
GIBSON CREEK HABITAT ENHANCEMENT
AND PUBLIC ACCESS STUDY

Submitted to the
CITY OF UKIAH

Prepared by
LSA ASSOCIATES, INC.

LSA

**Gibson Creek Habitat Enhancement
and Public Access Study**

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Gibson Creek Habitat Enhancement and Public Access Study

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A. Introduction

The City of Ukiah is creating a "Creeks Master Plan" to implement Policy OC-9.1 of the Ukiah General Plan. The Creeks Master Plan is intended to focus on the restoration of the creeks that pass through the City and empty into the Russian River. The policy calls for individual creek studies focusing on habitat enhancement, flood control, and public access. In the fall of 1999, the City Council approved the Orrs Creek Habitat Enhancement and Flood Control Study, the first in a series of creek studies that will lead to the Creeks Master Plan. The following study of Gibson Creek represents the second phase of the Creeks Master Plan program, and offers a unique and challenging strategy for reclaiming the creek as it travels through the urban core of the city.

The City has included a number of key participants in the creek study projects. These participants include Bob Coey of the Department of Fish and Game; Diane Chocolak of the Mendocino County Water Agency; Bill Randolph of the Ukiah Valley Streams Coalition; and Joe Scriven of the Mendocino Fisheries Program. All of these participants, as well as other interested stakeholders, are working together on a variety of projects focusing on improving the health of the local creeks.

B. A Brief History of Gibson Creek

Gibson Creek is fed by rainwater and natural springs which occur throughout the western hills of the Ukiah Valley. The pure cold water source attracted the pioneer Gibson family to settle along its banks in the 1860's. Part of the Gibson ranch was located along the north side of the creek on the flatland just west of Barnes Street as it crosses the creek.

Gibson Creek was an important water source in the wintertime for the town. The creek's canyon, near Standley Street, was dammed and pipes were installed to a 200,000 gallon reservoir at the top of Clay Street.

By special election on February 28, 1890, this area was annexed into the City limits. This was the first time an area had been added by popular vote and was desired by the citizens of Ukiah because of its "beautiful lots."

Ukiah participated in the 1893 midwinter fair in San Francisco by building a fish hatchery. After the fair, the hatchery was brought back to Ukiah and installed in the Gibson Creek Canyon in 1897. It became a popular tourist destination, attracting as many as "200 persons daily." Its popularity decreased during the 1930's depression and it was dismantled.

The City still owns the land and road in Gibson Creek Canyon where the fish hatchery was located. However, it has been determined that access to this parcel is limited to City employees rather than the general public. There has been recent interest in exploring how legal access for the general public can be established to this site.

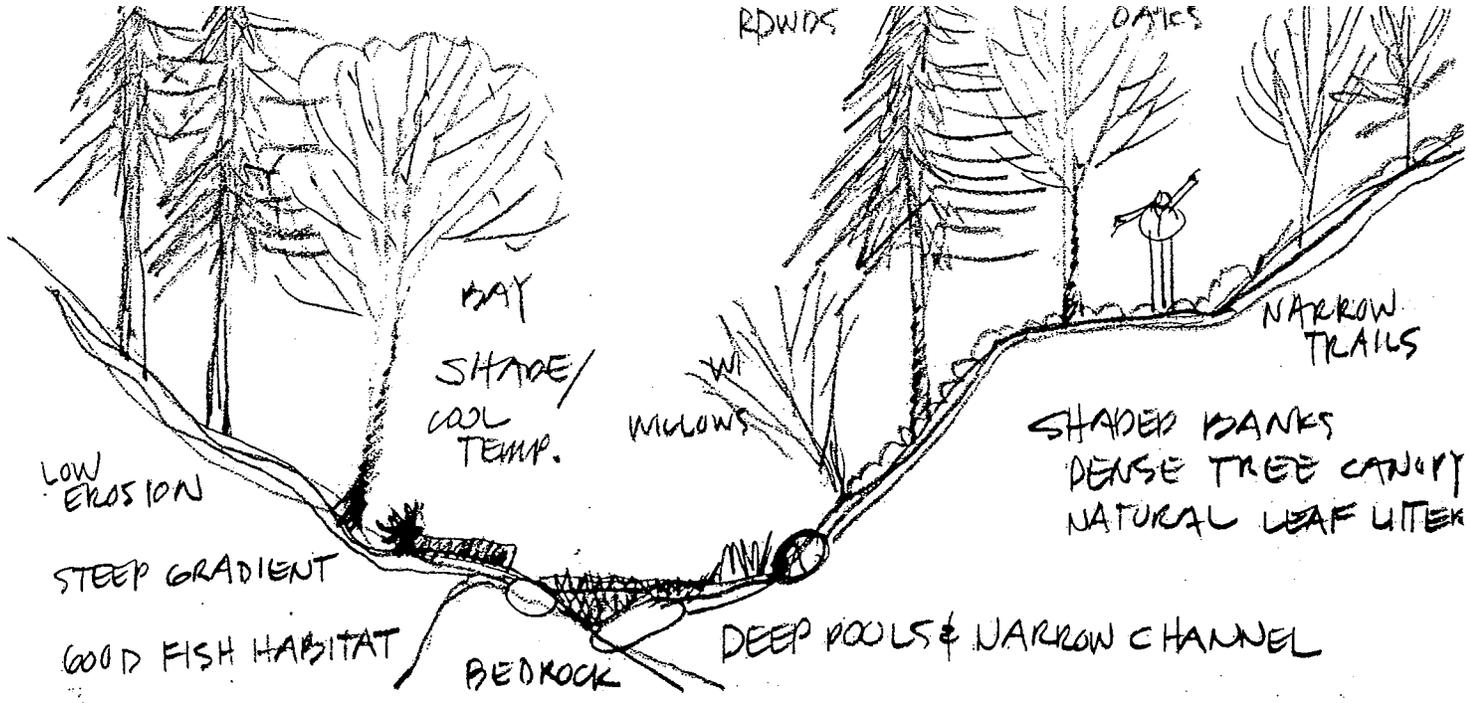
C. Gibson Creek Segments

Gibson Creek begins in the mountain ranges west of the City of Ukiah and flows through the city into the Russian River. As the city developed, different strategies and techniques were employed to control the creek. In some areas, the creek was allowed to follow its natural route, while in other areas the creek was confined by culverts, retaining walls, and earthen berms. It has been straightened and rerouted to facilitate agriculture and urban development. The current condition of the creek varies along its length. Restoration efforts will need to address these different conditions. To better address these varying conditions, Gibson Creek can be divided into ten segments with distinct problems and characteristics. These segments, beginning with the confluence of the creek with the Russian River, are discussed below (see Figure 1):

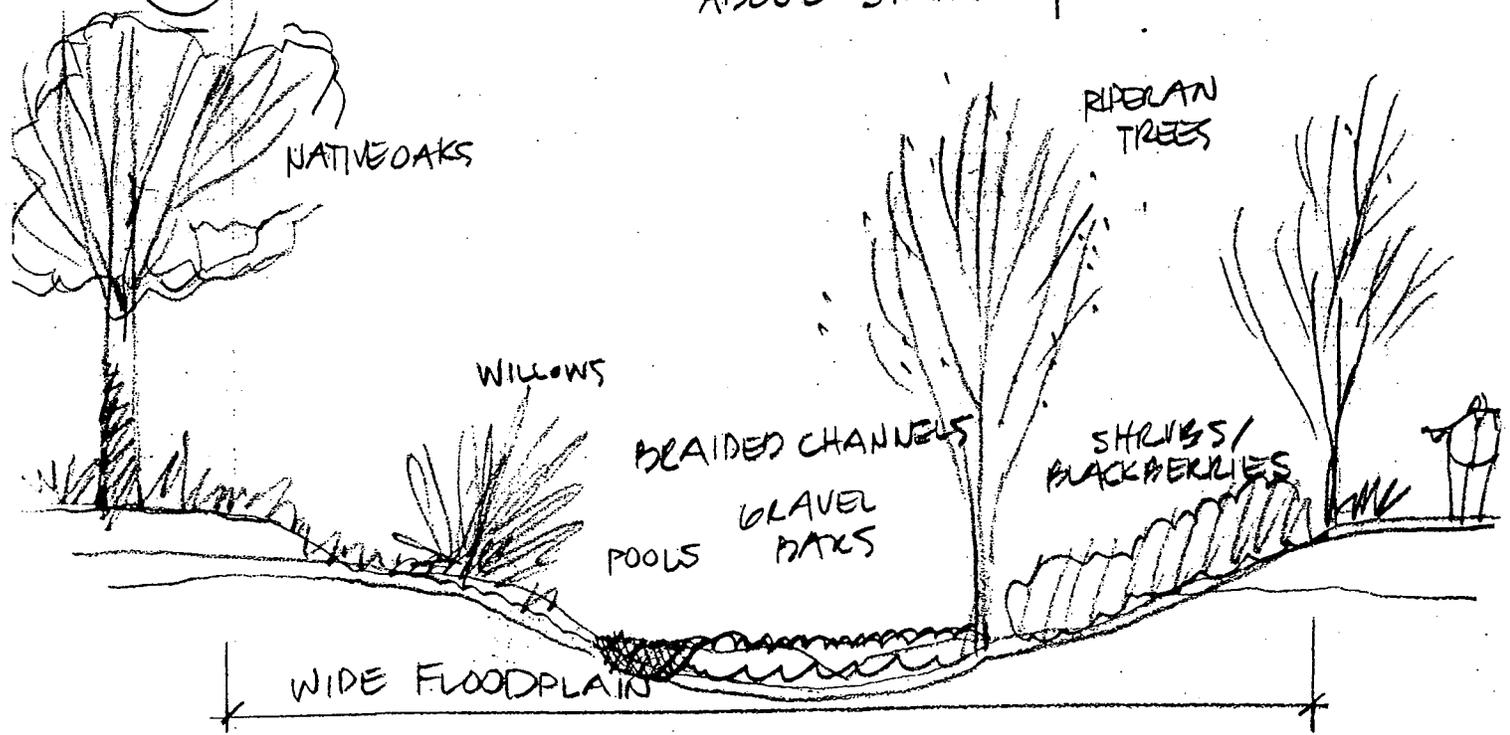
1. Combined Creeks. In this ¼-mile segment, Gibson, Doolan, and Mendocino Creeks combine and flow adjacent to an orchard and a service road into the Russian River. The creek channel is about 12 to 15 feet across in this section, with fairly steep banks and gravel in the bed. The channel banks are steep and eroded in this section. Riprap made from broken concrete and asphalt, as well as vertical concrete walls, have been installed on the banks to control erosion. Riparian vegetation provides shade along this creek segment. (See Appendix, Photo Set 1)
2. Babcock Lane Ditch. This segment of the creek extends for about ¾ mile parallel to Babcock Lane with orchards adjacent to the east. A few houses and commercial uses exist near the Gobbi Street/Babcock Lane intersection. The creek channel is very straight, about 10 to 12 feet across, with steep banks and a flat bottom. In this segment, the creek serves as a seasonal drainage ditch.

Several bridges cross the creek in this segment. The west bank, adjacent to the roadway, is grass-lined and eroding. The east bank has several clusters of mature oaks and Italian cypress at the fence line, with brush and black berries growing on the steep bank. The driveway crossings utilize culverts that have typically suffered erosion at both ends. (See Appendix, Photo Set 2)

3. Oak Manor Park and School. This 1/3-mile segment of creek is located east of Highway 101. Adjacent land uses to the east include Oak Manor Park and School—with parking, play equipment, and a 4-foot-high berm that provides flood protection and also obstructs views of the creek from park users. The Oak Manor Mobile Home Park is the main land use west of the creek. It is separated from the creek by a berm, a 6-foot screened cyclone fence around the trailer storage areas, and a 6-foot-high three-strand barbed wire cyclone fence at the occupied mobile homes. The mobile homes are only lightly screened by the berm and are clearly visible from the park and creek banks. The Oak Manor School has a 6-foot cyclone fence separating the creek from turf playing fields. This segment of the creek is meandering, and has a modified pool and riffle form. The creek is very accessible from the park and provides an amenity during winter/spring months. The creek gradient is relatively flat, but several pools and riffles are present. The existing banks are covered with grasses and blackberries, mainly on the western side, and large native oaks. (See Appendix, Photo Set 3)



10 SECTION - NATURAL UPPER CREEK 1"=10'
ABOVE STANDLEY



4 SECTION - NATURAL LOWER CREEK 1"=10'

HISTORIC CREEK SECTIONS

UKIAH - GIBSON CREEK
WSA

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10/5

Figure
Historic Creek Section

4. Shopping/Office Area. This 1/8-mile segment extends from Highway 101 to Orchard Avenue. Adjacent land use includes a shopping center with an asphalt parking lot set back from Orchard Avenue bordering the northern bank of the creek. Low-rise office buildings are located on Kings Court and back onto the creek. An open field is adjacent to the south bank for about half the length of this segment. A 6-foot cyclone fence is located at the top of the bank on both sides of the creek, with a paved pedestrian/bike path on the south side and a parking lot on the north side. A pedestrian bridge, linking the pedestrian/bike path with office and shopping uses, crosses the creek midway between Orchard Avenue and the freeway. A continuous 8- to 10-foot asphalt path follows the creek from Orchard Avenue to the freeway, where an overhead pedestrian ramp links the area to Oak Manor School. The creek channel in this segment has steep banks and dense vegetation. A broad band of brush, blackberries, and occasional large oaks occupy the top of both creek banks adjacent to the cyclone fence. (See Appendix, Photo Set 4)

5. Residential Orchard Avenue to Leslie Street. This 3/8-mile section of the creek flows through a single family residential subdivision built in the 1950s-1960s. In this section, the creek flows through a narrow channel with concrete block walls topped by 6-foot wooden or 4-foot cyclone fences. The concrete bottom of the creek has a v-shaped low-water channel which is filled with gravel. The creek has deposited sediment in the now-flat bottom of this artificial bed, and is beginning to form gentle meanders through the sediment. In this section, Gibson Creek functions as a storm drainage facility, with minimal riparian habitat or natural aquatic character. The creek bottom at this location is approximately 1 to 2 feet below the road crossings at Orchard Avenue and Leslie Street. A smooth concrete apron slopes down several feet from the foot of the culvert to the creek bottom; it is impassible for fish at low flows. (See Appendix, Photo Set 5)

6. Historic Train Depot Area. This 1/8-mile segment of the creek extends from Leslie Street to Perkins Street, where the creek exits from an underground culvert. Currently, the land uses adjacent to the creek in this section include the old train depot and open fields. Gibson Creek runs through a double box culvert for about 400 feet, from the Mason Street/Perkins Street intersection to the northeast side of the rail spur, where it opens into a broad, flat gravel plain. The creek is 15 to 20 feet wide with broad meanders and some gravel bars and vertically cut banks. There is some limited vegetation at Leslie Street including a redwood and three riparian trees. The adjacent grass-covered fields are open and flat. (See Appendix, Photo Set 6)

7. Downtown Area. The creek flows through the Downtown area for about 1/3 mile. In most of the downtown area, the creek flows through a concrete underground culvert. The creek flows above ground in two limited areas: for about 300 feet adjacent to Mason Street between Perkins and Standley Streets, and for the two block segment between Main and Oak Streets. These sections of the creek have a natural appearance, with willow trees and other vegetation growing along the banks. The creek is buried through the rest of the commercial area with numerous road crossings, parking lots, and older buildings in marginal uses occupying the land over the creek. In the parking lot there are fenced cut-out areas that allow access to the creek for maintenance and debris removal. Adjacent land uses include retail shops and offices, civic uses, parking, and storage buildings. Beyond Standley Street, the creek flows under a parking lot and some buildings. Above Main Street, the creek is aboveground except at road crossings and in one small section just below State Street. The banks are held back by wooden retaining walls that are in poor condition. Above State Street, the banks are of concrete blocks on the north and stone on the south. (See Appendix, Photo Sets 7, 8, and 8a)

8. Historic Residential District. The 1/3 mile section of Gibson Creek that flows through the historic residential district from Oak Street to Barnes Street has a steeper gradient than the previous sections. At each street crossing, the creek flows through a concrete culvert.

