

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

El Paso, Texas
April 4, 1946

MINUTE NO. 181

REQUEST OF MAVERICK COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NO. ONE TO CONSTRUCT, OPERATE AND MAINTAIN A DIVERSION DAM ACROSS THE RIO GRANDE ABOUT 42 MILES (67 KILOMETERS) UPSTREAM FROM EAGLE PASS, TEXAS AND PIEDRAS NEGRAS, COAHUILA.

The Commission met at the offices of - the United States Section in El Paso, Texas, on April 4, 1946, at 10 o'clock a.m., to consider the request of the Maverick County Water Control and Improvement District No. One of Eagle Pass, Texas, for permission at its expense, to construct, operate and maintain a diversion dam across the Rio Grande near their Main Canal Heading which is located on the left bank of the Rio Grande at a point about 42 miles (67 kilometers) upstream from the cities of Eagle Pass, Texas and Piedras Negras, Coahuila.

The Commission reviewed the data submitted by the District in regard to the proposed dam, inspected the aerial photographs of the reach of the river affected, studied and approved the joint report of the Consulting Engineers, dated February 27, 1946, which is attached hereto, and after considering the matter in light of the provisions contained in the Treaty of February 3, 1944, and the pertinent provisions of the other treaties concerning the fluvial international boundary line, found that the proposed diversion is among those authorized by the Treaty of February 3, 1944 for the purposes referred to in paragraphs (b) and (g) of Article 9; that the proposed diversion would cause no injury to either country provided proper measures are taken to guard against possible river changes which might tend to alter the boundary line, such measures to consist of changes in the plans and construction as substantially outlined in the report of the Consulting Engineers; and that in as much as there will be no obligation on the part of the Commission to regulate the flow of the stream in such manner as to

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COMISION INTERNACIONAL DE LIMITES Y AGUAS
ENTRE MEXICO Y LOS ESTADOS UNIDOS

El Paso, Texas
4 de abril de 1946

ACTA NÚM. 181

SOLICITUD DEL MAVERICK COUNTY WATER CONTROL AND IMPROVEMENT DISTRICT NÚM. UNO PARA CONSTRUIR, OPERAR Y MANTENER UNA PRESA DE DERIVACIÓN SOBRE EL RÍO BRAVO COMO A 67 KILOMETROS (42 MILLAS) AGUAS ARRIBA DE PIEDRAS NEGRAS, COAHUILA Y EAGLE PASS, TEXAS

La Comisión se reunió en las Oficinas - de la Sección de los Estados Unidos en El Paso, Texas, a las 10 horas del día 4 de abril de 1946, con objeto de considerar la solicitud del Maverick County Water Control and Improvement District Núm. Uno, de Eagle Pass, Texas, para que se le otorgue permiso de que, a su costa, construya, opere y mantenga una presa de derivación sobre el río Bravo, cerca de la bocanada de su Canal Principal, que está situada en la margen izquierda del río Bravo en un punto como a 67 kilómetros (42 millas) aguas arriba de las ciudades de Piedras Negras, Coahuila y Eagle Pass, Texas.

La Comisión revisó los datos presentados por dicho Distrito de Riego en relación con la presa proyectada; examinó las fotografías aéreas del tramo del río afectado; estudió y aprobó el informe común de los Ingenieros Consultores fechado el 27 de febrero de 1946, que va anexo; y después de considerar el asunto a la luz de las disposiciones contenidas en el Tratado de 3 de Febrero de 1944, y de las disposiciones aplicables de otros tratados relativos a la línea divisoria internacional fluvial, encontró que la derivación propuesta es de las permitidas por el Tratado de 3 de Febrero de 1944, para los fines previstos por los incisos (b) y (g) del Artículo 9; que la derivación propuesta no causaría perjuicio a ninguno de los dos países, siempre que se tomen las medidas apropiadas para evitar posibles cambios del río que pudieran alterar la línea divisoria, medidas que consisten en las modificaciones de los planes y de la construcción descritas substancialmente en el informe de los Ingenieros Consultores; y que puesto que no habrá obligación alguna de parte de la Comisión para regularizar el escurrimiento de la corriente de tal manera que se provea

(Continúa en la hoja Núm. 2)

provide an adequate water supply for the proposed additional diversion, said diversion would not interfere with the international generation of electric power.

