

PROGRESS REPORT

to

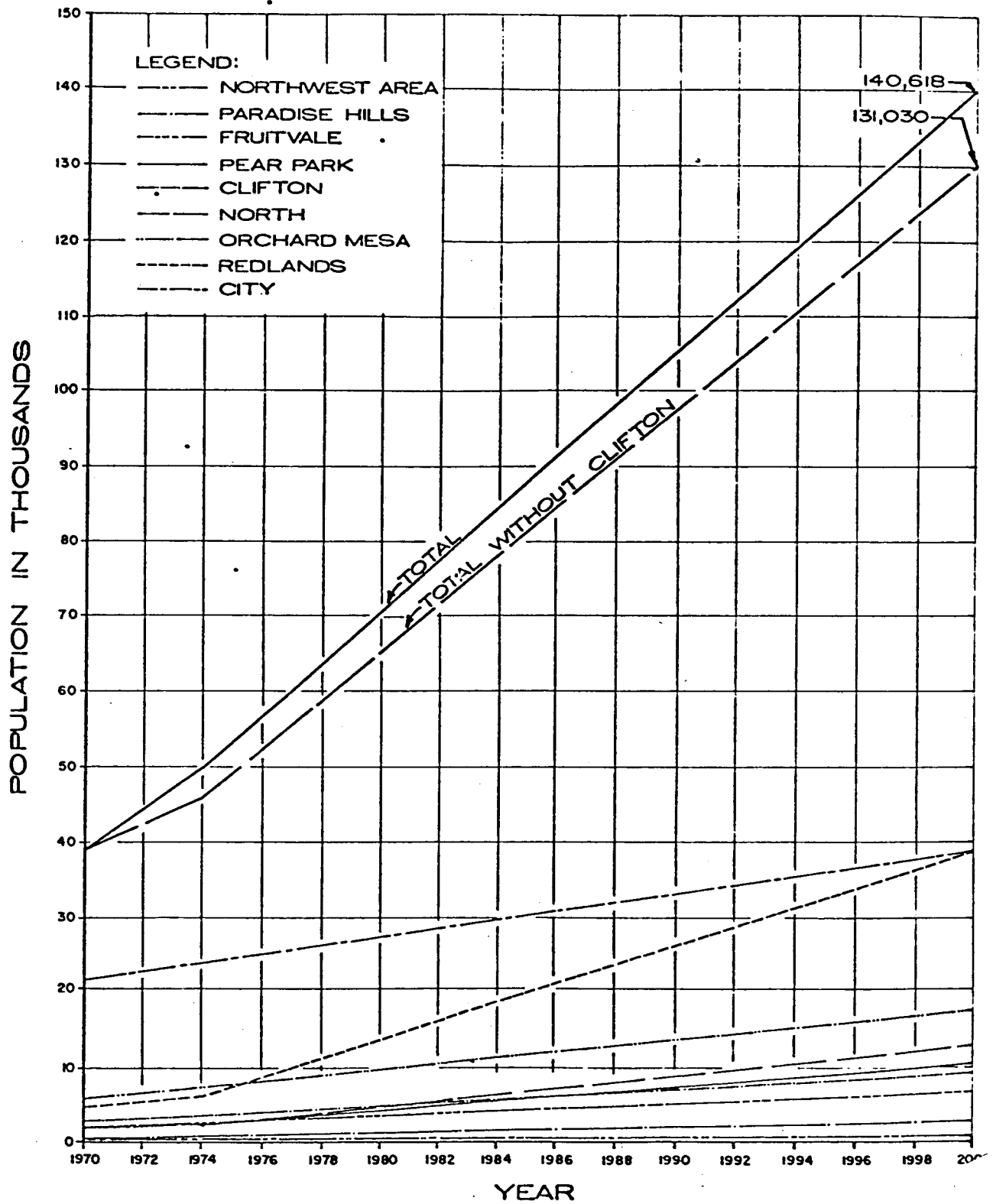
VALLEY-WIDE SEWER COMMITTEE
GRAND JUNCTION & MESA COUNTY, COLORADO

UPDATE OF "201 FACILITY PLAN"
AND PRE-DESIGN



March 15, 1977

GRAND JUNCTION 201 PLANNING AREA POPULATION PROJECTIONS

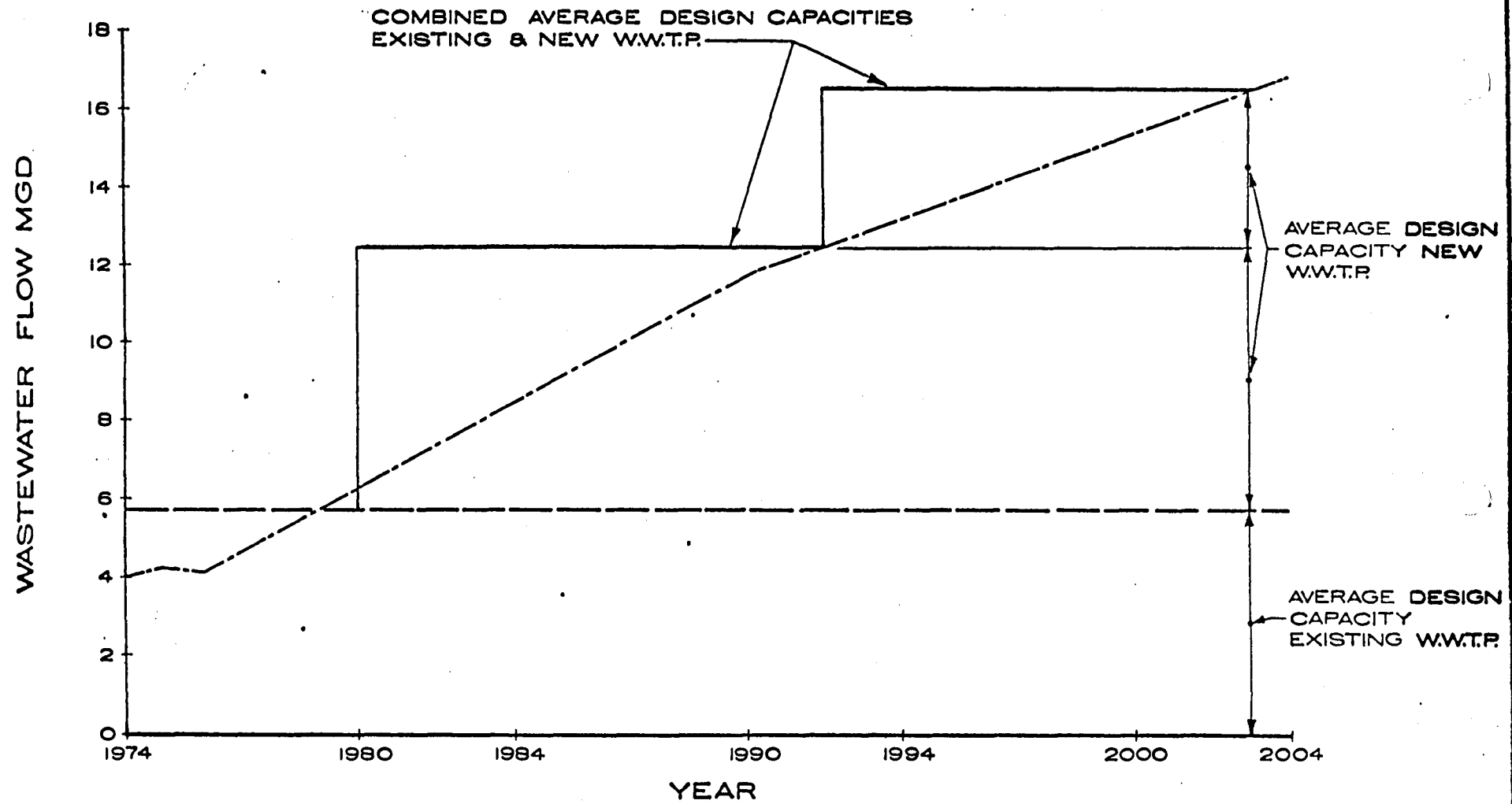


GRAND JUNCTION, COLORADO

**GRAND JUNCTION 201 PLANNING AREA
POPULATION**

<u>Area No.</u>	<u>Location</u>	<u>1970</u>	<u>1974</u>	<u>1990</u>	<u>1994</u>	<u>2000</u>
1.	City	21,240	24,090	33,456	35,800	39,310
2.	North	2,540	3,370	9,314	10,800	13,030
3.	Paradise Hills	--	440	2,488	3,000	3,768
4.	Fruitvale	1,940	2,690	5,257	5,900	6,862
5.	Pear Park	1,940	2,450	7,450	8,700	10,575
6.	Orchard Mesa	5,950	6,720	13,106	14,700	17,094
7.	Redlands	4,410	5,930	26,466	31,600	39,301
8.	Clifton	--	3,140	7,108	8,100	9,588
9.	Northwest Area	680	700	940	1,000	1,090
Total Without Clifton		--	46,390	98,477	111,500	131,030
TOTAL		--	49,530	105,585	119,600	140,618

**AVERAGE ANNUAL WASTEWATER FLOWS WITHOUT CLIFTON
AND
WASTEWATER TREATMENT PLANT AVERAGE DESIGN CAPACITIES**



GRAND JUNCTION 201 PLANNING AREA

Alternative Waste Treatment Schemes Considered
in Update of Grand Junction 201 Facilities Plan

Mechanical Plant Alternatives

- Alternative I - New 6.8 MGD plant; continued operation of existing 5.7 MGD plant; separate sludge treatment facilities; effluent of 30/30.
- Alternative II - New 6.8 MGD plant; continued operation of existing 5.7 MGD plant; consolidated sludge treatment at new plant; effluent of 30/30.
- Alternative III - New 12.5 MGD plant; abandon existing 5.7 MGD plant; effluent of 30/30.
- Alternative IV - New 6.8 MGD plant; continued operation of existing 5.7 MGD plant; separate sludge treatment facilities; effluent of 30/30/3.
- Alternative V - New 6.8 MGD plant; continued operation of existing 5.7 MGD plant; consolidated sludge treatment at new plant; effluent of 30/30/3.
- Alternative VI - New 12.5 MGD plant; abandon existing 5.7 MGD plant; effluent of 30/30/3.

Land Treatment Alternatives

- Alternative VII - New 12.5 MGD pump station, aerated lagoon and storage reservoir; land disposal site owned by Mesa County/Grand Junction. Abandon exist. 5.7 MGD plant.
- Alternative VIII - Continued operation of existing 5.7 MGD plant and new pump station to deliver effluent to storage reservoir; new 6.8 MGD pump station, aerated lagoon and storage reservoir; land disposal site owned by Mesa County/Grand Junction.

