

PROJECT MANUAL
Bid No. B-22-04

GRANT COUNTY, NEW MEXICO
BATAAN MEMORIAL IMPROVEMENTS
Fort Bayard, New Mexico



The technical material and data contained in this Project Manual were prepared under the supervision and direction of the undersigned, whose seal as a Professional Architect, licensed to practice in the State of New Mexico, is affixed below.



8/26/21

PROJECT MANUAL

Bid No. B-22-04

GRANT COUNTY, NEW MEXICO

BATAAN MEMORIAL IMPROVEMENTS

Fort Bayard, New Mexico

GRANT COUNTY COMMISSION

Chris Ponce, Chairman
Javier Salas, Member
Alicia Edwards, Member
Gerald W. Billings, Jr., Member
Harry Browne, Member

COUNTY CHIEF PROCUREMENT OFFICER

Randy J. Hernandez
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ARCHITECT

Mark Richard & Associates
Bayard, New Mexico



October 12, 2021

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ADVERTISEMENT FOR BIDS

The County of Grant is requesting bids for: Bataan Memorial Improvements until 3:00 p.m., November 10, 2021, at the Grant County Administration Bldg, 1400 Highway 180 East, Silver City, NM 88061. The Work involves construction of an accessible concrete ramp with decorative screen, concrete flatwork, small concrete structure and miscellaneous sitework.

Bidding Documents may be examined at the office of Mark Richard & Associates, 320 Peru St., Bayard, New Mexico, phone 575-537-5988 or online at www.grantcountynm.gov. Bona fide prime bidders may obtain two (2) sets of the Project Documents from the Architect's office. No partial sets shall be issued. Sub-bidders may obtain one (1) set of Project Manual from the Architect.

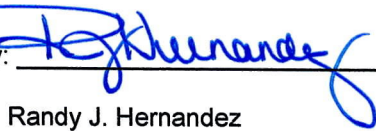
A non-mandatory, pre-bid conference will be held at the site, located at 33 Fort Bayard Road, Santa Clara, NM 88026 on October 26, 2021, at 2:00 p.m.

A certified check or bank draft payable to Grant County, U.S. Government Bonds, or a satisfactory Bid Bond executed by the bidder and acceptable surety in an amount equal to five percent (5%) of the bid shall be submitted with each bid. Subcontractors List and Non-Collusion Affidavit shall also be furnished.

The successful bidder shall be required to furnish and pay for satisfactory Performance and Payment Bonds. Attention is called to the provisions for Equal Employment Opportunity as set forth in these documents and not less than the minimum salaries and wages as set forth in the specifications must be paid on this project.

The County reserves the right to reject any or all bids and to waive any informalities in the bidding. No bid shall be withdrawn for a period of forty-five (45) days subsequent to the opening of bids without consent of the County.

By: _____



Randy J. Hernandez
Chief Procurement Officer
Grant County, New Mexico
575-574-0016
rhernandez@grantcountynm.gov

Date _____

10/12/2021

BIDDING SCHEDULE

This Schedule shall be followed. The Contractor shall maintain it, unless approval by Grant County is obtained. The Grant County Administration Building is located at 1400 Highway 180 East, Silver City, New Mexico.

AdvertisementOctober 12, 2021

Pre-Bid Conference (2:00 p.m., Bataan Memorial, Fort Bayard), non-mandatoryOctober 26, 2021

Deadline to Submit Questions to County Chief Procurement Officer..... November 2, 2021

Addendum Issued.....November 4, 2021

Bid Opening (3:00 p.m. Local Time).....November 10, 2021

Contract Award (Notice to Proceed).....November 18, 2021

Commencement of the Work (Anticipated).....December 2, 2021

Substantial Completion (Anticipated).....March 17, 2022

NOTE: These dates represent a tentative schedule of events. The County reserves the right to modify these dates at any time, with appropriate notice to prospective bidders.

INSTRUCTIONS TO BIDDERS

1. BID FORMS

A. All bids must be submitted on forms furnished or as otherwise approved, and shall be subject to all requirements of the Project Manual.

B. Bid Documents shall be sealed in an envelope which shall be clearly labeled with the words "Bid Documents," and show the project name, name of bidder, and date and time of opening.

C. The Forms for Bids are included in the Specifications. These forms shall be used by the General Contractor.

D. The Bid submission shall include the following documents:

- a. The Form of Bid, completed, dated, and signed;
- b. Bid Bond or other bid guaranty properly executed;
- c. Non-collusive Affidavit properly executed;
- d. Subcontractor List;
- e. Schedule of Values;
- f. Application for Preference (optional).

2. INTERPRETATIONS

The County of Grant shall be referred to as "Owner." Every request for an interpretation shall be made in writing to the Architect and any inquiry received by the date on the Bidding Schedule prior to the date fixed for opening bids will be given consideration. Addenda will be issued, but it shall be the bidder's responsibility to make inquiry as to addenda issued. All such addenda shall become a part of the contract and all bidders shall be bound by such addenda, whether or not received by the bidders.

3. BID GUARANTY

The Bid must be accompanied by a bid guaranty which shall not be less than five percent (5%) of the amount of the bid, and at the option of the bidder may be a certified check, bank draft, U.S. Government bond at par value, or a bid bond secured by a surety company. Certified check or bank draft must be made payable to the order of the Owner. The bid guaranty shall insure the execution of the contract and the furnishings of performance and payment bond or bonds by the successful bidder, all as required by the Specifications. The bid guaranty of unsuccessful bidders will be returned as soon as practicable after the opening bids.

4. NON-COLLUSION AFFIDAVIT

Each person submitting a bid for any portion of the work contemplated by the bidding documents shall execute an affidavit, in the form provided, to the effect that he has not colluded with any other person, firm or corporation in regard to any bid submitted. Such affidavit shall be attached to the bid.

5. BIDDER'S CONSTRUCTION EXPERIENCE

Before a bid is considered for award, the bidder may be requested to submit a statement regarding their previous experience in performing comparative work, their business and technical organization, financial resources and current construction license(s).

6. TIME FOR RECEIVING BIDS

Bids received prior to the time of opening will be securely kept, unopened. The officer whose duty it is to open them will decide when the specified time has arrived and no bid received thereafter will be considered, regardless of delays. No responsibility will attach to an officer for the premature opening of a bid not properly addressed and identified.

7. OPENING OF BIDS

At the time and place fixed for the opening of bids, every bid received within the time fixed for receiving bids will be publically opened and recorded, irrespective of any irregularities therein. Bidders and other persons properly interested may be present, in person or by representative.

8. WITHDRAWAL OF BIDS

Bids may be withdrawn on request dispatched by the bidder in time for delivery in the normal course of business prior to the time fixed for opening. Negligence on the part of the bidder in preparing their bid confers no right of withdrawal or modification of their bid after such bid has been opened. No bid shall be withdrawn for a period of 45 days subsequent to the opening of bids without the consent of the Architect.

9. AWARD OF CONTRACT: REJECTION OF BIDS

A. The Contract will be awarded to the responsible Bidder submitting the lowest Proposal, plus selected Alternates, complying with the conditions of the Invitation for Bids, provided their Bid is reasonable and it is in the interest of the Owner to accept it. The Owner may reject all Bids or may award the Contract on the Base Bid combined with such Additive Alternates necessary to come within the funds available. The Bidder to whom the award is made will be notified at the earliest practical date. The Owner, however, reserves the right to reject any and all Bids and to waive any informality in Bids received whenever such rejection or waiver is in the interest of the Owner.

B. The County also reserves the right to reject the bid of any bidder who has previously failed to perform properly, or to complete on time, contracts of a similar nature; who is not in a position to perform the contract; or who has habitually and without just cause neglected the payment of bills or otherwise disregarded his obligations to subcontractors, material men or employees.

C. The ability of a bidder to obtain a performance bond shall not be regarded as the sole test of such bidder's competency or responsibility.

10. PERFORMANCE BOND, EXECUTION OF CONTRACT

A. Subsequent to the award and within ten (10) days after the prescribed forms are presented for signature, the successful bidder shall execute and deliver to the Architect a contract in the form furnished in such number of counterparts as the Owner may require.

B. Having satisfied all conditions of award as set forth elsewhere in these documents, the successful bidder shall, within the period specified above, furnish bond(s) in a penal sum of at least the full amount of the contract as awarded, in the form included in the specifications, which secures the faithful performance of the contract and for the payment of all persons, firms or corporations to whom the Contractor may become legally indebted for labor, materials, tools, equipment, or services, of any nature, employment or used by him in performing the work. Such bond(s) shall bear the same date as, or a date subsequent to, the date of the contract.

C. On each such bond, the rate of premium shall be slated, together with the total amount of the premium charged. The current power of attorney for the person who signs for any surety company shall be attached to such bond.

D. The failure of the successful bidder to execute such contract and to supply the required bond within ten days after the prescribed forms are presented for signature, or within such extended period shall constitute a default. The Owner may award the contract to the next responsible bidder or re-advertise for bids, and may charge against the bidder the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid guaranty.

E. The Surety on the Performance and Payment bond must be authorized to transact a fidelity and surety business in the State where the project is located and must either (1) be on the Treasury Department list, or (2) submit a signed and sworn statement by its president and secretary showing its assets, liabilities, paid-up capital and paid-in surplus, together with a certification by its president showing that it maintains on deposit with the Insurance Commission, or other proper financial officer of the State in which it is incorporated, or of any other State of the United States, for the protection of its policy holders in the U.S., legal investments having a current market value of not less than \$100,000.00, provided that the amount of such bond shall not exceed ten percent (10%) of the paid-up capital and surplus.

11. EQUAL EMPLOYMENT OPPORTUNITY

Attention is called to the Equal Employment Opportunity provisions of the Contract (paragraph 33 of the General Conditions) and the requirements for affirmative action by the Contractor thereunder.

12. PRE-CONSTRUCTION CONFERENCE

Either before or soon after the actual award of the Contract (but in any event prior to the start of construction), the Contractor or his representative shall attend a Pre-Construction Conference with representatives of the Owner and the Architect. The Conference will serve to acquaint the participants with the general plan of contract administration and requirements under which the construction operation is to proceed.

13. GROSS RECEIPTS TAX

The Contractor shall be responsible for paying all applicable gross receipts tax. This tax and all other applicable federal, state and local taxes shall be included within the bid and additive alternates (if any) unless indicated otherwise on the Bid Form.

14. APPLICATION FOR PREFERENCE

A New Mexico Contractor may choose to submit an application for in-state preference. A form is enclosed herein. If the contractor is already a New Mexico registered vendor, he/she may submit a valid registration number, name of company and official signature only on the first page of the form (items 1 through 9).

15. LICENSED CONTRACTORS

All Contractors and sub-contractors shall be currently licensed by the State of New Mexico to apply their trade. They shall be licensed to perform the Work required by the Contract Documents, and shall continue to be so licensed for the term of the Contract.

16. SUBCONTRACTORS

A. The bidder shall list the Subcontractors they propose to use for all trades or items on the Subcontractor

Listing form attached to the Bidding Documents. Pursuant to Chapter 18, laws of 1988, 2nd Session relating to construction industries; enacting the subcontractor fair practices act, Section 1 through 12. The legislature finds that the practices of bid shopping and bid peddling in connection with the construction, alteration and repair of public works projects often result in poor quality of material and workmanship to the detriment of the public, deprive the public of the full benefits of fair competition among contractors and subcontractors and lead to insolvencies and loss of wages to employees.

B. A Subcontractor shall provide a performance and payment bond on a public works building project if the subcontractor's contract (to the Contractor) for work to be performed on a project is fifty thousand dollars (\$50,000.00) or more. Failure of a Subcontractor to provide required bond shall not subject the Owner to any increase in cost due to approved substitution of Subcontractor.

17. NOTICE OF AWARD

A written Notice of Award shall be issued by the Owner after review and approval of the bid and related documents by the Owner with reasonable promptness (13-1-100 and 13-1-108, NMSA 1978).

18. CANCELLATION OF AWARD

When in the best interest of the public, the Owner may cancel the award of any contract at any time before the execution of said contract by all parties without any liability against the Owner.

19. PROTESTS

Any bidder, offerer or contractor who is aggrieved in connection with this procurement (Bid) may protest to the Owner's Central Purchasing Agent and the Owner in accordance with the requirements of General Services Department Rule 93-601. The protest should be made in writing within twenty-four (24) hours after the facts or occurrences giving rise thereto, but in no case later than fifteen (15) calendar days after the facts or occurrences giving rise thereto (13-1-172, NMSA 1978). The Owner's Central Purchasing Agent or his designee shall have the authority to take any action reasonably necessary to resolve a protest of an aggrieved bidder, offerer, or contractor concerning a procurement. The Owner's Central Purchasing Agent or his designee shall promptly issue a determination relating to the protest. A copy of the determination issued under Section 13-1-175, NMSA 1978 of the Procurement Code shall immediately be mailed to the protestant and other bidders or offerers involved in the procurement (13-1-176, NMSA 1978).

20. POST-BID SUBMITTALS

Within ten (10) days of Notice of Award and prior to construction, the following shall be submitted to the Design Professional:

A. Contractor's required bonds and Certificate of Insurance;

B. For Owner's consideration for approval, a resume and Statement of Qualification of proposed Superintendent.

C. Signed Subcontractors List including contract amount of each, evidence of required bonds, costs of each bond, and beneficiary of each bond; evidence of DOL registration, evidence of CID licensure;

D. Assignment of Antitrust Claims (required for the Contractor, all Subcontractors, and all Suppliers);

E. Certificate of Insurance;

F. W-9 Form;

G. Evidence of other bonds or documents as specified in the Bidding Documents; and

H. Schedule of Values and required supporting data in accordance with the General Conditions of the Construction Contract.

GENERAL CONDITIONS

- 1.1 The "General Conditions of the Contract For Construction," AIA Document A-201, fourteenth edition, 1987, Articles 1 through 14 inclusive, is hereby made part of the specifications the same as if reproduced here in full except as modified, rescinded, or supplemented by Supplementary Conditions which are not altered by Special Conditions shall remain in effect as published. Copies of the AIA General Conditions may be examined at the office of the Architect.

SUPPLEMENTARY CONDITIONS

- 1.1 The following supplements shall modify the General Conditions. Where any portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

1.2 ARTICLE 10; PROTECTION OF PERSONS AND PROPERTY

10.2 Safety of Persons and Property

10.2.4.1 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary, the Contractor shall give the Owner reasonable advance notice.

1.3 ARTICLE 11; INSURANCE AND BONDS

11.1 Contractor's Liability Insurance

11.1.1.8 Liability Insurance shall include all major divisions of coverage and be on a comprehensive basis including:

1. Premises Operations (including X, C and U coverages as applicable)
2. Independent Contractors' Protective
3. Products and Completed Operations
4. Personal Injury Liability with Employment Exclusion deleted.
5. Contractual, including specified provision for Contractor's obligation under Paragraph 3.18.
6. Owned, non-owned, and hired motor vehicles.
7. Broad Form Property Damage including Completed Operations.

11.1.1.9 If the General Liability coverages are provided by a Commercial General Liability Policy on a claims-made basis, the policy date or Retroactive Date shall predate the Contract; the termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of coverages required to be maintained after final payment, certified in accordance with Subparagraph 9.10.2

Add the following Clause 11.1.2.1 to 11.1.2:

11.1.2.1 The insurance required by Subparagraph 11.1.1 shall be written for not less than the following limits, or greater if required by law.

1. Workmen's Compensation: Statutory; Employer's Liability: \$500,000.00
2. Public Liability (per person/per occurrence)

- A. Bodily and Personal Injury: \$500,000.00 CSL
- B. Property Damage: \$250,000.00
- 3. Automobile Liability (per person/per occurrence)
 - A. Bodily Injury: \$500,000.00 total CSL
 - B. Property Damage: \$250,000.00

1.4 ARTICLE 13; TERMINATION OR SUSPENSION OF THE CONTRACT

Add the following Paragraph 13.4 to Article 13:

13.4 Termination by the Owner for Convenience

13.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Contractor shall then:

- .1 Cease operations as directed by the Owner in the notice;
- .2 Take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 Terminate all existing Subcontracts and purchase orders and enter into no further Subcontracts and purchase orders, except for Work directed to be performed prior to the effective date of termination stated in the notice.

13.4.2 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment from the Owner on the same basis provided in Subparagraph 13.1.2.

SPECIAL CONDITIONS

1. TIME FOR COMPLETION

Work shall be completed within 100 calendar days after receipt of Notice to Proceed.

2. LIQUIDATED DAMAGES

As actual damages for any delay in completion are impossible of determination, the Contractor and his sureties shall be liable for and shall pay to the Owner the sum of \$200.00 for each calendar day of delay until the work is completed and accepted.

3. COMMUNICATIONS

All notices, demands, requests, instructions, approval, proposals, and claims must be in writing. Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the Office of the Contractor stated on the signature page of the Contract. All papers required to be delivered to the Owner shall, unless otherwise specified in writing to the Contractor, be delivered to the Architect, and any notice to or demand upon the Owner shall be sufficiently given if so delivered or deposited in the United States mail in a sealed, postage-paid envelope.

4. PROTECTION OF PERSONS AND PROPERTY

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. Any property damaged in performing the Work shall be replaced by the Contractor with like or equal materials.

5. BOOKLETS AND MANUALS

Furnish all applicable current editions of booklets and manuals related to the equipment to be installed. These are to remain property of the Owner. Their use is intended as a reference and guide to be used by the Contractor, his employees, and subcontractors.

6. PAY REQUEST FORM

The form of Application for Payment shall be a notarized AIA Document G702, Application and Certification for Payment, supported by AIA Document G703, Continuation Sheet.

7. LAW PROVISIONS

Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted therein and the Contract shall be read and enforced as though it were inserted therein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

8. CONTRACTOR'S REPRESENTATIONS

The Contractor represents and warrants to the Owner:

1. That it is financially solvent and that it is experienced in and competent to perform the type of Work and to furnish plant, materials, supplies and equipment, to be so performed or furnished by it; and

2. That it is familiar with all Federal, State, and Municipal laws, rules, ordinances and regulations which may in any way affect the Work or those employed therein, including, but not limited to, any special acts relating to the Work or to the Project of which it is a part; and

3. That all Work required by the Contract Documents as is to be done by it can be satisfactorily performed and used for the purpose for which it is intended, and that such performance will not injure any person or damage any property.

4. That it has carefully examined the Site of the Work, and that, from its own investigations, it has satisfied itself as to the nature and location of the Work, the character, quality and quantity of surface and subsurface materials likely to be encountered, the character of equipment and other facilities needed for the performance of the Work, the general and local conditions, and all other materials which may in any way affect the Work or its performance.

9. PROTECTION OF WORK AND PROPERTY

The Contractor shall continuously maintain adequate protection of all its Work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. The Contractor shall make good any such damage, injury or loss, except such as maybe directly and solely due to the affirmative negligence of the Owner. The Contractor shall adequately protect adjacent property. The Contractor shall take all necessary precautions for the safety of employees on the Work, and shall comply with all applicable provisions of Federal, State and Municipal safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where the Work is being performed.

