BANNOCK COUNTY COMMISSIONERS' – MEETING

Commissioners' Agenda

The Board of County Commissioners (BOCC) is comprised of the three elected County Commissioners: Ernie Moser (District 1), Jeff Hough (District 2, Chair), and Ken Bullock (District 3). The BOCC generally meets twice weekly: Tuesdays & Thursdays at 9:00 a.m. Unless otherwise noted, meetings are generally held in the Commissioner's Chambers at 624 E Center, Room 212, Pocatello, Idaho. During these public meetings, the BOCC may approve contracts, expend funds, hear testimony, make decisions on land use cases, and take care of other County matters.

Times are subject to change within 15 minutes of the stated time.

Thursday, February 19, 2026

9:00 AM Work Session and Claims Meeting (action items)

Work Session Agenda:

- ~~Hal Jensen, Planning and Development, requesting to discuss Memorandum of Understanding with Fort Hall (requested 10 minutes) (action item)~~
- Scott Crowther, Event Center/Wellness Complex, seeking review and signature on (1) Rental Agreement with Pocatello Downs, (2) Rental Agreement with Professional Rodeo Cowboy Association (PCRA), (3) Event Center Contract with Donor Connect, and (4) Event Center Contract requesting a fee waiver with University of Idaho/Bannock County Extension (requested 10 minutes) (action items)
- Nikola Ennis, UI Bannock County Extension, requesting to provide program updates
- Dillon Evans, Solid Waste, requesting signatures for Payment and Performance Bonds as well as the contract for the Landfill Entrance Facility with Great West Engineering (requested 5 minutes) (action item)
- Dan Kendall, Buildings and Grounds, providing a monthly update

Claims Agenda:

- Board of Ambulance District: Invoices and Commissioner Report
- Board of Commissioners: Invoices, Commissioners Reports, and Credit Applications
- Salary Rate Approval Forms/Notice of Separation with Potential Executive Session under Idaho Code §74-206(1)(a)&(b) regarding personnel with potential action following adjournment of Executive Session
- Payroll Report
- Alcohol Licenses and Permits
- Certificate of Residency Approval
- Mileage Reimbursement Requests
- Memorandum Authorization for Accounts Payable
- Cardholder User Agreement and Authorization

BANNOCK COUNTY COMMISSIONERS
624 E. Center, Pocatello, ID 83201
Phone: (208) 236-7210 • Fax: (208) 232-7363

ERNIE MOSER Commissioner 1st District
JEFF HOUGH Commissioner 2nd District
KEN BULLOCK Commissioner 3rd District

Business Meeting Agenda Request Form

*The Board of Bannock County Commissioners business meetings are generally held on **Tuesday at 9:15 a.m.** in the Commissioners' Chambers in the Bannock County Courthouse, Room 212; 624 E Center Pocatello, Idaho or as noticed **48 hours** prior to the meeting at https://bannockcounty.us/commissioners/. The Commissioners also hold meetings throughout the week as coordinated with the Commissioners' staff. Agenda times are subject to change within **15 minutes** of scheduled time. Any person(s) needing special accommodations to participate in public meetings should contact the Commissioners' Office at 208-236-7210, three to five working days before the meeting.*

Requestor Name:

Teri Jones

Department:

Event Center

Requestor Email:

tjones@bannockcounty.us

Item(s) to be considered:

Pocatello Downs 2026 contract approval

Date of meeting being requested:

02/19/2026

Time requested:

5 Minutes

Does the request involve a contract, agreement, external funding, or award acceptance?

Contract

Contract/Agreement Begin Date:

05/01/2026

Contract/Agreement End Date:

07/31/2026

List of additional attendees:

Scott Crowther, Chaney Nielson, Teri Jones, LuKrena Schoonover

Bannock County Event Center Rental Agreement

This Rental Agreement is made by and between Bannock County, a political subdivision of the State of Idaho (hereinafter referred to as "BANNOCK COUNTY"), and Pocatello Downs, Incorporated, a Non-Profit Corporation.

THE PARTIES AGREE TO THE FOLLOWING TERMS AND CONDITIONS:

1. NAME OF EVENT: Pocatello Downs Horse Races

2. TERM OF AGREEMENT: Pocatello Downs will abide by all contractual agreements and requirements. This agreement shall be effective for a period of one (1) year for 2026 and shall include seven (7) dates.

3. RAIN DAYS: Rain days will be rescheduled as soon as possible and approved based on calendar availability. The Director, Operations Manager, or Event Coordinator must approve rescheduled days.

4. FACILITIES: This contract covers usage of the following Bannock County facilities: Bannock County racetrack, Bannock County upper arena, Bannock County grandstands, open barn, Bannock County announcer's booth, Bannock County PA system, Bannock County winners circle, Bannock County paddocks, Bannock County ticket booth, Bannock County betting windows, Elk Stage, and Bannock County B Building. (User Fee is included).

5. FEES: Pocatello Downs shall pay $1,200.00 annually for the Bannock County office space. BANNOCK COUNTY is not responsible for any loss or damage to property.

6. PAYMENT: The entire balance owing shall be paid to BANNOCK COUNTY at least seven (7) days prior to the scheduled Event.

7. HORSE STALLS: 50 trainer stalls will be provided to Pocatello Downs with the purpose of renting to incoming trainers during the period of this agreement, with the following guidelines: Pocatello Downs will be responsible for cleaning all stalls used on race days and those used by horsemen associated with Pocatello Downs. Pocatello Downs will deposit all stall waste into Bannock County bunkers.

8. TRACK: Pocatello Downs assumes all maintenance of the track surface for the purpose of training from March 1 to September 30.

9. SPONSORSHIPS: BANNOCK COUNTY recognizes the right of Pocatello Downs to obtain and display Sponsorships for this Event. No discriminatory, vulgar, or offensive advertising of any kind shall be permitted on Bannock County property. Additionally, BANNOCK COUNTY has current and ongoing independent sponsorships displayed in certain areas at the Facilities to be used, Pocatello Downs shall in no way obstruct or hinder from view, any sponsorships BANNOCK COUNTY may currently have displayed at the time of the Event.

10. EQUIPMENT USE: Bannock County's water truck and operator will be available to Pocatello Downs for up to 8 hours on race days. The Bannock County water truck, loader, or grader will be operated only by authorized personnel and only with the permission of the Director or Operations Manager. Use of these pieces will be scheduled 24 hours in advance and will be subject to availability. BANNOCK COUNTY will not have a utility tractor to move the starting gates.

11. CONCESSIONS: Concessions located at the Bannock County Event Center will be operated and maintained by BANNOCK COUNTY staff. BANNOCK COUNTY staff is not obligated to operate the concessions on race days. If the concessions are open on race days, BANNOCK COUNTY will split concession profits with Pocatello Downs 50%/50%, with Pocatello Downs receiving 50% after the costs of operation, food, and related expenses are covered. BANNOCK COUNTY will notify Pocatello Downs if concessions will not be open during a certain race day.

12. ALCOHOL: Bannock County Event Center will receive 100% of all alcohol sales AFTER costs are covered during race days. Bannock County Event Center will operate a beer/alcohol booth. Bannock County Event Center will purchase all alcohol for resale. Bannock County Event Center will maintain Bannock County's beer/alcohol booth at a high standard and will be responsible for all damage that occurs during use. Prior to Bannock County events, the Bannock County Event Center will remove any unsold alcohol from Bannock County's property to limit county liability.

13. TOTE BOARD: Pocatello Downs will remove the tote board from the arena after the race day concludes due to the high volume of events scheduled at the Bannock County Upper Arena & Grandstands.

14. STORAGE: All storage in all areas, including but not limited to, the Bannock County office, Bannock County betting windows, and Bannock County beer booth, will be removed and taken off Bannock County property on or before September 30 each year.

15. BANNOCK COUNTY LABOR: Additional labor and equipment will be charged at 100% of the current Bannock County Fee Schedule.

    Additional Labor = $25.00 PER HOUR

    Backhoe, Loader, or Grader with Operator = $75.00 PER HOUR

    Small Tractor with Operator = $75.00 PER HOUR

Acknowledgements:

- The Pocatello Downs Contract is valid for 1 year ONLY with no promise of a future contract or the same pricing as previous approved contracts.
- The BANNOCK COUNTY staff and others alike will be granted access to any Bannock County property at any time without question and/or denial. This includes but is not limited to the horse stalls, B Building, betting windows, crow's nest, etc. Standard

accessibility (light trucks, UTVs, ECT) for BANNOCK COUNTY employees will be 24-hour access.

- Pocatello Downs and all associates vacate stalls during the Idaho High School Finals Rodeo,
- The BANNOCK COUNTY staff retains the right to enter into contracts (not affiliated with Pocatello Downs) for the rental of any Bannock County property at any time
- Housekeeping: Pocatello Downs will keep the Bannock County Event Center clean, all garbage cans will be kept in obvious and accessible locations, and will be emptied by BANNOCK COUNTY staff. The roll-off container is to be used for boxes, feed bags, and similar items. The Bannock County Grandstands are to be clear of all garbage, including but not limited to beer cans, concession debris, flyers, and betting tickets.
- The Bannock County PA system is to be turned off after race days conclude.
- The BANNOCK COUNTY water pump is not to be used Monday through Sunday from 9 PM to 7 AM due to the field watering schedule and danger to the booster pump.
- Normal operating hours on non-event days for BANNOCK COUNTY employees will be between 10 AM and 4 PM (operating equipment, manure hauling, etc.)
- Emergencies may necessitate the need to operate equipment outside of these hourly parameters.
- When possible, BANNOCK COUNTY shall notify Pocatello Downs of upcoming events in the upper arena.
- BANNOCK COUNTY shall work the track to satisfactory condition after events that require track closure.

16. INSURANCE: Pocatello Downs 1. shall provide a Certificate of Insurance with general liability or special event liability coverage of at least $1,000,000 per occurrence and $2,000,000 in aggregate, naming Bannock County and its agents as additional insureds on the policy. The entity shall also provide proof of coverage with at least statutory minimums for workers' compensation, employer's liability, and auto on behalf of any of its employees, drivers, or vehicles who will be participating at the event or used at the location, which shall be delivered to the Bannock County Event Center Office ten (10) days prior to the Event.

17. HAZARDOUS ACTIVITY: Pocatello Downs recognizes that this Event has activities that carry inherent risk or injury, property destruction, or death. As such, Pocatello Downs shall obtain waivers and/or releases of liability from any and all participants in the activities. Said waivers shall contain, at a minimum, language contained in Paragraph 15(a). Said waivers are subject to the approval of BANNOCK COUNTY prior to use of the Facilities. Copies of signed waivers shall be provided to BANNOCK COUNTY upon request. This requirement does not, in any way, abrogate the requirement for indemnification contained herein, abrogate the invocation of sovereign immunity herein, eliminate the requirement by the County for proof of sufficient insurance, nor abrogate any defenses or immunities provided by law.

    a. Pocatello Downs shall have participants sign a release and discharge of Bannock County, its elected and appointed officials, and employees and agents from all actions, causes of action, damages, claims, or demands for all known

or unknown personal injuries, property damage, or death resulting from or arising out of any participation in the above-described activity or event.

18. WARRANTIES: There are no express or implied warranties provided by BANNOCK COUNTY. Pocatello Downs, in executing this agreement, is relying upon its own judgment, information, and inspection of the property.

19. ENTRY BY BANNOCK COUNTY: BANNOCK COUNTY shall have the right to enter the Facilities at any time to examine the same and determine proper use and compliance with this Agreement.

20. ASSIGNMENT OR SUBLETTING PROHIBITED: Pocatello Downs shall not assign this rental agreement nor sublet the whole or any part thereof without the written consent of BANNOCK COUNTY, except as authorized in this agreement in Paragraph 5, Horse Stalls, and Paragraph 10, Vendors.

21. TERMINATION: That outside of a termination for breach of contract, either party may terminate the contract with written 90 days' notice to other party- In the event of such breach, and prior to terminating, the party alleging any breach must notify the other party, in writing, and state the nature of the breach, giving the breaching party an opportunity to cure. Except as may be otherwise provided in this Agreement, such breach by either party will result in the other party being responsible to reimburse the non-defaulting party for all costs incurred directly as a result of the breach of this Agreement, and shall be subject to such damages as may be allowed by law, including all attorneys' fees and costs of enforcing this Agreement.

22. GOOD FAITH: BANNOCK COUNTY and Pocatello Downs shall continue to engage in good-faith communication and negotiation during the term of this agreement to help keep costs low for use by Pocatello Downs, while also contemplating the actual costs to BANNOCK COUNTY.

23. ENTIRE AGREEMENT: This is the entire agreement of the parties and can only be modified or amended in writing by the parties.

24. ATTORNEY FEES: If action is brought to enforce the terms or provisions of this lease or to enforce forfeiture for default or to collect damages for breach, the prevailing party in such action shall be entitled to recover from the losing party reasonable attorney fees together with costs authorized by law.

25. NOTICES: Any notice required under this Agreement may be served upon BANNOCK COUNTY by hand delivery or USPS First-Class Mail, to Bannock County Event Center Office at 10588 Fairgrounds Road, Pocatello, ID 83201, and any notice may be served upon Pocatello Downs by hand delivery or USPS First Class Mail to Pocatello Downs, Inc. Service of a notice by US Mail shall be deemed complete upon the date of the postmarks by US Mail, Either party may change the address for services of notice by written notice to the other party.

26. ADDITIONAL ITEM; Pocatello Downs receives permission from Bannock County to simulcast (broadcast) events.

DATED this 19th day of February 2026.

BANNOCK COUNTY

_____ Date _____
Scott Crowther, Event Director

BANNOCK COUNTY BOARD OF COMMISSIONERS

_____ Date 2/19/26
Jeff Hough, Chairman

_____ Date 2/19/26
Ernie Moser, Commissioner

_____ Date 2/19/26
Ken Bullock, Commissioner

Pocatello Downs, INC.

_____ Date: _____
LuKrena Schoonover, President

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ERNIE MOSER Commissioner 1st District
JEFF HOUGH Commissioner 2nd District
KEN BULLOCK Commissioner 3rd District

Business Meeting Agenda Request Form

*The Board of Bannock County Commissioners business meetings are generally held on **Tuesday at 9:15 a.m.** in the Commissioners' Chambers in the Bannock County Courthouse, Room 212; 624 E Center Pocatello, Idaho or as noticed **48 hours** prior to the meeting at https://bannockcounty.us/commissioners/. The Commissioners also hold meetings throughout the week as coordinated with the Commissioners' staff. Agenda times are subject to change within **15 minutes** of scheduled time. Any person(s) needing special accommodations to participate in public meetings should contact the Commissioners' Office at 208-236-7210, three to five working days before the meeting.*

Requestor Name:

Teri Jones

Department:

Event Center

Requestor Email:

tjones@bannockcounty.us

Item(s) to be considered:

PRCA is requesting contract approval

Date of meeting being requested:

02/19/2026

Time requested:

5 Minutes

Does the request involve a contract, agreement, external funding, or award acceptance?

Contract

Contract/Agreement Begin Date:

05/01/2026

Contract/Agreement End Date:

05/31/2026

List of additional attendees:

Scott Crowther, Chaney Nielson, Teri Jones

Bannock County Event Center Rental Agreement

This Rental Agreement is made by and between Bannock County, a political subdivision of the State of Idaho (hereinafter referred to as "BANNOCK COUNTY"), and Professional Rodeo Cowboys Association (PRCA) Big Bucks ProRodeo, a Non-Profit Corporation (hereinafter referred to as "Big Bucks ProRodeo").

THE PARTIES AGREE TO THE FOLLOWING TERMS AND CONDITIONS:

1. NAME OF EVENT: PRCA Big Bucks ProRodeo

2. DATES OF EVENT(S): Big Bucks ProRodeo will abide by all contractual agreements and requirements. The 2026 Big Bucks ProRodeo will be held from May 21st to 24th, 2026

3. FEES: BANNOCK COUNTY shall waive fees for facilities used. BANNOCK COUNTY will receive all the revenue from RV Site Rental, Horse Stall Rental, Concessions, and Alcohol sales.

4. PAYMENT: The entire balance owing shall be paid to BANNOCK COUNTY at least seven (7) days prior to the scheduled Event.

5. FACILITIES: Big Bucks ProRodeo shall have exclusive access and use of the following facilities, during the agreed-upon dates and times, at the Event Center: Bannock County grandstands, Bannock County announcer's booth, Bannock County PA system, and Bannock County ticket booth. Nothing contained herein shall contemplate the use or control of areas and/or structures yet to be developed or erected.

6. RV SITE: BANNOCK COUNTY shall be responsible for the collection of any rent/fee they deem proper for use of the South RV Park and the North RV Park, and BANNOCK COUNTY will receive all the revenue. Big Bucks ProRodeo shall be responsible for complying with applicable state, local, and federal laws or regulations. BANNOCK COUNTY will unlock power boxes and allow access to the water supply for use during this Event. Big Bucks ProRodeo shall notify the Event Center staff of any maintenance needs as they may arise.

7. HORSE STALLS: BANNOCK COUNTY shall be responsible for the collection of any rent/fee they deem proper for use of the Horse Stalls. Big Bucks ProRodeo shall be responsible for complying with applicable state, local, and federal laws or regulations. Big Bucks ProRodeo shall be responsible for scheduling and cleaning the stalls. Big Bucks ProRodeo shall place the manure/shavings outside each stall, so Bannock County can dispose of the same. BANNOCK COUNTY will ensure the stalls are functional and in good repair prior to the Event.

8. SPONSORSHIPS: BANNOCK COUNTY recognizes the right of Big Bucks ProRodeo to obtain and display Sponsorships for this Event. No discriminatory, vulgar or offensive advertising of any kind shall be permitted on Bannock County property. Additionally, BANNOCK COUNTY has current and ongoing independent sponsorships displayed in certain areas at the Facilities to be used. Big Bucks ProRodeo shall in no way obstruct or hinder from view any sponsorships BANNOCK COUNTY may currently have displayed at the time of the Event.

9. CONCESSIONS: Concessions located at the Bannock County Event Center will be operated and maintained by the Bannock County staff, with Bannock County receiving 100% of the profit AFTER costs of operation, food, etc. are covered.

10. ALCOHOL: Bannock County Event Center will receive 100% of all alcohol sales AFTER costs are covered during race days. Bannock County Event Center will operate a beer/alcohol booth. Bannock County Event Center will purchase all alcohol for resale. Bannock County Event Center will maintain Bannock County's beer/alcohol booth at a high standard and will be responsible for all damage that occurs during use. Prior to Bannock County events, the Bannock County Event Center will remove any unsold alcohol from Bannock County's property to limit county liability.

11. EQUIPMENT USE: BANNOCK COUNTY shall provide Big Bucks ProRodeo with a County tractor and operator to work the arenas prior to practices and events. No other BANNOCK COUNTY equipment shall be used by Big Bucks ProRodeo, its agents, officers, employees, volunteers, or patrons without the express written permission of BANNOCK COUNTY, along with a signed waiver.

12. MISCELLANEOUS TERMS AND CONDITIONS: Big Bucks ProRodeo is responsible for and shall pay to repair all damage caused by its employees, volunteers, agents, participants, or invitees to any fixtures, equipment, facilities, and /or grounds as a result of use.

    a) Use of the Facilities shall be in accordance with applicable state, local, and federal laws and regulations.
    b) Approval must be obtained for the erection of buildings, tents, enclosures, structures, signs, outdoor; no nails, paint, or anything on walls; no tape on concrete floors.
    c) All temporary structures, forms, booths, etc., shall be removed within 24 hours of the event.
    d) Security is the responsibility of Big Bucks ProRodeo at its own expense as deemed necessary for the protection of valuable displays and buildings during the Event, day and night.

13. INSURANCE: Big Bucks ProRodeo shall 1. shall provide a Certificate of Insurance with general liability or special event liability coverage of at least $1,000,000 per occurrence and $2,000,000 in aggregate, naming Bannock County and its agents as additional insureds on the policy. The entity shall also provide proof of coverage with at least statutory minimums for workers' compensation, employer's liability, and auto on behalf of any of its employees, drivers, or vehicles who will be participating at the event or used at the location, which shall be delivered to the Bannock County Event Center Office ten (10) days prior to the Event.

14. HAZARDOUS ACTIVITY: Big Bucks ProRodeo recognizes that this Event has activities that carry inherent risk or injury, property destruction, or death. As such, Big Buck ProRodeo shall obtain waivers and/or releases of liability from any participants in the activities. Said waivers shall contain, at a minimum, language contained in Paragraph 12(a). Said waivers are subject to the approval of BANNOCK COUNTY prior to use of the Facilities. Copies of signed waivers shall be provided to BANNOCK COUNTY upon request. This requirement does not, in any way, abrogate the requirement for indemnification contained herein, abrogate the invocation of sovereign immunity herein, eliminate the requirement by the County for proof of sufficient insurance, nor abrogate any defenses or immunities provided by law.

    a) Big Bucks ProRodeo shall have participants sign a release and discharge of Bannock County, its elected and appointed officials, and employees and agents from all actions, causes of action, damages, claims, or demands for all known or unknown personal injuries, property damage, or death resulting from or arising out of any participation in the above described activity or event.

15. WARRANTIES: BANNOCK COUNTY provides no express or implied warranties. Big Bucks ProRodeo, in executing this agreement, is relying upon its own judgment, information, and inspection of the property.

16. ENTRY BY BANNOCK COUNTY: BANNOCK COUNTY shall have the right to enter the Facilities at any time to examine the same and determine proper use and compliance with this Agreement.

17. ASSIGNMENT OR SUBLETTING PROHIBITED: Big Bucks ProRodeo shall not assign this rental agreement nor sublet the whole or any part thereof without the written consent of BANNOCK COUNTY.

18. TERMINATION: This Agreement may be terminated at any time by either party if the other party materially breaches any of its representations, warranties, or obligations under this Agreement. In the event of such a breach, and prior to termination, the party alleging the breach must notify the other party in writing and state the nature of the breach, affording the breaching party an opportunity to cure. The time period for the opportunity to cure shall be reasonable, given the nature and timing of the alleged violation. Except as may be otherwise provided in this Agreement, such breach by either party will result in the other

party being responsible to reimburse the non-defaulting party for all costs incurred directly as a result of the violation of this Agreement. It shall be subject to such damages as may be allowed by law, including all attorneys' fees and costs of enforcing this Agreement.

19. GOOD FAITH: BANNOCK COUNTY and Big Bucks ProRodeo shall continue to engage in good-faith communication and negotiation during the term of this agreement to help keep costs low for use by Big Bucks ProRodeo, while also contemplating the actual costs to BANNOCK COUNTY.

20. ENTIRE AGREEMENT: This is the entire agreement of the parties and can only be modified or amended in writing by the parties.

21. ATTORNEY FEES: If action is brought to enforce the terms or provisions of this lease or to enforce forfeiture for default or to collect damages for breach, the prevailing party in such action shall be entitled to recover from the losing party reasonable attorney fees together with costs authorized by law.

22. NOTICES: Any notice required under this Agreement may be served upon BANNOCK COUNTY by hand delivery or USPS First-Class Mail, to Bannock County Event Center Office at 10588 Fairgrounds Road, Pocatello, ID 83201, and any notice may be served upon Big Bucks ProRodeo by hand delivery or USPS First Class Mail to Big Bucks ProRodeo, Cody Flitton, 293 South Arrowhead Lane, Mesquite, NV 89027 Service of a notice by US Mail shall be deemed complete upon the date of the postmarks by US Mail, Either party may change the address for services of notice by written notice to the other party.

DATED this _____ day of _____ 2026.

BANNOCK COUNTY

_____ Date _____

Scott Crowther, Event Director

BANNOCK COUNTY BOARD OF COMMISSIONERS

_____ Date 2/19/26

Jeff Hough, Chairman

_____ Date 2/19/26
Ernie Moser, Commissioner

_____ Date 2/19/26
Ken Bullock, Commissioner

PRCA Big Bucks ProRodeo

_____
Cody Flitton

BANNOCK COUNTY COMMISSIONERS
624 E. Center, Pocatello, ID 83201
Phone: (208) 236-7210 • Fax: (208) 232-7363

ERNIE MOSER Commissioner 1st District
JEFF HOUGH Commissioner 2nd District
KEN BULLOCK Commissioner 3rd District

Business Meeting Agenda Request Form

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Requestor Name:

Teri Jones

Department:

Event Center

Requestor Email:

tjones@bannockcounty.us

Item(s) to be considered:

Donor Connect is requesting approval for the annual 5k at the Wellness Complex

Date of meeting being requested:

06/27/2026

Time requested:

5 Minutes

Does the request involve a contract, agreement, external funding, or award acceptance?

Contract

Contract/Agreement Begin Date:

06/27/2026

Contract/Agreement End Date:

06/27/2026

List of additional attendees:

Scott Crowther, Chaney Nielson, Teri Jones, Amber Davis

Office Hours: Monday thru Friday 8:00 a.m. to 5:00 p.m., Closed Weekends and Holidays
Mailing Address: 10588 Fairgrounds Road, Pocatello, Idaho 83201
Email: eventcenter@bannockcounty.us
Phone: 208-237-1340

Payment Received: _____
Insurance Received: _____
Permits Received: _____
501(c) Received: _____
RecDesk Outlook Board Spreadsheet Reservation Listing

EVENT CENTER, WELLNESS COMPLEX AND FAIRGROUNDS CONTRACT

This is a request for facility reservation. Please complete all information. Incomplete information will result in a delay in the review of your contract. The information is requested to assist in the review and consideration of your request to rent a County facility. Historical users (using their original dates) have first priority. All other requests are on a first come – first served basis.

APPLICATION INFORMATION

- Company/Origination Name: (event host) Donor Connect
- Contact Name: (who will sign the contract) Brady Dransfield Title: Public Ed Manager
- Mailing Address: 6065 S. Fashion Blud. Suite 125
- City: Murray State: Ut Zip Code: 84107
- Cell Phone: 801-419-2771 Email: brady.dransfield@donorconnect.life

EVENT INFORMATION

- Event Name: Gift of Life walk/run Area Requested: Pavilion #3
- Event Description: 2k walk/5k run utilize sidewalkaround park
- Event Date(s): June 27, 2026 Estimated Number of Attendees: 140
- Event Start Time: 7:00 am Event End Time: 11:00 am
- Additional Set-Up or Tear Down Days (if needed): N/A
- Paid Admission Event: YES X NO _____ Cost _____ Event Open to the Public: YES X NO _____
- 501(c)(3): YES X NO ____ Non-Profit Name: _____ Tax ID #: _____
- Will Alcohol Be Served/Consumed? YES _____ NO X (If yes, county permit ($20) must be provided and present at event)

THE COUNTY SHALL:

Permit the Applicant to occupy the space as written above, to prepare buildings or erect temporary booths, which Applicant may use during the rental periods.

Permit the Applicant to display, demonstrate, sell, solicit or operate their business with the limits of their lease.

Use reasonable safeguards against fire, theft, and accidents, but does not assume any liability for damages to goods or property of the Applicant from fire, theft, water or storm, or any liability for accidents to persons or property caused under, or by virtue of the apparitions of Lessee under this contract.

Have a lien upon any and all property stored, used or located upon the leased space, or elsewhere upon the fairgrounds by the Lessee for any and all damages sustained by the breach of this contract or otherwise caused by the Applicant, and shall have the right to restrain such property or any part of it without process of law, and may appropriate any or all such as its own to satisfy and such claim.

Reserve the right to all food concession, unless otherwise permitted. If additional vendors are permitted menu must not compete with menu of fixed site.

THE APPLICANT SHALL:

Obtain approval for erection of buildings, tents, enclosures, structures and signs outdoor from County.

Not nail, drill, paint, or do anything to change appearance of the walls. Do not use tape on concrete.

Remove all temporary structures, forms, booths, etc. within twenty-four (24) hours after termination of lease. Items left after that time become the property of the County, to make such disposition as they shall see fit.

Not do any additional electrical wiring without permission of County.

Not permit any ale, beer or intoxicating liquor of any kind to be consumed by the Applicant, his employees, agents or guests without proper permit.

Collect fees for the RV rental spaces at $35.00/$45.00 per space, per day and turn the rental fees collected, into the office at the conclusion of the event.

Comply fully with all laws and ordinances of the Bannock County Fire Protection District #1.

Agrees to furnish security at its own expense as is deemed necessary for protection of valuable displays and buildings during the event day and night.

Applicant agrees to furnish the County a Certificate of Insurance naming Bannock County and agents as additionally insured in a *$ 1,000,000.00* combined single limit policy, such policy being delivered to Event Center Office ten (10) days prior to move in time.

Applicant shall provide a security deposit as indicated on the fee schedule, payable when reservation for facility is taken and contract signed. Payment will be held as a security binding. Deposit will be refunded if notification of cancellation is received thirty (30) days prior to event or upon final inspection of facilities, provided there has been no damage and facility is returned in same condition as received. (Clean)

The Lessee will pay the building/grounds rental fees thirty (30) days prior to the event (unless other arrangements are made prior to the event) in the amount of: $ $50 (see attached page for fee schedule).

Please make checks payable to – Bannock County Fairgrounds. Sales tax shall be collected as per Idaho Sales Tax Commission rules.

Bannock County Commissioners

_____ Date 2/19/26
Jeff Hough, Chairman

_____ Date 2/19/26
Ernie Moser, Commissioner

_____ Date 2/19/26
Ken Bullock, Commissioner

BANNOCK COUNTY

By: _____ Date _____

FY22 Fees Adopted by R.S. No. 2021-90

A. The terms of this contract shall commence and be binding upon the parties when the last signature is affixed to this contract, and final approval and granting of the application is made by the Bannock County Commissioners. No use of County facilities or grounds shall take place in the absence of approval. The terms of this contract shall remain in full force and effect until all obligations are fully performed or it is terminated as provided herein.

B. A fee as set by the Bannock County Commissioners, including but not limited to additional security, shall be paid by Applicant for the use of facilities and/or grounds. If waiver or reduction of fees has been requested, this must be approved by the Bannock County Commissioners and Applicant must comply with such terms set by the Board.

C. Applicant shall use only those parts of the facilities and/or grounds applied for and essential for the use. Applicant's use of facilities and grounds shall occur only with the agreement and acquiescence of the Bannock County Commissioners and take place in such a manner as shall not interfere with the use of building and grounds by the County or other users.

D. Applicant is responsible for and shall pay to repair all damage caused by its employees, volunteers, agents, participants or invitees to any fixtures, equipment, facilities and/or grounds as a result of the use.

E. Applicant shall clean, if necessary, all areas of any facilities and/or grounds which are used pursuant to this Agreement and shall leave the building(s) and/or grounds in the state it was prior to the commencement of the use. Failure of Applicant to clean areas of the buildings and/or grounds to the satisfaction of the County shall result in an assessment of costs or loss of deposit to Applicant for any necessary cleaning. The County reserves the right to request and receive an appropriate security and or cleaning deposit from Applicant if deemed necessary. Costs for any repairs or cleaning required may be deducted from said deposit.

F. Applicant agrees that the use of County buildings and grounds shall be in accord with any applicable state, local or federal law or regulation.

G. Applicant agrees that in the event any hazardous or potentially hazardous activities are contemplated in Applicant's use of the facilities; the Applicant shall obtain waivers and/or releases of liability from any and all participants in the activities. Said waivers shall contain, at a minimum, the following language in paragraph G(l). Said waivers are subject to the approval of the County prior to use of the facilities. Copies of all signed waivers shall be provided to the County upon request. This requirement does not, in any way, abrogate the requirement for indemnification herein, abrogate the invocation of sovereign immunity herein, eliminate any requirement imposed by the County for proof of sufficient insurance, nor modify or abrogate any defenses or immunities provided by law. Hazardous activities include, but are not limited to any sport or activity whether involving animals or equipment which carries an inherent risk or injury, property destruction or death. The Applicant agrees that decisions by the County or County staff to require or not to require the execution or submission of waivers do not abrogate any immunities or defenses provided by law. The County staff has complete discretion in the decision to require or not require the execution and submission of waivers in connection with any event.

G.(1) Applicant shall have participants sign a release and discharge of Bannock County, its elected and appointed officials, and employees and agents from all actions, causes of action, damages, claims or demands for all known or unknown personal injuries, property damage or death resulting from or arising out of my participation in the above described activity or events.

H. Maintenance. Bannock County agrees that regular maintenance of the grounds, parking lots and buildings will be the responsibility of the County.

I. Default. Each and every term and condition here of shall be deemed to be a material element of the Agreement. In the event either party should fail or refuse to perform according to the terms of this Agreement, such party may be declared in default thereof.

J. Independent Entities. County and Applicant are independent entities and their employees, volunteers, participants or invitees are not to be considered agents or employees of the other. Actions performed by Applicant pursuant to this contract are those of an independent agent and not those of an employee of the County.

K. Entire Agreement. This contract, with any properly executed addendums, represents the entire and integrated agreement and understanding between the parties and supersede all prior negotiations, statements, representations and agreements, whether written or oral.

L. Assignment. Neither this contract, nor any rights or obligations hereunder shall be assigned or delegated by a party without the prior written consent of the other party.

M. Modification. This Application and Agreement shall be modified on1y by a written agreement, duly executed by all parties hereto.

N. Invalidity. The parties mutually 1mderstand and agree this contract shall be governed by and interpreted pursuant to the laws of the State of Idaho. If any provision of this contract is held invalid or unenforceable by any court of competent jurisdiction, or if the County is advised of any such actual or potential invalidity or unenforceability, such holding or advice shall not invalidate or render unenforceable any other provision hereof. It is the express intent of the parties that the provisions of this contract are fully severable.

O. Venue. If any dispute arises between the parties from or concerning this contract or the subject matter hereof, any suit or proceeding at law or inequity shall be brought in the District Court of the State of Idaho, County of Bannock. Nothing in this clause shall be interpreted or construed to waive the County's assertion of governmental immunity.

P. Contingencies. Applicant certifies and warrants no gratuities, kick-backs or contingency fees were paid in connection with this contract, nor were any fees, commissions, gifts or other considerations made contingent upon the award of this contract.

Q. Discrimination. All parties agree they will not discriminate against any person who performs work under the terms and conditions of this contract because of race, color, gender, creed, handicapping conditions or national origin.

R. ADA Compliance. All parties agree they will not discriminate against a qualified individual with disability, pursuant to law as set forth in the Americans with Disabilities Act, P.L. 101-336, 42 U.S.C. § 12101, et seq., and/or any properly promulgated rules and regulations relating thereto.

S. Governmental Immunity. The Bannock County Commissioners and Bannock County do not waive them governmental immunity provided by any law by entering into and/or granting this contract and the County fully retains all immunities and defenses provided by law with regard to any action based upon this Agreement. Further; the County and its elected and ap- pointed officials do not waive their governmental immunity under contract, tort or any other applicable theory of law by entering into or granting this contract.

T. Force Majeure. Neither party shall be liable to perform under this contract if such failure arises out of causes beyond control, and without the fault or the negligence of said party. Such causes may include, but are not restricted to, Acts of God or the public enemy, fires, floods, epidemics, quarantine restrictions, freight embargoes and unusually severe weather. In every case, however, a failure to perform must be beyond the control and without the fault or the negligence of said party.

U. Notices. All notices required and permitted under this contract shall be deemed to have been given, if and when deposited in the U.S. Mail, properly stamped and addressed to the address listed herein, or when personally, delivered to such party. A party may change its address for notice hereunder by giving written notice to the other party.

V. Indemnification. To the fullest extent permitted by law, Applicant agrees to indemnify and hold Harmless Bannock County and its elected and appointed officials, employees and volunteers from any and all claims, damages, losses and expenses, including reasonable attorney's fees, for injuries, illness, death, property damage, claims, penalties, actions, demands or expenses arising from or in connection with this contract. In granting this contract, Bannock County may, in its sole discretion, require Applicant to show proof of insurance sufficient to cover Applicant's obligations pursuant to this clause. No use of buildings or grounds may commence until Bannock County Risk Management or County Legal Counsel has reviewed and approved the insurance coverage obtained/provided by Applicant if so required.

W. Third Party Beneficiary. The parties do not intend to create in any other individual or entity the status of third-party beneficiary and this Application and Agreement shall not be construed so as to create such status. The rights, duties and obligations contained in this contract shall operate only between the parties to this contract and shall inure solely to the benefit of the parties to this contract. The parties to this contract intend and expressly agree that only parties' signatory to this contract shall have any legal or equitable right to seek to enforce this contract, to seek any remedy arising out of a party's performance or failure to perform any term or condition of it, or to bring action for its breach. This provision is not intended to waive the County's governmental immunity in any way and shall not be construed to waive said governmental immunity in any way.

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Y. Appropriations Clause. Bannock County's obligations under this Application and Agreement are conditioned upon the availability of Funds which are appropriated or allocated for such obligations. If funds are not allocated and available for the continuance of said obligations, the contract may be terminated by the County at the end of the period for which funds are available. No penalty shall accrue to the County in the event this provision is exercised, and the County shall not be obligated or liable for any future payments due or for any damages as a result of termination under this provision.

Z. Alteration or Additions. Without the written consent of the County, or unless otherwise allowed by this Agreement, the Applicant shall not make any improvements to or alterations of the premises. Any alterations or improvements to the premises made by the Applicant shall become part of the realty and the property of the County.

1/8/2026
Date

Applicant

Brady Dransfield
Print Name

ADDITIONAL EVENT INFORMATION

EVENT NAME: Gift of Life walk/run

DATE:
June 27, 2026

TIME OF EVENT: 7:00 am - 11:00 am

AREA: Pavilion 3 and utilize the sidewalk around the facility

ADDITIONAL EVENT DETAILS:
Pavilion will serve as the gathering location for registration, program, and closing comments. The walk/run will take place on the sidewalk around the park. The event honors donor families and celebrates the gift of life, thanks to organ, tissue, and eye donors.

SPECIAL SET UP INSTRUCTIONS:
Power at the pavilion and access to restrooms. Picnic tables available at pavilion. Thank you for all you do!

NOTES/DRAWINGS:

EVENT CENTER, WELLNESS COMPLEX, RV PARK

FEE SCHEDULE

Area	Description	Cost		Unit	Quantity	Total
		Half Day	**Full Day**			
BCEC	Pavilions 1-4	$50	$100	Per Pavilion	1/2 day rental	$50
BCEC	Basketball Court	$50	$100	Per Court		
BCEC	Volleyball Courts	$50	$100	Per Court		
BCEC	Multi-Use Fields	$150	$300	Per Field		
BCEC	Championship Field	$175	$350	Per Field		
BCEC	Indoor Arena (Seats 500) Event/Individual	$60		Per Hour		
Indoor Arena Riding Passes		***Open Except For When Otherwise Reserved (Arena Worked Once Per Day) ***				
BCEC	6-Month Indoor Arena Family Pass (Nov-Apr)	$120		Family of 4, Including Parents and Children 17 and younger- Renewed Annually		
BCEC	6-Month Indoor Arena Individual Pass (Nov-Apr)	$90		Renewed Annually		
BCEC	Arena 1	$150	$300	Half (4 hours or less) /Full Day (anything over 4 hours)		
BCEC	Arena 2	$100	$200	Half (4 hours or less) /Full Day (anything over 4 hours)		
BCEC	Arena 3	$75	$150	Half (4 hours or less) /Full Day (anything over 4 hours)		
BCEC	Building B (Concrete Floor/Heated)	$175	$350	Half (4 hours or less) /Full Day (anything over 4 hours)		
BCEC	Tack/Hay Room	$20		Per Day		
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BCEC	Stall Bedding (Sawdust)	$15	Per Bag		
BCEC	Cattle Panel	$10	Per Panel/Per Day		
RV	Full Hookups (Water, Electricity, Sewer)	$45	Per Day		
RV	Partial Hookups (Water & Electricity)	$35	Per Day		
Labor	Additional Labor Per Person/Per Hour	$25	Per Hour		
EQUIP	Water Truck w/Operator	$100	Per Hour		
EQUIP	PA Systems	$10	Per Hour		
EQUIP	Operator w/Equipment (Tractor, Backhoe, Skid Steer)	$75	Per Hour		
EQUIP	Operator w/Motor Grader (Special Circumstances)	$100	Per Hour		
EQUIP	Tractor, No Operator	$50	Per Hour		
EQUIP	Hot Spot	$100	Per Day		
VENDOR	Vendor Admission Fee (Inspection, Permit, Admin)	$90	Per Month (starts on the 1st and ends on the last day of the month)		
AMP	Amphitheater 60x25x30 (9,000 capacity)				
	ITEMS TO BE NEGOTIATED BY CONTACT ONLY				
BCEC	Upper Arena & Grandstands (Seats 3,500)				
BCEC	Race Track				
BCEC	Elk Stage & Grass Area				
BCEC	Upper Office Spaces (3 Available)				
BCEC	Livestock Holding Pens				

BANNOCK COUNTY COMMISSIONERS
624 E. Center, Pocatello, ID 83201
Phone: (208) 236-7210 • Fax: (208) 232-7363

ERNIE MOSER, Commissioner, 1st District
JEFF HOUGH, Commissioner, 2nd District
KEN BULLOCK, Commissioner, 3rd District

Business Meeting Agenda Request Form

*The Board of Bannock County Commissioners business meetings are generally held on **Tuesday at 9:15 a.m.** in the Commissioners' Chambers in the Bannock County Courthouse, Room 212; 624 E Center Pocatello, Idaho or as noticed **48 hours** prior to the meeting at https://bannockcounty.us/commissioners/. The Commissioners also hold meetings throughout the week as coordinated with the Commissioners' staff. Agenda times are subject to change within **15 minutes** of scheduled time. Any person(s) needing special accommodations to participate in public meetings should contact the Commissioners' Office at 208-236-7210, three to five working days before the meeting.*

Requestor Name:

Teri Jones

Department:

Event Center

Requestor Email:

tjones@bannockcounty.us

Item(s) to be considered:

UI Extension Bannock County is requesting a fee waiver for the use of the B-Building and the Elk Stage grass area.

Date of meeting being requested:

02/19/2026

Time requested:

5 Minutes

Does the request involve a contract, agreement, external funding, or award acceptance?

Contract

Contract/Agreement Begin Date:

04/18/2026

Contract/Agreement End Date:

04/18/2026

List of additional attendees:

Scott Crowther, Chaney Nielson, Teri Jones, Nikki Ennis

Office Hours: Monday thru Friday 8:00 a.m. to 5:00 p.m., Closed Weekends and Holidays
Mailing Address: 10588 Fairgrounds Road, Pocatello, Idaho 83201
Email: eventcenter@bannockcounty.us
Phone: 208-237-1340

Payment Received: _____ ____
Insurance Received: _____ ____
Permits Received: _____ ____
501(c) Received: _____
RecDesk Outlook Board
Spreadsheet Reservation Listing
meeting 2-19-26

EVENT CENTER, WELLNESS COMPLEX AND FAIRGROUNDS CONTRACT

This is a request for facility reservation. Please complete all information. Incomplete information will result in a delay in the review of your contract. The information is requested to assist in the review and consideration of your request to rent a County facility. Historical users (using their original dates) have first priority. All other requests are on a first come – first served basis.

APPLICATION INFORMATION

- Company/Origination Name: (event host) UI Extension Bannock County
- Contact Name: (who will sign the contract) Nikki Ennis Title: Extension educator
- Mailing Address: 10660 Fairgrounds Rd. Bldg. A
- City: Pocatello State: ID Zip Code: 83201
- Cell Phone: 208-890-6937 Email: ennis@uidaho.edu

EVENT INFORMATION

- Event Name: Extension Day Area Requested: Bldg. B and Lawn area
- Event Description: this is a community event where we are connecting with community members to educate them with what we can do in Extension
- Event Date(s): April 18 Estimated Number of Attendees: 300?
- Event Start Time: 9AM Event End Time: 6PM
- Additional Set-Up or Tear Down Days (if needed): None
- Paid Admission Event: YES _____ NO x_____ Cost _____ Event Open to the Public: YES x_____ NO _____
- 501(c)(3): YES ____ NO ____ Non-Profit Name: Bannock County/ UI Extension Tax ID #: _____
- Will Alcohol Be Served/Consumed? YES _____ NOx_____ (If yes, county permit ($20) must be provided and present at event)

THE COUNTY SHALL:

Permit the Applicant to occupy the space as written above, to prepare buildings or erect temporary booths, which Applicant may use during the rental periods.

Permit the Applicant to display, demonstrate, sell, solicit or operate their business with the limits of their lease.

Use reasonable safeguards against fire, theft, and accidents, but does not assume any liability for damages to goods or property of the Applicant from fire, theft, water or storm, or any liability for accidents to persons or property caused under, or by virtue of the apparitions of Lessee under this contract.

Have a lien upon any and all property stored, used or located upon the leased space, or elsewhere upon the fairgrounds by the Lessee for any and all damages sustained by the breach of this contract or otherwise caused by the Applicant, and shall have the right to restrain such property or any part of it without process of law, and may appropriate any or all such as its own to satisfy and such claim.

FY22 Fees Adopted by R.S. No. 2021-90

Reserve the right to all food concession, unless otherwise permitted. If additional vendors are permitted menu must not compete with menu of fixed site.

THE APPLICANT SHALL:

Obtain approval for erection of buildings, tents, enclosures, structures and signs outdoor from County.

Not nail, drill, paint, or do anything to change appearance of the walls. Do not use tape on concrete.

Remove all temporary structures, forms, booths, etc. within twenty-four (24) hours after termination of lease. Items left after that time become the property of the County, to make such disposition as they shall see fit.

Not do any additional electrical wiring without permission of County.

Not permit any ale, beer or intoxicating liquor of any kind to be consumed by the Applicant, his employees, agents or guests without proper permit.

Collect fees for the RV rental spaces at $35.00/$45.00 per space, per day and turn the rental fees collected, into the office at the conclusion of the event.

Comply fully with all laws and ordinances of the Bannock County Fire Protection District #1.

Agrees to furnish security at its own expense as is deemed necessary for protection of valuable displays and buildings during the event day and night.

Applicant agrees to furnish the County a Certificate of Insurance naming Bannock County and agents as additionally insured in a *$ 1,000,000.00* combined single limit policy, such policy being delivered to Event Center Office ten (10) days prior to move in time.

Applicant shall provide a security deposit as indicated on the fee schedule, payable when reservation for facility is taken and contract signed. Payment will be held as a security binding. Deposit will be refunded if notification of cancellation is received thirty (30) days prior to event or upon final inspection of facilities, provided there has been no damage and facility is returned in same condition as received. (Clean)

The Lessee will pay the building/grounds rental fees thirty (30) days prior to the event (unless other arrangements are made prior to the event) in the amount of: $ $350.00 (see attached page for fee schedule).

Please make checks payable to – Bannock County Fairgrounds. Sales tax shall be collected as per Idaho Sales Tax Commission rules.

Bannock County Commissioners BANNOCK COUNTY

_____ Date 2/19/26

Jeff Hough, Chairman

_____ Date 2/19/26 By: _____ Date _____

Ernie Moser, Commissioner

_____ Date 2/19/26

Ken Bullock, Commissioner

FY22 Fees Adopted by R.S. No. 2021-90

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_____
Date

Nikola Ennis
_____
Applicant

_____
Print Name

ADDITIONAL EVENT INFORMATION

EVENT NAME: Extension Day

DATE:
April 18

TIME OF EVENT: 10-4

AREA: Bldg. B and lawn area

ADDITIONAL EVENT DETAILS:
We are hosting a communtly event where we can connect with the communtly and have booths where we can show them what Extension can do and help them with. We want to do this outreach so people know where they can find us and what we offer through educational classes and outreach. We will have hands on activities.

SPECIAL SET UP INSTRUCTIONS:
We may need extra tables and chairs to use. We are also requesting a fee waiver. Thank you!

NOTES/DRAWINGS:

Applicant will have access to the tables and chairs that are in B-Building
Setup will be done by Applicant
Applicant will clean up all areas that are used

EVENT CENTER, WELLNESS COMPLEX, RV PARK

FEE SCHEDULE

Area	Description	Cost		Unit	Quantity	Total
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RV	Partial Hookups (Water & Electricity)	$35	Per Day		
Labor	Additional Labor Per Person/Per Hour	$25	Per Hour		
EQUIP	Water Truck w/Operator	$100	Per Hour		
EQUIP	PA Systems	$10	Per Hour		
EQUIP	Operator w/Equipment (Tractor, Backhoe, Skid Steer)	$75	Per Hour		
EQUIP	Operator w/Motor Grader (Special Circumstances)	$100	Per Hour		
EQUIP	Tractor, No Operator	$50	Per Hour		
EQUIP	Hot Spot	$100	Per Day		
VENDOR	Vendor Admission Fee (Inspection, Permit, Admin)	$90	Per Month (starts on the 1st and ends on the last day of the month)		
AMP	Amphitheater 60x25x30 (9,000 capacity)				
ITEMS TO BE NEGOTIATED BY CONTACT ONLY					
BCEC	Upper Arena & Grandstands (Seats 3,500)				
BCEC	Race Track				
BCEC	Elk Stage & Grass Area				
BCEC	Upper Office Spaces (3 Available)				
BCEC	Livestock Holding Pens				

BANNOCK COUNTY COMMISSIONERS
624 E. Center, Pocatello, ID 83201
Phone: (208) 236-7210 • Fax: (208) 232-7363

ERNIE MOSER Commissioner 1st District
JEFF HOUGH Commissioner 2nd District
KEN BULLOCK Commissioner 3rd District

Business Meeting Agenda Request Form

*The Board of Bannock County Commissioners business meetings are generally held on **Tuesday at 9:15 a.m.** in the Commissioners' Chambers in the Bannock County Courthouse, Room 212; 624 E Center Pocatello, Idaho or as noticed **48 hours** prior to the meeting at https://bannockcounty.us/commissioners/. The Commissioners also hold meetings throughout the week as coordinated with the Commissioners' staff. Agenda times are subject to change within **15 minutes** of scheduled time. Any person(s) needing special accommodations to participate in public meetings should contact the Commissioners' Office at 208-236-7210, three to five working days before the meeting.*

Requestor Name:

Nikola Ennis

Department:

UI Bannock County Extension 4-H FCS and AG

Requestor Email:

ennis@uidaho.edu

Item(s) to be considered:

Updates of Extension Programming. We'd like to present what is coming up and what has been accomplished so far this year in Extension.

Date of meeting being requested: 02/19/2026

Time requested: 10 Minutes

Does the request involve a contract, agreement, external funding, or award acceptance?

No

Contract/Agreement Begin Date:

Contract/Agreement End Date:

List of additional attendees:

Jen Reader and Reed Findlay

BANNOCK COUNTY COMMISSIONERS
624 E. Center, Pocatello, ID 83201
Phone: (208) 236-7210 • Fax: (208) 232-7363

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Requestor Name:

Dillon Evans

Department:

Solid Waste

Requestor Email:

AubriL@bannockcounty.us , DillonE@bannockcounty.us

Item(s) to be considered:

Requesting signatures on page 46 of 381 agreement form, date page 51 of payment bond, and date page 55 of performance bond for scale house construction. The payment and performance bonds have two places to date (Effective Date of Contract and Date of Bond).

Date of meeting being requested: 02/19/2026

Time requested: 5 Minutes

Does the request involve a contract, agreement, external funding, or award acceptance?

Agreement

Contract/Agreement Begin Date:

Contract/Agreement End Date:

List of additional attendees:

Dillon Evans, Kyle Frost, Stephanie Wilke with Great West Engineering

Executed Contract Documents

Entrance Facility

- ☐ Bid Bond
- ☐ Bid Sheets and Signature Page
- ☐ Acknowledgement of Addenda

January 2026

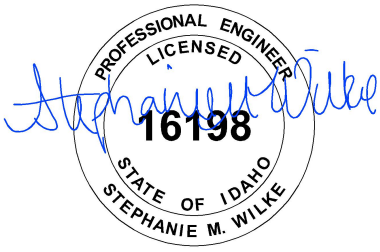
Prepared by:

GreatWest ENGINEERING

Set No.: _____

Project # 23205

ADDENDUM NO. 1



Date of Addendum:	**August 20, 2025**
Bid Due Date:	**September 3, 2025**
Bid Open Date:	September 4, 2025
Time Bid is Due:	**11:30 p.m. MST**
Time Bid is Open:	10:00 a.m. MST
Location of Bid Opening:	**Bannock County Commission Chambers** **Bannock County Courthouse** **Room 212** **624 E. Center, Pocatello, ID**
Owner:	**Bannock County**
Engineer:	Great West Engineering, Inc. 2501 Belt View Drive Helena, MT 59601 Phone: (406) 449-8627 Fax: (406) 449-8631

The following corrections, clarifications, and/or alterations to the plans and specifications for the project are as much part and parcel of the said plans and specifications as if included therein and supersede said plans and specifications.

Bidders are required to acknowledge receipt of all Addenda on the Bid Form and failure to do so may result in disqualification. This addendum consists of 9 pages.

GENERAL

The Pre-Bid Conference was held on August 12, 2025. Minutes and the Sign-In Sheet from the conference are attached and are considered part of this addendum. The minutes of the Pre-Bid Conference are incorporated into the contract documents via this addendum. The Bidder, through acknowledgement of this addendum, acknowledges that they have reviewed the Pre-Bid Meeting Minutes and have developed their bid with consideration of the information included in the minutes.

DRAWINGS

1. Sheet C14 – Detail 1 – Clarification of backfill requirements under slabs
2. Sheet C15 – Detail 1 – Clarification of asphalt road section
3. Sheet C17 – Detail 1 – Clarification of gravel surfacing

End of Addendum No. 1

BANNOCK COUNTY
LANDFILL ENTRANCE FACILITY
PRE-BID CONFERENCE MINUTES
August 12, 2025

---

1. **Introduction of all parties**
    a. Bannock County
        i. Dillon Evans, Landfill Manager
        ii. *Aubri Lewis, Management Assistant*
        iii. *Kyle Frost, Landfill Operations Manager*
        iv. *Shanda Crystal, Chief Procurement Officer*
    b. Great West Engineering
        i. Stephanie Wilke, Project Manager
    c. Others

2. **Project Discussion**
    a. The project consists of constructing a new entrance facility at the existing landfill and demolishing the existing scale house and scales. This project will require the construction of over 2,100 lineal feet of asphalt road, 53,000 cubic yards of embankment, 5,800 cubic yards of excavation, installation of three (3) 80-foot concrete deck weighing scales and scale foundations, construction of a new scale house, construction of a 4-bay concrete z-wall, fencing, site lighting, stormwater improvements, and gravel recycling/public tipping area. This project will also include furnishing and installing unmanned scale kiosks with appurtenances, signage, automatic sliding gates, automatic swinging gates, and guard rail.

3. **Award of Contract (00200)**
    a. Bid will be awarded to a single bidder based on the cost of the project.
    b. The Owner reserves the right to award the base bid to the successful low bidder based on available funding.

4. **Bid Date/Addendum (00100)**:
    a. Bids are due September 3, 2025, at 11:30 p.m. MST.
    b. Upload electronic bids and documents at https://bannockcounty.bonfirehub.com/portal/?tab=openOpportunities.
    a. No postmarks will be accepted.
    b. Bids will be opened on September 4, 2025, at 10:00 a.m. MST.
    a. All questions about the meaning or intent of the Contract Documents are to be submitted in writing to and must be received by August 18, 2025, at 5:00 p.m. MST. Questions or other correspondence must be submitted in writing electronically through the Opportunity Q&A on this solicitation.
    b. Addendum anticipated on August 22, 2025.

5. **Bonding Requirements (00200, Article 8)**
    a. A Bid must be accompanied by Bid security in an amount of 10% of Bidder's maximum Bid price.

6. **Bid Proposal**
    a. Those items identified in Article 2 of the Bid Form and https://bannockcounty.bonfirehub.com/portal/?tab=openOpportunities
    b. Bid Form sheets, including acknowledgment of Addendum(s) and signature pages
    c. Bid Security
    d. Bids will be opened at the County Commission Meeting on September 4, 2025, at 10:00 a.m. MST. The opening can be viewed virtually at https://www.bannockcounty.gov/meetings/.
    e. Remember to upload the following documents:
        i. I certify I am authorized to sign and submit this bid for the contractor

ii. I certify that neither myself nor this company have a conflict of interest in submitting this bid, either perceived or real.
iii. I certify that neither myself nor this company has participated in any bid rigging.
iv. I certify that neither myself nor this company is barred or suspended from doing business with the Federal Government as confirmed using the website SAM.gov.
v. I acknowledge I am responsible for reviewing and acknowledging any and all addendum(s) that have been issued for this solicitation.
vi. I confirm the company's ability to furnish a certificate of insurance prior to entering into contract with Bannock County, in accordance with the insurance requirements set forth in the Proposed Contract.
vii. I confirm the company's ability to furnish a performance and payment bond in accordance to this solicitation prior to signing a contract for services.
viii. Public Works License
ix. Bid Bond

f. Per Article 3 of Section 00200: Instructions to Bidders, Contractor to be prepared to provide additional information after the Bid opening and within 7 days. We will be requesting Subcontractor information from the apparent low general contractor and written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
g. *Per Article 11 of Section: Instructions to Bidders, Bidder must submit to Owner a list of Subcontractors or suppliers proposed for the following portions of the Work as part of the Bid:*
   i. ***Scales, Scale house, Fencing, Concrete, Signs, Asphalt, electrical, plumbing, HVAC, etc.***

7. Contract Time (00500, Article 4)

a. 160 calendar days to Substantial Completion (Section 00500, 4.02)
b. 30 calendar days after Substantial Completion to Final Completion

8. Warranty

a. There is a one-year project warranty requirement per Specification Section 00700
b. The scale manufacturer shall warrant the scale assembly including the deck and components below the deck for a period of ten years; peripheral devices shall be covered for a period of one year per Specification Section 10881 1.8. This requires a Warranty Bond.
a. Payment and Performance Bonds must extend one year after the substantial completion date

9. Federal Laws and Regulations

a. I certify that neither myself nor this company is barred or suspended from doing business with the Federal Government as confirmed using the website SAM.gov.

10. Payment Procedures (Agreement Section 00500 Article 6)

a. Payment will be processed one time monthly. The dates for submittal of pay applications will be specified at the pre-construction conference.
   i. Withhold 5% retainage on each pay application
b. Payment for materials in storage will be processed in accordance with the contract documents. Lien releases are required for all material payments with submittal of Pay Estimate #2.
c. Updated project schedule showing project finishing by Substantial Completion Date

11. Liquidated Damages (Agreement Section 00500):

a. Liquidated damages are $1,500 for each day that expires following the specified time to reach Substantial Completion.
b. Liquidated damages are $1,500 for each day that expires following the specified time to reach Final Completion.

12. Water for Construction (SP 07)

a. Contractor may obtain construction water from the hydrant located by the office at no charge.
b. The contractor will need to coordinate water needs with the County.

13. Conflicts with Utilities (SP 13)

a. Contractor responsible for coordination and work with utility companies or private entities that may be affected by the project.
b. For those utilities shown on the drawings, Contractor shall be responsible for charges related to utility conflicts.
c. The County is working with Idaho Power to determine if the OHP will be raised at no cost to the Contractor.
d. For underground utilities not shown on the drawings, Contractor shall follow procedures in Article 5.05 of the General Conditions.

14. Testing Responsibilities (SP-15)

a. Contractor
    i. Responsible for all testing requirements

15. Construction Staking (SP-16)

a. Staking will be provided one time at the beginning of the project.
b. Contractor will be responsible to protect staking.
c. Engineer shall provide the following staking consisting of stakes or hubs
    i. Vertical Control – Vertical control will be provided by benchmarks throughout the project site.
d. The Contractor is responsible for all other construction staking.

16. Working Hours (SP-20)

a. 8 hours/day or 40 hours/week
b. Between hours of 7:00 am to 5:00 pm

17. Progress Meetings (SP 25)

a. Engineer will schedule progress meetings at regular intervals throughout the construction schedule.
b. Conducted at project site, unless otherwise indicated.

18. Traffic Control (SP-30)

a. The Contractor shall allow two-lane traffic through the site Monday-Saturday 7 a.m. through 4 p.m.
b. The Contractor may limit traffic to one lane on hours outside of these confines. Work on weekends and overnight will be permitted with notice.

19. Demolition of Exisitng Scale House and Scales

a. Demolish existing scalehouse and scales after new scalehouse and scales are operational to the satisfaction of the Owner.
b. Coordinate demolition with Owner.
c. The Owner reserves the right to keep the existing scales once removed from the pits.
d. The scale house will be disposed of in the Class III landfill area at no additional charge to the Contractor.
e. The scale pits shall be filled with compacted soil or concrete.
f. The scale house foundation should be demolished below the ground surface. The entire disturbed area shall be reclaimed and repaved with asphalt.

20. Winter Shutdown (SP-17)

a. Shutdown will be allowed

21. Permits (SP-18)

a. Contractor responsible for:
   i. Building Permit
   ii. Electrical
   iii. Septic
   iv. Stormwater Discharge Permit

22. Unscheduled Employment of the Engineer (SP-21)

a. Examples of damages for unscheduled employment of the Engineer that will be assessed against the Contractor include, but are not limited to:
   i. The Contractor working beyond the specified contract time.
   ii. The Contractor working more than 8 hours per day, (or 40 hours per week if four ten hour shifts are run) or on Saturdays, Sundays, and Federal Holidays.
   iii. The Contractor utilizing material, supplies, or equipment that requires the redesign of the project.
   iv. The Contractor destroying or disturbing baselines benchmarks or reference stakes.
   v. Failure of the Contractor to maintain acceptable as-built records.
   vi. The review of a fourth or subsequent submittal of a Shop Drawing, sample, or other item requiring approval.
   vii. Additional services required due to the Contractor's failure to pay subcontractors and/or suppliers.
   viii. Retests required by the Engineer of tests that have failed.
   ix. Additional construction administration required by the Engineer as a result of unacceptable work.
   x. The Contractor requiring observation of product work outside of those trips identified in the contract between the Owner and engineer – 16 Trips.

23. Seeding (SP-23)

a. Seed disturbed areas with local seed mix per local conservation office. Drill seeding is preferred. Broadcast seeding will be allowed at two times the seed rate and track walked in with a dozer.

24. Gravel Borrow Area

a. The borrow area will be shared with the County's ongoing operations. The County needs access to the borrow area during landfill hours with their scrapers. Keep the top level open for the County's use.

25. Other/Questions/Clarifications

BANNOCK COUNTY
PROCUREMENT

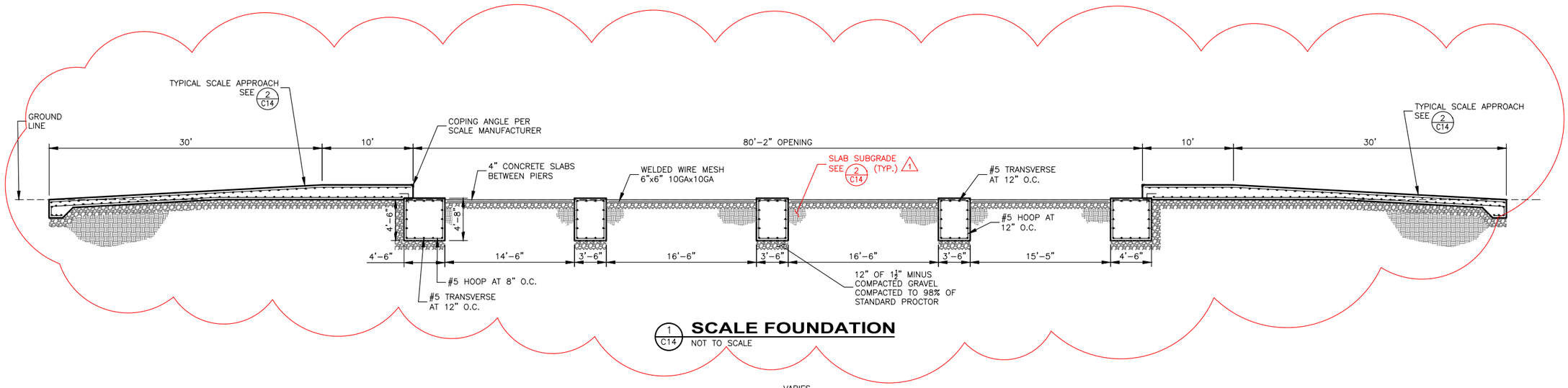
BANNOCK COUNTY

Pre-Bid Meeting

Landfill Entrance Construction

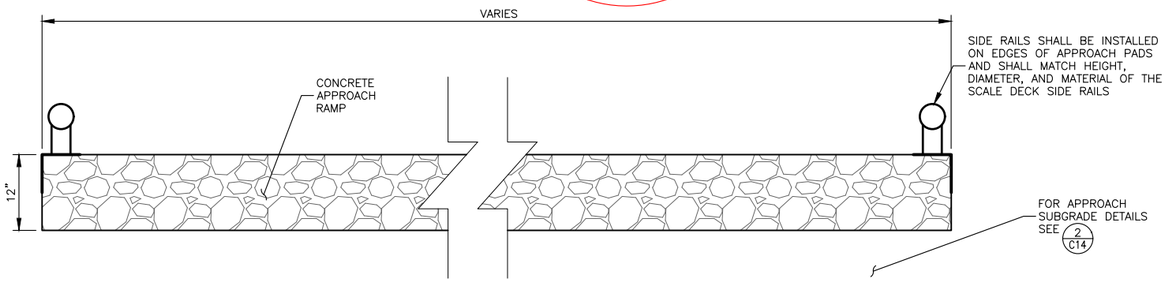
August 12, 2025

Representative's Name	Company	Telephone	Email
DENNIS ASHTON	WHITAKER CONST.	801-828-5606	dennis.ashton@whitcon.com
LENNIE PINCOCK	WestLine fence	208-680-1444	WestLinefnc@yahoo.com
CHRIS CURRY	IDAHO MATERIALS & CON	208-244-8478	CHRIS.CURRY@IDAHOMATERIALS.COM
NATE STINGER	IMC	208-251-0913	nate.stinger@idahomaterials.com
AARON REDD	GALE LIM CONSTRUCTION	208-716-7050	credd.glc@gmail.com
Mike Hoge	gale lim construction	208-681-7450	mhoge455@gmail.com
Rich Jessop	RS Jobber	208 705 1220	rich@rsjobber.com

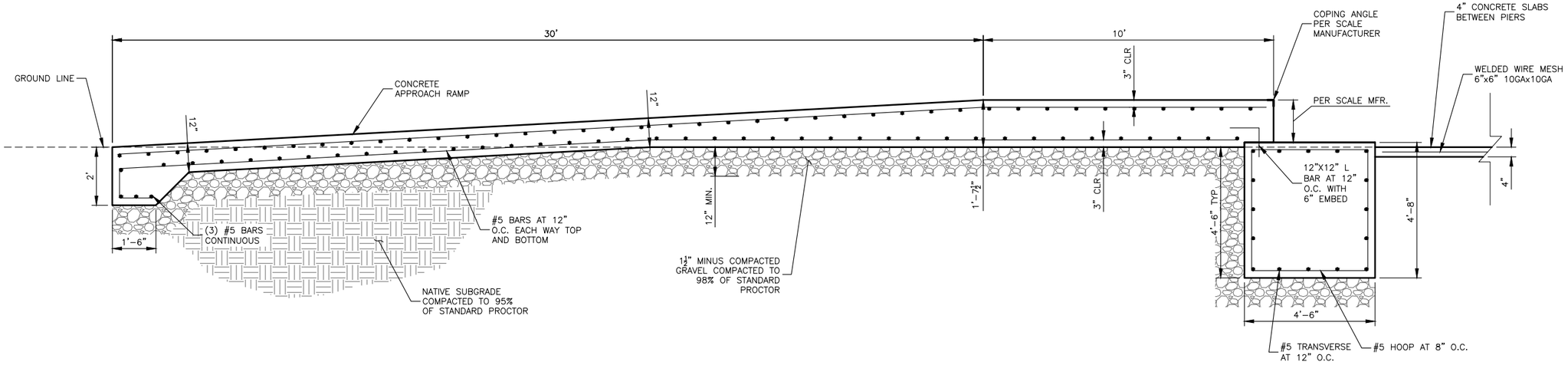


1 C14 SCALE FOUNDATION
NOT TO SCALE

NOTES:
1. DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS FROM SCALE MANUFACTURER TO ENGINEER FOR REVIEW BEFORE BUILDING SCALE FOUNDATION.
2. LOAD CELLS AND GROUND RODS SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS.
3. SCALE FOUNDATION SHOWN IS FOR AN 80'x11' CONCRETE DECK CARDINAL SCALE MODEL #1010329. IF CONTRACTOR SUBMITS ON AN APPROVED EQUIVALENT THE CONTRACTOR SHALL ALSO SUBMIT A NEW FOUNDATION DESIGN.
4. 3" TYPICAL CLEAR SPACE FOR ALL REBAR REINFORCEMENT.
5. CONCRETE APPROACH RAMPS SHALL BE 4,000 PSI CONCRETE CONSTRUCTED PER ISPWC.
6. PROVIDE CONTROL JOINTS AT 15' O.C. SPACING MAX AND SHALL BE 2" DEPTH. CONTROL JOINTS SHALL BE CUT AS SOON AS CONCRETE SURFACE IS FIRM ENOUGH SO CONCRETE WILL NOT BE DAMAGED, BUT NO LATER THAN 12 HOURS AFTER CONCRETE HAS BEEN PLACED.



SECTION OF SCALE APPROACH



2 C14 TYPICAL SCALE APPROACH
NOT TO SCALE

NO.	REVISION DESCRIPTION	BY	DATE
1	Slab Subgrade	TLC	8/20/25

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: AUGUST 20, 2025

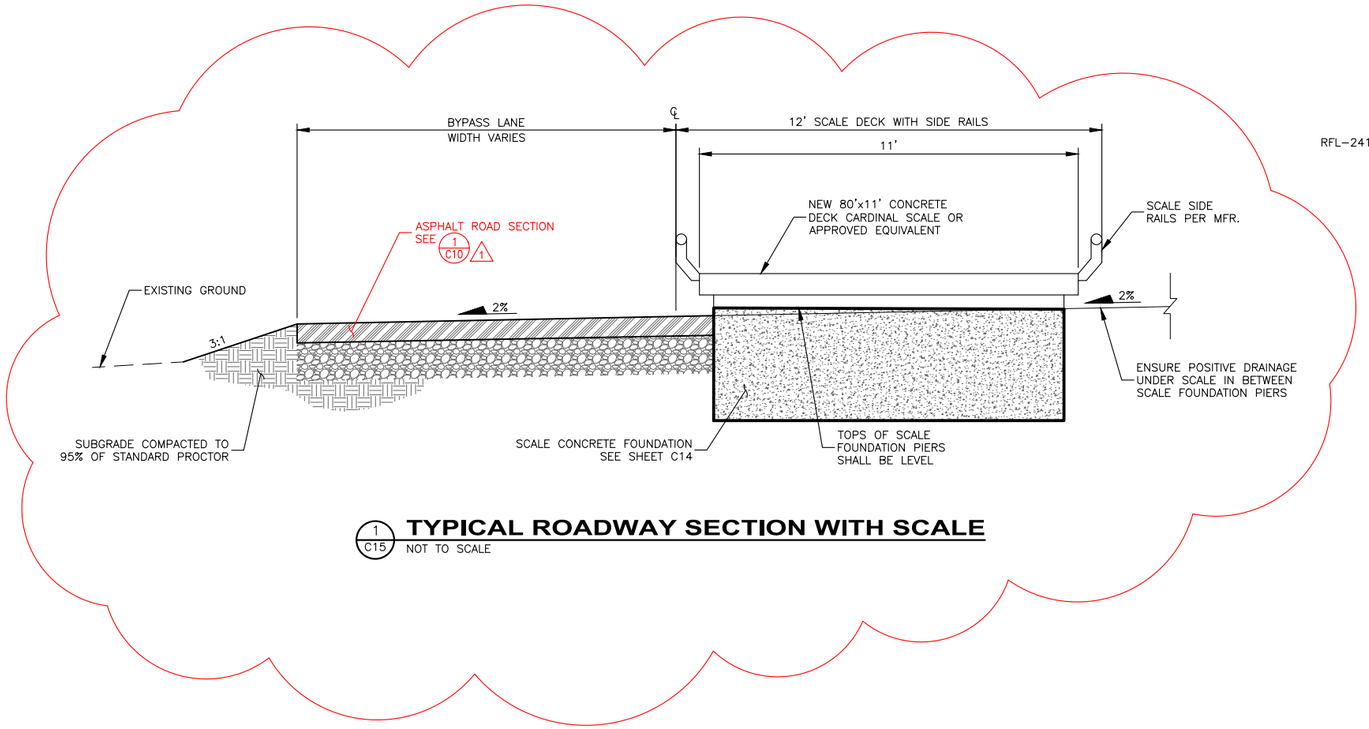
PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 1-21-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

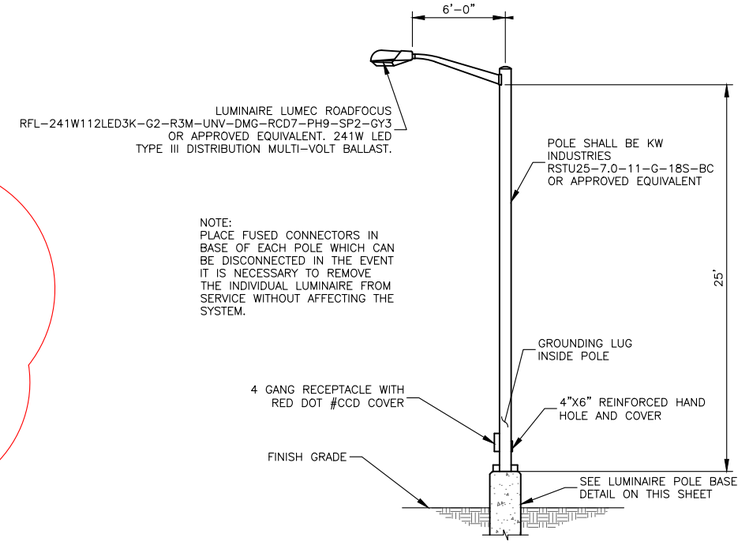
BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
SCALE DETAILS

SHEET NO.
C14

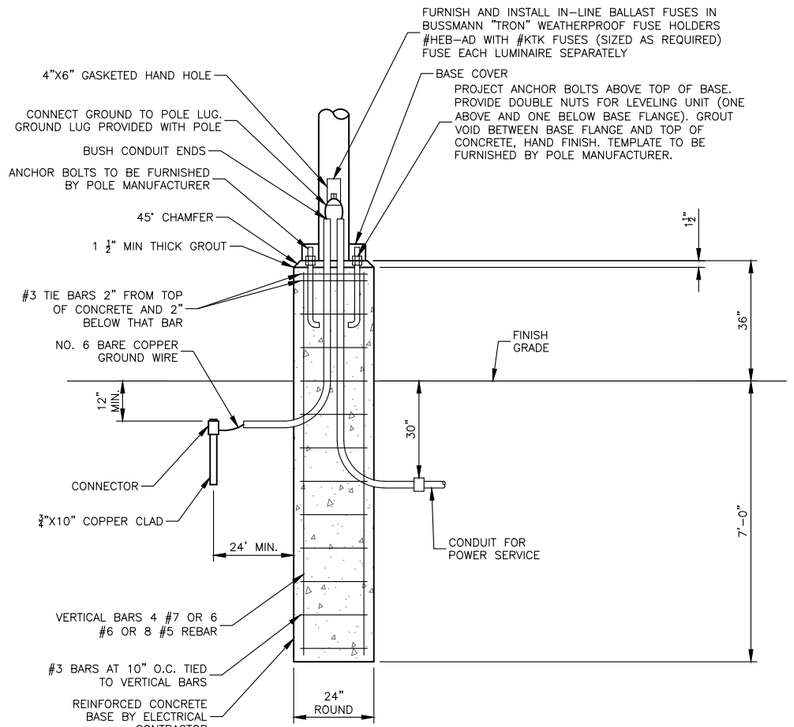
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1/C15 **TYPICAL ROADWAY SECTION WITH SCALE**
NOT TO SCALE



2/C15 **LUMINAIRE DETAIL**
NOT TO SCALE



3/C15 **LUMINAIRE POLE BASE DETAIL**
NOT TO SCALE

NO.	REVISION DESCRIPTION	BY	DATE
1	Asphalt Road Section	TLC	8/20/25

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: AUGUST 20, 2025

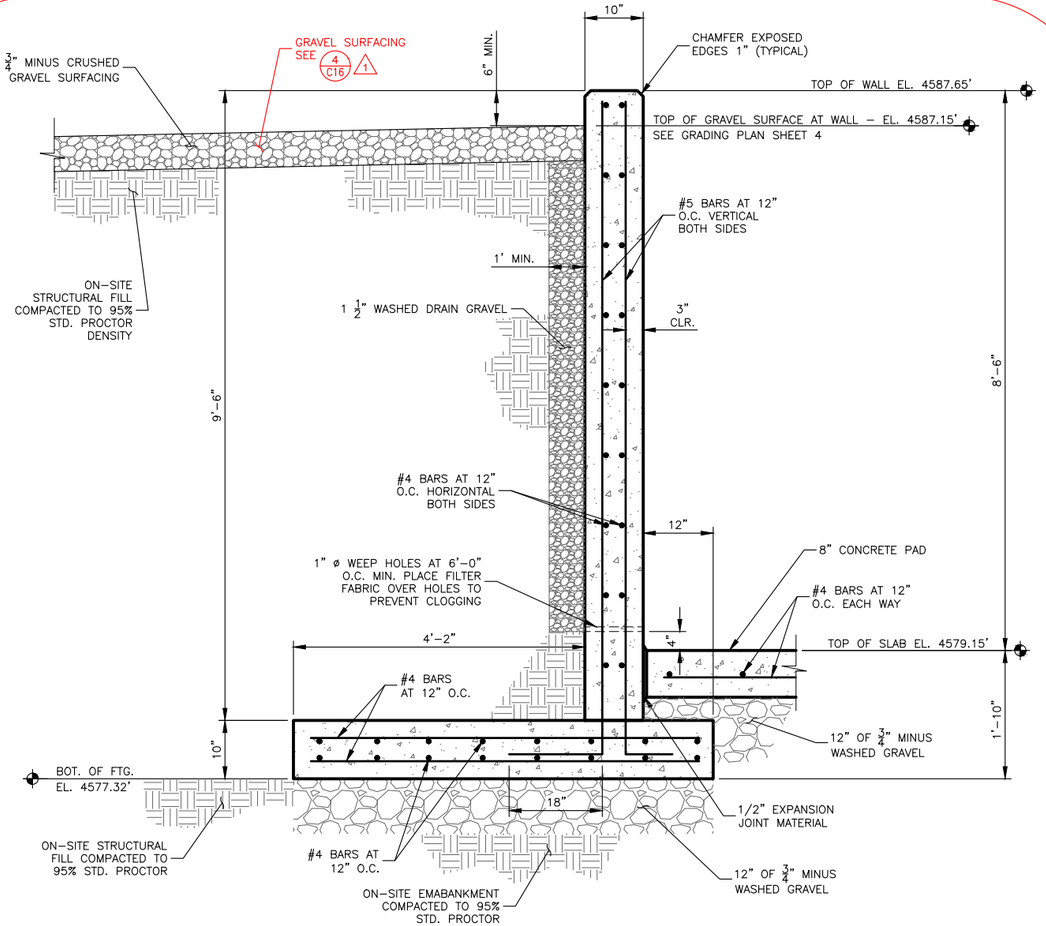
PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 1-21-2026

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406)449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
DETAILS

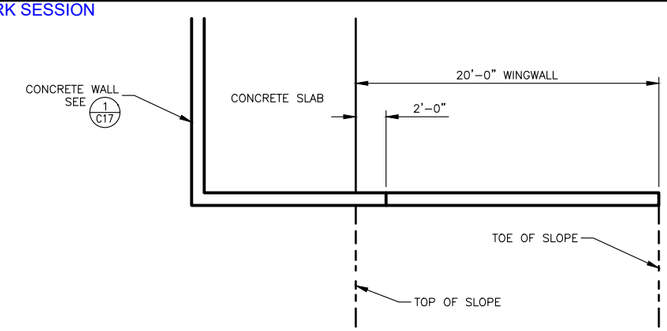
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C15

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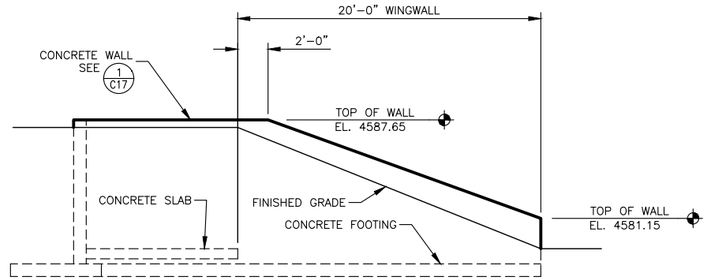


NOTE:
1. USE SAME REBAR VERT. AND HORIZ. SPACING PATTERN FOR WINGWALLS.
2. CONCRETE WALL & FOOTING CONCRETE SHALL HAVE A MINIMUM 28–DAY STRENGTH OF 4,000 PSI PER ISPWC.
3. CONTAINER PAD CONCRETE PAD SHALL HAVE A MINIMUM 28–DAY STRENGTH OF 3,000 PSI PER ISPWC.
4. ALL EXPOSED CONCRETE (WALLS AND SLABS) SHALL BE TREATED WITH SIKAGARD 740W SILANE SEALER OR APPROVED EQUIVALENT PER SPECIAL PROVISION SP–25.

1/C17 CONCRETE WALL SECTION
NOT TO SCALE

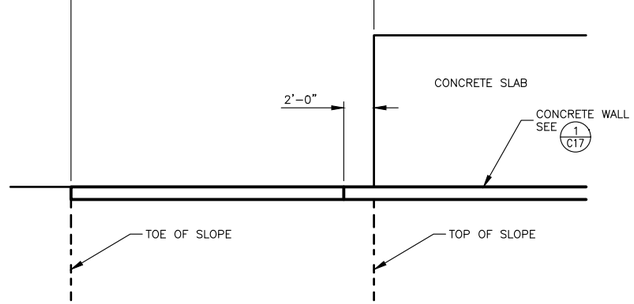


PLAN

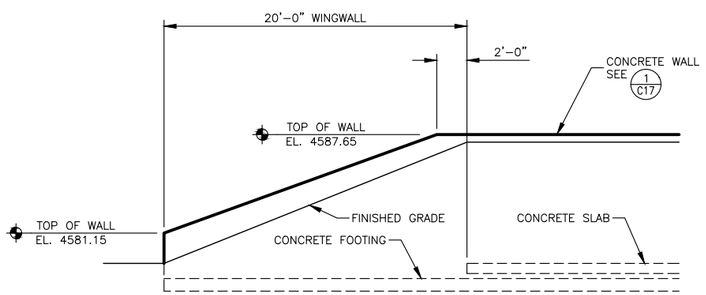


PROFILE

2/C17 EAST CONCRETE WINGWALL
NOT TO SCALE



PLAN



PROFILE

3/C17 WEST CONCRETE WINGWALL
NOT TO SCALE

NO.	REVISION DESCRIPTION	BY	DATE
1	Gravel Surfacing Section	TLC	8/20/25

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: AUGUST 20, 2025

PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 1-21-2026

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406)449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
Z-WALL DETAILS

SHEET NO.
C17

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EXECUTED CONTRACT DOCUMENTS

Entrance Facility

BANNOCK COUNTY IDAHO

January 2026

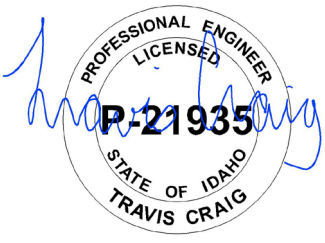
Prepared by:

Stetson Ratzlaff, EI

QAQC by:

Stephanie Wilke, PE
Travis Craig, PE





GreatWest ENGINEERING

TABLE OF CONTENTS

IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION

The Idaho Standard for Public Works Construction, 2020 Edition is incorporated herein by reference and shall be subject to the modifications and additions provided in the following Specifications.

DIVISION 0 – BIDDING AND CONTRACTING REQUIREMENTS

Section	Title
	WHITE SECTION
~~00100~~	~~Invitation to Bid~~
00200	Instructions to Bidders
	YELLOW SECTION
00400	Bid Form
C-430	Bid Bond Form (EJCDC No. C-430 (Penal Sum Form))
	WHITE SECTION
00500	Agreement Form
C-510	Notice of Award
C-550	Notice to Proceed
C-610	Performance Bond
C-612	Warranty Bond (if used)
C-615	Payment Bond
C-620	Application for Payment
C-625	Substantial Completion
C-626	Notice of Acceptability of Work
C-940	Work Change Directive
C-941	Change Order
C-942	Field Order
	Request for Information (RFI)
	BLUE SECTION
00700	Standard General Conditions (ISPWC Division 100 (2020))
00800	Supplementary Conditions of the Construction Contract (2018 EJCDC)
	GOLD SECTION
00910	Special Provisions

DIVISION 1 – GENERAL REQUIREMENTS

Division	Title
01010	Summary of Work
01050	Field Engineering
	GREEN SECTION
01275	Measurement and Payment
	WHITE SECTION
01300	Submittals
01320	Construction Progress Documentation
01340	Requests for Information (RFI)
01400	Quality Control and Quality Assurance
01600	Product Requirements
01700	Contract Closeout
01730	Execution Requirements

DIVISION 2 – SITE CONSTRUCTION

Section	Title
02232	Site Clearing
02300	Earthwork
02821	Chain-Link Fence and Gate

DIVISION 10 – SPECIALTIES

Section	Title
10881	Vehicle Scale

APPENDIX A – GEOTECHNICAL ENGINEERING EVALUATION BANNOCK COUNTY LANDFILL SCALE IMPROVEMENTS

INSTRUCTIONS TO BIDDERS

SECTION 00200

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.

~~**ARTICLE 2—BIDDING DOCUMENTS**~~

~~2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.~~

~~2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.~~

~~2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner recommends that Bidder register as a plan holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.~~

~~2.04 Bidder may register as a plan holder and obtain complete sets of Bidding Documents, in the number and format stated in the Advertisement or invitation to bid, from the Issuing Office. Bidders may rely that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.~~

~~2.05 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents, or make them available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are encouraged to register as plan holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.~~

~~2.06 *Electronic Documents*~~

~~A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.~~

1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.

B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within **seven (7)** days of Owner's request, Bidder must submit the following information:

A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.

B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.

C. Bidder's state or other contractor license number, if applicable

D. Subcontractor and Supplier qualification information.

3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 4 – PRE-BID CONFERENCE

4.01 A non-mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference; however, attendance at this conference is not required to submit a Bid.

4.02 Information presented at the pre-Bid conference does not alter the Contract Documents. Owner will issue Addenda to make any changes to the Contract Documents that result from

~~discussions at the pre-Bid conference. Information presented, and statements made at the pre-bid conference will not be binding or legally effective unless incorporated in an Addendum.~~

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions and/or Special Provisions identify the following regarding existing conditions at or adjacent to the Site:

a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.

b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.

c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.

d. Technical Data contained in such reports and drawings.

2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions and/or Special Provisions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions and/or Special Provisions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

4. *Geotechnical Baseline Report/Geotechnical Data Report:* The Bidding Documents contain a Geotechnical Baseline Report (GBR) and Geotechnical Data Report (GDR). *Bannock County Landfill Scale Improvements Geotechnical Engineering Evaluation – GPI – July 2025 (Appendix A)*

a. As set forth in the Supplementary Conditions, the GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during

construction in specified locations ("Baseline Conditions"). The GBR is a Contract Document.

b. The Baseline Conditions in the GBR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.

c. Nothing in the GBR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.

d. As set forth in the Supplementary Conditions, the GDR is a Contract Document containing data prepared by or for the Owner in support of the GBR.

B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Other Site-related Documents*

A. In addition to the documents regarding existing Site conditions referred to in Paragraph 5.02.A, the following other documents relating to conditions at or adjacent to the Site are known to Owner and made available to Bidders for reference:

N/A

B. No other Site-related documents are available.

5.04 ~~*Site Visit and Testing by Bidders*~~

~~A. Bidder is required~~ encouraged ~~to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.~~

~~B. A Site visit is scheduled following the pre-bid conference.~~

~~C. Bidders visiting the Site are required to arrange their own transportation to the Site.~~

~~D. All access to the Site other than during a regularly scheduled Site visit must be coordinated through the following Owner or Engineer contact for visiting the Site: Dillon Evans, **208-530-4904.** Bidder must conduct the required Site visit during normal working hours.~~

~~E. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.~~

~~F. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such~~

~~access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.~~

G. ~~Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.~~

~~H.~~ ~~Bidder must fill~~ and compact ~~all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.~~

5.05 *Owner's Safety Program*

A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

5.06 *Other Work at the Site*

A. Reference is made to Article 8 of the Supplementary Conditions and the Special Provisions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.

B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

6.02 Responsibilities of each Bidder Before Submitting a Bid:

A. Examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;

B. Visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work including but not limited to those general and local conditions affecting transportation, disposal, handling and storage facilities, availability of labor, utilities, roads, climatic conditions and seasons, physical conditions at the Site and project area a whole, Site topography and ground conditions, equipment and facilities needed prior to and during execution of the Work;

C. Become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;

D. Carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions and/or Special Provisions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions and/or Special Provisions, especially with respect to Technical Data in such reports and drawings;

E. Consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;

F. Agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;

G. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;

I. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and

J. Agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.

7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:

A. All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing and must be received by no later than 5:00 p.m. local time on August 11,

2025. Written comments may be submitted electronically through Bonfire Opportunity Q&A on this Solicitation. Owner will not accept any bidder's communications by any other means, except as specified here.

7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.

7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of ten (10%) percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety authorized to do business in Idaho meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents. **Bid security must be at least 10% of the Bidder's maximum Bid price.**

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.

9.02 ~~Bidder must set forth in the Bid the time by which Bidder must achieve Substantial Completion, subject to the restrictions established in Paragraph 13.07 of these Instructions. The Owner will take Bidder's time commitment regarding Substantial Completion into consideration during the evaluation of Bids, and it will be necessary for the apparent Successful Bidder to satisfy Owner that it will be able to achieve Substantial Completion within the time such Bidder has designated~~

~~in the Bid.~~ **~~[If applicable include the following: Bidder must also set forth in the Bid its commitments regarding the achievement of Milestones and readiness for final payment.]~~** ~~The Successful Bidder's time commitments will be entered into the Agreement or incorporated in the Agreement by reference to the specific terms of the Bid.~~

9.03 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS

10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or-equal" items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.

10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.

11.02 Bidders must submit to the Owner a list of the Subcontractors or Suppliers proposed for the following portions of the Work as part of the Bid:

A. **Scales, Scale house, Fencing, Concrete, Signs, Asphalt, electrical, plumbing, HVAC, etc.**

11.03 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

11.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

ARTICLE 12 – PREPARATION OF BID

12.01 The Bid Form is available electronically at *through Bannock County's e-Procurement Portal. Upload electronic bids and documents at* *https://bannockcounty.bonfirehub.com/portal/?tab=openOpportunities*

Should there be any doubt as to any meaning or intent of any ITB statement or provision, the Supplier should submit their inquiries in writing as prescribed. No changes may be made in the phraseology of the forms, nor may the Supplier add any phraseology conditioning the acceptance of the award.

Browser cookies must be enabled. Respondents should contact Bonfire at Support@GoBonfire.com for technical questions related to submissions or visit Bonfire's help forum at https://bonfirehub.zendesk.com/hc

A. File Format – Submission materials should be prepared in the file format listed under Requested Information for this opportunity in the Bonfire Portal; the maximum upload file size is 1000 MB. Documents should not be embedded within uploaded files, as the embedded files will not be accessible or evaluated.

B. Submission Modification – Suppliers will have the ability to modify their submissions up to the Submission Deadline listed for this Solicitation directly through the e-Procurement Portal. Any bid may be withdrawn prior to the scheduled date and time set for the bid opening by clicking un-submit within the e-Procurement Portal by the bidder or their authorized agent. No bid may be withdrawn after the date and time set for the bid opening.

If your bid contains trade secret information which you have identified, you must also submit a redacted copy of the bid (in electronic format, with the word "redacted" in the file name) with all trade secret information removed or blacked out; as well as a separate document containing a complete list of all trade secret information which was removed or blacked out in the redacted copy

C. Timely Submission – Bidders are solely responsible to ensure timely submission of their bids to the County via the eProcurement Portal as given in this solicitation. Bids must be uploaded, submitted, and finalized prior to the Closing Date and time listed in the ITB Administrative Information. It is **strongly** recommended that suppliers give themselves sufficient time and at least ONE (1) day before the Closing Date to begin the uploading process and to finalize their submissions.

The County's e-Procurement Portal clock is the official clock for the determination of all deadline dates and times. Without exception, bids will not be accepted after the submission deadline regardless of any technical difficulties such as poor internet connections.

Bannock County assumes no responsibility for failure of any computer or other equipment to deliver all or a portion of the bid at the time and in the manner required by the solicitation. Neither Bonfire nor the County warrant that access to and use of the Bonfire website will be free from interruptions or free from errors, nor shall Bonfire or the County be responsible for any inadvertent disclosure of bid repository information or any unauthorized access to bid repository information by third persons.

~~In the case of disruption of electronic communications or loss of services by Bonfire within two (2) hours prior to the deadline for submission of bids, the County will delay the deadline for bid submissions to ensure the ability of potential bidders to submit bids. If this occurs, instructions will be communicated to known Plan Holders.~~

~~D. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder will not enter any prices into that schedule.~~

12.02 ~~*Bidder must download, complete, and submit the required forms for bid submission.*~~

~~12.03 Download of the addendum is the Bidder's acknowledgement of receipt of each addendum.~~

~~12.04 Bidder will receive a BID SUBMITTED message if the bid is successful. If the Bidder is missing required information , Bidder will not be allowed to submit a bid.~~

~~12.05 Changes to bids can be made until the bids are due. Bidder must re-submit for changes to be updated.~~

~~12.06 If a Bidder un-submits the bid, it will remove the bid in its entirety. A bid may be re-submitted before bid closing. If Bidder fails to re-submit, the bid will not be received.~~

~~12.07 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.~~

~~12.08 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.~~

~~12.09 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.~~

~~12.10 A Bid by an individual must show the Bidder's name and official address.~~

~~12.11 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.~~

~~12.12 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.~~

~~12.13 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such~~

~~certification to the Bid. Bidder's state contractor license number~~ current Idaho Contractor's ~~registration number, if any, must also be shown on the Bid Form.~~

ARTICLE 13—BASIS OF BID

13.01 *Lump Sum – Deleted*

13.02 *Base Bid with Alternates – Deleted*

13.03 *Sectional Bids - Deleted*

13.04 *Cost-Plus-Fee Bids – Deleted*

13.05 *Unit Price*

A. Bidders must submit a Bid on a unit price basis for each item of Work listed in ~~the unit price section of~~ bid schedule included in the Bid Form.

B. The Bid will not be considered unless the Bid Form is complete, containing all unit prices for each Bid item included in the Bid Form, and Bids and totals are shown legibly in their proper locations. The total amount of the Bid shall be legibly written and numerically presented in the proper place, and the Bid Form shall be manually signed.

C. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

D. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in the favor of words.

E. The Bid will not be considered unless the Bid Form is complete, containing all unit prices for each Bid item included in the Bid Form, and Bids and totals are shown legibly in their proper locations. The total amount of the Bid shall be legibly written and numerically presented in the proper place, and the Bid Form shall be manually signed.

13.06 *Allowances – Deleted*

13.07 *Price-Plus-Time Bids – Deleted*

~~ARTICLE 14—SUBMITTAL OF BID~~

~~14.01 The Bidding Documents are available and may be submitted electronically at *https://bannockcounty.bonfirehub.com/portal/?tab=openOpportunities*~~

~~14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid. No hard copy bids will be accepted.~~

~~14.03 Bids received after the date and time prescribed for the bid due date, will not be accepted.~~

~~ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID~~

~~15.01 Any bid may be withdrawn prior to the scheduled date and time set for the bid opening by clicking un-submit within the e-Procurement Portal by Bidder or their authorized agent. No bid may be withdrawn after the date and time set for the bid opening.~~

~~15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.~~

~~15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.~~

~~ARTICLE 16—OPENING OF BIDS~~

~~16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.~~

~~ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE~~

~~17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.~~

~~ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT~~

~~18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.~~

~~18.02 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes~~

~~of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.~~

~~18.03 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.~~

~~18.04 *Evaluation of Bids*~~

~~A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.~~

~~B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner will announce to all bidders a "Base Bid plus alternates" budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.~~

~~C. For determination of the apparent low Bidder(s) when sectional bids are submitted, Bids will be compared on the basis of the aggregate of the Bids for separate sections and the Bids for combined sections that result in the lowest total amount for all of the Work.~~

~~D. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.~~

~~18.05 In evaluating whether a Bidder is qualified, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.~~

~~18.06 Owner may conduct such investigations as Owner deems necessary to establish the qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.~~

~~18.07 The project has a finite budget and has therefore been separated into a Base Bid and Additive Alternates based upon priority. The Bid will be awarded based upon one of two scenarios, either Base Bid only or any combination of Base Bid and Additive Alternatives nos. 1 and 2 combined. The award will be based upon the combined bid for the Base Bid and all Alternatives awarded within the available funding. In any of the possible scenarios, all awarded portions of the project will be awarded to a single Bidder.~~

ARTICLE 19—BONDS AND INSURANCE

19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if

any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—STATE LAWS AND REGULATIONS

21.01 All applicable laws, ordinances and the rules and regulations of authorities having jurisdiction over construction of the project shall apply to the Contract throughout. State laws and ordinances which the Contractor must comply with, include but are not limited to, those involving workmen's compensation insurance, Contractor registration, and gross receipts tax.

BID FORM

SECTION 00400

BID FORM

Article 1— Owner and Bidder 2
Article 2— Attachments to this Bid 2
Article 3— Basis of Bid—Unit Prices 3
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Article 5— Price-Plus-Time Bid – Deleted 4
Article 6— Time of Completion 4
Article 7— Bidder's Acknowledgements: Acceptance Period, Instructions, and Receipt of Addenda 4
Article 8— Bidder's Representations and Certifications 4

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ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

Bannock County Commission

624 E Center St Rm 101

Pocatello, ID 83201

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. List of Proposed Subcontractors;

C. List of Proposed Suppliers;

~~D. List of Project References~~

E. Evidence of authority to do business in the state of the Project; ~~or a written covenant to obtain such authority within the time for acceptance of Bids~~;

F. Contractor's license number No.: 11916 ~~as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids~~;

~~G. Required Bidder Qualification Statement with supporting data; and~~

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ARTICLE 3—BASIS OF BID—UNIT PRICES

3.01 *Lump Sum Bids – Deleted*

3.02 *Unit Price Bids*

A. Bidder will perform the following Work at the indicated unit prices:

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1	Mobilization	LS	1	$ 31,825.00	$ 31,825.00
2	80-Foot Concrete Deck Scale	EA	3	$102,220.00	$306,660.00
3	Scale Foundations	EA	3	$ 51,125.00	$153,375.00
4	Scale Concrete Approaches	LS	1	$153,375.00	$153,375.00
5	Excavation & Embankment	LS	1	$901,895.00	$901,895.00
6	Scale House	LS	1	$445,625.00	$445,625.00
7	Access Road	SY	12,556	$ 17.50	$219,730.00
8	Gates and Fencing	LS	1	$156,235.00	$156,235.00
9	Barrier Rails	LF	2,716	$ 48.00	$130,368.00
10	Site Electrical and Lighting	LS	1	$155,655.00	$155,655.00
11	Drainage Improvements	LS	1	$ 38,785.00	$ 38,785.00
12	Site Signage	LS	1	$ 25,005.00	$ 25,005.00
13	Water Service Connection	EA	2	$ 5,245.00	$ 10,490.00
14	Polyethylene (PE) Water Service Line	EA	2	$ 9,945.00	$ 19,890.00
15	Septic System	LS	1	$ 66,645.00	$ 66,645.00
16	Traffic Control	LS	1	$ 3,850.00	$ 3,850.00
17	12 Inch Gravel Surfacing	LS	1	$ 180,025.00	$ 180,025.00
Total of All Unit Price Bid Items (Base Bid)					$2,999,433.00

Additive Alternate No. 1 – Z-Wall

	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
101	Structural Concrete	LS	1	$ 84,675.00	$ 84,675.00
102	Concrete Slabs	LS	1	36,265.00	36,265.00
103	Barrier Gates/Fencing/Signage	LS	1	22,405.00	22,405.00
Total of All Unit Price Bid Items (Additive Alternate #1)					$143,345.00

Additive Alternate No. 2 – Asphaltic Pavement

	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
201	Asphaltic Road Surfacing	SY	12,556	$ 25.00	$313,900.00
Total of All Unit Price Bid Items (Additive Alternate #2)					$313,900.00

TOTAL OF BASE BID AND ADDITIVE ALTERNATES

Description	Bid Amount
Total of All Unit Price Bid Items (Base Bid)	$ 2,999,433.00
Total of All Unit Price Bid Items (Additive Alternate #1)	$ 143,345.00
Total of All Unit Price Bid Items (Additive Alternate #2)	$ 313,900.00
Total of All Bid Items	$ 3,456,678.00

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B. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and

2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 4—BASIS OF BID—COST-PLUS FEE – DELETED

ARTICLE 5—PRICE-PLUS-TIME BID – DELETED

ARTICLE 6—TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages and payments to Owner for Unscheduled Employment of the Engineer.

ARTICLE 7—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

7.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

7.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date
1	8/20/2025

ARTICLE 8—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

8.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda and any data and reference items identified in the Bidding Documents.

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2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the ~~Supplementary Conditions~~ Special Provisions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the ~~Supplementary Conditions~~ Special Provisions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

8.02 *Bidder's Certifications*

A. The Bidder certifies the following:

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1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
    a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
    b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
    c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
    d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

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BIDDER hereby submits this Bid as set forth above:

Bidder:

IDAHO MATERIALS AND CONSTRUCTION
(typed or printed name of organization)

By: NATHAN STINGER
(individual's signature)

Name: NATHAN STINGER
(typed or printed)

Title: CHIEF ESTIMATOR
(typed or printed)

Date: 10/15/2025
(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: Nikki Baca
(individual's signature)

Name: Nikki Baca
(typed or printed)

Title: Office Manager
(typed or printed)

Date: 10-15-2025
(typed or printed)

Address for giving notices:

10200 N. BANSTE ROAD
POCATELLO, ID 83202

Bidder's Contact:

Name: NATE STINGER
(typed or printed)

Title: CHIEF ESTIMATOR
(typed or printed)

Phone: (208) 232-5796

Email: nate.stinger@idahomaterials.com

Address:

10200 N. BANSTE ROAD
POCATELLO, ID 83202

Bidder's Contractor License No.: (if applicable) 39639

END OF SECTION

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AGREEMENT FORM

SECTION 00500

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT

This Agreement is by and between Bannock County ("Owner") and Idaho Materials and Construction ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: The project consists of constructing a new entrance facility at the existing landfill and demolishing the existing scale house and scales. This project will require the construction of over 2,100 lineal feet of asphalt road, 53,000 cubic yards of embankment, 5,800 cubic yards of excavation, installation of three (3) 80-foot concrete deck weighing scales and scale foundations, construction of a new scale house, construction of a 4-bay concrete z-wall, fencing, site lighting, stormwater improvements, and gravel recycling/public tipping area. This project will also include furnishing and installing unmanned scale kiosks with appurtenances, signage, automatic sliding gates, automatic swinging gates, and guard rail.

ARTICLE 2 – THE PROJECT

2.01 **The Project, of which the Work under the Contract Documents is a part, is generally described as follows:** Bannock County Landfill Entrance Facility.

ARTICLE 3 – ENGINEER

3.01 The Owner has retained Great West Engineering, Inc. ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by Engineer.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Days*

A. The Work will be substantially complete within **160 Calendar** days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the

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General Conditions within **190 Calendar** days after the date when the Contract Times commence to run.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. 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 completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner $**1,500** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $**1,500** for each day that expires after such time until the Work is completed and ready for final payment, but only to the extent such delays are caused by Contractor.

3. *Milestones:* Contractor shall pay Owner $**1,500** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved, or until the time specified for Substantial Completion is reached, at which time the rate indicated in Paragraph 4.05.A.1 will apply, rather than the Milestone rate, but only to the extent such delays are caused by Contractor.

4. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.

4.04 Special Damages

A. Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.

1. Damages for (2) in the above paragraph will be incurred based on the following hourly rates:

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Straight Time	
Project Manager	$217.00/Hour
Project Engineer	$180.00/Hour
Resident Project Representative (RPR)	$173.00/Hour
RPR Overtime Rate	$259.50/Hour
Project Administrator	$152.00/Hour
Clerical	$115.00/Hour
Mileage	$ 0.85/Mile
Survey Crew	$350.00/Hour
GPS Rental	$400.00/Day
Nuclear Densometer	$30.00/Day

B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

C. The special damages imposed in this paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.

ARTICLE 5 – CONTRACT PRICE

5.01 *Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, an amount equal to the sum of the established unit prices for each Bid item from the Bid Form multiplied by the actual quantity of the respective Bid item constructed and accepted.*

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the ~~General Conditions.~~ Contract Documents.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on the basis of Contractor's Applications for Payment ~~on or about the _____ day of~~ once each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

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1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

   a. Ninety five-percent (95%) of the value of the Work completed (with the balance being retainage).

   b. Ninety five-percent (95%) of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion of the entire construction to be provided under the construction Contract Documents, Owner shall pay an amount sufficient to increase total payments to Contractor to one hundred percent (100%) of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less two hundred percent (200%) of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

A. All amounts not paid when due will bear interest at the ~~rate of percent~~ maximum rate per ~~annum~~ MCA 28-2-2103 and MCA 28-2-2104.

ARTICLE 7 – CONTRACTOR'S DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 10, inclusive).
2. Invitation to Bid (pages 1 to 2, inclusive).
3. Instructions to Bidders (pages 1 to 14, inclusive).
4. Bid Form (pages 1 to 7, inclusive).
5. Bonds: Bid Bond
   a. Performance bond (together with power of attorney) (pages 1 to 4, inclusive).
   b. Payment bond (together with power of attorney) (pages 1 to 4, inclusive).
6. General Conditions (pages 1 to 70, inclusive).

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7. Supplementary Conditions (pages 1 to 24, inclusive).
8. Special Provisions (pages 1 to 11, inclusive).
9. Specifications as listed in the table of contents of the project manual (copy of list attached).
10. Drawings (not attached but incorporated by reference) consisting of 59 sheets with each sheet bearing the following general title: Bannock County Landfill Entrance Facility.
11. Addenda (numbers 1 to 1 inclusive).
12. Exhibits to this Agreement (enumerated as follows):;
    a. Notice of Award (pages 1 to 1, inclusive).
13. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Notice to Proceed.
    b. Work Change Directives.
    c. Change Orders.
    d. Field Orders.
    e. Warranty Bond, if any.
14. Permits, Approved and Pending.
15. The Idaho Standards For Public Works Construction, 2020 Edition, collectively referred to as ISPWC, as may be modified by above Contract Documents. (The ISPWC is not attached to the Agreement).

B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the ~~Contract~~ General Conditions.

ARTICLE 8 – REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

Contractor has examined and carefully studied the Contract Documents, including Addenda.

2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

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4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the ~~Supplementary Conditions~~ Special Provisions, with respect to the Technical Data in such reports and drawings.

5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the ~~Supplementary Conditions~~ Special Provisions, with respect to Technical Data in such reports and drawings.

6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all reasonably ascertainable and patent conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of

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Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

ARTICLE 9 – MISCELLANEOUS

9.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

9.02 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and 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 the Contract Documents.

9.03 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

9.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

Owner:

_____
(typed or printed name of organization)

By: _____
(individual's signature)

Date: _____
(date signed)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Attest: _____
(individual's signature)

Title: _____
(typed or printed)

Address for giving notices:

_____

_____

_____

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address:

_____

_____

_____

Phone: _____

Email: _____

*(If **[Type of Entity]** is a corporation, attach evidence of authority to sign. If **[Type of Entity]** is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*

Contractor:

IDAHO MATERIALS AND CONSTRUCTION
(typed or printed name of organization)

By: NATHAN STINGER
(individual's signature)

Date: 1/5/2026
(date signed)

Name: NATHAN STINGER
(typed or printed)

Title: CHIEF ESTIMATOR
(typed or printed)

*(If **[Type of Entity]** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest: Nikki Bass
(individual's signature)

Title: Office Manager/Contract Admin
(typed or printed)

Address for giving notices:

10200 N BATISTE ROAD

POCATELLO, ID. 83202

Designated Representative:

Name: NATHAN STINGER
(typed or printed)

Title: CHIEF ESTIMATOR
(typed or printed)

Address:

10200 N BATISTE ROAD

POCATELLO, ID. 83202

Phone: (208) 232-5796

Email: nate.stinger@idahomaterials.com

License No.: 39639
(where applicable)

State: IDAHO

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STANDARD FORMS

NOTICE OF AWARD

Date of Issuance:			
Owner:	Bannock County	Owner's Project No.:	
Engineer:	Great West Engineering	Engineer's Project No.:	1-23205
Project:	Bannock County Landfill Entrance Facility		
Contract Name:	Bannock County Landfill Entrance Facility		
Bidder:	Idaho Materials and Construction		
Bidder's Address:	10200 N. Batiste Rd. Pocatello, ID 83202		

You are notified that Owner has accepted your Bid dated 10/15/2025 for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

Base Bid and Additive Alternate No. 2 – Asphaltic Pavement without chip sealing (with a deduction of $25,000)

The Contract Price of the awarded Contract is $ 3,288,333 . Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

[1] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☐ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner [1] counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner:

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Copy: Engineer

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NOTICE TO PROCEED

Owner: _____ Owner's Project No.: _____

Engineer: _____ Engineer's Project No.: _____

Contractor: _____ Contractor's Project No.: _____

Project: _____

Contract Name: _____

Effective Date of Contract: _____

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on _____ pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion must be achieved is _____, and the date by which readiness for final payment must be achieved is _____.

[or]

The number of days to achieve Substantial Completion is ___ from the date stated above for the commencement of the Contract Times, resulting in a date for Substantial Completion of _____ _____; and the number of days to achieve readiness for final payment is ___ from the commencement date of the Contract Times, resulting in a date for readiness for final payment of ___ _____.

Before starting any Work at the Site, Contractor must comply with the following:

Owner: _____

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Date Issued: _____

Copy: Engineer

Olga Iglesias
Senior Fulfillment Specialist, Vice President - Surety

Marsh USA LLC
830 Brickell Plaza, #3300
Miami, FL 33131

+1 305-482-9075
Olga.Iglesias@marsh.com
www.marsh.com

January 14, 2026

Bannock County Commission
624 E. Center Street, Room 101
Pocatello, ID 83201

Subject: Authority to Insert Contract Date to Bond(s) and Power(s) of Attorney

Principal: Staker & Parson Companies dba Idaho Materials & Construction
Bond Number: 9495111
Name of Project: Bannock County Landfill Entrance Facility

To Whom it May Concern:

We hereby give our authorization to date the above referenced Performance and/or Payment Bonds and Power(s) of Attorney for the referenced project to correspond with the date of the agreement.

If you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

Olga Iglesias
Attorney-In-Fact of
Fidelity and Deposit Company of Maryland

Fidelity and Deposit Company of Maryland CORPORATE SEAL 1890

Bond No. 9495111

PAYMENT BOND

Contractor Name: Staker & Parson Co. DBA Idaho Materials and Construction Address *(principal place of business)*: 10200 N. Batiste Road Pocatello, Idaho 83202	**Surety** Name: Fidelity & Deposit Company of Maryland Address *(principal place of business)*: 1299 Zurich Way Schaumburg, IL 60196-1056
Owner Name: Bannock County Commission Mailing address *(principal place of business)*: 624 E. Center Street, Room 101 Pocatello, IL 83201	**Contract** Description *(name and location)*: Bannock County Landfill Entrance Facility Contract Price: $3,288,333.00 Effective Date of Contract: 2-19-2026

Bond

Bond Amount: $3,288,333.00

Date of Bond: 2-19-2026

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☒ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
Staker & Parson Co. DBA Idaho Materials and Construction *(Full formal name of Contractor)*	Fidelity & Deposit Company of Maryland *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: NATHAN STINGER *(Printed or typed)*	Name: Olga Iglesias *(Printed or typed)*
Title: CHIEF ESTIMATOR	Title: Attorney-In-Fact
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: Nikki Bacca *(Printed or typed)*	Name: Gicelle Pajon *(Printed or typed)*
Title: Office Manager / Contract Admin	Title: Surety Witness

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
   5.1. Claimants who do not have a direct contract with the Contractor
      5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
      5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
   5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
   7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
   7.2. Pay or arrange for payment of any undisputed amounts.
   7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

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8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

    16.1. *Claim*—A written statement by the Claimant including at a minimum:

        16.1.1. The name of the Claimant;

        16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

        16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

        16.1.4. A brief description of the labor, materials, or equipment furnished;

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16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows:

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Bond No. 9495111

PERFORMANCE BOND

Contractor Name: Staker & Parson Co. DBA Idaho Materials and Construction Address *(principal place of business)*: 10200 N. Batiste Road Pocatello, Idaho 83202	**Surety** Name: Fidelity & Deposit Company of Maryland Address *(principal place of business)*: 1299 Zurich Way Schaumburg, IL 60196-1056
Owner Name: Bannock County Commission Mailing address *(principal place of business)*: 624 E. Center Street, Room 101 Pocatello, IL 83201	**Contract** Description *(name and location)*: Bannock County Landfill Entrance Facility Contract Price: $3,288,333.00 Effective Date of Contract:

Bond

Bond Amount: $3,288,333.00

Date of Bond:

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☒ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
Staker & Parson Co. DBA Idaho Materials and Construction	Fidelity & Deposit Company of Maryland
(Full formal name of Contractor)	*(Full formal name of Surety) (corporate seal)*
By: NATHAN STINGER *(Signature)*	By: *(Signature)(Attach Power of Attorney)*
Name: NATHAN STINGER *(Printed or typed)*	Name: Olga Iglesias *(Printed or typed)*
Title: CHIEF ESTIMATOR	Title: Attorney-In-Fact
Attest: Nikki Bace *(Signature)*	Attest: *(Signature)*
Name: Nikki Bace *(Printed or typed)*	Name: Gicelle Pajon *(Printed or typed)*
Title: Office Manager / Contract Admin	Title: Surety Witness

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

EJCDC® C-610, Performance Bond.
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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
   3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
   3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
   3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
   5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
   5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
   5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
   5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

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5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

   7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

   7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

   7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

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statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

    14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

    14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows:

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ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by **Christopher Nolan,** in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint Olga Iglesias, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings,** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND,** this 31st day of March, A.D. 2025.

ATTEST:
ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: Christopher Nolan
Vice President

By: Dawn E. Brown
Secretary

State of Maryland
County of Baltimore

On this 31st day of March, A.D. 2025, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Christopher Nolan, Vice President and Dawn E. Brown, Secretary** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Genevieve M. Maison
Notary Public
My Commission Expire January 27, 2029

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify of revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this _____ day of _____, _____.

Thomas O. McClellan
Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:

Zurich Surety Claims
1299 Zurich Way
Schaumburg, IL 60196-1056
www.reportsfclaims@zurichna.com
800-626-4577

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 1/23/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Liberty Mutual Insurance Co. National Insurance East
500 N 3rd St, Suite 300
Wausau, WI 54403

www.LibertyMutual.com

CONTACT NAME: Named Insured / CRH Operating Company
PHONE (A/C, No, Ext): **FAX (A/C, No):**
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Liberty Mutual Fire Insurance Company	23035
INSURER B : Liberty Insurance Corporation	42404
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Staker Parson Companies (100-POC)
Idaho Materials & Construction-Pocatello
10200 North Batiste Road
Pocatello ID 83202

COVERAGES **CERTIFICATE NUMBER:** 89001149 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	✓ **COMMERCIAL GENERAL LIABILITY** ☐ ☐ CLAIMS-MADE ✓ OCCUR ✓ Primary/Non-Contributory ✓ Separation of Insured GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ✓ PRO-JECT ☐ LOC ☐ OTHER:	✓		TB2-C81-004095-115 XCU Coverage Included	9/1/2025	9/1/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 2,000,000 $ 300,000 $ 50,000 $ 2,000,000 $ 10,000,000 $ 10,000,000 $
A A	**AUTOMOBILE LIABILITY** ✓ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY ☐ ☐	✓		AS2-C81-004095-125 AS2-C81-054502-525 Physical Damage only: Comprehensive Ded $10,000 Collision Ded $10,000	9/1/2025 9/1/2025	9/1/2026 9/1/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 2,000,000 $ $ $ $
A	☐ **UMBRELLA LIAB** ✓ OCCUR ✓ **EXCESS LIAB** ☐ CLAIMS-MADE ☐ DED ☐ RETENTION $	✓		TL2-681-054523-925 (General Liability) Various – See Attached	9/1/2025	9/1/2026	EACH OCCURRENCE AGGREGATE Products/Completed Ops	$ 1,000,000 $ 1,000,000 $ 1,000,000
B B	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WA7-C8D-004095-025 All except OH, ND, WA, WY WC7-C81-004095-015 WI, MN	9/1/2025 9/1/2025	9/1/2026 9/1/2026	✓ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Landfill Entrance Facility Bannock County Landfill, Idaho.
Bannock County Commission and Great West Engineering 250 Helen P Clarke St Helena, MT 59601 are listed as additional insured with regards to the general liability, automobile liability, and excess liability policies, where required by written contract. 30-day Notice of Cancellation.

CERTIFICATE HOLDER

Bannock County Commission
624 E Center Street Rm 101
Pocatello ID 83201

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Valerie P. Reece
Valerie Reece

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ACORD 25 (2016/03) **The ACORD name and logo are registered marks of ACORD**

Policy Number: AS2-C81-004095-125, AS2-C81-054502-525
Issued by: Liberty Mutual Fire Insurance Co.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED - NONCONTRIBUTING

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
GARAGE COVERAGE FORM
MOTOR CARRIERS COVERAGE FORM
TRUCKERS COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" under the Who Is An Insured Provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage form.

Schedule

Name of Person(s) or Organizations(s):
Any person or organization where the Named Insured has agreed by written contract to include such person or organization

Regarding Designated Contract or Project:
Any

Each person or organization shown in the Schedule of this endorsement is an "insured" for Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured Provision contained in Section II of the Coverage Form.

The following is added to the **Other Insurance Condition:**

If you have agreed in a written agreement that this policy will be primary and without right of contribution from any insurance in force for an Additional Insured for liability arising out of your operations, and the agreement was executed prior to the "bodily injury" or "property damage", then this insurance will be primary and we will not seek contribution from such insurance.

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POLICY NUMBER: AS2-C81-004095-125, AS2-C81-054502-525

COMMERCIAL AUTO
CA 04 44 10 13

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US (WAIVER OF SUBROGATION)

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

SCHEDULE

Name(s) Of Person(s) Or Organization(s):
Any person or organization for whom you perform work under a written contract if the contract requires you to obtain this agreement from us, but only if the contract is executed prior to the injury or damage occurring.
Premium: $ INCL
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.

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POLICY NUMBER AS2-C81-004095-125

COMMERCIAL AUTO
CA 99 48 10 13

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

POLLUTION LIABILITY – BROADENED COVERAGE FOR COVERED AUTOS – BUSINESS AUTO AND MOTOR CARRIER COVERAGE FORMS

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

A. Covered Autos Liability Coverage is changed as follows:

1. Paragraph **a.** of the **Pollution** Exclusion applies only to liability assumed under a contract or agreement.

2. With respect to the coverage afforded by Paragraph **A.1.** above, Exclusion **B.6. Care, Custody Or Control** does not apply.

B. Changes In Definitions

For the purposes of this endorsement, Paragraph **D.** of the **Definitions** Section is replaced by the following:

D. "Covered pollution cost or expense" means any cost or expense arising out of:

1. Any request, demand, order or statutory or regulatory requirement that any "insured" or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of "pollutants"; or

2. Any claim or "suit" by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to or assessing the effects of "pollutants".

"Covered pollution cost or expense" does not include any cost or expense arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of "pollutants":

a. Before the "pollutants" or any property in which the "pollutants" are contained are moved from the place where they are accepted by the "insured" for movement into or onto the covered "auto"; or

b. After the "pollutants" or any property in which the "pollutants" are contained are moved from the covered "auto" to the place where they are finally delivered, disposed of or abandoned by the "insured".

Paragraphs **a.** and **b.** above do not apply to "accidents" that occur away from premises owned by or rented to an "insured" with respect to "pollutants" not in or upon a covered "auto" if:

(1) The "pollutants" or any property in which the "pollutants" are contained are upset, overturned or damaged as a result of the maintenance or use of a covered "auto"; and

(2) The discharge, dispersal, seepage, migration, release or escape of the "pollutants" is caused directly by such upset, overturn or damage.

Premium: INCL

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Policy Number: AS2-C81-004095-125, AS2-C81-054502-525, TB2-C81-004095-115
Issued By: Liberty Mutual Fire Insurance Co.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

NOTICE OF CANCELLATION TO THIRD PARTIES

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE PART
MOTOR CARRIER COVERAGE PART
GARAGE COVERAGE PART
TRUCKERS COVERAGE PART
EXCESS AUTOMOBILE LIABILITY INDEMNITY COVERAGE PART
SELF-INSURED TRUCKER EXCESS LIABILITY COVERAGE PART
COMMERCIAL GENERAL LIABILITY COVERAGE PART
EXCESS COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART
LIQUOR LIABILITY COVERAGE PART

Schedule

Name of Other Person(s)/ Organization(s):	Email Address or mailing address:	Number Days Notice:
Where required by written contract	Where required by written contract	90

A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule above. We will send notice to the email or mailing address listed above at least 10 days, or the number of days listed above, if any, before the cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.

B. This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

All other terms and conditions of this policy remain unchanged.

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POLICY NUMBER: TB2-C81-004095-115

COMMERCIAL GENERAL LIABILITY
CG 25 03 05 09

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED CONSTRUCTION PROJECT(S) GENERAL AGGREGATE LIMIT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section **I** – Coverage **A**, and for all medical expenses caused by accidents under Section **I** – Coverage **C**, which can be attributed only to ongoing operations at a single designated construction project shown in the Schedule below:

1. A separate Designated Construction Project General Aggregate Limit applies to each designated construction project, and that limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
2. The Designated Construction Project General Aggregate Limit is the most we will pay for the sum of all damages under Coverage **A**, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage **C** regardless of the number of:
   a. Insureds;
   b. Claims made or "suits" brought; or
   c. Persons or organizations making claims or bringing "suits".
3. Any payments made under Coverage **A** for damages or under Coverage **C** for medical expenses shall reduce the Designated Construction Project General Aggregate Limit for that designated construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations nor shall they reduce any other Designated Construction Project General Aggregate Limit for any other designated construction project shown in the Schedule below.
4. The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Designated Construction Project General Aggregate Limit.

B. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section **I** – Coverage **A,** and for all medical expenses caused by accidents under Section **I** – Coverage **C,** which cannot be attributed only to ongoing operations at a single designated construction project shown in the Schedule below:

1. Any payments made under Coverage **A** for damages or under Coverage **C** for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-completed Operations Aggregate Limit, whichever is applicable; and
2. Such payments shall not reduce any Designated Construction Project General Aggregate Limit.

C. When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-completed Operations Aggregate Limit, and not reduce the General Aggregate Limit nor the Designated Construction Project General Aggregate Limit.

D. If the applicable designated construction project has been abandoned, delayed, or abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the project will still be deemed to be the same construction project.

E. The provisions of Section **III** – Limits Of Insurance not otherwise modified by this endorsement shall continue to apply as stipulated.

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89001149 | 8-004095 | Interest No. 21222372 | 09.25-09.26 Standard 10-2 Excess AUTO | Excl:OT4 | Erin Celing | 1/23/2026 1:05:34 PM (CST) | Page 6 of 22

SCHEDULE

Designated Construction Project(s):

All Projects.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

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POLICY NUMBER: TB2-C81-004095-115

COMMERCIAL GENERAL LIABILITY
CG 20 10 04 13

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

A. **Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	**Location(s) Of Covered Operations**
Any owner, lessee, or contractor for whom you have agreed in writing prior to a loss to provide liability insurance	Any location listed in such agreement

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

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POLICY NUMBER: TB2-C81-004095-115

COMMERCIAL GENERAL LIABILITY
CG 20 37 04 13

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations
Any owner, lessee, or contractor for whom you have agreed in writing prior to a loss to provided liability insurance	Any location listed in such agreement
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. **Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

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Policy Number TB2-C81-004095-115
Issued by: Liberty Mutual Fire Insurance Company

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

OTHER INSURANCE AMENDMENT – SCHEDULED ADDITIONAL INSURED

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART
LIQUOR LIABILITY COVERAGE PART

Schedule

Name of Person(s) or Organization(s): Any person or organization for which such coverage is required by written contract prior to a loss

If you are obligated under a written agreement to provide liability insurance on a primary, excess, contingent, or any other basis for any person(s) or organization(s) shown in the Schedule of this endorsement that qualifies as an additional insured on this Policy, this Policy will apply solely on the basis required by such written agreement and Paragraph **4. Other Insurance** of **Section IV – Conditions** will not apply. Where the applicable written agreement does not specify on what basis the liability insurance will apply, the provisions of Paragraph **4. Other Insurance** of **Section IV – Conditions** will apply. However, this insurance is excess over any other insurance available to the additional insured for which it is also covered as an additional insured for the same "occurrence", claim or "suit".

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POLICY NUMBER: TB2-C81-004095-115

COMMERCIAL GENERAL LIABILITY
CG 24 04 05 09

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

The following is added to Paragraph **8. Transfer Of Rights Of Recovery Against Others To Us of Section IV – Conditions:**

We waive any right of recovery we may have against the person or organization shown in the Schedule below because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule below.

SCHEDULE

Name Of Person Or Organization:

As required by written contract or agreement entered into prior to loss.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

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NOTICE OF CANCELLATION TO THIRD PARTIES

A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule below. We will send notice to the email or mailing address listed below at least 10 days, or the number of days listed below, if any, before cancellation becomes effective. In no event does the notice to the third party exceed the notice to the first named insured.

B. This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

Schedule

Name of Other Person(s) / Organization(s):	Email Address or mailing address:	Number Days Notice:
Schedule on file with the Company	Schedule on file with the Company	90

All other terms and conditions of this policy remain unchanged.

Issued by Liberty Insurance Corporation 21814

For attachment to Policy No. WA7-C8D-004095-025 Effective Date Premium $

Issued to CRH Americas, Inc.

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WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Not applicable in Alaska, Kentucky, New Hampshire, New Jersey

Schedule

Any person or organization for which the employer has agreed by written contract, executed prior to loss, may execute a waiver of subrogation. However, for purposes of work performed by the employer in Missouri, this waiver of subrogation does not apply to any construction group of classifications as designated by the waiver of right to recover from others (subrogation) rule in our manual.

Where required by contract or written agreement prior to loss and allowed by law.

In the states of Connecticut, Florida, Iowa, Maryland, Nebraska and Oregon, the premium charge is 1% of the total manual premium, subject to a minimum premium of $250 per policy.

In the states of Alabama, Arizona, Arkansas, Colorado, Delaware, District of Columbia, Georgia, Idaho, Illinois, Indiana, Kansas, Maine, Michigan, Mississippi, Missouri, Montana, Nevada, New Mexico, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Vermont and West Virginia, the premium charge is 2% of the total manual premium, subject to a minimum premium of $100 per policy.

In the states of New York and Tennessee, the premium charge is 2% of the total manual premium, subject to a minimum premium of $250 per policy.

In the state of Virginia, the premium charge is 5% of the total manual premium, subject to a minimum premium of $250 per policy.

In the state of Hawaii, the premium charge is $250 and determined as follows: The premium charge for this endorsement is 1% of the total manual premium, subject to a minimum premium of $250 per policy.

In the state of Louisiana, the premium charge is 2% of the total standard premium, subject to a minimum premium of $250 per policy.

In the state of Massachusetts, the premium charge is 1% of the total

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manual premium.

Issued by Liberty Insurance Corporation 21814

For attachment to Policy No. WA7-C8D-004095-025 Effective Date Premium $

Issued to CRH Americas, Inc. Endorsement No.

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POLICY NUMBER: TL2-681-054653-445

EXCESS LIABILITY

CE 89 51 05 20

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

AMENDMENT OF CANCELLATION PROVISIONS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

EXCESS LIABILITY COVERAGE PART

Any term or provision of the Cancellation Conditions of the policy or any endorsement amending or replacing such Conditions is amended by the following:

A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule of this endorsement. We will send notice to the email or mailing address listed below at least 10 days, or the number of days listed below, if any, before the cancellation becomes effective. In no event will the notice period to the persons or organizations scheduled below exceed the notice to the first Named Insured.

B. This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

SCHEDULE

Name of Person(s) or Organization(s):	Email Address or Mailing Address:	Number of Days Advance Notice:
Per Schedule on file with company	Per Schedule on file with company	30

This endorsement does not change any other provision of the policy.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

GEORGIA CHANGES - CANCELLATION AND NONRENEWAL

This endorsement modifies insurance provided under the following:

COMMERCIAL UMBRELLA COVERAGE PART
EXCESS LIABILITY COVERAGE PART

A. Section **VI - CONDITION D. Cancellation** Paragraph **1.** is deleted and replaced by the following:

1. The first Named Insured shown in the Declarations may cancel this policy by mailing or delivering to us advance written notice of cancellation, subject to the following:

a. If only the interest of the first Named Insured is affected, the effective date of cancellation will be either the date we receive notice from the first Named Insured or the date specified in the notice, whichever is later. However, upon receiving a written notice of cancellation from the first Named Insured, we may waive the requirement that the notice state the future date of cancellation by confirming the date and time of cancellation in writing to the first Named Insured.

b. If by statute, regulation or contract this policy may not be cancelled unless notice is given to a governmental agency, mortgagee or other third party, we will mail or deliver at least 10 days notice to the first Named Insured and the third party as soon as practicable after receiving the first Named Insured's request for cancellation.

