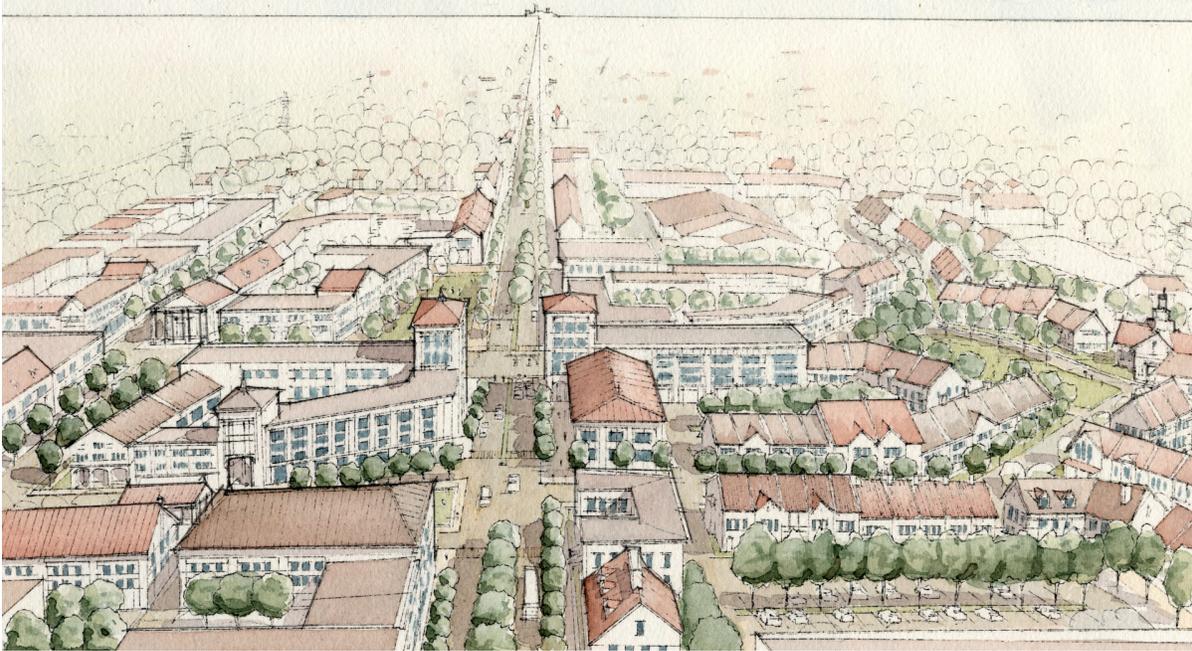


# The Plan For Fisher's Station



By

The City of Kentwood  
The City of Wyoming  
The Township of Gaines

With the Assistance of Grand Valley Metropolitan Council

And Grants From:

The People and Land Foundation  
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The Grand Rapids Foundation  
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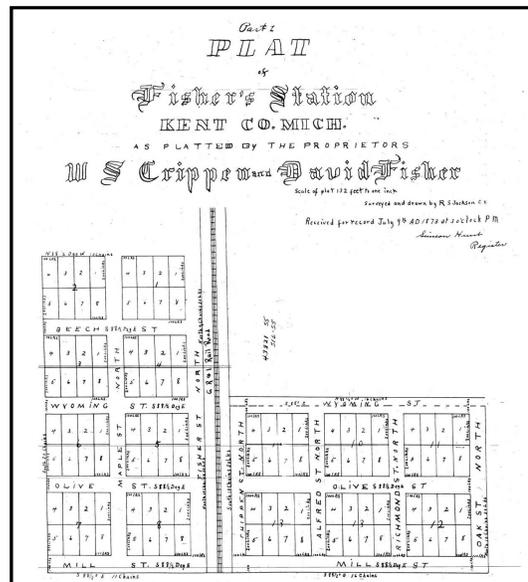
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## NAME

This plan is defined by two fixed route transit stations. In the mid 1800's there was a depot and plat on a railroad on the west edge of the project. It was called Fisher's Station by the owner and postmaster David Fisher. The project and area has been named Fisher's Station to re establish the history of the site and the role of transit. During the charrette participants were encouraged to suggest other names. The Kelloggville School District shortly thereafter requested that the name Kelloggville be used; in recognition of one the school system and an original settler – Francis W. Kellogg. As development occurs, transit stops, plazas, streets and neighborhoods will be named. Both of these names can be used as authorities see fit.



**KELLOGGVILLE, Kent County:** named for Francis W. Kellogg who located here the headquarters of his lumbering firm of Kellogg, White & Company about 1845; he was elected to the state legislature from Grand Rapids in 1857, followed by three terms in congress; George W. Kellogg became the first postmaster on June 4, 1856, the office being changed to Fisher's Station on Feb. 28, 1871; it was given a depot on the Grand Rapids & Indiana Railroad [MPH 35:510 1907; PO Archives].

## SUMMARY

In 2012 Bus Rapid Transit service will be established linking downtown Grand Rapids to stations along Division Avenue including stations at 54<sup>th</sup> Street and 60<sup>th</sup> Street. This type of transit service spurs more intense development around stations. The Cities of Wyoming and Kentwood and Township of Gaines perceived this as an opportunity to greatly improve under used lands. A week long city design was organized, based on stakeholder participation and direction. The result was a detailed plan affecting about 200 acres. This document is the elaboration and explanation of that plan.

At the heart of the plan are two new town centers, with a great increase in employment, number of buildings, residences and public spaces. Its streets are friendly to pedestrians as well as autos. It is connected to the surrounding neighborhoods and they are connected to the “main streets” they did not have before. Households and persons of all ages and income levels would be able to live and work here in dwellings that suited their needs. Children will be able to safely walk or ride bikes to schools, stores and parks. Retired individuals will be able to walk to nearby stores and churches, or ride efficient transit to cultural events and other services. Public utilities and services will be used at a high per capita rate, reducing the cost of government.

## CONTEXT

The area to be considered is lightly developed. There are a few healthy businesses, vacant land and parking lots, vacant buildings, storage buildings, recreational vehicle sales lots and a few residences. There are approximately 280 acres. Parks, schools and employment in industrial enterprises are nearby.



This is probably the largest area available for redevelopment along the BRT route. Property owners are interested in increasing the use of the land. There are also a number of mobile home parks with aging structures. There are some blocks of stable, single family residences, some good primary schools, a few retailers, a historic park and some fine streams.

54<sup>th</sup> and Division

## The Site

The project area is bounded by a limited access highway on the south, and a power line easement on the north. The area was chosen by the quarter mile, 10 minute walk distance from the likely BRT stations at 54<sup>th</sup> and 60<sup>th</sup> Streets. Within this area staff categorized properties as to their potential for change in the next 5 to 30 years, given adequate financial incentive. The area so designated totaled approximately 200 acres. A description is in the appendix.

Development has been limited on the west side due in part to the lack of sewer service. Nearby sewer mains have the capacity to handle volumes from lines extended to this area.

### Topography

The site is quite flat. Elevation varies only about 2 to 5 feet. The power line ROW/pathway is 5 feet higher on the north end and slightly lower as some places. 54<sup>th</sup> and Division and the Stock and Lock storage are “high” points. The rectangular blocks in the southwest corner of the map are lower and largely in the floodplain.

### Parks

There are two parks on the west side of the project area, and two sports parks/playgrounds adjacent to schools on the east side. Three streams cross the site.

## Transportation

### Principle Streets

Division, 54<sup>th</sup> Street and 60<sup>th</sup> Street are the principle arterials. Division carries about 19,000 vehicles per day (VPD), and 54<sup>th</sup> about 30,000, but only on the segment west of Division. The eastern segment has about 15,000 VPD. 60<sup>th</sup> has about 10,000.

### Connectivity

Street connectivity is very poor. There is almost no block structure, and the few existing blocks are very large. Freeways and power line right of ways are barriers to extending streets on the west, north and south.

### Bike Paths

There is a non motorized path in the power line right of ways along the north and the west. The northerly path does not cross Division. The westerly path may connect under the southerly freeway to a long, east west path.

### Transit

There is a bus route on Division from 68<sup>th</sup> Street to downtown Grand Rapids. It is one of the busiest routes.

Funding has been received for Bus Rapid Transit on Division Ave. This is the first New Starts, high capacity public transportation system in Michigan. The BRT line will serve Division Avenue from 60th Street north to Wealthy Street, up to Michigan Street, through downtown and into Central Station.

Bus Rapid Transit (BRT) is an innovative, high capacity, higher speed, cost-effective public transit solution that can achieve the performance of a higher cost light rail system. Being both efficient and higher speed, BRT systems attract choice riders.

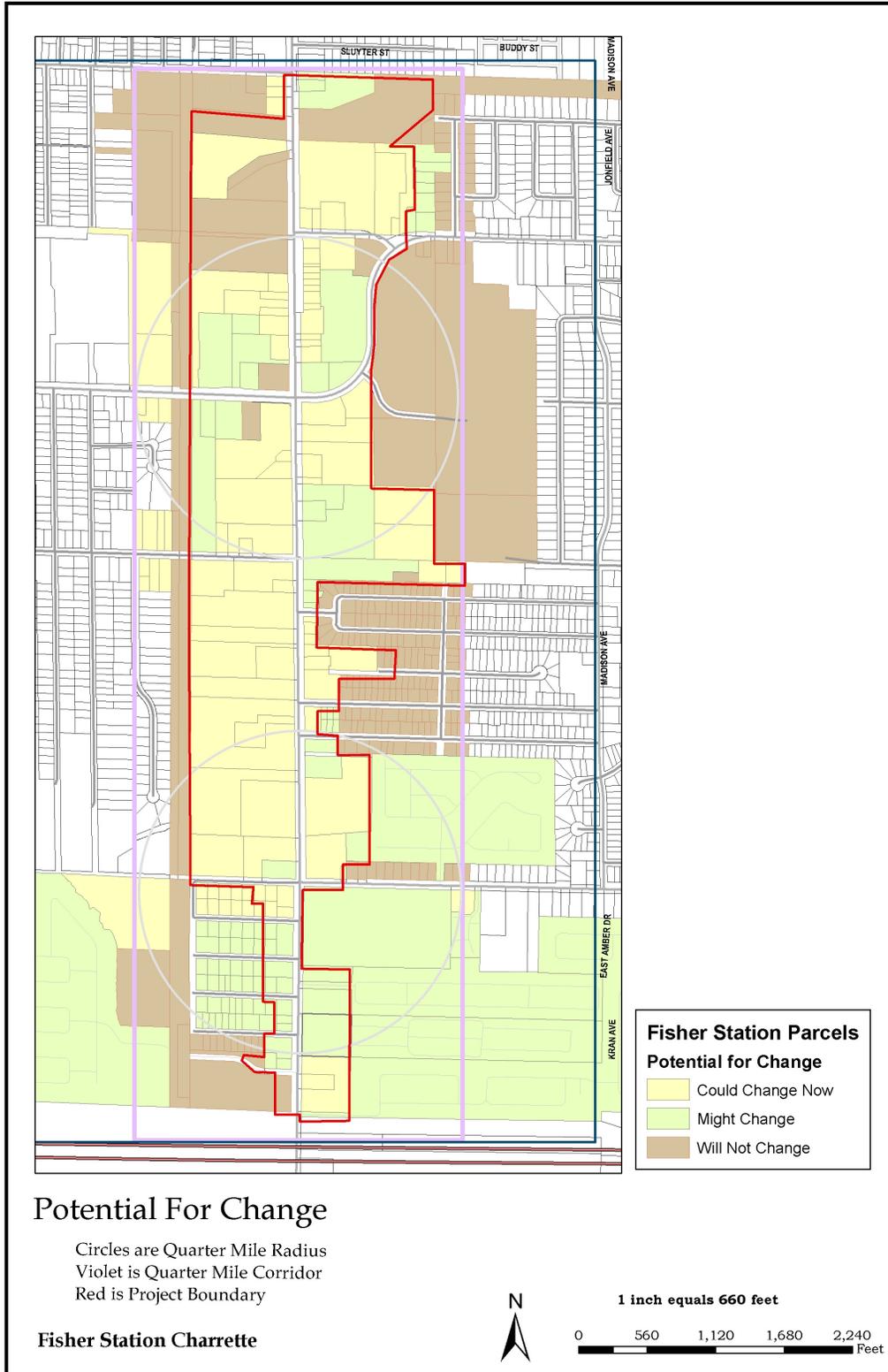
Station design – BRT makes less frequent stops than regular bus service. Generally, stations are spaced from ½ mile to 1 mile apart. Stations are designed for level boarding on vehicles. This, in conjunction with wide entry and exit doors, allows BRT to enter and exit stations quickly.

The likely installation of two stations of the Bus Rapid Transit (BRT) on South Division, within the next few years would generate significant new investment, and local government is poised to make that more likely. See example from Pasadena on the right.



## Potential for Change

During the preparation for the design event, local planners estimated the potential for change, given the likely inducements for land value increases and a project horizon of 5 to 15 years or more. The map shows those estimates.



## MISSION

The mission of the Fisher Station charrette is to produce a plan that matches in intensity the level of transit service, is walkable, economically feasible within the next 20 years, increases the value of property, provides jobs and services, especially for nearby residents, has an spatial design that supports healthy social and economic interactions and is preferred by the community.

<u>Mission Category</u>	<u>Mission Element</u>
• Project Product	Transit Oriented Development Plan
• Political	Improves and increases value and use of the area Serves surrounding area
• Quality of Live	More walkable streets, improved public spaces
• Economics	Increase the intensity of the use of property, and property value
• Transportation	Reduce dependence on auto, increase opportunity for walking, bicycling and especially transit
• Uses	Create more retail choices, office employment, housing options
• Design	Design to support walkability, high frequency transit use, and human social interaction

## PROGRAM

The program depended on the outcome of the public work session and the desires of the stakeholders that would be expressed during that work session. Below are some standard minimums for TOD's. It was the hope that the final plan would attain this range, if not immediately, during the years following the establishment of bus rapid transit service.

As an example: if 160 acres of the 280 acres in the project area were developed at the lighter end of these intensity levels, it could contain 1200 dwelling units, 200,000 square feet of office and retail development, 1200 residents, and still have room for parks and public spaces.

<b>Minimum Densities for Frequent, High Capacity Transit Service</b>
<b>Dwelling units per acre</b>
<b>15 to 30</b>
<b>Office / Retail FAR</b>
<b>0.35 to 1.0</b>

# THE CHARRETTE PROCESS AND DIRECTION BY CITIZENS

## Kickoff Meeting

On September 24, 2008 an informational meeting was held to describe the potential for redevelopment around the proposed Bus Rapid Transit stations at 54<sup>th</sup> Street and 60<sup>th</sup> Street. Planning Commissions and City and Township Commissions and Councils were invited to hear how Bus Rapid Transit Systems operate and how development has mushroomed around stations in other cities. Typical transit oriented development was described. The charrette process was explained. The audience was asked to record their views on paper.

## Stakeholders

A detailed list of stakeholders or collaborators was put together months before the charrette. It included property owners, business owners, block captains, churches, planning commissions, commissions and councils, developers, representatives of transit riders and disabled, housing providers, and county officials. These potential collaborators were urged to attend through emails, phone calls, mailings, personal visits and signs.

## Charrette Day

On Saturday, October 18, many of these collaborators met at a church located on the site. After a short orientation they broke up into groups of about seven, assisted by staff urban designers. Each group produced a plan for the area and described it to the reconvened larger group. These plans became the essence of the final layout.

In the afternoon the design team gathered at the studio, reviewing the plans and comments of the public session. Common elements of the drawings and comments were summarized.