10. LIENS

Neither the final payment nor any part of the retained percentage shall become due until the Contractor shall deliver to the Owner a complete release of all liens arising out of this Contract, and an affidavit that the releases include all the labor and material for which a lien could be filed; but the Contractor may, if any Sub-Contractor refuses to furnish a release, furnish a bond satisfactory to the Owner to indemnify him against any lien. If any liens remain unsatisfied after all payments are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

11. ALLOWANCES

Refer to Section 01100 herein.



TYPE "A" - STREET, HIGHWAY, UTILITY & LIGHT ENGINEERING

Please refer to the base and fringe rate columns that pertain to the date your wage decision was approved. For instance, if your wage decision was approved on April 1, 2021, you will use the rates in the first two columns. If your wage decision was approved on May 10, 2021, use the third and fourth columns.

Trade Classification	Effective January 1, 2021 Through May,4 2021		Effective May 5, 2021	
	Base Rate	Fringe Rate	Base Rate	Fringe Rate
Bricklayer/Block layer/Stonemason	24.46	8.81	24.46	8.81
Carpenter/Lather	25.63	11.74	24.63	11.24
Carpenter- Los Alamos County	28.37	13.44	27.80	13.19
Cement Mason	17.42	6.81	17.42	6.81
Ironworker	27.35	17.49	27.00	15.75
Painter- Commercial	17.25	7.75	17.00	6.88
Plumber/Pipefitter	31.52	12.90	30.76	11.62
Electricians- Outside Classifications: Zone 1				
Ground man	23.74	13.16	23.27	12.67
Equipment Operator	34.06	15.94	33.39	15.35
Lineman/ Technician	40.07	17.57	39.28	16.91
Cable Splicer	44.08	18.65	43.21	17.95
Electricians-Outside Classifications: Zone 2				
Ground man	23.74	13.16	23.27	12.67
Equipment Operator	34.06	15.94	33.39	15.35
Lineman/ Technician	40.07	17.57	39.28	16.91
Cable Splicer	44.08	18.65	43.21	17.95
Electricians-Outside Classifications: Los Alamos				
Ground man	24.42	13.34	23.94	12.85
Equipment Operator	35.04	16.21	34.35	15.60
Lineman/ Technician	41.22	17.88	40.41	17.21
Cable Splicer	45.34	18.99	44.45	18.28



Laborers				
Group I- Unskilled	12.26	6.22	12.26	6.22
Group II- Semi-Skilled	12.56	6.22	12.56	6.22
Group III- Skilled	12.96	6.22	12.96	6.22
Group IV- Specialty	13.21	6.22	13.21	6.22
Operators				
Group I	19.15	6.54	18.79	6.34
Group II	20.11	6.54	19.72	6.34
Group III	20.21	6.54	19.82	6.34
Group IV	20.33	6.54	19.93	6.34
Group V	20.43	6.54	20.03	6.34
Group VI	20.62	6.54	20.21	6.34
Group VII	20.78	6.54	20.37	6.34
Group VIII	21.08	6.54	20.66	6.34
Group IX	28.80	6.54	28.16	6.34
Group X	32.15	6.54	31.41	6.34
Truck Drivers				
Group I-IX	16.67	8.27	16.45	7.87

NOTE: All contractors are required to pay SUBSISTENCE, ZONE AND INCENTIVE PAY according to the trade. Details are in a PDF attachment at WWW.DWS.STATE.NM.US. Search Labor Relations/Labor Information/Public Works/Prevailing Wage Rates.

For more information about the Subsistence, Zone, and Incentive Pay rates, or to file a wage claim, contact the Labor Relations Division at (505) 841-4400 or visit us online at www.dws.state.nm.us.

FORM OF CONTRACT

1. The contract shall be a "STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR" where the basis of payment is a stipulated sum. (AIA Document A101-1987)
2. Article 1: The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to the execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, these form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than Modifications, appears in Article 9.
3. Other articles include Definition of the Work, Commencement, Substantial Completion dates, Contract Sum, Progress Payments, Final Payment, Miscellaneous Conditions, Termination, and Enumeration of Contract Documents.
4. A copy of the contract may be examined at the office of the Architect.

THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A311

Performance Bond

KNOW ALL MEN BY THESE PRESENTS: that

(Here insert full name and address or legal title of Contractor)

as Principal, hereinafter called Contractor, and,

(Here insert full name and address or legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto

(Here insert full name and address or legal title of Owner)

as Obligee, hereinafter called Owner, in the amount of

Dollars (\$ _____),

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Contractor has by written agreement dated

20____, entered into a contract with Owner for

(Here insert full name, address and description of project)

in accordance with Drawings and Specifications prepared by

(Here insert full name and address or legal title of Architect)

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

PERFORMANCE BOND

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly

1) Complete the Contract in accordance with its terms and conditions, or

2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as Work progresses (even though there should be a default or a succession of

defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of the Owner.

Signed and sealed this

day of

20

(Witness)

_____ (Principal) (Seal)
_____ (Title)

(Witness)

_____ (Surety) (Seal)
_____ (Title)

THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A311

Labor and Material Payment Bond

THIS BOND IS ISSUED SIMULTANEOUSLY WITH PERFORMANCE BOND IN FAVOR OF THE OWNER CONDITIONED ON THE FULL AND FAITHFUL PERFORMANCE OF THE CONTRACT

KNOW ALL MEN BY THESE PRESENTS: that

(Here insert full name and address or legal title of Contractor)

as Principal, hereinafter called Principal, and,

(Here insert full name and address or legal title of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto

(Here insert full name and address or legal title of Owner)

as Obligee, hereinafter called Owner, for the use and benefit of claimants as hereinbelow defined, in the

amount of

(Here insert a sum equal to at least one-half of the contract price)

Dollars (\$ _____),

for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Principal has by written agreement dated _____

20 _____

, entered into a contract with Owner for

(Here insert full name, address and description of project)

in accordance with Drawings and Specifications prepared by

(Here insert full name and address or legal title of Architect)

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

LABOR AND MATERIAL PAYMENT BOND

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: the Principal, the Owner, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial

accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this

day of

20

	}	(Principal)	(Seal)
(Witness)		(Title)	
	}	(Surety)	(Seal)
(Witness)		(Title)	

BID FORM
BATAAN MEMORIAL IMPROVEMENTS
Bid No. B-22-04

To: County of Grant, New Mexico

Commissioners:

1. The undersigned, having carefully examined the local conditions affecting the cost of the work, and with the Project Manual (including Advertisement for Bids, Instructions to Bidders, Bid Form, the Form of Bid Bond, the Form of Non-Collusion Affidavit, the Form of Contract, the Forms of Performance and Payment Bonds, the General Conditions, the Special Conditions, the Technical Specifications and the Drawings), and Addenda, if any thereto, as prepared by Mark Richard & Associates, and on file in the office of said Architect, hereby propose to furnish all labor, materials, equipment, and services required to construct and complete Project in accordance with the Contract Documents all in accordance herewith, for the sum of:

Base Bid Description: New accessible ramp, concrete wall with decorative metal panels, concrete flatwork, clear existing vegetation, install sand "court," river rock, benches, and concrete structure (box car), etc.

Base Bid (not including Gross Receipts Tax)

_____ (\$ _____)
(Numerical)

Additive Alternate One description: Bamboo posts (65).

Additive Alternate Two description: Hell ships.

Additive Alternate Three description: "Box Car" bullet holes (35).

Additive Alternate Four description: \$10,000.00 Allowance.

Additive Alternate One (not including Gross Receipt Tax)

_____ (\$ _____)
(Numerical)

Additive Alternate Two (not including Gross Receipt Tax)

_____ (\$ _____)
(Numerical)

Additive Alternate Three (not including Gross Receipt Tax)

_____ (\$ _____)
(Numerical)

Additive Alternate Four (not including Gross Receipt Tax)

_____ (\$ _____)
(Numerical)

THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A310

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we _____
(Here insert full name and address or legal title of Contractor)

as Principal, hereinafter called the Principal, and _____
(Here insert full name and address or legal title of Surety)

a corporation duly organized under the laws of the State of _____
as Surety, hereinafter called the Surety, are held and firmly bound unto _____
(Here insert full name and address or legal title of Owner)

as Obligee, hereinafter called the Obligee, in the sum of

Dollars (\$ _____),

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for _____
(Here insert full name, address and description of project)

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____ 20____

(Witness)

(Principal) (Seal)

(Title)

(Witness)

(Surety) (Seal)

(Title)

SCHEDULE OF VALUES

_____ General Contractor

Project: _____

Contractor shall fill in all blanks. Include overhead and profit for each item. Describe other work items.

<u>ITEM</u>	<u>SUBTOTAL COST</u>
Clearing and Grubbing	_____
Excavating	_____
Concrete ramp	_____
Ramp handrails	_____
Decorative metal panels	_____
Concrete flatwork	_____
River rock	_____
Sand court	_____
Box car	_____
Site benches	_____
Repair and paint mural wall.....	_____
Signage	_____
Guard railing (60 LF)	_____
Laboratory testing	_____
Other	_____

TOTAL BASE BID AMOUNT (not including Gross Receipts Tax)

_____ certifies the amounts as correct and properly distributed.
(Contractor)

SUBCONTRACTOR LIST

TRADE / WORK

NAME CITY / STATE

Irrigation System Removal

Marker Demolition

Excavation

Filling & Grading (sand & river rock)

Weed Barrier/Herbicide

Site Furniture

Concrete Flatwork

Concrete Retaining Wall

Concrete Structure (Box Car)

Decorative Metal Panels

Handrails/Guard Railing

Signage

Painting

Bamboo Posts

Laboratory Testing

Other

NON-COLLUSION AFFIDAVIT

STATE OF: _____

COUNTY OF: _____

_____, being first duly sworn, deposes and says:

That he is _____, the Party making
(a partner or officer of firm, corporation, etc.)
the foregoing Proposal or Bid, and attests to the following:

That Affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the Affiant whose services in connection with the construction of the public building or project or in securing the public contract were in the regular course of their duties for Affiant; and

That no part of the contract price received by Affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the Affiant whose services in connection with the construction of the public building or project were in the regular course of their duties for Affiant.

That such proposal or bid is genuine and not collusive or sham; that said Bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any Bidder or person, to put in a sham bid or to refrain from bidding, and has not in any manner directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of Affiant or of any other Bidder, or to fix any overhead, profit, or cost element of said bid price, or of that of any other Bidder, or to secure any advantage against Grant County, New Mexico, or any person interested in the proposed contract; and that all statements in said proposal or bid are true.

(Signature/s)

SUBSCRIBED AND SWORN TO before me this the _____ day of _____, 20_____.

Notary Public

My commission expires:

APPLICATION FOR PREFERENCE

This application for preference is pursuant to Sections 13-1-21, 13-1-22 and 13-4-2 NMSA 1978.

PART I - GENERAL INFORMATION (Must be completed by all applicants.)

1. Name of Business: _____
2. Street Address: _____
3. Post Office Box / Mailing Address (If different from question 2): _____
4. City: _____ State: _____ Zip: _____
5. Telephone Number: (____) _____
6. New Mexico Tax Number: _____ (May be obtained by contacting New Mexico Taxation and Revenue, P.O. Box 630, Santa Fe, NM 87509-0630 or Telephone (505) 827-00946.
7. Nature of Business (e.g., automobile dealer, electrical contractor, etc.): _____
8. Type of Business Organization (check one):
 - _____ Sole Proprietorship
 - _____ Partnership (general or limited)
 - _____ Corporation
 - _____ Trust
 - _____ Public Telecommunications Provider
 - _____ Other Legal Entity
9. If the business is a corporation, furnish the name and address of the statutory agent: _____

PART II - RESIDENT BUSINESS PREFERENCE

1. Is the business authorized to do business under the laws of the State of New Mexico? _____
2. (a) In what State does the business earn the largest percentage of its revenues? _____
(b) What percentage is earned in New Mexico? _____
3. (a) In what State is the largest percentage of the capital assets of the business located? _____
(b) What percentage is located in New Mexico? _____
4. (a) In what State does the largest percentage of full-time equivalent employees of the business reside permanently? _____
(b) What percentage resides permanently in New Mexico? _____
(c) How many full-time employees reside permanently in New Mexico? (Number, not percentage) _____

PART III - RESIDENT CONTRACTOR PREFERENCE

1. In what State does the business maintain its principal office? _____
2. (a) In what State does the business earn the largest percentage of its revenues? _____
(b) What percentage is earned in New Mexico? _____
3. (a) In what State is the largest percentage of the capital assets of the business located? _____

- (b) What percentage is located in New Mexico? _____
4. (a) In what State does the largest percentage of full-time equivalent employees of the business reside permanently? _____
 (b) What percentage resides permanently in New Mexico? _____
 (c) How many full-time employees reside permanently in New Mexico? (Number, not percentage) _____
5. Are all vehicles owned/leased by the business properly licensed with the New Mexico Motor Vehicles Division?

PLEASE INITIAL RATHER THAN CHECKING YOUR YES / NO RESPONSE

6. If the business is a SOLE PROPRIETORSHIP, answer the following question:
 (a) Is the sole proprietor a citizen of and domiciled in New Mexico? _____ Yes _____ No
7. If the business is a PARTNERSHIP, general or limited, answer the following questions:
 (a) Are the partners who own a majority beneficial interest in the partnership domiciled in New Mexico?
 _____ Yes _____ No
 (b) If one or more partners are corporations, is a majority of the outstanding shares of common stock of each corporation beneficially owned by individual citizens (i.e., actual persons rather than corporations or other legal entities) who are domiciled in New Mexico? _____ Yes _____ No
8. If the business is a CORPORATION, answer the following questions:
 (a) Is the corporation incorporated in New Mexico? _____ Yes _____ No
 (b) Is a majority of the outstanding shares of common stock of the corporation beneficially owned by one or more individual citizens (i.e., actual persons rather than corporations or other legal entities) who are domiciled in New Mexico? _____ Yes _____ No
9. If the business is a TRUST, answer the following question:
 (a) Is the majority of the beneficial interest of the trust owned by individual citizens (i.e., actual persons rather than corporations or other legal entities) who are domiciled in New Mexico? _____ Yes _____ No
10. If the business is a PUBLIC TELECOMMUNICATIONS PROVIDER as defined in the New Mexico Telecommunications Act, answer the following:
 (a) Has the business paid unemployment compensation to the Employment Security Department (Department of Labor) at the applicable experience rate for the business pursuant to the New Mexico Unemployment Compensation Law on no less than ten (10) employees who have performed services subject to contributions for the preceding two-year period? _____ Yes _____ No
11. If the business is any OTHER LEGAL ENTITY, answer the following:
 (a) Are the associates who own a majority beneficial interest in the entity domiciled in New Mexico?
 _____ Yes _____ No
 (b) If one or more associates are corporations, is a majority of the outstanding shares of common stock of each corporation beneficially owned by individual citizens (i.e., actual persons rather than corporations or other legal entities) who are domiciled in New Mexico? _____ Yes _____ No

NOTICE: A BUSINESS MUST HAVE ALL REQUIRED LICENSES FOR A PUBLIC WORKS CONTRACT AT THE TIME THE CONTRACT IS ADVERTISED FOR BIDS AND AT THE TIME BIDS ARE OPENED.

PART IV - CERTIFICATION (must be completed by all applicants)

I hereby certify that all statements made in this application are true and complete to the best of my knowledge, and I understand that misrepresentation of material facts will cause forfeiture of any right to resident preference. I agree to report to the State Purchasing Agent any changes in the facts which underlie the answers on this form.

Signature of Applicant

Date

SUBSCRIBED AND SWORN TO BEFORE ME THIS _____ DAY OF _____, 20_____.

STATE OF _____

COUNTY OF _____

Notary Public

My Commission expires:

(For Office use only)

RECOMMEND APPROVAL _____

APPROVED _____

RECOMMEND REJECTION _____

REJECTED _____

Vendor Registration Officer

State Purchasing Agent

Date

TECHNICAL SPECIFICATIONS

01050 PROJECT OVERVIEW

- 1.1 The existing memorial is located on the grounds of the Bataan Memorial Recreation Park near the entry to Fort Bayard. The work includes an accessible concrete ramp with decorative metal panels, concrete flatwork, removal of landscaping, new sand and river rock areas, site furniture, repair and general painting of mural wall, and small concrete enclosure with signage.
- 1.2 The recreation facility, not memorial, will be open for public use during construction. Safety is a concern. Temporary fencing may be necessary to limit project site access.
- 1.3 Contact representatives include:
 - Owner: Grant County
Priscilla Shoup, Planner
1400 Highway 180 East
Silver City, NM 88061
575-574-0007
 - Architect: Mark Richard & Associates, Inc.
Box 1258
Bayard, NM 88023
575-537-5988
- 1.4 Power and water are available near the site. Coordinate with Architect a staging area as necessary.
- 1.5 New Mexico Wage Rates are part of this document.
- 1.6 If discrepancy exists between Drawings and Specifications, the superior document shall apply. Contact Architect for clarification, if necessary.
- 1.7 Quality shall be emphasized throughout the project. All Work including labor and materials shall be first class. Inferior Work will not be acceptable.
- 1.8 Additive Alternates (4) are included in the project. Refer to the Bid form.

END OF SECTION

01085 APPLICABLE STANDARDS

- AASHTO – American Association of State Highway and Transportation Officials, 341 National Press Building, Washington, DC 20004.
- ACI - American Concrete Institute, Box 19150, Redford Station, Detroit, Michigan 48129.
- ADA – Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities, U.S. Department of Justice.
- AISC - American Institute of Steel Construction, Inc., 1221 Avenue of the Americas, New York, New York 10020.
- AISI - American Iron and Steel Institute, 1000 16th Street, NW, Washington, D.C. 20036.
- ANSI - American National Standards Institute (successor to USASI and ASA), 1430 Broadway, New York, New York 10018.
- APA – Engineered Wood Association, 7011 S. 19th St., Tacoma, WA 98466.
- ASTM - American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.
- AWI - Architectural Woodwork Institute, 1952 Isaac Newton Square W, Reston, VA 20190.
- AWS - American Welding Society, Inc., 2510 N.W. 7th Street, Miami, Florida 33125.
- AWWA - American Water Works Association, Inc., 6666 West Quincy Avenue, Denver, Colorado 80235.
- CRSI - Concrete Reinforcing Steel Institute, 228 North LaSalle Street, Chicago, Illinois 60610
- FM - Factory Mutual Engineering and Research Corporation, Box 668, Norwood, Massachusetts 02602.
- IBC - International Building Code, International Code Council, 4051 West Flossmoor Rd., Country Club Hills, IL 60478-5795.
- NAAMM - National Association of Architectural Metal Manufacturers, 1033 South Boulevard, Oak Park, Illinois 60302.
- NMBC - New Mexico Building Code, Construction Industries Division, Box 25101, Santa Fe, NM.
- NRCA – National Roofing Contractors Association, 8600 Bryn Mawr Avenue, Chicago, IL 60631.
- PCA - Portland Cement Association, 5420 Old Orchard Rd., Skokie, IL 60077.
- SSPC - Steel Structures Painting Council, 4400 5th Avenue, Pittsburgh, Pennsylvania 15213.
- TCNA – Tile Council of North America, Inc., P.O. Box 326, Princeton, New Jersey 08540.
- UL - Underwriters' Laboratories, Inc., 207 East Ohio Street, Chicago, Illinois 60611.
- WWPA - Western Wood Products Association, 1500 Yeon Building, Portland, Oregon 97204.