The United States Section has established that at the point of diversion under the proposal considered herein there is sufficient water available within the share allotted to the United States by the Treaty of February 3, 1944 to cover the volume of water not returned to the river under operation of the said diversion.

The Commission will, if the proposed diversion is made, prescribe such means as may be deemed adequate to determine the quantities of water diverted for generation of hydroelectric power and irrigation use and not returned to the main stream, which quantities will be charged to the share of the United States in accordance with the provisions of the Treaty of February 3, 1944.

In view of the foregoing, the Commission adopted the following resolution:

- "(1) The proposed diversion and the construction of the proposed works in connection therewith, with the changes recommended by the Consulting Engineers in their Joint Report dated February 27, 1946, are authorized.
- "(2) The proposed works shall be subject to all of the applicable provisions of the Treaty of February 3, 1944.
- "(3) The proposed dam shall be under the jurisdiction of the Commission, each Section thereof retaining jurisdiction over that part of the works located within the limits of its own country, in accordance with the provisions of Article 2 of the Treaty of February 3, 1944.
- "(4) It is understood that such jurisdiction of the Commission and of each of the two Sections thereof shall include supervision of the construction, operation and maintenance of said dam; the cost of such construction, operation and maintenance being for the account

un abastecimiento de agua adecuado para la propuesta derivación adicional, dicha derivación no interferiría con la generación internacional de energía eléctrica.

La Sección de los Estados Unidos ha comprobado que en el punto de derivación del agua, de acuerdo con la proposición que se considera, hay agua disponible suficiente, de la parte asignada a los Estados Unidos por el Tratado de 3 de Febrero de 1944, para cubrir el volumen de agua que no se devuelva al río al operar la citada derivación.

La Comisión, de construirse la proyectada derivación, dictará las medidas que considere adecuadas, para determinar las cantidades de agua derivada para la generación de energía hidro-eléctrica y para su uso en riego, que no sean devueltas a la corriente principal, las que serán cargadas a la asignación de los Estados Unidos, de acuerdo con las disposiciones del Tratado de 3 de Febrero de 1944.

En vista de lo anterior, la Comisión adoptó la resolución siguiente:

- "(1) Se autoriza la derivación propuesta y la construcción de las obras relativas con las modificaciones recomendadas por los Ingenieros Consultores en su informe común fechado 27 de febrero de 1946.
- "(2) Las obras propuestas quedan sujetas a todas las disposiciones aplicables del Tratado de 3 de Febrero de 1944.
- "(3) La presa propuesta quedará bajo la jurisdicción de la Comisión y cada una de sus Secciones tendrá jurisdicción sobre la parte de las obras situadas dentro de los límites de su respectivo país, de acuerdo con las disposiciones del Artículo 2 del Tratado de 3 de Febrero de 1944.
- "(4) Queda entendido que dicha jurisdicción de la Comisión y la de cada una de sus dos Secciones, incluirá la supervisión de la construcción y la operación y mantenimiento de dicha presa. Los costos de construcción, operación y mantenimiento serán por cuenta del

(Continued from sheet No. 2)

of the Maverick County Water Control -
and Improvement District No. One." ----

The meeting then adjourned. -----

R. M. Rawson

Commissioner of the United States

Rafael Escobedo

Commissioner of Mexico

Lois DeWinters

Secretary of the United States Section

H. de Barleanoy

Secretary of the Mexican Section

(Continúa de la hoja Num. 2)