Adjacent land uses in this area are residential, with limited office uses. In the lower portion of this segment, 3- to 4-foot wooden retaining walls have been built into the banks of some properties. Other properties have 4-foot concrete block walls. In the upper portion, the creek follows a gentle meandering path with pools and riffles. Mature trees and vegetation provide shade for aquatic habitat. Many of Ukiah's historic homes are located adjacent to this stretch of Gibson Creek. These houses have large yards which abut the creek, and many of the yards have areas of natural riparian vegetation on stepped terraces buffering the creek. (See Appendix, Photo Set 9)

9. Rural Residential Area. The 1/2-mile section of Gibson Creek that lies above Barnes Street has a steeper gradient than previous sections. The adjacent land uses here are large lot single-family residential. Many of the houses in this section use the creek as a garden feature. Dense natural and planted riparian vegetation includes layers of redwood, bay, oak, maple, willow, with dense underbrush. The banks of the creek have been armored with large precast concrete blocks, forming walls 4 to 6 feet high in several limited areas. The creek meanders naturally through this section, with a series of deep pools and riffles. Deer trails follow the creek banks.

10. Natural Watershed. This upstream segment of the creek is undisturbed and flows freely in its natural channel from the source in the mountains above town. It has a well-defined upstream pool and riffle form, with a fairly steep gradient. The creek is lined with redwoods, alders, maples, and oaks in a series of benches. The canopy provides continuous shade, with duff and groundcovers covering the steep banks. The land adjacent to the creek is unimproved private property which is fenced and posted. (See Appendix, Photo Set 10)

D. Creek Segments: Constraints and Opportunities

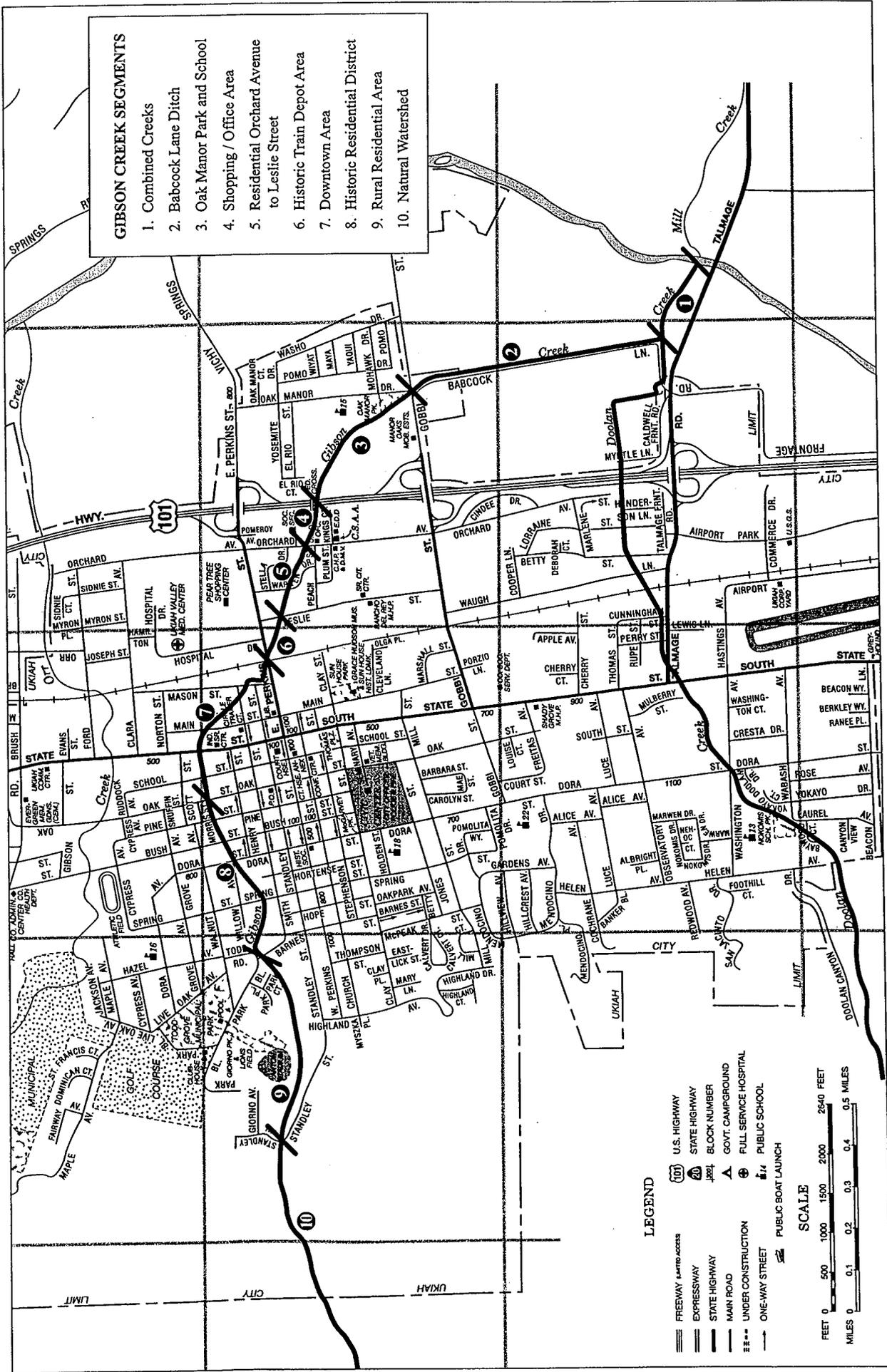
This section outlines the existing constraints and opportunities for improvement present at each of the creek segments described in Section B, above.

11. Combined Creeks

- a. Constraints. Limited minor pools and few deep channel segments exist in this area, leaving little available riparian habitat. While the aesthetic quality of this reach is good, the area serves as a drainage ditch for adjacent orchards, which also raises issues associated with chemical run-off from fertilizers used in the orchards.

- b. Opportunities. The goal of creek enhancement activities in this reach is to improve fish passage from the Russian River and to increase spawning habitat within Gibson Creek. Public access to the creekside should be increased, particularly at the confluence near Riverside Park. The flood capacity of the creek could be increased by developing more natural banks and a wider channel that would allow the creek to meander more naturally. This would also improve fish habitat by decreasing the velocity of the water flowing through this reach and by allowing the creek to form deep pools and riffles (see Figure 2).

Restoration of this segment of the creek should have a very high priority because it is the first reach above the Russian River and critical for fish access for all three adjacent creeks. Recommendations for improvement include removing concrete rubble; widening the channel; creating pools and riffles; removing fine-grained material; adding more riparian plantings; and adding gravel. A wider creek zone would allow for more gently sloping creek banks and improved habitat. Additional riparian planting and more pools with spawning gravel would provide shaded aquatic habitat.



- GIBSON CREEK SEGMENTS**
1. Combined Creeks
 2. Babcock Lane Ditch
 3. Oak Manor Park and School
 4. Shopping / Office Area
 5. Residential Orchard Avenue to Leslie Street
 6. Historic Train Depot Area
 7. Downtown Area
 8. Historic Residential District
 9. Rural Residential Area
 10. Natural Watershed

- LEGEND**
- FREEMWAY LIMITED ACCESS
 - EXPRESSWAY
 - STATE HIGHWAY
 - MAIN ROAD
 - UNDER CONSTRUCTION
 - ONE-WAY STREET
 - 101 U.S. HIGHWAY
 - 20 STATE HIGHWAY
 - 1224 BLOCK NUMBER
 - ▲ GOVT. CAMPGROUND
 - ⊕ FULL SERVICE HOSPITAL
 - ⊕ PUBLIC SCHOOL
 - ☀ PUBLIC BOAT LAUNCH



GIBSON CREEK HABITAT ENHANCEMENT AND PUBLIC ACCESS STUDY

Figure 2
Project Location Map

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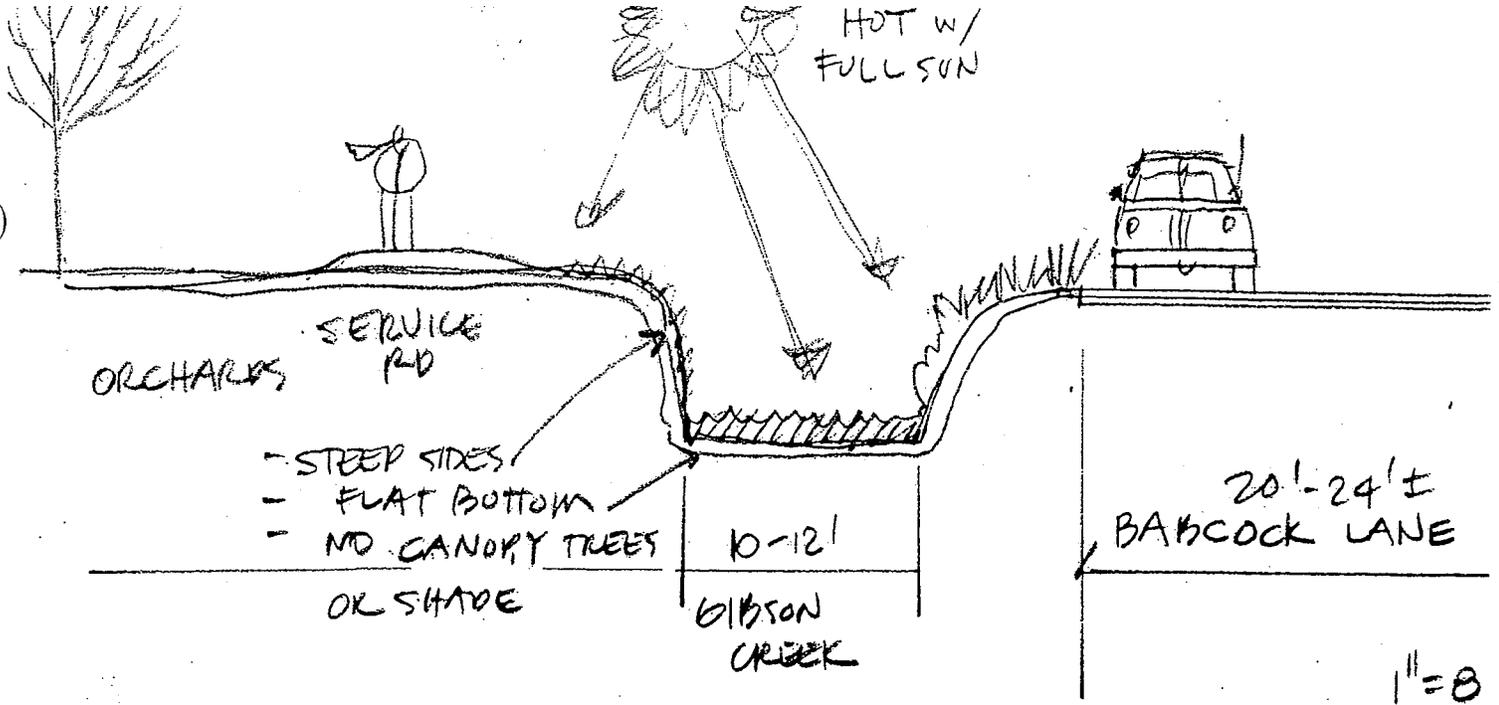
11. Babcock Lane Ditch

a. Constraints. The creek along this stretch acts as a drainage ditch, and has very low fish and wildlife habitat value. Several narrow concrete and metal culverts constrict the creek and may be barriers to fish at low water. The channel is very narrow and requires clearing to maintain flood flow capacity. There is high flood potential at the culverts, where the narrow span and low gradient increase the potential for blockage by debris at high flows. The reduced velocities in the flatter sections of the creek increase gravel deposition at these points. In this section the roadway is located above and directly adjacent to the creek; urban runoff is able to flow directly into the creek. The roadway also provides poor pedestrian and bicycle access to the creek as it consists of two narrow lanes with 24-inch gravel shoulders.

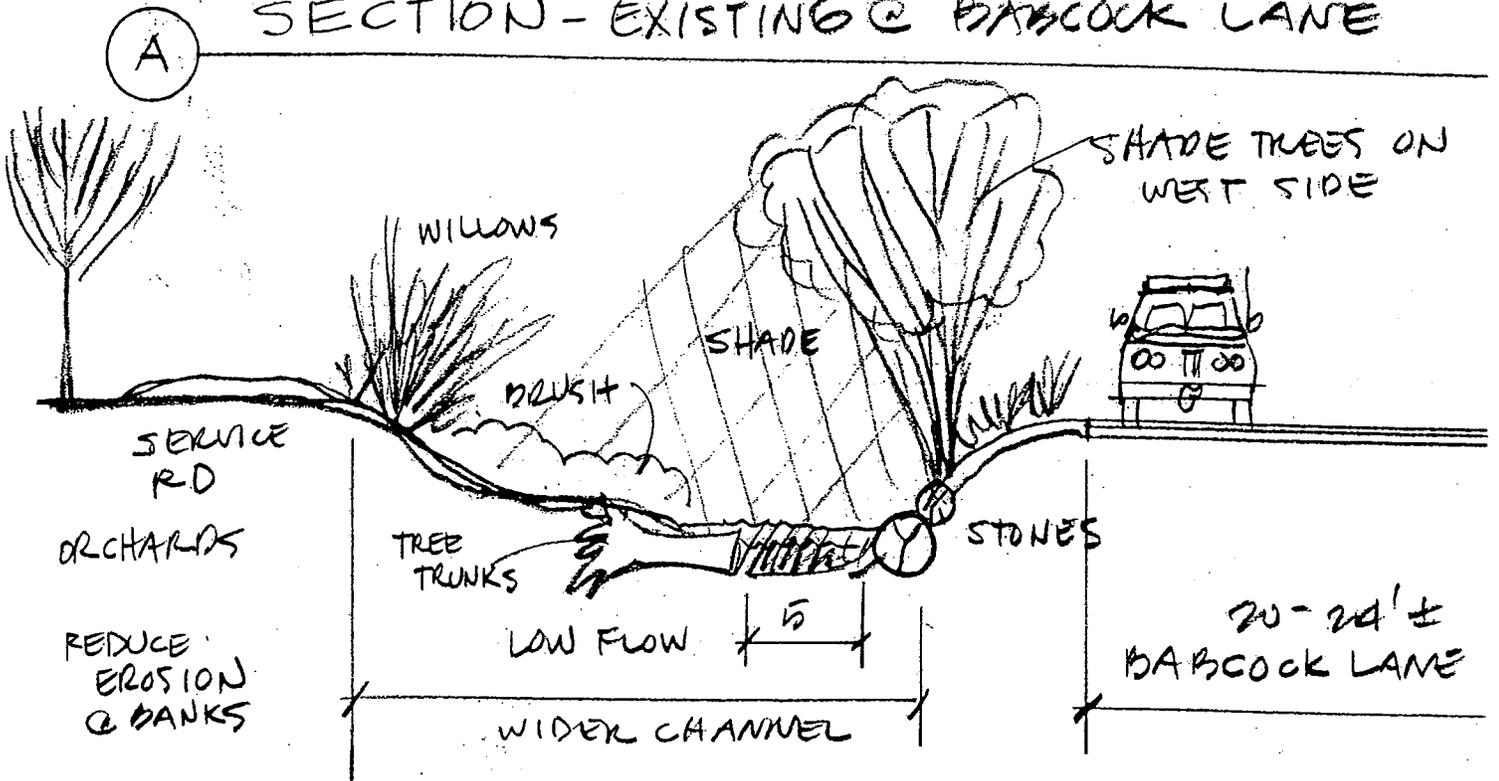
b. Opportunities. Widening the riparian zone along the creek banks would improve habitat, increase flood control, and provide safer creek access. Tree planting along Babcock Lane would shade the creek and help stabilize the banks. The existing culverts across the creek need improvement to improve flow and reduce the potential for fish barriers problems. A class II bike lane along the roadway would improve bicycle and pedestrian access to the creek (see Figure 3).

(1) Alternative Creek Realignment to Gobbi Street Riverside Park. The current creek's straight alignment does not promote the formation of pool and riffle features, and therefore generally provides poor habitat value. Relocating the creek in a creek easement separating the orchards and the housing south of East Gobbi Street would provide an alternative route for Gibson Creek. While this alternative would not be feasible without the commitment and cooperation of various property owners, it does merit discussion. This alternative would allow for the construction of a naturalized creek channel to follow either the historical alignment of Gibson Creek through the orchards or a wider modified route with stepped terraces and a natural meandering channel lined with riparian trees and other vegetation. An adjacent 8-foot-wide, paved bike/pedestrian path would provide access to the proposed Gobbi Street Riverside Park, with its playing fields and river access. Gibson Creek could provide water for the proposed wetlands in the new park. The current ditch at Babcock Lane could be maintained as a minor agricultural swale (see Figure 4).

(2) Babcock Lane Realignment. The City has completed a preliminary design for a project to realign Babcock Lane to form a four-way stop with Gobbi Street and Oak Manor Drive (see Appendix, page A1). As part of this project, the box culvert crossing at Gobbi Street would be lengthened and a cut-off wall would be added at the foot of the culvert to preclude down-cutting.



A SECTION - EXISTING @ BARBCKOCK LANE



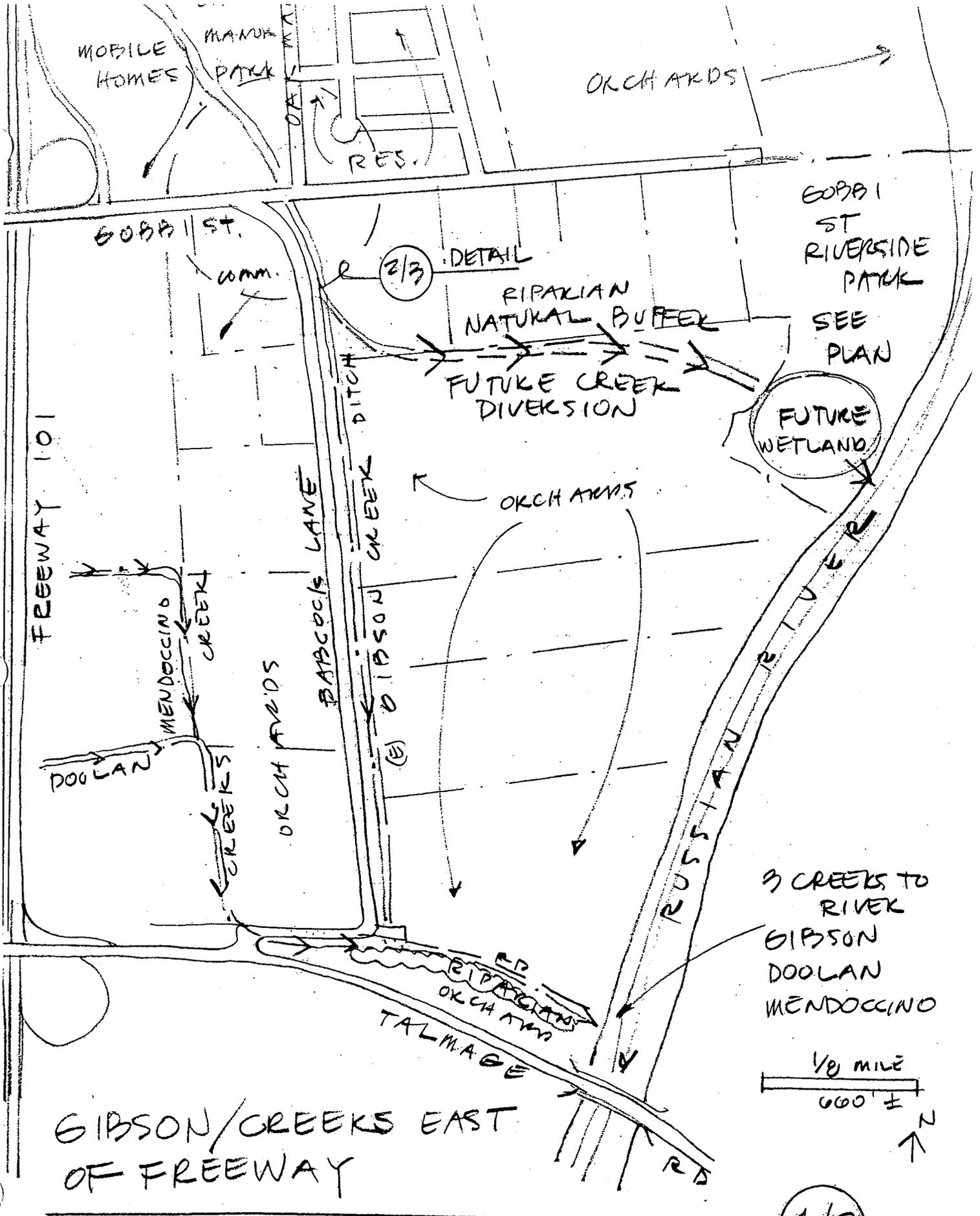
B SECTION - PROPOSED @ BARBCKOCK LANE

CREEK SECTIONS @ BARBCKOCK LN

UKIAH - GIBSON CREEK
LSA

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2



GIBSON/CREEKS EAST OF FREEWAY

UHAH - GIBSON CREEK LSA

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1/2

Figure 4
Gibson/Creeks East of Freeway

12. Oak Manor Park and School

a. Constraints. In this area the creek channel is relatively narrow with levees or berms on both banks. However, since the channel is shallow and accommodates only low to moderate flows, during high flows creek water flows into Oak Manor Drive and other low lying streets causing flooding. Houses in the area have been built on elevated pads to minimize flood damage. The mobile homes are situated at lower elevations and during high water events, local storm drains overflow and cause flooding in the trailer park.

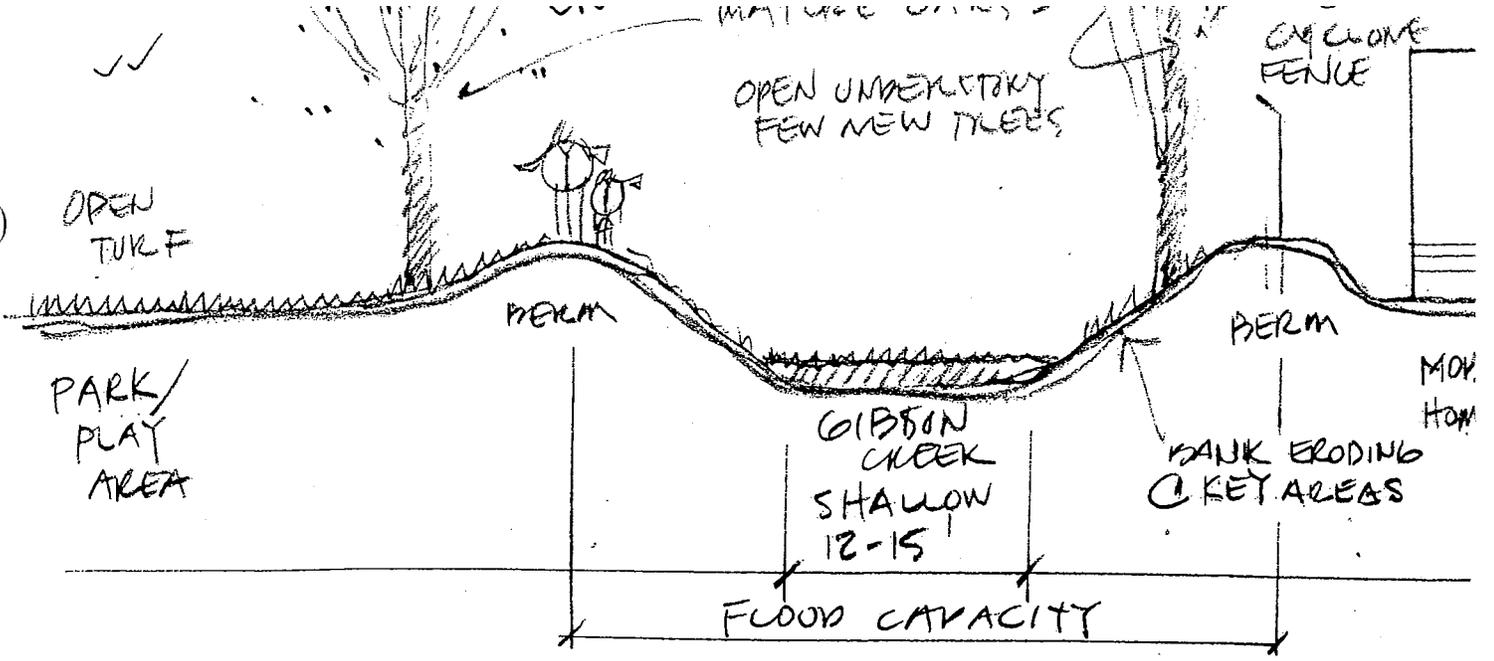
A section of the creek bank adjacent to the mobile homes is eroding as the creek gently meanders, undercutting large oaks and the channel banks. The mature oak trees do not provide enough vegetative cover for animals or for the protection of fish during low water flows. The mature oaks occasionally drop limbs on adjacent trailers. City maintenance may require drastic pruning of oak trees or remove of the trees to prevent damage from falling tree limbs. No under story of smaller oaks or other riparian trees is present. If the large oaks die or are removed, the banks will be bare.

A narrow, unpaved path is situated along the eastern levee, adjacent to the park. This path is too narrow for bike use and is difficult for winter walking.

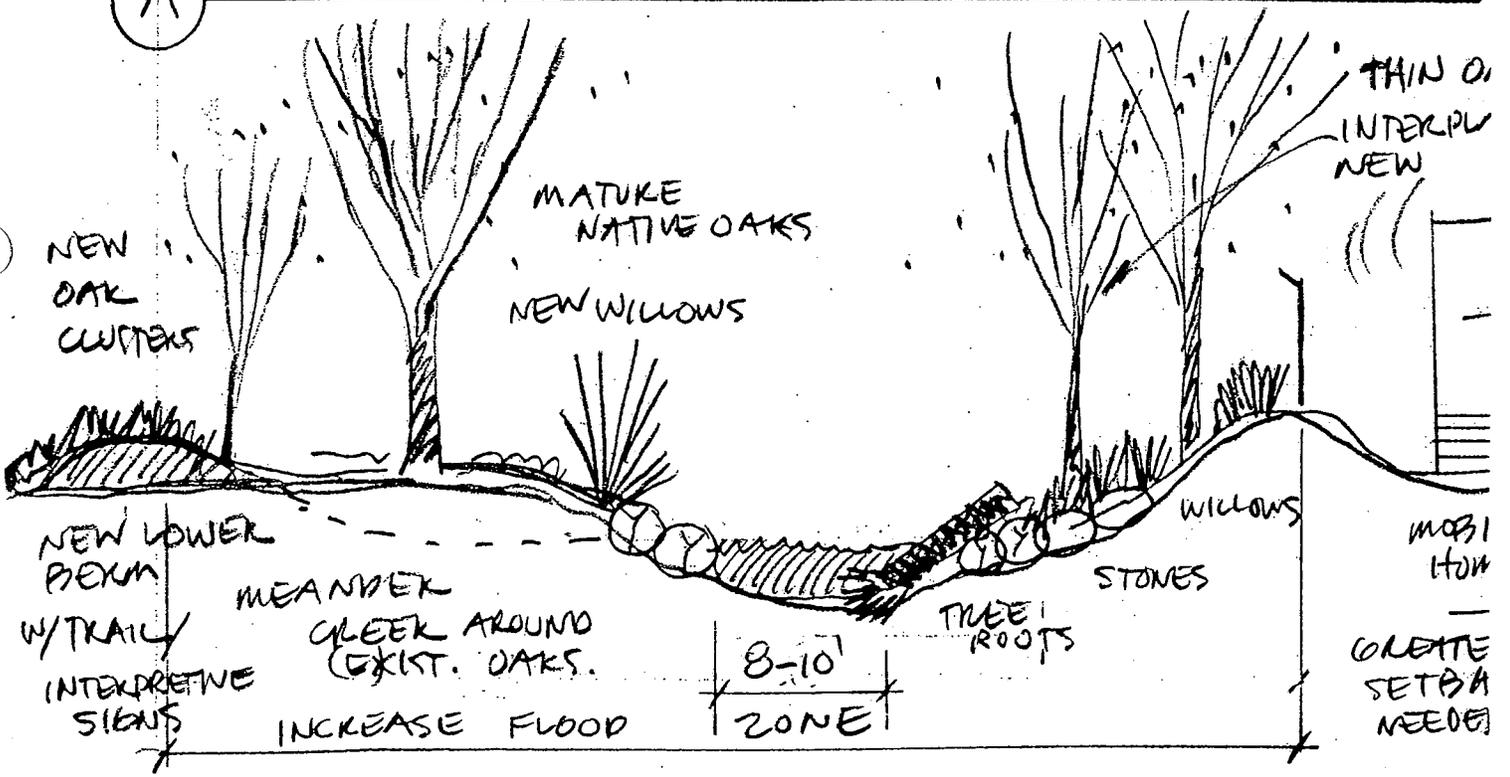
Where Gibson Creek crosses under Gobbi Street, the creek flows through a concrete box culvert. There is no developed pedestrian walkway near this portion of the creek. Where the channel widens beyond the culvert, a gravel bar has formed. As the creek deposits additional gravel at this point, the culvert can clog and cause flood waters to spill onto adjacent roads.

b. Opportunities. This portion of Gibson Creek is within the 100-year flood zone and is highly visible from public viewpoints. Consequently, improvements in this portion of the creek should have a high priority. Oak Manor Park provides an ideal demonstration site for a creek restoration project, with easy public access along the shoreline and high visibility to adjacent neighbors. A wider creek corridor can be created on the east bank by excavating the turf area. This would create a broader more natural series of flood terraces. Only minor relocation of play structures would be needed to improve the creek corridor in this area (see Figures 5 and 6).

As noted above, a City project to realign Babcock Lane to form a four-way stop with Gobbi Street and Oak Manor Drive is currently in the planning stages. This project would increase the length of the box culvert and install a cut-off wall below the culvert to prevent down-cutting at this point. The culvert should be sized to the



A SECTION - EXISTING CREEK @ PARK 1" = 10'



B SECTION - PROPOSED CREEK 1" = 10'

OAK MANOR PARK - SECTIONS

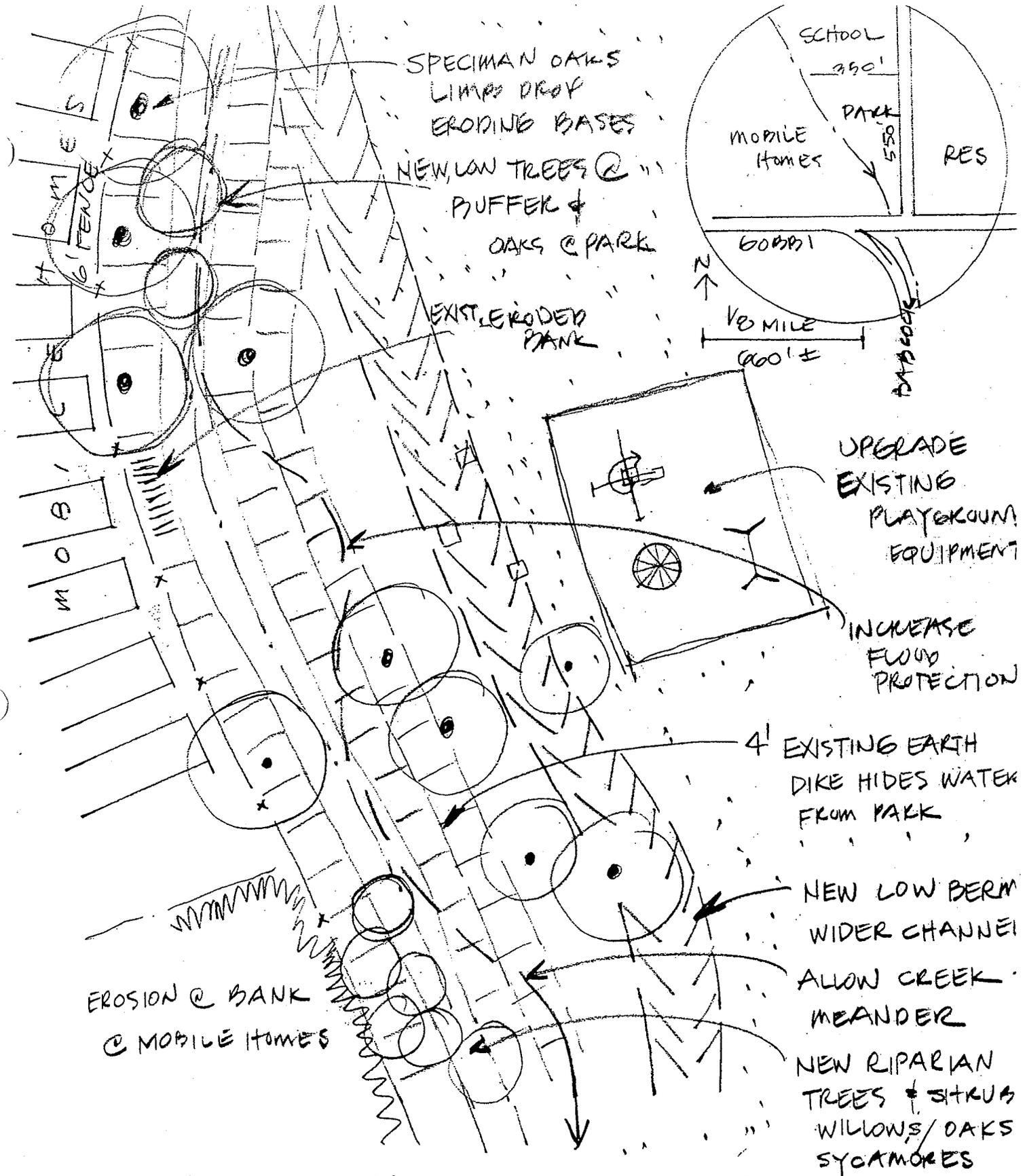
UKIAH - GIBSON CREEK

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Figure 5
Oak Manor Park Sections



IMPROVEMENTS FOR
OAK MANOR PARK - SITE PLAN

UKIAH - GIBSON CREEK
 LSA

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3

Figure 1
 Improvements for
 Oak Manor Park Site Plan

upper channel width to prevent gravel deposition at the foot of the culvert, as currently occurs. A comprehensive review of the Gobbi Street crossing should be undertaken. We recommend that a new bridge and pedestrian walkway added at the Gobbi Street crossing. A new pedestrian bridge planned by the City and construction of a new bridge would be the first step toward an improved neighborhood (see Figure 7).

13. Shopping/Office Area

a. Constraints. The abutments of the bridge are bare, with debris (including a shopping cart) in the creek channel. There is evidence of bike and pedestrian traffic down the banks of the creek at the sides of the bridge. Public access to the creek is restricted except at the bridge.

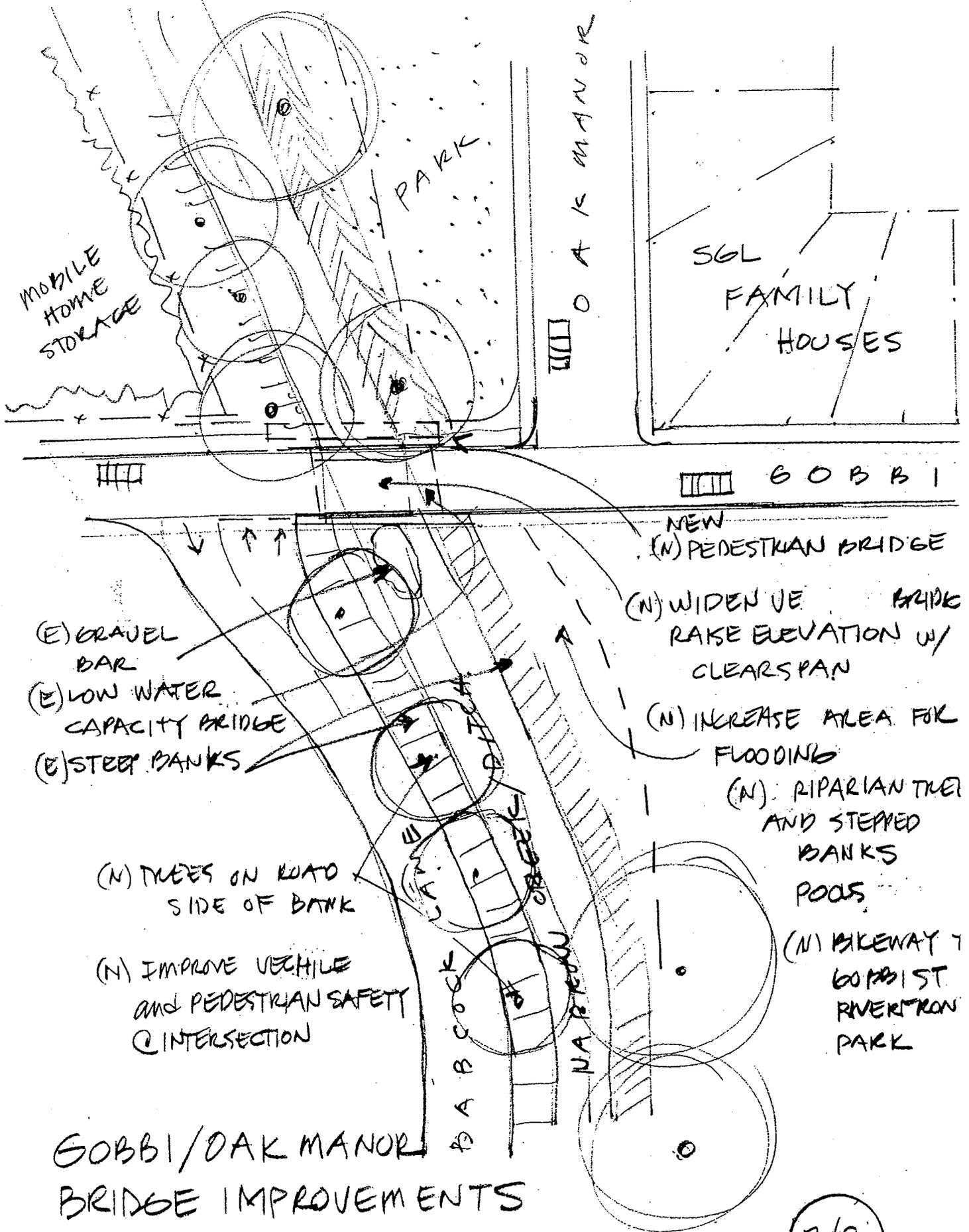
b. Opportunities. Given the existing land uses in the vicinity of this segment of the creek and the fair condition of the channel, this segment should have a low priority for modifications. Future redevelopment of surrounding land uses would provide an opportunity for creek enhancement in this section.

Additional riparian planting is recommended to provide more shade and improved habitat. Logs and step features should be added to the channel bottom to promote the formation of more pools and gentle meanders. The 6-foot fences could be lowered to provide improved views of the creek. Trees should be planted to shade the bike and pedestrian trail in summer. Blackberry bushes should be pruned behind the fences to keep the path clear. Currently the fenced creek is not accessible to the public, but it does provide some habitat and a wildlife corridor.

14. Residential Orchard Avenue to Leslie Street

a. Constraints. There is no public access to the creek in this section except at Warren Drive. Adjacent homes were built close to the banks of the creeks, and carports, storage buildings, and paving have extended up to the block wall edge on many properties. Most houses are screened from the creek by solid fences. Little native vegetation lines the banks; only occasional cedars, junipers, and ivy soften the edges. City maintenance is difficult due to limited access (only at cross streets and over mesh fences into a steep channel). When debris blocks the channel or when flooding occurs during high flows, it could flood adjacent houses.

Due to limited available land, any creek side pathway would have to detour onto marked city streets to avoid trespassing on private property. At the Leslie Street Bridge a concrete apron promotes smooth sheet flow, but is a potential barrier to the upstream movement of fish.



GOBBI/OAK MANOR
BRIDGE IMPROVEMENTS

UKIAH - GIBSON CREEK
LSA

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2/3

Figure
Gobbi/Oak Ma
Bridge Improve

b. Opportunities. Restoration of this section is a very high priority as the existing channel configuration presents obstacles to fish and wildlife movement. A broader creek corridor is recommended for this section Gibson Creek. In its current configuration, the creek is a potential liability, but it could be transformed into an amenity. Widening the creek would reduce side or backyards, but would unify the landscape by adding a broader more natural channel with stepped terraces for flood control; the channel could be lined with boulders, natural riprap, and riparian vegetation. A fish ladder or new pools would allow movement upstream through the Leslie Street culvert (see Figure 8). The creek widening project would take the cooperation of private property owners.

15. Historic Train Depot Area

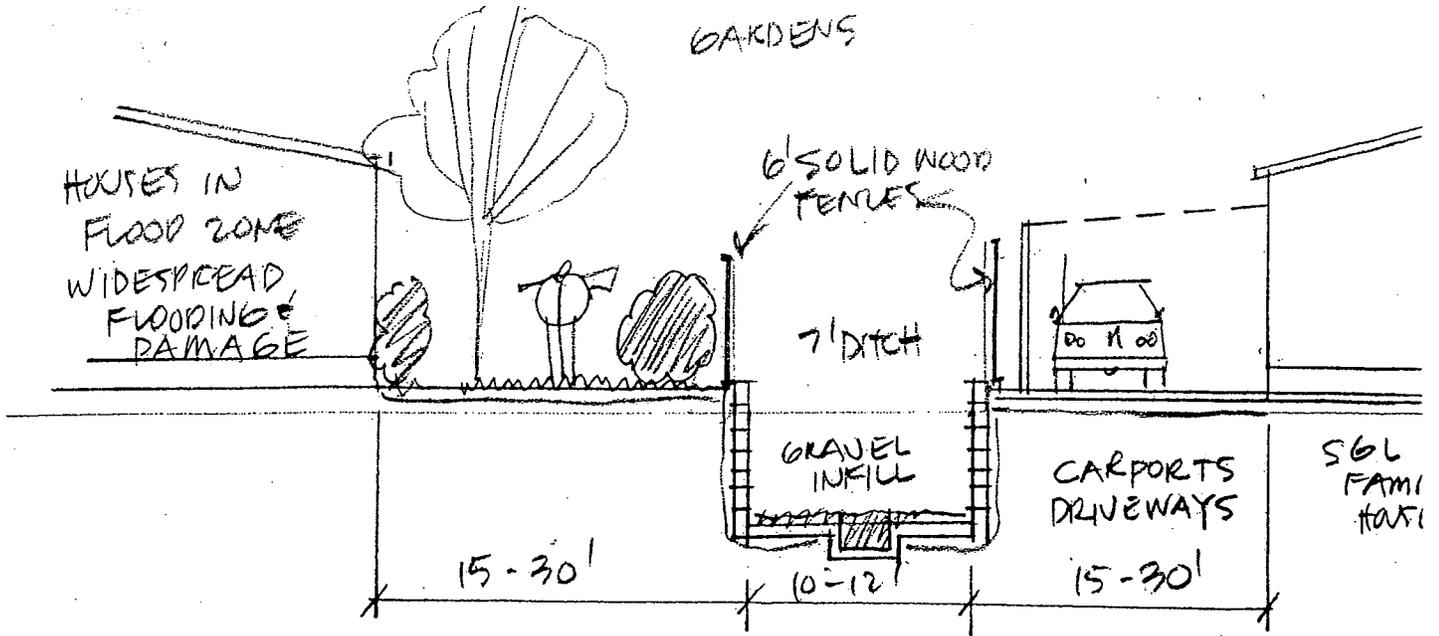
a. Constraints. Gibson Creek in this section is very shallow during low water flows, with no shade or bank cover. The banks are highly eroded in spots and there are silt deposits in other areas. The creek runs under several railroad tracks after crossing under Perkins Street. Access for maintenance is difficult through the double box culvert and the southern channel is partially filled with gravel. There is a high potential for flood damage if the culvert channels are constricted by debris or gravel deposition. Gibson Creek provides very poor wildlife habitat in this section. The shallow gravel channel, open exposure, and lack of pools detract from the habitat potential for fish.

b. Opportunities. This section of the creek should have a high priority for restoration because of its high visibility and the potential "development" of the historic train depot property. Any new development on the property would likely require a new bridge over Gibson Creek to align with Hospital Drive. The new bridge should be designed to include pedestrian access. Shade trees and other vegetation should be planted along the creek banks to shade the creek. The creek should be allowed to meander through the current wide channel, forming pools and riffles to provide fish habitat (see Figure 9). Public acquisition of the land between the creek and Perkins Street, as well as the creek itself, could provide for a small park along this important "gateway" into the City's downtown area.

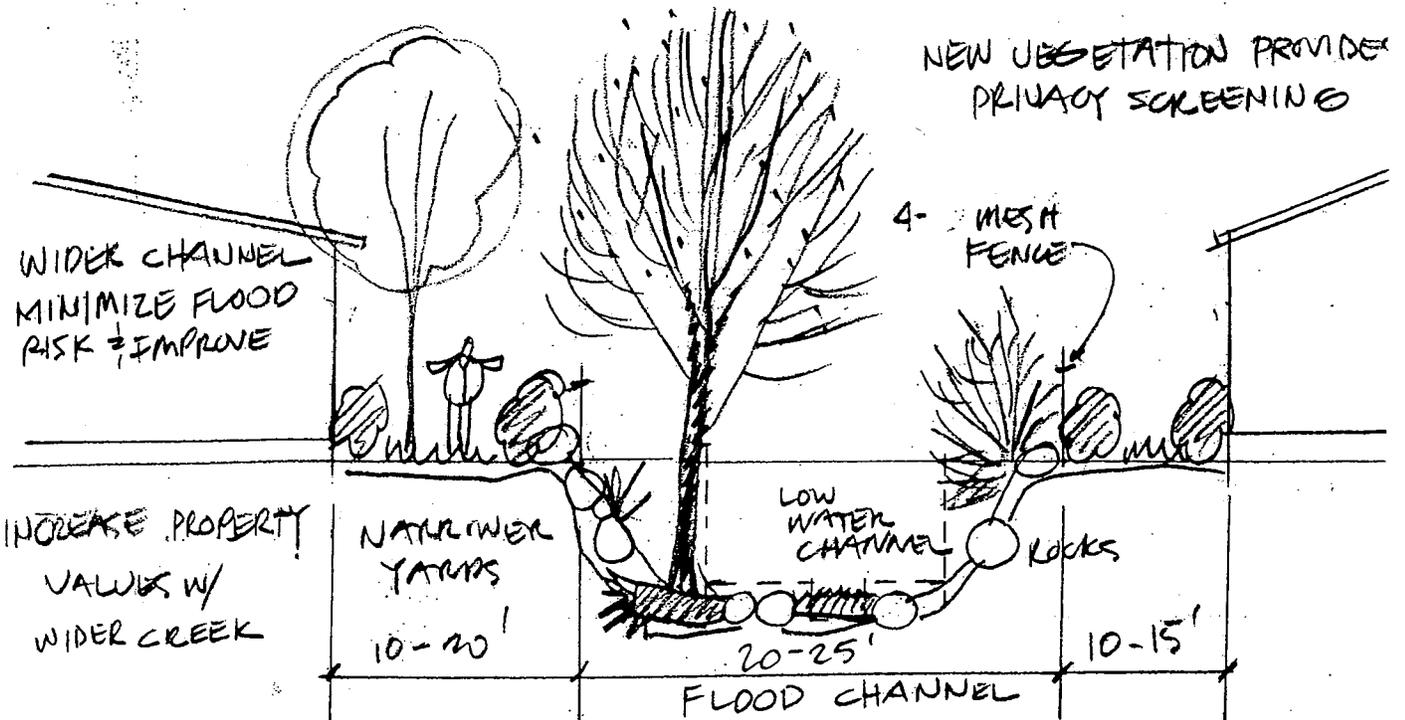
It is recommended that any new development or "redevelopment" of the historic train depot property include a Creek Restoration Plan, and a possible plan for public access to Gibson Creek.

