Planning Advisory Board/Zoning Commission
September 23, 2025 Agenda
2 Park Drive South, Great Falls, MT
Commission Chambers, Civic Center
3:00 PM

In order to honor the Right of Participation and the Right to Know (Article II, Sections 8 and 9 of the Montana Constitution), the City of Great Falls and Planning Advisory Board/Zoning Commission are making every effort to meet the requirements of open meeting laws: • The agenda packet material is available on the City's website: https://greatfallsmt.net/meetings. The Public may view and listen to the meeting on government access channel City-190, cable channel 190; or online at https://greatfallsmt.net/livestream. • Public participation is welcome in the following ways: • Attend in person. Please refrain from attending in person if you are not feeling well. • Provide public comments via email. Comments may be sent via email before 12:00 PM on Tuesday, September 23, 2025 to: jnygard@greatfallsmt.net. Include the agenda item or agenda item number in the subject line, and include the name of the commenter and either an address or whether the commenter is a city resident. Written communication received by that time will be shared with the Planning Advisory Board/Zoning Commission and appropriate City staff for consideration during the agenda item and before final vote on the matter; and, will be so noted in the official record of the meeting.

OPENING MEETING

1. Call to Order - 3:00 P.M.
2. Roll Call - Board Introductions

   Tory Mills - Chair

   Julie Essex - Vice Chair

   Michael Bicsak

   David Cantley

   Michael Gorecki

   Joe McMillen

   Jim Wingerter
3. Staff Recognition
4. Approval of Meeting Minutes - September 9, 2025

CONFLICT DISCLOSURE / EX PARTE COMMUNICATION

BOARD ACTIONS REQUIRING PUBLIC HEARING

5. Public Hearing – An Amendment to Resolution No. 10545 to modify the existing Conditional Use Permit, for Ponderosa Solutions LLC, located at 6501 18th Ave N., to allow for the handling of additional hazardous substances.

6. Public Hearing – Request for a Conditional Use Permit (CUP) to allow a concealed telecommunication facility within the POS Public and Open Space zoning district, upon Dudley Anderson Park, which is addressed as 701 33rd St S, and approval of the associated Lease Agreement.

BOARD ACTIONS NOT REQUIRING PUBLIC HEARING

COMMUNICATIONS

PUBLIC COMMENT

Public Comment on any matter and that is within the jurisdiction of the Planning Advisory Board/Zoning Commission. Please keep your remarks to a maximum of five (5) minutes. Speak into the microphone, and state your name and address for the record.

ADJOURNMENT

(Please exit the chambers as quickly as possible. Chamber doors will be closed 5 minutes after adjournment of the meeting.)

Assistive listening devices are available for the hard of hearing, please arrive a few minutes early for set up, or contact the City Clerk's Office in advance at 455-8451. Wi-Fi is available during the meetings for viewing of the online meeting documents.

Planning Advisory Board/Zoning Commission meetings are televised on cable channel 190 and streamed live at https://greatfallsmt.net. Meetings are re-aired on cable channel 190 the following Thursday at 7 p.m.

MINUTES OF THE MEETING
GREAT FALLS PLANNING ADVISORY BOARD/ZONING COMMISSION
September 9, 2025

CALL TO ORDER

Chair Mills called the regular meeting of the Great Falls Planning Advisory Board/Zoning Commission to order at 3:00 p.m. in the Commission Chambers at the Civic Center.

ROLL CALL & ATTENDANCE

Planning Board Members present:

Tory Mills, Chair

Julie Essex, Vice Chair

Michael Bicsak

David Cantley

Michael Gorecki

Jim Wingerter

Planning Board Members absent:

Joe McMillen

Planning Staff Members present:

Brock Cherry, Director of Planning and Community Development

Lonnie Hill, Deputy Director of Planning and Community Development

Rachel Campbell, Permit Technician

Jamie Nygard, Sr. Administrative Assistant

Other Staff present:

Rachel Taylor, Deputy City Attorney

Mr. Hill affirmed a quorum of the Board was present.

MINUTES

Chair Mills asked if there were any comments or corrections to the meeting minutes from August 12, 2025. Seeing none, Mr. Cantley motioned to approve the minutes as written. Seconded by Mr. Gorecki. All in favor, the minutes were approved.

Conflict Disclosure/Ex Parte Communications

None.

BOARD ACTIONS NOT REQUIRING A PUBLIC HEARING

Great Falls International Airport Tax Increment Financing Funding Application

Lonnie Hill, Deputy Director, addressed the Board and stated that the applicant, Great Falls International Airport Authority (GFIA), is requesting $300,000 in TIF funding for Phase II of the Industrial Development Project. The phased development plans to develop 300 acres west of the Cascade County Detention Center, zoned AI (Airport Industrial), for aviation-compatible, manufacturing, industrial, and commercial uses. The area is identified in the Airport Authority Master Plan Update for aviation commercial development, and the proposal includes a TIF Development Agreement to ensure compliance with all applicable regulations.

Mr. Hill presented a location map, a Google Street View, and the Phase II Plans.

Mr. Hill stated that the City Commission adopted the Great Falls International Airport Tax Increment Financing Industrial District Plan (GFIA TIFID) on November 5, 2008. The purpose of creating the GFIA TIFID was to meet the needs and interests of GFIA by fostering the development of secondary, value-added industries and to promote aviation-related economic development to improve area employment opportunities and expand the tax base.

Mr. Hill said that in 2021, the City Commission approved Resolution 10399 for Phase I, which included installing water, sewer, stormwater, electric, and data infrastructure, as well as building a stormwater pond and two site entrances along North Frontage Road. Phase I was finished in June 2024 and now supports three 2,400-square-foot bays leased for a Peterbilt dealership.

Mr. Hill stated that Phase II of the Industrial Development Project will include electrical and data lines, along with a water and sewer line extension along Ulm Frontage Road. The project will complete a waterline loop serving the west side of the Frontage Road. Once the infrastructure is finished, construction of the Phase II Industrial Condos will begin, including four to six additional 2,400-square-foot bays marketed for manufacturing use.

Mr. Hill stated that Staff has determined the proposal complies with the Montana Code Annotated (MCA) TIF Regulations, the GFIA TIFID Plan, and the City of Great Falls TIF Review Criteria. He also stated that Staff has found the expenditure of TIF Funds totaling $300,000 to be justified for the purpose of funding the proposed project, which will further promote industrial economic development in the Great Falls International Airport Tax Increment Financing Industrial District.

APPLICANT PRESENTATION

John Faulkner, representing the Great Falls International Airport, addressed the Board. He explained that Loopnet is a listing site for commercial locations and mentioned that he has monitored the site for the past few years, noting there are very few Light Industrial Commercial

sites available in Great Falls. He stated that the 300 acres serve as a tool to support economic development in the community. The first phase immediately filled all the bays, so the master plan for the site includes three buildings with about 100,000 square feet of light industrial space. The goal is to create flexible space that can be subdivided into bays, with dividing walls that can be dropped. The planned buildings should provide a 20-year supply of light industrial space, with roughly 25 acres remaining for future development. He mentioned that over the past year, several calls have come from manufacturers in Canada seeking a U.S. footprint to avoid tariffs. The need is urgent, so they are trying to be proactive and ready for these requests. They hope to start construction in spring 2026.

PUBLIC QUESTIONS

None.

BOARD QUESTIONS

Mr. Gorecki asked whether a traffic study had been conducted in the area. Mr. Faulkner responded that MDT is actively designing a plan to replace the intersection and mentioned that, many years ago, during the planning stage of the project, tentative traffic counts were sent to MDT. However, the current developments generate far less traffic than was estimated at that time. Mr. Hill noted that there is a project moving through the Metropolitan Planning Organization (MPO) and MDT that will reconfigure the airport interchange and relocate the service road to run beside Town Pump. An additional lane heading up Airport Hill on I-15 is also being planned, with the goal of providing a dedicated lane for airport traffic.

Mr. Gorecki asked if there has been a lot of interest in any aviation-related businesses. Mr. Faulkner replied that on the airport side, they are seeing aviation uses, but on the 300-acre side, any type of development is possible, as the FAA wants to see income generated that is compatible with the airport so it can sustain operations.

BOARD DISCUSSION AND ACTION

Mr. Mills stated that he met with a Canadian HVAC manufacturer a couple of months ago, and they could not find a space to occupy in Great Falls, so there is definitely a need.

MOTION: That the Planning Advisory Board recommend the City Commission approve the Great Falls International Airport Authority's request to allow the use of up to $300,000 in Great Falls International Airport Tax Increment Financing Industrial District funds for the cost of Phase II of the Industrial Development Project and approve the accompanying Development Agreement.

Made by: Ms. Essex

Second by: Mr. Cantley

VOTE: 6-0; Motion passed

COMMUNICATIONS

Mr. Hill stated that there will be two agenda items for the scheduled meeting on September 23, 2025. One for a Conditional Use Permit (CUP) from Verizon to place a concealed telecommunications facility in the Parks and Open Space District. The other one will be a CUP from Ponderosa Solutions to expand their operations to include additional hazardous materials, which requires them to amend their CUP.

Tentatively, the meeting on October 14, 2025, will include an agenda item for an annexation request for the development of a mobile home park near Morning Side Elementary School.

PUBLIC COMMENT

None.

ADJOURNMENT

There being no further business, Chair Mills adjourned the meeting at 3:27 p.m.

CHAIRMAN TORY MILLS

SECRETARY BROCK CHERRY

Meeting Date: September 23, 2025

CITY OF GREAT FALLS
PLANNING ADVISORY BOARD / ZONING COMMISSION AGENDA REPORT

Item:	Public Hearing – An Amendment to Resolution No. 10545 to modify the existing Conditional Use Permit for Ponderosa Solutions LLC, located at 6501 18th Ave N., to allow for the handling of additional hazardous substances.
Initiated By:	Ponderosa Solutions LLC, Owner
Presented By:	Kayla Kryzsko, Assistant City Planner, Planning and Community Development
Action Requested:	Recommendation to City Commission

Public Hearing:

1. Chairman of the Board conducts public hearing, pursuant to OCCGF 1.2.050 and Title 17, Chapter 16, Article 6.

2. Chairman of the Board closes public hearing and asks the will of the Board.

Suggested Motion:

1. Board Member moves:

"I move that the Planning Advisory Board recommend the City Commission (approve/deny) the amendment to Resolution 10545 to modify the existing Conditional Use Permit for the property as legally described in the Staff Report, and the accompanying Findings of Fact, subject to the Conditions of Approval being fulfilled by the applicants."

2. Chairman calls for a second, board discussion, and calls for the vote.

Background: On April 16, 2024, the City Commission approved Resolution No. 10545, granting a Conditional Use Permit (CUP) to Ponderosa Solutions LLC for the handling of Hydrogen Sulfide (H_2S), a hazardous substance used as an ingredient in asphalt. The site is legally described as Lot 6A of AgriTech Park.

The facility is designed for the transfer of materials such as asphalt products and fuels between railcars and tanker trucks. It includes recently constructed unit train tracks and designated transloading areas. Transfers are conducted using portable, top-loading systems to minimize spill risks. According to the applicant, the facility handles a significant volume of product annually, with all transfer operations subject to hazard risk analyses to ensure safe and compliant handling.

Ponderosa Solutions LLC is now requesting an amendment to their existing CUP to expand the list of hazardous substances handled at the transloading facility. This proposed amendment would support operations related to the handling of additional hazardous substances related to sustainable aviation fuel and jet fuel. The Safety Data Sheets for the proposed materials are provided in *Attachment D – Spill Prevention and Release Plan*.

Specifically, the applicant requests permission to handle the following substances, which are classified as hazardous under the OSHA Hazard Communication Standard:

1. Diesel #2 Ultra Low Sulfur
2. RD99LC (renewable diesel)
3. Sustainable Aviation Fuel (RJ100/SPK-HEFA)
4. Unleaded gasoline

Spill Prevention and Release Plan:
Building on the original Conditional Use Permit for handling Hydrogen Sulfide (H_2S), Ponderosa Solutions LLC has updated the Spill Prevention and Response Plan (SPRP) to address additional hazardous substances in support of the proposed CUP amendment.
The facility was originally constructed with a stormwater management system designed to minimize environmental impact. This system consists of berms, ditches, and a retention pond, all intended to contain potential spills and prevent runoff from reaching surrounding areas.

The original SPRP, approved as part of the initial CUP, outlines detailed procedures for spill response, containment, and reporting. The applicant has now submitted a revised site-specific plan that incorporates the newly proposed substances. A draft of the updated SPRP is included as *Attachment D – Spill Prevention and Release Plan.*

The property owner is responsible for implementing and maintaining the SPRP. This includes all spill prevention and response measures for incidents occurring on site.

Per the submitted SPRP, a worst-case discharge scenario evaluation has been included. The facility is designed to manage such an event, with containment capacity for the full volume of a single railcar, which is approximately 29,000 gallons. Storm drain piping on the site is wrapped in Mirafi 150N geotextile fabric, and the drains are protected using Best Management Practices (BMPs), including approved absorbent materials. In the event of a large spill, the outfall from the stormwater retention pond can be sealed. BMPs will be used to block the outfall, retaining stormwater on site and preventing discharge.

Ponderosa Solutions is continuing to coordinate with City staff to update the site-specific Spill Prevention and Emergency Response Plan. These documents will be reviewed by both the City's Fire Department and the Environmental Division of Public Works. Final approval of the Emergency Response Plan must be obtained from the Fire Department prior to any transloading operations involving Jet Fuel and Sustainable Aviation Fuel (SAF). For this request, the facility must comply with the requirements outlined in Chapter 57 of the International Fire Code (IFC), which governs Flammable and Combustible Liquids.

Per the applicant's narrative, this request reflects a continued commitment to safety, environmental compliance, and efficient operations in support of the proposed CUP modification.

Conditional Use Request: Chapter 20 of Title 17 of the Official Code of the City of Great Falls (OCCGF) requires a Conditional Use Permit for land uses that involve the handling of hazardous materials or the emission of potentially offensive odors.
Specifically, Section 17.20.3.060 states:

> *"A permitted land use that emits air contaminants or potentially offensive odors outside of the building, or that handles radioactive materials, hazardous substances, hazardous waste, or regulated substances shall be considered a conditional use in every circumstance."*

Under this provision, the original CUP was required for Ponderosa Solutions LLC to handle asphalt containing Hydrogen Sulfide. Due to the proposed handling of additional hazardous materials, a modification to the existing CUP is required.

Staff from various departments, including Fire Rescue staff, have reviewed the proposal and found that this amendment is a reasonable modification of the 2024 CUP. Staff recommends several conditions to ensure that current safety measures are in place. As a part of this evaluation, particular attention was given to the types of chemicals involved, their associated hazards, and the mitigation strategies required to address potential risk.

The proposed handling of Diesel #2 Ultra Low Sulf, RD99LC, RJ 100 (SPK-HEFA), and Unleaded Gasoline is classified as flammable liquid vapor and requires personal protective equipment such as protective gloves, eye and/or face protection, and flame-resistant clothing. In the event of a fire, extinguishing measures should be used by dry chemical, CO2, water spray (fog), or foam. These products are not intended to be stored on-site. For detailed information on handling and storage, please refer to the Safety Data Sheet provided in *Attachment D: Spill Prevention and Release Plan.*

The basis for decision for a conditional use permit is listed in OCCGF §17.16.36.040. The Zoning Commission's recommendation and the City Commission's decision to approve, conditionally approve, or deny an application shall be based on whether the application, staff report, public hearing, Zoning Commission recommendation, or additional information demonstrates that the decision of the City Commission shall at a minimum consider the criteria which are attached as *Attachment A - Basis of Decision: Conditional Use.*

2013 Growth Policy Update Analysis: Staff has reviewed the City's 2013 Growth Policy Update and has determined that the proposed conditional use to allow the handling of jet fuel and sustainable aviation fuel as part of the transloading facility is consistent with the City's long-term objectives.

The Growth Policy includes several guiding statements that support the proposed use. Notably:

- Page 155 outlines an economic policy to "*develop a strategic response to the impacts and opportunities offered by oil and gas development in the region."*
- Page 146 states an environmental policy goal to "*maintain a clean, healthy, vibrant, connected, and safe City now and into the future."*

These policies reflect the City's intent to balance economic opportunity with environmental stewardship, aligning with the nature and scope of the proposed project.

Neighborhood Council Input: The subject property is located within Neighborhood Council #4. Information regarding the Conditional Use Permit (CUP) proposal was presented at the Council's meeting on August 28, 2025. Representatives from Ponderosa Solutions provided an overview of their day-to-day operations and detailed the safety measures currently in place. The Ponderosa staff representative noted that, to date, the facility has transloaded over 20 million gallons of asphalt, with only one spill incident recorded, totaling 18 gallons. The incident was promptly contained, and the company has since continued to update its spill response plan to align with evolving operational practices. Following the presentation and discussion, the Neighborhood Council voted 4-0 in favor of recommending approval of amending the CUP to include Jet Fuel and Sustainable Aviation Fuel.

Concurrences: Representatives from the City's Public Works and Fire Departments have been involved with the review process of this application. All comments have been taken into consideration for the recommendation and conditions of the project.

Fiscal Impact: Approval of the Conditional Use Permit will allow the applicant to continue their current operations and add product to their transloading operations.

Staff Recommendation: Staff recommends approval of the amendment to the Conditional Use Permit with the following conditions:

Conditions of Approval:

1. **Subsequent Modifications:** Any future expansion or modification of the approved conditional use must be reviewed by the Director of the Planning and Community Development Department. If the Director determines in writing that the proposed change would alter one more of the original findings or review criteria, the modification shall require submittal and approval of a new Conditional Use Permit application.

2. **Regulatory Compliance:** The facility shall comply with all applicable federal, state, and local regulations governing the storages, use, transport, and disposal of the approved hazardous substances, including but not limited to, requirements established by the Environmental Protection Agency, Occupational Safety and Health Administration, Department of Transportation, the State Department of Environmental Quality, the International Fire Code, and all relevant provisions of the City of Great Falls Municipal Code.

3. **Expiration:** The conditional use permit shall expire one (1) year after the date of issuance unless substantial work has commenced under the permit and continues in good faith to completion.

4. **Abandonment:** If a conditional use ceases to operate for more than six (6) months, the conditional use permit is void.

5. **Hazardous substance, material, and/or Chemicals:** This approval specifically authorizes the applicant to handle the following hazardous substances, as described in the application materials: Diesel #2 Ultra Low Sulfur, RD99LC (renewable diesel), Sustainable Aviation Fuel (RJ100/SPK-HEFA), and Unleaded gasoline. The use, storage, or handling of any additional hazardous substances, materials, chemicals, or fuel types not expressly listed in this or any prior City approvals shall be prohibited unless and until the Conditional Use Permit is amended through a new public review and permitting process, with final approval granted by the City Commission.

6. **Emergency Management Plan:** An Emergency Management Plan shall be updated and approved by the Great Falls Fire Department prior to the implementation of any amendment authorizing the handling of additional hazardous substances. The plan shall be reviewed annually in conjunction with the applicant's Safety Inspection Certificate (SIC) and revised as necessary to maintain compliance with the City's adopted fire code and all other applicable regulations.

7. **Spill Prevention and Control Plan:** The applicant shall review and update, if necessary, the Spill Prevention and Control Plan, in accordance with the requirements under OCCGF 13.12.080.G.3, to the Director of Public Works for review and approval before the requested operations can take place.

8. **Industrial Wastewater Survey:** The applicant shall provide an updated Industrial Wastewater Survey to the Director of Public Works for review and approval as product inventory changes.

9. **Acceptance of Conditions:** The amendment will not go into effect until the applicant acknowledges in writing that it has received, understands, and agrees to comply with these conditions of approval.

Alternatives: The Zoning Commission could deny the conditional use permit requested by the applicant. For this action, the Zoning Commission must provide an alternative Basis of Decision to support a denial of the request.

Attachments/Exhibits:

- Attachment A – Basis of Decision: Conditional Use Permit
- Attachment B – Location and Zoning Map
- Attachment C – Applicant's Narrative
- Attachment D – Spill Prevention and Release Plan

ATTACHMENT A

CONDITIONAL USE PERMIT - BASIS OF DECISION

The applicant is requesting the approval of an amendment to an existing Conditional Use Permit (CUP) for Ponderosa Solutions LLC located at 6501 18th Ave N to allow handling of a hazardous substance's, Diesel #2 Ultra Low Sulfur, RD99LC (Renewable diesel), Sustainable Aviation Fuel (RJ100/SPK-HEFA), and Unleaded gasoline.

PRIMARY REVIEW CRITERIA:

The basis for decision for a conditional use permit is listed in OCCGF §17.16.36.040. The Zoning Commission's recommendation and the City Commission's decision to approve, conditionally approve, or deny an application shall be based on whether the application, staff report, public hearing, Zoning Commission recommendation, or additional information demonstrates that the decision of the City Commission shall, at a minimum, consider the following criteria:

1. **The zoning and conditional use is consistent with the City's Growth Policy and applicable neighborhood plans, if any.**

   The proposed conditional use is consistent with the overall intent and purpose of the 2013 City of Great Falls Growth Policy Update. This project and amendment is strongly supported by the following Environmental, Economic, and Physical portions of the Growth Policy.

   Environmental Policy 2.4 (page 146): Maintain a clean, healthy, vibrant, connected and safe City now and into the future.

   Economic Policy 3.2 (page 155): Develop a strategic response to the impacts and opportunities offered by oil and gas development in the region.

   Physical Policy 4.2 (page 168): Implement the City's land use codes to protect the health, safety and welfare of its residents.

   Physical Policy 4.6 (page 173): Plan, manage and coordinate the City's emergency response consistent with the state and local requirements.

   - Phy4.6.1 (page 173): Identify and review potential areas where there may be future conflicts between wild lands and urban areas.

2. **The establishment, maintenance, or operation of the conditional use will not be detrimental to, or endanger the health, safety, morals, comfort or general welfare.**

   The Conditions of Approval imposed on the permit include spill prevention measures, emergency response plans, and regular inspections to ensure ongoing compliance. These conditions are specifically designed to protect the health, safety, and general welfare of the public.

ATTACHMENT A

3. **The conditional use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood.**

   The subject property is located within an established industrial park specifically designed to accommodate heavy industrial uses, including operations involving hazardous substances. Surrounding properties are similarly zoned and developed for industrial activities, ensuring land use compatibility. The project will comply with all applicable local, state, and federal regulations related to the handling and storage of hazardous materials, including oversight from environmental and safety agencies. These regulations require strict containment measures, spill prevention protocols, and regular inspections, ensuring that operations are conducted safely and without impact to adjacent properties. The Conditions of Approval should mitigate any potential harmful effects on Giant Springs State Park and nearby environmentally sensitive areas.

4. **The conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.**

   The modification will allow the handling of additional hazardous substances related to jet fuel and sustainable aviation fuel. The conditions of approval are specifically designed to mitigate any potential impacts on surrounding properties and to ensure that future development in the area can continue in a normal and orderly manner consistent with the district's permitted uses.

5. **Adequate utilities, access roads, drainage and/or necessary facilities have been or are being provided.**

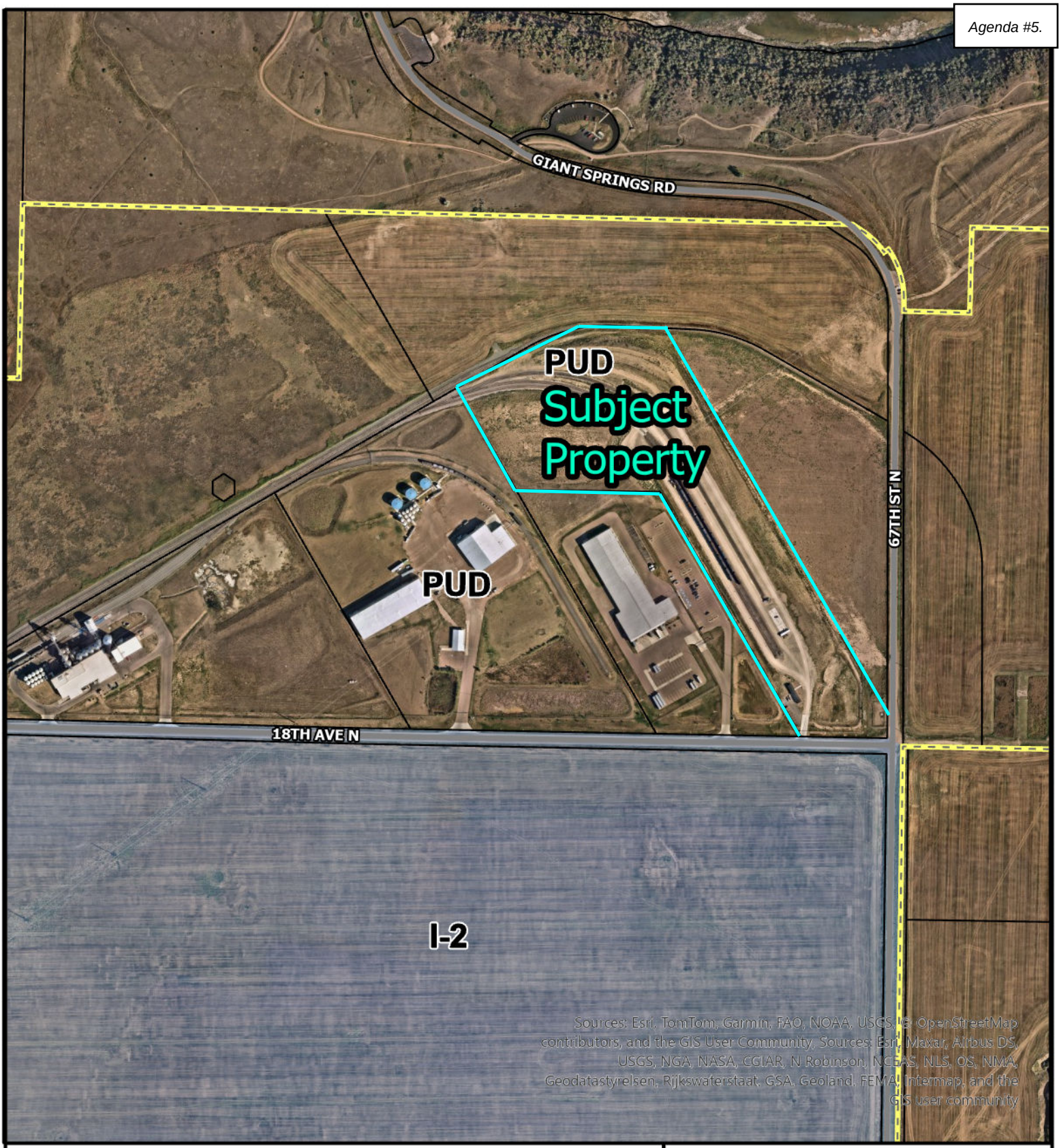
   The proposed modification does not require the construction of new infrastructure. The existing facility was developed through the City's permitting process and has received a Certificate of Occupancy, confirming that all required utilities, access roads, and drainage systems have been adequately addressed and approved.

6. **Adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.**

   The facility will utilize existing access points, including the rail line to the north and vehicular access from 18th Avenue North. These established routes are sufficient to accommodate anticipated traffic and help minimize congestion on surrounding public streets.

7. **The conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located, except as such regulations may, in each instance, be** modified **by the City Commission.**

   The proposed modification will comply with all applicable regulations outlined in the PUD Ordinance 3097 and the underlying I-2 zoning district, as well as all relevant codes and ordinances of the City of Great Falls, the State of Montana, and any other applicable regulatory agencies.



Location Map

CITY OF GREAT FALLS MONTANA

6501 18th Ave N

City Addresses
City Limit
Parcels

N

0 305 610 1,

Feet

Project Narrative

Ponderosa Solutions – Great Falls, MT Transloading Facility

Ponderosa Solutions operates a transloading facility in northeast Great Falls, MT, designed to safely transfer products such as asphalt, aviation fuel, diesel, and fertilizer from railcars to tanker trucks and tanker trucks to railcars for distribution. Currently the facility is only transloading asphalt but is requesting the addition of sustainable aviation fuel, diesel fuel, gasoline, and a dry chemical fertilizer. The facility manages significant volumes of materials each year, with safety and efficiency as top priorities. All transfer operations go through a hazard risk analysis process to identify and mitigate hazards.

The facility consists of newly constructed straight-line unit train tracks (Tracks A–E), each ranging from approximately 625 to 800 linear feet. PS utilizes designated transloading areas, approximately 575–625 feet in length, situated along access roads adjacent to the tracks. Using company-owned portable pumping systems, PS conducts all product transfer operations via top-loading methods, reducing the potential for spills associated with bottom-loading techniques.

Products handled at the facility include asphalt (up to 125,000 tons annually), sustainable aviation fuel (RJ100) Jet A (RD99LC), diesel fuel (RD99LC), and dry chemical pellet fertilizer (up to 18,000 tons annually). Ponderosa anticipates volumes of Jet A, diesel fuel, and gasolines to not exceed 130,000 barrels annually combined.

To protect the surrounding environment, the facility was designed with a stormwater management system that includes berms, ditches, and a retention pond. These features help direct and capture water on-site for inspection before it leaves the property. Ponderosa Solutions has developed a Spill Plan with the new product additions to ensure preparedness in the event of a spill. The plan outlines clear procedures for preventing incidents, responding quickly if one occurs, and coordinating with regulatory agencies.

This project represents Ponderosa Solutions' commitment to safe operations, environmental protection, and reliable service.

SPILL PREVENTION AND RELEASE PLAN

Great Falls, Montana
Transloading Site

Submitted for:

Transloading Operations at
18th Ave. N/67th Street NE
Great Falls, MT 59405

Prepared for:

Ponderosa Solutions
1014 E Cleveland Avenue
Sapulpa, OK 74066

Prepared by:

Olympus Technical Services
6809 King Avenue West, Unit F
Billings, Montana 59106

August 15, 2025

Olympus WO# C3096

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APPENDICES

1.0 Introduction

This Spill Prevention and Response Plan (SPRP) has been prepared for Ponderosa Solutions (PS) for its transloading activities at the Great Falls, MT transloading facility (Site), utilizing straight line sections of railroad track at PS's facility. PS's responsibilities under this plan shall only be applicable when PS and its contractors are using the Site to transload asphalt and other products from tanker trucks to railroad tank cars. The Site's location is depicted in Figure 1 (Topographic Map) and Figure 2 (Aerial Photograph). A map showing the Site Features is attached in Figure 3, and a zoomed view of the Site Features is in Figure 4. The figures and construction drawings are provided in Appendix A of this Plan.

This SPRP presents the procedures and controls used to prevent and respond to spills by PS during their transloading operations at the Site. As required, the SPRP also identifies the "worst case discharge" and the activities that will be undertaken at the maximum extent practicable to address the spill. Any spill prevention and response plan or permits required for the Site will be the responsibility of the Owner of the property on which the Site is located. In the case of a spill at the Site that involves PS's transloading operation, PS will respond and report to appropriate government agencies.

2.0 General Operational Information

2.1 Facility Description and Location

The Site is located near the intersection of 67th Street N and 18th Avenue N, in northeast Great Falls, MT, at approximate latitude 47.526132 degrees North and longitude -111.201147 degrees West, Montana principal meridian. The Site provides infrastructure to, among other things, transfer petroleum products from tanker trucks to railroad cars. Products transloaded at this Site include asphalt not to exceed 125,000 tons annually, sustainable aviation fuel (RJ100), Jet A (RD99LC), and diesel fuel (RD99LC) not to exceed 131,000 barrels annually, and dry chemical pellet fertilizer not to exceed 18,000 tons annually. PS's transloading area(s) are stationed tangential to newly constructed unit train straight tracks, identified as Tracks A, B, C, D, and E, each with straight track lengths ranging from approximately 625 to 800 linear feet of rail track, and generally oriented northwest-southeast. PS will utilize transloading areas ranging from approximately 575 to 625 feet long adjacent to the spurs located within the central portion of the Site. The spur-adjacent transloading regions are located on access roads on either side of the straight track lengths where the transloading operations take place. Following the transloading, the railroad tank cars are pulled by the POC and delivered to a line-haul railroad. The location of the Site is shown in Figure 1. The portion of the transload area used by PS is shown in Figures 2 through 4.

Regional topography near the Site slopes gently to the east-northeast, although the Site is relatively flat. The Site is sparsely developed, with industrial and commercial properties to the west. Agricultural fields surround the Site to the east and south, and undeveloped property to the north and northwest sides. The nearest perennial surface water bodies include the Missouri River, located approximately 400 feet to the north of the Site, and a small creek, located approximately 750 feet to the southeast of the Site. The construction drawings indicate that topsoil berms and diversion ditches surround the Site, and water is diverted through the ditches to a main stormwater settling pond constructed at the Site's southeast corner. Storm drains are installed in the Site's interior, conveying water through perforated piping from two upgradient

stormwater ponds at the northwest end of the Site towards the southeast and connecting to the ditches through culverts. A culvert is utilized to convey water from the western ditch, underneath the access road, and into the stormwater pond. Both ditches have splash pads constructed at the outflow ends into the stormwater pond, and a splash pad has been built downgradient of the main stormwater pond's outfall. The ditches have been revegetated with wetland seed mix at the bottoms of the swales and dryland seed mix along the berm embankments. The Site outfall is adjacent to the southeast corner of the stormwater pond and directs stormwater overflow to the east.

The transport tanker trucks are loaded to a maximum capacity of approximately 22 tons of petroleum product. The rail tank cars have a capacity of roughly 90 tons. The number of daily railroad cars loaded by PS at the Site is variable. When running, the transload volume of asphalt is a variable weight of tons per week. The petroleum product transfer activities are completed by utilizing transloaders, which are portable pumping systems owned by PS. PS will operate the transloaders. Loading is exclusively conducted via top-loading into the rail tank cars. The top-loading prevents potential drippage/spillage from the under-car loading.

3.0 Discharge Prevention Requirements

3.1 Transloading Operation Procedures

PS's primary operation under this SPRP is transferring asphalt from transport tanker trucks to rail tank cars, although other hydrocarbon materials may be transferred. The work is performed in general accordance with the *Ponderosa Solutions Transload Operations* Standard Operating Procedure (2024), provided in Appendix B. The procedure guides transloader inspection and startup, rail tank car preloading, rail tank car loading, and shutdown.

Before transferring products into rail tank cars, the transloader operator must complete a Site Operation Checklist, also provided in Appendix B. Only qualified PS personnel, or subcontracted personnel deemed qualified by PS, may operate the transloading truck and pump. The final location of stormwater drains, culvert, and the Site's stormwater outfall are presumed to be in the locations indicated on the construction drawings. The transloading equipment may be placed in various locations along the track straight lines, so it is recommended that the transloader operator walk the site to familiarize themselves with the location of these areas relative to their operational location.

3.2 Spill Prevention Measures

Spill scenarios that could result in a one-minute discharge of oil during transloading operations include, but are not limited to:

- Cracked fitting or gasket failure at transloader connection (50 gallons),
- Leaking valve packing on transfer pump (1-6,000 gallons at 1 gallon per minute [gpm] flow rate)
- Hose failure (1-6,000 gallons at 240 gpm flow rate)
- Tank truck failure caused by a collapse or puncture below product level (6,000 gallons at gradual to instantaneous flow rate)
- Rail car failure caused by collapse or puncture below product level (up to 29,000 gallons at a gradual to instantaneous flow rate); or,

- Overfilling a railcar (1 to 29,000 gallons at a gradual to instantaneous flow rate).

These spills would generally be a result of inattentive operators or faulty equipment. Equipment is inspected for issues before transfer operations utilizing the Loading and Inspection Report located in Appendix B.

The potential spill released from the tanker truck to the transloader connection is estimated at 50 gallons. The primary consideration in this estimate is that all welded pipe or heavy rubber pipe is used for transfer activities. Durable piping systems are typically resistant to rupture-type failures, especially if the tanker, transloader, and rail cars are secured with locked brakes and wheel chocks. A minor movement or high-pressure scenario could potentially crack a fitting, but the weakest point would likely be a gasket between flanges or fittings. A fitting or gasket crack would release a minimal product flow. Therefore, the scenario of a spill released from the tanker truck would be approximately 50 gallons.

A potential spill from the railroad car overfill is estimated to be 400 gallons. This would occur in the event of a product discharge that occurs over the course of one minute until the transfer systems can be shut down, either manually or automatically. Portable spill containers are placed beneath the railroad car to contain potential spills. The portable spill containers will be sufficiently sized to contain the potential spill during transfer activities. Spill response measures for a worst-case discharge spill are discussed in Section 5.0 of this plan.

The transloading procedures laid out in Section 3.1 are designed to prevent spills. Additionally, the equipment used in the transloading and the preventative measures in place greatly limit the likelihood of a significant spill. Before transloading any product, the rail car is visually inspected to ensure it is empty. PS does not allow tanker truckloads to be split. Specifically, PS has calculated that the volume of 4 tanker trucks is less than that of the rail cars they fill. The internal PS transloading policy is to transload four tanker trucks per rail car, leaving some empty space in the rail car.

The transloaders are generally equipped with a pump, 4-inch-diameter lines, a 4-inch-diameter OPW loading arm, and a 25-horsepower electric motor (the pump is electronically heat traced). Hoses are not under pressure except for the unloading hose running from the rear of the tanker back into the pump. Spill containers consisting of 25-gallon pans are placed underneath the hose connections running from the back of the trailer to catch drips when the unloading hose is disconnected from the truck and in case of a leaking valve or connection.

In the event of a more significant spill, Olympus Technical Services, Inc. (Olympus) will assist in the response. The inlet will be plugged immediately if a spill occurs around a stormwater outfall. Protective Best Management Practices (BMPs) should be immediately installed at the outlet of the outfall. There is one stormwater outfall at the Site, and it appears that stormwater runoff will generally be contained on Site due to Site grading and infrastructure and conveyed to the stormwater settling pond through constructed drainage ditches. As noted in Section 3.1, potential stormwater outfalls, drains, culverts, and the presumed direction of surface flow of fluids should be identified before transloading activities commence.

4.0 Spill Response Procedures

4.1 Notification

In the event of a spill during transloading operations, the on-site PS personnel have full authority to notify the spill responder, Olympus, and report the release to appropriate government agencies.

4.2 Emergency Contacts

Table 1 summarizes the individuals who may be contacted in the event of a release. Individuals listed as PS contacts have the full authority to implement response actions in the event of a discharge.

Table 1. Emergency Contacts

Company/ Agency	Contact	Role	Primary Phone	When to Contact
Ponderosa Solutions	Joe Rogers	Operations Supervisor	918-404-7603	*Immediately for all spills.*
	Sean Lett	Vice President	303-472-4070	
	Dillon Rind	HSE Manager	918-404-3068	
Olympus Technical Services	On-call Services	Spill Response Contractor	406-443-3087	*Immediately for major spills that are greater than 25 gallons.*
	John Driscoll	Response Manager	406-438-3225	
Montana DEQ (MDEQ) Enforcement Division (ENFD)	24-Hour Spill Reporting	Agency Notification	406-444-0379 406-324-4777 (On-call)	*You must contact a live person within 24 hours of spills over 25 gallons, spills affecting surface water, or spills that require an immediate emergency response.*
	Disaster and Emergency Services (DES)	Agency Notification	406-324-4777 (24-hr On Call)	
U.S. EPA National Response Center (NRC)	On-call operator	Agency Notification	800-424-8802	*Immediately for a release of any hazardous substance over the reportable quantity listed in 40 CFR 302 (typically 100 pounds for unlisted substances).*
U.S. EPA Regional Administrator	Dispatcher	Agency Notification	800-887-6063	*Within 60 days of spill.*
Fire, Police, Medical	Dispatcher	Government Services	911	*Immediately, if any immediate threat to life or health results from a spill.*
Poison Control	Dispatcher	Government Services	800-222-1222	*Immediately, if any immediate threat to life or health results from a spill.*

The following types of spills **must** be reported per the Montana Department of Environmental Quality (MDEQ)'s *Spill Management and Reporting Policy*:

- Releases or spills of hazardous substances in amounts that meet or exceed the reportable quantities in 40 CFR Part 302.
- Spills, overfills, and suspected releases from underground storage tanks and petroleum storage tanks. ARM 17.56.501, et seq.
- Releases or spills of any materials that would lower the quality of groundwater below water quality standards. ARM 17.30.1045

The following types of spills **should** be reported per MDEQ's *Spill Management and Reporting Policy*:

- Spills that enter or may enter state water or a drainage that leads directly to surface water;
- Spills that cause sludge or emulsion beneath the surface of the water, stream banks or shorelines;
- Spills that cause a film, "sheen," or change the color of the water, stream banks, or shorelines; or
- Spills of twenty-five (25) gallons or more of any petroleum product such as crude oil, gasoline, diesel fuel, aviation fuel, asphalt, road oil, kerosene, fuel oil; produced water, injection water, salt water, or a combination thereof; and derivatives of mineral, animal, or vegetable oils.

