

**HARRIS RANCH
COMMUNITY INFRASTRUCTURE DISTRICT NO. 1**

**DALLAS HARRIS SOUTH SUBDIVISION NO. 1 ROAD
AND UTILITY IMPROVEMENTS
(SE5/DHE 18)**

PROJECT COMPLETION DATE: APRIL 13, 2022

PROJECT SUBMITTED TO THE CITY OF BOISE: JUNE 8, 2022

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(SE5 / DHE18)

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June 8, 2021

Acknowledgement of Receipt

From: Barber Valley Development & Harris Family Limited Partnership
877 W. Main Street, Ste 501
Boise, Idaho 83702

I hereby acknowledge receipt of the following Harris Ranch Community Infrastructure District No. 1 reimbursement request from Barber Valley Development and Harris Family Limited Partnership:

Dallas Harris Subdivision No. 1 Road and Utility Improvements (SE5/DHE 18)
Project Manual & Reimbursement notebook

Signature of Recipient
City of Boise

Date
June 8, 2022

Dallas Harris South Subdivision No. 1 Road and Utility
Improvements
(SE5 / DHE18)

Construction of roadways for the benefit of the Harris
Ranch Community Infrastructure District

\$1,660,319.34

Wiring Instructions:

Columbia State Bank

Routing [REDACTED]

Account [REDACTED]

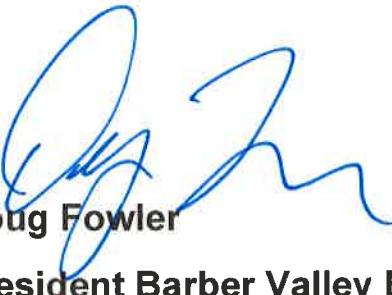
Barber Valley Development Inc.

Project Description

Dallas Harris South Subdivision No. 1 Road and Utility Improvements

SE 5

**Project reimbursement request submitted by Barber Valley
Development, Inc. & Harris Family Limited Partnership, LLC**



Doug Fowler
President Barber Valley Development

T. Hethe Clark
(208) 388-3327
hclark@clarkwardle.com

Via hand delivery

June 7, 2022

The Board of the Harris Ranch Community Infrastructure District No. 1 (“HRCID”)
c/o David Hasegawa, District Manager
150 N. Capitol Blvd.
Boise, Idaho 83702

Re: Completeness Letter – Dallas Harris South Subdivision No. 1 Road & Utility Improvements

Dear Members of the Board:

This letter is a review of how the above-mentioned payment request (the “**Payment Request**”) conforms to both the requirements of Title 50, Chapter 31 of Idaho Code (the “**CID Act**”) and the District Development Agreement No. 1 for the Harris Ranch Community Infrastructure District No. 1 (the “**Development Agreement**”). As noted below, the Payment Request does meet the letter of the CID Act and the Development Agreement and are eligible for reimbursement.

Background

The Payment Request is related to an improvement project within the Harris Ranch Community Infrastructure District No. 1 (the “**HRCID**”). In particular, the project relates to an area of HRCID commonly referred to Dallas Harris South Subdivision No. 1 (the “**Project**”), which is located in the southeast area of Harris Ranch. The reimbursement requests include roadway and utility improvements in right-of-way that is owned by the Ada County Highway District, which is a political subdivision of the State of Idaho. These rights-of-way include S. Hopes Well Way, S. Millbrook Way, E. Woodcutter Street, and E. Warm Springs Ave. Roadway improvements include those generally anticipated to be included with a roadway project (curb, gutter, sidewalks, etc.), but in this case also included a rapid flashing rectangular beacon as well as a box culvert for the S. Millbrook Way roadway crossing of Warm Springs Creek.

Conformity with the Development Agreement

The Development Agreement provides the roadmap for reimbursement of eligible projects within HRCID. Article II of the Development Agreement provides for the manner by which eligible projects are to be constructed by the developer, and requires the following:

Compliance with Applicable Codes. Per Section 2.1(b) of the Development Agreement, each of the Payment Requests were built to the standards required by Ada County Highway District ("ACHD") and the City of Boise ("City") prior to acceptance. Each of the improvements required inspection prior to acceptance by ACHD or the City. Roadway improvements were accepted by ACHD on May 19, 2022. Sewer was accepted on June 4, 2021. Street lights were accepted by the City of Boise on December 17, 2020.

Public Bidding. Section 2.2 requires conformity with public bidding requirements. The Payment Requests were both publicly bid in accordance with Idaho Code, including Section 67-2805. Notices of the opportunity to bid were published in The Statesman, with proof (affidavits) of publication provided to CID staff. Notices inviting bids include substantially the same information required in Section 1.5(b) of the Development Agreement, and the "limitation on recourse" language required in Section 1.5(d) is included in the Project Manual (see *Instruction to Bidders*, Para. 16). The lowest responsible bidder was, in each case, selected.

Cost Review. Sections 2.3 and 3.2(a) require that all project costs be submitted to the District Engineer for review. We have reviewed the Payment Requests in detail and removed items not eligible for reimbursement (e.g., domestic water facilities owned by Suez, a private entity).

Conditions for Payment. Section 3.3 includes a number of conditions for payment, outlined below:

Item	Description	Status
(i)	Certificate of Engineer	Included with this payment request
(ii) , (v)	Evidence of public ownership	All improvements are located in ACHD right-of-way and the Payment Requests include acceptance by the relevant local government entities
(iii)	Environmental assessments	Not requested – no evidence of contamination
(iv)	Conveyance to public entity	All property conveyed via standard plat dedication
(vi)	Assignment of warranties	All roadway work includes two-year warranty assigned to ACHD upon acceptance of the Work per the Construction Contract, Article XII
(vii)	Acceptance letters	ACHD, City of Boise, and Central District Health acceptance letters are included in the Payment Request packet as noted above
(viii)	Other documents requested by District Manager	None requested to developer's knowledge

Conformity with the CID Act

The Payment Requests are also eligible for reimbursement per the CID Act, as shown below:

Public Ownership. Section 50-3101(2) requires that community infrastructure must be owned by the state or a political subdivision. The Payment Requests include road and utility improvements that are owned by a political subdivision of the state – in this case, the real property (roadways) are owned by ACHD and the reimbursed sewer facilities are owned by the City.

Definition of Community Infrastructure. All of the items included in the Payment Requests are eligible for reimbursement under the definition of community infrastructure. Roadways are the first identified category of reimbursement. The wastewater system and storm water improvements are also eligible under Idaho Code Section 67-8203(24) (internally referenced in Section 50-3102(2)), which includes “[w]astewater collection, treatment and disposal facilities” as well as “[s]tormwater collection, retention, detention, treatment and disposal facilities, flood control facilities, and bank and shore protection and enhancement improvements.”

Substantial Nexus and Direct or Indirect Benefit. Section 50-3102(2) requires that community infrastructure have a substantial nexus and a direct or indirect benefit to the district. The term substantial nexus is not defined in the CID Act; however, in its typical usage, this refers to the overlap between the development of the HRCID, the needs that development creates, and the role the project plays in satisfying those requirements. Whether there is a direct or indirect benefit is a very similar analysis. Here, the improvements are generally categorized as roads, domestic sewer, and storm water facilities. Each has a benefit to the larger district. The roads in question surround not only multi-family areas (shown in violet and pink), but they (along with the box culvert) provide the entry into the project for those who will drive their children to school at the elementary school, whose site has been donated by the Harris family to the Boise School District. These roads also access other areas of the project that will be highly visited upon future buildout, including the park areas of the Village Green (green) and the commercial areas that include the Village Center (dark purple).



Fronting Individual Single-Family Residential Lots. No roadways involved in these Payment Requests front individual single-family residential lots. All roadways in question front properties that are currently in development as multi-family projects.

Conclusion

As shown above, each of the elements of the Payment Requests are eligible for reimbursement under the CID Act and the Development Agreement. As always, we thank you for your careful review and look forward to approval of these items.

Very truly yours,



T. Hethe Clark
HC/bdb

c: Client



Mary May, President
Alexis Pickering, Vice-President
Jim D. Hansen, 2nd Vice President
Kent Goldthorpe, Commissioner
Dave McKinney, Commissioner

May 19, 2022

To: BARBER VALLEY DEVELOPMENT INC
4940 E Mill Station Dr Ste 101-B
Boise, ID 83716

Re: Dallas Harris South 1 Subdivision
Project (Trakit) No. SUBP20-0061
Acceptance for Maintenance

You are hereby advised that construction of the public street improvements required of **Dallas Harris South 1 Subdivision** have been inspected by District personnel and said work has been satisfactorily completed to District Standards and the approved plans.

The Ada County Highway District hereby accepts the public street improvements constructed with **Dallas Harris South 1 Subdivision** for public maintenance.

An Inspection Deposit in the amount of **\$24,298.35** was provided prior to construction, with a total of **\$19,852.80** being charged for inspection costs. The balance of **\$4,445.55** is due the applicant under the terms of the inspection agreement and has been refunded with this letter.

This acceptance date of **April 13th, 2022** is the date of commencement of all warranties and guarantees for the 24-month period stipulated in the **subdivision construction permit**.

If you have any questions or concerns, please feel free to contact me at (208) 387-6354 or Malexander@achdidaho.org

Sincerely,

Sarah Cannon

Development Services Technician

Mike Alexander

Senior Engineering Technician

Digitally signed
by Michael
Michael Alexander Alexander
Date: 2022.06.01
14:00:13-06'00'

cc: Sherwin Pestka, ACHD Accounting
Ana Osborn, Shelaine Starkey and Steven Pecka, ACHD Accounting
Megan Merkley, ACHD GIS Services
Scott Forrey & Susan Perry, ACHD Pavement Management
Scott Bennett & Ed Merrill, ACHD Utilities
Amanda Morse (agmorse@adaweb.net) & Jean Schaffer (jschaffer@adaweb.net), Ada County



PUBLIC WORKS DEPARTMENT

MAYOR: Lauren McLean | DIRECTOR: Stephan Burgos

June 4, 2021

Doug Fowler
Barber Valley Development, Inc.
4940 E. Mill Station Drive Ste. 101-B
Boise, ID 83716

RE: Project Acceptance
Project No.: DRI-1907
Project Description: Dallas Harris South Subdivision #1
SUB 20-00043

Dear Gentlemen:

The sewer system for the above referenced project has been inspected and is approved for acceptance and release of the bond(s). This project has been constructed in accordance with the approved plans.

The one year warranty period, as required in Chapter 10-2-5.6, of the Boise City Code, will end one year after the above date. The City of Boise Public Works Department intends to make a further inspection of this project before the one year warranty period ends. If any problems are discovered, you will be notified.

Sincerely,

A handwritten signature of John Kellar.

John Kellar
Inspector



Mike Sheppard, P.E.
Civil Engineer

JK/tjl

CC:

Dan Smith, P.E., DEQ dan.m.smith@deq.idaho.gov email
Lori Badigian & Mike Reno, Central District Health Dept., lbadicia@cdhd.idaho.gov email
Jim Pickard, ACHD Construction Services jpickard@achdidaho.org email

I:\PWA\Project Program\DR\DR1900s\1907\Project Acceptance ltr.docx



Serving Ada, Boise, Elmore, and Valley Counties
<https://cdh.idaho.gov>

20-0909

October 23, 2020

Ada County Recorder
Attn: Phil McGrane
200 West Front Street
Boise, ID 83702

RE: Dallas Harris South Subdivision No. 1

Dear Mr. McGrane:

Central District Health has reviewed and does approve the final plat for this subdivision for central water and central sewer facilities. Final approval was given October 23, 2020.

Sanitary restrictions as required by Idaho Code, Title 50, Chapter 13 have been satisfied based on a review by a Qualified Licensed Professional Engineer (QLPE) representing the City of Boise and SUEZ Water and the QLPE approval of the design plans and specifications and the conditions imposed on the developer for continued satisfaction of the sanitary restrictions. Buyer is cautioned that at the time of this approval, no drinking water extensions or sewer extensions were constructed. Building construction can be allowed with appropriate building permits if drinking water extensions or sewer extensions have since been constructed or if the developer is simultaneously constructing those facilities. If the developer fails to construct facilities then sanitary restrictions may be reimposed, in accordance with Section 50-1326, Idaho Code, by the issuance of a certificate of disapproval, and no construction of any building or shelter requiring drinking water or sewer/septic facilities shall be allowed.

If you have any questions, please call 208-327-8517.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael H. Reno".

Michael H. Reno, R.E.H.S.
Senior Environmental Health Specialist

cc: Boise City Building Department
Boise City Planning Department
RiveRidge Engineering Company
Barber Valley Development, Inc.

MR:bk



PUBLIC WORKS DEPARTMENT

MAYOR: Lauren McLean | DIRECTOR: Stephan Burgos

17 December 2020

RE: Street Light Acceptance

SUB20-00043

Dallas Harris South Sub # 1

Everyone:

The street light system for the above referenced project has been inspected and is approved for acceptance. This project has been constructed in accordance with the approved plans.

The one year warranty period, as required in Chapter 9-20-08, D2, of the Boise City Subdivision Ordinance, will end one year after the above date. The City of Boise Public Works Department intends to make a further inspection of this project before the one year warranty period ends. If any problems are discovered, you will be notified.

Sincerely,

A handwritten signature in black ink that appears to read "TD Marshall".

Tom Marshall
Municipal Lighting Technician
City of Boise, Public Works Dept.

Idaho Statesman

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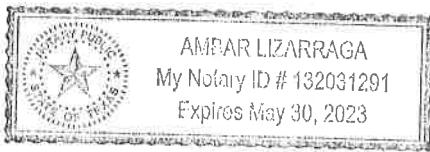
AFFIDAVIT OF PUBLICATION

Account #	Ad Number	Identification	PO	Amount	Cols	Depth
263310	0004670122	LEGAL NOTICE ADVERTISEMENT FOR BID Se	vertisement to Bid (DH South Sub	\$178.18	1	10.78 In

Attention: Barbara Beaushaw

CLARK WARDLE LLP
PO BOX 639
BOISE, ID 83701

LEGAL NOTICE ADVERTISEMENT FOR BID Sealed bids will be received by Barber Valley Development, Inc. ("BVD") in connection with Harris Ranch Community Infrastructure District No. 1 ("HR CID No.1") for the construction of roadway and utility infrastructure improvements in connection with the construction of Dallas Harris South Subdivision No. 1 (the "Project"), which includes roadway improvements for S. Hopes Well Way, S. Millbrook Way, E. Woodcutter Street, and E. Warm Springs Avenue. Elements related to these roadways are anticipated to include site grubbing and placement of roadway and sidewalk embankments, roadway curbs, gutters, sidewalks, and complete pavement section, installation of roadway markings, signage, street lighting, rapid flashing rectangular beacon and all electrical appurtenances, complete box culvert and wing walls and creek realignment for the S. Millbrook Way roadway crossing of Warm Springs Creek, landscaping and pressure irrigation improvements within the roadside planter strips, installation of sanitary sewer mains and services, domestic water mains, hydrants and services, storm water collection piping, inlets as detailed on the approved construction drawings, all as further set forth in the Project documents. Bids will be received at the office of RiveRidge Engineering Company, 2447 S. Vista Avenue, Boise, Idaho 83702, no later than 4:00pm on **June 26, 2020** and will be opened at that time. All questions or clarifications concerning this invitation to bid or the content and requirements of the bid and contract documents must be submitted in writing by 4:30pm on **June 23, 2020**. Address all questions or clarification requests in writing to Dave Powell, RiveRidge Engineering Company, 2447 S. Vista Avenue, Boise, Idaho 83702 (dpowell@rvrdg.com). Project documents will be available in hard copy and electronically (PDF format) at a cost of \$50.00 per set beginning **June 15, 2020**. Work will be awarded under one (1) general contract and will include all relat-



VICTORIA RODELA, being duly sworn, deposes and says: That she is the Principal Clerk of The Idaho Statesman, a daily newspaper printed and published at Boise, Ada County, State of Idaho, and having a general circulation therein, and which said newspaper has been continuously and uninterruptedly published in said County during a period of twelve consecutive months prior to the first publication of the notice, a copy of which is attached hereto: that said notice was published in The Idaho Statesman, in conformity with Section 60-108, Idaho Code, as amended, for:

2 Insertions

Beginning issue of: 06/12/2020

Ending issue of: 06/19/2020

V Rodela
(Legals Clerk)

On this 19th day of June in the year of
2020 before me, a Notary Public,
personally appeared before me
Victoria Rodela known or identified to
me to be the person whose name
subscribed to the within instrument,
and being by first duly sworn,
declared that the statements therein
are true, and acknowledged to me
that she executed the same.

Ones

Notary Public in and for the state of
Texas, residing in Dallas County

**Extra charge for lost or duplicate affidavits.
Legal document please do not destroy!**

ed work. All bids must be a lump-sum basis; segregated bids will not be accepted. Bids will be opened and publicly read aloud at the time and place stated for receipt of bids. Bids received after the time fixed for opening will not be considered. BVD and/or HR CID No. 1 reserve the right to waive irregularities and to reject any or all bids or to delay award of a contract as further set forth in the Project documents. No bidder may withdraw its bid after the hour set for opening thereof. Bid proposals will be accepted from those contractors only who, prior to the bid opening, hold current licenses as public works contractors in the State of Idaho. All work shall be performed in accordance with Title 54, Chapter 19 of Idaho Code governing Public Works Contractors. Each bidder shall identify its Public Works Contractors State License Number in space provided on the bid proposal form.

**Dated this 12th day of June
2020.**

Publish Dates: June 12, 2020;
June 19, 2020.

0004670122-01

NOTICE OF ADVERTISEMENT TO BID

for

**HARRIS RANCH COMMUNITY INFRASTRUCTURE DISTRICT NO. 1 –
DALLAS HARRIS SOUTH SUBDIVISION NO. 1 ROAD AND UTILITY IMPROVEMENTS**

(June 12, 2020)

Barber Valley Development, Inc. invites you to submit a sealed bid for HARRIS RANCH COMMUNITY INFRASTRUCTURE DISTRICT NO. 1 – DALLAS HARRIS SOUTH SUBDIVISION NO. 1 ROAD AND UTILITY IMPROVEMENTS (the “Project”). Bids will be prepared per the following Instructions to Bidders. Hard copy bid packets are available at Bidder’s cost from:

RiveRidge Engineering Company
2447 S. Vista Ave.
Boise, Idaho 83705

The construction of the Project will include, but not be limited to, the following work elements:

1. All of the work elements of the overall Dallas Harris South Subdivision No. 1 improvement project that are anticipated to be reimbursed through the Harris Ranch CID No. 1 (CID), generally defined as all roadway improvements for S. Hopes Well Way, S. Millbrook Way, E. Woodcutter Street, and E. Warm Springs Avenue. Elements related to these roadways are anticipated to include site grubbing and placement of roadway and sidewalk embankments roadway curbs, gutters, sidewalks, and complete pavement section, installation of roadway markings, signage, street lighting, rapid flashing rectangular beacon and all electrical appurtenances, complete box culvert and wing walls and creek realignment for the S. Millbrook Way roadway crossing of Warm Springs Creek, landscaping and pressure irrigation improvements within the roadside planter strips, installation of sanitary sewer mains and services, domestic water mains, hydrants and services, storm water collection piping, inlets as detailed on the approved construction drawings and further detailed in the contract document.

Bids shall be submitted to RiveRidge Engineering at 2447 S. Vista Avenue by 4:00 p.m. on June 26, 2020.

Each sealed bid package shall be marked “HARRIS RANCH COMMUNITY INFRASTRUCTURE DISTRICT NO. 1 – DALLAS HARRIS SOUTH SUBDIVISION NO. 1 ROAD AND UTILITY IMPROVEMENTS.” A 5% bid bond shall be required with the bid. All bidders shall have, at the time of bid opening, the proper Public Works Licensing for the intended construction.

INSTRUCTIONS TO BIDDERS

for

HARRIS RANCH COMMUNITY INFRASTRUCTURE DISTRICT NO. 1 – DALLAS HARRIS SOUTH SUBDIVISION NO. 1 ROAD AND UTILITY IMPROVEMENTS

1. **General**. This proposal is for work set forth in the plans and specifications for the Project (the “**Proposal**”).

2. **Specifications and Documents**. Prospective bidders (hereafter, “**Bidders**”) who intend to make a Proposal may obtain copies of the Specifications and Plans, each as defined in the Construction Contract (Section 2.0 of the Project Manual) from the entity identified on the Notice of Advertisement to Bid at Bidder’s expense. Refunds will not be made to Bidders.

3. **Fixed Price**. The contract for which Proposals will be submitted is a fixed-price contract. The Schedule of Values shall not in any way change the nature of the contract from its lump sum, fixed-price basis. Price proposals shall be submitted on the Bid Schedule forms. All pricing and payment shall be in United States dollars.

4. **Proposals**. The original and three copies of each Proposal shall be prepared and submitted in accordance with these Instructions to Bidders. Proposals which are not prepared and submitted in accordance with these instructions will be considered irregular and may be rejected. The Bidder shall submit the Proposal and shall complete the Bid Schedule, including alternatives, if any, and Schedule of Values which are attached hereto. The Schedule of Values for each Proposal shall be used primarily for progress payments and as a basis for pricing changes in the work.

a. **Preparation**. Proposals shall be prepared using the forms included. Proposals shall be typed or legibly written in black or blue ink. All prices should be stated in figures only. Bidders shall acknowledge receipt of all addenda issued for the specifications and documents in the space provided in the Proposal form.

b. **Exceptions**. Each Bidder shall list in the space provided on the Proposal form all exceptions or conflicts between its Proposal and any of the Specifications or Plans. If more space is required, additional pages may be added. In case of conflicts not identified by Bidder (as discussed in more detail below), the requirements of the Specifications and Plans shall govern.

Bidders shall be responsible for requesting in writing and receiving written clarification to all questions prior to submitting bids. If the Bidder takes exception to any element of the Contract Forms or any of the Specifications or Plans, all such exceptions shall be specific in nature and carefully referenced to the applicable page number, article number, and article title of the specifications and documents. If the Bidder proposes deletion of specification language and substitution of revised language, such deletion and substitution shall be carefully presented by typing complete paragraphs or articles of the original specification language and incorporating the substitute language. Proposed deletions shall be set off by brackets (i.e., “[delete this language]”) and proposed substitute language shall be indicated by underlining (i.e., “substitute this language”). Exceptions that are general, which make reference to the Bidder’s standard

terms and conditions, or that make reference to the Bidder's descriptive information as a whole will not be acceptable. Proposals that do not comply with these requirements for the presentation of exceptions may be rejected in Owner's sole discretion. If a proposal includes express or implied exceptions that are not listed as required, the requirements of the Specifications and Plans shall govern. The Bidder shall not alter any part of the Specifications or Plans in any way, except by stating its exceptions.

- c. **Signatures**. Each Bidder shall sign its Proposal with an authorized signature and shall provide its full business address. The Bidder's name stated on the Proposal shall be the exact legal name of the Bidder's entity. The names of all persons signing shall also be typed or printed below the signature.

Satisfactory evidence of the authority of the officer signing on behalf of a corporation shall be furnished. Bidding corporations, limited liability companies, and partnerships, shall designate the state in which they are formed or registered and the address of their principal office.

- d. **Submittal**. Proposals shall be submitted not later than the date and time stipulated in the Notice of Advertisement. The original and three copies shall be delivered to Owner at the following address:

Barber Valley Development, Inc.
c/o RiveRidge Engineering Company
2447 S. Vista Ave.
Boise, Idaho 83705
Ph. 208-344-1180
Fax 208-344-1182

A single proprietary interest shall not submit multiple proposals for the Project even though the individual proposals are submitted under different names. Owner reserves the right to reject all proposals so submitted.

5. **Withdrawal**. A Bidder's proposal may be withdrawn, altered, or resubmitted at any time prior to the time set for receiving the proposals. Proposals may not be withdrawn, altered, or resubmitted thereafter.

6. **Information to be Submitted with the Proposal**. In addition to any other information requested, each Bidder shall submit with its Proposal, unless otherwise stated, pertinent information concerning proposed organization and proposed schedule, as further described below:

- a. **Schedule of Values**. A Schedule of Values for all of the work that includes quantities and prices of items which when added together equal the Contract Price and subdivides the Project into component parts in sufficient detail to serve as the basis for progress payments during performance of the Project.
- b. **Bidder's Schedule Letter**. Each Bidder shall submit a schedule for construction of the improvements to meet the scheduled completion date of the Contract. The following dates are to be incorporated into the schedule:

Construction Notice to Proceed – July 6, 2020
Substantial Completion (Road segment opened) – November 20, 2020
Final Completion – December 4, 2020

The Bidder shall submit the following with its Proposal:

- i. A construction plan, including preliminary schedule, in writing. The plan shall indicate the sequence of activities including the definition of the various areas which will be worked in parallel and first areas that the Bidder intends to start. The scope of the Bidder's construction plan shall contain sufficient detail to include all major components of the Project, the allowances for other contractors, and activities discrete enough to evaluate on a weekly basis; and
- ii. A statement verifying that the Bidder can meet the schedule;
- c. **Bidder's Field Organization.** An organization chart showing the names of field management, supervisory, and technical personnel, and the details of the management, supervisory, and technical organization that Bidder proposes to be used for this Project. The successful Bidder's organization will be subject to the review and acceptance of Owner. The experience records of the bidder's required field personnel shall be submitted with the bid. Bidder's organization shall include the name of the superintendent who will be on-site throughout the course of the Project.
- d. **List of Subcontractors.** Each Bidder shall submit with its Proposal a list of subcontractors, including the value of the subcontract, what is to be supplied, and experience records (on comparable work) of the subcontractors, field personnel.
- e. **Quality Control Program.** Each Bidder shall submit, with its Proposal, a copy or written description of its quality control program.

7. **Warranty.** All work associated with the Project shall have a warranty period of two (2) years from the date of Project completion.

8. **Local Conditions.** Each Bidder shall visit the site of the Project or otherwise thoroughly inform itself of all conditions and factors which would affect the prosecution and completion of the Project, including, but not limited to, weather and seasonal runoff, the arrangement and condition of existing or proposed structures affecting or which are affected by the Project; the availability and cost of labor, water, materials and supplies; and facilities for transportation, handling, and storage of materials and equipment. By submitting a Proposal, Bidder agrees that all factors have been properly investigated and considered in the preparation of its Proposal. No claims for financial adjustment or extension of time to any contract awarded for the Project will be permitted by Owner that are based on the lack of such prior information or its effect on the cost of the Project.

- a. **Subsurface Conditions.** Each Bidder shall be responsible for determining the types of subsurface materials that will be found in connection with the Project. Bidder will be provided with a copy of a geotechnical evaluation provided by ALLWEST Testing & Engineering, dated December 17, 2019, reference

ALLWEST Project No. 519-392G). As further set forth in Section 2.02 of the Construction Contract, each Bidder is responsible for making its own interpretation of any data. There is no express or implied guarantee of any subsurface data provided.

- b. **Site Conditions that may Affect Sequence of Work.** Site conditions such as ground elevations, groundwater depths, existing underground and overhead utilities, on site debris, weather, seasonal runoff, etc. may affect Bidder's work. Bidder is responsible for the means, manner, and method of addressing known or unknown site conditions.

Bidder shall receive approval by Owner or Owner's Representative prior to visiting the Site and shall indemnify, defend, and hold the Owner and Owner's representative harmless for any damages or claims associated with Bidder or Bidder's employees, agents, or representatives activities associated with such site visits. Any disturbance of the Site shall be immediately repaired by Bidder at Bidder's sole cost.

9. **Interpretation and Addenda.** If any Bidder is in doubt as to the true meaning of any part of the proposed contract documents, such Bidder may submit to Owner and Engineer a written request for an interpretation. Each Bidder submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by addendum transmitted to each party receiving a set of such documents. Owner or Engineer will not be responsible for any other explanations or interpretations of the proposed documents. All questions will be answered in writing. It shall be each Bidder's responsibility to advise Owner and Engineer, before the time specified for receipt of proposals, of conflicting requirements or omissions of information that require clarification. Those questions not resolved by addenda shall be listed in the space provided on the proposal form, together with statements of the basis upon which the proposal is made as affected by each question. Written questions may be directed to individual bidders by Owner or Engineer to clarify their proposals and references provided by Bidders will be contacted for recommendations before a Contractor is selected.

10. **Objections.** Any objections to specifications or bidding procedures must be presented to Owner and Engineer in writing at least three (3) business days prior to the date and time upon which bids are scheduled to be opened.

11. **Bond.** A bid bond in the amount of 5% is required. Failure by the successful Bidder to execute the contract may result in forfeiture of the bid bond. The successful Bidder, upon entering into an agreement with Owner, will also be required to furnish a performance bond and a payment bond, each for not less than one hundred percent (100%) of the Contract Price, as adjusted by authorized change order, in accordance with the Contract.

12. **Taxes, Permits, and Licenses.** Each Bidder shall be responsible for determining the applicable taxes, permits, and licenses. If the Bidder is in doubt as to whether or not a tax, permit, or license is applicable, Bidder shall state in his proposal whether this item has been included in its Proposal and the amount of the tax, permit, or license in question.

13. **Time of Completion.** Time is of the essence for completion of the Project. The Proposal shall be based upon completion of the Project in accordance with the specified schedule. It will be necessary for Bidder to satisfy Owner of its ability to complete the Project within the identified time.

14. **Acceptance and Rejection of Proposals.** Owner reserves the right to reject Proposals, to waive irregularities and informalities in any Proposal that is submitted, and to award the Project to other than the low bidder if such bids are not responsive. Bidders not selected for award will be notified as soon as a winning Bidder has been selected. A selection will be made as soon as possible without compromising the selection process. Bidders are requested not to inquire regarding the status of the bid evaluation.

15. **Property of Owner.** All proposals shall become the property of Owner.

16. **Harris Ranch Community Infrastructure District No. 1.** The Project is being bid and constructed pursuant to the terms of District Development Agreement No. 1 between the City of Boise, Idaho and Harris Ranch Community Infrastructure District No. 1. The successful Bidder will not have recourse, directly or indirectly, to the City of Boise or Harris Ranch Community Infrastructure District No. 1 for any costs under any construction contract or any liability, claim, or expense arising therefrom.

CENTRAL PAVING								KNIFE RIVER			
No.	Description	Quantity	Unit	Unit Cost	Extended Cost	Quantity	Unit	Unit Cost	Extended Cost		
1	Mobilization	1	LS	\$ 27,000.00	\$27,000.00	1	LS	\$193,080.00	\$193,080.00		
2	Demobilization	1	LS	0	\$0.00	1	LS	\$3,000.00	\$3,000.00		
3	Bonds	1	LS	14300	\$14,300.00	1	LS	\$8,610.00	\$8,610.00		
4	Insurance	1	LS	0	\$0.00	1	LS	\$1,540.00	\$1,540.00		
	Subtotal				\$41,300.00				\$206,230.00		
	General Site Work										
5	Remove Existing Asphalt	1221	SY	\$4.60	\$5,616.60	1250	SY	\$3.80	\$4,750.00		
6	Clear & Grub	4.4	AC	\$8,036.36	\$35,359.98	2	AC	\$2,150.00	\$4,300.00		
7	Site Structural Fill	13250	CY	\$14.60	\$193,450.00	14760	CY	\$21.80	\$321,768.00		
8	Project Dewatering	1	LS	\$56,900.00	\$56,900.00	1	LS	\$29,040.00	\$29,040.00		
9	Hydroseed w/ Taskifier	1.75	AC	\$4,000.00	\$7,000.00	1	AC	\$2,550.00	\$2,550.00		
10	Warm Springs Creek Revegetation	1	LS	\$4,100.00	\$4,100.00	1	LS	\$3,200.00	\$3,200.00		
11	Excavation to Subgrade	1353	CY	\$19.00	\$25,707.00	4430	CY	\$5.30	\$23,479.00		
12	Excavate and Prepare Site for Box Culvert	1	LS	\$31,000.00	\$31,000.00	1	LS	\$61,580.00	\$61,580.00		
13	Deliver, Unload and Place Box Culvert and Wing Walls	1	LS	\$20,500.00	\$20,500.00	1	LS	\$43,530.00	\$43,530.00		
14	Poured in Place Apron Section	2	EA	\$9,800.00	\$19,600.00	2	EA	\$8,640.00	\$17,280.00		
15	Waterproof Membrane over Box Culvert	1	LS	\$7,600.00	\$7,600.00	1	LS	\$8,530.00	\$8,530.00		
16	Final Site Grading and Rip Rap at Box End Sections	1	LS	\$36,800.00	\$36,800.00	1	LS	\$20,270.00	\$20,270.00		
17	Channel Reconstruction & Incidental Rock Lined Channel	1	LS	\$7,400.00	\$7,400.00	1	LS	\$13,790.00	\$13,790.00		
18	Install Irrigation Sleeves & Repair Irrigation Along Creek	1	LS	\$5,100.00	\$5,100.00	1	LS	\$13,530.00	\$13,530.00		
19	Offsite Rock Retaining Wall	151	LF	\$90.80	\$13,710.80	155	LF	\$218.00	\$33,790.00		
20	Traffic Control	1	LS	\$9,200.00	\$9,200.00	1	LS	\$7,310.00	\$7,310.00		
	Construction Surveying	1	LS	\$0.00	\$0.00	1	LS	\$21,460.00	\$21,460.00		
	Subtotal				\$479,044.38				\$630,157.00		
	Roads										
21	Road & Sidewalk Subgrade Compact & Prep	13,395.0	SY	\$0.94	\$12,591.30	9860	SY	\$0.80	\$7,888.00		
22	6" Minus Uncrushed Aggregate Subbase (Imported)	4,156.0	CY	\$21.80	\$90,600.80	3750	CY	\$27.00	\$101,250.00		
23	3/4" Minus Crushed Aggregate Base Coarse	1,137.0	CY	\$44.60	\$50,710.20	1182	CY	\$47.00	\$55,554.00		

	CONTRACTOR BID TABULATION								
	Description	Quantity	Unit	Unit Cost	Extended Cost	Unit	Unit Cost	Extended Cost	
24	2-1/2" Asphalt Concrete	4,440.0	SY	\$11.50	\$51,060.00	4450	SY	\$10.85	\$48,282.50
25	5" Asphalt Concrete (Two Lift Placement per ACHD)	1,220.0	SY	\$23.20	\$28,304.00	1250	SY	\$22.45	\$28,062.50
26	Sand Layer over Box Culvert	16.0	CY	\$144.00	\$2,304.00	90	CY	\$20.50	\$1,845.00
27	Saw Cut Existing Asphalt	150.0	LF	\$6.85	\$1,027.50	130	LF	\$4.00	\$520.00
28	Standard 6" Vertical Curb and Gutter and Base Course	2,150.0	LF	\$17.20	\$36,980.00	2170	LF	\$19.70	\$42,749.00
29	6' Wide Concrete Sidewalk and Base Course	2,708.0	SY	\$34.30	\$92,884.40	1806	SY	\$41.00	\$74,046.00
30	15' Wide Concrete Sidewalk and Base Course	1,898.0	SY	\$34.90	\$66,240.20	1898	SY	\$42.50	\$80,665.00
31	Concrete Pedestrian Ramps	140.0	SY	\$117.00	\$16,380.00	15	SY	\$928.00	\$13,920.00
32	Valley Gutter	52	LF	\$49.90	\$2,594.80	52	LF	\$62.50	\$3,250.00
No.	Roads Continued								
33	Detectable Warning for Pedestrian Access	168	SF	\$17.60	\$2,956.80	\$15.00	SF	\$116.00	\$1,740.00
	Subtotal				\$454,634.00				\$459,772.00
	Water								
34	Install new 1" water service and meter setting	2	EA	\$3,200.00	\$6,400.00	2	EA	\$2,340.00	\$4,680.00
35	8" PVC Water Main	2,130	LS	\$28.30	\$60,279.00	1	LS	\$70,560.00	\$70,560.00
36	8" Water Main Fittings & Joint Restraints	1	LS	\$7,400.00	\$7,400.00	1	LS	\$6,290.00	\$6,290.00
37	8" x 2" Blowoff Assembly	1	EA	\$1,800.00	\$1,800.00	1	EA	\$1,300.00	\$1,300.00
38	8" Gate Valve	5	EA	\$1,400.00	\$7,000.00	5	EA	\$1,290.00	\$6,450.00
39	8" Ductile Iron Pipe	20	LF	\$511.00	\$10,220.00	24	LF	\$211.00	\$5,064.00
40	16" Steel Cover Pipe and Spacers	20	LF	\$399.00	\$7,980.00	20	LF	\$330.00	\$6,600.00
41	Install 6" Fire hydrant Assembly	1	EA	\$6,200.00	\$6,200.00	1	EA	\$4,520.00	\$4,520.00
42	Connect to Existing 8" Main	4	EA	\$1,300.00	\$5,200.00	4	EA	\$464.00	\$1,856.00
43	Adjust Existing Water Valve to finished grade	1	LS	\$1,200.00	\$1,200.00	1	LS	\$592.00	\$592.00
	Subtotal				\$113,679.00				\$107,912.00
	Sewer								
44	Remove Cleanout and connect to Existing 8" Pipe	1	LS	\$5,700.00	\$5,700.00	1	LS	\$2,370.00	\$2,370.00
45	8" SDR35, PVC Sewer Main	1,189	LF	\$56.40	\$67,059.60	1190	LF	\$74.50	\$88,655.00

CONTRACTOR BID TABULATION						
	Description	Quantity	Unit	Unit Cost	Extended Cost	Unit
46	New 48" Standard Sanitary Sewer Manhole	3	EA	\$5,300.00	\$15,900.00	3
47	New Traffic Rated Cleanout	1	EA	\$775.00	\$775.00	1
	Subtotal				\$89,434.60	
	Storm Drain					
48	12" PVC C-900 Storm Drain Pipe and Fittings	671	LF	\$44.60	\$29,926.60	644
49	15" HDPP Storm Drain Pipe	560	LF	\$43.70	\$24,472.00	620
50	Connect to Existing 15" HDPP Pipe	1	EA	\$1,700.00	\$1,700.00	1
51	Install Type 1 Catch Basin	6	EA	\$1,400.00	\$8,400.00	6
52	New 48" Standard Storm Drain Manhole	8	EA	\$4,300.00	\$34,400.00	8
53	Sand Lens	1	LS	\$10,100.00	\$10,100.00	1
54	Modify Offsite Infiltration Swale	1	LS	\$3,500.00	\$3,500.00	1
	Subtotal				\$112,498.60	
	SWPPP					
55	Prepare and File SWPPP, ENOL, ACHD ESC Plan	1	LS	\$1,000.00	\$1,000.00	1
56	Install all BMPs Prior to Construction	1	LS	\$18,000.00	\$18,000.00	1
57	Continuously Inspect and Maintain BMP's	1	LS	\$2,000.00	\$2,000.00	1
58	Final Site Inspection and File ENOT	1	LS	\$199.00	\$199.00	1
	Subtotal				\$21,199.00	
No.	Fine Irrigation					
59	Complete Fine Irrigation Design and Installation	1	LS	\$19,200.00	\$19,200.00	1
60	Irrigation Sleeving	1	LS	\$4,500.00	\$4,500.00	1
	Subtotal				\$23,700.00	
	Landscaping					
61	Amended Topsoil	300	CY	\$178.00	\$53,400.00	6
62	Lawn	10444	SF	\$0.49	\$5,117.56	10444
61	Trees	36	EA	\$563.00	\$20,268.00	36
62	Flowering plants in Planter Pots	1	LS	\$5,500.00	\$5,500.00	1
					LS	\$12,360.00

CONTRACTOR BID TABULATION							
	Description	Quantity	Unit	Unit Cost	Extended Cost	Unit	Unit Cost
63	Trash Receptical	8	EA	\$2,000.00	\$16,000.00	8	EA
64	Benches	8	EA	\$2,700.00	\$21,600.00	16	EA
65	Planter Pots	16	EA	\$2,200.00	\$35,200.00	16	EA
66	Tree Grates	16	EA	\$5,900.00	\$94,400.00	16	EA
	Subtotal				\$251,485.56		
	Street Signs and Lighting						
67	Street Signs	1	LS	\$2,400.00	\$2,400.00	1	LS
68	Type II Barricade	3	EA	\$375.00	\$1,125.00	3	EA
69	Type III Barricade	4	EA	\$512.00	\$2,048.00	4	EA
70	Street Lights - 25 ft Pole / 97 W LED	2	EA	\$6,500.00	\$13,000.00	2	EA
71	Street Lights - 30 ft Pole / 97 W LED	1	EA	\$5,300.00	\$5,300.00	1	EA
72	Street Light Electrical Conduit & Wire	1	LS	\$13,200.00	\$13,200.00	1	LS
73	Rectangular Rapid Flashing Beacon & Electrical	1	LS	\$32,100.00	\$32,100.00	1	LS
74	Powder Coat Street Signs & Poles	1	LS	\$2,400.00	\$2,400.00	1	LS
75	Pavement Striping and Symbols	1	LS	\$3,900.00	\$3,900.00	1	LS
	Subtotal				\$75,473.00		
	Total Project Cost				\$1,662,448.14		
							\$1,951,174.00

BIDDER'S PROPOSAL

PROJECT IDENTIFICATION: HARRIS RANCH COMMUNITY INFRASTRUCTURE DISTRICT
NO. 1 – DALLAS HARRIS SOUTH SUBDIVISION NO. 1 ROAD
AND UTILITY IMPROVEMENTS

CONTRACT IDENTIFICATION NUMBER: 19035

THIS BID IS SUBMITTED TO OWNER: Barber Valley Development, Inc.
c/o RiveRidge Engineering Company
2447 S. Vista Ave.
Boise, Idaho 83705

1. The undersigned Bidder proposes and agrees, if this Proposal is accepted, to enter into an agreement with Owner in the form included in the Contract Documents to complete all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Proposal and in accordance with the Contract Documents.

2. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including, without limitation those dealing with the disposition of Bid Security. Bidder will sign the agreement contained as Item 2.0.A (the "Contract") and submit the contract security and other documents required by the Contract Documents within 7 days after the date of the Notice of Award (Item 2.0.B). Any and all capitalized terms are as defined in the Contract.

3. In submitting this Proposal, Bidder represents, as more fully set forth in the Agreement, that:

- a. Bidder acknowledges receipt and has examined copies of all the Contract Documents, including the Notice of Advertisement and Instructions to Bidders (Item 1.0.A) and the following addenda:

Addendum Date:

6.25.2020

Number of Addendum:

1

- b. Bidder has examined the site and locality where the Work is to be performed, the legal requirements (Federal, State and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as Bidder deems necessary;
- c. This Proposal is genuine and not made in the interest of, or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other bidder to submit a false or sham Proposal; Bidder has not induced any

person, firm or a corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for himself any advantage over any other bidder or over Owner; and

- d. Bidder and all subcontractors to be associated with the Project currently possess or will be able to obtain the appropriate Idaho contractor's license prior to execution of the Agreement.

Bidder's Public Works Contractors License No. 10788-U-1-2

4. **Bid Schedules.**

- a. Bidder shall complete Bid Schedules for each of the five segments identified in the Notice of Advertisement to Bid.
- b. If awarded, Bidder shall complete the Work per the price(s) established in the submitted Bid Schedule(s).
- c. Bids shall include sales and other applicable taxes or fees.
- d. Quantities shown are estimates and subject to change during construction. Bidder agrees to perform all work described in the Contract Documents at the unit price identified in the Bid Schedule(s).

5. **Bidder agrees:**

- a. To provide a project superintendent to be on site at all times of construction and for the full duration of the Agreement. Bidder also agrees that said superintendent is to be approved by Owner prior to construction.
- b. Work will reach Substantial Completion and Final Completion on or before the dates or within the number of calendar days indicated in the Notice of Advertisement to Bid.
- c. To accept the provisions of the Contract as to liquidated damages in the event of failure to complete the Work by the date stipulated in the Notice of Advertisement to Bid.

6. **Additional Documents.** The following documents are made a condition of and shall be submitted with this Proposal:

- a. Bid Schedule;
- b. Contractor's Schedule of Values;
- c. Supplemental Equipment Rate Schedule;
- d. Bidder's Schedule Letter;
- e. Field Organization Chart;
- f. List of Subcontractors;
- g. Bid Bond in the amount of 5% of the Contract Price.

7. **Defined Terms.** The terms used in this Proposal which are defined in the Contract have the meanings assigned to them in the Contract, as the same may be amended.

[end of text – Bidder's signature on following page]

If BIDDER is a Corporation:

By: Central Paving Co., Inc., an S corporation
(Corporation Name)

By: Terry McEntee, President
(Name of Person Authorized to Sign), (Title)

Phone No. 208·338·0818

If BIDDER is a Limited Liability Company:

By: _____, an _____ limited liability company
(Limited Liability Company Name)

By: _____
(Name of Person Authorized to Sign), (Title)

Phone No. _____

If BIDDER is a Partnership:

By: _____, an _____ partnership
(Firm Name)

By: _____
(General Partner)

Phone No. _____

If BIDDER is an Individual:

By: _____
(Individual's Name)

Doing business as (if applicable): _____

Business address: _____

Phone No. _____

NOTICE OF AWARD

for

**HARRIS RANCH COMMUNITY INFRASTRUCTURE DISTRICT NO. 1 –
DALLAS HARRIS SOUTH SUBDIVISION NO. 1 ROAD AND UTILITY IMPROVEMENTS**

TO: Central Paving Co., Inc.

OWNER'S PROJECT NO.: 19035

You are notified that your Bid dated June 25, 2020 for the Project has been considered. You are the successful bidder for the Project and have been awarded the contract.

The lump-sum price for the Project is, as follows:

TOTAL LUMP SUM PRICE: **\$1,662,448.14**

Two (2) sets of the drawings will be delivered separately or otherwise made available to you immediately.

ACCEPTANCE OF AWARD:

OWNER:

BARBER VALLEY DEVELOPMENT, INC.,
an Idaho corporation

By: Doug Fowler, President
Date: _____

CONTRACTOR:

CENTRAL PAVING CO., INC.
an Idaho corporation

By: Terry McEntee, Authorized Agent
Date: 7-13-2020

Dallas Harris South Subdivision No. 1 (DHE18 & SE5)

Project Completion Date: April 13, 2022

<u>Vendor</u>	<u>Reimbursement Amount</u>	
Central Paving	\$	1,340,100.18
RiveRidge	\$	56,267.50
Old Castle	\$	263,951.66
Total Reimbursement Due	\$	1,660,319.34

CONSTRUCTION CONTRACT
(WITH GENERAL CONDITIONS)

for

**HARRIS RANCH COMMUNITY INFRASTRUCTURE DISTRICT NO. 1 –
DALLAS HARRIS SOUTH SUBDIVISION NO. 1 ROAD AND UTILITY IMPROVEMENTS**

Dated:

July 13, 2020

between

Barber Valley Development, Inc.

and

Central Paving Co., Inc.

CONSTRUCTION CONTRACT
(WITH GENERAL CONDITIONS)

for

**HARRIS RANCH COMMUNITY INFRASTRUCTURE DISTRICT NO. 1 –
DALLAS HARRIS SOUTH SUBDIVISION NO. 1 ROAD AND UTILITY IMPROVEMENTS**

This CONSTRUCTION CONTRACT (WITH GENERAL CONDITIONS) FOR HARRIS RANCH COMMUNITY INFRASTRUCTURE DISTRICT NO. 1 – DALLAS HARRIS SOUTH SUBDIVISION NO. 1 ROAD AND UTILITY IMPROVEMENTS (this “**Contract**”) is made and entered into this 13 day of July, 2020, by and between Barber Valley Development, Inc., an Idaho corporation (“**Owner**”) and Central Paving Co., Inc. (“**Contractor**”).

ARTICLE I
GENERAL TERMS

1.01 Contract Documents. The “Contract Documents” consist of this Contract and the following documents as set forth on the table of contents of the “Project Manual” (defined below), each of which are incorporated herein by reference:

1.0: Bidding Information and Bidder's Proposal

- A. Notice of Advertisement to Bid and Instructions to Bidders;
- B. Addenda to Notice of Advertisement to Bid and Instructions to Bidders (if any);
- C. Bidder's Proposal;
- D. Bid Schedule;
- E. Contractor's Schedule of Values;
- F. Supplemental Equipment Rate Schedule;
- G. Bidder's Schedule Letter;
- H. Bidder's Field Organization Chart;
- I. Bidder's List of Subcontractors; and
- J. Bid Bond.

2.0: Additional Contract Documents

- A. [intentionally omitted];
- B. Form of Notice of Award;
- C. Form of Notice to Proceed;
- D. Payment Bond;
- E. Performance Bond;
- F. Dual Obligee Rider (If Required);
- G. Form of Contract Change Order;
- H. Form of Materials Lien Waiver;
- I. Form of Subcontractor's Lien Waiver;
- J. Form of Application for Payment;
- K. Form of Certificate for Substantial Completion; and
- L. Form of Contractor's Project Certification

3.0: Technical Specifications for All Improvements (the “Specifications”)

4.0: Plans Approved for Construction by City of Boise City, Ada County Highway District, and Suez Water (the “Drawings” or “Plans”)

The Contract Documents shall further include all Change Orders (defined below) issued and accepted by Owner in writing after the execution of this Contract. These form the agreement between the parties, and all are fully a part of the agreement as if attached to this Contract or repeated herein. The "**Project Manual**" is the bound documentary information prepared for bidding and constructing the Work, as described in this Paragraph 1.01.

1.02 Contract Sum. Contractor agrees to provide all labor, materials, supervision, equipment, machinery, tools, facilities, services, employee training and testing, scaffolding, hoisting facilities, shop drawings, storage and testing, security, transportation, disposal, the securing of all field dimensions necessary or required, cutting or patching of existing materials, permits and agreements and any other items necessary to timely and fully complete the entire construction required to be provided under the Contract Documents (hereinafter referred to as the "**Work**" or "**Project**") at real property located within Harris Ranch CID No. 1 and generally in the areas near the real property that is or shall be platted as Dallas Harris South Subdivision No. 1, located in the northwest ¼ of Section 29 of Township 3 North, Range 3 East, Boise Meridian, Boise, Ada County, Idaho. (hereinafter referred to as the "**Premises**" or "**Site**").

The Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

Owner agrees to pay Contractor (according to the terms and on the schedule identified in this Contract), for the complete and proper performance of the Work required by this Contract, the sum of \$1,662,448.14 inclusive of the applicable sales tax on all taxable items ("**Contract Sum**").

Without limitation, Contractor is responsible for all of the following charges and each shall be deemed included within the Contract Sum:

- (a) Permits, Fees, Notices, and Compliance with Other Laws. Contractor shall, unless specified to the contrary in the Project Manual, secure and pay for all governmental fees and licenses necessary for the proper execution and completion of the Work or required to be obtained by a general contractor by the local jurisdiction in which the Work is to be performed. All assessments or inspection fees as may be imposed by any municipal agency or utility company shall be paid by Contractor.
- (b) Employee Costs. Contractor is responsible for paying payroll costs for employees in the employ of Contractor, including, but not limited to, salaries and wages plus the costs of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above.
- (c) Materials. Contractor shall pay the cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
- (d) Subcontractor and Consultants. Payments made by Contractor to subcontractors for Work performed by subcontractors. Costs of special consultants employed by Contractor for services specifically related to the Work, including, but not limited to, engineers, architects, testing laboratories, surveyors, attorneys, and accountants.

- (e) **Taxes.** Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with such laws and regulations as may be applicable to the Project during the performance of the Work.
- (f) **Charges for Patents or Processes.** Contractor agrees to pay all fees, royalties, and claims for any patented invention, device, article, method, arrangement, copyright, trademark, or service mark that may be used upon or in any manner connected with the performance of the Work or any part thereof. Contractor shall forever save and hold harmless and fully indemnify Owner and its agents from all liabilities, damages, claims, recoveries, costs, and expenses (including attorney's fees) that may at any time arise as a result of any alleged infringement of any patent, copyright, trademark, or service mark in consequence of the installation or use of an item, method, process, or arrangement in the performance of the Work.

1.03 Commencement and Completion. Contractor shall commence performance of the Work after receipt of Notice to Proceed from Owner of the form attached as Item 2.0.C to the Project Documents and upon completion of all necessary pre-construction meetings with any governmental entity having jurisdiction (the "**Contract Commencement Date**"). Contractor shall thereafter diligently prosecute the Work.

- (a) **No Site Disturbance Prior to Contract Commencement Date.** With the sole exception of inspections prior to the Contract Commencement Date that are authorized by Owner or Owner's Representative, no site disturbance shall occur at the Site prior to the date on which the "Contract Time" (defined below) commences to run. "**Contract Time**," as used herein, shall mean the time period for Contractor's Final Completion of the Work provided in this Paragraph, beginning with the Contract Commencement Date and including any extensions of such time periods pursuant to Paragraph 8.01.
- (b) **Substantial Completion.** Contractor shall achieve Substantial Completion of the components of the Work by **November 20, 2020** subject to adjustments of the Contract Time as provided in Paragraph 8.01.

"**Substantial Completion**," as used herein, shall mean the completion of the Work in accordance with the Contract Documents, subject to certain minor finishing items or adjustments required to be made by Contractor and at such time as the Work can be safely used or occupied by the public for its intended purpose (despite some items remaining incomplete), accepted by Ada County Highway District ("ACHD") (as applicable), and provided that Contractor has obtained and delivered to Owner all permits and other consents from all governmental authorities, if any, that are required with respect to the Work.

Notwithstanding anything to the contrary contained herein, Owner and Contractor agree that Substantial Completion will only be extended by (i) acts of God, (ii) war, (iii) delays caused by ACHD, (iv) unreasonable delays caused by utilities, (v) or inclement weather. Any other request for extensions of time must be approved in writing by Owner.

- (c) **Final Completion.** Final Completion of the Work shall occur by **December 4, 2020**, subject to adjustments of the Contract Time by Change Orders approved in writing by Owner.

"**Final Completion**" shall occur when all punch list items and any portion of the Work incomplete at the time of Substantial Completion have been completed in accordance with the requirements of the Contract Documents and to the satisfaction of Owner.

Owner shall certify the dates of Substantial Completion and Final Completion of the Work. Time is of the essence with respect to the Contract Documents and all obligations thereunder. Contractor shall

carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as Owner and Contractor may agree in writing.

1.04 Owner's Representative; Engineer. For purposes of this Contract, "Owner's Representative" and "Engineer" shall refer to RiveRidge Engineering, Inc.

ARTICLE II **GENERAL REQUIREMENTS OF CONTRACTOR AND OWNER**

2.01 Contractor's Requirements. Contractor accepts the relationship of trust and confidence established between it and Owner under this Contract and agrees, represents, and/or warrants, as follows:

- (a) **Financially Solvent.** Contractor (and its subcontractors) are financially solvent, able to pay all debts as they mature, and possessed of sufficient working capital to complete the Work and perform all obligations hereunder;
- (b) **Authority.** Contractor is authorized to do business in the State of Idaho and is properly licensed by all necessary governmental and public and quasi-public authorities having jurisdiction over Contractor and over the Work and the Project;
- (c) **Work Free of Liens.** Contractor agrees to faithfully and fully perform the terms of this Contract, and shall complete the Work free and clear of all liens. Contractor will provide prompt written notice of actual and prospective claims of any liens or charges known to Contractor.
- (d) **Best Quality.** All materials and equipment supplied as part of the work shall be new and all workmanship shall be of the best quality in strict accordance with this Contract. Contractor shall make no substitution of materials unless approved in advance, in writing, by Owner or its agent and in accordance with Paragraph 3.05. If required by Owner or its agent, Contractor shall furnish satisfactory evidence as to the kind and quality of materials used in the Work, including, whenever requested, sample of such materials.
- (e) **Superintendent.** Contractor shall designate a project superintendent to be approved by Owner. Said superintendent will remain with the Project until Final Completion. The superintendent shall represent Contractor, and communications given to the superintendent shall be as binding as if given to Contractor. Contractor shall not change the superintendent without Owner's consent, which consent shall not be unreasonably withheld or delayed.
- (f) **Contractor Employees.** Contractor shall, at all times during the progress of the Work, employ enough skilled workmen and have on hand and maintain an adequate supply of materials and equipment to complete the Work in accordance with the time schedule. The key members of Contractor's staff shall be persons agreed upon with Owner. Such key members of Contractor's staff shall not be changed without the written consent of Owner, unless such person becomes unable to perform any required duties due to death, disability, transfer, or termination of employment with Contractor. If a key member is no longer capable of performing, Owner and Contractor shall agree on a mutually acceptable substitute.
- (g) **Subcontractors.** Contractor has notified Owner in connection with the bidding process (on Item 1.0.J of the Contract Documents) of the names of any subcontractors whom Contractor intends to use on any or all parts of the Work. Contractor shall not employ any subcontractor, supplier, or other individual or entity, whether initially or as a replacement, against whom Owner may have a reasonable objection. Contractor agrees

that it is fully responsible for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by such subcontractors as Contractor is for the acts and omissions of a person directly employed by Contractor. Contractor shall require all subcontractors, suppliers, and other individuals or entities performing or furnishing any of the Work to communicate with Owner's Representative through Contractor. All work performed by a subcontractor or supplier for Contractor will be pursuant to an appropriate agreement that specifically binds the subcontractor or supplier to the applicable terms and conditions of the Contract Documents. Subcontractors whose work is unsatisfactory to Owner or Owner's Representative, or are considered by Owner or Owner's Representative to be careless, incompetent, unskilled, or otherwise objectionable shall be dismissed from work under the Contract upon written notice by Owner or Owner's Representative.

- (h) Review of Site. Without limiting Paragraph 2.02(b) hereof, Contractor has satisfied itself, by its own independent investigation and study prior to submitting a bid for the Work, regarding all the conditions affecting the Site of the Work to be done and materials to be furnished; the meaning, intention, and sufficiency of the plans and specifications; and the conditions under which the Work is to be done; and has executed this Contract based solely on such investigation, study, and determination made by it, and not in reliance upon any representation by Owner or by anyone acting for or on behalf of Owner.
- (i) Review of Contract Documents. Before undertaking each part of the Work, Contractor has studied and compared the Contract Documents and checked and verified pertinent figures therein and applicable field measurements. Contractor shall promptly report in writing to Owner or Owner's Representative any conflict, error, ambiguity, or discrepancy that Contractor discovers or has actual knowledge of, and shall obtain a written interpretation from Owner's Representative before proceeding with any work affected thereby. **If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and any applicable law or regulation, standard, specification, manual, code, or instruction of any supplier, Contractor shall promptly report it to Owner's Representative in writing. Contractor will not proceed with the Work affected thereby (except in case of emergency) until Owner's Representative has responded to such discovery.**
- (j) Emergencies. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Owner and Owner's Representative prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Owner determines that a change in the Contract Documents is required because of action taken by Contractor in response to such an emergency, a Change Order will be issued.
- (k) Cooperation with Owner re: Livestock. Contractor acknowledges that certain cattle and other livestock may be kept in areas nearby or adjacent to the Site. Contractor agrees to coordinate with Owner to ensure that issues associated with such animals are adequately addressed, including ensuring that fencing closures are maintained.

2.02 Owner's Requirements.

- (a) Availability of Lands. Owner shall furnish the Site. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials or equipment.
- (b) Studies; Reference Points. No construction surveys are provided by Owner. Contractor

will be provided with a copy of a geotechnical evaluation provided by ALLWEST Testing & Engineering, dated December 17, 2019, reference ALLWEST Project No. 519-392G). Owner makes no representations or warranties with regard to such data, which is subject to Contractor's independent review, investigation, and confirmation. Without limiting Section 01050 of the Specifications, Owner shall provide reference points for construction that in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer and Owner's Representative whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel at Contractor's sole cost and expense.

ARTICLE III **REQUIREMENTS PRIOR TO AND AT COMMENCEMENT OF CONSTRUCTION**

3.01 Preliminary Exchanges.

- (a) **Bonds.** Contractor shall obtain and furnish performance and payment bonds, each in an amount equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. All bonds shall be in the form attached as **Items 2.0.D and 2.0.E** to the Project Documents. Such bonds shall be executed by sureties acceptable to Owner, in Owner's reasonable discretion. Contractor shall deliver to Owner such bonds as Contractor may be required to furnish at the time Contractor delivers the executed counterpart of this Contract to Owner. These bonds shall remain in effect until two years after the date when final payment becomes due.

If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in the State of Idaho, Contractor shall promptly notify Owner and shall, within 20 days after the event giving rise to such notification, provide another acceptable bond and surety.

- (b) **Evidence of Insurance.** Before any Work at the Site is started, Contractor shall deliver to Owner certificates of insurance (and other evidence of insurance that either party or any additional insured may reasonably request) that Contractor is required to provide and maintain in accordance with this Contract.
- (c) **Copies.** Owner shall furnish Contractor up to two printed or hard copies of the Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

3.02 Preconstruction Conference. Without limiting Section 01200 of the Specifications, before any Work at the Site is started, a conference attended by Owner, Owner's Representative, Engineer, and any others identified by Owner will be held with Contractor to establish a working understanding among the parties and to discuss procedures and processes, including procedures for handling Shop Drawings and other submittals, processing applications for payment, and maintaining required records. Owner's Representative is designated to act on behalf of Owner in connection with the preconstruction conference. At such conference, Contractor shall designate, in writing, a specific individual to act as its authorized representative with regard to this Contract if said individual is anyone other than the superintendent approved by Owner.

3.03 Schedules. The schedules required pursuant to this Contract will be provided and reviewed in accordance with this Paragraph:

- (a) **Preliminary Schedules.** Within ten days of the effective date of this Agreement,

Contractor shall prepare a “**Progress Schedule**” with any modifications from Item 1.0.G of the Bid Documents to be approved by Owner and Owner’s Representative, in their sole but reasonable discretion. At such time, Contractor shall also provide a “**Schedule of Submittals**” (detailing required submittals and the time requirements to support scheduled performance of related construction activities) and the “**Schedule of Values**” (Item 1.0.E of the Bid Documents).

- (b) Initial Acceptance of Schedules. At least 10 days before submission of the first “**Application for Payment**” on the form attached as Item 2.0.J of the Bid Documents, Owner, Owner’s Representative, Engineer and Contractor will meet to review the schedules identified in Paragraph 3.03(a). No progress payments will be made to Contractor until an acceptable Progress Schedule is submitted to Owner or Owner’s Representative. Contractor’s Progress Schedule will be acceptable to Owner if it provides an orderly progression of the Work to completion within the Contract Times. Contractor’s Schedule of Submittals will be acceptable to Owner if it provides a workable arrangement for reviewing and processing the required submittals. Contractor’s Schedule of Values will be acceptable to Owner if it conforms to Item 1.0.E of the Bid Documents. Upon acceptance, each of the above schedules become part of this Contract.
- (c) Weekly Meetings; Progress Schedule. Contractor shall adhere to the Progress Schedule and will meet weekly with Owner’s Representative to address any issues encountered in the performance of the Work. In the event Contractor seeks to adjust the Progress Schedule, Contractor shall submit to Owner or Owner’s Representative proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Proposed adjustments in the Progress Schedule that will change the Contract Times may only be made by a Change Order and must be approved by Owner.
- (d) Delay. If Contractor is behind the Schedule to such an extent that Contractor will be unable to meet the Substantial Completion date or any major milestone dates listed in the Schedule, Contractor shall employ such additional forces, obtain such additional equipment, employ such additional supervision, and pay such additional overtime wages as may be required to place the progress of the Work back on schedule in accordance with the Schedule, all at Contractor’s expense. Failure to do so within five (5) days following written demand therefor shall constitute a default by Contractor hereunder.

3.04 Shop Drawings and Samples. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval by Owner’s Representative in accordance with the accepted Schedule of Submittals. For purposes of this Contract, “Shop Drawings” include all drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. For purposes of this Contract, “Samples” include physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

Each submittal will be identified as Engineer may require.

- (a) Shop Drawings:
 - (i) *Submit number of copies specified in the Specifications.*
 - (ii) *Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 3.04(e).*

(b) Samples:

- (i) *Submit number of Samples specified in the Specifications.*
 - (ii) *Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 3.04(e).*
- (c) Expense of Contractor. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed in connection with Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- (d) Submittal Procedures. Before submitting each Shop Drawing or Sample, Contractor shall have:
- (i) *reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;*
 - (ii) *determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;*
 - (iii) *determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and*
 - (iv) *determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.*

Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be by written communication separate from the Shop Drawings or Sample submittal. In addition, Contractor shall include a specific notation of each such variation on each Shop Drawing or Sample submitted to Engineer for review and approval.

- (e) Engineer's Review. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

Engineer's review and Owner's Representative's approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

Engineer's review and Owner's Representative's approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 3.04(d) and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of this Paragraph 3.04(d).

- (f) **Resubmittal Procedures.** Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

3.05 Substitutes and "Or-Equals". Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other suppliers may be submitted to Engineer and Owner for review under the circumstances described below.

- (a) **"Or-Equal" Items.** If an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's discretion and with approval of Owner, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items.

For the purposes of this Paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:

- (i) *in the exercise of reasonable judgment Engineer determines that: (i) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and (iii) it has a proven record of performance and availability of responsive service;*
- (ii) *Contractor certifies that, if approved and incorporated into the Work: (i) there will be no increase in cost to Owner or increase in Contract Times; and (ii) it will conform substantially to the detailed requirements of the item named in the Contract Documents; and*
- (iii) *Owner agrees to the "or-equal" item.*

- (b) **Substitute Items.** If an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, it will be considered a proposed substitute item. Contractor shall submit sufficient information as provided below to allow Engineer to determine (with Owner and Owner's Representative's approval) if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

- (i) shall certify that the proposed substitute item will (i) perform adequately the functions and achieve the results called for by the general design, (ii) be similar in substance to that specified, and (iii) be suited to the same use as that specified;
 - (ii) will state: (i) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time; (ii) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and (iii) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - (iii) will identify: (i) all variations of the proposed substitute item from that specified, and (ii) available engineering, sales, maintenance, repair, and replacement services; and
 - (iv) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- (c) Substitute Construction Methods or Procedures. If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, with Owner or Owner's Representative's approval, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents.
- (d) Special Guarantee. Owner, Owner's Representative, or Engineer may require Contractor to furnish, at Contractor's expense, a special performance guarantee or other surety with respect to any substitute.
- (e) Reimbursement. Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute and for any required changes in the Contract Documents to permit a substitute. Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's sole expense.

ARTICLE IV CONTRACTOR OVERSIGHT, SUBCONTRACT, AND SAFETY REQUIREMENTS

4.01 Supervision and Construction Oversight by Contractor. Without limiting any other requirements imposed in this Contract, Contractor shall supervise and direct the Work, using its best skill and attention. All Work performed by Contractor shall be under the direction of a competent supervisor on the Premises employed by Contractor. Contractor shall provide, at Contractor's sole cost, a job trailer that will remain at the Site until Substantial Completion. Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work under this Contract and following any special considerations specified by Owner in conformance with the Scope of Work.

In addition to the foregoing and those items set forth in Article II hereof:

- (a) Compliance with Laws. Contractor shall, at its expense, give all necessary notices and cause all work done and materials and equipment furnished pursuant to the Contract Documents to comply strictly with all applicable local, state and federal laws, ordinances, rules, regulations, codes and orders (hereinafter referred to collectively as "**Legal Requirements**"). Further, Contractor covenants and warrants that it shall observe and comply strictly with all Legal Requirements in connection with the performance of the

Work or otherwise. Contractor also shall take and observe all necessary measures and precautions for the safety and protection of all property and persons in connection with the performance of the Work. The Work shall be done, furnished and performed to the satisfaction of Owner and any governmental or other authorities concerned and their respective representatives, at all times, shall have access to the Work for any lawful purpose, including inspection.

- (i) *Contractor and Owner shall file the Environmental Protection Agency (EPA) Construction General Permit (CGP) separately. Contractor will file a Notice of Intent (NOI) and develop and implement an approved Storm Water Pollution Prevention Plan (SWPPP) prior to commencement or construction, and Contractor shall not file a Notice of Termination (NOT) with the EPA until authorized in writing by Owner. Authorization for Contractor to file the NOT will be granted by Owner when the area subject to the CGP has achieved final stabilization as defined in the CGP. Contractor shall pay all fees and costs associated with such permitting.*
- (b) Discipline and Good Order. Contractor shall at all times enforce strict discipline and good order among its employees and shall not employ on the Work any unfit person or anyone nonskilled in the task assigned to him. Contractor shall be solely responsible for the care, custody, control, and direction of all persons performing the Work, and shall have sole responsibility for the employment, discharge, and direction of such persons. Contractor shall not permit condone, or tolerate the use of alcohol or illegal drugs or controlled substances on the Site during working hours, including breaks or meal periods.
- (c) Use of Site. Contractor shall confine construction equipment, storage of materials and equipment, and the operations of workers to the Site and other areas permitted by law, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- (d) Maintenance of Site. Contractor shall clean up the Premises related to the Work in a thorough and workmanlike manner to the satisfaction of Owner and Owner's Representative wherever necessary during the progress of the Work and when requested by Owner or Owner's Representative. Contractor shall take all necessary precautions to keep the Premises free of safety hazards and shall protect all materials, equipment, and completed (or partially completed) Work from loss and damage, including theft and damage by weather and shall correct any damage or disfigurement to contiguous property resulting from the Work. Contractor acknowledges the dangers of uncontrolled fire on the Site and shall not permit the burning of any materials on Site without permission of Owner. Prior to Substantial Completion of the Work, Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work, Contractor shall remove from the Site all tools, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- (e) Safety. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work, and shall provide necessary protection to prevent damage, injury, or loss to all persons on the Site or who may be affected by the Work, all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and underground facilities not designated for removal, relocation, or replacement in the course of construction. Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss. Vehicles shall be operated and

maintained in a safe condition. Equipment shall only be operated by properly trained personnel. Excavations shall not be left overnight without proper barricades and satisfactory warning devices.

- (f) **Emergencies.** In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Owner and Owner's Representative prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Owner determines in Owner's sole but reasonable discretion, that a change in the Contract Documents is required because of action taken by Contractor in response to such an emergency, a Change Order will be issued.

4.02 Subcontracts.

- (a) Prior to commencement of the Work, Contractor shall furnish Owner with any updates to Contractor's List of Subcontractors (Item 1.0.1 of the Contract Documents). If requested by Owner, Contractor will furnish Owner with a copy of all written agreements (including subcontracts and purchase orders) therefor and the terms of all verbal agreements therefor.
- (b) If applicable, all subcontracts shall contain unit prices and any other feasible formula for use in the determination of the cost of changes in the Work.
- (c) Contractor agrees to hold all subcontractors, including all persons directly or indirectly employed by them, responsible for any damages due to breach of contract or any negligent act and to diligently endeavor to effect recoveries of such damages.
- (d) Owner shall be deemed to be a third party beneficiary of each subcontract and may, if Owner elects, require (following Contractor's default under this Contract or Owner's termination of this Contract) that the subcontractor perform all of the then unperformed duties and obligations of such subcontractor thereunder for the benefit of Owner (rather than Contractor); however, in the event that Owner requires any such performance by a subcontractor for the direct benefit of Owner, then Owner shall be bound and obligated to pay such subcontractor for all work done by such subcontractor (1) to date (to-wit: the reasonable value of that portion of the subcontract performed by such subcontractor) and (2) subsequent to the date that Owner elects to invoke such rights. Owner's liability in this connection, however, is not to exceed the amount obtained by subtracting from the subcontract price the total of all sums paid by Contractor to Subcontractor prior to Owner invoking its rights hereunder with respect to direct performance by subcontractor for Owner. In the event that Owner elects to invoke such rights, Owner shall give written notice of such election to Contractor and such subcontractor.

- 4.03 Quality Control.** Contractor agrees to provide quality control and process control testing following the Idaho Standards for Public Works Construction, 2015, and as further described in Section 01400 of the Specifications.

ARTICLE V
SITE CONDITIONS AND RELATED ISSUES

- 5.01 Differing Subsurface or Physical Conditions.** As provided in Paragraph 2.01(h), above, Contractor has acquainted itself with all existing conditions and limitations affecting the Work, including, without limitation, all property lines, utility locations, existing improvements, elevations, and Site and local conditions, as applicable to the Work. Claims for additional compensation or extensions of time because of the failure of Contractor to familiarize itself with conditions at the Site will not be allowed.

It is not intended by this provision to preclude claims for additional compensation or extension of time for conditions that would not reasonably be foreseen from a diligent inspection of the Site and review of all Site tests and studies in the possession of Contractor. If conditions are encountered by Contractor at the Site which are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice shall be given to Owner promptly before the conditions are disturbed and in no event later than three (3) days after first observance of the conditions. Owner will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If Owner determines that there are conditions at the Site as described above, and that no change in the terms of the Contract Documents is justified, Owner shall so notify Contractor in writing, stating the reasons therefor. Claims by Contractor in opposition to such determination must be made within twenty-one (21) days after Owner has given notice of the decision.

No adjustment in the Contract Time or Contract Sum shall be permitted, however, in connection with a concealed or unknown condition which does not differ materially from those conditions disclosed or which reasonably should have been disclosed by (a) Contractor's inspections, tests, reviews and preconstruction services for this Project, including any tests made by or in the possession of Contractor, or (b) inspections, tests, reviews and preconstruction services that Contractor negligently failed to request in connection with the Project. Nor shall an adjustment be permitted if: (a) Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under this Contract; or (b) the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas; or (c) Contractor failed to give the written notice as required by this Paragraph.

5.02 Underground Facilities. "Underground Facilities" include all underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

With regard to such Underground Facilities, the parties agree, as follows:

- (a) Shown or Indicated Underground Facilities. The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Neither Owner nor Engineer shall be responsible for the accuracy or completeness of any such information or data provided by others; and the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for: (a) reviewing and checking all such information and data; (b) locating all Underground Facilities shown or indicated in the Contract Documents; (c) coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and (d) the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work
- (b) Not Shown or Indicated Underground Facilities. If an Underground Facility is uncovered or revealed at or contiguous to the Site that was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 4.01 (f)) identify the owner of such Underground Facility and give written notice to that owner and to Owner's Representative and Engineer. Engineer will

promptly review the Underground Facility and, in consultation with Owner, determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility. If Engineer, in consultation and with approval of Owner, concludes that a change in the Contract Documents is required, a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated.

5.03 Hazardous Environmental Conditions at Site. For purposes of this Contract, a "Hazardous Environmental Condition" shall include the presence at the Site of asbestos, polychlorinated biphenyls, petroleum (including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, and oil mixed with other non "Hazardous Waste" (as defined in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time) Hazardous Waste, or radioactive material (source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time) in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.

- (a) Reports or Drawings. No Hazardous Environmental Conditions have been identified at the Site and no reports or drawings related to Hazardous Environmental Conditions have been provided by Owner.
- (b) Contractor Responsibility. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Contractor's subcontractors or suppliers, or anyone else for whom Contractor is responsible.
- (c) Encountered Hazardous Environmental Conditions. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 4.01 (f)); and (iii) notify Owner's Representative and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer or Owner's Representative concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer or Owner's Representative, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by this Paragraph.

Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely.

If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. Owner may have such deleted

portion of the Work performed by Owner's own forces or others.

- (d) **Indemnification.** To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Contractor's subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Owner's Representative, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

The provisions of Paragraphs 5.01 and 5.02 above do not apply to Hazardous Environmental Conditions uncovered or revealed at the Site.

ARTICLE VI RISK OF LOSS; INSURANCE; INDEMNIFICATION

6.01 Risk of Loss. Until such time as the Completion Date has been reached, all punch-list items have been accomplished, Contractor bears all risk of loss related to the Work constructed pursuant to this Agreement. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof and shall be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of any laws or regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by Owner. Such policies shall include expenses incurred in the repair or replacement of any insured property (including, but not limited to, fees and charges of engineers and architects). Such policies shall cover materials and equipment stored at the Site or at another location designated by Contractor. Such policies shall allow for partial utilization of the Work by Owner and shall include testing and startup. All such policies shall be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner and Contractor.