Our notice will state the effective date of cancellation, which will be the later of the following:

(1) 10 days from the date of mailing or delivering our notice, or

(2) the effective date of cancellation stated in the first Named Insured's notice to us.

B. Section **VI – CONDITION D. Cancellation** paragraph **5.** is deleted and replaced by the following:

5. Premium Refund

a. If this policy is cancelled, we will send the first Named Insured any premium refund due.

b. If we cancel, the refund will be pro rata, except as provided in c. below.

c. If the cancellation results from a failure of the first Named Insured to pay, when due, any premium to us or any amount, when due, under a premium finance agreement, then the refund may be less than pro rata. Calculation of the return premium at less than pro rata represents a penalty charged on unearned premium.

d. If the first Named Insured cancels, the refund may be less than pro rata.

e. The cancellation will be effective even if we have not made or offered a refund.

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C. The following is added to Section **VI. - CONDITION D. Cancellation** and supersedes any provision to the contrary:

If we decide to:

1. cancel or nonrenew this policy; or

2. increase current policy premium by more than 15% (other than any increase due to change in risk, exposure or experience modification or resulting from an audit of auditable coverages); or

3. change any policy provision which would limit or restrict coverage;

Then:

We will mail or deliver notice of our action (including the dollar amount of any increase in renewal premium of more than 15%) to the first Named Insured and lienholder, if any, at the last mailing address known to us. We will mail or deliver notice at least:

1. 10 days before the effective date of cancellation if this policy has been in effect less than 60 days or if we cancel for nonpayment of premium; or

2. 45 days before the effective date of cancellation if this policy has been in effect 60 or more days and we cancel for a reason other than nonpayment of premium; or

3. 45 days before the expiration date of this policy if we decide to renew, increase the premium or limit or restrict coverage.

D. The following is added to Section **VI. - CONDITION D. Cancellation.**

If notice is mailed, proof of mailing will be sufficient proof of notice.

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POLICY NUMBER: TL2-681-054653-445

EXCESS LIABILITY
CE 88 29 12 21

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

AMENDMENT OF OTHER INSURANCE PRIMARY AND NONCONTRIBUTORY – DESIGNATED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

EXCESS LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization: Any person or organization that qualifies as an additional Insured under this policy.

Condition **I. Other Insurance** under Section **VI. Conditions** is deleted and replaced by the following:

Other Insurance

If other insurance applies to a "loss" that is also covered by this policy, this policy will apply excess of the other insurance, unless the other insurance is specifically written to be excess of this policy. Nothing herein will be construed to make this policy subject to the terms, conditions and limitations of such other insurance.

Other insurance includes any type of self-insurance or other mechanism by which an Insured arranges for funding of legal liabilities.

However, this insurance will not seek contribution from any other insurance available to an additional insured shown in the Schedule of this endorsement, provided that:

1. The additional insured is a Named Insured on such other insurance;

2. You have agreed in a written contract or agreement with the designated additional insured to provide insurance for that person or organization on a primary or a primary and noncontributory basis and such agreement was made prior to a “loss” covered by this insurance;

3. "Underlying insurance" includes the person or organization as an additional insured; and

4. "Underlying insurance" provides coverage to the person or organization on a primary and noncontributory basis.

This endorsement does not change any other provision of the policy.

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POLICY NUMBER: TL2-681-054523-925

EXCESS LIABILITY

CE 89 51 05 20

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

AMENDMENT OF CANCELLATION PROVISIONS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

EXCESS LIABILITY COVERAGE PART

Any term or provision of the Cancellation Conditions of the policy or any endorsement amending or replacing such Conditions is amended by the following:

A. If we cancel this policy for any reason other than nonpayment of premium, we will notify the persons or organizations shown in the Schedule of this endorsement. We will send notice to the email or mailing address listed below at least 10 days, or the number of days listed below, if any, before the cancellation becomes effective. In no event will the notice period to the persons or organizations scheduled below exceed the notice to the first Named Insured.

B. This advance notification of a pending cancellation of coverage is intended as a courtesy only. Our failure to provide such advance notification will not extend the policy cancellation date nor negate cancellation of the policy.

SCHEDULE

Name of Person(s) or Organization(s):	Email Address or Mailing Address:	Number of Days Advance Notice:
Per Schedule on file with company	Per Schedule on file with company	30

This endorsement does not change any other provision of the policy.

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POLICY NUMBER: TL2-681-054523-925

EXCESS LIABILITY
CE 88 29 12 21

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

AMENDMENT OF OTHER INSURANCE PRIMARY AND NONCONTRIBUTORY – DESIGNATED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

EXCESS LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization: Any person or organization that qualifies as an additional Insured under this policy.

Condition **I. Other Insurance** under Section **VI. Conditions** is deleted and replaced by the following:

Other Insurance

If other insurance applies to a "loss" that is also covered by this policy, this policy will apply excess of the other insurance, unless the other insurance is specifically written to be excess of this policy. Nothing herein will be construed to make this policy subject to the terms, conditions and limitations of such other insurance.

Other insurance includes any type of self-insurance or other mechanism by which an Insured arranges for funding of legal liabilities.

However, this insurance will not seek contribution from any other insurance available to an additional insured shown in the Schedule of this endorsement, provided that:

1. The additional insured is a Named Insured on such other insurance;

2. You have agreed in a written contract or agreement with the designated additional insured to provide insurance for that person or organization on a primary or a primary and noncontributory basis and such agreement was made prior to a “loss” covered by this insurance;

3. "Underlying insurance" includes the person or organization as an additional insured; and

4. "Underlying insurance" provides coverage to the person or organization on a primary and noncontributory basis.

This endorsement does not change any other provision of the policy.

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COMMERCIAL UMBRELLA
CU 60 32 09 07

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

GEORGIA CHANGES - CANCELLATION AND NONRENEWAL

This endorsement modifies insurance provided under the following:

COMMERCIAL UMBRELLA COVERAGE PART
EXCESS LIABILITY COVERAGE PART

A. Section **VI - CONDITION D. Cancellation** Paragraph **1.** is deleted and replaced by the following:

1. The first Named Insured shown in the Declarations may cancel this policy by mailing or delivering to us advance written notice of cancellation, subject to the following:

a. If only the interest of the first Named Insured is affected, the effective date of cancellation will be either the date we receive notice from the first Named Insured or the date specified in the notice, whichever is later. However, upon receiving a written notice of cancellation from the first Named Insured, we may waive the requirement that the notice state the future date of cancellation by confirming the date and time of cancellation in writing to the first Named Insured.

b. If by statute, regulation or contract this policy may not be cancelled unless notice is given to a governmental agency, mortgagee or other third party, we will mail or deliver at least 10 days notice to the first Named Insured and the third party as soon as practicable after receiving the first Named Insured's request for cancellation.

Our notice will state the effective date of cancellation, which will be the later of the following:

(1) 10 days from the date of mailing or delivering our notice, or

(2) the effective date of cancellation stated in the first Named Insured's notice to us.

B. Section **VI – CONDITION D. Cancellation** paragraph **5.** is deleted and replaced by the following:

5. Premium Refund

a. If this policy is cancelled, we will send the first Named Insured any premium refund due.

b. If we cancel, the refund will be pro rata, except as provided in c. below.

c. If the cancellation results from a failure of the first Named Insured to pay, when due, any premium to us or any amount, when due, under a premium finance agreement, then the refund may be less than pro rata. Calculation of the return premium at less than pro rata represents a penalty charged on unearned premium.

d. If the first Named Insured cancels, the refund may be less than pro rata.

e. The cancellation will be effective even if we have not made or offered a refund.

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C. The following is added to Section **VI. - CONDITION D. Cancellation** and supersedes any provision to the contrary:

If we decide to:

1. cancel or nonrenew this policy; or

2. increase current policy premium by more than 15% (other than any increase due to change in risk, exposure or experience modification or resulting from an audit of auditable coverages); or

3. change any policy provision which would limit or restrict coverage;

Then:

We will mail or deliver notice of our action (including the dollar amount of any increase in renewal premium of more than 15%) to the first Named Insured and lienholder, if any, at the last mailing address known to us. We will mail or deliver notice at least:

1. 10 days before the effective date of cancellation if this policy has been in effect less than 60 days or if we cancel for nonpayment of premium; or

2. 45 days before the effective date of cancellation if this policy has been in effect 60 or more days and we cancel for a reason other than nonpayment of premium; or

3. 45 days before the expiration date of this policy if we decide to renew, increase the premium or limit or restrict coverage.

D. The following is added to Section **VI. - CONDITION D. Cancellation.**

If notice is mailed, proof of mailing will be sufficient proof of notice.

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Contractor's Application for Payment

Owner:		**Owner's Project No.:**	
Engineer:		**Engineer's Project No.:**	
Contractor:		**Contractor's Project No.:**	
Project:			
Contract:			
Application No.:		**Application Date:**	
Application Period:	**From**	**to**	

1. Original Contract Price				$ -
2. Net change by Change Orders				$ -
3. Current Contract Price (Line 1 + Line 2)				$ -
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)				$ -
5. Retainage				
a.	X	$ -	Work Completed	$ -
b.	X	$ -	Stored Materials	$ -
c. Total Retainage (Line 5.a + Line 5.b)				$ -
6. Amount eligible to date (Line 4 - Line 5.c)				$ -
7. Less previous payments (Line 6 from prior application)				
8. Amount due this application				$ -
9. Balance to finish, including retainage (Line 3 - Line 4)				$ -

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor:

Signature: **Date:**

Recommended by Engineer		**Approved by Owner**	
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	
Approved by Funding Agency			
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	

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Progress Estimate - Lump Sum Work

Contractor's Application for Payment

Owner: _____ **Owner's Project No.:** _____
Engineer: _____ **Engineer's Project No.:** _____
Contractor: _____ **Contractor's Project No.:** _____
Project: _____
Contract: _____

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I
			Work Completed					
Item No.	Description	Scheduled Value ($)	(D + E) From Previous Application ($)	This Period ($)	Materials Currently Stored (not in D or E) ($)	Work Completed and Materials Stored to Date (D + E + F) ($)	% of Scheduled Value (G / C) (%)	Balance to Finish (C - G) ($)
	Original Contract							
			-			-		-
						-		-
						-		-

Progress Estimate - Lump Sum Work

Contractor's Application for Payment

Owner: _____ **Owner's Project No.:** _____
Engineer: _____ **Engineer's Project No.:** _____
Contractor: _____ **Contractor's Project No.:** _____
Project: _____
Contract: _____

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I
			Work Completed					
Item No.	Description	Scheduled Value ($)	(D + E) From Previous Application ($)	This Period ($)	Materials Currently Stored (not in D or E) ($)	Work Completed and Materials Stored to Date (D + E + F) ($)	% of Scheduled Value (G / C) (%)	Balance to Finish (C - G) ($)
	Change Orders							
						-		-
						-		-
						-		-

Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: _____
Engineer: _____
Contractor: _____
Project: _____
Contract: _____

Owner's Project No.: _____
Engineer's Project No.: _____
Contractor's Project No.: _____

Application No.: _____ **Application Period:** From _____ to _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
Original Contract											
					-		-		-		-
					-		-		-		-
					-		-		-		-

Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: _____
Engineer: _____
Contractor: _____
Project: _____
Contract: _____

Owner's Project No.: _____
Engineer's Project No.: _____
Contractor's Project No.: _____

Application No.: _____ **Application Period:** From _____ to _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
Change Orders											
					-		-		-		-
					-		-		-		-
					-		-		-		-

Stored Materials Summary

Contractor's Application for Payment

Owner:
Engineer:
Contractor:
Project:
Contract:

Owner's Project No.:
Engineer's Project No.:
Contractor's Project No.:

Application No.: Application Period: From to Application Date:

A	B	C	D	E	F	G	H	I	J	K	L	M
						Materials Stored			Incorporated in Work			
Item No. (Lump Sum Tab) or Bid Item No. (Unit Price Tab)	Supplier Invoice No.	Submittal No. (with Specification Section No.)	Description of Materials or Equipment Stored	Storage Location	Application No. When Materials Placed in Storage	Previous Amount Stored ($)	Amount Stored this Period ($)	Amount Stored to Date (G+H) ($)	Amount Previously Incorporated in the Work ($)	Amount Incorporated in the Work this Period ($)	Total Amount Incorporated in the Work (J+K) ($)	Materials Remaining in Storage (I-L) ($)
								-			-	-
								-			-	-
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								-			-	-
					Totals	$ -	$ -	$ -	$ -	$ -	$ -	$ -

EJCDC C-620 Contractor's Application for Payment
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CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:
Engineer:
Contractor:
Project:
Contract Name:

Owner's Project No.:
Engineer's Project No.:
Contractor's Project No.:

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

_____

Date of Substantial Completion: _____

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

_____

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

_____

The following documents are attached to and made a part of this Certificate:

_____

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

NOTICE OF ACCEPTABILITY OF WORK

Owner: Owner's Project No.:
Engineer: Engineer's Project No.:
Contractor: Contractor's Project No.:
Project:
Contract Name:
Notice Date: Effective Date of the Construction Contract:

The Engineer hereby gives notice to the Owner and Contractor that Engineer recommends final payment to Contractor, and that the Work furnished and performed by Contractor under the Construction Contract is acceptable, expressly subject to the provisions of the Construction Contract's Contract Documents ("Contract Documents") and of the Agreement between Owner and Engineer for Professional Services dated _____ ("Owner-Engineer Agreement"). This Notice of Acceptability of Work (Notice) is made expressly subject to the following terms and conditions to which all who receive and rely on said Notice agree:

1. This Notice has been prepared with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the Engineer's professional opinion.
3. This Notice has been prepared to the best of Engineer's knowledge, information, and belief as of the Notice Date.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's Work) under the Owner-Engineer Agreement, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Owner-Engineer Agreement.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents, or to otherwise comply with the Contract Documents or the terms of any special guarantees specified therein.
6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

WORK CHANGE DIRECTIVE NO.: ___

Owner: Owner's Project No.:
Engineer: Engineer's Project No.:
Contractor: Contractor's Project No.:
Project:
Contract Name:
Date Issued: Effective Date of Work Change Directive:

Contractor is directed to proceed promptly with the following change(s):

Description:

Attachments:

Purpose for the Work Change Directive:

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

☐ Non-agreement on pricing of proposed change. ☐ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: $ _____ **[increase] [decrease] [not yet estimated]**.

Contract Time: _____ days **[increase] [decrease] [not yet estimated]**.

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

	Recommended by Engineer	Authorized by Owner
By:	_____	_____
Title:	_____	_____
Date:	_____	_____

CHANGE ORDER NO.: __

Owner: Owner's Project No.:
Engineer: Engineer's Project No.:
Contractor: Contractor's Project No.:
Project:
Contract Name:
Date Issued: Effective Date of Change Order:

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments:

Change in Contract Price	**Change in Contract Times**
Original Contract Price: $ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. **[Number of previous Change Order]**: $ _____	**[Increase] [Decrease]** from previously approved Change Orders No.1 to No. **[Number of previous Change Order]**: Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: $ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: $ _____	**[Increase] [Decrease]** this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: $ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

Recommended by Engineer (if required)	Accepted by Contractor
By: _____	_____
Title: _____	_____
Date: _____	_____
Authorized by Owner	Approved by Funding Agency (if applicable)
By: _____	_____
Title: _____	_____
Date: _____	_____

FIELD ORDER NO.: ___

Owner:	Owner's Project No.:
Engineer:	Engineer's Project No.:
Contractor:	Contractor's Project No.:
Project:	
Contract Name:	
Date Issued:	Effective Date of Field Order:

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

Attachments:

Issued by Engineer

By: _____

Title: _____

Date: _____

REQUEST FOR INFORMATION (RFI)

RFI # _____

Project: _____

Title:_____

To: Great West Engineering, Inc.
2501 Belt View Drive
Helena, MT 59601

From: _____
_____
_____

Status: _____

Location: _____

Due Date: _____

Reference: _____

Drawing No. _____

Spec Section:_____

Question:

Owner	Engineer	Contractor
Date	Date	Date

Reply:

Owner	Engineer	Contractor
Date	Date	Date

STANDARD GENERAL CONDITIONS

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

ISPWC DIVISION 100 -
STANDARD GENERAL CONDITIONS
OF THE CONSTRUCTION CONTRACT

Modified From

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

2020 UPDATE TO THE
IDAHO STANDARDS FOR
PUBLIC WORKS CONSTRUCTION
(ISPWC)

NOTE: The base document is the 2018 EJCDC version. Items added to EJCDC to form the 2020 ISPWC are underlined. Items deleted from the EJCDC to form the 2020 ISPWC are shown in strikeout format.

GUIDELINES FOR USE OF ISPWC Division 100 ~~EJCDC® C-700~~, STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

1.0 PURPOSE AND INTENDED USE OF THE DOCUMENT

ISPWC Division 100 ~~EJCDC® C-700~~, Standard General Conditions of the Construction Contract ~~(2018)~~, is the foundation document for the ISPWC ~~EJCDC~~ Construction Series. The General Conditions define the basic rights, responsibilities, risk allocations, and contractual relationship of the Owner and Contractor, and establish how the Contract is to be administered.

2.0 OTHER DOCUMENTS

ISPWC ~~EJCDC~~ documents are intended to be used as a system and changes in one ISPWC ~~EJCDC~~ document may require a corresponding change in other documents. Other ISPWC ~~EJCDC~~ documents may also serve as a reference to provide insight or guidance for the preparation of this document.

These General Conditions have been prepared for use with either ISPWC 00520 ~~EJCDC® C-520~~, Agreement Between Owner and Contractor for Construction Contract (Stipulated Price~~), or EJCDC® C-525, Agreement Between Owner and Contractor for Construction Contract (Cost-Plus-Fee) (2018 Editions)~~. The provisions of the General Conditions and the Agreement are interrelated, and a change in one may necessitate a change in the other.

To prepare supplementary conditions that are coordinated with the General Conditions, use ISPWC 00800 ~~EJCDC® C-800~~, Supplementary Conditions of the Construction Contract ~~(2018)~~.

The full ISPWC ~~EJCDC~~ Construction series of documents is discussed in the ISPWC 00001 (publication pending by EJCDC) ~~EJCDC® C-001~~, Commentary on the ISPWC ~~2018 EJCDC~~ Construction Documents ~~(2018)~~.

3.0 ORGANIZATION OF INFORMATION

All parties involved in a construction project benefit significantly from a standardized approach in the location of subject matter throughout the documents. Experience confirms the danger of addressing the same subject matter in more than one location; doing so frequently leads to confusion and unanticipated legal consequences. Careful attention should be given to the guidance provided in EJCDC® N-122/AIA® A521, Uniform Location of Subject Matter (2012 Edition) when preparing documents. EJCDC® N-122/AIA® A521 is available at no charge from the EJCDC website, www.ejcdc.org, and from the websites of EJCDC's sponsoring organizations.

If CSI MasterFormat™ is used for organizing the Project Manual, consult CSI MasterFormat™ for the appropriate document number (e.g., under 00 11 00, Advertisements and Invitations), and accordingly number the document and its pages.

4.0 EDITING THIS DOCUMENT

Remove these Guidelines for Use. Some users may also prefer to remove the two cover pages.

Although it is permissible to revise the Standard ISPWC ~~EJCDC~~ Text of Division 100 ~~C-700~~ (the content beginning at page 1 and continuing to the end), it is common practice to leave the Standard ~~EJCDC~~ Text of Division 100 ~~C-700~~ intact and unaltered, with modifications and supplementation of Division 100's

~~C-700's~~ provisions set forth in ~~EJCDC® C-800~~, Supplementary Conditions of the Construction Contract ~~(2018)~~. If the Standard Text itself is revised, the user must comply with the terms of the License Agreement, Paragraph 4.0, Document-Specific Provisions, concerning the tracking or highlighting of revisions. The following is a summary of the relevant License Agreement provisions:

1. The term "Standard ISPWC ~~EJCDC~~ Text" for Division 100 ~~C-700~~ refers to all text prepared by ISPWC ~~EJCDC~~ in the main body of the document. Document covers, logos, footers, instructions, or copyright notices are not Standard ISPWC ~~EJCDC~~ Text for this purpose.
2. During the drafting or negotiating process for Division 100 ~~C-700~~, it is important that the two contracting parties are both aware of any changes that have been made to the Standard ISPWC ~~EJCDC~~ Text. Thus, if a draft or version of Division 100 ~~C-700~~ purports to be or appears to be an ISPWC ~~EJCDC~~ document, the user must plainly show all changes to the Standard ISPWC ~~EJCDC~~ Text, using "Track Changes" (redline/strikeout), highlighting, or other means of clearly indicating additions and deletions.
3. If Division 100 ~~C-700~~ has been revised or altered and is subsequently presented to third parties (such as potential bidders, grant agencies, lenders, or sureties) as an ISPWC ~~EJCDC~~ document, then the changes to the Standard ISPWC ~~EJCDC~~ Text must be shown, or the third parties must receive access to a version that shows the changes.
4. Once the document is ready to be finalized (and if applicable executed by the contracting parties), it is no longer necessary to continue to show changes to the Standard ISPWC ~~EJCDC~~ Text. The user may produce a final version of the document in a format in which all changes are accepted, and the document at that point does not need to include any "Track Changes," redline/strikeout, highlighting, or other indication of additions and deletions to the Standard ISPWC ~~EJCDC~~ Text.

5.0 LICENSE AGREEMENT

This document is subject to the terms and conditions of the **License Agreement, 2018 EJCDC® Construction Series Documents**. A copy of the License Agreement was furnished at the time of purchase of this document, and is available for review at www.ejcdc.org and the websites of EJCDC's sponsoring organizations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—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. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39.a *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

39.b *Standard Specifications*— Wherever in these Contract Documents reference is made to the Standard Specifications, said reference shall be understood as referring to the Idaho Standards for Public Works Construction which applicable parts are incorporated herein and made a part of these Documents by specific reference thereto. If requirements contained in the Standard Specifications are modified by or are in conflict with supplemental information in these Contract Documents, the requirements of these Contract Documents shall prevail.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment

into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-

term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract

Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer 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 part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as

possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which 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 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.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

2. Abnormal weather conditions;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or

adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and

4. Acts of war or terrorism.

D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.

3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;

2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;

4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible. Contractor shall not enter upon nor use property not under Owner control until appropriate easements have been executed and a copy is on file at the site.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all 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 any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by,

or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: 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 and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

   a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

   b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

   c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

   a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

   b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

   c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then 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 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

   a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

   b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

   c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of

their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

1. The Contractor's scope of work shall include implementation of necessary safety, public health and environmental procedures and requirements relating to sanitary sewage encountered during the work.

2. The Contractor's scope of work shall include necessary safety and environmental requirements for handling and disposal of asbestos pipe removed from service or excavated during the course of the work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer 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, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition

and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. 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, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, 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, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own <u>negligent acts or omissions</u> ~~negligence~~.

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner 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 the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the

required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed

by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and

5. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will

provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the 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, risks, 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 Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, 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.

2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the 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 fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the 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, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item 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 is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
    a. in the exercise of reasonable judgment Engineer determines that the proposed item:
        1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
        2) 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;
        3) has a proven record of performance and availability of responsive service; and
        4) is not objectionable to Owner.
    b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
        1) there will be no increase in cost to the Owner or increase in Contract Times; and
        2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that

Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
    a. will certify that the proposed substitute item will:
        1) perform adequately the functions and achieve the results called for by the general design;
        2) be similar in substance to the item specified; and
        3) be suited to the same use as the item specified.
    b. will state:
        1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
        2) 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
        3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
    c. will identify:
        1) all variations of the proposed substitute item from the item specified; and
        2) available engineering, sales, maintenance, repair, and replacement services.
    d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a

Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation.

Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, 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 any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as

being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner 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 any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

B. In the event of the Contractor's default on the payment of taxes, excises, and license fees as set forth in Idaho Code 63-1503, the Owner shall have the authority to withhold from any payment due the Contractor under this contract, the estimated amount of such accrued and accruing taxes, excises, and license fees for the benefit of all taxing authorities to which said Contractor is liable.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner 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 such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

D. While not intended to be inclusive of all Laws or Regulations for which Contractor may be responsible under paragraph 7.11, the following Laws or Regulations are included as mandated by statute or for the convenience of the Contractor;

Idaho Code Section 63-1501. Definitions. As used in this act, the following terms shall have the following meanings:

"Contracting units" shall include the state or any officer or department thereof, the counties or other subdivisions of the state, and all municipal and quasi-municipal corporations therein.

"Contractor" shall mean any person, firm, co-partnership, association, or corporation, foreign or domestic, entering into a contract for the construction, erection, repair, or improvement of any kind or character of public works in this state.

"Taxes" shall mean all taxes, assessments, excises, and license fees authorized to be levied, assessed, and collected under the laws of this state, other than taxes on real property.

"Taxing unit" shall mean the state or any officer or department thereof, the counties or other subdivisions of the state, and all municipal and quasi-municipal corporations therein authorized by law to assess, levy and collect taxes.

Idaho Code Section 63-1502. Conditions precedent to contract for public works. Before entering into a contract for the construction of any public works in this state, the contracting unit shall require as conditions precedent that the contractor be authorized to do business in this state and that he furnish satisfactory evidence that he has paid or secured to the satisfaction of the respective taxing units all taxes for which he or his property is liable then due or delinquent.

Idaho Code Section 63-1503. Contractor for public works to pay or secure taxes—Agreement. Every contract for the construction of public works by a contracting unit of this state shall contain substantially the following provisions:

1. The contractor, in consideration of securing the business of erecting or constructing public works in this state, recognizing that the business in which he is engaged is of a transitory character, and that in the pursuit thereof, his property used therein may be

without the state when taxes, excises, or license fees to which he is liable become payable, agrees:

2. To pay promptly when due all taxes (other than on real property), excises and license fees due to the state, its subdivisions, and municipal and quasi-municipal corporations therein accrued or accruing during the term of this contract, whether or not the same shall be payable at the end of such term;

3. That if the said taxes, excises, and license fees are not payable at the end of said term, but liability for the payment thereof exists, even though the same constitute liens upon his property, to secure the same to the satisfaction of the respective officers charged with the collection thereof; and

4. That in the event of his default in the payment or securing of such taxes, excises, and license fees, to consent that the department, officer, board, or taxing unit entering into this contract may withhold from any payment due him hereunder the estimated amount of such accrued and accruing taxes, excises, and license fees for the benefit of all taxing units to which said contractor is liable.

Idaho Code Section 44-1002 requires the following: The Contractor must employ ninety-five percent (95%) bona fide Idaho residents as employees on any job under any such contract except where under such contracts fifty (50) or less persons are employed, the Contractor may employ ten percent (10%) nonresidents, provided, however, in all cases employers must give preference to the employment of bona fide residents in the performance of said work, and no contract shall be let to any person, firm, association, or corporation refusing to execute an agreement with the above mentioned provisions in it; provided, that, in contracts involving the expenditure of federal aid funds this act shall not be enforced in such a manner as to conflict with or be contrary to the federal statutes prescribing a labor preference to honorably discharged soldiers, sailors, and marines, prohibiting as unlawful any other preference or discrimination among citizens of the United States.

Idaho Code Chapter 19 of Title 54 requires proper licensing of Public Works Contractors.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve

Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. 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 damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the

Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must 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 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall 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 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. 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, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 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 will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. 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.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

5. Any review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (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 from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design

professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;
2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

7.20 *Quality Control*

A. Contractor shall provide quality control, which shall include the initial and subsequent inspections of Contractor's Work to ensure that the Work conforms to the Contract Documents.

B. Contractor shall designate the person responsible for Contractor's quality control while Work is in progress, and shall notify Engineer, in writing, prior to any change in quality control representative assignment.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the

Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all 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 damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or
2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
    b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
    c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
    d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
    e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
    f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

    a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

    b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

    The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Action on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, ~~under cost-plus-fee,~~ time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. 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 accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. ~~*Contractor's Fee*~~

~~1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:~~

~~a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.~~

~~b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:~~

~~1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.~~

~~2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.~~

~~2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change~~

~~Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.~~

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

   a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

   b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction 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 with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
3. by manufacturers of equipment furnished under the Contract Documents;
4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. 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, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages 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 pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *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, then 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 will 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.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, 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, 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 incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. 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 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

    a. to supervise, direct, or control the Work;

    b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

    c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

    d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

    e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

    a. the Work is defective, requiring correction or replacement;

    b. the Contract Price has been reduced by Change Orders;

    c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

    d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

    e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. ~~Ten~~ Twenty-one days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

    a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
    a. all documentation called for in the Contract Documents;
    b. consent of the surety, if any, to final payment;
    c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all 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 repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure. Such cure must occur within no more than thirty (30) days of said notice unless otherwise extended by the Engineer.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs,

losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until

payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and

2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;

2. agree with the other party to submit the dispute to another dispute resolution process; or

3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and 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 the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS TO THE GENERAL CONDITIONS

SECTION 00800

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, “Paragraph SC-4.05.”

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

SC-1.01 Defined Terms

SC-1.01.A Add to the list of definitions in Paragraph 1.01.A by inserting the following as numbered items in their proper alphabetical positions:

Abnormal Weather Conditions – Conditions of extreme or unusual weather for a given region, elevation, or season as determined by Engineer. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered Abnormal Weather Conditions.

ARTICLE 2 - PRELIMINARY MATTERS

SC-2.01 Delivery of Bonds and Evidence of Insurance

SC-2.01 Delete Paragraphs 2.01.B. and C. in their entirety and insert the following in their place:

A. *Bonds:* Engineer shall furnish to Contractor six copies of the agreement and other Contract Documents bound therewith. Contractor shall execute the Agreement, attach executed copies of the required Bonds and Power of Attorney, and submit all copies to Engineer who will forward them to the Owner. Owner shall execute all copies and return two copies to the Contractor. Owner shall also furnish two counterparts or conformed copies to the Engineer and shall retain two copies.

B. *Evidence of Contractor’s Insurance:* When Contractor delivers the signed counterparts of the Agreement to Engineer, Contractor shall also deliver to Engineer copies of the policies (including all endorsements, and identification of applicable self-insured retentions and deductibles) of insurance required to be provided by Contractor in this Contract. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

C. *Evidence of Owner’s Insurance:* After receipt from Contractor of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor copies of the policies of insurance to be provided by Owner in this Contract (if any). Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

SC-2.02 Copies of Documents

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor four printed copies of the Contract Documents (including two fully executed counterparts of the Agreement), and one copy in electronic portable document format (PDF).

Additional copies of Drawings and Project Manuals may be obtained from the Engineer on the following basis:

Full or partial sets of Drawings	$5.00 per sheet (Full size)
	$1.50 per sheet (Half size)
Each book of Specifications	$50.00

SC-2.03 Before Starting Construction

SC-2.03.A Add the following new paragraph immediately after Paragraph 2.03.A.3

4. A preliminary list of construction equipment with hourly rates, owned or rented by the Contractor and all Subcontractors that will be used in the performance of the Work. The equipment list will include information necessary to confirm the hourly rates per the General Conditions and SC-13.01.B.5.c, including make, model, and year of manufacture as well as the horse power, capacity or weight, and accessories.

SC-2.04 Preconstruction Conference; Designation of Authorized Representatives

SC-2.04.A Delete Paragraph 2.04.A in its entirety and insert the following in its place:

Before any Work at the Site is started, a conference will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

The conference shall be attended by authorized representatives of Owner, Engineer, and their consultants; Contractor and its superintendent. The Contractor shall be responsible for ensuring that all major Subcontractors; Suppliers; and other concerned parties attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

SC-2.05 Initial Acceptance of Schedules

SC-2.05.A Delete Paragraph 2.05.A in its entirety and insert the following in its place:

A. Prior to the first application for payment all schedules and documents identified in Paragraph 2.03.A shall be finalized and acceptable to the Engineer and Owner. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer and Owner as provided below. Acceptance of these schedules and documents by either Engineer or Owner will neither impose on Engineer or Owner responsibility for the sequencing, scheduling or progress of the Work and will not interfere with or relieve Contractor from Contractor’s full responsibility therefore.

SC-2.05.A Add the following new paragraph immediately after Paragraph 2.05.A.4:

5. Contractor's Schedule of Construction Equipment will be acceptable to Engineer as to form and substance if it provides the necessary information to reference the equipment and establish the hourly rates in accordance with the General Conditions and SC-13.01.B.5.c.

SC-2.06 Electronic Transmittals

SC-2.06 Add the following new paragraph immediately after Paragraph 2.06.A:

1. Electronic data for Shop Drawings and other submittals may be relied upon if done in accordance with Section 01300.

SC-2.06 Delete Paragraphs 2.06.B and 2.06.C in their entirety and insert the following in their place:

B. *Electronic Documents Protocol:* The parties shall conform to the following provisions in Paragraphs 2.06.B and 2.06.C, together referred to as the Electronic Documents Protocol ("EDP" or "Protocol") for exchange of electronic transmittals.

1. *Basic Requirements*

a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Unless otherwise agreed upon, Electronic documents will only be transmitted and accepted in Portable Document Format (PDF), Microsoft Word Document (DOC), Microsoft Excel Document (XLS), AutoCAD Drawing File (DWG), and Design Web Format (DWF) formats. If another type of file is required, Engineer approval is required. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.

b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.

c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.

d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with Engineer. Nothing herein will modify the requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.

e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.

f. Nothing herein negates any obligation 1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; 2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or 3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.

2. System Infrastructure for Electronic Document Exchange

a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.

1) The maximum size of an email attachment for exchange of Electronic Documents under this EDP is twenty (20) MB. Attachments larger than that may be exchanged using large file transfer functions or physical media.

2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.

b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.

c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and

systems, it shall not be liable to the other party for any breach of system security.

d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Contractor, not reasonably anticipated under the original EDP, Contractor may seek an adjustment in price or time under the appropriate process in the Contract.

e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the parties may rely for document archiving during the specified term of operation of such Project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract, or after termination of the Project document archive, if one is established, for as long as required by the Contract and as each party deems necessary for its own purposes.

f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.

g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.

C. Software Requirements for Electronic Document Exchange; Limitations

1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.

2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.

3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in Exhibit A to this EDP, including software versions, if listed.

ARTICLE 4 - COMMENCEMENT AND PROGRESS OF THE WORK

SC-4.01 Commencement of Contract Times; Notice to Proceed

SC-4.01.A –Amend the first sentence of Paragraph 4.01.A to read as follows:

Following execution of the Agreement by the Owner and the Contractor, written Notice to Proceed with the Work shall be given by the Owner to the Contractor. The Contract Time will commence to run on the day indicated in the Notice to Proceed.

SC-4.04 Progress Schedule

SC-4.04.A Delete Paragraph 4.04.A.1 in its entirety and insert the following in its place:

1. Contractor shall submit to Engineer with each application for payment an updated progress schedule reflecting the amount of work completed and adjustments to future work. Such adjustments will be acceptable to Engineer as providing an orderly progression of the Work to completion within any specified milestones and the Contract Time. No progress payment will be made to Contractor until the updated schedules are submitted to and acceptable to Engineer and Owner. Review and acceptance of progress schedules by the Engineer will neither impose on Engineer responsibility for the sequencing, scheduling or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefore.

SC-4.05 Delays in Contractor's Progress

SC-4.05.C.2 Amend paragraph 5.04.C.2 by striking out the following words "Abnormal weather conditions;" and inserting the following words "Abnormal Weather Conditions;"

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

5. Weather-Related Delays

   a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled. Weather that is perceived to be extreme or unusual but is typical for the project site location, elevation, or season, should not be considered Abnormal Weather Conditions. Requests for time extensions due to abnormal weather conditions will be submitted to the Engineer within five days of the end of the abnormal weather condition event. It is the responsibility of the Contractor to provide the information <u>in Items 1-3 of this paragraph for the Engineer to determine awarded weather days</u>. ~~listed in SC 4.05.C.5.b.~~

ARTICLE 5 - SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

SC-5.01 Availability of Lands

SC-5.01 Add the following new paragraph at the end of Paragraph 5.01.C:

If it is necessary or desirable that the Contractor use land outside of the Owner's easement or right-of-way, the Contractor shall obtain consent from the property owner and tenant of the land. The Contractor shall not enter for materials delivery or occupy for any other purpose with men, tools, equipment, construction materials, or with materials excavated from the site, any private property outside the designated construction easement boundaries or right-of-way without written permission from the property owner and tenant.

SC-5.03 Subsurface and Physical Conditions

SC-5.03.A Amend the first sentence of Paragraph 5.03.A to read as follows:

A. *Reports and Drawings*: The Special Provisions identify:

SC-5.03.B Amend the first sentence of Paragraph 5.03.C to read as follows:

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Special Provisions with respect to such reports and drawings, but such reports and drawings are not Contract Documents.

SC-5.03.D Add the following new paragraphs immediately after Paragraph 5.03.D:

E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

Report Title	Date of Report	Technical Data
Bannock County Landfill Scale Improvements Geotechnical Engineering Evaluation	July 15, 2025	**Geotechnical Report of existing conditions and structural suggestions**

F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
No Such Drawings		

SC-5.05 Underground Facilities

SC-5.05.A Add the following new paragraph immediately after Paragraph 5.05.A.5:

6. At least 2 but not more than 10 business days before beginning any excavation, the Contractor shall, in accordance with MCA 69-4-502, notify all owners of underground facilities and coordinate the Work with the owners of such underground facilities. The information shown or indicated in the Contract Documents with respect to existing underground facilities is based on information and data obtained from the owners of the facilities without field exploration, and as such, Owner and Engineer are not responsible for the accuracy or completeness of such information or data.

SC-5.06 Hazardous Environmental Conditions

SC-5.06.A Amend the first sentence of Paragraph 5.06.A to read as follows:

A. *Reports and Drawings:* The Special Provisions identify:

SC-5.06.B Amend the first sentence of Paragraph 5.06.B to read as follows:

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Special Provisions with respect to such reports and drawings, but such reports and drawings are not Contract Documents.

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Report Title	Date of Report	Technical Data
No Such Reports		

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
No Such Drawings		

ARTICLE 6 - BONDS AND INSURANCE

SC6.01 Performance, Payment, and Other Bonds

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.B:

1. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be **10** years after Substantial Completion for the scales.

2. After Substantial Completion, Contractor shall furnish a warranty bond issued in the form of EJCDC® C-612, Warranty Bond (2018). The warranty bond must be in a bond amount of **10** percent of the final Contract Price. The warranty bond period will extend to a date **10** years after Substantial Completion of the Work. Contractor shall deliver the fully executed warranty bond to Owner prior to or with the final application for payment, and in any event no later than 11 months after Substantial Completion.

3. The warranty bond must be issued by the same surety that issues the performance bond required under Paragraph 6.01.A of the General Conditions.

SC-6.02 Insurance—General Provisions

SC-6.02.B Delete Paragraph 6.02.B in its entirety and insert the following in its place:

B. Without limiting any of the other obligations or liabilities of the Contractor, Contractor shall secure and maintain such insurance from an insurance company (or companies) authorized to write insurance in the State of Idaho, with minimum "A.M. Best Rating" of A-VI, as will protect the Contractor, the vicarious acts of subcontractors, the Owner and the Engineer and their agents and employees from claims for bodily injury, or property damage which may arise from operations and completed operations under this Agreement. Contractor shall not commence work under this Agreement until such insurance has been obtained and certificates of insurance, with binders, or certified copies of the insurance policy shall have been filed with the Owner and the Engineer.

All insurance coverages shall remain in effect throughout the life of the Agreement, except that the Contractor shall maintain the Commercial General Liability Policy including product and completed operations coverage for a period of at least three years following the substantial completion date for property damage resulting from occurrences during the agreement period.

SC-6.02.B Add the following paragraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the Project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.

SC-6.03 Contractor's Insurance

SC-6.03 Amend Paragraph 6.03.B.4 by striking out the word "and" at the end of the Paragraph.

SC-6.03 Amend Paragraph 6.03.B.5 to read as follows:

5. include all necessary endorsements to support the stated requirements; and

SC-6.03 Add the following paragraph immediately after Paragraph 6.03.B.5:

6. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 45 days prior to written notice has been given to Contractor. Within three days of receipt of any such written

notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

D. *Other Additional Insureds*: As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: Engineer's Consultants, the State, its officers, officials, employees, and volunteers.

E. *Workers' Compensation and Employer's Liability*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	**Policy limits of not less than:**
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	$1,000,000
Bodily injury by disease—aggregate	$1,000,000
Employer's Liability	
Each accident	$1,000,000
Each employee	$1,000,000
Policy limit	$1,000,000
Stop-gap Liability Coverage	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	$1,000,000

F. *Commercial General Liability*—Claims Covered: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
2. damages insured by reasonably available personal injury liability coverage, and
3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

G. *Commercial General Liability*—Form and Content: Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.

    a. Such insurance must be maintained for three years after final payment.

    b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.

2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.

3. Severability of interests and no insured-versus-insured or cross-liability exclusions.

4. Underground, explosion, and collapse coverage.

5. Personal injury coverage.

6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.

7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.

H. *Commercial General Liability—Excluded Content*: The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:

1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).

2. Any exclusion for water intrusion or water damage.

3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.

4. Any exclusion of coverage relating to earth subsidence or movement.

5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).

6. Any limitation or exclusion based on the nature of Contractor's work.

7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	$3,000,000
Products—Completed Operations Aggregate	$3,000,000
Personal and Advertising Injury	$2,000,000
Bodily Injury and Property Damage—Each Occurrence	$2,000,000

J. *Automobile Liability*: Contractor shall purchase and maintain automobile liability insurance 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 automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	$2,000,000
Each Accident	$2,000,000
Property Damage	
Each Accident	$2,000,000
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	$2,000,000

K. *Umbrella or Excess Liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	$1,000,000
General Aggregate	$2,000,000

L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements*: Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of $500,000 after accounting for partial attribution of its limits to underlying policies, as allowed above.

N. *Contractor's Professional Liability Insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

Contractor's Professional Liability	**Policy limits of not less than:**
Each Claim	$2,000,000
Annual Aggregate	$3,000,000

SC-6.04 Builder's Risk and Other Property Insurance

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

F. *Builder's Risk Requirements*: The builder's risk insurance must:

1. be written on a builder's risk "all risk" policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following risks: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood).

   a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.

   b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.

2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are

intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.

3. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of contractors, engineers, and architects).

4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).

5. extend to cover damage or loss to insured property while in transit.

6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.

7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.

8. include performance/hot testing and start-up, if applicable.

9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.

10 include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following:

   a. **None**

11. include, in addition to the Contract Price amount, the value of the following equipment and materials to be installed by the Contractor but furnished by the Owner or third parties:

   a. **None**

13. In addition to the coverage sublimits stated above, the following coverages are also subject to sublimits, as follows:

   a. **None**

ARTICLE 7 - CONTRACTOR'S RESPONSIBILITIES

SC-7.13 Safety and Protection

SC-7.13.G Amend the second sentence of Paragraph 7.13.G by striking out the words "Supplementary Conditions" and replacing them with the words "Special Provisions".

SC-7.13.J Add the following new paragraphs immediately after Paragraph 7.13.J:

K. It is expressly understood by the parties to this Agreement that the Contractor is solely responsible for initiating, maintaining, and supervising safety precautions and programs in connection with the Work. The right of the Owner and Engineer to observe or otherwise review the Work and operations shall not relieve the Contractor from any of his covenants and obligations hereunder. Contractor shall incorporate all safety requirements into his construction progress and work schedules including preconstruction and scheduled monthly safety meetings, posted safety rules, tailgate meetings, and site inspections by safety and other inspectors employed by the Contractor.

L. The Contractor shall be responsible for and shall take necessary precautions and provide all material and equipment to protect, shore, brace, support and maintain all underground pipes, conduits, drains, sewers, water mains, gas mains, cables, etc., and other underground construction uncovered in the proximity, or otherwise affected by the construction work performed by him. All pavement, surfacing, driveways, curbs, walks, buildings, grass areas, trees, utility poles or guy wires damaged by the Contractor's operations in the performance of this work shall be repaired and/or replaced to the satisfaction of the Owner, Engineer, and effected property owner at the Contractor's expense. The Contractor shall also be responsible for all damage to streets, roads, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property or facility, regardless of location or character, which may be caused by moving, hauling, or otherwise transporting equipment, materials, or men to and from the work or any part of site thereof; whether by him or his subcontractors. The Contractor shall make satisfactory and acceptable arrangements with owner of, or the agency or authority having jurisdiction over, the damaged property or facility concerning its repair or replacement or payment of costs incurred in connection with said damage.

M. The Contractor shall conduct his work so as to interfere as little as possible with public travel, whether vehicular or pedestrian. Whenever it is necessary to cross, obstruct, or close roads, driveways, and walks, whether public or private, the Contractor shall obtain approval from the governing party and shall, at his own expense, provide and maintain suitable and safe bridges, detours, and other temporary expedients for the accommodation of public and private drives before interfering with them. The provisions for temporary expedients will not be required when the Contractor has obtained permission from the owner and tenant of the private property, or from the authority having jurisdiction over public property involved, to obstruct traffic at the designated point.

N. Safety provisions must be entirely adequate and meet with City or State and Federal regulations to protect the public on these streets and roads.

SC-7.18 Indemnification

SC-7.18.A Add the following new paragraph at the end of Paragraph 7.18.A:

While Owner and Engineer may have the right under this Contract to observe or otherwise review the work, progress and operations of the Contractor, it is expressly

understood and agreed that such observation shall not relieve the Contractor from any of its covenants and obligations hereunder.

ARTICLE 8 - OTHER WORK AT THE SITE

SC-8.02 Coordination

SC-8.02 Delete Paragraph 8.02 in its entirety and replace with the following:

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Special Provisions or provided to Contractor prior to the start of any such other work:

1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. an itemization of the specific matters to be covered by such authority and responsibility; and

3. the extent of such authority and responsibilities.

B. Unless otherwise provided in the Special Provisions, Owner shall have sole authority and responsibility for such coordination.

ARTICLE 10 - ENGINEER'S STATUS DURING CONSTRUCTION

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:

1. *Schedules*: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of values prepared by Contractor and consult with Engineer concerning acceptability.

2. *Conferences and Meetings*: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.

3. *Safety Compliance*: Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.

4. *Liaison:*

a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in

providing information regarding the provisions and intent of the Contract Documents.

b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.

c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.

5. *Interpretation of Contract Documents*: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

6. *Shop Drawings and Samples*:

a. Record date of receipt of Samples and Contractor-approved Shop Drawings.

b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.

c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.

7. *Modifications*: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.

8. *Review of Work; Defective Work:*

a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.

b. Observe whether any Work in place appears to be defective.

c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.

d. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

9. *Inspections, Tests, and System Start-ups:*

a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.

b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.

c. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.

d. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.

10. *Reports*:

a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.

b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.

c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

11. *Payment Requests*: Review Applications for Payment with Contractor.

12. *Certificates, Operation and Maintenance Manuals*: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

13. *Completion*

a. Participate in Engineer's visits regarding Substantial Completion.

b. Assist in the preparation of a punch list of items to be completed or corrected.

c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.

d. Observe whether items on the final punch list have been completed or corrected.

D. The RPR will not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including “or-equal” items).
2. Exceed limitations of Engineer’s authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
5 Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 13 - COST OF WORK; ALLOWANCES, UNIT PRICE WORK

SC-13.01 Cost of the Work

SC-13.01.B.5.c Delete paragraph 13.01.B.5.c in its entirety and insert the following in its place:

c. The rental of all construction equipment and machinery and parts thereof whether rented from contractor or rented from others. The cost shall be calculated as follows and will include the costs of transportation, loading, unloading, assembly, dismantling and removal thereof for equipment involved only in the changed portion of the work covered under the cost of the Work method. Transportation, loading and assembly costs will not be included for equipment already on the site which is being used for other portions of the Work. The cost of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work. Hourly equipment and machinery rates shall be calculated from the Rental Rate Blue Book for Construction Equipment, and the Equipment List submitted according to SC-2.03 and SC-2.05, and as follows:

1. for working equipment, the hourly rate shall be the monthly rental rate divided by 176 hours per month plus the hourly operating cost.
2. for equipment on standby, the hourly rate shall be 50% of the monthly rental rate divided by 176 hours per month, and the hourly operating cost shall not be applied.
3. for specialized equipment rented for a short duration used for change order work or additional work not part of the scope of work bid, the equipment rental rates will be negotiated prior to the work being performed.

SC-13.01.C.2 Add the following definition of small tools and hand tools:

a. For purposes of this paragraph, “small tools and hand tools” means any tool or equipment whose current price if it were purchased new at retail would be less than $500.

SC-13.02 Allowances

SC-13.02.C – Delete paragraph in its entirety and insert ”Deleted”.

SC-13.03 Unit Price Work

SC-13.03.E Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

   a. the extended price of a particular item of Unit Price Work amounts to ten percent (10%) or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than twenty-five (25%) percent from the estimated quantity of such item indicated in the Agreement; and

   b. Contractor’s unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor’s costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 15 - PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

SC-15.01 Progress Payments

SC-15.01.B.2 - Add the following new paragraph at the end of Paragraph 15.01.B.2:

Reflect Change Orders approved as of the date of the Application in each Application for Payment.

For stored materials and equipment, provide clear descriptions of the materials and equipment, the relation of materials and equipment to individual bid items, and the dollar values of materials and equipment stored and in place. The amount allowed for materials and equipment in storage shall not exceed the value of material remaining to be installed less the value of installation. Progress payments for stored materials and equipment to Contractor will not include any overhead or profit.

SC-15.01.B.4 - Add the following new paragraphs at the end of Paragraph 15.01.B.4:

Retainage may be used by the Owner to offset costs for any of the losses enumerated in Paragraphs 15.01.C.6.a through 15.01.C.6.e inclusive, 15.01.E.1.a through

15.01.E.1.l inclusive, or 16.02.E. In addition, retainage may be used by the Owner to protect against loss from failure by the Contractor to complete necessary work and to offset any liquidated damages due Owner.

SC-15.01.B.5 – Add new paragraphs immediately after Paragraph 15.01.B.4:

5. Each application for progress payment shall be accompanied by Contractor's updated progress schedule, shop drawing schedule, procurement schedule, subcontractor or supplier lien releases from previous pay application, and other data specified herein or reasonably required by Owner or Engineer. The Owner reserves the right to require submission of weekly certified payrolls by the Contractor.

SC-15.01.D.1 – Delete paragraph in its entirety and insert the following in its place:

The Application for Payment with Engineer's recommendations will be presented to the Owner and Agency for consideration. If the Owner finds the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 15.01.E will become due twenty (20) days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

SC-15.01.E.l Add the following language at the end of the first sentence of Paragraph 15.01.E.l:

, including liquidated damages.

SC-15.01 Add the following new Paragraph 15.01.F:

F. For contracts in which the Contract Price is based on the Cost of Work, if Owner determines that progress payments made to date substantially exceed the actual progress of the Work (as measured by reference to the Schedule of Values), or present a potential conflict with the Guaranteed Maximum Price, then Owner may require that Contractor prepare and submit a plan for the remaining anticipated Applications for Payment that will bring payments and progress into closer alignment and take into account the Guaranteed Maximum Price (if any), through reductions in billings, increases in retainage, or other equitable measures. Owner will review the plan, discuss any necessary modifications, and implement the plan as modified for all remaining Applications for Payment.

SC-15.02 Contractor's Warranty of Title

SC-15.02.A – Amend paragraph by striking out the following text: "7 days after".

SC-15.02.B - Add the following new paragraph immediately after Paragraph 15.02.A:

B. Neither recommendation of any progress payment by Engineer nor payment by the Owner to Contractor, nor any use or occupancy of the Work or any part thereof will release the Contractor from complying with the Contract Documents. Specifically, the Contractor shall maintain in accordance with Article 6, property insurance on all Work, materials, and equipment whether incorporated in the project or not and whether included in an application for payment or not, for the full insurable value thereof. Passing title to Owner for materials and equipment included in an application for payment does not relieve the Contractor of the Contractor's obligation to provide insurance (including property insurance) as

required in Article 6 of the General Conditions and these Supplementary Conditions. All insurance shall remain in effect as provided in Article 6.

SC-15.03 Substantial Completion

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

SC-15.04 Partial Use or Occupancy

SC-15.04 Add the following new paragraph immediately after Paragraph 15.04.A.4:

B. Owner has the right to take possession of or use any completed or substantially completed portions of the work at any time, but such taking possession or use will not be deemed an acceptance of any work not completed in accordance with the Contract Documents. Owner's use of any facilities so identified in the Contract Documents will not be grounds for extension of the contract time or change in the contract price. Owner's use of any facilities not specifically identified in the Contract Documents will be in accordance with conditions agreed to prior to such use, and any extra costs or delays in completion incurred and properly claimed by Contractor will be equitably adjusted with a Change Order. Facilities substantially completed in accordance with the Contract Documents which are occupied or used by Owner prior to substantial completion of the entire work will be done in accordance with General Conditions 15.03. Guarantee periods for accepted or substantially completed work including mechanical and electrical equipment will commence upon the start of continuous use by Owner. All tests and instruction of Owner's personnel must be satisfactorily completed, and Owner shall assume responsibility for and operation of all facilities occupied or used except as may arise through portions of work not yet completed by Contractor If the work has been substantially completed and the Engineer certifies that full completion thereof is materially delayed through no fault of the Contractor, the Owner shall, without terminating the Agreement, make payment of the balance due for the portion of the work fully completed and accepted.

SC-15.05 Final Inspection

SC-15.05 Add the following new paragraph immediately after Paragraph 15.05.A:

B. After Contractor has remedied all deficiencies to the satisfaction of the Engineer and delivered all construction records, maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, and other documents (all as required by the Contract Documents), Owner and Contractor shall be promptly notified in writing by Engineer that the work is acceptable.

SC-15.08 Correction Period

SC-15.08 Add the following new Paragraph 15.08.G:

G. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be the number of years set forth in SC-6.01.B.1; or if no such revision has been made in SC-6.01.B, then the correction period is hereby specified to be 10 years after Substantial Completion for the scales and one year after substantial completion for the remainder of the project.

ARTICLE 16 - SUSPENSION OF WORK AND TERMINATION

SC-16.01 Owner May Suspend Work

SC-16.01 Add the following new paragraph immediately after Paragraph 16.01.A

B. Owner may also suspend the Work or any portion thereof at the request of the Contractor by written notice to Contractor and Engineer. Contractor shall make such a request in writing to the Owner and furnish a copy of the request to the Engineer. If the Owner grants the Contractor's request to suspend the Work, Contractor will not be entitled to an adjustment in the Contract Price or an extension of the Contract Times, directly attributable to the suspension. However, the days which expire during the suspension would not be counted against Contract Times.

ARTICLE 17 - FINAL RESOLUTIONS OF DISPUTES

SC-17.02 Arbitration

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

Arbitration

A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of $100,000 or less will be settled in accordance with the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.

B. Notice of the demand for arbitration will be filed in writing with the other party to the Contract and with the American Arbitration Association, and a copy will be sent to Engineer for information. Demand for arbitration shall in no event be made on any claim, dispute or other matter in question that would be barred by the applicable statute of limitations.

C. The Contractor will carry on the work and maintain the progress schedule during any arbitration proceedings, unless otherwise mutually agreed in writing.

SC-17.03 Attorneys' Fees

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02.

SC-17.03 Attorneys' Fees

A. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

ARTICLE 18 - MISCELLANEOUS

18.01 Giving Notice

SC-18.01 Add the following new paragraph immediately after Paragraph 18.01.A:

B. The mailing address for giving notices to Contractor given in the Agreement is hereby designated as the place to which all notices, letters, and other communication to Contractor will be mailed or delivered. The mailing address for giving notices to Owner given in the Agreement is hereby designated as the place to which all notices, letters, and other communication to Owner shall be mailed or delivered. Either party may change his address at any time by an instrument in writing delivered to Engineer and to other party.

EXHIBIT A—SOFTWARE REQUIREMENTS FOR ELECTRONIC DOCUMENT EXCHANGE

Item	Electronic Documents	Transmittal Means	Data Format	Note (1)
a.1	General communications, transmittal covers, meeting notices and responses to general information requests for which there is no specific prescribed form.	Email	Email	
a.2	Meeting agendas, meeting minutes, RFI's and responses to RFI's, and Contract forms.	Email w/ Attachment	PDF	(2)
a.3	Contactors Submittals (Shop Drawings, "or equal" requests, substitution requests, documentation accompanying Sample submittals and other submittals) to Owner and Engineer, and Owner's and Engineer's responses to Contractor's Submittals, Shop Drawings, correspondence, and Applications for Payment.	Email w/ Attachment	PDF	
a.4	Correspondence; milestone and final version Submittals of reports, layouts, Drawings, maps, calculations and spreadsheets, Specifications, Drawings and other Submittals from Contractor to Owner or Engineer and for responses from Engineer and Owner to Contractor regarding Submittals.	Email w/ Attachment or LFE	PDF	
a.5	Layouts and drawings to be submitted to Owner for future use and modification.	Email w/ Attachment or LFE	DWG	
a.6	Correspondence, reports and Specifications to be submitted to Owner for future word processing use and modification.	Email w/ Attachment or LFE	DOC	
a.7	Spreadsheets and data to be submitted to Owner for future data processing use and modification.	Email w/ Attachment or LFE	EXC	
a.8	Database files and data to be submitted to Owner for future data processing use and modification.	Email w/ Attachment or LFE	DB	

Notes	
(1)	All exchanges and uses of transmitted data are subject to the appropriate provisions of Contract Documents.
(2)	Transmittal of written notices is governed by Paragraph 18.01 of the General Conditions.

Key	
Email	Standard Email formats (.htm, .rtf, or .txt). Do not use stationery formatting or other features that impair legibility of content on screen or in printed copies
LFE	Agreed upon Large File Exchange method (FTP, CD, DVD, hard drive)
PDF	Portable Document Format readable by Adobe® Acrobat Reader Latest Version
DWG	Autodesk® AutoCAD .dwg format Latest Version
DOC	Microsoft® Word .docx format Latest Version
EXC	Microsoft® Excel .xls or .xml format Latest Version
DB	Microsoft® Access .mdb format Latest Version

SPECIAL PROVISIONS

SECTION 00910

SPECIAL PROVISIONS

SP-01 INCORPORATION OF THE ISPWC 1
SP-02 QUALIFICATIONS OF CONTRACTORS, SUBCONTRACTORS, SUPPLIERS, AND OTHERS 1
SP-03 SUBSURFACE AND PHYSICAL CONDITIONS 1
SP-04 PREBID EXPLORATION/SITE INFORMATION 2
SP-05 SPOIL 2
SP-06 BEST MANAGEMENT PRACTICES 2
SP-07 WATER FOR CONSTRUCTION 3
SP-08 PRIVATE ACCESS 3
SP-09 LANDSCAPED AREAS 3
SP-10 REMOVAL AND REPLACEMENT OF FENCES, SIGNS, SIDEWALKS, CURBS, GUTTERS, POSTS, BARRICADES, ETC. 4
SP-11 REMOVAL AND REPLACEMENT OF EXISTING FENCES 4
SP-12 STAGING AREA 4
SP-13 CONFLICTS WITH UTILITIES 4
SP-14 PROPERTY PINS & MONITORING WELLS PROTECTION 5
SP-15 QUALITY CONTROL TESTING OF SOIL AND ASPHALT MATERIALS 5
SP-16 CONSTRUCTION STAKING 6
SP-17 WINTER SHUTDOWN 7
SP-18 PERMITS 7
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SP-01 INCORPORATION OF THE ISPWC

All provisions of the Idaho Standards for Public Works Construction, 2020 Edition, hereafter collectively referred to as the ISPWC, apply to the project, except where portions of the ISPWC are modified or replaced by the Contract Documents.

Where a modification to ISPWC does not exist for a particular Section of ISPWC it shall be assumed the work is to be completed in accordance with the appropriate ISPWC Section. When a modification to ISPWC does exist the requirements of that modification supersede the related ISPWC requirement. Forms included in the Project Manual will be used in lieu of similarly titled forms in the ISPWC. Technical Specifications included in the Project Manual, replace the same numbered specifications in the ISPWC.

Delete PAY ITEMS Section from ISPWC. Payment for an item will only be made if that item is listed as a Bid Item in Section 00400: Bid Form. If an item is listed as a Bid Item, administrative and procedural requirements will be listed in Section 01275: Measurement and Payment. If an item is not listed as a Bid Item, the item is not required or is considered an incidental cost to other Bid Items

SP-02 QUALIFICATIONS OF CONTRACTORS, SUBCONTRACTORS, SUPPLIERS, AND OTHERS

Provide qualifications for the Contractor and all Subcontractors, Suppliers, or other persons or organizations identified in Technical Specifications per the guidelines in the respective specification sections.

Submit the evidence of qualifications listed in Article 3.01 of the Instructions to Bidders as well as the following additional information.

- A list of at least three (3) jobs successfully completed within the last five (5) years by the Bidder similar in size and scope to the Work, including references for each project;
- The proposed Superintendent's name and resume; and
- The general availability of the Bidder to complete the Work within a reasonable timeframe.
- A list of at least five (5) projects successfully completed within the last ten (10) years by the Bidder similar in size and scope to the Work, including references for each project.
  For each Subcontractor, Supplier, or other person or organization listed, include the primary contact and phone number, approximate anticipated monetary value of Work, and a list of similar projects over the past three (3) years.

SP-03 SUBSURFACE AND PHYSICAL CONDITIONS

In the preparation of Drawings and Specifications, the Engineer or Engineer's Consultants relied upon the following reports of exploration and tests of subsurface conditions at the Site:

1. *Geotechnical Transmittal* Bannock County Scale Improvements, July 11, 2025, GPI

These reports are not part of the Contract Documents, but the "technical data" contained therein upon which the Contractor may rely as identified and the above are incorporated therein by reference. Contractor is not entitled to rely upon other information and data utilized by Engineer and Engineer's Consultants in the preparation of Drawings and Specifications.

SP-04 PREBID EXPLORATION/SITE INFORMATION

All Bidders are strongly encouraged to visit the site of the work and conduct all field investigations at their disposal to become acquainted with the nature of the work. Obtain written authorization from the Owner utilities, and others who may be directly affected prior to entering the property, conducting field tests, drilling, boring, excavating, or test pumping.

If potential Bidders wish to excavate test pits, the excavations will be limited to the vicinity of those areas that appear on the Drawings to be excavated. Excavations in paved areas will not be allowed without written permission from the Owner. Excavations must be backfilled in a reasonably uniform manner and graded to the original ground surface line and grade. Backfill in unpaved streets, parking areas, or alleys must be compacted as specified in the Contract Documents and surfaced with four inches of new or existing gravel.

SP-05 SPOIL

Unless otherwise indicated on the Drawings or elsewhere in these specifications, place spoil in the confines of the existing easements or right-of-ways. In areas where confines limit the placement of spoil, the Contractor may have to haul the spoil out of the area until he is ready to backfill. The locations of spoil placement will be discussed at the preconstruction conference and will be subject to approval by the Engineer. The Contractor will be responsible for the disposal of all excess spoil.

No additional payment will be allowed the Contractor for this work. Refer to Section 01275: Measurement and Payment for more information.

SP-06 BEST MANAGEMENT PRACTICES

Dust Control – Dust control is to be considered an integral part of the Work. Dust Control shall be provided from the start of construction until the Work is complete. Fugitive dust as a result of construction shall be controlled at all times within the subject property. The Contractor shall have a water truck available for dust control prior to beginning any construction tasks. Wetting shall be done a minimum of twice per day in dry conditions or at the direction of the Engineer or Owner as required until the final construction activities are completed. Contractor shall be prepared to provide dust control until the final surface restoration is completed. All costs incurred to meet dust control requirements are incidental to other items of the contract and no separate payment shall be made.

Road and Parking Lot Cleaning – It shall be the sole responsibility of the contractor to keep all roads and parking lots free from mud, gravel, cobbles or other contaminants generated as a result of construction activities. It shall be the responsibility of the contractor clean all foreign matter form roads and parking areas in a reasonable amount of time as determined by the Owner & Engineer. All costs incurred to meet road and parking lot cleaning requirements are incidental to other items of the contract and no separate payment shall be made.

Erosion Control Measures – Temporary erosion and sediment control measures includes the installation and maintenance of temporary structural control measures to reduce or eliminate the erosion of soil and transport of sediment offsite as result of construction activities. This may include, but not be limited to, silt fences, ditch checks, sediment basins, erosion control mats, stabilized construction entrance, temporary diversions, inlet protection, sediment traps, and slope drains. If erosion control measures are required, it shall be the responsibility of the contractor to install and maintain them throughout the construction. All costs incurred to meet erosion control requirements are incidental to other items of the contract and no separate payment shall be made.

Noxious Weed Control – Comply with the County Noxious Weed Management Act, Title 22, Chapter 24 and all county and contract noxious weed control requirements. Determine the specific noxious weed control requirements of each county where the project is located before submitting a bid. Equipment and vehicles will be washed prior to entering the project site to remove vegetation to avoid the spread of weeds. All costs incurred to meet noxious weed control requirements are incidental to other items of the contract and no separate payment shall be made.

Failure to Provide Service – If the contractor fails to provide adequate service on the above listed items, the Owner reserves the right to contract these activities to a third party, the cost of which will be deducted from the contract amount at the time of the next pay request.

SP-07 WATER FOR CONSTRUCTION

The Contractor may obtain water for construction purposes from the hydrant located by the office at no charge. The Contractor may operate the fire hydrant, however any damage that is sustained from the usage will be the responsibility of the Contractor to repair. The Contractor is responsible for providing all required fittings, hoses, backflow assemblies, valves and other appurtenances required for obtaining water for construction from the Owner.

Contractors permitted to use a hydrant need to know and understand proper hydrant operation procedures as they are the party ultimately responsible for improper hydrant connections or any other improper operation of a hydrant. The contractor is responsible to teach proper operation procedures to all employees using hydrants. This includes water truck drivers or any other employees of the company that operate hydrants for any reason. No hydrant shall ever be left without the cap replaced and securely tightened.

The use of fire hydrants for construction water needs is a privilege, and the Owner will not tolerate abuse of this privilege. This includes illegal connections, water theft, vandalism, tampering, failing to replace caps, or damage caused by neglect.

SP-08 PRIVATE ACCESS

At all times during construction, afford property owners access to their property to the highest degree possible. Contractor to ensure the BLM land east of the project site has access throughout the duration of the project. Ensure that businesses will have at least one approach open at all times, if possible, and open closed-off approaches as quickly as possible.

SP-09 LANDSCAPED AREAS

Repair any landscaped or vegetated areas on private or public land that are scarred or destroyed during construction to an equal or better condition than that prior to the start of construction. This will include removing, replacing and grading topsoil. Replace all landscaped and/or grass areas disturbed during the construction process with a minimum 6-inches of topsoil. Reseed all disturbed areas, private or public, unless otherwise indicated.

No additional payment will be allowed to the Contractor for this work if outside the pay limits depicted in the restoration details or detailed in Section 01275: Measurement and Payment.

SP-10 REMOVAL AND REPLACEMENT OF FENCES, SIGNS, SIDEWALKS, CURBS, GUTTERS, POSTS, BARRICADES, ETC.

Culverts, fences, signs, decorative rocks, newspaper boxes, posts, sidewalks, curbs, gutters, propane tanks, satellite dishes, barricades, etc. may be encountered during construction that may hinder construction operations. Whether on private or public property, remove and replace these objects as necessary to conduct construction operations. Replace objects removed in as good a condition as previously existed and to the satisfaction of the Engineer.

No additional payment will be allowed the Contractor for this work. See Section 01275: Measurement and Payment and the Drawings for more information.

SP-11 REMOVAL AND REPLACEMENT OF EXISTING FENCES

It is the responsibility of the Contractor to coordinate with Owner, prior to removing existing fences, to determine procedures, length of time fence may be removed, and requirements for temporary fencing until permanent fencing is complete.

All fence removed must be reassembled prior to the end of the work day. A secure fence will be required at the end of each work day. The trench under the fencing section must be backfilled at least 20' either side of the fence at the end of each work day.

SP-12 STAGING AREA

Staging area locations will be determined at the preconstruction conference. Take care to protect, preserve and/or replace objects and structures encountered within the confines of the staging areas and restore all disturbed areas as close as possible to original condition as possible unless otherwise dictated in these specifications.

Storage of construction materials, equipment, and other items pertinent to the construction of the project will be allowed in the staging areas. However, bulk storage of petroleum based products stored in tanks will not be allowed. At all times, spill kits must be available on-site for any accidental spills of petroleum.

No payment will be allowed to the Contractor for any work, including restoration, with regards to the staging areas.

SP-13 CONFLICTS WITH UTILITIES

As shown on the Drawings, utilities may be in conflict with certain areas of the project. Utilities and other appurtenances may include but are not limited to the following: culverts; propane or gas mains and services; television cables; telephone lines and pedestals; electrical boxes and lines; street lights; telephone and power poles; water mains and services; sanitary sewer mains and services; and storm drain pipes and inlets.

Utility locations are based on the available information which has been provided to or discovered by the Engineer. There is no guarantee as to the accuracy and completeness thereof is expressly disclaimed. As outlined in SC-5.05.A.3, the Contractor must check with Idaho's DIGLINE (800-342-15185, www.digline.com or 811) at least two full working days in advance of the planned work date so that all utilities are located prior to digging.

The Contractor shall coordinate work with all utility companies or private entities that may be affected by the project. For utilities shown on the Drawings, the Contractor shall be responsible for any charges associated with crossing, working around, and supporting as required for construction operations. If a utility must be relocated, as determined by the Owner and Engineer, the Owner will pay for charges associated with the relocation of the utility directly to the utility owner. The contractor shall pay for any charges to relocate, remove, or replace utilities if it is requested by the Contractor for his own means and methods. For underground utilities not shown on the Drawings, the contractor shall follow procedures outlined in Article 5.05: Underground Facilities of the General Conditions.

Unless identified as a bid item in the Bid Form, no separate payment will be made for this work, and the Contractor shall figure the cost of such work into other applicable bid items.

SP-14 PROPERTY PINS & MONITORING WELLS PROTECTION

The Contractor shall take extreme caution to protect and preserve existing property pins and monitoring wells. Locations of Monitoring Wells and property lines are shown on the plans. The Contractor shall replace, at his own expense, any property pins and/or monitoring wells that may be damaged during construction.

SP-15 QUALITY CONTROL TESTING OF SOIL AND ASPHALT MATERIALS

This Special Provision only applies to soil and asphalt materials. Refer to other applicable sections of the specifications for quality control testing requirements of other materials.

Complete testing of all components of the project will be required to the satisfaction of the Owner and the Engineer. The Contractor is solely responsible for quality control (QC) testing.

The following table outlines the minimum frequency of quality control testing. All testing is the responsibility of the Contractor and must be conducted by an approved, certified testing laboratory or individual.

Contractor must remedy all defects and performance problems revealed by the testing to the satisfaction of the Engineer at no additional expense to the Owner. The Owner may conduct quality assurance testing in addition to the Contractor’s quality control testing, and in the case of a conflict between quality control and quality assurance testing, the quality assurance testing will govern.

Minimum Quality Control Testing Frequency Table

SECTION	ITEM DESCRIPTION	TEST OR SUBMITTAL	FREQUENCY
TRENCH BACKFILL			
02221	Type 'A' Trench Backfill	Field Density/Moisture Content	1 test / 200 LF / lift
02221	Type 'B' Trench Backfill	Field Density/Moisture Content	1 test / 300 LF / lift
02221	Type 'C' Trench Backfill	Field Density/Moisture Content	1 test / 400 LF / lift
STREET, SIDEWALK, AND CURB AND GUTTER BACKFILL			
02230	Subgrade Preparation	Field Density/Moisture Content	1 test / 5,000 SF / lift
02230	Embankment Placement	Field Density/Moisture Content	1 test / 5,000 SF / lift
02230	Subexcavation Replacement	Field Density/Moisture Content	1 test / 5,000 SF / lift
02234	Sub-Base Course(s)	Field Density/Moisture Content	1 test / 2,500 SF / lift
02235	Base Course(s)	Field Density/Moisture Content	1 test / 2,000 SF / lift
MISCELLANEOUS BACKFILL			
02300	Select Fill/Structural Fill	Field Density/Moisture Content	1 test / 1,000 SF / lift
ASPHALT (PLANT MIX BITUMINOUS SURFACE)			
02510	Asphalt Concrete Pavement	Field Density	1 test / roller pass
02510	Asphalt Concrete Pavement	Field Thickness	1 test / 3,000 SF
02510	Asphalt Concrete Pavement	In-Place Density and Thickness	1 core / 500 ton

SP-16 CONSTRUCTION STAKING

The Engineer will provide horizontal and vertical control consisting of benchmarks throughout the project site. All offset staking is the Contractors responsibility. The Contractor shall protect all control points during the course of their work and replace any points damaged or removed by their activities. All survey monuments and stakes provided by the Contractor shall be subject to inspection and verification by the Engineer. The Contractor shall provide all additional staking necessary for vertical and horizontal control such that the project may be completed in accordance with the plans and specifications.

The Engineer shall provide the following staking consisting of stakes or hubs.

- Vertical and Horizontal Control – Vertical and horizontal control will be provided by benchmarks throughout the project site.

The finished elevations shall not deviate from the plan elevation more than 0.05 feet at any given point. Finished centerline horizontal alignment shall not deviate from plan location more than 0.2 feet.

This item covers survey work required to set specific horizontal and vertical stringlines, stakes, and/or bluetops to ensure location specific compliance with the Plans and Specifications for each stage of construction. Contractor is responsible for the preservation of said stringlines, stakes, and/or bluetops

until such time that they are no longer required for construction activities. Contractor is responsible for coordination efforts which will limit the amount of exposure to said stringlines, stakes, and/or bluetops. The Contractor will not be reimbursed for any additional survey work, including rental late fees or additional rental time that is required due to sequence of operations, operator error, or negligence. This item includes all labor, equipment (including rental fees), supplies, and incidentals associated with this work. The Engineer will stake the centerline stationing for all mainline cross-drain culverts. Consider all costs associated with this provision incidental to performance of the work. Include the cost in the cost of other items.

SP-17 WINTER SHUTDOWN

A shutdown due to inclement weather during the winter months may be requested by the Contractor. Indicate the number of calendar days being requested in the original shutdown request. This initial request may be extended during the shutdown period as long as such extension is justifiable and requested at least 14 days prior to the date the original extension was to elapse. Any extension of shutdown will require the Contractor to demonstrate that adequate operations can be maintained throughout the extended period. Shutdown extensions may require operation modifications and approval of the Idaho DEQ. Only one winter shutdown will be granted during the project.

The Owner reserves the right to approve or disapprove any shutdown or extension requests. As a condition of approval of a shutdown, close all open excavations, provide for maintaining traffic, and provide for protection of public property at the work site. The Contractor will not be allowed to perform any work during the shutdown period unless prior approval is granted by the Owner.

SP-18 PERMITS

The Owner and Engineer will obtain the following permits at no expense to the Contractor. The Contractor will be required to carry out all provisions of these permits as part of this contract.

1. Solid Waste License and Permit

The Contractor is responsible for obtaining all necessary permits, licenses, agreements, insurance, and approvals required by any government authority or agency for the performance of this work at his own expense. Owner will allow Contractor access, as appropriate and necessary, for obtaining data in regard to permits and, at its own discretion, may assist Contractor, when necessary, in obtaining such permits. These Permits may include but are not limited to the following:

1. Building permit
2. Electrical permit
3. Septic permit
4. Storm Water Discharge Permit. The work requires a General Permit for Storm Water Discharges Associated with Construction Activities, and all discharges must be in accordance with the submitted Storm Water Pollution Prevention Plan (SWPPP). The Contractor is responsible for preparing and signing a SWPPP and submitting a complete Notice of Intent (NOI) package to the Department of Environmental Quality. The Contractor will be responsible for all fees associated with the permit application.

   Implement and comply with the provisions of the NOI and SWPPP and the cost of this item will be distributed throughout the contract price. If the Contractor elects not to carry out the provisions of the NOI and SWPPP, he shall be responsible for any damages or fines the State of Idaho may assess for non-compliance. At the end of the project, the

Contractor will be responsible for submitting and signing a completed Notice of Terminations (NOT) form to the Department of Environmental Quality. The Contractor will be responsible for paying annual SWPPP permit renewal fees until the NOT is issued.

SP-19 EASEMENTS, CONSTRUCTION LIMITS, AND RIGHT-OF-WAY

Conduct construction operations within the easement, construction limits, and right-of-way limits. Obtain written permission from the adjoining private landowner prior to conducting any operations off the allowed easement. Take care to protect, preserve and/or replace objects and structures encountered within the confines of the easements and restore all disturbed areas restored to the original condition unless otherwise dictated in these specifications.

SP-20 WORKING HOURS

Regular working hours are defined as an eight-hour period (plus 1 hour lunch allotment) within the bounds of 7:00 AM and 5:00 PM Monday through Saturday. Work during other hours may be permitted following written approval of the Owner. Contractor shall provide the Engineer a request at least three (3) days prior to working other hours, or in excess of 8 hours per day. Engineer shall provide a response to the request within 24 hours of receipt. Emergency work may be done without prior permission.

The Contractor may work outside of these hours to accommodate traffic requirements.

SP-21 UNSCHEDULED EMPLOYMENT OF THE ENGINEER

Examples of damages for unscheduled employment of the Engineer that will be assessed against the Contractor include, but are not limited to:

1) The Contractor working beyond the specified contract time.
2) The Contractor working more than 8 hours per day, (or 40 hours per week if four ten hour shifts are run) or on Saturdays, Sundays, and Federal Holidays.
3) The Contractor utilizing material, supplies, or equipment that requires the redesign of the project.
4) The Contractor destroying or disturbing baselines benchmarks or reference stakes.
5) Failure of the Contractor to maintain acceptable as-built records.
6) The review of a fourth or subsequent submittal of a Shop Drawing, sample, or other item requiring approval.
7) Additional services required due to the Contractor's failure to pay subcontractors and/or suppliers.
8) Retests required by the Engineer of tests that have failed.
9) Additional construction administration required by the Engineer as a result of unacceptable work.
10) The Contractor requiring observation of product work outside of those trips identified in the contract between the Owner and engineer – 16 Trips.

Damages for the unscheduled employment of the Engineer may be incurred by the following personnel listed in section 4.04 of the Agreement and will be determined based on hourly rates shown in section 4.04 of the Agreement

The rates listed in section 4.04 of the Agreement are subject to changes on January 1st of each year.

Out of pocket expenses for materials, equipment, supplies, transportation, lodging, and subsistence will be billed at cost plus ten percent. Damages for unscheduled employment of the Engineer will be deducted from monthly progress payments and the final payment as the damages are incurred. Damages for

unscheduled employment of the Engineer are independent from liquidated damages for delay as described in the agreement.

SP-22 CONTRACTOR EMERGENCY CONTACT

Provide a primary and secondary 24-hour, 7-day a week emergency contact.

SP-23 SEEDING

Furnish and install native seed mix per local conservation office. Sow seed in the areas disturbed. Drill seeding is preferred. Broadcast seeding will be allowed at two times the seed rate and track walked in with a dozer.

SP-24 FIELD OFFICES

Maintain a suitable field office at the site, which will serve as headquarters for the project Superintendent. All communications, drawings, instructions, and other articles will be delivered to the Contractor's field office or to the Contractor's main office as appropriate. Communications delivered to either location will be deemed to have been delivered to the Contractor.

Maintain copies of record drawings, specifications, shop drawings, submittals, and all communications pertinent to the performance of the work at the field office and make them available to the Owner or Engineer for use at all times.

All electrical and heating bills for the field office are the responsibility of the contractor. No separate payment will be made for field offices. The cost of field offices will be included in the mobilization Bid Item for the base bid.

The Contractor is responsible to provide sanitary facilities for all workers at no additional cost.

SP-25 PROGRESS MEETINGS

The Engineer will schedule and conduct progress meetings at regular intervals to discuss the status of the project. The meetings will be conducted at the project site, unless otherwise indicated.

In addition to representatives of Owner and Engineer, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

Engineer shall record significant discussions and agreements achieved and shall distribute the meeting minutes to everyone concerned within 7 days of the meeting

SP-26 SILANE SEALER FOR CONCRETE

Contractor shall furnish and apply Sikagard 740W silane sealer or approved equivalent to all exposed concrete surfaces. Install per manufacturer recommendations. Apply at least 28 days after the concrete was cast.

SP-27 FINAL CLEANUP

Excess material accumulated from construction, such as piles of gravel or soil, debris, papers, rejected materials, worn out equipment parts, etc. shall be picked up and disposed of at the landfill. The Owner will not charge for disposal of items related to this project's construction.

SP-28 IMPACT TO/FROM OTHER ENTITIES

Owner's day-to-day landfill operation will continue to run during construction. The Contractor will coordinate operations and on-site traffic with the County.

SP-29 IDAHO PUBLIC WORKS CONTRACTOR EXEMPTIONS

Per Idaho Code 54-1903, Contractors performing work for a solid waste disposal site are exempt from Idaho Codes 44-1002 and 54-19. Therefore, reference to Idaho Code Sections 44-1002 and 54-19 shall not be valid for this project.

SP-30 TRAFFIC CONTROL

The Contractor shall allow two-lane traffic through the site Monday-Saturday 7 a.m. through 4 p.m. The Contractor may limit traffic to one lane on hours outside of these confines. Work on weekends and overnight will be permitted with notice.

SP-31 DEMOLITION OF EXISTING SCALE HOUSE AND SCALES

The Contractor shall demolish the existing scale house and scales after the new scale house and scales are operational to the satisfaction of the Owner. The Contractor shall coordinate demolition with the Owner. The Owner reserves the right to keep the existing scales once removed from the pits. The scale house will be disposed of in the Class III landfill area at no additional charge to the Contractor. The scale pits shall be filled with compacted soil or concrete. The scale house foundation should be demolished below the ground surface. The entire disturbed area shall be reclaimed and repaved with asphalt.

END OF SECTION

DIVISION 1

GENERAL REQUIREMENTS

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.1 DESCRIPTION

A. The Invitation to Bid contains a general description of the project work to be performed under this Contract. The Supplemental Conditions and Special Provisions and other documents contain additional information necessary to perform the work.

1.2 CONTRACT DOCUMENTS

A. Portions of the Contract Documents are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor. For example, “Furnish...” means “Contractor shall furnish...”, “Provide” means Contractor shall provide...”. For imperatives specifically addressing the Engineer/Owner, see paragraph 1.02, General Conditions.

B. Contract Documents are defined in Article 1, paragraph 1.01.A.13, General Conditions, as modified by Idaho Standards for Public Works Construction, any Supplemental Conditions, and Article 7 of the Agreement Form.

C. The Contract Documents are intended to provide the basis for proper completion of the work suitable for the intended use of the Owner. Comply with Article 3, General Conditions. Specifications and Drawings included in these contract documents establish the performance, quality requirements, location and general arrangement of materials and equipment, and establish the minimum standards for quality of workmanship and appearance. Anything not expressly set forth but which is reasonably implied or necessary for proper performance of the project shall be included.

D. The various portions of the Contract documents, of which these specifications are a part, are essential parts of the Agreement, and a requirement occurring in one is as binding as though occurring in all. All portions are intended to be complementary and to describe and provide for complete work as referenced in Article 3, General Conditions. Unless specifically noted otherwise, in the case of discrepancy, the following precedence will govern.

1. Permits from Town/City/County Departments and other agencies as may be required by law, which will govern over;
2. Change Orders, which will govern over;
3. Executed Agreement, which will govern over;
4. Addenda, which will govern over;
5. Special Provisions, which will govern over;
6. Divisions 1 through Division 16 Technical Specifications, which will govern over;
7. Supplementary Conditions to the General Conditions, which will govern over;

8. General Conditions, which will govern over;
9. Drawings, which will govern over;
10. Contractor's Bid, which will govern over;
11. ISPWC;

With reference to Drawings, the order of precedence is as follows:

1. Addenda/Change Order Drawings govern over any other Drawings.
2. Figures govern over scaled dimensions.
3. Contract Detail Drawings govern over Contract General Drawings.
4. Contract Drawings govern over Standard Drawings.

E. The bound copy of the Idaho Standards for Public Works Construction, 2020 Edition, as distributed by the Local Highway Technical Assistance Council (LHTAC), will govern as the legal set of these specifications over any unbound copy, or any CD-ROM or floppy disk versions

F. A requirement mentioned in one part/section of the Contract Documents shall be considered as having been mentioned in all parts/sections.

1.3 WORK SEQUENCE

A. Comply with paragraph 2.03, 2.05 and 4.04 of the General Conditions and Milestones specified in the Contract Documents.

B. Submit detail schedules as specified in the Contract Documents.

C. Field verify dimensions indicated on drawings before fabricating or ordering materials. Do not scale drawings.

D. Notify Engineer/Owner of existing conditions differing from those indicated on the drawings. Comply with paragraph 5.04, of the General Conditions and any Supplementary Conditions. Verify the existence and location of underground utilities along the route of the proposed work. Omission of an existing or previous abandoned utility location on the Drawings is not to be considered as its nonexistence. Inclusion of existing utility locations on the Drawings is not to be considered as its definite location. Do not remove or alter existing utilities without prior written approval.

1.4 CONTRACTOR USE OF PREMISES

A. Comply with paragraph 5.02, General Conditions, and as specified in the Contract Documents.

B. Do not park vehicles or equipment or store materials on private property without written permission from the property owner. Provide Engineer/Owner with copy of authorization.

1.5 OWNER FURNISHED ITEMS

A. Owner-furnished items are listed in the Contract Documents.

PART 2 - PRODUCT – NOT USED

PART 3 - EXECUTION – NOT USED

PART 4 - MEASUREMENT AND PAYMENT

4.1 PAYMENT

A. Unless specifically noted otherwise, the work of Division 1 shall be incidental to the work, and no separate payment shall be made.

END OF SECTION

SECTION 01050

FIELD ENGINEERING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and Special Provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
   1. Construction layout.
   2. Field engineering.

B. Related Sections include the following:
   1. Division 1 Section "Submittals" for submitting surveys.
   2. Division 1 Section "Contract Closeout" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Engineer promptly.

B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
   1. Establish benchmarks and control points to set lines and levels.
   2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
   3. Inform installers of lines and levels to which they must comply.
   4. Check the location, level and plumb, of every major element as the Work progresses.
   5. Notify Engineer when deviations from required lines and levels exceed allowable tolerances.
   6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.

D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Engineer.

3.2 FIELD ENGINEERING

A. Identification: Owner and Engineer will identify existing benchmarks, control points, and property corners to the best of his knowledge. The Contractor will have the ultimate responsibility to locate, recognize and preserve all of these that are encountered.

B. Retain a licensed land surveyor, at the Contractor's expense, to replace any survey corners, property pins, or highway right-of-way monuments removed or damaged during construction.

C. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
1. Do not change or relocate existing benchmarks or control points without prior written approval of Engineer. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Engineer before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

D. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

PART 4 - MEASUREMENT AND PAYMENT (Not Used)

END OF SECTION

SECTION 01275

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and Special Provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for measurement and payment.

1.3 DEFINITIONS

A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.

B. Measurement and Payment: The Measurement and Payment sections do not necessarily name all incidental items required to complete the work. The cost of all such incidentals shall be included in the various related items of work. All estimated quantities stipulated in the Bid Forms or other Contract Documents are approximate and are to be used only as a basis for estimating the probable cost of the work and for the purpose of comparing the proposals submitted for the work. It is understood and agreed that the actual amounts of work performed and materials furnished under unit price items may differ from such estimated quantities and the payment for such work and materials shall be based on the actual amount of work done and materials furnished in each case.

C. Engineer will determine the actual quantities and classifications of Unit Price Work performed by the Contractor.

D. List of Bid Items: A list of unit Bid Items is included at the end of this Section. Specification Sections referenced in the schedule contain requirements for materials described under each Bid Item.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST BID ITEMS

A. Bid Items No. 1- MOBILIZATION

1. Description: This item covers the costs of preparatory work and operations. **Any bids that contain a lump sum bid price for mobilization greater than 10% of the bid price for the respective schedule or additive alternative may be rejected at the option of the Owner.**
2. Work Required: Work required under this section includes but is not limited to the following.
   a. The movement of personnel, equipment, supplies and incidentals to the project site
   b. The establishment of all facilities necessary for the work on the project;
   c. The costs of obtaining the required permits, bonds, and insurance; and
   d. All other work and operations which must be performed, or costs incurred prior to beginning work on the various items of the project.
3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for MOBILIZATION will be made as a percentage completed of the lump sum. 50% of the lump sum will be credited to the first progress payment, with the second 50% being credited to subsequent progress payments in proportion to total construction completed as a percentage of the contract unit price.
5. Payment: Payment for MOBILIZATION will be made at the contract unit price bid as a lump sum.

B. Bid Item No. 2 – 80-FOOT CONCRETE DECK SCALE:

1. Description: This item consists of furnishing and installing four 80-foot concrete deck scales and appurtenances as shown on the Drawings and conforming to Specification Section 10881. Equipment furnished and installed shall be assembled, erected and placed in proper operating condition in full conformity with Drawings, specifications, special provisions, engineering data, instructions and recommendations of the equipment manufacturer.
2. Work Required: Work required under this section shall include but not be limited to the following:
   a. Furnishing and installing four 80-foot concrete deck scales per Specification Section 10881;
   b. Furnishing and installing three weight indicator in the scale house per the Specifications;
   c. Furnishing and installing all scale accessories;
   d. Furnishing and installing 4,000 psi concrete for decks with approved mix design;
   e. Providing and installing silane sealer;
   f. All concrete testing as required in ISPWC Standard Specification Division 700;
   g. Extending electrical supply to the scale per manufacturer's requirements;
   h. Furnishing and installing all necessary electrical appurtenances;
   i. Coordinating with the manufacturer for field testing and acceptance;
   j. Coordinating training session for the owners;

k. Furnishing and installing all electrical and signal conduit and wiring as needed;
l. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.

3. Unit of Measurement: EACH
4. Measurement: Measurement for 80-FOOT CONCRETE DECK SCALE will be made per EACH.
5. Payment: Payment for 80-FOOT CONCRETE DECK SCALE will be made at the contract unit price bid per EACH as indicated in the Bid Form.

C. Bid Item No. 3 – SCALE FOUNDATION:

1. Description: This item includes all work associated with the construction of the scale foundations as shown on the Drawings and Specification Sections 02300, ISPWC Division 700 and 10881.
2. Work Required: Work required under this section shall include but not be limited to the following:
   a. Excavation and structural embankment placement required to construct the particular structural component to lines and grades indicated on drawings;
   b. Disposal of excess spoil, debris and rubbish;
   c. Stockpiling excess materials to be used in embankment;
   d. Coordinating with scale manufacturer and providing shop drawings that meet the scale manufacturer's platform scale requirements;
   e. Furnish and installing forms, reinforcing steel, 4,000 psi concrete, block outs, etc. necessary to construct the structures;
   f. Submitting concrete mix design for approval;
   g. Furnishing and setting anchor bolts for scales, as required by the scale manufacturer's drawings;
   h. Testing of concrete as required in ISPWC Standard Specification Division 700;
   i. Testing of soil materials as required in the Special Provisions;
   j. Providing and installing penetrations for conduits as required;
   k. Final grading and cleanup;
   l. Providing and installing silane sealer;
   m. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified.
3. Unit of Measurement: EACH
4. Measurement: Measurement for SCALE FOUNDATION will be made per EACH.
5. Payment: Payment for SCALE FOUNDATION will be made at the contract unit price bid per EACH as indicated in the Bid Form.

D. Bid Item No. 4 – SCALE CONCRETE APPROACHES:

1. Description: This item shall meet the requirements of Specification Division 700 of the ISPWC Standard Specifications and be constructed to the sizes and locations shown on the Drawings.
2. Work Required: Work required under this section shall include, but not be limited to the following;
   a. Fine grading, compaction and preparation of subgrade;
   b. Construction of all formwork;

c. Furnishing and installing forms, reinforcing steel, 4,000 psi concrete, block outs, etc. necessary to construct the structures;
d. Submit concrete mix design and shop drawings for reinforcing steel;
e. Testing of concrete as required in ISPWC Standard Specification Division 700;
f. Testing of soil materials as required in the Special Provisions;
g. Place, finish, cure concrete;
h. Installation of construction joints;
i. Removal of forms;
j. Final grading and cleanup;
k. Providing and installing silane sealer;
l. Furnishing and installing steel side rails on concrete approaches as shown on the drawings;
m. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.

3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for CONCRETE APROACHES will be made as a percentage completed of the LUMP SUM.
5. Payment: Payment for CONCRETE APPROACHES will be made at the contract unit price bid per LUMP SUM as indicated in the Bid Form

E. Bid Item No. 5 – EARTHWORK:

1. Description: This item shall meet the requirements of Specification Sections 02300.
2. Work required under this section shall include but not be limited to the following:
   a. Clearing and grubbing;
   b. Topsoil stripping and stockpiling
   c. Removal of existing fence;
   d. Contour grading;
   e. Excavation and embankment placement required to construct, shape, and slope backslopes, cuts, subgrades, shoulders, etc. to lines and grades indicated on the drawings;
   f. Additional embankment material can be obtained from the stockpile as shown on the plan;
   g. Subbase proof rolling;
   h. Disposal of excess or unsuitable material: All excess excavated material shall be disposed of on site in location acceptable to the Owner;
   i. Demolition of existing scale house and scales;
   j. Stockpiling excess materials to be used in road embankment;
   k. Performing all compaction and other testing as required by Special Provisions;
   l. Placing topsoil on disturbed areas per specifications;
   m. Seeding disturbed areas;
   n. Supplying proctor tests required for each different material;
   o. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for EARTHWORK will be made as a percentage completed of the LUMP SUM.

5. Payment: Payment for EARTHWORK will be made at the contract unit price bid per LUMP SUM as indicated in the Bid Form.

F. Bid Item No. 6 – SCALE HOUSE

1. Description: This item covers all work, materials and equipment related to the 16' x 24' scale house, scale house foundation, utilities, and appurtenances.
2. Work required under this section shall include but not be limited to the following:
   a. Furnishing and installing the scale house foundation system (concrete and reinforcing)
   b. Structural fill
   c. Subgrade preparation
   d. Scale house building materials
   e. Scale house building construction
   f. Gutters
   g. Building permits
   h. Walls, doors and panels
   i. Windows and teller windows
   j. All interior and exterior finishes
   k. Electrical and network systems
   l. HVAC system
   m. Plumbing
   n. Furnishing and installing bollards around scale house as shown on the drawings;
   o. Coordinating with all required building official inspection and special instructions,
   p. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified.
3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for SCALE HOUSE will be made as a percentage of completed of the lump sum.
5. Payment: Payment for SCALE HOSUE will be made at the contract LUMP SUM bid as indicated in the Bid Form.

G. Bid Item No. 7 – ACCESS ROAD

1. Description: This item consists of the construction of the access road as shown on the plans. This item consists of final grading, shaping of the subgrade, road separation fabric, and base course. The Contractor must furnish and install all materials indicated on the Drawings and in the Contract Documents. The Contractor is responsible for verifying the quantities of material required to complete this work. Any excess material excavated for the road will be hauled to the stockpile area. The asphalt surfacing is paid for under Bid Item No. 201 if awarded.
2. Work required under this section shall include but not be limited to the following:
   a. Finish grading surface and subgrade preparation;
   b. Prepare subgrade for gravel;
   c. Watering, processing, and compaction of road materials;
   d. Furnish and install 8 oz. non-woven fabric as shown in the Drawings;
   e. Furnish and install 3/4-inch minus base course as shown in the Drawings;

f. Gradation and proctor testing of Contractor supplied materials as required by Special Provisions;
g. Field density testing of all embankments per the Special Provisions;
h. Additional staking as necessary;
i. All gradation, and proctor tests as specified herein;
j. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified.

3. Unit of Measurement: SQUARE YARD
4. Measurement: Measurement for ACCESS ROAD will be made per plan quantity.
5. Payment: Payment for ACCESS ROAD will be made at the contract SQUARE YARD as indicated in the Bid Form. Quantities shown on the Bid Form will be paid. .

H. Bid Item No. 8 – GATES AND FENCING:

1. Description: This item consists of furnishing and installing chain-link fencing and gates as shown on the Drawings. This item shall meet the requirements of Technical Specification Section 02821. This item includes all work required to install two (2) automatic sliding gates and gate operators with keypads and bollards for the entrance of the landfill as shown on the drawings. This item also includes all work required to install two (2) automatic swinging gates and gate operators with keypads and bollards for the employee entrance of the landfill as shown on the drawings. This item also includes installation of a 6-foot tall chain link perimeter fence and removal of portions of the chain link fence as shown on the Drawings. This item also includes installation of signage as shown on the Drawings. All work shall conform to manufacturer's specifications.
2. Work required under this section shall include but not be limited to the following:
   a. Furnishing and installing two automatic sliding gates and two automatic swinging gates;
   b. Furnishing and installing automatic gate operators or approved equivalent for new automatic gates as shown on the plans and Technical Specifications;
   c. Furnishing and installing two keypads per gate or to operate the new automatic gates;
   d. Furnishing and installing gate switches in the scale house for new gates;
   e. Furnishing and installing all conduits for the gate system;
   f. Furnishing and installing all electrical wiring required for gate operators and keypads;
   g. Furnishing and installing bollards around keypads as shown on the drawings;
   h. New gate and operators shall adhere to all applicable safety regulations;
   i. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: LUMP SUM
6. Measurement: Measurement for GATES AND FENCING will be made as a percentage completed of the LUMP SUM.
7. Payment: Payment for GATES AND FENCING will be made at the contract unit price bid per LUMP SUM as indicated in the Bid Form.

I. Bid Item No. 9 – BARRIER RAILS:
1. Description: This item includes the fabrication and installation of guardrails and precast concrete barriers in the locations shown on the Drawings.
2. Work required under this section shall include but not be limited to the following:
   a. Providing material submittals and shop drawings;
   b. Providing and installing concrete barrier rails including tapered ends as shown in the standard IDT drawings;
   c. Furnishing and installing w-beam guardrail
   d. Furnishing and installing 6" x 8" posts per IDT;
   e. Furnishing and installing all nails, nuts, bolts, and washers shown in the drawings
   f. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: LINEAL FOOT
4. Measurement: Measurement for BARRIER RAILS will be made per LINEAL FOOT as indicated in the Bid Form.
5. Payment: Payment for BARRIER RAILS will be made at the contract unit price bid per LINEAL FOOT as indicated in the Bid Form.

J. Bid Item No. 10 – SITE ELECTRICAL AND LIGHTING:
1. Description: This item includes the installation a new electrical panel to supply power to all of the new components of this project, installation of the site lighting at the locations shown on the Drawings and detailed in the Specifications.
2. Work required under this section shall include but not be limited to the following:
   a. Providing material submittals and shop drawings;
   b. Furnishing and installing a new drop power utility pole as necessary;
   c. Furnishing and installing a new electrical panel as detailed in the Specifications and Drawings;
   d. Furnishing and installing new LED luminaires with poles per the drawings;
   e. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for SITE ELECTRICAL AND LIGHTING will be made per LUMP SUM as indicated in the Bid Form.
5. Payment: Payment for SITE ELECTRICAL AND LIGHTING will be made at the contract unit price bid per LUMP SUM as indicated in the Bid Form.

K. Bid Item No. 11 – DRAINAGE IMPROVEMENTS
1. Description: This item consists of various drainage improvements. This item shall meet the requirements of Section 02320 of the Technical Specifications. All the on-site drainage and diversion ditches and berms shall be excavated to the proper depth and shape.
2. Work required under this section shall include but not be limited to the following:
   a. Furnishing and installing culverts and Flared End Treatment Sections (FETS) as shown on the Drawings
   b. Final grading of perimeter ditches;

c. Maintaining site drainage during the work;
d. Preparing and executing a SWPPP;
e. Maintaining BMP's according to an approved SWPPP;
f. Additional staking as necessary;
g. Construction of drainage ditches as shown on the Drawings.
h. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified.

3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for DRAINAGE IMPROVEMENTS will be made as a percentage completed of the lump sum.
5. Payment: Payment for DRAINAGE IMPROVEMENTS will be made at the contract LUMP SUM bid as indicated in the Bid Form.

L. Bid Item No. 12 – SIGNAGE

1. Description: This item includes the furnishing and installation of site road signage, and precast concrete jersey barriers for signages shown on the Drawings. Signage at the z-wall is paid under another bid item.
2. Work required under this section shall include but not be limited to the following:
   a. Furnishing and installing signage and jersey barriers for signage as shown in the Drawings;
   b. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for SIGNAGE will be made as a percentage completed of the lump sum.
5. Payment: Payment for SIGNAGE will be made on the percentage of the contract unit price bid per LUMP SUM as indicated in the Bid Form.

M. Bid Item No. 13 – WATER SERVICE CONNECTION:

1. Description: This item shall include the connection of the new service lines to the water main and the connection of the new water service line to the scale house. The service to the weed building will be terminated within 10 feet of the weed building with a cap. It includes installation of a new service saddle, corporation stop, curb valve and box at the locations shown on the plans. The Contractor shall connect the new service to the water main. Multiple different water service installation types will be required of the Contractor. The Contractor shall take into account the differences of each of these such as backfill requirements, pavement section, gravel section, traffic control, etc.
2. Work Required: Work required under this section shall include but not be limited to the following:
   a. Trench excavation, bedding, backfill, and compaction;
   b. Dewatering, sheeting, and shoring;
   c. Gravel and asphalt removal and replacement ;
   d. Furnishing and installing service clamps and corporation stops for water main;
   e. Tapping the existing water main;
   f. Furnishing and installing curb valves and boxes;
   g. Furnishing and installing all fittings;
   h. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified.

3. Unit of Measurement: PER EACH.
4. Measurement: Measurement for WATER SERVICE CONNECTION will be measured per each as listed in the Bid Form.
5. Payment: Payment will be made at the contract unit price bid per each WATER SERVICE CONNECTION as specified in the Bid Form.

N. Bid Item No. 14 – POLYETHYLENE (PE) WATER SERVICE LINE:

1. Description: PE water service line in sizes and classes indicated on the drawings and in the contract documents. Service line installation shall be by: 1) Removing pavement and/or gravel, trench excavation, line installation, trench backfill, and pavement and/or gravel restoration; or 2) Pushing or pulling the service line (method to be approved by Engineer) without destruction to surfacing; or 3) Combination of 1 and 2 or other method approved by the Engineer.
2. Work Required: Work required under this section shall include but not be limited to the following:
   a. Excavation and backfill;
   b. Dewatering, sheeting, and shoring required for installation;
   c. Furnishing and installing bedding;
   d. Testing, cleaning and disinfecting;
   e. Pushing or pulling service lines if applicable;
   f. Furnishing and installing polyethylene service line;
   g. Surface restoration (pavement and/or gravel)
   h. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified.
3. Unit of Measurement: EACH.
4. Measurement: Measurement for POLYETHYLENE (PE) WATER SERVICE LINE will be measured per each as indicated in the Bid Form.
5. Payment: Payment will be made at the contract price bid per each POLYETHYLENE (PE) WATER SERVICE LINE as indicated in the Bid Form and shall include the cost of trench excavation, pipe bedding, backfill and surface restoration.

O. Bid Item No. 15 – SEPTIC SYSTEM

1. Description: This item includes furnishing and installing a new concrete septic tank, drainfield laterals, chambers, and lateral clean-outs, etc. in sizes and types indicated on the Drawings and in the Contract Documents.
2. Work Required: Work required under this section includes but is not limited to the following.
   a. Excavation, backfill, and compaction;
   b. Dewatering, sheeting, and shoring required for installation;
   c. Performing structural excavations and backfill;
   d. Providing structural backfill below tank base;
   e. Furnishing and installing all necessary vents;
   f. Furnishing and installing all necessary filters;
   g. Connection of all piping;
   h. Furnishing and installing concrete watertight tank complete with monolithic base, gaskets, coatings, watertight connections, risers, and locking covers;
   i. Testing tank for water-tightness;
   j. Furnishing and installing manifold piping fittings and connections;
   k. Furnishing and installing fittings and lateral clean-outs;

l. All labor, tools, equipment, materials, royalties, and incidentals necessary to complete the work as specified.

3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for SEPTIC SYSTEM will be made as a percentage completed of the lump sum.
5. Payment: Payment for SEPTIC SYSTEM will be made at the contract unit price bid as a lump sum.

P. Bid Item No. 16 – TRAFFIC CONTROL

1. Description: This item includes providing and maintaining all traffic control on the project as indicated on the Drawings and in the Contract Documents.
2. Work Required: Work required under this section includes but is not limited to the following.
   a. Furnishing, installing, maintaining, replacing, and operating necessary construction traffic control devices throughout the work period;
   b. Preparing and submitting the traffic control plan and making adjustments as required for final approval; and
   c. All incidental materials, tools, equipment, and labor for the completion of this item.
3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for TRAFFIC CONTROL will be made as a percentage completed of the lump sum. 50% of the lump sum will be credited to the first progress payment, with the second 50% being credited to subsequent progress payments in proportion to the total construction completed as a percentage of the contract unit price.
5. Payment: Payment for TRAFFIC CONTROL will be made at the contract unit price bid as a lump sum.

Q. Bid Item No. 17 – 12” GRAVEL SURFACING:

1. Description: This item includes importing and installing the 12-inch-thick layer of 3/4-inch minus crushed gravel within the public tipping area and recycling area. This item shall meet the requirements of Section 802 of the ISPWC Standard Specifications.
2. Work required under this section shall include but not be limited to the following:
   a. Provide gradation and proctor tests for aggregate as required;
   b. Importing, hauling, and spreading the aggregate surface course material;
   c. Blending, watering and compacting;
   d. Finish grading to the lines and grade shown on the plans;
   e. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for 12” GRAVEL SURFACING will be per lump sum to the lines and grade as shown on the plans.
5. Payment: The payment for 12” GRAVEL SURFACING will be made at the contract unit price bid per LUMP SUM, as indicated in the Bid Form.

R. Bid Item No. 101 – STRUCTURAL CONCRETE:

1. Description: This item shall meet the requirements of the Technical Specification Division 700 – Concrete and be constructed to the sizes and

locations shown on the Drawings. This item includes the construction of the retaining walls and footings as shown on the Drawings.

2. Work required under this section shall include, but not be limited to the following:
   a. Excavation and embankment required to construct z-walls.
   b. Furnishing and installing 1½-inch crushed base course material under foundation;
   c. Fine grading, compaction and preparation of subgrade;
   d. Construction of forms;
   e. Furnishing and installing concrete and reinforcing steel;
   f. Submit concrete mix design and shop drawings for reinforcing steel;
   g. Concrete testing per ISPWC Section 703;
   h. Place, finish and cure concrete;
   i. Installation of weep holes and fabric as shown on the Drawings;
   j. Installation of weakened planes as shown on the Drawings;
   k. Furnishing and application of silane sealer on all exposed concrete;
   l. Removal of forms;
   m. Final grading, cleanup;
   n. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for STRUCTURAL CONCRETE will be made as a percentage completed of the lump sum
5. Payment: Payment STRUCTURAL CONCRETE will be made at the contract LUMP SUM bid as indicated in the Bid Form.

S. Bid Item No. 102 – CONCRETE SLABS:

1. Description: This item shall meet the requirements of the Technical Specification Division 700 – Concrete and be constructed to the sizes and locations shown on the drawings. This item includes the construction of the concrete slabs.
2. Work required under this section shall include, but not be limited to the following:
   a. Furnishing and installing 1½-inch crushed base course material under slabs;
   b. Fine grading, compaction, and preparation of subgrade;
   c. Construction of forms;
   d. Furnishing and installing concrete and reinforcing steel;
   e. Submit concrete mix design and shop drawings for reinforcing steel;
   f. Concrete testing per ISPWC Section 703;
   g. Place, finish and cure concrete;
   h. Installation of construction joints;
   i. Removal of forms;
   j. Furnishing and application of silane sealer on concrete slabs;
   k. Furnishing and installing concrete curbs as shown on the Drawings;
   l. Final grading, cleanup;
   m. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for CONCRETE SLABS will be made as a percentage completed of the lump sum.

5. Payment: Payment CONCRETE SLABS will be made at the contract LUMP SUM bid as indicated in the Bid Form.

T. Bid Item No. 103 – BARRIER GATES/FENCING/SIGNAGE:
1. Description: This item includes the fabrication and installation of chain-link fencing for the top of the container walls, precast concrete jersey barriers, and signing.
2. Work required under this section shall include but not be limited to the following:
   a. Furnishing and installing chain-link fencing as detailed in the drawings and specifications;
   b. Furnishing and installing gates as shown on the Drawings;
   c. Furnishing and installing signage as shown in the Drawings;
   d. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: LUMP SUM
4. Measurement: Measurement for BARRIER GATES/FENCING/SIGNAGE will be made as a percentage completed of the lump sum.
5. Payment: Payment for BARRIER GATES/FENCING/SIGNAGE will be made at the contract LUMP SUM bid as indicated in the Bid Form.

U. Bid Item No. 201 – ASPHALT ROAD SURFACING
1. Description: This item includes the construction of 4 inches of asphalt on the access roads and shall meet the requirements of ISPWC. This item also includes chip sealing all new asphalt areas per the requirements of ISPWC. The subgrade will be paid for under Bid Item No. 7.
2. Work required under this section shall include but not be limited to the following:
   a. Furnish and install 4 inches of AC Pavement as shown in the Drawings;
   b. Compaction of materials according to the Technical Specifications;
   c. Submittal of asphalt mix design;
   d. Furnishing and applying asphaltic coating to base course materials;
   e. Testing of asphalt per Technical Specifications and Special Provisions;
   f. Furnishing and applying chip seal as shown in the Drawings;
   g. Additional staking as necessary; and
   h. All labor, tools, equipment, materials, royalties, incidentals necessary to complete the work as specified.
3. Unit of Measurement: SQUARE YARD
4. Measurement: Plan Quantity per SQUARE YARD.
5. Payment: Payment for ASHPALT ROAD SURFACING will be made on the percentage of the contract unit price bid per SQUARE YARD as indicated in the Bid Form. Quantities shown on the Bid Form will be paid.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and Special Provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for submitting all submittals, including but not limited to, Shop Drawings, Product Data, Samples, and other miscellaneous submittals.

B. Related Sections include the following:
   1. Division 1 Section "Quality Control and Quality Assurance" for submitting test and inspection reports and Delegated-Design Submittals.
   2. Division 1 Section “Contract Closeout” for submitting final pay applications and O&M Manual

C. Submittals are categorized into two types: Action Submittals and Informational Submittals, as follows:
   1. Action Submittals: Written and graphic information submitted by the Contractor that requires Engineer’s responsive action. The following are examples of action submittals:
      a. Shop drawings
      b. Product data
      c. Samples
      d. Operation and Maintenance Manuals
      e. Site Usage Plan (Contractor’s staging – including trailer sitting and material laydown area)
      f. Schedule of Values
      g. Payment application
      h. Other requirements found within the technical specifications

D. Informational Submittal: Information submitted by the Contractor that does not require the Engineer’s responsive action. Submittals may be rejected for not complying with requirements. The following are examples of informational submittals:
   1. Shop Drawing Schedule
   2. Progress Schedule
   3. Schedule of Submittals
   4. Statement of Qualifications
   5. Construction Photography and Videography
   6. Work Plans

7. Traffic Plans
8. Outage Requests
9. Proposed Testing Procedures
10. Test Records and Reports
11. Vendor Training Outlines/Plans
12. Test and Start-Up Reports
13. Certifications
14. Design Data
15. Manufacturer(s) Instructions
16. Record Drawings
17. Record Shop Drawings
18. Submittals required by laws, regulations and governing agencies
19. Warranties, Insurance and Bonds
20. Contract Close-Out Documents
21. Material Data Safety Sheets
22. Other requirements found within the technical specifications

1.3 RELATED WORK

A. Additional requirements may be specified in the General Conditions for the Contract.

B. Additional submittal requirements may be specified in the respective technical Specification Sections.

1.4 SUBMITTAL PROCEDURES

A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Engineer for Contractor's use in preparing submittals.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities in accordance with the General Conditions.

C. Submittals Schedule: Submit per the General Conditions

D. Direct Transmittal from Contractor: Engineer will not accept submittals from anyone but the Contractor.

E. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal.
   1. Initial Review: Allow 21 days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
   2. Allow 21 days for processing each resubmittal.
   3. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.

F. Contractor's Responsibilities

1. All submittals shall be clearly identified as follows:
   a. Date of Submission
   b. Project Number
   c. Submittal Number
   d. Project Name
   e. Contractor Identification
      1) Contractor
      2) Supplier
      3) Manufacturer
      4) Manufacturer or supplier representative
   f. Identification of Product
   g. Reference to Contract Drawing
   h. Reference to Specification Number, Page, and Paragraph
   i. Reference to applicable standards, such as AWWA, ASTM, ASHTO, etc
   j. Indication of Contractor's approval
   k. Contractor's Certification statement
   l. Identification of deviations or variances from the Contract Documents, if any
   m. Reference to previous submittal (for resubmittals)
   n. Made in America (when required by the Contract Documents)
2. Submittals shall be clear and legible, and of sufficient size for legibility and clarity of the presented data
3. Submittal Log. Maintain a log of all submittals. The submittal log shall be kept accurate and up to date. Provide the submittal log to the Engineer, if requested by the Owner or Engineer. This log should include the following items (as applicable):
   a. Description
   b. Submittal Number
   c. Date transmitted to the Engineer
   d. Date returned to Contractor (from Engineer)
   e. Status of Submittal (Reviewed/Reviewed and Noted/etc)
   f. Date of Resubmittal to Engineer and Return from Engineer (if applicable and repeat as necessary)
   g. Distribution to subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as required.
   h. Date material released for fabrication
   i. Projected (or actual) delivery date
4. Numbering System: Utilize the following submittal identification numbering system:
   a. The first five digits shall be the applicable Specification Section Number.
   b. The next three digits shall be the sequential number of each separate item or drawing submitted under each Specification Section, in the chronological order submitted, starting at 1.
   c. The last character shall be the letter R followed by a digit, if a resubmittal is required, starting with 1 and continuing with sequential numbers. A typical submittal number would be as follows:
      a) 03300-3-R2
      b) 03300 = Specification section for Concrete.
      c) 3 = the third different submittal under this Section.

d) R2 = the third submission (second resubmission) of that particular submittal.

5. Variances
   a. Notify the Engineer in writing, at the time of submittal, of any variations or deviations in the submittals from the requirements of the Contract Documents per the General Conditions.
   b. Notify the Engineer in writing, at the time of re-submittal (resubmission), of all variations or deviations from previous submission of that particular shop drawing, except those deviations which are the specific result of prior comments from the Engineer.
6. Contractor's Certification
   a. Each submittal shall have affixed to it the following Certification Statement:
      1) "Certification Statement: By this statement, I hereby represent that I have met the requirements of subsection 7.16.A of the General Conditions, satisfied the Contractor's obligations under the Contract Documents with respect to Contractor's review of submittals, and that (enter company name) approves the submittal."
   b. Each submittal shall bear the above Certification Statement on the cover sheet.
   c. Each certification statement shall be signed and dated by the individual that reviewed and approved the information prior to submitting the documents to the Engineer.

G. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities.

H. Use for Construction: Use only final submittals with mark indicating action taken by Engineer in connection with construction.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

A. General: Prepare and submit Action Submittals required by individual Specification Sections.
   1. Number of Copies: Submit electronic copies of each submittal, unless otherwise indicated. Engineer will return two copies. Mark up and retain one returned copy as a Project Record Document.
   2. Electronic Submittal: Contractor may, at their option, provide Action Submittals in an electronic format provided the following conditions are met:
      a. The submittal contains no pages or sheets larger than 24 x 36 inches
      b. The entire submittal is included in a single file.
      c. Electronic files are PDF format (with printing enabled).

B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. Preparation: Include the following information, as applicable:
   a. Dimensions.
   b. Identification of products.
   c. Fabrication and installation drawings.
   d. Roughing-in and setting diagrams.
   e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
   f. Shop work manufacturing instructions.
   g. Templates and patterns.
   h. Schedules.
   i. Design calculations.
   j. Compliance with specified standards.
   k. Notation of coordination requirements.
   l. Notation of dimensions established by field measurement.
2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 24 by 36 inches (610 by 915 mm).

C. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:
   a. Manufacturer's written recommendations.
   b. Manufacturer's product specifications.
   c. Manufacturer's installation instructions.
   d. Standard color charts.
   e. Manufacturer's catalog cuts.
   f. Wiring diagrams showing factory-installed wiring.
   g. Printed performance curves.
   h. Operational range diagrams.
   i. Mill reports.
   j. Standard product operating and maintenance manuals.
   k. Compliance with recognized trade association standards.
   l. Compliance with recognized testing agency standards.
   m. Application of testing agency labels and seals.
   n. Notation of coordination requirements.

D. Samples: Furnish samples required by the Contract Documents for the Engineer’s approval. Samples shall be delivered to the Engineer as specified or directed. Unless specified otherwise, provide at least two samples of each required item. Materials or equipment for which samples are required shall not be used in the work unless and until approved by Engineer.

1. Preparation: Include the following information, as applicable:

a. Physical examples of the work
b. Small cuts or containers of materials
c. Complete units of repetitively used products
d. Color/texture/patterns swatches
e. Specimens for coordination of visual effects, graphic symbols, and other specified units of work

E. Operation and Maintenance Manuals
1. Submit in assembled manuals as specified in Division 1 Section "Contract Closeout". Such manuals shall include detailed instructions for Owner personnel on safe operation procedures, controls, start-up, shut-down, emergency procedures, storage, protection, lubrication, testing, trouble-shooting, adjustments, repair procedures, and other maintenance requirements.

F. Site Usage Plan
1. Submit a proposed site staging plan, including but not limited to the location of office trailers, storage trailers and material laydown. Such plan shall be a graphic presentation (drawing) of the proposed locations; and, shall include on-site traffic modifications, and temporary utilities, as may be applicable.

G. Schedule of Values
1. On projects consisting of lump sums (in whole or in part) submit a proposed schedule of values providing a breakdown of lump sum items in to reasonably small components –generally disaggregated by building, area, and/or discipline. The purpose of the schedule of values is for processing partial payment applications. If requested by the Engineer, provide sufficient substantiation for all or some items as necessary to determine the proposed schedule of values is a reasonable representation of the true cost breakdown of the Work. The schedule of values shall not be unbalanced to achieve early payment or over-payment in excess of the value of work or any other mis-distribution of the costs. If, in the opinion of the Engineer, the schedule of values is unbalanced, Contractor shall reallocate components to achieve a balanced schedule acceptable to Engineer.

H. Payment Application
1. If an application form is included in the Contract Documents, use that form unless otherwise approved by the Engineer and Owner. If an application form is not included in the Contract Documents, Contractor may purpose a form for approval.

2.2 INFORMATIONAL SUBMITTALS

A. General: Prepare and submit Informational Submittals required by other Specification Sections.
1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Engineer will not return copies.
2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

3. Test and Inspection Reports: Comply with requirements in Division 1 Section "Quality Control and Quality Assurance."
4. Electronic Submittal: Contractor may, at their option, provide Action Submittals in an electronic format provided the following conditions are met:
   a. The submittal contains no pages or sheets larger than 24 x 36 inches
   b. The entire submittal is included in a single file.
   c. Electronic files are PDF format (with printing enabled).

B. Shop Drawing Schedule
1. Prepare and submit a schedule indicating when shop drawings are required to be submitted to support the as-planned construction schedule. The submittal schedule shall allow sufficient time for preparation and submittal, review and response, and fabrication and delivery to support the construction schedule.

C. Progress Schedule
1. Prepare and submit construction schedules and monthly status reports as specified.

D. Schedule of Submittals
1. Prepare and submit schedule of submittals as specified in the General Conditions.

E. Statements of Qualifications
1. Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of Engineers and owners, and other information specified.

F. Construction Photography and Videography
1. Provide periodic construction photographs and videography as specified – including but not limited to preconstruction photographs and/or video, monthly progress photos and/or video and post-construction photographs and/or video.

G. Work Plans
1. Prepare and submit copies of all work plans needed to demonstrate to the Owner that Contractor has adequately thought-out the means and methods of construction and their interface with existing facilities. Work plans and follow-up preparatory meetings shall be conducted for all major work items. All parties involved in the construction of that work item shall attend preparatory meeting.

H. Traffic Plans
1. Prepare traffic plans where and when required by the Contract Documents and local ordinances or regulations. If Contractor is not already knowledgeable about local ordinances and regulations regarding traffic requirements, become familiar with such requirements and include all costs for preparation and submittal of traffic management plan, as specified. In addition, unless a supplemental payment provision is provided in the bid form, include the cost of all police attendance, when required.

I. Outage Requests
1. Provide sufficient notification of any outages required (electrical, flow process, etc.) as may be required to tie-in new work into the existing facilities. Unless

specified otherwise elsewhere, a minimum of seven calendar days notice shall be provided.

J. Proposed Testing Procedures
1. Prepare and submit testing procedures proposed to perform testing required by the various technical specifications.

K. Test Records and Reports
1. Provide copies of all test records and reports as specified in the various technical specifications.
2. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
3. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements.
4. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
5. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.
6. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
7. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
    a. Name, address, and telephone number of factory-authorized service representative making report.
    b. Statement on condition of substrates and their acceptability for installation of product.
    c. Statement that products at Project site comply with requirements.
    d. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
    e. Results of operational and other tests and a statement of whether observed performance complies with requirements.
    f. Statement whether conditions, products, and installation will affect warranty.
    g. Other required items indicated in individual Specification Sections.

L. Vendor Training Outlines/Plans
1. At least two weeks before scheduled training of Owner's personnel, provide lesson plans for vendor training in accordance with the specification for O&M manuals.

M. Test and Start-up Reports
1. Manufacturer(s) shall perform all pre-start-up installation inspection, calibrations, alignments, and performance testing as specified in the respective technical specifications. Provide copies of all such test and start-up reports.

N. Certifications
1. Provide various certifications as required by the technical specifications. Such certifications shall be signed by an officer (of the firm) or other individual authorized to sign documents of behalf of that entity.
2. Certifications may include, but are not limited to:
   a. Welding certifications and welders qualifications
   b. Certifications of Installation, Testing and Training for all equipment
   c. Material Testing reports furnished by an independent testing firm
   d. Certifications from manufacturer(s) for specified factory testing
   e. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
   f. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
   g. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.
   h. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.

O. Design Data
1. Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

P. Manufacturer(s) Instructions
1. Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
   a. Preparation of substrates.
   b. Required substrate tolerances.
   c. Sequence of installation or erection.
   d. Required installation tolerances.
   e. Required adjustments.
   f. Recommendations for cleaning and protection.

Q. Record Drawings
1. No later than Substantial Completion, submit a record of all changes during construction not already incorporated into drawings – in accordance with Division 1 Contract Closeout.

R. Record Shop Drawings
1. Before final payment is made, furnish one set of record shop drawings to the Engineer. These record shop drawings shall be in conformance with the approved documents and should show any field conditions which may affect their accuracy.

S. Submittals required by laws, regulations and governing agencies
1. Prepare and submit all documentation required by state or local law, regulation or government agency directly to the applicable agency. This includes, but is not limited to, notifications, reports, certifications, certified payroll (for projects subject to wage requirements) and other documentation required to satisfy all requirements. Provide to Engineer one hard copy or electronic copy of each submittal made in accordance with this paragraph.

T. Warranties, Insurance Certificates and Bonds
1. Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
2. Assemble a booklet or binder of all warranties and bonds as specified in the various technical specifications and in accordance with the Division 1 Contract Closeout. Provide two originals to the Engineer.

U. Contract Close-Out Documents
1. Submit documentation as indicated in Division 1 Contract Closeout.

V. Material Safety Data Sheets
1. Submit information directly to Owner. If submitted to Engineer, Engineer will not review this information but will return it with no action taken.

W. Other requirements of the technical Specification Sections
1. Comply with all other requirements of the technical specification sections.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Coordination of Submittal Times: Prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work or other related Sections, so that the installation will not be delayed by processing times including disapproval and resubmittal (if required). Coordinate with other submittals, testing, purchasing, fabrication, delivery and similar sequenced activities.

B. Before submission to the Engineer, review shop drawings as follows:

1. Make corrections and add field measurements, as required
2. Use any color for its notations except red (reserved for the Engineer's notations) and black (to be able to distinguish notations on black and white documents)
3. Include Contractor's Certification statement
4. Provide field measurements (as needed)
5. Coordinate with other submittals
6. Indicate relationships to other features of the work
7. Highlight information applicable to the work and/or delete information not applicable to the work

3.2 ENGINEER'S ACTION

A. General: Engineer will not review submittals that do not bear required certification statement, signature, and date of the responsible person and will return them without action.

B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
   1. "Reviewed" – This code is assigned when there are no notations or comments on the submittal. When returned under this code the Contractor may release the equipment and/or material for manufacture.
   2. "Reviewed and Noted" –This code is assigned when a confirmation of notations and comments IS NOT required by the Contractor. The Contractor may release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product.
   3. "Revise and Resubmit" –This combination of codes is assigned when notations and comments are extensive enough to require a resubmittal of the entire package. This resubmittal is to address all comments, omissions and non-conforming items that were noted.

C. Informational Submittals: Engineer will review each submittal and will not return it, or will reject and return it if it does not comply with requirements.

D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION

SECTION 01320

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and Special Provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
   1. Preliminary Construction Schedule.
   2. Contractor's Progress Schedule.
   3. Submittals Schedule.
   4. Daily construction reports.

B. Related Sections include the following:
   1. Special Provisions "Progress Meetings" for submitting and distributing meeting and conference minutes.
   2. Division 1 Section "Submittals" for submitting schedules and reports.
   3. Division 1 Section " Quality Control and Quality Assurance" for submitting a schedule of tests and inspections.
   4. Division 1 Section "Contract Closeout" for submitting Project Record Documents at Project closeout.

1.3 DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
   1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
   2. Predecessor activity is an activity that must be completed before a given activity can be started.

B. Event: The starting or ending point of an activity.

C. Float: The measure of leeway in starting and completing an activity.
   1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
   2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity.

3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

D. Fragnet: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.

E. Milestone: A key or critical point in time for reference or measurement.

F. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

1.4 SUBMITTALS

A. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Engineers and owners, and other information specified.

B. Preliminary Construction Schedule: Submit two printed copies; one a single sheet of reproducible media, and one a print.

C. Contractor's Construction Schedule: Submit two printed copies of initial schedule, one a reproducible print and one a blue- or black-line print, large enough to show entire schedule for entire construction period.

D. Daily Construction Reports: Submit 2 copies at monthly intervals.

1.5 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

B. Coordinate Progress Schedule, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
1. Secure time commitments for performing critical elements of the Work from parties involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S PROGRESS SCHEDULE, GENERAL

A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Substantial Completion.
   1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
   2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
   3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
   4. Startup and Testing Time: Include time for startup and testing.
   5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Engineer's administrative procedures necessary for certification of Substantial Completion.

B. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.

C. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.

D. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.

2.2 PRELIMINARY CONSTRUCTION SCHEDULE

A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule at the preconstruction conference.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for construction. Include cash requirement prediction based on indicated activities.

2.3 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
   1. List of subcontractors at Project site.
   2. List of separate contractors at Project site.

3. Approximate count of personnel at Project site.
4. High and low temperatures and general weather conditions.
5. Accidents.
6. Meetings and significant decisions.
7. Daily work progress.
8. Unusual events (refer to special reports).
9. Stoppages, delays, shortages, and losses.
10. Meter readings and similar recordings.
11. Emergency procedures.
12. Orders and requests of authorities having jurisdiction.
13. Change Orders received and implemented.
14. Work Change Directives received.
15. Services connected and disconnected.
16. Equipment or system tests and startups.
17. Partial Completions and occupancies.
18. Substantial Completions authorized.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Progress Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Progress schedule shall be submitted to the Engineer monthly with the progress payment.
   1. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
   2. As the Work progresses, indicate Actual Completion percentage for each activity.

B. Distribution: Distribute copies of approved schedule to Engineer, Owner, separate testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
   1. Post copies in Project meeting rooms and temporary field offices.
   2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION

SECTION 01340

REQUESTS FOR INFORMATION (RFI)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings, Technical Specifications, Addenda, and general provisions of the Contract, including Contract General Conditions and Supplementary General Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section contains the procedures to be followed by Contractor for submitting a Request for Information (RFI) upon discovery of any apparent conflicts, omissions, or errors in the Contract Documents or Drawings or upon having any question concerning Information.

B. RFI Administrative Requirements

C. RFI Procedures

D. RFI Execution

E. RELATED SECTIONS
1. Division 1 Section "Product Requirements" for product options, substitutions, omissions, and improper descriptions.

1.3 DEFINITIONS

A. Request for Information: A document submitted by the Contractor requesting clarification of a portion of the Contract Documents, hereinafter referred to as an RFI.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Description: Section provides procedure for Contractors to obtain interpretation or clarification of the Contract Documents, or identify apparent conflicts, omissions, or errors in the Contract Documents.

B. Responsible Person for Contractor: Submit name of the individual authorized to receive Requests for Information documents, and who is responsible for forwarding Request.

C. RFI Format: Submit all Requests for Information on the form attached at the back of this Section.

1.5 CONTRACTOR'S REQUESTS FOR INFORMATION (RFIs)

A. Contractor's Requests for Information (RFIs): Should Contractor be unable to determine from the Contract Documents the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of Work is described differently at more than one place in the Contract Documents; the Contractor shall request that the Engineer make an interpretation of the requirements of the Contract Documents to resolve such matters. Contractor shall comply with procedures specified herein to make Requests for Information (RFIs).

B. Submission of RFIs: RFIs shall be prepared and submitted on a form provided by the Engineer.
   1. Forms shall be completely filled in, and if prepared by hand, shall be fully legible after scanning or photocopying.
   2. Each RFI shall be given a discrete, consecutive number starting with 1.
   3. Each page of the RFI and each attachment to the RFI shall bear the following:
      a. Date of Submission
      b. Project Number
      c. Project Name
      d. RFI Number
      e. Descriptive Title
   4. Contractor shall sign all RFIs attesting to good faith effort to determine from the Contract Documents the information requested for Information. Frivolous RFIs shall be subject to reimbursement from Contractor to the Owner for fees charged by Engineer, Engineer's consultants and other design professions engaged by the Owner.