Maverick County Water Control and ----
Improvement District Núm. Uno." -----

Se levantó la sesión. -----

Rafael Escobedo

Comisionado de México

R. M. Rawson

Comisionado de los Estados Unidos

H. de Barleanoy

Secretario de la Sección Mexicana

Lois DeWinters

Secretario de la Sección de los
Estados Unidos

INTERNATIONAL BOUNDARY AND WATER COMMISSION

El Paso, Texas
February 27, 1946

JOINT REPORT OF THE CONSULTING ENGINEERS
REGARDING THE PROPOSED CONSTRUCTION OF A DIVERSION DAM ACROSS THE RIO GRANDE
ABOVE EAGLE PASS, TEXAS

The Honorable Commissioners,
International Boundary and Water Commission,
United States and Mexico,
El Paso, Texas and Ciudad Juárez, Chihuahua.

Sirs:

In accordance with your instructions we have made an examination and study of the request of the Maverick County Water Control and Improvement District No. One of Eagle Pass, Texas, for permission to construct, operate and maintain, at its expense, a diversion dam across the Rio Grande at a point approximately 42 miles north of Eagle Pass, Texas, and of the plans of the proposed dam which were submitted therewith. We have also examined the aerial and other available maps which show the physical conditions on the ground, and, being, through past visits, familiar therewith, report as follows:

The District supplies water by gravity for the irrigation of land lying above and below Eagle Pass, Texas, along the United States side of the Rio Grande and for the generation of hydroelectric energy by a power plant located on the left bank of the Rio Grande a few miles upstream from Eagle Pass, through a main canal which heads in the Rio Grande about 15 miles below Del Rio, Texas, and has a capacity of 1500 second feet, of which 600 second feet will ultimately be used for

irrigation and 900 second feet for power generation. At present about 400 second feet are needed for irrigation. Since 600 second feet can be diverted without the proposed dam, all the additional amount of water diverted can be used for the generation of hydroelectric energy and returned to the Rio Grande through the power plant. Under this circumstance, the flow of the Rio Grande will not be materially affected except along the 34-mile reach from the main canal heading to the power plant. Our inspection discloses that at present no diversion of water to either side is made along this river reach nor does it appear that any diversion is likely to be needed in the future since the lands on the United States side are supplied from the District's main canal, while those now irrigated on the Mexican side are supplied from the flows of the Rio San Diego and Rio San Rodrigo.

The site of the dam is located about one mile downstream from the present canal heading in a river bend where the current impinges against a bluff, approximately 25 feet in height, on the Mexican side. The whole river area, including this bluff, is underlain by rock, and the bluff is evidently not subject to rapid erosion as the positions of this bluff in the 1928 aerial survey and the 1940 aerial survey are the same. The dam site location is also just downstream from the lower end of an old river channel in which the river once apparently flowed along the toe of the high bank on the Mexican side. Downstream from the proposed dam the river turns towards high land on the United States side.

A copy of the structure plans submitted by the District is attached and these show that the proposed dam will have a 15-foot crown

with 3 to 1 side slopes, both upstream and downstream. Its over-all length will be 440 feet, and the length of the low water overflow crest will be 300 feet at an elevation of 819 feet, which is approximately 4 feet above the present low water surface of the river. Wing extensions of the overflow crest on both the United States and Mexican sides are 70 feet in length, and the top rises from the crest elevation of 819 feet to an elevation of 822 feet at the outer end of the wings. The dam proper will be constructed as a loose rock fill, with the voids in the rock filled with sand and gravel, and with the crown and upstream and downstream slopes grouted with concrete to a depth of not less than 2 feet.

a masonry cut-off wall set on solid rock and extending well into the low flow river bank is proposed on the United States end of the structure. On the Mexican bank, masonry cut-off walls tied into the bluff will be built on both the upstream and downstream toes of the structure and will be carried 6 inches into bed rock.

