Appendix I
Virginia Street Bridge

APPENDIX I

I.1 INTRODUCTION

This Appendix summarizes the events and activities related to the decision by the City of Reno whether to rehabilitate or replace the Virginia Street Bridge (VSB). The VSB is a two-span, four-lane structure that is owned by the City of Reno. The Nevada Department of Transportation (NDOT) performs regular inspections of the VSB and other bridges in the State for compliance with federal bridge inspection requirements and federal funding. The VSB is an important part of the downtown traffic system and has been a local landmark since it was constructed in 1905.

The fate of the VSB has been under serious discussion since 1994 when a study by NDOT identified numerous structural defects. Discussions continued until the Reno City Council meeting of March 28, 2007, when the Council decided that the VSB must be replaced. A chronology of events leading to this decision follows.

I.2 CHRONOLOGY OF EVENTS

December 7, 1994
Based on the results of a regularly-scheduled bridge inspection, an in-depth evaluation of the VSB was completed by NDOT. Several deficiencies were noted in the arch barrels such as spalling on the underside and visible cracks running the length of the span at regular intervals. Reinforcing steel was exposed in some areas and corrosion was evident. The report concluded that if no action were taken, the VSB would continue to deteriorate and would eventually have to be closed to vehicular traffic.

The study recommended that the VSB be rehabilitated under the Federal Bridge Replacement and Rehabilitation Program, which requires that historic structures be preserved when it is reasonable and feasible to do so.

(Attachment I-1 contains a copy of the NDOT study.)

March 1996
Partly because of the deficiencies noted in the NDOT study of 1994, the Federal Highway Administration (FHWA), NDOT, City of Reno, and the Reno Redevelopment Agency prepared an Environmental Assessment for the Center Street Bridge and VSB. Federal funds for this project were to be provided under the Highway Bridge Replacement and Rehabilitation Program, which is administered by NDOT. The following alternatives for the VSB were evaluated:

- No-Build. The VSB would be left in place. Within a few years large trucks would have to be banned from the bridge and downtown traffic and the tourism industry would be adversely affected.

- Rehabilitation (Preferred Alternative). Extensive rehabilitation would include new sidewalks, railings and lighting; removal of unsound concrete; cleaning or replacement of rusted reinforcing steel, and installation of new scour protection around the center pier.

- Replacement at a Different Location. A new bridge would be constructed near the existing bridge and Virginia Street would be realigned. This alternative was not feasible because of social and economic costs.

- Replacement at Existing Site. A new two- or three-span concrete bridge would be constructed. The new bridge would have a life expectancy of 75 years but the existing historic bridge would not be preserved or replicated. This was also the most costly alternative.

The EA's preferred alternative for the Center Street Bridge was replacement with a new three-span concrete bridge.

May 21, 1996
The VSB was a historic property added to the National Register of Historic Places (NRHP) in 1980 and the Center Street Bridge was eligible for listing on the NRHP. Because the 1996 EA proposed that the Center Street Bridge would be replaced and the VSB would be rehabilitated, the FHWA and the Nevada State Historic Preservation Office (SHPO) agreed to certain stipulations to mitigate the effects of demolition of the Center Street Bridge. These stipulations were contained in a memorandum of agreement (MOA), which was executed between the FHWA and Nevada SHPO. The City of Reno, NDOT, and the Advisory Council on Historic Preservation signed the MOA as concurring parties.

The MOA stipulated in part that (1) the VSB would be rehabilitated in a manner that would preserve the historical and architectural value of the Center Street Bridge, and (2) that the Center Street Bridge would be replaced with a new bridge designed to be compatible with the surrounding historic properties. The MOA required that if the terms of the agreement could not be carried out (e.g., if the VSB were replaced instead of rehabilitated), the signatories (i.e., FHWA and SHPO) must consult to amend the MOA using the same process exercised in creating the original document.

(Attachment I-2 contains a copy of the MOA.)

January 1, 1997
A major flood occurred in the Truckee Meadows. All bridges over the Truckee River in downtown Reno were closed and all were trapping flood debris on their upstream side (NBMG 1998).

1998
NDOT initiated a design project for rehabilitation of the VSB. The project was developed to about the 60 percent design level and presented to the City Council. Questions were raised about why the project did not include an increase in flood capacity and NDOT explained

that it was because the bridge met the requirements for a 50-year flood. The project was put on hold pending discussions on how to improve the hydraulic capacity.

1998
Center Street Bridge replacement project, which started in 1996, was completed.

1999
The NDOT VSB rehabilitation design project was put on hold because the Truckee Meadows Flood Control project was proposing to evaluate the entire downtown reach of the Truckee River. The U.S. Army Corps of Engineers (ACOE) initially estimated that the study would be completed within a year or two but the project was subsequently delayed. The City Council and NDOT decided to terminate the rehabilitation project because the ACOE study would be delayed and NDOT could not incorporate an increase hydraulic capacity in their design without a completed flood study.

April 8, 2000
Washoe County and the cities of Reno and Sparks created a community-based group known as the Community Coalition for the Truckee River Flood Project. The purpose was to develop a consensus in creating a flood plan with public input. The Coalition includes residents, businesses, 35 stakeholder organizations, 24 resource and regulatory agencies, and a range of technical consultants.

May 6, 2003
Ferrari Shields and Associates completed an engineering analysis for preservation of the VSB. The purpose of the study was to determine if the VSB could be structurally modified to accommodate peak flows from a 100-year event while preserving the bridge's historic features. The report concluded that that it was feasible to preserve the VSB in its entirety while safely passing the 21,000 cubic feet per second (cfs) 100-year flow. However, increasing flow capacity could be achieved only by adding new spans on both the north and south sides of the existing bridge abutments. Hydrologic modeling determined that a 40-foot clear span on the north side and a 25-foot clear span on the south side would allow passage of 21,000 cfs. A hydrologic transition was also required on the north side, which would carry the majority of additional flood flow capacity, so that flood flows could transition effectively into the new north span.

The report noted that construction of the new north bypass span and transition would likely impact the Masonic Temple and Masonic Office Building. Underpinning the Temple would allow construction of the new span but partial or complete demolition of the Office Building would be required.

(Attachment I-3 contains a copy of the Ferrari Shields report.)

April 2005
In April 2005 the cities of Reno and Sparks, the University of Nevada, and Washoe County entered into a cooperative agreement that set the path for implementing a Truckee River Flood Management Project Coordinating Committee. Each of the entities appointed two voting members and one alternate to represent the needs and concerns of citizens affected by

flooding. Non-voting members included citizens representing the community at large, municipal offices, and staff members who provide technical expertise, advice, and support.

December 31, 2005
A major flood occurred in the Truckee Meadows.

March 10, 2006
The Truckee River Flood Project Coordinating Committee identified the Locally Preferred Plan (LPP). The Living River Plan was the result of a six-year effort involving more than 500 meetings of the community coalition. The LPP allowed for replacement of the VSB unless it could be preserved in a manner not detrimental to the overall flood plan.

(Attachment I-4 contains a copy of the March 10, 2006 meeting minutes.)

March 16, 2007
A public workshop on the Virginia Street Bridge was held at the Washoe County Commission Chambers. The purpose of the workshop was to hear a report from the ACOE, and to accept comments from project sponsors, the public, and other interested parties on the decision whether to replace or rehabilitate the VSB. The workshop was held to exchange information only; no action was proposed.

In their presentation to the workshop, the ACOE raised serious concerns whether the Ferrari Shields bypass plan would work. Although hydraulic modeling results for the bypass channels were presented in the 2003 Ferrari Shields report, the ACOE noted that no allowance was made for the presence of debris in flood waters. When the ACOE modeled the bypass plan with debris, the results showed that water would overtop the bridge and the bypass plan would fail. In addition, flood project costs would be affected by the bypass option because of acquisition of additional developed property in the downtown core, and possible detrimental effects on existing businesses. The ACOE said that before they could recommend the bypass model for federal funding, testing would be required on a physical model in order to ensure that the plan would function as intended. The ACOE noted that construction of a physical model would increase project costs and could delay the project a minimum of six months.

Cost estimates were presented by the ACOE for the replacement option ($25.3 million) and the bypass and restoration option ($40.4 million). These estimates included $5 million in mitigation costs for the Center Street Bridge that would be paid by NDOT/FHWA to satisfy the terms of the 1996 MOA.

(Attachment I-5 contains a copy of the March 16, 2007 workshop minutes and presentation slides.)

March 28, 2007
At the City Council meeting on this date, a staff report (Discussion of the March 16, 2007 Public Workshop by the ACOE and Truckee River Flood Project Staff Regarding Rehabilitation and Replacement Options for the Virginia Street Bridge and Potential Direction to Staff) was presented to the Mayor and City Council. The staff report noted that

a critical path item in the ACOE's feasibility planning for the Truckee River Flood Project had been reached. In order to ensure that there would be no additional delays that would cause project costs to increase, the community must state its preferred plan for the VSB; i.e., whether it should be replaced or rehabilitated with bypass channels.

The staff report also noted the concerns about the bypass plan modeling that had been raised by the ACOE, and that there were doubts whether the bypass channels could be manipulated to the degree necessary to pass the 100-year event without radical changes to the existing design. If the physical dimensions of the bypass channels had to be expanded, the project could impact more businesses, utilities, stormwater infrastructure, and future walkway linkages under the VSB than currently shown. City staff also estimated that physical modeling of the bypass plan could delay formulation of a solution by two years, causing project costs to increase by 4 to 6 percent per year.

CH2M Hill prepared a Technical Memorandum outlining their opinions about the cost and timelines associated with VSB rehabilitation and replacement alternatives. A presentation by CH2M Hill and Places Landscape Architecture was also made to the Council. The presentation highlighted the cost estimates and timelines that had been developed for the rehabilitation and replacement options for the VSB. The presentation stated that cost estimates for both alternatives were comparable to those developed by the ACOE. Rehabilitation was estimated to take approximately 7 to 8 years to complete construction; replacement would take 6.5 to 7.5 years. Conceptual views of the bypass and rehabilitation alternative were presented. Various options for a new bridge were also presented. The presentation noted that that the design of the new VSB could be influenced by the existing bridge and could become a landmark structure for downtown Reno.

After public comment and discussion by Council members, a motion was approved to move forward with replacing the VSB. Staff was directed to (1) examine the feasibility of designating the bridge replacement as a Truckee River Flood Project Early Action (TRACTION) project; (2) consider replacement and/or redesign options for other downtown bridges; (3) invite all stakeholders to participate in deliberations regarding the design of the replacement bridge; (4) consider all aspects of the downtown flood project in conjunction with the design of the bridge in order to determine the overall appearance of the project; and (5) initiate a request for consultation with the Nevada SHPO regarding the 1996 MOA.

(Attachment I-6 contains a copy of the March 28, 2007 meeting minutes, staff report, CH2M Hill Technical Memorandum, and presentation slides.)

April 13, 2007

Following the City Council's recommendation on March 28, 2007, the Flood Project Coordinating Committee voted to make replacement of the VSB a component of the flood project LPP.

(Attachment I-7 contains a copy of the April 13, 2007 meeting minutes.)

I.3 REFERENCES

CH2M HILL. 2007. Technical Memorandum 1, Virginia Street Bridge. Prepared for the City of Reno. March 26, 2007.

Nevada Bureau of Mines and Geology [NBMG]. 1998. The 1997 New Year's Floods in Western Nevada. Nevada Bureau of Mines and Geology Special Publication 23.

Nevada Department of Transportation [NDOT]. 1994. Summary of Assessment of Virginia St. Bridge Structure No. B-178. Nevada Department of Transportation Structural Design Division, December 7, 1994.

Federal Highway Administration [FHWA]. 1996. Environmental Assessment and Programmatic 4(F), Center Street and Virginia Street Bridges. FHWA-NV-EA9601. March 1996.

Ferrari Shields and Associates. 2003. Historic Architectural Engineering Analysis for the Preservation of the Virginia Street Bridge, Reno, Nevada. Project No. D0526. May 6, 2003.

ATTACHMENT I-1

NDOT Study Report

SUMMARY OF ASSESSMENT OF VIRGINIA ST. BRIDGE STRUCTURE NO. B-178

by

NEVADA DEPARTMENT OF TRANSPORTATION
STRUCTURAL DESIGN DIVISION

SUMMARY OF ASSESSMENT OF VIRGINIA ST. BRIDGE STRUCTURE NO. B-178 by NEVADA DEPARTMENT OF TRANSPORTATION STRUCTURAL DESIGN DIVISION

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December 7, 1994

SUMMARY OF ASSESSMENT OF VIRGINIA ST. BRIDGE STRUCTURE NO. B-178

by

NEVADA DEPARTMENT OF TRANSPORTATION
STRUCTURAL DESIGN DIVISION
Design Engr.- B. Ponte

INTRODUCTION

The Virginia St. Bridge is located in downtown Reno, Nevada. The structure carries Virginia St. over the Truckee River and is an important part of the transportation system of the City of Reno. Due to a low rating by the bridge inspection section of NDOT a detailed evaluation of the structure has been preformed. The evaluation considered the structural strength, durability and hydraulic properties of the structure. This report summarizes the results of the evaluation.

EXISTING BRIDGE

The Virginia St. Bridge spans the Truckee River. The bridge is 150 ft. in length by 80 ft 8 in. wide. The bridge has a curb to curb width for traffic of 56 ft., with 11 ft. wide sidewalks and 1 ft 4 in. wide parapets on each side. The roadway and sidewalk widths match the heavily developed approach roadway. The structure currently carries 4 traffic lanes with parking on each side. The structure was constructed in 1905 and has remained in service since its construction. The only structural modification has been to remove the South West wingwall and construct a new wingwall as part of the Riverwalk construction. There is some evidence of patching on the underside of the arch barrel but no other repairs were noted. The bridge and roadway are shown in Figs. 1, 2, & 3.

The structure is a two span earth filled reinforced concrete barrel arch. The arches have a clear span of 65 ft. each. The centerline of the bridge is oriented North-South and the bridge spans the river at nearly right angles to the channel. At the N.W., N.E., and S.E. corners of the bridge there are wingwalls which originate at the arch springline and are oriented parallel to the river. These wingwalls tie into floodwalls which have been constructed on both banks of the river in this area. At these locations the arch springline coincides with the face of the floodwalls. At the S.W. corner of the bridge the original wingwall has been removed and a new wingwall constructed parallel to the centerline of the bridge. In this area the riverbank has been terraced to 15.5 ft behind the arch springline and developed by the Riverwalk Development. In the Riverwalk area a sidewalk follows the river bank well below street level and ends at the new wingwall (Fig 3.).

EVALUATION OF EXISTING BRIDGE

STRUCTURAL ASSESSMENT

An analysis of the bridge indicates that the structure can support the standard AASHTO HS20 truck loading and AASHTO seismic loading. The analysis was in accordance with "AASHTO MANUAL FOR CONDITION EVALUATION OF BRIDGES", 1994. The structure has successfully resisted flood forces without damage but a scour analysis indicates that the foundations can be undermined by scour. Significant details of the analysis are given below by component. See Fig. 7 for a figure showing the components and their location.

Bridge Deck - There is no structural bridge deck for this bridge. The arches are covered over with a granular earth fill and this fill is paved over. The condition of the pavement is fair. It is reported that the pavement has been a continuing maintenance problem because the fill over the arches is being washed out by seepage. This represents a maintenance problem and does not affect the structural strength of the bridge.

Spandrel Walls- The spandrel walls retain the fill over the arches and support the sidewalk and parapet. A visual inspection reveals no delaminations or signs of extensive corrosion. One core sample was taken and some rusting of the reinforcement was noted by visual examination. Measured concrete compressive strength is 2140 psi. An analysis of the wall based on no loss of strength due to corrosion present indicated that the wall has adequate structural strength to support the earth fill including the effects of live load.

Arch Barrels- The arch barrels support the fill and spandrel walls. They are subject to loads from dead weight, traffic, thermal expansion and contraction, shrinkage and seismic loads. A structural analysis as specified by AASHTO showed the arch barrels are adequate for the standard highway loading of HS20 and for seismic loads. An allowance was made in the analysis for the deteriorated condition of the barrels. The arch barrels have areas of spalling on the underside of the barrel as shown in Figs. 4, 5, & 6. There are also visible cracks running the length of the span at regular intervals with spalling along them. These cracks are believed to be construction joints which water drains through. These joints are oriented so as to have no effect on computed strength of the arches and were neglected in the analysis of load capacity except the amount of reinforcing considered effective and the concrete strength were reduced due to the deterioration. The largest spall areas are located at the springline with the most extensive spalling around drains. In this area the spalled and delaminated concrete extends over approximately 30% of the width of the barrel. In the spall areas the reinforcing steel is exposed and corroded. The degree of corrosion of the exposed reinforcement varies with the average loss over 4 ft of width of barrel estimated

at 30% in the worst areas. The analysis indicated however, that the springline is not a highly stressed area of the bridge. Much less spalling is present at the crown and other areas which are more highly stressed than the springline. Two core samples were taken at the springline of the South arch but no core samples were taken from the arch barrels within the spans. Measured concrete compressive strength is 2470 psi from a tested core. Since it is impossible to visually examine the top of the barrels the degree of corrosion can only be estimated from the visible underside. The structural analysis was based on a concrete strength of F'c= 2000 psi, a reinforcing steel yield of 33,000 psi and 30% of the reinforcing steel ineffective due to corrosion. These material properties are felt to be conservative estimates based on the visual examination. A standard elastic analysis was made as given in the Federal Highway Administration publication "ARCH BRIDGES", Structural Engineering Series No. 2 - Sept. 1977.

Foundations The foundations are massive unreinforced concrete spread footings founded 6 ft. below the river bed. The AASHTO MANUAL specifies that footings are to be considered structurally adequate unless there is evidence otherwise. Although visual examination shows eroded concrete at the streambed elevation, the eroded depth is small compared to the mass of the footing and was not considered significant. There is no evidence of settlement. The footings were considered adequate and no analysis of them was made. The two cores taken from the arch springline as noted above were considered representative of the footing concrete. No excavation was made to examine the concrete at depth.

A scour evaluation was preformed using HEC 2 methods. The computed depth of scour at the pier was approximately 15 ft. This scour depth is below the depth at which the pier footing is founded and the bridge is scour critical. The North abutment is flush with the channel walls and scour is not expected. The South abutment projects slightly with the modified wingwall and scour is presumed likely. To mitigate this scour hazard permanent scour protection must be provided at the pier and South abutment where the wingwall has been modified.

HYDRAULICS

NDOT has preformed preliminary analyses of the capacity of the Virginia St. Bridge to convey flood flows. These analyses show that, with the present existing bridges and channel, the Virginia St. Bridge has the capacity to convey the 50 year flood with approximately 2.5 ft. of freeboard and that a 100 year flood will overtop the bridge.

An analysis was also made of what the capacity would be if the Center St. Bridge were replaced with a more hydraulically efficient bridge. The results of this analysis were that if the Center St. Bridge were improved the Virginia St. bridge could convey the 50 year flood with 2.5 ft. of freeboard and the 100 year flood within 1 ft. of overtopping. Water surface profiles are shown in Fig. 8.

The NDOT study is in general agreement with the water surface profile for the 100 yr. flood available from FEMA studies. The

FEMA profile shows that for a 100 yr flood the bridge restricts the flow of water and the water surface at the upstream face of the bridge is approximately 2 ft above the riverbank.

For the class of roadway which the Virginia St. Bridge carries NDOT design policy is to convey the 50-year flood. This flood should preferably be conveyed with a minimum of 2 ft. of freeboard (distance between the bottom of the bridge and the floodwater surface) to reduce snagging by debris. The Virginia St. Bridge meets this condition.

The impact of the 100-year flood must also be assessed for compliance with local and Federal floodplain criteria. The Virginia St. Bridge produces approximately 2 ft. of backwater at the 100-year flood. This backwater contributes to flooding upstream from the bridge. There is no legal requirement to mitigate this existing situation, but this condition would not be acceptable for a new bridge. With replacement of the Center St. Bridge flooding at the bridge is eliminated but upstream crossings are still affected.

RECOMMENDATIONS

It is recommended that the existing bridge be rehabilitated by Bridge Replacement Funds. Work considered in this report is to be done under the Federal Bridge Replacement Program. This program requires that historic structures be preserved where reasonable and feasible to do so. Rehabilitation is feasible and will preserve the historic value of the bridge. Although rehabilitation is not necessarily the most economical alternate in terms of life cycle cost when flood damage is considered, it is a reasonable alternative. Modification at a future date is possible to accommodate future river development and improve hydraulics if deemed desirable at that time.

RECOMMENDED REHABILITATION

The recommended work to rehabilitate the structure is as follows: Remove railings, sidewalks, paving, and earth fill from over the arch barrels. Salvage ornamental ironwork in the railing and lights. Inspect and repair the top of the arch barrels. Repair the underside of the arch barrel by cleaning spall areas and filling them with shotcrete. Fill cracks in the arch barrels by epoxy injection. Install a waterproof membrane on the top of the arch barrels and reconstruct drains. Replace the earth fill over the arch barrels, reconstruct the sidewalks and railing using salvaged ironwork and repave. Construct scour protection pads around the pier and abutment footings. Repair the sides of the footings down to the scour protection pads. Repair would consist of removing deteriorated concrete and placing a layer of shotcrete on the side of the footings.

Advantages: The appearance of the bridge will be maintained or improved by the spall repairs. There is little destruction of any portion of the bridge of historical significance. Only the concrete portion of the railing will be replicated. The seepage

through the arch barrels is stopped and corrosion will be stopped or greatly reduced. The remaining life assigned by NDOT would be increased to 25 years. Compared to replacement or modification the cost is less, less time is required and the impact on traffic is minimized. The scour hazard will be mitigated with slightly less disturbance to the river channel than replacement.

Disadvantages: The rehabilitated bridge would be assigned a 25 year remaining life rather than the 50 year life assigned to new construction. The lower initial cost of rehabilitation compared to reconstruction is offset by the reduced life expectancy. There is no improvement to the hydraulics of the channel. Disturbance of the river channel is still required for construction of the scour protection and access may still be difficult for channel work.

Estimated Cost- $1,300,000

Estimated Life - 25 years

OTHER ALTERNATIVES STUDIED

Alternatives of DO NOTHING, MODIFICATION, and REPLACEMENT were compared to the recommended work of rehabilitation. They are shown in Figs. 9 & 10 and are presented below.

DO NOTHING- The Virginia St. Bridge is slowly deteriorating. Its structural strength will be significantly reduced by additional corrosion of the reinforcing steel and will reduce the load carrying capacity to below the standard HS20 loading. This may be acceptable if the bridge is to be closed to traffic in the future but is undesirable if the bridge is to remain carrying traffic. As the strength decreases, traffic will stress the remaining sound material more highly and produce more cracking of the concrete and accelerated spalling.

Advantages: no initial cost, no disturbance to a historical structure, and no environmental impact

Disadvantages: The structure will continue to deteriorate. The remaining life assigned by NDOT is presently 4 years. The extent of corrosion in the top of the arch barrel cannot be determined by inspection to verify the strength calculations. The load capacity can be verified only by a load test. Traffic restrictions in the near future are likely without such a test.

Estimated Cost- none

Estimated Life- 5 yr

MODIFICATION- This work consists of the work of rehabilitation and additionally constructing CONSPAN 16'x 9' or similar large arch culverts at the ends of the bridge to provide additional hydraulic capacity. This would require demolishing the wingwalls and

reconstructing them similar to the existing modified SW wingwall with the culvert passing through them. The floodwall would be modified adjacent to the wingwall by terracing the bank similar to the SW quadrant for a short distance to expose the culvert to the flow. It must be noted however, that if the Center St. and Lake St. Bridges were both replaced with hydraulically efficient bridges the existing bridge would have improved capacity without added culverts. For this condition the culverts would not flow full. The culverts would also allow extending the Riverwalk sidewalk under the bridge through the South culvert. This type of pedestrian crossing would be tunnel-like, which is not the most desirable and could be used by pedestrians only if the riverbank is terraced back at the S.E. quadrant of the bridge for pedestrian traffic.

Advantages: The arch spans can be preserved and rehabilitated to provide some historical preservation. The hydraulic capacity of the bridge can be increased. The construction time is less than for replacement. A pedestrian tunnel under Virginia St. would be available for riverwalk type development at the SE quadrant of the bridge.

Disadvantages: The additional culverts require that the river bank be terraced back at three quadrants of the bridge to allow flow through the culverts. This adds cost and construction time compared to rehabilitation and there is presently no plan of development for the river which incorporates this. An alley and a parking lot would be affected. The wingwalls must be demolished and reconstructed which will destroy some of the historic value of the structure. The cost is higher than for rehabilitation but less than reconstruction if riverbank modifications are minimized. However, the rehabilitated structure is assigned only a 25 year remaining life which makes the lifecycle cost slightly higher than reconstruction.

Estimated Cost- $1,600,000 with minimal bank modifications

Estimated Life- 25 years

REPLACEMENT- This work would consist of replacing the structure with a new bridge. The preferred replacement bridge would be a two span post-tensioned box girder bridge. The bridge would have sloping sides and a smooth bottom to minimize snagging of debris and provide good hydraulics during floods. The proposed bridge would span from the existing floodwalls. The proposed width would be 93 ft to accommodate 4- 12 ft lanes plus parking and sidewalks. (It is noted however, that this curb to curb width exceeds the width of the approach roadway and would require special approval of FHWA for funding). The proposed span would match the existing but could be increased to accommodate extending the Riverwalk sidewalk under the structure if there is any future plan for this.

Advantages: The new structure would have at least a 50 year life. It would be the most economical alternate over a 50 year span

if flood damage is a consideration. The new structure would have improved hydraulic capacity. The backwater would be reduced from 2 ft. produced by the present bridge to approximately 0.5 ft. which would reduce flooding in downtown Reno. The structure would provide wider lanes and may be designed to accommodate future developments which are planned.

Disadvantages: The existing bridge which is of historic value is destroyed. The initial cost is higher than for rehabilitation although life cycle costs are comparable. The river channel is disturbed more than for rehabilitation or modification and the 3 month construction window for work in the river will require extended hours of work. The construction time and impact on traffic is the greatest of the options studied.

Estimated Cost- Replace at preferred width $2,700,000
Replace at existing width $2,400,000

Estimated Life - 50 years

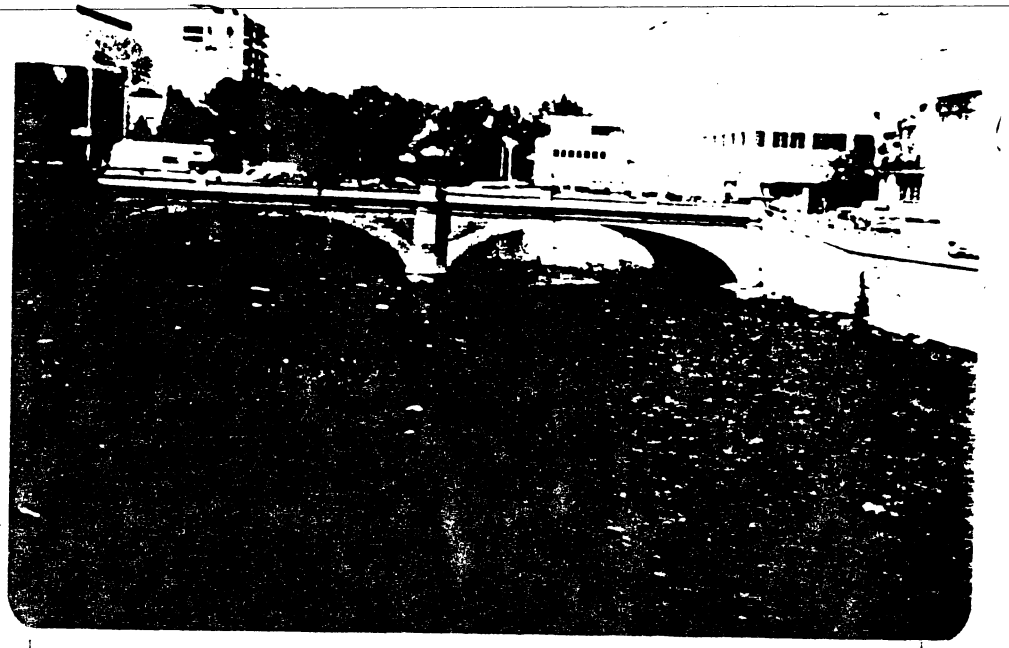

FIG 1- ELEVATION VIEW OF VIRGINIA ST. BRIDGE

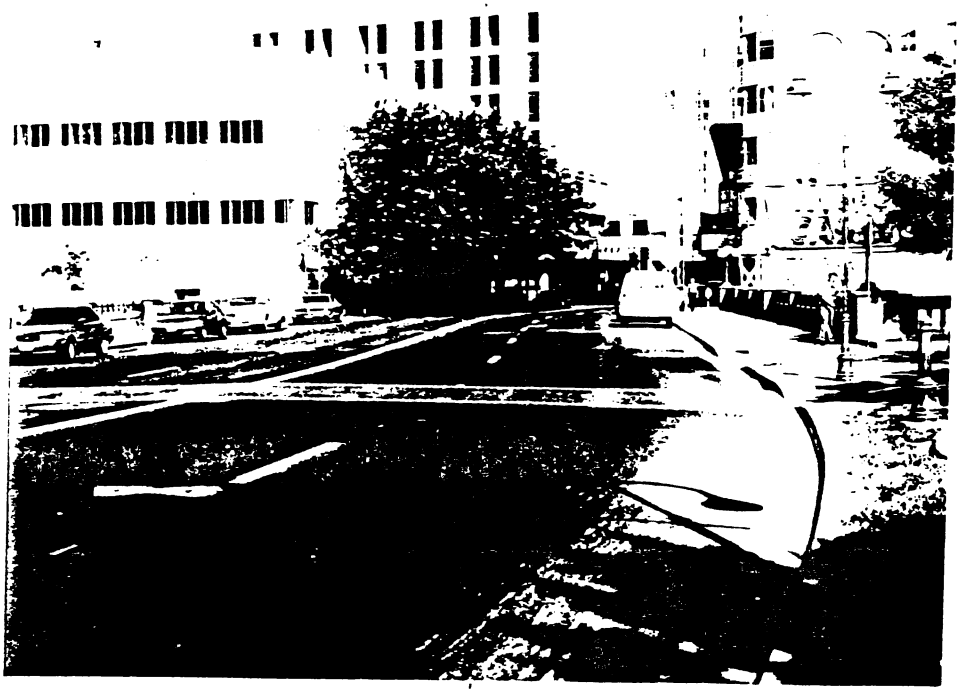

FIG 2- VIRGINIA ST. AT BRIDGE SITE

FIG 3- WEST FACE OF BRIDGE AND RIVERWALK DEVELOPMENT

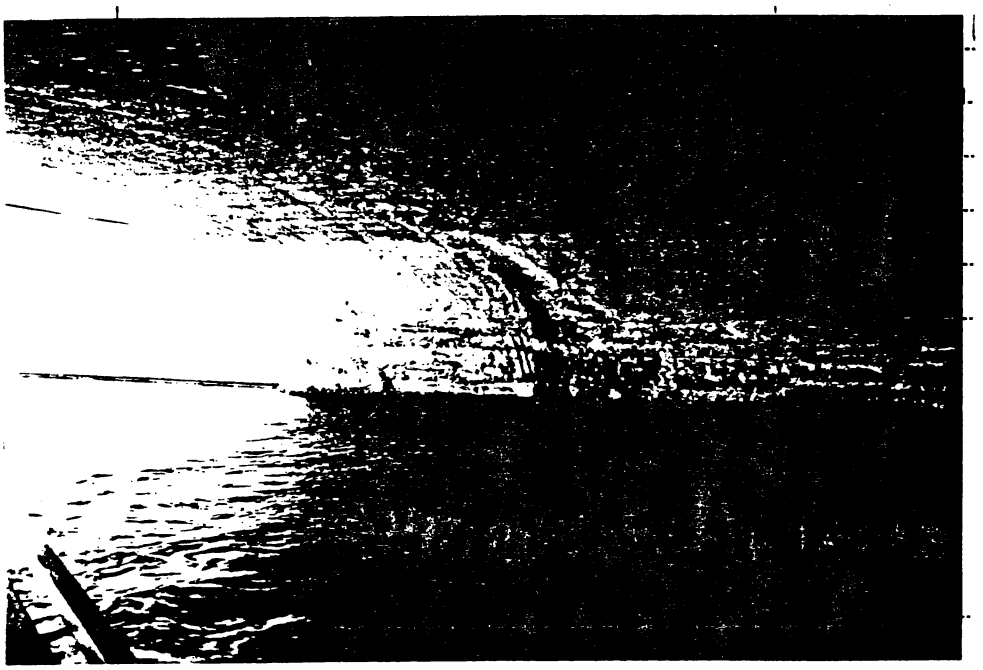

FIG 4- DETERIORATED AREAS OF NORTH ARCH BARREL (1993)

FIG 5- A SEVERE SPALL AREA IN ARCH BARREL

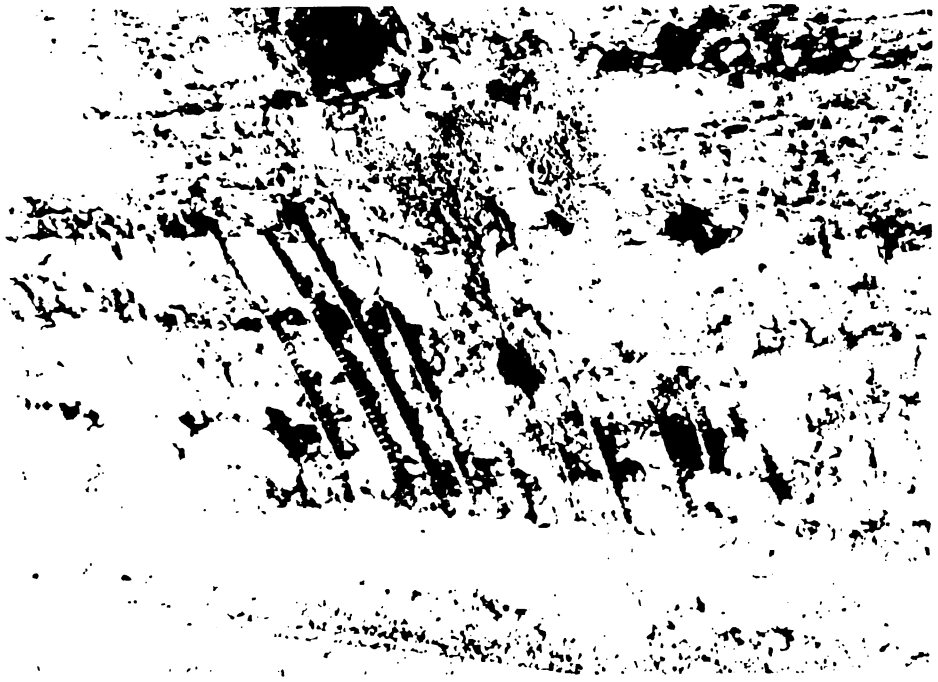

FIG 6- EXPOSED REINFORCING IN A SPALL AREA OF ARCH BARREL

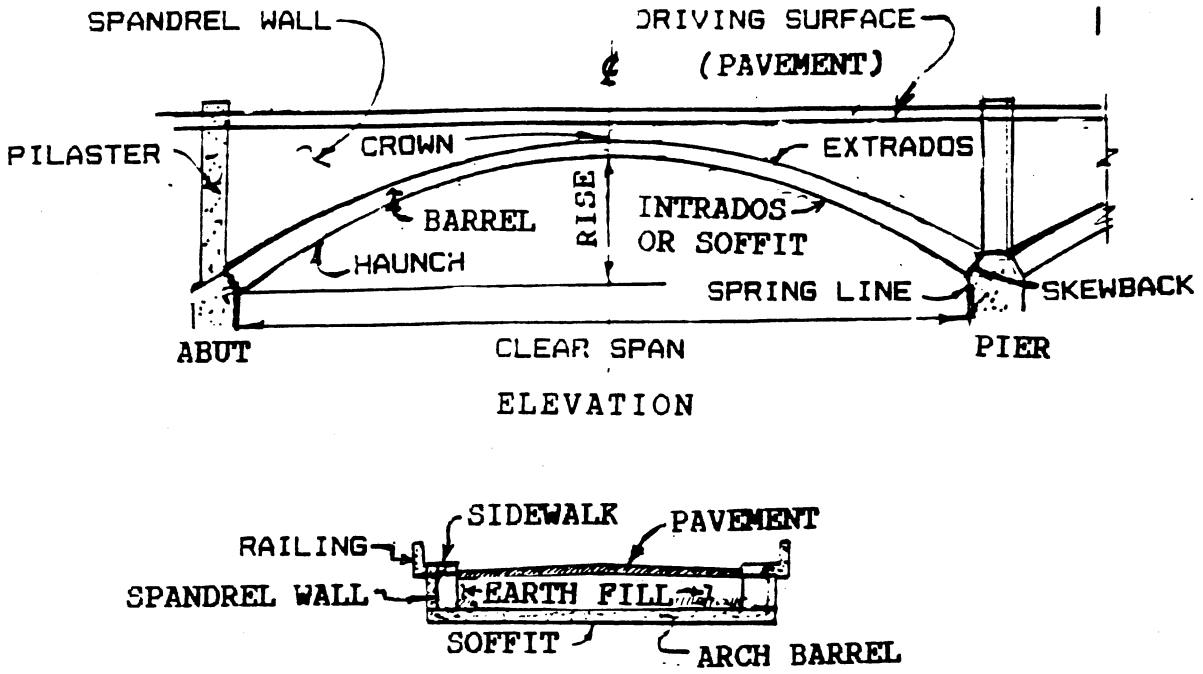

FIG 7- COMPONENTS OF
EARTH FILLED CONCRETE SPANDREL ARCH

Truckee River Profile

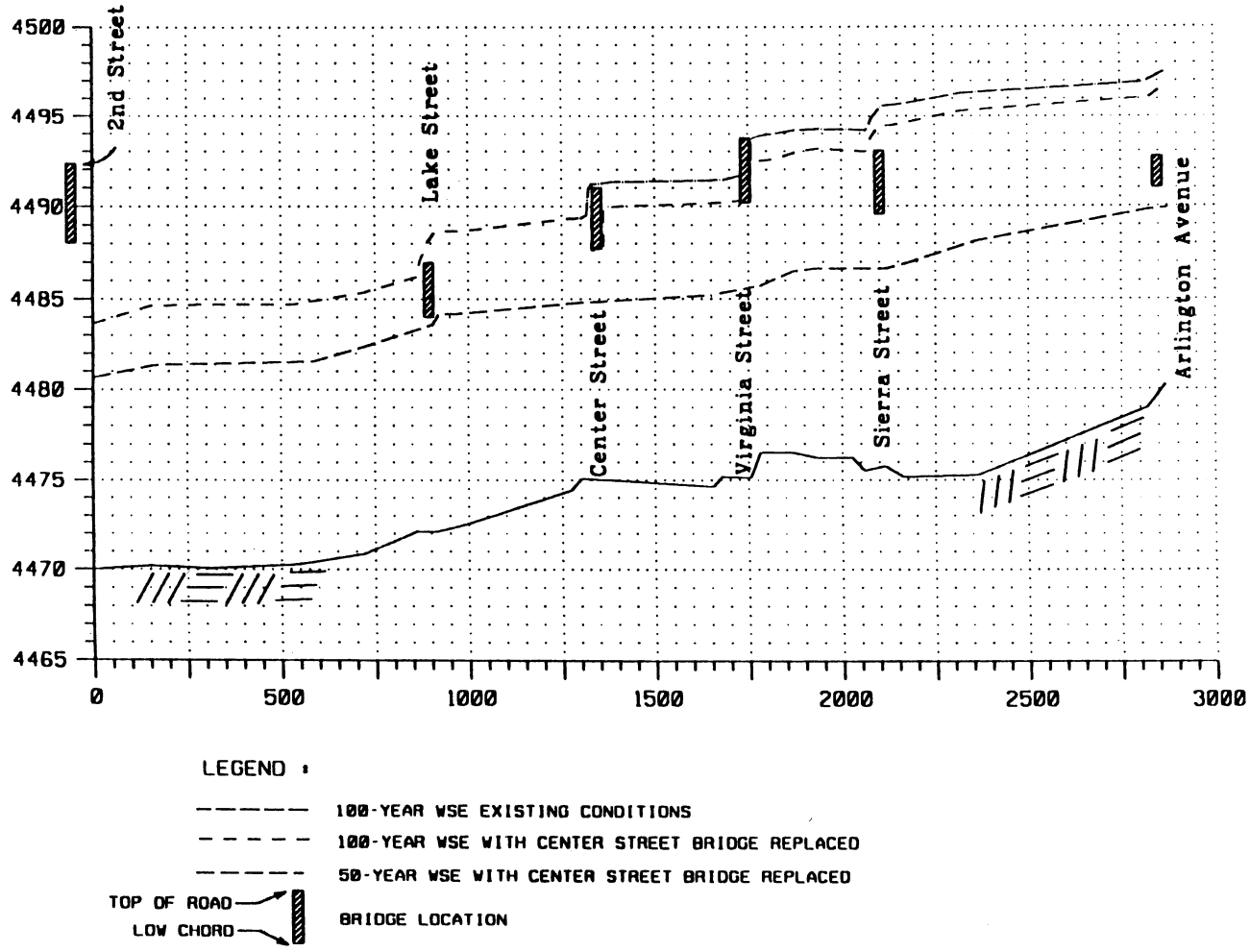

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FIG 8- WATER SURFACE PROFILES

Truckee River Profile

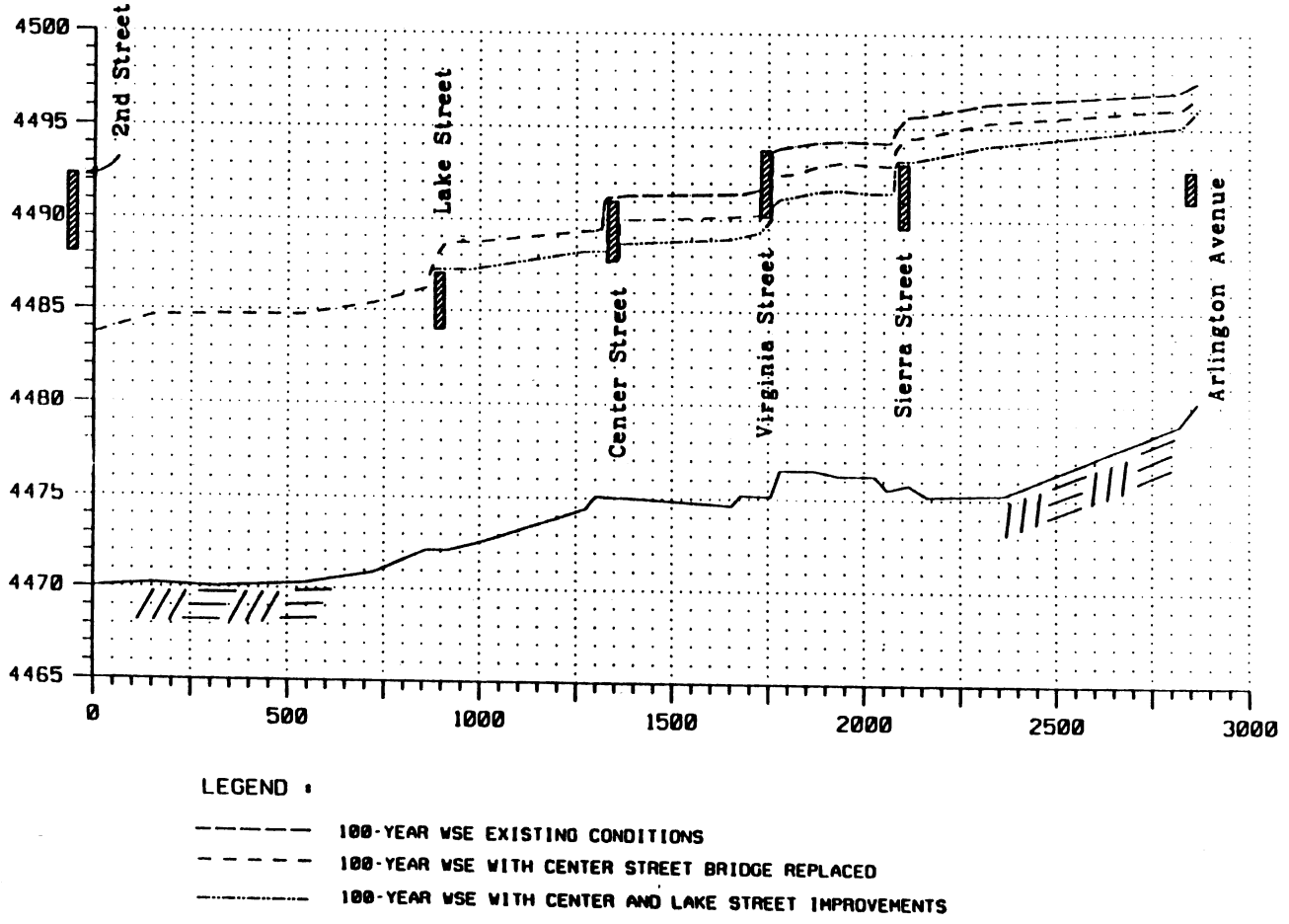

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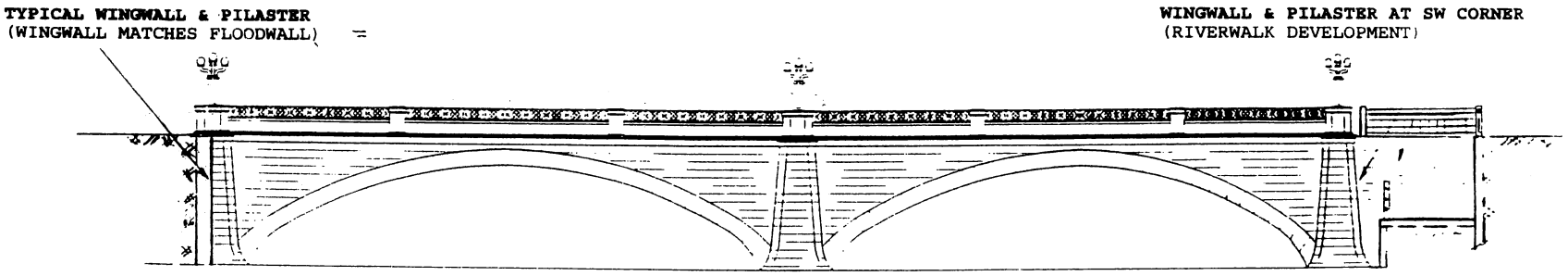
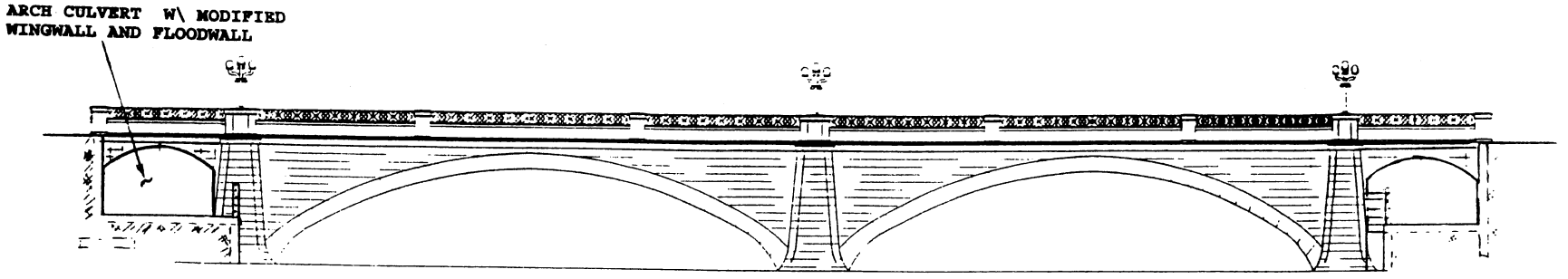
FIGURE 8a: Water Surface Profile



EXISTING & REHABILITATED STRUCTURE
WEST ELEVATION

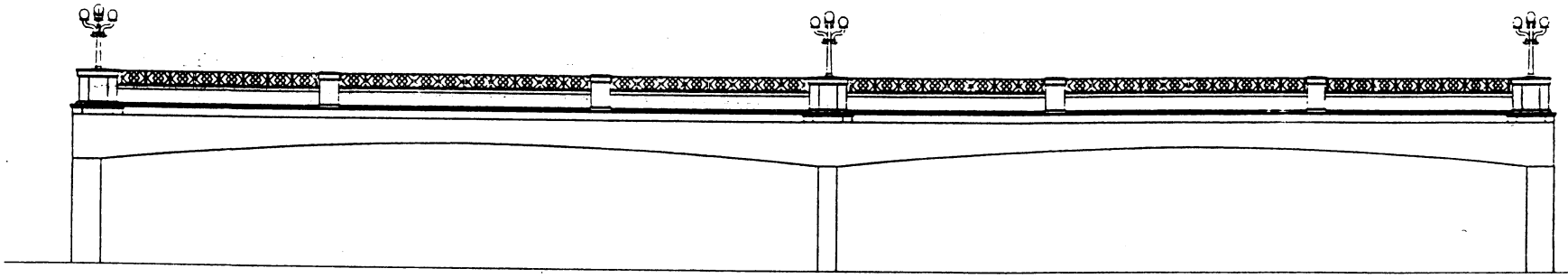


MODIFIED & REHABILITATED STRUCTURE
WEST ELEVATION

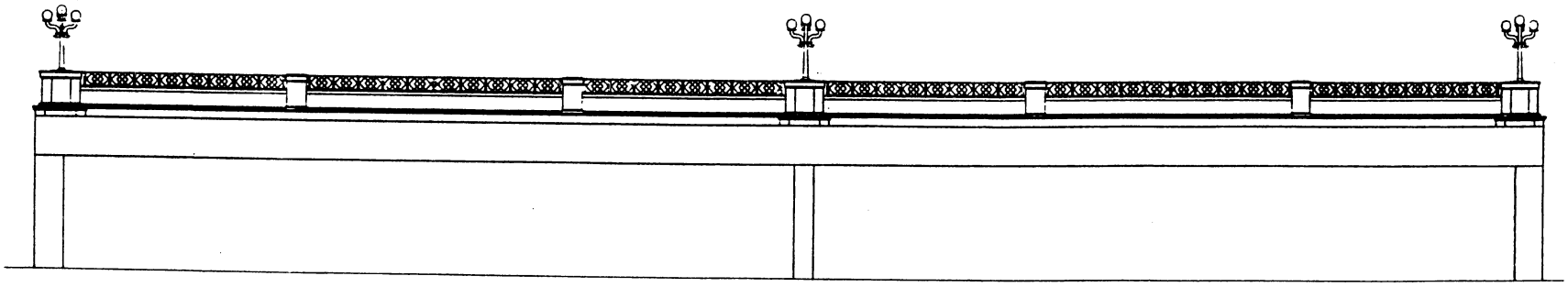
VIRGINIA STREET
BRIDGE

B-178

FIG 9- REHABILITATION & MODIFICATION



HAUNCHED GIRDER REPLACEMENT STRUCTURE
ELEVATION



STRAIGHT GIRDER REPLACEMENT STRUCTURE
ELEVATION

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

VIRGINIA STREET
BRIDGE

B-178

FIG 10- REPLACEMENTS

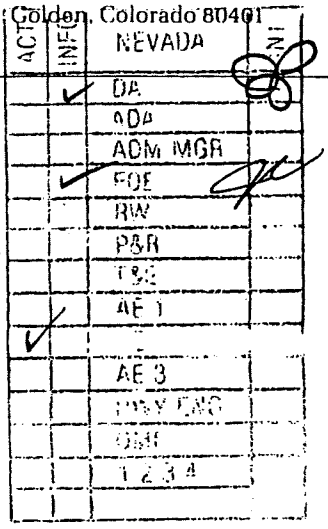
ATTACHMENT I-2

Memorandum of Agreement

Advisory Council On Historic Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

Reply to: 730 Simms Street, #401
Golden, Colorado 80401



May 21, 1996

Ms. Janice W. Brown
Assistant Division Administrator
U.S. Department of Transportation
Federal Highway Administration
Region Nine
Nevada Division
705 North Plaza Street, Suite 220
Carson City, NV 89701-4015

RE: *Memorandum of Agreement regarding the Virginia and Center Street Bridges, Reno, NV*

Dear Ms. Brown:

The enclosed Memorandum of Agreement regarding the above referenced project has been accepted by the Council. This action constitutes the comments of the Council required by Section 106 of the National Historic Preservation Act and the Council's regulations. Please send copies of the signed Agreement to the Nevada State Historic Preservation Officer and your Federal Preservation Officer.

The Council appreciates your cooperation in reaching a satisfactory resolution of this matter.

Sincerely,

Claudia Nissley
Director, Western Office
of Review

Enclosure

MEMORANDUM OF AGREEMENT
Virginia Street &
Center Street Bridges
Reno, Nevada

WHEREAS, the Federal Highway Administration (FHWA) has determined that the rehabilitation of the Virginia Street Bridge and the reconstruction of the Center Street Bridge, will have:

No Adverse Effect on the Virginia Street Bridge, a historic property listed on the National Register of Historic Places; and

Adverse Effect on the Center Street Bridge, a historic property eligible to the National Register of Historic Places; and

has consulted with the Nevada State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (Council) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f); and

WHEREAS, the Nevada Department of Transportation (NDOT) and the City of Reno, Nevada, has participated in the consultation and concurred in this Memorandum of Agreement; and

NOW, THEREFORE, FHWA, NDOT, the City of Reno, SHPO, and the Council agree that this undertaking shall be implemented in accordance with the following stipulations. These stipulations will take into account the effects of the undertaking on both the Virginia Street bridge and the Center Street bridge.

Stipulations

The FHWA will ensure that the following measures are carried out and acceptable to the appropriate agency.

1. The FHWA shall ensure that:

a. The Virginia Street bridge be rehabilitated in a manner that preserves the historical and architectural value of the bridge through conformance with the Secretary of Interior's "Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings."

b. After the Center Street bridge is demolished, it will be replaced with a new bridge designed to be compatible with the surrounding historic properties.

2. The FHWA shall ensure that the "Final Construction Documents" as they become available for each bridge, are provided to the SHPO for a 30 day review period. SHPO will provide written comments to FHWA within that 30 day time period or the FHWA will assume that the SHPO approves the documents. If there is a disagreement that cannot be resolved through meetings or additional documentation, the FHWA shall consult the Advisory Council as per stipulation 6.

3. The FHWA shall ensure that the construction, and any other activities associated with this undertaking, take place and are completed without any visually identifiable changes from the project plans dated March 29, 1996 and project effect documentation dated January 11, 1996, unless:

a. The FHWA, shall ensure that the SHPO be provided with appropriate documentation for review of any changes in the project's design, implementation, etc., including Change Orders, that could result in:

1. Any visible features added or deleted from the bridges.
2. Changes in colors, materials, and textures of any visible portion of the bridge.
3. Changes in the railings, lights, or benches that are visible.
4. Changes in the style or form of the bridges themselves.

b. The FHWA shall ensure that the SHPO has two standard working days, from the receipt of adequate documentation, to review each proposed change. At the end of those two standard working days, the SHPO will provide written comments on the proposed changes. Should there be any disagreement between FHWA and SHPO, staff from both agencies will meet as soon as possible to resolve the difficulty.

4. The FHWA has consulted with the HABS/HAER Coordinator of National Park Service (NPS). The FHWA has provided existing HAER reports to NPS and will provide further documentation as requested by NPS. NPS must accept documentation prior to FHWA commencing the project.

5. The FHWA shall ensure that all work carried out pursuant to this agreement is carried out by or under the direct supervision of a person or persons meeting at a minimum the *Secretary of the Interior's Professional Qualifications Standards* (48 FR 44738-9) as appropriate.

6. Should the Nevada SHPO or the Council object within 30 days to any actions proposed pursuant to this agreement, the FHWA shall consult with the objecting party to resolve the objection. If the FHWA determines that objection cannot be resolved, the FHWA shall forward all documentation relevant to the dispute to the Council. Within 30 days after receipt of all pertinent documentation, the Council will either:

a. provide the FHWA with recommendations, which the FHWA will take into account in reaching a final decision regarding the dispute; or

b. notify the FHWA that it will comment pursuant to 36 CFR § 800.6(b), and proceed to comment. Any Council comment provided in response to such a request will be taken into account by the FHWA in accordance with 36 CFR § 800.6(c)(2) with reference to the subject of the dispute.

If any of the signatories to this agreement believe that the terms of the agreement cannot be carried out, or that an amendment to the terms of the agreement must be made, that signatory shall immediately notify the other signatories and request consultation to amend this agreement. The process of amending the agreement shall be the same as that exercised in creating the original agreement.

Any recommendation or comment provided by the Council will be understood to pertain only to the subject of the dispute; the FHWA's responsibility to carry out all actions under this agreement that are not the subjects of the dispute will remain unchanged.

Execution of this Memorandum of Agreement by the FHWA and the Nevada SHPO, its subsequent acceptance by the Council and implementation of its terms, evidence that FHWA has afforded the Council an opportunity to comment on the Virginia Street and Center Street bridge project and its effects on historic properties, and that FHWA has taken into account the effects of the undertaking on historic properties.

FEDERAL HIGHWAY ADMINISTRATION

By: _____ Date: 4/8/96
Division Administrator

NEVADA STATE HISTORIC PRESERVATION OFFICE

By _____ Date: 4/12/96
Nevada State Historic Preservation Officer

Concur:

NEVADA DEPARTMENT OF TRANSPORTATION

By: _____ Date: 4/12/96
for Director

THE CITY OF RENO, NEVADA

By: _____ Date: 4-24-96

ACCEPTED FOR THE ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: _____ Date: 5-20-96

ATTACHMENT I-3

Ferrari Shields Report

PUBLIC WORKS DEPARTMENT
1 East 1st Street, 8th Floor
PO Box 1900
Reno, NV 89505

July 21, 2008

Federal Highway Administration, Nevada Division Office
Hannah Visser, Environmental Planning Specialist
705 N. Plaza Street, Suite 220
Carson City, NV 89701

SUBJECT: *Ferrari Shields Report: Historic Architectural Engineering Analysis for the Preservation of Virginia Street Bridge.*

Dear Ms. Visser:

You have requested a copy of the report that includes the various alternatives studied to avoid removal of the Virginia Street Bridge preceding FHWA signature on the 4(f) "de minimis." Attached is a report by Ferrari Shields and Associates conducted in May 2003, and will be referenced by the Corps in their DEIS to be released in February 2009. This report presented bypass channels as new box culvert spans to be added on both sides of the existing bridge.

At a public meeting March 16, 2007, engineering staff from the US Army Corps (Corps) made a presentation on flood control options, and raised serious concerns whether the rehabilitation option which includes the bypass channel, could serve as a viable flood control alternative. The Corps' concerns were related to the fact that the transitions into and out of the bypass channels would be ineffective flow areas. They held that the bypass channel design proposed atypical geometry that must be physically modeled to determine its capability of conveying flood flows. Other concerns involved the hydraulic modeling parameters of the rehabilitation option: the rehabilitation modeling as presented by Ferrari Shields and Associates was performed under pressure flow conditions and without debris accumulation. Pressure flow is an undesirable and unpredictable situation, but all the more so when debris is added as can be expected in real conditions.

The Corps has not yet released the Draft EIS, but has communicated with the Flood Project Sponsors that their recommendation will be for replacement of the Virginia Street Bridge. As above, we (sponsors) expect a final determination in February 2009. We expect the DEIS itself will also be a source document of additional alternatives investigated by the Corps.

Please let me know if you require additional information. I can be reached at (775) 334-2683.

Sincerely,

Kerri W. Lanza, P.E.,
Senior Civil Engineer

C: Mark Demuth

Project Number D0526

Historic Architectural Engineering Analysis for the Preservation of the Virginia Street Bridge Reno, Nevada

Index of Report

Ferrari Shields & Associates
185 Cadillac Place ◆ Reno Nevada 89509 ◆ 775-829-9277 ◆ 775-829-9359 (Fax)

FERRARI SHIELDS & ASSOCIATES
Consulting Structural and Civil Engineers
185 Cadillac Place Reno, Nevada 89509
Phone: (775) 829-9277 Fax: (775) 829-9359 ferrarishields.com

May 6, 2003

U.S. Army Corp of Engineers
Sacramento District
1325 J Street
Sacramento, CA 95814-2922

Attention: Richard Perry

Subject: Preliminary report for the historic architectural engineering analysis for the preservation of the Virginia Street Bridge, Reno, Nevada.

Dear Richard,

The following is the preliminary report for the preservation of the Virginia Street Bridge. **The purpose of this investigation was to determine if the Virginia Street Bridge can be structurally modified to allow the peak flow from a 100 year flood event to pass through the structure, while preserving the bridge's historic features.** In order to accomplish the preceding scope, Ferrari Shields assembled a team incorporating a hydrologist (Nimbus Engineers), a historic bridge structural engineer (Cannon/TranSystems), and a historic architect (van Dijk Westlake Reed Leskosky (VWRL)). This report will summarize the results of their individual scopes of work and present an overall analysis of the bridge. The individual reports of the preceding team members will be presented, in their entirety, in the Appendices of this report. River photographs are presented in Appendix E.

BACKGROUND

The Virginia Street Bridge was constructed in 1905. It is a two-span, earth filled concrete barrel arch structure with a clear span of 65', a width of 80', an overall length of 150', and a clear height above riverbed of approximately 15' at the high point of the arch. Although the bridge geometry and architecture are constructed to suggest that the bridge is constructed of stone masonry, the entire structure is structural reinforced concrete.

The Virginia Street Bridge spans the Truckee River at one of its narrowest points. The Truckee River, upstream from the bridge, is channelized by high concrete floodwalls on both the north and south banks. The elevation of the top of the north bank floodwall dips approximately 6' between the north abutment of the Sierra Street and Virginia Street Bridges. Over the years, Reno has been plagued by periodic flooding, with the most recent event occurring in January of 1997. The Virginia Street Bridge, in its current configuration, can safely pass approximately 16,000 cubic feet per second (cfs); the 100 year flood flow would require the bridge to safely pass approximately 21,000 cfs. The bridge arches are long, and flat, with a low clearance height above the riverbed. As a result, the springline of the arches, where they join the center and end abutments, present large areas that interfere with the water flow in the river. This combination of low clear height, combined with the flow interference makes the bridge very susceptible to debris damming, which further impairs its ability to pass the debris associated with flood flow. This reduction in the hydraulic capacity by debris damming creates flood back water, which has historically breached the north floodwall at the lowest elevation, creating extensive flooding in downtown Reno.

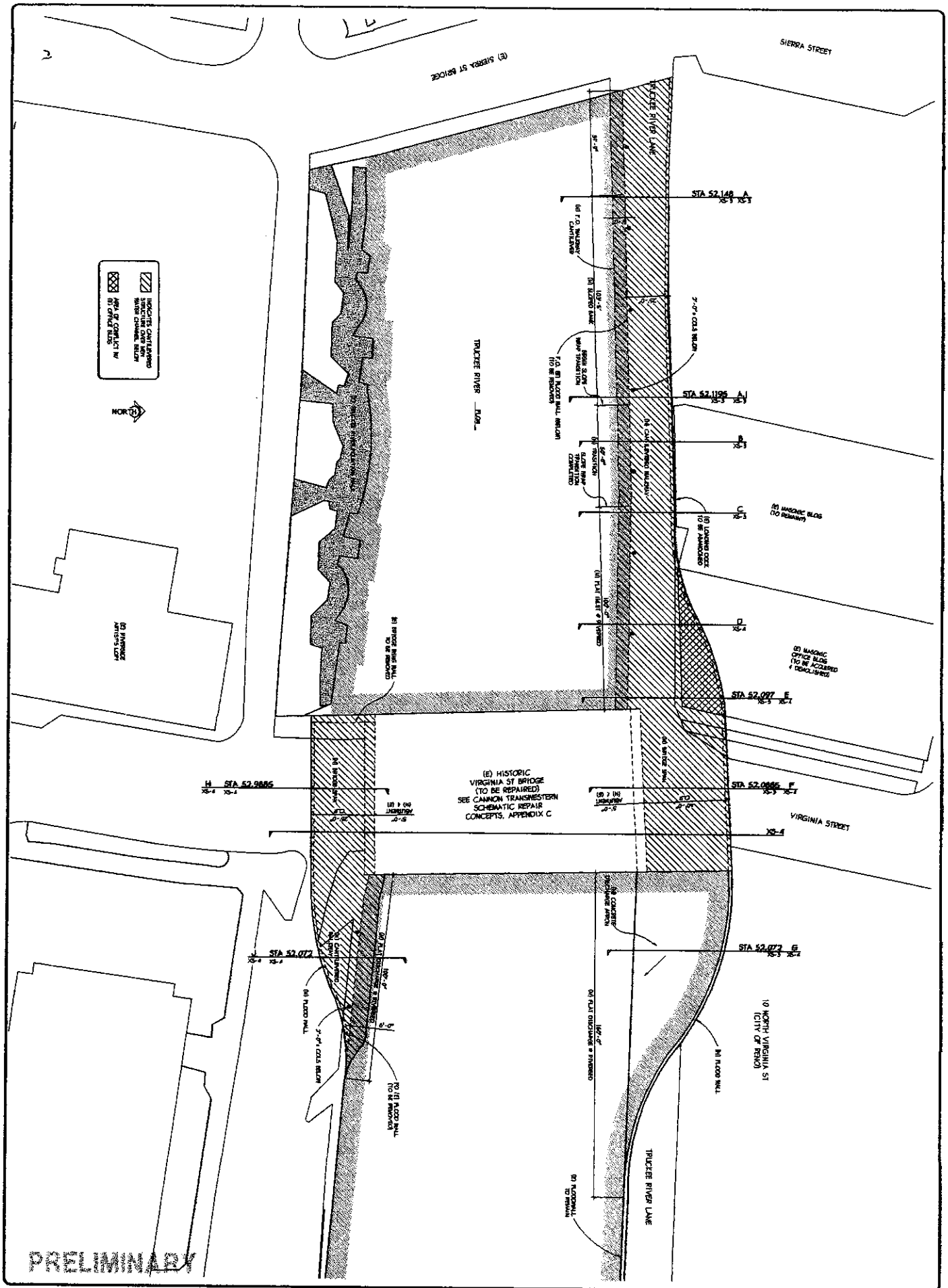
INVESTIGATION

It is obvious from its design and history of flooding, that the existing Virginia Street Bridge must be extensively modified to reach the 21,000 cfs flood flow capacity that is required for the 100 year flood. In conjunction with this modification, the structural capacity of the Bridge was also investigated to determine if the historic aspects of the bridge structure could be maintained while the bridge was structurally repaired. The various aspects of the investigation that are required to accomplish the preceding scope of work are as follows:

- Review of the Virginia Street Bridge and north riverbank configuration for modification of the 21,000 cfs 100 year flood flow (Ferrari Shields – Appendix A).
- Create a hydraulic model of the river modifications to calculate the suitability of the proposed modifications (Nimbus Engineers – Appendix B).
- Review of the structural competence of the bridge (Cannon/TranSystems – Appendix C).
- Review the historic aspects of the Bridge (VWRL – Appendix D).
- Possible construction methodology.