Land Treatment Alternatives con't.

Alternative IX - Abandon existing 5.7 MGD plant. New 12.5 MGD plant. New 12.5 MGD pump station, aerated lagoon and storage reservoir; deliver effluent to existing irrigation canal for distribution to land.

Alternative X - Continued operation of existing 5.7 MGD plant and new pump station to deliver effluent to storage reservoir; new 6.8 MGD pump station, aerated lagoon and storage reservoir; deliver effluent to existing irrigation canal for distribution to land.

GRAND JUNCTION/MESA COUNTY
VALLEY-WIDE WASTEWATER TREATMENT
COST SUMMARY
ALTERNATIVES I - VI
March 15, 1977

	<u>Alternative I-A</u>	<u>Alternative I-B</u>	<u>Alternative II</u>	<u>Alternative III</u>	<u>Alternative IV</u>	<u>Alternative V</u>	<u>Alternative VI</u>
	Two Plants Sep. Sludge 30/30 Eff. w/Pri. Sed.	Two Plants Sep. Sludge 30/30 Eff. w/Screens	Two Plants Con. Sludge 30/30 Eff.	One Plant 30/30 Eff.	Two Plants Sep. Sludge 30/30/3 Eff.	Two Plants Con. Sludge 30/30/3 Eff.	One Plant 30/30/3 Eff.
Total Construction Cost	\$ 7,841,000	\$ 7,927,000	\$ 9,068,000	\$11,366,000	\$ 9,582,000	\$10,767,700	\$12,516,000
Engineering @ 10%	784,100	792,700	906,800	1,136,600	958,200	1,076,800	1,251,600
Contingencies @ 5%	392,100	396,400	453,400	568,400	479,100	538,400	625,800
Project Sub-Total	\$ 9,017,200	\$ 9,116,100	\$10,428,200	\$13,071,000	\$11,019,300	\$12,382,900	\$14,393,400
Interest During Construction @ 5%	450,900	455,800	521,400	653,600	551,000	619,200	719,700
Land Cost @ \$5,000/Acre	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Total Project Cost	\$ 9,568,100	\$ 9,671,900	\$11,049,600	\$13,824,600	\$11,670,300	\$13,102,100	\$15,213,100
Amortized Cost @ 6-3/8% - 20 yrs.	\$ 859,760	\$ 869,090	\$ 992,890	\$ 1,242,240	\$ 1,048,660	\$ 1,177,320	\$ 1,367,000
Annual O & M Cost	651,680	682,640	643,070	539,450	807,610	799,000	657,850
Annual Equivalent Cost	\$ 1,511,440	\$ 1,551,730	\$ 1,635,960	\$ 1,781,690	\$ 1,856,270	\$ 1,976,320	\$ 2,024,850
Unit Cost/1000 Gallons	\$0.33	\$0.34	\$0.36	\$0.39	\$0.41	\$0.43	\$0.44
Federal Grant - 75% of Eligible Costs	\$ 6,762,900	\$ 6,837,075	\$ 7,821,150	\$ 9,803,250	\$ 8,264,475	\$ 9,287,175	\$10,795,050
Local Share - 25% of Eligible Costs plus Interest and Land Costs	\$ 2,805,200	\$ 2,834,825	\$ 3,228,450	\$ 4,021,350	\$ 3,405,825	\$ 3,814,925	\$ 4,418,050

GRAND JUNCTION/MESA COUNTY
VALLEY-WIDE WASTEWATER TREATMENT
COST SUMMARY
ALTERNATIVES VII - X
March 15, 1977

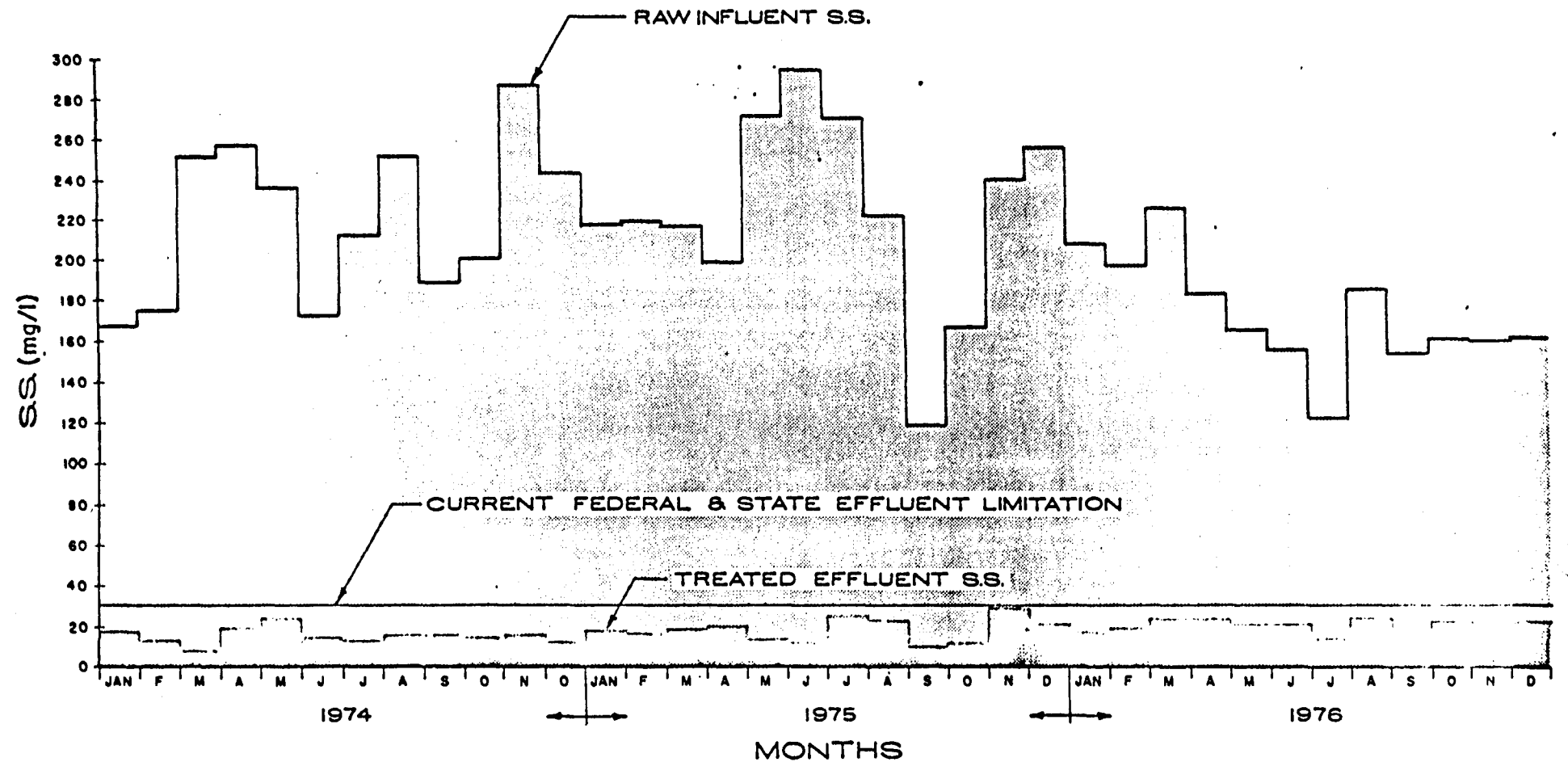
	<u>Alternative VII</u>		<u>Alternative VIII</u>		<u>Alternative IX</u>		<u>Alternative X</u>	
	Land Treatment (GJ/Mesa Owned) One Plant Site		Land Treatment (GJ/Mesa Owned) Two Plant Sites		Land Treatment (Exist. Irrig. Co.) One Plant Site		Land Treatment (Exist. Irrig. Co.) Two Plant Sites	
	(w/o Liner) @ 6'/yr.	(w/Liner) @ 6'/yr.	(w/o Liner) @ 6'/yr.	(w/Liner) @ 6'/yr.	(w/o Liner)	(w/Liner)	(w/o Liner)	(w/Liner)
Total Construction Cost	\$11,993,400	\$18,993,400	\$13,271,400	\$20,271,400	\$ 7,926,800	\$14,926,800	\$ 9,373,800	\$16,373,800
Engineering @ 10%	1,199,300	1,899,300	1,327,100	2,027,100	792,700	1,492,700	937,400	1,637,400
Contingencies @ 5%	599,700	949,700	663,600	1,013,600	396,300	746,300	468,700	818,700
Project Sub-total	\$13,792,400	\$21,842,400	\$15,262,100	\$23,312,100	\$ 9,115,800	\$17,165,800	\$10,779,900	\$18,829,900
Interest During Construction @ 5%	689,600	1,092,100	889,000	1,357,900	455,800	858,300	539,000	941,500
Land Cost @ \$5,000/Acre	16,665,000	16,665,000	16,665,000	16,665,000	3,000,000	3,000,000	3,000,000	3,000,000
Total Project Cost	\$31,147,000	\$39,599,500	\$32,816,100	\$41,335,000	\$12,571,600	\$21,024,100	\$14,318,900	\$22,771,400
Amortized Cost @ 6-3/8% - 20 yrs.	\$ 2,798,780	\$ 3,558,290	\$ 2,948,760	\$ 3,714,240	\$ 1,129,650	\$ 1,889,170	\$ 1,286,660	\$ 2,046,170
Annual O & M Cost	483,280	483,280	675,390	675,390	223,295	223,295	415,555	415,555
Annual Equivalent Cost	\$ 3,282,060	\$ 4,041,570	\$ 3,624,150	\$ 4,389,630	\$ 1,352,945	\$ 2,112,465	\$ 1,702,215	\$ 2,461,725
Unit Cost/1000 Gallons	---	---	---	---	\$0.30	\$0.46	\$0.37	\$0.54
W/O Net Crop Income	\$0.72	\$0.89	\$0.79	\$0.96	---	---	---	---
W/N.C.I. @ \$14/acre	\$0.71	\$0.88	\$0.78	\$0.95	---	---	---	---
W/N.C.I. @ \$100/acre	\$0.66	\$0.83	\$0.73	\$0.90	---	---	---	---
Federal Grant - 75% of Eligible Costs	\$20,593,050	\$26,630,550	\$21,695,325	\$27,732,825	\$ 6,836,850	\$12,874,350	\$ 8,084,925	\$14,122,425
Local Share - 25% of Eligible Costs Plus Interest and Land Costs	\$10,553,950	\$12,968,950	\$11,120,775	\$13,602,175	\$ 5,734,750	\$ 8,149,750	\$ 6,233,975	\$ 8,648,975