### **The Stakeholders' List of Prerequisites:**

1. Develop two mixed use nodes around each BRT stop, each of unique scale and character
2. Lay out an organic network of walkable streets
3. Make Division Avenue a “boulevard”
4. Become a destination (not a “pass through” area)
5. Provide a series of small park-and-ride lots
6. Shield parking from pedestrians
7. Provide space for neighborhood retail (cafes, drycleaners, shoe repair, bank, etc.) around stations.
8. Require 3 to 4 story (or more on key locations) mixed use buildings
9. Include appropriate building types to transition single family fabric.
10. Include a variety of building types that support all incomes (townhouses, live work units, office, multi-family residential, flex light industrial and mixed use buildings)
11. Tie bike trail to parks (Ideal, Kelloggsville) and connect the green spaces



*The group plans from charrette day. On the far right are some of the team sketch plans.*

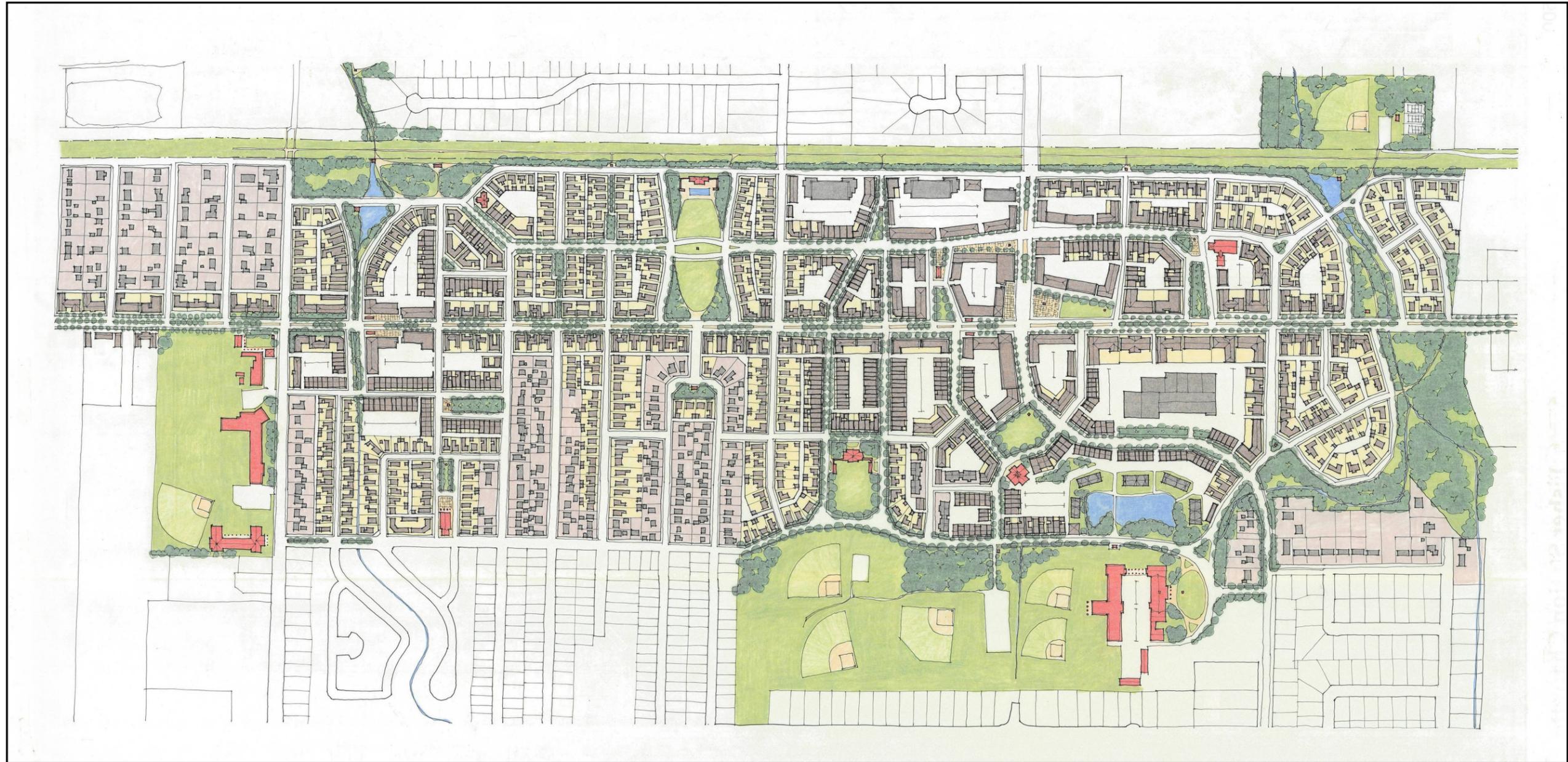
### **Working Out The Plan With Constant Review**

Sunday and Monday the design team members individually sketched out alternate designs, discussed and refined them into one common sketch that was presented to the public Monday night for comment and suggestions. There was an early presentation to the Wyoming City Council. The next few days were spent refining the plan, reaching consensus with city staff and the public about street design and some details. The studio was open to visitors the entire time and there were many visitors who were able to comment on the plan. Wednesday evening a few staff presented the plan to the full Kentwood City Council. The last two days were spent preparing the final drawings and presentation for Thursday night. More comments were solicited Thursday night, however at this point most ideas had been heard and incorporated. There were about 80 people at the meeting (including a Grand Valley State University class); and the reception was overwhelmingly positive.

## THE PLAN

The final plan of the charrette incorporates the ideas and sketches produced by citizens. There are two centers, placed at BRT stations, the 54<sup>th</sup> center is dominant. There is a complete network of streets, organically linked to adjacent neighborhoods. Division Avenue is a boulevard. Space for retail uses is reserved around the stations; buildings there are 3 or 4 stories, and provide a mixture of uses. There are many building types, including a great variety of housing types for different income levels and households. Parks and greenways are connected by slow traffic streets or paths, and are connected to local schools as well.

There are enough dwelling units and enough employment sites to match the new transit capacity; and encourage redevelopment. Aspects of the “citizens plan are described below.



## PLAN FEATURES

### Block and Street Pattern – Organic and Connected

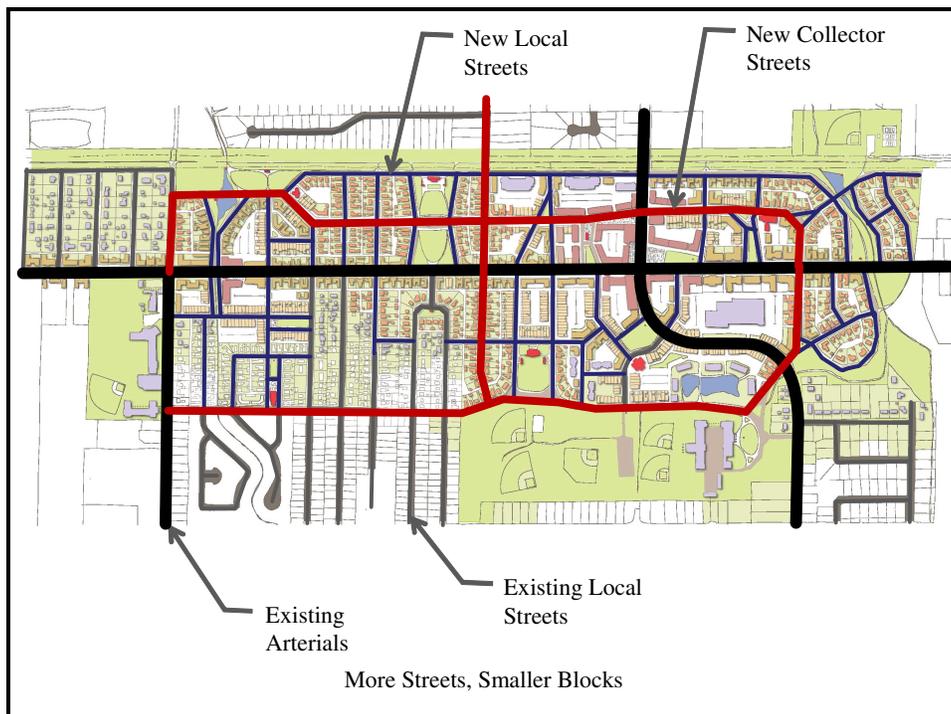
The initial public design session and subsequent drafts showed some common elements:

In order to gain blocks of walkable size, a north south street down the center of the west side is necessary. A north south street on the east side was also fit in, although with more difficulty. These connectors are the backbones of the street system, and enable connections between all the blocks and throughout the project. This good network of streets keeps short, internal trips off of Division, allowing it to be a less busy street. It also enables pedestrians and cyclists, of all abilities, to safely move around and to the adjacent neighborhoods, schools, retail and employment sites, and parks.

All new blocks are of walkable size – between 200 and 400 feet per side. These are universal standards, large enough for building sites, small enough for good circulation. New streets are aligned with the few existing streets. Most of the new streets, while providing good connectivity, are short or have angles which keep auto traffic at the desired slow speeds.

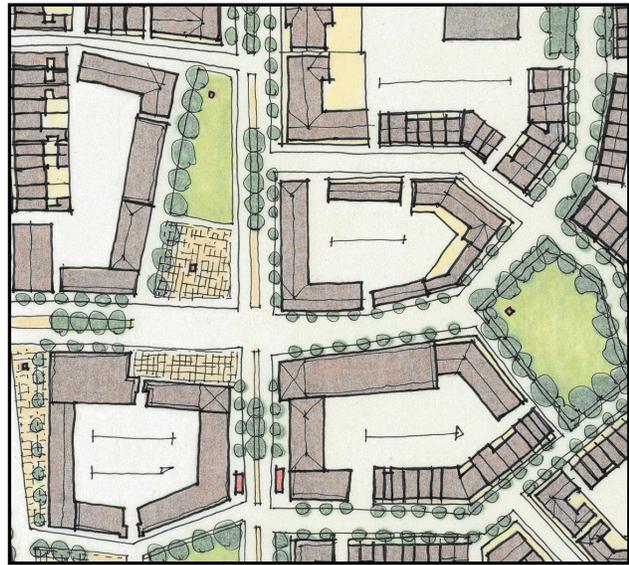
The location of the streets is very efficient and functional; their shape is designed to provide the organic quality that the stakeholders requested. There are many good views at the end of streets. Some of these are noted in the description later in the document.

The locations of many streets are determined by the need to preserve some of the more valuable buildings and uses. The blocks on the northwest side of Division attempt to enclose present businesses so that development can proceed around them without disturbing them.



## 54th Street Center and Plaza

The 54<sup>th</sup> Street intersection is the most important spot. It was and will be the busiest intersection, with the greatest intensity of uses, with the busiest BRT Station. This will be the place where the community gathers for public events and where the most people will pass through as pedestrians every day. Travelers from the north will find that the street suddenly widens into a large public space, which will be hinted at as they see the tallest buildings or towers from a distance. The building towers will mark the town center from all other directions as well. But just to the east is a residential area. This is signaled by the large, public green; seen as pedestrians or drivers enter from the west on 54<sup>th</sup> Street.



Plaza Upper Left, Green on Right



Top: Town Square-Division looking south to 54th  
Bottom: Town Green- Looking East on 54th

## 60th Street Center

The neighborhood center and station was placed a block north of 60<sup>th</sup> so that there could be concentrated uses and buildings on all sides of the station. A school takes up the southeast corner of 60<sup>th</sup> and Division. Mixed use buildings (retail, office) are placed on the station blocks; multi family buildings on the south. Widened sidewalks on both sides of the street form plazas.

A small stream flows past this site, and it would be valued by becoming the central feature of two blocks, and then widened to form a small pond with two block faces of residences fronted by the space of the pond.



Present View Looking West



Same View But As In Plan



60<sup>th</sup> Street Center

## Kellogg School Parkway

A new street, an extension of Jefferson Avenue, would border the west edge of Kellogg school park. This new street would complete blocks and provide the one north south connector on the east side of the plan area. Equally as important, it would greatly increase the value of property bordering the west edge of the park by setting up a long string of residential sites facing the park. This would also increase the use of the park, both as a green space and as a sports field. The sports fields on the south end of the park are now not used to their full potential because there are not enough eyes on the park for safety.

An isolated stretch of Jefferson Avenue now lies south of the park between Majestic and Nancy Streets. That section could be connected by extending the new parkway north by one lot, and by cutting through two and a half blocks of a mobile home park and connecting to a private street that reaches 60<sup>th</sup> Street.

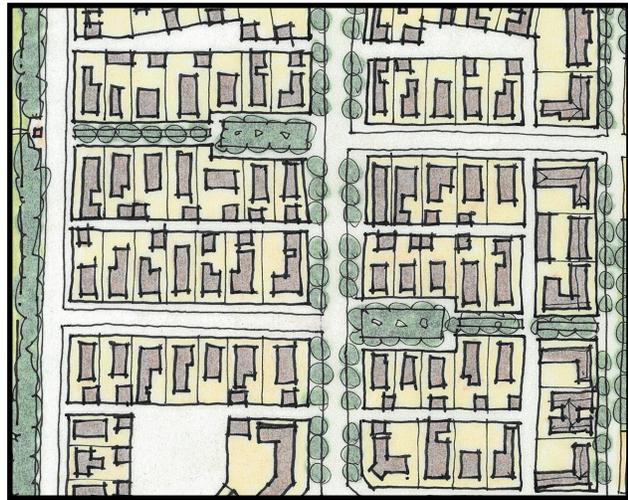
An addition to the park is shown on the southwest edge. Stakeholders felt there was a need for more land for field sports.



Looking North Along Kellogg School Parkway

## Courtyard Cottages

Small courtyard houses are another alternative for small households that still wish to own a single family house. The houses are clustered around a small, grassy courtyard. The front entrances are reached from the courtyard. Cars are parked off alleys at the rear. It has proved to be a very satisfactory arrangement for some households in other parts of the country. There are two blocks of this type in the southwest quadrant of the project.

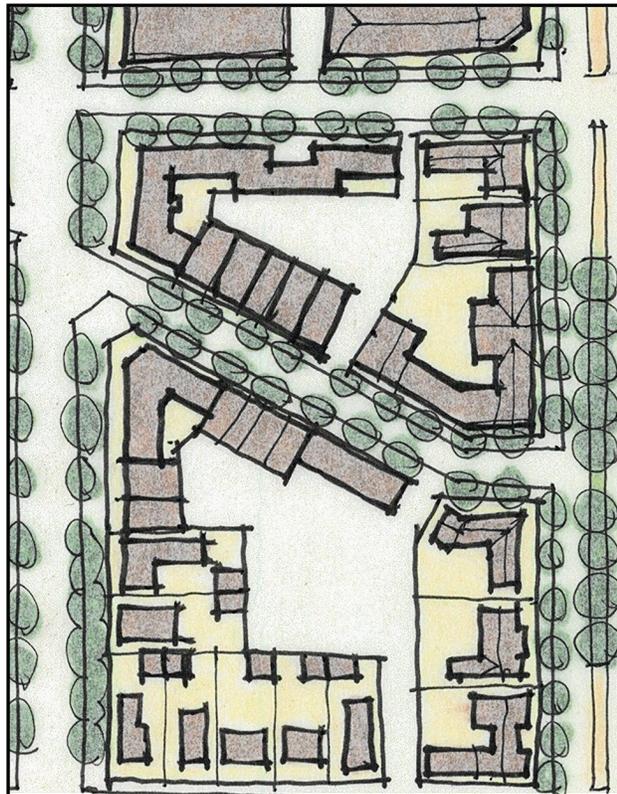


## Alleys and Interior Block Spaces

Most of the alleys in the plan do not pass straight through the block, but either have T intersections, or have turns, widenings or corners. This inhibits drivers from speeding through. The widenings provide car parking and loading space in mixed use blocks, and semiprivate neighborhood space in residential blocks. Occasionally this allows garages to be entered from the side of the lot, and thus the alley can be narrower in those sections.



Residential Blocks With Turned Alleys And Spaces.

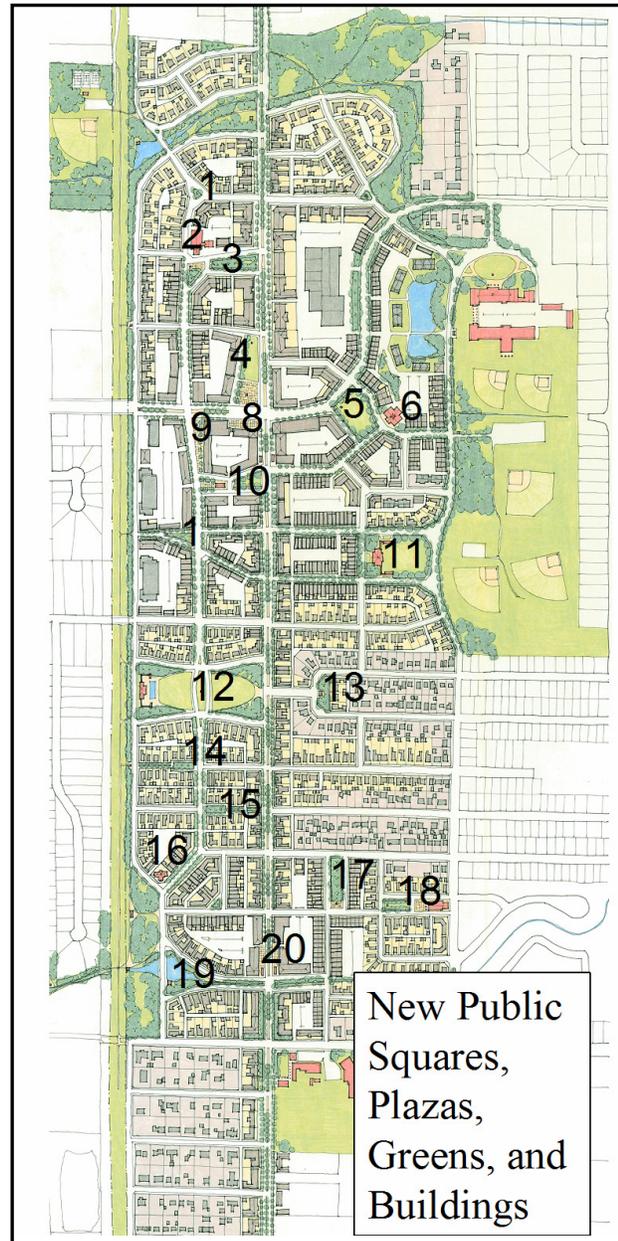


Mixed Use Blocks With Turned Alleys And Spaces

## Greens, Squares, Plazas and Public Buildings

There are at least 20 new greens, squares, plazas or locations for public buildings in the plan. They range from intersection islands large enough to hold a statue, to parks large enough to hold a soccer field. The numbers on the map on the right shows their locations. 3, 9, 10, 13, 17 and 18 are small plazas or greens that constitute neighborhood gathering locations and provide the outdoor open spaces beneficial to the more intense blocks. 4 and 8 constitute the most important, central place in town. Together they are the town square where major public announcements, events or gatherings, both small and large would occur. 20 is a similar place for the lower neighborhood. Both are near or at the transit stations. 11 and 12 are new public parks which could also be locations for public buildings such as swimming pools, YMCA's, outdoor or indoor stages. 6, 13 and 16 are prominent lots which would be ideal for churches, day care centers, or local government service offices. The buildings at these locations would be prominently visible from well traveled streets, thus would give the neighborhood identity and significance. 5 is a neighborhood green, but also a visual signal for travelers going east on 54<sup>th</sup> Street that they are entering a less intense, residential area. 14 and 15 are grassy courtyards primarily serving the small

houses that front it, but are also small, green spaces that the public can walk through, and that provide a change from auto shared streets.