MDEQ must be notified within 24 hours of a release being detected from regulated aboveground storage tanks (ASTs), underground storage tanks (USTs), or petroleum storage tanks (PSTs). ASTs and USTs are not expected to be located at the Site. Petroleum releases less than 25 gallons in volume must be contained and cleaned up within 24 hours. If cleanup cannot be completed within 24 hours, owners and operators must report the release to DEQ. Note that MDEQ requires contacting a live person to report releases. A voicemail is not considered adequate notification. The *Spill Management and Reporting Policy* is included in Appendix C.

4.3 Communication and Command Relationships

In the case of any size spill at the Site, the first responder will be PS on-Site staff. If the spill is significant enough to warrant, Olympus, the emergency response contractor for PS, will be called and mobilized to the Site to assist with the response. Depending on the size of the spill, guidance from local, state, and federal regulators will be solicited before making significant decisions during the spill response activities.

4.4 Response Procedures

In the event of a spill during PS's transloading operation at the Site, the following response procedures will be implemented, as appropriate, by the on-site PS personnel upon discovery of the spill:

- Act quickly to terminate product transfer between tanker truck and railroad car. If possible, safely attempt to stop additional discharge from the container, piping, hose, or other source. Use emergency shut-off if available.

- Shut off ignition sources, such as open flames, motors, electrical circuits, etc., that could initiate a fire near the spilled product.
- Take steps to prevent migration of the discharged material as quickly and safely as conditions warrant. If necessary, construct a soil berm or containment pits to retard flow, place booms or other barriers to cut off flow to a storm drain, etc.
- If a release is near a stormwater ditch, place booms or construct an earthen berm in the ditch downgradient of the release, including a secondary protective measure before the culvert and splash pads.
- Contact the designated authority for emergency response as identified.
- When necessary, the designated authority for emergency response will retain Olympus to clean up and dispose of the discharged product.
- The designated authority for emergency response will report the discharge to the appropriate authorities. If a spill requires an immediate emergency response, first contact the MDEQ, then follow up with a call to the Montana Disaster and Emergency Services (DES) 24-Hour Spill Reporting hotline. Any spill greater than 25 gallons or that impacts surface water must be reported to the MDEQ. Notification to the National Response Center (NRC) may also be required.

For spills of fuel greater than 25 gallons, spills that have impacted surface water, or spills with a potential threat to human health or the environment, the MDEQ must be notified immediately. Information that must be provided includes:

- Name, phone number, and address of the person responsible for a spill;
- Name, title, and phone number of the individual reporting the spill;
- Time and date of the spill;
- Spill location – including nearest city, highway, or waterway;
- Amount and description of material spilled;
- Cause of the spill; and,
- Action taken to minimize threats to human health and the environment.

A follow-up report must be submitted to MDEQ within 30 days of the release or as indicated by MDEQ.

4.5 Spill Kit

The following spill equipment is listed as recommended materials and equipment and is to be kept next to the transloading area:

General spill kit, including the following (at a minimum);

- Three bales of absorbent pads;
- Three 20-foot sections of 8-inch-diameter absorbent boom, a total of 60 feet;
- Ten (10), 4-foot sections of 3-inch-diameter absorbent boom, a total of 40 feet;
- Five 50-pound sacks of sand, diatomaceous earth, or similar;
- Three, 55-gallon drums;
- Yellow caution tape and wood lathe or construction candles, or pin flags to delineate the spill area;
- Five 5-gallon buckets and lids;
- Five rolls of duct tape;
- Two rolls of Visqueen plastic sheeting (150 feet x 15 feet or similar)
- Shovels (4) and rakes (4); and,

- Hoses/fittings to unload a railroad car in case of a leak.

Many of the items for this spill kit may be kept inside the drums for safe storage and protection from weather. Note: These materials and equipment are recommended to allow for a response to the most common spills, generally up to approximately 400 gallons, and may not be adequate for larger spills.

In the event of a more significant spill, Olympus will assist in cleanup and response utilizing heavy equipment. Sand and other sorbent materials will be available, and heavy equipment will be mobilized for use in the excavation of containment pits or berm construction should a significant spill not be captured by the spill containers. The product transloaded by the Site is liquid asphalt. Asphalt products are highly viscous and require heating before pumping. The highly viscous products are, by nature, relatively immobile. The spill kit is sufficient to address a low-magnitude spill. Product transfer activities at the Site are constantly monitored by Site personnel, and the Site is operated 24 hours per day, seven days per week. Therefore, if a minor spill occurs at the Facility, appropriate personnel on-site during the spill are prepared to clean up the spilled product.

5.0 Worst Case Discharge Scenario Evaluation

Response actions to a spill (e.g., necessary response equipment and personnel) depend on the magnitude of the spill and product released. Planning for smaller discharges is necessary because the nature of the response may be qualitatively different depending on the discharge quantity. Spill scenarios that were more applicable to PS transloading operations are discussed in further detail in Section 3.2. This section discusses a worst-case discharge of petroleum products or hazardous substances during transloading operations.

A worst-case discharge under this SPRP is considered the loss of the capacity of the entire contents of a vessel in weather conditions that impede cleanup. Thus, the hypothetical worst-case discharge scenario for PS transloading operations would be the loss of an entire rail car volume (29,000 gallons). This scenario is considered unlikely and could only occur from 1) a catastrophic failure of the rail car vessel or 2) a natural disaster.

If a Worst-Case Discharge occurs, the notification procedures listed in Section 4.2 will be initiated. On-site personnel will assess the conditions and hazards to ensure the response plan can be safely conducted. A spill should be approached from an upwind direction and air monitoring should be performed. The leak should be plugged, if possible, without risk. Generally, the transload area is relatively flat. Storm drainage will be constructed to typically flow towards either the west or eastern sides into drainage ditches, then to flow to the southeast at the transloading area. If the spill occurs near a storm drain, the inlet will be plugged immediately, and protective BMPs shall be installed at the outlet. BMPs to plug the inlet/outlets include sorbent booms and inert/non-combustible absorbent material (e.g., sand, vermiculite, diatomaceous earth, or soil lined with plastic sheeting).

The storm drains along the interior of the Site are constructed with perforated piping surrounded by walkway ballast and “burrito wrapped” with Mirafi 150N. In the event of a release or spill, the areas of these drains should be protected with BMPs, including boom or earthen berms and absorbent materials.

Protective BMPs shall be installed along the stormwater conveyance lines before they reach the stormwater pond. As an additional safety measure, the outfall from the stormwater pond shall be plugged with BMPs.

PS has retained an emergency response contractor (Olympus). The contractor will bring containers and pumps to capture and contain pooled liquid.

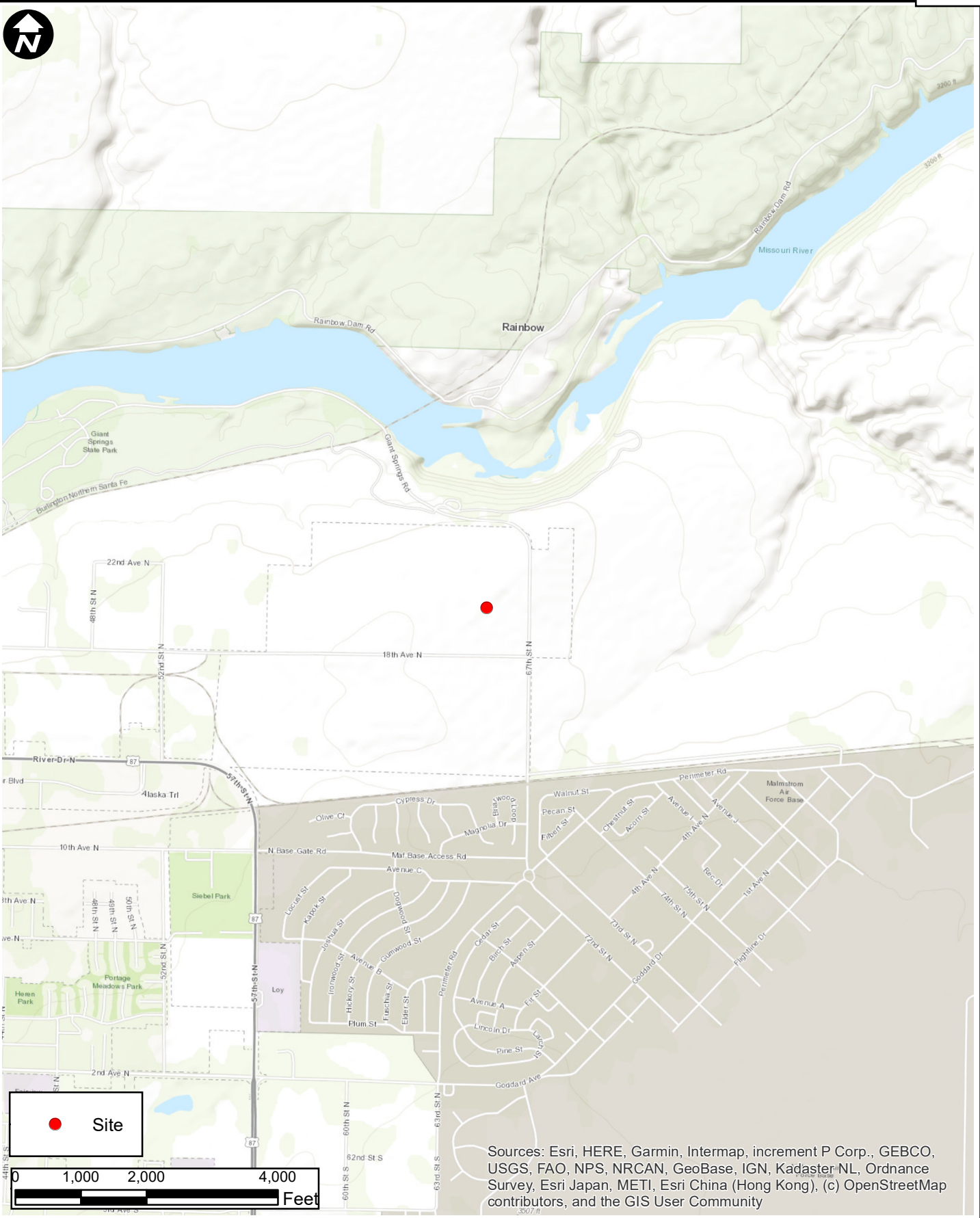
If contaminated soil or waste must be stored on-site, it must be done according to Federal, State, and Municipal laws and regulations. Containers must be stored upright and clearly labeled, and secondary containment must be utilized to avoid environmental contamination.

Heavily impacted soil will be scraped from the surface and deposited within a constructed area(s) contained by a berm. The soil will be covered to prevent the collection of rainwater. Depending on the size of the released spill, large-scale excavation of contaminated soil may be required. Semi-trucks with side/end-dump trailers and trailer tarp covers will be loaded with contaminated soil, and roll-off boxes will be brought to the site to contain the impacted soils during off-site transport. Depending on the distance to a suitable disposal site, impacted soil may also be elected to be loaded directly into rail cars for hauling. Based upon their characterization, the soil will be taken off-site for treatment or disposal. Characterization of waste will vary depending on the selected location for disposal. The closest landfill likely to accept waste of this nature is the High Plains Landfill in Floweree, MT, approximately 13 miles northeast of Great Falls.

Following clean-up activities, PS will contract with an environmental consultant to conduct an environmental assessment to determine the extent of remaining soil and water impacts and develop and implement a corrective action plan for any remaining contamination. All monitoring data and a summary of cleanup activities will be compiled in a report submitted to MDEQ. Olympus can be retained to complete these tasks if desired after release and spill cleanup.

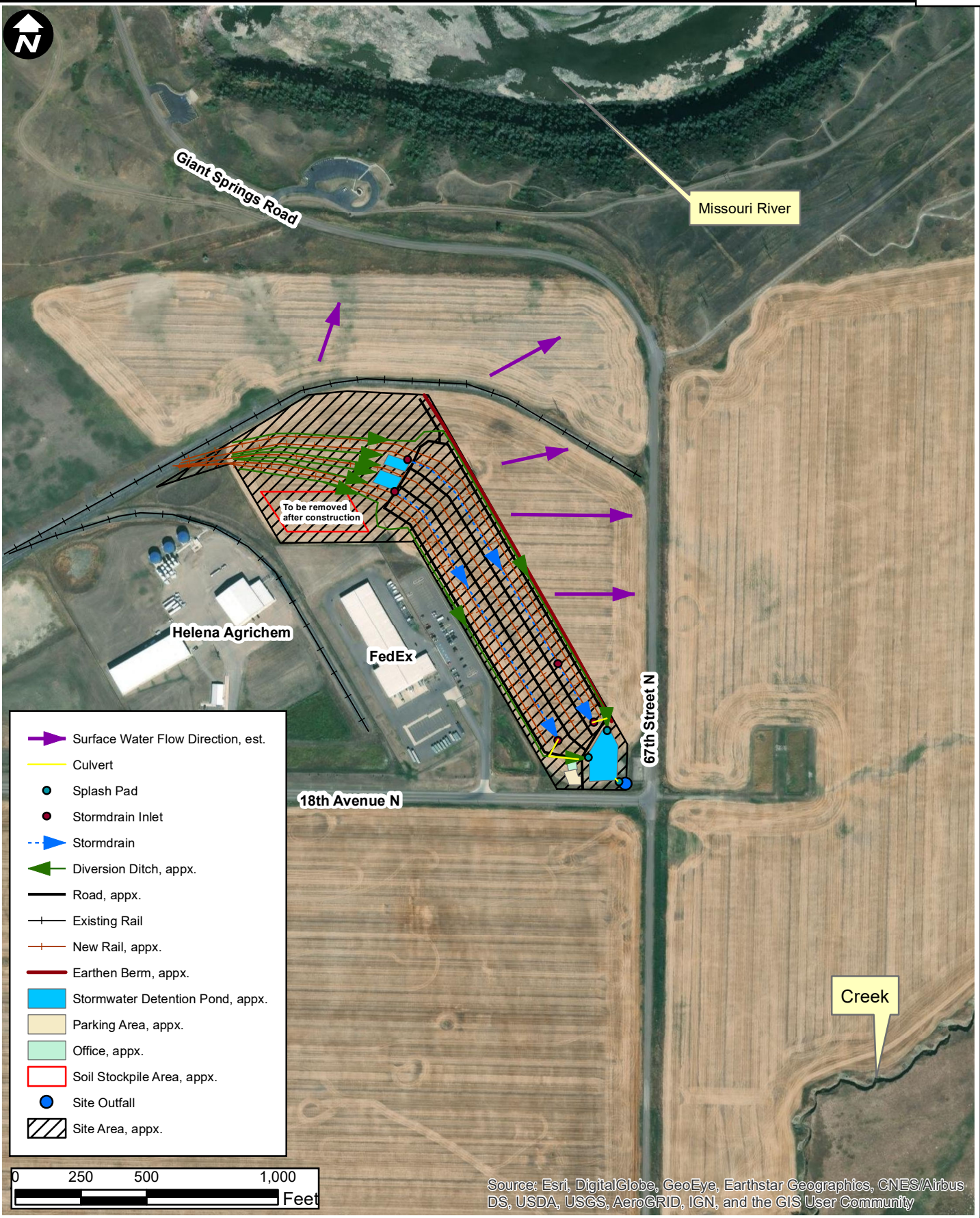
APPENDIX A:

SITE FIGURES

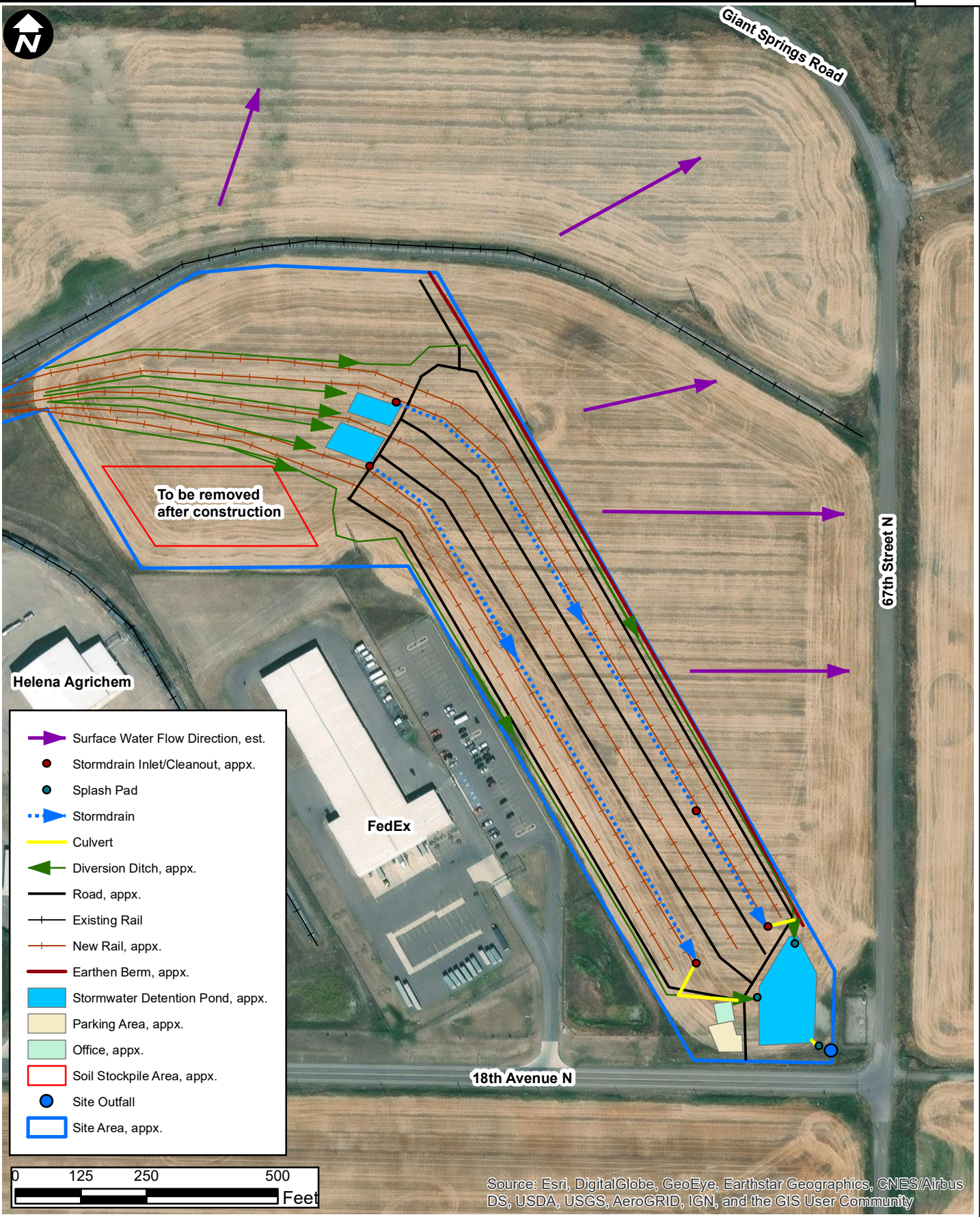


Olympus Technical Services, Inc.	Topographic Map	FIGURE 1

Olympus Technical Services, Inc.	Aerial Photograph	FIGURE 2



Olympus Technical Services, Inc.	Site Features	FIGURE 3



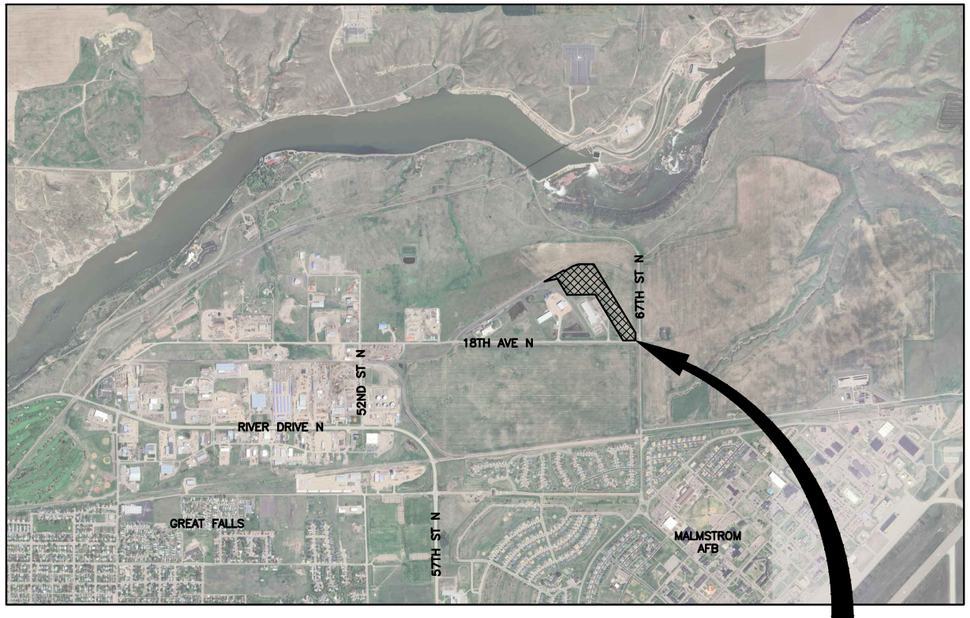
Olympus Technical Services, Inc.	Site Features (Zoom)	FIGURE 4

CONSTRUCTION DRAWINGS FOR
PONDEROSA GREAT FALLS TRANSLOAD
BID PACKAGE #1
GREAT FALLS, MT
MARCH, 2024

PROJECT LOCATION

VICINITY MAP

SHEET INDEX



VICINITY MAP

PROJECT LOCATION

BUILDING PERMIT REVIEW SET

JOHN P. JURAS 9957 PE REGISTERED PROFESSIONAL ENGINEER

REV	DATE	REVISION

TD&H Engineering
406.761.3010 • tdhengineering.com
1800 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

DRAWN BY:	CDF
DESIGNED BY:	CDF
QUALITY CHECK:	JPJ
DATE:	03/12/2024
JOB NO.	23-059
FIELDBOOK	

PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

COVER, SHEET INDEX, & VICINITY MAP

23-059

SHEET C1.0

GENERAL NOTES

1. ALL WORK TO BE COMPLETED IN ACCORDANCE WITH "BNSF RAILWAY COMPANY SPECIFICATIONS FOR CONSTRUCTION OF INDUSTRIAL TRACKAGE BY PRIVATE CONTRACTOR" AND "REQUIREMENTS FOR CONTRACTORS WORKING ON BNSF RIGHT-OF-WAY." ALL EXCEPTIONS MUST BE IN WRITING.
2. PROTECT ALL UTILITIES WHETHER SHOWN ON THE PLAN OR NOT.
3. NOTIFY ALL UTILITIES AND THE UTILITIES UNDERGROUND LOCATION CENTER (800) 424-5555 WHEN CONSTRUCTION WORK BEGINS AND TO ARRANGE FOR A REPRESENTATIVE OF THE UTILITY TO BE PRESENT IF THE CONTRACTOR'S OPERATIONS ARE IN CLOSE PROXIMITY TO ANY LINES IN THEIR EXISTING OR RELOCATED POSITION WHICH COULD CREATE A HAZARDOUS CONDITION. ALL CLEARANCES OR DEPTHS PROVIDED FOR UTILITIES ARE FROM THE EXISTING GROUND LINE AND ARE APPROXIMATE.
4. THERE SHALL BE NO 'STANDING WATER' IN TRACK DITCHES BETWEEN CULVERTS, AT ROAD CROSSINGS, OR AT CULVERT ENDS. 'POSITIVE DRAINAGE' WILL BE MAINTAINED THROUGHOUT THE LIMITS OF CONSTRUCTION.
5. PROPOSED TRACK SECTION IS BASED ON WOOD TIES AT 21.5" CENTERS. RAIL CONTRACTOR BASE BID SHALL BE BASED ON THIS SECTION WITH WOOD TIES. UNLESS OTHERWISE NOTED.
6. THE OWNER'S REPRESENTATIVE WILL VERIFY THAT GRADING CONTRACTOR ROADBED PREPARATION IS COMPLETE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, INCLUDING A TOPOGRAPHIC SURVEY OF THE PREPARED SUBGRADE AND SUBBALLAST, PRIOR TO THE RAIL CONTRACTOR BEGINNING WORK.

GRADING NOTES

1. CONTRACTOR SHALL CONSTRUCT SUBGRADE OF AREAS RECEIVING SEED TO ALLOW FOR 4" OF TOPSOIL TO BE APPLIED TO MEET THE PROPOSED GRADES.
2. EXCESS TOPSOIL AND EXCAVATED SOIL MAY BE STOCKPILED ON SITE WHERE INDICATED.
3. RETURN ALL DISTURBED AREAS OUTSIDE THE IMPROVEMENT AREA TO PRE-CONSTRUCTION CONDITION OR BETTER.
4. COMPLY WITH THE PROVISIONS OF THE GEOTECH REPORT AND THE DUST DONTROL PLAN.

STORM DRAIN & SANITARY SEWER NOTES

1. ALL GRAVITY SEWER PIPE IS TO BE SDR35 PVC AND MEET ASTM 3034 STANDARDS UNLESS OTHERWISE NOTED ON PLANS.
2. MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION AT CROSSINGS BETWEEN OUTSIDE OF SEWER/STORM DRAIN PIPE AND OUTSIDE OF WATER PIPE.
3. MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL SEPARATION BETWEEN OUTSIDE OF SEWER OR STORM DRAIN PIPE AND OUTSIDE OF WATER PIPE.
4. FIELD VERIFY LINE AND GRADE OF EXISTING CONNECTIONS.
5. EXCAVATE ALL CROSSINGS BETWEEN WATER LINES AND STORM/SEWER LINES PRIOR TO BEGINNING TRENCH EXCAVATION TO ENSURE CROSSING CLEARANCE. NOTIFY ENGINEER AND OWNER OF ANY CONFLICTS.

PAVEMENT NOTES

1. NEW PARKING LOT STRIPING TO BE 4" YELLOW PAINT PER MPWSS SECTION 02581, UNLESS OTHERWISE NOTED ON PLANS. ALL STRIPING ASSOCIATED WITH HANDICAP PARKING SHALL BE 4" BLUE PAINT.
2. ALL CONCRETE AND ASPHALT PAVEMENT SHALL CONFORM TO SPECIFICATIONS.
3. ASPHALT PAVEMENT OVER 3" THICK SHALL BE PLACED IN 2 LIFTS.

CONSTRUCTION PHASING

PROJECT IS SPLIT INTO THREE BID PACKAGES.

1. BID PACKAGE NUMBER ONE (BP #1) INCLUDES:
   - 1.1. TOPSOIL STRIPPING, EXCAVATION, EMBANKMENT, AND SUBGRADE PREPARATION OF ALL BP #1 WORK AREAS, EXCLUDING BP #2 AND BP #3 AS INDICATED ON C3.0.
   - 1.2. INSTALLATION OF ALL SITE UTILITIES EXCEPT THOSE REQUIRED FOR BP #2 AND INCLUDING THOSE REQUIRED FOR BP #3 TEMPORARILY STUBBED TO WITHIN 5 FEET OF BUILDING FOUNDATION LINE OR AS INDICATED ON SHEET C3.1.
   - 1.3. STORMWATER DETENTION FACILITY.
   - 1.4. SITE LIGHTING, POWER CIRCUITS.
   - 1.5. TRACKS C, D, & E COMPLETE.
   - 1.6. CONCRETE ASPHALT AND GRAVEL SURFACING WHERE INDICATED FOR BP #1.
   - 1.7. REVEGETATION OF AREAS DISTURBED BY BP #1.
2. BID PACKAGE NUMBER TWO (BP #2)
   - 2.1. TOPSOIL STRIPPING, EXCAVATION, EMBANKMENT AND SUBGRADE PREPARATION OF ALL BP #2 WORK AREAS.
   - 2.2. INSTALLATION OF TRACKS A & B COMPLETE.
   - 2.3. SITE LIGHTING FOR TRACKS A & B.
   - 2.4. GRAVEL SURFACING WHERE INDICATED FOR BP #2.
   - 2.5. REVEGETATIO OF AREAS DISTURBED BY BP #2.
3. BID PACKAGE NUMBER THREE (BP#3)
   - 3.1. BUILDING CONTRUCTION, COMPLETE.
   - 3.2. LANDSCAPING COMPLETE. EXCEPT FOR SEEDING OF BP #1 & BP #2 AREAS.
   - 3.3. PAVEMENT MARKING AND SIGNS.

SCALING NOTE

DRAWING SHEETS PRINTED FROM ADOBE PDF ELECTRONIC FILES ARE USUALLY NOT TO SCALE. VERIFY PRINTED SHEET SCALES FROM THE BAR SCALES LOCATED ON THE PLAN SHEETS.

UTILITY LOCATION

THE LOCATIONS OF UNDERGROUND UTILITIES REPRESENTED ON THIS DRAWING HAVE BEEN DETERMINED FROM A FIELD SURVEY AND FROM RECORDS OBTAINED FROM THE VARIOUS UTILITY COMPANIES. THE NUMBER AND LOCATIONS OF ALL UNDERGROUND UTILITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL MAKE HIS OWN INVESTIGATION TO OBTAIN THE EXACT INFORMATION NECESSARY TO PROTECT OR ACCESS ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CALL THE FOLLOWING NUMBER FOR ASSISTANCE : 800-424-5555, OR (406-755-8344, OR 800-551-8344 (FLATHEAD AND LINCOLN COUNTIES)).

'CALL BEFORE YOU DIG'

BUILDING PERMIT REVIEW SET

JOHN P. JURAS 9957 PE REGISTERED PROFESSIONAL ENGINEER

REV	DATE	REVISION

TD&H Engineering
406.761.3010 • tdhengineering.com
1800 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

DRAWN BY:	CDF
DESIGNED BY:	CDF
QUALITY CHECK:	JPJ
DATE:	03/12/2024
JOB NO.	23-059
FIELDBOOK	

PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

NOTES

23-059 | 32 | VG

SHEET C1.1

LEGEND

NEW	EXISTING	DESCRIPTION
		ASPHALT PAVEMENT
		BARRIER POST
		BUILDING BOUNDARY
		CLEANOUT (SANITARY SEWER, STORM, ROOF DRAIN, SUB DRAIN)
	BH-X	BOREHOLE (GEOTECH)
		CONCRETE
3345	3345	CONTOUR MAJOR
3345	3345	CONTOUR MINOR
	CP-X	CONTROL POINT (WITH NUMBER)
		CURB BOX/STOP
		CULVERT
		DITCH
		GRAVEL
		ELECTRICAL BOX (DIMENSIONS VARY)
		ELECTRICAL BOX (FLUSH)
		ELECTRICAL OUTLET OR CONDUIT
OE	OE	ELECTRIC (OVERHEAD)
X X	X X X X	FENCE CHAIN LINK
		FIRE HYDRANT
		GAS VALVE
		GATE
		GUY WIRE
		LIGHT POLE
		PAINT STRIPE
		POWER POLE
	P/L	PROPERTY LINE
		RAILROAD TRACKS
		RIPRAP
SS	SS	SANITARY SEWER MAIN
	FM	SANITARY SEWER FORCE MAIN
SS	SS	SANITARY SEWER MANHOLE (RIM)
EL=35XX.XX	1000.00 E 1000.00	SPOT ELEVATIONS (SEE ABBREVIATIONS)
T	T	TELEPHONE RISER
UFO	UFO	UNDERGROUND FIBER OPTIC
		UTILITY EASEMENT LINE
	TBM-X EL=XX	TEMPORARY BENCHMARK (NUM & EL OPTIONAL)
		TRAFFIC SIGN
W	W	WATER
		WATER VALVE

NOTE:

SYMBOLOGY SIZE AND SPACING MAY VARY DUE TO SCALE AND PRESENTATION FACTORS.

ABBREVIATIONS

&	AND	# OR NO.	NUMBER
@	AT	O.S.H.A.	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
BP #1	BID PACKAGE NO. 1		
℄	CENTER LINE	O.C.	ON CENTER
C.O. OR CO	CLEANOUT	PI	POINT OF INTERSECTION
CONC.	CONCRETE	POS	POINT OF SWITCH
CU. FT.	CUBIC FEET	PVC	POLYVINYL CHLORIDE
DEMO	DEMOLITION	P.S.F.	POUNDS PER SQUARE FOOT
ø OR DIA.	DIAMETER	P.S.I.	POUNDS PER SQUARE INCH
EA.	EACH	REQ'D	REQUIRED
E	EAST/EASTING	SCH.	SCHEDULE
EL. OR ELEV.	ELEVATION	SW	SIDEWALK (ELEVATION)
E.O.A.	EDGE OF ASPHALT	SF	SQUARE FEET
EX. OR EXIST	EXISTING	S.Y.	SQUARE YARDS
F.F.	FINISH FLOOR	STA.	STATION
F.L.	FLOW LINE	SWPPP	STORM WATER POLLUTION PREVENTION PLAN
INV	INVERT		
L.F.	LINEAR FEET	T.C.	TOP OF CURB
MAX.	MAXIMUM	(TYP)	TYPICAL
MIN.	MINIMUM	U.N.O.	UNLESS NOTED OTHERWISE
N	NORTH/NORTHING	W/	WITH
N.T.S.	NOT TO SCALE		

SURVEY CONTROL DATA

HORIZONTAL COORDINATES ARE GROUND, INTERNATIONAL FEET, AND WERE PROJECTED WITH SURVEY QUALITY GPS FROM THE TD&H CONTROL POINT #503. TO CONVERT TO MONTANA STATE PLANE COORDINATES, ZONE 2500, MULTIPLY TIMES THE COMBINED SCALE FACTOR OF 0.9992716354, ABOUT AN ORIGIN OF (0,0).

VERTICAL DATUM IS NAVD88 (GEOID18) AND WAS PROJECTED WITH SURVEY QUALITY GPS FROM THE TD&H CONTROL POINT #503.

Point	Northing	Easting	Elevation	Description
503	1200085.508	1549026.283	3432.62	5/8" REBAR WITH "TD&H CONTROL" RPC

BUILDING PERMIT REVIEW SET

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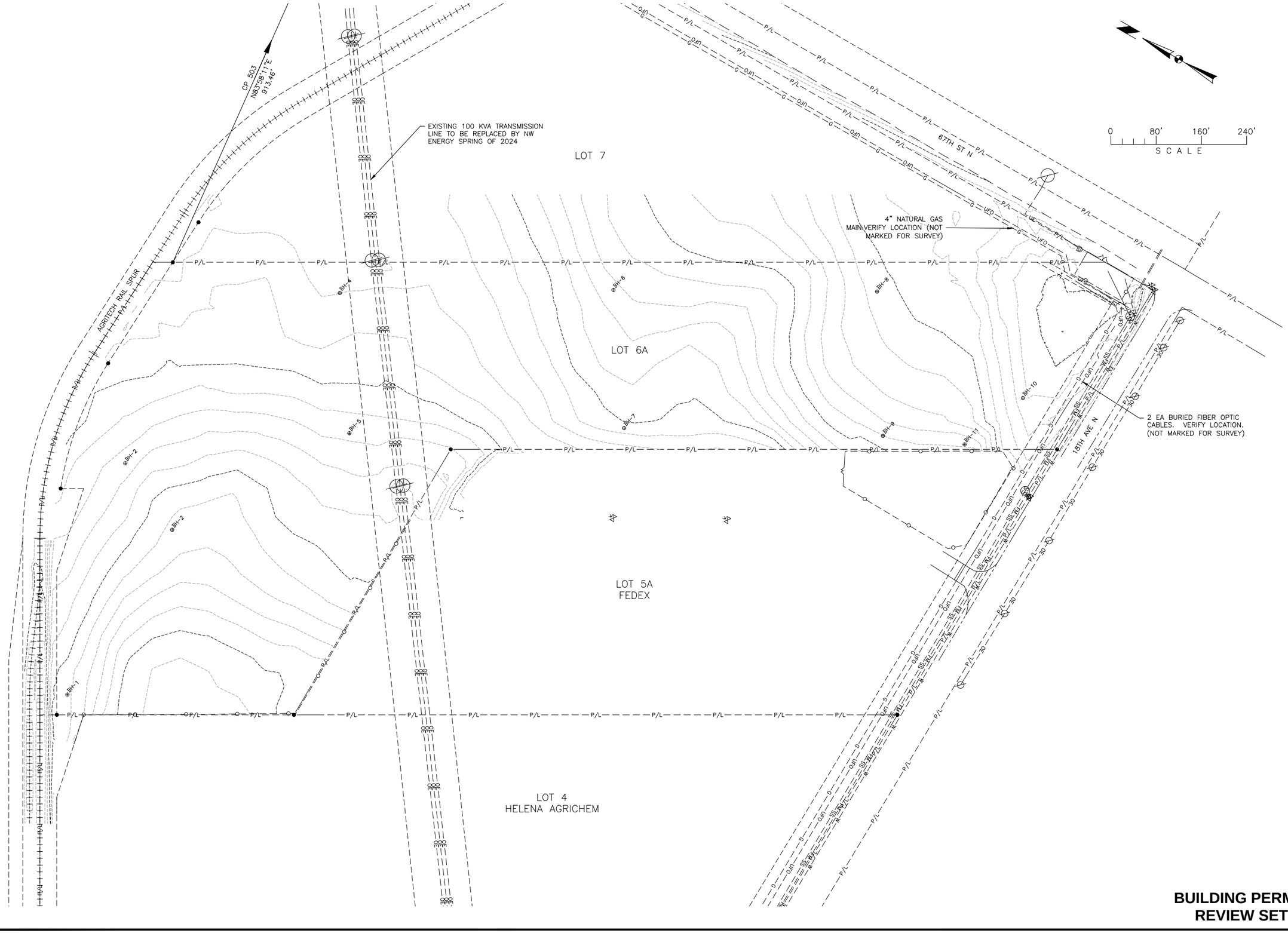
JOB NO.	23-059
FIELDBOOK	

PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

LEGEND, ABBREVIATIONS, SURVEY DATA

23-059 33 VG

SHEET C1.2



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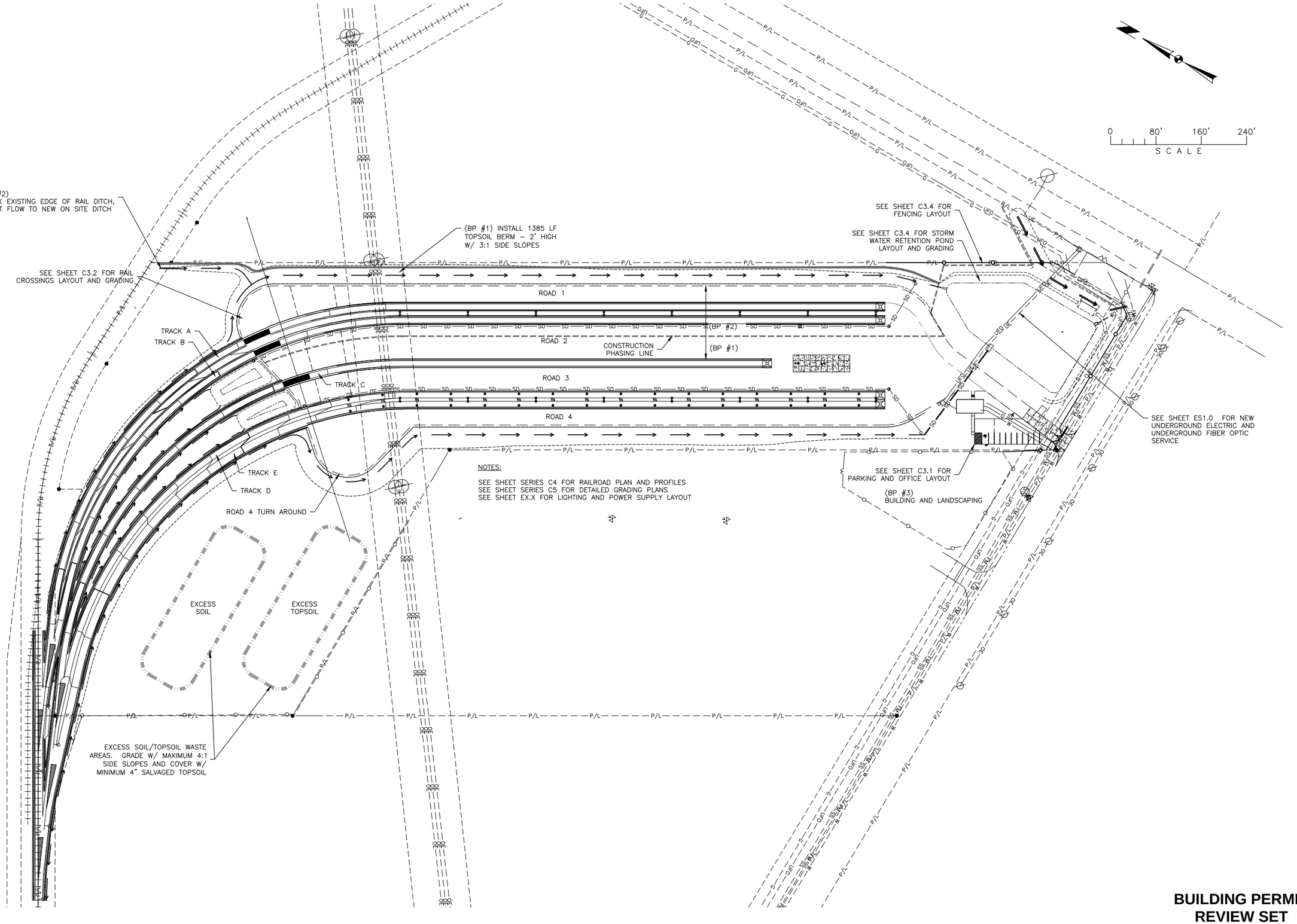
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

EXISTING CONDITIONS AND DEMOLITION

23-059 EX

SHEET C2.0



NOTES:

SEE SHEET SERIES C4 FOR RAILROAD PLAN AND PROFILES
SEE SHEET SERIES C5 FOR DETAILED GRADING PLANS
SEE SHEET EX.X FOR LIGHTING AND POWER SUPPLY LAYOUT

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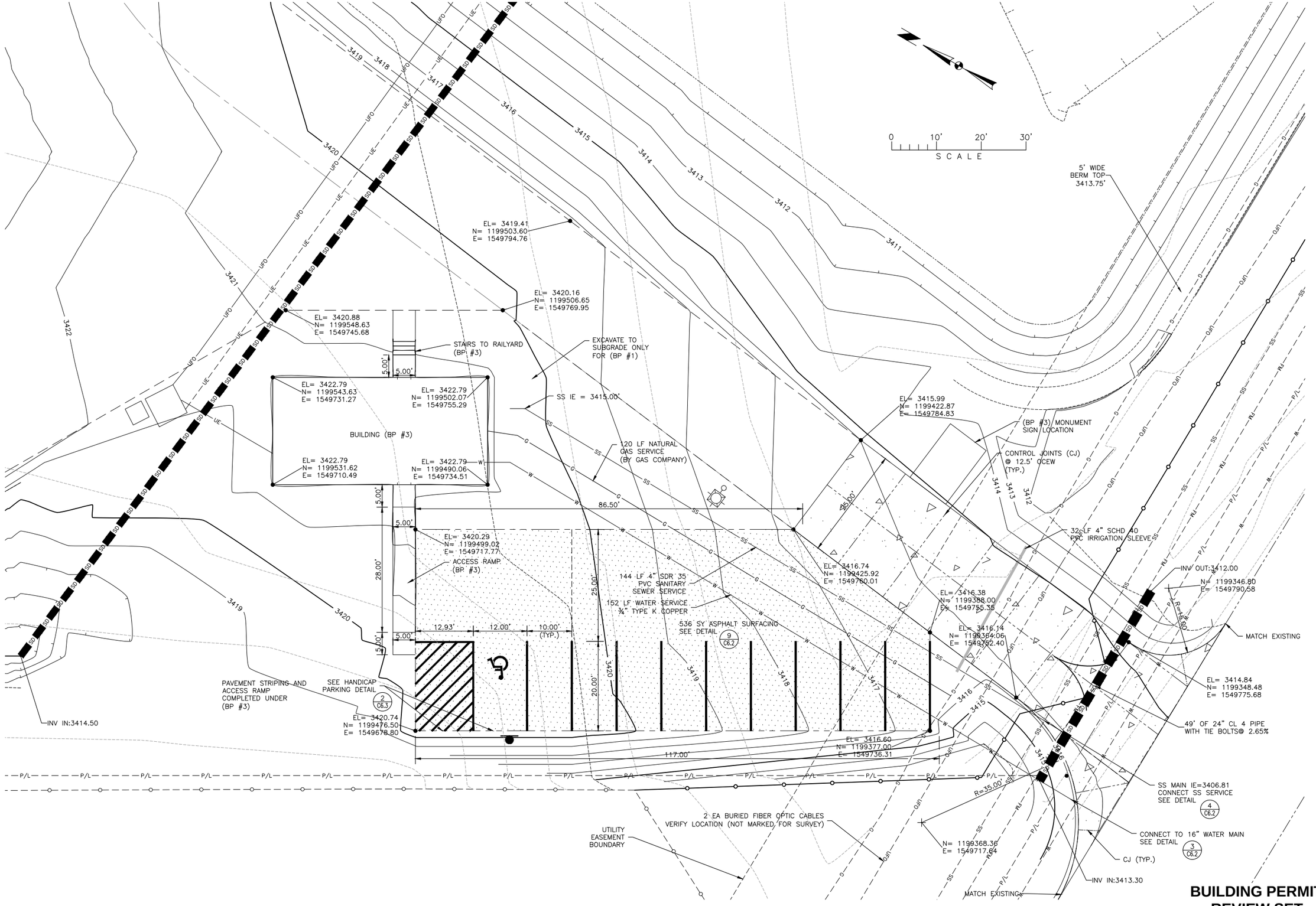
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

OVERALL SITE LAYOUT

23-059 L

SHEET C3.0



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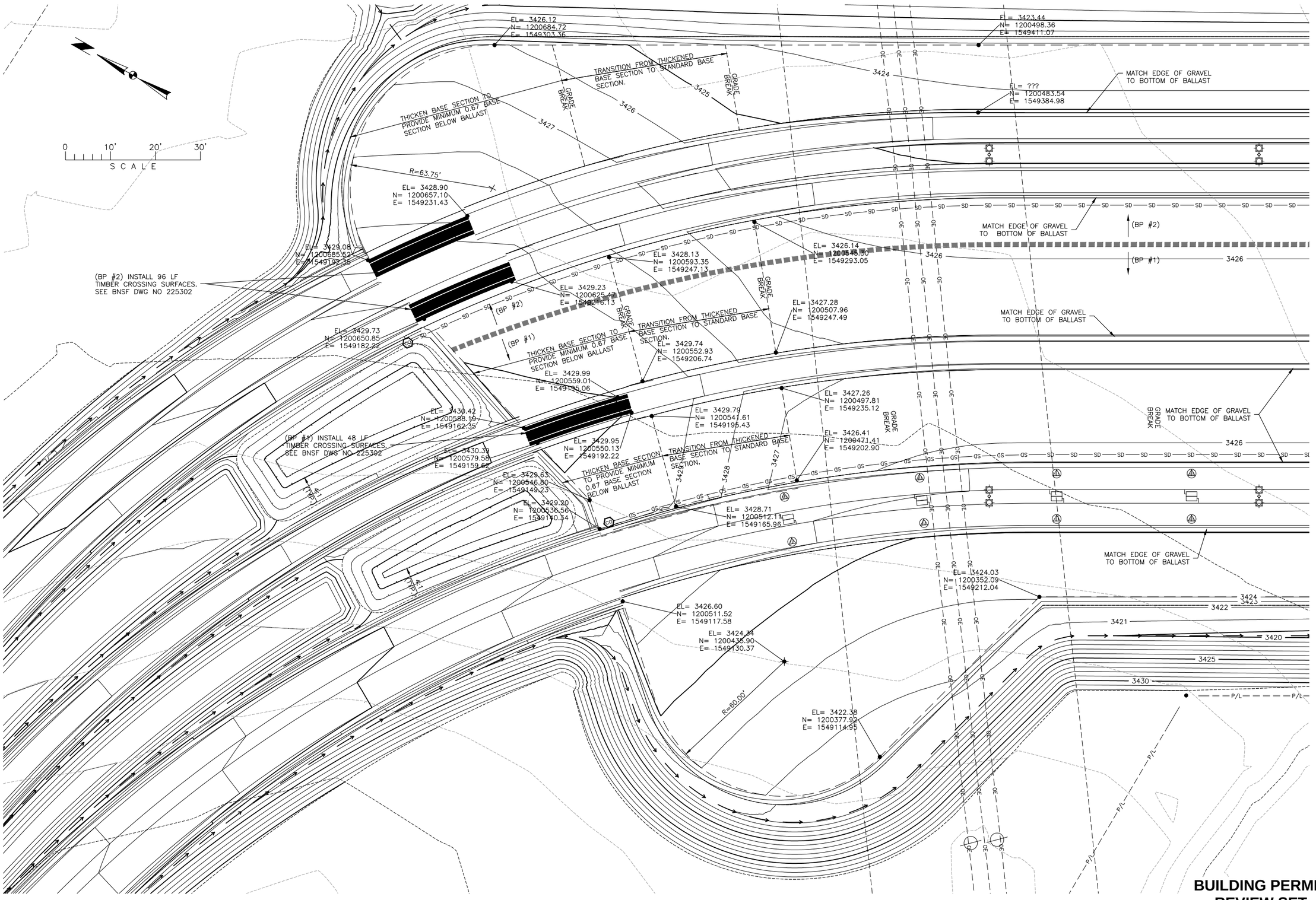
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

OFFICE & PARKING LOT, LAYOUT & GRADING

23-059 L... DWG

SHEET C3.1



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PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

RAIL CROSSING, LAYOUT & GRADING

23-059 L

SHEET C3.2

(BP #1) INSTALL 1385 LF TOPSOIL BERM
2' HIGH W/ 3:1 SIDE SLOPES

EL= 3423.39
N= 1199753.14
E= 1549841.78

EL= 3422.00
N= 1199659.50
E= 1549840.53

MATCH EDGE OF GRAVEL
TO POINT 4" ABOVE
BOTTOM OF BALLAST

(BP #2)

(BP #1)

EL= 3420.76
N= 1199611.05
E= 1549813.34

INV OUT:3413.50

EL= 3419.93
N= 1199584.87
E= 1549804.76

MATCH EDGE OF GRAVEL
TO POINT 4" ABOVE
BOTTOM OF BALLAST
(SEE TYPICAL SECTIONS)

EL= 3426.76
N= 1199832.48
E= 1549655.31

CONTROL JOINTS (CJ)
@ 10' OCEW

OUTLET PEDESTAL
BOLLARD

OUTLET PEDESTAL
BOLLARD

EL= 3426.76
N= 1199745.90
E= 1549705.35

30.00

4.00

50.00

EL= 3427.06
N= 1199730.88
E= 1549679.37

100.00

EL= 3427.06
N= 1199817.46
E= 1549629.33

MATCH EDGE OF GRAVEL
TO POINT 4" ABOVE
BOTTOM OF BALLAST

EL= 3420.88
N= 1199548.63
E= 1549745.68

187' OF 18" PIPE @ 0.54%

EL= 3420.16
N= 1199506.65
E= 1549769.95

POWER SUPPLY RISER
AND TRANSFORMER
(SEE ELECTRICAL)

EL= 3424.03
N= 1199630.29
E= 1549629.23

EL= 3422.96
N= 1199595.99
E= 1549663.56

MATCH EDGE OF GRAVEL
TO POINT 4" ABOVE
BOTTOM OF BALLAST

INV IN:3414.50

0 20' 40' 60'
SCALE

BUILDING PERMIT REVIEW SET

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PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

RAIL YARD PARKING PAD, LAYOUT & GRADING

23-059 L

SHEET C3.3

FL=3411.33
N= 1199611.92
E= 1550065.13

FL=3409.70
N= 1199516.08
E= 1550004.18

34'x8' SPLASH PAD
SEE DETAIL 3/C6.3

FL=3409.58
N= 1199500.52
E= 1549999.65

FL=3408.68
N= 1199383.26
E= 1550007.53

FL=3408.85
N= 1199403.15
E= 1549999.63

FL=3408.50
N= 1199365.47
E= 1550024.29

8'x6' SPLASH PAD
SEE DETAIL 3/C6.3

LOT 7 BYPASS DITCH

28.00'

INV OUT:3409.41
52 L.F. 12" SDR 35 PVC @ 4.96%
INV IN:3411.00

POND OUTLET STRUCTURE
SEE DETAIL 1/C6.3

30.00'

5.00'

R=14.00'

R=28.00'

POND OVERFLOW = 3412.75

INSTALL 340 LF
CHAIN LINK FENCE
SEE DETAIL 6/C6.1

EL= 3410.25
N= 1199538.40
E= 1549955.62

5' WIDE
BERM TOP
3413.75'

EL= 3410.25
N= 1199405.66
E= 1549955.59

4:1 (TYP.)

STORM POND
(BP #1)

INSTALL 260 LF
CHAIN LINK FENCE
SEE DETAIL 6/C6.1

(BP #1) INSTALL 1385 LF TOPSOIL BERM
2' HIGH W/ 3:1 SIDE SLOPES

5'x5' SPLASH PAD
SEE DETAIL 3/C6.3

EL= 3410.25
N= 1199642.47
E= 1549895.47

EL= 3410.25
N= 1199580.94
E= 1549860.94

14'x6' SPLASH PAD
SEE DETAIL 3/C6.3

EL= 3410.25
N= 1199407.65
E= 1549839.62

INV OUT:3413.50

EL= 3422.00
N= 1199659.50
E= 1549840.53

187' OF 18" PIPE @ 0.54%

EL= 3420.76
N= 1199611.05
E= 1549813.34

EL= 3419.93
N= 1199584.87
E= 1549804.76

MATCH EDGE OF GRAVEL
TO POINT 4" ABOVE
BOTTOM OF BALLAST

(BP #2)

(BP #1)

EL= 3420.16
N= 1199506.65
E= 1549769.95

INSTALL 30 LF
DOUBLE SWING GATE
SEE DETAIL 7/C6.1

EL= 3420.88
N= 1199548.63
E= 1549745.68

INSTALL 95 LF
CHAIN LINK FENCE
SEE DETAIL 6/C6.1

0 20' 40' 60'
SCALE

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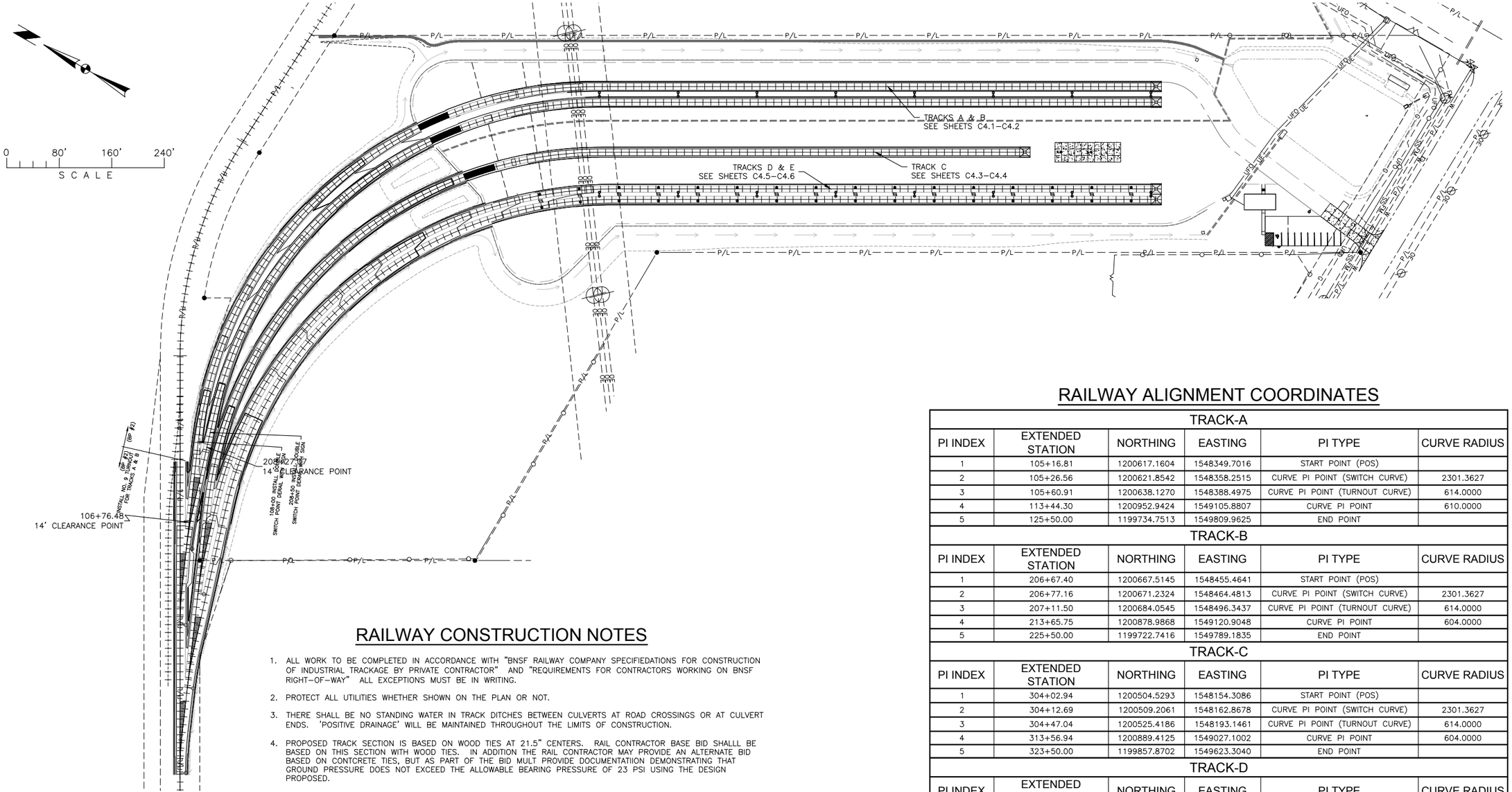
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

STORM POND, LAYOUT & GRADING

23-059 LAYOUT

SHEET C3.4



RAILWAY CONSTRUCTION NOTES

1. ALL WORK TO BE COMPLETED IN ACCORDANCE WITH "BNSF RAILWAY COMPANY SPECIFIEDATIONS FOR CONSTRUCTION OF INDUSTRIAL TRACKAGE BY PRIVATE CONTRACTOR" AND "REQUIREMENTS FOR CONTRACTORS WORKING ON BNSF RIGHT–OF–WAY" ALL EXCEPTIONS MUST BE IN WRITING.
2. PROTECT ALL UTILITIES WHETHER SHOWN ON THE PLAN OR NOT.
3. THERE SHALL BE NO STANDING WATER IN TRACK DITCHES BETWEEN CULVERTS AT ROAD CROSSINGS OR AT CULVERT ENDS. 'POSITIVE DRAINAGE' WILL BE MAINTAINED THROUGHOUT THE LIMITS OF CONSTRUCTION.
4. PROPOSED TRACK SECTION IS BASED ON WOOD TIES AT 21.5" CENTERS. RAIL CONTRACTOR BASE BID SHALLL BE BASED ON THIS SECTION WITH WOOD TIES. IN ADDITION THE RAIL CONTRACTOR MAY PROVIDE AN ALTERNATE BID BASED ON CONTCRETE TIES, BUT AS PART OF THE BID MULT PROVIDE DOCUMENTATIION DEMONSTRATING THAT GROUND PRESSURE DOES NOT EXCEED THE ALLOWABLE BEARING PRESSURE OF 23 PSI USING THE DESIGN PROPOSED.
5. THE OWNER'S REPRESENTATIVE WILL VERIFY THAT GRADING CONTRACTOR ROADBED PREPARATION IS COMPLETE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS. INCLUDING A TOPOGRAPHIC SURVEY OF THE ROADBED, PRIOR TO THE RAIL CONTRACTOR BEGINNING WORK.
6. CONFINE EQUIPMENT TO RAILROAD EASEMENT 30' FROM TRACK CENTERLINES.

WORK TO BE PERFORMED BY BNSF

NONE

WORK TO BE PERFORMED BY CONTRACTOR (BP #1)

CONSTRUCT 5061.06 TRACK FEET
WITH 3 #9–115 LB TURNOUTS (107.38' EACH).
INSTALL TWO– DOUBLE SWITCH POINT DERAILS.
INSTALL 3 EACH EARTHEN BUMPER.
INSTALL 48 LF OF TIMBER CROSSING.

RAIL MATERIALS TO BE USED BY THE CONTRACTOR

115# RAIL ON #4 NEW CROSS TIES.
115# MANUAL BNSF STANDARD GEOMETRY TURNOUT WITH INDUSTRIAL STANDARD COMPONENTS INCL. CUT SPIKE TIE PLATES, KNIFE POINTS, AND SELF–GUARDED FROG.
115# MANUAL DOUBLE SWITCH POINT DERAIL PER BNSF STANDARD PLAN 2400 03.
TIMBER CROSSING PANELS FOR LOW DENSITY RAIL TRAFFIC ON 8'6" WOOD TIES PER BNSF DWG NO 225302.

RAILWAY ALIGNMENT COORDINATES

TRACK-A					
PI INDEX	EXTENDED STATION	NORTHING	EASTING	PI TYPE	CURVE RADIUS
1	105+16.81	1200617.1604	1548349.7016	START POINT (POS)	
2	105+26.56	1200621.8542	1548358.2515	CURVE PI POINT (SWITCH CURVE)	2301.3627
3	105+60.91	1200638.1270	1548388.4975	CURVE PI POINT (TURNOUT CURVE)	614.0000
4	113+44.30	1200952.9424	1549105.8807	CURVE PI POINT	610.0000
5	125+50.00	1199734.7513	1549809.9625	END POINT	

TRACK-B					
PI INDEX	EXTENDED STATION	NORTHING	EASTING	PI TYPE	CURVE RADIUS
1	206+67.40	1200667.5145	1548455.4641	START POINT (POS)	
2	206+77.16	1200671.2324	1548464.4813	CURVE PI POINT (SWITCH CURVE)	2301.3627
3	207+11.50	1200684.0545	1548496.3437	CURVE PI POINT (TURNOUT CURVE)	614.0000
4	213+65.75	1200878.9868	1549120.9048	CURVE PI POINT	604.0000
5	225+50.00	1199722.7416	1549789.1835	END POINT	

TRACK-C					
PI INDEX	EXTENDED STATION	NORTHING	EASTING	PI TYPE	CURVE RADIUS
1	304+02.94	1200504.5293	1548154.3086	START POINT (POS)	
2	304+12.69	1200509.2061	1548162.8678	CURVE PI POINT (SWITCH CURVE)	2301.3627
3	304+47.04	1200525.4186	1548193.1461	CURVE PI POINT (TURNOUT CURVE)	614.0000
4	313+56.94	1200889.4125	1549027.1002	CURVE PI POINT	604.0000
5	323+50.00	1199857.8702	1549623.3040	END POINT	

TRACK-D					
PI INDEX	EXTENDED STATION	NORTHING	EASTING	PI TYPE	CURVE RADIUS
1	407+39.86	1200617.7708	1548404.7362	START POINT (POS)	
2	407+49.61	1200621.4707	1548413.7608	CURVE PI POINT (SWITCH CURVE)	2301.3627
3	407+83.96	1200634.2294	1548445.6487	CURVE PI POINT (TURNOUT CURVE)	614.0000
4	413+73.71	1200808.8268	1549008.9959	CURVE PI POINT	620.0000
5	425+50.00	1199656.6892	1549674.9006	END POINT	

TRACK-E					
PI INDEX	EXTENDED STATION	NORTHING	EASTING	PI TYPE	CURVE RADIUS
1	506+17.87	1200559.9926	1548272.3593	START POINT (POS)	
2	506+27.62	1200563.6925	1548281.3839	CURVE PI POINT (SWITCH CURVE)	2301.3627
3	506+61.96	1200576.4512	1548313.2718	CURVE PI POINT (TURNOUT CURVE)	614.0000
4	513+82.50	1200789.7633	1549001.5339	CURVE PI POINT	604.0000
5	525+50.00	1199648.6827	1549661.0479	END POINT	

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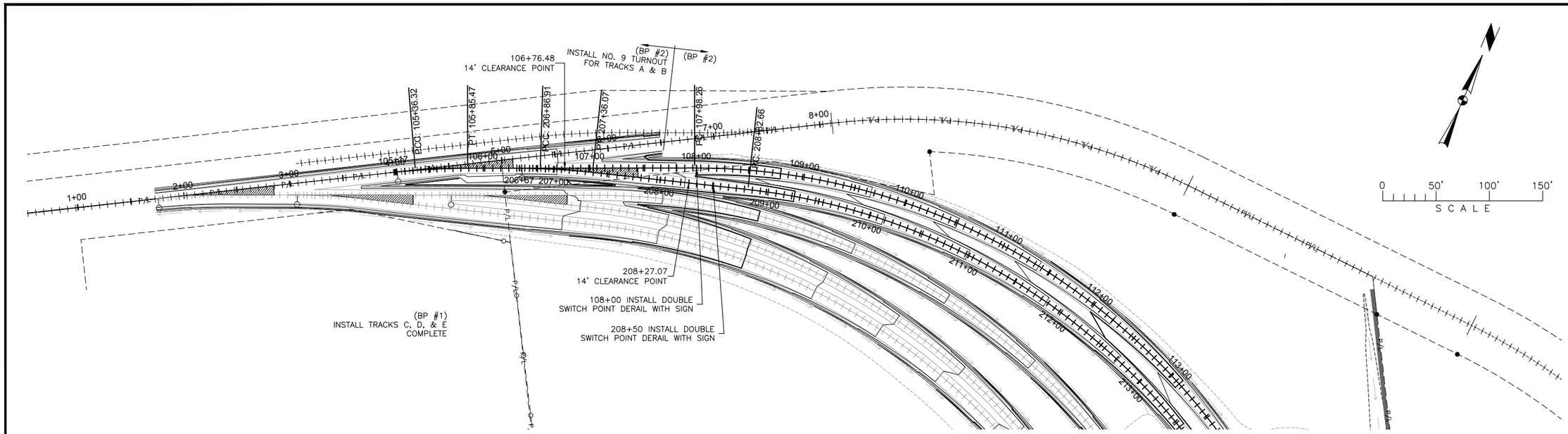
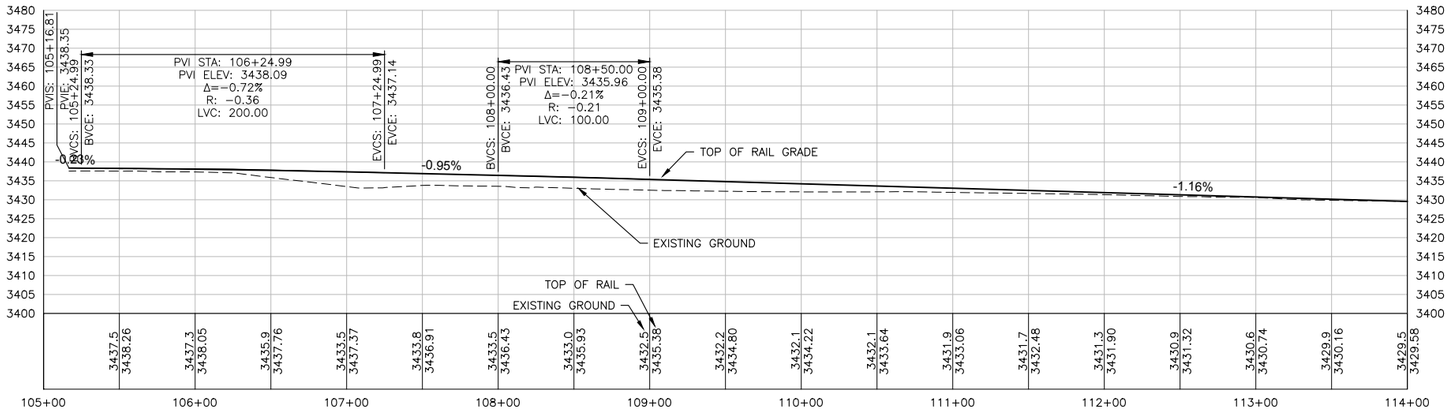
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

RAILWAY LAYOUT PLAN

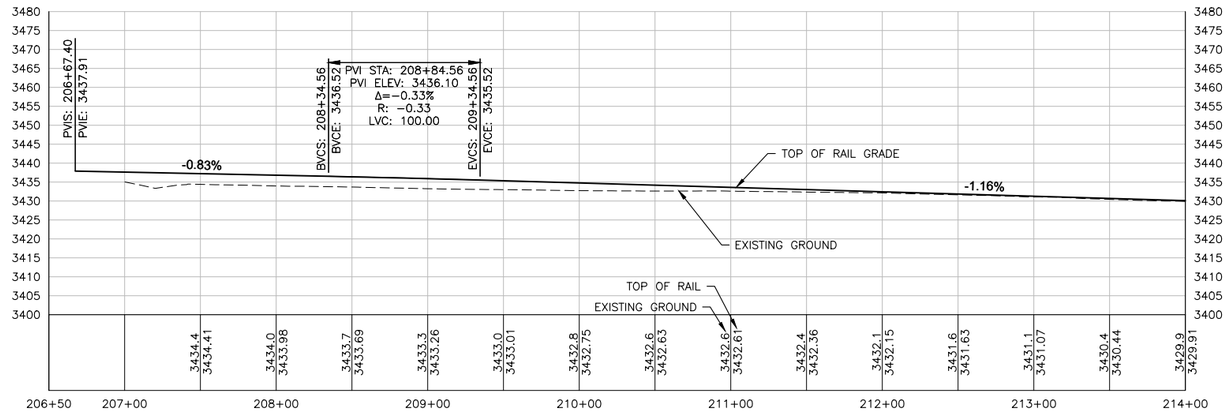
23-059 RAIL P&P.DWG

SHEET C4.0





TRACK-A STA:105+00-114+00



TRACK-B STA:206+50-214+00

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PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

TRACK A & B PLAN AND PROFILE

23-059 RAIL P&P.DWG

SHEET C4.1

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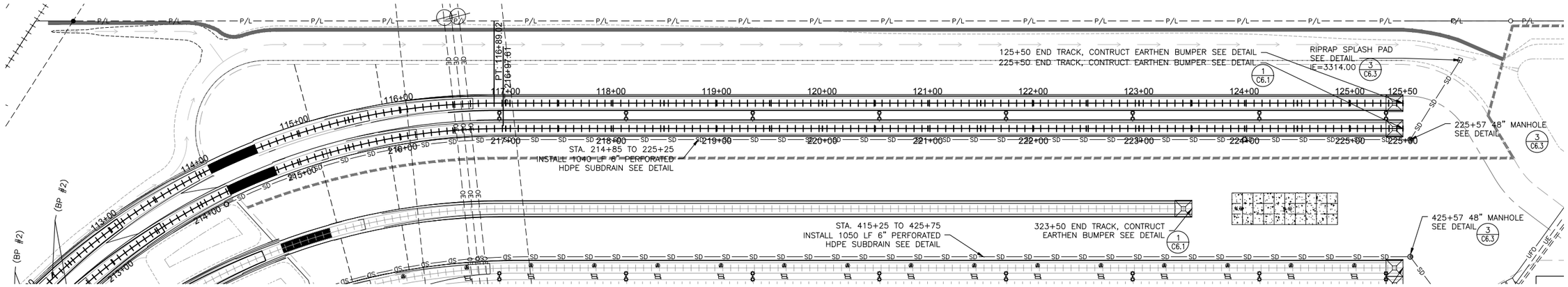
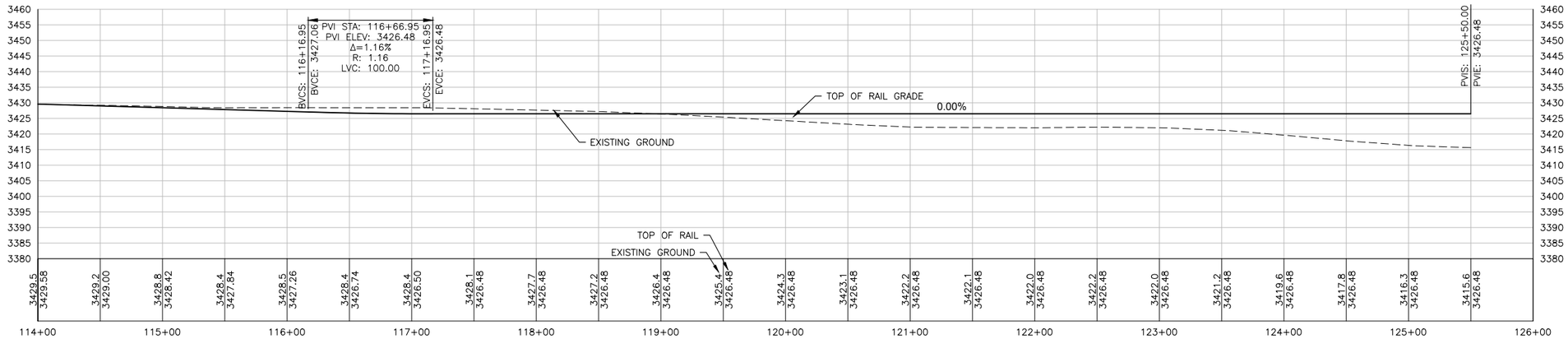
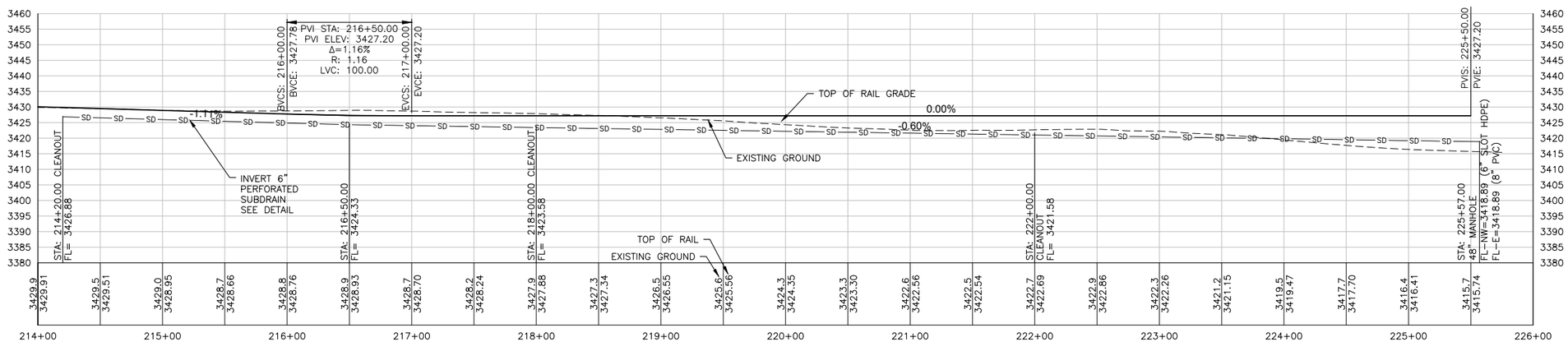




TRACK-A STA:114+00-126+00



TRACK-B STA:214+00-226+00

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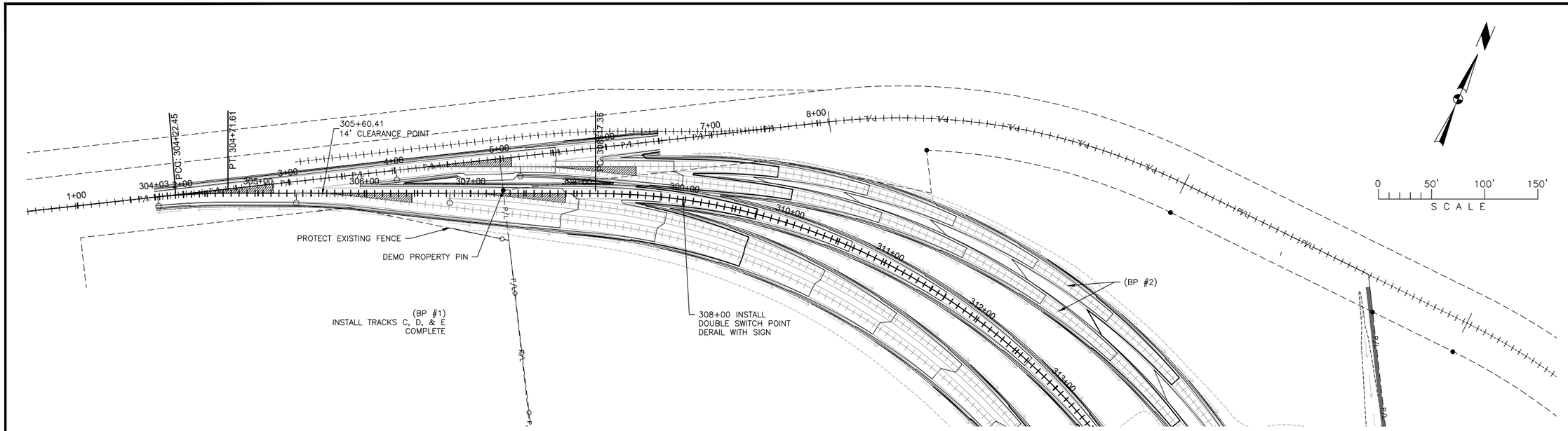
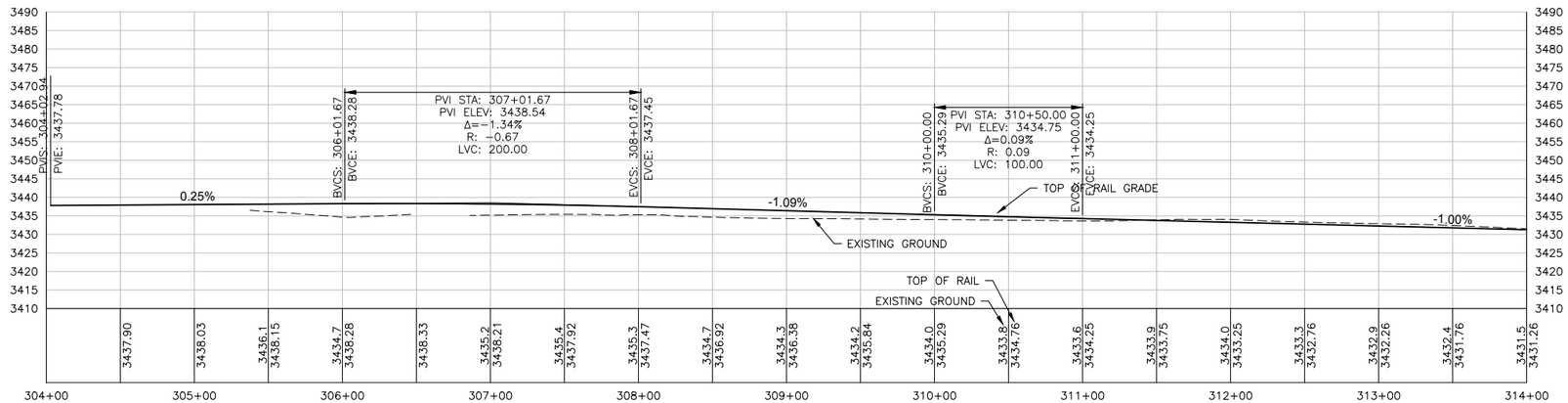
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

TRACK A & B PLAN AND PROFILE

23-059 RAIL P&P.DWG

SHEET C4.2





TRACK-C STA:304+00-314+00

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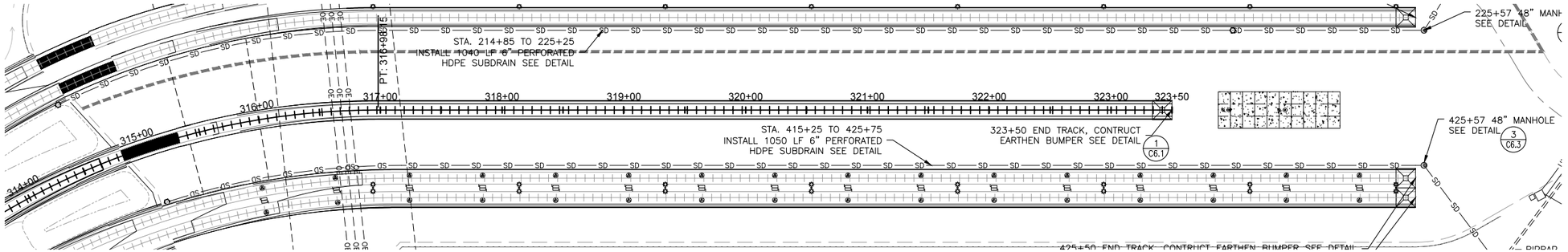
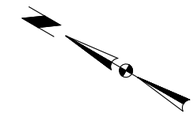
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

TRACK C PLAN AND PROFILE

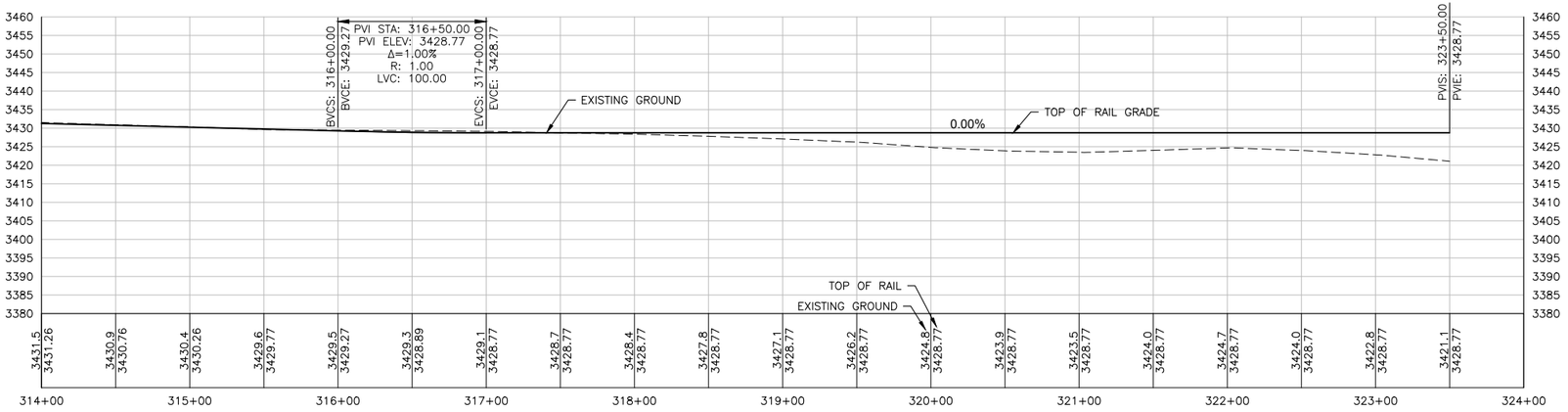
23-059 RAIL P&P.DWG

SHEET C4.3





0 50' 100' 150'
SCALE



TRACK-C STA:314+00-324+00

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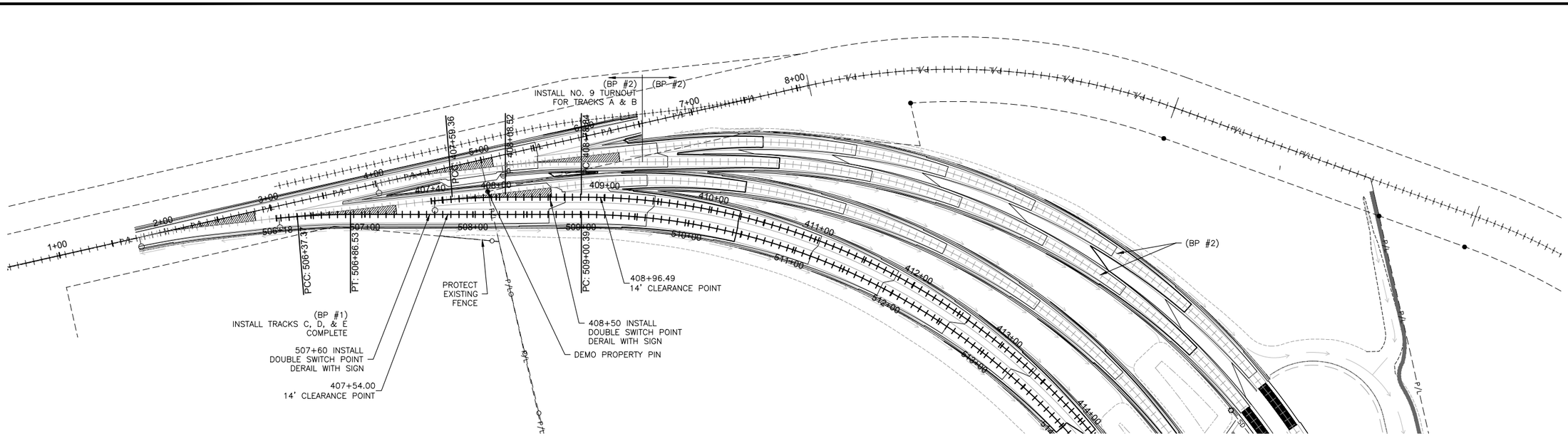
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

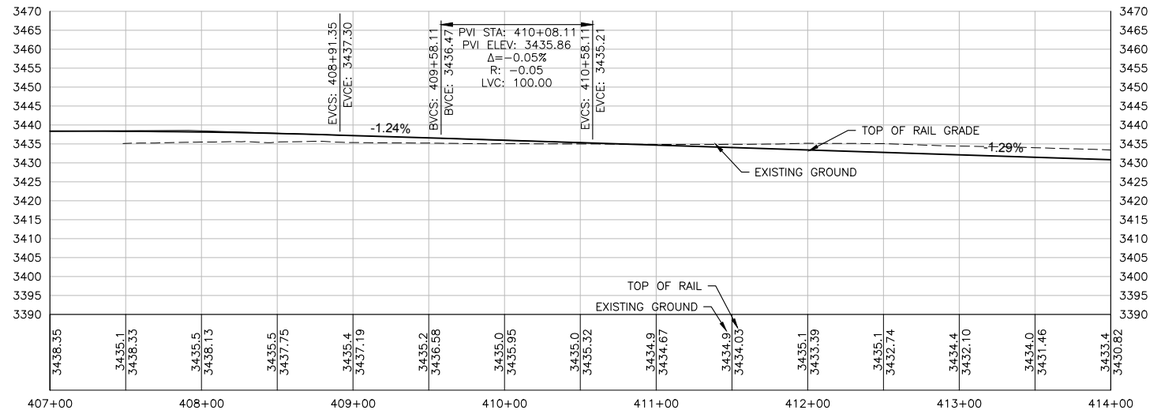
TRACK C PLAN AND PROFILE

BUILDING PERMIT REVIEW SET

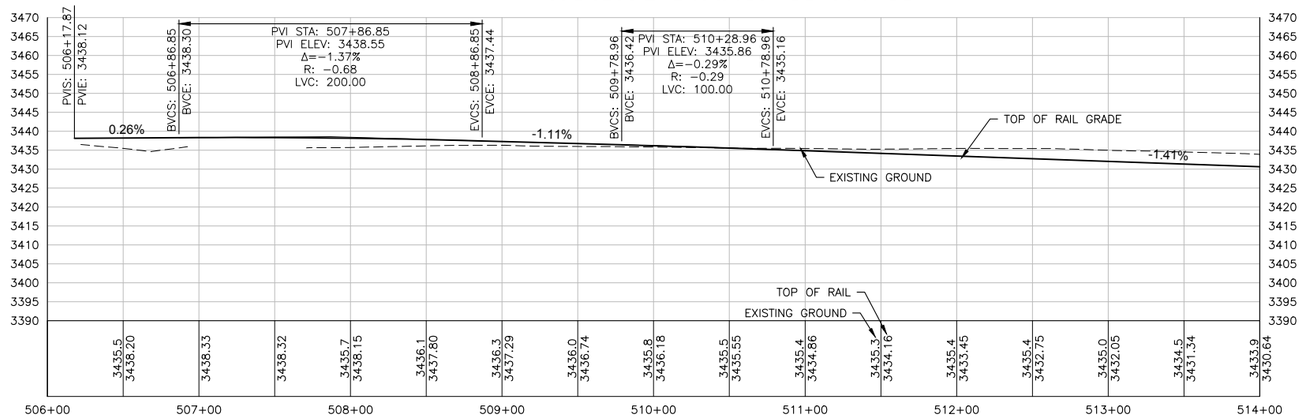
23-059 RA VG

SHEET C4.4





TRACK-D STA:407+00-414+00



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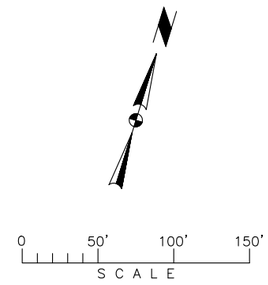

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DATE:	03/12/2024
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FIELDBOOK	

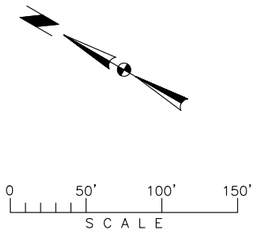
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

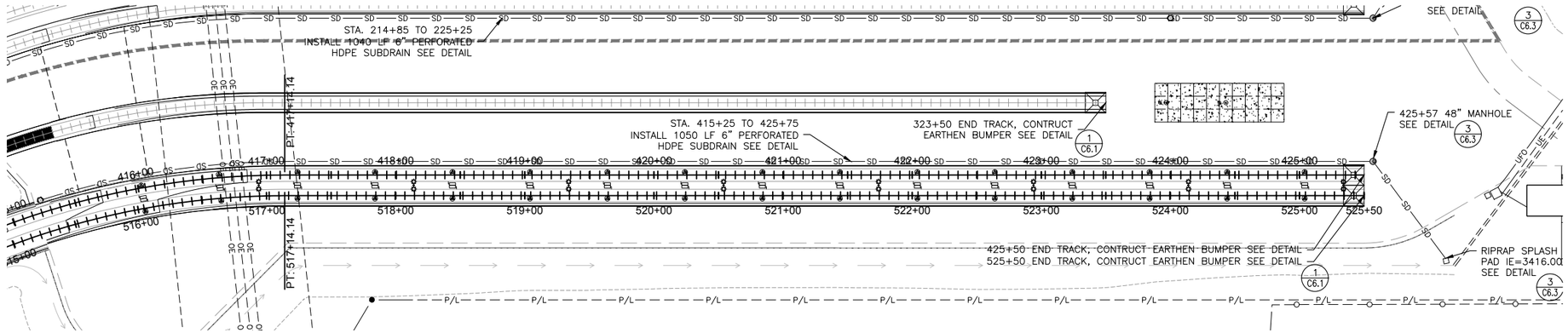
TRACK D & E PLAN AND PROFILE

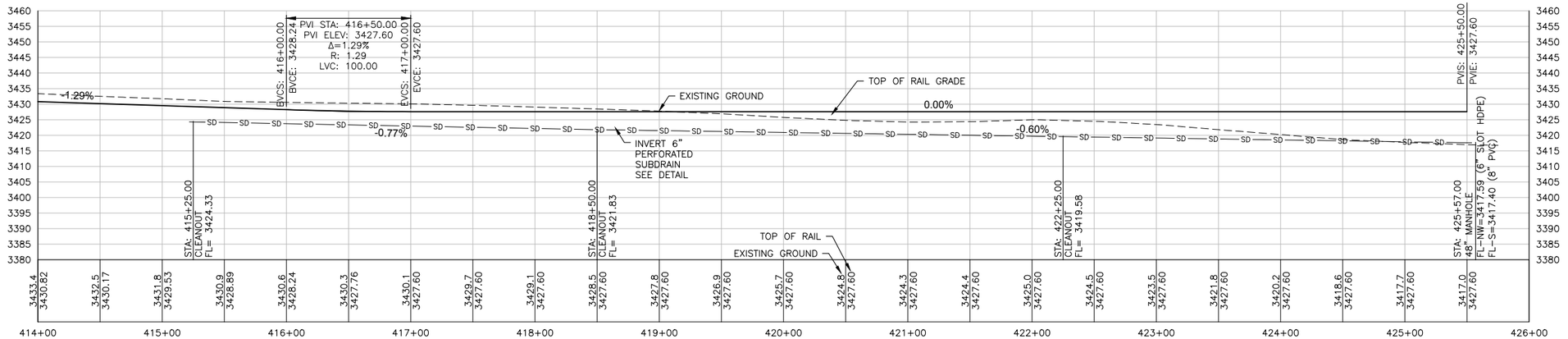
BUILDING PERMIT REVIEW SET

23-059 RAIL P&P.DWG

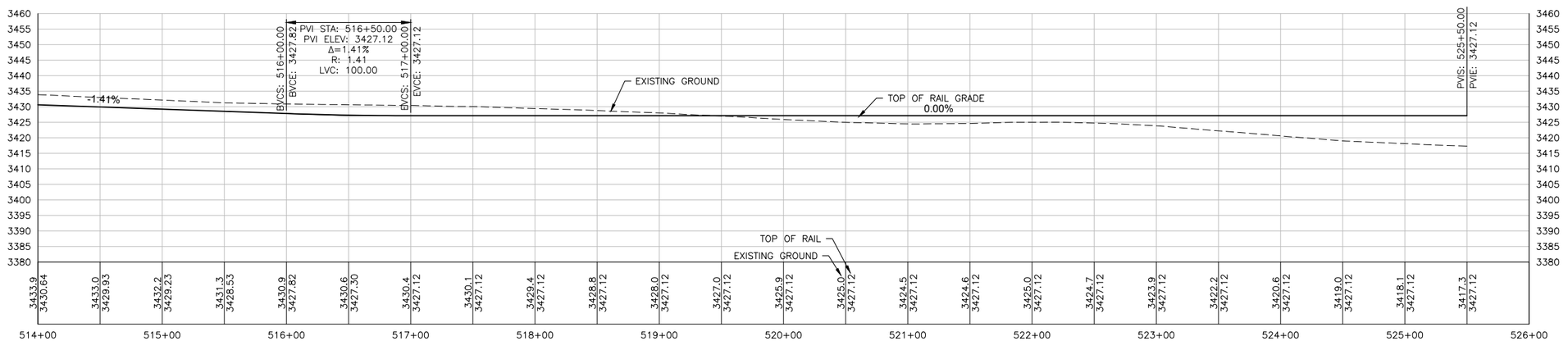
SHEET C4.5







TRACK-D STA:414+00-426+00



TRACK-E STA:514+00-526+00

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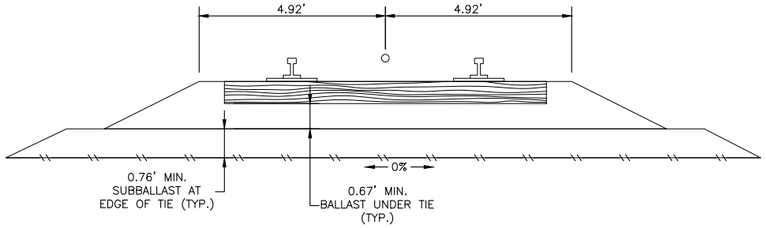
GREAT FALLS, MONTANA

TRACK D & E PLAN AND PROFILE

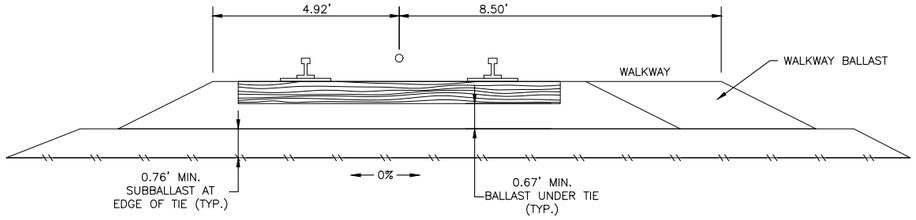
23-059 RAIL P&P.DWG

SHEET C4.6



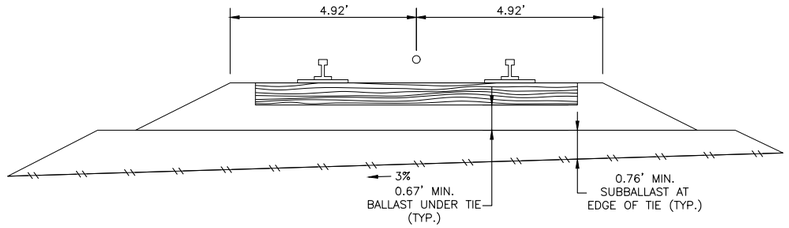
TYPICAL RAIL SECTION 1

STA. 105+50 TO 114+10
207+00 TO 214+29
304+35 TO 314+84
315+32 TO 323+50
407+47 TO 415+20



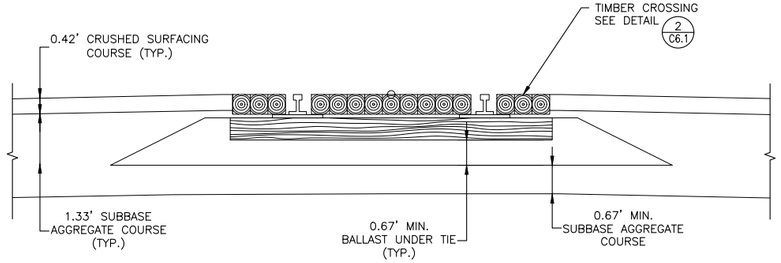
TYPICAL RAIL SECTION 1

STA. 506+50 TO 515+25



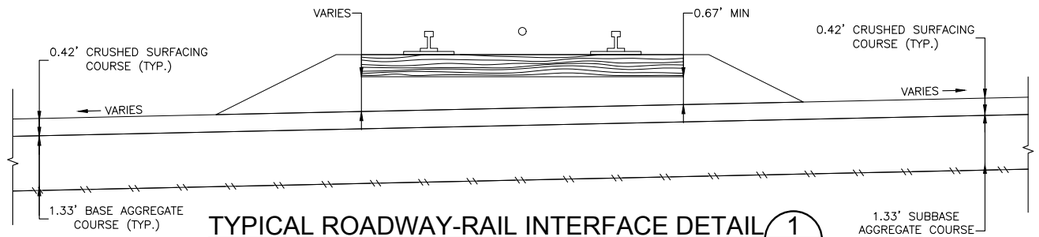
TYPICAL RAIL SECTION 2

STA. 114+58 TO 125+50
214+77 TO 225+50
415+25 TO 425+50
515+25 TO 525+50



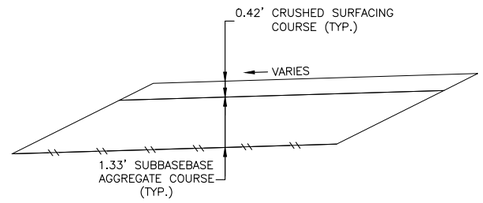
TYPICAL CROSSING SECTION

STA. 114+10 TO 114+58
214+29 TO 214+77
314+84 TO 315+32

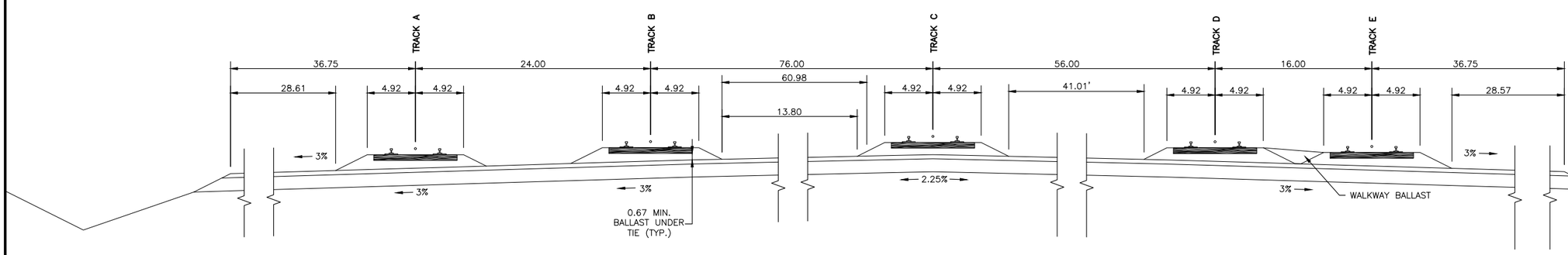


TYPICAL ROADWAY-RAIL INTERFACE DETAIL 1 C6.0

NOT TO SCALE



TYPICAL ROADWAY SECTION 1



TYPICAL RAIL YARD SECTION

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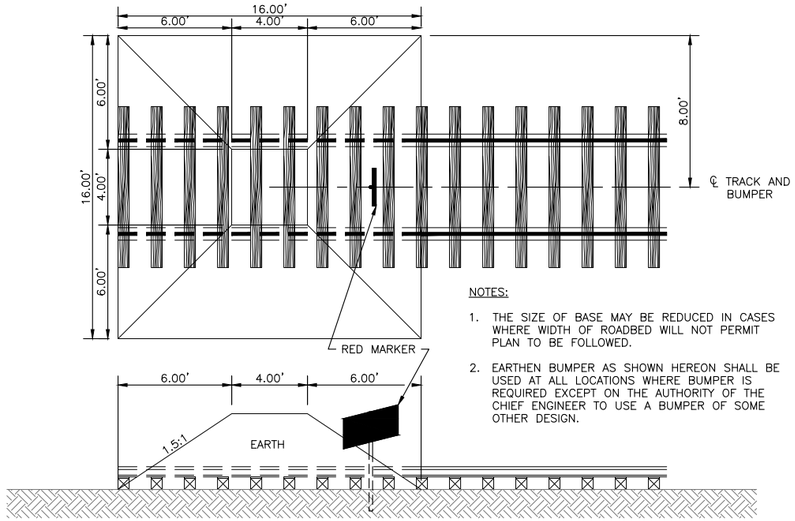
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

TYPICAL SECTIONS

23-059 D

SHEET C6.0



NOTES:

1. THE SIZE OF BASE MAY BE REDUCED IN CASES WHERE WIDTH OF ROADBED WILL NOT PERMIT PLAN TO BE FOLLOWED.
2. EARTHEN BUMPER AS SHOWN HEREON SHALL BE USED AT ALL LOCATIONS WHERE BUMPER IS REQUIRED EXCEPT ON THE AUTHORITY OF THE CHIEF ENGINEER TO USE A BUMPER OF SOME OTHER DESIGN.

EARTHEN BUMPER DETAIL 1
NOT TO SCALE — C6.1

FOR TIMBER CROSSING DETAIL SEE

BNSF RAILWAY COMPANY – GUIDELINES FOR INDUSTRY TRACK PROJECTS

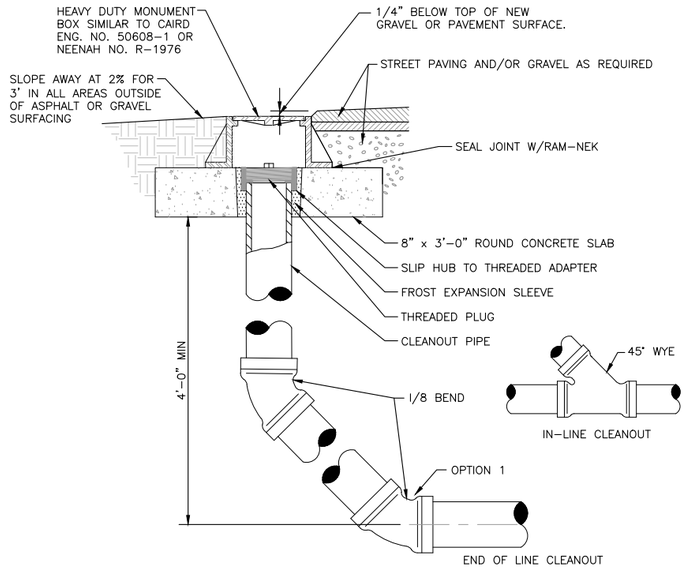
TIMBER CROSSING PANELS FOR LOW DENSITY RAIL TRAFFIC ON 8'6" WOOD TIES. DWG NO: 225302.

SCARF PANELS AS NECESSARY TO MAINTAIN MINIMUM CLEARANCES BETWEEN RAILS AND PANELS AS SHOWN ON FIGURE.

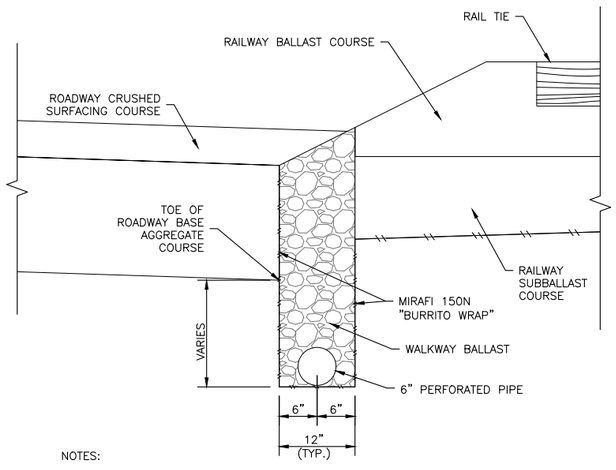
SCARFED WOOD FACES ARE TO BE TREATED WITH CREOSOTE PRESERVATIVE.

TIMBER CROSSING DETAIL 2
NOT TO SCALE — C6.1

RESERVED 3
NOT TO SCALE — C6.1



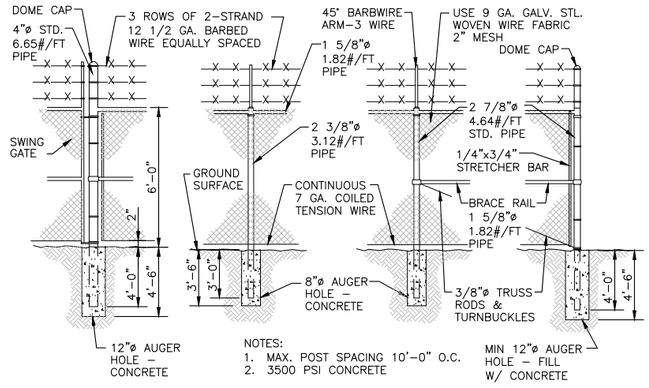
SUBDRAIN AND SEWER SERVICE CLEANOUT DETAIL 4
NOT TO SCALE — C6.1



NOTES:

1. MAINTAIN MINIMUM 0.5% LONGITUDINAL GRADE FOR PERFORATED PIPE.

SUBBALLAST AND BASE COURSE SUBDRAIN DETAIL 5
NOT TO SCALE — C6.1



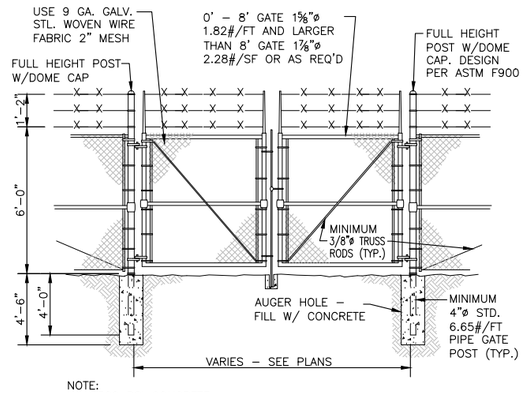
NOTES:
1. MAX. POST SPACING 10'–0" O.C.
2. 3500 PSI CONCRETE

GATE POST | LINE POST | BRACE POST | CORNER POST

NOTES:

1. SUBMIT FENCING LAYOUT DRAWINGS WITH DIMENSIONS, DETAILS, AND FINISHES FOR COMPONENTS, ACCESSORIES, AND POST FOUNDATIONS.
2. TO ENSURE SYSTEM INTEGRITY PROVIDE THE CHAIN LINK SYSTEM, FRAMEWORK, FABRIC, FITTINGS, GATES AND ACCESSORIES FROM A SINGLE SOURCE.
3. STEEL PIPE MATERIAL SHALL BE TYPE II: COLD FORMED ELECTRIC RESISTANCE WELDED STEEL PIPE COMPLYING WITH ASTM F1043 GROUP IC HAVING MINIMUM STEEL YIELD STRENGTH OF 50,000 PSI (344 MPA). EXTERNAL PROTECTIVE COATING F1043 TYPE B, 0.9 OZ/FT² (270 G/M²) MINIMUM HOT–DIP ZINC. INTERNAL COATING F1043 TYPE D, 81% NOMINAL ZINC PIGMENTED COATING MINIMUM 3 MILS (0.0076 MM) THICK OR TYPE B, MINIMUM 0.9 OZ/FT² (275 G/M²) ZINC.
4. INSTALL CHAIN LINK FENCE SYSTEM IN ACCORDANCE WITH ASTM F567 AND MANUFACTURER'S INSTRUCTIONS.
5. FABRIC TOP SHALL HAVE BARBED FINISH AND BOTTOM SHALL HAVE KNUCKLE FINISH.
6. VERIFY AREAS TO RECEIVE FENCING ARE COMPLETED TO FINAL GRADE PRIOR TO INSTALLATION.

CHAIN LINK SECURITY FENCE DETAIL 6
NOT TO SCALE — C6.1



NOTE:
1. 3500 PSI CONCRETE.
2. FINAL GATE SUPPORT POSTS, CONCRETE BASE, FRAMEWORK, ANCHORS & ASSOCIATED APPURTENANCES SHALL BE SIZED BY GATE MANUFACTURER TO ADEQUATELY SUPPORT GATE OPENING CLEAR SPAN. CONTRACTOR SHALL SUBMIT STRUCTURAL CALCULATIONS FROM GATE MANUFACTURER SUPPORTING FINAL FENCE & GATE MATERIAL & INSTALLATION DESIGN.

CHAIN LINK SECURITY FENCE DOUBLE SWING GATE DETAIL 7
NOT TO SCALE — C6.1

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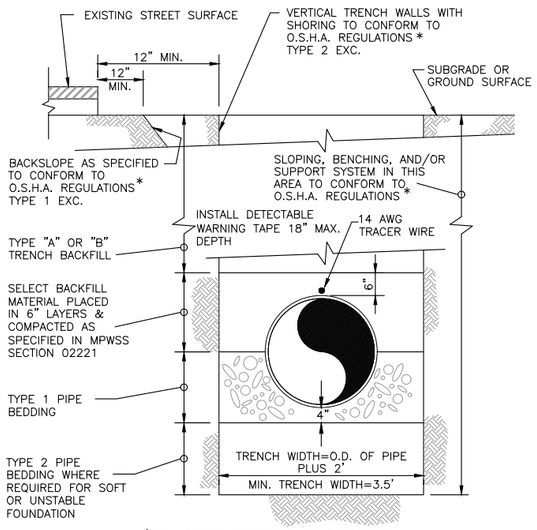
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

DETAILS

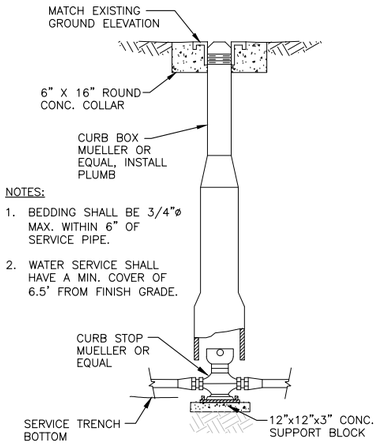
23-059 D... DWG
SHEET C6.1

NOTE: WHERE TRENCH PASSES THROUGH EXISTING PAVEMENT, THE PAVEMENT SHALL BE CUT ALONG A NEAT VERTICAL LINE A MINIMUM OF 12" FROM THE EDGE OF THE TRENCH OPENING. WHERE NEAT LINE IS LESS THAN 3" FROM EDGE OF EXISTING PAVEMENT OR CURB AND GUTTER SECTION, REMOVE AND REPLACE ENTIRE PAVEMENT SECTION BETWEEN TRENCH AND EDGE OF PAVEMENT.



* SEE O.S.H.A. CONSTRUCTION STANDARDS FOR EXCAVATIONS, SEC. 1926, SUBPART P

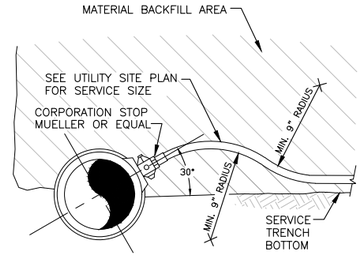
TYPICAL TRENCH DETAIL 1 C6.2
NOT TO SCALE



NOTES:
1. BEDDING SHALL BE 3/4"ø MAX. WITHIN 6" OF SERVICE PIPE.
2. WATER SERVICE SHALL HAVE A MIN. COVER OF 6.5' FROM FINISH GRADE.

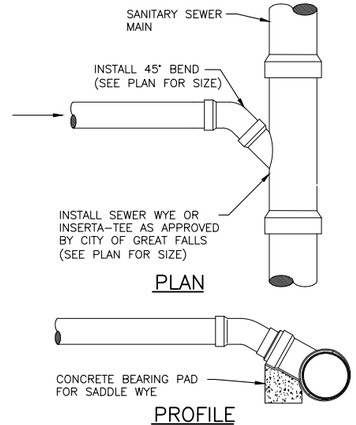
NOTE:
1. SEE CITY OF GREAT FALLS DESIGN CRITERIA & SPECIAL CONDITIONS FOR CURB BOX TYPE AND COATING REQUIREMENTS.

CURB STOP DETAIL 2 C6.2
NOT TO SCALE



NOTES:
1. BEDDING SHALL BE 3/4"ø MAX. WITHIN 6" OF SERVICE PIPE.
2. WATER SERVICE SHALL HAVE A MIN. COVER OF 6.5' FROM FINISH GRADE.

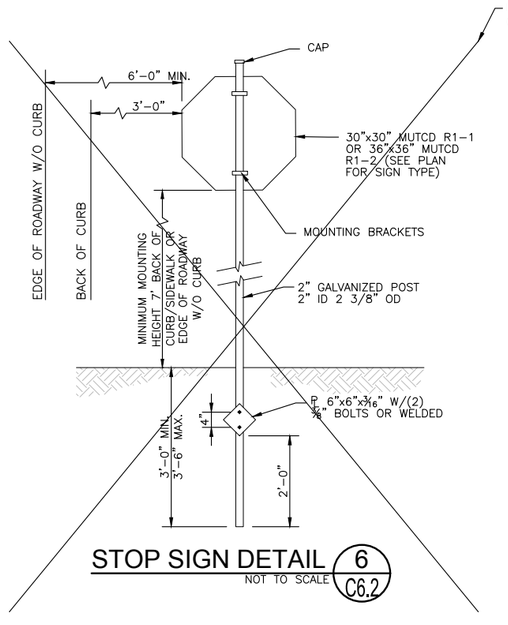
WATER SERVICE CONNECTION DETAIL 3 C6.2
NOT TO SCALE



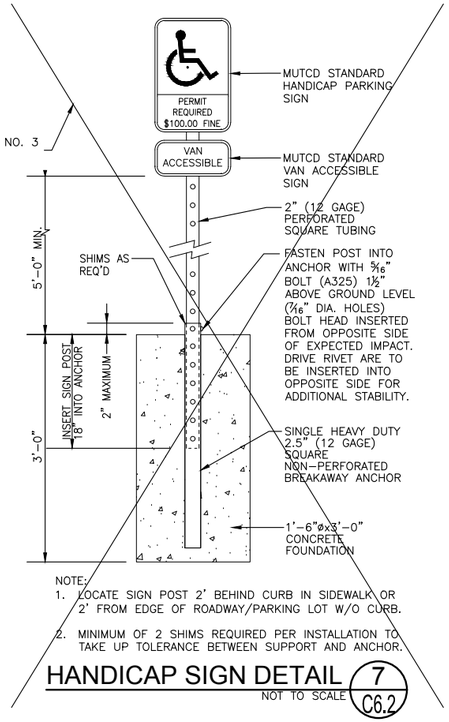
SEWER SERVICE CONNECTION DETAIL 4 C6.2
NOT TO SCALE

NOTES:
1. CENTER SYMBOL IN PARKING STALL.
2. BORDER REQUIRED UNLESS CONTRACT STATES OTHERWISE.
3. USE STANDARD SYMBOL UNLESS CONTRACT STATES OTHERWISE.

INTERNATIONAL HANDICAP SYMBOL DETAIL 5 C6.2
NOT TO SCALE

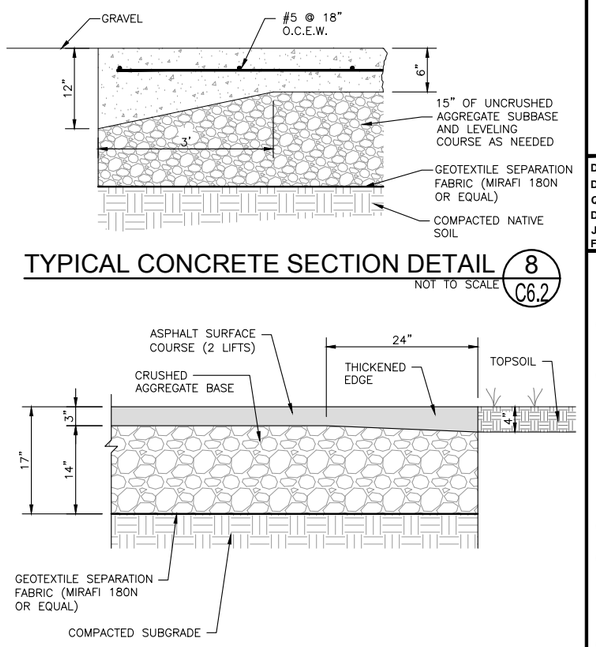


STOP SIGN DETAIL 6 C6.2
NOT TO SCALE



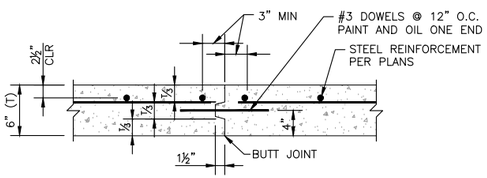
NOTE:
1. LOCATE SIGN POST 2' BEHIND CURB IN SIDEWALK OR 2' FROM EDGE OF ROADWAY/PARKING LOT W/O CURB.
2. MINIMUM OF 2 SHIMS REQUIRED PER INSTALLATION TO TAKE UP TOLERANCE BETWEEN SUPPORT AND ANCHOR.

HANDICAP SIGN DETAIL 7 C6.2
NOT TO SCALE

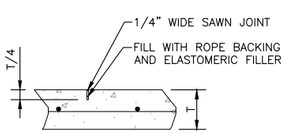


TYPICAL CONCRETE SECTION DETAIL 8 C6.2
NOT TO SCALE

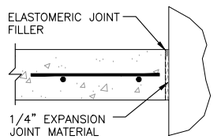
TYPICAL ASPHALT SECTION DETAIL 9 C6.2
NOT TO SCALE



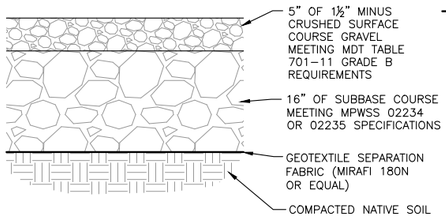
SLAB CONSTRUCTION JOINT DETAIL 10 C6.2
NOT TO SCALE



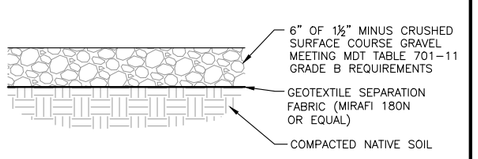
SLAB CONTROL JOINT DETAIL 11 C6.2
NOT TO SCALE



SLAB EXPANSION JOINT DETAIL 12 C6.2
NOT TO SCALE



GRAVEL SECTION DETAIL 13 C6.2
NOT TO SCALE



TYPICAL WALKING AREA - LIGHT GRAVEL SECTION DETAIL 14 C6.2
NOT TO SCALE

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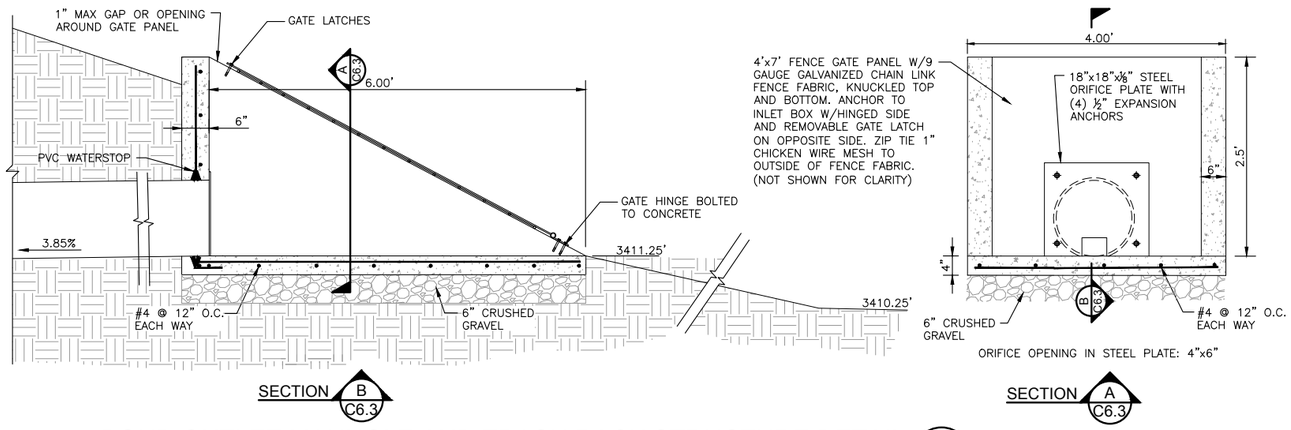
GREAT FALLS, MONTANA

DETAILS

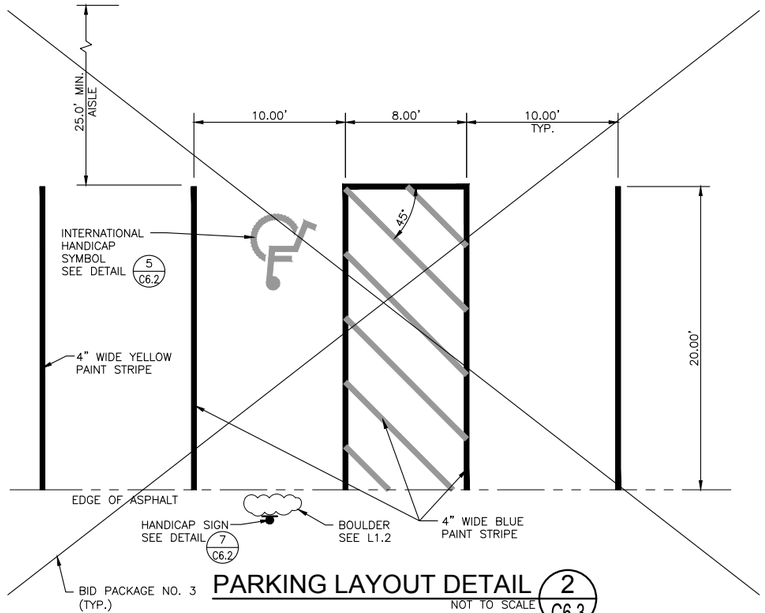
23-059 D VG

SHEET C6.2



POND OUTLET MANHOLE AND TRASH RACK STRUCTURE DETAIL 1 C6.3

NOT TO SCALE



PARKING LAYOUT DETAIL 2 C6.3

NOT TO SCALE

RIPRAP SPLASH PAD DETAIL 3 C6.3

NOT TO SCALE

TIE BOLT CONNECTION

TIE BOLT DETAIL
(TWO PER END SECTION)

NOTE:
1. USE TWO TIE BOLTS ON THE LAST TWO JOINTS OF BOTH CULVERT ENDS, ONE ON EACH SIDE AT 60° TO THE VERTICAL. GALVANIZE ALL PARTS.

TIE BOLT DETAIL 4 C6.3

NO SCALE

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GREAT FALLS, MONTANA

DETAILS

23-059 D WG

SHEET C6.3

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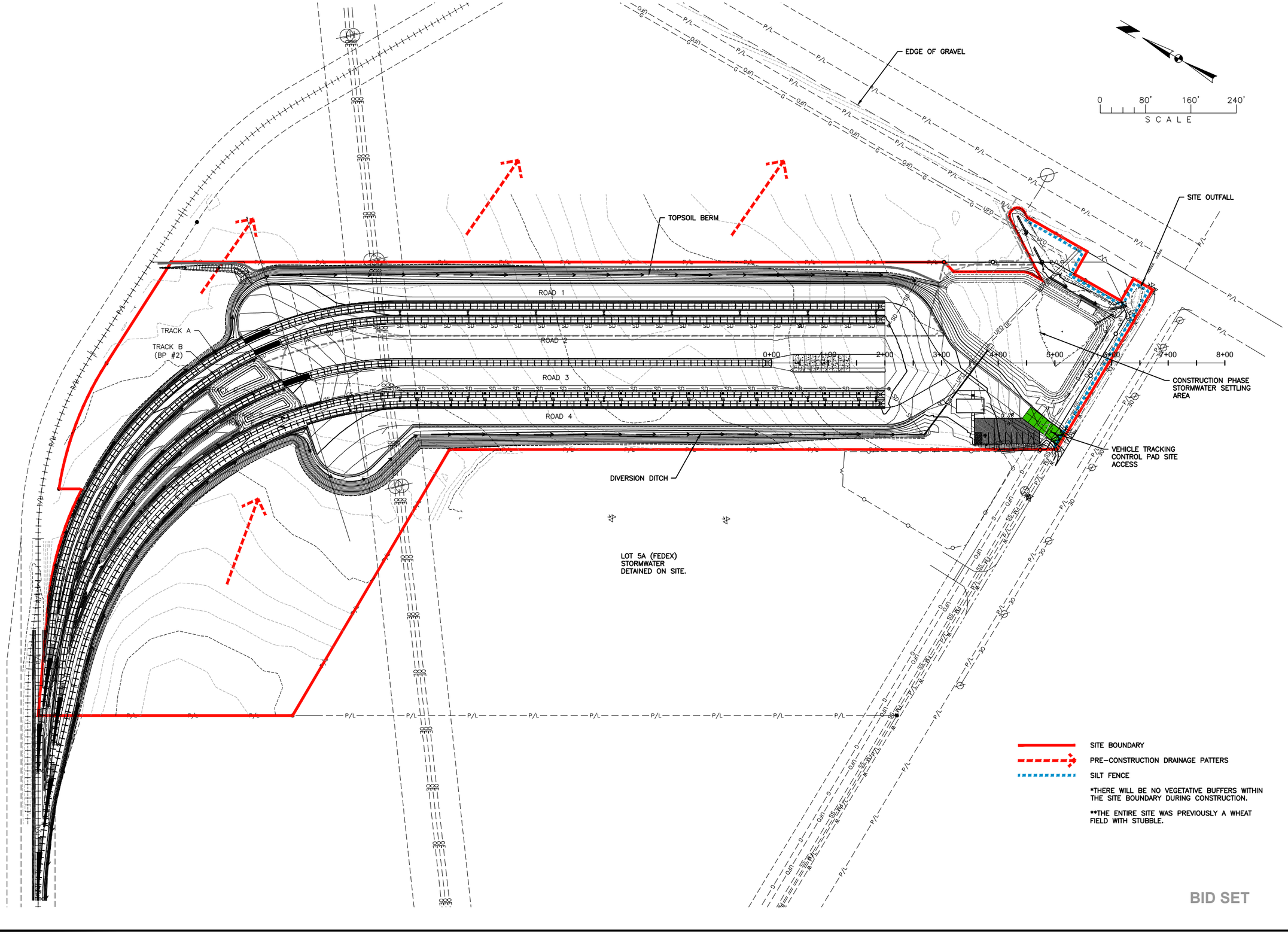

BID SET

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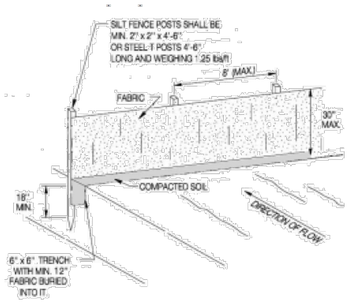
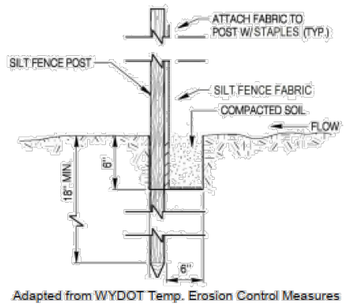
GREAT FALLS, MONTANA

SWPPP PLAN

23-059

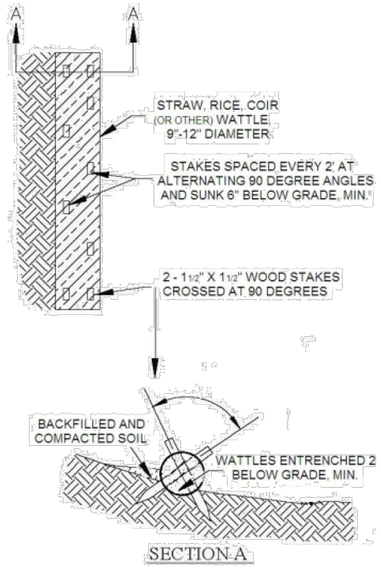
SHEET C7.0



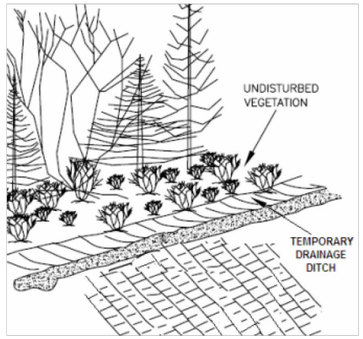


Adapted from WYDOT Temp. Erosion Control Measures

SILT FENCE DETAIL 1 C7.1
NOT TO SCALE

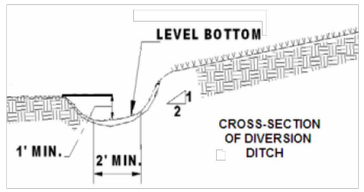


STRAW WATTLE DETAIL 2 C7.1
NOT TO SCALE

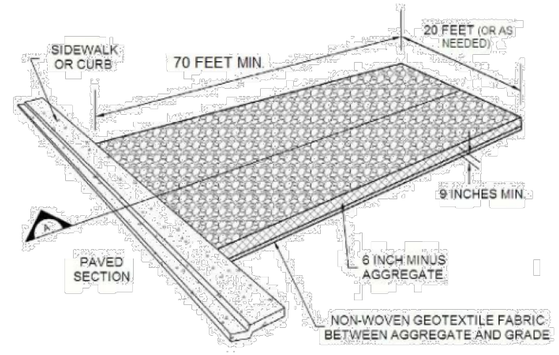


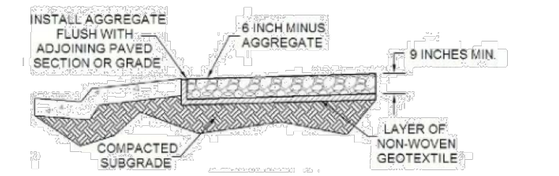
Adapted from CleanWater Services

Diversion Ditch **used to intercept run-on, above a graded slope.**



DIVERSION DITCH DETAIL 3 C7.1
NOT TO SCALE





VEHICLE TRACKING CONTROL PAD DETAIL 4 C7.1
NOT TO SCALE

BID SET

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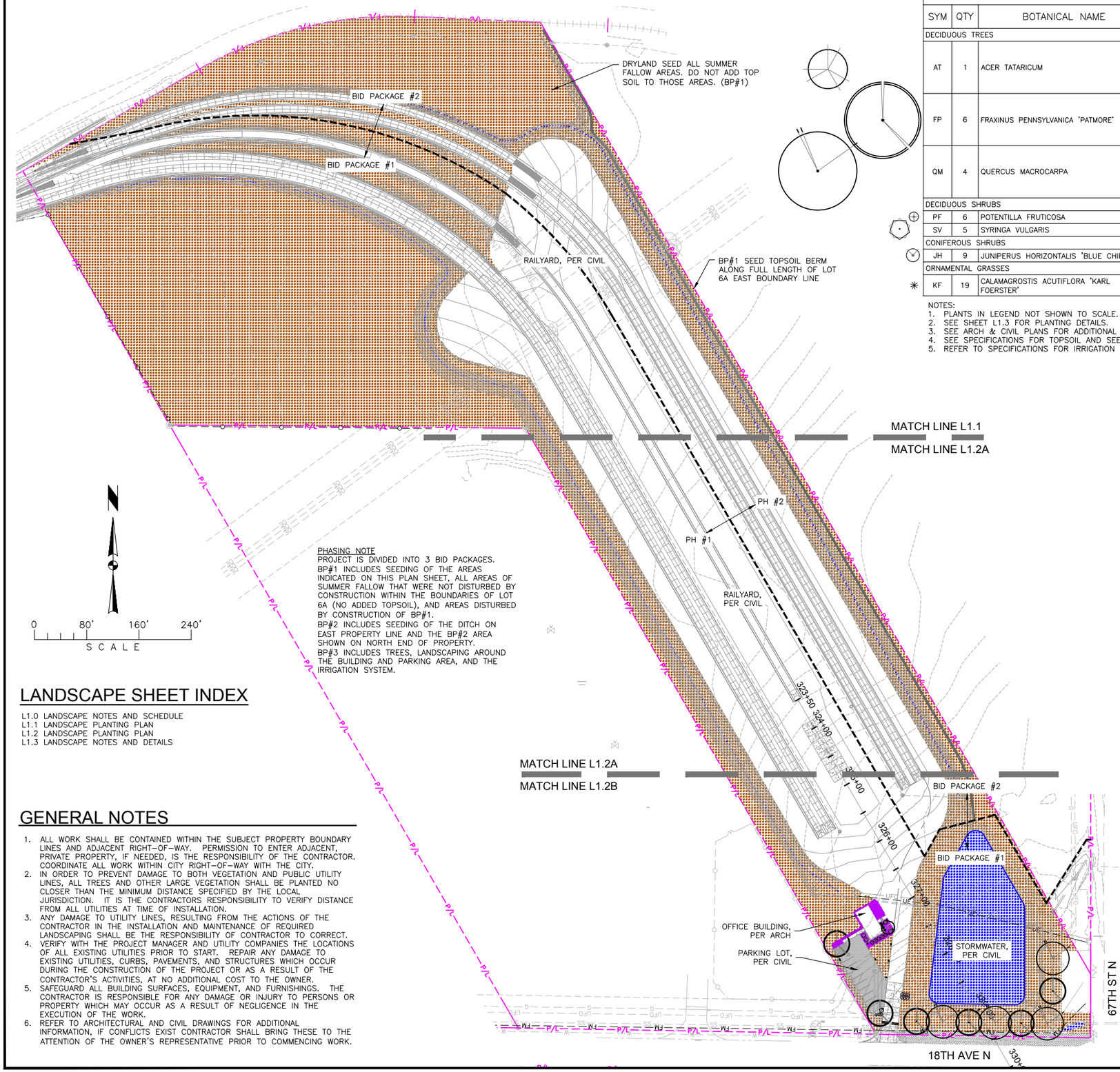
PONDEROSA GREAT FALLS TRANSLOAD - BID PACKAGE 1
GREAT FALLS, MONTANA

SWPPP DETAIL

23-059 SWPPP.DWG

SHEET C7.1

L1.0 LANDSCAPE SHEET MAP



PHASING NOTE
PROJECT IS DIVIDED INTO 3 BID PACKAGES.
BP#1 INCLUDES SEEDING OF THE AREAS INDICATED ON THIS PLAN SHEET, ALL AREAS OF SUMMER FALLOW THAT WERE NOT DISTURBED BY CONSTRUCTION WITHIN THE BOUNDARIES OF LOT 6A (NO ADDED TOPSOIL), AND AREAS DISTURBED BY CONSTRUCTION OF BP#1.
BP#2 INCLUDES SEEDING OF THE DITCH ON EAST PROPERTY LINE AND THE BP#2 AREA SHOWN ON NORTH END OF PROPERTY.
BP#3 INCLUDES TREES, LANDSCAPING AROUND THE BUILDING AND PARKING AREA, AND THE IRRIGATION SYSTEM.

LANDSCAPE SHEET INDEX

GENERAL NOTES

1. ALL WORK SHALL BE CONTAINED WITHIN THE SUBJECT PROPERTY BOUNDARY LINES AND ADJACENT RIGHT-OF-WAY. PERMISSION TO ENTER ADJACENT, PRIVATE PROPERTY, IF NEEDED, IS THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL WORK WITHIN CITY RIGHT-OF-WAY WITH THE CITY.
2. IN ORDER TO PREVENT DAMAGE TO BOTH VEGETATION AND PUBLIC UTILITY LINES, ALL TREES AND OTHER LARGE VEGETATION SHALL BE PLANTED NO CLOSER THAN THE MINIMUM DISTANCE SPECIFIED BY THE LOCAL JURISDICTION. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY DISTANCE FROM ALL UTILITIES AT TIME OF INSTALLATION.
3. ANY DAMAGE TO UTILITY LINES, RESULTING FROM THE ACTIONS OF THE CONTRACTOR IN THE INSTALLATION AND MAINTENANCE OF REQUIRED LANDSCAPING SHALL BE THE RESPONSIBILITY OF CONTRACTOR TO CORRECT.
4. VERIFY WITH THE PROJECT MANAGER AND UTILITY COMPANIES THE LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO START. REPAIR ANY DAMAGE TO EXISTING UTILITIES, CURBS, PAVEMENTS, AND STRUCTURES WHICH OCCUR DURING THE CONSTRUCTION OF THE PROJECT OR AS A RESULT OF THE CONTRACTOR'S ACTIVITIES, AT NO ADDITIONAL COST TO THE OWNER.
5. SAFEGUARD ALL BUILDING SURFACES, EQUIPMENT, AND FURNISHINGS. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE OR INJURY TO PERSONS OR PROPERTY WHICH MAY OCCUR AS A RESULT OF NEGLIGENCE IN THE EXECUTION OF THE WORK.
6. REFER TO ARCHITECTURAL AND CIVIL DRAWINGS FOR ADDITIONAL INFORMATION, IF CONFLICTS EXIST CONTRACTOR SHALL BRING THESE TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WORK.

MASTER PLANT SCHEDULE

SYM	QTY	BOTANICAL NAME	COMMON NAME	INSTALL SIZE	ROOT	NOTES	MATURE HEIGHT	MATURE WIDTH
DECIDUOUS TREES								
AT	1	ACER TATARICUM	TATARIAN MAPLE	2.0" CAL	B & B		15–20'	15–20'
FP	6	FRAXINUS PENNSYLVANICA 'PATMORE'	PATMORE GREEN ASH	2.0" CAL	B & B		50–60'	25–30'
QM	4	QUERCUS MACROCARPA	BUR OAK	2.0" CAL	B & B		60–80'	60–80'
DECIDUOUS SHRUBS								
PF	6	POTENTILLA FRUTICOSA	GOLDFINGER POTENTILLA	2 GAL.	CONTAINER		2–4'	3–5'
SV	5	SYRINGA VULGARIS	LILAC	5 GAL.	CONTAINER		12–15'	6–12'
CONIFEROUS SHRUBS								
JH	9	JUNIPERUS HORIZONTALIS 'BLUE CHIP'	BLUE CHIP JUNIPER	2 GAL.	CONTAINER	SPREADING	12"	8–10'
ORNAMENTAL GRASSES								
KF	19	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	CONTAINER		3–5'	18–42"

NOTES:
1. PLANTS IN LEGEND NOT SHOWN TO SCALE.
2. SEE SHEET L1.3 FOR PLANTING DETAILS.
3. SEE ARCH & CIVIL PLANS FOR ADDITIONAL LEGEND ITEMS.
4. SEE SPECIFICATIONS FOR TOPSOIL AND SEEDING REQUIREMENTS.
5. REFER TO SPECIFICATIONS FOR IRRIGATION INFORMATION.

SEED SCHEDULE

WETLAND POND MIX, BY TREASURE STATE SEED (OR APPROVED EQUAL)	
25%	GARRISON FOXTAIL
25%	CLIMAX TIMOTHY
15%	REED CANARYGRASS
15%	STREAKER REDTOP
10%	ALSIKE CLOVER
10%	TUFTED HAIRGRASS
PROVIDE TYPHA – CATTAILS AT BOTTOM OF POND 1 PLANT PER 15 SQ. FT. OVER A 1,500 SQ. FT. AREA AT POND OUTLET.	
PROVIDE FRESH, CLEAN, AND DRY NEW SEED WITH NOT LESS THAN 80% GERMINATION, NOT LESS THAN 95% PURE SEED, AND NOT MORE THAN 0.5% WEED SEED. APPLY WETLAND SEED MIXTURE AT A RATE OF 12–14 LBS/ACRE, DRILL SEED.	
DRYLAND SLOPE MIX, (OR APPROVED EQUAL)	
30%	FAIRWAY CRESTED WHEATGRASS
30%	HARD FESCUE
10%	SLENDER WHEAT GRASS
10%	SODAR STREAMBANK WHEATGRASS
10%	CRITANA THICKSPIKE WHEATGRASS
10%	SMOOTH BROME
PROVIDE FRESH, CLEAN, AND DRY NEW SEED WITH NOT LESS THAN 80% GERMINATION, NOT LESS THAN 95% PURE SEED, AND NOT MORE THAN 0.5% WEED SEED. APPLY DRYLAND SEED MIXTURE AT A RATE OF 10–12 LBS/ACRE, DRILL SEED.	

CODE REVIEW

CODE REQUIREMENT	REQUIRED	PROVIDED
17.44.3.020 – BOULEVARDS		
1 TREE PER 50 LINEAR FEET		
18TH AVE N	329 LN FT/50 = 7 TREES	7 TREES, LOCATED ON PROPERTY DUE TO BLVD CONFLICTS
GIANT SPRINGS ROAD	98 LN FT/50 = 2 TREES	2 TREES; LOCATED ON PROPERTY DUE TO BLVD CONFLICTS
17.44.3.030		
15% OF DEVELOPMENT AREA	N/A	N/A
10% OF OFF-STREET VEHICULAR USE AREAS	4,915 SF X 10% = 492 SF	506 SF
PARKING ROWS SHALL BE TERMINATED BY 6-FOOT PLANTING ISLAND		PROVIDED, SEE PLANS
PARKING ISLAND MUST CONTAIN A TREE WITH SHRUBS OR TURF GRASS – IF LIGHT POLE CONFLICTS THE TREE MAY BE RELOCATED	2 PARKING ISLANDS – 2 TREE REQUIRED	2 TREE IN PARKING LOT PROVIDED
1 TREE PER 400 SQ FT	N/A	INDUSTRIAL ZONING, NOT REQUIRED
4 SHRUBS PER 400 SQ FT (2 PERENNIALS OR 1 ORNAMENTAL GRASS MAY BE SUBSTITUTED FOR 1 SHRUB FOR A MAXIMUM OF 30% OF THE TOTAL REQUIRED SHRUBS)	N/A	INDUSTRIAL ZONING, NOT REQUIRED

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PONDEROSA SOLUTIONS OFFICE BUILDING - BID PACKAGE 3
GREAT FALLS, MONTANA

LANDSCAPE NOTES AND SCHEDULE

23-059 LAND

SHEET L1.0

L1.1 LANDSCAPE PLANTING PLAN

LEGEND

- (1) PLANTING BED, 3" DEPTH OF 1.5–INCH WASHED RIVER ROCK MULCH IN ALL PLANTING BEDS
- (2) EXISTING LANDSCAPING, RESTORE DISTURBED AREAS IN KIND
- (3) DRYLAND SEED MIX, PER SCHEDULE ON SHEET L1.0
- (4) WETLAND SEED MIX (BOTTOM OF SWALE), PER SCHEDULE ON SHEET L1.0
- BOULDER (BO ON PLANS) – SEE 4/L1.3
- METAL EDGING – SEE 5/L1.3
- PROPERTY LINE
- SL IRRIGATION SLEEVES
- VISION TRIANGLE, TYP

NOTES:
1. SEE SHEET L1.3 FOR PLANTING DETAILS.
2. SEE ARCH & CIVIL PLANS FOR ADDITIONAL LEGEND ITEMS.
3. SEE SPECIFICATIONS FOR TOPSOIL AND SEEDING REQUIREMENTS.
4. REFER TO SPECIFICATIONS FOR IRRIGATION INFORMATION.

RAILYARD, PER CIVIL

SEED BOTTOM OF SWALE W/ WETLAND SEED MIX (TYP)

MATCH LINE L1.2A

0 40' 80' 120'
SCALE

PLANT SCHEDULE

SYM	BOTANICAL NAME	COMMON NAME
DECIDUOUS TREES		
AT	ACER TATARICUM	TATARIAN MAPLE
FP	FRAXINUS PENNSYLVANICA 'PATMORE'	PATMORE GREEN ASH
QM	QUERCUS MACROCARPA	BUR OAK
DECIDUOUS SHRUBS		
PF	POTENTILLA FRUTICOSA	GOLDFINGER POTENTILLA
SV	SYRINGA VULGARIS	LILAC
CONIFEROUS SHRUBS		
JH	JUNIPERUS HORIZONTALIS 'BLUE CHIP'	BLUE CHIP JUNIPER
ORNAMENTAL GRASSES		
KF	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS

NOTE:
PLANTS IN LEGEND NOT SHOWN TO SCALE.

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PONDEROSA SOLUTIONS OFFICE BUILDING - BID PACKAGE 3
GREAT FALLS, MONTANA

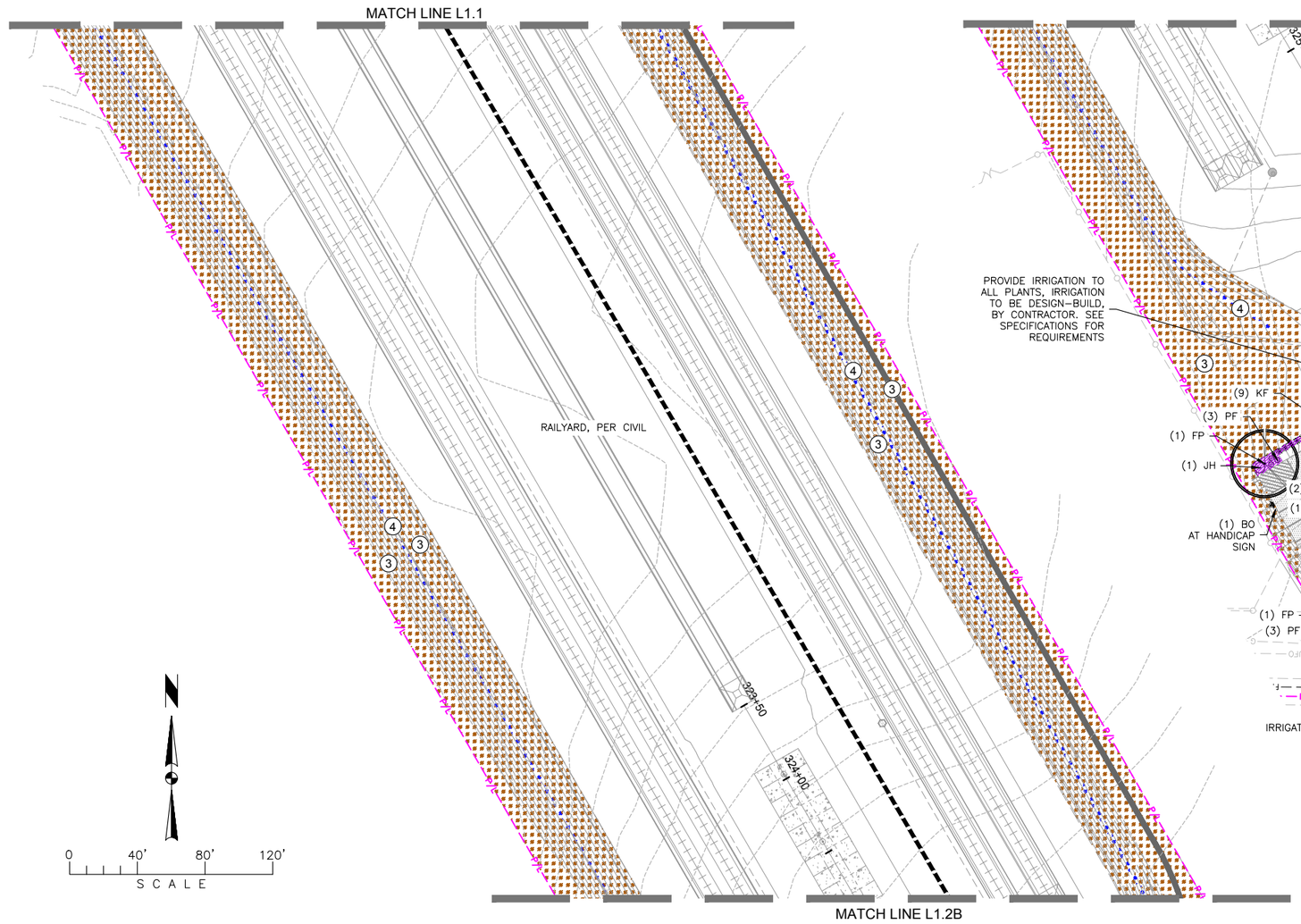
LANDSCAPE PLANTING PLAN

23-059 LAND

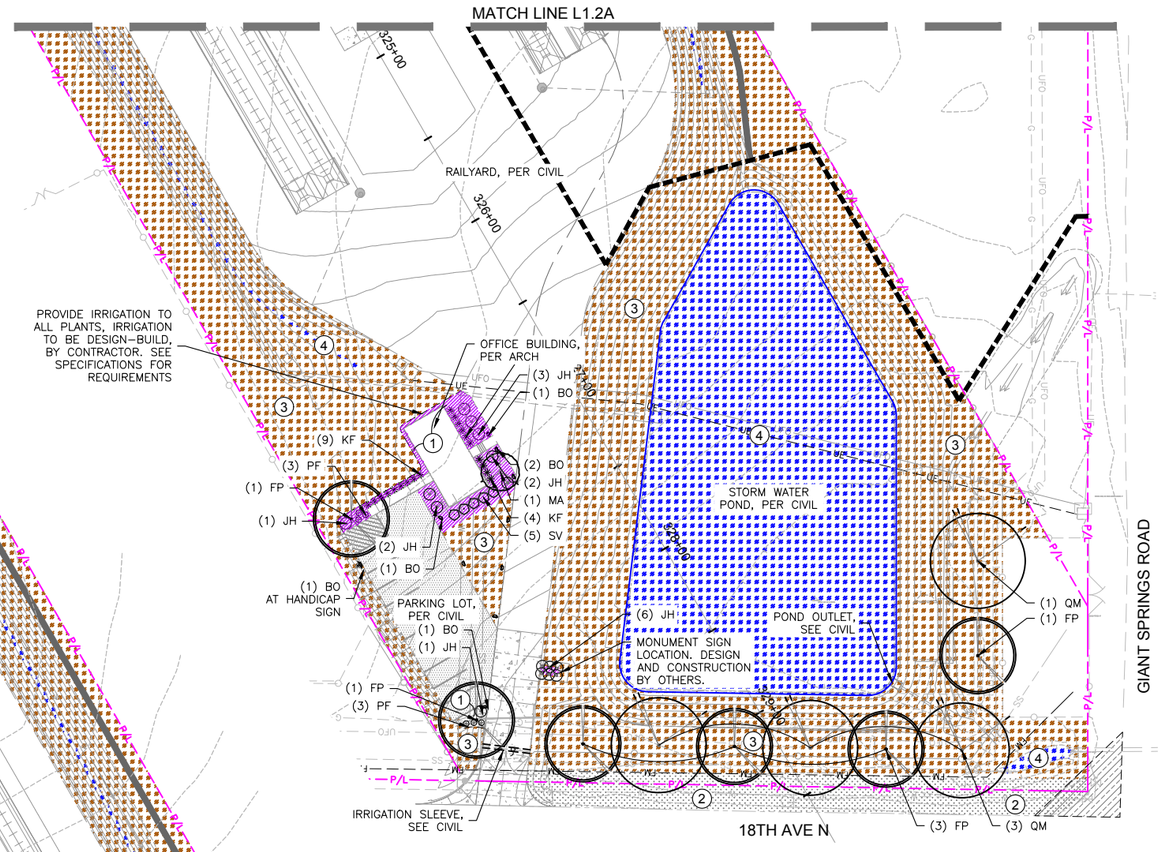
SHEET L1.1

PRINTED 2024-03-14, BY JOSEPH E. MATTER, I:\GTF\2023\23-059 PONDEROSA RAIL\06_CADD\CIVIL\BP 3\23-059 LANDSCAPE.DWG

L1.2A LANDSCAPE PLANTING PLAN



L1.2B LANDSCAPE PLANTING PLAN



PLANT SCHEDULE

SYM	BOTANICAL NAME	COMMON NAME
DECIDUOUS TREES		
AT	ACER TATARICUM	TATARIAN MAPLE
FP	FRAXINUS PENNSYLVANICA 'PATMORE'	PATMORE GREEN ASH
QM	QUERCUS MACROCARPA	BUR OAK
DECIDUOUS SHRUBS		
PF	POTENTILLA FRUTICOSA	GOLDFINGER POTENTILLA
SV	SYRINGA VULGARIS	LILAC
CONIFEROUS SHRUBS		
JH	JUNIPERUS HORIZONTALIS 'BLUE CHIP'	BLUE CHIP JUNIPER
ORNAMENTAL GRASSES		
KF	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS

NOTE:
PLANTS IN LEGEND NOT SHOWN TO SCALE.

LEGEND

- (1) PLANTING BED, 3" DEPTH OF 1.5–INCH WASHED RIVER ROCK MULCH IN ALL PLANTING BEDS
- (2) EXISTING LANDSCAPING, RESTORE DISTURBED AREAS IN KIND
- (3) DRYLAND SEED MIX, PER SCHEDULE ON SHEET L1.0
- (4) WETLAND SEED MIX (BOTTOM OF SWALE), PER SCHEDULE ON SHEET L1.0
- BOULDER (BO ON PLANS) – SEE 4/L1.3
- METAL EDGING – SEE 5/L1.3
- P/L — PROPERTY LINE
- SL — IRRIGATION SLEEVES
- VISION TRIANGLE, TYP

NOTES:
1. SEE SHEET L1.3 FOR PLANTING DETAILS.
2. SEE ARCH & CIVIL PLANS FOR ADDITIONAL LEGEND ITEMS.
3. SEE SPECIFICATIONS FOR TOPSOIL AND SEEDING REQUIREMENTS.
4. REFER TO SPECIFICATIONS FOR IRRIGATION INFORMATION.

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PONDEROSA SOLUTIONS OFFICE BUILDING - BID PACKAGE 3
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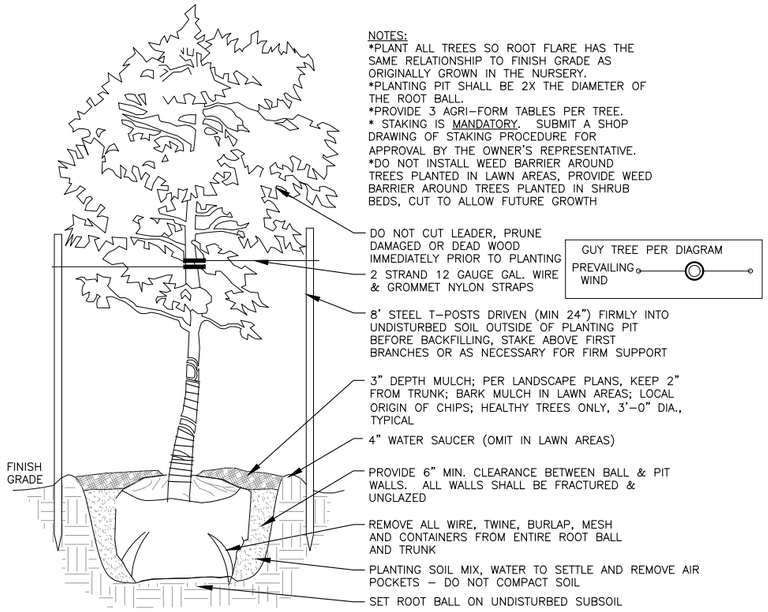
LANDSCAPE PLANTING PLAN

23-059 LAND VG

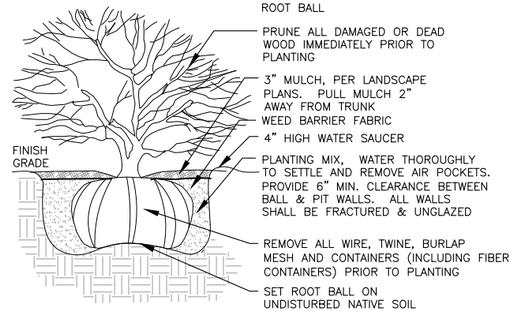
SHEET L1.2

L1.3 LANDSCAPE DETAIL SHEET



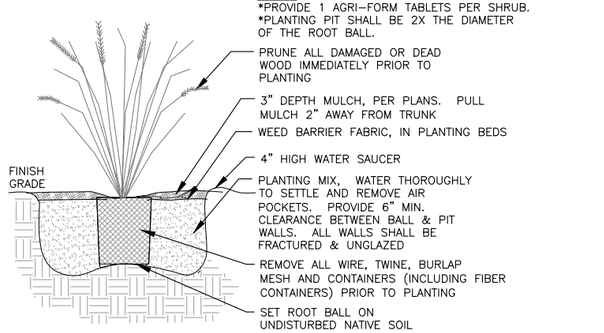
1 DECIDUOUS TREE

NOT TO SCALE



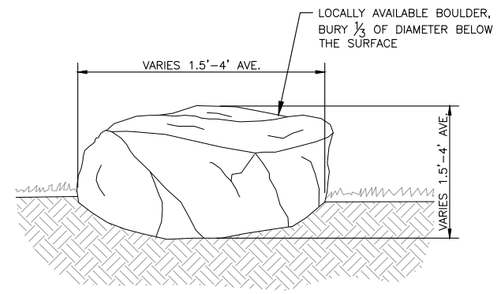
2 SHRUB PLANTING

NOT TO SCALE



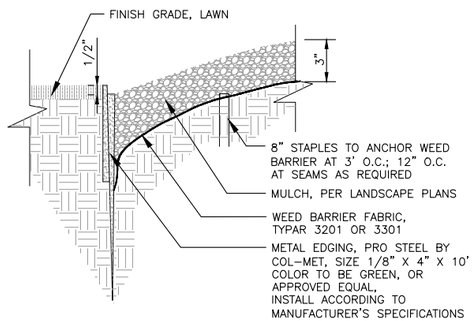
3 ORNAMENTAL GRASS & PERENNIAL PLANTING

NOT TO SCALE



4 BOULDER PLACEMENT

NOT TO SCALE



5 METAL EDGING DETAIL

NOT TO SCALE

PLANTING NOTES

1. COORDINATE WITH ARCHITECTURE/ENGINEERING PLANS TO BECOME THOROUGHLY FAMILIAR WITH GRADING, SURFACE, AND UNDERGROUND CONDITIONS AND UTILITIES.
2. ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ON-SITE BEFORE CONSTRUCTION BEGINS. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WORK.
3. CONTRACTOR IS RESPONSIBLE FOR TOPSOIL FILL AND LANDSCAPE GRADING. PROVIDE A MINIMUM OF 4-INCH TOPSOIL DEPTH IN ALL LANDSCAPE AREAS. SEE CIVIL FOR ADDITIONAL SITE GRADING.
4. ONE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF BOTH THE PLANTING AND IRRIGATION INSTALLATION, UNLESS OTHERWISE APPROVED BY OWNER'S REPRESENTATIVE.
5. COORDINATE WITH OTHER CONTRACTORS, AS NECESSARY, REGARDING LOCATION AND TIMING OF INSTALLATION OF PLANT MATERIALS.
6. PLANT MATERIALS SHALL BE FURNISHED IN THE QUANTITIES AND/OR SPACING AS SHOWN OR NOTED. IN CASE OF DISCREPANCIES BETWEEN THE PLAN AND THE PLANT SCHEDULE, THE PLAN SHALL DICTATE.
7. PLANT MATERIALS ARE DRAWN AT OR NEAR THEIR MATURE SIZE. UTILIZE THE CENTER POINT OF THE SYMBOL TO DETERMINE PROPER PLANT LAYOUT AND PLACEMENT. PLANT TREES WITHIN 5-FEET OF LOCATION SHOWN ON PLANS, PLANT SHRUBS WITHIN 1-FOOT OF LOCATION SHOWN ON PLANS, UNLESS OTHERWISE APPROVED BY OWNER'S REPRESENTATIVE.
8. ALL PLANTS ARE TO MEET OR EXCEED 'AMERICAN STANDARDS FOR NURSERY STOCK', CURRENT EDITION, BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION. ALL PLANTS SHALL BE NURSERY-GROWN UNLESS OTHERWISE NOTED.
9. ALL SHRUB BEDS TO BE MULCHED WITH CLEAN ROCK MULCH, OR APPROVED EQUAL AS SHOWN ON PLANS, SPECIFICATIONS, AND PER DETAILS, 3" MINIMUM DEPTH.
10. COORDINATE THE PLANTING WITH IRRIGATION SYSTEM. THE OWNER IS NOT RESPONSIBLE FOR DAMAGE CAUSED BY OTHER TRADES WHILE COMPLETING THIS WORK.
11. ALL SUBSTITUTIONS AND PLAN CHANGES MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE OWNER'S REPRESENTATIVE.
12. ANY WORK OR MATERIAL WHICH IN THE OPINION OF THE OWNER'S REPRESENTATIVE DOES NOT MEET THE REQUIREMENTS OF THE PLANS WILL BE CAUSE FOR REJECTION. ALL REJECTED WORK AND MATERIALS SHALL BE IMMEDIATELY REMOVED, DISPOSED, AND REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
13. BEGIN MAINTENANCE AFTER EACH PLANT HAS BEEN INSTALLED AND CONTINUE UNTIL FINAL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. MAINTENANCE INCLUDES WATERING, PRUNING, WEEDING, MULCHING, REPLACEMENT OF SICK OR DEAD PLANTS, AND ANY OTHER CARE NECESSARY FOR THE PROPER GROWTH OF THE PLANT STOCK.
14. DURING THE COURSE OF THIS WORK, REMOVE EXCESS WASTE MATERIAL DAILY FROM THE SITE AND UPON COMPLETION OF ALL WORK.
15. TO THE MAXIMUM EXTENT FEASIBLE, TOPSOIL THAT IS REMOVED DURING CONSTRUCTION ACTIVITIES SHALL BE CONSERVED FOR LATER USE.
16. PRIOR TO INSTALLATION OF PLANT MATERIALS, AREAS THAT HAVE BEEN COMPACTED OR DISTURBED BY CONSTRUCTION ACTIVITY SHALL BE THOROUGHLY LOOSENED. ORGANIC AMENDMENTS SUCH AS COMPOST, PEAT, OR AGED MANURE SHALL BE THOROUGHLY INCORPORATED.
17. UPON COMPLETION OF ALL LANDSCAPING, A SUBSTANTIAL COMPLETION WALK-THROUGH OF THE WORK WILL BE HELD. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE FOR SCHEDULING THE WALK-THROUGH AT LEAST SEVEN (7) DAYS PRIOR TO THE ANTICIPATED DATE.
18. WARRANTY ALL PLANT STOCK AND WORKMANSHIP FOR 24 MONTHS FROM THE DATE OF FINAL ACCEPTANCE. REPLACEMENT PLANTS SHALL BE WARRANTED FOR AN ADDITIONAL 1 YEAR.

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Agenda #5.

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PONDEROSA SOLUTIONS OFFICE BUILDING - BID PACKAGE 3
GREAT FALLS, MONTANA

LANDSCAPE NOTES AND DETAILS

23-059 LAND...VG

SHEET L1.3

ELECTRICAL SPECIFICATION (DIV. 16/26)

SECTION 16120 –CONDUCTORS

PART 1 GENERAL

1.1 QUALITY ASSURANCE

A. CONDUCTORS SHALL BE OF AMERICAN MANUFACTURE AND MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND THE UNDERWRITERS LABORATORIES.

B. CONDUCTORS SHALL BE COPPER. ALUMINUM IS NOT ACCEPTABLE.

PART 2 PRODUCTS

2.1 MATERIALS

A. TYPE 'THW' OR 'THWN' CONDUCTORS SHALL BE USED IN WET OR DRY LOCATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS. TYPE THHN MAY BE USED IN DRY LOCATIONS.

B. CONNECTORS
1. CABLE SIZE #6 OR LARGER, USE LUGS OR APPROVED CONNECTORS.
2. CONDUCTORS #8 AND SMALLER, USE ONE OF THE FOLLOWING SOLDERLESS CONNECTIONS OR APPROVED EQUAL:

IDEAL INDUSTRIES "WING NUT"
3M CO. "SCOTCHLOK"
BUCHANAN STEEL SPLICE CAP WITH NYLON INSULATOR

C. NOTE ANY SPECIAL WIRING OF AUXILIARY SYSTEMS AS SPECIFIED ELSEWHERE OR NOTED ON THE DRAWINGS.

D. PREWIRED CABLE SHALL NOT BE ACCEPTABLE.

PART 3 EXECUTION

3.1 INSTALLATION

A. ALL CONDUCTORS INSTALLED IN RACEWAYS.

B. CONDUCTORS TO BE SIZED IN ACCORD WITH THE NATIONAL ELECTRICAL CODE EXCEPT MINIMUM SIZE #12 AWG GAUGE UNLESS OTHERWISE SPECIFIED, NOTED OR APPROVED.

C. COLOR CODED IN ACCORD WITH THE FOLLOWING TABLE:

SYSTEM VOLTAGE	ØA	ØB	ØC	NEUTRAL	GROUND
277/480	BROWN	ORANGE	YELLOW	GRAY	GREEN
120/208	BLACK	RED	BLUE	WHITE	GREEN

1. AUXILIARY SYSTEMS SHALL EACH HAVE THEIR OWN COLOR CODING THROUGHOUT THE RESPECTIVE SYSTEMS.

D. CIRCUITS RUN AND NUMBERED TO AGREE WITH DRAWINGS. COMBINING OF CIRCUITS OTHER THAN WHAT IS SHOWN ON DRAWINGS IS UNACCEPTABLE.

END OF SECTION

SECTION 16110 – RACEWAYS AND FITTINGS

PART 1 GENERAL

1.1 WORK INCLUDED

A. THE WORK IN THIS SECTION INCLUDES CONDUIT SYSTEMS REQUIRED FOR POWER, LIGHTING AND OTHER SYSTEMS REQUIRING RACEWAYS.

B. SYSTEMS INCLUDED, BUT NOT LIMITED TO, ARE ALARM, SECURITY AND OTHERS NOTED ON THE DRAWINGS.

PART 2 PRODUCTS

2.1 MATERIALS

A. RIGID CONDUIT SHALL BE GALVANIZED RIGID STEEL CONFORMING TO FEDERAL SPECIFICATION NO. WW–C–581.

B. PVC CONDUIT MAY BE USED WHERE BURIED UNDERGROUND, NOT ABOVE GRADE.

C. EMT SHALL BE GALVANIZED STEEL CONFORMING TO FEDERAL SPECIFICATION NO. WW–C–563. MAY ONLY BE USED WHERE RIGID STEEL IS NOT CALLED FOR OR REQUIRED BY CODE.

1. CONNECTORS AND FITTINGS TO BE STEEL COMPRESSION TYPE OR SETSCREW TYPE (CAST METAL IS NOT ACCEPTABLE).

D. FLEXIBLE CONDUIT SHALL BE GALVANIZED FLEXIBLE STEEL CONDUIT CONFORMING TO FEDERAL SPECIFICATION NO. WW–C–566. USE POLYVINYL AND NEOPRENE–COVERED, WATERPROOF TYPE WITH WATERPROOF CONNECTORS FOR AND CONNECTIONS TO MOTORS AND EQUIPMENT.

E. INSULATED BUSHINGS SHALL BE O–Z/GEDNEY TYPE 'B', 'SB' OR 'SBT' AS REQUIRED.

F. TYPE 'MC' OR ANY PREWIRED FLEXIBLE METALLIC CABLE SHALL NOT BE ACCEPTABLE OR USED.

PART 3 EXECUTION

3.1 INSTALLATION

A. RACEWAYS USED THROUGHOUT CONSTRUCTION FOR ALL CONDUCTORS UNLESS OTHERWISE SPECIFICALLY INDICATED. SEPARATE RACEWAY SYSTEMS SHALL BE USED FOR EACH AUXILIARY SYSTEM SUCH AS EXIT LIGHTS, FIRE ALARM, COMMUNICATION OR SIGNAL SYSTEMS. MINIMUM SIZE CONDUIT FOR AUXILIARY SYSTEMS TO BE 3/4".

B. SEALTITE FLEXIBLE METAL CONDUIT SHALL BE USED FOR CONNECTIONS TO MOTOR AND EQUIPMENT. MINIMUM LENGTH OF 12". MAXIMUM LENGTH FOR CONNECTIONS TO MOTOR DRIVEN EQUIPMENT – 36" MAXIMUM LENGTH FOR CONNECTION TO LIGHT FIXTURES – 5'–0".

C. ALL CONDUITS SHALL BE PROVIDED WITH LOCKNUTS AND INSULATED THROAT CONNECTORS.

D. CONDUIT SHALL BE CONCEALED IN FINISHED SPACES, UNLESS OTHERWISE INDICATED.

E. INSTALLATION OF RACEWAYS TO BE COORDINATED WITH INSTALLATION OF OTHER TRADES, IN PARTICULAR, DUCTWORK AND PIPING. LOCATION OF MECHANICAL EQUIPMENT AND SYSTEMS TO TAKE PRECEDENCE OVER RACEWAYS LOCATION. INSTALLATION SHALL NOT RESTRICT EQUIPMENT MAINTENANCE SPACE OR ACCESS THERETO.

F. HANGING OF RACEWAYS DONE IN FIRST–CLASS MANNER USING CONDUIT CLAMPS, UNISTRUT BRACKETS, RACKS, ETC., OR OTHER APPROVED METHODS. HANGING OFF DUCTWORK, SUSPENDED CEILING SUPPORT WIRES, OR RESTING ON CEILING SUPPORT SYSTEM OR CEILING MATERIAL IS NOT PERMITTED. INSTALLATION SHALL NOT INTERFERE WITH REMOVABLE CEILING PANELS OR ACCESS OPENINGS.

3.2 GROUNDING RACEWAY SYSTEM

A. ALL NONCURRENT–CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT AND ALL RACEWAY SYSTEMS SHALL BE GROUNDED.

B. GROUND RACEWAY SYSTEMS AND CABINETS FOR AUXILIARY SYSTEMS BY BONDING OR BY CONDUIT INTERCONNECTION WITH THE ELECTRICAL SYSTEM OR AS OTHERWISE SPECIFICALLY INDICATED ON THE DRAWINGS.

C. RUN A GROUND WIRE WITH ALL CONDUIT PROPERLY CONNECTED AT EACH END WITH APPROVED FITTINGS WITH BINDING SCREW.

END OF SECTION

SECTION 16130 – BOXES

PART 1 GENERAL

1.1 COORDINATION

A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY DOOR SWINGS ON THE JOB BEFORE ROUGHING–IN FOR SWITCHES AT DOORS. LOCATE ON LOCK SIDE OF DOOR.

1.2 CIRCUIT IDENTIFICATION

A. EACH JUNCTION BOX SHALL HAVE ALL CIRCUIT NUMBERS IN THAT PARTICULAR BOX NOTED ON THE COVER. ON EXPOSED GALVANIZED BOXES WITH GALVANIZED COVERS, SUCH AS ABOVE ACCESSIBLE CEILINGS AND IN UNFINISHED SPACES, THE CIRCUIT NUMBERS SHALL BE ON THE OUTSIDE OF THE COVER. ON FLUSH BOXES IN FINISHED SPACES THE NUMBERS SHALL BE NOTED ON THE OUTSIDE OF THE COVER. USE A LABEL MAKER SUCH AS DYMO.

PART 2 PRODUCTS

2.1 MATERIALS

A. ZINC–COATED OR CADMIUM–PLATED CODE GAUGE SHEET STEEL, MINIMUM DEPTH 2–1/8" EXCEPT AT STRUCTURAL RESTRICTIONS. SIZES TO BE IN ACCORD WITH THE NATIONAL ELECTRICAL CODE.

B. BOXES FOR METALLIC RACEWAYS, 4–INCH BY 4–INCH NOMINAL SIZE AND SMALLER SHALL BE OF THE CAST–METAL HUB TYPE WHEN LOCATED IN NORMALLY WET LOCATIONS, WHEN SURFACE MOUNTED ON OUTSIDE OF EXTERIOR SURFACES, WHEN LOCATED IN HAZARDOUS AREAS, OR WHEN INSTALLED EXPOSED UP TO 7 FEET ABOVE INTERIOR FLOORS AND WALKWAYS.

C. JUNCTION OR PULL BOXES WHICH ARE LESS THAN 150 CUBIC INCHES IN SIZE, SHALL BE THE SAME AS OUTLET BOXES.

D. OCTAGON OR SQUARE BOXES SHALL BE NOT LESS THAN 4" SIZE.

E. NOTE ANY SPECIAL LIGHT FIXTURE MOUNTING REQUIREMENTS AND PROVIDE FOR SAME.

F. BOXES IN MASONRY WALLS SHALL BE SET IN THE CORNER OF THE MASONRY UNIT NEAREST HEIGHT AND LOCATION REQUIREMENTS. OUTLET BOXES SHALL CONSIST OF A 4" SQUARE BOX WITH A 2" X 4" RECTANGULAR CUT TILE WALL EXTENSION COVER. "THRU–WALL" BOXES ARE NOT ACCEPTABLE.

G. SPECIAL BOXES AS REQUIRED TO BE USED FOR SPECIAL SYSTEMS AS SPECIFIED, NOTED ON THE DRAWINGS OR AS REQUIRED.

H. APPROPRIATE FACTORY BOXES USED WITH SURFACE RACEWAYS, SUCH AS WIREMOLD.

I. COVERS ON FLUSH BOXES IN FINISHED SPACES SHALL HAVE COVER PLATES MATCHING ADJACENT DEVICE PLATES.

1. PLASTER RINGS SHALL BE PROVIDED ON ALL OUTLET BOXES IN PLASTER WALLS OR CEILINGS AND ELSEWHERE AS REQUIRED.

PART 3 EXECUTION

3.1 INSTALLATION

A. ALL METALLIC BOXES TO BE EFFECTIVELY GROUNDED.

B. CHECK OTHER DRAWINGS, SHOP DRAWINGS, ETC., TO DETERMINE THAT SWITCHES AND OUTLETS ARE NOT CONCEALED BEHIND CABINET WORK, DOORS, HEATING UNITS, ETC.

C. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO SEE THAT BOXES IN WALLS ARE STRAIGHT, LEVEL, PLUMB AND FLUSH WITH FINISHED SURFACES. USE BOX EXTENSIONS WHERE BOX IS SET TOO DEEP.

D. OPEN JUNCTION BOXES ARE NOT ACCEPTABLE. ALL BOXES SHALL HAVE AN APPROPRIATE COVER FOR THE LOCATION.

END OF SECTION

GENERAL PROJECT NOTES:

A. THE COMPLETE ELECTRICAL INSTALLATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, THE LATEST RULES AND REGULATIONS OF THE SAFETY ORDERS ISSUED BY THE DIVISION OF INDUSTRIAL SAFETY, THE NATIONAL BOARD OF FIRE UNDERWRITERS AND ALL APPLICABLE STATE AND LOCAL CODES ISSUED BY THE AUTHORITIES HAVING JURISDICTION.

B. ELECTRICAL CONTRACTOR SHALL DIRECT, PROVIDE, & SUPERVISE ALL ELECTRICAL WORK AND SHALL COORDINATE ALL WORK WITH OTHER TRADES. THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL, MECHANICAL, AND OTHER DRAWINGS RELATED TO THIS PROJECT FOR OTHER ELECTRICAL WORK TO BE DONE, WHICH MAY NOT BE SHOWN ON THESE ELECTRICAL PLANS.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL REQUIRED PERMITS AND INSPECTIONS.

D. ELECTRICAL CONTRACTOR SHALL DETERMINE METHODS, PHASING, & SEQUENCE OF ELECTRICAL WORK TO SATISFY CONTRACT DOCUMENT REQUIREMENTS.

E. ALL PENETRATIONS THROUGH WALLS SHALL BE TOTALLY SEALED TO PREVENT THE SPREAD OF SMOKE, FIRE, TOXIC GASES, AND WATER THROUGH THE PENETRATION. THE FIRE RATING OF THE SEALED PENETRATION SHALL BE AT LEAST THAT OF THE WALL INTO WHICH IT IS INSTALLED. THE SEAL SHALL PERMIT THE VIBRATION, EXPANSION AND/OR CONTRACTION OF THE CONDUIT PASSING THROUGH THE PENETRATION WITHOUT THE SEAL CRACKING OR CRUMBLING.

F. UNLESS OTHERWISE INDICATED, THE MINIMUM SIZE OF CONDUIT FOR ALL CIRCUITS SHALL BE 1/2".

G. GREEN INSULATED GROUND CONDUCTORS SHALL BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUIT CONDUIT.

H. ALL 120V CIRCUITS SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR.

I. ELECTRICAL EQUIPMENT AND FEEDERS SHALL BE SUPPORTED AND/OR ANCHORED IN ACCORDANCE WITH ALL LOCAL SEISMIC REQUIREMENTS.

J. ELECTRICAL CONTRACTOR SHALL REVIEW & VERIFY ALL DIMENSIONS PRIOR TO WORK. REPORT ANY OBSERVED AMBIGUITY, OMISSION, OR ERROR, IN WRITING, AT ONCE, TO THE GENERAL CONTRACTOR.

K. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL BACKER, CONCRETE PADS, & STRUCTURAL RELATED FRAMING ISSUES, WITH THE GENERAL CONTRACTOR, PRIOR TO ROUGH–IN. CONDUIT WHICH SPAN STRUCTURAL SEISMIC JOINTS REQUIRE 12" MINIMUM FLEXIBLE JOINT & SUPPORT.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	POWER PANEL
	TELEPHONE BOARD
	DISCONNECT SWITCH
	COMBINATION MAGNETIC STARTER
$M	FRACTIONAL HP, MOTOR SENTINEL
	BRANCH CIRCUIT EXPOSED ON BUILDING STRUCTURE OR CONCEALED IN WALLS/ CEILINGS IN FINISHED LOCATIONS.
	BRANCH CIRCUIT CONCEALED IN OR UNDER FLOOR
	EMPTY CONDUIT – 3/4" UNLESS NOTED OTHERWISE
	CONDUIT STUB OUT
	CONDUIT RUN – NUMBER OF ARROWHEADS INDICATES THE NUMBER OF CIRCUITS REQUIRED.
	POLE MOUNTED LED LIGHT FIXTURE
	LED LIGHT FIXTURE (CEILING OR WALL MOUNT)
	LED WALL PACK FIXTURE (WALL MOUNT)
	LINEAR LED LIGHT FIXTURE (WALL MOUNT)
	LINEAR LED LIGHT FIXTURE (SURFACE)
	EXIT LIGHT FIXTURE (UNIVERSAL MOUNT)
	LED EMERGENCY LIGHT FIXTURE
	DUPLEX CONVENIENCE RECEPTACLE
	DUPLEX CONVENIENCE RECEPTACLE – MOUNTED HORIZONTALLY
	DOUBLE DUPLEX CONVENIENCE RECEPTACLE
	208 VOLT RECEPTACLE NEMA 6–30R UNLESS OTHERWISE NOTED
T	THERMOSTAT
	COMBINATION DATA/TELEPHONE OUTLET
	MULTI–OUTLET ASSEMBLY – SIZE AS NOTED W/RECEPTACLE AS NOTED
	MOTOR
	SPECIAL EQUIPMENT CONNECTION OR OUTLET AS NOTED
J	JUNCTION BOX OR J–BOX
OS	OCCUPANCY SENSOR
TC	TIME CLOCK
$	SWITCH
$3	SWITCH – 3 WAY
$4	SWITCH – 4 WAY
$D	SWITCH – DIMMER
$OC	SWITCH – OCCUPANCY SENSOR (SUBSCRIPT INDICATES TYPE)
$T	SWITCH – TIMER
P	PUSH BUTTON

ABBREVIATIONS	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AIC	AMPS INTERRUPTING CURRENT
C	CONDUIT
EC	ELECTRICAL CONTRACTOR
EX	EXISTING
FACP	FIRE ALARM CONTROL PANEL
G.C.	GENERAL CONTRACTOR
GRD	GROUND
GFI	GROUND FAULT CIRCUIT INTERRUPTER
HOA	HAND–OFF–AUTOMATIC
HP	HORSE POWER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OVD	OVERHEAD DOOR
PMR	PER MANUFACTURER'S RECOMMENDATIONS
TEL	TELEPHONE
TFX,XFMR	TRANSFORMER
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHER PROOF
W\	WITH

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FIELDBOOK	

PONDEROSA PETROLEUM - RAIL ACCESS
GREAT FALLS, MONTANA

ELECTRICAL LEGEND & SPECIFICATIONS

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SHEET E0.1

PANELBOARD SCHEDULE

PANEL: H **MAIN BREAKER:** 400A **MOUNTING:** SURFACE **FEED LOCATION:** TOP **MINIMUM AIC:** 25KAMPS
CHARACTERISTICS: 277/480V,3Ø,4W **FEEDERS:** SEE ONE-LINE RISER DIAGRAM **MAIN BUSS:** 400A
MISCELLANEOUS: OUTDOOR RATED - SQUARE D "I-LINE" OR EQUAL, 26" WIDE MINIMUM, INTEGRAL 240KA SPD

WIRE SIZE	ID	LOAD DESCRIPTION	KVA LOAD ØA	ØB	ØC	CIRCUIT BREAKER	CKT #		CKT #	CIRCUIT BREAKER	KVA LOAD ØA	ØB	ØC	LOAD DESCRIPTION	ID	WIRE SIZE
#6	L	POLE MOUNTED LIGHTING	3.44			20A-1P	1	A	2	30A-1P				SPARE		
#6	L	POLE MOUNTED LIGHTING		3.44		20A-1P	3	B	4	30A-1P				SPARE		
#6	L	POLE MOUNTED LIGHTING			3.44	20A-1P	5	C	6	30A-1P				SPARE		
#6	L	POLE MOUNTED LIGHTING	3.44			20A-1P	7	A	8	20A-1P				SPARE		
#6	L	POLE MOUNTED LIGHTING		0.43		20A-1P	9	B	10	20A-1P				SPARE		
#12	E	TIME CLOCK CONTROL CKT.			0.10	20A-1P	11	C	12	20A-1P				SPARE		
		SPARE				20A-3P	13	A	14	20A-3P				SPARE		
		–					15	B	16					–		
		–					17	C	18					–		
		SPARE				30A-3P	19	A	20	30A-3P				SPARE		
		–					21	B	22					–		
		–					23	C	24					–		
		SPARE				60A-3P	25	A	26	60A-3P				SPARE		
		–					27	B	28					–		
		–					29	C	30					–		
		SPARE				100A-3P	31	A	32	90A-3P	1.00			PANEL 'L' (VIA 30KVA XFMR)	E	#3
		–					33	B	34			1.00		–	E	#3
		–					35	C	36				0.00	–	E	#3
3/0	E	RAILWAY POWER	13.3			100A-3P	37	A	38	100A-3P	9.1			PANEL 'A' (VIA 45KVA XFMR)	E	#3
3/0	E	–		13.3			39	B	40			10.1		–	E	#3
3/0	E	–			13.3		41	C	42				10.4	–	E	#3
3/0	E	RAILWAY POWER	13.3			100A-3P	43	A	44	100A-3P				SPARE		
3/0	E	–		13.3			45	B	46					–		
3/0	E	–			13.3		47	C	48					–		
		SPARE				200A-3P	49	A	50	200A-3P				SPARE		
		–					51	B	52					–		
		–					53	C	54					–		
		SUB-TOTAL LOADS	33.5	30.5	30.1						10.1	11.1	10.4	SUB-TOTAL LOADS		

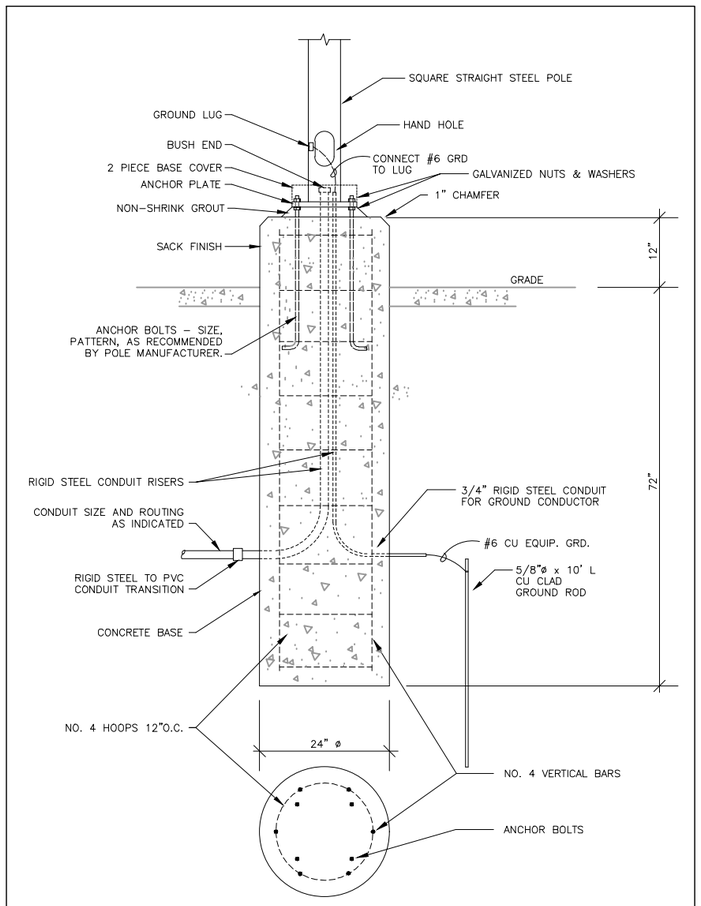
CONNECTED LOADS:		DEMAND LOADS:					DEMAND RESULTS:	
PHASE A	43.55 KVA	LIGHTING LOAD:	14.19 KVA	@ 125%	=	17.7 KVA	TOTAL DEMAND LOAD:	**129.2** KVA
PHASE B	41.54 KVA	RECEPTACLE LOAD:	0.00 KVA	@ 100%	=	0.0 KVA	SPARE LOAD:	203.2 KVA
PHASE C	40.57 KVA	RECEPTACLES AFTER 10KVA:	0.00 KVA	@ 50%	=	0.0 KVA	DESIGN LOAD:	332.4 KVA
TOTAL:	125.66 KVA	EQUIPMENT LOAD	111.47 KVA	@ 100%	=	111 KVA	FEEDER AMP.	400.0 Amps

PANELBOARD SCHEDULE

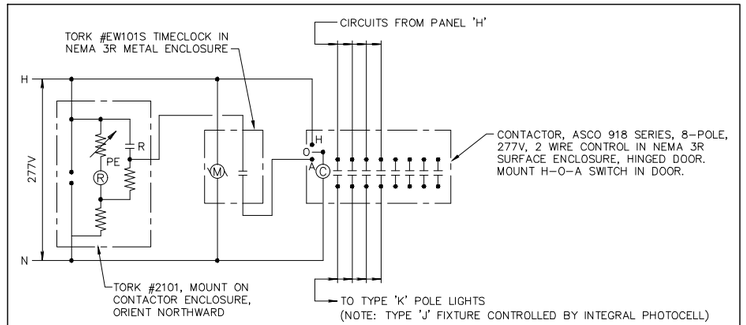
PANEL: L **MAIN BREAKER:** 100A **MOUNTING:** SURFACE **FEED LOCATION:** TOP **MINIMUM AIC:** 25KAMPS
CHARACTERISTICS: 120/208V,3Ø,4W **FEEDERS:** SEE ONE-LINE RISER DIAGRAM **MAIN BUSS:** 100A
MISCELLANEOUS: OUTDOOR RATED - SQUARE D #MPZB30T2F25K "MINI POWER ZONE" OR EQUAL W/ 30KVA STEP-DOWN XFMR

WIRE SIZE	ID	LOAD DESCRIPTION	KVA LOAD ØA	ØB	ØC	CIRCUIT BREAKER	CKT #		CKT #	CIRCUIT BREAKER	KVA LOAD ØA	ØB	ØC	LOAD DESCRIPTION	ID	WIRE SIZE
		MAIN BREAKER				100A-3P	1	A	2	20A-1P	1.00			BLOCK HEATER RECEPTACLE	E	#8
		–					3	B	4	20A-1P		1.00		BLOCK HEATER RECEPTACLE	E	#8
		–					5	C	6	20A-1P				SPARE		
		SPARE				20A-1P	7	A	8	20A-1P				SPARE		
		SPARE				20A-1P	9	B	10	20A-1P				SPARE		
		SPARE				20A-1P	11	C	12	20A-1P				SPARE		
		SPARE				20A-1P	13	A	14	40A-3P				SPARE		
		SPARE				20A-1P	15	B	16							
		SPARE				20A-1P	17	C	18					–		
		SPARE				20A-3P	19	A	20	60A-3P				SPARE		
		–					21	B	22					–		
		–					23	C	24					–		
		SPARE				30A-3P	25	A	26	80A-3P				SPARE		
		–					27	B	28					–		
		–					29	C	30					–		
		SUB-TOTAL LOADS	0.0	0.0	0.0						1.0	1.0	0.0	SUB-TOTAL LOADS		

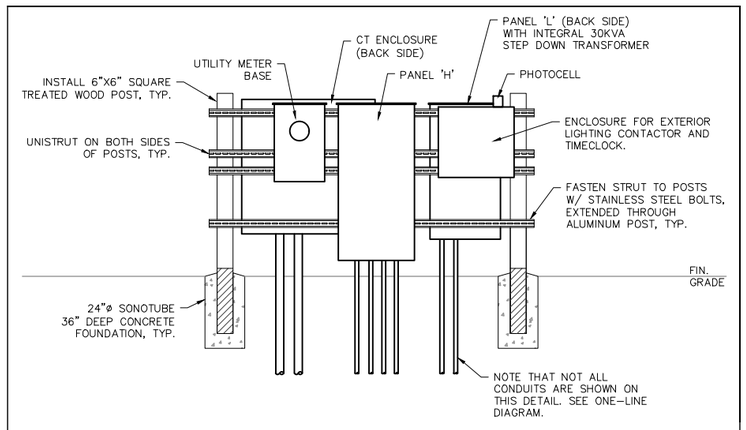
CONNECTED LOADS:		DEMAND LOADS:					DEMAND RESULTS:	
PHASE A	1.00 KVA	LIGHTING LOAD:	0.00 KVA	@ 125%	=	0.0 KVA	TOTAL DEMAND LOAD:	**2.0** KVA
PHASE B	1.00 KVA	RECEPTACLE LOAD:	0.00 KVA	@ 100%	=	0.0 KVA	SPARE LOAD:	28.0 KVA
PHASE C	0.00 KVA	RECEPTACLES AFTER 10KVA:	0.00 KVA	@ 50%	=	0.0 KVA	DESIGN LOAD:	30.0 KVA
TOTAL:	2.00 KVA	EQUIPMENT LOAD	2.00 KVA	@ 100%	=	2.0 KVA	FEEDER AMP.	100.0 Amps



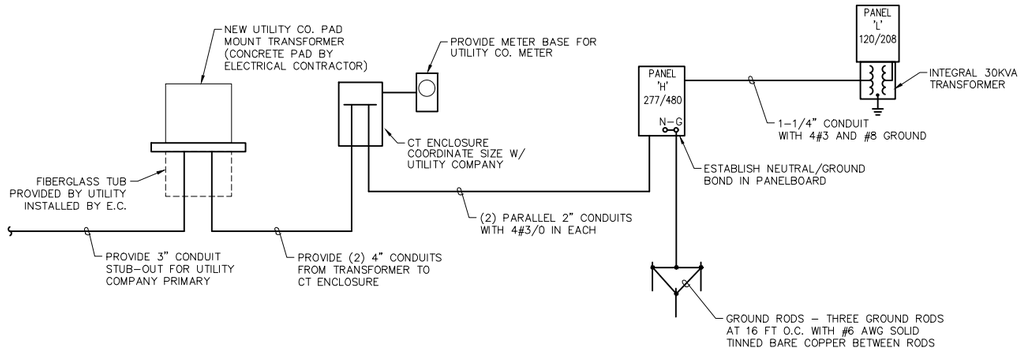
1 POLE BASE DETAIL
SCALE: NONE



2 EXTERIOR LIGHTING CONTROL DIAGRAM
SCALE: NONE



3 "H-FRAME" ELECTRICAL SERVICE PEDESTAL DETAIL
SCALE: NONE



4 ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

LIGHT FIXTURE SCHEDULE

LIGHT SYMBOL		DESCRIPTION	FIXTURE MANUFACTURER	FIXTURE CATALOG NUMBER	FIXTURE LOCATION	FIXTURE TYPE	LAMP TYPE	LAMP NO	LAMP VOLTAGE	NOTES
J		POLE MOUNTED LED FIXTURE WITH "DARK SKY" FULL CUT-OFF OPTICS. TYPE 1 SHORT DISTRIBUTION. 49,000 LUMENS, 431 WATTS. TEXTURED BLACK FINISH. PROVIDE ALL MOUNTING HARDWARE AS REQUIRED. PROVIDE WITH INTEGRAL PHOTOCELL.	LITHONIA	DSX2-LED-P8-40K-T1S-MVOLT -SPA-DBLBXD-PER	POLE	ARM MOUNT	LED/4000K	–	277V	1
K		TWIN POLE MOUNTED LED FIXTURE WITH "DARK SKY" FULL CUT-OFF OPTICS. TYPE 1 SHORT DISTRIBUTION. 49,000 LUMENS EACH, 431 WATTS EACH. TEXTURED BLACK FINISH. PROVIDE ALL MOUNTING HARDWARE AS REQUIRED.	LITHONIA	DSX2-LED-P8-40K-T1S-MVOLT -SPA-DBLBXD	POLE	ARM MOUNT	LED/4000K	–	277V	1

SPECIFIC NOTES:
1. PROVIDE 5"x5" SQUARE STEEL POLE, 30 FOOT LENGTH, TEXTURED BLACK FINISH. POLE SHALL BE RATED FOR 100 MPH SUSTAINED WINDS WITH EPA OF FIXTURE(S).
2. PROVIDE COMPATIBLE PHOTOCELL AND INSERT INTO TWISTLOCK PHOTOCELL RECEPTACLE (OR INTEGRAL PHOTOCELL IF AVAILABLE).

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DESIGNED BY:	BMK
QUALITY CHECK:	GPD
DATE:	03-01-2024
JOB NO.	23-059
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PONDEROSA PETROLEUM - RAIL ACCESS
GREAT FALLS, MONTANA

ELECTRICAL DETAILS & SCHEDULES - INTERIOR

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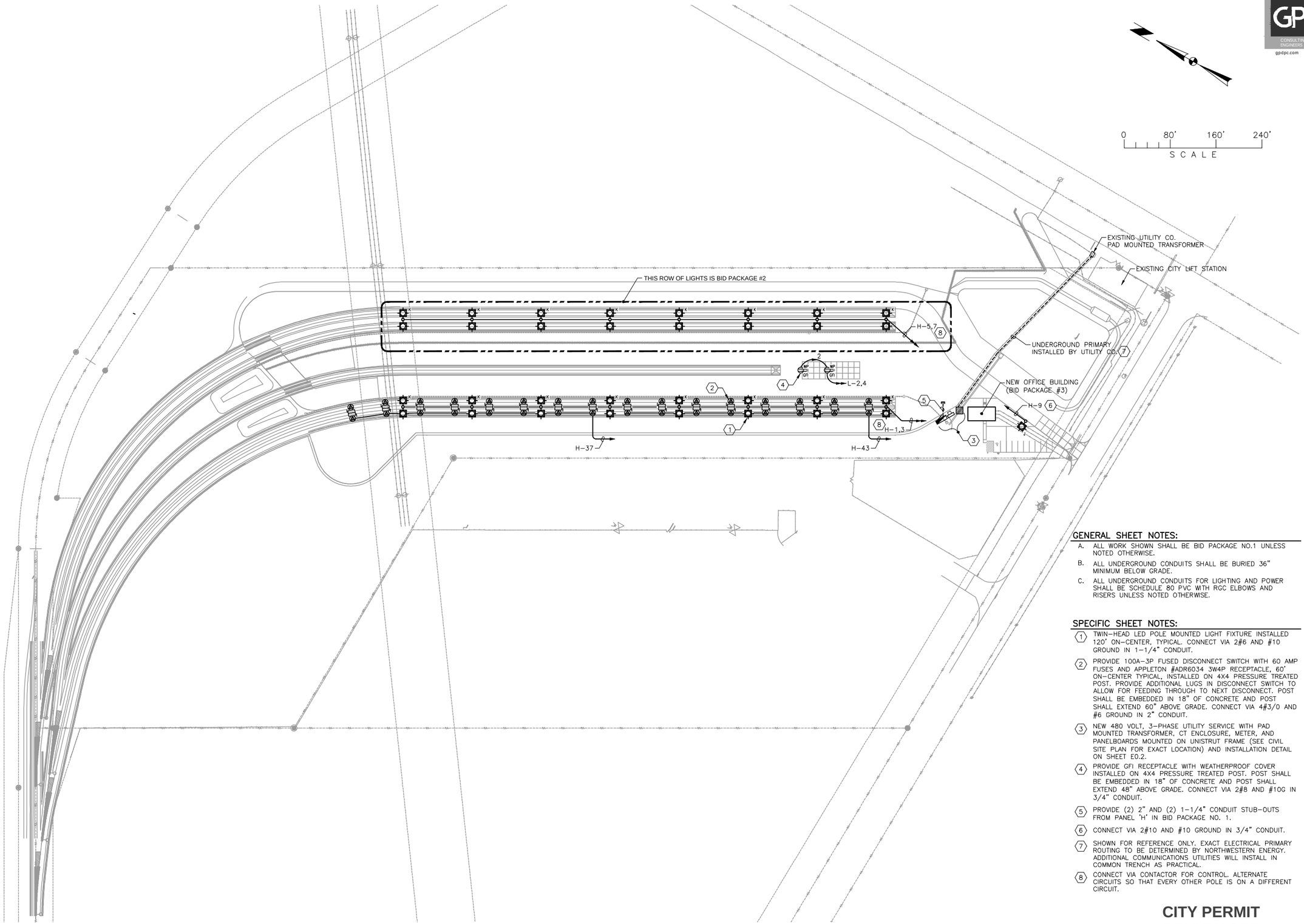

GENERAL SHEET NOTES:

A. ALL WORK SHOWN SHALL BE BID PACKAGE NO.1 UNLESS NOTED OTHERWISE.

B. ALL UNDERGROUND CONDUITS SHALL BE BURIED 36" MINIMUM BELOW GRADE.

C. ALL UNDERGROUND CONDUITS FOR LIGHTING AND POWER SHALL BE SCHEDULE 80 PVC WITH RGC ELBOWS AND RISERS UNLESS NOTED OTHERWISE.

SPECIFIC SHEET NOTES:

(1) TWIN-HEAD LED POLE MOUNTED LIGHT FIXTURE INSTALLED 120' ON-CENTER, TYPICAL. CONNECT VIA 2#6 AND #10 GROUND IN 1-1/4" CONDUIT.

(2) PROVIDE 100A-3P FUSED DISCONNECT SWITCH WITH 60 AMP FUSES AND APPLETON #ADR6034 3W4P RECEPTACLE, 60' ON-CENTER TYPICAL, INSTALLED ON 4X4 PRESSURE TREATED POST. PROVIDE ADDITIONAL LUGS IN DISCONNECT SWITCH TO ALLOW FOR FEEDING THROUGH TO NEXT DISCONNECT. POST SHALL BE EMBEDDED IN 18" OF CONCRETE AND POST SHALL EXTEND 60" ABOVE GRADE. CONNECT VIA 4#3/0 AND #6 GROUND IN 2" CONDUIT.

(3) NEW 480 VOLT, 3-PHASE UTILITY SERVICE WITH PAD MOUNTED TRANSFORMER, CT ENCLOSURE, METER, AND PANELBOARDS MOUNTED ON UNISTRUT FRAME (SEE CIVIL SITE PLAN FOR EXACT LOCATION) AND INSTALLATION DETAIL ON SHEET E0.2.

(4) PROVIDE GFI RECEPTACLE WITH WEATHERPROOF COVER INSTALLED ON 4X4 PRESSURE TREATED POST. POST SHALL BE EMBEDDED IN 18" OF CONCRETE AND POST SHALL EXTEND 48" ABOVE GRADE. CONNECT VIA 2#8 AND #10G IN 3/4" CONDUIT.

(5) PROVIDE (2) 2" AND (2) 1-1/4" CONDUIT STUB-OUTS FROM PANEL 'H' IN BID PACKAGE NO. 1.

(6) CONNECT VIA 2#10 AND #10 GROUND IN 3/4" CONDUIT.

(7) SHOWN FOR REFERENCE ONLY. EXACT ELECTRICAL PRIMARY ROUTING TO BE DETERMINED BY NORTHWESTERN ENERGY. ADDITIONAL COMMUNICATIONS UTILITIES WILL INSTALL IN COMMON TRENCH AS PRACTICAL.

(8) CONNECT VIA CONTACTOR FOR CONTROL. ALTERNATE CIRCUITS SO THAT EVERY OTHER POLE IS ON A DIFFERENT CIRCUIT.

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PONDEROSA PETROLEUM - RAIL ACCESS
GREAT FALLS, MONTANA

ELECTRICAL SITE PLAN

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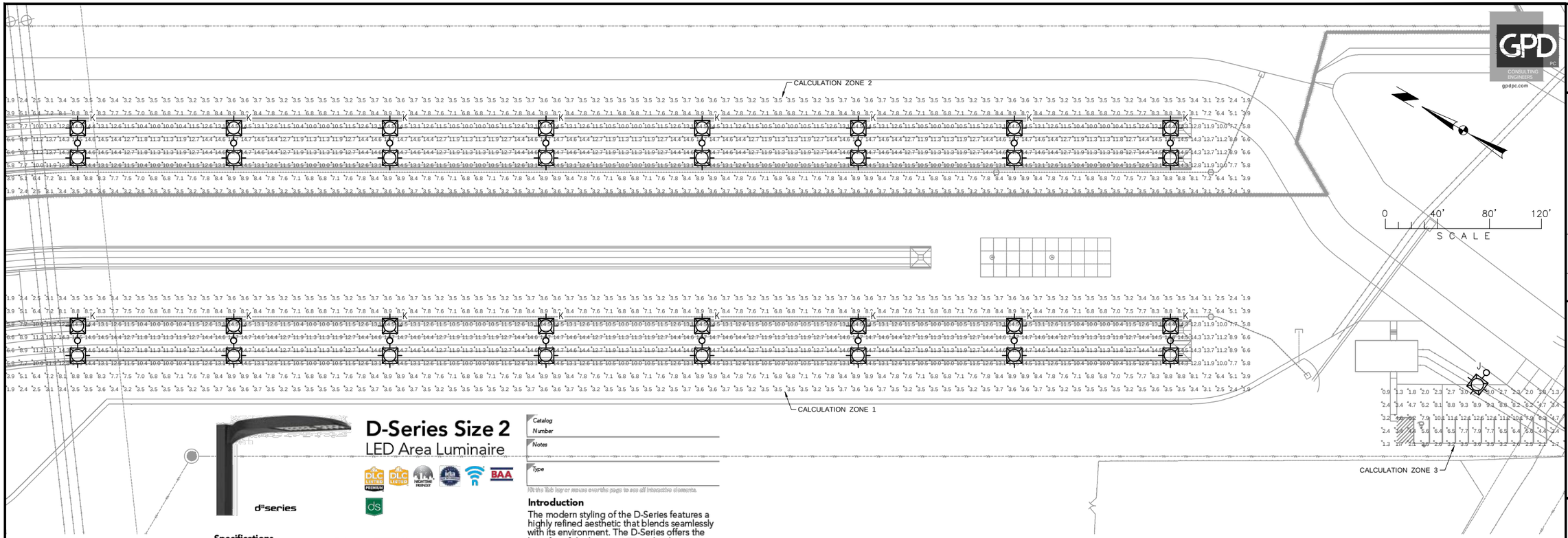
SHEET **ES1.0**



D-Series Size 2
LED Area Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

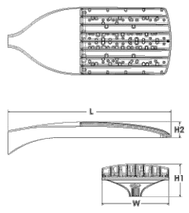
Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of up to 80% vs. 1000W HID and expected service life of over 100,000 hours.

Specifications

EPA:	1.06 ft² (0.10 m²)
Length:	40.59" (103.1 cm)
Width:	16.76" (42.6 cm)
Height H1:	8.11" (20.6 cm)
Height H2:	3.96" (10.1 cm)
Weight:	46 lbs (20.9 kg)



design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

Design Select options indicated by this color background.

Ordering Information

EXAMPLE: DSX2 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX2 LED

Series	LEDs	Color temperature[2]	Color Rendering Index[2]	Distribution	Voltage	Mounting
DSX2 LED	**Forward optics** P1 P5 P2 P6 P3 P7 P4 P8 **Rotated optics** P10[1] P13[1] P11[1] P14[1] P12[1]	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K (this section 80 CRI only, extended lead times apply) 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row T1S Type I short T2M Type II medium T3M Type III medium T3LG Type III low glare[3] T4M Type IV medium T4LG Type IV low glare[3] TFTM Forward throw medium T5M Type V medium T5LG Type V low glare T5W Type V wide BLC3 Type II backlight control[3] BLC4 Type IV backlight control[3] LCCO Left corner cutoff[3] RCCO Right corner cutoff[3]	MVOLT (120V-277V)[4] HVOLT (347V-480V)[5,6] XVOLT (277V - 480V)[7,8] 120 [9,10,26] 208 [9,10,26] 240 [9,10,26] 277 [9,10,26] 347 [9,10,26] 480 [9,10,26]	**Shipped included** SPA Square pole mounting (#8 drilling) RPA Round pole mounting (#8 drilling) SPA5 Square pole mounting #5 drilling[9] RPA5 Round pole mounting #5 drilling[9] SPA8N Square narrow pole mounting #8 drilling WBA Wall bracket[10] MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)

Control options		Other options		Finish (required)	
Shipped installed		**Shipped installed**		DDBXD	Dark Bronze
NLTAIR2 PIRHN	nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8–40' mounting height, ambient sensor enabled at 2fc [11,12,26,27]	SPD20KV	20KV surge protection	DBLXD	Black
PIR	High/low, motion/ambient sensor, 8–40' mounting height, ambient sensor enabled at 2fc [11,20,21]	HS	Houseside shield (black finish standard) [22]	DNAXD	Natural Aluminum
PER	NEMA twist-lock receptacle only (controls ordered separate) [14]	L90	Left rotated optics [1]	DWHXD	White
PER5	Five-pin receptacle only (controls ordered separate) [14,23]	R90	Right rotated optics [1]	DDBTXD	Textured dark bronze
PER7	Seven-pin receptacle only (controls ordered separate) [14,23]	CCE	Coastal Construction [23]	DBLBXD	Textured black
FAO	Field adjustable output [15,28]	HA	50°C ambient operation [24]	DNATXD	Textured natural aluminum
BL30	Bi-level switched dimming, 30% [16,28]	BAA	Buy America(n) Act Compliant	DWHGXD	Textured white
BL50	Bi-level switched dimming, 50% [16,28]	SF	Single fuse (120, 277, 347V) [26]	**Shipped separately**	
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) [17]	DF	Double fuse (208, 240, 480V) [26]	EGSR	External Glare Shield (reversible, field install required, matches housing finish)
DS	Dual switching [18,19,21]	3G	Vibration rated for 3G [27]	BSDB	Bird Spikes (field install required)

LITHONIA LIGHTING
COMMERCIAL OUTDOOR

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com

DSX2-LED
Rev. 10/30/23
Page 1 of 10

Lighting Calculation Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone 1 & 2	+	9.0 fc	14.7 fc	1.9 fc	7.7:1	4.7:1
Calc Zone 3	+	4.9 fc	12.5 fc	0.9 fc	13.9:1	5.4:1

GENERAL SHEET NOTES:

A. THIS SHEET IS FOR THE PURPOSE OF SHOWING COMPLIANCE WITH THE CITY OF GREAT FALLS LIGHTING ORDINANCE AND IS FOR REFERENCE ONLY.

B. NOTE THAT ALL 3 LIGHTING CALCULATION ZONES MEET CITY REQUIREMENTS FOR MAXIMUM AVERAGE LIGHT LEVEL AND AVERAGE TO MINIMUM RATIO REQUIREMENTS.

C. LIGHTING CALCULATION ZONES 1 AND 2 ARE ALLOWED A MAXIMUM AVERAGE LIGHT LEVEL OF 10 FOOT CANDLES (INDUSTRIAL LOADING/UNLOADING AREA).

D. LIGHTING CALCULATION ZONE 3 IS ALLOWED A MAXIMUM AVERAGE LIGHT LEVEL OF 5 FOOT CANDLES (COMMERCIAL PARKING LOT).

E. ALL CALCULATION ZONES MEET THE CITY REQUIREMENTS FOR AN AVERAGE TO MINIMUM LIGHTING LEVEL RATIO OF 6:1 OR BETTER.

CITY PERMIT REVIEW SET

GPD CONSULTING ENGINEERS
gpdpc.com

BRAD M. KAUFFMAN
No. 14587 PE
LICENSED PROFESSIONAL ENGINEER

REV	DATE	REVISION

TD&H Engineering
406.761.3010 • tdhengineering.com
1800 RIVER DR. NO. • GREAT FALLS, MONTANA 59401

DRAWN BY:	GPD
DESIGNED BY:	BMK
QUALITY CHECK:	GPD
DATE:	03-01-2024
JOB NO.	23-059
FIELDBOOK	

PONDEROSA PETROLEUM - RAIL ACCESS
GREAT FALLS, MONTANA

ELECTRICAL SITE LIGHTING CALCULATIONS

240500_ES_LIGHTING

SHEET ES2.0

APPENDIX B:

TRANSLOAD OPERATIONS STANDARD OPERATING PROCEDURE

PONDEROSA SOLUTIONS
TRANSLOAD OPERATIONS

PURPOSE:

This procedure provides guidance for loading rail cars by means of a Ponderosa Petroleum owned transloader.

PREREQUISITES:

1. Review MSDS sheets for any and all products being dealt with
2. Hazardous Material Training
3. Hazardous Material – Emergence Response
4. Fall Protection Training
5. Facility Rules and restrictions
6. On-site training
    i. Rail Car Inspection
    ii. Track lock out tag out
    iii. Transloader operation
7. Review Components of a Rail Car at http://www.americanrailcar.com/Manufacturing/TankCarDiagram

REQUIRED EQUIPMENT:

1. H_2S Monitor
2. Personal Protective Equipment
    - Hardhat
    - Safety Glasses, Face Shield
    - Work Boot
    - Pants
    - Long Sleeve Shirt (100% cotton)
    - Gloves
    - Orange Vest

SAFETY:

1. **Remember this is not a race, take your time, and do it right the first time. If you have a problem ask questions, get direction, then proceed. Safety is always FIRST.**

2. Any and every person on site has STOP WORK ATHORITY. Stop work authority is the responsibility and obligation to stop work when a perceived unsafe condition or behavior may result in an unwanted event.

3. When performing this procedure there is a potential for exposure to Hydrogen Sulfide (H_2S). H_2S is an invisible gas that smells like rotten eggs. Breathing exposure to high ppm levels can cause dizziness, loss of conscience, and in very extreme cases with ultra-high ppm concentrations, even death. H_2S monitor alarms begin at 10ppm and accelerate in report to 20ppm. Extreme caution should be exercised at all times and the use of all PPE is required at all times. The H_2S monitor should be worn by attaching it to outside clothing within a 10" radius of nose and mouth. If the monitor alarms, back away immediately into fresh air and do not reenter the area until H_2S mitigations are taken.

4. Backing trucks can often be overlooked as a safety risk. Do not stand in the path of a backing truck. Please use caution and remember, if you cannot see the driver the driver cannot see you.

5. NO SMOKING while on railroad property unless in a designated area.

6. No sources of ignition are allowed on person at the site (lighter, matches, other).

7. Cellphones are not to be used outside a vehicle cab.

PROCEDURE:

A. TRANSLOADER INSPECTION AND START UP.

Use clear and legible writing to complete the Transfer Unit Operation Checklist. Any deviations from the checklist should be noted in the comments.

1. Pre-startup checks

   i. General Visual inspection – walk the site, security check, look to identify anything that is out of place or appears to be tampered with.
   ii. Plugins are operating – ensure that all electrical heating systems are still in operating condition.
   iii. Check Tires – look for low or underinflated tires. If necessary check the tire pressure.
   iv. Truck cab locked and key in hiding place – if not please notify Ponderosa staff.

v. Truck Engine – ensure that oil and coolant is within operating range, and engine compartment is clear of any leaks.
vi. Generator – ensure that oil and coolant is within operating range, and engine compartment is clear of any leaks.

2. Startup / Warm up

i. Start truck engine – monitor all gauges for irregularity.
ii. Start Generator - monitor all gauges for irregularity.
iii. With generator running, check that lighting and fans are operating correctly.

3. Post Warm up

i. Truck Engine – record all gauge readings. If a reading is outside the SOR (standard operating range) identified, please call Ponderosa Petroleum immediately.
ii. Generator – record all gauge readings. If a reading is outside the SOR (standard operating range) identified, please call Ponderosa Petroleum immediately.

4. Track Isolation

i. Apply track isolation - a derailer or locked switch must be placed on the active end on the track.
ii. The blue flag must be located at end of the ACTIVE END of the rail tank car string.

B. RAIL TANK CAR PRELOADING

Use clear and legible writing to complete the Transfer Unit Operation Checklist. Any deviations from the checklist should be noted in the comments.

1. Inspect the car for overall integrity and any visible damage. All safety appliances must be in proper condition. The rail tank car must show no sign of leakage and have no visible defects.

2. Qualification stencils should be legible and reviewed to confirm that the car is not overdue for any tests, qualifications, or inspections. Do not load a rail tank car with overdue tests, qualifications, or inspections.

3. All fittings, valves, gaskets, and fasteners must be in proper condition, i.e., not corroded, torn, worn, stripped, or otherwise damaged.

4. Unless the rail tank car is cleaned/purged, ensure that the residue in the rail tank car is compatible with the product being loaded.

5. If equipped with a safety vent, the rupture disc must be thoroughly inspected. If equipped with a pressure relief valve, the valve must be inspected to ensure no debris is in the valve discharge area.

6. Remove the BOV cap and inspect the ball or valve. Look for excessive product in the cap and ensure there is no damage to the sealing system. It may be necessary to use a heat source to soften the product on the threads of the cap. Do not use a torch while the transloader is next to the railcar, as the gas storage is too close causing a hazard.

7. Thoroughly inspect the exposed parts of the heating system to identify all thing that would limit the receiving locations ability to heat the car.

8. Ensure that the car is placarded correctly.

C. RAIL TANK CAR LOADING

1. Chock the wheels of the rail tank car with the provided rail chocks.

2. Check that the rail tank car hand brake is engaged.

3. Park the transload truck next to the rail tank car so the access gangway is centered on the rail car safety cage opening and activate Parking Brake

4. Position the fan so the air is blowing across the manway dome and start the fan.

5. Climb the stairs, enter the safety platform and maintain 3 points of contact at all time.

6. Use foot lever on access gangway to fold down to railcar. Adjust hydraulic lift if necessary.

7. Open railcar dome lid by backing off all the dome lid nuts with the approved wrench.
    i. Note: If car has negative pressure (dome lid will not open after nuts are loose) it may be necessary to relieve pressure by opening the pressure relief valve.

8. After opening the dome lid, check the condition of the dome lid gasket. Gasket should be intact, unbroken, with no cracking or visible defects.

9. Ensure the car is completely empty and does not have excessive heel, any visible foreign objects, or excessive water. A small amount of residue product no wider than 18" is acceptable. If the product heel is determined to be excessive, please contact Ponderosa Petroleum and skip the car.

10. Spout the rail car and secure the loading arm by using a chain around the railcar safety platform to ensure the spout cannot come out of the manway.

11. Connect the grounding safety interlock to the railcar and verify the light is "green".

12. Insert the overfill protection into car ensuring the tip is below the nozzle >2".

13. The operator must complete the positioning of the transloader and must have secured the loading arm into the railcar before spotting the transport truck.

D. PRODUCT TRANSFER

1. Position tanker transport next to transloader

2. Ensure that the tanker transport trailer tires are properly chocked.

3. Receive the BOL from the tank transport driver and verify that the product matches the loading instructions, and the quantity is within expectations.

4. Record the rail tank car number on truck bill of lading.

5. Record the tanker transport bill of lading number, trailer #, driver, product, Net Volume, and Net Tons on the loading sheet.

6. Ensure hoses are not damaged, cracked, frayed, or missing parts. Inspect unloading hoses for leaks or damage. Cam lock fittings should be tight on hoses and have undamaged gaskets.

7. Connect the transfer hoses to the tanker transport connection.

Note: If only one transport tanker is connected, the secondary hose or inlet must be capped. Never operate the system with an open connection!

8. Ensure your face shield is down and start the motor/pump. Verify it is operating normal prior to opening any valves.

9. Open the valve on the discharge and inlet side of the strainer basket.

NOTE: When operating valves or closures, loaders should never stand directly above or place any part of their body directly above the gauging device, valve, fitting or closure.

10. Utilizing the bleeder valve on the transport truck, verbally confirm with the driver that the pump is working correctly, and the hose is not obstructed by verifying suction. If the hose is obstructed, heat may need to be applied to soften the asphalt blockage in the hose.

11. Confirm the tanker transport dome lid is open. Make sure you receive verbal conformation from the driver or visible check.

12. Verbally confirm the bleeder valve on the tanker transports are closed.

13. Instruct driver to open discharge valve from tanker transport **SLOWLY!!!**

14. Walk the lines to verify there are no leaks at the connections or around the hose.

15. Volume: The sum of the weight and gross volume cannot exceed the limits stenciled on the car. It is the responsibility of the transload operator to ensure limits are not exceeded. If questions arise do not hesitate to call a supervisor.
    i. Weight: Keep a rolling sum of all net weights from the tanker transport BOL's. This rolling sum cannot exceed the load limit stenciled on the rail tank car.
    ii. Volume: Keep a rolling sum of all Net Volume from the tanker transport BOL's if available. This rolling sum multiplied by 1.125 cannot exceed Tank Shell CAPY on end cap of car.
    iii. Typical outage after loading should be between 3"-10" below bottom edge of manway opening. This will vary with product temperature. Outage will be less with higher temperature product than lower temperature product.

16. Ensure pump is running properly. There should be no excessive noises or vibrations. (heavier oil under 300F may cause increase in noise)

17. After 2 minutes reinspect the system by "Walking the line" (following the flow of material from the tank transport to the rail tank car) checking for any abnormalities or leaks.

18. Stay within 25 feet of the operation with an unobstructed view during entire transfer.

E. PRODUCT TRANSFER COMPLETE

1. Allow pump to draw until tanker transport empties or railcar is full.

2. Instruct Driver to use (open) bleeder valve 3 times to empty product hose while pump continues to run.
   Note: On the last truck of the day, introduce diesel through the bleeder valve and walk the line out while the bleeder remains open. With the hose elevated, shut the valve on the left side of the strainer basket trapping all fluids. With the pump still running and both inlet valves (left of strainer) closed, slowly open the gate valve on the bottom of the strainer basket to clear the basket of oil and shut the outlet valve (right of the strainer) and bottom ball valve simultaneously. To open the strainer lid it may be necessary to quickly open an inlet valve (left side of strainer) to reduce the vacuum.

3. Close the valve on the inlet side of the strainer (Left) and the valve on the discharge side of the strainer basket (Right).

4. Stop the pump

5. Ensure bleeder valve is closed

6. Disconnect product hose from the tanker transport and secure to back of transload truck.

7. Ensure tanker transport dome lid is closed

8. Disconnect grounding system and confirm the light is “RED” on the monitor.

9. Remove the loading arm from the rail car when loading is complete and secure to the holding location on the platform.

10. Close the dome lid gently. Do not let it free fall and drop on the manway. This can damage the gasket and cause a broken seal.

11. Secure rail car dome lid bolts with wrench and install seal if required. Tighten nuts in a “star” criss-cross rotation pattern. Always starting with the #1 position. The #1 position is the nut on the right side of the handle for dome lid.

12. Add seals to the following locations and record the number on the Loading and Inspection Report.

    i. Manway Lid.
    ii. Protective Housing Cover Pin.
    iii. Bottom Outlet Cap.

13. Raise the access ramp at the top of the transloader stairs.

14. If another car needs to be loaded pull the transloader forward and start at step 1 of the section C. Rail Tank Car Loading.

15. Remove chocks from the railcars, remove blue flag, and unlock track.

16. Park truck and lock doors and all boxes.

17. Plug in heat trace

18. Plug in truck and generator block heaters if necessary (under 50F)

F. SHUT DOWN

1. Remove the isolate from track
    i. Remove the track isolation
    ii. Remove the blue flag

2. Shut Down
    i. Site Inspection – site is clean and picked up, loading road condition is good and the site is ready to go for next time.
    ii. Electrical – all equipment is plugged in and extension cords are working.
    iii. Spills / Leaks – note if there were any spills during shift, even if they have been cleaned up.
    iv. Trucks are Locked – all trucks have been locked up and keys are hidden.

F. QUESTIONS AND CONTACTS

Questions regarding Rail Tank Car loading procedures should be directed to

Primary:	Nate Johnson	(918) 891-1061
Secondary:	Sean Lett	(303) 472-4070
Ponderosa Petroleum	Office	(720) 851-5758

Site Operations Checklist

Truck #			Date	
			Operator	
	Item	Expectation	Result	Notes:
Site				
On shift	Site Inspection	Nothing appears out of place		
	Electrical	Extension cord woking, piping in warm		
	Spills / Leaks	No material has leaked onto the site		
	Track Isolation	Derailer or switch inplace, blue flag visiable		
Off Shift	Site Inspection	Site is clean and orderly		
	Electrical	Extension cords are plugged in and working		
	Spills / Leaks	No material has leaked onto the site		
	Trucks are locked	All trucks are locked and secure		
	Remove Track Isolation	Remove derailer, and blue flag		
Truck				
Off	Tire pressure	Fully inflated and no cuts or slices are visible		
	Truck Cab	Locked and keys are in hiding place		
	Fluids Check	Oil and coolant is within operating range		
Running	Start up	Monitor gauges for irregularity		
	Exhaust Regen light	On or Off		
After 15 Min	Oil Pressure	SOR - PSI 40 < OP < 55		
	Charging Volts	SOR - Volts 12 < CV < 14		
	Air Pressure	SOR - PSI		
	Engine Temp	SOR - Degrees F 160 < ET < 200		
Generator				
Off	Fluids Check	Oil and coolant is within operating range		
Running	Start up	Monitor gauges for irregularity		
	Operating equipment	Lights and fan working		
After 15 Min	Oil Pressure	SOR - PSI 40 < OP < 55		
	Charging Volts	SOR - Volts 12 < CV < 14		
	Engine Temp	SOR - Degrees F 180 < ET < 200		
	Voltage Output	SOR - Volts 460 < VO < 480		
	Amperage	SOR - Amps 58 < AMP < 62		

Ponderosa Solutions
Railcar Inspection

Location:
Rail Car Number:
Rail Car Capacity:
Load Limit:
LTWT:
Product
Protective Housing Seal Number:
BOV Lever Seal Number:
Caution Signs / 'MEN AT WORK' blue flags placed on active end of track
Track is secured against access(switch is locked out / locked derail is in place
Handbrake set and railcar wheels chocked
Automatic Equipment Identification tags present on both sides of the car
No damaged or missing items (ladders, handbrakes, railings, platforms etc.
Inspect tank shell for abrasion, corrosion, cracks, dents, distortions, defects in welds etc.
No excessive residue on car
No obvious defects in truck assembly and all springs are present and in good condition
Properly placarded (all four sides) and marked
No wording or stencils signifying repars needed
Visually inspect all valves for proper condition
All caps, handles, plugs and chains in place
BOV and BOV Gasket inspected(gasket replaced if needed, BOV Lever closed and pinned
Tank Qualification Due
Tank Shell Thickness Test Due
Service Equipment Due
PRD Valve/Vent Due
Operator:

Transloading Truck to Rail SOP Great Falls Terminal

Questions regarding loading procedures should be directed to

Primary:	Joe Rogers	(918) 404-7603
Secondary:	Sean Lett	(303) 472-4070
Ponderosa Petroleum	Office	(918) 404-7232

APPENDIX C:

MDEQ
SPILL MANAGEMENT AND REPORTING POLICY

Montana Department of Environmental Quality

SPILL MANAGEMENT AND REPORTING POLICY

I. CONTAINMENT AND CLEANUP

All releases or spills of hazardous or deleterious substances or other wastes, regardless of size, must be properly and expeditiously managed, contained, and removed to protect public health and the environment. This policy is written to provide guidance on when and how to report spills. This policy is intended to assist in the implementation of the following Montana laws and the administrative rules adopted thereunder: Comprehensive Environmental Cleanup and Responsibility Act (§75-10-701, *et seq.*, MCA); Hazardous Waste Act (§75-10-401, *et seq.*, MCA); Solid Waste Management Act (§75-10-201, *et seq.*, MCA); Underground Storage Tank Act (§75-11-501, *et seq.*, MCA); and the Water Quality Act (§75-5-101, *et seq.*, MCA).

II. NOTIFICATION REQUIREMENTS

Petroleum releases from regulated aboveground storage tanks (AST), underground storage tanks (UST) or petroleum storage tanks (PST) must be reported to DEQ within 24 hours of being detected as required by ARM 17.56, Subchapter 5. DEQ must be notified of releases of greater than 25 gallons of petroleum from an AST, UST or PST. Petroleum releases less than 25 gallons in volume must be contained and cleaned up within 24 hours. If cleanup cannot be completed within 24 hours, owners and operators must report the release to DEQ. DEQ maintains a leak line for reporting releases from an AST, UST or PST at 800-457-0568. Outside normal business hours, releases must be reported to the DES Duty Officer 24-hour phone number at (406) 324-4777. Releases must be reported to a live person - voice mails are not adequate notification.

All other releases and spills should be reported immediately to the state's Disaster and Emergency Services (DES) Duty Officer 24-hour phone number: (406) 324-4777. In addition to the following reporting requirements, notification(s) may be required by permits issued by state, federal or local government agencies. **Notification to the National Response Center (NRC) may also be required. NRC can be reached at 800-424-8802. DES or DEQ are not responsible for notifying the NRC.**

A. The following types of spills **must** be reported:

- Releases or spills of hazardous substances in amounts that meet or exceed the reportable quantities in *40 CFR Part 302*.
- Spills, overfills, and suspected releases from underground storage tanks and petroleum storage tanks. *ARM 17.56.501, et seq.*
- Releases or spills of any materials that would lower the quality of groundwater below water quality standards. *ARM 17.30.1045*.

B. The following types of spills **should** be reported:

- Spills that enter or may enter state water or a drainage that leads directly to surface water;
- Spills that cause sludge or emulsion beneath the surface of the water, stream banks or shorelines;
- Spills that cause a film, "sheen," or change the color of the water, stream banks or shorelines; or
- Spills of twenty-five (25) gallons or more of any petroleum product such as: crude oil, gasoline, diesel fuel, aviation fuel, asphalt, road oil, kerosene, fuel oil; produced water, injection water, salt water or combination thereof; and derivatives of mineral, animal, or vegetable oils.

For additional information:
Montana Department of Environmental Quality
Enforcement Program
Phone (406) 444-0379

Rev: November 2017

APPENDIX D:

SAFETY DATA SHEETS

OSTARA

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 10.04.2019

Crystal Green

SECTION 1: Identification

Product identifier

Product name: Crystal Green
Product code: MgNH4PO4-6H2O

Recommended use of the product and restriction on use

Relevant identified uses: Slow release fertilizer.
Uses advised against: None known.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:
United States
Ostara USA, LLC
3225 Highway 630 West
Ft. Meade, FL 33841
(778) 200-3340 (office) or (778) 846-1469 (cell)
pmitchell@ostara.com

Emergency telephone number:

United States
CHEMTREC (24 hours)
North America: 1-800-424-9300
Canada: +1 703-527-3887 (CCN 849806)
For Chemical Emergencies (Spill, Leak, Fire or Accident)

SECTION 2: Hazard(s) identification

GHS classification: Not a hazardous substance or mixture
Label elements

Hazard pictograms: None

Signal word: None

Hazard statements: None
Precautionary statements: None
Hazards not otherwise classified:
Nuisance dust may cause irritation and/or mechanical abrasion of the eye, skin and respiratory tract

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %

Crystal Green

CAS number: 7785-21-9	Phosporic acid, ammonium magnesium salt (1:1:1)	>97

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Take precautions to ensure your own safety
Remove source of exposure or move person to fresh air
Get medical advice if you feel unwell or concerned

After skin contact:

Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention
Take off all contaminated clothing
Gently blot or brush away excess product

After eye contact:

If symptoms develop or persist, seek medical attention
Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open
Remove contact lenses, if present and easy to do so
Continue rinsing for 15-20 minutes

After swallowing:

Seek medical attention if irritation, discomfort, or vomiting persists
If swallowed, rinse mouth with water (only if the person is conscious)

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Airborne dust may cause mechanical abrasion and irritation of the eye, skin and respiratory tract

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:
Toxic and irritating fumes may be produced in a fire, including: Nitrogen Oxides, Magnesium Oxides and Phosphorus Oxides

Special protective equipment for firefighters:
Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:
Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Ensure adequate ventilation
Ensure air handling systems are operational
Ensure suitable personal protection during removal of spillages
Avoid generation of dust
Avoid breathing dust

Environmental precautions:
Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:
Wear protective eye wear, gloves and clothing
Sweep or scoop up solid material while minimizing dust generation
Sweep spilled substances into containers. If appropriate, moisten first to prevent dusting
Use vacuum equipment for collecting spilt materials, where practical
Dispose of contents / container in accordance with local regulations
Transfer to a container for disposal

Reference to other sections:
See also sections 8, 13

SECTION 7: Handling and storage

Precautions for safe handling:
Use only with adequate ventilation.
Avoid breathing dust.
Do not eat, drink, smoke or use personal products when handling chemical substances.
Wear suitable gloves.
Wash hands thoroughly after handling.
Wear recommended personal protective equipment (See Section 8).
Or add eye protection and respiratory protection if exposure to airborne dust is possible

Conditions for safe storage, including any incompatibilities:
Keep container tightly sealed.
Keep container dry.
Store in a cool, well-ventilated area.
Keep away from heat and direct sunlight.
Store below 55°C.
Store away from incompatible materials (See Section 10.)

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:
No occupational exposure limits noted for the ingredient(s).

Biological limit values:
No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:
Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.
Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:
Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:
Select glove material impermeable and resistant to the substance.
Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:
If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:
Avoid contact with skin, eyes and clothing.
Wash hands before breaks and at the end of work.
Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Powder/Pellets (up to 5mmdiameter).
Odor	Musty/Ammonia (when damp or heated above 55°C).
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Not determined or not available.
Evaporation rate	Not applicable
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	1.7

Crystal Green

Solubilities	Insoluble in water.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	>55°C
Dynamic viscosity	Not applicable.
Kinematic viscosity	Not applicable.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

Other information

Bulk Density	1 g/ml

SECTION 10: Stability and reactivity

Reactivity:
Stable under normal conditions.
Chemical stability:
Stable under normal conditions.
Possibility of hazardous reactions:
Stable under normal conditions.
Conditions to avoid:
Heat and direct sunlight.
Incompatible materials:
Strong oxidizing agents.
Hazardous decomposition products:
Nitrogen oxides, Magnesium oxides, Phosphorus oxides.

SECTION 11: Toxicological information

Acute toxicity
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.
Skin corrosion/irritation
Assessment: Based on available data, the classification criteria are not met.
Product data:
No data available.
Substance data: No data available.
Serious eye damage/irritation
Assessment: Based on available data, the classification criteria are not met.
Product data:
No data available.
Substance data: No data available.
Respiratory or skin sensitization
Assessment: Based on available data, the classification criteria are not met.
Product data:
No data available.

Crystal Green

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:
No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:
No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:
No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:
No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:
No data available.

Substance data: No data available.

Information on likely routes of exposure:
No data available.

Symptoms related to the physical, chemical and toxicological characteristics:
No data available.

Other information:
No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

Fish	Low toxicity to aquatic organisms.

Substance data: No data available.

Chronic (long-term) toxicity

Crystal Green

Assessment: Based on available data, the classification criteria are not met.

Product data:

Fish	Low toxicity to aquatic organisms.

Substance data: No data available.

Persistence and degradability

Product data:

There is evidence of degradation in soil. Not persistent.

Substance data: No data available.

Bioaccumulative potential

Product data:

This substance has no potential for bioaccumulation.

Substance data: No data available.

Mobility in soil

Product data:

Insoluble in water. The substance is predicted to have low mobility in soil.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not regulated
UN proper shipping name	Not regulated

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 10.04.2019

Crystal Green

UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

7785-21-9	Phosporic acid, ammonium magnesium salt (1:1:1)	Listed

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 extremely hazardous substances: None of the ingredients are listed.

SARA Section 313 toxic chemicals: None of the ingredients are listed.

CERCLA: None of the ingredients are listed.

RCRA: None of the ingredients are listed.

Section 112(r) of the Clean Air Act (CAA): None of the ingredients are listed.

Massachusetts Right to Know:

7785-21-9	Phosporic acid, ammonium magnesium salt (1:1:1)	Not Listed

New Jersey Right to Know:

7785-21-9	Phosporic acid, ammonium magnesium salt (1:1:1)	Not Listed

New York Right to Know:

7785-21-9	Phosporic acid, ammonium magnesium salt (1:1:1)	Not Listed

Pennsylvania Right to Know:

7785-21-9	Phosporic acid, ammonium magnesium salt (1:1:1)	Not Listed

California Proposition 65: None of the ingredients are listed.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 0-0-0

HMIS: 0-0-0

Initial preparation date: 10.04.2019

End of Safety Data Sheet

SAFETY DATA SHEET

Diesel #2 Ultra Low Sulf

Section 1. Identification

GHS product identifier : Diesel #2 Ultra Low Sulf

Product code : D2U

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Petrochemical industry: Petroleum refining. Fuel.

Uses advised against	Reason
Not available.	

Supplier's details : Calumet Specialty Products Partners, L.P.
2780 Waterfront Pkwy E. Dr.
Suite 200
Indianapolis, Indiana 46214 USA
Technical Services: 317-328-5660

24hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887 : 24 hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (bone marrow, liver and thymus) - Category 2
AQUATIC HAZARD (ACUTE) - Category 2
AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Flammable liquid and vapor.
Harmful if inhaled.
Causes skin irritation.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure. (bone marrow, liver, thymus)
Toxic to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Wash hands thoroughly after handling.

Response : Collect spillage. Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not available.

Ingredient name	%	CAS number
Fuels, diesel, No 2	99.8	68476-34-6
ethylbenzene	0.1	100-41-4
naphthalene	0.1	91-20-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Harmful if inhaled.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : No specific data.

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Fuels, diesel, No 2	**ACGIH TLV (United States, 3/2015).** **Absorbed through skin.** TWA: 100 mg/m³, (measured as total hydrocarbons) 8 hours. Form: Inhalable fraction and vapor
ethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes.
naphthalene	**ACGIH TLV (United States, 3/2015).** **Absorbed through skin.** TWA: 10 ppm 8 hours. TWA: 52 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 10 ppm 8 hours. TWA: 50 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 10 ppm 8 hours. TWA: 50 mg/m³ 8 hours. STEL: 15 ppm 15 minutes. STEL: 75 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 10 ppm 10 hours. TWA: 50 mg/m³ 10 hours. STEL: 15 ppm 15 minutes. STEL: 75 mg/m³ 15 minutes.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Section 8. Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Mobile liquid.]

Color : Clear. to Yellow. Red.

Odor : Characteristic. Hydrocarbon.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 157.22 to 343.33°C (315 to 650°F)

Flash point : Closed cup: 60°C (140°F) [Pensky-Martens.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : >3 [Air = 1]

Relative density : 0.85

Solubility : Insoluble in the following materials: cold water and hot water.