END OF SECTION

01085-1

01100 ALLOWANCES

1.1 GENERAL

The Contractor shall include in the Contract Sum those Allowances listed herein. Each allowance shall appear as a separate item on the Contractor's Schedule of Values (Application for Payment).

1.2 PURPOSE

The purpose of these Allowances is to provide funds for additional items of work or expenses.

1.3 AUTHORIZATION

The Contractor shall use the Allowance only as explicitly authorized in writing (Change Order) by the Architect.

1.4 ACCOUNTING

The funds designated for these Allowances shall include all overhead, profit, labor and equipment costs.

1.5 COORDINATION

Coordinate allowance work with related work to ensure that each selection is completely integrated and interfaces with related work. Submit proposals for allowance work as directed and in the manner specified for Change Orders. Indicate quantities, unit costs, total purchase amounts, delivery charges and trade discounts. Where requested, furnish detailed breakdown or quantity survey.

1.6 AMOUNT

The Contractor shall include in the bid a sum of \$10,000.00 (not including G/R taxes) to cover unforeseen circumstances or changes. The balance of the allowance not used shall be credited to the Owner.

END OF SECTION

01150 APPLICATIONS FOR PAYMENT

1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General, Supplementary and Special Conditions and other General Requirements apply to this Section.

1.2 SUMMARY

This Section specifies administrative and procedural requirements governing each prime Contractor's Application for Payment.

1.3 SCHEDULE OF VALUES

1. Coordinate preparation of the Schedule of Values (on form) with preparation of the Contractor's Construction Schedule.

2. Submit the Schedule of Values to the Architect at the earliest feasible date, but in no case later than 7 days before the date scheduled for submittal of the initial Application for Payment.

3. Fill out "Application and Certificate of Payment" form completely. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several line items. Round amounts off to the nearest whole dollar: the total shall equal the Contract Sum. For each part of the Work that may include materials or equipment, purchased fabricated, stored, but not yet installed, provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

4. Show line items for indirect costs and margins on actual costs, only to the extent that such items will be listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete including its total cost and proportionate share of general overhead and profit margin. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown as separate line items or distributed as general overhead expense.

5. Update the Schedule of Values when changes in the Contract Sum occur.

1.4 APPLICATIONS FOR PAYMENT

1. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid by the Owner.

2. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.

3. Payment Application Time is as indicated in the Agreement. The date for each progress payment is the 15th day of each month unless agreed upon otherwise. The period of construction Work covered by each Application for Payment is the period prior to the date for each progress payment and starting the day following the end of the preceding period.

4. Use AIA Document G 702 and Continuation Sheets G 703 as the form for Application for Payment.

5. Complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Owner. Incomplete applications will be returned without action.

6. Submit three executed copies of each Application for Payment to the Architect.

7. Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following:

- List of principal suppliers and fabricators.
- Schedule of Values.
- Contractor's Construction Schedule (preliminary if not final).
- Certificates of insurance and insurance policies.
- Performance and payment bonds (if required).

8. Following issuance of the Certificate of Substantial Completion (G704), submit an Application for Payment; this application shall reflect any Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work. Administrative actions and submittals that shall proceed or coincide with this application include:

- Permits and similar approvals.
- Warranties (guarantees) and maintenance agreements.
- Maintenance instructions.
- Change-over information related to Owner's occupancy, use, operation and maintenance.
- Final cleaning.
- Application for reduction, retainage, and Consent of Surety.
- Advice on shifting insurance coverages.
- List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.

9. Administrative actions and submittals which must precede or coincide with submittal of the final payment Application for Payment include the following:

- Completion of Project closeout requirements.
- Completion of items specified for completion after Substantial Completion.
- Assurance that unsettled claims will be settled.
- Assurance that Work not complete and accepted will be completed without undue delay.
- Transmittal of required Project construction records to Owner.
- Proof that taxes, fees, and similar obligations have been paid.
- Removal of temporary facilities and services.
- Removal of surplus materials, rubbish and similar elements.
- Completion of Final Walk-Through of premises and acceptance by Owner and Architect.

END OF SECTION

01300 SUBMITTALS AND SUBSTITUTIONS

- 1.1 Conform to all requirements of the General, Supplementary and Special Conditions.
- 1.2 Wherever possible throughout the Contract Documents, the minimally acceptable quality of workmanship and materials has been defined by manufacturer's name and catalog number, reference to recognized industry and government standards, or description of required attributes and performance.
- 1.3 To ensure that specified products are furnished and installed in accordance with design intent, procedures have been established for advance submittal of design data and for their review by the Architect. If AIA-201 General Conditions are part of the contract, refer to Sections 3.12.8 and 4.2.7.
- 1.4 Consecutively number all submittals. Accompany each with a letter of transmittal containing all pertinent information required for identification.

1.5 SUBMITTAL SCHEDULE

Within 10 days after award of Contract, and before any items are submitted for approval, submit to the Architect two (2) copies of a submittal schedule as follows: Compile a complete schedule of all submittals anticipated to be made during progress of the Work. Include a list of each type of item for which Contractor's Drawing, Shop Drawings, Certificates of Compliance, samples, guarantees, or other types of submittals are required. On approval by the Architect this schedule will become part of the Contract and the Contractor will be required to adhere to the schedule except when specifically otherwise permitted.

1.6 COORDINATION

Coordinate the schedule with all necessary subcontractors and material suppliers.

1.7 REVISION

Revise and update the schedule on a monthly basis as necessary to reflect conditions and sequences. Promptly submit any revised schedules to Architect for review.

1.8 SHOP DRAWINGS

Make all Shop Drawings accurately and to scale sufficient in size to show all pertinent aspects of the item and its method of connection to the work. Three copies of Shop Drawings shall be submitted for the review and approval of the Architect. These copies will be distributed as follows: Architect (1), Contractor (1) and Owner (1). Submit as many additional copies as are required for manufacturers and suppliers.

1.9 SAMPLES

Unless otherwise specified, submit all samples in the quantity which is required to be returned plus one which will be retained by the Architect.

1.10 MANUFACTURER'S LITERATURE

Where contents of submitted literature from manufacturers include data not pertinent to the submittal, clearly indicate which portion of the contents is being submitted for review. Submit the number of copies which are required to be returned plus two copies which will be retained by the Architect.

1.11 CERTIFICATES

Where certificates of compliance are specified, show on each certification the name and location of the Work, name and address the certificate applies, and name of the manufacturer. Certification shall be the form of letter or company-standard forms. Certificates shall be signed by an officer of the manufacturer. In addition, all laboratory test reports submitted with Certificates shall show date of testing, specified requirements for which testing was performed, and results of tests.

1.12 SUBSTITUTIONS

The Contract is based on the standards of quality established in the Contract Documents. All products proposed for use, including those specified by required attributes and performance, shall require approval by the Architect before being incorporated into the Work. Do not substitute materials, equipment, or methods unless such substitutions have been specifically approved for the Work by the Architect. Where the phrase "or equal" or "or equal as approved by the Architect" occurs in the Contract Documents, do not assume that materials, equipment, or methods will be approved as equal unless the item has been specifically approved for this Work by the Architect. The decision of the Architect shall be final.

END OF SECTION

01410 LABORATORY TESTING SERVICES

- 1.1 The Contractor will retain and pay the expenses of a Testing Agency, except as specified otherwise in the specifications, as an independent testing agency to perform the tests and inspections mentioned in the Contract Documents or as otherwise deemed necessary and appropriate. Name of testing agency shall be submitted to the Architect for approval.
- 1.2 Select a testing laboratory qualified in accordance with ASTM E329 "Recommended Practice for Inspection and Testing Agencies for Concrete" and "Practice for Inspection and Testing Agencies for Concrete and Steel Used in Construction," and as approved by the Architect. Refer to Section 03300.
- 1.3 Testing, when required, shall be in accordance with all pertinent codes, regulations and specified standards.
- 1.4 Provide all testing required within the increments of time essential to timely completion of the Work.
- 1.5 The Contractor shall pay for all inspections, tests and approvals called for in the Specifications and shall furnish samples for such tests and deliver them to the Testing Agency.
- 1.6 Testing Agency shall be used for, but not to be limited to, the following tests: Soil Compaction and Concrete Strength.
- 1.7 Tests of fill materials should be made at the following rates:
 1. Soil Density
 - A. One (1) in-place soil density per 2,500 square feet of fill area, but a minimum of two (2) per lift of compacted material, per ASTM D-1556, ASTM D-2167, or ASTM D-2922 and D-3017.
 - B. One (1) moisture-density curve per each type of material used according to ASTM D-1557.
 - C. One (1) sieve analysis and plasticity index per material used according to ASTM D-422 and D-4318.
 2. Concrete
Refer to Section 03300.
- 1.8 The Testing Agency shall distribute copies of all reports to the offices of the parties concerned as follows:
 - 2 copies to the Architect
 - 1 copy to the Contractor
 - 1 copy to the Supplier being tested

END OF SECTION

01500 TEMPORARY FACILITIES AND CONTROL

PART ONE - GENERAL

The Contractor shall provide the following specific items of temporary construction and services unless noted otherwise:

1.1 TEMPORARY TOILET

The Contractor shall furnish and install, and maintain temporary toilet near the site. Coordinate location with Architect.

1.2 PROTECTION OF WORK IN PLACE

Work in place that is subject to injury because of operations carried on adjacent thereto shall be covered, boarded up, or substantially enclosed with adequate protection. Permanent openings used as thoroughfares for the introduction of work and materials to the structure shall have heads, jams and sills well blocked and boarded. All forms of protection shall be constructed in such manner that on completion the entire work will be delivered to the Owner in unblemished condition.

1.3 TEMPORARY FENCE

Contractor shall provide a fence, as necessary. Coordinate with Architect.

1.4 No signs will be permitted on the Project except the project sign, (verify) identifying captions over offices, certain directional and warning signs required for safety and protection. Contractor shall take all necessary steps to prevent installation of any unauthorized signs and, should any appear, cause them to be removed immediately, and repair and re-paint any damage caused thereby without additional cost to the Owner.

1.5 REMOVAL OF TEMPORARY CONSTRUCTION

Temporary office facilities, toilets, storage sheds, and other construction of a temporary nature shall be removed from the site as soon as the progress of the Work will permit, and the portions of the site occupied by the same shall be properly restored.

1.6 PUMPING AND DRAINAGE

Surface or subsurface water or other fluids shall not be permitted to accumulate in excavations or in and about the premises. Should such conditions be encountered or develop, the fluid shall be controlled and suitably disposed of by means of temporary pumps, piping, drainage lines, troughs, ditches, dams, or other methods.

PART TWO - EXAMINATION OF SITE

Bidders are requested to visit the site, compare the Drawings and Specifications with any work in place, and inform themselves of all conditions, including other work, if any, being performed. Failure to visit sites will in no way relieve the successful bidder from the necessity of furnishing any materials or performing any work that may be required to complete work in accordance with Drawings and Specifications, without additional cost to the Owner.

2.1 Information respecting the site(s) of the Work given in Drawings or Specifications is believed to be reasonably correct, but the Owner does not warrant either the completeness or the accuracy of such information, and it is the responsibility of the Contractor to verify all such information independently and to make such other examinations of the conditions to be encountered during construction.

- 2.2 The Contractor acknowledges that he has investigated and satisfied himself as to the conditions affecting the work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads, uncertainties of weather, river stages, or similar physical conditions at the site, the information and conditions of the ground, the character of the equipment and facilities needed preliminary to and during prosecution of the Work. The Contractor further acknowledges that he has satisfied himself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site(s). Any failure by the Contractor to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the Work. The Owner assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the Architect.

PART THREE - ENGINEERING AND LAYOUT

- 3.1 The Contractor shall provide competent engineering services (as necessary) to execute the Work in accordance with the Contract requirements. He shall verify the figures shown on the survey and approach drawings before undertaking any construction work, and shall be responsible for the accuracy of the finished work.
- 3.2 The Owner has established, or will establish, such general reference points as will, in his judgment, enable the Contractor to proceed with the Work. If the Contractor finds that any previously established reference points have been destroyed or displaced, he shall promptly notify the Owner.
- 3.3 The General Contractor shall provide his subcontractors with all lines and grades necessary. The Contractor shall be solely responsible for this layout work.

END OF SECTION

01700 PROJECT CLOSEOUT

1.1 RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other General Requirements Sections that apply.

1.2 SUMMARY

1. This Section specifies administrative and procedural requirements for Project Closeout, including but not limited to:

- Inspection procedures;
- Project record document submittal;
- Final cleaning.

2. Closeout requirements for specific construction activities are included in the appropriate Technical Sections.

1.3 SUBSTANTIAL COMPLETION

1. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

- A. In the Application for Payment at Substantial Completion show 100 percent completion for the Work. Include supporting documentation and a statement showing an accounting of changes to the Contract Sum.

- B. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.

- C. Advise Architect of Owner's pending insurance change-over requirements.

2. Reinspection procedure: The Architect will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed. The Architect will prepare a certificate of final acceptance, or advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance. If necessary, reinspection will be repeated.

1.4 CLOSEOUT PROCEDURES

Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representative. Include a detailed review of the following:

- Identifications systems
- Control sequences
- Hazards
- Cleaning
- Maintenance and similar agreements

1.5 FINAL CLEANING

1. General cleaning during construction is required by the General Conditions.

2. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.

A. Remove labels that are not permanent labels.

B. Clean transparent materials. Remove substances that are noticeable vision-obscuring materials. Replace damaged transparent materials.

C. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete broom clean.

3. Remove temporary protection and facilities installed for protection of the Work during construction.

4. Remove waste materials from the site and dispose of in a lawful manner. When extra materials of value remain, arrange for disposition of these materials as directed.

1.6 PRIOR TO FINAL PAYMENT

Provide or submit the following:

A. Certificate of Occupancy.

B. Affidavit of Payment of Debts and Claims.

C. Subcontractor's Release of Liens.

D. Consent of Surety to Final Payment.

END OF SECTION

02010 SUBSURFACE CONDITIONS

PART ONE - GENERAL

1.1 DESCRIPTION OF WORK

1. At the Memorial "Platform," the existing turf and irrigation system are to be removed. Soil shall be removed to a depth of 12 IN, where indicated.
2. Bidders should visit the site and acquaint themselves with all existing conditions. Prior to bidding, bidders may make their own subsurface investigations to satisfy themselves as to site and subsurface conditions, but all such investigations shall be performed only under time schedules and arrangements approved in advance by the Architect.

1.2 QUALITY ASSURANCE

1. Soil engineer may be retained by the Owner to observe performance of work in connection with excavating, trenching, filling, backfilling, and grading.
2. Adjustment of work: Re-adjust all work performed that does not meet technical or design requirements, but make no deviations from the Contract Documents without specific and written approval from the Architect.

PART THREE - EXECUTION

3.1 TURF AREA

1. The excavation of the turf area should be the only condition potentially affecting existing subsurface lines (electric power).
2. The existing sprinkler system shall be disconnected and removed. Irrigated areas (off site) shall remain operational.

3.2 ARCHITECT APPROVAL

The Architect shall be informed of conditions prior to removal of any existing piping. Rerouting of lines, etc., shall be accomplished only after review and approval of the Architect.

END OF SECTION

02100 CLEARING

PART ONE - GENERAL

1.1 SCOPE

Complete Site Clearing Work as shown on Drawings and as specified herein.

1.2 CONDITIONS AT SITE

Execute all work in an orderly and careful manner with due consideration for any and all surrounding areas, plantings or structures which are to remain. Periodically water as required to allay dust and dirt. Protect any adjacent improvements from damage and replace any portions damaged through this operation.

PART TWO - PRODUCTS

PART THREE - EXECUTION

3.1 CLEARING AND GRUBBING

1. Clear and grub the premises of all subterranean or surface material, growth and the like as required to remove any obstruction to the work indicated on the drawings within the clearing and grading limits.
2. Grub the entire ground surface of any grass, weeds and plants down to 12 inches below present grades, except protect all trees and major root systems.
3. Remove any stones, stumps, and roots larger than 1" in diameter to a depth not less than 12" below the original grade level.
4. Fill and compact any holes left by removal or large stones per requirements of Section EXCAVATION, BACKFILLING AND GRADING.
5. The existing tree roots shall not be disturbed unless approved by Architect.

3.2 DISPOSAL

All materials cleaned or grubbed shall become the property of Contractor and be removed from the site by Contractor.

3.3 CLEAN-UP

Remove from the Site all rubbish, debris, etc., resulting from Work in this Section, except as otherwise specified above, per GENERAL CONDITIONS.

END OF SECTION

02220 EXCAVATING, FILLING AND GRADING

PART ONE - GENERAL

1.1 DESCRIPTION

1. This Work includes, but is not necessarily limited to:

- A. Excavating for footings and slabs;
- B. Filling and backfilling to attain indicated grades;
- C. Rough and finish grading of the site;
- D. Installing granular bed as indicated on Drawings;
- E. Installing river rock as indicated on Drawings.

2. Related work described elsewhere:

- A. 01410 Laboratory Testing Services
- B. 02010 Subsurface Conditions
- C. 02260 Landscape Geotextile

1.2 JOB CONDITIONS

1. Dust Control

A. Use all means necessary to control dust on and near the Work and on and near all off-site borrow areas if such dust is caused by the Contractor's operation during performance of the Work or if resulting from the condition in which the Contractor leaves the site.

B. Thoroughly moisten all surfaces as required to prevent dust being a nuisance to the public, neighbors, and concurrent performance of other work on the site.

2. Protection

A. Use all means necessary to protect all materials of this Section before, during, and after installation, and to protect all objects designated to remain.

B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

1.3 SUBMITTALS

Submit samples of proposed imported materials to Architect for approval.

PART TWO - PRODUCTS

2.1 FILL MATERIAL, GENERAL

1. All fill material shall be subject to the approval of the Architect.

2. For approval of fill material, notify the Architect at least four (4) working days in advance of intention to import material, designate the proposed borrow area, and permit the Architect to sample as necessary from the borrow area for the purpose of making acceptance tests to prove the quality of the material.

2.2 ON-SITE FILL MATERIAL

All on-site fill material shall be soil or soil-rock mixture which is free from organic matter and other deleterious substances. It shall contain no rocks or lumps over 6" in greatest dimension, and not more than 15% of the rocks or lumps shall be larger than 2 1/2" in greatest dimension. Plasticity index of 15 or less.

2.3 IMPORTED FILL MATERIAL

All imported fill material shall meet the requirements of Article 2.2 above and, in addition, shall be predominantly granular with a maximum particle size of 2" and a plasticity index of 12 or less.