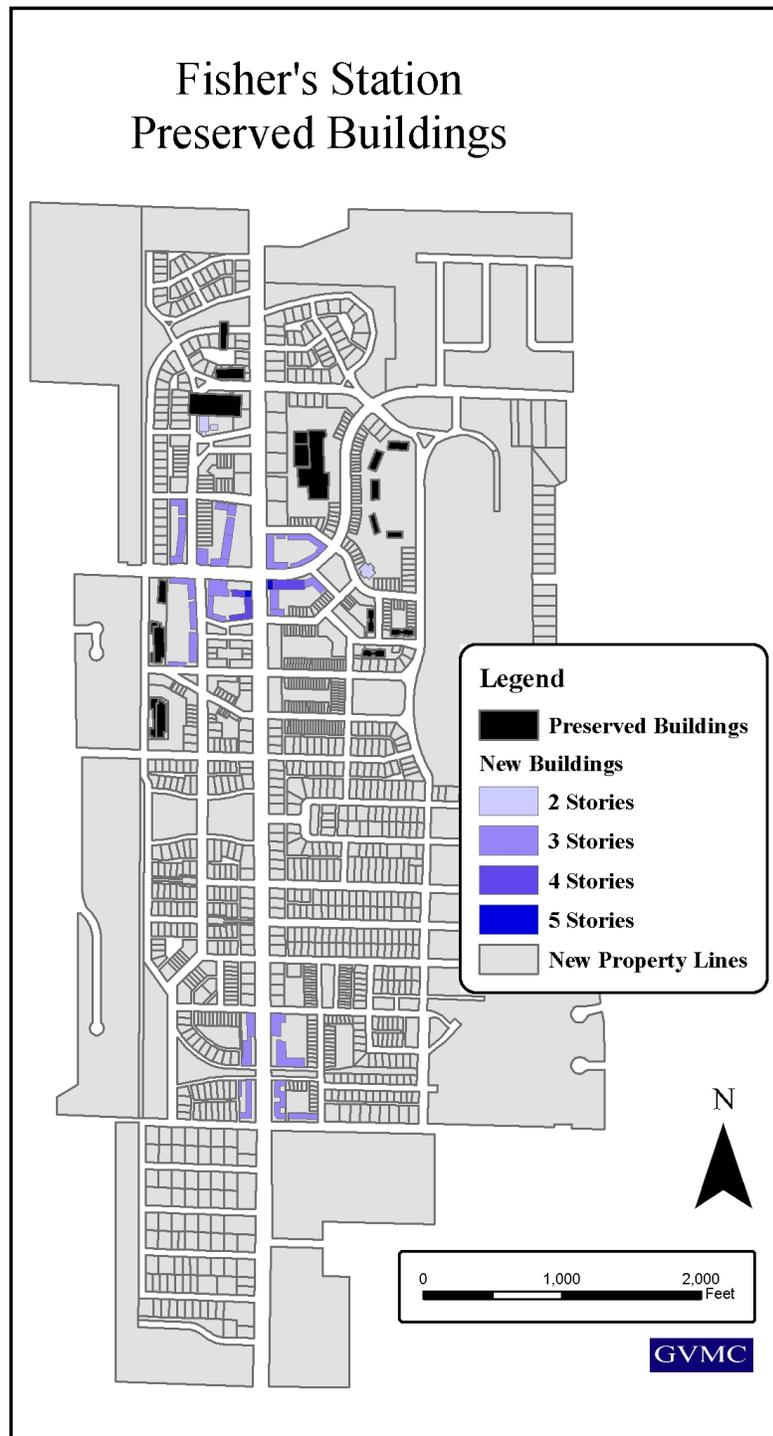
## Connecting Schools, Parks, Paths and Natural Features

It was important to make safe pedestrian connections to parks, paths and schools. There are non motorized paths along the power line right of way in Kentwood (by 1 in the illustration); along the old interurban right of way (3), and a major path along M-6, outside of the planning area. While introducing connections the plan also opens up and expands some of the natural features. Number 1 widens the space along Lyle Branch of the Heyboer Drain and would accommodate an extension of the Kentwood path to the interurban path. The stream is widened also into a pond. Number 2 makes a wooded area along Pine Creek Drain a public nature preserve. Crippen Drain, on the south end, is also given wider banks, made publicly accessible, ponded and linked to a small park (4 and 5). A path is extended to Ideal Park which is a block west of the project area, and the interurban trail can be connected along Buck Creek, under M-6 to the M-6 trail. As shown on the illustration, new streets with slow, moderate traffic, complete the connections between the trails, schools and parks.



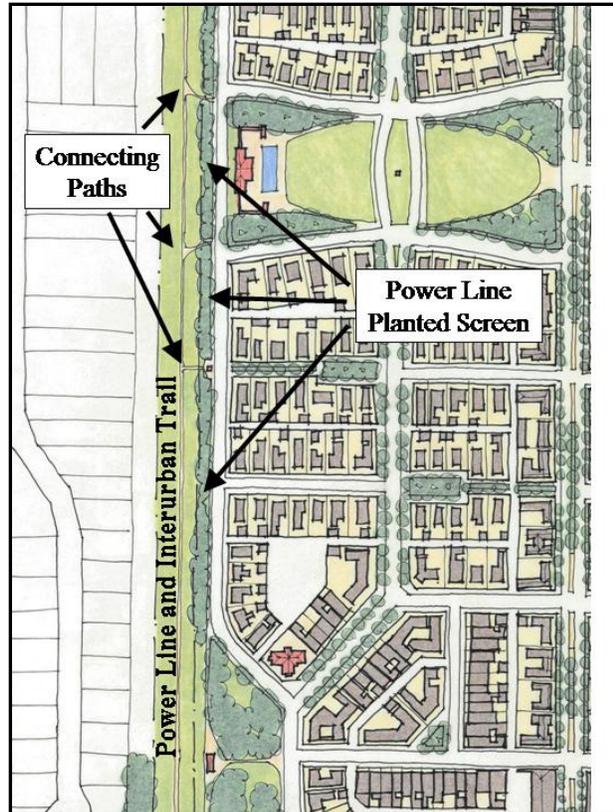
## Existing Buildings Embraced

Some of the buildings and businesses were deemed too valuable to be lost, at least for some time to come. It was possible to incorporate most of those into the plan permanently. There were a few buildings in the northwest section of the plan that might be preserved not permanently, but for decades. Of course redevelopment of any of the planned area will always be voluntary. The northwest section of the plan might not be developed for many years, and even then the new blocks might be adjusted to envelope those buildings for even longer



## Power Line Street

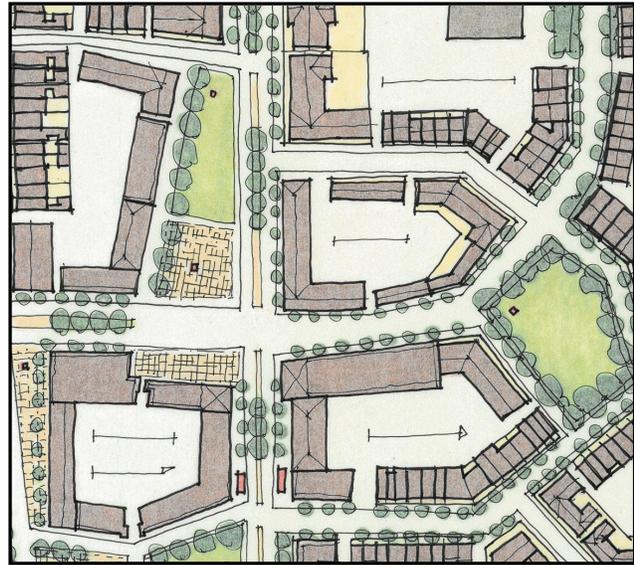
All of the possible street layouts with adequate block sizes necessitated a street along the interurban power line and path. Buildings could only be placed along the east side of that street and most would face the less than lovely view of power lines and towers. To make it a better view, a thirty foot wide wooded strip was located along most of the power line. Some vegetation is allowed under the power line, but tall trees were needed to screen the line. There would be many paths across this strip to connect to the existing bicycle/pedestrian path. The path would be a positive counter balance to the presence of the power line.



## Parking – On Block Interiors and on Street

Auto parking can destroy a town center or save it. Too much parking can destroy a walkable place by taking up valuable space and spreading the remaining buildings too far apart for walking. Too few spaces can make it impossible for those who must drive, to get to stores, work places or homes.

Parking lots in front of buildings would destroy the walkable nature of this proposed place and force destinations too far apart. Parking on the interiors of blocks and behind buildings, would provide the minimum amount of parking and, if designed correctly, might function as interior courtyards. In this plan all parking is on the street or on the interior of blocks.



A healthy town center should have as few parking spaces as possible while still enabling everyone to get where they need to be. There are a number of means to achieve this objective:

### Substitutes For Auto Parking

Every transit rider corresponds to at least one less parking space. The Fishers' Station area will be served by better than average transit service, so can expect higher than average transit use.

More and more people are using scooters/motorcycles and bicycles, or are walking – These modes are practical when jobs, shops and services are near residences. This plan places many residences near many jobs, shops and services. Bicycles and scooters still require storage space, but less. For example, eight bicycles can be stored in one auto parking space.

These modes are attractive when the streets and traffic conditions accommodate them. The street types in this plan do; and that is a reason why those designs are must not be changed to auto only designs.

### Management of Transit and Auto Parking

In a compact development valuable parking space must be managed to make thorough use of this costly land. Although individual parking management strategies often have modest impacts, their effects are cumulative. A cost-effective, integrated parking management program can often reduce parking requirements by 20-40%, and improve user convenience. Parking management is not difficult. There are more than two dozen strategies to choose from including:

- Sharing parking
- Public parking lots

- Shared, public parking serves multiple destinations
- Regulating parking spaces
- Pricing spaces to reflect market demand
- Overflow parking plans
- Offsite parking facilities
- Manage the most convenient spaces to favor priority uses (such as deliveries and quick errands)
- Clearly observable information on parking location and price
- Improving walking and cycling conditions

The management organization can reduce parking demand and encourage use of alternative modes of transportation by arranging for employees to be given a commuting allowance which they can use for parking, transit, or kept, if they walk or bicycle. Some parking organizations use parking fees to pay for free transit passes for employees.

*Such practices reduce auto trips an average of 18%, and up to as much as 50%. \**

### **On Street Parking**

On street parking can provide up to half of parking needs. Angle parking is the most efficient. The travel lanes of the street take the place of parking lot center lanes. A recently proven technique is back in angle parking. Street widths would need to be increased and perhaps lot depth decreased a few feet to accommodate angle parking.

### **Structure Parking**

Parking structures are very expensive and are financially practical only in more dense conditions. Perhaps the 54<sup>th</sup> street intersection setting will eventually reach those conditions. The cost of such structures can be reduced by using them on the interior of blocks, forming the back walls or even upper floors of buildings facing the street.

These measures can help reduce parking rates and the impact of the remaining spaces.

- Multifamily rates may be reduced to 1 or less per unit from 1.25
- Office rates may be reduced to 2 per 1000 square feet from 3 or 4
- Retail rates may be reduced to 3 or less per 1000 square feet from 4 or 5

These rates should be maximums in zoning ordinances, not minimums.

The plan map shows about seven acres set aside for parking. As the area is developed, more will likely be fit in. The analysis for the Bus Rapid Transit line suggested that about 200 spaces be set aside for commuters. Of course these spaces can be used for other purposes in the evening. The amount of parking for office, retail, civic and multifamily buildings was calculated:

Using typical rates calculations result in 4000 spaces covering 27 acres.

Using lower rates, made possible by the measures described above, would calculate out to 2500 spaces covering 17 acres. If half of the parking can be provided on street, there would be a need for about 8 or 9 acres of auto parking, spread around the two town centers.

\* *Online TDM Encyclopedia*, The Victoria Transport Policy Institute, [www.vtppi.org](http://www.vtppi.org)  
 Parking Management: Innovative Solutions To Vehicle Parking Problems

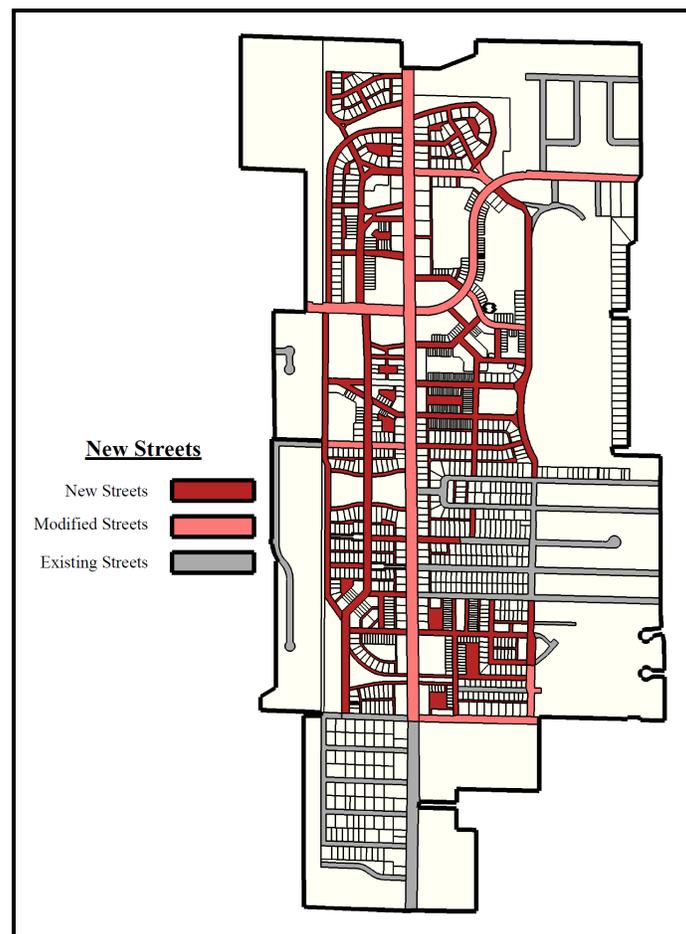
## STREETS AND CONNECTIONS

An extensive street network of carefully matched streets has been laid out for the neighborhood. It meets the citizens' goals of a walkable neighborhood, an organic network of streets, connections to parks and schools, and making Division the central street of the town centers. All the street types can accommodate all the modes of transport at more than their most likely volumes. The location of medians and turn lanes were adjusted for good auto turning movements and a good pedestrian and business environment.

### Street Network

The first graphic shows all the new streets and how they match up with existing streets to make an efficient and highly connected network.

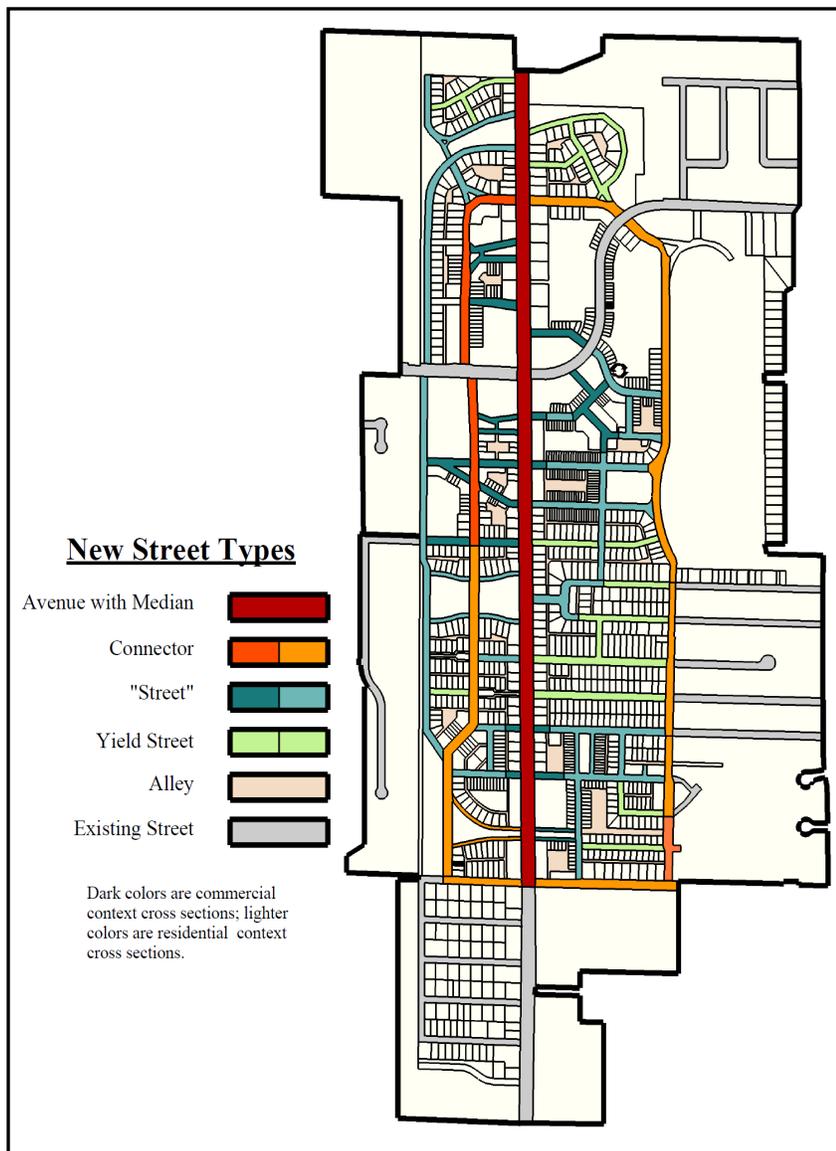
North south traffic is accommodated on three new streets taking pressure off of Division Avenue. Studies showed that much of the traffic on Division in this segment originates within the project area. The new north south streets can take traffic off of Division north of 54<sup>th</sup> Street and return it at 60<sup>th</sup> Street, while providing access to all parts of the project area. The connector streets form a loop through the project. The street spacing creates walkable size blocks that are still adequate for development.



## Street Types

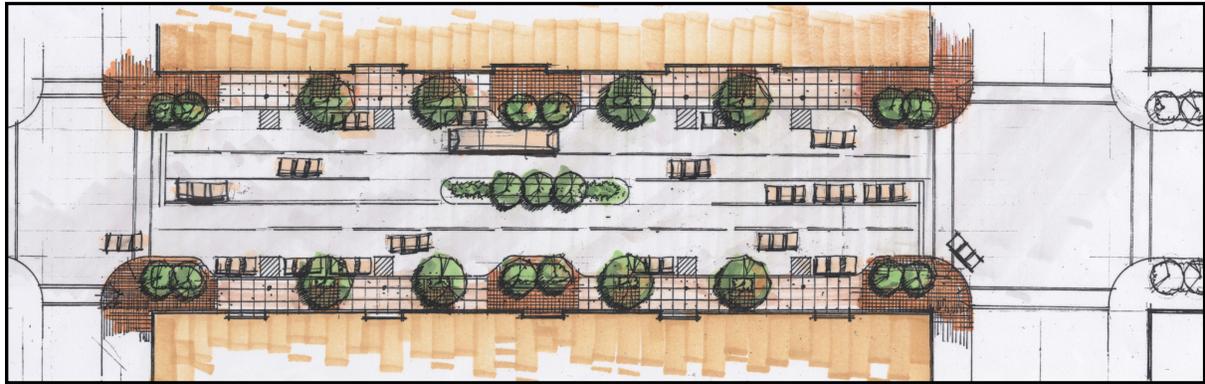
The graphic below shows the street network and street types. The street types are typical for this metropolitan area, are taken from Grand Valley Metro Council's Form Based Code Study and conform to the recent context sensitive street standards from the Institute of Traffic Engineers.

The street standards described below are optimum for the contexts in which they are placed and can accommodate the pedestrian, bicycle, transit and auto traffic of those sorts of places very well. It is extremely important to adhere closely to these street dimensions. Adding width to through lanes or adding lanes will increase auto speed and destroy or greatly diminish the pedestrian friendly function and character of these places. The *Form Based Code Study* of Grand Valley Metro Council or the *Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities* can be consulted for guidance on workable adjustments. *For details see the table and illustrations in the Appendix.*



### Avenue With Median

The citizens desired a boulevard treatment of Division Avenue. The proposed cross section includes median, parallel parking spaces, extended curbs at some corners, and left turn lanes where appropriate. The illustrations show the desired design. A small amount of additional right of way will be needed for this cross section. The cross section used in the more detailed drawings assumed a 112 foot right of way with 15 foot sidewalks, 2 eight foot wide parking lanes, 2 eleven foot wide through lanes and an eleven foot wide median/turn lane.



Design for Division Avenue



Cross Section of Design for Division Avenue

The median will accommodate pedestrian crossings at unsignalized locations. The bump outs and median reduce each crossing distance to 22 feet and require watching traffic in only one direction. Traffic engineers offer this as a safe crossing arrangement given Division's planned traffic speed and likely traffic volume. The angled median sidewalk faces pedestrians in the direction they need to look, and discourages crossing in one movement.



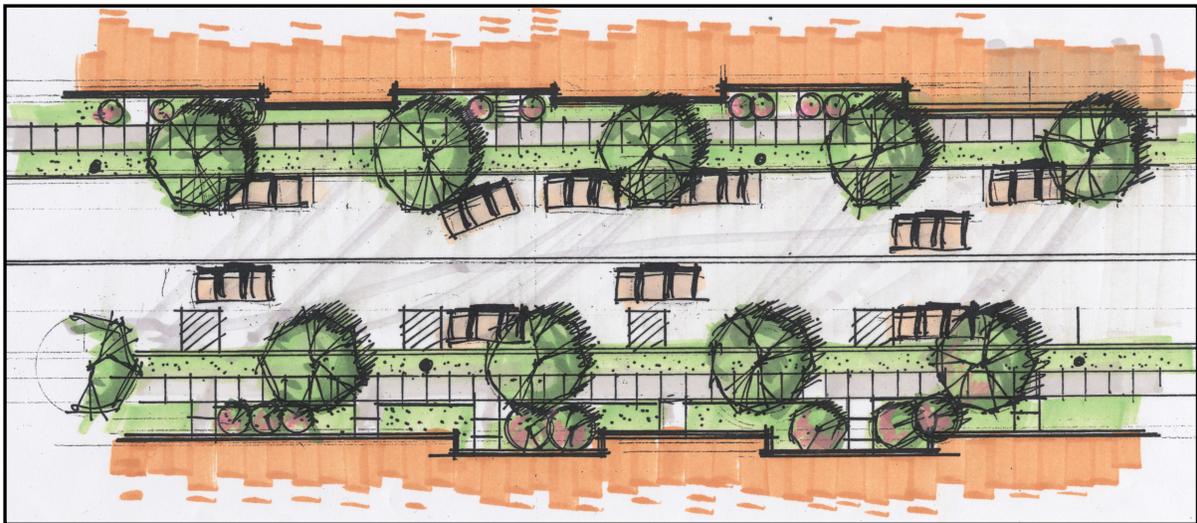
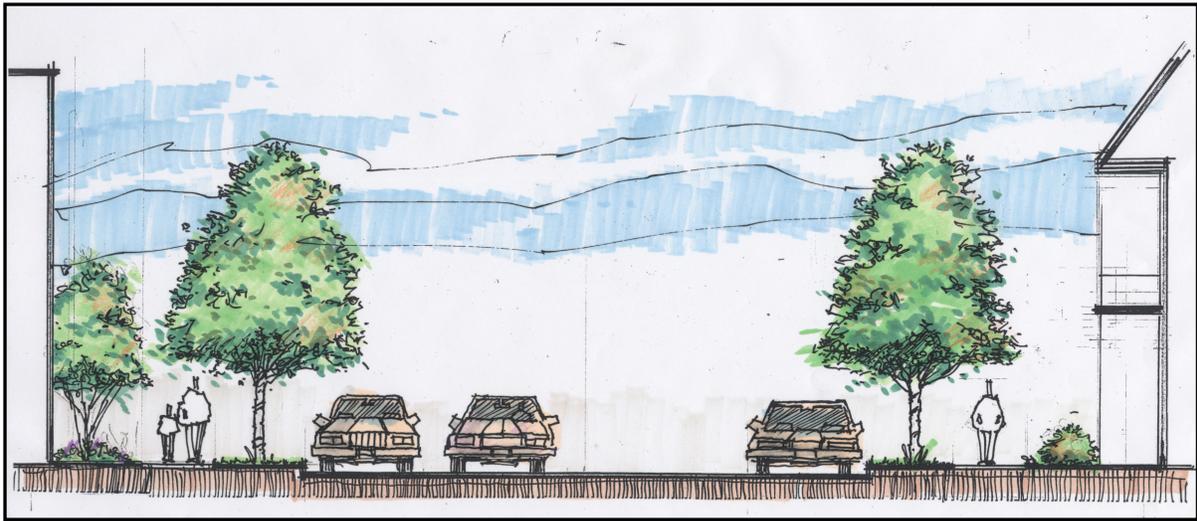
Angled Crosswalk for Division Avenue

## Connector Street

The connector street forms the loop through the project and is an alternate route to Division Avenue. Its curb to curb cross section includes two ten foot travel lanes, two five foot bicycle lands and two eight foot parking lanes. The illustration below does not show bicycle lanes and it may be that traffic will be slow enough that they are not needed. The curb to right of way edge would vary between residential and non residential contexts.

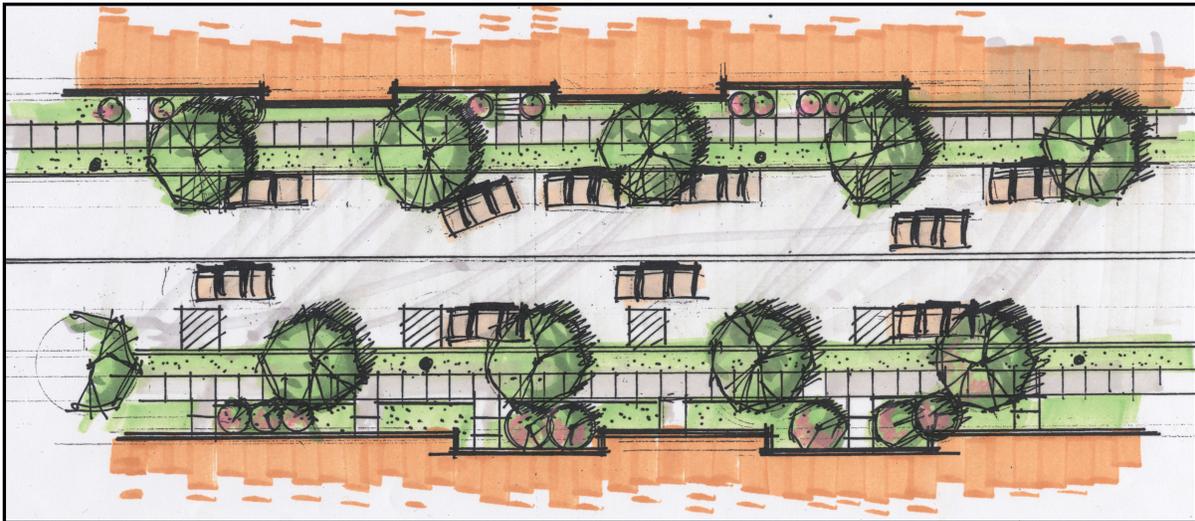
Commercial contexts would have a fourteen foot pedestrian “realm” on each side, which includes space for street furniture or tree wells.

Residential contexts would include a five foot sidewalk and 4 foot parkway next to the curb.



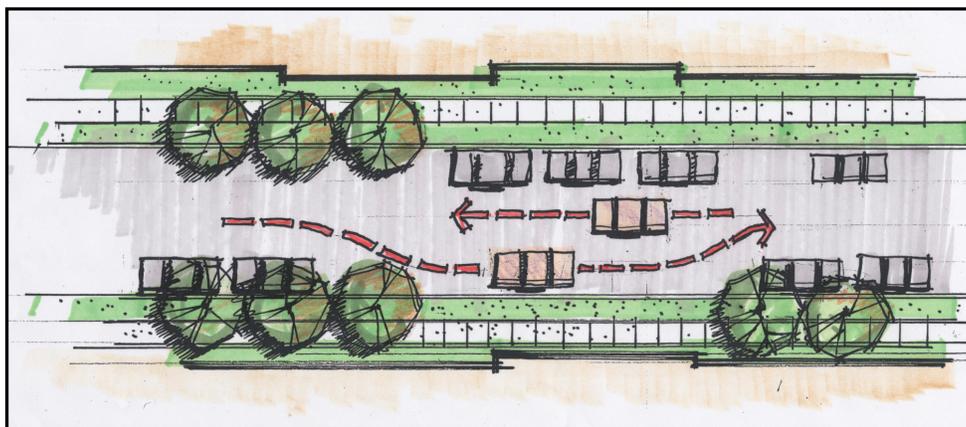
### “Street” Street

No better name has been found for the standard two lane street. This cross section is for short streets with mixed uses or higher density residential uses. Two ten foot travel lanes and two eight foot parking lanes are the usual curb to curb section. Streets with this cross section work well where the blocks are short and there are many alternate routes. The pedestrian sections are about 12 feet per side in mixed use/commercial areas and nine feet per side in residential areas.



### Yield Street

Studies have shown that this street type is the safest, and is common throughout our metropolitan area . The combination of 8 foot parking lanes and an eleven foot through lane forces traffic to take turns passing through sections with cars parked on each side. If the parking lanes tend to be completely filled, no parking sections can be assigned. This street type is appropriate for lower density residential streets. The parkway is wider – six to eight feet with 5 foot sidewalks.



### Alley and Lane

An alley can have 14 feet to 20 feet of right of way depending on location of garage entrances and purpose of the alley or lane.

## THE PLAN BY THE NUMBERS: 1400 DWELLINGS, 1700 JOBS

<i>Calculations Using Land and Floor Area for Fishers Station Plan</i>						
<i>Land Use</i>	<i>Total Land Per Use</i>	<i>Total floor area Per Use</i>	<i>Total First Floor</i>	<i>Total floor area Retail</i>	<i>Total floor area Office</i>	<i>Total floor area Residential</i>
<i>Multi Family</i>	466,437	233,218	90,627			233,218
<i>Mixed Use</i>	986,363	949,078	288,287	150,000	799,078	-
<i>Flex</i>	207,676	103,838	34,613		103,838	-
<i>Civic</i>		39,098	19,549		39,098	-
<i>Dwellings</i>						
<i>Townhouses</i>	792,559					
<i>Single Family</i>	1,780,004					
<i>6 Unit Apt Bldgs</i>	637,043					
<i>Courtyard Houses</i>	105,414					
<i>Totals</i>						
<i>Totals</i>	4,975,496	1,325,233	433,076	150,000	942,014	233,218
<i>Totals for Residential</i>	3,676,042					
<i>Units of area are square feet</i>						

### Floor Area

These tables are based on a building floor area to land ratio of 0.5. That is to say – for each square foot of land there would be 0.5 square feet of floor area. That was the goal for the project. This ratio could be adjusted up or down, but this is a healthy ratio for a town center, especially a transit supported center.

### Dwellings

Complete building of the plan would result in about 1400 dwelling units and an average net density of 17 units per acre. Density would be higher for most of dwelling types. The types are described later in the plan. “Multi family” could include a variety of building types; and 6 unit apartment buildings could be somewhat larger or smaller. Mixed use and flex buildings could include more residences and less office space. At the present there are only a few residences on the site. The housing mix conforms to the forecast housing demand described in GVMC’s residential market study (see Appendix).

<i>Calculations Using Land and Floor Area for Fishers Station Plan</i>				
<i>Land Use</i>	<i>Number of Retail Jobs</i>	<i>Number of Office Jobs</i>	<i>Number of Dwelling Units</i>	<i>Residential or Employment Density</i>
<i>Multi Family</i>	-	-	233	22
<i>Mixed Use</i>	375	2,664	-	134
<i>Flex</i>	-	346	-	73
<i>Civic</i>	-	130	-	
<i>Dwellings</i>				
<i>Townhouses</i>			337	19
<i>Single Family</i>			316	8
<i>6 Unit Apt Bldgs</i>			582	40
<i>Courtyard Houses</i>			24	10
<i>Totals</i>				
<i>Totals</i>	375	3,140		123
<i>Totals for Residential</i>			1,492	18
<i>Rates: 1 retail job per 400 square feet, 1 office job per 300 square feet, 1 dwelling unit per 1000 square feet; Density = DU's per acre or jobs per acre</i>				

## Jobs

The proportions of uses for mixed use or flex building floor space could vary greatly between retail, office and residences. This allows for an easier response to market conditions. The need for retail use is limited because of large, big box retailers only one mile to the west. Much of the existing retail space on the site is vacant. As an illustration the calculations above assume the presence of 150,000 square feet of retail floor space, with the remaining space being office employment. A minimum amount of retail should be present to make these balanced, 24 hour communities; so residents and workers can obtain most of their daily needs within walking distance, and there is a lively social center. There could be more retail space, but this ratio results in over 3000 office jobs and over 300 retail jobs. The number of square feet per office job is higher than often used, so quite a few more employees could be accommodated. At the assumed rates, there is an average of 123 employees per acre, counting only the land so used.

Using 2005 data it is estimated that there are 1300 jobs in the changed area. 581 are retail, 274 are service. It is not known how many of these are office jobs. *There would be a net increase of 1700 jobs, even though much of the commercial land would be converted to residential use.*

## Property Value and Tax Revenue

If fully developed according to this plan, the school districts and cities would at least triple their property tax revenues due to the increased value of the property. The table below is an estimate and does not include the extra 18 mills that schools receive from commercial property.

<b>Comparison of Present and Potential Property Tax Revenue</b>				
	City of Kentwood	City of Wyoming	Kelloggsville School	Kentwood School
Estimated Present	\$ 301,133	\$ 169,499	\$ 354,885	\$ 153,027
Estimated Future	\$ 909,155	\$ 626,862	\$ 1,001,874	\$ 773,686
<i>These estimates use the present State Equalized Values and present City(10.7 and 7.5) and School Millage (11) Rates. Future property value estimated on building costs (\$150 per square foot) and average present land values.</i>				

## BUILDING TYPES AND PLAN MAP

The citizens' plan composed during the charrette was a complete vision for the development of the project area. It includes the lay out of streets and blocks, new plazas and parks, street design, building forms and types on each block. The following map depicts the location of building types and their uses on the plan. Some categories on the map include more than one building type. The plan is flexible. The table below correlates building types to the map categories. The subsequent pages describe those building types. These details can be a starting point for building form standards or building type standards in a form based zoning code. The civic building sites are shown on the hand drawn plan map in the beginning of this document.

The categories on the map include one or more of the building types, described on the subsequent pages, as follows:

<b>Map Category</b>	<b>Building Types</b>
Mixed Use	Loft, Mixed Use, Live Work
Flex	Loft, Live Work
MultiFamily	Courtyard Apartment, Center Hall Apartment, Apartment House
Small Apartment Bdgs	Center Hall Apartment, Apartment House
Townhouse	Townhouse
Courtyard Cottage	Courtyard Cottage
Single Family	Single Family, Stacked Flat, Duplex, Accessory Building

The building type diagrams show recommended parameters for:

- Height
- Location of parking
- Build to or setback lines
- Lot size
- Lot coverage
- Location of auto access
- Use

The photographs represent buildings that meet these standards and are only examples. The architectural style could vary considerably.

# Fisher's Station

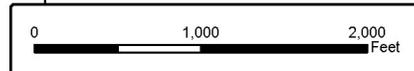
## Planned Land Use/Built Form



### Legend

#### New Land Use

-  Unchanged
-  Mixed Use
-  Flex Buildings
-  Multi Family Housing
-  Car Parking
-  Small Apartment Buildings
-  Town Houses
-  Courtyard Cottages
-  Single Family Houses
-  Parks
-  Natural Areas
- 



## Prominent Civic



Prominent Civic Structures are those that are sited specifically in the plan and not regulated by the Code.

Examples include schools, libraries, churches, and city halls



Space left intentionally blank due to building being specifically sited in plan

## Small Civic



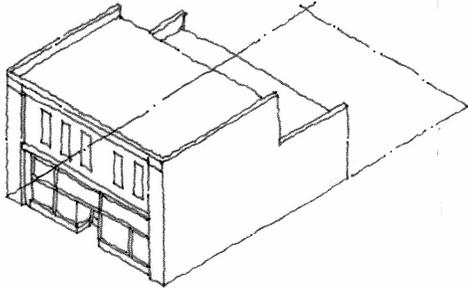
A small civic structure, sized according to residential lot standards. This type accommodates secondary neighborhood functions distinct from residential and commercial uses. Parking is restricted to that which can be provided at the rear of the lot.

Typical lot sizes are 24' to 50' wide by 90' to 120' deep.



Space left intentionally blank due to building being specifically sited on plan.

## Mixed Use

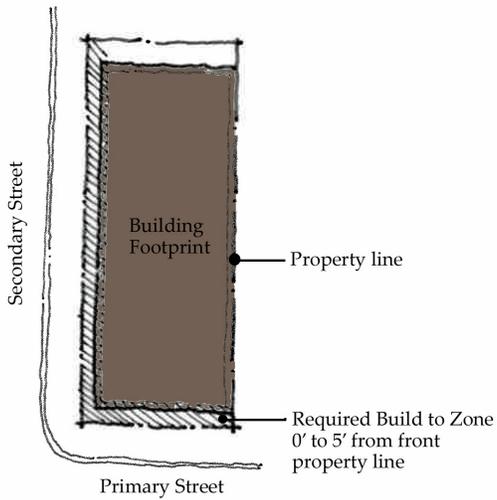


A pedestrian oriented equivalent to conventional retail and or office buildings of similar densities. A mixed use building is at least two stories, with parking integral to the building or in an open lot to the rear. The mixed use building should have a relative shallow setback to the street.

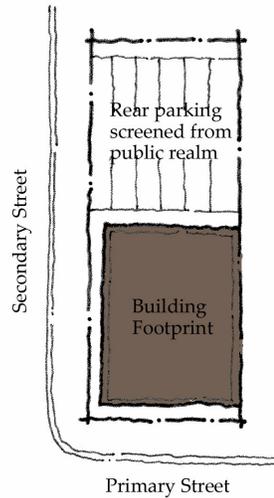
Typical lot sizes are 30' to 120' wide by 40' to 150' deep.



Building Siting



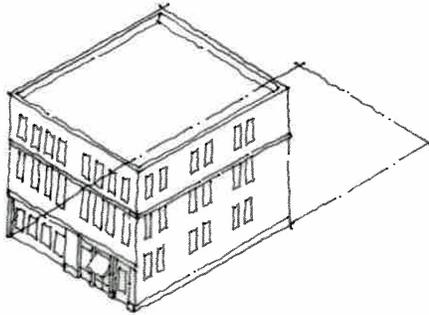
Building Parking



## Site Disposition

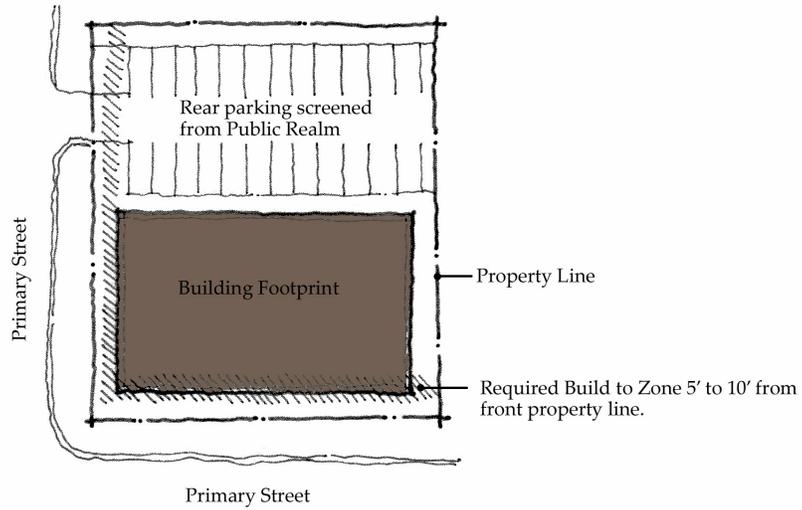
Maximum site coverage of building: 95%

# Loft



A building with primarily large open floorplan stacked flat residences on upper levels. Lower floors may be residential, office, service or convenience retail uses.

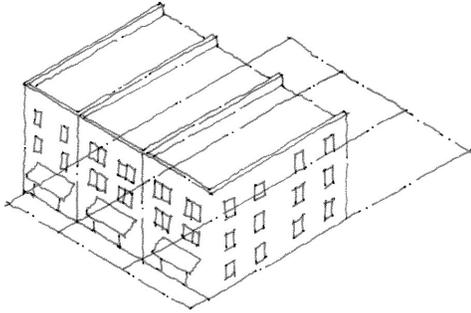
Typical lot sizes are 30' to 120' wide by 40' to 150' deep.



# Site Disposition

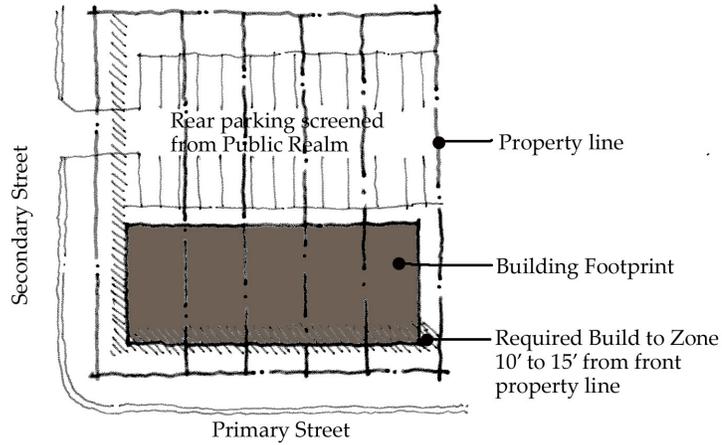
Maximum site coverage of building: 65%

# Live-Work or Flex Building



An attached building which incorporates both a living and working component, with the live portion typically given predominance. Lower levels can have flexible spaces with either storefronts or punched openings for windows,

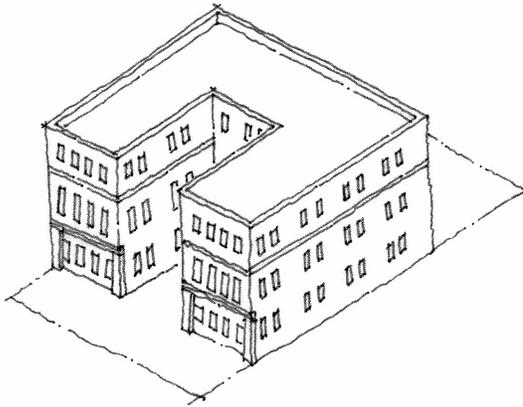
Typical lot sizes are 16' to 24' wide by 60' to 120' deep.



Maximum site coverage of building: 75%

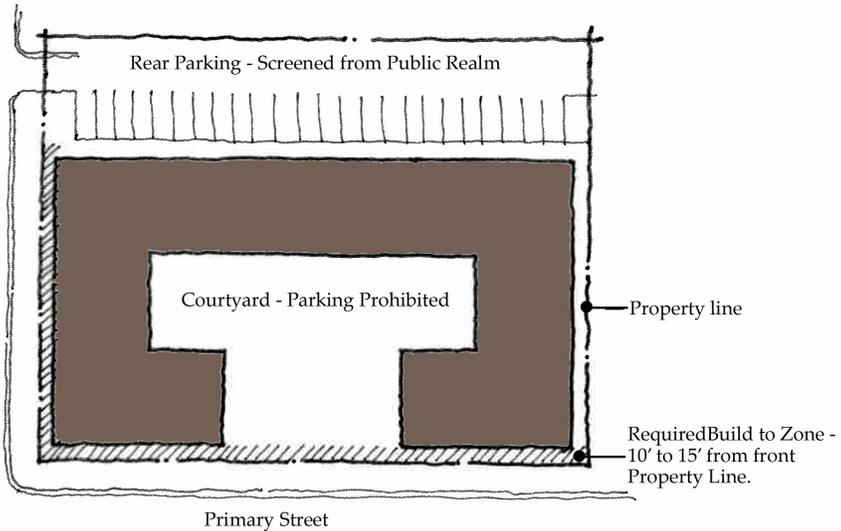
## Site Disposition

## Apartment - Courtyard



A residential or lodging building, with size regulated according to that which can accommodate its parking need. The street facade typically resembles the variety of a traditional apartment building. This type has a courtyard facing the primary street.

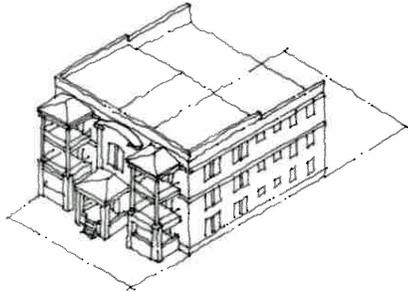
Typical lot sizes are 50' to 80' wide by 90' to 120' deep.



## Site Disposition

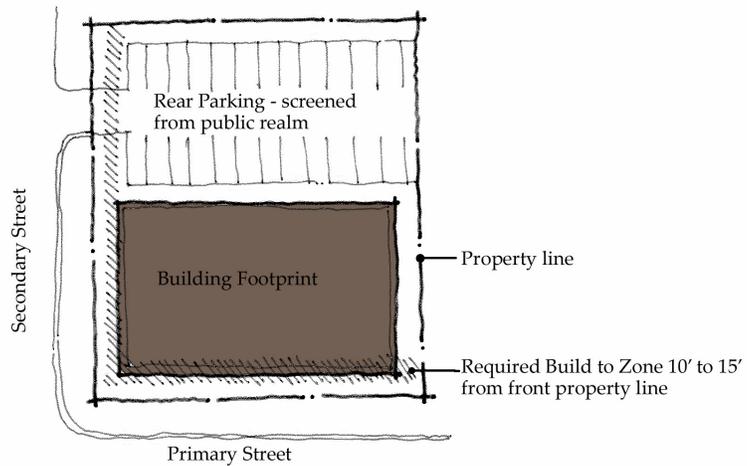
Maximum site coverage of building: 70%

## Apartment - Center Hall



A residential or lodging building, with size regulated according to that which can accommodate its parking need. The street facade may resemble a large detached house or any variety of traditional apartment types. This type has a center hall with a main entry door.

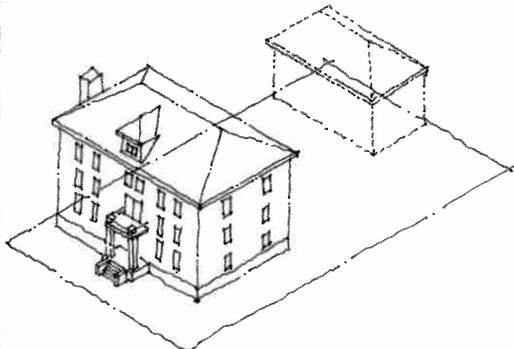
Typical lot sizes are 50' to 80' wide by 90' to 100' deep.



Maximum site coverage of building: 70%

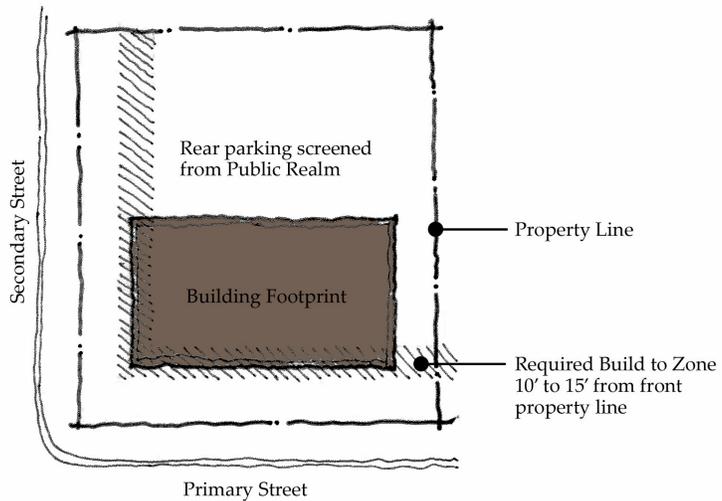
## Site Disposition

# Apartment House



A residential or lodging building, with size regulated according to that which can accommodate its parking need. The street facade may resemble a large detached house.

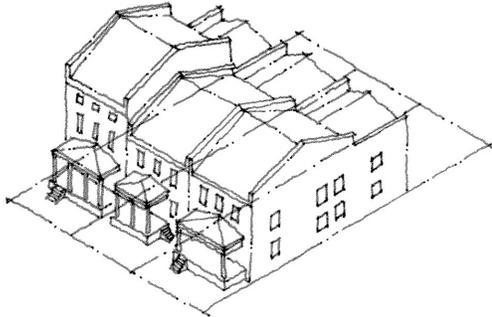
Typical lot sizes are 50' to 80' wide by 90' to 120' deep.



Maximum Site Coverage of Building 60%.