Modification of the Virginia Street Bridge for flood flow.

In its current configuration, both the Truckee River floodwalls at the north bank, and the Virginia Street Bridge are incapable of passing the 21,000 cfs 100 year flood flow. The flood flow modifications must address both the Bridge and the floodwall. In order to achieve the flood flow capacity, the following considerations must be taken into account:



RIVERBANK-FLOOD STABILIZATION STRUCTURE

NORTH BANK TRUCKEE RIVER

RENO, NEVADA

SHEET TITLE: RIVER PLAN

SHEET PS-1 OF SHEETS

DRAWN
CHECKED
PM
DATE
1/16/08
SCALE
1" = 20'-0"
JOB NO.
0036
SHEET

FERRARI SHIELDS & ASSOCIATES
CONSULTING STRUCTURAL & CIVIL ENGINEERS
185 Cadillac Place
Reno, Nevada 89509
775-829-9277
775-829-0359 (Fax)
admin@ferrarishields.com

REVISIONS
NO.

- Increased flow area must be developed through the Virginia Street Bridge.
- The floodwall height and structural integrity at the north bank of the Truckee River west of the Virginia Street Bridge must be raised and the floodwall structure brought up to current Corp of Engineers floodwall standards.
- Increased flood flow capacity must be developed upstream of the Virginia Street Bridge.

The only opportunity to increase the flow area in the Bridge, while maintaining its historic nature, is to add new spans to the north and south of the existing bridge abutments. In this regard, hydrologic modeling revealed that a 40' clear span at the north of the Bridge, and a 25' clear span at the south of the Bridge would allow the safe passage of the 21,000 cfs 100 year flood flow. To maintain hydrologic efficiency, a hydrologic transition of approximately 12 degrees to the axis of the river had to be developed at the new north span. The hydrologic transition requires that the north riverbank be "warped" both vertically and horizontally so that flood water can transition effectively into the new north span. This can be accomplished by constructing a new slope, extending from the river bottom to the property line at the north boundary of the 25' wide Truckee River Lane. The new north bank will slope approximately 45 degrees, and would be protected by a concrete apron. As the bank slope approaches the transition area at the new north span, it will begin to "warp" by becoming less steep, and eventually warping into the flat bottom of the new culvert at the north side of the Bridge. As the slope warps from 45 degrees to 0 degrees (flat), the vertical wall extends down to the riverbed as a new floodwall (see cross-sections and plans, Appendix A). Downstream of the new north bypass culvert, a transition basin will be constructed to guide the water flow back into the existing channel. A discharge basin has been planned east of the new culvert span so that the bypassed flow can be optimally reintroduced into the river flow. A cantilevered walkway structure will be constructed above the slope, at grade level, to reinstate the right-of-way for Truckee River Lane. The new cantilevered structure will be constructed at the proper elevation above the riverbed so that the existing 6' dip in the floodwall is removed and can accommodate the 100 year flood flow.

At the proposed new south span, the existing Truckee River Fountain Walk presents an obstacle to the creation of the optimum hydraulic transition into the culvert span. As a result, the south span had to be modeled with the hydraulic interference of the Fountain Walk. The south span also has a cantilevered structure above the new transition basin. The cantilevered structure will reinstate the Post Office building's parking and driveway. See project plot plan, next page.

Hydraulic model of stream flow.

A hydraulic model of the flood flow was developed, based on the proceeding requirements for the flood flow modifications (see Appendix B for the calculation models). Modeling of the existing conditions of a 100 year flood was simulated by the Corp of Engineers approved HEC-RAS Model, prepared by Montgomery Watson Harza, and modified in October, 1997 to reflect the riverbed changes that occurred during the January, 1997 flood.

The initial hydrologic model was based on the installation of a new north span only. The width of the span was increased to optimize proposed span opening width to pass the 21,000 cfs 100 year flood flow. The minimum acceptable width of the new north span was 40' clear. In order to efficiently integrate the new north span into the flood flow of the river, a proper hydraulic transition from the river flow into the new span had to be included. This transition consisted of the warping of the new slope in the cantilevered structure at the north riverbank upstream from the Virginia Street Bridge. The transition was accomplished by warping successive sections of the cantilevered retaining structure as it proceeds towards the bridge until the slope is horizontal. Once the slope is concurrent with the riverbed level, the back wall of the transition structure moves to the north until it meets the north wall of the new 40' clear span. This hydraulic approach to the new north span, however, does create a problem. The new hydraulic channel passes below the footprint of the existing Masonic office building, fronting Virginia Street. There are three potential options of dealing with this conflict: 1.) underpin the existing building and reinforce the top slab of the transition structure to accommodate the building loads; 2.) condemn and demolish the affected southern portion of the existing building to eliminate the conflict with the transition structure; 3.) condemn and demolish the entire structure. Even though the Masonic Office building was affected by the transition structure, the geometry of the hydraulic approach was able to rejoin the river before it conflicted with the Masonic Temple building, to the west of the office building. Any further increase in the width of the new span would result in a conflict with the basement footprint of the Masonic Temple building, to the west of the office building, making the 40' width of the new span a limiting value. Underpinning of the Masonic Temple basement will be required for a portion of the building.

With the installation of the new 40' north span, the existing bridge was able to pass the 100 year flood flow; however, the freeboard on the bridge was on 6". The 6" freeboard is perilous, since debris build-up along the upstream face of the bridge could easily raise the level of the backflow and overtop the bridge deck. In order to provide a greater safety factor, a new 25' clear span was added at the south abutment of the existing bridge. The new 25' south span, in concert with the new 40' north span allowed the bridge to pass the 100 year flood flow with a 4' freeboard, which is an acceptable safety factor. The hydraulic efficiency of the south span is less than the north span, since the existing Truckee River Fountain Walk impedes the smooth transition of the water from the river into the new span, reducing the capacity of the span. The hydraulic model of the south span includes the effect that the construction of a future 5' wide riverwalk on the hydraulic flow through the new south span.

Structural rehabilitation of the Virginia Street Bridge.

The historic Virginia Street Bridge is a two span, barrel arch, earth-filled, reinforced concrete bridge constructed in 1905. Years of annual Nevada Department of Transportation (NDOT) structural observations have been performed on the bridge with material sampling and analysis performed by CTL Laboratories. The ultimate compressive strength of the concrete was verified at 2,500 psi. Non-destructive testing has also determined that there is a relatively soft layer, 2" deep on the arch intrados. Wooden "chairs" used to elevate reinforcing from the concrete forms, were imbedded in

the arch intrados. Areas of spalled concrete and exposed, rusted reinforcement are evident at the face of both arches. Chloride content in the concrete is low, indicating that corrosion of the embedded reinforcing bars is not likely, and the rusted reinforcement that was observed is most likely the result of external moisture.

Past investigations and reports have tended to verify that the Virginia Street Bridge is in generally fair condition, and able to resist the AASHTO HS20 truck loading. However, the degradation of the bridge materials will continue, and likely accelerate. The rehabilitation of the Bridge needs to address the deterioration, but does not need to address an increase in the structural capacity of the bridge.

A scour analysis of the existing Virginia Street Bridge was prepared by CH2MHILL (Technical Memorandum No. 5, 2/4/98). In that report, it was noted that a new scour apron was required for the center pier of the bridge. The CH2MHill report also noted that the scour depth at the center pier could exceed 14' in depth. Field observations have not revealed any noticeable scour pattern at the center pier riverbed. The extra flow capacity from the new north and south spans will reduce the scour velocities at the center pier, and should significantly decrease the calculated scour depth. A new scour analysis will be performed with the new bridge configuration. Cannon/TranSystems has also highlighted the need for scour protection and underpinning at the existing north and south abutments. This underpinning and scour protection is necessary since the addition of the new north and south spans will transform the existing abutments into in-river piers, which has increased scour potential. A complete review of the structural rehabilitation aspects and approaches, prepared by Jerry Cannon, P.E. of Cannon/TranSystems, is presented in Appendix C of this report.

Historic Aspects of the Virginia Street Bridge.

The historic aspects of the bridge include the guard rail, lighting, and the faux wall surface pattern that suggested that the bridge was constructed of stone masonry. The concrete guard rail and stanchions have deteriorated to an unrepairable condition, and must be removed and replaced (the wrought iron railings sections can be reused). The "stone" masonry pattern cast into the concrete on the east and west faces of the bridge will require repair and rehabilitation. The damage to the faces of the arches must also be repaired. For a complete review of the scope and methods of the historic preservation, please review the VWRL document in Appendix D of this report.

Possible Construction Methodology.

There are three main areas of construction associated with the flood flow upgrade concept presented in this report. These suggestions are only a possible method of staging the construction. They are not guidelines; the successful contractor is responsible for all construction means and methods.

- Construction of the north bank cantilevered walkway approach/transition structure for the new north span.
- Construction of the new north and south bypass spans.
- Rehabilitation of the Virginia Street Bridge, including scour protection.

The construction of the cantilevered walkway at the north bank of the Truckee River is intended to serve as an equalization/transition chamber to guide the river flow into the new north span. It is appropriate that this new north bank structure and the new north span culvert should be constructed concurrently. A new roadway to the riverbed elevation can be constructed by excavating from the vacant lot at the 10 North Virginia Street site (the former location of the Mapes Hotel) to the west, along the north bank of the river. The existing floodwalls should be left in place and braced as necessary. The excavated area would extend west from the Virginia Street Bridge to the Sierra Street Bridge. Underpinning and or demolition of the Masonic Buildings should be undertaken in conjunction with the excavation. Once the excavation is complete, construction of the concrete cantilevered walkway/equalization chamber can begin and extend east down the river. The required underpinning of the existing north abutment of the bridge can also be accomplished in conjunction with the construction of the new north span culvert in Virginia Street. Retaining the existing floodwall allows the construction to take place in relatively dry conditions, and independent of river encroachment without the associated timeframe restrictions. A similar procedure can be followed for the new south span; however, the space available for the roadway to the riverbed is more restricted.

It is unknown at this time if any extensive structural reinforcing of the Virginia Street Bridge structure is needed. However, it is likely that the complete closure of Virginia Street would be required if extensive structural reinforcement of the Bridge is needed. New scour protection mats are required for the existing center pier, as well as the piers formed by the former north and south abutments. Installation of the scour mats will require the construction of coffer dams in the river. Access to the north and center piers could be achieved from the north bank excavated roadway, while the south pier scour mat would be accessed from the south bank excavated roadway.

DISCUSSION (Executive Summary)

The purpose of this investigation, as stated in the introduction, was: "to determine if the Virginia Street Bridge can be structurally "modified" to allow for the peak water flow underneath the bridge as determined in the hydrologic model while preserving as much of the bridge's historic features as possible."

The results of this investigation show that the addition of two new bypass spans – 40' at the north abutment and 25' at the south abutments of the Virginia Street Bridge will allow for the safe passage of the 21,000 cfs 100 year flood flow, with a freeboard of approximately 4' (see Appendix A). The north bypass span carries the majority of the additional flood flow capacity and requires the construction of a significant transition structure on the north bank of the river, between the Sierra and Virginia Street Bridges. The transition width at the north bank incorporates the 25' wide area of Truckee River Lane from the existing floodwall north to the edge of the Lane, and transitions to the required 40' clear width approximately 145' upstream (to the west) of the Virginia Street Bridge. As the north transition structure widens to 40', it encounters both the Masonic Temple building at midblock, and the Masonic Office Building bordering Virginia Street. Underpinning the Masonic Temple basement will allow the construction of the transition

structure. The Masonic Office Building, however, posses a significant impediment to the construction of the transition structure. The width of the transition structure extends 40' north into the footprint of the Office Building. This interference can be handled in three ways: the office building can be condemned and demolished; a portion of the building, large enough to allow the transition to be constructed, can be condemned and demolished; or, the existing building can be underpinned and the lid of the transition structure can be reinforced to accommodate the existing building loads. Utility relocation will be required at the north bank, of the Truckee River Lane. The new north transition structure also connects the elevations of the north banks of the Sierra Street and Virginia Street Bridges. The transition structure at the north bank is critical in eliminating the 6' "dip" in the elevation of the Truckee River Lane and north bank floodwall which is responsible for the flooding penetration of downtown Reno.

The transition structure at the south bank is much more abrupt and compact than the north transition, due to the adjacent presence of the Truckee River Fountain Walk. No buildings obstruct the south transition. The 25' clear span of the south by pass allows for the possible future construction of a 5' extension of the riverwalk to the east of Virginia Street. Because of the turbulence of the transition at the southern span, and the narrower width, it passes less flood flow than the north span. However, the south span is necessary to maximize the freeboard on the bridge.

The structural investigation of the bridge revealed that it was still basically a sound structure. However, it has suffered areas of substantial degradation that must be repaired. The concrete guardrails have to be completely removed and reconstructed. Also, the north and south bridge abutments have to be underpinned and extended 4' to prevent river scour. The existing center span has to have a new scour mat installed to prevent possible undermining of the foundation. Appendix C delineates the scope of the structural repairs that are required for the bridge.

The historic features of the bridge can be preserved and rehabilitated in their entirety. The existing wrought iron railings can be removed and reused, but the existing concrete guardrails have to be removed and reconstructed. The molded concrete reveals that produce the appearance that the bridge was constructed from stone masonry need to be repaired (see Appendix D for the historic preservation specifications).

The construction of the north transition structure can be efficiently constructed by leaving the existing north floodwall intact, excavating the earth behind it, and constructing the floodwall in a relatively dry environment. This construction method allows the transition structure to be constructed without impinging in the Truckee River, eliminating timeframe constraints and costs and environmental impacts associated with in-river construction.

CONCLUSIONS

Solution to Corp of Engineers Scope of Work.

This investigation has demonstrated the feasibility of preserving the historic Virginia Street Bridge, in its entirety, while safely passing the 21,000 cfs required for the 100 year flood flow. The north transition structure also eliminates the existing 6' "dip" at

the north bank floodwall that is historically responsible for much of Reno's past flooding. The construction of the north bank transition structure will require underpinning or demolition of the existing Masonic Temple and Masonic Office buildings. Possible condemnation of the buildings should be coordinated with the City of Reno. The existing buildings, especially the Office Building, are economically derelict, and appear to have reached the end of their economic life. The cost of underpinning and supporting these buildings could be applied to the purchase of the buildings for demolition. The demolition of the buildings would also result in lower construction costs for the construction of the north transition structure.

Alternative concepts studied.

Because of the requirement to preserve the historic Virginia Street Bridge, the family of solutions to the problem is extremely limited. Given the configuration of the river, a bypass solution was the only solution to the problem. The north and south bypass channels as included in this project are the most appropriate solutions to keeping the bridge intact.

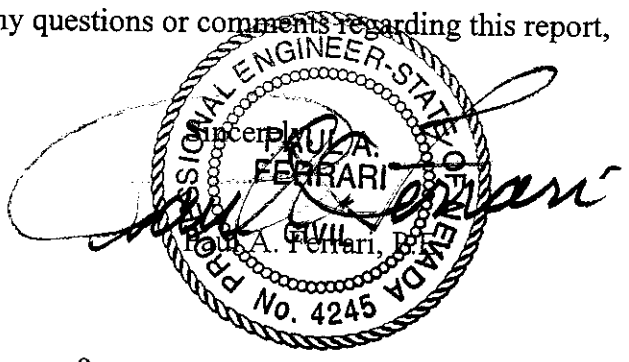
A clear span solution, removing the existing historic Virginia Street Bridge, was also studied. However, even this option required a widening of the river channel at Virginia Street, in order to maintain the current grade at Virginia Street. If the current bank configuration is maintained, a new clear span bridge would have to arch over the river, raising the Virginia Street grade, and creating a grade separation at the north and south abutments for approximately70'.

Sierra Street Bridge flood flow.

In the process of analyzing the 100 year flood flow through the modified Virginia Street Bridge, it was noted that the Sierra Street Bridge, upstream from the Virginia Street Bridge, could not pass the 100 year flood flow. Although the Sierra Street Bridge is not currently in our Scope of Work, the problem with the flood flow at this bridge should be noted as part of a "holistic" solution to flooding in downtown Reno. Should the Corp embrace the holistic approach to downtown Reno flooding, it is possible to modify the Sierra Street Bridge to pass the 100 year flood flow. The most efficient solution to the Sierra Street Bridge would be to extend the transition structure at the north bank of the river to the west (upstream) until it intersects the angle point in the river. This would entail the construction of a 25' wide bypass culvert at the north abutment of the Sierra Street Bridge. The intake for the culvert would intersect the river in front of the new theater building, and would rejoin the river downstream from the bridge.

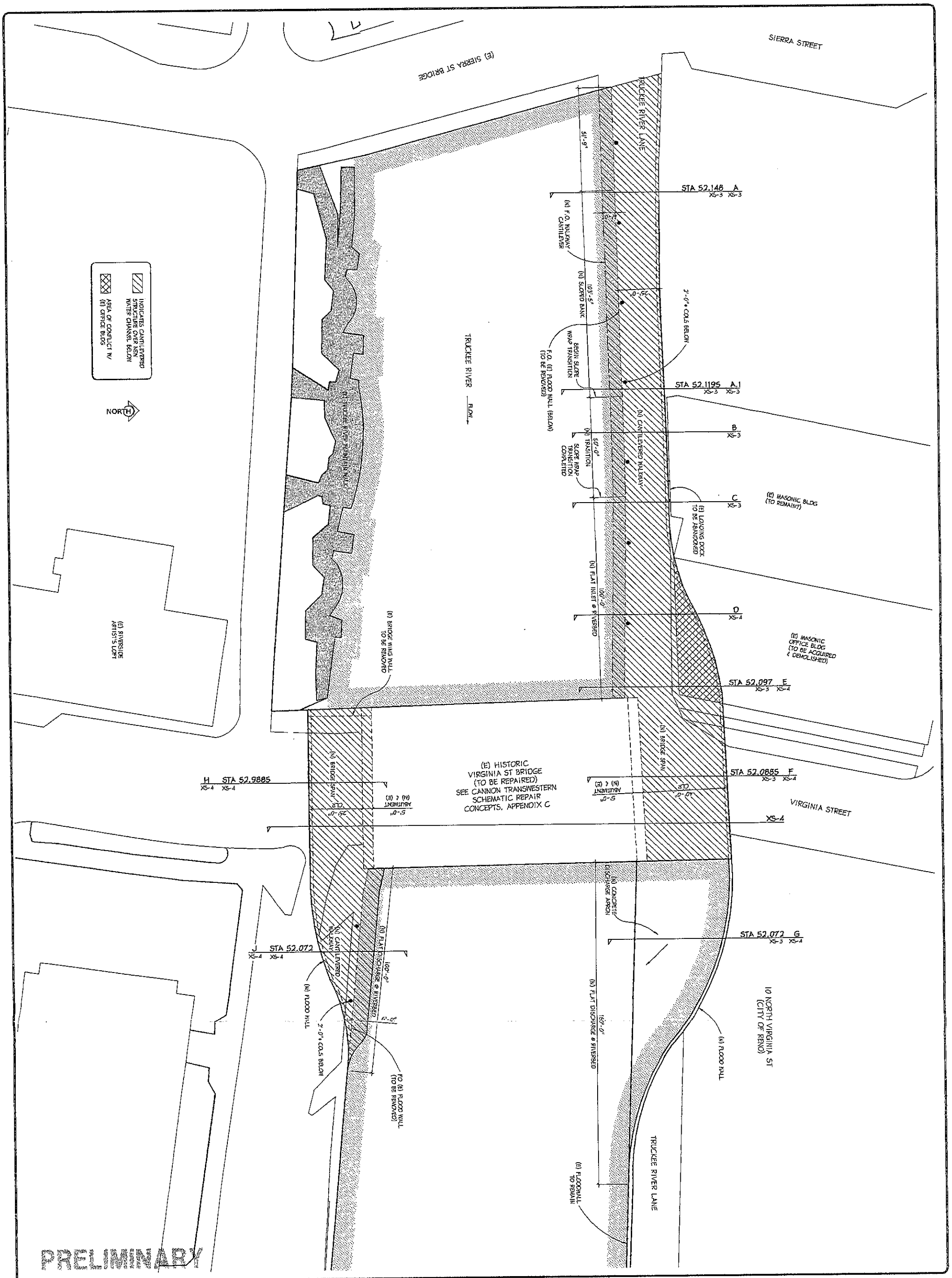
If the Corp of Engineers has any questions or comments regarding this report, please do not hesitate to contact me.

Sincerely,



Paul A. Ferrari, P.E.

APPENDIX A



PRELIMINARY

RIVERBANK-FLOOD STABILIZATION STRUCTURE

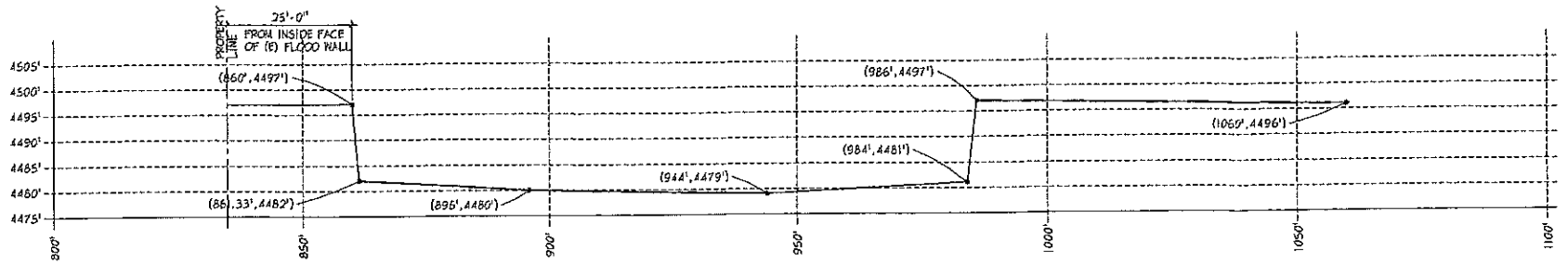
NORTH BANK TRUCKEE RIVER
RENO, NEVADA

SHEET TITLE: RIVER PLAN

DRAWN: SAS
CHECKED: PAF
DATE: 4/15/03
SCALE: 1" = 20'-0"
JOB NO.: 00526
SHEET: PS-1
OF SHEETS

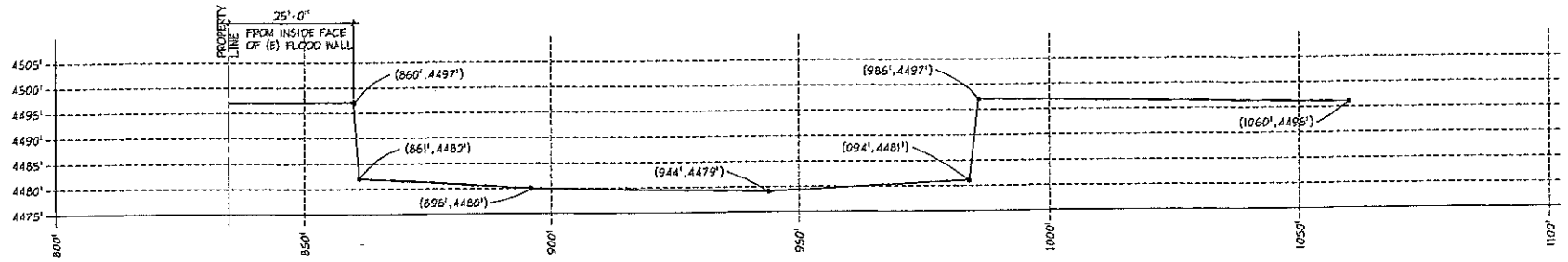
FERRARI SHIELDS & ASSOCIATES
CONSULTING STRUCTURAL & CIVIL ENGINEERS
185 Cadillac Place
Reno, Nevada 89509
775-829-9277
775-829-9359 (Fax)
admin@ferrarishields.com

REVISIONS | BY



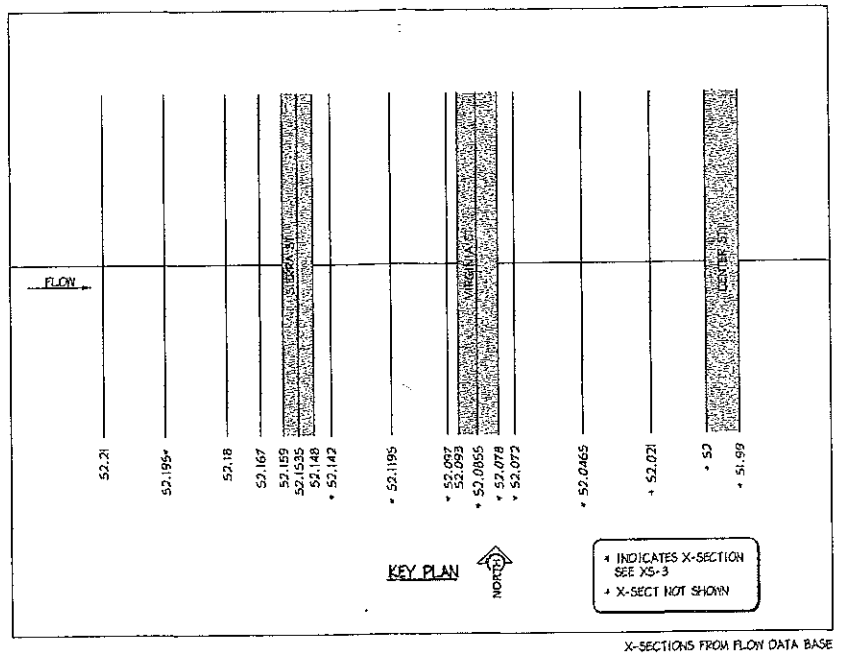
RS=52.1535 BR D SIERRA ST LOOKING DOWN RIVER (EAST)

SCALE: 1/16" = 1'-0"

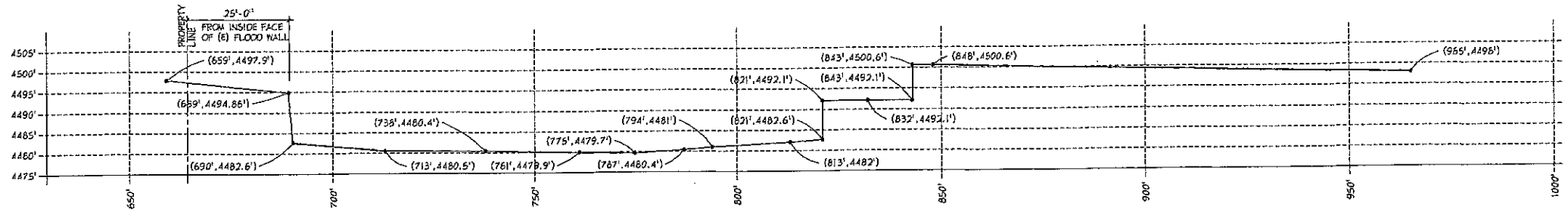


RS=52.148 - DS SIERRA ST LOOKING DOWN RIVER (EAST)

SCALE: 1/16" = 1'-0"

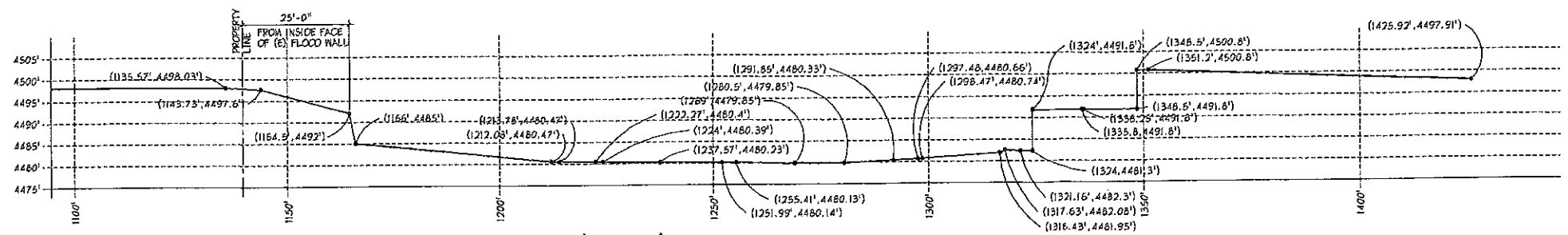


X-SECTIONS FROM FLOW DATA BASE



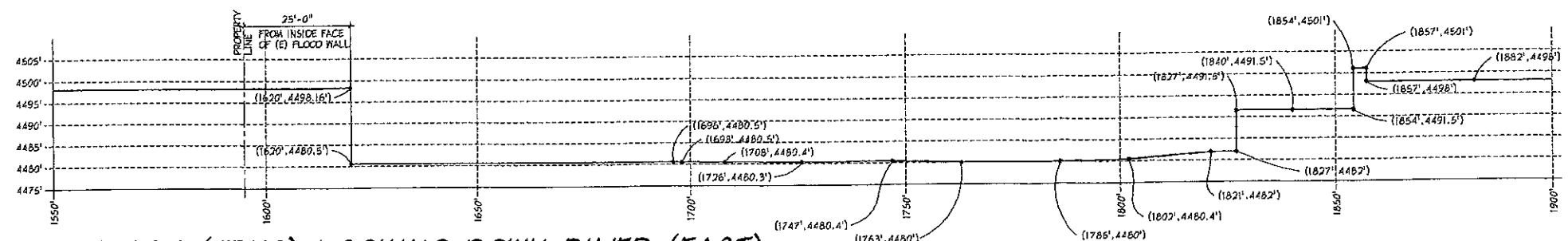
RS=52.142 (TRFG) LOOKING DOWN RIVER (EAST)

SCALE: 1/16" = 1'-0"



RS=52.1195* LOOKING DOWN RIVER (EAST)

SCALE: 1/16" = 1'-0"



RS=52.097 (TRFG) LOOKING DOWN RIVER (EAST)

SCALE: 1/16" = 1'-0"

REVISIONS	BY

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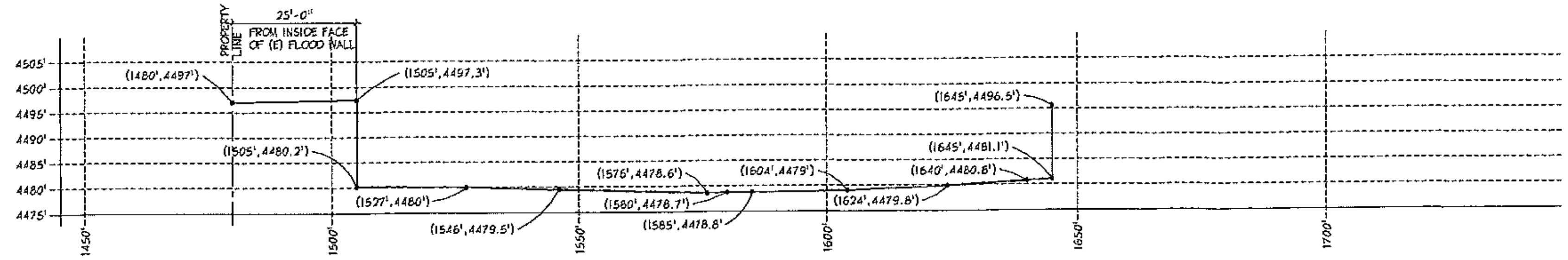
RIVERBANK-FLOOD STABILIZATION STRUCTURE
NORTH BANK TRUCKEE RIVER
RENO, NEVADA

SHEET TITLE: TOPOGRAPHIC RIVER PLANS - EXISTING CONDITIONS

DRAWN	SAS
CHECKED	PAF
DATE	4/15/03
SCALE	1/16" = 1'-0"
JOB NO.	D0526
SHEET	XS-1
OF	SHEETS

PRELIMINARY



RS=52.093 - US VIRGINIA ST (REPEATED XS) LOOKING DOWN RIVER (EAST)

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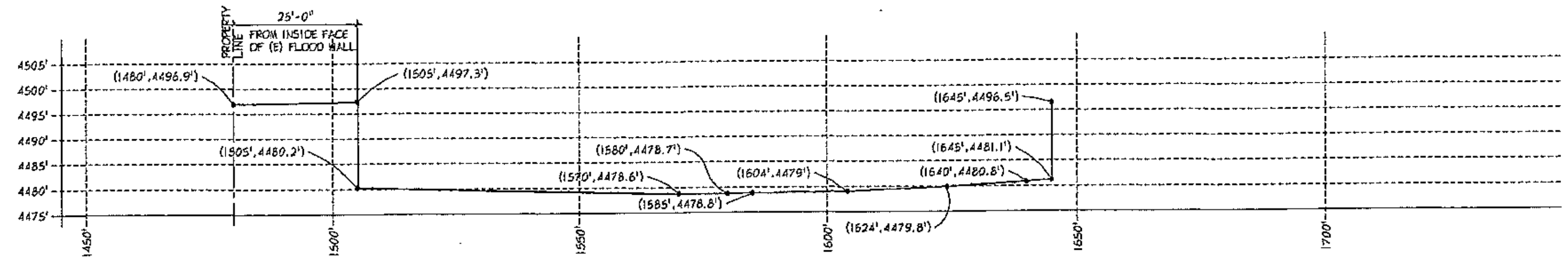
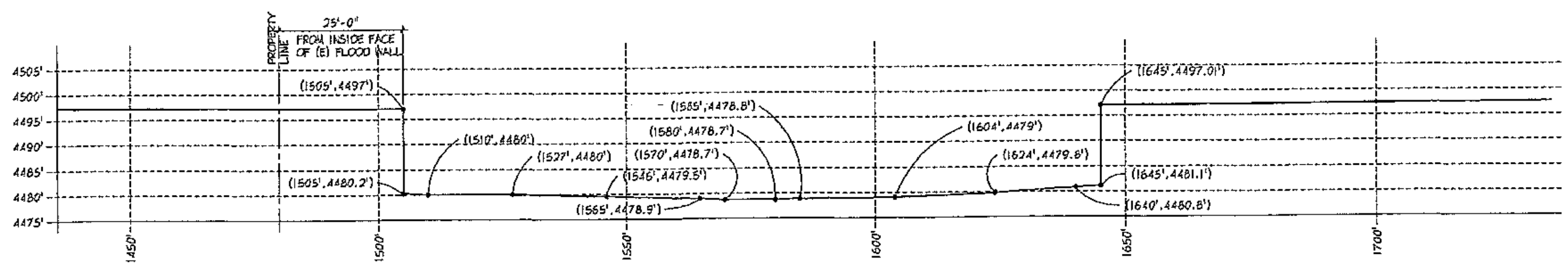


RS=52.0855 BR U VIRGINIA ST LOOKING DOWN RIVER (EAST)

SCALE: 1/16" = 1'-0"



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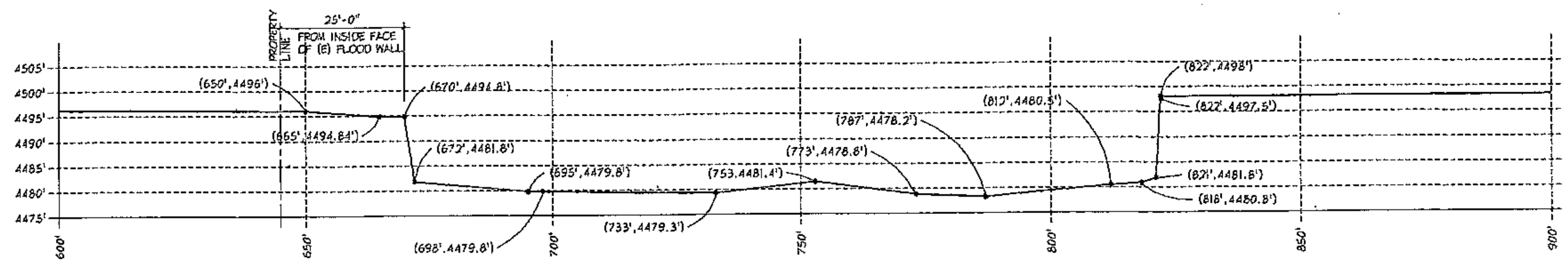

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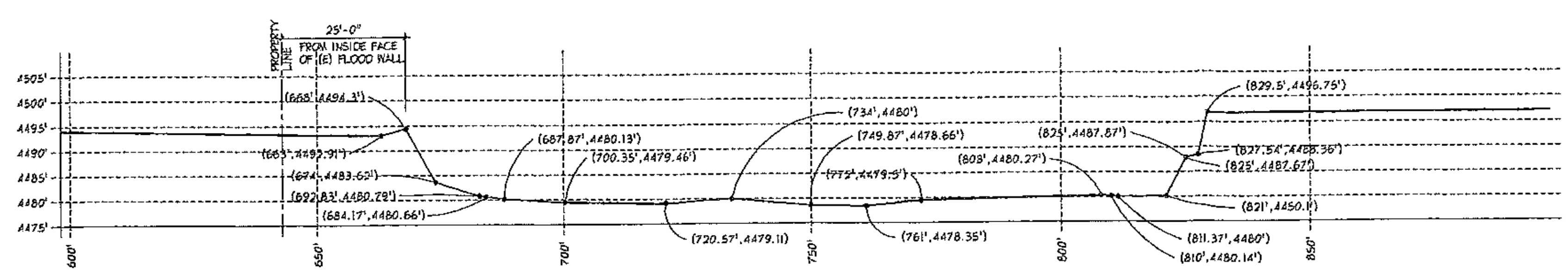
SCALE: 1/16" = 1'-0"



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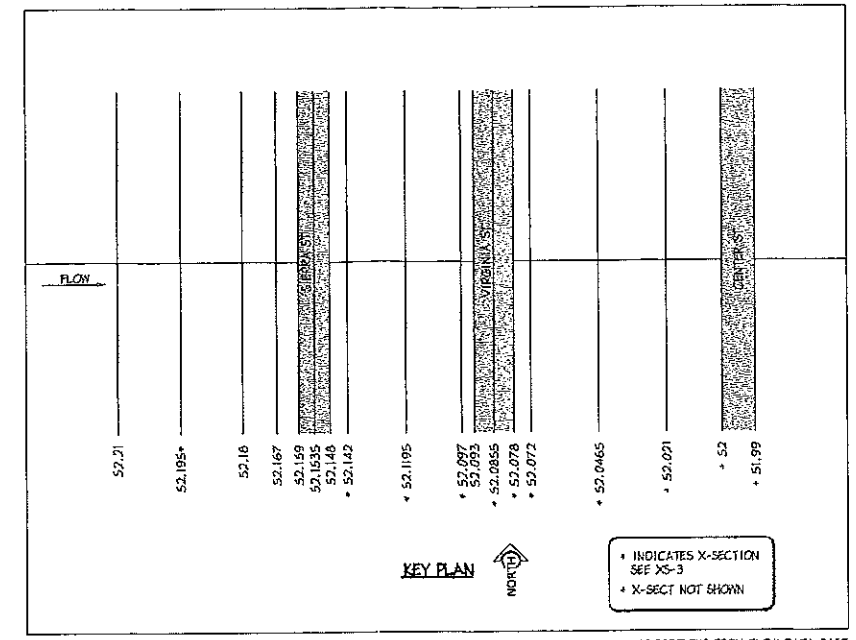
SCALE: 1/16" = 1'-0"



X-SECTIONS FROM FLOW DATA BASE

PRELIMINARY

REVISIONS	BY

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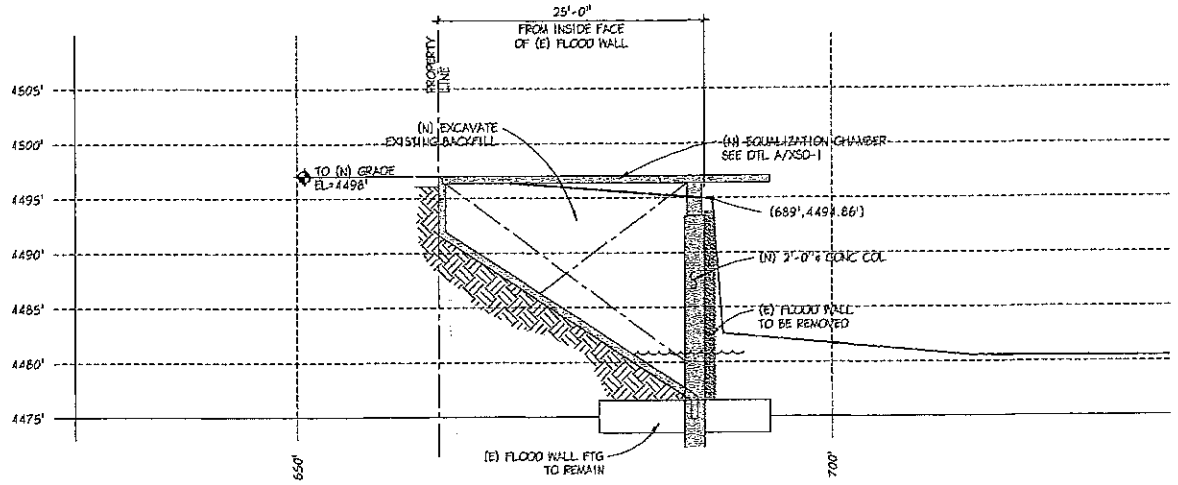
RIVERBANK-FLOOD STABILIZATION STRUCTURE

NORTH BANK TRUCKEE RIVER
RENO, NEVADA

SHEET TITLE: TOPOGRAPHIC RIVER PLANS - EXISTING CONDITIONS

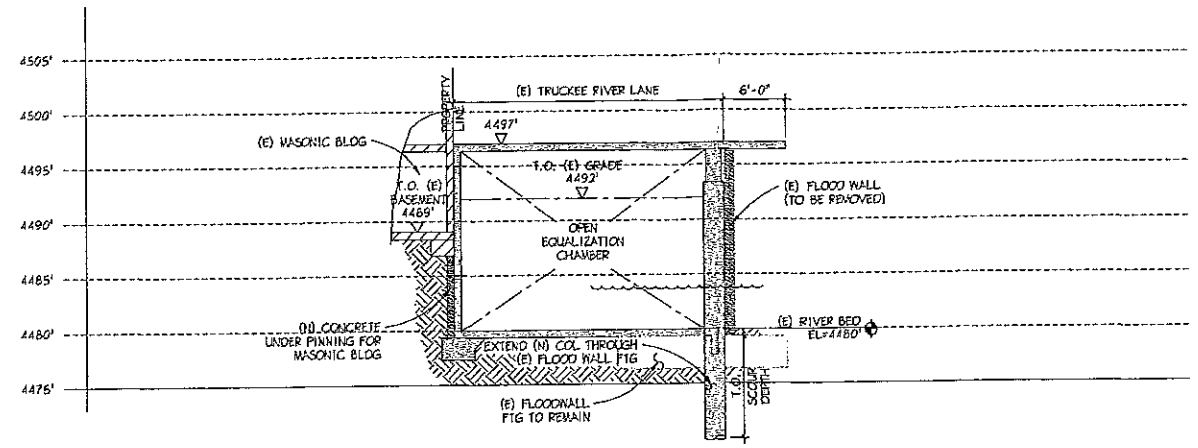
DRAWN: SAS
CHECKED: PAF
DATE: 4/15/03
SCALE: 1/16" = 1'-0"
JOB NO.: D0526
SHEET: XS-2
OF SHEETS



RS=52,142 (TRFG) LOOKING DOWN RIVER (EAST)

A

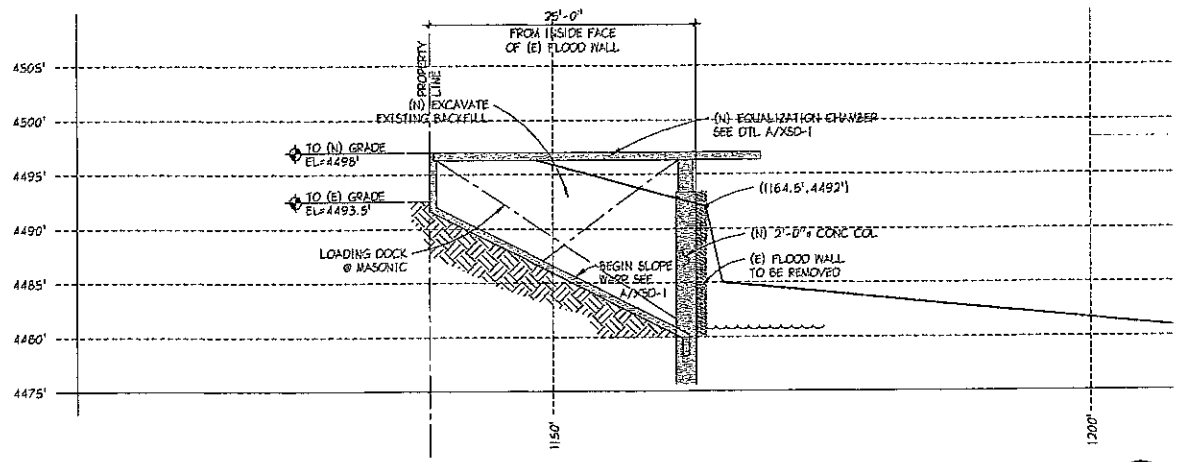
SCALE: 1/8" = 1'-0"



LOOKING DOWN RIVER (EAST)

C

SCALE: 1/8" = 1'-0"



RS=52.1195* LOOKING DOWN RIVER (EAST)

A.1

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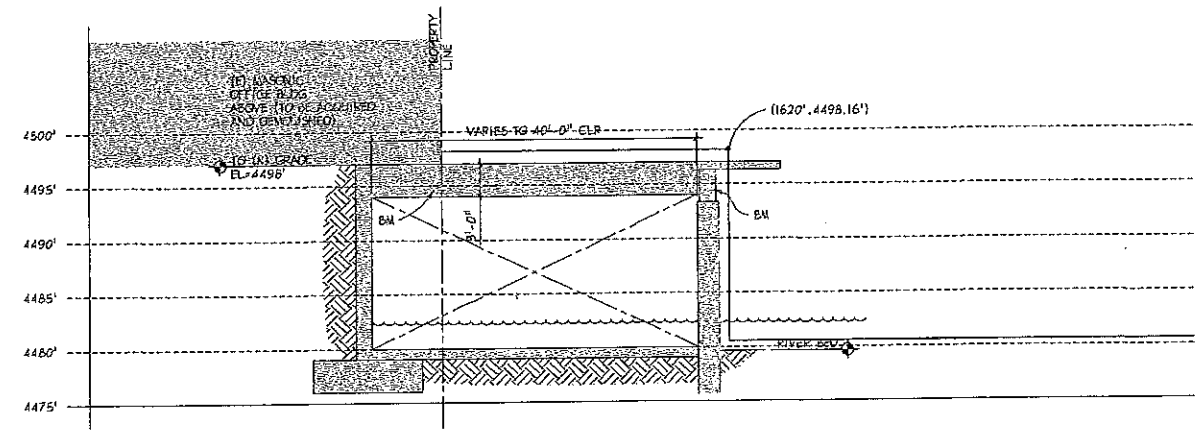
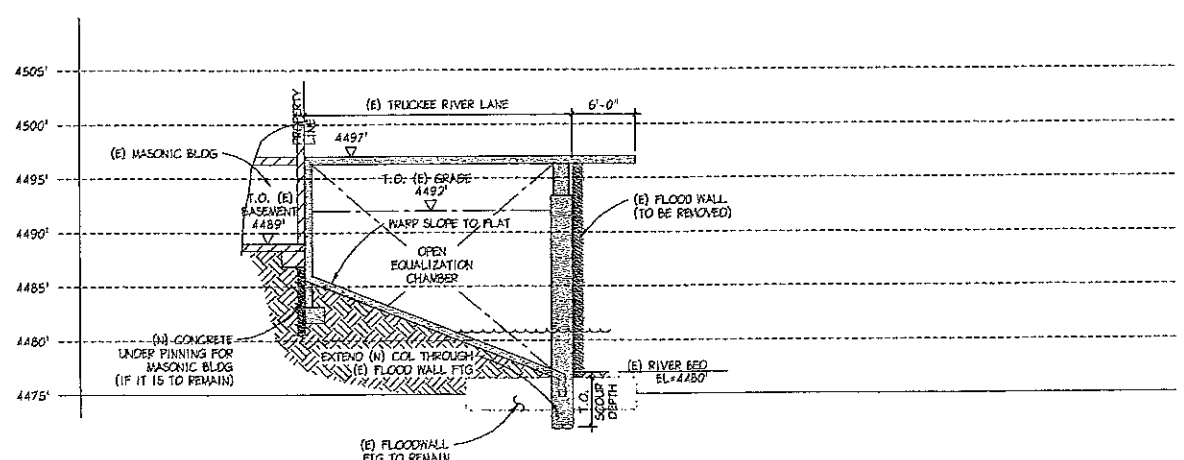


RS=52,097 (TRFG) LOOKING DOWN RIVER (EAST)

D

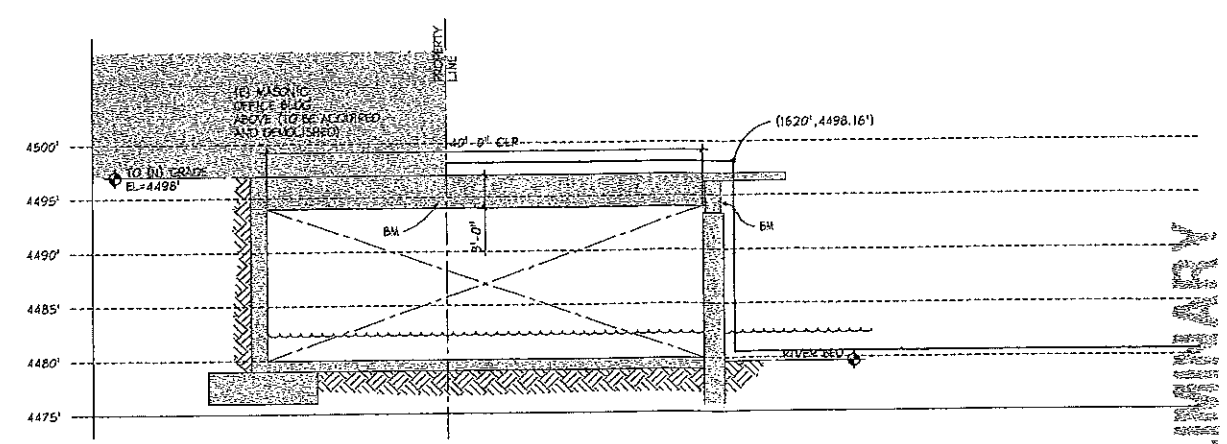
SCALE: 1/8" = 1'-0"



LOOKING DOWN RIVER (EAST)

B

SCALE: 1/8" = 1'-0"



RS=52,097 (TRFG) LOOKING DOWN RIVER (EAST)

E

SCALE: 1/8" = 1'-0"

REVISIONS	BY

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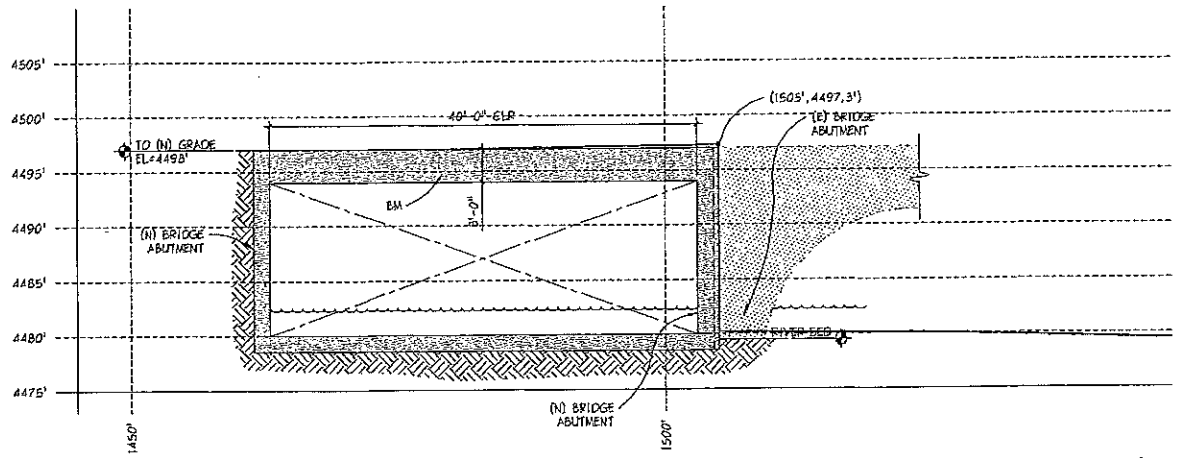
RIVERBANK-FLOOD STABILIZATION STRUCTURE

NORTH BANK TRUCKEE RIVER
RENO, NEVADA

SHEET TITLE: TOPOGRAPHICAL RIVER & NEW EQUALIZATION CHAMBER

PRELIMINARY

DRAWN	SAS
CHECKED	PAF
DATE	4/15/03
SCALE	1/8" = 1'-0"
JOB NO.	00528
SHEET	XS-3
OF	SHEETS



RS=52.0885 US VIRGINIA ST LOOKING DOWN RIVER (EAST) (F)

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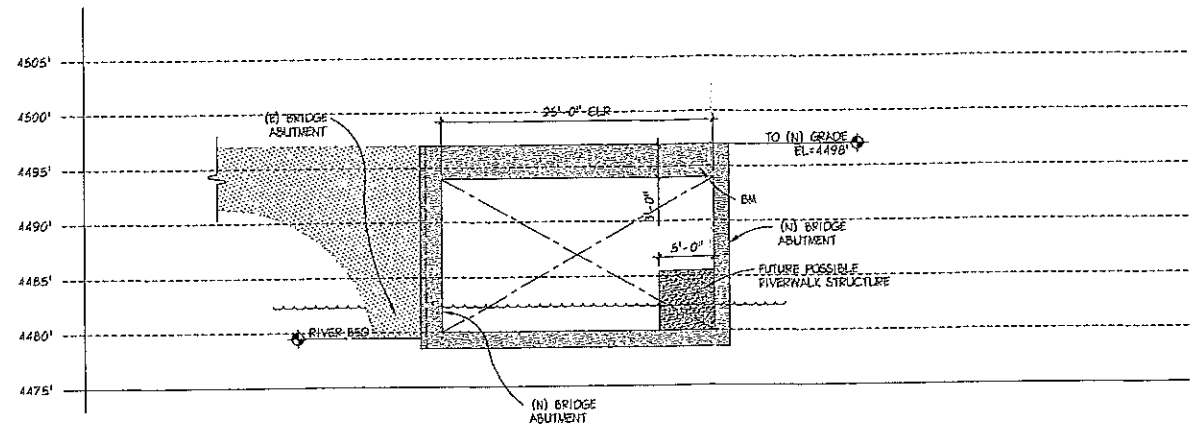
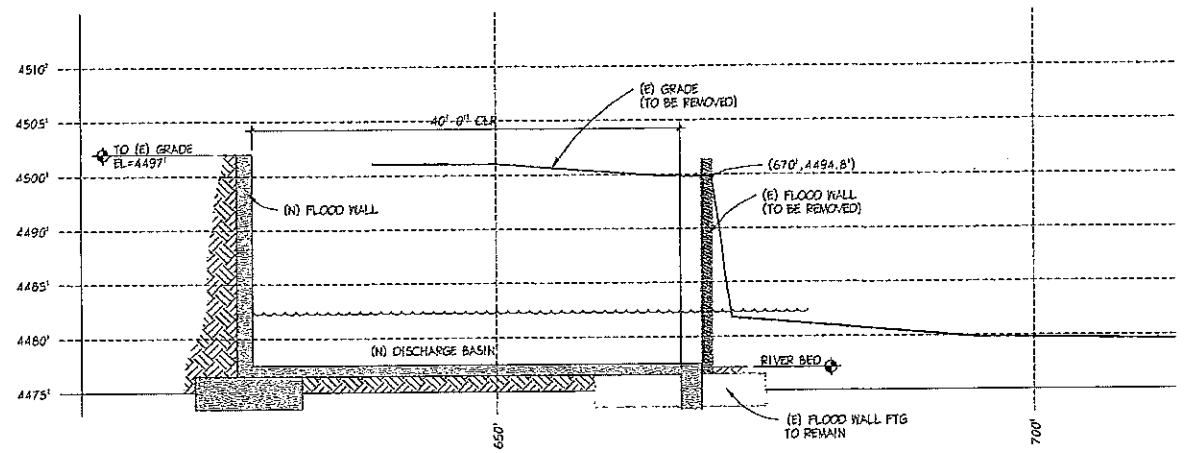


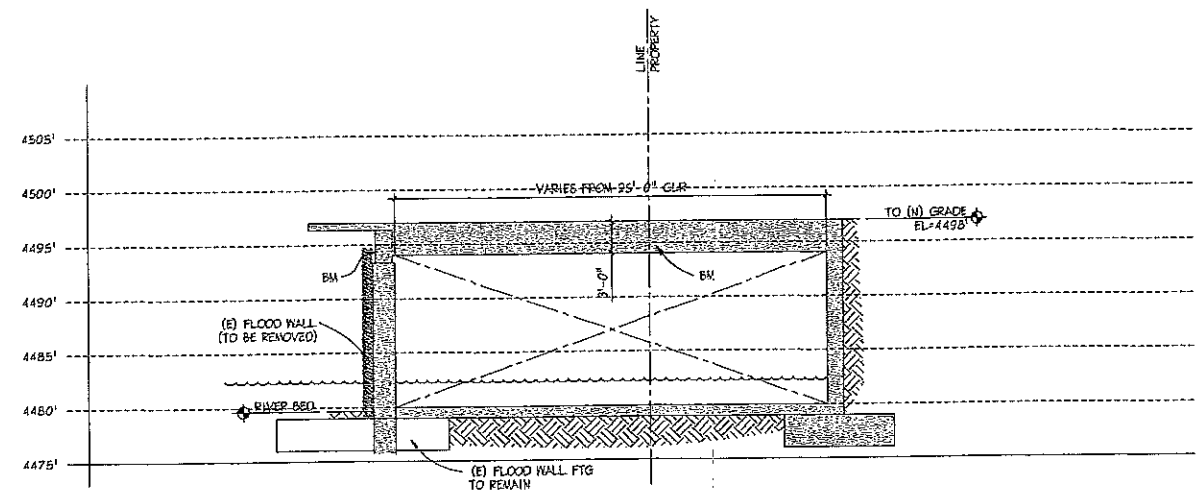
RS=52.0885 LOOKING DOWN RIVER (EAST) (H)

SCALE: 1/8" = 1'-0"



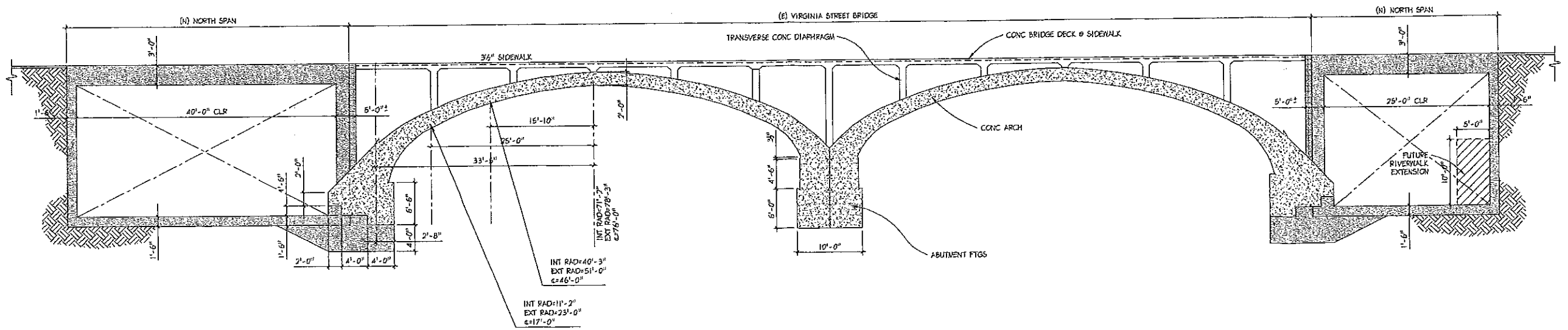
RS=52.072 (TRFG) LOOKING DOWN RIVER (EAST) (G)

SCALE: 1/8" = 1'-0"



RS=52.072 LOOKING DOWN RIVER (EAST) (J)

SCALE: 1/8" = 1'-0"



LONGITUDINAL SECTION @ VIRGINIA STREET BRIDGE-LOOKING EAST

SCALE: 1/8" = 1'-0"

PRELIMINARY

REVISIONS	BY

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775-829-9358 (Fax)
dan@ferrarishields.com

RIVERBANK-FLOOD STABILIZATION STRUCTURE
NORTH BANK TRUCKEE RIVER
RENO, NEVADA

SHEET TITLE: TOPOGRAPHICAL RIVER & NEW EQUALIZATION CHAMBER

DRAWN	SAS
CHECKED	PAF
DATE	4/15/03
SCALE	1/8" = 1'-0"
JOB NO.	00526
SHEET	XS-4
OF	SHEETS

APPENDIX B

Nimbus Engineers

May 13, 2003
Mr. Paul Ferrari, P.E.
Ferrari Shields & Associates
185 Cadillac Place
Reno, Nevada 89509

RE: Virginia Street Bridge Preservation – Preliminary Hydraulic Analysis
(Nimbus Job No. 0220)
Reno, Nevada

Dear Mr. Ferrari,

We are pleased to present the results of our hydraulic study for the Virginia Street Bridge Preservation project. The purpose of this investigation was to determine if the Virginia Street Bridge can be modified to allow the peak flow from the 100-year flood event to pass through the structure. The proposed modifications include increasing the flow area to the north and south of the existing bridge opening. Also included with these proposed changes are modifications to the existing floodwall configuration along the north bank from Sierra Street to Virginia Street. These modifications include a cantilevered walkway structure supported by piers which replaces the current vertical floodwall. The Army Corps of Engineers HEC-RAS model was used in this analysis.

The existing conditions model developed by Montgomery Watson for the Corps of Engineers report entitled *Flood Damage Reduction Alternatives Report* and for other previous analyses was obtained from the Washoe County Department of Water Resources and served as our existing conditions model. The cross sections in this report appear to have derived from the Nimbus Report dated March 1998 entitled *Hydraulic Analysis of January 1, 1997 Flood.* The 100-year flow magnitude of 20,700 cubic feet per second (cfs) used in the Montgomery Watson models was used for our analysis.

The Existing Conditions model was first modified based on selected openings on the north side of the Virginia Street Bridge. These were then modified based on constraints imposed by existing buildings and also for improved hydraulics. Several model iterations were developed and initial modeling results were analyzed with Ferrari Shields and the final constraints to geometry were established.

The final HEC-RAS models were developed by enlarging an opening north and south of the existing archway openings at the Virginia Street bridge. The northern opening was enlarged from an initial 15-foot wide opening to a maximum 45-foot wide opening in 10-foot increments. The initial models included no opening to the south, while the final three models had a 20-foot wide opening on the south side.

3785 Baker Lane, #201 • Reno, Nevada 89509 • (775) 689-8630 • Fax (775) 689-8614 • nimbus@nimbusengineers.com

General Modeling Information

Roughness values (n) from the existing conditions model were unchanged in the initial modeling effort except for the revised areas which are to be constructed of concrete. The roughness value of .013 was assigned for all new concrete surfaces. As the models were finalized, the roughness value through the existing structure was reduced from 0.033 to 0.024 to take into consideration the rehabilitation which will be done to the existing structure.