C. Subcontractor-Initiated and Supplier-Initiated RFIs: RFIs from subcontractors and material suppliers shall be submitted through, be reviewed by and be attached to an RFI prepared, signed and submitted by Contractor. RFIs submitted directly by subcontractors or material suppliers will be returned unanswered to the Contractor.
   1. Contractor shall review all subcontractor- and supplier-initiated RFIs and take actions to resolve issues of coordination, sequencing and layout of the Work.
   2. RFIs submitted to request clarification of issues related to means, methods, techniques and sequences of construction or for establishing trade jurisdictions and scopes of subcontracts will be returned without Information. Such issues are solely the Contractor's responsibility.
   3. Contractor shall be responsible for delays resulting from the necessity to resubmit an RFI due to insufficient or incorrect information presented in the RFI.

D. Unacceptable Uses for RFIs: RFIs shall not be used to request the following:
   1. Approval of submittals (use procedure specified in Section 01300 - Submittals)
   2. Approval of substitutions (refer to 01600 - Product Requirements)
   3. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the General Conditions)
   4. Different methods of performing Work than those indicated in the Contract Drawings and Specifications (comply with provisions of the General Conditions).

E. RFI Log: Contractor shall prepare and maintain a log of RFIs, and at any time requested by the Engineer or Owner, the Contractor shall furnish copies of the log showing all outstanding RFIs.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

3.1 Submit per the General Conditions. Additionally, electronic RFI requests will be accepted. Notification time begins from the date stamp of the Engineer's mail or email received date.

3.2 Requested Information: Contractor shall carefully study the Contract Documents, in particular to ensure that information sufficient for Information of requirements of the Contract Documents is not included. RFIs that request Information of requirements clearly indicated in the Contract Documents will be returned without Information.

A. In all cases in which RFIs are issued to request clarification of issues related to means, methods, techniques and sequences of construction, for example, pipe and duct routing, clearances, specific locations of Work shown diagrammatically, apparent interferences and similar items, the Contractor shall furnish all information required for the Engineer or Owner to analyze and/or understand the circumstances causing the RFI and prepare a clarification or direction as to how the Contractor shall proceed.

B. If information included with this type RFI by the Contractor is insufficient, the RFI will be returned unanswered.

3.3 Response Time: Request clarifications or information immediately upon discovery of need. Submit RFI's in a timely manner allowing full response time to avoid impacting Progress Schedule.

A. Engineer, whose decision will be final, shall resolve issues and respond to questions of Contractor, in most cases, within fourteen (14) days. Actual time may be lengthened for complex issues, or shortened for expedited situations, as mutually agreed in writing.

B. After submission of an RFI by Contractor and prior to receipt of the RFI response from Engineer, the Contractor proceeds with affected Work at own risk. Any portion of the Work not constructed in accordance with Engineer interpretation, clarification, instruction or decision is subject to removal and replacement at Contractor expense.

3.4 Disputed Requirements: In the event the Contractor believes that a clarification by the Engineer results in additional cost or time, Contractor shall comply with the Contract General Conditions.

END OF SECTION

SECTION 01400

QUALITY CONTROL AND QUALITY ASSURANCE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Contract Documents including, but not limited to Drawings and Special Provisions, General and Supplementary Conditions, other Division 1 through 16 Specification Sections, and Appendices to the Contract Documents, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
   1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
   2. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
   3. Requirements for Contractor to provide quality-control services required by Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.3 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Engineer.

C. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

1.4 SUBMITTALS

A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

B. Reports: Prepare and submit certified written reports that include the following:
1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Ambient conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

B. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.

E. Testing Agency Qualifications: An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E 548, and that specializes in types of tests and inspections to be performed.

F. Preconstruction Testing: Testing agency shall perform preconstruction testing for compliance with specified requirements for performance and test methods.
1. Contractor responsibilities include the following:
   a. Provide test specimens and assemblies representative of proposed materials and construction. Provide sizes and configurations of assemblies to adequately demonstrate capability of product to comply with performance requirements.
   b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Engineer, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

G. Control of Installation
1. Monitor quality control over suppliers, products, services, site conditions, and workmanship, to produce Work of specified quality.
2. Comply with manufacturers' instructions, including each step in sequence.
3. Examine the areas and conditions where Work is to be performed and notify the Owner of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected by the Contractor in a manner acceptable to the Owner.
4. Request clarification from Engineer should manufacturers' instructions conflict with Contract Documents. The clarification shall be received prior to proceeding.
5. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
6. Work shall be performed by persons qualified to produce workmanship of specified quality.

1.6 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency or Engineer to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of the types of testing and inspecting they are engaged to perform.
2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

B. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
1. Contractor shall, engage a qualified testing agency to perform these quality-control services.

a. Contractor shall not employ the same entity engaged by Owner, unless agreed to in writing by Owner.

2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
3. Contractor shall, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.

D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.

E. Testing Agency Responsibilities: Cooperate with Engineer and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Engineer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
3. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
4. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
5. Do not perform any duties of Contractor.

F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field-curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
   1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

SECTION 01600

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and Special Provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following administrative and procedural requirements: selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.

B. Related Sections include the following:
   1. Division 1 Section "Contract Closeout" for submitting warranties for contract closeout.
   2. Divisions 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
   1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation, shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
   2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
   3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties,

appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

D. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.

E. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

1.4 SUBMITTALS

A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
   1. Substitution Request Form:
   2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
      a. Statement indicating why specified material or product cannot be provided.
      b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
      c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
      d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
      e. Samples, where applicable or requested.
      f. List of similar installations for completed projects with project names and addresses and names and addresses of Engineers and owners.
      g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
      h. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
      i. Cost information, including a proposal of change, if any, in the Contract Sum.
      j. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
      k. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within one week of receipt of a request for substitution. Engineer will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
   a. Form of Acceptance: Field Order or Change Order.
   b. Use product specified if Engineer cannot make a decision on use of a proposed substitution within time allocated.

B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 1 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
   1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
   2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
   3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
   4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
   5. Store products to allow for inspection and measurement of quantity or counting of units.
   6. Store materials in a manner that will not endanger Project structure.
   7. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
   8. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
   9. Protect stored products from damage.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
   1. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Division 1 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT OPTIONS

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged, and unless otherwise indicated, that are new at time of installation.
   1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
   2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
   3. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in "Comparable Products" Article to obtain approval for use of an unnamed product.

B. Product Selection Procedures: Procedures for product selection include the following:
   1. Product: Where Specification paragraphs or subparagraphs titled "Product" name a single product and manufacturer, provide the product named.
      a. Substitutions may be considered.
   2. Products: Where Specification paragraphs or subparagraphs titled "Products" introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
      a. Substitutions may be considered, unless otherwise indicated.
   3. Manufacturers: Where Specification paragraphs or subparagraphs titled "Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
      a. Substitutions may be considered, unless otherwise indicated.

2.2 PRODUCT SUBSTITUTIONS

A. Timing: Engineer will consider requests for substitution if received by the Engineer within 30 days after the Notice of Award. Requests received after that time may be considered or rejected at discretion of Engineer.

B. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:

1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
2. Requested substitution does not require extensive revisions to the Contract Documents.
3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
4. Substitution request is fully documented and properly submitted.
5. Requested substitution will not adversely affect Contractor's Construction Schedule.
6. Requested substitution has received necessary approvals of authorities having jurisdiction.
7. Requested substitution is compatible with other portions of the Work.
8. Requested substitution has been coordinated with other portions of the Work.
9. Requested substitution provides specified warranty.

2.3 COMPARABLE PRODUCTS

A. Where products or manufacturers are specified by name, submit the following, in addition to other required submittals, to obtain approval of an unnamed product:
   1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
   2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
   3. Evidence that proposed product provides specified warranty.
   4. List of similar installations for completed projects with project names and addresses and names and addresses of Engineers and owners, if requested.
   5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and Special Provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
   1. Inspection procedures.
   2. Project record documents.
   3. Operation and maintenance manuals.
   4. Instruction of Owner's personnel.
   5. Final cleaning.

B. Related Sections include the following:
   1. Division 1 Section "Execution Requirements" for progress cleaning of Project site.
   2. Divisions 2 through 16 Sections for specific closeout and special cleaning requirements for products of those Sections.

1.3 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following or list items below that are incomplete in request. Also refer to the General Conditions for additional submittals and procedures for Substantial Completion.
   1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
   2. Advise Owner of pending insurance changeover requirements in accordance with the General Conditions.
   3. Submit specific warranties, Performance bonds, maintenance service agreements, final certifications, and similar documents.
   4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
   5. Prepare and submit Project Record Documents, operation and maintenance manuals, and/or similar final record information.

6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
8. Complete startup testing of systems.
9. Submit test/adjust/balance records.
10. Terminate and remove temporary facilities from Project site, construction tools, and similar elements.
11. Advise Owner of changeover in heat and other utilities.
12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. Inspection: Following the submittal of the preliminary documents described above, inspection of the Work shall be completed in accordance with the General Conditions.

1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment.
2. Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit evidence that bonds shall be in effect until one year after the date when final payment becomes due or until completion of the correction period specified, whichever is later.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of areas in sequential order.

2. Organize items applying to each area by major element.
3. Include the following information at the top of each page:
   a. Project name.
   b. Date.
   c. Name of Engineer.
   d. Name of Contractor.
   e. Page number.

1.6 PROJECT RECORD DOCUMENTS

A. General: Do not use Project Record Documents for construction purposes. Maintain Record Documents in accordance with the General Conditions.

B. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is installer, Subcontractor, or similar entity, to prepare the marked-up Record Prints. Record Prints shall, at a minimum, meet the following requirements:
   1. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
   2. Accurately record information in an understandable drawing technique.
   3. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
   4. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.
   5. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
   6. Mark important additional information that was either shown schematically or omitted from original Drawings.
   7. Note Work Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
   8. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.

C. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

1.7 OPERATION AND MAINTENANCE MANUALS

A. Assemble a complete set of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:

1. Operation Data:
   a. Emergency instructions and procedures.
   b. System, subsystem, and equipment descriptions, including operating standards.
   c. Operating procedures, including startup, shutdown, seasonal, and weekend operations.
   d. Description of controls and sequence of operations.
   e. Outline, cross section, and assembly drawings, engineering data, and wiring diagrams.
   f. Test data and performance curves, where applicable.
   g. Piping diagrams.
2. Maintenance Data:
   a. Manufacturer's information, including list of spare parts.
   b. Name, address, and telephone number of installer or supplier.
   c. Maintenance procedures.
   d. Maintenance and service schedules for preventive and routine maintenance.
   e. Maintenance record forms.
   f. Guide to “troubleshooting”.
   g. Sources of spare parts and maintenance materials.
   h. Copies of maintenance service agreements.
   i. Copies of warranties and bonds.

B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.
   1. Submit two copies of the operation and maintenance data.
   2. Prepare a table of contents for each volume with each product or system identified.

PART 2 - EXECUTION

2.1 DEMONSTRATION AND TRAINING

A. Instruction: Instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
   1. Provide instructors experienced in operation and maintenance procedures.
   2. Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
   3. Schedule training with Owner, through Engineer, with at least seven days’ advance notice.
   4. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.

B. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual

Specification Sections. For each training module, develop a learning objective and teaching outline. Include instruction for the following:

1. System design and operational philosophy.
2. Review of documentation.
3. Operations.
4. Adjustments.
5. Troubleshooting.
6. Maintenance.
7. Repair.

2.2 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
   a. Clean project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, broken pipe, sheeting, worn-out parts, rejected materials, concrete, asphalt and other foreign substances.
   b. Remove excess piles of gravel or soil deposited throughout project.
   c. Final grade in unpaved, graveled, and un-graveled areas with a motor grader.
   d. Remove all loose rocks, boulders, and coarse gravel pushed into a berm by final grading.
   e. Restore surface drainage to original condition unless otherwise detailed in the project plans and specifications.
   f. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
   g. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
   h. Remove tools, construction equipment, machinery, and surplus material from Project site.
   i. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
   j. Remove debris and surface dust from limited access spaces, including roofs, gutters, downspouts, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
   k. Sweep concrete floors broom clean in unoccupied spaces.
   l. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other

damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.

m. Remove labels that are not permanent.

n. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

o. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

p. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.

q. Replace parts subject to unusual operating conditions.

C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

SECTION 01730

EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and Special Provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
   1. General installation of products.
   2. Coordination of Owner-installed products.
   3. Progress cleaning.
   4. Starting and adjusting.
   5. Protection of installed construction.

B. Related Sections include the following:
   1. Division 1 Section "Contract Closeout" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
   1. Notify Engineer not less than two days in advance of proposed utility interruptions.
   2. Do not proceed with utility interruptions without Engineer's written permission.

C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

3.2 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
   1. Make vertical work plumb and make horizontal work level.
   2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.

G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.3 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Remove and properly dispose of excess material accumulated from demolition and construction (such as piles of gravel or soil, broken concrete, debris, papers, rejected materials, worn-out equipment parts, etc.) from the project site at the Contractor's expense. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
   1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
   2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).

3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Cutting and Patching: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.
1. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

H. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

I. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

J. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

K. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.4 STARTING AND ADJUSTING

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section "Quality Requirements."

3.5 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

END OF SECTION

DIVISION 2

SITE CONSTRUCTION

SECTION 02232

SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
1. Protecting existing trees and vegetation to remain.
2. Removing trees and other vegetation.
3. Clearing and grubbing.
4. Topsoil stripping.
5. Removing above-grade site improvements.
6. Disconnecting, capping or sealing, and abandoning site utilities in place.
7. Disconnecting, capping or sealing, and removing site utilities.

B. Related Sections include the following:
1. Division 1 Section "Construction and Temporary Facilities" for temporary utilities, temporary construction and support facilities, temporary security and protection facilities, and environmental protection measures during site operations.
2. Division 2 Section "Earthwork" for soil materials, excavating, backfilling, and site grading.
3. Division 2 Section "Seeding" for finish grading, including placing and preparing topsoil for lawns and planting.

1.3 DEFINITIONS

A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of weeds, roots, and other deleterious materials.

1.4 MATERIALS OWNERSHIP

A. Except for materials indicated to be stockpiled or to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from the site.

1.5 SUBMITTALS

A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.

B. Record drawings according to Division 1 Section "Closeout Procedures."

1. Identify and accurately locate capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
   1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
   2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

B. Improvements on Adjoining Property: Work on adjoining properties is not included in the scope of this project.

C. Salvageable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.

D. Notify utility locator service for area where Project is located before site clearing.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 2 Section "Earth Work."
   1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Provide erosion-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

C. Locate and clearly flag trees and vegetation to remain or to be relocated.

D. Protect existing site improvements to remain from damage during construction.
   1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TREE PROTECTION

A. Erect and maintain a temporary fence around drip line of individual trees or around perimeter drip line of groups of trees to remain. Remove fence when construction is complete.
   1. Do not store construction materials, debris, or excavated material within drip line of remaining trees.
   2. Do not permit vehicles, equipment, or foot traffic within drip line of remaining trees.

B. Do not excavate within drip line of trees, unless otherwise indicated.

C. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
1. Cover exposed roots with burlap and water regularly.
2. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.
3. Coat cut faces of roots more than 1-1/2 inches (38 mm) in diameter with an emulsified asphalt or other approved coating formulated for use on damaged plant tissues.
4. Cover exposed roots with wet burlap to prevent roots from drying out. Backfill with soil as soon as possible.

D. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Engineer.
1. Employ a qualified arborist, licensed in jurisdiction where Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.
2. Replace trees that cannot be repaired and restored to full-growth status, as determined by the qualified arborist.

E. Transplant trees and vegetation indicated to be relocated to the location designated by the Engineer, in a manner approved by Engineer.
1. Employ a qualified arborist or landscaping expert, licensed in jurisdiction where Project is located, to transplant trees and shrubs.
2. Operation shall be completed in such manner as to protect the root wad of the tree or other vegetation.

3.3 UTILITIES

A. Owner will arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing when requested by Contractor.
1. Verify that utilities have been disconnected and capped before proceeding with site clearing.

B. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
1. Owner will arrange to shut off indicated utilities when requested by Contractor.
2. Arrange to shut off indicated utilities with utility companies.

C. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
1. Notify Engineer not less than two weeks in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Engineer's written permission.

D. Excavate for and remove underground utilities indicated to be removed.

3.4 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
   1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
   2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
   3. Completely remove stumps, roots, obstructions, and debris extending to a depth of 18 inches (450 mm) below exposed subgrade.
   4. Use only hand methods for grubbing within drip line of remaining trees.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.
   1. Place fill material in horizontal layers not exceeding 8-inch (200-mm) loose depth, and compact each layer to a density equal to adjacent original ground.

3.5 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
   1. Strip surface soil of unsuitable topsoil, including trash, debris, weeds, roots, and other waste materials.

C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water.
   1. Do not stockpile topsoil within drip line of remaining trees.
   2. Dispose of excess topsoil as specified for waste material disposal.
   3. Stockpile surplus topsoil and allow for respreading deeper topsoil.

3.6 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.

B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
   1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.

3.7 DISPOSAL

A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION

SECTION 02300

EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 1 Specification Sections and Special Provisions apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
1. Preparing subgrades for slabs-on-grade and lawns and grasses.
2. Excavating and backfilling for buildings, structures and retaining walls.
3. Drainage course for slabs-on-grade.
4. Subsurface drainage backfill for walls.
5. Incidental excavation and backfill for utilities located under or adjacent to structures.

B. Related Sections include the following:
1. Division 1 Section "Temporary Facilities and Controls" for temporary controls, utilities, and support facilities.
2. Division 2 Section "Site Clearing" for temporary erosion and sedimentation control measures, site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.
3. ISPWC Division 200 “Earthwork”
4. ISPWC Division 300 “Trenching”

1.3 DEFINITIONS

A. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

B. Drainage Course: Course supporting the slab-on-grade that also minimizes upward capillary flow of pore water.

C. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation and replacement material will be paid for according to Section 01275 “Measurement and Payment or Contract provisions for changes in the Work.
2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.

D. Fill: Soil materials used to raise existing grades.

E. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material 1 cubic yard or more in volume that exceed a standard penetration resistance of 100 blows/2 inches when tested by an independent geotechnical testing agency, according to ASTM D 1586.

F. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

G. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.

H. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 SUBMITTALS

A. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
1. Classification according to ASTM D 2487 of each on-site and borrow soil material proposed for fill and backfill.
2. Laboratory compaction curve according to ASTM D 698 for each on-site and borrow soil material proposed for fill and backfill.

B. When, in the opinion of the Engineer, the field soil conditions differ from those represented by the material test reports, new samples shall be taken by the Contractor and delivered to the testing agency for classification and laboratory compaction curve testing. All testing shall be based on the appropriate soil test results.

1.5 QUALITY ASSURANCE

A. Geotechnical Testing Agency Qualifications: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548.

1.6 PROJECT CONDITIONS

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated.
1. Notify Engineer not less than two weeks in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Engineer's written permission.
3. Contact utility-locator service for area where Project is located before excavating.

B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.

B. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM or a combination of these groups; free of rock or gravel larger than 3 inches (75 mm)] in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter. Embankment material can be obtained from the excavations but if the material is unsatisfactory, additional embankment material can be obtained from the stockpile in the location shown on the plans.

C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.

D. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.

E. Structural Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.

F. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch (25-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.

G. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 3/4-inch (37.5-mm) sieve and 0 to 5 percent passing a No. 8 (2.36-mm) sieve.

H. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and 0 to 5 percent passing a No. 4 (4.75-mm) sieve.

I. Sand: ASTM C 33; fine aggregate, natural, or manufactured sand.

J. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 2 Section "Site Clearing."

C. Protect and maintain erosion and sedimentation controls, which are specified in Division 2 Section "Site Clearing," during earthwork operations.

D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.2 DEWATERING

A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.

B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
2. If required, install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXPLOSIVES

A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized regardless of the character of surface and subsurface conditions encountered.
1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
2. If rock is encountered within excavations, cease work in the area where rock is discovered until a time and materials change order for the extra work can be agreed upon by the Contractor, Owner and Engineer. The work in the affected area will again proceed after a change order is processed, and no shutdown time or associated additional costs will be awarded other than those agreed upon in the change order.

3.5 EXCAVATION FOR STRUCTURES

A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch (25 mm). If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.

1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
2. Pile Foundations: Stop excavations 6 to 12 inches (150 to 300 mm) above bottom of pile cap before piles are placed. After piles have been driven, remove loose and displaced material. Excavate to final grade, leaving solid base to receive concrete pile caps.
3. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch (25 mm). Do not disturb bottom of excavations intended as bearing surfaces.

3.6 SUBGRADE INSPECTION

A. Notify Engineer when excavations have reached required subgrade.

B. If Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.

C. Proof-roll subgrade below the building slabs and pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph (5 km/h).
2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons (13.6 tonnes).
3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.

D. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

3.7 UNAUTHORIZED EXCAVATION

A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi (17.2 MPa), may be used when approved by Engineer.
1. Fill unauthorized excavations under other construction or utility pipe as directed by Engineer.

3.8 STORAGE OF SOIL MATERIALS

A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.9 BACKFILL

A. Place and compact backfill in excavations promptly, but not before completing the following:
   1. Construction below finish grade including, where applicable, subdrainage, damp proofing, waterproofing, and perimeter insulation.
   2. Surveying locations of underground utilities for Record Documents.
   3. Testing and inspecting underground utilities.
   4. Removing concrete formwork.
   5. Removing trash and debris.
   6. Removing temporary shoring and bracing, and sheeting.
   7. Installing permanent or temporary horizontal bracing on horizontally supported walls.

B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.10 SOIL FILL

A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.

B. Place and compact fill material in layers to required elevations as follows:
   1. Under grass and planted areas, use satisfactory soil material.
   2. Under steps and ramps, use Structural Fill.
   3. Under building slabs, use Structural Fill.
   4. Under footings and foundations, use Structural Fill.
   5. Under and adjacent to retaining walls, use Structural Fill.
   6. In utility trenches within 5 feet of any retaining wall or foundation, use Structural Fill.

C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.11 SOIL MOISTURE CONTROL

A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
   1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
   2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.12 COMPACTION OF SOIL BACKFILLS AND FILLS

A. Place backfill and fill soil materials in layers not more than 8 inches (200 mm)] in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.

B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.

C. Where backfill is to extend higher on one side than on the other, as indicated on the Plans, structural floor beams or other means of restraint shall be installed before such backfill is placed. Should any deflection of the foundation wall result from the Contractor's failure to provide adequate bracing, the Contractor shall remove the backfill or embankment to relieve the deflection, properly brace the wall, and replace the backfill at no additional cost to the Owner.

D. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:
   1. Under structures, building slabs and steps, scarify and recompact top 12 inches (300 mm) of existing subgrade and each layer of backfill or fill soil material at 95 percent.
   2. Under lawn or unpaved areas, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill soil material at 95 percent.

3.13 GRADING

A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
   1. Provide a smooth transition between adjacent existing grades and new grades.
   2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.

B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
   1. Lawn or Unpaved Areas: Plus or minus [1 inch (25 mm)]

C. Grading inside Building and Structure Lines: Finish subgrade to a tolerance of 1/2 inch (13 mm) when tested with a 10-foot (3-m) straightedge.

3.14 SUBSURFACE DRAINAGE

A. Subsurface Drain: Place subsurface drainage geotextile around perimeter of subdrainage trench. Place a 6-inch (150-mm) course of filter material on subsurface drainage geotextile to support subdrainage pipe. Encase subdrainage pipe in a minimum of 12 inches (300 mm) of filter material, placed in compacted layers 6 inches (150 mm) thick, and wrap in subsurface drainage geotextile, overlapping sides and ends at least 6 inches (150 mm).
   1. Compact each filter material layer to 85 percent of maximum dry unit weight according to ASTM D 698

3.15 DRAINAGE COURSE

A. Place drainage course on subgrades free of mud, frost, snow, or ice.

B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade and under water storage reservoir floors as follows:
   1. Install subdrainage geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.

2. Place drainage course 6 inches (150 mm) or less in compacted thickness in a single layer.
3. Place drainage course that exceeds 6 inches (150 mm) in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick.
4. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.16 FIELD QUALITY CONTROL

A. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Engineer.

B. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least 1 test for every 1000 sq. ft. or less of building slab, but in no case fewer than 3 tests.
2. Foundation Wall Backfill: At each compacted backfill layer, at least 1 test for each [100 feet (30 m)] or less of wall length, but no fewer than 2 tests.

C. When testing reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.17 PROTECTION

A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.

C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION

SECTION 02821

CHAIN-LINK FENCE AND GATE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Chain-Link Fences: Industrial
   2. Gates: Industrial Automatic Slide
   3. Gates: Industrial Automatic Swing
   4. Gates: Industrial Swing

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show locations, components, materials, dimensions, sizes, weights, and finishes of components. Include plans, gate elevations, sections, details of post anchorage, attachment, bracing, and other required installation and operational clearances.

1.3 QUALITY ASSURANCE

A. Slide Gate Manufacturer: A company specializing in the manufacture of gate operators of the type specified, with a minimum of five years' experience manufacturing operators of this type and design.

B. Slide Gate Installer: Must have a minimum of three years' experience installing similar equipment.

1.4 CODES AND REGULATORY REQUIREMENTS

A. Slide gate operators shall be built to UL 325 standards and be listed by a nationally recognized testing laboratory. Complete all electrical work according to local codes and National Electrical Code. All fieldwork shall be performed in a neat and professional manner, completed to journeyman standards.

B. Current safety standards require the use of multiple external sensors to be capable of reversing the slide gate in either direction upon sensing an obstruction.

C. Slide gates must have physical stops to prevent over travel in both the open and close directions.

1.5 WARRANTY

A. Provide a warranty against all defects in materials or workmanship for five years after the date of installation.

PART 2 - PRODUCTS

2.1 CHAIN-LINK FENCE FABRIC

A. General: Height indicated on Drawings. Comply with ASTM A 392, CLFMI CLF 2445, and requirements indicated below:
1. Steel Wire Fabric: Metallic coated 9 gauge wire with a diameter of 0.148 inch (3.76 mm), galvanized after weaving (GAW).
    1. Mesh Size: 2 inches (50 mm).
    2. Metallic (Zinc) Coating: ASTM A 392, Type II.
2. Selvage: Twisted top and knuckled bottom.

2.2 INDUSTRIAL FENCE FRAMING

A. Posts and Rails: Comply with ASTM F 1043 for framing, ASTM F 1083 for Group IC round pipe, and the following:
1. Group: IC, round steel pipe, yield strength 50,000 psi (345 MPa)
2. Coating for Steel Framing:
    1. Metallic coating.

2.3 TENSION WIRE

A. General: Provide horizontal tension wire at bottom of fence fabric.

B. Metallic-Coated Steel Wire: 0.177-inch- (4.5-mm-) diameter, marcelled tension wire complying with ASTM A 817 and ASTM A 824.
1. Metallic Coating: Type III, Zn-5-Al-MM alloy.

2.4 INDUSTRIAL AUTOMATIC SLIDE GATES

A. General: The two gates shall be a Type II cantilever slide with class 1 roller assemblies and a chain link style, constructed and installed to operate as an automated system.
1. The gates are to be constructed to comply with ASTM F 1184 for a double slide gate types for materials and protective coatings.
2. The gates are to have a height of 6 feet.
3. The maximum gate weight is 1500 lbs.
4. Roller guards to be installed as required per ASTM F 1184 for Type II, Class I gates.
5. All fittings used are to comply with ASTM F 626.
6. A wind brace is to be installed a minimum of 2 feet from the ground, to avoid interference with the operating unit, contractor to confirm the actual final layout.
7. Metal Pipe and Tubing: Galvanized steel. Comply with ASTM F 1083 and ASTM F 1043 for materials and protective coatings.
8. Gates shall have edge sensors and photo eyes per UL 325.

2.5 INDUSTRIAL SLIDE GATE OPERATOR

A. General: Contractor shall install HySecurity SlideSmart HD 15 operators, 230 VAC single phase or equal upon approval by engineer
1. Operators shall include 1-HP continuous duty motor, programming switches, fail-secure design, partial-open feature and plug-in loop detectors.

2. Operators are to include Heater Kits.
3. Two plug-in loop detectors, one safety loop and one safety/free exit loop utilizing a HySecurity HY5B loop detector or approved equivalent.
4. The operators are to be placed on concrete pads and pedestals per the Operator manufacturers recommendations.
5. Operators shall be installed in accordance with UL 325 and all other applicable safety standards.

2.6 INDUSTRIAL AUTOMATIC SWING GATES

A. General: The two gates shall be a Type II swing and a chain link style, constructed and installed to operate as an automated system.
1. The gates are to be constructed to comply with ASTM F 2200 for a double swing gate types for materials and protective coatings.
2. The gates are to have a height of 6 feet
3. The maximum gate weight is 1500 lbs.
4. All fittings used are to comply with ASTM F 626.
5. Metal Pipe and Tubing: Galvanized steel. Comply with ASTM F 1083 and ASTM F 1043 for materials and protective coatings.
6. Gates shall have edge sensors and photo eyes per UL 325.

2.7 INDUSTRIAL SWING GATE OPERATOR

A. General: Contractor shall install HySecurity SlideSmart DC 20 operators, 230 VAC single phase or equal upon approval by engineer
1. Operators shall include 1-HP continuous duty motor, programming switches, fail-secure design, partial-open feature and plug-in loop detectors.
2. Operators are to include Heater Kits.
3. Two plug-in loop detectors, one safety loop and one safety/free exit loop utilizing a HySecurity HY5B loop detector or approved equivalent.
4. The operators are to be placed on concrete pads and pedestals per the Operator manufacturers recommendations.
5. Operators shall be installed in accordance with UL 325 and all other applicable safety standards.

2.8 POST MOUNTED KEY PAD

A. A post mounted Linear AK-11 Exterior Digital Keypad 480 code economy lighted keypad or approved equivalent, for gate access with the following general specifications
1. Input: 12-24 VAC or VDC
2. Output: n/o or n/c contact 1-9 second
3. Operating temperature: -22 to 149 Fahrenheit
4. Features:
    1) Programmable one to six digit codes
    2) Programmable courtesy light
    3) Variable relay output time: 1-9 seconds
5. Keypads are to be housed in heavy metal, powder coated enclosures with stainless steel faceplate and a metal keypad.

2.9 GATE OPERATOR CONTROLS

A. Industrial Slide Gates
1. New gate operator shall be programmed to control button located in the scale house.
2. New gate operator shall be programmed to remotes and key fobs

B. Industrial Swing Gates
1. New gate operator shall be programmed to control button located in the scale house.
2. New gate operator shall be programmed to remotes and key fobs.

2.10 FENCE GROUNDING

A. Conductors: Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger.
1. Material above Finished Grade: Copper.
2. Material on or below Finished Grade: Copper.
3. Bonding Jumpers: Braided copper tape, 1 inch (25 mm) wide, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.

B. Connectors and Grounding Rods: Comply with UL 467.

2.11 INDUSTRIAL SWING GATES

A. General: Comply with ASTM F 900 for swing gate types.
1. Metal Pipe and Tubing: Galvanized steel. Comply with ASTM F 1083 and ASTM F 1043 for materials and protective coatings.

B. Frames and Bracing: Fabricate members from round, galvanized steel tubing with outside dimension and weight according to ASTM F 900 and the following:
1. Gate Fabric Height: 2 inches (50 mm) less than adjacent fence height.
2. Leaf Width: As indicated.
3. Frame Members:
1) Tubular Steel: 1.66 inches (42 mm) round, full weight

C. Frame Corner Construction:
1. Welded and 5/16-inch diameter, adjustable truss rods for panels 5 feet (1.52 m) wide or wider.

D. Hardware: Latches permitting operation from both sides of gate, hinges, center gate stops and keepers for each gate leaf more than 5 feet (1.52 m) wide. Fabricate latches with integral eye openings for padlocking; padlock accessible from both sides of gate.

E. Gate Stops: Post and hardware to retain gate in open position.

2.12 FITTINGS

A. General: Comply with ASTM F 626.

B. Finish:
   1. Metallic Coating for Pressed Steel or Cast Iron: Not less than 1.2 oz./sq. ft. (366 g/sq. m) zinc.
   2. Aluminum: Mill finish.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Install chain-link fencing to comply with ASTM F 567 and more stringent requirements specified.

B. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.

C. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
   1. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.

D. Terminal Posts: Locate terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment.

E. Line Posts: Space line posts uniformly at 10 feet (3 m) o.c. maximum

F. Post Bracing and Intermediate Rails: Install according to ASTM F 567. Install braces at end and gate posts and at both sides of corner and pull posts.

G. Tension Wire: Install according to ASTM F 567, maintaining plumb position and alignment of fencing.

H. Top Rail: Install according to ASTM F 567.

I. Chain-Link Fabric: Apply fabric to outside of enclosing framework. Leave 2 inches (50 mm) between finish grade or surface and bottom selvage, unless otherwise indicated.

J. Tie Wires: Attach wire per ASTM F 626. Bend ends of wire to minimize hazard to individuals and clothing.

K. Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.

L. Barbed Wire: Uniformly spaced, angled toward security side of fence. Pull wire taut and install securely to extension arms and secure to end post or terminal arms.

3.2 GATE INSTALLATION

A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fence fabric to gates the in the same manner as attaching fence fabric to fence posts. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.3 GROUNDING AND BONDING

A. Fence Grounding: Install at maximum intervals of 1500 feet (450 m).

B. Fences within 100 Feet (30 m) of Buildings, Structures, Walkways, and Roadways: Ground at maximum intervals of 750 feet (225 m).
   1. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches (150 mm) below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at the grounding location.

C. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.
   1. Connections: Make connections so possibility of galvanic action or electrolysis is minimized.

PART 4 - MEASUREMENT AND PAYMENT

4.1 GENERAL

See Section 01275: Measurement and Payment

END OF SECTION

DIVISION 10

SPECIALTIES

SECTION 10881

VEHICLE SCALE

PART 1: GENERAL REQUIREMENTS

1.1 DESCRIPTION

A. The Contractor shall be responsible for all labor, materials and equipment necessary for the design, fabrication, construction, painting, installation, structural support, and electrical supply for the concrete deck truck scale as shown on the Drawings. Only new scales constructed of new, unused materials shall be accepted. Used or previously erected scales, or any parts, will not be accepted. For the purpose of this specification "Contractor" is defined as the general contractor and any scale subcontractors necessary for a complete installation meeting these specifications.

B. Equipment furnished and installed under this section shall be assembled, erected and placed in proper operating condition in full conformity with drawings, specifications, engineering data, instructions and recommendations of the equipment manufacturer unless exceptions are noted by the Engineer.

C. Related Sections include the following:

1. Division 2 Section 02300 “Earthwork”

2. ISPWC Division 700 Section 703 "Cast-In-Place Concrete" for required concrete.

1.2 REFERENCES

A. All work on the scales shall fully conform to the requirements of the latest published editions of the following Standard Specifications:

B. ACI 318 - Building Code Requirements for Reinforced Concrete

C. ACI 301 – Standard Specification for Structural Concrete

D. ASTM C33 – Concrete Aggregate

1. International Building Code (IBC) – Latest Edition

1.3 GOVERNING STANDARDS

A. The scale systems shall have been issued a Certificate of Compliance by the National Type Evaluation Program, (N.T.E.P.) and shall conform to the following federal, state, local, and industrial standards. Scale manufacturer shal provide a NTEP Certificate of Conformance attesting to conformance with standards.

1. National Bureau of Standards, NBS Handbook 44, "Specifications, Tolerances, and Technical Requirements for Weighing and Measuring Devices".

2. National Electrical Manufacturers Association and the National Electrical Code.
3. Applicable state regulations for commercial weighing devices.
4. AISC Manual of Steel Construction.
5. American Welding Society AWS D1.1, latest edition.

1.4 QUALIFICATION OF MANUFACTURER

A. The design and construction of the scale shall only be undertaken by a Contractor with a minimum of five years experience with vehicle scale construction. The Contractor must be able to demonstrate experience through the design and construction of at least five vehicle scales of size and capacity.

1.5 BIDDER REQUIREMENTS

A. The Bidder shall agree to hold himself responsible for any claim made against the Owner for any infringement of patents by the use of patented articles in the construction and completion of the work, for any process connected with the work agreed to be performed under the bid, and for all materials used upon the said work. Bidder also agrees to save harmless and indemnify the Owner from all costs, expenses and damages which the Owner might be obliged to pay by reason of any infringement of patents in the construction and completion of the work.

1.6 SUBMITTALS

A. The Contractor shall submit complete specifications, shop drawings, catalog data and literature. Five copies of the scale manufacturer's erection manual and operation and maintenance manuals shall also be included with the submittal.

1.7 VEHICLE SCALE DETAILS

A. The scale shall be constructed of the most economical design. All members of structural steel shall be designed to safely withstand the maximum stresses to which they may be subjected during erection and operation.

1. The length of the scale deck shall be 80 feet.

2. The width of the scale deck shall be 11 feet.

3. Scale shall include safety side rails.

1.8 GUARANTEE

A. The scale manufacturer shall warrant the scale assembly including the deck and components below the deck for a period of ten years; peripheral devices shall be covered for a period of one year.

PART 2: PRODUCTS

2.1 REQUIREMENTS

A. Three 11-foot wide by 80-foot long (unobstructed weighing surface) scale at the Bannock County Landfill. The design and manufacture of the scale weighbridge, load cells, digital instrumentation and associated accessories shall be of one manufacturer to maximize compatibility and availability of components. Scale shall be able to be interfaced with the County's new software and the new kiosk system. It is the Contractor's responsibility to prove proposed equivalent meets interfacing requirements.

2.2 SCALE

A. Weighing Platforms:

1. The scale weighbridge shall be capable of weighing a truck having a tandem axle weight of up to 100,000 pounds.
2. The weighbridge shall consist of three prefabricated steel modules.
3. The prefabricated scale modules shall be so designed to enable field pouring of the concrete without additional field forming. No rebar shall be required for the concrete deck. The requirement of field added reinforcing steel or other methods shall not be permissible.
4. Concrete for scale deck shall be a minimum strength of 4,000 psi at 28-day cure.
5. The weighbridge shall be designed to allow access to load cell cables, base plates, and all foundation anchor bolts from the top of the scale platform.
6. The weighbridge and load cell mounting assemblies shall be designed to allow installation or replacement of a load cell with only one additional inch of clearance required between the top of the foundation and the bottom of the weighbridge on pitless installations.
7. The load cell assembly shall be designed so that when you are at the scale weighbridge with a lifting jack, the load cell can be replaced in less than 5 minutes.
8. There shall be no field welding required for the installation of the scale.
9. All required load cells and load cell cables shall be furnished and factory pre-installed.
10. The weighbridge shall be constructed of 8-inch side I-beams and a ¼-inch bottom plate. One-quarter-inch stringers and round cross members shall be welded to the bottom pan and be of such design to easily allow concrete to flow around them and fully encapsulate them.
11. The weighbridges shall connect to each other via connection blocks that span the width of the load mounting. Bolted or pin and saddle designs shall not be permissible.
12. The depth of the concrete shall be 8 inches and less concrete depth shall not be permitted.
13. Scale shall be Cardinal model 1010329 or approved equivalent.

B. Scale Foundation

1. The foundation shall extend to the frost line at the loadcell piers. The areas between the load cell piers are not for load bearing purposes and are for cover.
2. The foundation shall provide a minimum of 3 inches of clearance to the weighbridge. If local regulations call for more than 3 inches of clearance, then they shall prevail.

3. The approach slab shall be a maximum of 17 ½ inches above the pier.
4. The foundation shall be constructed of concrete with a minimum strength of 4,000 psi at a 28-day cure.
5. The foundation shall be reinforced in all load-bearing areas. The reinforcing steel shall be 60 KSI yield strength and conform with ASTM A615 grade 60 minimum.
6. The entire foundation shall be tied together by a minimum of 6-inch x 6-inch , 10-gauge woven wire mesh, which shall cover the entire length and width of the foundation.
7. The foundation shall be constructed such that positive drainage away from the foundation is maintained.
8. The foundation shall be designed to include two approaches one at each end of the scale in accordance with local regulations and guidelines of the National Institute of Standards and Technology Handbook 44, current edition.

C. Load Cells and Cables

1. All load cells shall be of double-ended shear beam strain gauge design and shall have a minimum capacity of 75,000 pounds with a 150% of capacity overload rating.
2. Load cells shall be certified by NTEP and shall meet the specifications as set forth by the National Institute of Standards and Technology Handbook 44 for Class IIIL, multiple cells, 10,000 divisions. The manufacturer shall provide a NTEP Certificate of Conformance attesting to compliance with these requirements.
3. The load cell assembly shall be constructed to self-center.
4. The load cell shall not require check rods, check bolt, flexures, or chain links for stabilization, as these items are sources of ongoing maintenance requirements.
5. The distance between the top of the concrete pier to the bottom of the resting load cell in its stand shall not be less than 8 inches to avoid debris accumulation and water build-up.
6. No part of the load cell may extend below the scale deck.
7. The load cell shall be constructed from stainless steel and shall be environmentally sealed to an IP69K rating.
8. The load cell shall not need boots or shrouds of any kind to prevent the contamination of the bearing surface but shall be of a self-cleaning design. Designs using boots or shrouds shall not be allowable.
9. The load cell shall have a connector integral to its housing for connecting and disconnecting the load cell interface cable at the load cell.
10. System shall be so designed as to permit a load cell cable to be replaced without either splicing the load cell cable or replacing the load cell, either of which will contribute to eventual system failure and unnecessary service costs.
11. The load cell interface cable shall be metal braided for environmental and rodent protection. Neoprene covered load cell cable shall not be permitted.
12. The load cell shall be manufactured by the scale manufacturer and shall be a Cardinal Scale model SCBD75 SmartCell with axis frictionless centering system or approved equivalent.
13. Junction boxes shall not be permitted in the scale, attached to the exterior of the scale, or remotely mounted from the scale. Sectional controllers with encapsulated PCBs shall not be permitted due to the failure rates associated with PCBs that have wired connections made within enclosures which are not hermetically sealed.

14. In order to minimize maintenance issues, only a single cable shall be used to transmit data or weight signals between the weighbridge and the digital weight display.
15. The scale's weighing-related electronics shall consist solely of load cells, and load cell cables. No other devices shall be permitted between the load cell and the digital weight display. Junction boxes, summing boards, gathering boards, gathering boxes, totalizers, external analog-to-digital converter boxes, and sectional controller boxes will not be accepted because of their significant and inherent maintenance issues.
16. The grounding system shall employ a single-point ground in accordance with local regulations. The grounding system shall conform to the manufacturer's recommendations.

D. Weight Indicator
1. The scale shall be provided with a weight indicator that is compatible with Cardinal SmartCell digital load cells.
2. The weight indicator shall comply with the appropriate specifications for a Class IIIL 10,000 division weight indicator as specified by the National Institute of Standards and Technology Handbook 44 and shall have a NTEP Certificate of Conformance attesting to that compliance.
3. The weight indicator shall be housed in a desktop stainless enclosure and shall include a LCD display visible in all levels of light including total darkness and shall be installed in the scale house.
4. The weight indicator shall be manufactured by the scale manufacturer and shall be a Cardinal Scale 225 series Navigator weight indicator or approved equivalent.

E. Kiosk
1. Kiosk shall be 20"x20"x12" stainless steel enclosure provided by WasteWORKS or approved equivalent and shall contain the components listed below:
2. Keypad with backlit display.
3. IP intercom system with base station, controller and door mounted remote. Intercom shall be able to communicate with scale house attendant.
4. Swing-Away 4-sided hood and post. Swing-Away hood measures 24"x28"x14".
5. Kiosk ticket printer.
6. Outdoor, vari-focal, bullet camera and all manufacturer required software and server.
7. Electric Heater/Fan for enclosure.
8. RFID Reader
9. Contractor shall also provide on-site installation and training by the kiosk manufacturer.
10. Contractor shall ensure load tickets also print through new printers in the scale house.

PART 3: EXECUTION

3.1 CONTRACTOR RESPONSIBILITY

A. Scale manufacturer/subcontractor shall coordinate with General Contractor on scale foundation layout to ensure foundation fits scale components.

B. Contractor/Scale Subcontractor to provide electrical and data conduits for scale. Contractor shall also be responsible for running data cable and power to scales from the electrical panel and other components.

END OF SECTION

APPENDIX A

GeoProfessional Innovation®

July 11, 2025
File: MO24224A

Ms. Stephanie Wilke, P.E.
Great West Engineering
2501 Belt View Dr.
Helena, MT 59601

RE: **Geotechnical Transmittal**
Bannock County Landfill Scale Improvements
1500 North Fort Hall Mine Road
Pocatello, Idaho

Greetings, Stephanie.

GeoProfessional Innovation Corporation (GPI) appreciates the opportunity to continue our professional relationship with Great West Engineering (Great West) with the proposed improvements to the Bannock County Landfill in Pocatello, Idaho. We will continue to follow up with your project team as design is finalized. The remainder of this transmittal letter provides you, the Bannock County (County) team, and the design/construction management team information on how to correctly interpret and apply our deliverable. It further outlines the variability of subsurface conditions and other pitfalls of changing geology, which can commonly occur through incorrect applications or expectations of our work. This information is partially adapted from GBA, *the GeoProfessional Business Association*, of which GPI is a member.

YOUR GEOTECHNICAL DELIVERABLE

These documents include GPI's geotechnical design, soil engineering characteristics, recommendations, foundation, and earthwork construction criteria specifically prepared for Great West and your retained design consultants for the project, configuration, description, and location described in the *Project Understanding* section in the attached geotechnical (GT) plan sheets. Please read, understand, and implement the geotechnical recommendations and requirements in their entirety. Do not read or rely on select elements only. Design continuity across disciplines will be enhanced through regular consultation and incremental plan document reviews to verify the geotechnical design is understood and properly incorporated into final project design; ultimately realized during construction.

GPI's Deliverables are Based on a Unique Set of Project-Specific Factors

GPI considers a number of unique, project-specific factors when establishing the scope of our geotechnical services. Typical factors include the Owner's goals, objectives, and risk management preferences; the general nature of the structure(s) involved, its size and configuration, and the location of the structure on the site.

Typical changes that can reduce the reliability of an existing geotechnical engineering deliverable include those that affect:

- The function of the proposed structure(s)
- Elevation, configuration, location, orientation, loading and/or its proximity to other utilities or structures
- Composition of the design team
- Funding changes
- Site grades and drainage features

As a general rule, *always* inform GPI of project changes – even minor ones – and request an assessment of their impact. If our *Project Understanding*, as outlined in the attached documents, is not correct, please notify us

immediately. GPI cannot accept responsibility or liability for problems that occur because our documents do not consider developments of which we were not informed.

Subsurface Conditions Can Change

Unknown or unanticipated subsurface conditions are a principal cause of construction delays, cost overruns, and disputes. The information contained herein is provided to help manage your and the County's risk associated with subsurface conditions.

Site exploration identifies only a small portion of the site's subsurface conditions, which can change significantly between exploration locations. GPI performed 10 exploratory test pits throughout the proposed improvement areas. We relied on the field and laboratory data to apply our professional judgment rendering an opinion about the subsurface conditions throughout the site. Actual subsurface conditions exposed during construction may differ – sometimes significantly – from those identified in explorations and presented in our plans.

The site was previously developed and contains uncontrolled fill associated with historic earthwork, grading, and material handling activities. Fill was relatively deep (up to 6 feet) in exploration locations within the new scales, scale house, and Z-wall vicinities. The overall project grades are variable in this area; therefore, some subsurface variance should be expected and managed in earthwork specifications and contract documents. We provide specific recommendations for handling uncontrolled fill, as discussed below.

Design Alternatives Analyzed

GPI considered site soil characteristics and the estimated foundation loads to evaluate the allowable bearing capacity and settlement potential of the native, alluvial gravel and cobbles encountered in explorations. The native soil encountered in explorations was generally granular with the potential for occasional large boulders. While difficult for small excavation equipment, we expect site soil will be generally forgiving during seasonally inclement weather and provides good drainage characteristics for stormwater. Further, properly prepared site soil subgrades with good drainage will provide good pavement support.

The uncontrolled fill encountered on site contained trace amounts of wood debris, but generally appeared free of significant deleterious material. The uncontrolled fill varied in consistency; therefore, the recommendations outlined in the attached geotechnical plan sheets require uncontrolled fill be removed from beneath foundations. GPI considered the substantial investment involved with removing uncontrolled fill beneath the entire improvement areas, primarily beneath embankments and pavement sections. The site will be elevated primarily to achieve project grades. For this reason, we outline requirements to remove deleterious material, scarify, and recompact the site soil beneath planned embankments and pavement sections. This approach does not eliminate, but reduces the risks associated with leaving fill in place. Additionally, we evaluated foundation performance and concluded that 1 foot of granular soil improvements beneath foundations would provide a uniform bearing surface where over-excavations are necessary to remove uncontrolled fill.

GPI also performed geotechnical global stability analyses on the final slope configurations using the computer software SLOPE/W, developed by GEO-SLOPE International, Ltd. SLOPE/W searches for the potential failure surface with the lowest safety factor by calculating safety factors on many different potential failure surfaces using various slope stability analysis methods. A factor of safety (FOS) of 1.5 (static) and 1.1 (seismic) typically meets the geotechnical standard of care for permanent configurations. Our analyses evaluated potential failure surfaces along the critical (i.e., tallest) slope section. We selected a cross section through the tallest embankment in the northeast corner of the site, where the planned stormwater pond abuts the embankment. The slope configurations for embankments are planned at 3H:1V (horizontal to vertical). The cross-sectional

site subsurface geometry used in our analysis is illustrated on Figure A.1 in Appendix A, *Stability Analysis Results*.

Our analysis provides a predicted FOS against global failure for the planned slope configuration corresponding to deep-seated circular slope failures. The stormwater pond will not be lined and will rely on infiltration and evaporation for stormwater disposal. Therefore, we analyzed the slope configuration to include the stormwater pond at the highwater level, assuming the slope will also realize partially saturated conditions near the bottom of the embankment. Additionally, we modeled the slope configuration immediately after the pond is emptied (i.e., rapid drawdown). Our analyses conclude that under both static and seismic conditions, the configuration results in estimated FOS meeting the minimum FOS as outlined in Table 1. Figures A.2 through A.7 in Appendix A illustrate the estimated FOS for the final slope configurations.

Table 1. Design Factors of Safety

Configuration	Static Conditions		Seismic Conditions	
	Minimum	Calculated	Minimum	Calculated
Full Pond (South Slope)	1.5	2.05	1.1	1.27
Drained Pond (South Slope)	1.5	1.81	1.1	1.19
No Pond (North Slope)	1.5	1.83	1.1	1.21

GPI's Deliverables Can Be Subject to Misinterpretation

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, bid documents should clearly delineate how you intend the design team and contractors to rely on the geotechnical engineering deliverable. You can also lower the risk of costly problems from misinterpretation by having GPI confer with appropriate members of the project team during the entire design and construction process. We look forward to providing our review of pertinent final aspects of the plans and specifications.

Read Responsibility Provisions Closely

Geotechnical engineering is a far less exact science than other engineering disciplines. Geology does not behave uniformly or linearly and is subject to change based on various factors beyond anyone's control. This is especially important on sites that have been previously developed. This lack of understanding and the presumption that geotechnical design can be administered similar to structural and civil design has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, GPI includes an *Evaluation Limitations* section herein to indicate where GPI's responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions.* Ask questions; GPI will respond fully and frankly.

GEOTECHNICAL DESIGN CONTINUITY

We base the information contained in this deliverable on existing site conditions, data supplied by project team members as noted in the *Project Understanding* and *Geotechnical Design Basis* sections, and the currently planned site configuration at the proposed Bannock County Landfill site. Changes to the structures or embankment configuration, loading, or stormwater disposal plans may require additional analyses specific to the actual anticipated construction conditions and final grading configuration. GPI is available to provide geotechnical continuity through the final planning, design, and construction for the project. This includes aiding

Great West and the County in plan and specification review of appropriate portions of structural, civil, and grading for the project as well as support during earthwork.

EVALUATION LIMITATIONS

The attached geotechnical deliverable is prepared to assist the planning, design, and construction of the Bannock County Landfill Scale Improvements to be constructed at the Bannock County Landfill in Pocatello, Idaho. Our services comprise professional opinions and recommendations made in accordance with generally accepted geotechnical engineering principles and practices, as they exist at the time and in the area of this deliverable. GPI's scope does not include civil design, stormwater design, structural evaluation, structural concrete design, excavation safety plan development, off-site improvements, erosion control, shoring, hazardous substance evaluation, environmental site assessment, specification development, or project cost estimating. Nor does our scope include a site-specific seismic evaluation. The project site is in a moderately active seismic zone and shall be considered in structural design. GPI can perform these services under a separate scope if requested by Great West.

The geotechnical design recommendations and construction requirements provided herein are based on the premise that GPI or another qualified geotechnical engineering firm or individual conducts an adequate program of tests and observations during construction in order to verify compliance with our recommendations and to confirm conditions between exploration locations. If a firm other than GPI is selected to perform these observations during construction, we recommend that firm be notified that their scope includes implementing the geotechnical recommendations herein as the geotechnical engineer of record. This acknowledgment is in lieu of all express or implied warranties.

CLOSING

We are pleased to provide Great West Engineering with this geotechnical deliverable and we look forward to seeing this project advance through construction. If you have any questions regarding this deliverable or need more information, please contact us.

Sincerely,
GPI

Justin B. Maffey, P.E.
Project Engineer

Travis J. Wambeke, P.E.
Principal Engineer

TJW/mg

Attachments: Geotechnical Plan Sheets GT1 to GT8
Appendix A: Stability Analysis Results

BANNOCK COUNTY LANDFILL SCALE IMPROVEMENTS



Reference: Base images from Google. No scale intended.

1 PROJECT UNDERSTANDING

Existing Conditions and Proposed Construction

The site is located at the existing Bannock County landfill at 1500 North Fort Hall Mine Road in Pocatello, Idaho. Bannock County (County) operates the landfill that includes a scale and scale house for landfill operations along with an office building and equipment shop. A stormwater pond exists north of the buildings but will not be relied on for stormwater disposal for the new entrance facility. The landfill waste storage cells are located several hundred feet south of the entrance scale and associated buildings. The County will expand their operations north of the existing scale. The improvements include a new scale with scale house along with creating space for recycling, appliance disposal, tire collection, and associated access drive lanes. The existing conditions across the improvement area span both developed and undeveloped areas. Previous development areas comprise material stockpiling and gravel-surfaced drives. Undeveloped areas comprise significant grass and brush at the ground surface.

3 new scales will be constructed that will bear on a mat-slab/pier foundation systems and apply 4,000 pounds per square foot (psf) bearing pressure. The scale house will be founded on conventional shallow foundations with structural loads anticipated at less than 3 kips per linear foot (klf). As part of the planned improvements, a cast-in-place concrete "Z-wall" will be constructed near the northeast corner of the improvement area. The Z-wall will be constructed to retain the slope and house 4, 7.5x22-foot roll-off containers for waste handling at the bottom of the wall, constructed over concrete slabs. The Z-wall will have a maximum 9 feet exposed. A wall drain will collect and direct stormwater away from the wall and convey it to a disposal area specified by Great West.

The improvements require cuts up to 6 feet and fills up to 28 feet for roadway construction and to level the site. Access drives will be asphalt-paved for all weather travel and the remaining improvement areas will receive gravel surfacing. Stormwater will be collected from new impervious areas and directed to a new stormwater pond located on the south side of the northeast roadway embankment, specified and designed by Great West. Utilities will extend from existing connections along South Fort Hall Mine Road. No other improvements are planned.

Subsurface Conditions

Exploration was accomplished via 10 exploratory test pits extending 5.0 to 9.0 feet below the ground surface advanced with a CAT 323 provided by the County. Approximate test pit locations are shown on sheet GT6. During exploration, the subsurface geology was visually classified, described, and logged in reference to the *Unified Soil Classification System* (USCS). In-place soil samples were collected from various depths and locations for subsequent laboratory testing. The USCS is presented on GT6 and shall be used to interpret the soil conditions described in this document and on the individual exploration logs. Test pits were loosely backfilled and were not recompacted or reseeded.

The existing ground surface varied in composition throughout exploration locations. Topsoil was encountered at the ground surface in test pits TP-24224A-1 through 6, and 10 comprising silty gravel with sand or silt that was brown, loose/soft, and moist to wet extending 1.0 to 1.5 feet below the surface. Uncontrolled fill comprising silty gravel with varying cobbles was encountered at the ground surface in TP-24224A-7, -8, and -9 that was dark brown to grayish brown, loose to dense, and moist to wet extending 4.5 to 6.0 feet below the ground surface. In general, the native soil units encountered comprised a relatively heterogeneous mixture of alluvial gravel and sand with varying silt content, containing varying amounts of cobbles and boulders, consistent with a high-energy alluvial deposit. The native subsurface soil units are described below.

Alluvium

Silty Gravel with Sand (GM) to Poorly-graded Gravel with Silt and Sand (GP-GM): dark brown to light brown, medium dense to very dense dense, and moist. Alluvial gravel contained varying amounts of silt, cobbles, and boulders, and was encountered in each test beneath topsoil or uncontrolled fill and extended to the termination depths except in TP-24224A-4.

Silty Sand with Gravel, Cobbles, and Boulders (SM): light brown, medium dense to very dense, and moist. Alluvial silty sand was encountered TP-24224A-2 beneath alluvial gravel and extended to the termination depth of 9.0 feet below the ground surface.

Sandy Silty Clay with trace Gravel (CL-ML): light brown, stiff, and moist. Alluvial sandy silty clay was encountered as a relatively thin lens in TP-24224A-6 beneath alluvial gravel and extended 6.0 feet below the ground surface.

Additionally, Great West provided a sample of the borrow material that will be used for embankment construction. The sample was obtained from the excavation for the landfill just south of the site. The soil was classified as poorly-graded sand with gravel and cobbles (SP). Neither bedrock nor groundwater were encountered in the locations and depths explored.

2 GEOTECHNICAL DESIGN BASIS

General

- International Building Code, 2018
  - o IBC Chapters 16 and 18

GPI's field exploration, reference sheets GT6-GT7

- o Test pits advanced on April 3, 2025.
- Laboratory testing, reference sheet GT8
- Foundation frost depth - 2.5 feet (Bannock County)
- Estimated structural loads to be verified by structural design:
  - o Total scale foundation applied pressure: 4,000 psf
  - o Total conventional maximum strip footing load: 3 klf
- Seismic Site Class C (Reference IBC Section 1613 and ASCE 7).
- AASHTO Guide for Design of Pavement Structures
- Bearing capacity failure, factor of safety (FOS) = 3 or greater
- Settlement estimates are unfactored

3 REFERENCES

The geotechnical evaluation herein is based on the authorized geotechnical scope dated August 6, 2024, and the latest versions of the ASTM International standards, Idaho Standards for Public Works Construction (ISPWC), and other reference standards listed below:

Field Exploration

- ASTM D 420 - site characterization for engineering, design, and construction
- ASTM D 2487 - classification of soils for engineering purposes (USCS)
- ASTM D 2488 - Practice for description & identification of soil (Visual-manual procedure)s

Construction Standards

- ISPWC 2020 edition

Laboratory Investigation

- ASTM D2216 - water content of soil and aggregate
- ASTM D1557 - compaction characteristics of soil (modified effort)
- ASTM D6913 - grain size distribution by sieve analysis
- ASTM D4318 - Atterberg limits of soil
- SM 4500-H^+ B - Test method for measuring pH of soil
- SM 2510 B - Test method for electrical conductivity for soil resistivity
- SM-4500 SO_4 E - Test Method for measuring sulfate content of soil

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REV	DATE	DESCRIPTION
A	05/01/25	60% DRAFT
B	06/19/25	90% DRAFT
C	07/11/25	FINAL

CHECK: TJW
FILE: M0342424
PROJECT:
BANNOCK COUNTY LANDFILL SCALE IMPROVEMENTS GEOTECHNICAL ENGINEERING EVALUATION
1500 N. FORT HALL MINE RD., POCATELLO, IDAHO 83204
ATTN:
STEPHANIE WILKE, P.E.

DRAWN: AJS
DESIGN: JBM
PREPARED FOR:
GREAT WEST ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601

GeoProfessional Innovation.
GPI 6 O'Donnell Road Pullman, WA 99163 509.339.2000

4 EARTHWORK

Site Stripping/Preparation

1. Remove soil containing vegetation and organics from beneath the proposed improvement areas. Exploration identified soil containing vegetation and organics extending 1.0 to 1.5 feet below the ground surface.
2. Isolated thicker topsoil deposits are possible and must also be removed during site stripping operations.
3. Topsoil is not suitable for use as structural fill.
4. At the onset of construction, exploratory test pit backfill shall be relocated and remediated where the test pit locations are within 10 feet of the proposed foundations, hardscapes, or pavement surfaces.
5. Excavate loose test pit backfill and replace it with *General Structural Fill* referencing Section 6.

Uncontrolled Fill:

1. Uncontrolled fill was encountered during exploration associated with prior site grading and shall be removed beneath planned foundations as part of subgrading efforts. The majority of uncontrolled fill is expected to be removed as part of establishing foundation elevations for the Z-wall and scales/scale house.
2. Remove fill to expose undisturbed native soil and prepare the subgrade per the *Subgrading* section. Replace over-excavated fill with compacted *Structural Fill*, referencing Section 6 requirements.
3. Where uncontrolled fill remains beneath roadway and gravel surfacing sections, remediate it as described in the *Subgrading* section.
4. Uncontrolled fill can be reused as *General Structural Fill* (SF-1) provided it is processed to remove debris and meet the *Structural Fill*, Section 6, requirements.
5. The geotechnical engineer retained for construction (GER) shall observe and document fill over-excavations prior to placing *Structural Fill* and/ or concrete.

Subgrading

1. Project subgrades are defined as follows:
   - Foundation bearing surface
   - Pavement section bearing surface
   - Base of any depression created by soil or fill removal
   - Base of any utility trench
   - Over-excavations
   - Any in-situ soil surface to receive *Structural Fill*
2. Once site stripping, fill removal, and excavation to achieve foundation and pavement subgrades is complete, prepare subgrades per the following:
   - o Embankment subgrades: expose existing site soil free of deleterious debris, moisture condition and compact to 90% of the soil's maximum dry density referencing ASTM D1557 (Modified Proctor). Coarse soil subgrades shall be compacted per the *Coarse Fill* requirements in Section 6.
   - o Foundation subgrades: remove uncontrolled fill and expose native soil, moisture condition and compact to 90% of the Modified Proctor. Coarse soil subgrades shall be compacted per the *Coarse Fill* requirements in Section 6.
   - o Pavement section subgrades: expose existing site soil free of deleterious debris or previously placed structural fill, scarify at least 0.7 feet, moisture condition and compact to 95% of the soil's Modified Proctor.
3. The GER shall review site preparations, subgrading efforts, and over-excavations prior to *Structural Fill* placement.
4. After achieving subgrade, the contractor shall protect the subgrade from becoming disturbed, saturated, or frozen. Control prepared subgrading by limiting construction traffic and reducing the subgrade's exposure to precipitation, water, and freezing conditions. Remediate areas damaged by construction activity at no additional cost to the County.
5. Grade subgrades to direct surface water away from construction areas to avoid potential ponding.

Excavation Characteristics

1. Site soil is excavatable using conventional excavation techniques and equipment.
2. Temporarily excavate, slope, shore or brace excavations in accordance with the *Occupational Safety and Health Administration* (OSHA) regulations and local codes.
3. In a dry condition, the on-site soil is classified under OSHA as Type C soil; pending configuration, temporarily slope at least 1.5H:1V (horizontal:vertical).
4. Construction vibrations, seepage, or surface loading can cause excavations to slough or cave and should be avoided.
5. The contractor is solely responsible for site safety, excavation configurations, and maintaining OSHA-approved personnel for excavation monitoring.
6. Plan excavations carefully, allowing water collection points and utilizing conventional sumps and pumps to remove nuisance water from runoff, seeps, springs, or precipitation.
7. Coordinate construction activities and excavation backfilling as rapidly as possible following excavation to reduce the potential for subgrades to degrade under construction traffic.

Over-Excavation

1. Over-excavations are required to remove uncontrolled fill beneath foundation alignments. This may require excavating depths of 6 feet or greater beneath the Z-wall and scales.
2. Additionally; soft, loose, wet, pumping, or rutting areas that cannot achieve compaction following adequate moisture conditioning must be removed to expose medium dense, native soil at the direction of the GER, Great West, and the County.
3. Replace over-excavations with *Granular Structural Fill* (SF-2) as described in *Structural Fill*, Section 6.
4. Determine soil over-excavation criteria during construction with the GER, the contractor, Great West, and the County. Over-excavations, unless otherwise specified, shall extend at least 1 foot below the subgrade and laterally 1/2 the depth.

Wet Weather/Wet Soil Construction

1. Ideally, perform earthwork construction during dry weather conditions (typically May through October).
2. The site soil is susceptible to pumping or rutting from heavy vehicle and equipment loads. The key to reducing rework with the site soil is to minimize disturbance to it.
3. If earthwork occurs during wet periods, accomplish work at or near final subgrade with equipment that imparts low bearing pressures, track-mounted, and low tire pressure equipment. Using high ground-contact pressure equipment such as dump trucks, scrapers, and loaders can readily pump and rut the subgrade and their application shall be carefully considered.
4. Stage construction, specifically excavation and backfilling, to avoid traffic on subgrades.
5. Depending on precipitation, runoff, and perched groundwater conditions, the site soil may be over optimum moisture content. Contractors shall expect these conditions and be prepared to install runoff management facilities and to replace wet or disturbed soil with SF-2 after moisture conditioning.
6. Stormwater sheet flow towards or across the earthwork area can occur during storm events. Contractors shall expect these conditions and be prepared to install runoff management facilities to prevent stormwater from reaching active earthwork areas.
7. Maintain dewatering systems during wet weather to facilitate good drainage and reduced over-excavation.
8. Discharge collected construction water into temporary stormwater and sediment facilities established as part of the contractor's stormwater management plan.

Utility Trench Backfill

1. Remove all saturated, loose, and/or disturbed soil from the bottom of the utility trenches prior to placing pipe bedding.
2. Accomplish bedding for pipes, conduits, and utility trenches in accordance with ISPWC standards.
3. Backfill the remainder of utility trenches in accordance with the *Structural Fill*, Section 6 requirements.
4. Where existing utilities exist below new improvements, completely remove the utility trench backfill and piping. Replace with structural fill.

Slope Embankment Construction

1. Prepare embankment subgrades per the *Subgrading* section prior to constructing embankments and per the *Structural Fill* Section 6.
2. Bench all fill placed on slopes steeper than 5H:1V at a maximum 3 foot bench height, see Figure G2.1.
3. Grade fill slopes at no steeper than 3H:1V.
4. Construct cut slopes at no steeper than 2H:1V.
5. Shallow surface failures are expected to occur during spring or winter seasons where slopes are exposed to precipitation, runoff, and freeze-thaw action until adequate vegetation is established.
6. Typical slope failures are relatively shallow and occur under these conditions. Shallow slope failures may instigate progressive erosional failures on downhill slopes if not remediated quickly.
7. Steeper slope inclinations increase the risk of shallow surface failures, though such failures can occur even on flatter slopes without proper surface drainage and erosion control measures.
8. This project may generate an excess of topsoil or soil containing vegetation and organics. Place at least 0.5-feet of topsoil on slopes to facilitate vegetative growth and to track-walk the topsoil into the slope face.
9. Topsoil often experiences frost action and easily slips off the slope face. To utilize excess topsoil, place a thicker layer on slopes not to exceed 1-foot in thickness. Combine track-walking with a sheeps foot roller over the slope surface to further "seat" the topsoil into the slope and reduce the hazards of surface failures and erosion.

5 GEOSYNTHETICS

Where required, apply geosynthetics to the following material and placement requirements

Table G2.1: Geosynthetic Specifications

Geosynthetic Type	Use	Material Specifications
Non-Woven Separation Fabric	Pavement section separation, foundation/wall drains	- Must meet Subgrade Separation – ISPWC Standards Section 2050 - Part 2.3 (Type I) - Min. 180 pound grab tensile strength (ASTM D 4632) - Min. 70 pound puncture resistance (ASTM D 6241) - Min. 70 pound tear strength (ASTM D4533)
InterAx Geogrid	Extremely soft subgrade conditions	- Co-extruded and integrally formed - >1.0 rib aspect ratio - 0.13 inch node thickness (ASTM D4759-02)

Geosynthetics

1. Geosynthetic fabrics that do not meet the requirements in Table G2.1 above may be used only if approved by the GER, Great West, or the County.
2. Geosynthetic fabrics are applicable when constructing on soft or wet soil as separation and stabilization fabrics.
3. Where required to aid construction or increase long-term performance, apply geosynthetics directly on approved subgrades, taut, free of wrinkles, and over-lapping at least 1-foot.
4. Consult GPI to review geosynthetic applications or other subgrade improvement alternatives.
5. Geogrid is not expected to be required unless extremely soft subgrades develop during construction due to unusually high groundwater or construction during wet seasons.
6. Construction timing can impact the need for geosynthetics, specifically, geogrid.

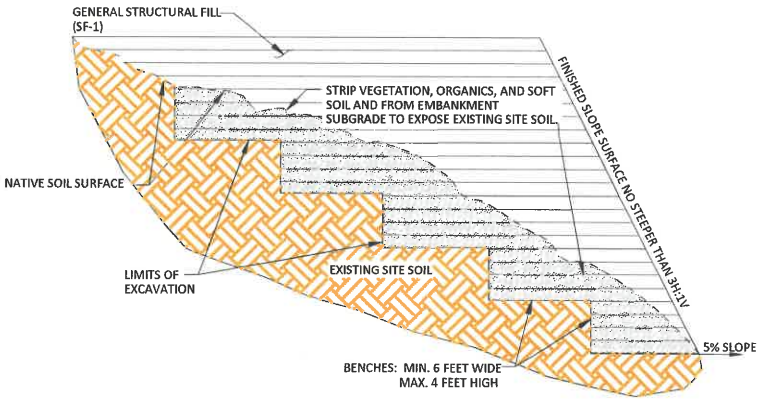


Figure G2.1: Slope Construction Schematic

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REV	DATE	DESCRIPTION	CHECK: NW
1	05/01/25	60% DRAFT	FILE: MD24224A
2	06/19/25	90% DRAFT	PROJECT:
3	07/11/25	FINAL	BANNOCK COUNTY LANDFILL 2501 BELT VIEW DRIVE HELENA, MT 59601

1500 N. FORT HALL MINE RD.
POCATELLO, IDAHO 83204

ATTN:
STEPHANIE WILKE, P.E.

PREPARED FOR:
GREAT WEST ENGINEERING
SCALE IMPROVEMENTS
GEOTECHNICAL ENGINEERING
EVALUATION

DESIGN: JBM
DRAWN: AJS

BANNOCK COUNTY IDAHO
Great West

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6 STRUCTURAL FILL

Material Requirements

1. Excavated site soil may be used as *General Structural Fill* (SF-1) so long as it meets the requirements provided in Table G3.1, below.
2. Material requirements for structural fill reference the 2020 ISPWC and are described in Table 3.1, below.

Table G3.1: Structural Fill Specifications and Allowable Use

NSF	Non-Structural Fill (Landscape, Fill, or Topsoil)	- Any area that will not support pavements, foundations or other improvements, (typically landscape areas)	- Soil classified as GW, GM, GP, GC, SM, SW, SP, SC, or ML according to the USCS. - Soil may not contain particles larger than 1 foot in median diameter. - Soil must be reasonably free from deleterious substances such as wood, metal, plastic, waste, etc.
SF-1	General Structural Fill	- Embankment construction - General site grading - Utility trench backfill	- Soil classified as GW, GP, GM, GC, SP, SM, or SW according to the USCS. - Soil must contain less than 3 percent (by weight) of organics or other deleterious substances. - Soil may not contain particles larger than 0.7 feet in diameter. - Site soil is anticipated to meet this criteria - Coarse granular soil locally know as "shotrock" or "pitrun" is suitable SF-1
SF-2	Granular Structural Fill	- Over-excavations to within 0.5 feet of concrete bearing surface - SF-1 applications	- Meeting requirements in ISPWC *Section 801 - UNCRUSHED AGGREGATES* (6-, 3-, or 1-inch nominal size - Crushed products are acceptable
CA-1	Crushed Aggregate	- Foundation and pavement support aggregate - Foundation/Z-wall backfill - SF-2 applications	- Meeting requirements in ISPWC *Section 802 - CRUSHED AGGREGATES* (3/4 in. Type I)
PB	Pipe Bedding	- Utility pipe bedding within 0.5-feet of the pipe invert and 1-foot over the pipe	- Meeting requirements in ISPWC *Section 305 - PIPE BEDDING*
DA	Drainage Aggregate	- Foundation/wall drains	- Meeting requirements in ISPWC *Section 801 - UNCRUSHED AGGREGATES*, Table 1 (Drain Rock) - CA-1 may also be used for DA

Required Compaction

Subgrades and backfill supporting any structure or improvement must be compacted to Structural Fill requirements presented in Table G3.2.

Table G3.2: Required Structural Fill Products for Designated Project Areas

Project Area	Required Structural Fill Product	Compaction Requirement[A]
Embankment subgrades	Existing Site Soil[B]	90%
Foundation subgrades	Native Soil[B]	90%
Pavement section subgrades	Existing Site Soil[B]	95%
Embankment construction, general site grading, utility trench backfill	SF-1[B]	95%
Over-excavations	CA-1, SF-2[B]	95%
Foundation support and backfill, Z-wall backfill, pavement support sections	CA-1	95%
Landscape areas sloped flatter than 5H:1V	Landscape Fill, Topsoil	85%

Table G3.2 Notes:

A. Relative compaction requirement compared to the maximum dry density of the soil as determined by ASTM D1557 (Modified Proctor).

B. Coarse soil with greater than 30% retained on the 3/4-inch sieve shall be compacted to the *Coarse Fill* section requirements.

1. Structural fill shall not contain particles of frozen soil, mud, snow, or ice. Structural fill shall not be placed on frozen subgrades.
2. Structural fill products must be moisture conditioned to near optimum moisture content, placed and compacted in maximum 1-foot-thick, loose lifts, providing compaction equipment weighs a minimum of 5 tons. If smaller or lighter compaction equipment is provided, reduce the lift thickness to meet the compaction requirements presented herein.

Coarse Fill

1. Any material with greater than 30 percent retained above the ¾-inch sieve is too coarse for Modified Proctor density testing, but may be used as SF-1 and SF-2. Coarse fill must be compacted using a "method specification" developed during construction that is based on the material characteristics and the contractor's means and methods.
2. Develop method specifications during construction with the GER and specific to the materials, compaction equipment, and conditions encountered.
3. A coarse fill method specification exists in section *202.3.8.C.3* of the ISPWC Standards
4. At a minimum, place all coarse fill in maximum 1.5-foot lifts and compact with 5 complete passes of a minimum 10-ton, vibratory or grid roller.
5. Vibratory rollers shall have a dynamic force of at least 30,000 pounds per impact per vibration and at least 1,000 vibrations per minute. Coarse fill must be compacted to a dense, interlocking, and unyielding surface. Vibratory rollers can negatively impact adjacent structures and moisture sensitive subgrades, and must be used with caution. Where adequate compaction equipment cannot access structural fill areas, do not use coarse fill.

Earthwork Testing

The firm retained to verify subgrade conditions, required fill removal, soil bearing units, and compaction shall become the GER. At a minimum, the following earthwork testing frequencies shall be implemented.

1. GER shall observe site preparations, test pit remediation, and uncontrolled fill removal.
2. All subgrades must be observed by the GER or the GER's representative prior to placing structural fill or concrete. GER shall verify foundation and substrate design criteria. Where applicable, 1 compaction test every 10,000 square feet (sf) beneath embankments and 1 compaction test per foundation alignment.
3. Embankment Construction – 1 compaction test every 5,000 sf, per fill lift, minimum 2 tests per testing event.
4. Foundation and Slab Support Aggregate - 1 compaction test every 1,000 sf or minimum 2 tests per area, whichever results in the greater number of tests, per fill lift.
5. Pavement Support Aggregate – 1 compaction test every 100 linear feet, per lane, per fill lift.
6. Utility Trench Backfill – 1 compaction test every 100 lf of trench and minimum 2 tests per utility alignment, whichever results in the greater number of tests, per fill lift.
7. Foundation/Wall Backfill – 1 compaction test every 100 lf of wall or minimum 2 tests per wall line (interior and exterior sides), whichever results in the greater number of tests, per fill lift.
8. Asphalt Pavement Construction – 1 compaction test every 2,000 sf, per paving lift. 1 laboratory test suite on a bulk sample of hot mix asphalt per each day's paving, including oil content, gradation, and theoretical maximum specific gravity (Rice).

7 SITE DRAINAGE

Exterior Grading

1. Site grading design and construction must allow for positive drainage of surface runoff water away from structures, walls, slopes, and not be allowed to infiltrate new foundation and pavement subgrades.
2. Convey runoff or water migrating along the ground surface away from existing and proposed structures by an appropriately designed series of ditches, hardscapes, swales, trench drains or other surface water management procedures.
3. Slope paved surfaces per Great West's design away from the structures. This reduces the risk of subsurface soil near the foundation becoming saturated due to water ponding near structures or pavement edges.
4. Provide roof drains to collect and direct water away from foundations.
5. Provide and connect roof downspouts to a solid pipe placed around the structures perimeter and do not allow water to infiltrate into the soil underlying new or existing structures.

Stormwater Infiltration

1. Stormwater will be disposed of via infiltration and evaporation in a proposed stormwater pond located north of the Z-wall.
2. The soil profile encountered in the location of the proposed pond is classified as silty sand with gravel and is anticipated as the primary soil unit for disposal via infiltration.
   - GPI performed an infiltration test in TP-24224A-4 in the silty sand unit.
   - The alluvial soil yielded estimated unfactored falling head infiltration rate of 6.1 inches per hour at 5.0 feet below the existing ground surface.
3. Apply a prescriptive safety factor of 2 to the estimated infiltration rate or based on Great West's ultimate disposal point and experience with stormwater disposal in Bannock County. Note that vertical infiltration can be impacted by freezing conditions.
4. Dispose stormwater in new treatment areas at least 50 feet from structures and at least 1 foot down gradient from foundations, embankments, or pavement subgrades.
5. Do not dispose stormwater directly onto soil slopes
6. If civil design or other issues will not allow appropriate collection and disposal points set away from structures or neighboring properties, the design team shall evaluate alternate stormwater disposal plans.

Foundations/Walls

1. Install drains at exterior foundations and along the Z-wall and slope to gravity drain and daylight. Dispose of collected stormwater at least 50 feet away from structures or to the maximum extent practical.
2. Figures G4.1 through G4.3 illustrate typical foundation drains.
3. Never connect foundation or retaining wall drains to roof drains.
4. Divert water collected in foundation and roof drains to the stormwater disposal system designed and specified by Great West.

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CHECK: MW
FILE: MD24224A

PROJECT:
BANNOCK COUNTY LANDFILL
SCALE IMPROVEMENTS
GEOTECHNICAL ENGINEERING EVALUATION

1500 N. FORT HALL MINE RD.,
POCATELLO, IDAHO 83204

DESIGN: JBM
DRAWN: AJS

PREPARED FOR:
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2501 BELT VIEW DRIVE
HELENA, MT 59601

ATTN:
STEPHANIE WILKE, P.E.

BANNOCK COUNTY IDAHO

Great West ENGINEERING

STATE OF IDAHO
JOSHUA B. DAVIS
17880
PROFESSIONAL ENGINEER
02/11/26

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GPI 6 O'Donnell Road Pullman, WA 99163 509.339.2000

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8

FOUNDATION DESIGN

The following foundation design parameters are stated for the provided structural loads outlined on sheet GT1, and are based on bearing new foundations on native soil or granular fill over native soil to reduce the differential settlement potential from new foundation loads. From geotechnical field and laboratory testing, and engineering analyses, design shallow foundations using the following criteria:

Foundation Design Criteria

1. Maximum allowable bearing pressure: 4,500 psf
2. Maximum 33 percent increase allowed for short term load increases such as wind or seismic.
   - Requires foundations to bear directly on CA-1 over compacted native soil per Figures G4.1 through G4.3.
2. Estimated foundation vertical settlement:
   - Total settlement: 1.0 inch
   - Differential settlement: Up to 0.5 inches in 30-foot horizontal span
3. Lateral load resistance:
   - Foundation base friction coefficient:
     - o 0.5 for foundations cast directly on CA-1
     - o Reduce friction coefficient by 1/3 for precast concrete
   - Passive soil resistance on foundation sides:
     - o Equivalent fluid weight: 565 pcf assumes granular backfill (CA-1)
     - o Requires 3/4-inch lateral movement to mobilize full resistance
4. Extend exterior footings at least 2.5 feet below the final, exterior ground surface to help protect against frost action.
5. Structurally design thickened footings with adequate reinforcing steel to preclude cracking at slab-to-foundation transitions.
6. GPI shall observe fill removal, foundation bearing surfaces, and slab subgrades.
7. Design criteria requires maintaining drained conditions at the foundation bearing subgrade via foundation drains (see Figures G4.1 and G4.2).

Seismic Activity Research

1. Seismic design should reference the parameters provided in Table G4.1. based on a seismic site Class C.
2. The dense, granular site soil and no shallow groundwater suggests that the project site has a low liquefaction potential during an extreme seismic event.
3. The risk-targeted maximum considered earthquake (MCER) spectral response acceleration parameters provided have been modified from a Site Class B to a Site Class C.

Table G4.1: Seismic Response Criteria (ASCE 7-16)[1]

Period (seconds)	Standard Acceleration Coefficients for Site Class B (g)[2]	MCER Spectral Acceleration Parameters for Site Class C (g)[3]	Design Spectral Acceleration Parameters for Site Class C (g)
0.0 (Peak)	PGA = 0.239	-	PGA_M = 0.287
0.2 (Short)	S_S = 0.543	S_{MS} = 0.696	S_{DS} = 0.464
1.0	S_1 = 0.172	S_{M1} = 0.258	S_{D1} = 0.172

1. Values for location Latitude: 42.788268°N, Longitude: 112.364484°W.
2. Acceleration based on 2% probability of exceedance in 50 years (2,475 year return period).
3. Values for ASCE Risk Category I, II, and III.

Wall Backfill Construction

1. Construct concrete retaining wall backfill per the *Structural Fill*, Section 6 requirements.
2. All backfill must be keyed into existing site soil surfaces steeper than 1.5H:1V. Subgrade keying is illustrated in Figure G4.2.
3. If adequate keying into existing surfaces, subgrade preparations, structural fill placement, and drainage are not accomplished as recommended herein, differential performance of walls can be expected.
4. Maintain drained conditions via a footing drain as illustrated in Figure G4.2

Soil Corrosivity

1. pH = 7.7 - slightly alkaline
2. Sulfates = 9.5 ppm - low
3. Resistivity = 2,560 ohm-cm - moderately corrosive
4. Account for the soil's moderate corrosion potential in reinforcing steel spacing. Whenever possible, place steel with maximum clearances established through structural design.
5. Based on these corrosion parameters, special cathodic protection or the use of galvanized products for buried structures may slightly extend their practical useful life.
6. Site soil is suitable for Types I/II and IL cement.

Lateral Earth Pressures (LEP)

Structurally design foundation/retaining walls to resist lateral earth pressures from the retained soil adjacent to the structure. Lateral surcharge loads from equipment or vehicles adjacent to the walls must be accounted for in structural wall design. Structural design shall apply the lateral earth pressures for wall design using the equivalent fluid unit weights (EFW) from Table G4.2.

Table G4.2: Equivalent Fluid Unit Weights (EFW)

Crushed Aggregate Backfill (CA-1) ($\Phi = 38°$)	Static EFW	Dynamic EFW
Lateral Earth Pressure Case		
At-rest (no wall movement)	52 pcf	NA
Active (wall movement away from soil mass	32 pcf	36 pcf
Passive (wall movement toward soil mass)[A]	565 pcf	360 pcf

Table G4.2 Notes:
A. Passive case assumes 3/4 inch lateral movement to fully mobilize passive resistance.

1. The above equivalent fluid weights assume fully drained conditions, no hydrostatic forces, and horizontal backfill behind walls.
2. Walls shall be constructed with adequate drainage systems specified by Great West or the structural engineer to reduce the potential for ponding behind the wall and developing hydrostatic pressures. This can be accomplished by including weepholes or other drainage features, specifically for Z-wall construction. These features do not preclude the need for foundation drainage as shown in Figures G4.1 through G4.3.
3. For walls that cannot tolerate movement, structurally design walls utilizing at-rest equivalent earth pressures.
4. Lateral surcharge pressures due to traffic, equipment, storage loads, etc., are not included in the above lateral earth pressure recommendations. Use a lateral earth pressure coefficient of 0.5, acting over the entire wall height to estimate the lateral surcharge loads from traffic and other surcharges behind and above walls.
5. Figures G4.4 and G4.5 illustrate the equivalent fluid pressure distributions for the anticipated wall backfill materials (EFW values are in Table G4.2) for static and dynamic conditions, respectively.

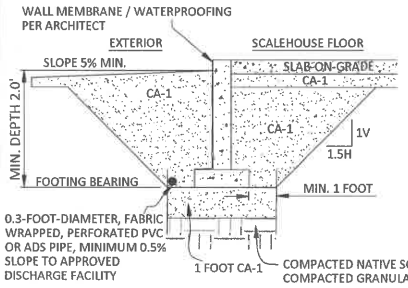


Figure G4.1: Typical Shallow Foundation Schematic (Not to Scale)

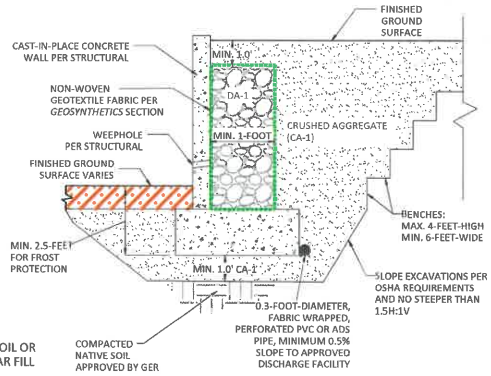


Figure G4.2: Typical Z-wall Foundation Schematic (Not to Scale)

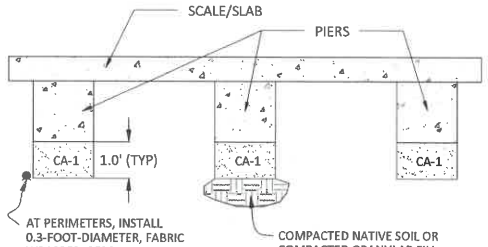


Figure G4.3: Typical Scale Foundation Schematic (Not to Scale)

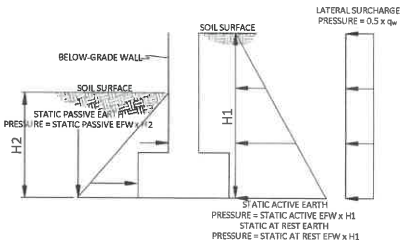


Figure G4.4: Static Lateral Earth Pressure Diagram

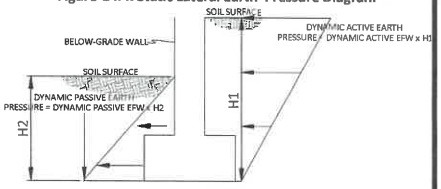


Figure G4.5: Dynamic Lateral Earth Pressure Diagram

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REV	DATE	DESCRIPTION
3	05/01/25	60% DRAFT
2	06/19/25	90% DRAFT
1	07/11/25	FINAL

CHECK: MW
FILE: MO24224A

PROJECT:
BANNOCK COUNTY LANDFILL SCALE IMPROVEMENTS GEOTECHNICAL ENGINEERING EVALUATION

PREPARED FOR:
GREAT WEST ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
ATTN:
STEPHANIE WILKE, P.E.

DESIGN: BM
DRAWN: AJS

GeoProfessional Innovation.
GPI 6 O'Donnell Road Pullman, WA 99163 509.339.2000

9 ASPHALT PAVEMENT DESIGN

General

Pavement section design references the American Association of State Highway and Transportation Officials (AASHTO) Guide for Design of Pavement Structures. Great West reports vehicular traffic will comprise passenger vehicles, refuse trucks, and haul/roll off for container and waste transport. Traffic loading includes 449 daily vehicles, of which 146 are heavy trucks. Pavement design parameters are based on typical pavement design criteria in the southern Idaho area, results from laboratory testing, and the subsurface conditions encountered during exploration.

Flexible Pavement

Table G5.1: Pavement Design Parameters

Design Parameter	Value Used	Reference
Reliability (R)	85%	Assumed
Standard Deviation (S)	0.45	AASHTO
Initial Serviceability (PSIi)	4.2	Typical southern Idaho area value
Terminal Serviceability (PSIz)	2.2	Typical southern Idaho area value
Traffic Loading	Paved areas: 2,260,000 ESALS[1]	Estimated Traffic: - 303 passenger vehicles (6,000 lb GVW) per day - 146 refuse/haul trucks (64,000 lb GVW) per day
Design Life	20 years	Typical pavement design life
Resilient Modulus (Mr)	10,500 psi[2]	Based on Mr correlations to site soil
Asphalt Layer Coefficient (a1)	0.42	Figure 2.5 AASHTO
Top Course Layer Coefficient (a2)	0.14	Figure 2.6 AASHTO
Top Course Drainage Coefficient (m2)	1.0	Table 2.4 AASHTO for "fair" drainage, 5 percent saturation

Table G5.1 Notes:
1. Equivalent Single Axle Loads (ESALs)
2. Pounds per square inch (psi)

Table G5.2 provides pavement thickness design for constructing new flexible pavement sections at planned parking areas and access drives. Figure G5.1 provides pavement thickness design for constructing new flexible pavement sections at the planned section. Figure G5.1 is not a structural detail.

Table G5.2: Asphalt Pavement Section Thickness

Pavement Section Material	Section Thickness (feet)	Material Specifications
Asphalt Pavement	0.33	Hot-mix asphalt (HMA) conforming to Section 800, latest ISPWC edition
CA-1	1.00	Meeting CA-1 requirements in Table G3.1 on sheet GT2
Non-woven geotextile fabric	Required	Meeting *Geosynthetics* section requirements, GT2.



Figure G5.1: Asphalt Pavement Section Thickness

Pavement Maintenance and Drainage

Accomplish crack and surface maintenance on all pavement surfaces every 3 to 5 years to reduce the potential for surface water infiltration into the underlying pavement subgrade, according to the following:

Surface Treatments

1. Crack Cleaning: Ensure that cracks are thoroughly clean, dry, and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and warm the pavement surfaces within the crack immediately prior to filling a crack with the sealant material. Do not overheat pavement. Flame dryers are not allowed.
2. Sand Slurry: For cracks greater than 1-inch-wide, fill with sand slurry by thoroughly mixing the components and pour the mixture into the cracks until full. Add additional CSS-1 cationic emulsified asphalt to the sand slurry as needed for workability to ensure the mixture will completely fill the cracks. Strike off the sand slurry flush with the existing pavement surface and allow the mixture to cure. Do not place the HMA overlay until the slurry has fully cured.
3. Hot Poured Sealant: For cracks less than 1-inch-wide, fill with hot poured sealant by applying the material in accordance with these requirements and the manufacturer's recommendations. Confine hot poured sealant material within the crack. Clean any overflow of sealant from the pavement surface.

Pavement Drainage Considerations

1. Surface and subgrade drainage are extremely important to the performance of the pavement section. Slope the subgrade, CA-1, and pavement surfaces aggressively towards stormwater management facilities.
2. Avoid inverted crowns in all pavement locations. Accomplish grading to avoid ponding at the subgrade and surface elevations.
3. The pavement's life will be dependent on achieving adequate drainage throughout the section and especially at the subgrade. Water that ponds at the pavement subgrade surface can induce heaving during the freeze-thaw process, which can readily damage pavement.

10 SLABS-ON-GRADE

Slab Substrate

1. Support concrete slabs with at least 1.0 foot of CA-1 meeting Table G3.1 requirements, placed over compacted subgrades prepared per the *Earthwork* section requirements.
2. Subgrade areas that are soft, wet, or disturbed during slab subgrade preparations must be moisture conditioned and recompacted, or over-excavated to dense soil and replaced with CA-1.
3. Compact CA-1 below slabs to *Structural Fill* requirements.
4. Floor slabs and supporting base section thicknesses must be structurally designed for the anticipated use and equipment or storage loading conditions.
5. Concrete slab design may utilize an allowable modulus of subgrade reaction (k) of 280 pounds per cubic inch (pci) for slab sections constructed over approved subgrades and at least 1.0 foot of compacted CA-1 (Figure G5.2) .

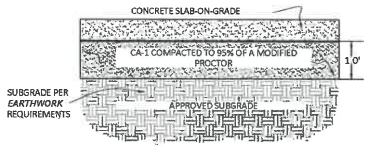


Figure G5.2: Slab Schematic

Exterior Slab Joints

1. Isolation (expansion/contraction) joints allow concrete expansion and contraction and reduce constriction of fixed, non-pavement structures.
2. Isolation joints shall be used adjacent to the following structures:
   - Building foundations
   - Building entrances
   - Z-wall container slabs
3. If isolation joints are placed where wheel loads will traverse them, the concrete slab shall be increased in thickness by at least 20 percent.
4. All isolation joints shall extend the full slab thickness and be constructed according to ACI 330R-08.

Concrete to Asphalt Transitions

1. Exterior slabs at scale approaches are subject to frost action that can induce heave and contraction during freeze-thaw cycles. The transition from asphalt to concrete at these approaches is also subject to significant traffic loading.
2. Therefore, Great West shall consider the transition detail illustrated in Figure G5.3 to help reduce frost action and help prevent rutting/cracking at the transition with improved load transfer.

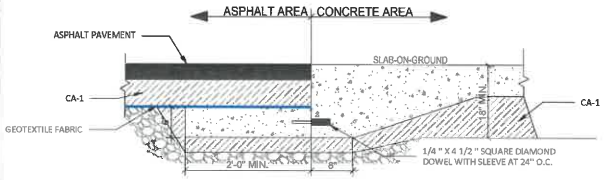


Figure G5.3: Concrete to Asphalt Transition Schematic

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□ CONSTRUCTION
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REV	DATE	DESCRIPTION	CHECK: TJW
3	05/01/25	60% DRAFT	FILE: MD24224A
2	06/19/25	90% DRAFT	PROJECT:
1	07/11/25	FINAL	BANNOCK COUNTY LANDFILL SCALE IMPROVEMENTS GEOTECHNICAL ENGINEERING EVALUATION

1500 N. FORT HALL MINE RD.
POCATELLO, IDAHO 83204

ATTN:
STEPHANIE WILKE, P.E.

PREPARED FOR:
GREAT WEST ENGINEERING
2501 BET VIEW DRIVE
HELENA, MT 59601

DESIGN: JBM
DRAWN: AJS

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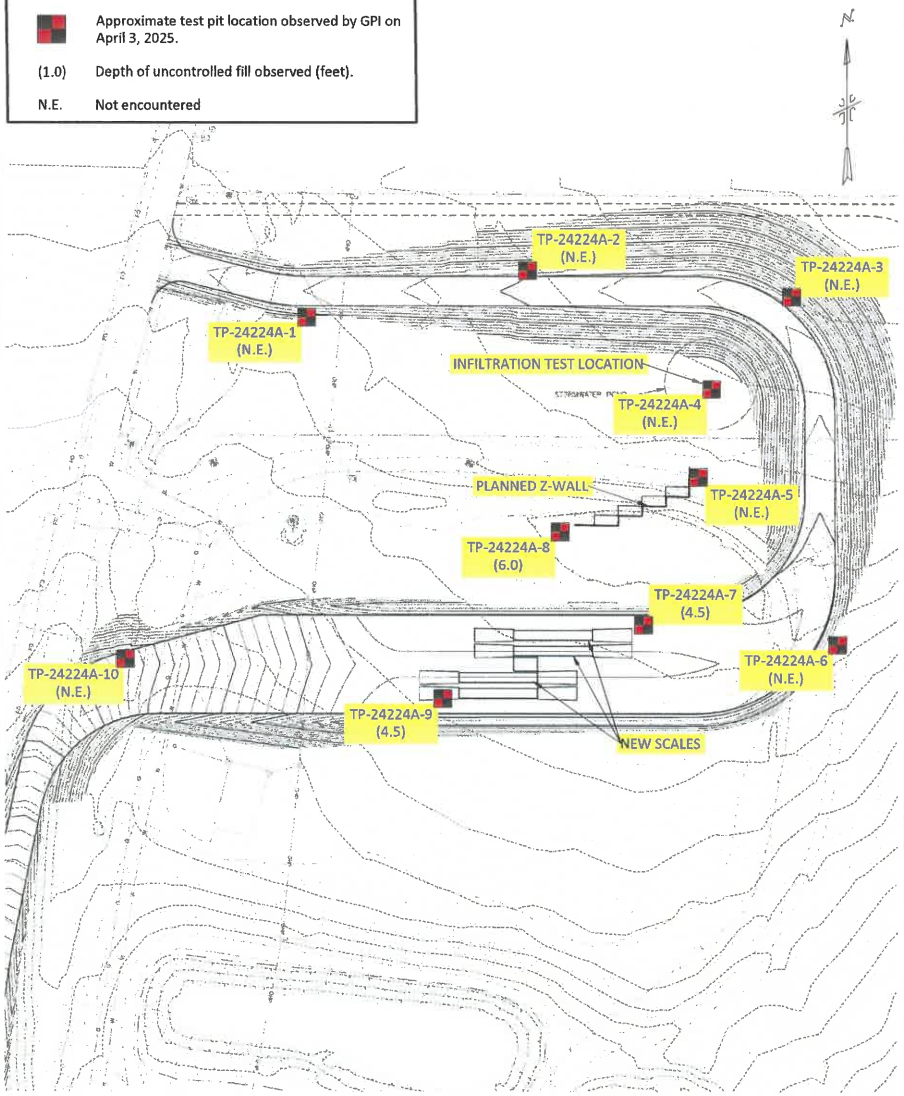
EXPLORATION MAP

LEGEND

Approximate test pit location observed by GPI on April 3, 2025.

(1.0) Depth of uncontrolled fill observed (feet).

N.E. Not encountered



Reference: Site Plan provided by Great West Engineering. No scale intended.

12

EXPLORATION LOGS

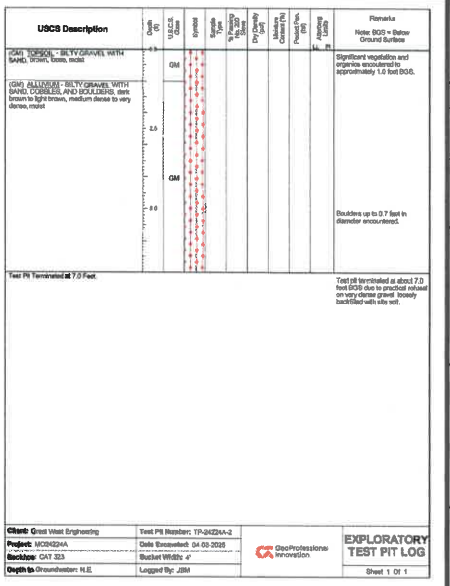
UNIFIED SOIL CLASSIFICATION SYSTEM

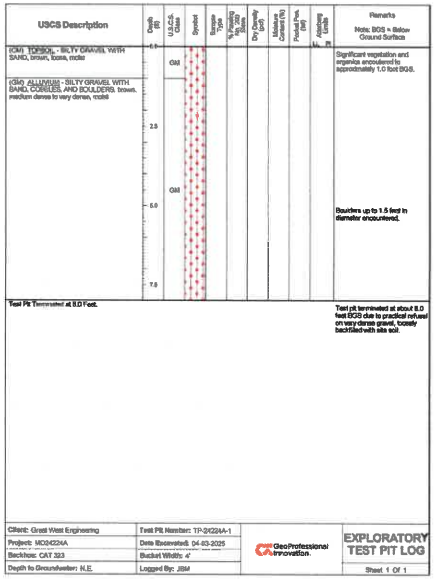
MAJOR DIVISIONS			GRAPHIC SYMBOL	GROUP SYMBOL	TYPICAL NAMES
COARSE GRAINED SOIL	GRAVEL	CLEAN GRAVEL		GW	WELL-GRADED GRAVEL, GRAVEL-SAND MIXTURES.
				GP	POORLY-GRADED GRAVEL, GRAVEL-SAND MIXTURES.
		GRAVEL WITH FINES		GM	SILTY GRAVEL, GRAVEL-SAND-SILT MIXTURES.
				GC	CLAYEY GRAVEL, GRAVEL-SAND-CLAY MIXTURES.
	SAND	CLEAN SAND		SW	WELL-GRADED SAND, GRAVELLY SAND.
				SP	POORLY-GRADED SAND, GRAVELLY SAND.
		SAND WITH FINES		SM	SILTY SAND, SAND-SILT MIXTURES.
				SC	CLAYEY SAND, SAND-CLAY MIXTURES.
FINE GRAINED SOIL	SILT AND CLAY LIQUID LIMIT LESS THAN 50%			ML	INORGANIC SILT, SANDY OR CLAYEY SILT.
				CL	INORGANIC CLAY OF LOW TO MEDIUM PLASTICITY, SANDY OR SILTY CLAY.
				CL-ML	INORGANIC MIXED CLAY AND SILT.
				OL	ORGANIC SILT AND CLAY OF LOW PLASTICITY.
	SILT AND CLAY LIQUID LIMIT GREATER THAN 50%			MH	INORGANIC SILT, MICA- CEOUS SILT, PLASTIC SILT.
				CH	INORGANIC CLAY OF HIGH PLASTICITY, FAT CLAY.
				OH	ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY.
				PT	PEAT, MUCK AND OTHER HIGHLY ORGANIC SOILS.

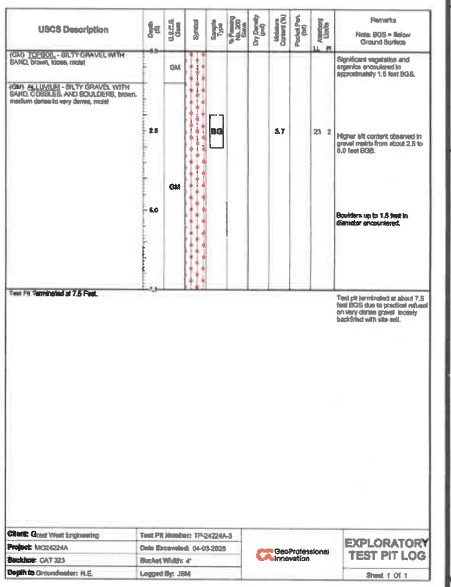
BORING LOG SYMBOLS: STANDARD 2 INCH OD SPLIT SPOON SAMPLE; CALIFORNIA MODIFIED 3 INCH OD SPLIT SPOON SAMPLE; ROCK CORE; SHELBY TUBE 3 INCH OD UNDISTURBED SAMPLE

TEST PIT LOG SYMBOLS: GRAB BAG SAMPLE (BG); BULK SAMPLE (BK); RING SAMPLE (RG)

GROUNDWATER SYMBOLS: GROUNDWATER AFTER 24 HOURS; GROUNDWATER AT TIME OF DRILLING; GROUNDWATER AT THE END OF DRILLING







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REV	DATE	DESCRIPTION
3	05/01/25	60% DRAFT
2	06/19/25	90% DRAFT
1	07/11/25	FINAL

FILE: MO24224A
CHECK: HW

PROJECT:
BANNOCK COUNTY LANDFILL
SCALE IMPROVEMENTS
GEOTECHNICAL ENGINEERING EVALUATION

PREPARED FOR:
GREAT WEST ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
ATTN: STEPHANIE WILKE, P.E.

DESIGN: JBM
DRAWN: AJS

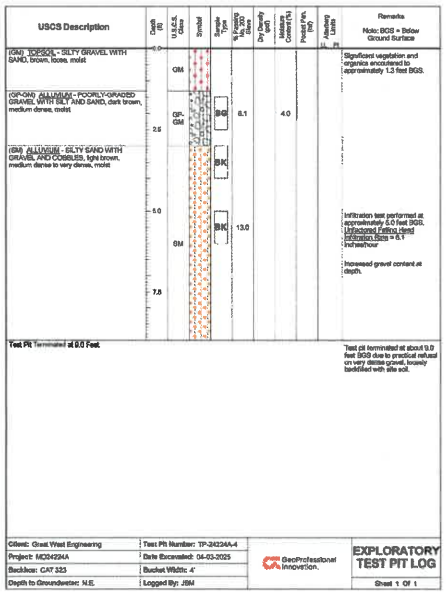
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EXPLORATION LOGS CONTINUED



USCS Description

(GM) TOPSOIL - SILTY GRAVEL WITH SAND, brown, loose, moist

(GP-GM) ALLUVIUM - POORLY-GRADED GRAVEL WITH SILT AND SAND, dark brown, medium dense, moist

(GM) ALLUVIUM - SILTY SAND WITH GRAVEL AND COBBLES, light brown, medium dense to very dense, moist

Test Pit Terminated at 9.0 Feet.

Remarks: Note: BGS = Below Ground Surface

Significant vegetation and organics encountered to approximately 1.5 feet BGS.

Infiltration test performed at approximately 5.0 feet BGS. Unlaboped Falling Head Infiltration Rate = 6.1 inches/hour

Increased gravel content at depth.

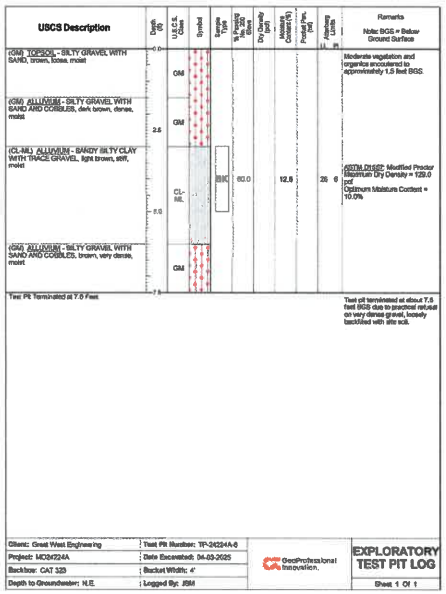
Test pit terminated at about 9.0 feet BGS due to practical refusal on very dense gravel, loosely backfilled with site soil.

Client: Great West Engineering | Test Pit Number: TP-24224A-4
Project: MD24224A | Date Excavated: 04-03-2025
Backhoe: CAT 323 | Bucket Width: 4'
Depth to Groundwater: N.E. | Logged By: JBM

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EXPLORATORY TEST PIT LOG

Sheet 1 Of 1



USCS Description

(GM) TOPSOIL - SILTY GRAVEL WITH SAND, brown, loose, moist

(GM) ALLUVIUM - SILTY GRAVEL WITH SAND AND COBBLES, dark brown, dense, moist

(CL-ML) ALLUVIUM - SANDY SILTY CLAY WITH TRACE GRAVEL, light brown, stiff, moist

(GM) ALLUVIUM - SILTY GRAVEL WITH SAND AND COBBLES, brown, very dense, moist

Test Pit Terminated at 7.5 Feet

Remarks: Note: BGS = Below Ground Surface

Moderate vegetation and organics encountered to approximately 1.5 feet BGS.

ASTM D1557: Modified Proctor Maximum Dry Density = 129.0 pcf Optimum Moisture Content = 10.0%

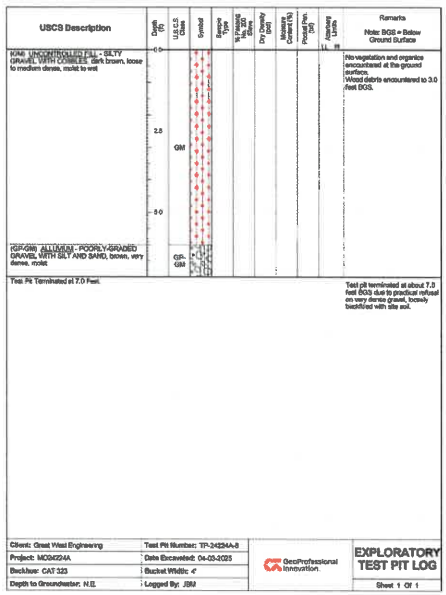
Test pit terminated at about 7.5 feet BGS due to practical refusal on very dense gravel, loosely backfilled with site soil.

Client: Great West Engineering | Test Pit Number: TP-24224A-5
Project: MD24224A | Date Excavated: 04-03-2025
Backhoe: CAT 323 | Bucket Width: 4'
Depth to Groundwater: N.E. | Logged By: JBM

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EXPLORATORY TEST PIT LOG

Sheet 1 Of 1



USCS Description

(GM) UNCONTROLLED FILL - SILTY GRAVEL WITH COBBLES, dark brown, loose to medium dense, moist to wet

(GP-GM) ALLUVIUM - POORLY-GRADED GRAVEL WITH SILT AND SAND, brown, very dense, moist

Test Pit Terminated at 7.0 Feet.

Remarks: Note: BGS = Below Ground Surface

No vegetation and organics encountered at the ground surface. Wood debris encountered to 3.0 feet BGS.

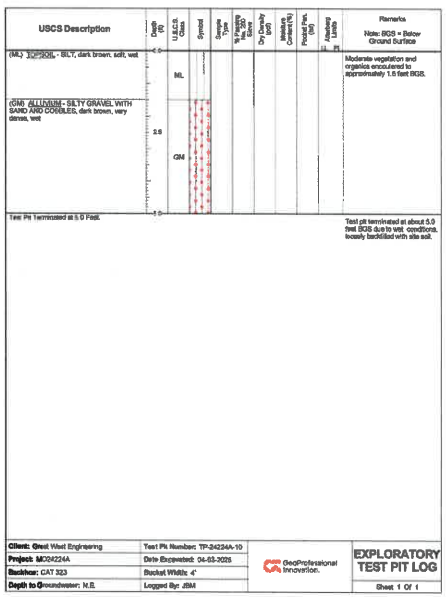
Test pit terminated at about 7.0 feet BGS due to practical refusal on very dense gravel, loosely backfilled with site soil.

Client: Great West Engineering | Test Pit Number: TP-24224A-6
Project: MD24224A | Date Excavated: 04-03-2025
Backhoe: CAT 323 | Bucket Width: 4'
Depth to Groundwater: N.E. | Logged By: JBM

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EXPLORATORY TEST PIT LOG

Sheet 1 Of 1



USCS Description

(ML) TOPSOIL - SILT, dark brown, soft, wet

(GM) ALLUVIUM - SILTY GRAVEL WITH SAND AND COBBLES, dark brown, very dense, wet

Test Pit Terminated at 5.0 Feet.

Remarks: Note: BGS = Below Ground Surface

Moderate vegetation and organics encountered to approximately 1.5 feet BGS.

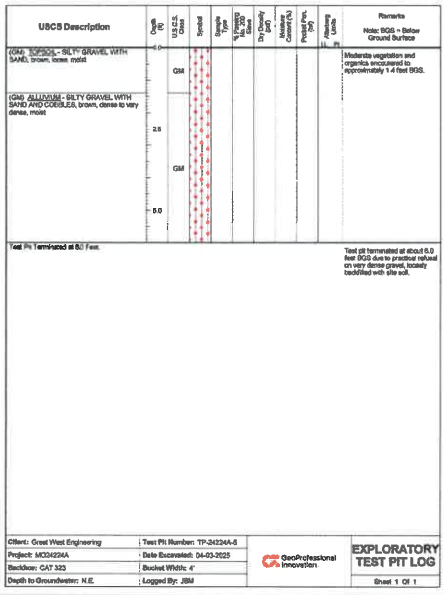
Test pit terminated at about 5.0 feet BGS due to wet conditions, loosely backfilled with site soil.

Client: Great West Engineering | Test Pit Number: TP-24224A-10
Project: MD24224A | Date Excavated: 04-03-2025
Backhoe: CAT 323 | Bucket Width: 4'
Depth to Groundwater: N.E. | Logged By: JBM

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EXPLORATORY TEST PIT LOG

Sheet 1 Of 1



USCS Description

(GM) TOPSOIL - SILTY GRAVEL WITH SAND, brown, loose, moist

(GM) ALLUVIUM - SILTY GRAVEL WITH SAND AND COBBLES, brown, dense to very dense, moist

Test Pit Terminated at 8.0 Feet.

Remarks: Note: BGS = Below Ground Surface

Moderate vegetation and organics encountered to approximately 1.4 feet BGS.

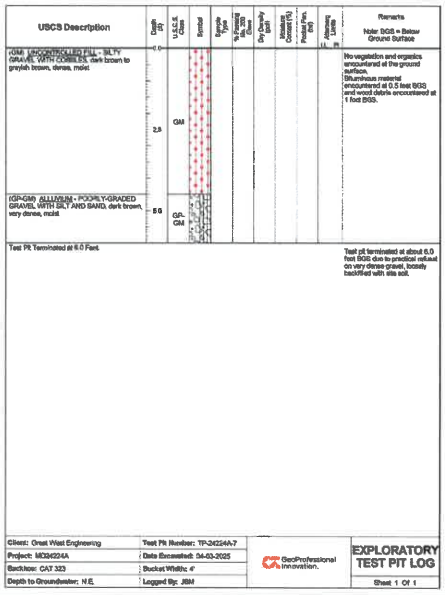
Test pit terminated at about 8.0 feet BGS due to practical refusal on very dense gravel, loosely backfilled with site soil.

Client: Great West Engineering | Test Pit Number: TP-24224A-8
Project: MD24224A | Date Excavated: 04-03-2025
Backhoe: CAT 323 | Bucket Width: 4'
Depth to Groundwater: N.E. | Logged By: JBM

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EXPLORATORY TEST PIT LOG

Sheet 1 Of 1



USCS Description

(GM) UNCONTROLLED FILL - SILTY GRAVEL WITH COBBLES, dark brown to grayish brown, dense, moist

(GP-GM) ALLUVIUM - POORLY-GRADED GRAVEL WITH SILT AND SAND, dark brown, very dense, moist

Test Pit Terminated at 6.0 Feet.

Remarks: Note: BGS = Below Ground Surface

No vegetation and organics encountered at the ground surface. Bituminous material encountered at 0.5 feet BGS and wood debris encountered at 1 foot BGS.

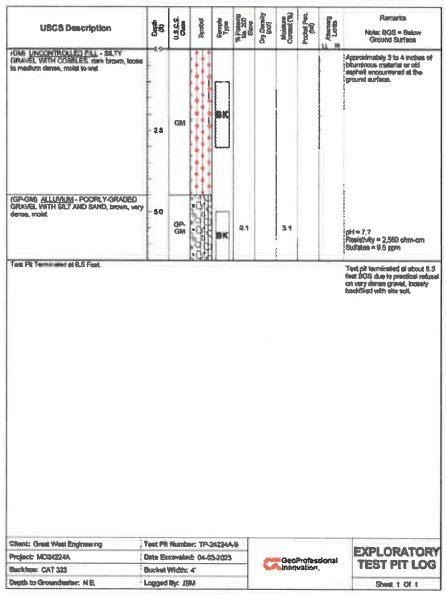
Test pit terminated at about 6.0 feet BGS due to practical refusal on very dense gravel, loosely backfilled with site soil.

Client: Great West Engineering | Test Pit Number: TP-24224A-7
Project: MD24224A | Date Excavated: 04-03-2025
Backhoe: CAT 323 | Bucket Width: 4'
Depth to Groundwater: N.E. | Logged By: JBM

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EXPLORATORY TEST PIT LOG

Sheet 1 Of 1



USCS Description

(GM) UNCONTROLLED FILL - SILTY GRAVEL WITH COBBLES, dark brown, loose to medium dense, moist to wet

(GP-GM) ALLUVIUM - POORLY-GRADED GRAVEL WITH SILT AND SAND, brown, very dense, moist

Test Pit Terminated at 6.5 Feet.

Remarks: Note: BGS = Below Ground Surface

Approximately 3 to 4 inches of bituminous material or old asphalt encountered at the ground surface.

pH = 7.7
Resistivity = 2,560 ohm-cm
Sulfates = 9.5 ppm

Test pit terminated at about 6.5 feet BGS due to practical refusal on very dense gravel, loosely backfilled with site soil.

Client: Great West Engineering | Test Pit Number: TP-24224A-9
Project: MD24224A | Date Excavated: 04-03-2025
Backhoe: CAT 323 | Bucket Width: 4'
Depth to Groundwater: N.E. | Logged By: JBM

GeoProfessional Innovation.

EXPLORATORY TEST PIT LOG

Sheet 1 Of 1

ISSUED FOR:
- [x] DESIGN USE
- [ ] PRELIMINARY REVIEW
- [ ] YOUR APPROVAL
- [ ] CONSTRUCTION
- [ ] DESTROY PREVIOUS PRINTS

REV	DATE	DESCRIPTION
1	05/01/25	60% DRAFT
2	06/19/25	90% DRAFT
3	07/11/25	FINAL

FILE: MD24224A | CHECK: TJW

PROJECT:
BANNOCK COUNTY LANDFILL
SCALE IMPROVEMENTS
GEOTECHNICAL ENGINEERING EVALUATION
1500 N. FORT HALL MINE RD.
POCATELLO, IDAHO 83204

PREPARED FOR:
GREAT WEST ENGINEERING
2501 BELTVIEW DRIVE
HELENA, MT 59601
ATTN:
STEPHANIE WILKE, P.E.

DESIGN: JBM | DRAWN: AJS

BANNOCK COUNTY IDAHO

GreatWest ENGINEERING

GeoProfessional Innovation.

GPI 6 O'Donnell Road Pullman, WA 99163 509.339.2000

GT7 of 8

3

13

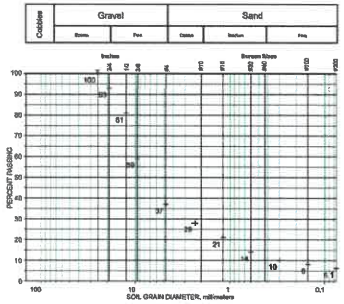
LABORATORY TEST RESULTS

Laboratory Test Results Summary

Test Pit	Depth (feet)	Lab Number	Description (U.S.C.S. Classification)	In situ Moisture, %	Max Dry Density, pcf	Optimum Moisture, %	Atterberg Limits Liquid Limit	Atterberg Limits Plasticity Index	#200 Sieve Passing, %	pH	Resistivity Ω-cm	Sulfates ppm
TP-24224A-3	2.0-3.0	19667	Silty Gravel with Sand, Cobbles, and Boulders (GM	3.7	-	-	23	2	-	-	-	-
TP-24224A-4	1.5-2.5	19668	Poorly-graded Gravel with Silt and Sand (GP-GM)	4.0	-	-	-	-	6.1	-	-	-
TP-24224A-4	5.0-6.0	19669	Silty Sand with Gravel and Cobbles (SM)	-	-	-	-	-	13	-	-	-
TP-24224A-6	3.0-5.0	19670	Sandy Silty Clay with Trace Gravel (CL-ML)	12.6	128.6	9.8	26	6	60	-	-	-
TP-24224A-9	5.0-6.0	19671	Poorly-graded Gravel with Silt and Sand (GP-GM)	3.1	-	-	-	-	9.1	7.7	2,560	9.5
Borrow Source	-	20107	Poorly-graded Sand with Gravel (SP)	-	-	-	-	-	3.1	-	-	-

GRADATION ANALYSIS
ASTM D6913

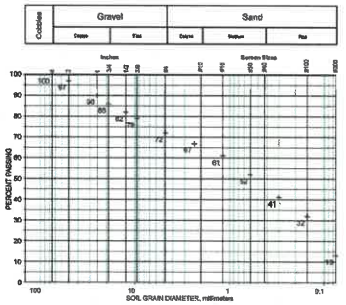
Project Name: Bannock County Landfill
Project Number: MO24224A
Client: Great West Engineering
Lab Number: 19669
Sample Location: TP-24224A-4 @ 1.5-2.5 feet BGS
Sample Classification: Poorly Graded Gravel with Silt and Sand (GP-GM)
Date Tested: 4/17/2025 By: MBK



Reviewed by: _____ GeoProfessional Innovation.

GRADATION ANALYSIS
ASTM D6913

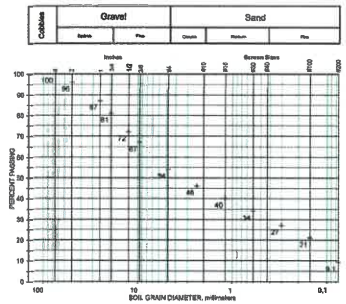
Project Name: Bannock County Landfill
Project Number: MO24224A
Client: Great West Engineering
Lab Number: 19669
Sample Location: TP-24224A-4 @ 5.0-6.0 feet BGS
Sample Classification: Silty Sand with Gravel and Cobbles (SM)
Date Tested: 4/17/2025 By: MBK



Reviewed by: _____ GeoProfessional Innovation.

GRADATION ANALYSIS
ASTM D6913

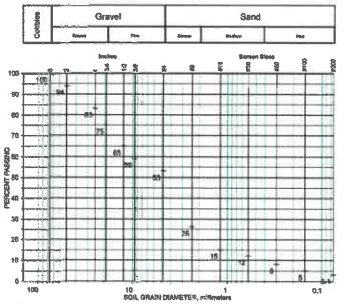
Project Name: Bannock County Landfill
Project Number: MO24224A
Client: Great West Engineering
Lab Number: 19671
Sample Location: TP-24224A-9 @ 5.0-6.0 feet BGS
Sample Classification: Poorly-Graded Gravel with Silt and Sand (GP-GM)
Date Tested: 4/17/2025 By: MBK



Reviewed by: _____ GeoProfessional Innovation.

GRADATION ANALYSIS
ASTM D6913

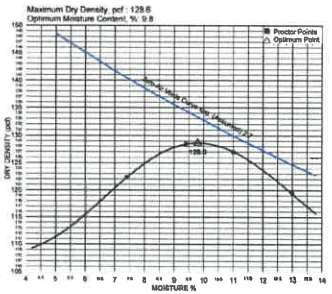
Project Name: Bannock County Landfill
Project Number: MO24224A
Client: Great West Engineering
Lab Number: 19668
Sample Location: Borrow Source
Sample Classification: Poorly Graded Sand with Gravel (SP)
Date Tested: 6/92025 By: MBK



Reviewed by: _____ GeoProfessional Innovation.

MOISTURE-DENSITY RELATIONSHIP CURVE
ASTM D 1557
Method C

Project Name: Bannock County Landfill
Project Number: MO24224A
Client: Great West Engineering
Lab Number: 19670
Sample Location: TP-24224A-6 @ 3.0-5.0 feet BGS
Sample Classification: Sandy Silty Clay with trace Gravel (CL-ML)
Date Tested: 4/17/2025 By: MBK
Rammer Type: Manual



Reviewed By: _____ GeoProfessional Innovation.

ISSUED FOR
■ DESIGN USE
□ PRELIMINARY REVIEW
□ YOUR APPROVAL
■ REFERENCE
□ CONSTRUCTION
■ DESTROY PREVIOUS PRINTS

REV	DATE	DESCRIPTION
1	05/01/25	60% DRAFT
2	06/19/25	90% DRAFT
3	07/31/25	FINAL

CHECK: TJW
FILE: MO24224A
PROJECT: BANNOCK COUNTY LANDFILL SCALE IMPROVEMENTS GEOTECHNICAL ENGINEERING EVALUATION
1500 N. FORT HALL MINE RD., POCATELLO, IDAHO 83204

DRAWN: AS
DESIGN: RBM
PREPARED FOR: GREAT WEST ENGINEERING 2501 BELT VIEW DRIVE HELENA, MT 59601
ATTN: STEPHANIE WILKE, P.E.

BANNOCK COUNTY IDAHO
GreatWest ENGINEERING

GeoProfessional Innovation.
GPI 6 O'Donnell Road Pullman, WA 99163 509.339.2000

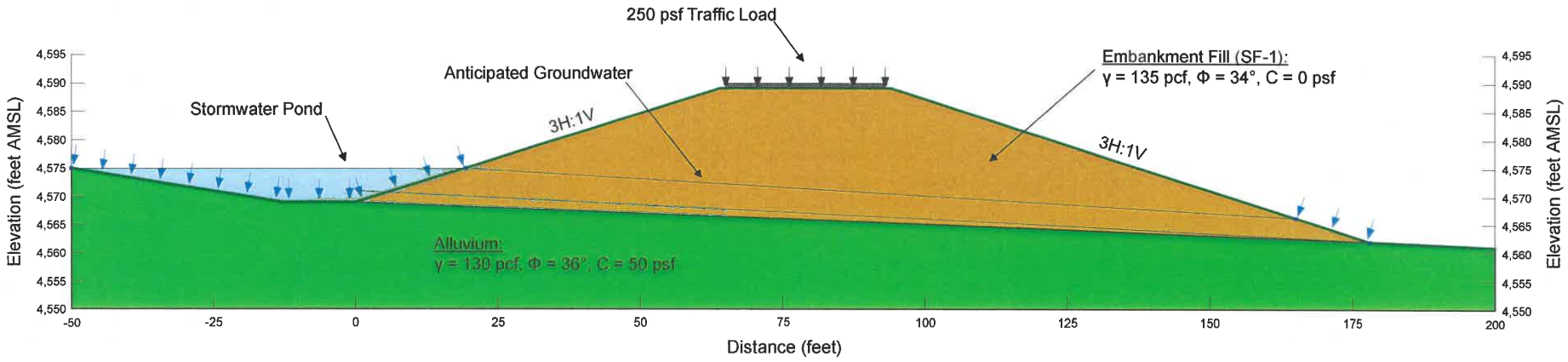
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3

APPENDIX A

Stability Analysis Results

Global Stability Analysis

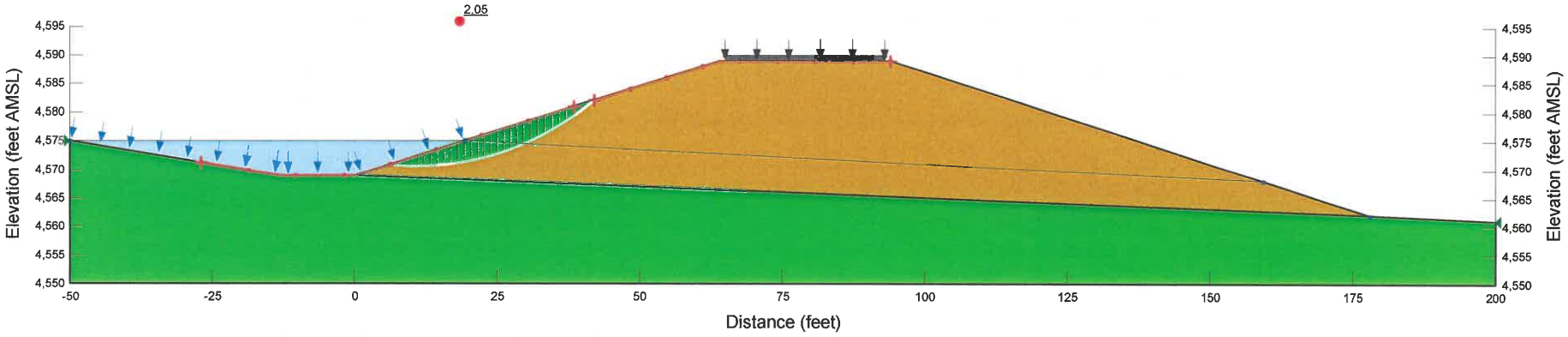
Geometry



STABILITY ANALYSIS GEOMETRY Bannock County Landfill Pocatello, Idaho	
GeoProfessional Innovation.	
MO24224A	FIGURE A.1

Global Stability Analysis

Full Pond, Static Conditions



Note: Underlined number and bold red point indicate minimum safety factor and center location of planar failure shown in green.
A minimum FOS of 1.5 is required per the geotechnical standard of care under static conditions.

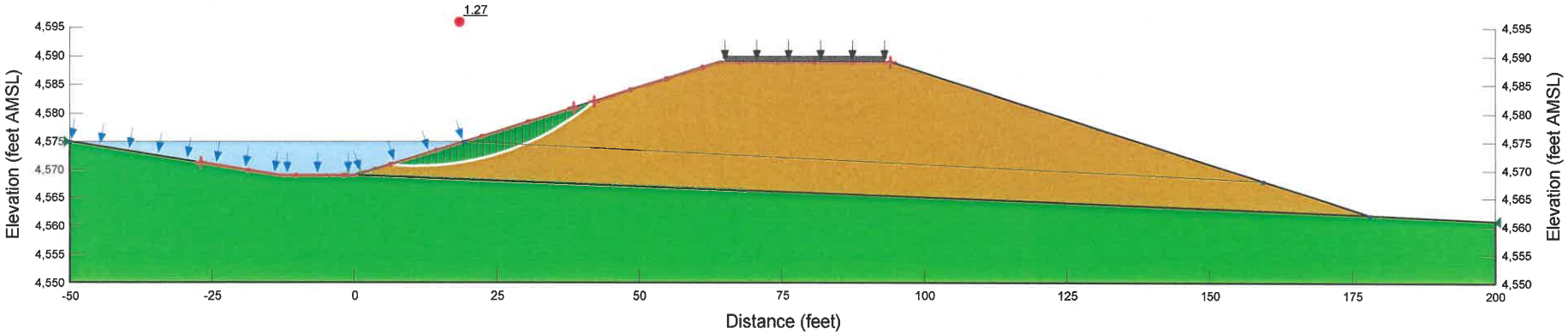
GLOBAL STABILITY ANALYSIS Bannock County Landfill Pocatello, Idaho	
GeoProfessional Innovation.	
MO24224A	FIGURE A.2

Global Stability Analysis

Full Pond, Seismic Conditions

Kh = 0.14

(i.e. ½ PGA)

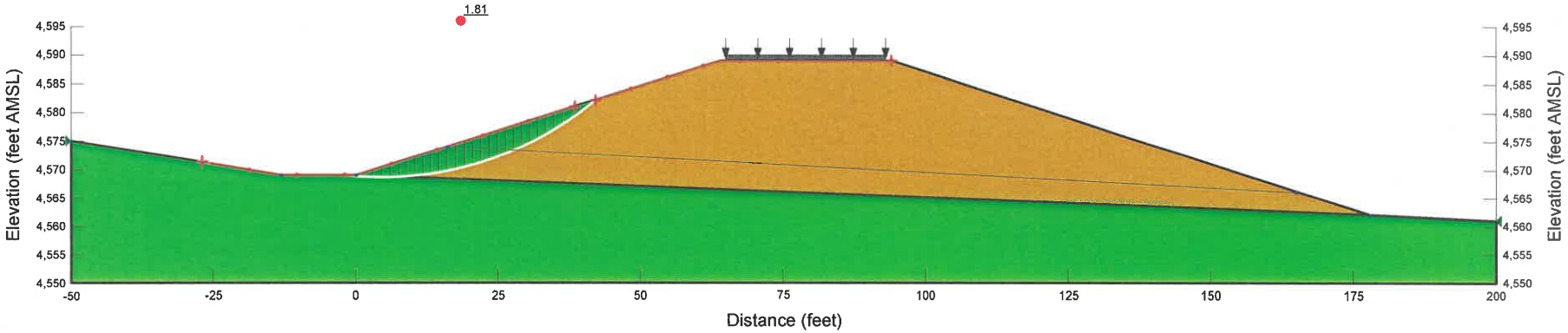


Note: Underlined number and bold red point indicate minimum safety factor and center location of planar failure shown in green.
A minimum FOS of 1.1 is required per the geotechnical standard of care under seismic conditions.