6.02 Other Contractor Insurance. Contractor shall purchase, at its sole cost and expense, from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Site is located such insurance as will protect Contractor from claims set forth below that arise out of or result from Contractor's operations under the Contract and for which Contractor may be legally liable, whether such operations be by Contractor or by a subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable: (i) claims under workers' compensation, disability benefits, and other similar employee benefit acts; (ii) claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

(iii) claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees; (iv) claims for damages insured by reasonably available personal injury liability coverage which are sustained: (1) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or (2) by any other person for any other reason; (v) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and (vi) claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

The insurance required by this Paragraph shall be written for not less than the limits of liability specified in **Exhibit A** or required by law, whichever is greater. The policies of insurance required by this Paragraph shall:

- (a) With respect to insurance required by (iii) through (vi) inclusive, be written on an occurrence basis, include as "**Additional Insureds**" (subject to any customary exclusion regarding professional liability) Owner, Owner's Representative, Engineer, LeNir Ltd., the Harris Family Limited Partnership, and ACHD, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
- (b) include at least the specific coverages and be written for not less than the limits of liability provided in **Exhibit A** or required by laws, whichever is greater;
- (c) include contractual liability insurance covering Contractor's indemnity obligations under Paragraph 6.05;
- (d) contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other Additional Insured;
- (e) remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work; and
- (f) include completed operations coverage: (i) Such insurance shall remain in effect for two years after final payment; and (ii) Contractor shall furnish Owner and each other Additional Insured evidence satisfactory to Owner and any such Additional Insured of continuation of such insurance at final payment and two (2) years thereafter.

Certificates of insurance for all policies required under this Article that are acceptable to Owner shall be filed with Owner prior to commencement of the Work. These certificates and the insurance policies required by this Paragraph shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to Owner. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment.

The insurance and insurance limits required herein shall not be deemed a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

6.03 [intentionally omitted].

6.04 General Insurance Provisions.

- (a) Waiver of Rights. Owner and Contractor intend that all policies purchased in accordance

with Paragraph 6.01 and 6.02 will protect Owner, Owner's Representative, Contractor, subcontractors, and Engineer, and all Additional Insureds (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder.

Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against subcontractors and Engineer, and all other individuals or entities identified as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

- (b) Receipt and Application of Insurance Proceeds. Any insured loss under the policies required under this Contract will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers.

6.05 Indemnification. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and defend Owner, Owner's Representative, Engineer, LeNir Ltd., the Harris Family Limited Partnership, and ACHD from any and all claims by third persons arising out of the performance of the Contract, including their respective agents, officers, directors, and employees (collectively, the "**Indemnitees**") (with counsel satisfactory to Owner) and hold Indemnitees harmless from all liability claims, demands, causes of action and costs of every kind and nature, including attorneys' fees, arising out of injury to, or death of, persons (including Contractor's and any Subcontractor's employees), and damage to any and all property, including loss of use thereof, occurring incident to or resulting wholly or in part from, directly or indirectly, any negligent or wilful act or omission by Contractor in connection with or growing out of the Contract Documents or the performance by Contractor of the Work. The indemnification obligation of Contractor under this Paragraph shall include damage wrongfully caused by Contractor to the Work or property of Owner, Contractor shall promptly remedy any damage wrongfully caused by Contractor to a separate contractor or property of any separate contractor. Contractor shall promptly attempt to settle any such disputes.

Contractor hereby releases and discharges the Indemnitees from liability for, and assumes the risk of loss of or damage to, equipment or other property of Contractor, and hereby indemnifies the Indemnitees against all claims and liabilities for loss of or damage to equipment or other property of third parties leased or otherwise used by Contractor and tools or other property owned by or in the custody of Contractor's employees. Contractor's indemnity obligations under this Article shall, but not by way of

limitation, specifically include all claims and judgments which may be made against the indemnitees under OSHA, similar laws of the state or other governmental body having jurisdiction, and further, against claims and judgments arising from violation of public ordinances and requirements of governing authorities due to Contractor's or Subcontractor's method of execution of the Work.

The indemnification obligations of Contractor under this Paragraph shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants, and subcontractors arising out of: (1) the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or (2) giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

ARTICLE VII PAYMENT

7.01 Manner of Payment and Right to Retain.

- (a) **Application for Payment.** Provided that an Application for Payment is received by Owner and Owner's Representative (which representative may be changed from time to time by written notice from Owner to Contractor) not later than the 25th day of the month, together with all supporting documentation as hereinafter required, Owner shall make payment to Contractor in the amount approved by Owner not later than the 15th day of the following month, less any amount that Owner is entitled to withhold pursuant to the provisions of Paragraph 7.02. Owner's Representative will observe the Work for the purpose of confirming completion in accordance with the Contract Documents. Owner's Representative is also authorized to give field instructions to Contractor.
- (b) **Payment Period.** The period covered by each Application for Payment shall be one (1) calendar month ending on the last day of the month. Each Application for Payment shall be based upon the approved Schedule of Values for all purposes.
- (c) **Payment Amount.** Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:
 - (i) *Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Sum allocated to that portion of the Work in the Schedule of Values, less retainage of five percent (5%). Amounts not in dispute may be included even though the Contract Sum has not yet been adjusted by Change Order;*
 - (ii) *Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by Owner, suitably stored off the site at a location agreed upon in writing), less retainage of five percent (5%);*
 - (iii) *Subtract the aggregate of previous payments made by Owner; and*
 - (iv) *Subtract amounts, if any, for which Owner has withheld or nullified an Application for Payment.*

Subject to the risk of loss provisions of Paragraph 6.01, payment amounts may include other specialized equipment not yet installed. All such items must be secured and stored in accordance with manufacturer recommendations. As further provided in Paragraph 6.01, Contractor bears all risk of loss if such items are damaged, lost, stolen, or otherwise rendered unfit or unavailable for installation as part of the Work.

- (d) **Certification.** In each Application for Payment, Contractor shall certify as to

subcontractors and suppliers that there are no known mechanics or materialmen liens outstanding as of the date hereof, all due and payable bills with respect to the work have been paid to date or are included in the amount requested in the current Application for Payment , and, except for such bills not paid but so included, there is no known basis for the filing of any mechanics or materialmen liens on the Work and waivers from all subcontractors and materialmen for which payment was made from the last advance made by Owner have been obtained.

At the time that each Application for Payment is submitted by Owner to Contractor, Contractor shall furnish to Owner a partial release of Contractor's liens, in the form attached as Item 2.0.H of the Contract Documents, covering all sums due Contractor through the date of the current Application for Payment, which partial release shall be duly executed and acknowledged by Contractor.

Contractor, within ten (10) days after Contractor's receipt of each progress payment, shall deliver to Owner partial releases of mechanic's and materialman's liens for all subcontractors and suppliers providing labor and/or materials to the Work, in the form attached as Item 2.0.I to the Contract Documents. Owner reserves the right to issue joint checks to Contractor and any Subcontractor or supplier and receive a credit against the applicable payment to Contractor.

(e) Final Payment. Final payment, constituting the entire unpaid balance of the Contract Price, shall be paid by Owner to Contractor by the 15th of the month following submission of the final Application for Payment, provided: (1) the Application for Payment is submitted by the 25th day of the preceding month; (2) the Work has been completed and the Contract fully performed; and (3) a Certificate of Substantial Completion of the form attached to the Contract Documents as Item 2.0.K has been issued by Owner. In addition, the following items must be satisfied: (1) receipt by Owner of a final lien release from all subcontractors and suppliers employed in furnishing labor or materials in connection with the Work, in the form attached to the Contract Documents as Item 2.0.I; (ii) Contractor's final release in the form attached to the Contract Documents as Item 2.0.I; and (iii) final inspection certificates and operating permits to the extent applicable.

(f) Prevention of Liens. Provided that Contractor has been paid by Owner all sums due to Contractor pursuant to the Contract, Contractor shall not voluntarily permit any laborer's, materialmen's, mechanic's, or other similar liens to be filed or otherwise imposed on any part of the Work or the property on which the Work is performed. If any laborer's, materialmen's, mechanic's, or other similar lien or claim thereof is filed or otherwise imposed against the Property, Contractor, within thirty (30) days of the filing of such lien or other imposition thereof, shall cause such lien to be released or otherwise discharged, except as to liens that Contractor is contesting in good faith by appropriate action diligently pursued, provided Contractor has notified Owner of the nature of such lien and informed Owner of the type of action being pursued by Contractor and, if requested by Owner, has provided Owner with a bond (satisfying the requirements of the Chapter 5 of Title 45 of Idaho Code) sufficient to cover such claim (or cause the surety to acknowledge in writing that the lien claim is covered by the payment bond) in the event Contractor is unsuccessful in contesting same or has made other arrangements satisfactory to Owner. If, however, Contractor, within the aforesaid thirty (30) day period, does not cause such lien either to be released and discharged forthwith or contests same in the manner provided hereinabove, then Owner have the right to deduct 150% of the amount of the lien claim from the next progress payment until Contractor shall be caused such lien to be released and discharged or otherwise contested same in the manner provided hereinabove. Contractor shall indemnify, defend, and hold harmless Owner from all claims, losses, demands, causes of action or suits of whatever nature arising out of any such lien or that part of the Work covered thereby.

It is further agreed that all payments to Contractor from Owner shall be deemed to be and constitute a trust fund to be used and applied by Contractor first in payment for all materials, labor, and any and all other obligations incurred in connection with the Work prior to its use and application by Contractor for its own purposes, or for any other purpose.

- (g) **Waiver.** The acceptance of final payment by Contractor shall constitute a waiver of all claims by Contractor except those previously made in writing and still unsettled.

7.02 Owner's Right to Withhold. Any provision hereof to the contrary notwithstanding, Owner shall not be obligated to make any payment to Contractor hereunder if any one or more of the following conditions exists:

- (a) Contractor has failed to perform any of its material obligations hereunder or otherwise is materially in default under any of the Contract Documents; provided, however, that if such default may be cured by the payment of a liquidated sum of money, then such payment shall be made as to the part thereof not affected by such default and Owner shall retain the remainder of such payment until such default has been cured;
- (b) Any part of such payment is attributable to Work that is defective, not performed, or not performed in accordance with the Contract Documents;
- (c) Contractor has failed to make payments promptly to Contractor's subcontractors for material and labor used in the Work, except as to claims for payment for material or labor used in the Work the validity of which Contractor is contesting in good faith in accordance with Paragraph 7.01(f);
- (d) If Owner, in its good faith judgment, determines that the portion of the Contract Sum then remaining unpaid will not be sufficient to complete the Work in accordance with the Drawings and Specifications, whereupon no additional payments will be due Contractor unless and until Contractor, in its sole cost, performs a sufficient portion of the Work so that such portion of the Contract Sum then remaining unpaid is reasonably determined by Owner to be sufficient to so complete the Work. For purposes of making the aforesaid judgment, Owner may (but is not obligated to) rely on the Schedule of Values, showing Contractor's estimate of Contractor's Costs for each of the items or categories of items described therein.

When any reason for withholding payment has been remedied, payment will be made for amounts previously withheld, less any costs which Owner reasonably incurred as a consequence or circumstance that gave rise to the withholding of such payment.

No partial payment made hereunder shall be or construed to be final acceptance or approval of that part of the Work to which such partial payment relates or relieve Contractor of any of its obligations hereunder with respect thereto.

ARTICLE VIII CHANGES IN THE WORK

8.01 Change Orders. Owner shall have the right at any time, by written change order provided by and signed by Owner, to make changes in any one or more of the following parts of the Contract:

- (a) the Drawing and Specifications; or
- (b) the scheduling of performance of all or any portion of the Work.

If, in Owner's discretion, any such changes cause an increase or decrease in the cost of, or the time

required for, the performance of any part of the Work, an equitable adjustment will be made in the Contract Sum called for (based upon unit prices quoted, if applicable) or the Contract Time, or both, and this Contract shall be modified in writing accordingly by change order on the form identified on Item 2.0.G to the Contract Documents (each a "**Change Order**"). Any claim by Contractor for adjustment under this Paragraph must be submitted to Owner in writing within ten (10) days from the date of receipt by Contractor of notification of change. No Work identified on any proposed Change Order shall be commenced until Owner executes a written Change Order. Pending final determination of costs by Owner, payments shall be made on the portion of Contractor's Application for Payment approved by Owner.

Agreement on any Change Order shall constitute a final settlement of all matters relating to the change in the Work that is the subject of the Change Order, including but not limited to, all direct and indirect costs associated with such change and any and all adjustments to the Contract Sum and the Contract Time. In the event a Change Order increases the Contract Sum, Contractor shall include the Work covered by such Change Orders in Applications for Payment as if such Work were originally part of the Contract Documents.

8.02 Non-Contractor Delays. Any delay or delays from time to time occurring, caused by Owner or as a result of fire, earthquake, adverse weather conditions not reasonably anticipated, or other acts of God or causes beyond the reasonable control of Contractor, including general labor disputes or unusual delays in transportation, shall not be attributed to Contractor, nor shall Owner be liable for any such delays, it being recognized that, from time to time, Contractor is confronted by delays beyond its control. Nevertheless, immediately after the cause of such delay or delays is removed, Contractor shall resume and continue performance in accordance with a mutually agreed upon revised schedule for the Work, with no additional increase in the Contract Sum. If a non-Contractor delay occurs, Contractor shall notify Owner of such delay within ten (10) days following the inception of such delay; otherwise, Contractor shall not be entitled to an extension of the Contract Time due to such delay. Contractor shall take all reasonable steps to avoid any delay. Contractor further acknowledges and agrees that adjustments in the Contract Time will be permitted for a delay only to the extent such delay (i) is not caused by Contractor and (ii) adversely affects the critical path of the Work. All delays in the Contract Time or the date of Substantial Completion or Final Completion must be approved in writing by Owner by a written Change Order.

ARTICLE IX **DEFAULT, TERMINATION, AND RELATED MATTERS**

9.01 Termination without Cause. Owner may terminate this Contract at its convenience for any reason or no reason upon three (3) business day's written notice to Contractor. Such termination shall be effective in the manner specified in the notice and shall be without prejudice to any claims which Owner may have against Contractor. Upon termination where Contractor is not in default, as Contractor's sole remedy therefor, Contractor shall be entitled only to payment in the amount of (i) the Contract Sum prorated based on the percentage of Work completed and paid in accordance with Article VII, and (ii) reasonable demobilization expenses and any other cost reasonably incurred by Contractor in carrying out the activities requested by Owner in connection with Owner's termination of this Contract. On receipt of a notice of termination for cause or convenience, Contractor shall, unless the notice shall direct otherwise, immediately discontinue Work, and the placing of orders for materials, facilities and supplies in connection with the performance of the Work and shall further, if requested, make every reasonable effort to procure the cancellation of any existing orders and subcontracts upon terms satisfactory to Owner. Contractor shall thereafter perform only such acts as may be necessary to preserve and protect Work already in progress, materials, plans or equipment, whether the same be located on the Project site or in transit thereto as directed by Owner.

9.02 Contractor's Default. If Contractor defaults or persistently fails or neglects to carry out the Work in accordance with the Contract Documents or fails to perform a provision of the Contract, Owner, after seven (7) day's written notice to Contractor, and without prejudice to any other right or remedy Owner may have, provided Contractor has not cured such default or failure within said seven (7)

day period, may make good such deficiencies and may deduct the cost thereof, including compensation for Owner's services and expenses made necessary thereby, from the payment then or thereafter due Contractor.

- (a) In the case of an "emergency" (defined herein as any default, neglect or defect in or with respect to the Work endangering life and/or property damage in excess of \$10,000), Owner shall provide Contractor with written notice of such default, neglect or defect constituting such emergency, but Owner may immediately commence and continue correction of such emergency, without waiting for the expiration of the above-described notice and cure period.
- (b) In any case where Owner makes good any deficiencies as provided herein, an appropriate Change Order shall be issued deducting from payments then or thereafter due Contractor the cost of correcting such deficiencies, including compensation for any architect's and their respective consultants' additional services and expenses made necessary by such default, neglect, or failure. Such action by Owner and amounts charged to Contractor shall be reasonable and necessary. If payments then or thereafter due Contractor are not sufficient to cover such amounts, Contractor shall pay the difference to Owner. Alternatively, at Owner's option, Owner may terminate the Contract and take possession of the Site and remove all materials, equipment, tools and construction equipment and machinery thereon owned by Contractor (or require Contractor to immediately remove all such materials, equipment, tools and construction equipment and machinery from the Site) and Owner may finish (or cause another contractor to finish) the Work by whatever method Owner may deem expedient.
- (c) After termination by Owner pursuant to this Paragraph, Contractor shall not be entitled to any further payment under this Contract, except to the extent of any amount by which Work completed prior to such termination and not previously paid for by Owner exceeds the amount due by Contractor to Owner under this Paragraph (including all damages that Owner would be entitled to recover at law from Contractor by reason of Contractor's breach), and even then only at such time as the Work is finally completed by Owner. If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for any architect's or other professional services and expenses made necessary thereby (including, without limitation, Owner's reasonable attorney's fees and costs), such excess shall be paid to Contractor following completion of the Work by Owner, but if such cost exceeds such unpaid balance, Contractor shall pay the difference to Owner. Owner shall not be responsible to Contractor for any loss of anticipated profits on Work not performed on account of a termination under this Paragraph. Any sums payable by Contractor to Owner shall be payable upon demand and shall bear interest at the rate of ten percent (10%) ("Default Rate") per annum until paid.

9.03 Additional Acts of Contractor Default.

- (a) In addition to the circumstances outlined in Paragraph 9.02 entitling Owner to perform Work on behalf of Contractor or terminate the Contract, if: (i) Contractor becomes insolvent, or makes a transfer in fraud of creditors, or makes an assignment for the benefit of creditors; (ii) Contractor files or has filed against it a petition under any chapter or section of the U.S. Bankruptcy Code, as amended, or under any similar law or statute of the United States or any state thereof, or shall be adjudged bankrupt or insolvent in any legal proceeding; (iii) a receiver or trustee is appointed for all or a significant portion of the assets of Contractor; or (iv) Contractor actually or constructively abandons, or puts Owner on actual or constructive notice that it intends to abandon, the Project, Owner may exercise the remedies provided in Paragraph 9.02 and in this Paragraph.
- (b) It is recognized that: (1) if an order for relief is entered on behalf of Contractor pursuant to Title 11 of the United States Code, (2) if any other similar order is entered under any

other debtor relief laws, (3) if Contractor makes a general assignment for the benefit of its creditors, (4) if a receiver is appointed for the benefit of its creditors, or (5) if a receiver is appointed on account of its insolvency, any such event could impair or frustrate Contractor's performance of the Contract Documents. Accordingly, it is agreed that upon the occurrence of any such event, Owner shall be entitled to request of Contractor or its successor in interest adequate assurance of future performance in accordance with the terms and conditions of the Contract Documents. Failure to comply with such request within ten (10) days of delivery of the request shall entitle Owner to terminate the Contract Documents and to the accompanying rights set forth in Paragraph 9.02. In all events, pending receipt of adequate assurance of performance and actual performance in accordance therewith, Owner shall be entitled to proceed with the Work with its own forces or with other contractors on a time and material or other appropriate basis, the cost of which will be back charged against the Contract Sum.

9.04 Owner Default. If Owner fails to make a payment required hereunder for a period of thirty (30) days, Contractor, after seven (7) days written notice to Owner, without prejudice or any other right or remedy Contractor may have, provided Owner has not cured such default within said seven (7) day period, may terminate this Contract and recover from Owner for payment for Work executed and for proven loss with respect to materials, equipment, tools and construction equipment and machinery, including reasonable overhead for profit and damages applicable to the Project, plus interest at the Default Rate until paid

9.05 Dispute Resolution. Owner and Contractor agree to mediate all claims and disputes prior to litigation or arbitration. If the dispute cannot be resolved by mediation, the dispute shall be decided by arbitration, if elected by Owner in Owner's sole discretion; otherwise, disputes may be resolved by a court of competent jurisdiction in Ada County.

Owner, at Owner's sole election, may choose arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. If Owner elects to arbitrate such dispute, there shall be a prehearing meeting between the parties at which each party shall present a memorandum disclosing the factual basis of its claim and defenses and disclosing legal issues raised. Only one arbitrator shall be selected to resolve any claim or dispute hereunder. The memorandum shall also disclose the names of any expert that a party may present as a witness during the proceedings. The party shall be entitled to discover all documents and information reasonably and necessary for a full understanding of any legitimate issue raised in the arbitration. The parties may use all methods of discovery available under the Federal Rules of Civil Procedure and shall be governed thereby.

9.06 Liquidated Damages. Owner and Contractor recognize that time is of the essence in this Agreement and that Owner will suffer financial loss if the Work is not substantially complete prior to the Substantial Completion date, plus any extensions thereof allowed in accordance with this Contract. The parties also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not substantially complete on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner \$1,000.00 for each day that expires after the Substantial Completion dates for each segment identified herein, as applicable and as identified in Paragraph 1.03, until the Work is complete.

ARTICLE X INTERPRETATION AND OWNERSHIP OF CONTRACT DOCUMENTS

10.01 Interpretation of Contract Documents. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all. Performance by Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results. All dimensions and clearances necessary to perform

the Work as indicated on the Drawings and contained in the Specifications, shall be verified by Contractor at the job site before executing the relevant portion of the Work and Contractor shall report any discrepancies to Engineer and Owner's Representative for adjustment before any Work affected thereby is commenced. Additionally, if sufficient detailed information is lacking, if Work is required in such a manner as to make it impossible to produce first-class Work, or if discrepancies appear among Contract Documents, then Contractor shall request clarification or interpretation from Engineer and Owner's Representative before proceeding with such Work.

The order of precedence of the Contract Documents is as set forth in Section 01000 of the Specifications. The most recently issued documents take precedence over previously issued forms of the same document. If an item is shown one place in the Drawings but not another, or called for in a schedule of the Specifications but not shown on the Drawings, it is to be included.

In the event of any internal inconsistency in either the Drawings or Specifications, or with each other, the appropriate method of performing the Work, in the event of the above mentioned inconsistency, shall be determined by Engineer with Owner's approval. Figures take precedence over physical scale measurements. Large scale details take precedence over smaller scale details. Drawings take precedence in regard to dimensions, when in conflict with mechanical and structural drawings, except for the size of the structural members. Specifically titled drawings and sections of the Specifications take precedence over indication of the item in a collateral way. Existing conditions take precedence over Drawings and Specifications for dimensions.

List of "Work included" and "Work excluded" in the Drawings and Specifications are not intended to enumerate each and every item of work or appurtenance required, and must be used in conjunction with other portions of the Contract Documents.

Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to any laws or regulations, shall mean the standard, specification, manual, code, or law or regulation in effect at the time of submission of Contractor's bid, except as may be otherwise stated in the Contract Documents. No provision of any such standard, specification manual, or code, or any instruction of a supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

10.02 Clarification of Contract Documents; Discrepancies. Clarifications and interpretations of the Drawings or Specifications shall be issued by Engineer. As further provided in Paragraph 2.01(i), Contractor has reviewed the Contract Documents and must promptly report any conflict, error, ambiguity, or discrepancy discovered or of which Contractor has actual knowledge and obtain a written interpretation or clarification from Engineer. Except as may be otherwise stated in the Contract Documents, the Contract Documents shall control in resolving any conflict between the Contract Documents and any standard, specification, manual, or code, or the instruction of any supplier, or the provisions of any law or regulation unless such an interpretation would result in a violation of such law or regulation.

10.03 Plans. Contractor or its subcontractors shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies thereof) prepared in connection with the Work by Owner or its agents, nor shall Contractor or any of its subcontractors reuse any such Drawings, Specifications, or other documents (or copies thereof) on extensions of the Project or any other project without written consent of Engineer and Owner and specific written verification or adaptation by Engineer. The prohibitions set forth in this Paragraph will survive final payment or termination of this Contract.

10.04 Data. Data that may be relied upon are printed or hard copies. Files in electronic media

format are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

ARTICLE XI TESTS AND INSPECTIONS

11.01 Access to Work. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

11.02 Tests and Inspections.

- (a) Contractor shall give Engineer or Owner's Representative timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- (b) Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents, except:
 - (i) *for inspections, tests, or approvals covered by Paragraphs 11.02(c) and 11.02(d) below;*
 - (ii) *costs incurred in connection with tests or inspections conducted pursuant to Paragraph 11.03(b) shall be paid as provided in Paragraph 11.03(c); and*
 - (iii) *as otherwise specifically provided in the Contract Documents.*
- (c) If any public body having jurisdiction or any utility requires any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body or utility, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer and Owner's Representative the required certificates of inspection or approval.
- (d) Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

11.03 Uncovering Work.

- (a) If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer or Owner's Representative, Contractor shall, if requested by Engineer or Owner's Representative, uncover such Work for observation. Uncovering Work shall be at Contractor's expense unless Contractor has given Engineer or Owner's Representative timely notice of Contractor's intention to cover the same and Engineer and Owner's Representative have not acted with reasonable promptness in response to such notice.
- (b) If Engineer or Owner's Representative considers it necessary or advisable that covered Work be observed by Engineer or Owner's Representative or inspected or tested by others, Contractor, at Engineer or Owner's Representative's request, shall uncover,

expose, or otherwise make available for observation, inspection, or testing as Engineer or Owner's Representative may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

- (c) If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others) and Owner shall be entitled to an appropriate decrease in the Contract Price. If it is found that such work is not defective, and Owner has received notice of the proposed uncovering, then Owner shall pay all costs related to uncovering and subsequent recovering of the Work inspected.
- (d) If uncovering of any Work is required by any governmental or quasi-governmental agency or utility, all such costs for uncovering the Work shall be borne by Contractor.

11.04 Owner May Stop the Work.

- (a) If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any subcontractor, any supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

11.05 Correction or Removal of Defective Work. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer or Owner's Representative, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

When correcting defective Work under the terms of this Paragraph 11.05 or Paragraph 11.06, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

11.06 Acceptance of Defective Work. Instead of requiring correction or removal and replacement of defective Work, Owner may agree to accept such Work. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted.

11.07 Owner May Correct Defective Work.

- (a) If Contractor fails within a reasonable time after written notice from Engineer or Owner's Representative to correct defective Work, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days' written notice to

Contractor, correct, or remedy any such deficiency and deduct such cost from the Contract Price.

- (b) In exercising the rights and remedies under this Paragraph, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- (c) All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- (d) Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph.

11.08 Re-inspection and/or Overtime Inspection. The cost of any re-inspection or overtime inspection by any person having the right to make re-inspections, whether by law or otherwise, shall be borne by Contractor in the event such re-inspection was made necessary by failure of Contractor to complete the Work contracted for herein, in accordance with the aforesaid plans and specifications.

ARTICLE XII **WARRANTY**

12.01 Warranty of Contractor. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Notwithstanding anything contained in the Contract Documents to the contrary, if, within two (2) years after the date of Final Completion or such longer period of time as may be prescribed by law with respect to latent defects or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provisions of the Contract Documents, Owner discovers any defective work, including any portion of the Work that was not constructed substantially in accordance with the Contract Documents, Contractor shall promptly, without cost to Owner, either correct such defective Work, or, if it is not possible to correct such defective Work, remove it from the site and replace it with non-defective Work.

The cost to Contractor of performing any of its obligation under this Article shall not be included in the cost of the Work and Contractor shall bear all extra costs such as additional design services related to such defective work.

In any emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or the rejected Work removed and replaced, and all direct costs of such removal and replacement, including reasonable compensation for additional professional services, shall be paid by Contractor. Inability or refusal of a subcontractor responsible for defective Work to correct such Work shall not excuse Contractor from performing under the warranty provided in this Paragraph.

Should Contractor fail to make such warranty corrections required hereby within five days after written notice thereof from Owner to Contractor, provided that if the required corrections cannot be made within five days, Contractor fails to commence making such warranty corrections within a reasonable period of time, not to exceed thirty (30) days, and diligently continue the prosecution of such warranty corrections until completion, Owner may do so at the expense of and for the account of Contractor.

Contractor's warranty provided herein is in addition to, and not in lieu of, any other remedies Owner may have under this Contract, at law, or in equity for defective Work.

All guarantees and warranties of materials and workmanship running in favor of Contractor shall be transferred and assigned to Owner or ACHD (if applicable) on final acceptance of the Work and prior to Contractor receiving final payment. In case of guarantees or warranties covering equipment and/or materials furnished and Work performed by subcontractors (including manufacturers), such guarantees and warranties shall be addressed to and in favor of Owner and run for two years, at least, from the date of Contractor's completion of the entire Work. Contractor shall be responsible for delivery of such guarantees and warranties to Owner or ACHD (if applicable) prior to final acceptance of the Work. Delivery of guarantees or warranties shall not relieve Contractor from any obligation assumed under any provision of this Agreement.

The two year warranty period for any item of defective Work shall recommence upon repair or restoration as described in this Article until two years of satisfactory service with no warranty work required is achieved.

ARTICLE XIII MISCELLANEOUS PROVISIONS

13.01 Books and Records. Contractor shall keep full and detailed accounts, books and records as may be necessary for proper financial management under this Contract, which books and records shall be preserved by Contractor for a period of two (2) years after the final payment by Owner. Owner may inspect, copy and audit, upon twenty-four (24) hours' prior notice, all or any part of the books and records of Contractor relating to the Work.

13.02 Entire Agreement; Amendment. The Contract Documents set forth all agreements between Owner and Contractor relative to the Work, and all prior negotiations or agreements are merged in the Contract Documents. No modification hereof or subsequent agreement relative to the subject matter of the Contract Documents shall be binding unless in writing and signed by both parties to the Contract Documents. Notwithstanding the foregoing, minor variations and deviations in the Work may be authorized by: (1) a Field Order; (2) Engineer's approval of a Shop Drawing or Sample; or (3) Engineer's written interpretation or clarification of Specifications or Drawings.

13.03 Waiver of Remedies. The waiver by Owner of any default, or of any breach of the terms of the Contract shall not be deemed a waiver of any subsequent breach. Remedies and rights of Owner in the event of any breach hereof by Contractor are cumulative and in addition to those given by law.

13.04 Assignment.

- (a) **By Contractor.** Subject to Contractor's right to contract with subcontractors and suppliers with respect to the performance of portions of the Work, Contractor shall not assign all, or any part of, this Contract nor any payments hereunder without first obtaining the consent in writing from Owner and then, only subject to the provisions of this Contract. This Contract is for Owner's benefit, its successors and assigns who, as well as Contractor, may directly enforce all rights and warranties, express or implied herein, but subcontractors shall have recourse only against Contractor and not against Owner.
- (b) **By Owner.** Owner may assign its rights under this Contract to any affiliate of Owner, without Contractor's prior written consent, and Owner also may collaterally assign its

rights under this Contract to a lender. Owner may rely solely upon Contractor for enforcement of all subcontracts. To effect such purpose, Contractor assigns to Owner the right, upon election of Owner, to bring any actions against subcontractors and material vendors without waiver by Owner of his right against Contractor because of defaults, delays, and defects for which a subcontractor or material vendor may also be liable; provided, however, that Owner shall not have the right to bring such actions directly against such subcontractor unless Contractor has defaulted hereunder (and such default remains uncured) or Owner has terminated the Contract as a result of such default. Contractor will indemnify, defend and hold Owner, Owner's Representative, Engineer, Harris Family Limited Partnership, and, where applicable, ACHD, harmless from any failure or refusal of any subcontractor to comply with any provision of the Contract Documents.

13.05 Relationship. Nothing contained in this Contract shall be deemed or construed to create the relationship of principal and agent or joint venturer as between Owner and Contractor, it being agreed and understood that the only relationship between the parties is that of Owner and independent contractor.

13.06 Attorneys' Fees. The prevailing party in any court or arbitration action arising out of this Contract, or the enforcement or breach hereof, shall be entitled to court costs and reasonable attorneys' fees as determined by the Court or arbitrator, including fees incurred on any appeal thereof.

13.07 Notices. Any notice provided or permitted to be given under the Contract Documents must be in writing and may be served by depositing same in the United States mail, addressed to the party to be notified, postage prepaid, by registered or certified mail, with return receipt requested; by delivery of such notice in person to such party; or by facsimile (with confirmation or receipt); or by nationally recognized overnight delivery service. Notice given in accordance herewith shall be effective upon receipt at the address of the addressee. For purposes of notice, the addresses of the parties shall be as set forth on the signature page hereof.

13.08 Severability. If any term or provision of this Contract shall be found to be illegal, unenforceable, or in violation of the laws, statutes, ordinances, or regulations of any public authority having jurisdiction thereof by a court of competent jurisdiction, then, notwithstanding such term or provision, this Contract shall be and remain in full force and effect and such term shall be deemed stricken; provided, however, this Contract shall be interpreted, when possible, so as to reflect the intentions of the parties as indicated by any such stricken term or provision.

13.09 Choice of Law. This Contract shall be enforceable under, and interpreted in accordance with, the laws of the state of Idaho. Venue for any litigation in any way related to this Agreement shall be in Ada County.

13.10 Waiver. Waiver by Owner of any provision of this Contract in one instance shall not constitute a waiver as to any other instance.

13.11 Intellectual Property. Contractor may not use Owner's or the Harris Ranch trade name, logo, or photographs of the Premises in any manner whatsoever without the prior written consent of Owner, which consent may be withheld in Owner's sole discretion.

13.12 Headings; Capitalization. The headings used in this Contract are for convenience only and are not to be construed as part of this Contract. Any terms capitalized but not defined herein shall have the meanings set forth in the Contract Documents.

13.13 Interpretation. In the event of any inconsistency or ambiguity between this Contract and any of the Contract Documents, this Contract shall prevail. Owner and Contractor both acknowledge and agree that each has reviewed the terms of this Contract. The parties further agree that the rule of construction that any ambiguities are resolved against the drafting party will be subordinated to the

principle that the terms and provisions of this Contract will be construed fairly as to all parties and not in favor or against any party.

13.14 Cooperation. The parties covenant and agree to do, execute, and deliver, or cause to be done, executed, and delivered, such further acts and assurances, for implementing the intention of the parties under this Contract.

13.15 Authority. Contractor's execution of this Agreement and performance thereof is within Contractor's duly authorized power.

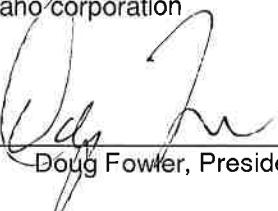
13.16 Counterparts. This Contract may be executed in counterparts.

[end of text – signatures on following page]

IN WITNESS WHEREOF, the parties have caused this Contract to be properly executed as of the day and year first written above.

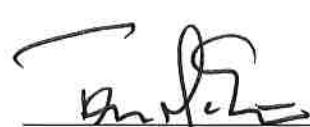
OWNER:

BARBER VALLEY DEVELOPMENT, INC.,
an Idaho corporation

By:  Doug Fowler, President

CONTRACTOR:

CENTRAL PAVING CO., INC.,
an Idaho corporation

By:  Terry McEntee, Authorized Agent

ADDRESS FOR NOTICE:
4940 E. Mill Station Dr.
Suite 101 B
Boise, ID 83716

With a copy to:

RiveRidge Engineering Company
2447 S. Vista Ave.
Boise, Idaho 83705

ADDRESS FOR NOTICE:
PO Box 10510
Boise, ID 83715

EXHIBIT A

The following insurance limits shall apply:

- a. Automobile liability: \$1,000,000.00 (combined single limit per accident or occurrence)
- b. Commercial General Liability:
 - i. General Aggregate: \$2,000,000.00
 - ii. Bodily Injury or Death (per occurrence): \$2,000,000.00
 - iii. Property damage (per occurrence): \$1,000,000.00
 - iv. Fire liability (per fire): \$300,000.00
 - v. Medical (any one person): \$10,000.00

Contractor shall have an equipment policy with limits adequate to protect Owner. As further set forth in Article VI of the Contract, the Additional Insureds shall include Owner, Owner's Representative, Engineer, LeNir Ltd., the Harris Family Limited Partnership, and ACHD.

EXISTING FEATURES PLAN

FOR DALLAS HARRIS SOUTH SUBDIVISION NO. 1 (SUB19-00056)

RIVERIDGE ENGINEERING COMPANY

RECORD DRAWINGS

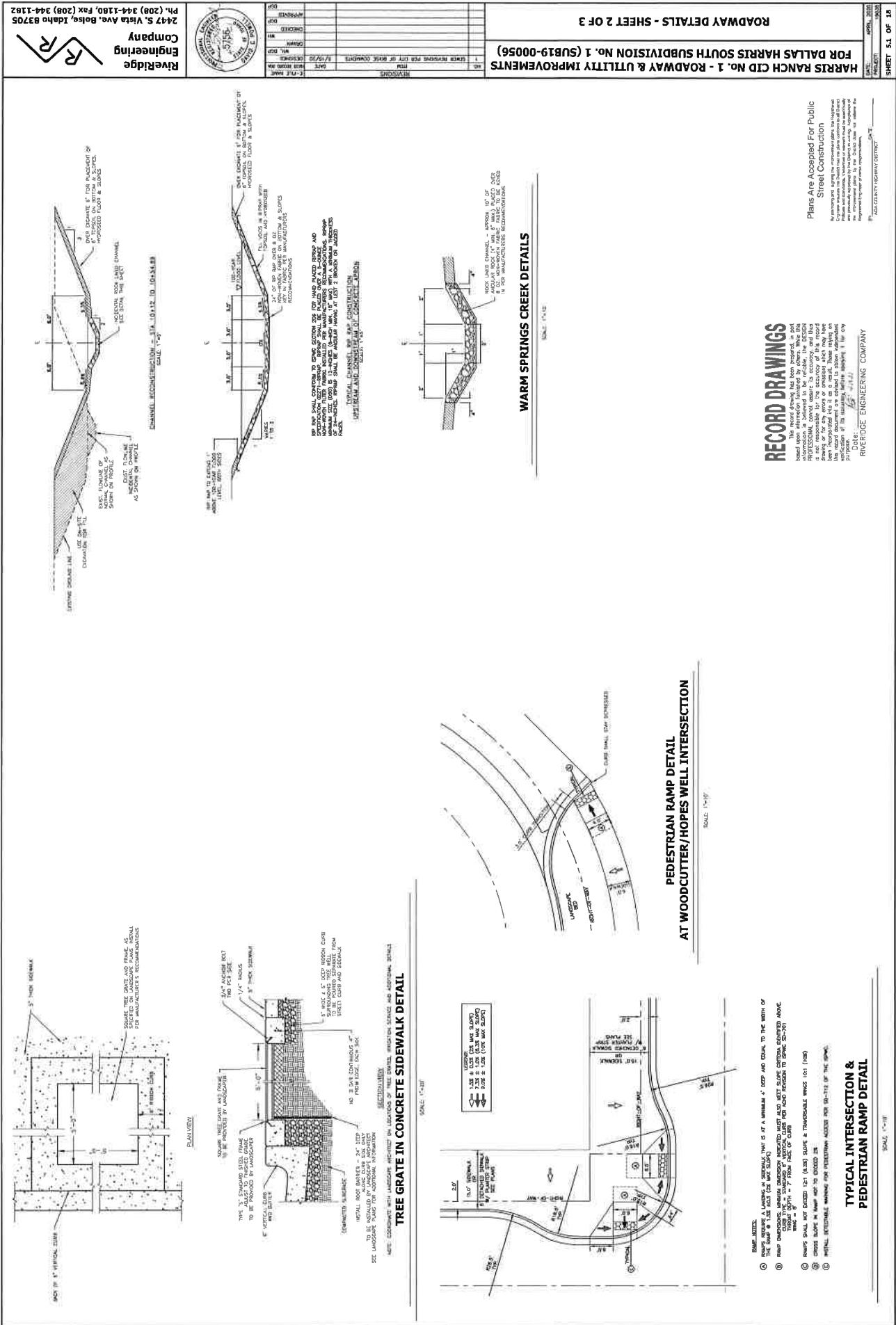
KEY NOTES

1) ONE-BORATE TEST PUMPING WELL AND RECHARGE
2) ONE DRAINE, DRAINE GROVE & DRAINS WITH CONSTRUCTION
3) LAYER FILL WITH STRUCTURAL FILL
4) PROTECT AND PRESERVE EXISTING SAND LANS

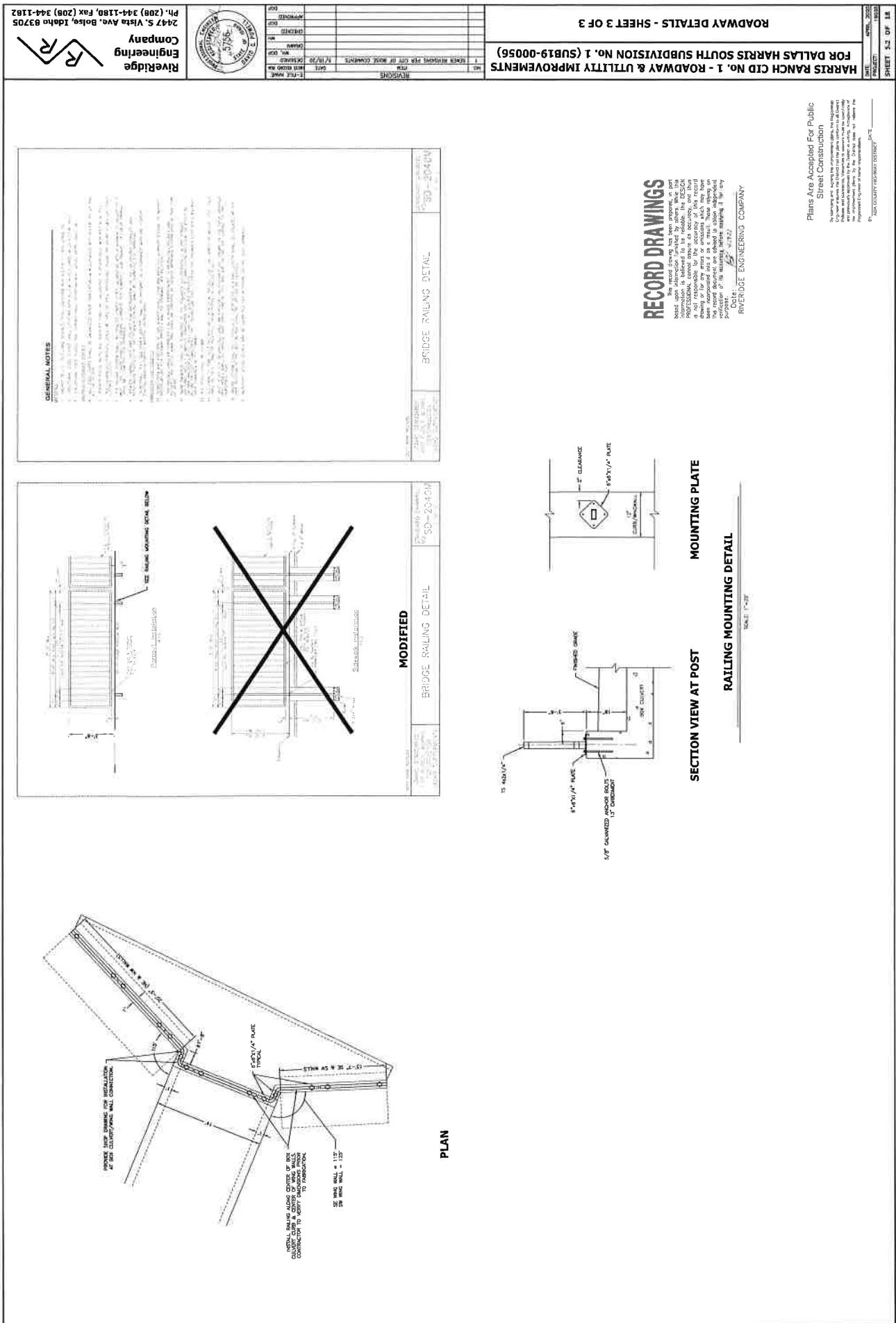
RIVERIDGE ENGINEERING COMPANY

LEGEND

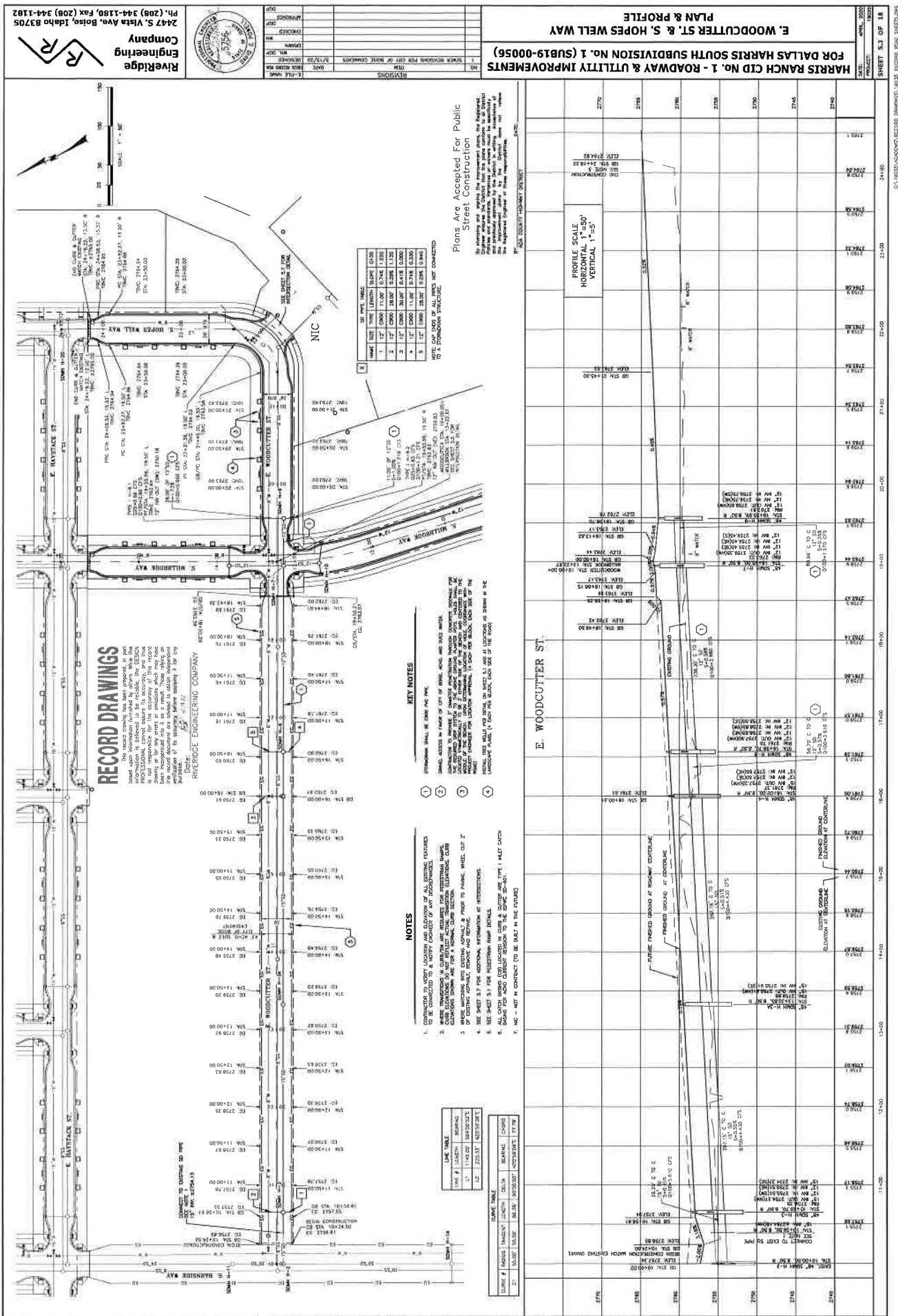
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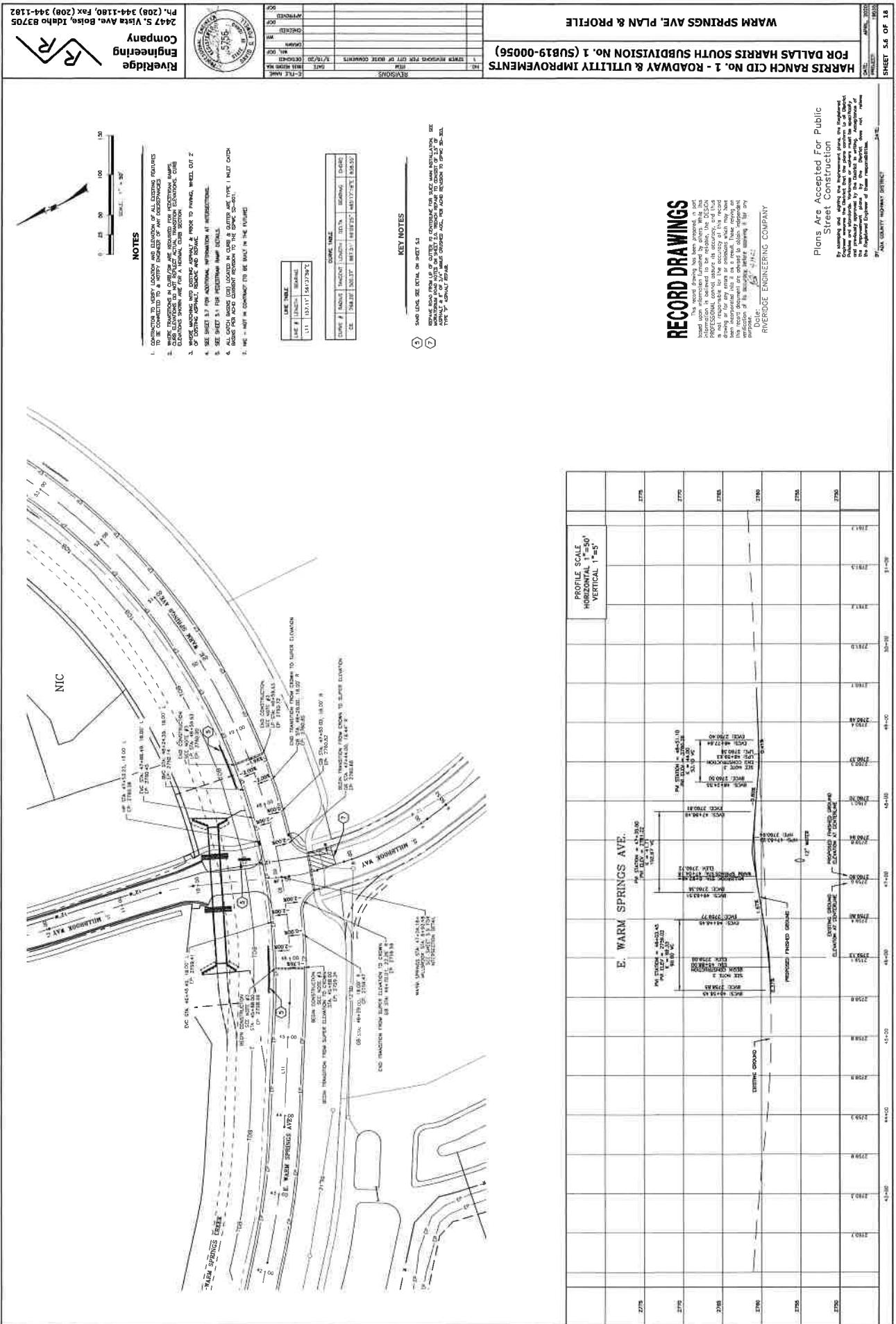


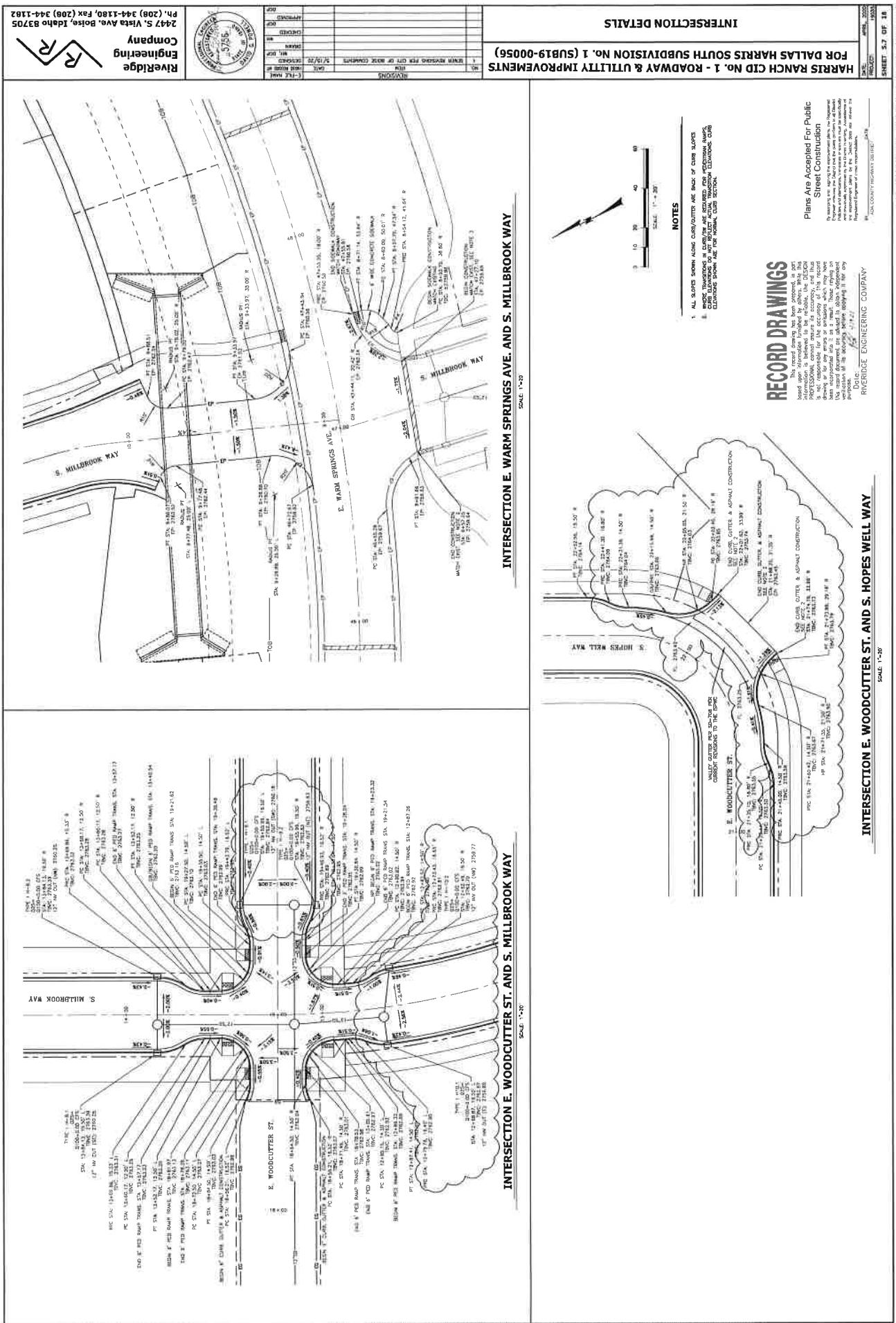
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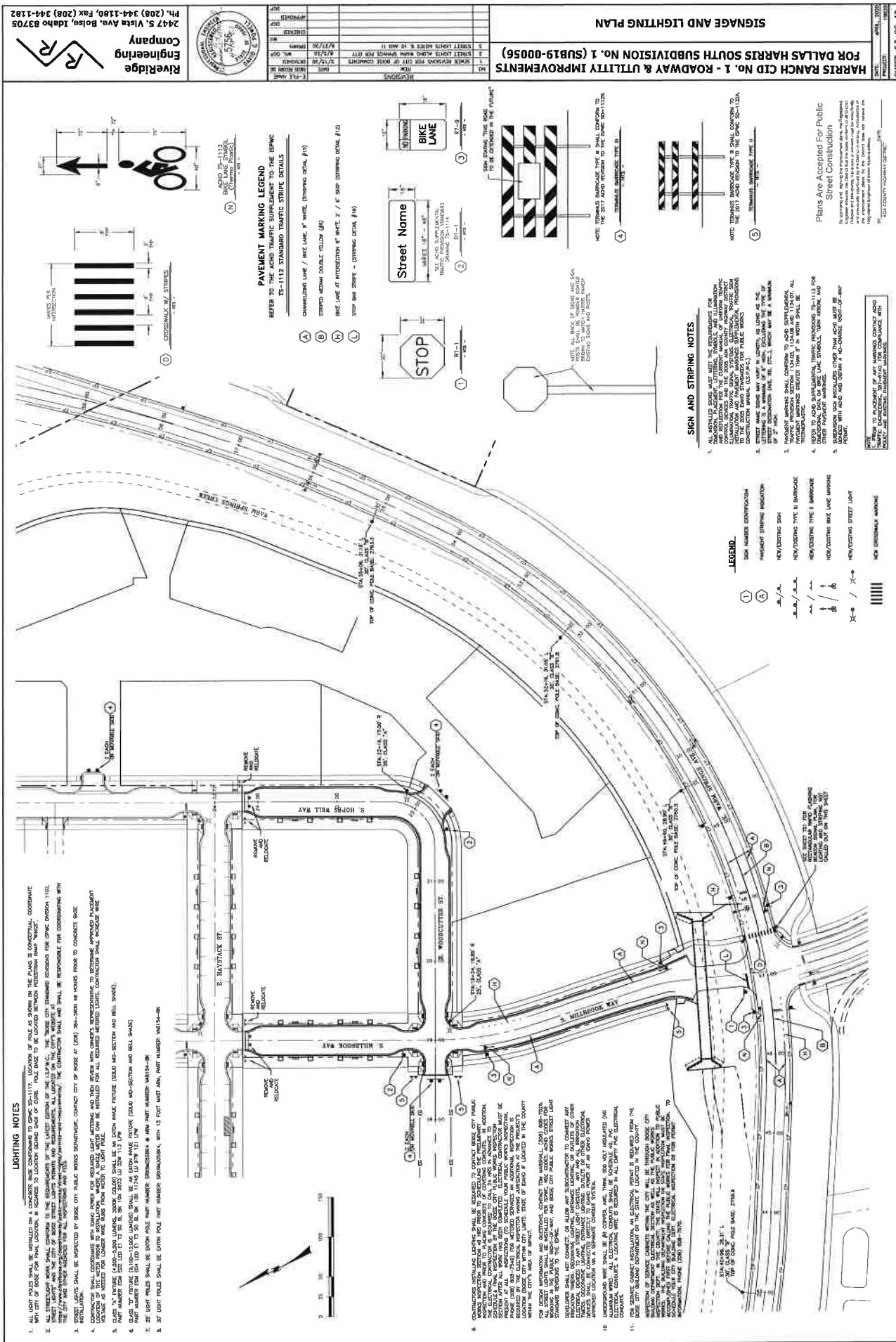


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MAK CONSULTING, INC.

THE ANSWER IS "YES"

KEITH@MAKCONSULTING.US • MIKE@MAKCONSULTING.US • WWW.MAKCONSULTING.US • EXPERIENCE SINCE 1996

Project: Harris Ranch Dallas Harris South Sub Date: 1/1/20

Client: Oldcastle Infrastructure Nampa – ACHD

Description: 12' Span x 6' Rise Precast Box Culvert

By: Mike Blackham, PE
208-713-8551

Plans Are Accepted For Public Street Construction

By stamping and signing the improvement plans, the Registered Engineer ensures the District that the plans conform to all District policies and standards. Variances or waivers must be specifically and previously approved by the District in writing. Acceptance of the improvement plans by the District does not relieve the Registered Engineer of those responsibilities.

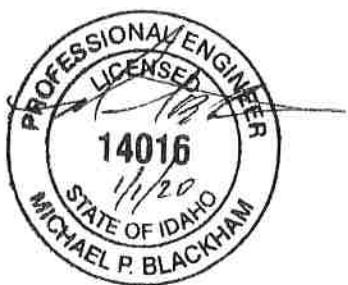
BY Michael Blackham DATE 8/20/20
ADA COUNTY HIGHWAY DISTRICT

Contents:

*Stamped Submittal Drawings

*Structural Calculations –

- Box Culvert – 41 Pages



*The following design calculations are based off the design criteria and geometry listed. Any changes in the loading or geometry will affect the design, and the acting engineer must be notified.

MAK CONSULTING

Project : Harris Ranch - Dallas Harris

Task : 12'x6' BC

Job No. : 57748

Client: Oldcastle - ACHD

File: Harris Ranch Dallas Harris South Sub.etcx

Sht _____ of _____

By:MB

Ck: _____

12/27/2019 9:31:05 AM

p. 1

Spec.: LRFD 8th ed.

Type of Culvert: Precast

Physical Dimensions

Clear Span: 12'-0"

Clear Height: 6'-0"

Top Slab: 1'-0"

Bottom Slab: 1'-0"

Ext. Wall: 1'-0"

Fill Depth Range

Maximum: 2.00 ft

Minimum: 0.00 ft

Increment: 0.50 ft

Length: 6'-9"

Skew Angle: 0.00 deg

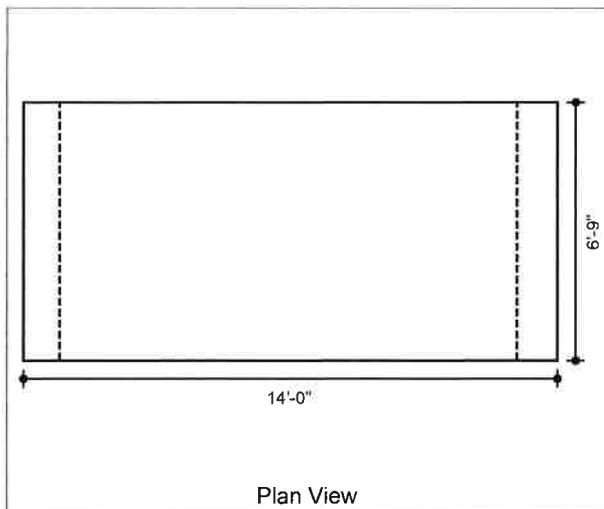
Bottom Slab Support: Full Slab

Top Haunch, Width: 1'-0"

Top Haunch, Height: 1'-0"

Bottom Haunch, Width: 1'-0"

Bottom Haunch, Height: 1'-0"



Material Properties

Concrete

Strength, fc: 5.000 ksi

Density: 0.150 kcf

Elasticity, Ec: 4287 ksi

Type: Normal wt

Steel

Yield, fy: 80 ksi

Allow Stress: 80 ksi

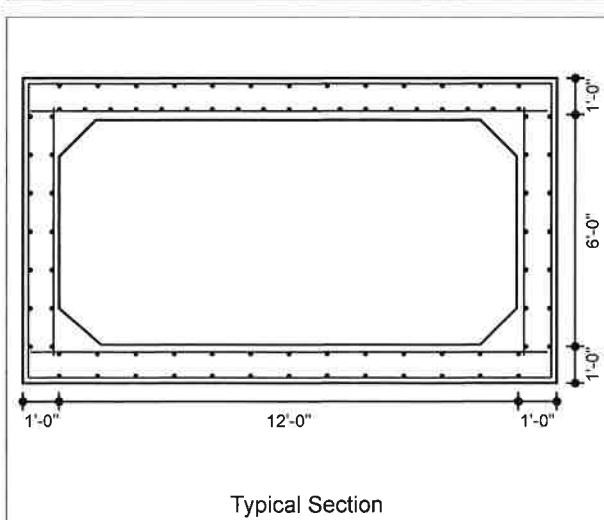
Elasticity, Es: 29000 ksi

Soil

Density: 0.125 kcf

Exposure Factor

Class 1 Exposure



Reinforcement Covers

Ext. Cover Top Slab: 2"

Ext. Cover Bottom Slab: 2"

Ext. Cover Walls: 2"

Int. Cover Walls: 2"

Int. Cover Top Slab: 2"

Int. Cover Bottom Slab: 2"

Loads

Live Load

Vehicle Names: HL-93

Traffic Direction: Parallel

Eq. Height of Soil: Calculated

Max No. of Lanes: 1

Dead Load

Future Wearing Surface: 0.070 klf

Additional Dead Load: 0.000 klf

Concentrated Loads: none

Lateral Soil Loads

Eq. Fluid Press. Max: 60.00 pcf

Eq. Fluid Press. Min: 30.00 pcf

Consider Int. Water Press.: no

Eriksson Culvert v4.4.4

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Filename: Harris Ranch Dallas Harris South Sub.etcx

Sht: ____ of ____

By:MB Chk: ____

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Culvert p. 1 of 40

Project: Harris Ranch - Dallas Harris

Task : 12'x6' BC

Client : Oldcastle - ACHD

Job No.: 57748

CULVERT PROPERTIES

Type of Culvert: Precast
Operating Mode : Analysis

Specification : LRFD 8th Edition

Physical Dimensions

No. of Boxes: 1 Name: BoxCulvert
Clear Span : 12.0000 ft
Clear Height: 6.0000 ft Skew Angle : 0.00 deg
Length : 6.7500 ft Bottom Slab Support: Full Slab
Fill Depth Range: Maximum : 2.00 ft Minimum : 0.00 ft Increment : 0.50 ft
Haunches: Top, Length: 12.0000 in Height: 12.0000 in
Bottom, Length: 12.0000 in Height: 12.0000 in
Member Thicknesses: Top Slab: 12.0000 in Bot Slab: 12.0000 in
Ext Wall: 12.0000 in
Wall Joint: None

Material Properties

Concrete: Strength,f'c : 5.000 ksi Density : 0.150 kcf Elasticity,Ec: 4287 ksi
Type : Normal Weight Density Modification Factor : 1.00
Fr Factor : 0.24 Gamma1 : 1.60 Gamma3 : 0.75
Steel: Yield,fy : 80.00 ksi fss Limit : 1fy Elasticity,Es: 29000 ksi
Yield,fyv : 60.00 ksi Diameter : 1.000 in Type : Rebar
Soil: Density : 0.125 kcf Slope Factor: 1.150 (B1 Installation)
Poisson's : 0.5
Fe Factor : 1.280 (User Defined)
Serviceability, Gamma-e: 1.00

Loads

Live Load: Vehicle: (AA) HL-93 - Design Vehicle
Aisle No. Weight(k) Dist. From Previous(ft)
1 8.00 0.00
2 32.00 14.00
3 32.00 14.00
Gage Width: 6.00 ft, Tread Width: 20.00 in, Tread Length: 10.00 in
Include Tandem: yes
Tandem: Axle 1: 25.00 k, Axle 2: 25.00 k, Axle Spacing: 4.00 ft
Lane Load: 0.00 klf, P-Moment: 0.00 k, P-Shear: 0.00 k
Combine: Truck + Lane Or Tandem + Lane
Inventory Rating Load Factor: 1.75 Operating Rating Load Factor: 1.35
Design Load Combinations: Strength I
Override MPF: no
Override DLA: no
Include Lane Load : no Max. No. of Lanes: Computed by Program
Traffic Direction : Lanes Parallel to Main Reinforcement
Neglect Live Load for Large Fill Depths: yes
Apply Surcharge at Fill Depths > 2 ft : yes
Compute Surcharge Depth: yes
Dead Load: Future Wearing Surface : 0.07 klf Add. Dead Load : 0.00 klf
Concentrated Loads : none
Lateral Soil Loads: Max. Equiv. Fluid Press.: 60.00 pcf Min. Equiv. Fluid Press. : 30.00 pcf
Buoyancy Check : no
Fluid Pressures : Apply Water Press. : no
Foundation Model : Rigid

	Max	Min
DC:	1.250	0.900
DW:	1.500	0.650
EV:	1.300	0.900
EH:	1.350	0.900
WA:	1.000	
EQ:	1.000	

LL I	:	1.750	LL II	:	1.350			
Ductility:	1.000		Importance:	1.000	Redundancy, non-earth:	1.000	Redundancy, earth:	1.050
Condition:	1.000		System:	1.000				
Phi Shear:	0.900		Phi Moment:	1.000	PM Compression:	0.750	PM Tension:	: 0.900
Load Factor Multipliers, Design Mode:	1.00		Analysis Mode:	1.00				

Reinforcement

Reinforcement Covers :	Exterior	Interior
Top Slab:	2.0000 in	2.0000 in
walls :	2.0000 in	2.0000 in
Bot Slab:	2.0000 in	2.0000 in

Assigned reinforcement:		Spacing	
Location	Mark	Size	(in)
Top Slab Inside	A100 (AS2)	3	3.0000
Bottom Slab Inside	A200 (AS3)	3	3.0000
Top Slab Outside	A300 (AS7)	4	6.0000
Bottom Slab Outside	A400 (AS8)	4	6.0000
Top Corner	A1 (AS1)	4	6.0000
Bottom Corner	A2 (AS1)	4	6.0000
Ext. Wall Inside	B1 (AS4)	3	3.0000
Ext. Wall Outside	B2 (AS1)	4	6.0000
Longitudinal	C1 (AS6)	3	12.0000
Top Distribution	C100 (AS5)	4	8.0000
Bottom Distribution	C200	3	12.0000

Analysis Options

LL Analysis :	Automatically Set Traffic Direction to Account for Skew Effects:	no
Limit Distribution Width to Culvert Length for Fills < 2 ft:	yes	
Limit Distribution Width to Culvert Length for Fills > 2 ft:	yes	
Combine Longitudinal Axle Overlaps for Fills > 2 ft:	yes	
Combine Transverse Axle Overlaps for Fills > 2 ft:	no	
Axle Placement Increment for Moving Load Analysis:	20	
Include Impact on Bottom Slab:	no	
Always Distribute Wheel Load:	yes	

Reinforcement:	Always Include Distribution Steel:	no
Distribution Slab Provided:	no	
User Defined Longitudinal Steel:	yes	
Max. As used in Vc Calcs:	2.00 in ² /ft	
Distribute Minimum Reinforcement per Face:	yes	
Use Individual Member Thicknesses for Min Steel:	no	
Epoxy coat steel:	no	

Slenderness :	Checked	K Factor:	2.00
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Analysis Modeling :	Use Haunches in the Structural Analysis Model:	yes
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Crit. Section:	Consider Haunches when Selecting Critical Section Locations:	yes
Extend Critical Section for Shear Beyond the End of the Haunch:	yes	
Use Max. Moment with Max. Shear at the Critical Section for Shear:	no	

Flexure :	Ignore Axial Thrust:	no
Use Eq. 12.10.4.2.4a-1:	no	

Shear :	Always Check Iterative Beta Method
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Environmental:	Apply environmental durability factors:	no
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Live Load Deflection Criteria:	1/800
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ANALYSIS RESULTS

Top Slab Thickness = 12.00 in

Bottom Slab Thickness = 12.00 in

Exterior Wall Thickness = 12.00 in

Modular Ratio (N) = 6.76 Max. Steel Ratio = 0.017

Design Span = 13.00 ft Design Height = 7.00 ft

Volume of Concrete: 1.556 cy/ft Weight of Steel: 188 lb/ft

M dimension = 1.53 ft (method of equivalent capacity)

= 5.14 ft (method of contraflexure - ASTM)

Reinforcing Steel Schedule

Location	Bar Mark	Qty	Size	Type	Spacing (in)	As,prv (in ² /ft)	Length (ft-in)	Wgt (lbs)	H Leg (ft-in)	V Leg (ft-in)
Top Slab (int)	A100 (AS2)	27	3	STR	3.00	0.440	13- 7	138		
Bot Slab (int)	A200 (AS3)	27	3	STR	3.00	0.440	13- 7	138		
Top Slab (ext)	A300 (AS7)	14	4	STR	6.00	0.400	13- 7	127		
Bot Slab (ext)	A400 (AS8)	14	4	STR	6.00	0.400	13- 7	127		
Corner (Top)	A1 (AS1)	28	4	L-BAR	6.00	0.400	7- 6	140	4-10	2- 8
Corner (Bottom)	A2 (AS1)	28	4	L-BAR	6.00	0.400	7- 0	131	4- 4	2- 8
Ext Wall (int)	B1 (AS4)	54	3	STR	3.00	0.440	6- 6	132		
Ext Wall (ext)	B2 (AS1)	28	4	STR	6.00	0.400	6- 0	112		
Top Slab (int- 1)	C100 (AS5)	19	4	STR	8.00	0.300	6- 8	85		
Bot Slab (int- 1)	C200	13	3	STR	12.00	0.110	6- 8	33		
Temperature (1)	C1 (AS6)	13	3	STR	12.00	0.110	6- 8	33		
Temperature (1)	C1 (AS6)	13	3	STR	12.00	0.110	6- 8	33		
Temperature (1)	C1 (AS6)	14	3	STR	12.00	0.110	6- 8	35		
Temperature (1)	C1 (AS6)	14	3	STR	12.00	0.110	6- 8	35		
							Total	1298		

Note: A denotes flexural steel, B denotes vertical steel, C denotes longitudinal steel

AS Bar Marks

Location	As prv in ² /ft
Transverse Side Wall - Outside Face (AS1)	0.400
Transverse Top Slab - Inside Face (AS2)	0.440
Transverse Bottom Slab - Inside Face (AS3)	0.440
Transverse Side Wall - Inside Face (AS4)	0.440
Distribution Top Slab - Inside Face (AS5)	0.300
Distribution Top Slab - Outside Face (AS6)	0.110
Transverse Top Slab - Outside Face (AS7)	0.400
Transverse Bottom Slab - Outside Face (AS8)	0.400

Notes: 1.) Final areas of steel provided must be checked in analysis mode

Splice Lengths Table:

Bar Mark	Size	Splice Length (ft-in)
B1	3	1- 5
C1	3	1- 5
C100	4	1-11
C200	3	1- 5

Summary of Ratings Table:

	Flexure	Shear
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Truck	Fill	Member	Location	IR	OR	Fill	Member	Location	IR	OR
(AA) HL-93	2.00	2	MID	1.18	1.53	0.00	2	LT	1.45	1.88

Critical Sections Summary: Flexure

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Moment	Design		ds	Ma	phi	As	Load Ratings			Fill Depth
			A. F.	Corr.					IR	OR	Truck	
BOT	18.00	-20.97	15.24	25.16	9.75	27.59	0.90	0.40	15.46	1.57	2.03	AA 2.00
MID	42.00	0.22	1.31	27.77	9.81	25.41	0.90	0.44	15.46	NC	NC	AA 0.00
MID-	42.00	-21.70	15.24	25.16	9.75	27.59	0.90	0.40	15.46	1.42	1.84	AA 2.00
TOP	18.00	-23.14	15.24	25.16	9.75	27.59	0.90	0.40	15.46	1.30	1.68	AA 2.00

Member 2: (Top Slab), Thickness = 12.00 in

Loc	Dist.	Moment	Design		ds	Ma	phi	As	Load Ratings			Fill Depth
			A. F.	Corr.					IR	OR	Truck	
LT	18.00	-10.23	3.27	25.16	9.75	23.71	0.90	0.40	15.46	2.69	3.48	AA 1.99
MID	78.00	22.15	-0.54	27.77	9.81	24.82	0.90	0.44	15.46	1.18	1.53	AA 2.00
RT	18.00	-10.23	3.27	25.16	9.75	23.71	0.90	0.40	15.46	2.69	3.48	AA 1.99

Member 4: (Bottom Slab), Thickness = 12.00 in

Loc	Dist.	Moment	Design		ds	Ma	phi	As	Load Ratings			Fill depth
			A. F.	Corr.					IR	OR	Truck	
LT	18.00	-7.73	4.44	25.16	9.75	24.09	0.90	0.40	15.46	5.30	6.86	AA 2.00
MID	78.00	18.36	0.23	27.77	9.81	25.07	0.90	0.44	15.46	1.70	2.20	AA 1.99
.T	18.00	-7.76	4.44	25.16	9.75	24.09	0.90	0.40	15.46	5.26	6.82	AA 2.00

Critical Sections Summary: Vertical Shear

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Shear	Design		Corr. Corr.	phi*vn	Beta	Vc	Vs	Av	Max. Spac	Load Ratings	Fill Depth	
			A. F.	Dv								IR	OR	Truck
BOT	26.64	2.16	21.0	15.24	9.44	14.40	2.000	16.00b	0.00	0.00	0.00	11.95	15.49	AA 2.00
MID	42.00	1.31	0.2	1.31	9.47	29.23	4.046	32.48a	0.00	0.00	0.00	99.99	99.99	AA 0.00
MID-	42.00	1.31	0.2	14.30	9.44	35.93	4.989	39.92a	0.00	0.00	0.00	23.86	30.92	AA 0.00
TOP	26.64	-2.00	19.1	14.30	9.44	14.40	2.000	16.00b	0.00	0.00	0.00	6.89	8.93	AA 0.00

Member 2: (Top Slab), Thickness = 12.00 in

Loc	Dist.	Shear	Design		Corr. Corr.	phi*vn	Beta	Vc	Vs	Av	Max. Spac	Load Ratings	Fill Depth	
			A. F.	Dv								IR	OR	Truck
LT	31.95	10.27	11.0	3.09	9.44	14.40	2.000	16.00b	0.00	0.00	0.00	1.45	1.88	AA 0.00
MID	78.00	4.45	19.6	-1.00	9.47	12.16	1.683	13.51a	0.00	0.00	0.00	2.73	3.54	AA 0.00
RT	31.95	10.27	11.0	3.09	9.44	14.40	2.000	16.00b	0.00	0.00	0.00	1.45	1.88	AA 0.00

Member 4: (Bottom Slab), Thickness = 12.00 in

Loc	Dist.	Shear	Design		Corr. Corr.	phi*vn	Beta	Vc	Vs	Av	Max. Spac	Load Ratings	Fill Depth	
			A. F.	Dv								IR	OR	Truck
LT	31.95	7.13	5.2	4.29	9.44	17.75	2.464	19.72a	0.00	0.00	0.00	4.07	5.28	AA 1.99
MID	78.00	0.23	14.4	-0.31	9.47	14.09	1.951	15.66a	0.00	0.00	0.00	62.03	80.41	AA 0.00
T	31.95	7.13	5.2	4.29	9.44	17.75	2.464	19.72a	0.00	0.00	0.00	4.07	5.28	AA 1.99

Vc Calculation By: a - Iterative Beta, b - Constant Beta, c - Box Culvert, d - Standard/Arema

Analysis Results: Fill Depth = 0.00 ft

Load Parameters:

Fe = 1.28 Surcharge Depth : 3.00 ft

Applied Horizontal Loads: (k/ft)

Load Description	Bottom of Wall	Top of Wall
Horizontal Earth Load	0.450	0.030
Live Load Surcharge	0.204	0.204
Internal Water Pressure	0.000	0.000

Unfactored Moments due to All Loads: (k-ft)

M-PT	Mdc	Mev	Mdw	Meh	Mls	Mwa
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Member 1: (Exterior wall)

Bottom

1- 0	-4.06	0.00	-0.78	-0.41	-0.32	0.00
1- 1	-3.79	0.00	-0.78	0.25	0.13	0.00
1- 2	-3.53	0.00	-0.78	0.71	0.48	0.00
1- 3	-3.26	0.00	-0.78	0.99	0.73	0.00
1- 4	-3.00	0.00	-0.78	1.11	0.88	0.00
1- 5	-2.73	0.00	-0.78	1.09	0.93	0.00
1- 6	-2.46	0.00	-0.78	0.96	0.88	0.00
1- 7	-2.20	0.00	-0.78	0.73	0.73	0.00
1- 8	-1.93	0.00	-0.78	0.42	0.48	0.00
1- 9	-1.66	0.00	-0.78	0.06	0.13	0.00
1-10	-1.40	0.00	-0.78	-0.34	-0.32	0.00

Top

Member 2: (Top Slab)

Left

2- 0	-1.40	0.00	-0.78	-0.36	-0.32	0.00
2- 1	-0.17	0.00	-0.25	-0.36	-0.32	0.00
2- 2	0.72	0.00	0.17	-0.36	-0.32	0.00
2- 3	1.35	0.00	0.46	-0.36	-0.32	0.00
2- 4	1.73	0.00	0.64	-0.36	-0.32	0.00
2- 5	1.86	0.00	0.70	-0.36	-0.32	0.00
2- 6	1.73	0.00	0.64	-0.36	-0.32	0.00
2- 7	1.35	0.00	0.46	-0.36	-0.32	0.00
2- 8	0.72	0.00	0.17	-0.36	-0.32	0.00
2- 9	-0.17	0.00	-0.25	-0.36	-0.32	0.00
2-10	-1.40	0.00	-0.78	-0.36	-0.32	0.00

Right

Member 4: (Bottom Slab)

Left

4- 0	-4.06	0.00	-0.78	-0.41	-0.32	0.00
4- 1	-1.52	0.00	-0.25	-0.41	-0.32	0.00
4- 2	0.46	0.00	0.17	-0.41	-0.32	0.00
4- 3	1.88	0.00	0.46	-0.41	-0.32	0.00
4- 4	2.72	0.00	0.64	-0.41	-0.32	0.00
4- 5	3.01	0.00	0.70	-0.41	-0.32	0.00
4- 6	2.72	0.00	0.64	-0.41	-0.32	0.00
4- 7	1.88	0.00	0.46	-0.41	-0.32	0.00
4- 8	0.46	0.00	0.17	-0.41	-0.32	0.00
4- 9	-1.52	0.00	-0.25	-0.41	-0.32	0.00
4-10	-4.06	0.00	-0.78	-0.41	-0.32	0.00

Right

Unfactored Shears due to All Loads: (k)

M-PT	Vdc	Vev	Vdw	Veh	Vls	Vwa
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Member 1: (Exterior wall)

Bottom						
1- 0	0.38	0.00	0.00	1.09	0.71	0.00
1- 1	0.38	0.00	0.00	0.79	0.57	0.00
1- 2	0.38	0.00	0.00	0.52	0.43	0.00
1- 3	0.38	0.00	0.00	0.28	0.29	0.00
1- 4	0.38	0.00	0.00	0.07	0.14	0.00
1- 5	0.38	0.00	0.00	-0.11	0.00	0.00
1- 6	0.38	0.00	0.00	-0.27	-0.14	0.00
1- 7	0.38	0.00	0.00	-0.39	-0.29	0.00
1- 8	0.38	0.00	0.00	-0.49	-0.43	0.00
1- 9	0.38	0.00	0.00	-0.55	-0.57	0.00
1-10	0.38	0.00	0.00	-0.59	-0.71	0.00

Top

Member 2: (Top Slab)

Left

2- 0	1.13	0.00	0.46	0.00	0.00	0.00
2- 1	0.78	0.00	0.36	0.00	0.00	0.00
2- 2	0.59	0.00	0.27	0.00	0.00	0.00
2- 3	0.39	0.00	0.18	0.00	0.00	0.00
2- 4	0.20	0.00	0.09	0.00	0.00	0.00
2- 5	0.00	0.00	0.00	0.00	0.00	0.00
2- 6	-0.20	0.00	-0.09	0.00	0.00	0.00
2- 7	-0.39	0.00	-0.18	0.00	0.00	0.00
2- 8	-0.59	0.00	-0.27	0.00	0.00	0.00
2- 9	-0.78	0.00	-0.36	0.00	0.00	0.00
2-10	-1.13	0.00	-0.46	0.00	0.00	0.00

Right

Member 4: (Bottom Slab)

Left

4- 0	2.18	0.00	0.46	0.00	0.00	0.00
4- 1	1.74	0.00	0.36	0.00	0.00	0.00
4- 2	1.31	0.00	0.27	0.00	0.00	0.00
4- 3	0.87	0.00	0.18	0.00	0.00	0.00
4- 4	0.44	0.00	0.09	0.00	0.00	0.00
4- 5	0.00	0.00	0.00	0.00	0.00	0.00
4- 6	-0.44	0.00	-0.09	0.00	0.00	0.00
4- 7	-0.87	0.00	-0.18	0.00	0.00	0.00
4- 8	-1.31	0.00	-0.27	0.00	0.00	0.00
4- 9	-1.74	0.00	-0.36	0.00	0.00	0.00
4-10	-2.18	0.00	-0.46	0.00	0.00	0.00

Right

nfactored Thrusts due to All Loads: (k) (Fill Depth = 0.00 ft)

Member	Pdc	Pev	Pdw	Peh	Pls	Pwa
1	1.13	0.00	0.46	0.00	0.00	0.00
2	-0.38	0.00	0.00	0.59	0.71	0.00
4	0.38	0.00	0.00	1.09	0.71	0.00

----- Analysis Truck, HL-93 -----

Vehicle	Axle	Weight (k/ft)	Length (ft)	Dist. From Previous (ft)
Truck	1	1.623	0.83	
	2	6.492	0.83	14.00
	3	6.492	0.83	14.00
Tandem	1	5.072	0.83	
	2	5.072	0.83	4.00

Live Load Parameters:

Traffic Direction is Parallel to Main Reinforcement

Distribution width : 4.72 ft

Note: Distribution width is calculated for one wheel only.