Conclusions

The dam is needed to restore conditions to those existing at the time, in 1930, when the canal heading was originally constructed and 1500 second feet of flow could be diverted at all times, and since there are present in the Rio Grande at this point waters belonging to the United States, being the flow of both the Devils and Pecos Rivers and other flows, which will unquestionably amount to more than the quantity of water that will be diverted and not returned to the river, and since this diversion existed at the time the Treaty of February 3, 1944 became

effective, it appears that the proposal can be approved under the provisions of that Treaty. However, the actual diversions from and the return flows to the river should be determined by continuous measurements. There also appears to be no objection to the proposed construction, as a boundary matter, provided the plans are altered to include a more substantial protection against erosion at the Mexican end of the dam and some provision to guard against the erosion of a new channel across the low ground lying between the United States end of the dam and the high bank on that side. Both of these changes in plan are measures needed to guard against river changes induced by the construction which might tend to alter the boundary line.

The protection of the Mexican end of the dam could consist of grouted slope paving about eight feet high, from the top of the dam, and extending about twenty-five feet upstream and downstream from the center-line of the dam. The protective work across the low ground on the United States side could consist of a low embankment with an initial elevation of 825 at the end of the cut-off wall, a gradual rise to contour elevation 830, and an embankment crown elevation of 830 until the high bank is reached. This embankment could serve also as an access road from the high ground to the dam and could be built of durable material and surfaced with gravel. The low area to either side of this embankment should also be planted to grass as a further measure of stabilization.

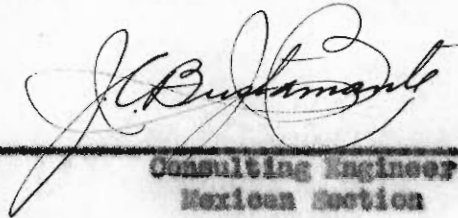
Recommendations

It is recommended that the request of the District be granted, provided that the changes in the plan, substantially as suggested, be incorporated in the work; that the District install and operate at the head of the canal and at the points where water is returned to the river, facilities, satisfactory to the Commission, to continuously measure the amount of water diverted from and returned to the river; and, that the Commission supervise the construction, operation and maintenance of the work.

Respectfully submitted,



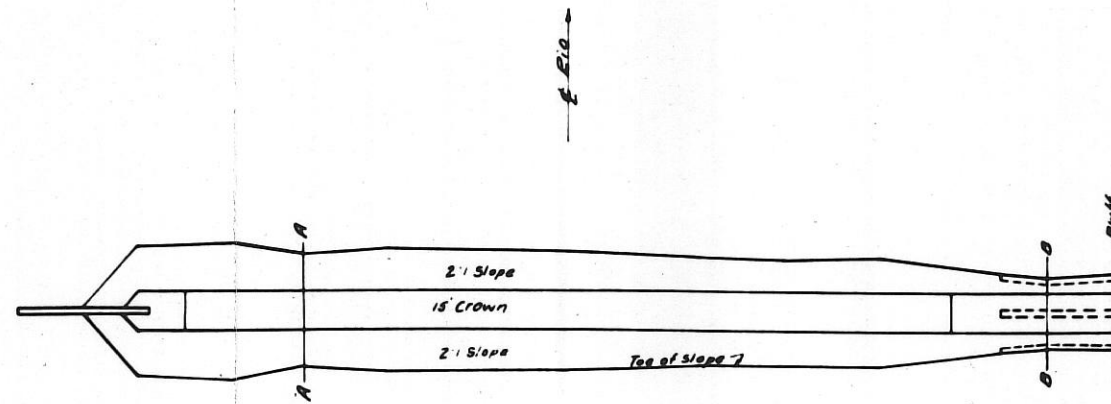
Consulting Engineer
United States Section