2.4 SAND

Sand bed shall be clean mineral aggregate with particle size grading within the following limits. Thickness shall be a minimum of 12"

- A. Passing the 1" mesh: 80 to 100%
- B. Passing the #4 sieve: 40 to 100%
- C. Passing the #200 sieve: 0 to 25%

2.5 STRUCTURAL BACKFILL

Below structural elements, including ramps and exterior flatwork, all shall be backfilled with compacted soil. The fill materials shall be compacted to 95% of Modified Proctor density within twenty-four (24) inches of grade.

2.6 SAND COURT

Sand shall be clean (pit run or washed), fine grain conforming to ASTM C144, or as approved by Architect.

2.7 RIVER ROCK

Rip rap rock shall be 5 to 7o IN gray Mimbres River stone or approved equal.

2.8 OTHER MATERIALS

All other materials not specifically described but required for a complete and proper installation shall be as selected by the Contractor subject to the approval of the Architect.

PART THREE - EXECUTION

3.1 GENERAL

1. Prior to all work of this Section, Contractor shall become thoroughly familiar with the site, the site conditions, and all portions of the Work falling with this Section.

2. Backfilling prior to approvals:

A. Do not allow or cause any of the work performed or installed for this Section to be covered up or enclosed prior to all required inspections, tests, and approvals. Should any of the work be so enclosed or covered up before it has been approved, uncover all site work at no additional cost to the Owner.

B. After the work has been completely tested, inspected, and approved, make all repairs and replacements necessary to restore the work to the condition in which it was found at the time of uncovering, all at no additional cost to the Owner.

3.2 FINISH ELEVATIONS AND LINES

For setting and establishing finish elevations and lines, secure the services of a technician acceptable to the Architect. Carefully preserve all data and monuments set by the civil engineer and, if displaced or lost, immediately replace to the approval of the Architect and at no additional cost to the Owner.

3.3 EXCAVATING

1. Where depressions result from, or have resulted from, the removal of surface or subsurface obstructions, open the depressions to equipment working width and remove all debris and soft material as directed by the Architect.

2. Excavate other areas to grades shown on the Drawings. Where excavation grades are not shown on the Drawings, excavate as required to accommodate the installation.

3. Backfill and compact all over-excavated areas as specified for fill below, and at no additional cost to the Owner.

3.4 PREPARATION OF SUBGRADE (Ramp)

1. After the site has been cleared, stripped, and excavated to within 6" of the specified depths for recompaction, scarify the exposed surface to a minimum depth of 6", thoroughly moisture-condition, and compact to the requirements specified for fill below.

2. Prior to placement of fill, remove all ruts, hummocks and other uneven surfaces by surface grading.

3.5 EXCESS WATER CONTROL

1. During unfavorable weather conditions, do not place, spread, or roll fill material. Do not resume operations until moisture content and fill density are satisfactory to the Architect.

2. Provide berms or channels to prevent flooding of subgrade. Promptly remove all water collecting in depressions.

3. Where soil has been softened or eroded by flooding or placement during unfavorable weather conditions, remove all damaged areas and recompact as specified for fill and compaction below.

4. Dewatering

A. Provide and maintain at all times during construction ample means and devices with which to remove promptly and dispose of all water from every source entering the excavations or other parts of the Work.

B. Dewater by means which will ensure dry excavations and the preservation of the final line grades of bottoms of excavations.

3.6 FILL AND COMPACTION

1. Filling: After subgrade compaction has been approved by the Architect, spread approved fill material in layers not exceeding 8" in uncompacted thickness.

2. Moisture-conditioning: Water or aerate the fill materials as necessary, and thoroughly mix to obtain a moisture content which will permit proper compaction.

3. General: Compact each soil layer to at least the specified minimum degree. Repeat compaction process until plan grade is attained.

4. Degree of compaction requirements:

Compact all structural fill, including recompacted existing fill and backfill, to a minimum degree of compaction of 95% (Modified Proctor Density, ASTM D-1551).

5. Jetting will not be permitted unless specifically authorized by the Architect for densification of cohesionless material.

6. Testing shall occur at the rate of 1 test per 1200 SF for each lift.

3.7 GRADING

1. General: Except as otherwise directed by the Architect, perform all rough and finish grading required to attain the elevations shown on the drawings.

2. Grading tolerances:

Rough grade: Landscaped areas: + or - 0.1'

3. Treatment after completion of grading:

A. After grading is completed and the Architect has finished his inspection, permit no further excavating, filling, or grading except with the approval of the Architect.

B. Use all means necessary to prevent erosion of freshly graded areas during construction and until such time as permanent drainage and erosion control measures have been installed.

3.8 EXCAVATION FOR FOOTINGS

1. Preparation:

A. To minimize differential settlement, it is essential that earth surfaces upon which footings will be placed shall be compacted to the approval of the Architect, or placed on undisturbed soil, and in accordance with the compaction requirements established in this Section of these Specifications.

B. Verify that all compaction is complete and approved prior to excavating for footings.

2. Excavate to the established lines and grades.

3.9 PLACING GRANULAR CUSHION

Carefully place the specified granular cushion in areas to receive concrete slabs (Box Car and Ramp) on grade, uniformly attaining a 4" thickness and providing all required transition planes.

3.10 SAND COURT

Sand shall be placed over geotextile without voids to grade. Hand-rake for final inspection.

3.11 RIVER ROCK

Refer to Section 02260.

END OF SECTION

02260 LANDSCAPE GEOTEXTILE

PART ONE – GENERAL

1.1 DESCRIPTION

Work included: Provide all labor, materials and equipment to properly install a geotextile and ground cover (sand and river rock).

1.2 QUALITY ASSURANCE

Work shall be performed by experienced landscape laborers and supervisor.

1.3 SUBMITTALS

1. Contractor shall submit samples (2) of the proposed system including weed control geotextile (8 x 11) and sand (ziplock bag).
2. If substitution of soil sterilization is proposed, provide relevant data as required by the Architect.
3. Submit manufacturer's instructions indicating preparation, installation, joints/seams, coverage, etc.

1.4 PRODUCT HANDLING

1. Deliver geotextile and soil sterilizer in original, unopened packaging with labels intact.
2. Store materials at temperatures between 40°F and 80°F, out of sunlight and rain.

1.5 JOB CONDITIONS

Air temperature during application shall not be less than 40°F and more than 90°F.

PART TWO – PRODUCTS

2.1 SOIL STERILIZER

A compound of one pound sodium chlorate and two pounds sodium borate dissolved in one gallon of potable water. Spray apply at the rate of one gallon per 100 SF. Verify if sterilizer shall affect existing trees; provide an approved alternate, as required.

2.2 GEOTEXTILE

Product shall accommodate drainage, but limit weed/root growth. 'Typar' #3401 of spun polypropylene weighing 4 OZ/SY or approved equal. Source: Buckley Powder Company (1-800-333-2266, ext. 178), Englewood, Colorado.

2.3 SAND

Sand shall be clean mortar sand conforming to ASTM C144 or approved equal.

2.4 ACCESSORIES

Fabric pin (3/16 IN Ø x 12 IN galvanized steel) with washer as approved.

2.5 RIVER ROCK

Clean river rock shall be 5 to 7 IN gray Mimbres River stone, or approved equal.

2.6 OTHER MATERIALS

All other materials not specifically described but required for a complete and proper installation shall be as selected by the Contractor subject to the approval of the Architect.

PART THREE – EXECUTION

3.1 CLEARING AND GRUBBING

1. Clear and grub the premises of all subterranean or surface material, growth and the like as required to remove any obstruction to the work indicated on the drawings within the clearing and grading limits.
2. Grub the entire ground surface of any grass, weeds and plants down to 12 inches below present grades, except protect all trees not affected by construction or shown to be removed.
3. Remove any existing material to a depth not less than 12 inches below the original grade level.
4. Fill and compact any holes left per requirements of Section EXCAVATION, BACKFILLING AND GRADING.
5. All materials cleaned or grubbed shall become the property of the Contractor and be removed from the site by Contractor.

3.2 SOIL STERILIZATION

1. Spray apply soil sterilizer (one gallon per 100 SF) to all areas to receive geotextile and landscape rock.
2. Do not overspray areas and damage existing vegetation to remain.
3. Clean up containers and equipment so as not to harm the environment. Introduce all cleaning water into city sanitary sewer system, or as otherwise appropriate.

3.3 GEOTEXTILE

1. After soil sterilizer is dry, roll out fabric. Keep material taut without tenting or spanning of voids. Cut material with scissors or as approved.
2. Lap fabric 1 FT or more. Hammer in fabric pins at 6 FT on center each way or more frequently as appropriate.
3. Carefully cover material with landscape gravel. To limit damage, protect fabric with 4 IN of gravel. Do not run heavy equipment or vehicles directly over fabric until gravel has been uniformly placed.
4. Back fill all placed fabric at the end of each work day for protection.

3.4 SAND COURT

1. Deliver sand to final location via hand or small equipment as not to damage geotextile, concrete flatwork, etc.
2. Place sand a minimum 12 IN deep over geotextile. Rake to remove voids and level to finish grades.

3.5 RIVER ROCK

1. Place rock 12 IN deep by hand or small equipment over geotextile and soil treatment.
2. Coordinate details with Architect.

END OF SECTION

02870 SITE FURNISHINGS

PART ONE – GENERAL

1.1 DESCRIPTION OF WORK

Work included: Installation of concrete benches as indicated on the Drawings.

1.2 QUALITY ASSURANCE

1. Precast items shall be manufactured by skilled workers and supervised by a ACI-certified foreman.
2. All precast work shall be true to dimension and have clean, accurate details.

1.3. SUBMITTALS

Refer to Section 01300.

1.4 PRODUCT HANDLING

Deliver all items to job site in original shipping containers. Protect items during and after installation. In the event of damage, make repairs or replace item to the satisfaction of the Architect.

PART TWO – PRODUCTS

2.1 CONCRETE BENCHES

1. Concrete
All precast concrete shall have a minimum compressive strength of 5,000 PSI at 28 days. Air entrainment shall be a maximum of 4 to 6%. Reinforcing steel shall conform to ASTM 615 and deformation to ASTM-M-305, Portland Cement ASTM C150 Type 1 or 3. All aggregate to meet ASTM C33.
2. Finish
Exposed surfaces shall be smooth and treated to remove surface matrix. Apply water repellent sealer as per manufacturer's specifications.
3. Color
Standard color as selected by Architect.
4. Manufacturer
Peterson Manufacturing Company (712-263-2442, Denison, Iowa), or approved equal.
5. Style
Model PB-58. (60 IN x 24 IN)

PART THREE – EXECUTION

3.1 INSPECTION

Examine the areas and conditions which to work will be installed. Correct conditions detrimental to the proper and timely installation of the work.

3.2 FOUNDATION

Coordinate type of foundation for proper installation with Architect. If bench to be installed on existing concrete flatwork, verify attachment. On open "ground," a gravel bed may suffice. Refer to Drawings.

3.3 LOCATION

Some benches will be installed under existing trees. Pruning for proper clearance may be required. Coordinate with Architect exact location of bench and required trimming.

END OF SECTION

03200 CONCRETE REINFORCEMENT

PART ONE - GENERAL

1.1 DESCRIPTION OF WORK

1. Work included: Provide complete, in place, all steel required for reinforcement of cast-in-place concrete as shown on the Drawings.
2. Related work described elsewhere: Section 03300 Cast-In-Place Concrete.

1.2 QUALITY ASSURANCE

Comply with pertinent provisions of following standards as listed in Section 01085, except as herein modified:

1. ACI "Manual of Standard Practice"
2. ACI 318 "Building Code Requirements for Reinforced Concrete"
3. AWS D12.1 "Recommended Practices for Welding Reinforcing Steel"

1.3 SUBMITTALS

1. General: Comply with pertinent provisions of Section 01300.
2. Shop Drawings: Within 35 calendar days after award of the Contract, submit complete Shop Drawings of all materials proposed to be furnished under this Section. Include the following:
 - A. Bar schedule, stirrup spacing, diagrams of bent bars, and arrangement and assemblies.
 - B. Make Shop Drawings in accordance with ACI 315.
3. Mill Certificates: Accompanying the Shop Drawings, submit steel producer's certificates of mill analysis, tensile, and bend tests for reinforcing steel.

1.4 PRODUCT HANDLING

1. Delivery: Deliver reinforcement to the job site bundled, tagged and marked. Use metal tags indicating bar size, lengths, and other information corresponding to markings shown on placement diagrams.
2. Storage: Store reinforcement at the job site in a manner to prevent damage and accumulation of dirt and excessive rust.

PART TWO - PRODUCTS

2.1 MATERIALS

1. Reinforcing bars: Comply with ASTM A 615, Grade 40 or better.
2. Steel wire: Comply with ASTM A 82.
3. Fiber reinforcement: Chopped (1 inch) polypropylene fibers.

4. Supports for reinforcement: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcement in place:

- A. Use wire bar type supports complying with CRSI recommendations, unless otherwise indicated. Do not use wood, brick, or other unacceptable materials.
- B. For slabs on grade, use supports with sand plates or horizontal runners where base material will not support chair legs.
- C. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with either hot-dip galvanized or plastic protected legs.

2.2 FABRICATION

1. General: Fabricate reinforcing bars to conform to required shapes and dimensions, with fabrication tolerances complying with CRSI Manual. In case of fabricating errors, do not re-bend or straighten reinforcement in a manner that will injure or weaken the material.
2. Unacceptable materials: Reinforcement with any of the following defects will not be permitted in the Work:
 - A. Bar lengths, depths, and bends exceeding specified fabrication tolerances.
 - B. Bends or kinks not indicated on Drawings or final Shop Drawings.
 - C. Bars with reduced cross-section due to excessive rusting or other causes.

PART THREE - EXECUTION

3.1 INSPECTION

Examine the substrate, formwork, and the conditions under which concrete reinforcement is to be placed, and correct conditions which would prevent proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

1. Comply with the specified standards for details and methods of reinforcement placement and supports, and as herein specified.
2. Clean reinforcement to remove loose rust and mill scale, earth, and other materials which reduce or destroy bond with concrete.
3. Position, support, and secure reinforcement against displacement by formwork, construction, or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers, as required.
4. Place reinforcement to obtain the minimum coverages for concrete protection. Arrange, space, and securely tie supports together with 16-gauge wire to hold reinforcement accurately in position during concrete placement operations. Set wire ties so that twisted ends are directed away from exposed concrete surfaces.

5. Provide sufficient numbers of supports and of strength to carry reinforcement. Do not place reinforcing bars more than 5 cm. (2") beyond the last leg of any continuous bar support. Do not use supports as bases for runways for concrete conveying equipment and similar construction loads.
6. Splices: Provide standard reinforcement splices by lapping (20 bar diameter minimum) ends, placing bars in contact, and tight wire tying.

END OF SECTION

03300 CAST-IN-PLACE CONCRETE

PART ONE - GENERAL

1.1 DESCRIPTION

1. Work included: Provide all cast-in-place concrete work as shown on the Drawings and as specified herein.
2. Related work described elsewhere: Section 03200 Concrete Reinforcement.

1.2 QUALITY ASSURANCE

1. Standards: Concrete work shall conform to the "Building Code Requirements for Reinforced Concrete," ACI 318-77 as Architect judges them applicable and supplemented and modified herein.

1.3 CONCRETE QUALITY CONTROL

1. Determination of the design mixes, within the requirements of these specifications, is solely the responsibility of the contractor, using tested materials and trial mixes. Prior to beginning concrete operations submit to the Architect: (a) Copies of the proposed design mixes, and (b) Testing Laboratory reports on the cylinders. All concrete to be working strength concrete in accordance with ACI 301-72.
2. Exposed Concrete: Concrete for walks, and other concrete exposed to freezing temperatures during wet weather shall have a water-cement ratio not exceeding six (6) gallons per sack and shall be air-entrained.
3. Concrete Strengths: All non-air-entrained concretes shall have a minimum compressive strength of 3000 psi at 28 days and a maximum water-cement ratio of .6. All air-entrained concrete shall have a minimum compressive strength of 3000 psi at 28 days and a maximum water-cement ratio of .65. Seven day strengths for Type I and II cements and 3 day strengths for Type III cements shall be a minimum of two-thirds of the 28-day design strengths.
4. Proportions and Consistency: Components of concrete shall be proportioned by weight. The mixture will work readily with the placement method used, around the reinforcement and into corners and angles of the forms.
5. Slump Testing: As specified, conforming to the following schedule:

Location	TYPE OF COMPACTION (in inches)			
	Manual		Vibration	
	Min.	Max.	Min.	Max.
Foundation, Slabs & Footings	2	5	2	4
All Other Work	3	5	2	4

6. Air-entrained Concrete: Use only where specified, or upon Architect's approval. Conform to the following limits:

Maximum Size Aggregate (inches)	Total Air Content Percent by Volume
1-1/2	5 +or- 1
1	6 +or- 1
3/4	6-1/2 +or- 1

1.4 TESTS ON CONCRETE AND MATERIALS

1. All work shall be done by a testing laboratory approved by the Architect at the Contractor's expense. Furnish necessary job labor for assisting laboratory technicians and Architect in taking test samples. Job handling, crating, marking, and shipping of test samples is the responsibility of the contractor.

2. Method of sampling: ASTM C-172, "Method of Sampling Fresh Concrete," except that samples for slump tests shall be taken promptly after one-half cubic yard has been discharged from the mixer.

3. Slump tests: ASTM C-143, "Method of Test for Slump of Portland Cement Concrete." Perform test on the first load of each day; in conjunction with making test cylinder; after any change in mix proportions; or any other time deemed necessary by the Architect. Number of cones per test - one; if slump is excessive a check test on another portion of the same sample shall be made immediately. Two successive tests with excessive slump shall be cause for rejection of the batch of concrete.

4. Air content tests: ASTM C-172, "Method for Test for Air content on Freshly Mixed Concrete by Volumetric Method." Perform tests at same time as test cylinders are made.

5. Compression tests: ASTM C-31, "Method of Making and Curing Concrete Compressions and Flexure Test Specimens in the Field." Perform one test per day for each class of concrete used that day; one test for each 20 cubic yards or fraction thereof, or for each 2000 square feet of surface area placed of concrete of each class used per day. Cure in accordance with requirements of ASTM C-31. Take three specimens per test. Each cylinder shall be clearly marked or tagged to record the data of molding, name of person making cylinder, precise description of the part of the building from which the samples were taken. Method of test shall be ASTM C-39, "Method of Test for Compressive Strength of Molded Concrete Cylinder." Test cylinder from each set as follows: 1 at 7 days, 1 at 28 days, and one left for 45 days if needed.

6. In-place testing: If the average strength of five (5) consecutive cylinders falls below the required compressive strength, the in-place concrete represented by the defective cylinders shall be tested at the contractor's expense by one of the following methods as directed by the Architect: (1) Core-drilling: ASTM C-42, "Standard Methods of Securing, Preparing and Testing Specimens from Hardened Concrete for Compressive and Flexural Strengths," and ACI Chapter 4; (2) Load testing: Load test shall be performed in accordance with Chapter 20 of the ACI Building Code Requirements (ACE 318-77) or latest revision thereof.