GLOBAL STABILITY ANALYSIS Bannock County Landfill Pocatello, Idaho	
GeoProfessional Innovation.	
MO24224A	FIGURE A.3

Global Stability Analysis

Drained Pond (Rapid Drawdown), Static Conditions



Note: Underlined number and bold red point indicate minimum safety factor and center location of planar failure shown in green.
A minimum FOS of 1.5 is required per the geotechnical standard of care under static conditions.

GLOBAL STABILITY ANALYSIS
Bannock County Landfill
Pocatello, Idaho

GeoProfessional Innovation.

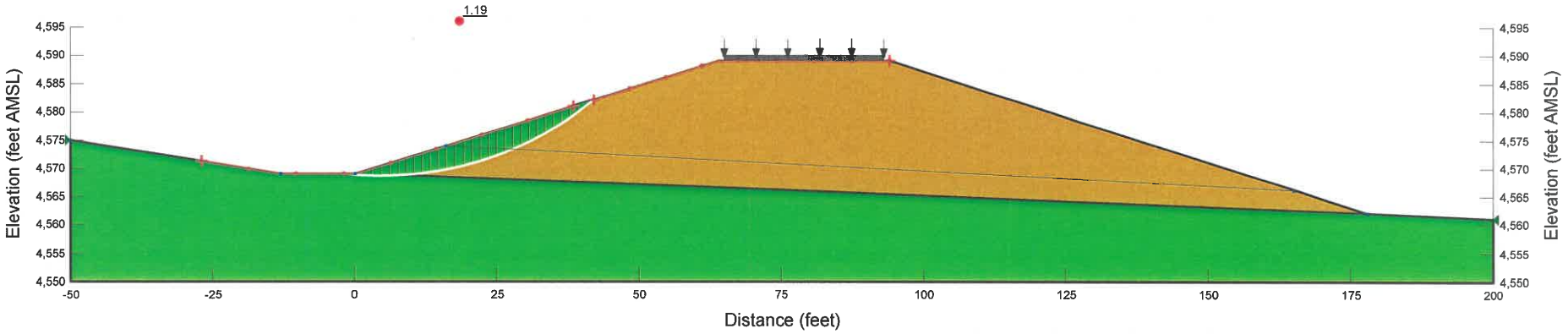
MO24224A	FIGURE A.4

Global Stability Analysis

Drained Pond (Rapid Drawdown), Seismic Conditions

Kh = 0.14

(i.e. ½ PGA)

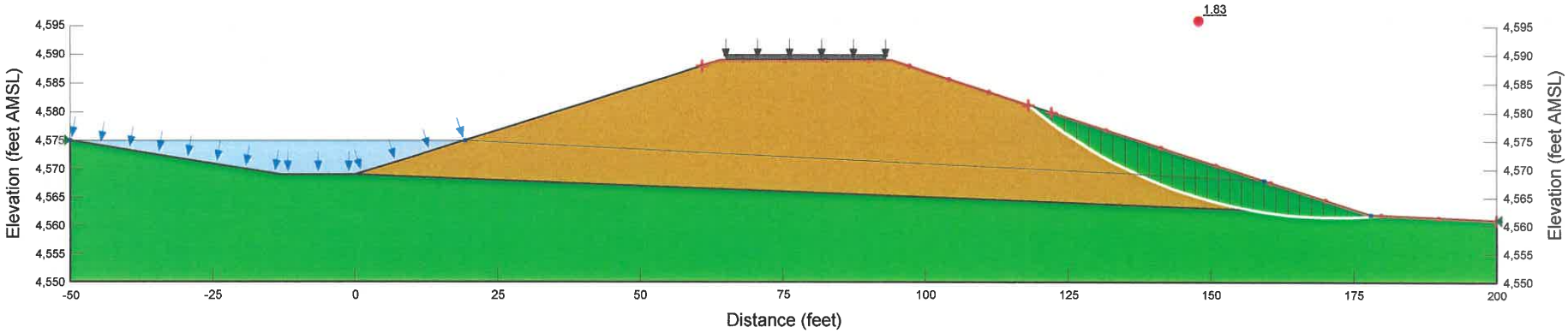


Note: Underlined number and bold red point indicate minimum safety factor and center location of planar failure shown in green.
A minimum FOS of 1.1 is required per the geotechnical standard of care under seismic conditions.

GLOBAL STABILITY ANALYSIS Bannock County Landfill Pocatello, Idaho	
GeoProfessional Innovation.	
MO24224A	FIGURE A.5

Global Stability Analysis

No Pond, Static Conditions



Note: Underlined number and bold red point indicate minimum safety factor and center location of planar failure shown in green.
A minimum FOS of 1.5 is required per the geotechnical standard of care under static conditions.

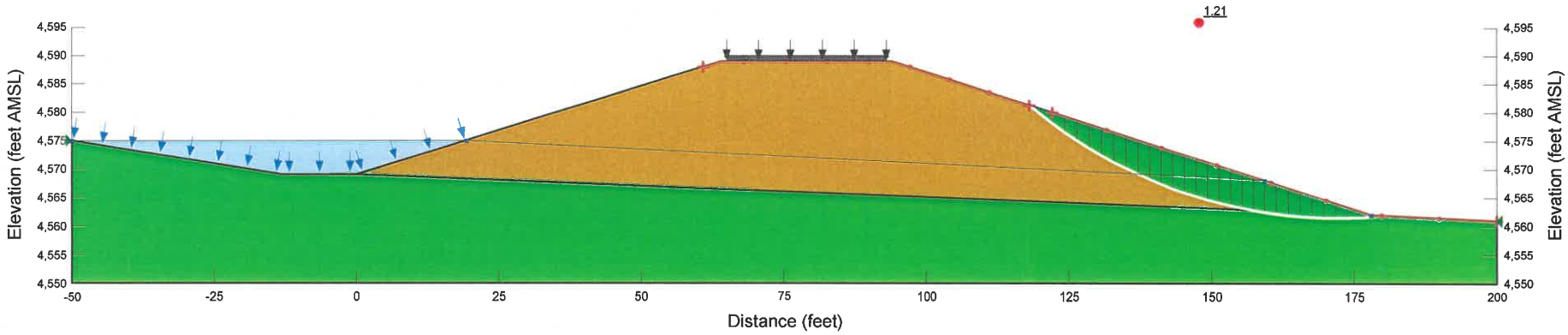
GLOBAL STABILITY ANALYSIS Bannock County Landfill Pocatello, Idaho	
GeoProfessional Innovation.	
MO24224A	FIGURE A.6

Global Stability Analysis

No Pond, Seismic Conditions

Kh = 0.14

(i.e. ½ PGA)



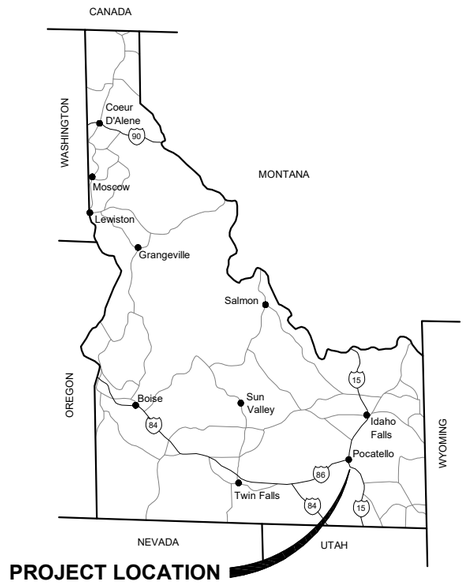
Note: Underlined number and bold red point indicate minimum safety factor and center location of planar failure shown in green.
A minimum FOS of 1.1 is required per the geotechnical standard of care under seismic conditions.

GLOBAL STABILITY ANALYSIS
Bannock County Landfill
Pocatello, Idaho

GeoProfessional Innovation.

MO24224A	FIGURE A.7

CONSTRUCTION PLANS



PROJECT LOCATION

PLANS PREPARED FOR:

DILLON EVANS, LANDFILL MANAGER
BANNOCK COUNTY

BANNOCK COUNTY IDAHO

BANNOCK COUNTY LANDFILL ENTRANCE FACILITY

CONSTRUCTION PLANS

SECTIONS 28 & 29, TOWNSHIP 7 S., AND RANGE 35 E.



NOT TO SCALE

APPROVED BY:

STEPHANIE WILKE, P.E.
GREAT WEST ENGINEERING

PROFESSIONAL ENGINEER LICENSED 16198 6-30-2026 STATE OF IDAHO STEPHANIE M. WILKE

QA/QC BY:

TRAVIS CRAIG, P.E.
GREAT WEST ENGINEERING

PROFESSIONAL ENGINEER LICENSED 21935 6-30-2026 STATE OF IDAHO TRAVIS L. CRAIG

PLANS PREPARED BY:

STETSON RATZLAFF, EI
BRET ANDERSON

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406)449-8627

SHEET INDEX

PROJECT: 1-23205
DATE: JULY 31, 2025

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- SHEET C1 COVER
- SHEET C2 LEGEND, ABBREVIATIONS, AND GENERAL NOTES
- SHEET C3 EXISTING SITE PLAN
- SHEET C4 STOCKPILE LOCATION
- SHEET C5 PROPOSED SITE PLAN
- SHEET C6 PROPOSED INFIELD GRADING PLAN
- SHEET C7 ENTRANCE ROAD PLAN & PROFILE
- SHEET C8 ENTRANCE ROAD PLAN & PROFILE
- SHEET C9 ENTRANCE ROAD PLAN & PROFILE
- SHEET C10 ROAD TYPICAL SECTIONS
- SHEET C11 SCALE HOUSE SEPTIC PLAN AND PROFILE
- SHEET C12 WEED CONTROL BUILDING SEPTIC PLAN AND PROFILE
- SHEET C13 SCALE PLAN
- SHEET C14 SCALE DETAILS
- SHEET C15 DETAILS
- SHEET C16 DETAILS
- SHEET C17 Z-WALL DETAILS
- SHEET C18 Z-WALL SAFETY FENCE DETAILS
- SHEET C19 KIOSK POLE DETAILS
- SHEET C21 SIGNAGE
- SHEET C22 SIGNAGE
- SHEET C23 FENCE DETAILS

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- SHEET A001 CODE INFORMATION
- SHEET A002 GENERAL INFORMATION & ASSEMBLY TYPES
- SHEET A210 FLOOR PLAN
- SHEET A211 ENLARGED PLAN - STAIRS / RAMP
- SHEET A301 EXTERIOR ELEVATIONS
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- SHEET A601 DOOR & WINDOW TYPES, DOOR SCHEDULE
- SHEET A701 FINISH PLAN & SCHEDULE
- SHEET A800 INTERIOR ELEVATIONS & DETAILS

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- SHEET S100 STRUCTURAL PLANS
- SHEET S200 SECTIONS & DETAIL VIEWS
- SHEET S201 SECTIONS & DETAIL VIEWS
- SHEET S300 STRUCTURAL NOTES
- SHEET S301 STRUCTURAL NOTES

MECHANICAL
- SHEET M001 MECHANICAL LEGEND & NOTES
- SHEET M002 MECHANICAL SPECIFICATIONS
- SHEET M110 MECHANICAL PLAN

PLUMBING
- SHEET P001 PLUMBING LEGEND & NOTES
- SHEET P002 PLUMBING SPECIFICATIONS AND SCHEDULES
- SHEET P110 PLUMBING PLAN

ELECTRICAL
- SHEET E000 ELECTRICAL SYMBOLS AND ABBREVIATIONS
- SHEET E001 ELECTRICAL SPECIFICATIONS
- SHEET E002 ELECTRICAL SPECIFICATONS
- SHEET E003 ELECTRICAL SCHEDULES
- SHEET E004 ELECTRICAL DETAILS
- SHEET E101 ELECTRICAL SITE PLAN
- SHEET E110 ELECTRICAL PLANS

ICT
- SHEET T000 ICT SYMBOLS AND ABBREVIATIONS
- SHEET T001 ICT SPECIFICATIONS
- SHEET T002 ICT SPECIFICATIONS
- SHEET T003 ICT SPECIFICATIONS
- SHEET T004 ICT SPECIFICATONS
- SHEET T101 ICT SITE PLAN
- SHEET T110 ICT PLANS

NO.	REVISION DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			

SET NO.

SHEET NO. C1

Y:\Shared\Helena Projects\1-23205-Bannock County Landfill Scale House\CADD 1-23205\Sheets\1-23205-C01-Cover.dwg

ABBREVIATIONS

@	AT
Δ	ANGLE OF DEFLECTION, DELTA ANGLE
<PT	ANGLE POINT
AB	ANCHOR BOLT
ABDN	ABANDON
AC	ASBESTOS CONCRETE
ADDN	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
APVD	APPROVED
ARCH	ARCHITECTURE, ARCHITECTURAL
ASPH	ASPHALT
AVE	AVENUE
AVG	AVERAGE
BFV	BUTTERFLY VALVE
BLDG	BUILDING
BLK	BLOCK
BLVD	BOULEVARD
BM	BEAM, BENCHMARK
BOT	BOTTOM
BRG	BEARING
BRKT	BRACKET
BVC	BEGIN VERTICAL CURVE
C–C	CENTER TO CENTER
CHAN	CHANNEL
CHK	CHECK
CI	CAST IRON
CIPC	CAST–IN–PLACE CONCRETE
CIRC	CIRCULAR
CJ	CONSTRUCTION JOINT, CONTROL JOINT
℄	CENTER LINE
CLR	CLEAR, CLEARANCE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNITS
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUE, CONTINUED, CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CP	CONTROL PANEL, CONTROL POINT
CPLG	COUPLING
CTR	CENTER
CTV	CABLE TELEVISION
CU	CUBIC, COPPER
CF	CUBIC FEET
CULV	CULVERT
CY	CUBIC YARD
DET	DETAIL
DI	DUCTILE IRON, DRAIN INLET
DIA, ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DR	DRIVE
DWG	DRAWING
E	EAST
EA	EACH
EL, ELEV	ELEVATION
ELB	ELBOW
ELEC	ELECTRIC, ELECTRICAL
ENCL	ENCLOSE
ENGR	ENGINEER
EOP	EDGE OF PAVEMENT
EQ	EQUAL, EQUALLY
EQ SP	EQUALLY SPACED
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EVC	END VERTICAL CURVE
EW	EACH WAY
EXC	EXCAVATE
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXST	EXISTING
FCV	FLOW CONTROL VALVE
FD	FLOOR DRAIN
FDN	FOUNDATION
FES	FLARED END SECTION
FET	FLARED END TERMINAL
FF	FINISHED FLOOR
FG	FINISH GRADE
FHYD	FIRE HYDRANT
FJ	FLANGE JOINT
FL	FLOW LINE
FLEX	FLEXIBLE
FM	FORCEMAIN
FT	FOOT, FEET
FO	FIBER OPTIC
FTG	FOOTING, FITTING
G	NATURAL GAS
GA	GAGE, GAUGE
GAL	GALLON
GALV	GALVANIZED
GND	GROUND
GVL	GRAVEL
HB	HOSE BIB
HDPE	HIGH DENSITY POLYETHYLENE
HOR, HORIZ	HORIZONTAL
HWY	HIGHWAY
HYD	HYDRANT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INV	INVERT
JB	JUNCTION BOX
JT	JOINT
K	RATE OF VERTICAL CURVATURE
LBS	POUNDS
LF	LINEAR FEET
LN	LANE
LPG	LIQUID PROPANE GAS
LT	LEFT
MAX	MAXIMUM
MD	MEASURE DOWN
MFD	MANUFACTURED
MFR	MANUFACTURE, MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MOV	MOTOR OPERATED VALVE
MPWSS	MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS
N	NORTH
NE	NORTHEAST
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OVERFLOW
OH	OVERHEAD
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
OPNG	OPENING
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	PLAIN END, POLYETHYLENE
PERP	PERPENDICULAR
PI	POINT OF INTERSECTION
P℄	PROPERTY LINE
PNL	PANEL
PRC	POINT OF REVERSE CURVATURE
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PREP	PREPARE, PREPARATION
PROP	PROPERTY
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT, POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
R, RAD	RADIUS
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDCR	REDUCER
REBAR	REINFORCEMENT BAR
REF	REFERENCE
REINF	REINFORCE
REQD	REQUIRED
RR	RAILROAD
RST	REINFORCING STEEL
RT	RIGHT
R/W	RIGHT–OF–WAY
S	SOUTH, SANITARY SEWER
SAN	SANITARY
SCH	SCHEDULE
SD	STORM DRAIN
SDWK	SIDEWALK
SE	SOUTHEAST
SECT	SECTION
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SLP	SLOPE
SPEC	SPECIFICATION
SQ	SQUARE
SSTL	STAINLESS STEEL
STA	STATION
SS	SANITARY SEWER SERVICE
STD	STANDARD
ST	STREET
STL	STEEL
STRUCT	STRUCTURE
SW	SOUTHWEST
SYM	SYMMETRICAL
TB	THRUST BLOCK
TBC	TOP BACK OF CURB
TBM	TEMPORARY BENCH MARK
TEL	TELEPHONE
TEMP	TEMPORARY
THRU	THROUGH
TYP	TYPICAL
UG	UNDERGROUND
UGP	UNDERGROUND POWER
UGT	UNDERGROUND TELEPHONE
UTIL	UTILITY
V	VALVE, VOLT
VB	VALVE BOX
VERT	VERTICAL
VOL	VOLUME
W	WEST, WATER
WTR	WATER
WD	WOOD
W/	WITH
W/O	WITHOUT
WL	WETLAND
WM	WIRE MESH, WATER METER
WS	WATERSTOP, WATER SURFACE, WATER SERVICE
WT	WEIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
XFMR	TRANSFORMER
X–ING	CROSSING
XS	CROSS SECTION
YD	YARD

LEGEND

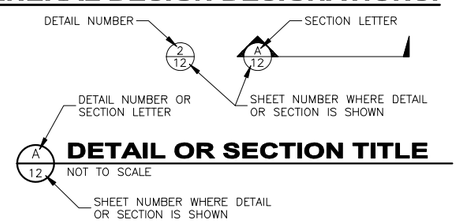
EXISTING	PROPOSED	DESCRIPTION
		MAJOR CONTOUR
		MINOR CONTOUR
OHT	OHT	OVERHEAD TELEPHONE
UGT	UGT	UNDERGROUND TELEPHONE
CTV	CTV	CABLE TELEVISION
FO	FO	FIBER OPTIC
G	G	NATURAL GAS
OHP	OHP	OVERHEAD POWER
UGP	UGP	UNDERGROUND POWER
S	S	SANITARY SEWER
SS SS SS	SS SS SS	SANITARY SEWER SERVICE
FM	FM	SANITARY SEWER FORCEMAIN
SD	SD	STORM DRAIN
		STORM CULVERT
W	W	WATER
WS WS WS	WS WS WS	WATER SERVICE
		CHAINLINK FENCE
X X X	X X X	BARBED WIRE FENCE
		WOOD FENCE
		PAVED ROAD
		GRAVEL ROAD
		PROPERTY/LOT LINE
		PROPERTY EASEMENT
		PROPERTY SETBACK
		RIGHT–OF–WAY
		CITY LIMIT/DISTRICT BOUNDARY
		RAILROAD
		DITCH
		WATER EDGE
WL		WETLAND
		BUILDING
		BENCHMARK
		CONTROL POINT
		PROPERTY PIN
		BORING
		MONITORING WELL
		TEST PIT
		BOLLARD
		MAIL BOX
		SIGN

EXISTING	PROPOSED	DESCRIPTION
		STUMP
		SHRUB/BUSH
		TREE–CONIFER
		TREE–DECIDUOUS
		TREE LINE
		COMMUNICATION MANHOLE
		COMMUNICATION VAULT
		TELEPHONE RISER
		CABLE TV RISER
		NATURAL GAS METER
		NATURAL GAS RISER
		NATURAL GAS VALVE
		LIGHT POLE
		STREET LIGHT POLE
		POWER RISER
		PAD MOUNTED TRANSFORMER
		POWER VAULT
		UTILITY POLE
		GUY WIRE
		SANITARY MANHOLE
		SANITARY CLEANOUT
		SANITARY LAMPHOLE
		STORM MANHOLE
		STORM ROUND INLET
		STORM SQUARE INLET
		STORM CATCH BASIN
		11.25° ELBOW
		22.50° ELBOW
		45° ELBOW
		90° ELBOW
		TEE
		CROSS
		CAP
		FIRE HYDRANT
		GATE VALVE
		REDUCER
		WATER METER
		WELL
		CURB STOP
		FROST FREE HYDRANT

GENERAL NOTES:

1. THIS IS A STANDARD LEGEND AND ABBREVIATION LIST. THEREFORE, NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED ON THIS PROJECT.
2. UNLESS MODIFIED BY THE CONTRACT DOCUMENTS, ALL WORK WILL CONFORM TO THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION, 2020 EDITION (REFERRED TO COLLECTIVELY AS ISPWC).
3. EXISTING UNDERGROUND UTILITIES SHOWN ARE FROM THE BEST INFORMATION AVAILABLE. THIS INFORMATION IS APPROXIMATE AND MAY BE INCOMPLETE. FOR ACCURATE LOCATION, THE CONTRACTOR SHALL CONTACT, PRIOR TO EXCAVATION, THE UTILITIES UNDERGROUND LOCATION CENTER AT: 1–800–342–1585 OR 811.

GENERAL DESIGN DESIGNATIONS:



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 7-31-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

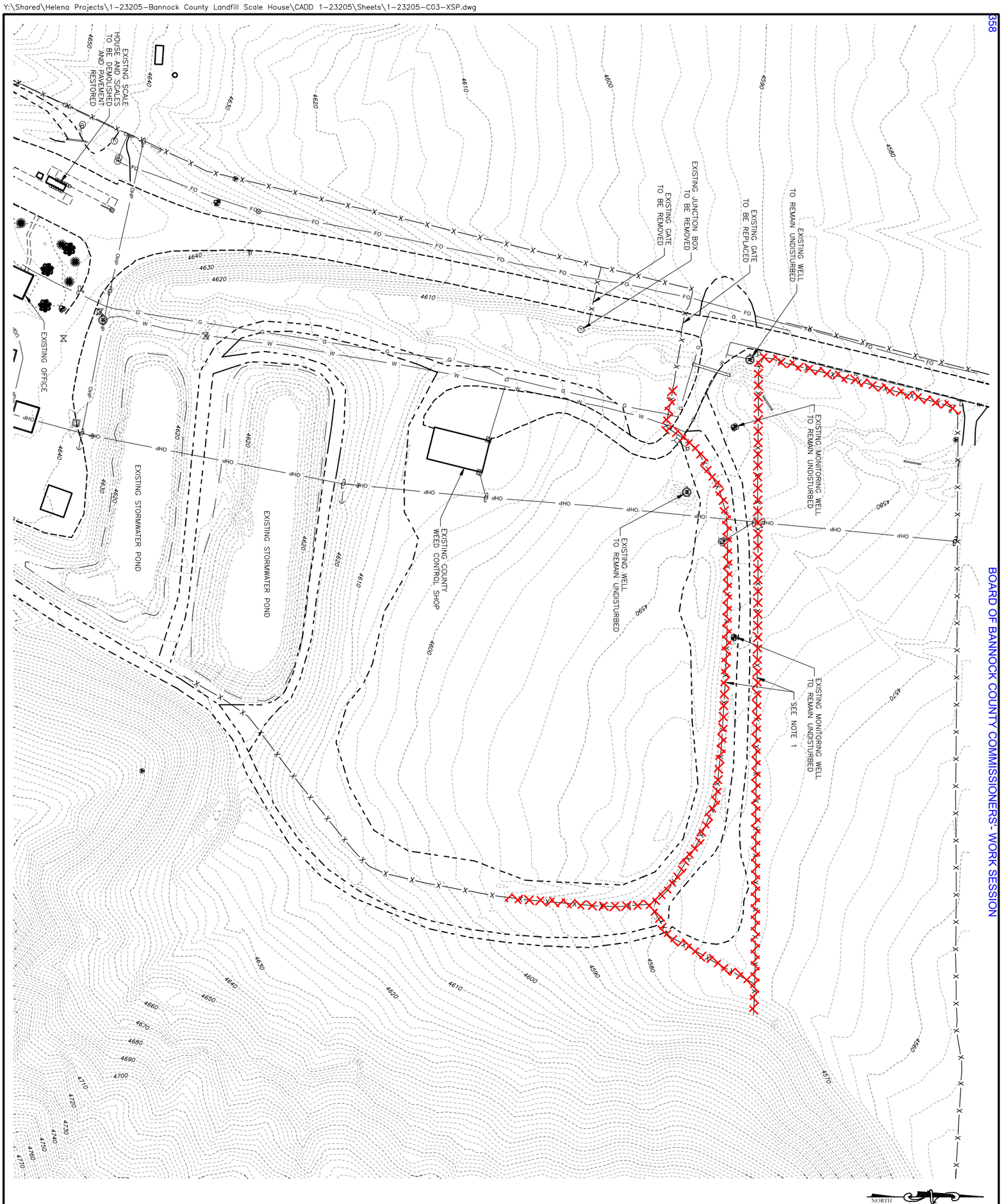
BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
LEGEND, ABBREVIATIONS, AND GENERAL NOTES

SHEET NO.
C2

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358 BOARD OF BANNOCK COUNTY COMMISSIONERS' WORK SESSION FEBRUARY 19, 2026



NOTES:
1. REMOVE EXISTING FENCE. COORDINATE WITH COUNTY FOR DISPOSAL OR RECYCLE OF EXISTING FENCE.

SHEET NO. C3

BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

EXISTING SITE PLAN

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406)449-8627

PROFESSIONAL ENGINEER LICENSED 16198 STATE OF IDAHO STEPHANIE M. WILKE
7-31-2025

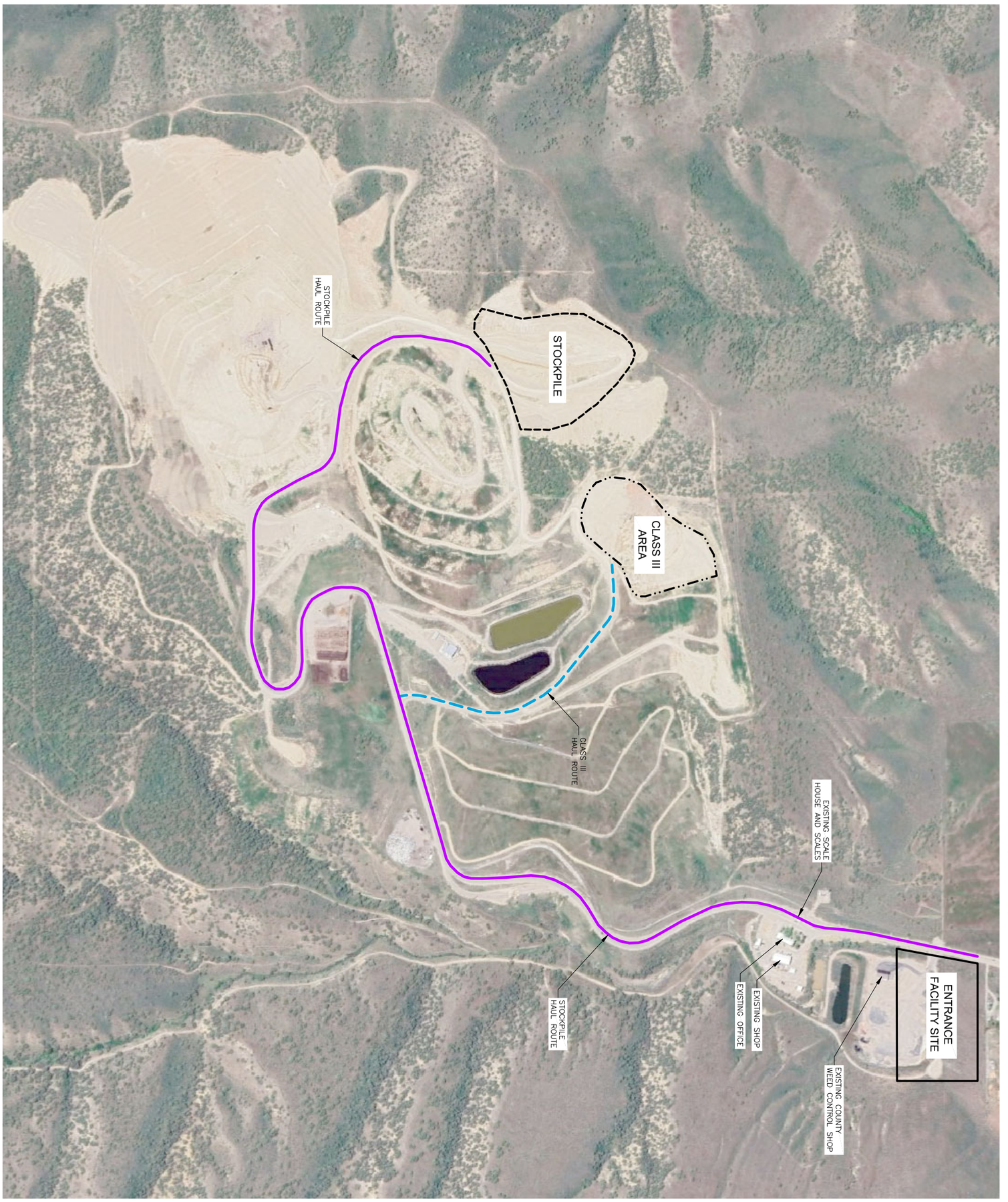
PROJECT:	1-23205
DESIGNED:	BAA
DRAWN:	STR / BAA
CHECKED:	TLC
APPROVED:	SMW
DATE:	JULY 31, 2025

NO.	REVISION DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			

359

BOARD OF BANNOCK COUNTY COMMISSIONERS' WORK SESSION

FEBRUARY 19, 2026



SCALE IN FEET
0
300
600

SHEET NO.
C4

BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

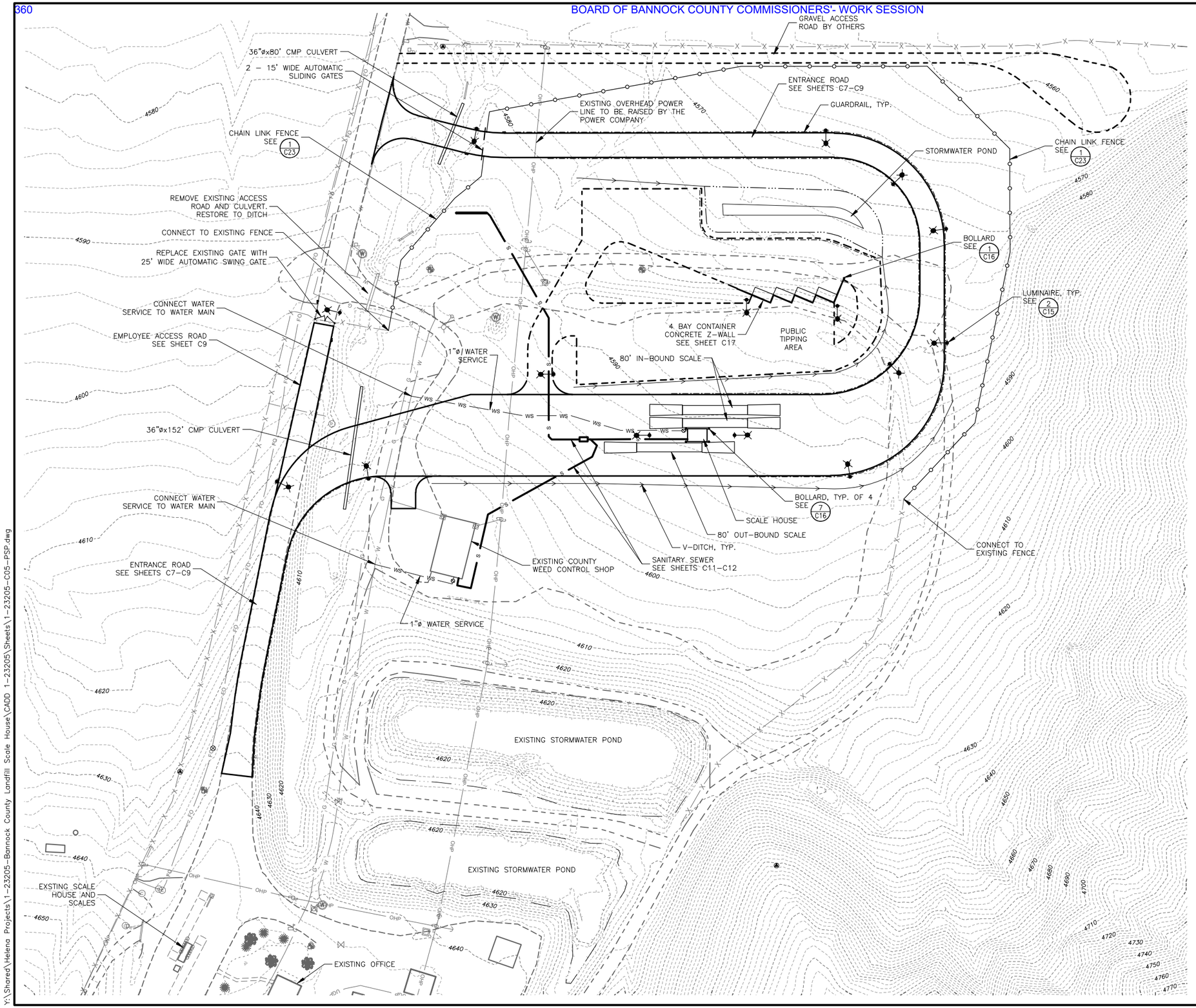
STOCKPILE LOCATION

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406)449-8627

PROFESSIONAL ENGINEER LICENSED 16198 STATE OF IDAHO STEPHANIE M. WILKE
7-31-2025

PROJECT:	1-23205
DESIGNED:	BAA
DRAWN:	STR / BAA
CHECKED:	TLC
APPROVED:	SMW
DATE:	JULY 31, 2025

NO.	REVISION DESCRIPTION	BY	DATE



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NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

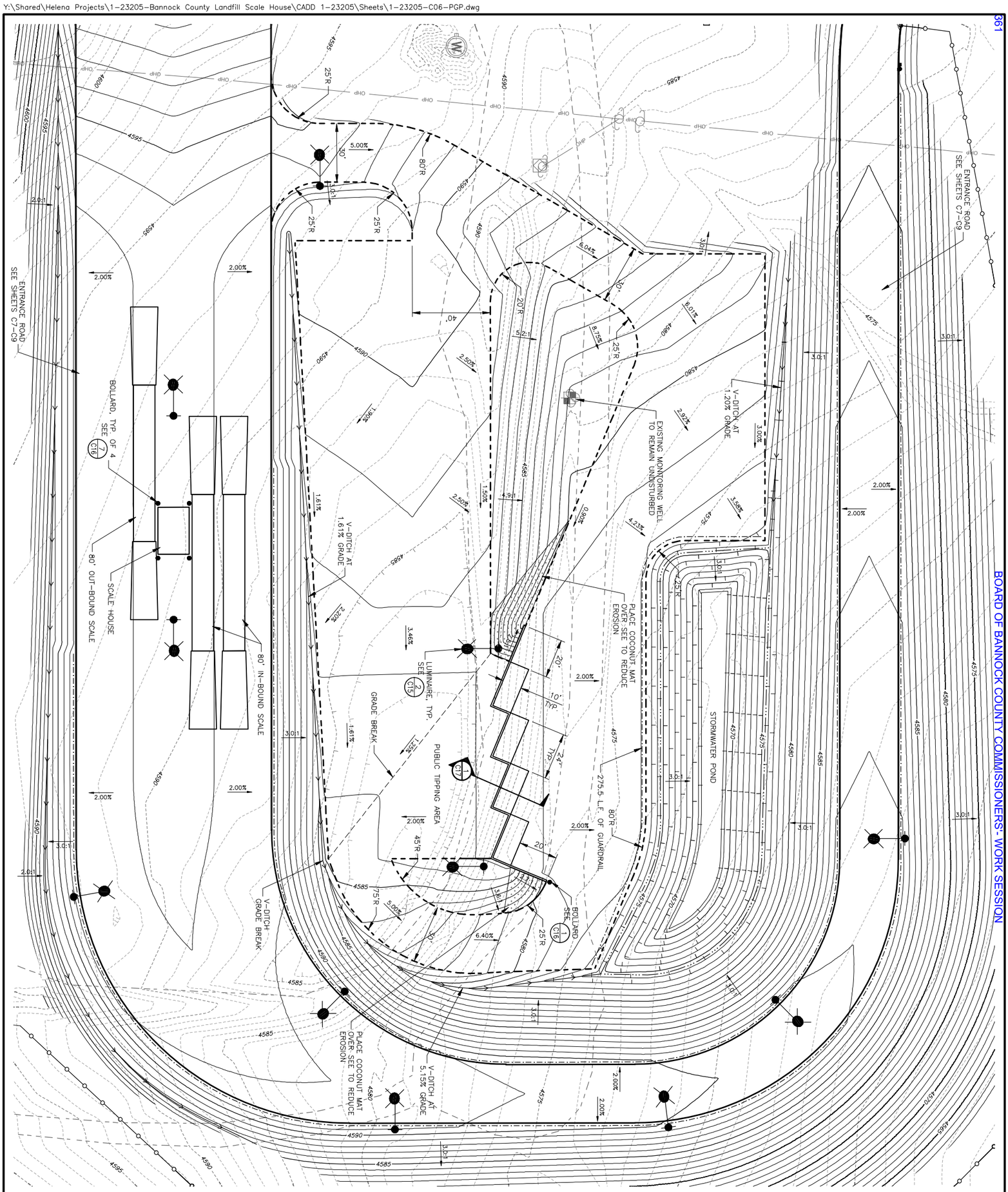
PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 1-31-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
PROPOSED SITE PLAN

SHEET NO.
C5

Y:\Shared\Helena Projects\1-23205-Bannock County Landfill Scale House\CADD 1-23205\Sheets\1-23205-C06-PGP.dwg



BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

PROPOSED INFIELD GRADING PLAN

SHEET NO. C6

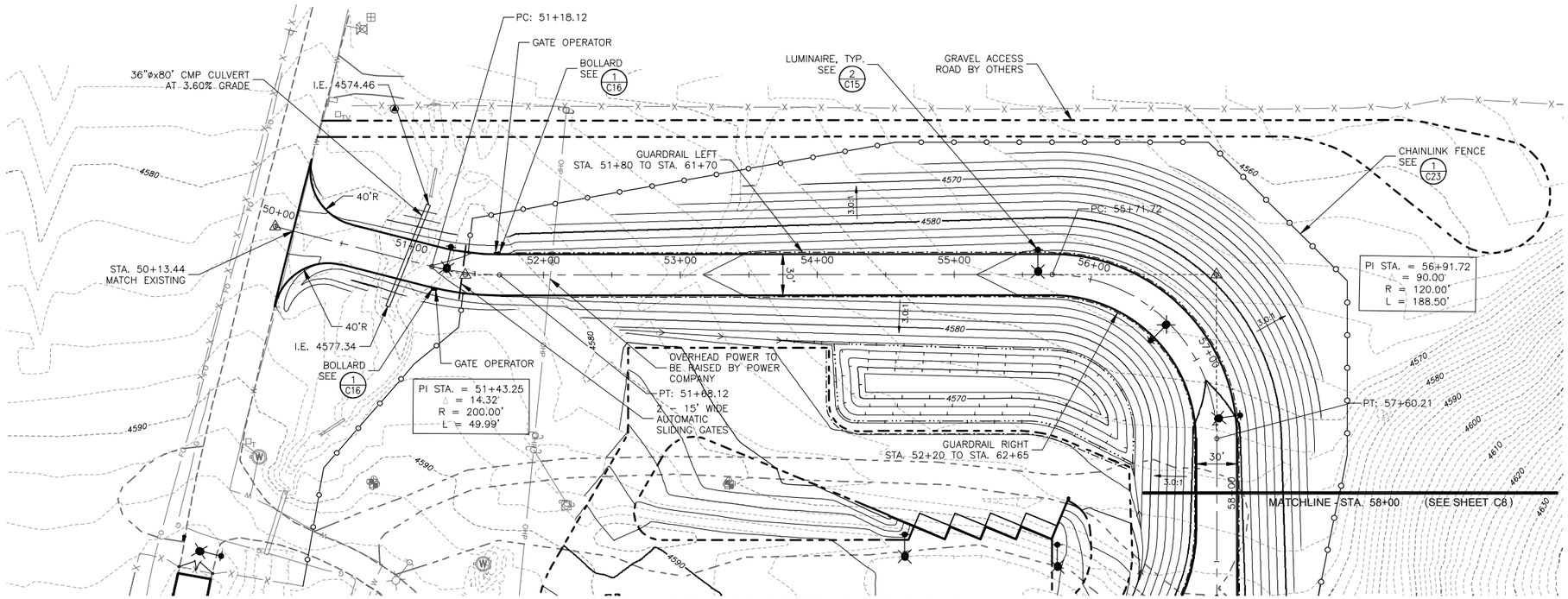
GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406)449-8627

PROFESSIONAL ENGINEER LICENSED 16198 STATE OF IDAHO STEPHANIE M. WILKE 07-31-2025

PROJECT:	1-23205
DESIGNED:	BAA
DRAWN:	STR / BAA
CHECKED:	TLC
APPROVED:	SMW
DATE:	JULY 31, 2025

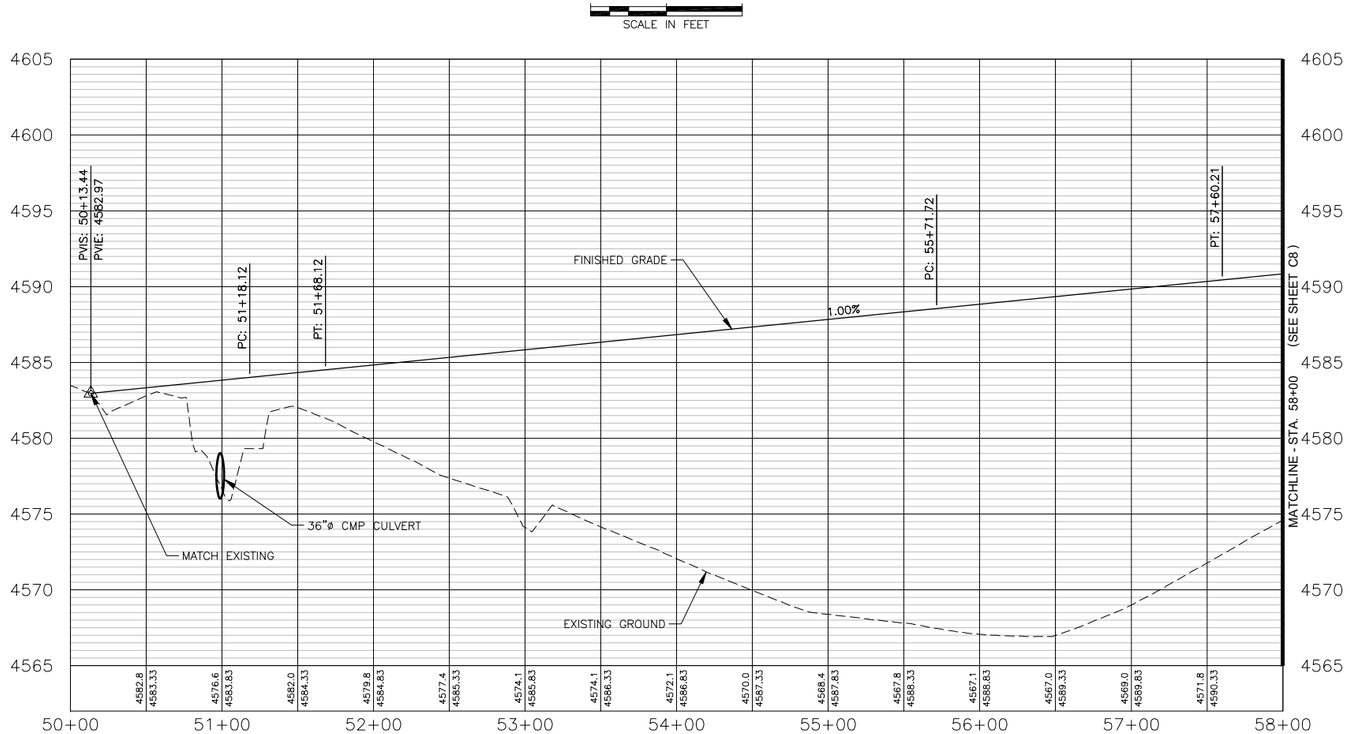
NO.	REVISION DESCRIPTION	BY	DATE

361
BOARD OF BANNOCK COUNTY COMMISSIONERS' WORK SESSION
FEBRUARY 19, 2026



PLAN VIEW OF ENTRANCE ROAD

0 50 100
SCALE IN FEET



PROFILE VIEW OF ENTRANCE ROAD - STA. 50+00 TO STA. 58+00

HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

PROFESSIONAL ENGINEER LICENSED 16198 STATE OF IDAHO STEPHANIE M. WILKE 7-31-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

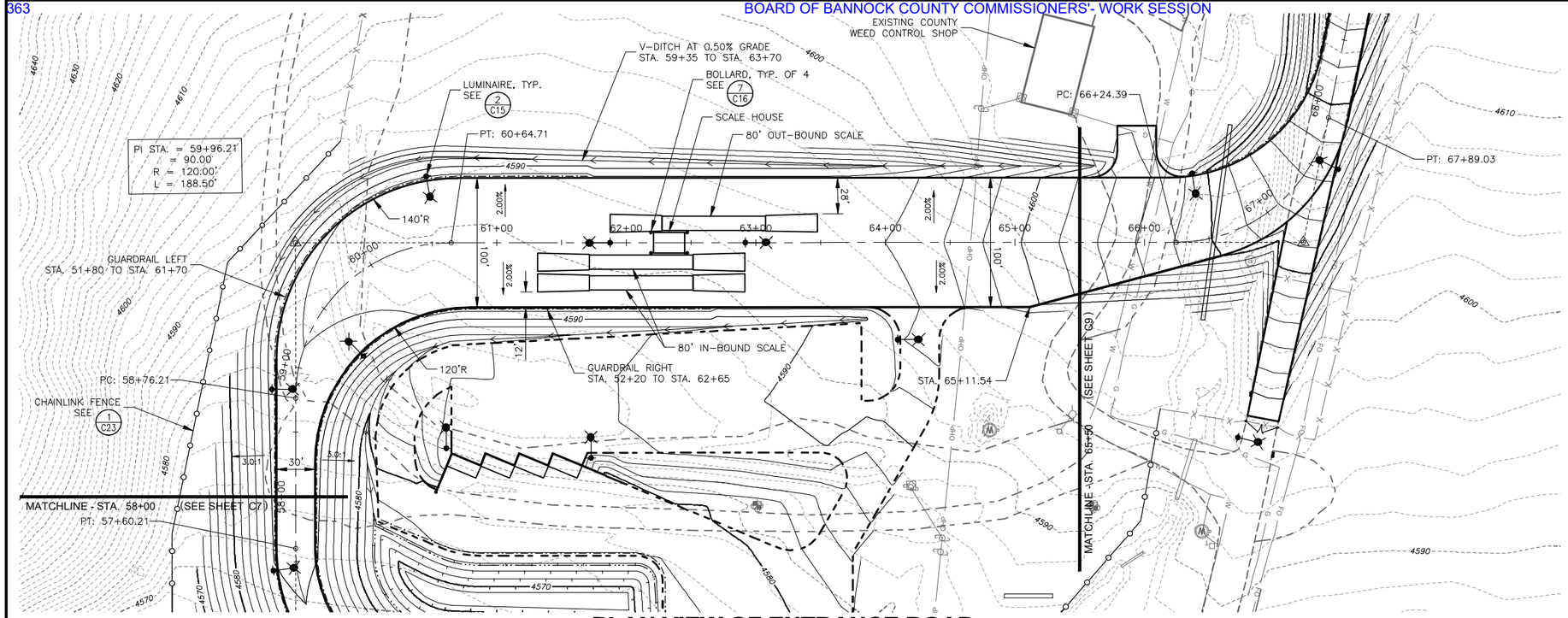
BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

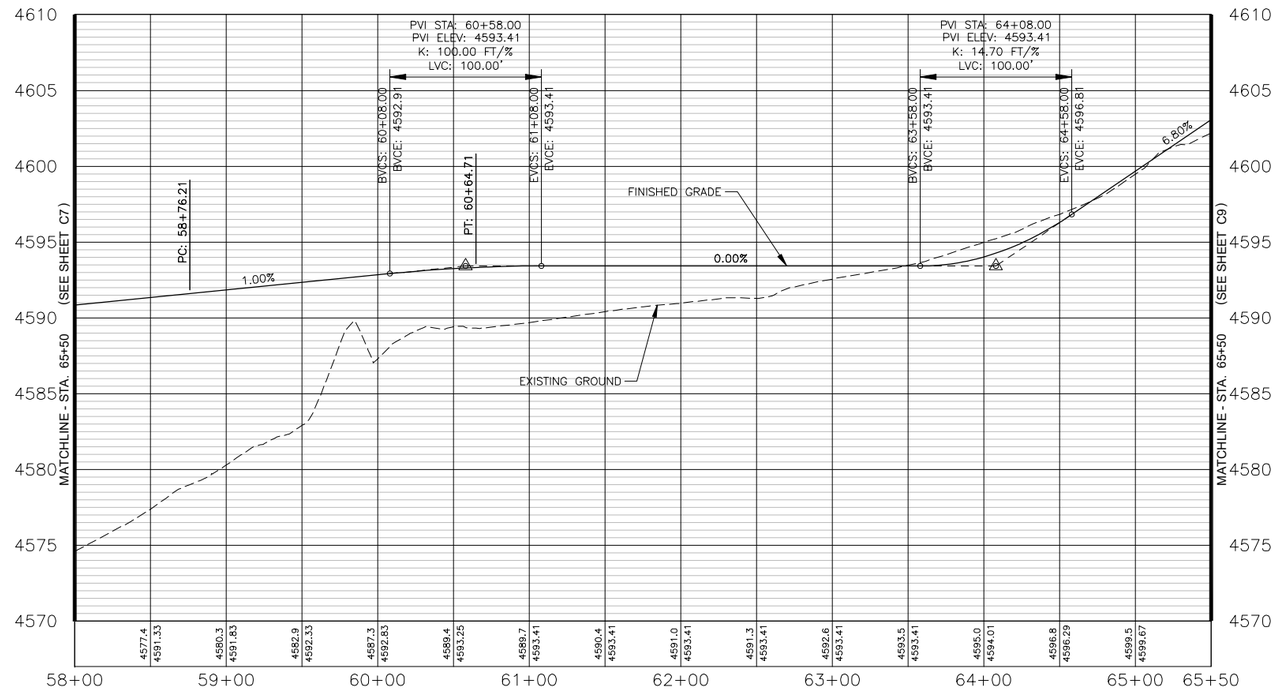
ENTRANCE ROAD PLAN & PROFILE
STA. 50+00 TO STA. 58+00

SHEET NO.
C7

Y:\Shared\Helena Projects\1-23205-Bannock County Landfill Scale House\CADD 1-23205\Sheets\1-23205-C07-PP.dwg



PLAN VIEW OF ENTRANCE ROAD



PROFILE VIEW OF ENTRANCE ROAD - STA. 58+00 TO STA. 65+50

HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO 16198 STEPHANIE M. WILKE 12-31-2025

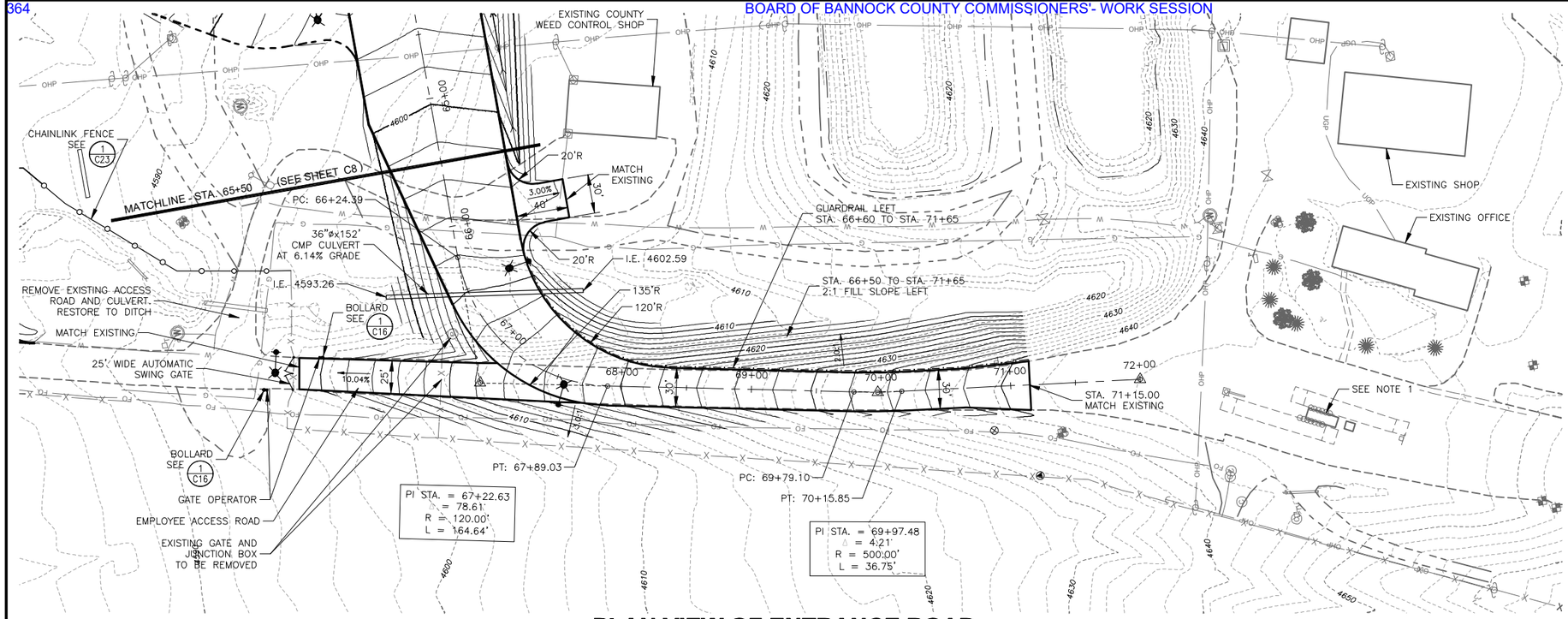
GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY

ENTRANCE ROAD PLAN & PROFILE
STA. 58+00 TO STA. 65+50

SHEET NO.
C8

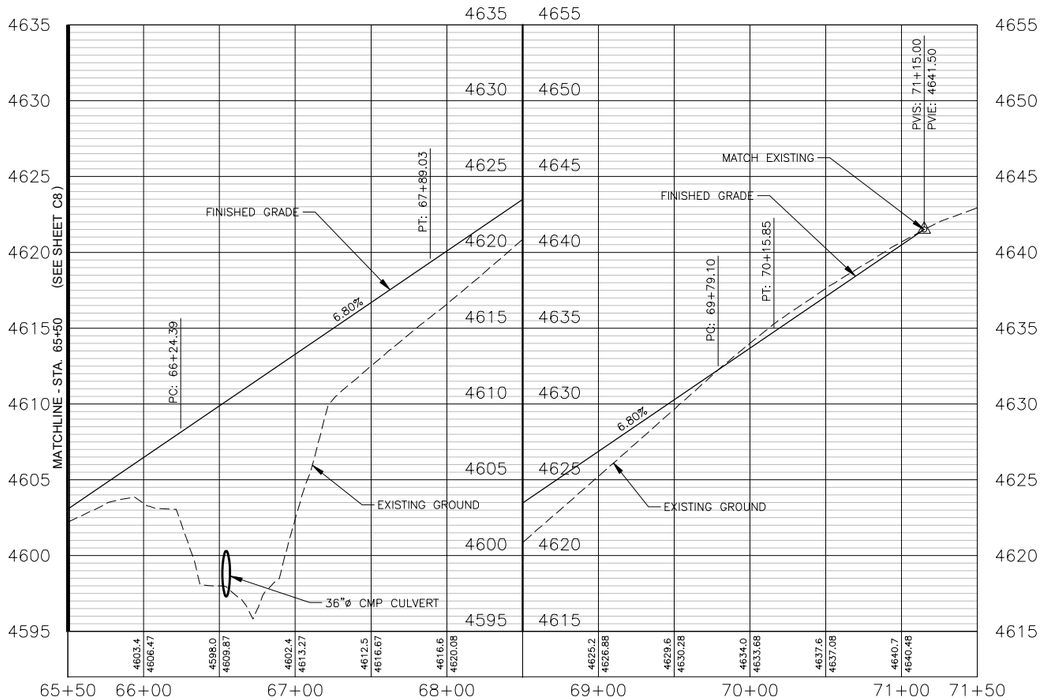
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PLAN VIEW OF ENTRANCE ROAD

0 50 100
SCALE IN FEET

NOTES:
1. EXISTING SCALE HOUSE AND SCALES TO BE DEMOLISHED AND PAVEMENT RESTORED TO MATCH EXISTING. SCALES TO BE PRESERVED FOR COUNTY USE TO THE EXTENT POSSIBLE. EXISTING SCALE HOUSE TO BE DISPOSED OF IN CLASS III LANDFILL.



PROFILE VIEW OF ENTRANCE ROAD - STA. 65+50 TO STA. 71+50

HORIZONTAL SCALE: 1" = 100'
VERTICAL SCALE: 1" = 10'

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

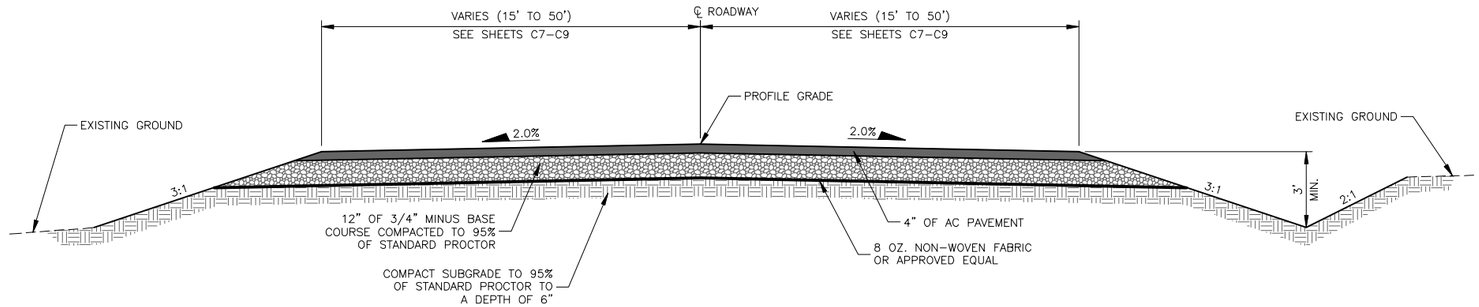
PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 1-31-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ENTRANCE ROAD PLAN & PROFILE
STA. 65+50 TO STA. 71+50

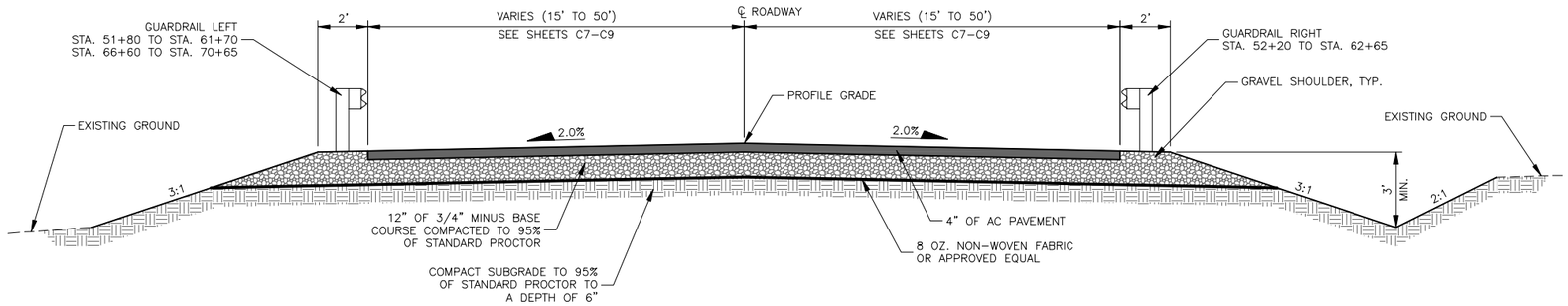
SHEET NO.
C9

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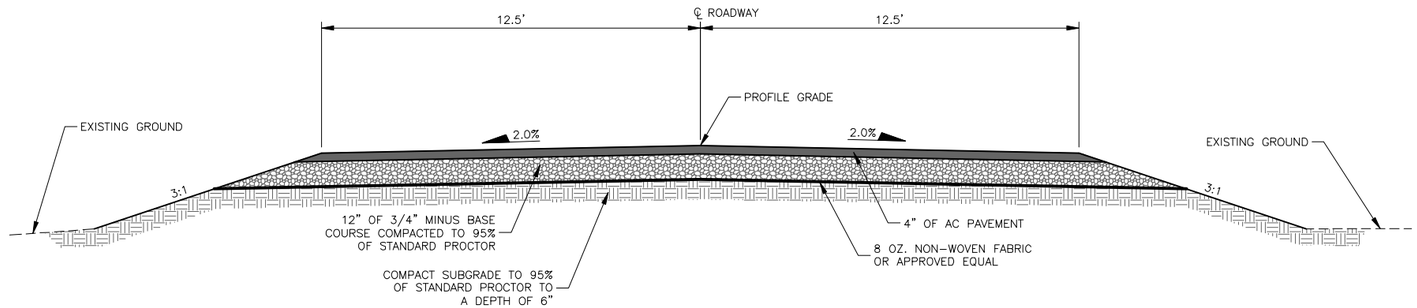
1 C10 ENTRANCE ROAD TYPICAL SECTION 1

NOT TO SCALE



2 C10 ENTRANCE ROAD TYPICAL SECTION 2

NOT TO SCALE



3 C10 EMPLOYEE ACCESS ROAD SECTION

NOT TO SCALE

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

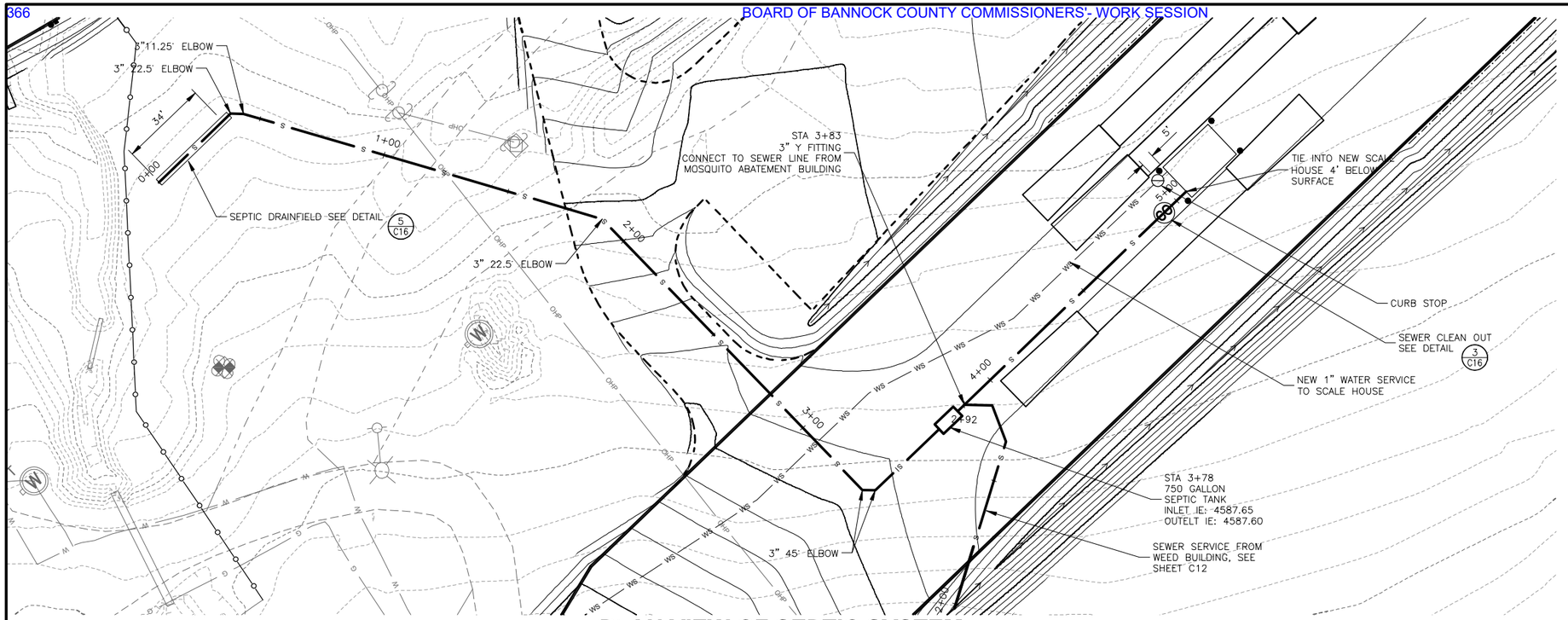
PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 12-31-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ROAD TYPICAL SECTIONS

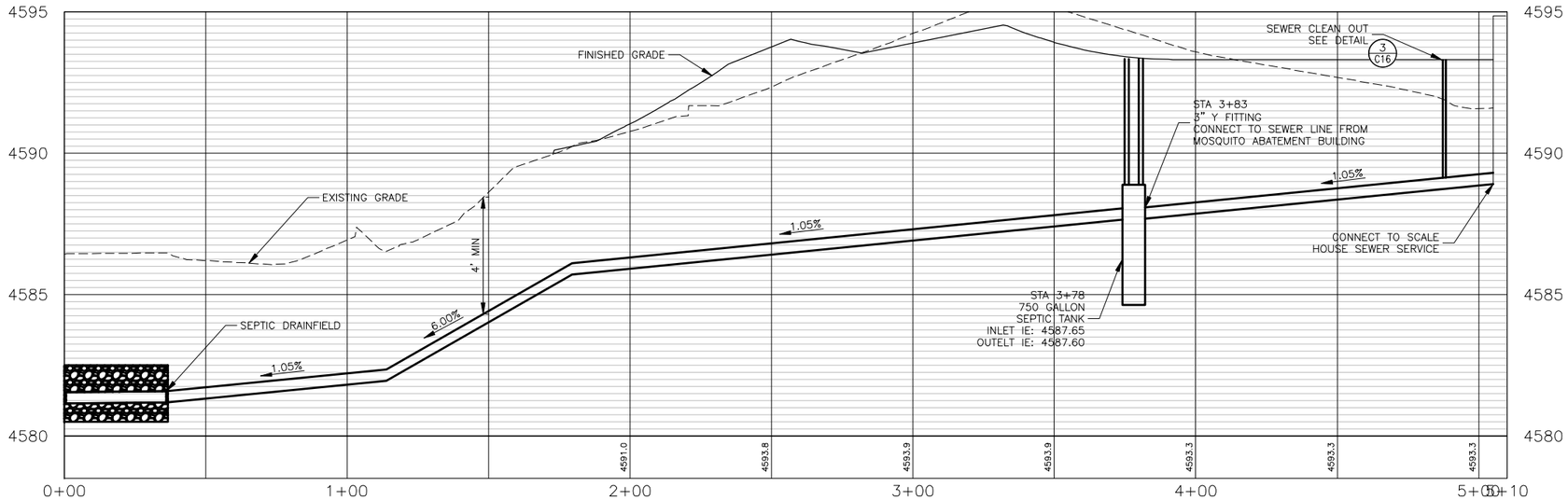
SHEET NO.
C10

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PLAN VIEW OF SEPTIC SYSTEM

0 25 50
SCALE IN FEET



PROFILE VIEW OF SEPTIC SYSTEM - STA. 0+00 TO STA. 5+10

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

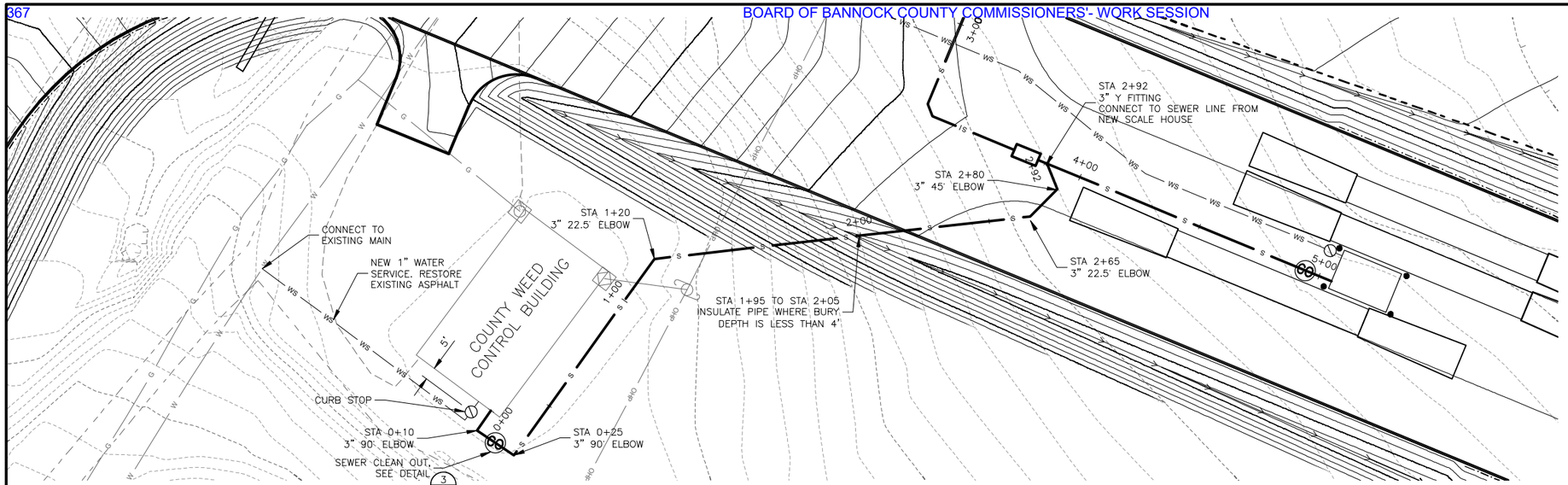
PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 1-31-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
SCALE HOUSE SEPTIC PLAN AND PROFILE

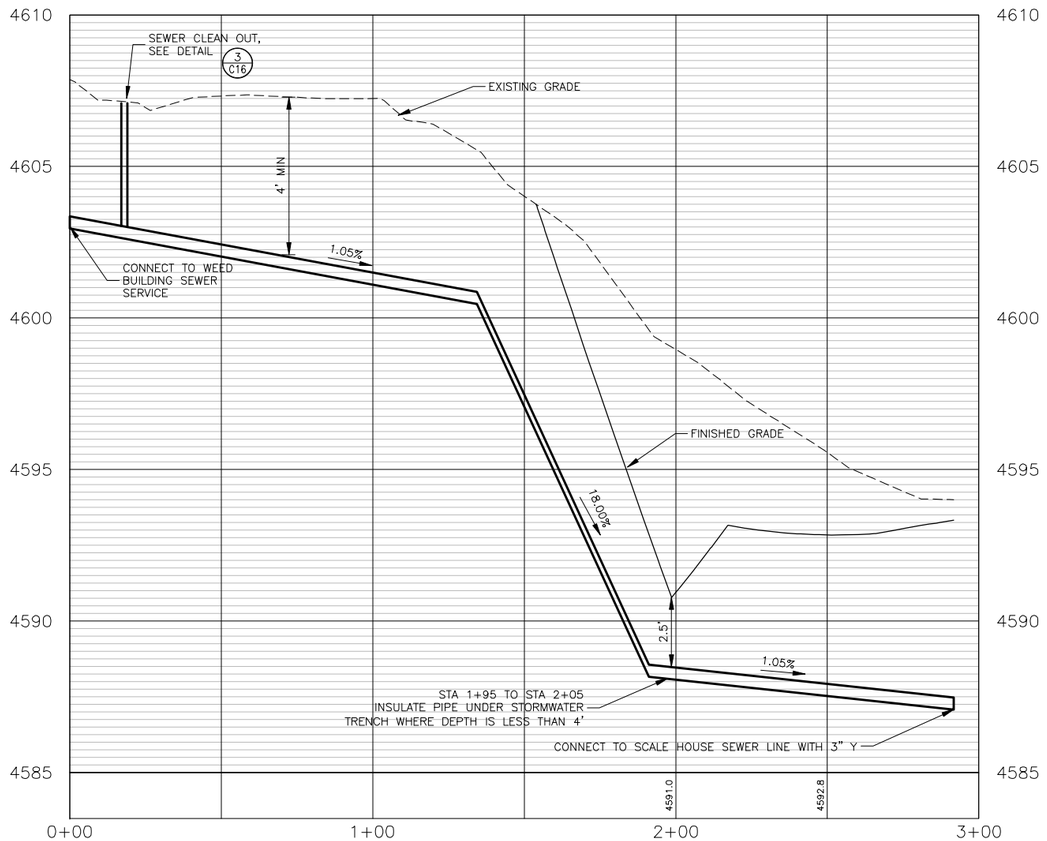
SHEET NO.
C11

Y:\Shared\Helena Projects\1-23205-Bannock County Landfill Scale House\CADD 1-23205\Sheets\1-23205-C11-Septic.dwg



PLAN VIEW OF WEED BUILDING SEPTIC LINE

0 25 50
SCALE IN FEET



PROFILE VIEW OF WEED BUILDING SEPTIC - STA. 0+00 TO STA. 3+00

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

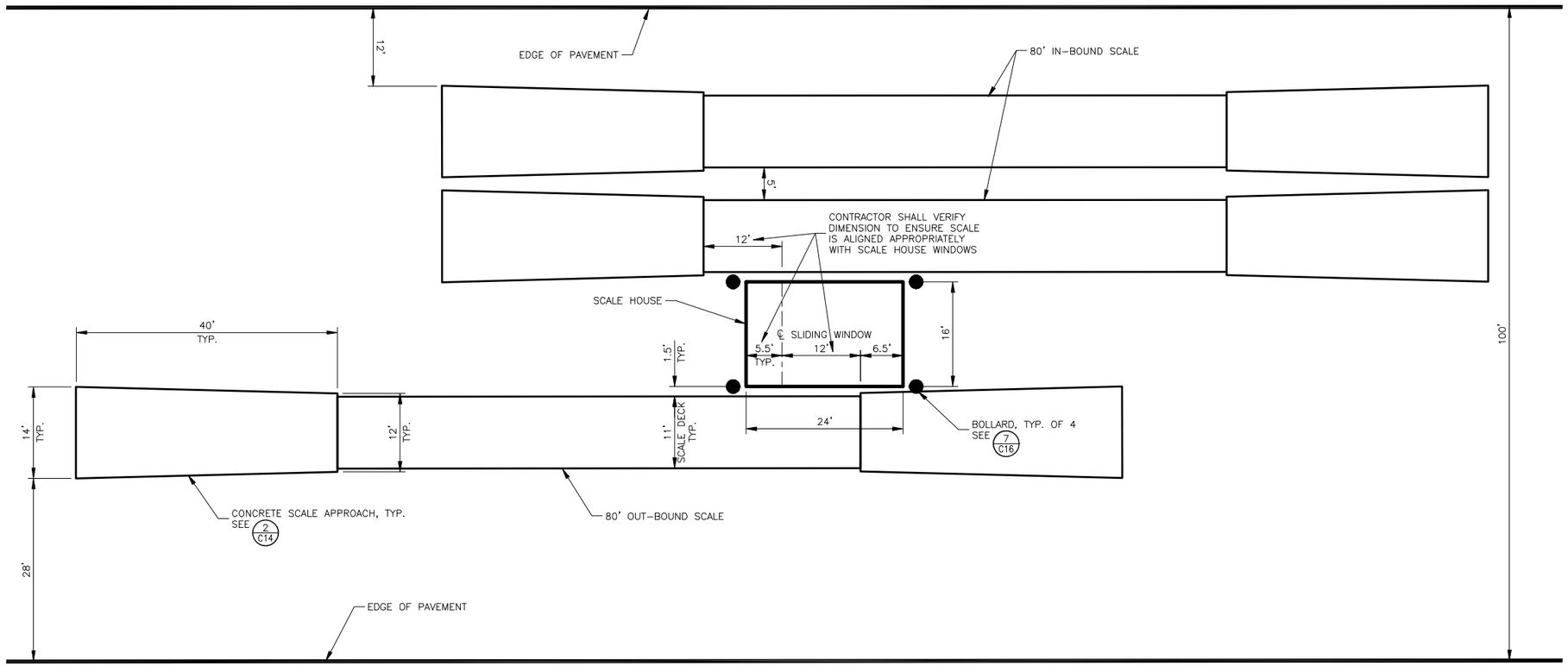
PROFESSIONAL ENGINEER — LICENSED — 16198 — STATE OF IDAHO — STEPHANIE M. WILKE — 1-21-2026

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
WEED CONTROL BUILDING SEPTIC PLAN AND PROFILE

SHEET NO.
C12

Y:\Shared\Helena Projects\1-23205-Bannock County Landfill Scale House\CADD 1-23205\Sheets\1-23205-C12- MA Septic.dwg



SCALE PLAN

0 10 20

SCALE IN FEET

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

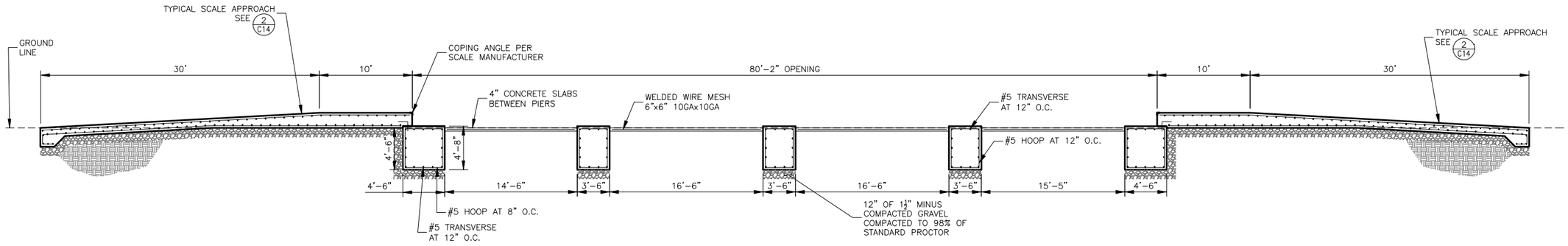
PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 12-31-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
SCALE PLAN

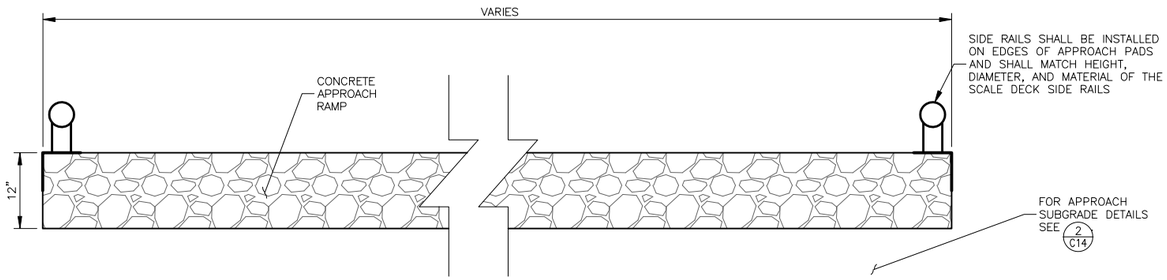
SHEET NO.
C13

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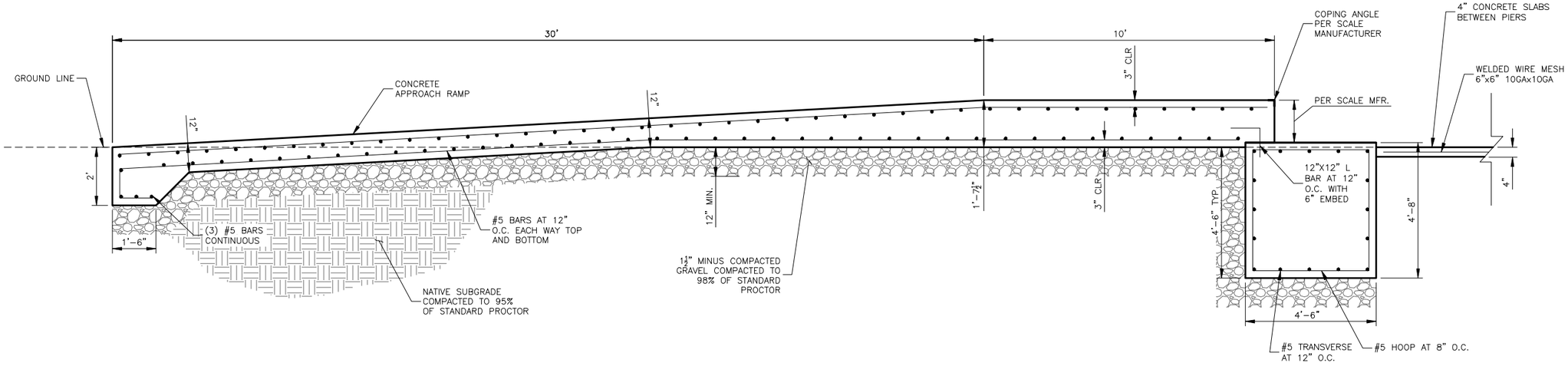


1 C14 SCALE FOUNDATION
NOT TO SCALE

NOTES:
1. DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS FROM SCALE MANUFACTURER TO ENGINEER FOR REVIEW BEFORE BUILDING SCALE FOUNDATION.
2. LOAD CELLS AND GROUND RODS SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS.
3. SCALE FOUNDATION SHOWN IS FOR AN 80'x11' CONCRETE DECK CARDINAL SCALE MODEL #1010329. IF CONTRACTOR SUBMITS ON AN APPROVED EQUIVALENT THE CONTRACTOR SHALL ALSO SUBMIT A NEW FOUNDATION DESIGN.
4. 3" TYPICAL CLEAR SPACE FOR ALL REBAR REINFORCEMENT.
5. CONCRETE APPROACH RAMPS SHALL BE 4,000 PSI CONCRETE CONSTRUCTED PER ISPWC.
6. PROVIDE CONTROL JOINTS AT 15' O.C. SPACING MAX AND SHALL BE 2" DEPTH. CONTROL JOINTS SHALL BE CUT AS SOON AS CONCRETE SURFACE IS FIRM ENOUGH SO CONCRETE WILL NOT BE DAMAGED, BUT NO LATER THAN 12 HOURS AFTER CONCRETE HAS BEEN PLACED.



SECTION OF SCALE APPROACH



2 C14 TYPICAL SCALE APPROACH
NOT TO SCALE

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

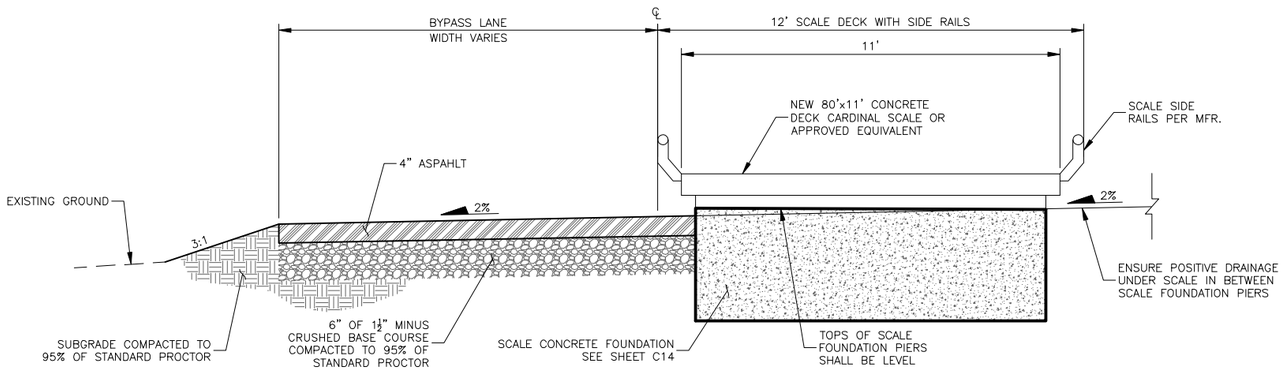
PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 11-21-2025

GreatWest ENGINEERING
2501 BELLVIEW DRIVE
HELENA, MT 59601
(406) 449-8627

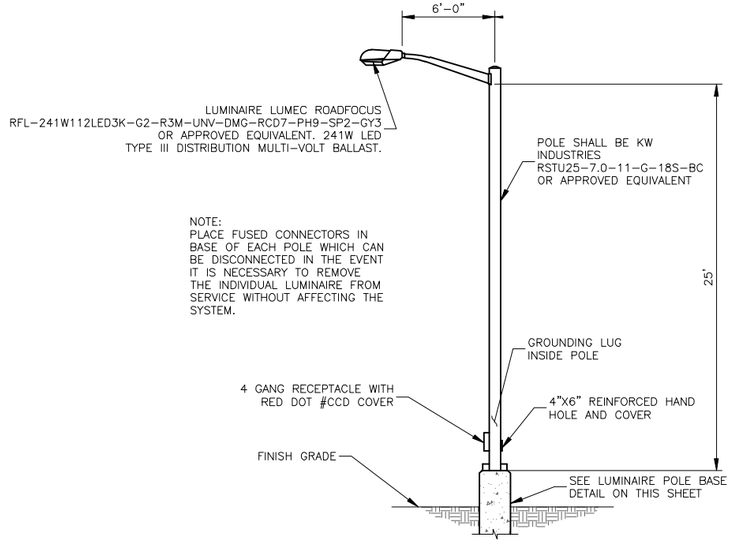
BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
SCALE DETAILS

SHEET NO.
C14

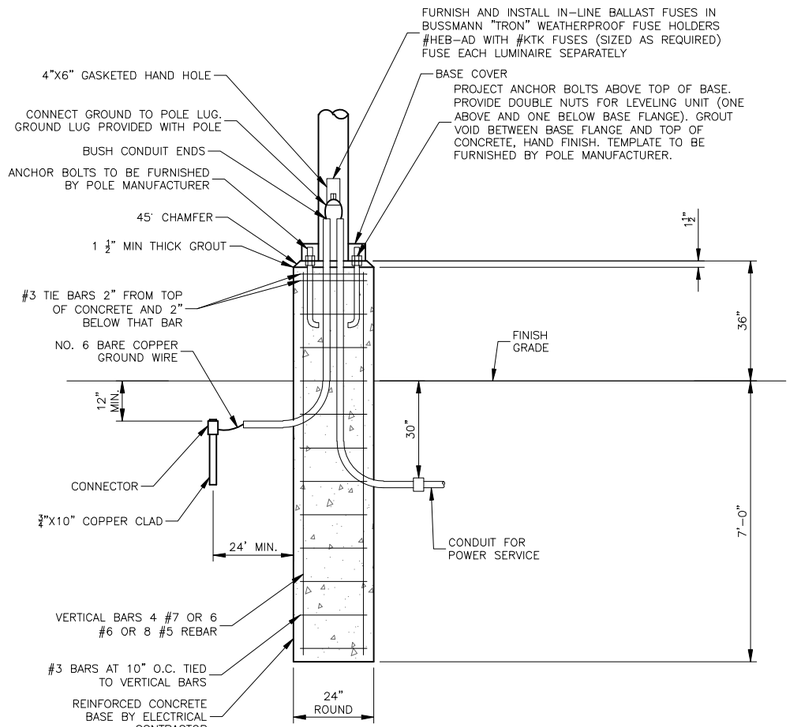
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1 C15 **TYPICAL ROADWAY SECTION WITH SCALE**
NOT TO SCALE



2 C15 **LUMINAIRE DETAIL**
NOT TO SCALE



3 C15 **LUMINAIRE POLE BASE DETAIL**
NOT TO SCALE

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

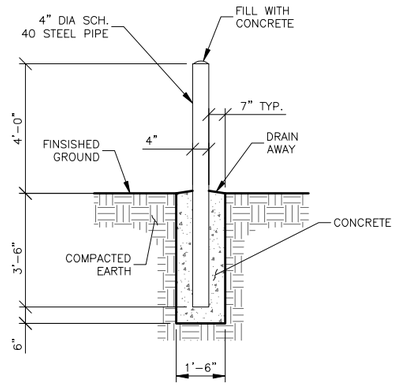
PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 1-31-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
DETAILS

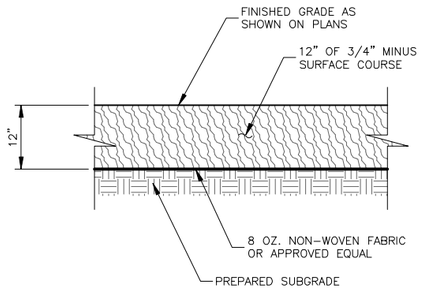
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C15

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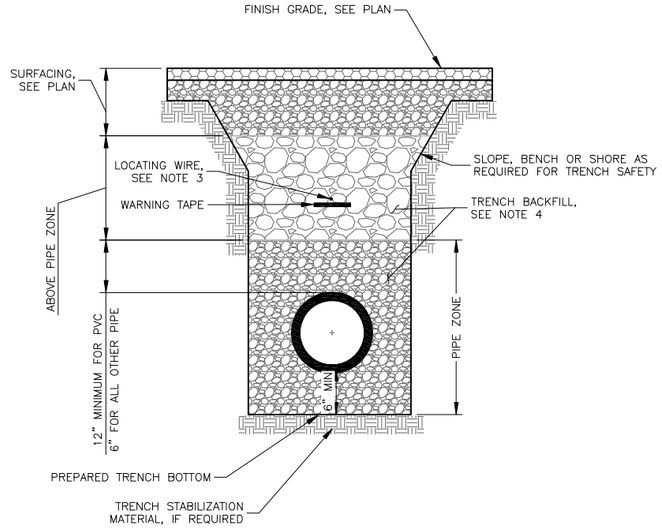


NOTE: PAINT ALL EXPOSED STEEL WITH 2 COATS OF TRAFFIC YELLOW PAINT.

1 C16 BOLLARD DETAIL
NOT TO SCALE



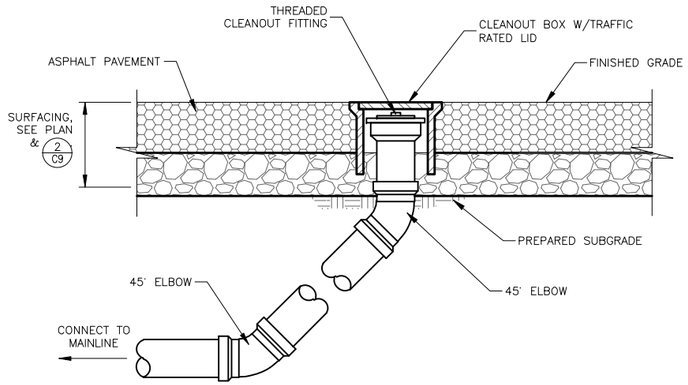
4 C16 GRAVEL SURFACING
NOT TO SCALE



NOTES:

1. TRENCH EXCAVATION SHALL BE NOT MORE THAN 100 FEET AHEAD OF THE PIPE LAYING OPERATION.
2. TRENCHES ARE TO BE BACK FILLED AT THE END OF EACH DAY. IN LIEU OF BACK FILLING, SMALL EXCAVATIONS MAY BE LEFT OPEN AND COVERED WITH STEEL PLATES OR A SAFETY FENCE, IF APPROVED. IF A FENCE IS USED, IT SHALL BE AT LEAST 4' HIGH AND BE ADEQUATELY SUPPORTED AT A MAXIMUM SPACING OF 6' C-C TO PROVIDE AN IMPASSABLE BARRIER.
3. INSTALL LOCATING WIRE CONTINUOUSLY ALONG PIPE CENTERLINE. TERMINATE AND BRING TO SURFACE FOLLOWING STANDARD INSTALLATION PROCESS.
4. IN PIPE ZONE, COMPACT MATERIAL TO 90% RELATIVE COMPACTION. ABOVE PIPE ZONE, COMPACT MATERIAL TO 95% RELATIVE COMPACTION.

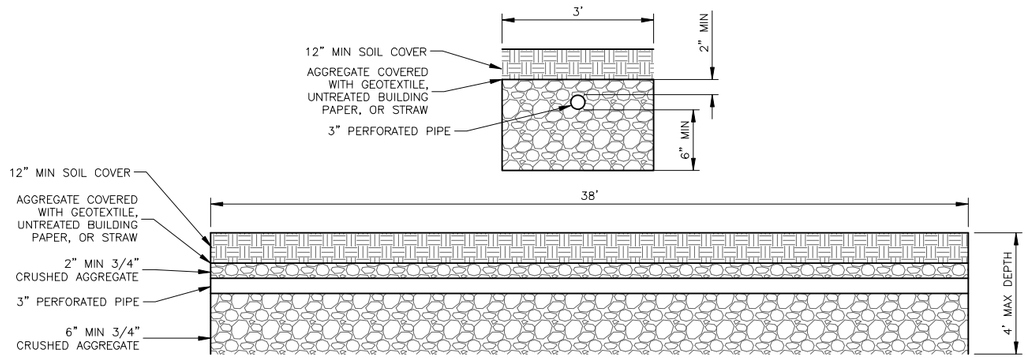
2 C16 PIPE TRENCH DETAIL
NOT TO SCALE



NOTES:

1. ALL CLEANOUT PIPE SHALL MATCH MAINLINE PIPE MATERIAL AND SDR WALL THICKNESS.

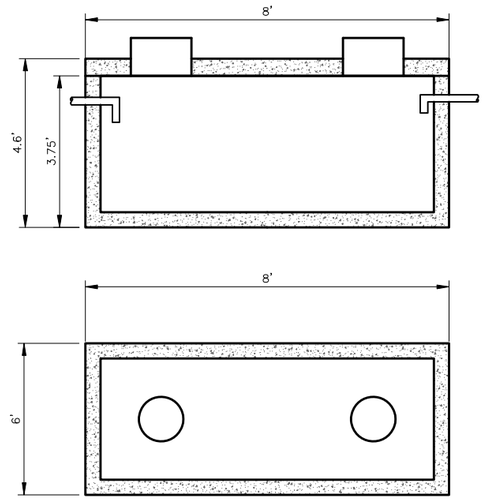
3 C16 CLEANOUT
NOT TO SCALE



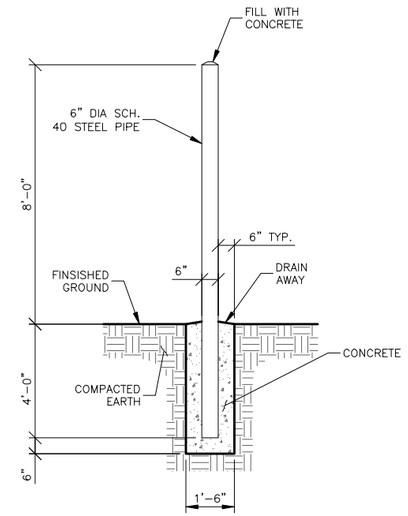
NOTES:

1. SEPTIC DRAINFIELD TO BE INSTALLED PER IDAPA 58.01.03.008 AND SECTION 3 OF THE 2025 TECHNICAL GUIDANCE MANUAL FOR INDIVIDUAL AND SUBSURFACE SEWAGE DISPOSAL SYSTEMS FROM DEQ.

5 C16 SEPTIC DRAINFIELD
NOT TO SCALE



6 C16 750 GALLON SEPTIC TANK
NOT TO SCALE



NOTE: PAINT ALL EXPOSED STEEL WITH 2 COATS OF TRAFFIC YELLOW PAINT.

7 C16 SCALE HOUSE BOLLARD DETAIL
NOT TO SCALE

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

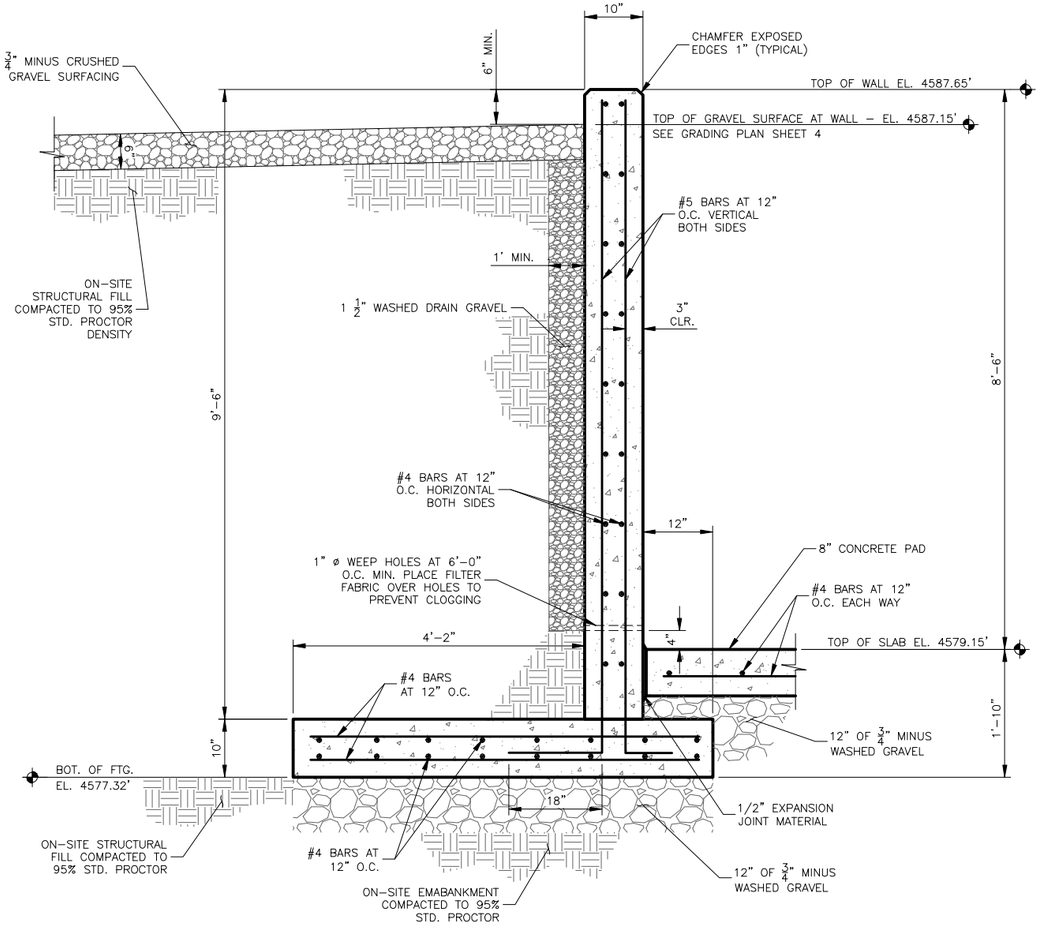
PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO 16198 STEPHANIE M. WILKE 12-31-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
DETAILS

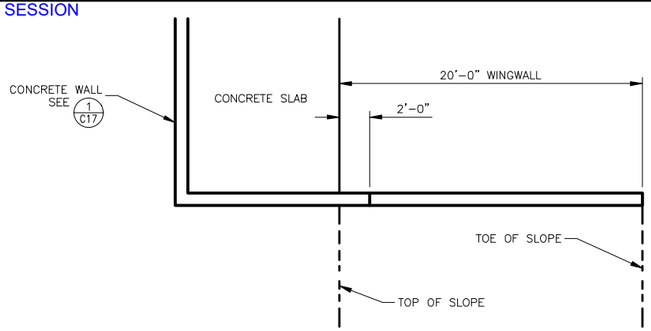
SHEET NO.
C16

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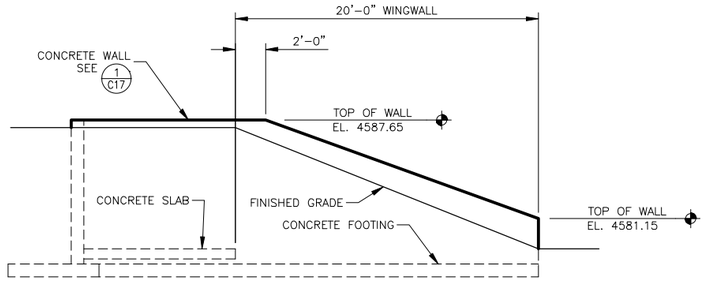


NOTE:
1. USE SAME REBAR VERT. AND HORIZ. SPACING PATTERN FOR WINGWALLS.
2. CONCRETE WALL & FOOTING CONCRETE SHALL HAVE A MINIMUM 28–DAY STRENGTH OF 4,000 PSI PER ISPWC.
3. CONTAINER PAD CONCRETE PAD SHALL HAVE A MINIMUM 28–DAY STRENGTH OF 3,000 PSI PER ISPWC.
4. ALL EXPOSED CONCRETE (WALLS AND SLABS) SHALL BE TREATED WITH SIKAGARD 740W SILANE SEALER OR APPROVED EQUIVALENT PER SPECIAL PROVISION SP–25.

1/C17 CONCRETE WALL SECTION
NOT TO SCALE

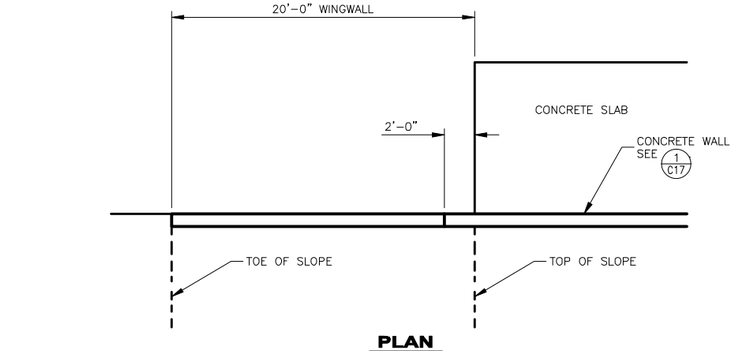


PLAN

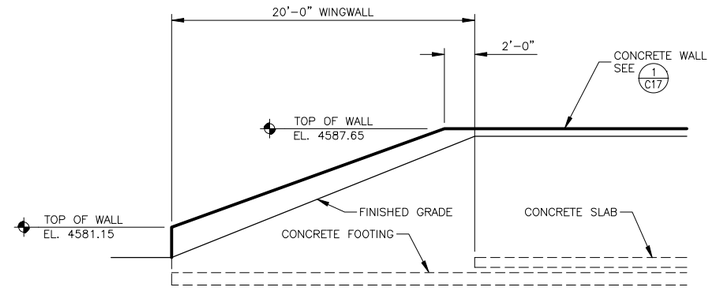


PROFILE

2/C17 EAST CONCRETE WINGWALL
NOT TO SCALE



PLAN



PROFILE

3/C17 WEST CONCRETE WINGWALL
NOT TO SCALE

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

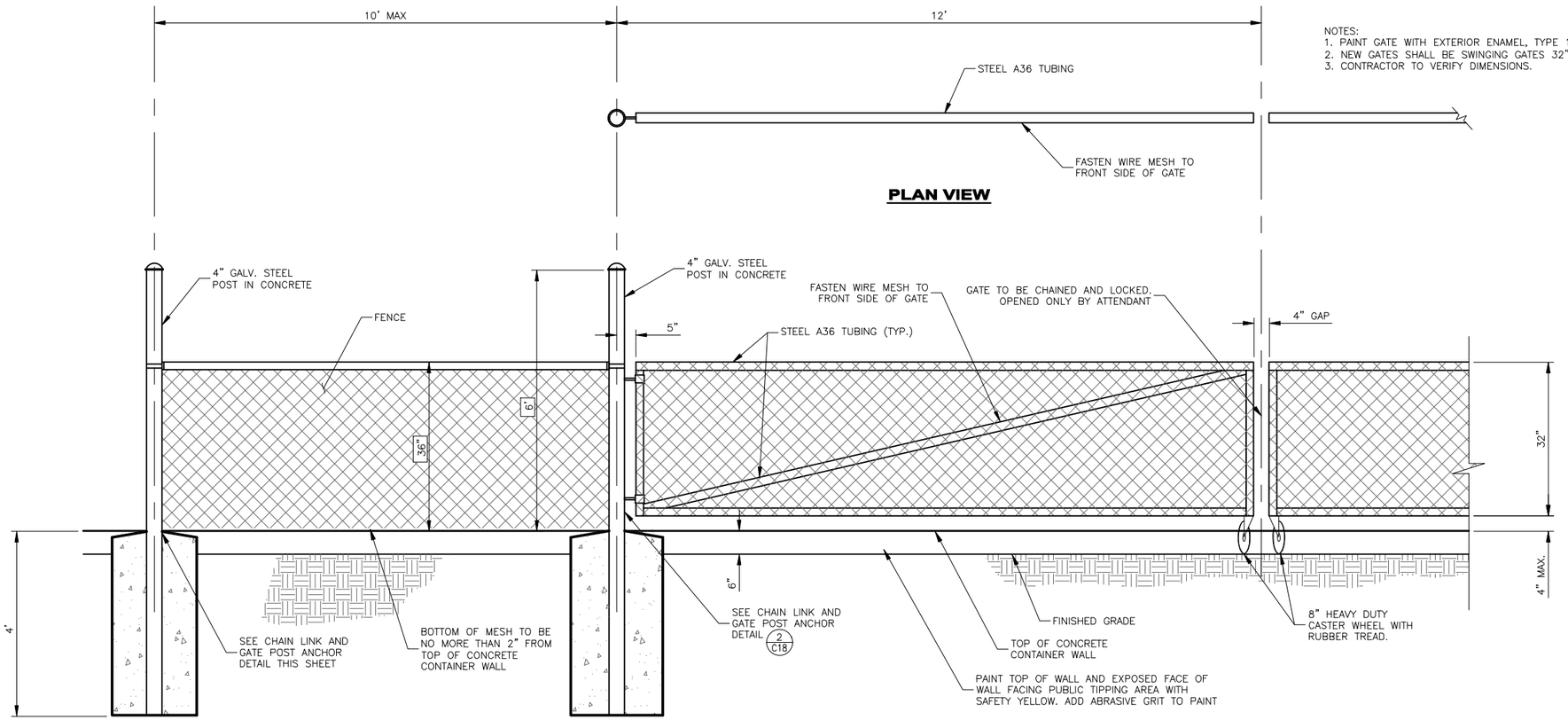
PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 7-31-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
Z-WALL DETAILS

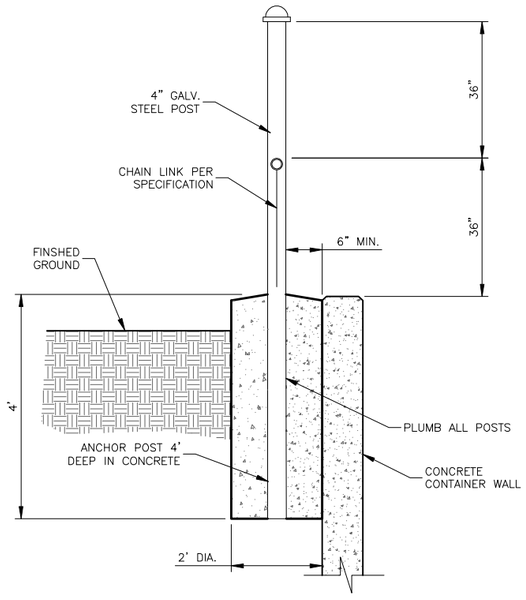
SHEET NO.
C17

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NOTES:
1. PAINT GATE WITH EXTERIOR ENAMEL, TYPE 1, SAFETY YELLOW.
2. NEW GATES SHALL BE SWINGING GATES 32" HIGH WITH GALVANIZED CHAIN LINK FABRIC.
3. CONTRACTOR TO VERIFY DIMENSIONS.

1 C18 TOP OF WALL FENCE AND GATE DETAIL
NOT TO SCALE



2 C18 TOP OF WALL CHAIN LINK AND GATE ANCHOR TYPICAL SECTION
NOT TO SCALE

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

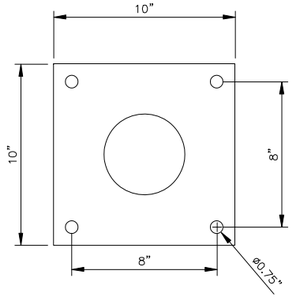
PROFESSIONAL ENGINEER — LICENSED — 16198 — STATE OF IDAHO — STEPHANIE M. WILKE — 11-21-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

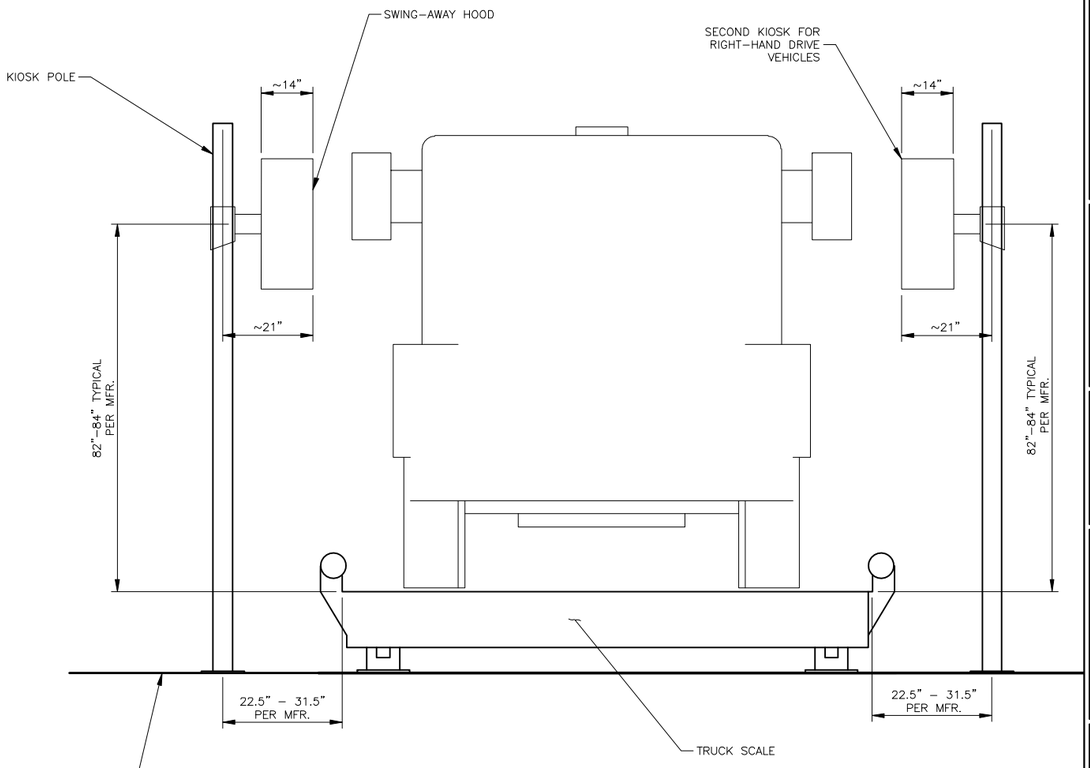
BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
Z-WALL SAFETY FENCE DETAILS

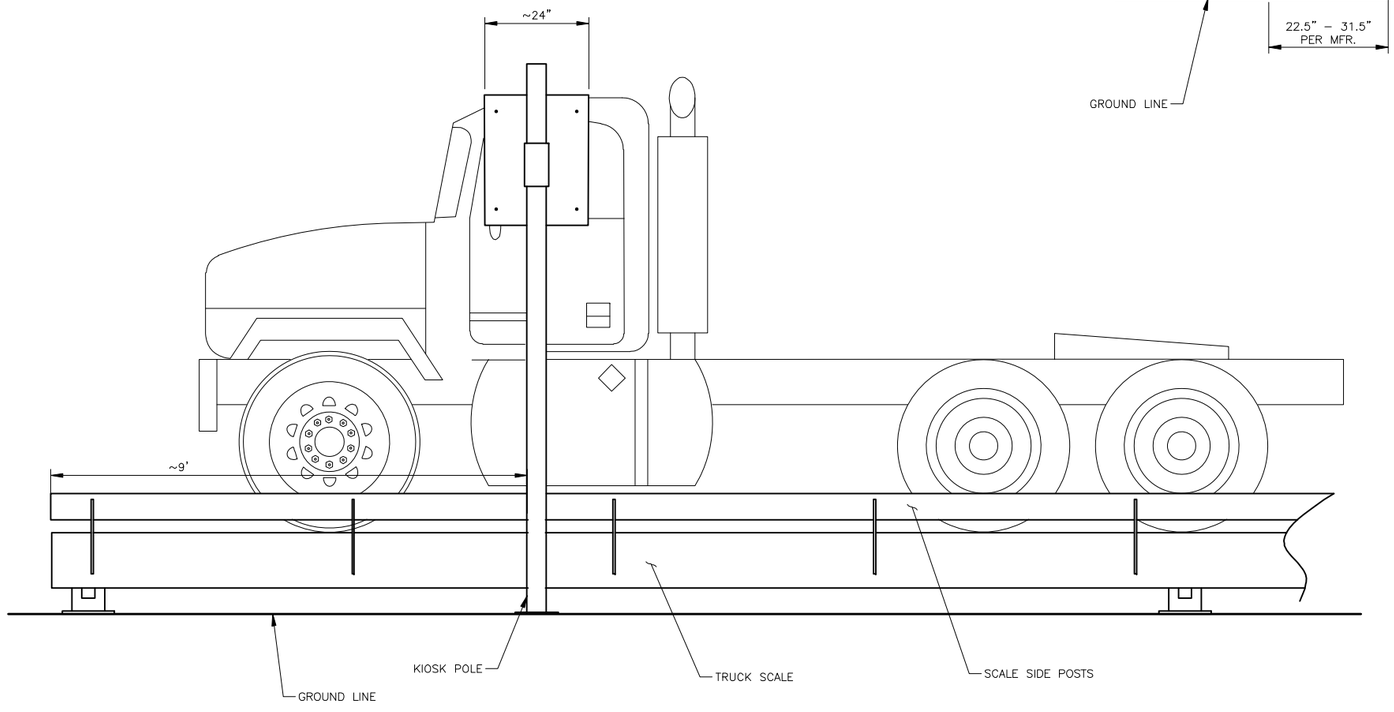
SHEET NO.
C18

Y:\Shared\Helena Projects\1-23205-Bannock County Landfill Scale House\CADD 1-23205\Sheets\1-23205-C18-Safety Details.dwg



1. POST ANCHOR PER MANUFACTURER





NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 12-31-2025

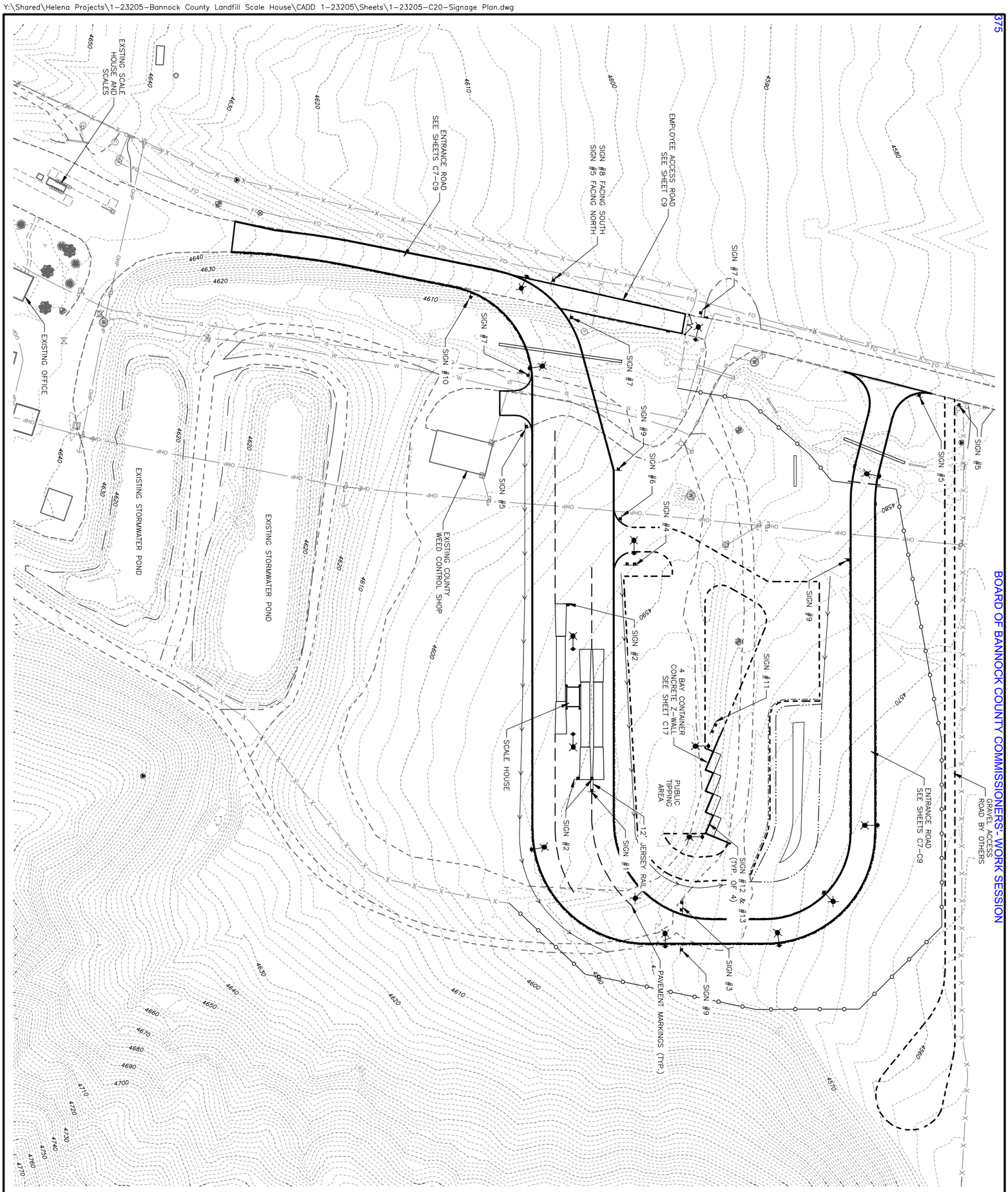
GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406)449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
KIOSK POLE DETAILS

SHEET NO.
C19

Y:\Shared\Helena Projects\1-23205-Bannock County Landfill Scale House\CADD 1-23205\Sheets\1-23205-C19- Kiosk Pole Details.dwg

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BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

SIGNAGE & TRAFFIC PLAN

SHEET NO. C20

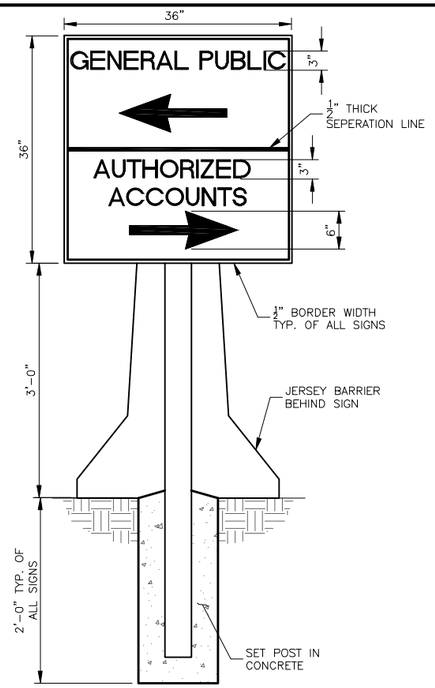
GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406)449-8627

PROFESSIONAL ENGINEER LICENSED 16198 STATE OF IDAHO STEPHANIE M. WILKE 07-31-2025

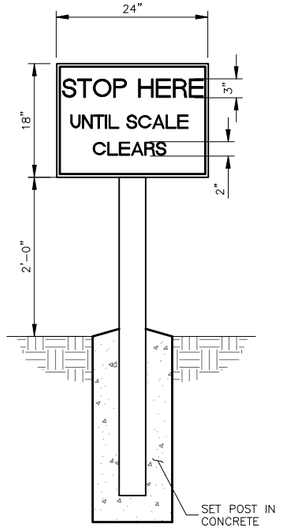
PROJECT:	1-23205
DESIGNED:	BAA
DRAWN:	STR / BAA
CHECKED:	TLC
APPROVED:	SMW
DATE:	JULY 31, 2025

NO.	REVISION DESCRIPTION	BY	DATE

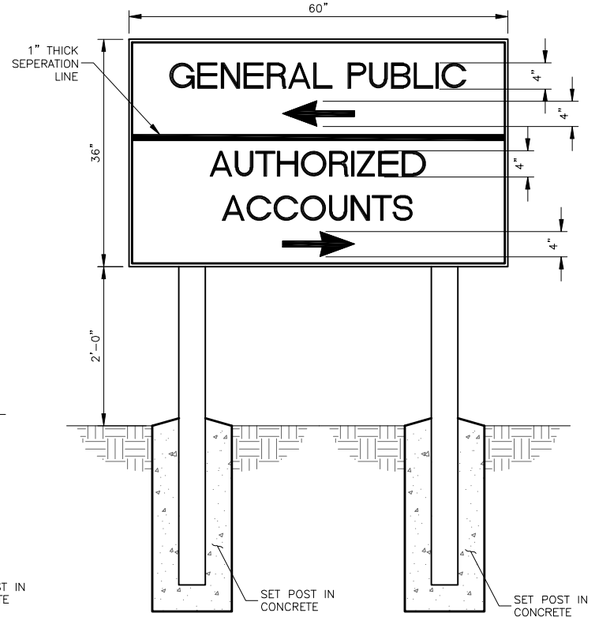
375
BOARD OF BANNOCK COUNTY COMMISSIONERS' WORK SESSION
FEBRUARY 19, 2026



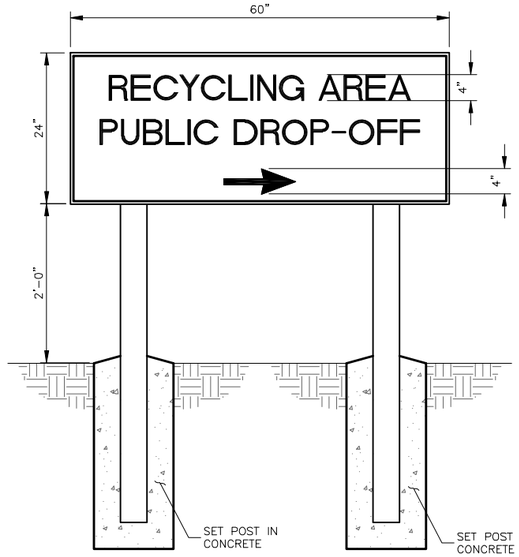
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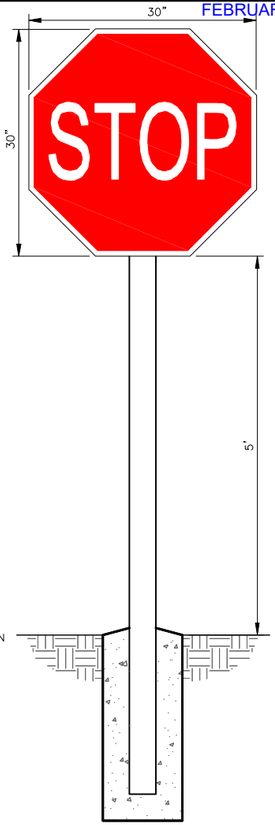
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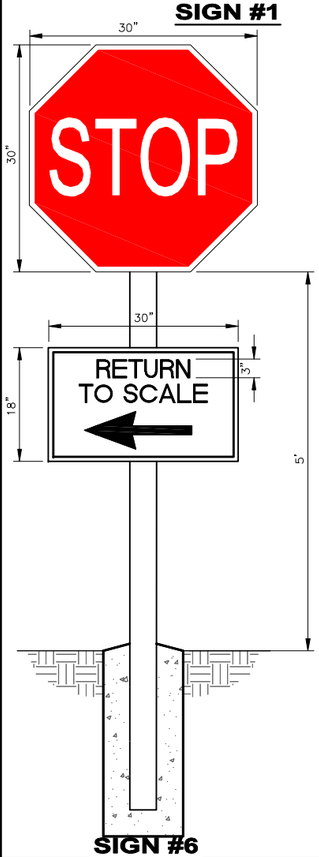
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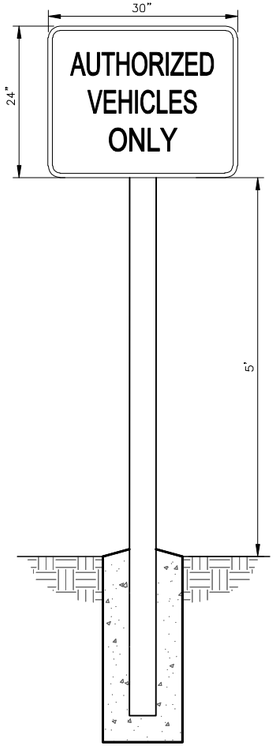
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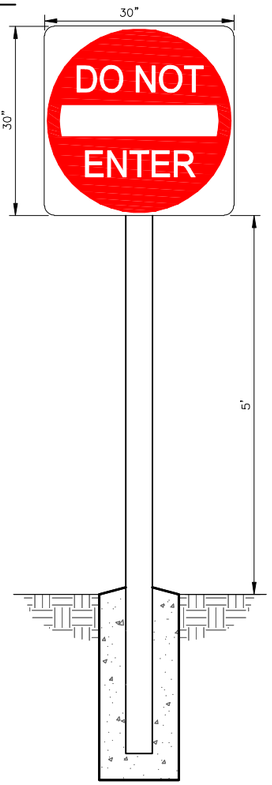
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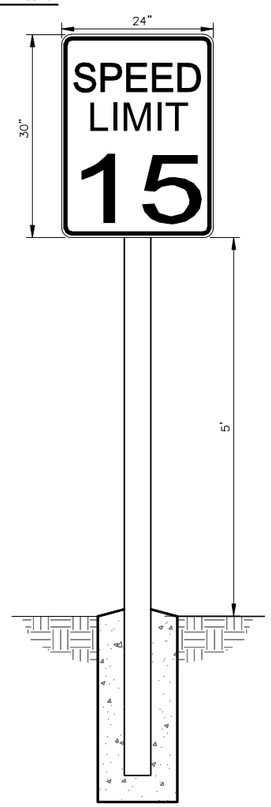
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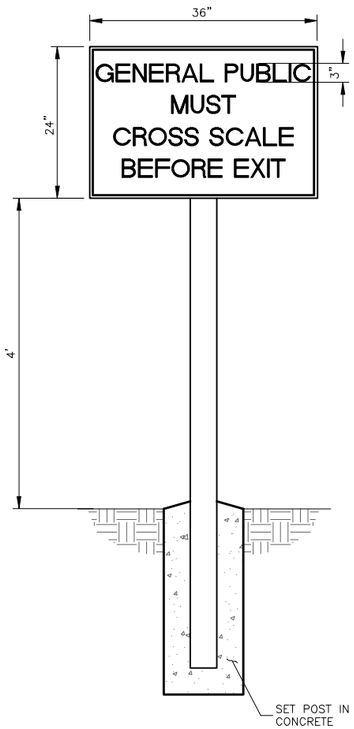
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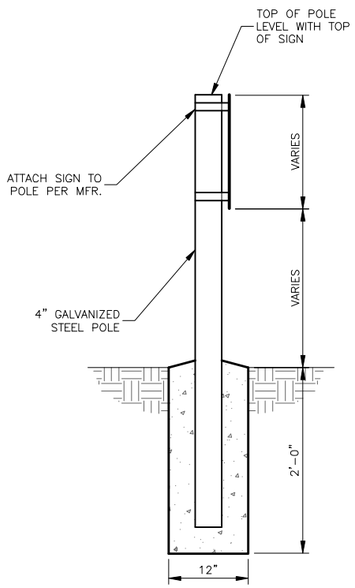
SIGN #8



SIGN #9



SIGN #10



TYPICAL SIGN PROFILE

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

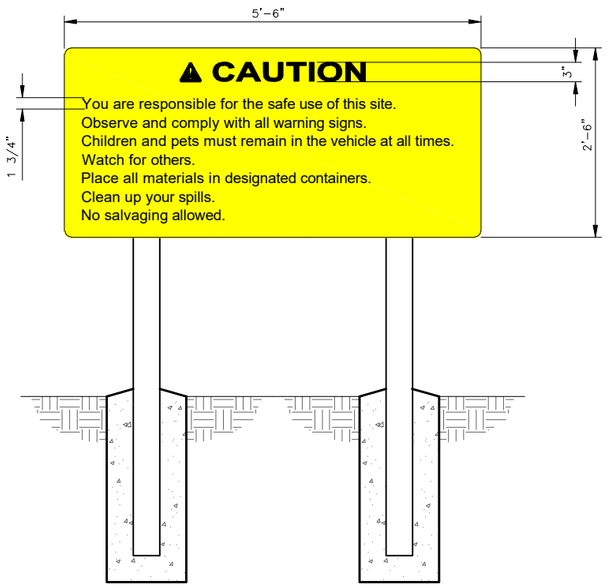
PROFESSIONAL ENGINEER — STATE OF IDAHO — STEPHANIE M. WILKE — 16198 — 7-31-2025

GreatWest ENGINEERING
2601 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

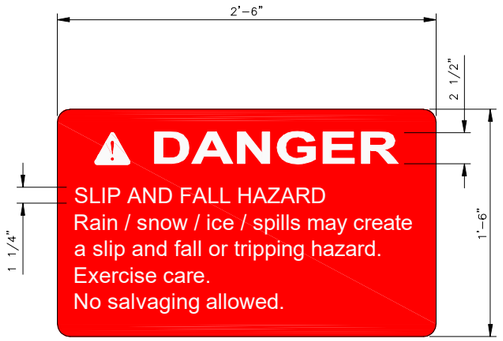
BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
SIGNAGE

SHEET NO.
C21

Y:\Shared\Helena Projects\1-23205-Bannock County Landfill Scale House\CADD 1-23205\Sheets\1-23205-C21-Signage.dwg



SIGN #11
NOT TO SCALE



SIGN #12
NOT TO SCALE



SIGN #13
NOT TO SCALE

SIGN SCHEDULE

SIGN #	TEXT	SIZE SHAPE	COLOR	MOUNTING	QUANITITY
1	"GENERAL PUBLIC" WITH ARROW POINTING LEFT "AUTHORIZED ACCOUNTS" WITH ARROW POINTING RIGHT	36" X 36" SQUARE	WHITE WITH BLACK LETTERS AND BORDER	ATTACH TO POST. SEE NOTE 3. JERSEY RAIL BEHIND SIGN	1
2	"STOP HERE UNTIL SCALE CLEARS"	24" X 18" RECTANGLE	WHITE WITH BLACK LETTERS AND BORDER	ATTACH TO POST. SEE NOTE 3	3
3	"GENERAL PUBLIC" WITH ARROW POINTING LEFT "AUTHORIZED ACCOUNTS" WITH ARROW POINTING RIGHT	60" X 36" RECTANGLE	WHITE WITH BLACK LETTERS AND BORDER	ATTACH TO TWO POSTS. SEE NOTE 3	1
4	"RECYCLING AREA PUBLIC DROP-OFF" WITH ARROW POINTING RIGHT	60" X 24" RECTANGLE	WHITE WITH BLACK LETTERS AND BORDER	ATTACH TO TWO POSTS. SEE NOTE 3	1
5	"STOP"	30" X 30" OCTAGON	RED WITH WHITE LETTERS AND BORDER	ATTACH TO POST. SEE NOTE 3	4
6	"STOP" AND "RETURN TO SCALE" WITH ARROW POINTING LEFT	30" X 30" OCTAGON 30" X 18" RECTANGLE	RED WITH WHITE LETTERS AND BORDER BLACK WITH WHITE LETTERS AND BORDER	ATTACH TO POST. SEE NOTE 3	1
7	"AUTHORIZED VEHICLES ONLY"	30" X 24" RECTANGLE	WHITE WITH BLACK LETTERS AND BORDER	ATTACH TO POST. SEE NOTE 3	3
8	"DO NOT ENTER"	30" X 30" SQUARE	RED WITH WHITE LETTERS AND BORDER	ATTACH TO POST. SEE NOTE 3	1
9	"SPEED LIMIT 15"	24" X 30" RECTANGLE	WHITE WITH BLACK LETTERS AND BORDER	ATTACH TO POST. SEE NOTE 3	3
10	"GENERAL PUBLIC MUST CROSS SCALE BEFORE EXIT"	36" X 24" RECTANGLE	WHITE WITH BLACK LETTERS AND BORDER	ATTACH TO POST. SEE NOTE 3	1
11	"CAUTION"	66" X 30" RECTANGLE	YELLOW WITH BLACK LETTERS	ATTACH TO TWO POSTS. SEE NOTE 3	1
12	"DANGER"	30" X 18" RECTANGLE	RED WITH WHITE LETTERS	ATTACH TO ONE GATE OF EACH BAY	4
13	"WARNING"	30" X 9" RECTANGLE	ORANGE WITH BLACK LETTERS	ATTACH TO ONE GATE OF EACH BAY	4

1. ALL SIGNS, UNLESS OTHERWISE NOTED, SHALL BE CONSTRUCTED WITH 5005–H34 ALUMINUM FLAT SHEET WITH A MILL FINISH. THE GAUGE OF THE ALUMINUM SHALL BE .080 GA. FOR SIGNS LESS THAN 6.25 SQ. FT., .100 GA. FOR SIGNS BETWEEN 6.25 SQ. FT. AND 9.00 SQ. FT. , AND .125 GA. FOR SIGNS LARGER THAN 9.00 SQ. FT.
2. ALL SIGNS SHALL BE COATED WITH REFLECTIVE SHEETING. ALL SIGNS SHALL BE HORIZONTAL AND WITHIN $\frac{1}{2}$" LEVEL.
3. SIGN POSTS SHALL BE 4" DIAMETER GALVANIZED STEEL POSTS.
4. ALL SIGNS SHALL BE MOUNTED UTILIZING BOLTS, WASHERS, NUTS, AND/OR BRACING AS RECOMMENDED BY THE SIGN MANUFACTURER AND APPROVED BY THE ENGINEER.
5. ALL SIGNS SHALL BE FABRICATED BY A REPUTABLE SIGNWORKS MANUFACTURER WITH A MIN. OF 3 YEARS EXPERIENCE IN THE SIGNING INDUSTRY.
6. SIGN MOUNTING HEIGHTS TO BE PER APPLICABLE OSHA STANDARDS.
7. FINAL PLACEMENT OF SIGNS TO BE DETERMINED BY OWNER.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

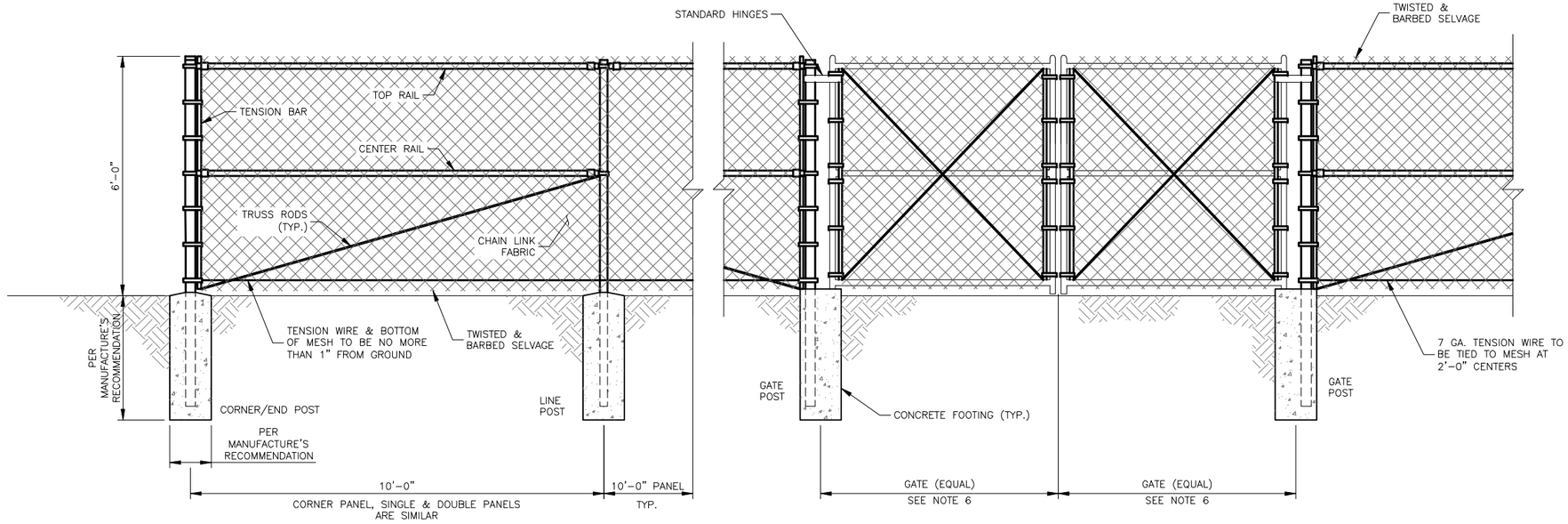
PROFESSIONAL LICENSED ENGINEER 16198 STATE OF IDAHO STEPHANIE M. WILKE 11-21-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
SIGNAGE

SHEET NO.
C22

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FENCE MATERIALS:
1. FABRIC TO BE 9 GAUGE 2" MESH
2. POST SPACING NOT TO EXCEED 10'-0"
3. POSTS, RAILS, BRACING, AND CONCRETE WILL BE SIZED BY FENCE MANUFACTURER BASED ON FENCE HEIGHT

NOTES:
1. PULL POST BRACING SHALL BE SAME AS CORNER BRACING
2. AT LEAST ONE POST WILL BE EXTENDED 3' INTO GROUND FOR LIGHTNING PROTECTION
3. CHAIN LINK MESH TO BE TIED TO TOP & CENTER RAILS AT 2'-0" CENTERS.
4. GATE CHAIN LINK FABRIC SHALL MATCH FENCE CHAIN LINK FABRIC.
5. GATE FRAMES SHALL BE WELDED & BRACES FURNISHED AS REQUIRED.
6. REFER TO PLAN FOR GATE TYPES AND SIZES.