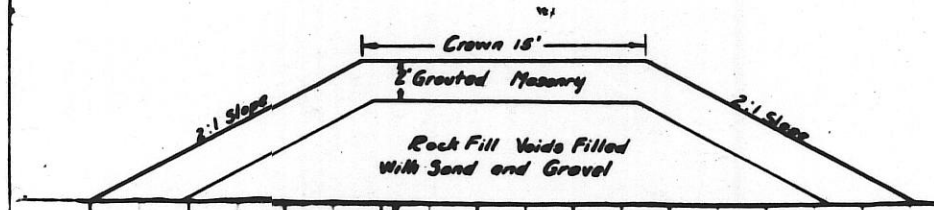
Consulting Engineer
Mexican Section

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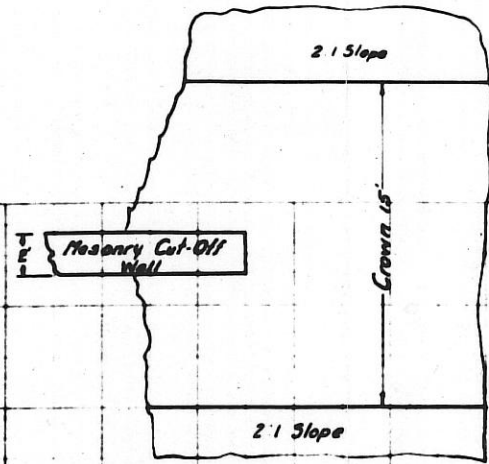
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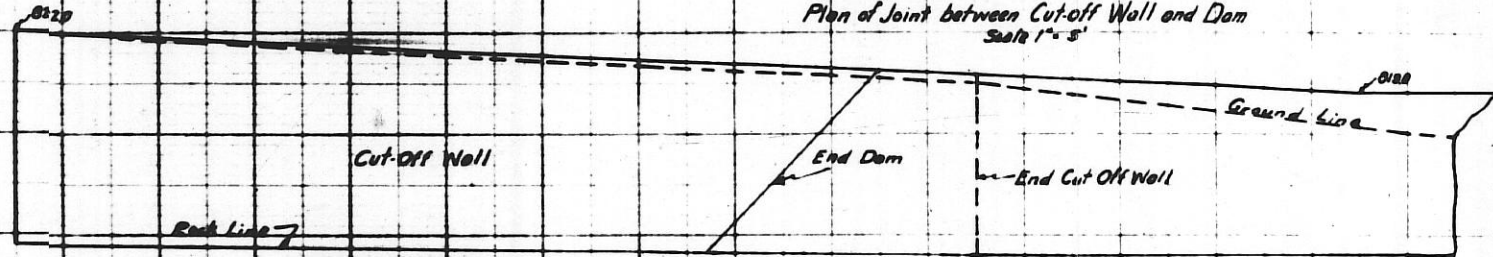
Plan of Proposed Dam
Scale 1" = 40'



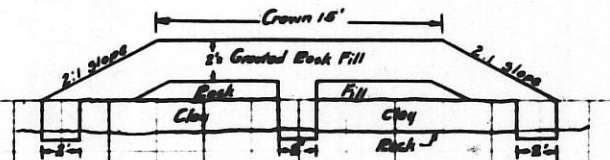
Section A-A
Scale 1" = 5'



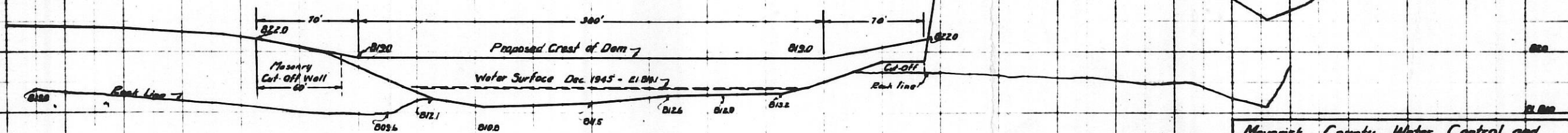
Plan of Joint between Cut-off Wall and Dam
Scale 1" = 5'



Plan Cut-off Wall
Scale 1" = 5'



Section B-B
Scale 1" = 5'



Section on E of Proposed Dam
Scale 1" = 40' Hor.
1" = 10' Vert.

Maverick County Water Control and
Improvement District No. One
**PROPOSED ROCK DAM
ACROSS THE RIO GRANDE
MAIN CANAL INTAKE**
Approved by *[Signature]*
District Eng. Date 1-15-26