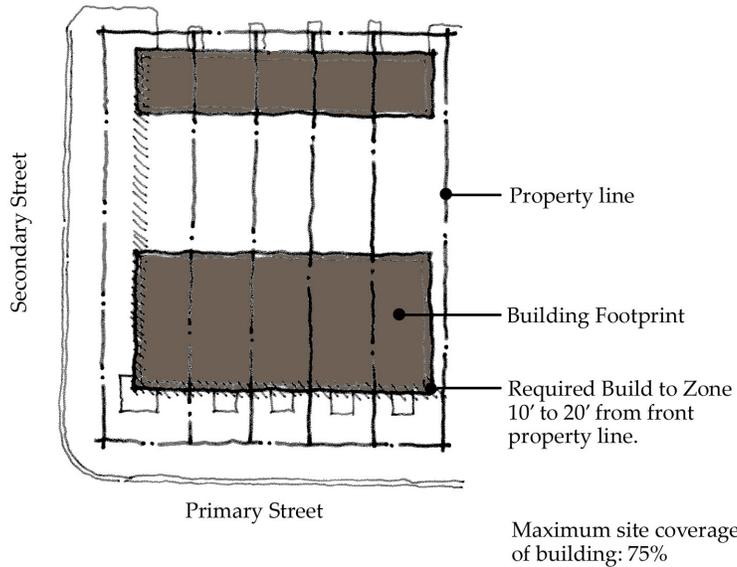
# Site Disposition

# Rowhouse



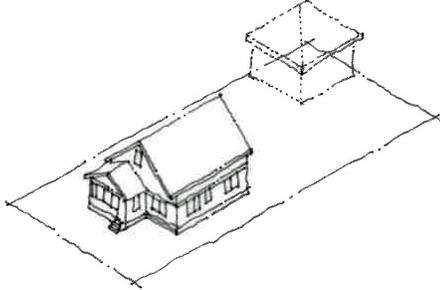
Similar in form to a conventional sub-urban townhouse, except that the garage - either attached or detached - is located in the rear and accessed from an alley or parking court. Rowhouses conform to the patterns of the street, typically with shallow front yard setbacks.

Typical lot sizes are 16' to 30' wide by 60' to 120' deep.



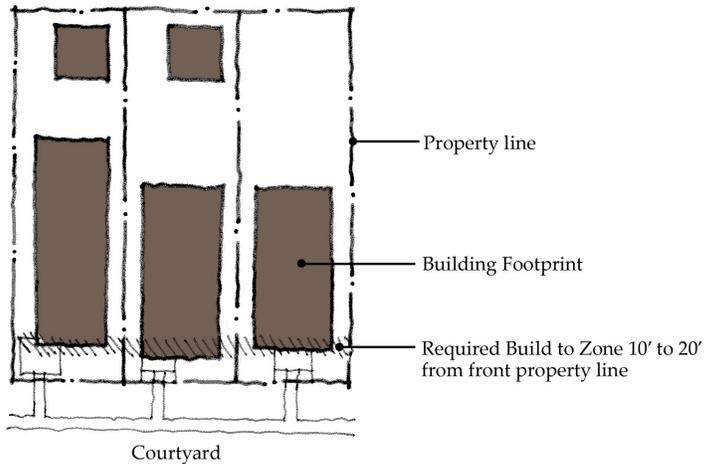
## Site Disposition

## Courtyard Cottage



A single-family home type which typically fronts on a courtyard, mews or green in a cottage court array, facing other courtyard cottages. The home is typically smaller narrower than other single-family homes.

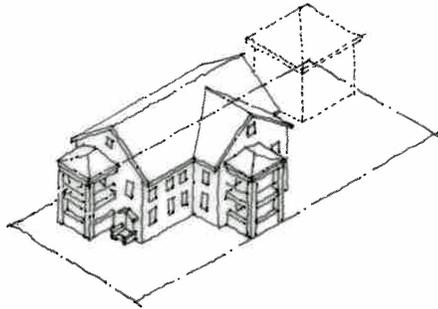
Typical lot sizes are 25' to 30' wide by 90' to 120' deep.



Maximum site coverage of building: 50%

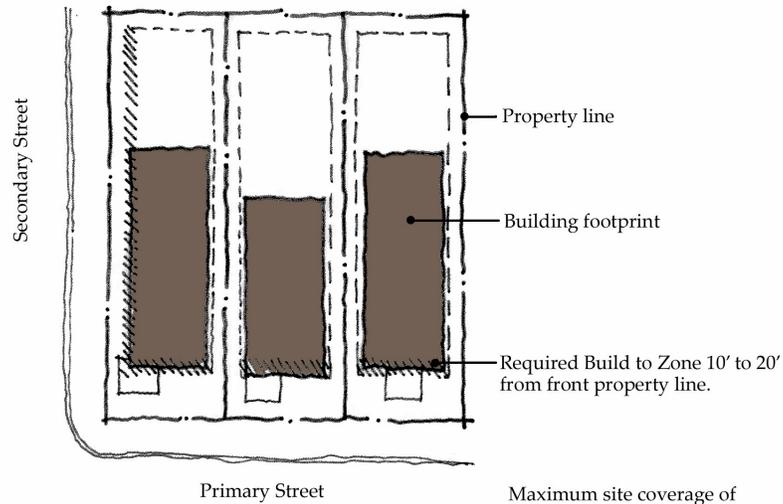
## Site Disposition

# Duplex



A building with two single-family homes attached side by side. The garages are located at the rear of the unit and accessed from an alley or auto court. Garages may be detached or attached.

Typical lot sizes are 40' to 70' wide by 60' to 120' deep.



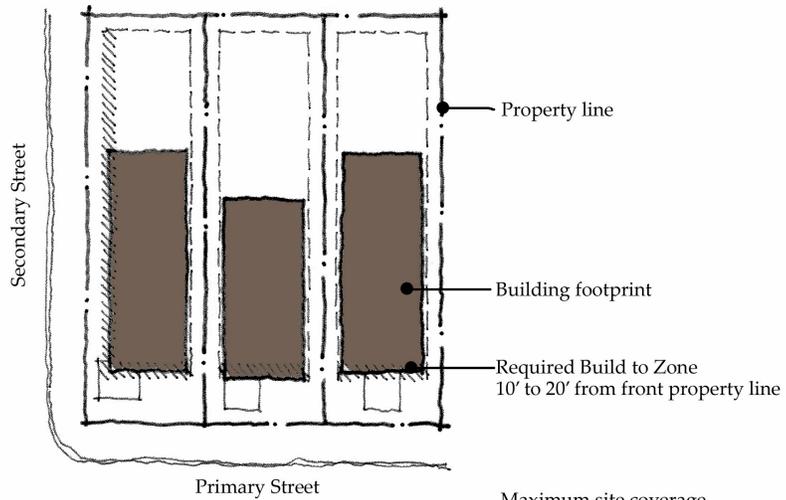
## Site Disposition

# Stacked Flat



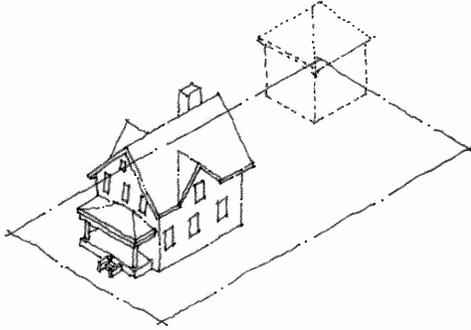
A building with typically two single family units attached one over the other. The garages - either attached or detached - are located in the rear of the unit and accessed from an alley or auto court.

Typical lot sizes are 36' to 50' wide by 60' to 120' deep.



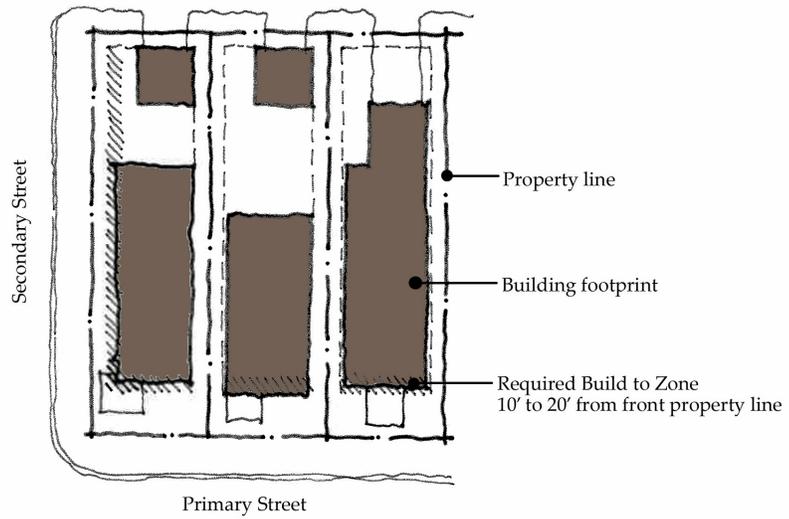
# Site Disposition

## Single-Family



A single family detached house on its own lot, with parking typically located to the rear of the lot.

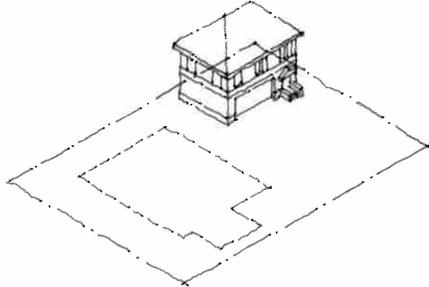
Typical lot sizes are 30' to 70' wide by 90' to 120' deep.



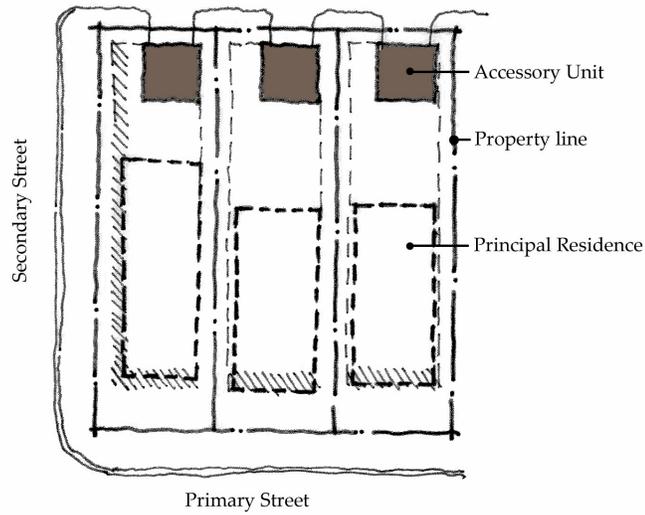
## Site Disposition

Maximum site coverage of building: 50%

## Accessory Unit



A secondary dwelling unit associated with a principal residence on a single lot. An accessory unit is typically located over the garage, attached or detached, of a rowhouse or single-family home. Also known as a garage apartment, granny flat or accessory apartment.



## Site Disposition

## **NEXT STEPS**

### **Adopt As Part of an Official Plan**

The first step is for the Cities of Wyoming and Kentwood to adopt this document as part of their master plans. It would be a “subplan” as authorized in the Michigan Planning Enabling Act of 2008. The recent Act authorizes Cities to adopt more specific plans for particular sections of their community.

The new law also authorizes the adoption of a “master street plan” which can include the “location, character and extent of streets”, as well as all other public facilities. This *Plan for Fisher’s Station* would constitute part of a master street plan for each City. Proposed developments and public works would be required to conform to the master plan and the Fisher’s Station subplan. The *Plan for Fisher’s Station* also prescribes the street cross sections that would guide the design of all new and reconstructed streets, as well as location of medians and left turn lanes. The Fisher’s Station plan’s prescriptions can be adjusted for changes to some degree, but those changes would need to be approved by each City’s planning commission, which is also required by the State planning act. All streets, squares, parks, and other public improvements must be approved by the planning commissions before they can be authorized of built. (Article IV, Sec 61)

A “zoning plan” is required as part of City master plans. A zoning plan is a “plan for various zoning districts controlling the height, area, bulk, location, and use of buildings and premises. The zoning plan shall include an explanation of how the land use categories on the future land use map relate to the districts on the zoning map.” The *Plan for Fisher’s Station* includes the specifics needed to qualify as a “zoning plan” for this subarea of Kentwood and Wyoming.

### **Zoning Changes**

The second step is the adoption by both Cities of an essentially identical form based code for the project area. The code (ordinance) would be part of the Cities’ zoning ordinance, and would include a regulating plan (a more specific version of the zoning plan), standards for block sizes, streets, and building form.

### **Phasing and Segmentation of the Plan**

The third step would be to put together an implementation strategy. This would include an identification of those parts of the project area most likely to change and those easiest to change. These would be aggregated into segments each of which would establish fairly complete places. That would assure other developers about the viability of the next steps. The segments would be listed by priority and worked on in that order.

## **Public Improvements**

Once phases are established, a list of certain, likely and potential public improvements should be made. This would include street and sewer improvements, public buildings, and acquisitions of land for parks, streets or other public spaces.

A major portion of Division Avenue within the plan area is scheduled for reconstruction by 2012. The cities could begin preliminary design based on the street network, cross sections and layout described in this document. This street design is practical if the adjoining area is zoned and built in the manner described in this document. Therefore the communities will need to be committed to both.

## **Natural Areas/Trails/Parks/Greens**

The alteration, expansion and connection of parks, trails and natural areas will be a significant and motivating part of the establishment of these two centers. A parallel strategy should be devised by municipal and county parks departments, the drain commissioner and regional trails organizations.

## **Specific Action List**

Each year the group responsible for the establishment of the two neighborhood centers should list their actions and goals for that year, after reviewing the progress of the previous year and the overall strategy.

## **Organization**

It would be useful to organize the usual cooperation between Wyoming, Kentwood, Gaines and Byron more formally in order to facilitate this cooperation. It might be very formal by the establishment of a joint planning commission of Kentwood and Wyoming. It could be somewhat less formal by establishing a joint committee to work on zoning ordinances, review of projects and public actions. By memorandum of understanding the units could establish a committee with the appointment, for example, of a planning commissioner, elected official and staff planner from each jurisdiction. It could include any two or more of the governments, and to varying degrees of involvement. Byron and Gaines might be initially included in a consulting role. Their role might become more proactive if they undertake more extensive redevelopment south of 60<sup>th</sup> Street. A committee (as opposed to an official joint planning commission) could also include representatives of business associations, school districts and other stakeholders. Another option is to establish an advisory group.

## **Public/Private Cooperation**

This project needs private developers and builders that share this vision. The Cities and Townships can pro actively seek out developers and builders who may be interested and provide them with the information they need to make decisions about the site. It would be good to assemble a package of pertinent and useful information, both digital and printed, and making sure that sympathetic builders receive it. Setting aside time to seek out developers and discussing the potential could be an item on the annual action list.

## APPENDIX

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<b>Existing Conditions</b>		
<b>Change Area</b>		
Total Area	200	acres
Area of Residential Use	-	acres
Number of Dwelling Units	170	Dwelling Units
Mobile Homes	0	Mobile Homes
Average Density	--	DU's per Acre
<b>Commercial Floor Area</b>	1185873	Square Feet
Floor/Area Ratio		Sq. Ft floor per Sq. Ft.
For sum of area and bdgs	0.15	
Average of all parcels	0.22	
<b>One Quarter Mile Wide Corridor</b>		
Total Area	540	acres
Area of Residential Use	103	acres
Number of Dwelling Units	800	Dwelling Units
Mobile Homes	336	Mobile Homes
Average Density	7.8	DU's per Acre

## Summary of Recent Market Studies

### **Retail Market Study** *For the Burton-Chicago and Division Avenue Corridor* Anderson Economic Group September, 2004

For the Division Avenue corridor from about 28<sup>th</sup> Street to 60<sup>th</sup> Street:

There could be feasibly 110,000 more square feet of retail uses, 28 establishments. A detailed list is provided. This is an estimate for immediate use. Long term changes would depend on increases in disposable income and population in the market area.

Perhaps we can claim a quarter of that space for the Fisher Station area.

### **Residential Market Study** *For the Burton-Chicago and Division Avenue Corridor* Anderson Economic Group September, 2004

The study recommends 385 units for a 55 to 71 acre site in the Fisher Station area which would be sold in ONE year. They say the potential market is 900 units for the entire Division Ave corridor.

In another location they recommend 100 to 300 units for the Division St corridor with 70% owner occupied. These should be at values of \$60,000 to \$100,000 and \$150,000 to \$175,000. They suggest a 6 unit per acre density.

They say a large, 300 unit development would transform and stabilize the corridor.

Recommended housing types:

Single Family Homes

Bungalows – 1000 to 2000 sq ft

Small – 1 story, 2 to 3 bdrms, 10,890 sq ft lots, 2 car detached garage

Large – 2 story, 3 to 4 bdrms, 10,890 sq ft lots, 2 car detached garage

Garage Apartments -- 500 to 700 sq ft

Condos and Apartments - attached 1 car garage in rear

Stacked Flats – 2 to 4 units per bdg

Duplexes – 2 to 4 units per bdg

[in another part of the study they recommend a minimum of 4 apartments per structure]

Live Work Units 800 to 1500 sq ft residential, 500 to 1000 sq ft retail [or office] 2 car detached garage [rear? Could be attached?]

The study recommends more housing diversity by introducing row houses, townhouses, and “loft” apartment buildings of 4 units or more.

New structures are needed in order to attract new households.