1 / C23 PERIMETER FENCE AND GATE DETAIL

NOT TO SCALE

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: 1-23205
DESIGNED: BAA
DRAWN: STR / BAA
CHECKED: TLC
APPROVED: SMW
DATE: JULY 31, 2025

PROFESSIONAL ENGINEER LICENSED STATE OF IDAHO STEPHANIE M. WILKE 16198 1-31-2025

GreatWest ENGINEERING
2501 BELT VIEW DRIVE
HELENA, MT 59601
(406) 449-8627

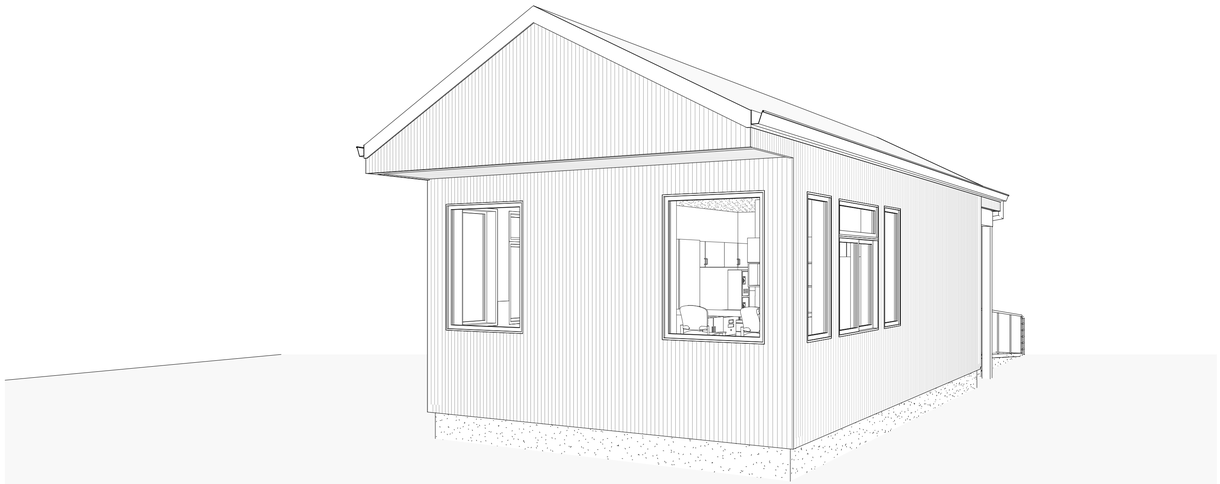
BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
FENCE DETAILS

SHEET NO.
C23

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BANNOCK COUNTY LANDFILL ENTRANCE FACILITY

CONSTRUCTION PLANS



PROJECT DIRECTORY

ARCHITECT:

MOSAIC ARCHITECTURE, P.C.
317 N. Cruse Ave., Suite 201
Helena, MT 59601
Ph. 406-449-2013
CONTACT: MATT AUNE, AIA matta@mosaicarch.com

STRUCTURAL ENGINEERING:

KRIVONEN STRUCTURAL ENGINEERS
1004 DIVISION ST. 3RD FLOOR
BILLINGS, MT 59101
406.579.4500
CONTACT: MARK LACHMUND P.E. mark@krivonen.com

MECHANICAL/ELECTRICAL/PLUMBING/ICT ENGINEERING:

MORRISON MAIERLE INCORPORATED
1055 MOUNT AVE
MISSOULA, MT 59801
PH. 406-542-8880
CONTACT:
MECHANICAL: LUKASH HOFF-PRUSS lhoffpruss@m-m.net
ELECTRICAL: TREVOR LARSON tlarson@m-m.net

CIVIL ENGINEERING:

GREATWEST ENGINEERING
2501 BELT VIEW DR
HELENA, MT 59601
(406) -7547
CONTACT: STEPHANIE WILKE swilke@greatwesteng.com

SHEET INDEX

ARCHITECTURAL DRAWINGS

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A211	ENLARGED PLAN - STAIRS / RAMP
A301	EXTERIOR ELEVATIONS
A401	SECTIONS
A501	DETAILS
A601	DOOR & WINDOW TYPES, DOOR SCHEDULE
A701	FINISH PLAN & SCHEDULE
A800	INTERIOR ELEVATIONS & DETAILS

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S201	SECTIONS & DETAIL VIEWS
S300	STRUCTURAL NOTES
S301	STRUCTURAL NOTES

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M002	MECHANICAL SPECIFICATIONS
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PLUMBING DRAWINGS

P001	PLUMBING LEGEND & NOTES
P002	PLUMBING SPECIFICATIONS AND SCHEDULES
P110	PLUMBING PLAN

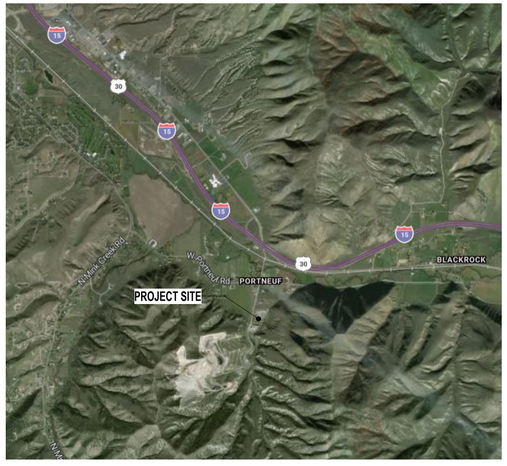
ELECTRICAL DRAWINGS

E000	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E001	ELECTRICAL SPECIFICATIONS
E002	ELECTRICAL SPECIFICATIONS
E003	ELECTRICAL SCHEDULES
E004	ELECTRICAL DETAILS
E101	ELECTRICAL SITE PLAN
E110	ELECTRICAL PLANS

ICT DRAWINGS

T000	ICT SYMBOLS AND ABBREVIATIONS
T001	ICT SPECIFICATIONS
T002	ICT SPECIFICATIONS
T003	ICT SPECIFICATIONS
T004	ICT SPECIFICATIONS
T101	ICT SITE PLAN
T110	ICT PLANS

VICINITY MAP



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NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232.05
DESIGNED: RB
DRAWN: MOSAIC
CHECKED: MDA
APPROVED: SMW
DATE: JUNE 09, 2025

LICENSED ARCHITECT MATT AUNE NO. 14204 STATE OF MONTANA

mosaic architecture-planning-design
317 Cruse Avenue Suite 201
Helena, Montana 59601
406.449.2013
www.mosaicarch.com

BANNOCK COUNTY LANDFILL

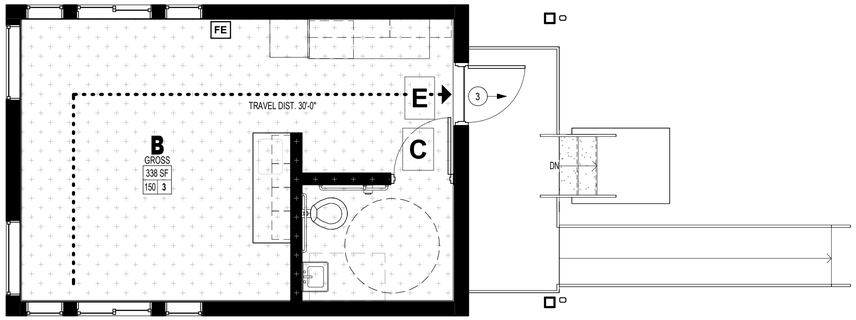
ENTRANCE FACILITY

COVER

SHEET NO.

A000

DATE STAMP 6/18/2025 2:30:21 PM



1 **LEVEL 1 CODE PLAN**
1/4" = 1'-0"

PLAN NORTH

IECC COMPLIANCE FOR COMMERCIAL PROJECTS

CLIMATE ZONE: **6B**

INSULATION REQUIREMENTS - IECC 2021 TABLE C402.1.3/C402.4 AND IDAHO AMENDMENTS

ROOFS	R-30 CONTINUOUS ABOVE DECK, R-49 AT ATTICS
METAL FRAMED WALLS, ABOVE GRADE	R-13 CAVITY + R-7.5 CONTINUOUS
WOOD FRAMED WALLS, ABOVE GRADE	R-20 CAVITY+ R-3.8 CONTINUOUS, OR R-13 +R-7.5 CONTINUOUS
MASS WALLS, ABOVE GRADE:	R-13.3 CONTINUOUS
BELOW GRADE WALLS:	R-7.5 CONTINUOUS
FLOORS - JOIST/FRAMING:	R-30 (R-38 FOR STEEL FLOOR JOISTS)
UN-HEATED SLAB:	R-10 VERTICAL FOR 24" BELOW (FULL HEIGHT OF THICKENED SLAB EDGE)
HEATED SLAB:	R-15 FOR 36" BELOW + R-5 FULL SLAB
OPAQUE SWINGING DOORS:	U-0.37
ROLL UP OR SLIDING DOORS	R-4.75
SKYLIGHT U-FACTOR:	0.50, MAXIMUM
FIXED FENESTRATION U-FACTOR:	0.36, MAXIMUM
OPERABLE FENESTRATION U FACTOR	0.43 MAXIMUM
ENTRANCE DOOR:	0.77, MAXIMUM
SHGC	0.40 WITH ADJUSTMENT FOR PROJECTION FACTOR > 2

INSULATION TO BE PROVIDED - REQUIREMENTS IN OTHER AREAS OF DRAWINGS OR SPECIFICATIONS TAKE PRECEDENCE OVER THE FOLLOWING REQUIREMENTS:

ROOFS	R-50 BLOWN-IN ATTIC INSULATION
WOOD FRAMED WALLS:	R-21 CAVITY + R3.8 CONTINUOUS
UNHEATED SLAB:	R-10 VERTICAL FOR 24" BELOW (FULL HEIGHT OF THICKENED SLAB EDGE)
OPAQUE SWINGING DOORS:	U-0.37
ROLL UP OR SLIDING DOORS	R-4.75
FENESTRATION U-FACTOR (FIXED):	0.36 MAXIMUM
FENESTRATION U-FACTOR (OPERABLE):	0.43, MAXIMUM
ENTRANCE DOOR:	0.77, MAXIMUM
SHGC	0.40 WITH PROJECTION FACTOR < 2

APPLICABLE BUILDING CODES

THIS PROJECT SHALL COMPLY WITH THE LATEST EDITION OF CODES ADOPTED BY THE STATE OF IDAHO:

- 2018 International Building Code (IBC)
- 2018 International Mechanical Code (IMC)
- 2018 International Fuel Gas Code (IFGC)
- 2017 Uniform Plumbing Code (IAMPO)
- 2020 National Electrical Code (NEC)
- 2018 International Fire Code (IFC)
- 2021 International Energy Conservation Code (IECC)

CODE PLAN LEGEND

OCCUPANCY GROUP **B** AREA

IU — INCIDENTAL USE W/ REQUIRED SEPARATION PER TABLE 509.1. SHALL NOT OCCUPY >10% OF FLOOR AREA OF STORY IN WHICH LOCATED, AND IS CALCULATED AS PART OF OCCUPANCY IN WHICH IT IS LOCATED.

AO — ACCESSORY OCCUPANCY AREA: W/ NO SEPARATION REQUIRED AND CALCULATED AS PART OF MAIN OCCUPANCY IF TOTAL ACCESSORY OCCUPANCIES WITHIN A STORY OCCUPY LESS THAN 10% OF AREA OF THAT STORY, PER SECTION 508.2.3.

ROOM NAME
500 SF
100 5

ROOM AREA
OCCUPANT LOAD
MAX. FLOOR AREA PER OCCUPANT FROM TABLE 1004.5

OCCUPANT LOADS FOR FUNCTIONS DESIGNATED **NET FLOOR AREA** IN TABLE 1004.5 ARE IDENTIFIED FOR ACTUAL OCCUPIED AREAS.

OCCUPANT LOADS FOR FUNCTIONS DESIGNATED **GROSS FLOOR AREA** ARE IDENTIFIED FOR ENTIRE AREA OF THE FUNCTION W/ DEDUCTIONS ONLY FOR AREA OF EXTERIOR WALLS, VENT SHAFTS AND INTERIOR COURTS.

2-HOUR FIRE WALL OR FIRE BARRIER: OR COMBINATION OF (WHERE OCCURS) CONFORMING TO THE MOST STRINGENT REQUIREMENTS OF EACH. SEE CODE ANALYSIS PLANS FOR SPECIFIC NAMES OF IBC WALL DESIGNATIONS. ALL WITH FIRE-RESISTIVE OPENING PROTECTION AT DOORS, WINDOWS, DUCTS (WITH EXCEPTIONS), PENETRATIONS, AND PROTECTION AT JOINTS. SEE WALL TYPES, DOOR AND WINDOW SCHEDULES, MECHANICAL DRAWINGS, PENETRATION DETAILS, AND JOINT DETAILS WHERE APPLICABLE.

1-HOUR FIRE WALL, FIRE BARRIER, FIRE PARTITION, OR SMOKE BARRIER WALL: OR COMBINATION OF (WHERE OCCURS) CONFORMING TO THE MOST STRINGENT REQUIREMENTS OF EACH. SEE CODE ANALYSIS PLANS FOR SPECIFIC NAMES OF IBC WALL DESIGNATIONS. ALL WITH FIRE-RESISTIVE OPENING PROTECTION AT DOORS, WINDOWS, DUCTS (WITH EXCEPTIONS), PENETRATIONS, AND PROTECTION AT JOINTS. SEE WALL TYPES, DOOR AND WINDOW SCHEDULES, MECHANICAL DRAWINGS, PENETRATION DETAILS, AND JOINT DETAILS WHERE APPLICABLE.

NONRATED WALL: WITH NO OPENING PROTECTION REQUIRED AT DOORS, WINDOWS, DUCTS, PENETRATIONS, AND JOINTS UON. SEE WALL TYPES.

MOER:2 — MEANS OF EGRESS REQUIRED (QUANTITY). ONLY DESIGNATED WHERE (2) MEANS OF EGRESS ARE REQUIRED, PER §1006.2.1.

EXIT SIGN W/ INTEGRATED DIRECTIONAL ARROW WHERE OCCURS AT ALL EXITS, EVERY 100' IN CORRIDORS, AND IN SPACES WHERE 2 MEANS OF EGRESS ARE REQUIRED PER S §1006. SEE ELECTRICAL DRAWINGS. (W/ POCHE IN QUADRANT INDICATING "EXIT" TEXT SIDE OF SIGN.) SIGNS SHOWN IN CORRIDORS ARE CEILING HUNG. SIGNS SHOWN ON WALL ARE WALL HUNG.

12 — REQUIRED EXIT AND EXIT EGRESS DIRECTION WITH ACCUMULATIVE NUMBER OF OCCUPANTS SERVED. (DESIGNATED WHERE (2) MEANS OF EGRESS ARE REQUIRED PER TABLE §1006.2.1)

Wmin — MINIMUM EGRESS WIDTH (INCHES) BASED ON ACCUMULATIVE NUMBER OF OCCUPANTS SERVED AT INDICATED EGRESS COMPONENT, PER SECTION 1005.3: .3 INCHES/OCC FOR STAIRWAYS(NONSPRINKLERED BUILDINGS); .2 INCHES/OCC FOR OTHER EGRESS COMPONENTS (NONSPRINKLERED BLDGS).

EXIT ACCESS TRAVEL DISTANCE (E.A.T.D.) - MAXIMUM 200' FOR 'B' OCCUPANCY W/OUT SPRINKLER SYSTEM, PER TABLE 1017.2. MAXIMUM DISTANCE FOR EACH STORY SHOWN.

COMMON PATH OF EGRESS TRAVEL (C.P.E.T.) - MAXIMUM 75' FOR 'B' OCCUPANCY W/OUT SPRINKLER SYSTEM, OCC LOAD >30, PER TABLE 1006.2.1.

FE — PORTABLE CLASS ABC FIRE EXTINGUISHER IN ADA-COMPLIANT SEMI-RECESSED CABINET

REQUIRED SPECIAL INSPECTIONS:

IN ADDITION TO REGULAR INSPECTIONS, THE FOLLOWING ITEMS WILL ALSO REQUIRE SPECIAL INSPECTIONS AND TESTING IN ACCORDANCE WITH SECTIONS 1704 AND 1705 OF THE 2018 INTERNATIONAL BUILDING CODE. SEE STRUCTURAL FOR SPECIFIC REQUIREMENTS. **COPIES OF 3RD PARTY REPORTS TO BE SENT TO BUILDING DEPARTMENT & COPIES KEPT ON-SITE FOR INSPECTOR REVIEW.**

a) SPECIAL INSPECTIONS:
- INSPECTION OF FABRICATORS (1704.2.5)
- STEEL CONSTRUCTION (1705.2)
- CONCRETE CONSTRUCTION (1705.3)
- MASONRY CONSTRUCTION (1705.4)
- WOOD CONSTRUCTION (1705.5)
- SOILS (1705.6)
- SPECIAL CASES (1705.1.1)
  - EPOXY SET ANCHORS
  - POWDER-ACTUATED FASTENERS
  - CONCRETE EXPANSION ANCHORS

b) SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE (1705.12):
- STRUCTURAL STEEL (1705.12.1)
- STRUCTURAL WOOD (1705.12.2)
- COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION (1705.12.3)

SUMMARY CODE REVIEW

-SEE CODE ANALYSIS PLANS THIS SHEET-

PROJECT DESCRIPTION: NEW LANDFILL SCALE HOUSE

OCCUPANCY GROUPS: (CHAPTER 3)
- **B** - BUSINESS
- ACCESSORY OCCUPANCIES PER SEC. 508.2 WHERE OCCUR.
- INCIDENTAL USES PER TABLE 509 WHERE OCCUR.

CONSTRUCTION TYPE: (TABLE 601) TYPE VB, NON-SPRINKLERED

ALLOWABLE FLOOR AREA (At): (TABLE 506.2) **-B-** 9,000 SF

ACTUAL FLOOR AREA: 338 SF

ALLOWABLE NO. OF STORIES / HEIGHT: (TABLE 504.4/504.3) **-B-** 2 STORIES / 40 FT

ACTUAL NO. OF STORIES / HEIGHT: [1] STORY - 12'-0" ; OK

INTERIOR FINISH REQUIREMENTS: (TABLE 803.13) INTERIOR EXIT STAIRWAYS, EXIT RAMPS & EXIT PASSAGEWAYS: CLASS A. CORRIDORS & ENCLOSURE FOR EXIT ACCESS STAIRWAYS & EXIT ACCESS RAMPS: CLASS B. ROOMS AND ENCLOSED SPACES: CLASS C

OCCUPANT LOADS FOR EGRESS DESIGN: (SEC. 1004 + TABLE 1004.5) SEE CODE ANALYSIS PLAN. OCCUPANT LOADS BASED ON MAX. FLOOR AREA IN SQ FT PER OCCUPANT FROM TABLE 1004.5:

BUSINESS: **150 GROSS**

OCCUPANT LOAD BY FLOOR: LEVEL 1 **3 -OCCUPANTS**

EGRESS WIDTH PER OCCUPANT SERVED: (SEC. 1005.3)
STAIRWAYS: 0.3 INCHES / OCCUPANT (NONSPRINKLERED)
OTHER EGRESS COMPONENTS: 0.2 INCHES / OCCUPANT (NONSPRINKLERED)

EGRESS WIDTH MINIMUMS BY COMPONENT (USE WHERE EXCEED MINIMUMS BY OCCUPANT LOAD): **44" AT STAIRWAYS** (36" WHERE OCC LOAD < 50) [IBC §1011.2]; **32" CLEAR AT DOORS** [§1010.1.1]. **44" AT CORRIDORS, AISLES & EXIT PASSAGEWAYS (36" for occupant load <50)** [§ 1020.2, 1018.3, 1018.5; 1024.2 RESPECTIVELY], **PROVIDED**.

CORRIDOR FIRE RESISTANCE RATING: (TABLE 1020.2) **B OCCUPANCY, OCC LOAD <30: NOT REQUIRED (NONSPRINKLERED)**; B OCCUPANCY, OCC LOAD >30: 1-HOUR (NONSPRINKLERED)

OPENING PROTECTIVES: (TABLE 716.1(2))
1-HR FIRE PARTITIONS (CORRIDOR WALLS):
FIRE DOOR RATING: 20 MINUTE
DOOR VISION PANEL GLAZING MARKING: D-20
(TABLE 716.1(3)) SIDELIGHT/TRANSOM ASSEMBLY MARKING: DH-OH-20
FIRE WINDOW ASSEMBLY RATING: 45 MINUTE
WINDOW ASSEMBLY MARKING: OH-45 OR W-60

TYPE OF CONSTRUCTION

(CHAPTER 6) CONSTRUCTION TYPE V-B; GROUP **-B-** OCCUPANCY

FIRE-RESISTANCE RATING REQUIREMENTS

	BUILDING ELEMENT	RATING
TABLE 601	STRUCTURAL FRAME	0 HR
TABLE 602	EXTERIOR BEARING WALLS: FIRE SEP <5'	2 HR - N/A
	EXTERIOR BEARING WALLS: FIRE SEP ≥5',<10'	1 HR - N/A
	EXTERIOR BEARING WALLS: FIRE SEP ≥10'	0 HR
TABLE 601	INTERIOR BEARING WALLS	0 HR
TABLE 602	EXTERIOR NONBEARING WALLS: FIRE SEP <5'	2 HR - N/A
	EXTERIOR NONBEARING WALLS: FIRE SEP ≥5',<10'	1 HR - N/A
	EXTERIOR NONBEARING WALLS: FIRE SEP ≥10'	0 HR
TABLE 601	FLOORS	0 HR
TABLE 601	ROOFS	0 HR

MAXIMUM AREA OF EXTERIOR OPENINGS

(CHAPTER 7) MAXIMUM AREA OF EXTERIOR OPENINGS PER TABLE 705.8: NONSPRINKLERED

NORTH WALL - SEPARATION ≥30 FT
UNPROTECTED NO LIMIT
PROTECTED NO LIMIT

EAST WALL - SEPARATION ≥30 FT
UNPROTECTED NO LIMIT
PROTECTED NO LIMIT

SOUTH WALL - SEPARATION ≥30 FT
UNPROTECTED NO LIMIT
PROTECTED NO LIMIT

WEST WALL - SEPARATION ≥30 FT
UNPROTECTED NO LIMIT
PROTECTED NO LIMIT

PLUMBING FIXTURE COUNTS

(PER ADMINISTRATIVE RULES OF IDAHO IDAPA 07.02.06)

OCCUPANT LOAD = 3

	FIXTURE TYPE	FIXTURES REQUIRED	NO. OCC.	TOTAL REQUIRED	FIXTURES PROVIDED
BUSINESS	WC, MALE:	1:50	3	1	1 WC
	WC, FEMALE:	1:15			
	LAVS, MALE:	1 PER 2 WC		1	1
	LAVS, FEMALE:	1 PER 2 WC		1	1
	DF:	0		0	0

*PER ADMINISTRATIVE RULES OF MONTANA 24.301.351FOOTNOTE M, WHERE URINALS ARE PROVIDED, NOT WITHSTANDING THE REQUIRED URINAL IN FOOTNOTE G ABOVE, ONE WATER CLOSET LESS THAN THE NUMBER SPECIFIED MAY BE PROVIDED FOR EACH URINAL INSTALLED, EXCEPT THE NUMBER OF WATER CLOSETS IN SUCH CASES SHALL NOT BE REDUCED TO LESS THAN ONE-HALF OF THE MINIMUM SPECIFIED.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: Designer
DRAWN: Author
CHECKED: Checker
APPROVED: Approver
DATE: JUNE 09, 2025

LICENSED ARCHITECT MATT AUNE NO. 14204 STATE OF MONTANA

mosaic architecture-planning-design
317 Cruse Avenue Suite 201
Helena, Montana 59601
406.449.2013
www.mosaicarch.com

BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

CODE INFORMATION

SHEET NO.

A001

DATE STAMP: 2/19/2025 8:49:03 AM

ABBREVIATIONS:

@	at
A.B.	anchor bolt
A/C	air conditioning
ACC PNL	access panel
ACOUST	acoustical
ACT	acoustical ceiling tile
AD	area drain
ADJ	adjacent
AFF	above finished floor
AIB	air infiltration barrier
ALT	alternate
ALUM	aluminum
ANOD	anodized
APPROX	approximate
ARCH	architect
AUTO	automatic
BBD	bulletin board
BD	board
BITUM	bituminuous
BL	building line
BLDG	building
BLK	block
BLKG	blocking
BM	beam/bench mark
BO	by owner
B.O.	bottom of
BOT	bottom
BRG	bearing
BSBD	baseboard
BTWN	between
B.O.W.	bottom of wall
BU	built up
CAB	cabinet
CAP	capacity
CB	catch basin
CL	centerline
C.C.	center to center
CDX	exterior grade plywood
CG	corner guard
CH	channel
CI	cast iron/cubic inches
CJ	control joint
CLG	ceiling
C.L.L.	contract limit line
CL	center line
CLR	clear
CMU	concrete masonry unit
CO	clean out
COL	column
CONC	concrete
COND	condition
CONF	conference
CONN	connection
CONST	construction
CTRD	centered
CONT	continuous
CONTR	contractor
CORR	corridor
CPT	carpet
CT	ceramic tile
CUH	cabinet unit heater
CW	curtain wall system
CY	cubic yard
DBL	double
DEPT	department
DF	drinking fountain
DIA	diameter
DIAG	diagonal
DIM	dimension
DISP	dispenser
DN	down
DR	door
DWR	drawer
DS	downspout
DTL	detail
DWG	drawing
E	east
EA	each
EIFS	exterior insulation finish system
E.J.	expansion joint
EL/ELEV	elevation - height/elevator
ELEC	electrical
ENCL	enclosure
EO	electrical outlet
EP	electrical panel
EQ	equal
EQUIP	equipment
EWA/EW	exterior wall assembly
EWC	electrical water cooler
EWH	electrical water heater
(E)/EXIST	existing
EXH	exhaust
EXP	expansion
EXT	exterior
FA	fire alarm/floor-ceiling assembly
FAH	fire alarm horn
FAS	fire alarm station
FD	floor drain
FDN/FND	foundation
FE	fire extinguisher
FEC	fire extinguisher cabinet
FF	finished floor
FFHB	frost free hose bib
FG	finish grade
FH	fire hydrant
FIN. FLR	top of floor sheathing
FIN	finish
FIXT	fixture
F.O.	face of
FLR/FL	floor
FLUOR	fluorescent
FND	feminine napkin dispenser/disposal
FOC	face of concrete
FOF	face of finish
FOS	face of stud
FOW	face of wall
FT	foot or feet
FTG	footing
GA	gauge
GB	grab bar
GALV	galvanized
G.C.	general contractor
GEN	general
GFRG	glass fiber reinforced gypsum
GI	galvanized iron
GL	glass
GLU LAM	or G.L.B. glue laminated beam
GRD	grade/grid
GWB	gypsum wall board
GYP	gypsum
HB	hose bib
HC	hollow core/handicapped
HD BD	Hard board
HDR	header
HOR	horizontal
HR	hour
HT	height
HTG	heating
HVAC	heating, ventilation, air conditioning
HW	hot water
IN	inch
INCL	included
INFO	information
INSUL	insulation
INT	interior
IWA/IW	interior wall assembly
JAN	janitor
JST	joist
JT	joint
LAV	lavatory
LF	lineal foot
LTG	lighting
M	men's
MAT	material
MAX	maximum
MECH	mechanical
MDF	medium density fiber board
MEMB	membrane
MEZZ	mezzanine
MFR	manufacturer
MH	manhole
MIN	minimum
MIR	mirror
MISC	miscellaneous
MO	masonry opening
MTL	metal
MULL	mullion
N	north
NA	not applicable
NIC	not in contract
NO	number
NTS	not to scale
OFCI	owner furnished/contractor installed
OC	on center
OD	outside diameter
OH	overhead/opposite hand
OPNG	opening
OPP	opposite
PART BD	particle board
PART'N	partition
PC	precast concrete
PFM	prefinished metal
PL	plate
P.LAM	plastic laminate
PLWD	plywood
PNL	panel
PR	pair
PSL	parallel strand lumber
PT	point
PTD	paper towel dispenser
PTD/R	paper towel dispenser/receptacle
PVMT	pavement
PVC	polyvinylchloride
QTY	quantity
R/RAD	radius
R	riser
RA	roof/ceiling assembly
RB	rubber base
RD	roof drain
RE	regarding
REF	reference/refrigerator
REINF	reinforcing
REQD	required
RES	resilient
RM	room
RO	rough opening
RV	roof vent
R&S	rod and shelf
S	south
SACT	suspended acoustical ceiling tile
SC	solid core
SCD	see civil drawings
SCHED	schedule
SD	soap dispenser
SECT	section
SED	see electrical drawings
SF	square feet
SGL	single
SHT	sheet
SHTG	sheathing
SHWR	shower
SIM.	similar
S.I.P.	structural insulated panel
SLNT.	sealant
SMD	see mechanical drawings
SOG	slab on grade
SPD	see plumbing drawings
SPEC	specifications
S.S.	stainless steel
SS	service sink
SSD	see structural drawings
SSM	solid surface material
STD	standard
STF	storefront
STL	steel
STOR	storage
STRUCT	structural
SUBFLR	subfloor
SUSP	suspended
SV	sheet vinyl
SY	square yard
T	tread/thermostat
TB	towel bar
TEL	telephone
TEMP	temperature
T&G	tongue and groove
THK	thick
THRU	through
TJI	Truss Joist Incorporated
T.O.	top of
T.O.B.	top of beam
T.O.C.	top of concrete
T.O.P.	top of plate
T.O. FTG	top of footing
T.O.S.	top of steel
T.O.SL.	top of slab
T.O.W.	top of wall
TPD	toilet paper dispenser
TR	tread
TS	tubular steel
TV	television
TYP	typical
UG	underground
UNO	unless noted otherwise
UR	urinal
VAC	vacuum outlet
VAR	varies
VB	vapor barrier
VCT	vinyl composition tile
VERT	vertical
VEST	vestibule
VFY	verify
VT	vinyl tile
VWC	vinyl wall covering
W	west/women/width
W/	with
W/O	without
WC	water closet
WD	wood
W/D	washer/dryer
WH	water heater
WNDW	window
WP	waterproof
WR	water resistant
WRB	weather resistive barrier
WT	weight
WWF	welded wire fabric
WWM	welded wire mesh
X	by
YD	yard

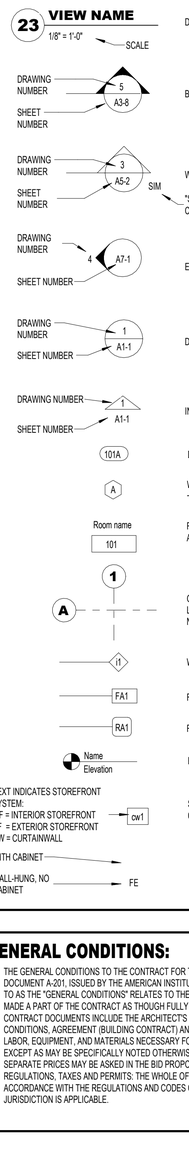
WALL TYPE TAG



WALL STUD & FINISH HEIGHT

c	GWB TO 6" ABOVE CEILING; FRAME OR BRACE TO STRUCTURE
e	EXTERIOR - SEE SECTIONS
f	FURRING
p	PARTIAL HEIGHT
s	TO STRUCTURE
x	SHAFT - CONTINUOUS THROUGH FLOOR ASSEMBLIES

REFERENCE SYMBOLS:



GENERAL CONDITIONS:

1. THE GENERAL CONDITIONS TO THE CONTRACT FOR THE CONSTRUCTION OF BUILDINGS: DOCUMENT A-201, ISSUED BY THE AMERICAN INSTITUTE OF ARCHITECTS HEREINAFTER REFERRED TO AS THE "GENERAL CONDITIONS" RELATES TO THE WORK OF THIS PROJECT AND IS HEREBY MADE A PART OF THE CONTRACT AS THOUGH FULLY CONTAINED IN THESE SPECIFICATIONS.
2. CONTRACT DOCUMENTS INCLUDE THE ARCHITECT'S DRAWINGS, SPECIFICATIONS, GENERAL CONDITIONS, AGREEMENT (BUILDING CONTRACT) AND ALL ADDENDA. THEY ARE TO INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY FOR THE PROPER EXECUTION OF THE WORK EXCEPT AS MAY BE SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS OR FOR WHICH SEPARATE PRICES MAY BE ASKED IN THE BID PROPOSAL.
3. REGULATIONS, TAXES AND PERMITS: THE WHOLE OF THE WORK IS TO BE EXECUTED IN STRICT ACCORDANCE WITH THE REGULATIONS AND CODES OF THE GOVERNMENTAL AGENCIES WHOSE JURISDICTION IS APPLICABLE.

GENERAL NOTES:

1. GENERAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS & CONDITIONS. EXISTING DIMENSIONS SHOWN ARE APPROXIMATE AND MUST BE FIELD VERIFIED.
2. REFER TO SPECIFICATIONS FOR DETAILED DESCRIPTIONS & REQUIREMENTS OF CONSTRUCTION.
3. GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES, PROVIDE ON-SITE SUPERVISION & BE RESPONSIBLE FOR COMPLIANCE WITH ALL SAFETY PRECAUTIONS, CODES AND REGULATIONS.
4. PROTECT EXISTING UTILITIES, SITE IMPROVEMENTS & PLANTING TO REMAIN.
5. PATCH ANY SURFACES DAMAGED DURING CONSTRUCTION. SURFACES ARE TO BE PATCHED FLUSH WITH EXISTING. MATCH EXISTING ADJACENT FINISH OR APPLY NEW FINISH AS SCHEDULED.
6. PROVIDE SOLID BACKING FOR ALL WALL-MOUNTED ITEMS.
7. IN GENERAL, REPETITIVE DETAILS DRAWN ARE SHOWN IN FULL ONLY ONCE. REPETITIONS MAY NOT BE COMPLETE IN EVERY DETAIL AS SHOWN IN THE ORIGINAL DETAIL.
8. DIMENSIONS ARE SHOWN ON THE DRAWINGS. DO NOT SCALE THE DRAWINGS.
9. ALL HEIGHTS ARE DIMENSIONED FROM THE TOP OF SUBFLOOR UNLESS NOTED OTHERWISE.
10. WHERE COLUMNS & STUD WALLS ALIGN, GYPSUM BOARD TO BE CONTINUOUS OVER COLUMNS OR BOXED AROUND COLUMN IF COLUMN PROJECTS BEYOND WALL.
11. BRING TO THE ATTENTION OF THE ARCHITECT ANY CONDITION OR AREA OF FINISH THAT IS IN QUESTION OR NOT NOTED.
12. SEAL ALL PENETRATIONS OF WALLS, FLOORS AND CEILINGS WITH A FIRE RATING EQUIVALENT TO THE CONSTRUCTION PENETRATED AND PER DETAILS & SPECIFICATIONS.
13. DUST BARRIERS MUST BE INSTALLED WHEREVER NEW WORK IS ADJACENT TO OCCUPIED AREAS. BARRIERS MUST BE SEALED TO INSURE NO DUST TRANSMISSION TO OCCUPIED SPACES.
14. COORDINATE LAYOUT, CLEARANCES, PENETRATIONS, BACKING & FASTENERS WITH WORK TO FOLLOW.
15. HEATING, PLUMBING AND ELECTRICAL PLANS WHERE SHOWN DIAGRAMMATICALLY ARE INTENDED TO INDICATE CAPACITY, SIZE, LOCATION & GENERAL ARRANGEMENTS. ALL NECESSARY FEATURES OF RELATED CONSTRUCTION WILL BE REQUIRED AS IF SHOWN IN DETAIL.
16. WHERE MECHANICAL & ELECTRICAL EQUIPMENT LOCATIONS CONFLICT ELECTRICAL, LIGHT FIXTURE LOCATIONS SHALL TAKE PRECEDENCE.
17. PROVIDE SUFFICIENT STUD DEPTH TO CONCEAL MECHANICAL & ELECTRICAL WORK IN WALLS.
18. PROVIDE ALL NEW MATERIALS (U.N.O.) AND QUALIFIED CRAFT PERSONS TO COMPLETE THE WORK.
19. CONSTRUCTION DOCUMENTS SHOW THE DESIGN INTENT OF THE PROJECT AND MAY NOT SHOW MINOR DETAILS OF PROPOSED INSTALLATIONS. THE INCLUSION OF THESE MINOR DETAILS IS IMPLIED TO PROVIDE A COMPLETE PROJECT AND ARE TO BE INCLUDED AS A PART OF A BID.
20. REFER TO MECHANICAL & ELECTRICAL DRAWINGS FOR COORDINATION OF WORK.
21. IN THE CASE OF CONTRADICTIONS BETWEEN DRAWINGS OR BETWEEN DRAWINGS & SPECIFICATIONS, ASSUME THE MORE COSTLY APPROACH FOR BIDDING PURPOSES. BRING ALL CONTRADICTIONS TO THE ATTENTION OF THE ARCHITECT.
22. CONTRACTOR SHALL PROMPTLY REMOVE ALL WASTE MATERIALS AND LEAVE PREMISES AND SITE CLEAN.
23. THE CONTRACTOR SHALL PROVIDE ALL CEILING AND/OR WALL ACCESS PANELS/DOORS AS REQUIRED BY THE AIR CONDITIONING, PLUMBING & ELECTRICAL SYSTEMS. PROVIDE APPROVED ASSEMBLIES W/ SELF-CLOSING DEVICES IN RATED CONSTRUCTION. (PAINT TO MATCH ADJACENT WALL COLOR)
24. ELECTRICAL OUTLETS AND LIGHTING ARE ONLY SHOWN ON ARCHITECTURAL "A" SHEETS WHERE PLACEMENT OF SUCH IS CRITICAL TO PARTICULAR AESTHETICS. SEE ELECTRICAL DRAWINGS FOR ALL ELECTRICAL AND DATA FEATURES.

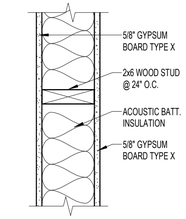
DRAWING SET NOTE: THESE DRAWINGS ARE TO BE UTILIZED AS A COMPLETE SET FOR BIDDING & CONSTRUCTION. INDIVIDUAL SECTIONS OF DRAWINGS SHOULD NOT BE SEPARATED FROM THE ENTIRE SET. IMPORTANT NOTES FOR ONE AREA OF WORK MAY BE INCLUDED IN OTHER AREAS IN THE DRAWINGS. ALL CONTRACTORS & SUPPLIERS MUST REVIEW ENTIRE DRAWING SET & SPECIFICATIONS.

GENERAL WALL NOTES

1. WALL TYPE CONSTRUCTION IS CONTINUOUS FROM SLAB TO ROOF FRAMING ABOVE UNLESS INDICATED OTHERWISE.
2. IF A WALL TYPE IS NOT INDICATED, PROVIDE WALL TYPE OF MOST SIMILAR CONDITION - VERIFY WITH ARCHITECT.
3. IN CASES OF CONFLICT BETWEEN SECTIONS AND WALL TYPES, CLARIFY WITH ARCHITECT PRIOR TO BIDDING WHEN TIME ALLOWS, OTHERWISE ASSUME THE MOST EXPENSIVE CONDITION FOR BIDDING PURPOSES.
4. STRUCTURAL NOTES, SPECIFICATIONS, STUD GAUGE NOTATIONS ETC. TAKE PRECEDENCE OVER ARCHITECTURAL WALL TYPES.
5. FOR LIGHT GAUGE (NON-STRUCTURAL) METAL FRAMING, PROVIDE MIN. 22 GAUGE STUDS UNLESS THE CONTRACTOR CAN PROVIDE MANUFACTURER'S DATA SUPPORTING LIGHTER GAUGE STUDS BASED ON HEIGHT AND FINISH MATERIALS.
6. ALL VOIDS IN EXTERIOR WALLS - INCLUDING IN NON-VISIBLE LOCATIONS - TO BE FILLED TIGHT WITH INSULATION. SMALL CRACKS & VOIDS TO BE CAULKED OR SPRAY-FOAMED FOR TIGHT SEAL.
7. ALL EXTERIOR WALLS TO RECEIVE VAPOR BARRIER UNDER INTERIOR FINISH. ALL SEAMS OF VAPOR BARRIER MUST BE TAPED/SEALED TIGHT AND ALL JOINTS MUST BE TAPED/ SEALED TIGHT WITH MATERIALS AND METHODS APPROVED BY VAPOR BARRIER MFR.
8. TYPE "X" GYPSUM WALL BOARD SPECIFIED THROUGHOUT. PROVIDE WATER-RESISTANT TYPE "X" GYPSUM BOARD ON ENTIRE WALL WHERE PLUMBING FIXTURES OCCUR. PROVIDE TILE BACKER BOARD TYPE "X" ON ALL WALLS WITH TILE.
9. WALLS INDICATED WITH ACOUSTICAL INSULATION TO MEET AN STC RATING OF 48 OR MORE, UNLESS OTHERWISE INDICATED.
10. PROVIDE SOUND ATTENUATION INSULATION ON TOP OF ACT WHERE WALLS TERMINATE AT CEILING OR 6" ABOVE CEILING. EXTEND 5 FEET TO BOTH SIDES OF WALL. HOLD INSULATION 7" AWAY FROM LIGHT FIXTURES.
11. PROVIDE BACKER ROD & CAULKING JOINT AT ABUTMENT OF ALL DISSIMILAR MATERIALS.
12. PROVIDE STEEL "J" EDGE METAL AND 1/4" CAULK JOINT AT PERIMETER OF ALL GYPSUM BOARD WALLS WHERE ABUTTING DIFFERENT MATERIALS.
13. PROVIDE CORNER BEADS AT ALL EXTERNAL GYPSUM BOARD CORNERS.
14. PENETRATIONS OF FIRE-RESISTIVE WALLS, HORIZONTAL ASSEMBLIES SHALL BE PROTECTED AS REQUIRED IN IBC SECTION 714.
15. PROVIDE FIRE, SMOKE AND CEILING RADIATION DAMPERS AT DUCT PENETRATIONS AND AIR TRANSFER OPENINGS IN FIRE RATED ASSEMBLIES PER IBC SECTION 717.

INTERIOR WALL TYPES

NOTE: SEE ELEVATIONS AND FINISH SCHEDULES FOR WALL FINISHES, TYPICAL ALL WALL TYPES

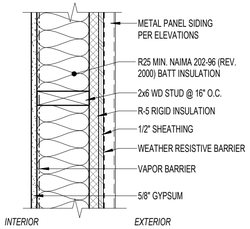


i3 INTERIOR PARTITION

NON-RATED

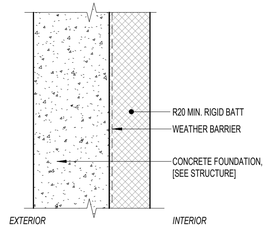
EXTERIOR WALL TYPES

NOTE: SEE STRUCTURAL FOR ADDITIONAL INFORMATION FOR ALL WALL TYPES



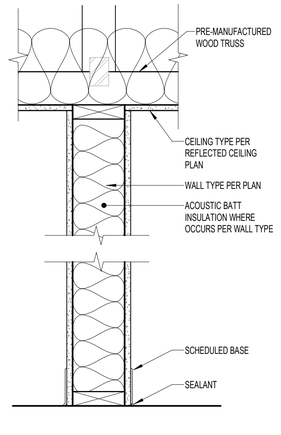
e1 EXTERIOR WALL - NON RATED

FOUNDATION TYPES

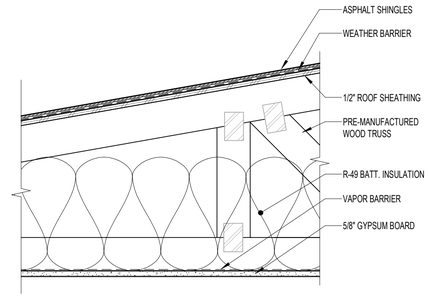


f1 FOUNDATION WALL

PARTITION WALL BRACING

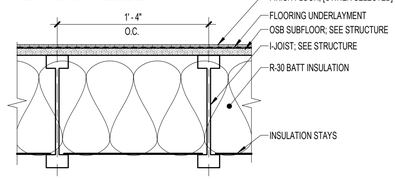


ROOF/CEILING ASSEMBLIES

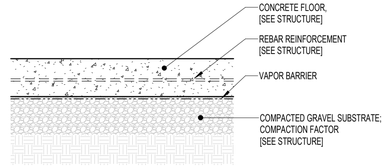


RA1 ROOF ASSEMBLY

FLOOR ASSEMBLY



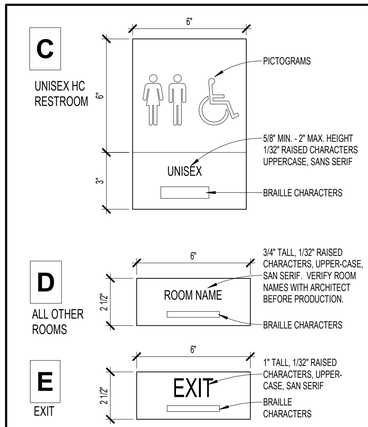
FA1 FLOOR ASSEMBLY 1



FA2 FLOOR ASSEMBLY 2

ROOM SIGNAGE

PROVIDE SIGN AT EACH ROOM ENTRY DOOR AS NOTED AND EACH EXIT AS FOLLOWS:



SIGNAGE NOTES:

1. SEE SPECIFICATIONS FOR SPECIFIC SIGNAGE DETAILS, DIMENSIONS, FONT, COLORS, MATERIALS, ETC.
2. ALL SIGNAGE INDICATED BELOW SHALL COMPLY WITH ICC A117.1.
3. ROOM SIGN PANEL TO BE POSTED ADJACENT TO THE LATCH SIDE OF THE DOOR, 60 INCHES ABOVE THE FINISH FLOOR TO THE CENTERLINE OF THE SIGN. 18" X 18" CLEAR FLOOR SPACE CENTERED ON TACTILE CHARACTERS SHALL BE PROVIDED.

NO.	REVISION DESCRIPTION	BY	DATE

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DRAWN: Author
CHECKED: Checker
APPROVED: Approver
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LICENSED ARCHITECT MATT AUNE NO. 14204 STATE OF MONTANA

mosaic architecture-planning-design
317 Cruse Avenue Suite 201
Helena, Montana 59601
406.449.2013
www.mosaicarch.com

BANNOCK COUNTY LANDFILL

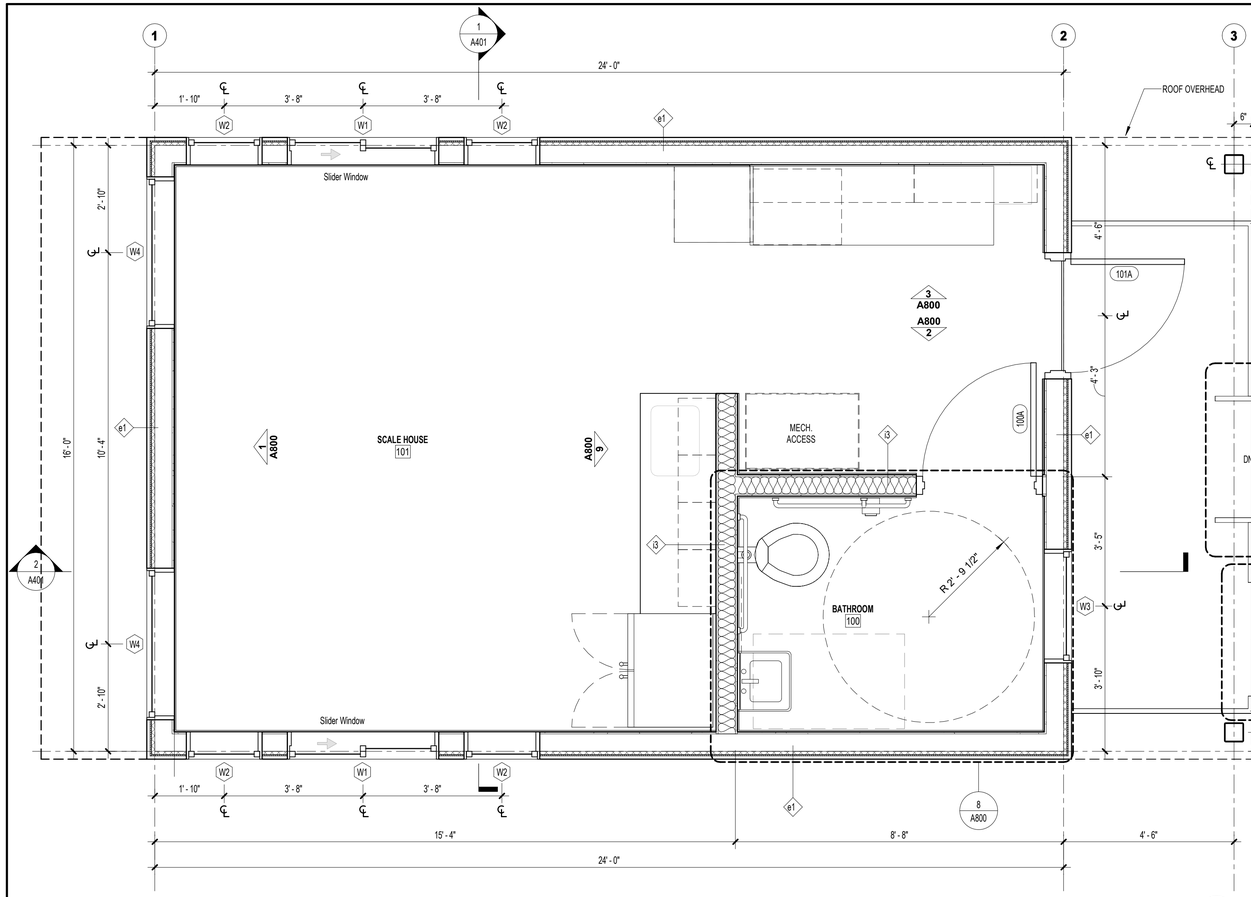
ENTRANCE FACILITY

GENERAL INFORMATION & ASSEMBLY TYPES

SHEET NO.

A002

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1 FLOOR PLAN -
1/2" = 1'-0"

PLAN NORTH

GENERAL ROOFING NOTES

1. INSTALL SELF-ADHERING ICE BARRIER MATERIAL ON ALL EAVES AND OVERHANGS FROM THE LOWEST EDGE OF ALL ROOF SURFACES TO A POINT AT LEAST 36" INSIDE THE EXTERIOR WALL LINE OF THE BUILDING.
2. INSTALL SELF-ADHERING ICE BARRIER MATERIAL AT ALL VALLEYS & CHANGES IN ROOF SLOPE, 24" MIN. EACH SIDE OF TRANSITION.
3. PROVIDE TAPERED INSULATION CRICKET ON UPHILL SIDE OF ALL ROOF CURBS/PENETRATIONS GREATER THAN 1'-0" WIDE.
4. GANG PLUMBING VENTS ABOVE CEILING TO MINIMIZE ROOF PENETRATIONS. VERIFY PENETRATIONS IN FIELD. LOCATE PENETRATIONS TO NOT BE VISIBLE FROM APPROACH TO FRONT ENTRY WHERE FEASIBLE.
5. SEE MECHANICAL AND PLUMBING DRAWINGS FOR PIPING AND EQUIPMENT PENETRATIONS. ALL PVC PIPE PENETRATIONS TO BE PAINTED DARK GREY.

GENERAL FLOOR PLAN NOTES

1. DIMENSIONS ARE TO FACE OF STUD, EXISTING WALL FINISH, MASONRY, OR DOOR/WINDOW OPENINGS. DIMENSIONS OF EXISTING CONSTRUCTION ARE NOT SHOWN ON DRAWINGS - VERIFY DIMENSIONS OF ALL EXISTING CONSTRUCTION IN THE FIELD. DIMENSIONS TO OPENINGS ARE NOMINAL. VERIFY ALL OPENINGS WITH ROUGH OPENING REQUIREMENTS.
2. ALL DOOR OPENINGS PERPENDICULAR TO A WALL ARE 4" TO THE WALL FRAMING UNO.
3. EXISTING CONSTRUCTION TO REMAIN SHOWN SHADED, NEW CONSTRUCTION SHOWN SOLID.
4. SEE SHEET A-002 FOR WALL TYPES. IN AREAS WITH SUSPENDED ACOUSTICAL TILE CEILINGS, GYPSUM WALL BOARD MAY BE TERMINATED 6" ABOVE THE CEILING. IN AREAS WITH EXPOSED STRUCTURE CONTINUE GYPSUM BOARD TO UNDERSIDE OF STRUCTURE.
5. VERIFY EXISTING WALL CONSTRUCTION.
6. ALL EGRESS DOORS SHALL BE READILY OPERABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

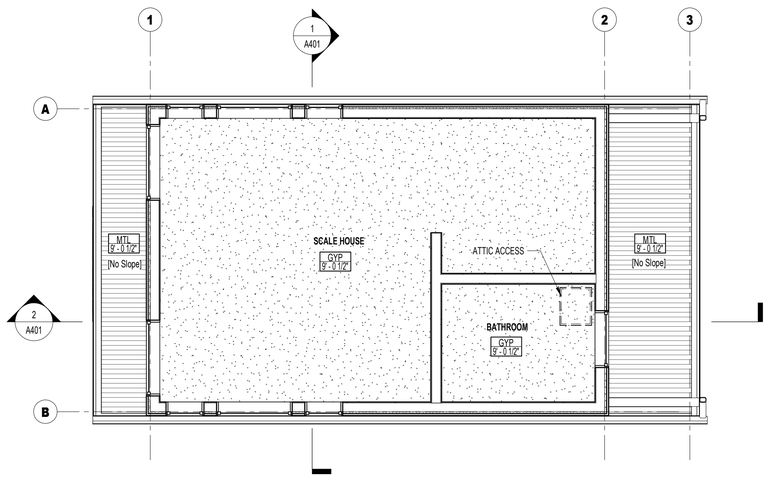
GENERAL CEILING NOTES

1. GENERALLY CENTER CEILING GRIDS IN EACH ROOM AS SHOWN ON PLANS TO PROVIDE EQUALLY SIZED PANELS ON OPPOSITE WALLS. IF PLANS INDICATE A GRID ALIGNING WITH A COLUMN, WALL, SOFFIT, ETC., START GRID AT INDICATED SURFACE.
2. SEE FLOOR PLAN FOR WALL TYPES AND WALLS THAT EXTEND FULL HEIGHT TO STRUCTURE.
3. SEE TYPICAL DETAILS THIS SHEET.
4. CEILING FIXTURES ARE SHOWN FOR REFERENCE ONLY FOR COORDINATION WITH CEILING FINISH SYSTEM. SEE MECHANICAL, ELECTRICAL AND SPRINKLER DRAWINGS FOR ALL CEILING FIXTURES AND TYPES.
5. SPOT ELEVATIONS ARE FROM FINISH FLOOR TO SURFACE FINISH OF CEILING AND ARE ROUNDED TO THE NEAREST INCH.

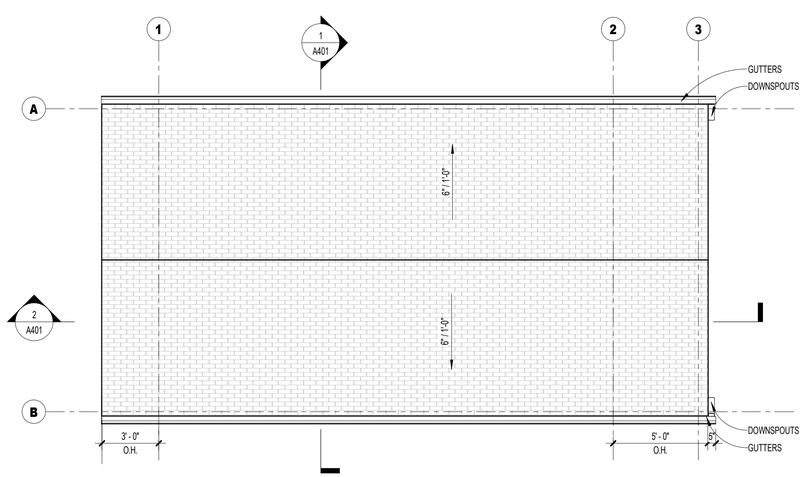
CEILING LEGEND

	GWB	5/8" TYPE "X" GYPSUM WALLBOARD ON STL. FRAMING - SEE DETAILS. PAINT P1 UNO
	MTL	METAL SOFFIT - SEE DETAILS. PAINT P1 UNO

CEILING LAYOUT NOTES: LAY-IN CEILINGS ARE SHOWN CONCEPTUALLY. IT IS THE INTENT THE CEILINGS AREA CENTERED WITHIN THE ROOM. IN ODD SHAPED ROOMS, PRIMARY VISUAL AREA TO BE CENTERED. CEILING INSTALLER SHOULD CONSULT WITH THE ARCHITECT IN THE FIELD FOR ANY AREAS IN WHICH THEY WOULD LIKE TO MODIFY THE LAYOUT FROM THAT SHOWN ON THE PLAN. MODIFICATIONS MAY BE ALLOWED, AT THE DISCRETION OF THE ARCHITECT, TO EASE INSTALLATION, SAVE CUTTING, OR INCREASE VISUAL APPEAL.



3 REFLECTED CEILING PLAN
1/4" = 1'-0"



2 ROOF PLAN
1/4" = 1'-0"

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mosaic
architecture-planning-design
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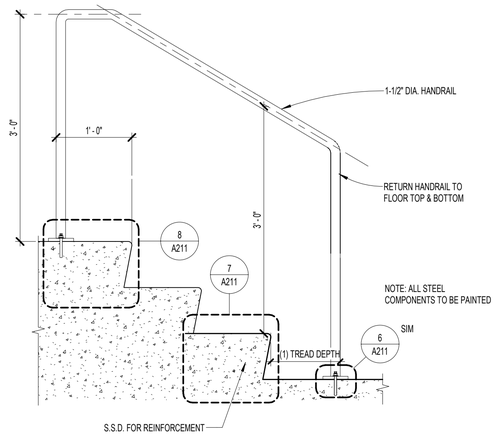
BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

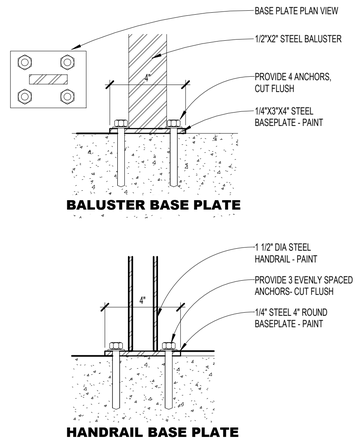
FLOOR PLAN

SHEET NO.
A210

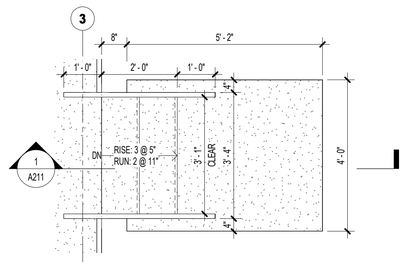
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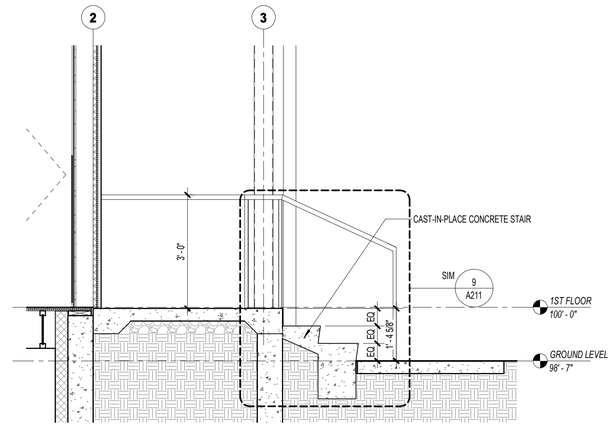
9 EXTERIOR STAIR - FREESTANDING HANDRAIL ONLY
1" = 1'-0"



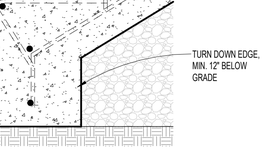
6 HANDRAIL & BALUSTER POST BASE, TYP.
3" = 1'-0"



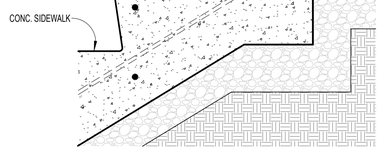
4 STAIR ENLARGED PLAN
1/2" = 1'-0"



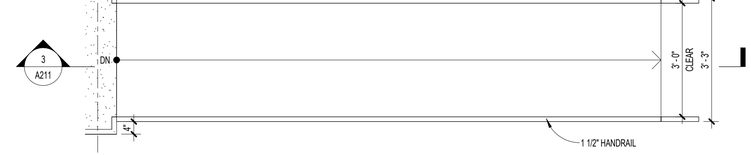
1 STAIR SECTION
1/2" = 1'-0"



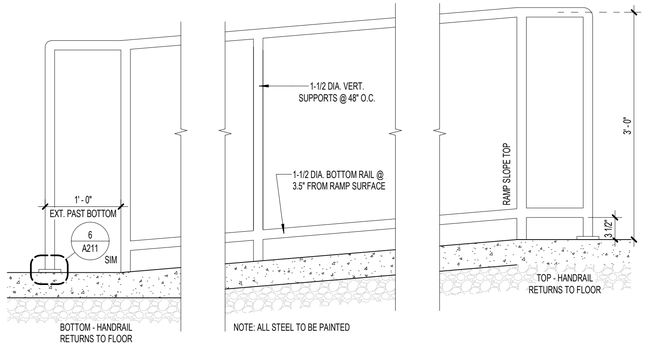
7 CONCRETE STAIR (EXTERIOR) - B.O. RUN - SLANTED RISER
1 1/2" = 1'-0"



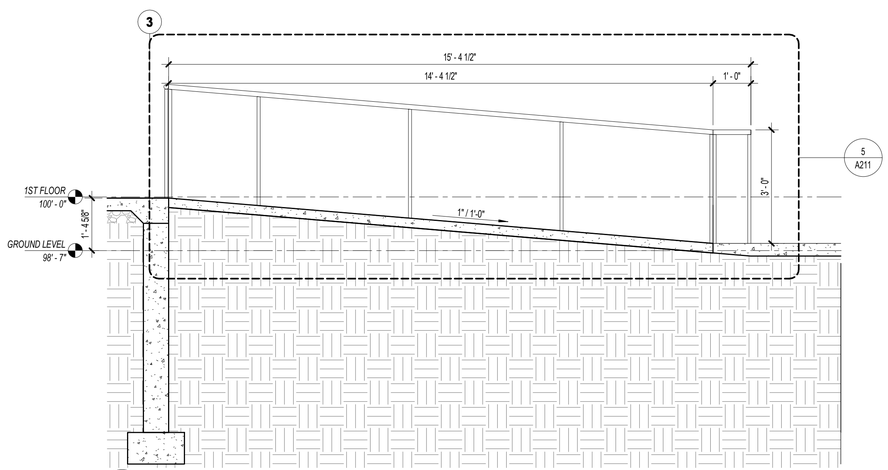
8 CONCRETE STAIR (EXTERIOR) - T.O. RUN - SLANTED RISER
1 1/2" = 1'-0"



2 ENLARGED PLAN- RAMP
1/2" = 1'-0"



5 EXTERIOR RAMP HANDRAIL - TYPE 1
1" = 1'-0"



3 RAMP SECTION
1/2" = 1'-0"

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317 Cruse Avenue Suite 201
Helena, Montana 59601
406.449.2013
www.mosaicarch.com

BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

ENLARGED PLAN - STAIRS / RAMP

SHEET NO.
A211

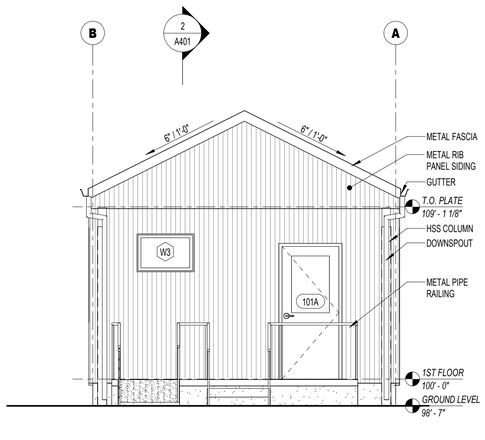
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MATERIALS LEGEND

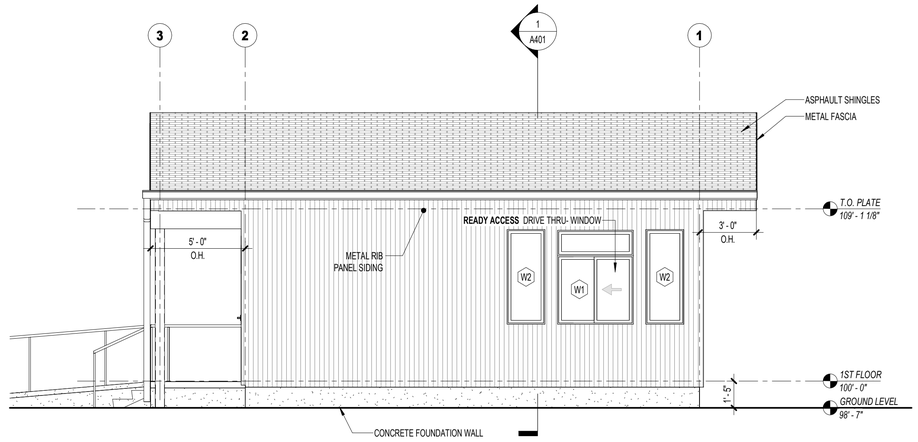
- ASPHALT SHINGLES
- VERTICAL CORRUGATED METAL PANEL SIDING
- CAST IN PLACE CONCRETE

NOTES

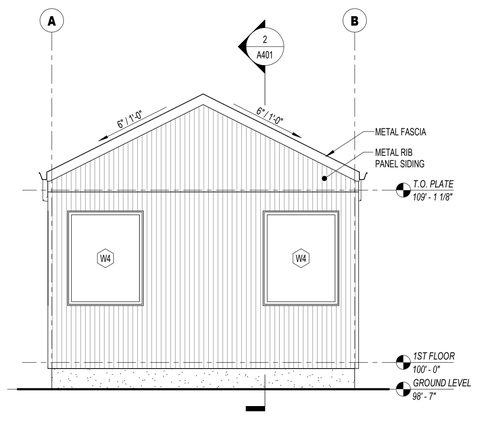
1. THIS LEGEND DOES NOT INCLUDE ALL MATERIALS. SEE NOTES AND REFERENCED DETAILS FOR ADDITIONAL INFORMATION.
2. ALL EXPOSED WOOD & FIBER CEMENT TO BE PAINTED.
3. PAINT ALL WINDOW TRIM, WD SOFFITS & ROOF FASCIAS.



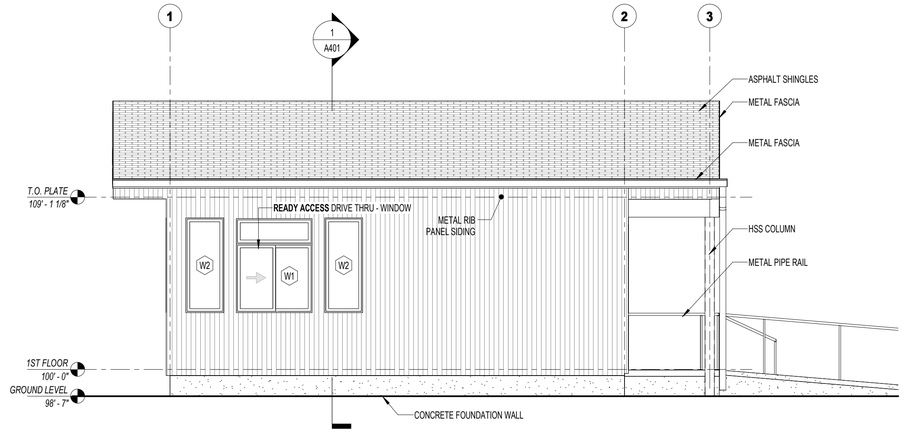
3 EAST ELEVATION
1/4" = 1'-0"



1 NORTH ELEVATION
1/4" = 1'-0"



4 WEST ELEVATION
1/4" = 1'-0"



2 SOUTH ELEVATION
1/4" = 1'-0"

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: Designer
DRAWN: Author
CHECKED: Checker
APPROVED: Approver
DATE: JUNE 09, 2025

LICENSED ARCHITECT MATT AUNE NO. 14204 STATE OF MONTANA

mosaic architecture-planning-design
317 Cruse Avenue Suite 201
Helena, Montana 59601
406.449.2013
www.mosaicarch.com

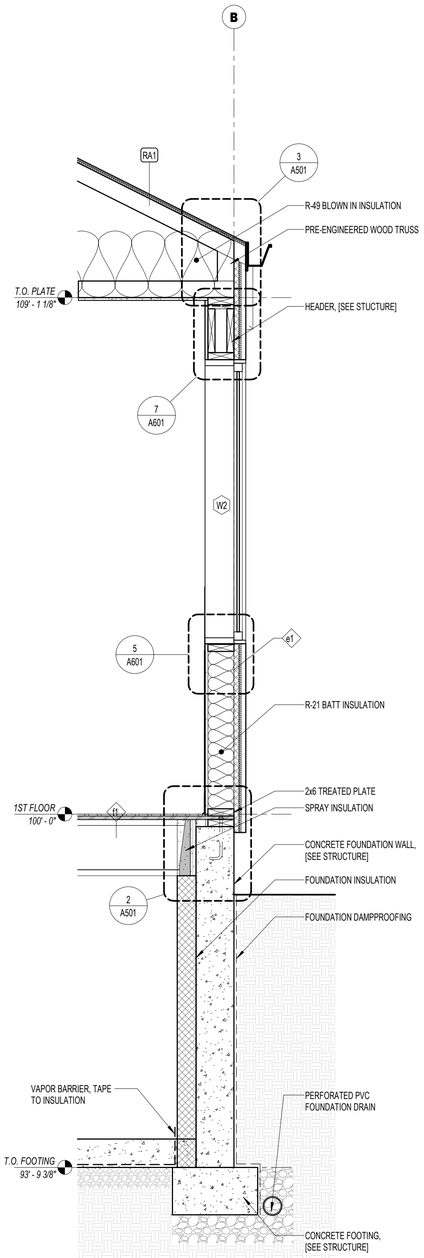
BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

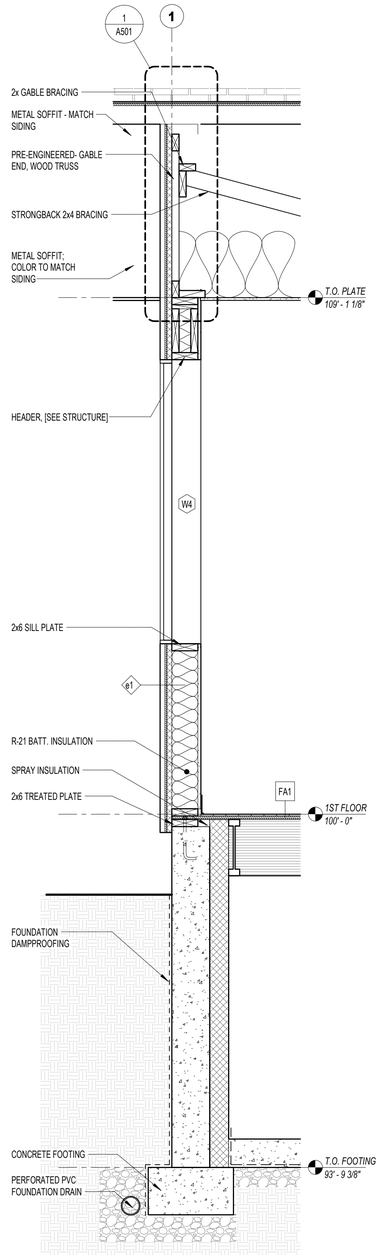
EXTERIOR ELEVATIONS

SHEET NO.
A301

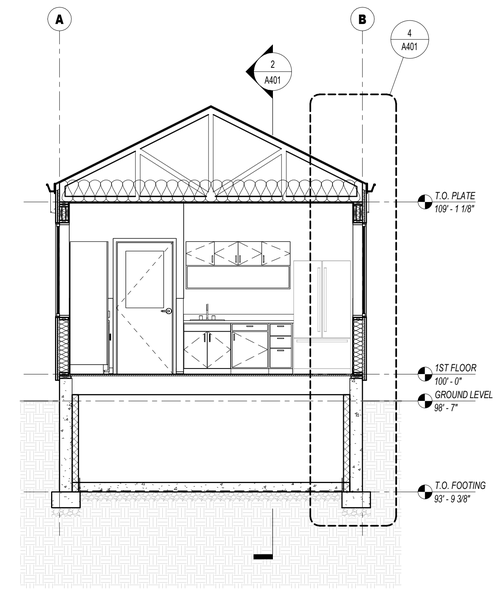
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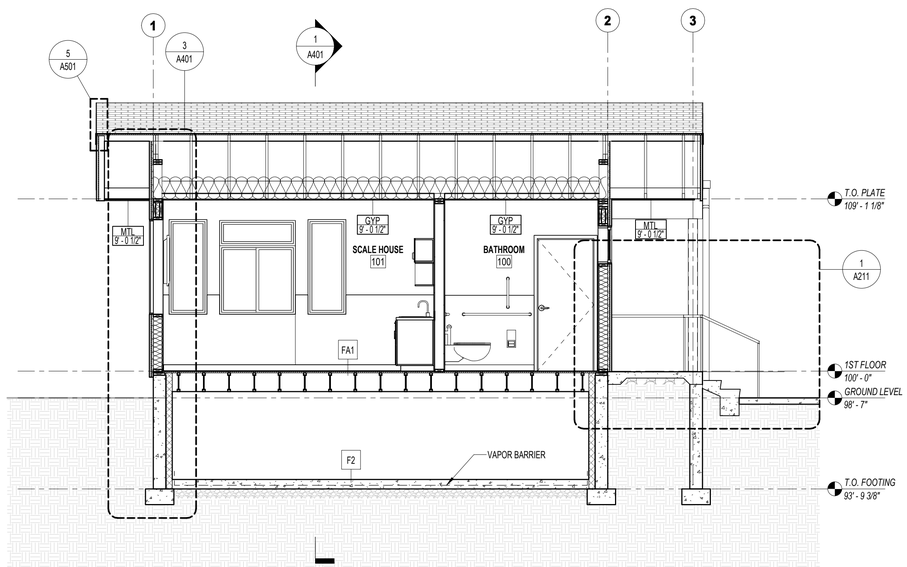
4 WALL SECTION 1
3/4" = 1'-0"



3 WALL SECTION 2
3/4" = 1'-0"



1 Section 1
1/4" = 1'-0"



2 Section 2
1/4" = 1'-0"

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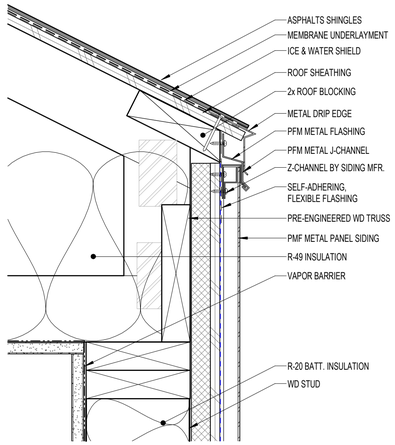
BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

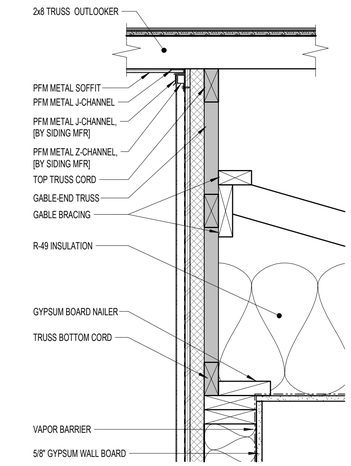
SECTIONS

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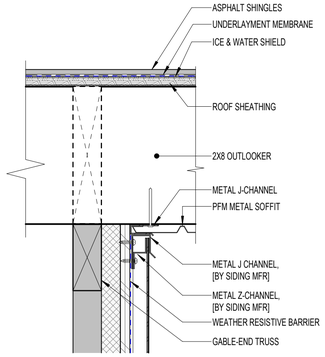
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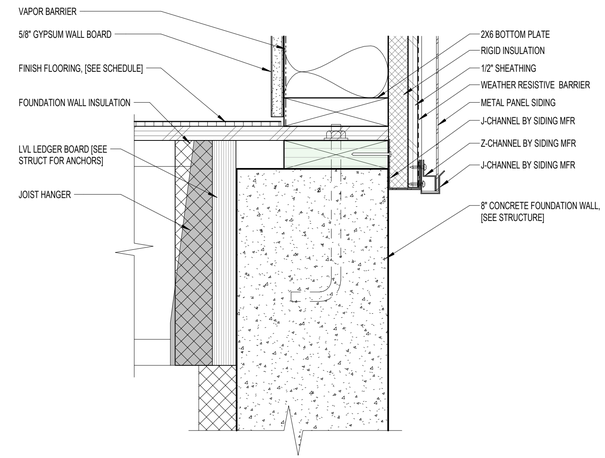
3 EAVE @ ROOF
3" = 1'-0"



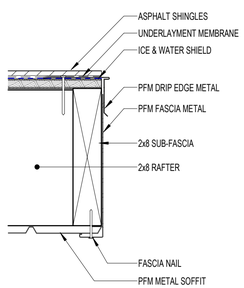
1 TRUSS @ GABLE
1 1/2" = 1'-0"



4 OVERHANG @ WALL
3" = 1'-0"



2 JOIST @ LEDGER
3" = 1'-0"



5 ROOF @ RAKE
3" = 1'-0"

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NO. 14204
STATE OF MONTANA

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architecture-planning-design
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BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

DETAILS

SHEET NO.

A501

DATE STAMP 8/18/2025 8:49:07 AM

GENERAL NOTES - INTERIORS

1. SEE STANDARD FIXTURE MOUNTING HEIGHTS & REQUIREMENTS UNLESS OTHERWISE NOTED.
2. FAUCET CONTROLS & OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND & SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF.
3. WHERE TOWEL, WASTE RECEPTACLE & OTHER DISPENSING & DISPOSING FIXTURES ARE PROVIDED, AT LEAST ONE OF EACH TYPE IS TO BE MOUNTED WITH OPERABLE PARTS WITHIN 48" OF FLOOR.
4. HOT WATER & DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED.
5. PROVIDE CODE-COMPLIANT BLOCKING WITHIN WALLS AS REQUIRED FOR ALL WALL-MOUNTED ITEMS.
6. SECURELY ANCHOR HANDWASH SINKS TO WITHSTAND AN APPLIED VERTICAL LOAD OF 250 LB ON THE FRONT OF THE FIXTURE.
7. ALL WALLS ARE TO RECEIVE BASE U.N.O. - SEE FINISH SCHEDULE.
8. 6" SELF-COVED WALL BASE REQUIRED AT KITCHENS, SOILED UTILITY ROOMS, & JANITOR CLOSETS.
9. SEE ROOM FINISH PLANS & FINISH SCHEDULES FOR ADDITIONAL INFORMATION

ABBREVIATIONS

ALUM	ALUMINUM
ANOD	ANODIZED FINISH - DK BRONZE
FACT	FACTORY FINISH
HM	HOLLOW METAL
MFR	MANUFACTURER
SF	ALUMINUM STOREFRONT
STL	STEEL
WD	WOOD - SOLID CORE

GLAZING LEGEND

1/4" LAMINATED SAFETY GLAZING

1/4" LAMINATED SAFETY GLAZING. APPLY "FROSTED" GLASS FILM TO GLAZING

ACCESSORIES LEGEND

ACCESSORY / EQUIPMENT TAG

BCS	BABY CHANGING STATION - KOALA KARE KB200-05
GB	GRAB BARS
MIR	MIRROR - BOBRICK B-165 1836 CHANNEL FRAME
PTD	PAPER TOWEL DISPENSER
SD	SOAP DISPENSER
SND	SANITARY NAPKIN DISPOSAL
TPD	TOILET PAPER DISPENSER

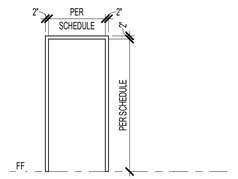
*INCLUDE COAT HOOKS ON THE INSIDE OF ALL TOILET PARTITION DOORS

GENERAL DOOR NOTES

1. ALL DOOR LOCATIONS NOT SPECIFICALLY DIMENSIONED TO BE PLACED 4 INCHES FROM ADJACENT WALL SURFACE. IF THERE IS NO DIRECTLY ADJACENT SIDEWALL, CONTACT ARCHITECT FOR PROPER PLACEMENT.
2. ALL DOORS TO HAVE ADA COMPLIANT THRESHOLDS WITH 1/2" MAXIMUM RISE UNLESS SPECIFICALLY DETAILED OTHERWISE.
3. ALL METAL DOORS AND FRAMES TO BE PRIMED AND PAINTED. VERIFY COLOR WITH ARCHITECT.
4. ALL EXTERIOR DOORS TO BE FULLY INSULATED.
5. ALL EXTERIOR DOORS TO HAVE FULL PERIMETER WEATHERSTRIPPING.
6. ALL HARDWARE ON FIRE-RATED DOORS MUST BE APPROVED FOR SUCH USE AND INSTALLED AS REQUIRED TO MAINTAIN SYSTEM FIRE RATING.
7. ALL DOORS/FRAMES TO HAVE RESILIENT SILENCERS.
8. CONTRACTOR TO USE ARCHITECT'S DOOR TYPE PLAN DESIGNATION NUMBER IN ADDITION TO THE ROOM NUMBER ON ALL SHOP DRAWING SUBMITTALS
9. FIRE RATING FOR FRAMES MUST MATCH RATING FOR DOORS.
10. SEE WINDOW ELEVATIONS FOR FRAME TYPES FOR ALUMINUM FRAMES.
11. ALL EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

DOOR FRAME TYPES

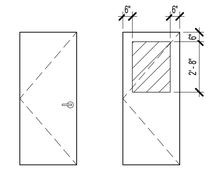
SEE PLAN AND SCHEDULE FOR ALL DOOR SIZES



A
H.M. FRAME

DOOR TYPES

SEE PLAN AND SCHEDULE FOR ALL DOOR SIZES



F
FLUSH

HG
HALF GLASS

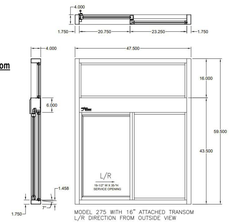
DOOR SCHEDULE

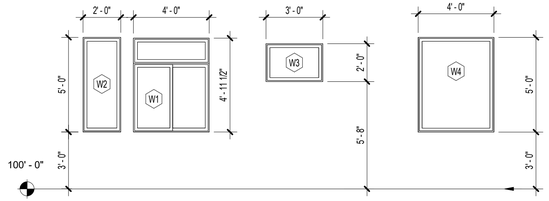
MARK	ROOM NAME	DOOR TYPE	WIDTH	HEIGHT	THICKNESS	DOOR MAT'L	DOOR FINISH	FRAME TYPE	FRAME MAT'L	FRAME FINISH	DOOR HDWR GROUP	FIRE RAT'G	COMMENTS
100A	BATHROOM	HG	3' - 0"	7' - 0"	1 3/4"	MTL	PNT	HM	MTL	PNT	PRV		
101A	SCALE HOUSE	F	3' - 0"	7' - 0"	1 3/4"	MTL	PNT	HM	MTL	PNT	EXT		

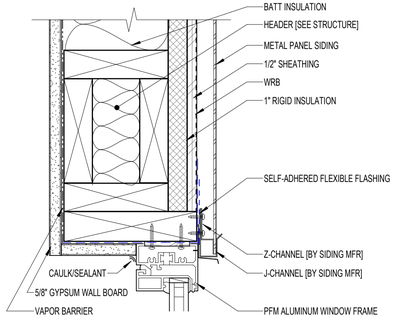
EXTERIOR WINDOW ELEVATIONS

READY ACCESS **Model 275 W/Transom**

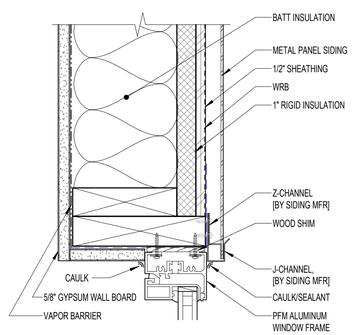
- Sliding Door Opening
- Operating options ranging from self close manual open/close to fully automatic
- 3/4" Insulated Solarban 70xl Low E tempered glazing.
- Arrives Fully Assembled



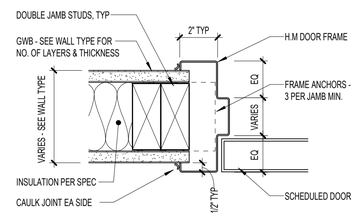




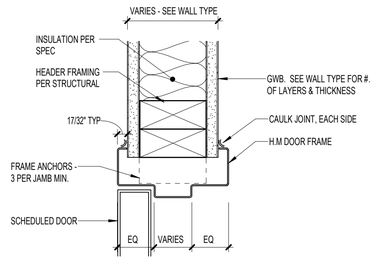
7 FIXED WINDOW HEAD
3" = 1'-0"



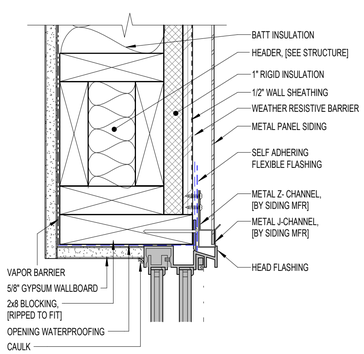
5 FIXED WINDOW JAMB / SILL
3" = 1'-0"



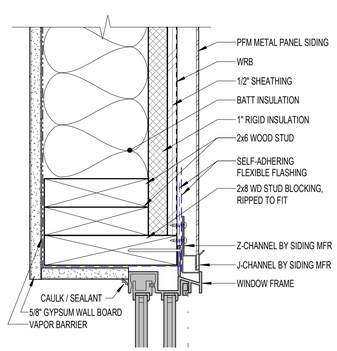
3 HM INTERIOR JAMB
3" = 1'-0"



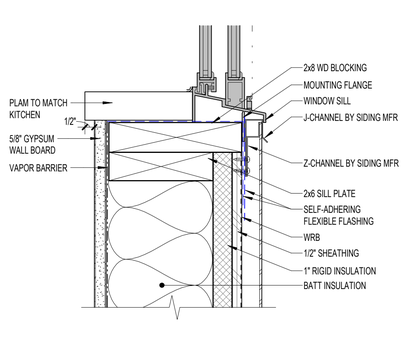
1 HM INTERIOR HEAD1
3" = 1'-0"



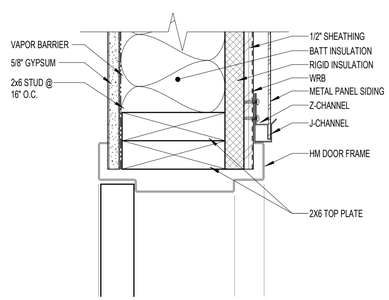
9 SLIDER WINDOW HEAD DETAIL
3" = 1'-0"



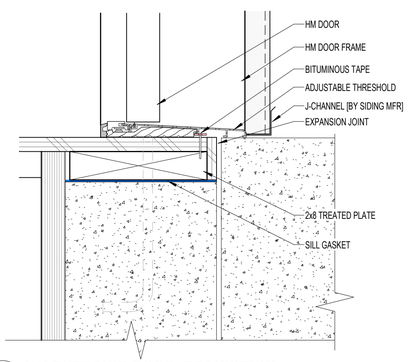
8 SLIDER WINDOW JAMB
3" = 1'-0"



6 SLIDER SILL
3" = 1'-0"



4 HM EXT. DOOR HEADER / JAMB
3" = 1'-0"



2 HM EXTERIOR DOOR- TRANSITION
3" = 1'-0"

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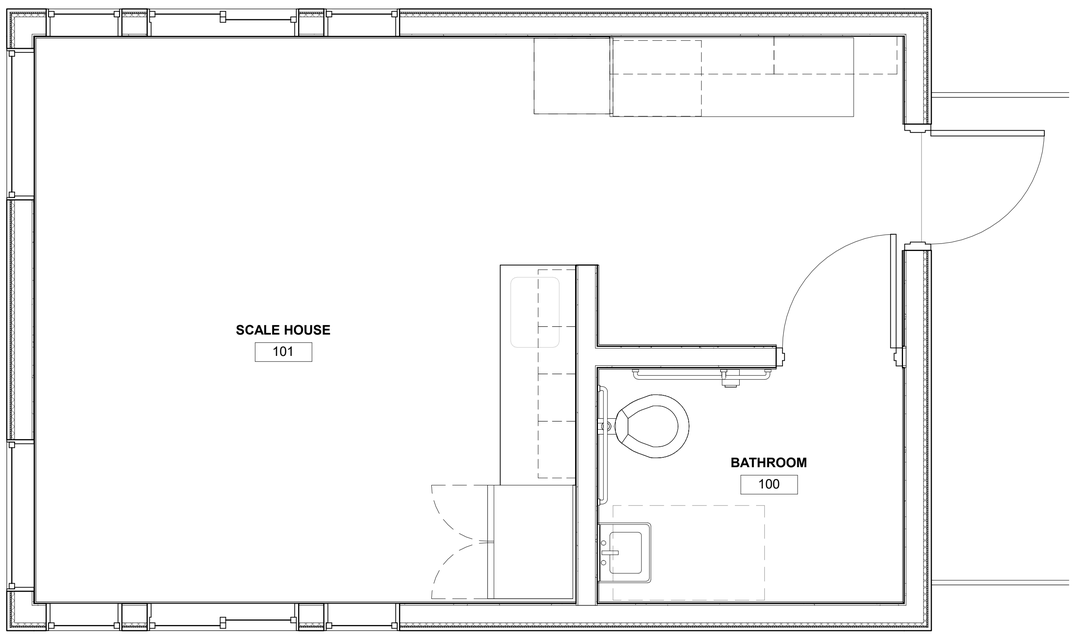
DOOR & WINDOW TYPES, DOOR SCHEDULE

SHEET NO.
A601

DATE STAMP 8/18/2025 8:49:08 AM

ROOM FINISH SCHEDULE

NO.	ROOM NAME	AREA	PERIMETER	FLOOR FINISH	BASE FINISH	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	COMMENTS
100	BATHROOM	50 SF	28'-8"	FL1	FRP1	P1/FRP	P1/FRP	P1/FRP	P1/FRP	
101	SCALE HOUSE	284 SF	80'-3"	FL1	FRP1	P1/FRP	P1/FRP	P1/FRP	P1/FRP	



1 **LEVEL 1 FINISH PLAN**
1/2" = 1'-0"

ROOM FINISH LEGEND

FLOOR FINISHES

FL1
FL1: TARKET - PERFORMA - COLOR: GREY SAND 55033

BASE FINISHES

FRP1: 4" FRP BASE - COLOR: WHITE

FLOOR AND BASE FINISH NOTES:
1. SEE SPECIFICATIONS FOR FINISH MANUFACTURER.
2. ALL FLOORING TO BE INSTALLED ON MANUFACTURERED APPROVED SUB FLOOR.
3. INSTALL FACTORY-PROVIDED TRANSITION STRIP OR AS DETAILED AT ALL FLOORING CHANGES.
4. CHANGE FLOORING WHERE INDICATED ON PLANS, CHANGE FLOOR CENTERED UNDER DOOR AT ROOM TO ROOM CHANGES, U.N.O
5. AT CASEWORK, CONTINUE BASE AROUND ENDPANELS AND TOE-KICKS, U.N.O.

CEILING FINISHES
SEE RCP

WALL FINISHES

PAINT NOTE: MANUF. SHOWN ARE BASIS OF DESIGN ONLY. SUBSTITUTIONS ALLOWED WITH APPROVAL; SEE SPEC SECTION ON SUBSTITUTIONS. VERIFY FINAL PAINT COLORS AND LOCATIONS W/ ARCHITECT PRIOR TO INSTALLATION.

P1: PAINT - COLOR: WHITE
FRP: SMOOTH - WHITE

HOLLOW METAL FRAMES
P1: PAINT - WHITE

WALL FINISHES NOTES:
1. SEE INTERIOR ELEVATIONS AND/OR DETAILS FOR INTERIOR WINDOWS, SPECIAL WALL FINISHES, TRIM, ETC.
2. FINISH SCHEDULE APPLIES TO GENERAL AREA: THERE MAYBE SPECIFIC FINISH REQUIREMENTS SHOWN ON DETAILS, DRAWINGS OR SPECIFICATIONS.
3. SEE SPECIFICATIONS FOR LEVEL(S) OF FINISH AT GWB SURFACES.
4. ALL WALLS/CEILINGS P1 UNLESS OTHERWISE NOTED ON PLANS &/OR ELEVATIONS.

COUNTERTOPS, CASEWORK SURFACES, TRIM

PL1: PLASTIC LAMINATE 1 - WILSONART PREMIUM LAMINATE - COLOR (SELECTED BY OWNER)

COUNTERTOP AND CASEWORK FINISHES NOTES:
1. SEE SPECIFICATION FOR MANUFACTURER.
2. PLASTIC LAMINATE COUNTERTOPS TO HAVE LAMINATE EDGES, U.N.O. NOTED IN DETAILS.
3. PROVIDE FINISHED END PANELS WHERE EXPOSED TO VIEW, PROVIDE SCRIBE STRIP AT ALL WALL ABUTMENTS.
4. WHERE NOTED ON ELEVATIONS, PROVIDE 4" BACKSPLASH W/ SQUARE EDGES, MATCH ADJ. COUNTERTOP MATERIAL.
5. FOR BIDDING PURPOSES ASSUME EACH DRAWER AND/OR DOOR HAS A PULL, EVEN IF NOT SHOWN IN ELEVATIONS

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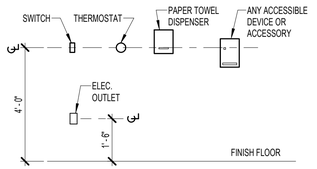
FINISH PLAN & SCHEDULE

SHEET NO.
A701

DATE STAMP 8/18/2025 8:49:08 AM

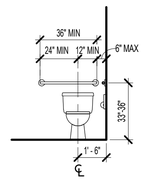
ACCESSIBLE MOUNTING HEIGHTS AND CLEARANCES

1. DIMENSIONS TO TOILET ROOM ACCESSORIES ARE TO THE TOP OF THE HIGHEST OPENING OR OPERABLE PART.
2. ACCESSORIES ABOVE COUNTERS SHALL BE MOUNTED WITH T.O. OPERABLE PARTS LESS THAN 3'-8" A.F.F.

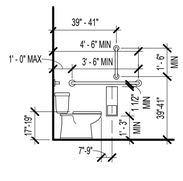




PLAN



FRONT ELEVATION

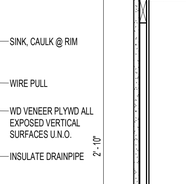


SIDE ELEVATION

TYP ACCESSIBLE MOUNTING HEIGHTS

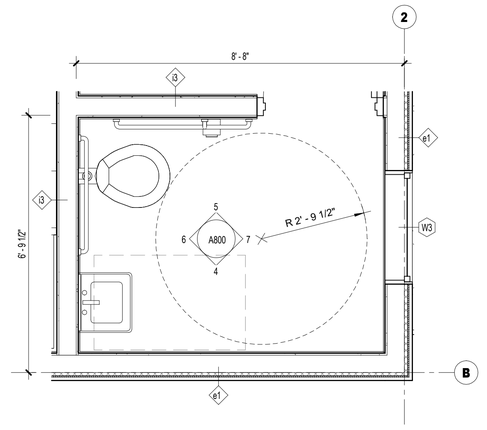
PLAN

FRONT ELEVATION

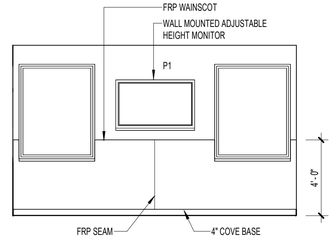


SIDE ELEVATION

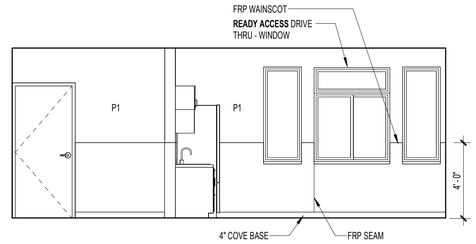
ACCESSIBLE TOILET



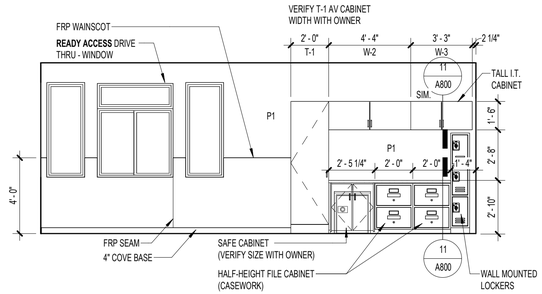
8 ENLARGED BATHROOM PLAN
1/2" = 1'-0"



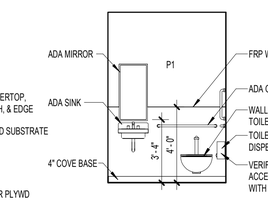
1 INTERIOR ELEVATION- SOUTH
1/4" = 1'-0"



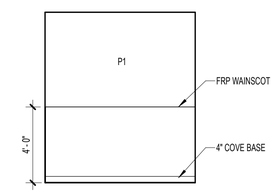
2 INTERIOR ELEVATION- EAST
1/4" = 1'-0"



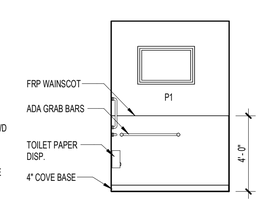
3 INTERIOR ELEVATION- WEST
1/4" = 1'-0"



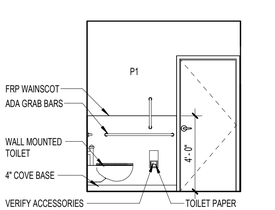
6 INTERIOR BATHROOM - SOUTH
1/4" = 1'-0"



4 INTERIOR BATHROOM - EAST
1/4" = 1'-0"

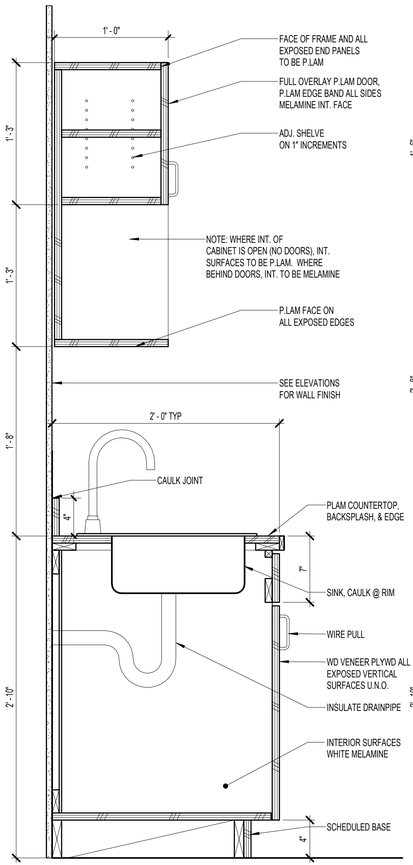


7 INTERIOR BATHROOM - NORTH
1/4" = 1'-0"

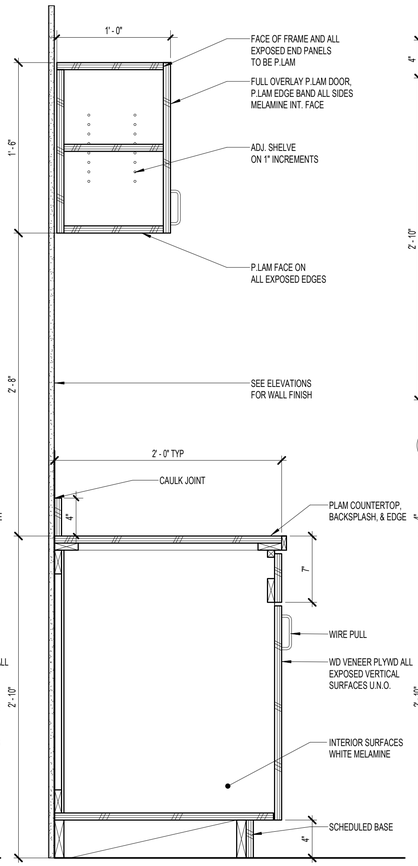


5 INTERIOR BATHROOM - WEST
1/4" = 1'-0"

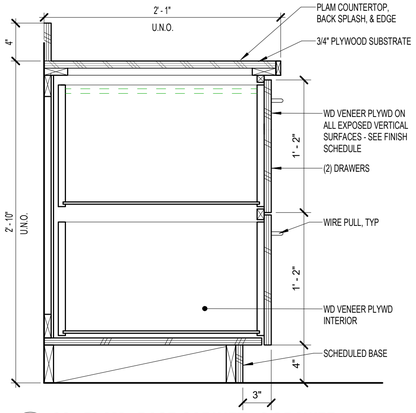
ACCESSIBLE TOILET



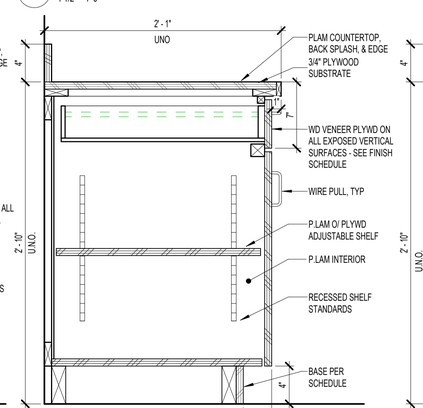
14 06 - PLAM - BASE CABINET @ SINK
1 1/2" = 1'-0"



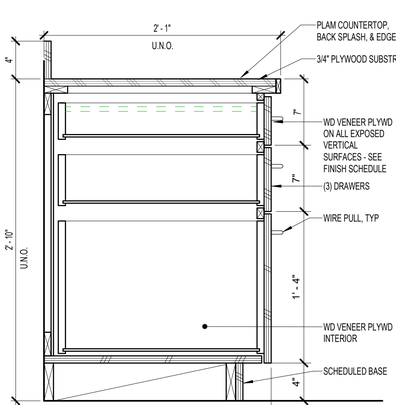
13 06 - PLAM - BASE CABINET & UPPERS
1 1/2" = 1'-0"



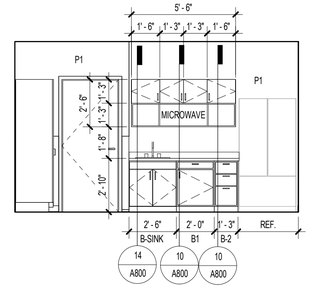
11 06 - PLAM - BASE CABINET - 2 DRAWER
1 1/2" = 1'-0"



12 06 - PLAM - BASE CABINET WITH DRAWER
1 1/2" = 1'-0"



10 06 - PLAM - BASE CABINET - 3 DRAWER
1 1/2" = 1'-0"



9 INTERIOR ELEVATION- NORTH
1/4" = 1'-0"

mosaic
architecture-planning-design
317 Cruse Avenue Suite 201
Helena, Montana 59601
406.449.2013
www.mosaicarch.com

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: Designer
DRAWN: Author
CHECKED: Checker
APPROVED: Approver
DATE: JUNE 09, 2025

LICENSED ARCHITECT MATT AUNE NO. 14204 STATE OF MONTANA

BANNOCK COUNTY LANDFILL

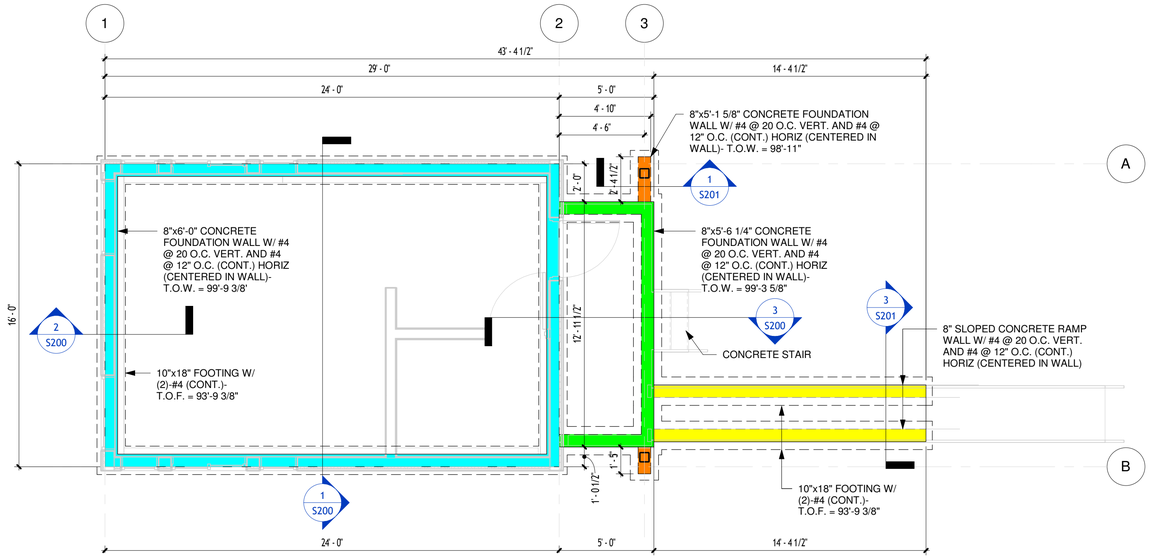
ENTRANCE FACILITY

INTERIOR ELEVATIONS & DETAILS

SHEET NO.

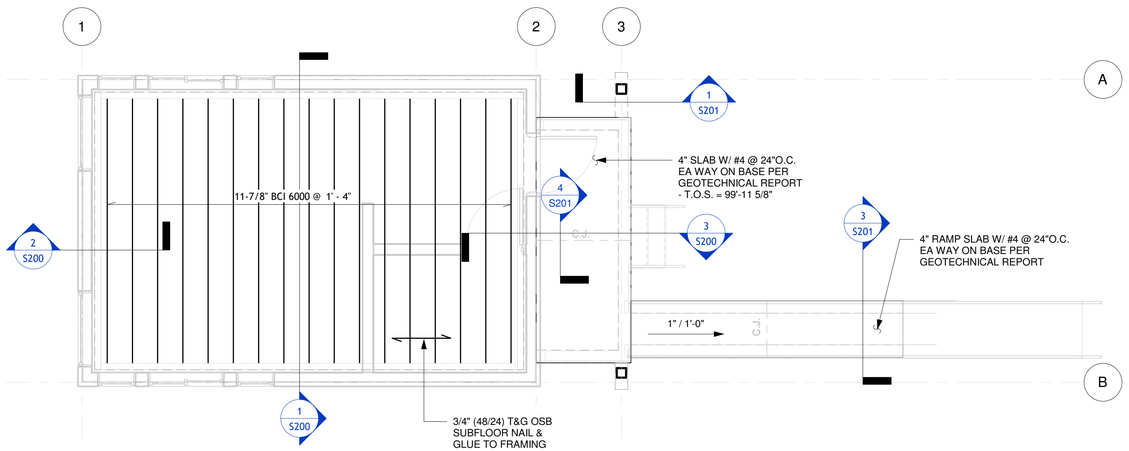
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DATE STAMP 8/18/2025 8:49:09 AM

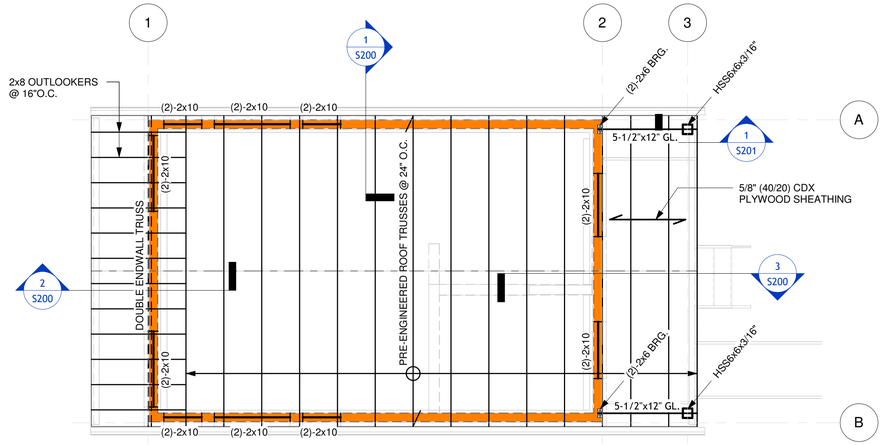


1 FOUNDATION PLAN
1/4" = 1'-0"

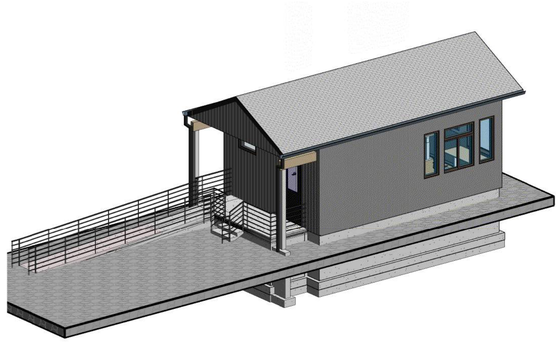
CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION

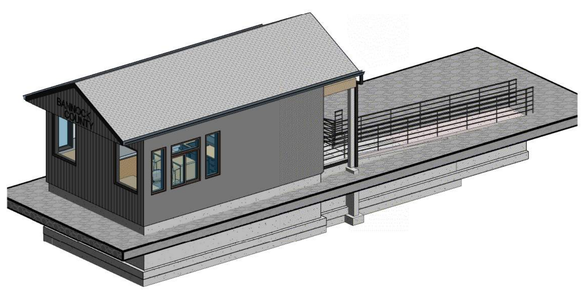


2 FRAMING PLAN
1/4" = 1'-0"



3 ROOF FRAMING PLAN
1/4" = 1'-0"





KRIVONEN
STRUCTURAL ENGINEERS

DATE STAMP: 8/18/2025 8:54:23 AM

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 25123
DESIGNED: ML
DRAWN: KZ
CHECKED: ML
APPROVED: ML
DATE: 6-10-25

MONTANA MARK LACHMUND 16770 REGISTERED PROFESSIONAL ENGINEER

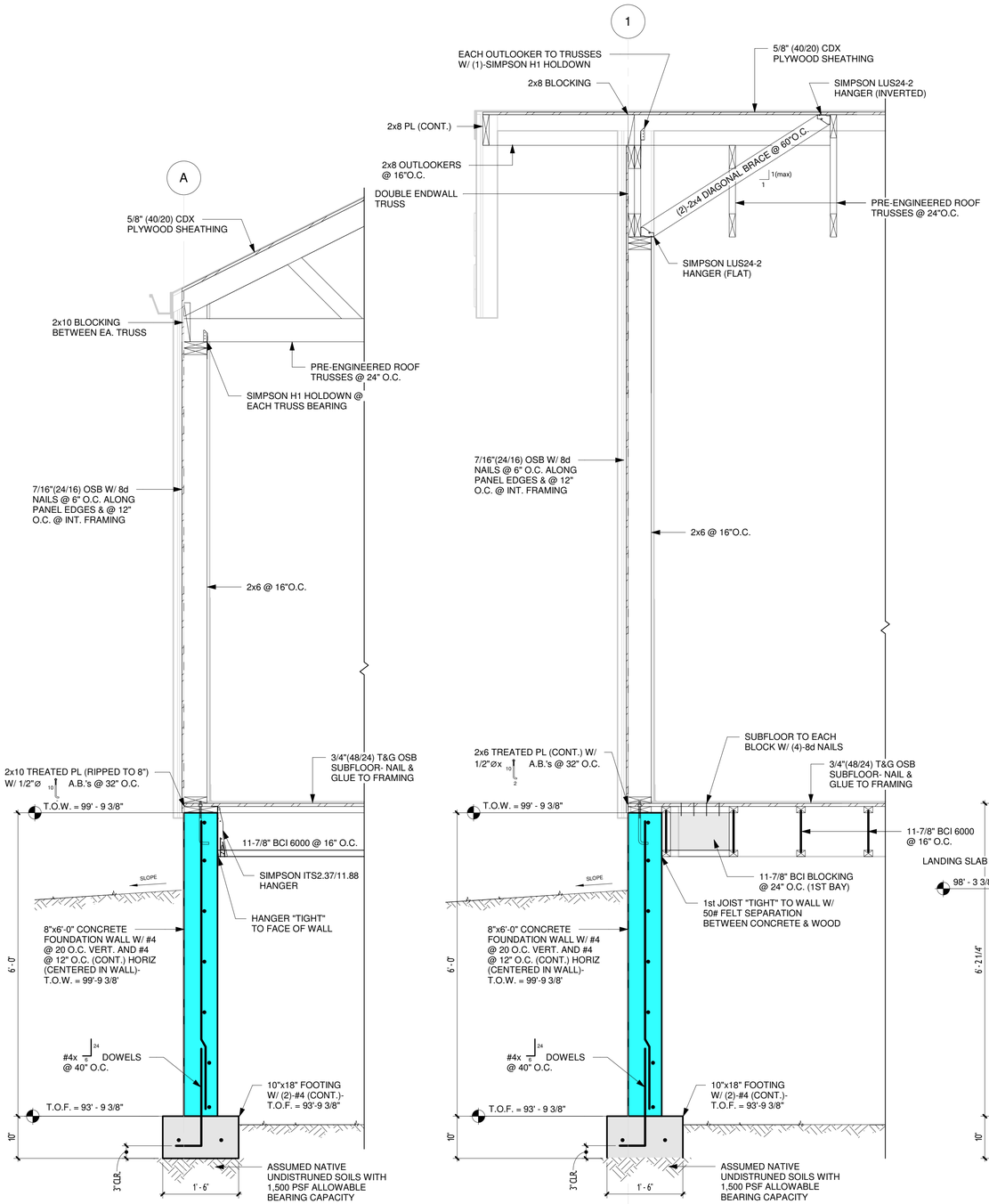
mosaics architecture-planning-design
317 Cruse Avenue Suite 201
Helena, Montana 59601
406.449.2013
www.mosaicarch.com

BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

STRUCTURAL PLANS

SHEET NO.
S100



1 SECTION
3/4" = 1'-0"

2 SECTION
3/4" = 1'-0"

3 SECTION
3/4" = 1'-0"

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 25123
DESIGNED: ML
DRAWN: KZ
CHECKED: MK
APPROVED: MK
DATE: 6-10-25

MONTANA MARK LACHMUND 16770 REGISTERED PROFESSIONAL ENGINEER

mosaic architecture-planning-design
317 Cruse Avenue Suite 201
Helena, Montana 59601
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BANNOCK COUNTY LANDFILL

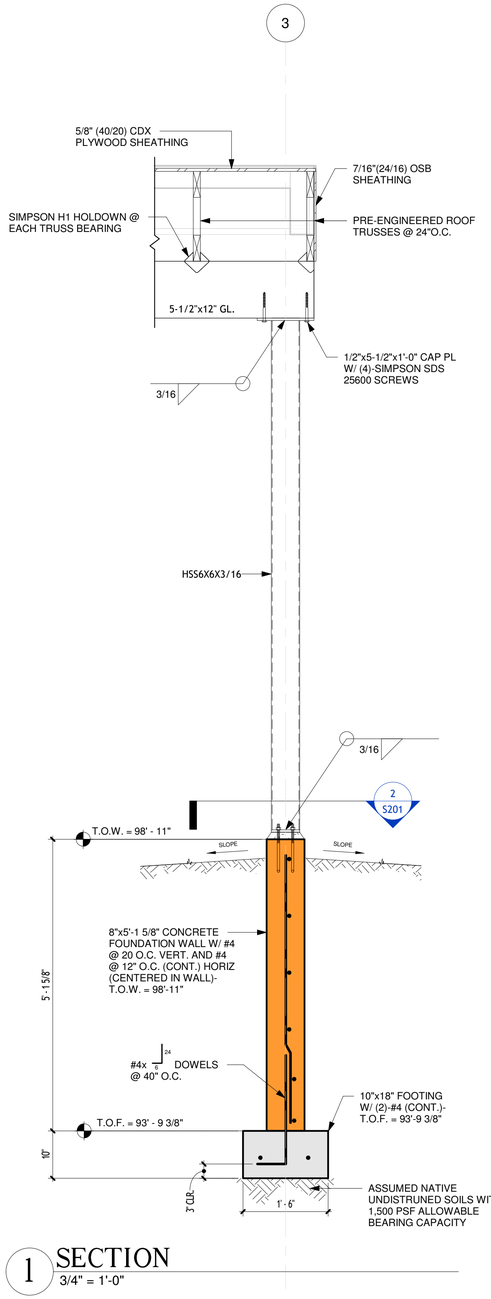
ENTRANCE FACILITY

SECTIONS & DETAIL VIEWS

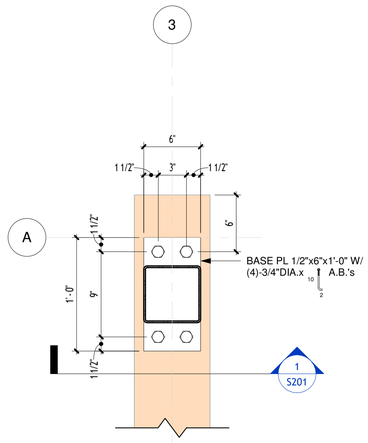
SHEET NO.
S200

KRIVONEN
STRUCTURAL ENGINEERS

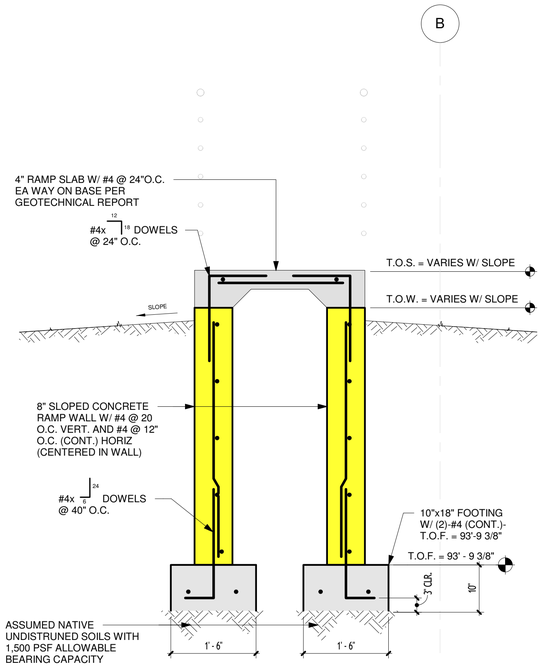
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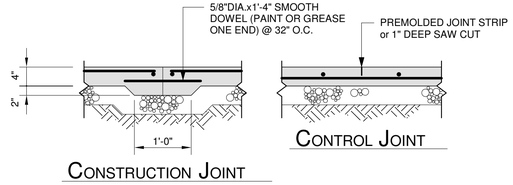
1 SECTION
3/4" = 1'-0"



2 BASE PL DETAIL
1 1/2" = 1'-0"



3 RAMP SECTION
3/4" = 1'-0"



4 'TYP.' CONTROL JOINT DETAIL
3/4" = 1'-0"

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 25123
DESIGNED: ML
DRAWN: KZ
CHECKED: ML
APPROVED: ML
DATE: 6-10-25

MONTANA MARK LACHMUND 16770 REGISTERED PROFESSIONAL ENGINEER

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Helena, Montana 59601
406.449.2013
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BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

SECTIONS & DETAIL VIEWS

SHEET NO.
S201

KRIVONEN
STRUCTURAL ENGINEERS

DATE STAMP 8/18/2025 8:54:24 AM

STRUCTURAL NOTES

GOVERNING CODES

INTERNATIONAL BUILDING CODE, 2021 EDITION
AMERICAN INSTITUTE OF STEEL CONSTRUCTION, 9TH EDITION
AMERICAN CONCRETE INSTITUTE, 318-14
AMERICAN SOCIETY OF CIVIL ENGINEERS, 7-16
AMERICAN WELDING SOCIETY D1.1 (U.O.N.)