GRAND JUNCTION/MESA COUNTY
INTERCEPTOR SEWERS

March 15, 1977

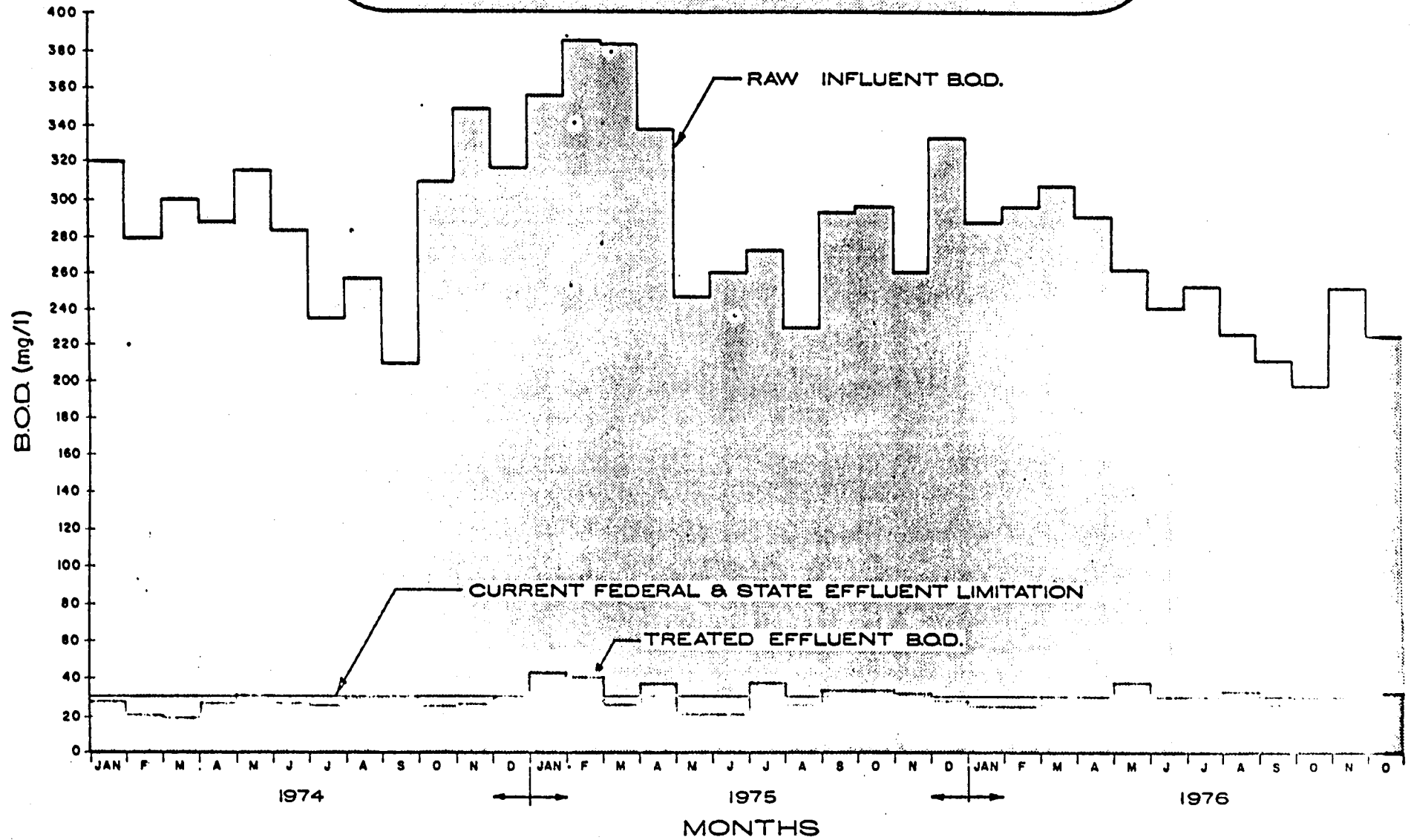
<u>Project</u>	<u>Estimated Cost</u>
Interceptor Sewers:	
1. River Road	\$3,266,200
2. Goat Wash	229,000
3. Tiara Rado	169,750
4. Paradise Hills - Phase II	222,000
5. Red Canyon River Crossing	419,050
6. Goat Wash River Crossing	356,000
7. Panorama River Crossing	401,200
8. Independent Avenue Sewer	<u>159,000</u>
Total	\$5,222,200
Engineering @ 10% (design, inspection, soils)	522,200
Contingencies @ 5%	<u>261,100</u>
ESTIMATED TOTAL COST	\$6,005,500
Federal Grant - 75% of Eligible Costs	\$4,504,125
Local Share - 25% of Eligible Costs	\$1,501,375

MONTHLY AVERAGES
RAW INFLUENT & TREATED EFFLUENT
SUSPENDED SOLIDS



WEST WASTEWATER TREATMENT PLANT
GRAND JUNCTION, COLORADO

MONTHLY AVERAGES
 RAW INFLUENT & TREATED EFFLUENT
 BIOCHEMICAL OXYGEN DEMAND



WEST WASTEWATER TREATMENT PLANT
 GRAND JUNCTION, COLORADO

AMENDMENT NO. 1 TO
ENGINEERING AGREEMENT WITH
THE CITY OF GRAND JUNCTION AND MESA COUNTY, COLORADO
FOR STEP II - DESIGN SERVICES
FOR
RIVER ROAD INTERCEPTOR SEWER AND
PARADISE HILLS INTERCEPTOR SEWER - PHASE II

This Amendment No. 1 to the Engineering Agreement dated September 23, 1976 between the CITY OF GRAND JUNCTION, COLORADO and HENNINGSON, DURHAM & RICHARDSON, INC. OF COLORADO is for Phase II - Final Design of the following projects produced as a single set of bidding documents (plans and specifications).

River Road Interceptor Sewer

This interceptor sewer project shall be a 48-inch and 54-inch diameter sewer beginning at the existing City wastewater treatment plant and running north-westerly along the River Road to the proposed West Wastewater Treatment Plant to be located at approximately 22 Road adjacent and directly west of Interstate I-70. Approximate length to be 25,000 LF.