Piers will be added at a spacing of 40 feet in place of the existing floodwall to support a cantilevered walkway and a new floodwall will be placed approximately 25 feet north of the existing floodwall under the proposed conditions. The piers were added to the initial HEC-RAS models but had a negligible effect on computed water surface elevations and were omitted from the preliminary as they did not affect the relative differences. Within the final report the piers will be added to the model for completeness.

Most models considered for this preliminary report did not incorporate the cantilevered walkway and other changes in the channel geometry upstream of the Virginia Street Bridge. The final section consisting of a 35' expansion on the north and a 20' expansion on the south, which appears to be the most satisfactory configuration, was modeled with and without the revised geometry. The results indicate this change does not substantially alter the hydraulics of the model.

Results

The following table summarizes the results of the final HEC-RAS models:

Modeled Alternative	Elevation at Bridge	Freeboard	Velocity (fps) US Section	Velocity Total (Inside BR US)
Existing Conditions	4499.93	-0.73	7.24	12.94
15' expansion on north; 0' expansion on south	4499.50	-0.30	6.31	11.64
25' expansion on north; 0' expansion on south	4499.18	0.02	6.06	11.00
35' expansion on north; 0' expansion on south	4498.93	0.27	5.81	10.17
45' expansion on north; 0' expansion on south	4498.70	0.50	5.59	9.45
25' expansion on north; 20' expansion on south	4498.80	0.40	5.20	9.19
30' expansion on north; 20' expansion on south	4498.91	0.29	5.29	9.51
35' expansion on north; 20' expansion on south	4495.60	3.6	5.00	8.73
45' expansion on north; 20' expansion on south	4495.60	3.6	4.84	8.08
35' expansion on north; 20' expansion on south Revised Channel	4495.60	3.6	5.01	8.60

Note that the existing elevation of the bridge deck is 4499.2.

The results indicate a modification including a 35-foot expansion on the north and a 20-foot expansion on the south will allow adequate capacity to transmit the 100-year flood event.

We have enjoyed working with you on this important project and look forward to successfully finalizing the work. If you or the Corps require additional information, please do not hesitate to contact us.

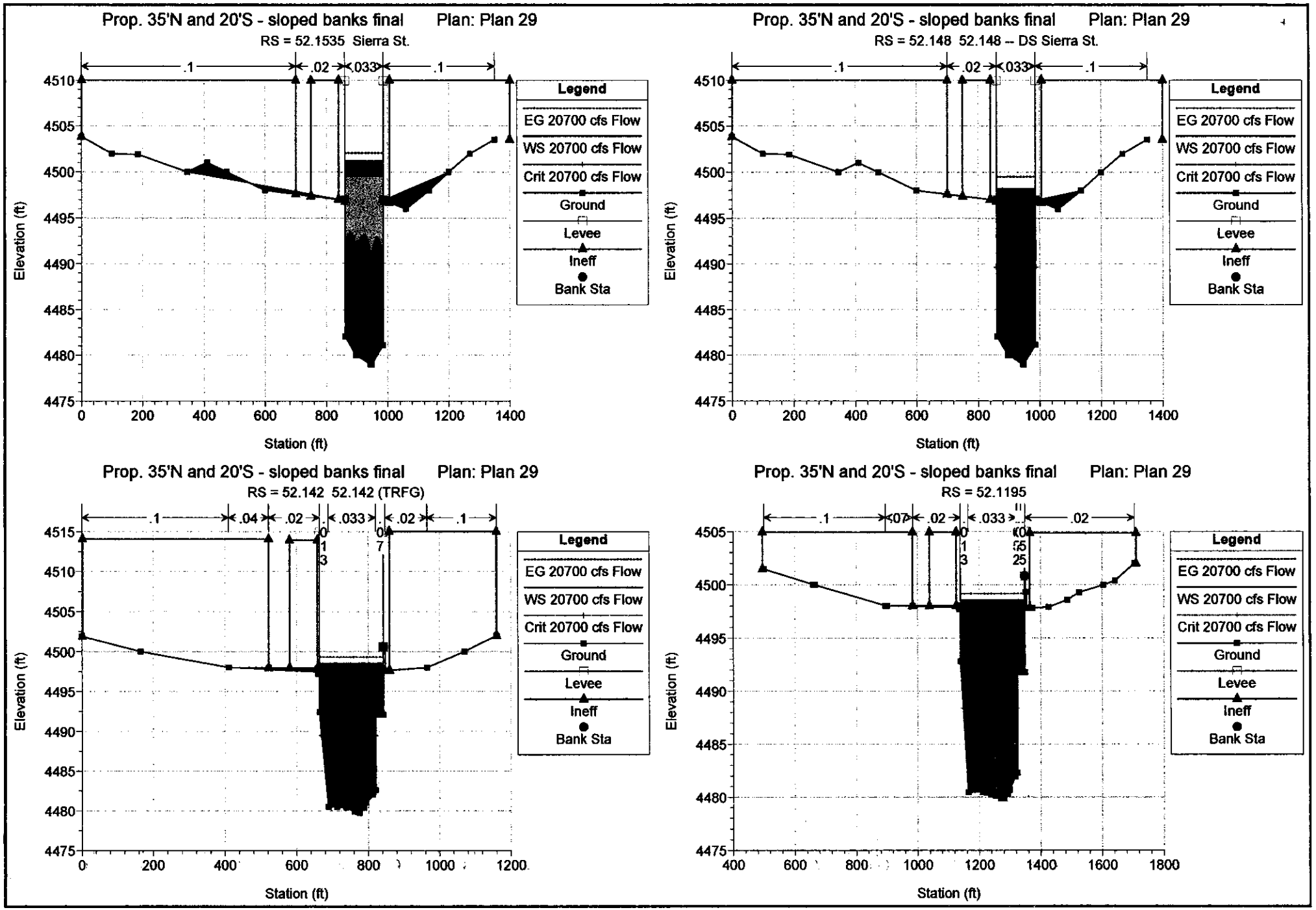
Sincerely
NIMBUS ENGINEERS

Margaret (Peggy) Bowker, P.E.
President

Thomas Goebel, P.E.
Project Engineer

REGISTERED PROFESSIONAL ENGINEER-STATE OF NEVADA
MARGARET F. BOWKER
12/01
CIVIL
No. 5252
5/14/03

PROFESSIONAL ENGINEER-STATE OF NEVADA
THOMAS M. GOEBEL
EXP 6/03
CIVIL
No. 15397
5/14/03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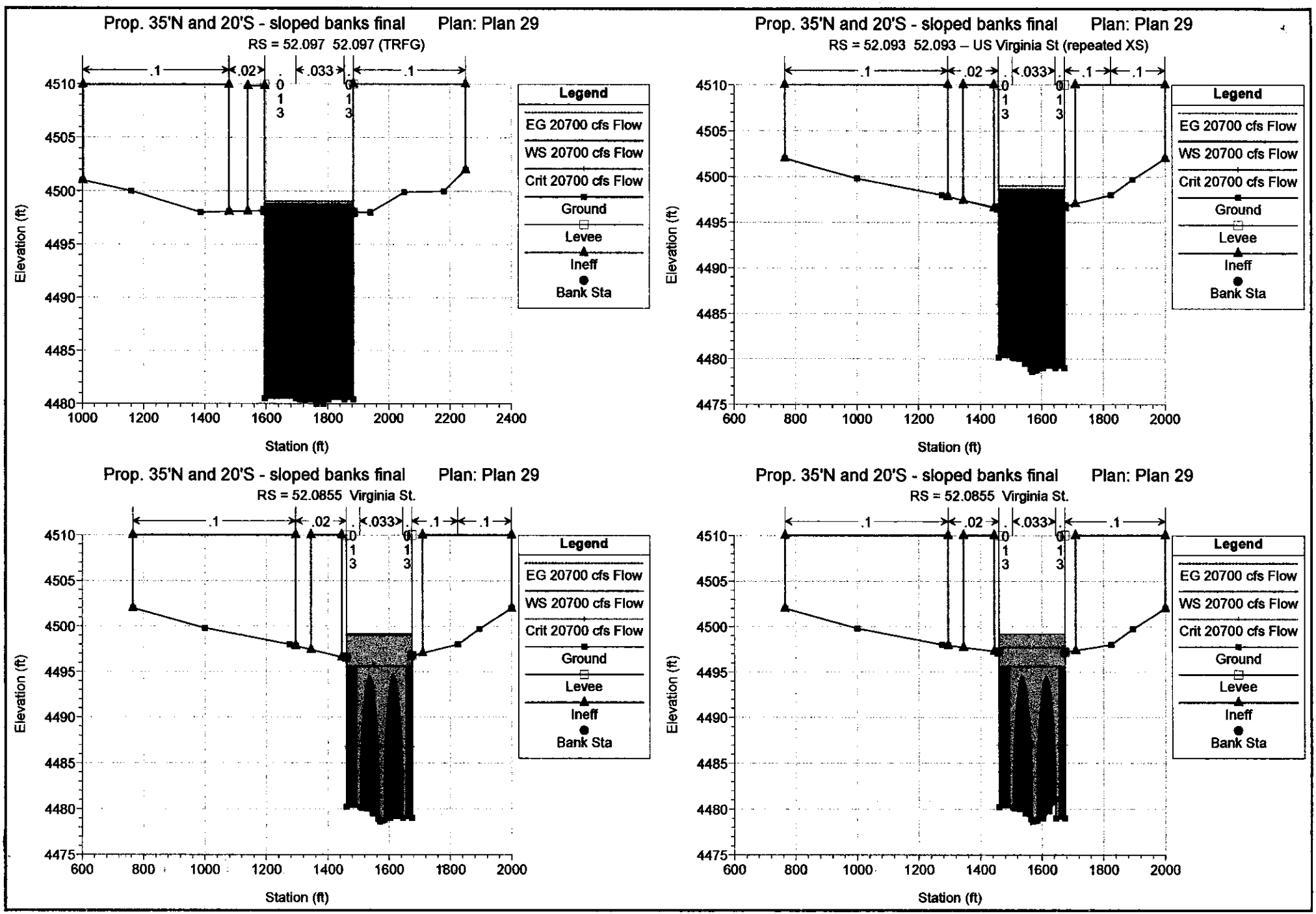
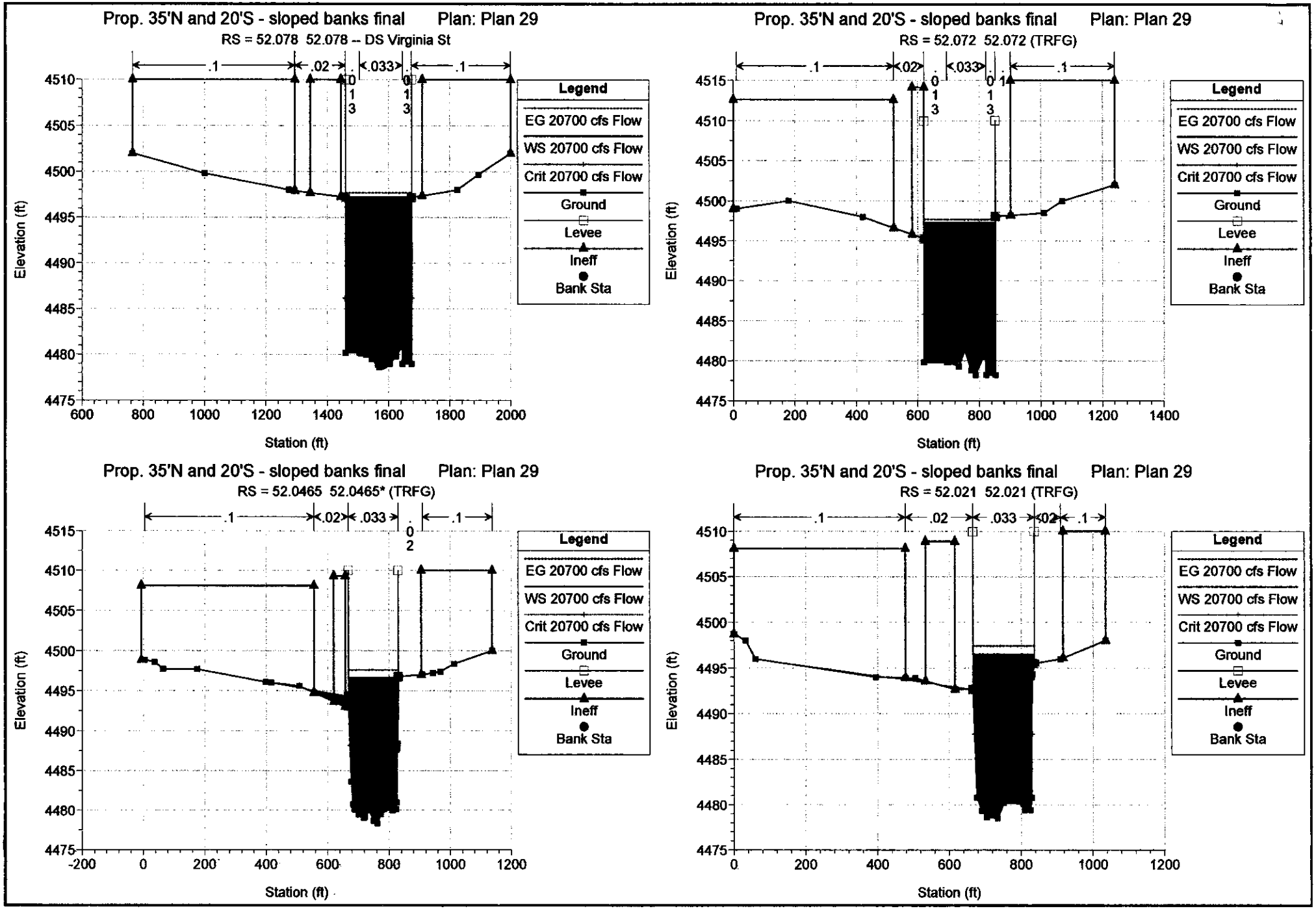
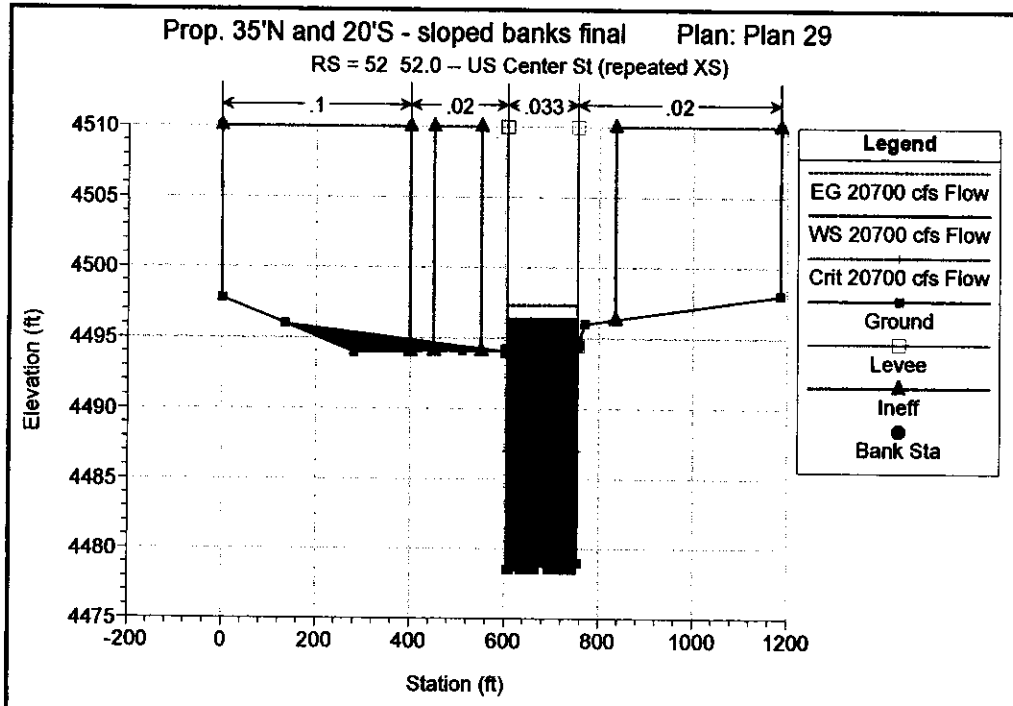
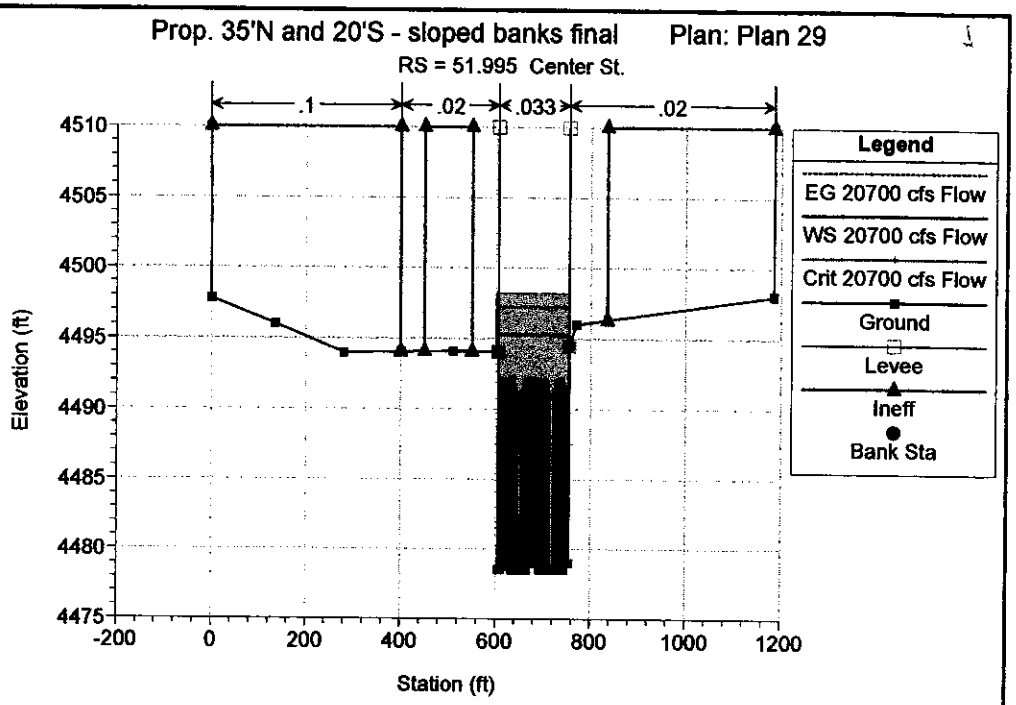
.1
.02
.033
.1
Legend
EG 20700 cfs Flow
WS 20700 cfs Flow
Crit 20700 cfs Flow
Ground
Levee
Ineff
Bank Sta
Elevation (ft)
Station (ft)
Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52.148 52.148 -- DS Sierra St.
.1
.02
.033
.1
Legend
EG 20700 cfs Flow
WS 20700 cfs Flow
Crit 20700 cfs Flow
Ground
Levee
Ineff
Bank Sta
Elevation (ft)
Station (ft)
Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52.142 52.142 (TRFG)
.1
.04
.02
.033
.02
.1
Legend
EG 20700 cfs Flow
WS 20700 cfs Flow
Crit 20700 cfs Flow
Ground
Levee
Ineff
Bank Sta
Elevation (ft)
Station (ft)
Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52.1195
.1
.07
.02
.033
.02
Legend
EG 20700 cfs Flow
WS 20700 cfs Flow
Crit 20700 cfs Flow
Ground
Levee
Ineff
Bank Sta
Elevation (ft)
Station (ft)


Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52.097 52.097 (TRFG)
Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52.093 52.093 – US Virginia St (repeated XS)
Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52.0855 Virginia St.
Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52.0855 Virginia St.
.1
.02
.033
Legend
EG 20700 cfs Flow
WS 20700 cfs Flow
Crit 20700 cfs Flow
Ground
Levee
Ineff
Bank Sta
Elevation (ft)
Station (ft)


Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52.078 52.078 -- DS Virginia St
Elevation (ft)
Station (ft)
Legend
EG 20700 cfs Flow
WS 20700 cfs Flow
Crit 20700 cfs Flow
Ground
Levee
Ineff
Bank Sta
Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52.072 52.072 (TRFG)
Elevation (ft)
Station (ft)
Legend
EG 20700 cfs Flow
WS 20700 cfs Flow
Crit 20700 cfs Flow
Ground
Levee
Ineff
Bank Sta
Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52.0465 52.0465* (TRFG)
Elevation (ft)
Station (ft)
Legend
EG 20700 cfs Flow
WS 20700 cfs Flow
Crit 20700 cfs Flow
Ground
Levee
Ineff
Bank Sta
Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52.021 52.021 (TRFG)
Elevation (ft)
Station (ft)
Legend
EG 20700 cfs Flow
WS 20700 cfs Flow
Crit 20700 cfs Flow
Ground
Levee
Ineff
Bank Sta


Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 52 52.0 -- US Center St (repeated XS)
.1
.02
.033
.02
Legend
EG 20700 cfs Flow
WS 20700 cfs Flow
Crit 20700 cfs Flow
Ground
Levee
Ineff
Bank Sta
Elevation (ft)
Station (ft)
4510
4505
4500
4495
4490
4485
4480
4475
-200
0
200
400
600
800
1000
1200


Prop. 35'N and 20'S - sloped banks final Plan: Plan 29
RS = 51.995 Center St.
.1
.02
.033
.02
Legend
EG 20700 cfs Flow
WS 20700 cfs Flow
Crit 20700 cfs Flow
Ground
Levee
Ineff
Bank Sta
Elevation (ft)
Station (ft)
4510
4505
4500
4495
4490
4485
4480
4475
-200
0
200
400
600
800
1000
1200

HEC-RAS Plan: Plan 29 River: RIVER-1 Reach: Reach-1 Profile: 20700 cfs Flow

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	59.45	20700.00	4664.60	4676.25	4674.83	4679.40	0.004996	14.29	1499.47	160.00	0.79
Reach-1	59.18	20700.00	4659.90	4669.92	4668.47	4672.11	0.004828	11.87	1745.67	226.51	0.75
Reach-1	58.64	20700.00	4641.20	4654.86	4653.26	4657.79	0.005167	13.74	1507.36	163.03	0.79
Reach-1	57.96	20700.00	4630.30	4643.46	4639.41	4645.16	0.002425	10.47	1976.48	167.01	0.54
Reach-1	57.955	Bridge									
Reach-1	57.95	20700.00	4630.50	4642.64	4639.39	4644.56	0.002981	11.13	1859.01	169.00	0.59
Reach-1	57.63	20700.00	4621.40	4637.30	4634.32	4639.40	0.003111	11.63	1798.24	179.93	0.63
Reach-1	57.22	20700.00	4613.70	4624.16	4624.16	4628.42	0.009159	16.57	1249.32	145.00	0.99
Reach-1	56.94	20700.00	4604.60	4620.31	4615.82	4621.73	0.001751	9.78	2559.87	271.00	0.49
Reach-1	56.935	Bridge									
Reach-1	56.93	20700.00	4605.10	4617.16	4615.76	4619.94	0.004629	13.56	1762.22	248.56	0.76
Reach-1	56.76	20700.00	4602.30	4612.49	4611.71	4615.25	0.005909	13.71	1822.02	272.95	0.83
Reach-1	56.28	20700.00	4591.70	4603.96	4600.82	4605.47	0.002545	9.89	2150.04	233.83	0.56
Reach-1	56.27	20700.00	4590.30	4603.28	4600.84	4605.28	0.003308	11.42	1933.85	218.17	0.64
Reach-1	55.61	20700.00	4574.10	4583.59	4583.59	4586.91	0.009490	14.63	1414.96	214.45	1.00
Reach-1	55.6	20700.00	4569.20	4582.06		4584.24	0.003806	11.88	1750.92	192.66	0.68
Reach-1	55.19	20700.00	4559.80	4571.94	4570.80	4574.74	0.005048	13.61	1751.04	256.83	0.78
Reach-1	54.87	20700.00	4552.00	4565.47	4562.74	4567.92	0.003211	12.65	1812.14	213.54	0.65
Reach-1	54.48	20700.00	4543.30	4553.39	4553.39	4557.82	0.007970	16.92	1252.60	146.22	0.99
Reach-1	54.06	20700.00	4531.30	4544.38		4545.72	0.002346	9.42	2447.49	297.80	0.54
Reach-1	53.91	20700.00	4527.60	4540.30	4538.51	4543.13	0.004247	13.58	1646.23	194.01	0.73
Reach-1	53.42	20700.00	4514.80	4524.13	4524.13	4527.69	0.008879	15.13	1367.99	191.05	1.00
Reach-1	53.10	20700.00	4500.80	4517.66	4512.85	4519.33	0.002125	10.39	1992.21	160.00	0.52
Reach-1	52.94	20700.00	4496.66	4516.35	4508.89	4517.56	0.001568	8.85	2338.86	187.33	0.44
Reach-1	52.93	20700.00	4496.30	4516.05	4507.52	4517.40	0.001318	9.45	2190.48	120.00	0.39
Reach-1	52.925	Bridge									
Reach-1	52.92	20700.00	4496.30	4511.93	4507.52	4514.24	0.002698	12.20	1696.71	120.00	0.57
Reach-1	52.9	20700.00	4497.70	4511.59	4508.79	4513.90	0.004065	12.17	1700.25	161.86	0.66
Reach-1	52.86	20700.00	4497.71	4510.90	4507.88	4513.01	0.003884	11.66	1775.43	176.30	0.65
Reach-1	52.82	20700.00	4496.46	4510.20	4507.39	4512.32	0.003355	11.69	1770.51	180.99	0.66
Reach-1	52.815	Bridge									
Reach-1	52.81	20700.00	4496.68	4509.08	4507.00	4511.63	0.004026	12.81	1616.49	163.73	0.72
Reach-1	52.76	20700.00	4494.80	4508.32	4505.98	4510.69	0.003657	12.35	1676.32	167.67	0.69
Reach-1	52.72	20700.00	4494.50	4507.91	4504.79	4509.85	0.003020	11.19	1850.44	179.35	0.61
Reach-1	52.67	20700.00	4492.45	4507.07	4504.78	4509.04	0.003274	11.26	1838.89	209.57	0.67
Reach-1	52.63	20700.00	4490.50	4506.48	4502.90	4508.36	0.003029	11.00	1881.14	185.95	0.61
Reach-1	52.6	20700.00	4491.50	4505.21	4502.88	4507.59	0.004199	12.40	1669.00	175.73	0.71
Reach-1	52.58	20700.00	4490.80	4505.42	4501.81	4507.03	0.002413	10.17	2034.41	194.04	0.55
Reach-1	52.56	20700.00	4490.50	4505.29	4500.68	4506.75	0.002025	9.69	2136.01	194.59	0.52
Reach-1	52.52	20700.00	4491.48	4504.08	4500.83	4506.14	0.003088	11.52	1797.30	167.76	0.62
Reach-1	52.436	20700.00	4490.70	4503.46	4499.01	4504.89	0.001886	9.60	2157.17	185.00	0.50
Reach-1	52.38	20700.00	4489.82	4503.42	4497.67	4504.28	0.001100	7.43	2787.06	234.00	0.38
Reach-1	52.335	20700.00	4490.50	4503.40	4497.85	4503.88	0.001297	5.53	3739.84	371.00	0.31
Reach-1	52.326	20700.00	4483.80	4503.45	4496.95	4503.78	0.000805	4.62	4480.88	422.00	0.25
Reach-1	52.317	20700.00	4483.70	4503.31	4494.51	4503.63	0.003374	4.55	4548.85	519.20	0.27
Reach-1	52.309	Mult Open									
Reach-1	52.301	20700.00	4483.70	4502.65	4494.41	4503.05	0.005003	5.07	4086.67	519.19	0.32
Reach-1	52.292	20700.00	4482.40	4502.65	4495.56	4502.94	0.000719	4.31	4797.61	447.00	0.23
Reach-1	52.267	20700.00	4482.40	4502.53	4495.25	4502.85	0.000684	4.50	4601.50	417.00	0.24
Reach-1	52.21	20700.00	4480.90	4502.34	4490.59	4502.66	0.001044	4.59	4509.42	257.00	0.19
Reach-1	52.195*	20700.00	4479.60	4502.01	4490.30	4502.49	0.001483	5.61	3691.83	198.00	0.23
Reach-1	52.18	20700.00	4478.30	4501.39	4490.92	4502.32	0.000782	7.73	2679.44	139.00	0.31
Reach-1	52.167	20700.00	4478.60	4501.16	4490.93	4502.25	0.000848	8.38	2470.65	129.99	0.34
Reach-1	52.159	20700.00	4479.00	4501.22	4489.59	4502.17	0.000740	7.83	2643.48	126.00	0.30
Reach-1	52.1535	Bridge									
Reach-1	52.148	20700.00	4479.00	4498.19	4489.63	4499.50	0.001187	9.18	2256.02	126.00	0.38
Reach-1	52.142	20700.00	4479.70	4498.48	4489.47	4499.33	0.001002	7.39	2802.84	178.99	0.33
Reach-1	52.1195	20700.00	4479.85	4498.56	4488.40	4499.15	0.000652	6.19	3345.21	209.00	0.27
Reach-1	52.097	20700.00	4480.00	4498.79	4485.80	4499.03	0.000066	3.89	5322.19	289.00	0.16
Reach-1	52.093	20700.00	4478.60	4498.62	4485.99	4499.01	0.000173	5.01	4130.00	215.00	0.20
Reach-1	52.0855	Bridge									
Reach-1	52.078	20700.00	4478.60	4497.24	4486.17	4497.70	0.000230	5.46	3794.15	215.00	0.23

HEC-RAS Plan: Plan 29 River: RIVER-1 Reach: Reach-1 Profile: 20700 cfs Flow (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	52.072	20700.00	4478.20	4497.28	4485.80	4497.67	0.000172	5.03	4114.39	232.00	0.21
Reach-1	52.0465	20700.00	4478.35	4496.58	4488.18	4497.57	0.000906	7.97	2596.78	161.50	0.35
Reach-1	52.021	20700.00	4478.50	4496.52	4487.79	4497.42	0.000855	7.64	2710.62	171.00	0.34
Reach-1	52	20700.00	4478.50	4496.38	4486.99	4497.33	0.000848	7.81	2651.15	149.01	0.33
Reach-1	51.995	Bridge									
Reach-1	51.99	20700.00	4478.50	4495.45	4487.00	4496.50	0.001041	8.22	2518.01	154.00	0.36
Reach-1	51.945*	20700.00	4476.67	4495.31	4486.38	4496.25	0.000807	7.75	2672.69	160.00	0.33
Reach-1	51.92	20700.00	4475.70	4495.25	4485.51	4496.14	0.000747	7.56	2738.78	159.99	0.32
Reach-1	51.915	Bridge									
Reach-1	51.91	20700.00	4474.60	4490.27	4485.10	4491.95	0.002023	10.38	1994.12	152.46	0.51
Reach-1	51.895*	20700.00	4474.50	4489.75	4485.63	4491.76	0.002620	11.38	1818.43	149.67	0.58
Reach-1	51.88	20700.00	4474.40	4489.19	4485.89	4491.53	0.003225	12.28	1685.70	145.40	0.64
Reach-1	51.85	20700.00	4470.93	4488.63	4484.88	4491.02	0.003107	12.41	1668.23	138.37	0.63
Reach-1	51.81	20700.00	4471.93	4488.33	4484.03	4490.30	0.002542	11.27	1837.07	151.84	0.57
Reach-1	51.77	20700.00	4473.64	4488.08	4484.25	4489.55	0.003603	9.72	2129.03	292.98	0.64
Reach-1	51.73	20700.00	4473.10	4485.19	4483.83	4488.44	0.005500	14.48	1430.03	145.27	0.81
Reach-1	51.725	Bridge									
Reach-1	51.72	20700.00	4473.20	4483.86	4483.86	4487.79	0.008779	15.90	1301.66	164.28	1.00
Reach-1	51.71	20700.00	4470.95	4483.20	4482.60	4486.72	0.007179	15.06	1374.65	163.32	0.91
Reach-1	51.69	20700.00	4472.40	4484.21	4481.01	4485.68	0.002537	9.73	2126.96	219.99	0.55
Reach-1	51.685	Bridge									
Reach-1	51.68	20700.00	4472.40	4483.86	4481.01	4485.44	0.002863	10.10	2048.86	219.99	0.58
Reach-1	51.67	20700.00	4469.86	4483.35	4479.98	4485.25	0.002859	11.06	1870.90	176.72	0.60
Reach-1	51.64	20700.00	4468.50	4480.93	4479.51	4484.43	0.005656	15.01	1379.51	132.38	0.82
Reach-1	51.61	20700.00	4464.93	4481.10	4477.37	4483.29	0.002947	11.86	1744.75	149.13	0.61
Reach-1	51.57	20700.00	4465.80	4480.76	4477.09	4482.74	0.002776	11.29	1832.83	160.88	0.59
Reach-1	51.55	20700.00	4466.60	4480.85	4476.82	4482.31	0.002225	9.70	2135.08	203.54	0.53
Reach-1	51.54	20700.00	4463.30	4480.89	4475.82	4482.14	0.001684	8.97	2307.30	198.99	0.46
Reach-1	51.51	20700.00	4466.80	4479.99	4476.35	4481.76	0.002655	10.69	1935.82	181.61	0.58
Reach-1	51.47	20700.00	4466.10	4479.80	4475.17	4481.14	0.002079	9.28	2231.27	215.98	0.51
Reach-1	51.46	20700.00	4465.40	4480.11	4473.26	4480.89	0.000890	7.10	2917.25	300.76	0.40
Reach-1	51.44	Bridge									
Reach-1	51.42	20700.00	4465.40	4476.86	4473.28	4478.41	0.002520	9.99	2071.91	195.00	0.54
Reach-1	51.41	20700.00	4464.10	4476.97	4472.66	4478.19	0.001852	8.87	2333.46	220.22	0.48
Reach-1	51.38	20700.00	4462.40	4475.08	4472.66	4477.63	0.004026	12.82	1614.15	153.11	0.70
Reach-1	51.34	20700.00	4461.10	4474.31	4471.50	4476.84	0.003594	12.78	1620.24	144.01	0.67
Reach-1	51.31	20700.00	4456.90	4473.09	4470.05	4476.19	0.003884	14.15	1463.24	111.00	0.69
Reach-1	51.27	20700.00	4456.89	4472.92	4469.63	4475.20	0.003231	12.11	1708.69	150.67	0.63
Reach-1	51.23	20700.00	4457.73	4469.59	4469.59	4474.05	0.008331	16.94	1221.65	134.89	0.99
Reach-1	51.18	20700.00	4457.00	4468.69	4466.14	4470.83	0.003571	11.76	1760.13	177.26	0.66
Reach-1	51.17	20700.00	4452.60	4469.15	4463.39	4470.47	0.001599	9.22	2245.23	172.00	0.45
Reach-1	51.15	20700.00	4452.25	4469.17	4462.47	4470.23	0.001322	8.28	2499.04	203.51	0.42
Reach-1	51.1445	Bridge									
Reach-1	51.139	20700.00	4452.25	4468.97	4462.47	4470.07	0.001390	8.42	2458.45	203.04	0.43
Reach-1	51.13	20700.00	4450.48	4468.89	4460.80	4469.88	0.001120	7.98	2594.89	195.10	0.39
Reach-1	51.08	20700.00	4448.40	4467.13	4461.62	4469.31	0.002413	11.84	1748.10	113.00	0.53
Reach-1	51.07	20700.00	4451.16	4463.99	4463.99	4468.82	0.008273	17.64	1173.66	119.74	0.99
Reach-1	51.04	20700.00	4448.75	4461.90	4461.90	4466.58	0.008252	17.35	1192.86	125.67	0.99
Reach-1	51	20700.00	4448.98	4460.79	4459.72	4464.11	0.005987	14.63	1415.37	152.40	0.85
Reach-1	50.96	20700.00	4447.23	4460.16	4458.42	4462.90	0.004788	13.28	1558.64	164.55	0.76
Reach-1	50.92	20700.00	4444.90	4460.15	4456.43	4461.94	0.002603	10.75	1926.31	175.05	0.57
Reach-1	50.91	20700.00	4444.90	4459.04	4456.63	4461.55	0.003966	12.71	1629.19	153.86	0.69
Reach-1	50.88	20700.00	4444.80	4456.33	4456.33	4460.60	0.008502	16.58	1248.75	145.27	1.00
Reach-1	50.84	20700.00	4444.44	4456.48	4454.45	4458.54	0.004384	11.50	1799.58	224.47	0.72
Reach-1	50.83	20700.00	4445.40	4456.23	4454.45	4458.30	0.004416	11.56	1791.19	222.18	0.72
Reach-1	50.81	20700.00	4443.93	4456.22	4453.80	4457.71	0.003430	9.80	2112.71	277.68	0.63
Reach-1	50.77	20700.00	4441.71	4456.31	4450.62	4457.07	0.001246	6.98	2963.62	303.18	0.39
Reach-1	50.72	20700.00	4436.40	4454.24	4451.50	4456.39	0.003711	11.76	1759.75	184.83	0.67
Reach-1	50.69	20700.00	4438.96	4454.02	4449.99	4455.86	0.002975	10.91	1896.54	186.61	0.60
Reach-1	50.66	20700.00	4436.20	4452.65	4450.17	4455.19	0.004528	12.77	1621.47	171.57	0.73
Reach-1	50.65	20700.00	4436.63	4452.86	4448.72	4454.63	0.002365	10.68	1938.51	159.20	0.54
Reach-1	50.64	Bridge									

HEC-RAS Plan: Plan 29 River: RIVER-1 Reach: Reach-1 Profile: 20700 cfs Flow (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Reach-1	50.63	20700.00	4436.63	4451.27	4448.72	4453.61	0.003678	12.28	1685.33	159.20	0.67
Reach-1	50.6056*	20700.00	4436.32	4450.91	4448.28	4453.10	0.003508	11.86	1745.16	172.13	0.66
Reach-1	50.5813*	20700.00	4436.01	4450.52	4447.86	4452.66	0.003582	11.72	1765.51	182.29	0.66
Reach-1	50.557	20700.00	4435.70	4450.07	4447.45	4452.23	0.003667	11.78	1757.27	182.72	0.67
Reach-1	50.54	20700.00	4433.30	4449.93	4445.58	4451.91	0.002443	11.28	1834.58	141.00	0.55

Plan: Plan 29 RIVER-1 Reach-1 RS: 52.0855 Profile: 20700 cfs Flow

E.G. US. (ft)	4499.01	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	4498.62	E.G. Elev (ft)	4499.01	4497.70
Q Total (cfs)	20700.00	W.S. Elev (ft)	4495.60	4495.60
Q Bridge (cfs)	20700.00	Crit W.S. (ft)	4486.79	4487.02
Q Weir (cfs)		Max Chl Dpth (ft)	16.85	16.85
Weir Sta Lft (ft)		Vel Total (ft/s)	8.60	8.74
Weir Sta Rgt (ft)		Flow Area (sq ft)	2406.74	2368.20
Weir Submerg		Froude # Chl	0.02	0.02
Weir Max Depth (ft)		Specif Force (cu ft)	27517.05	26993.03
Min El Weir Flow (ft)	4499.21	Hydr Depth (ft)	2464502.00	2425032.00
Min El Prs (ft)	4495.60	W.P. Total (ft)	465.66	463.62
Delta EG (ft)	1.31	Conv. Total (cfs)	411114.7	402363.6
Delta WS (ft)	1.38	Top Width (ft)		
BR Open Area (sq ft)	2368.20	Frctn Loss (ft)		
BR Open Vel (ft/s)	8.74	C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.82	0.84
Br Sel Method	Press Only	Power Total (lb/ft s)	7.04	7.38

Errors Warnings and Notes

Note:	Momentum answer is not valid if the water surface is above the low chord or if there is weir
	flow. The momentum answer has been disregarded.
Note:	The downstream water surface is above the minimum elevation for pressure flow. The orifice
	equations were used for pressure flow.

APPENDIX C

Draft Report

Historic Virginia Street Bridge Over the Truckee River

Structure No. B178

Prepared for:

Ferrari Shields & Associates
Consulting Structural & Civil Engineer
185 Cadillac Place
Reno, Nevada 89509

Prepared by:

Cannon & Associates,
a Division of TranSystems Corporation
406 South Fourth Avenue
Tucson, Arizona 85701
P605030013

Date: May 14, 2003

TABLE OF CONTENTS

1.0 GENERAL

The Historic Virginia Street Bridge was built in 1906 and is a two span earth-filled reinforced concrete barrel arch having two spans of 66'-10" and an overhaul length of about 150 feet. The width of the bridge is 80'-8" with a clear roadway width of 56 feet and 12'-0" wide sidewalks on each side of the bridge. The bridge carries four traffic lanes, two in each direction.

Virginia Street is classified as an "other principal arterial" with an average daily traffic count in 1996 of about 15,000 vehicles per day. The bridge has a sufficiency rating of 24.2 which makes it eligible for Bridge Replacement Funds.

The Truckee River flows under the Virginia Street Bridge and has a 100 year flow of 21,000 CFS. The bridge has a capacity of 16,000 CFS which is about 5,000 CFS less than the 100 year flow. In recent storm events, flows went around the bridge causing flooding to the area. The purpose of this study is to increase the flow capacity under the Virginia Street Bridge from 16,000 CFS to 21,000 CFS. This study includes lengthening the bridge to pass the 100 year flow event with about four feet freeboard as well as the rehabilitation of the bridge.

2.0 HISTORIC BRIDGE CONDITION ASSESSMENT

The condition assessment prepared by CH2M HILL concluded that the bridge currently has adequate load-carrying capacity, but the ability of the concrete to resist freeze-thaw, erosion and impact are poor. The deterioration of the bridge is due to freeze-thaw, leaching of cementitious materials, carbonation of the concrete at the surface, and erosion and impact. Corrosion of the reinforcing steel and load settlement induced strains are not considered as being significant factors.

2.1 Structural Capacity of Arch

The results of a structural analysis indicate the earth-filled arch can support the AASHTO HS20 truck loading when considering the observed deteriorated condition of the arch barrels with the assumption that about 3 inches of the arch thickness is ineffective, the analysis indicated that it is possible to remove and repair unsound concrete without removing the earth fill.

2.2 Material Condition

The condition of the concrete was found to be relatively good, given the age of the bridge. Concrete strengths are lower than are expected in modern structures, but this was due to the unsophisticated mixing and placing practices of the time rather than a result of aging and deterioration. Poor compaction at construction joints has resulted in honeycombing. This honeycombing exacerbated by freeze-thaw, erosion and leaching of cementitious materials results in a surface layer of softness

away from the expansion joints. The surface softness is expected to extend to depths of about 2 to 4 inches.

Chloride contents are low, indicating that active corrosion of embedded reinforcing steel is not likely.

Concrete strengths vary with strengths from 2,470 psi to 3,340 psi.

2.2.1 Existing coating

The vertical surfaces of the spandrel walls and rails are covered with a cementitious coating. The composition of the coating is unknown. The coating is not adhering uniformly to the concrete surfaces.

2.2.2 Arch Rib Delamination

The arch rib has some evidence of delamination possible as a result of freeze-thaw damage and is not suspected to be the result of reinforced steel corrosion.

2.2.3 Arch Surface Delamination

Extensive scaling of the concrete surface was observed at the bottom surface of the arch. The deterioration appears to be due to four primary environmental factors.

2.2.4 Cracking & Scaling of west Spandrel Wall and Arch Fascia

The west spandrel wall and the corresponding arch fascia are severely cracked.

2.2.5 Bridge Barrier Railing

The concrete portions of the bridge railing are heavily cracked and deteriorated. The iron work of the existing railing and the light fixtures are in generally good condition with minimal exterior surface corrosion.

2.2.6 Moisture Control

The reduction in the freeze-thaw deterioration of the arch barrels is needed. This can be accomplished by control of the moisture. A drain blanket at the upper surface of the arch along with reconstruction of the arch-fill drains will be needed.

2.3 Flow Capacity of Bridge

The Historic Virginia Street Bridge can pass 16,000 CFS under the bridge which is about 5,000 CFS less than the required 21,000 CFS with freeboard. Hydraulic studies determined that additions of a 40 feet wide opening on the north side of the bridge along with a 25 feet wide opening on the south side of the bridge are sufficient to pass the 100 year flow event of 21,000 CFS under the bridge with a freeboard of about four feet. (See Hydraulic Report of additional information.)

3.0 RECOMMENDATIONS

The following recommendations are provided to rehabilitate and increase the flow capacity of the Historic Virginia Street Bridge:

1. That the Historic Bridge arch barrel be rehabilitated including surface repair, delamination repair, and moisture control.

2. That the west spandrel walls be replaced with new concrete walls that have the same appearance as the Historic Bridge spandrel walls. The east spandrel walls will probably not need to be replaced, but need further study.

3. That the pier ends be rehabilitated using partial depth replacement of sections of the pier walls.

4. That the concrete barrier rail be replaced with a near replica of the existing concrete barrier rail and the steel rails be repaired, painted, and reused on the bridge.

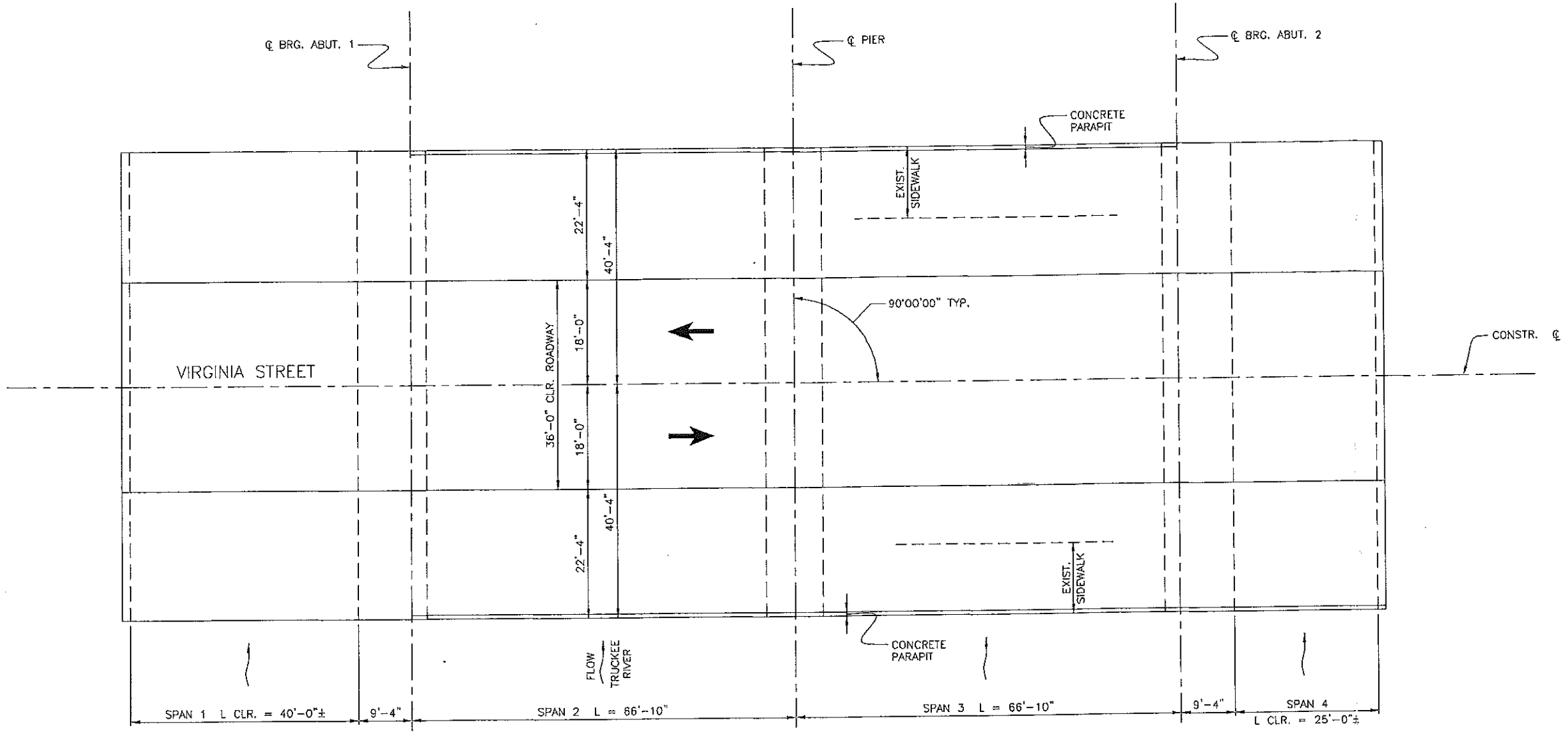
5. That the north end of the bridge be extended by providing a 40' wide box type structure and that the south end of the bridge be extended by providing a 25' wide box structure to pass the 100 year flows with about 4'-0" freeboard. (See Plan Sheet B1, page 4)

6. That the roadway width be modified and side walls redone to provide one lane in each direction along with wider side walls. (See Plan Sheet B2, page 5)

7. The existing utility on the west fascia of the bridge be relocated under the roadway of the bridge.

8. That Virginia Street remains closed while rehabilitation work is being done and that all pedestrian and vehicular traffic be routed to other streets in the City.

9. The abutment footings be deepened since they now act as a pier and the abutment and pier foundation needs scour protection. This needs further evaluation.



LOCATION PLAN

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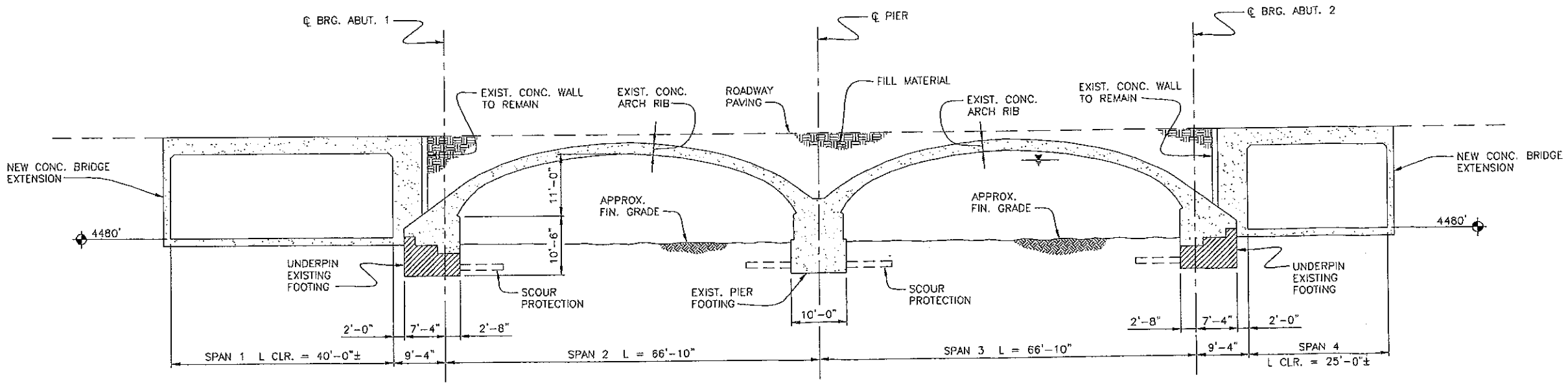

SECTION AT CONSTRUCTION CENTERLINE

SCALE: 1"=10'-0"

REVISIONS	BY

Cannon & Associates
406 South Fourth Avenue
Tucson, AZ 85701
(520) 792-2200
a division of
TRANSYSTEMS CORPORATION

HISTORIC VIRGINIA STREET BRIDGE REHAB.

OVER TRUCKEE RIVER
RENO, NEVADA

SHEET TITLE: PLAN AND SECTION

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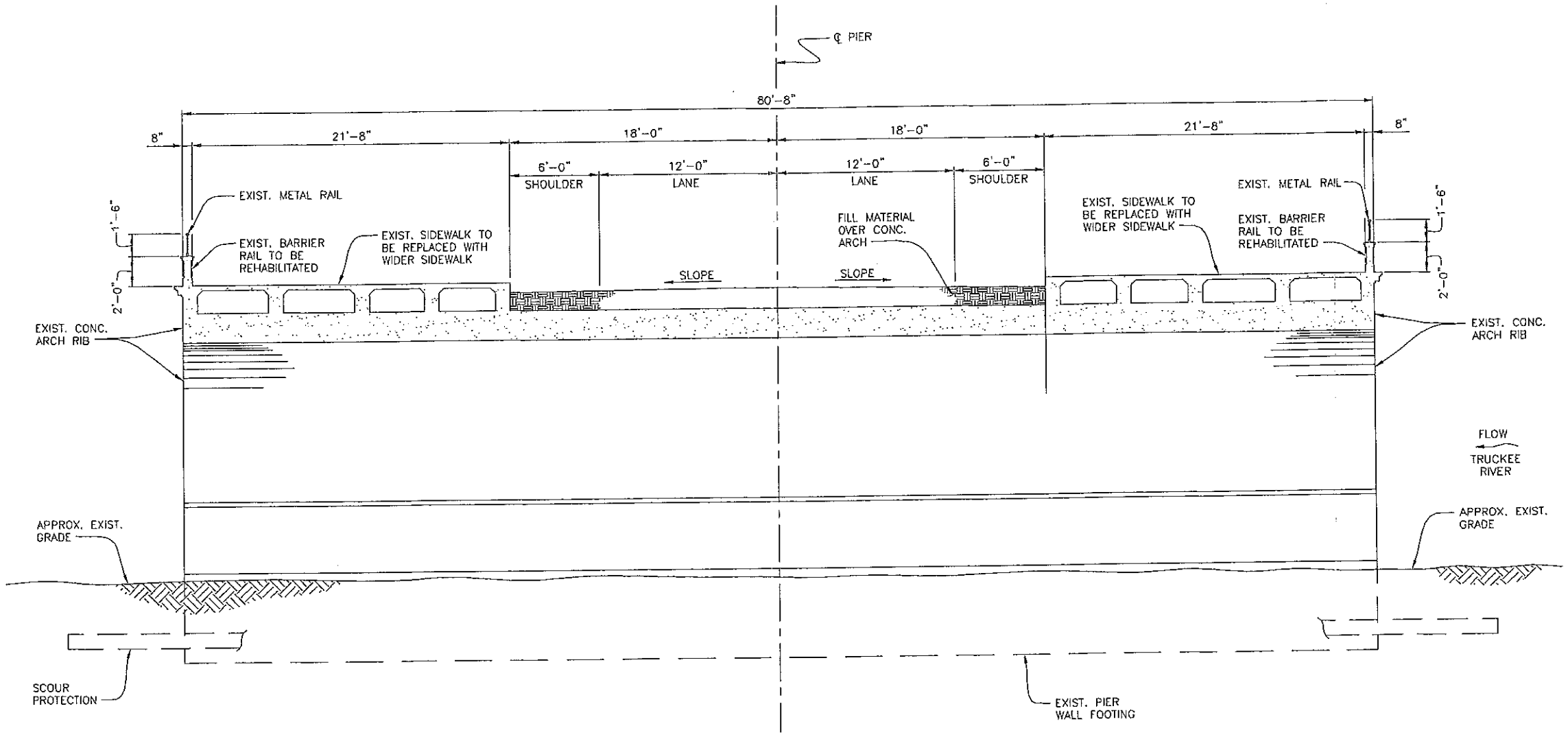
DATE	5/9/03
SCALE	AS NOTED
JOB NO.	
SHEET	B-1
OF	SHEETS



SECTION - LOOKING SOUTH AT PIER

SCALE: 1/4"=1'-0"

REVISIONS	BY

Cannon & Associates
406 South Fourth Avenue
Tucson, AZ 85701
(520) 792-2200
a division of
TransSystems Corporation

HISTORIC VIRGINIA STREET BRIDGE REHAB.
OVER TRUCKEE RIVER
RENO, NEVADA

SHEET TITLE: SECTION

DRAWN
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APPENDIX D

May 13, 2003

Richard Perry
Project Manager
Environmental Resources Branch
1325 J Street
Sacramento, CA 95814

RE: Historic Preservation Specifications
Virginia Street Bridge, Reno, Nevada

Dear Mr. Perry:

This letter outlines the architectural parameters and specifications for the pending rehabilitation of the Virginia Street Bridge, a structure that is listed on the National Register of Historic Places, and documented by the Historic American Engineering Record (HAER). Due to its ownership by the State of Nevada, and location on the federal highway system, the Virginia Street Bridge is maintained in accordance with the standards of the Federal Highway Administration by the State of Nevada. Accordingly, any action that impacts the bridge requires consultation with the Nevada State Historic Preservation Office, pursuant to 36 CFR 800. A Memorandum of Agreement is already in place between the agencies involved which stipulates that the Virginia Street Bridge should be rehabilitated in a manner that preserves the historic and architectural values of the Bridge in accordance with the Secretary of the Interior's Standards for Rehabilitation.

Expectations for preservation of historic bridges have varied over the years due to anomalies between applying the Secretary of the Interior's Standards for Rehabilitation, initially intended for buildings, and the interpretation of these Standards in regard to bridges. The Commonwealth of Virginia has recently adopted a modest variation of the Standards specifically to address historic bridges. These standards have been recognized by HAER, and are a justifiably relevant guideline to apply to the Virginia Street Bridge in Reno.

On March 24, 2003, members of our team met with Mella Harmon of the Nevada SHPO in order to discuss the condition and integrity of the bridge and identify those features which would be viewed as "character- defining," and therefore important to retain in the context of the rehabilitation. We also discussed various approaches to the treatments of the bridge and its original surfaces.

This evaluation is part of an effort to generate viable options for modification of the Virginia Street Bridge to handle 22,000 CFS of water flow, which is the projected 100-year flood volume. The intent is to create a solution that accommodates the potential flood conditions, and also provides an acceptable alternative that facilitates preservation of the bridge. It is the consulting team's objective that the proposed design, as outlined below and currently being

Phoenix, Arizona *One East Camelback Road Suite 690 Phoenix, Arizona 85012-1668* *602.212.0451 FAX: 602.212.1020*
Cleveland, Ohio *925 Euclid Avenue Suite 1900 Cleveland, Ohio 44115-1407* *216.522.1350 FAX: 216.522.1357*
Principals: *Paul Westlake Jr. FAIA Ronald A. Reed FAIA Vince Leskosky AIA Philip LiBassi AIA*
Design Associate: *Peter van Dijk FAIA*
Internet: *http://www.vwrl.com*

developed, will meet both of these goals, and will conform to the Secretary of the Interior's Standards (as interpreted by the State of Virginia). Accordingly, we are optimistic that the proposed action will be determined to have "no adverse effect" on the Virginia Street Bridge. Please note that a formal opinion on effect will need to be solicited from the Nevada SHPO, once a design is formalized.

Proposed Treatments to Virginia Street Bridge:

1. **Substructure**: The structural arches will be infilled with new concrete where needed. Existing fill and metal reinforcement will be left in place. The original structure will continue to carry the load of the bridge.

Relevant Standard: *Every reasonable effort shall be made to continue a historic bridge in useful transportation service. Primary consideration should be given to the rehabilitation of the bridge on site.*

2. **Upstream and Downstream Faces**
   The exposed faces of the bridge consist of molded concrete that emulates the appearance of a masonry arch structure, with an ashlar pattern, and voussouirs outlining the arch. This facing is deteriorated and will be replicated using a mold taken from the existing structure, and recast with concrete of a composition compatible to the existing material.

Relevant Standard: *Deteriorated structural members and architectural features shall be retained and repaired, rather than replaced. Where the severity of deterioration requires replacement of a distinctive element, the new element should match the old in design, texture, and other visual qualities, and where possible, materials.*

3. **Concrete Railings/Balustrades**

   The concrete railing/balustrade that serves as the guardrail along the bridge, and is the primary architectural treatment of the superstructure is significantly deteriorated, and no longer firmly attached to the bridge beneath. This feature will be reproduced (as above) and connected so that it is integral with the bridge deck.

Relevant Standard: *Deteriorated structural members and architectural features shall be retained and repaired, rather than replaced. Where the severity of deterioration requires replacement of a distinctive element, the new element should match the old in design, texture, and other visual qualities, and where possible, materials.*

4. Metal Balustrades and Streetlights

The railing includes sections of metal balustrade that are bolted into the concrete piers. The original light standards are also in place, bolted into the concrete. These components will be removed, cleaned or treated as necessary, and reinstalled.

Relevant Standard: *Distinctive engineering and stylistic features, finishes, and construction techniques or examples of craftsmanship that characterize an historic property should be preserved.*

4. Abutments

The abutments are not presently visible because they are essentially beneath the road surface, although ends of spans are embellished by an engaged pier. This feature will be resurfaced as above. New concrete will be added to increase the capacity of each span, but this material will not be visible. The existing abutment will still accommodate some load and be part of the supporting mass.

Relevant Standard: *Deteriorated structural members and architectural features shall be retained and repaired, rather than replaced. Where the severity of deterioration requires replacement of a distinctive element, the new element should match the old in design, texture, and other visual qualities, and where possible, materials.*

5. Approach Spans – New Construction

New approach spans are being designed for both the north and south ends of the bridge. These spans will effectively serve as culverts that accommodate the required volume of excess floodwater. At the north end, a span of 40 feet will be incorporated into a new treatment of the river bank, and a 25 foot span will be incorporated into the existing river walk at the south bank. These new spans will be detailed in a slightly simpler manner than the historic bridge, but will be of a similar motif and material. The new arches will have a slightly shallower (perhaps square) profile, so they are clearly differentiated from the historic bridge. The intent will be for the historic spans to be the visually dominant element, and coordinated with the new retaining walls as required by the hydraulic requirements of the new culverts.

Relevant Standard:

New additions, exterior alterations, structural reinforcements, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

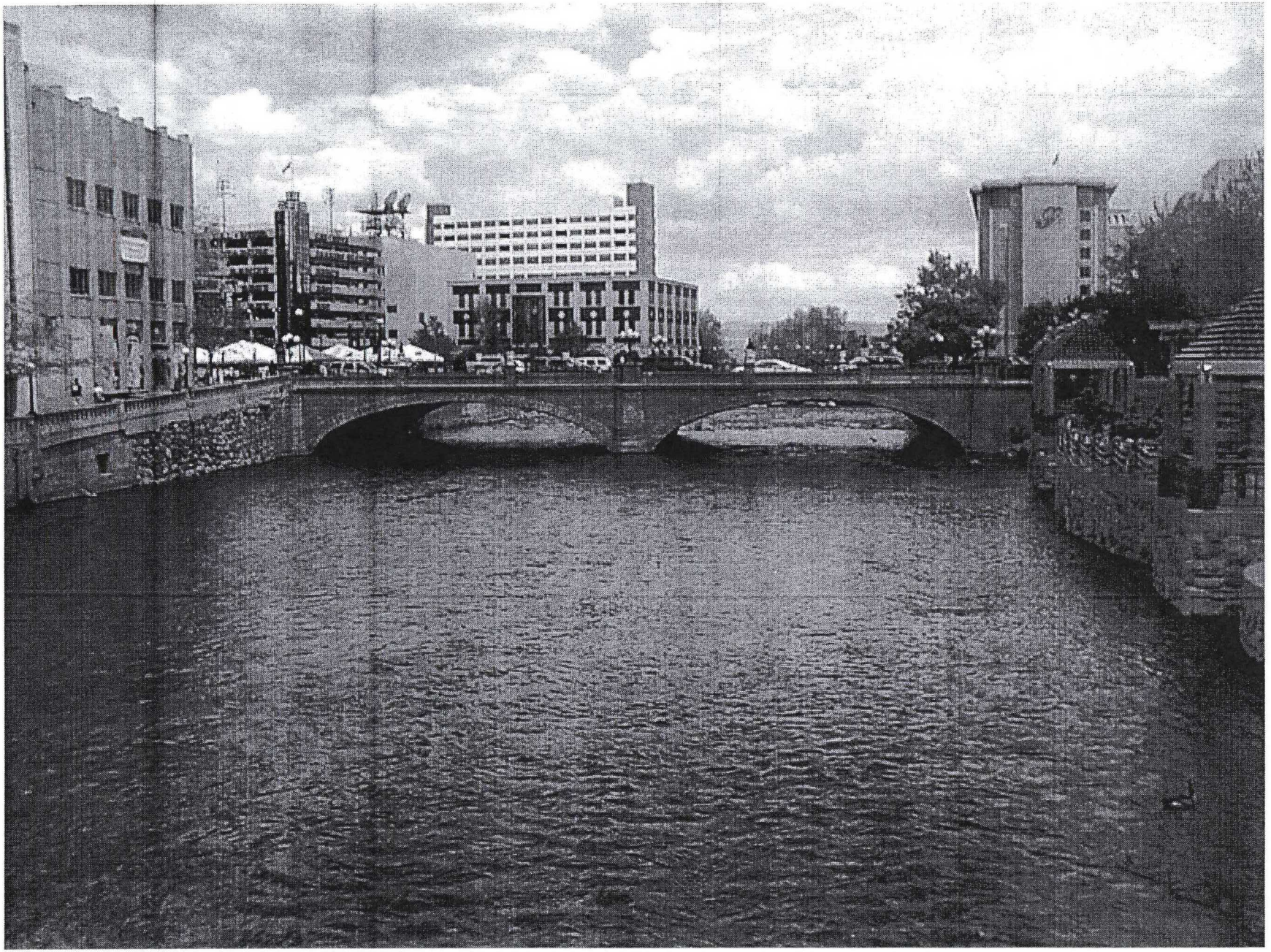
Our team will look forward to implementing these concepts and producing a final design in future phases of this contract.