DESIGN CRITERIA

BUILDING DESIGN CATEGORY: II
SNOW LOAD: P_f=63 PSF NON-REDUCIBLE + DRIFTING, P_g= 90 PSF, C_e=1.0, C_s=1.0, I_w=1.0, C_t=1.0
WIND LOAD: $V_{(3\ SEC)}$=102 MPH
SEISMIC:
SOIL CLASS: "D"
DESIGN CATEGORY "B": I_e=1.0, S_s=0.58, S_1=0.16
RESISTIVE SYSTEM=WOOD SHEATHING
SEISMIC DESIGN FACTORS: S_{MS}=0.78, S_{M1}=0.44, S_{DS}=0.52, S_{D1}=0.29, R=6½
SIMPLIFIED BASE SHEAR METHOD: LIVE LOAD FACTOR = 1
FLOOR LOAD: 50 PSF (LIVE)
FOUNDATION: ASSUMED BEARING ON MATERIAL SPECIFIED W/ ASSOCIATED CAPACITY IN GEOTECHNICAL REPORT

GENERAL NOTES

- CONTRACTOR SHALL COORDINATE OPENINGS & IMBEDDED ITEMS NOTED ON CONSTRUCTION DOCUMENTS WITH APPROPRIATE TRADE.
- ALL SHOP DRAWINGS OF ALL STRUCTURAL COMPONENTS SHALL BE REVIEWED BY ARCHITECT / ENGINEER PRIOR TO FABRICATION.
- STRUCTURAL COMPONENTS SHALL BE TEMPORARILY BRACED IN A MANNER TO RESIST EARTHQUAKE, WIND, SNOW, & LATERAL EARTH LOADS or COMBINATION THEREOF UNTIL PLYWOOD ROOF DIAPHRAGM, PLYWOOD SHEATHED SHEAR WALLS, or FLOOR FRAMING ARE IN PLACE & SECURED PROPERLY.
- THE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH DRAWINGS AND SPECIFICATIONS FROM ALL OTHER DISCIPLINES. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES, AND OTHER ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.
- THE STRUCTURAL DRAWINGS HERE-IN REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK & CONNECTIONS HAVE BEEN COMPLETED. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY, & INSPECTION OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE METHODS, TECHNIQUES, AND SEQUENCE OF PROCEDURES TO PERFORM THE WORK. THE SUPERVISION OF THE WORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO APPROVAL BY THE ENGINEER.
- LOADING APPLIED TO THE STRUCTURE DURING THE PROCESS OF CONSTRUCTION SHALL NOT EXCEED THE SAFE LOAD-CARRYING CAPACITY OF THE STRUCTURAL MEMBERS. THESE LOADINGS ARE SPECIFIED IN THE "DESIGN CRITERIA" PORTION OF THESE NOTES. DO NOT APPLY ANY CONSTRUCTION LOADS UNTIL STRUCTURAL FRAMING IS PROPERLY CONNECTED TOGETHER AND UNTIL ALL TEMPORARY BRACING IS IN PLACE.
- SHOP DRAWINGS AND OTHER ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL. THE ENGINEER'S REVIEW IS TO BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK, AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR THE ERRORS & OMISSIONS ASSOCIATED WITH THE PREPARATION OF THE SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC.

STRUCTURAL STEEL

- ALL STEEL DESIGN AND FABRICATION IN ACCORDANCE WITH THE 14TH EDITION OF THE AMERICAN INSTITUTE FOR STEEL CONSTRUCTION (A.I.S.C.) CODE:
- WHERE "CONTINUOUS CHORD" ANGLES ARE INDICATED, PROVIDE A CONTINUOUS BUTT WELD OR FULL PENETRATION WELD AT THE SPLICE POINTS.
- HOLES IN THE STEEL SHALL BE DRILLED OR PUNCHED WITH SMOOTH EDGES. BURNING OR TORCH CUTTING OF HOLES AT SITE IS NOT PERMITTED.
- THE STRUCTURAL STEEL ERECTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING.
- COLUMNS, ANCHOR BOLTS, AND BASE PLATES, ETC. HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN ANALYZED FOR POTENTIAL LOADINGS ENCOUNTERED DURING STEEL ERECTION AND CONSTRUCTION. ANY ANALYSIS OF THESE COMPONENTS FOR ADEQUACY DURING ERECTION AND CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER SHALL BE HOT-DIPPED GALVANIZED.
- PROTECTIVE COATINGS DAMAGED DURING TRANSPORTING, ERECTING, AND FIELD WELDING PROCESSES SHALL BE REPAIRED IN THE FILED TO MATCH THE SHOP APPLIED COATING.

MATERIALS:

TUBES: ASTM A500 GRADE B, Fy = 46 KSI
W BEAMS: ASTM A992, Fy = 50 KSI
STEEL SHAPES & PLATES: ASTM A36, Fy = 36 KSI (UNLESS NOTED)
WELDED CONNECTIONS: E70XX ELECTRODES
BOLTED CONNECTIONS: ASTM A325 BOLTS WITH "SNUG TIGHT" FIT UNLESS NOTED OTHERWISE NOTED

CONCRETE (CONT.)

- ALL CONCRETE SHALL BE READY MIXED AND SUPPLIED IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS. NO WATER SHALL BE ADDED TO MIX AT JOB SITE.
- MINIMUM COVER REQUIREMENTS:
CAST AGAINST EARTH = 3"
FORMED WALLS = 1½"
TOP OF SLAB = 1"
- CHAMFER ALL EXPOSED CORNERS ¾" UNLESS NOTED
- OPENINGS IN CONCRETE WALLS OF 2'-0" or GREATER IN EITHER DIRECTION SHALL HAVE 2 - #4 BARS ALL SIDES & SHALL EXTEND 24" BEYOND OPENING.
- COLD WEATHER CONCRETING GUIDELINES TO BE FOLLOWED IN COLD TEMPERATURES.
- FLYASH TYPE "F" or TYPE "C" MAY BE USED TO REPLACE NO MORE THAN 10% OF THE CEMENT CONTENT.
- 4" SLUMP MAX. 5-7% AIR ENTRAINED FOR ALL FOUNDATIONS & EXTERIOR SLABS.
- MAXIMUM AGGREGATE SIZE OF 1" MINUS OR ¾" NOMINAL.
- TYPE "1", TYPE "2", OR TYPE "1L" CEMENT IS ACCEPTABLE.

MATERIALS:

ANCHOR BOLTS: ASTM F1554 BOLTS
CONCRETE SLABS (INTERIOR): 3500 PSI AT 28 DAYS
CONCRETE SLABS (EXTERIOR): 4000 PSI AT 28 DAYS
ELSEWHERE: 3000 PSI AT 28 DAYS

CAST IN-PLACE CONCRETE:

- CONCRETE MIXES SHALL BE DESIGNED PER ACI 318-19
- CONCRETE SHALL CONFORM TO THE FOLLOWING PROPERTIES:

CONCRETE LOCATION	MIN. Fc (28 DAYS)	SLUMP	W/C RATIO
ELEVATED SLABS	3500 PSI	2" - 4"	0.46
FOUNDATIONS	3500 PSI	2" - 4"	0.5
INTERIOR SLAB ON GRADE	3500 PSI	2" - 4"	0.5

AT CONTRACTOR'S OPTION, AN APPROVED ADMIXTURE MAY BE USED TO PRODUCE FLOWABLE CONCRETE. MAXIMUM SLUMP SHALL NOT EXCEED 10 INCHES. THE CONTRACTOR SHALL SUBMIT TEST RESULTS OF THE PROPOSED CONCRETE MIXES ALONG WITH THE MANUFACTURER'S TECHNICAL DATA FOR APPROVAL PRIOR TO POURING CONCRETE.

ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-19.
HOT WEATHER CONCRETING PER ACI 305.
COLD WEATHER CONCRETING PER ACI 306.

ALL REINFORCING STEEL SHALL BE SET AND TIED IN PLACE PRIOR TO POURING OF CONCRETE. EXCEPT THE VERTICAL DOWELS FOR MASONRY WALL REINFORCING MAY BE "FLOATED" IN PLACE. DO NOT FIELD BEND BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE UNLESS SPECIFICALLY INDICATED OR APPROVED BY THE ENGINEER.

REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI 318-19.

BAR SUPPORTS AND HOLDING BARS SHALL BE PROVIDED FOR ALL REINFORCING STEEL TO INSURE MINIMUM CONCRETE COVER. BAR SUPPORTS SHALL BE PLASTIC TIPPED OR STAINLESS STEEL.

FORMWORK SHALL REMAIN IN PLACE UNTIL CONCRETE HAS OBTAINED AT LEAST 90% OF ITS 28 DAY COMPRESSIVE STRENGTH. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND RE-SHORING.

REINFORCING STEEL:

- LAP REQUIREMENTS: 30 BAR DIAMETERS COMPRESSIVE REINFORCEMENT (CONCRETE) OR 55 BAR DIAMETERS IN TENSION REINFORCEMENT (CONCRETE). TENSION REINFORCING BARS ARE MARKED "CONT." ON PLANS & INCLUDED LONGITUDINAL BARS IN BENDING AS WELL AS CROSS-TIE REINFORCING. 48 BAR DIAMETERS (MASONRY)
- CORNER BARS REQUIRED AT FOUNDATION WALL LOCATIONS OF SIZE & NUMBER OF HORIZONTAL WALL STEEL AT ALL CORNERS & INTERSECTIONS.
- REBAR NOT TO BE WELDED UNLESS ASTM A706 GRADE REBAR IS PROVIDED
- REBAR SHALL BE SECURELY TIED IN-PLACE WITH #16 ANNEALED IRON WIRE.
- CHAIRS SHALL BE USED IN SLABS FOR PROPER PLACEMENT.
- ALL WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A185-97, CENTERED IN SLAB.
- REINFORCING STEEL BARS :
#4 THRU #10 BARS: ASTM A615 - GRADE 60
#2 & #3 BARS: ASTM A615 - GRADE 40
- WELDED WIRE FABRIC (W.W.F.): ASTM A185

FOUNDATION BEARING NOTES:

-FOUNDATION PREP SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT. GEOTECHNICAL RECOMMENDATIONS SUPERCEDE ALL GENERIC RECOMMENDATIONS BELOW. THE FOLLOWING GUIDELINES ARE ONLY TO BE UTILIZED IF A GEOTECHNICAL REPORT IS NOT PROVIDED.
-PROVIDE BASE BENEATH SLAB PER GEOTECHNICAL REPORT. IF NO GEOTECHNICAL REPORT IS SUBMITTED, "KRIVONEN STRUCTURAL ENGINEERS" WILL NOT BE LIABLE FOR DAMAGES RELATED TO SLAB SETTLEMENT or HEAVE.
-IF NO GEOTECH REPORT IS PROVIDED, PROVIDE 4" LAYER OF ¾" MINUS ROADMIX BELOW SLABS ON GRADE. COMPACTION OF FILL BENEATH SLABS ON GRADE SHALL SATISFY 95% MAXIMUM DRY DENSITY PER ASTM D698.
-SOILS BENEATH FOUNDATIONS SHALL BE PROTECTED FROM FREEZING DURING CONSTRUCTION.
-POSITIVE DRAINAGE AND/OR THE EXCAVATION SHALL BE PUMPED TO PREVENT SURFACE WATER BUILD-UP DURING ALL PHASES OF CONSTRUCTION.
-PRIOR TO FILL PLACEMENT, REMOVE ALL TOPSOILS, ORGANICS, DEBRIS, OLD CONCRETE & MASONRY. EXISTING SLABS IN EXCESS OF 48" BELOW BOTTOM OF EXISTING FOOTINGS MAY REMAIN.
-ANY STRUCTURAL FILL REQUIRED BELOW FOOTINGS AND/OR SLABS SHOULD BE TO THE SPECIFICATION OF THE GEOTECHNICAL REPORT FOR THE PROJECT. IF NO GEOTECHNICAL REPORT IS PROVIDED, OUR OFFICE SHOULD BE CONTACTED DURING EXCAVATION TO VERIFY BEARING CONDITIONS.
-POTENTIAL STRUCTURAL SETTLEMENT GIVEN IN GEOTECHNICAL REPORT IS ASSUMED TO BE ACCEPTABLE TO OWNER. THE STRUCTURE HAS NOT BEEN DESIGNED TO MITIGATE THIS MAGNITUDE OF MOVEMENT.

CONCRETE SLAB NOTES:

-MAXIMUM CONCRETE SLUMP FOR ALL SLABS SHALL BE 4".
-ALL WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A-185. LAP ADJOINING PIECES AT LEAST ONE FULL MESH.
-SLAB JOINTS SHALL BE FILLED WITH APPROVED MATERIAL. THIS SHOULD HAPPEN AS LATE AS POSSIBLE. PREFERABLY 4-6 WEEKS AFTER THE SLAB HAS BEEN CAST. PRIOR TO FILLING, REMOVE ALL DEBRIS FROM SLAB JOINT, THEN FILL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AS FOLLOWS:
6" OR THICKER SLABS FILL JOINTS WITH EPOXY RESIN
4" - 6" SLAB CONTROL JOINTS FILL WITH FIELD MOLDED OR ELASTOMETRIC SEALANT.
-EXTERIOR SLABS MAY NOT BE SHOWN ON THE STRUCTURAL DRAWING. SEE CIVIL AND ARCHITECTURAL DRAWINGS FOR EXTERIOR SLAB LOCATIONS, THICKNESS AND REINFORCING.
-THE USE OF POLYPROPYLENE FIBERS IN LIEU OF REBAR OR WELDED WIRE FABRIC IS PROHIBITED.
-SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF CONCRETE DRAINS. SLOPE SLAB ACCORDINGLY TO DRAINS.

FOUNDATION NOTES:

-NO UNBALANCED BACKFILL SHALL BE DONE UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING EITHER BY TEMPORARY BRACING OR BY PERMANENT CONSTRUCTION.
-ALL RETAINING WALLS SHALL HAVE AT LEAST 12" OF FREE-DRAINING GRANULAR BACKFILL, FULL HEIGHT OF WALL. PROVIDE VERTICAL CONTROL JOINTS IN RETAINING WALLS AT APPROXIMATELY EQUAL INTERVALS NOT TO EXCEED 25'-0" OR 3 TIMES THE WALL HEIGHT.

WOOD FRAMING

- ALL WOOD FRAMING MATERIALS SHALL BE SURFACE DRIED WITH A MAXIMUM OF 9% MOISTURE CONTENT.
- ALL LUMBER FLOOR OR ROOF FRAMING SHALL BE BRACED AT MIDSPAN AND NO MORE THAN 8'-0" CENTERS WITH FULL DEPTH BLOCKING.
- ALL FRAMING EXPOSED TO THE WEATHER OR EXPOSED TO CONCRETE OR MASONRY SHALL BE PRESSURE TREATED IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVES ASSOCIATION SPECIFICATIONS.
- BOLT HOLES SHALL BE CAREFULLY DRILLED NOT MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER. BOLTED CONNECTIONS SHALL BE SNUGGED TIGHT BY NOT TO THE EXTENT OF CRUSHING THE WOOD UNDER WASHERS.
- WOOD MEMBERS SHALL BE BOLTED WITH A307 HOT DIPPED GALVANIZED BOLTS.

WOOD JOISTS:

- BCI JOIST FABRICATOR TO SUPPLY CONTRACTOR WITH INSTALLATION GUIDELINES, SHOP DRAWINGS INDICATING LENGTH & SPACING REQUIREMENTS & DETAILING AS REQUIRED FOR INSTALLATION.
- BCI BLOCKING & NECESSARY HARDWARE FOR INSTALLATION TO BE PROVIDED BY JOIST MANUFACTURER.
- TJI JOIST SUBSTITUTE TO BE EQUAL QUALITY & PERFORMANCE TO BCI'S SPECIFIED.
- WOOD I-JOISTS SHALL NOT BE CUT, NOTCHED, COPED, DRILLED, NOR OTHERWISE ALTERED IN ANY WAY UNLESS SPECIFICALLY CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN REQUIREMENTS.
- ALL ROOF JOISTS SHALL BE POSITED WITH NATURAL CAMBER TURNED "UP"

WOOD TRUSSES:

- ROOF TRUSS DESIGN LOADS ARE 63 PSF SNOW + ADDITIONAL SNOW DRIFT LOADS ON PLAN +8 PSF DEAD TOP CHORD & 7 PSF DEAD BOTTOM CHORD. ADDITIONALLY, BOTTOM CHORDS SHALL BE DESIGNED FOR 10 PSF ATTIC LIVE LOAD (ASSUMED ATTIC ACCESS OPENING IS SMALLER THAN 20"x30")
- TRUSS SUPPLIER TO FURNISH CONTRACTOR WITH SHOP DRAWINGS. INCLUDED IN THIS SUBMITTAL ARE STRESS DIAGRAMS, CONNECTOR DESIGNATIONS AND BRIDGING AND/OR BLOCKING REQUIREMENTS.
- ADDITIONALLY, TRUSS MANUFACTURER IS TO PROVIDE INSTRUCTIONS TO CONTRACTOR FOR INSTALLATION OF PREMANUFACTURED TRUSS UNITS.
- TRUSS DRAWINGS ARE DIAGRAMMATICAL & ARE THEREFORE INTENDED TO ESTABLISH OUTLINES OF TRUSS CONFIGUARTIONS.
- TRUSS DESIGN TO ACCOUNT FOR SECONDARY BENDING STRESSES DUE TO DEAD, LIVE, AND WIND LOADS SHALL BE CONSIDERED BY THE MANUFACTURER.
- TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, OR ALTERED IN ANY WAY WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
- WOOD TRUSSES SHALL BE ERECTED IN ACCORDANCE WITH THE TRUSS MANUFACTURER'S REQUIREMENTS BY AN EXPERIENCED CONTRACTOR.

WOOD STUD WALLS:

-PROVIDE FULL DEPTH BLOCKING AT MIDHEIGHT ALL INTERIOR BEARINGS STUD WALLS
-PROVIDE 2x BLOCKING (ON EDGE IF SHEATHING IS ON 1-FACE & FLAT IF SHEATHING IS ON 2-FACES) AT SHEATHING PANEL JOINTS IN SHEAR WALLS.
-BEARING WALLS TO HAVE DOUBLE (CONT.) 2x6 TOP PLATES W/ STAGGERED SPLICES UNLESS NOTED OTHERWISE.
-BOTTOM WALL PLATES OR VERTICAL STUDS IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.
-PROVIDE 2x6 @ 16"O.C. VERTICAL FRAMING @ ALL BEARING & EXTERIOR WALLS UNLESS NOTED OTHERWISE.
-PROVIDE DOUBLE BEARING TRIMMER STUDS & DOUBLE FULL HT. KING STUDS @ ALL EXTERIOR WALL OPENING JAMBS UNLESS NOTED OTHERWISE.
-PROVIDE STUD PACKS BENEATH GIRDER TRUSSES OR BEAMS EQUAL TO OR GREATER THAN THE WIDTH OF THE MEMBER BEING SUPPORTED UNLESS NOTED OTHERWISE.
-LAMINATIONS OF STUD PACKS TO BE STITCHED TOGETHER W/ 16d RING-SHANKED NAILS @ 12"O.C.
-STUD PACKS, POSTS, & BLOCKING TO BE STACKED CONTINUOUSLY TO FOUNDATION UNLESS NOTED OTHERWISE.

PLYWOOD AND OSB SHEATHING:

- ALL PLYWOOD AND OSB CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE AMERICAN PLYWOOD ASSOCIATION (APA) SPECIFICATIONS.

ROOF & FLOOR DIAPHRAGMS:

- INSTALL PLYWOOD OR OSB PANELS WITH THE LONG DIMENSION OF THE PANELS ACROSS THE SUPPORTS AND WITH THE PANEL CONTINUOUS OVER TWO OR MORE SPANS. STAGGER PANEL END JOINTS. ALLOW ⅛" SPACING BETWEEN PANEL ENDS & EDGES UNLESS OTHER WISE RECOMMENDED BY PANEL MANUFACTURER. (SEE SHEAR DIAPHRAGM ELEVATION)

SHEAR WALLS:

- INSTALL PLYWOOD OR OSB PANELS WITH THE LONG DIMENSION OF THE PANELS ACROSS THE SUPPORTS AND WITH THE PANEL CONTINUOUS OVER TWO OR MORE SPANS. PANELS TO BE ORIENTED VERTICALLY OR HORIZONTALLY.
- PROVIDE 2x4 BLOCKING (FLAT TO PANEL) AT UNSUPPORTED PANEL EDGES AS FOLLOWS:
ROOF AND FLOORS = AT AREAS INDICATED ON PLANS.
WALLS = ALL EXTERIOR WALLS AND INTERIOR WALLS AS SHOWN ON PLANS.

MATERIALS:

DIMENSIONAL FRAMING:
LUMBER - #1 HEM FIR: Fb = 975 PSI, Fv = 150 PSI, E = 1.5x10^6 PSI
2x4 FRAMING-#1 HEM FIR (CONSTRUCTION GRADE): Fb = 925 PSI, Fv = 135 PSI, E = 1.5x10^6 PSI
LVL BEAMS:
1¾" = Fv = 285 PSI, Fb = 2800 PSI, E = 2.0x10^6 PSI
3½" or WIDER = Fv = 285 PSI, Fb = 3100 PSI, E = 2.0x10^6 PSI
GLU-LAM BEAMS (V8 ORIENTATION): Fv = 265 PSI, Fb = 2400 PSI, E = 1.8x10^6 PSI
POSTS: HEM FIR #1
VERSA-STUD 1.7 2400: Fv = 285 PSI, Fb = 2400 PSI, Fc = 3000 PSI, E = 1.7x10^6 PSI

WOOD FRAMING (CONT.)

NAILING SCHEDULE:

CONNECTION	ATTACHMENT
JOIST TO SILL OR GIRDER, TOENAIL	(3)-10d
BRIDGING TO JOIST, TOENAIL EACH END	(2)-10d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	(3)-10d TOENAILS
TOP PLATE TO STUD, END NAIL	(2)-16d
STUD TO SOLE PLATE	(4)-8d TOENAIL or (2)-16d
DOUBLE STUDS, FACE NAIL	16d @ 24"O.C.
DOUBLE TOP PLATES, FACE NAIL	16d @ 16"O.C.
BUILT-UP STUD PACKS	20d @ 6"O.C.
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	(2)-16d
CONTINUOUS HEADER, TWO PIECES	16d @ 15"O.C.
ROOF JOISTS TO PLATE, TOENAIL	(3)-10d
CONTINUOUS HEADER TO STUD, TOENAIL	(4)-10d
ROOF JOISTS, LAPS OVER PARTITIONS, FACE NAIL	(3)-10d
ROOF JOISTS TO PARALLEL RAFTERS, FACE NAIL	(3)-16d
BUILT-UP CORNER STUDS	20d @ 24"O.C.
BUILT-UP CORNER BEAMS	20d @ 32"O.C.
⅝"(40/20) OSB ROOF SHEATHING (LAY SHEATHING IN STAGGERED CONFIGURATIONS AT PANEL EDGE)	8d @ 6" O.C. @ EDGES 8d @ 12"O.C. @ INTERMEDIATE FRAMING OR 1½"x16ga STAPLES @ 6"O.C. @ PANEL EDGES & @ 12"O.C. @ INT. FRAMING. (STAPLES ONLY PERMITTED IF ALL DIAPHRAGM PANEL JOINTS ARE BLOCKED)
7/16" (GRADE 2-M-W) OSB WALL SHEATHING (2x BLOCKING @ ALL PANEL JOINTS)	8d @ 6"O.C. @ EDGES 8d @ 12"O.C. @ INTERMEDIATE FRAMING OR 1½"x16ga STAPLES @ 4"O.C. @ PANEL EDGES & @ 12"O.C. @ INT. FRAMING.
¾" (48/24) T&G OSB SUBFLOOR (NAILING + CONTINUOUS BEAD OF CONSTRUCTION ADHESIVE)	8d @ 6"O.C. @ EDGES 8d @ 12"O.C. @ INTERMEDIATE FRAMING

KRIVONEN
STRUCTURAL ENGINEERS

DATE STAMP: 1/8/2025 8:54:25 AM

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 25123
DESIGNED: ML
DRAWN: KZ
CHECKED: ML
APPROVED: ML
DATE: 6-10-25

MONTANA MARK LACHMUND 16770 REGISTERED PROFESSIONAL ENGINEER

mosaics architecture-planning-design
317 Cruse Avenue Suite 201
Helena, Montana 59601
406.449.2013
www.mosaicarch.com

BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

STRUCTURAL NOTES

SHEET NO.
S300

STRUCTURAL NOTES (CONT.)

BEARING STUD SCHEDULE

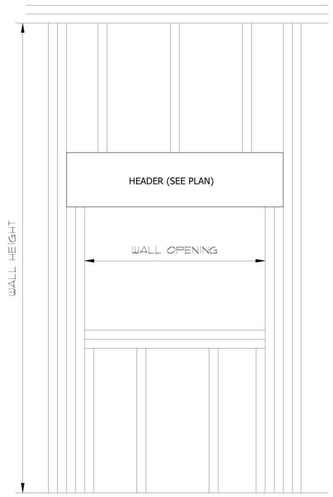
EXTERIOR WALL OPENING JAMB FRAMING

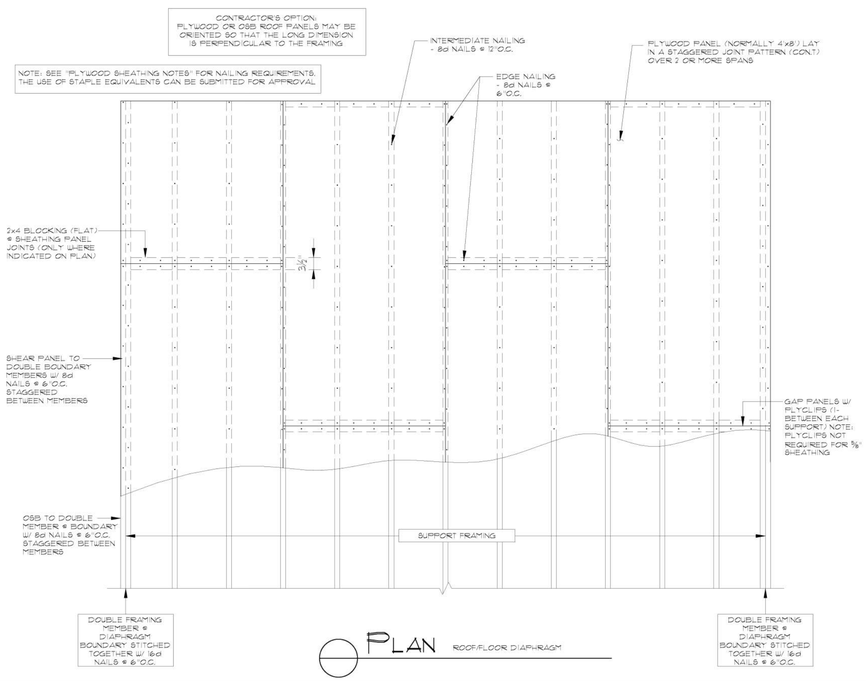
VALUE = # BEARING TRIMMER STUDS / # OF FULL HEIGHT KING STUDS

WALL HEIGHT	9'-0"		10'-0"		11'-0"		12'-0"	
WALL OPENING								
3'-0"	1	1	1	1	1	1	1	2
4'-0"	1	1	1	1	1	2	1	2
5'-0"	1	1	1	2	1	2	1	2
6'-0"	2	2	2	2	2	2	2	2
7'-0"	2	2	2	2	2	2	2	2
8'-0"	2	2	2	2	2	2	2	3
9'-0"	2	2	2	2	2	3	2	3
10'-0"	3	2	3	2	3	3	3	3
11'-0"	3	2	3	3	3	3	3	4
12'-0"	3	2	3	3	3	3	3	4

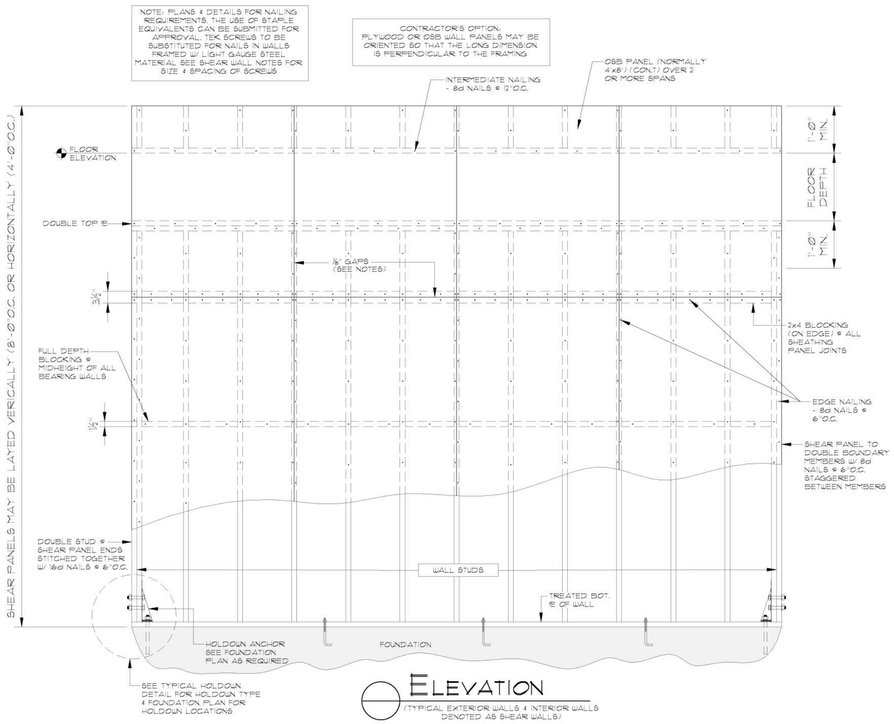
TABLE VALUES ASSUME:

-TABLE VALUES ASSUME 63 PSF SNOW LOAD AND 115 MPH EXP. "C" ULT. WIND PRESSURE.
-FRAMING OF #2 H.F. OR BETTER
-WALL BEARING ROOF TRUSSES (ONLY) SPANNING 50'-0" OR LESS WITH 2'-0" EAVES.
-FRAMING SPECIFIED IN TABLE ONLY TO BE USED IF INFORMATION IS NOT SHOWN ON PLANS.
-JAMB FRAMING STUDS TO BE STITCHED TOGETHER W/ SIMPSON SDWS SCREWS @ 12"O.C. WITH LENGTH NECESSARY TO ENGAGE ALL MEMBERS.





PLAN ROOF/FLOOR DIAPHRAGM



ELEVATION (TYPICAL EXTERIOR WALLS & INTERIOR WALLS DENOTED AS SHEAR WALLS)

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mosaics architecture-planning-design
317 Cruse Avenue Suite 201
Helena, Montana 59601
406.449.2013
www.mosaicarch.com

BANNOCK COUNTY LANDFILL

ENTRANCE FACILITY

STRUCTURAL NOTES

SHEET NO.

S301

KRIVONEN STRUCTURAL ENGINEERS

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ABBREVIATIONS

ACC	AIR COOLED CONDENSER
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AF	AIR FOIL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFR	ABOVE FINISHED ROOF
AFS	AIR FLOW STATION
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
ATC	AUTOMATIC TEMPERATURE CONTROL
ATM	ATMOSPHERE
AWG	AMERICAN WIRE GAUGE
B	BOILER
BB	BASEBOARD
BC	BACKWARD CURVED
BD	BACKDRAFT DAMPER
BF	BOILER FEED
BHP	BRAKE HORSEPOWER
BI	BACKWARD INCLINED
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DUCT
BOJ	BOTTOM OF JOIST
BOS	BOTTOM OF STEEL
BTU	BRITISH THERMAL UNIT
C	COMMON
CAV	CONSTANT AIR VOLUME
CC	COOLING COIL
CCW	COUNTER CLOCKWISE
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
C&I	CONTROLS & INSTRUMENTATION
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CND	CONDENSATE
CONT	CONTINUATION
CORR	CORRIDOR
CT	COOLING TOWER
CU	CONDENSING UNIT
CH	CABINET HEATER
CV	CONTROL VALVE
CVS	CONTROL VALVE STATION
CW	CLOCKWISE
dB	DECIBEL
DB	DRY BULB TEMPERATURE (°F)
DDC	DIRECT DIGITAL CONTROL
DH	DUCT HEATER
DP	DEW POINT TEMPERATURE (°F)
DX	DIRECT EXPANSION
E	EXHAUST
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE (°F)
EC	ELECTRICAL CONTRACTOR
EDR	EQUIVALENT DIRECT RADIATION
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
ELEV	ELEVATION
ERV	ENERGY RECOVERY VENTILATOR
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE (°F)
F&T	FLOAT & THERMOSTATIC
FA	FACE AREA
FC	FORWARD CURVED
FC	FAN COIL
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FT	FEET
GA	GAUGE OR GAGE
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GH	GRAVITY HOOD
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H	HUMIDIFIER
HC	HEATING COIL
HG	MERCURY
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HR	HOUR
HX	HEAT EXCHANGER

ID	INSIDE DIAMETER
IFB	INTEGRAL FACE & BYPASS
IGV	INLET GUIDE VANES
IPS	IRON PIPE SIZE
IU	INDUCTION UNIT
KW	KILOWATTS
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE (°F)
LF	LINEAR FEET
LWT	LEAVING WATER TEMPERATURE (°F)
M	MOTOR OPERATED
MAU	MAKEUP AIR UNIT
MB	MIXING BOX
MBH	1000 BTU/HR
MC	MECHANICAL CONTRACTOR
MFR	MANUFACTURER
MS	MINI-SPLIT
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPS	NOMINAL PIPE SIZE
OA	OUTSIDE AIR
OAD	OUTSIDE AIR DAMPER
OBD	OPPOSED BLADE DAMPER
P	PUMP
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE
PHC	PREHEAT COIL
PPM	PART PER MILLION
PROP	PROPELLER
PRV	PRESSURE REDUCING VALVE
PSIA	PSI, ABSOLUTE
PSIG	PSI, GAUGE
QTY	QUANTITY
R	REGISTER
RA	RETURN AIR
RD	RADIAL DAMPER
RF	RETURN/RELIEF AIR FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
SA	SUPPLY AIR
SAF	SUPPLY AIR FAN
SC	SENSIBLE COOLER
SCFM	CFM, STANDARD CONDITIONS
SD	SMOKE DETECTOR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SENS	SENSIBLE
SP	STATIC PRESSURE
SPS	STATIC PRESSURE SENSOR
SS	STAINLESS STEEL
T	THERMOSTAT
TA	TRANSFER AIR
TCC	TEMPERATURE CONTROL CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TG	TRANSFER GRILL
TOS	TOP OF STEEL
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UH	UNIT HEATER
UNC	UNDERCUT
UV	UNIT VENTILATOR
VA	VOLT-AMPERE
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
WB	WET BULB TEMPERATURE (°F)
WC	WATER COLUMN
WG	WATER GAUGE
WSHP	WATER SOURCE HEAT PUMP
ΔT	TEMPERATURE DIFFERENCE (°F)

MECHANICAL LEGEND

ANNOTATION SYMBOLS

- X / X — 3D VIEW NUMBER / SHEET NUMBER
- X / X — DETAIL NUMBER / SHEET NUMBER
- X / X — SECTION NUMBER / SHEET NUMBER
- X / CFM — AIR DEVICE MARK AND CFM
- X / CFM / OBD — AIR DEVICE MARK AND CFM - PROVIDE OPPOSED BLADE DAMPER
- X / CFM / RD — AIR DEVICE MARK AND CFM - PROVIDE RADIAL DAMPER
- ME-# — MECHANICAL EQUIPMENT MARK
- (E) ME-# — EXISTING MECHANICAL EQUIPMENT
- (D) ME-# — DEMOLISHED MECHANICAL EQUIPMENT
- POINT OF NEW CONNECTION
- POINT OF DISCONNECTION

HVAC CONTROL SYMBOLS

- T — ADJUSTABLE THERMOSTAT
- T# — ADJUSTABLE THERMOSTAT W/ EQUIPMENT MARK
- T — ADJUSTABLE THERMOSTAT W/ LOCKABLE COVER
- C — ADJUSTABLE CO2 SENSOR
- S — WALL SWITCH
- H — ADJUSTABLE HUMIDISTAT
- T — TEMPERATURE SENSOR
- H — HUMIDITY SENSOR
- C — CO2 SENSOR
- P — BUILDING PRESSURE SENSOR
- SP — STATIC PRESSURE SENSOR
- DP — DIFFERENTIAL PRESSURE SENSOR
- CO/NO — CARBON MONOXIDE / NITRIC OXIDE SENSOR

HVAC DUCTWORK

- W"xD" — RECTANGULAR DUCT WIDTH x DEPTH
- X"ø — ROUND DUCT DIAMETER
- W"/D" — OVAL DUCT WIDTH/DEPTH
- X"ø — FLEXIBLE DUCT DIAMETER
- FLOOR/CEILING SUPPLY DIFFUSER
- FLOOR/CEILING RETURN GRILLE
- FLOOR/CEILING EXHAUST GRILLE
- SIDEWALL SUPPLY DIFFUSER
- SIDEWALL RETURN/EXHAUST GRILLE

NOTE: THIS IS A STANDARD LEGEND. NOT ALL PIPE TYPES AND SYMBOLS ARE NECESSARILY UTILIZED IN THE DRAWINGS.

HVAC DUCTWORK (CONT.)

- SUPPLY DUCT (SECTION VIEW)
- RETURN DUCT (SECTION VIEW)
- EXHAUST DUCT (SECTION VIEW)
- OUTDOOR AIR DUCT (SECTION VIEW)
- DUCT UP (PLAN VIEW)
- DUCT DOWN (PLAN VIEW)
- R — INCLINED RISE - IN DIRECTION OF AIRFLOW
- D — INCLINED DROP - IN DIRECTION OF AIRFLOW
- INTERNAL DUCT LINING
- ELBOW WITH TURNING VANES
- RADIUS ELBOW
- MANUAL VOLUME DAMPER
- R — REMOTE VOLUME DAMPER
- BD — BACKDRAFT DAMPER
- Z — ZONE DAMPER
- B — BYPASS DAMPER
- M — MOTORIZED DAMPER
- FL — FIRE DAMPER
- FSD — FIRE/SMOKE DAMPER
- SD — SMOKE DAMPER

GENERAL

- (E) NAME — EXISTING PIPE TO REMAIN
- (D) NAME — EXISTING PIPE TO BE DEMOLISHED
- NAME — NEW PIPING
- DIRECTION OF FLOW

HVAC PIPING

- HWS — HEATING WATER SUPPLY
- HWR — HEATING WATER RETURN
- CWS — CHILLED WATER SUPPLY
- CWR — CHILLED WATER RETURN
- CTS — COOLING TOWER SUPPLY
- CTR — COOLING TOWER RETURN
- HPWS — HEAT PUMP WATER SUPPLY
- HPWR — HEAT PUMP WATER RETURN
- HPS — HIGH PRESSURE STEAM
- MPS — MEDIUM PRESSURE STEAM
- LPS — LOW PRESSURE STEAM
- CND — STEAM CONDENSATE RETURN
- ATV — ATMOSPHERIC VENT
- REF — REFRIGERANT (LIQUID AND SUCTION)

PIPE FITTINGS

- ELBOW
- PIPE BREAK
- PIPE UP
- PIPE DOWN
- CHANGE IN ELEVATION OF PIPE
- SIDE CONNECTION, TEE FITTING
- TOP CONNECTION, TEE FITTING UP
- BOTTOM CONNECTION, TEE FITTING DOWN
- CAPPED OUTLET OR BLIND FLANGE
- CONCENTRIC REDUCER

VALVES

- MANUAL BALANCING VALVE
- AUTOMATIC BALANCING VALVE
- VENTURI VALVE
- ISOLATION VALVE
- MANUAL 3-WAY VALVE
- STRAINER
- CHECK VALVE
- BACKFLOW PREVENTER
- PRESSURE REDUCING VALVE
- GAS PRESSURE REGULATOR
- TEMPERATURE AND/OR PRESSURE RELIEF VALVE
- HOSE-END DRAIN W/ CAP
- BOILER DRAIN W/ CAP
- S — SOLENOID VALVE
- M — 2-WAY TEMPERATURE CONTROL VALVE
- M — 3-WAY TEMPERATURE CONTROL VALVE
- STEAM TRAP

PIPING SPECIALTIES

- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- PRESSURE / TEMPERATURE PORT
- UNION OR FLANGE
- PIPE WELL - EMPTY
- T — TEMPERATURE SENSOR
- P — PRESSURE SENSOR
- FS — FLOW SWITCH
- PS — PRESSURE SWITCH
- P — PRESSURE GAUGE, SNUBBER & NEEDLE VALVE
- T — TEMPERATURE GAUGE
- FLEXIBLE CONNECTOR
- THERMAL/SEISMIC EXPANSION LOOP
- PIPE GUIDES
- ANCHOR
- F — FLOW METER

MECHANICAL GENERAL NOTES

INSTALLATION:

A. NEW PIPING, DUCTWORK AND EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE CURRENTLY ADOPTED INTERNATIONAL MECHANICAL AND INTERNATIONAL BUILDING CODES.
B. EQUIPMENT SHALL BE INSTALLED LEVEL, PLUMB, AND FIRMLY ANCHORED IN LOCATIONS INDICATED ON PLAN. OBSERVE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PRODUCTS SERVE THEIR INTENDED FUNCTION.
C. INSTALL EQUIPMENT, DUCTWORK, AND PIPING SO AS TO MAINTAIN CODE REQUIRED CLEARANCES FOR ELECTRICAL AND TELECOMMUNICATION EQUIPMENT.
D. ELEMENTS PENETRATING BUILDING COMPONENTS (ROOF ASSEMBLIES, WALL ASSEMBLIES, ETC.) SHALL BE SEALED WEATHER AND WATER TIGHT. COORDINATE PENETRATIONS WITH GENERAL CONTRACTOR TO PATCH TO THE SATISFACTION OF THE ARCHITECT OR ENGINEER.

COORDINATION:

A. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT, ROUTING OF DUCTWORK, AND ROUTING OF PIPING WITH OTHER TRADES.
B. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO REVIEW THE DRAWINGS OF OTHER DISCIPLINES AND PROVIDE THE NECESSARY LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
C. COORDINATE THE INSTALLATION OF GRILLES, REGISTERS AND DIFFUSERS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS, THE ELECTRICAL LIGHTING PLANS, AND IF RELEVANT, THE TELECOMMUNICATION AND FIRE SPRINKLER PLANS.

ELECTRICAL COORDINATION:

A. SEE THE MEP COORDINATION SCHEDULE FOR ELECTRICAL INFORMATION. COORDINATE WITH OTHER TRADES TO ENSURE THAT ELECTRICAL DISCONNECTS, MOTOR STARTERS, VARIABLE FREQUENCY DRIVES, CONTROLS, AND ELECTRICAL ACCESSORIES ARE FURNISHED AND/OR INSTALLED BY THE APPROPRIATE TRADE.

SITE ELEVATION:

A. EQUIPMENT SHALL BE SELECTED FOR THE PROJECT ELEVATION OF 4,462'.

MECHANICAL SHEET INDEX

NUMBER	SHEET NAME
M001	MECHANICAL LEGEND & NOTES
M002	MECHANICAL SPECIFICATIONS
M110	MECHANICAL PLAN

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: LHP
DRAWN: LHP
CHECKED: CMS
APPROVED: REB
DATE: 06/17/2025

PROFESSIONAL ENGINEER — LICENSED — 22070 — STATE OF IDAHO — ROSS BALFOUR
06/17/2025

Morrison Maierle
engineers - surveyors - planners - scientists
1055 Mount Ave
Missoula, Montana 59801
406.542.4841
www.m-m.net

100% - CD CONSTRUCTION DOCUMENT

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
MECHANICAL LEGEND & NOTES

SHEET NO.
M001

DATE STAMP 6/18/2025 8:53:14 AM

MECHANICAL SPECIFICATIONS

GENERAL

1. THE MECHANICAL CONTRACTOR SHALL INCLUDE ALL ITEMS, ARTICLES, MATERIALS, OPERATIONS AND METHODS LISTED, MENTIONED, OR SCHEDULED IN THESE SPECIFICATIONS AND THE ACCOMPANYING DRAWINGS. ALL MATERIAL, EQUIPMENT, AND LABOR SHALL BE FURNISHED TOGETHER WITH ALL INCIDENTAL ITEMS REQUIRED BY GOOD PRACTICE TO PROVIDE THE COMPLETE SYSTEMS DESCRIBED.
2. EXAMINE AND REFER TO ALL ARCHITECTURAL, CIVIL, STRUCTURAL, ELECTRICAL, UTILITY, LANDSCAPE AND MECHANICAL DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION CONDITIONS WHICH MAY AFFECT THE MECHANICAL WORK. INSPECT THE BUILDING SITE AND EXISTING FACILITIES FOR VERIFICATION OF PRESENT CONDITIONS. MAKE PROPER PROVISIONS FOR THESE CONDITIONS IN PERFORMANCE OF THE WORK AND COST THEREOF.
3. ALL WORK ON THE PROJECT SHALL CONFORM TO ALL ADOPTED CITY, STATE, AND NATIONAL CODES & REGULATIONS. SUCH CODES & REGULATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE IBC, IMC, IECC, IDAHO PLUMBING CODE, NFPA, NEC, SERVICING UTILITY COMPANIES AND THE AUTHORITY HAVING JURISDICTION.
4. THE MECHANICAL AND ELECTRICAL CONTRACTORS SHALL BE RESPONSIBLE FOR AND PAY FOR ALL FEES AND PERMITS REQUIRED FOR WORK UNDER THEIR CONTRACT AND UNDER THEIR SUPERVISION BY SUBCONTRACT.
5. ALL USAGE CONTRACTS BETWEEN THE OWNER AND THE SERVING UTILITIES COMPANY, SUCH AS MEMBERSHIP AND USAGE CHARGES OR FEES, ETC., FOR THE PURPOSE OF OBTAINING THE SERVICES FOR THE UTILITY COMPANY SHALL BE APPLIED FOR AND PAID FOR BY THE OWNER.

RESPONSIBILITY

1. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF A SATISFACTORY AND COMPLETE SYSTEM IN ACCORDANCE WITH THE INTENT OF THE DRAWING AND SPECIFICATIONS. PROVIDE, AT NO EXTRA COST, ALL INCIDENTAL ITEMS, MATERIALS, ACCESSORIES AND LABOR REQUIRED FOR COMPLETION OF THE WORK EVEN THOUGH THEY ARE NOT SPECIFICALLY MENTIONED OR INDICATED ON THE DRAWINGS OR IN THE SPECIFICATIONS.
2. THE DRAWINGS DO NOT ATTEMPT TO SHOW COMPLETE DETAILS OF THE BUILDING CONSTRUCTION WHICH AFFECT THE MECHANICAL INSTALLATION; AND REFERENCE IS THEREFORE REQUIRED TO THE ARCHITECTURAL, CIVIL, STRUCTURAL, LANDSCAPE AND ELECTRICAL DRAWINGS AND SPECIFICATIONS AND TO SHOP DRAWINGS OF ALL TRADES FOR ADDITIONAL DETAILS WHICH AFFECT THE INSTALLATION OF THE WORK COVERED UNDER THIS DIVISION OF THE CONTRACT.
3. LOCATION OF MECHANICAL SYSTEM COMPONENTS SHALL BE CHECKED FOR CONFLICTS WITH OPENINGS, STRUCTURAL MEMBERS AND COMPONENTS OF OTHER SYSTEMS HAVING FIXED LOCATIONS. IN THE EVENT OF ANY CONFLICTS, THE ARCHITECT/ENGINEER SHALL BE CONSULTED AND THEIR DECISION SHALL GOVERN. NECESSARY CHANGES SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.
4. DO NOT INSTALL EQUIPMENT UNTIL COMPLETE SHOP DRAWINGS OF SUCH EQUIPMENT HAVE BEEN APPROVED BY THE ARCHITECT/ENGINEER. ANY WORK INSTALLED BY THE CONTRACTOR, PRIOR TO APPROVAL OF SHOP DRAWINGS, WILL BE AT THE CONTRACTOR'S RISK.
5. ALL MODIFICATIONS AND CHANGES REQUIRED DUE TO INSTALLATION OF EQUIPMENT OTHER THAN THE EQUIPMENT SCHEDULED AND SPECIFIED SHALL BE MADE AT THE CONTRACTOR'S EXPENSE, THIS INCLUDES WORK BY OTHER TRADES. IF THE INSTALLATION OF EQUIPMENT OTHER THAN THE SCHEDULED AND SPECIFIED EQUIPMENT REQUIRES MODIFICATIONS TO STRUCTURE, ELECTRICAL SYSTEMS, PLUMBING SYSTEMS, FIRE PROTECTION OR FIRE ALARM SYSTEMS, ANY AND ALL CHANGES SHALL BE MADE AT THE MECHANICAL CONTRACTORS EXPENSE.
6. ALL WORK TO BE PERFORMED SHALL FIRST BE SCHEDULED AND SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR ACCEPTANCE.
7. THE CONTRACTOR SHALL BE CAREFUL NOT TO BLOCK ANY PATHS OF EGRESS WHILE PERFORMING THE WORK SPECIFIED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF ALL MATERIALS RESULTING FROM HIS/HER WORK. CLEANUP SHALL BE PERFORMED TO THE LEVEL OF ACCEPTANCE OF THE OWNER'S REPRESENTATIVE & THE ENGINEER.
9. THE CONTRACTOR SHALL GUARANTEE THAT ALL WORK EXECUTED UNDER THEIR CONTRACT SHALL BE FREE OF DEFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

INTENT OF DRAWINGS

1. THE DRAWINGS ARE PARTLY DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EXACT LOCATION OF PIPING AND DUCTWORK UNLESS SPECIFICALLY DIMENSIONED. RISER AND OTHER DIAGRAMS ARE SCHEMATIC AND DO NOT NECESSARILY SHOW THE PHYSICAL ARRANGEMENT OF THE EQUIPMENT. THEY SHALL NOT BE USED FOR OBTAINING LINEAL RUNS OF PIPING OR DUCTWORK, NOR SHALL THEY BE USED FOR SHOP DRAWINGS FOR PIPING AND DUCTWORK FABRICATION OR ORDERING. DISCREPANCIES SHOWN ON DIFFERENT PLANS, OR BETWEEN PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR RESOLUTION.

MATERIALS AND EQUIPMENT

1. MANUFACTURER'S TRADE NAMES AND CATALOG NUMBERS ARE LISTED TO INDICATE THE QUALITY OF EQUIPMENT OR MATERIALS DESIRED FOR INSTALLATION. ALTERNATIVE EQUIPMENT OR MATERIALS MAY BE SUBMITTED FOR PRIOR APPROVAL BEFORE BIDDING THE PROJECT. NO SUBSTITUTIONS WILL BE ALLOWED AFTER BIDDING.
2. WRITTEN PRIOR APPROVAL FOR SUBSTITUTIONS MUST BE SUBMITTED TO AND RECEIVED BY THE ARCHITECT/ENGINEER SEVEN (7) DAYS PRIOR TO BID OPENING. REQUESTS FOR SUBSTITUTION ARE TO BE SUBMITTED SUFFICIENTLY AHEAD OF THE DEADLINE TO GIVE AMPLE TIME FOR EXAMINATION. PRIOR APPROVAL REQUEST FOR SUBSTITUTION MUST INDICATE THE SPECIFIC ITEM OR ITEMS TO BE FURNISHED IN LIEU OF THOSE SCHEDULED, TOGETHER WITH COMPLETE TECHNICAL AND COMPARATIVE DATA ON SCHEDULED ITEMS AND ITEMS PROPOSED FOR SUBSTITUTION.
3. HIGH ALTITUDE OPERATION: CAPACITY OF ALL EQUIPMENT IS TO BE SIZED AND MANUFACTURED TO PERFORM AT THE ELEVATION OF THE PROJECT SITE. IF NOT SPECIFICALLY INDICATED IN THE EQUIPMENT SCHEDULE OR IN THE SPECIFICATIONS PROVIDE ALL REQUIRED ACCESSORIES AND EQUIPMENT FOR PROPER OPERATION AT ELEVATION OF THE PROJECT SITE.
4. STORE MATERIALS AND EQUIPMENT INDOORS AT THE JOB SITE OR, IF THIS IS NOT POSSIBLE, STORE ON RAISED PLATFORMS AND PROTECT FROM THE WEATHER BY MEANS OF WATERPROOF COVERS. COVERINGS SHALL PERMIT CIRCULATION OF AIR AROUND THE MATERIALS TO PREVENT CONDENSATION OF MOISTURE. SCREEN OR CAP OPENINGS IN EQUIPMENT TO PREVENT THE ENTRY OF VERMIN.
5. ALL NEW PIPING SHALL BE IDENTIFIED WITH SETON SET MARK PIPE MARKERS, LETTERED TO MATCH EXISTING - IF APPLICABLE - AND MARKED AT A MAXIMUM OF EVERY 25 FT. ALL NEW VALVES SHALL BE IDENTIFIED WITH BRASS OR ALUMINUM VALVE TAGS.

MATERIALS AND EQUIPMENT (CONT.)

6. SEE THE DUCTWORK SCHEDULE AND MECHANICAL PIPING SCHEDULE ON THE DRAWINGS FOR MATERIAL AND INSULATION REQUIREMENTS.
7. COORDINATE THE INSTALLATION OF GRILLES, REGISTERS AND DIFFUSERS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS AND THE ELECTRICAL LIGHTING PLANS.
8. VERIFY THE LOCATION OF THERMOSTATS AND SENSORS WITH THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION. INSTALL THERMOSTATS 48" ABOVE FINISHED FLOOR PER ADA REQUIREMENTS.
9. PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT, DUCTWORK AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.
10. FLEXIBLE DUCTWORK BETWEEN BRANCH DUCTS AND GRILLES, REGISTERS OR DIFFUSERS SHALL BE LIMITED TO 5FT.
11. INSTALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE ALL EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.
12. INSTALL FLOOR DRAIN STRAINERS AND CLEANOUT COVERS FLUSH AND LEVEL WITH FINISHED FLOOR.
13. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE-CAULKING ALL FIRE-RATED AND SMOKE-RATED WALL PENETRATIONS OF PIPING, DUCTWORK, ETC.
14. PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS AND DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

SHOP DRAWINGS AND SUBMITTALS

1. WITHIN 30 DAYS OF AWARDING OF THE CONTRACT, THE MECHANICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND/OR SUBMITTALS FOR ALL SCHEDULED EQUIPMENT AND MATERIALS INCLUDED IN THE CONSTRUCTION DOCUMENTS.
2. ALL SHOP DRAWINGS AND SUBMITTALS SHALL BE IN THE FORM OF ELECTRONICALLY TRANSMITTED PDFS. SHOP DRAWINGS AND SUBMITTALS SHALL INCLUDE SHOP DRAWINGS AND LITERATURE SHOWING ITEMS TO BE USED, SIZE, DIMENSIONS, CAPACITY, ROUGH-IN, AND ANY OTHER INFORMATION NECESSARY FOR A COMPLETE REVIEW. MANUFACTURER'S LITERATURE SHOWING MORE THAN ONE ITEM SHALL BE CLEARLY MARKED AS TO WHICH ITEM IS BEING FURNISHED OR IT WILL BE REJECTED AND RETURNED WITHOUT REVIEW.
3. EACH SUBMITTED ITEM MUST BE CLEARLY MARKED WITH THE PROJECT NAME, DATE, BRANCH OF WORK, SUBMITTING PARTY, REVISION NUMBER, AND ASSOCIATED SCHEDULE. SUBMITTALS NOT IDENTIFIED AS DESCRIBED ABOVE WILL BE REJECTED AND RETURNED WITHOUT REVIEW.
4. PRIOR TO THEIR SUBMISSION, EACH SUBMITTAL SHALL BE THOROUGHLY CHECKED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DOCUMENT REQUIREMENTS. EACH SUBMITTAL SHALL THEN BEAR A STAMP EVIDENCING SUCH CHECKING AND SHALL SHOW CORRECTIONS MADE, IF ANY. SUBMITTALS REQUIRING EXTENSIVE CORRECTIONS SHALL BE REVISED BEFORE SUBMISSION TO THE ENGINEER. EACH SUBMITTAL NOT STAMPED AND SIGNED BY THE CONTRACTOR EVIDENCING SUCH CHECKING WILL BE REJECTED AND RETURNED WITHOUT REVIEW.
5. REVIEW OF THE SHOP DRAWINGS AND LITERATURE BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR FOR RESPONSIBILITY FOR DEVIATIONS FOR THE DRAWINGS OR SPECIFICATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS IN THE SHOP DRAWINGS OR LITERATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE MATERIALS AND EQUIPMENT WHICH MEET THE SPECIFICATIONS AND JOB REQUIREMENTS.

REVIEW & SITE INSPECTIONS

1. ALL WORK AND MATERIAL IS SUBJECT TO REVIEW AT ANY TIME BY THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE. IF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE FINDS MATERIAL THAT DOES NOT CONFORM TO THESE SPECIFICATIONS OR THAT IS NOT PROPERLY INSTALLED OR FINISHED, CORRECT THE DEFICIENCIES IN A MANNER SATISFACTORY TO THE ARCHITECT/ENGINEER AT THE CONTRACTOR'S EXPENSE.

STARTUP, TESTING AND OWNER TRAINING

1. ENGAGE A FACTORY AUTHORIZED REPRESENTATIVE TO CONDUCT AN INSPECTION OF THE INSTALLATION OF THEIR COMPANY'S EQUIPMENT PRIOR TO START-UP OF ANY EQUIPMENT. THE REPRESENTATIVE SHALL SUBMIT A REPORT IDENTIFYING ANY DEFICIENCIES TO THE ARCHITECT, ENGINEER AND CONSTRUCTION MANAGER. ANY DEFICIENCIES IDENTIFIED SHALL BE ADDRESSED PRIOR TO START-UP. START-UP SHALL BE CONDUCTED BY A FACTORY AUTHORIZED REPRESENTATIVE. STARTUP REPORTS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER ONCE COMPLETED.
2. NEW AIR AND WATER SYSTEMS SHALL BE BALANCED IN THEIR ENTIRETY TO THE SATISFACTION OF THE ENGINEER IN ACCORDANCE WITH NEBB STANDARDS.
3. THE MECHANICAL CONTRACTOR SHALL PROVIDE 1 HRS OF TRAINING TO THE OWNER TO ENSURE THE OWNER KNOWS HOW TO OPERATE THE SYSTEMS INSTALLED UNDER THE MECHANICAL CONTRACT. PROVIDE AN ADDITIONAL 1 HRS OF ADDITIONAL SERVICE THROUGH THE FIRST YEAR OF OPERATION TO ADDRESS QUESTIONS THAT MAY ARISE.

PROJECT CLOSEOUT

1. THE MECHANICAL CONTRACTOR SHALL MAINTAIN AT THE PROJECT SITE, A "RECORD SET OF DRAWINGS" SHOWING FIELD CHANGES, AS-BUILT ELEVATIONS, UNUSUAL CONDITIONS ENCOUNTERED DURING CONSTRUCTION, AND SUCH OTHER DATA AS REQUIRED TO PROVIDE THE OWNER WITH AN ACCURATE "AS CONSTRUCTED" SET OF RECORD DRAWINGS. THE CONTRACTOR SHALL FURNISH THIS "RECORD SET" TO THE ENGINEER FOLLOWING THE FINAL INSPECTION OF THE PROJECT.
2. THE MECHANICAL CONTRACTOR SHALL PROVIDE AN "OPERATION AND MAINTENANCE MANUAL" (O&M MANUAL) PRIOR TO THE COMMENCEMENT OF OWNER TRAINING. THE O&M MANUAL SHALL BE PROVIDED IN DIGITAL OR THREE PAPER COPIES (BOUND & LABELED) FORMAT AS REQUESTED BY THE ENGINEER OR OWNER. THE O&M MANUAL SHALL CONSIST OF A TITLE PAGE, TABLE OF CONTENTS, AND MANUAL CONTENTS. THE MANUAL CONTENTS SHALL CONSIST OF PRODUCT DATA INFORMATION, PRODUCT SERVICE/MAINTENANCE MANUAL, AND EXECUTED WARRANTY FOR EACH AND ALL EQUIPMENT AND PRODUCTS INSTALLED UNDER THE SCOPE OF THIS PROJECT.

DUCTWORK SCHEDULE

GENERAL NOTES:
1. DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED PER SMACNA GUIDELINES.
2. ROUND DUCTWORK SHALL BE GALVANIZED SPIRAL SHEET METAL.
3. PROVIDE SEISMIC BRACING OF DUCTWORK AS REQUIRED BY LOCAL CODES.
4. SHEET METAL DUCTWORK GAGE SHALL BE SELECTED IN ACCORDANCE WITH SMACNA GUIDELINES.
5. DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH SMACNA AND THE CURRENT EDITION OF THE IECC.
6. DUCT INSULATION MUST HAVE FLAME SPREAD LESS THAN 25 AND SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL 723.
7. INDOOR EXHAUST DUCTWORK SHALL BE INSULATED FROM THE PENETRATION OF THE BUILDING ENVELOPE TO 10 FT UPSTREAM OF A BACKDRAFT OF SHUTOFF DAMPER.
8. VALUES SCHEDULED BELOW ARE A MINIMUM AND SHALL BE SUPERSEDED BY MORE STRINGENT, CURRENTLY ADOPTED ENERGY OR MECHANICAL CODE REQUIREMENTS.

JACKET:
1. FACTORY APPLIED ALL SERVICE JACKETS (ASJ) SHALL BE FOIL SCRIM KRAFT (FSK). SEAL AT EXPOSED SEAMS/ EDGES/ CORNERS WITH FSK ADHESIVE TAPE.

LOCATION	APPLICATION	INSULATION				
		TYPE	THICKNESS	R-VALUE	VAPOR BARRIER	FACTORY INSTALLED JACKET TYPE
INDOOR	EXHAUST (EA) - SEE NOTES	MINERAL-FIBER BLANKET	- -	R-12	YES	FSK
INDOOR	EXHAUST (EA) - SEE NOTES	- -	- -	- -	- -	- -

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: LHP
DRAWN: LHP
CHECKED: CMS
APPROVED: REB
DATE: 06/17/2025

PROFESSIONAL ENGINEER LICENSED 22070 STATE OF IDAHO ROSS BALFOUR
06/17/2025

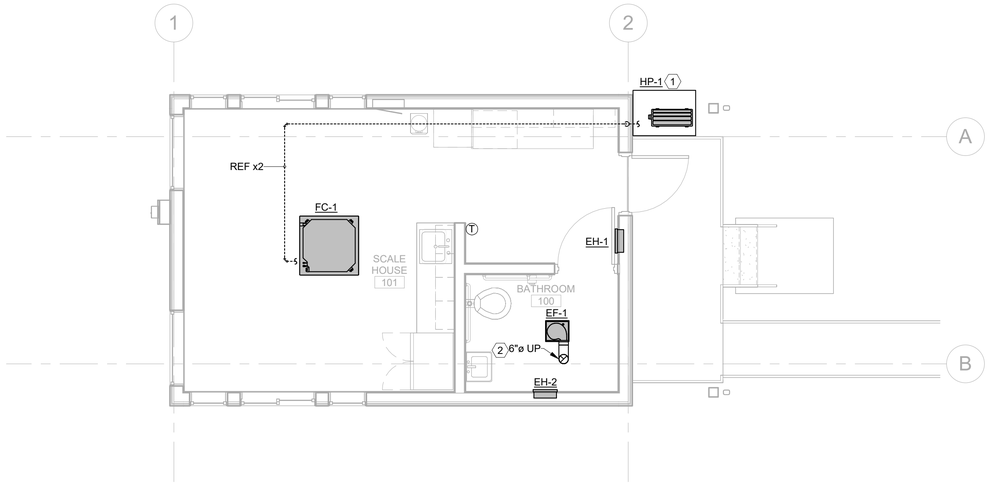
Morrison Maierle
engineers - surveyors - planners - scientists
1055 Mount Ave
Missoula, Montana 59801
406.542.4841
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BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
MECHANICAL SPECIFICATIONS

SHEET NO.
M002

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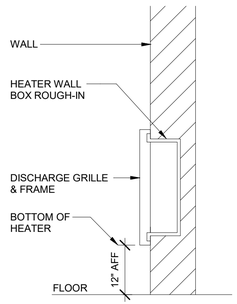
1 1ST FLOOR - MECHANICAL PLAN
1/4" = 1'-0"

KEY NOTES:

1. ROUTE REFRIGERANT PIPING FROM OUTDOOR UNIT TO ASSOCIATED INDOOR UNIT. SIZE AND INSTALL PER MFGR'S INSTRUCTIONS.
2. 6" EA UP THRU ROOF. TERMINATE WITH ROOF CAP - ALDES 22 046 OR EQUAL.

MECHANICAL PLAN NOTES

A. VERIFY THE LOCATION OF THERMOSTATS AND SENSORS WITH THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION. INSTALL THERMOSTATS 48" ABOVE FINISHED FLOOR PER ADA REQUIREMENTS.
B. PROVIDE AND INSTALL SEISMIC BRACING FOR EQUIPMENT, DUCTWORK AND PIPING PER THE REQUIREMENTS OF THE CURRENTLY ADOPTED INTERNATIONAL BUILDING CODE.
C. FLEXIBLE DUCTWORK BETWEEN BRANCH DUCTS AND GRILLES, REGISTERS, OR DIFFUSERS SHALL BE LIMITED TO 5 FT. FLEXIBLE DUCT SHALL NOT BE USED IN PLACE OF ELBOWS.
D. PROVIDE AND INSTALL FIRE, SMOKE, OR COMBINATION FIRE/SMOKE DAMPERS WHERE DUCTWORK PASSES THROUGH RATED ASSEMBLIES. ASSOCIATED DUCT DETECTORS SHALL BE ADDRESSABLE. SMOKE DAMPERS AND COMBINATION SMOKE/FIRE DAMPERS SHALL INCLUDE A KEYED REMOTE TEST SWITCH LOCATED IN AN ACCESSIBLE LOCATION. FIELD COORDINATE THE LOCATION OF TEST SWITCHES WITH THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.
E. SEAL DUCT AND PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL-APPROVED FIRE STOP SYSTEM.
F. MAINTAIN THE INTEGRITY OF DRAFTSTOPPING WHERE DUCTWORK AND PIPING PENETRATE DRAFTSTOPPING MATERIALS.
G. PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS AND DEVICES INSTALLED IN INACCESSIBLE LOCATIONS. COORDINATE SUCH INSTALLATIONS WITH THE ARCHITECT AND ENGINEER.
H. DUCTWORK DIMENSIONS INDICATE THE CLEAR WIDTH/HEIGHT AND HAVE NOT BEEN INCREASED TO ACCOMMODATE DUCT LINER. INSTALLED DUCT SHALL BE INCREASED TO ACCOMMODATE LINER THICKNESS WHERE LINER IS INDICATED IN THE DRAWINGS OR SPECIFICATIONS.
I. EXPOSED DUCTWORK TO BE HOT DIPPED GALVANIZED STEEL AND PAINTED PER ARCHITECTURAL. CONTRACTOR TO CLEAN AND DRY DUCTWORK PRIOR TO PAINTING.
J. PIPING SHALL BE IDENTIFIED WITH PIPE LABELS MARKED AT A MAXIMUM OF EVERY 25 FT. VALVES SHALL BE IDENTIFIED WITH BRASS OR ALUMINUM VALVE TAGS.
K. PIPING WALL PENETRATIONS SHALL SHALL BE FINISHED WITH A CHROME ESCUTCHEON PLATE.



FULL RECESSED

2 ELECTRIC UNIT HEATER DETAIL
NTS

AIR-SOURCE HEAT PUMP SCHEDULE

ACCESSORIES:
1. DRAIN PAN HEATER
2. ELEVATED MOUNTING SUPPORTS
3. SNOW HOOD

REMARKS:
1. INDOOR UNIT REFRIGERANT PIPING TO DIRECTLY CONNECT TO HEAT PUMP. NO BRANCH BOX REQUIRED.

RATING TEMPERATURE DATA:
1. COOLING: 80°F DB / 67°F WB INDOOR RETURN AIR, 95°F / 75°F WB OUTDOOR AIR
2. HEATING: 70°F DB / 60°F WB INDOOR RETURN AIR, 47°F DB / 43°F WB OUTDOOR AIR

ELECTRICAL DATA:
SEE MEP COORDINATION SCHEDULE FOR STARTER/DISCONNECT AND ALL OTHER ELEC. DATA

MARK	MANUF.	MODEL	COMPRESSOR TYPE	A-WEIGHTED SOUND POWER (dBA)	COOLING INFORMATION			HEATING INFORMATION			PHYSICAL DATA			
					CAPACITY (MBH)	SEER	EER	CAPACITY (MBH)	HSPF	COP	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	WEIGHT (LBS)
HP-1	DAIKIN	2MXM18AVJU9	SWING	54	17.2	21	12	18.5	10	- -	12 5/8	34 1/4"	29 1/2"	127

FAN COIL SCHEDULE

ACCESSORIES:
1. WIRED REMOTE CONTROLLER

CONTROLS:
1. 7-DAY PROGRAMMABLE THERMOSTAT

REMARKS:
1. FAN COIL REFRIGERANT PIPING TO DIRECTLY CONNECT TO OUTDOOR UNIT. NO BRANCH BOX REQUIRED.

RATING TEMPERATURE DATA:
1. COOLING: 80°F DB / 67°F WB INDOOR RETURN AIR, 95°F / 75°F WB OUTDOOR AIR
2. HEATING: 70°F DB / 60°F WB INDOOR RETURN AIR, 47°F DB / 43°F WB OUTDOOR AIR

ELECTRICAL DATA:
SEE MEP COORDINATION SCHEDULE FOR STARTER/DISCONNECT AND ALL OTHER ELEC. DATA.

MARK	MANUF.	MODEL	TYPE	AIRFLOW DATA		COOLING INFORMATION			HEATING INFORMATION		PHYSICAL DATA			
				MAX AIRFLOW (CFM)	A-WEIGHTED SOUND POWER (dBA)	COOLING CAPACITY (BTU/HR)	SEER	EER	HEATING CAPACITY (BTU/HR)	HSPF	HEIGHT (IN)	WIDTH (IN)	LENGTH (IN)	WEIGHT (LBS)
FC-1	DAIKIN	FCA18AAVJU	CEILING	448	44	18000	21	12	18000	10	18-1/8	34-1/4	43-5/16	235

EXHAUST FAN SCHEDULE

ACCESSORIES:
1. STANDARD DISCONNECT PREWIRED.
2. VIBRATION ISOLATORS.
3. 6" TO 4" REDUCER.
4. WALL CAP WITH INTEGRAL BACKDRAFT DAMPER.

CONTROLS:
1. INTERLOCK WITH LIGHTS (OCCUPANCY SENSOR) IN ASSOCIATED ROOMS.

ELECTRICAL DATA:
SEE MEP COORDINATION SCHEDULE FOR STARTER/DISCONNECT AND ALL OTHER ELEC. DATA.

MARK	MANUF.	MODEL	AIRFLOW (CFM)	SONES	ESP (IN WC)	DRIVE	TYPE	MOUNTING	CONTROL	WEIGHT (LBS)
EF-1	PANASONIC	FV-0511VK2	110	<0.3	.1	DIRECT	EXHAUST	CEILING	1	11.8

ELECTRIC HEATER SCHEDULE

ACCESSORIES:
1. INTEGRAL THERMOSTAT.
2. INTEGRAL DISCONNECTING MEANS AND THERMAL OVERLOADS.

ELECTRICAL DATA:
SEE MEP COORDINATION SCHEDULE FOR STARTER/DISCONNECT AND ALL OTHER ELECTRICAL DATA.

MARK	MANUF.	MODEL	VOLTAGE-PH	WATTAGE	FINISH	MOUNTING	PHYSICAL DATA		
							DEPTH (IN)	WIDTH (IN)	HEIGHT (IN)
EH-1	MARLEY	FRC4027F	240-1	3000 W	WHITE	RECESSED	4 1/4"	15 3/4"	19 5/16"
EH-2	MARLEY	FRC4027F	120-1	1500	WHITE	RECESSED	4 1/4"	15 3/4"	19 5/16"

MEP COORDINATION SCHEDULE

CONTROL TYPE:
- BAS BUILDING AUTOMATION SYSTEM
- CO CARBON MONOXIDE DETECTOR
- CONT CONTINUOUS OPERATION
- EF INTERLOCK WITH EXHAUST FAN
- HCP HOOD CONTROL PANEL
- INT INTEGRAL
- L LIGHT SWITCH
- MS MANUAL SWITCH
- OS OCCUPANCY SENSOR
- PS PRESSURE SWITCH
- T THERMOSTAT
- TC TIME CLOCK
- UC UNIT CONTROLLER
- VE VEHICLE EXHAUST DETECTION SYSTEM
- N/A NOT APPLICABLE

DISCONNECT/STARTER TYPE:
- CB PANELBOARD CIRCUIT BREAKER WITHIN SIGHT OF EQUIPMENT
- CSFD COMBINATION STARTER/DISCONNECT - HOA
- FD FUSED DISCONNECT
- FST FUSTAT
- FW FACTORY-WIRED SINGLE POINT CONNECTION
- MOCP MOTOR OVER-CURRENT PROTECTION
- MSS MANUAL STARTER SWITCH WITH THERMAL OVERLOADS (1-, 2- OR 3-POLE AS REQUIRED)
- NFD NON-FUSED DISCONNECT
- RCPT 20A DUPLEX RECEPTACLE (GFCI PROTECTED AS REQUIRED), CORD AND PLUG
- RVSS REDUCED VOLTAGE SOLID-STATE
- VFD VARIABLE FREQUENCY DRIVE - HOA
- N/A NOT APPLICABLE

DIVISION OF RESPONSIBILITIES:
- 22/22 FURNISHED AND INSTALLED BY DIV. 22, WIRED BY DIV. 22
- 22/26 FURNISHED AND INSTALLED BY DIV. 22, WIRED BY DIV. 26
- 23/23 FURNISHED AND INSTALLED BY DIV. 23, WIRED BY DIV. 23
- 23/26 FURNISHED AND INSTALLED BY DIV. 23, WIRED BY DIV. 26
- 26/26 FURNISHED AND INSTALLED BY DIV. 26, WIRED BY DIV. 26

NOTES:
1. INTEGRAL DISCONNECTS AND OVERLOADS
2. INTEGRAL OVERLOADS
3. SINGLE POINT CONNECTION
4. PROVIDE RECEPTACLE AND DATA CONNECTION FOR PANEL
5. MOUNT ON UNI-STRUT IN FRONT OF UNIT
6. SIZE FUSES IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES FOR INSTALLED EQUIPMENT
7. INTEGRAL VARIABLE FREQUENCY DRIVE
8. DUCT SMOKE DETECTOR(S) REQUIRED

GENERAL NOTES:
A. CONTROL WIRING SHALL BE CONCEALED WITHIN WALL CONSTRUCTION, ABOVE CEILING, OR RUN IN CONDUIT. EXPOSED CONTROL WIRING IS UNACCEPTABLE.
B. UNLESS SPECIFICALLY NOTED, ALL FEEDERS SHALL INCLUDE A FULL SIZE NEUTRAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY WITH THE MANUFACTURER OF THE ACTUAL EQUIPMENT BEING SUPPLIED WHETHER A NEUTRAL IS REQUIRED PRIOR TO ROUGH-IN.
C. ALL DUCT SMOKE DETECTORS FURNISHED BY DIV. 26, INSTALLED BY DIV. 23, AND WIRED BY DIV. 26. DIV. 26 SHALL WIRE ALL FANS TO SHUT DOWN WHEN ALARM IS INITIATED BY ANY DUCT SMOKE DETECTOR.

MARK	DESCRIPTION	ELECTRICAL DATA			CONTROL		NOTES	DISCONNECT / STARTER		DISCONNECT				FEEDER	
		LOAD	MOCP	VOLT-PHASE	TYPE	DIV		TYPE	DIV	SIZE (NEMA)	SWITCH (AMPS)	FUSE (AMPS)	ENCLOSURE (NEMA)	COPPER WIRE (AWG)	CONDUIT (INCHES)
EF-1	EXHAUST FAN	0.2 MCA	- -	120-1	L	26/26		MSS	26/26	--	--	--	--	12	3/4
EH-1	ELECTRIC HEATER	12.5 A	- -	240-1	T	23/23		FW	23/26	--	--	--	--	12	3/4
EH-2	ELECTRIC HEATER	12.5 A	- -	120-1	T	23/23		FW	23/26	--	--	--	--	12	3/4
EWH-1	ELECTRIC WATER HEATER	3.5 KW / 15 A	- -	240-1	INT	23/23		FW	22/26	--	--	--	--	12	3/4
EWH-2	ELECTRIC WATER HEATER	6.5 KW / 27 A	--	240-1	INT	23/23		FW	22/26	--	--	--	--	10	3/4
FC-1	MINI-SPLIT INDOOR UNIT	POWER	FROM	MS-1B	T	23/23		--	--	--	--	--	--	10	3/4
HP-1	MINI-SPLIT HEAT PUMP	15.6 MCA	- -	230-1	INT	23/23		FD	23/26	--	30	NOTE 6	3R	12	3/4

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: LHP
DRAWN: LHP
CHECKED: CMS
APPROVED: REB
DATE: 06/17/2025

PROFESSIONAL ENGINEER LICENSED 22070 STATE OF IDAHO ROSS BALFOUR
06/17/2025

Morrison Maierle
engineers - surveyors - planners - scientists
1055 Mount Ave
Missoula, Montana 59801
406.542.4841
www.m-m.net

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BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
MECHANICAL PLAN

SHEET NO.
M110

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ABBREVIATIONS

ACC	AIR COOLED CONDENSER
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AF	AIR FOIL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFR	ABOVE FINISHED ROOF
AFS	AIR FLOW STATION
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
ATC	AUTOMATIC TEMPERATURE CONTROL
ATM	ATMOSPHERE
AWG	AMERICAN WIRE GAUGE
B	BOILER
BB	BASEBOARD
BC	BACKWARD CURVED
BD	BACKDRAFT DAMPER
BF	BOILER FEED
BHP	BRAKE HORSEPOWER
BI	BACKWARD INCLINED
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DUCT
BOJ	BOTTOM OF JOIST
BOS	BOTTOM OF STEEL
BTU	BRITISH THERMAL UNIT
C	COMMON
CAV	CONSTANT AIR VOLUME
CC	COOLING COIL
CCW	COUNTER CLOCKWISE
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
C&I	CONTROLS & INSTRUMENTATION
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CND	CONDENSATE
CONT	CONTINUATION
CORR	CORRIDOR
CT	COOLING TOWER
CU	CONDENSING UNIT
CH	CABINET HEATER
CV	CONTROL VALVE
CVS	CONTROL VALVE STATION
CW	CLOCKWISE
dB	DECIBEL
DB	DRY BULB TEMPERATURE (°F)
DDC	DIRECT DIGITAL CONTROL
DH	DUCT HEATER
DP	DEW POINT TEMPERATURE (°F)
DX	DIRECT EXPANSION
E	EXHAUST
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE (°F)
EC	ELECTRICAL CONTRACTOR
EDR	EQUIVALENT DIRECT RADIATION
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
ELEV	ELEVATION
ERV	ENERGY RECOVERY VENTILATOR
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE (°F)
F&T	FLOAT & THERMOSTATIC
FA	FACE AREA
FC	FORWARD CURVED
FC	FAN COIL
FP	FIRE PROTECTION
FPM	FEET PER MINUTE
FT	FEET
GA	GAUGE OR GAGE
GC	GENERAL CONTRACTOR
GEN	GENERATOR
GH	GRAVITY HOOD
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H	HUMIDIFIER
HC	HEATING COIL
HG	MERCURY
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HR	HOUR
HX	HEAT EXCHANGER
ID	INSIDE DIAMETER
IFB	INTEGRAL FACE & BYPASS
IGV	INLET GUIDE VANES
IPS	IRON PIPE SIZE
IU	INDUCTION UNIT
KW	KILOWATTS
KWH	KILOWATT HOUR
LAT	LEAVING AIR TEMPERATURE (°F)
LF	LINEAR FEET
LWT	LEAVING WATER TEMPERATURE (°F)
M	MOTOR OPERATED
MAU	MAKEUP AIR UNIT
MB	MIXING BOX
MBH	1000 BTU/HR
MC	MECHANICAL CONTRACTOR
MFR	MANUFACTURER
MS	MINI-SPLIT
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPS	NOMINAL PIPE SIZE
OA	OUTSIDE AIR
OAD	OUTSIDE AIR DAMPER
OBD	OPPOSED BLADE DAMPER
P	PUMP
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE
PHC	PREHEAT COIL
PPM	PART PER MILLION
PROP	PROPELLER
PRV	PRESSURE REDUCING VALVE
PSIA	PSI, ABSOLUTE
PSIG	PSI, GAUGE
QTY	QUANTITY
R	REGISTER
RA	RETURN AIR
RD	RADIAL DAMPER
RF	RETURN/RELIEF AIR FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
SA	SUPPLY AIR
SAF	SUPPLY AIR FAN
SC	SENSIBLE COOLER
SCFM	CFM, STANDARD CONDITIONS
SD	SMOKE DETECTOR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SENS	SENSIBLE
SP	STATIC PRESSURE
SPS	STATIC PRESSURE SENSOR
SS	STAINLESS STEEL
T	THERMOSTAT
TA	TRANSFER AIR
TCC	TEMPERATURE CONTROL CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TG	TRANSFER GRILL
TOS	TOP OF STEEL
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UH	UNIT HEATER
UNC	UNDERCUT
UV	UNIT VENTILATOR
VA	VOLT-AMPERE
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
WB	WET BULB TEMPERATURE (°F)
WC	WATER COLUMN
WG	WATER GAUGE
WSHP	WATER SOURCE HEAT PUMP
ΔT	TEMPERATURE DIFFERENCE (°F)

PLUMBING LEGEND

ANNOTATION SYMBOLS

- X / X — 3D VIEW NUMBER / SHEET NUMBER
- X / X — DETAIL NUMBER / SHEET NUMBER
- X / X — SECTION NUMBER / SHEET NUMBER
- PF# — PLUMBING FIXTURE / EQUIPMENT MARK
- (E) PF# — EXISTING PLUMBING FIXTURE / EQUIPMENT
- (D) PF# — DEMOLISHED PLUMBING FIXTURE / EQUIPMENT
- POINT OF NEW CONNECTION
- POINT OF DISCONNECTION
- 1/4" SLOPE — DIRECTION OF FLOW AND SLOPE PER FOOT

GENERAL

- NAME (E) — EXISTING PIPE TO REMAIN
- NAME (D) — EXISTING PIPE TO BE DEMOLISHED
- NAME — NEW PIPING
- DIRECTION OF FLOW

PLUMBING

- DCW — DOMESTIC COLD WATER
- DHW — DOMESTIC HOT WATER (120°F)
- DHWR — DOMESTIC HOT WATER RECIRC.
- HTHW — HIGH TEMPERATURE HOT WATER (140°F)
- IRR — IRRIGATION
- RO — REVERSE OSMOSIS TREATED
- TP — TRAP PRIMER LINES
- SAN — SANITARY WASTE
- V — SANITARY VENT
- GW — GREASE WASTE
- AW — ACID WASTE
- AV — ACID VENT
- NG — NATURAL GAS
- LPG — LIQUIFIED PETROLEUM GAS
- RWL — RAIN WATER LEADER
- ORL — RAIN WATER OVERFLOW
- CND — CONDENSATE DRAIN
- CA — COMPRESSED AIR

PIPE FITTINGS

- ELBOW
- PIPE BREAK
- PIPE UP
- PIPE DOWN
- CHANGE IN ELEVATION OF PIPE
- SIDE CONNECTION, TEE FITTING
- TOP CONNECTION, TEE FITTING UP
- BOTTOM CONNECTION, TEE FITTING DOWN
- CAPPED OUTLET OR BLIND FLANGE
- CONCENTRIC REDUCER

VALVES

- MANUAL BALANCING VALVE
- AUTOMATIC BALANCING VALVE
- VENTURI VALVE
- ISOLATION VALVE
- MANUAL 3-WAY VALVE
- STRAINER
- CHECK VALVE
- BACKFLOW PREVENTER
- PRESSURE REDUCING VALVE
- GAS PRESSURE REGULATOR
- TEMPERATURE AND/OR PRESSURE RELIEF VALVE
- HOSE-END DRAIN W/ CAP
- BOILER DRAIN W/ CAP
- SOLENOID VALVE

PIPING SPECIALTIES

- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- PRESSURE / TEMPERATURE PORT
- UNION OR FLANGE
- PIPE WELL - EMPTY
- TEMPERATURE SENSOR
- PRESSURE SENSOR
- FLOW SWITCH
- PRESSURE SWITCH
- PRESSURE GAUGE, SNUBBER & NEEDLE VALVE
- TEMPERATURE GAUGE
- FLEXIBLE CONNECTOR
- THERMAL/SEISMIC EXPANSION LOOP
- PIPE GUIDES
- ANCHOR
- WATER METER
- FLOOR CLEAN OUT
- WALL CLEAN OUT
- WATER HAMMER ARRESTER
- HOSE BIBB
- WALL HYDRANT
- IRRIGATION BLOWOUT PORT

NOTE: THIS IS A STANDARD LEGEND. NOT ALL PIPE TYPES AND SYMBOLS ARE NECESSARILY UTILIZED IN THE DRAWINGS.

PLUMBING GENERAL NOTES

INSTALLATION:

A. NEW PIPING AND EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE CURRENTLY ADOPTED UNIFORM PLUMBING AND INTERNATIONAL BUILDING CODES.
B. EQUIPMENT SHALL BE INSTALLED LEVEL, PLUMB, AND FIRMLY ANCHORED IN LOCATIONS INDICATED. OBSERVE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PRODUCTS SERVE THEIR INTENDED FUNCTION.
C. DRAWINGS ARE DIAGRAMMATIC IN NATURE. THE PURPOSE OF THESE PLANS IS TO INDICATE THE INTENDED SIZES, APPROXIMATE LOCATION AND ROUTING OF MAJOR COMPONENTS. ACTUAL CONDITIONS AND LOCATIONS SHALL BE FIELD VERIFIED AND ADJUSTED IF NECESSARY.
D. PROVIDE AND INSTALL SEISMIC BRACING FOR EQUIPMENT AND PIPING PER THE REQUIREMENTS OF THE CURRENTLY ADOPTED INTERNATIONAL BUILDING CODE.
E. ELEMENTS PENETRATING BUILDING COMPONENTS (ROOF ASSEMBLIES, WALL ASSEMBLIES, ETC.) SHALL BE SEALED WEATHER AND WATER TIGHT. COORDINATE PENETRATIONS WITH GENERAL CONTRACTOR TO PATCH TO THE SATISFACTION OF THE ARCHITECT OR ENGINEER.
F. MATERIAL THAT IS IN CONTACT WITH POTABLE DOMESTIC WATER SHALL BE NSF CERTIFIED LEAD FREE.

COORDINATION:

A. IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT AND ROUTING OF PIPING WITH OTHER TRADES.
B. IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW THE DRAWINGS OF OTHER DISCIPLINES AND PROVIDE LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.

ELECTRICAL COORDINATION:

A. SEE THE MEP COORDINATION SCHEDULE FOR ELECTRICAL INFORMATION. COORDINATE WITH OTHER TRADES TO ENSURE THAT ELECTRICAL DISCONNECTS, MOTOR STARTERS, VARIABLE FREQUENCY DRIVES, CONTROLS, AND ELECTRICAL ACCESSORIES ARE FURNISHED AND/OR INSTALLED BY THE APPROPRIATE TRADE.

SITE ELEVATION:

A. EQUIPMENT SHALL BE SELECTED FOR THE PROJECT ELEVATION OF 4,462'.

PLUMBING SHEET INDEX

NUMBER	SHEET NAME
P001	PLUMBING LEGEND & NOTES
P002	PLUMBING SPECIFICATIONS AND SCHEDULES
P110	PLUMBING PLAN

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: LHP
DRAWN: LHP
CHECKED: CMS
APPROVED: REB
DATE: 06/17/2025

PROFESSIONAL ENGINEER — LICENSED — 22070 — STATE OF IDAHO — ROSS BALFOUR
06/17/2025

Morrison Maierle
engineers - surveyors - planners - scientists
1055 Mount Ave
Missoula, Montana 59801
406.542.4841
www.m-m.net

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BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
PLUMBING LEGEND & NOTES

SHEET NO.
P001

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PLUMBING FIXTURE SCHEDULE

REMARKS:
1. PROVIDE ALL FIXTURES WITH APPROPRIATE COMMERCIAL GRADE SUPPORTS/CARRIERS, P-TRAPS, STOP VALVES, BRAIDED FLEXIBLE SUPPLIES, UNDER FIXTURE PIPING INSULATION AND HAMMER...
2. PROVIDE AND INSTALL TRAP PRIMERS FOR ALL FLOOR DRAINS AND FLOOR SINKS UNLESS OTHERWISE INDICATED.
3. INSTALL ALL TRAP PRIMERS IN RECESSED WALL MOUNTED BOXES IN AN ACCESSIBLE LOCATION.
4. FIELD COORDINATE INSTALLATION LOCATION OF TRAP PRIMER WALL BOXES, WATER CLOSETS, LAVATORIES, AND URINALS FOR ADA COMPLIANCY WITH ARCHITECT/ENGINEER.

MARK	FIXTURE						TRIM				ROUGH-IN SIZE (IN)				REMARKS
	DESCRIPTION	ADA	MANUF.	MODEL	MATERIAL / FINISH	MOUNTING / HEIGHT	DESCRIPTION	MANUF.	MODEL	MATERIAL / FINISH	WASTE	VENT	COLD	HOT	
FD-1	FLOOR DRAIN WITH ADJUSTABLE HEIGHT ROUND STRAINER	- -	JR SMITH	2005	CAST IRON BODY / NICKEL BRONZE STRAINER	FLOOR	- -	- -	- -	- -	2"	1-1/2"	1/2"	- -	PROVIDE COMPLETE WITH TRAP PRIMER CONNECTION, PIPING TO TRAP PRIMER, AND TRAP SEAL.
L-1	LAVATORY - WALL MOUNTED - TOUCHLESS FAUCET	YES	KOHLER	K-2007	VITREOUS CHINA	WALL / ADA HEIGHT	TOUCHLESS FAUCET	MOEN	8554	CHROME	2"	1-1/2"	1/2"	1/2"	BATTERY POWERED - PROVIDE JR SMITH #700 SERIES CARRIER, WATER STOPS, OFFSET DRAIN W/ TRUEBRO LAV GUARD II PIPE INSULATION.
S-1	BREAKROOM SINK	YES	ELKAY	LRAD171655	STAINLESS STEEL	DROP-IN / ADA HEIGHT	SINGLE-HANDLE PULL DOWN	MOEN	87966	CHROME	2"	1-1/2"	1/2"	1/2"	PROVIDE WITH BASKET STRAINER, QUARTER TURN STOP VALVES AND P-TRAP.
WC-1	WATER CLOSET - FLOOR MOUNTED - FLUSH VALVE	YES	KOHLER	K-96057-SS	VITREOUS CHINA	FLOOR / ADA HEIGHT	ELECTRONIC FLUSH VALVE	SLOAN	G2 8111	CHROME	3"	2"	1"	- -	FLOOR MOUNTED - BATTERY FLUSH VALVE - 1.6 GALLONS PER FLUSH - KOHLER #K-4666 CA ELONGATED OPEN FRONT TOILET SEAT, HEAVY-DUTY COMMERCIAL.

DOMESTIC WATER HEATER SCHEDULE - ELECTRIC

REMARKS:
1. ALL PIPING WITHIN 18" OF WATER HEATER SHALL BE COPPER.

ELECTRICAL DATA:
SEE MEP COORDINATION SCHEDULE FOR STARTER/DISCONNECT AND ALL OTHER ELEC. DATA.

MARK	MANUF.	MODEL	TYPE	KW	VOLTAGE/PHASE	0.5 GPM TEMPERATURE RISE (°F)	UNIT PHYSICAL DATA		
							HEIGHT (IN) / WIDTH (IN)	DEPTH (IN)	WEIGHT (LBS)
EWH-1	EEMAX INC.	SPEX4208T	INSTANTANEOUS	3.5	240-1	48	9.73 / 5.25	3	4
EWH-2	EEMAX INC.	SPEX4208T	INSTANTANEOUS	6.5	240-1	89	9.73 / 5.25	3	4

PLUMBING SPECIFICATIONS

GENERAL
1. THE PLUMBING CONTRACTOR SHALL INCLUDE ALL ITEMS, ARTICLES, MATERIALS, OPERATIONS AND METHODS LISTED, MENTIONED, OR SCHEDULED IN THESE SPECIFICATIONS AND THE ACCOMPANYING DRAWINGS. ALL MATERIAL, EQUIPMENT, AND LABOR SHALL BE FURNISHED TOGETHER WITH ALL INCIDENTAL ITEMS REQUIRED BY GOOD PRACTICE TO PROVIDE THE COMPLETE SYSTEMS DESCRIBED.
2. EXAMINE AND REFER TO ALL ARCHITECTURAL, CIVIL, STRUCTURAL, ELECTRICAL, UTILITY, LANDSCAPE AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION CONDITIONS WHICH MAY AFFECT THE PLUMBING WORK. INSPECT THE BUILDING SITE AND EXISTING FACILITIES FOR VERIFICATION OF PRESENT CONDITIONS. MAKE PROPER PROVISIONS FOR THESE CONDITIONS IN PERFORMANCE OF THE WORK AND COST THEREOF.
3. ALL WORK ON THE PROJECT SHALL CONFORM TO ALL ADOPTED CITY, STATE, AND NATIONAL CODES & REGULATIONS. SUCH CODES & REGULATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE IBC, IMC, IECC, IDAHO PLUMBING CODE, NFPA, NEC, SERVICING UTILITY COMPANIES AND THE AUTHORITY HAVING JURISDICTION.
4. THE PLUMBING AND ELECTRICAL CONTRACTORS SHALL BE RESPONSIBLE FOR AND PAY FOR ALL FEES AND PERMITS REQUIRED FOR WORK UNDER THEIR CONTRACT AND UNDER THEIR SUPERVISION BY SUBCONTRACT.
5. ALL USAGE CONTRACTS BETWEEN THE OWNER AND THE SERVING UTILITIES COMPANY, SUCH AS MEMBERSHIP AND USAGE CHARGES OR FEES, ETC., FOR THE PURPOSE OF OBTAINING THE SERVICES FOR THE UTILITY COMPANY SHALL BE APPLIED FOR AND PAID FOR BY THE OWNER.

RESPONSIBILITY
1. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF A SATISFACTORY AND COMPLETE SYSTEM IN ACCORDANCE WITH THE INTENT OF THE DRAWING AND SPECIFICATIONS. PROVIDE, AT NO EXTRA COST, ALL INCIDENTAL ITEMS, MATERIALS, ACCESSORIES AND LABOR REQUIRED FOR COMPLETION OF THE WORK EVEN THOUGH THEY ARE NOT SPECIFICALLY MENTIONED OR INDICATED ON THE DRAWINGS OR IN THE SPECIFICATIONS.
2. THE DRAWINGS DO NOT ATTEMPT TO SHOW COMPLETE DETAILS OF THE BUILDING CONSTRUCTION WHICH AFFECT THE PLUMBING INSTALLATION; AND REFERENCE IS THEREFORE REQUIRED TO THE ARCHITECTURAL, CIVIL, STRUCTURAL, LANDSCAPE AND ELECTRICAL DRAWINGS AND SPECIFICATIONS AND TO SHOP DRAWINGS OF ALL TRADES FOR ADDITIONAL DETAILS WHICH AFFECT THE INSTALLATION OF THE WORK COVERED UNDER THIS DIVISION OF THE CONTRACT.
3. LOCATION OF PLUMBING SYSTEM COMPONENTS SHALL BE CHECKED FOR CONFLICTS WITH OPENINGS, STRUCTURAL MEMBERS AND COMPONENTS OF OTHER SYSTEMS HAVING FIXED LOCATIONS. IN THE EVENT OF ANY CONFLICTS, THE ARCHITECT/ENGINEER SHALL BE CONSULTED AND THEIR DECISION SHALL GOVERN. NECESSARY CHANGES SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.
4. DO NOT INSTALL EQUIPMENT UNTIL COMPLETE SHOP DRAWINGS OF SUCH EQUIPMENT HAVE BEEN APPROVED BY THE ARCHITECT/ENGINEER. ANY WORK INSTALLED BY THE CONTRACTOR, PRIOR TO APPROVAL OF SHOP DRAWINGS, WILL BE AT THE CONTRACTOR'S RISK.
5. ALL MODIFICATIONS AND CHANGES REQUIRED DUE TO INSTALLATION OF EQUIPMENT OTHER THAN THE EQUIPMENT SCHEDULED AND SPECIFIED SHALL BE MADE AT THE CONTRACTOR'S EXPENSE, THIS INCLUDES WORK BY OTHER TRADES. IF THE INSTALLATION OF EQUIPMENT OTHER THAN THE SCHEDULED AND SPECIFIED EQUIPMENT REQUIRES MODIFICATIONS TO STRUCTURE, ELECTRICAL SYSTEMS, PLUMBING SYSTEMS, FIRE PROTECTION OR FIRE ALARM SYSTEMS, ANY AND ALL CHANGES SHALL BE MADE AT THE PLUMBING CONTRACTORS EXPENSE.
6. ALL WORK TO BE PERFORMED SHALL FIRST BE SCHEDULED AND SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR ACCEPTANCE.
7. THE CONTRACTOR SHALL BE CAREFUL NOT TO BLOCK ANY PATHS OF EGRESS WHILE PERFORMING THE WORK SPECIFIED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF ALL MATERIALS RESULTING FROM HIS/HER WORK. CLEANUP SHALL BE PERFORMED TO THE LEVEL OF ACCEPTANCE OF THE OWNER'S REPRESENTATIVE & THE ENGINEER.
9. THE CONTRACTOR SHALL GUARANTEE THAT ALL WORK EXECUTED UNDER THEIR CONTRACT SHALL BE FREE OF DEFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

INTENT OF DRAWINGS
1. THE DRAWINGS ARE PARTLY DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EXACT LOCATION OF PIPING AND DUCTWORK UNLESS SPECIFICALLY DIMENSIONED. RISER AND OTHER DIAGRAMS ARE SCHEMATIC AND DO NOT NECESSARILY SHOW THE PHYSICAL ARRANGEMENT OF THE EQUIPMENT. THEY SHALL NOT BE USED FOR OBTAINING LINEAL RUNS OF PIPING OR DUCTWORK, NOR SHALL THEY BE USED FOR SHOP DRAWINGS FOR PIPING AND DUCTWORK FABRICATION OR ORDERING. DISCREPANCIES SHOWN ON DIFFERENT PLANS, OR BETWEEN PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR RESOLUTION.

MATERIALS AND EQUIPMENT
1. MANUFACTURER'S TRADE NAMES AND CATALOG NUMBERS ARE LISTED TO INDICATE THE QUALITY OF EQUIPMENT OR MATERIALS DESIRED FOR INSTALLATION. ALTERNATIVE EQUIPMENT OR MATERIALS MAY BE SUBMITTED FOR PRIOR APPROVAL BEFORE BIDDING THE PROJECT. NO SUBSTITUTIONS WILL BE ALLOWED AFTER BIDDING.
2. WRITTEN PRIOR APPROVAL FOR SUBSTITUTIONS MUST BE SUBMITTED TO AND RECEIVED BY THE ARCHITECT/ENGINEER SEVEN (7) DAYS PRIOR TO BID OPENING. REQUESTS FOR SUBSTITUTION ARE TO BE SUBMITTED SUFFICIENTLY AHEAD OF THE DEADLINE TO GIVE AMPLE TIME FOR EXAMINATION. PRIOR APPROVAL REQUEST FOR SUBSTITUTION MUST INDICATE THE SPECIFIC ITEM OR ITEMS TO BE FURNISHED IN LIEU OF THOSE SCHEDULED, TOGETHER WITH COMPLETE TECHNICAL AND COMPARATIVE DATA ON SCHEDULED ITEMS AND ITEMS PROPOSED FOR SUBSTITUTION.
3. HIGH ALTITUDE OPERATION: CAPACITY OF ALL EQUIPMENT IS TO BE SIZED AND MANUFACTURED TO PERFORM AT THE ELEVATION OF THE PROJECT SITE. IF NOT SPECIFICALLY INDICATED IN THE EQUIPMENT SCHEDULE OR IN THE SPECIFICATIONS PROVIDE ALL REQUIRED ACCESSORIES AND EQUIPMENT FOR PROPER OPERATION AT ELEVATION OF THE PROJECT SITE.
4. STORE MATERIALS AND EQUIPMENT INDOORS AT THE JOB SITE OR, IF THIS IS NOT POSSIBLE, STORE ON RAISED PLATFORMS AND PROTECT FROM THE WEATHER BY MEANS OF WATERPROOF COVERS. COVERINGS SHALL PERMIT CIRCULATION OF AIR AROUND THE MATERIALS TO PREVENT CONDENSATION OF MOISTURE. SCREEN OR CAP OPENINGS IN EQUIPMENT TO PREVENT THE ENTRY OF VERMIN.
5. ALL NEW PIPING SHALL BE IDENTIFIED WITH SETON SET MARK PIPE MARKERS, LETTERED TO MATCH EXISTING - IF APPLICABLE - AND MARKED AT A MAXIMUM OF EVERY 25 FT. ALL NEW VALVES SHALL BE IDENTIFIED WITH BRASS OR ALUMINUM VALVE TAGS.

MATERIALS AND EQUIPMENT (CONT.)
6. SEE THE PLUMBING PIPING SCHEDULE ON THE DRAWINGS FOR MATERIAL AND INSULATION REQUIREMENTS.
7. COORDINATE THE INSTALLATION OF GRILLES, REGISTERS AND DIFFUSERS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS AND THE ELECTRICAL LIGHTING PLANS.
8. VERIFY THE LOCATION OF THERMOSTATS AND SENSORS WITH THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION. INSTALL THERMOSTATS 48" ABOVE FINISHED FLOOR PER ADA REQUIREMENTS.
9. PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT, DUCTWORK AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.
10. FLEXIBLE DUCTWORK BETWEEN BRANCH DUCTS AND GRILLES, REGISTERS OR DIFFUSERS SHALL BE LIMITED TO 5FT.
11. INSTALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE ALL EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.
12. INSTALL FLOOR DRAIN STRAINERS AND CLEANOUT COVERS FLUSH AND LEVEL WITH FINISHED FLOOR.
13. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE-CAULKING ALL FIRE-RATED AND SMOKE-RATED WALL PENETRATIONS OF PIPING, DUCTWORK, ETC.
14. PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS AND DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

SHOP DRAWINGS AND SUBMITTALS
1. WITHIN 30 DAYS OF AWARDING OF THE CONTRACT, THE PLUMBING CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND/OR SUBMITTALS FOR ALL SCHEDULED EQUIPMENT AND MATERIALS INCLUDED IN THE CONSTRUCTION DOCUMENTS.
2. ALL SHOP DRAWINGS AND SUBMITTALS SHALL BE IN THE FORM OF ELECTRONICALLY TRANSMITTED PDFS. SHOP DRAWINGS AND SUBMITTALS SHALL INCLUDE SHOP DRAWINGS AND LITERATURE SHOWING ITEMS TO BE USED, SIZE, DIMENSIONS, CAPACITY, ROUGH-IN, AND ANY OTHER INFORMATION NECESSARY FOR A COMPLETE REVIEW. MANUFACTURER'S LITERATURE SHOWING MORE THAN ONE ITEM SHALL BE CLEARLY MARKED AS TO WHICH ITEM IS BEING FURNISHED OR IT WILL BE REJECTED AND RETURNED WITHOUT REVIEW.
3. EACH SUBMITTED ITEM MUST BE CLEARLY MARKED WITH THE PROJECT NAME, DATE, BRANCH OF WORK, SUBMITTING PARTY, REVISION NUMBER, AND ASSOCIATED SCHEDULE. SUBMITTALS NOT IDENTIFIED AS DESCRIBED ABOVE WILL BE REJECTED AND RETURNED WITHOUT REVIEW.
4. PRIOR TO THEIR SUBMISSION, EACH SUBMITTAL SHALL BE THOROUGHLY CHECKED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DOCUMENT REQUIREMENTS. EACH SUBMITTAL SHALL THEN BEAR A STAMP EVIDENCING SUCH CHECKING AND SHALL SHOW CORRECTIONS MADE, IF ANY. SUBMITTALS REQUIRING EXTENSIVE CORRECTIONS SHALL BE REVISED BEFORE SUBMISSION TO THE ENGINEER. EACH SUBMITTAL NOT STAMPED AND SIGNED BY THE CONTRACTOR EVIDENCING SUCH CHECKING WILL BE REJECTED AND RETURNED WITHOUT REVIEW.
5. REVIEW OF THE SHOP DRAWINGS AND LITERATURE BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR FOR RESPONSIBILITY FOR DEVIATIONS FOR THE DRAWINGS OR SPECIFICATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS IN THE SHOP DRAWINGS OR LITERATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE MATERIALS AND EQUIPMENT WHICH MEET THE SPECIFICATIONS AND JOB REQUIREMENTS.

REVIEW & SITE INSPECTIONS
1. ALL WORK AND MATERIAL IS SUBJECT TO REVIEW AT ANY TIME BY THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE. IF THE ARCHITECT/ENGINEER OR THEIR REPRESENTATIVE FINDS MATERIAL THAT DOES NOT CONFORM TO THESE SPECIFICATIONS OR THAT IS NOT PROPERLY INSTALLED OR FINISHED, CORRECT THE DEFICIENCIES IN A MANNER SATISFACTORY TO THE ARCHITECT/ENGINEER AT THE CONTRACTOR'S EXPENSE.

STARTUP, TESTING AND OWNER TRAINING
1. ENGAGE A FACTORY AUTHORIZED REPRESENTATIVE TO CONDUCT AN INSPECTION OF THE INSTALLATION OF THEIR COMPANY'S EQUIPMENT PRIOR TO START-UP OF ANY EQUIPMENT. THE REPRESENTATIVE SHALL SUBMIT A REPORT IDENTIFYING ANY DEFICIENCIES TO THE ARCHITECT, ENGINEER AND CONSTRUCTION MANAGER. ANY DEFICIENCIES IDENTIFIED SHALL BE ADDRESSED PRIOR TO START-UP. START-UP SHALL BE CONDUCTED BY A FACTORY AUTHORIZED REPRESENTATIVE. STARTUP REPORTS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER ONCE COMPLETED.
2. NEW AIR AND WATER SYSTEMS SHALL BE BALANCED IN THEIR ENTIRETY TO THE SATISFACTION OF THE ENGINEER IN ACCORDANCE WITH NEBB STANDARDS.
3. THE PLUMBING CONTRACTOR SHALL PROVIDE 1 HRS OF TRAINING TO THE OWNER TO ENSURE THE OWNER KNOWS HOW TO OPERATE THE SYSTEMS INSTALLED UNDER THE PLUMBING CONTRACT. PROVIDE AN ADDITIONAL 1 HRS OF ADDITIONAL SERVICE THROUGH THE FIRST YEAR OF OPERATION TO ADDRESS QUESTIONS THAT MAY ARISE.

PROJECT CLOSEOUT
1. THE PLUMBING CONTRACTOR SHALL MAINTAIN AT THE PROJECT SITE, A "RECORD SET OF DRAWINGS" SHOWING FIELD CHANGES, AS-BUILT ELEVATIONS, UNUSUAL CONDITIONS ENCOUNTERED DURING CONSTRUCTION, AND SUCH OTHER DATA AS REQUIRED TO PROVIDE THE OWNER WITH AN ACCURATE "AS CONSTRUCTED" SET OF RECORD DRAWINGS. THE CONTRACTOR SHALL FURNISH THIS "RECORD SET" TO THE ENGINEER FOLLOWING THE FINAL INSPECTION OF THE PROJECT.
2. THE PLUMBING CONTRACTOR SHALL PROVIDE AN "OPERATION AND MAINTENANCE MANUAL" (O&M MANUAL) PRIOR TO THE COMMENCEMENT OF OWNER TRAINING. THE O&M MANUAL SHALL BE PROVIDED IN DIGITAL OR THREE PAPER COPIES (BOUND & LABELED) FORMAT AS REQUESTED BY THE ENGINEER OR OWNER. THE O&M MANUAL SHALL CONSIST OF A TITLE PAGE, TABLE OF CONTENTS, AND MANUAL CONTENTS. THE MANUAL CONTENTS SHALL CONSIST OF PRODUCT DATA INFORMATION, PRODUCT SERVICE/MAINTENANCE MANUAL, AND EXECUTED WARRANTY FOR EACH AND ALL EQUIPMENT AND PRODUCTS INSTALLED UNDER THE SCOPE OF THIS PROJECT.

FIXTURE UNIT SCHEDULE

MARK	DESCRIPTION	DFU	CWFU	HWFU	COUNT	DFU	WSFU	
							COLD	HOT
FD-1	EMERGENCY FLOOR DRAIN	0	0	0	1	0	0	0
L-1	LAVATORY	1	1	1	1	1	1	1
S-1	SINK	2	1.5	1.5	1	2	1.5	1.5
WC-1	FLUSH VALVE WATER CLOSET	4	5	0	1	4	5	0
TOTALS						7	7.5	2.5

PLUMBING PIPE SCHEDULE

NOTE:
1. INSULATION THICKNESS IS BASED ON A CONDUCTIVITY NOT EXCEEDING 0.27 BTU • INCH / (HR • FT² • °F)
2. PLASTIC PIPE SHALL NOT BE INSTALL WITHIN THE FIRST 18" OF A WATER HEATER.
3. PROVIDE SEISMIC BRACING OF PIPING 2-1/2" AND LARGER OR AS REQUIRED BY LOCAL CODES.
4. ALL PIPE INSULATION MUST HAVE A FLAME SPREAD LESS THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL723.
5. NO PLASTIC PIPING IS ALLOWED IN AIR PLENUMS.
6. ANY CONNECTIONS THAT ARE DISSIMILAR METALS SHALL REQUIRE A DIELECTRIC NIPPLE. DIELECTRIC UNIONS ARE NOT ALLOWED.
7. PROVIDE FIBERGLASS ALL SERVICE JACKET (ASJ).
8. ASJ TO BE SEALED AT ALL SEAMS AND EDGES.

SYSTEM	ABBREV	PIPE MATERIAL	INSULATION
DOMESTIC COLD WATER - BELOW GRADE - TRAP PRIMERS	DCW	PEX	NONE
DOMESTIC COLD WATER < 1-1/2"ø	DCW	'L' COPPER / PEX	1/2"
DOMESTIC HOT WATER < 1-1/2"ø	DHW	'L' COPPER / PEX	1"
SANITARY SEWER	SAN	SCHEDULE 40 PVC	NONE
VENT	V	SCHEDULE 40 PVC	NONE

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: LHP
DRAWN: LHP
CHECKED: CMS
APPROVED: REB
DATE: 06/17/2025

PROFESSIONAL ENGINEER LICENSED 22070 STATE OF IDAHO ROSS BALFOUR
06/17/2025

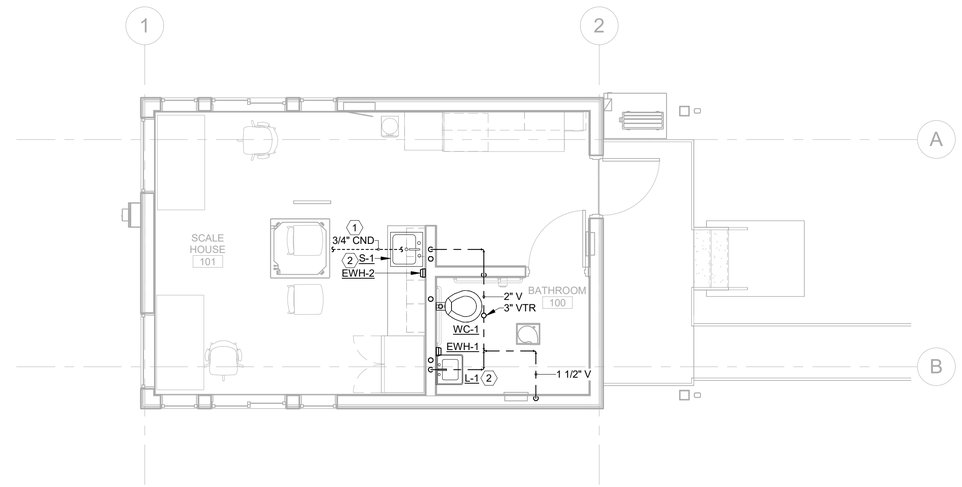
Morrison Maierle
engineers - surveyors - planners - scientists
1055 Mount Ave
Missoula, Montana 59801
406.542.4841
www.m-m.net

100% - CD CONSTRUCTION DOCUMENT

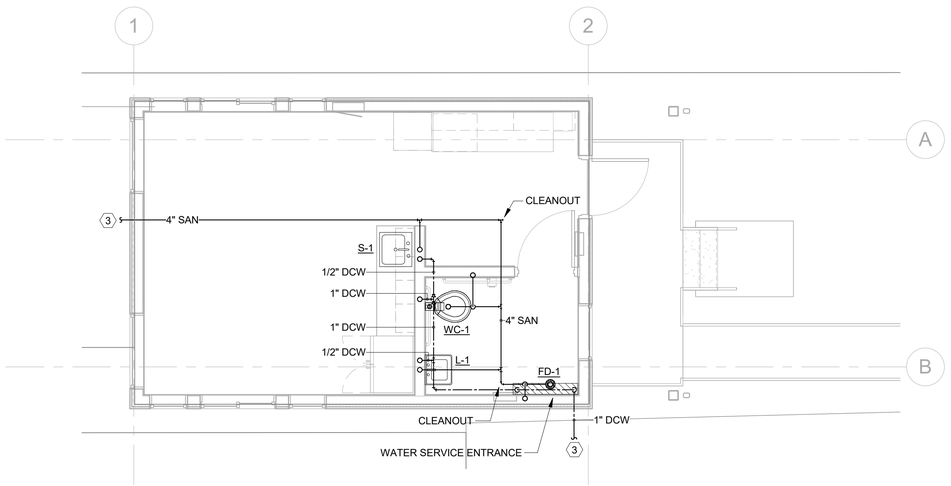
BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
PLUMBING SPECIFICATIONS AND SCHEDULES

SHEET NO.
P002

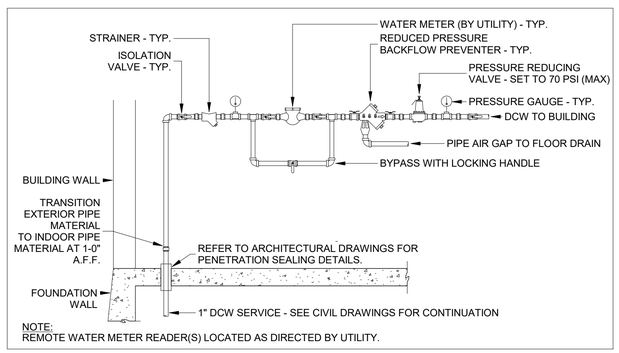
DATE STAMP 2/18/2025 8:53:43 AM



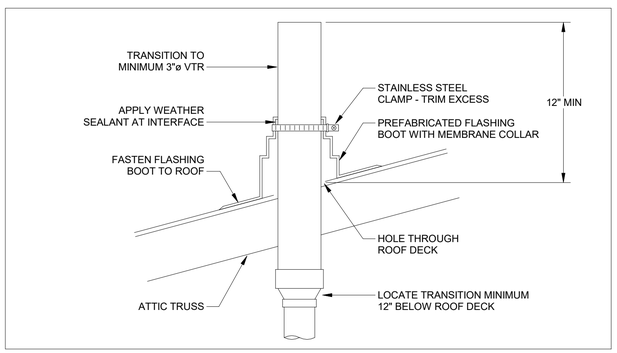
1 1ST FLOOR PLUMBING PLAN
1/4" = 1'-0"



2 1ST FLOOR UNDERFLOOR PLUMBING PLAN
1/4" = 1'-0"



3 WATER SERVICE ENTRANCE DETAIL
NTS



4 VENT THRU ROOF DETAIL
NTS

PLUMBING PLAN NOTES

A. PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, AND OTHER DEVICES INSTALLED IN INACCESSIBLE LOCATIONS. COORDINATE SUCH INSTALLATIONS WITH THE ARCHITECT AND ENGINEER.
B. PROVIDE TRAP SEALS AND TRAP PRIMERS FOR FLOOR DRAINS, FLOOR SINKS, AND OTHER FLOOR RECEPTORS.
C. INSTALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.
D. INSTALL FLOOR DRAIN STRAINERS AND CLEANOUT COVERS FLUSH AND LEVEL WITH FINISHED FLOOR.
E. PIPING SHALL BE IDENTIFIED WITH PIPE LABELS MARKED AT A MAXIMUM OF EVERY 25 FT. VALVES SHALL BE IDENTIFIED WITH BRASS OR ALUMINUM VALVE TAGS.
F. PROVIDE AND INSTALL PIPE GUIDES, EXPANSION JOINTS, AND HANGERS PER MANUFACTURER'S RECOMMENDATIONS.
G. PIPING WALL PENETRATIONS SHALL BE FINISHED WITH A CHROME ESCUTCHEON PLATE.
H. MAINTAIN THE INTEGRITY OF DRAFTSTOPPING WHERE PIPES PENETRATE DRAFTSTOPPING MATERIALS.
I. NO FITTINGS OR PIPING CONNECTIONS SHALL BE INSTALLED UNDERSLAB.
J. REFER TO THE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES TO INDIVIDUAL FIXTURES.
K. COORDINATE CONCRETE PENETRATIONS WITH STRUCTURAL DRAWINGS TO VERIFY HOW AND WHERE CONCRETE CAN BE CUT.
L. EXPOSED PIPING SHALL BE PAINTED PER ARCHITECTURAL OR PROVIDED WITH A PVC COATED JACKET IN THE COLOR OF THE ARCHITECT'S CHOOSING. CONTRACTOR TO CLEAN AND DRY PIPING PRIOR TO PAINTING.
M. SANITARY SEWER, RAINWATER, AND OTHER DRAIN PIPING SHALL BE INSTALLED AT A MINIMUM 1/4" PER FOOT (2%) SLOPE IN DIRECTION OF FLOW. UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
N. COORDINATE UNDERGROUND FIRE RISER STUB UP LOCATION WITH FIRE SUPPRESSION SHOP DRAWINGS.

KEY NOTES:

1. DISCHARGE 3/4" CND TO TAILPIECE OF SINK.
2. PROVIDE 1/2" DCW TO SINK AND TO TANKLESS ELECTRIC WATER HEATER. PROVIDE 1/2" DHW FROM WATER HEATER TO SINK.
3. COORDINATE CONTINUATION OF SERVICE WITH CIVIL.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: LHP
DRAWN: LHP
CHECKED: CMS
APPROVED: REB
DATE: 06/17/2025

PROFESSIONAL ENGINEER LICENSED 22070 STATE OF IDAHO ROSS BALFOUR
06/17/2025

Morrison Maierle
engineers - surveyors - planners - scientists
1955 Mount Ave
Missoula, Montana 59801
406.542.4841
www.m-m.net

100% - CD CONSTRUCTION DOCUMENT

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
PLUMBING PLAN

SHEET NO.
P110

DATE STAMP: 6/18/2025 8:53:44 AM

ELECTRICAL ABBREVIATIONS LEGEND

A, AMP	AMPERES
AC	ALTERNATING CURRENT
A/C	AIR CONDITIONING
AF	AMP FUSE
AFC	AVAILABLE FAULT CURRENT
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AS	AMP SWITCH
ATS	AUTOMATIC TRANSFER SWITCH
BAS	BUILDING AUTOMATION SYSTEM
BKR	BREAKER
BOF	BOTTOM OF FIXTURE
C	RACEWAY/CONDUIT
CB	CIRCUIT BREAKER
CCT	COLOR RENDERING TEMPERATURE
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
C.O.	RACEWAY/CONDUIT ONLY, WITH PULL STRING
COD	CENTER OF DEVICE
CNTRL	CONTROL
CU	COPPER
(D)	EXISTING TO BE DEMOLISHED
DISC	DISCONNECT
DIST	DISTRIBUTION
DPDT	DOUBLE POLE DOUBLE THROW
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
ELEC	ELECTRIC
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
EX, EXIST	EXISTING
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FD	FUSED DISCONNECT
FLR	FLOOR
FO	FIBER OPTIC
FSD	FIRE SMOKE DAMPER RELAY, CONTROLLED BY ASSOCIATED SMOKE DETECTOR AND CIRCUITED BACK TO FACP
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GEC	GROUNDED ELECTRODE CONDUCTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
GRC	GALVANIZED RIGID CONDUIT
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HZ	HERTZ
J-BOX	JUNCTION BOX
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
LCP	LIGHTING CONTROL PANEL
LPW	LUMENS PER WATT
LTG	LIGHTING
LM	LUMENS
LV	LOW VOLTAGE
MAG	MAGNETIC STARTER
MAN	MANUAL
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MH	METAL HALIDE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MSS	MOTOR STARTER SWITCH WITH THERMAL OVERLOADS
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFD	NON-FUSED DISCONNECT
NL	NIGHT LIGHT, UN-SWITCHED 24/7 OPERATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
#	NUMBER
OAE	OR APPROVED EQUAL
OC	ON CENTER
OCPD	OVERCURRENT PROTECTIVE DEVICE
OH	OVERHEAD
P	POLE
PB	PUSHBUTTON
PC	PLUMBING CONTRACTOR
PH	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE CONDUIT
PWR	POWER
(R)	EXISTING TO REMAIN
RCPT	RECEPTACLE
RECEPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RVNR	REDUCED VOLTAGE NON-REVERSING
RVR	REDUCED VOLTAGE REVERSING
SP	SINGLE POLE TOGGLE SWITCH
SPD	SURGE PROTECTIVE DEVICE (TVSS)
SPEC	SPECIFICATION
SPST	SINGLE POLE SINGLE THROW
SSPB	START-STOP PUSHBUTTON
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TB	TELEPHONE BOARD
TC	TIME CLOCK
TD	TIME DELAY
TEL	TELEPHONE
TR	TAMPER RESISTANT
TSP	TWISTED SHIELDED PAIR
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WAO	WORK AREA OUTLET
WP	WEATHERPROOF
WPI	WEATHERPROOF WHILE-IN-USE
WR	WEATHER RESISTANT
W/O	WITHOUT
XFMR	TRANSFORMER
Y	WYE-CONNECTED
Δ	DELTA-CONNECTED
ø	PHASE

ELECTRICAL ONE-LINE LEGEND

- CT AND CUSTOMER POWER METER
- MOTOR
- UTILITY ELECTRIC METER AND BASE (BASE BY CUSTOMER)
- SURGE PROTECTION DEVICE
- LIGHTNING ARRESTER, TYPE 1 SPD, MOUNTED ON EXTERIOR OF MAIN SWITCHGEAR (SQUARE D. SDSA SERIES, OAE)
- STRESS RELIEF CONE
- PFC — POWER FACTOR CORRECTION CAPACITOR
- $X — EQUIPMENT TOGGLE DISCONNECT SWITCH
  "X" INDICATES TYPE:
  F - FUSTAT
  M - MOTOR STARTER SWITCH W/ THERMAL OVERLOADS
- CONTACTOR NORMALLY OPEN, NORMALLY CLOSED
- TRANSFORMER, 3-PH, 3-WIRE DELTA CONNECTION
- TRANSFORMER, 3-PH, 4-WIRE GROUNDED WYE CONNECTION
- AUTOMATIC TRANSFER SWITCH
- VFD — VARIABLE FREQUENCY DRIVE
- FIXED MOUNT LV BREAKER
- FUSED SWITCH ("XXAS/XXAF" - SW AND FUSE AMP RATING)
- G — GENERATOR
- CB — WALL MOUNTED BREAKER
- THERMAL OVERLOAD ELEMENT
- DISCONNECT SWITCH ("XXAS" = SWITCH AMP RATING)
- FUSED DISCONNECT SWITCH ("XXAS/XXAF" = SW AND FUSE AMP RATING)
- COMBINATION MOTOR STARTER (STR SIZE, TYP, AS, AF, SEE MEP COORDINATION SCHEDULE)
- SWITCHBOARD OR PANELBOARD; NAME, VOLTAGE, PHASE, NUMBER OF WIRES WHEN INDICATED

ELECTRICAL POWER LEGEND

- D-1 X — PANEL AND CIRCUIT DESIGNATION ARE NEXT TO EACH DEVICE (PANEL NAME - CIRCUIT NUMBER). MINIMUM BRANCH CIRCUIT WIRE SIZE IS #12, UNO. A SINGLE INSULATED GREEN GROUND CONDUCTOR SHALL BE PROVIDED WITH EACH HOME RUN. PROVIDE A SEPARATE NEUTRAL FOR EACH CIRCUIT. HOME RUNS SHALL HAVE NO MORE THAN THREE CIRCUITS. LINE VOLTAGE AND LOW VOLTAGE WIRING IS NOT SHOWN ON PLANS.
  "X" INDICATES TYPE:
  C - AUTOMATIC CONTROL
  GFI - GROUND FAULT INTERRUPTER
  WP - WEATHERPROOF FLIP COVER
  WPI - WEATHERPROOF WHILE-IN-USE COVER
  WR - WEATHER-RESISTANT TYPE
  U - PROVIDE WITH (2) USB PORTS
  TR - TAMPER RESISTANT
- SIMPLEX RECEPTACLE - CEILING MOUNT, WALL MOUNT (+18", UNO)
- DUPLEX RECEPTACLE - CEILING MOUNT, WALL MOUNT (+18", UNO)
- QUADRUPLEX RECEPTACLE - CEILING MOUNT, WALL MOUNT (+18", UNO)
- ABOVE COUNTER RECEPTACLE - MOUNT AT +4" ABOVE BACKSPLASH
- PANELBOARD OR LOAD CENTER
- SPECIAL PURPOSE RECEPTACLE (MOUNT AT +18", UNO)
  "X" INDICATES TYPE:
  A - NEMA 5-20R, #12 CU; B - NEMA 5-30R, #10 CU;
  C - NEMA 5-50R, #6 CU; D - NEMA 6-20R, #12 CU;
  E - NEMA 6-30R, #10 CU; F - NEMA 6-50R, #6 CU;
  G - NEMA 14-20R, #12 CU; H - NEMA 14-30R, #10 CU;
  I - NEMA 14-50R, #6 CU*
  * +4" AFF FOR RANGE
- PUSHBUTTON (MOUNT AT +48", UNO)
  "X" INDICATES TYPE:
  EPO - EMERGENCY POWER OFF
  ADA - HANDICAPPED ACCESSIBLE DOOR (DEVICE BY OTHERS)
  ODO - OVERHEAD DOOR OPERATOR (DEVICE BY OTHERS)
- J — JUNCTION BOX
- RACEWAY BELOW FLOOR OR BELOW GRADE
- RACEWAY STUB-OUT WITH CAPPED END
- GROUNDING BUS

ELECTRICAL LIGHTING FIXTURE LEGEND

- SURFACE LED FIXTURE - "a" & "b" DESIGNATES SWITCH
- WALL MOUNTED SCONCE
- RECESSED CAN DOWNLIGHT
- EXIT SIGN - WALL MOUNT, CEILING MOUNT. ARROW INDICATES DIRECTION OF TRAVEL, SHADING INDICATES LIGHTED FACE.
- COMBINATION EXIT SIGN/ EGRESS LIGHTING UNIT - WALL MOUNT, CEILING MOUNT. ARROW INDICATES DIRECTION OF TRAVEL, SHADING INDICATES LIGHTED FACE.

ELECTRICAL LIGHTING CONTROL LEGEND

STANDARD LIGHTING CONTROLS:
SWITCHES AND LINE VOLTAGE DIMMERS

- $X — TOGGLE SWITCH (MOUNT AT +48", UNO)
  "X" INDICATES TYPE:
  BLANK - SINGLE POLE
  3 - INDICATES THREE-WAY
  4 - INDICATES FOUR-WAY
  D - INDICATES DIMMER SWITCH PHILIPS SUNRISE - ON/OFF
  K - INDICATES KEYED SWITCH
  T - INDICATES TIMER
  P - INDICATES PILOT LIGHT
  OS - INDICATES WALL SWITCH OCC SENSOR WATTSTOPPER DSW-301 (SINGLE OR DUAL DSW-302 SWITCH)
  OSD - INDICATES WALL SWITCH OCC SENSOR WITH 0-10V DIMMING - WATTSTOPPER DW-311
  a - SINGLE POLE LIGHTING SWITCH ZONE 'a'
  b - SINGLE POLE LIGHTING SWITCH ZONE 'b'
  ab - INDICATES LIGHTING SWITCHES WITH MULTIPLE ZONES
- OS — OCCUPANCY SENSOR - DUAL TECHNOLOGY
  CEILING MOUNT: WATTSTOPPER DT-300, OR EQUAL
  WALL MOUNT: WATTSTOPPER DT-200, OR EQUAL
  WALL MOUNTED SHALL BE AT +96", UNO
  PROVIDE WITH BZ-50 POWER PACKS AS NEEDED.
- P — PHOTOCELL - CEILING MOUNT, WATTSTOPPER LS-301, OR EQUAL

ABBREVIATIONS AND SYMBOLS GENERAL NOTES

A. THE ABBREVIATIONS ON THIS SHEET COMPRISE A STANDARD LIST; NOT ALL ABBREVIATIONS APPEAR ON THIS PROJECT.
B. THE SYMBOLS ON THIS SHEET COMPRISE A STANDARD LIST; NOT ALL SYMBOLS APPEAR ON THIS PROJECT.
C. ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE ABOVE FINISHED FLOOR, UNLESS NOTED OTHERWISE. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS, MAKING ADJUSTMENTS AS REQUIRED TO AVOID INTERFERENCE WITH EQUIPMENT SUCH AS BASEBOARD FIN-TUBE, CABINET UNIT HEATERS, ETC. ARCHITECT/ENGINEER SHALL BE NOTIFIED OF ALL SUCH HEIGHT ADJUSTMENTS. MOUNTING HEIGHTS INDICATED ON ARCHITECTURAL WALL ELEVATIONS OR AS NOTED SPECIFICALLY ON THE DRAWINGS OR IN THE SPECIFICATIONS SHALL TAKE PRECEDENCE OVER MOUNTING HEIGHTS LISTED.