Impact Factor : 1.33

Distribution width : 0.00 ft

Lane Load: 0.000 k/ft

Truck Positions That Cause Maximum Results:

Maximum +Moment in Top Slab

Vehicle	Axle	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	1.623	0.83	20.50
	2	6.492	0.83	6.50
	3	6.492	0.83	-7.50

Maximum +Moment : 9.39 k-ft

Corresponding Moment at End : -7.63 k-ft

Coincident Bottom Slab Load : 0.31 k/ft

Maximum +Shear in Top Slab

Truck	1	1.623	0.83	14.42
	2	6.492	0.83	0.42
	3	6.492	0.83	-13.58

Maximum +Shear : 5.26 k

Corresponding Shear at Mid : -0.15 k

Coincident Bottom Slab Load : 0.31 k/ft

Maximum +Moment in Top Slab

Tandem	1	5.072	0.83	10.27
	2	5.072	0.83	6.27

Maximum +Moment : 9.25 k-ft

Corresponding Moment at End : -9.10 k-ft

Coincident Bottom Slab Load : 0.49 k/ft

Maximum +Shear in Top Slab

Tandem	1	5.072	0.83	4.42
	2	5.072	0.83	0.42

Maximum +Shear : 6.98 k

Corresponding Shear at Mid : -1.47 k

Coincident Bottom Slab Load : 0.49 k/ft

Maximum -Moment in Top Slab

Vehicle	Axle	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	1.623	0.83	19.62
	2	6.492	0.83	5.62
	3	6.492	0.83	-8.38

Maximum -Moment : -7.78 k-ft

Corresponding Moment at Mid : 7.72 k-ft

Coincident Bottom Slab Load : 0.31 k/ft

Maximum -Shear in Top Slab

Truck	1	1.623	0.83	26.58
	2	6.492	0.83	12.58
	3	6.492	0.83	-1.42

Maximum -Shear : -5.27 k

Corresponding Shear at Mid : 0.14 k

Coincident Bottom Slab Load : 0.31 k/ft

Maximum -Moment in Top Slab

Tandem	1	5.072	0.83	7.90
	2	5.072	0.83	3.90

Maximum -Moment : -10.78 k-ft

Corresponding Moment at Mid : 8.46 k-ft

Coincident Bottom Slab Load : 0.49 k/ft

Maximum -Shear in Top Slab

Tandem	1	5.072	0.83	12.58
	2	5.072	0.83	8.58

Maximum -Shear : -6.99 k

Corresponding Shear at Mid : 1.47 k

Coincident Bottom Slab Load : 0.49 k/ft

nfactored Moments and Shears due to Truck Loads: (k-ft, k)

M-PT	Truck				Tandem				Lane			
	M11+	M11-	V11+	V11-	M11+	M11-	V11+	V11-	M11+	M11-	V11+	V11-

Member 1: (Exterior wall)

Bottom

1- 0	0.00	-4.23	0.52	-0.68	0.00	-6.08	0.40	-0.85	0.00	0.00	0.00	0.00
1- 1	0.00	-4.29	0.52	-0.68	0.00	-6.13	0.40	-0.85	0.00	0.00	0.00	0.00
1- 2	0.00	-4.51	0.52	-0.68	0.00	-6.46	0.40	-0.85	0.00	0.00	0.00	0.00
1- 3	0.00	-4.81	0.52	-0.68	0.00	-6.89	0.40	-0.85	0.00	0.00	0.00	0.00
1- 4	0.00	-5.18	0.52	-0.68	0.00	-7.39	0.40	-0.85	0.00	0.00	0.00	0.00
1- 5	0.00	-5.58	0.52	-0.68	0.00	-7.93	0.40	-0.85	0.00	0.00	0.00	0.00
1- 6	0.00	-6.00	0.52	-0.68	0.00	-8.48	0.40	-0.85	0.00	0.00	0.00	0.00
1- 7	0.00	-6.43	0.52	-0.68	0.00	-9.05	0.40	-0.85	0.00	0.00	0.00	0.00
1- 8	0.00	-6.88	0.52	-0.68	0.00	-9.62	0.40	-0.85	0.00	0.00	0.00	0.00
1- 9	0.00	-7.33	0.52	-0.68	0.00	-10.20	0.40	-0.85	0.00	0.00	0.00	0.00
1-10	0.10	-7.78	0.52	-0.68	0.08	-10.78	0.40	-0.85	0.00	0.00	0.00	0.00

Top

Member 2: (Top Slab)

Left												
2- 0	0.10	-7.78	5.26	0.00	0.08	-10.78	6.98	0.00	0.00	0.00	0.00	0.00
2- 1	3.20	-4.20	4.80	-0.31	2.50	-5.42	6.15	-0.24	0.00	0.00	0.00	0.00
2- 2	5.62	-1.60	4.28	-0.79	4.39	-1.51	5.27	-0.62	0.00	0.00	0.00	0.00
2- 3	7.63	-0.03	3.72	-1.32	6.96	-0.02	4.36	-1.03	0.00	0.00	0.00	0.00
2- 4	8.93	0.00	3.12	-1.90	8.76	0.00	3.44	-1.70	0.00	0.00	0.00	0.00
2- 5	9.39	0.00	2.51	-2.51	9.25	0.00	2.55	-2.55	0.00	0.00	0.00	0.00
2- 6	8.93	0.00	1.90	-3.12	8.76	0.00	1.70	-3.44	0.00	0.00	0.00	0.00
2- 7	7.63	-0.03	1.32	-3.72	6.96	-0.02	1.03	-4.36	0.00	0.00	0.00	0.00
2- 8	5.62	-1.60	0.79	-4.28	4.39	-1.51	0.62	-5.27	0.00	0.00	0.00	0.00
2- 9	3.12	-4.20	0.31	-4.80	2.44	-5.42	0.24	-6.15	0.00	0.00	0.00	0.00
2-10	0.10	-7.78	0.00	-5.27	0.08	-10.78	0.00	-6.99	0.00	0.00	0.00	0.00

Right

Member 4: (Bottom Slab)

Left												
4- 0	0.00	-4.23	2.16	0.00	0.00	-6.08	3.29	0.00	0.00	0.00	0.00	0.00
4- 1	0.00	-1.71	1.76	0.00	0.00	-2.23	2.65	0.00	0.00	0.00	0.00	0.00
4- 2	1.60	0.00	1.35	0.00	2.12	0.00	2.02	0.00	0.00	0.00	0.00	0.00
4- 3	2.79	0.00	0.94	0.00	4.07	0.00	1.38	0.00	0.00	0.00	0.00	0.00
4- 4	3.49	0.00	0.54	0.00	5.23	0.00	0.75	0.00	0.00	0.00	0.00	0.00
4- 5	3.71	0.00	0.13	-0.13	5.62	0.00	0.11	-0.12	0.00	0.00	0.00	0.00
4- 6	3.49	0.00	0.00	-0.54	5.23	0.00	0.00	-0.75	0.00	0.00	0.00	0.00
4- 7	2.79	0.00	0.00	-0.94	4.07	0.00	0.00	-1.39	0.00	0.00	0.00	0.00
4- 8	1.60	0.00	0.00	-1.35	2.12	0.00	0.00	-2.02	0.00	0.00	0.00	0.00
4- 9	0.00	-1.73	0.00	-1.76	0.00	-2.25	0.00	-2.66	0.00	0.00	0.00	0.00
4-10	0.00	-4.23	0.00	-2.16	0.00	-6.10	0.00	-3.29	0.00	0.00	0.00	0.00

Right

Serviceability Check: Crack Control

Bar		Moment	Thrust	Fss	Spacing	Allow
Mark	Location	(k-ft)	(k)	(ksi)	(in)	(in)
A1	Top Corner Bar	-11.7	8.56	26.93	6.00	15.05
A2	Bot Corner Bar	-10.4	8.56	22.74	6.00	18.65
A100	Top Slab (int)	11.8	-0.60	35.81	3.00	10.45
A200	Bot Slab (int)	9.1	0.08	27.06	3.00	15.24
B2	Ext Wall (ext)	-10.9	8.56	24.21	6.00	17.25

Strength Limit State at Critical Sections: Flexure

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Design (in)	Corr.						Load Ratings		
			Moment (k-ft)	A. F. (k)	Mu (k-ft)	ds (in)	Ma (k-ft)	phi	As (in ²)	Mcr (k-ft)	IR
BOT	18.00	-16.64	14.30	25.16	9.75	27.29	0.90	0.40	15.46	1.89	2.45
MID	42.00	0.22	1.31	27.77	9.81	25.41	0.90	0.44	15.46	NC	NC
MID-	42.00	-17.75	14.30	25.16	9.75	27.29	0.90	0.40	15.46	1.66	2.16
TOP	18.00	-19.40	14.30	25.16	9.75	27.29	0.90	0.40	15.46	1.49	1.94

Member 2: (Top Slab), Thickness = 12.00 in

Loc	Dist.	Design	Corr.							Load Ratings	
		Moment (in)	Moment (k-ft)	A. F. (k)	Mu (k-ft)	ds (in)	Ma (k-ft)	phi	AS (in ²)	Mcr (k-ft)	IR
LT	18.00	-9.83	3.09	25.16	9.75	23.65	0.90	0.40	15.46	2.54	3.29
MID	78.00	19.57	-1.00	27.77	9.81	24.67	0.90	0.44	15.46	1.31	1.70
RT	18.00	-9.83	3.09	25.16	9.75	23.65	0.90	0.40	15.46	2.54	3.29

Member 4: (Bottom Slab), Thickness = 12.00 in

Loc	Dist. (in)	Moment (k-ft)	Design		Corr.		phi	AS (in ²)	Mcr (k-ft)	Load Ratings	
			A. F. (k)	Mu (k-ft)	ds (in)	Ma (k-ft)				IR	OR
LT	18.00	-6.29	4.18	25.16	9.75	24.00	0.90	0.40	15.46	5.60	7.26
MID	78.00	14.37	-0.31	27.77	9.81	24.89	0.90	0.44	15.46	2.07	2.68
RT	18.00	-6.31	4.18	25.16	9.75	24.00	0.90	0.40	15.46	5.56	7.21

Notes: Mu - Resisting moment under pure flexure, Ma - Allowable moment under applied axial load

Strength Limit State at Critical Sections: Vertical Shear

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Design	Corr.	Corr.	Shear (in)	Moment (k)	A. F.	Dv (in)	phi*vn (k)	Beta	Theta	Vc (k)	Vs (k)	Av (in2)	Spac (in)	Load Ratings	
																IR	OR
BOT	26.64	2.18	16.8	14.30	9.44	14.68	2.038	41.03	16.31a	0.00	0.00	0.00	0.00	0.00	0.00	10.19	13.21
MID	42.00	1.31	0.2	1.31	9.47	29.23	4.046	31.33	32.48a	0.00	0.00	0.00	0.00	0.00	0.00	99.99	99.99
MID-	42.00	1.31	0.2	14.30	9.44	35.93	4.989	28.84	39.92a	0.00	0.00	0.00	0.00	0.00	0.00	23.86	30.92
TOP	26.64	-2.00	19.1	14.30	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	0.00	0.00	0.00	6.89	8.93

Member 2: (Top Slab), Thickness = 12.00 in

Loc	Dist.	Design		Corr.	Corr.	phi*vn	Beta	Theta	Vc	Vs	Av	Spac	Max.		Load Ratings	
		Shear	Moment	A. F.	Dv								(in)	(k)	(k)	(in)
LT	31.95	10.27	11.0	3.09	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00		1.45	1.88	
MID	78.00	4.45	19.6	-1.00	9.47	12.16	1.683	43.90	13.51a	0.00	0.00	0.00		2.73	3.54	
RT	31.95	10.27	11.0	3.09	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00		1.45	1.88	

Member 4: (Bottom Slab), Thickness = 12.00 in

Loc	Dist.	Design		Corr.		Corr.		Beta	Theta	Vc	Vs	Av	Max.	Load Ratings		
		Shear	Moment	A.	F.	Dv	phi*vn							Spac	IR	OR
(in)	(k)	(k-ft)	(k)	(in)	(k)	(in)	(in2)	(in)						(in)		

Eriksson Culvert v4.4.4

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Filename: Harris Ranch Dallas Harris South Sub.etcx

sht: ____ of ____

By:MB Chk: ____

12/27/2019 9:31:33 AM

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T	31.95	5.49	4.5	4.18	9.44	19.58	2.719	36.77	21.76a	0.00	0.00	0.00	5.05	6.55
ID	78.00	0.23	14.4	-0.31	9.47	14.09	1.951	41.69	15.66a	0.00	0.00	0.00	62.03	80.41
RT	31.95	5.49	4.5	4.18	9.44	19.58	2.719	36.78	21.75a	0.00	0.00	0.00	5.04	6.54

Vc Calculation By: a - Iterative Beta, b - Constant Beta, c - Box Culvert, d - Standard/Arema

Load Combination Results at Tenth Points: (k-ft, k)(Fill Depth = 0.00 ft)

M-PT +Moment -Moment +Axial -Axial +Shear -Shear

Member 1: (Exterior wall)

Bottom

1- 0	-5.303	-18.027	1.308	14.305	4.178	-0.311
1- 1	-3.340	-16.476	1.308	14.305	3.502	-0.504
1- 2	-1.836	-16.426	1.308	14.305	2.868	-0.678
1- 3	-0.761	-16.677	1.308	14.305	2.276	-0.833
1- 4	-0.085	-17.140	1.308	14.305	1.726	-0.970
1- 5	0.219	-17.750	1.308	14.305	1.305	-1.176
1- 6	0.182	-18.474	1.308	14.305	1.207	-1.643
1- 7	-0.168	-19.279	1.308	14.305	1.127	-2.068
1- 8	-0.801	-20.147	1.308	14.305	1.066	-2.452
1- 9	-1.688	-21.059	1.308	14.305	1.024	-2.794
1-10	-2.800	-22.819	1.308	14.305	1.001	-3.095

Top

Member 2: (Top slab)

Left

2- 0	-2.824	-22.843	1.739	3.095	14.305	1.308
2- 1	4.783	-11.119	-1.001	3.095	12.284	0.941
2- 2	10.749	-2.717	-1.001	3.095	10.365	-0.239
2- 3	15.505	0.458	-1.001	1.739	8.385	-1.557
2- 4	18.531	0.916	-1.001	1.739	6.397	-2.952
2- 5	19.569	1.068	-1.001	1.739	4.455	-4.455
2- 6	18.531	0.916	-1.001	1.739	2.952	-6.397
2- 7	15.505	0.458	-1.001	1.739	1.557	-8.385
2- 8	10.749	-2.717	-1.001	3.095	0.239	-10.365
2- 9	4.656	-11.119	-1.001	3.095	-0.941	-12.284
2-10	-2.824	-22.843	1.739	3.095	-1.308	-14.313

Right

Member 4: (Bottom slab)

Left

4- 0	-5.303	-18.027	3.142	4.178	9.159	2.253
4- 1	-2.534	-7.317	-0.311	4.178	7.366	1.803
4- 2	4.263	-0.616	-0.311	3.142	5.574	1.352
4- 3	9.903	0.848	-0.311	3.142	3.781	0.901
4- 4	13.260	1.727	-0.311	3.142	1.989	0.451
4- 5	14.371	2.020	-0.311	3.142	0.227	-0.227
4- 6	13.260	1.727	-0.311	3.142	-0.451	-1.994
4- 7	9.903	0.848	-0.311	3.142	-0.901	-3.787
4- 8	4.263	-0.616	-0.311	3.142	-1.352	-5.579
4- 9	-2.534	-7.349	-0.311	4.178	-1.803	-7.372
4-10	-5.303	-18.071	3.142	4.178	-2.253	-9.164

Analysis Results: Fill Depth = 0.50 ft

Load Parameters:

Fe = 1.28 Surcharge Depth : 3.00 ft

Applied Horizontal Loads: (k/ft)

Load Description	Bottom of wall	Top of wall
Horizontal Earth Load	0.480	0.060
Live Load Surcharge	0.198	0.198
Internal Water Pressure	0.000	0.000

Unfactored Moments due to All Loads: (k-ft)

M-PT	Mdc	Mev	Mdw	Meh	Mls	Mwa
------	-----	-----	-----	-----	-----	-----

Member 1: (Exterior wall)

Bottom

1- 0	-4.06	-0.89	-0.78	-0.46	-0.31	0.00
1- 1	-3.79	-0.89	-0.78	0.27	0.13	0.00
1- 2	-3.53	-0.89	-0.78	0.78	0.47	0.00
1- 3	-3.26	-0.89	-0.78	1.10	0.71	0.00
1- 4	-3.00	-0.89	-0.78	1.24	0.86	0.00
1- 5	-2.73	-0.89	-0.78	1.23	0.91	0.00
1- 6	-2.46	-0.89	-0.78	1.09	0.86	0.00
1- 7	-2.20	-0.89	-0.78	0.84	0.71	0.00
1- 8	-1.93	-0.89	-0.78	0.49	0.47	0.00
1- 9	-1.66	-0.89	-0.78	0.08	0.13	0.00
1-10	-1.40	-0.89	-0.78	-0.39	-0.31	0.00

Top

Member 2: (Top Slab)

Left

2- 0	-1.40	-0.89	-0.78	-0.40	-0.31	0.00
2- 1	-0.17	-0.28	-0.25	-0.40	-0.31	0.00
2- 2	0.72	0.19	0.17	-0.40	-0.31	0.00
2- 3	1.35	0.53	0.46	-0.40	-0.31	0.00
2- 4	1.73	0.73	0.64	-0.40	-0.31	0.00
2- 5	1.86	0.80	0.70	-0.40	-0.31	0.00
2- 6	1.73	0.73	0.64	-0.40	-0.31	0.00
2- 7	1.35	0.53	0.46	-0.40	-0.31	0.00
2- 8	0.72	0.19	0.17	-0.40	-0.31	0.00
2- 9	-0.17	-0.28	-0.25	-0.40	-0.31	0.00
2-10	-1.40	-0.89	-0.78	-0.40	-0.31	0.00

Right

Member 4: (Bottom Slab)

Left

4- 0	-4.06	-0.89	-0.78	-0.46	-0.31	0.00
4- 1	-1.52	-0.28	-0.25	-0.46	-0.31	0.00
4- 2	0.46	0.19	0.17	-0.46	-0.31	0.00
4- 3	1.88	0.53	0.46	-0.46	-0.31	0.00
4- 4	2.72	0.73	0.64	-0.46	-0.31	0.00
4- 5	3.01	0.80	0.70	-0.46	-0.31	0.00
4- 6	2.72	0.73	0.64	-0.46	-0.31	0.00
4- 7	1.88	0.53	0.46	-0.46	-0.31	0.00
4- 8	0.46	0.19	0.17	-0.46	-0.31	0.00
4- 9	-1.52	-0.28	-0.25	-0.46	-0.31	0.00
4-10	-4.06	-0.89	-0.78	-0.46	-0.31	0.00

Right

Unfactored Shears due to All Loads: (k)

M-PT	Vdc	Vev	Vdw	Veh	Vls	Vwa
------	-----	-----	-----	-----	-----	-----

Member 1: (Exterior wall)

Bottom						
1- 0	0.38	0.00	0.00	1.20	0.69	0.00
1- 1	0.38	0.00	0.00	0.88	0.55	0.00
1- 2	0.38	0.00	0.00	0.58	0.42	0.00
1- 3	0.38	0.00	0.00	0.32	0.28	0.00
1- 4	0.38	0.00	0.00	0.09	0.14	0.00
1- 5	0.38	0.00	0.00	-0.11	0.00	0.00
1- 6	0.38	0.00	0.00	-0.29	-0.14	0.00
1- 7	0.38	0.00	0.00	-0.43	-0.28	0.00
1- 8	0.38	0.00	0.00	-0.55	-0.42	0.00
1- 9	0.38	0.00	0.00	-0.64	-0.55	0.00
1-10	0.38	0.00	0.00	-0.69	-0.69	0.00

Top

Member 2: (Top Slab)

Left

2- 0	1.13	0.52	0.46	0.00	0.00	0.00
2- 1	0.78	0.42	0.36	0.00	0.00	0.00
2- 2	0.59	0.31	0.27	0.00	0.00	0.00
2- 3	0.39	0.21	0.18	0.00	0.00	0.00
2- 4	0.20	0.10	0.09	0.00	0.00	0.00
2- 5	0.00	0.00	0.00	0.00	0.00	0.00
2- 6	-0.20	-0.10	-0.09	0.00	0.00	0.00
2- 7	-0.39	-0.21	-0.18	0.00	0.00	0.00
2- 8	-0.59	-0.31	-0.27	0.00	0.00	0.00
2- 9	-0.78	-0.42	-0.36	0.00	0.00	0.00
2-10	-1.13	-0.52	-0.46	0.00	0.00	0.00

Right

Member 4: (Bottom Slab)

Left

4- 0	2.18	0.52	0.46	0.00	0.00	0.00
4- 1	1.74	0.42	0.36	0.00	0.00	0.00
4- 2	1.31	0.31	0.27	0.00	0.00	0.00
4- 3	0.87	0.21	0.18	0.00	0.00	0.00
4- 4	0.44	0.10	0.09	0.00	0.00	0.00
4- 5	0.00	0.00	0.00	0.00	0.00	0.00
4- 6	-0.44	-0.10	-0.09	0.00	0.00	0.00
4- 7	-0.87	-0.21	-0.18	0.00	0.00	0.00
4- 8	-1.31	-0.31	-0.27	0.00	0.00	0.00
4- 9	-1.74	-0.42	-0.36	0.00	0.00	0.00
4-10	-2.18	-0.52	-0.46	0.00	0.00	0.00

Right

Unfactored Thrusts due to All Loads: (k) (Fill Depth = 0.50 ft)

Member	Pdc	Pev	Pdw	Peh	Pls	Pwa
1	1.13	0.52	0.46	0.00	0.00	0.00
2	-0.38	0.00	0.00	0.69	0.69	0.00
4	0.38	0.00	0.00	1.20	0.69	0.00

----- Analysis Truck, HL-93 -----

Vehicle	Axle No.	Weight (k/ft)	Length (ft)	Dist. From Previous (ft)
Truck	1	0.945	1.41	
	2	3.782	1.41	14.00
	3	3.782	1.41	14.00
Tandem	1	2.955	1.41	
	2	2.955	1.41	4.00

Live Load Parameters:

Traffic Direction is Parallel to Main Reinforcement

Distribution Width : 4.72 ft

Note: Distribution width is calculated for one wheel only.

Impact Factor : 1.31

Distribution Width : 0.00 ft

Lane Load: 0.000 k/ft

Truck Positions That Cause Maximum Results:

Maximum +Moment in Top Slab

Vehicle	Axle No.	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	0.945	1.41	20.50
	2	3.782	1.41	6.50
	3	3.782	1.41	-7.50

Maximum +Moment : 8.89 k-ft

Corresponding Moment at End : -7.48 k-ft

Coincident Bottom Slab Load : 0.31 k/ft

Maximum +Shear in Top Slab

Truck	1	0.945	1.41	14.70
	2	3.782	1.41	0.70
	3	3.782	1.41	-13.30

Maximum +Shear : 5.08 k

Corresponding Shear at Mid : -0.24 k

Coincident Bottom Slab Load : 0.31 k/ft

Maximum +Moment in Top Slab

Tandem	1	2.955	1.41	6.65
	2	2.955	1.41	2.65

Maximum +Moment : 8.88 k-ft

Corresponding Moment at End : -9.99 k-ft

Coincident Bottom Slab Load : 0.49 k/ft

Maximum +Shear in Top Slab

Tandem	1	2.955	1.41	4.70
	2	2.955	1.41	0.70

Maximum +Shear : 6.69 k

Corresponding Shear at Mid : -1.63 k

Coincident Bottom Slab Load : 0.49 k/ft

Maximum -Moment in Top Slab

Vehicle	Axle No.	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	0.945	1.41	19.80
	2	3.782	1.41	5.80
	3	3.782	1.41	-8.20

Maximum -Moment : -7.63 k-ft

Corresponding Moment at Mid : 8.05 k-ft

Coincident Bottom Slab Load : 0.31 k/ft

Maximum -Shear in Top Slab

Truck	1	0.945	1.41	26.30
	2	3.782	1.41	12.30
	3	3.782	1.41	-1.70

Maximum -Shear : -5.08 k

Corresponding Shear at Mid : 0.24 k

Coincident Bottom Slab Load : 0.31 k/ft

Maximum -Moment in Top Slab

Tandem	1	2.955	1.41	7.95
	2	2.955	1.41	3.95

Maximum -Moment : -10.56 k-ft

Corresponding Moment at Mid : 8.36 k-ft

Coincident Bottom Slab Load : 0.49 k/ft

Maximum -Shear in Top Slab

Tandem	1	2.955	1.41	12.30
	2	2.955	1.41	8.30

Maximum -Shear : -6.70 k

Corresponding Shear at Mid : 1.63 k

Coincident Bottom Slab Load : 0.49 k/ft

nfactored Moments and Shears due to Truck Loads: (k-ft, k)

M-PT	Truck				Tandem				Lane			
	M11+	M11-	V11+	V11-	M11+	M11-	V11+	V11-	M11+	M11-	V11+	V11-

Member 1: (Exterior wall)

Bottom

1- 0	0.00	-4.19	0.42	-0.65	0.00	-6.03	0.33	-0.82	0.00	0.00	0.00	0.00
1- 1	0.00	-4.27	0.42	-0.65	0.00	-6.12	0.33	-0.82	0.00	0.00	0.00	0.00
1- 2	0.00	-4.47	0.42	-0.65	0.00	-6.41	0.33	-0.82	0.00	0.00	0.00	0.00
1- 3	0.00	-4.77	0.42	-0.65	0.00	-6.84	0.33	-0.82	0.00	0.00	0.00	0.00
1- 4	0.00	-5.12	0.42	-0.65	0.00	-7.31	0.33	-0.82	0.00	0.00	0.00	0.00
1- 5	0.00	-5.49	0.42	-0.65	0.00	-7.83	0.33	-0.82	0.00	0.00	0.00	0.00
1- 6	0.00	-5.91	0.42	-0.65	0.00	-8.35	0.33	-0.82	0.00	0.00	0.00	0.00
1- 7	0.00	-6.33	0.42	-0.65	0.00	-8.90	0.33	-0.82	0.00	0.00	0.00	0.00
1- 8	0.00	-6.75	0.42	-0.65	0.00	-9.45	0.33	-0.82	0.00	0.00	0.00	0.00
1- 9	0.00	-7.18	0.42	-0.65	0.00	-10.01	0.33	-0.82	0.00	0.00	0.00	0.00
1-10	0.06	-7.63	0.42	-0.65	0.00	-10.56	0.33	-0.82	0.00	0.00	0.00	0.00

Top

Member 2: (Top Slab)

2- 0	0.06	-7.63	5.08	0.00	0.00	-10.56	6.69	0.00	0.00	0.00	0.00	0.00
2- 1	2.77	-4.11	4.61	-0.21	2.16	-5.28	5.86	-0.16	0.00	0.00	0.00	0.00
2- 2	5.18	-1.55	4.10	-0.68	4.05	-1.45	4.99	-0.53	0.00	0.00	0.00	0.00
2- 3	7.16	0.00	3.53	-1.18	6.63	0.00	4.09	-0.92	0.00	0.00	0.00	0.00
2- 4	8.44	0.00	2.94	-1.75	8.41	0.00	3.19	-1.50	0.00	0.00	0.00	0.00
2- 5	8.89	0.00	2.34	-2.34	8.88	0.00	2.32	-2.33	0.00	0.00	0.00	0.00
2- 6	8.44	0.00	1.75	-2.94	8.41	0.00	1.50	-3.19	0.00	0.00	0.00	0.00
2- 7	7.16	0.00	1.18	-3.53	6.63	0.00	0.92	-4.09	0.00	0.00	0.00	0.00
2- 8	5.18	-1.55	0.67	-4.10	4.05	-1.43	0.52	-4.99	0.00	0.00	0.00	0.00
2- 9	2.73	-4.11	0.21	-4.62	2.14	-5.28	0.16	-5.87	0.00	0.00	0.00	0.00
2-10	0.06	-7.63	0.00	-5.08	0.00	-10.56	0.00	-6.70	0.00	0.00	0.00	0.00

Right

Member 4: (Bottom Slab)

4- 0	0.00	-4.19	2.16	0.00	0.00	-6.03	3.29	0.00	0.00	0.00	0.00	0.00
4- 1	0.00	-1.71	1.75	0.00	0.00	-2.18	2.65	0.00	0.00	0.00	0.00	0.00
4- 2	1.57	0.00	1.35	0.00	2.07	0.00	2.02	0.00	0.00	0.00	0.00	0.00
4- 3	2.77	0.00	0.94	0.00	4.04	0.00	1.38	0.00	0.00	0.00	0.00	0.00
4- 4	3.46	0.00	0.53	0.00	5.20	0.00	0.75	0.00	0.00	0.00	0.00	0.00
4- 5	3.69	0.00	0.13	-0.13	5.59	0.00	0.11	-0.11	0.00	0.00	0.00	0.00
4- 6	3.46	0.00	0.00	-0.53	5.20	0.00	0.00	-0.75	0.00	0.00	0.00	0.00
4- 7	2.77	0.00	0.00	-0.94	4.04	0.00	0.00	-1.38	0.00	0.00	0.00	0.00
4- 8	1.57	0.00	0.00	-1.35	2.07	0.00	0.00	-2.02	0.00	0.00	0.00	0.00
4- 9	0.00	-1.72	0.00	-1.75	0.00	-2.19	0.00	-2.65	0.00	0.00	0.00	0.00
4-10	0.00	-4.22	0.00	-2.16	0.00	-6.04	0.00	-3.29	0.00	0.00	0.00	0.00

Right

Serviceability Check: Crack Control

Bar		Moment	Thrust	Fss	Spacing	Allow
Mark	Location	(k-ft)	(k)	(ksi)	(in)	(in)
A1	Top Corner Bar	-12.4	8.79	28.87	6.00	13.74
A2	Bot Corner Bar	-11.2	8.79	24.99	6.00	16.57
A100	Top Slab (int)	12.0	-0.45	36.44	3.00	10.19
A200	Bot Slab (int)	9.9	0.16	29.17	3.00	13.83
B2	Ext Wall (ext)	-11.6	8.79	26.26	6.00	15.55

Strength Limit State at Critical Sections: Flexure

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Design		Corr.				Load Ratings			
		Moment (in)	Moment (k-ft)	A. F. (k)	Mu (k-ft)	ds (in)	Ma (k-ft)	phi	AS (in ²)	Mcr (k-ft)	IR
BOT	18.00	-17.69	14.51	25.16	9.75	27.36	0.90	0.40	15.46	1.82	2.35
MID	42.00	0.00	1.75	27.77	9.81	25.56	0.90	0.44	15.46	NC	NC
MID-	42.00	-18.71	14.51	25.16	9.75	27.36	0.90	0.40	15.46	1.61	2.08
TOP	18.00	-20.29	14.51	25.16	9.75	27.36	0.90	0.40	15.46	1.45	1.88

Member 2: (Top slab), Thickness = 12.00 in

Loc	Dist.	Design		Corr.				Load Ratings			
		Moment (in)	Moment (k-ft)	A. F. (k)	Mu (k-ft)	ds (in)	Ma (k-ft)	phi	As (in ²)	Mcr (k-ft)	IR
LT	18.00	-9.95	3.15	25.16	9.75	23.67	0.90	0.40	15.46	2.56	3.32
MID	78.00	19.76	-0.77	27.77	9.81	24.75	0.90	0.44	15.46	1.32	1.71
RT	18.00	-9.95	3.15	25.16	9.75	23.67	0.90	0.40	15.46	2.56	3.32

Member 4: (Bottom slab), Thickness = 12.00 in

Loc	Dist. (in)	Design		Corr.		ds (in)	Ma (k-ft)	phi	As (in ²)	Mcr (k-ft)	Load Ratings	
		Moment (k-ft)	A. F. (k)	Mu (k-ft)	IR						OR	
LT	18.00	-6.56	4.12	25.16	9.75	23.98	0.90	0.40	15.46	5.64	7.32	
MID	78.00	15.38	-0.18	27.77	9.81	24.94	0.90	0.44	15.46	1.98	2.56	
RT	18.00	-6.57	4.12	25.16	9.75	23.98	0.90	0.40	15.46	5.63	7.30	

Notes: Mu - Resisting moment under pure flexure, Ma - Allowable moment under applied axial load

Strength Limit State at Critical Sections: Vertical Shear

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Design		Corr.	Corr.	phi*vn	Beta	Theta	Vc	Vs	Av	Spac	Load Ratings		
		Shear (in)	Moment (k)	A. F. (k)	Dv (in)								(in2)	(in)	IR
BOT	26.64	2.05	17.8	14.51	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00		11.48	14.88
MID	42.00	1.14	0.4	1.75	9.47	30.95	4.284	30.67	34.39a	0.00	0.00	0.00		99.99	99.99
MID-	42.00	1.14	0.4	14.51	9.44	35.97	4.996	28.82	39.97a	0.00	0.00	0.00		24.90	32.27
TOP	26.64	-1.98	20.0	14.51	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00		7.13	9.24

Member 2: (Top slab), Thickness = 12.00 in

Loc	Dist.	Design	Corr.	Corr.							Max.	Load Ratings		
		Shear	Moment	A. F.	Dv	phi*vn	Beta	Theta	Vc	Vs	Av	IR	OR	
	(in)	(k)	(k-ft)	(k)	(in)	(k)		(k)	(k)	(in2)	(in)			
LT	31.95	10.20	10.5	3.15	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	1.49	1.93
MID	78.00	4.09	19.8	-0.77	9.47	12.16	1.683	43.90	13.51a	0.00	0.00	0.00	2.97	3.85
RT	31.95	10.20	10.5	3.15	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	1.49	1.93

Member 4: (Bottom slab), Thickness = 12.00 in

Loc	Dist.	Design		Corr.								Max.	Load	Ratings
		Shear	Moment	A. F.	Dv	phi*vn	Beta	Theta	Vc	Vs	Av			
	(in)	(k)	(k-ft)	(k)	(in)	(k)		(k)	(in2)	(in)				

Eriksson Culvert v4.4.4

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Filename: Harris Ranch Dallas Harris South Sub.etcx

Sht: ____ of ____

By:MB Chk: ____

12/27/2019 9:31:33 AM

Culvert p. 15 of 40

'T	31.95	5.90	4.7	4.12	9.44	19.12	2.655	37.12	21.24a	0.00	0.00	0.00	4.80	6.22
ID	78.00	0.22	15.4	-0.18	9.47	13.69	1.895	42.12	15.21a	0.00	0.00	0.00	62.37	80.85
RT	31.95	5.91	4.7	4.12	9.44	19.12	2.655	37.12	21.24a	0.00	0.00	0.00	4.80	6.22

Vc Calculation By: a - Iterative Beta, b - Constant Beta, c - Box Culvert, d - Standard/Arema

Load Combination Results at Tenth Points: (k-ft, k)(Fill Depth = 0.50 ft)

Analysis Results: Fill Depth = 1.00 ft

Load Parameters:

Fe = 1.28 Surcharge Depth : 3.00 ft

Applied Horizontal Loads: (k/ft)

Load Description	Bottom of Wall	Top of Wall
Horizontal Earth Load	0.510	0.090
Live Load Surcharge	0.192	0.192
Internal Water Pressure	0.000	0.000

Unfactored Moments due to All Loads: (k-ft)

M-PT	Mdc	Mev	Mdw	Meh	Mls	Mwa
------	-----	-----	-----	-----	-----	-----

Member 1: (Exterior wall)

Bottom

1- 0	-4.06	-1.78	-0.78	-0.51	-0.30	0.00
1- 1	-3.79	-1.78	-0.78	0.29	0.13	0.00
1- 2	-3.53	-1.78	-0.78	0.85	0.45	0.00
1- 3	-3.26	-1.78	-0.78	1.20	0.69	0.00
1- 4	-3.00	-1.78	-0.78	1.37	0.83	0.00
1- 5	-2.73	-1.78	-0.78	1.37	0.88	0.00
1- 6	-2.46	-1.78	-0.78	1.22	0.83	0.00
1- 7	-2.20	-1.78	-0.78	0.94	0.69	0.00
1- 8	-1.93	-1.78	-0.78	0.56	0.45	0.00
1- 9	-1.66	-1.78	-0.78	0.10	0.13	0.00
1-10	-1.40	-1.78	-0.78	-0.43	-0.30	0.00

Top

Member 2: (Top slab)

Left

2- 0	-1.40	-1.78	-0.78	-0.45	-0.30	0.00
2- 1	-0.17	-0.57	-0.25	-0.45	-0.30	0.00
2- 2	0.72	0.38	0.17	-0.45	-0.30	0.00
2- 3	1.35	1.06	0.46	-0.45	-0.30	0.00
2- 4	1.73	1.46	0.64	-0.45	-0.30	0.00
2- 5	1.86	1.60	0.70	-0.45	-0.30	0.00
2- 6	1.73	1.46	0.64	-0.45	-0.30	0.00
2- 7	1.35	1.06	0.46	-0.45	-0.30	0.00
2- 8	0.72	0.38	0.17	-0.45	-0.30	0.00
2- 9	-0.17	-0.57	-0.25	-0.45	-0.30	0.00
2-10	-1.40	-1.78	-0.78	-0.45	-0.30	0.00

Right

Member 4: (Bottom Slab)

Left

4- 0	-4.06	-1.78	-0.78	-0.51	-0.30	0.00
4- 1	-1.52	-0.57	-0.25	-0.51	-0.30	0.00
4- 2	0.46	0.38	0.17	-0.51	-0.30	0.00
4- 3	1.88	1.06	0.46	-0.51	-0.30	0.00
4- 4	2.72	1.46	0.64	-0.51	-0.30	0.00
4- 5	3.01	1.60	0.70	-0.51	-0.30	0.00
4- 6	2.72	1.46	0.64	-0.51	-0.30	0.00
4- 7	1.88	1.06	0.46	-0.51	-0.30	0.00
4- 8	0.46	0.38	0.17	-0.51	-0.30	0.00
4- 9	-1.52	-0.57	-0.25	-0.51	-0.30	0.00
4-10	-4.06	-1.78	-0.78	-0.51	-0.30	0.00

Right

Unfactored Shears due to All Loads: (k)

M-PT	Vdc	Vev	Vdw	Veh	Vls	Vwa
------	-----	-----	-----	-----	-----	-----

Member 1: (Exterior wall)

Bottom						
1- 0	0.38	0.00	0.00	1.30	0.67	0.00
1- 1	0.38	0.00	0.00	0.96	0.54	0.00
1- 2	0.38	0.00	0.00	0.65	0.40	0.00
1- 3	0.38	0.00	0.00	0.36	0.27	0.00
1- 4	0.38	0.00	0.00	0.11	0.13	0.00
1- 5	0.38	0.00	0.00	-0.11	0.00	0.00
1- 6	0.38	0.00	0.00	-0.31	-0.13	0.00
1- 7	0.38	0.00	0.00	-0.48	-0.27	0.00
1- 8	0.38	0.00	0.00	-0.61	-0.40	0.00
1- 9	0.38	0.00	0.00	-0.72	-0.54	0.00
1-10	0.38	0.00	0.00	-0.80	-0.67	0.00

Top

Member 2: (Top slab)

Left

2- 0	1.13	1.04	0.46	0.00	0.00	0.00
2- 1	0.78	0.83	0.36	0.00	0.00	0.00
2- 2	0.59	0.62	0.27	0.00	0.00	0.00
2- 3	0.39	0.42	0.18	0.00	0.00	0.00
2- 4	0.20	0.21	0.09	0.00	0.00	0.00
2- 5	0.00	0.00	0.00	0.00	0.00	0.00
2- 6	-0.20	-0.21	-0.09	0.00	0.00	0.00
2- 7	-0.39	-0.42	-0.18	0.00	0.00	0.00
2- 8	-0.59	-0.62	-0.27	0.00	0.00	0.00
2- 9	-0.78	-0.83	-0.36	0.00	0.00	0.00
2-10	-1.13	-1.04	-0.46	0.00	0.00	0.00

Right

Member 4: (Bottom Slab)

Left

4- 0	2.18	1.04	0.46	0.00	0.00	0.00
4- 1	1.74	0.83	0.36	0.00	0.00	0.00
4- 2	1.31	0.62	0.27	0.00	0.00	0.00
4- 3	0.87	0.42	0.18	0.00	0.00	0.00
4- 4	0.44	0.21	0.09	0.00	0.00	0.00
4- 5	0.00	0.00	0.00	0.00	0.00	0.00
4- 6	-0.44	-0.21	-0.09	0.00	0.00	0.00
4- 7	-0.87	-0.42	-0.18	0.00	0.00	0.00
4- 8	-1.31	-0.62	-0.27	0.00	0.00	0.00
4- 9	-1.74	-0.83	-0.36	0.00	0.00	0.00
4-10	-2.18	-1.04	-0.46	0.00	0.00	0.00

Right

nfactored Thrusts due to All Loads: (k) (Fill Depth = 1.00 ft)

Member	Pdc	Pev	Pdw	Peh	Pls	Pwa
1	1.13	1.04	0.46	0.00	0.00	0.00
2	-0.38	0.00	0.00	0.80	0.67	0.00
4	0.38	0.00	0.00	1.30	0.67	0.00

----- Analysis Truck, HL-93 -----

Vehicle	Axle	Weight (k/ft)	Length (ft)	Dist. From Previous (ft)
Truck	1	0.661	1.98	
	2	2.643	1.98	14.00
	3	2.643	1.98	14.00
Tandem	1	2.065	1.98	
	2	2.065	1.98	4.00

Live Load Parameters:

Traffic Direction is Parallel to Main Reinforcement

Distribution Width : 4.72 ft

Note: Distribution width is calculated for one wheel only.

Impact Factor : 1.29

Distribution width : 0.00 ft

Lane Load: 0.000 k/ft

Truck Positions That Cause Maximum Results:

Maximum +Moment in Top Slab

Vehicle	Axle	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	0.661	1.98	20.50
	2	2.643	1.98	6.50
	3	2.643	1.98	-7.50

Maximum +Moment : 8.41 k-ft

Corresponding Moment at End : -7.33 k-ft

Coincident Bottom Slab Load : 0.31 k/ft

Maximum +Shear in Top Slab

Truck	1	0.661	1.98	14.99
	2	2.643	1.98	0.99
	3	2.643	1.98	-13.01

Maximum +Shear : 4.90 k

Corresponding Shear at Mid : -0.34 k

Coincident Bottom Slab Load : 0.31 k/ft

Maximum +Moment in Top Slab

Tandem	1	2.065	1.98	9.85
	2	2.065	1.98	5.85

Maximum +Moment : 8.64 k-ft

Corresponding Moment at End : -9.23 k-ft

Coincident Bottom Slab Load : 0.49 k/ft

Maximum +Shear in Top Slab

Tandem	1	2.065	1.98	4.99
	2	2.065	1.98	0.99

Maximum +Shear : 6.41 k

Corresponding Shear at Mid : -1.78 k

Coincident Bottom Slab Load : 0.49 k/ft

Maximum -Moment in Top Slab

Vehicle	Axle	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	0.661	1.98	19.54
	2	2.643	1.98	5.54
	3	2.643	1.98	-8.46

Maximum -Moment : -7.46 k-ft

Corresponding Moment at Mid : 7.38 k-ft

Coincident Bottom Slab Load : 0.31 k/ft

Maximum -Shear in Top Slab

Truck	1	0.661	1.98	26.01
	2	2.643	1.98	12.01
	3	2.643	1.98	-1.99

Maximum -Shear : -4.90 k

Corresponding Shear at Mid : 0.34 k

Coincident Bottom Slab Load : 0.31 k/ft

Maximum -Moment in Top Slab

Tandem	1	2.065	1.98	7.90
	2	2.065	1.98	3.90

Maximum -Moment : -10.33 k-ft

Corresponding Moment at Mid : 8.31 k-ft

Coincident Bottom Slab Load : 0.49 k/ft

Maximum -Shear in Top Slab

Tandem	1	2.065	1.98	12.01
	2	2.065	1.98	8.01

Maximum -Shear : -6.41 k

Corresponding Shear at Mid : 1.78 k

Coincident Bottom Slab Load : 0.49 k/ft

nfactored Moments and Shears due to Truck Loads: (k-ft, k)

M-PT	Truck				Tandem				Lane			
	M11+	M11-	V11+	V11-	M11+	M11-	V11+	V11-	M11+	M11-	V11+	V11-

Member 1: (Exterior wall)

Bottom

1- 0	0.00	-4.19	0.33	-0.63	0.00	-5.98	0.26	-0.78	0.00	0.00	0.00	0.00
1- 1	0.00	-4.24	0.33	-0.63	0.00	-6.10	0.26	-0.78	0.00	0.00	0.00	0.00
1- 2	0.00	-4.44	0.33	-0.63	0.00	-6.36	0.26	-0.78	0.00	0.00	0.00	0.00
1- 3	0.00	-4.72	0.33	-0.63	0.00	-6.77	0.26	-0.78	0.00	0.00	0.00	0.00
1- 4	0.00	-5.05	0.33	-0.63	0.00	-7.23	0.26	-0.78	0.00	0.00	0.00	0.00
1- 5	0.00	-5.42	0.33	-0.63	0.00	-7.72	0.26	-0.78	0.00	0.00	0.00	0.00
1- 6	0.00	-5.81	0.33	-0.63	0.00	-8.22	0.26	-0.78	0.00	0.00	0.00	0.00
1- 7	0.00	-6.21	0.33	-0.63	0.00	-8.74	0.26	-0.78	0.00	0.00	0.00	0.00
1- 8	0.00	-6.63	0.33	-0.63	0.00	-9.27	0.26	-0.78	0.00	0.00	0.00	0.00
1- 9	0.00	-7.04	0.33	-0.63	0.00	-9.80	0.26	-0.78	0.00	0.00	0.00	0.00
1-10	0.03	-7.46	0.33	-0.63	0.00	-10.33	0.26	-0.78	0.00	0.00	0.00	0.00

Top

Member 2: (Top Slab)

Left												
2- 0	0.03	-7.46	4.90	0.00	0.00	-10.33	6.41	0.00	0.00	0.00	0.00	0.00
2- 1	2.35	-4.00	4.43	-0.15	1.84	-5.15	5.58	-0.11	0.00	0.00	0.00	0.00
2- 2	4.78	-1.49	3.91	-0.56	3.73	-1.37	4.72	-0.44	0.00	0.00	0.00	0.00
2- 3	6.72	0.00	3.35	-1.05	6.37	0.00	3.83	-0.82	0.00	0.00	0.00	0.00
2- 4	7.98	0.00	2.76	-1.59	8.14	0.00	2.95	-1.34	0.00	0.00	0.00	0.00
2- 5	8.41	0.00	2.17	-2.17	8.64	0.00	2.10	-2.10	0.00	0.00	0.00	0.00
2- 6	7.98	0.00	1.59	-2.76	8.14	0.00	1.34	-2.95	0.00	0.00	0.00	0.00
2- 7	6.72	0.00	1.05	-3.35	6.37	0.00	0.82	-3.83	0.00	0.00	0.00	0.00
2- 8	4.78	-1.49	0.56	-3.91	3.73	-1.35	0.43	-4.72	0.00	0.00	0.00	0.00
2- 9	2.35	-4.00	0.14	-4.43	1.84	-5.15	0.11	-5.58	0.00	0.00	0.00	0.00
2-10	0.03	-7.46	0.00	-4.90	0.00	-10.33	0.00	-6.41	0.00	0.00	0.00	0.00

Right

Member 4: (Bottom Slab)

Left												
4- 0	0.00	-4.19	2.16	0.00	0.00	-5.98	3.28	0.00	0.00	0.00	0.00	0.00
4- 1	0.00	-1.71	1.75	0.00	0.00	-2.12	2.65	0.00	0.00	0.00	0.00	0.00
4- 2	1.54	0.00	1.34	0.00	2.03	0.00	2.01	0.00	0.00	0.00	0.00	0.00
4- 3	2.74	0.00	0.94	0.00	4.00	0.00	1.38	0.00	0.00	0.00	0.00	0.00
4- 4	3.44	0.00	0.53	0.00	5.17	0.00	0.74	0.00	0.00	0.00	0.00	0.00
4- 5	3.67	0.00	0.12	-0.12	5.55	0.00	0.11	-0.11	0.00	0.00	0.00	0.00
4- 6	3.44	0.00	0.00	-0.53	5.17	0.00	0.00	-0.74	0.00	0.00	0.00	0.00
4- 7	2.74	0.00	0.00	-0.94	4.00	0.00	0.00	-1.38	0.00	0.00	0.00	0.00
4- 8	1.54	0.00	0.00	-1.34	2.03	0.00	0.00	-2.01	0.00	0.00	0.00	0.00
4- 9	0.00	-1.71	0.00	-1.75	0.00	-2.12	0.00	-2.65	0.00	0.00	0.00	0.00
4-10	0.00	-4.20	0.00	-2.16	0.00	-5.98	0.00	-3.29	0.00	0.00	0.00	0.00

Right

Serviceability Check: Crack Control

Bar		Moment	Thrust	Fss	Spacing	Allow
Mark	Location	(k-ft)	(k)	(ksi)	(in)	(in)
A1	Top Corner Bar	-13.1	9.03	30.77	6.00	12.61
A2	Bot Corner Bar	-12.0	9.03	27.21	6.00	14.85
A100	Top Slab (int)	12.6	-0.31	37.82	3.00	9.66
A200	Bot Slab (int)	10.6	0.25	31.27	3.00	12.60
B2	Ext Wall (ext)	-12.3	9.03	28.26	6.00	14.13

Strength Limit State at Critical Sections: Flexure

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Design (in)	Moment (k-ft)	Corr.						Load Ratings		
				A. F. (k)	Mu (k-ft)	ds (in)	Ma (k-ft)	phi	As (in ²)	Mcr (k-ft)	IR	OR
BOT	18.00	-18.74	14.73	25.16	9.75	27.42	0.90	0.40	15.46	1.74	2.26	
MID	42.00	0.00	2.20	27.77	9.81	25.70	0.90	0.44	15.46	NC	NC	
MID-	42.00	-19.64	14.73	25.16	9.75	27.42	0.90	0.40	15.46	1.55	2.01	
TOP	18.00	-21.16	14.73	25.16	9.75	27.42	0.90	0.40	15.46	1.41	1.82	

Member 2: (Top Slab), Thickness = 12.00 in

Loc	Dist. (in)	Moment (k-ft)	Design		Corr.		phi	As (in ²)	Mcr (k-ft)	Load Ratings	
			A. F. (k)	Mu (k-ft)	ds (in)	Ma (k-ft)				IR	OR
LT	18.00	-10.07	3.19	25.16	9.75	23.68	0.90	0.40	15.46	2.59	3.36
MID	78.00	20.38	-0.54	27.77	9.81	24.82	0.90	0.44	15.46	1.29	1.68
RT	18.00	-10.07	3.19	25.16	9.75	23.68	0.90	0.40	15.46	2.59	3.36

Member 4: (Bottom Slab), Thickness = 12.00 in

Loc	Dist. (in)	Moment (k-ft)	Design		Corr.		phi	As (in ²)	Mcr (k-ft)	Load Ratings	
			A. F.	Mu	ds	Ma				IR	OR
LT	18.00	-6.83	4.08	25.16	9.75	23.97	0.90	0.40	15.46	5.70	7.39
MID	78.00	16.38	-0.05	27.77	9.81	24.98	0.90	0.44	15.46	1.88	2.44
RT	18.00	-6.83	4.08	25.16	9.75	23.97	0.90	0.40	15.46	5.70	7.39

Notes: Mu - Resisting moment under pure flexure, Ma - Allowable moment under applied axial load

Strength Limit State at Critical Sections: Vertical Shear

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Design		Corr.	Corr.	phi*vn	Beta	Theta	Vc	Vs	Av	Max.	Load Ratings	
		Shear	Moment	A. F.	DV								(in)	IR
BOT	26.64	1.94	18.8	14.73	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	13.39	17.36
MID	42.00	0.98	1.0	2.20	9.47	31.68	4.385	30.40	35.20a	0.00	0.00	0.00	99.99	99.99
MID-	42.00	0.98	1.0	14.73	9.44	35.98	4.997	28.82	39.98a	0.00	0.00	0.00	26.10	33.83
TOP	26.64	-1.95	20.9	14.73	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	7.41	9.61

Member 2: (Top Slab), Thickness = 12.00 in

Loc	Dist.	Design		Corr.	Corr.	phi*vn	Beta	Theta	Vc	Vs	Av	Spac	Load Ratings	
		Shear	Moment	A. F.	Dv								(in)	(k)
LT	31.95	10.14	10.0	3.19	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	1.52	1.97
MID	78.00	3.80	20.4	-0.54	9.47	12.16	1.683	43.90	13.51a	0.00	0.00	0.00	3.20	4.15
RT	31.95	10.14	10.0	3.19	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	1.52	1.97

Member 4: (Bottom slab), Thickness = 12.00 in

Eriksson Culvert v4.4.4

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Filename: Harris Ranch Dallas Harris South Sub.etcx

Sht: ____ of ____

By:MB Chk: ____

12/27/2019 9:31:34 AM

Culvert p. 21 of 40

'T	31.95	6.32	4.9	4.08	9.44	18.59	2.581	37.51	20.65a	0.00	0.00	0.00	4.54	5.88
ID	78.00	0.21	16.4	-0.05	9.47	13.37	1.851	42.48	14.86a	0.00	0.00	0.00	62.71	81.29
RT	31.95	6.32	4.9	4.08	9.44	18.59	2.581	37.51	20.65a	0.00	0.00	0.00	4.53	5.88

Vc Calculation By: a - Iterative Beta, b - Constant Beta, c - Box Culvert, d - Standard/Arema

Load Combination Results at Tenth Points: (k-ft, k)(Fill Depth = 1.00 ft)

Analysis Results: Fill Depth = 1.50 ft

Load Parameters:

Fe = 1.28 Surcharge Depth : 3.00 ft

Applied Horizontal Loads: (k/ft)

Load Description	Bottom of Wall	Top of Wall
Horizontal Earth Load	0.540	0.120
Live Load Surcharge	0.186	0.186
Internal Water Pressure	0.000	0.000

Unfactored Moments due to All Loads: (k-ft)

M-PT	Mdc	Mev	Mdw	Meh	Mls	Mwa
------	-----	-----	-----	-----	-----	-----

Member 1: (Exterior wall)

Bottom

1- 0	-4.06	-2.68	-0.78	-0.55	-0.29	0.00
1- 1	-3.79	-2.68	-0.78	0.31	0.12	0.00
1- 2	-3.53	-2.68	-0.78	0.92	0.44	0.00
1- 3	-3.26	-2.68	-0.78	1.31	0.67	0.00
1- 4	-3.00	-2.68	-0.78	1.50	0.80	0.00
1- 5	-2.73	-2.68	-0.78	1.51	0.85	0.00
1- 6	-2.46	-2.68	-0.78	1.35	0.80	0.00
1- 7	-2.20	-2.68	-0.78	1.05	0.67	0.00
1- 8	-1.93	-2.68	-0.78	0.64	0.44	0.00
1- 9	-1.66	-2.68	-0.78	0.12	0.12	0.00
1-10	-1.40	-2.68	-0.78	-0.48	-0.29	0.00

Top

Member 2: (Top slab)

Left

2- 0	-1.40	-2.68	-0.78	-0.50	-0.29	0.00
2- 1	-0.17	-0.85	-0.25	-0.50	-0.29	0.00
2- 2	0.72	0.57	0.17	-0.50	-0.29	0.00
2- 3	1.35	1.58	0.46	-0.50	-0.29	0.00
2- 4	1.73	2.19	0.64	-0.50	-0.29	0.00
2- 5	1.86	2.39	0.70	-0.50	-0.29	0.00
2- 6	1.73	2.19	0.64	-0.50	-0.29	0.00
2- 7	1.35	1.58	0.46	-0.50	-0.29	0.00
2- 8	0.72	0.57	0.17	-0.50	-0.29	0.00
2- 9	-0.17	-0.85	-0.25	-0.50	-0.29	0.00
2-10	-1.40	-2.68	-0.78	-0.50	-0.29	0.00

Right

Member 4: (Bottom slab)

Left

4- 0	-4.06	-2.68	-0.78	-0.55	-0.29	0.00
4- 1	-1.52	-0.85	-0.25	-0.55	-0.29	0.00
4- 2	0.46	0.57	0.17	-0.55	-0.29	0.00
4- 3	1.88	1.58	0.46	-0.55	-0.29	0.00
4- 4	2.72	2.19	0.64	-0.55	-0.29	0.00
4- 5	3.01	2.39	0.70	-0.55	-0.29	0.00
4- 6	2.72	2.19	0.64	-0.55	-0.29	0.00
4- 7	1.88	1.58	0.46	-0.55	-0.29	0.00
4- 8	0.46	0.57	0.17	-0.55	-0.29	0.00
4- 9	-1.52	-0.85	-0.25	-0.55	-0.29	0.00
4-10	-4.06	-2.68	-0.78	-0.55	-0.29	0.00

Right

Unfactored Shears due to All Loads: (k)

M-PT	Vdc	Vev	Vdw	Veh	Vls	Vwa
------	-----	-----	-----	-----	-----	-----

Member 1: (Exterior wall)

Bottom

1- 0	0.38	0.00	0.00	1.41	0.65	0.00
1- 1	0.38	0.00	0.00	1.04	0.52	0.00
1- 2	0.38	0.00	0.00	0.71	0.39	0.00
1- 3	0.38	0.00	0.00	0.41	0.26	0.00
1- 4	0.38	0.00	0.00	0.13	0.13	0.00
1- 5	0.38	0.00	0.00	-0.11	0.00	0.00
1- 6	0.38	0.00	0.00	-0.33	-0.13	0.00
1- 7	0.38	0.00	0.00	-0.52	-0.26	0.00
1- 8	0.38	0.00	0.00	-0.68	-0.39	0.00
1- 9	0.38	0.00	0.00	-0.80	-0.52	0.00
1-10	0.38	0.00	0.00	-0.90	-0.65	0.00

Top

Member 2: (Top slab)

Left

2- 0	1.13	1.56	0.46	0.00	0.00	0.00
2- 1	0.78	1.25	0.36	0.00	0.00	0.00
2- 2	0.59	0.94	0.27	0.00	0.00	0.00
2- 3	0.39	0.62	0.18	0.00	0.00	0.00
2- 4	0.20	0.31	0.09	0.00	0.00	0.00
2- 5	0.00	0.00	0.00	0.00	0.00	0.00
2- 6	-0.20	-0.31	-0.09	0.00	0.00	0.00
2- 7	-0.39	-0.62	-0.18	0.00	0.00	0.00
2- 8	-0.59	-0.94	-0.27	0.00	0.00	0.00
2- 9	-0.78	-1.25	-0.36	0.00	0.00	0.00
2-10	-1.13	-1.56	-0.46	0.00	0.00	0.00

Right

Member 4: (Bottom slab)

Left

4- 0	2.18	1.56	0.46	0.00	0.00	0.00
4- 1	1.74	1.25	0.36	0.00	0.00	0.00
4- 2	1.31	0.94	0.27	0.00	0.00	0.00
4- 3	0.87	0.62	0.18	0.00	0.00	0.00
4- 4	0.44	0.31	0.09	0.00	0.00	0.00
4- 5	0.00	0.00	0.00	0.00	0.00	0.00
4- 6	-0.44	-0.31	-0.09	0.00	0.00	0.00
4- 7	-0.87	-0.62	-0.18	0.00	0.00	0.00
4- 8	-1.31	-0.94	-0.27	0.00	0.00	0.00
4- 9	-1.74	-1.25	-0.36	0.00	0.00	0.00
4-10	-2.18	-1.56	-0.46	0.00	0.00	0.00

Right

nfactored Thrusts due to All Loads: (k) (Fill Depth = 1.50 ft)

Member	Pdc	Pev	Pdw	Peh	Pls	Pwa
1	1.13	1.56	0.46	0.00	0.00	0.00
2	-0.38	0.00	0.00	0.90	0.65	0.00
4	0.38	0.00	0.00	1.41	0.65	0.00

----- Analysis Truck, HL-93 -----

Vehicle	Axle	Weight (k/ft)	Length (ft)	Dist. From Previous (ft)
Truck	1	0.504	2.56	
	2	2.016	2.56	14.00
	3	2.016	2.56	14.00
Tandem	1	1.575	2.56	
	2	1.575	2.56	4.00

Live Load Parameters:

Traffic Direction is Parallel to Main Reinforcement

Distribution Width : 4.72 ft

Note: Distribution width is calculated for one wheel only.