Sincerely,

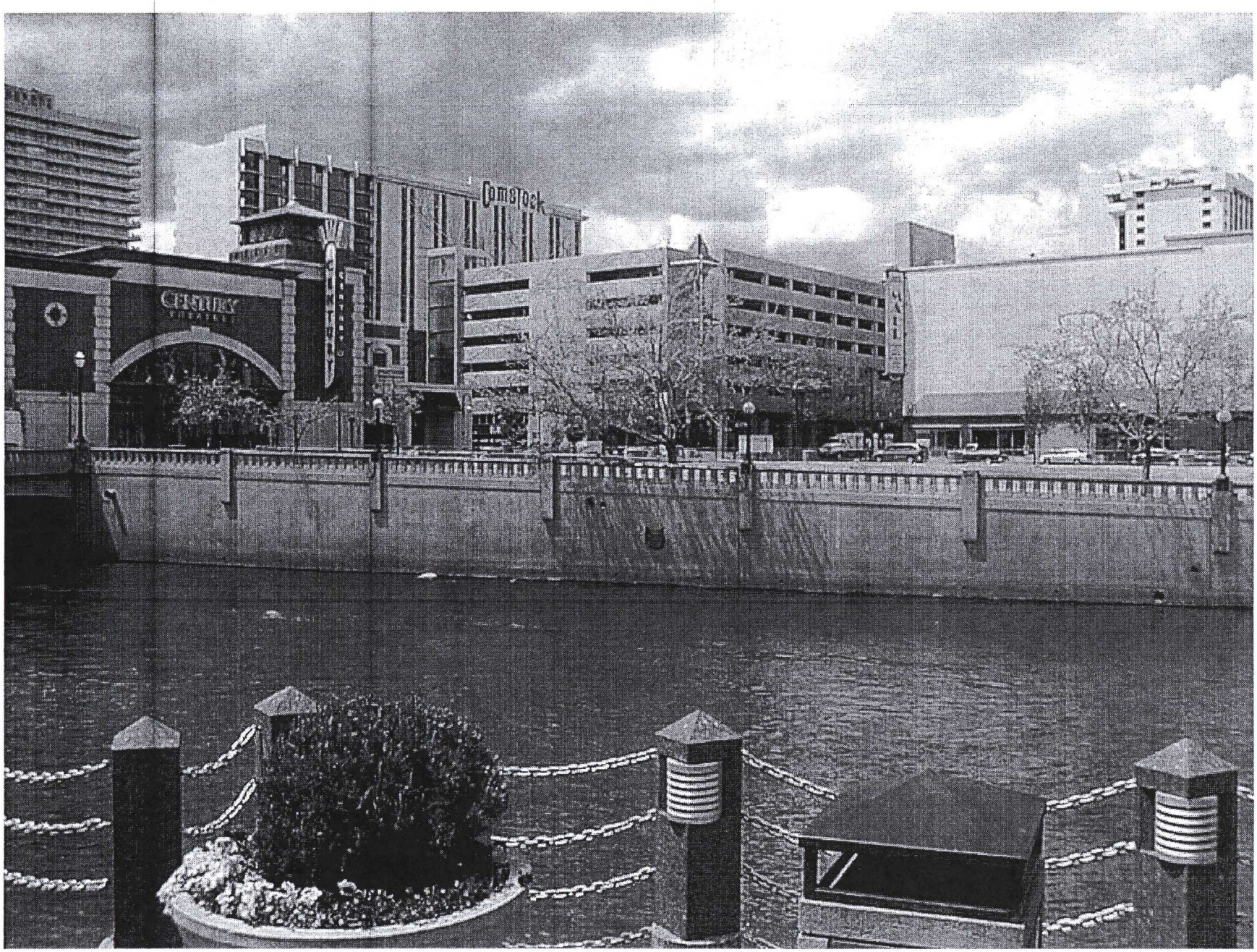
Roger A. Brevoort
Director of Historic Preservation

cc: Paul Westlake, Jr. FAIA
Jerry Cannon
Mella Harmon

APPENDIX E

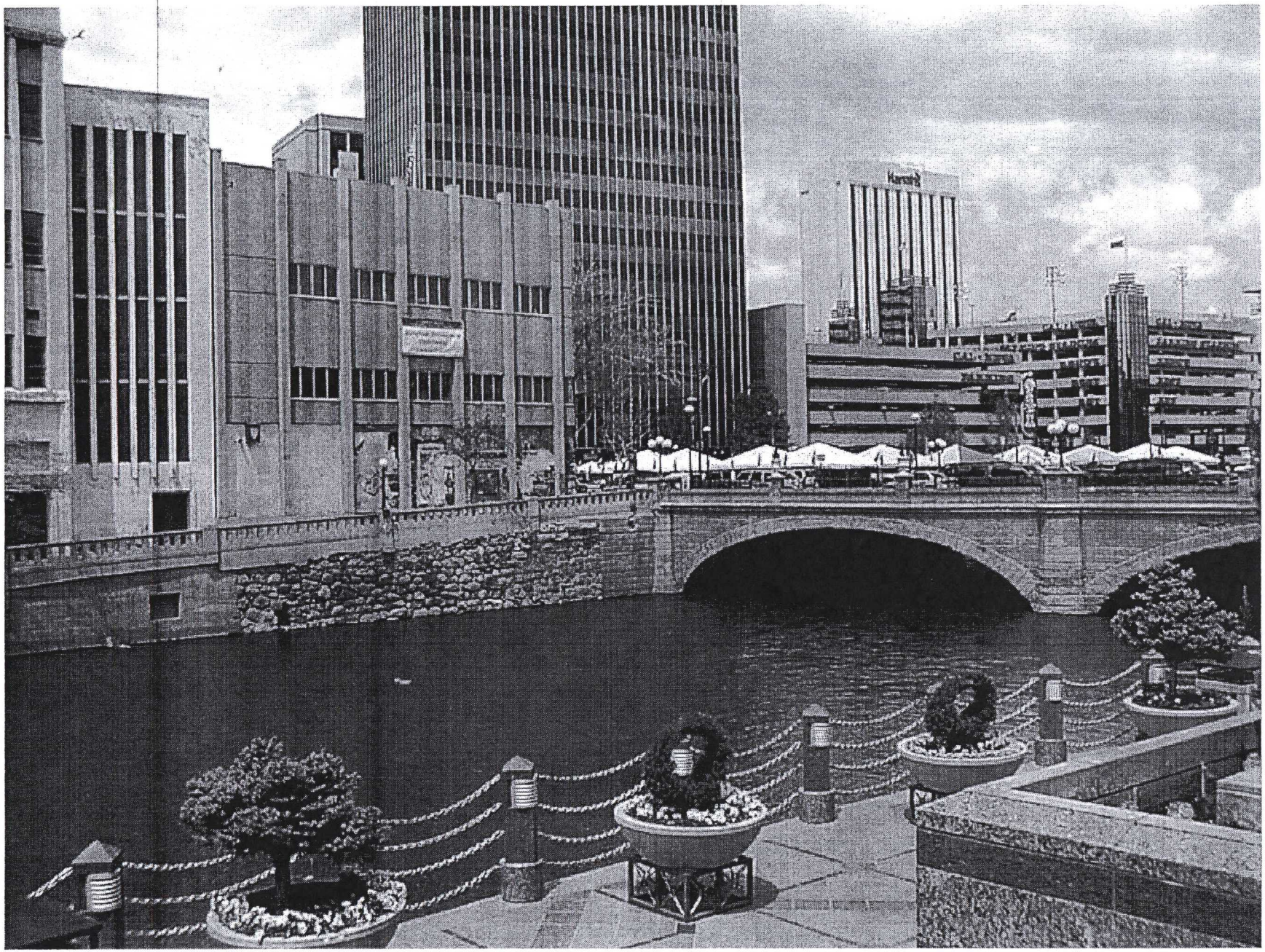


Virginia Street bridge looking East (downstream).



North bank East of Sierra Stret bridge.

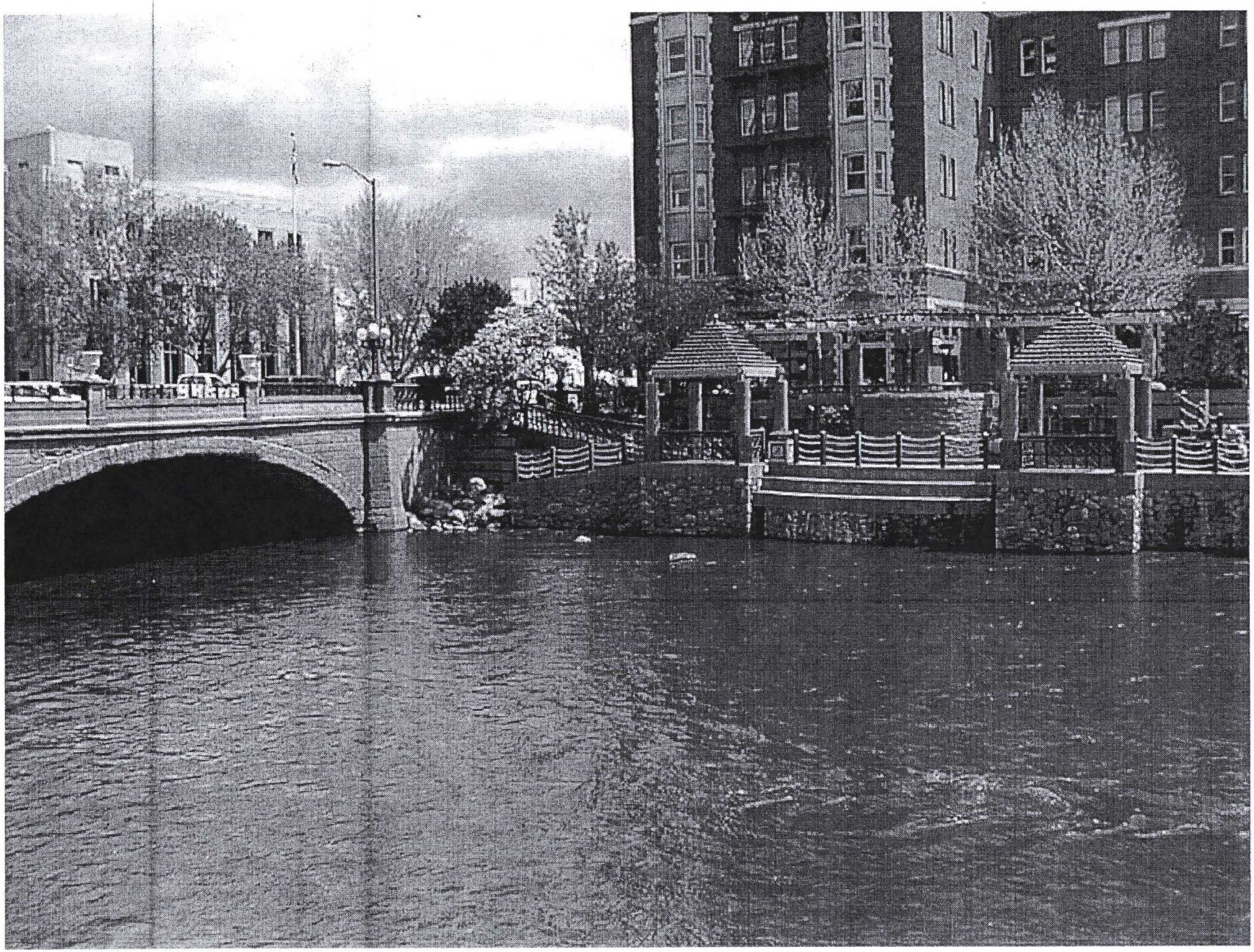
North bank midway at Masonic Temple building (left) and Masonic office building (right). Note "dip" in flood wall grade.



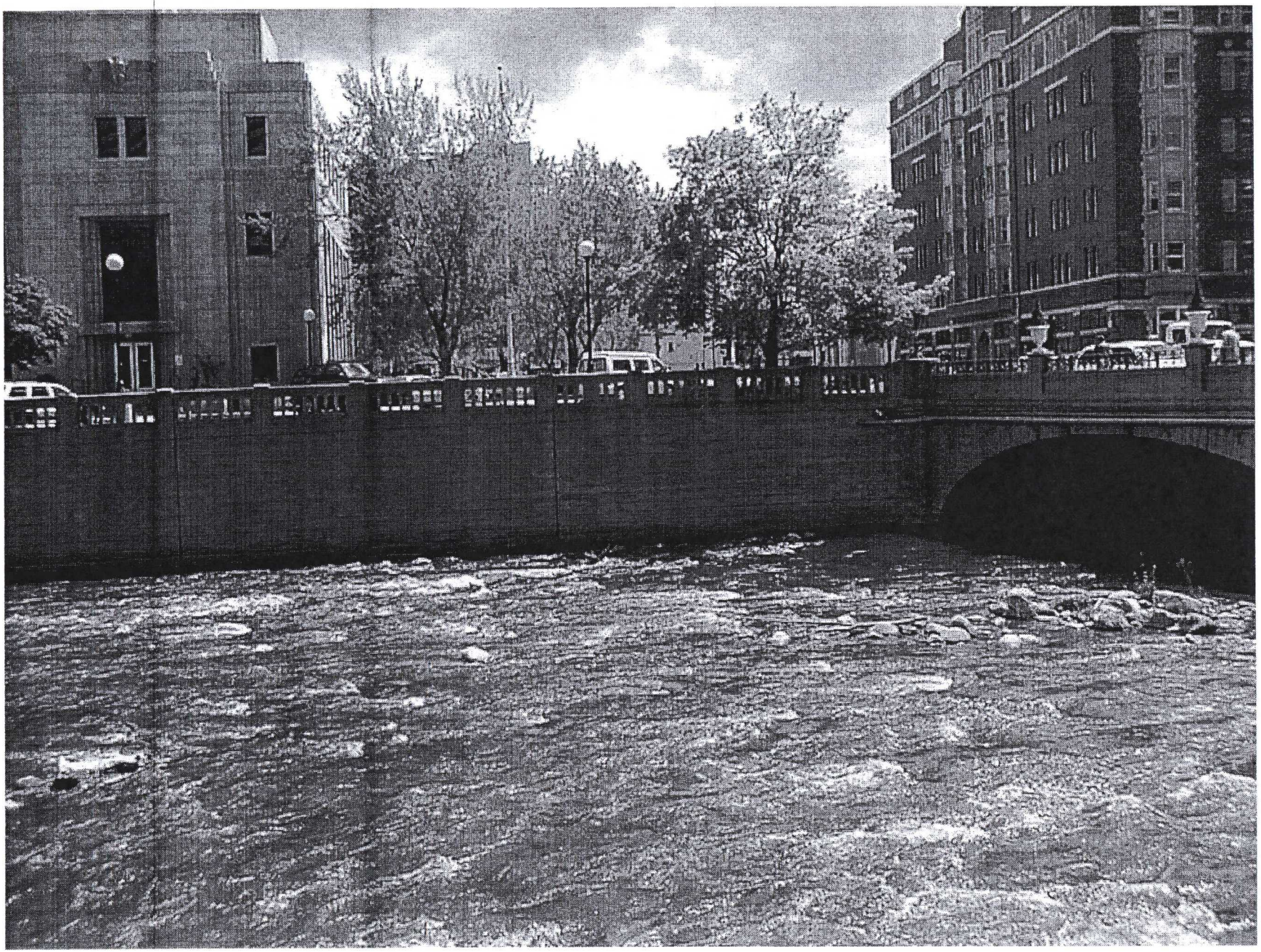
North bank at west face of bridge at new north culvert inlet.

Truckee River Lane @ North bank, looking West. Note depression in grade.

North bank East of bridge @ re-entrant basin.



South bank @ West abutment. New south culvert inlet.



South bank east of bridge at re-entry basin for new south culvert.

ATTACHMENT I-4

Flood Project Coordinating Committee Meeting Minutes
March 10, 2006

TRUCKEE RIVER FLOOD MANAGEMENT

FLOOD PROJECT COORDINATING COMMITTEE

DRAFT OF MINUTES

FRIDAY – MARCH 10, 2006 – 8:30 A.M.

Washoe County Commission Chambers

1001 East Ninth Street, Reno, Nevada

MEMBERS	**ALTERNATES**
Jessica Sferrazza, Chair	Mike Carrigan
Geno Martini, Vice-chair	Robert Dickens
Joseph Crowley	Dwight Dortch
Dan Gustin	Pete Sferrazza
David Humke	
Bob Larkin	
Robert Lichtenstein	
Judy Moss	

1. CALL TO ORDER AND ROLL CALL

Chair Sferrazza called the meeting to order at 8:34 a.m. A quorum was established.

VOTING MEMBERS PRESENT:	Joseph Crowley, Dan Gustin, Geno Martini and Jessica Sferrazza. David Humke joined the meeting at 8:36 a.m. Member Bob Larkin joined the meeting at 8:45 a.m.
VOTING MEMBERS EXCUSED:	Robert Lichtenstein and Judi Moss.
VOTING ALTERNATES PRESENT:	Mike Carrigan - for Judy Moss; and Robert Dickens - for Robert Lichtenstein.
NON-VOTING MEMBERS PRESENT:	Connie Butts, Jeanne Ruefer - for Steve Bradhurst, Dean Schultz and Steve Varela. Katy Singlaub joined the meeting at 8:37 a.m. Elisa Maser and Wayne Siedel joined the meeting 8:38 a.m. John Sherman joined the meeting after the recess.
NON-VOTING ALTERNATES PRESENT:	Franco Crivelli, Dennis Ghiglieri, Dennis Miller,
FLOOD PROJECT STAFF PRESENT:	Naomi Duerr, Nathan Edwards, Betsy Mellinger and Paul Urban.

2. APPROVAL OF AGENDA

It was moved by Member Martini, seconded by Member Gustin, to approve the agenda. The motion carried: Members Carrigan, Crowley, Dickens, Gustin, Martini and Chair Sferrazza assenting; and Members Humke and Larkin absent.

3. APPROVAL OF MINUTES – *FPCC (Flood Project Coordinating Committee) meeting of February 10, 2006*

It was moved by Member Martini, seconded by Member Carrigan, to approve the February 10, 2006, meeting minutes, as submitted. The motion carried: Members Carrigan, Crowley,

Dickens, Gustin, Martini and Chair Sferrazza assenting; and Members Humke and Larkin absent.

Member David Humke joined the meeting 8:36 a.m.

4. PUBLIC COMMENT *

Neal Cobb outlined his opposition to the Community Coalition plan and the demolition of the historic Virginia Street Bridge. Of particular concern is the suggestion to replace the bridge with one similar to the 1877 bridge that was lost to a flood in 1905.

Katy Singlaub joined the meeting at 8:37 a.m.

Roberta Ross, President DIA (Downtown Improvement Association), expressed the DIA's and her support of the Community Coalition Plan.

Elisa Maser and Wayne Siedel joined the meeting 8:38 a.m.

Ms. Ross outlined how, in her opinion, a clear span bridge would allow more flow during significant events by removing the center support structure from the river channel.

Peggy Bowker noted her support for the proposed plan and explained that removal of the Virginia Street Bridge would nearly double the amount of water flow.

Jerry Purdy noted his support for the plan proposal and suggested that the river channel be deepened and cleared of sediment. Mr. Purdy noted the rate at which flood water can inundate a flood plain. Mr. Purdy complimented Ms. Duerr's contributions to the Flood Project.

Randolph Tobey, Vice-chair Pyramid Lake Paiute Tribe, expressed concerns and voiced his opinion about the proposed project and said it would only benefit upstream residents.

Member Bob Larkin joined the meeting at 8:45 a.m.

Mr. Tobey suggested that the FPCC take no action until a single and integrated plan addressing all concerns can be developed. Responding to Chair Sferrazza's concern about the Pyramid Lake Paiute Tribe's (Tribe) participation over the past several years, Mr. Tobey explained that while his limited time in office does not provide him with a complete history, he believes there is still time to address issues of concern to the Tribe.

Mella Harmon noted that ancient Rome could solve hydraulic problems and explained that she had participated early on in the process. She noted that, while the process to formulate the plan was democratic, some historic preservationists felt that they did not achieve their desired outcome.

Richard Matulich noted his concern that tributaries and other conduits in the region also be considered as part of the flood project.
Chair Sferrazza noted that at the request of Member Humke that the issue would be addressed at the April meeting.

James Hunting, Chair – Reno Redevelopment Citizens Advisory Committee, expressed support for the Community Coalition Plan and commended the members of the Community Coalition and the FPCC for their efforts.

Linda Howe, River Walk Merchants Association, reiterated the Association's support for the Community Coalition Plan.

Doug Smith, Chair - Scenic Nevada, spoke in opposition to the proposed plan noting that the 100 year old Virginia Street Bridge provided a visual statement about the city. Typically, landmark structures, including bridges (e.g. Brooklyn Bridge) are unique points of interest for a city.

Alicia Barber, Preserve Nevada, drew attention to the 1996 MOA (Memorandum of Agreement) to rehabilitate the Virginia Street Bridge and recommended that the proposed plan be modified to indicate there is not a consensus on the rehabilitation or demolition of the historic bridge. Ms. Barber encouraged members to reflect the concerns of the community as a whole in their actions.

George Cammorata recalled the flooding of his offices during the 1997 event and noted the need to protect cultural and historic resources, such as the Virginia Street Bridge. Mr. Cammarota asked whether there were any local ordinances that address the removal of historic or cultural resources.

7. COMMUNITY PREFERRED PLAN – *Presentation of the final Community Coalition Living River Plan for the Truckee River Flood Management Project by members of the Working Group of the Community Coalition and staff. Possible action to: 1). Accept the Community Coalition Plan (with or without modifications) as the community's preferred plan; and 2). direct staff to incorporate the project elements into a document to present to the Corps of Engineers as the local sponsors' Locally Preferred Plan for inclusion in the General Reevaluation Report and NEPA (National Environmental Protection Act) process.*

Naomi Duerr, Truckee River Flood Project Department Director, outlined the five components of the Community Coalition that the FPCC Board would hear. Ms. Duerr provided a brief history of the process that began with the region's request to the U.S. Army Corps of Engineers (Corps) in 1996 to reevaluate a flood control project for the Truckee River. Ms. Duerr emphasized that the process would include Section 106 Consultation with SHPO (State Historic Preservation Office) as well as an Environmental Impact Study (EIS) that would address the issues identified during the earlier public comment period.

Members Humke and Dickens left the meeting at approximately 9:07 a.m.

Ms. Duerr outlined the process that would ensue after the FPCC action and provided a descriptive analysis of the flood photographs dating back to 1907.

Member Dickens rejoined the meeting at 9:10 a.m.

Ms. Duerr noted that portions of the Vista Reefs were lowered resulting in a lowering of river surface by 5-or-6 feet. Drawing attention to the effects of channel realignments to provide faster water flows in the 1960's, Ms. Duerr noted that a more natural river configuration would allow flood water to spread over natural flood plains as well as slowing the rate of water flow. As the region continues to expand, flood events may be more intense if no action is taken.

Member Larkin left the meeting at 9:14 a.m.

Ms. Duerr noted that while levees contain water within prescribed areas, there are significantly greater effects downstream. The intent of the proposed plan is to not only reduce damage caused by flooding in the Truckee Meadows, but to reduce downstream effects.

Member Humke rejoined the meeting at 9:16 a.m.

Ms. Duerr noted that Elisa Maser had served as facilitator during the initial phases of the Community Coalition process.

Elisa Maser noted the make-up of the Community Coalition which included representatives from the Pyramid Lake Paiute Tribe, Reno Sparks Indian Colony and as well as nearly 40 other stakeholders and interested individuals. Drawing attention to the ±500 meetings that encompassed nearly 20,000 hours of volunteer work, Ms. Maser explained that the entire community looked at benefits to the region as a whole, including water quality, recreational opportunities and restoration rather than the Corps' recommended levees that would impede or prohibit river access. Ms. Maser noted that in areas where levees are needed, they are blended into the landscape to the extent possible thus reducing overall heights. The coalition focused on the hydrology aspects of flood protection rather than the more emotional aspects of the river to assure that recommendations could be supported. In addition to an early warning system implemented soon after the 1997 event, an acquisition program to provide a more natural flood plain has continued to provide flood water storage and reduce downstream impacts associated with higher flows. Ms. Maser emphasized that the Corps is looking at two other alternatives and that one of the early implementation projects being considered is the relocation of the North Truckee Drain to alleviate potential flooding in the Sparks industrial area. Other features of the proposed project include undulating berms/levees, terracing and other design amenities that provides the community with active and passive recreational areas.

Dean Schultz, Airport Authority of Washoe County, explained that a segment of the property purchased from the University of Nevada, Reno (UNR) as part of the project was within the airport's critical flyway zone. To ensure safety for area residents and airliners, Mr. Schultz pointed out that certain activities were prohibited, such as picnicking that would attract large numbers of people and birds. However, a bicycle/pedestrian path would be appropriate.

Member Geno Martini left the meeting at 9:32 a.m.

Beth Miramon commented that the crossing at the location of the Virginia Street Bridge was the reason the City is located in this particular area.

Dennis Ghiglieri drew attention to a photograph taken during the 2005 event showing the area drained by Steamboat Creek. A key component of the overall flood project includes detention and protection along Steamboat and other creeks. Drawing attention to Alexander Lake, Mr. Ghiglieri explained that the Huffaker Narrows would provide additional stormwater storage that would slow water flows and reduce flooding in the area of UNR Farms and downstream in Storey County.

Member Martini rejoined the meeting at 9:38 a.m.

Mr. Ghiglieri pointed out a proposed levee extension to protect the Pebble Beach area of Hidden Valley as well as an area where homes would either be raised above flood level or acquired based on a final cost/benefit analysis.

Responding to Chair Sferrazza's inquiry about Bella Vista development, Ms. Duerr explained that the loss of any significant portion of that area to development would have detrimental effects on the overall flood project. It is suggested that local jurisdictions encourage developers to use these portions of the undeveloped property as open space and/or recreational opportunities with developers moving residential development out of the area needed for detention.

Member Larkin rejoined the meeting at 9:46 a.m.

Ms. Duerr outlined the ongoing discussions with the property developer(s) and staff's recommendation to construct certain development areas above the level of the (South Meadows Parkway extension) roadway, which would also act as a natural barrier for the detention pond.

During a brief discussion it was suggested that a resolution be developed for consideration at the April 2006 meeting that can be sent to the local governing bodies expressing the FPCC's concern about continued development in areas needed for flood project detention.

Paul Urban, Project Manager, Truckee River Flood Management Department, explained that a final cost/benefit analysis for raising sixteen homes had not been completed. In some instances it may be fiscally prudent to acquire and relocate the existing property owners.

The next component of the project relates to the downtown Reno area. Drawing attention to the existing homes and retaining walls in the downtown core (e.g. Masonic Lodge), Mr. Urban noted that the low points in some locations flood before bridge flows reach their maximum velocity. Additionally, further upstream (Booth Street bridge) Mr. Urban explained that stormwater frequently overtops the river banks. Mr. Urban outlined the design elements that would include flood walls in heights ranging from 1-foot to a maximum of 3-feet in certain areas in conjunction with the replacement of the Lake, Sierra and Virginia Street bridges. Although the Center Street Bridge does not meet 100-year event floods as shown during the 1997 event, there is no cost benefit to replacement of the bridge, which was constructed in 1995. Mr. Urban then outlined other

components of the flood project, which includes flood proofing of various structures to preclude water damage to elevators and other mechanical equipment.

During the discussion it was emphasized that staff would work with property owners and others familiar with the downtown and other areas to assure that flood issues continue to be adequately addressed. It was noted that new development along the river was being designed in a manner that minimizes potential flood and related impacts. As the discussion continued, it was emphasized that flood project staff has and is working with local planning staff on development projects. Additionally, staff has met with Reno Hilton and Reno Sparks Indian Colony to assure that changes to the Hilton property, which affected the Reno Tahoe International Airport during the 1997 event, include flood protection measures to mitigate impacts. Other discussion emphasized that the proposed detention areas would remain dry nearly 95-percent of the year and quickly drain once an event subsided.

Connie Butts noted the progress made in moving the project forward since the FPCC was created and a director (Naomi Duerr) was hired to oversee the process. Ms. Butts noted that Mr. Urban has provided significant assistance in development and understanding of the flood modeling process to ascertain how flows would affect those located downstream. One proposal includes the development of an elevated walkway around Rainbow Bend to accommodate additional flows expected due to the upstream project. Currently, Storey County is developing a plan to address Long Valley Creek flooding issues.

There was significant discussion about the proposed plan. The amount of storage proposed at Huffaker Detention Pond, which will lessen flood water impacts to UNR Main Station Farm, was discussed. Discussion then turned to the use of low lying areas such as Wadsworth (Nevada). It was explained that Wadsworth and other downstream area issues would continue to be addressed as the conceptual design moves forward, including issues noted by the Tribe earlier in the meeting. The intent of the process is to define a project that will be approved by the Corps and fully funded by Congress. Other discussion noted that the Tribe has been in contact with staff concerning various issues and is providing modeling updates. However, Ms. Duerr will continue to meet with Tribal representatives to assure that their issues are incorporated and addressed in the project's planning and design.

Other discussion suggested that staff develop a diary of meetings with tribal members and others, which can be used in congressional presentations to show that all stakeholders were involved in the process.

Mauricia Baca outlined the anticipated benefits of the Community Coalition Plan, including, but not limited to water quality, restoration of the river ecosystem, and recreational opportunities. As the river is returned to a more natural state, downstream pressures associated with flood events will be significantly reduced. Other aspects of a more natural riverbed include reductions in noxious vegetation, restoration of wildlife and riparian habitat, and significant reductions in soil erosion. Ms. Baca noted that land acquisition negotiations are underway on several properties and have been closed on the East Steer Ranch and other land areas which are critical to the project, have signed purchase agreements.

The meeting recessed at 10:56 a.m. and reconvened at 11:17 a.m. Members Larkin and Martini absent.

Ms. Duerr outlined the recommended motion to accept the Community Coalition proposal and its 29-elements as presented, and adopt the Living River Plan as the locally preferred plan. Additionally, the motion should include direction to staff to forward the document to the Corps, which will combine the recommendations with the National Economic Development (NED) Plan to develop the final cost/benefit analysis and final plan.

It was moved by Member Crowley, seconded by Member Humke, to accept this report and adopt the Community Coalition's Living River Plan as the Locally Preferred Plan. It is further recommended to direct staff to incorporate the description of the Living River Plan elements into a document to present to the Corps as the Locally Preferred Plan with the recommendation that the Corps strongly consider incorporating these project elements into their National Economic Development (NED) Plan and that the Corps provide full federal funding and participation in implementing the Flood Project.

Member Gustin extended his appreciation and thanks to the volunteers for what he believes was a laborious and somewhat tedious body of work. However, while Member Gustin is in favor of moving the project forward, he asked that the motion maker and second consider a modification to item 3 that would address concerns about preservation of the Virginia Street Bridge.

Member Larkin rejoined the meeting at 11:20 a.m.

Member Gustin noted that in his opinion, any separation of the downtown segment of the project from the rest of the project plan would be detrimental to the overall project. Member Gustin emphasized that there would be additional opportunities for review and discussion of pertinent issues, such as bridge preservation, during the Section 106 Consultation. Member Gustin asked that the motion be amended to provide an opportunity to rehabilitate/restore the Virginia Street Bridge in a manner that would increase stormwater flows if possible.

Member Crowley amended the motion. Member Humke amended the second.

Chair Sferrazza recommended that any such amendment to the motion clearly define who will ultimately determine whether the Virginia Street Bridge is restored or replaced.

Ms. Duerr explained the Corps approval process and emphasized that the local sponsor would have the final determination on whether to accept or reject the Corps recommendation. Ms. Duerr noted that there has been some discussion about the construction of a physical model of the river system to determine what effect rehabilitation or replacement of the bridges would have. However, such a process could require several months for construction and evaluation along with a cost of ±$500,000.

Member Gustin emphasized that the intent of the proposed amendment is allow a rational decision to be made on the restoration of the bridge.

Mr. Urban noted that the EIS would analyze all alternatives without making a specific recommendation. The Corps' plan which is ultimately recommended to Congress for funding will be based on the NED (National Economic Development Plan). However, the local plan sponsors will determine what project they are willing to fund.

Chair Sferrazza suggested that the final determination on the restoration of the Virginia Street Bridge be based on the Chief's Report.

Member Carrigan recommended that item 3 be amended to read that the Lake and Sierra Street Bridges, including the Virginia Street Bridge be replaced, unless the Virginia Street Bridge can be preserved in a manner that will not degrade the flood plan.

Member Gustin concurred with the recommendation.

Member Crowley amended the motion to include language that allows the replacement of the Lake and Sierra Street Bridges, including Virginia Street Bridge unless the Virginia Street Bridge can be preserved in a manner that is not detrimental to the overall flood plan. Member Humke amended the second.

Member Crowley, on behalf of UNR, expressed his appreciation for the work of the Community Coalition and their commitment to resolving issues. Additionally, Mr. Crowley is pleased to have been involved in the process and drew attention to welcome news in his discussions with Ms. Duerr that flood water onto the Main Station Farm will be significantly less than originally thought under the proposed plan. Member Crowley is eager to continue his discussion and negotiation with Ms. Duerr that will ultimately result in a recommendation to the Board of Regents on the Main Station Farm. Mr. Crowley will submit a written statement for the record once he has refined the proposed language.

Ms. Duerr noted that staff will be providing UNR with modeling data so that UNR staff can review the modeling data independently.

Member Larkin recommended that Item 29 be modified to consider the construction of a levee or other flood control features to mitigate upstream flows in the Wadsworth and other downstream areas. Although there may have been some concerns on various issues, this is a culminating moment of consensus.

Member Carrigan commented that while this has been a long-time coming that the region is united as a community to move the process forward.

Member Humke noted that elected officials sometimes follow where they are led by the public. It is Mr. Humke's belief that the region is providing the unity needed to move the process forward in a positive and beneficial manner. Member Humke noted that other flood issues associated with tributaries should be included to assure that the river system and its tributaries are made better.

Ms. Butts expressed her appreciation to the FPCC, Ms. Duerr and Mr. Urban for providing the driving force to keep the project moving forward.

Chair Sferrazza expressed her support for the plan and asked that members of the Community Coalition introduce themselves to receive the accolades they deserve.

The following members of the Community Coalition introduced themselves: Jay Aldean, Steve Allis, Mauricia Baca, Todd Belkie, Peggy Bowker, Connie Butts, Dennis Ghiglieri, Shawn Gooch, Elisa Maser, Dennis Miller, Bob Ramsey, Dean Schultz, Rose Strickland and Terry Williams.

Chairperson Sferrazza asked a representative from the historic preservation community to support the community preferred plan since it now included the amendment to Item 3 regarding the Virginia Street Bridge. Ms. Barber concurred with the proposed amendment to Item 3.

The motion carried: Members Carrigan, Crowley, Dickens, Gustin, Humke, Larkin and Chair Sferrazza assenting; and Member Martini absent.

Tim Kelleher, US Army Corps of Engineers (via telephone), expressed his appreciation to the working group and Community Coalition in achieving this major milestone. He noted that there is still more difficult work ahead in order to bring the plan proposal forward for Congressional authorization. Mr. Kelleher emphasized the importance of widespread community support in presenting a plan for federal authorization and funding

6. LAND ACQUISITION - UNR PARCEL AT MILL STREET AND MCCARRAN BOULEVARD – *Update on the status of the purchase of the UNR parcel located on the northwest corner of Mill Street and McCarran Boulevard. Recommendation to the FPCC that the Purchase Agreement be revised to incorporate purchase of the entire UNR parcel, with improvements, to include the land and buildings leased to Cooperative Extension, a total of approximately five additional acres, for an additional $1,100,000. Possible action by the FPCC to authorize the Director to make these changes to the Purchase Agreement and authorize the expenditure of an additional $1,100,000 to complete the purchase.*

Naomi Duerr outlined staff's recommendation to acquire an additional 5-acres from the University of Nevada, Reno (UNR), which will increase the cost from $12.1-million to $13.2-million.

It was moved by Member Larkin, seconded by Member Humke, to direct staff to authorize the Truckee River Flood Project Director (Naomi Duerr) to make the changes to the purchase agreement and authorize the expenditure of an additional $1.1-million to complete the purchase.

Member Crowley stated that he and Member Dickens would recuse themselves from the vote.

The motion carried: Members Carrigan, Gustin, Humke, Larkin and Chair Sferrazza assenting; Members Crowley and Dickens recused; and Member Martini absent.

5. FLOOD PROJECT MONTHLY REPORTS – *(a) Working Group Activities; (b) Flood Project Staff Activities; (c) Financial Report; and (d) Project Timeline.*

Naomi Duerr provided an overview of staff activities since the February meeting.

Member Crowley left the meeting at 12:04 p.m.

Ms. Duerr summarized her recent visit to Washington, D.C. during which she met with Congressional staff, Corps personnel and other key individuals concerning the project. Ms. Duerr noted that lobbyist Mia O'Connell had assisted in arranging meetings with appropriate individuals during her visit.

8. ARMY CORPS OF ENGINEER'S MONTHLY REPORT * - Report on activities related to the Truckee River Flood Management Project including scheduling and funding.

Tim Kelleher, Project Manager, Civil Works Branch, ACOE, outlined ongoing work on downstream hydraulics and construction cost data noting there was a slight delay in the completion of the 25-and 50-year event data compilation. However, he does not believe that the delay will have any significant effect on the schedule.

Member Gustin left the meeting 12:12 p.m.

Ms. Kelleher outlined a meeting with congressional staff to provide the additional funding requested by Naomi Duerr during her visit to Washington, D.C. It appears that the request for the additional $600,000 was favorably received and that a meeting is planned with State Historic Preservation Office (SHPO), Nevada Department of Transportation (NDOT) and (Federal Highway Authority (FHA) on the Section 106 consultation. Additionally, there are discussions with NDOT on the ultimate alignment of the Tahoe-Pyramid Connector through the Huffaker Narrows area. Responding to Chair Sferrazza's inquiry about written confirmation from the Corps on the critical need for acquisition of certain properties for the flood project, Mr. Kelleher stated he would provide appropriate documentation that discusses the issue in greater detail. Mr. Kelleher noted that the Draft EIS (Environmental Impact Study) would be completed in December 2006 and that public comment and scoping would begin approximately three or four months after the issue date.

Ms. Duerr noted that a workshop on the matter had been scheduled for January 2007 and will occur earlier if possible. Additionally, Ms. Duerr will work with SHPO and the Corps to assure that the SHPO's requirements are met in the Section 106 Consultation.

9. COMMITTEE MEMBER COMMENTS, REQUESTS AND FUTURE AGENDA ITEMS *

During the discussion it was suggested that a resolution to the governing bodies be drafted about development in critical flood storage areas. Legal counsel (Nathan Edwards) was asked to provide a legal opinion on how such a resolution could be worded to assure that FPCC members are not required to recuse themselves from development projects within their jurisdictions. Other discussion noted that individual jurisdictions had been briefed on water rights. The April meeting agenda will

also include an update on funding options previously requested. As the discussion continued, it was suggested that the State of Nevada, as the property owner for the Truckee River streambed be asked to participate in the process. Other discussion noted that the City of Reno would, on March 22, 2006, consider an ordinance associated with providing funding when the mitigation cannot be provided on site. Additionally, members would like an update on whether a greater that 1:1 ratio of mitigation is legally defensible. Other agenda items should include an authorization for the Truckee River Flood Project Director to expend certain funds without FPCC Board authorization (e.g., food) as well as an update on what, if any, additional Truckee River Flood Project Department positions are needed.

10. ADJOURNMENT

Chair Sferrazza adjourned the meeting at 12:38 p.m.

ATTACHMENT I-5

Virginia Street Bridge Workshop Minutes and Presentation Slides
March 16, 2007

Flood Project Coordinating Committee

FLOOD PROJECT COORDINATING COMMITTEE
MINUTES
Friday – March 16, 2007 – 3:00 p.m.
Washoe County Commission Chambers - Building A
1001 East Ninth Street, Reno, Nevada

1. CALL TO ORDER AND ROLL CALL – *Determination of a Quorum*

Chair Sferrazza called the meeting to order at 3:02 p.m. and outlined the format of the meeting noting that the Virginia Street Bridge workshop would open at 5:00 p.m. with testimony on the bridge taken at that time. A quorum was established.

VOTING MEMBERS PRESENT:	Robert Dickens, David Humke, Bob Larkin and Jessica Sferrazza. Geno Martini joined the meeting at 3:19 p.m.
VOTING MEMBERS EXCUSED:	Milton Glick, Dan Gustin and Ron Smith.
VOTING ALTERNATES PRESENT:	Dave Aiazzi.
VOTING ALTERNATES EXCUSED:	Mike Carrigan and Pete Sferrazza.
NON-VOTING MEMBERS PRESENT:	Neil Mann, Elisa Maser, Rosemary Menard, John Sherman and Katy Singlaub. Andrew Green joined the meeting at 3:43 p.m.
NON-VOTING MEMBERS EXCUSED:	Shaun Carey, John Jackson, Charles McNeely, Tom Minton, Dean Schultz, and Wayne Seidel. One vacant.
NON-VOTING ALTERNATES PRESENT:	Connie Butts and Todd Welty. Franco Crivelli joined the meeting at 3:15 p.m. Dennis Miller joined the meeting at 3:45 p.m. Dennis Ghiglieri joined the meeting at 5:02 p.m.
NON-VOTING ALTERNATES EXCUSED:	David Childs, Mary Hill and Jeanne Ruefer.
FLOOD PROJECT STAFF PRESENT:	Naomi Duerr, Betsy Mellinger, Ronda Moore, Jan Platt and Paul Urban. Nathan Edwards joined the meeting at 3:08 p.m.

2. APPROVAL OF AGENDA

It was moved by Member Humke, seconded by Member Larkin, to approve the March 16, 2007, meeting agenda as written. The motion carried: Members Dickens, Humke, Larkin, Alternate Aiazzi and Chair Sferrazza assenting; and Members Glick, Gustin, Martini and Smith excused.

3. APPROVAL OF MINUTES – *FPCC (Flood Project Coordinating Committee) meeting of February 9, 2007*

It was moved by Member Humke, seconded by Member Larkin, to approve the February 9, 2007, minutes, as submitted. The motion carried: Members Dickens, Humke, Larkin and Chair Sferrazza assenting; Alternate Aiazzi abstaining; and Members Glick, Gustin and Smith excused.

4. ANNOUNCEMENTS *

Naomi Duerr – Flood Project Director, outlined AB 274, which is before the legislature that would, if approved, provide up to $10 million for stream ecosystem restoration for use in both northern and southern Nevada. Ms. Duerr encouraged those present to attend the Assembly Ways and Means Committee hearing on the matter.

Ms. Duerr then noted that Paul Urban had been promoted to Senior Licensed Engineer and that Ronda Moore, Esq. had joined the Flood Project staff as Deputy Director, bringing her expertise and training as an attorney, former Deputy Secretary of State, and Deputy Attorney General with a focus on natural resources to the project's staff. Ms. Duerr then explained that Mike Chapman, a prominent attorney with expertise in land issues, had been retained to assist the Flood Project in land acquisition and relocation issues.

Ms. Duerr also announced that a special meeting of the FPCC (Flood Project Coordinating Committee) would be held on Tuesday, March 20, 2007, because the Corps (U. S. Army Corps of Engineers) had asked for our assistance to contract for external peer review of the Flood Project that is required by the Corps' review process.

Nathan Edwards, Deputy District Attorney, joined the meeting at 3:08 p.m.

5. PUBLIC COMMENT *

Tom Clark – Bristlecone Family Resources, provided an update on progress to date in finding a new home for the Bristlecone facility. Mr. Clark introduced Ralph Smith of Valley Contracting who will assist in the process of identifying a location, and for construction or remodeling needs. Mr. Clark noted that he hopes to complete negotiations with an investor partner in the near future and expressed his appreciation to the City of Reno for their assistance in locating land for the facility.

Mr. Smith commented that Valley Construction would provide assistance in securing subcontractors and other assistance in the development of the new Bristlecone facility.

Mr. Clark stated that he would continue to provide monthly updates during Public Comment and asked that he not be added as an agenda item.

6. UPDATE ON PROPOSED INTERLOCAL AGREEMENT FOR PROJECT FUNDING – *Action to accept report and provide direction to staff on further development of the interlocal funding agreement.*

John Sherman - Washoe County Finance Director, noted that the Flood Project Coordinating Committee (FPCC) had provided direction on five crucial issues and staff was working on drafting a proposal following that direction, which would be taken to each of the local jurisdictions for approval and then brought to the FPCC after it was refined and ready to be finalized.

Responding to Chair Sferrazza's inquiry about a joint approach to sales tax, Katy Singlaub – Washoe County Manager, stated that there had been a meeting on March 2 and discussion among her counterparts in the other jurisdictions about how to quantify the unmet needs of the region in order to develop a collaborative funding plan, and those discussions would be continuing.

Naomi Duerr – Flood Project Director, noted that progress on the Interlocal Funding Agreement would be heard by the Reno City Council on March 28, 2007 and would be taken to the City of Sparks and Washoe County shortly thereafter.

Franco Crivelli joined the meeting at 3:15 p.m.

7. PROPOSED AMENDMENTS TO THE FLOOD PROJECT COOPERATING COMMITTEE (FPCC) AGREEMENT – *Consideration and action to approve draft amendments to the FPCC (Flood Project Coordinating Committee) Cooperative Agreement including changing the participation of University of Nevada-Reno from voting to non-voting membership; changing Storey County participation from non-voting to both voting and non-voting membership; changing the existing consensus voting structure; and memorializing previous actions approved by the FPCC.*

Naomi Duerr - Truckee River Flood Project Director, provided an overview of the discussions with each of the three jurisdictions, noting that the City of Reno preferred a simple majority voting process, while Washoe County preferred a super majority before something could be passed. Sparks had not had a chance to meet on this yet, but they were prepared to take the matter up once the FPCC made its recommendations. Ms. Duerr noted that a binding arbitration clause had been included in the original agreement in the event that an issue could not be resolved by a unanimous consent of all members of the FPCC, but it would be removed from the agreement section dealing with unanimity.

Member Geno Martini joined the meeting at 3:19 p.m.

Ms. Duerr then explained that Storey County was aware that the FPCC (Flood Project Coordinating Committee) would look to Storey County to help participate in the flood funding areas.

Connie Butts, who represents Storey County on the Working Group, noted that the Storey County Commission was in the process of looking at the reallocation of a 1/8th cent of an existing 1/4 cent sales tax to the Truckee River Food project.

Member Larkin stated that Washoe County supported a super majority voting scenario and there were many reasons in support of that, but noted that the BCC (Board of County Commissioners) had agreed to abide by FPCC recommendations.

Alternate Aiazzi noted that all other board and commissioners use the simple majority method and asked for clarification as to why a super majority would be needed for this process.

Member Humke outlined previous precedent set in funding legislation and other concerns that were best dealt with under a super majority voting structure.

Elisa Maser noted that the Working Group had discussed the voting issue at length and noted that the region has moved forward using a consensus form of voting for eight (8) years. Ms. Maser explained that the Working Group's recommendation was to keep the current full consensus process or at least a super majority, explaining that when the Project is brought before Congress the fact that the community was fully united behind it would be a compelling factor in favor of getting approval and funding.

Chair Sferrazza noted that the City of Reno had used only a simple majority vote to authorize and fund the ReTRAC Project (Reno Transportation Rail Access Corridor) and it was also a federal project in partnership with the local government.

It was moved by Member Dickens, seconded by Alternate Aiazzi, to change the voting process to permit the FPCC to approve an action by an affirmative vote of a simple majority.

Alternate Aiazzi suggested that Section 3 on arbitration be deleted if a simple majority voting process is implemented.

Member Dickens stated that due to the complexity of the issues, he preferred to take each issue separately.

Member Larkin stated his preference for a super majority with five (5) of the seven (7) member board assenting to any specific action, but was concerned about people getting hung up on a number because delaying the process was not in the best interests of the Flood Project.

Member Humke stated that one argument for a super majority is that Washoe County, being the one that carries the debt and sells the bonds, has the ultimate fiduciary responsibility to the taxpayers and the BCC would be more comfortable knowing that a super majority of the FPCC voting members were in agreement with any matter passed to Washoe County for consent. Responding to Chair Sferrazza's comment about federal scrutiny of another project, he recalled that Senator Reid had stated that if he was going to sell the Flood Project to the Corps of

Engineers and Congress, all the local entities needed to be together and united behind it. Member Humke stated that what he took from that message was that a super majority is called for.

Member Dickens withdrew his motion.

It was moved by Alternate Aiazzi, seconded by Member Martini, to approve a simple majority voting process. The motion failed: Members Dickens, Larkin, Martini, Alternate Aiazzi and Chair Sferrazza assenting; Member Humke dissenting; and Members Glick, Gustin and Smith excused.

Chair Sferrazza suggested that a compromise was called for and asked whether having a simple majority vote for most issues, with a super majority vote on all issues related to issuing bonds, might possibly be satisfactory to address concerns expressed by Washoe County representatives.

Member Humke responded that there were numerous complex issues related to land acquisition that involve fiduciary responsibility to the taxpayers in addition to bonding, as well as a number of other complex and technical issues. Without being able to review a list of what would and would not require a super majority vote, he stated that he would not be comfortable approving a simple majority process.

Alternate Aiazzi noted that approving a simple majority would not prevent us from going to Congress with unanimous support of the project, and stated that, in his opinion, the BCC had surrendered their power on the matter and should not be attaching strings to it. He commented that if a super majority vote is needed for this particular commission then a super majority voting structure should be adopted for all boards and commissions.

Member Humke responded that Washoe County had not given away anything and instead had engaged in negotiations to create the structure that currently exists. He reiterated that it is Washoe County that has the ultimate fiduciary responsibility to the taxpayers, not the other jurisdictions, and that fact has not changed.

Chair Sferrazza commented that all the parties were funding the project even if Washoe County did the bonding, and all were working together to create an interlocal funding agreement to fairly apportion the responsibility, noting that the County had agreed to follow the FPCC's recommendations.

Nathan Edwards – Deputy District Attorney, stated that it was not quite that simple in terms of what the County is bound to do with respect to what the FPCC recommends, and that was not the question before the Committee—it was the voting structure that they were taking action on today.

There was significant discussion of the suggested voting options. As the discussion continued, it was suggested that a good proposal would naturally be approved unanimously thereby making the requirement for a super majority vote unnecessary.

Alternate Aiazzi, changed his motion that was still on the floor and moved to approve a 66-percent super majority or five (5) of seven (7) members' affirmative vote, which was seconded by Member Martini. The motion carried: Members Dickens, Humke, Larkin, Martin, Alternate Aiazzi and Chair Sferrazza assenting; and Members Glick, Gustin and Smith excused.

Alternate Aiazzi made a motion to change the voting structure to a simple majority based on the previous motion and affirmative vote.

Alternate Aiazzi explained that in his opinion the FPCC could now make this change in the voting structure because they had passed the previous motion that 66% in favor was adequate to take action.

Member Larkin called for a point of order and asked legal counsel to address the question.

Nathan Edwards – Deputy District attorney, stated that he was not prepared to issue a legal conclusion on such short notice but expressed his concern that if the first vote for a super majority had been taken with the secret intent to immediately lower it to a simple majority, there could be issues with that.

Ms. Duerr commented that before any change in the FPCC's voting process could take effect, all the jurisdictions must take action to approve the amendment to the Cooperative Agreement that they all signed.

Alternate Aiazzi voiced his objection to his second motion being viewed as inappropriate and asked Mr. Edwards to cite legal authority for his comment.

Mr. Edwards restated that he was not prepared to issue a legal conclusion on such short notice and noted that he did not have the full resource of the law library at his disposal.

Discussion ensued on the subject of who provides legal representation to the FPCC and that the issue should be addressed at future meetings when it was properly agendized.

Chair Sferrazza noted that the Reno City Council had voted for a simple majority voting process and if they did not agree to the super majority the FPCC recommended, then the FPCC would remain with the requirement for a unanimous vote.

David Creekman - Sparks Deputy City Attorney, commented that the Sparks City Council had not yet taken action and that any action taken by the FPCC will be conveyed to the Sparks Council, which would vote on the matter, and that no changes to the Cooperative Agreement would take effect until all parties agreed to it by formal action of their respective governing bodies.

It was moved by Member Larkin, seconded by Member Dickens, to add one voting member from the Storey County Commission to the Flood Project Coordinating Committee.

In response to questions about contributing to funding of the Flood Project, Ms. Duerr commented that Storey County is in the process of modifying the distribution of certain sales tax revenues as their contribution to the flood project.

Andrew Green joined the meeting at 3:43 p.m.

During the discussion it was noted that the FPCC had always sought and will continue to seek funding from all partners in the flood project. The intent of the funding requirement is to assure a contribution to the project's costs but not a directive on how and what should be allocated. Those issues would be determined after the benefits engineer completed its study and the Interlocal funding agreement was finalized among the local sponsors.

The motion carried: Members Dickens, Humke, Larkin, Martini, Alternate Aiazzi and Chair Sferrazza assenting; and Members Glick, Gustin and Smith excused.

It was moved by Member Martini, seconded by Member Larkin, to change the status of the University of Nevada Reno members to that of non-voting members.

Responding to Member Larkin's inquiry about whether this action must be affirmed by the University's Board of Regents, Member Dickens stated that he thought the action might not need Regent approval since only the University Present and the University's legal counsel had signed the original Cooperative Agreement.

The motion carried: Members Dickens, Humke, Larkin, Martini, Alternate Aiazzi and Chair Sferrazza assenting; and Members Glick, Gustin and Smith excused.

Mr. Creekman left the meeting at 3:48 p.m.

8. CHANGING THE LEVEL OF FLOOD PROTECTION TO BE PROVIDED BY THE LOCALLY PREFERRED PLAN TO THE 117-YEAR FLOOD EVENT – *The FPCC (Flood Project Coordinating Committee) adopted the locally preferred flood plan (LPP) in March 2006. As adopted, the plan would provide flood protection up to the 100-year event. Based on an analysis of benefits and costs, the Army Corps of Engineers has determined that there is a Federal interest in participating in a flood project that would provide protection up to the 117-year event, or a 1997 flood. Possible action to amend the Locally Preferred Plan to provide 117-year flood protection.*

Paul Urban - Truckee River Flood Project Manager, noted that the Corps (U. S. Army Corps of Engineers) had determined a federal interest in raising the level of protection from a 100-year to 117-year event in the Truckee Meadows reach of the project. Mr. Urban noted that the increased level of protection not only protected the stability and health of the river but also those located downstream of the project.

Andrew Green left the meeting at 3:50 p.m.

During the discussion it was noted that the cost of the project would increase by approximately $10-million but there would be an annual benefit of about $5-million per year. It was noted that a majority of the cost was associated with land and/or easement acquisition.

It was moved by Alternate Member Aiazzi, seconded by Member Humke, to amend the Locally Preferred Plan to provide a 117-year flood event protection in the Truckee Meadows. The motion carried: Members Dickens, Humke, Larkin, Martini, Alternate Aiazzi and Chair Sferrazza assenting; and Members Glick, Gustin and Smith excused.

9. APPROVAL TO ADD ADMINISTRATIVE ASSISTANT POSITION TO TRUCKEE RIVER FLOOD PROJECT DEPARTMENT STAFF – *Possible action to approve addition of Administrative Assistant position to Flood Project staff.*

Naomi Duerr, Director, Truckee River Flood Project, noted that this action would add the position to the Flood Project staff immediately rather than at the beginning of the 2007-2008 fiscal year. Ms. Duerr noted that currently there were nine (9) authorized positions and that approval of the position would result in ten (10) individuals being dedicated to the Flood Project.

Member Bob Larkin left the meeting at 3:55 p.m.

Alternate Aiazzi noted his concern that this would have three times the staffing currently at TMRPA (Truckee Meadows Regional Planning Agency). Chair Sferrazza pointed out that ReTRAC had been a smaller project but had a huge staff compared to the relatively small number of employees at the Flood Project.

Chair Sferrazza asked that an organizational chart of the Flood Project staff, including each staffer's responsibilities, be brought to the April 13, 2007, meeting.

It was moved by Member Martini, seconded by Member Humke, to approve the addition of an Administrative Assistant position to the Truckee River Flood Project staff. The motion carried: Members Dickens, Humke, Martini, Alternate Aiazzi and Chair Sferrazza assenting; and Members Glick, Gustin, Larkin and Smith excused.

10. APPROVAL TO FUND TRAVEL EXPENSES OF FPCC MEMBERS FOR TRAVEL RELATING TO FLOOD PROJECT BUSINESS IN FISCAL YEAR 06-07 IN AN AMOUNT NOT TO EXCEED $7,500. – *Possible action to approve funding for fiscal year 06-07 in an amount not to exceed $7,500.00.*

Naomi Duerr, Director, Truckee River Flood Project, outlined the requested budget augmentation for $7,500.00 that members could access for Flood Project related travel expenses.

Responding to Chair Sferrazza's inquiry about whether she should abstain since approval would affect reimbursement to the City of Reno for her recent travel to Washington, D.C. which involved

both City business and Flood Project business, Nathan Edwards – Deputy District Attorney, suggested that though the most conservative approach would be for Chair Sferrazza to abstain in this particular vote, he did not see it as a problem for her to vote on the matter.

Member Bob Larkin rejoined the meeting at 3:58 p.m.

In response to Alternate Aiazzi's question whether the amount was adequate to cover travel for all the FPCC members, Ms. Duerr explained that the $7,500.00 would cover the remainder of the current fiscal year only. Ms. Duerr noted that the 2007-2008 budget included a separate travel expense line item.

It was moved by Alternate Aiazzi, seconded by Member Larkin, to approve funding for fiscal year 2006-2007 in the amount of $7,500.00 for flood project related travel. The motion carried: Members Dickens, Humke, Larkin, Martini, and Alternate Aiazzi assenting; with Chair Sferrazza abstaining; and Members Glick, Gustin and Smith excused.

11. WORKING GROUP MONTHLY REPORT *

Naomi Duerr – Flood Project Director, outlined the March 12, 2007, Working Group review of the Corps (U. S. Army Corps of Engineers) Environmental Restoration Plan and explained that the Working Group had made recommendations to the Corps to increase the level of restoration in specific locations.

12. FLOOD PROJECT MONTHLY REPORTS – *Possible action to accept reports and provide direction regarding project scheduling and funding items as set forth in the reports.* A) MONTHLY ACTIVITIES REPORT: *1. Staff activities; and 2. TAC (Technical Advisory Committee) activities;* B) FINANCIAL REPORT: *1. Month of February 2007 transactions; and 2. Fiscal year to date transactions (July 2006 through February 2007); and* C) PROJECT TIMELINE.

Naomi Duerr – Flood Project Director, outlined the recent meetings with Flood Project lobbyists, Nevada's Congressional delegation and the Assistant Secretary of the Army in Washington, D.C. Ms. Duerr noted that the representatives of the Flood Project had expressed their appreciation for the work of the Sacramento District Corps (U. S. Army Corps of Engineers) on the project.

Member Larkin summarized the meetings with Assistant Secretary of the Army Woodley and the lobbyist engaged for the project as well as discussions with Senators Ensign and Reid's staff. Mr. Larkin believes that a trip later in 2007 should be made to continue to keep the Truckee Meadows Project in the forefront on the national scene.

Ms. Duerr noted that representatives had also met with the Energy and Water Appropriations staff to discuss funding and authorization issues. Ms. Duerr noted that all projects are being subject to increased review and scrutiny and that the external peer review will help assure that the project is fully "vetted" before seeking funding authorization.

It was moved by Member Humke, seconded by Member Larkin, to accept the report as presented. The motion carried: Members Dickens, Humke, Larkin, Martini, Alternate Aiazzi and Chair Sferrazza assenting; and Members Glick, Gustin and Smith excused.

13. ARMY CORPS OF ENGINEER'S MONTHLY REPORT – *Report on activities related to the Truckee River Flood Management Project including project scheduling and funding. Possible action to accept the report and provide direction to staff related to Truckee River Flood Management Project scheduling and funding items as set forth in the report.*

Brandon Muncy – Chief Civil Works Program, noted recent challenges associated with the external peer review and the modifications to Corps' processes due to Hurricane Katrina. The external peer review process is intended to provide a strengthened position for a project proposal as it is forwarded to Congress. Mr. Muncy noted the importance of having projects included in the President's budget.

Responding to Member Larkin's inquiry about the suggested special meeting on March 20, 2007, Naomi Duerr – Flood Project Director, commented that the contract cost will most likely exceed her budget authority so it had to go before the FPCC and the Board of County Commissioners for approval.

Mr. Muncy noted that the external peer review is typically done later in the process and that the Corps appreciates the willingness of the local sponsors to step forward and facilitate advancement of the project schedule.

Member Larkin noted that the region also appreciates the responsiveness of the Corps.

14. COMMITTEE MEMBER COMMENTS, REQUESTS AND FUTURE AGENDA ITEMS

Alternate Aiazzi suggested an agenda item to authorize the use of independent counsel.

Chair Sferrazza concurred and commended both Deputy District Attorneys Pete Simeoni and Nathan Edwards for the valuable work they had done for the project, specifically mentioning the legal research on mitigation ratios.

Chair Sferrazza recessed the meeting at 4:16 p.m.

Chair Sferrazza reconvened the meeting at 5:02 p.m. A quorum was present (Members Glick, Gustin and Smith excused). Non-voting Member Katy Singlaub did not rejoin the meeting.

15. 5:00 P.M. PUBLIC WORKSHOP ON THE VIRGINIA STREET BRIDGE * – *The Locally Preferred Plan (LPP) adopted by the Flood Project Coordinating Committee (FPCC) calls for the replacement of the bridges at Sierra and Lake Streets in downtown Reno and, if feasible, rehabilitation of the existing Virginia Street Bridge, including improving the flood flow capacity of the crossing. The purpose of this workshop is to hear information from the U. S. Army Corps of Engineers, project sponsors, the public and other interested parties on*

proposals to either replace or rehabilitate the bridge. No action or determination of feasibility will occur at this meeting.

Chair Sferrazza outlined the format for the workshop starting with a presentation by the Flood Project Director, project staff and the Corps (U. S. Army Corps of Engineers). Chair Sferrazza noted that public comment would be taken after the presentation. Chair Sferrazza emphasized that the FPCC (Flood Project Coordinating Committee) would take no action at tonight's (March 16, 2007) meeting and the purpose was to gather information and hear public comment.

Naomi Duerr – Flood Project Director, reiterated that the matter was not agendized for FPCC action and that further discussion and action would be taken at the regular meeting of the FPCC on Friday, April 13, 2007.

Chair Sferrazza commented that the Reno City Council would also review the options for the City of Reno-owned Virginia Street Bridge on April 11, 2007, and would likely make a decision on the matter of restoring or replacing the bridge at that meeting.

Ms. Duerr noted that the bridge issues were somewhat complicated with a segment of the population seeing it only as a means of transportation connecting the north and south banks of the Truckee River, while others, including historic preservationists, saw the bridge as a treasured symbol and link to the City's origin and past. In terms of ranking, NDOT (Nevada Department of Transportation) scored the Virginia Street Bridge as a 2 out of a possible 100. The damage caused by the 1997 flood in Washoe County was in excess of $700-million. Drawing attention to photos of the 1997 inundation, Ms. Duerr emphasized that another flood of the 1997 magnitude would result in damages in excess of $1-billion with a significant effect on the long term viability of the local economy in gaming, industrial areas of Sparks, as well as damage to the Reno Tahoe International Airport. Ms. Duerr pointed out that flood damage is not limited to only water related damage but also to detrimental effects on employees, residents and business due to loss of income, inability to receive or ship goods, and other non-tangible items. Ms. Duerr noted that flood inundations were experienced in the downtown reach during the 1907, 1950, 1955, 1986, 1997 and 2005 events. Ms. Duerr compared the design components of the LPP and Corps' NED plan, noting that a 100-year level of protection is proposed for the downtown reach of the project.

Member Bob Larkin left the meeting at 5:12 p.m.

Ms. Duerr noted that the FPCC had adopted the 117-year level of protection for the Truckee Meadows reach and that staff has worked with Senator Harry Reid to secure legislation that allows the project to use accumulated benefits of the project as a whole with a goal of justifying an adequate level of protection for the downtown reach, where the high project expenses made it more difficult to substantiate a comparable level of benefits. Ms. Duerr recalled that the FPCC in March of 2006 had directed that, if feasible, the Virginia Street Bridge was to be preserved. The ultimate goal of the workshop and subsequent public hearing on April 13, 2007, is to determine the definition of feasible as it pertains to restoration/preservation or replacement of the Virginia Street Bridge.

Paul Urban – Flood Project Manager, offered the following acronym definitions: FFP – Full Federal Participation; LPP – Locally Preferred Plan; and NED Plan – National Economic Development Plan.

Member Larkin rejoined the meeting at 5:16 p.m.