ELECTRICAL PROJECT GENERAL NOTES

A. PRIOR TO BID CONTRACTOR SHALL VISIT THE SITE. NOT ALL WORK REQUIRED TO COMPLETE THE PROJECT IS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH ALL THE WORK REQUIRED TO COMPLETE THE PROJECT IN ADDITION TO THE LOCAL CONDITIONS AND INCLUDE SAID WORK IN THE BID.
B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL ELECTRICAL SERVICE WORK WITH UTILITY. OWNER PAYS ALL FEES, CONTRACTOR DOES ALL SCHEDULING AND COORDINATION OF WORK. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ALL SCHEDULES ARE MET.
C. GENERAL WORK PRACTICES FOR ELECTRICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NECA 1, "STANDARD PRACTICES FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING." THIS PUBLICATION IS AVAILABLE FROM NECA BY TELEPHONE AT 301-657-3110 OR ON-LINE AT WWW.NECANET.ORG.
D. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE WITH MECHANICAL FOR PLENUM SPACES AND PROVIDE PLENUM RATED CABLES WHERE REQUIRED FOR LIGHTING CONTROL, DATA, FIRE ALARM AND ALL OTHER L.V. SYSTEMS NOT INSTALLED IN CONDUIT. VERIFY CONDUIT REQUIREMENTS ON DRAWINGS AND SPECIFICATIONS.
E. FIRE-RESISTANCE: PROVIDE A MINIMUM HORIZONTAL DISTANCE OF 24" BETWEEN OUTLET BOXES LOCATED ON OPPOSITE SIDES OF FIRE-RESISTANCE RATED WALLS. WHERE THIS IS NOT POSSIBLE INSTALL UL LISTED PUTTY PADS ON ALL OUTLET BOXES NOT MEETING THE 24" SEPARATION. PROVIDE A UL LISTED THROUGH -PENETRATION FIRESTOP FOR PENETRATIONS OF FIRE-RESISTANCE RATED ASSEMBLIES.
F. CONDUCTORS ARE SIZED PER THE 75 DEGREE C RATING COLUMN OF NEC TABLE 310.16. IF THE TERMINAL USED FOR A TERMINATION OF A PARTICULAR CONDUCTOR IS NOT MARKED, OR THE TERMINAL IS MARKED FOR 60 DEGREE C CONDUCTORS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EITHER ADJUST THE AMPACITY OF THE CONDUCTOR TO MATCH THE 60 DEGREE COLUMN OF TABLE 310.16, OR REPLACE THE TERMINAL WITH ONE RATED FOR AT LEAST 75 DEGREES C.
G. BASED ON ACTUAL HOMERUN LENGTHS REQUIRED IN THE FIELD, THE CONTRACTOR SHALL CALCULATE AND INCREASE THE WIRE SIZES AS REQUIRED TO LIMIT BRANCH CIRCUIT VOLTAGE DROP TO 3%. FOR 20A BRANCH CIRCUITS THE MINIMUM CONDUCTOR SIZES SHALL BE AS FOLLOWS: #10 AWG CU FOR RUNS BETWEEN 100 AND 200 LINEAR FEET, #8 AWG CU FOR RUNS BETWEEN 200 AND 325 LINEAR FEET, AND AS CALCULATED BY THE CONTRACTOR FOR CIRCUITS EXTENDING BEYOND 325 LINEAR FEET. IN ALL CASES WHERE WIRE SIZES INCREASE, THE CONTRACTOR SHALL PROVIDE LARGER CONDUITS AS REQUIRED.
H. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH 120V BRANCH CIRCUIT.

ELECTRICAL SHEET INDEX

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E000	ELECTRICAL SYMBOLS AND ABBREVIATIONS
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E004	ELECTRICAL DETAILS
E101	ELECTRICAL SITE PLAN
E110	ELECTRICAL PLANS

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: TJL
DRAWN: TJL
CHECKED: BMM
APPROVED: GLS
DATE: 06/17/2025

PROFESSIONAL ENGINEER REGISTERED 18100 STATE OF IDAHO GARTH L. STEVENS

Morrison Maierle
engineers · surveyors · planners · scientists
1055 Mount Ave
Missoula, Montana 59801
406.542.4841
www.m-m.net

100% - CD CONSTRUCTION DOCUMENT

BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ELECTRICAL SYMBOLS AND ABBREVIATIONS

SHEET NO.
E000

DATE STAMP 6/18/2025 8:54:32 AM

260010 - GENERAL REQUIREMENTS OF ELECTRICAL

A. SUMMARY
1. THE REQUIREMENTS LISTED IN THIS SECTION ARE SUPPLEMENTAL TO THE DIVISION 01 GENERAL REQUIREMENTS.
2. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL AND LOW-VOLTAGE CONTRACTORS TO EXAMINE AND REFER TO ALL ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING AND LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION CONDITIONS WHICH MAY AFFECT THE SCOPE OF ELECTRICAL, COMMUNICATIONS, ELECTRONIC SAFETY AND SECURITY WORK. INSPECT THE BUILDING SITE AND EXISTING FACILITIES FOR VERIFICATION OF PRESENT CONDITIONS. MAKE PROPER PROVISIONS FOR THESE CONDITIONS IN PERFORMANCE OF THE WORK AND COST THEREOF.
3. ELECTRICAL, COMMUNICATIONS, ELECTRONIC SAFETY AND SECURITY WORK FOR THIS PROJECT SHALL INCLUDE ALL ITEMS, ARTICLES, MATERIALS AND THE ASSOCIATED LABOR MENTIONED, SCHEDULES OR SHOWN IN THESE SPECIFICATIONS AND IN THE ACCOMPANYING DRAWINGS.
4. FURNISH AND INSTALL ALL EQUIPMENT, MATERIALS AND ANY REQUIRED INCIDENTAL ITEMS REQUIRED BY GOOD PRACTICE TO COMPLETE THE SYSTEMS DESCRIBED HEREIN.
5. REFER TO DIVISION 01 FOR ALL LISTED ALTERNATES AND PROVIDE SEPARATE PRICING AND WORK AS INDICATED IN DIVISION 01 AND CONTRACT DOCUMENTS.

B. DEFINITIONS - THROUGHOUT CONTRACT DOCUMENTS THESE WORDS AND PHRASES ARE USED:
1. CONTRACT DOCUMENTS - ALL DRAWINGS, SPECIFICATIONS, ADDENDA AND CHANGE ORDERS THAT DOCUMENT WORK TO BE DONE.
2. EQUIVALENT OR EQUAL - PRODUCT OF LIKE TYPE AND FUNCTION THAT COMPLIES WITH ALL APPLICABLE PROVISIONS OF DRAWINGS AND SPECIFICATIONS AND WHICH HAS BEEN APPROVED AS SUBSTITUTE FOR SPECIFIED ITEM.
3. FURNISH - PURCHASE MATERIAL AS SHOWN AND SPECIFIED, AND PLACE MATERIAL TO APPROVED LOCATION ON SITE OR ELSEWHERE AS NOTED OR AGREED UPON.
4. INSTALL - SET IN PLACE AND CONNECT, READY FOR USE AND IN COMPLETE AND PROPERLY OPERATING FINISHED CONDITION.
5. PROVIDE - FURNISH AND INSTALL WITH ALL PRODUCTS, LABOR, SUB-CONTRACTS, AND APPURTENANCES REQUIRED FOR A COMPLETE AND PROPERLY OPERATING, FINISHED CONDITION.
6. ROUGH-IN - PROVIDE CONDUIT RACEWAY SYSTEM WITH JUNCTION BOXES, FITTINGS, STRAPS, BUSHINGS, ETC., FOR FUTURE INSTALLATION OF WIRING, DEVICES, DISCONNECTS AND BREAKERS. PROVISION SHALL BE MADE IN PANELBOARD (HARDWARE, ETC.) FOR FUTURE INSTALLATION OF BREAKERS.
7. SERVICEABLE - ARRANGED SO THAT COMPONENT OR PRODUCT IN QUESTION MAY BE PROPERLY REMOVED AND REPLACED WITHOUT DISASSEMBLY, DESTRUCTION OR DAMAGE TO SURROUNDING INSTALLATION.

C. CODES, STANDARDS AND REGULATIONS
1. CODES - PERFORM ALL WORK IN STRICT ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE AND LOCAL CODES; INCLUDING, BUT NOT LIMITED TO LATEST LEGALLY ENACTED EDITIONS OF FOLLOWING CODES:
   a. NFPA 70, NATIONAL ELECTRIC CODE – NEC
   b. NFPA 72, NATIONAL FIRE ALARM CODE
   c. ANSI-C2, NATIONAL ELECTRICAL SAFETY CODE – NESC
   d. INTERNATIONAL BUILDING CODE – IBC
   e. INTERNATIONAL FIRE CODE – IFC
   f. INTERNATIONAL ENERGY CONSERVATION CODE – IECC
2. STANDARDS - REFERENCE TO STANDARDS INFERS THAT INSTALLATION, EQUIPMENT AND MATERIAL SHALL BE WITHIN LIMITS FOR WHICH IT WAS DESIGNED, TESTED AND APPROVED, IN CONFORMANCE WITH CURRENT PUBLICATIONS AND STANDARDS OF FOLLOWING ORGANIZATIONS:
   a. AMERICAN NATIONAL STANDARDS INSTITUTE – ANSI
   b. AMERICAN SOCIETY FOR TESTING AND MATERIALS – ASTM
   c. INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS – IEEE
   d. INSULATED CABLE ENGINEERS ASSOCIATION – ICEA
   e. NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION – NECA
   f. NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION – NEMA
   g. NATIONAL FIRE PROTECTION ASSOCIATION – NFPA
   h. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION – OSHA
   i. UNDERWRITERS' LABORATORIES, INC. – UL
   j. RULES AND REGULATIONS OF THE STATE/LOCAL FIRE MARSHAL
   k. STANDARDS AND REQUIREMENT OF THE SERVING UTILITIES
   l. STATE AND LOCAL ORDINANCES
3. REGULATIONS - DESIGN HAS BEEN PERFORMED IN ACCORDANCE WITH APPLICABLE REGULATIONS AND GUIDELINES NOTED BELOW. CONTRACTOR SHALL CAREFULLY APPLY THESE REGULATIONS AND BRING ANY DISCREPANCIES TO IMMEDIATE ATTENTION OF ARCHITECT/ENGINEER.
   a. AMERICANS WITH DISABILITIES ACT – ADA

D. FEES AND PERMITS
1. ELECTRICAL CONTRACTOR SHALL PAY FOR ALL PERMITS OR FEES IN CONNECTION WITH ELECTRICAL WORK. FEES SHALL INCLUDE ANY OR ALL USER FEES, GOVERNMENT FEES, SYSTEM DEVELOPMENT FEES, CONNECTION FEES OR OTHER FEES THAT ARE REQUIRED TO BE PAID BEFORE SYSTEMS CAN BE CONNECTED OR USED.
2. SCHEDULE ALL REQUIRED ELECTRICAL INSPECTIONS WITH LOCAL ELECTRICAL INSPECTOR. NOTIFY ENGINEER OF ALL ITEMS OF DISCREPANCY NOTED BY ELECTRICAL INSPECTOR IF THOSE ITEMS AFFECT COST OR FUNCTION OF SYSTEM, OR IF THEY CONFLICT WITH ELECTRICAL DRAWINGS AND SPECIFICATIONS.
3. ALL UTILITY COST AND FEES FROM THE UTILITY WORK SHALL BE THE RESPONSIBILITY OF THE OWNER. CONTRACTOR TO COORDINATE ALL UTILITY REQUIREMENTS, STANDARDS AND RESPONSIBILITIES WITH SERVING UTILITY FOR A COMPLETE SCOPE OF WORK PRIOR TO BID.
4. DELIVER ALL INSPECTION CERTIFICATES TO ARCHITECT/ENGINEER PRIOR TO FINAL ACCEPTANCE OF WORK.

E. INTENT OF SPECIFICATIONS AND DRAWINGS
1. PLANS AND SPECIFICATIONS ARE INTENDED TO RESULT IN COMPLETE ELECTRICAL INSTALLATION IN FULL COMPLIANCE WITH ALL APPLICABLE CODES, STANDARDS AND ORDINANCES.
2. PLANS AND SPECIFICATIONS ARE TO SUPPLEMENT EACH OTHER AND ANY DETAILS CONTAINED IN ONE SHALL BE INCLUDED AS IF CONTAINED IN BOTH.
3. ELECTRICAL DRAWINGS SHALL SERVE AS WORKING DRAWINGS, BUT ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE IF ANY DIMENSIONAL DISCREPANCIES EXIST.
4. DRAWINGS ARE PARTLY DIAGRAMMATIC AND DO NOT SHOW ROUTING OF CONDUITS, EXACT LOCATION OF PRODUCTS, OR INSTALLATION FEATURES IN EXACT DETAIL. LOCATIONS OF DEVICES, FIXTURES AND EQUIPMENT ARE APPROXIMATE UNLESS DIMENSIONED.
5. RISER DIAGRAMS AND CONTROL SCHEMATICS ARE NOT TO SCALE AND DO NOT SHOW PHYSICAL ARRANGEMENT OF EQUIPMENT. DO NOT USE RISER DIAGRAMS OR SCHEMATICS TO OBTAIN LINEAL CONDUIT AND CABLING DISTANCES.
6. ITEMS ARE SHOWN ON DRAWINGS IN LOCATIONS TO MINIMIZE INTERFERENCE WITH OTHER EQUIPMENT, STRUCTURAL MEMBERS, ETC. EXACT FINISH LOCATIONS ARE NOT INDICATED, HOWEVER, AND ALL WORK SHALL BE DONE TO AVOID INTERFERENCE. PRESERVE HEADROOM AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.

F. CONTRACTOR'S RESPONSIBILITY - CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF COMPLETE AND FUNCTIONAL PIECE OF WORK IN ACCORDANCE WITH TRUE INTENT OF CONTRACT DOCUMENTS. PROVIDE ALL INCIDENTAL ITEMS REQUIRED FOR COMPLETE INSTALLATION AND SATISFACTORY OPERATION OF ALL EQUIPMENT, WHETHER OR NOT SPECIFICALLY NOTED IN CONTRACT DOCUMENTS.
1. QUALIFICATIONS
   a. CONTRACTOR SHALL EMPLOY ON THIS PROJECT, CAPABLE, EXPERIENCED AND RELIABLE FOREMAN AND SUCH SKILLED WORKMEN AS MAY BE REQUIRED FOR VARIOUS CLASSES OF WORK TO BE PERFORMED.
   b. WHERE SPECIAL SKILLS AND CERTIFICATION ARE REQUIRED, CONTRACTOR SHALL ENSURE THAT WORK IS PERFORMED BY INDIVIDUALS WITH REQUIRED EXPERIENCE, SKILL AND CERTIFICATION.
   c. IF, IN ENGINEER'S OPINION, CONTRACTOR'S EMPLOYEES DO NOT POSSESS NECESSARY QUALIFICATIONS TO PERFORM SPECIALTY WORK, CONTRACTOR WILL BE REQUIRED TO OBTAIN SERVICES OF WORKMEN WHO ARE APPROVED BY MANUFACTURER AND CERTIFIED BY APPLICABLE AGENCY OR GROUP. THESE WORKMEN, IF REQUIRED, SHALL BE PROVIDED AT NO ADDITIONAL EXPENSE.
   d. REFER TO OTHER SPECIFICATION SECTIONS FOR ADDITIONAL REQUIRED CONTRACTOR QUALIFICATIONS AND CERTIFICATION.
2. LICENSING AND CERTIFICATION - ALL DIVISION 26 WORK SHALL BE ACCOMPLISHED BY ELECTRICIANS, LICENSED BY STATE IN WHICH WORK IS BEING DONE, CERTIFIED AS REQUIRED, AND SKILLED IN THEIR CRAFT. ELECTRICIAN MAY ELECT TO HIRE SUBCONTRACTORS FOR PORTIONS OF WORK (SUCH AS SYSTEMS DESCRIBED IN DIVISIONS 27 AND 28) WHO ARE NOT LICENSED ELECTRICIANS, BUT HAVE REQUIRED CERTIFICATES AND ARE LICENSED IN THEIR DISCIPLINE BY STATE IN WHICH WORK IS BEING DONE.
3. COORDINATION
   a. CONTRACTOR SHALL CONSULT ALL CONTRACT DOCUMENTS, SHOP DRAWINGS OF OTHER TRADES, AND ACTUAL BUILDING DIMENSIONS TO PREDETERMINE THAT HIS WORK AND EQUIPMENT WILL FIT AS PLANNED. DO NOT SCALE DRAWINGS FOR FABRICATION. NO EXTRA PAYMENT WILL BE ISSUED FOR MATERIALS OR ITEMS WHICH DO NOT FIT BECAUSE OF CONTRACTOR'S FAILURE TO VERIFY AS-BUILT BUILDING DIMENSIONS.
   b. CONTRACTOR SHALL CHECK LOCATION OF FIXTURES, OUTLETS, EQUIPMENT, CONDUIT, ETC., TO DETERMINE THEY CLEAR ALL OPENINGS, STRUCTURAL MEMBERS, PIPING, DUCTS AND MISCELLANEOUS EQUIPMENT HAVING FIXED LOCATIONS.
   c. CHANGES IN LOCATION OF ELECTRICAL WORK, NECESSARY DUE TO OBSTACLES OR INSTALLATION OF OTHER TRADES SHOWN ON CONTRACT DOCUMENTS, SHALL BE MADE BY ELECTRICAL CONTRACTOR AT NO EXTRA COST.
   d. CONTRACTOR SHALL COORDINATE WITH PLUMBING AND MECHANICAL CONTRACTORS TO AVOID INSTALLATION OF PIPING AND DUCTWORK ABOVE OR BELOW PANELBOARDS IN VIOLATION OF NATIONAL ELECTRICAL CODE.
   e. LAY OUT ALL WORK IN ADVANCE AND AVOID CONFLICT WITH OTHER WORK IN PROGRESS. PHYSICAL DIMENSIONS SHALL BE DETERMINED FROM ARCHITECTURAL AND STRUCTURAL PLANS. VERIFY LOCATIONS FOR JUNCTION BOXES, DISCONNECT SWITCHES, STUB-UPS, ETC., FOR CONNECTION TO EQUIPMENT FURNISHED BY OTHERS, OR IN OTHER DIVISIONS OF THIS WORK.
   f. CONTRACTOR SHALL COORDINATE AND PLAN WORK TO PROCEED WITH WORK OF OTHER TRADES.
   g. CONTRACTOR SHALL INFORM GENERAL CONTRACTOR OF ALL REQUIRED OPENINGS IN BUILDING STRUCTURE FOR INSTALLATION OF ELECTRICAL EQUIPMENT.
   h. CONTRACTOR SHALL CHECK DIMENSIONS OF ALL ELECTRICAL EQUIPMENT INSTALLED, PROVIDED BY HIMSELF OR BY OTHERS, SO CORRECT CLEARANCES AND CONNECTIONS CAN BE MADE.
   i. CONSULTING ALL CONTRACT DOCUMENTS AND SHOP DRAWINGS OF OTHER TRADES, CONTRACTOR SHALL DETERMINE WHERE ELECTRICAL JUNCTION/PULL BOXES AND EQUIPMENT CAN BE INSTALLED TO MAINTAIN PROPER ACCESSIBILITY. WHERE ACCESSIBILITY CANNOT BE MAINTAINED BY JUDICIOUS PLACEMENT OF BOXES, ELECTRICAL CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR TO PROVIDE, FABRICATE, INSTALL, ADJUST, PAINT, ETC. ACCESS DOORS THROUGH NON-ACCESSIBLE FLOOR, WALL, AND CEILING FINISHES TO ALLOW ACCESS TO ALL ELECTRICAL JUNCTION AND PULL BOXES, ELECTRICAL DEVICES, ELECTRICAL EQUIPMENT, ETC. AT ALL REQUIRED LOCATIONS WHETHER SHOWN OR NOT SHOWN ON PLANS. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR DETERMINING SIZE AND LOCATION OF THE ACCESS DOORS. REPORT ANY CONFLICTS TO ARCHITECT/ENGINEER.

G. REVIEW - ALL WORK AND MATERIAL IS SUBJECT TO REVIEW AT ANY TIME BY THE ARCHITECT/ENGINEER OR HIS REPRESENTATIVE. IF THE ARCHITECT/ENGINEER OR HIS REPRESENTATIVE FINDS MATERIAL THAT DOES NOT CONFORM TO THESE SPECIFICATIONS OR THAT IS NOT PROPERLY INSTALLED OR FINISHED, CORRECT THE DEFICIENCIES IN A MANNER SATISFACTORY TO THE ARCHITECT/ENGINEER AT THE CONTRACTOR'S EXPENSE.

H. TEMPORARY FACILITIES
1. ELECTRICAL UTILITIES
   a. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY ELECTRICAL POWER TO THE CONSTRUCTION SITE AS DIRECTED BY THE GENERAL CONTRACTOR. NO CONNECTIONS TO THE OWNER'S SYSTEM SHALL BE ALLOWED WITHOUT OWNER'S WRITTEN APPROVAL. PROVIDE A SEPARATE UTILITY SERVICE AS REQUIRED.
   b. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY ELECTRICAL POWER TO JOB TRAILERS AS DIRECTED BY THE GENERAL CONTRACTOR.
   c. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY COMMUNICATIONS TO JOB TRAILERS AS DIRECTED BY THE GENERAL CONTRACTOR.
   d. ALL COSTS ASSOCIATED WITH TEMPORARY POWER, COMMUNICATIONS AND UTILITY COST SHALL BE PAID BY TO THE GENERAL CONTRACTOR.
   e. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION LIGHTING AS DIRECTED BY THE GENERAL CONTRACTOR TO PROVIDE A SAFE WORKING ENVIRONMENT.
   f. ALL TEMPORARY SERVICES ARE TO BE REMOVED IN THEIR ENTIRETY PRIOR TO OCCUPANCY AS DIRECTED BY THE GENERAL CONTRACTOR.
2. OFFICES
   a. THE ELECTRICAL CONTRACTOR MUST HAVE THE PERMISSION OF THE OWNER AND GENERAL CONTRACTOR OR CONSTRUCTION MANAGER TO INSTALL A TEMPORARY OFFICE/JOB TRAILER ON THE PROJECT SITE.
   b. CONTRACTOR SHALL COMPLETELY REMOVE HIS TEMPORARY INSTALLATIONS WHEN NO LONGER NEEDED AND THE PREMISES SHALL BE COMPLETELY CLEAN, DISINFECTED, PATCHED, AND REFINISHED TO MATCH ADJACENT AREAS.
3. TEMPORARY FIRE PROTECTION - THE ELECTRICAL AND LOW-VOLTAGE CONTRACTORS SHALL PROVIDE ALL NECESSARY FIRST AID HAND FIRE EXTINGUISHERS FOR CLASSES OF HAZARDS AS MAY EXIST IN HIS OWN WORK AREA ONLY IN ACCORDANCE WITH GOOD AND SAFE PRACTICE AND AS REQUIRED BY JURISDICTIONAL SAFETY AUTHORITY.

I. RECORD DOCUMENTS (AS-BUILT DRAWINGS)
1. AT BEGINNING OF WORK, CONTRACTOR SHALL SET ASIDE ONE COMPLETE SET OF DRAWINGS WHICH SHALL BE MAINTAINED AS COMPLETE "AS-BUILT" SET. DRAWINGS SHALL BE UPDATED DAILY IN NEAT AND LEGIBLE MANNER AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. DRAWINGS, SPECIFICATION, ADDENDA, CHANGE ORDERS, ETC. SHALL BE MAINTAINED AT JOB SITE AND AVAILABLE FOR REVIEW AT ANY TIME.
2. SHOW DIMENSIONED LOCATION AND ROUTING OF ALL ELECTRICAL WORK THAT WILL BECOME PERMANENTLY CONCEALED, CAST IN CONCRETE OR BURIED UNDERGROUND.
3. SHOW COMPLETE ROUTING AND SIZING OF ANY SIGNIFICANT REVISIONS TO SYSTEMS SHOWN.
4. SHOW PROVISIONS FOR FUTURE CONNECTION, REFERENCED TO BUILDING LINES OR APPROVED BENCH MARKS.
5. PROVIDE WIRING DIAGRAMS FOR ALL INDIVIDUAL COMMUNICATIONS SYSTEMS AS INSTALLED. IDENTIFY ALL COMPONENTS AND SHOW ALL WIRE AND TERMINAL NUMBERS AND CONNECTIONS.
6. AT COMPLETION OF PROJECT, DELIVER DRAWINGS TO ENGINEER FOR REVIEW.

J. WARRANTY
1. THE CONTRACTOR SHALL GUARANTEE THAT ALL MATERIALS AND LABOR INSTALLED ARE NEW AND OF FIRST QUALITY AND THAT ANY MATERIAL OR LABOR FOUND DEFECTIVE SHALL BE REPLACED WITHOUT COST TO THE OWNER WITHIN ONE (1) YEAR AFTER SUBSTANTIAL COMPLETION OF THE CONTRACT OR ONE (1) FULL SEASON OF HEATING AND COOLING OPERATION, WHICHEVER IS THE GREATER. THE GUARANTEE SHALL LIST THE DATE OF THE BEGINNING OF THE ONE (1) YEAR PERIOD, WHICH SHALL BE THE DATE THAT THE SUBSTANTIAL COMPLETION CERTIFICATE IS ISSUED.
2. ANY DAMAGE TO THE BUILDING, CAUSED BY DEFECTIVE WORK OR MATERIAL OF THE CONTRACTOR WITHIN THE ABOVE-MENTIONED PERIOD, SHALL BE SATISFACTORILY REPAIRED WITHOUT COST TO THE OWNER.
3. THE GUARANTEE DOES NOT INCLUDE MAINTENANCE OF EQUIPMENT. THE OWNER SHALL ACCEPT FULL RESPONSIBILITY FOR PROPER OPERATION AND MAINTENANCE OF EQUIPMENT IMMEDIATELY UPON SUBSTANTIAL COMPLETION AND OCCUPANCY OF THE BUILDING.
4. FINAL ACCEPTANCE BY THE OWNER WILL NOT OCCUR UNTIL ALL OPERATING INSTRUCTIONS ARE MOUNTED IN EQUIPMENT ROOMS AND OPERATING PERSONNEL THOROUGHLY INDOCTRINATED IN THE OPERATION OF ALL ELECTRICAL EQUIPMENT BY THE CONTRACTOR.
5. NO EQUIPMENT INSTALLED AS PART OF THIS PROJECT SHALL BE USED FOR TEMPORARY HEAT DURING CONSTRUCTION.

K. MATERIALS AND EQUIPMENT
1. MANUFACTURER'S TRADE NAMES AND CATALOG NUMBERS LISTED ARE INTENDED TO INDICATE THE QUALITY OF EQUIPMENT OR MATERIALS DESIRED. MANUFACTURERS NOT LISTED IN THE SPECIFICATION WILL BE CONSIDERED SUBSTITUTIONS AND MUST HAVE PRIOR APPROVAL.
2. SEE DIVISION 01 FOR SUBSTITUTIONS PROCEDURES. REQUESTS FOR SUBSTITUTION ARE TO BE SUBMITTED SUFFICIENTLY AHEAD OF THE DEADLINE, TO GIVE AMPLE TIME FOR EXAMINATION. PRIOR APPROVAL REQUEST FOR SUBSTITUTION MUST INDICATE THE SPECIFIC ITEM OR ITEMS TO BE FURNISHED IN LIEU OF THOSE SCHEDULED, TOGETHER WITH COMPLETE TECHNICAL AND COMPARATIVE DATA ON SCHEDULED ITEMS AND ITEMS PROPOSED FOR SUBSTITUTION.
3. IF THE ENGINEER APPROVES ANY PROPOSED SUBSTITUTION, THE APPROVED PRODUCT WILL BE LISTED IN AN ADDENDUM. BIDDERS SHALL NOT RELY ON APPROVAL MADE IN ANY OTHER MANNER.
4. ELECTRICAL EQUIPMENT MAY BE INSTALLED WITH MANUFACTURER'S STANDARD FINISH AND COLOR EXCEPT WHERE SPECIFIC COLOR, FINISH OR CHOICE IS INDICATED. IF THE MANUFACTURER HAS NO STANDARD FINISH, EQUIPMENT SHALL HAVE A PRIME COAT AND TWO FINISH COATS OF GRAY ENAMEL.
5. HIGH ALTITUDE OPERATION: CAPACITY OF ALL EQUIPMENT IS TO BE SIZED AND MANUFACTURED TO PERFORM AT THE ELEVATION OF THE PROJECT SITE. IF NOT SPECIFICALLY INDICATED IN THE EQUIPMENT SCHEDULE OR IN THE SPECIFICATIONS PROVIDE ALL REQUIRED ACCESSORIES AND EQUIPMENT FOR PROPER OPERATION AT ELEVATION OF THE PROJECT SITE.
6. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR MATERIALS AND EQUIPMENT INSTALLED UNDER THIS CONTRACT. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE PROTECTION OF MATERIALS AND EQUIPMENT OF OTHERS FROM DAMAGE AS A RESULT OF HIS WORK.
7. MANUFACTURED MATERIAL AND EQUIPMENT SHALL BE APPLIED, INSTALLED, CONNECTED, ERECTED, USED, CLEANED AND CONDITIONED AS DIRECTED BY MANUFACTURER UNLESS HEREIN SPECIFIED TO THE CONTRARY.
8. THIS CONTRACTOR SHALL MAKE THE REQUIRED ARRANGEMENT WITH GENERAL CONTRACTOR OR CONSTRUCTION MANAGER FOR THE INTRODUCTION INTO THE BUILDING OF EQUIPMENT TOO LARGE TO PASS THROUGH FINISHED OPENINGS.
9. STORE MATERIALS AND EQUIPMENT INDOORS AT THE JOB SITE OR, IF THIS IS NOT POSSIBLE, STORE ON RAISED PLATFORMS AND PROTECT FROM THE WEATHER BY MEANS OF WATERPROOF COVERS. COVERINGS SHALL PERMIT CIRCULATION OF AIR AROUND THE MATERIALS TO PREVENT CONDENSATION OF MOISTURE. SCREEN OR CAP OPENINGS IN EQUIPMENT TO PREVENT THE ENTRY OF VERMIN.

L. SUBSTITUTION OF MATERIALS - WHERE SUBSTITUTED EQUIPMENT REQUIRES STRUCTURAL, ARCHITECTURAL, MECHANICAL, PLUMBING OR ELECTRICAL WORK THAT DIFFERS FROM BASIC DESIGN, COST OF ALL CHANGES, INCLUDING RE-DESIGN, SHALL BE RESPONSIBILITY OF CONTRACTOR USING SUBSTITUTION.
1. APPROVED MANUFACTURERS
   a. IN GENERAL, ONE PARTICULAR MANUFACTURER AND PART NUMBER OR SERIES IS LISTED TO DESCRIBE EQUIPMENT. EQUIVALENT EQUIPMENT OF OTHER MANUFACTURERS LISTED FOR THAT ITEM MAY BE SUBSTITUTED WITHOUT PRIOR APPROVAL. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ITEM USED FOR BIDDING PURPOSES IS TRULY EQUIVALENT TO THAT SPECIFIED. IF IT IS NOT EQUIVALENT, IT WILL BE REJECTED AT SHOP DRAWING REVIEW AND CONTRACTOR SHALL SUPPLY SPECIFIED ITEM AT HIS OWN COST.
   b. IT IS UNDERSTOOD THAT MANUFACTURERS LISTED MAY NOT ACTUALLY HAVE EQUIVALENT PRODUCT TO THAT SPECIFIED. IF CONTRACTOR/DISTRIBUTOR HAS ANY QUESTIONS REGARDING DESIRED PRODUCT CHARACTERISTICS AND SUITABILITY OF PROPOSED SUBSTITUTION, HE IS ENCOURAGED TO SUBMIT FOR PRIOR APPROVAL. ALSO, ANY MANUFACTURER NOT LISTED SHALL BE SUBMITTED FOR PRIOR APPROVAL.
2. PRIOR APPROVALS
   a. MANUFACTURERS NOT LISTED IN SPECIFICATION OR ON SCHEDULE FOR A PARTICULAR ITEM ARE OPEN FOR SUBSTITUTION PRIOR TO BID OPENING ONLY.
   b. MANUFACTURERS DESIRING APPROVAL SHALL SUBMIT CATALOG CUTS THAT DEFINE QUALITY OF PRODUCT AND ABILITY TO PERFORM AS SPECIFIED. IT IS UNDERSTOOD THAT NO TWO MANUFACTURES USE IDENTICAL METHODS OR MAKE IDENTICAL PRODUCTS. ANY AND ALL DEVIATIONS FROM THAT SPECIFIED SHALL BE CLEARLY NOTED.
   c. SUBMITTALS SHALL ARRIVE AT ENGINEER AT LEAST TEN (10) DAYS PRIOR TO BID OPENING. ALL APPROVALS WILL BE LISTED IN LAST ADDENDUM AS BEING APPROVED TO BID. ITEMS SUBSTITUTED, BUT NOT LISTED IN CONTRACT DOCUMENTS, WILL NOT BE CONSIDERED IF SUBMITTED ON SHOP DRAWINGS.
   d. APPROVAL OF SUBSTITUTE EQUIPMENT IS ON BASIS OF QUALITY ONLY. MATERIALS SUPPLIER SHALL BE RESPONSIBLE FOR HIS QUOTATION REFLECTING PROPER SELECTION OF HIS PARTICULAR EQUIPMENT WITH REGARD TO PROPER CAPACITIES, PHYSICAL DIMENSIONS, REQUIREMENTS, INTENDED FUNCTION, FINISH, COLOR, ETC. ENGINEER WILL NOT GIVE APPROVAL TO SPECIFIC MODEL NUMBERS OR CHECK CAPACITIES, DIMENSIONS, OR REQUIREMENTS. EVALUATION WILL BE ON BASIS OF QUALITY AND EQUALITY TO SPECIFIED ITEMS.
   e. PRIOR APPROVAL SHALL BE OBTAINED FROM ENGINEER AND NO OTHER ENTITY (ARCHITECT, OWNER, ETC.) IS AUTHORIZED TO GIVE SUCH APPROVAL.

M. PRODUCT AND SYSTEM SUBMITTALS
1. SUBMITTALS WILL BE REQUIRED FOR EACH PIECE OF EQUIPMENT, MATERIAL OR PRODUCT UTILIZED IN THE PROJECT. ALL SUBMITTAL SHALL BE SUBMITTED, REVIEWED AND ALL DISCREPANCIES ADDRESSED PRIOR TO ORDERING EQUIPMENT OR STARTING WORK. ANY EQUIPMENT ORDERED WITHOUT HAVING FIRST COMPLETED THE SUBMITTAL PROCESS IS AT THE RISK OF THE CONTRACTOR. ANY WORK PERFORMED PRIOR TO COMPLETING THE SUBMITTAL PROCESS IS DONE AT THE RISK OF THE CONTRACTOR.
2. SUBMITTAL DEFINITIONS
   a. PRODUCT DATA: PROVIDE MANUFACTURERS CUT SHEETS THAT INCLUDE GENERAL PRODUCT INFORMATION INCLUDING BUT NOT LIMITED TO: MODEL NUMBER, PHYSICAL DATA, NOMINAL CAPACITIES, ROUGH-IN REQUIREMENTS.
   b. PERFORMANCE DATA: PROVIDE DETAILED PERFORMANCE AND CAPACITIES BASED ON PROJECT SPECIFIC REQUIREMENTS INCLUDING BUT NOT LIMITED TO: VOLTAGE, PHASE, AMPERAGE, OVERCURRENT PROTECTION, CONDUCTOR SIZE, CONDUCTOR MATERIAL, CONDUIT SIZE, COLOR TEMPERATURE, COLOR RENDERING INDEX, LIFE EXPECTANCE, EFFICACY, EFFICIENCY, IP RATINGS, LIGHT DISTRIBUTION TYPES AND LIGHTING CONTROL.
   c. SHOP DRAWINGS: PROVIDE DETAILED DRAWINGS OF THE EQUIPMENT SHOWING OVERALL DIMENSIONS, LOCATION OF ELECTRICAL CONNECTION, LOCATION OF ANCHORAGE POINTS, LOCATION OF ELECTRICAL AND CONTROL PANELS, AND ALL OPERATING, SERVICE AND MAINTENANCE CLEARANCES.
   d. DELEGATED DESIGN: PROVIDE DETAILED DRAWINGS PREPARED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER THAT DETAIL PERTINENT DESIGN CRITERIA, THE MATERIALS AND PRODUCTS TO BE INSTALLED AND THE REQUIRED INSTALLATION LOCATIONS.
   e. WIRING DIAGRAM: PROVIDE DIAGRAMS THAT IDENTIFY AND DETAIL REQUIRED FIELD WIRING.
3. SUBMITTAL FORMATS
   a. INCLUDE THE FOLLOWING INFORMATION WITH EACH SUBMITTAL:
      - PROJECT NAME
      - SUBMITTAL DATE
      - NAME OF ARCHITECT
      - NAME OF ENGINEER
      - NAME OF GENERAL CONTRACTOR OR CONSTRUCTION MANAGER
      - NAME OF SUB-CONTRACTOR
      - NAME OF FIRM OR ENTITY THAT PREPARED THE SUBMITTAL
      - UNIQUE SUBMITTAL NUMBER
      - TYPE OF SUBMITTAL
      - SPECIFICATION SECTION
      - NAME OR MARK OF EQUIPMENT OR MATERIAL AND DETAIL OR DRAWINGS REFERENCE.
   b. ALL SUBMITTAL WITH THE EXCEPTION OF COLOR CHARTS OR MATERIAL SAMPLES SHALL BE ELECTRONICALLY TRANSMITTED PDF'S. ALL SUBMITTALS OVER 8 MB SHALL BE SETUP ON A SHARE FILE SITE AND ACCESS GRANTED THROUGH EMAIL WITH FOLDER'S LINK FOR DOWNLOAD.
4. SUBMITTAL REQUIREMENTS
   a. SUBMITTALS SHALL BE SUBMITTED AS A COMPLETE SPECIFICATION SECTION. THE SUBMITTAL MUST INCLUDE ALL MATERIALS AND EQUIPMENT FOR THAT SPECIFICATION SECTION. SUBMITTALS FOR INDIVIDUAL MATERIALS OF EQUIPMENT WILL BE REJECTED WITHOUT REVIEW.
   b. SUBMITTALS SHALL BE COMPLETE, CLEARLY SHOW ITEM USED, SIZE, DIMENSIONS, CAPACITY, ROUGH IN, ETC., AS REQUIRED FOR COMPLETE CHECK AND INSTALLATION. MANUFACTURER'S LITERATURE SHOWING MORE THAN ONE ITEM SHALL BE CLEARLY MARKED AS TO WHICH ITEM IS BEING FURNISHED OR IT WILL BE REJECTED AND RETURNED WITHOUT REVIEW.
   c. EACH SUBMITTAL SHALL BE THOROUGHLY CHECKED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DOCUMENT REQUIREMENTS, ACCURACY OF DIMENSIONS, RELATIONSHIP TO THE WORK OF OTHER TRADES, AND CONFORMANCE WITH SOUND, SAFE PRACTICES AS TO ERECTION AND INSTALLATION. EACH SUBMITTAL SHALL THEN BEAR A STAMP EVIDENCING SUCH CHECKING AND SHALL SHOW CORRECTIONS MADE, IF ANY. SUBMITTALS REQUIRING EXTENSIVE CORRECTIONS SHALL BE REVISED BEFORE SUBMISSION. EACH SUBMITTAL NOT STAMPED AND SIGNED BY THE GENERAL AND ELECTRICAL CONTRACTORS EVIDENCING SUCH CHECKING WILL BE REJECTED AND RETURNED WITHOUT REVIEW.
   d. ON EACH SUBMITTAL, CLEARLY INDICATE DEVIATIONS FROM REQUIREMENTS IN THE CONTRACT DOCUMENTS, INCLUDING MINOR VARIATIONS AND LIMITATIONS; INCLUDE RELEVANT ADDITIONAL INFORMATION AND REVISIONS, OTHER THAN THOSE REQUESTED ON PREVIOUS SUBMITTALS. INDICATE BY HIGHLIGHTING ON EACH SUBMITTAL OR NOTING ON ATTACHED SEPARATE SHEET.
   e. REVIEW OF THE SHOP DRAWINGS AND LITERATURE BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR FOR RESPONSIBILITY FOR DEVIATIONS FOR THE DRAWINGS OR SPECIFICATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS IN THE SHOP DRAWINGS OR LITERATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE MATERIALS AND EQUIPMENT WHICH MEET THE SPECIFICATIONS AND JOB REQUIREMENTS.
   f. LUMINAIRES SUBMITTALS SHALL INCLUDE DIMENSIONS,

260526 - GROUNDING AND BONDING

A. GROUNDING ELECTRODE CONDUCTOR: BARE COPPER, SIZED PER NEC 250.66.
B. BONDING CONDUCTOR: BARE COPPER FOR LENGTHS OF 6 FEET OR LESS, COPPER WITH INSULATION IN PVC CONDUIT (METALLIC CONDUIT IN AIR PLENUM) WHERE LONGER THAN 6 FEET IN LENGTH. IF METALLIC CONDUIT IS USED, PROVIDE BONDING BUSHING AT EACH END. SIZE PER NEC 250.102.
C. EQUIPMENT GROUND CONDUCTOR: COPPER WITH GREEN INSULATION (LARGER WIRES MAY BE PERMANENTLY MARKED WITH GREEN), SIZED PER NEC 250.122. DO NOT RELY ON CONDUIT FOR THE GROUNDING PATH.
D. GROUNDING BUS: RECTANGULAR COPPER BAR, 1/4" X 4" X 12" WITH 9/32" HOLES SPACED 1-1/8" APART. WALL-MOUNT WITH STAND-OFF INSULATORS.
E. UFER GROUND (CONCRETE-ENCASED GROUNDING ELECTRODE): FABRICATE ACCORDING TO NFPA 70. USE A MINIMUM OF 20 FEET OF BARE COPPER CONDUCTOR NOT SMALLER THAN #4 AWG. IF CONCRETE FOUNDATION IS LESS THAN 20 FEET LONG, COIL EXCESS CONDUCTOR WITHIN BASE OF FOUNDATION. BOND GROUNDING CONDUCTOR TO REINFORCING STEEL IN AT LEAST FOUR LOCATIONS AND TO ANCHOR BOLTS. EXTEND GROUNDING CONDUCTOR BELOW GRADE AND CONNECT TO BUILDING'S GROUNDING GRID OR TO GROUNDING ELECTRODE EXTERNAL TO CONCRETE.
F. GROUND RODS: COPPER-CLAD STEEL; 3/4 INCH BY 10 FEET. DRIVE RODS UNTIL TOPS ARE 2 INCHES BELOW FINISHED FLOOR OR FINAL GRADE. INSTALL AT LEAST 2 GROUND RODS, SPACED AT LEAST 10 FEET FROM EACH OTHER AND LOCATED AT LEAST THE SAME DISTANCE FROM OTHER GROUNDING ELECTRODES.
G. GROUND ROD CLAMPS: MECHANICAL TYPE, COPPER OR COPPER ALLOY, TERMINAL WITH HEX HEAD BOLT.
H. PIPE CONNECTORS: COPPER OR COPPER ALLOY, PRESSURE TYPE CLAMP, SIZED FOR PIPE, SECURED WITH AT LEAST TWO BOLTS. BOND EACH ABOVEGROUND PORTION OF GAS PIPING SYSTEM DOWNSTREAM FROM EQUIPMENT SHUTOFF VALVE.
I. WATER PIPE CONNECTORS: MECHANICAL TYPE, TWO-PIECE, DIE-CAST ZINC ALLOY WITH ZINC-PLATED BOLTS. LISTED FOR DIRECT BURIAL. WHERE A DIELECTRIC MAIN WATER FITTING IS INSTALLED, CONNECT GROUNDING CONDUCTOR ON STREET SIDE OF FITTING. BOND METAL GROUNDING CONDUCTOR CONDUIT OR SLEEVE TO CONDUCTOR AT EACH END. USE BRAIDED-TYPE BONDING JUMPERS TO ELECTRICALLY BYPASS WATER METERS. CONNECT TO PIPE WITH A BOLTED CONNECTOR.
J. WELDED CONNECTORS: EXOTHERMIC-WELDING KITS OF TYPES RECOMMENDED BY KIT MANUFACTURER FOR MATERIALS BEING JOINED AND INSTALLATION CONDITIONS.
K. BUS-BAR CONNECTORS: MECHANICAL TYPE, CAST SILICON BRONZE, SOLDERLESS COMPRESSION-TYPE WIRE TERMINALS, AND LONG-BARREL, TWO-BOLT CONNECTION TO GROUND BUS BAR.
L. BEAM CLAMPS: WHEN AVAILABLE, BOND STRUCTURAL STEEL TO GROUNDING ELECTRODE SYSTEM WITH MECHANICAL TYPE CLAMP TERMINAL WITH GROUND WIRE ACCESS FROM FOUR DIRECTIONS, AND DUAL, TIN-PLATED OR SILICON BRONZE BOLTS.
M. UNDERGROUND GROUNDING CONDUCTORS: INSTALL BARE TINNED-COPPER CONDUCTOR, NO. 2/0 AWG MINIMUM. BURY AT LEAST 24 INCHES BELOW GRADE.

260548.16 - SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS

A. IN GENERAL, ALL ELECTRICAL EQUIPMENT SHALL BE DESIGNED AND INSTALLED TO WITHSTAND A SEISMIC EVENT. THE TERM "WITHSTAND" MEANS "THE EQUIPMENT WILL REMAIN IN PLACE WITHOUT SEPARATION OF ANY PARTS WHEN SUBJECTED TO THE SEISMIC FORCES SPECIFIED AND THE UNIT WILL BE FULLY OPERATIONAL AFTER THE SEISMIC EVENT."
B. FOR EQUIPMENT, COMPONENTS, CHANNEL BRACINGS, RESTRAINT CABLES, ANCHOR BOLTS, ETC. SEISMIC-RESTRAINT LOADING SHALL COMPLY WITH DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS. S_{DS} = **0.360**
C. COMPONENT IMPORTANCE FACTOR, I_P = 1.0 FOR ELECTRICAL EQUIPMENT EXCEPT FOR COMPONENTS REQUIRED FOR LIFE-SAFETY PURPOSES AFTER AN EARTHQUAKE SUCH AS EGRESS LIGHTING AND FIRE ALARM CONTROL PANEL WHERE I_P = 1.5.
D. COMPONENT RESPONSE MODIFICATION FACTOR, R_P: SEE TABLE 13.6-1 OF ASCE 7-10.
E. COMPONENT AMPLIFICATION FACTOR, A_P: SEE TABLE 13.6-1 OF ASCE 7-10.

260925 – NON-DIGITAL LIGHTING CONTROL SYSTEM

A. INDOOR OCCUPANCY AND VACANCY SENSORS - WALL AND CEILING-MOUNTED, SOLID-STATE INDOOR OCCUPANCY/VACANCY SENSORS. DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC). DESIGN IS BASED ON WATTSTOPPER DT-300 AND DT-200 SERIES.
   1. OCCUPANCY SENSOR: TURN LIGHTS ON WHEN COVERAGE AREA IS OCCUPIED, AND TURN THEM OFF WHEN UNOCCUPIED.
   2. VACANCY SENSOR: LIGHTS ARE MANUALLY TURNED ON AND SENSOR TURNS LIGHTS OFF WHEN THE ROOM IS UNOCCUPIED.
B. SWITCHBOX-MOUNTED OCCUPANCY SENSORS, DUAL TECHNOLOGY - SWITCHBOX-MOUNTED, COMBINATION LIGHTING-CONTROL SENSOR AND CONVENTIONAL SWITCH LIGHTING-CONTROL UNIT USING DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC). DESIGN IS BASED ON WATTSTOPPER DW-100 SERIES.
C. LIGHTING CONTACTORS – MULTI-POLE (UP TO 12) ELECTRICALLY OPERATED AND MECHANICALLY HELD CONTACTOR COMPLYING WITH NEMA ICS 2 AND UL 508. UNIT INCLUDES NEMA 1 ENCLOSURE, HAND-OFF-AUTO SWITCH, PILOT DEVICES AND SOLID-STATE CONTROL MODULE AS REQUIRED FOR 2 OR 3 WIRE CONTROL. DESIGN IS BASED ON ASCO 918 SERIES.
D. INSTALL SENSORS IN APPROPRIATE LOCATIONS AND AIM EACH TO ACHIEVE NOT LESS THAN 90-PERCENT COVERAGE OF AREAS INDICATED. DO NOT EXCEED COVERAGE LIMITS SPECIFIED IN MANUFACTURER'S WRITTEN INSTRUCTIONS.
E. MOUNT ELECTRICALLY HELD LIGHTING CONTACTORS WITH ELASTOMERIC ISOLATOR PADS TO ELIMINATE STRUCTURE-BORNE VIBRATION UNLESS CONTACTORS ARE INSTALLED IN AN ENCLOSURE WITH FACTORY-INSTALLED VIBRATION ISOLATORS.
F. CALIBRATE ALL SENSOR TIME DELAYS AND SENSITIVITY TO GUARANTEE PROPER DETECTION OF OCCUPANTS AND ENERGY SAVINGS. ADJUST TIME DELAY SO THAT CONTROLLED AREA REMAINS LIGHTED FOR 5 MINUTES AFTER OCCUPANT LEAVES AREA.
G. LOW VOLTAGE CABLES DO NOT REQUIRE RACEWAY WHERE CONCEALED IN ACCESSIBLE CEILINGS. CABLING SHALL BE CLEANLY ORGANIZED AND SUPPORTED BY J-HOOKS OR APPROVED METHODS EVERY 4 FEET. LOW VOLTAGE CABLES SHALL BE INSTALLED IN CONDUIT/RACEWAY WHERE EXPOSED.
H. WIRING WITHIN ENCLOSURES: SEPARATE POWER-LIMITED AND NONPOWER-LIMITED CONDUCTORS ACCORDING TO CONDUCTOR MANUFACTURER'S WRITTEN INSTRUCTIONS.
I. ALL LINE VOLTAGE CONNECTIONS SHALL BE TAGGED TO INDICATE CIRCUIT AND SWITCHED LEGS. RUN SEPARATE NEUTRALS FOR ANY PHASE DIMMED BRANCH LOAD CIRCUIT. DIFFERENT TYPES OF DIMMING LOADS SHALL HAVE SEPARATE NEUTRAL.
J. OCCUPANCY SENSOR LOCATIONS SHALL BE SHIFTED AS NECESSARY TO ENSURE THE FOLLOWING:
   1. NORMAL DEVICES SHALL BE INSTALLED NO HIGHER THAN 120" AFF.
   2. NO DEVICE RELYING SOLELY ON PIR SENSING SHALL BE INSTALLED IN A LOCATION WHERE OBSTACLES MAY BLOCK THE SENSOR'S FIELD OF VIEW.
   3. ANY DEVICE EMPLOYING ULTRASONIC SENSING SHALL BE INSTALLED AT A MINIMUM OF 72" AWAY FROM ANY STRONG TRANSFER OF AIR SUCH AS SUPPLY DIFFUSERS.

260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

A. MINIMUM RACEWAY SIZE: 1 INCH TRADE SIZE FOR TELECOM/DATA AND 3/4 INCH TRADE SIZE FOR ALL OTHER APPLICATIONS.
B. INSTALL NONMETALLIC CONDUIT OR TUBING FOR PROTECTING BARE GROUNDING CONDUCTORS.
C. DO NOT FASTEN CONDUITS ONTO THE BOTTOM SIDE OF A METAL DECK ROOF.
D. KEEP RACEWAYS AT LEAST 6 INCHES AWAY FROM PARALLEL RUNS OF FLUES AND STEAM OR HOT-WATER PIPES. INSTALL HORIZONTAL RACEWAY RUNS ABOVE WATER AND STEAM PIPING.
E. ARRANGE STUB-UPS SO CURVED PORTIONS OF BENDS ARE NOT VISIBLE ABOVE FINISHED SLAB.
F. INSTALL NO MORE THAN THE EQUIVALENT OF THREE 90-DEGREE BENDS IN ANY CONDUIT RUN EXCEPT FOR CONTROL WIRING CONDUITS, FOR WHICH FEWER BENDS ARE ALLOWED. SUPPORT WITHIN 12 INCHES OF CHANGES IN DIRECTION. SUPPORT CONDUIT WITHIN 12 INCHES OF ENCLOSURES TO WHICH IT IS ATTACHED.
G. UNLESS BURIED, INSTALL ALL CONDUITS PARALLEL OR PERPENDICULAR TO BUILDING LINES.
H. INSTALL RACEWAYS SQUARE TO THE ENCLOSURE AND TERMINATE AT ENCLOSURES WITH LOCKNUTS. INSTALL LOCKNUTS HAND TIGHT PLUS 1/4 TURN MORE. DO NOT RELY ON LOCKNUTS TO PENETRATE NONCONDUCTIVE COATINGS ON ENCLOSURES. REMOVE COATINGS IN THE LOCKNUT AREA PRIOR TO ASSEMBLING CONDUIT TO ENCLOSURE TO ENSURE A CONTINUOUS GROUND PATH.
I. RACEWAYS MAY BE INSTALLED UNDER THE CONCRETE SLAB, BUT NO CONDUITS SHALL BE EMBEDDED WITHIN THE SLAB. DIRECT-BURIED CONDUIT - INSTALL MANUFACTURED RIGID STEEL CONDUIT ELBOWS FOR STUB-UPS AT POLES AND EQUIPMENT AND AT BUILDING ENTRANCES THROUGH FLOOR. ANY METALLIC CONDUIT THAT DOES OR MAY COME INTO CONTACT WITH SOIL SHALL BE COATED WITH TWO COATS OF BITUMASTIC OR TWO LAYERS OF 10 MIL. CORROSION PROTECTION TAPE.
J. INSTALL FIRESTOPPING AT PENETRATIONS OF FIRE-RATED FLOOR AND WALL ASSEMBLIES.
K. INSTALL SLEEVES AND SLEEVE SEALS AT PENETRATIONS OF EXTERIOR FLOOR AND WALL ASSEMBLIES. INCLUDE CAST-IRON PIPE SLEEVES SIZED TO ALLOW FOR 1-INCH ANNULAR CLEAR SPACE BETWEEN RACEWAY OR CABLE AND SLEEVE FOR INSTALLING SLEEVE-SEAL SYSTEM WHICH INCLUDES MANUFACTURED EPDM RUBBER INTERLOCKING LINKS SHAPED TO FIT SURFACE OF PIPE AND WITH NUMBER REQUIRED FOR PIPE MATERIAL AND SIZE OF PIPE. INCLUDE STAINLESS STEEL PRESSURE PLATES AND CONNECTING BOLTS AND NUTS.
L. INDOOR RACEWAYS:
   1. EXPOSED, NOT SUBJECT TO PHYSICAL DAMAGE: EMT.
   2. EXPOSED AND SUBJECT TO SEVERE PHYSICAL DAMAGE: RIGID STEEL CONDUIT.
   3. CONCEALED IN NEW CEILINGS AND INTERIOR WALLS AND PARTITIONS: EMT.
   4. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): FMC, EXCEPT USE LFMC IN DAMP OR WET LOCATIONS.
   5. DAMP OR WET LOCATIONS: RIGID STEEL CONDUIT.
   6. BOXES AND ENCLOSURES: NEMA 250, TYPE 1, EXCEPT USE NEMA 250, TYPE 3R, NONMETALLIC IN DAMP OR WET LOCATIONS.
   7. RACEWAY FITTINGS: COMPATIBLE WITH RACEWAYS AND SUITABLE FOR USE AND LOCATION.
   8. RIGID AND INTERMEDIATE STEEL CONDUIT: USE THREADED RIGID STEEL CONDUIT FITTINGS, UNLESS NOTED OTHERWISE.
   9. INSTALL SURFACE RACEWAYS ONLY WHERE SPECIFICALLY INDICATED ON DRAWINGS. INSTALL SURFACE RACEWAY WITH A MINIMUM 2-INCH RADIUS CONTROL AT BEND POINTS.
   10. FLEXIBLE CONDUIT CONNECTIONS: MAXIMUM OF 72 INCHES OF FLEXIBLE CONDUIT FOR RECESSED AND SEMI-RECESSED LUMINAIRES, EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION, OR MOVEMENT; AND FOR TRANSFORMERS AND MOTORS. USE LFMC IN DAMP OR WET LOCATIONS SUBJECT TO SEVERE PHYSICAL DAMAGE. USE LFMC OR LFNC IN DAMP OR WET LOCATIONS NOT SUBJECT TO SEVERE PHYSICAL DAMAGE.
M. OUTDOOR RACEWAYS:
   1. EXPOSED CONDUIT: RIGID STEEL CONDUIT.
   2. CONCEALED CONDUIT, ABOVE GROUND: EMT.
   3. UNDERGROUND CONDUIT: RNC, TYPE EPC-40-PVC, DIRECT BURIED. USE TYPE EPC-80-PVC UNDER PAVED SURFACES.
   4. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): LFNC.
   5. BOXES AND ENCLOSURES, ABOVE GROUND: NEMA250, TYPE 3R.
N. ENCLOSURES – BOXES AND ENCLOSURES FOR PANELBOARD, DISCONNECT SWITCH AND MOTOR CONTROL UNITS, ETC. BASED ON THE INSTALLATION LOCATIONS/ENVIRONMENTS.
   1. INDOOR, DRY AND CLEAN LOCATIONS: NEMA 250, TYPE 1.
   2. OUTDOOR LOCATIONS: NEMA 250, TYPE 3R.
O. GENERAL BOX MOUNTING
   1. MOUNT BOXES AT HEIGHTS INDICATED ON DRAWINGS. IF MOUNTING HEIGHTS OF BOXES ARE NOT INDIVIDUALLY INDICATED, GIVE PRIORITY TO ADA REQUIREMENTS. INSTALL BOXES WITH HEIGHT MEASURED TO CENTER OF BOX UNLESS OTHERWISE INDICATED.
   2. HORIZONTALLY SEPARATE BOXES MOUNTED ON OPPOSITE SIDES OF WALL SO THEY ARE NOT IN THE SAME VERTICAL CHANNEL.
   3. LOCATE BOXES SO THAT COVER OR PLATE WILL NOT SPAN DIFFERENT BUILDING FINISHES.
   4. FASTEN JUNCTION AND PULL BOXES TO OR SUPPORT FROM BUILDING STRUCTURE. DO NOT SUPPORT BOXES BY CONDUITS.

260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

A. CONDUCTOR COLOR-CODING:
   1. 120/240V: PHASE A - BLACK, PHASE B - RED, NEUTRAL - WHITE.
   2. GROUNDS: BARE COPPER OR GREEN.
B. ALL EQUIPMENT SHALL HAVE AN IDENTIFICATION LABEL, BLACK LETTERS ON A WHITE FIELD. LABEL INCLUDES UNIT NAME AND CIRCUIT THAT FEEDS IT.
   1. 1" MINIMUM HEIGHT LETTERS FOR SERVICE DISCONNECT AND EMERGENCY SHUT-OFF SWITCHES.
   2. 1/2" MINIMUM HEIGHT LETTERS FOR PANELBOARDS, SWITCHBOARDS, RELAY ENCLOSURES AND TRANSFORMERS.
   3. 1/4" MINIMUM HEIGHT LETTERS FOR DISCONNECT SWITCHES AND MOTOR STARTERS.
   4. 1/8" MINIMUM HEIGHT LETTERS FOR DEVICE COVERPLATES.
C. UNDERGROUND LINE WARNING TAPE - INSTALL UNDERGROUND-LINE WARNING TAPE FOR DIRECT-BURIED CABLES AND CABLES IN RACEWAYS. DURING BACKFILLING OF TRENCHES, INSTALL CONTINUOUS UNDERGROUND-LINE WARNING TAPE DIRECTLY ABOVE CABLE OR RACEWAY AT 6 TO 8 INCHES BELOW FINISHED GRADE. USE MULTIPLE TAPES WHERE WIDTH OF MULTIPLE LINES INSTALLED IN A COMMON TRENCH OR CONCRETE ENVELOPE EXCEEDS 16 INCHES OVERALL.
D. PANELBOARDS LABEL SHALL INCLUDE - PANEL NAME, VOLTAGE, AMPERAGE, NUMBER OF PHASES AND WIRES, SOURCE AND AVAILABLE FAULT CURRENT WITH DATE CALCULATED. INCLUDE TYPEWRITTEN DIRECTORY OF CIRCUITS IN THE LOCATION PROVIDED BY PANELBOARD MANUFACTURER. INDICATE CIRCUIT LOAD INCORPORATING OWNER'S FINAL ROOM DESIGNATIONS. SPARES SHALL BE FILLED IN BY HAND WITH PENCIL. ON MAIN DISTRIBUTION PANEL DOOR / SWITCHBOARD FRONT PROVIDE A LAMINATED ONE-LINE DIAGRAM OF THE ELECTRICAL SYSTEM AND ALL PANEL CONFIGURATIONS.
E. RECEPTACLES: IDENTIFY PANELBOARD AND CIRCUIT NUMBER FROM WHICH THE DEVICE IS SERVED.
   1. MARK INSIDE OF BOX OR COVERPLATE WITH PERMANENT MARKER. TEST TO ENSURE THAT MARKER LINES ARE NOT VISIBLE ON OUTSIDE OF COVER WHEN IT IS INSTALLED.
   2. MARK OUTSIDE OF COVERPLATE USING LABELER SUCH AS BROTHER PT-90 TO PRODUCE 1/8" BLACK LETTERS (WHITE LETTERS IF COVER IS DARK) ON CLEAR TAPE.

262416 - PANELBOARDS

A. FLUSH AND SURFACE-MOUNTED ENCLOSURES (AS NOTED ON PLANS) WITH DEAD-FRONT CABINETS. RATED FOR ENVIRONMENTAL CONDITIONS AT INSTALLED LOCATION.
B. MAXIMUM HEIGHT CABINET
   a. STANDARD: 84 INCHES TO TOP OF ENCLOSURE (SO THAT MAXIMUM HEIGHT OF HIGHEST BREAKER IS 78 INCHES MAXIMUM).
C. INCOMING MAINS LOCATION: TOP OR BOTTOM AS DETERMINED BY CONTRACTOR, BASED ON FIELD CONDITIONS, UNO.
D. HARD-DRAWN COPPER PHASE, NEUTRAL, AND GROUND BUSES WITH 98 PERCENT CONDUCTIVITY. MECHANICAL TYPE LUGS WITH A LUG ON THE NEUTRAL AND GROUND BARS FOR EACH BREAKER POLE IN THE PANELBOARD. CONDUCTOR CONNECTORS SHALL BE SUITABLE FOR USE WITH CONDUCTOR MATERIAL, QUANTITY AND SIZES (REFER TO THE FEEDER SCHEDULE).
E. PANELBOARD SHORT-CIRCUIT CURRENT RATING: FULLY RATED TO INTERRUPT SYMMETRICAL SHORT-CIRCUIT CURRENT AVAILABLE AT TERMINALS. ASSEMBLY SHALL BE LISTED BY AN NRTL FOR 100 PERCENT INTERRUPTING CAPACITY. ALL OVERCURRENT PROTECTIVE DEVICES (OCPDS) SHALL BE FULLY RATED FOR AVAILABLE FAULT CURRENT. NO SERIES RATING WILL BE ALLOWED.
F. BRANCH OVERCURRENT PROTECTIVE DEVICES - BOLT-ON CIRCUIT BREAKERS OR PLUG-IN CIRCUIT BREAKERS WHERE INDIVIDUAL POSITIVE-LOCKING DEVICE REQUIRES MECHANICAL RELEASE FOR REMOVAL. REPLACEABLE WITHOUT DISTURBING ADJACENT UNITS. MOLDED CASE CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE ONLY AND SUITABLE FOR INDIVIDUAL AS WELL AS PANELBOARD MOUNTING. NO BREAKERS DESIGNATED "PLUG-ON" TYPE ALLOWED UNLESS SPECIFICALLY NOTED ON PLANS.
G. BREAKERS SHALL BE ONE OR TWO-POLE AS SCHEDULED, OPERATE MANUALLY FOR NORMAL ON-OFF SWITCHING AND AUTOMATICALLY UNDER OVERLOAD AND SHORT CIRCUIT CONDITIONS.
H. THE OPERATING HANDLE SHALL OPEN AND CLOSE ALL POLES SIMULTANEOUSLY ON MULTI-POLE BREAKERS. THE OPERATING MECHANISM SHALL BE TRIP-FREE SO THAT CONTACTS CANNOT BE HELD CLOSED AGAINST ABNORMAL OVERCURRENT OR SHORT CIRCUIT CONDITIONS. DO NOT USE SINGLE-POLE CIRCUIT BREAKERS WITH HANDLE TIES WHERE MULTI-POLE BREAKERS ARE INDICATED ON THE PANEL SCHEDULE OR WHERE REQUIRED FOR POLY-PHASE LOADS.
I. BREAKERS SHALL BE OF THE TYPE NOTED ON PANEL SCHEDULE (SHUNT-TRIP, GFI, ARC-FAULT, ETC.) OR AS REQUIRED BY THE EQUIPMENT BEING PROVIDED.
J. BREAKERS NOTED AS GFI PROTECTED FOR EQUIPMENT SHALL HAVE A 30mA OR GREATER TRIP.
K. BREAKERS NOTED AS GFI PROTECTED FOR PERSONNEL SHALL HAVE A 6mA TRIP.
L. A CONTROL TRANSFORMER WITH PRIMARY AND SECONDARY FUSING SHALL BE PROVIDED AS REQUIRED FOR CONTROL OF SHUNT-TRIP BREAKERS.
M. DESIGN OF DISTRIBUTION PANELBOARDS IS GENERALLY BASED ON THE SQUARE D, I-LINE PANELBOARD. DESIGN OF LIGHTING AND APPLIANCE BRANCH PANELBOARDS IS BASED ON THE SQUARE D NQ AND NF SERIES PANELBOARDS.
N. ARRANGE CONDUCTORS IN GUTTERS INTO GROUPS AND BUNDLE AND WRAP WITH WIRE TIES.
O. SPARE CONDUIT STUB-OUTS AT RECESSED PANELS. ALL SPARE CONDUITS SHALL BE TERMINATED IN LOCATIONS WHERE THEY ARE ACCESSIBLE FROM A CRAWLSPACE, ATTIC, OR BY LADDER IN AREAS THAT HAVE T-GRID CEILINGS. THEY SHALL BE TERMINATED AWAY FROM EQUIPMENT, DUCTS OR PIPES THAT WOULD OBSTRUCT ACCESS.
   1. STUB FOUR (4) 1-INCH EMPTY CONDUITS FROM PANELBOARD INTO ACCESSIBLE CEILING SPACE ABOVE THE PANEL, OR A SPACE DESIGNATED TO BE ACCESSIBLE CEILING SPACE IN THE FUTURE.
   2. WHERE APPLICABLE, STUB FOUR (4) 1-INCH EMPTY CONDUITS INTO ACCESSIBLE FLOOR SPACE OR ACCESSIBLE CEILING SPACE ON THE LEVEL BELOW.

260519 - CONDUCTORS

A. FEEDERS: COPPER, TYPE THHN/THWN-2, SINGLE CONDUCTORS IN RACEWAY.
B. BRANCH CIRCUITS: COPPER, TYPE THHN/THWN-2, SOLID FOR NO. 10 AWG AND SMALLER; STRANDED FOR NO. 8 AWG AND LARGER. SINGLE CONDUCTORS IN RACEWAY. MC CABLE ALLOWED WHERE CONCEALED IN WALLS, BELOW FLOORS OR CEILINGS.
C. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH 120 V BRANCH CIRCUIT.

262713 - ELECTRICITY METERING

A. COORDINATE ELECTRICAL SERVICE CONNECTIONS WITH UTILITY COMPANY AND UTILITY-FURNISHED COMPONENTS. SUBMIT ALL METERING AND CT CABINETS TO THE UTILITY COMPANY FOR APPROVAL. COORDINATE ALL UTILITY REQUIREMENTS AND ROUTING PRIOR TO ROUGH-IN. OBTAIN ALL REQUIREMENTS IN WRITING.
B. METERS WILL BE FURNISHED BY UTILITY COMPANY. CONTRACTOR SHALL PROVIDE CURRENT-TRANSFORMER CABINETS AND METER SOCKETS.
C. METER SOCKETS: COMPLY WITH REQUIREMENTS OF ELECTRICAL UTILITY COMPANY INCLUDING:
   1. SIZING, GAUGE STEEL, LOCKING CAPABILITIES, ETC.
   2. MOUNTING CONFIGURATION AND METHODS
   3. APPROPRIATE METER JAW CONFIGURATION
   4. LANDING LUG SIZE, LOCATION AND CONFIGURATION.
   5. ANTI-INVERSION CLIP AND LEVER BYPASS AS REQUIRED.
D. INSTALL RACEWAYS AND EQUIPMENT ACCORDING TO UTILITY COMPANY'S WRITTEN INSTRUCTIONS. PROVIDE EMPTY CONDUITS FOR METERING LEADS AND EXTEND GROUNDING CONNECTIONS AS REQUIRED BY UTILITY COMPANY.

262813 - FUSES

A. APPLY FUSES IN THE FOLLOWING CIRCUMSTANCES:
   1. SERVICE ENTRANCE: CLASS L OR CLASS RK-1, TIME DELAY.
   2. FEEDERS AND BRANCH CIRCUITS: CLASS L OR CLASS RK-1, TIME DELAY.
   3. MOTORS, TRANSFORMERS: CLASS RK-5, TIME DELAY.
   4. CONTROL CIRCUITS: CLASS CC, FAST ACTING.
   5. LUMINAIRES: IN ACCORDANCE WITH FIXTURE MANUFACTURER'S GUIDELINES.
   6. FUSTATS: TYPE S, TIME DELAY WITH REJECTION BASE.
B. SIZE FUSES AS SHOWN AND SPECIFIED, OR AS REQUIRED BY LOAD BEING SERVED. WHERE FUSING IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES REQUIRES SMALLER FUSES, PROVIDE NECESSARY REDUCERS WITH NO ADDITIONAL COST TO OWNER.

262816 - ENCLOSED SWITCHES

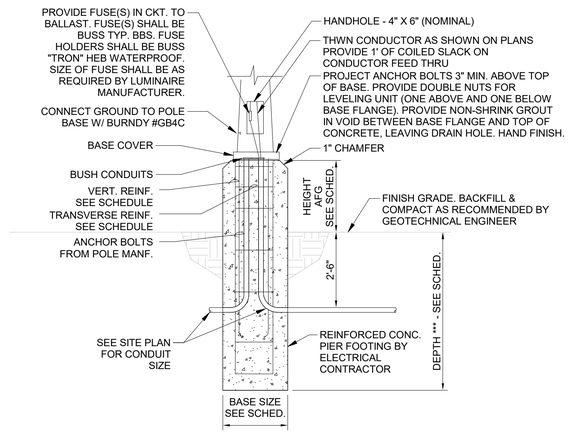
A. FUSIBLE AND NON-FUSIBLE SWITCHES
   1. TYPE HD, HEAVY DUTY, SINGLE THROW, TWO- OR THREE-POLE, 240 OR 600V AC AS NOTED ON PLANS, UL 98 AND NEMA KS 1, HORSEPOWER RATED, WITH CLIPS OR BOLT PADS TO ACCOMMODATE FUSES AS REQUIRED BY MANUFACTURER OF THE EQUIPMENT BEING PROTECTED.
   2. LOCKABLE HANDLE (IN THE 'OFF' POSITION) WITH CAPABILITY TO ACCEPT THREE PADLOCKS, AND INTERLOCKED WITH COVER IN CLOSED POSITION.
   3. ABILITY TO ALSO LOCK SWITCH HANDLE IN THE 'ON' POSITION FOR EXTERIOR MAIN DISCONNECT.
   4. SUITABLE LUGS FOR NUMBER, SIZE, AND CONDUCTOR MATERIAL.
   5. NEUTRAL KIT: INTERNALLY MOUNTED; INSULATED, CAPABLE OF BEING GROUNDED AND BONDED; LABELED FOR COPPER AND ALUMINUM NEUTRAL CONDUCTORS.
   6. SERVICE-RATED SWITCHES - LABELED FOR USE AS SERVICE EQUIPMENT WITH EQUIPMENT GROUND KIT.
B. FUSTAT - NEMA 1 RATED AND DESIGNED TO MOUNT ON SQUARE, PRESSED STEEL BOX, 15A, 120V, TYPE S FUSE SOCKET, TOGGLE SWITCH AND PILOT LIGHT.

262726 - WIRING DEVICES

A. STRAIGHT-BLADE RECEPTACLES - DUPLEX CONVENIENCE RECEPTACLES, 125V, 20A; COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, AND FS W-C-596.
   1. COOPER; 5351 (SINGLE), 5362 (DUPLEX), 5362CH (HALF-CONTROLLED DUPLEX) TR5362 (TAMPER DUPLEX).
   2. HUBBELL; HBL5361 (SINGLE), HBL5362 (DUPLEX), BR20C1 (HALF-CONTROLLED DUPLEX) HBL5362TR (TAMPER DUPLEX).
   3. LEVITON; 5361 (SINGLE), 5362 (DUPLEX), 5362-S1 (HALF-CONTROLLED DUPLEX)5362-SG (TAMPER DUPLEX).
   4. P&S; 5351 (SINGLE), CRB5362 (DUPLEX), 5362CDW (HALF-CONTROLLED DUPLEX) TR5352 (TAMPER DUPLEX).
B. TV OUTLET (POWER & SIGNAL) - RECESSED, 3-GANG, IN-WALL ENCLOSURE WITH 20A DUPLEX RECEPTACLE LOCATED IN LEFT, SINGLE-GANG OPENING. CENTER SINGLE-GANG, LOW-VOLTAGE OPENING WITH 1-1/4" CONDUIT AND PULLSTRING PROVISION FOR SIGNAL CABLE. ROUTE TO ACCESSIBLE CEILING SPACE AND TO FLOOR BOX WHERE APPLICABLE. RIGHT SINGLE-GANG, LOW-VOLTAGE OPENING WITH 1" CONDUIT AND PULLSTRING PROVISION FOR SIGNAL CABLE. ROUTE TO ACCESSIBLE CEILING SPACE.
   1. ARLINGTON; TVBS505SS.
C. GFCI RECEPTACLES - 125V, 20A, DUPLEX, STRAIGHT BLADE, NON-FEED-THROUGH TYPE. COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, UL 943 CLASS A, AND FS W-C-596. INCLUDE SELF-TESTING AND INDICATOR LIGHT THAT SHOWS WHEN THE GFCI HAS MALFUNCTIONED AND NO LONGER PROVIDES PROPER GFCI PROTECTION.
   1. COOPER; VGF20 (STANDARD), TRVGF20 (TAMPER), WRSGF20 (OUTDOOR).
   2. HUBBELL; GFR5352L (STANDARD), GFRTRST20 (TAMPER), GFTWRST20 (OUTDOOR).
   3. LEVITON; GFNT2 (STANDARD), GFTR2-KW (TAMPER), GFWR2 (OUTDOOR).
   4. P&S; 2097 (STANDARD), 2097TR (TAMPER), 2097TRWR (OUTDOOR).
D. WALL-BOX DIMMERS (FOR 0-10V DIMMING) - STAND-ALONE SLIDE DIMMER WITH SEPARATE ON/OFF SWITCH BUTTON, DESIGNED FOR USE ALONE OR WITH STANDARD THREE-WAY AND FOUR-WAY SWITCHES. MATCH DIMMER TO LED DRIVER IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES. INSTALL ALL HOT, SWITCHED, TRAVELERS, NEUTRAL AND GROUND WIRES AS REQUIRED, AS WELL AS LOW-VOLTAGE WIRES.
   1. PHILIPS; SUNRISE SERIES (LTL203261).
   2. WATT STOPPER; RADIANT SERIES (RH4FBL3P).
   3. ACUITY; SYNERGY SERIES (ISD-BC).
   4. LUTRON; DIVA SERIES (DVSTV).
E. DEVICE COLOR - AS SELECTED BY ARCHITECT UNLESS OTHERWISE INDICATED OR REQUIRED BY NFPA 70 OR DEVICE LISTING.
F. WALL PLATES
   1. INDOOR FINISHED AREAS - SMOOTH, HIGH-IMPACT THERMOPLASTIC WITH COLOR TO MATCH CORRESPONDING WIRING DEVICES.
   2. INDOOR UNFINISHED AREAS - GALVANIZED STEEL.
   3. OUTSIDE AND WET-LOCATIONS - NEMA 250, COMPLYING WITH TYPE 3R, WEATHERPROOF-IN-USE, DIE-CAST ALUMINUM WITH LOCKABLE COVER.
G. IDENTIFICATION - IDENTIFY PANELBOARD AND CIRCUIT NUMBER FROM WHICH THE DEVICE IS SERVED.
   1. MARK INSIDE OF BOX OR COVERPLATE WITH PERMANENT MARKER. TEST TO ENSURE THAT MARKER LINES ARE NOT VISIBLE ON OUTSIDE OF COVER WHEN IT IS INSTALLED.
   2. MARK OUTSIDE OF COVERPLATE USING LABELER SUCH AS BROTHER PT-90 TO PRODUCE 1/8" BLACK LETTERS (WHITE LETTERS IF COVER IS DARK) ON CLEAR TAPE.
H. WEATHER STRIPPING - BEHIND EXTERIOR WALL DEVICES INSTALL A PRECUT FOAM INSULATION PAD OVER THE FIXTURE AND REINSTALL THE COVER.

262913.03 - MANUAL AND MAGNETIC MOTOR CONTROLLERS

A. MANUAL MOTOR STARTER SWITCHES - FRACTIONAL HORSEPOWER MANUAL MOTOR STARTER SWITCHES: QUICK-MAKE, QUICK-BREAK TOGGLE OR PUSH-BUTTON ACTION; MARKED TO SHOW WHETHER UNIT IS OFF, ON, OR TRIPPED.
   1. 120V SINGLE-PHASE: SINGLE-POLE, SINGLE-THROW.
   2. 240V SINGLE-PHASE: DOUBLE-POLE, SINGLE-THROW.
   3. CONFIGURATION: NON-REVERSING.
   4. OVERLOAD RELAYS: INVERSE-TIME-CURRENT

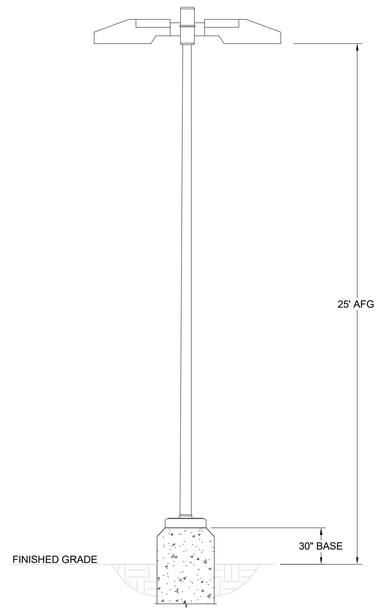


NOTE:
* CONTRACTOR SHALL GRIND EXPOSED CONCRETE SMOOTH AS REQUIRED TO REMOVE ANY FORMWORK MARKINGS.

CONCRETE BASE SCHEDULE *****					
POLE HT.	BASE SIZE	VERT. REINF.	TRANSVERSE REINF.**	DEPTH ***	HEIGHT AFG
14' TO 30'	20" SQ.	(4) #7 *	#3@8"O.C.	7'-0"	2'-6"
	24" RND.	(6) #6 ****	#3@8" O.C.	7'-0"	2'-6"

* PROVIDE VERTICAL BARS AT EACH CORNER OF SQ. PIER.
** PROVIDE SPACING OF 3#3 WITHIN THE TOP 6" OF PIER.
*** DEPTH BELOW FINISHED GRADE.
**** SPACE VERTICAL BARS EVENLY AROUND PERIMETER.
***** PROVIDE REINF. CLEARANCE AND COVER PER ACI 318.

2 POLE LIGHT BASE DETAIL
N.T.S.



1 POLE LIGHT HEIGHT DETAIL - STEEL POLE
N.T.S.

Branch Panel: BS

Location: SCALE HOUSE 101
Supply From: METER SOCKET
Mounting: Recessed
Enclosure: NEMA 1
Volts: 120/240 Single
Phases: 1
Wires: 3
A.F.C.: 15,065
Mains Type: MCB
Mains Rating: 150 A

Notes:

CKT	Circuit Description	Load Classification	Trip	Poles	A	B	Poles	Trip	Load Classification	Circuit Description	CKT
1	LTG - INTERIOR	Lighting; Motor	20 A	1	297 1872		2	20 A	HVAC	PWR - MS-1B	2
3	LTG - EXTERIOR	Lighting	20 A	1		162 1872					4
5	RCPT - GENERAL, INTERCOM	Receptacle	20 A	1	540 1500		2	20 A	Heating	PWR - EH-1	6
7	RCPT - GENERAL	Receptacle	20 A	1		900 1500					8
9	RCPT - IT RACK	Receptacle	20 A	1	180 1500		1	20 A	Heating	PWR - EH-2	10
11	RCPT - GENERAL AND EXTERIOR	Receptacle	20 A	1		360 1750	2	20 A	Heating	PWR - EWH-1	12
13	RCPT - ACCESS CONTROL	Receptacle	20 A	1	180 1750						14
15	RCPT - RESTROOM	Receptacle	20 A	1		180 3250	2	35 A	Heating	PWR - EWH-2	16
17	<1>RCPT- REFRIGERATOR	Receptacle	20 A	1	180 3250						18
19	RCPT - MICROWAVE	Receptacle	20 A	1		1500 500	1	20 A	Power	PWR - NORTH GATE	20
21	RCPT - MINI FRIDGE	Receptacle	20 A	1	1180 500		1	20 A	Power	PWR - SOUTH GATE	22
23	RCPT - GENERAL	Receptacle	20 A	1		540 520	2	20 A	Lighting	LTG - SOUTH SITE	24
25	SPARE	--	20 A	1	0 520						26
27	SPARE	--	20 A	1		0 468	2	20 A	Lighting	LTG - NORTH SITE	28
29	SPARE	--	20 A	1	0 468						30
			Total Load:		13917 VA	13502 VA					
			Total Amps:		116 A	113 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	3744 VA	100.00%	3744 VA		
Heating	14500 VA	100.00%	14500 VA	**Total Conn. Load:**	27419 VA
Lighting	2385 VA	125.00%	2981 VA	**Total Est. Demand:**	28028 VA
Motor	50 VA	125.00%	63 VA	**Total Conn.:**	114 A
Power	1000 VA	100.00%	1000 VA	**Total Est. Demand:**	117 A
Receptacle	5740 VA	100.00%	5740 VA		

Notes:
<1> PROVIDE 5ma GFCI BREAKER

LUMINAIRE SCHEDULE

NOTES:
1. PRIOR SUBMITTAL NOT REQUIRED. ALL ALTERNATE FIXTURE SHOP DRAWINGS WILL BE REVIEWED AFTER THE PROJECT IS AWARDED.
2. PRIOR SUBMITTAL IS REQUIRED.
3. ALTERNATE FIXTURE IS NOT ACCEPTED FOR SUBSTITUTIONS.
4. PROVIDE 0-10V DIMMING, DOWN TO 10% LUMEN OUTPUT, MINIMUM.
5. PROVIDE FUSING.
6. VERIFY FINISH WITH ARCHITECT.
7. PROVIDE WITH REMOTE 12V STEP-DOWN TRANSFORMER.
8. CIRCUIT VIA TYPE EM INVERTER.
9. LAMP DATA IS FOR 4' CROSS-SECTION OF FIXTURE.
10. MOUNT BOTTOM OF FIXTURE CENTERED AT 6" ABOVE TOP OF MIRROR. SEE ARCHITECT ELEVATIONS.

GENERAL NOTES:
A. ALL LUMINAIRES SHALL BE TESTED AND LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) SUCH AS UL OR ETL. ALL LUMINAIRES SHALL HAVE DESIGN LIGHTS CONSORTIUM (DLC) CERTIFICATION AND/OR ENERGY STAR RATING.
B. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL CEILING TYPES AND PROVIDE ALL MOUNTING, FIRE-RATED, AND IC-RATED ACCESSORIES AS REQUIRED. FOR FIRE-RATED CEILING ASSEMBLIES AND FOR CEILINGS WITH INSULATION, VERIFY ALL RECESSED
C. LUMINAIRE HOUSINGS ARE RATED APPROPRIATELY OR PROVIDE DROP-OVER ENCLOSURES OR TENTS FOR LUMINAIRES. VERIFY THAT DROP-OVER ENCLOSURES OR TENTS ALLOW FOR AIR SPACE AROUND LUMINAIRE PER MANUFACTURER'S RECOMMENDATIONS.

TYPE	LAMPS	LOAD (W)	OUTPUT (LM, NOMINAL)	CCT (K)	DESCRIPTION	MFR	CATALOG NO. OR SERIES	FINISH	MOUNTING	VOLTAGE	NOTES
D1	LED	15 W	2000	3500	6" LED RECESSED DOWNLIGHT	LITHONIA	LDN6-35/20-L06-AR-LSS-TRW-MVOLT-GZ10	WHITE	RECESSED	120 V	2
D1E	LED	15 W	2000	3500	SAME AS TYPE D1 WITH REMOTE COLD WEATHER EMERGENCY BATTERY PACK	LITHONIA	LDN6-35/20-L06-AR-LSS-TRW-MVOLT-GZ10-ILBLP-CP05-HE-SD-LC-CW	WHITE	RECESSED	120 V	2
S1	LED	42 W	3000	3500	4' LOW PROFILE LED WRAPAROUND	LITHONIA	FMLWL-48-8-35-ZT	WHITE	RECESSED	120 V	2
SP1	LED	104 W	13605	4000	LED POLE MOUNTED LIGHT MOUNTED ON SQUARE STEEL POLE AT +25'AFG	LITHONIA	DSX1-LED-P3-40K-80CRI-T2M-MVOLT-SP1-PIR-DMG-DDBXD	DARK BRONZE	POLE	240 V	2
SP2	LED	208 W	27210	4000	SAME AS TYPE SP1 BUT WITH 2 HEADS AT 180 DEGREES	LITHONIA	DSX1-LED-P3-40K-80CRI-T2M-MVOLT-SP1-PIR-DMG-DDBXD	DARK BRONZE	POLE	240 V	2
V1	LED	18 W	1304	3000	2' SQUARE CONTEMPORARY VANITY. MOUNT 6" ABOVE MIRROR AND CENTERED WITH SINK/MIRROR	LITHONIA	FMVCSL-24IN-MVOLT-30K-90CRI-BN	BRUSHED NICKEL	WALL +7'6"	120 V	2
W1	LED	18 W	2000	3500	ARCHITECTURAL WALL SCONCE WITH VISUAL COMFORT OPTIC	LITHONIA	WDGE2-LED-P2-35K-80CRI-VW-MVOLT-SRM-DDBXD	DARK BRONZE	WALL	120 V	2
X1	LED	4 W	NA	NA	THERMOPLASTIC EXIT SIGN WITH GREEN LETTERING, DUAL LED HEAD AND NICKEL CADMIUM BATTERY	LITHONIA	LHQM-LED-G-HO-SD	WHITE	WALL +8'-0"	120 V	2

MEP COORDINATION SCHEDULE

CONTROL TYPE:
- BAS BUILDING AUTOMATION SYSTEM
- CO CARBON MONOXIDE DETECTOR
- CONT CONTINUOUS OPERATION
- EF INTERLOCK WITH EXHAUST FAN
- HCP HOOD CONTROL PANEL
- INT INTEGRAL
- L LIGHT SWITCH
- MS MANUAL SWITCH
- OS OCCUPANCY SENSOR
- PS PRESSURE SWITCH
- T THERMOSTAT
- TC TIME CLOCK
- UC UNIT CONTROLLER
- VE VEHICLE EXHAUST DETECTION SYSTEM
- N/A NOT APPLICABLE

DISCONNECT/STARTER TYPE:
- CB PANELBOARD CIRCUIT BREAKER WITHIN SIGHT OF EQUIPMENT
- CSFD COMBINATION STARTER/DISCONNECT - HOA
- FD FUSED DISCONNECT
- FST FUSTAT
- FW FACTORY-WIRED SINGLE POINT CONNECTION
- MOCP MOTOR OVER-CURRENT PROTECTION
- MSS MANUAL STARTER SWITCH WITH THERMAL OVERLOADS (1-, 2- OR 3-POLE AS REQUIRED)
- NFD NON-FUSED DISCONNECT
- RCPT 20A DUPLEX RECEPTACLE (GFCI PROTECTED AS REQUIRED), CORD AND PLUG
- RVSS REDUCED VOLTAGE SOLID-STATE
- VFD VARIABLE FREQUENCY DRIVE - HOA
- N/A NOT APPLICABLE

DIVISION OF RESPONSIBILITIES:
- 22/22 FURNISHED AND INSTALLED BY DIV. 22, WIRED BY DIV. 22
- 22/26 FURNISHED AND INSTALLED BY DIV. 22, WIRED BY DIV. 26
- 23/23 FURNISHED AND INSTALLED BY DIV. 23, WIRED BY DIV. 23
- 23/26 FURNISHED AND INSTALLED BY DIV. 23, WIRED BY DIV. 26
- 26/26 FURNISHED AND INSTALLED BY DIV. 26, WIRED BY DIV. 26

NOTES:
1. INTEGRAL DISCONNECTS AND OVERLOADS
2. INTEGRAL OVERLOADS
3. SINGLE POINT CONNECTION
4. PROVIDE RECEPTACLE AND DATA CONNECTION FOR PANEL
5. MOUNT ON UNI-STRUT IN FRONT OF UNIT
6. SIZE FUSES IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES FOR INSTALLED EQUIPMENT
7. INTEGRAL VARIABLE FREQUENCY DRIVE
8. DUCT SMOKE DETECTOR(S) REQUIRED

GENERAL NOTES:
A. CONTROL WIRING SHALL BE CONCEALED WITHIN WALL CONSTRUCTION, ABOVE CEILING, OR RUN IN CONDUIT. EXPOSED CONTROL WIRING IS UNACCEPTABLE.
B. UNLESS SPECIFICALLY NOTED, ALL FEEDERS SHALL INCLUDE A FULL SIZE NEUTRAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY WITH THE MANUFACTURER OF THE ACTUAL EQUIPMENT BEING SUPPLIED WHETHER A NEUTRAL IS REQUIRED PRIOR TO ROUGH-IN.
C. ALL DUCT SMOKE DETECTORS FURNISHED BY DIV. 26, INSTALLED BY DIV. 23, AND WIRED BY DIV. 26. DIV. 26 SHALL WIRE ALL FANS TO SHUT DOWN WHEN ALARM IS INITIATED BY ANY DUCT SMOKE DETECTOR.

MARK	DESCRIPTION	ELECTRICAL DATA			CONTROL		NOTES	DISCONNECT / STARTER		DISCONNECT				FEEDER	
		LOAD	MOCP	VOLT-PHASE	TYPE	DIV		TYPE	DIV	SIZE (NEMA)	SWITCH (AMPS)	FUSE (AMPS)	ENCLOSURE (NEMA)	COPPER WIRE (AWG)	CONDUIT (INCHES)
EF-1	EXHAUST FAN	0.2 MCA	- -	120-1	L	26/26		MSS	26/26	--	--	--	--	12	3/4
EH-1	ELECTRIC HEATER	12.5 A	- -	240-1	T	23/23		FW	23/26	--	--	--	--	12	3/4
EH-2	ELECTRIC HEATER	12.5 A	- -	120-1	T	23/23		FW	23/26	--	--	--	--	12	3/4
EWH-1	ELECTRIC WATER HEATER	3.5 KW / 15 A	- -	240-1	INT	23/23		FW	22/26	--	--	--	--	12	3/4
EWH-2	ELECTRIC WATER HEATER	6.5 KW / 27 A	--	240-1	INT	23/23		FW	22/26	--	--	--	--	10	3/4
FC-1	MINI-SPLIT INDOOR UNIT	POWER	FROM	MS-1B	T	23/23		--	--	--	--	--	--	10	3/4
HP-1	MINI-SPLIT HEAT PUMP	15.6 MCA	- -	230-1	INT	23/23		FD	23/26	--	30	NOTE 6	3R	12	3/4

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: TJL
DRAWN: TJL
CHECKED: BMM
APPROVED: GLS
DATE: 06/17/2025

PROFESSIONAL ENGINEER REGISTERED 18100 STATE OF IDAHO EARTH L. STEVENS

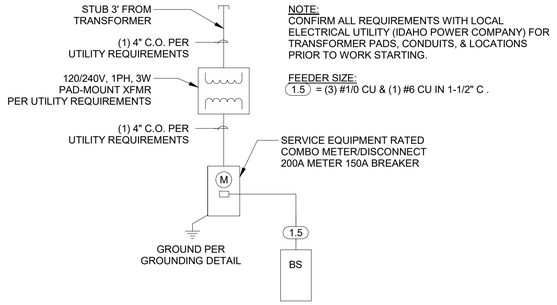
Morrison Maierle
engineers - surveyors - planners - scientists
1055 Mount Ave
Missoula, Montana 59801
406.542.4841
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BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ELECTRICAL SCHEDULES

SHEET NO.
E003

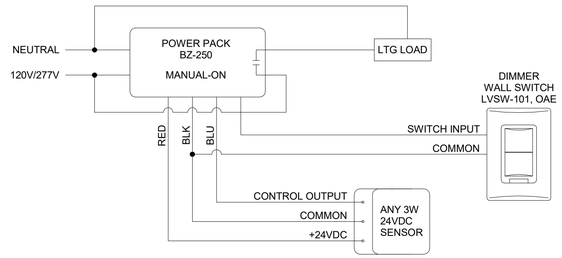
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NOTE:
CONFIRM ALL REQUIREMENTS WITH LOCAL ELECTRICAL UTILITY (IDAHO POWER COMPANY) FOR TRANSFORMER PADS, CONDUITS, & LOCATIONS PRIOR TO WORK STARTING.

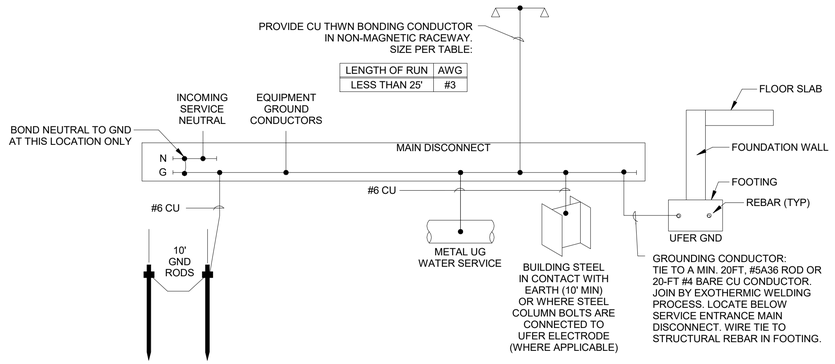
FEEDER SIZE:
(1.5) = (3) #1/0 CU & (1) #6 CU IN 1-1/2" C .

1 ONE-LINE DIAGRAM
N.T.S.

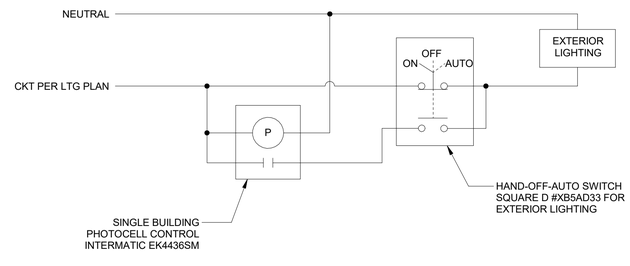


NOTES:
- WIRE CONNECTIONS TO LOW VOLTAGE SWITCHES VARY DEPENDING ON SWITCH TYPE AND FUNCTION. REFER TO MANUFACTURER WIRING DIAGRAMS FOR PROPER CONNECTION.

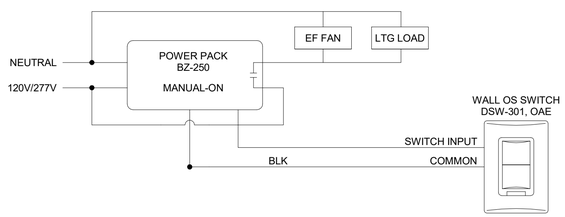
2 LIGHTING CONTROL DIAGRAM
N.T.S.



3 GROUNDING AND BONDING RISER DIAGRAM
N.T.S.



4 EXTERIOR LIGHTING CONTROL DIAGRAM
N.T.S.



NOTES:
- WIRE CONNECTIONS TO LOW VOLTAGE SWITCHES VARY DEPENDING ON SWITCH TYPE AND FUNCTION. REFER TO MANUFACTURER WIRING DIAGRAMS FOR PROPER CONNECTION.

5 LIGHTING CONTROL DIAGRAM - RESTROOM
N.T.S.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: TJL
DRAWN: TJL
CHECKED: BMM
APPROVED: GLS
DATE: 06/17/2025

PROFESSIONAL ENGINEER REGISTERED GARTH L. STEVENS STATE OF IDAHO 18100

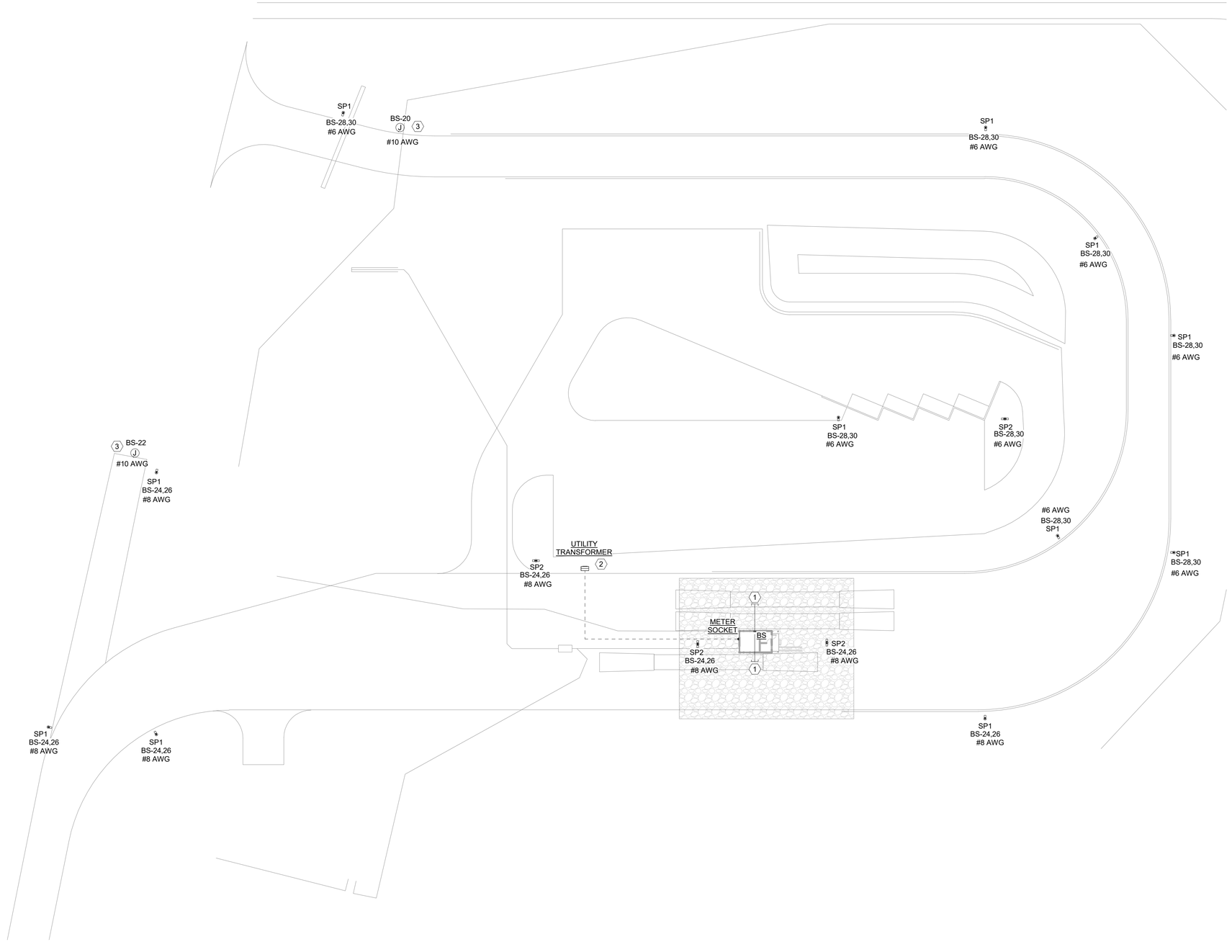
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BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ELECTRICAL DETAILS

SHEET NO.
E004

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1 ELECTRICAL SITE PLAN
1" = 40'-0"

ELECTRICAL GENERAL NOTES

A. IT IS ABSOLUTELY NECESSARY FOR ALL TRADES INVOLVED TO COORDINATE WITH EACH OTHER AND VERIFY THAT THERE ARE NO CONFLICTS IN LOCATION OF DUCTS, CONDUITS, DIFFUSERS, BOXES, AND OTHER ITEMS THROUGHOUT THIS PROJECT BEFORE FINAL PLACEMENT OF MATERIALS.
B. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING OF FLOORS, WALLS, CEILINGS, AND ROOFS TO PERFORM THE REQUIRED WORK DEPICTED IN THESE DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL PATCHING OF HOLES TO THE SATISFACTION OF THE ARCHITECT/ENGINEER.
C. LOW VOLTAGE CABLES (LIGHTING CONTROLS) ABOVE ACCESSIBLE CEILINGS SHALL BE SUPPORTED USING J-HOOKS AT INTERVALS NOT TO EXCEED 48" OC, UNO.

(#) KEY NOTES:

1. PROVIDE (2)1" CONDUIT FROM PANEL BS ON THE INTERIOR OF BUILDING TO SCALE AT EACH LOCATION SHOWN. COORDINATE EXACT ROUTING TO SCALE FROM INTERIOR LOCATION WITH OWNER AND SCALE EQUIPMENT PROVIDER PRIOR TO ROUGH-IN.
2. VERIFY EXACT LOCATION OF TRANSFORMER WITH UTILITY COMPANY, CIVIL AND OWNER PRIOR TO ROUGH-IN. LOCATION SHOWN IS FOR REFERENCE ONLY UNTIL COORDINATION WITH UTILITY AND OWNER IS CONFIRMED.
3. PROVIDE POWER CONNECTION TO AUTOMATIC GATE. PROVIDE ALL REQUIRED CONDUIT FOR CONTROLS AND SENSORS AS REQUIRED BY GATE PROVIDER. COORDINATE FINAL LOCATIONS AND REQUIREMENTS PRIOR TO ROUGH-IN.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: TJL
DRAWN: TJL
CHECKED: BMM
APPROVED: GLS
DATE: 06/17/2025

PROFESSIONAL ENGINEER REGISTERED 18100 STATE OF IDAHO GARTH L. STEVENS

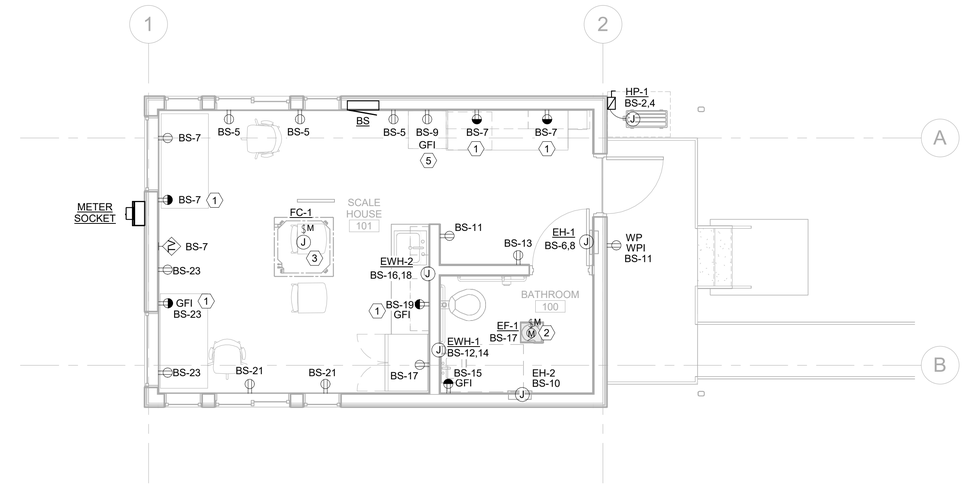
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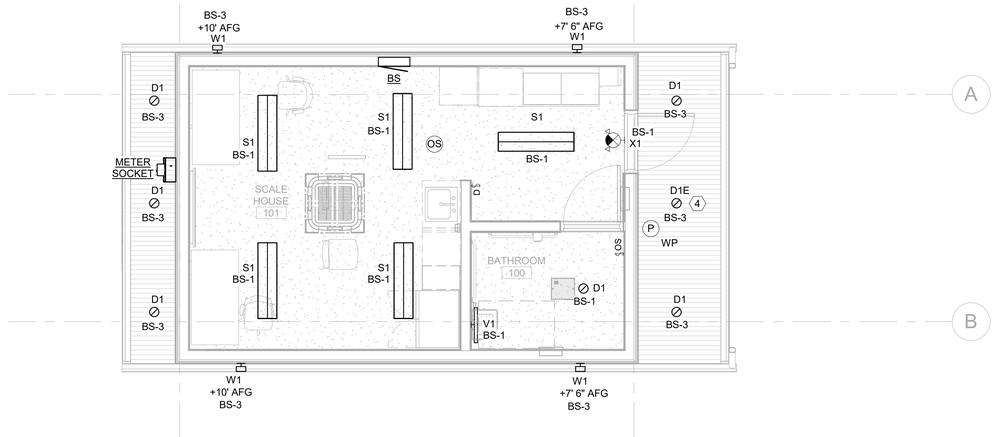
BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ELECTRICAL SITE PLAN

SHEET NO.
E101

DATE STAMP: 6/18/2025 8:54:35 AM



1 POWER PLAN
1/4" = 1'-0"



2 LIGHTING PLAN
1/4" = 1'-0"

ELECTRICAL GENERAL NOTES

A. IT IS ABSOLUTELY NECESSARY FOR ALL TRADES INVOLVED TO COORDINATE WITH EACH OTHER AND VERIFY THAT THERE ARE NO CONFLICTS IN LOCATION OF DUCTS, CONDUITS, DIFFUSERS, BOXES, AND OTHER ITEMS THROUGHOUT THIS PROJECT BEFORE FINAL PLACEMENT OF MATERIALS.
B. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING OF FLOORS, WALLS, CEILINGS, AND ROOFS TO PERFORM THE REQUIRED WORK DEPICTED IN THESE DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL PATCHING OF HOLES TO THE SATISFACTION OF THE ARCHITECT/ENGINEER.
C. LOW VOLTAGE CABLES (LIGHTING CONTROLS) ABOVE ACCESSIBLE CEILINGS SHALL BE SUPPORTED USING J-HOOKS AT INTERVALS NOT TO EXCEED 48" OC, UNO.

(#) KEY NOTES:

1. ADA COUNTER. COORDINATE ABOVE COUNTER RECEPTACLE HEIGHTS WITH ARCHITECTURAL ELEVATIONS.
2. CONNECT EXHAUST FAN TO LIGHTING CIRCUIT AND CONTROLS. EXHAUST FAN SHALL BE CONTROLLED VIA OCCUPANCY SENSOR. SEE DETAIL ON SHEET E005.
3. POWER FOR INDOOR UNIT IS DERIVED FROM ASSOCIATED OUTDOOR UNIT. PROVIDE POWER AND CONTROLS CONNECTION AS REQUIRED.
4. COORDINATE LOCATION OF REMOTE COLD WEATHER EMERGENCY BATTERY FOR EGRESS FIXTURE. LOCATE ABOVE CEILING WHERE ACCESIBLE BY REMOVING FIXTURE.
5. LOCATE THIS OUTLET IN THE CRAWLSPACE FOR TELECOMMUNICATIONS CABINET. COORDINATE FINAL LOCATION WITH TELECOMMUNICATIONS INSTALLER. REFER TO SHEET T110 FOR MORE INFORMATION.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: TJL
DRAWN: TJL
CHECKED: BMM
APPROVED: GLS
DATE: 06/17/2025

PROFESSIONAL ENGINEER REGISTERED 18100 STATE OF IDAHO GARTH L. STEVENS

Morrison Maierle
engineers - surveyors - planners - scientists
1055 Mount Ave
Missoula, Montana 59801
406.542.4841
www.m-m.net

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BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ELECTRICAL PLANS

SHEET NO.
E110

DATE STAMP 6/18/2025 8:54:36 AM

ICT ABBREVIATIONS LEGEND

AFC	ABOVE FINISHED CEILING	MMF	MULTI-MODE FIBER
ACT	ACOUSTICAL CEILING TILE	MUTOA	MULTI-USER TELECOMMUNICATIONS OUTLET ASSEMBLY
AFF	ABOVE FINISHED FLOOR		
AFG	ABOVE FINISHED GRADE	(N)	NEW
AHJ	AUTHORITY HAVING JURISDICTION	NEC	NATIONAL ELECTRIC CODE
AP	ACCESS POINT (WIRELESS, TYP.)	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
AV	AUDIO-VISUAL		
AWG	AMERICAN WIRE GAUGE	NIC	NOT IN CONTRACT
BAS	BUILDING AUTOMATION SYSTEM	NTS	NOT TO SCALE
C	CONDUIT	O.C.	ON CENTER
CAT	CATEGORY	OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED		
		OFOI	OWNER FURNISHED, OWNER INSTALLED
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED	OH	OVERHEAD
		OSP	OUTSIDE PLANT CABLE
CMP	COMMUNICATIONS PLENUM (RATED)	PB	PULLBOX
CMR	COMMUNICATIONS RISER (RATED)	PBB	PRIMARY BONDING BUSBAR
CU	COPPER	PEX	PRESS TO EXIT
(D)	DEMOLISHED	PoE	POWER OVER ETHERNET
DIM	DIMENSION	PP	PATCH PANEL
DMARC	DEMARCATION	QEL	QUIET ELECTRIFIED LATCH
DPS	DOOR POSITION SWITCH	QTY	QUANTITY
(E), EX.	EXISTING	REQ	REQUIREMENT
EA	EACH	RM	ROOM
EC	ELECTRICAL CONTRACTOR (DIV 26)	REX	REQUEST TO EXIT
EF	ENTRANCE FACILITY	SBB	SECONDARY BONDING BUSBAR
E.L.	ELECTRIFIED LATCH	SMF	SINGLE-MODE FIBER
EMT	ELECTRICAL METALLIC TUBING	SP	SERVICE PROVIDER
EPT	ELECTRIC POWER TRANSFER	SPEC	SPECIFICATION
ER	EQUIPMENT ROOM	STP	SHIELDED TWISTED PAIR
FACP	FIRE ALARM CONTROL PANEL	TR	TELECOM ROOM
FLR	FLOOR	TTB	TELEPHONE TERMINAL BOARD
GND	GROUND	TYP	TYPICAL
HT	HEIGHT/HIGH	UG	UNDERGROUND
I/O	INDOOR/OUTDOOR	UPS	UNINTERRUPTIBLE POWER SUPPLY
ICT	INFORMATION AND COMMUNICATIONS TECHNOLOGY	UNO	UNLESS NOTED OTHERWISE
		UTP	UNSHIELDED TWISTED PAIR
IDS	INTRUSION DETECTION SYSTEM	VIF	VERIFY IN FIELD
IMC	INTERMEDIATE METAL CONDUIT	W/	WITH
ISP	INTERNET SERVICE PROVIDER	W/O	WITHOUT
J-BOX	JUNCTION BOX	WAO	WORK AREA OUTLET
MFR	MANUFACTURER	WAP	WIRELESS ACCESS POINT
MH	MAINTENANCE HOLE	WP	WEATHERPROOF
MIN	MINIMUM		

ABBREVIATIONS AND SYMBOLS GENERAL NOTES

A. THE ABBREVIATIONS ON THIS SHEET COMPRISE A STANDARD LIST; NOT ALL ABBREVIATIONS APPEAR ON THIS PROJECT.
B. THE SYMBOLS ON THIS SHEET COMPRISE A STANDARD LIST; NOT ALL SYMBOLS APPEAR ON THIS PROJECT.
C. ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE ABOVE FINISHED FLOOR, UNLESS NOTED OTHERWISE. MOUNTING HEIGHTS INDICATED ON ARCHITECTURAL WALL ELEVATIONS OR AS NOTED SPECIFICALLY ON THE DRAWINGS OR IN THE SPECIFICATIONS SHALL TAKE PRECEDENCE OVER MOUNTING HEIGHTS LISTED.

ICT PROJECT GENERAL NOTES

1. THIS PROJECT IS TO CONFORM TO THE LATEST LOCALLY ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE AND THE LATEST REVISION OF:
   ANSI/TIA-526-7-A, Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant, and its published addenda.
   ANSI/TIA-526-14-C, Measurement of Optical Power Loss of Installed Multimode Fiber Cable Plant, and its published addenda.
   ANSI/TIA-568.0-E, Generic Telecommunications Cabling for Customer Premises, and its published addenda.
   ANSI/TIA-568.1-E, Commercial Building Telecommunications Infrastructure Standard, and its published addenda.
   ANSI/TIA-568.2-E, Balanced Twisted-Pair Telecommunications Cabling and Components Standard, and its published addenda.
   ANSI/TIA-568.3-E, Optical Fiber Cabling and Components Standard, and its published addenda.
   ANSI/TIA-569-E, Telecommunications Pathways and Spaces, and its published addenda
   ANSI/TIA-598-D Optical Fiber Cable Color Coding
   ANSI/TIA-606-D, Administration Standard for Telecommunications Infrastructure, and its published addenda
   ANSI/TIA-607-D, Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises, and its published addenda.
   ANSI/TIA-758-C, Customer Owned Outside-Plant Telecommunications Infrastructure Standard, and its published addenda.
2. SEE SPECIFICATIONS FOR ADDITIONAL CONTRACTOR QUALIFICATIONS, PRODUCT INSTALLATION, AND QUALITY REQUIREMENTS.
3. ALL DIMENSIONS MUST BE VERIFIED IN THE FIELD AND ANY DEVIATIONS CAUSING CHANGES EXCEEDING 6 INCHES TO THE INTENDED LOCATION OF MAJOR TELECOMMUNICATIONS INFRASTRUCTURE COMPONENTS MUST BE COORDINATED WITH THE ARCHITECT AND DESIGNER PRIOR TO INSTALLATION.
4. ALL ICT DEVICES SHALL BE SECURELY MOUNTED PLUMB AND STRAIGHT TO WALLS, FLOORS, OR RACKS, PER THE MANUFACTURER'S RECOMMENDED MOUNTING PRACTICE, UNLESS OTHERWISE INDICATED IN THE ICT DRAWINGS.
5. ALL CABLES SHALL BE RATED FOR THE ENVIRONMENT IN WHICH THEY ARE INSTALLED.
6. INSTALL FIRESTOP ASSEMBLIES IN ALL THROUGH-SLAB AND THROUGH-WALL PENETRATIONS FOR THE INSTALLATION OF ICT CABLING AS REQUIRED TO MAINTAIN FIRE RATING OF PENETRATED SLAB OR WALL. REVIEW DRAWINGS FOR PARTITION TYPE RATINGS. FIRESTOPPING SYSTEMS USED FOR ALL PENETRATIONS SHALL BE A UL LISTED ASSEMBLY AND APPROVED BY APPLICABLE AUTHORITIES HAVING JURISDICTION PRIOR TO INSTALLATION.
7. THE METHOD OF INSTALLATION FOR ALL ICT RELATED BACK BOXES IN WALLS AND THE METHOD FOR PASSAGE OF CONDUIT AND WIREWAYS THROUGH ACOUSTICALLY SENSITIVE WALLS SHALL BE COORDINATED WITH THE ACOUSTICAL CONSULTANT OR OWNER PRIOR TO INSTALLATION.
8. BOND ALL CONDUITS, CABLE TRAYS, AND JUNCTION BOXES PER ANSI/TIA-607-D IN ADDITION TO ANY APPLICABLE CODE REQUIREMENTS.
9. ALL ICT RELATED FLOOR BOXES, POKE THRU DEVICES, JUNCTION BOXES AND BACK BOXES SHOULD BE PROVIDED WITH AN EMPTY CONDUIT TO THE APPLICABLE TELECOMMUNICATIONS ROOM, CABLE TRAY PATHWAY OR PULL BOX. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL DETAILS.
10. CONDUIT ROUTES ON THE ICT DRAWINGS SHOW ONLY INTERCONNECTION BETWEEN THE TERMINATION POINTS AND APPROXIMATE ROUTES. THE EXACT ROUTE OF CONDUIT AND CABLE PATHWAYS ARE DETERMINED BY FIELD CONDITIONS AND VERIFIED BY INSTALLING CONTRACTOR.
11. NOTIFY THE DESIGNER OF ANY DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE "T" (ICT) DRAWINGS. OBTAIN CLARIFICATION BEFORE PROCEEDING WITH WORK.
12. ALL PATHWAY AND RACEWAY INCLUDING CONDUIT SLEEVES, FLOOR BOXES, OUTLET BOXES AND CONDUIT BY ELECTRICAL, UNO.
13. ALL CABLES SHALL BE SUPPORTED EVERY 48" O.C. MAX. BY J-HOOKS, CABLE TRAY, OR IN CONDUIT.
14. ALL CABLES RUN IN CONDUIT UNDER SLAB SHALL BE INDOOR/OUTDOOR RATED CATEGORY 6A.
15. CABLE GAUGE AND NUMBER OF CONDUCTORS ARE SHOWN IN THE FORMAT: AWG/# (EX. 16/2 = 16 AWG / 2 CONDUCTOR)
16. CALL 811 PRIOR TO PERFORMING ANY EXCAVATION.

CABLE ROUTING LEGEND

- HORIZONTAL CABLE PATHWAY
- BACKBONE CABLE PATHWAY
- BELOW GRADE
- CONDUIT OR CONDUIT SLEEVE. EMT, UNO.
- LADDER RACK OR CABLE TRAY, SEE PLANS FOR ADDITIONAL INFORMATION.
- VERTICAL TRANSITION BETWEEN FLOORS OR GRADE
- HORIZONTAL TRANSITION BETWEEN SHEETS AND/OR DETAILS
- (J) JUNCTION BOX. 4" x 4" x 2-1/8", UNO.

STRUCTURED CABLING LEGEND

- X — WORK AREA OUTLET - WALL MOUNT AT +18", UNO. "X" INDICATES NUMBER OF CATEGORY 6 JACKS, UNO. SEE NOTE 1.
- AP X — "AP" - WORK AREA OUTLET - WALL MOUNT WIRELESS ACCESS POINT. MOUNT AT +8' AFF, UNO. "X" INDICATES NUMBER OF CATEGORY 6 JACKS, UNO. SEE NOTE 1.
- TV X — "TV" - WORK AREA OUTLET FOR TV BOX. WALL MOUNTED BOX PROVIDED BY ELECTRICAL CONTRACTOR.
- X — WORK AREA OUTLET - CEILING MOUNT. PROVIDE 15' SERVICE LOOP. "X" INDICATES NUMBER OF CATEGORY 6 JACKS, UNO. SEE NOTE 2.
- AP X — "AP" - WORK AREA OUTLET - CEILING MOUNT WIRELESS ACCESS POINT. "X' INDICATES NUMBER OF CATEGORY 6 JACKS. SEE NOTE 2.
- X — WORK AREA OUTLET - FLOOR MOUNT. BOX AND CONDUIT PATHWAY PROVIDED BY ELECTRICAL CONTRACTOR. "X" INDICATES NUMBER OF CATEGORY 6 JACKS.

NOTE 1: PROVIDE 4" SQUARE BOX (2-1/8" DEEP) WITH SINGLE-GANG MUD RING & 1" EMT CONDUIT STUBBED BACK TO CRAWL SPACE.

NOTE 2: IN LOCATIONS ABOVE T-BAR CEILING, TERMINATE IN BISCUIT STYLE HOUSING ABOVE CEILING TILE. LABEL HOUSING AND T-BAR RAIL. IN HARD LID CEILINGS, STUB 1" EMT CONDUIT FROM OUTLET TO CRAWL SPACE.

SECURITY LEGEND

- C — INDICATES SIMPLEX CATEGORY 6 OUTLET FOR IP CAMERA. PROVIDE BULLET CAMERA, MINIMUM 2 MEGA PIXELS. SEE SPECIFICATIONS FOR ADDITIONAL DETAILS. SEE NOTE 2.

NOTE 2: FOR EXTERIOR CAMERAS, TERMINATE INSIDE BUILDING ON BISCUIT BLOCK IN NEAREST ACCESSIBLE CEILING SPACE. PROVIDE 1" SLEEVE FLUSH w/ BUILDING TO BUILDING EXTERIOR AND WEATHERPROOF SLEEVE PENETRATION. FOR INTERIOR CAMERAS IN HARD LID CEILINGS, STUB 1" EMT CONDUIT FROM OUTLET TO CRAWL SPACE. FOR INTERIOR CAMERAS IN T-BAR CEILINGS, TERMINATE ON BISCUIT BLOCK ABOVE T-BAR CEILING TILES. PROVIDE 15' SECURITY LOOP. MOUNT @ +8' AFF, UNO.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: PH
DRAWN: PH
CHECKED: GS
APPROVED: GS
DATE: 06/17/2025

PROFESSIONAL ENGINEER REGISTERED — 18100 — STATE OF IDAHO — GARTH L. STEVENS

Morrison Maierle
engineers - surveyors - planners - scientists
1055 Mount Ave
Missoula, Montana 59801
406.542.4841
www.m-m.net

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BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ICT SYMBOLS AND ABBREVIATIONS

SHEET NO.
T000

DATE STAMP 6/18/2025 8:51:23 AM

270528 - PATHWAYS FOR COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.1 ACTION SUBMITTALS
- A. PRODUCT DATA: FOR EACH TYPE OF PRODUCT USED ON THIS PROJECT, PROVIDE CUT SHEET WITH HIGHLIGHTED PART NUMBER OF PRODUCT. A SEPARATE SUBMITTAL IS REQUIRED FOR EACH SPECIFICATION SECTION. DO NOT COMBINE OR MERGE SPECIFICATION SECTIONS.
- B. SHOP DRAWINGS: FOR CUSTOM ENCLOSURES AND CABINETS. INCLUDE PLANS, ELEVATIONS, SECTIONS, AND ATTACHMENT DETAILS.

PART 2 - PRODUCTS

2.1 METAL CONDUITS AND FITTINGS
- A. DESCRIPTION: METAL RACEWAY OF CIRCULAR CROSS SECTION WITH MANUFACTURER-FABRICATED FITTINGS.
- B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
  1. O-Z/GEDNEY; A BRAND OF EMERSON INDUSTRIAL AUTOMATION.
  2. SOUTHWIRE COMPANY.
  3. THOMAS & BETTS CORPORATION; A MEMBER OF THE ABB GROUP.
- C. GENERAL REQUIREMENTS FOR METAL CONDUITS AND FITTINGS:
  1. LISTED AND LABELED AS DEFINED IN NFPA 70, BY A NATIONALLY RECOGNIZED TESTING LABORATORY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
  2. COMPLY WITH TIA-569-E.
- D. GRC: COMPLY WITH ANSI C80.1 AND UL 6.
- E. ARC: COMPLY WITH ANSI C80.5 AND UL 6A.
- F. IMC: COMPLY WITH ANSI C80.6 AND UL 1242.
- G. PVC-COATED STEEL CONDUIT: PVC-COATED IMC.
  1. COMPLY WITH NEMA RN 1.
  2. COATING THICKNESS: 0.040 INCH (1 MM), MINIMUM.
- H. EMT: COMPLY WITH ANSI C80.3 AND UL 797.
- I. FITTINGS FOR METAL CONDUIT: COMPLY WITH NEMA FB 1 AND UL 514B.
  1. CONDUIT FITTINGS FOR HAZARDOUS (CLASSIFIED) LOCATIONS: COMPLY WITH UL 1203 AND NFPA 70.
  2. FITTINGS FOR EMT:
     a. MATERIAL: STEEL
     b. TYPE: SETSCREW
  3. EXPANSION FITTINGS: PVC OR STEEL TO MATCH CONDUIT TYPE, COMPLYING WITH UL-467, RATED FOR ENVIRONMENTAL CONDITIONS WHERE INSTALLED, AND INCLUDING FLEXIBLE EXTERNAL BONDING JUMPER.
  4. COATING FOR FITTINGS FOR PVC-COATED CONDUIT: MINIMUM THICKNESS OF 0.040 INCH (1 MM), WITH OVERLAPPING SLEEVES PROTECTING THREADED JOINTS.
- J. JOINT COMPOUND FOR IMC, GRC, OR ARC: APPROVED, AS DEFINED IN NFPA 70, BY AUTHORITIES HAVING JURISDICTION FOR USE IN CONDUIT ASSEMBLIES, AND COMPOUNDED FOR USE TO LUBRICATE AND PROTECT THREADED CONDUIT JOINTS FROM CORROSION AND TO ENHANCE THEIR CONDUCTIVITY.

2.2 NONMETALLIC CONDUITS AND FITTINGS
- A. DESCRIPTION: NONMETALLIC RACEWAY OF CIRCULAR SECTION WITH MANUFACTURER-FABRICATED FITTINGS.
- B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
  1. CARLON; A BRAND OF THOMAS & BETTS CORPORATION.
  2. DURA-LINE.
  3. RACO; HUBBELL.
- C. GENERAL REQUIREMENTS FOR NONMETALLIC CONDUITS AND FITTINGS:
  1. LISTED AND LABELED AS DEFINED IN NFPA 70, BY AN NRTL, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
  2. COMPLY WITH TIA-569-E.
- D. RNC: TYPE EPC-40-PVC TYPE EPC-80-PVC, COMPLYING WITH NEMA TC 2 AND UL 651 UNLESS OTHERWISE INDICATED.
- E. RIGID HDPE: COMPLY WITH UL 651A.
- F. CONTINUOUS HDPE: COMPLY WITH UL 651A.
- G. RTRC: COMPLY WITH UL 2515A AND NEMA TC 14.
  1. FITTINGS: COMPLY WITH NEMA TC 3; MATCH TO CONDUIT OR TUBING TYPE AND MATERIAL.
- H. SOLVENTS AND ADHESIVES: AS RECOMMENDED BY CONDUIT MANUFACTURER.

2.3 OPTICAL-FIBER-CABLE PATHWAYS AND FITTINGS
- A. DESCRIPTION: COMPLY WITH UL 2024; FLEXIBLE-TYPE PATHWAY WITH A CIRCULAR CROSS SECTION, APPROVED FOR PLENUM OR RISER INSTALLATION UNLESS OTHERWISE INDICATED.
- B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
  1. CARLON; A BRAND OF THOMAS & BETTS CORPORATION.
  2. DURA-LINE.
  3. HUBBELL.

2.4 SURFACE METAL PATHWAYS
- A. DESCRIPTION: GALVANIZED STEEL WITH SNAP-ON COVERS, COMPLYING WITH UL 5.
- B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
  1. MONOSYSTEMS, INC.
  2. PANDUIT CORP.
  3. WIREMOLD / LEGRAND.
- C. LISTED AND LABELED AS DEFINED IN NFPA 70, BY AN NRTL, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- D. COMPLY WITH TIA-569-E.

2.5 SURFACE NONMETALLIC PATHWAYS:
- A. DESCRIPTION: TWO- OR THREE-PIECE CONSTRUCTION, COMPLYING WITH UL 5A, AND MANUFACTURED OF RIGID PVC.
- B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
  1. PANDUIT CORP.
  2. QUAZITE: HUBBELL POWER SYSTEMS, INC.
  3. WIREMOLD / LEGRAND.
- C. FINISH: TEXTURE AND COLOR DETERMINED AT TIME OF SUBMITTAL.
- D. LISTED AND LABELED AS DEFINED IN NFPA 70, BY AN NRTL, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- E. COMPLY WITH TIA-569-E.

2.6 J-HOOKS
- A. DESCRIPTION: PREFABRICATED SHEET METAL CABLE SUPPORTS FOR TELECOMMUNICATIONS CABLE.
- B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
  1. EATON, B-LINE.
  2. PANDUIT CORP.
  3. WIREMOLD / LEGRAND.
- C. LISTED AND LABELED AS DEFINED IN NFPA 70, BY AN NRTL, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- D. COMPLY WITH TIA-569-E.

270528 - PATHWAYS FOR COMMUNICATIONS SYSTEMS (CONTINUED)

2.7 BOXES, ENCLOSURES, AND CABINETS
- A. DESCRIPTION: ENCLOSURES FOR COMMUNICATIONS.
- B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
  1. O-Z/GEDNEY; A BRAND OF EMERSON INDUSTRIAL AUTOMATION.
  2. RACO; HUBBELL.
  3. THOMAS & BETTS CORPORATION; A MEMBER OF THE ABB GROUP.
- C. GENERAL REQUIREMENTS FOR BOXES, ENCLOSURES, AND CABINETS:
  1. COMPLY WITH TIA-569-E.
  2. BOXES, ENCLOSURES, AND CABINETS INSTALLED IN WET LOCATIONS SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY AN NRTL, AND MARKED FOR USE IN WET LOCATIONS.
  3. BOX EXTENSIONS USED TO ACCOMMODATE NEW BUILDING FINISHES SHALL BE OF SAME MATERIAL AS RECESSED BOX.
  4. DEVICE BOX DIMENSIONS: 4 INCHES SQUARE BY 2-1/8 INCHES DEEP, WITH SINGLE GANG MUD RING, U.N.O.
- D. SMALL SHEET METAL PULL AND JUNCTION BOXES: NEMA OS 1.
- E. NONMETALLIC OUTLET AND DEVICE BOXES: COMPLY WITH NEMA OS 2 AND UL 514C.
- F. HINGED-COVER ENCLOSURES: COMPLY WITH UL 50 AND NEMA 250, TYPE 3R, WITH CONTINUOUS-HINGE COVER WITH FLUSH LATCH UNLESS OTHERWISE INDICATED.
  1. METAL ENCLOSURES: STEEL, FINISHED INSIDE AND OUT WITH MANUFACTURER'S STANDARD ENAMEL.
  2. NONMETALLIC ENCLOSURES:
     a. MATERIAL: FIBERGLASS.
     b. FINISHED INSIDE WITH RADIO-FREQUENCY-RESISTANT PAINT.
  3. INTERIOR PANELS: STEEL; ALL SIDES FINISHED WITH MANUFACTURER'S STANDARD ENAMEL.