7. Penalty Provisions: When approved laboratory 28-day molded concrete cylinder test together with supplemental core tests of in-place concrete fail to meet the specified strength requirements, then structural calculations and other investigations shall be made to determine if such low test concrete may be used in its present condition. Should this low strength concrete be determined as acceptable, the contractor is to be assessed a penalty of \$300.00 per cubic yard of concrete placed. The Architect shall have the option of implementing the penalty or replacing the low strength concrete. The Owner shall have final authority in implementing the low strength penalty provision.

1.5 SUBMITTALS

Refer to Section 01300.

1.6 PRODUCT HANDLING

Deliver formliners to job site in original packing. Replace damaged items as required by Architect.

PART TWO - PRODUCTS

2.1 CONCRETE (HARDROCK)

1. Concrete shall be ready-mixed and delivered in accordance with specifications for ready-mixed concrete, ASTM C-94. Concrete for ramp wall shall be as recommended by formliner manufacturer and approved by Architect.

2. Cement: A uniform product of Portland Cement of a single manufacturer shall be used throughout all work. For concrete cast in contact with earth, it shall be Type I-II cement, ASTM C-150. For the remainder of general work use ASTM C-150 Type I or Type II; for air-entrained concrete use ASTM C-175 Type I-II.

3. Aggregate:

A. For Standard Concrete: ASTM C-33, gravel or crushed stone, well graded from fine to coarse. Maximum size of aggregate shall be not larger than one-fifth of narrowest dimension between forms, not larger than three-fourths of the minimum clear spacing between reinforcement or between reinforcement and forms. For unreinforced slabs, the maximum size aggregate shall not be larger than one-third the slab thickness.

B. Use size 467 aggregate with maximum size of 1 - 1/2" for footings, unreinforced slabs 6" or more in thickness.

C. Use size 57 aggregate with maximum size of 1" for walls and other concrete except as noted.

D. At Exposed Concrete: Conform to the above requirements. In addition assure that aggregate is free of soluble salts or other substances which can stain or discolor the surface. Use aggregates from single source of supply to ensure uniformity of appearance throughout the job for exposed concrete.

4. Water: Potable

5. Admixtures:

A. Air-entrained agents may only be used where approved by Architect and shall conform to ASTM C-260.

B. Other admixtures (including fly ash) may be used only after specific approval of the Architect.

2.2 CURING MATERIALS

1. Membrane-forming curing compound: The curing compound shall conform to ASTM C-309-58, Type I with fugitive dye. When used, assure that such liquids are compatible with hardeners, sealers, and similar applications required for floor slabs.

2. Polyethylene film: ASTM D-2103, 6 mil thickness, lapped a minimum of 4" and sealed with pressure sensitive tape.

3. Other materials: Other methods or materials may be used only after prior approval of Architect.

2.3 HARDENER

Coordinate with Architect.

2.4 SEALER

Coordinate with Architect.

2.5 VAPOR BARRIER

Polyethylene film: ASTM D-2103 6 mil thickness lapped a minimum of 6 inches.

2.6 NON-SHRINK GROUT

This grout shall be non-metallic, non-shrink as manufactured by U.S. Grout Corporation, Greenwich, Connecticut.

2.7 EXPANSION JOINT FILLER STRIPS

These strips shall conform to ASTM Designated D-1751-65m and shall be of size required.

2.8 FORMLINER MANUFACTURER

1. Fitzgerald Formliners (1-800-547-7760, Santa Ana, California) or approved equal.
2. Pattern shall be a mix of "Western Range Grass" (20003A-36 and 20003B-36). Refer to Drawings.
3. Panel size: 36 IN high by 106 IN long, single use (polystyrene).
4. Location: East wall of accessible ramp.
5. Concrete mix design as per manufacturer recommendations and Architect approval.

2.9 CUSTOM FORMLINERS

1. FORMS: Create wood siding look via 1x6 rough sawn forms.
2. LOCATION: Inside and outside walls of "Box Car."

3.0 BULLET HOLES

LOCATION: "Box Car" walls, refer to Drawings.

PART THREE - EXECUTION

3.1 PREPARATION FOR PLACEMENT

1. Assure that all reinforcing is properly and securely positioned and tied. Verify that all required sleeves, anchors, slots, inserts, conduit boxes and similar items have been properly located and secured to prevent displacement during concrete placement. Determine that all expansion joints, strips, construction and control joints are properly located and formed. Assure that equipment is clean and that all debris is removed from the forms and other areas receiving concrete. Reinforcing to be free of ice and snow. Assure that forms are lined, oiled or wetted as specified for the particular usage. During freezing weather the use of water to wet forms is prohibited. Immediately prior to pour, dampen subgrade for slabs on grade. Remove water from places of deposit. Remove laitance and unsound material from the surface of hardened concrete and moisten surfaces before new concrete is poured. Provide runways for wheeled conveying equipment. Do not wheel conveying equipment over reinforcement and do not support runways on reinforcement. Assure that screeds are

accurately set and rigidly secured to withstand pouring operations. Assure that membrane damp-proofing is in place where required by Drawings.

2. Construction joints: Locate where shown on the Drawings and on control joints or expansion joints where possible. If locations are not indicated on Drawings, locate to least impair strength of the structural elements. Where a joint is made, the hardened surface shall be thoroughly cleaned and all laitance removed. Vertical joints shall be thoroughly wetted and slushed with a coat of neat cement grout before placing new concrete. At least two hours shall elapse after depositing concrete in columns and walls before placing concrete in members supported thereon.

3. Expansion joints: Locate and detail joints as shown on the Drawings. Unless otherwise detailed, make joints 1/2" thick, using pre-molded asphalt impregnated fiberboard, fill thickness of casting. Finish edges at expansion joints with slightly rounded edging tool. In no case shall the reinforcement or other fixed metal items which are embedded in or bonded to the concrete be run continuous throughout an expansion joint.

4. Control joints: Locate and detail such joints as shown on the Drawings and/or coordinate with Architect. Construct joints either by cutting or by tooling concrete while in a plastic state. Joints shall be 1/4 the slab thickness and shall be 1/8" wide.

5. Bond-barrier joints: Form such joints with 15-lb. asphalt-saturated felt, full thickness of the slab where interior slabs abut rigid vertical surfaces, wrapped around pipe and conduit penetrations, and elsewhere as shown on Drawings.

3.2 INSPECTION

1. Notify the Architect 24 hours in advance of all concrete pours. It must be inspected by Architect or field representative.

2. Immediately in advance of placing concrete excavations, forms, reinforcements, inserts, etc., may be inspected by the Architect, and if any part of the work is determined to be unsatisfactory, the concrete work shall not proceed until after all defects have been remedied and the approval of the Architect has been obtained. Such approval will not in any way relieve the Contractor of his obligation to produce the finished concrete required by the provision of the drawings and specifications.

3.3 MIXING AND PLACING CONCRETE

1. Ready-mixed concrete: Mix and deliver in accordance with specifications for ready-mixed concrete, ASTM C-94.

2. Conveying: Convey concrete from the mixer to the place of deposit using wheeled vehicles, chutes, tremies, pumping equipment or other equipment. Assure as nearly as possible a continuous flow of concrete at delivery end. Concrete shall be delivered without segregation of material during the conveying operations.

3. Old concrete: Concrete that has attained an initial set which has held its water content more than 45 minutes shall not be deposited.

4. Placing: Deposit concrete as near as practicable in final position. Excessive "pushing" of concrete from one area to another is prohibited. Place concrete at such a rate that it is plastic and flows readily between bars and mixes well with previous layers. When placing has started, carry on a continuous operation until the pour of a full panel or section is completed. Concrete shall not be allowed to drop freely more than five feet. Where greater drops are required, a tremie or other means approved by the Architect shall be employed.

5. Compaction: Consolidate all concrete by suitable mechanical internal vibrating equipment where practicable, supplemented by manual rodding or tamping. Form vibrators are prohibited. Apply the vibrator at uniformly spaced points not farther apart than the visible effectiveness of the equipment. During compaction,

use care to avoid insertion of the vibrator into lower courses of pour that have begun to set. Do not vibrate excessively in one spot and do not use the vibrator to transport concrete inside the form.

6. Cold weather placement: Concrete shall be mixed and placed only when the temperature is at least 40 degrees F. and rising, unless permission to pour is obtained from the Architect, in which event all materials shall be heated and otherwise properly prepared so that batching and mixing can proceed in accordance with the provision of the specifications. When the temperature is below 40 degrees F., the concrete temperature after placement shall be maintained at 50 degrees F. or higher for 4 days for normal concrete and 3 days for high early strength concrete. Leave protection in place for 24 hours after heat is discontinued to avoid sudden rapid cooling. Concrete shall not be poured when snow, rain, or blowing sand and dust is expected.

7. Hot weather placement: During low humidity, high temperature or wind conditions, take suitable precautions to avoid drying of concrete prior to finishing operations. Use of windbreaks, sunshades, fog sprays or other devices shall be provided when needed. Concrete deposited in hot weather shall not have a placing temperature that will cause difficulty from loss of slump, flash set, or cold joints - not more than 90 degrees F. unless otherwise approved.

8. Curing: Concrete surfaces not covered by forms shall be protected against moisture loss. Curing shall be accomplished by one of the following methods and such protection shall be maintained for a period of at least 7 days for normal concrete and 3 days for high early strength concrete.

A. Moist curing: Cover uniformed surfaces with a uniform layer of sand not less than one (1) inch thick. Keep sand distributed over entire surface and deep sand continually wet. Cure formed surfaces in the forms, keeping forms continually wet.

B. Membrane-forming liquid: Apply in strict compliance with manufacturer's printed directions, using not less than two coats applied at right angles to each other. Surfaces subjected to rainfall within three (3) hours after applications shall be re-sprayed at the full rate. Surfaces cured in this manner shall be kept free of foot or vehicular traffic, or other sources of abrasion during the cure period.

C. Limitations: Unless otherwise approved by the Architect, membrane curing shall not be used on surfaces which receive concrete fill or finish coats, mortar setting beds for clay tile products, applied floor coverings, or similar applications.

D. Polyethylene film or waterproof paper: Cover surfaces completely, lapping sheet ends and edges approximately 4 inches and sealing laps with adhesive tape or other suitable means. Where this method is used to cure concrete slabs that are exposed finished, the film shall be held in full contact with the floor with a layer of rigid insulation board, sand, or similar material.

3.4 CLEANING AND REPAIRING CONCRETE (Coordinate with Architect)

1. Form tie holes: Remove form ties four days after pour, unless directed otherwise; fill holes with cement mortar mixed dry and rammed solid.

2. Voids and gravel pockets: Repair as directed whenever Architect judges it necessary.

3. Finishing exposed surfaces: Knock fins off smooth; patch imperfections to match adjacent surfaces. Rub surfaces with carborundum stone, leave clean and smooth.

3.5 CONCRETE FINISHES

1. Slabs: Slab surfaces shall be finished by tamping the concrete with suitable tools to force the coarse aggregate down from the surface; shall be screeded with straight edges and floated to the required finish level; and when free of tool marks, shall be level and shall be a true plane surface with a tolerance of 1/8 inch in 10 feet.

2. Concrete sidewalks, and exterior slabs shall be given a broomed finish unless noted otherwise. The surface shall be troweled smooth, then finished with a stiff bristle broom drawn over the surface in parallel passes transverse to the flow of traffic. Immediately following brooming, slab edges and joint edges shall be rounded with an edging tool having a 1/2 inch radius.

3.6 WALLS AND CEILINGS

1. Formed concrete basic finish: After removal of forms, remove loose material and fins from concrete surface. Grout fill honeycombs, tie rod holes and other pockets or voids. At areas to be grouted, remove unsound concrete, clean away debris, thoroughly wet surfaces, brush coat with neat cement grout and fill with mortar thoroughly compacted in place. Use mortar consisting of one part blended white and normal Portland Cement, two parts fire aggregate passing No. 16 mesh and as little water as necessary for handling and placing. Blend cements in proportions to secure a color match in unpainted areas when dry. Finish exposed patchwork flush with and matching adjoining surfaces. Damp-cure patchwork for 72 hours.

2. Smooth finish (where called for): Use for overhead concrete surfaces that will be exposed as finish work, except where otherwise specified. Obtain by using steel forms or by lining forms with 3/16 inch pressed wood or 1/4 inch thick plywood. Sheets as large as possible with smooth, even edges and installed close points. Joint marks and fins, ground prominent grain marking, and bulges or depressions more than 1/8 inch in 4 feet. Surfaces shall be patched, leaving the surface finish uniformly smooth and washed clean.

3.7 CLEAN-UP

At the completion of each concrete installation, all forms, empty sacks and other debris resulting from the concrete operations shall be removed from the building and premises by the contractor.

3.8 SIDEWALKS

Joints shall be grooved at right angles to sidewalks and slabs at intervals equal to width or at a maximum of 8 feet o.c., unless otherwise indicated. See Drawings. The grooves shall be one inch deep. Where slabs abut against curbing or other concrete construction, 1/2 inch pre-formed bituminous expansion shall be installed. Similar expansion joints shall be installed in the straight run of sidewalk to underside of concrete.

3.9 FORMLINERS

Install within concrete forms. Pour, vibrate, strip and clean as per manufacturer.

3.10 SEALER

See Section 09910 Painting.

END OF SECTION

05500 METAL FABRICATIONS

PART ONE - GENERAL

1.1 DESCRIPTION OF WORK

1. Work included: Provide all metal fabrications, including decorative screen(s), hand railings and guard railings, complete, in place, as shown on the Drawings, specified herein, or needed for a complete and proper installation and not specifically called for under other Sections of these Specifications.
2. Related work described elsewhere: Cast-in-Place Concrete, 03300.

1.2 QUALITY ASSURANCE

1. Standards: Comply with standards specified herein as listed in Section 01085.
2. Qualifications of personnel: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.
3. Welding: Perform all shop and field welding required in connection with the Work of this Section, adhering strictly to the current pertinent recommendations of the American Welding Society.

1.3 SUBMITTALS

1. General: Comply with the provisions of Section 01300.
2. Product Data: Within 30 calendar days after award of Contract, submit:
 - A. Complete materials list of all items proposed to be furnished and installed under this Section.
 - B. Manufacturer's specifications and other data required to demonstrate compliance with specified requirements.
 - C. Shop Drawings of all items proposed to be furnished and installed under this Section. Include plans, sections, elevations, and details as needed.

1.4 PRODUCT HANDLING

1. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all other trades.
2. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 MATERIALS AND COMPONENTS

1. Metal Surfaces, General: For fabrication of the Work of this Section which will be exposed to view, use only those materials which are smooth and free from surface blemishes, including pitting, seam marks, roller marks, rolled trade names, and roughness.

2. Standards: All materials shall comply with:

- A. Steel plates, shapes, and bars: ASTM A36.
- B. Welded wire fabric: ASTM A185.
- C. Steel bars and bar-size shapes: ASTM A306, Grade 65, or ASTM A36.
- D. Cold-finished steel bars: ASTM A108, grade as selected by the fabricator.
- E. Weathering cold-rolled carbon steel sheets: ASTM A606, Type 4 (Core Ten).
- F. Steel pipe: ASTM A53, type as selected, Grade A, Core-ten finish is required, standard weight (Schedule 40) unless otherwise indicated.

2.2 FASTENERS

1. General: Provide fasteners for exterior use, as approved by Architect. Select fasteners for the type, grade, and class required.

2. Standards: All fasteners shall comply with:

- A. Bolts and nuts: Regular hexagon-head type, ASTM A307, Grade A.
- B. Lay bolts: Square-head type, Fed. Spec. FF-B-561.
- C. Machine Screws: Cadmium-plated steel, Fed. Spec. FF-S-92.
- D. Plain Washers: Round, carbon steel, Fed. Spec. FF-W-92.
- E. Masonry anchorage devices: Coordinate with Architect.
- F. Lock washers: Helical spring type carbon steel, Fed. Spec. FF-W-84.

2.3 FINISH

1. Core-Ten Finish as required on Drawings (decorative panels).

2. Mill Finish at painted components (guard railings).

2.4 FABRICATION

1. Workmanship:

- A. Use materials of size and thickness shown or, if not shown, of required size and thickness to produce strength and durability in the finished product.
- B. Work to dimensions shown or accepted on the Shop Drawings, using proven details of fabrication and support.
- C. Use type of materials shown or specified for the various components of the Work.

D. Form exposed work true to line and level, with accurate angles and surfaces and with straight sharp edges.

E. Ease the exposed edges to a radius of approximately 0.8 mm (1/32") unless otherwise shown.

F. Weld corners and seams continuously, complying with AWS recommendations. At exposed connections, grind exposed welds smooth and flush, match and blend with adjoining surfaces.

G. Form exposed panel connections with hairline joints, flush and smooth, using continuous butt welds.

H. Provide for anchorage of the type shown. Coordinate with supporting structure. Fabricate and space the anchoring devices to provide adequate support for intended use.

2. Finish

All weathering steel shall be sandblasted and treated with approved oxidation accelerant.

2.5 MISCELLANEOUS METAL FABRICATIONS

1. Rough hardware:

A. Provide bent or otherwise custom fabricated bolts, plates, anchors, hangers, dowels, and other miscellaneous steel and iron shapes as required.

B. Manufacture or fabricate items of sizes, shapes and dimensions required.

C. Provide steel washers for heads and nuts.

2. Weld plates:

A. Provide weld plates for steel items bearing on concrete construction, made flat, free from warps or twists, and of required thickness and bearing area.

B. Weld plates to receive anchors, as per Drawings.

3. Panel framing and supports:

A. Provide steel framing and supports which are part of structural steel framework, as required to complete the Work.

B. Fabricate units to sizes, shapes and profiles show, or if not shown, of required dimensions to receive adjacent other work to be retained by framing.

C. Fabricate the panels from steel shapes of welded construction with butt joints for field or shop connection unless otherwise shown.

D. Secure units to integrally-welded plates for casting into concrete, and furnish inserts if units must be installed after concrete is place.

4. Pipe Handrails:

Fabricate to shapes and sizes shown with all ends closed, welds ground smooth.

5. Decorative Panels:

Panels shall be a minimum of 1/8 IN Core Ten sheet steel. Patterns shall be laser cut, punched, or as otherwise approved, into the sheets based on a scale images provided by the Architect.

6. Guard Railing:

Refer to drawings for locations, fabrication and installation. 2x2 grid, 8x8 gauge with mill finish.

2.6 SOURCES

1. Welded wire fabric (guard railing): McNichols (800-237-3820).
2. Weathering Steel Sheet: Central Steel Service (205-664-2950), Birmingham, AL.
3. Decorative Panels: Zahner (816-474-8882), Kansas City, MO, iMark (587-805-0924), Edmonton, Alberta, and Hendrick Manufacturing (870-686-3387), Carbondale, PA.

PART THREE -EXECUTION

3.1 INSPECTION

Examine the areas and conditions under which metal items are to be installed, and correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

Furnish directions for installation of anchorages, such as concrete inserts, anchor bolts, and miscellaneous items having integral anchors, which are to be embedded in concrete construction. Coordinate delivery of such items to project site.

3.3 INSTALLATION

1. Setting loose plates:
 - A. Clean concrete bearing surfaces free from bond-reducing materials, and roughen to improve bond to surfaces. Clean the bottom surface of bearing plates.
 - B. Set loose leveling and bearing plates on wedges or other adjacent devices.
 - C. After the bearing members have been positioned and plumbed, tighten the anchor bolts. Do not remove wedges or shims; but if protruding, cut off flush with the edge of the bearing plate before packing with grout.
 - D. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.
2. Fastening to in-place construction: Provide anchorage fastenings where necessary for securing metal fabrications to in-place construction.
3. Cutting, fitting, and placement:
 - A. Perform cutting, drilling, and fitting required for installation of miscellaneous metal fabrications.

B. Set work accurately in location, alignment, and elevation, and make plumb, level, true, and free from rack, measured from established lines and levels.

C. Provide temporary bracing or anchors in formwork for items which are to be built into concrete or similar construction.

D. Fit exposed connections accurately together to form tight hairline joints.

E. Coordinate weld connections which cannot be shop welded because of shipping size limitations with Architect.

F. Grind exposed joints smooth. Do not weld, cut or abrade the surfaces of exterior units after fabrication unless approved by Architect.

4. Field welding: Comply with AWS Code for procedures of manual shielded metal-arc welding, appearance and quality of weld made, and methods in correcting welding work.

5. Decorative Panels: Coordinate details and techniques with Architect.

3.4 PAINTING

Paint guard railing system as per Section 09910 Painting.

END OF SECTION

09910 PAINTING

PART ONE - GENERAL

1.1 DESCRIPTION

1. Work included: Paint existing exterior wall and new exposed surfaces and guard railing in accordance with the Drawings and as specified herein.
2. Definitions: The term "paint," as used herein, means all coating systems materials including primers, emulsions, epoxy, enamels, sealers, fillers, and other applied materials whether used as prime, intermediate, or finish coat.

1.2 QUALITY ASSURANCE

1. Standards: Comply with standards in this Section, as listed in Section 01085.
2. Qualifications of workmen:
 - A. Provide at least one person who shall be present at all times during execution of the Work of this Section, who shall be thoroughly familiar with the specified requirements and the materials and methods needed for their execution, and who shall direct all Work performed under this Section.
 - B. In acceptance or rejection of the Work of this Section, the Architect will make no allowance for lack of skill on the part of the workmen.
3. Paint coordination: Provide finish coats which are compatible with the prime coats used and assuring compatibility of the total coating system for the various substrata.

1.3 SUBMITTALS

1. General: Comply with the provisions of Section 01300.
2. Samples: Following the selection of colors and glosses by the Architect, submit samples for the Architect's review. Provide two (2) samples of each color and each gloss for each material on which the finish is specified to be applied.

1.4 PRODUCT HANDLING

1. Delivery of materials: Deliver all materials to the job site in original, new, and unopened containers bearing the manufacturer's name and label.
2. Storage of materials: Provide proper storage to prevent damage to, and deterioration of, paint materials.
3. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation, and to protect the work and materials of all other trades.

1.5 JOB CONDITIONS

Do not apply paints when the temperature of surfaces to be painted and the surrounding air temperature are below 45°F., unless otherwise permitted by the manufacturer's printed instructions as approved by the Architect. Do not apply paint in snow, rain, fog, or mist, or when the relative humidity exceeds 85%, or to damp or wet surfaces.

1.6 EXTRA STOCK

Upon completion of the Work of this Section, deliver to the Owner an extra stock equaling 10% of each color, type, and gloss of paint used on the Work. Tightly seal each container and clearly label with the contents and locations used.

PART TWO - PRODUCTS

2.1 PAINT MATERIALS

1. Design: Sherwin Williams, and the materials of that manufacturer, are named in the Painting Schedule. Equal products of other manufacturers approved in advance by the Architect may be substituted.
2. General: Provide the best quality grade of the various types of coatings as regularly manufactured by paint materials manufacturers approved by the Architect. Materials not displaying the manufacturer's identification as a standard best-grade product will not be acceptable.
3. Colors and glosses: The Architect will verify colors to be used in the various types of paint specified and will be the sole judge of acceptability of the various glosses obtained from the materials proposed to be used in the Work.
4. Undercoats and thinners: Provide undercoat paint produced by the same manufacturer as the finish coat. Use only the thinners recommended by the paint manufacturer, and use only to the recommended limits. Insofar as practicable, use undercoat, finish coat, and thinner material as parts of a unified system of paint finish.
5. Standards: Provide paint materials which meet or exceed the standards listed for each application in the Painting Schedule.

2.2 APPLICATION EQUIPMENT

For application of the approved paint, use only such equipment as is recommended for application of the particular paint by the manufacturer of the particular paint, and as approved by the Architect.

2.3 OTHER MATERIALS

All other materials not specifically described but required for a complete and proper installation of the Work of this Section shall be new, first-quality of their respective kinds, and as selected by the Contractor subject to the approval of the Architect.

PART THREE - EXECUTION

3.1 SURFACE CONDITIONS

Inspect the existing work and verify that all such work is complete prior to installation of the Work of this Section. Painting must be completed in strict accordance with the original design and the manufacturer's recommendations.

3.2 MATERIALS PREPARATION

1. General: Mix and prepare painting materials in strict accordance with the manufacturer's recommendations as approved by the Architect.
2. Stirring: Stir all materials before applications to produce a mixture of uniform density, and as required during the application of materials. Do not stir into the material any film which may form on the surface. Remove the film and, if necessary, strain the material before using.

3.3 SURFACE PREPARATION

1. General: Perform all preparation and cleaning procedures in strict accordance with the paint manufacturer's recommendations. Remove all removable items which are in place and are not scheduled to receive paint finish, or provide surface-applied protection prior to surface preparation and painting operations. Reinstall the removed items.
2. Existing finished surfaces:
 - A. Contractor shall verify substrate's existing surface treatment and condition. Submit proposed preparation and application methods to the Architect for review.
 - B. All surface contamination such as oil, grease, loose paint, dirt, foreign matter, rust, mold, mortar, efflorescence, and sealers shall be removed to assure sound bonding to tightly adhering finish. Any glossy surfaces must be clean and dull before repainting. Spot prime all bare areas with appropriate primer.
 - C. Repair, patch any existing detrimental conditions to the satisfaction of Architect. Allow patches to properly dry before painting.
 - D. Power Washing: Use potable water and pressure to remove dirt, but do not damage existing surface.
 - E. Check for compatibility of previously painted surface and new coating with a test patch. Apply 2 to 3 S.F. area of new paint, allow to dry, and check adhesion.

3.4 PAINT APPLICATION

1. General: Only the inspected and approved coats of paint will be considered in determining the number of coats applied. Sand and dust between enamel coats to remove all defects visible to the unaided eye from a distance of five feet. Apply as per manufacturer's recommendations.
2. Drying: Allow sufficient drying time between coats. Modify the period as recommended by the material manufacturer to suit adverse weather conditions.
3. Brush application: Brush out and work all brush coats onto the surfaces in an even film. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, and other surface imperfections will not be acceptable.
4. Spray application (only if approved by Architect): Wherever spray application is used, apply each coat to provide the equivalent hiding of brush-applied coats. Do not double back with spray equipment for the purpose of building up film thickness of two coats in one pass. Completed work shall match the approved Samples for color, texture, and coverage. Remove, refinish, or repaint all work not in compliance with specified requirements.

3.5 INSPECTION

Notify Architect at least 24 hours in advance of application of each coat.

3.6 PAINT SCHEDULE

Stucco Primer / Top Coat

One coat Loxon sealer

One coat Conflex elastomeric coating

Concrete Sealer (boxcar and ramp wall)

2 coats, as approved by Architect.

Guard Railing Primer / Top Coat

One coat Pro-Industrial Pro-Cryl

Two coats Duration exterior gloss.

END OF SECTION

10100 SIGNAGE

PART ONE – GENERAL

1.1 DESCRIPTION

Furnish, assemble and install the following items:

1. Large photographic image
2. Troop rosters
3. Dedication plaque

1.2 QUALITY ASSURANCE

Employ skilled workmen experienced in the necessary crafts, who are familiar with the requirements and methods for proper performance of the Work of this Section.

1.3 SUBMITTALS

Comply with Section 01300. Provide Shop Drawings of all proposed items to be installed.

1.4 PRODUCT HANDLING

Protect the materials of this Section before, during and after installation. In the event of damage, make repairs or replacements to satisfaction of the Architect.

1.5 SHOP DRAWINGS

Coordinate with supplier and Architect. Refer to Section 01300.

PART TWO – PRODUCTS

2.1 LARGE PHOTOGRAPH

1. A digital image of the 200th Coast Artillery Battery G from Grant County, circa 1941, will be provided to the sign maker.
2. Refer to Drawings for location.
3. The black and white image shall be printed directly on laminated aluminum panel (.080 IN). The image shall be protected by a 3/16 IN layer of polycarbonate sheeting.
4. Size: 60 IN wide x 28 IN high. Verify exact size with Architect.

2.2 TROOP ROSTERS AND MAP (2)

1. A digital image of the troop rosters – survivors' and fallen soldiers' names shall be provided to the sign maker.
2. Refer to Drawings for location.

3. The multi-color image shall be produced and protected as in 2.1.3 above.
4. Size: 14 IN wide x 28 IN high. Verify exact size with Architect.

2.3 SOURCES

1. 5-One Media, c/o Arizona Lithographics, John Henry Daws, (757-635-5677), Tucson, Arizona.
2. J & J Signs, John Mahl (575-538-3256), Silver City, New Mexico.
3. Southwell Company, San Antonio, TX, (plaque) or equal.
4. Others with prior approval of Architect.

2.4 DEDICATION PLAQUE

Aluminum tablet casting shall be free of pits and holes. All letters shall be sharp. Border and faces of letters shall be satin finished and background to be pebble/stipple texture. Background shall be a medium gray paint and coated or as otherwise approved. Tablet shall be 15 IN wide by 25 IN high with a projected bevel border. Letter style shall be Helvetica. Architect shall provide text.

PART THREE – EXECUTION

3.1 INSPECTION

Examine areas and conditions under which items are to be installed. Correct conditions detrimental to proper and timely completion of the Work.

3.2 INSTALLATION

Install items as per Manufacturer in coordination with Architect. Refer to Drawings.

DRAWINGS

GENERAL NOTES.....	1
SITE PLAN.....	2
RAMP FOUNDATION PLAN AND ELEVATION.....	3
RAMP SECTION AND DETAILS.....	4
BOX CAR PLAN, SECTION AND ELEVATION.....	5
MISCELLANEOUS DETAILS.....	6
EXISTING SITE PLAN (ELEVATIONS).....	7

GENERAL NOTES

Contractor shall verify all existing conditions, dimension and elevations.

Coordinate disposition of removed materials with Owner (Head of Maintenance). Properly dispose of all waste.

Floor Plan dimensions are rough to rough unless noted otherwise.

Patch surfaces disturbed by the work to satisfaction of Architect.

All work shall conform to applicable codes and regulations, i.e., 2015 IBC, ICC/ANSI Standards.

Allowance may be used to compensate Contractor for additional work only authorized by Change Order.

Contact Architect at least two days before interruption of any utilities, i.e., gas, water, etc.

Thresholds shall not exceed 1/2 IN high, tapered on both edges.

No projections from exterior wall(s) next to walkway/ramp shall exceed 4 IN.

Grind all welds smooth.

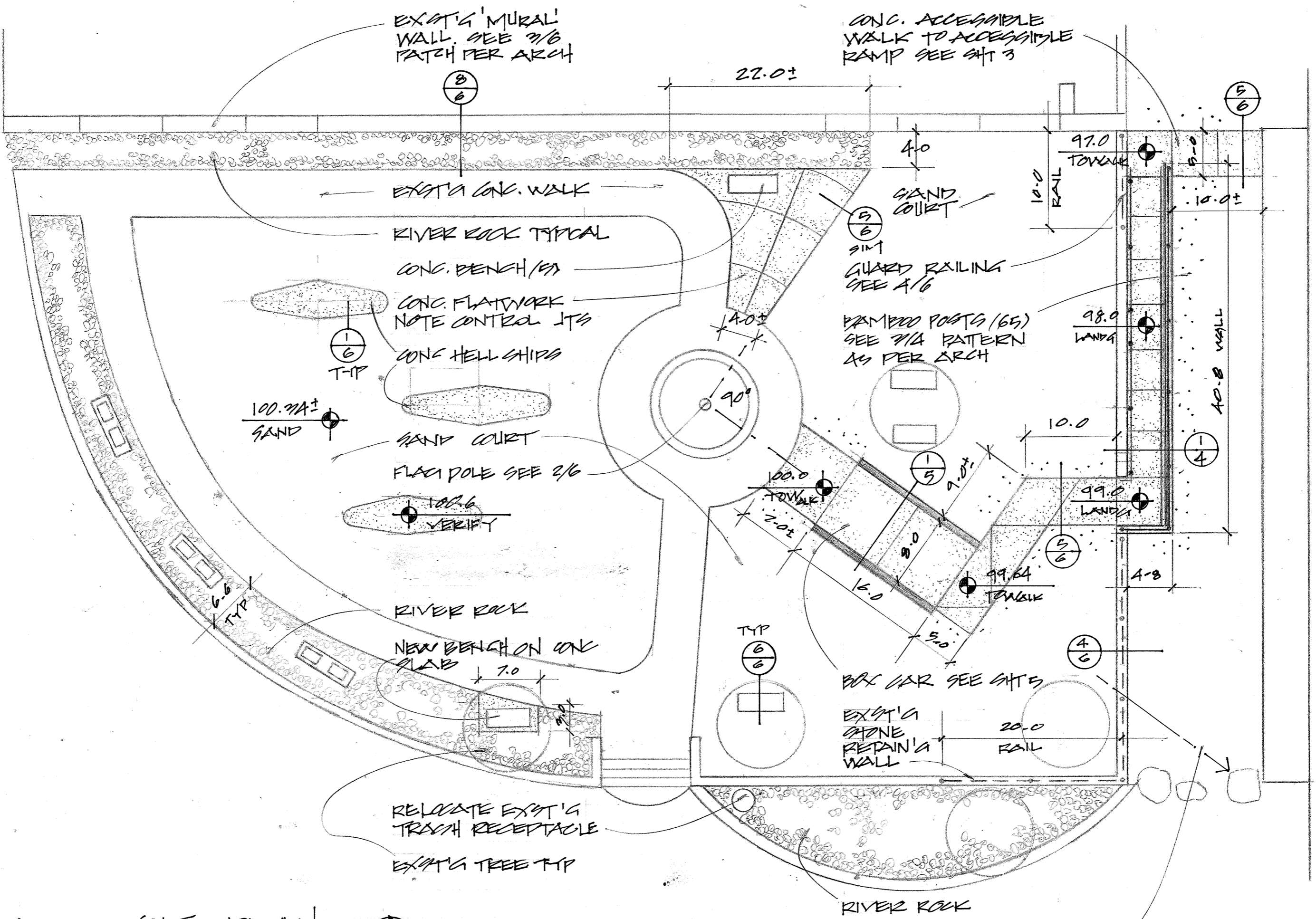
All structural steel shall be min 36KSI.

All ramp/railing work shall conform to accessible standards.

Broom finish ramp and concrete walks perpendicular to run.

All exterior concrete (ramps & walks) shall be fiber reinforced (2 LBS poly/CY) min, 3000 PSI @ 28 days. Caulk control joints and seal as approved by Architect.

Guard railing shall conform to 2015 IBC. No 4 IN sphere shall pass through railing system.



EXIST'G MURAL WALL. SEE 7/6 PATCH PER ARCH

CONC. ACCESSIBLE WALK TO ACCESSIBLE RAMP SEE SH 3

22.0±

EXIST'G CONC. WALK

RIVER ROCK TYPICAL

CONC. BENCH / EA

CONC. FLATWORK
NOTE CONTROL JTS

CONC HELL SHIPS

100.7A±
SAND

SAND COURT

FLAG POLE SEE 2/6

RIVER ROCK

NEW BENCH ON CONC SLAB

RELOCATE EXIST'G TRASH RECEPTACLE

EXIST'G TREE TYP

GAND COURT

BAMBOO POSTS (65)
SEE 7/4 PATTERN
AS PER ARCH

BOX CAR SEE SH 5

EXIST'G PHONE
RETAIN'G
WALL

RIVER ROCK

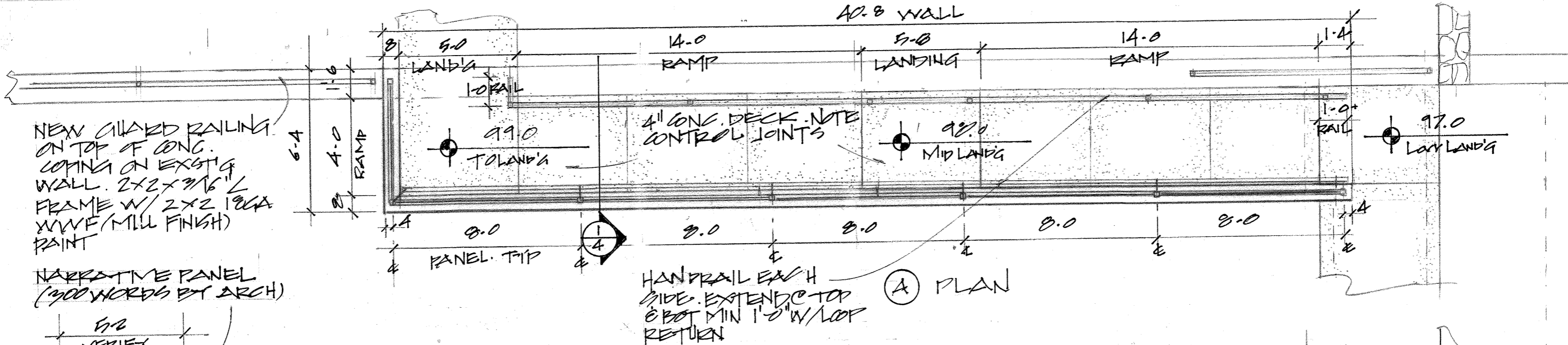
ALIGN BOX CAR OPEN'GS W/ FLAG POLE & KNEELING NUM. COORD W/ ARCH

1 SITE PLAN
1" = 10' 0"

2

2

072395



NEW GUARD RAILING ON TOP OF CONG. COPING ON EXIST'G WALL. 2x2x3/16" FRAME W/ 2x2 12GA WVF (MILL FINISH) PAINT

NARRATIVE PANEL (300 WORDS BY ARCH)

HANDRAIL EACH SIDE. EXTEND TO TOP & BOT MIN 1'-0" W/ LOOP RETURN

DECORATIVE STL PANEL(S) IN FRAME ARE SPEC'D W/ CONT BUTT JOINT WELD

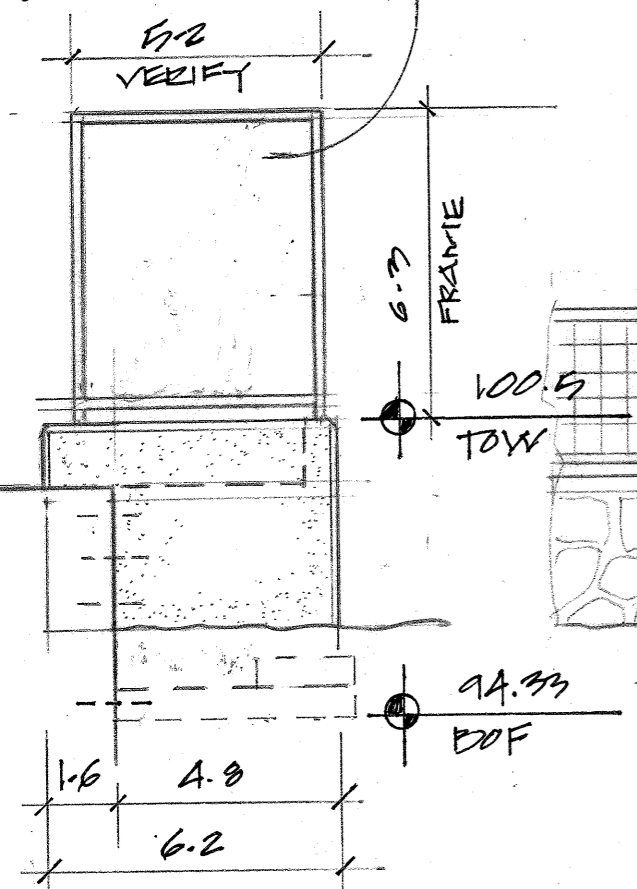
WOODEN EXIT HANDRAIL ATTACHMENT W/ ARCH NOTE RETURN @ END

GUARD RAILING W/ PER IBC SEE A/B

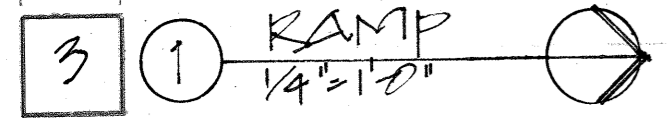
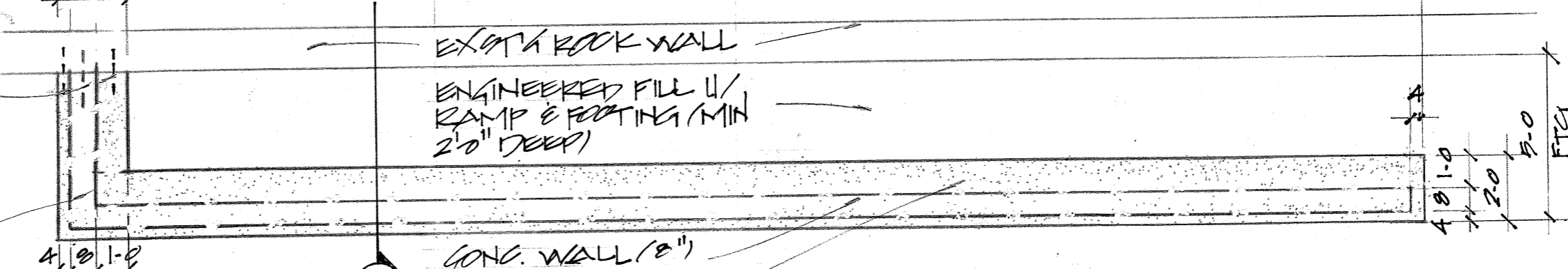
CONG. WALL W/ FORM LINERS (3/8x100) SEE SPEC'S. PANEL (1") ALL EXT. CORNERS? 41.4 FOOTING

EXIST'G ROCK WALL ENGINEERED FILL U/ RAMP & FOOTING (MIN 2'-0" DEEP)

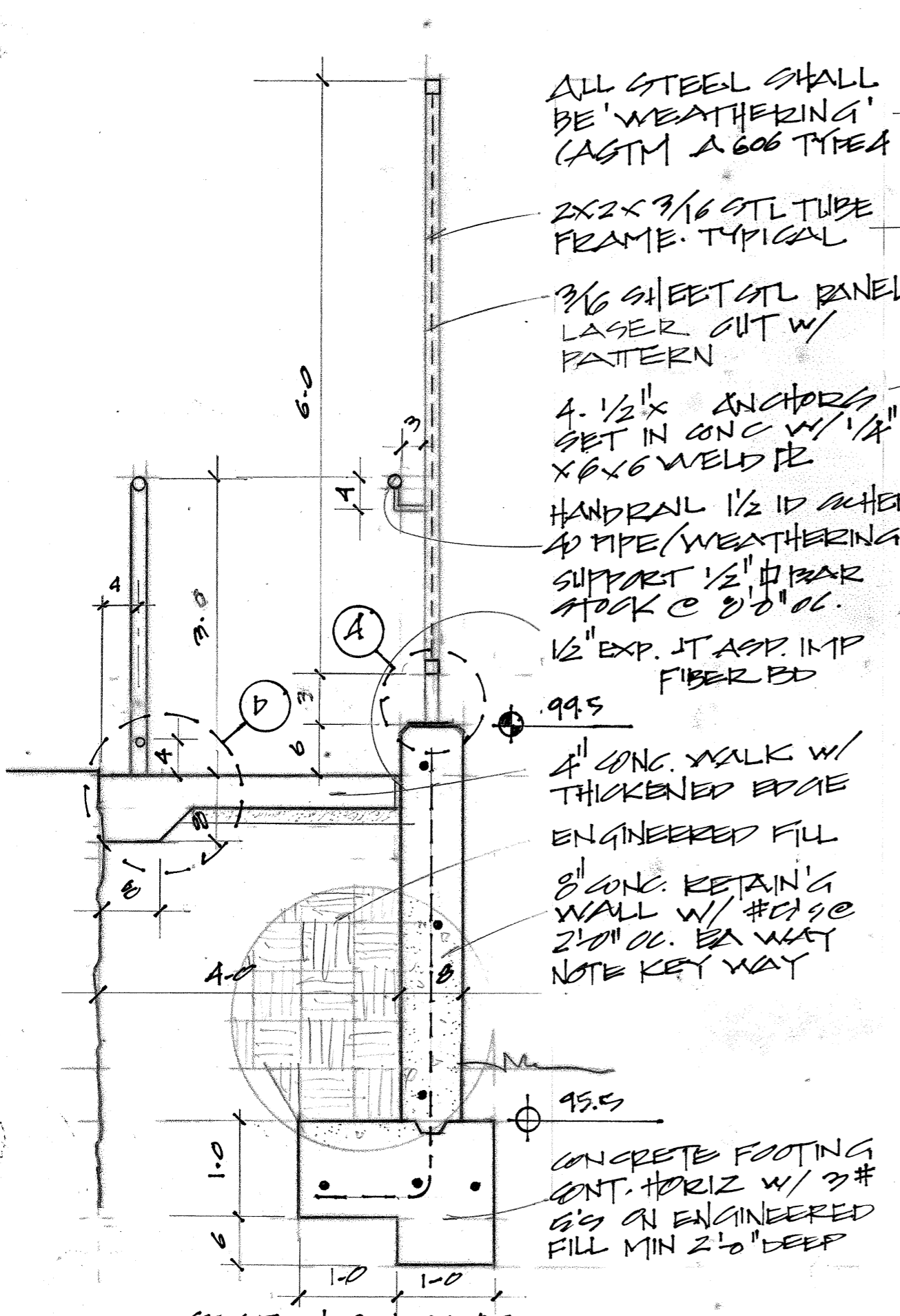
CONG. WALL (8") CONG. FOOTING



(D) SOUTH
TIE NEW FTA TO EXIST'G ROCK WALL W/ 2 #4'S 16" L IN EXIST'G 3/4" HOLES TIE OLD & NEW WALLS AS NOTED W/ 3 ANCHORS
STEP DOWN SOUTH FTA 8"



(C) FOUNDATION PLAN



ALL STEEL SHALL BE 'WEATHERING' (ASTM A 606 TYPE A)

2X2X 3/16 STL TUBE FRAME. TYPICAL

3/16 SHEET STL PANEL LASER CUT W/ PATTERN

4. 1/2" X ANCHORS SET IN CONC W/ 1/4" X 6 X 6 WELD PL

HANDRAIL 1/2 ID GALV PIPE (WEATHERING) SUPPORT 1/2" BAR STOCK @ 2'-0" OC. 1/2" EXP. JT ASP. IMP FIBER BD

99.5

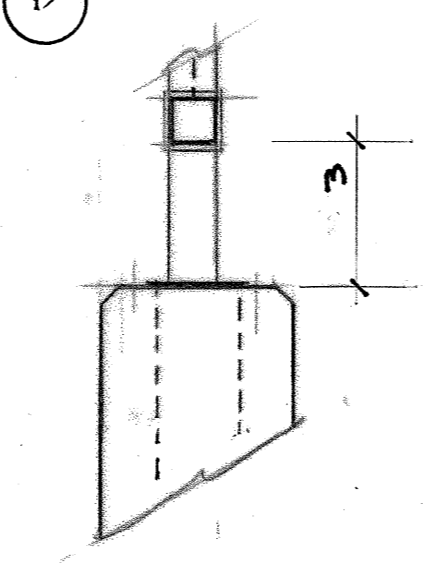
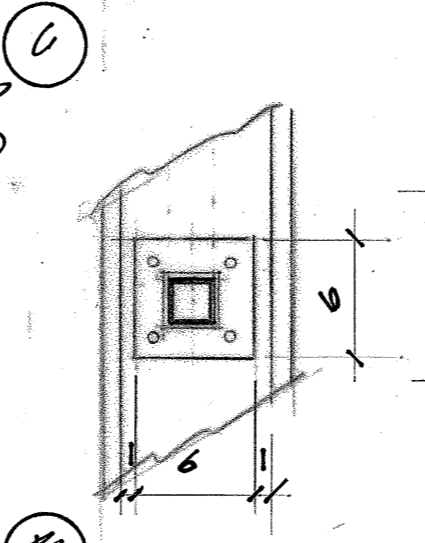
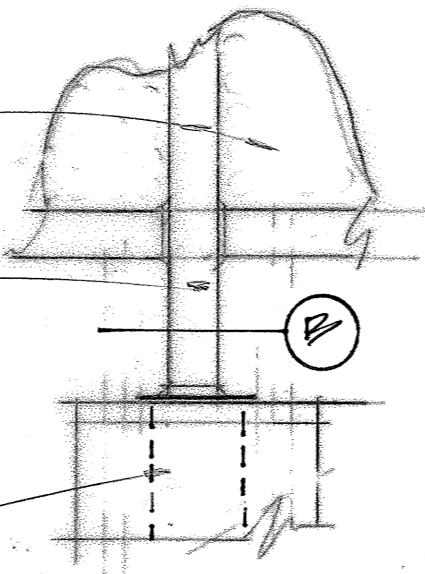
4" CONC. WALK W/ THICKENED EDGE ENGINEERED FILL

8" CONC. RETAIN'G WALL W/ #4 @ 2'-0" OC. EA WAY NOTE KEY WAY

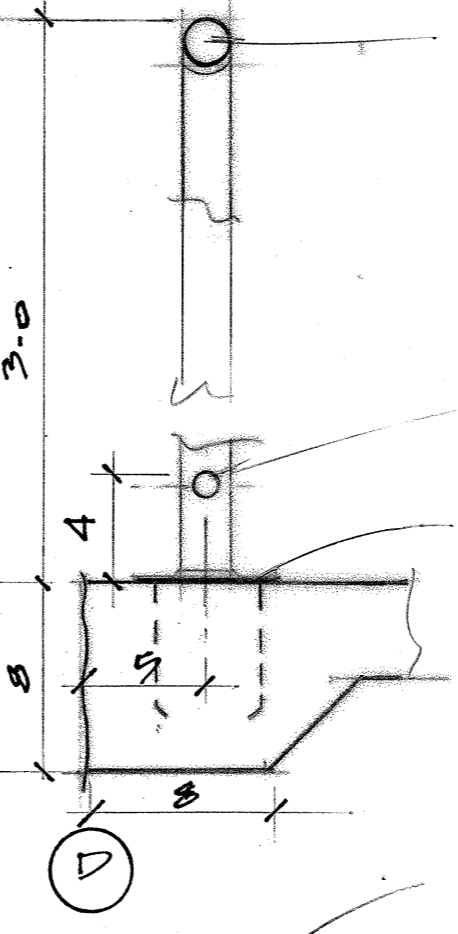
95.5

CONCRETE FOOTING CONT. HORIZ W/ 3# 6'S ON ENGINEERED FILL MIN 2'-0" DEEP

SECTION @ RAMP 1/4" 1



FRAME BASE 1/2" 4



PARTIAL ELEVATION DECORATIVE PANEL 1/2" 2

2 7/8" USED DRILL CASING. CUT OFF EXPOSED THREADED END

1/2" ID GALV PIPE RAIL WELD 1/4" FILET TO 2X2X 3/16 STL TUBE

BAMBOO POSTS SHALL BE PLACED IN VARIETY OF LG COORD W/ ARCH

1" ID STL SCHED 40 PIPE BOT. RAIL

1/4 X 6 X 6 WELD PL W/ 4 1/2 X 6 ANCHORS

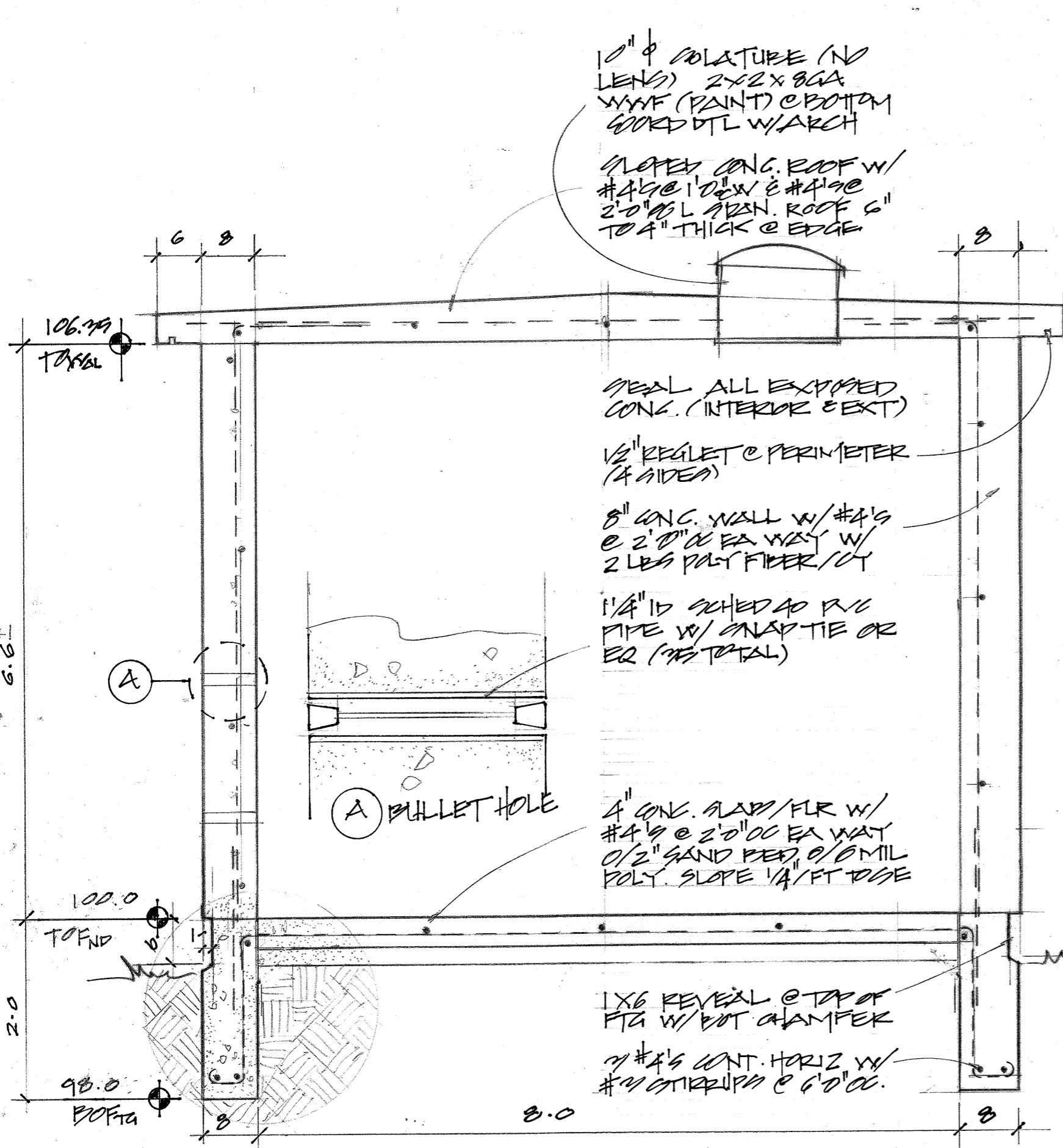
CONCRETE FOOTING 2" SHY OF FIN. GRADE 2" DEEP @ BOT OF PIPE

3/16" PLASMA CUT SHIT STL. WELD ONT @ BUTT JOINT

COORD FRAME / PANEL WELDS W/ ARCH

1/4" FILET WELDS @ FRAME TIP. GRIND SMOOTH

BAMBOO POST SINGLE 3/4" 3



10" ϕ INSULATION (NO LENS) 2x2x8GA WVF (PAINT) @ BOTTOM GOOD DTL W/ARCH

SLOPED CONG. ROOF W/ #4 @ 1'0" W & #4 @ 2'0" L SPAN. ROOF 6" TO 4" THICK @ EDGE

SEAL ALL EXPOSED CONG. (INTERIOR & EXT)

1/2" REGLET @ PERIMETER (4 SIDES)

8" CONG. WALL W/ #4'S @ 2'0" O.C. EA WAY W/ 2 LBS POLY FIBER / CY

1/4" ID SCHED 40 PVC PIPE W/ SNAP TIE OR EQ (1/2" TOTAL)

4" CONG. SLAB / FLR W/ #4'S @ 2'0" O.C. EA WAY 0/2" SAND BED 0/0 MIL POLY. SLOPE 1/4" / FT TO SE

1x6 REVEAL @ TOP OF FTA W/ BOT ALAMFER

#4'S CONT. HORIZ W/ #2 CONT. UP @ 6'0" O.C.

OVERHANG W/ REGLET

2'0" DEEP TURN DOWN. NO REVEAL

4" CONG FLOOR SLAB W/ 2 LBS POLY FIBER / CY

FORM INT & EXT. CONG. WALLS W/ 1x6 ROUGH SAWN BOARDS RUN VERT. TO CREATE BRAN & JOINT PATTERN

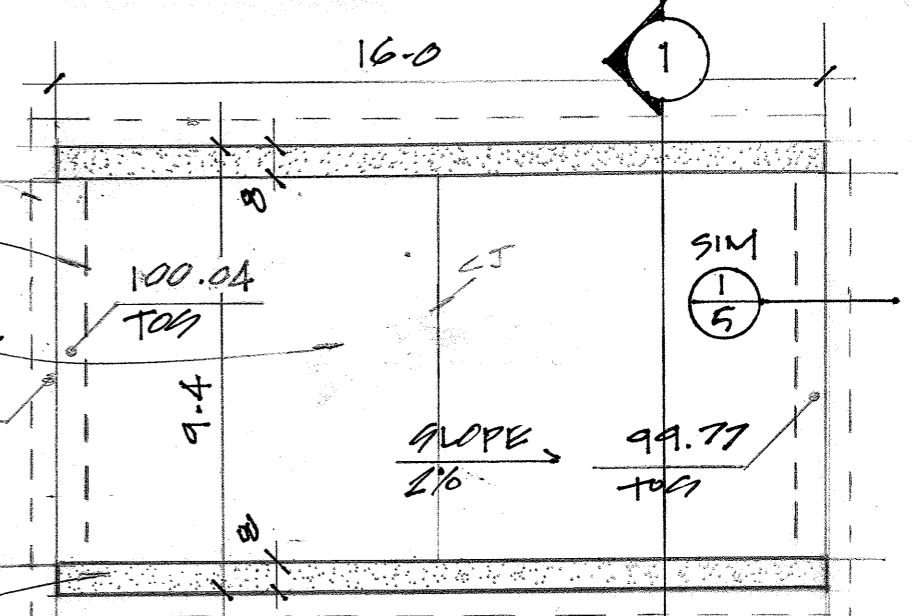
#4'S @ 2'0" O.C. EA WAY

BULLET HOLES (9/16" BORED LAYOUT PATTERN W/ ARCH (ADD ALT) SOUTH WEST WALL ONLY

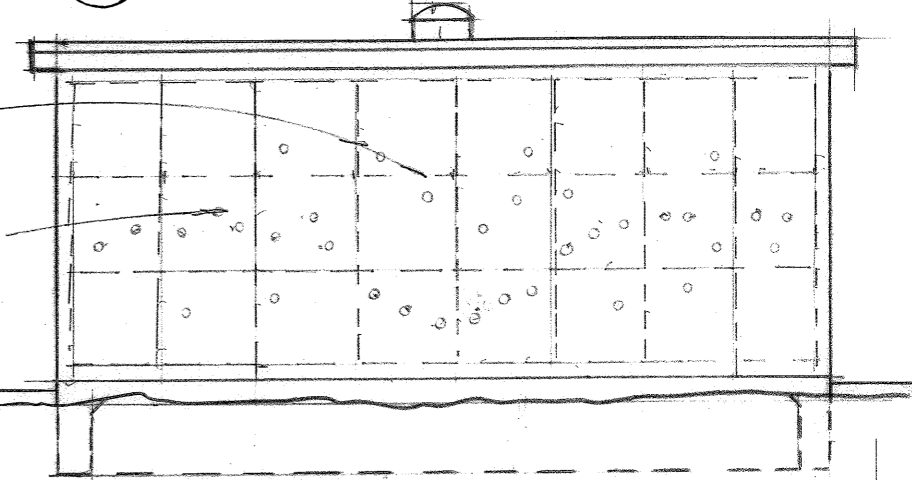
1" DEEP NICHES FOR ALMAGIE, VERIFY SIZES & LOCATION(S) REFER TO SPEC

SLOPE FLR 1/4" / FT TO SOUTHEAST (DOWN)

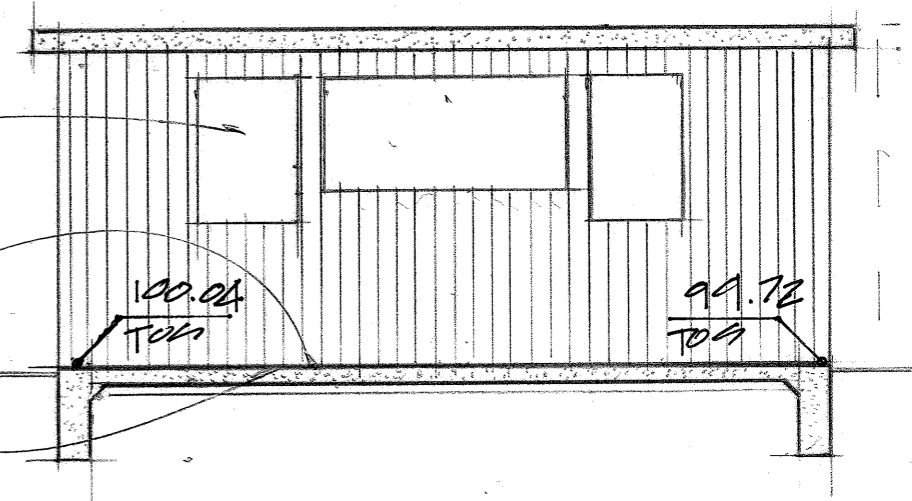
RAFT FOUNDATION SHALL BE PLACED UPON ENGINEERED FILL. MIN 2'0" DEEP U ALL ELEMENTS



2 BOX CAR - PLAN



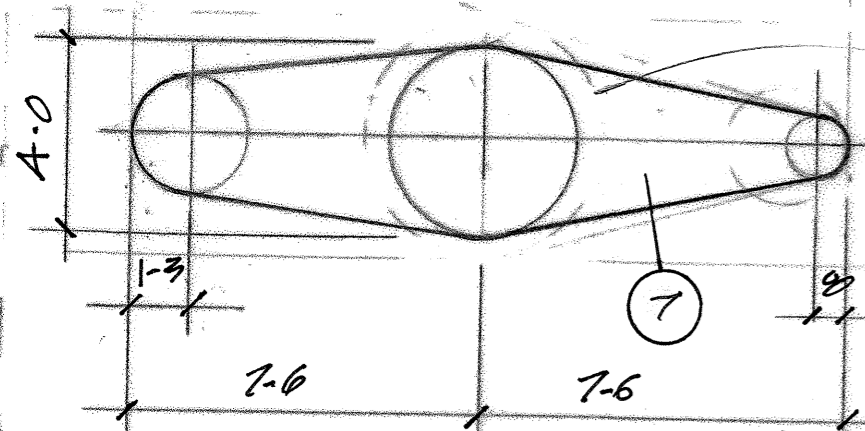
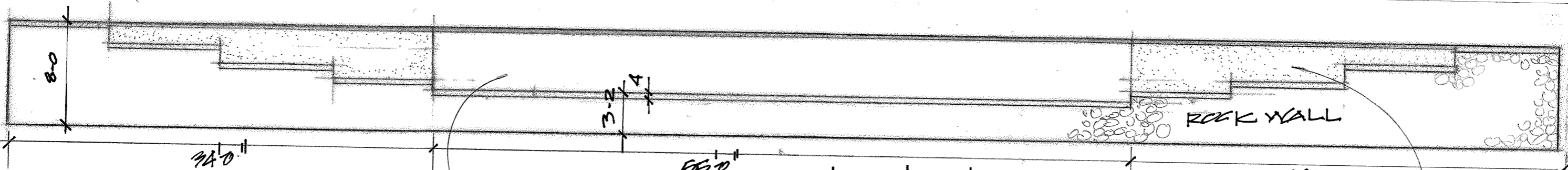
3 BOX CAR ELEVATION SOUTH



4 BOX CAR SECTION 60 1/8" LOOKING NORTH

5 1 BOX CAR SECTION 7/4" = 1'0"

5



EXIST'G MURAL AREA TO REMAIN AS IS

6" CONC SLAB W/ 2LBS CHOPPED FIBER/FT W/ EMBEDDED STL ITEMS PROVIDED

RAILING SYSTEM:
 2X2X 3/16 STL L (MILL FIN) FRAME W/ 3X3GA 2X2 WWF (MILL FIN) WELDED PAINT ALL (1 PRIME & 2 FINISH)

EXIST'G FLAG POLE PLANTER. REMOVE VALVE BOX & TURF FILL W/ MIN 1'-0" SAND

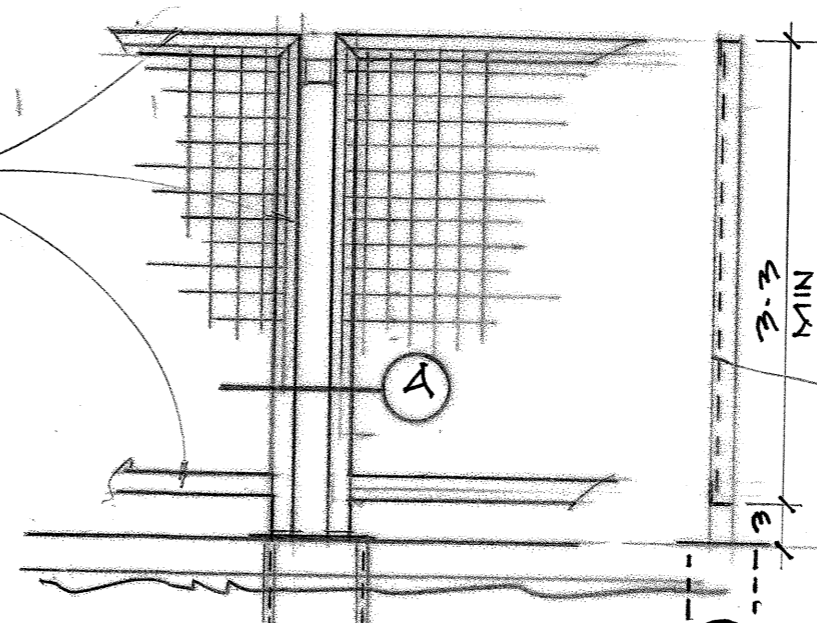
1/4 X 6 X 10 STL BRACKET W/ 4 3/8" Ø X 9 ANCHOR BOLTS (A 320) SET IN 1/2" Ø HOLES W/ EPOXY

CAN CUT & CONTROL JOINTS @ EXIST'G CONC CAP & CAULK

4" CONCRETE WALK W/ 2LBS FIBER/FT NOTE CHAMFER EDGE

ALL NEW CONCRETE WALKS SHALL BE PLACED ON MIN 12" ENGINEERED FILL

3 NORTH - MURAL WALL
 1/8" EXISTING



PATCH & PAINT STUCCO ABOVE LEDGE & LEDGIE (NORTH & SOUTH)

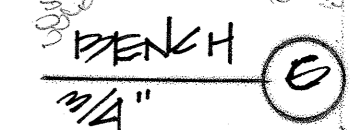
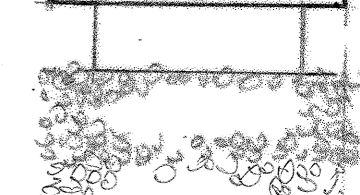
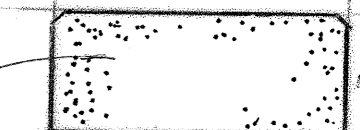
EXIST'G ROCK WALL @ BOTTOM. HEIGHT VARIES & STUCCO ABOVE

PRE-CAST CONC BENCH W/ FEET SET ON 1'-0" B COMPACTED 1" GRAVEL OR EQ

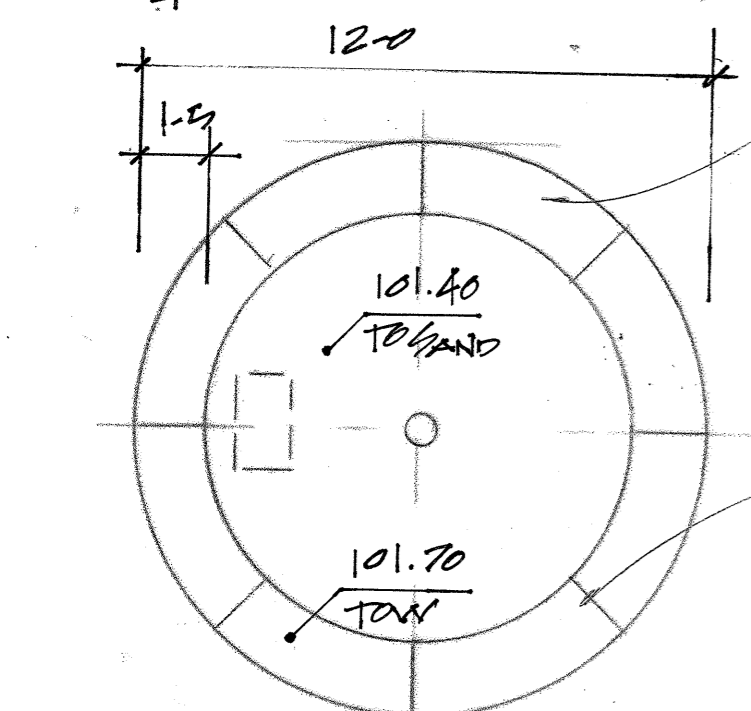
COORD WELDS W/ ARCH

THICKENED PERIMETER EDGE. PLACE SLAB ON COMPACTED SLAB

VERIFY EXACT LOCATION OF RAILING ON EXIST'G ROCK WALL W/ ARCH



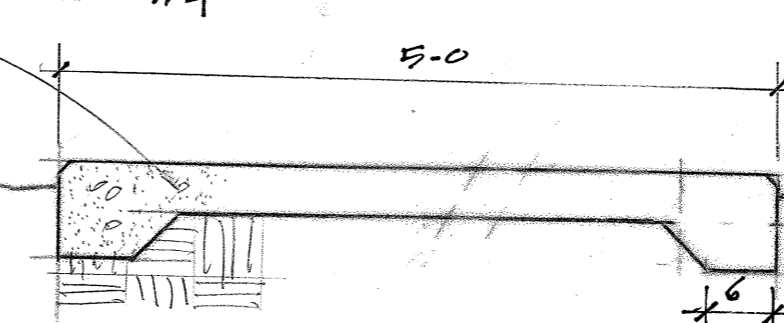
1 HULL SHIP - PLAN
 1/4"



2 FLAG POLE RING
 1/4" EXISTING

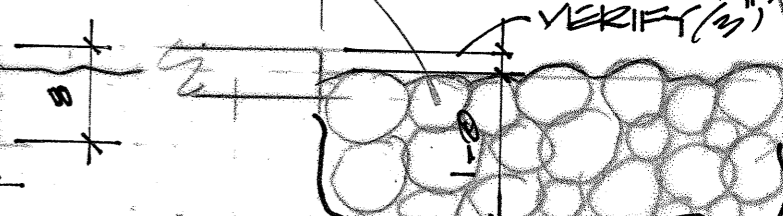
6

4 RAILING ELEVATION
 3/4"

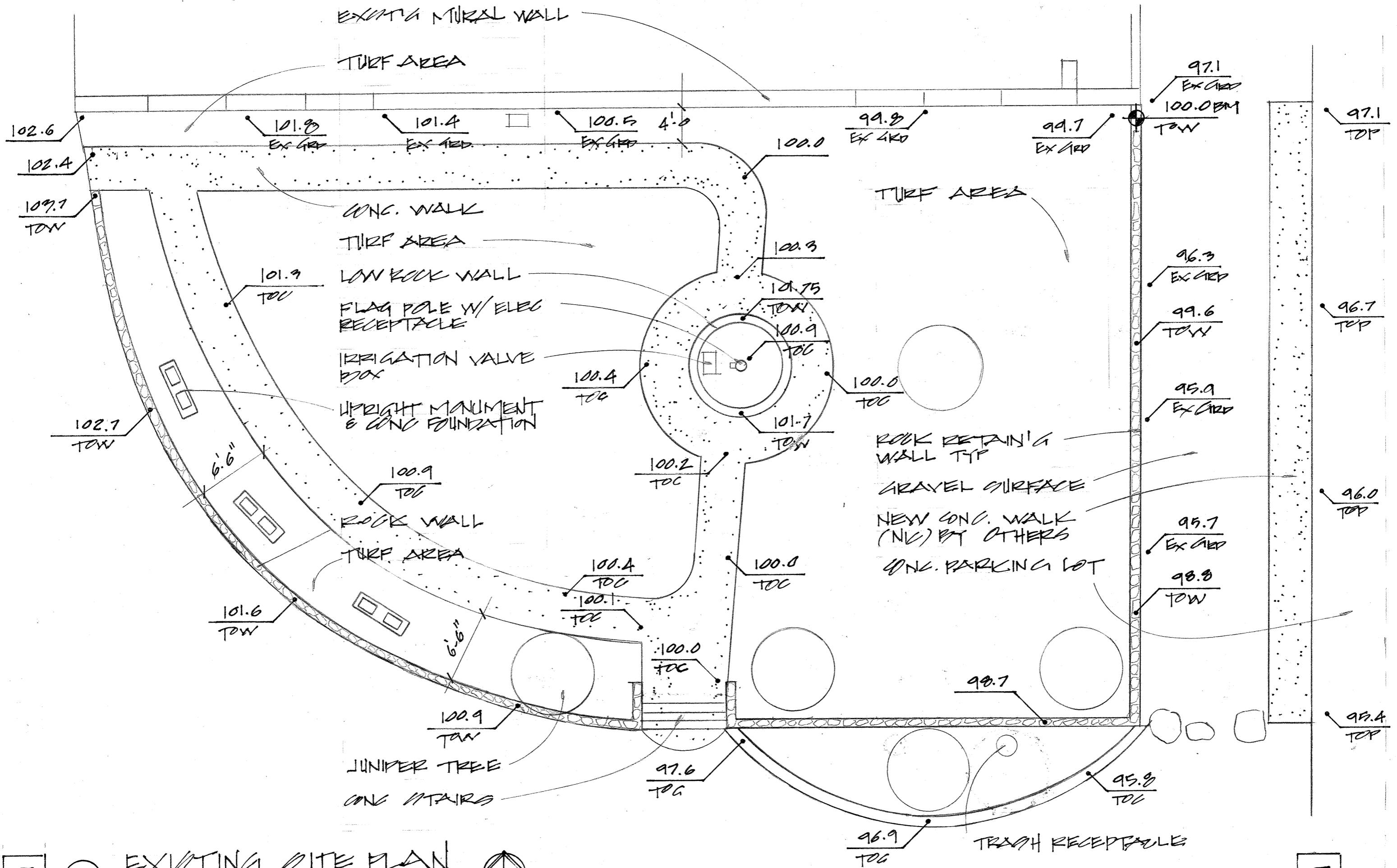


5 TYPICAL WALKWAY
 3/4"

7 IN Ø RIVER ROCK 12" DEEP/ WEED GEOTEXTILE & HERBICIDE



8 RIVER ROCK
 TYPICAL 3/4" 6



7 1 EXISTING SITE PLAN 1" = 10'-0" 7