Mr. Urban outlined the components of the LPP, which includes the replacement of the Lake and Sierra bridges and preservation of the Virginia Street Bridge if feasible. Mr. Urban explained that the intent is to have Congress authorize as much of the overall project as possible, Mr. Urban then summarized the proposed Ferrari-Shields Bypass Option that would remove a portion of the Pappy I. Smith River Walk, and the 1950's portion of the historic Masonic Temple. This option also includes the construction of stormwater bypasses which resemble box culverts, along with replacement of flood walls on the north bank and installation of a cantilevered walkway. Mr. Urban noted that the Flood Project would own any property acquired for the bypass option. Additionally, the channel-widening to accommodate flows would most likely affect the entrance to the Riverside 12 Theatre Complex just west of the Sierra Street Bridge, as well as portions of the Ten North Virginia Street Plaza and the Post Office located on the south bank of the river, as well as the Riverside Artists Lofts. Mr. Urban noted that the renderings were not at the design level of accuracy, but the entrance to the theater complex would most likely be closed during construction. Mr. Urban noted that the land acquired by the Flood Project could be sold for other uses. Mr. Urban noted that the cantilevered walkway would have several columns to the river bed to support the walkway, which is used as secondary emergency access by law enforcement, fire and other emergency vehicles/personnel. Mr. Urban noted that the computer model of the Ferrari-Shields Bypass would not necessarily work, as the original modeling process did not include debris that is associated with flood events.

Mr. Urban then outlined the NED plan being proposed by the Corps that includes a clear span bridge at all three locations, as well as some increased wall heights. Mr. Urban noted that a clear span bridge would most likely have some effect on pedestrians given the elevated ramps needed to cross the bridge on the north and south banks. The intent of a clear span bridge is to raise the roadbed and railing above the river channel to minimize the amount of debris accumulated by structure in the river channel during an event. It is unclear how the bypass and cantilevered walkway components would deal with debris accumulation. Mr. Urban noted that the steel support structure above the bridge was only one of several design options that could be used for a clear span bridge. The intent of the Community Coalition discussion was to replace the existing structure with a landmark bridge that would attract tourist and residents to the downtown core. Mr. Urban noted that the Corps design would be the more typical roadway bridge such as the one used on East Second Street. Responding to Chair Sferrazza's inquiry about the $5-million defined in the MOU for restoration of the Virginia Street Bride, Mr. Urban explained that a process similar to that used for reconstruction of the Center Street Bridge might be used by documenting, photographing and other measures to chronicle the bridge and preserve its heritage for the future generations. Additionally, continued development along the upstream areas of the river will also have some hydraulic effect on water levels and flows.

Ms. Duerr noted that removal of the bridge from the LPP and NED options would affect the overall cost/benefit analysis of the project. Without a specific plan for restoration or replacement of the

bridge, neither staff nor the Corps can determine what the actual benefits and costs would be. Recently it was brought to staff's attention that because bridges are considered to be utilities by the Corps, the local cost share would be affected. Typically a bridge replacement is paid solely by the local sponsor without any federal participation. The intent is to develop a LPP that encourages and received full federal funding. Therefore, it is critical that the bridge be part of any project submitted to Congress for authorization and funding. Ms. Duerr deferred the question about whether the Ferrari-Shields Bypass Option would work to the Corps.

Brandon Muncy – Chief, Civil Works Program, commented that modeling done by the Corps indicates that while the Ferrari-Shields option would work under the modeling used by the designer, modeling that properly took into account the inclusion of debris typically associated with a major flood event indicated that water would overtop the bridge, thus causing the bypass option to fail. The considerations and assumptions used by the Corps took into account the ability of the bypass to gather water and return it to the main channel during an event. The Corps' conclusion was that it appeared that the bypasses would not function as indicated in the designer's modeling process. Additionally the bypass option would affect project costs due to the acquisition of additional developed property in the downtown core, as well as some perhaps detrimental effects on existing businesses such as the Riverside 12 Theatre Complex. It appears that there are other options that should perhaps be explored before a final decision is made on whether the proposed bypass option could be redesigned so that it would function as intended. Even after a potentially improved design demonstrated that it might be feasible through computer modeling, the Corps would need to build a physical model of the proposed option using various test scenarios to assure that each component functions as expected before any recommendation would be made for federal funding. Mr. Muncy noted that although the process is still in the feasibility phase, the Corps cannot even tentatively propose an option that it does not believe will function. The next step being proposed by the Corps is to meet with interested parties including the designer of the Ferrari Shields option to explore what might be feasible. Mr. Muncy noted that the construction of a physical model to test the Ferrari-Shields option could delay the project a minimum of six (6) or more months.

Member Larkin stated that the region could not wait an additional six months because the need to mitigate flooding in the Truckee Meadows is critical. Mr. Larkin pointed out that another 1997 event would cause a minimum of $1-billion in damage.

Rosemary Menard left the meeting at 6:12 p.m.

Mr. Muncy noted that the region could replace or rehabilitate the bridge without Corps involvement. However, that would most likely affect the overall project design and cost/benefit analysis since it would no longer be included as part of the project. Mr. Muncy outlined the various three federal funding levels associated with the NED and LPP plans. Mr. Muncy noted that if the LPP including bridge restoration were sent forward for funding, the local cost share would include land acquisition for the bypass, and relocation of utilities which included bridge restoration. Therefore, the local community must determine the level of funding they are willing to absorb and understand that the Corps cannot endorse an LPP that does not meet minimum federal cost/benefit ratios. Mr. Muncy outlined authorized funding levels for project components based on the level of federal funding authorized. For example, a $147-million project with full

federal participation would involve a federal cost of $88-million, with the local matching cost being $54-million, as compared to a $165-million project that does not meet full federal funding criteria costing local sponsors $150-million with only $10-million in federal funding being approved. Under the NED replacement scenario, the flood protection stays at a 50-year level downtown with no flood walls and bridge replacements at all three locations (Lake, Sierra and Virginia Streets), which would be compared to a 100-year protection downtown recommended in the LPP that includes replacement of the bridge and flood walls. Mr. Muncy stated that inundation maps associated with the various options could be provided to better illustrate the levels of protection.

Jerry Fuentes – Corps Project Planner, commented that no buildings should be at risk using a 100-year level of protection.

Mr. Muncy noted that while a mathematical model does not cause any significant delay in the project, a physical model and testing definitely would. Mr. Muncy noted that value engineering and design engineering studies can be completed while funding approval is being sought. Additionally, certain design modifications can be made as during the design phase after funding is approved if it is found than an element does not function as anticipated.

Member Dickens rejoined the meeting at 6:27 p.m.

Chair Sferrazza opened the public portion of the workshop and stated that she had received email correspondence from the following individuals in opposition to restoration of the bridge.

Erik Holland; Doug Smith; Ralph Hartmann; David Morgan; Brian Fitzgerald; Susan Fairfield; Lorie Shaw; Steve Cerocke; Dr. John Zimmerman; Erich Schmitt; Tim Ruffin; and Adina Raney.

A copy of the correspondence is on file at the Flood Project Office.

Alice Baldrica – SHPO (State Historic Preservation Office), recalled the existing MOU and suggested it would be helpful to involve NDOT and Federal Highway Administration so they could hear the testimony provided that indicates the Ferrari-Shields Bypass option would not work.

Member Geno Martini rejoined the meeting at 6:30 p.m.

Bert Bedeau – Preserve Nevada, commented that both the bypass and NED options appeared to need full federal funding and he compared the cost share to local sponsors ranging from ±$54.4-million for replacement and ±$56.2-million for restoration, not really a large difference. Mr. Bedeau commented that Preserve Nevada, the Historic Trust, and others would be willing to work with the Corps and others to identify a solution that addresses flood issues while preserving the bridge.

Mr. Muncy stated that Corps staff could most likely verify the modeling within a week and answer what effects a parallel modeling would have on the project schedule.

Alicia Barber – Preserve Nevada, recalled the March 2006 amendment to the LPP to preserve the Virginia Street Bridge, if feasible. Ms. Barber asked that a discussion including Ferrari-Shields, NDOT and others should be facilitated to address the bypass option and work to find an

alternative that addresses both flood control and preservation concerns. Ms. Barber reminded those present of the existing MOU signed in partnership by the City of Reno, NDOT and others to preserve the Virginia Street Bridge. Ms. Barber noted the necessity of preserving the integrity of the process and urged that a sense of urgency should not subvert the rehabilitation of the bridge.

Joan Dyer – President HRPS (Historic Reno Preservation Society), noted that a guest speaker from the National Historic Trust had found the area near the Virginia Street Bridge lonely nine (9) years ago but a recent visit to the City showed a vibrancy that had not existed in the past. Ms. Dyer noted that historic and cultural tourism is on the rise nationwide and that there are many historic buildings that are not all steel and shine.

Jim Hunting – President DIA (Downtown Improvement Association) and member of the Redevelopment Agency CAC (Citizens Advisory Committee) outlined his concern for the ±500 residential units, businesses and other property owners that are affected by flooding. Each year that the project is delayed increases the risk of another 1997-type event inflicting tremendous damage on the area. Mr. Hunting suggested that replacement of the Virginia Street Bridge should be a priority project.

William Render stated that he favors the replacement of the current bridge structure noting that 1997 flood proved that a proper bridge, rather than a bypass should be installed. Mr. Render noted that the financial peril the situation posed to existing businesses was a cost that all taxpayers may have to absorb if a 1997-type event occurs again.

Glen Dawson noted than the board needed to look to the QOL (Quality of Life) and specifically the cost of a human life compared to the cost of bridge replacement during a major flood event. Mr. Dawson encouraged the FPCC to move forward with replacement of the bridge.

Catherine Green – First United Methodist Church, commented that the historic church and other historic structures were also affected by the 1997 and 2005 events and are prone to future flooding due to the bridge.

Roberta Ross – owner Ross Manor, commented that her employees and tenants had worked with her during the 1997 and 2005 events to protect the 100-year old building. It is Ms. Ross' belief that the replacement of the bridge is the most feasible option based on the testimony heard. Ms. Ross outlined her concerns associated with the Ferrari-Shields Bypass option including homeless individuals setting up camps inside the bypass culvert under the cantilevered walkway, as well as the area becoming a canvas for graffiti under the walkway. Ms. Ross encouraged the FPCC to replace the bridge.

Linda Howe – River Walk Merchants Association, noted that a majority of businesses and property owners had signed a petition (copy on file) in support of the bridge replacement. Ms. Howe agreed with Ms. Ross' concern about homeless uses of the bypass option, noting the work that has been done to alleviate the homeless situation in the downtown core.

Gerald Jackson – owner Beaujolais Bistro and President of the River Walk Merchants Association, read potions of a letter from the Plaza Resort Club (copy on file) into the record noting that the restaurant is also located in a 100-year old building.

Fred Boyd – Interim CEO (Chief Executive Officer) Reno-Sparks Chamber of Commerce, noted the potentially devastating effect another 1997 event would have on the economic vitality of the region and suggested that, in his opinion, replacement of the bridge is a major step in addressing flood concerns.

Dick Bartholet – member of the Reno Redevelopment CAC, drew attention to a study being conducted by UNR (University of Nevada, Reno) on the social costs of homelessness. Mr. Bartholet encouraged the FPCC to also consider the costs associated in dealing with not only the homeless population but also other illicit activities that would occur if the bypass option were constructed. Mr. Bartholet recalled that Brick Park (West Street Plaza) had been demolished to alleviate homeless and other illicit activities as part of the downtown redevelopment.

Jeff Wilson – DIA (Downtown Improvement Association) member, drew attention to the City's plans for the 1930's era Post Office and explained how the bypass option would negatively affect those redevelopment plans that would step the existing parking lot on the south bank down to the river.

Janel Walsh – Siena Hotel/Casino Sales Manager, noted Barney Ng's investment in the former Holiday Hotel/Casino and the effect a future flood could have on his more than $70-million investment. Ms. Welch explained that the bridge replacement is, in her opinion, the most feasible option.

Denise Rush commented that she did not believe the costs of rehabilitation had been accurately calculated.

John Howard – First United Methodist Church, commented that the church had been in this location for 80-years and that while historical preservation is important and generally supported by the church, the members would prefer to stay invested in downtown Reno and therefore supported a replacement of the Virginia Street Bridge.

Bob Ramsey suggested that the Virginia Street Bridge should be replaced with a style similar to that used for the Center Street Bridge.

Member David Humke left the meeting at 7:06 p.m.

Mr. Ramsey noted that a new bridge could be constructed imitating many of the design elements resulting in a bridge that meets flood concerns.

Jerry Purdy noted his concern as a taxpayer about the ±$300-million funding shortfall and concurred with the replacement of the bridge.

Member Humke rejoined the meeting at 7:10 p.m.

Marilyn Brian asked that the FPCC adopt a design that reduces flooding.

Matt Newsomer – NDOT (Nevada Division of Transportation), stated that NDOT is present and has been involved in the discussion and review of the Ferrari Shields Bypass Design, noting that NDOT had also asked for a physical model to assure that the bypass option would function as intended.

Daryl Drake – commercial real estate broker, commented that his business focus is the downtown core and that the effect of another 1997 event would have significant detriment effects. Mr. Drake drew attention to recent Reno City Council priorities including the acquisition and rehabilitation of the 1930's era Post Office as well as an extension of the Whitewater Park and enhancements to the Ten North Virginia Street Plaza. Mr. Drake noted his concern that two parties are pitted against each other to the detriment of the community and suggested that the two groups focus their attention on reaching a viable solution that respects both sides of the issue.

Allan Hash did not wish to speak but asked that his written suggestion regarding the preservationists moving the bridge to another location be noted for the record.

Chair Sferrazza closed the meeting to public comment.

Neal Mann – Reno Public Works Director, noted that additional background information on the issue would be brought to the Reno City Council on March 28, 2007, and again on April 11, 2007 for action.

Member Larkin noted the detrimental effect that additional delay on the issue would have on the project, noting that 25,000 employees in the Sparks Industrial Area would be significantly affected in another 1997 event. Mr. Larkin respectfully asked that the Reno City Council take action and provide direction to the FPCC.

Member Aiazzi disclosed that his wife is on the Board of Directors for Bruka Theater and that his place of employment as a Member of the Reno City Council was at One East First Street. Mr. Aiazzi asked that staff prepare and present the following information: 1) look at the Virginia Street bridge design in the same manner as the Center Street bridge (use the Center Street design); 2) show an overlay of flood impact and inundation areas associated with each of the designs (apparently Corps has these graphics); 3) provide renderings of what the bypass option and the bridge replacement would look like from a pedestrian point of view; 4) show how the bypass option will change the look of the bridge and at what point does the restoration option (Ferrari-Shields) cause the bridge to lose its historic character; 5) provide more information on what the ramps to a clear span bridge would look like and their effect on existing structures/businesses such as Bruka Theater, Riverside Artists Lofts, Post Office and the Plaza; and 6) clarify who ultimately decides on the restoration or replacement option and what the time line would be for approval and/or construction associated with each alternative.

Ms. Duerr noted that while the City of Reno has some autonomy in its decision on the Virginia Street Bridge, the benefits would be lost if it were removed from the flood project plans.

Additionally, the legal implications and encumbrance of the MOU must be addressed along with the effects of the bypass option on Ten North Virginia Plaza and other projects in downtown.

Member Humke asked that the issues and responses be placed on the website for public review.

Chair Sferrazza noted that, in her opinion, the FPCC should have input from the Reno City Council before making any recommendations on the LPP. Ms. Sferrazza suggested a joint meeting of the FPCC and City Council so that issues can be discussed.

Ms. Duerr suggested that a compressed version of today's workshop should be presented to the Reno City Council at its upcoming meetings, so that they have the same information gathered tonight on which to base their decision.

Chair Sferrazza stated that she would ask whether the City Council is willing to participate in a joint FPCC/City Council meeting on April 13, 2007.

16. ADJOURNMENT

Chair Sferrazza adjourned the meeting at 7:37 p.m.

US Army Corps
of Engineers

Downtown Reno Alternatives

Truckee River Flood
Management Project

FPCC Meeting
Virginia Street Bridge Workshop
March 16, 2007

Definition of Terms

- **NED – National Economic Development Plan :**
  - This is the plan developed by the Corps that creates the greatest benefit to the economy of the United States as a Whole.
  - Benefit categories spelled out in Corps policy
  - Funded with Full Federal Participation

- **LPP – Locally Preferred Plan:**
  - The plan preferred by the local sponsor that included project elements that are not in the NED but have been determined locally to be needed
  - The additional cost to things added to the project that are not included in the NED are paid for by the sponsor

- **FFP – Full Federal Participation:**
  - This means that the Corps would cost share project costs to the total amount allowed by law even if the project elements are not in the NED.
  - Only Congress can authorize full federal funding of a LPP

- **LERRDs – Lands, Easements, Replacement, Relocation, and Disposal areas**
  - Paid for 100% by the local sponsor

Virginia Street Bridge (VSB) Alternatives

- **Replacement – NED:** Remove existing bridge and replace with a clear span type.
  - Non-Fed responsible for all construction and land costs
  - Corps responsible for historic and cultural mitigation costs

- **Bypass & Restore – LPP:** Construct a bypass channel around both abutments. Strengthen abutments, Modify approaches. Cost shared per Corps Policy.
  - Non-Fed Responsible for all costs over the NED plan
  - Corps responsible for mitigation costs and construction costs up to NED costs.

- **Bypass & Restore – FFP:** Same as Bypass & Restore but cost shared at Full Federal Participation (65% Fed-35% non-Fed)
  - Non Fed responsible for LERRDs including modifications to VSB
  - Corps responsible for all other constructions costs
  - Congressional direction needed.

Virginia Street Bridge (VSB) Alternatives

Replacement – NED

Federal Cost	Non-Federal Cost	* NDOT / FHWA	Total
$5.1 M	$15.2 M	$5.0M	$25.3 M

1. * NDOT Mitigation costs for Center Street Bridge are not included in this estimate.

2. * If the Virginia Street Bridge is replaces NDOT is still responsible to complete the mitigation for the Center Street Bridge

Virginia Street Bridge (VSB) Alternatives

Bypass & Restore – LPP

Federal Cost	Non-Federal Cost	* NDOT / FHWA	Total
$11.0 M	$24.4 M	$5.0M	$40.4 M

* NDOT Mitigation costs for Center Street Bridge are not paid for by the Corps of Engineers

Virginia Street Bridge Alternatives

Bypass & Restore – FFP

Federal Cost	Non-Federal Cost	* NDOT / FHWA	Total
$22.1 M	$13.3 M	$5.0M	$40.4 M

* NDOT Mitigation costs for Center Street Bridge are not paid for by the Corps of Engineers

Virginia Street Bridge Alternatives

Alternative	Federal Cost	Non-Federal Cost	* NDOT / FHWA	Total
Replacement	$5.1 M	$15.2 M	$5.0M	$25.3 M
Bypass & Modify - LPP	$11.0 M	$24.4 M	$5.0M	$40.4 M
Bypass & Modify – FFP	$22.1 M	$13.3 M	$5.0M	$40.4 M

NDOT Mitigation costs for Center Street Bridge are not included in this estimate

Downtown Reno Alternatives

- **Replacement (NED):** Remove and replace three existing bridges and replace with a clear span type. (40-50 year Level of Protection)
- **Replacement (FFP):** Same as above but with the floodwalls to provide 100-year Level of Protection. Costs shared as Full Federal participation (65% Fed 35% non-Fed)
- **Bypass & Restore –LPP:** Construct bypass at VSB, restore VSB, replace two bridges and Floodwalls. Non-Fed responsible for all costs over the Corps Policy Complaint Plan (NED)
- **Bypass & Restore – FFP:** Same as Bypass & restore VSB but cost shared as Full Federal Participation (65% Fed-35% non-Fed). **Congressional direction needed**

Downtown Reno Alternatives

Alternative	Federal Cost	Non-Federal Cost	* NDOT / FHWA	Total
Replacement (NED)	$9.7 M	$41.5 M	$5.0M	$56.2 M
Replacement (100yr) FFP	$88.3 M	$54.4 M	$5.0M	$147.7 M
Bypass (100yr) LPP	$9.7 M	$150.8 M	$5.0M	$165.5 M
Bypass (100yr) FFP	$104.3 M	$56.2 M	$5.0M	$165.5 M

1. * NDOT Mitigation costs for Center Street Bridge are not included in this estimate.
2. * If the Virginia Street Bridge is replaced NDOT is still responsible to complete the mitigation for the Center Street Bridge

Summary

- FPCC has determined to Bypass & Restore Virginia Street Bridge if feasible.
- Cost to Washoe County and partners depend how the project is authorized.
- Determining the feasibility of the Bypass & Modify Option is an on-going process.

Virginia Street Bridge

Restore or Replace?
An Informational Workshop

Naomi Duerr
Paul Urban
Brandon Muncy

Virginia Street Bridge

Structure of Workshop

- Framework for Issues – Naomi Duerr
- Guide to the Options – Paul Urban
- Feasibility – Brandon Muncy, COE

Goals

- Increase knowledge and understanding
- Begin to address issues of feasibility
- Lay groundwork for future decisionmaking

Problem

1997 - $600 to $700 M in damages in Washoe Co.

$1 BILLION in 6 counties

Today would be $1 Billion+ in Washoe Co.

Flooding is #1 threat to life and property
in the United States

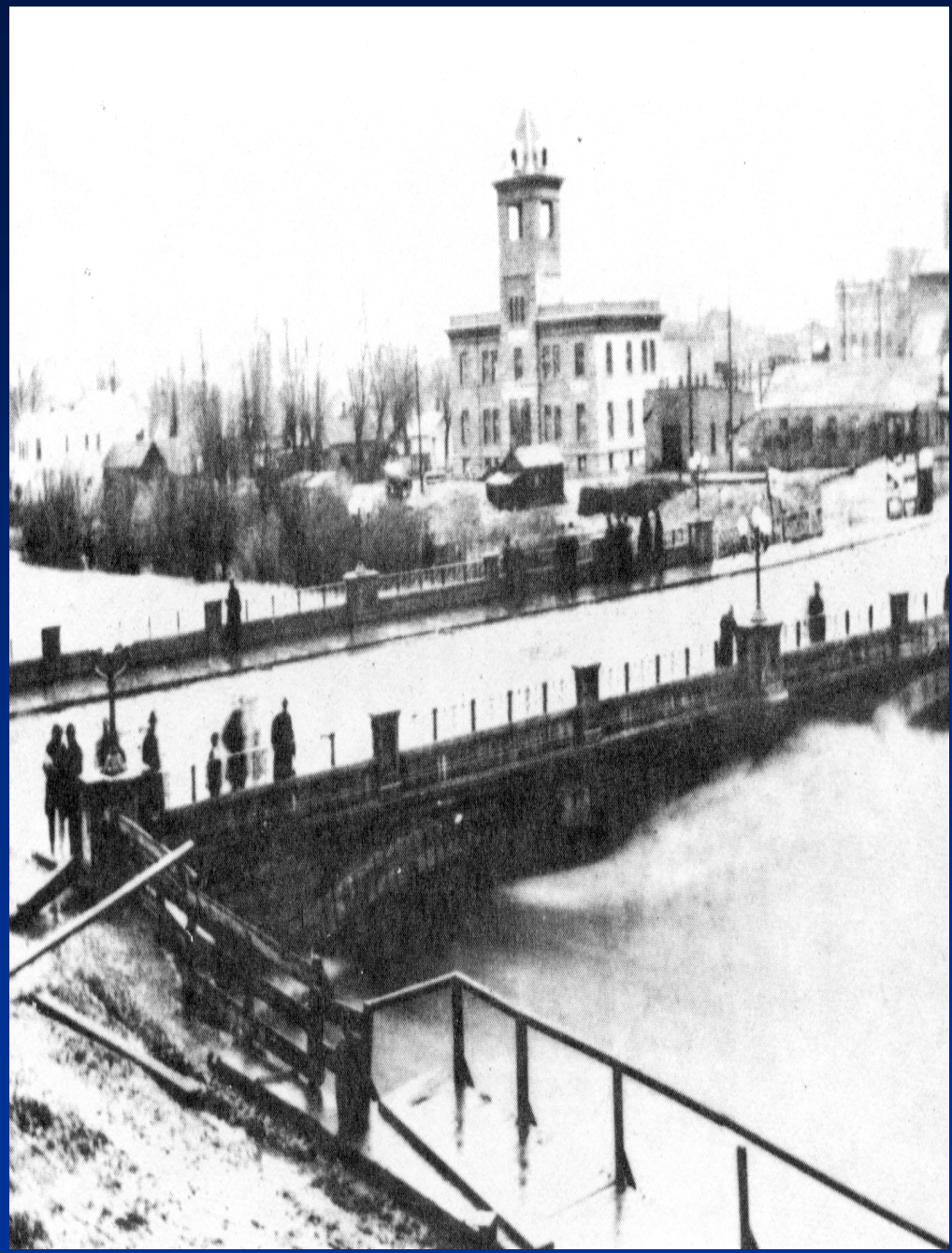

American

UNR Farms – Rosewood Lakes

Flood of 1997 - East Sparks

History of Bridge Flooding

1907




1950
Oper. 414
Nov. 1950

1955

Downtown Reno—1997

Flood of 2005

Background

- Center Street Agreement - $5 M mitigation
- Corps Process NED vs. LPP
- Downtown vs. Meadows
- NED 50-year, LPP 100-year
- Senator Reid Legislation – Unitize
  Benefit –Cost Analysis
- “Full Federal Participation”

The Locally Preferred Plan

- Adopted in March 2006
- 40 sub-elements
- Replacement of the bridges at Sierra and Lake St, and if feasible, rehabilitation of the existing Virginia Street Bridge

ATTACHMENT I-6

Reno City Council Meeting Minutes, Staff Report, CH2M Hill Technical Memorandum, and Presentation Slides March 28, 2007

REGULAR MEETING
RENO CITY COUNCIL
BRIEF OF MINUTES
March 28, 2007

The Reno City Council held a regular meeting at 10:06 a.m. on Wednesday, March 28, 2007 in the Council Chambers in City Hall.

PRESENT: Councilpersons Gustin, Zadra, Sferrazza, Dortch, Aiazzi and Hascheff.

ABSENT: Mayor Cashell.

ALSO PRESENT: Assistant City Manager Schlerf, City Manager McNeely, City Attorney Kadlic, Chief Deputy City Attorney Chase and City Clerk Jones.

ASSISTANT MAYOR GUSTIN PRESIDED IN MAYOR CASHELL'S ABSENCE.

A.3 APPROVAL OF THE AGENDA – March 28, 2007.

It was moved by Councilperson Dortch, seconded by Councilperson Zadra to approve the agenda with item J.8 withdrawn.

Motion carried with Mayor Cashell absent.

A.4 APPROVAL OF MINUTES – February 28, 2007 and March 7, 2007.

It was moved by Councilperson Zadra, seconded by Councilperson Dortch to approve the minutes.

Motion carried with Mayor Cashell absent.

B.0 CASH DISBURSEMENTS – February 25, 2007 through March 17, 2007.

It was moved by Councilperson Aiazzi, seconded by Councilperson Dortch to approve the Cash Disbursements.

Motion carried with Mayor Cashell absent and Councilperson Hascheff abstaining on all Martin Marietta disbursements.

AGENDA ITEM NO.

D.0 PRESENTATIONS:

D.1 Introduction of New Employees.

Laura Dickey, Diversity & Training Manager, asked the new employees to introduce themselves and identify the departments for which they work.

Ms. Dickey and the Councilpersons welcomed the new employees.

D.2 Presentation of the Meritorious Medal of Merit to Reno Police Officer Jason Soto for saving a life during operational conditions.

Mike Poehlman, Chief of Police, presented the Meritorious Medal of Merit to Reno Police Officer Jason Soto and thanked him for his uncompromising courage and determination to protect the citizens of the community.

C.0 CONSENT AGENDA

C.1 Business Licenses

New License - Liquor

a. Los Gallos Taqueria, Lazaro Macias Gonzalez, 440 North Virginia Street, Suite A.
b. Diamond Market, Aurora Dominguez Granados, 10855 Double R Boulevard, Suite E.

New License - Gaming

c. Wild River Grille, Charles A. Shapiro, 17 South Virginia Street, Suite 180.

Change of Ownership - Liquor

d. Thai Lotus Restaurant LLC, Pinyarat Moonsrikaew, 6430 South Virginia Street, Suite A.
e. Albertson's Store No. 149, Robert M. Piccinini, 525 Keystone Avenue.
f. Albertson's Store No. 170, Robert M. Piccinini, 4995 Kietzke Lane.
g. Albertson's Store No. 173, Robert M. Piccinini, 10500 North McCarran Boulevard.
h. Albertson's Store No. 175, Robert M. Piccinini, 195 West Plumb Lane.

Change of Ownership - Cabaret

i. Wild River Grille, Charles Andrew Shapiro, 17 South Virginia Street, Suite 180.

Recommendation: Staff recommends that the Council approve the Privileged License applications subject to Police Department approval.

AGENDA ITEM NO.

C.2 Staff Report: Approval of a Bid Award for Maintenance of Landscaped Rights-of-Way to Signature Landscaping in the amount of $235,092.33.

Recommendation: Staff recommends that the Council award the bid to Signature Landscaping in the amount of $235,092.33 and authorize the Mayor to sign.

C.3 Staff Report: Approval of a Reversion to Acreage for South Meadows Commercial Property for parcels located west of Double R Boulevard, 400 feet north of Double Diamond Parkway. **Case No. LDC07-00192. [Ward 2]**

Recommendation: Staff recommends that the Council approve the reversion map and authorize the Mayor to sign.

C.4 Staff Report: Approval of a Consultant Contract with Lumos and Associates for Construction Administration for the Corey Sanitary Sewer Lift Station Rehabilitation Project in an amount not to exceed $156,295.

Recommendation: Staff recommends that the Council approve the Consultant Contract in an amount not to exceed $156,295 and authorize the Mayor to sign.

C.5 Staff Report: Approval of the purchase of VMWare Server Consolidation Solution in an amount not to exceed $249,000.

Recommendation: Staff recommends that the Council approve the purchase in an amount not to exceed $249,000 and authorize the Communications and Technology Director to sign the purchase order.

C.6 Staff Report: Approval of a Reversion to Acreage for BOW Enterprises, LLC for parcels located northwest of Vassar Street and Market Street. **Case No. LDC07-00257. [Ward 3]**

Recommendation: Staff recommends that the Council approve the reversion map and authorize the Mayor to sign.

C.7 Staff Report: Approval of a Reversion to Acreage for Robert G. and Patricia Morris for parcels located west of Quincy Street, ±50 feet north of East Sixth Street. **Case No. LDC07-00258. [Ward 4]**

Recommendation: Staff recommends that the Council approve the reversion map and authorize the Mayor to sign.

C.8 Staff Report: Approval of a Second Amendment to the Interlocal Agreement with Washoe County for Funding of an Amended Consultant Agreement with Quad Knopf Consulting Engineers for reimbursement from the Regional Water Management Fund for $127,215.

C.8 continued

Recommendation: Staff recommends that the Council approve the Second Amendment and authorize the Mayor to execute.

C.9 Staff Report: Approval of Amendment Two of the Agreement for Consultant Services with Quad Knopf to complete Phase II of the North Valleys Flood Control Hydrologic Analysis and Mitigation Options in an amount not to exceed $127,215.

Recommendation: Staff recommends that the Council approve Amendment Two and authorize the Mayor to execute.

C.10 Staff Report: Approval of a Sponsorship Agreement for the 2007 Reno River Festival in the amount of $26,000 and sponsorship of 100% of City service costs.

Recommendation: Staff recommends that the Council approve the Agreement and authorize the Mayor to sign.

C.11 Staff Report: Approval of an Extension of the Contract for External Audit Services with the audit firm of Bartig, Basler & Ray, CPAs, Inc. for the FY2006/2007 audit in an amount not to exceed $86,840.

Recommendation: Staff recommends that the Council approve the extension.

C.12 Staff Report: Approval of a Bid Award to Spanish Springs Construction for Panther Valley Park Phase 3 in an amount not to exceed $97,444.

Recommendation: Staff recommends that the Council approve the Bid Award in an amount not to exceed $97,444.

C.13 Staff Report: Approval of Contracts for FY2007/2008 Challenge Grants to Arts Organizations.

Recommendation: The Reno Arts and Culture Commission recommends that the Council approve the three Challenge Grants to Arts Organizations Contracts for FY2007-2008 and authorize the Mayor to sign.

C.14 Staff Report: Approval of Contracts for FY2007/2008 Cultural Event Grants to Arts or Cultural Organizations.

Recommendation: The Reno Arts and Culture Commission recommends that the Council approve the 16 Cultural Event Grant Contracts for FY2007-2008 and authorize the Mayor to sign.

C.15 Staff Report: Approval of Contracts for FY2007/2008 Project Grants to Arts and Culture Organizations.

Recommendation: The Reno Arts and Culture Commission recommends that the Council approve the 30 Project Grant Contracts to Arts and Culture Organizations for FY2007-2008 and authorize the Mayor to sign.

C.16 Staff Report: Approval of an Addendum to the Lease Agreement with Washoe County for the Reno Tennis Center located on Plumas Street.

Recommendation: Staff recommends that the Council approve the Addendum and authorize the Mayor to sign.

C.17 Staff Report: Approval of Bid Award #1405 for the Fire Department Brush Truck to Master Body Sales and Service for $150,414.

Recommendation: Staff recommends that the Council approve the Bid Award and authorize the Fire Chief to sign the appropriate Purchase Order.

C.18 Staff Report: Approval of Bid Award #1401 for Fertilizers for Washoe County, the City of Sparks, Incline Village and the City of Reno at a total cost of $205,892.16, with Reno's annual cost being $88,496.16.

Recommendation: Staff recommends that the Council approve the Bid Award to the low, responsive bidders as outlined in the tabulation.

C.19 Staff Report: Approval of Award of Request for Proposal (RFP) #030029 for the Tennis Program and Facility Operations at the Reno Tennis Center to Alpine Tennis.

Recommendation: Staff recommends that the Council approve the Agreement and authorize the City Manager to sign.

C.20 Staff Report: Approval of Award of RFP #030028 for the Rosewood Lakes Golf Course Food and Beverage Concession to Suzelle (dba Odette's).

Recommendation: Staff recommends that the Council approve the agreement and authorize the City Manager to sign.

C.21 Staff Report: Approval of Award of RFP #030027 for the Whitewater Park Rafting and Kayaking Concession to Tahoe Whitewater Tours.

Recommendation: Staff recommends that the Council approve the agreement and authorize the City Manager to sign.

C.22 Staff Report: Approval of an Easement Agreement and Permit for the Q-1 Pedestrian Bridge between the City of Reno and the Nevada Division of State Lands.

Recommendation: Staff recommends that the Council approve the Non-Exclusive Easement with the Nevada Division of State Lands for the river crossing permit and authorize the Mayor to sign.

C.23 Staff Report: Approval of a Reversion to Acreage for Grace Community Church of Reno for parcels located northeast of Robb Drive and Bankside Way. **Case No. LDC07-00110. [Ward 5]**

Recommendation: Staff recommends that the Council approve the reversion map and authorize the Mayor to sign.

C.24 Staff Report: Approval of Bid Award #1407 to Unilight for Ballroom Light Fixtures in the amount of $147,127.

Recommendation: Staff recommends that the Council approve the Bid Award in the amount of $147,127 and authorize the Public Works Director to sign the purchase order.

C.25 Staff Report: Approval for a one-year time extension on the tentative map for the Golden Highlands Subdivision, located at the southern terminus of Beckworth Drive, Crest Bluff Court, Squaw Creek Court, and Gold Court (Golden Highlands-Time Extension). **Case No. LDC06-00438. [Ward 4]**

Recommendation: Staff recommends that the Council approve the time extension subject to the existing conditions.

C.26 Staff Report: Approval of Bid Award #1399 for Swimming Pool Chemicals for Washoe County, the City of Sparks, Incline Village and the City of Reno at an estimated cost of $58,320, with Reno's annual cost being $14,000.

Recommendation: Staff recommends that the Council approve the Bid Award.

C.27 Staff Report: Approval of a Contract in the amount of $97,510 for Pictometry Mapping Services.

Recommendation: Staff recommends that the Council approve the mapping agreement and authorize the Mayor to sign.

C.28 Staff Report: Acceptance of an $18,375 grant from the Truckee River Fund to Evaluate Re-vegetation Failure and Success in the Chalk Creek Sub-Watershed near Seventh Street and Robb Drive.

C.28 continued

Recommendation: Staff recommends that the Council accept the grant and authorize the Mayor to sign.

C.29 Staff Report: Acceptance of a $250,000 grant from the Truckee River Fund to Implement a Water Quality Management Program for the Chalk Creek Sub-Watershed and to Evaluate Mitigation Strategies for Total Dissolved Solids.

Recommendation: Staff recommends that the Council accept the grant and authorize the Mayor to sign.

Sam Dehne, Reno resident, presented his views on the consent agenda.

It was moved by Councilperson Dortch, seconded by Councilperson Aiazzi to approve consent agenda items C.1 through C.29 with item C.11 pulled for discussion.

Motion carried with Mayor Cashell absent.

C.11 Staff Report: Approval of an Extension of the Contract for External Audit Services with the audit firm of Bartig, Basler & Ray, CPAs, Inc. for the FY2006/2007 audit in an amount not to exceed $86,840.

Recommendation: Staff recommends that the Council approve the extension.

Councilperson Sferrazza stated that Bartig, Basler & Ray also completed the audit in 2002, and asked if the City went out to bid on the 2007 audit contract.

Lynette Hamilton, Accounting Manager, said that Bartig, Basler & Ray was awarded the contract when it was put out to bid for the fiscal 2003 audit, and was granted a three-year contract with two one-year extensions. She also said that this is the last year of Bartig, Basler & Ray's contract, and a Request for Proposal (RFP) will be sent out in summer 2007 to solicit a new audit firm.

It was moved by Councilperson Sferrazza, seconded by Councilperson Hascheff to uphold the staff recommendation.

Motion carried with Mayor Cashell absent.

AGENDA ITEM NO.

E.0 PROCLAMATIONS:

E.1 April is Fair Housing Month – Kate Knister, Silver State Fair Housing.

Councilperson Sferrazza, on behalf of Robert A. Cashell, Sr. and the City of Reno, proclaimed April 2007 as Fair Housing Month.

E.2 Community Development Week, April 9-15, 2007 – Mark Lewis, Jodi Royal-Goodwin.

Councilperson Aiazzi, on behalf of Robert A. Cashell, Sr. and the City of Reno, proclaimed April 9-15, 2007 as Community Development Week.

E.3 2007 Child Abuse Prevention Month (April 2007) – Phillip Ulibarri, Development Officer, Washoe County District Health Department.

Councilperson Zadra, on behalf of Robert A. Cashell, Sr. and the City of Reno, proclaimed April 2007 as Child Abuse Prevention Month.

E.4 April 6, 2007 is National Tartan Day – Doug McAlpine, Chief, Nevada Society of Scottish Clans.

Councilperson Dortch, on behalf of Robert A. Cashell, Sr. and the City of Reno, proclaimed April 6, 2007 as National Tartan Day.

D.0 PRESENTATIONS:

D.3 Presentation regarding the 2006 Reno-Tahoe Blues Fest.

Sam Dehne, Reno resident, presented his views on the Festival.

William Lyons, Board of Directors, discussed the success of the 2006 Reno-Tahoe Blues Festival and thanked the Council for their continued support.

COUNCILPERSON HASCHEFF ABSENT AT 10:59 A.M.

F.0 PUBLIC HEARINGS – 10:15 A.M.

F.1 Staff Report: Request for abandonment of a ±5.5 foot by ±216 foot long portion of the northerly right-of-way of Pine Street (±1,188 square feet), which is the south frontage of the lots (APN 011-118-03, 011-118-04 and 011-118-06) between an unnamed access road and Center Street. **Case No. LDC07-00236 (Pine Street Abandonment). [Ward 1]**

F.1 **Case No. LDC07-00236 (Pine Street Abandonment)** – continued

Recommendation: Staff recommends that the Council approve the abandonment subject to the conditions in the Staff Report.

The Assistant Mayor asked if proper notice was given.

City Clerk Jones stated that proper notice was given and no correspondence was received.

Assistant Mayor Gustin opened the public hearing and asked if anyone wished to speak.

Ken Krater, 901 Dartmouth Drive, representing the applicant, stated his willingness to answer questions concerning the proposed abandonment.

Stacie Huggins, Wood Rodgers, representing State Street, LLC, said that the abandonment will allow existing property owners to use creative building design alternatives and facilitate the uniform alignment of curbs and sidewalks.

The Assistant Mayor closed the public hearing.

Councilperson Gustin asked if the existing sidewalk will be widened. He also requested more information about the proposed project.

Mr. Krater said that the uniform alignment of the curb and sidewalk will allow room for streetscape improvements, a six-foot wide sidewalk, and a more dramatic entryway feature into the residential component of his company's flagship project. He stated that the project maintains two lanes of traffic and parking on the side, and will bring the street into accordance with local street standards.

Councilperson Gustin said that although the abandonment will bring the structure closer to the street, the benefits of the project outweigh other alternatives.

> It was moved by Councilperson Gustin, seconded by Councilperson Zadra to uphold the staff recommendation and make the finding that the public will not be materially injured by the proposed abandonment.

Councilperson Aiazzi agreed that the abandonment and related project will correct the current misalignment of property lines.

> Motion carried with Mayor Cashell and Councilperson Hascheff absent.

F.2 Staff Report: Request for: (1) annexation of ±1.10 acres into the City of Reno; and (2) a zoning map amendment from ±1.10 acres of LLR1 (Large Lot Residential – 1 acre minimum) to SF6 (Single Family – 6,000 square foot minimum) on a site located on the northeast corner of the intersection of Panther Drive and Western Road. **Case No. LDC06-00455 (Panther Valley Drive). [Ward 4]**

Recommendation: The Planning Commission recommends approval of the requested annexation and zoning map amendment by ordinance.

The Assistant Mayor asked if proper notice was given.

City Clerk Jones stated that proper notice was given and no correspondence was received.

Assistant Mayor Gustin opened the public hearing and asked if anyone wished to speak. No one spoke and the Assistant Mayor closed the public hearing.

Tracy Chase, Deputy City Attorney, stated that this item needs to be continued and re-noticed.

It was moved by Councilperson Dortch, seconded by Councilperson Zadra to continue and re-notice this item.

Motion carried with Mayor Cashell and Councilperson Hascheff absent.

F.2.1 **ORDINANCE, INTRODUCTION** Bill No. Ordinance annexing to and making part of the City of Reno certain specifically described territory being ±1.10 acres of property located on the northeast corner of the intersection of Panther Drive and Western Road, Washoe County, Nevada; together with other matters properly relating thereto. **Case No. LDC06-00455 (Panther Valley Drive). [Ward 4]**

THIS ITEM WAS CONTINUED.

F.2.2 **ORDINANCE, INTRODUCTION** Bill No. Ordinance to amend Title 18, Chapter 18.08 of the Reno Municipal Code, entitled "Zoning", rezoning a ±1.10 acre site located on the northeast corner of the intersection of Panther Drive and Western Road from LLR1 (Large Lot Residential – 1 acre minimum) to SF6 (Single Family – 6,000 square foot minimum); together with other matters properly relating thereto. **Case No. LDC06-00455 (Panther Valley Drive). [Ward 4]**

THIS ITEM WAS CONTINUED.

COUNCILPERSON AIAZZI ABSENT AT 11:06 A.M.

F.3 Staff Report: Request for an amendment/repeal of certain sections of Chapter 18 of the Reno Municipal Code pertaining to building height restrictions in the vicinity of the Reno-Tahoe International Airport and the Reno-Stead Airport. **Case No. AT-2-07 (Removal of Avigation Height Restrictions).**

Recommendation: Both the Planning Commission and the City Attorney's Office recommend amendment or repeal of the identified sections of the Reno Municipal Code, Title 18, as set forth in the bill.

The Assistant Mayor asked if proper notice was given.

City Clerk Jones stated that proper notice was given and no correspondence was received.

Assistant Mayor Gustin opened the public hearing and asked if anyone wished to speak.

Sam Dehne, Reno resident, presented his views on this issue.

The Assistant Mayor closed the public hearing.

It was moved by Councilperson Dortch, seconded by Councilperson Zadra to uphold both the Planning Commission and City Attorney's Office recommendation.

Motion carried with Mayor Cashell and Councilpersons Hascheff and Aiazzi absent.

F.3.1 **ORDINANCE, INTRODUCTION** Bill No. Ordinance amending Reno Municipal Code, Title 18, "Annexation and Land Development," Chapter 18.08, "Zoning," Article 1, "Official Zoning Map and Establishment of Zone Districts," Section 18.08.101, "Establishment and Purpose of Base and Overlay Zoning Districts," Article III, "District-Specific Standards - Base Zoning Districts," Section 18.08.301, "Nonresidential and Mixed Use Base Zoning Districts," Article IV, "General Overlay Zoning Districts," Section 18.08.402, "Airport Safety General Overlay Districts," Section 18.08.405, "Regional Center and Corridor Planning Area Overlay Districts," and Chapter 18.12, "General Development and Design Standards," Section 18.12.101, "General Provisions" to amend and/or repeal certain portions thereof relating to restrictions on the heights of building located near the Reno-Tahoe International Airport and the Reno-Stead Airport; together with other matters properly relating thereto.

F.3.1 continued

It was moved by Councilperson Dortch, seconded by Councilperson Zadra to refer Bill No. 6467 to the Committee of the Whole.

Motion carried with Mayor Cashell and Councilpersons Hascheff and Aiazzi absent.

COUNCILPERSONS HASCHEFF AND AIAZZI PRESENT AT 11:10 A.M.

H.7 Staff Report: Resolution No. Resolution authorizing the issuance and sale of not to exceed $120,000,000 principal amount of City of Reno, Nevada, Hospital Revenue Bonds (Renown Regional Medical Center Project), Series 2007A, to finance a portion of the cost of a project for the nonprofit corporation Renown Regional Medical Center and its affiliates Renown South Meadows Medical Center and Renown Network Services, consisting of acquisition and equipping of health and care facilities and supplemental facilities for a health and care facility; making determinations as to the sufficiency of revenues and as to other matters related to such project and such bonds; delegating to City Officials the authority to execute and deliver the Bond Purchase Contract and to determine certain Final Terms of such Bonds; authorizing the execution and delivery by the City of a Loan Agreement, an Indenture of Trust, a Purchase Contract, such Bonds, and Closing Documents in connection therewith; and ratifying all consistent actions heretofore taken toward the issuance and sale of such Bonds.

Recommendation: Staff recommends that the Council adopt the resolution.

It was moved by Councilperson Dortch, seconded by Councilperson Hascheff to adopt Resolution No. 6905.

Councilperson Aiazzi disclosed that his wife works at Renown, but not in a supervisory capacity.

Motion carried with Mayor Cashell absent.

G.0 ORDINANCES, ADOPTION

G.1 Staff Report: Bill No. 6455 Ordinance annexing to and making part of the City of Reno certain specifically described territory being ±9.3 acres of property located at the western terminus of Silver Lake Road, ±925 feet west of Red Rock Road, Washoe County, Nevada, and upon annexation the property will be zoned CC (Community Commercial) and OS (Open Space); together with other matters properly relating thereto. **Case No. LDC07-00220 (Red Rock Storage Annexation). [Ward 4]**

G.1 **Case No. LDC07-00220 (Red Rock Storage Annexation)** – continued

Recommendation: Staff recommends that the Council adopt the ordinance.

It was moved by Councilperson Dortch, seconded by Councilperson Aiazzi to pass and adopt Bill No. 6455, Ordinance No. 5904.

Motion carried with Mayor Cashell absent.

G.2 Staff Report: Bill No. 6456 Ordinance to amend Title 18, Chapter 18.08 of the Reno Municipal Code, entitled "Zoning", rezoning a ±10.56 acre site located on the east side of Edison Way (380 & 390 Edison Way), ±2,015 feet south of its intersection with Mill Street from IC (Industrial Commercial) to PF (Public Facility); together with other matters properly relating thereto. **Case No. LDC07-00161 (Regional Technical Institute). [Ward 3]**

Recommendation: Staff recommends that the Council adopt the ordinance.

It was moved by Councilperson Sferrazza, seconded by Councilperson Hascheff to pass and adopt Bill No. 6456, Ordinance No. 5905.

Motion carried with Mayor Cashell absent.

G.3 Staff Report: Bill No. 6457 Ordinance to amend Title 18, Chapter 18.08 of the Reno Municipal Code, entitled "Zoning", rezoning ±325.53 acres generally bounded by the northern border of the Reno-Stead Airport to the north, Lemmon Drive to the east, the US-395/Stead Boulevard Interchange to the south, and Red Rock Road to the west from SF15 (Single Family Residential –15,000 square feet) to OS (Open Space) on ±197.85 acres, from SF6 (Single Family Residential – 6,000 square feet) to OS (Open Space) on ±70.77 acres, from I (Industrial) to OS (Open Space) on ±25.94 acres, from SF15 (Single Family Residential –15,000 square feet) to IB (Industrial Business) on ±4.5 acres, and from LLR1 (Large Lot Residential – 1 acre) to I (Industrial) on ±24.47 acres; together with other matters properly relating thereto. **Case No. LDC07-00189 (Stead Neighborhood Plan). [Ward 4]**

Recommendation: Staff recommends that the Council adopt the ordinance.

It was moved by Councilperson Dortch, seconded by Councilperson Aiazzi to pass and adopt Bill No. 6457, Ordinance No. 5906.

Motion carried with Mayor Cashell absent.

G.4 Staff Report: Bill No. 6458 Ordinance annexing to and making part of the City of Reno certain specifically described territory being ±13.52 acres of property located along the west side of Red Rock Road and north of Silver Lake Road, Washoe County, Nevada, and upon annexation will be zoned CC (Community Commercial); together with other matters properly relating thereto. **Case No. LDC07-00194 (Red Rock Town Center). [Ward 4]**

Recommendation: Staff recommends that the Council adopt the ordinance.

It was moved by Councilperson Dortch, seconded by Councilperson Zadra to pass and adopt Bill No. 6458, Ordinance No. 5907.

Motion carried with Mayor Cashell absent.

G.5 Staff Report: Bill No. 6459 Ordinance annexing to and making part of the City of Reno certain specifically described territory being ±.913 acres of property located on the east side of East Heindel Road, ±160 feet north of its intersection with North Virginia Street, Washoe County, Nevada, and upon annexation will be zoned SF15 (Single Family Residential – 15,000 sq. ft.); together with other matters properly relating thereto. **Case No. LDC07-00195 (Dawson/Heindel). [Ward 4]**

Recommendation: Staff recommends that the Council adopt the ordinance.

It was moved by Councilperson Dortch, seconded by Councilperson Hascheff to pass and adopt Bill No. 6459, Ordinance No. 5908.

Motion carried with Mayor Cashell absent.

G.6 Staff Report: Bill No. 6460 Ordinance to amend Reno Municipal Code, Title 10, entitled "Health and Sanitation," Chapter 10.04, entitled "General Sanitary Matters", by repealing Section 10.04.140; entitled "Privately Owned Wastewater Treatment Facilities"; together with other matters properly relating thereto.

Recommendation: Staff recommends that the Council adopt the ordinance.

Councilperson Gustin, speaking as a member of the Washoe County Board of Health, stated his support for this amendment.

It was moved by Councilperson Zadra, seconded by Councilperson Aiazzi to pass and adopt Bill No. 6460, Ordinance No. 5909.

Motion carried with Mayor Cashell absent.

G.7 Staff Report: Bill No. 6461 Ordinance to amend Title 5, Chapter 5.90, Article II, of the Reno Municipal Code entitled "Garbage Service", to modify a certain provision relating to charges to allow franchisees to adjust the individual rates of specific business lines as long as the total increase for residential, commercial and industrial rates, collectively, is less than or equal to the annual increase in the Consumer Price Index (CPI); and other matters properly relating thereto.

Recommendation: Staff recommends that the Council adopt the ordinance.

Jon Shipman, Deputy City Attorney, presented an overview of the request.

Frank Cassas, attorney representing Reno Disposal, stated that correspondence submitted by trash haulers in opposition to this ordinance pertains to exclusive franchise agreements for trash in the City of Sparks, Incline Village and Douglas County, and is not pertinent to this exclusive garbage franchise. He said that the only issue being considered is the reallocation of a previously approved rate increase amongst the various services provided under the franchise.

Mark Severtson, Market Area Controller for Reno Disposal, stated his willingness to answer questions regarding the request.

Michael Springer, 9628 Prototype Court, representing Castaway Trash Hauling, stated that trash haulers are concerned about the lack of definition for Waste Management's (WM) new 'industrial' category that was recently added to the current 'commercial' and 'residential' categories. He asked if there are audit standards and accounting systems in place to track WM's garbage versus trash service, and if WM is hauling garbage but calling it trash in order to circumvent the Franchise Agreement.

Cathy Brandhorst, Reno resident, discussed several subjects.

Jon Shipman, Deputy City Attorney, presented an overview of the Staff Report. He said that collection rates were set years ago and are not being changed; the purpose of the ordinance is to allow WM to adjust the rates of various types of customers in varying percentages instead of adhering to the across-the-board percentages that the current agreement stipulates. Mr. Shipman also said that 'industrial' is not a new rate line, but rather a subset of rates currently included in the ordinance.

Councilperson Zadra asked for clarification of the term 'industrial'.

Mr. Severtson said that the 'industrial' line of business is a subset of the 'commercial' line, and refers to big boxes (12-40 yards of waste) such as those at casinos and grocery stores.

G.7 Ordinance to amend Title 5, Chapter 5.90, Article II, of the Reno Municipal Code entitled "Garbage Service" – continued

Mr. Shipman explained that the ordinance amendment before the Council does not pertain to the issue of definitively defining 'trash' and 'garbage'. He said that the Council previously directed staff to pursue a host of issues with WM, and this issue can be added to the list.

Councilperson Aiazzi asked if it would be possible to determine and add the definitions of 'trash' and 'garbage' to the Franchise Agreement now.

Mr. Shipman said that both the City and WM would have to agree to any further Franchise Agreement amendments, and there is no re-opener clause that gives the City the right to unilaterally impose any terms or require WM to come to the table for discussions.

Councilperson Aiazzi disclosed that he met with Dave Wieland and representatives of Castaway Trash Hauling.

Mr. Shipman and Councilperson Aiazzi discussed details of the change suggested on page 301 of the Staff Report under item (10) *Rates*.

Councilperson Aiazzi asked for clarification of WM's influence on the CPI.

Mr. Severtson said that 69% of garbage collection services are performed by private and public companies and 31% is done by municipalities, who also have an influence on the CPI. He said that WM services represent a large portion of the 69%, and it is not clear the extent to which private companies like Castaway influence the CPI.

Councilperson Hascheff asked how the City monitors WM's cost accounting procedures to ensure that expenses incurred for trash collection (non-franchise) are not entered under the garbage portion (franchise), which is under the City's jurisdiction.

Andy Green, Finance Director, said that he and the City's internal auditor examined WM's accounting function and system to determine how WM would account for the fee distribution among the three business lines (industrial, commercial, residential). He said that they followed some sample transactions through WM's system to see how overhead, landfill, personnel costs, etc. are applied, and the methodology used for the transactions seemed reasonable. He discussed the possibility of conducting a more in-depth analysis if necessary.

G.7 Ordinance to amend Title 5, Chapter 5.90, Article II, of the Reno Municipal Code entitled "Garbage Service" – continued

Councilperson Hascheff asked if the City retains the right to conduct an audit of Waste Management's financial procedures under the Franchise Agreement.

Mr. Green and Mr. Shipman agreed that the City retains the right to conduct an audit of Waste Management's practices under the current Franchise Agreement.

Discussion ensued regarding WM's cost accounting system, especially as it relates to differentiating between the trash and garbage categories.

Councilperson Hascheff asked Mr. Springer if his concerns have been adequately addressed by information presented at the table today.

Mr. Springer stated that accounting systems should be in place to ensure that WM separately tracks the trash versus garbage portions of its business, and the City should take a proactive role in monitoring the system for accuracy.

Councilperson Zadra disclosed that she spoke with Dave Wieland and representatives of Reno Disposal. She asked if Reno Disposal notified the affected industrial customers of the proposed ordinance amendment and public hearing.

Mike Genera, Community & Municipal Relations, Waste Management, stated that a letter was distributed to all companies affected by the change, and responses were received from Sierra Summit mall and a church. He presented a copy of the WM letter to the City Clerk for the files.

Councilperson Gustin questioned whether an annual audit of WM's accounting system is adequate.

Mr. Green said that WM has reasonable policies and internal controls in place to differentiate accurately between the categories of service, and conducting an annual review of the system is sufficient. He also said that, at the Council's direction, a more in-depth audit can be implemented.

Councilperson Dortch and Mr. Green discussed the possibility of expanding the sample used in analyzing WM's accounting procedures.

Councilperson Gustin disclosed that he communicated via e-mail and spoke with Dave Wieland of Castaway Trash Hauling.

G.7 Ordinance to amend Title 5, Chapter 5.90, Article II, of the Reno Municipal Code entitled "Garbage Service" – continued

Councilperson Hascheff disclosed that he spoke with Dave Wieland of Castaway Trash Hauling and Greg Martinelli of Reno Disposal. He said that WM's competitors want assurance that the City is closely monitoring how the garbage company cost accounts trash (non-franchise) and garbage (franchise) expenses.

Councilperson Aiazzi said that revising the ordinance to clarify such terms as 'industrial' should be done as soon as the opportunity presents itself. He also said that most of the trash haulers' concerns will be addressed if a proper accounting process is in place.

Councilperson Dortch stated that Waste Management is a publicly traded company that prepares audited financial statements and reports directly to their shareholders.

Councilperson Dortch and Mr. Green reiterated that the City retains the right to, if necessary, conduct a more vigorous audit of WM's accounting procedures.

Councilperson Gustin said that taking a more microscopic look at WM's cost accounting system would alleviate the trash haulers' concerns.

Councilperson Hascheff said that delaying approval of the ordinance will increase the amount of revenue that needs to be recovered, and suggested moving forward with ordinance adoption.

> It was moved by Councilperson Gustin, seconded by Councilperson Dortch to pass and adopt Bill No. 6461, Ordinance No. 5910 with direction to staff to analyze and verify the allocation of expenses (cost accounting) between the garbage and trash operations and report back to the Council.
>
> Motion carried with Mayor Cashell absent.

G.8 Staff Report: Bill No. 6462 Ordinance confirming the proceedings taken in providing for the City of Reno, Nevada, 2006 Special Assessment District No. 1 (Northwest Reno); providing for the payment of the costs and expenses of said improvements, providing for assessing the cost of said improvements against the parcels of land benefited by said improvements, describing the manner for the collection and payment of said assessments, and providing penalties for delinquent payments; together with other matters properly relating thereto.

Recommendation: Staff recommends that the Council adopt the ordinance.

G.8 continued

It was moved by Councilperson Aiazzi, seconded by Councilperson Hascheff to pass and adopt Bill No. 6462, Ordinance No. 5911.

Motion carried with Mayor Cashell absent.

G.9 Staff Report: Bill No. 6463 Ordinance annexing to and making part of the City of Reno certain specifically described territory being ±120.28 acres of property located west of South McCarran Boulevard, and more specifically located to the south, west and east of the "Quail Valley in the Pines" and "Whispering Pines" subdivisions with access from Pinehaven Drive and Pine Bluff Trail, Washoe County, Nevada; together with other matters properly relating thereto. **Case No. LDC06-00376 (The Pines). [Ward 1]**

Recommendation: Staff recommends that the Council adopt the ordinance.

It was moved by Councilperson Hascheff, seconded by Councilperson Zadra to pass and adopt Bill No. 6463, Ordinance No. 5912.

Motion carried with Mayor Cashell absent.

G.10 Staff Report: Bill No. 6464 Ordinance to amend Title 18, Chapter 18.08 of the Reno Municipal Code, entitled "Zoning", rezoning a ±625 acre site located west of South McCarran Boulevard, and more specifically located to the south, west and east of the "Quail Valley in the Pines" and "Whispering Pines" subdivisions with access from Pinehaven Drive and Pine Bluff Trail to: (a) expand "The Pines" PUD (Planned Unit Development) boundaries as shown in "The Pines PUD Supplemental Handbook"; (b) amend the Caughlin Ranch PUD Handbook to add ±160.78 acres of land and insert associated text, making the property subject to the development standards and policies of the Caughlin Ranch PUD Handbook; and (c) to change the zoning designation on ±120.28 acres from HDR-2.5 (High Density Rural – 2.5 acre lots) to PUD and ±40.53 acres from SPD (Specific Plan District) to PUD; together with other matters properly relating thereto. **Case No. LDC06-00376 (The Pines). [Ward 1]**

Recommendation: Staff recommends that the Council adopt the ordinance.

It was moved by Councilperson Hascheff, seconded by Councilperson Aiazzi to pass and adopt Bill No. 6464, Ordinance No. 5913.

Motion carried with Mayor Cashell absent.

G.11 Staff Report: Bill No. 6465 Ordinance annexing to and making part of the City of Reno certain specifically described territory being ±3.81 acres of property located at 205 and 325 Vera Drive ±350 feet southwest of the intersection of South Virginia Street and Foothill Road, Washoe County, Nevada, and upon annexation the project site will be zoned LLR1 (Large Lot Residential – 1 acre); together with other matters properly relating thereto. **Case No. LDC07-00148 (Horseshoe Bend, LLC 205 and 325 Vera). [Ward 2]**

Recommendation: Staff recommends that the Council adopt the ordinance.

It was moved by Councilperson Zadra, seconded by Councilperson Hascheff to pass and adopt Bill No. 6465, Ordinance No. 5914.

Motion carried with Mayor Cashell absent.

G.12 Staff Report: Bill No. 6466 Ordinance annexing to and making part of the City of Reno certain specifically described territory being ±5 acres of property located at 400 and 450 Holcomb Ranch Lane, ±800 feet east of its intersection with South Virginia Street and Holcomb Ranch Lane, Washoe County, Nevada, and upon annexation the property will be zoned LLR1 (Large Lot Residential – 1 acre); together with other matters properly relating thereto. **Case No. LDC07-00238 (400 and 450 Holcomb Ranch Lane). [Ward 2]**

Recommendation: Staff recommends that the Council adopt the ordinance.

It was moved by Councilperson Zadra, seconded by Councilperson Aiazzi to pass and adopt Bill No. 6466, Ordinance No. 5915.

Motion carried with Mayor Cashell absent.

A.5 PUBLIC COMMENT

Paul McKenzie, 375 Maggie Circle, Sun Valley, representing the Building & Construction Trades Council, said that Cabela's recently extended contracts to several out of town contractors, their bidding process is not open, and contractors contacting Cabela's are given conflicting information.

Susan Schlerf, Assistant City Manager, said that staff will contact Mr. McKenzie to address his concerns.

Assistant Mayor Gustin agreed that concerns expressed by representatives from the building trades should be investigated.

Councilperson Hascheff stated that he recently forwarded e-mails expressing concerns about Cabela's bidding process to the City Manager for response.

A.5 PUBLIC COMMENT – continued

Ronald Magee, 1150 Second Street, discussed issues regarding temporary housing and code enforcement.

Cathy Brandhorst, Reno resident, discussed several issues.

Pamela Bedard, 2201 Putnam Drive, member of the Urban Forestry Commission, discussed upcoming spring events including Reno Clean & Green and tree planting efforts.

Councilperson Gustin suggested that Ms. Bedard contact Neighborhood Advisory Board (NAB) liaisons to discuss the possibility of announcing these events at upcoming NAB meetings.

David McClurg, 9090 South Sandy Parkway, Salt Lake City, Utah, representing Layton Construction and Cabela's, stated that Cabela's is committed to paying prevailing wages in accordance with Star Bond requirements.

Steve Miller, Branch Manager of Intermountain Electric, said that they bid the project twice before the latest bid invitation came in to bid on March 27, 2007, and were in the process of bidding for the third time when they were told by the Cabela's project manager that the bid was awarded to an out of town contractor before the date of the bid. He asked the Council to ensure that Cabela's not only pays prevailing wages, but also upholds the Reno journeyman licensing standards.

Joe Ganser, representing Intermountain Electric, stated that he was in charge of bidding the Cabela's project for Intermountain Electric, and when he called Cabela's about an addendum that should have bent mailed to them, he was informed that the bid had been awarded to an out of town contractor before the announced bid date.

Sam Dehne, Reno resident, discussed several subjects.

Jeff Beecner, 4686 East Van Buren, Phoenix, Arizona, representing Layton Construction, general contractor for the Cabela's project, explained their bidding and selection processes, and their adherence to prevailing wage standards. He said that the bid process for the work discussed by representatives from Intermountain Electric was held twice, and the bid was awarded before the third bid process because of the tight project schedule. He said that bidding was open to everyone, and welcomed the opportunity to discuss it in more detail.

Councilperson Aiazzi asked when the Reno Cabela's store is scheduled to open.

A.5 PUBLIC COMMENT – continued

Mr. Beecner stated that Cabela's is scheduled to open in November 2007.

John Kadlic, Reno City Attorney, introduced his stepdaughter to the Council.

H.0 RESOLUTIONS [Other Resolutions can be found under the Public Hearing and Mayor Council Sections of this Agenda.]

H.1 Staff Report: Resolution No. Resolution donating $6,970 to Sierra Challenge Athletic Association to assist with the adaptive wheelchair sports program from the Access Advisory Committee.

Recommendation: The Reno Access Advisory Committee recommends that the Council adopt the resolution.

It was moved by Councilperson Hascheff, seconded by Councilperson Aiazzi to adopt Resolution No. 6906.

Motion carried with Mayor Cashell absent.

H.2 Staff Report: Resolution No. Resolution Accepting Streets – Del Webb Parkway East and Del Webb Parkway West. **Case No. LDC04-00517. [Ward 5]**

Recommendation: Staff recommends that the Council adopt the resolution.

It was moved by Councilperson Aiazzi, seconded by Councilperson Zadra to adopt Resolution No. 6907.

Motion carried with Mayor Cashell absent.

H.3 Staff Report: Resolution No. Resolution Accepting Streets – Sierra Canyon by Del Webb at Somersett Village 8. **Case No. LDC05-00313. [Ward 5]**

Recommendation: Staff recommends that the Council adopt the resolution.

It was moved by Councilperson Aiazzi, seconded by Councilperson Hascheff to adopt Resolution No. 6908.

Motion carried with Mayor Cashell absent.

H.4 Staff Report: Resolution No. Resolution Accepting Streets – Sky Vista Village 3 Subdivision. **Case No. LDC92-93. [Ward 4]**

Recommendation: Staff recommends that the Council adopt the resolution.

It was moved by Councilperson Dortch, seconded by Councilperson Hascheff to adopt Resolution No. 6909.

Motion carried with Mayor Cashell absent.

H.5 Staff Report: Resolution No. Resolution Accepting Streets and Parcels – Granite Ridge Phase 3 Subdivision. **(Case No. LDC04-00167). [Ward 5]**

Recommendation: Staff recommends that the Council adopt the resolution.

It was moved by Councilperson Aiazzi, seconded by Councilperson Hascheff to adopt Resolution No. 6910.

Motion carried with Mayor Cashell absent.

H.6 Staff Report: Resolution No. Resolution to Approve an Interlocal Cooperative Agreement between the City of Reno and Washoe County School District for the "4 Steps Into the Future" program.

Recommendation: Staff recommends that the Council adopt the resolution.

It was moved by Councilperson Hascheff, seconded by Councilperson Sferrazza to continue this item.

Motion carried with Mayor Cashell absent.

H.8 Staff Report: Resolution No. Resolution Establishing Service Charges and Fees, including Fire New Construction Fees, for the City of Reno, Nevada.

Recommendation: Staff recommends that the Council adopt the resolution.

It was moved by Councilperson Aiazzi, seconded by Councilperson Zadra to adopt Resolution No. 6911.

Councilperson Sferrazza asked if this action will resolve all outstanding fee issues.

Jill Olsen, Assistant Finance Director, stated that Maximus has not completed their work on the planning and engineering fees.

H.8 Resolution Establishing Service Charges and Fees – continued

Andy Green, Finance Director, and Councilperson Sferrazza discussed revenue collection and Building Enterprise Fund versus General Fund issues.

Tracy Chase, Chief Deputy City Attorney, and Matt Jensen, Deputy City Attorney discussed contract related issues.

Ms. Olsen stated that the fees are scheduled to become effective along with the building fees on April 2, 2007, and suggested resolving the issue of where the fees get collected later.

Councilperson Gustin said that the fees under discussion amount to less than $600.

Motion carried with Mayor Cashell absent.

H.9 Staff Report: Approval of the purchase of five Model 14 Brush Apparatus, including equipment, in the amount of $1,420,277 utilizing Bureau of Land Management Contract #NAC060014 as authorized under Nevada Revised Statutes (NRS) 332.195 and Adoption of a Resolution for Financing Fire Apparatus in the amount of $1,245,277.

Recommendation: Staff recommends that the Council approve the purchase of five (5) Model 14 Brush Apparatus for the Reno Fire Department from Masterbody, Inc., 9824 Atlantic Avenue, South Gate, CA 90280-6901, pursuant to the award of Bureau of Land Management Contract Number NAC060014 of January 17, 2006, for $1,254,277 and the purchase of equipment for this apparatus in the amount of $175,000. Staff also recommends that the Council adopt a resolution using a financial institution for the lease/purchase of five (5) Apparatus, brush trucks, as per NRS Chapter 350.

Assistant Mayor Gustin asked if there was anyone who wished to comment on this item. No one wished to speak and the Council heard the item in an expedited manner.

Councilperson Zadra clarified that the proposed expenditure is for fire equipment.

Councilperson Gustin said that he was advised at the March 26, 2007 Caucus meeting that a brush truck is used to fight wildland fires occurring outside the city limits.

AGENDA ITEM NO.

H.9.1 **RESOLUTION No.** Resolution authorizing the negotiation of lease/purchase agreements between the City of Reno and Suntrust Leasing Corporation in the principal amount of $1,245,277; providing for payments from legally available municipal funds; and prescribing other details in connection therewith.

It was moved by Councilperson Hascheff, seconded by Councilperson Aiazzi to adopt Resolution No. 6912.

Motion carried with Mayor Cashell absent.

A RECESS WAS CALLED AT 12:40 P.M. AND UPON RECONVENING AT 1:48 P.M. ALL WERE PRESENT.

I.0 ORDINANCES, INTRODUCTION [Other Ordinance Introductions can be found under the Public Hearing Sections of this Agenda.]

L.8 Discussion and potential direction to staff regarding an exception to the Banner Ordinance for Renown Healthcare until Renown Healthcare obtains permanent signage. J. Sferrazza

Councilperson Sferrazza said that the temporary banner displayed over Renown's parking structure is prohibited under the current sign ordinance, and suggested that the Council initiate a code amendment to allow the banner to be displayed until permanent signage can be obtained.

Councilperson Aiazzi stated that other facilities under construction such as the Montage also have temporary signage, and requested specific direction regarding the proposed code amendment.

Councilperson Sferrazza said that the current ordinance allows temporary signage to be displayed for 20 days within a 90-day period. She suggested increasing the display period to six months for structures under construction, and requiring written assurance that permanent signage is being prepared.

Claudia Hanson, Interim Planning Manager, stated that the size of Renown's banner was also an issue.

Councilperson Dortch suggested the possibility of tying temporary signage regulations to Community Development's building permit process.

Discussion ensued regarding the need for a timely solution to the signage issue at Renown and a long-term solution that will apply across the board. The possibility of not enforcing the ordinance was also discussed.

L.8 Discussion … exception to the Banner Ordinance for Renown Healthcare – continued

Councilperson Zadra expressed support for approving an exemption for Renown's banner. She cautioned that 'construction' should be clearly identified in order to avoid the proliferation of temporary signage by individuals who are, for example, replacing a bathroom floor in a convenience store.

Ms. Chase said that a moratorium on enforcement of the ordinance could be placed on the next meeting agenda, and approval of an ordinance amendment will require two readings.

Ms. Hanson stated that ordinance amendments must also be reviewed by the Planning Commission.

Councilperson Hascheff and Ms. Chase discussed the possibility of handling the banner exemption administratively.

Mayor Cashell suggested that the Council provide staff with more detailed information about the proposed restrictions and proceed with an ordinance amendment.

Councilperson Aiazzi suggested the possibility of initiating an ordinance specifically addressing temporary signage. He said that the ordinance could include flexible time restrictions and requirements for maintaining the signage while it is being displayed. He also said that tying the restrictions to the building permit process would not capture signage used by people selling their properties after the permit process is complete.

It was moved by Councilperson Sferrazza, seconded by Councilperson Aiazzi to initiate a code amendment regarding temporary signage used during construction. Staff was also directed to address size and time limit issues in drafting the amendment.

Motion carried.

AGENDA ITEM NO.

J.0 STANDARD DEPARTMENT ITEMS

J.1 COMMUNITY DEVELOPMENT

J.2 Staff Report: Initiation of a zoning code text amendment to correct errors in the definition and application of non-restricted gaming in Section 18.08.201(d) Summary Use Table for Nonresidential and Mixed Use Base Zone Districts, Section 18.08.405(c) DRRC (Downtown Reno Regional Center Overlay Zoning District), and Section 18.24.203 Definition of Words, Terms, and Phrases to conform the sections to Council's intent; and other matters relating thereto.

Recommendation: Staff recommends that the Council initiate the text amendments.

Claudia Hanson, Interim Planning Manager, said that the purpose of the text amendment is to clarify definitions related to gaming and casinos.

It was moved by Councilperson Gustin, seconded by Councilperson Dortch to uphold the staff recommendation.

Motion carried.

J.3 Staff Report: Initiation of a Text Amendment to Title 18; "Annexation and Land Development" to address Low Impact Design (LID) standards.

Recommendation: Staff recommends that the Council initiate the text amendment.

It was moved by Councilperson Aiazzi, seconded by Councilperson Gustin to uphold the staff recommendation.

Motion carried.

J.3.A Staff Report: Initiation of a zoning text amendment to Section 18.08.201 “Permitted Uses by Base Zone District” and Section 18.24.203 “Definition of Words, Terms and Phrases” to amend the definitions of “Service Station” and “Truck Terminal” and add the definition of “Truck Stop”; and other matters property relating thereto.

Recommendation: Staff recommends that the Council initiate the text amendment.

J.3.A Initiation of a zoning text amendment – continued

It was moved by Councilperson Dortch, seconded by Councilperson Aiazzi to uphold the staff recommendation.

Motion carried.

J.6 CITY MANAGER

J.9 Staff Report: Discussion and potential direction to staff regarding proposed state legislation.

Nick Anthony, Legislative Relations Manager, presented a brief overview of the Staff Report.

Councilperson Aiazzi asked the status of AB287 regarding annexation of certain territory by certain cities.

Mr. Anthony said that AB287 was heard last week in senate government affairs. He also said that the bill was brought forward by Washoe County, testimony in support of the bill was heard from the City of Reno and the City of Sparks, and an amendment to AB287 may be forthcoming from people hoping to create a city-controlled General Improvement District (GID).

Councilperson Aiazzi asked why Washoe County did not testify in support of AB287 since they (the County) agreed to do so as part of the City's settlement agreement with them.

Mr. Anthony stated that Washoe County took no position on AB287.

Mayor Cashell stated that the County agreed to introduce and support AB287.

Councilperson Hascheff disclosed that he works for the principals at Winnemucca Ranch, and recused himself from discussing or voting on this item.

Councilperson Sferrazza and Mr. Anthony discussed the status of SB246 and AB526. They also discussed the impact of AB526, and AT&T's participation in the process.

Charles McNeely, City Manager, discussed the impact of AB526.

Councilperson Aiazzi discussed the Council's opposition to AB438, which proposes to revise provisions related to outdoor advertising structures.

J.9 Discussion and potential direction to staff regarding proposed state legislation – continued

It was moved by Councilperson Aiazzi, seconded by Councilperson Dortch to uphold the direction outlined in the Staff Report, with AB287 pulled for a separate motion.

Motion carried.

It was moved by Councilperson Aiazzi, seconded by Councilperson Dortch to uphold the direction outlined in the Staff Report and support AB287.

Motion carried with Councilperson Hascheff abstaining.

J.4 PUBLIC WORKS

J.5 Staff Report: Discussion of the March 16, 2007 Public Workshop by the Army Corps of Engineers and Truckee River Flood Project staff regarding Rehabilitation and Replacement Options for the Virginia Street Bridge (VSB) and potential direction to staff.

Recommendation: The purpose of this report is to share information regarding the options to improve flood conveyance through the VSB. Staff has anticipated a process to include an information report on March 28, 2007, and then request direction on a preferred VSB alternative at the subsequent April 11, 2007 City Council meeting. This preference would then be communicated to the Flood Project Coordinating Committee (FPCC), which is scheduled to meet on April 13, 2007. Should the Council feel prepared to provide a recommended VSB preference on March 28, 2007, an alternative to a motion to accept the Staff Report would be appropriate for consideration.

Neil Mann, Public Works Director, presented an overview of the Staff Report.

Nancy Holmes, address unknown, presented a Public Comment Form, but did not wish to speak.

Melinda Gustin, 7 Elm Court, presented a Public Comment Form in favor of honoring both the 1996 Memorandum of Agreement (MOA) and Programmatic Agreement already in place. Ms. Gustin did not wish to speak.

Feluvia Belaustegui, representing the Historic Reno Preservation Society, presented a Public Comment Form requesting that the City make all possible efforts to save the Virginia Street Bridge. Ms. Belaustegui did not wish to speak.

J.5 Discussion … Rehabilitation and Replacement Options for the Virginia Street Bridge – continued

Jim Hunting, President of the Downtown Improvement Association (DIA) and member of the Citizen Advisory Committee, said that the DIA has taken a stand regarding the VSB based on the following three criteria: 1) technical feasibility, 2) project and economic costs, and 3) timeliness. He discussed Reno's periodic flood events, and said that the DIA favors replacement of the VSB with a clear span bridge.

Fred Boyd, Interim CEO of the Reno Sparks Chamber of Commerce, said that they support replacement of the VSB.

Daryl Drake, 1885 South Arlington Avenue #207, discussed the need for increasing the capacity of the VSB in order to minimize the impact of flooding on property owners and business. He said that the concept of extending floodwalls anywhere from 3 to 8 feet above their current height is inconsistent with redevelopment plans and goals.

Joan Dyer, President of the Reno Historic Preservation Society, discussed history and aesthetics related to the VSB.

Steve Kralj, 3195 Socrates, said that the VSB should be replaced. He presented drawings of possible bridge design options.

Doug Smith, Chairman of the Board of Scenic Nevada, discussed support for rehabilitating the VSB. He said that other bridges also contribute to flooding, and discussed how development has crowded the Truckee River into a narrow concrete channel instead of allowing it to flow naturally.

James Bonar, 1615 Moon Lane, representing the Lincoln Highway Association, discussed the history and aesthetics of the VSB, and said that the bridge should be restored.

Cindy Ainsworth, 1158 Indian Cove, co-founder of the Reno Historic Preservation Society, encouraged the City to consider all possible alternatives before voting to replace the VSB.

Jerry Purdy, 3141 Platte River Drive, retired federal highways engineer, discussed the cost of designing and constructing bridges, and concerns about the cost of the proposed Flood Control Project. He stated his support for replacing the VSB.

Michael G. Thornton, 160 South Park Street, presented a letter suggesting that the City build a memorial to the old bridge on the site of the new bridge, but did not wish to speak.

J.5 Discussion … Rehabilitation and Replacement Options for the Virginia Street Bridge – continued

Gerald C. Jackson, President of the Riverwalk Merchants Association and owner of the Beaujolais Bistro, said that the VSB creates a dam for floodwaters and should be removed as soon as possible.

Cathy Brandhorst, Reno resident, discussed several subjects.

Glenn Dawson, 201 West Liberty Street #207, owner of Investment Paradigm and member of the Chamber of Commerce, said that replacing the VSB will facilitate continued growth of the community.

Roberta Ross, 118 West Street, owner of Ross Manor Residential Hotel & Apartments and member of the DIA and Chamber of Commerce, said that replacing the VSB will help to protect and preserve numerous historical structures west of the bridge.

Mayor Cashell said that testimonies presented at the March 16, 2007 Workshop will be entered into the public record.

Naomi Duerr, Director of the Truckee River Flood Project, discussed the history of the VSB and flooding in the downtown area. She said that the City of Reno owns the VSB, and soliciting financial assistance from the Federal Highways Administration (FHWA) and Truckee River Flood Project requires additional processes and procedures. She explained the timeframe necessary for these authorization processes, and the 1996 MOA regarding the Virginia Street and Center Street bridges.

Paul Urban, Senior Engineer and Truckee River Flood Project Manager, stated that he has been working with the Army Corps of Engineers since 1998 to resolve flooding issues related to the downtown bridges. He said that restoring the VSB would require building a bypass channel for flood flows, and discussed this option and its impacts in detail. He also discussed details of the clear span alternative.

Mr. Mann suggested using the information presented at the March 16, 2007 Workshop to consider specific bridge alternatives.

Bill Crawford, CH2 on the Hill, discussed cost estimates and timelines for the VSB rehabilitation and replacement options presented by the Army Corps of Engineers (clear span, two span, three span and clear span signature). He said that all estimates were made on the assumption that the project would be developed under the Federal Highway Bridge Replacement and Rehabilitation

J.5 Discussion … Rehabilitation and Replacement Options for the Virginia Street Bridge – continued

Program, which would involve participation of the FHWA and Nevada Department of Transportation (NDOT).

Barb Satner, landscape architect and planner with Places Consulting Services, Inc., provided simulations of the proposed VSB rehabilitation and bypass channel concept, as well as possible bridge replacement concepts. She said that flood bypass channel construction would require extensive modifications to the Truckee River Fountain Walk Plaza, Post Office Plaza design and 10 North Virginia Street Plaza/Ice Rink pedestrian and vehicular system, and would require removal of the Masonic office building.

Mayor Cashell asked if cleaning out three or four feet of silt from the river bottom has been considered.

Ms. Duerr discussed problems associated with dredging the riverbed, including re-silting potential damage to the river eco-system.

Mayor Cashell and Ms. Duerr discussed bridge design options.

Mr. Crawford said that all three of the downtown bridges will have to be raised to meet the prescribed flood elevation.

Councilperson Gustin stated that replacing or renovating the VSB will take approximately six and one-half years. He asked what obligation the current Council has to honor the 1996 MOA signed by the previous Council, and if the City is liable to repay any portion of the cost of the Center Street Bridge if they vote to replace the VSB rather than rehabilitate it.

Tracy Chase, Chief Deputy City Attorney, discussed the history of the 1996 MOA, and said that the agreement relates to a project that never came to fruition. She also said that NDOT has anticipated $5 million toward rehabilitation in their long-term financial plan, and the MOA and Programmatic Agreement are both tied to Army Corps of Engineers' processes and procedures.

Councilperson Gustin and Mr. Urban discussed the Corps' March 16, 2007 assessment that the proposed bypass channel may not work, and the enlarged bypass channel proposal that was presented to the Council today.

Councilperson Gustin and Mr. Crawford discussed the need for raising the grade of Virginia Street by approximately five feet.

J.5 Discussion … Rehabilitation and Replacement Options for the Virginia Street Bridge – continued

Councilperson Aiazzi asked how much a signature bridge would cost.

Mr. Crawford estimated that a signature bridge would cost $3-4 million more than a conventional highway bridge.

Councilperson Aiazzi asked if maps are available that show upstream flood effects for each of the proposed alternatives.

Mr. Urban said that updated maps reflecting current modeling assumptions have been requested from the Army Corps of Engineers.

Councilperson Aiazzi and Ms. Duerr discussed pending federal legislation and the cost differential involved in removing the VSB from the MOA.

Discussion ensued regarding federal building requirements; the life expectancy of the VSB; the dispute resolution process; and the Flood Project EIS process.

Councilperson Hascheff, Mr. Urban and Ms. Duerr discussed the feasibility of the bypass channel option.

Councilperson Zadra and Ms. Duerr discussed rehabilitation versus replacement timelines.

Councilperson Zadra, Mr. Mann and Mr. Urban discussed construction management issues and projected cost estimates.

Mayor Cashell discussed his opposition to making all the changes necessary to create a bypass channel around the VSB, and stated his support for replacing the structure as quickly as possible.

Councilperson Gustin and Mr. Crawford discussed the possibility of replacing the VSB with a bridge similar to the one on Center Street. Mr. Crawford said that the Center Street Bridge does not meet the current flood control requirements.

Councilperson Hascheff said that replacement of the VSB is the only feasible alternative, and opportunities to preserve the historic nature of the bridge can be explored through the design process. He asked staff to begin preparing design options as soon as possible.

J.5 Discussion … Rehabilitation and Replacement Options for the Virginia Street Bridge – continued

Councilperson Dortch agreed that replacement is the only alternative, and that staff should begin preparing bridge design options. He said that the design of the bridge will play a large part in determining how to approach other projects near the VSB.

Councilperson Aiazzi said that the City should enter into the dispute resolution process with the appropriate historic preservation groups if the replacement option is approved, and stated that the plaque installed on the VSB to commemorate Reno's 100th birthday should be reinstalled on the new bridge.

Councilperson Sferrazza discussed the cost of rehabilitating the VSB, and the Corps' determination that restoring the bridge will not solve flooding problems in downtown Reno. She stated that replacing the VSB is the appropriate way to proceed.

> It was moved by Councilperson Hascheff, seconded by Councilperson Dortch to accept report and move forward with replacing the Virginia Street Bridge as quickly as possible. Staff was directed to: 1) examine the feasibility of designating the bridge replacement as a Truckee River Flood Project Early Action (TRACTION) project; 2) consider replacement and/or redesign options for other downtown bridges; 3) invite all stakeholders to participate in deliberations regarding the design of the replacement bridge; 4) consider all aspects of the downtown flood project (floodwalls, etc.) in conjunction with the design of the bridge in order to determine the overall appearance of the project; and 5) initiate a request for consultation with the State Historical Preservation Office regarding the existing 1996 agreement.

Councilpersons Sferrazza and Zadra discussed Councilperson Gustin's commitment to preserving the historical character of the community, and the difficulty with which he is faced in making this decision.

Councilperson Gustin stated that he while he would prefer to restore the 100 year old Virginia Street Bridge, replacing it appears to be the best way to protect the community from the effects of flooding.

> Motion carried.

J.7 Staff Report: Discussion and potential direction to staff regarding concepts for an Interlocal Agreement with the City of Sparks, Washoe County, and the City of Reno, to address gap financing for the Flood Control Project.

Recommendation: Staff recommends that the Council provide direction to staff regarding the proposed flood control Interlocal Agreement structure.

Andy Green, Finance Director, presented a brief overview of the Staff Report. He said that direction from the Council is needed before staff can finish drafting an Interlocal Agreement to address gap financing for the Flood Control Project.

Councilperson Aiazzi asked for an estimate of how many acres of land can be acquired for $273 million, and how much per acre the land is anticipated to cost.

Naomi Duerr, Director of the Truckee River Flood Project, said that approximately 2,000 acres will be needed for the Flood Control Project. She said that some of the land has been developed and some is unimproved, and the average cost per acre is estimated at between $100,000 and $200,000 per acre.

Councilperson Aiazzi and Ms. Duerr discussed other cost estimates provided in the Staff Report, including the $300 million funding gap. Ms. Duerr said that the Army Corps of Engineers' 2004 project estimates severely undervalued the land, did not consider downstream restoration, and only included the bridges, not the floodwalls.

Councilperson Aiazzi and Ms. Duerr also discussed the omission of the City's $184 million Flood Control Project water rights match, and the proposed $200 million (25%) contingency fund. Councilperson Aiazzi stated that the $300 million funding gap is a worst-case scenario of what is actually needed for the Flood Control Project.

Councilperson Hascheff and Ms. Duerr discussed the FPCC's (Flood Project Coordinating Committee) role in maintaining the completed Flood Control Project.

Councilperson Sferrazza and Ms. Duerr discussed the Army Corps of Engineers' cost estimates, particularly in relation to land prices.

Mayor Cashell and Ms. Duerr discussed the substantial increase in land prices over the past several years, as well as issues related to property owned by UNR (University of Nevada-Reno).

J.7 Discussion … gap financing for the Flood Control Project – continued

Councilperson Aiazzi said that Washoe County should absorb 50% of the Flood Control Project costs because Reno residents are also County residents and should not be double taxed. He reiterated previous comments that all those contributing to flooding should be required to participate in the project, including Washoe Valley and Incline Village.

Mayor Cashell agreed that Washoe County should pay 50% of the project expenses, with the remaining 50% distributed between the City of Reno and the City of Sparks.

Councilperson Hascheff and Ms. Duerr discussed plans for creating a special assessment district to help fund the Flood Control Project.

Ms. Duerr stated that Washoe Valley and Incline Village have been included on the maps to be provided to the Flood Control Project consultant.

Susan Ball Rothe, Deputy City Attorney, confirmed that creation of a special assessment district to help fund the project is no longer being considered, and that the City is instead moving forward with the Nevada Revise Statutes (NRS) 268 flood control aspect.

It was moved by Councilperson Hascheff, seconded by Councilperson Aiazzi to accept the report.

Motion carried.

J.8 Staff Report: Approval of a sponsorship request from the Economic Development Authority of Western Nevada (EDAWN) in the amount of $3,500 for the Development of a Regional Promotion Branding Strategy.

THIS ITEM WAS WITHDRAWN FROM THE AGENDA.

J.10 Discussion and potential direction to staff regarding programs and summer use of the 10 North Virginia Street Plaza.

Recommendation: Staff recommends that the Council review the proposed City Plaza summer program schedule and provide feedback on any desired changes, as well as thoughts on leaving the skate rental trailer in place.

Nanette Smejkal, Parks, Recreation and Community Services Director, presented an overview of the proposed summer program schedule for the 10 North Virginia Street Plaza.

J.10 Discussion … summer use of the 10 North Virginia Street Plaza – continued

Mayor Cashell and Ms. Smejkal discussed the possibility of renting the skate rental trailer to other special events organizers.

Cadence Matijevich, Special Events Program Manager, discussed the possibility of renting the trailer to private special events organizers. She stated that there are no restroom facilities in the trailer, and many organizers are already well along in the event planning process.

Mayor Cashell asked if Hot August Nights or Street Vibrations organizers have expressed an interest in leasing the land for this year's events.

Ms. Matijevich said that Hot August Nights and Street Vibrations organizers were previously advised that the facility would not be available for their use. She suggested using incentives such as reduced fees to entice them to use the Plaza facility this summer.

Councilperson Aiazzi stated that the City leases the skate rental trailer.

Ms. Smejkal agreed that it will cost the City an additional $4,000 in rental fees to leave the trailer in place at the Plaza during the summer.

Councilperson Aiazzi said that the trailer should be removed from the site, especially since restroom facilities are unavailable and no one has indicated an interest in renting it. He also said that encouraging the public to use the Plaza at their own discretion is the best alternative.

Christine Fey, Arts and Culture Manager, discussed problems associated with providing removable equipment and features for use on the Plaza.

Councilperson Aiazzi asked if the concrete ramp will remain on the Plaza if the trailer is removed.

Ms. Fey said that with a rail installed on the backside of the ramp to discourage skateboarding, it could serve as a stage during the summer months. She said that removing the ramp from the site in the summer and replacing it in the fall is an expensive endeavor.

> It was moved by Councilperson Aiazzi, seconded by Councilperson Gustin to uphold the staff recommendation and direct staff to proceed with removal of the skate rental trailer from the 10 North Virginia Street Plaza.
>
> Motion carried.

AGENDA ITEM NO.

K.0 CITY CLERK

K.1 Boards and Commissions Appointments

K.1.a. Urban Forestry Commission

It was moved by Councilperson Gustin, seconded by Councilperson Aiazzi to appoint Elizabeth Spencer and Darley Jeppson to the Urban Forestry Commission.

Motion carried.

K.1.b. Youth City Council

It was moved by Councilperson Sferrazza, seconded by Councilperson Aiazzi to appoint Finau Tonata and Cy Armstrong to the Youth City Council.

Motion carried.

K.1.c. Historical Resources Commission

It was moved by Councilperson Gustin, seconded by Councilperson Aiazzi to reappoint Sally Crawford Ramm to the Historical Resources Commission.

Motion carried.

L.0 MAYOR AND COUNCIL

L.1 Identification of Mayor and Council Items for Future Agendas of the Reno City Council.

Councilperson Zadra requested a discussion of Cabela's conformance to the agreement they entered into with the City of Reno.

Councilperson Sferrazza requested an informational report and possible action regarding business at 733 South Wells Avenue.

Councilperson Sferrazza requested an agenda item to authorize a contract with an independent consultant to determine the appropriate flood mitigation ratio in Flood Zone 1 if necessary.

AGENDA ITEM NO.

L.2 Liaison Reports

Councilperson Zadra said that the 10 North Virginia Street Plaza Subcommittee agreed to delay any decisions regarding development of the Plaza until the Request for Qualifications (RFQ) for the retail portion and pending bridge decisions can be melded into the process.

L.3 Reports from any Conferences or Professional Meetings.

NO ACTION WAS TAKEN ON THIS ITEM.

L.4 **RESOLUTION No.** Resolution donating $500 to the Angel Kiss Foundation in support of the Third Annual Whitewater Raft and Music Festival. J. Sferrazza

It was moved by Councilperson Sferrazza, seconded by Councilperson Aiazzi to adopt Resolution No. 6913.

Motion carried.

L.5 Staff Report: Discussion and potential approval of a City Council Internship Program and allocation of program funding for the current fiscal year. J. Sferrazza

Recommendation: Staff recommends that the Council determine if they desire to establish a City Council Internship Program and, if so, allocate the funding necessary for the remainder of the fiscal year.

Councilperson Sferrazza said that several University of Nevada-Reno (UNR) students have expressed interest in earning public policy credit by interning for individual Councilpersons. She said that funding will be sufficient to provide an intern for each Councilperson, but participation in the Internship Program by the Councilpersons will be discretionary.

Donna Dreska, Human Resources Director, confirmed that negotiations are currently underway for the City Council Internship Program to provide 3 to 6 public policy credits to participating UNR students.

Councilperson Aiazzi suggested replacing vacant liaison positions with internships as a way of funding the Internship Program.

Councilperson Zadra said that she does not support replacing liaisons with interns because their inexperience will increase the workload of liaisons and staff.

L.5 Discussion … City Council Internship Program and allocation of program funding for the current fiscal year – continued

Councilperson Sferrazza suggested the possibility of funding the Internship Program rather than the Four Steps Into the Future program.

Mayor Cashell stated that the City received an award for the Four Steps Into the Future program.

Councilperson Aiazzi suggested that the Council should respond to the City Manager's request for budget cutbacks, and not approve new programs that require additional funding.

Councilperson Gustin asked the proposed duration of the internships.

Ms. Dreska responded that six month to one year internships are being considered.

It was moved by Councilperson Sferrazza, seconded by Councilperson Hascheff to establish the City Council Internship Program and allocate the necessary funding.

Motion carried with Councilperson Zadra voting nay.

Charles McNeely, City Manager, and Ms. Dreska discussed the program's start date.

Councilperson Zadra asked if the Internship Program will be accomplished at the expense of an experienced liaison who knows how to get the work done and can do it in less time.

Mr. McNeely stated that interns will not be used to replace liaisons, and resources to support the Internship Program will need to be identified.

Councilperson Zadra asked if the Internship Program will require the Council's approval for all assignments of over two hours.

Ms. Dreska stated that the two-hour work policy currently in place for liaisons was not considered during Internship Program deliberations.

Mr. McNeely discussed the difficulty of imposing a two-hour limit on interns who are at the Councilpersons' disposal during the time they are completing the internship.

L.5 Discussion … City Council Internship Program and allocation of program funding for the current fiscal year – continued

Mayor Cashell and Councilperson Sferrazza discussed the 17 hour per week limit on the interns participating in the Internship Program.

L.7 Discussion of a possible moratorium on the receipt of development applications in Flood Zone 1 and potential direction to staff. J. Sferrazza and D. Gustin

Councilperson Gustin said that the goal of implementing a 90-day moratorium on the receipt of development applications in Flood Zone 1 is to structure cooperation between the City of Reno, City of Sparks and Washoe County in setting a dirt fill/removal ratio for development in the flood zone.

Greg Evangelatos, representing Centex Homes, said that 28 acres of their property will be placed in developmental limbo by a moratorium.

Erik Holland, 17 South Virginia Street #506, presented a Public Comment Form commending Councilpersons Gustin and Sferrazza for their support of a moratorium on flood plain construction projects, but did not speak.

Councilperson Aiazzi asked if the moratorium will require two readings.

Tracy Chase, Chief Deputy City Attorney, said that approval of a moratorium will trigger its initiation.

Councilperson Hascheff discussed preference for a 90-day moratorium with the option of extending it if necessary.

Councilperson Gustin said that the City needs to reach a consensus regarding the necessary mitigation ratio.

Ms. Chase stated that it may be possible for staff to reach consensus on the mitigation ratio before the 90-day moratorium expires.

Mayor Cashell stated his support for a 90-day moratorium.

Councilperson Zadra stated that a request for an extension of the 90-day moratorium should include detailed documentation regarding the amount of additional time necessary for resolving the issue.

Councilperson Sferrazza discussed the possibility of hiring an independent consultant to prepare a mitigation ratio analysis.

L.7 Discussion of a possible moratorium on the receipt of development applications in Flood Zone 1 – continued

Mayor Cashell asked if all three entities would participate in preparation of the mitigation ratio analysis.

Councilperson Sferrazza responded that the independent analysis is only intended for the City of Reno.

Councilperson Gustin said that the completed analysis will be presented to the City of Sparks and Washoe County for consideration in adopting a uniform mitigation ratio.

It was moved by Councilperson Gustin, seconded by Councilperson Sferrazza to approve a 90-day moratorium on the receipt of development applications in Flood Zone 1 and direct staff to move forward with determination of an appropriate flood mitigation ratio during that period.

Motion carried.

Discussion ensued regarding the possible need for placing the hiring of an independent consultant on a future agenda.

L.9 **RESOLUTION No.** Resolution donating $500 to the McQueen High School Booster Club for benefit of the Junior Reserve Officer Training Corps (ROTC) Program for their continued efforts in citizenship, leadership and service to the community. D. Aiazzi

It was moved by Councilperson Aiazzi, seconded by Councilperson Hascheff to adopt Resolution No. 6914.

Motion carried.

L.10 **RESOLUTION No.** Resolution donating $5,000 to the Reno Rodeo Association to offset costs associated with sponsorship of Chalk Art in the Plaza. D. Aiazzi and D. Dortch.

It was moved by Councilperson Aiazzi, seconded by Councilperson Hascheff to adopt Resolution No. 6915.

Motion carried.

AGENDA ITEM NO.

L.11 Selection of two members of the City Council to attend a meeting at Washoe County regarding the Washoe County Regional Open Space and Natural Resources Management Plan.

Councilperson Hascheff volunteered to attend the first meeting.

It was moved by Councilperson Sferrazza, seconded by Councilperson Aiazzi to appoint Councilpersons Hascheff and Dortch to attend the meeting.

Motion carried.

L.6 Initiation of an amendment to the boundaries of the Downtown Reno Regional Center Plan and Overlay Zoning District to reflect the Wells Neighborhood Plan boundary. J. Sferrazza

It was moved by Councilperson Sferrazza, seconded by Councilperson Aiazzi to move the section from Holcomb to Wells Avenue and Stewart Street to Ryland from the Downtown Reno Regional Center Plan to the Wells Avenue Neighborhood Plan.

Motion carried.

A RECESS WAS CALLED AT 5:31 P.M. AND UPON RECONVENING AT 6:09 P.M. MAYOR CASHELL AND COUNCILPERSON DORTCH WERE ABSENT. ASSISTANT MAYOR GUSTIN PRESIDED IN MAYOR CASHELL'S ABSENCE.

M.0 PUBLIC HEARINGS – 6:00 P.M.

M.1 Staff Report: Request for: (a) approval of a temporary surface parking lot for 5 years per Section 18.08.202(b)(20)b1; and (b) variances to eliminate the requirement to install: 1) perimeter and interior parking lot landscaping; 2) streetscape standards including: a) tinted sidewalk; b) candy cane street lights; c) tree grates; d) terra cotta styled trash receptacles and planters; and e) cast iron benches; 3) a six foot wall and associated parking lot screening; 4) active ground level commercial use along the frontage of South Virginia Street between I-80 and California Ave; 5) the one percent (1%) pedestrian amenities improvements for the new 363-space open parking lot; and 6) a five-foot parking lot edge based on the expansion of an existing parking lot by more than ten percent (10%) on a ±2.76 acre site located on the south side of Court Street between South Virginia Street to the east and South Sierra Street to the west in the California District of the MU/DRRC (Mixed Use/Downtown Reno Regional Center) zone. **Case No. LDC07-00196 (Pioneer Parking Lot). [Ward 1]**

M.1 **Case No. LDC07-00196 (Pioneer Parking Lot)** – continued

Recommendation: The Planning Commission recommends denial of the requested variances.

This case was appealed by David M. Solaro, Washoe County, Capital Projects.

The Assistant Mayor asked if proper notice was given.

City Clerk Jones stated that proper notice was given and an e-mail in opposition to the requested variances was received from Patrick James Martin, owner of a building at 115 Ridge Street.

Assistant Mayor Gustin opened the public hearing and asked if anyone wished to speak.

Cathy Brandhorst, Reno resident, discussed several subjects.

The Assistant Mayor closed the public hearing.

MAYOR CASHELL PRESENT AT 6:12 P.M.

Mayor Cashell said that Washoe County requested a 30-60 day postponement while corrections to the ordinances are being made.

It was moved by Councilperson Aiazzi, seconded by Councilperson Gustin to make the finding that the appellant is an aggrieved party.

Motion carried with Councilperson Dortch absent.

It was moved by Councilperson Gustin, seconded by Councilperson Aiazzi to continue the item to the second meeting in May 2007.

Motion carried with Councilperson Dortch absent.

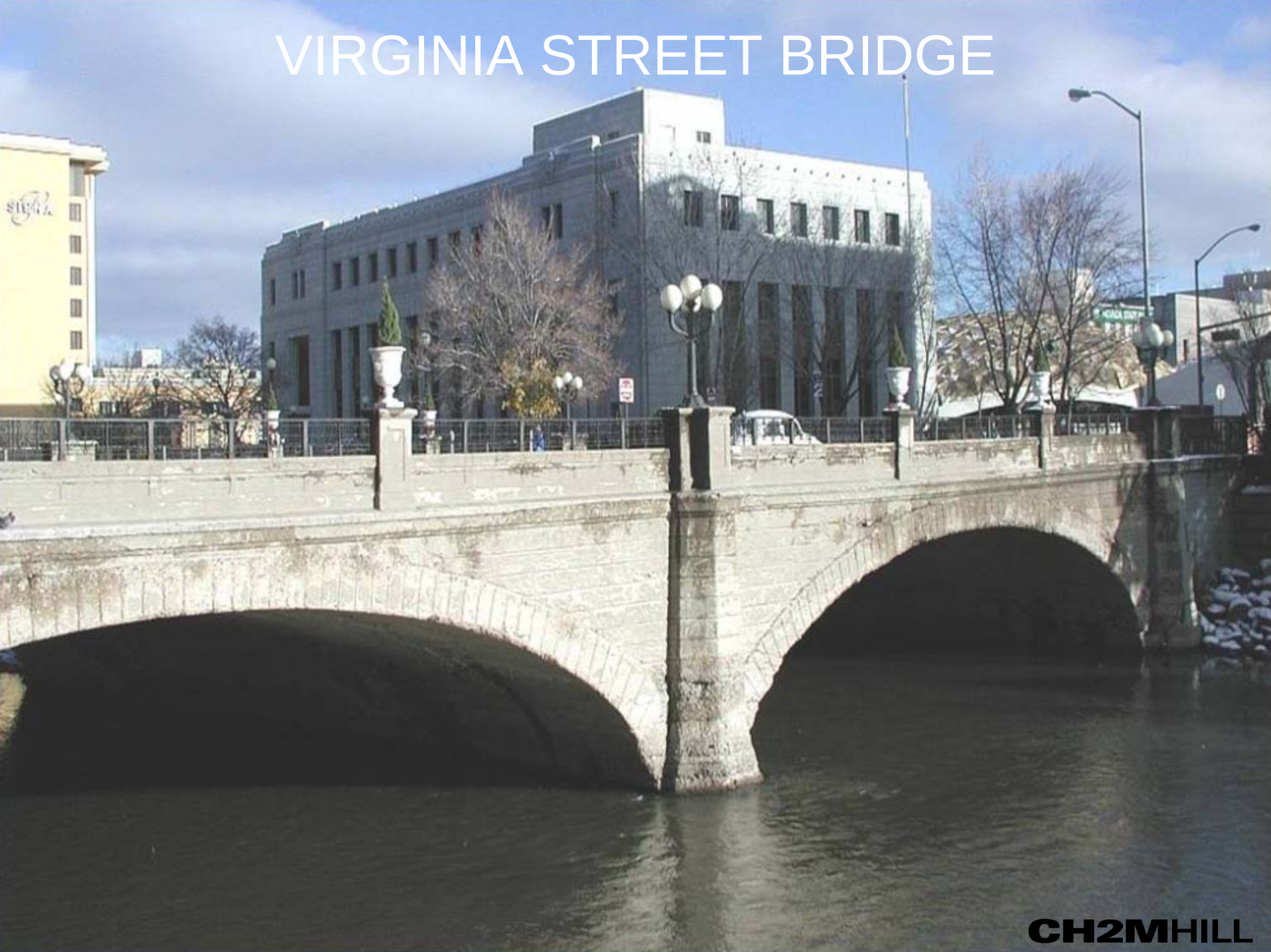
MEETING ADJOURNED AT 6:15 P.M.

Virginia Street Bridge at Truckee River Simulations

Bridge Rehabilitation &
Flood Bypass Channels

Bridge Replacement

VIRGINIA STREET BRIDGE



CH2MHILL

Example of Clear Span Conventional Highway Bridge

Second Street over the Truckee River

CH2MHILL

Example of Two Span Conventional Highway Bridge

Booth Street over the Truckee River

CH2MHILL

Example of Three Span Conventional Highway Bridge

Center Street over the Truckee River

CH2MHILL

Example of Clear Span Signature Bridge

Damen Avenue Bridge - Chicago

CH2MHILL

SCOPE OF WORK

Provide Cost Estimates And Timelines For The Rehabilitation And Replacements Options Identified By THE ACOE For The Virginia Street Bridge

ASSUMPTIONS

A Rehabilitation Or Replacement Project Is Developed Under The Federal Highway Bridge Replacement And Rehabilitation Program (FHWA/NDOT)

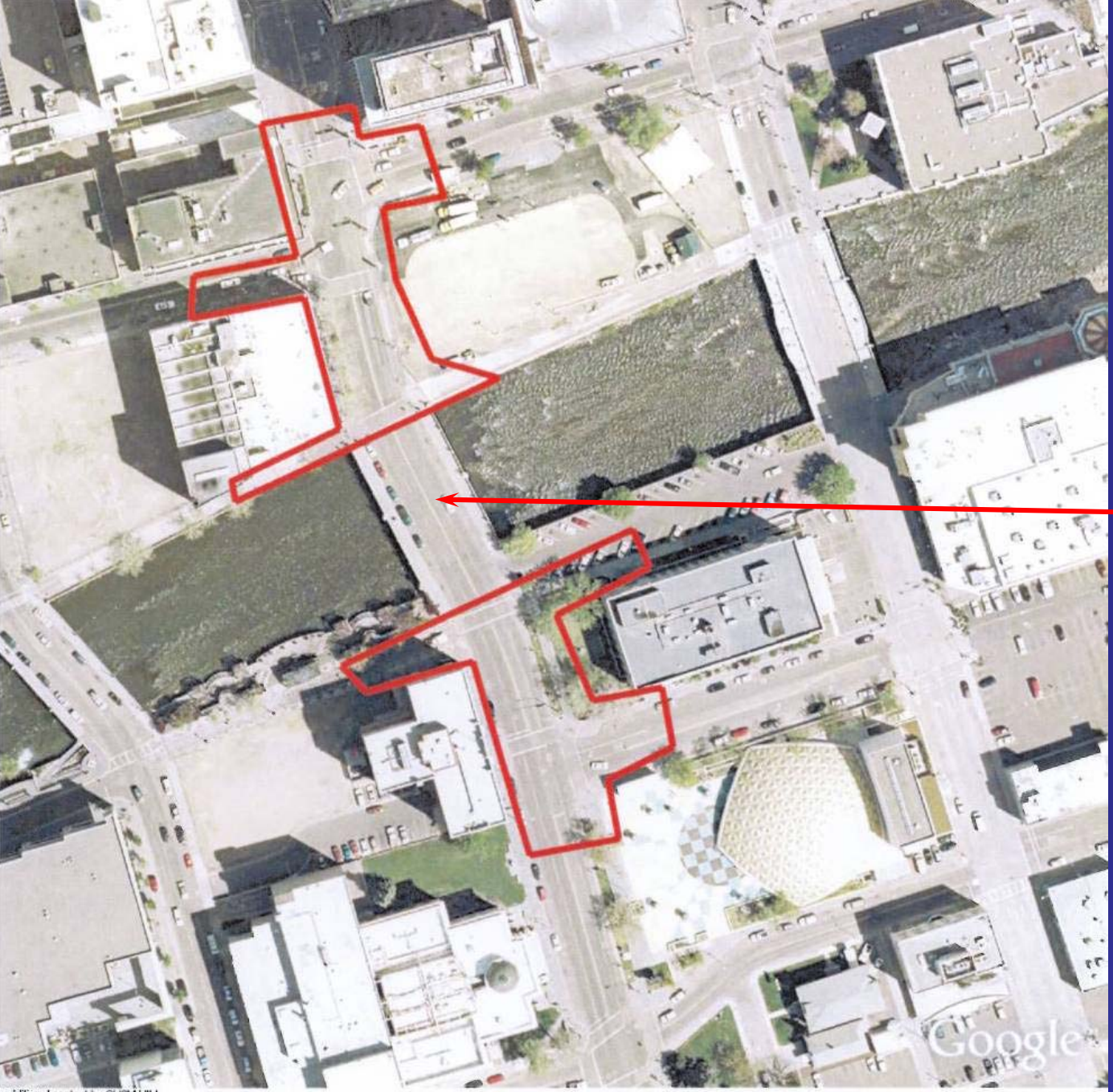
SUMMARY

Cost Estimates For Both Rehabilitation and Replacement Are Comparable To The ACOE's Estimates

Timeline For Rehabilitation Is Approximately 7 To 8 Years To Complete Construction With Replacement Being Slightly Less

REQUIRED INCREASE IN VIRGINIA STREET ELEVATION AT THE TRUCKEE RIVER TO ACCOMMODATE REPLACEMENT ALTERNATIVES

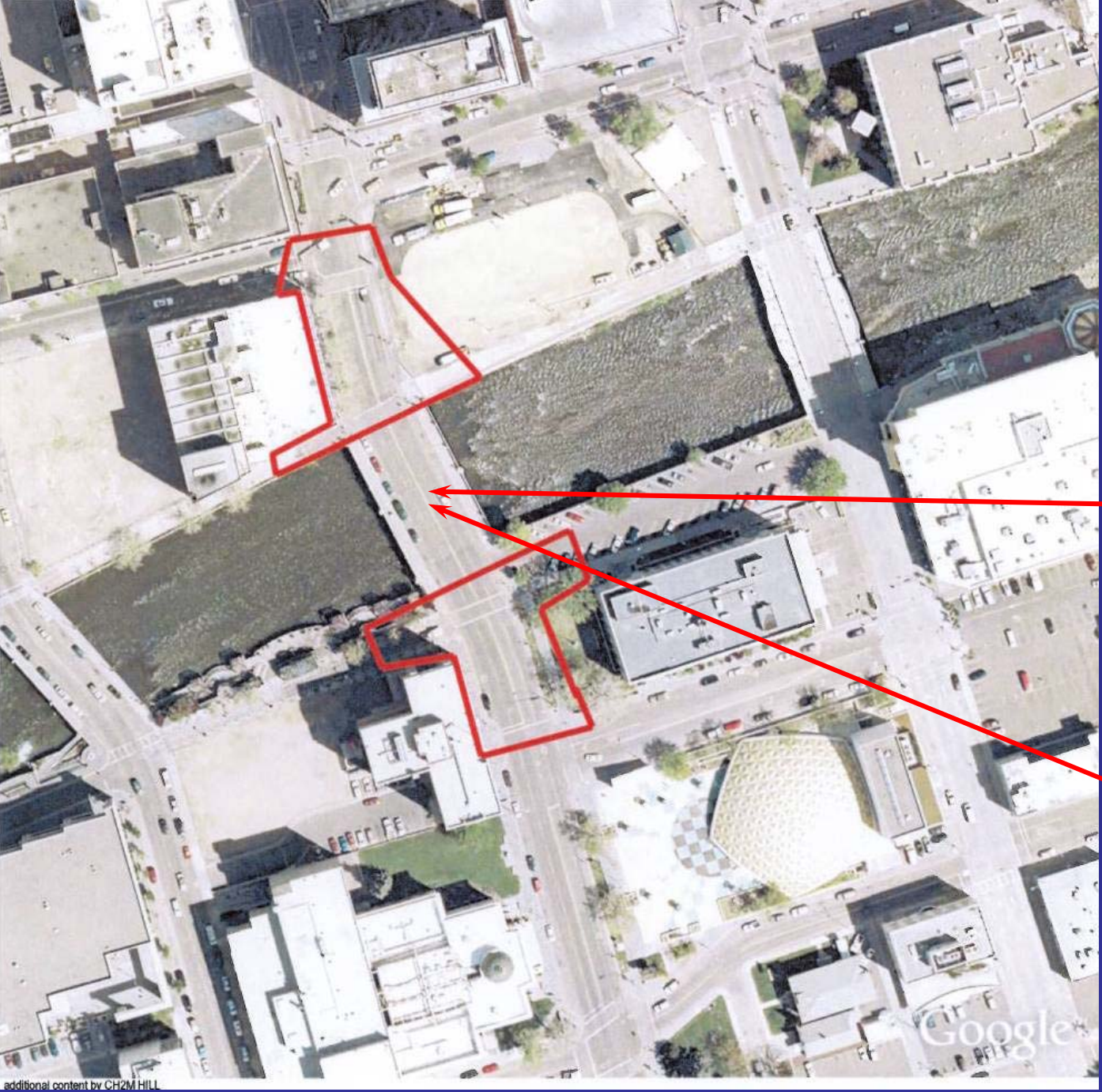
REPLACEMENT ALTERNATIVE	INCREASE IN ELEVATION (FEET)
CONVENTIONAL CLEAR SPAN BRIDGE – LPP	**9**
CONVENTIONAL TWO-SPAN BRIDGE – LPP	**5.5**
SIGNATURE BRIDGE – LPP	**5**



Approximate Limits of Virginia Street Reconstruction

For the Conventional Clear Span Bridge – LPP w/ Floodwalls 9 Feet at Virginia Street Bridge

CH2MHILL



Approximate Limits of Virginia Street Reconstruction

For the Signature Clear Span Bridge – LPP w/ Floodwalls 5 Feet at Virginia Street Bridge

For the Conventional Two-Span Bridge – LPP w/ Floodwalls 5.5 Feet at Virginia Street Bridge

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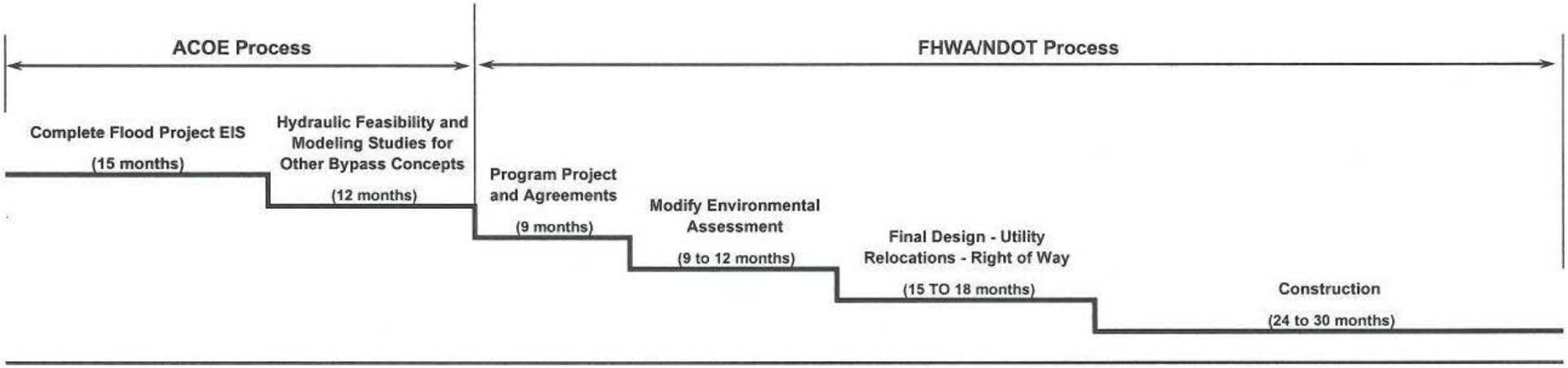
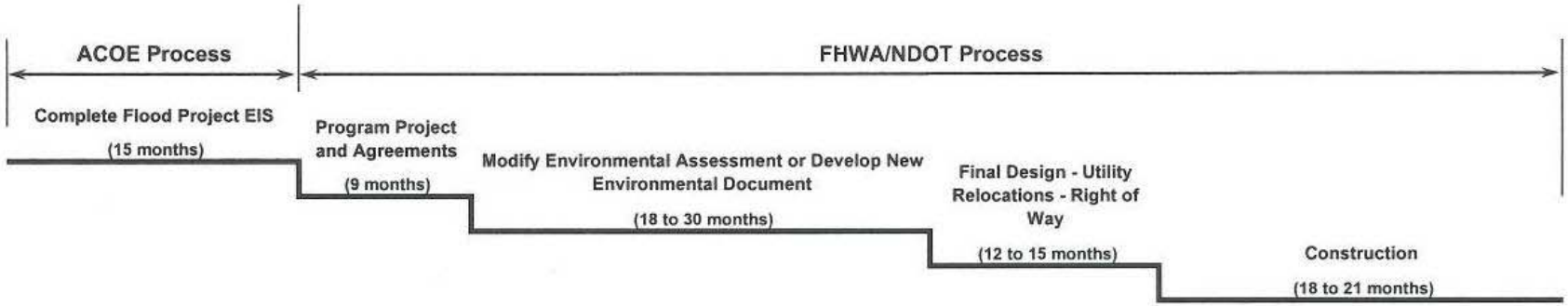
Rehabilitation Alternative

7 to 8 Years to Complete Construction



Replacement Alternatives

6.5 to 7.5 Years to Complete Construction



Time lines for Rehabilitation Alternative and Replacement Alternatives

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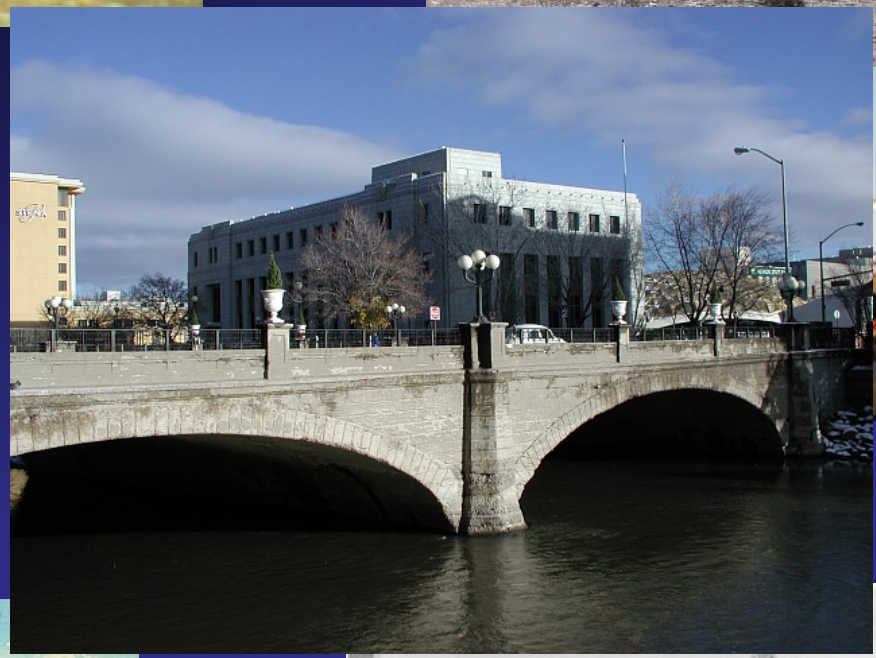

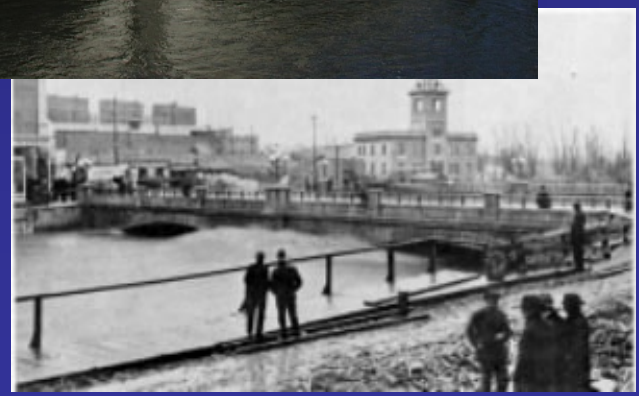

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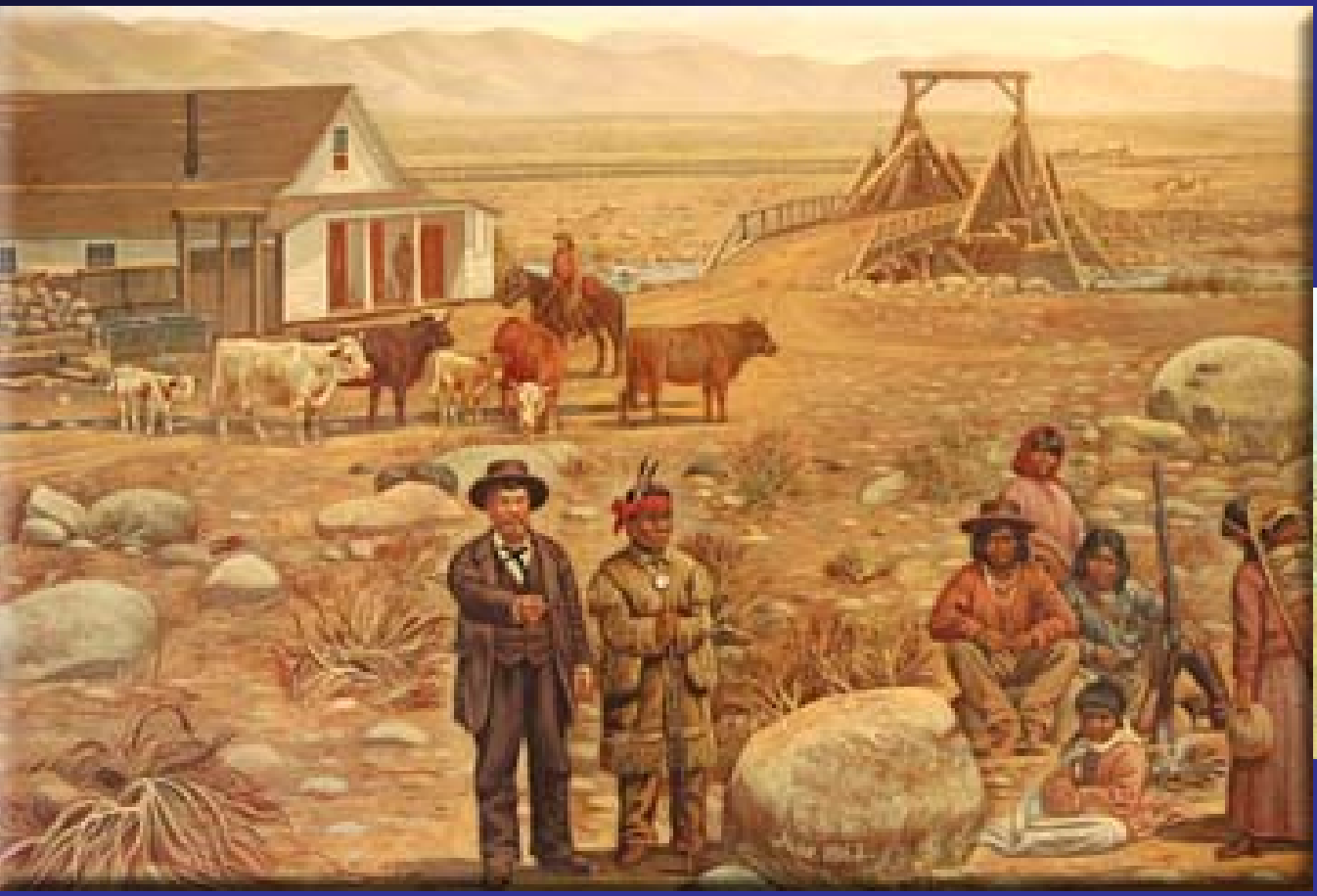
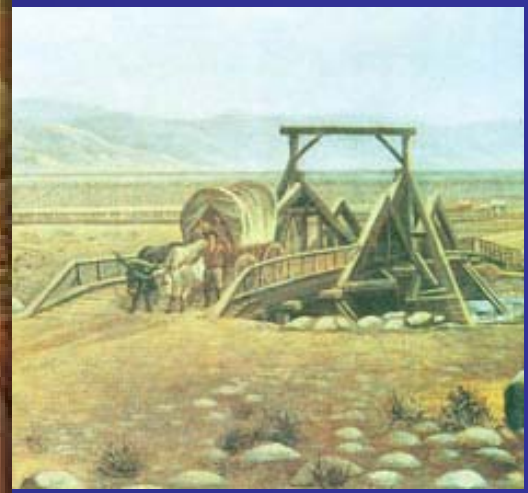
HORSE FERRY

THERE MAY HAVE BEEN A FERRY
BEFORE THE BRIDGE WAS BUILT

WOODEN BRIDGE BUILT BY C.W. FULLER





IRON BRIDGE AT LAKE'S CROSSING
BUILT IN 1877

RIVERSIDE HOTEL & VIRGINIA STREET BRIDGE
ABOUT 1903

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CONSULTING SERVICES, INC.

VIRGINIA STREET BRIDGE
COMPLETED 1905

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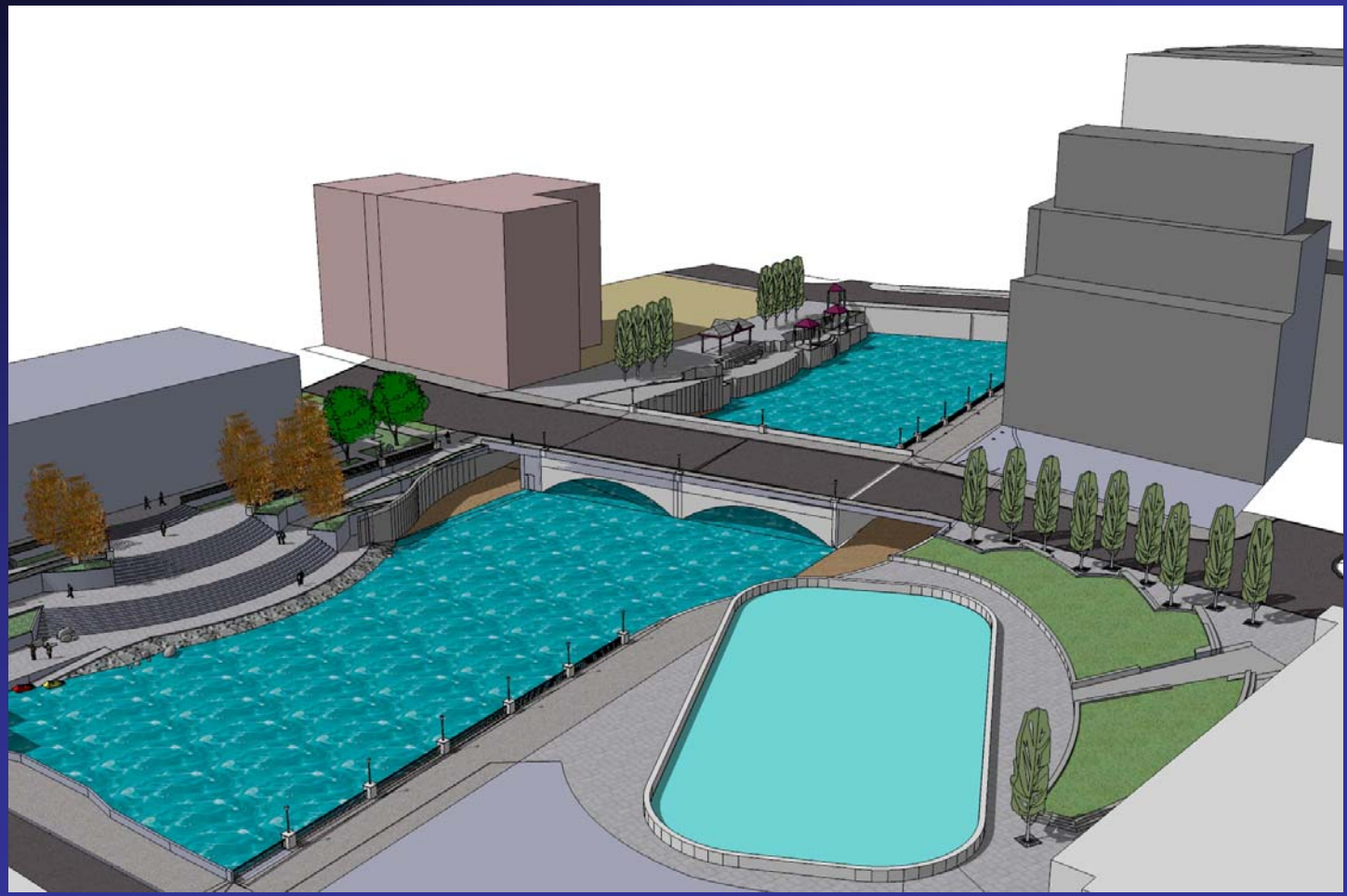
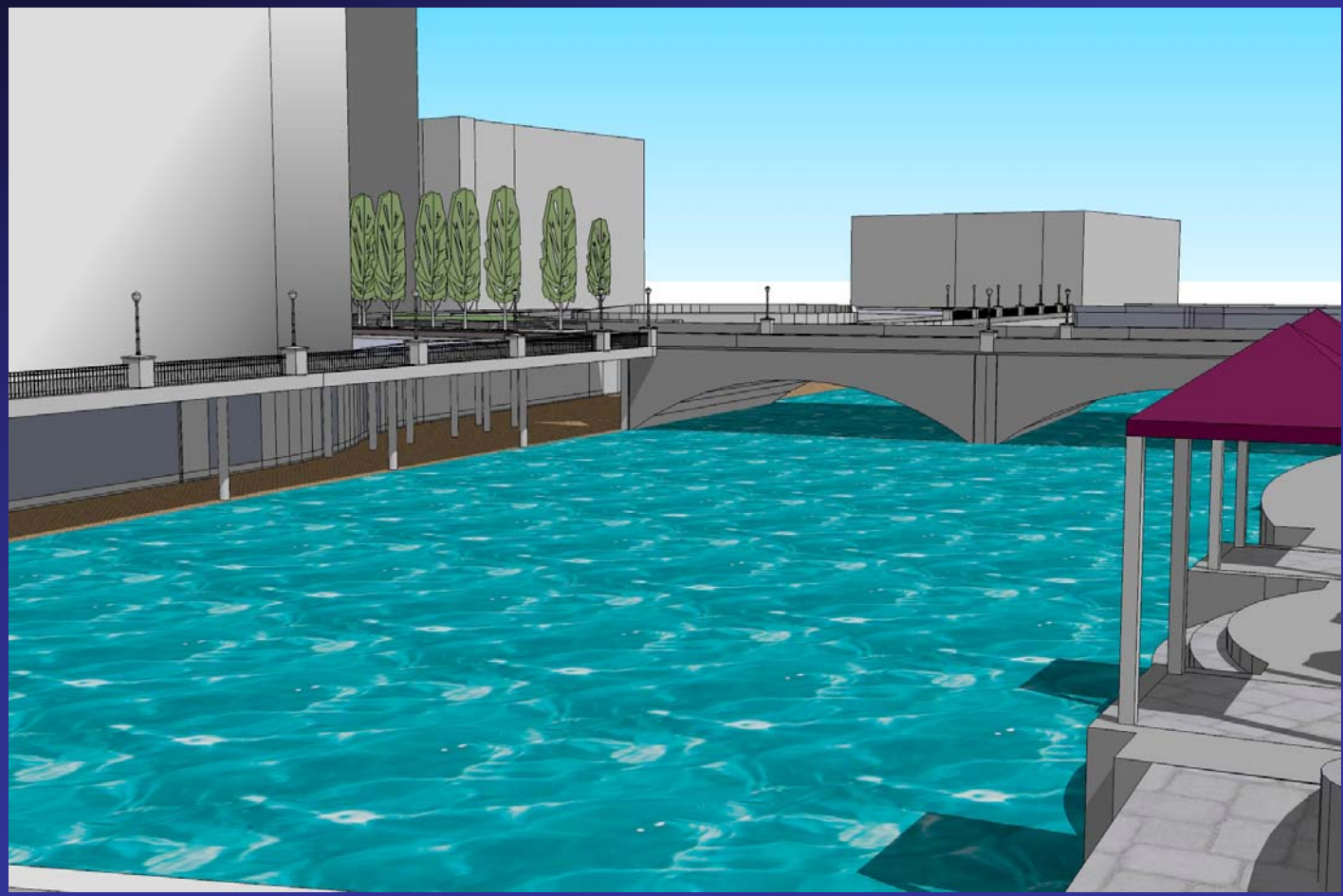
Bridge Rehabilitation & Flood Bypass Concept – overview southwest



Bridge Rehabilitation & Flood Bypass Concept – looking northeast at flood bypass channel



Bridge Rehabilitation & Flood Bypass Concept – looking southeast

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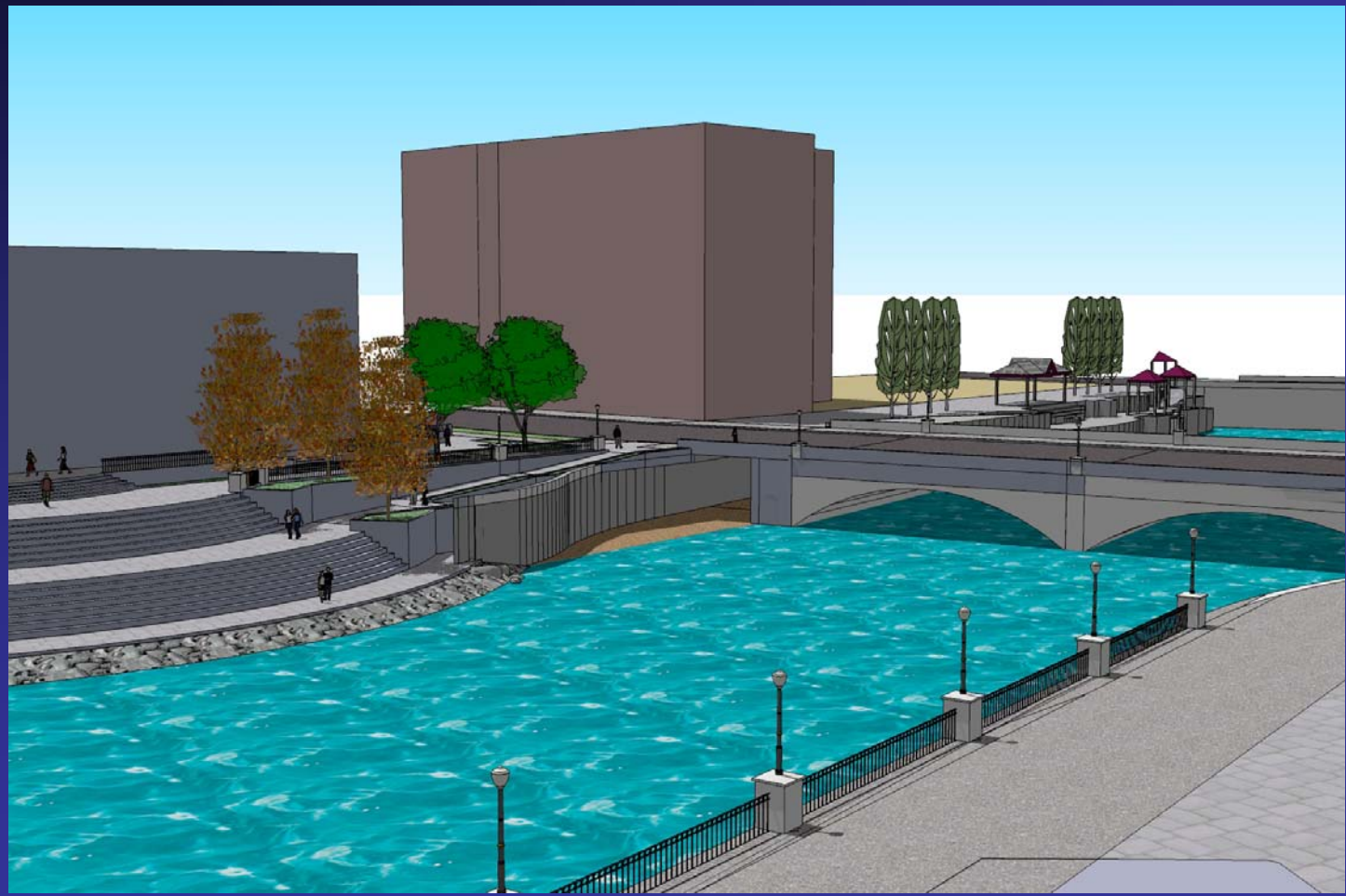
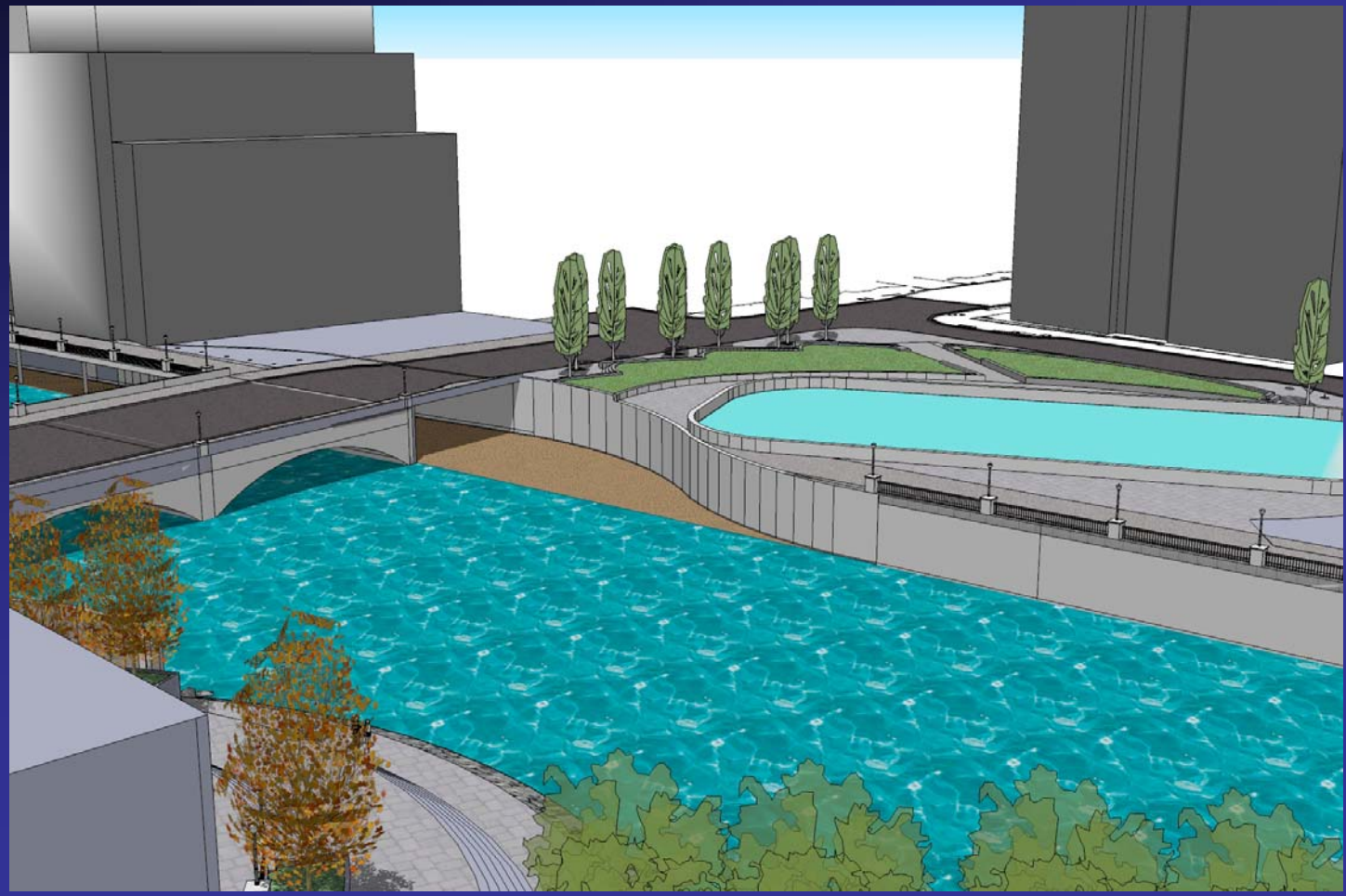
Bridge Rehabilitation & Flood Bypass Concept – looking southwest



Bridge Rehabilitation & Flood Bypass Concept – looking northwest



Issues

- Flood Bypass Channel Construction would require extensive modifications to:
  - Truckee River Fountain Walk Plaza
  - Post Office Plaza Design
  - 10 North Virginia Plaza/Ice Rink pedestrian & vehicular systems
  - Remove the Masonic Office Building

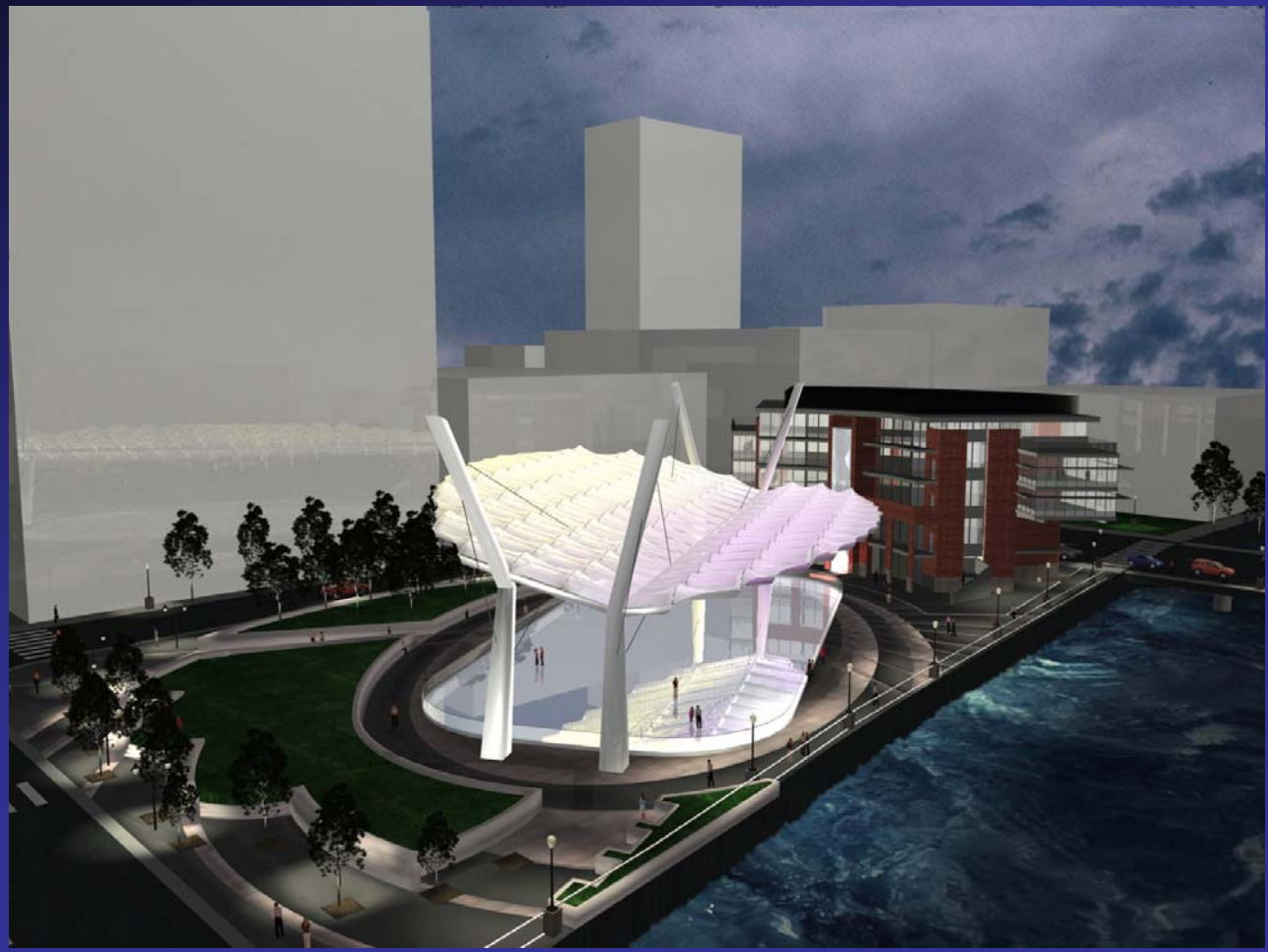
Bridge Replacement

- Bridge Types best choices for flood mitigation
  - through arch
  - cable stayed, off-set pier
  - no center pier

Issues

- Historic status of existing VA St. Bridge could influence replacement design.
- Replacement design is unlikely to have piers, which will improve flood capacity.
- New bridge could affect your ability to view up and down the river, keep bridge 'transparent' to maintain river views.

Replacement bridge design should be coordinated with 10 North Virginia Plaza/Ice Rink cover for visual compatibility



Opportunities

- Replacement VA St. Bridge could be a new landmark for downtown Reno with unique design. A team including an experienced bridge designer should be used to derive a context based design solution.
- Look at the 'family' of downtown river bridges during VA St. Bridge design process to ensure overall design compatibility since Sierra and Lake Street bridges are also scheduled for replacement.

ARCH BRIDGES

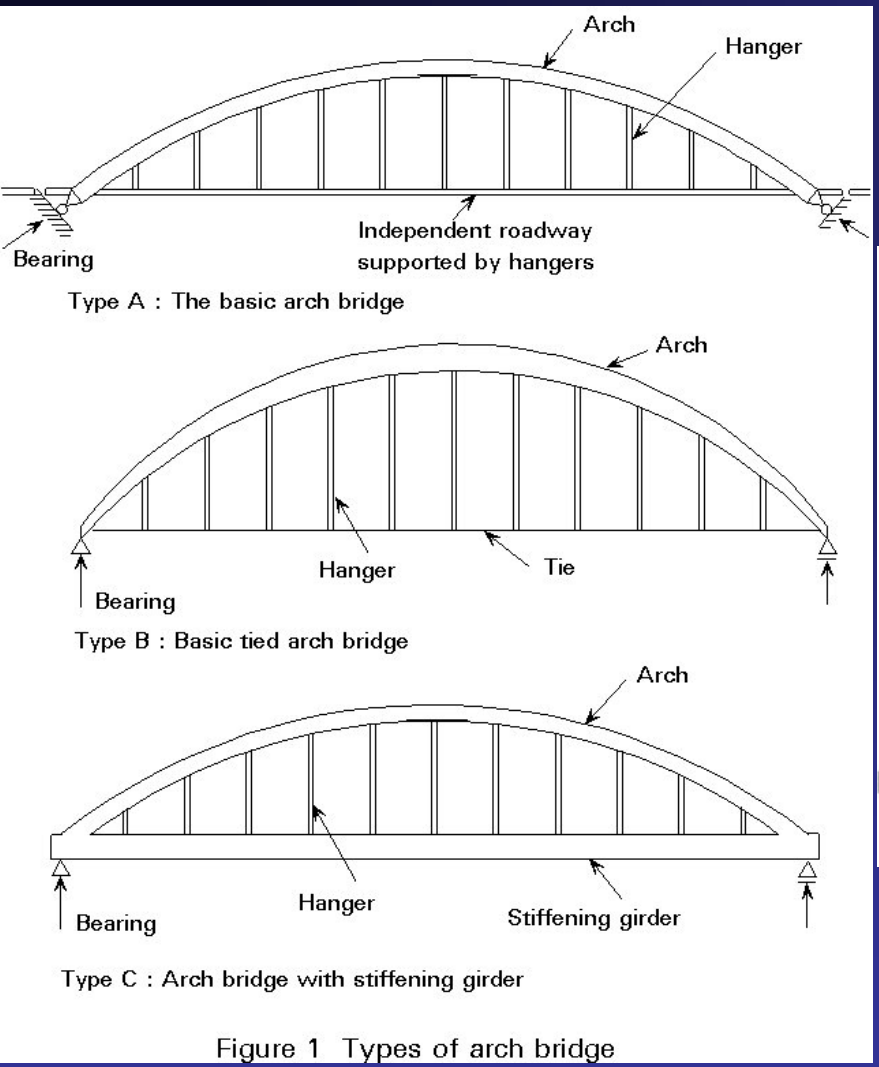
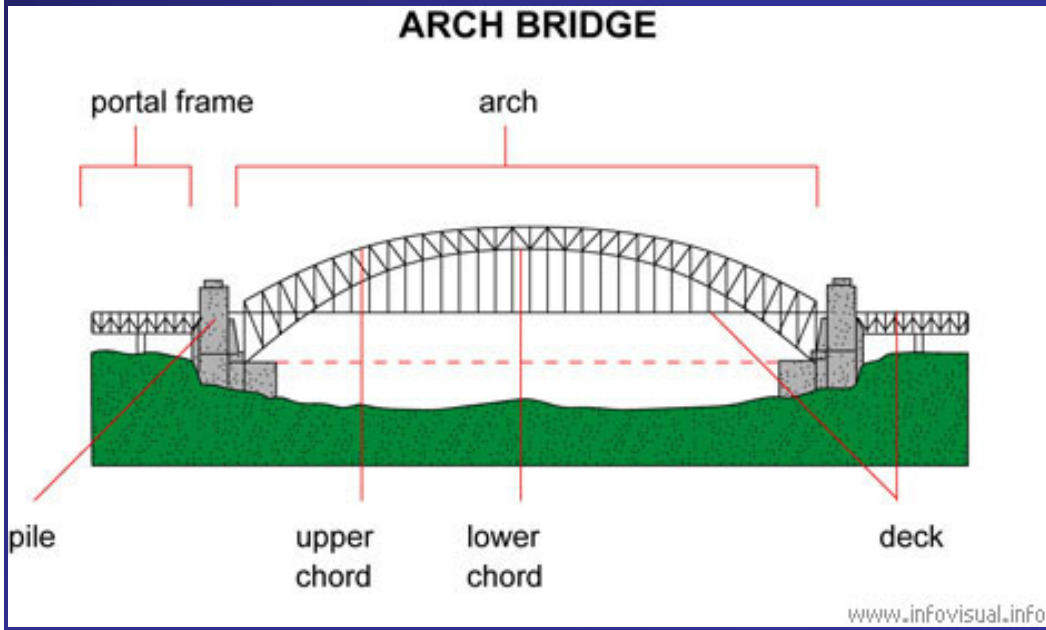
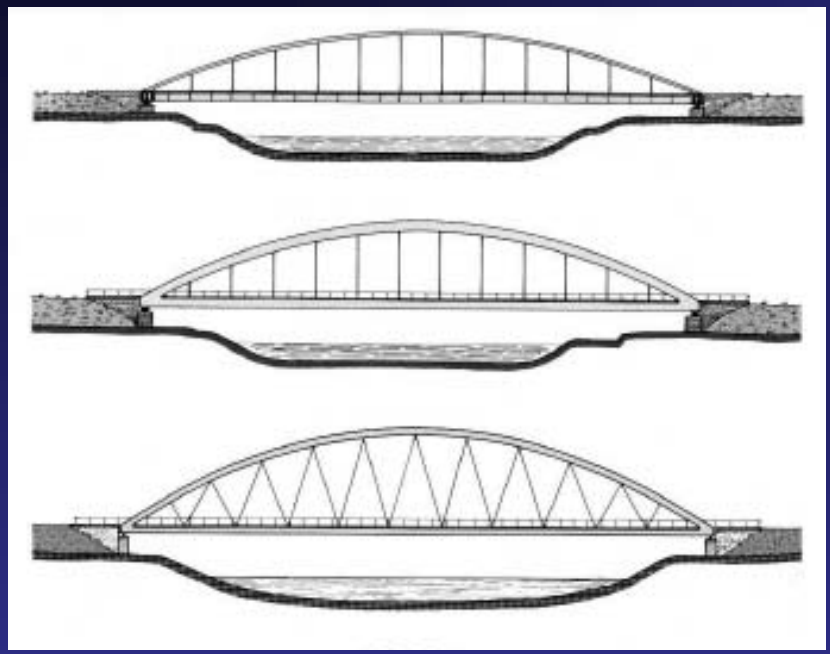


Figure 1 Types of arch bridge



ARCH BRIDGES

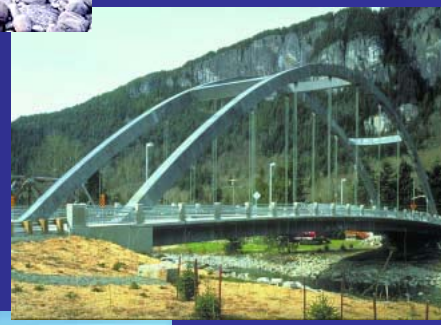


This type of bridge has a thin deck with support structures above.

ARCH BRIDGES

COLUMBUS GATEWAY ARCH BRIDGE
COLUMBUS INDIANA

STEEL TIED ARCH BRIDGE



WES SMITH BRIDGE
INDEX, WASHINGTON

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RAINBOW ARCH BRIDGE

REDFIELD RAINBOW ARCH BRIDGE
REDFIELD, SOUTH DAKOTA

PLACES LANDSCAPE ARCHITECTURE CONSULTING SERVICES, INC.

TUBULAR ARCH

DAMEN AVENUE ARCH BRIDGE
CHICAGO, ILLINOIS

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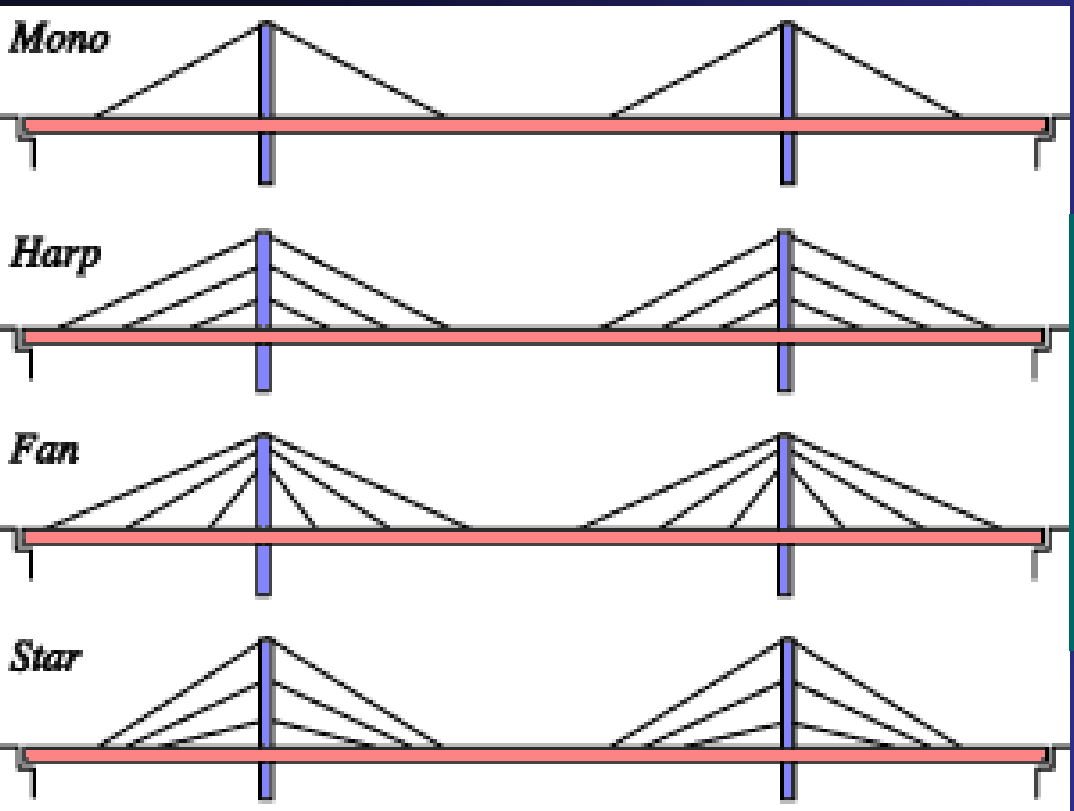
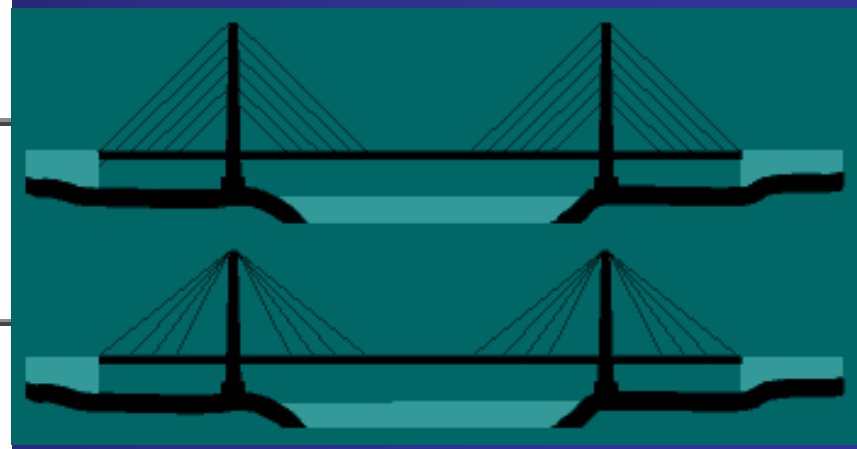
TUBULAR TRUSS

BIRMINGHAM BRIDGE

CABLE STAYED BRIDGES





CABLE STAYED BRIDGES

CALATRAVA PUENTE del ALAMILLO
SEVILLE

PUENTE de la MUJER BRIDGE

BOYNE CABLE STAYED BRIDGE
IRELAND

CABLE STAYED BRIDGE

SUNDIAL BRIDGE by CALAVERAS
REDDING, CALIFORNIA

PLACES LANDSCAPE ARCHITECTURE
CONSULTING SERVICES, INC.

CABLE STAYED BRIDGE

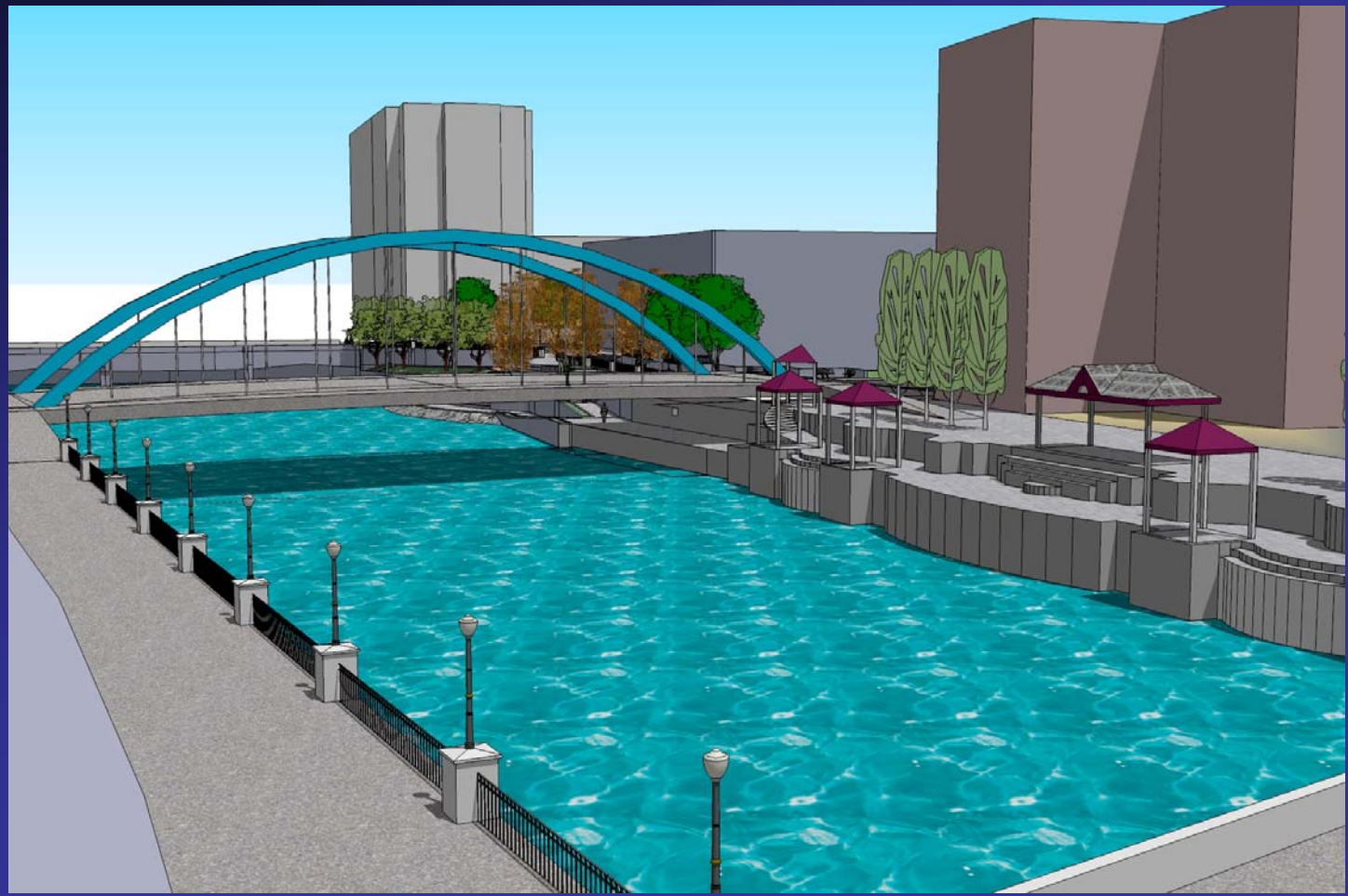
CALIFORNIA STREET BRIDGE
MISSOULA, MONTANA

PLACES LANDSCAPE ARCHITECTURE CONSULTING SERVICES, INC.

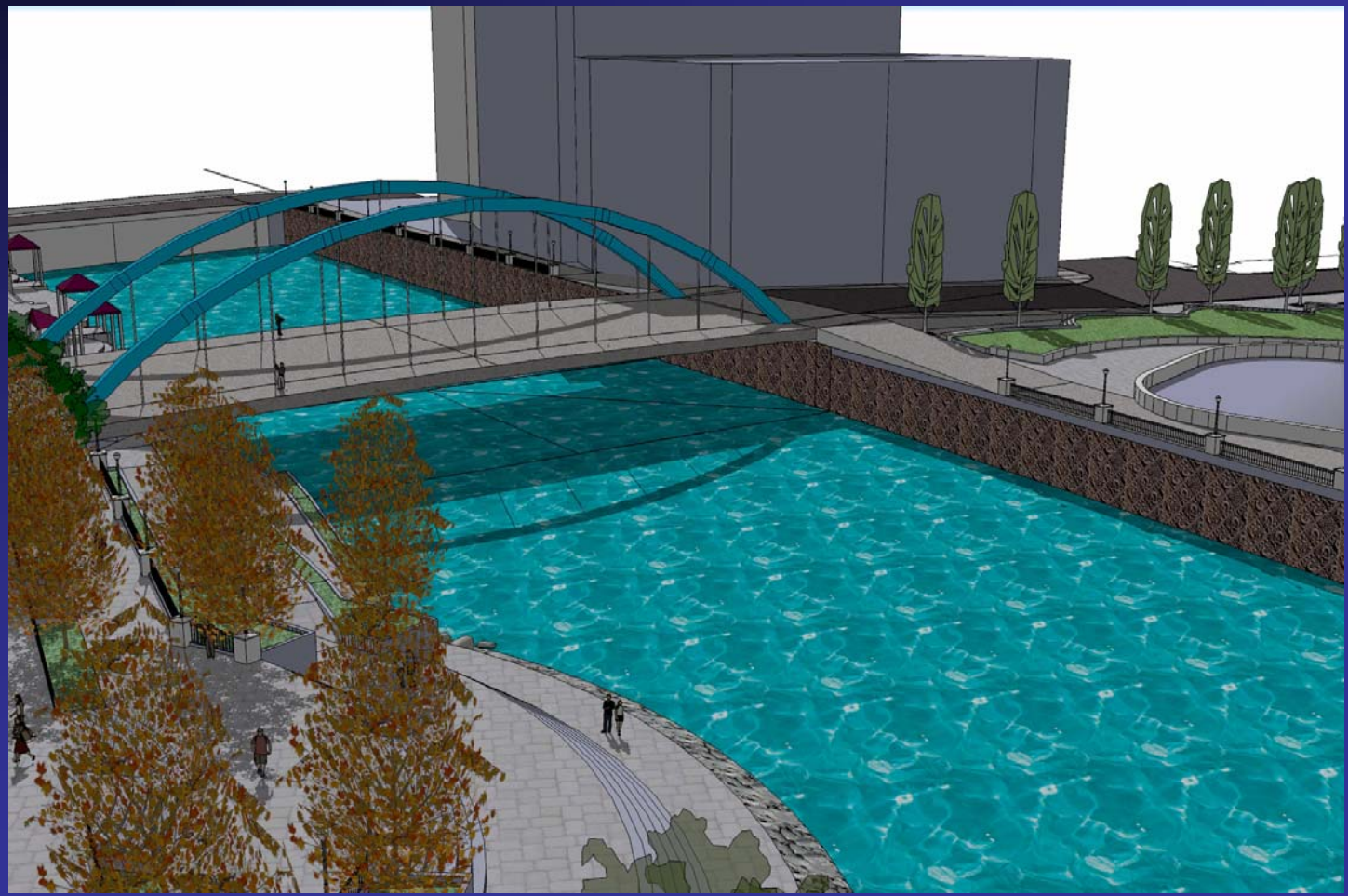
NIGHT LIGHTS

Bridge Replacement – looking northeast

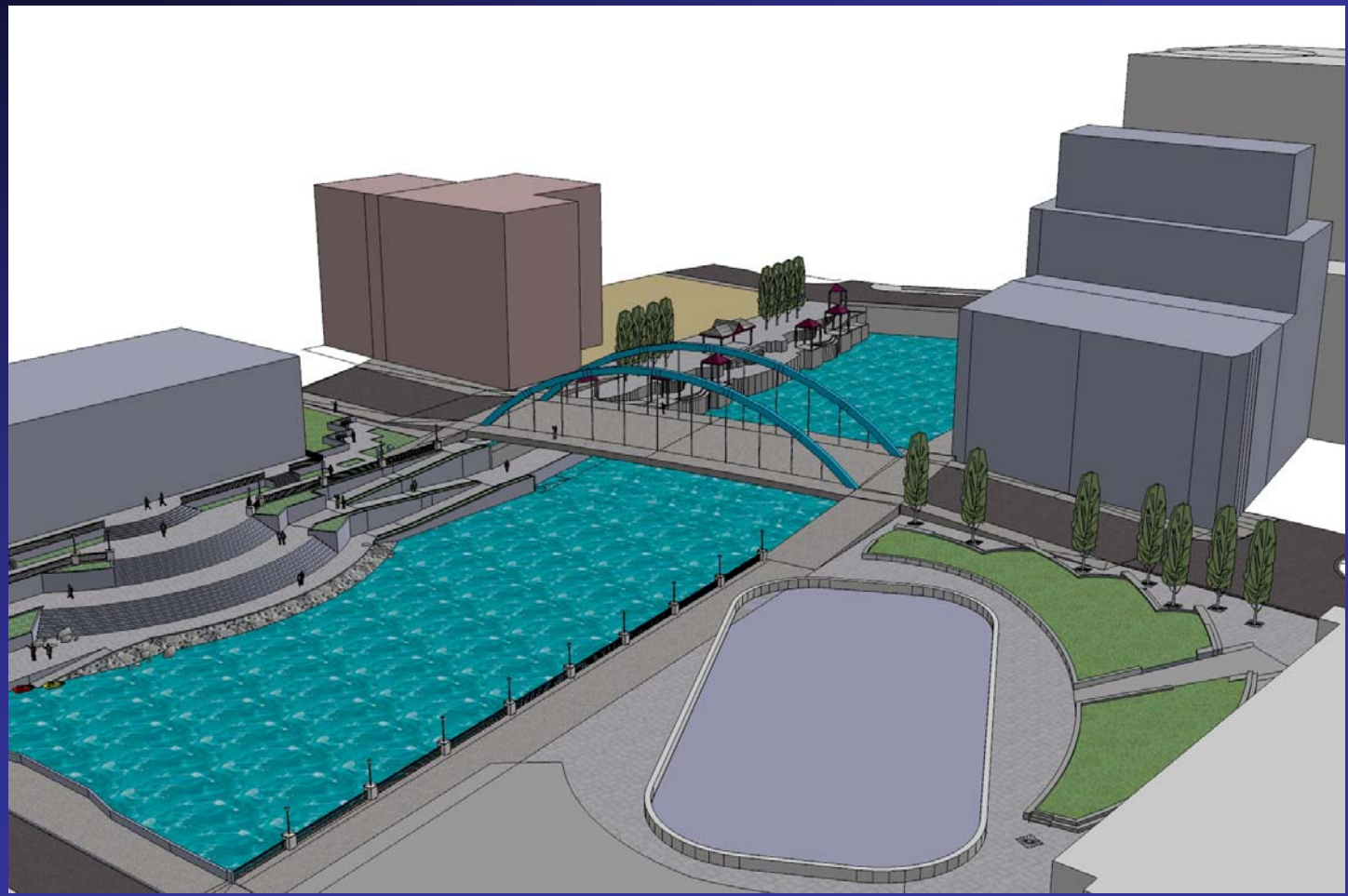
Bridge Replacement – looking southeast



Bridge Replacement – looking northwest



Bridge Replacement – looking southwest



Bridge Replacement – looking south at 1st Street

Virginia Street Bridge

PREPARED FOR: City of Reno

PREPARED BY: Bill Crawford, CH2MHILL

COPIES: David Roundtree, Area Manager CH2MHILL
Matt Negrete, CH2M HILL
Mike Cooper, CH2M HILL
Kaci Thomas, CH2M HILL
Kathy Grimshaw, CH2MHILL

DATE: March 26, 2007

PROJECT NUMBER: 358045

Introduction

The City of Reno has requested CH2M HILL provide opinions on the cost and timelines associated with rehabilitation and replacement alternatives for the Virginia Street Bridge as part of the Truckee River Flood Management Project. The alternatives evaluated by CH2M HILL are based on those developed by the US Army Corps of Engineers' (ACOE) National Economic Development (NED) plan and the Locally Preferred Plan (LPP). The ACOE's Clear Span NED option includes replacement of the three bridges at Sierra, Virginia, and Lake Streets only and does not include floodwalls to contain the 100-year flood. The LPP adopted by the Flood Project Coordinating Committee includes replacement of the bridges at Sierra and Lake Streets and, if feasible, rehabilitation of the Virginia Street Bridge. The LPP also includes construction of floodwalls to contain the 100-year flood.

As requested, the cost estimates and timelines presented in this report assume any future project developed for the Virginia Street Bridge will be under the federal Highway Bridge Replacement and Rehabilitation Program (HBRRP) in order that federal funds can be used. The funding for this federal program is administered by Nevada Department of Transportation which will also establish the standards for design and construction.

The five Virginia Street Bridge alternatives include:

Rehabilitation - LPP

The rehabilitation alternative includes repairing the existing Virginia Street Bridge and construction of the improvements outlined in the Ferrari-Shields concept. This alternative is consistent with the LPP Bypass and Floodwall option.

Replacement – Conventional Highway Bridge NED

Initially this replacement alternative included a clear span conventional highway bridge to be consistent with the ACOE's Clear Span NED. However, in CH2M HILL's opinion, a clear span conventional highway bridge is not feasible. Instead a two-span conventional highway bridge having a center pier was used for this alternative. While this is not consistent with the ACOE's Clear Span NED, there may be an opportunity to meet the hydraulic requirements. This is discussed in more detail later.

Replacement – Signature Bridge NED

This replacement alternative uses a clear span signature bridge and is consistent with the ACOE's Clear Span NED. A signature bridge is one that is considered unique, a showcase for the site, and has enhanced aesthetics. In addition, the main support elements would be above the roadway, allowing for a thinner bridge depth.

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Background

The Virginia Street Bridge carries pedestrian and vehicular traffic across the Truckee River in Downtown Reno. It was built in 1905 and is on the National Register of Historic Places. The bridge is a two-span earth filled concrete barrel arch.

The Nevada Department of Transportation (NDOT) in 1992 identified the Virginia Street Bridge as being structurally deficient and entered into an agreement with the City of Reno to study repair options. Due to the bridge's historic value, these studies were conducted under the National Environmental Policy Act (NEPA). An Environmental Assessment was completed in 1996 that approved rehabilitation of the bridge through the federal HBRRP. NDOT determined rehabilitation was feasible since the bridge could be salvaged and complied with the flood control requirements of that time.

NDOT started the final design to rehabilitate the Virginia Street Bridge in 1997. Downtown Reno suffered extensive damage due to the New Years Flood of 1997. In 1998, the City of Reno decided to suspend the project since the scope of work did not include an increase in the bridge's hydraulic capacity. In 1999, the rehabilitation project was terminated pending

the recommendations from a flood control project that would evaluate the entire downtown reach of the Truckee River.

Rehabilitation

The cost to design and construct a rehabilitation of the Virginia Street Bridge includes not only repair of the existing bridge but also includes the improvements outlined in the Ferrari-Shields concept. The Federal Highway Administration (FHWA) requires the deficiencies making a bridge eligible under the federal HBRRP be corrected as part of the rehabilitation project. The work necessary to repair the existing bridge is based on the 1997 repair strategy prepared by NDOT. A re-evaluation of the bridge's condition is warranted to determine if the 1997 repair strategy is still valid. Details of the 1997 repair include: (See Exhibit 1)

- Remove asphalt.
- Remove and reconstruct sidewalk.
- Remove and reconstruct concrete railings and end posts. Salvage and reinstall wrought iron railing.
- Remove earth fill to expose concrete arch.
- Remove and replace unsound concrete and reinforcing steel on concrete barrel arch. (Assumed to be 30% of the arch in 1997 and 50% for this estimate)
- Remove and replace unsound concrete and reinforcing steel on spandrel walls and wing walls. (Assumed to be 40% of the walls in 1997 and 60% for this estimate)
- Remove unsound concrete at arch spring lines and replace with concrete matching the existing texture and color.
- Construct a scour protection pad around center pier.

The Ferrari-Shields concept was developed to improve the hydraulic capacity of the Virginia Street Bridge and allow the existing historic bridge to remain in place. Details of the Ferrari-Shields concept include: (See Exhibit 2)

- Construct bypass tunnels behind the north and south abutments of the Virginia Street Bridge.
- Remove a portion of the north and south river walls east of the Virginia Street Bridge and construct transition channels.
- Remove the north river wall from the west edge of the Virginia Street Bridge to approximately 150 feet upstream of the Sierra Street Bridge and construct a wider channel with new river walls and cantilever overhangs to accommodate Truckee River Lane.
- Construct a bypass tunnel behind the north abutment of the Sierra Street Bridge.
- Remove the property at 40 West First Street to accommodate construction of the north bypass structure behind the north abutment of the Virginia Street Bridge.

The ACOE also identified the potential need to remove a portion of the Riverwalk west of the south abutment of Virginia Street Bridge and construct a transition channel into the south tunnel. CH2M HILL included the cost for this transition channel in the estimate.

Debris

Debris can collect and build up on bridges reducing the hydraulic efficiency. Trees are the typical type of debris that has historically collected on the bridges within downtown Reno. The amount of debris can be significant. The existing bridges have had problems with debris due to supports in the river. The ACOE recommends clear span bridges for the replacement alternatives.

The rehabilitation alternative effectively has three supports in the river that will collect debris and reduce the hydraulic opening. With the addition of the two tunnels on either side of the abutments, the proposed bridge will have four openings with three wide supports.

CH2M HILL has reviewed the ACOE's hydraulic model of the rehabilitation alternative and their estimate of debris accumulation and reduced hydraulic capacity is reasonable.

Rehabilitation Cost

Cost opinion to rehabilitation is $36,000,000 in 2007 dollars, see Exhibit 3 for details.

Replacement

The cost to design and construct a Virginia Street Bridge replacement includes removal of the existing bridge and construction of a new one at the same location.

Impacts to Virginia Street Elevation

All replacement alternatives require raising the elevation of Virginia Street at the Truckee River. The amount Virginia Street needs to be raised is a function of the Water Surface Elevation associated with the ACOE's NED and LPP with Floodwalls scenarios, the amount of freeboard clearance needed for debris passage, and the depth of bridge, see Exhibit 4. The amount of elevation increase for each of the four replacement alternatives is shown in Table 1.

TABLE 1
REQUIRED INCREASE IN VIRGINIA STREET ELEVATION AT THE TRUCKEE RIVER TO ACCOMMODATE REPLACEMENT ALTERNATIVES

REPLACEMENT ALTERNATIVE	INCREASE IN ELEVATION (FEET)
CONVENTIONAL CLEAR SPAN BRIDGE – NED	6.7
CONVENTIONAL TWO-SPAN BRIDGE– NED	3.7
SIGNATURE BRIDGE – NED	3.2
CONVENTIONAL CLEAR SPAN BRIDGE – LPP	8.7
CONVENTIONAL TWO-SPAN BRIDGE - LPP	5.7
SIGNATURE BRIDGE – LPP	5.2

Raising the elevation of Virginia Street at the Truckee River will require reconstruction of the approaches to the bridge. The limits of reconstruction required to meet the increased

elevation requirements are shown on Exhibits 5 through 8 for the clear span bridges. It is CH2M HILL's opinion that the clear span conventional highway bridge alternatives are not feasible due to impacts to adjacent property. For example, the Conventional Clear Span LPP Alternative requires an elevation increase at the Truckee River of approximately 8.7 feet. The difference in elevation between the reconstructed Virginia Street and the Masonic Building can be as much as 7 feet.

A conventional highway bridge alternative may be feasible if a center pier is placed in the river. This allows the bridge depth to be reduced from approximately 6.5 feet to approximately 3.5 feet making it comparable in depth to the clear span signature bridges. A center pier however has not been recommended by the ACOE. There may be an opportunity to increase the opening under the bridge that offsets the reduction in hydraulic opening caused by a center pier. The south abutment could be moved 15 to 20 feet further south opening up the hydraulic area offsetting the reduction in area caused by a center pier. Pulling back the south abutment also has the benefit of a direct connection along the river's edge between the Riverwalk and future Reno Town Square. A comprehensive hydraulic analysis would be required to determine if placement of a pier in the river would allow for the 100-year flood to pass through the opening.

Replacement Cost

Conventional highway bridges are generally the least cost alternative. A signature bridge comes with a premium but its thinner bridge deck results in lower approach road reconstruction costs.

The conventional highway two-span bridge alternatives and the signature bridge alternatives have comparable approach road reconstruction costs. The LPP with Floodwalls alternative has higher approach road reconstruction costs compared to the ACOE's NED alternatives. This is due to the amount of area requiring reconstruction. In general, the greater the increase in elevation at the river, the more roadway reconstruction is required.

All replacement alternatives include an increase in span by moving the south abutment away from the river. This provides for some increase in hydraulic area and also allows pedestrian access under the bridge connecting the existing Riverwalk with the proposed Reno Town Square. Cost opinions for the replacement alternatives in 2007 dollars is shown in Exhibit 9 and summarized in Table 2.

Table 2
COST OPINIONS FOR THE VIRGINIA STREET BRIDGE REPLACEMENT ALTERNATIVES

REPLACEMENT ALTERNATIVE	ESTIMATED COST
CONVENTIONAL TWO-SPAN – NED	$14,000,000
SIGNATURE – NED	$17,000,000
CONVENTIONAL TWO-SPAN – LPP	$15,000,000
SIGNATURE – LPP	$18,000,000

Timeline

CH2M HILL prepared timelines based on the project being developed by NDOT under the federal HBRRP. Steps in the timeline are different between the rehabilitation and replacement alternatives. If rehabilitation is selected, the ACOE must identify another bypass concept that will meet the flood criteria and then build a physical model to verify the concept works. Upon successful demonstration that the physical model works and issuance of the ACOE's Chief's Report, the City of Reno can request that FHWA/NDOT revise the 1996 Environmental Assessment to include the new hydraulic features. NDOT was consulted and indicated it would take from 9 to 12 months to modify the existing document.

If replacement is selected, the ACOE must first complete their EIS and issue the Chief's Report. The City of Reno can then request the FHWA/NDOT revise the 1996 Environmental Assessment. NDOT was consulted and indicated it would take from 18 to 30 months to modify the exiting document with the possibility a new document will be required.

Design and construction times for the rehabilitation will generally take longer than replacement due to the amount of river construction needed for the rehabilitation and its staging.

Rehabilitation Timeline

Time to complete the rehabilitation alternative is estimated to be between 7 to 8 years, see Exhibit 10.

Replacement Timeline

Time to complete the replacement alternatives is essentially the same for all four alternatives and is estimated to be between 6 and 7.5 years, see Exhibit 10.

Summary

All rehabilitation and replacement alternatives were prepared assuming Virginia Street will be completely closed to traffic for the duration of construction. See Table 3 for a summary of each alternative's cost opinion.

TABLE 3
COST OPINIONS FOR THE VIRGINIA STREET BRIDGE ALTERNATIVES

ALTERNATIVE	COST (2007 DOLLARS)	COST (BEGINNING OF CONSTRUCTION*)
REHABILITATION – LPP	$36,000,000	$45,000,000
REPLACEMENT CONVENTIONAL TWO-SPAN – NED	$14,000,000	$18,000,000
REPLACEMENT SIGNATURE – NED	$17,000,000	$22,000,000
REPLACEMENT CONVENTIONAL TWO-SPAN – LPP	$15,000.000	$19,000,000
REPLACEMENT SIGNATURE – LPP	$18,000,000	$23,000,000

* Cost to beginning of construction is based on a 5% cost increase per year.

Virginia Street Bridge: Restore or Replace?

An Informational Workshop for the Reno City Council

Neil Mann – City of Reno
Naomi Duerr- Flood Project
Paul Urban - Flood Project
Bill Crawford -CH2MHill
Barbara Santner - Places

Goals

- Increase knowledge and understanding of Virginia Street Bridge issues
- Understand decision-making process
- Begin to address issues of feasibility
- Lay groundwork for Reno Council recommendations to FPCC

Structure of Workshop

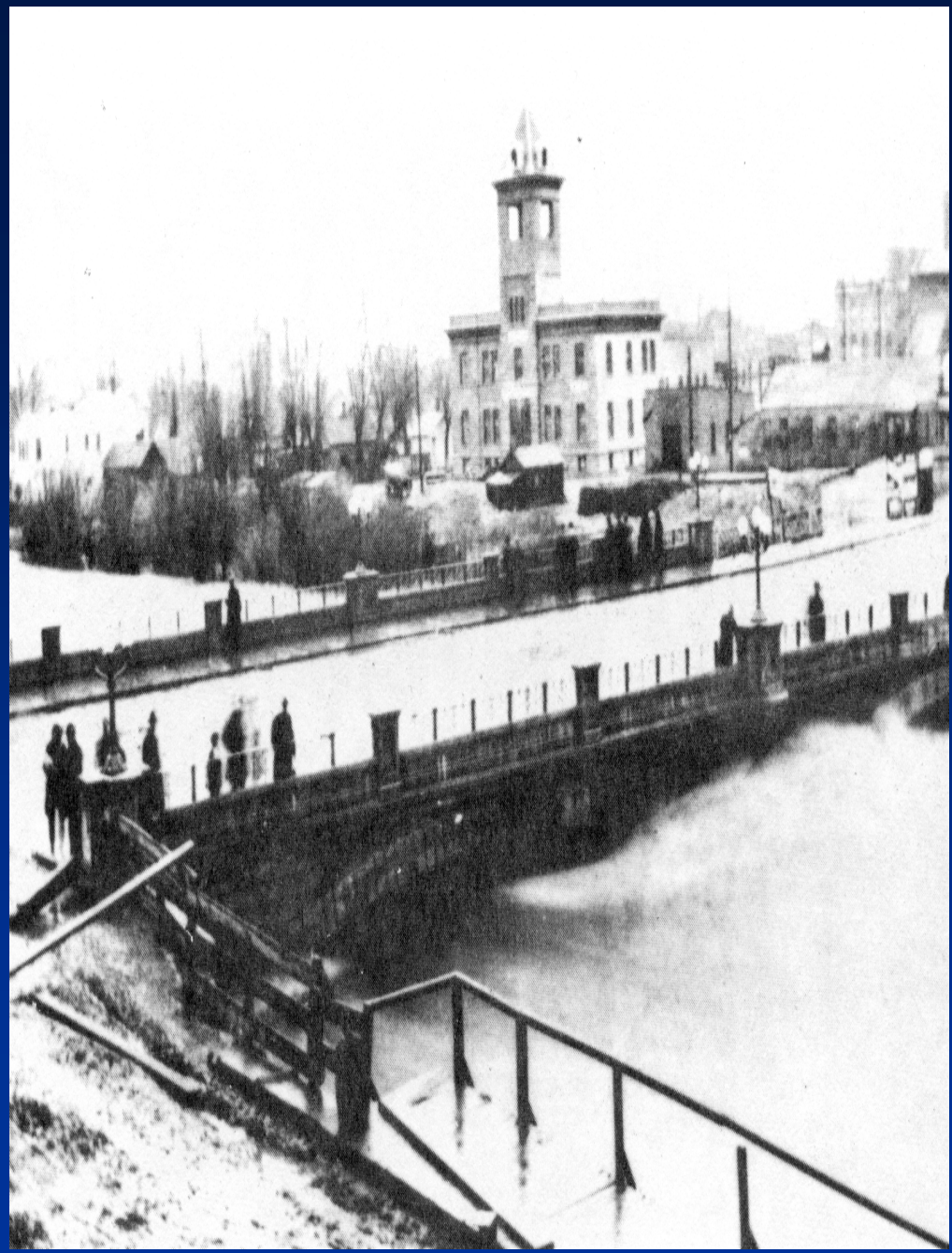
- Goals and Framework – Neil Mann
- History, Key Issues, Corps Process
  - Naomi Duerr
- Guide to the Options – Paul Urban
- More on the Options and Costs – Bill Crawford
- Bridge Visioning – Barbara Santner

- History of Bridge Flooding
- Key Issues
- Corps Process
- Feasibility issues

Virginia Street Bridge

History of Bridge Flooding

1907




1950
Oper. 414
Nov. 1950

1955

Flood of 1997

Flood of 2005

Problem

1997 - $600 to $700 M in damages in Washoe Co.,

$1 Billion in 6 counties

Today would be $1+ Billion
in Washoe County alone

Flooding is #1 threat to life and property
in the United States

Key Issues

- Ownership – Reno

Called in at Reno's Request

- Federal Highways Administration
- Truckee River Flood Project

FHWA Issues: Center & Virginia Street Bridges

- 1996 MOA
- Signed by 5 parties (Reno, NDOT, FHWA, SHPO, Advisory Council on Historic Preservation)
- Demo and Replace Center Street Bridge – $5-7 M paid for by FHWA
- Rehab Virginia Street Bridge - placeholder of $5 M in NDOT/FHWA budget for work

Corps Issues

- NED vs. LPP – What are they? What level of flood protection?
- Cost - Benefit Analysis - Downtown vs. the Meadows
- Virginia Street Bridge is the key to the inclusion of downtown in flood project - without it downtown is less than 1:1 and is dropped from project
- 2 kinds of benefits flood damage reduction and advanced bridge replacement

To solve the Cost-Benefit Issue

- Senator Reid Legislation – Unitize Cost- Benefit Analysis- spread benefits over whole project, make downtown more viable

- "Full Federal Participation"

The Locally Preferred Plan

- Adopted in March 2006
- 40 sub-elements
- Replacement of the bridges at Sierra and Lake St, and if feasible, rehabilitation of the existing Virginia Street Bridge

Feasibility

- Physical Feasibility- does it work?
- Total cost of each option
- Local cost of each option
- Schedule
- Community acceptability

Virginia Street Bridge Options and Feasibility

Paul Urban

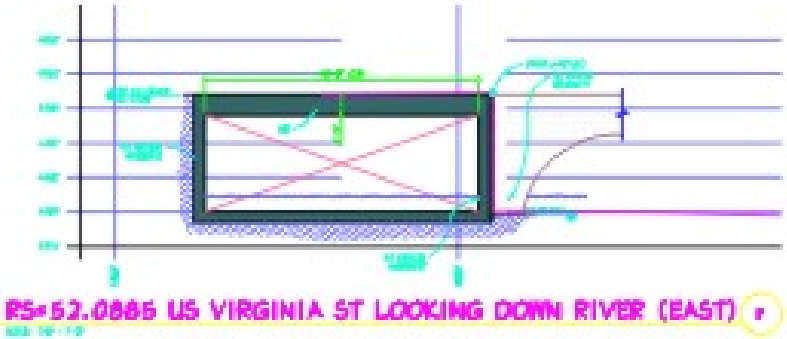
Next Steps

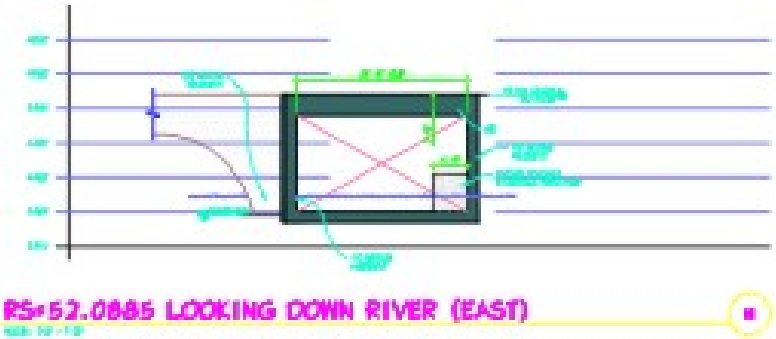
- Reno Council – Wednesday, April 11
- FPCC – Friday, April 13
- Review Feasibility Issues
- Determine feasibility of known issues

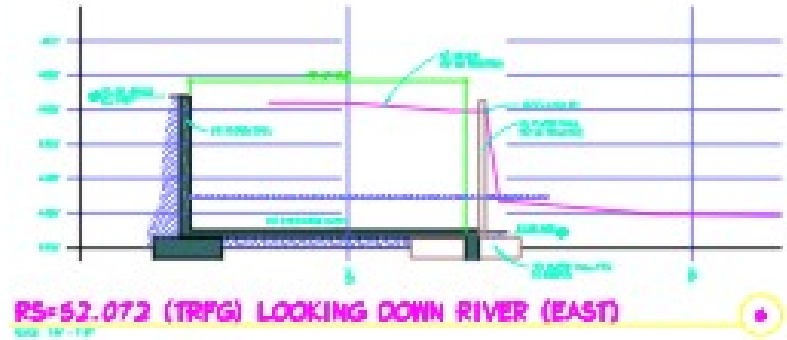
Virginia Street Bridge (VSB) Alternatives

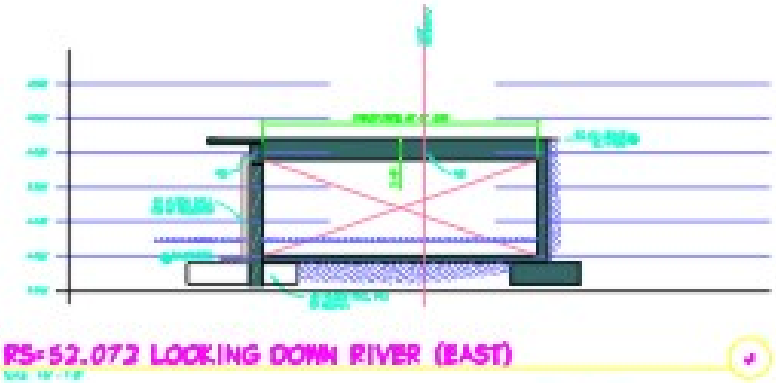
- **Bypass & Restore – LPP:** Construct a bypass channel around both abutments. Strengthen abutments, Modify approaches.

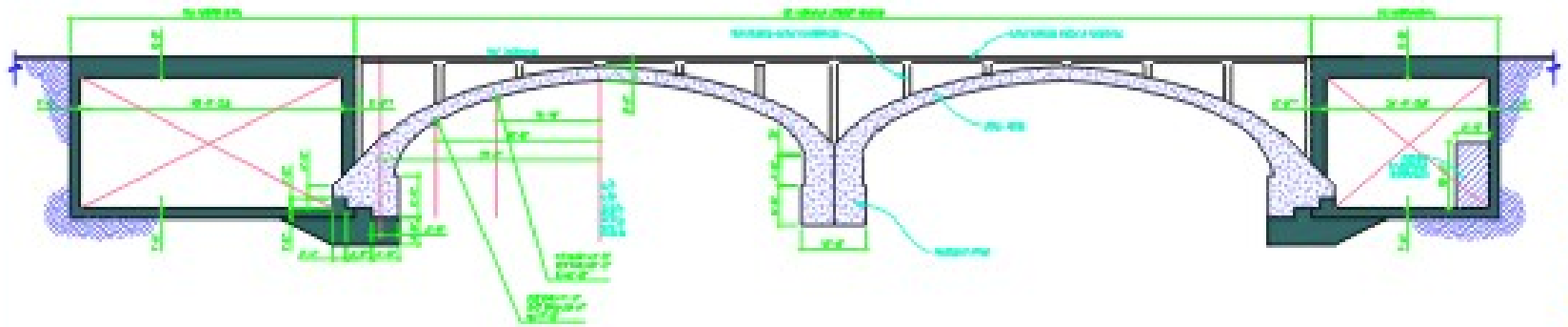
- **Replacement – NED:** Remove existing bridge and replace with a clear span type.