**The Implementation Plan** *For the Burton-Chicago and Division Avenue Corridor*  
Anderson Economic Group September, 2004

There are twelve action points for the Division Avenue corridor, eight relate to the Fisher Station area. These stand out:

- Cluster stores
- Use boulevards, pedestrian islands, and plant trees
- Create a residential neighborhood south of 56<sup>th</sup> street
- Create an identity for this neighborhood through various means, make it an arrival
- Connect streets in a network across Division too, avoiding dead ends
- Calm traffic and put in pedestrian friendly items like cross walks, benches, lights,

**The City of Kentwood Retail Market Analysis**

J Eppink Partners Inc, June, 2004

Target Area 1 of the Kentwood plan centered on 44<sup>th</sup> Street and Division Ave. Its market area included what would likely be the market area of Fisher Station. The study estimated conservatively that the area could support an additional 76,750 square feet of retail uses – about eleven establishments and 3000 square feet of service office. Some portion of that might be met at the 54<sup>th</sup> Street intersection of Fisher Station.

Recommendations:

- Again this consultant recommends adding residential units to support the retail operators. (p.42)
- Office development would be a change for the area. (p. 43)
- Cluster retail uses appropriately. (p. 45)
- Market and brand neighborhood centers [needs to be a center to do that] (p. 46)

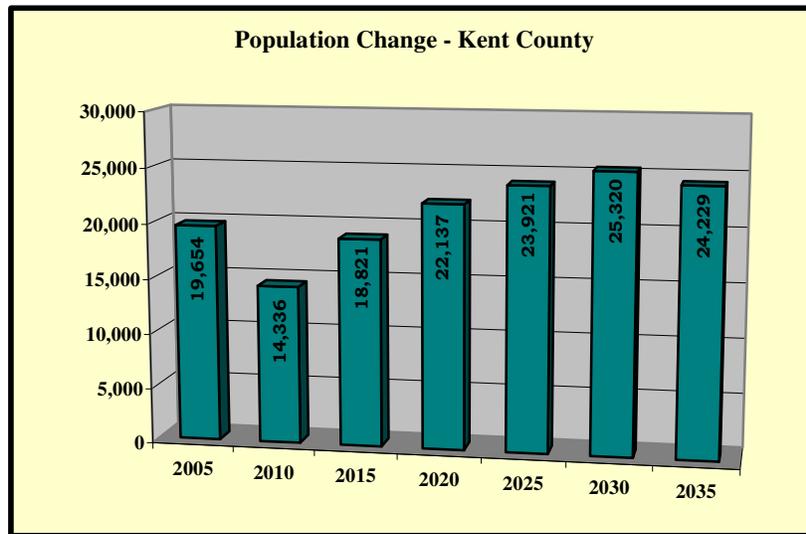
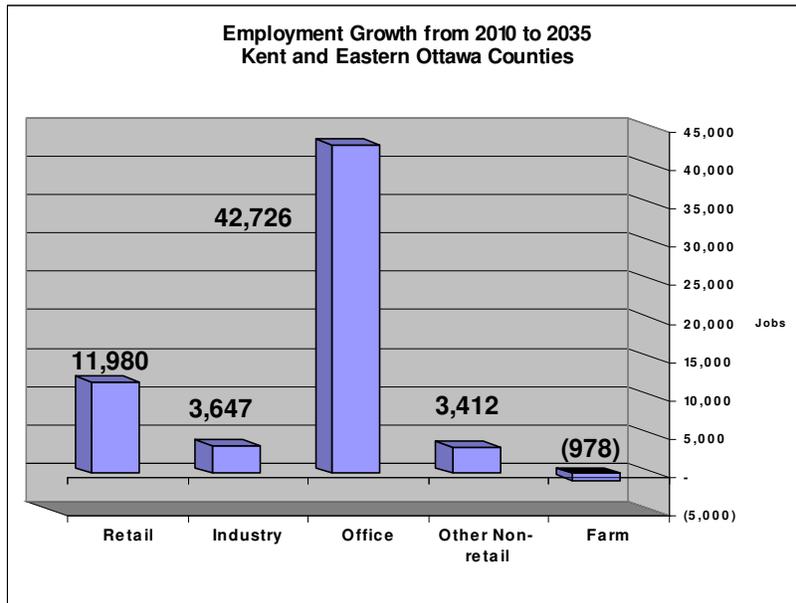
**Volk Zimmerman Housing Market Study**

This study covered Kent and Ottawa Counties and was completed in 2004. The analysis was very detailed and gave breakdowns by housing type and rent/price ranges for the housing demand for the following seven years. The fundamental conclusion was that all future housing in the area should be in walkable neighborhoods or downtowns, of typical types found there; because that is the unmet demand. The housing supply of conventional suburban development is already large enough to meet the future demand for that type.

## Population and Employment Projections

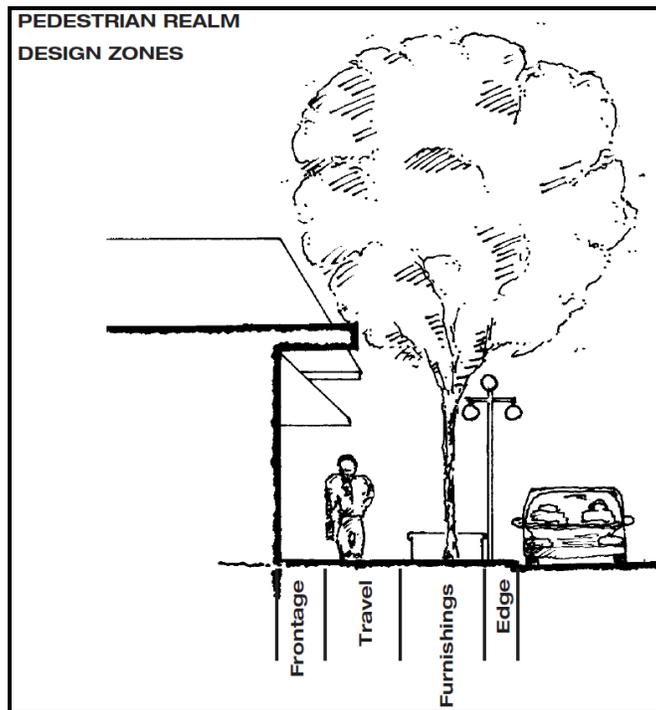
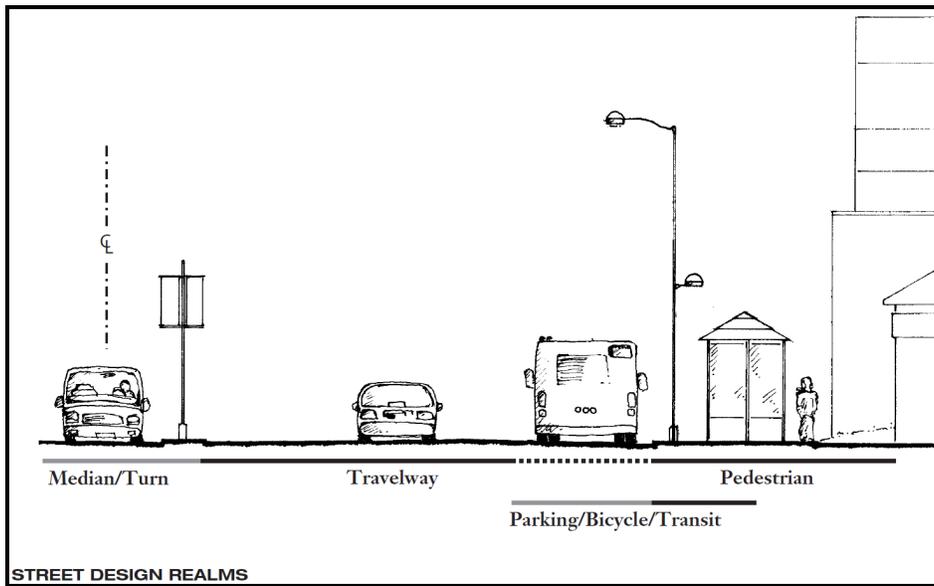
The following projections are the most rigorous available for Michigan communities. It shows employment and population growth. The greatest growth will be in small households and office based employment. (Categorization of employment by building type was done by local staff.)

Economic and Demographic Outlook for Michigan and Its Counties to 2035  
February 12, 2008  
George A. Fulton, Donald R. Grimes  
Institute of Labor and Industrial Relations, University of Michigan



<b>Street Standards</b>				
	<b>Avenue with Median</b>	<b>Connector Street</b>	<b>Street</b>	<b>Yield Street</b>
<b>Travel Way Realm</b>				
<b>Target Speed</b>				
Commercial	30 to 35 mph	25 mph	20-25 mph	NA
Residential	30 to 35 mph	25 mph	20-25 mph	15 mph
<b>Number of Through Lanes</b>				
Commercial	4	2	2	NA
Residential	4	2	2	1
<b>Basic Lane Width</b>				
Commercial	10-11 ft.	10 ft.	10 ft.	NA
Residential	9-11 ft.	9-10 ft.	9-10 ft.	9-10 ft.
<b>Median Width for:</b>				
Left Turn Lane	10-16 ft.	NA	NA	NA
Street Trees	10 ft. minimum	NA	NA	NA
Pedestrian Refuge	8 ft. minimum	NA	NA	NA
<b>On-Street Parking</b>				
Parallel	8 ft.	7- 8 ft.	7- 8 ft.	8 ft.
Angle	None	optional	Optional	None
<b>Bicycle Facilities</b>				
Outside Lane	None	None	NA	NA
Bicycle Lanes	None	5 ft.	In Traffic	In Traffic
<b>Pedestrian Realm</b>				
<b>Walking Space</b>				
Commercial	6 ft.	6-8 ft.	6-8 ft.	NA
Residential	5-6 ft.	5 ft.	5 ft.	5 ft.
<b>Curb Edge</b>				
Commercial	1.5 ft.	1.5 to 6 ft.	1.5 to 6 ft.	NA
Residential	0.5 ft.	4 ft.	4 ft.	6-8 ft.
<b>Frontage</b>				
Commercial	2.5 ft.	2.5	1.5 ft.	NA
Residential	0-1.5 ft.	0-1.5 ft.	0 ft.	0 ft.

This table sets out the ranges of dimensions for the street types used in this plan and illustrated in the Street Types section of the plan. The categories in the left column are defined by the illustrations below. These dimensions follow the recommended practices of the Institute of Traffic Engineers in the *Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities*. The contexts of this plan require these street types. More information can be found in the ITE document and in the *Form Based Code Study* from Grand Valley Metro Council.



## Traffic and Street Design Decisions and Data

### Memorandum on Division Avenue Design

Date: October 24, 2008

To: File

From: John LaPlante, PE, PTOE

Subject: Fisher's Station Charrette

Traffic Concerns Discussion

Wednesday, October 22, 2008 - Final Minutes

Attending: Russell Henckel, PE	Wyoming Asst Dir of Public Works
Ronald Dressander	Wyoming Traffic Ops Supervisor
Patrick Hughes, PE	Kentwood Asst City Engineer
Terry Schweitzer	Kentwood Community Devpmt Director
Lisa Golder	Kentwood Econ Devpmt Planner
Tom Williams, PE	AECOM Transp Transit Planning
Pete LaMourie, PE	Progressive AE Traffic Engineer
John LaPlante, PE	T.Y. Lin Intl Director of Traffic Engrg

#### 1. Traffic Study of Division and 54<sup>th</sup> Street

Mr. LaPlante reported on the results a half-hour traffic study that the Charrette Team had conducted yesterday at the Division-54<sup>th</sup> Street intersection during the 5:00-5:30 peak period. This brief, quick count was very much in line with the tube counts taken in June 08. There had been some discussion of making 54<sup>th</sup> Street seven lanes at some time in the future, but neither the GVMC 2035 Long Range Transportation Plan, nor the anticipated land uses and roadway network to the east would justify such a cross section.

Based on the traffic data from this most recent count, a Synchro capacity analysis was performed and an overall intersection Level of Service C (total signal delay of 29.0 sec) was confirmed. A second analysis of this intersection found that if the eastbound right turn lane was eliminated, the Level of Service would just slip over to D with 35.1 sec signal delay. (See attached Synchro analysis sheets.)

It was agreed that given the traffic delay expectations of the Wyoming and Kentwood residents, that the right turn lane should be retained. This also gives a sizable cushion if traffic volumes should ever increase significantly with the new developments.

#### 2. Division Street Geometrics

Based on the inputs received from the stakeholder and community inputs, it was agreed that Division Avenue should remain with two 11-foot lanes in each direction and an 11-foot left turn median area. However, as the adjacent properties become redeveloped with rear parking entering off of well-spaced cross streets, the need for a continuous two-way left turn lane goes away and the midblock portions of the median can be landscaped for both aesthetic and traffic taming purposes with dedicated left turn bays only at selected cross street intersections. The length of the left turn bays would depend on demand, with one or two cars at the local street intersections and much longer left turn storage at 54<sup>th</sup> Street. Landscaping of the median and parkways

should be low maintenance (grass and small trees), unless a local business or community organization is willing to pay for and maintain more elaborate plantings.

In addition, we are proposing 8-foot wide parking bays along the entire street wherever there is developed frontage. The parking bays would not extend to the cross street intersections so that pedestrian crossing distances would be kept to a minimum. At certain midblock locations, such as where the east-west shared use path along the power line corridor north of 52<sup>nd</sup> Street, parking would be restricted creating a bulb-out and combined with an angled median crossing results in a convenient and safe bike and pedestrian crossing opportunity. (See attached sketch.) Kentwood already has a similar bike/ped crossing on Eastern north of 52<sup>nd</sup> Street.

To further tame the traffic on Division Avenue, it is proposed to coordinate the traffic signals at a constant speed; 35mph to begin and possibly lowering to 30mph as redevelopment proceeds and parking bays are installed.

Both city agencies agreed that the proposed roadway geometrics (11-foot lanes and 8-foot parking bays) would work for this street. And both agencies already have the ability to maintain basic landscaped medians. It was noted that coordinating the traffic signals would have little effect currently because the signals are so far apart (roughly half-mile to one-mile spacing). However, as new signals are added, such as 56<sup>th</sup> Street or the commercial area to the north, signal coordination would be very feasible. It was agreed that signals should not be located any less than one-quarter mile apart.

### 3. Bus Rapid Transit (BRT) Provisions

The BRT will have only two stops in the Fisher Station area: 54<sup>th</sup> Street and 60<sup>th</sup> Street. The 54<sup>th</sup> Street stop will be the only stop with planned commuter park-and-ride within the charrette study area; roughly 200 initial spaces preferably split into two or three quadrants of the intersection.

The 60<sup>th</sup> Street stops are recommended to be located roughly 300 feet north of 60<sup>th</sup> Street on each side of the street (near the current creek crossing) where there are more opportunities to develop adjacent properties into a small commercial district. If this becomes the southern terminus of the BRT route, an off-street turnaround, probably in the southwest quadrant, would seem to make the most sense.

The 54<sup>th</sup> Street stops will either be in pull-off bays on Division Avenue roughly 200 feet south of 54<sup>th</sup> Street, or in an off-line station incorporated into a major commercial development on the undeveloped property in the southwest quadrant of the intersection.

In order to maintain a constant schedule to downtown, the traffic signals on 54<sup>th</sup> Street should be coordinated, as noted above, with “soft signal transit preemption” that would only allow buses to extend a green phase by 5 sec, if needed.

Again, both city agencies would be comfortable with either the on-street or off-line station concepts.

## **Traffic Data**

*The following four pages are the results of Synchro Capacity Analysis referenced in the preceding memorandum.*



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	184	619	413	51	454	27	266	421	23	86	511	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Storage Length (ft)	150		150	150		0	150		0	150		0
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.992			0.992			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1662	3323	1487	1662	3297	0	1662	3297	0	1662	3187	0
Flt Permitted	0.184			0.301			0.199			0.476		
Satd. Flow (perm)	322	3323	1487	527	3297	0	348	3297	0	833	3187	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			426		5			7			53	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		847			823			718			600	
Travel Time (s)		16.5			16.0			14.0			11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	200	673	449	55	493	29	289	458	25	93	555	209
Shared Lane Traffic (%)												
Lane Group Flow (vph)	200	673	449	55	522	0	289	483	0	93	764	0
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Detector Phase	7	4	4	3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	18.0	35.0	35.0	9.0	26.0	0.0	25.0	52.0	0.0	10.0	37.0	0.0
Total Split (%)	17.0%	33.0%	33.0%	8.5%	24.5%	0.0%	23.6%	49.1%	0.0%	9.4%	34.9%	0.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None		None	Max		None	Max	
Act Effct Green (s)	36.4	29.5	29.5	24.7	19.6		56.1	48.4		42.5	36.5	
Actuated g/C Ratio	0.36	0.29	0.29	0.25	0.19		0.56	0.48		0.42	0.36	
v/c Ratio	0.70	0.69	0.61	0.30	0.81		0.73	0.30		0.23	0.64	
Control Delay	37.5	36.7	7.8	26.6	49.3		25.2	17.5		14.3	29.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.5	36.7	7.8	26.6	49.3		25.2	17.5		14.3	29.2	
LOS	D	D	A	C	D		C	B		B	C	
Approach Delay		27.0			47.2			20.4			27.6	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	106
Actuated Cycle Length:	100.6
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	29.0
Intersection LOS:	C
Intersection Capacity Utilization	71.9%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 3: 54th Street & Division Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	184	619	413	51	454	27	266	421	23	86	511	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.940			0.992			0.992			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1662	3124	0	1662	3297	0	1662	3297	0	1662	3187	0
Flt Permitted	0.245			0.156			0.149			0.476		
Satd. Flow (perm)	429	3124	0	273	3297	0	261	3297	0	833	3187	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		167			5			6			51	
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		847			823			718			600	
Travel Time (s)		16.5			16.0			14.0			11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	200	673	449	55	493	29	289	458	25	93	555	209
Shared Lane Traffic (%)												
Lane Group Flow (vph)	200	1122	0	55	522	0	289	483	0	93	764	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0		8.0	20.0		8.0	20.0		8.0	20.0	
Total Split (s)	21.0	42.0	0.0	8.0	29.0	0.0	23.0	46.0	0.0	10.0	33.0	0.0
Total Split (%)	19.8%	39.6%	0.0%	7.5%	27.4%	0.0%	21.7%	43.4%	0.0%	9.4%	31.1%	0.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag										
Lead-Lag Optimize?	Yes	Yes										
Recall Mode	None	None		None	None		None	Max		None	Max	
Act Effct Green (s)	42.1	36.0		28.8	24.7		50.6	43.0		36.0	29.9	
Actuated g/C Ratio	0.42	0.36		0.29	0.25		0.50	0.43		0.36	0.30	
v/c Ratio	0.58	0.92		0.41	0.64		0.80	0.34		0.27	0.78	
Control Delay	26.9	39.6		29.0	38.4		38.0	21.7		18.1	38.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.9	39.6		29.0	38.4		38.0	21.7		18.1	38.3	
LOS	C	D		C	D		D	C		B	D	
Approach Delay		37.7			37.5			27.8			36.1	
Approach LOS		D			D			C			D	

Intersection Summary

Area Type:	Other		
Cycle Length:	106		
Actuated Cycle Length:	100.8		
Natural Cycle:	70		
Control Type:	Actuated-Uncoordinated		
Maximum v/c Ratio:	0.92		
Intersection Signal Delay:	35.1	Intersection LOS:	D
Intersection Capacity Utilization:	82.0%	ICU Level of Service:	E
Analysis Period (min):	15		

Splits and Phases: 3: 54th Street & Division Avenue



## Public Improvement Cost Estimates

Depending on the phasing of development, the redevelopment portrayed in this plan is dependent on some additions to the public infrastructure. Opinions on some possible combinations of likely projects were obtained from an experienced engineer. These would help in making decisions about matching public costs with an increased tax base. It should be remembered that redevelopment in one location may make development possible in adjacent or nearby locations. Therefore the increased value of those sites should be included in the calculations

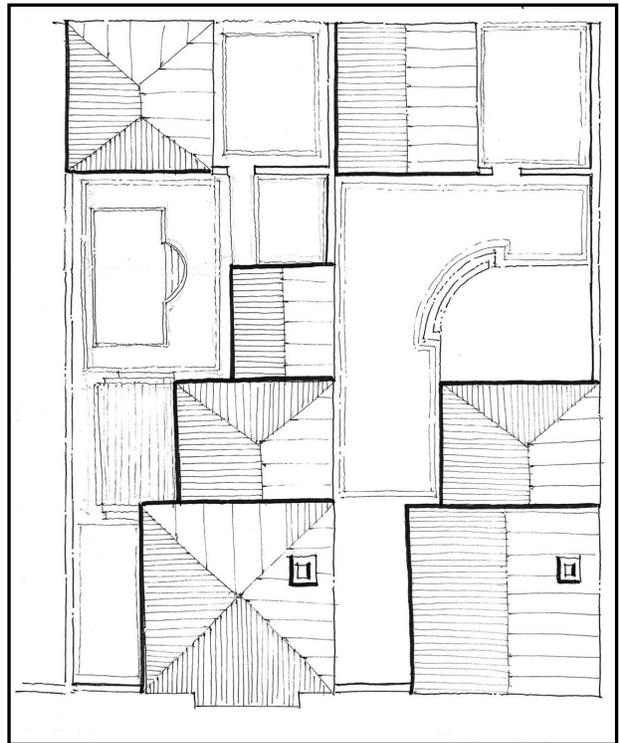
<b>Engineer's Opinion of Probable Construction Costs</b>			
<b>(Option 1)</b>			
	<b>Extent</b>	<b>Rate</b>	<b>Cost</b>
Removal and Restoration of Division Avenue	2,710 l.f.	\$175/l.f.	\$475,000
10" Sanitary Sewer Installation in Division Avenue	2,640 l.f.	\$75/l.f.	\$198,000
Removal and Restoration of 56th Street	1,400 l.f.	\$150/l.f.	\$210,000
10" Sanitary Sewer Installation in 56th Street	1,325 l.f.	\$75/l.f.	\$100,000
Miscellaneous			\$148,000
<b>Total</b>			<b>\$1,131,000</b>
<b>(Option 2)</b>			
Removal and Restoration of Division Avenue	2,710 l.f.	\$175/l.f.	\$475,000
10" Sanitary Sewer Installation in Division Avenue	2,640 l.f.	\$75/l.f.	\$198,000
Removal and Restoration of 56th Street	2,060 l.f.	\$150/l.f.	\$309,000
10" Sanitary Sewer Installation in 56th Street	1,980 l.f.	\$75/l.f.	\$149,000
Miscellaneous			\$148,000
<b>Total</b>			<b>\$1,279,000</b>
<b>(Option 3)</b>			
Removal and Restoration of Division Avenue	2,660 l.f.	\$175/l.f.	\$466,000
10" Sanitary Sewer Installation in Division Avenue	2,600 l.f.	\$75/l.f.	\$195,000
10" Sanitary Sewer Installation in 60th Street Right-of-Way	900 l.f.	\$100/l.f.	\$90,000
10" Sanitary Sewer Installation in Easement	1,555 l.f.	\$75/l.f.	\$117,000
Miscellaneous			\$131,000
<b>Total</b>			<b>\$999,000</b>
<b>(Option 4)</b>			
Removal and Restoration of Division Avenue	2,710 l.f.	\$175/l.f.	\$475,000
10" Sanitary Sewer Installation in Division Avenue	2,640 l.f.	\$75/l.f.	\$198,000
Lift Station			\$180,000
6" Forcemain	1,350 l.f.	\$65/l.f.	\$88,000
Miscellaneous			\$142,000
<b>Total</b>			<b>\$1,083,000</b>
<b>Items Individually</b>			
Removal and Restoration of Division Avenue	2,710 l.f.	\$175/l.f.	\$475,000
Removal and Restoration of Division Avenue	2,660 l.f.	\$175/l.f.	\$466,000
10" Sanitary Sewer Installation in Division Avenue	2,600 l.f.	\$75/l.f.	\$195,000
10" Sanitary Sewer Installation in Division Avenue	2,640 l.f.	\$75/l.f.	\$198,000
Removal and Restoration of 56th Street	1,400 l.f.	\$150/l.f.	\$210,000
Removal and Restoration of 56th Street	2,060 l.f.	\$150/l.f.	\$309,000
10" Sanitary Sewer Installation in 56th Street	1,325 l.f.	\$75/l.f.	\$100,000
10" Sanitary Sewer Installation in 56th Street	1,980 l.f.	\$75/l.f.	\$149,000
10" Sanitary Sewer Installation in 60th Street Right-of-Way	900 l.f.	\$100/l.f.	\$90,000
10" Sanitary Sewer Installation in Easement	1,555 l.f.	\$75/l.f.	\$117,000
Lift Station			\$180,000
6" Forcemain	1,350 l.f.	\$65/l.f.	\$88,000
Miscellaneous			\$148,000
Miscellaneous			\$131,000
Miscellaneous			\$142,000

## Examples of Buildings

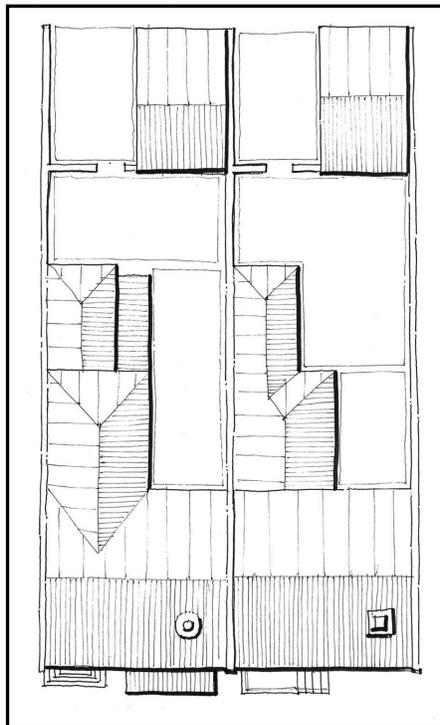
### Suggested Design for a Mixed Use Building on 50 Foot Wide Lot



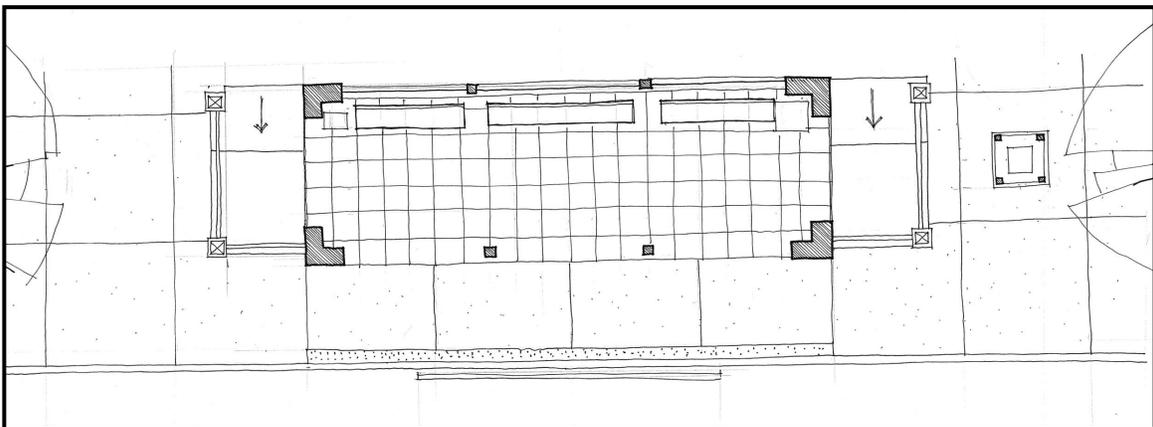
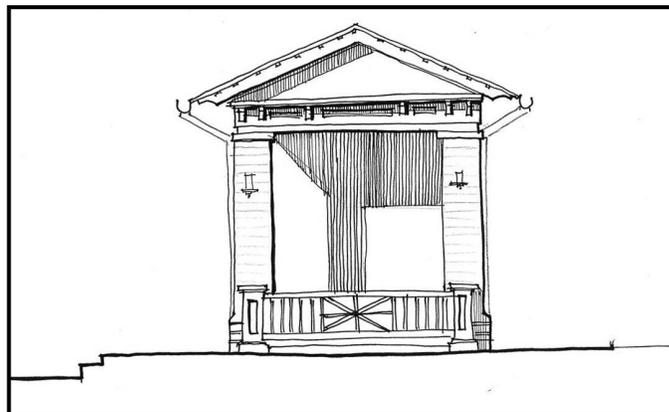
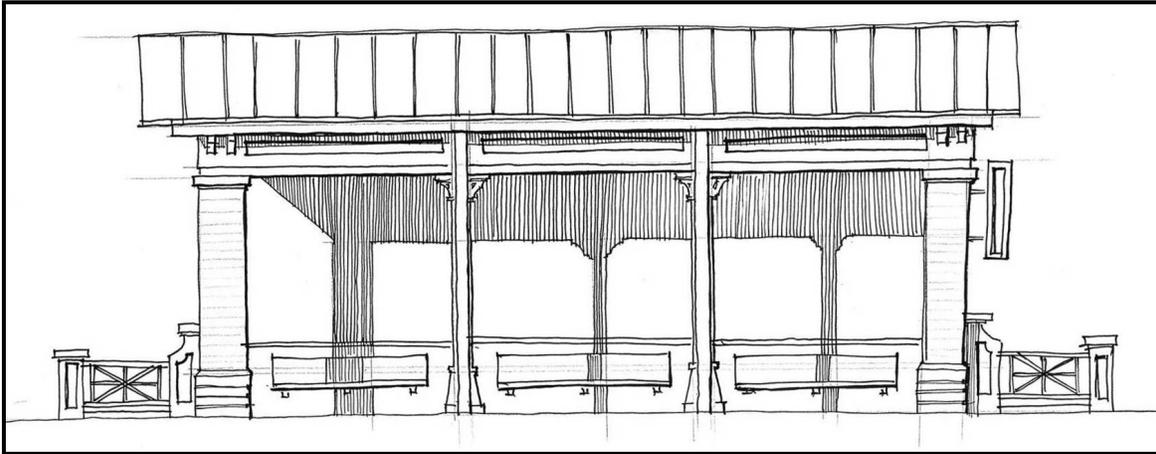
## Suggested Design for a Side Yard House on 35 Foot Wide Lot



**Suggested Design for a Town House on 25 Foot Wide Lot**



## Suggested Design for a Transit Station



<b>Charrette Participants</b>	
<b>Name</b>	<b>Note/Organization</b>
Betsy Artz	Kentwood Planning Commission
Dan/Judy Beal	
Sam Bolt	City of Wyoming Council
Jonathan Bradford	Inner City Christian Federation
David Bulkowski	Disability Advocates
David DeBruin	Kentwood EDC
Jerry Dieterman	Wyoming Planning Commission
Tim Fiebig	
Ed Fredricks.	Business Owner
Ed Fridentz	Kentwood Economic Development
Jan Fridentz	
John Hartlett	Wyoming Planning Commission
Roger Haynes	
Walt Hehner	
Russ Henckel	City of Wyoming
Don R. Hilton	Gaines Township Supervisor
Matt Hofstee	
Dan Holtrop	City of Kentwood
Steve Karrip	Metro Motors (Business on Division)
Dan Kasunic	City of Wyoming
Don/June Kosten	Residents and land owners
Frank Lynn	Disability Advocates
Harold Mast	Kent County Commissioner and Genesis Housing
Mick McGraw	Eastbrook Builders
Jerry Mears	Wyoming Planning Director
Rog Nabor	
Mr and Mrs Niewenhuis	Property Owners
David Nyenhuis	Calvin Student
Shane Pavlek	Resident
Tim Pomorski	Kelloggsville Public Schools
Tim Reeves	Kelloggsville Public Schools
Ronnie Rober	Gaines Township
Richard L. Root	Kentwood Mayor
Mayor Carol Sheets	Wyoming Mayor
Ike Spencer	Wyoming Planning Commission
Casey Staal	
Barb Van Duren	Wyoming Deputy City Manager
Joanne Voorhees	City of Wyoming Council
Evelyn Walker	
John Wynbeek	Genesis Housing
Don Yokum	Kentwood Planning Commissioner
.....	A Byron Township Resident
.....	Four members of Grace Lutheran Church, 150 50th St. SW

Most of these individuals took part in the first long design work day and the rest of the process. Some attended the first review session, or visited the studio, or were able to participate in the decisions at other times during the work week. Staff of Kentwood, Gaines and Wyoming are not listed but took part in the decision making process.

## **Charrette Team**

<b><u>Name</u></b>	<b><u>Role</u></b>	<b><u>Organization</u></b>	<b><u>Profession</u></b>
Jay Hoekstra	– Charrette Co-Director,	Grand Valley Metro Council,	City Planner
Marcela Cambor	– Charrette Co-Director,	Marcela Cambor & Associates,	Urban Designer

### **Urban Design**

Mark Miller – Urban Design, Nederveld Associates, Architect/Urban Designer  
Bob Petko – Urban Design, Progressive AE, Landscape Architect  
Jim Reminga – Urban Design, Crossroads Ventures LLC, Landscape Architect/ Developer  
Andrew von Maur – Urban Design, Andrews University, Professor of Architecture /Architect

### **Urban Design/Illustration**

Bryce Buckley– Urban Design\Illustrations, Andrews University, Architecture Student  
Kevin Fresse – Urban Design\Illustrations, Andrews University, Architecture Student  
Lionel Johnson– Urban Design\Illustrations, Andrews University, Architecture Student

### **Transportation Engineers/Street Design**

Tom Williams, Transit-Traffic Engineer, AECOM Transportation, Transportation Engineer  
John LaPlante, - Street Design, T.Y. Lin International, Inc. P.E., PTOE, Traffic Engineer  
Pete LaMourie - Street Design, Progressive AE, Traffic Engineer  
Rick Pulaski – Cost Estimator, Nederveld Associates, Civil Engineer

### **Organization/Planning**

Timothy Cochran – Urban Planning/Organization, City of Wyoming, Planner  
Lisa Golder – Urban Planning/Organization, City of Kentwood, Planner  
Joe Pung – Urban Planning/Organization, City of Kentwood, Planner  
Terry Schweitzer – Urban Planning/Organization, City of Kentwood, Planner  
Brian Tingley – Urban Planning/Organization, Gaines Township, Planner  
Conrad Venema, Transit Planning/Organization, The Rapid, Transit Planner