Impact Factor : 1.27

Distribution Width : 0.00 ft

Lane Load: 0.000 k/ft

Truck Positions That Cause Maximum Results:

Maximum +Moment in Top Slab

Vehicle	Axle	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	0.504	2.56	20.50
	2	2.016	2.56	6.50
	3	2.016	2.56	-7.50

Maximum +Moment : 7.96 k-ft

Corresponding Moment at End : -7.16 k-ft

Coincident Bottom Slab Load : 0.31 k/ft

Maximum +Shear in Top Slab

Truck	1	0.504	2.56	15.28
	2	2.016	2.56	1.28
	3	2.016	2.56	-12.72

Maximum +Shear : 4.72 k

Corresponding Shear at Mid : -0.44 k

Coincident Bottom Slab Load : 0.31 k/ft

Maximum +Moment in Top Slab

Tandem	1	1.575	2.56	7.27
	2	1.575	2.56	3.27

Maximum +Moment : 8.40 k-ft

Corresponding Moment at End : -9.93 k-ft

Coincident Bottom Slab Load : 0.49 k/ft

Maximum +Shear in Top Slab

Tandem	1	1.575	2.56	5.28
	2	1.575	2.56	1.28

Maximum +Shear : 6.13 k

Corresponding Shear at Mid : -1.84 k

Coincident Bottom Slab Load : 0.49 k/ft

Maximum -Moment in Top Slab

Vehicle	Axle	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	0.504	2.56	19.83
	2	2.016	2.56	5.83
	3	2.016	2.56	-8.17

Maximum -Moment : -7.29 k-ft

Corresponding Moment at Mid : 7.59 k-ft

Coincident Bottom Slab Load : 0.31 k/ft

Maximum -Shear in Top Slab

Truck	1	0.504	2.56	25.72
	2	2.016	2.56	11.72
	3	2.016	2.56	-2.28

Maximum -Shear : -4.72 k

Corresponding Shear at Mid : 0.44 k

Coincident Bottom Slab Load : 0.31 k/ft

Maximum -Moment in Top Slab

Tandem	1	1.575	2.56	7.92
	2	1.575	2.56	3.92

Maximum -Moment : -10.08 k-ft

Corresponding Moment at Mid : 8.25 k-ft

Coincident Bottom Slab Load : 0.49 k/ft

Maximum -Shear in Top Slab

Tandem	1	1.575	2.56	11.72
	2	1.575	2.56	7.72

Maximum -Shear : -6.13 k

Corresponding Shear at Mid : 1.84 k

Coincident Bottom Slab Load : 0.49 k/ft

nfactored Moments and Shears due to Truck Loads: (k-ft, k)

M-PT	Truck				Tandem				Lane			
	M _{LL+}	M _{LL-}	V _{LL+}	V _{LL-}	M _{LL+}	M _{LL-}	V _{LL+}	V _{LL-}	M _{LL+}	M _{LL-}	V _{LL+}	V _{LL-}

Member 1: (Exterior wall)

Bottom

1- 0	0.00	-4.17	0.32	-0.60	0.00	-5.91	0.20	-0.74	0.00	0.00	0.00	0.00
1- 1	0.00	-4.20	0.32	-0.60	0.00	-6.07	0.20	-0.74	0.00	0.00	0.00	0.00
1- 2	0.00	-4.39	0.32	-0.60	0.00	-6.30	0.20	-0.74	0.00	0.00	0.00	0.00
1- 3	0.00	-4.66	0.32	-0.60	0.00	-6.68	0.20	-0.74	0.00	0.00	0.00	0.00
1- 4	0.00	-4.98	0.32	-0.60	0.00	-7.13	0.20	-0.74	0.00	0.00	0.00	0.00
1- 5	0.00	-5.33	0.32	-0.60	0.00	-7.60	0.20	-0.74	0.00	0.00	0.00	0.00
1- 6	0.00	-5.71	0.32	-0.60	0.00	-8.07	0.20	-0.74	0.00	0.00	0.00	0.00
1- 7	0.00	-6.09	0.32	-0.60	0.00	-8.57	0.20	-0.74	0.00	0.00	0.00	0.00
1- 8	0.00	-6.48	0.32	-0.60	0.00	-9.07	0.20	-0.74	0.00	0.00	0.00	0.00
1- 9	0.00	-6.88	0.32	-0.60	0.00	-9.57	0.20	-0.74	0.00	0.00	0.00	0.00
1-10	0.00	-7.29	0.32	-0.60	0.00	-10.08	0.20	-0.74	0.00	0.00	0.00	0.00

Top

Member 2: (Top Slab)

2- 0	0.00	-7.29	4.72	0.00	0.00	-10.08	6.13	0.00	0.00	0.00	0.00	0.00
2- 1	1.99	-3.89	4.24	-0.11	1.56	-4.98	5.30	-0.09	0.00	0.00	0.00	0.00
2- 2	4.49	-1.42	3.73	-0.45	3.51	-1.29	4.45	-0.35	0.00	0.00	0.00	0.00
2- 3	6.30	0.00	3.17	-0.93	6.13	0.00	3.57	-0.73	0.00	0.00	0.00	0.00
2- 4	7.53	0.00	2.59	-1.45	7.89	0.00	2.72	-1.21	0.00	0.00	0.00	0.00
2- 5	7.96	0.00	2.01	-2.01	8.40	0.00	1.90	-1.90	0.00	0.00	0.00	0.00
2- 6	7.53	0.00	1.45	-2.59	7.89	0.00	1.21	-2.72	0.00	0.00	0.00	0.00
2- 7	6.30	0.00	0.93	-3.17	6.13	0.00	0.72	-3.57	0.00	0.00	0.00	0.00
2- 8	4.39	-1.42	0.45	-3.73	3.43	-1.28	0.35	-4.45	0.00	0.00	0.00	0.00
2- 9	1.99	-3.89	0.11	-4.25	1.56	-4.98	0.09	-5.31	0.00	0.00	0.00	0.00
2-10	0.01	-7.29	0.00	-4.72	0.00	-10.08	0.00	-6.13	0.00	0.00	0.00	0.00

Right

Member 4: (Bottom Slab)

4- 0	0.00	-4.17	2.15	0.00	0.00	-5.91	3.28	0.00	0.00	0.00	0.00	0.00
4- 1	0.00	-1.70	1.74	0.00	0.00	-2.06	2.64	0.00	0.00	0.00	0.00	0.00
4- 2	1.50	0.00	1.34	0.00	1.98	0.00	2.01	0.00	0.00	0.00	0.00	0.00
4- 3	2.71	0.00	0.93	0.00	3.96	0.00	1.37	0.00	0.00	0.00	0.00	0.00
4- 4	3.41	0.00	0.52	0.00	5.13	0.00	0.74	0.00	0.00	0.00	0.00	0.00
4- 5	3.64	0.00	0.12	-0.12	5.52	0.00	0.10	-0.10	0.00	0.00	0.00	0.00
4- 6	3.41	0.00	0.00	-0.52	5.13	0.00	0.00	-0.74	0.00	0.00	0.00	0.00
4- 7	2.71	0.00	0.00	-0.93	3.96	0.00	0.00	-1.37	0.00	0.00	0.00	0.00
4- 8	1.50	0.00	0.00	-1.34	1.98	0.00	0.00	-2.01	0.00	0.00	0.00	0.00
4- 9	0.00	-1.70	0.00	-1.74	0.00	-2.06	0.00	-2.64	0.00	0.00	0.00	0.00
4-10	0.00	-4.18	0.00	-2.15	0.00	-5.91	0.00	-3.28	0.00	0.00	0.00	0.00

Right

Serviceability Check: Crack Control

Bar		Moment	Thrust	Fss	Spacing	Allow
Mark	Location	(k-ft)	(k)	(ksi)	(in)	(in)
A1	Top Corner Bar	-13.8	9.27	32.63	6.00	11.64
A2	Bot Corner Bar	-12.8	9.27	29.35	6.00	13.44
A100	Top Slab (int)	13.1	-0.25	39.35	3.00	9.12
A200	Bot Slab (int)	11.3	0.35	33.36	3.00	11.54
B2	Ext Wall (ext)	-13.0	9.27	30.25	6.00	12.91

Strength Limit State at Critical Sections: Flexure

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Moment (in)	Design	Corr.	Load Ratings						
			Moment (k-ft)	A. F. (k)	Mu (k-ft)	ds (in)	Ma (k-ft)	phi	As (in ²)	Mcr (k-ft)	IR
BOT	18.00	-19.74	14.94	25.16	9.75	27.50	0.90	0.40	15.46	1.67	2.16
MID	42.00	0.00	2.65	27.77	9.81	25.84	0.90	0.44	15.46	NC	NC
MID-	42.00	-20.56	14.94	25.16	9.75	27.50	0.90	0.40	15.46	1.50	1.94
TOP	18.00	-22.01	14.94	25.16	9.75	27.50	0.90	0.40	15.46	1.36	1.77

Member 2: (Top slab), Thickness = 12.00 in

Loc	Dist.	Moment (in)	Design		Corr.		phi	As (in ²)	Mcr (k-ft)	Load Ratings	
			Moment (k-ft)	A. F. (k)	Mu (k-ft)	ds (in)				IR	OR
LT	18.00	-10.14	3.24	25.16	9.75	23.70	0.90	0.40	15.46	2.64	3.42
MID	78.00	21.02	-0.46	27.77	9.81	24.85	0.90	0.44	15.46	1.26	1.63
RT	18.00	-10.14	3.24	25.16	9.75	23.70	0.90	0.40	15.46	2.64	3.42

Member 4: (Bottom Slab), Thickness = 12.00 in

Loc	Dist.	Moment (in)	Design		Corr.		As (in ²)	Mcr (k-ft)	Load Ratings		
			Moment (k-ft)	A. F. (k)	Mu (k-ft)	ds (in)			phi	IR	OR
LT	18.00	-7.08	4.17	25.16	9.75	24.00	0.90	0.40	15.46	5.79	7.51
MID	78.00	17.38	0.09	27.77	9.81	25.02	0.90	0.44	15.46	1.79	2.32
RT	18.00	-7.08	4.17	25.16	9.75	24.00	0.90	0.40	15.46	5.79	7.51

Notes: Mu - Resisting moment under pure flexure, Ma - Allowable moment under applied axial load

Strength Limit State at Critical Sections: Vertical Shear

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Design		Corr.	Corr.	phi*vn	Beta	Theta	Vc	Vs	Av	Spac	Load Ratings	
		Shear	Moment	A. F.	DV								(in)	(k)
BOT	26.64	1.96	19.8	14.94	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	13.73	17.80
MID	42.00	0.96	1.6	2.65	9.47	29.72	4.113	31.12	33.02a	0.00	0.00	0.00	99.99	99.99
MID-	42.00	0.96	1.6	14.94	9.44	35.91	4.987	28.84	39.90a	0.00	0.00	0.00	27.44	35.57
TOP	26.64	-1.92	21.8	14.94	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	7.74	10.03

Member 2: (Top slab), Thickness = 12.00 in

Loc	Dist.	Design		Corr.								Max.		Load Ratings	
		Shear	Moment	A. F.	DV	phi*vn	Beta	Theta	Vc	Vs	Av	Spac	IR	OR	
	(in)	(k)	(k-ft)	(k)	(in)	(k)		(k)	(k)	(in2)	(in)				
LT	31.95	10.09	9.7	3.24	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	1.56	2.02	
MID	78.00	3.52	21.0	-0.46	9.47	12.16	1.683	43.90	13.51a	0.00	0.00	0.00	3.46	4.48	
RT	31.95	10.09	9.6	3.24	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	1.56	2.02	

Member 4: (Bottom Slab), Thickness = 12.00 in

Loc	Dist.	Design		Corr.		Corr.		Beta	Theta	Vc	Vs	Av	Max.	Load	Ratings
		Shear	Moment	A.	F.	Dv	phi*vn								(in)

Eriksson Culvert v4.4.4

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Filename: Harris Ranch Dallas Harris South Sub.etcx

Sht:____of____

By:MB Chk:____

12/27/2019 9:31:34 AM

Culvert p. 27 of 40

'T	31.95	6.73	5.1	4.17	9.44	18.12	2.516	37.87	20.13a	0.00	0.00	0.00	4.29	5.56
.ID	78.00	0.20	17.4	0.09	9.47	14.45	2.000	45.00	16.06b	0.00	0.00	0.00	71.12	92.19
RT	31.95	6.73	5.1	4.17	9.44	18.12	2.516	37.87	20.13a	0.00	0.00	0.00	4.29	5.56

Vc Calculation By: a - Iterative Beta, b - Constant Beta, c - Box Culvert, d - Standard/Arema

Analysis Results: Fill Depth = 1.99 ft

Load Parameters:

Fe = 1.28 Surcharge Depth : 3.00 ft

Applied Horizontal Loads: (k/ft)

Load Description	Bottom of wall	Top of wall
Horizontal Earth Load	0.569	0.149
Live Load Surcharge	0.180	0.180
Internal Water Pressure	0.000	0.000

Unfactored Moments due to All Loads: (k-ft)

M-PT	Mdc	Mev	Mdw	Meh	Mls	Mwa
------	-----	-----	-----	-----	-----	-----

Member 1: (Exterior wall)

Bottom

1- 0	-4.06	-3.55	-0.78	-0.60	-0.28	0.00
1- 1	-3.79	-3.55	-0.78	0.32	0.12	0.00
1- 2	-3.53	-3.55	-0.78	0.99	0.43	0.00
1- 3	-3.26	-3.55	-0.78	1.42	0.65	0.00
1- 4	-3.00	-3.55	-0.78	1.63	0.78	0.00
1- 5	-2.73	-3.55	-0.78	1.64	0.82	0.00
1- 6	-2.46	-3.55	-0.78	1.48	0.78	0.00
1- 7	-2.20	-3.55	-0.78	1.16	0.65	0.00
1- 8	-1.93	-3.55	-0.78	0.70	0.43	0.00
1- 9	-1.66	-3.55	-0.78	0.14	0.12	0.00
1-10	-1.40	-3.55	-0.78	-0.52	-0.28	0.00

Top

Member 2: (Top Slab)

Left

2- 0	-1.40	-3.55	-0.78	-0.54	-0.28	0.00
2- 1	-0.17	-1.13	-0.25	-0.54	-0.28	0.00
2- 2	0.72	0.75	0.17	-0.54	-0.28	0.00
2- 3	1.35	2.10	0.46	-0.54	-0.28	0.00
2- 4	1.73	2.91	0.64	-0.54	-0.28	0.00
2- 5	1.86	3.18	0.70	-0.54	-0.28	0.00
2- 6	1.73	2.91	0.64	-0.54	-0.28	0.00
2- 7	1.35	2.10	0.46	-0.54	-0.28	0.00
2- 8	0.72	0.75	0.17	-0.54	-0.28	0.00
2- 9	-0.17	-1.13	-0.25	-0.54	-0.28	0.00
2-10	-1.40	-3.55	-0.78	-0.54	-0.28	0.00

Right

Member 4: (Bottom Slab)

Left

4- 0	-4.06	-3.55	-0.78	-0.60	-0.28	0.00
4- 1	-1.52	-1.13	-0.25	-0.60	-0.28	0.00
4- 2	0.46	0.75	0.17	-0.60	-0.28	0.00
4- 3	1.88	2.10	0.46	-0.60	-0.28	0.00
4- 4	2.72	2.91	0.64	-0.60	-0.28	0.00
4- 5	3.01	3.18	0.70	-0.60	-0.28	0.00
4- 6	2.72	2.91	0.64	-0.60	-0.28	0.00
4- 7	1.88	2.10	0.46	-0.60	-0.28	0.00
4- 8	0.46	0.75	0.17	-0.60	-0.28	0.00
4- 9	-1.52	-1.13	-0.25	-0.60	-0.28	0.00
4-10	-4.06	-3.55	-0.78	-0.60	-0.28	0.00

Right

Unfactored Shears due to All Loads: (k)

M-PT	Vdc	Vev	Vdw	Veh	Vls	Vwa
------	-----	-----	-----	-----	-----	-----

Member 1: (Exterior wall)

Bottom						
1- 0	0.38	0.00	0.00	1.51	0.63	0.00
1- 1	0.38	0.00	0.00	1.13	0.50	0.00
1- 2	0.38	0.00	0.00	0.77	0.38	0.00
1- 3	0.38	0.00	0.00	0.45	0.25	0.00
1- 4	0.38	0.00	0.00	0.15	0.13	0.00
1- 5	0.38	0.00	0.00	-0.11	0.00	0.00
1- 6	0.38	0.00	0.00	-0.35	-0.13	0.00
1- 7	0.38	0.00	0.00	-0.56	-0.25	0.00
1- 8	0.38	0.00	0.00	-0.74	-0.38	0.00
1- 9	0.38	0.00	0.00	-0.89	-0.50	0.00
1-10	0.38	0.00	0.00	-1.00	-0.63	0.00

Top

Member 2: (Top Slab)

Left

2- 0	1.13	2.07	0.46	0.00	0.00	0.00
2- 1	0.78	1.66	0.36	0.00	0.00	0.00
2- 2	0.59	1.24	0.27	0.00	0.00	0.00
2- 3	0.39	0.83	0.18	0.00	0.00	0.00
2- 4	0.20	0.41	0.09	0.00	0.00	0.00
2- 5	0.00	0.00	0.00	0.00	0.00	0.00
2- 6	-0.20	-0.41	-0.09	0.00	0.00	0.00
2- 7	-0.39	-0.83	-0.18	0.00	0.00	0.00
2- 8	-0.59	-1.24	-0.27	0.00	0.00	0.00
2- 9	-0.78	-1.66	-0.36	0.00	0.00	0.00
2-10	-1.13	-2.07	-0.46	0.00	0.00	0.00

Right

Member 4: (Bottom Slab)

Left

4- 0	2.18	2.07	0.46	0.00	0.00	0.00
4- 1	1.74	1.66	0.36	0.00	0.00	0.00
4- 2	1.31	1.24	0.27	0.00	0.00	0.00
4- 3	0.87	0.83	0.18	0.00	0.00	0.00
4- 4	0.44	0.41	0.09	0.00	0.00	0.00
4- 5	0.00	0.00	0.00	0.00	0.00	0.00
4- 6	-0.44	-0.41	-0.09	0.00	0.00	0.00
4- 7	-0.87	-0.83	-0.18	0.00	0.00	0.00
4- 8	-1.31	-1.24	-0.27	0.00	0.00	0.00
4- 9	-1.74	-1.66	-0.36	0.00	0.00	0.00
4-10	-2.18	-2.07	-0.46	0.00	0.00	0.00

Right

nfactored Thrusts due to All Loads: (k) (Fill Depth = 1.99 ft)

Member	Pdc	Pev	Pdw	Peh	Pls	Pwa
1	1.13	2.07	0.46	0.00	0.00	0.00
2	-0.38	0.00	0.00	1.00	0.63	0.00
4	0.38	0.00	0.00	1.51	0.63	0.00

----- Analysis Truck, HL-93 -----

Vehicle	Axle	Weight (k/ft)	Length (ft)	Dist. From Previous (ft)
Truck	1	0.407	3.12	
	2	1.626	3.12	14.00
	3	1.626	3.12	14.00
Tandem	1	1.270	3.12	
	2	1.270	3.12	4.00

Live Load Parameters:

Traffic Direction is Parallel to Main Reinforcement

Distribution Width : 4.72 ft

Note: Distribution width is calculated for one wheel only.

Impact Factor : 1.25

Distribution Width : 0.00 ft

Lane Load: 0.000 k/ft

Truck Positions That Cause Maximum Results:

Maximum +Moment in Top Slab

Vehicle	Axle	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	0.407	3.12	20.50
	2	1.626	3.12	6.50
	3	1.626	3.12	-7.50

Maximum +Moment : 7.53 k-ft

Corresponding Moment at End : -6.98 k-ft

Coincident Bottom Slab Load : 0.31 k/ft

Maximum +Shear in Top Slab

Truck	1	0.407	3.12	15.56
	2	1.626	3.12	1.56
	3	1.626	3.12	-12.44

Maximum +Shear : 4.55 k

Corresponding Shear at Mid : -0.53 k

Coincident Bottom Slab Load : 0.31 k/ft

Maximum +Moment in Top Slab

Tandem	1	1.270	3.12	7.64
	2	1.270	3.12	3.64

Maximum +Moment : 8.22 k-ft

Corresponding Moment at End : -9.79 k-ft

Coincident Bottom Slab Load : 0.49 k/ft

Maximum +Shear in Top Slab

Tandem	1	1.270	3.12	5.56
	2	1.270	3.12	1.56

Maximum +Shear : 5.86 k

Corresponding Shear at Mid : -1.29 k

Coincident Bottom Slab Load : 0.49 k/ft

Maximum -Moment in Top Slab

Vehicle	Axle	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	0.407	3.12	21.41
	2	1.626	3.12	7.41
	3	1.626	3.12	-6.59

Maximum -Moment : -7.11 k-ft

Corresponding Moment at Mid : 7.01 k-ft

Coincident Bottom Slab Load : 0.31 k/ft

Maximum -Shear in Top Slab

Truck	1	0.407	3.12	25.44
	2	1.626	3.12	11.44
	3	1.626	3.12	-2.56

Maximum -Shear : -4.55 k

Corresponding Shear at Mid : 0.53 k

Coincident Bottom Slab Load : 0.31 k/ft

Maximum -Moment in Top Slab

Tandem	1	1.270	3.12	7.90
	2	1.270	3.12	3.90

Maximum -Moment : -9.82 k-ft

Corresponding Moment at Mid : 8.20 k-ft

Coincident Bottom Slab Load : 0.49 k/ft

Maximum -Shear in Top Slab

Tandem	1	1.270	3.12	11.44
	2	1.270	3.12	7.44

Maximum -Shear : -5.86 k

Corresponding Shear at Mid : 1.29 k

Coincident Bottom Slab Load : 0.49 k/ft

Unfactored Moments and Shears due to Truck Loads: (k-ft, k)

M-PT	Truck				Tandem				Lane			
	M11+	M11-	V11+	V11-	M11+	M11-	V11+	V11-	M11+	M11-	V11+	V11-

Member 1: (Exterior Wall)

Bottom

1- 0	0.00	-4.16	0.32	-0.57	0.00	-5.83	0.17	-0.70	0.00	0.00	0.00	0.00
1- 1	0.00	-4.17	0.32	-0.57	0.00	-6.03	0.17	-0.70	0.00	0.00	0.00	0.00
1- 2	0.00	-4.35	0.32	-0.57	0.00	-6.27	0.17	-0.70	0.00	0.00	0.00	0.00
1- 3	0.00	-4.61	0.32	-0.57	0.00	-6.61	0.17	-0.70	0.00	0.00	0.00	0.00
1- 4	0.00	-4.91	0.32	-0.57	0.00	-7.04	0.17	-0.70	0.00	0.00	0.00	0.00
1- 5	0.00	-5.25	0.32	-0.57	0.00	-7.48	0.17	-0.70	0.00	0.00	0.00	0.00
1- 6	0.00	-5.60	0.32	-0.57	0.00	-7.93	0.17	-0.70	0.00	0.00	0.00	0.00
1- 7	0.00	-5.97	0.32	-0.57	0.00	-8.39	0.17	-0.70	0.00	0.00	0.00	0.00
1- 8	0.00	-6.34	0.32	-0.57	0.00	-8.87	0.17	-0.70	0.00	0.00	0.00	0.00
1- 9	0.00	-6.73	0.32	-0.57	0.00	-9.34	0.17	-0.70	0.00	0.00	0.00	0.00
1-10	0.00	-7.11	0.32	-0.57	0.00	-9.82	0.17	-0.70	0.00	0.00	0.00	0.00

Top

Member 2: (Top Slab)

Left

2- 0	0.00	-7.11	4.55	0.00	0.00	-9.82	5.86	0.00	0.00	0.00	0.00	0.00
2- 1	1.63	-3.77	4.06	-0.09	1.27	-4.83	5.03	-0.07	0.00	0.00	0.00	0.00
2- 2	4.21	-1.35	3.55	-0.36	3.32	-1.20	4.19	-0.28	0.00	0.00	0.00	0.00
2- 3	5.90	0.00	2.99	-0.82	6.04	0.00	3.33	-0.64	0.00	0.00	0.00	0.00
2- 4	7.11	0.00	2.42	-1.31	7.68	0.00	2.50	-1.09	0.00	0.00	0.00	0.00
2- 5	7.53	0.00	1.86	-1.86	8.22	0.00	1.71	-1.71	0.00	0.00	0.00	0.00
2- 6	7.11	0.00	1.31	-2.42	7.68	0.00	1.09	-2.50	0.00	0.00	0.00	0.00
2- 7	5.90	0.00	0.81	-2.99	5.94	0.00	0.63	-3.33	0.00	0.00	0.00	0.00
2- 8	4.04	-1.35	0.36	-3.55	3.24	-1.20	0.28	-4.19	0.00	0.00	0.00	0.00
2- 9	1.63	-3.77	0.09	-4.07	1.27	-4.83	0.07	-5.04	0.00	0.00	0.00	0.00
2-10	0.01	-7.11	0.00	-4.55	0.00	-9.82	0.00	-5.86	0.00	0.00	0.00	0.00

Right

Member 4: (Bottom Slab)

Left

4- 0	0.00	-4.16	2.14	0.00	0.00	-5.83	3.28	0.00	0.00	0.00	0.00	0.00
4- 1	0.00	-1.68	1.74	0.00	0.00	-1.99	2.64	0.00	0.00	0.00	0.00	0.00
4- 2	1.47	0.00	1.33	0.00	1.94	0.00	2.00	0.00	0.00	0.00	0.00	0.00
4- 3	2.68	0.00	0.92	0.00	3.92	0.00	1.37	0.00	0.00	0.00	0.00	0.00
4- 4	3.39	0.00	0.52	0.00	5.10	0.00	0.73	0.00	0.00	0.00	0.00	0.00
4- 5	3.62	0.00	0.11	-0.11	5.48	0.00	0.10	-0.10	0.00	0.00	0.00	0.00
4- 6	3.39	0.00	0.00	-0.52	5.10	0.00	0.00	-0.73	0.00	0.00	0.00	0.00
4- 7	2.68	0.00	0.00	-0.92	3.92	0.00	0.00	-1.37	0.00	0.00	0.00	0.00
4- 8	1.47	0.00	0.00	-1.33	1.93	0.00	0.00	-2.00	0.00	0.00	0.00	0.00
4- 9	0.00	-1.68	0.00	-1.74	0.00	-1.99	0.00	-2.64	0.00	0.00	0.00	0.00
4-10	0.00	-4.16	0.00	-2.15	0.00	-5.83	0.00	-3.28	0.00	0.00	0.00	0.00

Right

Serviceability Check: Crack Control

Bar		Moment	Thrust	Fss	Spacing	Allow
Mark	Location	(k-ft)	(k)	(ksi)	(in)	(in)
A1	Top Corner Bar	-14.4	9.51	34.41	6.00	10.80
A2	Bot Corner Bar	-13.5	9.51	31.51	6.00	12.21
A100	Top Slab (int)	13.7	-0.20	41.01	3.00	8.57
A200	Bot Slab (int)	12.1	0.44	35.40	3.00	10.62
B2	Ext Wall (ext)	-13.7	9.51	32.17	6.00	11.87

Strength Limit State at Critical Sections: Flexure

Member 1: (Exterior wall). Thickness = 12.00 in

Loc	Dist.	Moment (in)	Design		Corr.		phi	As (in ²)	Mcr (k-ft)	Load Ratings	
			Moment (k-ft)	A. F. (k)	Mu (k-ft)	ds (in)				IR	OR
BOT	18.00	-20.75	15.16	25.16	9.75	27.57	0.90	0.40	15.46	1.59	2.07
MID	42.00	0.00	3.08	27.77	9.81	25.98	0.90	0.44	15.46	NC	NC
MID-	42.00	-21.46	15.16	25.16	9.75	27.57	0.90	0.40	15.46	1.44	1.87
TOP	18.00	-22.82	15.16	25.16	9.75	27.57	0.90	0.40	15.46	1.32	1.71

Member 2: (Top Slab), Thickness = 12.00 in

LOC	Dist.	Moment (in)	A. F. (k)	Mu (k-ft)	ds (in)	Ma (k-ft)	phi	As (in ²)	Mcr (k-ft)	Load Ratings	
										Corr.	IR
LT	18.00	-10.23	3.27	25.16	9.75	23.71	0.90	0.40	15.46	2.69	3.48
MID	78.00	21.74	-0.40	27.77	9.81	24.87	0.90	0.44	15.46	1.22	1.58
RT	18.00	-10.23	3.27	25.16	9.75	23.71	0.90	0.40	15.46	2.69	3.48

Member 4: (Bottom Slab), Thickness = 12.00 in

Loc	Dist.	Moment (in)	Design		Corr.		phi	AS (in ²)	Mcr (k-ft)	Load Ratings	
			Moment (k-ft)	A. F. (k)	Mu (k-ft)	ds (in)				IR	OR
LT	18.00	-7.32	4.29	25.16	9.75	24.04	0.90	0.40	15.46	5.90	7.65
MID	78.00	18.36	0.23	27.77	9.81	25.07	0.90	0.44	15.46	1.70	2.20
RT	18.00	-7.32	4.29	25.16	9.75	24.04	0.90	0.40	15.46	5.90	7.65

Notes: Mu - Resisting moment under pure flexure, Ma - Allowable moment under applied axial load

Strength Limit State at Critical Sections: Vertical Shear

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Design		Corr.	Corr.	phi*vn	Beta	Theta	Vc	Vs	Av	Spac	Max.	Load	Ratings	
		Shear	Moment	A. F.	Dv								(in)	(k)	(k-ft)	(k)
BOT	26.64	2.01	20.8	15.16	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00		13.78		17.87
MID	42.00	0.97	2.2	3.08	9.47	28.38	3.927	31.74	31.53a	0.00	0.00	0.00		99.99		99.99
MID-	42.00	0.97	2.2	15.16	9.44	35.84	4.977	28.86	39.82a	0.00	0.00	0.00		29.00		37.60
TOP	26.64	-1.89	22.6	15.16	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00		8.11		10.52

Member 2: (Top slab), Thickness = 12.00 in

Loc	Dist.	Design		Corr.	Corr.	phi*vn	Beta	Theta	Vc	Vs	Av	Spac	Max.	Load	Ratings
		Shear	Moment	A. F.	Dv								(in)	(k)	(in)
LT	31.95	10.05	9.5	3.27	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00		1.60	2.07
MID	78.00	3.25	21.7	-0.40	9.47	12.16	1.683	43.90	13.51a	0.00	0.00	0.00		3.74	4.85
RT	31.95	10.05	9.2	3.27	9.44	14.50	2.014	41.21	16.11a	0.00	0.00	0.00		1.61	2.09

Member 4: (Bottom Slab), Thickness = 12.00 in

Eriksson Culvert v4.4.4

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Filename: Harris Ranch Dallas Harris South Sub.etcx

Sht: ____ of ____

By:MB Chk: ____

12/27/2019 9:31:34 AM

Culvert p. 33 of 40

	'T	31.95	7.13	5.2	4.29	9.44	17.75	2.464	38.19	19.72a	0.00	0.00	0.00	4.07	5.28
ID	78.00	0.19	18.4	0.23	9.47	14.45	2.000	45.00	16.06b	0.00	0.00	0.00	74.65	96.77	
RT	31.95	7.13	5.2	4.29	9.44	17.75	2.464	38.19	19.72a	0.00	0.00	0.00	4.07	5.28	

Vc Calculation By: a - Iterative Beta, b - Constant Beta, c - Box Culvert, d - Standard/Arema

oad Combination Results at Tenth Points: (k-ft, k)(Fill Depth = 1.99 ft)

M-PT	+Moment	-Moment	+Axial	-Axial	+Shear	-Shear
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Member 1: (Exterior wall)

Bottom

1- 0	-8.544	-22.638	3.082	15.162	4.287	0.225
1- 1	-6.300	-21.111	3.082	15.162	3.522	-0.022
1- 2	-4.577	-20.759	3.082	15.162	2.799	-0.249
1- 3	-3.345	-20.749	3.082	15.162	2.118	-0.458
1- 4	-2.577	-21.029	3.082	15.162	1.478	-0.649
1- 5	-2.241	-21.456	3.082	15.162	0.968	-0.908
1- 6	-2.309	-22.023	3.082	15.162	0.816	-1.465
1- 7	-2.753	-22.707	3.082	15.162	0.683	-1.979
1- 8	-3.542	-23.492	3.082	15.162	0.568	-2.452
1- 9	-4.647	-24.356	3.082	15.162	0.473	-2.884
1-10	-6.040	-26.179	3.082	15.162	0.396	-3.274

Top

Member 2: (Top Slab)

Left

2- 0	-6.065	-26.203	2.185	3.274	15.162	3.082
2- 1	0.383	-11.826	-0.396	3.274	12.590	2.360
2- 2	9.191	-1.448	-0.396	3.274	10.168	1.768
2- 3	15.468	2.060	-0.396	2.185	7.724	0.454
2- 4	20.191	3.210	-0.396	2.185	5.315	-1.355
2- 5	21.743	3.593	-0.396	2.185	3.252	-3.252
2- 6	20.191	3.210	-0.396	2.185	1.355	-5.327
2- 7	15.304	2.060	-0.396	2.185	-0.475	-7.724
2- 8	8.901	-1.448	-0.396	3.274	-1.768	-10.168
2- 9	0.383	-11.826	-0.396	3.274	-2.360	-12.603
2-10	-6.065	-26.203	2.185	3.274	-3.082	-15.162

Right

Member 4: (Bottom Slab)

Left

4- 0	-8.544	-22.638	3.588	4.287	11.958	4.027
4- 1	-3.832	-8.626	3.588	4.287	9.600	3.222
4- 2	4.865	-0.167	0.225	3.588	7.243	2.416
4- 3	12.378	2.451	0.225	3.588	4.885	1.611
4- 4	16.865	4.021	0.225	3.588	2.528	0.805
4- 5	18.355	4.545	0.225	3.588	0.194	-0.194
4- 6	16.865	4.021	0.225	3.588	-0.805	-2.528
4- 7	12.378	2.451	0.225	3.588	-1.611	-4.885
4- 8	4.857	-0.167	0.225	3.588	-2.416	-7.243
4- 9	-3.832	-8.626	3.588	4.287	-3.222	-9.600
4-10	-8.544	-22.638	3.588	4.287	-4.027	-11.958

Right

Analysis Results: Fill Depth = 2.00 ft

Load Parameters:

Fe = 1.28 Surcharge Depth : 3.00 ft

Applied Horizontal Loads: (k/ft)

Load Description	Bottom of Wall	Top of Wall
Horizontal Earth Load	0.570	0.150
Live Load Surcharge	0.180	0.180
Internal Water Pressure	0.000	0.000

Unfactored Moments due to All Loads: (k-ft)

M-PT	Mdc	Mev	Mdw	Meh	Mls	Mwa
------	-----	-----	-----	-----	-----	-----

Member 1: (Exterior wall)

Bottom

1- 0	-4.06	-3.57	-0.78	-0.60	-0.28	0.00
1- 1	-3.79	-3.57	-0.78	0.32	0.12	0.00
1- 2	-3.53	-3.57	-0.78	0.99	0.43	0.00
1- 3	-3.26	-3.57	-0.78	1.42	0.65	0.00
1- 4	-3.00	-3.57	-0.78	1.63	0.78	0.00
1- 5	-2.73	-3.57	-0.78	1.64	0.82	0.00
1- 6	-2.46	-3.57	-0.78	1.48	0.78	0.00
1- 7	-2.20	-3.57	-0.78	1.16	0.65	0.00
1- 8	-1.93	-3.57	-0.78	0.71	0.43	0.00
1- 9	-1.66	-3.57	-0.78	0.14	0.12	0.00
1-10	-1.40	-3.57	-0.78	-0.53	-0.28	0.00

Top

Member 2: (Top slab)

Left

2- 0	-1.40	-3.57	-0.78	-0.54	-0.28	0.00
2- 1	-0.17	-1.13	-0.25	-0.54	-0.28	0.00
2- 2	0.72	0.76	0.17	-0.54	-0.28	0.00
2- 3	1.35	2.11	0.46	-0.54	-0.28	0.00
2- 4	1.73	2.92	0.64	-0.54	-0.28	0.00
2- 5	1.86	3.19	0.70	-0.54	-0.28	0.00
2- 6	1.73	2.92	0.64	-0.54	-0.28	0.00
2- 7	1.35	2.11	0.46	-0.54	-0.28	0.00
2- 8	0.72	0.76	0.17	-0.54	-0.28	0.00
2- 9	-0.17	-1.13	-0.25	-0.54	-0.28	0.00
2-10	-1.40	-3.57	-0.78	-0.54	-0.28	0.00

Right

Member 4: (Bottom Slab)

Left

4- 0	-4.06	-3.57	-0.78	-0.60	-0.28	0.00
4- 1	-1.52	-1.13	-0.25	-0.60	-0.28	0.00
4- 2	0.46	0.76	0.17	-0.60	-0.28	0.00
4- 3	1.88	2.11	0.46	-0.60	-0.28	0.00
4- 4	2.72	2.92	0.64	-0.60	-0.28	0.00
4- 5	3.01	3.19	0.70	-0.60	-0.28	0.00
4- 6	2.72	2.92	0.64	-0.60	-0.28	0.00
4- 7	1.88	2.11	0.46	-0.60	-0.28	0.00
4- 8	0.46	0.76	0.17	-0.60	-0.28	0.00
4- 9	-1.52	-1.13	-0.25	-0.60	-0.28	0.00
4-10	-4.06	-3.57	-0.78	-0.60	-0.28	0.00

Right

Unfactored Shears due to All Loads: (k)

M-PT	Vdc	Vev	Vdw	Veh	Vls	Vwa
------	-----	-----	-----	-----	-----	-----

Member 1: (Exterior wall)

Bottom

1- 0	0.38	0.00	0.00	1.51	0.63	0.00
1- 1	0.38	0.00	0.00	1.13	0.50	0.00
1- 2	0.38	0.00	0.00	0.77	0.38	0.00
1- 3	0.38	0.00	0.00	0.45	0.25	0.00
1- 4	0.38	0.00	0.00	0.15	0.13	0.00
1- 5	0.38	0.00	0.00	-0.11	0.00	0.00
1- 6	0.38	0.00	0.00	-0.35	-0.13	0.00
1- 7	0.38	0.00	0.00	-0.56	-0.25	0.00
1- 8	0.38	0.00	0.00	-0.74	-0.38	0.00
1- 9	0.38	0.00	0.00	-0.89	-0.50	0.00
1-10	0.38	0.00	0.00	-1.01	-0.63	0.00

Top

Member 2: (Top slab)

Left

2- 0	1.13	2.08	0.46	0.00	0.00	0.00
2- 1	0.78	1.66	0.36	0.00	0.00	0.00
2- 2	0.59	1.25	0.27	0.00	0.00	0.00
2- 3	0.39	0.83	0.18	0.00	0.00	0.00
2- 4	0.20	0.42	0.09	0.00	0.00	0.00
2- 5	0.00	0.00	0.00	0.00	0.00	0.00
2- 6	-0.20	-0.42	-0.09	0.00	0.00	0.00
2- 7	-0.39	-0.83	-0.18	0.00	0.00	0.00
2- 8	-0.59	-1.25	-0.27	0.00	0.00	0.00
2- 9	-0.78	-1.66	-0.36	0.00	0.00	0.00
2-10	-1.13	-2.08	-0.46	0.00	0.00	0.00

Right

Member 4: (Bottom slab)

Left

4- 0	2.18	2.08	0.46	0.00	0.00	0.00
4- 1	1.74	1.66	0.36	0.00	0.00	0.00
4- 2	1.31	1.25	0.27	0.00	0.00	0.00
4- 3	0.87	0.83	0.18	0.00	0.00	0.00
4- 4	0.44	0.42	0.09	0.00	0.00	0.00
4- 5	0.00	0.00	0.00	0.00	0.00	0.00
4- 6	-0.44	-0.42	-0.09	0.00	0.00	0.00
4- 7	-0.87	-0.83	-0.18	0.00	0.00	0.00
4- 8	-1.31	-1.25	-0.27	0.00	0.00	0.00
4- 9	-1.74	-1.66	-0.36	0.00	0.00	0.00
4-10	-2.18	-2.08	-0.46	0.00	0.00	0.00

Right

nfactored Thrusts due to All Loads: (k) (Fill Depth = 2.00 ft)

Member	Pdc	Pev	Pdw	Peh	Pls	Pwa
1	1.13	2.08	0.46	0.00	0.00	0.00
2	-0.38	0.00	0.00	1.01	0.63	0.00
4	0.38	0.00	0.00	1.51	0.63	0.00

----- Analysis Truck, HL-93 -----

Vehicle	Axle	Weight (k/ft)	Length (ft)	Dist. From Previous (ft)
Truck	1	0.408	3.13	
	2	1.631	3.13	14.00
	3	1.631	3.13	14.00
Tandem	1	1.274	3.13	
	2	1.274	3.13	4.00

Live Load Parameters:

Traffic Direction is Parallel to Main Reinforcement
 Distribution Width : 4.69 ft
 Impact Factor : 1.25
 Distribution width : 0.00 ft
 Lane Load: 0.000 k/ft

Truck Positions That Cause Maximum Results:

Maximum +Moment in Top Slab

Vehicle	Axle	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	0.408	3.13	20.50
	2	1.631	3.13	6.50
	3	1.631	3.13	-7.50

Maximum +Moment : 7.68 k-ft
 Corresponding Moment at End : -6.92 k-ft
 Coincident Bottom Slab Load : 0.37 k/ft

Maximum +Shear in Top Slab

Truck	1	0.408	3.13	15.57
	2	1.631	3.13	1.57
	3	1.631	3.13	-12.43

Maximum +Shear : 4.58 k
 Corresponding Shear at Mid : -0.54 k
 Coincident Bottom Slab Load : 0.37 k/ft

Maximum +Moment in Top Slab

Tandem	1	1.274	3.13	7.63
	2	1.274	3.13	3.63

Maximum +Moment : 8.44 k-ft
 Corresponding Moment at End : -9.68 k-ft
 Coincident Bottom Slab Load : 0.58 k/ft

Maximum +Shear in Top Slab

Tandem	1	1.274	3.13	5.57
	2	1.274	3.13	1.57

Maximum +Shear : 5.89 k
 Corresponding Shear at Mid : -1.29 k
 Coincident Bottom Slab Load : 0.58 k/ft

Maximum -Moment in Top Slab

Vehicle	Axle	Weight (k)	Length (ft)	Dist. From Left End (ft)
Truck	1	0.408	3.13	21.42
	2	1.631	3.13	7.42
	3	1.631	3.13	-6.58

Maximum -Moment : -7.05 k-ft
 Corresponding Moment at Mid : 7.16 k-ft
 Coincident Bottom Slab Load : 0.37 k/ft

Maximum -Shear in Top Slab

Truck	1	0.408	3.13	25.43
	2	1.631	3.13	11.43
	3	1.631	3.13	-2.57

Maximum -Shear : -4.58 k
 Corresponding Shear at Mid : 0.54 k
 Coincident Bottom Slab Load : 0.37 k/ft

Maximum -Moment in Top Slab

Tandem	1	1.274	3.13	7.90
	2	1.274	3.13	3.90

Maximum -Moment : -9.72 k-ft
 Corresponding Moment at Mid : 8.42 k-ft
 Coincident Bottom Slab Load : 0.58 k/ft

Maximum -Shear in Top Slab

Tandem	1	1.274	3.13	11.43
	2	1.274	3.13	7.43

Maximum -Shear : -5.89 k
 Corresponding Shear at Mid : 1.29 k
 Coincident Bottom Slab Load : 0.58 k/ft

M-PT	Truck				Tandem				Lane			
	M11+	M11-	V11+	V11-	M11+	M11-	V11+	V11-	M11+	M11-	V11+	V11-
Member 1: (Exterior Wall)												
Bottom												
1- 0	0.00	-4.23	0.41	-0.45	0.00	-6.10	0.24	-0.51	0.00	0.00	0.00	0.00
1- 1	0.00	-4.29	0.41	-0.45	0.00	-6.09	0.24	-0.51	0.00	0.00	0.00	0.00
1- 2	0.00	-4.51	0.41	-0.45	0.00	-6.36	0.24	-0.51	0.00	0.00	0.00	0.00
1- 3	0.00	-4.81	0.41	-0.45	0.00	-6.72	0.24	-0.51	0.00	0.00	0.00	0.00
1- 4	0.00	-5.18	0.41	-0.45	0.00	-7.15	0.24	-0.51	0.00	0.00	0.00	0.00
1- 5	0.00	-5.58	0.41	-0.45	0.00	-7.60	0.24	-0.51	0.00	0.00	0.00	0.00
1- 6	0.00	-5.87	0.41	-0.45	0.00	-8.08	0.24	-0.51	0.00	0.00	0.00	0.00
1- 7	0.00	-6.16	0.41	-0.45	0.00	-8.56	0.24	-0.51	0.00	0.00	0.00	0.00
1- 8	0.00	-6.45	0.41	-0.45	0.00	-9.03	0.24	-0.51	0.00	0.00	0.00	0.00
1- 9	0.00	-6.75	0.41	-0.45	0.00	-9.37	0.24	-0.51	0.00	0.00	0.00	0.00
1-10	0.03	-7.05	0.41	-0.45	0.02	-9.72	0.24	-0.51	0.00	0.00	0.00	0.00
Top												

Member 2: (Top Slab)

Left												
2- 0	0.03	-7.05	4.58	0.00	0.02	-9.72	5.89	0.00	0.00	0.00	0.00	0.00
2- 1	1.73	-3.69	4.09	-0.09	1.35	-4.69	5.06	-0.07	0.00	0.00	0.00	0.00
2- 2	4.34	-1.26	3.57	-0.36	3.44	-1.04	4.21	-0.28	0.00	0.00	0.00	0.00
2- 3	6.04	0.00	3.01	-0.82	6.24	0.00	3.35	-0.64	0.00	0.00	0.00	0.00
2- 4	7.26	0.00	2.44	-1.32	7.90	0.00	2.51	-1.09	0.00	0.00	0.00	0.00
2- 5	7.68	0.00	1.87	-1.87	8.44	0.00	1.72	-1.72	0.00	0.00	0.00	0.00
2- 6	7.26	0.00	1.32	-2.44	7.90	0.00	1.09	-2.52	0.00	0.00	0.00	0.00
2- 7	6.04	0.00	0.81	-3.01	6.15	0.00	0.63	-3.35	0.00	0.00	0.00	0.00
2- 8	4.17	-1.26	0.36	-3.57	3.35	-1.04	0.28	-4.21	0.00	0.00	0.00	0.00
2- 9	1.73	-3.69	0.09	-4.10	1.35	-4.69	0.07	-5.07	0.00	0.00	0.00	0.00
2-10	0.03	-7.05	0.00	-4.58	0.02	-9.72	0.00	-5.89	0.00	0.00	0.00	0.00

Right**Member 4: (Bottom Slab)**

Left												
4- 0	0.00	-4.23	2.16	0.00	0.00	-6.10	3.28	0.00	0.00	0.00	0.00	0.00
4- 1	0.00	-1.71	1.76	0.00	0.00	-2.26	2.65	0.00	0.00	0.00	0.00	0.00
4- 2	1.51	0.00	1.35	0.00	2.00	0.00	2.01	0.00	0.00	0.00	0.00	0.00
4- 3	2.79	0.00	0.94	0.00	3.97	0.00	1.38	0.00	0.00	0.00	0.00	0.00
4- 4	3.49	0.00	0.54	0.00	5.13	0.00	0.74	0.00	0.00	0.00	0.00	0.00
4- 5	3.71	0.00	0.11	-0.11	5.52	0.00	0.10	-0.10	0.00	0.00	0.00	0.00
4- 6	3.49	0.00	0.00	-0.54	5.13	0.00	0.00	-0.74	0.00	0.00	0.00	0.00
4- 7	2.79	0.00	0.00	-0.94	3.97	0.00	0.00	-1.38	0.00	0.00	0.00	0.00
4- 8	1.51	0.00	0.00	-1.35	1.99	0.00	0.00	-2.01	0.00	0.00	0.00	0.00
4- 9	0.00	-1.73	0.00	-1.76	0.00	-2.28	0.00	-2.65	0.00	0.00	0.00	0.00
4-10	0.00	-4.23	0.00	-2.16	0.00	-6.12	0.00	-3.29	0.00	0.00	0.00	0.00

Right

Note: Unfactored live load results computed at 2.00 ft and 0 ft fill depths, per LRFD 3.6.1.2.6

Serviceability Check: Crack Control

Bar		Moment	Thrust	Fss	Spacing	Allow
Mark	Location	(k-ft)	(k)	(ksi)	(in)	(in)
A1	Top Corner Bar	-14.6	9.55	34.96	6.00	10.56
A2	Bot Corner Bar	-13.6	9.55	31.87	6.00	12.02
A100	Top Slab (int)	13.9	-0.29	41.82	3.00	8.32
A200	Bot Slab (int)	12.1	0.62	35.30	3.00	10.66
B2	Ext Wall (ext)	-13.9	9.55	32.58	6.00	11.66

Strength Limit State at Critical Sections: Flexure

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Design				Corr.				Load Ratings		
		Moment (in)	Moment (k-ft)	A. F. (k)	Mu (k-ft)	ds (in)	Ma (k-ft)	phi	As (in ²)	Mcr (k-ft)	IR	OR
BOT	18.00	-20.97	15.24	25.16	9.75	27.59	0.90	0.40	15.46	1.57	2.03	
MID	42.00	0.00	3.09	27.77	9.81	25.99	0.90	0.44	15.46	NC	NC	
MID-	42.00	-21.70	15.24	25.16	9.75	27.59	0.90	0.40	15.46	1.42	1.84	
TOP	18.00	-23.14	15.24	25.16	9.75	27.59	0.90	0.40	15.46	1.30	1.68	

Member 2: (Top Slab), Thickness = 12.00 in

Loc	Dist.	Design		Corr.		ds	Ma	phi	As	Mcr	Load Ratings	
		Moment (in)	Moment (k-ft)	A. F. (k)	Mu (k-ft)						IR	OR
LT	18.00	-10.01	2.95	25.16	9.75	23.60	0.90	0.40	15.46	2.75	3.56	
MID	78.00	22.15	-0.54	27.77	9.81	24.82	0.90	0.44	15.46	1.18	1.53	
RT	18.00	-10.01	2.95	25.16	9.75	23.60	0.90	0.40	15.46	2.75	3.56	

Member 4: (Bottom Slab), Thickness = 12.00 in

Loc	Design		Corr.						Load Ratings		
	Dist.	Moment	A. F.	Mu	ds	Ma	phi	As	Mcr	IR	OR
	(in)	(k-ft)	(k)	(k-ft)	(in)	(k-ft)		(in ²)	(k-ft)		
LT	18.00	-7.73	4.44	25.16	9.75	24.09	0.90	0.40	15.46	5.30	6.86
MID	78.00	18.43	0.55	27.77	9.81	25.17	0.90	0.44	15.46	1.70	2.20
RT	18.00	-7.76	4.44	25.16	9.75	24.09	0.90	0.40	15.46	5.26	6.82

Notes: Mu - Resisting moment under pure flexure, Ma - Allowable moment under applied axial load

Strength Limit State at Critical Sections: Vertical Shear

Member 1: (Exterior wall), Thickness = 12.00 in

Loc	Dist.	Design		Corr.	Corr.	phi*vn	Beta	Theta	Vc	Vs	Av	Spac	Load Ratings	
		Shear	Moment	A. F.	Dv								(in)	IR
BOT	26.64	2.16	21.0	15.24	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	11.95	15.49
MID	42.00	1.12	2.3	3.09	9.47	28.07	3.886	31.89	31.19a	0.00	0.00	0.00	99.99	99.99
MID-	42.00	1.12	2.3	15.24	9.44	35.83	4.975	28.86	39.81a	0.00	0.00	0.00	39.46	51.16
TOP	26.64	-1.57	22.9	15.24	9.44	14.40	2.000	45.00	16.00b	0.00	0.00	0.00	10.13	13.14

Member 2: (Top slab), Thickness = 12.00 in

Loc	Dist.	Design		Corr.	Corr.	phi*vn	Beta	Theta	Vc	Vs	Av	Max.	Load Ratings			
		Shear	Moment	A. F.	Dv								(in)	(k)	(in)	
LT	31.95	10.10		9.7	2.95	9.75	22.32	n/a	n/a	24.80c	0.00	0.00	0.00	2.67	3.47	
MID	78.00		3.27		22.1	-0.54	9.81	22.46	n/a	n/a	24.96c	0.00	0.00	0.00	6.87	8.91
RT	31.95	10.10		9.4	2.95	9.75	22.32	n/a	n/a	24.80c	0.00	0.00	0.00	2.67	3.47	

Member 4: (Bottom Slab), Thickness = 12.00 in

Eriksson Culvert v4.4.4

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Filename: Harris Ranch Dallas Harris South Sub.etcx

Sht: ____ of ____

By:MB Chk: ____

12/27/2019 9:31:34 AM

Culvert p. 39 of 40

	T	31.95	7.15	5.3	4.44	9.75	22.32	n/a	n/a	24.80c	0.00	0.00	0.00	5.38	6.97
.ID	78.00	0.19	18.4	0.55	9.81	22.46	n/a	n/a	24.96c	0.00	0.00	0.00	99.99	99.99	
RT	31.95	7.16	5.3	4.44	9.75	22.32	n/a	n/a	24.80c	0.00	0.00	0.00	5.37	6.96	

Vc Calculation By: a - Iterative Beta, b - Constant Beta, c - Box Culvert, d - Standard/Arema

Load Combination Results at Tenth Points: (k-ft, k)(Fill Depth = 2.00 ft)

M-PT	+Moment	-Moment	+Axial	-Axial	+Shear	-Shear
------	---------	---------	--------	--------	--------	--------

Member 1: (Exterior wall)

Bottom

1- 0	-8.560	-23.125	3.091	15.239	4.438	0.551
1- 1	-6.315	-21.241	3.091	15.239	3.673	0.304
1- 2	-4.591	-20.945	3.091	15.239	2.949	0.076
1- 3	-3.358	-20.974	3.091	15.239	2.267	-0.134
1- 4	-2.589	-21.248	3.091	15.239	1.627	-0.324
1- 5	-2.253	-21.703	3.091	15.239	1.117	-0.584
1- 6	-2.322	-22.306	3.091	15.239	0.965	-1.141
1- 7	-2.766	-23.028	3.091	15.239	0.831	-1.656
1- 8	-3.555	-23.795	3.091	15.239	0.716	-2.130
1- 9	-4.662	-24.432	3.091	15.239	0.620	-2.561
1-10	-6.057	-26.029	3.091	15.239	0.543	-2.952

Top

Member 2: (Top Slab)

Left

2- 0	-6.081	-26.053	2.187	2.952	15.239	3.091
2- 1	0.552	-11.601	-0.543	2.952	12.654	2.368
2- 2	9.421	-1.273	-0.543	2.952	10.219	1.774
2- 3	15.842	2.068	-0.543	2.187	7.762	0.454
2- 4	20.588	3.221	-0.543	2.187	5.341	-1.364
2- 5	22.148	3.605	-0.543	2.187	3.270	-3.270
2- 6	20.588	3.221	-0.543	2.187	1.364	-5.353
2- 7	15.674	2.068	-0.543	2.187	-0.474	-7.762
2- 8	9.128	-1.273	-0.543	2.952	-1.774	-10.219
2- 9	0.552	-11.601	-0.543	2.952	-2.368	-12.667
2-10	-6.081	-26.053	2.187	2.952	-3.091	-15.239

Right

Member 4: (Bottom slab)

Left

4- 0	-8.560	-23.125	3.590	4.438	11.986	4.036
4- 1	-3.838	-9.107	3.590	4.438	9.625	3.229
4- 2	4.974	-0.165	0.551	3.590	7.265	2.422
4- 3	12.474	2.459	0.551	3.590	4.905	1.614
4- 4	16.947	4.033	0.551	3.590	2.544	0.807
4- 5	18.431	4.557	0.551	3.590	0.195	-0.196
4- 6	16.947	4.033	0.551	3.590	-0.807	-2.549
4- 7	12.474	2.459	0.551	3.590	-1.614	-4.910
4- 8	4.966	-0.165	0.551	3.590	-2.422	-7.270
4- 9	-3.838	-9.137	3.590	4.438	-3.229	-9.631
4-10	-8.560	-23.166	3.590	4.438	-4.036	-11.991

Right

AASHTO LRFD Gravity Cantilever Wing Wall Structural Design

Design Specifications..... AASHTO LRFD Bridge 2014

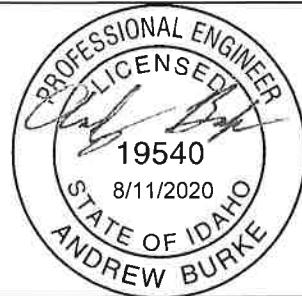
Material Properties..... Concrete Compressive Strength - 5000psi @ 28 days
Reinforcing Bars per ASTM A615, Grade 60
Weldable Reinforcing Bars per ASTM A706, Grade 60
Epoxy-Coated Reinforcing Bars per ASTM A775, Grade 60
Welded Wire Fabric per ASTM A1064, Grade 65

Geometry..... Stem Thickness at Top- 12 in
Average Stem Height - 10.5 ft
Base Thickness - 12 in
Base Length - 6.5 ft
Heel Length - 4.5 ft

Design Assumptions..... Concrete Unit Weight - 150 pcf
Soil Unit Weight - 120 pcf
Soil Ultimate Bearing Capacity - 10000 psf
Active Earth Pressure Coefficient - 0.28
At-Rest Earth Pressure Coefficient - 0.48
Toe Passive Earth Pressure Coefficient - 3
Key Passive Earth Pressure Coefficient - 5
Drained Granular Backfill Material Required as Specified
Water Table is Below Base Slab

General Design Notes:

Harris Ranch Dallas Harris South Sub Culvert



Load Factors**Table 3.4.1-1 - Modified**

	Strength I	Strength II	Strength III	Strength IV	Strength V	Service I
DC Max	1.25	1.25	1.25	1.50	1.25	1.00
DC Min	0.90	0.90	0.90	0.90	0.90	1.00
EHa Max	1.50	1.50	1.50	1.50	1.50	1.00
EHa Min	0.90	0.90	0.90	0.90	0.90	1.00
EHo Max	1.35	1.35	1.35	1.35	1.35	1.00
EHo Min	0.90	0.90	0.90	0.90	0.90	1.00
EVrw Max	1.35	1.35	1.35	1.35	1.35	1.00
EVrw Min	1.00	1.00	1.00	1.00	1.00	1.00
LS	1.75	1.35	-	-	1.35	1.00

DC Dead load of structural components and nonstructural attachments

EHa Horizontal earth pressure load for Active Earth conditions

EHO Horizontal earth pressure load for At-Rest Earth conditions

EVrw Vertical pressure from dead load of earth fill for Retaining Walls and Abutments

LS Live load surcharge

Load Combinations Evaluated

	γ_{DC}	$\gamma_{EH\ Toe}$	$\gamma_{EH\ Heel}$	$\gamma_{EV\ Toe}$	$\gamma_{EV\ Heel}$	γ_{LS}	
Case 1			1.50			1.75	Max
Strength I	0.90	0.90		1.00	1.00		Min
Case 2	1.25		1.50	1.35	1.35	1.75	Max
Strength I		0.90					Min
Case 3	1.00	1.00	1.00	1.00	1.00	1.00	Max
Service I							Min

Case 1 Evaluation for Sliding, Overturning/Eccentricity, and Stem Wall Design

Case 2 Evaluation for Bearing and Typically Base Slab Design

Case 3 Crack Control/Steel Spacing and Minimum Steel Requirements

Resistance Factors

	Value	Type	Source
ϕ_b	0.55	Bearing	Table 11.5.7-1
ϕ_t	0.9	Sliding	Table 10.5.5.2.2-1
ϕ_{ep}	0.5	Pass. Soil	Table 10.5.5.2.2-1
ϕ_v	0.9	Shear	Section 5.5.4.2.1
ϕ_m	0.75 - 0.9	Moment	Section 5.5.4.2.1

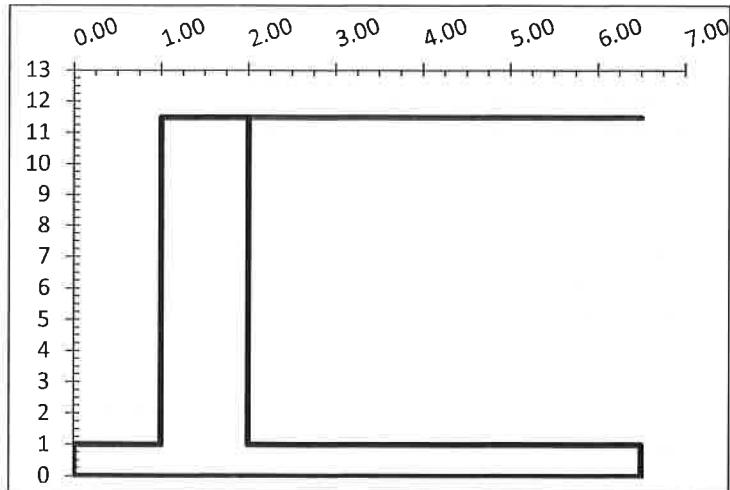
Overall Design Check	OK
	No Issues
Overall Stability Check	OK
	No Issues

Material Properties

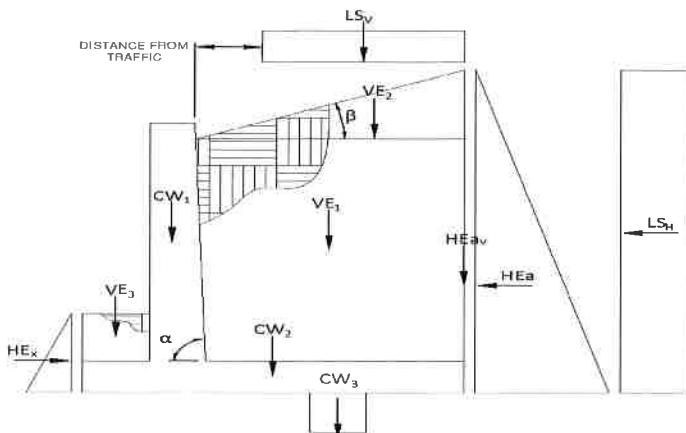
Concrete Compressive Strength (f'_c)	5000 psi	Soil Unit Weight (γ_s)	120 pcf
Concrete Unit Weight (γ_c)	150 pcf	Nominal Bearing Resistance (q_n)	10000 psf
Rebar Yield Strength (f_y)	60 ksi	Foundation Composition	Soil
Rebar Modulus of Elasticity (E_s)	29000 ksi		

Geometry

Average Stem Height	10.5 ft
Stem Thickness at Top	12 in
Stem Taper on Soil Side	0 in/ft
Base Thickness	12 in
Toe Length	1 ft
Heel Length	4.5 ft
Base Pinned by Slab?	No
Shear Key Depth & Thickness	0.0 in 0.0 in
Shear Key Distance from Toe	0.00 ft
Stem Total Taper Length	0 in
Total Base Length	6.50 ft
Total Stem Height	11.50 ft
Section Weight	2550 lb/ft

**Loading****Soil**

Height of Soil Above Heel	10.5 ft
Height of Soil Above Toe	0 ft
Inclination of Soil Over Heel (β)	0 deg
Backfill Internal Angle of Friction (ϕ_f)	33 deg
Base Internal Angle of Friction (ϕ_b)	44 deg
Toe Internal Angle of Friction (ϕ_t)	30 deg
Depth of Scour/Freeze-Thaw (max)	2 ft
Water Table At Top of Slab?	No
Wall-Soil Interface Friction Angle (δ)	20 deg
Wall Inclination Angle (α)	90 deg

**0.28****Unfactored Force Summary**

5.00	3.00	Horizontal Passive Soil Force (HEp)	0 lb/ft
0.48		Horizontal Toe Soil Force (HEo)	0 lb/ft
33.60	pcf	Horizontal Heel Soil Force (HEa)	2088 lb/ft
0.00	pcf	Vertical Component of HEa (HEav)	760 lb/ft
360.00	pcf	Vertical Heel Soil Force (VE1)	5670 lb/ft
57.60	pcf	Vertical Heel Sloping Soil Force (VE2)	0 lb/ft
0.00	ft	Vertical Toe Soil Force (VE3)	0 lb/ft
		Concrete Stem Weight (CW1)	1575 lb/ft
		Concrete Base Weight (CW2)	975 lb/ft
		Concrete Shear Key Weight (CW3)	0 lb/ft
		Lateral LL Surcharge Force (LSH)	773 lb/ft
		Vertical LL Surcharge Force (LSv)	600 lb/ft

Live Load Surcharge

Yes

Distance from Wall to Traffic	2 ft
Equivalent Height of Soil (h_{eq})	2 ft
Lateral Live Load Surcharge Pressure	67.20 psf
Vertical Live Load Surcharge Pressure	240 psf

Unfactored Loads and Moments About the Toe**Vertical Components**

Load Identifier	Value	Moment Arm	Moment
Vertical Component of HEa (HEa _v)	760 lb/ft	6.50 ft	4939 lb-ft/ft
Vertical Heel Soil Force (VE ₁)	5670 lb/ft	4.25 ft	24098 lb-ft/ft
Vertical Heel Slop. Soil Force (VE ₂)	0 lb/ft	5.00 ft	0 lb-ft/ft
Vertical Toe Soil Force (VE ₃)	0 lb/ft	0.50 ft	0 lb-ft/ft
Concrete Stem Weight (CW ₁)	1575 lb/ft	1.50 ft	2363 lb-ft/ft
Concrete Base Weight (CW ₂)	975 lb/ft	3.25 ft	3169 lb-ft/ft
Concrete Shear Key Weight (CW ₃)	0 lb/ft	0.00 ft	0 lb-ft/ft
Vertical LL Surcharge Force (LS _v)	600 lb/ft	5.25 ft	3150 lb-ft/ft

Horizontal Components

Load Identifier	Value	Moment Arm	Moment
Horizontal Toe Soil Force (HEp1)	0 lb/ft	-0.33 ft	0 lb-ft/ft
Horizontal Toe Soil Force (HEo)	0 lb/ft	1.00 ft	0 lb-ft/ft
Horizontal Heel Soil Force (HEa)	2088 lb/ft	3.83 ft	8003 lb-ft/ft
Lateral LL Surcharge Force (LS _H)	773 lb/ft	5.75 ft	4444 lb-ft/ft
Horizontal Shear Key Force (HEp2)	0 lb/ft	0.00 ft	0 lb-ft/ft

Factored Loads and Moments About the Toe**Strength Load Combinations**

	Case 1		Case 2		Case 3	
	Shear	Moment	Shear	Moment	Shear	Moment
HEa _v	1140	7409	1140	7409	760	4939
VE ₁	5670	24098	7655	32532	5670	24098
VE ₂	0	0	0	0	0	0
VE ₃	0	0	0	0	0	0
CW ₁	1418	2126	1969	2953	1575	2363
CW ₂	878	2852	1219	3961	975	3169
CW ₃	0	0	0	0	0	0
LS _v	1050	5513	1050	5513	600	3150
HEp1	0	0	0	0	0	0
HEo	0	0	0	0	0	0
HEa	3132	12005	3132	12005	2088	8003
LS _H	1352	7776	1352	7776	773	4444
HEp2	0	0	0	0	0	0
	lb/ft	lb-ft/ft	lb/ft	lb-ft/ft	lb/ft	lb-ft/ft

HEa _v	Vertical Component of HEa	LS _v	Vertical LL Surcharge Force
VE ₁	Vertical Heel Soil Force	HEp	Horizontal Toe Soil Force (Passive)
VE ₂	Vertical Heel Sloping Soil Force	HEo	Horizontal Toe Soil Force (At-Rest)
VE ₃	Vertical Toe Soil Force	HEa	Horizontal Heel Soil Force
CW ₁	Concrete Stem Weight	LS _H	Lateral LL Surcharge Force
CW ₂	Concrete Base Weight	CW ₃	Concrete Key Weight



CUSTOMER: RiverRidge Eng.

BY: Andrew Burke, PE

A CRH COMPANY

JOB: Harris Ranch

DATE: 8/10/2020

PRODUCT: Wing Wall

CHECKED: 0

Stability**Eccentricity Evaluation (Overturning)**

AASHTO 11.6.3.3

	Resultant_v	Moment_v	Moment_H	X	e	e_{max}	Check
Case 1	10155	41997	19781	2.19	-1.06	2.17	OK
Case 1b	9105	36485	19781	1.83	-1.42	2.17	OK
Case 2	13032	52367	19781	2.50	-0.75	2.17	OK
Case 3	9580	37718	12447	2.64	-0.61	2.17	OK
	<i>lb/ft</i>	<i>lb-ft/ft</i>	<i>lb-ft/ft</i>	<i>ft</i>	<i>ft</i>	<i>ft</i>	

Resultant_v Summation of individual vertical component forces**Moment_v** Summation of the individual vertical component moments**Moment_H** Summation of the individual horizontal component moments**X** Location of Resultant Force to the right of the toe edge**e** Eccentric distance of Resultant Force from midpoint of base - negative towards Toe, positive towards Heel**e_{max}** Maximum allowable eccentric distance of Resultant Force, on either side of midpoint of base**Bearing Resistance Evaluation**

AASHTO 11.6.3.2

	Resultant_v	e	σ_v(max)	σ_v@key	σ_v(min)	Contact L	φq_n	Check
Case 1	10155	-1.06	2321	2321	#N/A	4.38	5500	OK
Case 2	13032	-0.75	2606	2606	#N/A	5.00	5500	OK
Case 2b	11982	-0.99	2651	2651	#N/A	4.52	5500	OK
Case 3	9580	-0.61	1816	1816	#N/A	5.28	10000	OK
	<i>lb/ft</i>	<i>ft</i>	<i>psf</i>	<i>psf</i>	<i>psf</i>	<i>ft</i>	<i>psf</i>	

σ_v Bearing pressure due to eccentric load**φq_n** Bearing resistance from Ultimate Bearing Capacity**Sliding Resistance Evaluation**

AASHTO 10.6.3.4

Include Passive Resistance? Key Only

	Total_{hor}	Normal Force			R_t	R_{es}	φR_n	Check
		Resultant_v	Soil-Soil	Conc.-Soil				
Case 1	4484	10155	0	10155	7845	0	7061	OK
Case 1b	4484	9105	0	9105	7034	0	6331	OK
Case 2	4484	13032	0	13032	10068	0	9061	OK
Case 3	2861	9580	0	9580	7401	0	7401	OK
	<i>lb/ft</i>	<i>lb/ft</i>	<i>lb/ft</i>	<i>lb/ft</i>	<i>lb/ft</i>	<i>lb/ft</i>	<i>lb/ft</i>	

Total_{hor} Total horizontal component forces against the back of the stem**R_t** Horizontal resistance from vertical components**R_{es}** Horizontal resistance from passive soil**φR_n** Total horizontal resistance**Soil-Soil** Total vertical component forces resisted by soil to soil friction in front of the shear key**Conc.-Soil** Total vertical component forces resisted by conc to soil friction on and behind the shear key

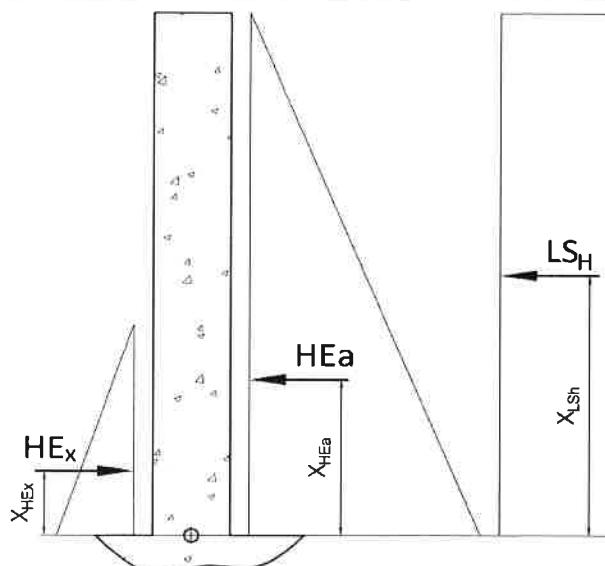
Stem Wall Design**Geometry**

Stem Thickness	12 in
Average Stem Height	10.50 ft
Soil Height Above Heel at Stem	10.50 ft
Total Soil Height Above Toe	0.00 ft
Live Load Surcharge Height	2.00 ft
Height of Sloping Soil Above Heel	0.00 ft

Soil Over Toe

Include Soil Above Toe?*	No
No Soil Pressure Coefficient	0.00
Resisting Lateral Soil Pressure	57.60 pcf

*Adds all lateral effects of At-Rest Soil to Stem Wall Design

**Unfactored Loads and Moments at Bottom of the Stem**

	Pressure	Force	Xn	Moment
HEa	34 pcf	1740 lb/ft	3.50 ft	6092 lb-ft/ft
HEo	0 pcf	0 lb/ft	-0.67 ft	0 lb-ft/ft
LS _H	67 psf	706 lb/ft	5.25 ft	3704 lb-ft/ft

Factored Loads and Moments at Bottom of Stem

	HEa	HEo	LS _H	Total	
Case 1	Shear	2611	0	1235	3846 lb/ft
	Moment	9138	0	6483	15620 lb-ft/ft
Case 2	Shear	2611	0	1235	3846 lb/ft
	Moment	9138	0	6483	15620 lb-ft/ft
Case 3	Shear	1740	0	706	2446 lb/ft
	Moment	6092	0	3704	9796 lb-ft/ft

Design Shear and Moment

V _u	3846 lb/ft	Controlling Case: Case 1
M _u	15620 lb-ft/ft	Controlling Case: Case 1
M _s	9796 lb-ft/ft	Controlling Case: Case 3

Load Resistance

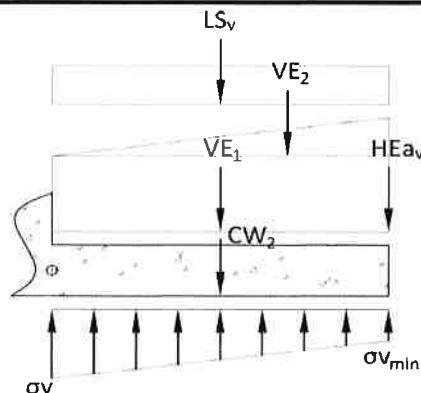
Design Strip Width	12 in
Concrete Cover	2 in
Reinforcing Bar Size	5
Reinforcing Bar Spacing	8 in
Transverse Bar Size	4
Transverse Bar Spacing	18 in
Effective Depth	9.69 in
Area of Steel Provided	0.460 in ²
Transverse Area of Steel	0.131 in ²

ΦV _n	14774 lb/ft	Check	OK
ΦM _n	19501 lb-ft/ft	Check	OK
A _s _{min}	0.323 in ²	Check	OK
S _p _{max}	13.81 in	Check	OK
A _s _{temp}	0.110 in ²	Check	OK
S _p _{tempmax}	18.00 in	Check	OK

NOTE: Stem shall be reinforced with temperature & shrinkage (transverse) reinforcing on non-soil-side when design steel isn't on centerline

Heel Design**Geometry**

Toe Length	12 in
Stem Thickness at Base	12 in
Base Thickness	12 in
Heel Length	4.50 ft
Height of Soil Above Heel	10.50 ft
Height of Sloping Soil Above Heel	0.00 ft

**Unfactored Loads and Moments at the Stem**

	Pressure	Force	Xn	Moment
LS_v	240 psf	600 lb/ft	3.25 ft	1950 lb-ft/ft
VE_1	1260 psf	5670 lb/ft	2.25 ft	12758 lb-ft/ft
VE_2	0 psf	0 lb/ft	3.00 ft	0 lb-ft/ft
HE_{av}	-	633 lb/ft	4.50 ft	2851 lb-ft/ft
$CW_{2\text{heel}}$	150 psf	675 lb/ft	2.25 ft	1519 lb-ft/ft
CW_3	0 psf	0 lb/ft	0.00 ft	0 lb-ft/ft

Factored Loads and Moments at the Stem

		LS_v	VE_1	VE_2	HE_{av}	$CW_{2\text{and}3}$	Total	
Case 1	<i>Shear</i>	1050	5670	0	950	608	8278	<i>lb/ft</i>
	<i>Moment</i>	3413	12758	0	4276	1367	21813	<i>lb-ft/ft</i>
Case 2	<i>Shear</i>	1050	7655	0	950	844	10498	<i>lb/ft</i>
	<i>Moment</i>	3413	17223	0	4276	1898	26810	<i>lb-ft/ft</i>
Case 3	<i>Shear</i>	600	5670	0	633	675	7578	<i>lb/ft</i>
	<i>Moment</i>	1950	12758	0	2851	1519	19077	<i>lb-ft/ft</i>

Bearing Resistance & Design Loading

	$\sigma v_{\text{heelmax}}$	$\sigma v_{\text{heelmin}}$	V_u_{bearing}	M_u_{bearing}	V_u_{net}	M_u_{net}	P_u_{net}	
Case 1	2321	0	5513	6548	2765	15265	3846	Controlling Case
Case 2	2606	0	7820	11734	2678	15076	3846	
Case 3	1816	0	5948	9743	1630	9334	2446	
	<i>psf</i>	<i>psf</i>	<i>lb/ft</i>	<i>lb/ft</i>	<i>lb/ft</i>	<i>lb-ft/ft</i>	<i>lb/ft</i>	

Load Resistance

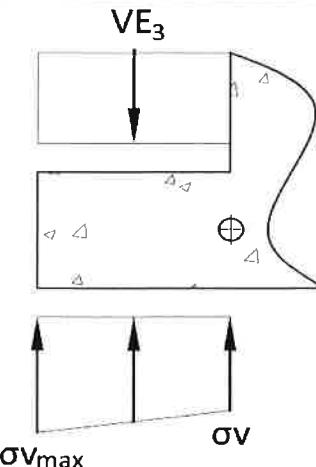
Design Strip Width	12 in
Concrete Cover	2 in
Reinforcing Bar Size	5
Reinforcing Bar Spacing	8 in
Transverse Bar Size	4
Transverse Bar Spacing	18 in
Effective Depth	9.69 in
Area of Steel Provided	0.460 in ²
Transverse Area of Steel	0.131 in ²

ϕV_n	12513 lb/ft	Check	OK
ϕM_n	16483 lb-ft/ft	Check	OK
$A_s \text{min}$	0.287 in ²	Check	OK
$S_p \text{max}$	11.54 in	Check	OK
$A_s \text{temp}$	0.110 in ²	Check	OK
$S_p \text{tempmax}$	18.00 in	Check	OK

NOTE: Underside of heel shall be reinforced with temperature & shrinkage (transverse) reinforcing when required

Toe Design**Geometry**

Toe Length	12 in
Stem Thickness at Base	12 in
Base Thickness	12 in
Heel Length	4.50 ft
Height of Soil Above Toe	0.00 ft
Include Soil Over Toe?	Yes

**Unfactored Loads and Moments at the Stem**

	Pressure	Force	Xn	Moment
VE ₃	0 psf	0 lb/ft	0.50 ft	0 lb-ft/ft
CW _{2toe}	150 psf	150 lb/ft	0.50 ft	75 lb-ft/ft
CW ₃	0 psf	0 lb/ft	1.00 ft	0 lb-ft/ft

Factored Loads and Moments at the Stem

	VE ₃	CW _{2toe}	CW ₃	Total	
Case 1	Shear	0	135	0	135 lb/ft
	Moment	0	68	0	68 lb-ft/ft
Case 2	Shear	0	188	0	188 lb/ft
	Moment	0	94	0	94 lb-ft/ft
Case 3	Shear	0	150	0	150 lb/ft
	Moment	0	75	0	75 lb-ft/ft

Bearing Resistance & Design Loading

	σV _{toemax}	σV _{toemin}	V _u _{bearing}	M _u _{bearing}	V _u _{net}	M _u _{net}	
Case 1	2321	2321	2321	1160	-2186	-1093	
Case 2	2606	2606	2606	1303	-2418	-1209	
Case 3	1816	1816	1816	908	-1666	-833	
	psf	psf	lb/ft	lb-ft/ft	lb/ft	lb-ft/ft	Controlling Case

Load Resistance

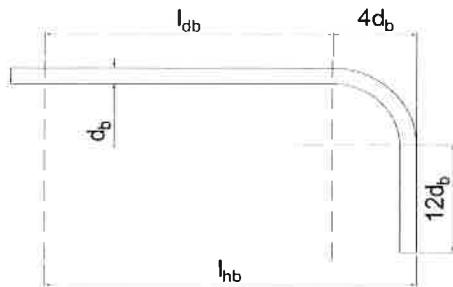
Design Strip Width	12 in
Concrete Cover	2 in
Reinforcing Bar Size	5
Reinforcing Bar Spacing	8 in
Transverse Bar Size	4
Transverse Bar Spacing	18 in
Effective Depth	9.69 in
Area of Steel Provided	0.460 in ²
Transverse Area of Steel	0.131 in ²

φV _n	27122 lb/ft	Check	OK
φM _n	19501 lb-ft/ft	Check	OK
A _s _{min}	0.037 in ²	Check	OK
S _p _{max}	18.00 in	Check	OK
A _s _{temp}	0.110 in ²	Check	OK
S _p _{tempmax}	18.00 in	Check	OK

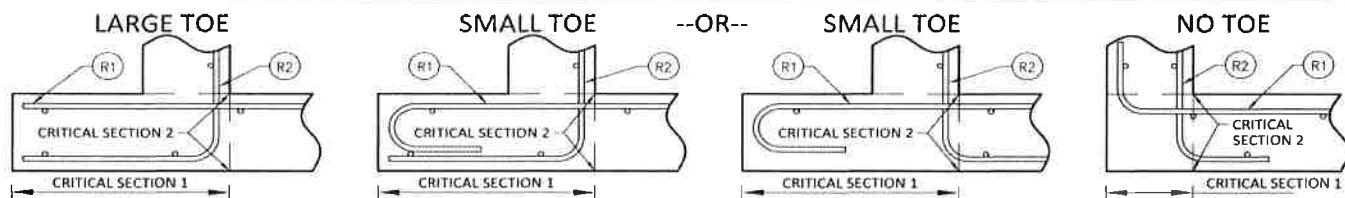
NOTE: Topside of toe shall be reinforced with temperature & shrinkage (transverse) reinforcing when required

Reinforcing Details**Development Length**

Toe Classification	Large Toe
Toe Length	12 in
Stem Thickness at Base	12 in
Base Thickness	12 in
Epoxy Coated Bars?	No



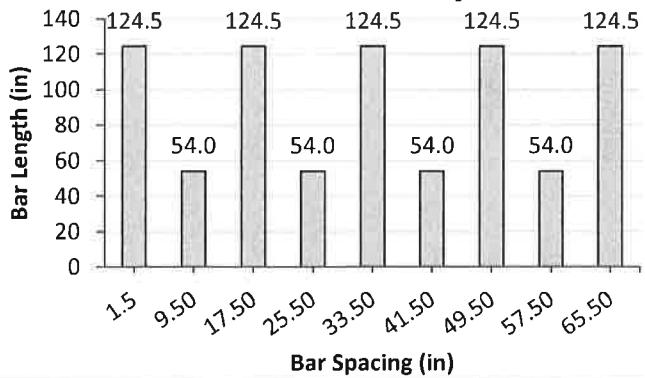
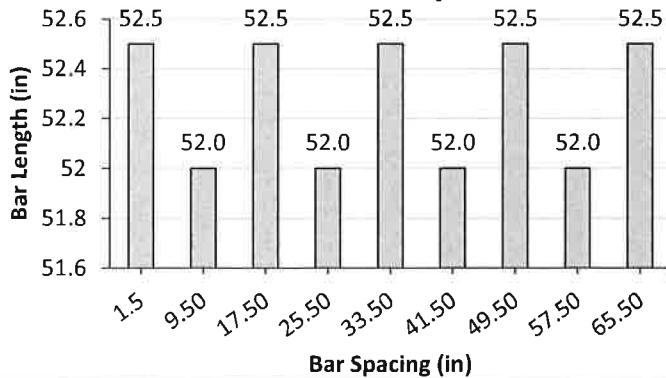
	Bar Size	Diameter	Clearance	Spacing	Straight Dev. Length (l_{db})	Hook Dev. Length (l_{hb})
Heel (R1)	5	0.625	2.00	8.00	12.00	6.62
Stem (R2)	5	0.625	2.00	8.00	12.00	6.00
Toe (R2)	5	0.625	2.00	8.00	12.00	6.00
	<i>u/l</i>	<i>in</i>	<i>in</i>	<i>in</i>	<i>in</i>	<i>in</i>

