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CITY OF MIDDLETOWN
CONNECTICUT RIVER
BOAT LAUNCHING FACILITY REPORT

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INTRODUCTION

Until 1977, the State of Connecticut operated a small boat launch facility on land owned by the City of Middletown. Site studies conducted in 1973 showed that the State boat launching facility had deteriorated considerably and was thought by many users as too steep for safe operation of motor vehicles and trailers.

A decision was made in 1975 to eliminate that facility and replace the area with bulkheading, boardwalk and park facilities--now known as Harborpark.

In the meantime the City, assisted by a consultant, proceeded to prepare plans and specifications for the location of a replacement boat launch near the intersection of River Road and Silver Street. In early 1980, this project was dropped when the City's Water Department, in an exploratory effort, discovered a potential yield of one to two million gallons of fresh water per day on the site.

The City of Middletown recognizing that there are many small boat owners in Middletown and surrounding communities, who wish to have access to the Connecticut River from a point in Middletown, retained Cardinal Engineering Associates, Inc., to perform a reconnaissance survey of lands bordering the Connecticut River in order to determine if there is a potential usable site for small boat launching facilities.

GENERAL CONSIDERATIONS

Size of the Facility

It is difficult to estimate how many boaters would use a facility in Middletown but it is conceivable that on peak days a facility of any size could be used to nearly full capacity.

The State of Connecticut has been expanding the number of its facilities due to the heavy demand and is welcoming Middletown's initiative as a contribution to the recreational resources in the State.

Conversations with Mr. Dean Kraska, who manages State facilities and our own survey indicate that a boat launch ramp in Middletown should be made to accommodate at least two dozen users and if at all possible, three dozen.

Boat Sizes

The size of boats that use this type of facility varies from the very small, carried on the car top, to an occasional twenty-four footer, with the majority of the crafts being in the fourteen to eighteen foot range.

Parking of Cars and Trailers

The parking area has to provide room for all users since the conditions of the roads in the riverfront section offer no possibility of parking on the road side. The entrance and exit should be easy and direct in order to minimize hazard and interference with normal local traffic. The parking stalls should be about forty feet long to accommodate cars with trailers and as wide as twelve feet to compensate for the added driving difficulty.

Some spaces should be provided for cars only, either guests meeting boaters or fishermen with a small dinghy carried on their cars. Ample turning room should be allowed in order to ease all maneuvers required for launching and hauling the crafts.

Launching Ramp

Forecasting peak traffic of some twenty boats, concentrated in a couple of morning hours, allowing ten minutes for each launch and somewhat longer for the less successful ones, it appears that provisions for multiple launching is highly desirable.

Precast concrete planks for ramps are readily available in ten foot lengths, so that a forty foot wide ramp seems an excellent choice to allow at least two boats on the ramp at any one time. Precast concrete planks of this type have been extensively used in recent years with good results. Inquiries we have made reveal however that this product can be improved further with different reinforcement and we would also recommend to investigate a prestressed concrete plank to better withstand wear and cracking.

The optimum grade of the ramp, as determined by experience, is 15% or one foot rise in 6.7 feet. A ramp one hundred feet long would thus allow for a rise of fifteen feet which would be roughly required for the facility.

Channel

The Connecticut River is still tidal in Middletown, the high occurring two hours and forty minutes after it does at the Saybrook jetty and the low three hours and forty minutes after the same reference point.

The mean high tide is 0.9 feet above mean sea level (MSL) and the mean low tide is 1.3 feet below MSL. Spring tides have a range only slightly higher (2.6 feet compared to 2.2 feet).

Considering the shallow draft of most trailerable boats (2 feet or less), a channel bottom of 3.3 feet below MSL would be sufficient, however, to allow for extreme conditions or for low-hanging propellers, we suggest that the bottom of the ramp and the channel be at 4.5 feet below MSL.

The channel should be dredged to the river's navigable channel or until this depth is encountered in the river bed, it should be around fifty feet wide and be marked with stakes or day beacons, preferably on both sides, to be clearly recognized by the unfamiliar boater. The channel should be dredged in a location not prone to periodic shoaling in order to avoid maintenance or running aground for the lack of it.

The sediment transport pattern is, at times, unpredictable but areas characterized by shoaling and mud flats are clearly indicated on the river chart and should be avoided.

PARCELS INVESTIGATED

A. Riverfront Parcels

Starting from Harborpark and proceeding easterly along Water Street and River Road for about two-thirds of a mile, which is the extent chosen by the City, we have identified and considered all the parcels as herein reported. Refer also to the map (Appendix A)

1. Harborpark

Everybody is well acquainted with this City-owned park, fully developed for recreational uses, including boat houses and docks for racing shells of Wesleyan University, Middletown high schools, and competing colleges and high schools.

The local fire department makes use of this facility to launch its boat for rescue operations on the River.

Harborpark contains no area that can be developed into a boat ramp and dependent parking area.

2. Tilcon-Tomasso Concrete Plant

This one acre parcel fronts on the Connecticut River and on Sumner Brook. Its location, next to Harborpark and the launching site of the Wesleyan and high school crews, would seem a prime choice for another boat ramp. This very proximity, on the other hand, may prove hazardous for the fragile racing shells during days of intense activity, especially if some inexperienced power boater does not display the caution that the situation requires.

This parcel is owned by J.J. Vinci and leased to Tilcon-Tomasso Industries for operating a concrete plant. Raw materials for the plant can be barge-delivered, although presently this function is assigned to trucking. Before installing the plant the land was filled above spring-flood levels and more fill has later accumulated from the dumping of concrete wastes.

In order to develop this property into a boat launch facility, the property must be acquired, the lease terminated and the plant relocated. If this is successfully accomplished, there are alternate ways to lay-out a facility and one could be as presented in Appendix B.

Since the site is directly on the river channel no auxiliary channel needs to be dredged. The water depth at this point will instead require the dumping of random-sized stone (riprap) in order to provide a foundation for the lower portion of the ramp.

The site would be excavated to lower the elevation by an average of five feet in order to blend in with the adjoining Harborpark and to lessen the length of the ramp.

Concrete blocks would be placed along the lower half of the ramp on both sides for boarding and leaving the crafts after tie-ups.

The parking lot could accomodate thirty-two cars with trailers and five cars without trailers. This would allow adequate turning movements, even though at the narrow end manuevers will require a certain amount of skill and concentration. The parking area would be paved and delineated with curbs and guard rails.

Where existing bulkheads have to be removed to construct the facility or where the slopes are prone to erosion, a stone revetment would be laid on a gravel base.

The surface runoff would be collected in a double chamber to deposit sediments and accidental spillage before being discharged into the river.

Some landscaping, benches and a timber fence along Water Street would complete the facility.

The cost of this project, exclusive of land acquisition and relocation of equipment is estimated to be about \$234,000.

3. W.R. Peterson Co.

This parcel, of about three acres, also fronts on the Connecticut River and on Sumner Brook. It houses several oil tanks which are serviced by barges and a yard with overhead tanks for distribution to oil trucks. This parcel, although in a prime location, could not feasibly be converted from its present use to a small boat launch facility.

4. Sewage Treatment Plant

This facility located on some 3.5 acres was built by the City around 1975. This parcel cannot, obviously, be considered.

From this point, the Railroad Right-of-Way or River Road run along the river's edge for a distance of about 1800 feet and no developable land is present.

5. From the last point the strip of land between the road and the river's edge widens from a few feet to eighty feet in a distance of nine hundred feet. The land is owned by the State of Connecticut and represents the northerly boundary of the Connecticut Valley Hospital.

The shoreline displays unstable characteristics; spring floods are eroding the banks and trees are gradually disappearing.

6. The City of Middletown owns the land fronting the River from this point on to and beyond Silvermine Road. This strip, over 2000 feet long and varying in width from 100 to 200 feet, houses Middletown Water Plant and several wells tapping high yielding aquifers.

A parcel of land comprising portions of this parcel and portions of the State owned parcel previously described could be put together and developed into a boat launching facility. In relation to the river the location is excellent being close to the navigable channel and not prone to shoaling. The eroding shoreline, now

loosing bordering trees, would have to be stabilized, thus preserving this resource for the benefit of boaters and non-boaters alike.

The location is about two-thirds of a mile from Harborpark and may not be so handy to the emergency fire launch, especially in consideration of the substandard conditions of River Road. It would be highly desirable that this road be reconstructed in any event and that all the adjoining shoreline be improved for the aesthetic enjoyment of the river.

The use of State land for construction of a part of the facility would require an act from the legislature, but the worthy purpose should ease the process.

The other major consideration is the proximity of city wells tapping a deep aquifer for distribution into the City's system and how a boat launching facility could affect this sensitive area.

It would seem unlikely that the small area to be paved is of any significance for the recharge of the aquifer. Also accidental spillages in the river, during engine start ups, are unlikely to find their way into the wells since the aquifer is separated from the river by impervious intervening strata.

Seepage thru the parking lot pavement seems also unlikely, and it can be further prevented by interposing a membrane between the subgrade and the pavement. One possible type is a PVC liner, gas resistant, manufactured by Staff Industries under the designation of 'XR5' in thickness of 25 and 30 mil. This liner would drain any spillage into a trap that also collects all surface water. The trap requires periodical maintenance to remove sediments and floating liquids.

A feasible layout of the facility is shown on Appendix C and some of the main features are described here:

A steel sheeting and fence is placed twenty feet off the last existing well to allow for the ramp slope and to further protect the nearest well from contamination. The ramp is forty feet wide made of precast concrete planks placed on a properly prepared base. Concrete blocks along the lower edges allow tie ups and boarding. The channel to the river is dredged to a fifty foot width and properly marked.

The parking lot is paved with bituminous concrete on a proper base with the addition of the liner previously described in the area close to the wells. There are twenty eight spaces for cars with trailers and fifteen spaces for cars alone, although this ratio can be altered to some extent. Turning movement and traffic can be safely handled. There are curbs and timber fences to control access parking operations and collection of surface runoff.

The eroding shoreline is re-aligned and protected with stone revetment placed on a gravel base. The size of the stones is to be large enough to withstand river current action and vandalism. Few benches are included as well as landscaping and turfing, which in addition to the existing trees will enhance the area and will prevent soil erosion.

The cost of the project is estimated to be about \$228,000.

B. Non Riverfront Parcels

In consideration of the limited resources left along the riverfront for development of a boat launching facility we have extended our considerations to a couple of additional parcels not located on the river's edge:

7. A parcel owned by Salvatore J. Marino Industries having frontage on Sumner Brook.

This parcel was investigated and a plan to use portions of it was developed. See Appendix D

There are however several major drawbacks that make this location less than desirable.

Dredging of Sumner Brook would be a yearly necessity due to the sediments carried by storm sewer outfalls and eroding banks.

A sewer line crossing Sumner Brook near its bottom may limit dredging depth curtailing launching at low tides.

The ramp will have to cross over a sewer pipe and costly work would be needed to protect this pipe from heavy loads (cars and trailers).

The area itself was an active dump and any activity may expose refuse and leach toxic wastes into the brook.

Boats will have to navigate a shallow and narrow brook buried between steep littered banks for one thousand feet before reaching the Connecticut River.

For the above considerations we would suggest to abandon any plan for this parcel.

8. A small parcel of about one acre between River Road and the Railroad. The parcel contains an abandoned track spur and a depression partly filled with stagnant water.

Although this parcel on inspection seemed to offer some promise, an examination of property lines, width of the railroad right-of-way and the grade of the track compared to the river's edge, clearly showed the impossibility of its use.

CONCLUSIONS

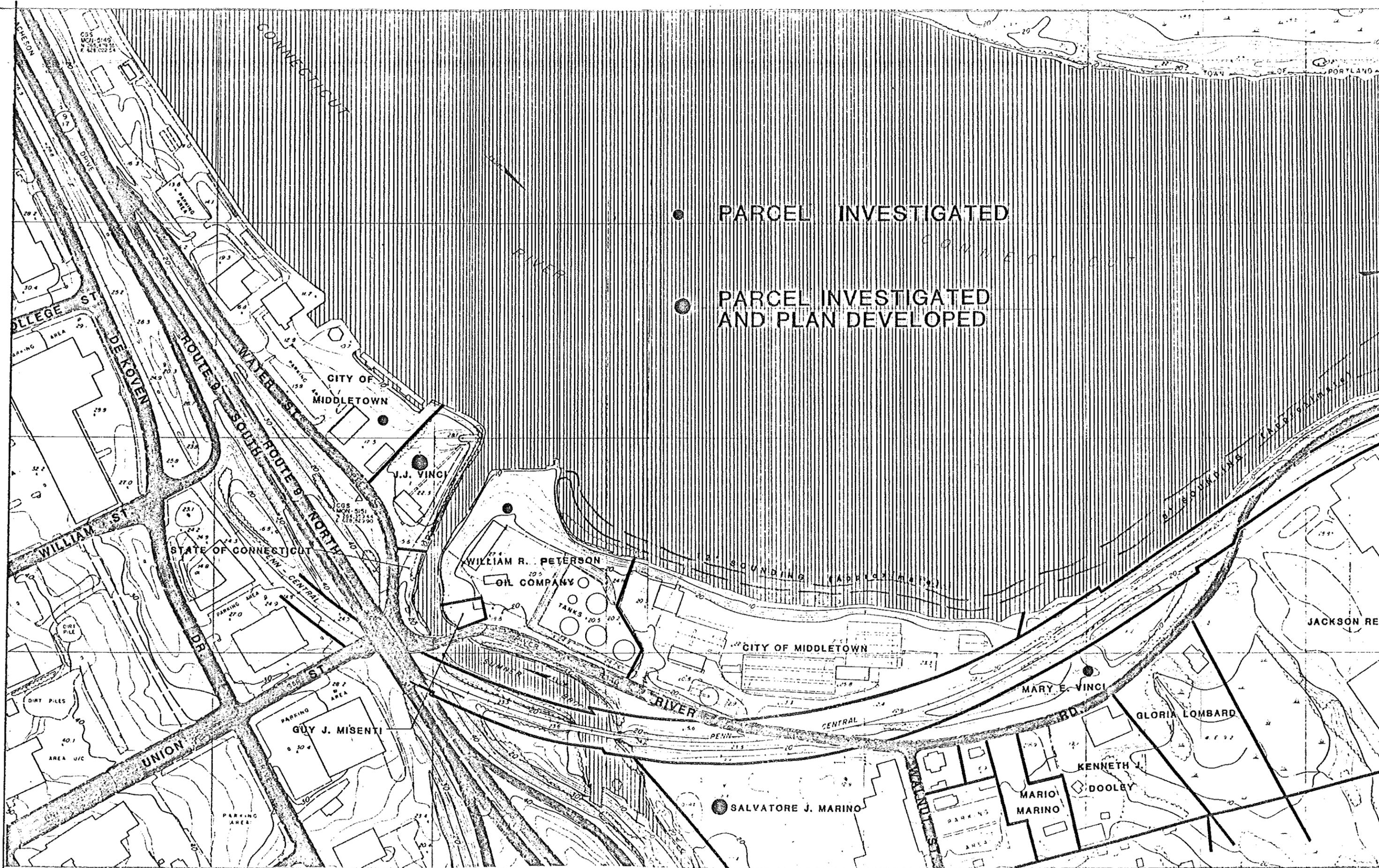
The findings of this report have been presented already to various departments of the City of Middletown and to the Harbor Improvement Agency.

Most of the riverfront has already been occupied, some lost to the railroad, some fortunately reclaimed to aesthetic functions (Harborpark), some occupied by commercial entities presently or formerly needing river transportation. Other riverfront is encumbered by city services: water and sewer.

What remains is so marginal that in order to develop a small boat launching facility it is necessary either to relocate existing users or to squeeze and beg in between.

Out of the two sites reported as feasible neither is without drawbacks and decision process will have to include other considerations beyond the technical nature of this report.

MAPS OF THE CONNECTICUT RIVER
AND RIVERFRONT PARCELS



● PARCEL INVESTIGATED

● PARCEL INVESTIGATED AND PLAN DEVELOPED

CONNECTICUT

CONNECTICUT RIVER

CITY OF MIDDLETOWN

STATE OF CONNECTICUT

WILLIAM R. PETERSON
OIL COMPANY

J.J. VINCI

GUY J. MISENTI

SALVATORE J. MARINO

MARY E. VINCI

GLORIA LOMBARD

KENNETH J. DOOLEY

MARIO MARINO

JACKSON RE

COLLEGE ST

DE KOVEN

ROUTE 9 SOUTH

WATER ST

ROUTE 9 NORTH

WILLIAM ST

UNION DR

ST

RIVER

CENTRAL

BD

ST

CGS
MCH-0149
P 429 0224

CGS
MCH-31544
P 428 42790

2' SOUNDING (APPLICABLE)

BULLOCKS LAKE

AREA U/C

PARKING AREA

PARK Y5

AREA

DIRTY PILE

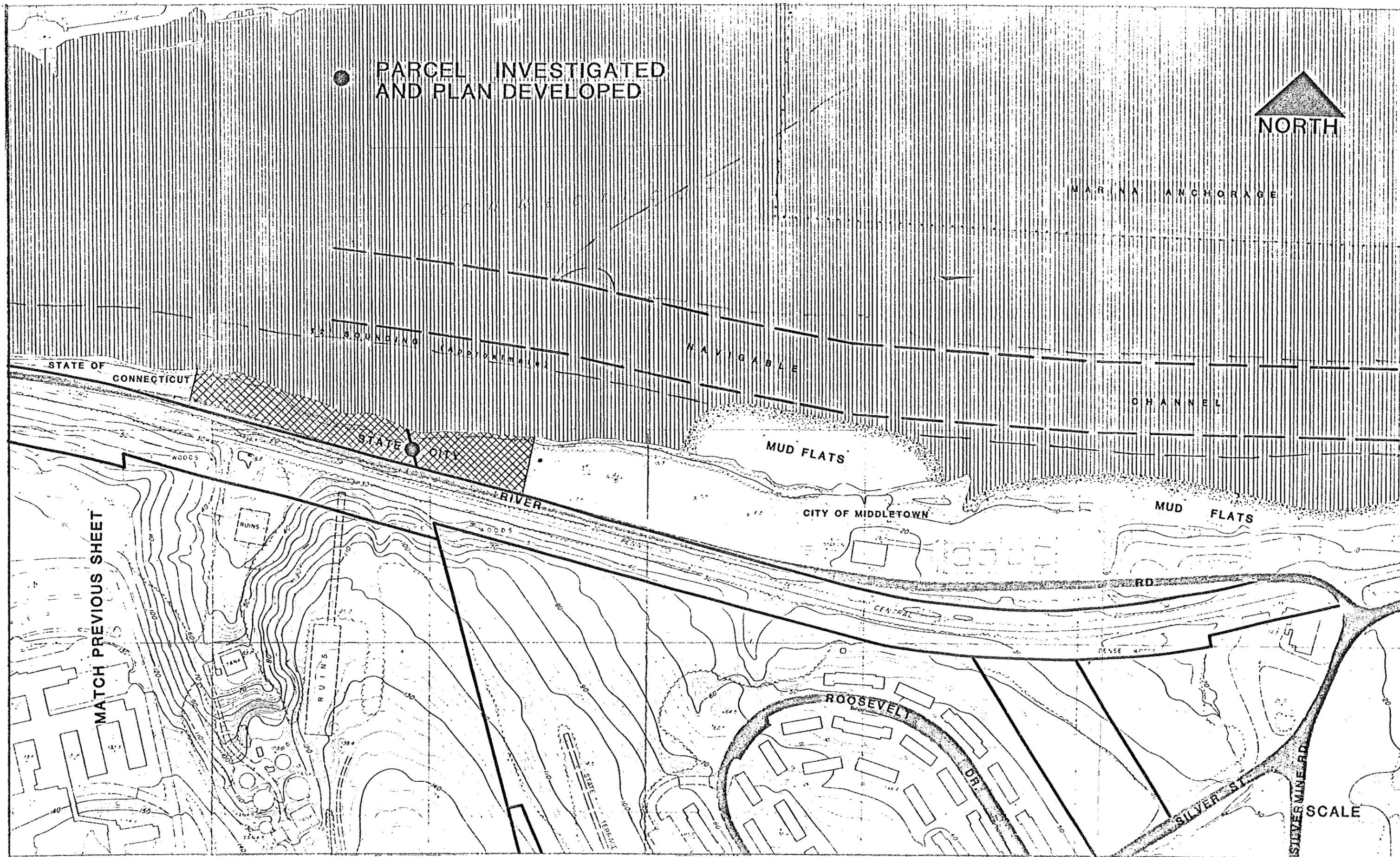
PARKING AREA

PARKING AREA

AREA

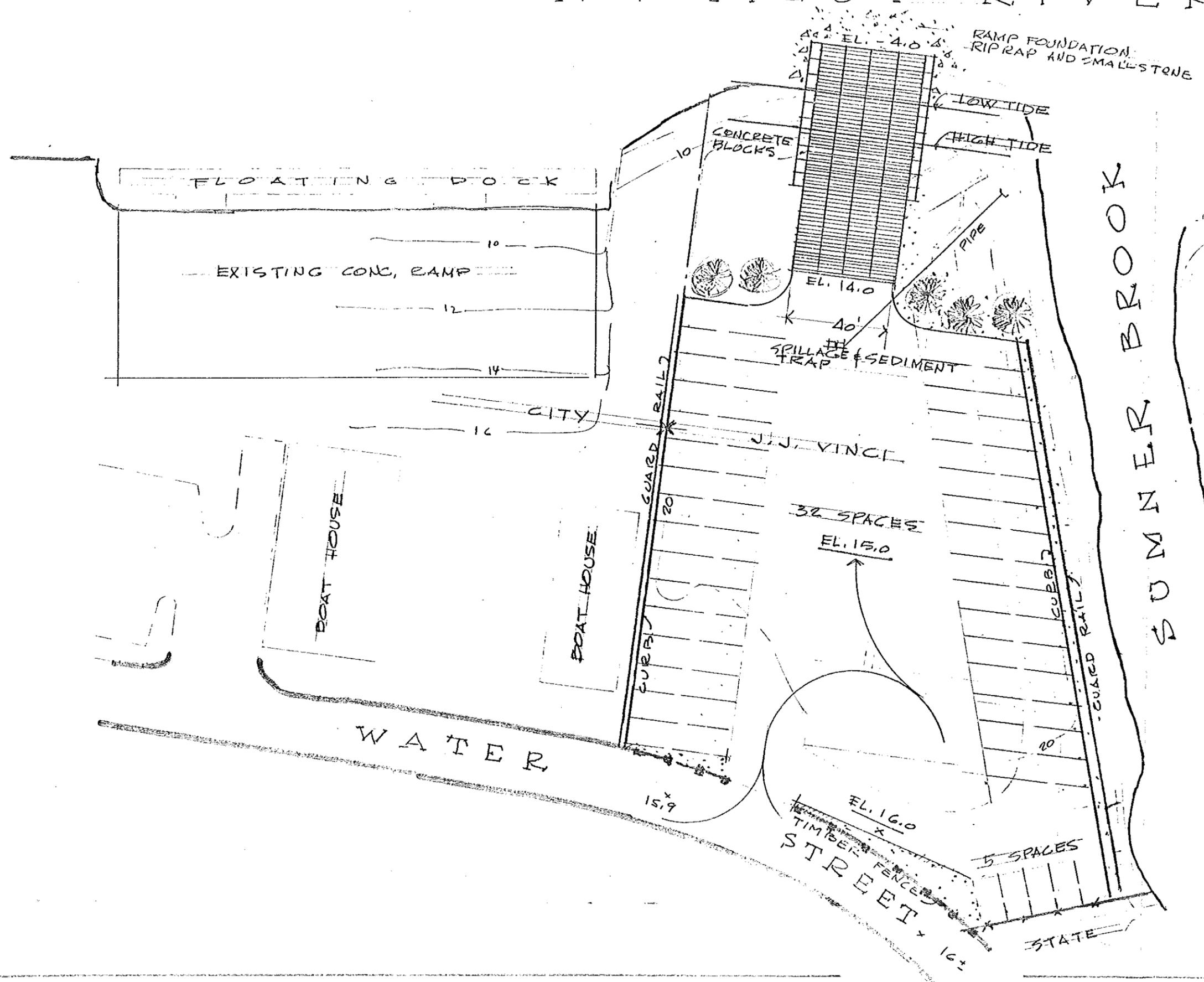
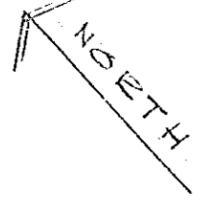
TOWN OF PORTLAND

● PARCEL INVESTIGATED
AND PLAN DEVELOPED



PLAN OF DEVELOPMENT FOR THE
J.J. VINCI PARCEL

CONNECTICUT RIVER



CITY OF MIDDLETOWN
 COST ESTIMATE
 WATER STREET - J.J. VINCI PARCEL LEASED TO TILCON TOMASSO

May 6, 1982

Item	Description	Quantities	Unit Price	Amount
1	Removal of concrete foundation	L.S.	30,000.00	\$ 30,000.00
2	Unclassified excavation	8000 cy	10.00	80,000.00
3	Fine grading	5000 sy	0.60	3,000.00
4	Riprap and crushed stone fill for ramp foundation	300 cy	30.00	9,000.00
5	Stone revetment, 24" thick on 12" gravel filter	450 sy	30.00	13,500.00
6	2" Bituminous pavement on 4" processed stone on 6" gravel	4000 sy	6.30	25,200.00
7	Spillage and sediment trap	L.S.	2,000.00	2,000.00
8	Bituminous curb	600 lf	3.00	1,800.00
9	4"x8" Timber bumper fence	130 lf	12.00	1,560.00
10	Galvanized guard rail	400 lf	15.00	6,000.00
11	10" Stone bedding for ramp	380 sy	4.00	1,520.00
12	5"x14"x10'-0" Precast concrete planks for ramp	272 ea.	50.00	13,600.00
13	10"x48" Concrete anchor	40 lf	50.00	2,000.00
14	30"x36" Concrete blocks	100 lf	20.00	2,000.00
15	Parking stall striping	32 ea.	3.00	96.00
16	Tree Planting	5 ea.	100.00	500.00
17	Benches	2 ea.	200.00	400.00
18	Topsoil and seed	300 sy	2.80	840.00
				\$ 193,016.00
	10% Contingencies			19,302.00
	Engineering, Surveys, etc.			15,000.00
	Inspection			5,000.00
	Legal, Permits, etc.			2,000.00
	Construction Cost			\$ 234,318.00

Equipment relocation and land cost unknown.

PLAN OF DEVELOPMENT FOR PARCELS OWNED BY THE
CITY OF MIDDLETOWN AND THE STATE OF CONNECTICUT

SCALE 1"=40'

50

40

30

20

RAILROAD TRACK EL. 25+

RIVER ROAD EL. 28+

STATE OF CONNECTICUT CITY OF MIDDLE TOWN

5 SPACES

10 SPACES

15 SPACES

WATERPROOF MEMBRANE

STONE REVEALMENT

EXISTING EL. 67

EXISTING TOP OF BANK (EL. 14+)

CONNECTICUT RIVER

CONC. BLOCKS 2 FT HIGH 3' WIDE

RAIN LINE SPILLAGE

BLIND

EXISTING WESTERNLY

STEEL SHEET BULKHEAD

CHAIN LINK FENCE

EXISTING SPLIT RAIL FENCE

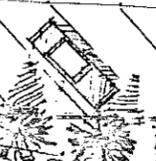
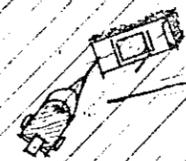
EL. 16+

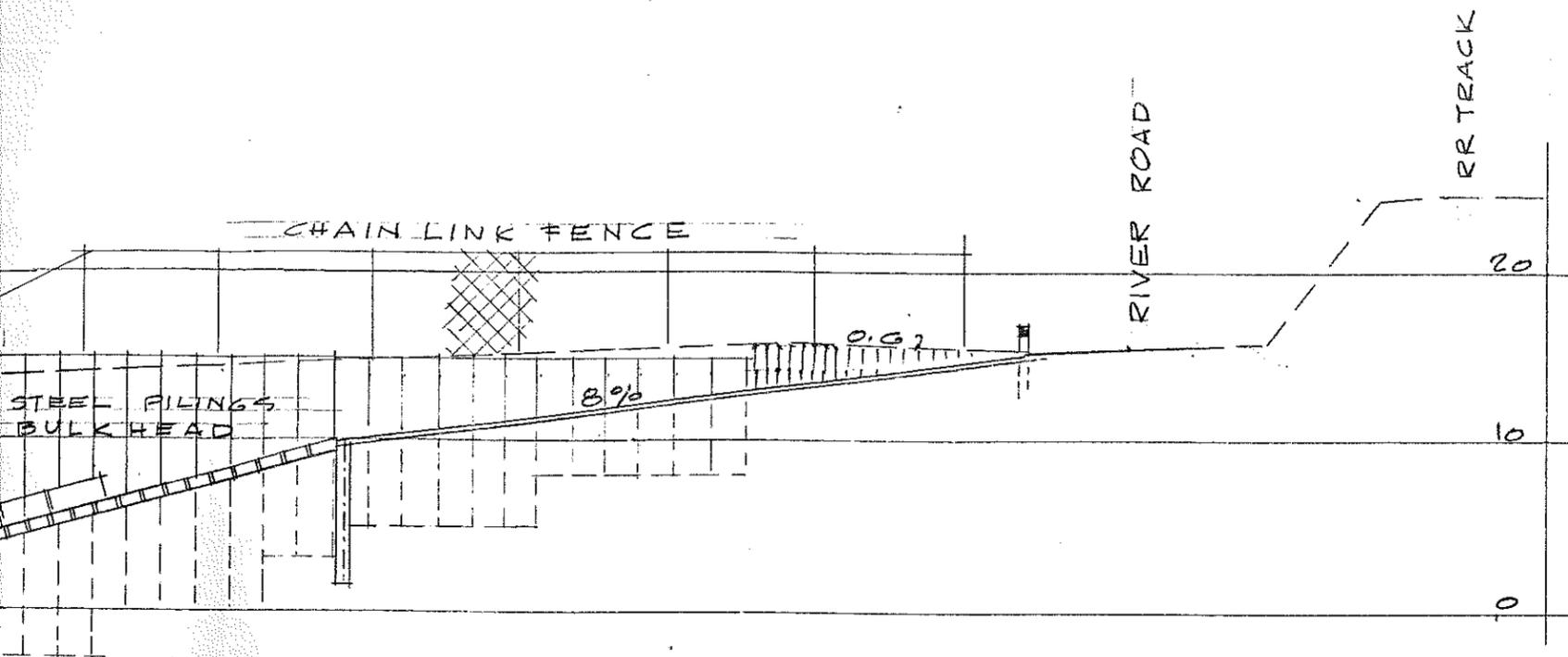
EL. 4.5

NORTH

200' TO CHANNEL

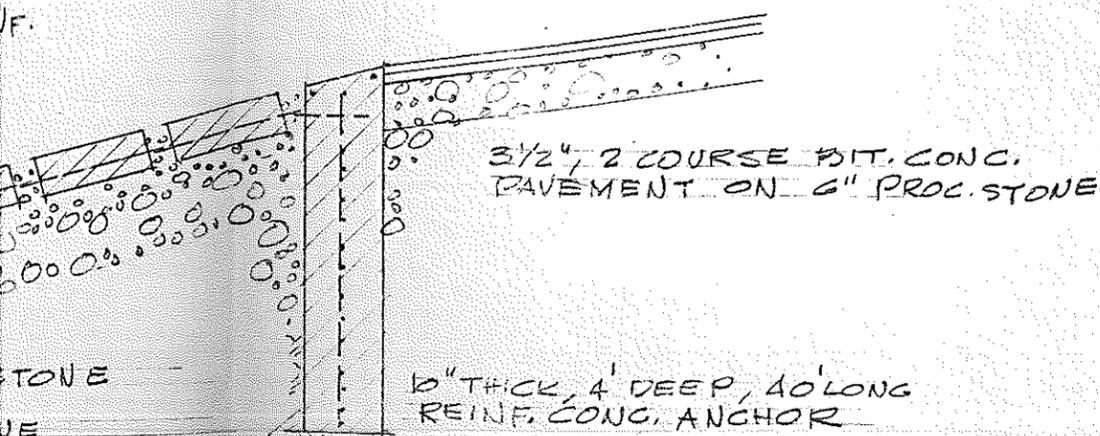
A-E



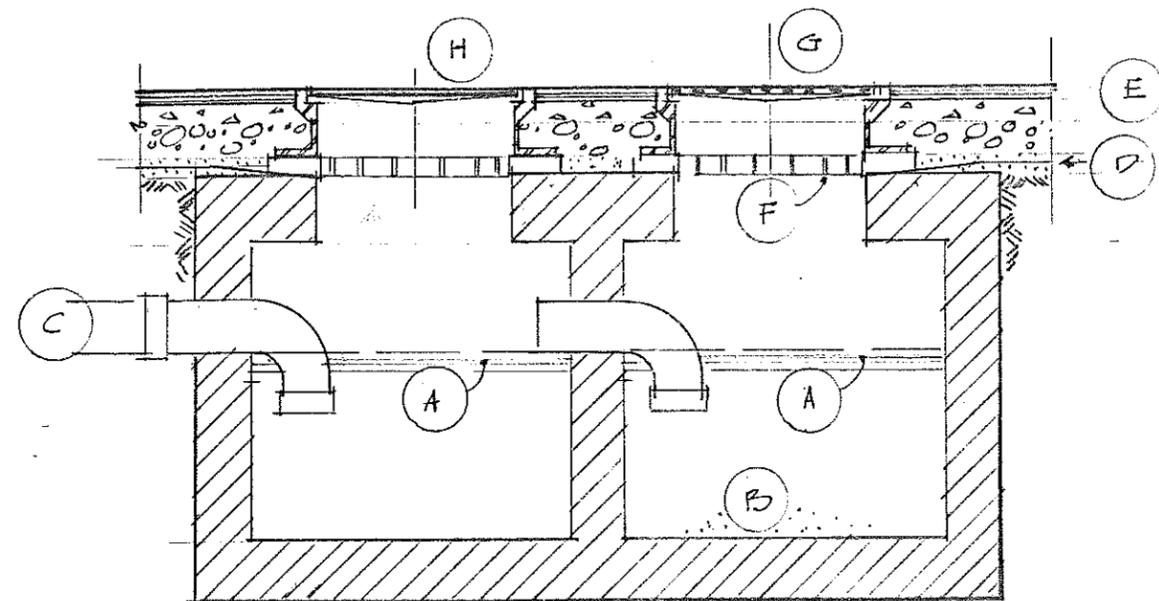


LONGITUDINAL SECTION OF RAMP

SCALE: HOR 1" = 20'
VER 1" = 10'

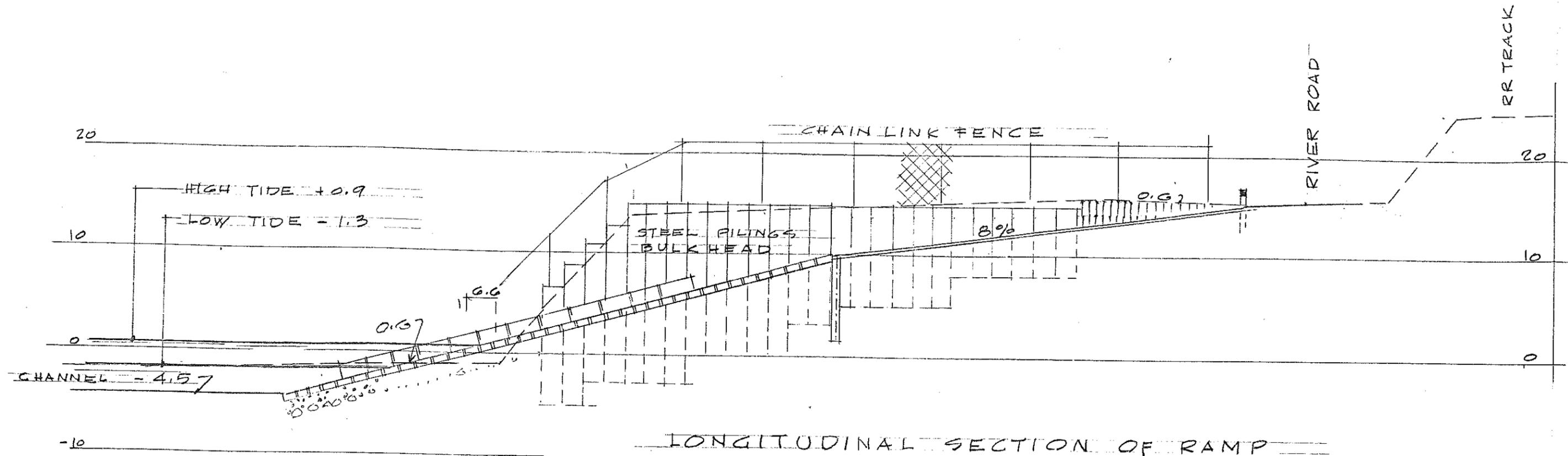


DETAILS

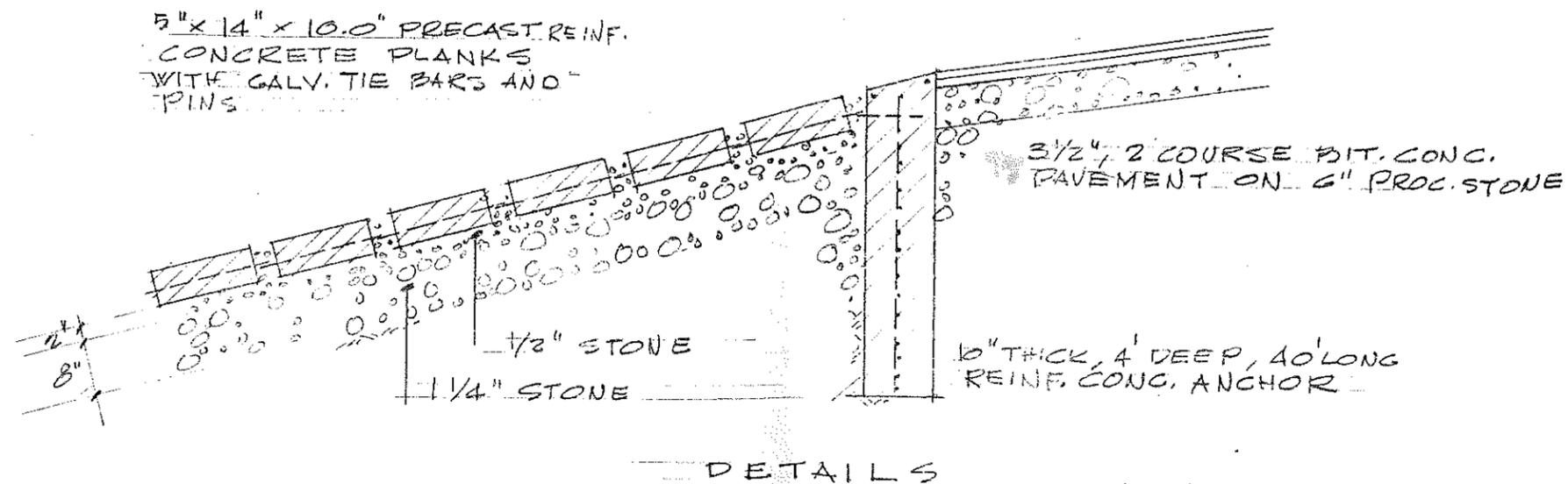


- A GAS, OIL SPILLAGE
- B SAND, GRIT
- C DISCHARGE PIPE TO RIVER
- D MEMBRANE PLACED IN SAND CUSHIONS
- E PAVEMENT: GRAVEL, STONE & BIT. SURFACE
- F WEEPHOLES TO DRAIN PAVEMENT BASE
- G BOLTED DOWN GRATE
- H BOLTED DOWN SOLID GRATE

SPILLAGE & SEDIMENT TRAP STRUCTURE
NO SCALE



SCALE - HOR 1" = 20'
VER 1" = 10'



CITY OF MIDDLETOWN
 COST ESTIMATE
 RIVER ROAD - CITY AND STATE OWNED LAND

May 6, 1982

Item	Description	Quantities	Unit Price	Amount
1	Excavation and grading	3000 cy	2.50	\$ 7,500.00
2	Fine grading	9000 sy	0.60	5,400.00
3	Steel sheet piling	3000 sf	13.00	39,000.00
4	Stone revetment 24" thick on 12" gravel filter	900 sy	30.00	27,000.00
5	2" Bituminous pavement on 4" processed stone on 6" gravel	5800 sy	6.30	36,540.00
6	Plastic membrane in sand cushion	2400 sy	5.00	12,000.00
7	Spillage and sediment trap	L.S.	2,000.00	2,000.00
8	Bituminous curb	800 lf	3.00	2,400.00
9	4"x8" Timber bumper fence	800 lf	12.00	9,600.00
10	Galvanized guard rail	540 lf	15.00	8,100.00
11	10" Stone bedding for ramp	380 sy	4.00	1,520.00
12	5"x14"x10'-0" Precast concrete	272 ea.	50.00	13,600.00
13	10"x48" Concrete Anchor	40 lf	50.00	2,000.00
14	30"x36" Concrete blocks	100 lf	20.00	2,000.00
15	6' Chain link fence	120 lf	13.00	1,560.00
16	Parking stall striping	43 ea.	3.00	129.00
17	Tree planting	4 ea.	100.00	400.00
18	Benches 2 ea.		200.00	400.00
19	Topsoil and seed	500 sy	2.80	1,400.00
20	Dredge approach channel Mobilize and de-mobilize Plus	1000 cy	5.00	5,000.00
				\$ 187,549.00
	10% Contingencies			18,755.00
	Engineering, Surveys, etc.			15,000.00
	Inspection			5,000.00
	Legal, Permits, etc.			2,000.00
	Construction Cost			\$ 228,304.00
	Land Cost			1.00
	Project Cost			\$ 228,305.00

PLAN OF DEVELOPMENT FOR THE PARCEL OWNED BY
S.J. MARINO INDUSTRIES