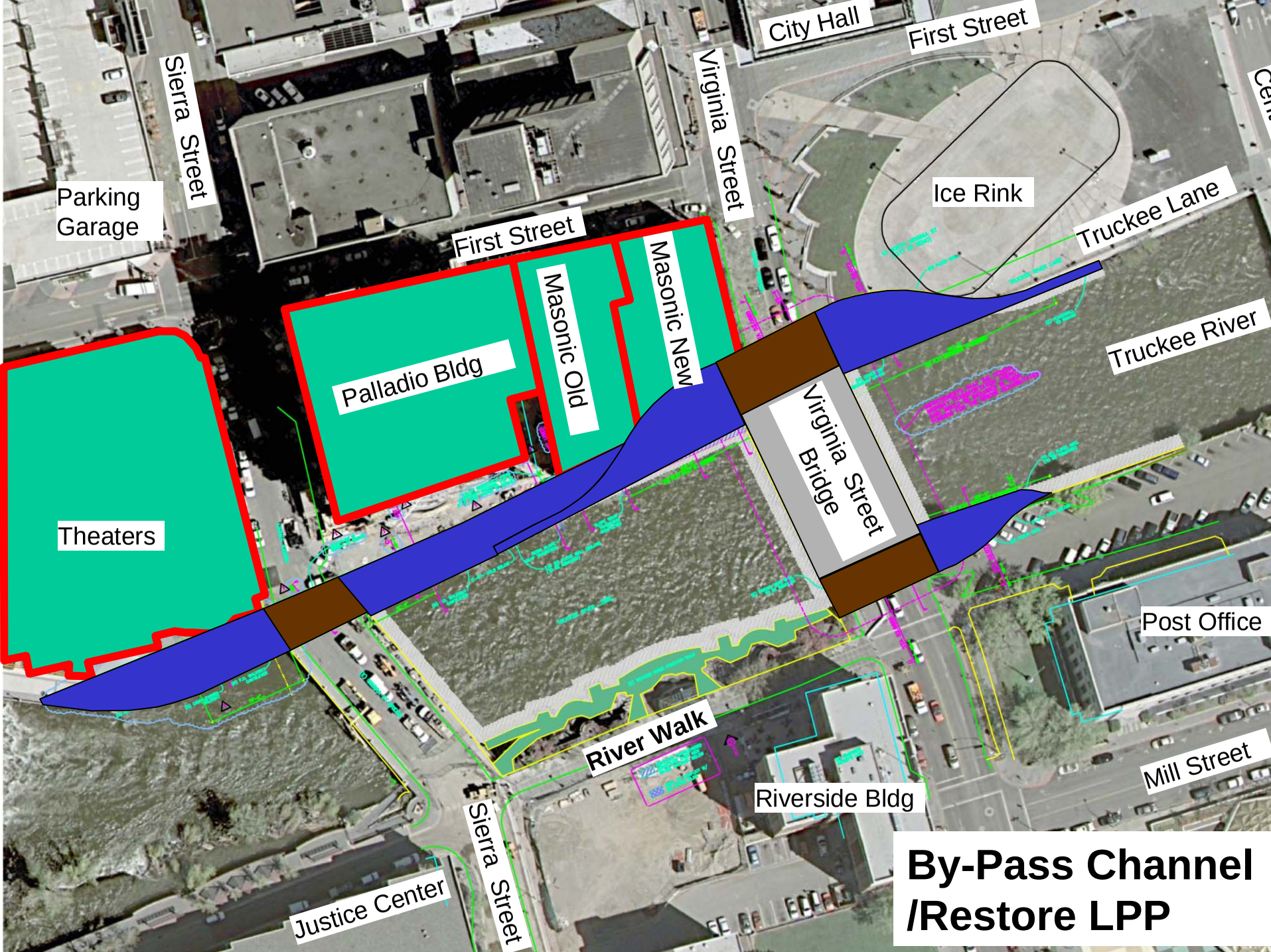








By-Pass/Restore Bridge Section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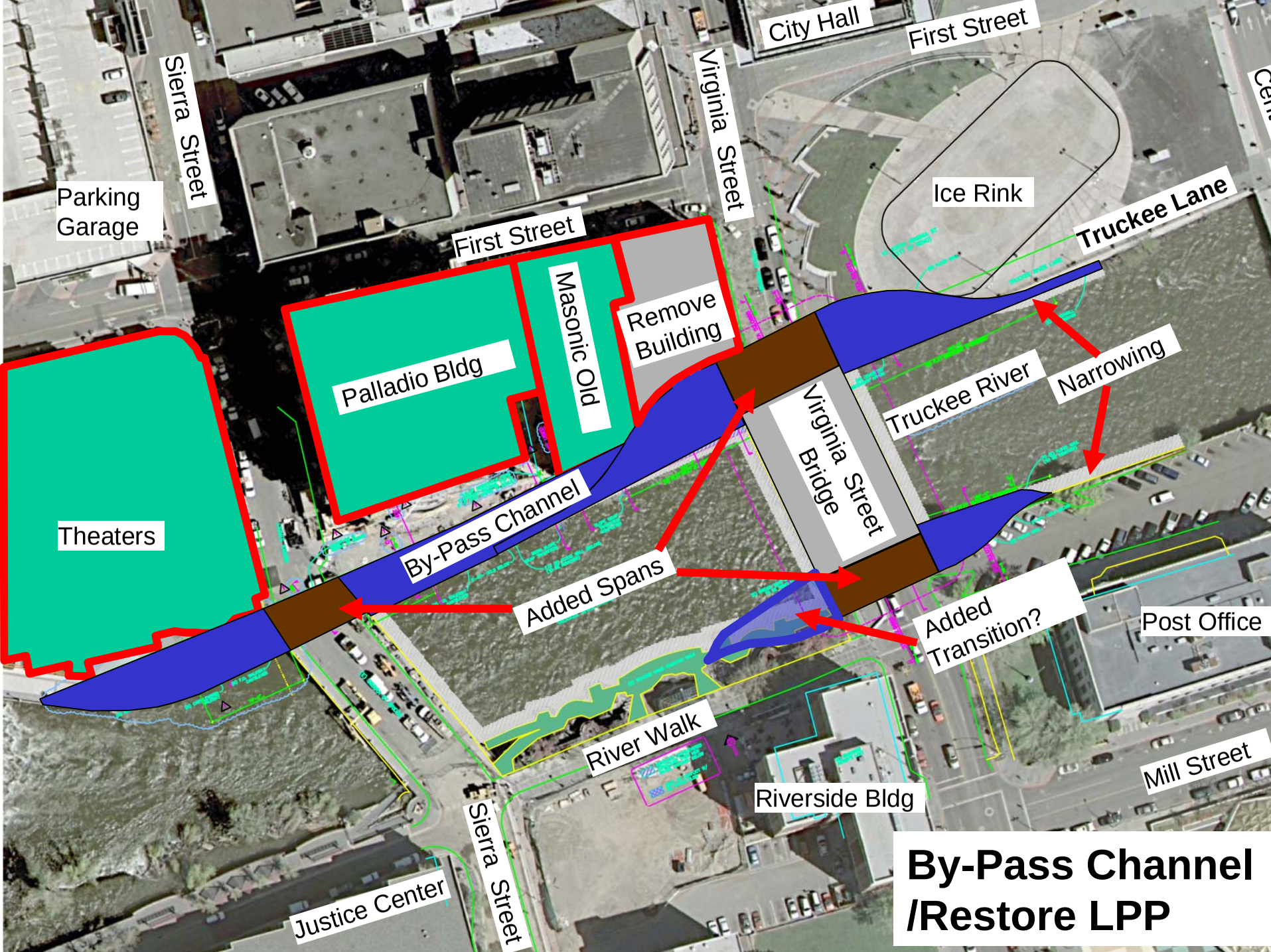
Masonic New
Palladio Bldg
Truckee River
Virginia Street Bridge
Theaters
Post Office
River Walk
Mill Street
Riverside Bldg
Sierra Street
Justice Center
By-Pass Channel /Restore LPP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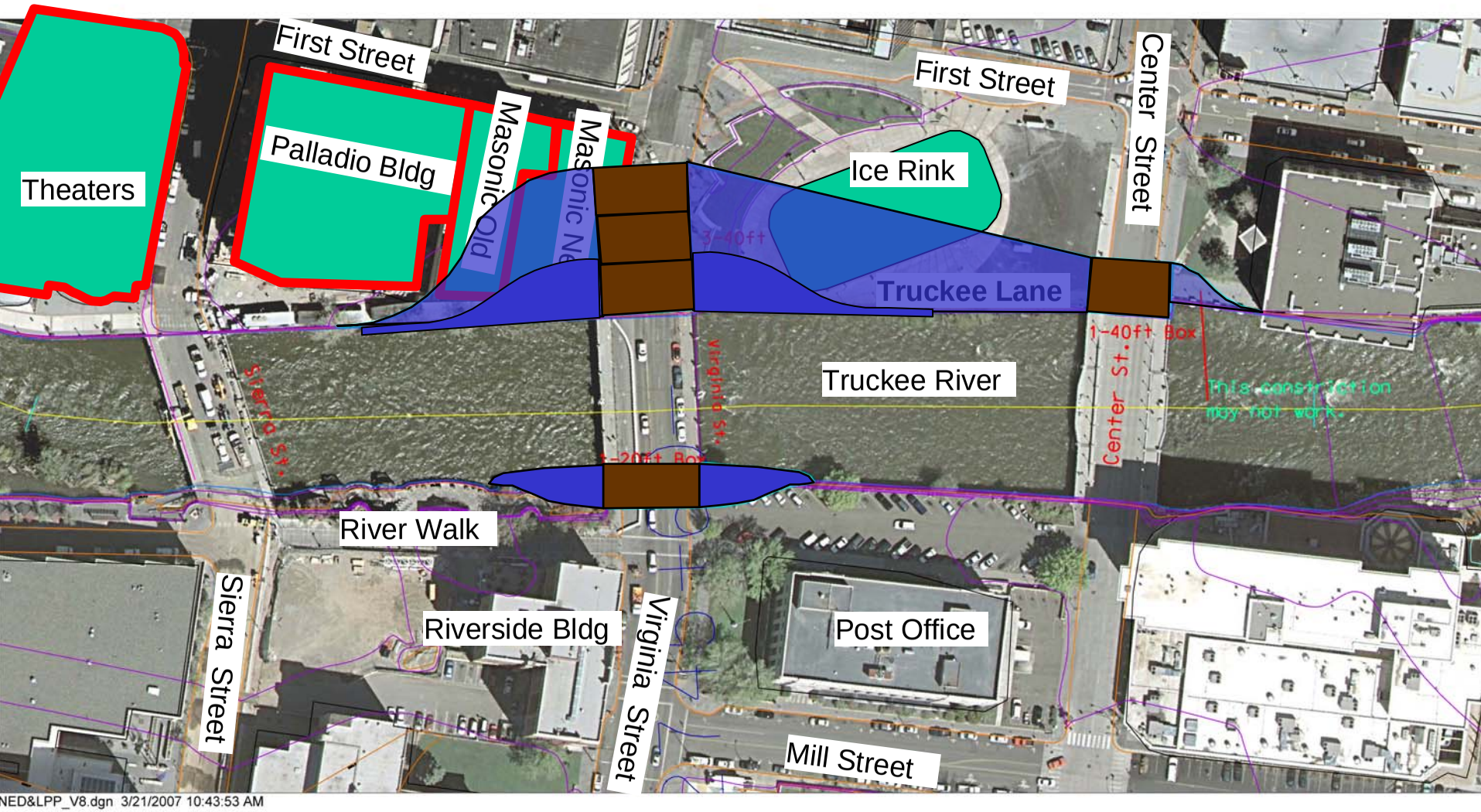
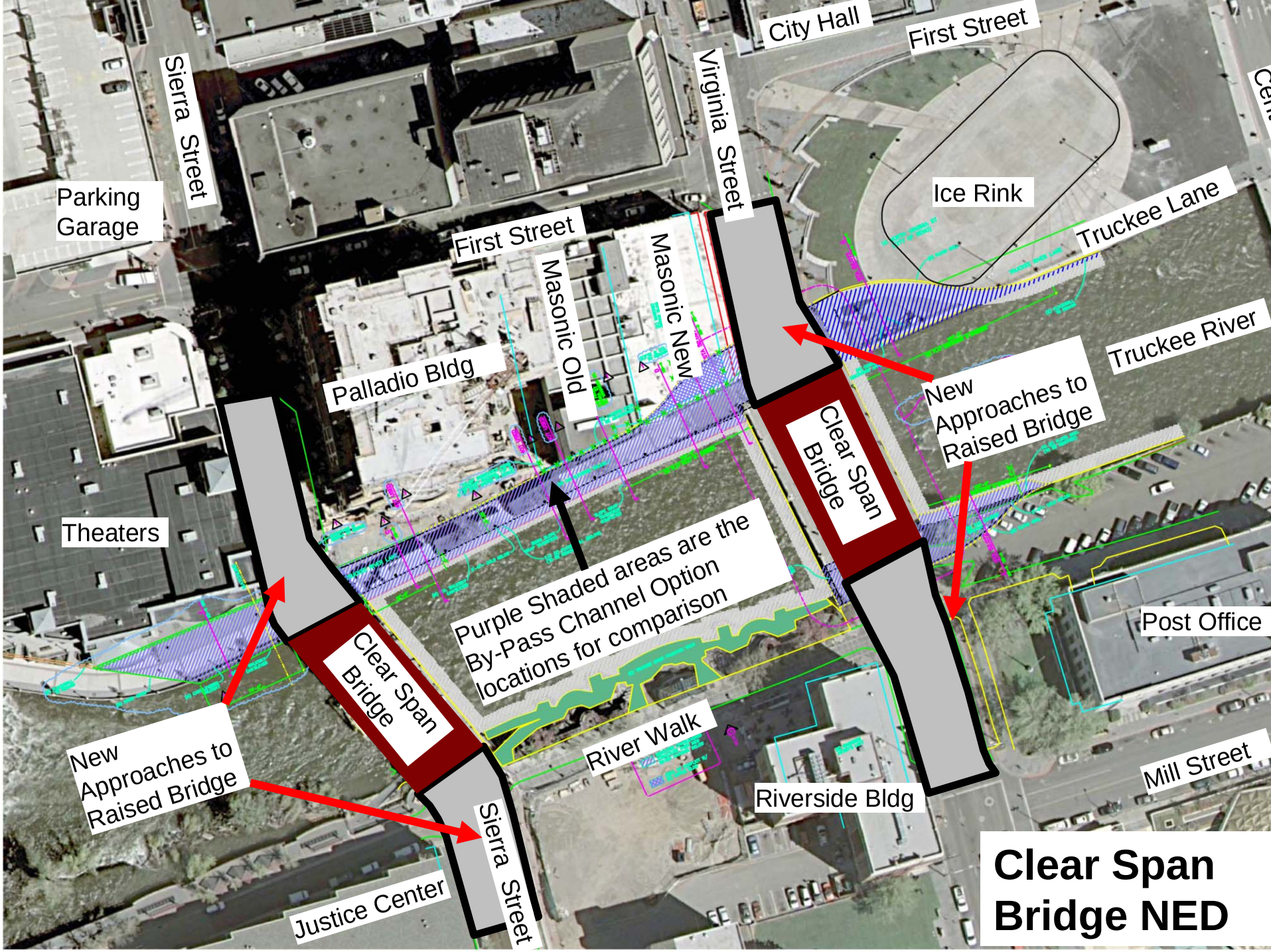
By-Pass Channel /Restore LPP

Expanded Bypass Channel Design



This option was modeled by the Corps after the 3-16-07 FPCC meeting.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Mill Street
Riverside Bldg
Sierra Street
Justice Center
Clear Span Bridge NED

“Signature” Bridge Concepts

- Clear Flow Path
- Thin Road Deck
- Superstructure Type Support
- Aesthetically Pleasing

Definition of Terms

- **NED – National Economic Development Plan :**
  - This is the plan developed by the Corps that creates the greatest benefit to the economy of the United States as a Whole.
  - Benefit categories spelled out in Corps policy
  - Funded with Full Federal Participation

Definition of Terms

LPP – Locally Preferred Plan:

- The plan preferred by the local sponsor that included project elements that are not in the NED but have been determined locally to be needed
- The additional cost to things added to the project that are not included in the NED are paid for by the sponsor

Definition of Terms

- **FFP – Full Federal Participation:**
  - This means that the Corps would cost share project costs to the total amount allowed by law even if the project elements are not in the NED.
  - Only Congress can authorize full federal funding of a LPP

Definition of Terms

- **LERRDs – Lands, Easements, Replacement, Relocation, and Disposal areas**
  - Paid for 100% by the local sponsor

Cost share for Alternatives

Replacement – NED:

- Non-Fed responsible for all construction and land costs
- Corps responsible for historic and cultural mitigation costs

Bypass & Restore – LPP:

- Non-Fed Responsible for all costs over the NED plan
- Corps responsible for mitigation costs and construction costs up to NED costs.

Bypass & Restore – FFP:

- Non Fed responsible for LERRDs including modifications to VSB
- Corps responsible for all other constructions costs
- Congressional direction needed.

Virginia Street Bridge (VSB) Alternatives

- **Replacement – NED:** Remove existing bridge and replace with a clear span type.
- **Bypass & Restore – LPP:** Construct a bypass channel around both abutments. Strengthen abutments, Modify approaches. Cost shared per Corps Policy.
- **Bypass & Restore – FFP:** Same as Bypass & Restore but cost shared at Full Federal Participation (65% Fed-35% non-Fed)

Virginia Street Bridge Alternatives

Alternative	Federal Cost	Non-Federal Cost	* NDOT / FHWA	Total
Replacement	$5.1 M	$15.2 M	$5.0M	$25.3 M
Bypass & Modify - LPP	$11.0 M	$24.4 M	$5.0M	$40.4 M
Bypass & Modify – FFP	$22.1 M	$13.3 M	$5.0M	$40.4 M

NDOT Mitigation costs for Center Street Bridge are not included in this estimate

Downtown Reno Alternatives

- **Replacement (NED):** Remove and replace three existing bridges and replace with a clear span type. (40-50 year Level of Protection)

- **Replacement (FFP):** Same as above but with the floodwalls to provide 100-year Level of Protection. Costs shared as Full Federal participation (65% Fed 35% non-Fed)

- **Bypass & Restore –LPP:** Construct bypass at VSB, restore VSB, replace two bridges and Floodwalls. Non-Fed responsible for all costs over the Corps Policy Complaint Plan (NED)

- **Bypass & Restore – FFP:** Same as Bypass & restore VSB but cost shared as Full Federal Participation (65% Fed-35% non-Fed). **Congressional direction needed**

Downtown Reno Alternatives

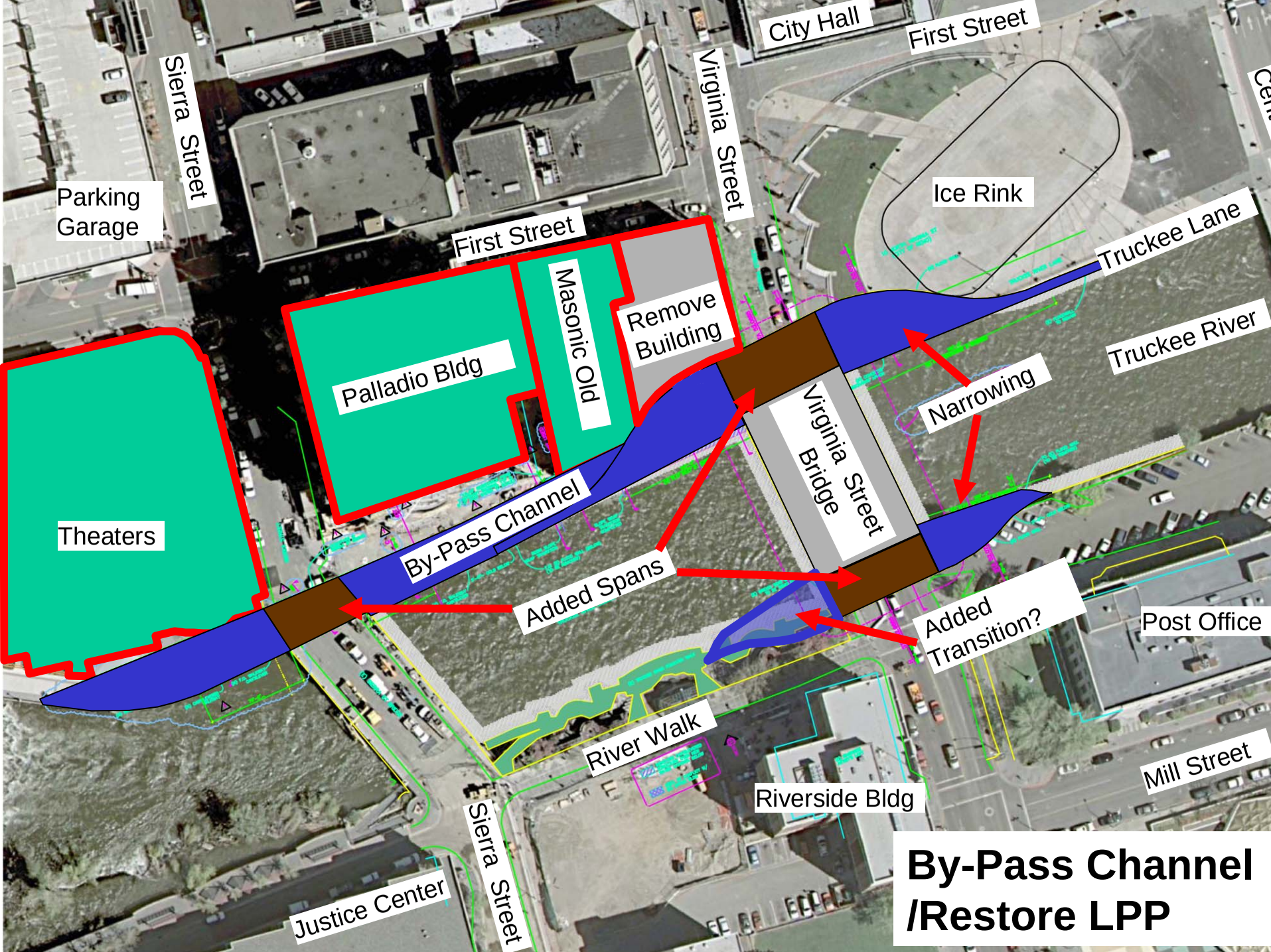
Alternative	Federal Cost	Non-Federal Cost	* NDOT / FHWA	Total
Replacement (NED)	$9.7 M	$41.5 M	$5.0M	$56.2 M
Replacement (100yr) FFP	$88.3 M	$54.4 M	$5.0M	$147.7 M
Bypass (100yr) LPP	$9.7 M	$150.8 M	$5.0M	$165.5 M
Bypass (100yr) FFP	$104.3 M	$56.2 M	$5.0M	$165.5 M

1. ***** NDOT Mitigation costs for Center Street Bridge are not included in this estimate.
2. ***** If the Virginia Street Bridge is replaced NDOT is still responsible to complete the mitigation for the Center Street Bridge

Questions

Summary

- FPCC has determined to Bypass & Restore Virginia Street Bridge if feasible.
- Cost to Washoe County and partners depend how the project is authorized.
- Determining the feasibility of the Bypass & Modify Option is an on-going process.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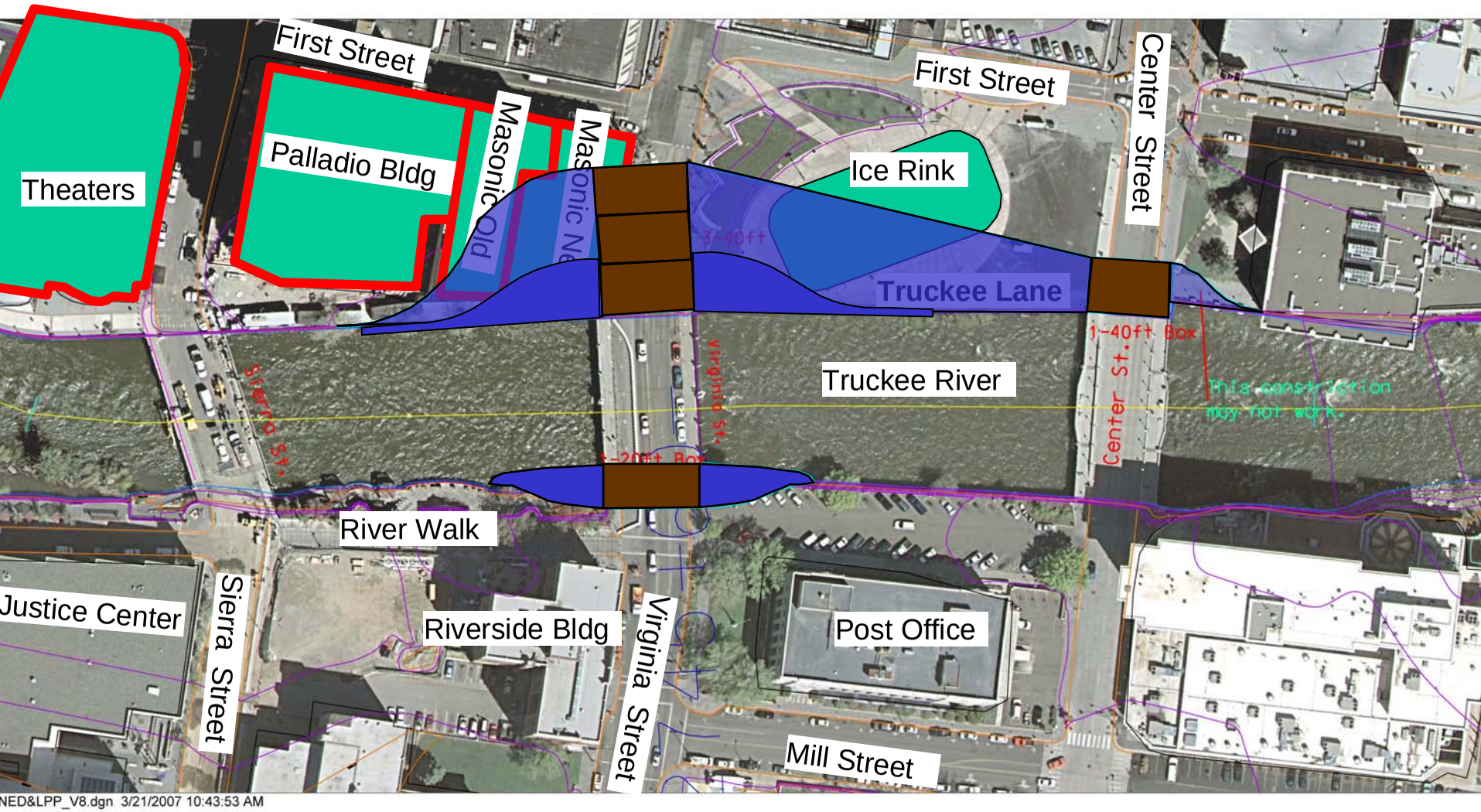
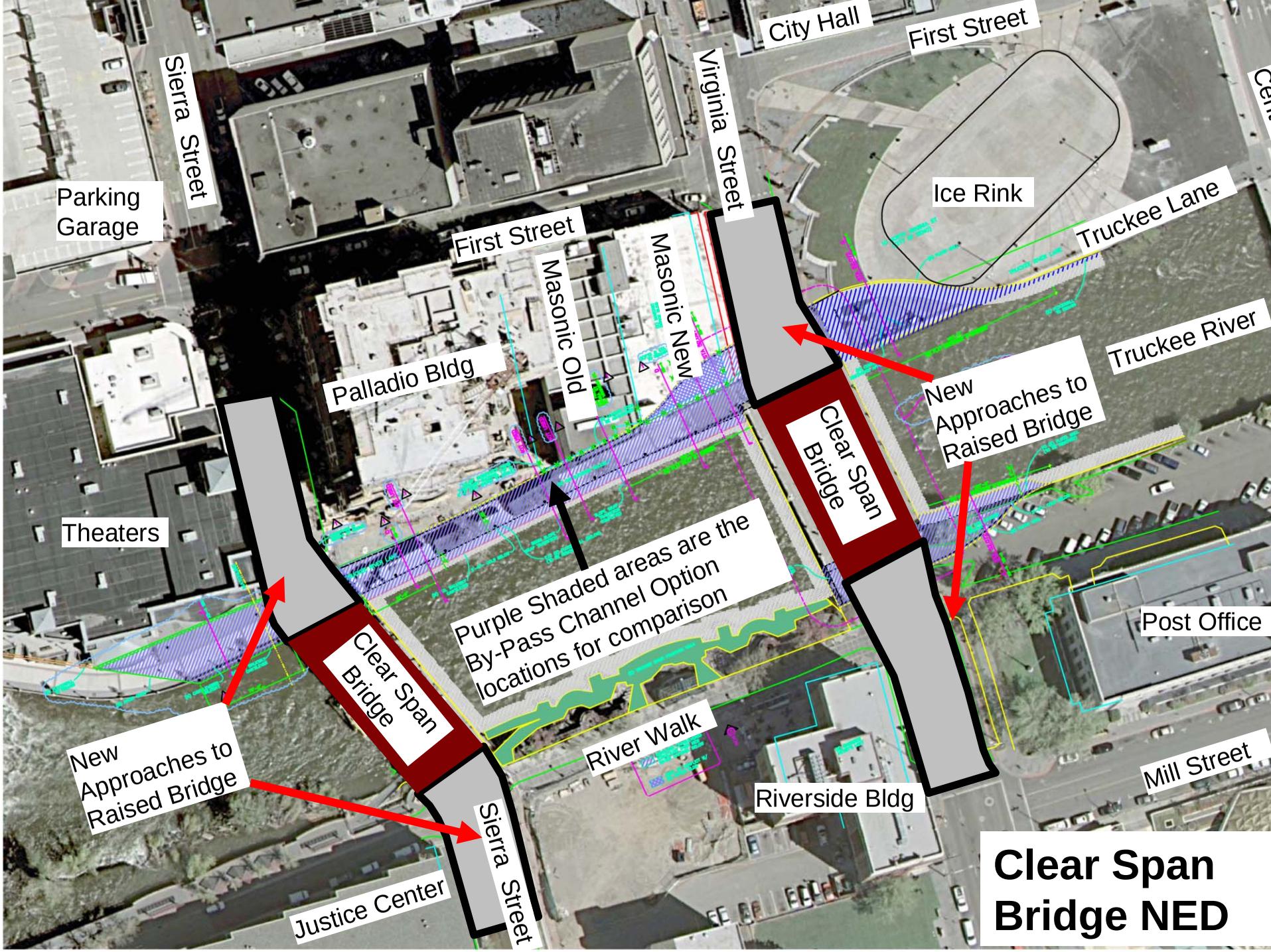


This option was modeled by the Corps after the 3-16-07 FPCC meeting.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US Army Corps
of Engineers

Downtown Reno Alternatives

Truckee River Flood
Management Project

FPCC Meeting
Virginia Street Bridge Workshop
March 16, 2007

STAFF REPORT

Agenda Item: **J.5**

To: Mayor and City Council Date: **3-28-2007**

Thru: Charles McNeely, City Manager

Subject:
Staff Report: Discussion of the March 16, 2007 Public Workshop by the Army Corps of Engineers and Truckee River Flood Project staff regarding Rehabilitation and Replacement Options for the Virginia Street Bridge and potential direction to staff.

From: Neil Mann, Public Works Director

Summary: A public meeting was held by the Truckee River Flood Project Coordinating Committee (FPCC) on Friday March 16th regarding options pertaining to the improvement of flood conveyance at the Virginia Street Bridge (hereafter "bridge or "VSB"). These options are with respect to the Truckee River Flood Project's Locally Preferred Plan. The Army Corps' Civil Works Division (COE) and Truckee River Flood Project staff made a presentation on flood control options including rehabilitation of the VSB with construction of bypass channels, or the replacement of VSB with clear span or other locally preferred bridge-type alternative. This staff report will accompany a verbal report presentation at the City Council meeting, additional information from supporting consultants, and relay staff concerns regarding the alternatives.

Previous Council Action: February 28, 2007: Early Action Truckee River Flood Project Alternatives: Virginia Street Bridge "visioning process" was discussed and other downtown flood project priorities were selected for further evaluation.

Background: The VSB is on the National Register of Historic Places. VSB is owned by the City of Reno and is considered an integral component of the region's Truckee River Flood Project. In 1997, downtown Reno suffered a devastating flood. Other significant floods in recent history include: 1950, 1963, 1986, and 2005. In these events, VSB has proved an impediment to flood flows in that its shape does not allow full river channel conveyance. Floodwater backs up behind the VSB until the waters are pushed under, over, and around the bridge, creating flood damage to adjacent properties. The accumulation of debris on the center pier compounds this issue and decreases the bridge's ability to pass flood waters.

As a part of the process to replace the Center Street Bridge over the Truckee River in 1996-97 (the previous bridge was also considered a historic structure), the Federal Highway Administration (FHWA) entered into a Memorandum of Understanding with the State Historic Preservation Office (SHPO) providing for the VSB to be rehabilitated. The City of Reno is signatory to the 1996 FHWA/SHPO Memorandum of Understanding as a concurring party. The Memorandum of Understanding includes a stipulation which would allow FHWA to change the form and style of the VSB (Stipulation 3). The FHWA, through NDOT, partially funded the replacement of the Center Street Bridge. It is reported that NDOT has anticipated $5 million toward VSB rehabilitation in their long-term financial plan.

While some parties feel that the Virginia Street Bridge should be rehabilitated and improved for flood capacity, others believe that replacement is the preferred option to provide optimum flood relief. Staff is

working with a bridge consultant and landscape architect to evaluate the costs and impacts of both alternatives as presented by the COE on March 16, 2007. Cost estimates are being evaluated by this team and sketches are being prepared to provide a "look and feel" analysis of each alternative under consideration which will be presented at the March 28, 2007 City Council meeting.

Discussion: A critical path item in the COE's feasibility planning for the Truckee River Flood Project has been reached. To ensure no additional delays that would cause cost increases to the overall project, the COE requires input from the community as to its preference regarding the VSB: Does the community prefer rehabilitation with bypass channels or replacement? The COE and Flood Project staff reintroduced these options to the public at the March 16, 2007 public meeting. Implications of the options such as cost, impacts to adjacent structures, need for right-of-way, schedule, and ability of each option to address flood conveyance were discussed at the meeting. The locally preferred flood protection plan (LPP) adopted in March 2006 includes the plan to restore the VSB, if feasible. The COE, at the March 16th, 2007 public meeting, raised some serious concerns whether the rehabilitation option, which includes the bypass channels, can serve as a viable flood control alternative. Public Works staff attended this meeting and has identified several areas of concern with the VSB restoration and bypass channel proposal. These concerns have been developed by Public Works staff assigned to the Flood Project and those that have responded to flood events in the past. The concerns are described below.

Existing VSB Flood Conveyance: During a high water event, the Truckee River accumulates forest and urban debris which are carried with flood water, including trees, limbs, and lumber. This type of debris can become lodged against the upstream face and pier of the VSB. An accumulation of debris can artificially raise flood levels, sometimes considerably. The City's ability to remove debris from floodwater is discontinued for safety reasons when the river begins to approach the VSB deck because it can be overtopped by floodwater. Once water begins flowing over the bridge deck, staff has no safe ability to continue addressing debris accumulation.

The second area of concern is the arched design of the bridge. The two arches meet in the middle of the river forming a pier, and create a waterway obstruction that can induce pier and foundation scour. This was the case in the event of late 2005 and an emergency repair to the bridge foundation was completed in 2006.

There is a number of downtown buildings, including Reno City Hall, that can be impacted by Truckee River flood flows due to their proximity to the river and flood flow back-up caused by the VSB. Some of these buildings contain historic value to the community. When flood flows occur, there can be a significant amount of business, commerce, visitor activities, recreation and governmental operations that are impacted and can be interrupted due to high water events.

VSB Bypass Channel Implications: The existing VSB conveys about a 40-year Truckee River flood event with typical clearance standards. In order to convey the desired 100-year flood flows for downtown Reno protection, and yet still preserve its historic integrity, the COE has proposed to construct bypass channels around the bridge.

The bypass channel design proposes atypical geometry that must be physically modeled to determine its capability of conveying flood flows. Normally, a computer model can predict flood flow implications of typical configurations. Due to the configuration of the bypass channel, the COE holds that computer modeling is not capable of analysis for this complex situation and will require that a formal scale model be built and tested in a laboratory. NDOT, as administrator for FHWA funds, will require that a scale model be constructed and tested to prove that the proposal will work.

The COE disclosed at the March 16, 2007 meeting that certain critical parameters had been omitted in the previous computer flow models for the bypass channel. The COE stated that the computer modeling was done under pressure flow conditions and without debris accumulation. Pressure flow is an undesirable and unpredictable situation, but all the more so when debris is added as can be expected in real conditions. In fact, when the COE added debris to its model, the bypass channel did not pass 100 year flood flow conditions; the water surface elevation exceeded the height of the bridge railing by several feet and flood flows would exit the river channel into the downtown area.

COE staff expressed doubt that the bypass channel can be manipulated to a degree that will alleviate flooding to the required 100-year flood protection levels without radical changes to the design. This would understandably cause additional impacts to properties or utility conflicts that staff cannot at this time predict.

Since the bypass channel proposal is conceptual, the physical dimensions of the bypass channels should be considered estimates. The channel could get wider and transition zones to/from the existing channel could become longer. The north bypass channel extends from near the edge of the ice rink configuration on the 10 N. Virginia Plaza and extends upstream to Wingfield Park. The public and private investments that this channel segment will directly impact include:

The Truckee River Lane
The Century Theater (access and entryway)
The Masonic Building
The Masonic Building Addition
The 10 N. Virginia Plaza
The Ice Rink on the River including subsurface infrastructure
Footings for the Plaza Canopy
Fiber Optic Communication Cables
Stormwater Infrastructure
Water Quality Infrastructure
Buried wet and dry utilities
Future river walkway linkages under the VSB

The south side bypass channel extends up and down stream of the Virginia Street Bridge. The public and private investments that this channel segment will directly impact include:

The Riverwalk Improvements
The Post Office Parking Lot
Buried wet and dry utilities
Future Post Office River Access Project
Future river walkway linkages under the VSB

Should the dimensions of the bypass channel need to be expanded to address 100-year flood protection and debris affected flows, there will be further impact to existing public and private investments, especially for the Riverwalk, the Post Office site, private buildings on the north side and upstream of Virginia Street, the 10 N. Virginia Redevelopment building site, etc. In addition, there would be impacts to properties during construction activities.

The bypass channel concept would retain the existing VSB which presents debris management issues previously discussed. The debris issue would increase due to the replacement of the Truckee River Lane with a cantilevered walkway section over the north side bypass channel. This would be supported with new piers into the waterway. These piers create more locations for debris collection and in areas that

would be difficult to address during high water events. Staff understands that the bypass channel structures will be designed to withstand vehicular traffic for maintenance and emergency access along the river.

Since the bypass channel must be physically modeled to determine its effectiveness, this activity is not scheduled until after Congressional authorization in 2008. Additional project funding would be used to construct the model and have it tested under laboratory conditions. Should the bypass channel prove to be ineffective for flood relief, an alternative approach will need to be developed which adds more time to the schedule, especially if it means the existing VSB cannot feasibly be restored and function under flood conditions. Staff estimates the timeframe from initial bypass channel modeling through evaluating other alternatives, if necessary, could consume about 24+ months before a bridge solution can decided upon for future design and construction. Delays in schedule will cause project costs to increase by an estimated 4-6% a year.

Financial Implications: Initial work recently released by the COE indicates a new VSB will cost around $20 million while the VSB rehabilitation option will cost around $40 million. While the numeric difference is an increase of $20 million, staff is reviewing the adequacy of the cost estimates with regard to property impacts, relocation and mitigation of the private buildings and public investments that could ultimately be impacted. Although the rehabilitation option will include floodwalls, these costs do not include floodwalls. The local project costs will be dependent on the final selection of an alternative and how the federal project is authorized by Congress. Local project costs are expected to be met by regional funding strategies and sources of the Truckee River Flood Project.

Recommendation: The purpose of this report is to share information regarding the options to improve flood conveyance through the Virginia Street Bridge. Staff has anticipated a process to include an informational report on March 28, 2007, and then request direction on a preferred VSB alternative at the subsequent April 11, 2007 City Council meeting. This preference would then be communicated to the FPCC which is scheduled to meet on April 13, 2007. Should City Council feel prepared to provide a recommended VSB preference on March 28, 2007, an alternative to the motion listed below would be appropriate for consideration.

Proposed Motion: I move to accept the staff report.

ATTACHMENT I-7

Flood Project Coordinating Committee Meeting Minutes
April 13, 2007

Flood Project Coordinating Committee

MINUTES
Friday – April 13, 2007 – 8:30 a.m.
Washoe County Commission Chambers, 1st Floor of Building A
1001 East Ninth Street, Reno, Nevada

1. CALL TO ORDER AND ROLL CALL – *Determination of a Quorum*

Chair Sferrazza called the meeting to order at 8:30 a.m. A quorum was established.

VOTING MEMBERS PRESENT:	Dan Gustin, David Humke, Bob Larkin, Geno Martini, Jessica Sferrazza and Ron Smith.
VOTING MEMBERS EXCUSED:	Robert Dickens and Milton Glick.
VOTING ALTERNATES PRESENT:	None.
VOTING ALTERNATES EXCUSED:	Dave Aiazzi, Mike Carrigan and Pete Sferrazza. One vacant.
NON-VOTING MEMBERS PRESENT:	Franco Crivelli, John Jackson, Neil Mann, Dennis Miller, John Sherman and Katy Singlaub. Dean Schultz joined the meeting at 8:36 a.m. Shaun Carey joined the meeting at 8:39 a.m.
NON-VOTING MEMBERS EXCUSED:	Andrew Green, Elisa Maser, Charles McNeely, Rosemary Menard, Tom Minton and Wayne Seidel.
NON-VOTING ALTERNATES PRESENT:	JoAnn Meacham and Jeanne Ruefer. Connie Butts joined the meeting at 10:31 a.m.
NON-VOTING ALTERNATES EXCUSED:	David Childs, Dennis Ghiglieri and Mary Hill.
FLOOD PROJECT STAFF PRESENT:	Naomi Duerr, Mimi Fujii-Strickler, Betsy Mellinger, Ronda Moore, Jan Platt and Pete Simeoni.
FLOOD PROJECT STAFF EXCUSED:	Paul Urban.

2. APPROVAL OF AGENDA

It was moved by Member Larkin, seconded by Member Martini, to approve the April 13, 2007, agenda, as written.

Dean Schultz joined the meeting at 8:36 a.m.

3. APPROVAL OF MINUTES – *FPCC (Flood Project Coordinating Committee) meeting of March 16, 2007 and Special FPCC Meeting of March 20, 2007.*

It was moved by Member Larkin, seconded by Member Humke, to approve the March 16 and March 20, 2007, meeting minutes, as submitted. The motion carried: Members Humke, Larkin, Martini, Smith and Chair Sferrazza assenting; Member Gustin abstaining; and Members Dickens and Glick excused.

4. ANNOUNCEMENTS *

Naomi Duerr – Flood Project Director, introduced Mimi Fujii-Strickler – Flood Project Outreach Manager noting that her duties will include oversight of the FPWG (Flood Project Working Group), TAC (Technical Advisory Committee) and other Outreach programs. Ms. Duerr explained that Ms. Fujii-Strickler has fourteen (14) years experience in flood plain management as well as several years experience in community relations. Ms. Duerr invited members to the special April 18, 2007, meeting with Colonel Ron Light and possible tour of restoration sites along the Truckee River. Ms. Duerr asked that individuals interested in participating in the breakfast meeting and tour make their reservation with Flood Project staff. Ms. Duerr will invite all Reno, Sparks and Washoe County elected officials of the upcoming meeting and tour.

5. PUBLIC COMMENT *

Chair Sferrazza commented that Mr. Clark was at the Nevada Legislature and would be unable to attend to make his monthly update on Bristlecone today (April 13, 2007).

Naomi Duerr – Flood Project Director, noted that escrow has closed on the Catholic Church property and that Bristlecone was now a tenant of the Flood Project.

6. UPDATE ON PROPOSED AMENDMENTS TO FLOOD PROJECT COOPERATIVE AGREEMENT – *Possible action to accept report and provide direction to staff on further development or amendment to the Flood Project Cooperative Agreement.*

Ronda Moore – Flood Project Deputy Director, recalled the March 16, 2007, draft amendments to the Cooperative Agreement that the FPCC had adopted: 1) To add one elected official from Storey County as an FPCC voting member; 2) to modify University of Nevada, Reno status on the FPCC from voting to non-voting; and 3) to modify the voting procedure from unanimous consensus to a 66-percent majority vote. Ms. Moore noted that the Storey County Commission had delayed action on the Cooperative Agreement pending additional information on their funding responsibilities and further understandings of Flood project construction in Storey County, among other matters.

Shaun Carey joined the meeting at 8:39 a.m.

Dennis Miller – representing Storey County noted that Commissioner Bob Kershaw was unable to attend today's (April 13, 2007) meeting and that the Storey County Commission hopes to make their final decision at their May 2007 meeting.

Ms. Moore noted that the cooperative agreement could not be placed on the Sparks City Council April 9th agenda and would likely be placed on the May 7th agenda.

Ms. Moore noted that the City of Reno had reviewed the recommendations and took action to approve the agreement with certain modifications on April 11th, including: 1) a simple majority voting structure; and 2) not adding Storey County as a voting member until their funding mechanism is

identified. The BCC (Board of County Commissioners) approved the FPCC's recommended amendments in their entirety.

Naomi Duerr noted that the Board of County Commissioners voted to add Storey County, change the voting status of UNR to non-voting and go with the 66% majority, as the FPCC had directed.

Chair Sferrazza emphasized that the Reno City Council has asked that funding sources be identified before adding Storey County as a voting member and that the simple majority vote seems appropriate since local jurisdictions typically take action using a simple majority vote.

Ms. Moore noted that the existing Cooperative Agreement would remain in place and unchanged until all the jurisdictions approve a modified agreement.

Washoe County Manager Katy Singlaub noted that the BCC had taken action already and only if a Commissioner who voted on the prevailing side requested reconsideration of the Cooperative Agreement would the BCC consider changing from the supermajority voting structure.

Sparks City Manager Shaun Carey suggested that the matter be brought to the joint meeting of the three bodies on May 7, 2007, to better understand the underlying reason for the BCC's desire for a supermajority voting structure.

Chair Sferrazza concurred with Mr. Carey.

Member Larkin noted that the May 7, 2007, agenda was rather full but would consider adding the matter to the agenda.

Pete Simeoni – Deputy District Attorney, explained that until such time as all parties sign a modified agreement, the existing agreement remains in effect as written.

Commissioner Larkin stated it was the FPCC that unanimously accepted the 66% supermajority and recommended it to the other jurisdictions, and it was therefore the burden of the FPCC to justify the 66% supermajority, not the County Commissioners'.

There was additional discussion about the 66-percent voting requirement and the need to find a compromise position. It was noted during the discussion that it was incumbent upon the FPCC (Flood Project Coordinating Committee) to justify the 66-percent requirement. Other discussion pointed out that the BCC had taken appropriate action in accepting the FPCC's recommendations regarding amendment of the Cooperative Agreement.

Peter Simeoni stated that he would take a look at the FPCC's Bylaws to see if there is any language as to motions for reconsideration of items already voted on to see if they could be brought back before the FPCC.
There was discussion that the FPCC could not reconsider the voting structure because it was not on today's agenda and staff was directed to bring the issue to the next FPCC meeting.

It was moved by Member Larkin, seconded by Member Humke, to accept the report as presented. The motion carried: Members Humke, Gustin, Larkin, Martini, Smith and Chair Sferrazza assenting; and Members Dickens and Glick excused.

7. VIRGINIA STREET BRIDGE – *Presentation of factors affecting feasibility of rehabilitating and bypassing Virginia Street Bridge. Possible action to amend the Locally Preferred Plan (LPP) to include replacement of the Virginia Street Bridge rather than rehabilitation and bypass.*

Naomi Duerr, Flood Project Director, recapped the presentation and discussion of the March 16, 2007, workshop and subsequent presentation to the Reno City Council on March 28, 2007, concerning the Virginia Street Bridge. Ms. Duerr outlined the actions taken by the FPCC in March 2006 as it pertains to the LPP (Locally Preferred Plan) and restoration, if feasible, of the Virginia Street Bridge. Drawing attention to the 1996 MOA (Memorandum of Agreement) to rehabilitate the Virginia Street Bridge in exchange for the demolition and replacement of the Center Street Bridge, Ms. Duerr noted that the Reno City Council had directed City staff to open a dialogue with the signers of the 1996 agreement, which consisted of NDOT (Nevada Department of Transportation), FHWA (Federal Highways Administration), SHPO (State Historic Preservation Office), City of Reno and the Advisory Council on Historic Preservation. Ms. Duerr outlined the NED (National Economic Development) and LPP Plan options as well as federal funding levels. The NED provides 50 year protection in the downtown reach and the LPP provides 100 year protection. Ms. Duerr emphasized that without the Virginia Street Bridge, there was no project for the downtown reach of the overall project based on the benefit cost calculations, thus resulting in continued flooding if the bridge were taken out of the flood project. The Army Corps of Engineers has stated that if the replacement of the Virginia is not part of the project, then we do not have a project in downtown.

Member Larkin left the meeting at 9:11 a.m.

Ms. Duerr outlined the effects of the Ferrari-Shields bypass option as well as the modified option that increased the length and width of the bypass channel thus causing significant encroachment into the Ten North Virginia Street Plaza, demolition of all or part of the Masonic Temple, loss of setback from the river for the newly constructed Palladio project as well as detrimental effects on the Riverside 12 Theatre Complex. Ms. Duerr noted that the Corps (U. S. Army Corps of Engineers) does not believe the original bypass option will pass the flood flow, as the modeling for that proposal had not included debris typically associated with flooding. Additionally, the added bypass width would need to be physically modeled to assure that the design would function as intended.

Member Larkin rejoined the meeting at 9:13 a.m.

Ms. Duerr then outlined the issue associated with bridge replacement including the ramp heights to achieve the clearance needed above the river, as well as full replacement cost paid by the local sponsors. Responding to Member Larkin's inquiry about the final design selection, Ms. Duerr explained that the City of Reno would have the final decision on the bridge design and that the Corps would typically choose the typical highway bridge design over a more aesthetically pleasing and appropriate structure. Ms. Duerr noted that the three bridge replacement option, including flood walls, would cost approximately $147-million to provide the 100-year level of protection. Ms. Duerr then summarized the timeline associated with each of the alternatives and levels of federal funding,

pointing out that each of the estimates shown in the matrix included the $5-million for mitigation of the Center Street Bridge replacement.

Discussion focused on the cost/benefit ratios with the replacement of the three (3) bridges (Lake, Sierra and Virginia Streets) and the potential replacement of newer Center Street Bridge. As the discussion continued, it was noted that the downtown portion of the overall project might be lost if a consensus is not reached to resolve the issues of the MOA and Virginia Street Bridge replacement versus restoration.

Member Gustin commented that while the Reno City Council had agreed to the replacement, he believes that the restoration option is still under consideration. Drawing attention to the MOA and potential legal challenge, Mr. Gustin noted that the City Council had voted to replace the bridge to protect downtown.

Ms. Duerr concurred and outlined the numerous processes that must occur before a final decision is rendered.

Member Gustin commented that perhaps it was premature to amend the LPP due to other decisions that may affect the final outcome.

Member Larkin noted that the Corps is seeking a decision from the FPCC on the LPP to avoid a dilution of resources if they are required to look at several options instead of one.

It was moved by Member Larkin, seconded by Member Martini, to accept the report and include the replacement of the Virginia Street Bridge, including flood walls with a clear span bridge, in the Locally Preferred Plan (LPP).

Member Gustin commented that, in his opinion, it was not the FPCC that would delay the project but rather one of the five signators of the MOA.

JoAnn Meacham – City of Sparks, noted that asking the Corps to analyze two separate options would affect the project's timeline.

Member Larkin noted that the FPCC from this point forward would be required to make more difficult decisions to move the project forward.

Chair Sferrazza commented that Member Gustin is right in his concern about the signators to the MOA and that it is critical that preservationists work with the FPCC and City to design a bridge that reflects the historic character of the City while providing needed flood control. Chair Sferrazza stated she would support the motion.

Responding to Member Gustin's inquiry about the bypass option, Ms. Duerr explained that the Corps analysis of the original bypass option showed water five (5) feet above the road deck, which would continue to flood downtown Reno. Additional analysis using a wider channel and bypass option may work but would require acquisition of more land, demolition of buildings and interfere with existing businesses and features, like the river walk, as well as the construction of a physical model. Ms. Duerr emphasized that flood water must be a minimum of two (2) feet below the arch.

Member Gustin noted his reluctance to support the motion and concern about harming the project. Mr. Gustin disclosed that a family member is a member of the National Trust for the State of Nevada who would vote on the issue.

Pete Simeoni – Deputy District Attorney, commented that he had not reviewed the MOA.

The meeting recessed at 9:56 a.m. and reconvened at 10:02 a.m. A quorum was present: Members Dickens, Humke and Glick excused.

Chair Sferrazza summarized the motion before the board.

Member Gustin explained that he would abstain from this particular vote as he could not participate in the decision due to other influences.

Katy Singlaub rejoined the meeting at 10:04 a.m.

Neal Mann – Reno Public Works Director, commented that the City had sent letters to the five signators of the MOA as directed by the City Council on March 28, 2007.

Member Humke rejoined the meeting at 10:06 a.m.

Mr. Mann noted that the reopening of the discussion on the MOA was due to a change in conditions since the signing of the MOA in 1996. Mr. Mann noted that clear span bridges would replace existing bridges at Lake and Sierra Streets and that the Center Street bridge may also need to be addressed.

The motion carried: Members Humke, Larkin, Martini, Smith and Chair Sferrazza assenting; Member Gustin abstaining; and Members Dickens and Glick excused.

8. RENO-SPARKS INDIAN COLONY TRAction PROJECT – *Presentation of a proposed TRAction project to construct a portion of the flood project levee from US 395 to Glendale Avenue. Recommendation to conceptually approve a TRAction award to the Reno-Sparks Indian Colony, authorize staff to develop an agreement between Washoe County and the Colony in an amount not to exceed $2-Million, and authorize the Washoe County Board of County Commissioners to enter into the agreement.*

Naomi Duerr, Flood Project Director, commented that the proposed TRAction project is within the footprint of the NED (National Economic Development) and LPP (Locally Preferred Plan) documents and that the project proponents have been asked to present their request to the FPCC (Flood Project Coordinating Committee).

Doug Gardipe – Vice-chair RSIC (Reno Sparks Indian Colony), commented that, in his opinion, the proposed project would be a win-win for both the Truckee River Flood Project as well as the ±1,100 residents of RSIC. Mr. Gardipe concurred with the staff report and recommendations.

Scott Nebesky – Planning Director, pointed out the location of the proposed project and recalled the land swap with the State of Nevada under AB299. Mr. Nebesky outlined the components and design of the proposed levee and flood wall and the use of a 5:1 slope to soften the height of the flood wall that will protect the future Wal-Mart site. It is hoped that this particular project will encourage others to extend the protection toward Grand Sierra Resort. Mr. Nebesky noted that the project would have no known effect on the downstream areas.

Steve Moran – Business Director, outlined the known benefits of the project and outlined the existing funding streams. Drawing attention to the continued escalation in construction costs and additional expense associated with a 117-year level of protection, Mr. Moran outlined the $1.75-million request. Responding to Member Smith's concerns about the Wal-Mart contribution, Mr. Moran stated that the Colony has a lot of time and money invested into the project and he but feels the deal is fair. However, it is anticipated that the State of Nevada and Washoe County School District will receive about one-third of the state sales tax collected, the other two-thirds would go to the Reno Sparks Indian Colony and be used to provide government services, such as the new health center that has been built. With respect to personal property Tax, he noted that Wal-Mart is a non-tribal tenant and the Tribe will assist the assessor in coming on to the Colony's land to assess personal property tax and the value of the improvements, which would turn that over to Washoe County. Mr. Moran emphasized that this is a "fair rent" lease agreement with Wal-Mart and that the amount requested represents a genuine escalation in project costs.

Connie Butts joined the meeting at 10:31 a.m.

In response to questions from Member Martini, Mr. Moran explained that RSIC has not identified federal funding for the project and congress had not been asked for an appropriation. Under the terms of the agreement with Wal-Mart, revenue projections and lease terms could not be disclosed. Remaining sales tax would fund ongoing police, fire and other infrastructure costs as well as the RSIC Health Center. There was discussion about the project's design. It was noted that the project proposal would have minimal downstream impact. Other discussion noted that Flood Project staff had discussed the use of levees along the Sparks Industrial area and that the Corps (U. S. Army Corps of Engineers) had reviewed the design, which they found consistent wit the character of the overall Truckee River Flood Project.

Ms. Duerr then explained that the $1.75-million contribution could be leveraged to ±$10-million in project credit. Ms. Duerr outlined the various funding level scenarios the FPCC could use should they decide to fund the project, noting that the ambitious construction schedule would result in a flood project feature being completed in late 2007 that would provide significant flood protection for a large area. Ms. Duerr summarized the costs savings realized by funding the TRAction project.

Mr. Nebesky reiterated the proposed construction timeline once funding is approved. It was confirmed that construction of the project would occur before Wal-Mart's construction started. Mr. Nebesky also stated that the Colony would participate in a flood funding district like any other landowner, and not seek to be exempt based on its status as a sovereign nation. He also stated that the Colony was already talking to flood project staff about how they would participate in ongoing maintenance.

There was some discussion about requiring the use of local contractors for the project. It was noted that such a provision might affect the overall project's funding and credits. Therefore, it is crucial that all federal regulations be followed to assure proper credit and/or reimbursement.

Tim Kelleher – Corps, commented that final credits are accounted for during the final project audit at the end of project.

It was moved by Member Larkin, seconded by Member Gustin, to recommend that the Board of County Commissioners approve the funding for the construction of a levee and flood wall on property located along the south side of the Truckee River, in an amount not to exceed $1.72-million or fifty-percent of the land value and construction costs, whichever is less, to direct staff to enter into a TRAction agreement with the Reno Sparks Indian Colony, that a flood maintenance district be considered, and that a member of the Truckee River Flood Project team appointed by the Flood Project Director (Naomi Duerr) would participate in the activities of the project's management team.

Member Martini stated that he would support the motion based on the overall benefits to the Truckee River Flood Project. Mr. Martini emphasized that this is not a "gift" to the FPCC from the Colony.

Member Humke noted that this would be the first visible component of the project and it would protect the wider community as well.

Mr. Nebesky stated that RSIC would not, in his opinion, seek an exemption from any future flood funding district based on its status as a sovereign nation, but would be like any other property owner in the district.

Member Larkin expressed his support for the motion and pointed out that other TRAction project applicants should not expect a similar result, as each proposal will be judged solely on its merits.

Member Gustin noted the project would protect Renown Medical Center from flooding and they were very glad it was being constructed and the Colony's contributions would benefit the whole community.

Chair Sferrazza agreed and noted the leverage of project funding and the first visible flood project component that, in her opinion, will demonstrate to the community that the flood project is moving forward and creating good partnerships.

The motion carried: Members Humke, Gustin, Larkin, Martini, Smith and Chair Sferrazza assenting; and Members Dickens and Glick excused.

Dean Schultz suggested that an extension of the project to the Grand Sierra Resort be discussed at a future meeting.

Ms. Duerr commented that the City of Reno was considering the extension of the proposed project with additional levees and it would be brought to the FPCC at a future meeting.

Member Martini left the meeting at 11:16 a.m.

9. UPDATE ON PROPOSED INTERLOCAL AGREEMENT FOR PROJECT FUNDING – *Possible action to accept report and provide direction to staff on further development of the interlocal funding agreement.*

Naomi Duerr – Flood Project Director, commented that the legal and finance staff for the three jurisdictions have listed the basic principles guiding development of the interlocal, which would be presented to each of the local jurisdictions for their input and approval. The team would continue to move forward on finalizing the interlocal and would then bring it to the FPCC when they finished or when there was another decision point they needed input from the FPCC on.

10. UPDATE ON FPCC LEGAL COUNSEL – *Possible action to accept report.*

Pete Simeoni - Deputy District Attorney, explained that District Attorney Dick Gammick had determined that as the FPCC was an agency of Washoe County that outside legal counsel could only be used under specific circumstances and that the Washoe County District Attorney would continue to provide legal staff as needed.

Member Martini rejoined the meeting at 11:19 a.m.

Chair Sferrazza turned the meeting gavel to Vice-chair Larkin at 11:19 a.m. and left the meeting.

11. OVERVIEW OF FLOOD PROJECT ORGANIZATION CHART – *Presentation on current organizational chart for Truckee River Flood Management Department. Possible action to accept report and provide direction to staff to retain or amend organizational chart.*

Naomi Duerr – Flood Project Director, provided an overview of the organizational chart noting that the chart includes various consultants to show there are many other professionals involved in doing the work needed for the flood project. It is Ms. Duerr's belief that there are sufficient resources to properly manage the project and she compared the staff size used by the City of Reno for Project ReTRAC (Reno Transportation Rail Access Corridor), noting that the flood project's staff was much smaller than ReTRAC's, even though the ReTRAC project was only about one-third the size of the overall Truckee River Flood Management Project.

12. WORKING GROUP MONTHLY REPORT – *Report on Working Group meeting of March 28, 2007. Possible action to accept report and provide direction to the Working Group on items as presented in the report.*

It was moved by Member Gustin, seconded by Member Smith, to accept the report as presented. The motion carried: Members Humke, Gustin, Martini, Smith and Vice-chair Larkin assenting; Members Dickens, Glick and Chair Sferrazza excused.

13. FLOOD PROJECT MONTHLY REPORTS

13-A. MONTHLY ACTIVITIES REPORT – *1). Staff Activities; 2). TAC (Technical Advisory Committee) Meetings; and 3). Clippings;*

13-B. FINANCIAL REPORT – *B-1. Month of March 2007 transactions; and B-2. Fiscal year to date transactions (July 2006 through March 2007);* and

13-C. PROJECT TIMELINE – *Possible action to accept reports and provide direction regarding project scheduling and funding items as set forth in the reports.*

Naomi Duerr - Flood Project Director, provided an overview of the staff activities and TAC (Technical Advisory Committee) meetings. Ms. Duerr then drew attention to the press clippings appended to the report and asked whether staff should continue to include that information as part of the monthly update.
Dennis Miller left the meeting at 11:26 a.m.

A consensus was reached to continue adding press clippings to the monthly update report.

Ms. Duerr noted that staff had met with the Corps (U. S. Army Corps of Engineers) on the schedule and recalled the special meeting held on March 20, 2007, to approve the funding of an external peer review. Ms. Duerr explained that the Corps continues to seek similar opportunities to seek the FPCC's assistance in order to reduce the project's timeline.

It was moved by Member Humke, seconded by Member Smith, to accept the report as presented. The motion carried: Members Humke, Gustin, Martini, Smith and Vice-chair Larkin assenting; Members Dickens, Glick and Chair Sferrazza excused.

14. ARMY CORPS OF ENGINEER'S MONTHLY REPORT – *Report on activities related to the Truckee River Flood Management Project including project scheduling and funding. Possible action to accept the report and provide direction to staff related to Truckee River Flood Management Project scheduling and funding items as set forth in the report.*

Frank Piccola - Chief of the Planning Division, commented that he had accepted the Chief's position in January 2007 and explained that staff is committed to the Truckee River project. Mr. Piccola intends to continue a transparent sharing of information with the FPCC (Flood Project Coordinating Committee) and staff. Mr. Piccola noted that Jerry Fuentes was seeking ways to reduce the timeline by 60-days. Mr. Piccola outlined the matrix team working on the Truckee River project under the lead of Brandon Muncy with Tim Kelleher serving as the Project Manager.

Tim Kelleher – Project Manager, echoed Mr. Piccola's commitment to the project and noted that full funding had been received for the balance of FY (fiscal year) 2006-2007 to cover Corps staff operations. Mr. Kelleher expressed his appreciation to the FPCC for funding the external peer review process and explained that a similar process will most likely be used for the bridge costing and preliminary design work.

It was moved by Member Gustin, seconded by Member Humke, to accept the report as presented. The motion carried: Members Humke, Gustin, Martini, Smith and Vice-chair Larkin assenting; Members Dickens, Glick and Chair Sferrazza excused.

Vice-chair Larkin reopened Agenda Item 10

10. UPDATE ON FPCC LEGAL COUNSEL – *Possible action to accept report.*

It was moved by Member Humke, seconded by Member Martini, to accept the report as presented. The motion carried: Members Humke, Gustin, Martini, Smith and Vice-chair Larkin assenting; Members Dickens, Glick and Chair Sferrazza excused.

15. COMMITTEE MEMBER COMMENTS, REQUESTS AND FUTURE AGENDA ITEMS

Member Martini requested an update on the following: 1) North Truckee Drain Interlocal Agreement; 2) Benefits Engineering Study; and 3) Regional Hydrological model.

Vice-chair Larkin asked that an update on the future extension of the levee/flood walls from the Reno Sparks Indian Colony to the Grand Sierra Report be added to a future agenda.

Member Gustin suggested an agenda item to reconsider and perhaps take another action on the voting structure be added to the next agenda for discussion and possible action.

Deputy District Attorney Pete Simeoni will research the matter of reconsideration and provide a clarification to the board at the next meeting in response to Member Gustin's request.

16. ADJOURNMENT

Vice-chair Larkin adjourned the meeting at 11:43 a.m.