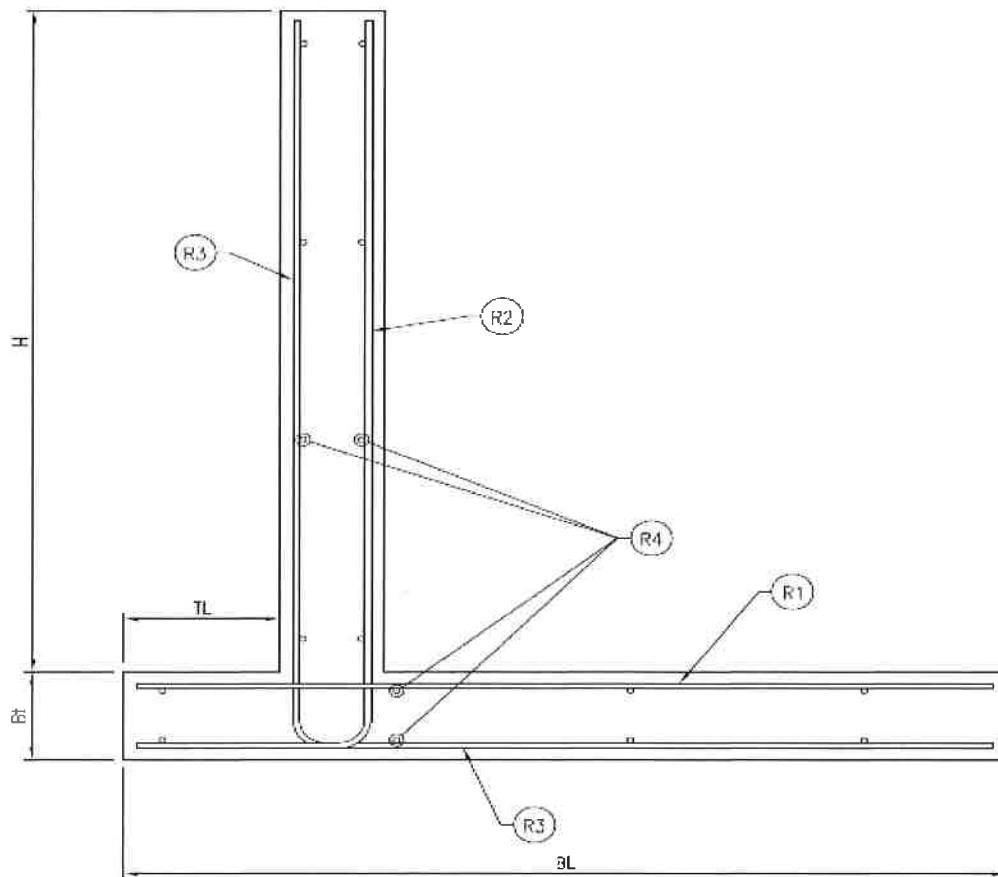
**Dimension Validation**

	Type	Tail Direction	Req. Critical Section 1	Req. Critical Section 2	Check
Heel (R1)	Straight	-	13.50 in	12.00 in	OK
Stem (R2)	L-Bar	Into Toe	11.00 in	8.00 in	OK
Toe (R2)	L-Bar	Into Stem	8.00 in	9.50 in	OK

Rebar Reduction

	Bar Size	Increased Spacing	As Prov.	Cutoff Length	Check
Heel (R1)	5	16.0	0.230	52.0	OK
Stem (R2)	5	16.0	0.230	54.0	OK
	<i>u/l</i>	<i>in</i>	<i>in</i> ²	<i>in</i>	

Stem Rebar Layout**Heel Rebar Layout**

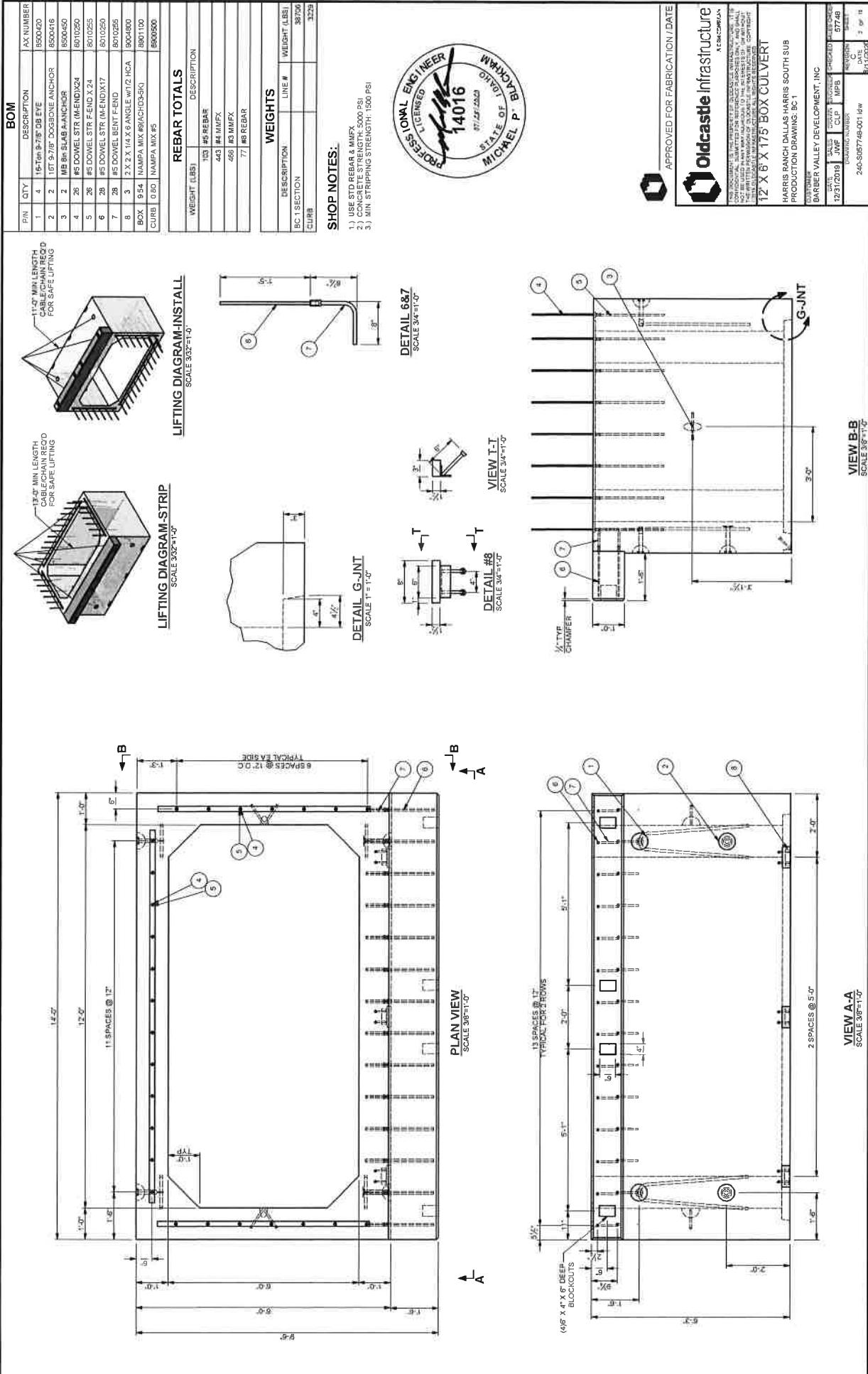
Reinforcing Summary

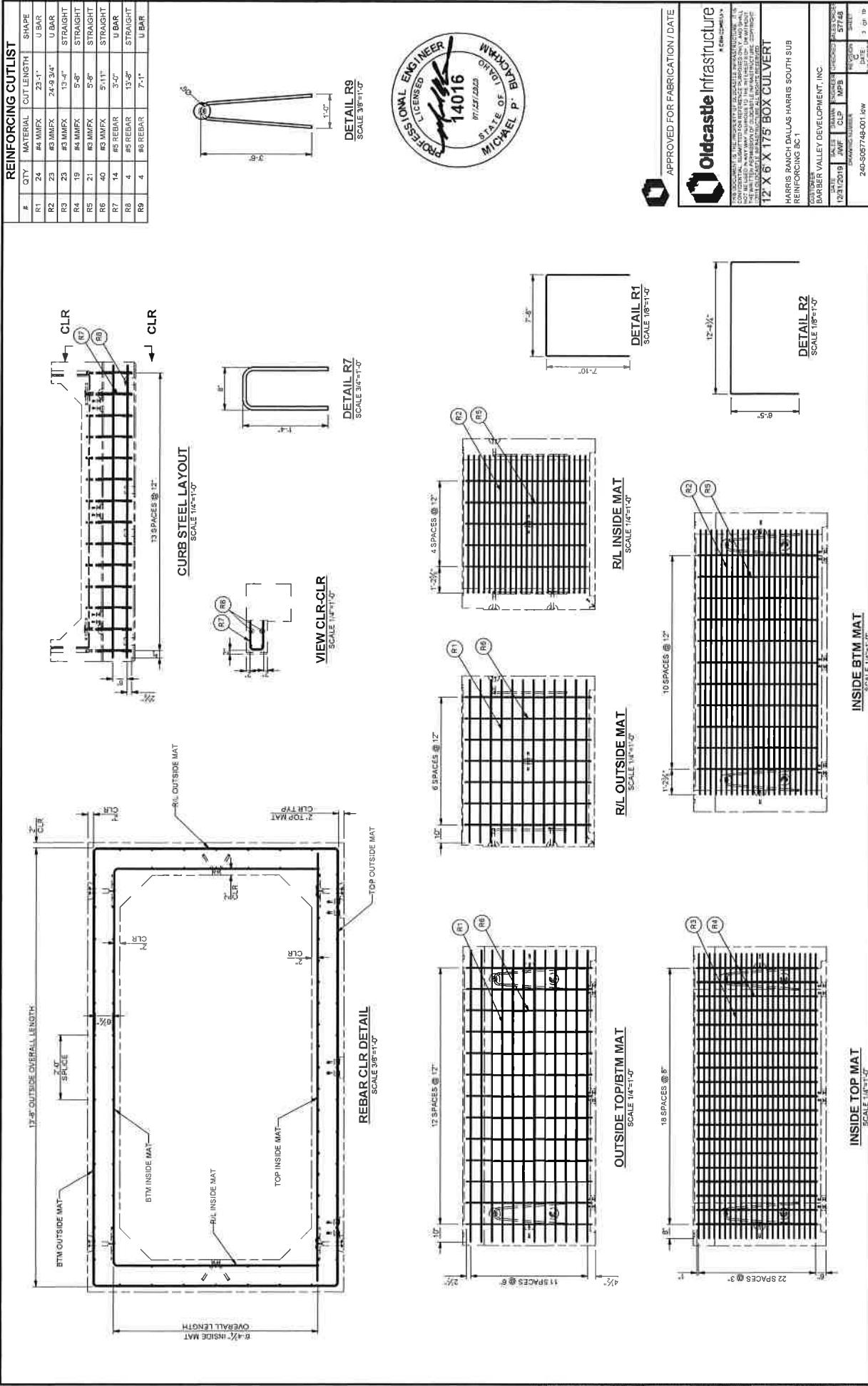
H: 10.5 ft TL: 1 ft
BL: 6.500 ft BT: 12 in

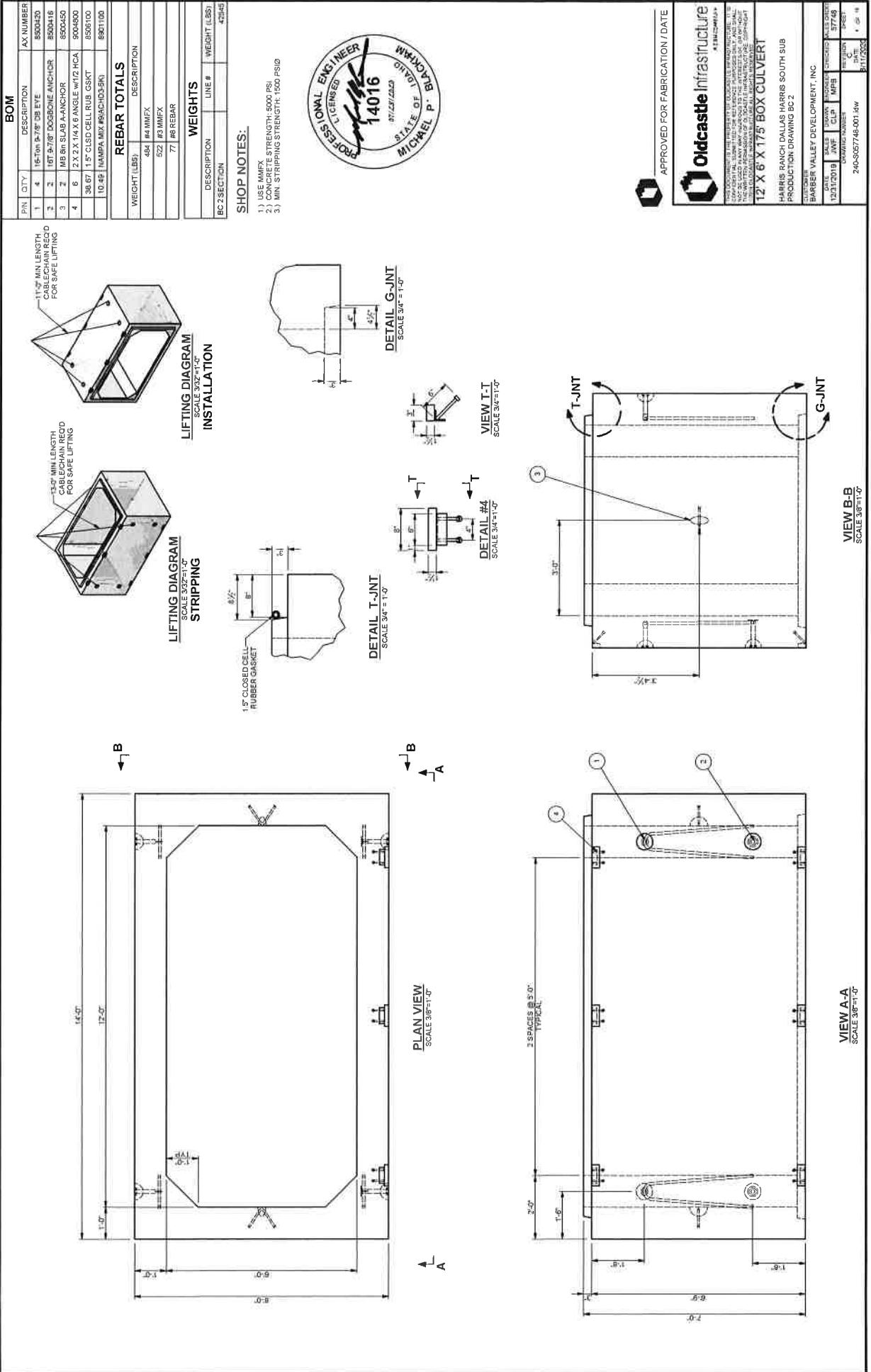
	Bar Size	Spacing	Clearance	Type
R1	5	8	2	L-Bar
R2	5	8	2	L-Bar
R3	4	18	2	L-Bar
R4	4	18	-	Straight
-	-	-	-	-
	u/l	in	in	

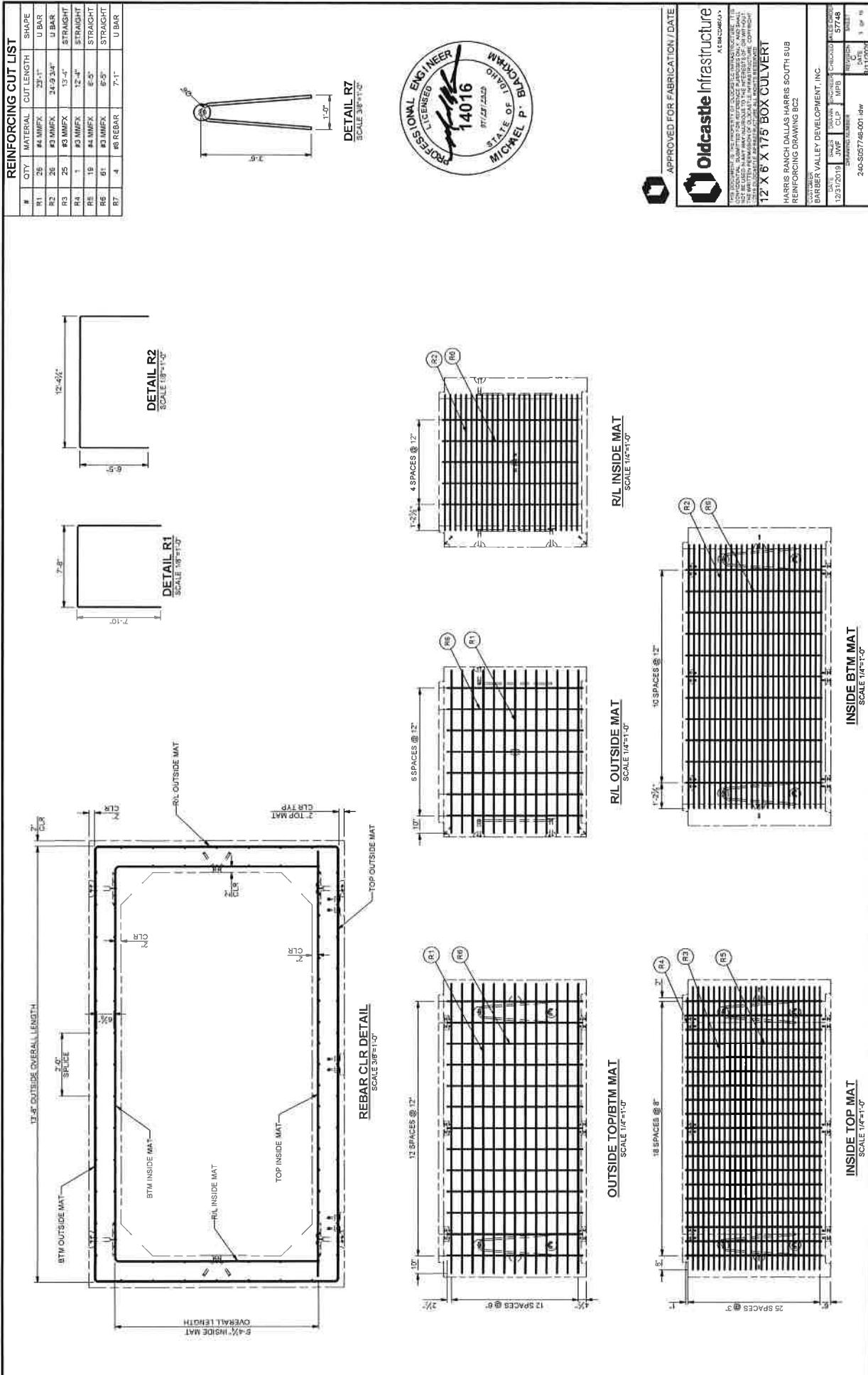
Special Notes

- R1 *Every other bar may be cut at a distance 52 in. from the back face of the stem. (See Heel Rebar Layout)
Bar terminates in the Stem as a Standard Bend L-Bar, minimum tail length is 7.5 in.*
- R2 *Every other bar may be cut at a distance 54 in. from the top face of the heel. (See Stem Rebar Layout)
Bar terminates in the Toe as a Standard Bend L-Bar, minimum tail length is 7.5 in.*

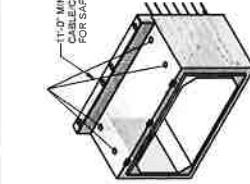




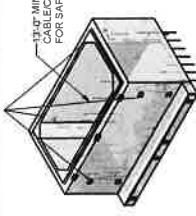




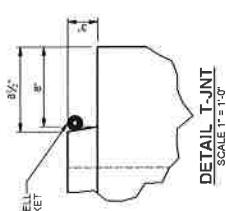
PIN	QTY	DESCRIPTION	AX NUMBER
1	4	15-75 μF/10V DB E/EY	88000420
2	2	15V 100μF/10V ANCHOR	88000415
3	3	200 μF/10V LAB ANCHOR	88000450
4	25	#5 CONEL STR-FEND X24	88072575
5	26	#5 CONEL STR-M (END)X24	88012550
6	28	#5 CONEL STR-M (END)X17	88012550
7	26	#5 CONEL STR-FEND	88012555
8	3	2.5 X 3.1 X 1.4 CM ANGLE w/HOLE	88000830
18-57	1	C1500 CELL RUBBER S55T	88061000
BLOCK	1	NAMPA M/T (HICD-5N)	88011000
CURB	10.56	NAMPA M/T (HICD-5N)	88000500
CURB	9.80	NAMPA M/T (HICD-5N)	88000500



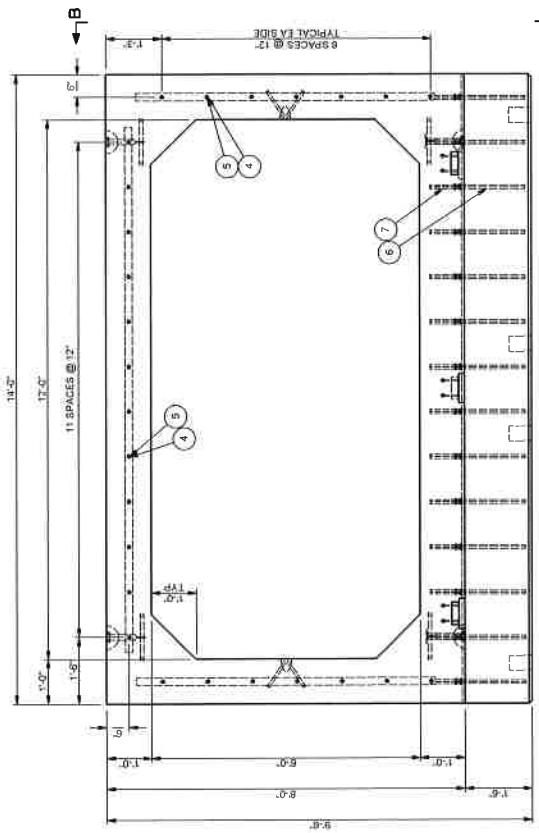
LIFTING DIAGRAM-INSTALL



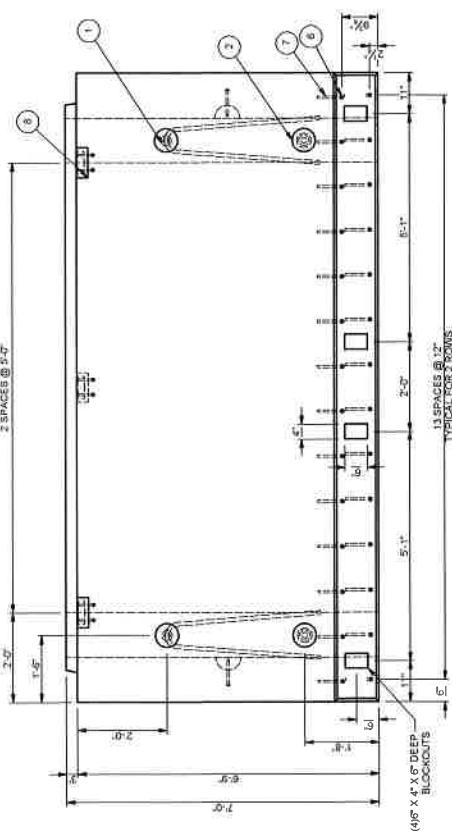
LIFTING DIAGRAM-STRIP



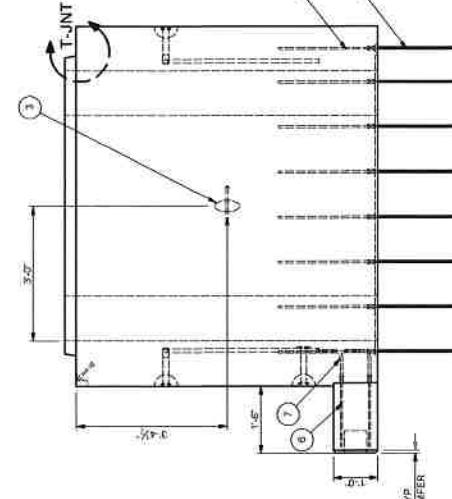
DETAIL T-JNT
SCALE 1" = 1'-0"



PLAN VIEW
SCAFFOLD 3/8" x 1" -



VIEW A-A

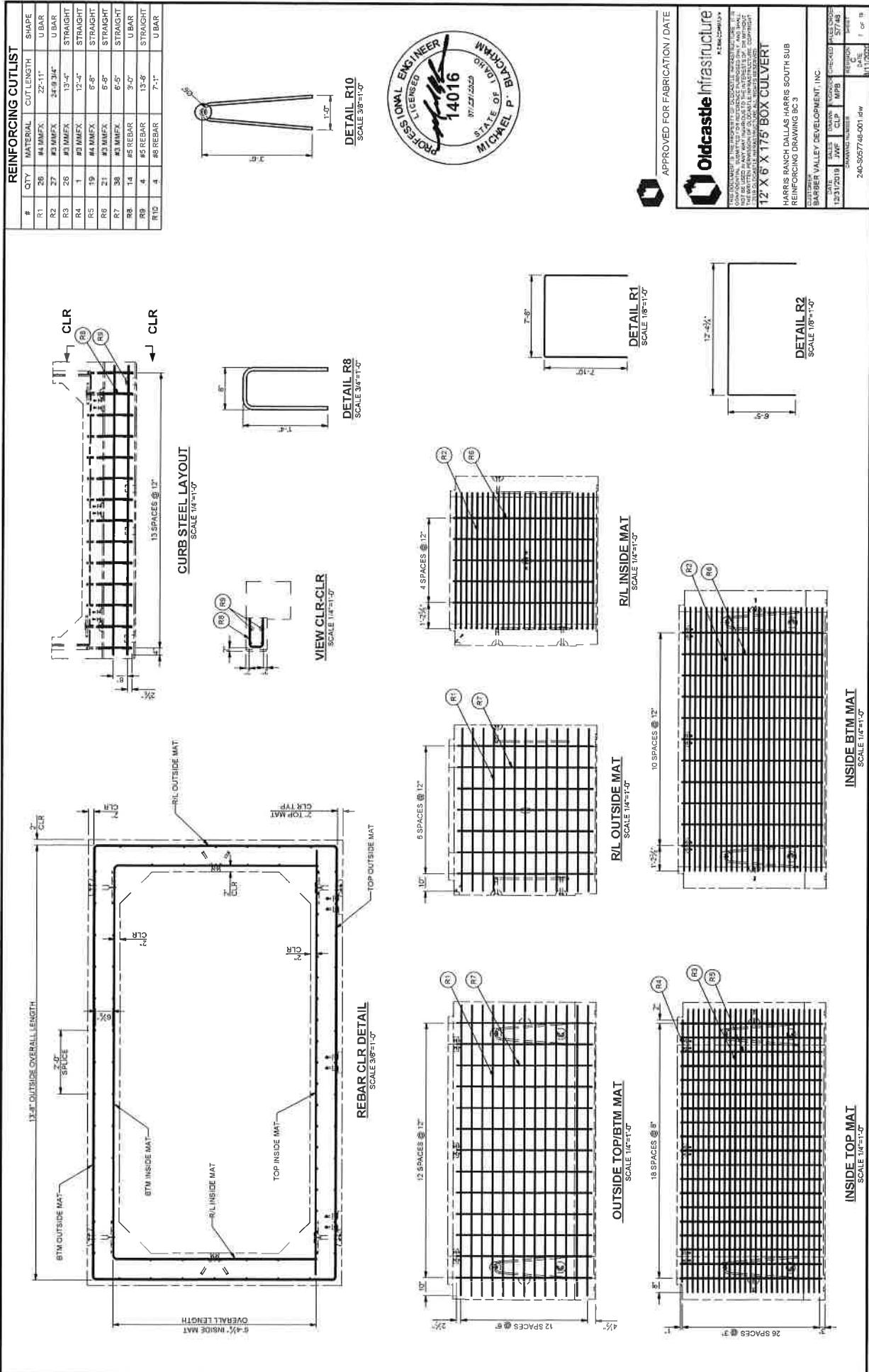


VIEW B-B
SCAIF 3/80 = 1:57



Oldcastle Infrastructure
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REBAR TOTALS		
PIN	QTY	DESCRIPTION
1	6	16# S-75 LOGDRIVE ANCHOR
2	7	#5 DOWEL BEAT-F-END
3	1	#5 DOWEL STR (M-EHD)X24
4	10	#5 DOWEL STR FANIX 2 X 24
5	5	#5 DOWEL STR (M-EHD)X24
	52	NAMPA MEDIUM DESIGN #5

REBAR TOTALS

ITEM #	DESCRIPTION
WEIGHT (LBS)	
262	#5 REBAR
244	#4 REBAR

WEIGHTS

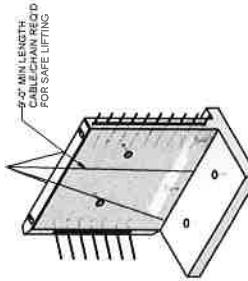
DESCRIPTION	LINE #	WEIGHT (LBSS)
WING WALL 1		2523
LOOR		

SHOP NOTES:

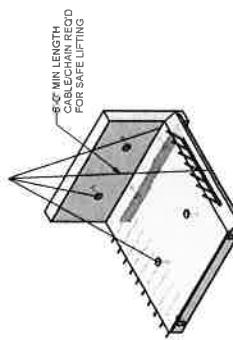
- 1) USE SID REBAR
- 2) CONCRETE STRENGTH: 5000 PSI
- 3) MIN STRIPPING STRENGTH: 1500 PSI



APPROVED FOR FABRICATION / DATE

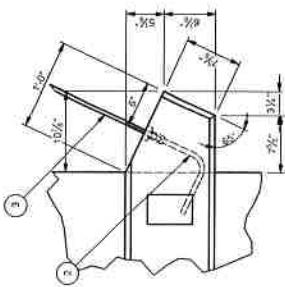


LIFTING DIAGRAM

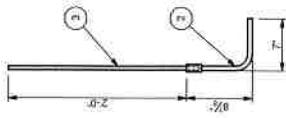


LIFTING DIAGRAM

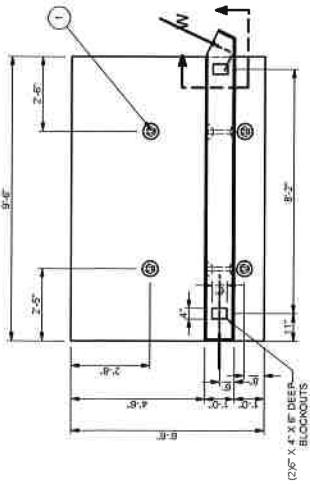
SCALE 1/8" = 1'-0"
STRIPPING



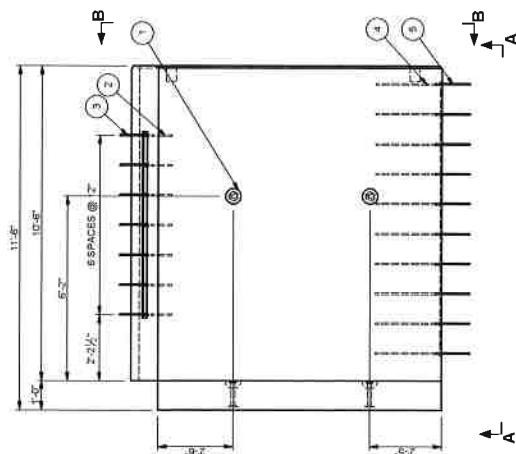
DETAIL #2-3



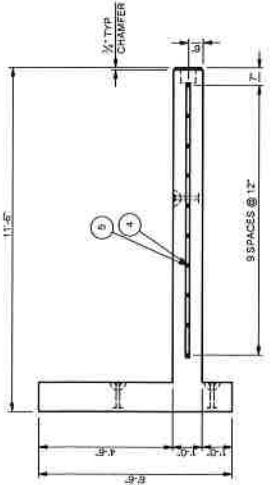
DETAIL W



VIEW B-B

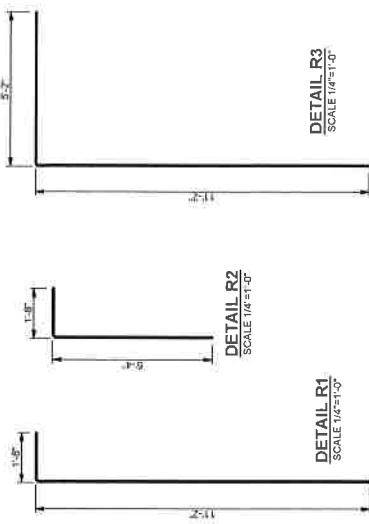


PLAN VIEW SCALE 1/4"=1'-0"



VIEW A-A

REINFORCING CUTLIST					
#	QTY	MATERIAL	CUT LENGTH	SHAPE	
R1	81	B	#5 REBAR	12'-3"	L-BAR
R2	7	B	#5 REBAR	6'-10"	L-BAR
R3	8	B	#4 REBAR	16'-2 1/2"	L-BAR
R4	15	B	#4 REBAR	8'-6"	L-BAR
R5	17	B	#4 REBAR	9'-2"	Straight
R6	7	B	#4 REBAR	9'-2"	Straight
R7	1	B	#4 REBAR	10'-2"	Straight

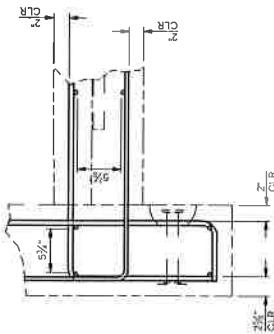


DETAIL R3
SCALE 1/4"=1'-0"

DETAIL R2
SCALE 1/4" = 1'-0"

DETAIL R1
SCALE 1/4"=1'-0"

DETAIL R4
SCALE 1/4"=1'-0"

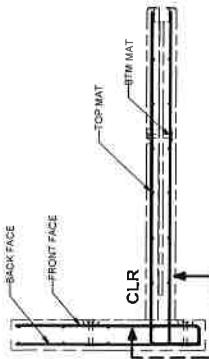


DETAIL CLR
SCALE 3/4"=1'-0"

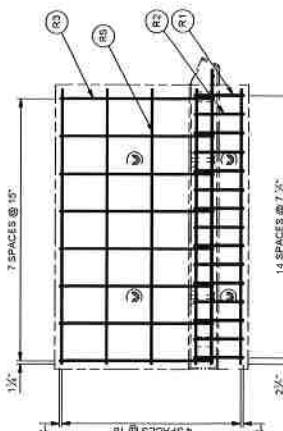


APPROVED FOR FABRICATION / DATE

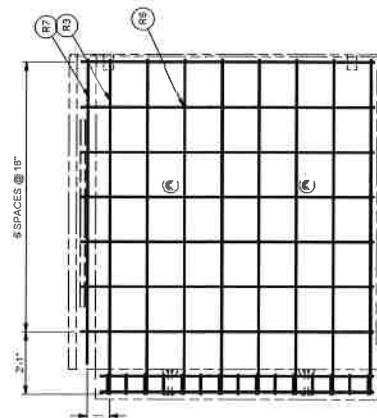
REBAR CLR



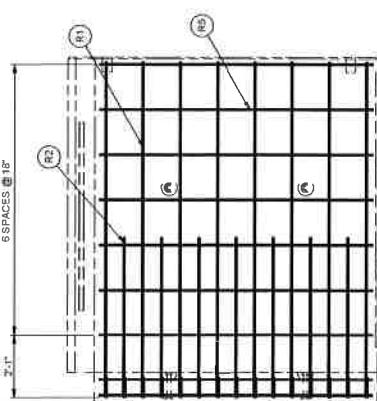
BACK FACE



BTM MAT
SCALE 1/4"=1'-0"



TOP MAT
SCALE 1/4"=1'-0"

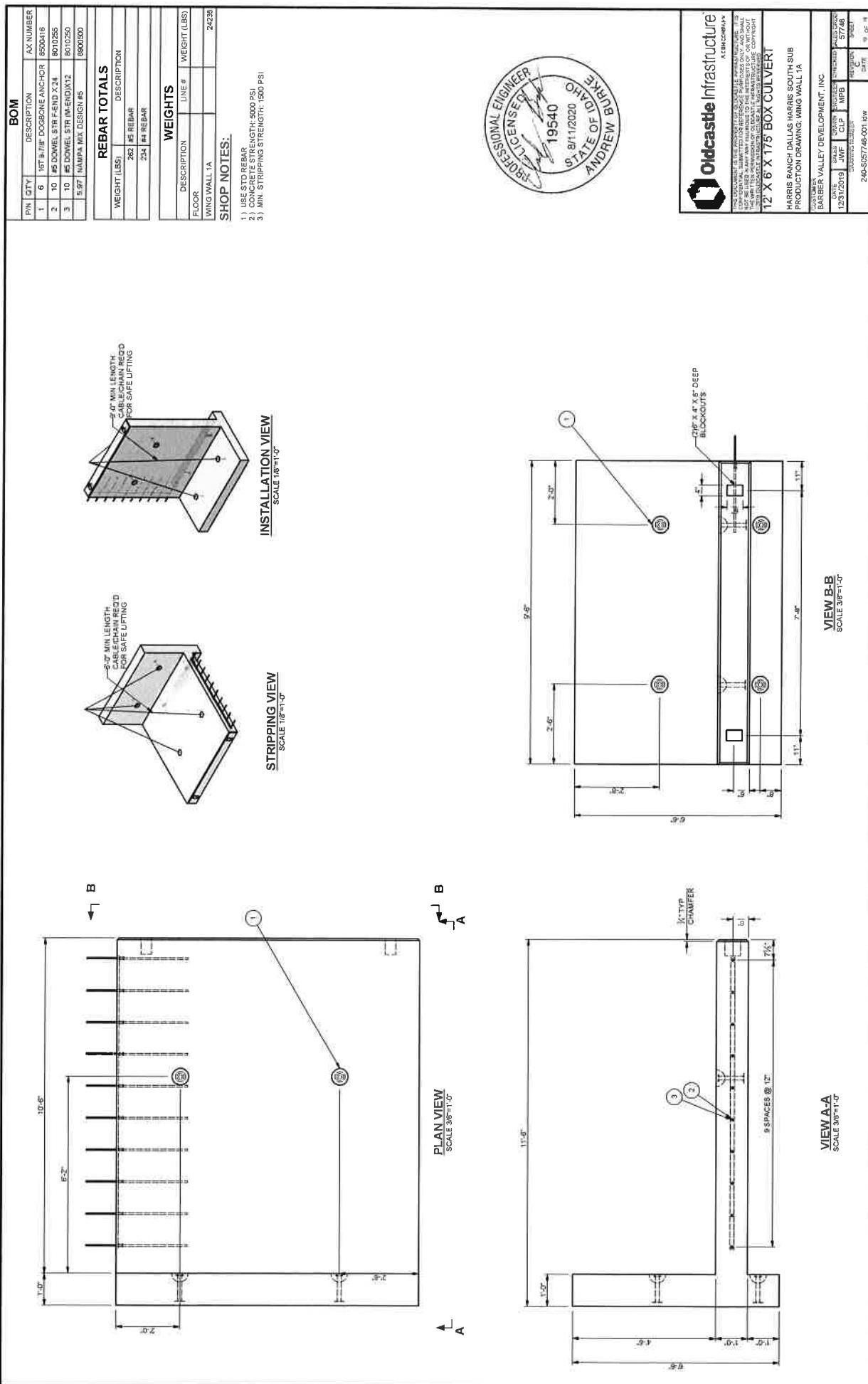


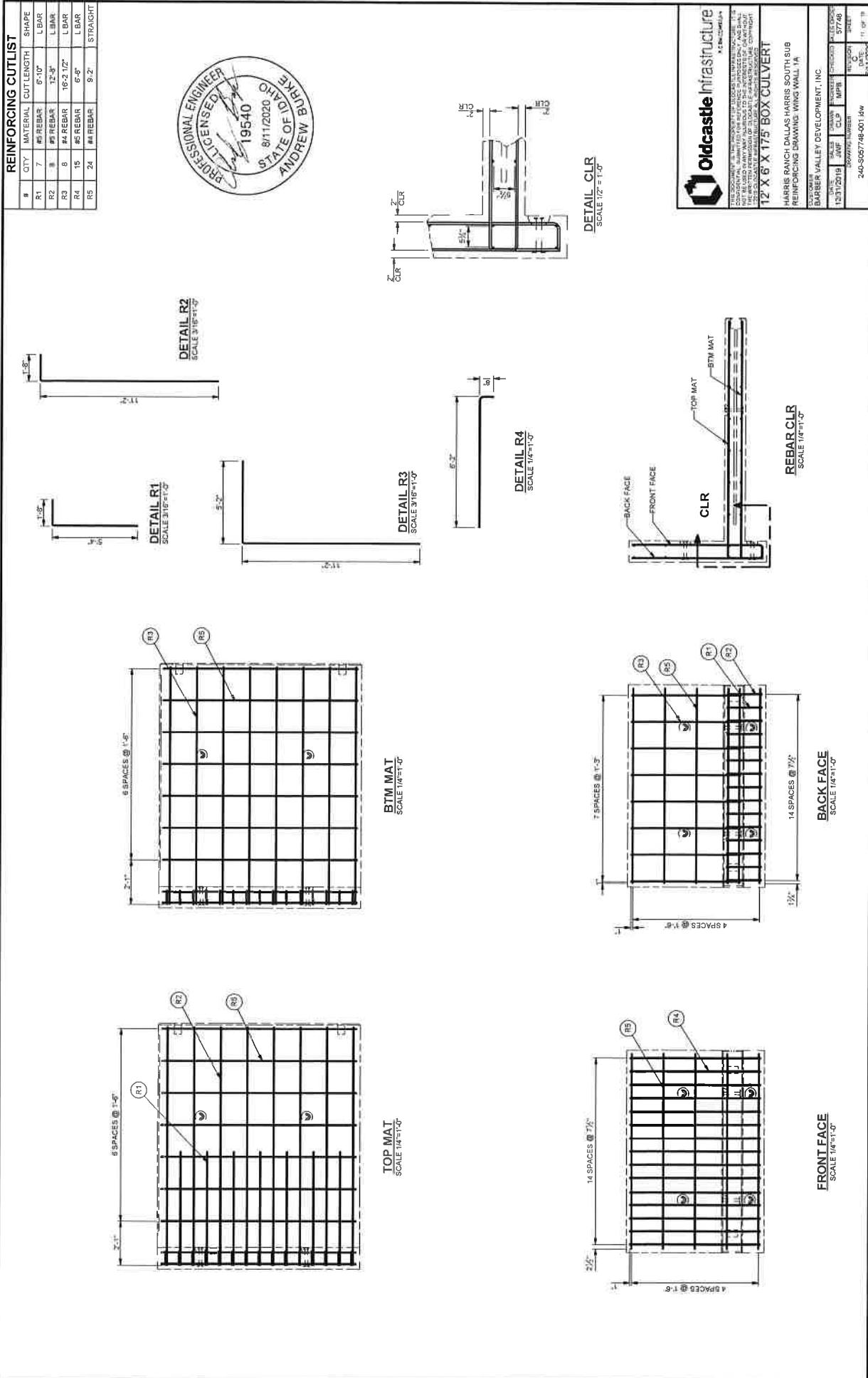
The diagram illustrates a rectangular reinforcement cage for a concrete column. It features 14 vertical bars spaced evenly along its height, with a note indicating "14 SPACES @ 7 1/2"". There are also 6 horizontal bars spanning the width of the cage. The bars are labeled with numbers: (14) at the top, (6) on the left side, (15) in the center, (16) on the right side, and (6) at the bottom. The entire cage is enclosed in a dashed rectangular outline.

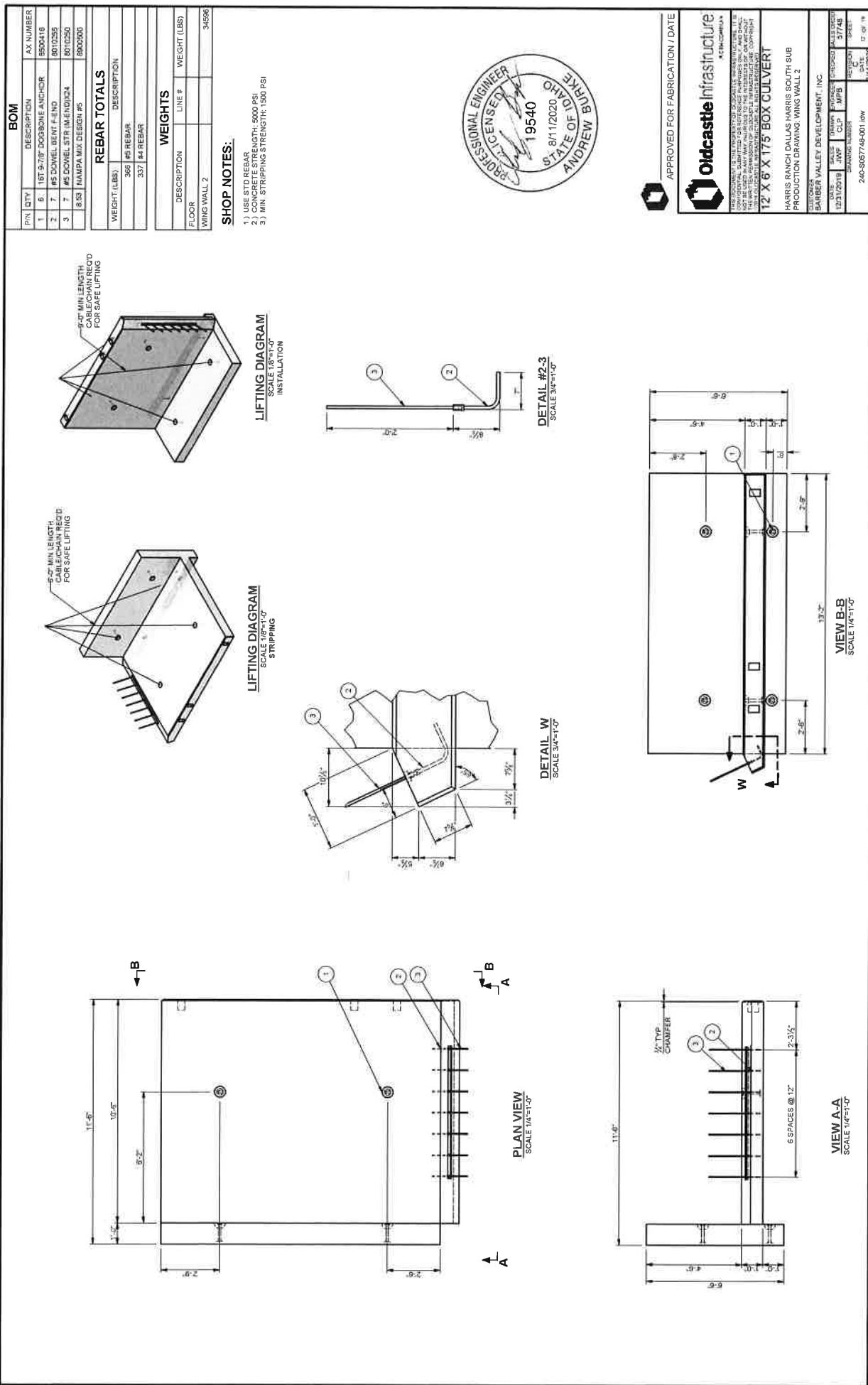
FRONT FACE
SCALE 1/4" = 1'-0"

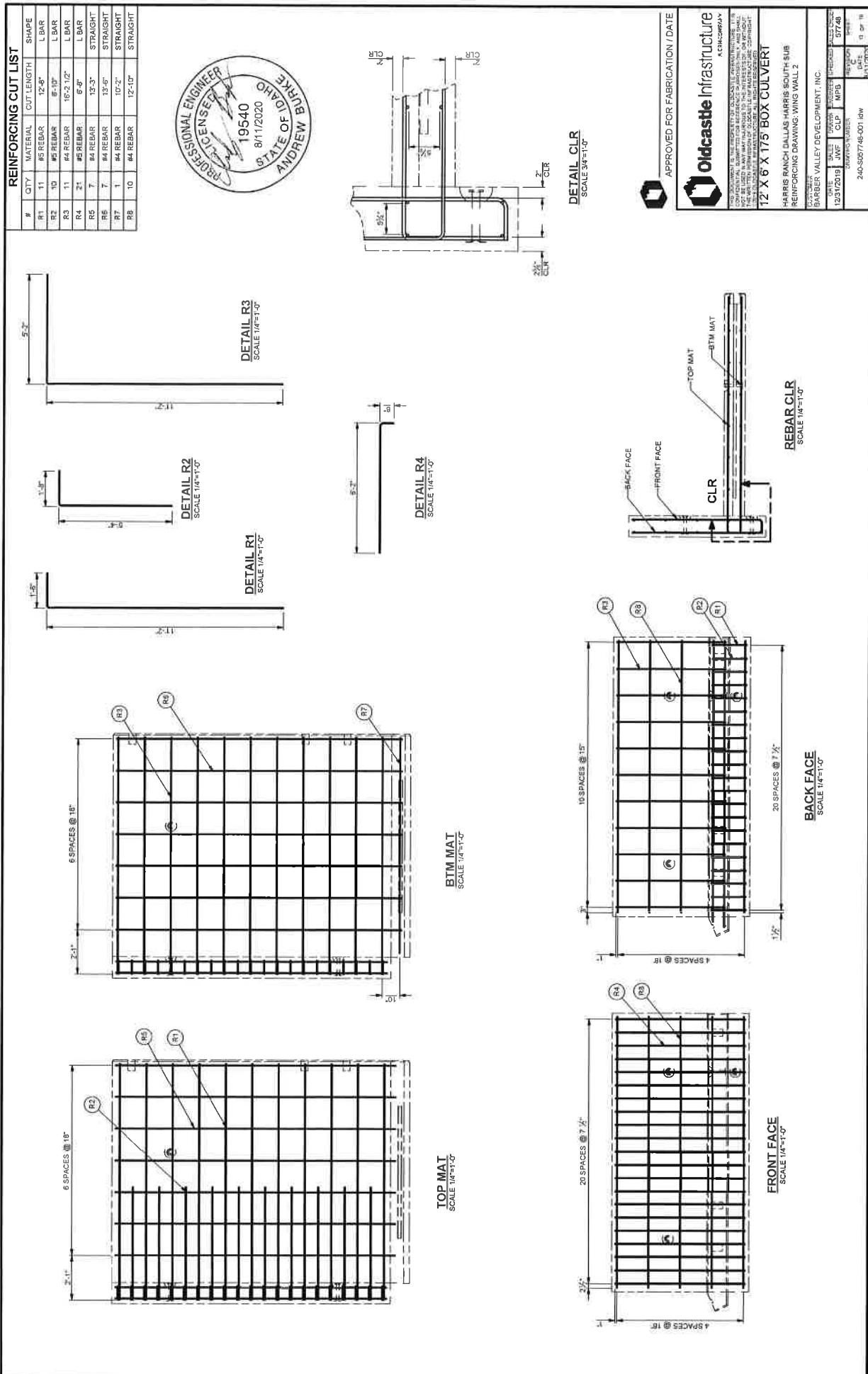
BACK FACE
SCALE 1/4"=1'-0"

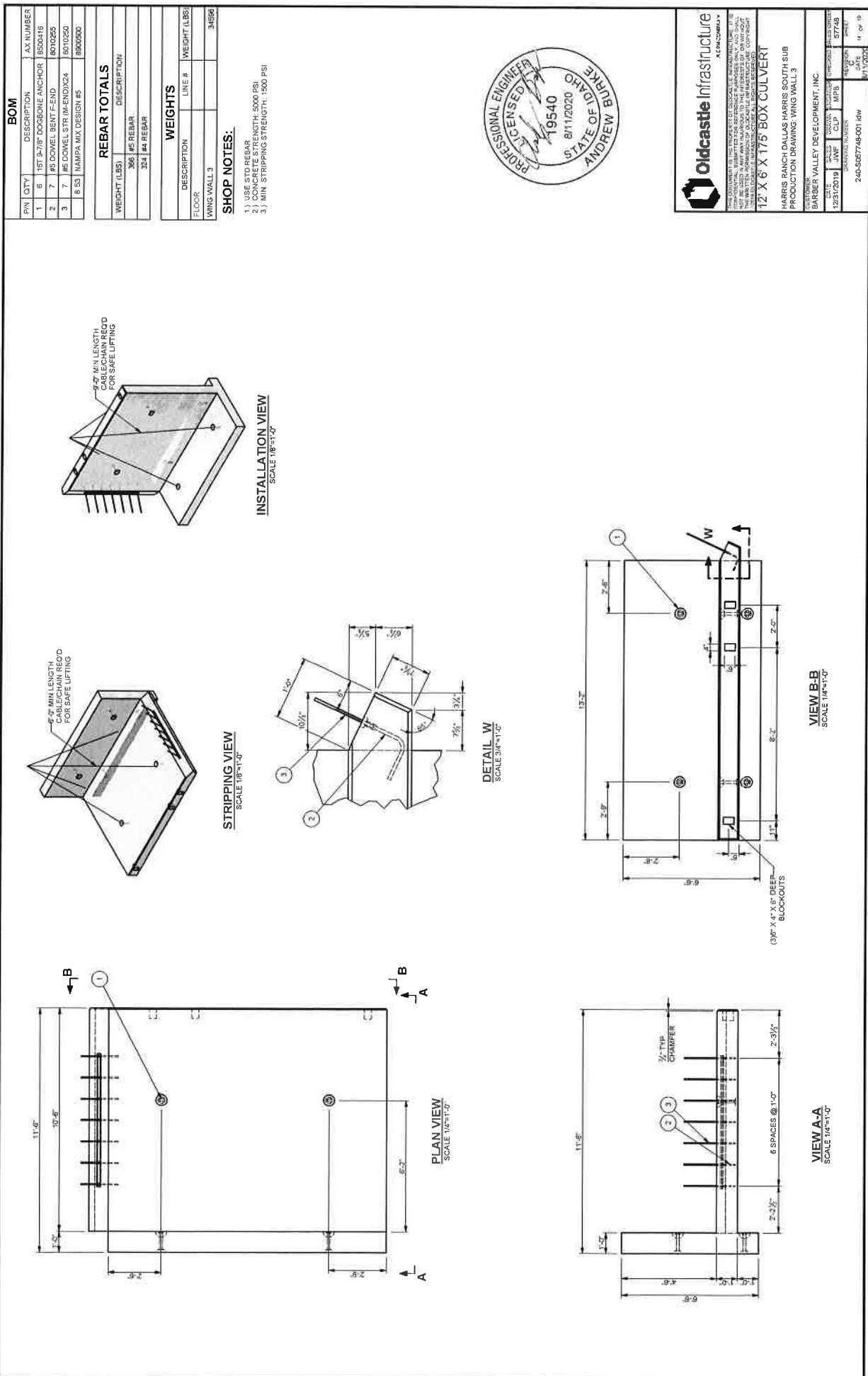








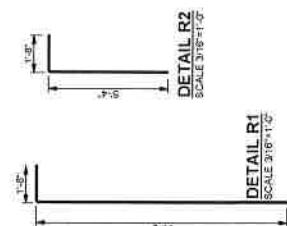




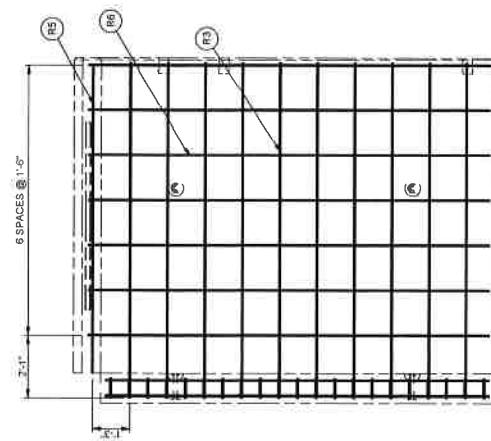
REINFORCING CUTLIST				
#	QTY	MATERIAL	CUT LENGTH	SHAPE
R1	11	#4 REBAR	12'-0"	L BAR
R2	10	#4 REBAR	6'-0"	L BAR
R3	10	#4 REBAR	16'-0" / 12'-0"	L BAR
R4	21	#4 REBAR	8'-0"	L BAR
R5	1	#4 REBAR	10'-0"	Straight
R6	1	#4 REBAR	10'-0"	Straight
R7	17	#4 REBAR	12'-0"	Straight



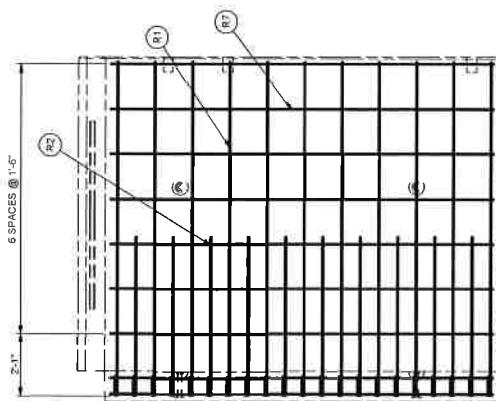
DETAIL R3
SCALE 3/16" = 1'-0"



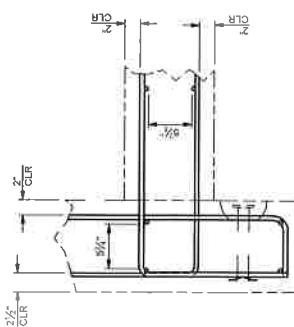
DETAIL R1
SCALE 3/16" = 1'-0"



BTM MAT
SCALE 1/4"=1'-0"



TOP MAT
SCALE 1:43-1:60



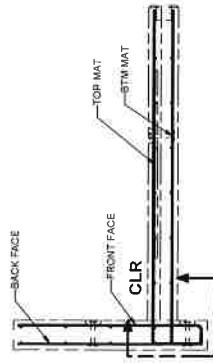
DETAIL CLR
SCALE 3/4"=1'-0"



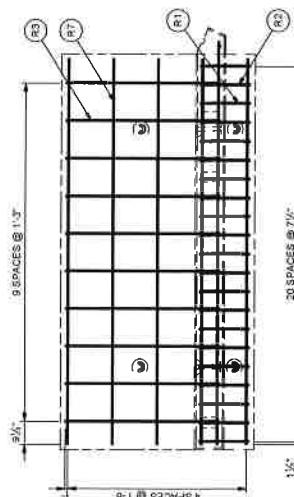
RT

HARRIS RANCH DALLAS HARRIS SOUTH SUB
REINFORCING DRAWING: WING WALL 3

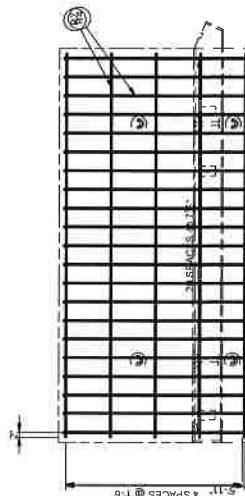
DATE	SALES		PURCHASES		CREDITS		DEBITS		BALANCE
	CLP	MIB	CLP	MIB	CLP	MIB	CLP	MIB	
12/31/2019									\$57748
	LAWHORN-PLUMMER, LLC								
	240-S007748-00100								



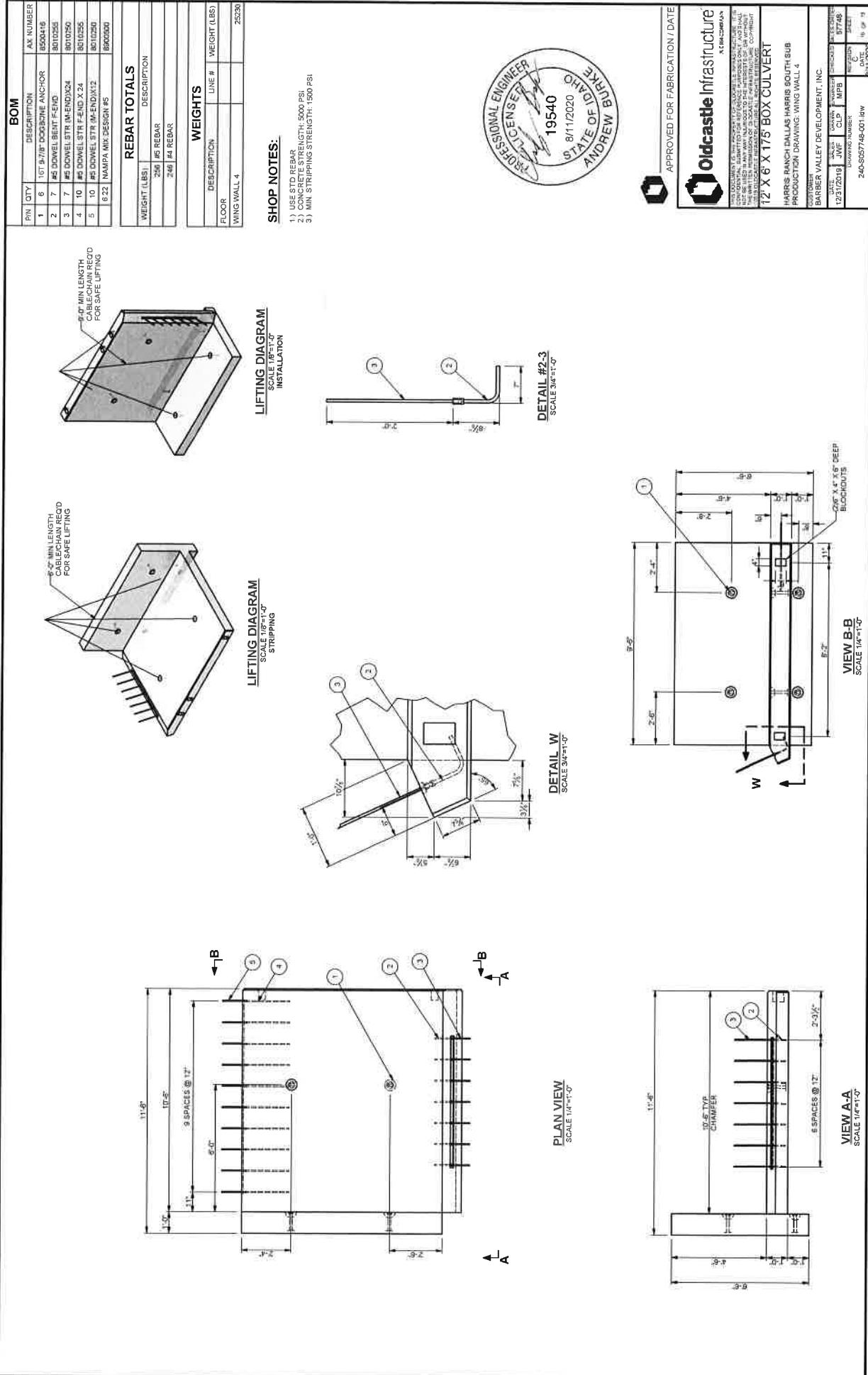
REBAR CLR
SCALE 1/4"=1'-0"



BACK FACE SCALE 1/4"=1'0"



FRONT FACE



BOM			
P/N	QTY	DESCRIPTION	AX NUMBER
1	6	15' 1/4" x 7/8" DOUBBLE ANCHOR	8000416
2	10	1# DOWEL STR-END X 24	8010255
3	10	1# DOWEL STR-END X 12	8010250
5	50	HAMBURG DESIGN #5	8000000

REBAR TOTALS			
WEIGHT (LBS)	DESCRIPTION	LINE #	WEIGHT (LBS)
262	1# REBAR		
234	1# REBAR		

24285

WEIGHTS			
FLOOR	DESCRIPTION	LINE #	WEIGHT (LBS)
WING WALL 4A			

SHOP NOTES:

1. USE STD REBAR
2. CONCRETE STRENGTH 5000 PSI
3. MIN. STRIPPING STRENGTH 1500 PSI



PROFESSIONAL ENGINEER
ANDREW BURKE
19520
8/11/2020
STATE OF IDAHO
ANDREW BURKE



Oldcastle Infrastructure

THE OLDCASTLE LOGO AND TRADE NAME ARE TRADEMARKS OWNED BY THE OLDCASTLE GROUP OF COMPANIES. THESE TRADEMARKS ARE REGISTERED IN THE UNITED STATES PATENT AND TRADEMARK OFFICE AND ARE USED IN THE TRADE AND INDUSTRY AS A SIGNIFYING SOURCE OF THE PRODUCT OR SERVICE. THE TRADE NAME OLDCASTLE IS OWNED BY THE OLDCASTLE GROUP OF COMPANIES. THE TRADE NAME OLDCASTLE IS OWNED BY THE OLDCASTLE GROUP OF COMPANIES.

12' X 6' X 17' BOX CULVERT

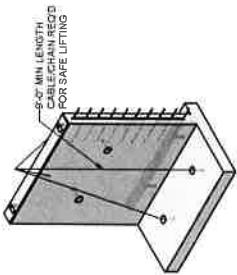
HARRIS RANCH DALLAS HARRIS SOUTH SUB PRODUCTION DRAWING: WING WALL A

JARDINE VALLEY DEVELOPMENT, INC.

SALES: 123-12019
CLERK: 123-12019
MFG: 123-12019
INVENTORY: 123-12019
DATE: 8/11/2020

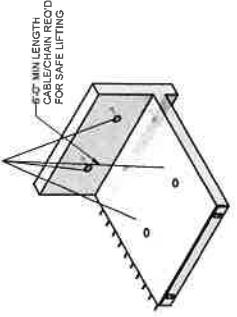
INSTALLATION VIEW

SCALE 1/8 = 1'-0"



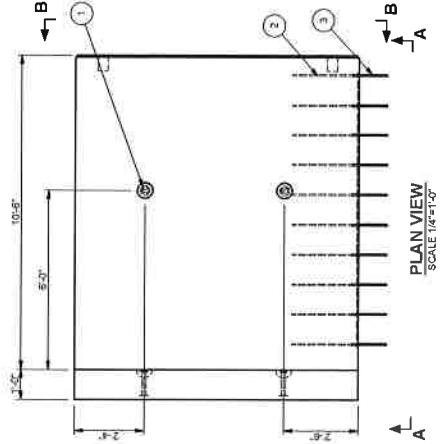
STRIPPING VIEW

SCALE 1/8 = 1'-0"



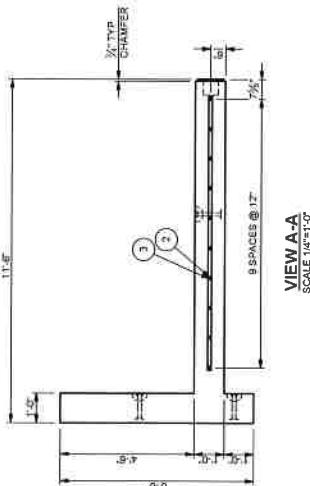
PLAN VIEW

SCALE 1/4 = 1'-0"



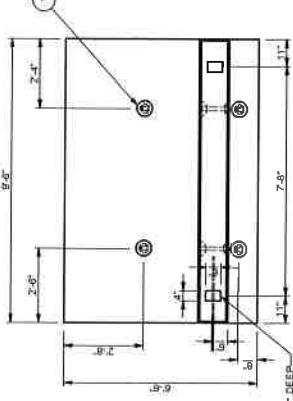
VIEW A-A

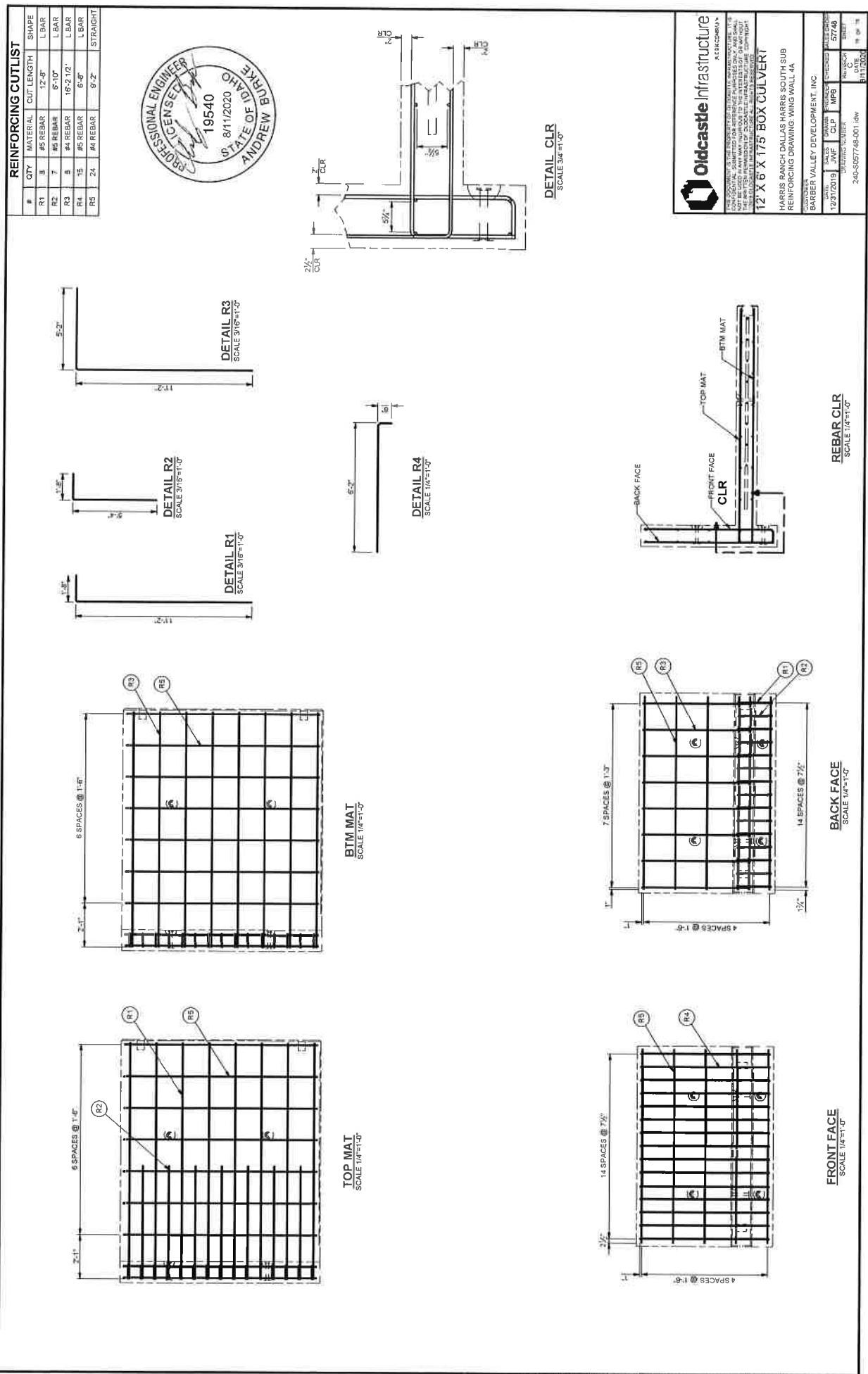
SCALE 1/4 = 1'-0"

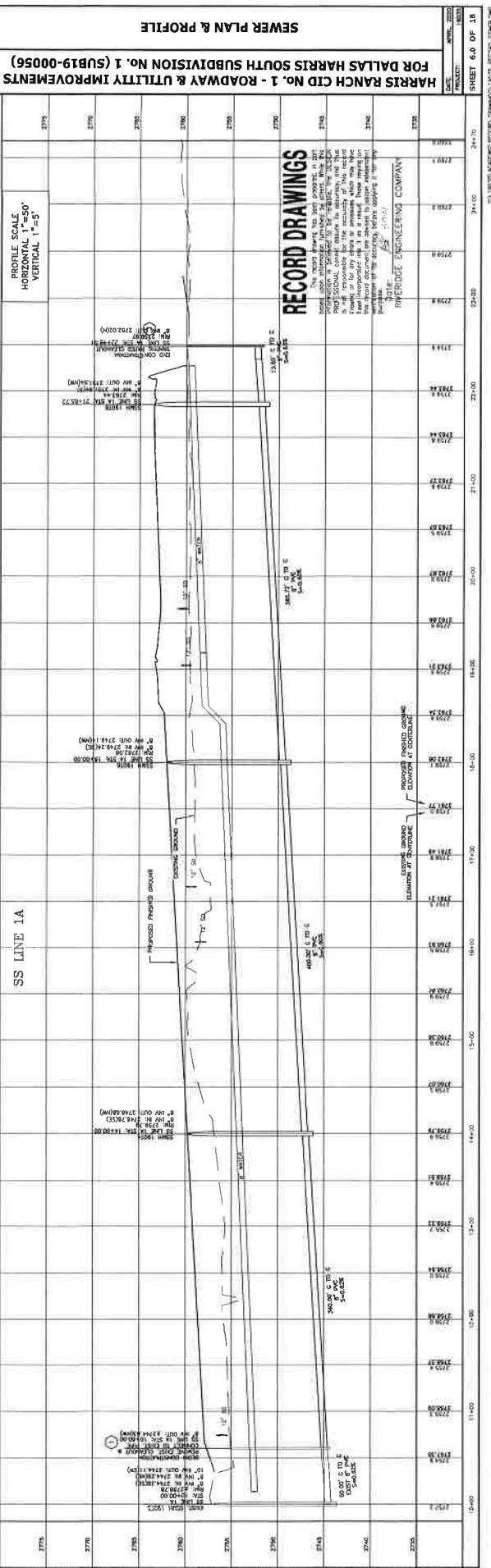
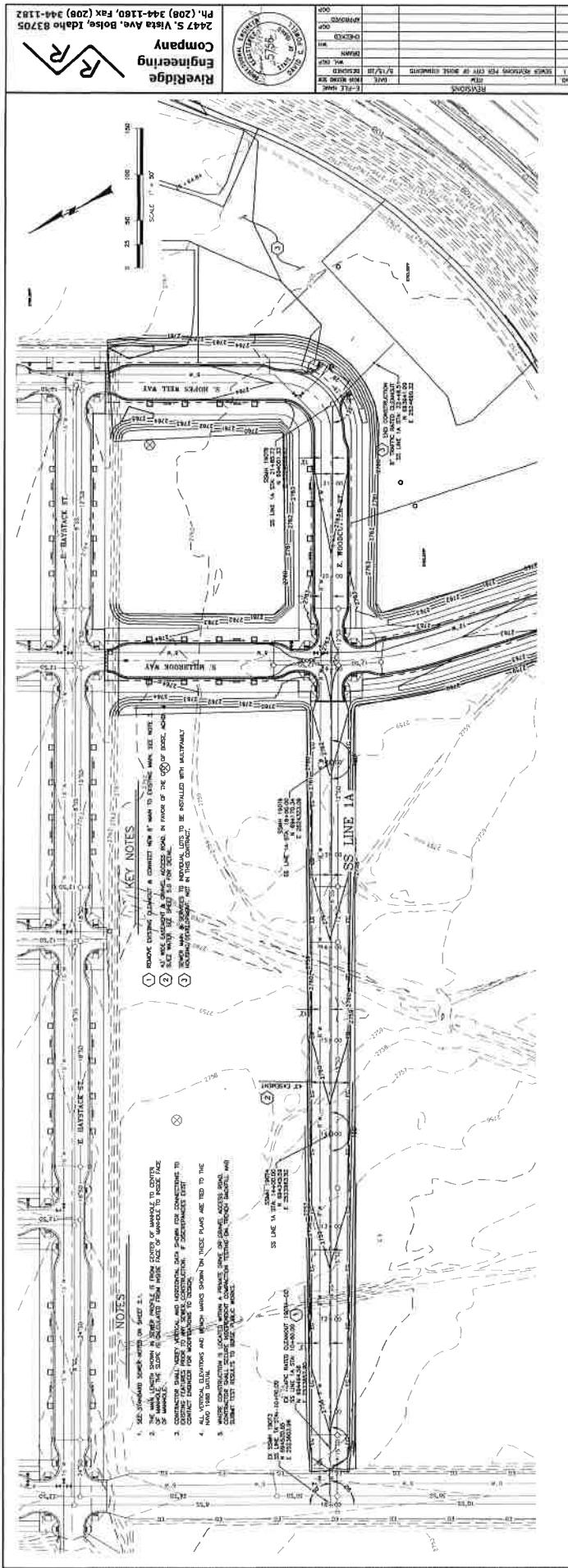


VIEW B-B

SCALE 1/4 = 1'-0"









VICINITY MAP

KEY NOTES

- 1** STORMDRAIN TO BIC CDOO WATER CLASS PAPER
2 LOWER WATER TO PROVIDE 18" SEPARATION FROM EXISTING STORM DRAIN PIPE

LEGEND

- The diagram illustrates several types of valves used in piping systems:

 - PROPOSED WATER LINE**: Represented by a horizontal line with vertical end caps.
 - PROPOSED FRICTION VALVE**: Represented by a circle with a diagonal line through it.
 - PROPOSED BLOW-OFF**: Represented by a circle with a horizontal line through it.
 - PROPOSED GATE VALVE**: Represented by a circle with a vertical line through it.
 - PROPOSED SINGLE SERVICE**: Represented by a circle with a diagonal line from top-left to bottom-right.
 - PROPOSED COMMON SERVICE**: Represented by a circle with a diagonal line from top-right to bottom-left.
 - PROPOSED BUTTERFLY VALVE**: Represented by a circle with a horizontal line inside.
 - EXISTING AIRPORT INLET VALVE**: Represented by a circle with a horizontal line through it.
 - EXISTING GATE VALVE**: Represented by a circle with a vertical line through it.
 - EXISTING SERVICE**: Represented by a circle with a diagonal line from top-left to bottom-right.
 - EXISTING WATER LINE**: Represented by a horizontal line with vertical end caps.
 - EXISTING BLOW-OFF**: Represented by a circle with a horizontal line through it.
 - EXISTING AIRPORT SERVICE**: Represented by a circle with a diagonal line from top-right to bottom-left.