16. Downtown Area

a. Constraints. In this downtown area, the creek is clearly seen as a liability, with 6-foot cyclone fences protecting parking lot boxed cutouts. It is surrounded by



A SECTION - EXISTING CONC. DITCH 1" = 10'



B SECTION - PROPOSED CREEK CORRIDOR 1" = 10'
ORCHARD TO WARREN

CREEK SECTIONS - RESIDENTIAL AREA

UKIAH - GIBSON CREEK
LSA

JUNE 00

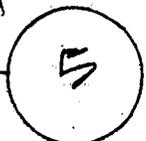
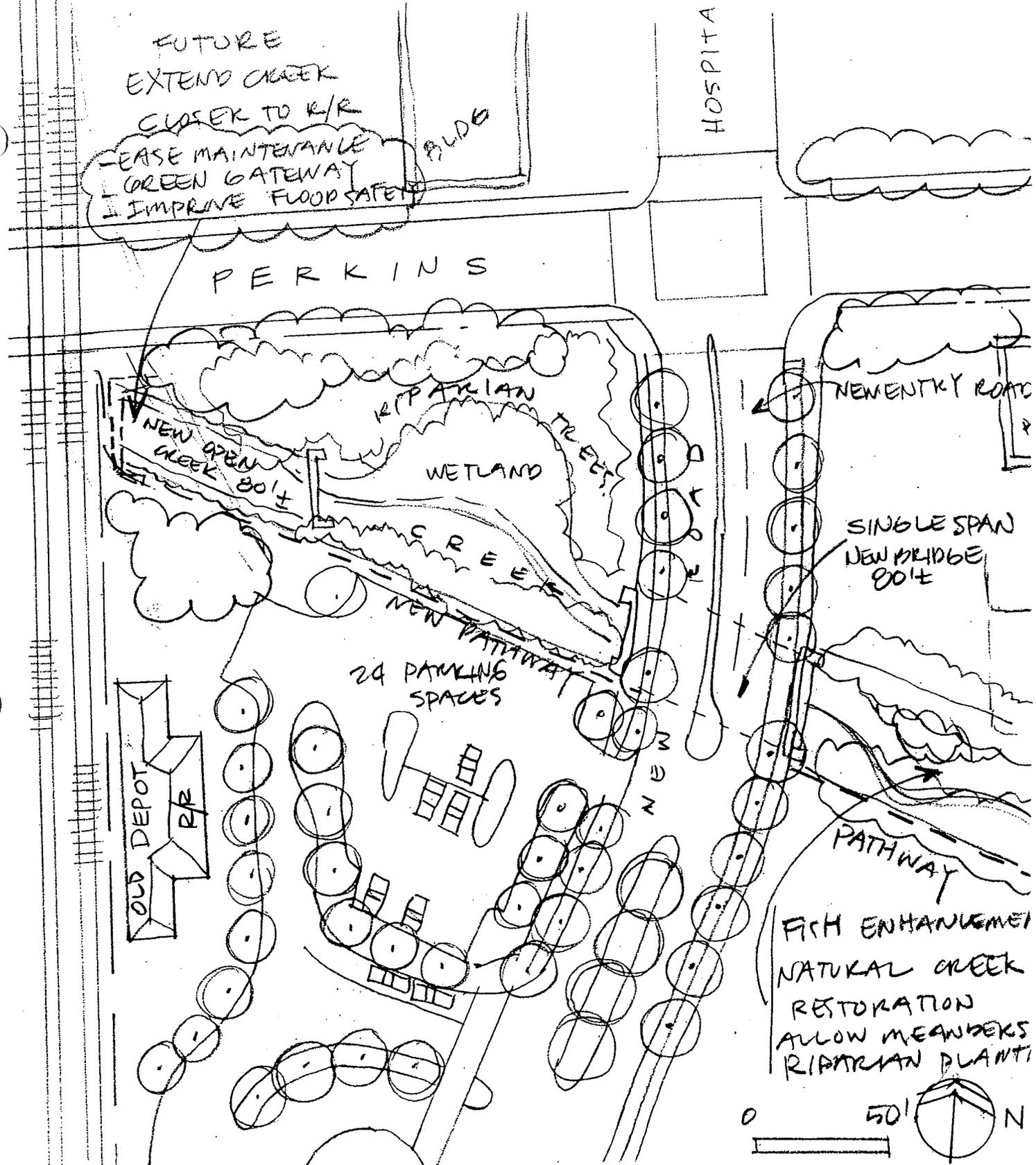


Figure 8
Creek Sections - Residential Area



SITE PLAN FOR
FUTURE TRANSIT CENTER / RR DEPOT

UKIAH - GIBSON CREEK
LSA

JUNE :00

6

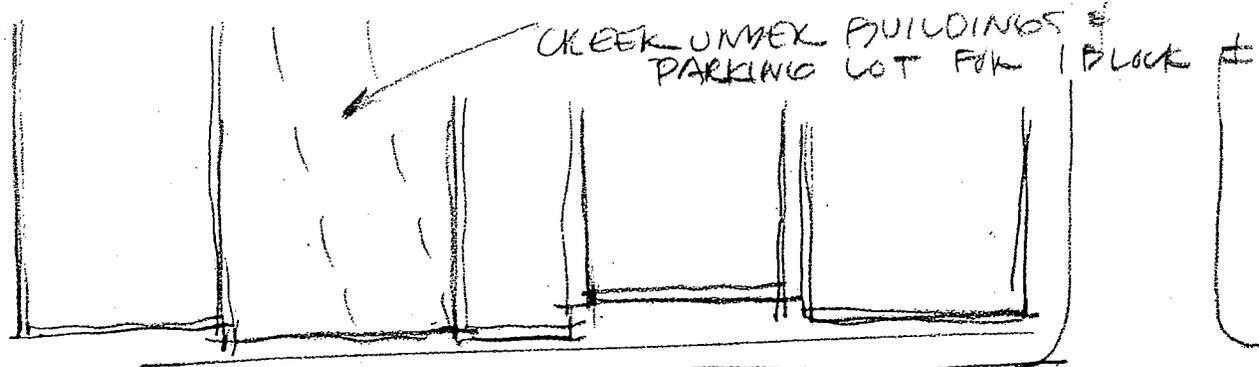
Figure 9
Site Plan for Future
Transit Center/RR Depot

asphalt, is covered with street crossings, buildings and parking lots. The Mason Street area where the creek is open provides some visual amenities, with a few clusters of willows and liquid ambers lining the banks. The open blocks above State Street are lined with broken timber walls and a deteriorating building floor that is falling into the creek. Flood control is a concern, with little access to clean debris from the box culverts and enclosed channel that make up the majority of this section of the creek. If debris clogged the underground channel, it would quickly flood adjacent businesses and adjacent streets. There is no natural corridor for fish passage and wildlife in this downtown section of Gibson Creek. Pedestrian/bike access is limited to adjacent commercial streets.

b. Opportunities. There are several areas that would be ideal for creek enhancement projects in the commercial area. A restoration project could serve to help revitalize the area to the benefit of both the City and adjacent property owners. The Probation Department building is surrounded by a parking lot at Mason and Smith Streets (see Figures 10 and 11). The creek could be daylighted through this parking lot, and the corner area north of the creek could be developed into a pocket park at a lower grade than the surrounding streets. This lower area would serve as a floodplain for the creek during flood events. Parking on adjacent streets could be converted into diagonal parking to provide additional spaces to replace those removed by the restoration project. A future creekside deli with outdoor decks could take advantage of the vegetation and water amenities (see Figures 11 and 12). Several buildings that cover the creek could someday be removed to open the creek and allow for a broader flood channel with riparian vegetation (see Figure 13).

The failing wooden retaining walls along the open area of the creek between Main and State Streets could be removed and the banks cut back to provide floodplain terraces within the creek channel. This would also give the creek a more natural appearance (see Figure 14).

On the west side of State Street, a large parking lot abuts the north bank of the creek. The creek in this area has a concrete wall on the north bank and an old stone wall on the south. There is an existing historic structure within 2 feet of the south bank, but the north bank could be cut back in terraces to provide for creek expansion during high water flows. A landscape buffer between the creek and the parking lot would form a creekside pocket park with a pedestrian trail. This buffer could also help filter runoff from the parking lot so that pollutants wouldn't enter the creek (see Figures 15 and 16).



SMITH ST.

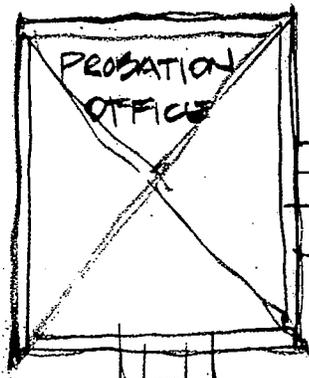
MASON ST

BARREN PARKING LOT

65' ±

CREEK IN A BOX W/ 6' FENCE

PARKING



↑ 111 = 50' ±

CREEK TURNS SHARPLY TO ROADSIDE GREENWAY

EXISTING PLAN - MASON @ SMITH

UKIAH GIBSON CREEK
USA

JUNE 00

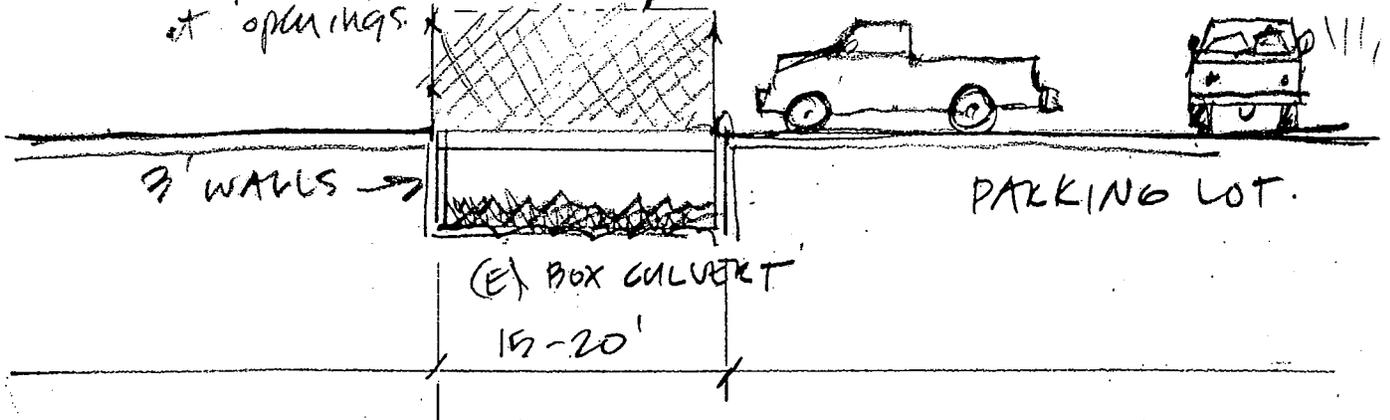
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Figure 10
Existing Plan -
Mason Street at Smith Street

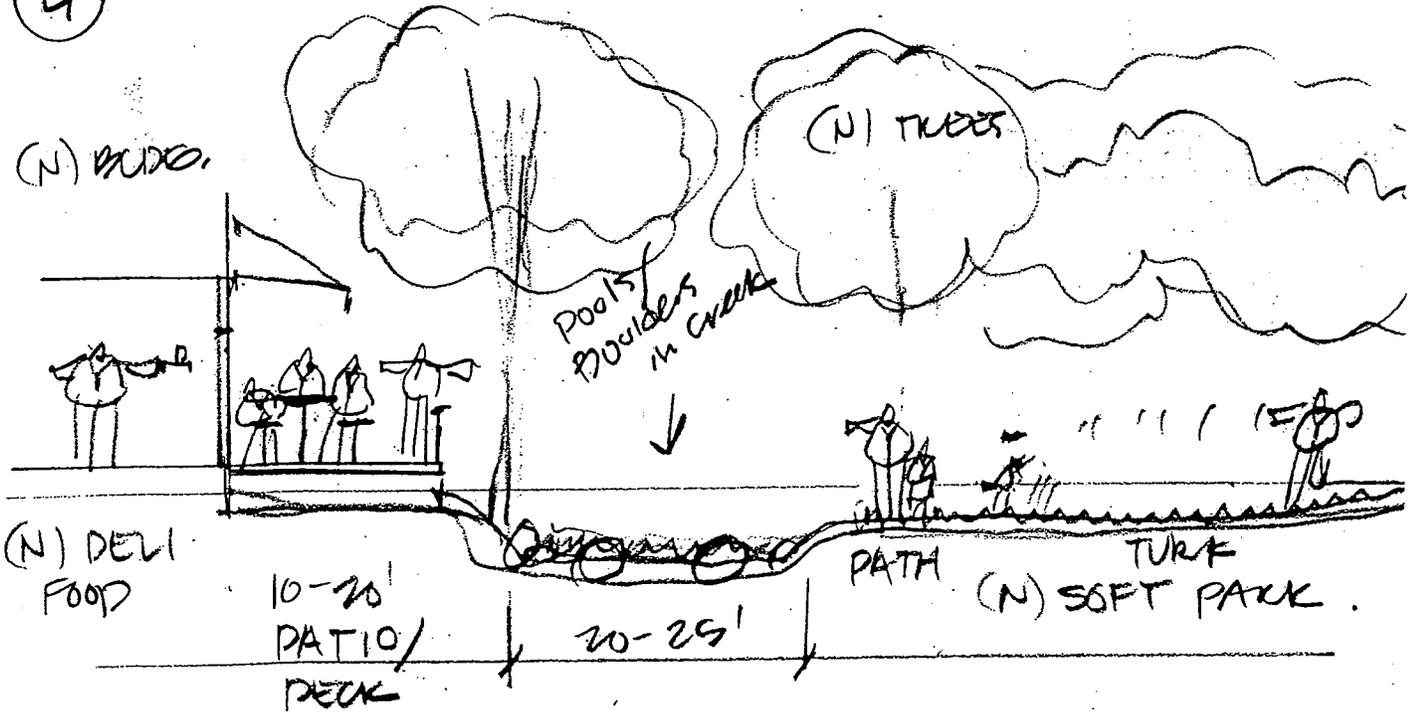
EXISTING PARKING LOT
OPEN ASPHALT
NO SHADE @ CREEK

(E) CREEK - IN A STARK
CYCLONE FENCE
WITH CUTOUTS -
DIFFICULT MAINTENANCE

6' cyclone fences
at openings



(L1) SECTION OF PARKING LOT EXISTING



(L2) SECTION - OPEN CREEK PROPOSED

1" = 10' - 0" ±

- WIDER FLOOD ZONE
- IMPROVE CREEK HABITAT
- ATTRACT PEOPLE

SECTIONS - MASON @ SMITH

UKIAH - DOWNTOWN CREEKS
LSA

JUNE 00

7

Figure 11
Sections - Mason Street at Smith Street

CREEK RENOVATION TO AID
STORE IMPROVEMENTS.

(N) DIAGONAL
PARKING

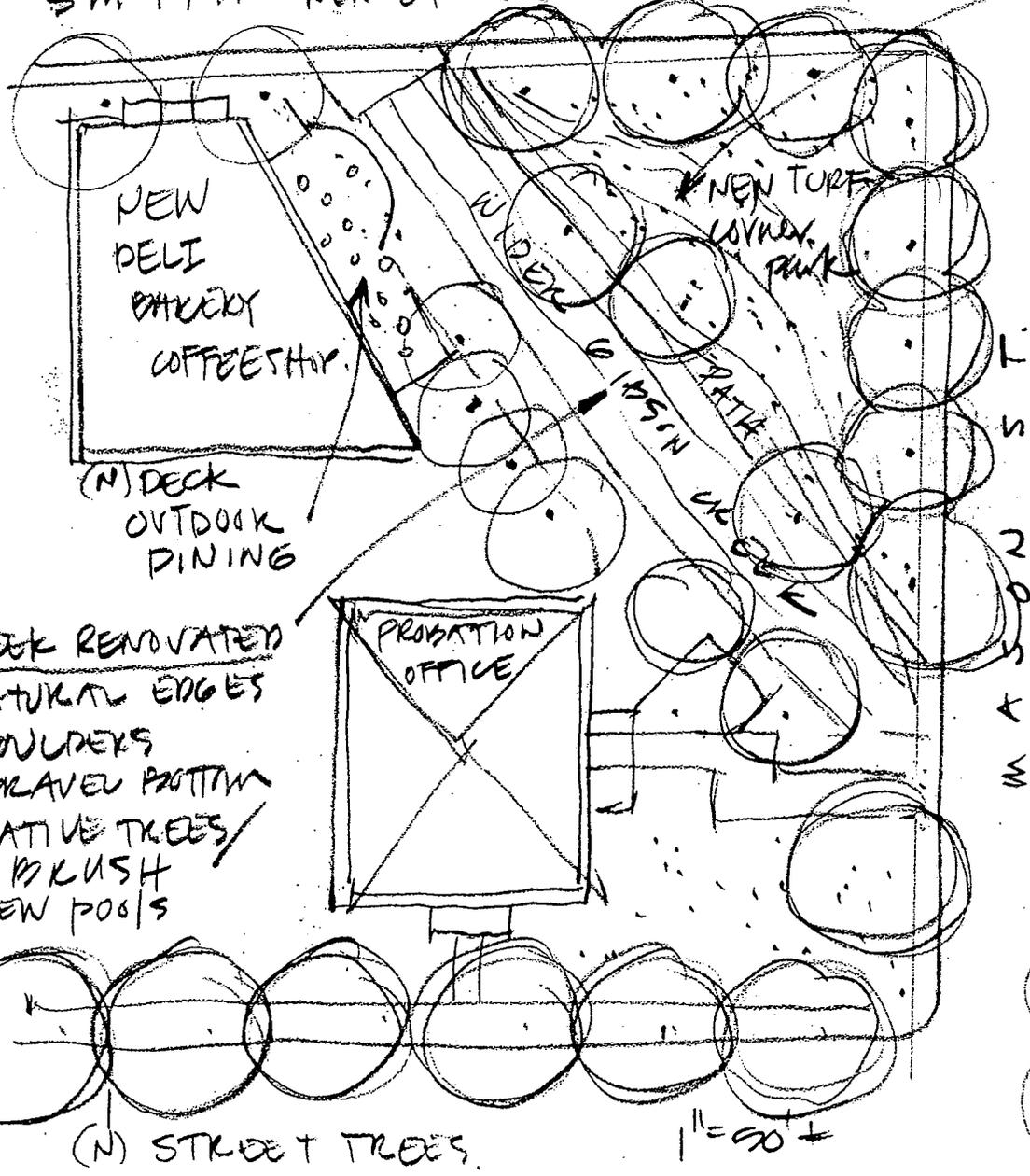
SLOW
TRAFFIC

SMITH NEW STREET TREES.

NEW PARK

SUMMER
TURF

ENTIRE P
LOWER 3'
FOR WINT
FLOODING



WIDER CREEK W/ PATH/NATIVE
PLANTINGS
EX WIDER FLOOD ZONE

- CREEK RENOVATED
- NATURAL EDGES
 - BOULDERS
 - GRAVEL BOTTOM
 - NATIVE TREES/
BUSH
 - NEW POOLS

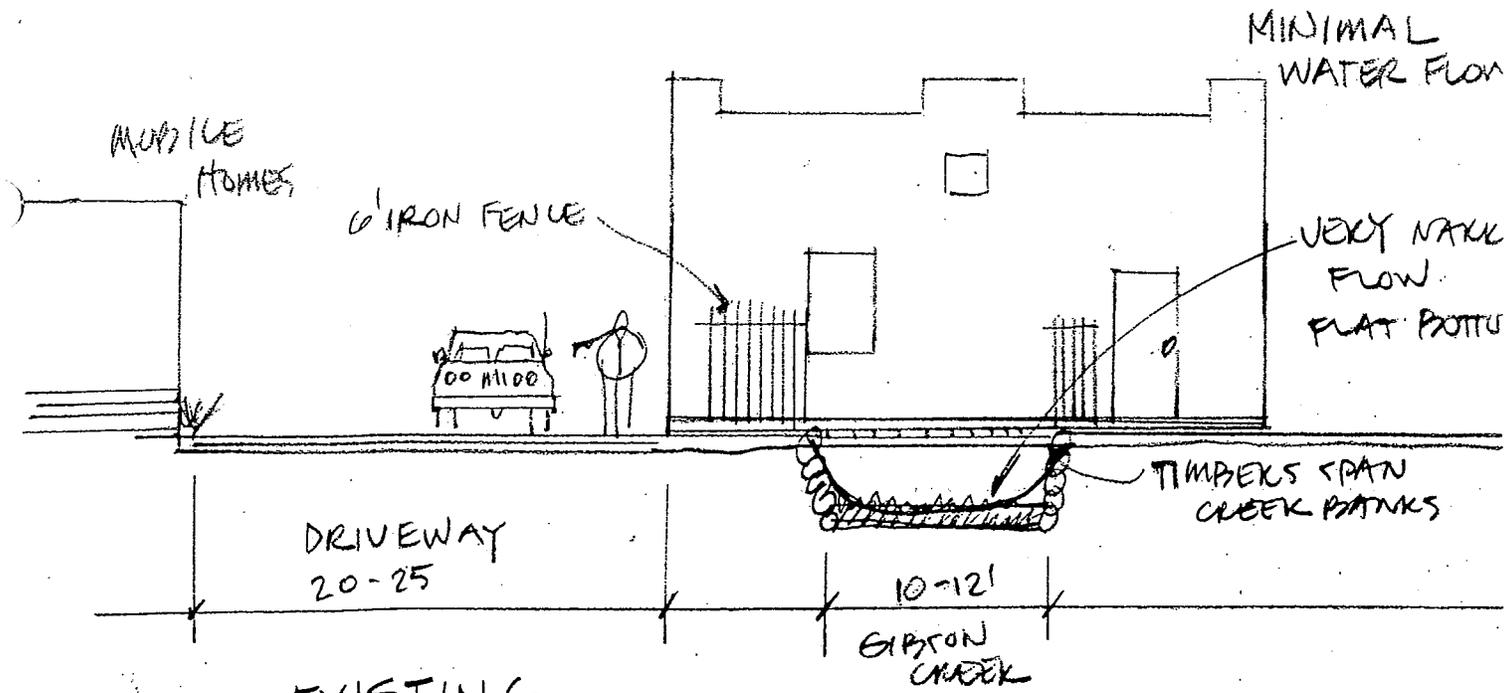
PROPOSED PLAN - MASON @ SMITH

UKIAH GIBSON CREEK
LSA

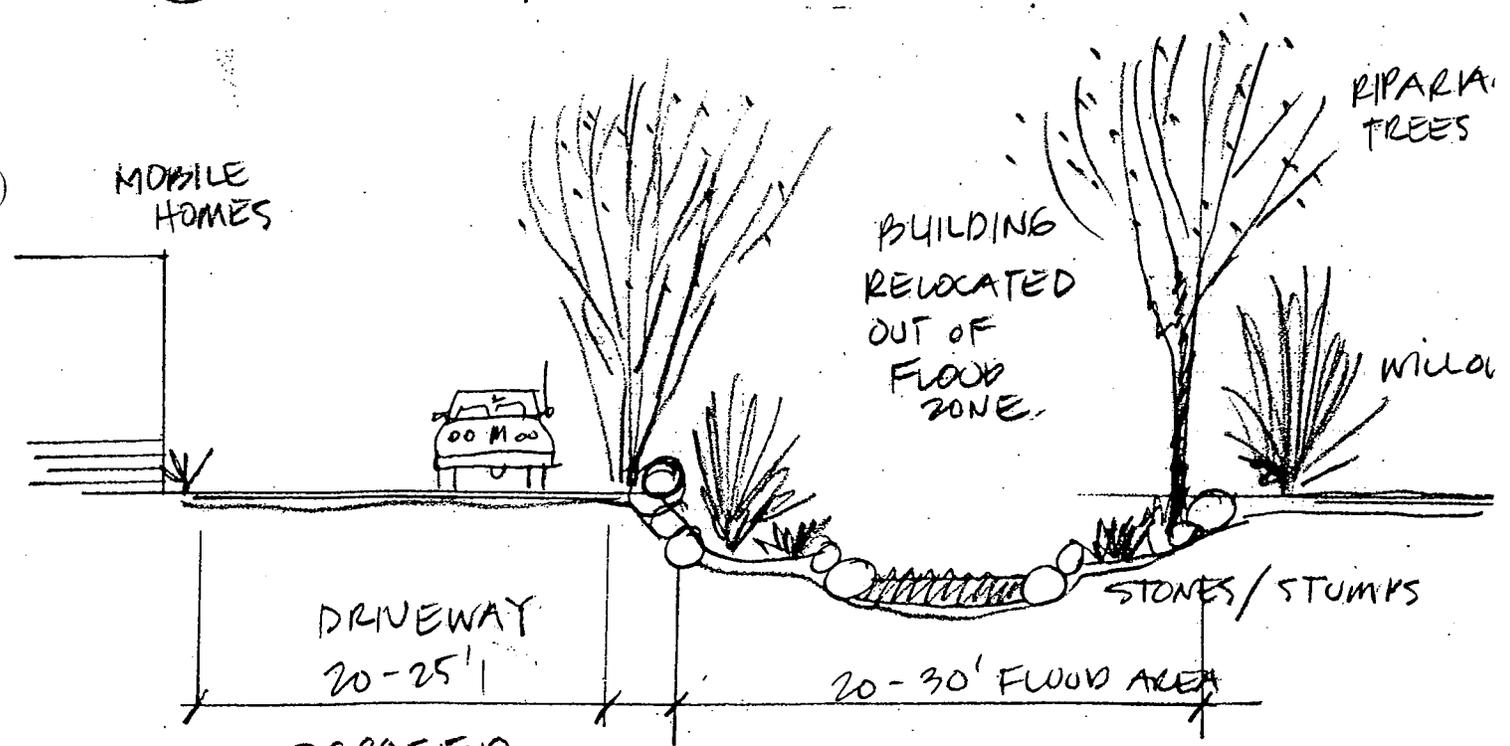
JUNE 00

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Figure 12
Proposed Plan - Mason Street



(A) EXISTING SECTION - CREEK UNDER BUILDING 1"=10'



(B) PROPOSED SECTION - CREEK IN NATURAL CHANNEL 1"=10'

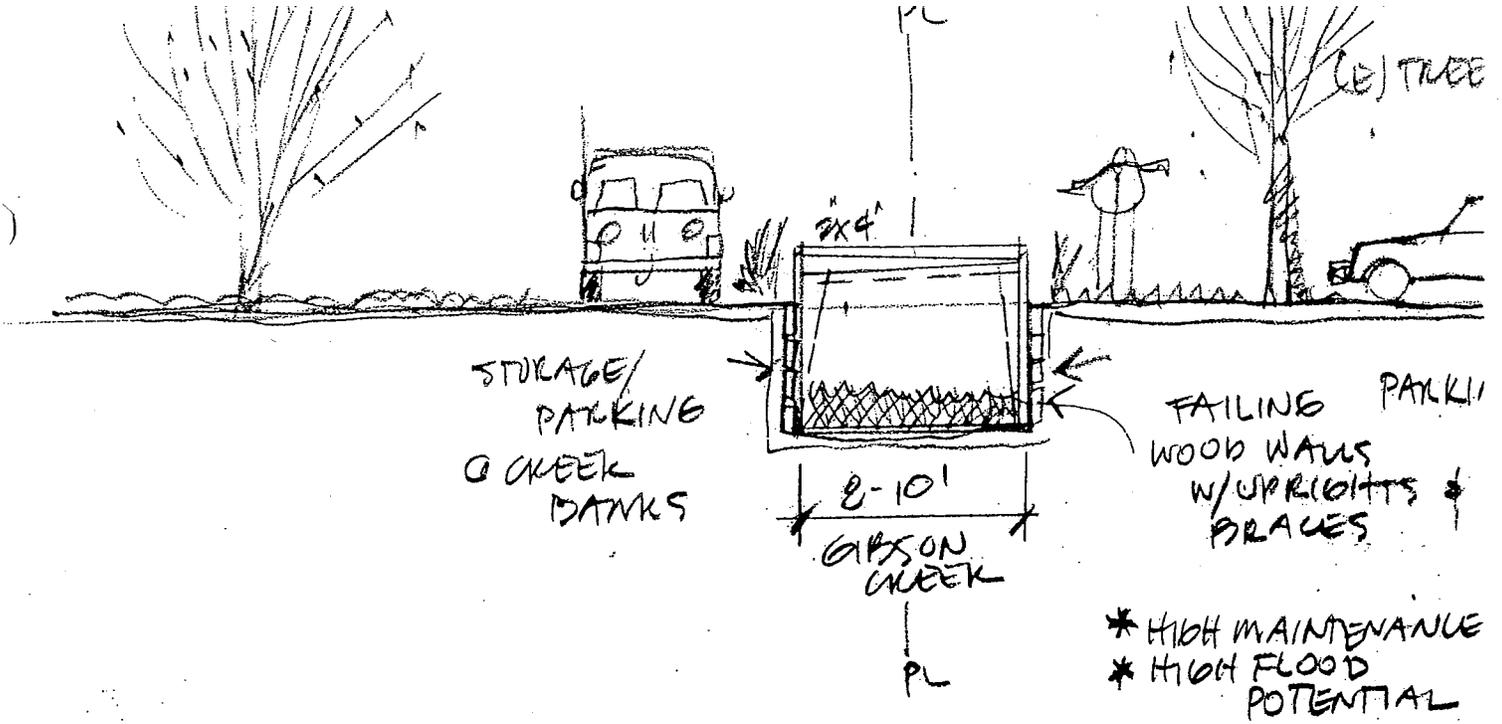
CREEK SECTIONS @ MAIN ST

UKIAH - GIBSON CREEK
LSA

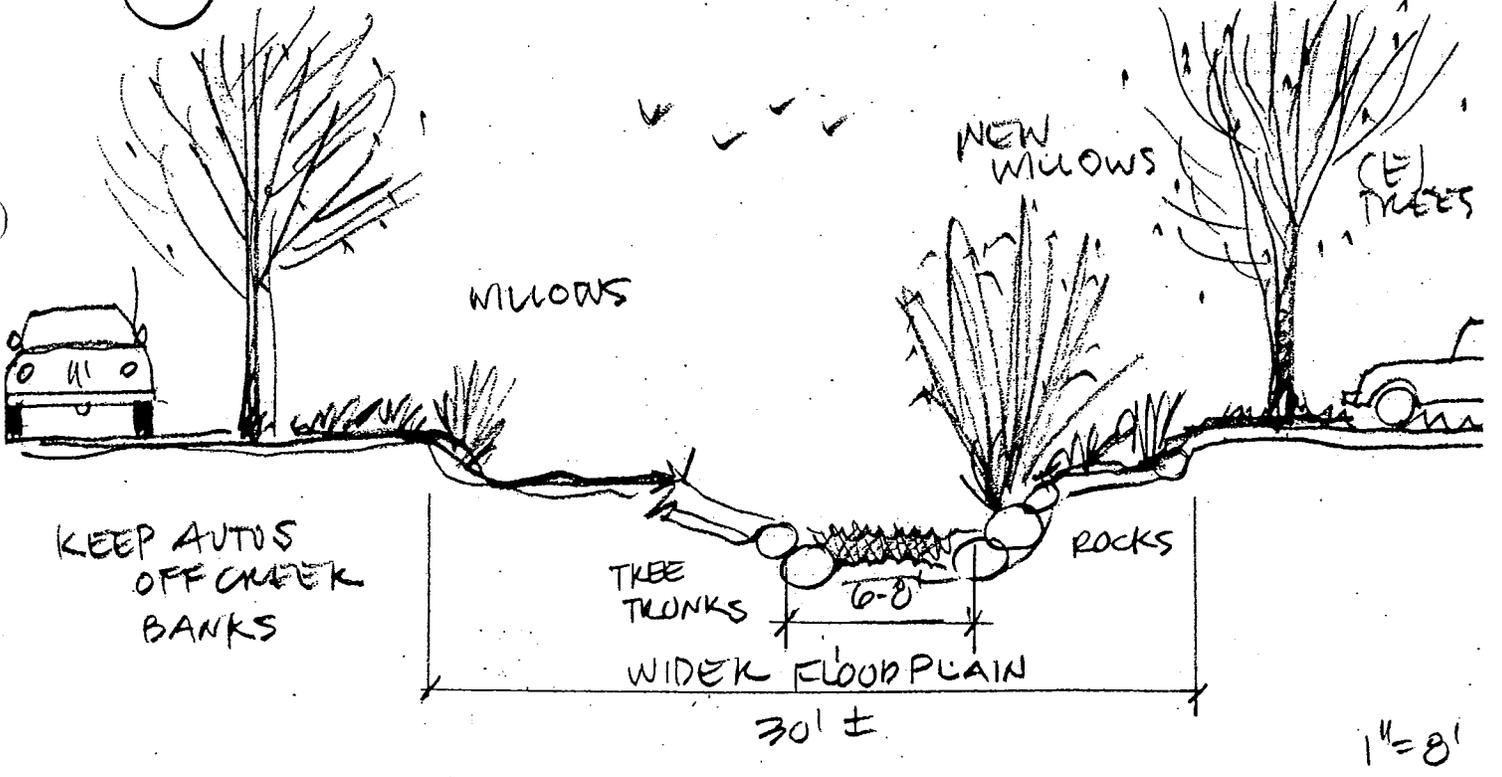
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Figure 13
Creek Sections at Main Street



(A) SECTION - EXISTING 1" = 8'



(B) SECTION - PROPOSED

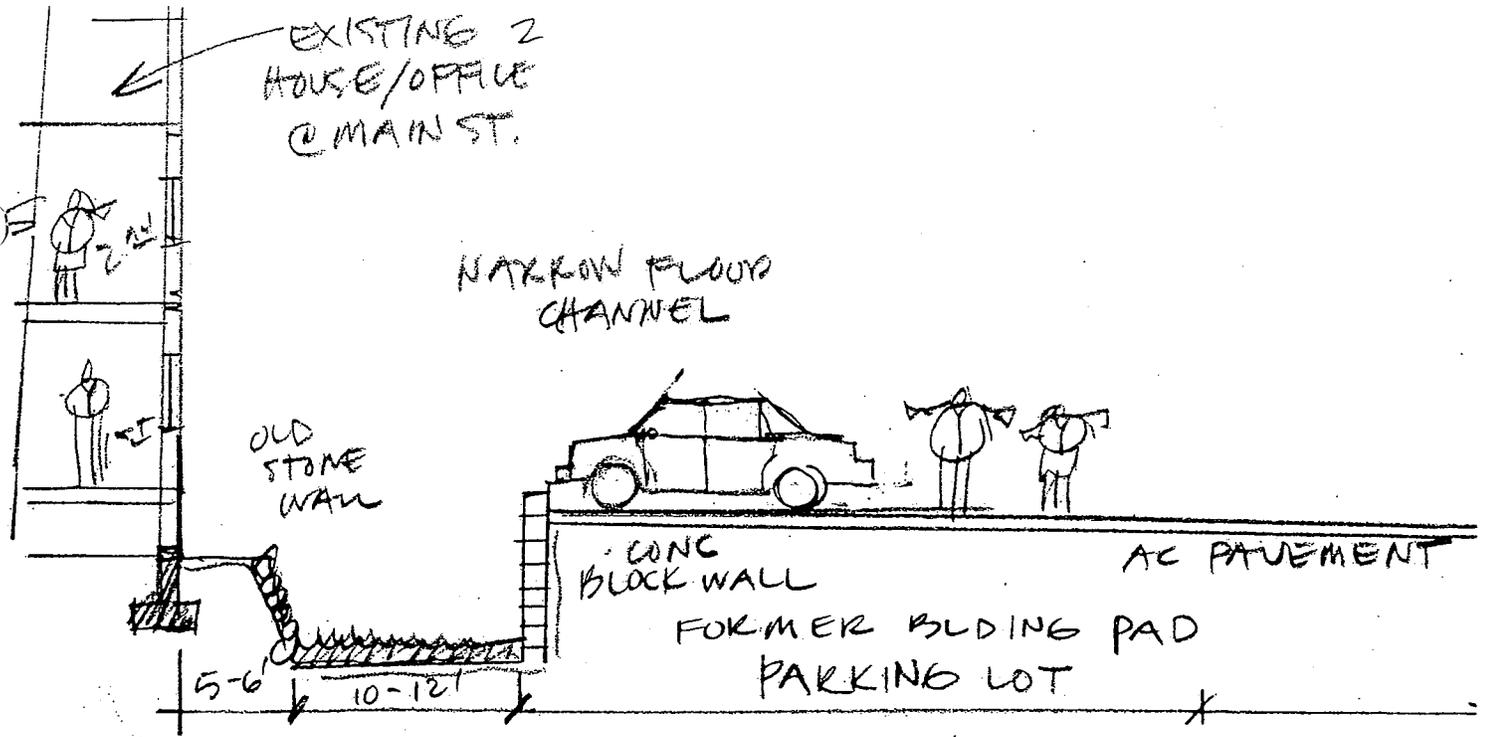
SECTIONS - MAIN @ STATE

UKIAH - GIBSON CREEK
LSA

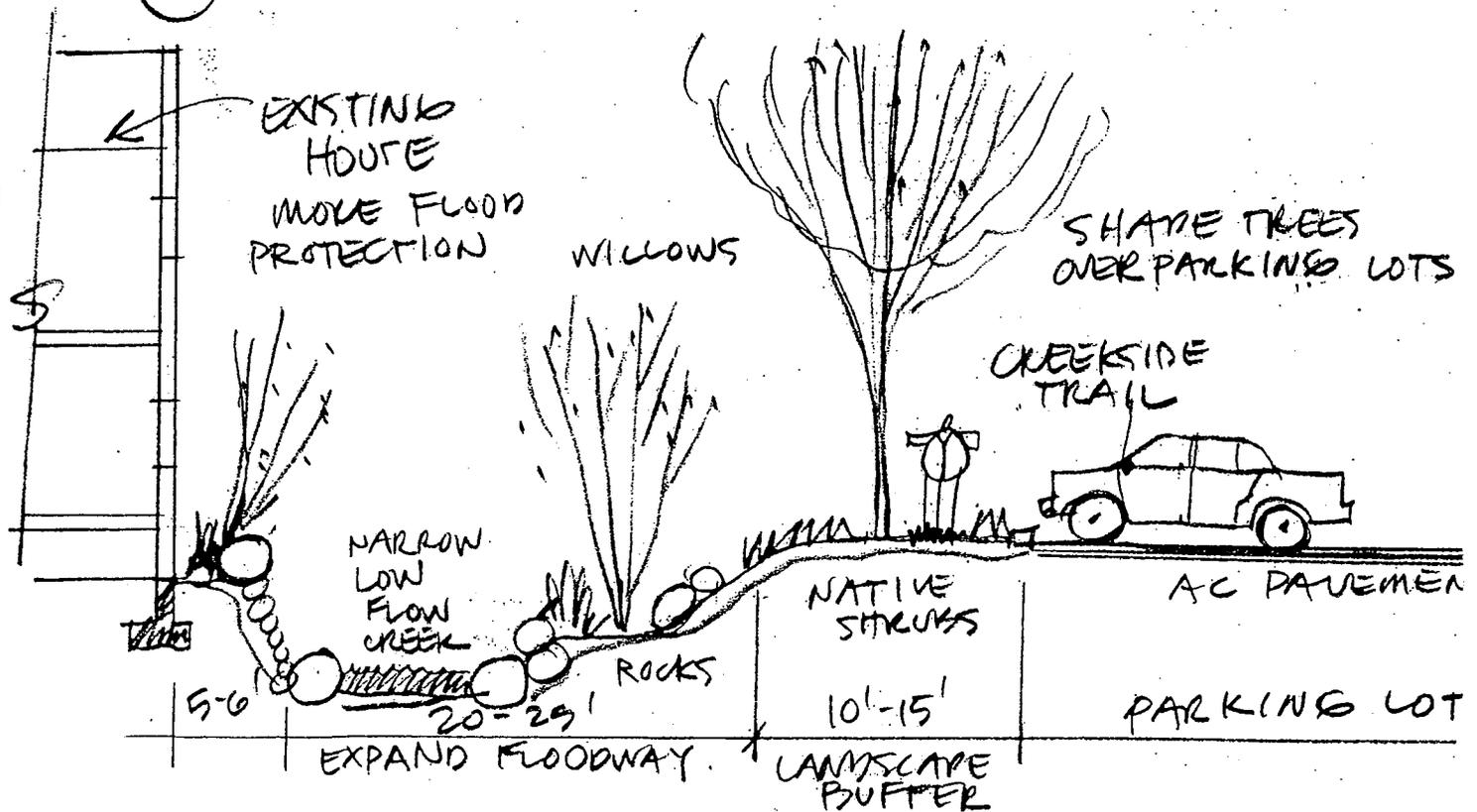
JUNE 00

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Figure 14
Sections - Main Street at State Street



(A) SECTION - EXISTING 1" = 10'



(B) SECTION - PROPOSED 1" = 10'

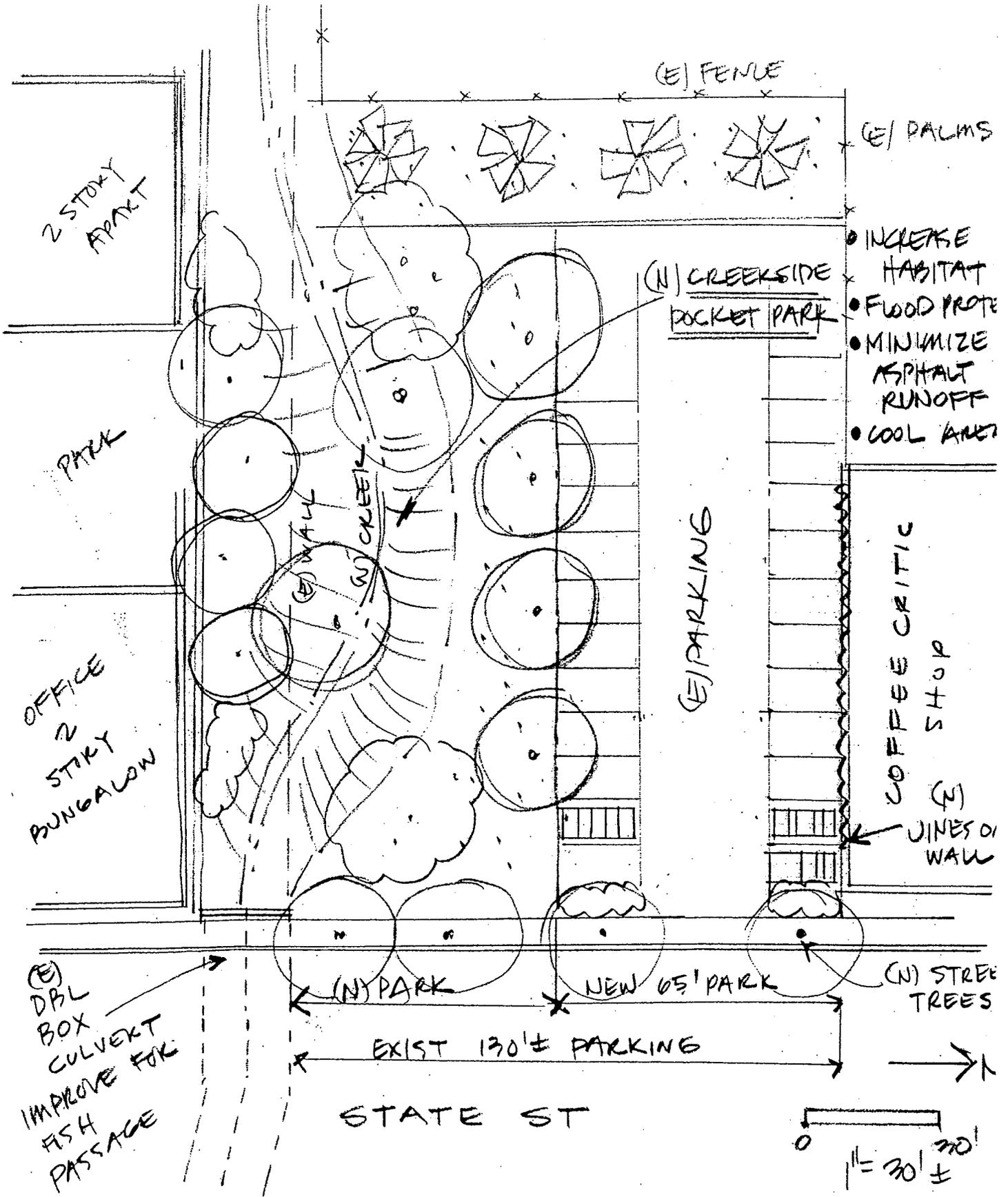
TYPICAL PARKING WEST OF STATE

UKIAH GIBSON CREEK
USA

JUNE .00

7

Figure 1
Proposed Section
Typical Parking West of State Street



PROPOSED PARK PLAN @ STATE

UKIAH GIBSON CREEK
LSA

JUNE .00

7

Figure 16
Proposed Park Plan at State Street

17. Historic Residential District

- a. Constraints. At several street crossings, the box culverts have flat bottoms which limit low water fish passage. There are also several with two or three waterfalls below the culvert. Debris collects in creeks, with one ideal pool strewn with election signs, floating trash, and a computer (see Figure 17).
- b. Opportunities. This section needs little restoration, but it should be kept clean with periodic trash removals. The creek through this section runs through private property, with property lines typically running to the centerline of the creek. Any improvements in this area would involve the cooperation and support of the property owners.

While the creek in this section is general healthy and attractive, there are some improvements that could be done. Retaining walls could be removed and steep banks graded to a gentler slope to allow the creek to form natural meanders and floodplain terraces (see Figure 18). These improvements would give residents better access to the creek. Education on the value of creeks for children and other residents, especially the property owners on either side of the creek, may also be beneficial. Bridges with solid bottoms that form barriers to fish passage should be modified or replaced with free spans that allow free wildlife movement.

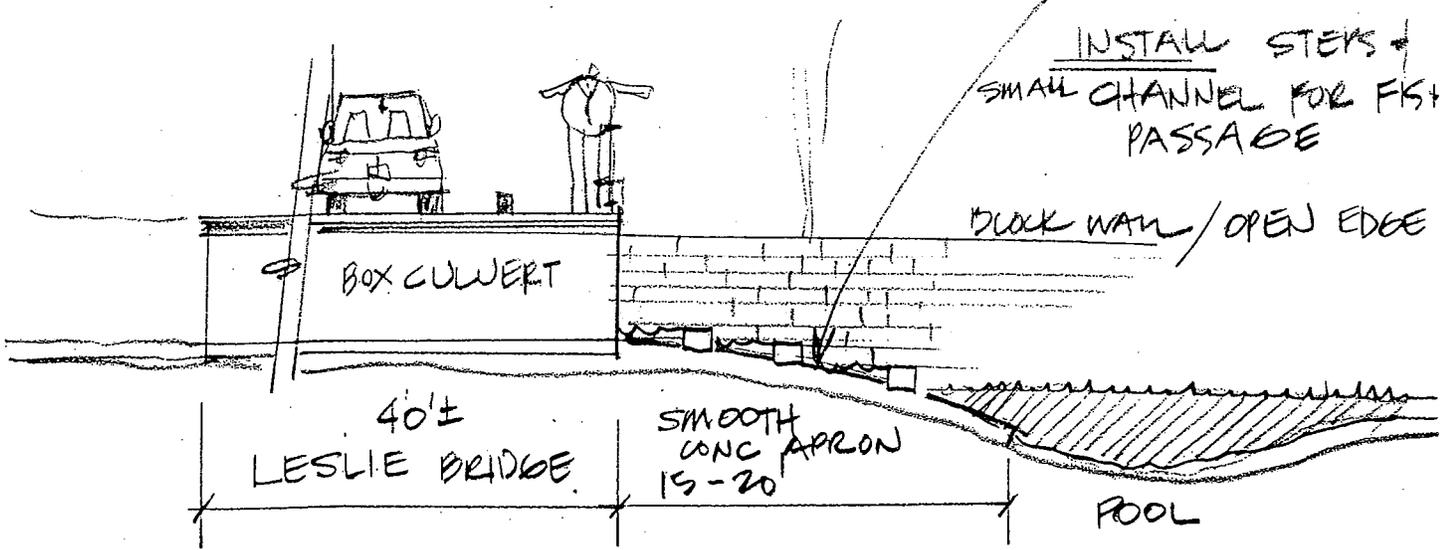
18. Rural Residential Area

- a. Constraints. The bridge at Standley Street has a pool undercutting the bank and a waterfall that might be a fish barrier. Road crossings with concrete bottom box culverts could act as fish barriers.
- b. Opportunities. This section has a low priority for restoration as the creek is in good condition throughout this reach. The natural character of the creek in this section should be maintained. The bridge crossings should be improved by removing solid floorings and building up the creek bed at the foot of culverts to facilitate fish passage.