Paradise Hills Interceptor Sewer - Phase II

This interceptor sewer will be 15-inch and 18-inch diameter sewer and is an extension of the Paradise Hills Interceptor Sewer and shall extend along Patterson Road from approximately 1/4 mile east of 25 Road westerly to the River Road Interceptor. The final routing of this sewer will be either west on Patterson Road to River Road or west on Patterson Road to 25 Road and then south in 25 Road to River Road. Approximate length to be 6,700 LF.

DETAILED DESIGN SERVICES - STEP II

When authorized by the City/County, the Engineer will proceed with the preparation of detailed design including plans and specifications (contract documents) for the sanitary interceptor sewers and appurtenant items identified. These services will include the necessary computations, field surveys, design, drawings, pipe materials selection, specifications, detailed cost estimates and other documents required for receiving construction bids for the sanitary interceptor sewers and appurtenant items.

Services will include:

1. Conferences with City staff during design.
2. Final selection of sewer alignment.
3. Detailed surveys required for design.
4. Coordination of the soils testing services performed by others.
5. Selection and sizing of sewer pipe and other materials.
6. Preparation of bidding documents including detailed plans and specifications, forms for proposals, advertisement, construction contracts and bonds as required.
7. Detailed cost estimates.
8. Continuing conferences and coordination during the design phase with the City/County, State of Colorado Health Department and EPA as necessary.
9. Furnishing four sets of completed plans and specifications for the project to the City/County (plans and specifications will be furnished to approval agencies by the Engineer at no extra cost).
10. Providing assistance in obtaining any necessary governmental approvals of the plans and specifications.

COMPENSATION

For all services for the work described above the Engineer shall receive compensation in the lump sum amount of \$138,600.00. This amount, which is the Engineer's compensation for Step II engineering work, will be billed in partial amounts, monthly, based on work accomplished during the preceding month as computed by the Engineer. See attached EPA Form 5700-41 giving the engineering cost breakdown for this project.

95% of the Step II Detailed Design Services compensation is due upon completion of the plans and specifications for the project and filing of same with the City, the State of Colorado Health Department (Colorado Water Quality Control Commission) and EPA.

The final 5% of the Step II Detailed Design Services compensation is due upon approval of the plans and specifications and authorization to advertise and receive bids by the State of Colorado Health Department and EPA.

SERVICES TO BE PERFORMED BY THE CITY/COUNTY

The following items of service are not included in the Engineer's services and shall be provided by the City/County:

1. Authorized access to enter on private property if needed.
2. Legal descriptions and drawings for right-of-way and easement procurement. Procurement of all land ownership information, right-of-way easements, and land value determinations.
3. Excavation for existing utility location verification if necessary.
4. Soils testing services.

EPA REQUIRED PROVISIONS

The attached Appendix C-1 Required Provisions are included as part of this contract.

ACCEPTANCE

This proposal is hereby accepted:

CITY OF GRAND JUNCTION, COLORADO
and
MESA COUNTY, COLORADO

Attest: *Dora B. Lockhart*

By *James E. Patterson Jr.*
Date 3-16-77

HENNINGSON, DURHAM & RICHARDSON,
INC. OF COLORADO

Attest: *Karl D. Henrichsen*
Karl D. Henrichsen
Vice-President and
Secretary

By *[Signature]*
Date 3-16-77

) CFR PART 35 SUBPART E)
APPENDIX C-1 REQUIRED PROVISIONS
CONSULTING ENGINEERING AGREEMENTS

APPENDIX C-1 REQUIRED PROVISIONS—CONSULTING ENGINEERING AGREEMENTS

1. General.
2. Responsibility of the Engineer.
3. Scope of Work.
4. Changes.
5. Termination.
6. Remedies.
7. Payment.
8. Project Design.
9. Audit; Access to Records.
10. Price Reduction for Defective Cost or Pricing Data.
11. Subcontracts.
12. Labor Standards.
13. Equal Employment Opportunity.
14. Utilization of Small or Minority Business.
15. Covenant Against Contingent Fees.
16. Gratuities.
17. Patents.
18. Copyrights and Rights in Data.

1. **General.** (a) The Owner and the Engineer agree that the following provisions shall apply to the work to be performed under this agreement and that such provisions shall supersede any conflicting provisions of this agreement.

(b) This agreement is funded in part by a grant from the U.S. Environmental Protection Agency. Neither the United States nor the U.S. Environmental Protection Agency (hereinafter, "EPA") is a party to this agreement. This agreement is subject to regulations contained in 40 CFR 35.936, 35.937, and 35.939.

2. **Responsibility of the Engineer.** (a) The Engineer shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all designs, drawings, specifications, reports, and other services furnished by the Engineer under this agreement. The Engineer shall, without additional compensation, correct or revise any errors or deficiencies in his designs, drawings, specifications, reports and other services.

(b) The Engineer shall perform such professional services as may be necessary to accomplish the work required to be performed under this agreement, in accordance with this agreement and applicable EPA requirements.

(c) Approval by the Owner or EPA of drawings, designs, specifications, reports, and incidental engineering work or materials furnished hereunder shall not in any way relieve the Engineer of responsibility for the technical adequacy of the work. Neither the Owner's nor EPA's review, approval or acceptance of, nor payment for, any of the services shall be construed to operate as a waiver of any rights under this agreement or of any cause of action arising out of the performance of this agreement, and the Engineer shall be and remain liable in accordance with applicable law for all damages to the Owner or EPA caused by the Engineer's negligent performance of any of the services furnished under this agreement.

(d) The rights and remedies of the Owner provided for under this agreement are in

addition to any other rights and remedies provided by law.

3. **Scope of work.** Except as may be otherwise specifically limited in this agreement, the services to be rendered by the Engineer shall include all services required to complete the task or step in accordance with applicable EPA regulations (40 CFR Part 35, Subpart E).

4. **Changes.** (a) The Owner may, at any time, by written order, make changes within the general scope of this agreement in the services or work to be performed. If such changes cause an increase or decrease in the Engineer's cost of, or time required for, performance of any services under this agreement, whether or not changed by any order, an equitable adjustment shall be made and this agreement shall be modified in writing accordingly. Any claim of the Engineer for adjustment under this clause must be asserted in writing within 30 days from the date of receipt by the Engineer of the notification of change unless the Owner grants a further period of time before the date of final payment under this agreement.

(b) No services for which an additional compensation will be charged by the Engineer shall be furnished without the written authorization of the Owner.

5. **Termination.** (a) This agreement may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this agreement through no fault of the terminating party: *Provided*, That no such termination may be effected unless the other party is given (1) not less than ten (10) days written notice (delivered by certified mail, return receipt requested) of intent to terminate and (2) an opportunity for consultation with the terminating party prior to termination.