2.8 POLYMER-CONCRETE HANDHOLES
- A. DESCRIPTION: MOLDED OF SAND AND AGGREGATE; BOUND TOGETHER WITH POLYMER RESIN; AND REINFORCED WITH STEEL, FIBERGLASS, OR A COMBINATION OF THE TWO.
- B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
  1. ARMORCAST PRODUCTS COMPANY.
  2. NEWBASIS.
  3. QUAZITE: HUBBELL POWER SYSTEMS, INC.
- C. GENERAL REQUIREMENTS FOR POLYMER CONCRETE HANDHOLES:
  1. BOXES AND HANDHOLES FOR USE IN UNDERGROUND SYSTEMS SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY AN NRTL, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
  2. BOXES INSTALLED IN WET AREAS SHALL BE LISTED AND LABELED AS DEFINED IN NFPA 70, BY AN NRTL, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
  3. COMPLY WITH TIA-569-E.
- D. CONFIGURATION: DESIGNED FOR FLUSH BURIAL WITH OPEN BOTTOM UNLESS OTHERWISE INDICATED.
- E. COVER: WEATHERPROOF, SECURED BY TAMPER-RESISTANT LOCKING DEVICES AND HAVING STRUCTURAL LOAD RATING CONSISTENT WITH ENCLOSURE AND HANDHOLE LOCATION.
  1. COVER FINISH: NONSKID FINISH SHALL HAVE A MINIMUM COEFFICIENT OF FRICTION OF 0.50.
  2. COVER LEGEND: MOLDED LETTERING, "COMMUNICATIONS".

2.9 CABLE TRAYS
- A. DESCRIPTION: WIRE MESH BASKET CABLE SUPPORT FOR TELECOMMUNICATIONS CABLE.
- B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
  1. EATON, B-LINE.
  2. PANDUIT CORP.
  3. WIREMOLD / LEGRAND.
- C. LISTED AND LABELED AS DEFINED IN NFPA 70, BY AN NRTL, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- D. COMPLY WITH TIA-569-E.

2.10 LADDER RACK
- A. DESCRIPTION: RAIL/RUNG STYLE CABLE SUPPORT FOR TELECOMMUNICATIONS CABLE.
- B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
  1. EATON, B-LINE.
  2. PANDUIT CORP.
  3. CHATSWORTH.
- C. LISTED AND LABELED AS DEFINED IN NFPA 70, BY AN NRTL, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
- D. COMPLY WITH TIA-569-E.

PART 3 - EXECUTION

3.1 PATHWAY APPLICATION
- A. MINIMUM PATHWAY SIZE: REFER TO DRAWINGS.
- B. PATHWAY FITTINGS: COMPATIBLE WITH PATHWAYS AND SUITABLE FOR USE AND LOCATION.
- C. DO NOT INSTALL ALUMINUM CONDUITS, BOXES, OR FITTINGS IN CONTACT WITH CONCRETE OR EARTH.
- D. INSTALL SURFACE PATHWAYS ONLY WHERE INDICATED ON DRAWINGS.
- E. DO NOT INSTALL NONMETALLIC CONDUIT WHERE AMBIENT TEMPERATURE EXCEEDS 120 DEG F.

3.2 INSTALLATION
- A. COMPLY WITH THE FOLLOWING STANDARDS FOR INSTALLATION REQUIREMENTS EXCEPT WHERE REQUIREMENTS ON DRAWINGS OR IN THIS SECTION ARE STRICTER:
  1. NECA 1.
  2. TIA-569-E.
  3. NECA 101.
  4. NECA 102.
  5. NECA 105.
  6. NECA 111.
- B. COMPLY WITH NFPA 70 LIMITATIONS FOR TYPES OF PATHWAYS ALLOWED IN SPECIFIC OCCUPANCIES AND NUMBER OF FLOORS.
- C. KEEP PATHWAYS AT LEAST 12 INCHES AWAY FROM PARALLEL RUNS OF FLUES AND STEAM OR HOT-WATER PIPES. INSTALL HORIZONTAL PATHWAY RUNS ABOVE WATER AND STEAM PIPING.
- D. COMPLETE PATHWAY INSTALLATION BEFORE STARTING CONDUCTOR INSTALLATION.
- E. INSTALL NO MORE THAN THE EQUIVALENT OF 180-DEGREE BENDS IN ANY PATHWAY RUN. PROVIDE JUNCTION BOX AT LOCATIONS EXCEEDING 180-DEGREE BENDS. SUPPORT WITHIN 12 INCHES OF CHANGES IN DIRECTION. UTILIZE LONG RADIUS ELBOWS FOR ALL OPTICAL-FIBER CABLES.
- F. CONCEAL RIGID CONDUIT WITHIN FINISHED WALLS, CEILINGS, AND FLOORS UNLESS OTHERWISE INDICATED. INSTALL CONDUITS PARALLEL OR PERPENDICULAR TO BUILDING LINES.
- G. SUPPORT CONDUIT WITHIN 12 INCHES OF ENCLOSURES TO WHICH ATTACHED.
- H. PATHWAYS EMBEDDED IN SLABS:
  1. RUN CONDUIT LARGER THAN 1-INCH TRADE SIZE, PARALLEL OR AT RIGHT ANGLES TO MAIN REINFORCEMENT. WHERE AT RIGHT ANGLES TO REINFORCEMENT, PLACE CONDUIT CLOSE TO SLAB SUPPORT. SECURE PATHWAYS TO REINFORCEMENT AT MAXIMUM 10-FOOT INTERVALS.
  2. ARRANGE PATHWAYS TO CROSS BUILDING EXPANSION JOINTS AT RIGHT ANGLES WITH EXPANSION FITTINGS. COMPLY WITH REQUIREMENTS FOR EXPANSION JOINTS SPECIFIED IN THIS ARTICLE.
  3. ARRANGE PATHWAYS TO KEEP A MINIMUM OF 1 INCH OF CONCRETE COVER IN ALL DIRECTIONS.
  4. DO NOT EMBED THREADLESS FITTINGS IN CONCRETE UNLESS SPECIFICALLY APPROVED BY ARCHITECT FOR EACH SPECIFIC LOCATION.

270528 - PATHWAYS FOR COMMUNICATIONS SYSTEMS (CONTINUED)
- I. STUB-UPS TO ABOVE RECESSED CEILINGS:
  1. USE EMT, IMC, OR RMC FOR PATHWAYS.
  2. USE A CONDUIT BUSHING OR INSULATED FITTING TO TERMINATE STUB-UPS NOT TERMINATED IN HUBS OR IN AN ENCLOSURE.
- J. THREADED CONDUIT JOINTS, EXPOSED TO WET, DAMP, CORROSIVE, OR OUTDOOR CONDITIONS: APPLY LISTED COMPOUND TO THREADS OF PATHWAY AND FITTINGS BEFORE MAKING UP JOINTS. FOLLOW COMPOUND MANUFACTURER'S WRITTEN INSTRUCTIONS.
- K. COAT FIELD-CUT THREADS ON PVC-COATED PATHWAY WITH A CORROSION-PREVENTING CONDUCTIVE COMPOUND PRIOR TO ASSEMBLY.
- L. DO NOT RELY ON LOCKNUTS TO PENETRATE NONCONDUCTIVE COATINGS ON ENCLOSURES. REMOVE COATINGS IN THE LOCKNUT AREA PRIOR TO ASSEMBLING CONDUIT TO ENCLOSURE, TO ASSURE A CONTINUOUS GROUND PATH.
- M. CUT CONDUIT PERPENDICULAR TO THE LENGTH. FOR CONDUITS OF 2-INCH TRADE SIZE AND LARGER, USE ROLL CUTTER OR A GUIDE TO ENSURE CUT IS STRAIGHT AND PERPENDICULAR TO THE LENGTH.
- N. INSTALL PULL WIRES IN EMPTY PATHWAYS. USE POLYPROPYLENE OR MONOFILAMENT PLASTIC LINE WITH NOT LESS THAN 200-LB TENSILE STRENGTH. LEAVE AT LEAST 12 INCHES OF SLACK AT EACH END OF PULL WIRE. SECURE PULL WIRE, SO IT CANNOT FALL INTO CONDUIT. CAP PATHWAYS DESIGNATED AS SPARE ALONGSIDE PATHWAYS IN USE.
- O. SURFACE PATHWAYS:
  1. INSTALL SURFACE PATHWAY FOR SURFACE TELECOMMUNICATIONS OUTLET BOXES ONLY WHERE INDICATED ON DRAWINGS.
  2. INSTALL SURFACE PATHWAY WITH A MINIMUM 2-INCH RADIUS CONTROL AT BEND POINTS.
  3. SECURE SURFACE PATHWAY WITH SCREWS OR OTHER ANCHOR-TYPE DEVICES AT INTERVALS NOT EXCEEDING 48 INCHES AND WITH NO LESS THAN TWO SUPPORTS PER STRAIGHT PATHWAY SECTION. SUPPORT SURFACE PATHWAY ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. TAPE AND GLUE ARE NOT ACCEPTABLE SUPPORT METHODS.
- P. PATHWAYS FOR OPTICAL-FIBER AND COMMUNICATIONS CABLE: INSTALL PATHWAYS, METAL AND NONMETALLIC, RIGID AND FLEXIBLE, AS FOLLOWS:
  1. 1-INCH TRADE SIZE AND LARGER: INSTALL PATHWAYS IN MAXIMUM LENGTHS OF 75 FEET.
  2. INSTALL WITH A MAXIMUM OF TWO 90-DEGREE BENDS OR EQUIVALENT FOR EACH LENGTH OF PATHWAY UNLESS DRAWINGS SHOW STRICTER REQUIREMENTS. SEPARATE LENGTHS WITH PULL OR JUNCTION BOXES OR TERMINATIONS AT DISTRIBUTION FRAMES OR CABINETS WHERE NECESSARY TO COMPLY WITH THESE REQUIREMENTS.
- Q. INSTALL PATHWAY-SEALING FITTINGS AT ACCESSIBLE LOCATIONS ACCORDING TO NFPA 70 AND FILL THEM WITH LISTED SEALING COMPOUND. FOR CONCEALED PATHWAYS, INSTALL EACH FITTING IN A FLUSH STEEL BOX WITH A BLANK COVER PLATE HAVING A FINISH SIMILAR TO THAT OF ADJACENT PLATES OR SURFACES. INSTALL PATHWAY-SEALING FITTINGS ACCORDING TO NFPA 70.
- R. INSTALL DEVICES TO SEAL PATHWAY INTERIORS AT ACCESSIBLE LOCATIONS. LOCATE SEALS, SO NO FITTINGS OR BOXES ARE BETWEEN THE SEAL AND THE FOLLOWING CHANGES OF ENVIRONMENTS. SEAL THE INTERIOR OF ALL PATHWAYS AT THE FOLLOWING POINTS:
  1. WHERE CONDUITS PASS FROM WARM TO COLD LOCATIONS, SUCH AS BOUNDARIES OF REFRIGERATED SPACES.
  2. WHERE AN UNDERGROUND SERVICE PATHWAY ENTERS A BUILDING OR STRUCTURE.
  3. WHERE OTHERWISE REQUIRED BY NFPA 70.
- S. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS FOR SOLVENT WELDING PVC CONDUIT AND FITTINGS.
- T. J-HOOKS:
  1. SIZE TO ALLOW A MINIMUM OF 25 PERCENT FUTURE CAPACITY WITHOUT EXCEEDING DESIGN CAPACITY LIMITS.
  2. SHALL BE SUPPORTED BY DEDICATED SUPPORT WIRES. DO NOT USE CEILING GRID SUPPORT WIRE OR SUPPORT RODS.
  3. HOOK SPACING SHALL ALLOW NO MORE THAN 6 INCHES OF SLACK. THE LOWEST POINT OF THE CABLES SHALL BE NO LESS THAN 6 INCHES ADJACENT TO CEILINGS, MECHANICAL DUCTWORK AND FITTINGS, LUMINAIRES, POWER CONDUITS, POWER AND TELECOMMUNICATIONS OUTLETS, AND OTHER ELECTRICAL AND COMMUNICATIONS EQUIPMENT.
  4. SPACE HOOKS NO MORE THAN 4 FEET O.C.
  5. PROVIDE A HOOK AT EACH CHANGE IN DIRECTION.
- U. MOUNT BOXES AT HEIGHTS INDICATED ON DRAWINGS. INSTALL BOXES WITH HEIGHT MEASURED TO CENTER OF BOX UNLESS OTHERWISE INDICATED.
- V. RECESSED BOXES IN MASONRY WALLS: SAW-CUT OPENING FOR BOX IN CENTER OF CELL OF MASONRY BLOCK, AND INSTALL BOX FLUSH WITH SURFACE OF WALL. PREPARE BLOCK SURFACE TO PROVIDE A FLAT SURFACE FOR A RAINTIGHT CONNECTION BETWEEN BOX AND COVER PLATE OR SUPPORTED EQUIPMENT AND BOX.
- W. HORIZONTALLY SEPARATE BOXES MOUNTED ON OPPOSITE SIDES OF WALLS, SO THEY ARE NOT IN THE SAME VERTICAL CHANNEL.
- X. FASTEN JUNCTION AND PULL BOXES TO OR SUPPORT FROM BUILDING STRUCTURE. DO NOT SUPPORT BOXES BY CONDUITS.
- Y. SET METAL FLOOR BOXES LEVEL AND FLUSH WITH FINISHED FLOOR SURFACE.
- Z. SET NONMETALLIC FLOOR BOXES LEVEL. TRIM AFTER INSTALLATION TO FIT FLUSH WITH FINISHED FLOOR SURFACE.

3.3 INSTALLATION OF UNDERGROUND CONDUIT
- A. DIRECT-BURIED CONDUIT:
  1. EXCAVATE TRENCH BOTTOM TO PROVIDE FIRM AND UNIFORM SUPPORT FOR CONDUIT. INSTALL BACKFILL.
  2. AFTER INSTALLING CONDUIT, BACKFILL AND COMPACT.
  3. INSTALL MANUFACTURED DUCT ELBOWS FOR STUB-UPS AT POLES AND EQUIPMENT AND AT BUILDING ENTRANCES THROUGH FLOOR UNLESS OTHERWISE INDICATED. INSTALL MANUFACTURED RIGID STEEL CONDUIT ELBOWS FOR STUB-UPS AT POLES AND EQUIPMENT AND AT BUILDING ENTRANCES THROUGH FLOOR.
     a. COUPLE STEEL CONDUITS TO DUCTS WITH ADAPTERS DESIGNED FOR THIS PURPOSE, AND ENCASE COUPLING WITH 3 INCHES OF CONCRETE AROUND CONDUIT FOR A MINIMUM OF 12 INCHES ON EACH SIDE OF THE COUPLING.
     b. FOR STUB-UPS AT EQUIPMENT MOUNTED ON OUTDOOR CONCRETE BASES AND WHERE CONDUITS PENETRATE BUILDING FOUNDATIONS, EXTEND STEEL CONDUIT HORIZONTALLY A MINIMUM OF 60 INCHES FROM EDGE OF FOUNDATION OR EQUIPMENT BASE. INSTALL INSULATED GROUNDING BUSHINGS ON TERMINATIONS AT EQUIPMENT.
  4. UNDERGROUND WARNING TAPE: PROVIDE WARNING TAPE 12" ABOVE TRENCHED CONDUIT.

3.4 INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES
- A. INSTALL HANDHOLES AND BOXES LEVEL AND PLUMB AND WITH ORIENTATION AND DEPTH COORDINATED WITH CONNECTING CONDUITS TO MINIMIZE BENDS AND DEFLECTIONS REQUIRED FOR PROPER ENTRANCES.
- B. UNLESS OTHERWISE INDICATED, SUPPORT UNITS ON A LEVEL BED OF CRUSHED STONE OR GRAVEL, GRADED FROM 1/2-INCH SIEVE TO NO. 4 SIEVE AND COMPACTED TO SAME DENSITY AS ADJACENT UNDISTURBED EARTH.
- C. ELEVATION: IN PAVED AREAS, SET SO COVER SURFACE WILL BE FLUSH WITH FINISHED GRADE. SET COVERS OF OTHER ENCLOSURES 1 INCH ABOVE FINISHED GRADE.
- D. FIELD CUT OPENINGS FOR CONDUITS ACCORDING TO ENCLOSURE MANUFACTURER'S WRITTEN INSTRUCTIONS. CUT WALL OF ENCLOSURE WITH A TOOL DESIGNED FOR MATERIAL TO BE CUT. SIZE HOLES FOR TERMINATING FITTINGS TO BE USED, AND SEAL AROUND PENETRATIONS AFTER FITTINGS ARE INSTALLED.

3.5 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR COMMUNICATIONS PENETRATIONS
- A. INSTALL SLEEVES AND SLEEVE SEALS AT PENETRATIONS OF EXTERIOR FLOOR AND WALL ASSEMBLIES.

270528 - PATHWAYS FOR COMMUNICATIONS SYSTEMS (CONTINUED)

3.6 FIRESTOPPING
- A. INSTALL FIRESTOPPING AT PENETRATIONS OF FIRE-RATED FLOOR AND WALL ASSEMBLIES.

3.7 PROTECTION
- A. PROTECT COATINGS, FINISHES, AND CABINETS FROM DAMAGE OR DETERIORATION.
  1. REPAIR DAMAGE TO GALVANIZED FINISHES WITH ZINC-RICH PAINT RECOMMENDED BY MANUFACTURER.
  2. REPAIR DAMAGE TO PVC COATINGS OR PAINT FINISHES WITH MATCHING TOUCHUP COATING RECOMMENDED BY MANUFACTURER.

END OF SECTION 27 0528.

271116 - COMMUNICATIONS RACKS, FRAMES, AND ENCLOSURES

SUMMARY
- A. ACTION SUBMITTALS
  1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT. SEPARATE SUBMITTAL REQUIRED FOR EACH SPECIFICATION SECTION.

PRODUCTS
- A. PERFORMANCE REQUIREMENTS
  1. SEISMIC PERFORMANCE: EQUIPMENT SHALL WITHSTAND THE EFFECTS OF EARTHQUAKE MOTIONS DETERMINED ACCORDING TO ASCE/SEI 7.
     a. THE TERM "WITHSTAND" MEANS "THE UNIT WILL REMAIN IN PLACE WITHOUT SEPARATION OF ANY PARTS WHEN SUBJECTED TO THE SEISMIC FORCES SPECIFIED.
  2. UL LISTED.
  3. ROHS COMPLIANT.
- B. 19-INCH WALL MOUNTED CABINETS
  1. DESCRIPTION: WALL MOUNTED CABINET WITH THREADED RAILS DESIGNED FOR MOUNTING TELECOMMUNICATIONS EQUIPMENT.
  2. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
     a. B-LINE, AN EATON BUSINESS
     b. CHATSWORTH
     c. PANDUIT CORP.
  3. GENERAL REQUIREMENTS:
     a. FRAMES: MODULAR UNITS DESIGNED FOR TELECOMMUNICATIONS TERMINAL SUPPORT AND COORDINATED WITH DIMENSIONS OF UNITS TO BE SUPPORTED.
     b. MATERIAL: ALUMINUM.
     c. FINISH: MANUFACTURER'S STANDARD, BAKED-POLYESTER POWDER COAT.
     d. COLOR: BLACK.
  4. WALL MOUNTED CABINETS:
     a. OVERALL HEIGHT: AS INDICATED ON DRAWINGS.
     b. UPRIGHT DEPTH: AS INDICATED ON DRAWINGS.
     c. TWO-POST LOAD RATING: 300 LBS. MINIMUM.
     d. NUMBER OF RACK UNITS PER RACK: 19.
     e. THREADS: 12-24.
     f. HORIZONTAL CABLE MANAGEMENT CHANNELS, GROUNDING LUG, AND A HORIZONTAL POWER STRIP.
     g. VERTICAL CABLING FINGER SECTIONS FOR VERTICAL CABLE MANAGEMENT.
     h. SHALL HAVE A MINIMUM OF FOUR MOUNTING HOLES FOR PERMANENT ATTACHMENT TO WALL.
     i. AS INDICATED ON DRAWINGS.
  5. CABLE MANAGEMENT:
     a. WITH INTEGRAL WIRE RETAINING FINGERS.
     b. VERTICAL FINGER CABLE MANAGER ATTACHED TO MOUNTING RAILS.
     c. HORIZONTAL CABLE MANAGEMENT WITH COVERS SHALL BE INCLUDED BETWEEN ALL COMPONENTS.
     d. AS INDICATED ON DRAWINGS.
- C. POWER STRIPS
  1. POWER STRIPS: COMPLY WITH UL 1363.
     a. LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
     b. RACK MOUNTING, WITH INTEGRAL FLANGES.
     c. HEIGHT: 1 RU.
     d. HOUSING: METAL
     e. SIX 20-A, 120-V AC, NEMA WD 6, CONFIGURATION 5-20R RECEPTACLES. FOR HORIZONTAL STRIPS.
     f. TWENTY-FOUR 20-A, 120-V AC, NEMA WD 6, CONFIGURATION 5-20R RECEPTACLES. FOR VERTICLE STRIPS.
     g. LED INDICATOR LIGHTS FOR POWER AND PROTECTION STATUS.
     h. LED INDICATOR LIGHTS FOR REVERSE POLARITY AND OPEN OUTLET GROUND.
     i. CIRCUIT BREAKER AND THERMAL FUSING: WHEN PROTECTION IS LOST, CIRCUIT OPENS AND CANNOT BE RESET.
     j. CIRCUIT BREAKER AND THERMAL FUSING: UNIT CONTINUES TO SUPPLY POWER IF PROTECTION IS LOST.
     k. CORD CONNECTED WITH 10-FOOT LINE CORD.
     l. ROCKER-TYPE ON-OFF SWITCH, ILLUMINATED WHEN IN ON POSITION.
     m. SURGE PROTECTION: UL 1449, TYPE 3.
        1. MAXIMUM SURGE CURRENT, LINE TO NEUTRAL: 27 KA
        2. PROTECTION MODES SHALL BE LINE TO NEUTRAL, LINE TO GROUND, AND NEUTRAL TO GROUND.
        3. UL 1449 VOLTAGE PROTECTION RATING FOR LINE TO NEUTRAL AND LINE TO GROUND SHALL BE 600 V AND 500 V FOR NEUTRAL TO GROUND.
  2. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
     a. B-LINE, AN EATON BUSINESS
     b. CHATSWORTH
     c. PANDUIT CORP.
- D. GROUNDING
  1. COMPLY WITH REQUIREMENTS IN TIA-607-D FOR GROUNDING CONDUCTORS AND CONNECTORS.
- E. LABELING
  1. COMPLY WITH TIA-606-D AND UL 969 FOR A SYSTEM OF LABELING MATERIALS, INCLUDING LABEL STOCKS, LAMINATING ADHESIVES, AND INKS USED BY LABEL PRINTERS.

EXECUTION
- A. INSTALLATION
  1. COMPLY WITH BICSI TDMM FOR LAYOUT OF COMMUNICATIONS EQUIPMENT SPACES.
  2. COMPLY WITH BICSI ITSIMM FOR INSTALLATION OF COMMUNICATIONS EQUIPMENT SPACES.
- B. GROUNDING
  1. COMPLY WITH TIA 607-D.
  2. LOCATE SECONDARY BUS BAR (SBB) TO MINIMIZE LENGTH OF BONDING CONDUCTORS. FASTEN TO WALL, ALLOWING AT LEAST 2" OF CLEARANCE BEHIND SBB. CONNECT SBB WITH A MINIMUM NO. 4 AWG GROUNDING ELECTRODE CONDUCTOR FROM SBB TO SUITABLE ELECTRICAL BUILDING GROUND. CONNECT RACK SBB TO NEAR SBB OR THE PRIMARY BUS BAR (PBB).
     a. BOND THE SHIELD OF SHIELDED CABLE TO PATCH PANEL, AND BOND PATCH PANEL TO SBB OR PBB.

END OF SECTION 27 1116.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: PH
DRAWN: PH
CHECKED: GS
APPROVED: GS
DATE: 06/17/2025

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engineers - surveyors - planners - scientists
1055 Mount Ave
Missoula, Montana 59801
406.542.4841
www.m-m.net

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BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ICT SPECIFICATIONS

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271513 - COMMUNICATIONS COPPER HORIZONTAL CABLING

SUMMARY
A. SECTION INCLUDES:
1. CATEGORY 6 TWISTED PAIR CABLE.
2. CATEGORY 6A TWISTED PAIR CABLE.
3. TWISTED PAIR CABLE HARDWARE, INCLUDING PLUGS AND JACKS.
4. CABLE MANAGEMENT SYSTEM.
5. GROUNDING PROVISIONS FOR TWISTED PAIR CABLE.
B. COPPER HORIZONTAL CABLING DESCRIPTION
1. THE MAXIMUM ALLOWABLE HORIZONTAL CABLE LENGTH IS 90 METERS. THIS MAXIMUM ALLOWABLE LENGTH DOES NOT INCLUDE AN ALLOWANCE FOR THE LENGTH OF 10 METERS USED FOR PATCHING.
C. ACTION SUBMITTALS
1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT. SEPARATE SUBMITTAL REQUIRED FOR EACH SPECIFICATION SECTION.
D. CLOSEOUT SUBMITTALS
1. MAINTENANCE DATA.
2. AS-BUILT DRAWINGS
3. TEST RESULTS
4. WARRANTY CERTIFICATE
E. INSTALLER QUALIFICATIONS
1. INSTALLER QUALIFICATIONS: DIVISION 27 SUB-CONTRACTOR SHALL BE A MANUFACTURER CERTIFIED CONTRACTOR AND WILL BE REQUIRED TO PROVIDE A MINIMUM 25-YEAR PERFORMANCE WARRANTY ON PARTS AND LABOR FOR ALL CATEGORY 6 AND CATEGORY 6A CABLING AND SYSTEMS. PROOF OF THE SUB-CONTRACTOR'S ABILITY TO PROVIDE SUCH A WARRANTY SHALL BE SUBMITTED TO THE GENERAL CONTRACTOR AT THE TIME OF BIDDING AND TO THE OWNER PRIOR TO THE NOTICE TO PROCEED. THIS WARRANTY SHALL COVER THE PATCH PANELS, HORIZONTAL CABLING, WORK AREA OUTLETS, AND PATCH CORDS.
2. CONTRACTOR SHALL EMPLOY, IN CONJUNCTION WITH CONSTRUCTION OF THE PROJECT, A CAPABLE, EXPERIENCED, AND RELIABLE FOREPERSON AND SUCH SKILLED WORKERS AS MAY BE REQUIRED FOR THE VARIOUS CLASSES OF WORK TO BE PERFORMED. CONTRACTOR SHALL BE REQUIRED TO SUBMIT EVIDENCE OF FOREPERSON'S SKILLED EXPERIENCE ON ANSI/TIA CERTIFIED FIBER OPTIC SYSTEMS. EVIDENCE OF EXPERIENCE SHALL BE SUBMITTED TO OWNER WITH SUBMITTAL OF BID. MINIMUM EXPERIENCE FOR ANY WORKMAN INVOLVED IN CABLING WORK SHALL BE CABLE PULLING AND TERMINATION WORK ON PROJECTS FOR A MINIMUM OF 5 YEARS AND COMPLETION OF TRAINING (40 HRS. MINIMUM) WHICH CERTIFIES THE PERSON'S WORK IN COPPER CABLING INSTALLATIONS. TRAINING CAN BE A COMBINATION OF BICSI AND MANUFACTURER TRAINING.

PRODUCTS
A. CATEGORY 6 TWISTED PAIR CABLE
1. DESCRIPTION: FOUR-PAIR, BALANCED-TWISTED PAIR CABLE, CERTIFIED TO MEET TRANSMISSION CHARACTERISTICS OF CATEGORY 6 CABLE AT FREQUENCIES UP TO 350 MHZ. NO MINIMUM SPECIFICATION CABLE WILL BE ACCEPTED.
2. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS. AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE THE FOLLOWING:
a. COMMSCOPE, INC.
b. PRYSMIAN, WITH PANDUIT PERFORMANCE WARRANTY.
c. THE SIEMON COMPANY.
3. STANDARD: COMPLY WITH NEMA WC 66/ICEA S-116-732 AND TIA-568.2-E FOR CATEGORY 6 CABLES.
4. CONDUCTORS: 100-OHM, 23 AWG SOLID COPPER.
5. SHIELDING/SCREENING: UNSHIELDED TWISTED PAIRS (UTP).
6. CABLE RATING: **RISER.**
7. JACKET: BLUE.
B. CATEGORY 6A TWISTED PAIR CABLE
1. DESCRIPTION: FOUR-PAIR, BALANCED-TWISTED PAIR CABLE, CERTIFIED TO MEET TRANSMISSION CHARACTERISTICS OF CATEGORY 6A CABLE AT FREQUENCIES UP TO 500MHZ. SEE DRAWINGS FOR ADDITIONAL DETAILS.
2. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS. AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE THE FOLLOWING:
a. COMMSCOPE, INC.
b. PRYSMIAN, WITH PANDUIT PERFORMANCE WARRANTY
c. THE SIEMON COMPANY.
3. STANDARD: COMPLY WITH TIA-568.2-E FOR CATEGORY 6A CABLES.
4. CONDUCTORS: 100-OHM, 23 AWG SOLID COPPER.
5. SHIELDING/SCREENING: UNSHIELDED TWISTED PAIRS (UTP)
6. CABLE RATING: **RISER**.
7. JACKET: BLUE.
C. TWISTED PAIR CABLE HARDWARE.
1. DESCRIPTION: HARDWARE DESIGNED TO CONNECT, SPLICE, AND TERMINATE TWISTED PAIR COPPER COMMUNICATIONS CABLE.
2. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY THE FOLLOWING:
1. COMMSCOPE, INC.
2. PANDUIT, WITH MINICOM.
3. THE SIEMON COMPANY.
3. GENERAL REQUIREMENTS FOR TWISTED PAIR CABLE HARDWARE:
1. COMPLY WITH THE PERFORMANCE REQUIREMENTS OF CATEGORY 6.
2. COMPLY WITH TIA-568.2-E, IDC TYPE, WITH MODULES DESIGNED FOR PUNCH-DOWN CAPS OR TOOLS.
3. CABLES SHALL BE TERMINATED WITH CONNECTING HARDWARE OF SAME CATEGORY OR HIGHER.
4. PATCH PANEL: MODULAR PANELS HOUSING NUMBERED JACK UNITS WITH IDC-TYPE CONNECTORS AT EACH JACK LOCATION FOR PERMANENT TERMINATION OF PAIR GROUPS OF INSTALLED CABLES.
1. FEATURES:
a. UNIVERSAL T568A AND T568B WIRING LABELS.
b. LABELING AREAS ADJACENT TO CONDUCTORS.
c. REPLACEABLE CONNECTORS.
d. 48 PORTS.
2. CONSTRUCTION: 16-GAUGE STEEL AND MOUNTABLE ON 19-INCH EQUIPMENT RACKS.
3. NUMBER OF JACKS PER PANEL: 48.
5. PATCH CORDS: PROVIDE ONE FACTORY TERMINATED CATEGORY 6 PATCH CORD FOR EACH HORIZONTAL CABLE TERMINATED WITHIN THE PATCH PANELS. THE PATCH CABLE LENGTHS SHALL BE FIELD MEASURED BEFORE ORDERING (TYPICAL LENGTHS ARE 3' AND 5'). PROVIDE TWO FACTORY TERMINATED CATEGORY 6 PATCH CORD FOR EACH DUPLEX OUTLET INDICATED ON THE PLANS AND FOUR FOR EACH QUAD OUTLET INDICATED ON THE PLANS. THE PATCH CABLE LENGTHS SHALL BE FIELD MEASURED BEFORE ORDERING (TYPICAL LENGTHS ARE 5' – 9').
1. PATCH CORDS SHALL HAVE BEND-RELIEF-COMPLIANT BOOTS AND COLOR-CODED ICONS TO ENSURE PERFORMANCE. PATCH CORDS SHALL HAVE LATCH GUARDS TO PROTECT AGAINST SNAGGING.
2. PATCH CORDS TO BE 28 AWG, UNO.
A. PERMANENT LINKS THAT EXCEED 83 METERS SHALL USE 24 AWG PATCH CORDS.
3. PROVIDE ALL PATCHING REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
6. PLUGS AND PLUG ASSEMBLIES:
1. MALE; EIGHT POSITION; COLOR-CODED MODULAR TELECOMMUNICATIONS CONNECTOR DESIGNED FOR TERMINATION OF A SINGLE FOUR-PAIR, 100-OHM, UNSHIELDED OR SHIELDED TWISTED PAIR CABLE.
2. STANDARD: COMPLY WITH TIA-568.2-E.
3. MARKED TO INDICATE TRANSMISSION PERFORMANCE.
7. JACKS AND JACK ASSEMBLIES:
1. FEMALE; EIGHT POSITION; MODULAR; FIXED TELECOMMUNICATIONS CONNECTOR DESIGNED FOR TERMINATION OF A SINGLE FOUR-PAIR, 100-OHM, UNSHIELDED OR SHIELDED TWISTED PAIR CABLE.
2. DESIGNED TO SNAP-IN TO A PATCH PANEL OR FACEPLATE.
3. STANDARD: COMPLY WITH TIA-568.2-E.
4. MARKED TO INDICATE TRANSMISSION PERFORMANCE.
5. COLOR TO BE DETERMINED AT TIME OF SUBMITTAL.

271513 - COMMUNICATIONS COPPER HORIZONTAL CABLING (CONTINUED)

8. SUMMFACEPLATES:
1. TWO, FOUR, AND SIX PORT, VERTICAL SINGLE GANG FACEPLATES DESIGNED TO MOUNT TO DOUBLE GANG WALL BOXES WITH SINGLE GANG MUD RINGS.
2. EIGHT, TEN, AND TWELVE PORT, VERTICAL DOUBLE GANG FACEPLATES DESIGNED TO MOUNT TO DOUBLE GANG WALL BOXES.
3. PLASTIC FACEPLATE: HIGH-IMPACT PLASTIC.
4. METAL FACEPLATE: STAINLESS STEEL
5. FOR USE WITH SNAP-IN JACKS ACCOMMODATING ANY COMBINATION OF TWISTED PAIR, OPTICAL FIBER, AND COAXIAL WORK AREA CORDS.
6. SNAP-IN, CLEAR-LABEL COVERS AND MACHINE-PRINTED INSERTS.
7. COLOR TO BE DETERMINED AT TIME OF SUBMITTAL.
D. GROUNDING
1. COMPLY WITH TIA-607-D.

EXECUTION
A. FIRESTOPPING
1. COMPLY WITH TIA-569-E.
B. GROUNDING
1. COMPLY WITH TIA-607-D.
2. LOCATE GROUNDING BUS BAR TO MINIMIZE THE LENGTH OF BONDING CONDUCTORS. FASTEN TO WALL, ALLOWING AT LEAST A 2-INCH CLEARANCE BEHIND THE GROUNDING BUS BAR. CONNECT GROUNDING BUS BAR TO SUITABLE ELECTRICAL BUILDING GROUND, USING A MINIMUM NO. 4 AWG GROUNDING ELECTRODE CONDUCTOR.
3. BOND METALLIC EQUIPMENT TO THE GROUNDING BUS BAR, USING NOT SMALLER THAN A NO. 6 AWG EQUIPMENT GROUNDING CONDUCTOR.
4. EQUNDING BUSBAR SHALL BE 12" X 4" X 1/4".
C. IDENTIFICATION
1. CABLE AND WIRE IDENTIFICATION:
a. LABEL EACH CABLE WITHIN 2" OF EACH TERMINATION WITH A MECHANICALLY GENERATED LABEL.
b. LABEL EACH PATCH PANEL, PATCH PANEL PORT, AND EACH FACEPLATE PORT WITH A MECHANICALLY GENERATED LABEL.
c. LABELS SHALL BE PREPRINTED OR COMPUTER-PRINTED TYPE, WITH A PRINTING AREA AND FONT COLOR THAT CONTRAST WITH CABLE JACKET COLOR BUT STILL COMPLY WITH TIA-606-D.
D. FIELD QUALITY CONTROL
1. PERFORM TESTS PER SECTION 271700

END OF SECTION 27 1513.

271700 - TESTING IDENTIFICATION AND ADMINISTRATION OF BALANCED TWISTED PAIR INFRASTRUCTURE

PART 1 - GENERAL
1.1 WORK INCLUDED
A. PROVIDE ALL LABOR, MATERIALS, TOOLS, FIELD-TEST INSTRUMENTS AND EQUIPMENT REQUIRED FOR THE COMPLETE TESTING, IDENTIFICATION AND ADMINISTRATION OF THE WORK CALLED FOR IN THE CONTRACT DOCUMENTS.
B. IN ORDER TO CONFORM TO THE OVERALL PROJECT EVENT SCHEDULE, THE CABLING CONTRACTOR SHALL SURVEY THE WORK AREAS AND COORDINATE CABLING TESTING WITH OTHER APPLICABLE TRADES.
C. IN ADDITION TO THE TESTS DETAILED IN THIS DOCUMENT, THE CONTRACTOR SHALL NOTIFY THE OWNER OR THE OWNER'S REPRESENTATIVE OF ANY ADDITIONAL TESTS THAT ARE DEEMED NECESSARY TO GUARANTEE A FULLY FUNCTIONAL SYSTEM. THE CONTRACTOR SHALL CARRY OUT AND RECORD ANY ADDITIONAL MEASUREMENT RESULTS AT NO ADDITIONAL CHARGE.

1.2 SCOPE
A. THIS SECTION INCLUDES THE MINIMUM REQUIREMENTS FOR THE TEST CERTIFICATION, IDENTIFICATION AND ADMINISTRATION OF HORIZONTAL BALANCED TWISTED PAIR CABLING.
B. THIS SECTION INCLUDES MINIMUM REQUIREMENTS FOR:
1. COPPER CABLING TEST INSTRUMENTS
2. COPPER CABLING TESTING
3. IDENTIFICATION
a. LABELS AND LABELING
4. ADMINISTRATION
5. TEST RESULTS DOCUMENTATION
6. AS-BUILT DRAWINGS
C. TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH THIS DOCUMENT.
D. TESTING SHALL BE PERFORMED ON EACH CABLING LINK. (100% TESTING)
E. ALL TESTS SHALL BE DOCUMENTED.

1.3 QUALITY ASSURANCE
A. ALL TESTING PROCEDURES AND FIELD-TEST INSTRUMENTS SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF:
1. ANSI/TIA-1152, REQUIREMENTS FOR FIELD TEST INSTRUMENTS AND MEASUREMENTS FOR BALANCED TWISTED-PAIR CABLING
2. ANSI/TIA-568.0-E, GENERIC TELECOMMUNICATIONS CABLING FOR CUSTOMER PREMISES.
3. ANSI/TIA-568.1-E, COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD
4. ANSI/TIA-568.2-E, BALANCED TWISTED-PAIR TELECOMMUNICATIONS CABLING AND COMPONENTS STANDARDS.
5. ANSI/TIA-606-D, ADMINISTRATION STANDARD FOR COMMERCIAL TELECOMMUNICATIONS INFRASTRUCTURE, INCLUDING THE REQUIREMENTS SPECIFIED BY THE CUSTOMER, UNLESS THE CUSTOMER SPECIFIES THEIR OWN LABELING REQUIREMENTS.
B. TRAINED TECHNICIANS WHO HAVE SUCCESSFULLY ATTENDED AN APPROPRIATE TRAINING PROGRAM AND HAVE OBTAINED A CERTIFICATE AS PROOF THEREOF SHALL EXECUTE THE TESTS. THESE CERTIFICATES MAY HAVE BEEN ISSUED BY ANY OF THE FOLLOWING ORGANIZATIONS OR AN EQUIVALENT ORGANIZATION:
1. MANUFACTURER OF THE CONNECTORS OR CABLE.
2. MANUFACTURER OF THE TEST EQUIPMENT USED FOR THE FIELD CERTIFICATION.
3. TRAINING ORGANIZATIONS (E.G., BICSI, A TELECOMMUNICATIONS ASSOCIATION HEADQUARTERS IN TAMPA, FLORIDA; ACP [ASSOCIATION OF CABLING PROFESSIONALS™] CABLING BUSINESS INSTITUTE LOCATED IN DALLAS, TEXAS)
C. THE THE OWNER OR THE OWNER'S REPRESENTATIVE SHALL BE INVITED TO WITNESS AND/OR REVIEW FIELD-TESTING.
1. THE OWNER OR THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED OF THE START DATE OF THE TESTING PHASE FIVE (5) BUSINESS DAYS BEFORE TESTING COMMENCES.
2. THE OWNER OR THE OWNER'S REPRESENTATIVE WILL SELECT A RANDOM SAMPLE OF 5% OF THE INSTALLED LINKS. THE OWNER OR THE OWNER'S REPRESENTATIVE SHALL TEST THESE RANDOMLY SELECTED LINKS AND THE RESULTS ARE TO BE STORED IN ACCORDANCE WITH PART 3 OF THIS DOCUMENT. THE RESULTS OBTAINED SHALL BE COMPARED TO THE DATA PROVIDED BY THE INSTALLATION CONTRACTOR. IF MORE THAN 2% OF THE SAMPLE RESULTS DIFFER IN TERMS OF THE PASS/FAIL DETERMINATION, THE INSTALLATION CONTRACTOR UNDER SUPERVISION OF THE REPRESENTATIVE SHALL REPEAT 100% TESTING AT NO COST TO THE OWNER.

1.4 SUBMITTALS
A. MANUFACTURERS CATALOG SHEETS AND SPECIFICATIONS FOR THE TEST EQUIPMENT BEING USED ON THIS PROJECT.
B. A SCHEDULE (LIST) OF ALL BALANCED TWISTED-PAIR COPPER LINKS TO BE TESTED.
C. SAMPLE TEST REPORTS.

271700 - TESTING IDENTIFICATION AND ADMINISTRATION OF BALANCED TWISTED PAIR INFRASTRUCTURE (CONTINUED)

1.5 ACCEPTANCE OF TEST RESULTS
A. UNLESS OTHERWISE SPECIFIED BY THE OWNER OR THE OWNERS REPRESENTATIVE, EACH CABLING LINK SHALL BE IN TESTED FOR:
1. WIRE MAP
2. LENGTH
3. PROPAGATION DELAY
4. DELAY SKEW
5. DC LOOP RESISTANCE – RECORDED FOR INFORMATION ONLY
6. DC RESISTANCE UNBALANCE – RECORDED FOR INFORMATION ONLY
7. INSERTION LOSS
8. NEXT (NEAR-END CROSSTALK)
9. PS NEXT (POWER SUM NEAR-END CROSSTALK)
10. ACR-N (ATTENUATION TO CROSSTALK RATIO NEAR-END) – RECORDED FOR INFORMATION ONLY
11. PS ACR-N (POWER SUM ATTENUATION TO CROSSTALK RATIO NEAR-END) – RECORDED FOR INFORMATION ONLY
12. ACR-F (ATTENUATION TO CROSSTALK RATIO FAR-END)
13. PS ACR-F (POWER SUM ATTENUATION TO CROSSTALK RATIO FAR-END)
14. RETURN LOSS
15. TCL (TRANSVERSE CONVERSION LOSS) – RECORDED FOR INFORMATION ONLY
16. ELTCTL (EQUAL LEVEL TRANSVERSE CONVERSION TRANSFER LOSS) – RECORDED FOR INFORMATION ONLY
B. ALL INSTALLED CABLING PERMANENT LINKS SHALL BE FIELD-TESTED AND PASS THE TEST REQUIREMENTS AND ANALYSIS AS DESCRIBED IN PART 3. ANY PERMANENT LINK THAT FAILS THESE REQUIREMENTS SHALL BE DIAGNOSED AND CORRECTED. ANY CORRECTIVE ACTION THAT MUST TAKE PLACE SHALL BE DOCUMENTED AND FOLLOWED WITH A NEW TEST TO PROVE THAT THE CORRECTED PERMANENT LINK MEETS PERFORMANCE REQUIREMENTS. THE FINAL AND PASSING RESULT OF THE TESTS FOR ALL PERMANENT LINKS SHALL BE PROVIDED IN THE TEST RESULTS DOCUMENTATION IN ACCORDANCE WITH PART 3.
C. ACCEPTANCE OF THE TEST RESULTS SHALL BE GIVEN IN WRITING AFTER THE PROJECT IS FULLY COMPLETED AND TESTED IN ACCORDANCE WITH CONTRACT DOCUMENTS AND TO THE SATISFACTION OF THE OWNER.

PART 2 - PRODUCTS
2.1 BALANCED TWISTED-PAIR CABLE TESTERS
A. THE FIELD-TEST INSTRUMENT SHALL BE WITHIN THE CALIBRATION PERIOD RECOMMENDED BY THE MANUFACTURER, TYPICALLY 12 MONTHS.
B. CERTIFICATION TESTER
1. ACCURACY
a. LEVEL IV ACCURACY IN ACCORDANCE WITH ANSI/TIA-1152
b. INDEPENDENT VERIFICATION OF ACCURACY
c. ACCEPTABLE MANUFACTURERS
• FLUKE NETWORKS
2. PERMANENT LINK ADAPTERS
a. RJ45 PLUG MUST MEET THE REQUIREMENTS FOR NEXT, FEXT AND RETURN LOSS IN ACCORDANCE WITH ANSI/TIA-568.2-E ANNEX C.
b. TWISTED PAIR CATEGORY 5E, 6, AND 6A CORDS ARE NOT PERMITTED AS THEIR PERFORMANCE DEGRADES WITH USE AND CAN CAUSE FALSE RETURN LOSS FAILURES.
3. RESULTS STORAGE
a. MUST BE CAPABLE OF STORING > 10,000 RESULTS FOR ALL MEASUREMENTS FOUND IN 2.1 B.4 BELOW.
4. MEASUREMENT CAPABILITIES
a. WIRE MAP
b. LENGTH
c. PROPAGATION DELAY
d. DELAY SKEW
e. DC LOOP RESISTANCE
f. DC RESISTANCE UNBALANCE
g. INSERTION LOSS
h. NEXT (NEAR-END CROSSTALK)
i. PS NEXT (POWER SUM NEAR-END CROSSTALK)
j. ACR-N (ATTENUATION TO CROSSTALK RATIO NEAR-END)
k. PS ACR-N (POWER SUM ATTENUATION TO CROSSTALK RATIO NEAR-END)
l. ACR-F (ATTENUATION TO CROSSTALK RATIO FAR-END)
m. PS ACR-F (POWER SUM ATTENUATION TO CROSSTALK RATIO FAR-END)
n. RETURN LOSS
o. TCL (TRANSVERSE CONVERSION LOSS)
p. ELTCTL (EQUAL LEVEL TRANSVERSE CONVERSION TRANSFER LOSS)
q. TIME DOMAIN REFLECTOMETER
r. TIME DOMAIN XTALK ANALYZER
C. PC SOFTWARE
1. WINDOWS® BASED.
2. MUST SHOW WHEN 3 DB AND 4 DB RULES ARE APPLIED.
3. RE-CERTIFICATION CAPABILITY, WHERE RESULTS MUST HAVE THEIR CABLE IDS SUFFIXED WITH (RC).
4. BUILT IN PDF EXPORT – NO ADDITIONAL THIRD PARTY SOFTWARE PERMITTED.
5. BUILT-IN STATISTICAL ANALYSIS.

2.2 IDENTIFICATION
A. LABELS
1. SHALL MEET THE LEGIBILITY, DEFACEMENT, EXPOSURE AND ADHESION REQUIREMENTS OF UL 969.
2. SHALL BE PREPRINTED USING A MECHANICAL MEANS OF PRINTING (E.G., LASER PRINTER).
3. WHERE USED FOR CABLE MARKING, PROVIDE VINYL SUBSTRATE WITH A WHITE PRINTING AREA AND A CLEAR "TAIL" THAT SELF LAMINATES THE PRINTED AREA WHEN WRAPPED AROUND THE CABLE. IF CABLE JACKET IS WHITE, PROVIDE CABLE LABEL WITH PRINTING AREA THAT IS ANY OTHER COLOR THAN WHITE, PREFERABLY ORANGE OR YELLOW – SO THAT THE LABELS ARE EASILY DISTINGUISHABLE.
4. WHERE INSERT TYPE LABELS ARE USED PROVIDE CLEAR PLASTIC COVER OVER LABEL.
5. PROVIDE PLASTIC WARNING TAPE 6 INCHES WIDE CONTINUOUSLY PRINTED AND BRIGHT COLORED 18" ABOVE ALL DIRECT BURIED SERVICES, UNDERGROUND CONDUITS AND DUCT-BANKS.
6. ACCEPTABLE MANUFACTURERS:
a. BRADY CORPORATION
b. SILVER FOX
c. BROTHER
d. EPSON
e. DYMO

2.3 ADMINISTRATION
A. ADMINISTRATION OF THE DOCUMENTATION SHALL INCLUDE TEST RESULTS OF EACH PERMANENT LINK.
B. THE TEST RESULT INFORMATION FOR EACH LINK SHALL BE RECORDED IN THE MEMORY OF THE FIELD-TEST INSTRUMENT UPON COMPLETION OF THE TEST.
C. THE TEST RESULT RECORDS SAVED WITHIN THE FIELD-TEST INSTRUMENT SHALL BE TRANSFERRED INTO A WINDOWS® -BASED DATABASE UTILITY THAT ALLOWS FOR THE MAINTENANCE, INSPECTION AND ARCHIVING OF THESE TEST RECORDS.

3.2 BALANCED TWISTED PAIR CABLE TESTING
A. FIELD-TEST INSTRUMENTS SHALL HAVE THE LATEST SOFTWARE AND FIRMWARE INSTALLED.
B. PERMANENT LINK TEST RESULTS INCLUDING THE INDIVIDUAL FREQUENCY MEASUREMENTS FROM THE TESTER SHALL BE RECORDED IN THE TEST INSTRUMENT UPON COMPLETION OF EACH TEST FOR SUBSEQUENT UPLOADING TO A PC IN WHICH THE ADMINISTRATIVE DOCUMENTATION (REPORTS) MAY BE GENERATED.

271700 - TESTING IDENTIFICATION AND ADMINISTRATION OF BALANCED TWISTED PAIR INFRASTRUCTURE (CONTINUED)

C. TESTING SHALL BE PERFORMED ON EACH CABLING SEGMENT (CONNECTOR TO CONNECTOR). SAMPLING IS NOT ACCEPTABLE.
D. PERMANENT LINK ADAPTERS MADE FROM TWISTED PAIR CATEGORY 5E, 6, 6A, 7 OR 7A CORDS ARE NOT PERMITTED AS THEIR PERFORMANCE DEGRADES WITH USE AND CAN CAUSE FALSE RETURN LOSS FAILURES.
E. THE INSTALLER SHALL BUILD A REFERENCE LINK. ALL COMPONENTS SHALL BE ANCHORED SO IT IS NOT POSSIBLE TO DISTURB THEM. THE TECHNICIAN IS TO CONDUCT A CATEGORY 6A PERMANENT LINK TEST EACH DAY TO ENSURE NO DEGRADATION OF THE TESTER OR ITS PERMANENT LINK ADAPTERS.
F. WIRE MAP MEASUREMENT
1. THE WIRE MAP TEST IS INTENDED TO VERIFY PIN-TO-PIN TERMINATION AT EACH END AND CHECK FOR INSTALLATION CONNECTIVITY ERRORS. FOR EACH OF THE 8 CONDUCTORS IN THE CABLING, THE WIRE MAP INDICATES:
a. CONTINUITY TO THE REMOTE END
b. SHORTS BETWEEN ANY TWO OR MORE CONDUCTORS
c. REVERSED PAIRS
d. SPLIT PAIRS
e. TRANSPOSED PAIRS
f. DISTANCE TO OPEN ON SHIELD
g. ANY OTHER MISS-WIRING
2. THE CORRECT CONNECTIVITY OF TELECOMMUNICATIONS OUTLETS/CONNECTORS IS DEFINED IN ANSI/TIA-568.2-E. TWO COLOR SCHEMES ARE PERMITTED. THE USER SHALL DEFINE WHICH SCHEME IS TO BE USED. THE FIELD TESTER SHALL DOCUMENT WHICH COLOR SCHEME WAS USED. EXAMPLES ARE GIVEN BELOW:
G. LENGTH MEASUREMENT
1. THE LENGTH OF EACH BALANCED TWISTED PAIR SHALL BE RECORDED.
2. SINCE PHYSICAL LENGTH IS DETERMINED FROM ELECTRICAL LENGTH, THE PHYSICAL LENGTH OF THE LINK CALCULATED USING THE PAIR WITH THE SHORTEST ELECTRICAL DELAY SHALL BE REPORTED AND USED FOR MAKING THE PASS OR FAIL DETERMINATION.
3. THE PASS OR FAIL CRITERIA IS BASED ON THE MAXIMUM LENGTH ALLOWED FOR THE PERMANENT LINK AS SPECIFIED IN ANSI/TIA-568.2-E PLUS THE NOMINAL VELOCITY OF PROPAGATION (NVP) UNCERTAINTY OF 10%. FOR A PERMANENT LINK, THE LENGTH MEASUREMENT CAN BE 325 FT. (99 M) BEFORE A FAIL IS REPORTED.
H. PROPAGATION DELAY MEASUREMENT
1. IS THE TIME IT TAKES FOR A SIGNAL TO REACH THE END OF THE LINK.
2. THE MEASUREMENT SHALL BE MADE AT 10 MHZ PER ANSI/TIA-1152.
3. THE PROPAGATION DELAY OF EACH BALANCED TWISTED PAIR SHALL BE RECORDED.
4. IS NOT TO EXCEED 498 NS PER ANSI/TIA-568.2-E SECTION 6.3.18.
I. DELAY SKEW MEASUREMENT
1. IS THE DIFFERENCE IN PROPAGATION DELAY @ 10 MHZ BETWEEN THE SHORTEST DELAY AND THE DELAYS OF THE OTHER WIRE PAIRS.
2. THE DELAY SKEW OF EACH BALANCED TWISTED PAIR SHALL BE RECORDED.
3. IS NOT TO EXCEED 44 NS PER ANSI/TIA-568.2-E SECTION 6.3.19.
J. DC RESISTANCE
1. OFTEN REPORTED AS RESISTANCE, IS THE LOOP RESISTANCE OF BOTH CONDUCTORS IN THE PAIR.
2. IS NOT SPECIFIED IN ANSI/TIA-1152, BUT SHALL BE RECORDED FOR ALL FOUR PAIRS.
K. DC RESISTANCE UNBALANCE
1. OFTEN REPORTED AS RESISTANCE UNBALANCE, IS THE DIFFERENCE IN RESISTANCE OF THE TWO WIRES WITHIN THE PAIR.
2. IS NOT SPECIFIED IN ANSI/TIA-1152 FOR A PERMANENT LINK, BUT SHALL BE RECORDED FOR ALL FOUR PAIRS.
L. INSERTION LOSS
1. IS THE LOSS OF SIGNAL STRENGTH OVER THE CABLING (IN DB).
2. THE FREQUENCY RESOLUTION SHALL BE:
a. 1 – 500 MHZ
3. WORST CASE SHALL BE REPORTED FOR ALL FOUR PAIRS IN ONE DIRECTION ONLY.
4. REPORTED MARGINS FOUND TO BE WITHIN THE ACCURACY OF THE FIELD TESTER SHALL BE MARKED WITH AN ASTERISK (*).
5. IS NOT TO EXCEED THE CATEGORY 6A PERMANENT LINK LIMITS FOUND IN ANSI/TIA-568.2-E SECTION 6.3.7.
M. NEXT (NEAR-END CROSSTALK)
1. IS THE DIFFERENCE IN AMPLITUDE (IN DB) BETWEEN A TRANSMITTED SIGNAL AND THE CROSSTALK RECEIVED ON OTHER WIRE PAIRS AT THE SAME END OF THE CABLING.
2. THE FREQUENCY RESOLUTION SHALL BE:
a. 1 – 500 MHZ
3. SHALL BE MEASURED IN BOTH DIRECTIONS. (12 PAIR TO PAIR POSSIBLE COMBINATIONS)
4. BOTH WORST CASE AND WORST MARGINS SHALL BE REPORTED.
5. IS NOT TO EXCEED THE CATEGORY 6A PERMANENT LINK LIMITS FOUND IN ANSI/TIA-568.2-E SECTION 6.3.8.
6. REPORTED MARGINS FOUND TO BE WITHIN THE ACCURACY OF THE FIELD TESTER SHALL BE MARKED WITH AN ASTERISK (*).
7. THE TIME DOMAIN XTALK DATA SHALL BE STORED FOR ANY MARGINAL OR FAILING NEXT RESULTS.
N. PS NEXT (POWER SUM NEAR-END CROSSTALK)
1. IS THE DIFFERENCE (IN DB) BETWEEN THE TEST SIGNAL AND THE CROSSTALK FROM THE OTHER PAIRS RECEIVED AT THE SAME END OF THE CABLING.
2. THE FREQUENCY RESOLUTION SHALL BE:
a. 1 – 500 MHZ
3. SHALL BE MEASURED IN BOTH DIRECTIONS. (8 PAIR POSSIBLE COMBINATIONS)
4. BOTH WORST CASE AND WORST MARGINS SHALL BE REPORTED.
5. IS NOT TO EXCEED THE CATEGORY 6A PERMANENT LINK LIMITS FOUND IN ANSI/TIA-568.2-E SECTION 6.3.9.
6. REPORTED MARGINS FOUND TO BE WITHIN THE ACCURACY OF THE FIELD TESTER SHALL BE MARKED WITH AN ASTERISK (*).
7. THE TIME DOMAIN XTALK DATA SHALL BE STORED FOR ANY MARGINAL OR FAILING PS NEXT RESULTS.
O. ACR-N (ATTENUATION CROSSTALK RATIO NEAR-END)
1. IS A CALCULATION OF NEXT MINUS INSERTION LOSS OF THE DISTURBED PAIR IN DB.
2. THE FREQUENCY RESOLUTION SHALL BE:
a. 1 – 500 MHZ
3. SHALL BE CALCULATED IN BOTH DIRECTIONS.
4. IS NOT SPECIFIED IN ANSI/TIA-1152, BUT SHALL BE RECORDED FOR ALL 12 POSSIBLE COMBINATIONS.
P. PS ACR-N (POWER SUM ATTENUATION CROSSTALK RATIO NEAR-END)
1. IS A CALCULATION OF PS NEXT MINUS INSERTION LOSS OF THE DISTURBED PAIR IN DB.
2. THE FREQUENCY RESOLUTION SHALL BE:
a. 1 – 500 MHZ
3. SHALL BE CALCULATED IN BOTH DIRECTIONS.
4. IS NOT SPECIFIED IN ANSI/TIA-1152, BUT SHALL BE RECORDED FOR ALL 8 POSSIBLE COMBINATIONS.
Q. ACR-F (ATTENUATION CROSSTALK RATIO FAR-END)
1. IS A CALCULATION OF FEXT MINUS INSERTION LOSS OF THE DISTURBED PAIR IN DB.
2. THE FREQUENCY RESOLUTION SHALL BE:
a. 1 – 500 MHZ
3. SHALL BE MEASURED IN BOTH DIRECTIONS. (24 PAIR TO PAIR POSSIBLE COMBINATIONS)
4. BOTH WORST CASE AND WORST MARGINS SHALL BE REPORTED.
5. IS NOT TO EXCEED THE CATEGORY 6A PERMANENT LINK LIMITS FOUND IN ANSI/TIA-568.2-E SECTION 6.3.11.
6. REPORTED MARGINS FOUND TO BE WITHIN THE ACCURACY OF THE FIELD TESTER SHALL BE MARKED WITH AN ASTERISK (*).

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: PH
DRAWN: PH
CHECKED: GS
APPROVED: GS
DATE: 06/17/2025

PROFESSIONAL ENGINEER REGISTERED 18100 STATE OF IDAHO GARTH L. STEVENS

Morrison Maierle
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Missoula, Montana 59801
406.542.4841
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BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ICT SPECIFICATIONS

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T002

DATE STAMP: 6/18/2025 8:51:24 AM

271700 - TESTING IDENTIFICATION AND ADMINISTRATION OF BALANCED TWISTED PAIR INFRASTRUCTURE (CONTINUED)

R. PS ACR-F (POWER SUM ATTENUATION CROSSTALK RATIO FAR-END)
1. IS A CALCULATION OF PS FEXT MINUS INSERTION LOSS OF THE DISTURBED PAIR IN DB.
2. THE FREQUENCY RESOLUTION SHALL BE:
   a. 1 – 500 MHZ
3. SHALL BE MEASURED IN BOTH DIRECTIONS. (8 PAIR POSSIBLE COMBINATIONS)
4. BOTH WORST CASE AND WORST MARGINS SHALL BE REPORTED.
5. IS NOT TO EXCEED THE CATEGORY 6 PERMANENT LINK LIMITS FOUND IN ANSI/TIA-568.2-E SECTION 6.3.13.
6. REPORTED MARGINS FOUND TO BE WITHIN THE ACCURACY OF THE FIELD TESTER SHALL BE MARKED WITH AN ASTERISK (*).

S. RETURN LOSS
1. IS THE DIFFERENCE (IN DB) BETWEEN THE POWER OF A TRANSMITTED SIGNAL AND THE POWER OF THE SIGNALS REFLECTED BACK.
2. THE FREQUENCY RESOLUTION SHALL BE:
   a. 1 – 500 MHZ
3. SHALL BE MEASURED IN BOTH DIRECTIONS. (8 PAIR POSSIBLE COMBINATIONS)
4. BOTH WORST CASE AND WORST MARGINS SHALL BE REPORTED.
5. SHALL BE IGNORED AT ALL FREQUENCIES WHERE THE INSERTION LOSS IS LESS THAN 3 DB FOR THAT PAIR.
6. IS NOT TO EXCEED THE CATEGORY 6 PERMANENT LINK LIMITS FOUND IN ANSI/TIA-568.2-E SECTION 6.3.6.
7. REPORTED MARGINS FOUND TO BE WITHIN THE ACCURACY OF THE FIELD TESTER SHALL BE MARKED WITH AN ASTERISK (*).
8. THE TIME DOMAIN REFLECTOMETER DATA SHALL BE STORED FOR ANY MARGINAL OR FAILING RETURN LOSS RESULTS.

T. TCL (TRANSVERSE CONVERSION LOSS)
1. IS THE RATIO (IN DB) BETWEEN A DIFFERENTIAL MODE SIGNAL INJECT AT THE NEAR-END AND THE COMMON-MODE SIGNAL MEASURED AT THE NEAR-END ON THE SAME WIRE PAIR.
2. THE FREQUENCY RESOLUTION SHALL BE:
   a. 1 – 500 MHZ
3. SHALL BE MEASURED IN BOTH DIRECTIONS.
4. IS NOT SPECIFIED IN ANSI/TIA-1152 FOR A PERMANENT LINK, BUT SHALL BE RECORDED FOR ALL 8 POSSIBLE COMBINATIONS.

U. ELTCTL (EQUAL LEVEL TRANSVERSE CONVERSION TRANSFER LOSS)
1. IS THE RATIO (IN DB) BETWEEN A DIFFERENTIAL MODE SIGNAL INJECT AT THE NEAR-END AND THE COMMON-MODE SIGNAL MEASURED AT THE FAR END ON THE SAME WIRE PAIR MINUS THE INSERTION LOSS OF THAT PAIR.
2. THE FREQUENCY RESOLUTION SHALL BE:
   a. 1 – 500 MHZ
3. SHALL BE MEASURED IN BOTH DIRECTIONS.
4. IS NOT SPECIFIED IN ANSI/TIA-1152 FOR A PERMANENT LINK, BUT SHALL BE RECORDED FOR ALL 8 POSSIBLE COMBINATIONS.

3.3 ADMINISTRATION
A. TEST RESULTS DOCUMENTATION
1. TEST RESULTS SAVED WITHIN THE FIELD-TEST INSTRUMENT SHALL BE TRANSFERRED INTO A WINDOWS™-BASED DATABASE UTILITY THAT ALLOWS FOR THE MAINTENANCE, INSPECTION AND ARCHIVING OF THE TEST RECORDS. THESE TEST RECORDS SHALL BE UPLOADED TO THE PC UNALTERED, I.E., "AS SAVED IN THE FIELD-TEST INSTRUMENT". THE FILE FORMAT, CSV (COMMA SEPARATED VALUE), DOES NOT PROVIDE ADEQUATE PROTECTION OF THESE RECORDS AND SHALL NOT BE USED.
2. THE TEST RESULTS DOCUMENTATION SHALL BE AVAILABLE FOR INSPECTION BY THE OWNER OR THE OWNER'S REPRESENTATIVE DURING THE INSTALLATION PERIOD AND SHALL BE PASSED TO THE OWNER'S REPRESENTATIVE WITHIN 5 WORKING DAYS OF COMPLETION OF TESTS ON CABLING SERVED BY A TELECOMMUNICATIONS ROOM OR OF BACKBONE CABLING. THE INSTALLER SHALL RETAIN A COPY TO AID PREPARATION OF AS BUILT INFORMATION.
3. THE DATABASE FOR THE COMPLETE PROJECT, INCLUDING TWISTED-PAIR COPPER CABLING LINKS, IF APPLICABLE, SHALL BE STORED AND DELIVERED IN PDF FORMAT PRIOR TO OWNER ACCEPTANCE OF THE BUILDING.
4. CIRCUIT IDS REPORTED BY THE TEST INSTRUMENT SHOULD MATCH THE SPECIFIED LABEL ID (SEE 3.3 OF THIS SECTION).
5. THE DETAILED TEST RESULTS DOCUMENTATION DATA IS TO BE PROVIDED IN AN ELECTRONIC DATABASE FOR EACH TESTED BALANCE TWISTED-PAIR AND SHALL CONTAIN THE FOLLOWING INFORMATION
   a. THE OVERALL PASS/FAIL EVALUATION OF THE LINK-UNDER-TEST
   b. THE DATE AND TIME THE TEST RESULTS WERE SAVED IN THE MEMORY OF THE TESTER
   c. THE IDENTIFICATION OF THE CUSTOMER SITE AS SPECIFIED BY THE END-USER
   d. THE NAME OF THE TEST LIMIT SELECTED TO EXECUTE THE STORED TEST RESULTS
   e. THE NAME OF THE PERSONNEL PERFORMING THE TEST
   f. THE VERSION OF THE TEST SOFTWARE AND THE VERSION OF THE TEST LIMIT DATABASE HELD WITHIN THE TEST INSTRUMENT
   g. THE MANUFACTURER, MODEL AND SERIAL NUMBER OF THE FIELD-TEST INSTRUMENT
   h. THE ADAPTERS USED
   i. THE FACTORY CALIBRATION DATE
   j. WIRE MAP
   k. PROPAGATION DELAY VALUES, FOR ALL FOUR PAIRS
   l. DELAY SKEW VALUES, FOR ALL FOUR PAIRS
   m. DC RESISTANCE VALUES, FOR ALL FOUR PAIRS
   n. DC RESISTANCE UNBALANCE, VALUES FOR ALL FOUR PAIRS
   o. INSERTION LOSS, WORST CASE VALUES FOR ALL FOUR PAIRS
   p. NEXT, WORST CASE MARGIN AND WORST CASE VALUES, BOTH DIRECTIONS
   q. PS NEXT, WORST CASE MARGIN AND WORST CASE VALUES, BOTH DIRECTIONS
   r. ACR-F, WORST CASE MARGIN AND WORST CASE VALUES, BOTH DIRECTIONS
   s. PS ACR-F, WORST CASE MARGIN AND WORST CASE VALUES, BOTH DIRECTIONS
   t. RETURN LOSS, WORST CASE MARGIN AND WORST CASE VALUES, BOTH DIRECTIONS
   u. TCL, WORST CASE VALUES BOTH DIRECTIONS
   v. ELTCTL, WORST CASE VALUES, BOTH DIRECTIONS
   w. TIME DOMAIN CROSSTALK DATA IF THE LINK IS MARGINAL OR FAILS
   x. TIME DOMAIN REFLECTOMETER DATA IF THE LINK IS MARGINAL OR FAILS

B. RECORD COPY AND AS-BUILT DRAWINGS.
1. PROVIDE RECORD COPY DRAWINGS PERIODICALLY THROUGHOUT THE PROJECT AS REQUESTED BY THE CONSTRUCTION MANAGER OR OWNER, AND AT END OF THE PROJECT IN PDF FORMAT. RECORD COPY DRAWINGS AT THE END OF THE PROJECT SHALL BE IN CAD FORMAT AND INCLUDE NOTATIONS REFLECTING THE AS BUILT CONDITIONS OF ANY ADDITIONS TO OR VARIATION FROM THE DRAWINGS PROVIDED SUCH AS, BUT NOT LIMITED TO CABLE PATHS AND TERMINATION POINT. THE AS BUILT DRAWINGS SHALL INCLUDE, BUT ARE NOT LIMITED TO BLOCK DIAGRAMS, FRAME AND CABLE LABELING, CABLE TERMINATION POINTS, EQUIPMENT ROOM LAYOUTS AND FRAME INSTALLATION DETAILS. THE AS-BUILTS SHALL INCLUDE ALL FIELD CHANGES MADE UP TO CONSTRUCTION COMPLETION:
   a. FIELD DIRECTED CHANGES TO PULL SCHEDULE.
   b. HORIZONTAL CABLE ROUTING CHANGES.
   c. ASSOCIATED DETAIL DRAWINGS.

END OF SECTION 27 1700.

282300 - VIDEO SURVEILLANCE

PART 1 - GENERAL

1.1 SECTION OVERVIEW
A. CONTRACTOR'S RESPONSIBILITY
1. UNLESS OTHERWISE PROVIDED IN THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL PROVIDE AND PAY FOR ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, UTILITIES, CONSTRUCTION EQUIPMENT AND MACHINERY, TRANSPORTATION AND OTHER FACILITIES AND SERVICES NECESSARY FOR THE PROPER EXECUTION, OPERATION AND COMPLETION OF THE WORK.
B. SPECIFICATION LANGUAGE
1. SPECIFICATIONS AND NOTES ARE WRITTEN IN IMPERATIVE AND ABBREVIATED FORM. IMPERATIVE LANGUAGE OF THE TECHNICAL SPECIFICATIONS IS DIRECTED AT THE CONTRACTOR, UNLESS SPECIFICALLY NOTED OTHERWISE.
C. DRAWINGS AND SPECIFICATIONS
1. CONTRACTOR SHALL CAREFULLY STUDY THE DRAWINGS AND SPECIFICATIONS, AND SHALL AT ONCE REPORT ANY ERROR, UNFORESEEN CIRCUMSTANCES, INCONSISTENCY OR OMISSION THEY MAY DISCOVER.
D. INTENT AND CORRELATION
1. THE INTENT OF THE PROJECT DRAWINGS AND SPECIFICATIONS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
2. THE PROJECT DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ANYONE SHALL BE AS BINDING AS IF REQUIRED BY BOTH.

1.2 SUMMARY
A. SECTION INCLUDES:
1. IP CAMERAS
2. NETWORK VIDEO RECORDER HARDWARE
3. NETWORK INTERFACE

1.3 REFERENCES
A. NFPA 70 - NATIONAL ELECTRICAL CODE
B. IBC 2021

1.4 SYSTEM DESCRIPTION
A. SYSTEM REQUIREMENTS
B. CONTRACTOR DESIGN.
1. THE PROJECT DRAWINGS REPRESENT APPROXIMATE EQUIPMENT LOCATIONS. CONTRACTOR SHALL PROVIDE SYSTEM WORK AS REQUIRED, INCLUDING:
   a. CONDUIT LAYOUT AND SIZING.
   b. WIRE AND CABLE LAYOUT AND SIZING.
   c. POINT-TO-POINT WIRING AND EQUIPMENT HOOK-UP INFORMATION.
   d. EQUIPMENT MOUNTING DETAILS.
   e. OTHER DETAILED WORK REQUIRED.
2. CONTRACTOR'S WORK SHALL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES. ALL ELECTRICAL DESIGN, INCLUDING THE SIZING AND PLACEMENT OF CONDUIT, RACEWAYS AND CONDUCTORS, SHALL BE IN ACCORDANCE WITH IBC 2021 AND NFPA 70: NATIONAL ELECTRICAL CODE UNLESS LOCAL CODES ESTABLISH MORE STRINGENT REQUIREMENTS.
3. CONTRACTOR'S WORK IS SUBJECT TO REVIEW AND APPROVAL BY THE PROJECT MANAGER.
4. MISCELLANEOUS:
   a. CABLING SHALL BE PROVIDED BY DIVISION 27 CONTRACTOR.
   b. PROVIDE COMPLETE "AS-BUILT" DOCUMENTATION.
   c. OTHER WORK AS DEFINED WITHIN THE PROJECT DRAWINGS AND SPECIFICATIONS.
C. PERFORMANCE REQUIREMENTS
1. KEY SYSTEM CHARACTERISTICS AND FEATURES. THE NVR SYSTEM SHALL PROVIDE THE FOLLOWING DESIGN AND PERFORMANCE ATTRIBUTES:
   a. THE NVR SHALL OFFER AN IP-BASED VIDEO SURVEILLANCE SOLUTION. THE NVR SHALL ALLOW FOR CAMERA AND VIDEO ENCODER CONFIGURATION AND VIEWING OF LIVE VIDEO FROM INDUSTRY STANDARD IP CAMERAS.
   b. THE NVR PLATFORM SHALL BE A RACK-MOUNTABLE FIXED STATION FOR ACCEPTING ALL POWER, CAMERA, NETWORK AND OTHER WIRING CONNECTIONS.
   c. THE SYSTEM SHALL PROVIDE EXTENSIVE NETWORKING FEATURES FOR EFFICIENT SYSTEM ACCESS AND MANAGEMENT, AND FOR ADVANCED CONTROL OF THE VIDEO DATA BEING CAPTURED AND TRANSMITTED OVER THE USER NETWORK. CONTROL SHALL INCLUDE MANAGING THE REQUIREMENTS FOR AND USAGE OF NETWORK BANDWIDTH RESOURCES.
   d. THE NVR SHALL SUPPORT EVENT-BASED RECORDING AND/OR SHALL RECORD CONTINUALLY 24 HOURS A DAY. THE AMOUNT OF LOCAL ONLINE STORAGE THAT IS AVAILABLE FOR PLAYBACK FROM THE NVR SHALL BE DEPENDENT ON THE SIZE OF THE HARD DRIVE IN THE NVR OR OTHER STORAGE MEDIUM AS WELL AS THE INDIVIDUAL CAMERA CONFIGURATION (FRAME RATE, RESOLUTION, AND COMPRESSION, BRIGHTNESS, CONTRAST) AND NUMBER OF CAMERAS.
   e. THE NVR SHALL SUPPORT MULTICAST-STREAMING TECHNOLOGY WHEREBY, ONCE ONE USER HAS REQUESTED A LIVE VIDEO STREAM OTHER SYSTEM USERS SHALL BE ABLE TO VIEW THE SAME VIDEO STREAM WITHOUT OPENING A SEPARATE CONNECTION.
   f. THE NVR SHALL SUPPORT EVENT-BASED RECORDING AND/OR SHALL RECORD CONTINUALLY 24 HOURS A DAY. THE AMOUNT OF LOCAL ONLINE STORAGE THAT IS AVAILABLE FOR PLAYBACK FROM THE NVR SHALL BE DEPENDENT ON THE SIZE OF THE HARD DRIVE IN THE NVR OR OTHER STORAGE MEDIUM AS WELL AS THE INDIVIDUAL CAMERA CONFIGURATION (FRAME RATE, RESOLUTION, AND COMPRESSION, BRIGHTNESS, CONTRAST) AND NUMBER OF CAMERAS.
   g. THE NVR SHALL SUPPORT MULTICAST-STREAMING TECHNOLOGY WHEREBY, ONCE ONE USER HAS REQUESTED A LIVE VIDEO STREAM OTHER SYSTEM USERS SHALL BE ABLE TO VIEW THE SAME VIDEO STREAM WITHOUT OPENING A SEPARATE CONNECTION. MULTICAST STREAMING TECHNOLOGY HELPS LIMIT THE AMOUNT OF BANDWIDTH REQUIRED FOR SYSTEM OPERATION/MONITORING.
   h. THE NVR MAIN STORAGE MEDIUM SHALL BE A DIGITAL HARD DRIVE. ALL VIDEO INFORMATION CAN BE STORED ON THE NVR INTERNAL HARD DRIVE FOR IMMEDIATE PLAYBACK. THE HARD DRIVE SHALL WORK IN A FIFO (FIRST IN FIRST OUT) MODE TO ALLOW NEW VIDEO CLIPS TO OVERWRITE OLD CLIPS. THE NVR SHALL BE ABLE TO BE CONFIGURED TO ONLY STORE VIDEO FOR A USER-DEFINABLE NUMBER OF DAYS. THIS MUST BE 30 DAYS MINIMUM. ANY RECORDED VIDEO OLDER THEN THE USER-DEFINED NUMBER OF DAYS SHALL NOT BE AVAILABLE FOR EITHER PLAY BACK OR VIEWING. THE NVR SOLUTION SHALL ENABLE ENTERPRISE-WIDE, NETWORKED, MULTI-USER ACCESS TO ALL SYSTEM RESOURCES VIA A WIDE RANGE OF OPTIONS FOR CONNECTIVITY WITH THE EXISTING LAN.
   i. THE NVR SHALL CONNECT TO THE NETWORK. VARIOUS TYPES OF NETWORK ARCHITECTURES SHALL BE SUPPORTED INCLUDING10/100/1000 ETHERNET.
   j. THE USER INTERFACE SHALL PROVIDE ADVANCED FEATURES SUCH INTELLIGENT VIDEO MOTION DETECTION, INTEGRATED IMAGE ENHANCEMENT FEATURES, ADVANCED VIDEO SEARCH FEATURES THAT DO NOT AFFECT ON-GOING VIDEO RECORDING, AUTHENTICATION CAPABILITIES FOR THE SECURE EXPORT OF VIDEO CLIPS, FLEXIBLE PRE AND POST ALARM CACHING/RECORDING CAPABILITIES, AUDIO AND ALL OTHER ASPECTS OF SYSTEM CONFIGURATION AND CONTROL.
   k. THE NVR SHALL SUPPORT UNIDIRECTIONAL AND, IF SUPPORTED BY THE CAMERA OR VIDEO ENCODER, SYNCHRONIZED AUDIO RECORDING THROUGH CAMERAS OR VIDEO ENCODER THAT SUPPORT THIS OPTION. THE ABILITY TO RECORD SYNCHRONIZED AUDIO AND VIDEO SHALL BE ENABLED THROUGH AND STORED IN THE NVR. THE AUDIO SHALL BE AVAILABLE FOR BOTH RECORDED VIDEO AND LIVE VIDEO PLAYBACK.
   l. THE AUDIO SHALL BE EXCLUSIVELY AVAILABLE FOR RECORDING PURPOSES. THE SMS SHALL SUPPORT AUDIO PROTOCOLS SUCH AS G.711.
   m. THE SYSTEM SHALL OFFER A 1-YEAR COMPREHENSIVE WARRANTY.

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2. THE NVR UNITS SHALL CAPTURE, DIGITIZE AND COMPRESS THE VIDEO ON ALL ENABLED INPUTS. ONCE COMPRESSED, THE UNIT SHALL EITHER DISTRIBUTE THE COMPRESSED DATA TO ANY NUMBER OF VIEWERS ON THE NETWORK THAT HAVE ACCESS TO IT, AND/OR SHALL STORE THE COMPRESSED DATA TO THE AVAILABLE INTERNAL AND/OR EXTERNAL HARD DISC DRIVES. THE UNIT SHALL MANAGE ITS OWN HARD DRIVE SPACE USING A FIFO (FIRST IN, FIRST OUT) MECHANISM BY DELETING THE OLDEST STORED VIDEO TO MAKE ROOM FOR THE NEWEST VIDEO. THE UNIT SHALL SIMULTANEOUSLY HANDLE RECORDING, RETRIEVING, AND LIVE DISTRIBUTION OF VIDEO. THE UNITS SHALL BE CAPABLE OF OPERATING IN CONTINUOUS RECORD MODE, EVENT DRIVEN RECORD MODE, SCHEDULED RECORD MODE OR MOTION DETECTION RECORD MODE.
3. SYSTEM SECURITY
   a. THE NVR UNITS SHALL ALLOW FOR THE USE OF PASSWORD AUTHENTICATION TO PREVENT UNAUTHORIZED ACCESS TO THE NVR. WHEN PASSWORD AUTHENTICATION IS ENABLED, THE NVR UNIT SHALL ALLOW FOR A UNIQUE PASSWORD.
   b. THE NETWORK ADMINISTRATOR SHALL BE ABLE TO ACCESS ALL NVR UNITS THAT ARE VISIBLE ON THE NETWORK. EACH INDIVIDUAL NVR UNIT SHALL KEEP A LOG OF ANY USER ACCESS TO THE UNIT. THE LOG SHALL BE RETRIEVABLE REMOTELY BY AN ADMINISTRATOR, BUT NO USER WILL BE ABLE TO REMOVE ENTRIES FROM, OR IN ANY WAY ALTER, THE LOG. THE LOG SHALL BE MAINTAINED AUTOMATICALLY BY REMOVING ENTRIES THAT ARE SIX MONTHS OLD. IT SHALL BE AN OPTION TO COPY AND SAVE THE REPORT TO A TEXT-FORMATTED FILE FOR IMPORT INTO A THIRD PARTY APPLICATION. IT SHALL BE AN OPTION TO PRINT THE REPORT.
4. SYSTEM MANAGEMENT
   a. ALL OF THE NVR UNITS ON THE NETWORK, REGARDLESS OF TYPE, SHALL BE CAPABLE OF BEING MANAGED CENTRALLY FROM THE SECURITY MANAGEMENT SYSTEM. ALL SYSTEMS SHALL BE CAPABLE OF BEING MANAGED BY A SINGLE, CONSISTENT USER INTERFACE APPLICATION.
   b. REPORTS ON SYSTEMS USE, PROBLEMS, AND ALARMS SHALL BE CAPABLE OF BEING PRINTED. REPORTS SHALL ALSO BE CAPABLE OF BEING COPIED OR SAVED FOR IMPORTING INTO THIRD PARTY APPLICATIONS.
5. ALARM CUT DETECTION
   a. THE NVR UNITS SHALL CONSTANTLY MONITOR ALL ENABLED ALARM INPUTS FOR CUTS OR BREAKS IN THE WIRE AND PROVIDE NOTIFICATION ON DETECTION.
6. VIDEO CAPTURE
   a. INDIVIDUAL NVRS SHALL BE AVAILABLE IN MODELS SUPPORTING AT LEAST 30 FRAMES PER SECOND.
   b. THE NVR SHALL SUPPORT MJPEG, MPEG-4, AND H.264 VIDEO FORMATS.
   c. THE NVR SHALL SUPPORT FORMATS SIMULTANEOUSLY ON THE SAME SYSTEM. THE NVR SHALL SUPPORT MULTIPLE VIDEO RESOLUTIONS. THESE RESOLUTIONS WILL MEGA-PIXEL RESOLUTIONS. THESE RESOLUTIONS SHALL BE DEPENDENT ON THE NETWORK ENABLED VIDEO DEVICE.
   d. DURING PLAYBACK OF VIDEO, THE AUTHORIZED SYSTEM OPERATOR SHALL BE ABLE TO START AND STOP PLAYBACK. THIS OPERATION SHALL NOT AFFECT ANY OTHER OPERATION.
7. VIDEO LOSS DETECTION
   a. THE NVR UNITS SHALL CONSTANTLY SUPERVISE ALL ENABLED VIDEO INPUTS FOR A SYNC SIGNAL AND OPTIONALLY, IF ENABLED, NOTIFY THE ADMINISTRATOR OF SIGNAL LOSS.
8. STORAGE
   a. EACH NVR SHALL HAVE AT A MINIMUM UP TO 4 INTERNAL HARD DISC DRIVES CONFIGURED IN A RAID 6 ARRAY HAVING A CAPACITY TO SUPPORT THE NUMBER OF CAMERAS AT A 10 FPS RATE AND 30 DAYS OF STORAGE. NO SYSTEM (NVR) SOFTWARE SHALL RESIDE ON ANY OF THESE HARD DRIVES, THEREBY AVOIDING ANY REDUCTION IN VIDEO STORAGE CAPACITY.
   b. THE NVR UNITS SHALL CONTAIN NO REMOVABLE MEDIA FOR OFF-LINE STORAGE.
   c. CONFIGURABLE PARAMETERS FOR ALTERING STORAGE DURATION SHALL INCLUDE:
      - DISPLAY SIZE
      - FRAME RATE
      - VIDEO QUALITY SETTINGS (MOST DETAILED, MORE DETAILED, MEDIUM, MORE COMPRESSED, MOST COMPRESSED)
      - RECORDING PERIOD (EVENT DRIVEN, SCHEDULED OR MOTION DETECTED)
   d. ALL VIDEO SHALL BE STORED AT THE NVR UNIT (THROUGH INTERNAL STORAGE USING A RAID 6 HARD DRIVE CONFIGURATION) AND ONLY BE DELIVERED OVER THE NETWORK WHEN EITHER THE RECORDED VIDEO IS SEARCHED AND RETRIEVED OR IF LIVE VIDEO IS REQUESTED.
   e. THE NVR MAIN STORAGE MEDIUM SHALL BE A DIGITAL HARD DRIVE. ALL VIDEO INFORMATION CAN BE STORED ON THE NVR INTERNAL HARD DRIVE FOR IMMEDIATE PLAYBACK. THE HARD DRIVE SHALL WORK IN A FIFO (FIRST IN FIRST OUT) MODE TO ALLOW NEW VIDEO CLIPS TO OVERWRITE OLD CLIPS. THE NVR SHALL BE ABLE TO BE CONFIGURED TO ONLY STORE VIDEO FOR A USER-DEFINABLE NUMBER OF DAYS. THIS MUST BE 30 DAYS MINIMUM. ANY RECORDED VIDEO OLDER THAN THE USER-DEFINED NUMBER OF DAYS SHALL NOT BE AVAILABLE FOR EITHER PLAY BACK OR VIEWING.
9. RECORDED INFORMATION
   a. THE INFORMATION RECORDED ON THE NVR UNITS SHALL CONSIST OF THE FOLLOWING DATA:
      - COMPRESSED VIDEO
      - TIME STAMP CONSISTING OF DATE AND TIME WITH MILLISECOND RESOLUTION
   b. ASSOCIATED EVENT INFORMATION
10. RECORDED FORMAT
   a. COMPRESSED VIDEO FROM ALL CAMERAS SHALL BE STORED IN SUCH A WAY THAT IT IS INDEPENDENTLY RETRIEVABLE.
11. CONTINUOUS RECORDING
   a. THE NVR UNITS SHALL BE CAPABLE OF RECORDING CONTINUOUSLY ON EACH VIDEO INPUT.
12. SCHEDULING
   a. THE NVR UNIT SHALL BE CAPABLE OF EXECUTING ANY NUMBER OF INTERNAL RECORDING SCHEDULES DEFINED BY THE ADMINISTRATOR. SCHEDULES SHALL BE REMOTELY CONFIGURABLE AND CONTROL THE FOLLOWING ACTIONS:
      - RECORDING (ANY COMBINATION OF CAMERAS FOR ANY DURATION FROM 30 SECONDS TO 30 DAYS)
   b. ACCESS TO LIVE VIDEO (DURING SPECIFIED PERIODS)
13. LIVE VIDEO VIEWING
   a. THE NVR VIEWING APPLICATION SHALL BE CAPABLE OF DISPLAYING UP TO 16 VIDEO WINDOWS SIMULTANEOUSLY WITH VIDEO FROM UP TO 4 DIFFERENT NVR UNITS. LIVE VIDEO WINDOWS SHALL BE ABLE TO CO-EXIST WITH PLAYBACK WINDOWS ON THE SAME SCREEN FROM WITHIN THE SAME APPLICATION. AS NEW VIDEO WINDOWS ARE DISPLAYED, THE EXISTING WINDOWS SHALL AUTO-FORMAT TO ALLOW FOR THE NEW WINDOW. EACH VIDEO/AUDIO WINDOW SHALL HAVE INDEPENDENT CONTROL AND ALL WINDOWS SHALL BE CAPABLE OF BEING LINKED TOGETHER AND CONTROLLED SIMULTANEOUSLY. EACH VIDEO/AUDIO WINDOW SHALL BE CAPABLE OF PERFORMING AN INSTANT REPLAY OF SELECTED DURATION BY SIMPLY USING A SLIDER CONTROL TO MOVE BACK IN TIME. IF AUDIO IS ASSOCIATED WITH THE SELECTED WINDOW THERE SHALL BE A SET OF CONTROLS TO ADJUST THE VOLUME OR MUTE THE AUDIO.
14. VIDEO IMAGE SETTINGS
   a. THE VIDEO WINDOW SHALL SUPPORT IMAGE CONTROLS FOR BRIGHTNESS, CONTRAST, SATURATION AND HUE LEVELS TO CUSTOMIZE THE APPEARANCE OF VIDEO IN THE ACTIVE DISPLAY WINDOW. RECORDED VIDEO IS IN NO WAY ALTERED BY THESE CONTROLS, HOWEVER, PRINTED OR SAVED STILL IMAGES CAN BE IMAGE ENHANCED.

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15. SEARCH AND RETRIEVAL OF RECORDINGS
   a. SEARCHING AND RETRIEVING VIDEO AND FROM THE NVR UNIT SHALL BE DONE AS A SINGLE OPERATION.
   b. RECORDED VIDEO SHALL BE SEARCHABLE BY:
      - SELECTING THE CAMERA OF INTEREST AND ENTERING A SPECIFIC POINT IN TIME
   c. THE SEARCH FUNCTION SHALL ALLOW MULTIPLE NVR LOCATIONS TO BE SPECIFIED. THE SEARCH FUNCTION SHALL ALLOW ANY DURATION OF VIDEO TO BE RETRIEVED.
16. PLAYBACK VIEWING
   a. THE RETRIEVED VIDEO SHALL BE DISPLAYED AUTOMATICALLY IN A WINDOW. THE PLAYBACK WINDOWS SHALL BE CAPABLE OF BEING DISPLAYED ALONGSIDE THE LIVE VIDEO WINDOWS. A DATE/TIME STAMP SHALL APPEAR WITH THE VIDEO BEING DISPLAYED AND SHALL BE UPDATED FOR EACH FRAME THAT IS DISPLAYED.
17. PLAYBACK CONTROLS
   a. WHEN A PLAYBACK WINDOW IS SELECTED, THE FOLLOWING CONTROLS SHALL BE MADE AVAILABLE TO CONTROL THE PLAYBACK OF THE VIDEO:
      - PLAY – FORWARD AND REVERSE
      - PAUSE
      - SINGLE FRAME – FORWARD AND REVERSE
   b. THE PLAY SPEED SHALL BE CAPABLE OF BEING CHANGED TO 2X, 4X, 8X, AND 16X NORMAL SPEED. THE RECORDED VIDEO SHALL BE CAPABLE OF BEING QUICKLY NAVIGATED USING A SHUTTLE SEARCH (SLIDE BAR) OR SIMILAR. VIDEO FRAMES SHALL BE DISPLAYED WHILE THE SLIDE BAR IS BEING MOVED TO ASSIST IN FINDING THE FRAME OF INTEREST. THE VIDEO SHALL BE CAPABLE OF BEING VIEWED IN A CONTINUOUS PLAYBACK LOOP.
18. TIME RULER
   a. FOR NAVIGATION THROUGH A VIDEO CLIP, THE OPERATOR SHALL BE ABLE TO USE A SLIDE BAR OR SIMILAR. THE VIDEO IMAGE SHALL UPDATE WHILE THE SLIDE BAR IS BEING MOVED. TO CHANGE THE TIME RESOLUTION FOR MORE ACCURATE NAVIGATION, THE TIME RULER SHALL BE CAPABLE OF BEING ZOOMED IN OR OUT.
19. VIDEO IMAGE COPY
   a. AN IMAGE FROM A LIVE OR PLAYBACK WINDOW SHALL ALLOW COPYING TO THE CLIPBOARD AND PASTING INTO ANY COMPATIBLE THIRD PARTY APPLICATION, INCLUDING IMAGE ENHANCEMENT, EMAIL, OR WORD PROCESSING PACKAGES. THE COPIED INFORMATION SHALL INCLUDE BOTH VIDEO AND ASSOCIATED TEXT (LOCATION, CAMERA, TIME, DATE, AND EVENT INFORMATION).
20. VIDEO IMAGE PRINT
   a. AN IMAGE FROM A WINDOW, LIVE OR RECORDED, SHALL BE CAPABLE OF BEING PRINTED TO ANY NETWORK-CONNECTED PRINTER. THE PRINTED IMAGE SHALL HAVE THE ASSOCIATED TEXT (LOCATION, CAMERA, TIME, AND DATE) PRINTED ON THE SAME PAGE.
21. VIDEO IMAGE SAVE
   a. AN IMAGE FROM A WINDOW, LIVE OR RECORDED, SHALL BE CAPABLE OF BEING SAVED IN EITHER JPEG OR BETTER FORMAT. THE PRINTED IMAGE SHALL HAVE THE ASSOCIATED TEXT (LOCATION, CAMERA, TIME, DATE, AND EVENT INFORMATION) SAVED IN THE SAME FILE.
22. AUTHENTICATION/CONTINUITY OF EVIDENCE
   a. THE PROCESS FOLLOWED FOR THE STORAGE AND RETRIEVAL OF RECORDED VIDEO AND AUDIO SHALL BE CAPABLE OF BEING DOCUMENTED AND HAVE A TAMPERPROOF AUDIT TRAIL IN PLACE TO ENSURE THE PROCESS HAS BEEN FOLLOWED. THE EXPORTED VIDEO RECORDING SHALL BE CAPABLE OF BEING STORED ON READ-ONLY MEDIA AS AN .AVI FILE. ANY SAVED VIDEO CLIP SHALL BE SEALED WITH A DIGITAL SIGNATURE, WHICH CAN BE VERIFIED, BY ANY OF THE ASSOCIATED VIEWING APPLICATIONS. A THIN-CLIENT APPLICATION SHALL BE FREELY AVAILABLE (E.G., DOWNLOADABLE OVER THE INTERNET) AS A ROYALTY FREE TOOL WITH WHICH THIRD PARTIES MAY PLAY BACK SUCH VIDEO CLIPS.

1.5 SUBMITTALS
A. PRODUCT DATA
1. PRODUCT DATA: FOR EACH TYPE OF PRODUCT USED ON THIS PROJECT, PROVIDE CUT SHEET WITH HIGHLIGHTED PART NUMBER OF PRODUCT. A SEPARATE SUBMITTAL IS REQUIRED FOR EACH SPECIFICATION SECTION. DO NOT COMBINE OR MERGE SPECIFICATION SECTIONS.
B. PROCEDURES
1. PROVIDE SUBMITTALS AS REQUIRED BY PROJECT.
C. SHOP DRAWINGS
1. PROVIDE GENERAL SHOP DRAWINGS FOR CAMERA LOCATIONS.
2. PROVIDE OTHER SHOP DRAWINGS ONLY IF SPECIFICALLY REQUESTED.
D. MANUFACTURERS INSTALLATION AND PROGRAMMING INSTRUCTIONS
1. PROVIDE MANUFACTURERS INSTALLATION AND PROGRAMMING INSTRUCTIONS AS REQUESTED IN THE VARIOUS SPECIFICATION SECTIONS.
E. PROJECT RECORD DRAWINGS
1. DEFINITION: PROJECT RECORD DRAWINGS ARE DRAWINGS THAT COMPLETELY RECORD AND DOCUMENT ALL ASPECTS AND FEATURES OF THE WORK. (ALSO KNOWN AS "AS-BUILT" DRAWINGS.)
2. THE PURPOSE OF PROJECT RECORD DRAWINGS IS TO PROVIDE FACTUAL INFORMATION REGARDING ALL ASPECTS OF THE WORK, TO ENABLE FUTURE SERVICE, MODIFICATIONS, AND ADDITIONS TO THE WORK.
3. PROJECT RECORD DRAWINGS ARE AN IMPORTANT ELEMENT OF THIS WORK. CONTRACTOR SHALL ACCURATELY MAINTAIN PROJECT RECORD DRAWINGS THROUGHOUT THE COURSE OF THIS PROJECT. PROJECT RECORD DRAWINGS SHALL INCLUDE DOCUMENTATION OF ALL WORK, INCLUDING THE DOCUMENTATION OF EXISTING EQUIPMENT, WIRING, CONDUITS, AND RACEWAYS THAT ARE TO BE REUSED IN THE WORK.
4. PROJECT MANAGER SHALL FURNISH CONTRACTOR WITH .DWG FILES FOR CONTRACTOR'S USE IN PREPARING PROJECT RECORD DRAWINGS.
5. CONTRACTOR SHALL MAINTAIN A WORKING SET OF PROJECT RECORD DRAWINGS AT THE PROJECT SITE THROUGHOUT THE COURSE OF THE WORK. THE WORKING SET SHALL BE UPDATED AS THE WORK PROGRESSES.
6. PROJECT RECORD DRAWINGS SHALL ACCURATELY SHOW THE PHYSICAL PLACEMENT OF THE FOLLOWING:
7. EQUIPMENT AND DEVICES.
8. CONDUIT AND RACEWAYS.
9. JUNCTION AND PULL BOX LOCATIONS.
10. INTERFACES TO EXTERNAL EQUIPMENT.
11. CONNECTIONS TO POWER AND TELEPHONE OR OTHER COMMUNICATIONS CIRCUITS.
12. PROJECT RECORD DRAWINGS SHALL SHOW THE PHYSICAL PLACEMENT OF EACH DEVICE AND CONDUIT OR AERIAL

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F. SYSTEM DOCUMENTATION
   1. DEFINITION: SYSTEM DOCUMENTATION IS A COMPLETE COLLECTION OF ALL INSTALLATION, PROGRAMMING, OPERATION, AND MAINTENANCE MANUALS AND WORK SHEETS RELATING TO THE EQUIPMENT PROVIDED AS PART OF THE WORK.
   2. CONTRACTOR SHALL MAINTAIN A FILE OF SYSTEM DOCUMENTATION AT THE PROJECT SITE THROUGHOUT THE COURSE OF THE WORK. SUCH FILE SHALL BE UPDATED WITH NEW INFORMATION AS EQUIPMENT IS RECEIVED AND INSTALLED. SYSTEM DOCUMENTATION SHALL BE AVAILABLE FOR INSPECTION BY PROJECT MANAGER ON A DAILY BASIS.
   3. UPON COMPLETION OF WORK, AND PRIOR TO FINAL COMPLETION, CONTRACTOR SHALL PREPARE AND SUBMIT TO PROJECT MANAGER TWO (2) SETS OF SYSTEM DOCUMENTATION.

G. CLOSEOUT SUBMITTALS
   1. PROVIDE A SET OF AS-BUILT DRAWINGS AND MANUALS TO THE PROJECT MANAGER
      a. AS-BUILT DRAWINGS
      b. MOUNTING DETAILS
      c. PRODUCT DATA
      d. INSTALLATION MANUALS
      e. OPERATING MANUALS
      f. MAINTENANCE/SERVICE MANUALS
   2. PROVIDE THE PROJECT MANAGER- WITH ALL PROGRAMMING SHEETS, AS-BUILT DRAWINGS, OPERATING MANUALS, MAINTENANCE/REPAIR MANUALS, AND ALL PROGRAMMING SHEETS.

1.6 QUALITY ASSURANCE

A. QUALIFICATIONS
   1. QUALIFICATIONS OF CONTRACTOR
      a. CONTRACTOR SHALL BE AN INSTALLATION AND SERVICE CONTRACTOR REGULARLY ENGAGED IN THE SALE, INSTALLATION, MAINTENANCE AND SERVICE OF VIDEO SURVEILLANCE SYSTEMS.
      b. CONTRACTOR SHALL HAVE THREE YEARS OF EXPERIENCE WITH THE INSTALLATION, START-UP AND PROGRAMMING OF SYSTEMS OF A SIMILAR SIZE AND COMPLEXITY TO THE ONE PROPOSED.
      c. CONTRACTOR SHALL BE A FACTORY AUTHORIZED DEALER OF THE SYSTEM PROPOSED FOR AT LEAST ONE YEAR.
      d. CONTRACTOR SHALL SUBMIT THE NAMES AND PHONE NUMBERS OF CUSTOMERS FOR AT LEAST THREE OTHER PROJECTS OF SIMILAR SIZE AND COMPLEXITY USING SIMILAR TECHNOLOGIES.
   2. SUPERVISION OF WORK
      a. CONTRACTOR SHALL EMPLOY A COMPETENT SUPERVISOR TO BE IN RESPONSIBLE CHARGE OF THE WORK. FOREMAN SHALL BE ON THE PROJECT SITE DAILY DURING THE EXECUTION OF THE WORK.
      b. CONTRACTOR'S SUPERVISOR SHALL BE A REGULAR EMPLOYEE, PRINCIPLE, OR OFFICER OF CONTRACTOR, WHO IS THOROUGHLY EXPERIENCED IN PROJECTS OF A SIMILAR SIZE AND TYPE. CONTRACTOR SHALL NOT USE CONTRACT EMPLOYEES OR SUBCONTRACTORS AS FOREMEN.
   3. QUALIFICATIONS OF TECHNICIANS
      a. TECHNICIANS SHALL HAVE CURRENT MANUFACTURER'S CERTIFICATIONS. PROVIDE PROOF OF CERTIFICATIONS WITH SUBMITTAL.

1.7 WARRANTY

A. CONTRACTOR WARRANTS THAT ALL WORK FURNISHED (MATERIAL AND LABOR) UNDER THIS CONTRACT WILL BE OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS, AND IN CONFORMANCE WITH THE PROJECT DRAWINGS AND SPECIFICATIONS.
B. CONTRACTOR SHALL PROVIDE PARTS AND LABOR GUARANTEE ON ALL WORK. UNLESS OTHERWISE SPECIFIED HEREIN, CONTRACTOR'S GUARANTEE SHALL BE FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL COMPLETION, EXCEPT WHERE ANY SPECIFIC GUARANTEES FROM A SUPPLIER OR EQUIPMENT MANUFACTURER EXTENDS FOR A LONGER TIME.
C. CONTINTRACTOR'S GUARANTEE SHALL COVER ALL COSTS ASSOCIATED WITH TROUBLESHOOTING, REPAIR, AND REPLACEMENT OF DEFECTIVE WORK, INCLUDING COSTS OF LABOR, TRANSPORTATION, LODGING, MATERIALS, AND EQUIPMENT.
D. GUARANTEE SHALL NOT COVER ANY DAMAGE TO MATERIAL OR EQUIPMENT CAUSED BY ACCIDENT, MISUSE, UNAUTHORIZED MODIFICATION OR REPAIR BY THE OWNER, OR ACTS OF GOD.
E. CONTRACTOR SHALL PROMPTLY RESPOND TO THE OWNER'S REQUESTS FOR SERVICE DURING THE GUARANTEE PERIOD. CONTRACTOR SHALL PROVIDE REPAIR SERVICE AS SOON AS REASONABLY POSSIBLE UPON REQUEST FROM OWNER, BUT IN NO CASE SHALL SERVICE RESPONSE EXCEED 24 HOURS FROM TIME OF REQUEST.

1.8 OWNER'S INSTRUCTIONS

A. COORDINATION WITH OWNER
   1. CONTRACTOR SHALL CLOSELY SCHEDULE AND COORDINATE ITS ACTIVITIES WITH DESIGNATED REPRESENTATIVES.
   2. CONTRACTOR SHALL PROVIDE USER LICENSING FOR TWO (2) SIMULTANEOUS USERS.
   3. CONTRACTOR SHALL PROVIDE TRAINING TO PERSONNEL ON HOW TO FULLY OPERATE THE SYSTEM.
   4. CONTRACTOR SHALL PROVIDE PROJECT MANAGER WITH A WORK PLAN ON A WEEKLY BASIS. SUCH WORK PLAN WILL DESCRIBE LOCATIONS OF INTENDED ACTIVITIES, TYPES OF ACTIVITIES, AND POTENTIAL CONFLICTS TO FACILITY OPERATIONS.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

A. CONTRACTOR RESPONSIBILITY
   1. ALL PRODUCTS PROVIDED BY SHALL BE NEW AND UNUSED, AND SHALL BE OF MANUFACTURER'S CURRENT AND STANDARD PRODUCTION.
   2. WHERE TWO OR MORE EQUIPMENT ITEMS OF THE SAME KIND ARE PROVIDED, ALL SHALL BE IDENTICAL AND PROVIDED BY THE SAME MANUFACTURER.
   3. DRAWINGS AND SPECIFICATIONS INDICATE MAJOR SYSTEM COMPONENTS, AND MAY NOT SHOW EVERY COMPONENT, CONNECTOR, MODULE, OR ACCESSORY THAT MAY BE REQUIRED TO SUPPORT THE OPERATION SPECIFIED. CONTRACTOR SHALL PROVIDE ALL COMPONENTS NEEDED FOR COMPLETE AND SATISFACTORY OPERATION.

B. PRODUCT AVAILABILITY
   1. CONTRACTOR, PRIOR TO SUBMITTING A PROPOSAL, SHALL DETERMINE PRODUCT AVAILABILITY AND DELIVERY TIME, AND SHALL INCLUDE SUCH CONSIDERATIONS INTO THE PROPOSED CONTRACT TIME.
   2. CERTAIN PRODUCTS SPECIFIED MAY ONLY BE AVAILABLE THROUGH FACTORY-AUTHORIZED DEALERS AND DISTRIBUTORS. CONTRACTOR SHALL VERIFY HIS ABILITY TO PROCURE THE PRODUCTS SPECIFIED PRIOR TO SUBMITTING A PROPOSAL.

C. WIRE AND CABLE
   1. CABLING IS HANDLED BY DIVISION 27 CABLING CONTRACTOR.

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2.2 GENERAL SYSTEM SPECIFICATIONS

A. THE CONTRACTOR SHALL FURNISH ALL MATERIAL AND LABOR FOR A COMPLETE AND OPERATIVE \VIDEO RECORDING SYSTEM INCLUDING DOCUMENTATION, PROGRAMMING, AND TRAINING.
B. NVR COMPONENTS
   1. THE VIDEO MANAGEMENT SYSTEM (VMS)
      a. THE VMS SHALL BE THE APPLICATION USED BY AN OPERATOR RESPONSIBLE FOR VIEWING LIVE VIDEO OR FOR REVIEWING RECORDED VIDEO AND SHALL BE PART OF THE SMS. LIVE VIDEO SHALL BE DISPLAYED WHEN THE USER SELECTS THE CAMERA OF INTEREST AND REQUESTS THE ASSOCIATED VIDEO. IF AUDIO HAS BEEN ASSOCIATED WITH THE CAMERA THEN THAT AUDIO SHALL ALSO BE HEARD. THE VMS SHALL DISPLAY UP TO 16 LIVE OR PLAYBACK DISPLAY WINDOWS AT THE SAME TIME.
      b. THE VMS SHALL BE ABLE TO SEARCH FOR RECORDED VIDEO BY:
         - SELECTING THE CAMERA OF INTEREST AND ENTERING A SPECIFIC POINT IN TIME.
         - SCANNING THE VIDEO FOR MOTION IN SELECTED AREAS OF THE FIELD OF VIEW.
      c. STILL VIDEO IMAGES SHALL ALSO BE EXTRACTED AND:
         - TRANSFERRED INTO THIRD PARTY APPLICATIONS FOR IMAGE ENHANCEMENT OR PRESENTATION PURPOSES.
         - SAVED IN JPEG FORMAT FOR EMAIL PURPOSES.
         - PRINTED TO ANY NETWORK-CONNECTED PRINTER.
      d. PROVIDE LICENSING FOR TWO VIEWING STATIONS.
   2. ACCEPTABLE MANUFACTURERS:
      a. AXIS
      b. AVIGILON
      c. MILESTONE
   3. 4U VERTICAL WALL-MOUNT BRACKET
      a. DESCRIPTION: 4U VERTICAL WALL MOUNTED RACK BRACKETS ALLOWING VERTICAL INSTALLATION OF UP TO A 4U RACK MOUNT DEVICE.
      b. PROVIDE (1) BRACKET PER NVR.
      c. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
         - TRIPP LITE
         - CHATSWORTH
         - PANDUIT CORP.
      d. GENERAL REQUIREMENTS:
         - FRAMES: MODULAR UNITS DESIGNED FOR TELECOMMUNICATIONS TERMINAL SUPPORT AND COORDINATED WITH DIMENSIONS OF UNITS TO BE SUPPORTED.
         - MATERIAL: ALUMINUM.
         - FINISH: MANUFACTURER'S STANDARD, BAKED-POLYESTER POWDER COAT.
         - COLOR: BLACK.

C. CAMERAS
   1. CAMERA TYPES
      a. MEGAPIXEL QUALITY LENSES ARE REQUIRED FOR THE ENTIRE CAMERA LINE. CAMERAS SHALL BE A MINIMUM 5 MEGAPIXELS PER SENSOR.
      b. CAMERAS SHALL BE COLOR.
      c. VANDAL RESISTANT DOME.
      d. BLOWER/HEATER FOR OUTDOOR CAMERAS.
      e. POWERED BY POE.
      f. SUPPORT WDR TECHNOLOGY.
   2. ACCEPTABLE MANUFACTURERS:
      a. AXIS
      b. AVIGILON
      c. PELCO
   3. NETWORK COMMUNICATIONS
      a. THE NVR UNIT SHALL CONNECT TO AN ENTERPRISE LAN/WAN NETWORK VIA A 1 OR 10 GIGABIT CONNECTION. THE VIEWING AND CONFIGURATION APPLICATIONS SHALL OPERATE ON WORKSTATIONS THAT ARE CONNECTED (LOCALLY OR REMOTELY) TO THE ENTERPRISE LAN AND BE ABLE TO COMMUNICATE WITH THE NVR UNITS ACROSS THIS NETWORK. THE NVR UNIT AND NVR APPLICATIONS SHALL COMMUNICATE USING TCP/IP PROTOCOL.
      b. THE NVR UNIT SHALL OPERATE USING EITHER DHCP OR STATIC IP ADDRESSING.
      c. THE NVR UNIT SHALL BE CAPABLE OF HAVING A BANDWIDTH LIMIT SET, THAT IT WILL NOT EXCEED WHEN DISTRIBUTING LIVE VIDEO OR DELIVERING RECORDED VIDEO.

PART 3 - EXECUTION

3.1 EXAMINATION

A. DO NOT BEGIN INSTALLATION UNTIL SUBSTRATES HAVE BEEN PROPERLY PREPARED.
B. EXAMINE SITE CONDITIONS PRIOR TO INSTALLATION. NOTIFY ARCHITECT AND OWNER IN WRITING IF UNSUITABLE CONDITIONS ARE ENCOUNTERED. DO NOT START INSTALLATION UNTIL SITE CONDITIONS ARE ACCEPTABLE.
C. IF PREPARATION IS THE RESPONSIBILITY OF ANOTHER INSTALLER, NOTIFY ARCHITECT IN WRITING OF DEVIATIONS FROM MANUFACTURER'S RECOMMENDED INSTALLATION TOLERANCES AND CONDITIONS.

3.2 INSTALLATION

A. ALL COMPONENTS OF THE VIDEO MANAGEMENT SYSTEM SHALL BE THOROUGHLY TESTED BEFORE SHIPPING TO THE PROJECT LOCATION.
B. VIDEO MANAGEMENT SYSTEM SHALL BE INSTALLED, PROGRAMMED AND TESTED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
   1. COORDINATE INTERFACES WITH OWNER'S REPRESENTATIVE WHERE APPROPRIATE.
   2. PROVIDE BACKBOXES, RACKS, CONNECTORS, SUPPORTS, CONDUIT, CABLE, AND WIRE FOR A COMPLETE AND RELIABLE INSTALLATION. OBTAIN OWNER'S APPROVAL FOR EXACT LOCATION OF ALL BOXES, CONDUIT, AND WIRING RUNS PRIOR TO INSTALLATION.
   3. INSTALL CONDUIT, CABLE, AND WIRE PARALLEL AND SQUARE WITH BUILDING LINES, INCLUDING RAISED FLOORS AREAS. DO NOT EXCEED FORTY PERCENT (40 PERCENT) FILL IN CONDUITS. GATHER WIRES AND TIE TO CREATE AN ORDERLY INSTALLATION.
   4. COORDINATE WITH OTHER TRADES TO PROVIDE PROPER SEQUENCING OF INSTALLATION.

3.3 FIELD COMMISSIONING AND CERTIFICATION

A. FIELD COMMISSIONING: TEST VIDEO MANAGEMENT SYSTEM AS RECOMMENDED BY MANUFACTURER, INCLUDING THE FOLLOWING:
   1. CONDUCT COMPLETE INSPECTION AND TESTING OF EQUIPMENT, INCLUDING VERIFICATION OF OPERATION WITH CONNECTED EQUIPMENT.
   2. TEST DEVICES AND DEMONSTRATE OPERATIONAL FEATURES FOR OWNER'S REPRESENTATIVE AND AUTHORITIES HAVING JURISDICTION, AS APPLICABLE
   3. CORRECT DEFICIENCIES UNTIL SATISFACTORY RESULTS ARE OBTAINED.
   4. SUBMIT WRITTEN COPIES OF TEST RESULTS.

3.4 TRAINING

A. CONDUCT ON-SITE SYSTEM ADMINISTRATOR AND SECURITY/SURVEILLANCE OPERATOR TRAINING, WITH THE NUMBER OF SESSIONS AND LENGTH OF SESSIONS AS RECOMMENDED BY THE VIDEO MANAGEMENT SYSTEM MANUFACTURER. TRAINING SHALL INCLUDE ADMINISTRATION, PROVISIONING, CONFIGURATION, OPERATION, AND DIAGNOSTICS.

3.5 PROTECTION

A. PROTECT INSTALLED PRODUCTS UNTIL COMPLETION OF PROJECT.
B. TOUCH UP, REPAIR OR REPLACE DAMAGED PRODUCTS BEFORE SUBSTANTIAL COMPLETION.

END OF SECTION 28 2300.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
DESIGNED: PH
DRAWN: PH
CHECKED: GS
APPROVED: GS
DATE: 06/17/2025

PROFESSIONAL ENGINEER REGISTERED GARTH L. STEVENS STATE OF IDAHO 18100

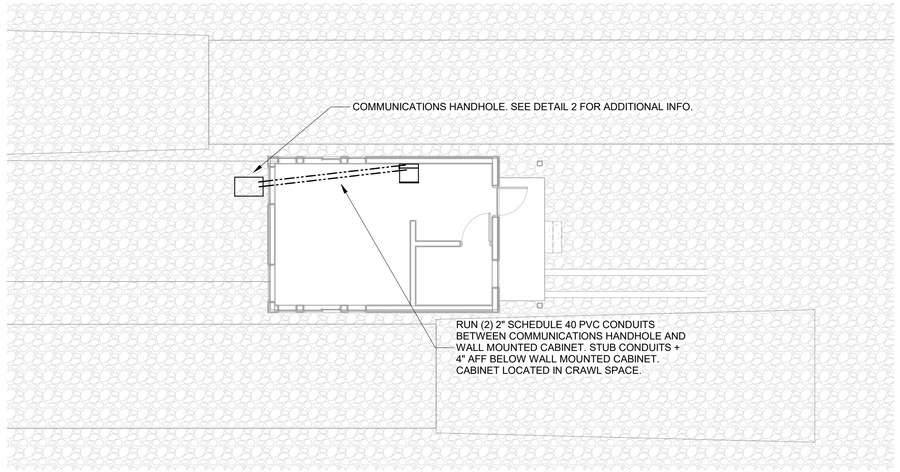
Morrison Maierle
engineers · surveyors · planners · scientists
1055 Mount Ave
Missoula, Montana 59801
406.542.4841
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BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ICT SPECIFICATIONS

SHEET NO.
T004

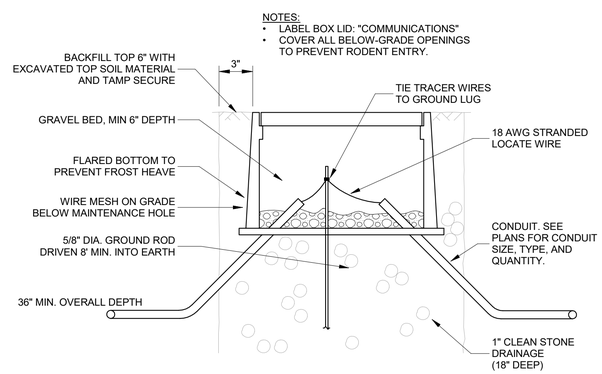
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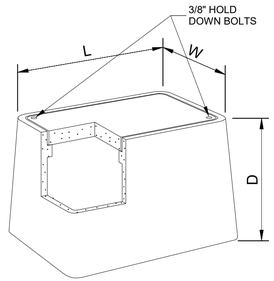


1 ICT SITE PLAN
1/8" = 1'-0"

GENERAL ICT SITE NOTES

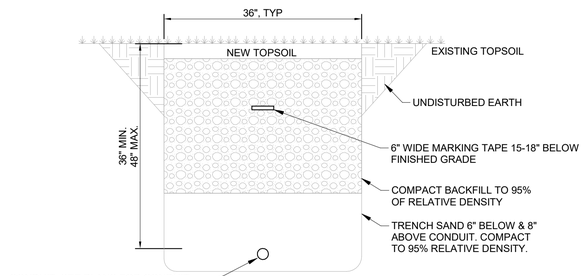
A. IT IS ABSOLUTELY NECESSARY FOR ALL TRADES INVOLVED TO COORDINATE WITH EACH OTHER.
B. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING OF FLOORS, WALLS, CEILINGS, AND ROOFS TO PERFORM THE REQUIRED WORK DEPICTED IN THESE DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL PATCHING OF HOLES TO THE SATISFACTION OF THE ARCHITECT/ENGINEER.
C. ALL SIZING, PLACEMENT, AND QUANTITIES FOR CONDUITS, CONDUIT SLEEVES, CABLE TRAY, AND LADDER RACK CALLED OUT ON STRUCTURED CABLING PLANS AND/OR ENLARGED VIEWS.
D. ALL CONDUIT ENDS SHALL BE FURNISHED WITH PLASTIC BUSHINGS FOR CABLE PROTECTION.
E. PROVIDE PULL STRINGS FOR ALL CONDUITS INSTALLED GREATER THAN 10'.
F. LINES SHOWN ON THE PLAN FROM ICT BASED DEVICES TO THE BUILDING REPRESENT THE PROPOSED ROUTING PATH FOR PATHWAYS. CONTRACTOR SHALL SELECT BEST PATH WHEN ROUTING FOR THE LEAST IMPACT ON SITE OR BUILDING.
G. PRIOR TO ANY TRENCHING, CONTACT 811 'CALL BEFORE YOU DIG' AND COORDINATE WITH OWNER AND UTILITIES TO LOCATE ALL BURIED POWER, COMMUNICATIONS, GAS, WATER, SEWER, IRRIGATION PIPING, ETC. FROM THIS INFORMATION, ESTABLISH THE BEST ROUTING AND PLAN FOR AREAS THAT WILL REQUIRE HAND DIGGING.
H. ALL PATHWAYS ON SITE SHALL HAVE A MINIMUM OF 36" OF CLEAN, PROPERLY COMPACTED COVER.
I. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING OF SIDEWALKS, PAVEMENT, FLOORS, WALLS, CEILINGS, ROOFS, ETC. TO PERFORM THE REQUIRED WORK DEPICTED IN THESE DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL PATCHING OF HOLES TO THE SATISFACTION OF THE ARCHITECT/ENGINEER.
J. CAREFULLY CUT AND RETAIN SOD ALIVE FOR REINSTALLATION. SAW CUT, REMOVE, AND LEGALLY DISPOSE OF CONCRETE AND ASPHALT.
K. INSTALL MOLDED PLASTIC INTERMEDIATE (HORIZONTAL) SPACERS EVERY SIX FEET WHENEVER TWO OR MORE CONDUITS ARE INSTALLED IN A TRENCH. MAINTAIN A MINIMUM 12-INCH SEPARATION BETWEEN POWER AND COMMUNICATIONS CONDUITS. WHERE TRENCH IS SHARED WITH OTHER UTILITIES, A MINIMUM 24-INCH SEPARATION SHALL BE MAINTAINED FROM WATER, GAS, OR SEWER LINES. ALL CONDUIT SEPARATIONS ARE MEASURED SURFACE-TO-SURFACE AND NOT CENTER-TO-CENTER.
L. FILL TRENCH AND COMPACT TO MATCH ADJACENT UNDISTRUBED SOIL. REPLACE SOD TO MATCH EXISTING. POUR CONCRETE AND REPLACE ASPHALT TO MATCH ADJACENT SURFACES.
M. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO EXISTING BURIED POWER, COMMUNICATIONS, GAS, WATER, SEWER, IRRIGATION PIPING, ETC. AND SHALL HIRE TRAINED AND CERTIFIED CRAFTSMEN TO PERFORM THE REPAIRS AND BRING THEM BACK TO 'LIKE EXISTING CONDITIONS'. REPAIR WORK WILL NOT BE CONSIDERED COMPLETE UNTIL ALL SYSTEMS ARE ONCE AGAIN FUNCTIONING PROPERLY AND OWNER IS SATISFIED WITH THE REPAIRS.





TIER 22 RATED CONCRETE POLYMER PULL BOX MINIMUM INSIDE DIMENSIONS
W = 24"
L = 36"
D = 24"

2 COMMUNICATIONS - HANDHOLE DETAIL
N.T.S.



NOTE:
• EDGE OF TRENCH TO BE 36" MIN FROM EDGE OF WATER OR SEWER LINE
• WHEN TRENCH IS SHARED WITH OTHER UTILITIES, SUCH AS POWER OR GAS, ENSURE 12" MINIMUM SPACING BETWEEN ICT CONDUITS AND OTHER UTILITIES.

3 COMMUNICATIONS - TRENCH DETAIL
N.T.S.

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT NO. 1-232 05
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PROFESSIONAL ENGINEER REGISTERED 18100 STATE OF IDAHO GARTH L. STEVENS

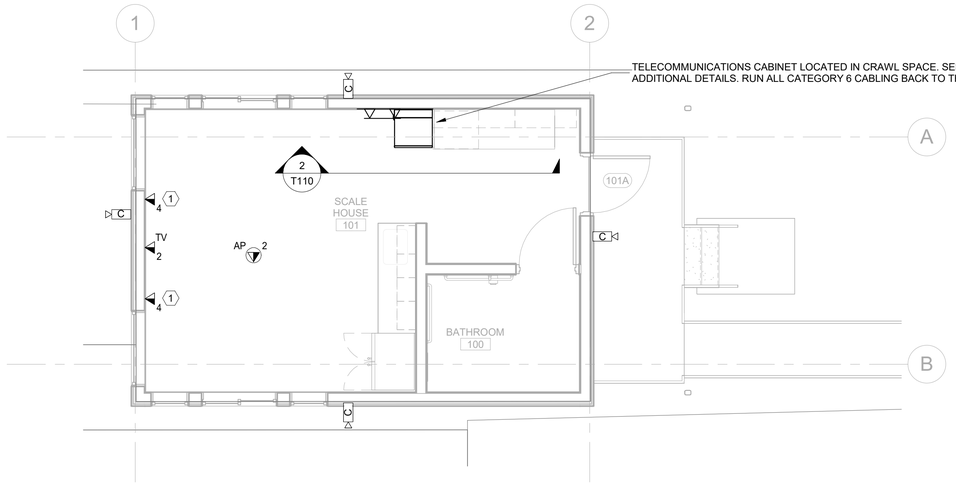
Morrison Maierle
engineers - surveyors - planners - scientists
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Missoula, Montana 59801
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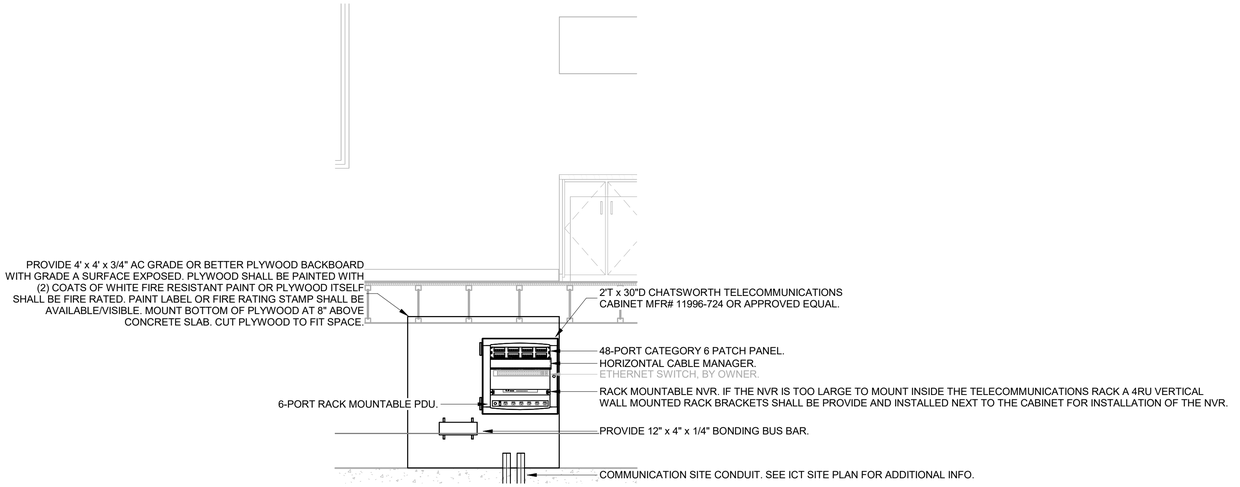
BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ICT SITE PLAN

SHEET NO.
T101

DATE STAMP 6/18/2025 8:51:26 AM



1 1ST FLOOR - ICT PLAN
1/4" = 1'-0"



2 ENLARGED VIEW TELECOMMUNICATIONS CABINET
NTS

GENERAL ICT NOTES

A. IT IS ABSOLUTELY NECESSARY FOR ALL TRADES INVOLVED TO COORDINATE WITH EACH OTHER AND VERIFY THAT THERE ARE NO CONFLICTS IN LOCATION OF DUCTS, CONDUITS, DIFFUSERS, BOXES, AND OTHER ITEMS THROUGHOUT THIS PROJECT BEFORE FINAL PLACEMENT OF MATERIALS.
B. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING OF FLOORS, WALLS, CEILINGS, AND ROOFS TO PERFORM THE REQUIRED WORK DEPICTED IN THESE DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL PATCHING OF HOLES TO THE SATISFACTION OF THE ARCHITECT/ENGINEER.
C. ALL CONDUIT ENDS SHALL BE FURNISHED WITH PLASTIC BUSHINGS FOR CABLE PROTECTION.
D. PROVIDE PULL STRINGS FOR ALL CONDUITS INSTALLED GREATER THAN 10'.

(#) KEY NOTES:

1. MOUNT WAO ABOVE COUNTER. MATCH HEIGHT OF ADJACENT POWER RECEPTACLE.

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BANNOCK COUNTY LANDFILL
ENTRANCE FACILITY
ICT PLANS

SHEET NO.
T110

DATE STAMP 6/18/2025 8:51:27 AM



Water/Wastewater ▪ Transportation ▪ Grant Services ▪ Solid Waste ▪ Structural ▪ Bridges ▪ Natural Resources ▪ Planning

BILLINGS
6780 Trade Center Avenue
Billings, MT 59101
Phone: (406) 652-5000

BOISE
1921 E Overland Road
Meridian, ID 83642
Phone: (208) 576-6646

GREAT FALLS
702 2nd Street South #2
Great Falls, MT 59405
Phone: (406) 952-1109

HELENA
2501 Belt View Drive
Helena, MT 59601
Phone: (406) 449-8627
Fax: (406) 449-8631

SPOKANE
10220 N. Nevada St.,
Suite 130
Spokane, WA 99218
Phone: (509) 413-1430

www.greatwesteng.com

BANNOCK COUNTY COMMISSIONERS
624 E. Center, Pocatello, ID 83201
Phone: (208) 236-7210 • Fax: (208) 232-7363

ERNIE MOSER Commissioner 1st District
JEFF HOUGH Commissioner 2nd District
KEN BULLOCK Commissioner 3rd District

Business Meeting Agenda Request Form

*The Board of Bannock County Commissioners business meetings are generally held on **Tuesday at 9:15 a.m.** in the Commissioners' Chambers in the Bannock County Courthouse, Room 212; 624 E Center Pocatello, Idaho or as noticed **48 hours** prior to the meeting at https://bannockcounty.us/commissioners/. The Commissioners also hold meetings throughout the week as coordinated with the Commissioners' staff. Agenda times are subject to change within **15 minutes** of scheduled time. Any person(s) needing special accommodations to participate in public meetings should contact the Commissioners' Office at 208-236-7210, three to five working days before the meeting.*

Requestor Name:

Dan Kendall

Department:

Buildings and Grounds

Requestor Email:

danielk@bannockcounty.gov

Item(s) to be considered:

Monthly Buildings and Grounds update

Date of meeting being requested: 02/19/2026

Time requested: 5 Minutes

Does the request involve a contract, agreement, external funding, or award acceptance?

No

Contract/Agreement Begin Date:

Contract/Agreement End Date:

List of additional attendees: