for downtown includes two travel lanes, bicycle lanes, parallel parking, planter/paver strip, and sidewalks.



Collector – City Developed Alternative

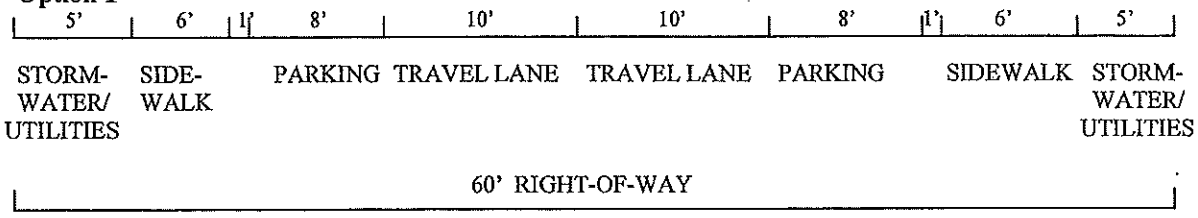
The City-developed collector standard includes two travel lanes separated by a 21' curbed median that includes an 8' multi-use path and 10' stormwater/utility strips on both sides of the multi-use path. Parking and sidewalks are provided on both sides.



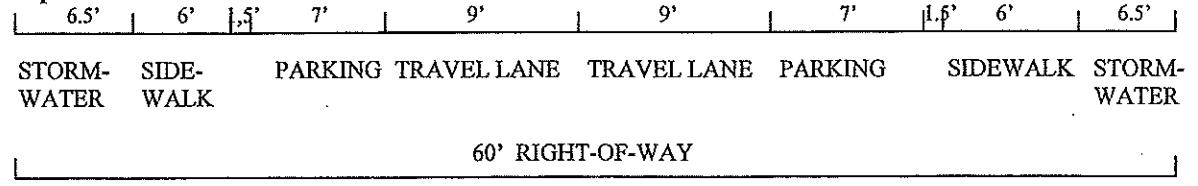
Local Commercial and Residential Streets

Local streets are recommended to have a 60 foot right-of-way with two travel lanes for automobiles and bicycles, parallel parking, landscape strip with street trees, and sidewalk. Two options are recommended.

Option 1



Option 2

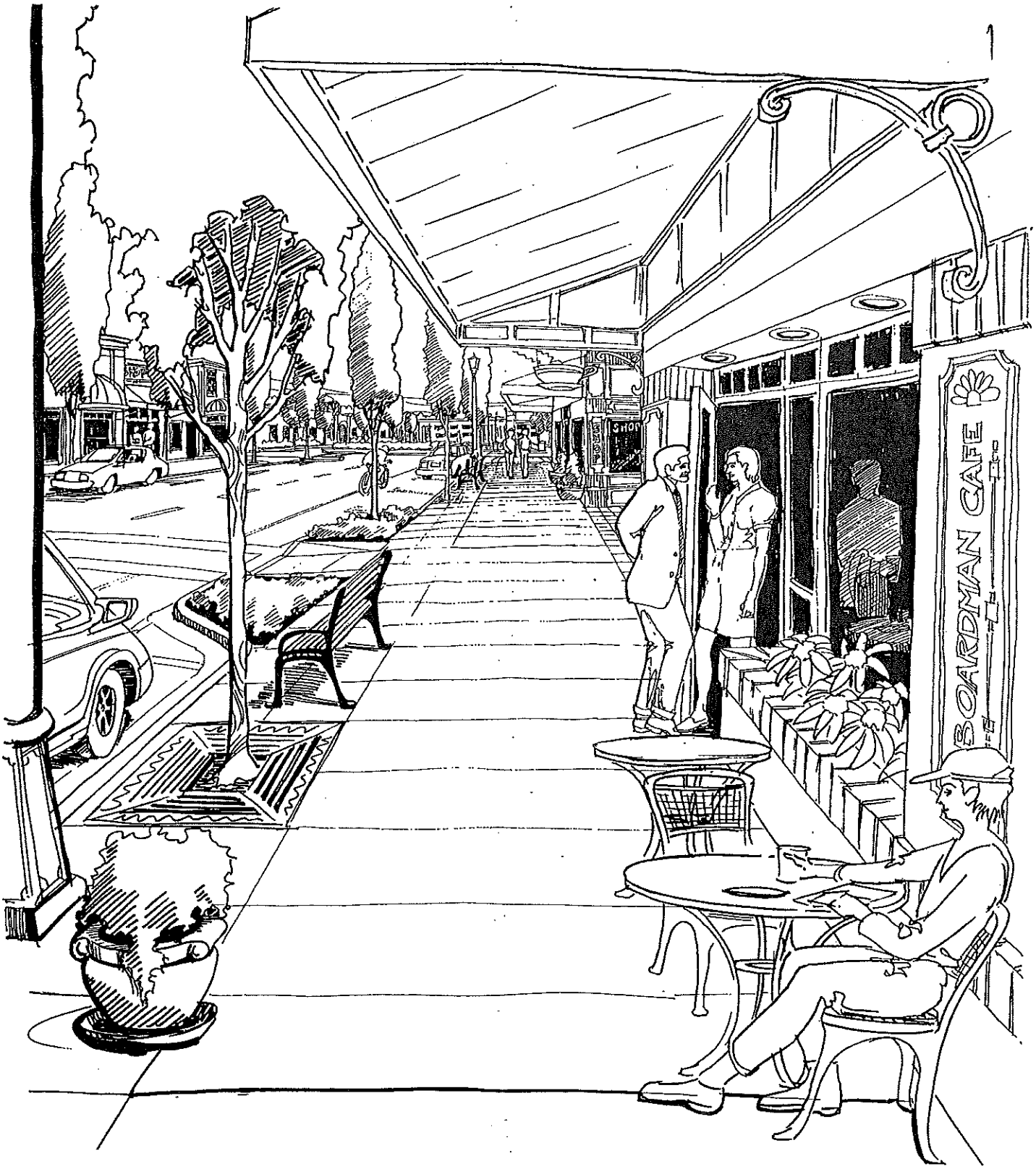


Alleys
Alleys in single family residential areas should be 20 feet wide and provide rear access to dwellings.

Pedestrian/Bicycle Pathways
Off-street pedestrian/bicycle pathways are recommended to be 10 feet wide.

STREETSCAPE ELEMENTS
As described above, the arterial, collector, and local street standards include a landscape strip between the curb and sidewalk to be planted with street trees and additional landscaping. Additional streetscape elements are recommended for retail street frontages. Main Street as well as Kinkade Road and Willow Fork Road between Main Street and Dillabaugh Street are recommended to have street furniture that will complement the retail uses. The landscape strip along portions of these frontages could be paved and include placement of street trees with grates, street lights, benches, flowering pots, and other amenities.

Buildings are encouraged to have awnings to provide shade and cooler conditions needed in the summer.


BOARDMAN CAFE

CONCEPTUAL INFRASTRUCTURE PLANS

The selection of the west side of Main Street for the new downtown location dictates that new infrastructure needs should be accommodated through the existing and expanded street system. The infrastructure framework for this area is in place with the existing grid street system consisting of Main Street, Dillabaugh Street, Locust Road, Kinkade Road, and Willow Fork Drive.

The downtown plan recommends maintaining the established street grid system and expanding these streets as development occurs. This will not only provide a well-connected and efficient street system, it also provides for the logical expansion of water, sanitary sewer, and stormwater services and facilities.

The street design standards address stormwater collection and distribution. This includes the option for stormwater facilities to be located adjacent on both sides of the street or if the median standard is constructed, for stormwater to be within the median. In both street design standards, curbs are proposed that will have "curb weeps" that will allow stormwater to collect and drain off the street into drainage swales.

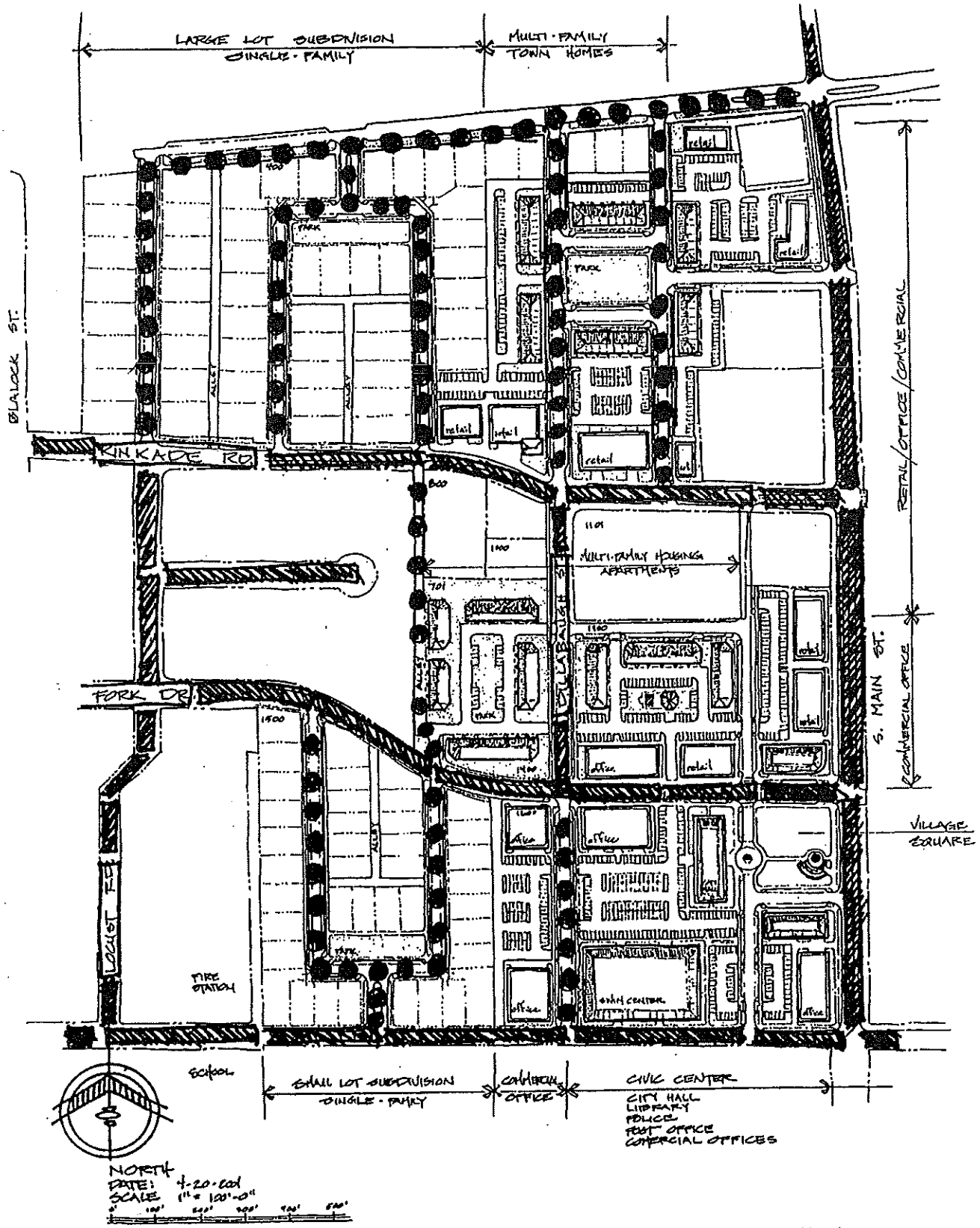
In conclusion, the downtown area will be serviced by water, sanitary sewer, and stormwater facilities through the existing and expanded street grid system. More specifically, in order to provide adequate infrastructure services for the new downtown area, primary water, sanitary sewer, and stormwater facilities are existing and proposed in the following streets:

Existing
- Main Street (Oregon Trail Blvd. to Wilson Road)
- Kinkade Road (Main Street to Locust Road)
- Willow Fork Drive (Main Street to Locust Road)
- Wilson Road (Main Street to Locust Road)
- Locust Road (Kinkade Road to Wilson Road)

Proposed
- (Planned) Oregon Trail Blvd. (Main Street to Locust Road)
- New north-south street between Main Street and Dillabaugh Street (from Oregon Trail Blvd. to Kinkade Road)
- Dillabaugh Street (from Oregon Trail Blvd. to Kinkade Road and from Willow Fork Drive to Wilson Road)
- New north-south streets (from Oregon Trail Blvd. to Kinkade Road and from Kinkade Road to Willow Fork Drive)
- Locust Road (from Oregon Trail Blvd. to Kinkade Road)
- New north-south streets between Dillabaugh Street and Locust Road (from Willow Fork Drive to Wilson Road)

EXISTING WATER, SANITARY SEWER, & STORM WATER SERVICES & FACILITIES

PROPOSED SERVICES & FACILITIES



FINAL DEVELOPMENT PLAN
CITY OF BOARDMAN, OREGON

TRILAND DESIGN GROUP (503) 968-6689
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ANALYSIS OF FUTURE TRAFFIC VOLUMES AND ALTERNATIVES ALONG MAIN STREET

The purpose of this document is to present an evaluation of future 2020 traffic volumes along Main Street in Boardman. These 2020 traffic volumes were based on the annual 30th highest traffic volumes estimated for 2000 adjusted for future growth along this corridor as well as new developments throughout Boardman including the proposed new "Downtown" area to be located south of I-84 and north of Wilson Road. The main finding of this work is that the proposed three-lane section of Main Street (from TSP) is adequate to accommodate future traffic volumes. Also, analysis found that although traffic signals will be warranted at the I-84 ramp intersections at Main Street, the two lane section across the bridge should be adequate to accommodate most, if not all, the planned future growth. However, right turn lanes should be provided both north and south of the interchange onto both eastbound and westbound I-84 on-ramps.

Estimate of 30th Highest Traffic Volumes for 2000

The primary route through Boardman is Main Street. Past traffic data collected along highways in this area (see Tables 1 and 1A) revealed that the yearly peak hours occurs in the May when the existing traffic counts were taken (See Figures VI-8 and VI-8A). Based on past traffic trends from these other highways, May volumes tend to be the highest (represent about 112-113 percent of the ADT), and would also equate to annual 30th highest hourly volumes (which are also estimated to be about 11-13 percent of the annual average ADT). Thus, the traffic count data from the May 2000 counts will be used for the 30th highest volumes. Three intersections on Figure VI-8 were not counted in May during the PM peak hour. However, the I-84 ramp intersection were counted both in May and November. Comparing these two sets of counts reveals that the May volumes were approximately 15 percent higher than the November counts. Based on this, the November volumes were increased by 15 percent and balanced for traffic flow along Main Street. Finally, using traffic flows along Main Street at Wilson Road and Kinkade, the traffic volumes at Willow Fork Drive as estimated. Based on these assumptions, Figure VI-9 presents the estimated 30th highest hourly traffic volumes for 2000. Table 1 presents the results of intersection capacity analyses of these 30th highest hourly volumes and indicates that all intersections operate at acceptable Levels of Service and V/C ratios.

Table 1 Historical Traffic data from SHUTLER, 11-007 Automatic Traffic Recorder

Location: ORE19, JOHN DAY HIGHWAY, NO. 5, 4.2 miles south of Arlington
Installed: April, 1957

HISTORICAL TRAFFIC DATA

Year	Average Daily Traffic	Percent of ADT				
		Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1991	886	149	18.3	14.6	13.4	12.9
1992	911	174	15.8	13.9	13.4	13.1
1993	929	193	27.0	18.7	16.8	15.3
1994	962	174	15.0	12.4	11.9	11.3
1995	862	***	****	****	****	****
1996	820	165	14.3	12.8	12.3	12.0
1997	866	167	17.3	12.8	12.4	12.0
1998	822	146	14.4	12.4	11.8	11.6
1999	855	155	13.6	12.3	11.9	11.6
2000	788	161	14.3	12.8	12.2	11.9

2000 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	910	115	737	94
February	989	126	801	102
March	998	127	809	103
April	1027	130	839	106
May	1051	133	887	113
June	998	127	820	104
July	1001	127	829	105
August	967	123	782	99
September	929	118	778	99
October	956	121	810	103
November	853	108	703	89
December	808	103	659	84

Table 1A Historical Traffic Data from Umatilla Bridge (30-025) Automatic Traffic Recorder

Location: I82, McNARY HIGHWAY, NO. 70
0.58 mile south of Oregon-Washington State Line
Installed: April, 1977

HISTORICAL TRAFFIC DATA

		Percent of ADT				
Year	Average Daily Traffic	Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
1990	9887	160	16.9	12.7	11.9	11.2
1991	10292	***	****	****	****	****
1992	10924	159	17.3	12.4	11.6	11.3
1993	11120	168	13.9	12.8	12.1	11.8
1994	11874	168	13.9	12.0	11.7	11.1
1995	12655	154	13.9	11.6	11.2	10.9
1996	12675	149	12.4	11.0	10.6	10.3
1997	13355	157	13.9	11.6	11.0	10.7
1998	14514	148	13.4	11.5	10.9	10.7
1999	15438	154	13.2	11.6	11.2	10.9

1999 TRAFFIC DATA

	Average Weekday Traffic	Percent of ADT	Average Daily Traffic	Percent of ADT
January	11956	77	11690	76
February	12359	80	12557	81
March	14167	92	14588	94
April	14932	97	15142	98
May	15244	99	15567	101
June	17055	110	17345	112
July	18119	117	18302	119
August	18032	117	18519	120
September	16859	109	16921	110
October	16414	106	16597	108
November	14761	96	14880	96
December	13189	85	13152	85

Table 2: 2000 Levels of Service for 30th Highest Annual Volumes

Intersection	30th Highest Peak Hour Volumes		
	Unsignalized Intersections+		
	Avg Vehicle Delay (Sec/Veh)	*LOS*	*V/C Ratio*
I-84 Westbound Ramp/Main Street *(Critical Movement: WB Approach)*	12.4	B	0.16
I-84 Eastbound Ramp/Main Street *(Critical Movement: EB Approach*	12.6	B	0.14
Front Street/Main Street *(Critical Movement: EB Approach)*	13.1	B	0.06
Kinkade Road/Main Street *(Critical Movement: EB Approach*	10.2	B	0.05
Willow Fork Drive/Main Street *(Critical Movement: EB Approach*	10.2	B	0.02
Wilson Road/Main Street *(Critical Movement: EB Approach*	10.6	B	0.11

+ All intersections have stop sign control for east/west movements, except for Wilson Road/Main Street that has stop control on all approaches

Estimate of Future 2020 Traffic Volumes

Future 2020 traffic volumes through the study area were estimated from several sources:

1) **Past Traffic Trends:** The data in Figure VI-8 and Tables 1 and 1A indicate that traffic in this region has not increased substantially unless it is directly related to new developments. The Transportation System Plan (TSP) for Boardman assumed a 2.9 percent per year general growth rate, but did not include any specific developments. Figure VI-10 presents the estimated 2020 traffic volumes from the TSP. This resulted in an increase of approximately 450 peak hour trips along Main Street south of I-84, which would equate to about 450 new single family homes. As discussed below, this analyses will include several new residential developments plus the mixed retail, office and residential uses in the new Downtown. Thus, it is assumed that the general growth rate will be only 1 percent per year. That is, existing 30th highest hourly volumes were multiplied by 1.2.

2) **Recent Residential Developments:** Discussions with City staff revealed that three major residential developments are approved and should be built out over the next 5-7 years. Table 3 presents the trip generation estimate for these developments and their locations and assignment of vehicle trips is presented on Figure VI-11. The distribution was based on existing traffic volumes and discussion among the planning staff/consultants.

Table 3: Estimate of Weekday Trip Generation for Recently Approved/Proposed Developments

Name/Access (ITE Code 210)	Units/ Homes	Daily Trips	PM Peak Hour		
			Total	In	Out
35 SF Homes West Of Main Street	35 SF	335	35	22	13
200 SF Homes West Along Wilson Rd	200 SF	1,914	202	129	73
70 SF Homes East of Main Street	70 SF	670	71	45	26
Total	370	3,302	349	223	126

3) **New Downtown Plan.** The main focus of the Boardman Main Street "Downtown" Development Plan study has been to select an area for the new Downtown and develop a set of land uses that could occur based on area growth trends and market analysis. The impetus for this plan is that most of the residents of Boardman live south of I-84, but most of the retail and jobs in Boardman are north of I-84. To direct future growth in Boardman and not overload the interchange, this project evaluated several sites along Main Street (most of this land is zoned C-1, which permits a wide range of commercial and residential uses) and design options for a new Downtown on a parcel(s) along Main Street from Oregon Trail Blvd. to Wilson Road. A full consensus has not been reached on this plan or its location. Consequently, this traffic analysis will evaluate the last version of the Downtown Plan. This latest version is presented in Figure VI-12 and described in Table 4. The latest plan encompasses approximately 75 acres between Main Street and Locust Road, and (future) Oregon Trail Blvd. and Wilson Road. The following table identifies the land use development program including a range of total square footage for retail, office, public/civic buildings, and park space; and number of dwelling units for multi-family and single family uses. Table 5 presents the trip generation associated with these land uses.

Table 4: Development Plan for Boardman Main Street "Downtown"

Land Use	Square Footage	Dwelling Units
Retail	50,000-80,000	
Office	32,000-80,000	
Public/Civic Buildings*	68,000-83,000	
Multi-Family Residential		160-280 units
Single Family Residential		130-150 units
Open Space	100,000	
Parking		900-1,000 spaces

* Public/Civic Buildings includes a city hall (14,000-28,000 SF), community center (46,000 SF), and one other building for public use (8,000-9,000 SF).

Table 5: Estimated Trip Generation For Boardman Main Street Downtown Plan

Land Use	Daily Trips	AM Peak Hour				PM Peak Hour			
		Total		In	Out	Total		In	Out
Retail (80,000 GSF)	5,906	140		85	55	542		260	282
(ITE Code 820)									
Pass-By Trips		30%	42	21	21	30%	163	82	81
Internal Trips		10%	14	9	5	10%	54	26	28
New Trips		60%	84	51	33	60%	325	156	169
General Office Building	881	125		110	15	119		20	99
(80,000 GSF) (ITE Code 710)									
Recreational Community Center	1,052	61		40	21	81		28	53
(46,000 GSF) (ITE Code 495)									
Government Office Complex	925	83		74	9	106		33	73
(37,000 GSF) (ITE Code 733)									
Single-Family Homes	1,436	113		28	85	152		97	55
(150 Homes) (ITE Code 210)									
Apartments	1856	143		23	120	174		117	57
(280 Units) (ITE Code 220)									
Subtotal of Office/Residential	6,150	525		275	250	632		295	337
Total Pass-By Trips		42		21	21	163		82	81
Total Internal Trips		14		9	5	54		26	28
Total New Vehicle Trips		609		326	283	957		451	506

Finally, with the buildout of the Downtown Plan on the west side of Main Street, it is assumed that residential uses would then develop on the east side of Main Street. This parcel contains about 55 acres and based on the existing residential development patterns, was assumed to have a buildout of 330 single-family homes. Trip generation for this area is presented in Table 6.

Table 6: Estimate of Weekday Trip Generation for Future Residences East of Main Street

Name/Access (ITE Code 210)	Units/ Homes	Daily Trips	PM Peak Hour		
			Total	In	Out
55 Acres East of Main Street	330	3,158	333	213	120

Figure VI-13 presents the directional trip distributions for the different types of land uses in the Downtown Development Plan. To assign all these volumes onto the roadway network, a Traffix Model was developed. This model assumed that the entire street network in this plan as well as the basic improvements in the TSP (discussed below) was constructed. This model is shown in Figure VI-14. It should be noted that the assignment of trips to each of these land uses was via the most direct route and trips between the residential and commercial uses were performed via direct assignments of trips. To be conservative and due to the lack of consensus about the plan, localized adjustments for pass-by trips was not performed. Figure VI-15 presents traffic generated by all proposed future developments by 2020 throughout the study area.

Based on the above, two scenarios were evaluated:

Scenario 1: Future traffic volumes including 20 percent background growth and three planned residential developments. Resulting total future 2020 traffic volumes for this scenario are presented in Figure VI-16.

Scenario 2: Future traffic volumes including 20 percent background growth and all planned developments including new Downtown Plan. Resulting total future 2020 traffic volumes for this scenario are presented in Figure VI-17.

Future Roadway Improvement Plans

This section discussed future roadway improvement plans proposed in the TSP. First, Figure VI-18 presents the typical cross sections for roadway in Boardman. Main Street is classified as an arterial street and by 2020 we assumed that it was buildout to its ultimate 3-lane section with left turn lanes at all major intersections and right turn lanes as needed. Figure VI-19 presents the initial proposed lane configurations assumed to be in place by 2020.

Below is a discussion of other roadway improvement issues from the TSP:

Front Street interstate 84 Interchange Operational Issues

Analysis of year 2020 future forecast volumes revealed that the Interstate 84 Westbound Ramp/Main Street intersection would require capacity improvements to restore intersection operations to an acceptable level of service. As a result of the close spacing between the Interstate 84 ramps and the two respective frontage roads (North Front Street and South Front Street), it is expected that several geometric changes will be required to accommodate future traffic volume growth. There are several interrelated factors that will determine whether, and how, the capacity of the Interstate 84 interchange and Main Street can be ensured. These issues include:

- **Intersection Spacing**. The existing intersections of Main Street/North Front Street, Main Street/Interstate 84 Westbound Ramp, Main Street interstate 84 Eastbound Ramp, Main Street/South Front Street are too closely spaced and will not function efficiently as traffic volumes grow. Overlapping functional areas of intersections make it especially difficult for drivers on side streets (such

as Front Street) to safely enter Main Street because of the numerous conflicting vehicle movements that must be simultaneously monitored. For example, a driver trying to turn left from North Front Street onto Main Street must find an adequate gap in the Main Street traffic stream while also coordinating with vehicles entering Main Street from the Westbound Interstate 84 ramp, Boardman Avenue, and any number of adjacent commercial properties.

- **Circulation Patterns.** Ill-defined circulation patterns along North and South Front Streets, in conjunction closely spaced intersections, make minor street turning operations at intersections difficult for drivers.

- **Access Management.** The lack of access management along Main Street complicates intersection operations as drivers are able to make turns onto and off of Main Street at virtually any location. The lack of access management results in a multitude of cut-through trips that create safety issues in parking lots. The situation is especially evident when Riverside High School students are released and drivers cut through local commercial parking lots to avoid queuing at the North Main Street/ Boardman Avenue intersection.

- **North-South Connectivity.** The lack of alternative north-south connections across Interstate 84, which focuses the majority of north-south travel through the city via Main Street and the Interstate 84 interchange, further complicates intersection/interchange operations. The lack of continuity is further exacerbated by the existing development pattern in Boardman that funnels many of the residences across the interstate at Main Street on a daily basis to access employment and service centers.

In addition to these issues, the existing pedestrian and bicycle facilities in this area are inadequate. Given the large demand for north-south pedestrian facilities, especially along Main Street, any improvement project(s) should incorporate improved pedestrian/bicycle facilities.

Front Street/Interstate 84 Interchange Improvement Needs
There are several potential improvements that could be made to the Interstate 84 interchange to increase capacity as identified below:

- signalize the north leg of the interchange;
- provide a left-turn lane across the Interstate 84 Interchange;
- widen the eastbound and westbound Interstate 84 ramps to accommodate separate left- and right-turn lanes; or,
- enhance circulation on the north and south sides of the interchange.

The decision to implement one or more of the improvements identified above is subject to several considerations. It is especially important to consider a system perspective in evaluating these alternatives. For example, signalization alone will not fully address the capacity needs of the interchange and adjacent intersections. Further, development of left-turn lanes at the interchange would require widening of the existing bridge deck, potentially necessitating a new interchange altogether. The effect of signalizing the Interstate 84 Westbound Ramp/Main Street intersection must also consider the impact signalization will have on adjacent intersections.

Considering a more global system perspective, if alternative links across Interstate 84 can be implemented in conjunction with access management and circulation improvements along Main Street, it is conceivable that future traffic volume demands at the existing interchange can be accommodated. There are also issues as to how the interchange will operate in the future with respect to the frontage roads located on either side of the interchange. The following paragraphs highlight some of the other issues that need to be considered.

Circulation Improvements
The City of Boardman' s roadway system is comprised of a number of streets that collectively feed the two Interstate 84 interchanges. The east-west orientation of the Columbia River, Interstate 84, the Union Pacific Railroad right-of-way, and the Bonneville Power Administration's right-of-way all limit the number and extent of north-south connections through the city and have shaped the local roadway network.

As more properties develop in the southern and northeast quadrants of the city, the city needs to ensure that adequate facilities are provided such that the city does not become entirely dependent on any one roadway to facilitate local trips. As properties develop in the these parts of the city, careful consideration should be given to the type and locations of connections to the existing street system, and to connectivity and access issues within any new subdivisions. It is essential to provide pedestrian, bicycle, and vehicular access both to and within new developments and to provide a sense of linkage to and continuity with the existing developments in town. Care should also be taken to avoid "cul-de-sac" developments in these and other residential areas that may be developed in town.

North-South Connectivity
There are several potential opportunities to strengthen north-south connectivity within the City of Boardman. Ideally, roadway circulation alternatives should provide routes for local trips while accommodating industrial/heavy vehicle traffic destined to the Port and other locations on separate facilities. Opportunities to strengthen north-south connectivity include:.

- provision of a new interchange or overpass on the west side of Boardman; and/or ,
- extension of Olson Road across Interstate 84.

East- West Connectivity
In addition to improving north-south connectivity, there is also a need to ensure that the city develops adequate east-west facilities parallel to Interstate 84 such that these facilities provide access to local commercial and residential properties in a safe and efficient manner. It will be especially important to ensure that convenient east-west connectivity is preserved such that the city does not become entirely dependent on interstate access to facilitate local east-west trips. In addition, with the large amount of development occurring on the south side of the city, there is a need to ensure that the city's east-west roads are connected in a logical manner. Potential opportunities to strengthen east-west connectivity within the City of Boardman include:

- extension of South Front Street between South Main Street and Olson Road; and/or ,
- construction of Oregon Trail Boulevard, a proposed east-west roadway along the BPA easement, to provide additional east-west connectivity south of the Interstate 84.

In addition to connectivity enhancements, the city should also consider development of access management techniques to further circulation needs. These techniques should provide for the consolidation of access points along collector and arterial level roadways as property develops or redevelops and allow for more focused crossings of roadways in areas outside of the downtown.

Future 2020 Traffic Conditions

This section presents the results of the intersection capacity analysis for future 2020 traffic volumes. The 1999 OHP requires that the maximum acceptable v/c ration for district and local interest roads be 0.80 or lower. The minimum acceptable v/c ratio for both I-84/Main Street ramp intersections is 0.70.

Scenario 1: 20 Percent General Growth and Three Residential Developments
As discussed above, the 2020 traffic volumes for this scenario (in Figure VI-16) are slightly lower than the volumes in the TSP (Figure VI-10). The results of intersection capacity analyses for this scenario are presented in Table 7. The results in this table reveal that all intersections will operate at acceptable V/C ratios. Tables 8 and 9 present the results of warrant analyses for providing separate right and left turn lane from Main Street onto the minor streets. From these analyses warrants are not met for separate turn lanes at any of these intersections except for a separate right turn lane southbound along Main Street at Oregon Trail.

Table 7: Scenario 1 2020 Levels of Service

Intersection	30th Highest Peak Hour Volumes		
	Unsignalized Intersections+		
	Avg Vehicle Delay (Sec/Veh)	*LOS*	*V/C Ratio*
I-84 Westbound Ramp/Main Street *(Critical Movement: WB Approach)*	13.9	B	0.23
I-84 Eastbound Ramp/Main Street *(Critical Movement: EB Approach*	16.3	C	0.31
Front Street/Main Street *(Critical Movement: EB Approach)*	19	C	0.13
Oregon Trail/Main Street *(Critical Movement: WB Approach)*	15.4	C	0.12
Kinkade Road/Main Street *(Critical Movement: WB Approach)*	13.9	B	0.03
Willow Fork Drive/Main Street *(Critical Movement: EB Approach)*	11.1	B	0.04
Wilson Road/Main Street *(Critical Movement: EB Approach)*	9.2	A	0.27

+ All intersections have stop sign control for east/west movements, except for Wilson Road/Main Street that has stop control on all approaches

Table 8: Scenario 1: Results of Left Turn Warrant Analyses for Intersections along Main Street

Future 2020 PM Peak Hour			ODOT Design Manual	
Intersection	Left Turns (vph)	Combined Volume Criteria (vph/Lane)	Minimum Criteria (Left-Turns-vph)	Warrant Met?
NB Main Street at Front Street	10	448	30	NO
SB Main Street at Front Street	10	448	30	NO
NB Main Street at Oregon Trail	25	315	46	NO
NB Main Street at Kinkade Road	12	255	56	NO
SB Main Street at Kinkade Road	10	255	56	NO
NB Main Street at Fork Drive	6	220	62	NO

Table 9: Scenario 1 Results of Right Turn Warrant Analysis for Intersections along Main Street

Future 2020 PM Peak Hour			ODOT Design Manual	
Intersection	Right Turns (vph)	Design Hour Volume (vph per Lane)	Minimum Criteria (Right Turns-vph)	Warrant Met?
NB Main Street at Front Street	10	371	64	No
SB Main Street at Front Street	42	525	43	No
NB Main Street at Oregon Trail	5	188	88	No
SB Main Street at Oregon Trail	82	443	54	Yes
NB Main Street at Kinkade Road	10	163	92	No
SB Main Street at Kinkade Road	54	346	67	No
NB Main Street at Fork Drive	21	294	74	No

Scenario 2: 20 Percent General Growth and All Proposed/Planned Developments

As discussed above, the 2020 traffic volumes for this scenario (in Figure VI-17) are significantly higher than the volumes in the TSP (Figure VI-10), particularly at the I-84 interchange area. The results of intersection capacity analyses for this scenario are presented in Table 10. The only intersection with a high V/C ratio was at Main Street and Oregon Trail. Front Street is estimated to have significant delays, but the v/c ratio is acceptable. Preliminary traffic signal warrants were evaluated at the I-84 ramp intersections, at Front Street, and at Oregon Trail. These analyses are presented in Tables 11A-11D and found that warrants for a traffic signal are met at the I-84 ramps, but not at the other two intersections. The results in this table reveal that all other intersections will operate at acceptable V/C ratios. Tables 12 and 13 present the results of warrant analyses for providing separate right and left turn lane from Main Street onto the minor streets. Results of these analyses indicate that all intersections need separate left turn lanes and most meet warrants for separate right turn lanes. It should be noted that separate left turn lanes were not assumed along Main Street at the I-84 ramps due to the two lane ramp, but separate right turn lanes were assumed off of each ramp, northbound onto the EB on-ramp and southbound onto the WB on-ramp.

Table 10: Scenario 2 2020 Levels of Service

Intersection			
	Signalized Intersections		
	Avg Vehicle Delay (Sec/Veh)	**V/C Ratio**	**LOS**
I-84 Westbound Ramp/Main Street *(Critical Movement: WB Approach)*		0.66	C
I-84 Eastbound Ramp/Main Street *(Critical Movement: EB Approach*		0.62	C
	Minor Street Stop Control+		
Front Street/Main Street *(Critical Movement: EB Approach)*	>45	0.52	F
Oregon Trail/Main Street *(Critical Movement: EB Approach*	>45	1.15	F
Kinkade Road/Main Street *(Critical Movement: EB Approach*	30.9	0.46	D
Willow Fork Drive/Main Street *(Critical Movement: EB Approach*	21.3	0.22	C
Wilson Road/Main Street *(Critical Movement: EB Approach*	10.4	0.41	B

+ All intersections have stop sign control for east/west movements, except for Wilson Road/Main Street that has stop control on all approaches

[HCS Estimate of Delays and V/C]

Table 11A: Summary of Signal Warrant Analysis at I-84 WB off-Ramp/Main Street

Traffic Signal Warrant	ODOT Criteria ADT Volumes		Estimated Future ADT Volumes*		Warrant Met?
	Major Street	Minor Street	Major Street	Minor Street	
1. Minimum Volume	7,400	2,500	9,785	2,820	Yes
2. Interruption of Continuous Flow	11,100	1,250	9,785	2,820	No

* *For Warrants 1 and 2, the 30th highest volumes shown in Figure VI-17 were assumed to be 11 percent of the ADT volumes.*

Table 11B: Summary of Signal Warrant Analysis at I-84 EB off-Ramp/Main Street

Traffic Signal Warrant	ODOT Criteria ADT Volumes		Estimated Future ADT Volumes*		Warrant Met?
	Major Street	Minor Street	Major Street	Minor Street	
1. Minimum Volume (without discounting RT)	7,400	2,500	14,630	440 (2,210)	No (Almost)
2. Interruption of Continuous Flow (without discounting RT)	11,100	1,250	14,630	440 (2,210)	No (Yes)

* *For Warrants 1 and 2, the 30th highest volumes shown in Figure VI-17 were assumed to be 11 percent of the ADT volumes.*

Table 11C: Summary of Signal Warrant Analysis at Oregon Trail/Main Street

Traffic Signal Warrant	ODOT Criteria ADT Volumes		Estimated Future ADT Volumes*		Warrant Met?
	Major Street	Minor Street	Major Street	Minor Street	
1. Minimum Volume	7,400	2,500	12,090	975	No
2. Interruption of Continuous Flow	11,100	1,250	12,090	975	No

* *For Warrants 1 and 2, the 30th highest volumes shown in Figure VI-17 were assumed to be 11 percent of the ADT volumes.*

Table 11D: Summary of Signal Warrant Analysis at South Front Street/Main Street

Traffic Signal Warrant	ODOT Criteria ADT Volumes		Estimated Future ADT Volumes*		Warrant Met?
	Major Street	Minor Street	Major Street	Minor Street	
1. Minimum Volume	7,400	1,850	15,745	400	No
2. Interruption of Continuous Flow	11,100	950	15,745	400	No

* *For Warrants 1 and 2, the 30th highest volumes shown in Figure VI-17 were assumed to be 11 percent of the ADT volumes.*

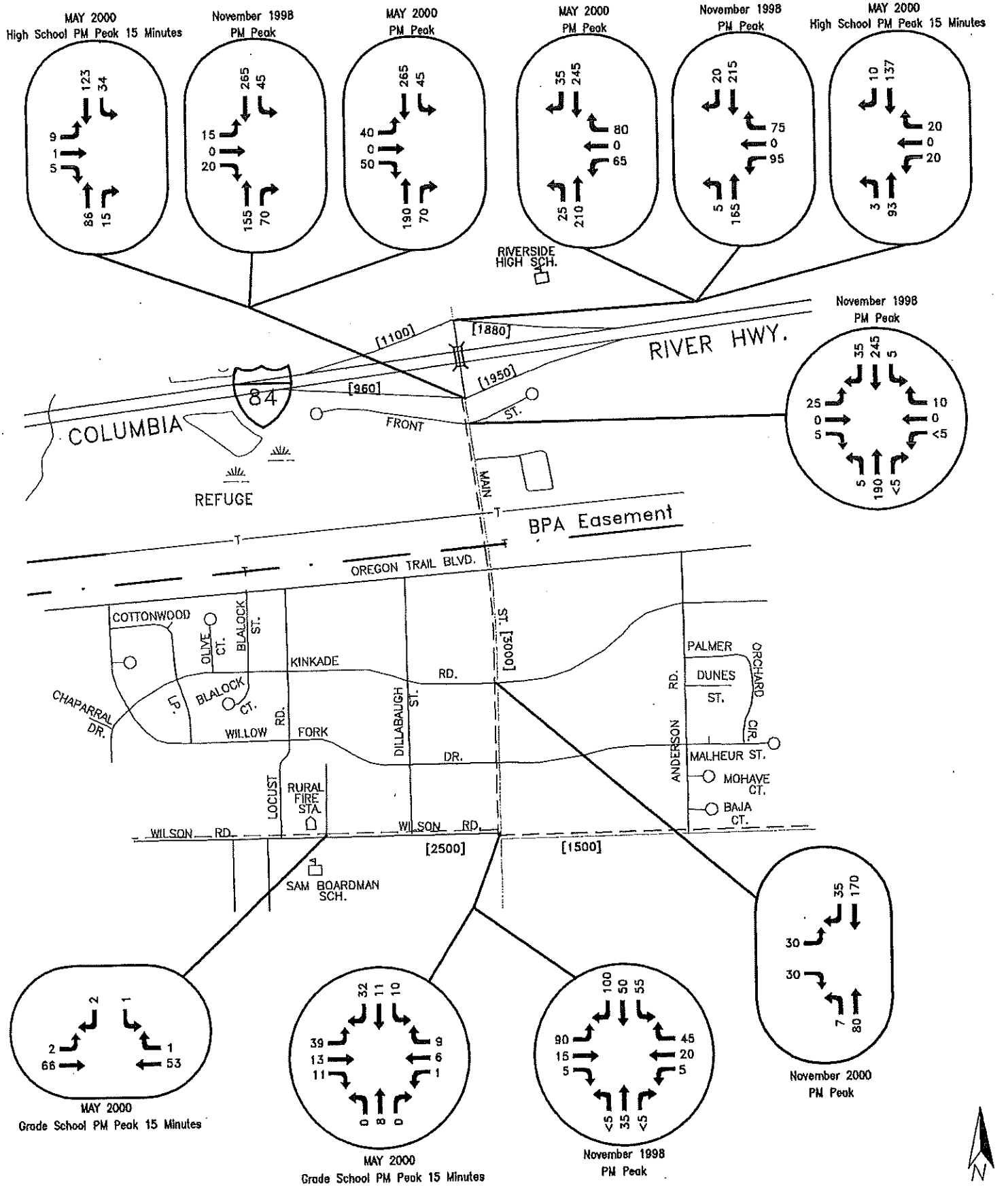
Table 12: Scenario 2 Results of Left Turn Warrant Analyses for Intersections along Main Street

Future 2020 PM Peak Hour			ODOT Design Manual	
Intersection	Left Turns (vph)	Combined Volume Criteria (vph/Lane)	Minimum Criteria (Left-Turns-vph)	Warrant Met?
NB Main Street at Front Street	10	866	6	Marginal
SB Main Street at Front Street	10	866	6	Marginal
NB Main Street at Oregon Trail	20	665	15	Yes
SB Main Street at Oregon Trail	105	665	15	Yes
NB Main Street at Kinkade Road	53	465	28	Yes
SB Main Street at Kinkade Road	40	465	28	Yes
NB Main St. at Willow Fork Dr.	20	336	43	No
SB Main St. at Willow Fork Dr.	61	336	43	Yes

Table 13: Scenario 2 Results of Right Turn Warrant Analysis for Intersections along Main Street

Future 2020 PM Peak Hour			ODOT Design Manual	
Intersection	Right Turns (vph)	Design Hour Volume (vph per Lane)	Minimum Criteria (Right Turns-vph)	Warrant Met?
NB Main Street at Front Street	10	830	15	Yes
SB Main Street at Front Street	42	902	15	Yes
NB Main Street at Oregon Trail	27	509	45	No
SB Main Street at Oregon Trail	177	821	15	Yes
NB Main Street at Kinkade Road	23	392	61	No
SB Main Street at Kinkade Road	112	539	41	Yes
NB Main St. at Willow Fork Dr.	23	241	81	No
SB Main St. at Willow Fork Dr.	58	432	56	Yes

Figure VI-8: Recent Peak Hour Traffic Volumes

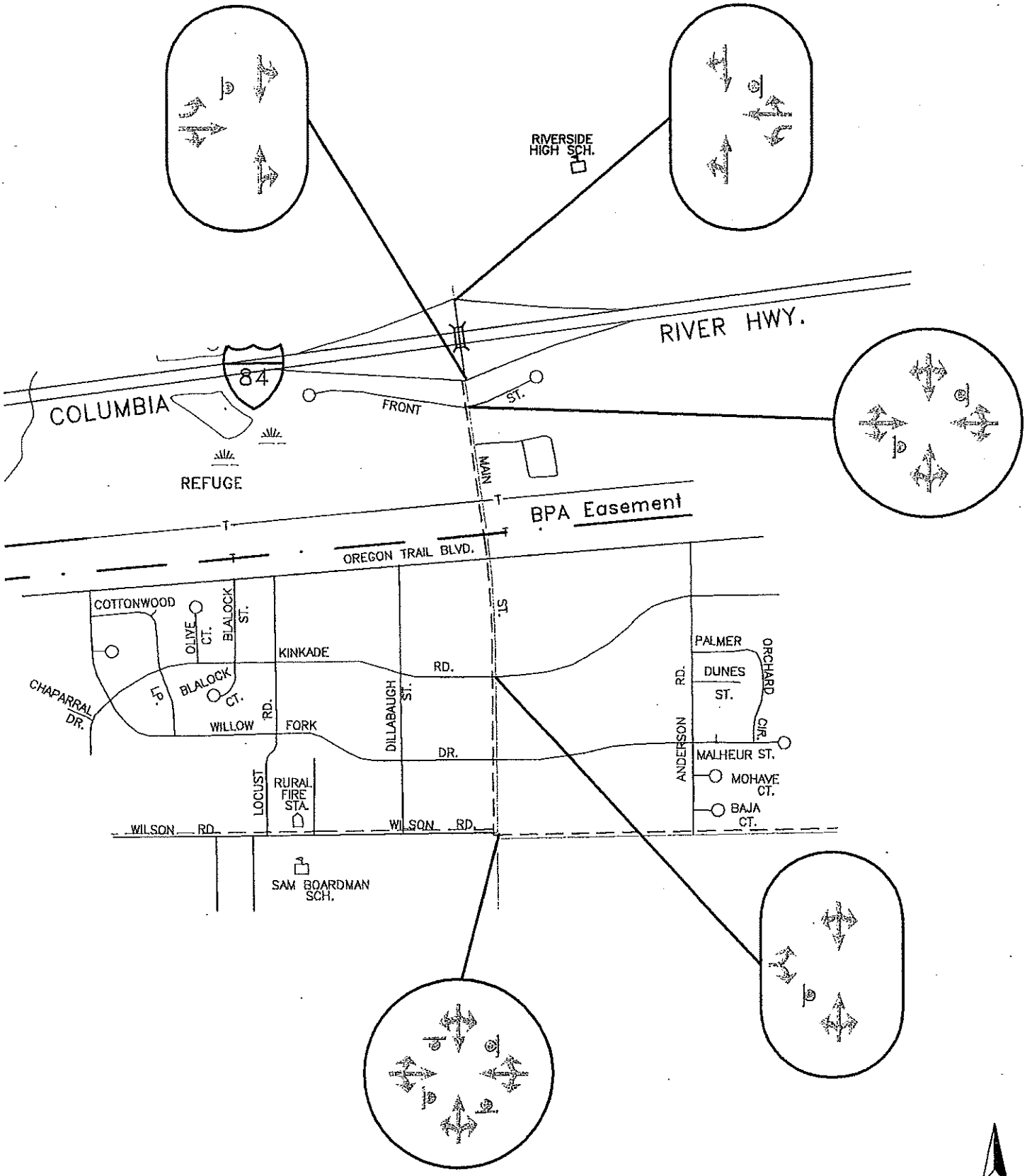


Annual Daily Traffic [ADT]

Drawing not to scale.

cts Engineers, Inc.

Figure VI-8A: Existing Traffic Controls And Lane Configurations at Study Area Intersections



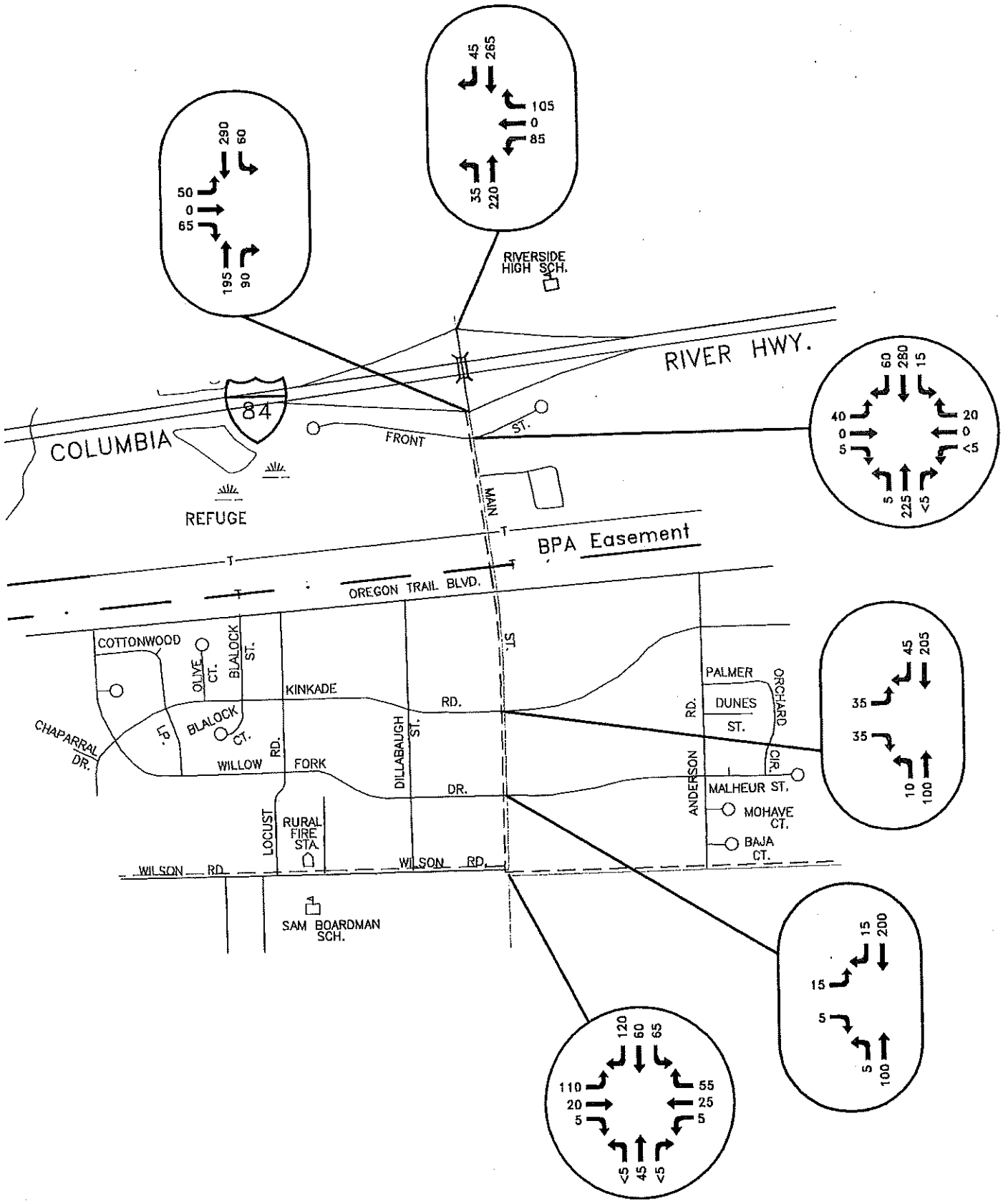
Multi-Use Path – – – –

Stop Sign

Drawing not to scale.

cts Engineers, Inc.

Figure VI-9: Estimated 30th Highest Peak Hour Traffic Volumes



Drawing not to scale.

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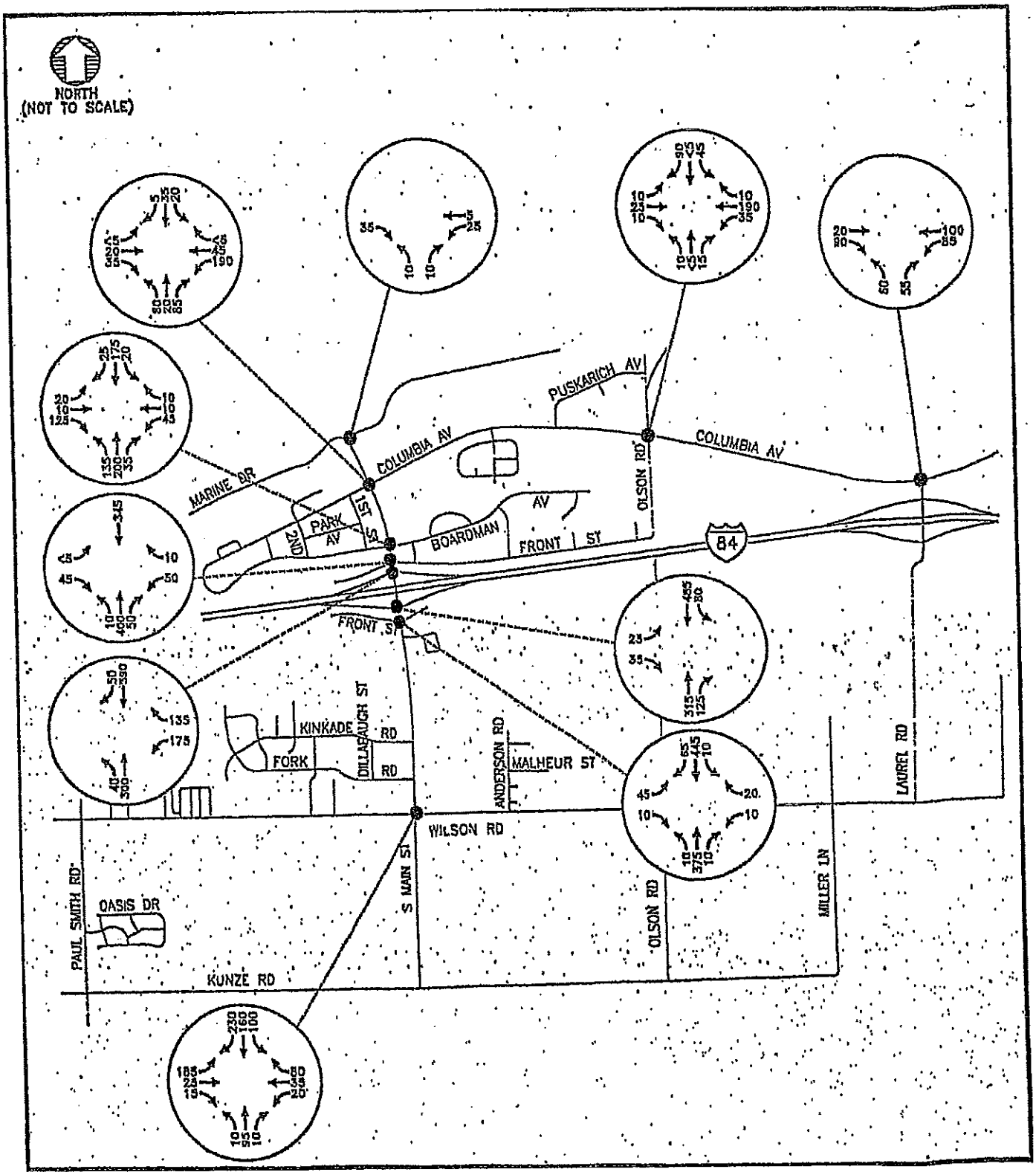
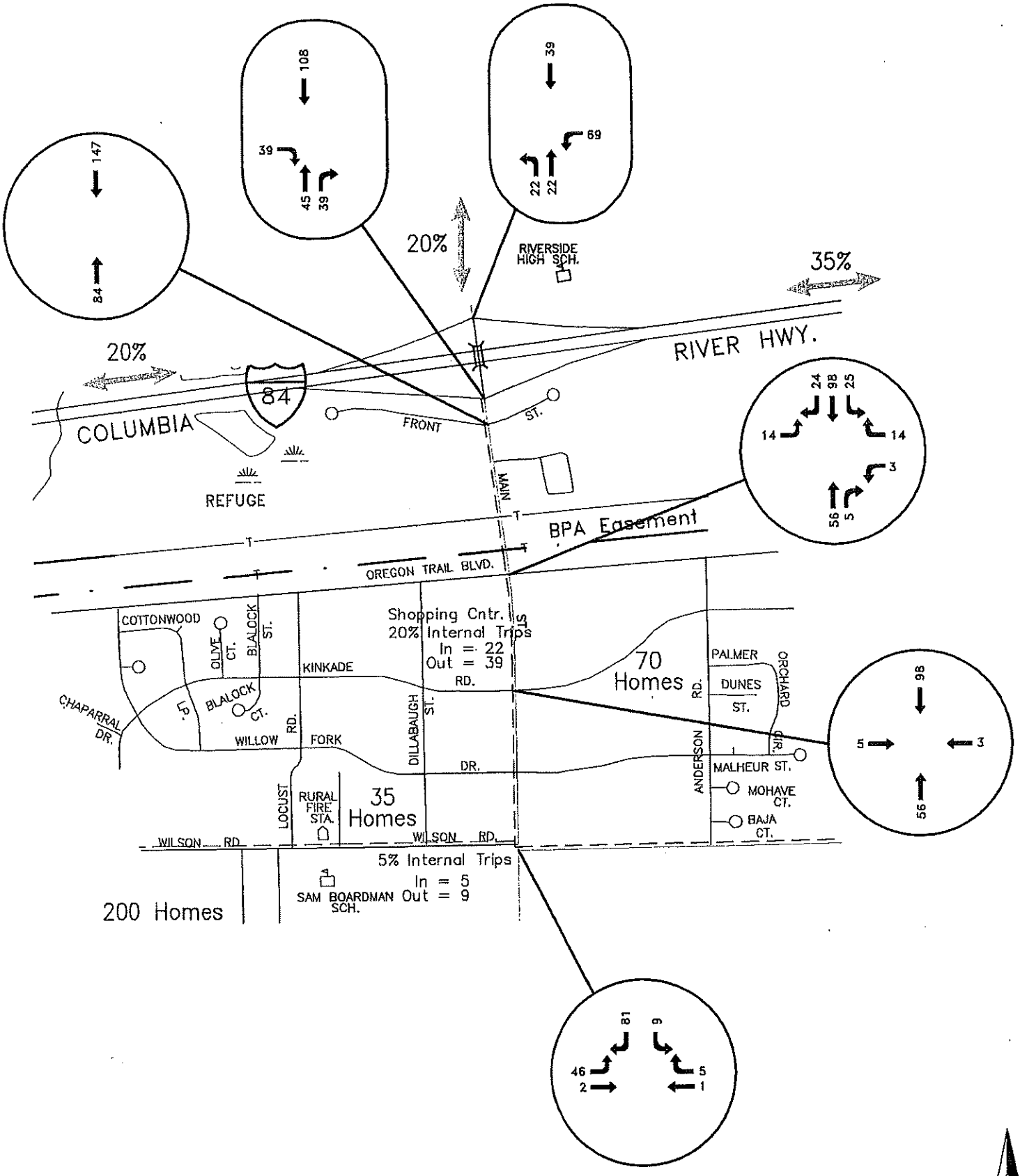
Figure VI-10: Estimated 2020 Traffic Volumes from the TSP



Drawing not to scale.

Figure VI-11: PM Peak Hour Trips Generated By The 3 Single-Family Developments



Drawing not to scale.

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Figure VI-12: Latest Boardman Main Street "Downtown" Development Plan

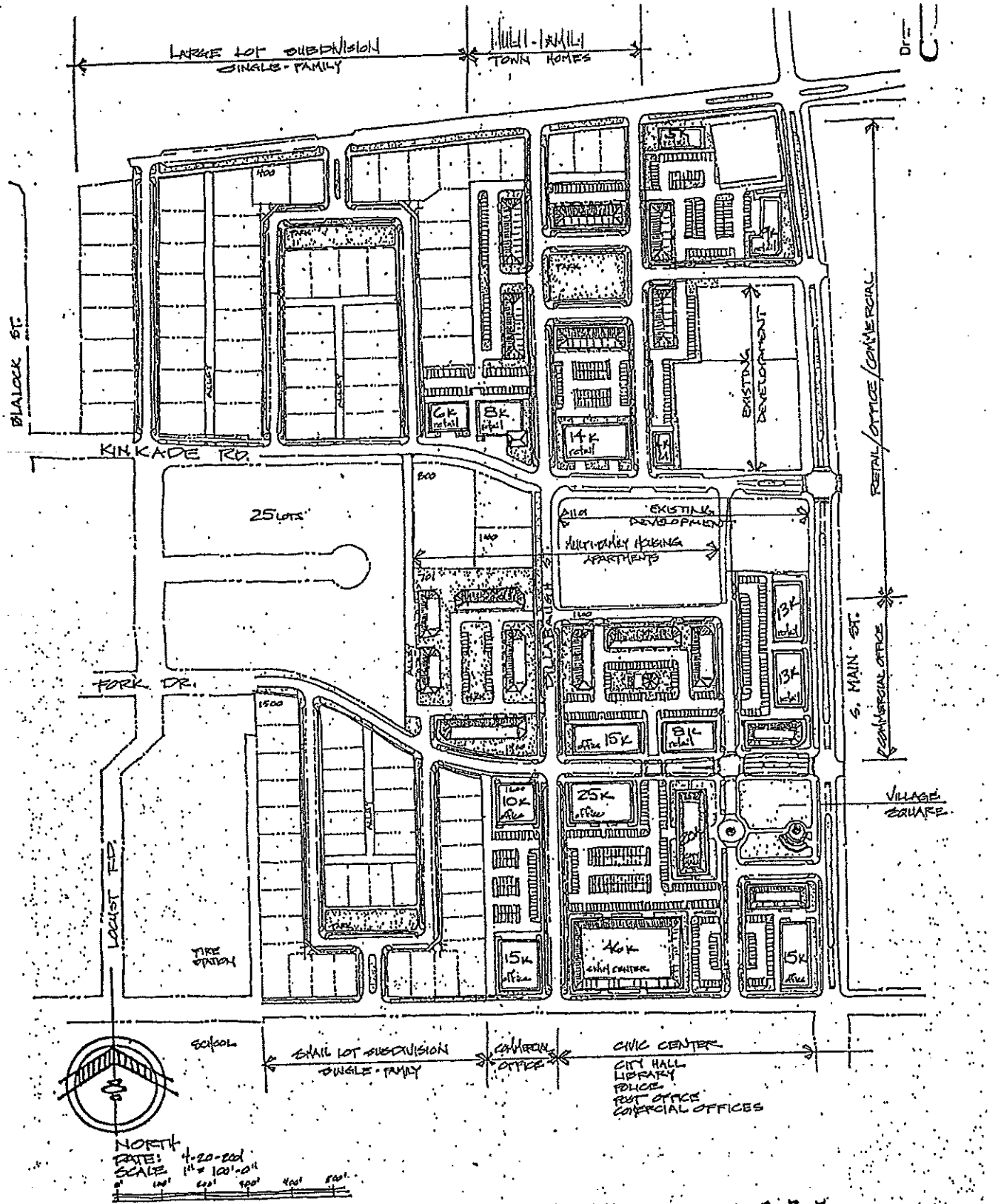
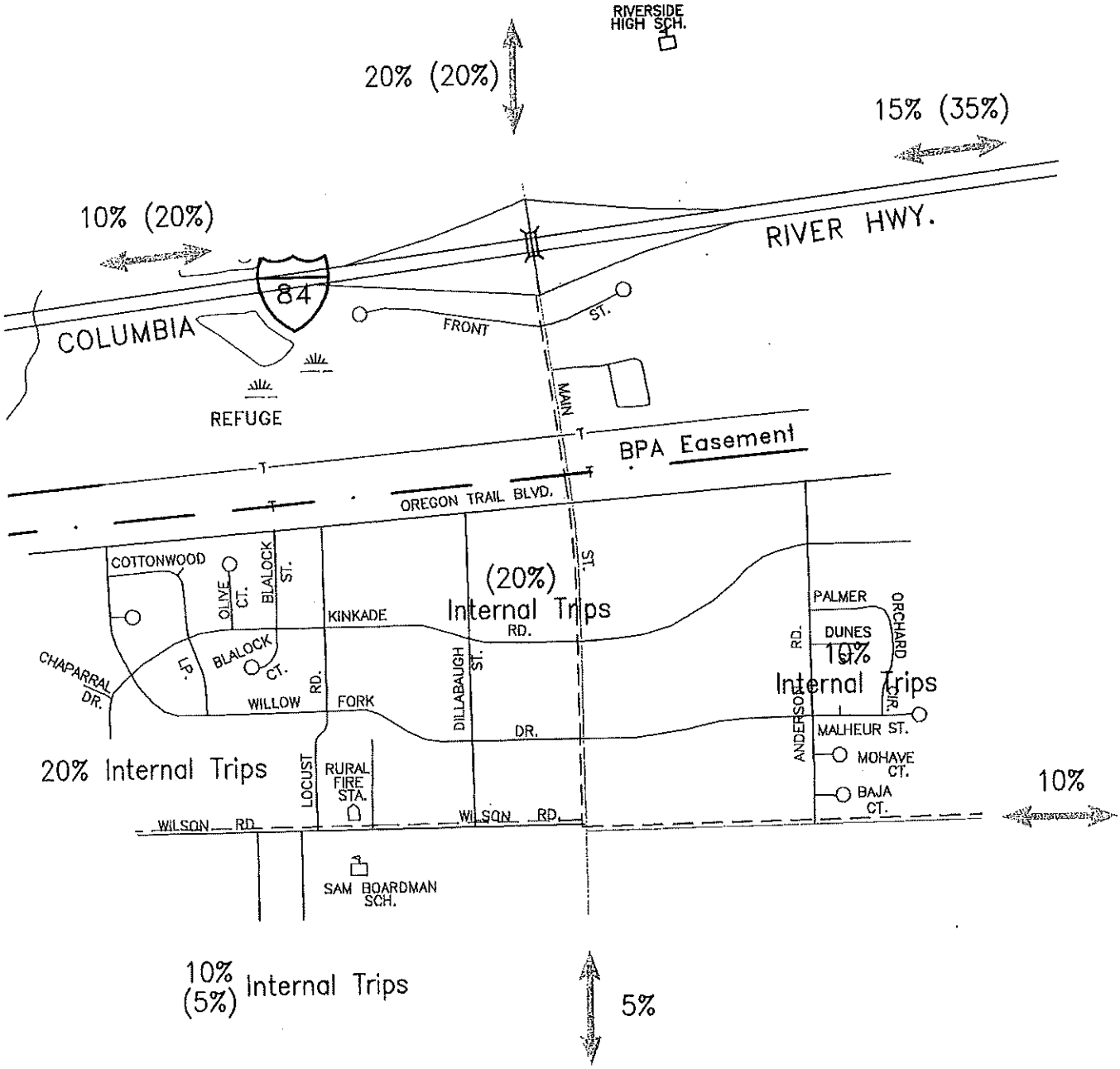


Figure VI-13: Directional Trip Distributions For Land Uses In Boardman Downtown Plan



(Residential) Commercial

Multi-Use Path — — — —

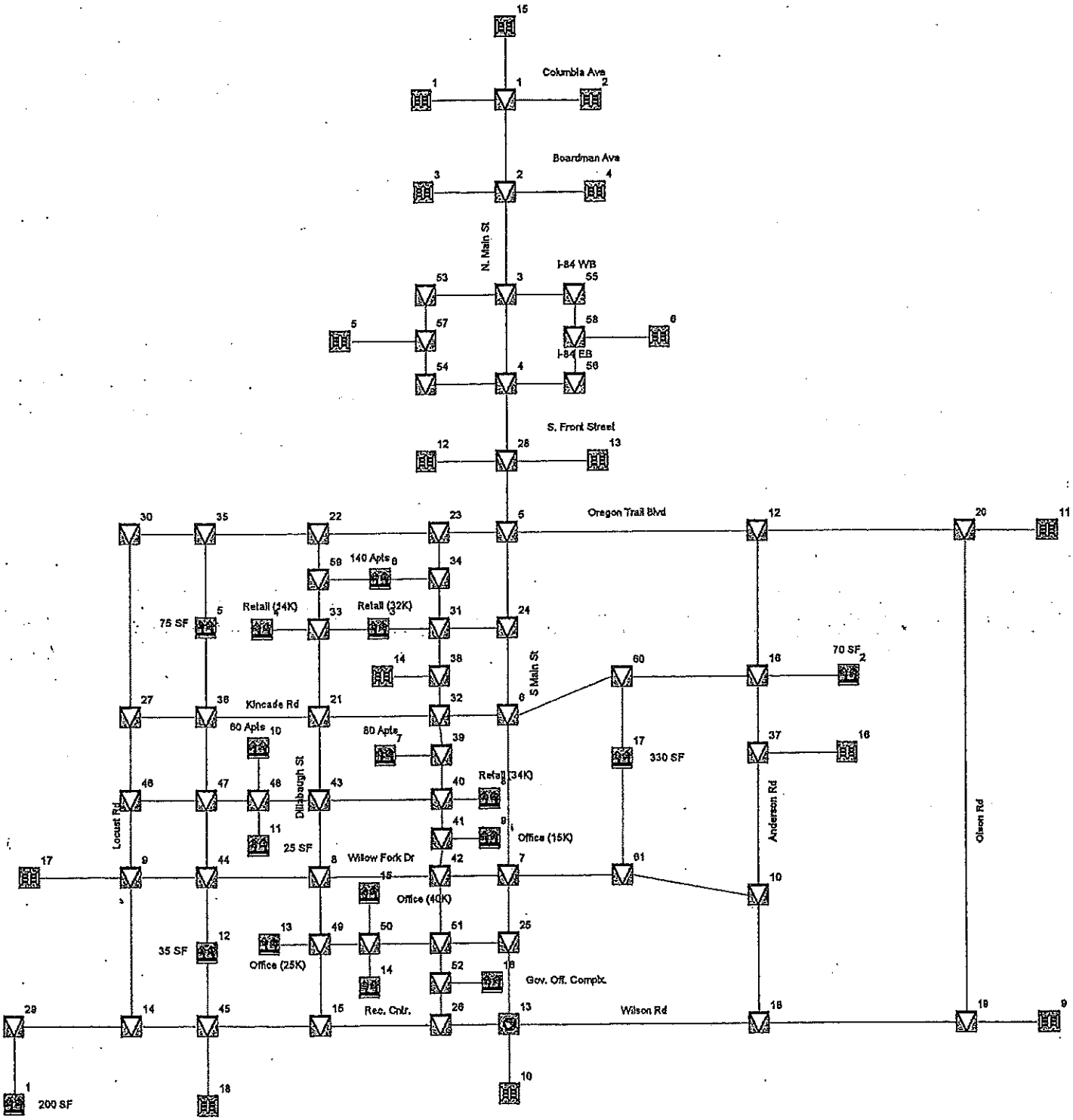
Stop Sign

Boardman TSP

Drawing not to scale.

cts Engineers, Inc.

Figure VI-14: Traffix Model of Future 2020 Roadway Network for Boardman



Drawing not to scale.

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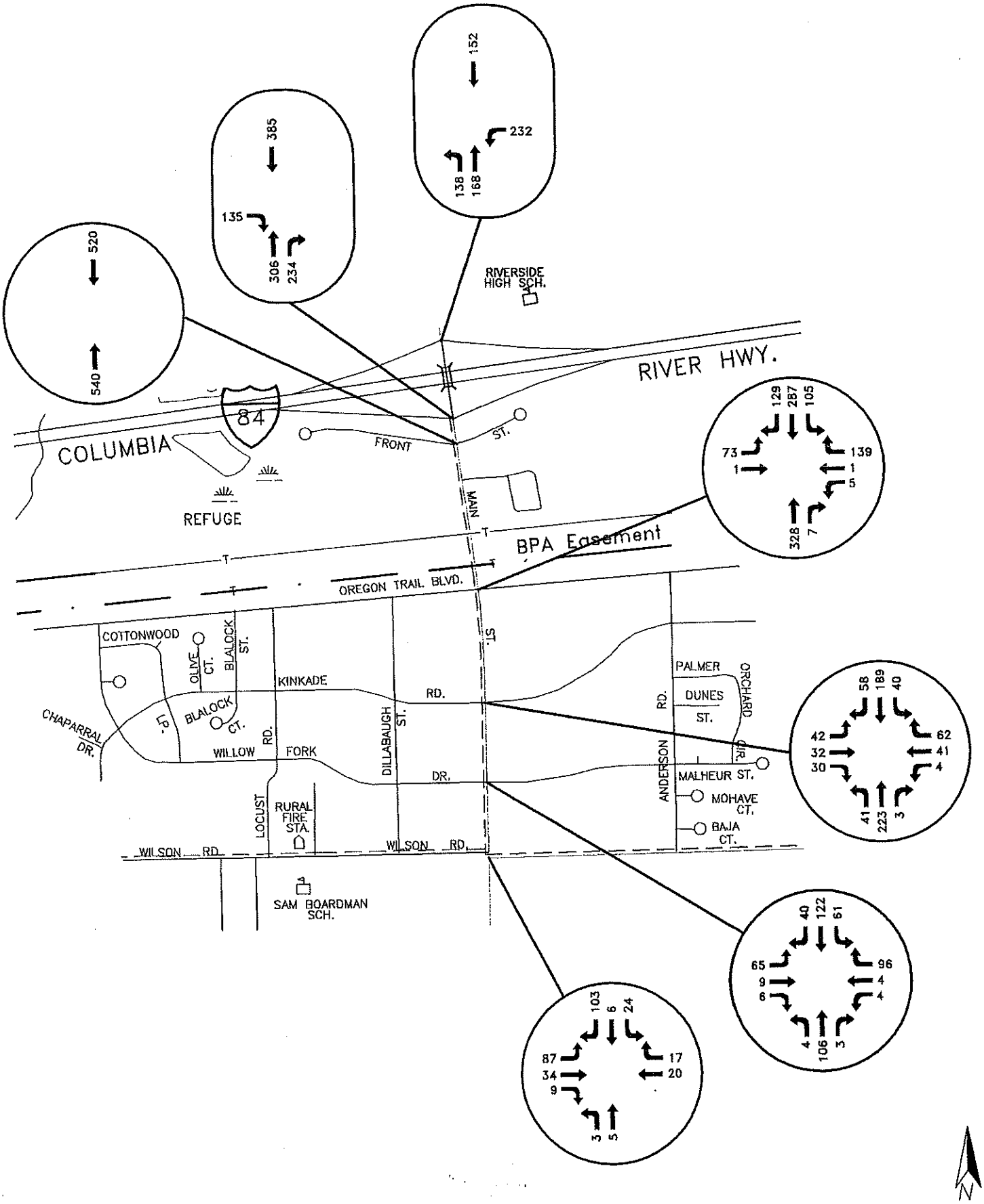
Figure VI-15: Trips Generated by ALL Developments



Drawing not to scale.

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Figure VI-16: 2020 Projected Peak Hour Traffic Volumes With 20 Percent Growth And 3 Single-Family Developments (Scenerio I)

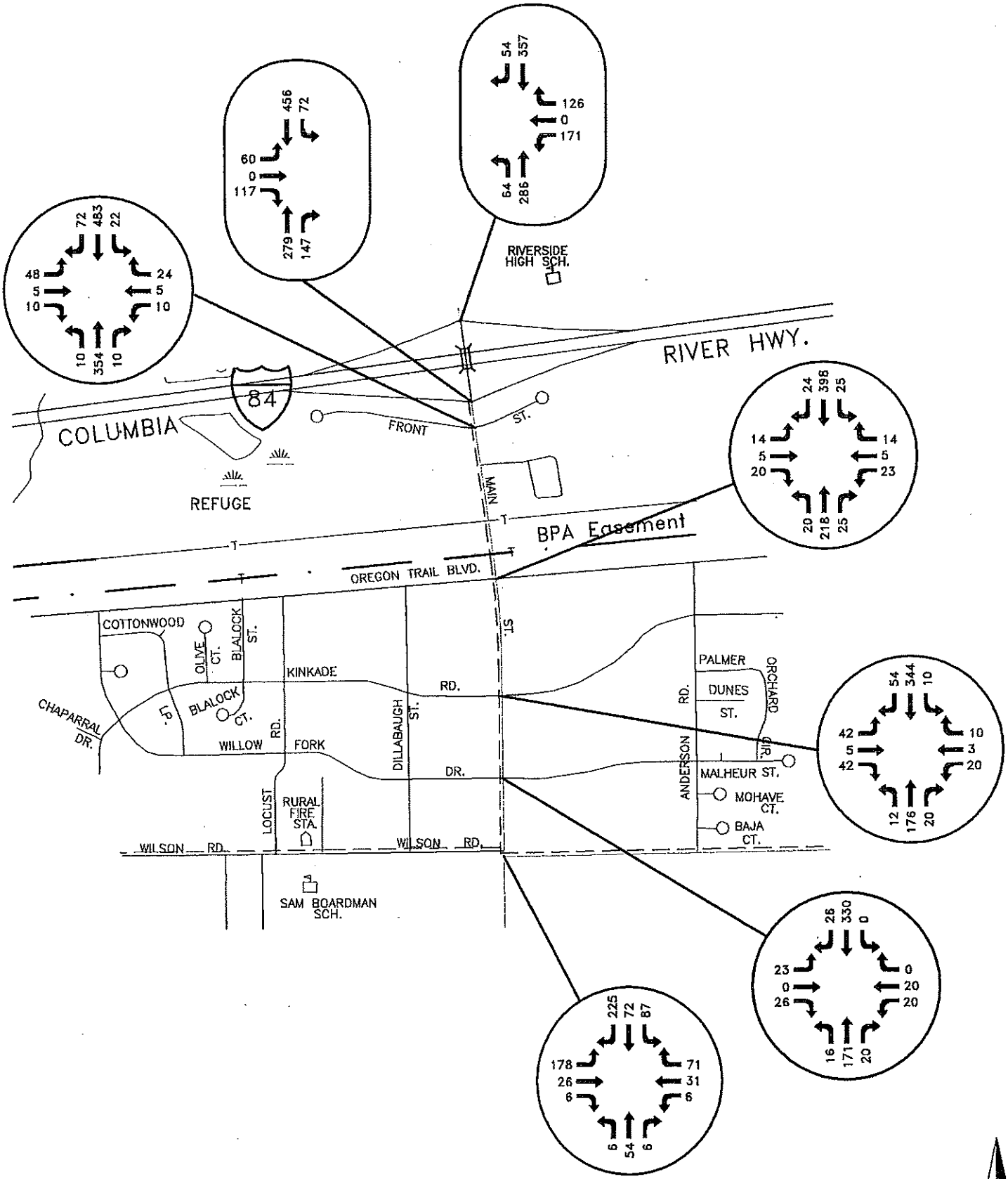

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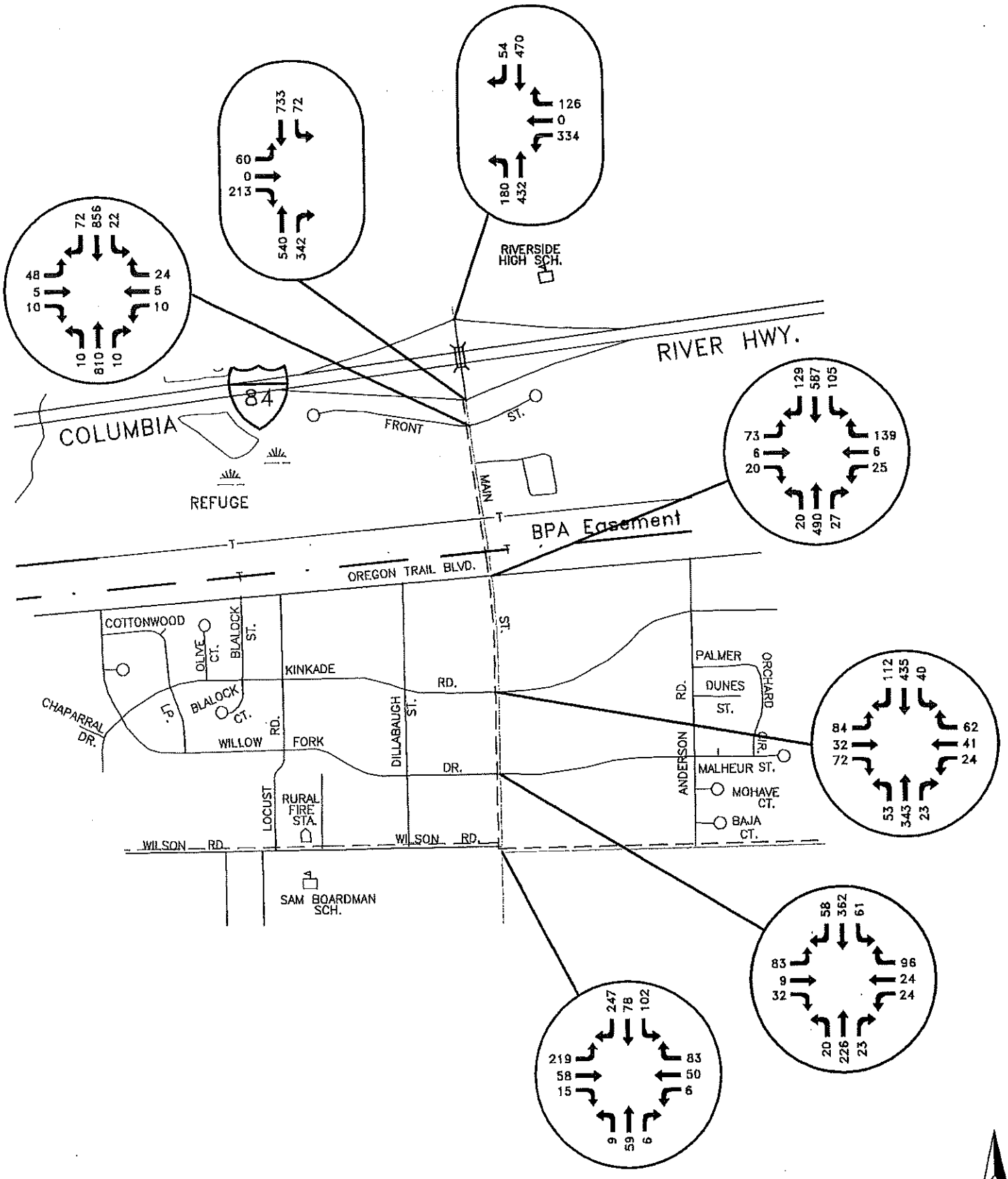
Figure VI-17: 2020 Projected Peak Hour Traffic Volumes With 20 Percent Growth And ALL Developments (Scenerio II)



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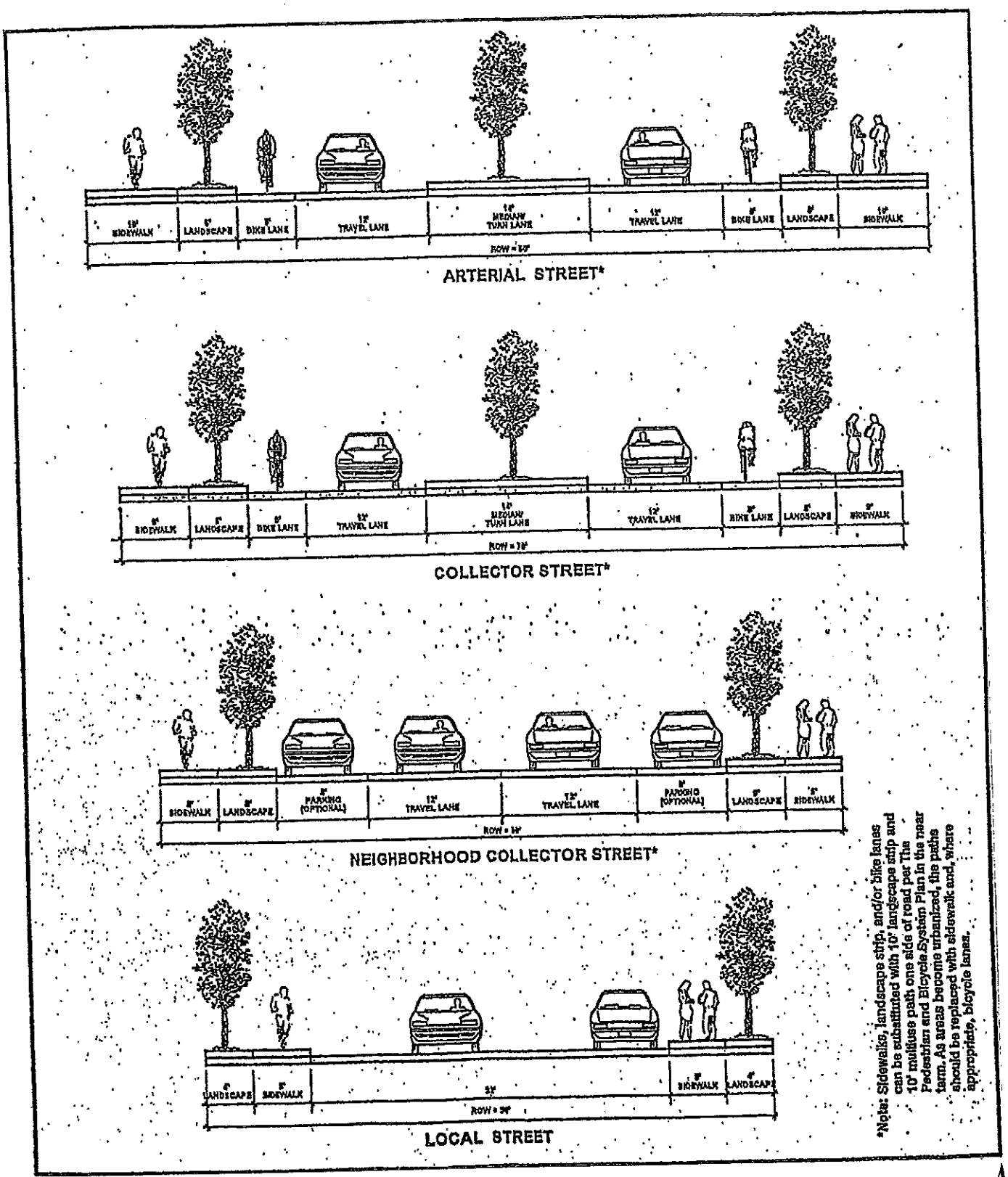
cts Engineers, Inc.

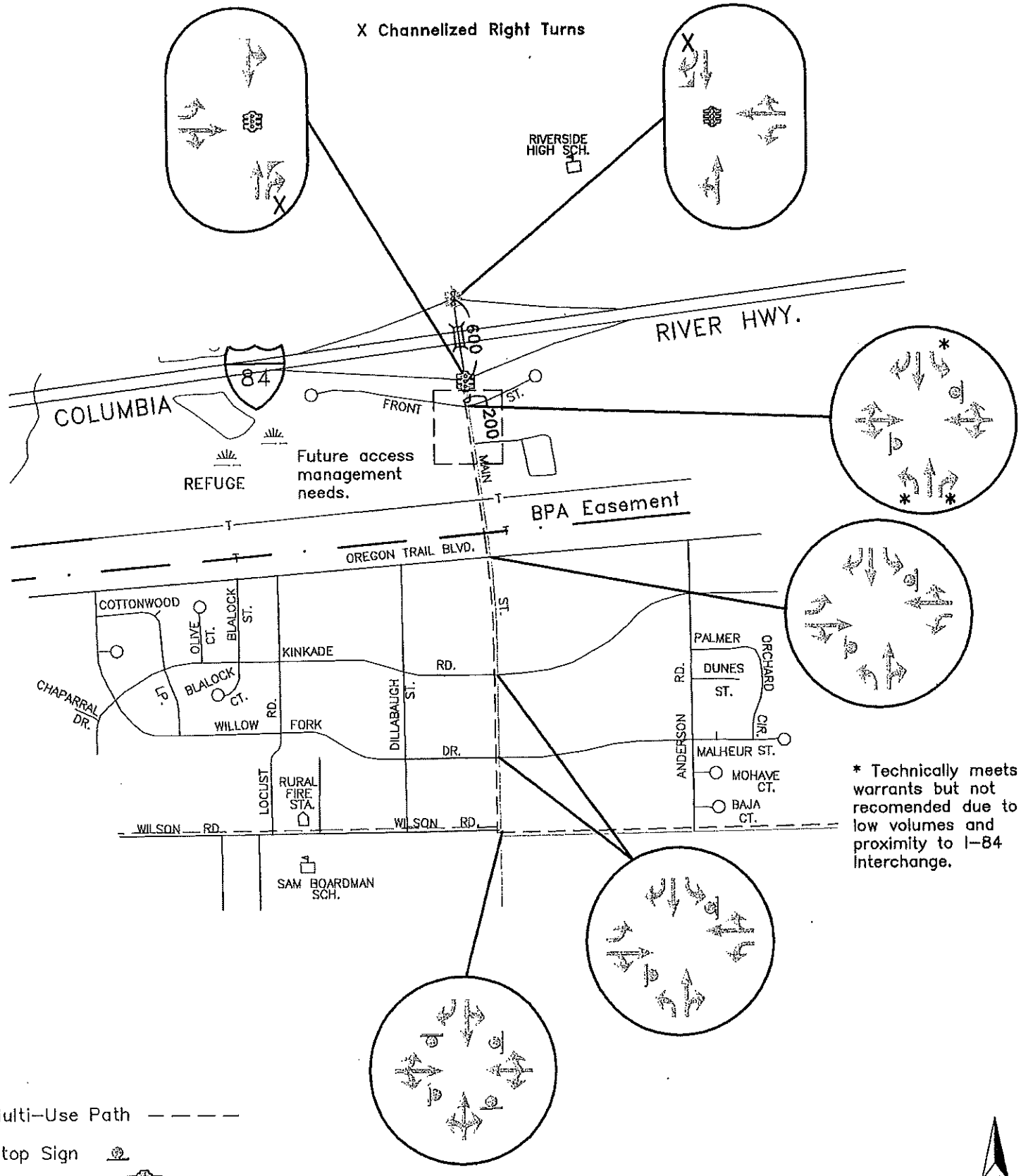
Figure VI-18: Standard Roadway Sections from TSP



N

Drawing not to scale.

Figure VI-19: Proposed 2020 Traffic Controls and Lane Configurations at Study Area Intersections



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COST ESTIMATES AND POTENTIAL IMPLEMENTATION MECHANISMS

Preliminary cost estimates are provided for arterial, collector, and local streets. These are rough cost estimates to be used as a guide to facilitate identification of costs for specific projects and in identifying funding priorities. As preliminary and final design of specific projects occur, more detailed and accurate cost estimates should be prepared.

Street Cost Estimate

Street Type	Street $[1]	Water/Sewer $	Street Amenities	Design[2]	Total
Arterial	$625/LF	$140/LF	$220/LF[3]	$100/LF	$1,085/LF
Collector	$575/LF	$140/LF	$175/LF[4]	$90/LF	$980/LF
Local Street	$450/LF	$140/LF	$55/LF[5]	$65/LF	$710/LF

Streetscape Amenities

Description	Unit Price	Unit
Street Trees & Grates ($80/tree, $250/grate)	$330	Each
Bulbouts (w/ colored, stamped pattern)	$2,250	Each
Street Lights (non-historic)	$1,100	Each
Historic Street Lights	$1,500	Each
Benches	$800	Each
Drinking Fountain	$1,000	Each
Trash Receptacle	$250	Each
Irrigation	$15	Lineal Foot
Plant Materials	$18	Lineal Foot
Electrical Conduit	$14	Lineal Foot
Total	--	--

[1] Includes elements identified in the street design standards, i.e. pavement width, curbs, sidewalks, storm drainage.
[2] Estimated to be approximately 10% of construction costs.
[3] Includes street trees and grates, bulbouts, historic street lights, irrigation, plant materials, electrical conduit, benches, drinking fountain, trash receptacles.
[4] Includes street trees and grates, bulbouts, historic street lights, irrigation, plant materials, and electrical conduit.
[5] Includes street trees, street lights, and irrigation.

POTENTIAL IMPLEMENTATION MECHANISMS

This section identifies potential implementation mechanisms according to the following categories:

- **Revenue Resources**
- **Grants and Loans**
- **ODOT Funding Sources**
- **Volunteer Labor and Material Donation**

Revenue Resources

In order to finance the recommended transportation system improvements it will require the expenditure of substantial capital resources. More importantly, the City of Boardman needs to consider a range of funding sources implement the identified improvements. Although property taxes have traditionally served as the primary revenue source for local governments, property tax revenue accrues to general fund operations, and is typically not available for dedicated street improvements or maintenance. Despite this limitation, the use of alternative revenue funding has been a trend throughout Oregon as the full implementation of Measure 5 and 47 has significantly reduced property tax revenues (see below). *The alternative revenue sources described in this section may not all be appropriate in Boardman; however, this overview is being provided to illustrate the range of options currently available to finance transportation improvements during the next 20 years.*

Property Taxes

Property taxes have historically been the primary revenue source for local governments. However, property tax revenue accrues to the general operating fund for the City. This revenue source is not typically available for street improvements or maintenance. The dependence of local governments on this revenue source is due, in large part, to the fact that property taxes are easy to implement and enforce. Property taxes are based on real property (i.e. land and buildings), which has a predictable value and appreciation to base taxes upon. This is as opposed to income or sales taxes, which can fluctuate with economic trends or unforeseen events.

Property taxes can be levied through: 1) tax base levies, 2) serial levies, and 3) bond levies. The most common method uses tax base levies, which do not expire and are allowed to increase by six percent per annum. Serial levies are limited by amount and time they can be imposed. Bond levies are for specific projects and are limited by time based on the debt load of the local government on the project.

The historic dependence on property taxes in Oregon is changing with the passage of Ballot Measure 5 in the early 1990s. Ballot Measure 5 limits the property tax rate for purposes other than payment of certain voter-approved general obligation indebtedness. Under full implementation, the tax rate for all local taxing authorities is limited to $15 per $1,000 of assessed valuation. As a group, all non-school taxing authorities are limited to $10 per $1,000 of assessed valuation. All tax base, serial, and special levies are subject to the tax rate limitation. Ballot Measure 5 requires that all non-school taxing districts' property tax rate be reduced if together they exceed $10 per $1,000 of assessed valuation; then all of the taxing districts' tax rates are reduced on a proportional basis. The proportional reduction in the tax rate is commonly referred to as compression of the tax rate.

Measure 47, another ballot initiative passed by Oregon voters in November 1996, is a constitutional amendment that reduces and limits property taxes, which in turn limits local revenues and replacement fees. The measure limits 1997-98 property taxes to the lesser of the 1995-96 tax, minus 10 percent, or the 1994-95 tax. It limits future annual property tax increases to three percent, with exceptions. Local governments' lost revenue may be replaced only with state income tax, unless voters approve replacement fees or charges. Tax levy approvals in certain elections require a "double majority" of 50 percent voter participation and approval.

Subsequent to Measure 47, the state legislature created Measure 50, which retains the tax relief of Measure 47, but clarifies some legal issues. Oregon voters approved this revised tax measure in May 1997.

The League of Oregon Cities (LOC) estimated that direct revenue losses to local governments, including school districts, may total $467 million in fiscal year 1998, $553 million in 1999, and increase thereafter. The actual revenue losses to local governments will depend on actions of the Oregon legislature. LOC also estimates that the state will have revenue gains of $23 million in 1998, $27 million in 1999, and increase thereafter because of increased personal and corporate tax receipts due to lower property tax deduction.

Measure 50 adds another layer of restrictions to those which govern the adoption of tax bases and levies outside the tax base, as well as Measure 5's tax rate limits for schools and non-schools, and tax rate exceptions for voter approved debt. Each new levy, and the imposition of a property tax, must be tested against a longer series of criteria before the collectible tax amount on a parcel of property can be determined.

State Highway Fund
The State of Oregon disburses gas tax revenue to all counties and cities to fund street improvements, road construction, and maintenance. In Oregon, the State collects gas taxes, vehicle registration fees, overweight/overheight fines and weight/mile taxes, and returns a portion of the total revenue to cities and counties through an allocation formula. The revenue share allocated to cities is divided among all incorporated cities based on population. A majority of Oregon cities use state gas tax allocations to fund street construction and maintenance.

Local Gas Taxes
The Oregon Constitution permits counties and incorporated cities to levy additional local gas taxes with the stipulation that the revenue generated from the taxes will be dedicated to street-related improvements and maintenance within the jurisdiction. At present, only a few local governments (including the cities of Woodburn and The Dalles, and Multnomah and Washington Counties) levy a local gas tax. The City of Boardman may consider raising its local gas tax as a way to generate additional street improvement funds. However, with relatively few jurisdictions exercising this tax, an increase in the cost differential between gas purchased in Boardman and gas purchased in neighboring communities may encourage drivers to seek less expensive fuel elsewhere. Any action will need to be supported by careful analysis to minimize the unintended consequences of such an action.

Vehicle Registration Fees
The Oregon Vehicle Registration Fee is allocated to state, counties and cities for road funding. Oregon counties are granted authority to impose a vehicle registration fee covering the entire county. The Oregon Revised Statutes would allow Jackson County to impose a biannual registration fee for all passenger cars licensed within the County. Although both counties and special districts have this legal authority, vehicle registration fees have not been imposed by local jurisdictions. A disincentive to employing such a fee may be the cost of collection and administration. In order for a local vehicle registration fee program to be viable in Jackson County, all incorporated cities and the county would need to formulate an agreement which would detail how the fees would be spent on future street construction and maintenance.

Local Improvement Districts
The Oregon Revised Statutes allow local governments to form Local Improvement Districts (LIDs) to construct public improvements. LIDs are most often used by cities to construct local projects such as streets, sidewalks, bikeways, or public facilities. The statutes allow formation of a district by either the city government or property owners. Cities that use LIDs are required to have a local LID ordinance that provides a process for district formation and payback property owners within a specified area. The cost can be allocated based on property frontage or other methods such as traffic trip generation. The types of allocation methods are only limited by the scope of the Local Improvement Ordinance. The cost of LID participation is considered an assessment against the property, which is a lien equivalent to a tax lien. Individual property owners typically have the option of paying the assessment in cash or applying for assessment financing through the city. Since the passage of Ballot

Measure 5, cities have most often funded local improvement districts through the sale of special assessment bonds.

Local Trust Funds and Fees
Although not commonly implemented, local trust funds and local fees can be assessed by a local jurisdiction to generate revenue. In Boardman, this could be a method for generating revenue for additional parking. A parking trust fund would be an alternative for meeting parking requirements, i.e. in lieu of providing parking spaces, a fee could be charged for parking spaces. The fees generated in the trust fund would then be used to assist in the financing of a public parking lot or structure.

Businesses could be assessed an annual public parking fee. The parking fee could be based on square footage of the business or by seating capacity for restaurants and charter boats. This would provide the City with an ongoing income that could be used to provide additional parking and to retire any debt incurred to provide additional parking.

System Development Charges (SDCs)
System Development Charges (SDCs), or impact fees, are becoming increasingly popular in funding public works infrastructure needed for new local development. Generally, the objective of systems development charges is to allocate portions of the costs associated with capital improvements on land development projects, which increase demand on transportation, water, sewer, other infrastructure systems, and public services.

Local governments have the legal authority to charge property owners and/or developers fees for improving the local public works infrastructure based on projected demand resulting from their development. The charges are most often targeted towards improving community water, sewer, or transportation systems. Cities and counties must have specific infrastructure plans in place that comply with state guidelines in order to collect SDCs.

Typically, the fee is collected when new building permits are issued. Transportation SDCs are based on trip generation of the proposed development. Residential calculations would be based on the assumption that a typical household will generate a given number of vehicle trips per day.

Nonresidential use calculations are based on employee ratios for the type of business or industrial uses. The SDC revenues help fund the construction of transportation facilities necessitated by new development.

GRANTS AND LOANS

There are a variety of grant and loan programs available, most with specific requirements relating to economic development or specific transportation issues, rather than for the general construction of new streets. Many programs require a match from the local jurisdiction as a condition of approval. Because grant and loan programs are subject to change, as well as statewide competition, they should not be considered a secure long-term funding source for Boardman. Most of the programs available for transportation projects are funded and administered through ODOT and/or the Oregon Economic Development Department (OEDD).

Bike-Pedestrian Grants
By law (ORS 366.514), all road or highway construction or reconstruction projects must include facilities for pedestrians and bicyclists, with some exceptions. ODOTs Bike and Pedestrian Program administers two programs to assist in the development of walking and bicycling improvements: local grants, and Small-Scale Urban Projects. Cities and counties with projects on local streets are eligible for local grant funds. An 80 percent state/20 percent local match ratio is required. Eligible projects include curb extensions, pedestrian crossings and intersection improvements, shoulder widening, and re-striping for bike lanes. Projects on urban state highways with little or no right-of-way acquisition and few environmental impacts are eligible for Small-Scale Urban Project Funds. Both programs are limited to projects costing up to $100,000. Projects that cost

more than $100,000, require right-of-way acquisition, or have environmental impacts should be submitted to ODOT for inclusion in the STIP.

Enhancement Program
This federally funded program earmarks $8 million annually for projects in Oregon. Projects must demonstrate a link to the intermodal transportation system, compatibility with approved plans, and local financial support. A 10.27 percent local match is required for eligibility. Each proposed project is evaluated against all other proposed projects in the region. Within the five Oregon regions, the funds are distributed on a formula based on population, vehicle miles traveled, number of vehicles registered, and other transportation-related criteria. The initial solicitation for applications was mailed to cities and counties October 1998. Local jurisdictions had until January 1999 to complete and file applications for funding available during the 2000-2003 fiscal years, which began October 1999.

Highway Bridge Rehabilitation or Replacement Program
The Highway Bridge Rehabilitation Program (HBRR) provides federal funding for the replacement and rehabilitation of bridges of all functional classifications. A portion of the HBRR funding is allocated for the improvement of bridges under local jurisdiction. A quantitative ranking system is applied to the proposed projects based on sufficiency rating, cost factor, and load capacity. They are ranked against other projects statewide, and require state and local matches of 10 percent each. It includes the Local Bridge Inspection Program and the Bridge Load Rating Program.

Transportation Safety Grant Program
Managed by ODOT's Transportation Safety Section (TSS), this program's objective is to reduce the number of transportation-related accidents and fatalities by coordinating a number of statewide programs. Program funds are intended as seed money, funding a program for three years. Eligible programs include programs in impaired driving, occupant protection, youth, pedestrian, speed enforcement, bicycle and motorcycle safety. Every year, TSS produces a Highway Safety Plan that identifies the major safety programs, suggests counter measures to existing safety problems, and lists successful projects selected for funding, rather than granting funds through an application process.

Special Transportation Fund
The Special Transportation Fund (STF) awards funds to maintain, develop, and improve transportation services for people with disabilities and people over 60 years of age. Financed by a two-cent tax on each pack of cigarettes sold in the state, the annual distribution is approximately $5 million. Three-quarters of these funds are distributed to mass transit districts, transportation districts, and where such districts do not exist, counties, or a per-capita formula. The remaining funds are distributed on a discretionary basis.

Special Small City Allotment Program
The Special Small City Allotment Program (SCA) is restricted to cities with populations under 5,000 residents. Unlike some other grant programs, no locally funded match is required for participation. Grant amounts are limited to $25,000 and must be earmarked for surface projects (drainage, curbs, sidewalks, etc.) However, the program does allow jurisdictions to use the grants to leverage local funds on non-surface projects if the grant is used specifically to repair the affected area. Criteria for the $1 million in total annual grant funds include traffic volume, the five-year rate of population growth, surface wear of the road, and the amount of time since the last SCA grant.

Immediate Opportunity Grant Program
The Oregon Economic Development Department (OEDD) and ODOT collaborate to administer a grant program designed to assist local and regional economic development efforts. The program is funded to a level of approximately $7 million per year through state gas tax revenues. The following are primary factors in determining eligible projects:

- Improvement of public roads;
- Inclusion of an economic development-related project of regional significance;
- Creation of retention of primary employment; and
- Ability to provide local funds (50/50) to match grant.

The maximum amount of any grant under the program is $500,000. Local governments which have received grants under the program include: Washington County, Multnomah County, Douglas County, the City of Hermiston, Port of St. Helens, and the City of Newport.

Oregon Special Public Works Fund
The Special Public Works Fund (SPWF) program was created by the 1995 State Legislature as one of several primarily for the construction of public infrastructure, which support commercial and/or industrial development programs for the distribution of funds from the Oregon Lottery to economic development projects in communities throughout the state. The program provides grant and loan assistance to eligible municipalities and result in permanent job creation or job retention. To be awarded funds, each infrastructure project must support businesses wishing to locate, expand, or remain in Oregon. SPWF awards can be used for improvement, expansion, and new construction of public sewage treatment plants, water supply works, public roads, and transportation facilities.

While SPWF program assistance is provided in the form of loans and grants, the program emphasizes loans in order to assure that funds will return to the state over time for reinvestment in local economic development infrastructure projects. Jurisdictions that have received SPWF funding for projects that include some type of transportation-related improvement include the cities of Baker City, Bend, Cornelius, Forest Grove, Madras, Portland, Redmond, Reedsport, Toledo, Wilsonville, Woodburn, and Douglas County.

Oregon Transportation Infrastructure Bank
The Oregon Transportation Infrastructure Bank (OTIB) program is a revolving loan fund administered by ODOT to provide loans to local jurisdictions (including cities, counties, special districts, transit districts, tribal governments, ports, and state agencies). Eligible projects include construction of federal-aid highways, bridges, roads, streets, bikeways, pedestrian facilities, and right-of-way costs. Capital outlays such as buses, light-rail cars and lines, maintenance yards, and passenger facilities are also eligible.

ODOT FUNDING OPTIONS

The State of Oregon provides funding for all highway related transportation projects through the Statewide Transportation Improvement Program (STIP) administered by the Oregon Department of Transportation. The STIP outlines the schedule for ODOT projects throughout the State. The STIP, which identifies projects for a three-year funding cycle, is updated on an annual basis. Starting with the 1998 budget year, ODOT will then identify projects for a four-year funding cycle. In developing this funding program, ODOT must verify that the identified projects comply with the Oregon Transportation Plan (OTP), ODOT Modal Plans, Corridor Plans, local comprehensive plans, and TEA-21 planning requirements. The STIP must fulfill federal planning requirements for staged, multi-year, statewide, intermodal program of transportation projects. Specific transportation projects are prioritized based on federal planning requirements and the different State plans. ODOT consults with local jurisdictions before highway related projects are added to the STIP.

The highway-related projects identified in Boardman's TSP will be considered for future inclusion on the STIP. The timing of including specific projects will be determined by ODOT based on an analysis of all the project needs within Region 2. The City of Boardman, Jackson County, and ODOT will need to communicate on an annual basis to review the status of the STIP and the prioritization of individual **projects within the project**

area. Ongoing communication will be important for the city, county, and ODOT to coordinate the construction of both local and state transportation projects.

ODOT also has the option of making small highway improvements as part of their ongoing highway maintenance program. Types of road construction projects that can be included within the ODOT maintenance programs are intersection realignments, additional turn lanes, and striping for bike lanes. Usually, ODOT field crews, using state equipment, complete maintenance related construction projects. The maintenance crews do not have the staff or specialized road equipment needed for large construction projects.

An ODOT funding technique that may have future application to Boardman's TSP is the use of state and federal transportation dollars for off-system improvements. ODOT has the authority and ability to fund transportation projects that are located outside the boundaries of the highway corridors. It is expected that this funding technique will be used to finance local system improvements that reduce traffic on state highways or reduce the number of access points for future development along state highways.

Financing Tools
In addition to funding options, the recommended improvements listed in this plan may benefit from a variety of financing options. Although often used interchangeably, the words financing and funding are not the same. Funding is the actual generation of revenue by which a jurisdiction pays for improvements, some examples include the sources discussed above: property taxes, SDCs, fuel taxes, vehicle registration fees, LIDs, and various grant programs. In contrast, financing refers to the collecting of funds through debt obligations.

The City of Boardman has a number of available debt financing options. The use of debt to finance capital improvements must be balanced with the ability to make future debt service payments and to deal with the impact on its overall debt capacity and underlying credit rating. Again, debt financing should be viewed not as a source of funding, but as a time shifting of funds. The use of debt to finance these transportation-system improvements is appropriate since the benefits from the transportation improvements will extend over the period of years. If such improvements were to be tax financed immediately, a large short-term increase in the tax rate would be required. By utilizing debt financing, local governments are essential, spreading the burden of the costs of these improvements to more of the people who are likely to benefit from the improvements and lowering immediate payments.

General Obligation Bonds
General obligation (GO) bonds are voter-approved bond issues, which represent the least expensive borrowing mechanism available to municipalities. GO bonds are typically supported by a separate property tax levy specifically approved for the purposes of retiring debt. The levy does not terminate until all debt is paid off. The property tax levy is distributed equally throughout the taxing jurisdiction according to assessed value of property. GO debts typically are used to make public improvement projects that will benefit the entire community.

State statutes require that the GO indebtedness of a city not exceed three percent (3%) of the real market value of all taxable property in the city. Since GO bonds would be issued subsequent to voter approval, they would not be restricted to the limitations set forth in Ballot Measures 5, 47, and 50. Although new bonds must be specifically voter approved, Measure 47 and 50 provisions are not applicable to outstanding bonds, unissued voter-approved bonds, or refunding bonds.

Limited Tax General Obligation Bonds
Limited tax general obligation (LTGO) bonds are similar to general obligation bonds in that they represent an obligation of the municipality. However, a municipality's obligation is limited to its current revenue sources and is not secured by the public entity's ability to raise taxes. As a result, LTGO bonds do not require voter approval. However, since the LTGO bonds are not secured by the full taxing power of the issuer, the limited tax bond represents a higher borrowing cost than GO bonds. The municipality must pledge to levy the maximum amount

under constitutional and statutory limits, but are not the unlimited taxing authority pledged with GO bonds. Because LTGO bonds are not voter approved, they are subject to the limitations of Ballot Measures 5, 47, and 50.

Bancroft Bonds
Under Oregon Statute, municipalities are allowed to issue Bancroft bonds, which pledge the city's full faith and credit to assessment bonds. As a result, the bonds become general obligations of the city, but are paid with assessments. Historically, these bonds provided a city with the ability to pledge its full faith and credit in order to obtain a lower borrowing cost without requiring voter approval. However, since Bancroft bonds are not voter approved, taxes levied to pay debt service on them are subject to the limitations of Ballot Measures 5, 47, and 50. As a result, since 1991, Bancroft bonds have not been used by Oregon municipalities, which were required to compress their tax rates.

VOLUNTEER LABOR AND MATERIAL DONATION

Volunteer labor and material donation is a potential mechanism for implementing transportation related improvements. However, this type of implementation mechanism typically should not be viewed as an ongoing long-term solution for making improvements.

REVIEW OF ORIGINAL PROJECT OBJECTIVES & TRANSPORTATION RELATIONSHIP/BENEFITS

1. **Strengthen the capability of Boardman to effectively manage growth and comply with the Transportation Planning Rule (TPR), integrate transportation and land use planning, and encourage transportation-efficient land uses.**

The plan provides for a mix of commercial, residential, and public uses within a defined, compact area. Multiple land uses are located within close proximity allowing people to conveniently move between uses via walking, bicycling, or driving.

2. **Address the 1999 Oregon Highway Plan (OHP) and access management standards, Policy 3C Interchange Access Management Areas, and Policy 1G Major Improvements Policy.**

The plan, including the traffic projections and analysis, addresses the OHP access management standards, interchange access management areas, and major improvements policies.

3. **Make more efficient use of the transportation infrastructure by separating local traffic from freeway-related traffic, thereby preventing or postponing reconstruction of the current interchange/overpass and on and off-ramps.**

The plan provides separation of local traffic from freeway-related traffic by providing a mix of uses within a compact area. The plan also provides retail and employment opportunities on the south side of the freeway where the primary residential development is occurring and will continue to occur.

4. **Reduce reliance on the automobile by developing the City's commercial/retail focal point in the area of future residential development and connecting it with a grid system of streets, bikeways and pedestrian paths.**

The plan reduces reliance on the automobile by providing commercial/retail uses in the area of future residential development and connecting it to the existing grid street system, i.e. Main Street, Wilson Road, Kinkade Road, Willow Fork Road, Dillabaugh Street, Locust Road, and planned Oregon Trail Blvd.

5. **Reduce traffic around the freeway interchange and the local street system that immediately serves and connects with the freeway system by encouraging future locally oriented commercial uses to develop away from the areas of conflict and by creating alternate travel routes.**

The location of the downtown reduces the need for local residents to travel to the north side of the freeway for goods and services.

6. **Improve transportation safety by separating local and freeway-oriented traffic, which also includes a large proportion of trucks that are accessing the Port of Morrow or utilizing traveler services at the interchange on Main Street.**

The plan separates local traffic from freeway-oriented traffic by providing a range of services and goods on the south side of the freeway where the primary residential development is occurring.

7. **Improve local transportation network connectivity by developing a plan that includes a grid system pattern of streets in the south Boardman area, and links current and future community facilities and the Port of Morrow.**

The plan capitalizes upon the existing and developing street grid system south of the freeway. The plan recommends future community facilities, i.e. civic use and retail uses, in close proximity to residential uses therefore providing shorter trips and multi-modal transportation opportunities between civic, commercial, and residential uses.

8. Direct commercial development in a concentrated, localized, mutually beneficial, and aesthetically pleasing pattern.

The plan establishes commercial development in a concentrated mixed use area by capitalizing and expanding the existing street grid system and by providing amenities, i.e. pedestrian/bicycle system, street amenities, parks, and open spaces.

9.. Establish a stronger community identity.

The mixed use plan and civic uses, including a village square, provide a strong community identity.

10. Increase the overall livability in Boardman, thereby making it a more attractive place to reside.

The plan provides increased livability through a mix of uses within close proximity, multi-modal transportation opportunities and reduced reliance on the automobile, public facilities and open spaces, and an attractive street environment.

11. Reduce commuter-related traffic.

Commuter-related traffic is reduced by locating commercial uses and public facilities within close proximity to the primary developing residential area.

12. Adoption and implementation of the City of Boardman TSP in compliance with OAR 660-012-0015(3) and 660-012-045.

The plan includes update, adoption, and implementation of the Boardman Transportation System Plan.

APPENDICES

APPENDIX A. RECOMMENDED DOWNTOWN (D) ZONING DISTRICT

Chapter 2.2 — Downtown (D) District

Sections:

2.2.100 Purpose

A city goal is to strengthen the Boardman Downtown district as the "heart" of the community and as the logical place for people to gather and create a business center. The District is intended to support this goal through elements of design and appropriate mixed use development. This chapter provides standards for the orderly improvement and expansion of the Boardman Downtown District based on the following principles:

- Efficient use of land and urban services;
- Direct commercial development in a concentrated, localized, mutually beneficial, and aesthetically pleasing pattern;
- Reduce reliance on the automobile by developing the City's commercial/retail focal point in the area of future residential development and connecting it with a grid system of streets, bikeways and pedestrian paths.
- A mixture of land uses to encourage walking as an alternative to driving, and provide more employment and housing options;
- Downtown Boardman provides both formal and informal community gathering places;
- There is a distinct storefront character which identifies downtown Boardman;
- The Boardman Downtown District is connected to neighborhoods and other employment areas;

2.2.110 Permitted Land Uses

A. **Permitted Uses.** The land uses listed in Table 2.2.110.A are permitted in the Boardman Downtown District, subject to the provisions of this Chapter. Only land uses which are specifically listed in Table 2.2.110.A, and land uses which are approved as "similar" to those in Table 2.2.110, may be permitted *[The land uses identified with a "CU" in Table 2.2.110.A require Conditional Use Permit approval prior to development or a change in use, in accordance with Chapter 4.4.].*

B. **Determination of Similar Land Use.** Similar use determinations shall be made in conformance with the procedures in Chapter 4.8 - Interpretations.

Table 2.2.110.A
Land Uses and Building Types Permitted in the *Boardman Downtown* District

1. Residential*: a. Single-family attached townhome *Two- and Three-Family* b. Two- and three-family housing (duplex and triplex) *Multi-family* c. Multi-family housing *Residential care* d. Residential care homes and facilities e. Family daycare (12 or fewer children) **2. Home occupations** **3. Bed & breakfast inns and vacation rentals** *[(CU)]**	**4. Public and Institutional*:** a. Churches and places of worship b. Clubs, lodges, similar uses c. Government offices and facilities (administration, public safety, transportation, utilities, and similar uses) d. Libraries, museums, community centers, concert halls and similar uses e. Public parking lots and garages f. Private utilities g. Public parks and recreational facilities h. Schools (public and private) i. Special district facilities j. Telecommunications equipment (including wireless) *[- CU]* k. Uses similar to those listed above *[subject to CU requirements, as applicable]* **5. Accessory Uses and Structures***	**6. Commercial:** a. Entertainment (e.g., theaters, clubs, amusement uses) b. Hotels/motels c. Medical and dental offices, clinics and laboratories d. Mixed use development (housing & other permitted use)* e. Office uses (i.e., those not otherwise listed) f. Personal and professional services (e.g., child care center, catering/food services, restaurants, laundromats and dry cleaners, barber shops and salons, banks and financial institutions, and similar uses) g. Repair services (must be enclosed within building) h. Retail trade and services, except auto-oriented uses i. Uses similar to those listed above *[subject to CU requirements, as applicable]* **7. Industrial*:** Light manufacture (e.g., small-scale crafts, electronic equipment, bakery, furniture, similar goods when in conjunction with retail)
Uses marked with an asterisk (*) are subject to the standards in Section 2.2.180, "Special Standards for Certain Uses." Home occupations and temporary uses are subject to the standards in Section 4.9.		

2.2.120 Building Setbacks

In the Boardman Downtown District, buildings are placed close to the street to create a vibrant pedestrian environment, to slow traffic down, provide a storefront character to the street, and encourage walking. The setback standards are flexible to encourage public spaces between sidewalks and building entrances (e.g., extra-wide sidewalks, plazas, squares, outdoor dining areas, and pocket parks). The standards also encourage the formation of solid blocks of commercial and mixed use buildings for a walkable Boardman Downtown.

Building setbacks are measured from the respective property line. Setbacks for porches are measured from the edge of the deck or porch to the property line. The setback standards, as listed on the following page, apply to primary structures as well as accessory structures. The standards may be modified only by approval of a Variance, in accordance with Chapter 5.1.

A. Front Yard Setbacks.

1. Minimum Setback. There is no minimum front yard setback required.

2. Maximum Setback. The maximum allowable front yard setback is 0 feet. On parcels with more than one building, this standard applies to the largest building. The setback standard may be increased when a usable public space with pedestrian amenities (e.g., extra-wide sidewalk, plaza, pocket park, outdoor dining area or town square with seating) is provided between the building and front property line. (See also, Pedestrian Amenities Standards in Section 2.2.170, and Design Standards in Section 2.2.160 for related building entrance standards.)

B. Rear Yard Setbacks.

1. Minimum Setback. The minimum rear yard setback for all structures shall be 0 feet for street-access lots, and 8 feet for alley-access lots (distance from building to rear property line or alley easement) in order to provide space for parallel parking.

2. Through-Lots. For buildings on through-lots (lots with front and rear frontage onto a street), the front yard setbacks in "A" shall apply.

C. Side Yard Setbacks. There is no minimum side yard setback required, except that buildings shall conform to the vision clearance standards in Chapter 3.1 and the applicable fire and building codes for attached structures, fire walls, and related requirements.

2.2.130 Lot Coverage *[and Floor Area Ratio]*

A. Lot Coverage. There is no maximum lot coverage requirement, except that compliance with other sections of this code may preclude full (100 percent) lot coverage for some land uses.

B. Floor Area Ratio. There is no maximum floor area ratio, except that compliance with other sections of this code may limit floor area ratios.

2.2.140 Block Layout and Building Orientation

This section is intended to promote the walkable, storefront character of Boardman Downtown by forming short blocks and orienting (placing or locating) buildings close to streets. Placing buildings close to the street also slows traffic down and provides more "eyes on the street", increasing the safety of public spaces. The standards, as listed on the following page and illustrated above, compliment the front yard setback standards in Section 2.2.120.

A. Applicability. This Section applies to new Land Divisions and all of the following types of development (i.e., subject to Site Design Review):

1. Three or more single family attached townhomes on their own lots (i.e., townhomes subject to Site Design Review);

2. Duplex and tri-plex developments with more than one building (i.e., duplex and tri-plex developments subject to Site Design Review);

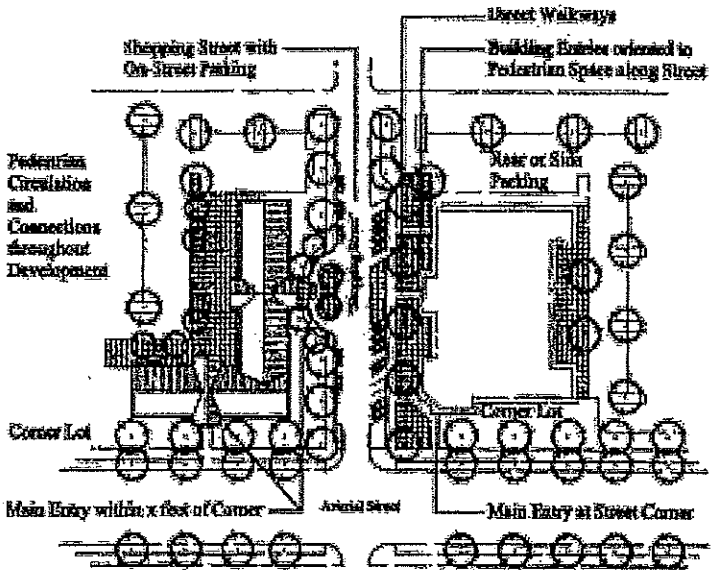
3. Multi-family housing;

4. Public and institutional buildings, except that the standard shall not apply to buildings which are not subject to site design review or those that do not receive the public (e.g., buildings used solely to house mechanical equipment, and similar uses); and

5. Commercial and mixed use buildings subject to site design review.

Compliance with all of the provisions of subsections B through E, below, shall be required.

B. Block Layout Standard. New land divisions and developments which are subject to Site Design Review shall be configured to provide an alley or interior parking court, as shown above. Blocks (areas bound by public street right-of-way) shall have a length not exceeding 200 feet, and a depth not exceeding 200 feet. Pedestrian pathways shall be provided from the street right-of-way to interior parking courts between buildings, as necessary to ensure reasonably safe, direct, and convenient access to building entrances and off-street parking. Exceptions to this standard may be approved when all of the provisions of subsection 'C' (Superblock Development) below are met.

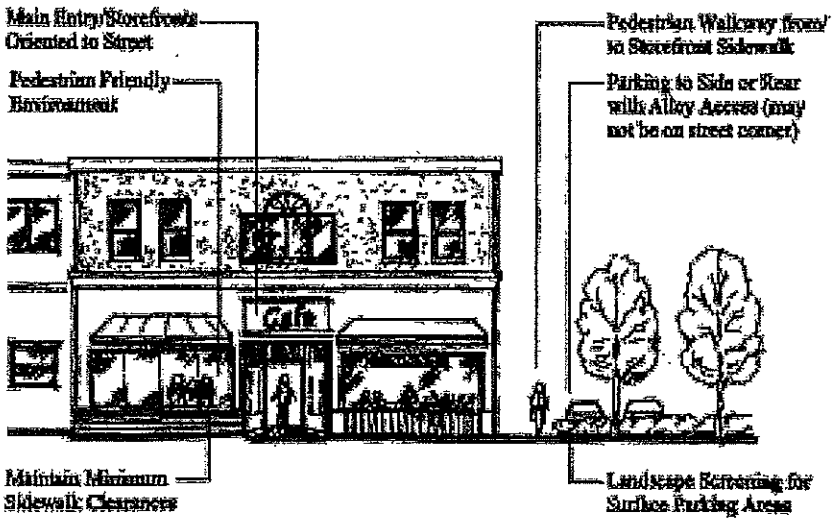


C. **Superblock Developments.** "Superblock developments" shall conform to all of the standards in 1-2 below (See figure):

1. Create a "shopping street". Each development has at least one street or drive designed with the basic elements of a good pedestrian-oriented shopping street: buildings oriented (placed) close to both sides of a "main street", which may be public or private; on-street parking; wide sidewalks (e.g., 8-12 feet typical), street trees; pedestrian-scale lighting and other similar enhancements.

2. Provide usable pedestrian space. Pedestrian space means a plaza or extra-wide pathway/sidewalk near one or more building entrances. Each development provides street trees or planters, space for outdoor seating, canopies or awnings, and on-street parking (in selected areas) to improve the pedestrian environment along internal private drives.

Figure 2.2.140D - Building Orientation (Typical)



D. Building Orientation Standard. All of the developments listed in Section A shall be oriented to a street. The building orientation standard is met when all of the following criteria are met:

1. The minimum and maximum setback standards in Section 2.2.120 are met;

2. Buildings have their primary entrance(s) oriented to (facing) the street. Building entrances may include entrances to individual units, lobby entrances, entrances oriented to pedestrian plazas, or breezeway/courtyard entrances (i.e., to a cluster of units or commercial spaces). Alternatively, a building may have its entrance facing a side yard when a direct pedestrian walkway not exceeding 10 feet in length is provided between the building entrance and the street right-of-way.

3. Off-street parking, driveways or other vehicular circulation shall not be placed between a building and the street which is used to comply with subsection 'b', above. On corner lots, buildings and their entrances shall be oriented to the street corner, as shown above; parking, driveways and other vehicle areas shall be prohibited between buildings and street corners.

E. Variances. The standards of this Section shall not be changed through a Class A Variance. The standard may be varied to address physical constraints, in accordance with the provisions for Class B or C variances in Chapter 5.

2.2.150 Building Height

All buildings in the Boardman Downtown District shall comply with the following building height standards. The standards are intended to allow for development of appropriately-scaled buildings with a storefront character:

A. Maximum Height. Buildings shall be no more than four (4) stories or 50 feet in height, whichever is greater. The maximum height may be increased by 10 feet when housing is provided above the ground floor ("vertical mixed use"), as shown above. The building height increase for housing shall apply only to that portion of the building that contains housing.

B. Method of Measurement. "Building height" is measured as the vertical distance above a reference datum measured to the highest point of the coping of a flat roof or to the deck line of a mansard roof or to the average height of the highest gable of a pitched or hipped roof (See Figure 2.1.170 for examples of measurement). The reference datum shall be selected by either of the following, whichever yields a greater height of building:

1. The elevation of the highest adjoining sidewalk or ground surface within a five-foot horizontal distance of an exterior wall of the building when such sidewalk or ground surface is not more than 10 feet above the lowest grade;

2. An elevation 10 feet higher than the lowest grade when the sidewalk or ground surface described in subsection 'A' is more than 10 feet above the lowest grade. The height of a stepped or terraced building is the maximum height of any segment of the building. Not included in the maximum height are: chimneys, bell towers, steeples, roof equipment, flag poles, and similar features which are not for human occupancy.

2.2.160 Design Standards

A. Purpose and Applicability. The Boardman Downtown design standards are intended to provide detailed, human-scale design, while affording flexibility to use a variety of building styles. This section applies to all of the following types of buildings:

1. Three or more single family attached townhomes on their own lots (i.e., townhomes subject to Site Design Review);

2 Duplex and tri-plex developments with more than one building (i.e., duplex and tri-plex developments subject to Site Design Review);

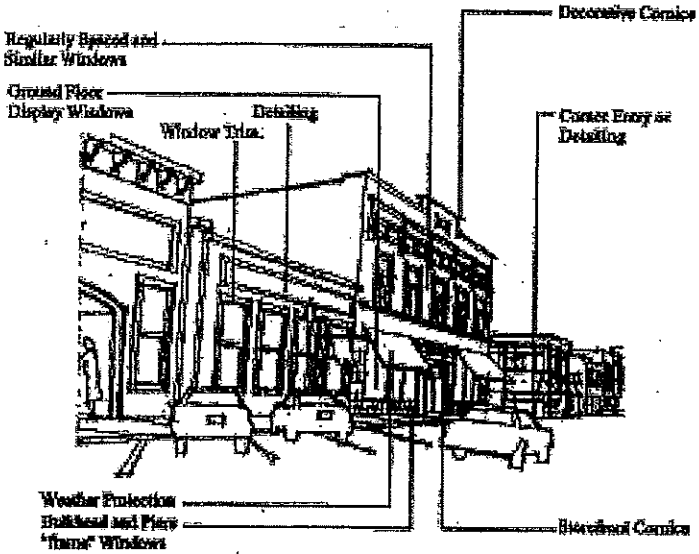
3. Multi-family housing;

4. Public and institutional buildings, except that the standard shall not apply to buildings which are not subject to site design review or those that do not receive the public (e.g., buildings used solely to house mechanical equipment, and similar uses); and

5. Commercial and mixed use buildings subject to site design review.

B. Guidelines and Standards. Each of the following standards shall be met. An architectural feature used to comply with one standard may be used to comply with another standard.

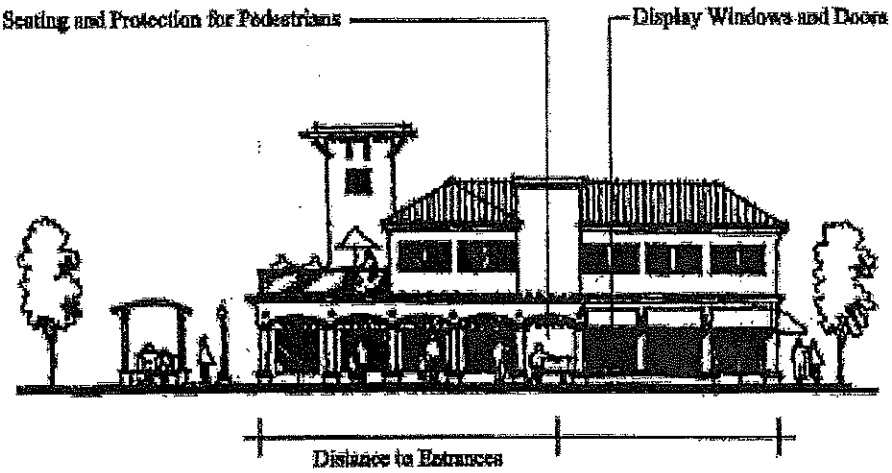
Figure 2.2.160B(1) - [Downtown / Main Street] Building Design Elements (Typical)



1. Detailed Storefront Design. All buildings shall contribute to the storefront character and visual relatedness of Downtownbuildings. This criterion is met by providing all of the architectural features listed in a-e, below, along the front building elevation (i.e., facing the street), as applicable. *[Note: the example shown above is meant to illustrate required building design elements, and should not be interpreted as a required architectural style.]*

a. Corner building entrances on corner lots. Alternatively, a building entrance may be located away from the corner when the building corner is beveled or incorporates other detailing to reduce the angular appearance of the building at the street corner.
b. Regularly spaced and similar-shaped windows with window hoods or trim (all building stories).
c. Large display windows on the ground-floor (non-residential uses only). Display windows shall be framed by bulkheads, piers and a storefront cornice (e.g., separates ground-floor from second story, as shown above).
d. Decorative cornice at top of building (flat roof); or eaves provided with pitched roof.
e. All residential buildings subject to design review shall comply with the Residential District design standards, as listed in Chapter 2.1, Section 190.

Figure 2.2.160B(2) - Design of Large-Scale Buildings and Developments (Typical)



2. Design of Large-Scale Buildings and Developments. The standards in subsection "c", below, shall apply to "Large-Scale Buildings and Developments", as defined in a-b:
   a. Buildings with greater than 20,000 square feet of enclosed ground-floor space (i.e., "large-scale"). Multi-tenant buildings shall be counted as the sum of all tenant spaces within the same building shell; and
   b. Multiple-building developments with a combined ground-floor space (enclosed) greater than 40,000 square feet (e.g., shopping centers, public/institutional campuses, and similar developments).
   c. All large-scale buildings and developments, as defined in a-b, shall provide human-scale design by conforming to all of the following criteria:
      (1) Incorporate changes in building direction (i.e., articulation), and divide large masses into varying heights and sizes, as shown above. Such changes may include building offsets; projections; changes in elevation or horizontal direction; sheltering roofs; terraces; a distinct pattern of divisions in surface materials; and use of windows, screening trees; small-scale lighting (e.g., wall-mounted lighting, or up-lighting); and similar features. *[Note: the example shown above is meant to illustrate examples of these building design elements, and should not be interpreted as a required architectural style.]*

(2) Every building elevation adjacent to a street with a horizontal dimension of more than 100 feet, as measured from end-wall to end-wall, shall have a building entrance; except that buildings elevations that are unable to provide an entrance due to the internal function of the building space (e.g., mechanical equipment, areas where the public or employees are not received, etc.) may not be required to meet this standard. Pathways shall connect all entrances to the street right-of-way, in conformance with Chapter 3.1 - Access and Circulation.

2.2.170 Pedestrian Amenities

A. Purpose and Applicability. This section is intended to complement the building orientation standards in Section 2.2.140, and the street standards in Chapter 3.1, by providing comfortable and inviting pedestrian spaces within the Boardman Downtown District. Pedestrian amenities serve as informal gathering places for socializing, resting, and enjoyment of the City's Downtown, and contribute to a walkable district. This section applies to all of the following types of buildings:

1. Three or more single family attached townhomes on their own lots (i.e., townhomes subject to Site Design Review);

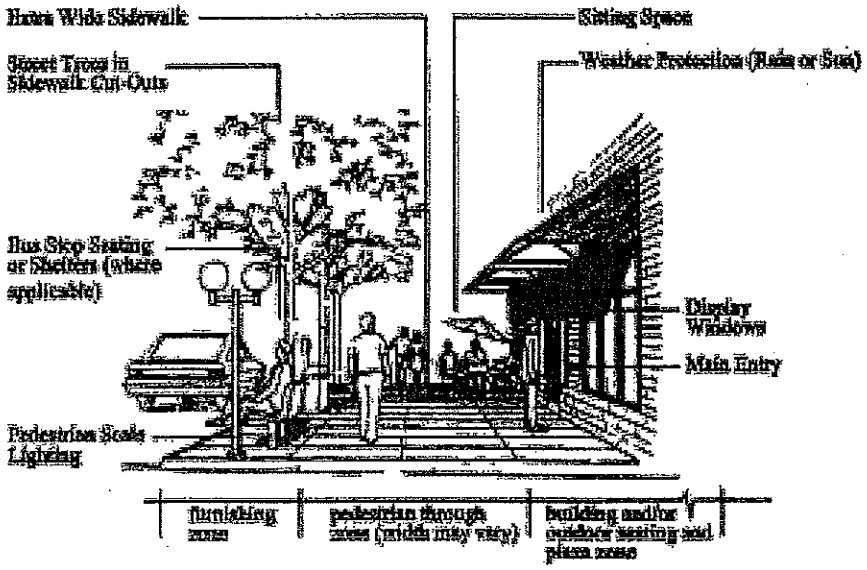
2 Duplex and tri-plex developments with more than one building (i.e., duplex and tri-plex developments subject to Site Design Review);

3. Multi-family housing;

4. Public and institutional buildings, except that the standard shall not apply to buildings which are not subject to site design review or those that do not receive the public (e.g., buildings used solely to house mechanical equipment, and similar uses); and

5. Commercial and mixed use buildings subject to site design review.

Figure 2.2.170 - Pedestrian Amenities (Typical)



B. Guidelines and Standards. Every development shall provide one or more of the "pedestrian amenities" listed in 1-4, below, and illustrated above. *[Note: the example shown above is meant to illustrate examples of pedestrian amenities. Other types of amenities and designs may be used.]* Pedestrian amenities may be provided within a public right-of-way when approved by the applicable jurisdiction.

1. A plaza, courtyard, square or extra-wide sidewalk next to the building entrance (minimum width of 15 feet);

2. Sitting space (i.e., dining area, benches or ledges between the building entrance and sidewalk (minimum of 16 inches in height and 30 inches in width);

3. Building canopy, awning, pergola, or similar weather protection (minimum projection of 4 feet over a sidewalk or other pedestrian space).

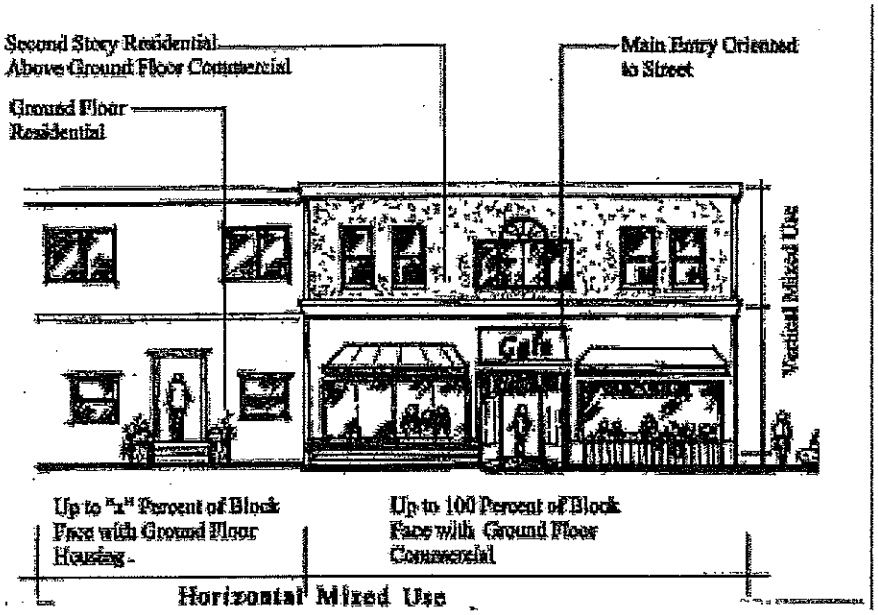
4. Public art which incorporates seating (e.g., fountain, sculpture, etc.).

2.2.180 Special Standards for Certain Uses

This section supplements the standards contained Sections 2.2.100 through 2.2.170. It provides standards for the following land uses in order to control the scale and compatibility of those uses within the Residential District:

- **Residential Uses**
- **Bed and Breakfast Inns and Vacation Rentals**
- **Public and Institutional Uses**
- **Accessory Uses and Structures**
- **Automobile-Oriented Uses and Facilities**
- **Outdoor Storage and Display**
- **Light Manufacture**

A. **Residential Uses.** Higher density residential uses, such as multi-family buildings and attached townhomes, are permitted to encourage housing near employment, shopping and services. All residential developments shall comply with the standards in 1-6, below, which are intended to require mixed use development; conserve the community's supply of commercial land for commercial uses; provide for designs which are compatible with a storefront character; avoid or minimize impacts associated with traffic and parking; and ensure proper management and maintenance of common areas. Residential uses which existed prior to the effective date of this code are exempt from this Section.



1. Mixed Use Development Required. Residential uses shall be permitted only when part of a mixed use development (residential with commercial or public/institutional use). Both "vertical" mixed use (housing above the ground floor), and "horizontal" mixed use (housing on the ground floor) developments are allowed, subject to the standards in 2-6.

2. Limitation on street-level housing. No more than 50 percent of a single street frontage may be occupied by residential uses. This standard is intended to reserve storefront space for commercial uses and public/institutional uses; it does not limit residential uses above the street level on upper stories, or behind street-level storefronts.
3. Density. There is no minimum or maximum residential density standard. Density shall be controlled by the applicable lot coverage, floor area, and building height standards.

4. Parking, Garages, and Driveways. All off-street vehicle parking, including surface lots and garages, shall be oriented to alleys, placed underground, placed in structures above the ground floor, or located in parking areas located behind or to the side of the building; except that side-yards facing a street (i.e., corner yards) shall not be used for surface parking. All garage entrances facing a street (e.g., underground or structured parking) shall be recessed behind the front building elevation by a minimum of 6 feet. On corner lots, garage entrances shall be oriented to a side-street (i.e., away from Main Street when access cannot be provided from an alley.

5. Creation of Alleys. When a subdivision (e.g., four or more townhome lots) is proposed, a public or private alley shall be created for the purpose of vehicle access. Alleys are not required when existing development patterns make construction of an alley impracticable. As part of a subdivision, the City may require dedication of right-of-way or easements, and construction of pathways between townhome lots (e.g., between building breaks) to provide pedestrian connections through a development site, in conformance with Chapter 3.1- Access and Circulation.

6. Common Areas. All common areas (e.g., walkways, drives, courtyards, private alleys, parking courts, etc.) and building exteriors shall be maintained by a homeowners association or other

legal entity. Copies of any applicable covenants, restrictions and conditions shall be recorded and provided to the city prior to building permit approval.

B. Public and Institutional Uses. Public and institutional uses (as listed in Table 2.2.110.A) are allowed in the Boardman Downtown District, except that automobile-oriented uses shall comply with the standards in "E", below.

C. Accessory Uses and Structures. Accessory uses and structures are of a nature customarily incidental and subordinate to the principal use or structure on the same lot. Typical accessory structures in the Boardman Downtown District include small workshops, greenhouses, studios, storage sheds, and similar structures. Accessory uses and structures are allowed for all permitted land uses within the Boardman Downtown District, as identified in Table 2.2.2.A. Accessory structures shall comply with the following standards:

1. Primary use required. An accessory structure shall not be allowed before or without a primary use, as identified in Table 2.2.110.A.

2. Setback standards. Accessory structures shall comply with the setback standards in Section 2.2.120.

3. Design guidelines. Accessory structures shall comply with the Boardman Downtown design guidelines, as provided in Section 2.2.160.

4. Restrictions. A structure shall not be placed over an easement that prohibits such placement. No structure shall encroach into the public right-of-way.

5. Compliance with subdivision standards. The owner may be required to remove an accessory structure as a condition of land division approval when removal of the structure is necessary to comply with setback standards.

E. Automobile-Oriented Uses and Facilities. Automobile-oriented uses and facilities, a defined below, shall conform to all of the following standards in the Boardman Downtown District. The standards are intended to provide a vibrant storefront character, slow traffic down, and encourage walking.

1. Parking, Garages, and Driveways. All off-street vehicle parking, including surface lots and garages, shall be accessed from alleys, placed underground, placed in structures above the ground floor, or located in parking areas located behind or to the side of a building; except that side-yards on corner lots shall not be used for surface parking. All garage entrances facing a street (e.g., underground or structured parking) shall be recessed behind the front elevation by a minimum of 6 feet. On corner lots, garage entrances shall be oriented to a side-street (i.e., away from Main Street when vehicle access cannot be provided from an alley. Individual surface parking lots shall not exceed a total of 50 parking spaces, or one-half city block, whichever is smaller; larger parking areas shall be in multiple story garages.

2. Automobile-Oriented Uses. "Automobile-oriented use" means automobiles and/or other motor vehicles are an integral part of the use. These uses are restricted because, when unrestricted, they detract from the pedestrian-friendly, storefront character of the district and can consume large amounts of land relative to other permitted uses. Automobile-oriented uses shall comply with the following standards:

   a. Drive-up, drive-in, and drive-through facilities. Drive-up, drive-in, and drive-through facilities (e.g., associated with restaurants, banks, car washes, and similar uses) are permitted only when accessory to a primary commercial "walk-in" use, and shall conform to all of the following standards:
      1. The facility receives access from an alley or driveway, and not a street;
      2. None of the drive-up, drive-in or drive-through facilities (e.g., driveway queuing areas, windows, teller machines, service windows, drop-boxes, and similar facilities) are located within 20 feet of a street and shall not be oriented to a street corner. (Walk-up only teller machines and kiosks may be oriented to a corner);
      3. The facility is subordinate to a primary permitted use. "Subordinate" means all components of the facility, in total, occupy less street frontage than the primary commercial or public/institutional building; and
      4. No more than one drive-up, drive-in, or drive-through facility shall be permitted on one block, or for a distance of 400 linear feet along the same street frontage, whichever is less.

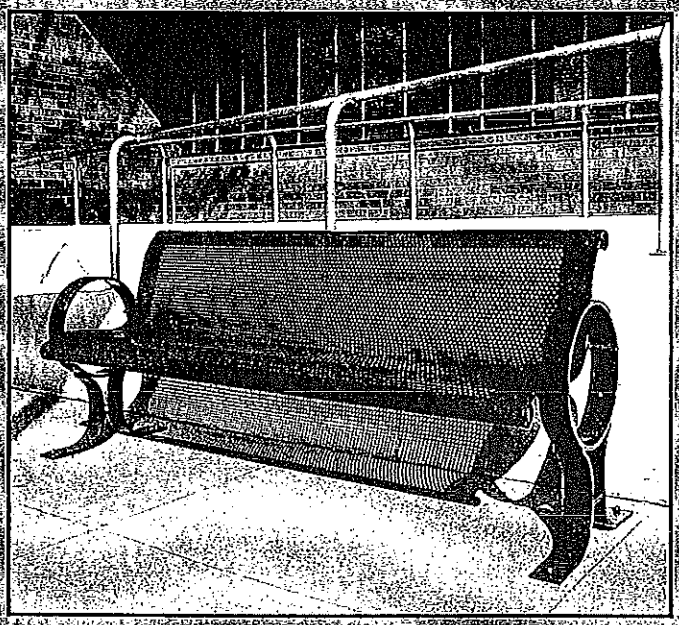
F. Sidewalk Displays. Sidewalk display of merchandise and vendors shall be limited to cards, plants, gardening/floral products, food, books, newspapers, bicycles, and similar small items for sale or rental to pedestrians (i.e., non-automobile oriented). A minimum clearance of 6 feet shall be maintain. Display of larger items, such as automobiles, trucks, motorcycles, buses, recreational vehicles/boats, construction equipment, building materials, and similar vehicles and equipment, is prohibited.

G. Light Manufacture. Light manufacture uses are allowed in the Downtown. "Light manufacture" means production or manufacturing of small-scale goods, such as crafts, electronic equipment, bakery products, printing and binderies, furniture, and similar goods. Light manufacture uses shall conform to all of the following standards which are intended to protect the pedestrian-friendly, storefront character of Boardman Downtown:

1. Retail or Service Use Required. Light manufacture is allowed only when it is in conjunction with a permitted retail or service use and does not exceed 50 percent of the gross floor area.

2. Location. The light manufacture use shall be enclosed within a building, or shall be located within a rear yard not adjacent to a street.

APPENDIX B. STREET FURNITURE EXAMPLES



MODEL 59 BENCH

Ten gauge perforated steel gently contoured into a comfortable seating surface is the heart of this bench.

Materials:
Seating Surface: 10 gauge perforated steel.
Supports and End Straps: 1/2" x 3" steel bar.
Fasteners: 3/8" diameter plated.
Finish: Baked on polyester powder in choice of black, blue, bronze, green (shown), or deep red.

59-60 6' long bench, 2 supports, wt. 196 lbs.
59-80 8' long bench, 2 supports, wt. 222 lbs.

Specify color.

Support Options:
S-1 Embedment
S-2 Surface Plate
S-3 Gull Wing
S-4 Sub Floor

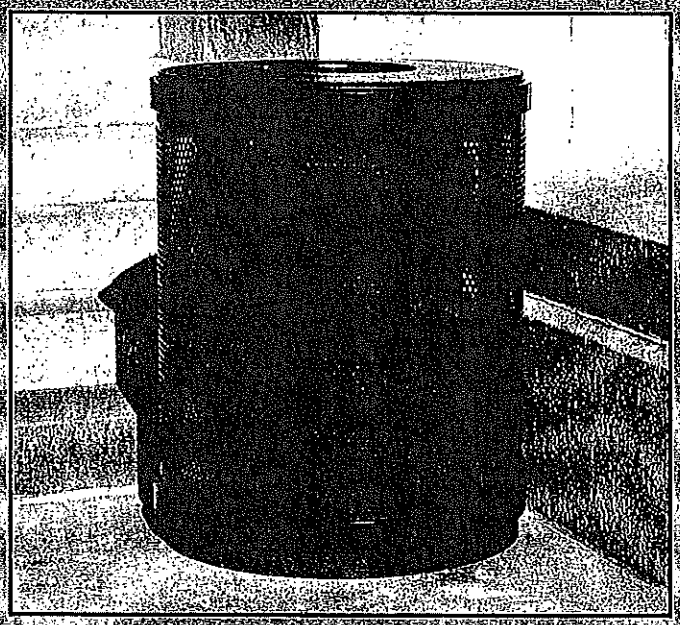
MODEL 89 RECEPTACLE

The 14 gauge steel of this receptacle is perforated in the same pattern as our 59 Series benches and is furnished complete with the No. 45-00 polyethylene liner and a 22 gallon plastic liner. Provisions for anchoring are provided.

Materials:
Body: 14 gauge perforated steel.
Frame: 1/4" x 2" and 1/2" x 2" and 3/8" x 1" steel bar.
Reveal Strip: 1/4" x 3/4" steel bar.
Liner: 22 gallon plastic.
Top: Polyethylene with plastic coated cable.
Finish: Baked on polyester powder in choice of black, blue, bronze, green (shown) or deep red.

89-00 All steel receptacle, wt. 41 lbs.

Specify color.

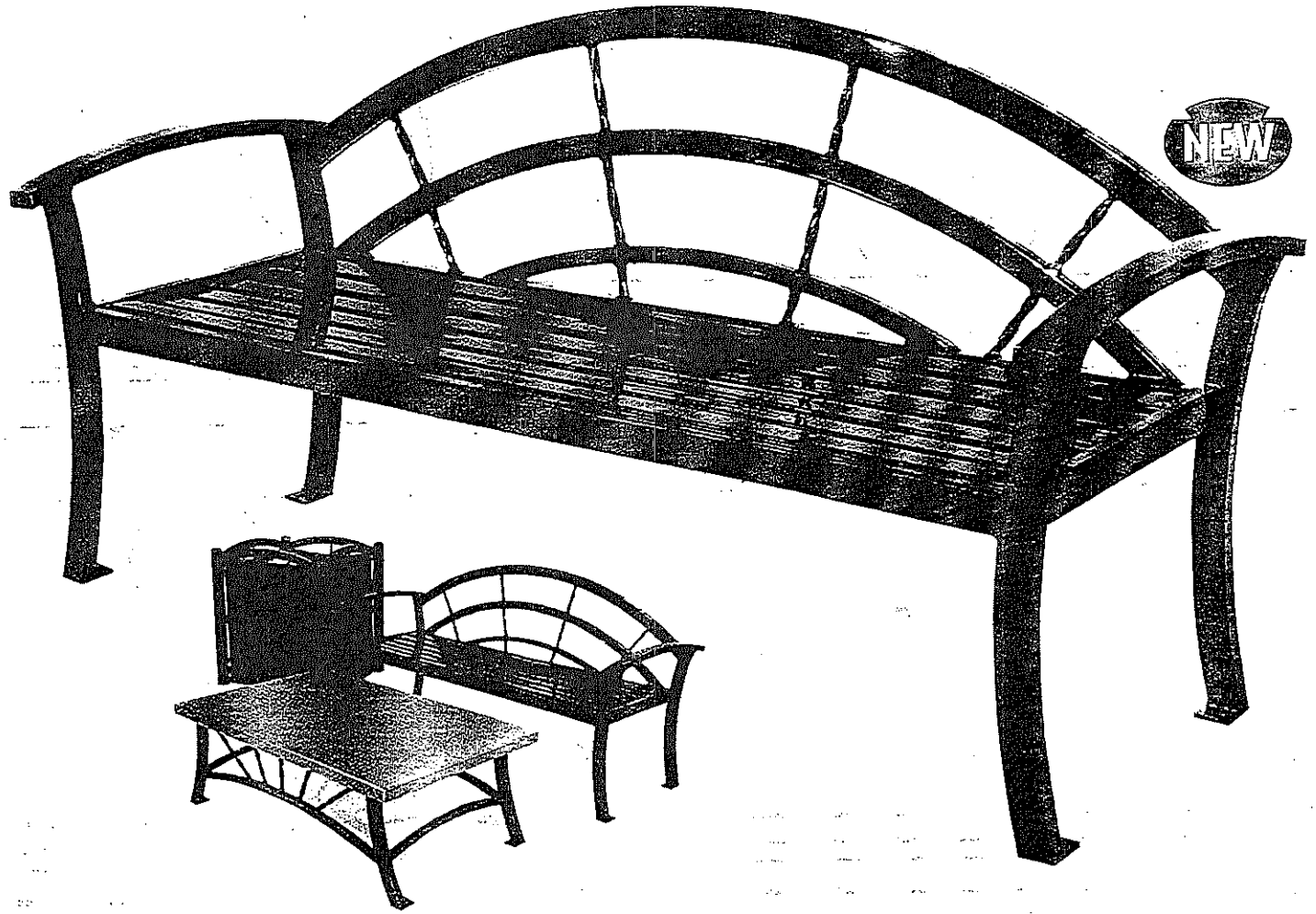


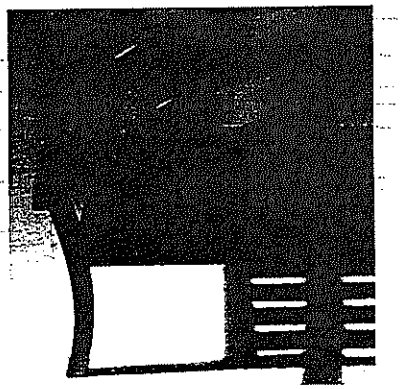
Kerrington Series

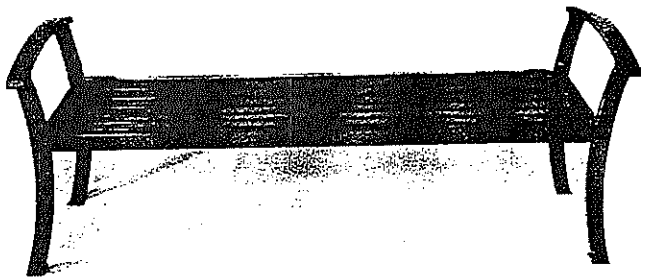
(Patent Pending)

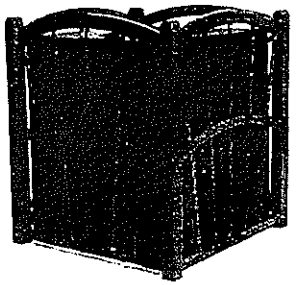
With flowing curves and a cottage-like appeal, the Kerrington embodies the English garden persona, bringing charm and grace to commercial site furniture. An appropriate selection for creating interactive space, we completed this series with a table to create an outdoor sitting room.

- Spiraled steel accents the back design to add a lively touch
- Table is available with stainless or powder coated steel top
- Bench available with back or flat in any length, mounting or standard color
- Litter receptacle includes powder coated steel liner, flat lid, anti-theft lanyard in either 22- or 32-gallon capacity with any mounting or standard color; optional lid and liners *(see page 22)*
- Exclusive KEYSHIELD™ polyester powder coating finish—our stamp of armored excellence that is foremost in the industry









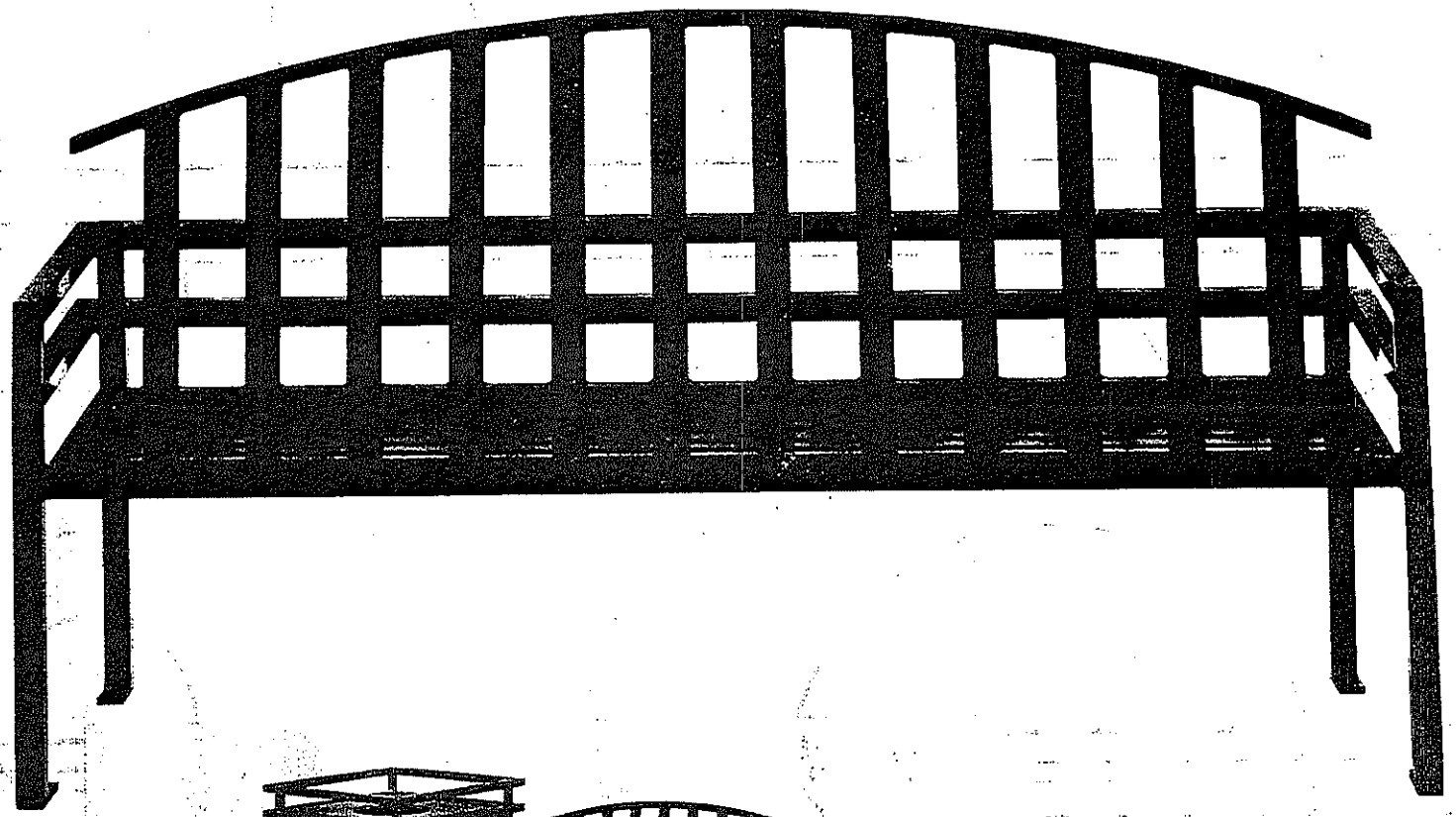
KE24	Kerrington bench w/back 4'	$795
KE26	Kerrington bench w/back 6'	$895
KE28	Kerrington bench w/back 8'	$1095
KE14	Kerrington flat bench 4'	$630
KE16	Kerrington flat bench 6'	$690
KE18	Kerrington flat bench 8'	$790
KE3-22	Kerrington litter 22 gal.	$825
KE3-32	Kerrington litter 32 gal.	$880
KERT	Kerrington table with powder coated top	$775
KERT-S	Kerrington table with stainless steel top	$1250

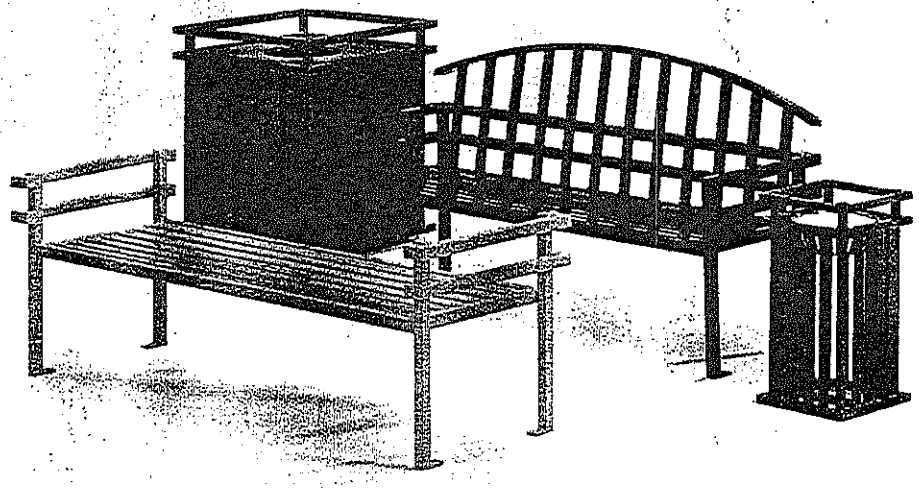
McConnell Series

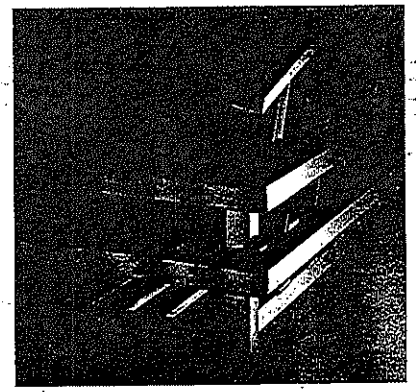
(Patent No. Des. 413,449)

In the style of the Arts and Crafts movement, the McConnell bench focuses attention on the creation of the heart and hand. A regal appearance is dramatized by the arm design with evidence of horizontal lines and artistic engineering. The back is crowned with an arc, completing this period recreation.

- Double steel reinforcement in the arms of the bench
- Curved rectangular tubing accents top of bench
- Bench available with back or flat in any length, mounting or standard color
- Litter receptacle includes liner, flat lid, anti-theft lanyard in either 22- or 32-gallon capacity with any mounting or standard color; optional lid and liners *(see page 22)*
- Exclusive KEYSHIELD™ polyester powder coating finish—our stamp of armored excellence that is foremost in the industry







MC24	McConnell bench w/back 4'	$785
MC26	McConnell bench w/back 6'	$860
MC28	McConnell bench w/back 8'	$960
MC14	McConnell flat bench 4'	$585
MC16	McConnell flat bench 6'	$640
MC18	McConnell flat bench 8'	$740
MC3-22	McConnell litter 22 gal.	$855
MC3-32	McConnell litter 32 gal.	$905
MC5	McConnell ash urn	$425
MCA5	McConnell ash/trash combo	$525

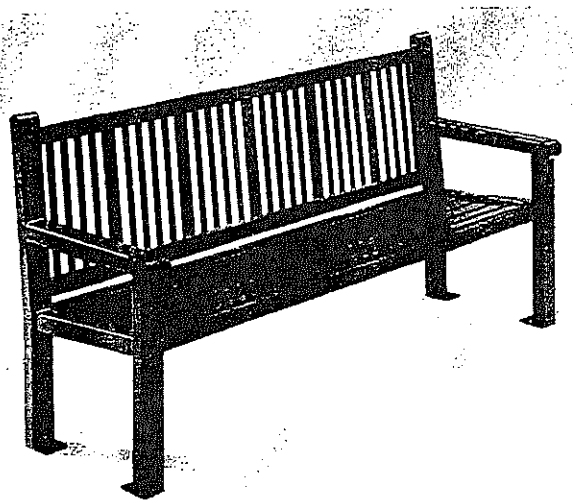
Reading Series

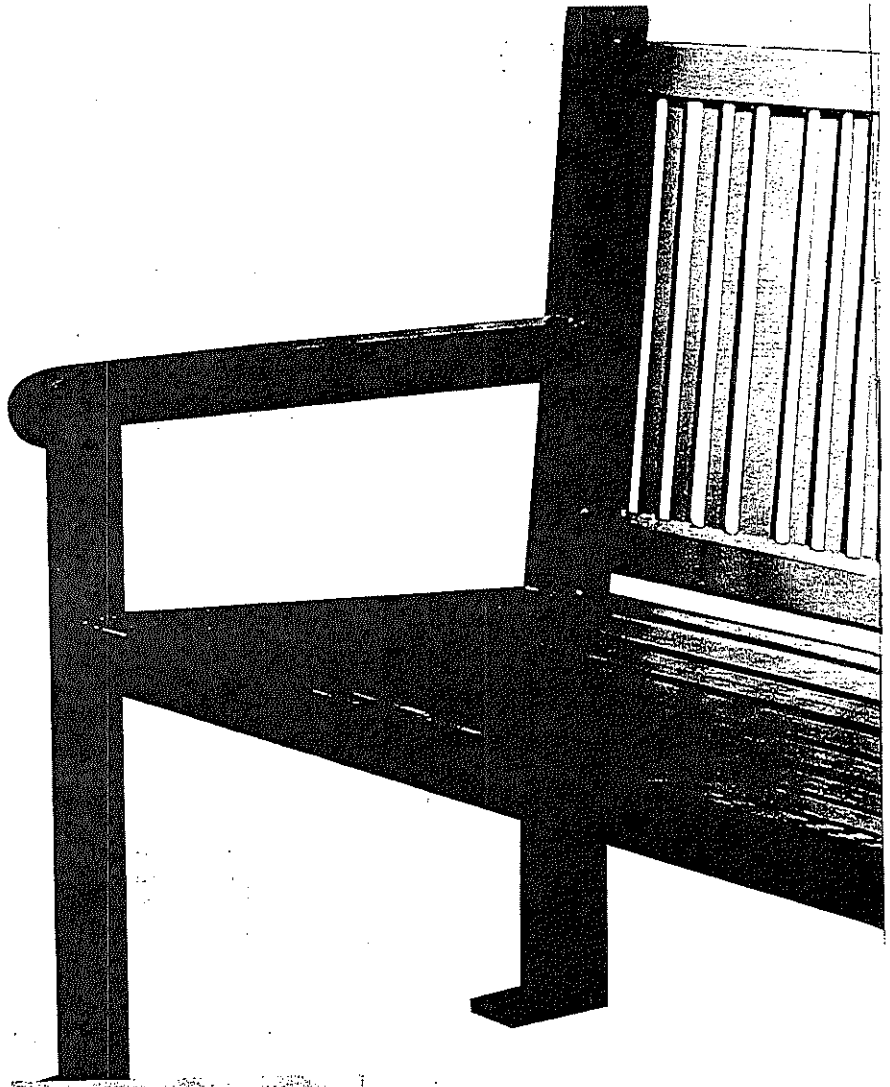
(Patent No. Des. 376,270)

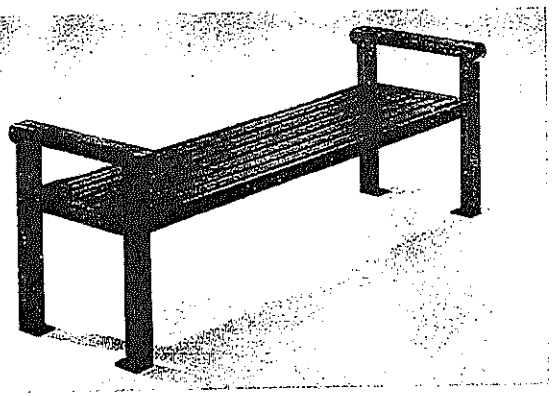
Designed in the style of a wooden garden bench, this patented sturdy metal bench is equally at home in a train station or an exclusive mall.

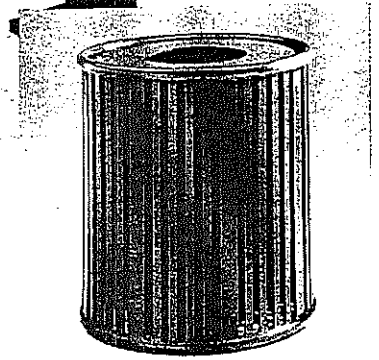
- Bench available with back or flat in any length, mounting or standard color
- Litter receptacle includes plastic liner, flat lid, anti-theft lanyard in either 22- or 32-gallon capacity with any mounting or standard color; optional lid and liners *(see page 22)*
- Exclusive KEYSHIELD™ polyester powder coating finish—our stamp of armored excellence that is foremost in the industry

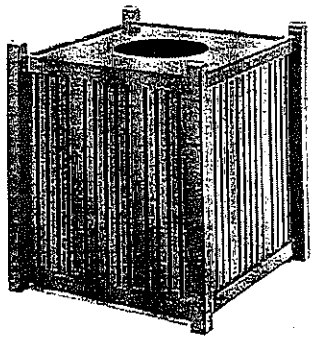
RE22	Reading chair	$745
RE24	Reading bench w/back 4'	$795
RE26	Reading bench w/back 6'	$895
RE28	Reading bench w/back 8'	$1095
RE14	Reading flat bench 4'	$630
RE16	Reading flat bench 6'	$690
RE18	Reading flat bench 8'	$790
RE2CU6	Curved Reading w/back 6'	$1200



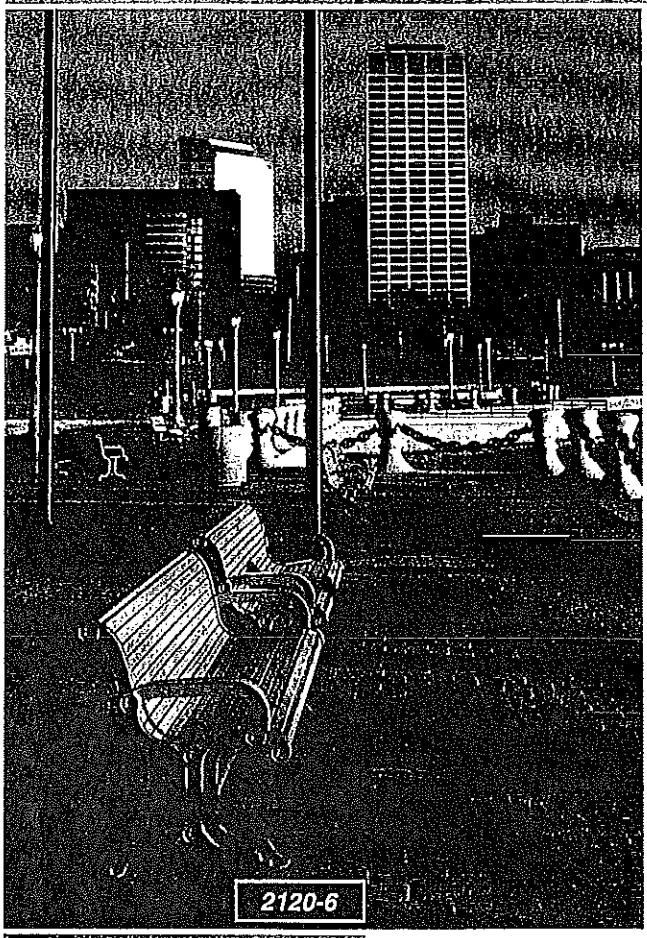


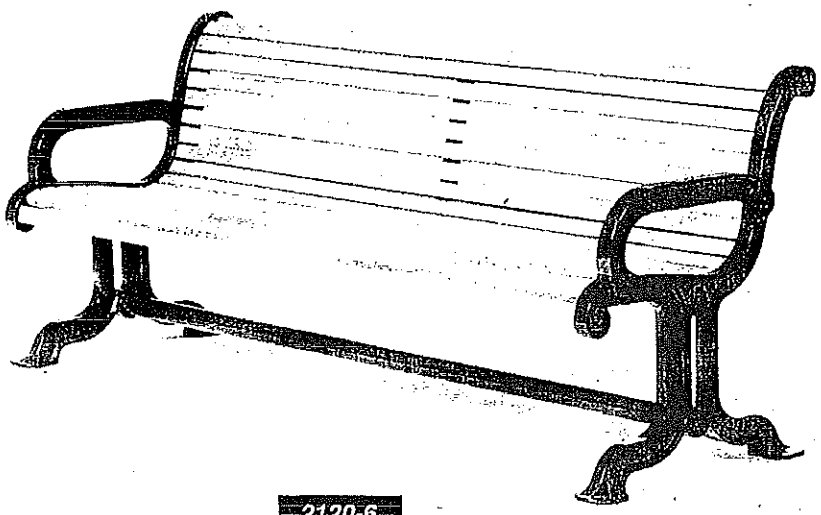






Columbia Cascade TimberForm® Restoration™


2120-6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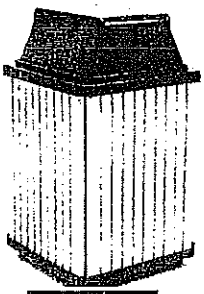
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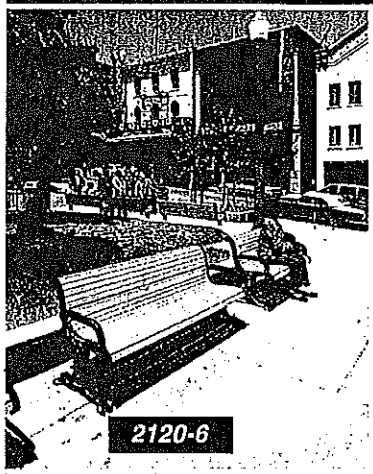
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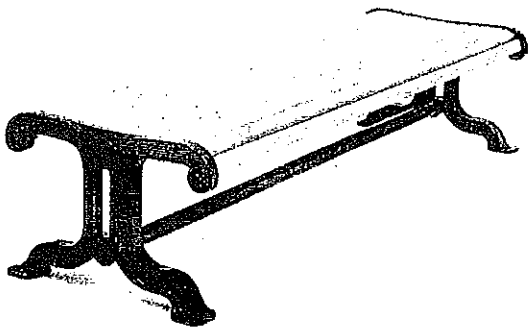
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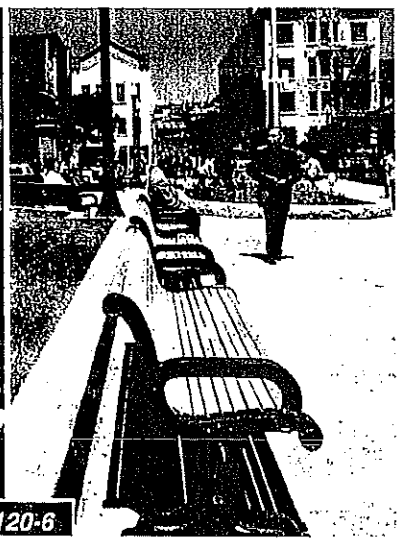
2120-6



TimberForm Restoration

The TimberForm Restoration series is a twin family of site furnishings featuring benches and seats with cast iron frames and wood slats. Matching wood surrounds appear on the litter container, ash receptacle and planter.

Two design series are offered. One, the 2118 style (facing page), features wide sweeping armrests with a rose relief cast in the bench and seat ends. It was the recipient of the prestigious "G-Mark" of design excellence from the Japanese government. The other, the 2120 style (this page), is a classical civic furniture design with simplified elements. Each style has been successfully used for interior and exterior applications throughout the world.

Symbols and Logos

Custom symbols and graphics can be included in relief on seat and bench ends replacing the existing motifs.

Seating Surfaces

Wood seating surfaces are offered in kiln-dried Alaska yellow cedar, Marine Teak or Purpleheart.

Seating Options

Long lengths, intermediate support frames and armrests are offered.

Litter Containers

Matching wood surrounds a metal 21- or 36-gallon steel liner. Top options: Open Top; Flat Top; Domed Top; Ash/Dome Top; Hamper Top; Hamper Top with ash tray; or Hamper Top with covered ash tray.

Complementary Accessories

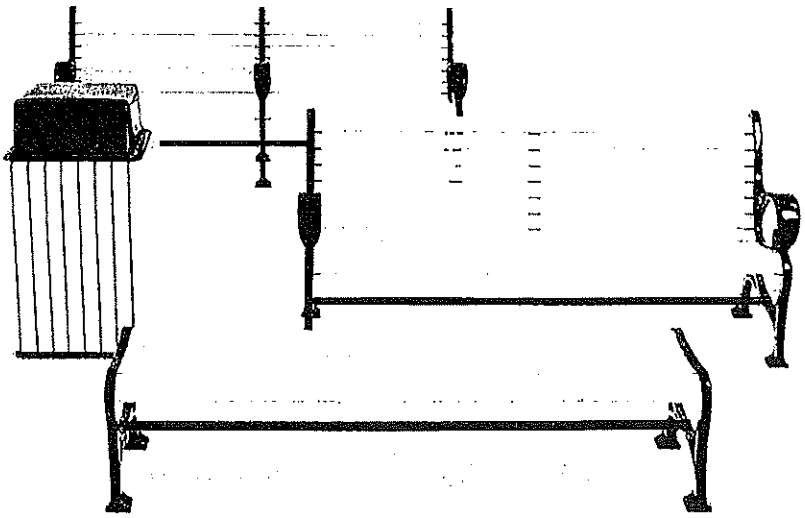
Matching ash receptacles and planters.

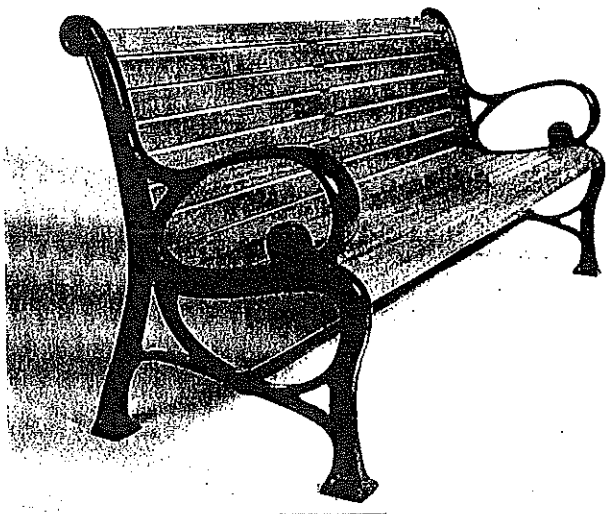
Colors

Choose from ten standard and over 170 special CASPAX-7 designer colors.

Mounting

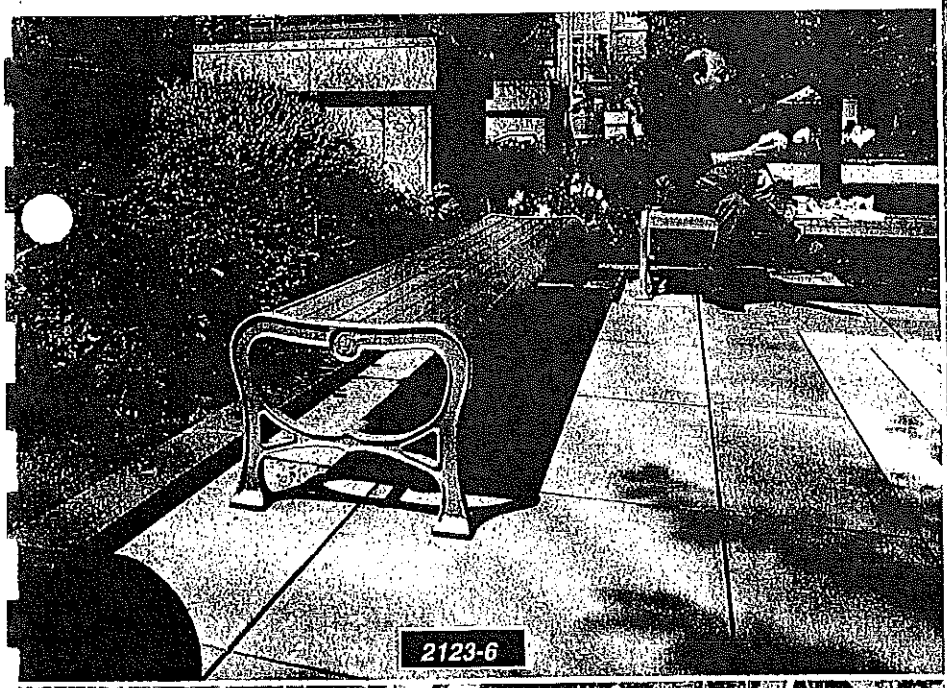
Permanent surface mounting or movable applications.



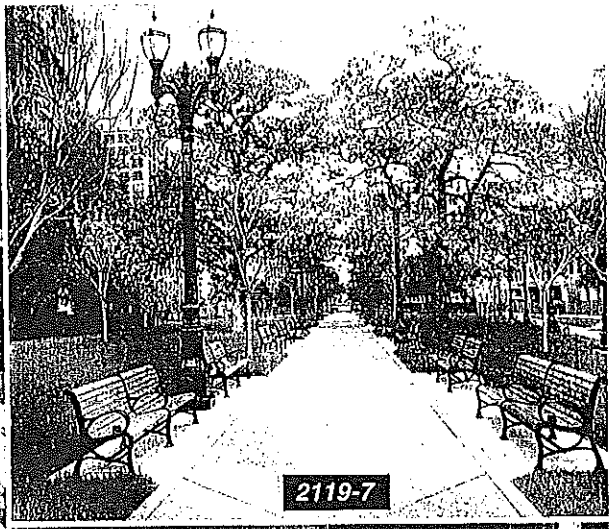


2118-6

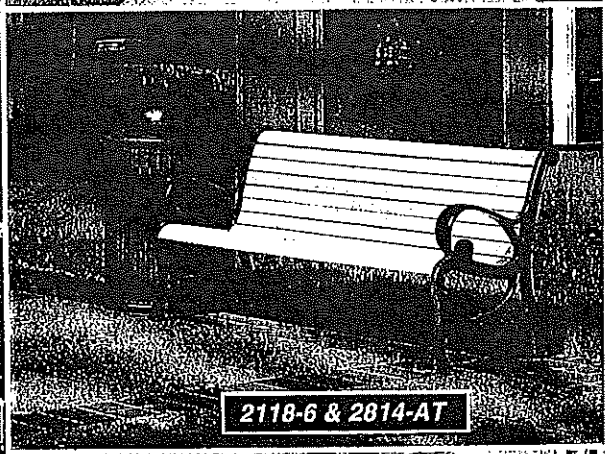
Front to back 2123-6, 2107-HT, 2118-6, 2119-7



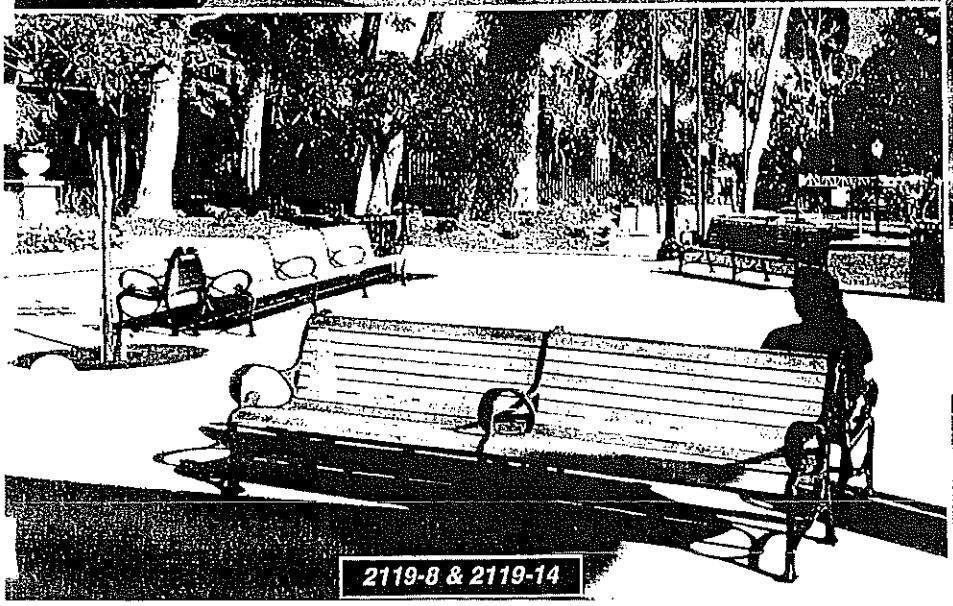
2123-6



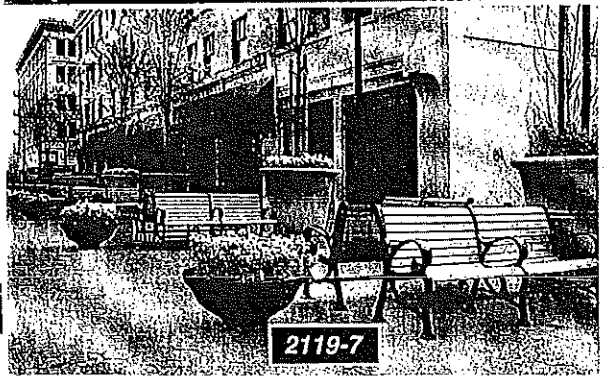
2119-7



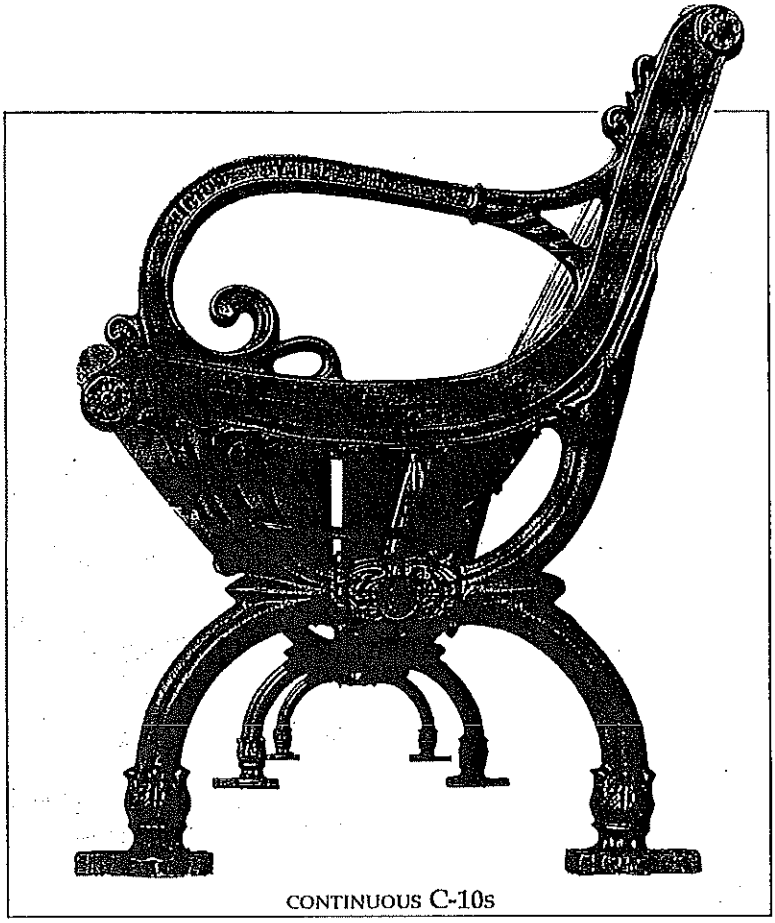
2118-6 & 2814-AT



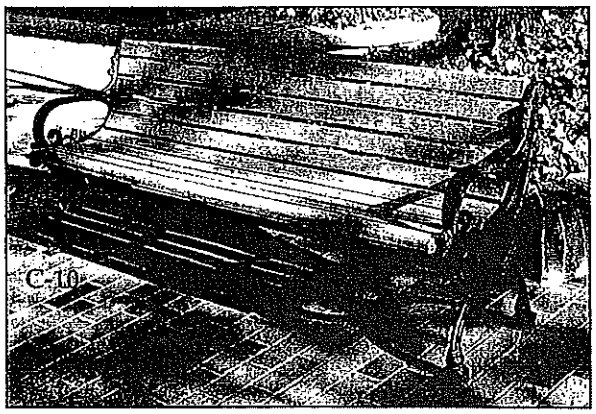
2119-8 & 2119-14



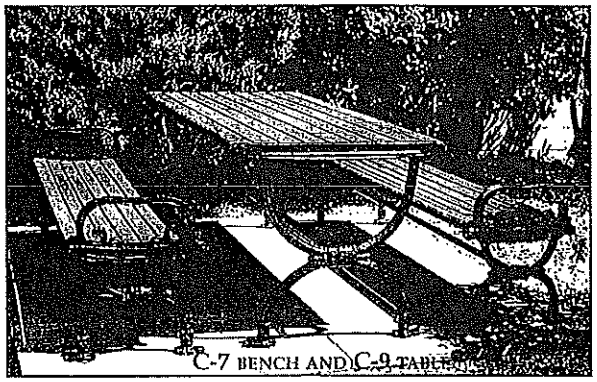
2119-7



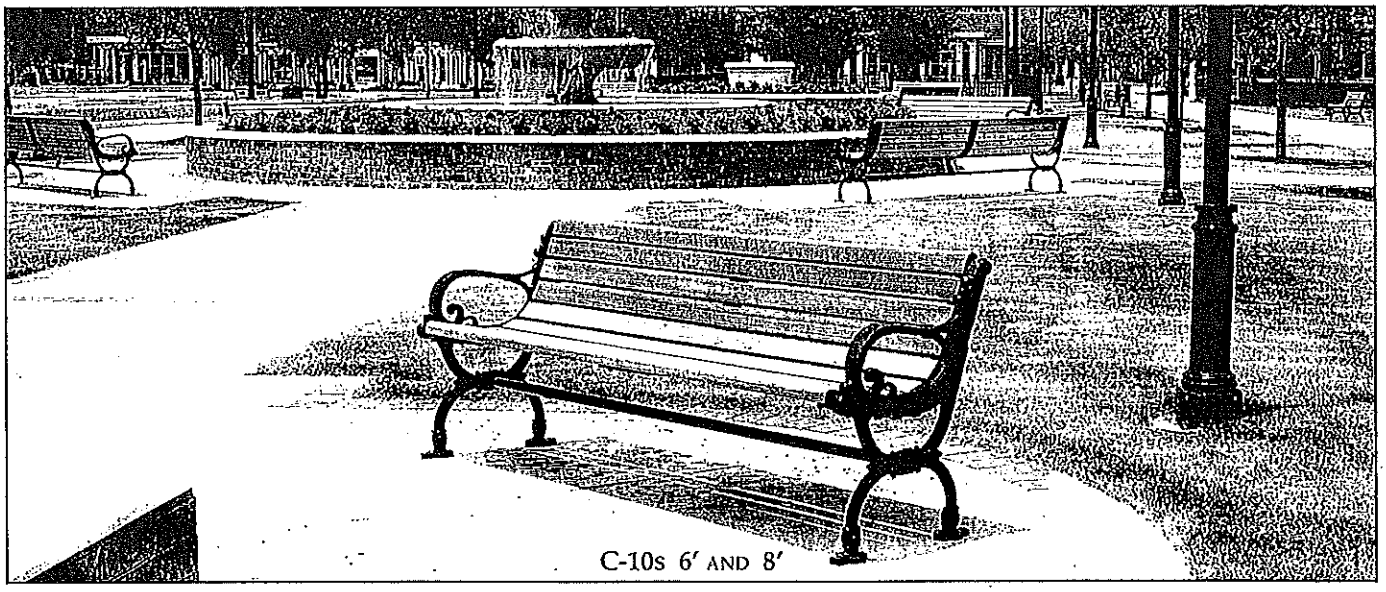
CONTINUOUS C-10s



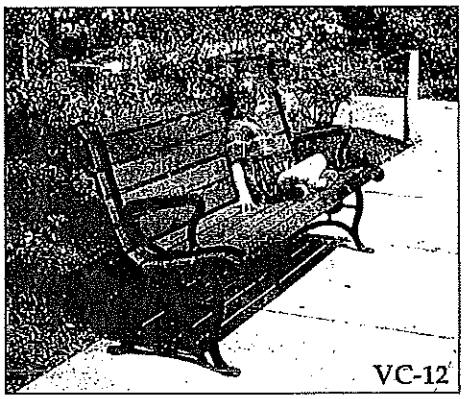
C-10



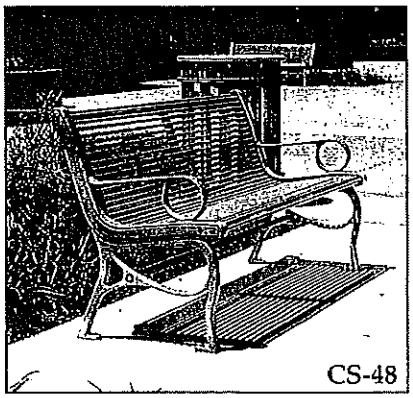
C-7 BENCH AND C-9 TABLE



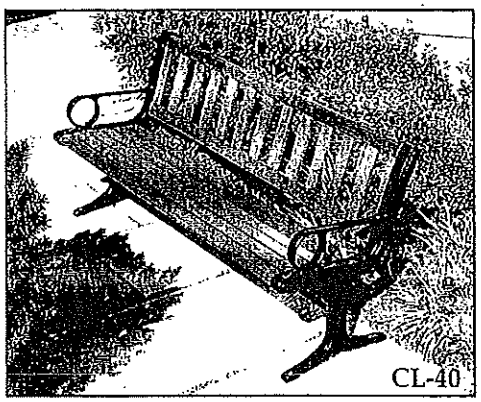
C-10s 6′ AND 8′



VC-12



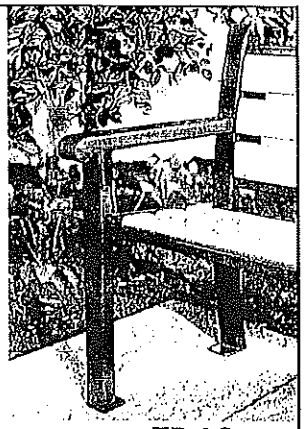
CS-48



CL-40

No-More-Compromises

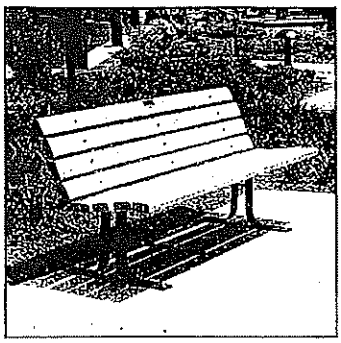
Now You Can Use Recycled Plastic Products Without Compromising Design, Durability, Appearance or Comfort...



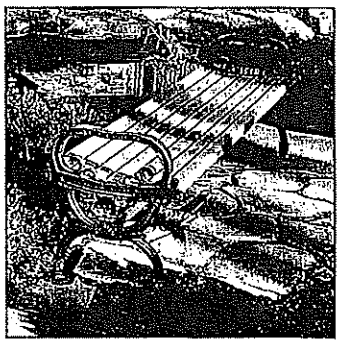
TB-6 Settee

The remarkable 2nd Sites Systems® materials combine recycled plastic and steel in a system designed to be "plug-compatible" with the best wood slats available. They are durable and attractive, with molded-through color and UV-resistance. They shed water and resist rot. They are easily cleaned and highly stain resistant.

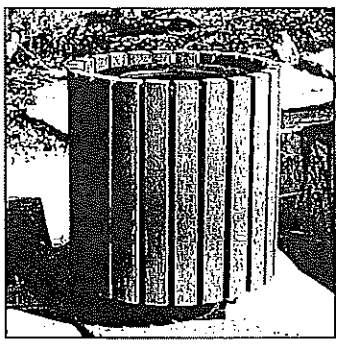
Colors include tan, brown, reddish-brown and weathered gray. From a distance, they look like the wood that they replace. Up close, they are comfortable to sit on and incredibly strong. They truly serve the dual roles of creatively using recyclable resources and providing superb design options.



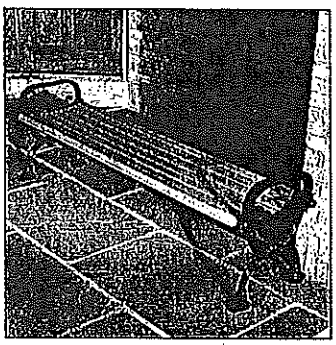
Model 8 with Gullwing Legs



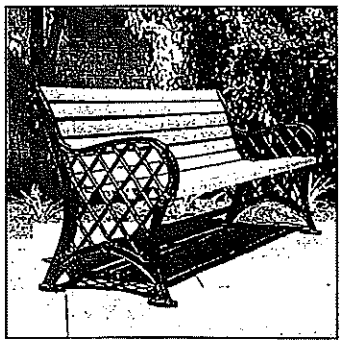
C-7



HF-24 (standard recycled slats)

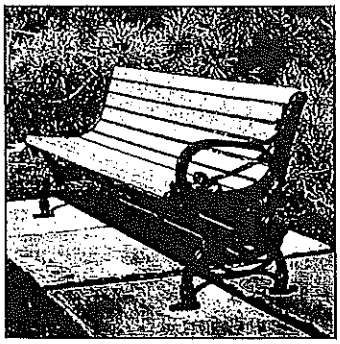


C-7

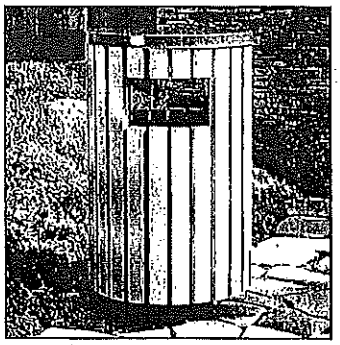


C-97

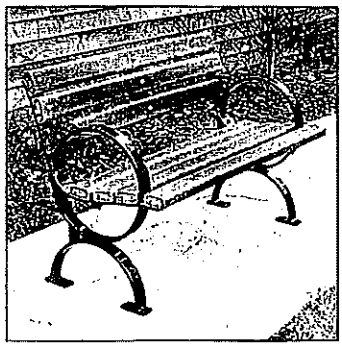
C-10



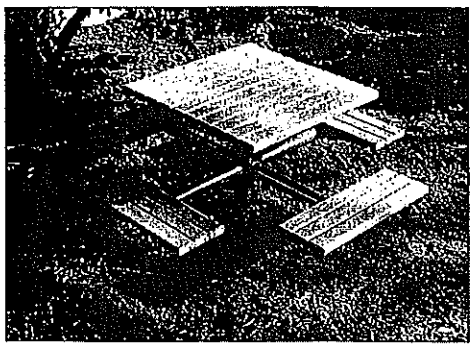
C-10



HPF-24 (standard recycled slats)



FR-7



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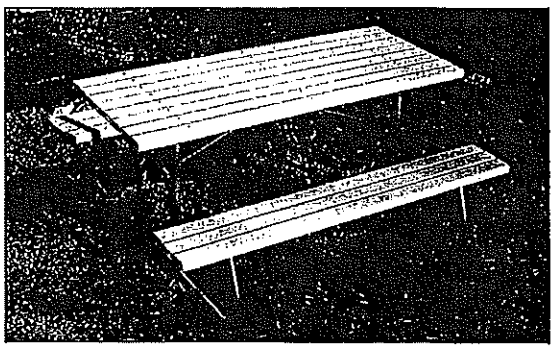
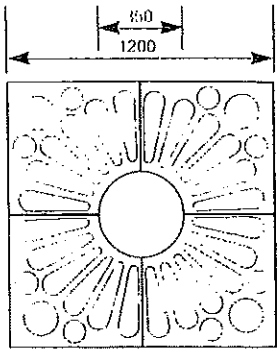
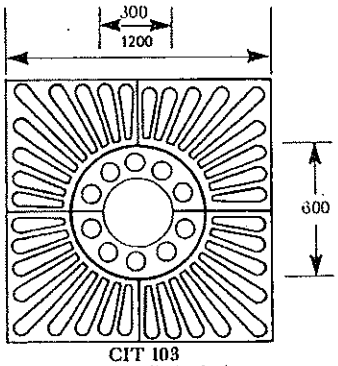


ST-5

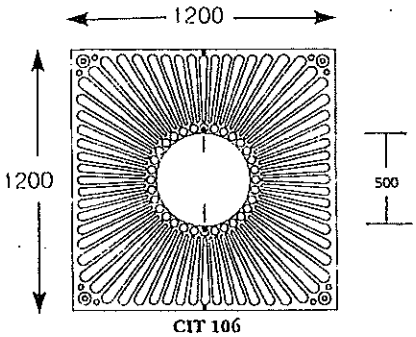
steel support frames as standard and locking devices can be supplied to prevent un-authorised removal. All tree grilles can be fully integrated with our tree guard range.
Tree grilles can be supplied in either natural finish or fully painted with a rust preventative paint.



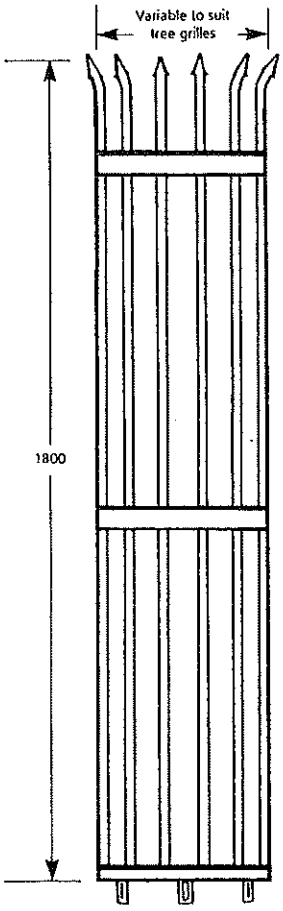
CIT 101
Square Tree Grille in 4 pieces.



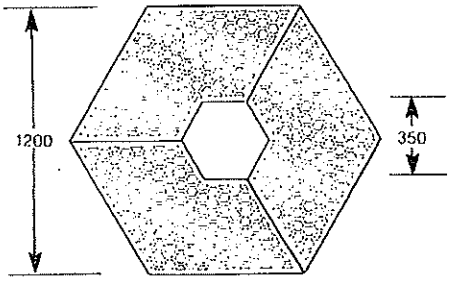
CIT 103
Square Tree Grille in 6 pieces.



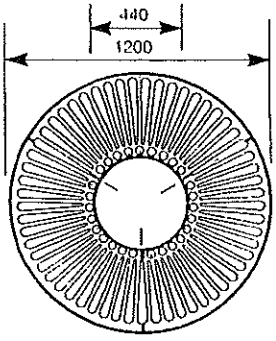
CIT 106
Square Tree Grille in 2 pieces.
Also available 900 x 900



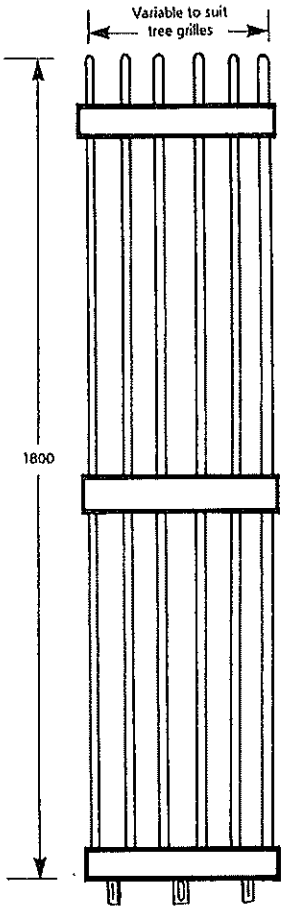
STG 203



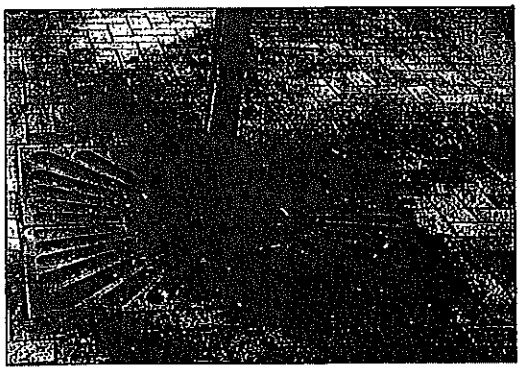
CIT 102
Hexagonal Tree Grille in 3 pieces. Thickness 22mm.



CIT 105
Also available in 2m diameter.

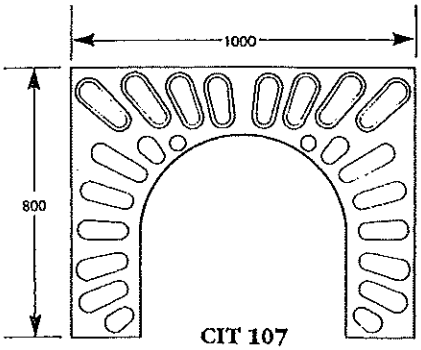


STG 204

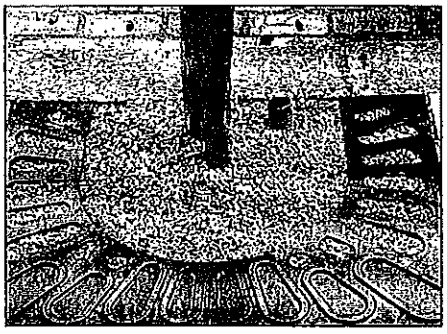


CIT 103

THE PROBLEM



CIT 107

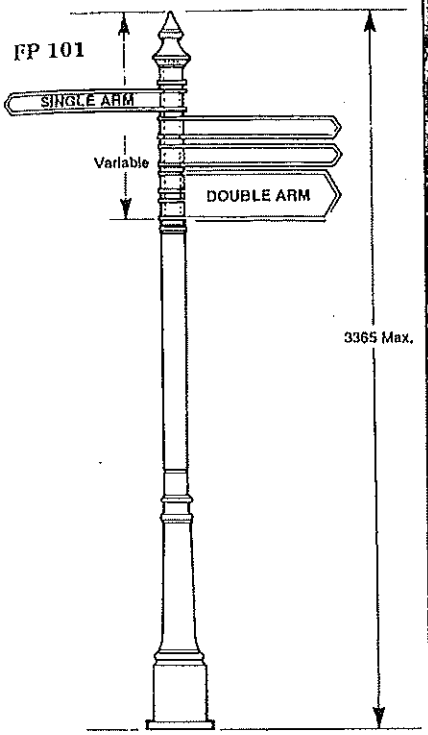


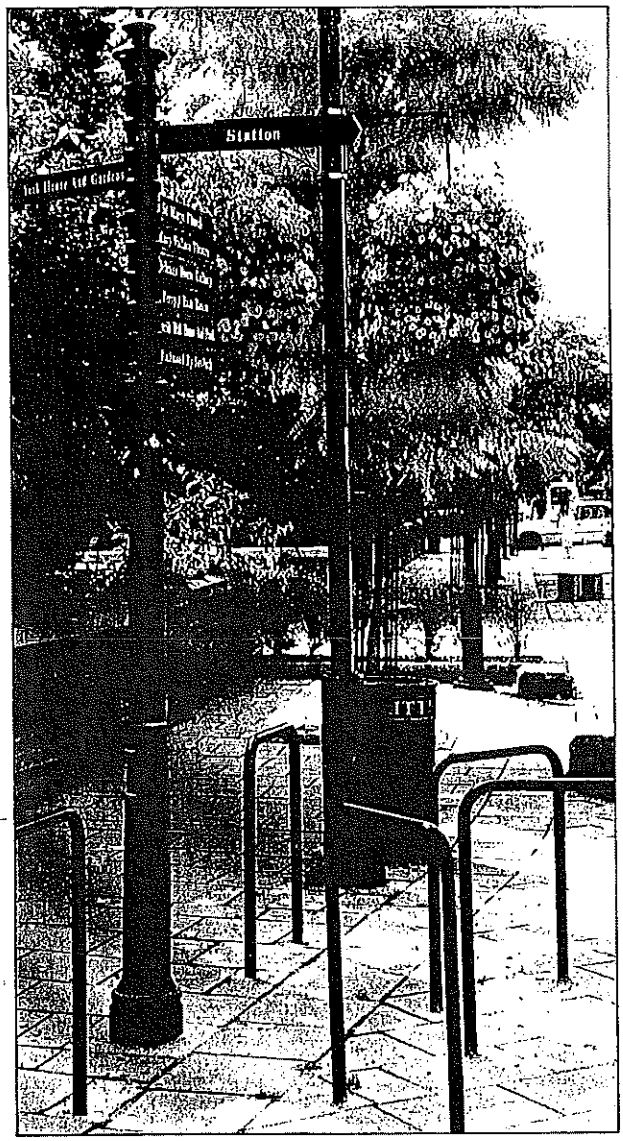
THE SOLUTION

In conjunction with the London Borough of Wandsworth, the CIT 107 has been designed for use where trees are planted within 500mm of the kerb or where pedestrian access may be restricted. As illustrated above the CIT 107 protects the trunk of the tree as

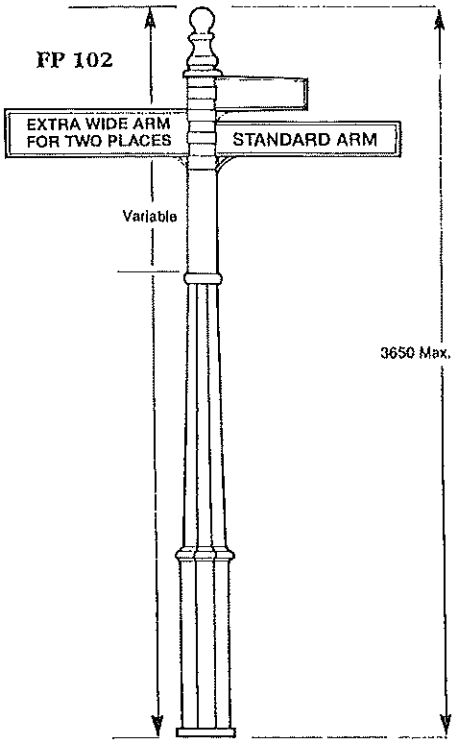
pieces give clear directional and public/tourist information.

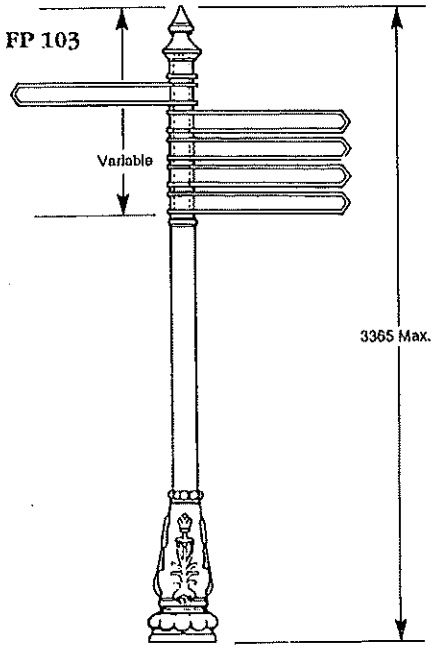
Finger post are constructed using a cast iron decorative base and a mild steel mounting tube for the fingers, surmounted with a cast finial. Arms can be either single or double width and are cast in aluminium.

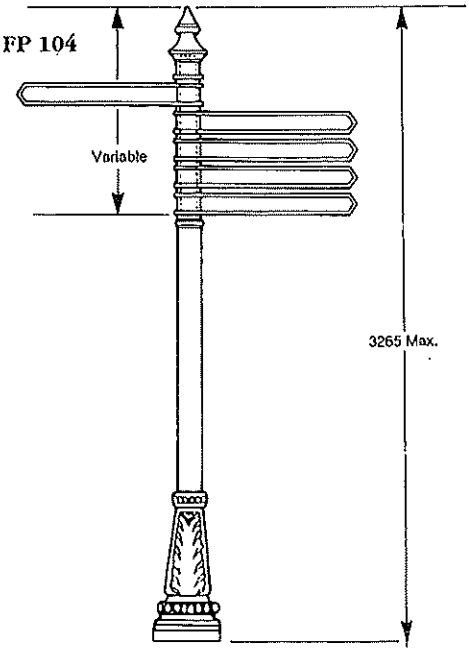


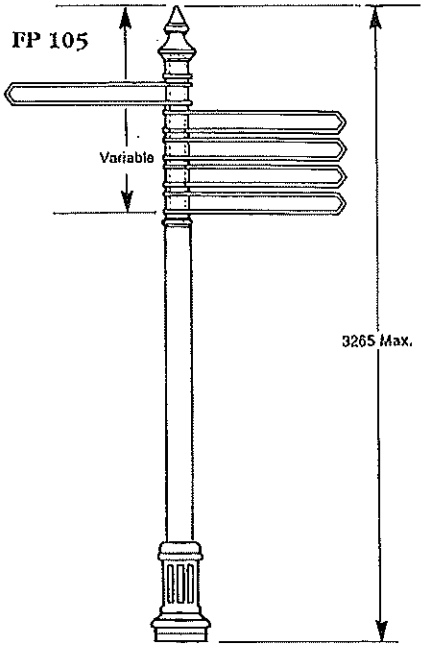


FP 101





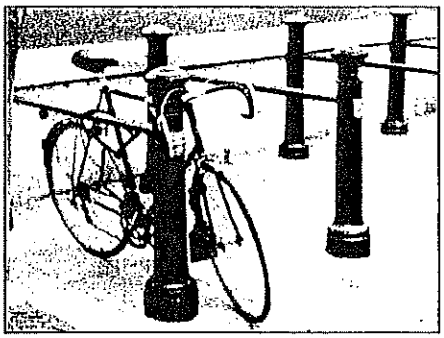




Posts can be bolted directly to a concrete pad-stone using the base flange plate or alternatively supplied with a mild steel root.

THE CAST IRON CO

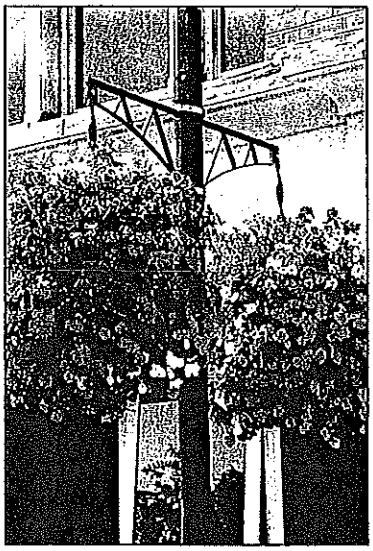
COMMEMORATIVE PLAQUES AND ROAD NAMEPLATES can be cast in either iron, aluminium or bronze from our standard range or to your own particular design.

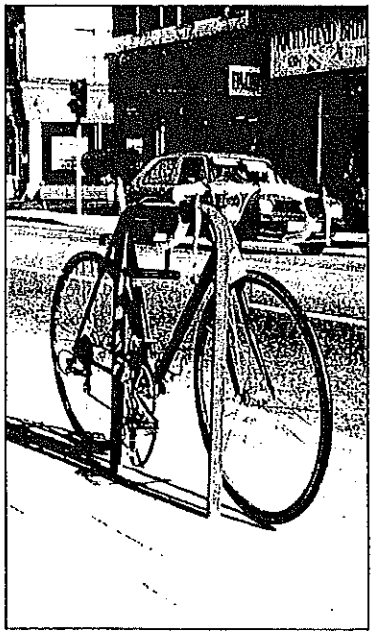


CI 109 Modified for use as a cycle stand

CYCLE STANDS can be constructed using two bollards from our bollard range with a 1200mm length of tubular steel mounted between them. Alternatively they can be fabricated using tubular steel 'croquet hoops' for ground fixing.

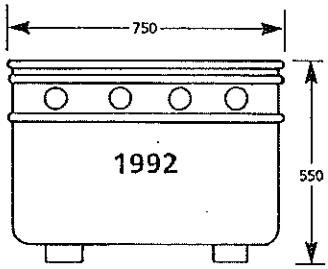
HANGING BRACKETS can be fabricated in a wide range of designs and can be post or wall mounted.





CS 202

PLANTERS can be cast or fabricated and allow small trees and shrubs to be planted where it is not possible or practical to plant directly into the ground.



HANGING BASKETS are fabricated items constructed to the designers own specifications and can be suspended from lamp posts, finger posts and wall brackets. Filled with an array of plants, these items add interest and colour.

The Cast Iron Company design and produce traditional and modern street furniture. Cast and fabricated items can be manufactured and our range includes ornate lighting, bollards and finger posts; litter bins and seats; posts and rails; tree grilles and guards; ornate gates and railings; bandstands and covered walk-ways.

Copies of The Cast Iron Co's trade literature for all products are available by contacting the sales office.

APPENDIX C. SUMMARIES OF MEETINGS

Summary of September 13, 2000 Meetings & September 29, 2000 Telephone Conversation

Summary of Project Management Meeting #2, November 16, 2000

Summary of Project Management Meeting #3, February 8, 2001

Boardman Looks At Plans To Develop A "Downtown" Main Street Area (February 2001) Article by Heidi Soderstrom, Eastern Oregonian

Summary of May 24, 2001 Meetings

Summary of June 14, 2001 Meetings

SUMMARY OF SEPTEMBER 13. 2000 MEETINGS & SEPTEMBER 29, 2000 TELEPHONE CONVERSATION

This summary of initial meetings includes:

- September 13, 2000 Project Management Team Meeting
- September 13, 2000 Advisory Committee Meeting
- September 13, 2000 Site Tour
- September 13, 2000 Post-Site Tour Meeting
- September 29, 2000 Telephone Conversation

PROJECT MANAGEMENT TEAM MEETING

September 13, 2000
2:00-3:30 p.m.
Boardman City Hall

Attendees:
Debi Watson, Advisory Committee/Planning Commission/Downtown Development Association
Rex Mather, City Manager, City of Boardman
Barry Beyeler, Utilities/Natural Resources Manager, City of Boardman
Cheryl Jarvis-Smith, ODOT Region 5
Bob Foster, Foster Consultants
Larry Lewis, TriLand Design Group

Summary
The itinerary of the day was discussed including:

- The Project Management Team Meeting: 2:00-3:30 pm
- The Advisory Committee Meetings: 3:30-4:30 pm
- Site Tour: 4:30-5:00 pm

The Project Management Team discussed the plans for the NASCAR racetrack and associated uses and how it would impact Boardman and the downtown area if developed. Summary statements included:

- If developed, the race track and associated uses would likely be located off of Tower Road which intersects with I-84 approximately six miles west of Boardman;
- DLCD will not likely allow a state goal exception to allow retail/urban uses since it is located outside the Urban Growth Boundary (UGB);
- DLCD does not believe the race track should influence the Boardman "Downtown" Main Street project;
- The race track developer has indicated he would participate with the City in the development of the Boardman "Downtown" Main Street project, if requested. It was recommended that the race track developer be invited to an AC meeting at some point in the planning process.

There was discussion regarding interstate-related uses along the I-84 frontage in Boardman. A comment was made that if interstate uses developed on the north side of I-84, traffic congestion may occur due to the close proximity of the high school and the retail uses.

Potential mapping sources include Anderson Perry (541) 963-8309 and Morrow County who has a Boardman Zoning Map. The City has an aerial photograph that is 5-6 years old. Gary Neil of the Port of Morrow may also have mapping.

Art Kegler is the realtor representing the property owner of the 75-acre downtown area site.

Cheryl will provide TriLand with the Boardman Lands Needs and Supply.

ADVISORY COMMITTEE MEETING
September 13, 2000
3:30-4:30 p.m.
Umatilla Electric Conference Room

The meeting began with introductions, description of the Advisory Committee's (AC) project role, and a review of the planning process and project schedule.

An initial question (and focus of the meeting) was how committed should the City and this project be on focusing on the 75-acre site located south of I-84 and east of Main Street. The question was raised because the 75-acre site is privately owned which may make if difficult or infeasible for the new downtown area to be developed as the community desires, i.e. public plaza and public uses. A previous study evaluated three alternative sites and, through a strenuous process, it was agreed that the 75-acres was the recommended site. The Tum-A-Lum property, located west of Main Street was identified as another potential site for the downtown area.

Other issues and comments included:
- Debi stated she believes the city can grow to a population of 10,000 to 12,000 without building up, i.e. multi-story structures;
- Idea of the City providing parking so business owners do not have to;
- Property ownership should be evaluated in the evaluation of alternatives downtown concepts;
- Keep Main Street the main street.
- Consider alternative ownership locations for public space;
- Provide "green" development, i.e. move away from the "endless pavement", provide an open space system;
- Provide a planned street system/street connectivity.
- Is reuse of existing buildings viable?
- In addition to transportation facilities, plan for utilities, i.e. water, sewer, and storm drainage.

SITE TOUR
September 13, 2000
4:30-5:30 p.m.
Library Parking Lot

The AC gathered at the library parking lot located on the west side of Main Street, south of I-84. Discussion included:

- The "Oregon Trail Blvd." will be constructed along the BPA easement from Main Street west to (what is currently known as) "Future Blvd." Timing of construction depends on development;
- The Tum-A-Lum property is an "L" shaped parcel located between the library and Napa Store and behind the Napa Store. It was recommended that someone from the AC should contact the Tum-A-Lum owners to discuss their plans for the property.
- Is it possible to develop the new downtown, or a portion of it, through a public/private partnership or joint venture?
- Identify alternative locations/ownership for the "center" of the new downtown;
- AC members generally do not think parking on the street is a good idea;
- Currently, all residential development is occurring on the southwest side of Boardman with traffic funneling along Wilson Road and Main Street.

POST-SITE TOUR MEETING
September 13, 2000
5:30-8:00 p.m.
Umatilla Electric Conference Room

Following the site tour, Debi Wilson, Kathy Moore, Cheryl Jarvis-Smith, Bob Foster, and Larry Lewis continued the discussion of issues and potential uses for the downtown area including:

- The planned Oregon Trail Blvd. is one component that the community got excited about so it would be beneficial to tie the "downtown" public space with Oregon Trail Blvd;
- Potential ownership of the public plaza could include the City, Urban Renewal Agency, and/or the Port of Morrow;
- The Boardman Downtown Development Association could become land owners because they are a non-profit agency. This may be considered if it would be a benefit to the community;
- Hobo Pond is a wetland area located the I-84 south frontage, west of Main Street.
- Boardman has the highest per capita population under 18 years old in the state with 33% in 1995. The average age in Boardman in 1995 was 23.5.
- There is a 50-60% Hispanic population.
- The grade school may be the best source for the youth charrette since all the elementary students that live in Boardman also go to school in Boardman. The high school includes 50% Boardman students and 50% Irrigon students;
- The Catholic Church has a large Hispanic population and is a good community participant (Dan Deltoso is the contact);
- Public uses that the community will likely buy into include:
  - amphitheater,
  - fountain,
  - public plaza,

- City Hall,
- skate board park,
- senior center/community center

- The Post Office is planning to acquire land within two years and move into a new building in three years.
- There was discussion on how large the public/civic space should be. The initial thought was 12-acres would be an ideal size. Looking at how much space the above noted public uses would require, the total area needed for public uses may be reduced to approximately 8 acres.

SUMMARY OF SEPTEMBER 29, 2000 TELEPHONE CONVERSATION
Debi Watson
Larry Lewis

Debi talked to the Tum-A-Lum people. It appears we need to focus on the original 75-acre site (as described in the contract). The Tum-A-Lum people appear intent on developing their hardware/home improvement-related business in the downtown area and are not interested in other areas in Boardman, i.e. the Port.

Debi is optimistic about a land swap with the 75-acre property owner for the public/civic space. The property owner has previously said he would be interested in a land swap. Debi shared this information with the City Council. City Council believes the appropriate time to talk to the property owner is once we decide how much land we need for the "town square". The City will want two additional acres for a new senior citizens/community center.

SUMMARY OF PROJECT MANAGEMENT TEAM MEETING #2

Thursday, November 16, 2000, 9:30-10:30 am
Boardman City Hall

Attendees
Rex Mather, City of Boardman
Barry Beyeler, City of Boardman
Cheryl Jarvis-Smith, ODOT Region 5
Bob Foster, Foster Consultants
Larry Lewis, TriLand Design Group

Discussion Items

I. Review November 16, 2000 Agenda

9:30-10:30 am	Project Management Team Meeting	City Hall
10:40-11:40 am	Youth Charrette	Boardman Elementary School
4:00-6:00 pm	Community Meeting/Charrette	City Hall

II. Review Base Map, Opportunities & Constraints Analysis, and Discuss the "Downtown" Site

A citywide/UGB map was presented and discussed. Key features identified on this map include two potential downtown sites south of I-84: 1) the 75-acre parcel located east of Main Street and, 2) the undeveloped commercial-zoned land located west of Main Street. The Opportunities & Constraints Map provides more detail about existing conditions of these two sites including existing and potential access. Discussion primarily focused on the potential of the different sites developing as a downtown area given current property ownership. Although the 75-acre site on the east side of Main Street has previously been identified as the new downtown site, there is now discussion amongst members of the community that the west side of Main Street is more feasible as the new downtown site, from a land acquisition or from the standpoint of negotiating with property owners.

III. Youth Charrette Process

The agenda for the youth charrette was discussed briefly including the primary purpose to solicit ideas from the students on what physical elements (i.e. streets, trees, etc.) and what types of land uses they would like to see in the new downtown.

IV. Community Meeting/Charrette Process

The Kick-Off Meeting and Community Charrette agenda was identified including:

- Introduction
- Review Base Maps, Opportunities & Constraints
- Slide Show
- "Downtown" Preference Diagrams
- Public Preference - Desired Downtown Land Uses & Elements

V. Upcoming Meetings (tentative)

The following meetings were tentatively scheduled:

Site Plan Workshop	Thurs. February 8, 2001
Final Plans Workshop/Presentation	Thurs. April 12, 2001
City Council/Planning Commission Work Session	Thurs. May 10, 2001
City Council/Planning Commission Public Hearings (2)	May/June 2001

SUMMARY OF PROJECT MANAGEMENT TEAM MEETING #3

Thursday, February 8, 2001 4:00 p.m.
Boardman City Hall

Attendees

Rex Mather, City of Boardman
Barry Beyeler, City of Boardman
Cheryl Jarvis-Smith, ODOT Region 5
Bob Foster, Foster Consultants
Larry Lewis, TriLand Design Group

Discussion Items

The civic center was discussed as a key element of the new downtown master plan. The City needs to have a good idea of how much land the civic center will require in order to consider specific parcels of land that may be appropriate and feasible. The following civic center "breakdown" was identified:

• City Hall/Library	250' x 350'	2.0 acres
• Park/Plaza	120 x 170'	0.5 acres
• Community Center/Swimming Pool	160 x 240'	1.0 acre
• Police Station and/or Post Office	180 x 150'	0.6 acres
Subtotal:		4.1 acres
Subtotal plus 20%		**5.0 acres**

Next steps in the planning process will include identification of street standards for the existing Main Street, for a new Main Street (i.e. perpendicular to existing Main Street), and for local streets.

In the Crescent Alternatives Site Plan, pedestrian connections need to be shown going east from the 75-acre site.

An overview of the market component and land development program was reviewed.

Discussion included the need to identify how the proposed section of Main Street south of I-84 works with the proposed standard and improvement for Main Street north of I-84.

BOARDMAN LOOKS AT PLANS TO DEVELOP A "DOWNTOWN" MAIN STREET AREA
By HEIDI SODERSTROM
of the East Oregonian

BOARDMAN — Residents crowded into the city hall's conference room Thursday night (February 8, 2001) to discuss design concepts plastered on the walls, drawings defining development of a "downtown" Main Street area south of the freeway on land zoned for commercial use.

Bob Foster, urban designer, and Larry Lewis, planner, explained to the audience the three different designs, each pictured on the east side of Main Street but with capabilities to flip over to the west side if the town so desires.

The conceptual designs show alternative ways to develop the Downtown Main Street site and have been prepared for the preferred diagram that was selected at the community meeting in November, Lewis said. Whichever design is chosen by the city will be implemented over a 20-year time period.

A Transportation Growth Management grant through the Oregon Department of Transportation made it possible for the city of Boardman to hire Lewis and Foster to come up with the concepts.

Specific design features include a potential plaza and other public spaces, location of buildings, building setbacks, parking, streetscape elements, urban design concepts, existing and planned streets, access, potential improvements to intersections and pedestrian/bicycle facilities.

The crowd favorite is the "Amphitheater concept," with it's unique use of angles creating park areas. The "Crescent concept" was also lauded for it's use of a sweeping curve and interconnecting roadways. The "Grid concept" looked boring to most, but was thought to maybe be the most practical.

"The fact is, it's going to be developed a spot here, a spot here, so from that stand point the grid concept is the easiest," Mayor Tom Meyers said.

However, it was the amphitheater design that won most of the votes at the end of the meeting, Foster said.

"Most people wanted more green parks, which is why they chose the amphitheater concept. It just feels more loose," he said, relating back to the issue of flexibility being the key to whichever design is approved as was brought up by several people.

Along with flexibility, residents looked at how traffic, water issues and growth would be effected by each of the concepts.

"We give them our ideas, what we know and what we have experienced," Foster said. "But it is their town, so they have to make the decisions."

Lewis said no total cost has been developed yet, it is part of the next step.

The next development meeting is scheduled tentatively for April 12.

"It gets more and more focused as we go," Foster said, with more details likely be ironed out at the next meeting.

Reporter Heidi Soderstrom can be reached at 1-800-522-0255 (ext. 1-304 after hours) or e-mail: hsoderstrom@eastoregonian.com.

SUMMARY OF MAY 24, 2001 MEETINGS

PROJECT MANAGEMENT TEAM MEETING (6:00 p.m.)

Attendees:

- Rex Mather, City Manager
- Barry Beyeler, City Utilities and Natural Resources Manager
- Cheryl Jarvis-Smith, ODOT
- Larry Lewis, TriLand Design Group

Discussion Items:

- Discussion primarily focused on the recent opportunity the City has to negotiate with a developer that may result in the civic center/city hall being constructed. The location is west of Main Street, between (planned) Oregon Trail Blvd. and Kinkade Street from Main Street to east of Dillabaugh Street.

  The agreed upon final plan identifies flexibility so that land uses can be relocated and still provide a street grid system with a compatible land use arrangement(s).

- Ongoing and planned subdivision development was identified.

- The status of the proposed NASCAR race track and potential impacts to Boardman were discussed.

FINAL PLAN PRESENTATION (7:00 p.m.)

The agenda included review of the planning process, the flexible land use plan, the land use development program, street design standards, and street furniture. The focus of the presentation and discussion was on the flexible land use plan. The final development plan was prepared prior to the latest opportunity the City is pursuing to construct a civic center/city hall west of Main Street, south of the planned Oregon Trail Blvd. A land use diagram was presented that illustrates how the different land uses can be relocated while still maintaining the grid street system and providing compatible land use relationships.

Draft street design standards were presented and discussed. City staff is working on draft street design standards that incorporate a wide median on arterial and collector streets with a multi-use path and stormwater facilities and utilities.

DOWNTOWN (D) ZONING DISTRICT SUMMARY AND TSP AMENDMENTS (±8:30 p.m.)

An overview of the Downtown Zoning District was provided including the purpose and key elements of the new zoning district.

A summary of recommended amendments to the Transportation System Plan was identified including the need to incorporate the Downtown Plan, revise the street classification system, revise the street design standards, incorporate the infill and redevelopment alternative, determine other changes needed to comply with the TPR, and any other changes required to comply with the 1999 Oregon Highway Plan.

SUMMARY OF JUNE 14, 2001 MEETINGS

PROJECT MANAGEMENT TEAM MEETING (5:00 p.m.)

Attendees:

- Rex Mather, City Manager
- Barry Beyeler, City Utilities and Natural Resources Manager
- Cheryl Jarvis-Smith, ODOT
- Larry Lewis, TriLand Design Group

Key Discussion Items:

- Street design standards: review of draft street design standards prepared by Barry including arterial and collector standards that have wide medians with an 8' wide multi-use path and stormwater/utility strip on both sides of the multi-use path. There was considerable discussion about bicycle use and safety of bicyclists accessing the multi-use path across travel lanes and through intersections.
- Downtown zone: The project includes establishing a downtown zone however, due to the flexibility and changing opportunities that have occurred, it has been unrealistic to define appropriate boundaries for the downtown zone.

CITY COUNCIL/PLANNING COMMISSION WORK SESSION (7:00 p.m.)

The intent of the work session was to review and discuss the following items:

- Draft Street Design Standards
- Downtown Zoning Boundary
- Downtown Zoning Ordinance
- TSP Project Update
- TSP Implementing Policies and Ordinances

Draft Street Design Standards

Barry presented the draft standards that include the arterial and collector standards with the wide median for the multi-use path and stormwater/utility facilities. There was considerable discussion about bicycle access and intersection conflicts.

Downtown Zoning Boundary

Following considerable discussion, it was generally determined that the downtown district should include the existing commercial zoned land west of Main Street and a 200-foot depth along the east side of Main Street from Oregon Trail Blvd. to north of Wilson Road. There are some concerns that this area is too large to accommodate a compact pedestrian friendly downtown and that commercial development could occur in a piece-meal fashion, therefore never creating a concentrated downtown area and leaving a lot of land vacant for a long time.

Downtown Zoning District

Review of the draft downtown district resulted in the decision for the City Council/Planning Commission to take time to review the draft and have another work session to discuss and revise the draft. There were concerns that some of the ordinances were too detailed and costly, and therefore would not make it attractive or economically feasible for downtown development to occur.

TSP Project Update

Review of the TSP and updates focused on Main Street and the street design standards. Discussion resulted in the need for three Main Street standards including:

- South Main with two 12-foot travel lanes, one 12-foot center turn lane/median, two 12-foot planter strips, and 10-foot sidewalks;
- North Main (Enhancement Project) with two 12-foot travel lanes, one 12-foot center turn lane, 6-foot bicycle lanes, and 6-foot sidewalks;
- Main Street Railroad Overpass with two 12-foot travel lanes and two 6-foot bicycle lanes.

There was also discussion of the potential frontage road closures and the need to identify access management in the TSP to comply with the 1999 Oregon Highway Plan. Generally, new access will be prohibited within ¼ mile of the interchange and ongoing evaluation will be needed to determine if existing access points can be consolidated or eliminated.