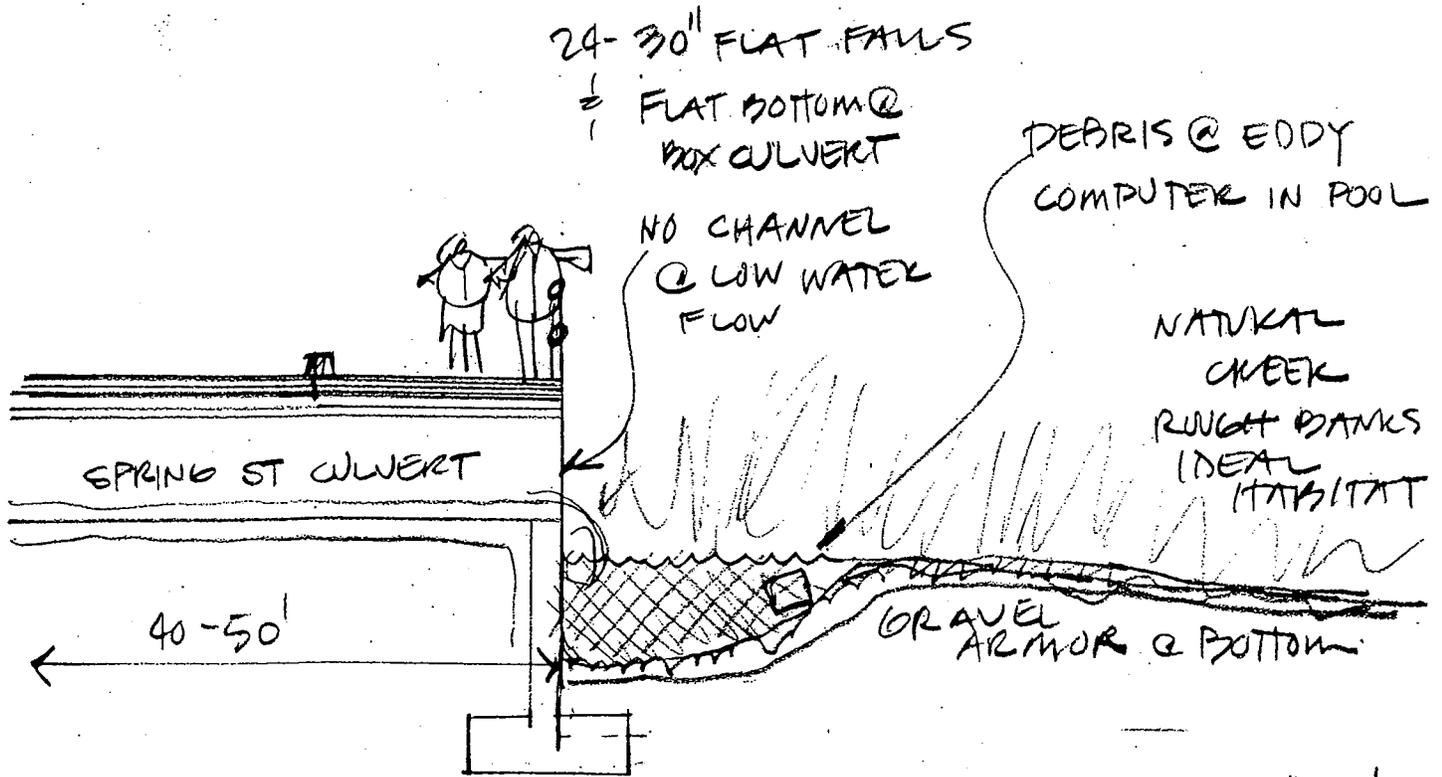
9. Natural Watershed

- a. Constraints. This section of Gibson Creek appears almost pristine, though old bridge abutments, logging roads, and other signs of early logging are visible. Public access is limited by fences that exclude most visitors. Any mines or quarries in the upper watershed could be a threat to water quality.

(E) FISH BARRIER - SMOOTH FLAT APRON
STOPS FISH & LOW F



SECTION LESLIE ST-FISH BARRIER 1"=8'



SECTION - SPRING ST BRIDGE FALLS 1"=8'

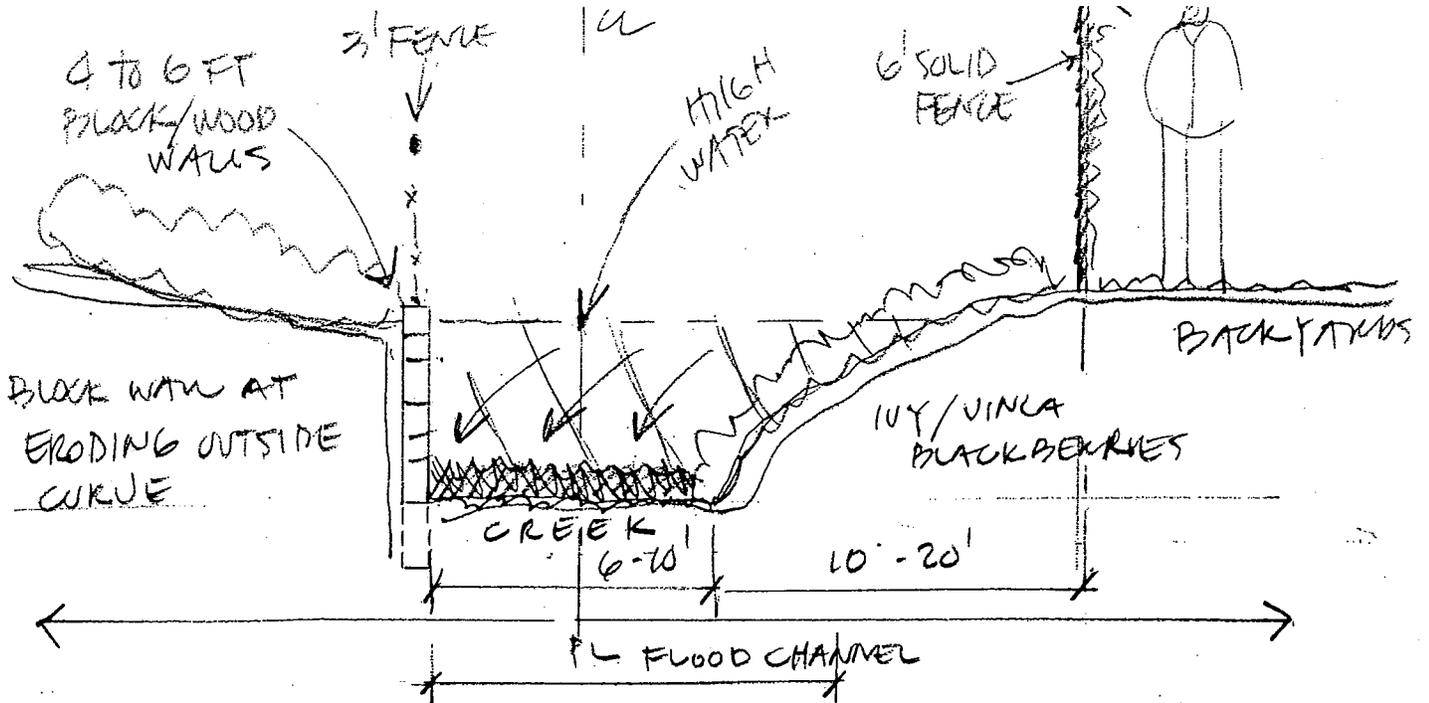
TYPICAL BRIDGE FISH BARRIERS

UKIAH - GIBSON CREEK
LSA

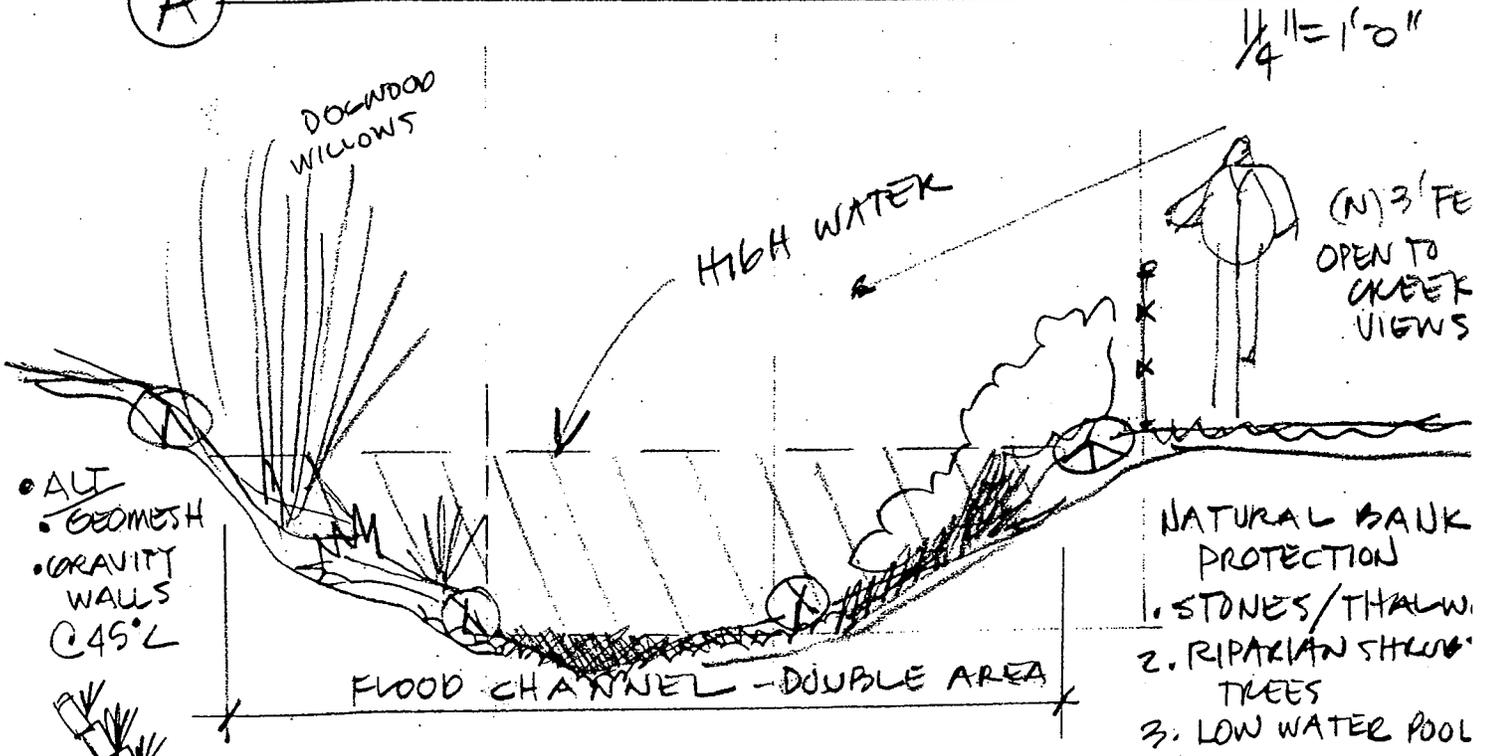
JUNE 00

5/8

Figure 17
Typical Bridge Fish Barriers



(A) SECTION - EXISTING SIDNEYARD CREEK



(B) SECTION - PROPOSED BANK PROTECTION

RESIDENTIAL BANK PROTECTION

UKIAH - GIBSON CREEK
LSA

JUNE 00

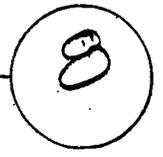


Figure 18
Residential Bank Protector

b. Opportunities. The multitude of deep pools incised in rock provide ideal fish habitat. Development and grading on the hillsides and within the Gibson Creek watershed that would decrease water clarity and purity should be carefully evaluated and properly mitigated. The headwaters should be protected to continue to provide a diverse wildlife habitat close to the City of Ukiah. This wild area provides natural beauty and helps maintain the creek ecosystem. The City should work with property owners to develop a public access plan for this segment of Gibson Creek.

E. General Recommendations

Education can be the key to upgrading and maintaining the condition of the creeks in Ukiah. School projects such as sprouting acorns from native oaks to be planted along the creek corridor can encourage children's interest in the health of the creeks. Annual creek clean-up days and curbside stenciling of storm drains sponsored by school groups or civic organizations are good ways to encourage the public to participate in the care of the creeks.

Community support for the creek clean-up and restoration activities undertaken by the Ukiah Valley Streams Coalition and the Mendocino Fisheries Program (E-Center) should be strongly encouraged.

Another useful tool to encourage public care and concern for the creeks would be an educational pamphlet. These pamphlets could be circulated to the citizens of Ukiah. They might include information about the potential impacts from dumping yard waste and other trash in the creeks; run-off from excessive use of fertilizers, herbicides, and pesticides; and information about using riprap and retaining walls for bank stabilization.

Other educational forums could be used to teach creek hydrology and the importance of riparian vegetation for fish and wildlife. The visibility gained by providing better public access to the creeks would also encourage public concern and respect for the creeks.

The creeks can also be used as amenities to spur revitalization projects. For example, Gibson Creek can help create a gateway to the community at key locations. Daylighting Gibson Creek could help revitalize the downtown area by providing an attractive outdoor amenity that will draw people to the area and encourage them to linger in parks and cafes adjacent to the creek. By promoting these kinds of education, restoration, and revitalization projects, Ukiah's creeks will be maintained as valuable natural assets and amenities in perpetuity.

F. Potential Funding Sources

Federal and State Funds to restore urban creeks, improve riparian habitat, and restore fish populations are available from a number of sources. The City of Ukiah, in conjunction with local groups such as the Ukiah Valley Streams Coalition and the Mendocino Fisheries Program (E-Center), may commit funds towards planned creek improvements. Funding assistance from resource agencies could be used to supplement the resources committed by local agencies to carry out restoration work. State or federal grants funding may be obtained to implement larger specific projects that would not otherwise be feasible due to lack of local funding.

Funding sources vary with jurisdiction and each source of funding has specific eligibility requirements and time limitations. The California Department of Fish and Game Watershed Restoration Branch oversees a number of grant programs that may be available of funding creek enhancement projects in Ukiah. These include the following:

- Proposition 99, a source of funds for fish habitat restoration;
- Commercial Salmon Stamp Account, for salmon restoration grants;
- Steelhead Catch-Restoration Card funds, for steelhead habitat restoration and enhancement projects;

Additional grants are available for public school educational programs on watershed and anadromous fishery conservation, instream habitat restoration, and riparian restoration.

The Sonoma County Water Agency has developed a number of Watershed Protection Projects for the Russian River watershed, funded by the California Water Bond Act Initiative. Several of these are cooperative projects with other affected counties. Both Sonoma and Mendocino Counties would benefit from developing a cooperative project for fisheries enhancement in the Russian River. Sonoma County currently has such a project, which could be expanded to include the Mendocino County portion of the Russian River watershed.

Other agencies and organizations that may fund creek enhancement projects include:

- U.S. Army Corps of Engineers
- National Marine Fisheries Service
- State Water Resource Control Board
- North Coast Regional Water Quality Control Board

- Mendocino County Water Agency
- California Coastal Conservancy
- Planning and Conservation League

G. Study Participants

■ ■ ■

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