101

RECORD DRAWINGS

The record drawing has been prepared, in part based upon information furnished by others, while this information is believed to be reliable, the DESIGNERS AND ENGINEERS ASSOCIATES, INC., do not guarantee its accuracy or completeness. They do not accept responsibility for any errors or omissions which may have been made in this drawing.

The record drawing is submitted at \$1.00. These fees will be waived if payment is made within 30 days of receipt of drawing.

The record drawing is intended to assist independent verification of the structural features for any purpose.

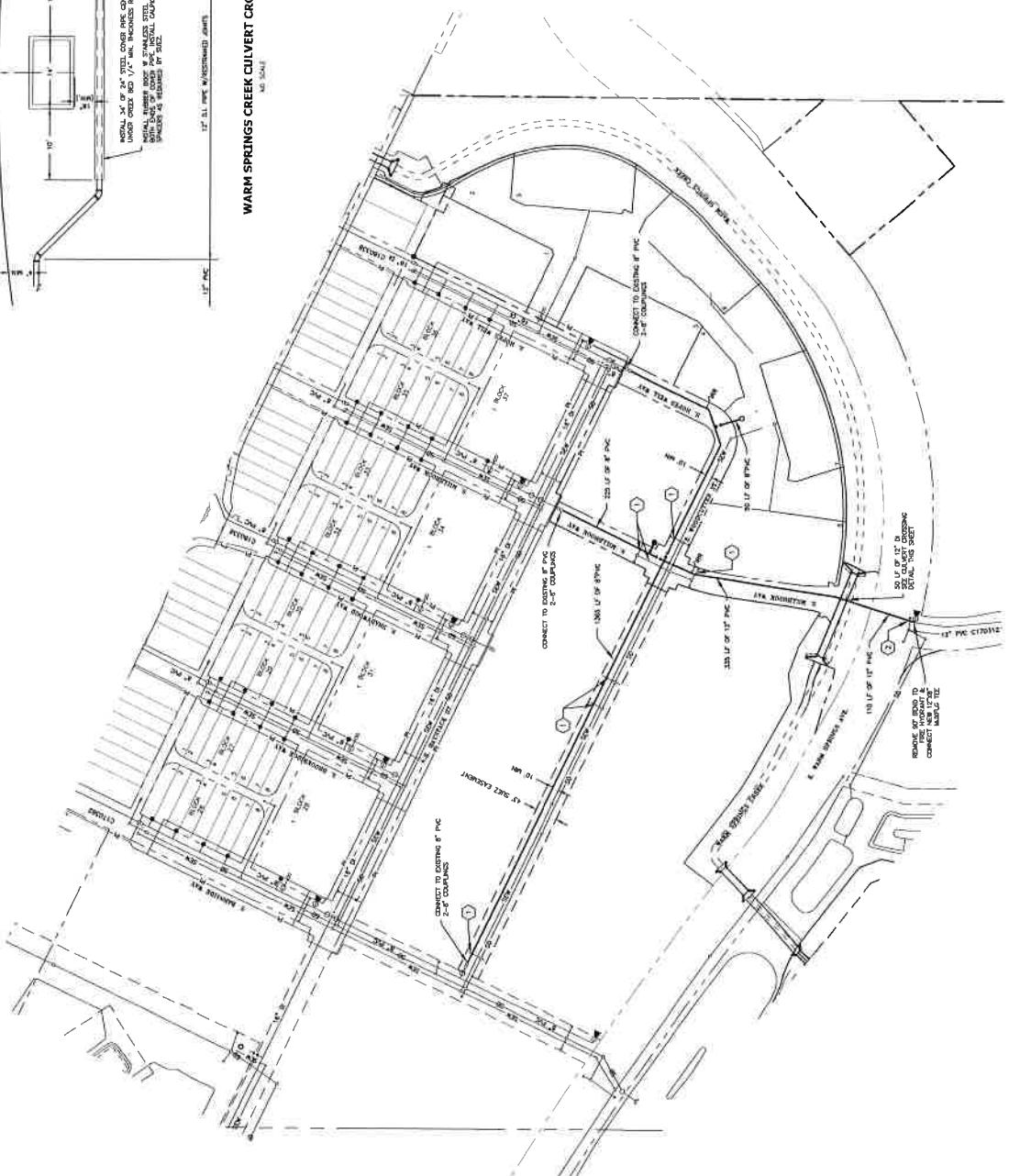
Very truly yours,

Dates:

RIVERIDGE ENGINEERING COMPANY

R/R
RiverRidge
Engineering
Company
2427 S. VISTA AVE. ROSE DALE 87305
Ph. (303) 241-1480, Fax (303) 241-1182
E-mail: RR@AOL.COM

WARM SPRINGS CREEK CULVERT CROSSING DETAIL



Satz 1: INSTITUTIONEN	
Wirtschaftswissenschaften	Carsten Schröder
Sozialwissenschaften	
Rechtswissenschaften	
Medizin	
Humanmedizin	
Satz 2: DIS-RESPONDENTEN	
Wirtschaftswissenschaften	170 No. 100
Sozialwissenschaften	
Rechtswissenschaften	
Medizin	
Humanmedizin	

HARRIS RANCH CID NO. 1 - ROADWAY & UTILITY IMPROVEMENTS

FOR DALLAS HARRIS SOUTH SUBDIVISION NO. 1

PLANTING PLAN

SHEET 1 OF 6

NOTES:

- NOTE: IRIGATION TO BE INSTALLED BY OTHERS. IRRIGATION SYSTEM SHALL BE FULLY OPERATIONAL PRIOR TO PLANTING.
- SEE SHEET L3 FOR PLANT LIST
- SEE SHEET L3 FOR ACHD NOTES
- SEE SHEET L4 FOR PLANTING NOTES
- SEE SHEET L4 FOR PLANTING DETAILS
- SEE SHEET L4 FOR TREE GRATE DETAIL
- SEE SHEET L3 FOR SITE AMENITIES LEGEND
- SEE SHEET L5 FOR RAISED PLANTER DETAIL, NOTES AND RAISED PLANTER PLANTING DIRECTIONS
- SEE SHEET L6 FOR ADDITIONAL SITE AMENITIES DETAILS

Legend:

- Tree Planting
- Shrub Planting
- Grate
- Structure
- Other

Scale: 1"-0" = 20'-0"

North:

Harris Ranch

- SEE SHEET L3 FOR PLANT LIST
- SEE SHEET L3 FOR ACHD NOTES
- SEE SHEET L4 FOR PLANTING NOTES
- SEE SHEET L4 FOR PLANTING DETAILS
- SEE SHEET L4 FOR TREE GRAFT DETAILS
- SEE SHEET L3 FOR SITE AMENITIES LEGEND
- SEE SHEET L5 FOR RAISED PLANTER DETAILS
- SEE SHEET L6 FOR ADDITIONAL SITE AREA

SEE SHEET L3 FOR ACHD NOTES
SEE SHEET L4 FOR PLANTING NOTES
SEE SHEET L4 FOR PLANTING DETAILS
SEE SHEET L4 FOR TREE GRAVE DETAIL
SEE SHEET L5 FOR SITE AMENITIES LEGEND

END ITAL, NOTES AND RAISED PLANTER PLANTING DIRECTIONS

NOTE IRRIGATION TO BE INSTALLED BY OTHERS. IRRIGATION SYSTEM SHALL BE FULLY OPERATIONAL PRIOR TO PLANTING.

Harris Ranch

A circular icon containing a north-pointing arrow, with the word "North" written vertically next to it.

HARRIET	11	08	6
WATER	3-22-20	19-01158	

HARRIS RANCH CID NO. 1 - ROADWAY & UTILITY IMPROVEMENTS

FOR DALLAS HARRIS SOUTH SUBDIVISION NO. 1

PLANTING PLAN

SHEET 2 OF 9

NOTES:

- SEE SHEET L3 FOR PLANT LIST
- SEE SHEET L3 FOR ACHD NOTES
- SEE SHEET L4 FOR PLANTING NOTES
- SEE SHEET L4 FOR PLANTING DETAILS
- SEE SHEET L4 FOR TREE GRATE DETAIL
- SEE SHEET L3 FOR SITE AMENITIES LEGEND
- SEE SHEET L5 FOR RAISED PLANTER DETAIL, NOTES AND RAISED PLANTER PLANTING DIRECTIONS
- SEE SHEET L6 FOR ADDITIONAL SITE AMENITIES DETAILS

PLANTING NOTES

PLANTING DETAILS

TREE GRATE DETAIL

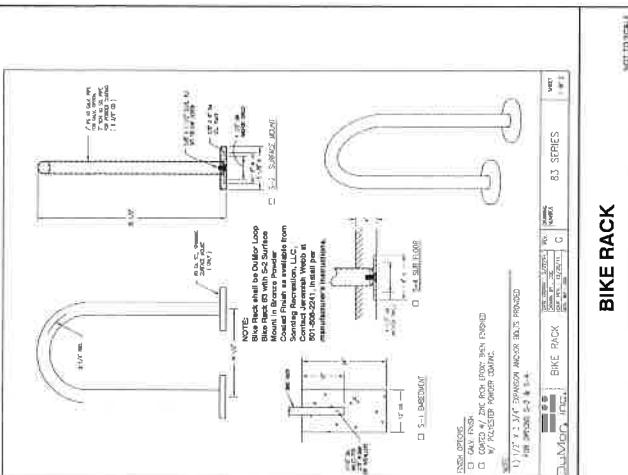
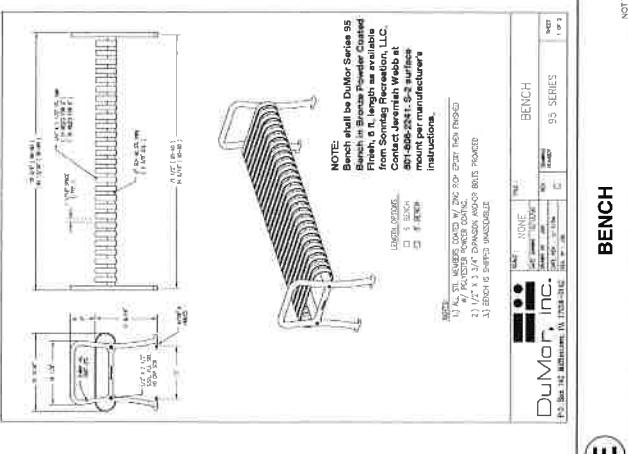
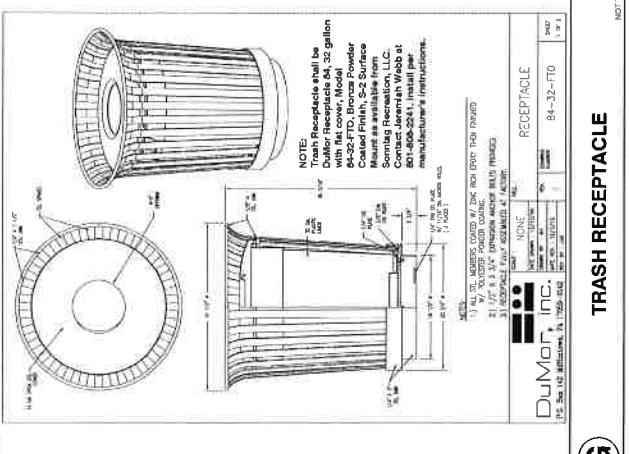
SITE AMENITIES LEGEND

RAISED PLANTER DETAIL, NOTES AND RAISED PLANTER PLANTING DIRECTIONS

ADDITIONAL SITE AMENITIES DETAILS

Scale: 1"-0" = 50'-0"

North

<p style="text-align: center;">TESHIMA DESIGN GROUP LAURENCE REED & ASSOCIATES INC. LA-16745</p> <p style="text-align: right;">DATE NO. 9-11 TDS NO. 10-20-00</p> 		<p style="text-align: center;">SHEET 6 OF 6 DETAILS</p> <p style="text-align: center;">FOR DALLAS HARRIS SOUTH SUBDIVISION NO. 1</p> <p style="text-align: center;">ROADWAY & UTILITY IMPROVEMENTS</p>	
 <p>BIKE RACK</p> <p>NOT TO SCALE</p> <p>F</p>			
 <p>BENCH</p> <p>NOT TO SCALE</p> <p>E</p>			
 <p>RECEPTACLE</p> <p>NOT TO SCALE</p> <p>G</p>			

Harris Ranch

NOTE:
All site amenities shall be approved by Owner or Owner's
Representative prior to ordering and installation.

Harris Ranch

SHEET 6 OF 6

DALLAS HARRIS SOUTH SUBDIVISION NO. 1

CERTIFICATE OF OWNERS

DALE HARRIS ESTATES TOWNEHOME SUBDIVISION NO. 11; A SUBDIVISION OF THE NORTHEAST CORNER OF SAW DALLS HARRIS ESTATES TOWNEHOME SUBDIVISION NO. 1, LOCATED IN THE CITY OF PLANO, TEXAS, AND BOUNDARY LINES AS SHOWN ON THE PLAT APPROVED BY THE PLANNING COMMISSION NO. 1, AND BOUND BY THE SOUTHERLY BOUNDARY LINE OF SAW DALLS HARRIS ESTATES TOWNEHOME SUBDIVISION NO. 8, AND THE SOUtherly BOUNDARY EXTENSION THEREOF, SOUTH 84°00' EAST, 161.00 FEET TO THE REAL POINT OF BEGINNING, CONTAINING 4.46 ACRES, MORE OR LESS.

OWNER'S

IN WITNESS WHEREOF, THE GRANTORS HAVE CAUSED THIS INSTRUMENT TO BE SIGNED THIS 25 DAY OF November, 2021.

BABER VALLEY DEVELOPMENT, INC., AN IDAHO CORPORATION



Douglas A. Twiss
PRESIDENT

STATE OF IDAHO }
COUNTRY OF ADA }

ON THIS 25 DAY OF November, 2021, BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID STATE, I WITNESSED THE SIGNATURES OF THE PERSONS IDENTIFIED TO ME TO BE THE PRESIDENT OF BABER VALLEY DEVELOPMENT, INC., AN IDAHO CORPORATION, AND I KNOWLEDGEably BELIEVE THAT THE SIGNATURES ON THE SUBSCRIBED INSTRUMENT ARE IN REASONABLE AGREEMENT WITH THE NAME OF SUCH PERSON EXECUTING THE SAME.

DOUGLAS A. TWISS
NOTARY PUBLIC

ACKNOWLEDGMENT

A rectangular seal for an Idaho Notary Public. It features a double-line border. The top line contains the text "NOTARY PUBLIC STATE OF IDAHO". The bottom line contains "My Commission Expires [date]". In the center, it says "REDEEMABLE AT" above a box containing "THE STATE BANK OF BOISE". Below the box is "IDAHO".

卷之三

STATE OF
IDAHO,
I, CODY M. MCANABON, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR LICENSED BY THE STATE OF IDAHO, AND THAT I HAVE MADE THE DIRECT SUPERVISION AND ACCURATELY REPRESENTED THE PLATTS AND SURVEYS ON THE PROPERTY PLATED THEREON, AND THAT THE SAME ARE IN CONFORMITY WITH THE STATE OF IDAHO CODE RELATING TO PLATTS AND SURVEYS.

A circular seal for a professional surveyor. The outer ring contains the text "IDAHO LAND SURVEYOR" at the top and "LICENSED PROFESSIONAL SURVEYOR" at the bottom. In the center, it says "STATE OF IDAHO". Below that is "COST OF SURVEY". At the very bottom, it has "EXPIRES". The number "17779" is prominently displayed in the middle of the seal.

IDAHO NO. 11779

IDAHO NO. 11779

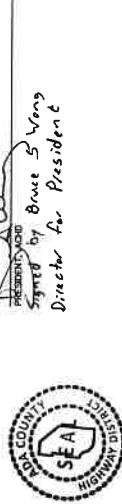
CODY M. McCAMMON, P.L.S.

IDAHO SURVEY GROUP INC.

JOB NO. 19-428

DALLAS HARRIS SOUTH SUBDIVISION NO. 1

APPROVAL OF ADA COUNTY HIGHWAY DISTRICT
THE FOLLOWING PLAT WAS APPROVED AND APPROVED ON THE 25 DAY OF APRIL 2022



APPROVAL OF CENTRAL DISTRICT HEALTH
SANITARY INSTRUCTIONS AS REQUIRED BY IDAHO CODE, TITLE 50, CHAPTER 13 HAVE BEEN SATISFIED ACCORDING TO THE LETTER TO BE READ ON FILE WITH THE COUNTY RECORDER OR HIS AGENT LISTING THE CONDITIONS OF APPROVAL.
SANITARY INSTRUCTIONS MAY BE REIMPOSED IN ACCORDANCE WITH SECTION 50-1305, IDAHO CODE, BY ISSUANCE OF A CERTIFICATE OF DISAPPROVAL.



APPROVAL OF CITY ENGINEER
THE UNDERSIGNED BOISE CITY ENGINEER, HEREBY STATE THAT THE RECOMMENDED CONDITIONS OF BOISE CITY HAVE BEEN SATISFIED FOR THIS PLAT.



PE # 1185

APPROVAL OF CITY COUNCIL
THE UNDERSIGNED CITY COUNCIL, IN NAME FOR THE CITY OF BOISE, IDAHO, DO HEREBY CERTIFY THAT AT A REGULAR MEETING OF THE CITY COUNCIL, HELD ON THE 25 DAY OF APRIL, 2022, THIS PLAT WAS DULY ACCEPTED AND APPROVED.



CERTIFICATE OF COUNTY SURVEYOR

I, THE UNDERSIGNED, PROFESSIONAL LAND SURVEYOR, IN AND FOR ADA COUNTY, IDAHO, DO HEREBY CERTIFY THAT I HAVE CHECKED THIS PLAT AND THAT IT AGREES WITH THE STATE OF IDAHO CODE.



PLS #15553

CERTIFICATE OF THE COUNTY TREASURER

I, THE UNDERSIGNED, COUNTY TREASURER IN AND FOR THE COUNTY OF ADA, STATE OF IDAHO, FOR THE REQUIREMENTS OF LC-50-1305 DO HEREBY CERTIFY THAT ANY AND ALL CURRENT AND/OR DELINQUENT COUNTY PROPERTY TAXES FOR THE PROPERTY INCLUDED IN THIS PLAT HAVE BEEN PAID IN FULL. THIS CERTIFICATION IS VALID FOR THE NEXT THIRTY (30) DAYS ONLY.



Elizabeth M. Maas
COUNTY TREASURER



DATE
4-8-2022

COUNTY RECORDER'S CERTIFICATE

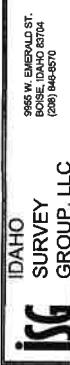
STATE OF IDAHO }
COUNTRY OF ADA }

I HEREBY CERTIFY THAT THIS INSTRUMENT WAS FILED FOR RECORD AT THE REQUEST OF BARBER VALLEY DEVELOPMENT, INC.
A FEE OF .50 MINUTES PAST 10 O'CLOCK A.M. ON THIS 13th DAY OF APRIL, 2022.

INSTRUMENT NO. 2D22-DS49223

Daryl McCarren
EX-RECORDER

DATE
\$ 21.00



Job No. 19-428
SHEET 4 OF 4

805 W. EMERALD ST.
BOISE, IDAHO 83714
(208) 346-2570

CHANGE ORDER

(Instructions on next page)

No. 1

PROJECT: **Dallas Harris South Subdivision No. 1 CID Project**

DATE OF ISSUANCE – August 27, 2020

OWNER: **Barber Valley Development**

OWNER's Contract No.: **19035: CID Eligible Items**

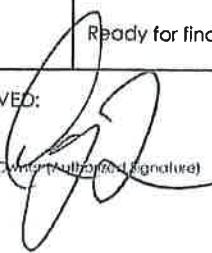
CONTRACTOR – Central Paving

You are directed to make the following changes in the Contract Documents.

Description: **This Change Order is related to the Boise City required addition of 4 street lights and changes by ACHD to the Rapid Rectangular Flashing Beacon.**

Reason for Change Order: **Boise City Street Light ordinance requirements and electrical modifications to the RRFB by ACHD.**

Attachments: See attached items and cost summary

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES
Original Contract Price \$ <u>1,662,448.14</u>	Original Contract Times Substantial Completion: _____ N/A Ready for final payment: days or dates
Net changes from previous Change Orders \$ <u>00.00</u>	Net changes from previous change Orders No. __ to No. N/A days
Contract Price prior to this Change Order \$ <u>1,662,448.14</u>	Contract Times prior to this Change Order Substantial Completion: Ready for final payment: _____ N/A days or dates
Net Increase (decrease) of the Change Order \$ <u>52,666.89</u>	Net Increase (decrease) of the Change Order N/A days
Contract Price with all approved Change Orders \$ <u>1,715,115.03</u>	Contract Times with all approved Change Orders Substantial Completion: _____ N/A Ready for final payment: days or dates
APPROVED: By: Date: 	ACCEPTED: By: Contractor (Authorized Signature) Date: <u>9-9-20</u>

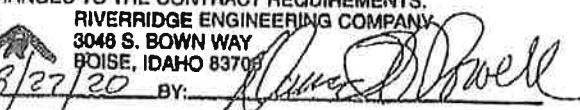


TRANSMITTAL NO. 005

Project: Dallas HARRIS South Subdivision No. 1	Date: 8/25/2020	
To: David Powell P.E.	Ref: SUBMITTAL – COR #01 All Agency Approved Drawing Changes ELECTRICAL ONLY	
WE ARE SENDING	SUBMITTED FOR:	ACTION TAKEN
<input type="checkbox"/> Shop Drawings	<input checked="" type="checkbox"/> Approval	<input checked="" type="checkbox"/> Approved as Submitted
<input type="checkbox"/> Letter	<input type="checkbox"/> Your Use	<input type="checkbox"/> Approved as Noted
<input checked="" type="checkbox"/> Change Order	<input type="checkbox"/> As Requested	<input type="checkbox"/> Resubmit
<input type="checkbox"/> Plans – Irrigation Design	<input type="checkbox"/> Review and Comment	<input type="checkbox"/> Returned
<input type="checkbox"/> Specifications	Sent Via:	<input type="checkbox"/> Returned for Correction
<input type="checkbox"/> Pay Estimate	<input type="checkbox"/> Attached	<input type="checkbox"/> Due Date
<input type="checkbox"/> Other:	<input type="checkbox"/> Separate Cover Via:	

- NO EXCEPTION TAKEN REVISE AND RESUBMIT
 MAKE CORRECTIONS NOTED
 OTHER INCOMPLETE - RESUBMIT
SPECIFIED ITEM

THIS REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. COMMENTS MADE ON THIS SUBMITTAL DURING THIS REVIEW DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. IT IS THE CONTRACTORS ULTIMATE RESPONSIBILITY TO DETERMINE MATERIALS, DIMENSIONS AND QUANTITIES OF PRODUCTS REQUIRED FOR THE PROJECT. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES AND COORDINATION OF THE ACTUAL CONSTRUCTION. REVIEW OF THIS SUBMITTAL DOES NOT AUTHORIZE CHANGES TO THE CONTRACT REQUIREMENTS.

RIVERIDGE ENGINEERING COMPANY
3046 S. BOWN WAY
BOISE, IDAHO 83709
DATE: 8/27/20 BY: 


James R. Burggraf, Project Manager

TERRY McENTEE, PRESIDENT
PAT McENTEE, VICE PRESIDENT



P.O. BOX 15010
5319 SOUTH APPLE
BOISE, ID 83715

PHONE (208) 338-0818

E-MAIL: INFO@CENTRALPAVING.COM
WEBSITE: www.centralpaving.com

8/25/2020

RiveRidge Engineering
Attn: David Powell P.E.
2447 S. Vista Ave.
Boise, ID. 83705

RE: 19035 Dallas Harris South Subdivision No. 1
Change Order Request #01 - All Agency Approved Drawings ELECTRICAL ONLY

David,

Attached is the cost breakdown for the electrical changes illustrated in the All Agency Approved drawings dated 7/31/2020. This price includes the changes made to the luminaires and the RRFB on the Project. This price also includes the costs associated with Central Paving shouldering and grading around the added street lights. Please note that this is for the electrical changes only and the remaining scope changes will be submitted under a different COR number from Central Paving.

DESCRIPTION	QUANTITY	UOM	UNIT PRICE	TOTAL
Electrical Changes Per All Agency Approved Drawings	1	LS	\$52,666.89	\$ 52,666.89

Total Cost of Change: \$52,666.89

Respectfully,


James R. Burggraf

Project Name **Dallas Harris Sout Sub. No. 1 Electrical Changes**

TOTAL CHANGE ORDER COSTS

Labor w/no Mark Up	\$ 613.56
Equipment w/no Mark Up	\$ 381.20
Material w/no Mark Up	\$ -
CPI Cost	\$ 50,064.20
O&P	\$ 2,602.69
TOTAL COST COR #01	\$ 52,666.89

CENTRAL PAVING COSTS W/ MARK UP

CPI Labor w/ Mark Up	\$ 705.59
CPI Equipment w/ Mark Up	\$ 438.38
Material Costs w/ Mark Up	\$ -
Total CPI Cost	\$ 1,143.97

PROJECT: Dallas Harris Sout Sub. No. 1 Electrical Changes

All Agency Approved Electrical Changes

		Units	UOM	Unit Cost	Total
Labor	Operator	8	HR	\$ 44.58	\$ 356.64
	Laborer	4	HR	\$ 31.52	\$ 126.08
	Driver		HR	\$ 32.42	\$ -
	Foreman	2	HR	\$ 65.42	\$ 130.84
	Project Manager		HR	\$ 90.00	\$ -
TOTAL LABOR				\$ 613.56	
Mark-up (20%)		15%		\$ 92.03	
TOTAL					\$ 705.59
Equipment					
Blade Pro System		4	HR	\$ 15.00	\$ 60.00
Cat 140 Motor Grader		4	HR	\$ 80.30	\$ 321.20
TOTAL EQUIPMENT				\$ 381.20	
Mark-up		15%		\$ 57.18	
TOTAL					\$ 438.38
Subcontractor					
Power Plus - Luminaires		1	LS	\$ 45,570.49	\$ 45,570.49
Power Plus - RRFB		1	LS	\$ 3,498.95	\$ 3,498.95
TOTAL SUBCONTRACTOR				\$ 49,069.44	
Mark-up (15%)		5%		\$ 2,453.47	
TOTAL					\$ 51,522.91
					Total \$ 52,666.89



25 Hartman St. • Boise, ID 83704 • 208.323.1506
ID-ELE-14995 • RCE-3894 • PW-10947-U • OR-ELE-C1143 • CCB-134715

Item 73, 30' Street Light, TS1 revisions consist of replacing 3' luminaire arm with 15' luminaire arm and purchasing light pole material form ACHD including sales tax. In addition to this light pole includes in revisions on sheet 5.9 of 18. Revisions consist of install (4) new 30' City of Boise (Harris Ranch) poles with hooked mast arms and bell fixtures. This revision also includes (4) S-40TADA junction boxes, conduit, wire and terminating the power in the new duel metered service pedestal included in the RRFB revisions.

TS1 & 5.9 of 18 Added 30' Light Poles:

Materials:	\$24,094.64
Labor:	\$11,350.33
Equipment:	\$3,150.00
Fuel/Oil:	<u>\$860.00</u>
Sub Total:	\$39,454.97
10% Overhead:	\$3,945.50
5% Profit:	<u>\$2,170.02</u>
Total:	\$45,570.49

This price **does not** include survey, traffic control, landscape repair, irrigation repair, repair of concrete/asphalt, material testing, rock excavation or any associated Idaho Power fees.

Respectfully submitted,

Jeremy J. Kuntz
Power Plus Inc.
jkuntz@pwrplusinc.com

**Idaho Contractors License 14995C
Idaho Public Works No. 10947-U-1-4(16000)
Contractors Registration No. RCE-3894**



August 19, 2020

Central Paving Company Inc.
5040 S. Apple
Boise, ID 83716

Attn: James Burggraf
Re: Dallas Harris South Subdivision NO.1 Road & Utility Improvements
Revised Electrical Price

Power Plus has received the revised plan sheets, TS1 of TS1 RRFB revisions and sheet 5.9 of 18 lighting revisions.

Item 75 RRFB, TS1 revisions consist of replacing IMSA 14-5 cable with IMSA 14-12 conductor, replacing the 100 Amp, single metered service pedestal with a 200 Amp, dual metered service pedestal and purchasing all signal equipment from ACHD and paying all sales tax.

TS1 of TS1: RRFB Revision

Materials:	\$ 1,060.50
Labor:	\$ 1,228.51
ACHD Materials:	<u>\$ 9,524.10</u>
Sub Total:	\$11,813.11
10% Overhead:	\$ 1,181.31
5% Profit:	<u>\$ 649.72</u>
Total:	\$13,644.14

TS1 of TS1: RRFB Deduct

Materials:	\$ 141.30
Labor:	\$ 491.60
Bid RRFB:	<u>\$9,512.29</u>
Total:	-\$10,145.19

Total Add to Item 75: \$3,498.95

CHANGE ORDER

(Instructions on next page)

No. 2

PROJECT: Dallas Harris South Subdivision No. 1 CID Project

DATE OF ISSUANCE – October 30, 2020

OWNER: Barber Valley Development

OWNER's Contract No.: 19035: CID Eligible Items

CONTRACTOR – Central Paving

You are directed to make the following changes in the Contract Documents.

Description: This Change Order is related to the Suez Idaho required change to the original Bid documents to change out the 8" water main within Millbrook Way and require 12" water main. And also to increase the required sleeving under the box culvert from a 16" sleeve to a 24" sleeve to accommodate the increased water main size. Also included is the change related to gate valving and fittings.

Reason for Change Order: Suez Idaho required changes to the Domestic Water design to extend 12" water main within Millbrook Way, matching the existing water main size within the Barber Junction Subdivision.

Attachments: See attached items and cost summary

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES
Original Contract Price \$ <u>1,662,448.14</u>	Original Contract Times Substantial Completion: _____ N/A Ready for final payment: days or dates
Net changes from previous Change Orders \$ <u>52,666.89</u>	Net changes from previous change Orders No. ___ to No. N/A days
Contract Price prior to this Change Order \$ <u>1,715,115.03</u>	Contract Times prior to this Change Order Substantial Completion: Ready for final payment: _____ N/A days or dates
Net Increase (decrease) of the Change Order \$ <u>17,749.00</u>	Net Increase (decrease) of the Change Order N/A days
Contract Price with all approved Change Orders \$ <u>1,733,752.48</u>	Contract Times with all approved Change Orders Substantial Completion: _____ N/A Ready for final payment: days or dates

APPROVED:
By: 
Central Paving (Authorized Signature)
Date:

ACCEPTED:
By: Terry McEntee
Central Paving (Authorized Signature)
Date:

DALLAS HARRIS SOUTH SUB No. 1 PIPING CHANGE COMPARISON

ALL AGENCY APPROVED DRAWINGS

Item Description	Original Quantity	Revised Quantity	Net Change in Quantity	Price Per Unit	Net Add/Deduct
1" Water Service Complete	2	2	0		\$ -
8" Water Main	2130	1640	-490	\$ 24.90	\$ (12,201.00)
Fittings & Restraints	0	1	1	\$ 7,060.00	\$ 7,060.00
8" Fittings & Restraints	1	0	-1	\$ 6,530.00	\$ (6,530.00)
Blowoff Assembly	1	1	0		\$ -
8" Gate Valve	5	4	-1	\$ 1,250.00	\$ (1,250.00)
8" Ductile Pipe	20	0	-20	\$ 449.00	\$ (8,980.00)
12" Ductile Pipe	0	50	50	\$ 308.00	\$ 15,400.00
16" Steel Casing	20	0	-20	\$ 351.00	\$ (7,020.00)
24" Steel Casing	34	0	34	\$ 320.00	\$ 10,880.00
Fire Hydrant Assembly	1	1	0		\$ -
Connect to Existing	4472	5960	1488	\$ 1.00	\$ 1,488.00
12" Gate Valve	0	1	1	\$ 2,170.00	\$ 2,170.00
12" Water Main	0	445	445	\$ 37.60	\$ 16,732.00

TOTAL CHANGE \$ 17,749.00

CHANGE ORDER

(Instructions on next page)

No. 3

PROJECT: Dallas Harris South Subdivision No. 1 CID Project

DATE OF ISSUANCE – October 30, 2020

OWNER: Barber Valley Development

OWNER's Contract No.: **19035: CID Eligible Items**

CONTRACTOR – Central Paving

You are directed to make the following changes in the Contract Documents.

Description: **This Change Order is related to the revisions required for the box culvert, increased depth of cutoff walls, added metal culvert railing and the removal of 3 pedestrian crossings for the project.**

Reason for Change Order: ACHD made recent revisions to their bridge policy manual and imposed these same policy changes on this box culvert, regardless of the fact that we had successfully installed 2 box culverts of the same channel using the previous policy and designed this box culvert using these older policy requirements.

Attachments: **See attached items and cost summary**

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES
Original Contract Price \$ <u>1,662,448.14</u>	Original Contract Times Substantial Completion: _____ N/A Ready for final payment: days or dates
Net changes from previous Change Orders \$ <u>70,415.89</u>	Net changes from previous change Orders No. ___ to No. N/A days
Contract Price prior to this Change Order \$ <u>1,733,752.48</u>	Contract Times prior to this Change Order Substantial Completion: Ready for final payment: _____ N/A days or dates
Net Increase (decrease) of the Change Order \$ <u>32,590.75</u>	Net Increase (decrease) of the Change Order _____ N/A days
Contract Price with all approved Change Orders \$ <u>1,767,972.77</u>	Contract Times with all approved Change Orders Substantial Completion: _____ N/A Ready for final payment: days or dates

APPROVED:
By: 
Terry McEntee (Authorized Signature)
Date:

ACCEPTED:
By: Terry McEntee

Central Paving Co., Inc., CID-Terry
Contractor (Authorized Signature)
Date:

TERRY McENTEE, PRESIDENT
PAT McENTEE, VICE PRESIDENT



P.O. BOX 15010
5319 SOUTH APPLE
BOISE, ID 83715

PHONE (208) 338-0818

E-MAIL: INFO@CENTRALPAVING.COM
WEBSITE: www.centralpaving.com

10/11/2020

RiveRidge Engineering
Attn: David Powell P.E.
2447 S. Vista Ave.
Boise, ID. 83705

RE: 19035 Dallas Harris South Subdivision No. 1
Change Order Request #04 - All Agency Approved Drawings Concrete ONLY

David,

Enclosed, please find Central Paving COR #04 for the concrete changes associated with the All Angency Approved drawings

DESCRIPTION	QUANTITY	UOM	UNIT PRICE	TOTAL
Concrete Changes Per All Agency Approved Drawings	1	LS	\$ 32,590.75	\$ 32,590.75
Central Paving Mark Up	1	LS	\$ 1,629.54	\$ 1,629.54

Total Cost of Change: \$ 34,220.29

Respectfully,

James R. Burggraf

Pusher

Construction Inc.

Unit Bid

P O Box 14030 - Boise ID 83714
IDPWL# 008813-AA-4
NV # 0077018

Phone: (208) 573-2207
RCE - 31124

Email: pcirandy@gmail.com
Fed ID 27-3922107

Project: Harris Ranch - CO #1
Contractor: Central Paving

Contact: James
Date: 10/8/2020

DESCRIPTION		QTY	UN	UNIT PRICE	AMOUNT
Culvert Railling		155	LF	\$ 196.65	\$ 30,480.75
Culvert Cutoff Wall Additional Height		61	SF	\$ 20.00	\$ 1,220.00
31 Ped Ramp (3 Removed)		-30	SY	\$ 100.00	\$ (3,000.00)
33 Detectable Warning for Ped Access		-34	SF	\$ 15.00	\$ (510.00)
Added Closure Pours		2	EA	\$ 2,200.00	\$ 4,400.00
				TOTAL:	\$ 32,590.75

NOTE:

Pusher Acknowledges Addendums: No Acknowledged

- Proposal only valid for contract with personal or bank guarantee mutually agreed upon between Owner/Bank and Pusher Construction Inc.
- Tree Grate is install only
- Preject Bid to be placed by machine with GPS controls. Any required string to be by others. Complete survvey also required for project by others.
- Gravel section to be 3/4" minus prepared at or 1/10' above grade by others. All gravel for incidental concrete items to be prepped by others.
- Actual quantities at above unit price, optional pricing is not included in above pricing.
- Project bid with one mobilization. Additional mobilizations as well as canges to original plans will be executed with a written change order.
- PCI reserves the right to withdraw this proposal if not accepted within 14 days.

Optional Pricing for Additional Work

Blankets Per SF Per Week	0 SF	\$ 0.25	\$ -
Non Chloride Accelerator - Per Percent, Per Yard	0 CY	\$ 6.95	\$ -
Hot Water Per Yard	0 SCY	\$ 4.80	\$ -
Excavate and Prep Subgrade	0 SF	\$ 1.00	\$ -
Place and Finish Road 4" Base Section	0 SF	\$ 2.00	\$ -
Touch Up Road Base Section	0 SF	\$ 1.00	\$ -

EXCLUSIONS:

- | | |
|---|--|
| Excavation, Grading, Backfill, and Compaction | Surveying and Staking |
| Dewatering and Additional Pipe Work @ Catch Basins | Design and Engineering |
| Rock Excavation @ Catch Basins | Saw Cutting and Demolition |
| All Permits, Inspections and Testing | Repair of Concrete Damaged by Others |
| Site Access, Obstructions, Work Area, Muud, Grade, etc. | Concrete Spoils Removal, Concrete Wash Out |
| Cold Weather Protection | Misc. Embeds, Steel Embeds |
| Traffic Control | Supply and Install Sleeves |
| Tree Grate (Install Only) | Locating Utilities Incidental to Project Scope |

We hereby proposae to furnish labor and material-complete, times actual Quantities, in accordance with the above specifications for the ABOVE UNIT PRICES with payment to be made within 30 days after job completion.

ACCEPTANCE OF PROPOSAL

The above prices, specifications, terms and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined.

Accepted:  Signature: _____

Date: 10/15/20 Signature: _____

CHANGE ORDER

(Instructions on next page)

No. 4

PROJECT: Dallas Harris South Subdivision No. 1 CID Project

DATE OF ISSUANCE - October 30, 2020

JUNE 29, 2021 KSP

OWNER: Barber Valley Development

OWNER's Contract No.: 19035: CID Eligible Items

CONTRACTOR – Central Paving

You are directed to make the following changes in the Contract Documents.

Description: This Change Order is related to the revisions required for added stop signs, stop bars and revised street names for the project as listed in the attached RiverRidge Request Letter and the Central Paving response letter for the same

Reason for Change Order: ACHD is requiring stop signs at the intersection of Millbrook and Haystack and Hopes Well and Haystack to align with stop signs in the opposing direction. There was also a street name change from Woodcutter to Brightside.

Attachments: See attached items and cost summary

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES
Original Contract Price \$ <u>1,662,448.14</u>	Original Contract Times Substantial Completion: <u>N/A</u> Ready for final payment: <small>days or dates</small>
Net changes from previous Change Orders \$ <u>70,415.89</u>	Net changes from previous change Orders No. <u> </u> to No. <u>N/A</u> <small>days</small>
Contract Price prior to this Change Order \$ <u>1,737,971.77</u>	Contract Times prior to this Change Order Substantial Completion: Ready for final payment: <u>N/A</u> <small>days or dates</small>
Net increase (decrease) of the Change Order \$ <u>2,461.05</u>	Net increase (decrease) of the Change Order <u>N/A</u> <small>days</small>
Contract Price with all approved Change Orders \$ <u>1,770,432.82</u>	Contract Times with all approved Change Orders Substantial Completion: <u>N/A</u> Ready for final payment: <small>days or dates</small>

APPROVED:

By:

Date:

ACCEPTED:

By:

Contractor (Authorized Signature)

Date: 7-7-2021

TERRY McENTEE, PRESIDENT
PAT McENTEE, VICE PRESIDENT



P.O. BOX 15010
5319 SOUTH APPLE
BOISE, ID 83715

PHONE (208) 338-0818

E-MAIL: INFO@CENTRALPAVING.COM
WEBSITE: www.centralpaving.com

4/26/2021

RiveRidge Engineering
Attn: David Powell P.E.
2447 S. Vista Ave.
Boise, ID. 83705

RE: 19035 Dallas Harris South Subdivision No. 1
Change Order Request #05 - Signage and Striping Changes

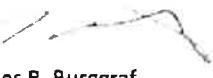
David,

Enclosed, please find pricing for new signs as requested as well as the price to remove and replace the stop bar at the intersection of Millbrook and Warmsprings.

DESCRIPTION	QUANTITY	UOM	UNIT PRICE	TOTAL
Furnish and Install New Street Name Sign	1	LS	\$ 350.00	\$ 350.00
Furnish and Install 30" Stop Sign	2	EA	\$ 465.00	\$ 930.00
Remove and Reinstall Stop Bar @ Millbrook/WarmSprings	1	LS	\$ 1,086.00	\$ 1,086.00
Central Paving Mark Up	1	LS	\$ 95.05	\$ 95.05

Total Cost of Change: \$ 2,461.05

Respectfully,



James R. Burggraf

James Burggraf

From: Cory Zubizareta <cory@curtiscleansweep.com>
Sent: Thursday, April 22, 2021 1:47 PM
To: James Burggraf
Subject: RE: Changes to Signage and Marking

James,

Pricing is as follows:

Woodcutter was denied by street name committee and changed to E. Brightside Street. This impacts 2 street signs. – FURNISH AND INSTALL NEW STREET NAME SIGNS AS NEEDED – 1 ls - \$350.00

At intersection of Hopes Well and Brightside, the street sign for Hopes Well is miss-spelled "Hope Well and needs to be changed – We will change this sign out at no cost

I need 2 new stop signs as noted and the one on Millbrook will have to be cored into the sidewalk – Furnish and install 30" Stop sign core drilled in sidewalk w/ 24" Thermoplastic stop bar as needed – 2 @ \$465.00ea = \$930.00

Thanks,

Cory Zubizareta

Project Estimator

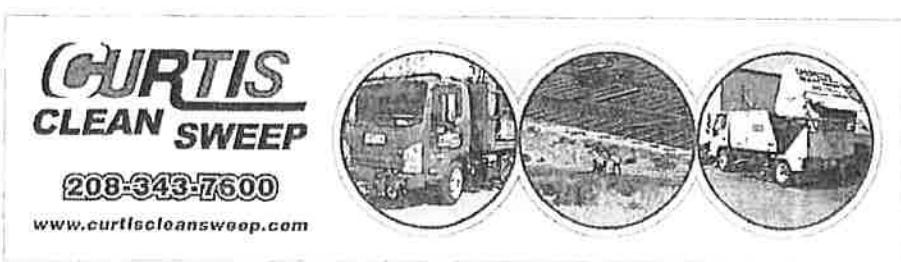
Office: 208.343.7600

Cell: 208.284.1475

Fax: 208.343.2159

Email: cory@curtiscleansweep.com

Website: www.curtiscleansweep.com



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From: James Burggraf <james@centralpaving.com>

Sent: Thursday, April 22, 2021 1:10 PM

To: Cory Zubizareta <cory@curtiscleansweep.com>; Mike Zubizareta <Mike@curtiscleansweep.com>

Subject: FW: Changes to Signage and Marking

Importance: High



PROPOSAL

P.O. Box 44112 Boise, ID 83711
PHONE: (208)343-7600
FAX: (208)343-2159

Idaho Public Works - 13294-A-4 (09950, 02761, 02785, 01570, 18800, 02890)

Oregon Construction License - 129615

DBE Authority - 49 CFR 26

RCE-1922

PROPOSAL SUBMITTED TO	PHONE	FAX	DATE
Central Paving			1/22/2021
STREET	JOB NAME		
	Dallas Harris South #1		
CITY, STATE, ZIP CODE	JOB LOCATION		
	Boise, Idaho		
CONTACT	SHEET #	PLAN DATE	
	Sheet 5.8	5/15/20	

BASE BID

ITEM #	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	BID AMOUNT
1	REMOVE EXISTING STOP BAR AND NEEDED.	1.0	LS	\$750.00	\$750.00
2	INSTALL ADDITIONAL THERMOPLASTIC STOP BAR AS NEEDED.	1.0	LS	\$336.00	\$336.00

SPECIAL NOTES

- 1 This bid may expire if notice of intent is not given within 10 days of the bid opening.
- 2 This bid excludes all business signs.
- 3 These prices reflect all line items as a total package and cannot be broken up individually.
- 4 Obliteration of pavement markings excludes fog seal.
- 5 Bid Bond not included in price. If required add 3% to overall quote total.
- 6 General contractor responsible for layout of all lines, crosswalks, stop bars, and symbols. Layout of lines must consist of a control point every 60 ft on a tangent, and every 25 ft on a curve. All layout must be approved before we can proceed with any striping. Please plan accordingly.
- 7 Striping prices do not include obliteration, preparation, cleaning or brooming of surfaces, or layout for control points of lines.
- 8 Prices exclude any and all traffic control.
- 9 Delays or layout of control points shall be charged an hourly rate of \$250.00/hr per crew.
- 10 This is a unit price proposal. This contract is based on estimated quantities. Actual payment will be based on final quantities completed.
- 11 Work cannot be guaranteed unless performed at specified minimum temperatures.
- 12 Due to the instability of the traffic paint industry with the associated price increases and material shortages, Curtis Clean Sweep Inc reserves the right to adjust the pricing for the pavement marking products quoted above as we receive these increases. In the event that traffic paint becomes unavailable, Curtis Clean Sweep Inc will be held harmless.

We propose hereby to furnish material and labor - complete in accordance with the above specification's for the sum of:

\$1,086.00

Payment is to be made as follows: **UPON INVOICE**

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written order, and will become and extra charge over and above the estimate. All agreements contingent upon strikes, accidents, or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workman's Compensation Insurance.

Authorized Signature:

CORY ZUBIZARETA

Note: This proposal will be withdrawn by us if not accepted within 10 days.

Acceptance of Proposal - The prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as specified above

SIGNATURE: _____

DATE: _____

DALLAS HARRIS SOUTH SUBDIVISION NO. 1 - (se5)
 CONTRACTOR PAYMENT REQUEST EVALUATION AND EXPLANATION OF ITEMS

September 10, 2021



ITEM	ITEM EXPANATION	
1 - 4	Mobilization, Demobilization, Bonds and Insurance considered eligible for reimbursement	\$ 41,300.00
5 - 6	Items related the clearing and grubbing of new roadway limits and removal of exisiting pavement for pavement matches and repaving considered to be eligible for reimbursement	\$ 25,706.00
7 - 17	All items are related to the placement of roadway structural fill, preparation and installation of the new Box Culvert for the S. Millbrook Way crossing and channel restoration, all considered to be eligible for reimbursement	\$ 410,057.00
18	Item related to pressure irrigation sleeves and repair not eligible for reimbursement	
19	This item is for the installation of a rock retaining wall along the Warm Springs Creek sidewalk to protect against channel scour of the creek and damage to the sidewalk considered to be eligible for reimbursement.	\$ 13,710.80
20 - 34	All items are related to the construction of public roadways all considered to be eligilbe for reimbursement.	\$ 463,834.00
35 - 44	All items are related to the installation of the domestic water system and are not eligible for reimbursement	
45 - 48	All items are related to the installation of the sanitary sewer system and all considered to be eligilbe for reimbursement.	\$ 89,434.60
49 - 55	All items are related to the installation of the storm water collection system within the public roadways sanitary sewer system and all considered to be eligilbe for reinbursement.	\$ 112,498.60
56 - 59	All items related to the project SWPPP and continuous management are considered to be eligible for reimbursement	\$ 21,199.00
60 - 69	All items are related to the installation of the private pressure irrigation system and the landscaping and sidewalk amenties are not eligible for reimbursement.	
70 - 78	All items are related to the installation of roadway traffic control and street lighting and are all considered eligible for reimbursement.	\$ 75,473.00
Change Order No. 1	Change Order 1 is for the addition of street lights along E. Warm Springs and for ACHD required changes to the Rapid Rectangular Flashing Pedestrian Beacon and are all considered to be eligible for reimbursement.	\$ 52,666.89
Change Order No. 2	Change Order 2 is related to changes to the domestic water distribution system and are not eligible for reimbursement.	
Change Order No. 3	Change Order 3 is related to ACHD required changes to the Box Culvert cutoff walls and the required addition of railing on both wingwalls and are considered eligible for reimbursement.	\$ 34,220.29

TOTAL AMOUNT RECOMMENDED FOR CID REIMBURSEMENT \$ 1,340,100.18

Central Paving**Dallas Harris South Subdivision No. 1 (DHE18 & SE)**

Inovice Date	Application No.	Amount Billed	Check Number	Date Paid	Amount Paid
9/25/2020	1	\$ 440,385.27	6198	10/15/2020	\$ 440,385.27
10/30/2020	2	\$ 373,271.88	6228	11/12/2020	\$ 373,271.88
11/30/2020	3	\$ 499,424.10	6269	12/15/2020	\$ 499,424.10
12/23/2020	4	\$ 274,114.47	6326	12/28/2020	\$ 274,114.47
1/31/2021	5	\$ 27,494.76	6341	2/11/2021	\$ 27,494.76
2/26/2021	6	\$ 58,810.28	6279	3/15/2021	\$ 58,810.28
3/20/2021	7	\$ 14,553.05	6311	4/12/2021	\$ 14,533.05
6/8/2021	8	\$ 5,225.00	6418	7/13/2021	\$ 5,225.00
7/6/2021	9	\$ 77,174.02	6452	8/17/2021	\$ 77,174.02
		\$ 1,770,452.83			\$ 1,770,432.83
Adjustments:*		\$ 430,332.65			\$ 430,332.65
Total:		\$ 1,340,120.18			\$ 1,340,100.18

*See 6E for details

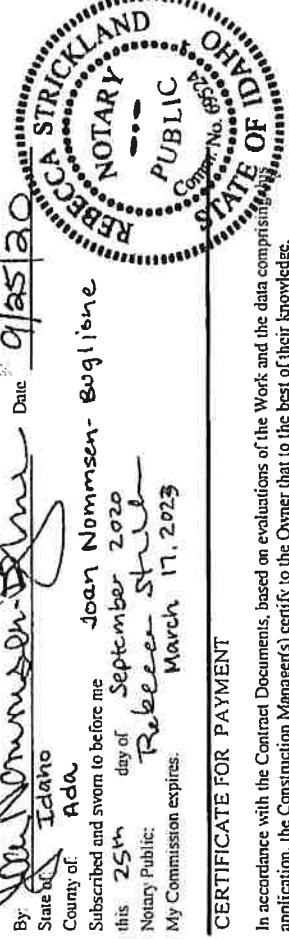
BARBER VALLEY DEVELOPMENT		APPLICATION NO:	1	000	DISTRIBUTION TO:
		APPLICATION DATE:			OWNER
		PERIOD TO:	09/25/20		CONSTRUCTION MANAGER
		CONTRACT DATE:			ARCHITECT
		COMMITMENT NO:			CONTRACTOR
					FIELD
FROM CONTRACTOR:	VIA CONSTRUCTION				
TO CONTRACTOR:	CENTRAL PAVING CO., INC				
MANAGER(S): Contact: Terry McEntee					
CONTRACT FOR:					

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract AIA Document G703, Continuation Sheet Equivalent, is attached.

1. ORIGINAL CONTRACT SUM.....	1,662,448.14 -	CONTRACTOR:	Central Paving Co., Inc
2. NET CHANGES IN THE WORK.....	0 -	By:	
3. CONTRACT SUM TO DATE (Line 1 + 2)	1,662,448.14 -	State of:	Idaho
4. TOTAL COMPLETED AND STORED TO DATE (Column 1 on G703).....	463,563.44 -	County of:	Ada
5. RETAINAGE:		Subscribed and sworn to before me	Joan Nommensen Bugline
a. $\frac{5\%}{}$ % of Completed Work (Column F + G on G703)	463,563.44 -	day of	September 2020
b. $\frac{5\%}{}$ % of Stored Material (Column H on G703)	23,178.17 -	This	25 th
Total Retainage (Lines 5a + 5b, or Total in Column L on G703)	-	Notary Public:	Releaser Strickland
6. TOTAL EARNED LESS RETAINAGE.....	23,178.17 -	My Commission expires:	March 17, 2023
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT.....	440,365.27 -		
(Line 6 from prior Certificate)			
8. CURRENT PAYMENT DUE.....	1,222,062.87 -		
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 minus Line 6)	1,198,884.70 -		
10. BALANCE TO FINISH, EXCLUDING RETAINAGE (Column K from G703)	-		

Check here for request to release retainage.



CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on evaluations of the Work and the data comprising this application, the Construction Manager(s) certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED.....

440,365.27

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

CONSTRUCTION MANAGER

By: Rebecca Strickland Date: 9/29/20

SUMMARY OF CHANGES IN THE WORK	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this month including Construction Change Directives		
TOTAL	-	-
NET CHANGES IN THE WORK		

By: _____ Date: _____
This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

Rebecca Strickland
Notary Public
State of Idaho
Comm. No. 6570
DW 9/29

Wimber Valley Development

1000 Lakes Ranch - Dallas Farms Subdivision No. 1

Project Contractive											Date	Pay Estimate No.
Client/Bld #	Description	Quantity	Bid Units	Unit Price	Total	Previous	Current	Payments	Current Period Retention	Total	Total	Retention to Date
Milestone Milestone on Job Work Ed [Schedule 1]												
1	Induction	1.00	LN	\$ 27,000.00	\$ 27,000.00	-	1.00	\$ 27,000.00	\$ 25,650.00	\$ 27,000.00	\$ 1,250.00	\$ 1,250.00
2	Permitting	1.00	LN	\$ 1,200.00	\$ 1,200.00	-	1.00	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	-	\$ 1,200.00
3	Permits	1.00	LN	\$ 1,200.00	\$ 1,200.00	-	1.00	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	-	\$ 1,200.00
4	Survey new	1.00	LN	\$ -	\$ -	-	1.00	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	-	\$ 1,200.00
5	GENERAL, SITE WORK	1.231	BL	\$ 4.60	\$ 5,565.56	-	1.231	\$ 4.60	\$ 5,565.56	\$ 5,565.56	-	\$ 5,565.56
6	Hoover Estimator - Asphalt	4.20	BL	\$ 8,105.56	\$ 33,445.56	-	4.20	\$ 8,105.56	\$ 33,445.56	\$ 33,445.56	-	\$ 33,445.56
7	Asphalt Pavement Paving	13,346.00	CT	\$ 14.60	\$ 195,550.00	-	13,346.00	\$ 14.60	\$ 195,550.00	\$ 195,550.00	-	\$ 195,550.00
8	Project Identification	1.00	LN	\$ 56,900.00	\$ 56,900.00	-	1.00	\$ 56,900.00	\$ 56,900.00	\$ 56,900.00	-	\$ 56,900.00
9	Right-of-Way or Transfer	1.75	AF	\$ 41,000.00	\$ 71,500.00	-	1.75	\$ 41,000.00	\$ 71,500.00	\$ 71,500.00	-	\$ 71,500.00
10	Warm Spring Creek Reposition	1.00	LN	\$ 4,100.00	\$ 4,100.00	-	1.00	\$ 4,100.00	\$ 4,100.00	\$ 4,100.00	-	\$ 4,100.00
11	Excavation & Removal	1,371.00	LN	\$ 19.00	\$ 25,849.00	-	1,371.00	\$ 19.00	\$ 25,849.00	\$ 25,849.00	-	\$ 25,849.00
12	Excavation & Removal Site Soil and Water	1.00	LN	\$ 2,000.00	\$ 2,000.00	-	1.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	-	\$ 2,000.00
13	Excavation & Removal Water Catchment and Water Works	1.00	LN	\$ 20,500.00	\$ 20,500.00	-	1.00	\$ 20,500.00	\$ 20,500.00	\$ 20,500.00	-	\$ 20,500.00
14	Excavation & Removal Surface	2.00	EV	\$ 9,800.00	\$ 19,600.00	-	2.00	\$ 9,800.00	\$ 19,600.00	\$ 19,600.00	-	\$ 19,600.00
15	Final Site Cleaning and Rip Rap	1.00	LN	\$ 7,600.00	\$ 7,600.00	-	1.00	\$ 7,600.00	\$ 7,600.00	\$ 7,600.00	-	\$ 7,600.00
16	Final Site Cleaning and Rip Rap Top Soil	1.00	LN	\$ 34,800.00	\$ 34,800.00	-	1.00	\$ 34,800.00	\$ 34,800.00	\$ 34,800.00	-	\$ 34,800.00
17	Channel Excavation & Reinforced Earth Liner Lined Channel	1.00	LN	\$ 2,400.00	\$ 2,400.00	-	1.00	\$ 2,400.00	\$ 2,400.00	\$ 2,400.00	-	\$ 2,400.00
18	Channel Excavation & Reinforced Earth Liner Lined Channel Clean & Check	1.00	LN	\$ 5,100.00	\$ 5,100.00	-	1.00	\$ 5,100.00	\$ 5,100.00	\$ 5,100.00	-	\$ 5,100.00
19	Cracks Sealing Mortar & Repair Wall **	1.00	AF	\$ 17,000.00	\$ 17,000.00	-	1.00	\$ 17,000.00	\$ 17,000.00	\$ 17,000.00	-	\$ 17,000.00
20	Cracks Sealing Wall	1.00	LN	\$ 9,200.00	\$ 9,200.00	-	1.00	\$ 9,200.00	\$ 9,200.00	\$ 9,200.00	-	\$ 9,200.00
21	Crosswalks Surveying	1.00	LN	\$ -	\$ -	-	1.00	\$ -	\$ -	\$ -	-	\$ -
22	Driveway	1.00	LN	\$ 13,500.00	\$ 13,500.00	-	1.00	\$ 13,500.00	\$ 13,500.00	\$ 13,500.00	-	\$ 13,500.00
23	Earth & Structures, Subgrade Compaction & Gravel	4,156.00	SV	\$ 0.94	\$ 3,825.60	-	4,156.00	\$ 0.94	\$ 3,825.60	\$ 3,825.60	-	\$ 3,825.60
24	Earth & Structures, Subgrade Compaction & Gravel	1,319.00	SV	\$ 21.00	\$ 27,699.00	-	1,319.00	\$ 21.00	\$ 27,699.00	\$ 27,699.00	-	\$ 27,699.00
25	Earth & Structures, Subgrade Compaction & Gravel	2,127.00	SV	\$ 44.60	\$ 93,243.40	-	2,127.00	\$ 44.60	\$ 93,243.40	\$ 93,243.40	-	\$ 93,243.40
26	Excavation & Removal Tree List Numbered per A.L.S.111	1,290.00	SV	\$ 11.50	\$ 14,085.00	-	1,290.00	\$ 11.50	\$ 14,085.00	\$ 14,085.00	-	\$ 14,085.00
27	Excavation & Removal Tree Numbered	1,480.00	SV	\$ 14.80	\$ 21,640.00	-	1,480.00	\$ 14.80	\$ 21,640.00	\$ 21,640.00	-	\$ 21,640.00
28	Excavation & Removal Utility Lines	2.00	SV	\$ 6,855.00	\$ 13,710.00	-	2.00	\$ 6,855.00	\$ 13,710.00	\$ 13,710.00	-	\$ 13,710.00
29	Excavation & Removal Utility Lines and Exterior and Street Lamp	2,150.00	SV	\$ 17.20	\$ 36,590.00	-	2,150.00	\$ 17.20	\$ 36,590.00	\$ 36,590.00	-	\$ 36,590.00
30	Excavation & Removal Utility Lines and Street Lamp	1,700.00	SV	\$ 14.30	\$ 24,344.40	-	1,700.00	\$ 14.30	\$ 24,344.40	\$ 24,344.40	-	\$ 24,344.40
31	Excavation & Removal Utility Lines and Street Lamp	1,990.00	SV	\$ 24.90	\$ 49,740.20	-	1,990.00	\$ 24.90	\$ 49,740.20	\$ 49,740.20	-	\$ 49,740.20
32	Excavation & Removal Utility Lines and Street Lamp	1,430.00	SV	\$ 17.00	\$ 24,310.00	-	1,430.00	\$ 17.00	\$ 24,310.00	\$ 24,310.00	-	\$ 24,310.00
33	Excavation & Removal Utility Lines and Street Lamp	1,520.00	SV	\$ 20.00	\$ 30,400.00	-	1,520.00	\$ 20.00	\$ 30,400.00	\$ 30,400.00	-	\$ 30,400.00
34	Excavation & Removal Utility Lines and Street Lamp	1,630.00	SV	\$ 17.60	\$ 28,944.00	-	1,630.00	\$ 17.60	\$ 28,944.00	\$ 28,944.00	-	\$ 28,944.00
35	Excavation & Removal Utility Lines and Street Lamp	1,630.00	SV	\$ 17.60	\$ 28,944.00	-	1,630.00	\$ 17.60	\$ 28,944.00	\$ 28,944.00	-	\$ 28,944.00
36	Excavation & Removal Utility Lines and Street Lamp	20,000.00	SV	\$ 6,400.00	\$ 128,000.00	-	20,000.00	\$ 6,400.00	\$ 128,000.00	\$ 128,000.00	-	\$ 128,000.00
37	Excavation & Removal Utility Lines and Street Lamp	2,100.00	SV	\$ 28.30	\$ 59,010.00	-	2,100.00	\$ 28.30	\$ 59,010.00	\$ 59,010.00	-	\$ 59,010.00
38	Excavation & Removal Utility Lines and Street Lamp	1.00	SV	\$ 7,400.00	\$ 7,400.00	-	1.00	\$ 7,400.00	\$ 7,400.00	\$ 7,400.00	-	\$ 7,400.00
39	Excavation & Removal Utility Lines and Street Lamp	5.00	SV	\$ 1,400.00	\$ 7,000.00	-	5.00	\$ 1,400.00	\$ 7,000.00	\$ 7,000.00	-	\$ 7,000.00
40	Excavation & Removal Utility Lines and Street Lamp	20,000.00	SV	\$ 10,100.00	\$ 201,000.00	-	20,000.00	\$ 10,100.00	\$ 201,000.00	\$ 201,000.00	-	\$ 201,000.00
41	Excavation & Removal Utility Lines and Street Lamp	4,500.00	SV	\$ 6,200.00	\$ 28,000.00	-	4,500.00	\$ 6,200.00	\$ 28,000.00	\$ 28,000.00	-	\$ 28,000.00
42	Excavation & Removal Utility Lines and Street Lamp	4,500.00	SV	\$ 6,200.00	\$ 28,000.00	-	4,500.00	\$ 6,200.00	\$ 28,000.00	\$ 28,000.00	-	\$ 28,000.00
43	Excavation & Removal Utility Lines and Street Lamp	4,500.00	SV	\$ 6,200.00	\$ 28,000.00	-	4,500.00	\$ 6,200.00	\$ 28,000.00	\$ 28,000.00	-	\$ 28,000.00
44	Excavation & Removal Utility Lines and Street Lamp	1,000.00	SV	\$ 1,200.00	\$ 1,200.00	-	1,000.00	\$ 1,200.00	\$ 1,200.00	\$ 1,200.00	-	\$ 1,200.00
45	Excavation & Removal Utility Lines and Street Lamp	1.00	SV	\$ 7,000.00	\$ 7,000.00	-	1.00	\$ 7,000.00	\$ 7,000.00	\$ 7,000.00	-	\$ 7,000.00
46	Excavation & Removal Utility Lines and Street Lamp	1,000.00	SV	\$ 26.40	\$ 26,400.00	-	1,000.00	\$ 26.40	\$ 26,400.00	\$ 26,400.00	-	\$ 26,400.00
47	Excavation & Removal Utility Lines and Street Lamp	1,000.00	SV	\$ 30,000.00	\$ 30,000.00	-	1,000.00	\$ 30,000.00	\$ 30,000.00	\$ 30,000.00	-	\$ 30,000.00
48	New Tree Stump Removal	1.00	SV	\$ 775.00	\$ 775.00	-	1.00	\$ 775.00	\$ 775.00	\$ 775.00	-	\$ 775.00
49	SOIL DRINK	671.00	LP	\$ 44.60	\$ 29,926.60	-	671.00	\$ 44.60	\$ 29,926.60	\$ 29,926.60	-	\$ 29,926.60
50	SOIL DRINK	562.00	LP	\$ 43.70	\$ 24,372.00	-	562.00	\$ 43.70	\$ 24,372.00	\$ 24,372.00	-	\$ 24,372.00
51	SOIL DRINK	1.00	LP	\$ 7,000.00	\$ 7,000.00	-	1.00	\$ 7,000.00	\$ 7,000.00	\$ 7,000.00	-	\$ 7,000.00
52	Soil Type 1 & 2 Holes	0.00	ES	\$ 1,200.00	\$ 0.00	-	0.00	\$ 1,200.00	\$ 0.00	\$ 0.00	-	\$ 0.00
53	Soil Type 1 & 2 Holes	0.00	ES	\$ 1,200.00	\$ 0.00	-	0.00	\$ 1,200.00	\$ 0.00	\$ 0.00	-	\$ 0.00
54	Soil Type 1 & 2 Holes	1.00	ES	\$ 10,000.00	\$ 10,000.00	-	1.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	-	\$ 10,000.00
55	Soil Type 1 & 2 Holes	1.00	ES	\$ 3,500.00	\$ 3,500.00	-	1.00	\$ 3,500.00	\$ 3,500.00	\$ 3,500.00	-	\$ 3,500.00

SCHEDULE	
56	Progress and Payments, Enclosed with Each Item
57	Initial All LANDSCAPING in Construction
58	Contractor's Payment and Accrued Interest
59	Final Site Preparation and the SNOTT
60	FINAL INSPECTION
61	Telephone and Irrigation Dripline and Installation
62	Irrigation Sprinkling
LANDSCAPING	
63	Landscaped Terminal
2	Lawn
3	Ferns
4	Flowering shrubs & Flower Pots
5	Tree Lined
6	Tree Lined
7	Flower Bed
8	Flower Pot
9	Tree Lined
10	STREET SIGNS AND LIGHTING
11	Street Signs
12	Street Light Fixtures
13	Street Light - 50' Tall (7' W/ LEFT)
14	Street Light - 30' Tall (7' W/ LEFT)
15	Street Light - External (7' W/ LEFT)
16	Street Light - External (7' W/ RIGHT)
17	Street Lamp Head (Plastic) (2) Street & Terminal
18	Terminal Lamp Post (2) Street & Terminal
19	Professional Signage and Symbols

Previous Payment (no retention)	Payment This Est (with Retention)	Payment This Est (with Retention)	Total Payment (no Retention)	Estimated (w/ Retention)	Total Payment (w/ Retention)	Retention This Pay Est.	Retention Total Retention
\$ 1,662,438.14	\$ 1,662,438.14	\$ 1,662,438.14	\$ 1,662,438.14	\$ 1,662,438.14	\$ 1,662,438.14	\$ 463,563.44	\$ 23,178.17
Report Total \$ 1,662,438.14	Report Total \$ 1,662,438.14	Report Total \$ 1,662,438.14	Report Total \$ 1,662,438.14	Report Total \$ 1,662,438.14	Report Total \$ 1,662,438.14	Report Total \$ 463,563.44	Report Total \$ 23,178.17

BARBER VALLEY DEVELOPMENT, INC.
4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716

Columbia Bank 521 12TH AVE. SOUTH
NAMPA, ID 83651

34-827/1251

6198

10/15/2020

PAY TO THE Central Paving Co., Inc. **440,385.27
ORDER OF _____ \$ _____

Four Hundred Forty Thousand Three Hundred Eighty-Five and 27/100***** DOLLARS

Central Paving Co., Inc.
PO Box 15010
Boise, Idaho 83715

MEMO Application #1 Dallas Harris Estates So. #1 CID

MP

1006198

ROUTE 5010
CASHIER
10/15/2020

6198

BARBER VALLEY DEVELOPMENT, INC.
Central Paving Co., Inc.

Date	Type	Reference	Original Amt.	Balance Due	10/15/2020	Discount	Payment
10/13/2020	Bill		440,385.27	440,385.27			440,385.27
						Check Amount	440,385.27

Columbia/ICB- CHEC Application #1 Dallas Harris Estates So. #1 CID 440,385.27

6198

BARBER VALLEY DEVELOPMENT, INC.
Central Paving Co., Inc.

Date	Type	Reference	Original Amt.	Balance Due	10/15/2020	Discount	Payment
10/13/2020	Bill		440,385.27	440,385.27			440,385.27
						Check Amount	440,385.27

Columbia/ICB- CHEC Application #1 Dallas Harris Estates So. #1 CID 440,385.27

BARBER VALLEY DEVELOPMENT		APPLICATION NO: 2 000	DISTRIBUTION TO: OWNER CONSTRUCTION MANAGER ARCHITECT CONTRACTOR FIELD
FROM CONTRACTOR:	CENTRAL PAVING CO., INC	APPLICATION DATE: PERIOD TO: 10/30/2020	CONTRACT DATE
MANAGER(S): Contact: Terry McElite		COMMITMENT NO:	

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. AIA Document G703, Continuation Sheet Equivalent, is attached.

1. ORIGINAL CONTRACT SUM 1,662,448.14 -
2. NET CHANGES IN THE WORK 105,523.63 -
3. CONTRACT SUM TO DATE (Line 1 + 2) 1,767,971.77 -
4. TOTAL COMPLETED AND STORED TO DATE (Column 1 on G703) 856,481.21 -
5. RETAINAGE:
 - a. 5% % of Completed Work (Column F + G on G703) 856,481.21 -) = 42,824.06 -
 - b. 5% % of Stored Material (Column H on G703) Total Retainage (Lines 5a + 5b, or Total in Column L on G703) 42,824.06 -
6. TOTAL EARNED LESS RETAINAGE (Lines 4 minus Line 5 Total) 813,657.15 -
7. LESS PREVIOUS CERTIFIES FOR PAYMENT (Line 6 from prior Certificate) 440,385.27 -
8. CURRENT PAYMENT DUE 373,271.88 -
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 minus Line 6) 868,666.50 -
10. BALANCE TO FINISH, EXCLUDING RETAINAGE (Column K from G703) 911,490.57 -

Check here for request to release retainage.

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract. Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates of Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: R. Shindler Date: 10/30/2020
 By: R. Shindler State of: TENNESSEE
 County of: DAK
 Subscribed and sworn to before me this 30th day of October 2020
 Notary Public. B. Buglione My Commission expires: 5/30/2021

CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on evaluations of the Work and the ~~Contractor's~~ information and belief, the Construction Manager(s) certify to the Owner that to the best of their knowledge, the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

CONSTRUCTION MANAGER

By: Marcia Burrell Date: 11/9/20
 CONSTRUCTION MANAGER

SUMMARY OF CHANGES IN THE WORK	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	-	-
Total approved this month including Construction Change Directives	-	-
NET CHANGES IN THE WORK	TOTAL	-

By: _____ Date: _____
 This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

BARBER VALLEY DEVELOPMENT, INC.4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716**ColumbiaBank** 521 12TH AVE. SOUTH
NAMPA, ID 83651

6228

34-827/1251

11/12/2020

PAY TO THE Central Paving Co., Inc. **373,271.88
 ORDER OF Three Hundred Seventy-Three Thousand Two Hundred Seventy-One and 88/100*****
DOLLARS

Central Paving Co., Inc.
 PO Box 15010
 Boise, Idaho 83715

MEMO Pay App #2 South Sub 1 Haystack

1100622811

DUK HFD IMAGE
C UNDER WITH THIS

MP

6228

BARBER VALLEY DEVELOPMENT, INC.
 Central Paving Co., Inc.
 Date Type Reference
 11/12/2020 Bill

Original Amt.	Balance Due	11/12/2020	Discount	Payment
373,271.88	373,271.88			373,271.88
				373,271.88

Check Amount

Columbia/ICB- CHEC Pay App #2 South Sub 1 Haystack 373,271.88

BARBER VALLEY DEVELOPMENT, INC.
 Central Paving Co., Inc.
 Date Type Reference
 11/12/2020 Bill

Original Amt.	Balance Due	11/12/2020	Discount	Payment
373,271.88	373,271.88			373,271.88
				373,271.88

Columbia/ICB- CHEC Pay App #2 South Sub 1 Haystack 373,271.88

AIA Document G732 2 09

Application and Certification for Payment, Construction Manager as Adviser Edition

BARBER VALLEY DEVELOPMENT		VIA CONSTRUCTION MANAGERS:	DISTRIBUTION TO: OWNER CONSTRUCTION MANAGER ARCHITECT CONTRACTOR FIELD
FROM CONTRACTOR:	CENTRAL PAVING CO., INC.	CONTRACT DATE:	
CONTRACT FOR: Harris Ranch S Sub Div 1 Contact: Terri McEntee		COMMITMENT NO:	

CONTRACTORS APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract, AIA Document G703. Continuation Sheet Equivalent, is attached.

1. ORIGINAL CONTRACT SUM.....	1,662,448.14 -
2. NET CHANGES IN THE WORK.....	105,523.63 -
3. CONTRACT SUM TO DATE (Line 1 + 2).....	1,767,971.77 -
4. TOTAL COMPLETED AND STORED TO DATE (Column I on G703).....	1,382,190.79 -
5. RETAINAGE.....	
a. <u>5%</u> % of Completed Work (Column F + G on G703)	<u>1,382,190.79</u> -) = <u>69,109.54</u> -
b. <u>5%</u> % of Stored Material (Column H on G703)	<u>-</u>) = <u>-</u>
Total Retainage (Lines 5a + 5b, or Total in Column L on G703)	<u>69,109.54</u> -
6. TOTAL EARNED LESS RETAINAGE..... (Lines 4 minus Line 5 Total)	<u>1,313,081.25</u> -
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT..... (Line 6 from prior Certificate)	<u>813,657.15</u> -
8. CURRENT PAYMENT DUE.....	<u>499,424.10</u> -
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 minus Line 6)	<u>385,790.98</u> -
10. BALANCE TO FINISH, EXCLUDING RETAINAGE (Column K from G703)	<u>366,501.43</u> -

Check here for request to release retainage.

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates of Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

APPLICATION NO:	3	000
APPLICATION DATE:		
PERIOD TO:	11/30/2020	
CONTRACT DATE:		
COMMITMENT NO:		
CONTRACTOR:	Central Paving Co. Inc.	
By:	R. Strickland (Signature)	Date: 12-3-2020
State of:	TENNESSEE	
County of:	Franklin	
Subscribed and sworn to before me this <u>3</u> day of <u>December</u> , <u>2020</u>		
Notary Public: <u>John O'Donnell</u>		
My Commission Expires: <u>5/30/2022</u>		
CERTIFICATE FOR PAYMENT		

In accordance with the Contract Documents, based on evaluations of the work performed comprising this application, the Construction Manager(s) certify to the Owner that the work is in accordance with the information and belief the Work has progressed as indicated, the quality of the work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED 499,424.10 -

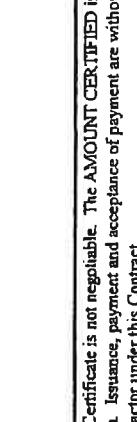
(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

CONSTRUCTION MANAGER


John O'Donnell
Date: 12-7-20

SUMMARY OF CHANGES IN THE WORK	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this month including Construction Changes Directives		
TOTAL	-	-
NET CHANGES IN THE WORK		

CONSTRUCTION MANAGER


R. Strickland
Date: 12-7-20

By: _____
This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named
herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or
Contractor under this Contract.

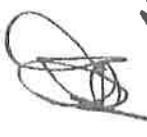
Barber Valley Development

Project Harris Ranch - Dallas Harris S Subdivision No. 1
Contractor Central Paving

Client Bid #	Description	Bid Quantity	Units	Unit Price	Total	Previous		Current		Payment
						Current	Total	Previous	Current	
1	Mobileization	1.00	LS	\$ 27,000.00	\$ 27,000.00	1.00		1.00	\$ 27,000.00	\$ -
2	Demobilization	1.00	LS	\$ -	\$ -			-	\$ -	\$ -
3	Beads	1.00	LS	\$ 14,300.00	\$ 14,300.00	1.00		1.00	\$ 14,300.00	\$ -
4	Instrument	1.00	LS	\$ -	\$ -			-	\$ -	\$ -
GENERAL SITE WORK										
5	Remove Existing Asphalt	1,221.00	SY	\$ 4.60	\$ 5,616.60	-	1,221.00	1,221.00	\$ -	\$ 5,616.60
6	Clear & Grab	4.40	AC	\$ 8,036.36	\$ 35,359.98	4.60	4.60	\$ 36,967.26	\$ -	\$ -
7	Site Structural Fill	13,250.00	CY	\$ 14.60	\$ 193,450.00	13,250.00	13,250.00	\$ 193,450.00	\$ -	\$ -
8	Project Demarcates	1.00	LS	\$ 56,900.00	\$ 56,900.00	0.95	0.95	1.00	\$ 54,055.00	\$ 2,845.00
9	Hydrex w/ Tackifier	1.75	AC	\$ 4,000.00	\$ 7,000.00	-	-	\$ -	\$ -	\$ -
10	Warm Springs Creek Revegetation	1.00	LS	\$ 4,100.00	\$ 4,100.00	-	-	\$ -	\$ -	\$ -
11	Excavation to Subgrade	1,353.00	CY	\$ 19.00	\$ 25,707.00	1,353.00	1,353.00	\$ 25,707.00	\$ -	\$ -
12	Excavate and Prepare Site for Box Culvert	1.00	LS	\$ 31,000.00	\$ 31,000.00	1.00	1.00	\$ 31,000.00	\$ -	\$ -
13	Deliver, Install and Place Box Culvert and Wing Walls	1.00	LS	\$ 20,500.00	\$ 20,500.00	1.00	1.00	\$ 20,500.00	\$ -	\$ -
14	Power in Place Aprons Section	2.00	EA	\$ 9,800.00	\$ 19,600.00	0.20	2.00	\$ 1,960.00	\$ -	\$ 17,640.00
15	Waterproof Membrane over Box Culvert	1.00	LS	\$ 7,600.00	\$ 7,600.00	1.00	1.00	\$ 7,600.00	\$ -	\$ -
16	Flat Site Grading and Rip Rap at Box End Section	1.00	LS	\$ 36,800.00	\$ 36,800.00	0.15	0.85	1.00	\$ 5,520.00	\$ 31,280.00
17	Channel Reconstruction & Incidental Rock Lined Channel	1.00	LS	\$ 7,400.00	\$ 7,400.00	-	1.00	1.00	\$ -	\$ 7,400.00
18	Install Irrigation Shelves & Repair Irrigation Along Creek	1.00	LS	\$ 5,100.00	\$ 5,100.00	1.00	1.00	\$ 5,100.00	\$ -	\$ -
19	Offsite Rock & Retaining Wall **	15.00	LF	\$ 90.80	\$ 1,371.00	151.00	151.00	\$ 13,710.80	\$ -	\$ -
20	Traffic Control	1.00	LS	\$ 9,200.00	\$ 9,200.00	0.75	0.25	1.00	\$ 6,900.00	\$ 2,300.00
21	Construction Surveying	1.00	LS	\$ -	\$ -	-	-	\$ -	\$ -	\$ -
ROADS										
22	Road & Sidewalk Subgrade Compact & Prep	13,395.00	SY	\$ 0.94	\$ 12,591.30	13,395.00	13,395.00	\$ -	\$ -	\$ 12,591.30
23	6" Metal Unreinforced Aggregate Subbase (Imported)	4,156.00	CY	\$ 21.80	\$ 90,600.80	4,156.00	4,156.00	\$ 90,600.80	\$ -	\$ 90,600.80
24	3/4" Metal Crushed Aggregate Base Course	1,137.00	CY	\$ 44.60	\$ 50,710.20	995.00	142.00	\$ 1,137.00	\$ 44,377.00	\$ 6,333.20
25	2-1/2" Asphalt Concrete	4,440.00	SY	\$ 11.50	\$ 51,060.00	-	4,440.00	4,440.00	\$ -	\$ 51,060.00
26	5" Asphalt Concrete (Two 1/4" Thickness per ACHB)	1,220.00	SY	\$ 23.20	\$ 28,304.00	-	1,220.00	1,220.00	\$ -	\$ 28,304.00
27	Sand Layer over Box Culvert	16.00	CY	\$ 14.00	\$ 230.00	-	16.00	16.00	\$ -	\$ 230.00
28	Saw Cut Existing Asphalt	150.00	LF	\$ 6.65	\$ 1,027.50	100.00	50.00	\$ 150.00	\$ 685.00	\$ 342.50
29	Standard 6" Vertical Curb and Gutter and Base Course	2,150.00	LF	\$ 17.20	\$ 36,980.00	2,150.00	2,150.00	\$ 2,150.00	\$ -	\$ 36,980.00
30	6" Wide Curved Sidewalk and Base Course	2,708.00	SY	\$ 34.30	\$ 92,884.40	1,250.00	1,250.00	\$ 1,250.00	\$ -	\$ 42,875.00
31	15" Wide Curved Sidewalk and Base Course	1,898.00	SY	\$ 34.90	\$ 66,240.20	200.00	200.00	\$ 200.00	\$ -	\$ 6,980.00
32	Curved Pedestrian Ramp **	140.00	SY	\$ 117.00	\$ 16,380.00	100.00	100.00	\$ 100.00	\$ -	\$ 11,700.00
33	Valley Catch	52.00	LF	\$ 49.90	\$ 2,594.80	52.00	52.00	\$ 52.00	\$ -	\$ 2,594.80
34	Detectable Warning for Pedestrian Access	168.00	SF	\$ 17.60	\$ 2,956.80	120.00	120.00	\$ 120.00	\$ -	\$ 2,112.00
WATER										
35	Install new 1" water service and meter setting	2.00	EA	\$ 3,200.00	\$ 6,400.00	2.00	2.00	\$ 6,400.00	\$ -	\$ -
36	6" PVC Water Main	2,130.00	LS	\$ 28.30	\$ 60,279.00	1,640.00	490.00	\$ 2,130.00	\$ 46,412.00	\$ 13,867.00
37	8" Water Main Flanges & Joint Restraints	1.00	LS	\$ 7,400.00	\$ 7,400.00	1.00	1.00	\$ 7,400.00	\$ -	\$ -
38	8" x 2" Blowoff Assembly	1.00	EA	\$ 1,800.00	\$ 1,800.00	1.00	1.00	\$ 1,800.00	\$ -	\$ -
39	8" Gate Valve (see C1#2)	5.00	EA	\$ 1,400.00	\$ 7,000.00	4.00	1.00	\$ 5,600.00	\$ 1,400.00	\$ -
40	8" Ductile Iron Pipe (see C1#2)	20.00	LF	\$ 511.00	\$ 10,220.00	-	20.00	20.00	\$ -	\$ 10,220.00

Client Bid #	Description	Bid Quantity	Units	Unit Price	Total	Previous		Current		Current
						Previous	Total	Current	Total	
41	16" Stel Cover Pipe and Spacers (see CO#2)	20.00	LF	\$ 399.00	\$ 7,980.00	-	20.00	20.00	\$ -	\$ 7,980.00
42	Install 6" Fire hydrant / Assembly	1.00	EA	\$ 6,200.00	\$ 6,200.00	1.00	1.00	1.00	\$ 6,200.00	\$ -
43	Connect to Existing 8" Main	4.00	EA	\$ 1,300.00	\$ 5,200.00	4.00	4.00	4.00	\$ 5,200.00	\$ -
44	Adjust Existing Water Valve to finished grade	1.00	LS	\$ 1,200.00	\$ 1,200.00	1.00	1.00	1.00	\$ -	\$ 1,200.00
SEWER										
45	Introduce Cleanout and connect to Existing 8" Pipe	1.00	LS	\$ 5,700.00	\$ 5,700.00	1.00	1.00	1.00	\$ 5,700.00	\$ -
46	8" SDR35, PVC Sewer Main	1,169.00	LF	\$ 56.40	\$ 67,059.60	1,189.00	1,189.00	1,189.00	\$ 67,059.60	\$ -
47	New 4" Standard Spherical Sewer Manhole	3.00	EA	\$ 5,100.00	\$ 15,300.00	3.00	3.00	3.00	\$ 15,300.00	\$ -
48	New Traffic Rated Cleanout	1.00	EA	\$ 775.00	\$ 775.00	1.00	1.00	1.00	\$ 775.00	\$ -
STORM DRAIN										
49	12" PVC C-900 Storm Drain Pipe and Fittings	671.00	LF	\$ 44.60	\$ 29,926.60	671.00	671.00	671.00	\$ 29,926.60	\$ -
50	15" HDPE Storm Drain Pipe	560.00	LF	\$ 43.70	\$ 24,472.00	560.00	560.00	560.00	\$ 24,472.00	\$ -
51	Concrete Existing 15" HDPE Pipe	1.00	EA	\$ 1,700.00	\$ 1,700.00	1.00	1.00	1.00	\$ 1,700.00	\$ -
52	Install Type I Catch Basin	6.00	EA	\$ 1,400.00	\$ 8,400.00	-	6.00	6.00	\$ -	\$ 8,400.00
53	New 4" Standard Storm Drain Manhole	8.00	EA	\$ 4,300.00	\$ 34,400.00	8.00	8.00	8.00	\$ 34,400.00	\$ -
54	Stand-Lean	1.00	LS	\$ 10,100.00	\$ 10,100.00	-	1.00	1.00	\$ -	\$ 10,100.00
55	Modify Offsite Infiltration Seal	1.00	LS	\$ 3,500.00	\$ 3,500.00	1.00	1.00	1.00	\$ 3,500.00	\$ -
SWPP										
56	Prepare and Exc SWPP, ESD, ACHD ESC Plan	1.00	LS	\$ 1,000.00	\$ 1,000.00	1.00	1.00	1.00	\$ 1,000.00	\$ -
57	Install all BMPs Prior to Construction	1.00	LS	\$ 18,000.00	\$ 18,000.00	1.00	1.00	1.00	\$ 18,000.00	\$ -
58	Continuously Inspect and Maintain BMP's	1.00	LS	\$ 2,000.00	\$ 2,000.00	0.70	0.20	0.90	\$ 1,400.00	\$ 400.00
59	Final Site Inspection and File ENOT	1.00	LS	\$ 199.00	\$ 199.00	-	-	-	\$ -	\$ -
PARK IRIGATION										
1	Complete Park Irrigation Design and Installation	1.00	LS	\$ 19,200.00	\$ 19,200.00	0.30	0.30	0.30	\$ 5,760.00	\$ -
1	Irrigation Seeding	1.00	LS	\$ 4,500.00	\$ 4,500.00	1.00	1.00	1.00	\$ 4,500.00	\$ -
LANDSCARING										
2	Amended Topsoil	300.00	CF	\$ 178.00	\$ 53,400.00	-	-	-	\$ -	\$ -
3	Lawn	10,444.00	SF	\$ 0.49	\$ 5,117.56	-	-	-	\$ -	\$ -
4	Trees	36.00	EA	\$ 563.00	\$ 20,268.00	-	-	-	\$ -	\$ -
5	Flowering plants in Planter Pots	1.00	LS	\$ 5,500.00	\$ 5,500.00	-	-	-	\$ -	\$ -
6	Trash Receptical	8.00	EA	\$ 2,000.00	\$ 16,000.00	7.00	7.00	7.00	\$ -	\$ 14,000.00
7	Beeches	6.00	EA	\$ 2,700.00	\$ 21,600.00	7.00	7.00	7.00	\$ -	\$ 18,900.00
8	Planter Pots	16.00	EA	\$ 2,200.00	\$ 35,200.00	4.00	4.00	4.00	\$ -	\$ 8,800.00
9	Tree Grates	16.00	EA	\$ 5,900.00	\$ 94,400.00	6.00	6.00	6.00	\$ -	\$ 35,400.00
STREET SIGNS AND LIGHTING										
10	Street Signs	1.00	LS	\$ 2,400.00	\$ 2,400.00	-	-	-	\$ -	\$ -
11	Type II Burttude	3.00	EA	\$ 375.00	\$ 1,125.00	-	-	-	\$ -	\$ -
12	Type II Burttude	4.00	EA	\$ 512.00	\$ 2,048.00	-	-	-	\$ -	\$ -
13	Street Lights -25 ft Pole/97 W LED	2.00	EA	\$ 6,500.00	\$ 13,000.00	1.00	1.00	1.00	\$ 6,500.00	\$ -
14	Street Lights -39 ft Pole / 97 W LED	1.00	EA	\$ 5,300.00	\$ 5,300.00	-	-	-	\$ -	\$ -
15	Street Light Electrical Conduit & Wire	1.00	LS	\$ 13,200.00	\$ 13,200.00	0.50	0.50	0.50	\$ 6,600.00	\$ 6,600.00
16	Rectangular Rapid Flashing Beacon & Electrical	1.00	LS	\$ 32,100.00	\$ 32,100.00	0.30	0.30	0.30	\$ 9,630.00	\$ 16,050.00
17	Power Coat Street Signs & Poles	1.00	LS	\$ 2,400.00	\$ 2,400.00	-	-	-	\$ -	\$ -
18	Pavement Striping and Symbols	1.00	LS	\$ 3,900.00	\$ 3,900.00	-	-	-	\$ -	\$ -
CHANGE ORDERS										
CO #1	ACHD Electrical Modifications	1.00	LS	\$ 52,666.89	\$ 52,666.89	0.50	0.20	0.70	\$ 26,333.45	\$ 10,533.38
CO #2	All Agency UG Pipe	1.00	LS	\$ 18,636.45	\$ 18,636.45	1.00	1.00	1.00	\$ 18,636.45	\$ -
CO #3	All Agency Concrete	1.00	LS	\$ 34,220.29	\$ 34,220.29	0.20	0.20	0.20	\$ 6,844.06	\$ -

Client Bid #	Description	Bid Quantity	Units	Unit Price	Total	Previous	Current	Total	Previous	Current	Total	Previous	Current
	Original Contract Value		\$	1,662,448.14									
	Contract Value with Change Orders		\$	1,767,971.77									


26,285.48
499,424.10
Retainage
Total Due

12.1.20

BARBER VALLEY DEVELOPMENT, INC.4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716**Columbia Bank** 621 12TH AVE. SOUTH
NAMPA, ID 83651

34-827/1251

6269

12/15/2020

PAY TO THE Central Paving Co., Inc.
ORDER OF _____

Four Hundred Ninety-Nine Thousand Four Hundred Twenty-Four and 10/100*****

**499,424.10

\$

DOLLARS

Central Paving Co., Inc.
PO Box 15010
Boise, Idaho 83715FUG WITI PLATE
Closes with ticket

MEMO App.#3.HR.South.Sub.No.1

MP

1100626911

BARBER VALLEY DEVELOPMENT, INC.
Central Paving Co., Inc.Date Type Reference
12/9/2020 BillOriginal Amt.
499,424.10Balance Due
499,424.10

12/15/2020

Discount

Check Amount

6269

Payment
499,424.10
499,424.10

Columbia/ICB- CHEC App #3 HR South Sub No 1

499,424.10

BARBER VALLEY DEVELOPMENT, INC.
Central Paving Co., Inc.Date Type Reference
12/9/2020 BillOriginal Amt.
499,424.10Balance Due
499,424.10

12/15/2020

Discount

Check Amount

6269

Payment
499,424.10
499,424.10

Columbia/ICB- CHEC App #3 HR South Sub No 1

499,424.10

ATA Document G732 2 09

Application and Certification for Payment, Construction Manager as Adviser Edition

FROM CONTRACTOR: CENTRAL PAVING CO., INC		VIA CONSTRUCTION MANAGER(S):	DISTRIBUTION TO: OWNER CONSTRUCTION MANAGER ARCHITECT CONTRACTOR FIELD
CONTRACT FOR: Harris Ranch S Sub Div 1		CONTACT: Terry McEntee	APPLICATION NO: 4 000 APPLICATION DATE: PERIOD TO: 12/23/2020 CONTRACT DATE: COMMITMENT NO:

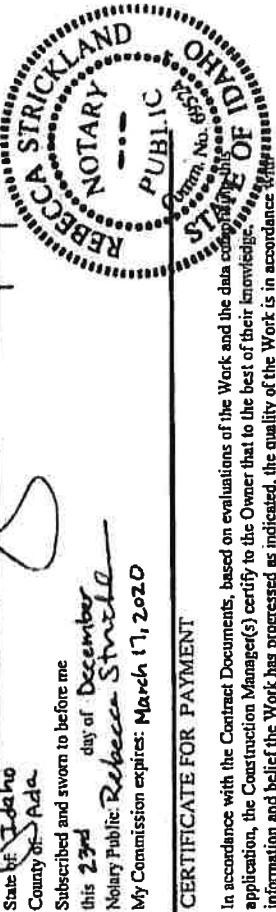
CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. AIA Document G703, Continuation Sheet Equivalent, is attached.

1. ORIGINAL CONTRACT SUM..... 1,662,448.14 -
2. NET CHANGES IN THE WORK 105,523.63 -
3. CONTRACT SUM TO DATE (Line 1+ 2) 1,767,971.77 -
4. TOTAL COMPLETED AND STORED TO DATE (Column I on G703) 1,656,305.26 -
5. RETAINAGE:
 - a. 3% % of Completed Work 1,656,305.26 -) = 82,815.26 -
 - b. 5% % of Stored Material (Column H on G703 -) = 82,815.26 -

Total Retainage (Lines 5a + 5b, or Total in Column L on G703) 157,3490 -
6. TOTAL EARNED LESS RETAINAGE 1,382,190.79 -
- (Lines 4 minus Line 5 Total)
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT..... 274,114.47 -
8. CURRENT PAYMENT DUE..... 194,481.77 -
9. BALANCE TO FINISH, INCLUDING RETAINAGE
(Line 3 minus Line 6) 111,888.51 -
10. BALANCE TO FINISH, EXCLUDING RETAINAGE
(Column K from G703) - -

Check here for request to release retainage.



CERTIFICATE FOR PAYMENT
In accordance with the Contract Documents, based on evaluations of the Work and the data contained in the Application, the Construction Manager(s) certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED..... 274,114.47 -

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

CONSTRUCTION MANAGER


By: Rebekah Strickland Date: 1/14/21

SUMMARY OF CHANGES IN THE WORK	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	-	-
Total approved this month including Construction Change Directives	-	-
TOTAL	-	-

NET CHANGES IN THE WORK

By: _____ Date: _____
This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

42	Install 6" PVC Hydrant Assembly [C]onnect to Existing 6" Main	1.00 EA \$ 6,200.00 \$ 6,200.00 1.00 1.00 \$ 6,200.00 \$
43	Added Existing Water Valve to Distribute water	1.00 LS \$ 1,300.00 \$ 1,300.00 1.00 1.00 \$ 1,300.00 \$
44	Added Existing Water Valve to Distribute water	1.00 LS \$ 1,200.00 \$ 1,200.00 1.00 1.00 \$ 1,200.00 \$
45	Recon Concrete and connect to Existing 6" Pipe [C]onnect 6" SDR 30 PVC to Service Node	1.00 EA \$ 5,700.00 \$ 5,700.00 1.00 1.00 \$ 5,700.00 \$
46	New 6" Standard Sanitary Server Manhole [C]onnect to Existing 6" HDPE Pipe	1.169 LF \$ 56.40 \$ 67,059.60 \$ 1,189.00 \$ 67,059.60 \$
47	New 18" Standard Sanitary Server Manhole [C]onnect to Existing 18" HDPE Pipe	3.01 EA \$ 5,300.00 \$ 15,900.00 \$ 3,000.00 \$ 15,900.00 \$
48	New Traffic-Based Camera	1.00 EA \$ 773.00 \$ 775.00 \$ 775.00 \$ 775.00 \$
49	STORM DRAIN [C]onnect PVC Curb Storm Drain Pipe and Fittings [C]onnect to Existing 18" HDPE Storm Drain Pipe	671.00 LF \$ 44.60 \$ 29,926.60 \$ 671.00 \$ 29,926.60 \$
50	18" HDPE Storm Drain Pipe	560.00 LF \$ 43.70 \$ 24,472.00 \$ 560.00 \$ 24,472.00 \$
51	[C]onnect to Existing 18" HDPE Pipe	1.06 EA \$ 1,700.00 \$ 1,700.00 \$ 1,700.00 \$ 1,700.00 \$
52	Final Type I Catch Basin	6.00 EA \$ 1,400.00 \$ 8,400.00 \$ 6.00 \$ 8,400.00 \$
53	New 24" Standard Storm Driveway Manhole	8.00 EA \$ 4,300.00 \$ 34,400.00 \$ 8.00 \$ 34,400.00 \$
54	Final Lane	1.00 EA \$ 10,100.00 \$ 10,100.00 \$ 1.00 \$ 10,100.00 \$
55	Mobility Onsite Infrastructure Enhance	1.00 LS \$ 3,500.00 \$ 3,500.00 \$ 1.00 \$ 3,500.00 \$
56	Permit and Tie SWPPP, ZENOL ACHD ESC Plan	1.00 LS \$ 1,000.00 \$ 1,000.00 \$ 1.00 1.00 \$ 1,000.00 \$
57	Final all DRPA Permits to Construction	1.00 LS \$ 18,000.00 \$ 18,000.00 \$ 1.00 1.00 \$ 18,000.00 \$
58	Continuously Import and Monitor BMP's	1.00 LS \$ 2,000.00 \$ 2,000.00 \$ 0.30 0.10 \$ 1,800.00 \$ 200.00
59	Final Site Inspection and File ENOT	1.00 LS \$ 199.00 \$ 199.00 \$ - - \$ - \$
60	FIRE IRRIGATION	
1	Complete Fire Irrigation Design and Installation [C]onnect to Service Line	1.00 EA \$ 19,200.00 \$ 19,200.00 \$ 0.30 0.30 \$ 5,760.00 \$
1	Fire Hydrant Service Line	1.00 LS \$ 4,500.00 \$ 4,500.00 \$ 1.00 1.00 \$ 4,500.00 \$
2	Assess and Tag all [C]onnect to Service Line	300.00 EA \$ 0.49 \$ 5,117.56 \$ 300.00 \$ 300.00 \$ 53,400.00
3	Lawn	10,444.00 SF \$ 563.00 \$ 20,256.00 \$ - - \$ - \$
4	Trees	1.00 EA \$ 5,500.00 \$ 5,500.00 \$ - - \$ - \$
5	Flowering Plants in Planter Pots	1.00 EA \$ 2,000.00 \$ 16,000.00 \$ 7.00 1.00 \$ 14,000.00 \$ 2,000.00
6	Trunk Receptical	8.00 EA \$ 2,700.00 \$ 21,600.00 \$ 7.00 1.00 \$ 18,900.00 \$ 2,700.00
7	Benches	16.00 EA \$ 2,200.00 \$ 35,200.00 \$ 4.00 4.00 \$ 8,800.00 \$
8	Planter Pots	16.00 EA \$ 5,900.00 \$ 94,400.00 \$ 6.00 14.00 \$ 35,400.00 \$ 47,200.00
9	Tree Grates	
10	STREET SIGNS AND LIGHTING	
10	Street Signs	1.00 LS \$ 2,400.00 \$ 2,400.00 \$ 1.00 1.00 \$ 2,400.00 \$
11	Type II Barcode	3.00 EA \$ 375.00 \$ 1,125.00 \$ - - \$ - \$
12	Type III Barcode	4.00 EA \$ 512.00 \$ 2,048.00 \$ - - \$ - \$
13	Street Light - 25W LED	2.00 EA \$ 6,500.00 \$ 13,000.00 \$ 1.00 2.00 \$ 6,500.00 \$
14	Street Light - 57W LED	1.00 EA \$ 5,200.00 \$ 5,200.00 \$ 1.00 1.00 \$ 5,200.00 \$
15	Street Light - 57W LED	1.00 EA \$ 13,200.00 \$ 13,200.00 \$ 1.00 1.00 \$ 13,200.00 \$
16	Rectangular Rapid Flashing Beacon & Electrical	1.00 LS \$ 32,100.00 \$ 32,100.00 \$ 0.40 0.20 \$ 25,880.00 \$ 6,420.00
17	Parking Coat Street Signs & Posts	1.00 LS \$ 2,400.00 \$ 2,400.00 \$ 1.00 1.00 \$ - \$
18	Pavement Striping and Symbols	1.00 LS \$ 3,900.00 \$ 3,900.00 \$ 1.00 1.00 \$ - \$
19	CHANGE ORDERS	
CO #1	A/CHD Electrical Modifications	1.00 LS \$ 52,660.89 \$ 52,660.89 \$ 0.70 0.30 \$ 36,866.82 \$ 15,800.07
CO #2	All Agency US Pipe	1.00 LS \$ 18,636.45 \$ 18,636.45 \$ 1.00 1.00 \$ 18,636.45 \$
CO #3	All Agency Concrete	1.00 LS \$ 34,220.29 \$ 34,220.29 \$ 0.20 0.20 \$ 6,844.06 \$

Original Contract Value	\$ 1,662,448.14
Contract Value with Change Orders	\$ 1,757,971.77

Previous Payment (no retention)	Payment This Est (w/o Retention)
\$ 1,382,190.79	\$ 274,114.47

BARBER VALLEY DEVELOPMENT, INC.
4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716

 Columbia Bank 521 12TH AVE. SOUTH
NAMPA, ID 83651

34-827/1251

6326

12/28/2020

PAY TO THE Central Paving Co., Inc.
ORDER OF _____

**274,114.47
\$ _____

Two Hundred Seventy-Four Thousand One Hundred Fourteen and 47/100*****

DOLLARS

Central Paving Co., Inc.
PO Box 15010
Boise, Idaho 83715

MEMO CID App #4 HR So. Sub #1

1100632611

RECEIVED IMAGE
COVER WITH INK

M

6326

BARBER VALLEY DEVELOPMENT, INC.
Central Paving Co., Inc.

Date	Type	Reference	Original Amt.	Balance Due	12/28/2020	Discount	Payment
12/28/2020	Bill		274,114.47	274,114.47			274,114.47

Check Amount

274,114.47
274,114.47

Columbia/ICB- CHEC CID App #4 HR So. Sub #1

274,114.47

6326

BARBER VALLEY DEVELOPMENT, INC.
Central Paving Co., Inc.

Date	Type	Reference	Original Amt.	Balance Due	12/28/2020	Discount	Payment
12/28/2020	Bill		274,114.47	274,114.47			274,114.47

Check Amount

274,114.47
274,114.47

Columbia/ICB- CHEC CID App #4 HR So. Sub #1

274,114.47

AIA Document G732 2 09

Application and Certification for Payment, Construction Manager as Adviser Edition

BARBER VALLEY DEVELOPMENT		VIA CONSTRUCTION	APPLICATION NO: 5 000	DISTRIBUTION TO: OWNER
FROM CONTRACTOR:	CENTRAL PAVING CO., INC	MANAGER(S):	PERIOD TO: 1/31/2021	CONSTRUCTION MANAGER ARCHITECT CONTRACTOR FIELD
Contact: Terry McEntee		CONTRACT DATE:		
CONTRACT FOR: Harris Ranch S Sub Div 1		COMMITMENT NO:		

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract AIA Document G703, Continuation Sheet Equivalent, is attached.

1 ORIGINAL CONTRACT SUM.....	1,662,449.14 -	CONTRACTOR: Central Paving Co., Inc
2 NET CHANGES IN THE WORK.....	105,523.83 -	
3 CONTRACT SUM TO DATE (Lines 1+2).....	1,767,971.77 -	
4 TOTAL COMPLETED AND STORED TO DATE (Column 1 on G703)	1,685,247.19 -	
5 RETAINAGE:		
a. <u>5%</u> % of Completed Work (Column F + G on G703)	1,685,247.19 -	= 84,262.36 -
b. <u>5%</u> % of Stored Material (Column H on G703)		
Total Retainage (Lines 5a + 5b or Total in Column L on G703)		84,262.36 -
6 TOTAL EARNED LESS RETAINAGE (Lines 4 minus Line 5 Total)		1,600,984.83 -
7 LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate)		1,573,480.00 -
8 CURRENT PAYMENT DUE.....	27,494.76 -	
9 BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 minus Line 6)	166,986.94 -	
10. BALANCE TO FINISH, EXCLUDING RETAINAGE (Column K from G703)	158,637.59 -	

Check here for request to release retainage.

The undersigned Contractor certifies that to the best of the Contractors knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates of Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

By BSTL Cleland
State of EDWARD
County of EDDA
Subscribed and sworn to before me
this 15 day of February, 2021
Notary Public Jeanne Cleland - 2021
My Commission expires: 5/31/2021

CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on evaluations of the Work and the data comprising this application, the Construction Manager(s) certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED..... 27,494.76 -

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

CONSTRUCTION MANAGER

By Mark Powell
Date: 2/3/21

SUMMARY OF CHANGES IN THE WORK	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this month including Construction Change Directives		
TOTAL	-	-
NET CHANGES IN THE WORK	-	-

By _____ Date: _____
This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named
herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or
Contractor under this Contract

0W 2/22/21

Barber Valley Development
 Harris Ranch - Dallas Harris S Subdivision No. 1

Project Contractor	Client Bid #	Description	Bid Quantity	Units	Unit Price	Total	Previous	Current	Total	Previous	Current	Date Pay Estimate No.	31-Jan-21 5	Payment
			1.00	L\$	\$ 27,000.00	\$ 27,000.00	1.00		1.00	\$ 27,000.00		-		
1	Mobilization		1.00	L\$	\$ -	\$ -								
2	Demobilization		1.00	L\$	\$ -	\$ -								
3	Beads		1.00	L\$	\$ 14,300.00	\$ 14,300.00	1.00		1.00	\$ 14,300.00		-		
4	Infrastructure		1.00	L\$	\$ -	\$ -								
	GENERAL SITE WORK													
5	Remove Existing Asphalt		1.21	SY	\$ 4.60	\$ 5,616.60	1,221.00		1.221	\$ 5,616.60		-		
6	Clear & Grab		4.40	AC	\$ 8,036.36	\$ 35,359.98	4.60	[0.20]	4.40	\$ 36,967.26		(1,607.27)		
7	Site Structural Fill		13.56	CY	\$ 14.60	\$ 193,450.00	13,250.00		13,250.00	\$ 193,450.00		-		
8	Project Demolition		1.00	L\$	\$ 56,900.00	\$ 56,900.00	1.00		1.00	\$ 56,900.00		-		
9	Hydrant and Tees/Flanges		1.75	AC	\$ 4,000.00	\$ 7,000.00	1.75		1.75	\$ 7,000.00		-		
10	Worm Springs Creek Regrade/Reinforcement		1.35	SY	\$ 4,000.00	\$ 4,000.00	1.00		1.00	\$ 4,000.00		-		
11	Excavation to Subgrade		1.00	L\$	\$ 19.00	\$ 25,707.00	1,333.00		1,333.00	\$ 25,707.00		-		
12	Excavate and Prepare Site for Backfill		1.00	L\$	\$ 31,000.00	\$ 31,000.00	1.00		1.00	\$ 31,000.00		-		
13	Outline, Layout and Place Bus Curb/Stone and Wind Walls		1.00	L\$	\$ 20,500.00	\$ 20,500.00	1.00		1.00	\$ 20,500.00		-		
14	Poured in Place Action Section		2.00	EA	\$ 9,800.00	\$ 19,600.00	2.00		2.00	\$ 19,600.00		-		
15	Waterproof Membrane over Bus Curb/Stone		1.00	L\$	\$ 7,600.00	\$ 7,600.00	1.00		1.00	\$ 7,600.00		-		
16	Permeable Gravel and Rip Rap at Bus Stop Locations		0.09	L\$	\$ 36,800.00	\$ 36,800.00	1.00		1.00	\$ 36,800.00		-		
17	Change Reinforcement & Encapsulate Rock Lined Channel		1.00	L\$	\$ 7,400.00	\$ 7,400.00	1.00		1.00	\$ 7,400.00		-		
18	Install Irrigation System & Repair Irrigation Along Creek		1.00	L\$	\$ 5,100.00	\$ 5,100.00	1.00		1.00	\$ 5,100.00		-		
19	Office Rock Retaining Wall **		1.00	L\$	\$ 90.80	\$ 13,710.80	151.00		151.00	\$ 13,710.80		-		
20	Traffic Control		1.00	L\$	\$ 9,200.00	\$ 9,200.00	1.00		1.00	\$ 9,200.00		-		
21	Construction Services		1.00	L\$	\$ -	\$ -						-		
	ROADS													
22	Road & Sidewalk Surface Coating & Prep		13.39	SY	\$ 0.94	\$ 12,391.30	13,395.00		13,395.00	\$ 12,391.30		-		
23	4' Asphalt Uncertified Aggregate Sidewalk & Driveway		4.15	CY	\$ 21.80	\$ 90,600.80	4,156.00		4,156.00	\$ 90,600.80		-		
24	1/4" Minus Crushed Aggregate Base Course		1.17	CY	\$ 44.60	\$ 50,710.20	1,137.00		1,137.00	\$ 50,710.20		-		
25	2-1/2" Asphalt Concrete		4.44	DW	\$ 11.50	\$ 51,060.00	4,440.00		4,440.00	\$ 51,060.00		-		
26	5" Asphalt Concrete (Two Lift Placement per ACH10)		1.20	CY	\$ 23.20	\$ 28,304.00	1,200.00		1,200.00	\$ 28,304.00		-		
27	Seal Layer over Bus Cobble		1.00	CY	\$ 14.00	\$ 2,304.00	16.00		16.00	\$ 2,304.00		-		
28	Saw Cut & Finishing Asphalt		1.93	LF	\$ 6.05	\$ 1,027.50	150.00		150.00	\$ 1,027.50		-		
29	Standard 6" Vertical Curb and Gutter and Base Course		2.15	LF	\$ 17.20	\$ 36,980.00	2,150.00		2,150.00	\$ 36,980.00		-		
30	7" Wide Concrete Sidewalk and Base Course		2.78	SY	\$ 34.30	\$ 92,884.40	2,708.00		2,708.00	\$ 92,884.40		-		
31	15" Wide Concrete Sidewalk and Base Course		1.91	SY	\$ 34.90	\$ 66,240.20	1,898.00		1,898.00	\$ 66,240.20		-		
32	Concrete Pothole Ramps		1.00	SY	\$ 117.00	\$ 16,180.00	140.00		140.00	\$ 16,180.00		-		
33	Valley Gutter		52.00	LF	\$ 49.90	\$ 2,594.80	52.00		52.00	\$ 2,594.80		-		
34	Driveway Venting for Pedestrian Access		16.00	SF	\$ 17.60	\$ 2,956.80	168.00		168.00	\$ 2,956.80		-		
	WATER													
35	Install New 1" Water Service and Meter Setting		2.00	EA	\$ 3,200.00	\$ 6,400.00	2.00		2.00	\$ 6,400.00		-		
36	1" PVC Water Main		2,131.00	L\$	\$ 28.30	\$ 60,279.00	2,130.00		2,130.00	\$ 60,279.00		-		
37	1" Water Main Flanges & Joint Restrainers		1.00	EA	\$ 7,400.00	\$ 7,400.00	1.00		1.00	\$ 7,400.00		-		
38	1" x 1" Bimetal Assembly		1.00	EA	\$ 1,800.00	\$ 1,800.00	1.00		1.00	\$ 1,800.00		-		
39	1" Gate Valve (per CO #2)		3.00	EA	\$ 1,400.00	\$ 7,000.00	5.00		5.00	\$ 7,000.00		-		
40	1" Ductile Iron Pipe (per CO #2)		20.00	LF	\$ 511.00	\$ 10,220.00	20.00		20.00	\$ 10,220.00		-		
41	16" Steel Cover Pipe and Spacers (per CO #2)		20.00	LF	\$ 399.00	\$ 7,980.00	20.00		20.00	\$ 7,980.00		-		
42	Install 16" Fire Hydrant Assembly		1.00	EA	\$ 6,200.00	\$ 6,200.00	1.00		1.00	\$ 6,200.00		-		

43	Connected to Existing "Y" Main	4.00	EA	\$ 1,300.00	\$ 5,200.00	4.00		4.00	\$ 5,200.00	\$
44	Allient Existing Water Valve in Plastered Grade	1.00	LS	\$ 1,200.00	\$ 1,200.00	1.00		1.00	\$ 1,200.00	\$
SEWER										
45	Historic Cesspool and connected to Existing SEW Pipe	1.00	LS	\$ 5,700.00	\$ 5,700.00	1.00		1.00	\$ 5,700.00	\$
46	1" SPDS, PVC Sewer Mats	1,189.00	LF	\$ 56.40	\$ 67,059.60	1,189.00		1,189.00	\$ 67,059.60	\$
47	New 4" Standard Sanitary Sewer Manholes	1.00	EA	\$ 5,300.00	\$ 15,900.00	3.00		3.00	\$ 15,900.00	\$
48	New Traffic Based Cleanout	1.00	EA	\$ 775.00	\$ 775.00	1.00		1.00	\$ 775.00	\$
STORM DRAIN										
49	[12] PVC C-900 Storm Drain Pipe and Fittings	671.00	LF	\$ 44.60	\$ 29,926.60	671.00		671.00	\$ 29,926.60	\$
50	15" HDPE Storm Drain Pipe	560.00	LF	\$ 43.70	\$ 24,472.00	560.00		560.00	\$ 24,472.00	\$
51	Connected to Existing 15" HDPE Pipe	1.00	EA	\$ 1,700.00	\$ 1,700.00	1.00		1.00	\$ 1,700.00	\$
52	Install Type - Catch Basin	6.00	EA	\$ 1,400.00	\$ 8,400.00	6.00		6.00	\$ 8,400.00	\$
53	New 4" Standard Storm Drain Manhole	1.00	LS	\$ 4,300.00	\$ 34,400.00	8.00		8.00	\$ 34,400.00	\$
54	Seal Lids	1.00	LS	\$ 10,100.00	\$ 101,000.00	1.00		1.00	\$ 101,000.00	\$
55	Manhole Utility Infrastructure Share	1.00	LS	\$ 3,500.00	\$ 3,500.00	1.00		1.00	\$ 3,500.00	\$
SWPP										
56	Prepare and File SWPPP, ENOL, ACHD E&C Plan	1.00	LS	\$ 1,000.00	\$ 1,000.00	1.00		1.00	\$ 1,000.00	\$
57	Initial and Ongoing Priority Construction	1.00	LS	\$ 18,000.00	\$ 18,000.00	1.00		1.00	\$ 18,000.00	\$
58	Continual Impact and Maintain BHP's	1.00	LS	\$ 2,000.00	\$ 2,000.00	1.00		1.00	\$ 2,000.00	\$
59	Final Site Inversion and File ENOT	1.00	LS	\$ 199.00	\$ 199.00	-		-	\$	
FINE ERADICATION										
1	Contract Fine Irrigation Ditches and Irrigation	1.00	LS	\$ 12,200.00	\$ 12,200.00	0.30		0.30	\$ 5,760.00	\$
1	Contract Fine Irrigation Seeding	1.00	LS	\$ 4,500.00	\$ 4,500.00	1.00		1.00	\$ 4,500.00	\$
LANDSCAPING										
2	American Topsoil	300.00	CY	\$ 53,400.00	\$ 300.00			300.00	\$ 53,400.00	\$
3	Landscaping	10,444.00	SF	\$ 0.49	\$ 5,117.56			-	\$	
4	Trees	26.00	EA	\$ 563.00	\$ 20,268.00			-	\$	
5	Flowering plants in Planter Pots	1.00	LS	\$ 5,500.00	\$ 5,500.00					
6	Transplanted	1.00	LS	\$ 2,000.00	\$ 16,000.00	8.00		8.00	\$ 16,000.00	\$
7	Bananas	1.00	EA	\$ 2,700.00	\$ 21,600.00	8.00		8.00	\$ 21,600.00	\$
6	Planter Pots	1.00	EA	\$ 2,200.00	\$ 35,200.00	4.00		4.00	\$ 8,800.00	\$
9	Tree Grates	16.00	EA	\$ 5,900.00	\$ 94,400.00	14.00		14.00	\$ 82,600.00	\$
STREET SIGNS AND LIGHTING										
10	Street Signs	1.00	LS	\$ 2,400.00	\$ 2,400.00	1.00		1.00	\$ 2,400.00	\$
11	Type II Barriers	3.00	EA	\$ 375.00	\$ 1,125.00	-		3.00	\$	
12	Type II Barriers	4.00	EA	\$ 512.00	\$ 2,048.00	-		4.00	\$	
13	Street Light - 10' Pole, 10' LED	2.00	EA	\$ 6,500.00	\$ 13,000.00	2.00		2.00	\$ 13,000.00	\$
14	Street Light - 10' Pole, 10' LED	1.00	EA	\$ 5,300.00	\$ 5,300.00	1.00		1.00	\$ 5,300.00	\$
15	Street Light Electrical Curbail & Wire	1.00	LS	\$ 13,200.00	\$ 13,200.00	1.00		1.00	\$ 13,200.00	\$
16	Rectangular Rapid Flashing Beacon & Electrical	1.00	LS	\$ 22,100.00	\$ 22,100.00	1.00		1.00	\$ 22,100.00	\$
17	Pavilion Coat Street Signs & Posts	1.00	LS	\$ 2,400.00	\$ 2,400.00	1.00		1.00	\$ 2,400.00	\$
18	Pavilion Shelters and Symbols	1.00	LS	\$ 3,900.00	\$ 3,900.00	1.00		1.00	\$ 3,900.00	\$
CHANGE ORDER										
CO #1	ACHD Electrical Modifications	1.00	LS	\$ 52,666.80	\$ 52,666.80	1.00		1.00	\$ 52,666.80	\$
CO #2	All Agency UC Pipe	1.00	LS	\$ 18,636.45	\$ 18,636.45	1.00		1.00	\$ 18,636.45	\$
CO #3	All Agency Concrete	1.00	LS	\$ 34,220.29	\$ 34,220.29	0.20		0.20	\$ 34,220.29	\$

	Original Contract Value	Contract Value with Change Orders	Previous Payment (no retention)	Payment Thus Est (w/o Retention)
	\$ 1,662,448.14	\$ 1,767,971.77	\$ 1,666,305.25	\$ 26,941.96

BARBER VALLEY DEVELOPMENT, INC.
4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716

ColumbiaBank 521 12TH AVE. SOUTH
NAMPA, ID 83651

34-827/1251

6341

2/11/2021

PAY TO THE Central Paving Co., Inc. ORDER OF Central Paving Co., Inc. **27,494.76
Twenty-Seven Thousand Four Hundred Ninety-Four and 76/100***** \$ 27,494.76

DOLLARS

Central Paving Co., Inc.
PO Box 15010
Boise, Idaho 83715

MEMO App. #5 Harris Ranch So. Sub #1 CID

10063411

DUPLICATE IMAGE
PAGES WITH IMAGE

M

BARBER VALLEY DEVELOPMENT, INC.
Central Paving Co., Inc. 6341

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
2/10/2021	Bill		27,494.76	27,494.76		27,494.76
					Check Amount	27,494.76

Columbia/ICB- CHEC App. #5 Harris Ranch So. Sub #1 CID 27,494.76

BARBER VALLEY DEVELOPMENT, INC.
Central Paving Co., Inc. 6341

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
2/10/2021	Bill		27,494.76	27,494.76		27,494.76
					Check Amount	27,494.76

Columbia/ICB- CHEC App. #5 Harris Ranch So. Sub #1 CID 27,494.76

AIA Document G732 2 09

Application and Certification for Payment, Construction Manager as Adviser Edition

BARBER VALLEY DEVELOPMENT		APPLICATION NO.: 6 000	DISTRIBUTION TO: OWNER CONSTRUCTION MANAGER ARCHITECT CONTRACTOR FIELD
FROM CONTRACTOR:	VIA CONSTRUCTION MANAGER(S): Contact: Terry McEntee CONTRACT FOR: Harris Ranch S Sub Div 1	APPLICATION DATE: PERIOD TO: 2/26/21 CONTRACT DATE: COMMITMENT NO:	

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. AIA Document G703, Continuation Sheet Equivalent, is attached.

1. ORIGINAL CONTRACT SUM	1,662,448.14 -
2. NET CHANGES IN THE WORK	105,523.63 -
3. CONTRACT SUM TO DATE (Line 1 + 2)	1,767,971.77 -
4. TOTAL COMPLETED AND STORED TO DATE (Column I on G703)	1,747,152.77 -
5. RETAINAGE:	
a. <u>5%</u> % of Completed Work (Column F + G on G703)	<u>1,747,152.77 -</u> = <u>87,357.64 -</u>
b. <u>5%</u> % of Stored Material (Column H on G703)	<u>-</u> = <u>-</u>
Total Retainage (Lines 5a + 5b, or Total in Column L on G703)	87,357.64 -
6. TOTAL EARNED LESS RETAINAGE..... (Lines 4 minus Line 5 Total)	1,659,795.13 -
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT..... (Line 6 from prior Certificate)	1,600,984.83 -
8. CURRENT PAYMENT DUE.....	<u>58,810.28 -</u>
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 minus Line 6)	<u>108,176.64 -</u>
10. BALANCE TO FINISH, EXCLUDING RETAINAGE (Column K from G703)	20,819.00 -

Check here for request to release retainage.

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates of Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR: Central Paving Co., Inc.

By: R. St. John Date: 2/24/21

State of: IDAHO
County of: Ada
Subscribed and sworn to before me
this 24 day of February, 2021.
Notary Public John M. Jensen-Buglione
My Commission expires: 5/30/2020

CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on evaluations of the Work applied for, and taking this application, the Construction Manager(s) certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED: \$58,810.28

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

CONSTRUCTION MANAGER

By: Mandy Howell Date: 3/4/21

CONSTRUCTION MANAGER

SUMMARY OF CHANGES IN THE WORK	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this month including Construction Change Directives		
NET CHANGES IN THE WORK		

By: _____ Date: _____
This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named.
herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or
Contractor under this Contract.

3/4/21

OW

Barber Valley Development

Project Contractor	Harris Ranch - Dallas Harris S Subdivision No. 1 Central Paving	Description	Bid Quantity	Units	Unit Price	Total	Previous	Current	Quantities	Previous	Current	Total	Previous	Current	Payment Date Pay Estimate No. 6	Date 25-Feb-21
Client Bid #																
1	Mobilization		1.00	LS	\$ 27,000.00	\$ 27,000.00	1.00					1.00	\$ 27,000.00	\$ 27,000.00		
2	Debris Hauling		1.00	LS	\$ -	\$ -	-					-	\$ -	\$ -		
3	Beads		1.00	LS	\$ 14,300.00	\$ 14,300.00	1.00					1.00	\$ 14,300.00	\$ 14,300.00		
4	Insurance		1.00	LS	\$ -	\$ -	-					-	\$ -	\$ -		
GENERAL SITE WORK																
5	Remove Existing Asphalt		1,221.00	SY	\$ 4.60	\$ 5,616.60	1,221.00					1,221.00	\$ 5,616.60	\$ 5,616.60		
6	Clean & Grub		4.40	AC	\$ 8,036.36	\$ 35,359.98	4.40					4.40	\$ 35,359.98	\$ 35,359.98		
7	Site Structural Fill		13,250.00	CY	\$ 14.60	\$ 193,450.00	13,250.00					13,250.00	\$ 193,450.00	\$ 193,450.00		
8	Project Drawing		1.00	LS	\$ 56,900.00	\$ 56,900.00	1.00					1.00	\$ 56,900.00	\$ 56,900.00		
9	Hydrant w/ Tether		1.75	AC	\$ 4,000.00	\$ 7,000.00	1.75					1.75	\$ 7,000.00	\$ 7,000.00		
10	Warm Springs Creek Revegetation		1.00	LS	\$ 4,100.00	\$ 4,100.00	1.00					1.00	\$ 4,100.00	\$ 4,100.00		
11	Excavation to Subgrade		1,553.00	CY	\$ 19.00	\$ 25,707.00	1,353.00					1,353.00	\$ 25,707.00	\$ 25,707.00		
12	Excavate and Prepare Site for Box Culvert		1.00	LS	\$ 31,000.00	\$ 31,000.00	1.00					1.00	\$ 31,000.00	\$ 31,000.00		
13	Deliver, Unload and Place Box Culvert and Wing Walls		1.00	LS	\$ 20,500.00	\$ 20,500.00	1.00					1.00	\$ 20,500.00	\$ 20,500.00		
14	Pour to Place Apron Sections		2.00	EA	\$ 9,880.00	\$ 19,600.00	2.00					2.00	\$ 19,600.00	\$ 19,600.00		
15	Waterproof Membrane over Box Culvert		1.00	LS	\$ 7,600.00	\$ 7,600.00	1.00					1.00	\$ 7,600.00	\$ 7,600.00		
16	Final Site Grading and Rip Rap at Box End Sections		1.00	LS	\$ 36,380.00	\$ 36,380.00	1.00					1.00	\$ 36,380.00	\$ 36,380.00		
17	Channel Reconstruction & Incidental Rock Line Channel		1.00	LS	\$ 7,400.00	\$ 7,400.00	1.00					1.00	\$ 7,400.00	\$ 7,400.00		
18	Initial Irrigation Shutoff & Repair Irrigation Along Creek		1.00	LS	\$ 5,100.00	\$ 5,100.00	1.00					1.00	\$ 5,100.00	\$ 5,100.00		
19	Concrete Rock Retaining Wall **		151.00	LP	\$ 90.80	\$ 13,710.80	151.00					151.00	\$ 13,710.80	\$ 13,710.80		
20	Traffic Control		1.00	LS	\$ 9,200.00	\$ 9,200.00	1.00					1.00	\$ 9,200.00	\$ 9,200.00		
21	Construction Surveying		1.00	LS	\$ -	\$ -	-					-	\$ -	\$ -		
ROADS																
22	Build & Smoothall Subgrade Compact & Prep		13,193.00	SY	\$ 0.94	\$ 12,591.30	13,395.00					13,395.00	\$ 12,591.30	\$ 12,591.30		
23	6" Mulus Uncrushed Aggregate Subbase [Impacted]		4,156.00	CY	\$ 21.80	\$ 90,680.80	4,156.00					4,156.00	\$ 90,680.80	\$ 90,680.80		
24	3/4" Milus Crushed Aggregate Base Course		1,137.00	CY	\$ 44.60	\$ 50,710.20	1,137.00					1,137.00	\$ 50,710.20	\$ 50,710.20		
25	2-1/2" Asphalt Concrete		4,440.00	SY	\$ 11.50	\$ 51,060.00	4,440.00					4,440.00	\$ 51,060.00	\$ 51,060.00		
26	5" Asphalt Concrete (Tire Linn Placement per ACHD)		1,220.00	SY	\$ 23.20	\$ 28,304.00	1,220.00					1,220.00	\$ 28,304.00	\$ 28,304.00		
27	Sand Layer over Box Culvert		16.00	CY	\$ 14.00	\$ 2304.00	16.00					16.00	\$ 2304.00	\$ 2304.00		
28	Saw Cut Existing Asphalt		150.00	LF	\$ 6.85	\$ 1,027.50	150.00					150.00	\$ 1,027.50	\$ 1,027.50		
29	Standard 6' Vertical Curb and Gutter and Base Course		2,150.00	LY	\$ 17.20	\$ 36,980.00	2,150.00					2,150.00	\$ 36,980.00	\$ 36,980.00		
30	6' Wide Concrete Sidewalk and Base Course		2,708.00	SY	\$ 34.30	\$ 92,884.40	2,708.00					2,708.00	\$ 92,884.40	\$ 92,884.40		
31	15' Wide Concrete Sidewalk and Base Course		1,398.00	SY	\$ 34.90	\$ 66,240.20	1,398.00					1,398.00	\$ 66,240.20	\$ 66,240.20		
32	Curbside Pedestrian Ramps		140.00	SY	\$ 117.00	\$ 16,380.00	140.00					140.00	\$ 16,380.00	\$ 16,380.00		
33	Valley Gutter		52.00	LF	\$ 49.90	\$ 2,594.80	52.00					52.00	\$ 2,594.80	\$ 2,594.80		
34	Detachable Walkway for Pedestrian Access		168.00	SP	\$ 17.60	\$ 2,956.80	168.00					168.00	\$ 2,956.80	\$ 2,956.80		
WALTER																
35	Install new 1" water service and meter setting		2.00	EA	\$ 3,200.00	\$ 6,400.00	2.00					2.00	\$ 6,400.00	\$ 6,400.00		
36	8" PVC Water Main		2,130.00	LS	\$ 28.30	\$ 60,279.00	2,130.00					2,130.00	\$ 60,279.00	\$ 60,279.00		
37	8" Water Main Fitting & Joint Restraints		1.00	LS	\$ 7,400.00	\$ 7,400.00	1.00					1.00	\$ 7,400.00	\$ 7,400.00		
38	8" x 2" Manhole Assembly		1.00	EA	\$ 1,800.00	\$ 1,800.00	1.00					1.00	\$ 1,800.00	\$ 1,800.00		
39	8" Gate Valve (see CO #2)		5.00	EA	\$ 1,400.00	\$ 7,000.00	5.00					5.00	\$ 7,000.00	\$ 7,000.00		
40	8" Double Union Pipe (see CO#2)		20.00	LF	\$ 511.00	\$ 10,220.00	20.00					20.00	\$ 10,220.00	\$ 10,220.00		
41	16" Steel Cover Pipe and Spacers (see CO#2)		20.00	LF	\$ 399.00	\$ 7,980.00	20.00					20.00	\$ 7,980.00	\$ 7,980.00		

42	Install 6" Fire Hydrant Assembly	1.0E	EA	\$ 6,200.00	\$ 6,200.00	1.00		1.00	\$ 6,200.00	
43	Connect to Existing 6" Main	4.0E	EA	\$ 1,300.00	\$ 5,200.00	4.00		4.00	\$ 5,200.00	
44	Adjust Existing Water Valve to finished Grade	1.0E	LS	\$ 1,200.00	\$ 1,200.00	1.00		1.00	\$ 1,200.00	
	SEWER									
45	Remove Cleanout and connect to Existing 8" Pipe	1.0E	LS	\$ 5,700.00	\$ 5,700.00	1.00		1.00	\$ 5,700.00	
46	8" SDR35, PVC Sewer Main	1,189.00	LF	\$ 56.40	\$ 67,059.60	1,189.00		1,189.00	\$ 67,059.60	
47	New 48" Standard Sanitary Sewer Manhole	3.0E	EA	\$ 5,300.00	\$ 15,900.00	3.00		3.00	\$ 15,900.00	
48	New Traffic Rated Cleanout	1.0E	EA	\$ 775.00	\$ 775.00	1.00		1.00	\$ 775.00	
	STORM DRAIN									
49	12" PVC C-800 Storm Drain Pipe and Fittings	671.00	LF	\$ 44.60	\$ 29,926.60	671.00		671.00	\$ 29,926.60	
50	15" HDPP Storm Drain Pipe	560.00	LF	\$ 43.70	\$ 24,472.00	560.00		560.00	\$ 24,472.00	
51	Connect to Existing 15" HDPP Pipe	1.0E	EA	\$ 1,700.00	\$ 1,700.00	1.00		1.00	\$ 1,700.00	
52	Install Type I Catch Basins	6.0E	EA	\$ 1,400.00	\$ 8,400.00	6.00		6.00	\$ 8,400.00	
53	New 48" Standard Storm Drain Manhole	8.0E	EA	\$ 4,360.00	\$ 34,480.00	8.00		8.00	\$ 34,480.00	
54	Sand Lags	1.0E	LS	\$ 10,100.00	\$ 10,100.00	1.00		1.00	\$ 10,100.00	
55	Ready Mix Infiltration Seal	1.0E	LS	\$ 3,500.00	\$ 3,500.00	1.00		1.00	\$ 3,500.00	
	SWPPP									
56	Prepare and File SWPP, ENOL, ACHD ESC Plan	1.0E	LS	\$ 1,000.00	\$ 1,000.00	1.00		1.00	\$ 1,000.00	
57	Install all DWPs Prior to Construction	1.0E	LS	\$ 18,000.00	\$ 18,000.00	1.00		1.00	\$ 18,000.00	
58	Contractually Inspect and Maintain DWPs	1.0E	LS	\$ 2,000.00	\$ 2,000.00	1.00		1.00	\$ 2,000.00	
59	Final Site Inspection and File ENOL	1.0E	LS	\$ 199.00	\$ 199.00	-		-	\$ -	
	PIPE IRRIGATION									
1	Complete Pipe Irrigation Design and Installation	1.0E	LS	\$ 19,200.00	\$ 19,200.00	0.30		0.90	\$ 5,760.00	11,520.00
1	Irrigation Steering	1.0E	LS	\$ 4,500.00	\$ 4,500.00	1.00		1.00	\$ 4,500.00	
	LANDSCAPING									
2	Aimedland Topsoil	300.00	CY	\$ 178.00	\$ 53,400.00	300.00		300.00	\$ 53,400.00	
3	Lawn	10,444.00	SF	\$ 0.49	\$ 5,117.56	10,344.00		10,444.00	\$ 5,117.56	
4	Trees	36.00	EA	\$ 563.00	\$ 20,688.00	36.00		36.00	\$ 20,688.00	
5	Flowering plants in Planter Pots	1.0E	LS	\$ 5,500.00	\$ 5,500.00	-		-	\$ -	
6	Tree Reception	8.0E	EA	\$ 2,000.00	\$ 16,000.00	8.00		8.00	\$ 16,000.00	
7	Beneath Trees	8.0E	EA	\$ 2,700.00	\$ 21,600.00	8.00		8.00	\$ 21,600.00	
8	Planter Pots	16.0E	EA	\$ 2,200.00	\$ 35,200.00	6.00		16.00	\$ 35,200.00	
9	Tire Grates	16.0E	EA	\$ 5,900.00	\$ 94,400.00	14.00		2.00	\$ 16,000	\$ 82,600.00
	STREET SIGNS AND LIGHTING									
10	Street Signs	1.0E	LS	\$ 2,400.00	\$ 2,400.00	1.00		1.00	\$ 2,400.00	
11	Type II Barricade	3.0E	EA	\$ 375.00	\$ 1,125.00	3.00		3.00	\$ 1,125.00	
12	Type III Barricade	4.0E	EA	\$ 512.00	\$ 2,048.00	4.00		4.00	\$ 2,048.00	
13	Street Lights - 25 ft Pole / 97W LED	2.0E	EA	\$ 6,500.00	\$ 13,000.00	2.00		2.00	\$ 13,000.00	
14	Street Lights - 30 ft Pole / 97W LED	1.0E	EA	\$ 5,300.00	\$ 5,300.00	1.00		1.00	\$ 5,300.00	
15	Street Light Electrical Conduit & Wire	1.0E	LS	\$ 13,200.00	\$ 13,200.00	1.00		1.00	\$ 13,200.00	
16	Rectangular Rapid Flashing Beacon & Electrical	1.0E	LS	\$ 32,100.00	\$ 32,100.00	1.00		1.00	\$ 32,100.00	
17	Powered Coat Street Signs & Poles	1.0E	LS	\$ 2,400.00	\$ 2,400.00	1.00		1.00	\$ 2,400.00	
18	Pavement Stamps and Symbols	1.0E	LS	\$ 3,900.00	\$ 3,900.00	1.00		1.00	\$ 3,900.00	
	CHANGE ORDERS									
CO #1	ACHD Electrical Modifications	1.0E	LS	\$ 52,666.89	\$ 52,666.89	1.00		1.00	\$ 52,666.89	
CO #2	All Agency UC Pipe	1.0E	LS	\$ 18,636.45	\$ 18,636.45	1.00		1.00	\$ 18,636.45	
CO #3	All Agency Concrete	1.0E	LS	\$ 34,220.29	\$ 34,220.29	1.00		1.00	\$ 34,220.29	

Original Contract Value	\$ 1,662,448.14
Contract Value with Change Orders	\$ 1,767,971.77
Previous Payment	Payment This
(no retention)	Est (w/o Retention)
	\$ 1,665,247.21
	\$ 61,905.56

COLUMBIA BANK
877.272.3678
columbiabank.com

6279

34-827/1281

1181

CHECK ARMOR

3/15/2021

BARBER VALLEY DEVELOPMENT INC
877 W MAIN ST STE 501
BOISE, ID 83702-6018

PAY TO THE
ORDER OF

Central Paving Co., Inc.

**58,810.28

Fifty-Eight Thousand Eight Hundred Ten and 28/100*****

DOLLARS

Central Paving Co., Inc.
PO Box 15010
Boise, Idaho 83715

MEMO Pay App #6 DH So. Sub 1 SE5 CID

AUTHORIZED SIGNATURE

1006279

BARBER VALLEY DEVELOPMENT INC

6279

Central Paving Co., Inc.

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
3/15/2021	Bill		58,810.28	58,810.28		58,810.28
					Check Amount	58,810.28

Columbia/ICB- CHEC Pay App #6 DH So. Sub 1 SE5 CID

58,810.28

BARBER VALLEY DEVELOPMENT INC

6279

Central Paving Co., Inc.

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
3/15/2021	Bill		58,810.28	58,810.28		58,810.28
					Check Amount	58,810.28

Columbia/ICB- CHEC Pay App #6 DH So. Sub 1 SE5 CID

58,810.28

AIA Document G732 2 09

Application and Certification for Payment, Construction Manager as Adviser Edition

BARBER VALLEY DEVELOPMENT		APPLICATION NO:	7 000	DISTRIBUTION TO:
		APPLICATION DATE:		OWNER
		PERIOD TO:	3/2021	CONSTRUCTION MANAGER
		CONTRACT DATE:		ARCHITECT
		COMMITMENT NO:		CONTRACTOR
				FIELD
FROM CONTRACTOR:	CENTRAL PAVING CO., INC	VIA CONSTRUCTION MANAGER(S):		
Contact: Terry McEntee				
CONTRACT FOR: Harris Ranch S Sub Div 1				

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. AIA Document G703, Continuation Sheet Equivalent, is attached.

1. ORIGINAL CONTRACT SUM.....	1,662,448.14 -	CONTRACTOR:	By: <u>R.S. Schell</u>
2. NET CHANGES IN THE WORK.....	105,523.63 -	State of: <u>IDAHO</u>	Date: <u>3/31/2021</u>
3. CONTRACT SUM TO DATE (Line 1+2).....	1,767,971.77 -	County of: <u>IDAHO</u>	
4. TOTAL COMPLETED AND STORED TO DATE (Column I on G703)	1,762,471.77 -	Subscribed and sworn to before me	
5. RETAINAGE:		this <u>31</u> day of <u>MARCH</u> <u>2021</u>	
a. <u>5%</u> % of Completed Work (Column F + G on G703)	<u>1,762,481.77 -</u>	Notary Public: <u>DAWN M. BUGLIONE</u>	
b. <u>5%</u> % of Stored Material (Column H on G703)	<u>) = 88,123.59 -</u>	My Commission expires: <u>5/30/2024</u>	
Total Retainage (Lines 5a + 5b, or Total in Column L on G703)	<u>88,123.59 -</u>		
6. TOTAL EARNED LESS RETAINAGE (Lines 4 minus Line 5 Total)	<u>1,674,348.18 -</u>		
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate)	<u>1,659,795.13 -</u>		
8. CURRENT PAYMENT DUE.....	<u>14,553.05 -</u>		
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 minus Line 6)	<u>93,623.59 -</u>		
10. BALANCE TO FINISH, EXCLUDING RETAINAGE (Column K from G703)	<u>5,500.00 -</u>		

Check here for request to release retainage.

In accordance with the Contract Documents, based on evaluation of the work performed and data comprising thus application, the Construction Manager(s) certify to the Owner and Contractor(s) of their knowledge, information and belief the Work has progressed as indicated, the Plaintiff Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED.....

14,553.05

(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)

CONSTRUCTION MANAGER

Mark Schell
By: Mark Schell Date: 3/31/21

SUMMARY OF CHANGES IN THE WORK	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this month including Construction Change Directives		
NET CHANGES IN THE WORK	TOTAL	-

By: _____ Date: _____
This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract

Mark Schell
By: Mark Schell Date: 3/31/21

Barber Valley Development

Harris Ranch - Dallas Harris S Subdivision No 1
Central Paving

Project Contractor	Client Bid #	Description	Bid Quantity	Units	Unit Price	Total	Previous	Total	Current	Quantities	Payments
Date											
	20-Mar-21 7										
1	1	Materials & Min	1.00	LS	\$ 27,000.00	\$ 27,000.00	1.00		1.00	\$ 27,000.00	\$ -
2	2	Structural Steel	1.00	LS	\$ -	\$ -	-		-	\$ -	\$ -
3	3	Brads	1.00	LS	\$ 14,200.00	\$ 14,200.00	1.00		1.00	\$ 14,200.00	\$ -
4	4	Insurance	1.00	LS	\$ -	\$ -	-		-	\$ -	\$ -
		GENERAL SITE WORK									
5	5	Remove Existing Asphalt	1,221.00	SY	\$ 4.60	\$ 5,616.60	1,221.00		1,221.00	\$ 5,616.60	\$ -
6	6	Clear & Grub	4.40	AC	\$ 8,036.36	\$ 35,359.98	4.40		4.40	\$ 35,359.98	\$ -
7	7	Site Structural Fill	13,250.00	CY	\$ 14.60	\$ 193,450.00	13,250.00		13,250.00	\$ 193,450.00	\$ -
8	8	Project Screening	1.00	LS	\$ 56,900.00	\$ 56,900.00	1.00		1.00	\$ 56,900.00	\$ -
9	9	Hydromed w/ Tackifier	1.75	AC	\$ 4,000.00	\$ 7,000.00	1.75		1.75	\$ 7,000.00	\$ -
10	10	Warm Surface Creek Recreational	1.00	LS	\$ 4,100.00	\$ 4,100.00	1.00		1.00	\$ 4,100.00	\$ -
11	11	Excavation in Subgrade	1,353.00	CY	\$ 19.00	\$ 25,707.00	1,353.00		1,353.00	\$ 25,707.00	\$ -
12	12	Excavate and Prepare Site for Box Culvert	1.00	LS	\$ 31,000.00	\$ 31,000.00	1.00		1.00	\$ 31,000.00	\$ -
13	13	Boxcut, Unload and Place Box Culvert and Wing Wall	1.00	LS	\$ 20,500.00	\$ 20,500.00	1.00		1.00	\$ 20,500.00	\$ -
14	14	Panel in Place Apron Section	2.00	EA	\$ 9,800.00	\$ 19,600.00	2.00		2.00	\$ 19,600.00	\$ -
15	15	Waterproof Membrane over Box Culvert	1.00	LS	\$ 7,600.00	\$ 7,600.00	1.00		1.00	\$ 7,600.00	\$ -
16	16	Final Site Grading and Roll Rep at Box Culvert Section	1.00	LS	\$ 36,200.00	\$ 36,200.00	1.00		1.00	\$ 36,200.00	\$ -
17	17	Channel Rehabilitation & Inclusive Rock Lined Channel	1.00	LS	\$ 7,400.00	\$ 7,400.00	1.00		1.00	\$ 7,400.00	\$ -
18	18	Install Irrigation System & Repair Irrigation Along Creek	1.00	LS	\$ 5,100.00	\$ 5,100.00	1.00		1.00	\$ 5,100.00	\$ -
19	19	Onsite Rock Retaining Wall **	151.00	LF	\$ 90.80	\$ 13,710.80	151.00		151.00	\$ 13,710.80	\$ -
20	20	Traffic Control	1.00	LS	\$ 9,200.00	\$ 9,200.00	1.00		1.00	\$ 9,200.00	\$ -
21	21	Construction Surveying	1.00	LS	\$ -	\$ -	-		-	\$ -	\$ -
		ROADS									
22	22	Road & Sidewalk Surface Compaction & Prep	13,795.00	SY	\$ 0.94	\$ 12,591.30	13,395.00		13,395.00	\$ 12,591.30	\$ -
23	23	6' Minus Uncrushed Aggregate Subbase [Inherited]	4,156.00	CY	\$ 21.60	\$ 90,600.80	4,156.00		90,600.80	\$ 90,600.80	\$ -
24	24	24.1" Minus Crushed Aggregate Base Course	1,127.00	CY	\$ 44.60	\$ 50,710.20	1,127.00		1,127.00	\$ 50,710.20	\$ -
25	25	24.2" Asphalt Concrete	4,440.00	SY	\$ 1.50	\$ 51,060.00	4,440.00		4,440.00	\$ 51,060.00	\$ -
26	26	5" Asphalt Concrete [Twu LF Placement per ACD]	1,220.00	SY	\$ 23.20	\$ 28,304.00	1,220.00		1,220.00	\$ 28,304.00	\$ -
27	27	Sand Layer under Box Culvert	16,100	CY	\$ 144.00	\$ 2,304.00	16,100		16,100	\$ 2,304.00	\$ -
28	28	Sand Cut Existing Asphalt	150.00	LF	\$ 6.35	\$ 1,027.50	150.00		150.00	\$ 1,027.50	\$ -
29	29	Standard 6" Vertical Curb and Gutter w/ Base Course	2,150.00	LF	\$ 17.20	\$ 36,980.00	2,150.00		2,150.00	\$ 36,980.00	\$ -
30	30	6" Wide Concrete Sidewalk and Base Course	2,708.00	SY	\$ 34.30	\$ 92,884.40	2,708.00		2,708.00	\$ 92,884.40	\$ -
31	31	1st" Wide Concrete Sidewalk and Base Course	1,898.00	SY	\$ 34.90	\$ 66,240.20	1,898.00		1,898.00	\$ 66,240.20	\$ -
32	32	Concrete Pedestrian Benches	40.00	SY	\$ 117.00	\$ 16,380.00	140.00		140.00	\$ 16,380.00	\$ -
33	33	Valley Gutter	52.00	LF	\$ 49.90	\$ 2,594.80	52.00		52.00	\$ 2,594.80	\$ -
34	34	Decorative Warming for Pedestrian Areas	168.00	SP	\$ 17.00	\$ 2,956.80	168.00		168.00	\$ 2,956.80	\$ -
		WATER									
35	35	Install 6" water service and meter setting	2.00	EA	\$ 3,200.00	\$ 6,400.00	2.00		2.00	\$ 6,400.00	\$ -
36	36	18" PVC Water Main	2,150.00	LS	\$ 28.30	\$ 60,279.00	2,130.00		2,130.00	\$ 60,279.00	\$ -
37	37	18" Water Main Fittings & Joint Restraints	1,000	LS	\$ 7,400.00	\$ 7,400.00	1,000		1,000	\$ 7,400.00	\$ -
38	38	18" x 2" Stormwater System [1]	104.00	EA	\$ 1,800.00	\$ 1,800.00	100		100	\$ 1,800.00	\$ -
39	39	18" Gate Valve (See CO #2)	50.00	EA	\$ 1,400.00	\$ 7,000.00	5,00		5,00	\$ 7,000.00	\$ -

-40	1" Ductile Iron Pipe 3' free Fall 2"	20.00	LF	\$ 511.00	\$ 10,220.00	20.00		20.00	\$ 10,220.00	\$ -
41	In" Steel Cover Pipe and Spacers (see CD#1)	20.00	LF	\$ 399.00	\$ 7,980.00	20.00		20.00	\$ 7,980.00	\$ -
42	Install 6" PVC Inlet at Assembly	10.00	EA	\$ 6,200.00	\$ 6,200.00	1.00		1.00	\$ 6,200.00	\$ -
43	Connect to Existing 6" Man	4.00	EA	\$ 1,300.00	\$ 5,200.00	4.00		4.00	\$ 5,200.00	\$ -
44	Install Existing Water Valve in Existing Valve	1.00	LS	\$ 1,200.00	\$ 1,200.00	1.00		1.00	\$ 1,200.00	\$ -
SEWER										
45	Remove Catchbas and connect to Existing 6" Pipe	1.00	LS	\$ 5,700.00	\$ 5,700.00	1.00		1.00	\$ 5,700.00	\$ -
46	1" SPDRK, PVC Service Main	1,189.00	LP	\$ 56.40	\$ 67,059.60	1,189.00		1,189.00	\$ 67,059.60	\$ -
47	New 4" Standard Sanitary Sewer Manhole	3.00	EA	\$ 5,300.00	\$ 15,900.00	3.00		3.00	\$ 15,900.00	\$ -
48	No-Traffic Related Cleanout	1.00	EA	\$ 775.00	\$ 775.00	1.00		1.00	\$ 775.00	\$ -
STORM DRAIN										
49	12" PVC C-2500 Storm Drain Pipe and Fitting*	671.00	LF	\$ 44.60	\$ 29,916.60	671.00		671.00	\$ 29,916.60	\$ -
50	1" HDPE Storm Drain Pipe	560.00	LF	\$ 43.70	\$ 24,472.00	560.00		560.00	\$ 24,472.00	\$ -
51	Connect to Existing 12" HDPE Pipe	1.00	EA	\$ 1,700.00	\$ 1,700.00	1.00		1.00	\$ 1,700.00	\$ -
52	Install 1" x 1" Catch Basin	6.00	EA	\$ 1,400.00	\$ 8,400.00	6.00		6.00	\$ 8,400.00	\$ -
53	New 4" Standard Storm Drain Manhole	1.00	EA	\$ 4,300.00	\$ 34,400.00	1.00		1.00	\$ 34,400.00	\$ -
54	Sand Lint	1.00	LS	\$ 10,100.00	\$ 10,100.00	1.00		1.00	\$ 10,100.00	\$ -
55	Infiltration Ditch Infiltration Slnk	1.00	LS	\$ 3,500.00	\$ 3,500.00	1.00		1.00	\$ 3,500.00	\$ -
SWPPP										
56	Prepare and File SWPPP, ENOL, ACD, ESC Plan	1.00	LS	\$ 1,000.00	\$ 1,000.00	1.00		1.00	\$ 1,000.00	\$ -
57	Install all BOM's Prior to Construction	1.00	LS	\$ 18,000.00	\$ 18,000.00	1.00		1.00	\$ 18,000.00	\$ -
58	Continuously Update and Maintain BOM's*	1.00	LS	\$ 2,000.00	\$ 2,000.00	1.00		1.00	\$ 2,000.00	\$ -
59	Final Site Inspection and File ENOT	1.00	LS	\$ 199.00	\$ 199.00	*		1.00	\$ -	\$ 199.00
FINE IRRIGATION										
1	Complete Fine Irrigation Design and Installation	1.00	LS	\$ 19,200.00	\$ 19,200.00	0.50	0.10	1.00	\$ 17,280.00	\$ 1,920.00
1	Irrigation Sprinkler	1.00	LS	\$ 4,500.00	\$ 4,500.00	1.00		1.00	\$ 4,500.00	\$ -
LANDSCAPING										
2	Aerated Topsoil	300.00	CUY	\$ 178.00	\$ 53,400.00	300.00		300.00	\$ 53,400.00	\$ -
3	Lawn	10,444.00	SF	\$ 0.49	\$ 5,117.56	10,444.00		10,444.00	\$ 5,117.56	\$ -
4	Trees	36.00	SF	\$ 563.00	\$ 20,226.00	36.00		36.00	\$ 20,226.00	\$ -
5	Pavement Plants in Planter Pots	1.00	LS	\$ 5,500.00	\$ 5,500.00	1.00		1.00	\$ -	\$ -
6	Truth Rectangular	1.00	EA	\$ 2,000.00	\$ 16,000.00	8.00		8.00	\$ 16,000.00	\$ -
7	Benches	1.00	EA	\$ 2,700.00	\$ 21,600.00	8.00		8.00	\$ 21,600.00	\$ -
8	Planter Pots	16.00	EA	\$ 2,200.00	\$ 35,200.00	10.00		10.00	\$ 22,000.00	\$ -
9	Tree Guards	16.00	EA	\$ 5,900.00	\$ 94,400.00	16.00		16.00	\$ 94,400.00	\$ -
STREET SIGNS AND LIGHTING										
10	Street Signs	1.00	LS	\$ 2,400.00	\$ 2,400.00	1.00		1.00	\$ 2,400.00	\$ -
11	Type II Barricade	3.00	EA	\$ 375.00	\$ 1,125.00	3.00		3.00	\$ 1,125.00	\$ -
12	Type III Barricade	4.00	EA	\$ 512.00	\$ 2,048.00	4.00		4.00	\$ 2,048.00	\$ -
13	Street Light - 30 ft Pole / 9W LED	2.00	EA	\$ 6,500.00	\$ 13,000.00	2.00		2.00	\$ 13,000.00	\$ -
14	Street Light - 30 ft Pole / 9W LED	1.00	EA	\$ 5,300.00	\$ 5,300.00	1.00		1.00	\$ 5,300.00	\$ -
15	Street Light Electrical Conduit & Wire	1.00	LS	\$ 13,200.00	\$ 13,200.00	1.00		1.00	\$ 13,200.00	\$ -
16	Rectangular Recessed Lighting Boxes & Electrical	1.00	LS	\$ 32,100.00	\$ 32,100.00	1.00		1.00	\$ 32,100.00	\$ -
17	Pav. for Curb Street Signs & Poles	1.00	LS	\$ 2,400.00	\$ 2,400.00	1.00		1.00	\$ 2,400.00	\$ -
18	Pavement Surface Soil & Sand	1.00	LS	\$ 3,900.00	\$ 3,900.00	1.00		1.00	\$ 3,900.00	\$ -
CHANGE ORDERS										
CD #1	ACID Electrical Modifications	1.00	LS	\$ 52,666.89	\$ 52,666.89	1.00		1.00	\$ 52,666.89	\$ -
CD #2	All Agency UG Pipe	1.00	LS	\$ 18,636.45	\$ 18,636.45	1.00		1.00	\$ 18,636.45	\$ -
CD #3	All Agency Concrete	1.00	LS	\$ 34,220.29	\$ 34,220.29	1.00		1.00	\$ 34,220.29	\$ -

	Original Contract Value	Contract Value with Change Orders	Previous Payment (no retention)	Payment This Est (w/o Retention)
\$	\$ 1,663,448.14	\$ 1,761,971.77	\$ 1,742,552.77	\$ 15,319.00

6311

BARBER VALLEY DEVELOPMENT INC877 W MAIN ST STE 501
BOISE, ID 83702-6018COLUMBIA BANK
877.272.3878
columbialbank.com

34-827/1261

1181

CHECK ARMOR

4/12/2021

PAY TO THE
ORDER OF Central Paving Co., Inc.

**14,533.05

Fourteen Thousand Five Hundred Thirty-Three and 05/100*****

DOLLARS

Central Paving Co., Inc.
PO Box 15010
Boise, Idaho 83715

MEMO Harris Ranch Sub #1 CID App #7

AUTHORIZED SIGNATURE

006311

BARBER VALLEY DEVELOPMENT INC

6311

Central Paving Co., Inc.

Date Type Reference
4/2/2021 BillOriginal Amt. Balance Due
14,533.05 14,533.05
Discount
Check Amount

4/12/2021

Payment

14,533.05

14,533.05

Columbia/ICB- CHEC Harris Ranch Sub #1 CID App #7

14,533.05

BARBER VALLEY DEVELOPMENT INC

6311

Central Paving Co., Inc.

Date Type Reference
4/2/2021 BillOriginal Amt. Balance Due
14,533.05 14,533.05
Discount
Check Amount

4/12/2021

Payment

14,533.05

14,533.05

Columbia/ICB- CHEC Harris Ranch Sub #1 CID App #7

14,533.05

AIA Document G732 2 09

Application and Certification for Payment, Construction Manager as Adviser Edition

BARBER VALLEY DEVELOPMENT		APPLICATION NO: 8 000	DISTRIBUTION TO: CONSTRUCTION MANAGER ARCHITECT CONTRACTOR FIELD
FROM CONTRACTOR:	CENTRAL PAVING CO., INC MANAGERS: Contact: Terry McEntee	APPLICATION DATE: PERIOD TO: 06/08/21	CONTRACT DATE: COMMITMENT NO:
CONTRACT FOR: Harris Ranch S Sub Div 1			

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract AIA Document G703, Continuation Sheet Equivalent, is attached.

1. ORIGINAL CONTRACT SUM..... 1,662,448.14 -
2. NET CHANGES IN THE WORK..... 105,523.63 -
3. CONTRACT SUM TO DATE (Line 1 + 2)..... 1,767,971.77 -
4. TOTAL COMPLETED AND STORED TO DATE (Column I on G703)..... 1,767,971.77 -
5. RETAINAGE:
 - a. 5% % of Completed Work
(Column F + G on G703) 1,762,797.77.) = 88,398.59 -
 - b. 5% % of Stored Material
(Column H on G703) -) = 88,398.59 -
6. TOTAL EARNED LESS RETAINAGE..... 88,398.59 -
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT..... 1,674,348.18 -
8. CURRENT PAYMENT DUE..... 5,225.00 -
9. BALANCE TO FINISH, INCLUDING RETAINAGE 88,398.59 -
10. BALANCE TO FINISH, EXCLUDING RETAINAGE 0.00 -

(Column K from G703)

Check here for request to release retainage.

AMOUNT CERTIFIED..... 5,225.00 -

In accordance with the Contract Documents, based on evaluations of the Work and the data comprising this application, the Construction Manager(s) certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

CONSTRUCTION MANAGER

By: Dave Morell

Date: 6.14.21

SUMMARY OF CHANGES IN THE WORK	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	-	-
Total approved this month including Construction Change Directives	-	-
TOTAL	-	-
NET CHANGES IN THE WORK	-	-

By: _____ Date: _____
This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract

Date:

TM CJC

7/11/21

Barber Valley Development

Harris Ranch - Dallas Harris S Subdivision No. 1

Central Paving

Project Contractor	Client Bid #	Description	Bid Quantity	Units	Unit Price	Total	Previous	Current	Total	Previous	Current	Quantities:	Date	Pay Estimate No.	Payment	
														08-Jun-21	\$	
1		Mobilization	1.00	LS	\$ 27,000.00	\$ 27,000.00	1.00		1.00	\$ 27,000.00						
2		Demobilization	1.00	LS	\$ -	\$ -	-		-							
3		Bonds	1.00	LS	\$ 14,300.00	\$ 14,300.00	1.00		1.00	\$ 14,300.00						
4		Insurance	1.00	LS	\$ -	\$ -	-		-							
GENERAL SITE WORK																
5		Remove Existing Asphalt	1,221.00	SY	\$ 4.60	\$ 5,616.60	1,221.00		1,221.00	\$ 5,616.60						
6		Clear & Grub	4.40	AC	\$ 8,036.36	\$ 35,359.98	4.40		4.40	\$ 35,359.98						
7		Site Structural Fill	13,250.00	CY	\$ 14.60	\$ 193,450.00	13,250.00		13,250.00	\$ 193,450.00						
8		Project Briefing	1.00	LS	\$ 56,900.00	\$ 56,900.00	1.00		1.00	\$ 56,900.00						
9		Hydrex w/ Trickleter	1.75	AC	\$ 4,000.00	\$ 7,000.00	1.75		1.75	\$ 7,000.00						
10		Warm Springs Creek Restoration	1.00	LS	\$ 4,100.00	\$ 4,100.00	1.00		1.00	\$ 4,100.00						
11		Excavation to Subgrade	1,353.00	CY	\$ 19.00	\$ 25,707.00	1,353.00		1,353.00	\$ 25,707.00						
12		Excavate and Prepare Site for Box Culvert	1.00	LS	\$ 31,000.00	\$ 31,000.00	1.00		1.00	\$ 31,000.00						
13		Deliver, Unload and Place Box Culvert and Wing Walls	1.00	LS	\$ 20,500.00	\$ 20,500.00	1.00		1.00	\$ 20,500.00						
14		Excavated in Place Action Section	2.00	EA	\$ 9,800.00	\$ 19,600.00	2.00		2.00	\$ 19,600.00						
15		Waterproof Membrane over Box Culvert	1.00	LS	\$ 7,600.00	\$ 7,600.00	1.00		1.00	\$ 7,600.00						
16		Final Site Grading and Rip Rap at Box End Sections	1.00	LS	\$ 36,800.00	\$ 36,800.00	1.00		1.00	\$ 36,800.00						
17		Channel Reconstruction & Inculent Rock Lined Channel	1.00	LS	\$ 7,400.00	\$ 7,400.00	1.00		1.00	\$ 7,400.00						
18		Inlet Irrigation Shovel & Repair Irrigation Aerial Creek	1.00	LS	\$ 5,100.00	\$ 5,100.00	1.00		1.00	\$ 5,100.00						
19		Outside Rock Retaining Wall **	151.00	LF	\$ 50.80	\$ 13,710.80	151.00		151.00	\$ 13,710.80						
20		Traffic Control	1.00	LS	\$ 9,200.00	\$ 9,200.00	1.00		1.00	\$ 9,200.00						
21		Construction Surveying	1.00	LS	\$ -	\$ -	-		-							
ROADS																
22		Road & Sidewalk Subgrade Compact & Prep	13,395.00	SY	\$ 0.94	\$ 12,591.30	13,395.00		13,395.00	\$ 12,591.30						
23		6" Minus Unscreamed Aggregate Subbase [Inverts]	4,156.00	CY	\$ 21.80	\$ 90,360.80	4,156.00		4,156.00	\$ 90,360.80						
24		3/4" Minus Crushed Aggregate Base Course	1,137.00	CY	\$ 44.60	\$ 50,710.20	1,137.00		1,137.00	\$ 50,710.20						
25		1/2" Asphalt Concrete	4,440.00	SY	\$ 11.50	\$ 51,060.00	4,440.00		4,440.00	\$ 51,060.00						
26		8" Asphalt Concrete (Thin Lift Placement per ACID)	1,220.00	SY	\$ 23.20	\$ 28,504.00	1,220.00		1,220.00	\$ 28,504.00						
27		Sand Layer over Box Culvert	16.00	CY	\$ 144.00	\$ 2,304.00	16.00		16.00	\$ 2,304.00						
28		Saw Cut Existing Asphalt	150.00	LF	\$ 6.85	\$ 1,027.50	150.00		150.00	\$ 1,027.50						
29		Standard 6" Vertical Curb and Gutter and Base Course	2,150.00	LF	\$ 17.20	\$ 36,528.00	2,150.00		2,150.00	\$ 36,528.00						
30		6" Wide Concrete Sidewalk and Base Course	2,708.00	SY	\$ 34.30	\$ 92,884.40	2,708.00		2,708.00	\$ 92,884.40						
31		15" Wide Concrete Stairs like and Base Course	1,498.00	SY	\$ 34.90	\$ 66,240.20	1,498.00		1,498.00	\$ 66,240.20						
32		Concrete Pedestrian Ramps	140.00	SY	\$ 117.00	\$ 16,380.00	140.00		140.00	\$ 16,380.00						
33		Valley Gutter	52.00	LF	\$ 49.90	\$ 2,594.80	52.00		52.00	\$ 2,594.80						
34		Detachable Warning for Pedestrian Access	168.00	SP	\$ 17.60	\$ 2,956.80	168.00		168.00	\$ 2,956.80						
WATER																
35		Install new 1" water service and meter setting	2.00	EA	\$ 3,200.00	\$ 6,400.00	2.00		2.00	\$ 6,400.00						
36		1" PVC Water Mtn	2,130.00	LS	\$ 28.30	\$ 60,279.00	2,130.00		2,130.00	\$ 60,279.00						
37		1" Water Main Fitting & Joint Re-trims	1.00	LS	\$ 7,400.00	\$ 7,400.00	1.00		1.00	\$ 7,400.00						
38		1" x 2" Blowout Assembly	1.00	EA	\$ 1,800.00	\$ 1,800.00	1.00		1.00	\$ 1,800.00						
39		1" Gate Valve (see CO #2)	5.00	EA	\$ 1,400.00	\$ 7,000.00	5.00		5.00	\$ 7,000.00						
40		Ductile Iron Pipe (see CO #2)	20.00	LF	\$ 511.00	\$ 10,220.00	20.00		20.00	\$ 10,220.00						
41		Steel Cover Plate and Spacers (see CO #2)	20.00	LF	\$ 399.00	\$ 7,980.00	20.00		20.00	\$ 7,980.00						

42	Install 6" Storm Drain Assembly	1.0k	EA	\$ 6,200.00	1.00		1.00	\$ 6,200.00	S
43	Connect to Existing 6" Main	4.0k	EA	\$ 1,300.00	4.00		4.00	\$ 5,200.00	S
44	Adjust Existing Water Valve is Installed Grade	1.0k	LS	\$ 1,200.00	1.00		1.00	\$ 1,200.00	S
SEWER									
45	Remove Cleanout and connect to Existing 6" Pipe	1.0k	LS	\$ 5,700.00	1.00		1.00	\$ 5,700.00	S
46	8" SDR-35 PVC Sewer Main	1,182.00	LF	\$ 56.40	67,059.60	1,189.00	1,189.00	\$ 67,059.60	S
47	New 48" Standard Sanitary Sewer Manhole	3.00	EA	\$ 5,300.00	15,900.00	3.00	3.00	\$ 15,900.00	S
48	New Traffic Riser (Cesspool)	1.0k	EA	\$ 775.00	775.00	1.00	1.00	\$ 775.00	S
STORM DRAIN									
49	12" PVC C-900 Storm Drain Pipe and Fitting	671.00	LF	\$ 44.60	29,926.60	671.00	671.00	\$ 29,926.60	S
50	15" HDPE Storm Drain Pipe	560.00	LF	\$ 42.70	24,472.00	560.00	560.00	\$ 24,472.00	S
51	Connect to Existing 15" HDPE Pipe	1.0k	EA	\$ 1,700.00	1,700.00	1.00	1.00	\$ 1,700.00	S
52	Install Type I Catch Basin	6.0k	EA	\$ 1,400.00	8,400.00	6.00	6.00	\$ 8,400.00	S
53	New 48" Standard Storm Drain Manhole	1.0k	EA	\$ 4,300.00	34,400.00	8.00	8.00	\$ 34,400.00	S
54	Small Lens	1.0k	LS	\$ 10,100.00	10,100.00	1.00	1.00	\$ 10,100.00	S
55	Wetify Offsite Infiltration Svle	1.0k	LS	\$ 3,500.00	3,500.00	1.00	1.00	\$ 3,500.00	S
SWPPP									
56	Prepare and File SWPPP, ENOL, ACID ESC Plan	1.0k	LS	\$ 1,000.00	1,000.00	1.00	1.00	\$ 1,000.00	S
57	Install all BMP's Prior to Construction	1.0k	LS	\$ 18,000.00	18,000.00	1.00	1.00	\$ 18,000.00	S
58	Compliance w/ Forest and Maintain BMP's	1.0k	LS	\$ 2,000.00	2,000.00	1.00	1.00	\$ 2,000.00	S
59	Final Site Inspection and File ENOT	1.0k	LS	\$ 199.00	199.00	1.00	1.00	\$ 199.00	S
FENCE IRRIGATION									
1	Complete Finc Irrigation Design and Installation	1.0k	LS	\$ 19,200.00	19,200.00	1.00	1.00	\$ 19,200.00	S
1	Irrigation Sketch	1.0k	LS	\$ 4,500.00	4,500.00	1.00	1.00	\$ 4,500.00	S
LANDSCAPING									
2	Amended Topsoil	300.00	CY	\$ 178.00	53,400.00	300.00	300.00	\$ 53,400.00	S
3	Lawns	10,444.00	SF	\$ 0.49	5,117.56	10,444.00	10,444.00	\$ 5,117.56	S
4	Trees	36.00	EA	\$ 562.00	20,268.00	36.00	36.00	\$ 20,268.00	S
5	Hanging plants in Planter Pots	1.0k	LS	\$ 5,500.00	5,500.00	1.00	1.00	\$ 5,500.00	S
6	Trash Receptical	8.0k	EA	\$ 2,000.00	16,000.00	8.00	8.00	\$ 16,000.00	S
7	Benching	8.0k	EA	\$ 2,700.00	21,600.00	8.00	8.00	\$ 21,600.00	S
8	Planter Pots	16.0k	EA	\$ 2,200.00	35,200.00	16.00	16.00	\$ 35,200.00	S
9	Tree Grates	16.0k	EA	\$ 5,900.00	94,400.00	16.00	16.00	\$ 94,400.00	S
STREET SIGNS AND LIGHTING									
10	Street Sign	1.0k	LS	\$ 2,400.00	2,400.00	1.00	1.00	\$ 2,400.00	S
11	Type II Barricade	3.0k	EA	\$ 375.00	1,125.00	3.00	3.00	\$ 1,125.00	S
12	Type II Barricade	4.0k	EA	\$ 512.00	2,048.00	4.00	4.00	\$ 2,048.00	S
13	Street Lights - 25' Pole / 97W LED	2.0k	EA	\$ 6,500.00	13,000.00	2.00	2.00	\$ 13,000.00	S
14	Street Lights - 39' Pole / 97W LED	1.0k	EA	\$ 5,300.00	5,300.00	1.00	1.00	\$ 5,300.00	S
15	Street Light Electrical Consult & Wire	1.0k	LS	\$ 13,200.00	13,200.00	1.00	1.00	\$ 13,200.00	S
16	Redeangular Rain Flashing, Beacon & Electrical	1.0k	LS	\$ 32,100.00	32,100.00	1.00	1.00	\$ 32,100.00	S
17	Builder Cost Street Signs & Posts	1.0k	LS	\$ 2,400.00	2,400.00	1.00	1.00	\$ 2,400.00	S
18	Pavement Striping and Symbols	1.0k	LS	\$ 3,900.00	3,900.00	1.00	1.00	\$ 3,900.00	S
CHANGE ORDERS									
CO #1	ACHD Electrical Modifications	1.0k	LS	\$ 52,666.89	52,666.89	1.00	1.00	\$ 52,666.89	S
CO #2	All Agency LG Pipe	1.0k	LS	\$ 18,636.45	18,636.45	1.00	1.00	\$ 18,636.45	S
CO #3	All Agency Concrete	1.0k	LS	\$ 34,220.29	34,220.29	1.00	1.00	\$ 34,220.29	S

Previous Payment (no retention)	Payment This Est (w/o Retention)
1,762,471.77	5,500.00

Original Contract Value Contract Value with Change O

BARBER VALLEY DEVELOPMENT INC
877 W MAIN ST STE 501
BOISE, ID 83702-6018

COLUMBIA BANK
877.272.3678
columbiabank.com

6418

34-827/1251
1181
CHECK ARMOR
ANTI-FRAUD PROTECTION

7/13/2021

PAY TO THE
ORDER OF
Central Paving Co., Inc.

Five Thousand Two Hundred Twenty-Five and 00/100*****

**5,225.00
\$

DOLLARS

Central Paving Co., Inc.
PO Box 15010
Boise, Idaho 83715

MEMO HR Sub. No 1 App #8 CID

AUTHORIZED SIGNATURE

1006418

BARBER VALLEY DEVELOPMENT INC

6418

Central Paving Co., Inc.

Date Type Reference
7/1/2021 Bill

Original Amt.
5,225.00

Balance Due
5,225.00

7/13/2021

Discount

Payment

5,225.00

Check Amount

5,225.00

Columbia/ICB- CHEC HR Sub. No 1 App #8 CID

5,225.00

BARBER VALLEY DEVELOPMENT INC

6418

Central Paving Co., Inc.

Date Type Reference
7/1/2021 Bill

Original Amt.
5,225.00

Balance Due
5,225.00

7/13/2021

Discount

Payment

5,225.00

Check Amount

5,225.00

Columbia/ICB- CHEC HR Sub. No 1 App #8 CID

5,225.00

AIA Document G732 2 09

Application and Certification for Payment, Construction Manager as Adviser Edition

BARBER VALLEY DEVELOPMENT					DISTRIBUTION TO: OWNER CONSTRUCTION MANAGER ARCHITECT CONTRACTOR FIELD
FROM CONTRACTOR:	CENTRAL PAVING CO., INC.	VIA CONSTRUCTION MANAGERS:		APPLICATION NO: 9 000 APPLICATION DATE: 07/06/21 PERIOD TO: 07/06/21	
CONTRACT FOR:	Harris Ranch S Sub Div 1	Contact: Terry McElree		CONTRACT DATE: COMMITMENT NO:	

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract AIA Document G703, Continuation Sheet Equivalent, is attached.

1. ORIGINAL CONTRACT SUM..... 1,662,448.14 -
2. NET CHANGES IN THE WORK..... 107,984.68 -
3. CONTRACT SUM TO DATE (Line 1 + 2)..... 1,770,432.82 -
4. TOTAL COMPLETED AND STORED TO DATE (Column I on G703)..... 1,770,432.82 -
5. RETAINAGE:

a. 5% % of Completed Work (Column F + G on G703)	<u>74,692.87</u>
b. 5% % of Stored Material (Column H on G703)	<u>88,524.64</u>
Total Retainage (Lines 5a + 5b, or Total in Column L on G703)	<u>174,692.87</u>
6. TOTAL EARNED LESS RETAINAGE..... 88,524.64 -
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT..... 1,693,258.80 -
8. CURRENT PAYMENT DUE..... 77,174.02 -
9. BALANCE TO FINISH, INCLUDING RETAINAGE
(Line 3 minus Line 6)..... 0.00 -
10. BALANCE TO FINISH, EXCLUDING RETAINAGE
(Column K from G703)..... 0.00 -

Check here for request to release retainage.

CO# 4 \$2461.05
 Retention \$74,692.87
 ✓ Short Paid #1 \$ 20.00
 ✓ Short Paid #5 \$ 16. \$ 10.
 ✓ Short Paid #7 \$ 17,174.02

SUMMARY OF CHANGES IN THE WORK	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner		
Total approved this month including Construction Change Directives		
NET CHANGES IN THE WORK	TOTAL	-

Check here for request to release retainage.

In accordance with the Contract Documents, based on evaluations of the Work and the information contained in this application, the Construction Manager(s) certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED..... 77,174.02

CONSTRUCTION MANAGER
Ronald Howell
By: _____ Date: 7/7/21

Check here for request to release retainage.

In accordance with the Contract Documents, based on evaluations of the Work and the information contained in this application, the Construction Manager(s) certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED..... 77,174.02

CONSTRUCTION MANAGER
Ronald Howell
By: _____ Date: 7/7/21

AMOUNT CERTIFIED..... 77,174.02

CONSTRUCTION MANAGER
Ronald Howell
By: _____ Date: 7/7/21

Note: This Pay request clears up a few minor book keeping items:
 ① Due to N/G RETAINAGE IN PAY REQUEST # 4
 ② MINOR COST EXTENSIONS CORRECTIONS IN PAY REQUEST # 5, # 6, # 7.

By: _____ Date: _____
 This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract

0W 8-17-21

50	15" HDPE Storm Drain Pipe	Solid Ww	LF	\$ 43.70	\$ 24,472.00	\$ 560.00	\$ 24,472.00	\$ -
51	Connect to Existing 15" HDPE Pipe	EA	\$ 1,700.00	1.00	\$ 1,700.00	6.00	\$ 1,700.00	\$ -
52	Install Type 1 Catch Basin Pipe	EA	\$ 1,400.00	1.00	\$ 8,400.00	6.00	\$ 8,400.00	\$ -
53	New 3" Standard Storm Drain Manhole	EA	\$ 4,300.00	1.00	\$ 24,400.00	8.00	\$ 34,400.00	\$ -
54	Small Lids	EA	\$ 10,100.00	1.00	\$ 10,100.00	1.00	\$ 10,100.00	\$ -
55	Modify Onsite Infiltration Smale	LS	\$ 3,500.00	1.00	\$ 3,500.00	1.00	\$ 3,500.00	\$ -
56	SWPPP							
57	Permit and File SWPPP, ENOL, ACHD E&C Plan	EA	\$ 1,000.00	1.00	\$ 1,000.00	1.00	\$ 1,000.00	\$ -
58	Install all BMPs Prior to Construction Continuously, Landscaping and Maintain BMP's	EA	\$ 18,000.00	1.00	\$ 18,000.00	1.00	\$ 18,000.00	\$ -
59	Final Site Inspection and File ENOT	EA	\$ 2,000.00	1.00	\$ 2,000.00	1.00	\$ 2,000.00	\$ -
	FINE IRRIGATION							
1	Complete Fine Irrigation Design and Installation	EA	\$ 19,200.00	1.00	\$ 19,200.00	1.00	\$ 19,200.00	\$ -
1	Irrigation Site Drilling	EA	\$ 4,500.00	1.00	\$ 4,500.00	1.00	\$ 4,500.00	\$ -
	LANDSCAPING							
2	Amended Topsoil	CY	\$ 178.00	1.00	\$ 53,400.00	300.00	\$ 53,400.00	\$ -
3	Lawn	CF	\$ 0.444/00	0.49	\$ 5,117.56	10,444.00	\$ 5,117.56	\$ -
4	Tree	EA	\$ 563.00	1.00	\$ 20,268.00	36.00	\$ 20,268.00	\$ -
5	Floristic Plants in Planters/Pots	EA	\$ 5,500.00	1.00	\$ 5,500.00	1.00	\$ 5,500.00	\$ -
6	Tree Receptical	EA	\$ 2,000.00	1.00	\$ 16,000.00	8.00	\$ 16,000.00	\$ -
7	Bushes	EA	\$ 2,700.00	1.00	\$ 21,600.00	8.00	\$ 21,600.00	\$ -
8	Planter Pots	EA	\$ 2,200.00	1.00	\$ 35,200.00	16.00	\$ 35,200.00	\$ -
9	Tree Grates	EA	\$ 5,900.00	1.00	\$ 94,400.00	16.00	\$ 94,400.00	\$ -
	STREET SIGNS AND LIGHTING							
10	Street Signs	EA	\$ 2,400.00	1.00	\$ 2,400.00	1.00	\$ 2,400.00	\$ -
11	Type II Barriers	EA	\$ 375.00	1.00	\$ 1,125.00	3.00	\$ 1,125.00	\$ -
12	Type III Barriers	EA	\$ 512.00	1.00	\$ 2,048.00	4.00	\$ 2,048.00	\$ -
13	Street Lights 25' n Pole 97W LED	EA	\$ 6,500.00	1.00	\$ 13,000.00	2.00	\$ 13,000.00	\$ -
14	Street Lights 30' n Pole 97W LED	EA	\$ 5,300.00	1.00	\$ 5,300.00	1.00	\$ 5,300.00	\$ -
15	Street Light Electrical Cansuit & Wire	EA	\$ 13,200.00	1.00	\$ 13,200.00	1.00	\$ 13,200.00	\$ -
16	Rectangular Renufl Flashing Beacon & Electrical	EA	\$ 32,160.00	1.00	\$ 32,160.00	1.00	\$ 32,160.00	\$ -
17	Pavement Coat Street Signs & Polys	EA	\$ 2,400.00	1.00	\$ 2,400.00	1.00	\$ 2,400.00	\$ -
18	Pavement Signing and Symbols	EA	\$ 3,900.00	1.00	\$ 3,900.00	1.00	\$ 3,900.00	\$ -
	CHANGE ORDERS							
CO #1	ACHD Electrical Modifications	EA	\$ 52,666.89	1.00	\$ 52,666.89	1.00	\$ 52,666.89	\$ -
CO #2	All Agency UG Pipe	EA	\$ 18,636.45	1.00	\$ 18,636.45	1.00	\$ 18,636.45	\$ -
CO #3	All Agency Concrete	EA	\$ 34,220.29	1.00	\$ 34,220.29	1.00	\$ 34,220.29	\$ -
CO #4	Stops sign Stop Bars Revised Street Name	EA	\$ 2,461.05	-	\$ 2,461.05	-	\$ 2,461.05	\$ -

Original Contract Value	Contract Value with Change Orders	Previous Payment (no retention)	Payment This [no Retention]	Est [no Retention]
\$ 1,662,448.14	\$ 1,770,432.82	\$ 1,767,971.77	\$ 2,461.05	\$ 2,461.05

Barber Valley Development

Project: Harris Ranch - Dallas Harris S Subdivision No. 1
 Contractor: Central Paving

Client Bid

	Description	Bid Quantity	Units	Unit Price	Total	Previous	Current	Total	Previous	Current	Quantities	Date	Pay Estimate No.	Payment
1	Mobilization	1.00	LS	\$ 27,000.00	\$ 27,000.00	1.00		1.00	\$ 27,000.00			-	-	-
2	Demobilization	1.00	LS	\$ -	\$ -							-	\$ -	-
3	Bonds	1.00	LS	\$ 14,300.00	\$ 14,300.00	1.00		1.00	\$ 14,300.00			-	\$ 14,300.00	-
4	Insurance	1.00	LS	\$ -	\$ -							-	\$ -	-
GENERAL SITE WORK														
5	Remove Existing Asphalt	1,221.00	SY	\$ 4,60	\$ 5,616.60	-	1,221.00		1,221.00	\$ 5,616.60		-		-
6	Clear & Grab	4.40	AC	\$ 8,036.36	\$ 35,359.98	4.40		4.40	\$ 35,359.98			-		-
7	Site Structural Fill	13,250.00	CY	\$ 14.60	\$ 193,450.00	13,250.00		13,250.00	\$ 193,450.00			-		-
8	Project Demolition	1.00	LS	\$ 56,900.00	\$ 56,900.00	1.00		1.00	\$ 56,900.00			-		-
9	Hydroseed w/ Tackifier	1.75	AC	\$ 4,000.00	\$ 7,000.00	1.75		1.75	\$ 7,000.00			-		-
10	Warm Springs Creek Recreational	1.00	LS	\$ 4,100.00	\$ 4,100.00	1.00		1.00	\$ 4,100.00			-		-
11	Excavation in Subgrade	1,353.00	CY	\$ 19.00	\$ 25,707.00	1,353.00		1,353.00	\$ 25,707.00			-		-
12	Excavate and Prepare Site for Box Culvert	1.00	LS	\$ 31,000.00	\$ 31,000.00	1.00		1.00	\$ 31,000.00			-		-
13	Deliver, Unload and Place Box Culvert and Wing Walls	1.00	LS	\$ 20,500.00	\$ 20,500.00	1.00		1.00	\$ 20,500.00			-		-
14	Poured in Place Apron Section	2.00	EA	\$ 9,800.00	\$ 19,600.00	2.00		2.00	\$ 19,600.00			-		-
15	Waterproof Membrane over Box Culvert	1.00	LS	\$ 7,600.00	\$ 7,600.00	1.00		1.00	\$ 7,600.00			-		-
16	Final Site Grading and Repair at Box End Sections	1.00	LS	\$ 36,800.00	\$ 36,800.00	1.00		1.00	\$ 36,800.00			-		-
17	Channel Reconstruction & Residential Rock Lined Channel	1.00	LS	\$ 7,400.00	\$ 7,400.00	1.00		1.00	\$ 7,400.00			-		-
18	Install Irrigation Sheets & Repair Irrigation Along Creek	1.00	LS	\$ 5,100.00	\$ 5,100.00	1.00		1.00	\$ 5,100.00			-		-
19	Office Rock Retaining Wall **	151.00	LF	\$ 90.80	\$ 13,710.80	151.00		151.00	\$ 13,710.80			-		-
20	Traffic Control	1.00	LS	\$ 9,200.00	\$ 9,200.00	1.00		1.00	\$ 9,200.00			-		-
21	Construction Services Inc.	1.00	LS	\$ -	\$ -	-		-	\$ -			-		-
ROADS														
22	Road & Sidewalk Subgrade Compacted & Poured	13,395.00	SY	\$ 0.94	\$ 12,591.30	13,395.00		13,395.00	\$ 12,591.30			-		-
23	(6" Main Uncertified As-Excavated Subbase [Unpoured])	4,156.00	CY	\$ 21.80	\$ 90,600.80	4,156.00		4,156.00	\$ 90,600.80			-		-
24	3/4" Main Crushed Aggregate Base Course	1,137.00	CY	\$ 44.60	\$ 50,710.20	1,137.00		1,137.00	\$ 50,710.20			-		-
25	2-1/2" Asphalt Concrete	4,440.00	SY	\$ 11.50	\$ 51,060.00	4,440.00		4,440.00	\$ 51,060.00			-		-
26	5" Asphalt Concrete (In Lift Placement per CID#)	1,220.00	SY	\$ 23.20	\$ 28,304.00	1,220.00		1,220.00	\$ 28,304.00			-		-
27	Sand Litterer Box Culvert	16.00	CY	\$ 144.00	\$ 2,304.00	16.00		16.00	\$ 2,304.00			-		-
28	Saw Cut Existing Asphalt	150.00	LF	\$ 6.85	\$ 1,027.50	150.00		150.00	\$ 1,027.50			-		-
29	Stepped or Vertical Curb and Gutter and Base Course	2,151.00	LF	\$ 17.20	\$ 36,980.00	2,151.00		2,151.00	\$ 36,980.00			-		-
30	6" Wide Concrete Sidewalk and Base Course	2,708.00	SY	\$ 34.20	\$ 92,884.40	2,708.00		2,708.00	\$ 92,884.40			-		-
31	15" Wide Concrete Sidewalk and Base Course	1,998.00	SY	\$ 34.90	\$ 66,240.70	1,998.00		1,998.00	\$ 66,240.70			-		-
32	Concrete Pedestrian Ramp	140.00	SY	\$ 117.00	\$ 16,380.00	140.00		140.00	\$ 16,380.00			-		-
33	Valley Gutter	52.00	LF	\$ 49.90	\$ 52.00	52.00		52.00	\$ 52.00			-		-
34	Detachable Warning for Pedestrian Access	63.00	SF	\$ 17.60	\$ 2,595.60	168.00		168.00	\$ 2,595.60			-		-
WATER														
35	Install new 1" water service and meter setting	2.00	EA	\$ 3,200.00	\$ 6,400.00	2.00		2.00	\$ 6,400.00			-		-
36	9" PVC Water Main	2,130.00	LS	\$ 23.30	\$ 60,279.00	2,130.00		2,130.00	\$ 60,279.00			-		-
37	9" Water Main Fittings & Joint Restraints	1.00	LS	\$ 7,400.00	\$ 7,400.00	1.00		1.00	\$ 7,400.00			-		-
38	9" x 2" Bi-metal Fittings	1.00	EA	\$ 1,800.00	\$ 1,800.00	1.00		1.00	\$ 1,800.00			-		-
39	9" Gate Valve (see CO #2)	5.00	EA	\$ 1,400.00	\$ 7,000.00	5.00		5.00	\$ 7,000.00			-		-
40	9" Ductile Iron Pipe (see CO #2)	20.00	LF	\$ 51.00	\$ 1,020.00	20.00		20.00	\$ 1,020.00			-		-
41	16" Steel Coker Pipe and Spacers (see CO #2)	21.00	LF	\$ 399.00	\$ 7,980.00	20.00		20.00	\$ 7,980.00			-		-
42	Install 6" Fire Hydrant Assembly	1.00	EA	\$ 6,200.00	\$ 6,200.00	1.00		1.00	\$ 6,200.00			-		-
43	Connect to Existing 6" Main	4.00	EA	\$ 1,300.00	\$ 5,200.00	4.00		4.00	\$ 5,200.00			-		-
44	Adjust Existing Water Valve in finished Grade	1.00	LS	\$ 1,200.00	\$ 1,200.00	1.00		1.00	\$ 1,200.00			-		-
SEWER														
45	Remove Ciment and connect to Existing 6" Pipe	1.00	LS	\$ 5,700.00	\$ 5,700.00	1.00		1.00	\$ 5,700.00			-		-
46	# SD-15, PVC-Sewer Main	1,149.00	LF	\$ 56.40	\$ 67,059.60	1,149.00		1,149.00	\$ 67,059.60			-		-
47	New 48" Standard Sanitary Sewer Manhole	3.00	EA	\$ 5,300.00	\$ 15,900.00	3.00		3.00	\$ 15,900.00			-		-
48	New Traffic Related Cleanout	1.00	EA	\$ 775.00	\$ 775.00	1.00		1.00	\$ 775.00			-		-
STORM DRAIN														
49	12" PVC-C 3000 Einm.Drain Pipe and Fittings	671.00	LF	\$ 44.60	\$ 29,926.60	671.00		671.00	\$ 29,926.60			-		-

Date 06-Jul-21
 Pay Estimate No. 9

BARBER VALLEY DEVELOPMENT INC
877 W MAIN ST STE 501
BOISE, ID 83702-6018

COLUMBIA BANK
877.272.3678
columbialbank.com

6452

34-827/1251

1181

CHECK ARMOR

8/17/2021

AY TO THE Central Paving Co., Inc.
ORDER OF

**77,174.02

Seventy-Seven Thousand One Hundred Seventy-Four and 02/100*****

DOLLARS

Central Paving Co., Inc.
PO Box 15010
Boise, Idaho 83715

MEMO Harris Ranch So. Sub 1 CID final Pay App #9

AUTHORIZED SIGNATURE

110006452110

BARBER VALLEY DEVELOPMENT INC
Central Paving Co., Inc.

6452

Date	Type	Reference	Original Amt.	Balance Due	8/17/2021	Discount	Payment
8/17/2021	Bill		77,174.02	77,174.02			77,174.02
						Check Amount	77,174.02

Columbia/ICB- CHEC Harris Ranch So. Sub 1 CID final Pay App #9

77,174.02

BARBER VALLEY DEVELOPMENT INC
Central Paving Co., Inc.

6452

Date	Type	Reference	Original Amt.	Balance Due	8/17/2021	Discount	Payment
8/17/2021	Bill		77,174.02	77,174.02			77,174.02
						Check Amount	77,174.02

Columbia/ICB- CHEC Harris Ranch So. Sub 1 CID final Pay App #9

77,174.02

BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL SERVICES

THIS IS AN AGREEMENT effective as of

August 20, 2019

("Effective Date") between

Barber Valley Development

("Owner")

and RiveRidge Engineering Company

("Engineer")

Engineer agrees to provide the services described below to Owner for

SP-01 SES - Dallas Harris Estates
No. 18 Construction Management
Services

("Project").

Description of Engineer's Services:

The Dallas Harris Estates No. 18 Project Construction Management Scope of Services is made a part of this agreement and is attached.

Owner and Engineer further agree as follows:

1.01 Basic Agreement

A. Engineer shall provide, or cause to be provided, the services set forth in this Agreement, and Owner shall pay Engineer for such Services as set forth in Paragraph 9.01.

2.01 Payment Procedures

A. *Preparation of Invoices.* Engineer will prepare a monthly invoice in accordance with Engineer's standard invoicing practices and submit the invoice to Owner.

B. *Payment of Invoices.* Invoices are due and payable within 30 days of receipt. If Owner fails to make any payment due Engineer for services and expenses within 30 days after receipt of Engineer's invoice, the amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day. In addition, Engineer may, without liability, after giving seven days written notice to Owner, suspend services under this Agreement until Engineer has been paid in full all amounts due for services, expenses, and other related charges. Payments will be credited first to interest and then to principal.

3.01 Additional Services

A. If authorized by Owner, or if required because of changes in the Project, Engineer shall furnish services in addition to those set forth above.

B. Owner shall pay Engineer for such additional services as follows: For additional services of Engineer's employees engaged directly on the Project an amount equal to the cumulative hours charged to the Project by each class of Engineer's employees times standard hourly rates for each applicable billing class; plus reimbursable expenses and Engineer's consultants' charges, if any.

4.01 Termination

A. The obligation to provide further services under this Agreement may be terminated:

1. For cause.

a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the Agreement's terms through no fault of the terminating party.

b. By Engineer:

1) upon seven days written notice if Engineer believes that Engineer is being requested by Owner to furnish or perform services contrary to Engineer's responsibilities as a licensed professional; or

2) upon seven days written notice if the Engineer's services for the Project are delayed or suspended for more than

90 days for reasons beyond Engineer's control.

3) Engineer shall have no liability to Owner on account of such termination.

c. Notwithstanding the foregoing, this Agreement will not terminate as a result of a substantial failure under paragraph 4.01.A.1.a if the party receiving such notice begins, within seven days of receipt of such notice, to correct its failure and proceeds diligently to cure such failure within no more than 30 days of receipt of notice; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience, by Owner effective upon the receipt of notice by Engineer.

B. The terminating party under paragraphs 4.01.A.1 or 4.01.A.2 may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Project site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

5.01 Controlling Law

A. This Agreement is to be governed by the law of the state in which the Project is located.

6.01 Successors, Assigns, and Beneficiaries

A. Owner and Engineer each is hereby bound and the partners, successors, executors, administrators, and legal representatives of Owner and Engineer (and to the extent permitted by paragraph 6.01.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators, and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.

B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless

specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

7.01 General Considerations

A. The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with Engineer's services. Engineer and its consultants may use or rely upon the design services of others, including, but not limited to, contractors, manufacturers, and suppliers.

B. Engineer shall not at any time supervise, direct, or have control over any contractor's work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any contractor, for safety precautions and programs incident to a contractor's work progress, nor for any failure of any contractor to comply with laws and regulations applicable to contractor's work.

C. Engineer neither guarantees the performance of any contractor nor assumes responsibility for any contractor's failure to furnish and perform its work in accordance with the contract between Owner and such contractor.

D. Engineer shall not be responsible for the acts or omissions of any contractor, subcontractor, or supplier, or of any contractor's agents or employees or any other persons (except Engineer's own employees) at the Project site or otherwise furnishing or performing any of construction work; or for any decision made on interpretations or clarifications of the construction contract given by Owner without consultation and advice of Engineer.

E. The general conditions for any construction contract documents prepared hereunder are to be the "Standard General Conditions of the Construction Contract" as prepared by the Engineers Joint Contract Documents Committee (No. C-700, 2002 Edition).

F. All design documents prepared or furnished by Engineer are instruments of service, and Engineer retains an ownership and property interest (including the copyright and the right of reuse) in such documents, whether or not the Project is completed.

I. Owner shall have the right to copies (hard copies and/or electronic copies) of all final maps, elevations, grade and related work (the "Finished Work"),

which is exclusive to this Project and has been paid for by Owner, including any copying costs. The Finished Work shall be the property of Owner, including the right to be used by Owner whether or not Engineer finishes the Project. If the Project is not completed by Engineer, Owner shall execute a Release of Liability, in a form satisfactory to Engineer, prior to the transfer of any copies of the Finished Work.

G. To the fullest extent permitted by law, Owner and Engineer (1) waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project, and (2) agree that Engineer's total liability to Owner under this Agreement shall be limited to \$100,000 or the total amount of compensation received by Engineer, whichever is greater.

H. The parties acknowledge that Engineer's scope of services does not include any services related to a Hazardous Environmental Condition (the presence of

asbestos, PCBs, petroleum, hazardous substances or waste, and radioactive materials). If Engineer or any other party encounters a Hazardous Environmental Condition, Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until Owner: (i) retains appropriate specialist consultants or contractors to identify and, as appropriate, abate, remediate, or remove the Hazardous Environmental Condition; and (ii) warrants that the Site is in full compliance with applicable Laws and Regulations.

8.01 Total Agreement

A. This Agreement (consisting of pages 1 to 4 inclusive together with any expressly incorporated appendix), constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

9.01 Payment (Lump Sum Contract)

A. Using the procedures set forth in paragraph 2.01, Owner shall pay Engineer as follows:

The Following is considered a Lump Sum Contract for:

I. Construction Management Services	\$ 44,000.00
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Total estimated compensation	\$ 44,000.00
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The Engineer reserves the right to review and modify, if necessary, estimated fees following the approval of a final concept plan by the Owner. The Engineer may alter the distribution of compensation between individual tasks of the work noted herein to be consistent with services actually rendered, but shall not exceed the total estimated compensation amount unless prior approval is given in writing by the Owner.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

OWNER:	Barber Valley Development  By: Doug Fowler, LeNir Ltd.	ENGINEER:	RiveRidge Engineering Company  By: David G. Powell, P.E.
Title:	President	Title:	Corporate Vice President
Date Signed:	<u>8/23/19</u>	Date Signed:	<u>8/20/19</u>

Acknowledged: Barber Valley Development

Address for giving notices:

LeNir Ltd
4940 E. Mill Station Drive, Suite 101-B
Boise, ID 83716

Address for giving notices:

RiveRidge Engineering
2447 S. Vista Avenue
Boise, ID 83705



August 20, 2019

Doug Fowler
LeNir LTD
4940 E. Mill Station Dr.
Suite 101-B
Boise, ID 83716

RE: SP-01 SE5 - Dallas Harris Estates Subdivision No. 18
Construction Management Contract

Dear Mr. Fowler:

RiveRidge Engineering Company is pleased to submit this Scope of Services and associated Fee Structure for the **Construction Management Services** associated with the Dallas Harris Estates Subdivision No. 18 construction project as depicted on the attached drawing.

Task 1 – Construction Bid Coordination and Award for improvements.

1. RiveRidge Engineering will distribute plans and coordinate with LeNir LTD and contractors for the evaluation and costing of the intended construction.
2. RiveRidge will work with team to set up contract documents and specifications for the CID eligible bid process.
3. RiveRidge will coordinate with team and submit all documents to Boise City Engineer for review and verification that documents and process meets CID eligibility requirements.
4. RiveRidge will coordinate with Owner and Contractor for execution of Project Contract and scheduling of construction.

Task 2 – Site Construction of Improvements.

RiveRidge Engineering Company will provide the following services related to construction:

1. Distribute plans to agencies, utilities and contractors that will be working on the project based on final approved plans and specifications.
2. Schedule, attend and assist with the ACHD and Boise City Pre-construction Conferences.
3. Construction management services, including site observation, coordination with owner,



agencies, contractors and sub-consultants and meetings to verify construction is being accomplished in accordance with the approved plans, specifications and timing.

4. Review and recommendation to Owner for payment of monthly contractor payment requests to be approved by Owner prior to payment.
5. Review and preparation of construction work directives and construction change orders to be reviewed and approved by Owner prior to authorization of change.
6. On site visits for substantial and final completion inspections.
7. Coordination with owner, contractor and agencies for the timely completion of all punch list work at end of project to final agency acceptance.
8. Final project close-out to include evaluation of project impacts from change orders and directives, payment of retainage to contractor and final payments to contractor upon final agency and owner approval and acceptance of all improvements.

Construction Management Subtotal	\$44,000.00
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Exclusions: The following services are specifically excluded from this Scope and considered to be provided, if required, by others:

1. Geotechnical and testing services
2. Legal services
3. Application fees associated with plan submittals, permits and approvals
4. Landscape and fine irrigation design, plan submittal and approvals
5. Any task not specifically identified above

This Construction Management Scope of Services is submitted for your review and approval. Attached, for your execution, is an agreement that is tied to this scope once you have approved this document. I am available to discuss any questions you might have regarding the scope, timeline and costs.

Sincerely,

David G. Powell, P.E.
Project Manager

RiveRidge**Dallas Harris South Subdivision No. 1 (DHE18 & SE5)**

Inovice Date	Job No.	Total Amount Billed	Check Number	Date Paid	Total Amount Paid
7/10/2020	19035	\$ 2,985.00	6150	7/31/2020	\$ 2,985.00
8/12/2020	19035	\$ 9,267.50	6181	9/14/2020	\$ 9,267.50
9/9/2020	19035	\$ 5,575.00	6216	10/15/2020	\$ 5,575.00
10/8/2020	19035	\$ 8,500.00	6248	11/12/2020	\$ 8,500.00
11/9/2020	19035	\$ 9,312.50	6285	12/15/2020	\$ 9,312.50
12/7/2020	19035	\$ 10,607.50	6323	12/28/2020	\$ 10,607.50
1/6/2021	19035	\$ 6,120.00	6361	2/11/2021	\$ 6,120.00
2/8/2021	19035	\$ 2,975.00	6257	3/15/2021	\$ 2,975.00
3/10/2021	19035	\$ 925.00	6308	4/12/2021	\$ 925.00
Total:		\$ 56,267.50			\$ 56,267.50

Barber Valley Development
4940 E. Mill Station Dr., Suite 101-B
Boise, ID 83716

Date: July 10, 2020
Job No. 19035

Description: Dallas Harris South Subdivision No. 1 (SE5) Construction Management

PROFESSIONAL SERVICES	AMOUNT	BALANCE
Professional engineering services rendered in June, 2020 in accordance with agreement		
1. Project coordination for project contract signing and for startup of construction with agencies and contractor		
Project Manager 8.5 Hours @ \$ 160.00	\$ 1,360.00	
Project Engineer 13.0 Hours @ \$ 125.00	\$ 1,625.00	
EIT 0.0 Hours @ \$ 95.00	\$ -	
		\$ 2,985.00
Total Due This Period:	\$ 2,985.00	
Payments/Credits:	\$ -	
Outstanding Invoice:	\$ -	
TOTAL AMOUNT DUE:		\$ 2,985.00

PAYMENT TERMS:

All account balances not paid in full within one month of the billing date are subject to an interest charge at a rate of eighteen (18) percent (%) per annum compounded monthly until paid in full. Payments received shall be credited first to accrued interest and then to principal. All costs or fees incurred to collect overdue account balances shall be added to the principal portion of the account balance.

7/13/20
DW

BARBER VALLEY DEVELOPMENT, INC.4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716
 **Columbia Bank** 521 12TH AVE. SOUTH
NAMPA, ID 83651

34-827/1251

6150

7/31/2020

PAY TO THE
ORDER OF

RiveRidge

**2,985.00

Two Thousand Nine Hundred Eighty-Five and 00/100*****

DOLLARS

RiveRidge
2447 S. Vista Ave.
Boise, Idaho 83705FOLIO FIELD NUMBER
CASHIER'S WORKSHEET

MP

MEMO SE 5 19035

10061501

6150

BARBER VALLEY DEVELOPMENT, INC.
RiveRidge

7/31/2020

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
7/31/2020	Bill	19035 SE5	2,985.00	2,985.00		2,985.00
				Check Amount		
				2,985.00		

Columbia/ICB- CHEC SE 5 19035 2,985.00

6150

BARBER VALLEY DEVELOPMENT, INC.
RiveRidge

7/31/2020

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
7/31/2020	Bill	19035 SE5	2,985.00	2,985.00		2,985.00
				Check Amount		
				2,985.00		

Columbia/ICB- CHEC SE 5 19035 2,985.00

Barber Valley Development
4940 E. Mill Station Dr., Suite 101-B
Boise, ID 83716

Date: August 12, 2020
Job No. 19035

Description: Dallas Harris South Subdivision No. 1 (SE5) Construction Management

PROFESSIONAL SERVICES	AMOUNT	BALANCE
Professional engineering services rendered in July, 2020 in accordance with agreement		
1. Project coordination for preconstruction meeting, grading permit and initial site grading work by Central Paving		
Project Manager 25.5 Hours @ \$ 160.00	\$ 4,080.00	
Project Engineer 33.5 Hours @ \$ 125.00	\$ 4,187.50	
EIT 0.0 Hours @ \$ 95.00	\$ -	
		\$ 8,267.50
2. Precision Engineering LLC		
Design of the Rapid Rectangular Flashing Beacon	\$ 1,000.00	
		\$ 1,000.00
Total Due This Period:	\$ 9,267.50	
Payments/Credits:	\$ -	
Outstanding Invoice:	\$ -	
TOTAL AMOUNT DUE:		\$ 9,267.50

PAYMENT TERMS:

All account balances not paid in full within one month of the billing date are subject to an interest charge at a rate of eighteen (18) percent (%) per annum compounded monthly until paid in full. Payments received shall be credited first to accrued interest and then to principal. All costs or fees incurred to collect overdue account balances shall be added to the principal portion of the account balance.

AM
8/13/2020

BARBER VALLEY DEVELOPMENT, INC.
4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716

Columbia Bank 521 12TH AVE. SOUTH
NAMPA, ID 83651

34-827/1251

6181

9/14/2020

PAY TO THE RiveRidge \$ **9,267.50
ORDER OF _____

Nine Thousand Two Hundred Sixty-Seven and 50/100*****

DOLLARS

RiveRidge
2447 S. Vista Ave.
Boise, Idaho 83705

ROUTING NUMBER
COLUMBIA BANK

MP

MEMO 19035 DH South Sub 1

1006181

BARBER VALLEY DEVELOPMENT, INC.

6181

RiveRidge

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
9/10/2020	Bill		9,267.50	9,267.50		9,267.50
					Check Amount	9,267.50

Columbia/ICB- CHEC 19035 DH South Sub 1 9,267.50

BARBER VALLEY DEVELOPMENT, INC.

6181

RiveRidge

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
9/10/2020	Bill		9,267.50	9,267.50		9,267.50
					Check Amount	9,267.50

Columbia/ICB- CHEC 19035 DH South Sub 1

9,267.50



Barber Valley Development
4940 E. Mill Station Dr., Suite 101-B
Boise, ID 83716

Date: September 9, 2020
Job No. 19035

Description: Dallas Harris South Subdivision No. 1 (SE5) Construction Management

PAYMENT TERMS:

All account balances not paid in full within one month of the billing date are subject to an interest charge at a rate of eighteen (18) percent (%) per annum compounded monthly until paid in full. Payments received shall be credited first to accrued interest and then to principal. All costs or fees incurred to collect overdue account balances shall be added to the principal portion of the account balance.

2447 S. Vista Avenue • Boise, ID 83705
208-344-1180

9/9/20
Tm

BARBER VALLEY DEVELOPMENT, INC.
4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716

 Columbia Bank 521 12TH AVE. SOUTH
NAMPA, ID 83651

34-827/1251

6216

10/15/2020

PAY TO THE RiveRidge
ORDER OF _____ \$ **5,575.00
Five Thousand Five Hundred Seventy-Five and 00/100*****DOLLARS

RiveRidge
2447 S. Vista Ave.
Boise, Idaho 83705

MEMO CID Dallas South NO 1

"006216"

RiveRidge
2447 S. Vista Ave.
Boise, Idaho 83705

M

BARBER VALLEY DEVELOPMENT, INC. RiveRidge			Original Amt.	Balance Due	10/15/2020	Discount	Payment
Date	Type	Reference	5,575.00	5,575.00			5,575.00
10/13/2020	Bill						5,575.00
					Check Amount		

Columbia/ICB- CHEC CID Dallas South NO 1 5,575.00

BARBER VALLEY DEVELOPMENT, INC. RiveRidge			Original Amt.	Balance Due	10/15/2020	Discount	Payment
Date	Type	Reference	5,575.00	5,575.00			5,575.00
10/13/2020	Bill						5,575.00
					Check Amount		

Columbia/ICB- CHEC CID Dallas South NO 1 5,575.00



Barber Valley Development
4940 E. Mill Station Dr., Suite 101-B
Boise, ID 83716

Date: October 8, 2020
Job No. 19035

Description: Dallas Harris South Subdivision No. 1 (SE5) Construction Management

	PROFESSIONAL SERVICES	AMOUNT	BALANCE
	Professional engineering service rendered in September, 2020 per project contract.		
1.	Project coordination, shop drawing review and construction management and inspection Project Manager 37.5 Hours @ \$ 160.00 Project Engineer 20.0 Hours @ \$ 125.00	\$ 6,000.00 \$ 2,500.00	\$ 8,500.00
		Total Due This Period: Payments/Credits:	\$ 8,500.00
		Outstanding Invoice(s) Subtotal:	\$ -
		TOTAL AMOUNT DUE:	\$ 8,500.00

PAYMENT TERMS:

All account balances not paid in full within one month of the billing date are subject to an interest charge at a rate of eighteen (18) percent (%) per annum compounded monthly until paid in full. Payments received shall be credited first to accrued interest and then to principal. All costs or fees incurred to collect overdue account balances shall be added to the principal portion of the account balance.

AM
10/19/20

BARBER VALLEY DEVELOPMENT, INC.
4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716

 ColumbiaBank 521 12TH AVE. SOUTH
NAMPA, ID 83651

34-827/1251

6248

11/12/2020

PAY TO THE RiveRidge

ORDER OF _____

Eight Thousand Five Hundred and 00/100*****

**8,500.00
\$

DOLLARS

RiveRidge
2447 S. Vista Ave.
Boise, Idaho 83705

MEMO 19035.CID.So..Sub.1

110062481*

BARBER VALLEY DEVELOPMENT, INC.
RiveRidge

Date Type Reference
11/12/2020 Bill

Original Amt.
8,500.00

Balance Due
8,500.00

11/12/2020

Discount

Check Amount

6248

Payment
8,500.00
8,500.00

Columbia/ICB- CHEC 19035 CID So. Sub 1 8,500.00

BARBER VALLEY DEVELOPMENT, INC.
RiveRidge

Date Type Reference
11/12/2020 Bill

Original Amt.
8,500.00

Balance Due
8,500.00

11/12/2020

Discount

Check Amount

6248

Payment
8,500.00
8,500.00

Columbia/ICB- CHEC 19035 CID So. Sub 1

8,500.00



Barber Valley Development
4940 E. Mill Station Dr., Suite 101-B
Boise, ID 83716

Date: November 9, 2020
Job No. 19035

Description: Dallas Harris South Subdivision No. 1 (SE5) Construction Management

PAYMENT TERMS:

All account balances not paid in full within one month of the billing date are subject to an interest charge at a rate of eighteen (18) percent (%) per annum compounded monthly until paid in full. Payments received shall be credited first to accrued interest and then to principal. All costs or fees incurred to collect overdue account balances shall be added to the principal portion of the account balance.

2447 S. Vista Avenue • Boise, ID 83705
208-344-1180

PM
12/8/20

BARBER VALLEY DEVELOPMENT, INC.
4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716

ColumbiaBank 621 12TH AVE. SOUTH
NAMPA, ID 83651

34-827/1251

6285

12/15/2020

PAY TO THE RiveRidge
ORDER OF _____

Nine Thousand Three Hundred Twelve and 50/100*****

\$ **9,312.50

DOLLARS

RiveRidge
2447 S. Vista Ave.
Boise, Idaho 83705

MEMO South Sub No 1 CID 19035

11006 2851# [REDACTED]

RIVE RIDE RAGE
SLOES WITH HIGH

M

BARBER VALLEY DEVELOPMENT, INC.
RiveRidge

Date Type Reference
12/14/2020 Bill

Original Amt.
9,312.50

Balance Due
9,312.50

12/15/2020

Discount

Check Amount

6285

Payment
9,312.50
9,312.50

Columbia/ICB- CHEC South Sub No 1 CID 19035

9,312.50

BARBER VALLEY DEVELOPMENT, INC.
RiveRidge

Date Type Reference
12/14/2020 Bill

Original Amt.
9,312.50

Balance Due
9,312.50

12/15/2020

Discount

Check Amount

6285

Payment
9,312.50
9,312.50

Columbia/ICB- CHEC South Sub No 1 CID 19035

9,312.50



Barber Valley Development
4940 E. Mill Station Dr., Suite 101-B
Boise, ID 83716

Date: December 7, 2020
Job No. 19035

Description: Dallas Harris South Subdivision No. 1 (SE5) Construction Management

PROFESSIONAL SERVICES	AMOUNT	BALANCE
Professional engineering service rendered in November, 2020 per project contract.		
1. Project coordination, shop drawing review and construction management and inspection		
Project Manager 62.0 Hours @ \$ 160.00	\$ 9,920.00	
Project Engineer 5.5 Hours @ \$ 125.00	\$ 687.50	
		\$ 10,607.50
Total Due This Period: Payments/Credits:		\$ 10,607.50
Outstanding Invoice(s) Subtotal:		\$ -
TOTAL AMOUNT DUE:		\$ 10,607.50

PAYMENT TERMS:

All account balances not paid in full within one month of the billing date are subject to an interest charge at a rate of eighteen (18) percent (%) per annum compounded monthly until paid in full. Payments received shall be credited first to accrued interest and then to principal. All costs or fees incurred to collect overdue account balances shall be added to the principal portion of the account balance.

AM
12/8/20
DW

BARBER VALLEY DEVELOPMENT, INC.
4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716

ColumbiaBank 521 12TH AVE. SOUTH
NAMPA, ID 83661

34-827/1251

6323

12/28/2020

PAY TO THE RiveRidge

**10,607.50

ORDER OF Ten Thousand Six Hundred Seven and 50/100*****

DOLLARS

RiveRidge
2447 S. Vista Ave.
Boise, Idaho 83705

MEMO CID DH South Sub No 1 -19035

1006323

BARBER VALLEY DEVELOPMENT, INC.
RiveRidge

Date Type Reference
12/28/2020 Bill

Original Amt.
10,607.50

Balance Due
10,607.50

12/28/2020

Discount

Check Amount

6323

Payment
10,607.50
10,607.50

Columbia/ICB- CHEC CID DH South Sub No 1 -19035

10,607.50

BARBER VALLEY DEVELOPMENT, INC.
RiveRidge

Date Type Reference
12/28/2020 Bill

Original Amt.
10,607.50

Balance Due
10,607.50

12/28/2020

Discount

Check Amount

6323

Payment
10,607.50
10,607.50

Columbia/ICB- CHEC CID DH South Sub No 1 -19035

10,607.50



Barber Valley Development
4940 E. Mill Station Dr., Suite 101-B
Boise, ID 83716

Date: January 6, 2021
Job No. 19035

Description: Dallas Harris South Subdivision No. 1 (SE5) Construction Management

	PROFESSIONAL SERVICES	AMOUNT	BALANCE
	Professional engineering service rendered in December, 2020 per project contract.		
1.	Project coordination, shop drawing review and construction management and inspection Project Manager 32.0 Hours @ \$ 160.00 Project Engineer 8.0 Hours @ \$ 125.00	\$ 5,120.00 \$ 1,000.00	\$ 6,120.00
		Total Due This Period: Payments/Credits:	\$ 6,120.00
		Outstanding Invoice(s) Subtotal:	\$ -
		TOTAL AMOUNT DUE:	\$ 6,120.00

PAYMENT TERMS:

All account balances not paid in full within one month of the billing date are subject to an interest charge at a rate of eighteen (18) percent (%) per annum compounded monthly until paid in full. Payments received shall be credited first to accrued interest and then to principal. All costs or fees incurred to collect overdue account balances shall be added to the principal portion of the account balance.

Jan
(1/21)
01/22/21

BARBER VALLEY DEVELOPMENT, INC.4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716**ColumbiaBank** 521 12TH AVE. SOUTH
NAMPA, ID 83651

34-827/1251

6361

2/11/2021

PAY TO THE
ORDER OF

RiveRidge

**6,120.00

\$

Six Thousand One Hundred Twenty and 00/100*****

DOLLARS

RiveRidge
2447 S. Vista Ave.
Boise, Idaho 83705PREG TICK IMAGE
CREDIT WITHIN 1000

MEMO 19035 CID DH South Sub No1

MP

10063611

6361

BARBER VALLEY DEVELOPMENT, INC.
RiveRidge

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
2/10/2021	Bill		6,120.00	6,120.00		6,120.00
					Check Amount	6,120.00

Columbia/ICB- CHEC 19035 CID DH South Sub No1 6,120.00

6361

BARBER VALLEY DEVELOPMENT, INC.
RiveRidge

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
2/10/2021	Bill		6,120.00	6,120.00		6,120.00
					Check Amount	6,120.00

Columbia/ICB- CHEC 19035 CID DH South Sub No1

6,120.00



Barber Valley Development
4940 E. Mill Station Dr., Suite 101-B
Boise, ID 83716

Date: February 8, 2021
Job No. 19035

Description: Dallas Harris South Subdivision No. 1 (SE5) Construction Management

PAYMENT TERMS:

All account balances not paid in full within one month of the billing date are subject to an interest charge at a rate of eighteen (18) percent (%) per annum compounded monthly until paid in full. Payments received shall be credited first to accrued interest and then to principal. All costs or fees incurred to collect overdue account balances shall be added to the principal portion of the account balance.

2447 S. Vista Avenue • Boise, ID 83705
208-344-1180

Am
2/18/21
DW 318

BARBER VALLEY DEVELOPMENT INC
877 W MAIN ST STE 501
BOISE, ID 83702-6018

COLUMBIA BANK
677.272.3678
columbiabank.com

6257

34-827/1261

1181

CHECK ARMOR

3/15/2021

PAY TO THE
ORDER OF _____ RiveRidge

**2,975.00
\$

Two Thousand Nine Hundred Seventy-Five and 00/100*****

DOLLARS

RiveRidge
2447 S. Vista Ave.
Boise, Idaho 83705

MEMO CID SE5 19035 DH S. Sub 1

AUTHORIZED SIGNATURE:

006257

BARBER VALLEY DEVELOPMENT INC

6257

RiveRidge

Date	Type	Reference	Original Amt.	Balance Due	3/15/2021	Discount	Payment
3/15/2021	Bill		2,975.00	2,975.00			2,975.00
						Check Amount	2,975.00

Columbia/ICB- CHEC CID SE5 19035 DH S. Sub 1

2,975.00

BARBER VALLEY DEVELOPMENT INC

6257

RiveRidge

Date	Type	Reference	Original Amt.	Balance Due	3/15/2021	Discount	Payment
3/15/2021	Bill		2,975.00	2,975.00			2,975.00
						Check Amount	2,975.00

Columbia/ICB- CHEC CID SE5 19035 DH S. Sub 1

2,975.00



Barber Valley Development
4940 E. Mill Station Dr., Suite 101-B
Boise, ID 83716

Date: March 10,2021
Job No. 19035

Description: Dallas Harris South Subdivision No. 1 (SE5) Construction Management

PAYMENT TERMS:

All account balances not paid in full within one month of the billing date are subject to an interest charge at a rate of eighteen (18) percent (%) per annum compounded monthly until paid in full. Payments received shall be credited first to accrued interest and then to principal. All costs or fees incurred to collect overdue account balances shall be added to the principal portion of the account balance.

2447 S. Vista Avenue • Boise, ID 83705
208-344-1180

Am
3/10/21
DW
4/16/21

BARBER VALLEY DEVELOPMENT INC
877 W MAIN ST STE 501
BOISE, ID 83702-6018

COLUMBIA BANK
877.272.3678
columbiabank.com

6308

34-827/1261

1181

1 CHECK ARMOR

4/12/2021

PAY TO THE
ORDER OF

RiveRidge

Nine Hundred Twenty-Five and 00/100*****

**925.00
\$

DOLLARS

RiveRidge
2447 S. Vista Ave.
Boise, Idaho 83705

MEMO 19035 SE 5 DHE South Sub #1 CID

AUTHORIZED SIGNATURE

1006308

BARBER VALLEY DEVELOPMENT INC

6308

RiveRidge

Date Type Reference
3/24/2021 Bill

Original Amt.	Balance Due	4/12/2021	Discount	Payment
925.00	925.00			925.00

Check Amount 925.00

Columbia/ICB- CHEC 19035 SE 5 DHE South Sub #1 CID 925.00

BARBER VALLEY DEVELOPMENT INC

6308

RiveRidge

Date Type Reference
3/24/2021 Bill

Original Amt.	Balance Due	4/12/2021	Discount	Payment
925.00	925.00			925.00

Check Amount 925.00

Columbia/ICB- CHEC 19035 SE 5 DHE South Sub #1 CID 925.00

Old Castle

Dallas Harris South Subdivision No. 1 (DHE18 & SE5)

Inovice Date	Invoice No.	Total Amount Billed	Check Number	Date Paid	Total Amount Paid
6/1/2020	S057748	\$ 251,186.08	6110	6/30/2020	\$ 251,186.08
9/29/2020	Email	\$ 12,765.58	12/10/1916	10/1/2020	\$ 12,765.58
Total:		\$ 263,951.66			\$ 263,951.66

Confirmation

Confirmation No.: SC051534

 16419 TEN LN
 Nampa, ID 83687

 Telephone : 208-465-0176
 Fax: 208-465-7129

oldcastleinfrastructure.com
Sold To ..: Cash Sale Customer

Ship To ..: Harris Ranch Box Culvert
 To Follow
 Meridian, ID 83642

Ship date: 2/26/2020

Reference :		Contact:		Phone:		
Order No	Date	Customer No	Customer PO	Terms	Cash discount	Delivery terms
S057748	6/1/2020	000001		Cash on Delivery		FOB Job Site

Group: A

Qty	Unit	Item	Description	Mark	Unit price	Amount
1.00	Ea	9001300	12' Span x 6' Rise x 175' Long Box Culvert Price Includes: Precast box culvert sections with end sections having attached curbs, precast wing walls, rebar dowels for cast-in-place closure pours between wing walls and box culvert, rebar dowels for connection between cast-in-place apron, closed cell rubber @ joints, loose weld plates for connection between box culvert sections, and delivery **Note: Price includes delivery and for contractor to offload and set. Cast-in-place closure pours and aprons by others. Oldcastle to provide loose weld plates for contractor to attach in the field. Price does not include waterproof membrane for box culvert. Box culvert manufactured per ACHD specifications. Oldcastle to provide stamped engineering and submittals prior to manufacturing. Pricing figured using the following material: **Note: price inclu		236,968.00	236,968.00
1.00	\$	7009100	Engineering for Box Culvert and Wing Walls			
1.00	Ea	1180300	Harris Ranch South Box Culvert Piece BC1 12' Span x 6' Rise With Attached Cub Approximate Weight: 42,000 lbs.			
1.00	Ea	1180300	Harris Ranch South Box Culvert Piece BC3 12' Span x 6' Rise With Attached Cub Approximate Weight: 42,000 lbs			



Page: 2

Confirmation

Confirmation No.: SC051534

16419 TEN LN
Nampa, ID 83687Telephone : 208-465-0176
Fax: 208-465-7129

oldcastleInfrastructure.com

Sold To ..: Cash Sale Customer

Ship To ..: Harris Ranch Box Culvert
To Follow
Meridian, ID 83642

Ship date: 2/26/2020

Contact:

Phone:

Order No	Date	Customer No	Customer PO	Terms	Cash discount	Delivery terms
S057748	6/1/2020	000001		Cash on Delivery		FOB Job Site

Qty	Unit	Item	Description	Mark	Unit price	Amount
24.00	Ea	1160300	Harris Ranch Box Culvert BC2 12' Span x 6' Rise x 6'-9" Long Approximate Weight: 42,600 lbs.			
4.00	Ea	1180301	Precast Wing Wall With Attached Footing Approximate Weight: 35,500 lbs.			

Tax Code	Taxable amount	Tax Rate	
ID	236,968.00	6.0000	14,218.08

Products and services listed on this Confirmation are provided under the Standard Terms and Conditions located at
<http://oldcastleInfrastructure.com/customer-support/terms-conditions/material-sales/>

ORDER TOTAL US 251,186.08

(Accepted by) _____

(Position) _____

(Date) _____

BARBER VALLEY DEVELOPMENT, INC.4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716**Columbia Bank** 621 12TH AVE. SOUTH
NAMPA, ID 83681**6110**

34-827/1251

6/30/2020

WCBT/HE/S-19

/ TO THE Oldcastle Infrastructure **251,186.08
 ORDER OF _____ \$ _____
 Two Hundred Fifty-One Thousand One Hundred Eighty-Six and 08/100 DOLLARS
 Oldcastle Infrastructure
 16419 Ten Lane
 Nampa, Idaho 83687

MEMO 5057748

#006110#

MP

BARBER VALLEY DEVELOPMENT, INC.

Oldcastle Infrastructure

Date	Type	Reference	Original Amt.	Balance Due	6/30/2020	Discount	Payment
7/9/2020	Bill		251,186.08	251,186.08			251,186.08
						Check Amount	251,186.08

6110

Columbia/ICB- CHEC 251,186.08

6110

Date	Type	Reference	Original Amt.	Balance Due	6/30/2020	Discount	Payment
7/9/2020	Bill		251,186.08	251,186.08			251,186.08
						Check Amount	251,186.08

Columbia/ICB- CHEC 251,186.08

Tomi McGee

From: David Powell <dpowell@rvrdg.com>
Sent: Tuesday, September 29, 2020 1:36 PM
To: Tomi McGee; Amy Mitchel
Subject: FW: Harris Ranch Box Culvert Updated Pricing
Attachments: SKM_C45820092913140.pdf

Tomi – Attached is a change in the box culvert design and costs that are required due to ACHD policy change and deepening the required wing walls at both ends of the box culvert. This is warranted expense that became apparent after the project bid process. This is just now coming in from Old Castle and needs to be executed and paid as soon as possible so not to lose any more time in the manufacture of the box

David G. Powell, PE
RiveRidge Engineering Company
2447 S. Vista Avenue
Boise, Idaho 83705
Work - (208) 344-1180
Direct – (208) 609-4930
Cell – (208) 830-4654
dpowell@rvrdg.com

From: Farrow, Jared <Jared.Farrow@oldcastle.com>
Sent: Tuesday, September 29, 2020 1:11 PM
To: Wendy Haustveit <whaustveit@rvrdg.com>; David Powell <dpowell@rvrdg.com>
Subject: Harris Ranch Box Culvert Updated Pricing

Good Afternoon,

Attached is the updated Harris Ranch proposal that includes the additional engineering and added wing walls. If you could please pass onto your client for additional payment of: \$12,765.58. Also, if I could get a signed proposal for my file.

Please let me know if you have any questions.



Jared Farrow
Sales Manager

16419 Ten Lane
Nampa, ID 83687

P 208.546.3161 | C 208.989.9948
E Jared.Farrow@oldcastle.com

BARBER VALLEY DEVELOPMENT, INC.
4940 E. MILL STATION DRIVE, STE. 101-B
BOISE, ID 83716

 Columbia Bank 521 12TH AVE. SOUTH
NAMPA, ID 83651

34-827/1251

6189

10/1/2020

PAY TO THE Oldcastle Infrastructure ***12,765.58
ORDER OF _____ \$ _____
Twelve Thousand Seven Hundred Sixty-Five and 58/100*****
Oldcastle Infrastructure DOLLARS
16419 Ten Lane
Nampa, Idaho 83687

MEMO S057748 Harris Ranch Box Culvert

10061891# [REDACTED]

BARBER VALLEY DEVELOPMENT, INC. Oldcastle Infrastructure			10/1/2020	6189		
Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
10/1/2020	Bill		12,765.58	12,765.58		12,765.58
					Check Amount	12,765.58

Columbia/ICB-CHEC S057748 Harris Ranch Box Culvert 12,765.58

BARBER VALLEY DEVELOPMENT, INC. Oldcastle Infrastructure			10/1/2020	6189		
Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
10/1/2020	Bill		12,765.58	12,765.58		12,765.58
					Check Amount	12,765.58

Columbia/ICB-CHEC S057748 Harris Ranch Box Culvert 12,765.58