(b) This agreement may be terminated in whole or in part in writing by the Owner for its convenience: *Provided*, That no such termination may be effected unless the Engineer is given (1) not less than ten (10) days written notice (delivered by certified mail, return receipt requested) of intent to terminate and (2) an opportunity for consultation with the terminating party prior to termination.

(c) If termination for default is effected by the Owner, an equitable adjustment in the price provided for in this agreement shall be made, but (1) no amount shall be allowed for anticipated profit on unperformed services or other work, and (2) any payment due to the Engineer at the time of termination may be adjusted to the extent of any additional costs occasioned to the Owner by reason of the Engineer's default. If termination for default is effected by the Engineer, or if termination for convenience is effected by the Owner, the equitable adjustment shall include a reasonable profit for services or other work performed. The equitable adjustment for any termination shall provide for payment to the Engineer for services rendered and expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by the Engineer relating to commitments which had become firm prior to the termination.

(d) Upon receipt of a termination action pursuant to paragraphs (a) or (b) above, the Engineer shall (1) promptly discontinue all services affected (unless the notice directs otherwise), and (2) deliver or otherwise make available to the Owner all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by the Engineer in performing this agreement, whether completed or in process.

(e) Upon termination pursuant to paragraphs (a) or (b) above, the Owner may

take over the work and prosecute the same to completion by agreement with another party or otherwise.

(f) If, after termination for failure of the Engineer to fulfill contractual obligations, it is determined that the Engineer had not so failed, the termination shall be deemed to have been effected for the convenience of the owner. In such event, adjustment of the price provided for in this agreement shall be made as provided in paragraph (c) of this clause.

(g) The rights and remedies of the Owner and the Engineer provided in this clause are in addition to any other rights and remedies provided by law or under this agreement.

6. **Remedies.** (a) Except as may be otherwise provided in this agreement, or as the parties hereto may otherwise agree, all claims, counter-claims, disputes and other matters in question between the owner and the Engineer arising out of or relating to this agreement or the breach thereof will be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then obtaining, subject to the limitations stated in paragraphs (c) and (d) below. This agreement and any other agreement or consent to arbitrate entered into in accordance therewith as provided below, will be specifically enforceable under the prevailing law of any court having jurisdiction.

(b) Notice of demand for arbitration must be filed in writing with the other party to this Agreement, with the EPA Regional Administrator and with the American Arbitration Association. The demand must be made within a reasonable time after the claim, dispute or other matter in question has arisen. In no event may the demand for arbitration be made after the time when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations.

(c) All demands for arbitration and all answering statements thereto which include any monetary claim must contain a statement that the total sum or value in controversy as alleged by the party making such demand or answering statement is not more than \$200,000 (exclusive of interest and costs). The arbitrators will not have jurisdiction, power or authority to consider, or make findings (except in denial of their own jurisdiction) concerning any claim, counter-claims, dispute or other matter in question where the amount in controversy thereof is more than \$200,000 (exclusive of interest and costs) or to render a monetary award in response thereto against any party which totals more than \$200,000 (exclusive of interest and costs).

(d) No arbitration arising out of, or relating to, this agreement may include, by consolidation, joinder or in any other manner, any additional party not a party to this agreement.

(e) By written consent signed by all the parties to this agreement and containing a specific reference hereto, the limitations and restrictions contained in paragraphs (c) and (d) above may be waived in whole or in part as to any claim, counter-claim, dispute or other matter specifically described in such consent. No consent to arbitration in respect of a specifically described claim, counter-claim, dispute or other matter in question will constitute consent to arbitrate any other claim, counter-claim, dispute or other matter in question which is not specifically described in such consent or in which the sum or value in controversy exceeds \$200,000 (exclusive of interest and costs) or which is with any party not specifically described therein.

(f) The award rendered by the arbitrators will be final, not subject to appeal, and judgment may be entered upon it in any court having jurisdiction thereof.

7. **Payment.** (a) The Engineer may submit monthly or periodic statements requesting payment. Such requests shall be based upon the amount and value of the work and services performed by the Engineer under this agreement, and shall be prepared by the Engineer and supplemented or accompanied by such supporting data as may be required by the owner.

(b) Upon approval of such payment request by the Owner, payment upon properly certified vouchers shall be made to the Engineer as soon as practicable of ninety percent of the amount as determined above, less all previous payments: *Provided, however,* that if the Owner determines that the work under this agreement or any specified task hereunder is substantially complete and that the amount of retained percentages is in excess of the amount considered by him to be adequate for the protection of the Owner, he may at his discretion release to the Engineer such excess amount.

(c) Upon satisfactory completion by the Engineer of the work called for under the terms of this agreement, and upon acceptance of such work by the Owner, the Engineer will be paid the unpaid balance of any money due for such work, including the retained percentages relating to this portion of the work.

(d) Upon satisfactory completion of the work performed hereunder, and prior to final payment under this agreement for such work, or prior settlement upon termination of the agreement, and as a condition precedent thereto, the Engineer shall execute and deliver to the Owner a release of all claims against the Owner arising under or by virtue of this agreement, other than such claims, if any, as may be specifically exempted by the Engineer from the operation of the release in stated amounts to be set forth therein.

8. **Project Design.** (a) In the performance of this agreement, the Engineer shall, to the extent practicable, provide for maximum use of structures, machines, products, materials, construction methods, and equipment which are readily available through competitive procurement, or through standard or proven production techniques, methods, and processes, consistent with 40 CFR 35.936-3 and 35.936-13, except to the extent that advanced technology may be utilized pursuant to 40 CFR 35.908.

(b) The Engineer shall not, in the performance of the work called for by this agreement, produce a design or specification such as to require the use of structures, machines, products, materials, construction methods, equipment, or processes which are known by the Engineer to be available only from a sole source, unless such use has been adequately justified in writing by the Engineer as necessary for the minimum needs of the project.

(c) The Engineer shall not, in the performance of the work called for by this agreement, produce a design or specification which would be restrictive in violation of Sec. 204(a)(6) of the Federal Water Pollution Control Act (Pub. L. 92-500). This statute requires that no specification for bids or statement of work may be written in such a manner as to contain proprietary, exclusionary, or discriminatory requirements other than those based upon performance, unless such requirements are necessary to test or demonstrate a specific thing, or to provide for necessary interchangeability of parts and equipment, or at least two brand names or trade names of comparable quality or utility are listed and are followed by the words "or equal."

(d) The Engineer shall report to the Owner any sole-source or restrictive design or specification giving the reason or reasons why it is considered necessary to restrict the design or specification.

(e) The Engineer shall not knowingly specify or approve the performance of work at a facility which is in violation of Clean Air or Water standards and which is listed by the Director of the EPA Office of Federal Activities pursuant to 40 CFR Part 15.

9. **Audit; access to records.** (a) The Engineer shall maintain books, records, documents and other evidence directly pertinent to performance on EPA grant work under this agreement in accordance with accepted professional practice, appropriate accounting procedures and practices, and 40 CFR 30.605, 30.805, and 35.935-7. The Engineer shall also maintain the financial information and data used by the Engineer in the preparation or support of the cost submission required pursuant to 40 CFR 35.937-6(b) and a copy of the cost summary submitted to the Owner. The United States Environmental Protection Agency, the Comptroller General of the United States, the United States Department of Labor, Owner, and [the State water pollution control agency] or any of their duly authorized representatives shall have access to such books, records, documents and other evidence for the purpose of inspection, audit and copying. The Engineer will provide proper facilities for such access and inspection.

(b) The Engineer agrees to include paragraphs (a) through (e) of this clause in all his contracts and all tier subcontracts directly related to project performance which are in excess of \$10,000.

(c) Audits conducted pursuant to this provision shall be in accordance with generally accepted auditing standards and established procedures and guidelines of the reviewing or audit agency(ies).

(d) The Engineer agrees to the disclosure of all information and reports resulting from access to records pursuant to paragraphs (a) and (b) above, to any of the agencies referred to in paragraph (a) above. Where the audit concerns the Engineer, the auditing agency will afford the Engineer an opportunity for an audit exit conference and an opportunity to comment on the pertinent portions of the draft audit report. The final audit report will include the written comments, if any, of the audited parties.

(e) Records under paragraphs (a) and (b) above shall be maintained and made available during performance on EPA grant work under this agreement and until three years from date of final EPA grant payment for the project. In addition, those records which relate to any "dispute" appeal under an EPA grant agreement, or litigation, or the settlement of claims arising out of such performance, or costs or items to which an audit exception has been taken, shall be maintained and made available until three years after the date of resolution of such appeal, litigation, claim or exception.

10. **Price reduction for defective cost or pricing data.** (The provisions of this clause are required by EPA only if the amount of this agreement exceeds \$100,000.00. The Owner may elect to utilize this clause if the contract amount is \$100,000 or less.)

(a) If the EPA Project Officer determines that any price, including profit negotiated in connection with this agreement or any cost reimbursable under this agreement was increased by any significant sums because the Engineer, or any subcontractor furnished incomplete or inaccurate cost or pricing data or data not current as certified in his certification of current cost or pricing data (EPA Form 5700-41), then such price or cost or

profit shall be reduced accordingly and the agreement shall be modified in writing to reflect such reduction.

(b) Failure to agree on a reduction shall be subject to the "Remedies" clause of this agreement.

(NOTE: Since the agreement is subject to reduction under this clause by reason of defective cost or pricing data submitted in connection with certain subcontracts, the Architect-Engineer may wish to include a clause in each such subcontract requiring the subcontractor to appropriately indemnify the Architect-Engineer. It is also expected that any subcontractor subject to such indemnification will generally require substantially similar indemnification for defective cost or pricing data required to be submitted by his lower tier subcontractors.)

11. **Subcontracts.** (a) Any subcontractors and outside associates or consultants required by the Engineer in connection with the services covered by this agreement will be limited to such individuals or firms as were specifically identified and agreed to during negotiations, or as are specifically approved by the Owner during the performance of this agreement. Any substitution in such subcontractors, associates, or consultants will be subject to the prior approval of the Owner.

(b) Except as otherwise provided in this agreement, the Engineer may not subcontract services in excess of thirty percent (30%) of the contract price to subcontractors or consultants without prior written approval of the Owner.

12. **Labor standards.** To the extent that this agreement involves "construction" (as defined by the Secretary of Labor), the Engineer agrees that such construction work shall be subject to the following labor standards provisions, to the extent applicable:

(a) Davis-Bacon Act (40 U.S.C. 276a-276a-7);

(b) Contract Work Hours and Safety Standards Act (40 U.S.C. 327-333);

(c) Copeland Anti-Kickback Act (18 U.S.C. 874); and

(d) Executive Order 11246 (Equal Employment Opportunity) and implementing rules, regulations, and relevant orders of the Secretary of Labor or EPA; and the Engineer further agrees that this agreement shall include and be subject to the "Labor Standards Provisions for Federally Assisted Construction Contracts" (EPA Form 5720-4) in effect at the time of execution of this agreement.

13. **Equal employment opportunity.** In accordance with EPA policy as expressed in 40 CFR § 30.420-5, the Engineer agrees that he will not discriminate against any employee or applicant for employment because of race, religion, color, sex, age or national origin.

14. **Utilization of Small and Minority Business.** In accordance with EPA policy as expressed in 40 CFR 35.936-7, the Engineer agrees that qualified small business and minority business enterprises shall have the maximum practicable opportunity to participate in the performance of EPA grant-assisted contracts and subcontracts.

15. **Covenant against contingent fees.** The Engineer warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees. For breach or violation of this warranty the Owner shall have the right to annul this agreement without liability or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such

commission, percentage, brokerage, or contingent fee.

16. *Gratuities.* (a) The Owner may, by written notice to the Engineer, terminate the right of the Engineer to proceed under this agreement if it is found, after notice and hearing, by the Owner that gratuities (in the form of entertainment, gifts, or otherwise) were offered or given by the Engineer, or any agent or representative of the Engineer, to any official or employee of the Owner or of EPA with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performance of this agreement: *Provided*, That the existence of the facts upon which the Owner makes such findings shall be in issue and may be reviewed in proceedings pursuant to Clause 6 (Remedies) of this agreement.

(b) In the event this agreement is terminated as provided in paragraph (a) hereof, the Owner shall be entitled (1) to pursue the same remedies against the Engineer as it could pursue in the event of a breach of the contract by the Engineer, and (2) as a penalty in addition to any other damages to which it may be entitled by law, to exemplary damages in an amount (as determined by the Owner) which shall be not less than three nor more than ten times the costs incurred by the Engineer in providing any such gratuities to any such officer or employee.

(c) The rights and remedies of the Owner provided in this clause shall not be exclusive and are in addition to any rights and remedies provided by law or under this agreement.

17. *Patents.* If this agreement involves research, developmental, experimental, or demonstration work and any discovery or invention arises or is developed in the course of or under this agreement, such invention or discovery shall be subject to the reporting and rights provisions of Subpart D of 40 CFR Part 30, including Appendix B of said Part 30. In such case, the Engineer shall report the discovery or invention to EPA directly or through the Owner, and shall otherwise comply with the Owner's responsibilities in accordance with Subpart D of 40 CFR Part 30. The Engineer hereby agrees that the disposition of rights to inventions made under this agreement shall be in accordance with the terms and conditions of aforementioned Appendix B. The Engineer shall include provisions appropriate to effectuate the purposes of this condition in all subcontracts involving research, developmental, experimental, or demonstration work.

18. *Copyrights and rights in data.* (a) The Engineer agrees that any plans, drawings, specifications, computer programs, technical reports, operating manuals, or other "Subject Data" (as defined in Appendix C to 40 CFR Part 30) are subject to the rights in the United States, as set forth in said Appendix C, including the right to use, duplicate and disclose, such manuals, etc., in whole or in part, in any manner for any purpose whatsoever, and have others do so. For purposes of this article, "grantee" as used in said Appendix C shall refer to the Engineer. If the material is copyrightable, the Engineer may copyright such, as permitted by said Appendix C, and subject to the rights in the Government as set forth in Appendix C, but the Owner and the Federal Government reserve a royalty-free, nonexclusive, and irrevocable license to reproduce, publish and use such materials, in whole or in part, and to authorize others to do so. The Engineer shall include provisions appropriate to effectuate the purpose of this condition in all subcontracts expected to produce copyrightable "Subject Data."

(b) All such "Subject Data" furnished by the Engineer pursuant to this agreement are

instruments of his services in respect of the project. It is understood that they are not intended or represented to be suitable for reuse on any other project. Any reuse by the Owner without specific written verification or adaptation by the Engineer will be at the risk of the Owner and without liability or legal exposure to Engineer. Any such verification or adaptation will entitle the Engineer to further compensation at rates to be agreed upon by the Owner and the Engineer.

COST OR PRICE SUMMARY FORM FOR SUBAGREEMENTS UNDER U.S. E GRANTS
 (See accompanying instructions before completing this form)

Form Approved
 OMB No. 158-R0144

PART I - GENERAL

1. GRANTEE Grand Junction/Mesa County, Colorado		2. GRANT NUMBER CO 80 337	
3. NAME OF CONTRACTOR OR SUBCONTRACTOR Henningson, Durham & Richardson, Inc. of Colorado		4. DATE OF PROPOSAL March 15, 1977	
5. ADDRESS OF CONTRACTOR OR SUBCONTRACTOR (Include ZIP code) 310 Capitol Life Center Denver, Colorado 80203 (303) 861-1300		6. TYPE OF SERVICE TO BE FURNISHED Step II - Design Services for River Road Interceptor Sewer and Paradise Hills Interceptor Sewer (Phase II).	

PART II - COST SUMMARY

7. DIRECT LABOR (Specify labor categories)	ESTI- MATED HOURS	HOURLY RATE	ESTIMATED COST	TOTALS
See attached direct labor cost break-down.		\$	\$	
DIRECT LABOR TOTAL:				\$ 47,463
8. INDIRECT COSTS (Specify indirect cost pools)	RATE	x BASE =	ESTIMATED COST	
Payroll Overhead (35.06%)	0.3506	\$ 47,463	\$ 16,641	
General & Administrative Overhead (105.81%)	1.0581	\$ 47,463	50,221	
INDIRECT COSTS TOTAL:				\$ 66,862
9. OTHER DIRECT COSTS				
a. TRAVEL			ESTIMATED COST	
(1) TRANSPORTATION (Air \$410) (Auto \$435)			\$ 845	
(2) PER DIEM 5 @ \$40			\$ 200	
TRAVEL SUBTOTAL:			\$ 1,045	
b. EQUIPMENT, MATERIALS, SUPPLIES (Specify categories)			ESTIMATED COST	
	QTY	COST	\$	\$
Aerial Mapping				4,700
Printing				555
EQUIPMENT SUBTOTAL:				5,255
c. SUBCONTRACTS			ESTIMATED COST	
			\$	
SUBCONTRACTS SUBTOTAL:			\$	
d. OTHER (Specify categories)			ESTIMATED COST	
			\$	
OTHER SUBTOTAL:			\$	
OTHER DIRECT COSTS TOTAL:				\$ 6,300
10. TDATL ESTIMATED COST				\$ 120,625
11. PROFIT				\$ 17,975
12. TOTAL PRICE				\$ 138,600

ENGINEERING DIRECT LABOR COST BREAKDOWN

STEP II - DESIGN SERVICES

RIVER ROAD INTERCEPTOR SEWER
AND
PARADISE HILLS INTERCEPTOR SEWER - PHASE II
GRAND JUNCTION/MESA COUNTY, COLORADO

RIVER ROAD INTERCEPTOR SEWER:

<u>Classification</u>	<u>Estimated Manhours</u>	<u>Rate</u>	<u>Total Direct Labor</u>
Principal	200	\$18.00	\$ 3,600
Environmental Engineer/ Project Manager	740	13.05	9,657
Structural Engineer	320	9.75	3,120
Civil Engineer	660	9.50	6,270
3-Man Survey Crew	400	17.00	6,800
Draftsman	1,600	5.75	9,200
Technician	360	8.35	3,006
Stenographic	160	4.75	760
	Sub-Total		<u>\$42,413</u>

PARADISE HILLS INTERCEPTOR SEWER - PHASE II:

Principal	20	\$18.00	\$ 360
Environmental Engineer/ Project Manager	40	13.05	522
Civil Engineer	100	9.50	950
3-Man Survey Crew	104	17.00	1,768
Draftsman	200	5.75	1,150
Technician	20	8.35	167
Stenographic	28	4.75	133
	Sub-Total		<u>\$ 5,050</u>

TOTAL DIRECT LABOR \$47,463

Henningson, Durham & Richardson
Consolidated Overhead History*

Year Ending Year Ending Year Ending
May 31, 1974 May 31, 1975 May 31, 1976

	Year Ending May 31, 1974	Year Ending May 31, 1975	Year Ending May 31, 1976
<u>Payroll</u>			
Sick Leave			
Vacation			
Holiday			
Retirement - ESOP			
Group Insurance - WC			
Payroll Taxes			
Total Payroll	21.95%	23.51	35.06
<u>General and Administrative</u>			
*Business Development Expenses			
*Business Development Materials			
Renderings & Photos			
Professional Cards			
Conferences & Meetings			
*Travel			
*Airplane			
Auto			
Subscriptions			
Dues			
*Donations			
Employee Relations			
Building Rental			
Equipment Rental			
Auto & Airplane Rental			
Computer Expense			
Taxes - General			
*Depreciation & Amortization			
Office Expense			
Drafting Room Expense			
Equipment Maintenance			
Building Maintenance			
Telephone			
Postage			
Insurance - General			
*Insurance - Life			
Legal, Audit, Etc.			
Printing			
*Bad Debts			
Relocation Expense			
*Indirect Labor			
Miscellaneous			
State Income Taxes			
Total General and Administrative	91.10%	104.07	105.81
Total in relation to direct labor	113.05%	127.58	140.87

* Overhead determined by U.S. Government allowed items only. Overhead items not allowed in U.S. Government contracts i.e. bad debts, donations, etc. have been deleted. Actual operating overhead without these deductions for year ending May 31, 1976 was 152%. For additional information please contact Robert J. Jerabek, Controller, 8404 Indian Hills Dr., Omaha, Nebraska 68124 (402-399-1000)

Date: 1-31-77

By: Robert J. Jerabek, Treasurer