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Fuels, diesel, No 2	LC50 Inhalation Dusts and mists	Rat	≥4.1 mg/l	4 hours
	LD50 Dermal	Rabbit	>4100 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
ethylbenzene	LC50 Inhalation Gas.	Rat	4000 ppm	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
naphthalene	LC50 Inhalation Dusts and mists	Rat	>340 mg/m³	1 hours
	LD50 Dermal	Rabbit	20000 mg/kg	-
	LD50 Oral	Rat	490 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
naphthalene	Skin - Mild irritant	Rabbit	-	495 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 0.05 Mililiters	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Section 11. Toxicological information

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
ethylbenzene	-	2B	-
naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
ethylbenzene	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Fuels, diesel, No 2	Category 2	Not determined	bone marrow, liver and thymus
ethylbenzene	Category 2	Not determined	hearing organs

Aspiration hazard

Name	Result
Fuels, diesel, No 2	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Harmful if inhaled.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Section 11. Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Inhalation (dusts and mists)	1.503 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Fuels, diesel, No 2	Acute EC50 2 to 100 mg/l	Algae	72 hours
	Acute EC50 2 to 100 mg/l	Daphnia	48 hours
	Acute LC50 2 to 100 mg/l	Fish	96 hours
ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
naphthalene	Acute EC50 1600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2350 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 213 µg/l Fresh water	Fish - Melanotaenia fluviatilis - Larvae	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ethylbenzene	301B Ready Biodegradability - CO_2 Evolution Test	70 to 80 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Fuels, diesel, No 2	-	-	Inherent
ethylbenzene	-	-	Readily

Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Fuels, diesel, No 2	>3.3	-	low
ethylbenzene	3.6	-	low
naphthalene	3.4	36.5 to 168	low

Mobility in soil

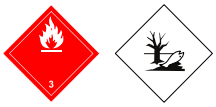
Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN1993	UN1993	UN1993	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (ethylbenzene)	FLAMMABLE LIQUID, N.O.S. (ethylbenzene)	FLAMMABLE LIQUID, N.O.S. (ethylbenzene)	FLAMMABLE LIQUID, N.O.S. (ethylbenzene)
Transport hazard class(es)	3 	3 	3 	3 
Packing group	III	III	III	III
Environmental hazards	No.	Yes.	Yes.	No.
Additional information	This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.	The environmentally hazardous substance mark may appear if required by other transportation regulations.

Section 14. Transport information

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: naphthalene

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

All components are listed or exempted.

Clean Water Act (CWA) 307: ethylbenzene; naphthalene

Clean Water Act (CWA) 311: ethylbenzene; naphthalene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Fuels, diesel, No 2	99.8	Yes.	No.	No.	Yes.	Yes.
ethylbenzene	0.1	Yes.	No.	No.	Yes.	Yes.
naphthalene	0.1	Yes.	No.	No.	Yes.	Yes.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	ethylbenzene naphthalene	100-41-4 91-20-3	0.1 0.1
Supplier notification	ethylbenzene naphthalene	100-41-4 91-20-3	0.1 0.1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

Section 15. Regulatory information

State regulations

Massachusetts : None of the components are listed.

New York : The following components are listed: Ethylbenzene; Naphthalene

New Jersey : The following components are listed: ETHYL BENZENE; BENZENE, ETHYL-; NAPHTHALENE; MOTH FLAKES

Pennsylvania : The following components are listed: BENZENE, ETHYL-; NAPHTHALENE

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
ethylbenzene	Yes.	No.	41 µg/day (ingestion) 54 µg/day (inhalation)	No.
naphthalene	Yes.	No.	Yes.	No.

International lists

National inventory

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : **Japan inventory (ENCS)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.

Malaysia : Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Carc. 2, H351	Calculation method
STOT RE 2, H373 (bone marrow, liver and thymus)	Calculation method
Aquatic Acute 2, H401	Calculation method
Aquatic Chronic 2, H411	Calculation method

History

Date of issue/Date of revision : 03/08/2016

Version : 0.01

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Section 16. Other information

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

RD99LC

Section 1. Identification

GHS product identifier : RD99LC

Product code : 800462

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Not applicable.

Uses advised against

Not applicable.

Supplier's details : Montana Renewables, LLC
1807 3rd Street N.W.
Great Falls, Montana 59404
USA
Technical Services: 317-328-5660

Emergency telephone number (with hours of operation) : 24 hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 4
CARCINOGENICITY - Category 2
ASPIRATION HAZARD - Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Combustible liquid.
May be fatal if swallowed and enters airways.
Suspected of causing cancer.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from flames and hot surfaces. No smoking.

Response : IF exposed or concerned: Get medical advice or attention. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	%	Identifiers
Alkanes, C10-20-branched and linear	≥90	CAS: 928771-01-1
Fuels, diesel, No 2	≤0.3	CAS: 68476-34-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 4. First aid measures

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Combustible liquid. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not swallow. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Alkanes, C10-20-branched and linear Fuels, diesel, No 2	None. **ACGIH TLV (United States, 1/2024) [Diesel Fuel]** A3. Absorbed through skin. TWA 8 hours: 100 mg/m³ (measured as total hydrocarbons). Form: Inhalable fraction and vapor.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls/personal protection

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Color : Clear. [Light]

Odor : Odorless. [Slight]

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Boiling point or initial boiling point and boiling range : 215.56 to 298.89°C (420 to 570°F)

Flash point : Closed cup: 88.889°C (192°F) [Pensky-Martens]

Evaporation rate : Not available.

Flammability : Not available.

Lower and upper explosion limit/flammability limit : Not available.

Vapor pressure :

	Vapor Pressure at 20˚C			Vapor pressure at 50˚C		
Ingredient name	**mm Hg**	**kPa**	**Method**	**mm Hg**	**kPa**	**Method**
Alkanes, C10-20-branched and linear	0.65	0.087				

Relative vapor density : Not available.

Relative density : 0.77 to 0.79

Solubility(ies) :

Section 9. Physical and chemical properties and safety characteristics

Media	Result
cold water hot water	Not soluble Not soluble

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : 204°C (399.2°F)

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): 3 mm^2/s (3 cSt)

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
Alkanes, C10-20-branched and linear	**Rat - Oral - LD50** >2000 mg/kg **Rat - Dermal - LD50** >2000 mg/kg
Fuels, diesel, No 2	**Rat - Oral - LD50** >5000 mg/kg **Rabbit - Dermal - LD50** >4100 mg/kg **Rat - Inhalation - LC50 Dusts and mists** ≥4.1 mg/l [4 hours]

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Not available.

Section 11. Toxicological information

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
Fuels, diesel, No 2	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (bone marrow, liver, thymus) - Category 2

Aspiration hazard

Product/ingredient name	Result
Alkanes, C10-20-branched and linear	ASPIRATION HAZARD - Category 1
Fuels, diesel, No 2	ASPIRATION HAZARD - Category 1

Section 11. Toxicological information

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Result

Not available.

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
RD99LC Alkanes, C10-20-branched and linear Fuels, diesel, No 2	2503.5 2500 N/A	2503.5 2500 2500	N/A N/A N/A	N/A N/A N/A	N/A N/A 1.5

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
Alkanes, C10-20-branched and linear	**Acute - LC50** OECD [Fish, Acute Toxicity Test] Fish >1000 mg/l [96 hours] **Acute - EC50** Algae >100 mg/l [72 hours]
Fuels, diesel, No 2	**Acute - LC50** Fish 2 to 100 mg/l [96 hours] **Acute - EC50** Daphnia 2 to 100 mg/l [48 hours] **Acute - EC50** Algae 2 to 100 mg/l [72 hours]

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Alkanes, C10-20-branched and linear	-	-	Readily
Fuels, diesel, No 2	-	-	Inherent

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Alkanes, C10-20-branched and linear	>6.5	-	High
Fuels, diesel, No 2	>3.3	-	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.

Section 13. Disposal considerations

Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1202	UN1202	UN1202	UN1202	UN1202
UN proper shipping name	Diesel fuel	DIESEL FUEL	GASOLEO	DIESEL FUEL	Diesel fuel
Transport hazard class(es)	3 	3 	3 	3 	3 
Packing group	III	III	III	III	III
Environmental hazards	No.	No.	No.	No.	No.

Additional information

DOT Classification : This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials.
Limited quantity Yes.
Packaging instruction Exceptions: 150. Non-bulk: 203. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 60 L. Cargo aircraft: 220 L.
Special provisions 144, B1, IB3, T2, TP1

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).
Explosive Limit and Limited Quantity Index 30
Passenger Carrying Road or Rail Index 60
Special provisions 88, 150

IMDG : **Emergency schedules** F-E, S-E

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344.
Special provisions A3

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Section 15. Regulatory information

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 4
CARCINOGENICITY - Category 2
ASPIRATION HAZARD - Category 1

Composition/information on ingredients

Name	%	Classification
Alkanes, C10-20-branched and linear	≥90	FLAMMABLE LIQUIDS - Category 4 ASPIRATION HAZARD - Category 1
Fuels, diesel, No 2	≤0.3	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

Section 15. Regulatory information

China : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: All components are listed or exempted.

Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

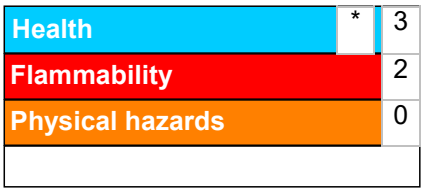
Turkey : Not determined.

United States : All components are active or exempted.

Viet Nam : All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 4 CARCINOGENICITY - Category 2 ASPIRATION HAZARD - Category 1	On basis of test data Calculation method Calculation method

History

Date of printing : 4/28/2025

Date of issue/Date of revision : 4/28/2025

Date of previous issue : 4/28/2025

Version : 1.02

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
DOT = Department of Transportation
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
LogPow = logarithm of the octanol/water partition coefficient

Section 16. Other information

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
TDG = Transportation of Dangerous Goods
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

RJ100 (SPK-HEFA)

Section 1. Identification

GHS product identifier : RJ100 (SPK-HEFA)

Product code : 800352

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Industrial applications

Uses advised against	Reason
None known.	

Supplier's details : Montana Renewables, LLC
1807 3rd Street N.W.
Great Falls, Montana 59404
USA
Technical Services: 317-328-5660

Emergency telephone number : 24 hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 100%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Flammable liquid and vapor.
May be fatal if swallowed and enters airways.

Precautionary statements

Prevention : Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Keep container tightly closed.

Response : IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

RJ100 (SPK-HEFA)

Section 2. Hazards identification

Supplemental label elements : Avoid contact with skin and clothing. Wash thoroughly after handling.

Hazards not otherwise classified : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	%	CAS number
Alkanes, C8-18-branched and linear	≥90	2252265-89-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : Defatting to the skin. May cause skin dryness and irritation.

Ingestion : May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Section 4. First aid measures

Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

RJ100 (SPK-HEFA)

Section 6. Accidental release measures

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Alkanes, C8-18-branched and linear	None.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Section 8. Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Color : Clear. Light tan. to Green.

Odor : Characteristic. Hydrocarbon.

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : -40°C (-40°F)

Boiling point, initial boiling point, and boiling range : 148.89 to 298.89°C (300 to 570°F)

Flash point : Closed cup: 37.778 to 65.556°C (100 to 150°F) [Pensky-Martens]

Evaporation rate : Not available.

Flammability : Not available.

Lower and upper explosion limit/flammability limit : Lower: 0.7%
Upper: 4.7%

Vapor pressure : 0.067 kPa (0.5 mm Hg)

Relative vapor density : >1 [Air = 1]

RJ100 (SPK-HEFA)

Section 9. Physical and chemical properties and safety characteristics

Relative density : 0.78 to 0.84

Solubility(ies) :

Media	Result
cold water	Not soluble
hot water	Not soluble

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : 210°C (410°F)

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): <20.5 mm^2/s (<20.5 cSt)

Flow time (ISO 2431) : Not available.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

RJ100 (SPK-HEFA)

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Name	Result
RJ100 (SPK-HEFA) Alkanes, C8-18-branched and linear	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : Defatting to the skin. May cause skin dryness and irritation.

Ingestion : May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN1863	UN1863	UN1863	UN1863
UN proper shipping name	Fuel, aviation, turbine engine	FUEL, AVIATION, TURBINE ENGINE	FUEL, AVIATION, TURBINE ENGINE	Fuel, aviation, turbine engine
Transport hazard class(es)	3 	3 	3 	3 
Packing group	III	III	III	III
Environmental hazards	No.	No.	No.	No.

Additional information

RJ100 (SPK-HEFA)

Section 14. Transport information

DOT Classification : This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials.
Limited quantity Yes.
Packaging instruction Exceptions: 150. Non-bulk: 203. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 60 L. Cargo aircraft: 220 L.
Special provisions 144, B1, IB3, T2, TP1

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).
Explosive Limit and Limited Quantity Index 5
Passenger Carrying Road or Rail Index 60
Special provisions 17, 91, 150

IMDG : **Emergency schedules** F-E, S-E
Special provisions 223, 363

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344.
Special provisions A3

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 6 final risk management**: 2,4,6-tri-tert-butylphenol
TSCA 8(a) PAIR: 2-tert-butylphenol; 4-tert-butylphenol
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 307: ethylbenzene
Clean Water Act (CWA) 311: xylene; ethylbenzene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 3
ASPIRATION HAZARD - Category 1
HNOC - Defatting irritant

Composition/information on ingredients

Section 15. Regulatory information

Name	%	Classification
Alkanes, C8-18-branched and linear	≥90	FLAMMABLE LIQUIDS - Category 3 ASPIRATION HAZARD - Category 1

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65

⚠ **WARNING**: This product can expose you to Ethylbenzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.
Information provided is based on industrial use and may not be relevant to consumer applications.

Ingredient name	Concentration (%)	No significant risk level	Maximum acceptable dosage level
Ethylbenzene	0.000085 - 0.00023976	Yes.	-

International lists

National inventory

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : Not determined.

Eurasian Economic Union : **Russian Federation inventory**: All components are listed or exempted.

New Zealand : Not determined.

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : Not determined.

Thailand : Not determined.

Turkey : Not determined.

United States : All components are active or exempted.

Viet Nam : Not determined.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3 ASPIRATION HAZARD - Category 1	On basis of test data Expert judgment

History

Date of issue/Date of revision : 09/12/2024

Date of previous issue : 07/09/2024

Version : 1.03

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

RJ100 (SPK-HEFA)

Section 16. Other information

as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Indicates information that has changed from previously issued version.

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SAFETY DATA SHEET

Unleaded Gasoline (All Grades)

CALUMET REFINING, LLC

Section 1. Identification

GHS product identifier : Unleaded Gasoline (All Grades)

Product code : UL

Other means of identification : Conventional Unleaded Gasoline with and without Ethanol (All Grades)

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Petrochemical industry: Petroleum refining. Fuel.

Uses advised against	Reason
None known.	

Supplier's details : Calumet Refining, LLC
2780 Waterfront Pkwy E. Drive Suite 200
Indianapolis, IN 46214
USA
Technical Services: 317-328-5660

Emergency telephone number : 24 hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture :
FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
GERM CELL MUTAGENICITY - Category 1
CARCINOGENICITY - Category 1A
TOXIC TO REPRODUCTION (Fertility) - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, bone marrow, hearing organs, kidneys, liver, peripheral nervous system) - Category 1
ASPIRATION HAZARD - Category 1
AQUATIC HAZARD (ACUTE) - Category 2
AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Flammable liquid and vapor.
Harmful if swallowed or if inhaled.
Causes serious eye irritation.
Causes skin irritation.
May cause genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs through prolonged or repeated exposure. (blood system, bone marrow, hearing organs, kidneys, liver, peripheral nervous system)
Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response : Collect spillage. Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Other means of identification : Conventional Unleaded Gasoline with and without Ethanol (All Grades)

CAS number/other identifiers

CAS number : Not available.

Ingredient name	%	CAS number
Unleaded Gasoline (All Grades)	100	-
Gasoline, natural	100	8006-61-9
toluene	1 - 15	108-88-3
xylene	1 - 10	1330-20-7
ethylbenzene	0 - 10	100-41-4
ethanol	10	64-17-5
1,2,4-trimethylbenzene	0 - 5	95-63-6
naphthalene	<5	91-20-3
n-hexane	<5	110-54-3
benzene	<3	71-43-2
cumene	<1	98-82-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Unleaded Gasoline (All Grades) Gasoline, natural	None. **OSHA PEL 1989 (United States, 3/1989).** TWA: 300 ppm 8 hours. TWA: 900 mg/m³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 1500 mg/m³ 15 minutes.
toluene	**ACGIH TLV (United States, 3/2019).** TWA: 20 ppm 8 hours. **OSHA PEL Z2 (United States, 2/2013).** TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 100 ppm 8 hours. TWA: 375 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2016).** TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes.
xylene	**ACGIH TLV (United States, 3/2019).** TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m³ 15 minutes.
ethylbenzene	**ACGIH TLV (United States, 3/2019).** TWA: 20 ppm 8 hours. **OSHA PEL (United States, 5/2018).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2016).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes.
ethanol	**ACGIH TLV (United States, 3/2019).** STEL: 1000 ppm 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **NIOSH REL (United States, 10/2016).**

Section 8. Exposure controls/personal protection

	TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.
1,2,4-trimethylbenzene	**ACGIH TLV (United States, 3/2019).** TWA: 25 ppm 8 hours. TWA: 123 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 25 ppm 8 hours. TWA: 125 mg/m³ 8 hours. **NIOSH REL (United States, 10/2016).** TWA: 25 ppm 10 hours. TWA: 125 mg/m³ 10 hours.
naphthalene	**ACGIH TLV (United States, 3/2019).** **Absorbed through skin.** TWA: 10 ppm 8 hours. TWA: 52 mg/m³ 8 hours. **OSHA PEL (United States, 5/2018).** TWA: 10 ppm 8 hours. TWA: 50 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 10 ppm 8 hours. TWA: 50 mg/m³ 8 hours. STEL: 15 ppm 15 minutes. STEL: 75 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2016).** TWA: 10 ppm 10 hours. TWA: 50 mg/m³ 10 hours. STEL: 15 ppm 15 minutes. STEL: 75 mg/m³ 15 minutes.
n-hexane	**ACGIH TLV (United States, 3/2019).** **Absorbed through skin.** TWA: 50 ppm 8 hours. **OSHA PEL (United States, 5/2018).** TWA: 500 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 50 ppm 8 hours. TWA: 180 mg/m³ 8 hours. **NIOSH REL (United States, 10/2016).** TWA: 50 ppm 10 hours. TWA: 180 mg/m³ 10 hours.
benzene	**ACGIH TLV (United States, 3/2019).** **Absorbed through skin.** TWA: 0.5 ppm 8 hours. TWA: 1.6 mg/m³ 8 hours. STEL: 2.5 ppm 15 minutes. STEL: 8 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** STEL: 5 ppm 15 minutes. TWA: 1 ppm 8 hours. **OSHA PEL Z2 (United States, 2/2013).** TWA: 10 ppm 8 hours. CEIL: 25 ppm AMP: 50 ppm 10 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes. **NIOSH REL (United States, 10/2016).** TWA: 0.1 ppm 10 hours.

Section 8. Exposure controls/personal protection

cumene	STEL: 1 ppm 15 minutes. **ACGIH TLV (United States, 3/2019).** TWA: 50 ppm 8 hours. **OSHA PEL (United States, 5/2018).** **Absorbed through skin.** TWA: 50 ppm 8 hours. TWA: 245 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** **Absorbed through skin.** TWA: 50 ppm 8 hours. TWA: 245 mg/m³ 8 hours. **NIOSH REL (United States, 10/2016).** **Absorbed through skin.** TWA: 50 ppm 10 hours. TWA: 245 mg/m³ 10 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Mobile liquid.]

Color : Clear. to Yellow.

Odor : Characteristic. Hydrocarbon.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 20°C (68°F)

Flash point : Closed cup: <40°C (<104°F) [Pensky-Martens.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 1.4%
Upper: 7.6%

Vapor pressure : Not available.

Vapor density : >1 [Air = 1]

Relative density : >0.7

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): <0.01 cm^2/s (<1 cSt)

Flow time (ISO 2431) : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
toluene	LC50 Inhalation Vapor	Rat	49 g/m³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	6670 ppm	4 hours
	LC50 Inhalation Vapor	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
ethylbenzene	LC50 Inhalation Gas.	Rat	4000 ppm	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m³	4 hours
	LD50 Oral	Rat	7 g/kg	-
1,2,4-trimethylbenzene	LC50 Inhalation Vapor	Rat	18000 mg/m³	4 hours
	LD50 Oral	Rat	5 g/kg	-
naphthalene	LD50 Dermal	Rabbit	20000 mg/kg	-
	LD50 Oral	Rat	490 mg/kg	-
n-hexane	LC50 Inhalation Vapor	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	15840 mg/kg	-
benzene	LD50 Oral	Rat	930 mg/kg	-
cumene	LC50 Inhalation Vapor	Rat	39000 mg/m³	4 hours
	LD50 Oral	Rat	1400 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Gasoline, natural	Eyes - Mild irritant	Human	-	8 hours 140 ppm	-
	Eyes - Moderate irritant	Man	-	1 hours 500 ppm	-
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 mg	-
	Eyes - Mild irritant	Rabbit	-	870 ug	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin - Mild irritant	Pig	-	24 hours 250 Ul	-
	Skin - Mild irritant	Rabbit	-	435 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Moderate irritant	Rabbit	-	500 mg	-
xylene	Eyes - Mild irritant	Rabbit	-	87 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 mg	-
	Skin - Mild irritant	Rat	-	8 hours 60 Ul	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	100 %	-
ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 mg	-
ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	100 Ul	-
	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	400 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
n-hexane	Eyes - Mild irritant	Rabbit	-	10 mg	-
benzene	Eyes - Moderate irritant	Rabbit	-	88 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-

Section 11. Toxicological information

	Skin - Mild irritant	Rat	-	8 hours 60 Ul	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
cumene	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Mild irritant	Rabbit	-	86 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 mg	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Gasoline, natural	-	2B	-
toluene	-	3	-
xylene	-	3	-
ethylbenzene	-	2B	-
ethanol	-	1	-
naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.
benzene	+	1	Known to be a human carcinogen.
cumene	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
toluene	Category 3	Not applicable.	Narcotic effects
	Category 3	Not applicable.	Respiratory tract irritation
xylene	Category 3	Not applicable.	Respiratory tract irritation
ethylbenzene	Category 3	Not applicable.	Narcotic effects
ethanol	Category 3	Not applicable.	Narcotic effects
1,2,4-trimethylbenzene	Category 3	Not applicable.	Narcotic effects
	Category 3	Not applicable.	Respiratory tract irritation
n-hexane	Category 3	Not applicable.	Narcotic effects
	Category 3	Not applicable.	Respiratory tract irritation
benzene	Category 3	Not applicable.	Narcotic effects
	Category 3	Not applicable.	Respiratory tract irritation
cumene	Category 3	Not applicable.	Narcotic effects
	Category 3	Not applicable.	Respiratory tract irritation

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Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
toluene	Category 2	Not determined	kidneys and liver
xylene	Category 2	Not determined	Not determined
ethylbenzene	Category 2	Not determined	hearing organs
n-hexane	Category 2	Not determined	peripheral nervous system
benzene	Category 1	Not determined	blood system and bone marrow

Aspiration hazard

Name	Result
toluene	ASPIRATION HAZARD - Category 1
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
1,2,4-trimethylbenzene	ASPIRATION HAZARD - Category 1
n-hexane	ASPIRATION HAZARD - Category 1
benzene	ASPIRATION HAZARD - Category 1
cumene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Harmful if swallowed. Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : May cause genetic defects.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Unleaded Gasoline (All Grades)	1457.5	2750	12752.4	183.6	N/A
toluene	636	N/A	N/A	49	N/A
xylene	4300	1100	6670	N/A	N/A
ethylbenzene	3500	N/A	4000	N/A	N/A
ethanol	7000	N/A	N/A	124.7	N/A
1,2,4-trimethylbenzene	5000	N/A	N/A	18	N/A
naphthalene	490	20000	N/A	N/A	N/A
n-hexane	15840	N/A	N/A	N/A	N/A
benzene	930	N/A	N/A	N/A	N/A
cumene	1400	N/A	N/A	39	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella	72 hou

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		subcapitata	
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6.53 mg/l Marine water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2.93 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 100 ul/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
1,2,4-trimethylbenzene	Acute LC50 4910 µg/l Marine water	Crustaceans - Elasmopus pectenicrus - Adult	48 hours
	Acute LC50 7720 µg/l Fresh water	Fish - Pimephales promelas	96 hours
naphthalene	Acute EC50 1.6 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2350 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 213 µg/l Fresh water	Fish - Melanotaenia fluviatilis - Larvae	96 hours
n-hexane	Acute LC50 2500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
benzene	Acute EC50 29000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 1600000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute EC50 9.23 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 21 mg/l Marine water	Crustaceans - Artemia salina	48 hours
	Acute LC50 5.28 ul/L Fresh water	Fish - Oncorhynchus gorbuscha - Fry	96 hours
	Chronic EC10 >1360 mg/l Fresh water	Algae - Scenedesmus subspicatus	96 hours
	Chronic NOEC 98 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 1.5 to 5.4 ul/L Marine water	Fish - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling)	4 weeks
cumene	Acute EC50 2600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 7.4 mg/l Marine water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 10.6 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2700 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
ethylbenzene	301B Ready Biodegradability - CO_2 Evolution Test	70 to 80 % - 28 days	-	-

Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
toluene	-	-	Readily
xylene	-	-	Readily
ethylbenzene	-	-	Readily
ethanol	-	-	Readily
benzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Gasoline, natural	-	10 to 2500	high
toluene	2.73	90	low
xylene	3.12	8.1 to 25.9	low
ethylbenzene	3.6	-	low
ethanol	-0.35	-	low
1,2,4-trimethylbenzene	3.63	243	low
naphthalene	3.4	36.5 to 168	low
n-hexane	4	501.187	high
benzene	2.13	11	low
cumene	3.55	35.48	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Toluene; Benzene, methyl-	108-88-3	Listed	U220
Xylene	1330-20-7	Listed	U239
Naphthalene	91-20-3	Listed	U165
Benzene (I,T)	71-43-2	Listed	U019
Cumene (I); Benzene, (1-methylethyl)- (I)	98-82-8	Listed	U055

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN1203	UN1203	UN1203	UN1203
UN proper shipping name	Gasoline. Marine pollutant (Gasoline, natural, n-hexane) RQ (benzene, xylene)	Gasoline. Marine pollutant (n-hexane, 1,2,4-trimethylbenzene)	Gasoline. Marine pollutant (n-hexane, 1,2,4-trimethylbenzene)	Gasoline
Transport hazard class(es)	3 	3 	3 	3 
Packing group	II	II	II	II
Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

DOT Classification : This product is not regulated as a marine pollutant when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes, provided the packagings meet the general provisions of §§ 173.24 and 173.24a. **Reportable quantity** 333.33 lbs / 151.33 kg [51.92 gal / 196.54 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark).
The marine pollutant mark is not required when transported by road or rail.

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: naphthalene
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
Clean Water Act (CWA) 307: toluene; ethylbenzene; naphthalene; benzene
Clean Water Act (CWA) 311: toluene; xylene; ethylbenzene; naphthalene; benzene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

Section 15. Regulatory information

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
GERM CELL MUTAGENICITY - Category 1
CARCINOGENICITY - Category 1A
TOXIC TO REPRODUCTION (Fertility) - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, bone marrow, hearing organs, kidneys, liver, peripheral nervous system) - Category 1
ASPIRATION HAZARD - Category 1

Composition/information on ingredients

Name	%	Classification
Unleaded Gasoline (All Grades)	100	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A GERM CELL MUTAGENICITY - Category 1 CARCINOGENICITY - Category 1A TOXIC TO REPRODUCTION (Fertility) - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 ASPIRATION HAZARD - Category 1
Gasoline, natural	100	FLAMMABLE LIQUIDS - Category 2 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2
toluene	1 - 15	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, liver) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid

Section 15. Regulatory information

xylene	1 - 10	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
ethylbenzene	0 - 10	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
ethanol	10	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
1,2,4-trimethylbenzene	0 - 5	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
naphthalene	<5	ACUTE TOXICITY (oral) - Category 4 CARCINOGENICITY - Category 2
n-hexane	<5	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B TOXIC TO REPRODUCTION (Fertility) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (peripheral nervous system) - Category 2 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid
benzene	<3	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (blood system, bone marrow) - Category 1 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid

Section 15. Regulatory information

cumene	<1	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1 HNOC - Static-accumulating flammable liquid

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	toluene xylene ethylbenzene 1,2,4-trimethylbenzene naphthalene n-hexane benzene cumene	108-88-3 1330-20-7 100-41-4 95-63-6 91-20-3 110-54-3 71-43-2 98-82-8	1 - 15 1 - 10 0 - 10 0 - 5 <5 <5 <3 <1
Supplier notification	toluene xylene ethylbenzene 1,2,4-trimethylbenzene naphthalene n-hexane benzene cumene	108-88-3 1330-20-7 100-41-4 95-63-6 91-20-3 110-54-3 71-43-2 98-82-8	1 - 15 1 - 10 0 - 10 0 - 5 <5 <5 <3 <1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: GASOLINE; TOLUENE; METHYLBENZENE; XYLENE; DIMETHYLBENZENE; ETHYL BENZENE; ETHYLBENZENE; ETHYL ALCOHOL; DENATURED ALCOHOL; PSEUDOCUMENE; HEXANE; N-HEXANE; NAPHTHALENE; BENZENE; CUMENE; 1-METHYLETHYLBENZENE

New York : The following components are listed: Toluene; Xylene mixed; Ethylbenzene; Hexane; Naphthalene; Benzene; Cumene; Benzene, 1-methylethyl-

New Jersey : The following components are listed: GASOLINE; GASOLINE, NATURAL; TOLUENE; BENZENE, METHYL-; XYLENES; BENZENE, DIMETHYL-; ETHYL BENZENE; BENZENE, ETHYL-; ETHYL ALCOHOL; ALCOHOL; PSEUDOCUMENE; 1,2,4-TRIMETHYL BENZENE; n-HEXANE; HEXANE; NAPHTHALENE; MOTH FLAKES; BENZENE; CUMENE; BENZENE, (1-METHYLETHYL)-

Pennsylvania : The following components are listed: BENZENE, METHYL-; BENZENE, DIMETHYL-; BENZENE, ETHYL-; DENATURED ALCOHOL; ETHANOL; PSEUDOCUMENE; HEXANE; NAPHTHALENE; BENZENE; BENZOL DILUENT; BENZENE, (1-METHYLETHYL)-

California Prop. 65

⚠ **WARNING**: This product can expose you to chemicals including Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Information provided is based on industrial use and may not be relevant to consumer applications.

Section 15. Regulatory information

Ingredient name	Concentration (%)	No significant risk level	Maximum acceptable dosage level
Toluene	1 - 15	-	Yes.
Ethylbenzene	0 - 10	Yes.	-
ethanol	10	-	-
Naphthalene	<5	Yes.	-
n-Hexane	<5	-	-
Benzene	<3	Yes.	Yes.
Cumene	<1	-	-

International lists

National inventory

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : All components are listed or exempted.

Viet Nam : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H302	Calculation method
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2A, H319	Calculation method
Muta. 1, H340	Calculation method
Carc. 1A, H350	Calculation method
Repr. 2, H361 (Fertility)	Calculation method
Repr. 2, H361 (Unborn child)	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 1, H372 (blood system, bone marrow, hearing organs, kidneys, liver, peripheral nervous system)	Calculation method
Asp. Tox. 1, H304	Calculation method
Aquatic Acute 2, H401	Calculation method
Aquatic Chronic 2, H411	Calculation method

History

Date of issue/Date of revision : 03/02/2020

Version : 5

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Meeting Date: September 23, 2025

CITY OF GREAT FALLS
PLANNING ADVISORY BOARD / ZONING COMMISSION AGENDA REPORT

Item:	Public Hearing – Request for a Conditional Use Permit (CUP) to allow a concealed telecommunication facility within the POS Public and Open Space zoning district, upon Dudley Anderson Park, which is addressed as 701 33rd St S, and approval of the associated Lease Agreement.
Initiated By:	Keleigh Adams, Verizon Wireless and Centerline Communications, LLC
Presented By:	Tracy Martello, Assistant City Planner, Planning and Community Development
Action Requested:	Recommendation to the City Commission

Public Hearing:

1. Chairman of the Board conducts public hearing, pursuant to OCCGF 1.2.050 and Title 17, Chapter 16, Article 6.

2. Chairman of the Board closes public hearing and asks the will of the Board.

Suggested Motion:

1. Board Member moves:

"I move that the Zoning Commission recommend the City Commission (approve/deny) the Conditional Use Permit for the subject property as legally described in the Staff Report, the accompanying Basis of Decision, and the associated Lease Agreement, subject to the Conditions of Approval being fulfilled by the applicant."

2. Chairman calls for a second, board discussion, and calls for the vote.

Request Summary:
The applicant, Verizon Wireless, has submitted an application for a Conditional Use Permit (CUP) to allow a "concealed telecommunication facility" within the POS Parks and Open Space zoning district at Dudley Anderson Park, located at 701 33rd Street South, located in the Dudley-Anderson Addition, Section 8, T20N, R4E, P.M.M., Cascade County, Montana.

Verizon proposes to install a 60-foot "monopine", a monopole telecommunications tower designed to resemble a pine tree, on the north end of the park. The project includes removing an existing concrete pad, constructing a 15-foot paved driveway, and constructing a secured 45-foot by 35-foot fenced area.

Within this area, the facility will house ground support equipment including a backup generator, fuel storage tank, electrical meters, utility mounting structures, and a walk-in enclosure for telecommunications hardware.

Background:
Verizon Wireless previously installed wireless antennas on the reservoir tank in Dudley Anderson Park in 2010. In 2024, the City of Great Falls Public Works Department notified Verizon that the Reservoir Rehabilitation Project would require the removal of those antennas and that the aging reservoir would no longer serve as a suitable host. To maintain uninterrupted service, Verizon has temporarily deployed a Cell on Wheels (COW) within the park. According to the applicant's narrative, the proposed monopine tower is intended as a permanent solution to meet emergency communication requirements, comply with FCC regulations, and support ongoing customer service needs in the area.

Because the site is zoned POS Parks and Open Space, the proposed facility requires a Conditional Use Permit. The request has been reviewed by City staff and presented to the Park and Recreation Advisory Board and Neighborhood Council #9. If the CUP is approved, additional approvals will be required, including a height variance to allow a tower height of sixty (60) feet, building permits to ensure compliance with applicable codes and regulations, and an executed lease agreement between Verizon Wireless and the City. The Lease Agreement is attached to this report and included as part of the motion for approval.

Staff has also included design requirements intended to minimize visual impacts and ensure compatibility with the surrounding park environment. These requirements include the installation of a monopine design, as shown in the applicant's preliminary plans, and the construction of a secure fence to prevent unauthorized access. Surrounding land uses include single-family homes in the R-3 Single-Family High Density zoning district to the west, north, and east, and C-2 General Commercial property to the south, which includes Fuddruckers and the Charles M. Russell Post Office.

Park and Recreation Advisory Board Input:
The request for the permanent telecommunication facility was presented to the Park and Recreation Advisory Board on March 10 and again on April 14. During the initial meeting on March 10, the Park Board asked the applicant to explore alternative locations for the telecommunications facility, specifically within the commercial district to the south of the park or in a less visible area within the park.

Upon returning on April 14, the applicant reported that the intended coverage area is within the residential area located north of Dudley Anderson Park. Relocating the tower farther south into the commercial district on 10th Avenue South would compromise this coverage objective, and would require a structure of approximately 100 feet in height. Given the potential loss of coverage and the varying tower height, the Park Board recommended approving the location on the north side of Dudley Anderson Park on April 14th involving a shorter, 60-foot tower.

Neighborhood Council #9 Input:
The Conditional Use Permit was presented to Neighborhood Council #9 on April 10 and again at its May 8 meeting. At the April 10 meeting, the proposal was tabled pending the submission of a rendering of the proposed monopine design, as well as the findings requested from the Park and Recreation Advisory Board. Additionally, the Council was dissatisfied with the level of public turnout and participation at the April 10 meeting. Subsequently, Council members reported that they personally knocked on residents' doors to share information and gather feedback regarding the proposed tower.

At the May 8 meeting, the applicant provided the requested rendering and the Council addressed the recommendation of the Park and Recreation Advisory Board. Following this, Neighborhood Council #9 voted to approve the Conditional Use Permit for the construction of a telecommunication facility on the north side of Dudley Anderson Park.

Conditional Use Permit Basis of Decision:
The basis of decision for a CUP is listed in OCCGF §17.16.36.040. The Zoning Commission's recommendation and the City Commission's decision to approve, conditionally approve, or deny an application shall be based on whether the application, staff report, public hearing, and additional information demonstrate that the criteria within the Basis of Decision have been met. Staff has provided the following Basis of Decision findings:

1. The conditional use is consistent with the City's growth policy and applicable neighborhood plans, if any.

The proposed conditional use for the subject property is consistent with the overall intent and purpose of the 2013 City Growth Policy Update. The proposed project specifically supports the following Goals and Policy from the Social portions of the Growth Policy:

Social Policy 1.1.2: Respond to public safety and emergency medical needs in a timely and safe manor (page 130)

Social Policy 1.3.3: Partner with other governmental and non-governmental entities to coordinate improvement projects, promote joint uses, avoid duplication, and maximize the public benefit of facilities and services. (Page 132)

According to OCCGF 4.1.010, the purpose of telecommunication facilities in the City of Great Falls is to establish and maintain infrastructure that serves as a critical component of the city's emergency response network. This connectivity allows for coordinated efforts among all emergency response agencies, as well as Wireless Emergency Alerts (WEAs).

2. The establishment, maintenance, or operation of the conditional use will not be detrimental to, or endanger the public health, safety, morals, comfort or general welfare.

To ensure public health and safety, the proposed telecommunication facility will be required to undergo a building permit review and comply with all applicable building codes and regulations, which are in place to ensure the structural safety and integrity of the installation. In addition, as a condition of approval, the Conditional Use Permit (CUP) will require the construction of a secure, fenced enclosure around the facility. This measure is intended to restrict unauthorized access and provide a clear physical barrier to protect park users.

3. The conditional use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood.

The proposed monopine telecommunications tower is replacing a previous Verizon antenna located upon the water tower within the park. Additionally, the park currently accommodates other utility services, including power lines and the aforementioned water tower. Although a new structure is being constructed, continuing to use the site for utility purposes and maintaining the lease with Verizon aligns with the park's historical use.

The location of the telecommunication facility has been reviewed by the Park and Recreation Advisory Board to ensure the tower is placed in a location that allows for the lowest possible height while still meeting operational requirements. Specifically, the location enables the telecommunication facility to be limited to a height of 60 feet. The lower height and design requirements of a monopine help preserve the visual character of the area and minimize any potential impact on neighboring properties. As stated within the conditions of approval, the height of sixty (60) feet requires the approval of a dimensional variance, and will not be allowed to increase in the future, to minimize visual impacts and ensure compatibility with the surrounding park environment.

4. The conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.

The proposed project will not impede the normal and orderly development and improvement of surrounding properties. To the west, north, and east of the subject property is the R-3 Single-Family High Density zoning district, consisting of existing single-family homes. To the south of the park is the C-2 General Commercial zoning district. This area has a mix of existing commercial uses. For these reasons, the CUP will not impede the existing or future development of the surrounding properties.

5. Adequate utilities, access roads, drainage and/or necessary facilities have been or are being provided.

Adequate utilities, access roads, drainage, and other necessary facilities have been provided and are being required as part of the building permit process, including a Public Works approach permit. The site plan includes a 15-foot paved access road to ensure reliable access to the facility.

6. Adequate measures have been or will be taken to provide ingress and egress so as to minimize traffic congestion in the public streets.

Ingress and egress to the site will be provided via a 15-foot paved access road, ensuring safe and efficient entry and exit. Verizon will be required to obtain an approach permit, which will ensure compliance with local standards for access. As the facility is not intended to serve the public or function as a service site, traffic volume will be very minimal. Therefore, no significant impact on public street congestion is anticipated.

7. The conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located, except as such regulations may, in each instance, be modified by the City Commission.

Verizon Wireless shall be required to comply with all applicable provisions of the Official Code of the City of Great Falls, including those pertaining to height restrictions. Pursuant to OCCGF §4.2.060, towers located within residential neighborhoods are limited to a maximum height of forty-five (45) feet. To accommodate the proposed facility, Verizon will submit a request for a dimensional variance to increase the tower height to sixty (60) feet. This request will be subject to review and final approval, by the Board of Adjustment in accordance with established procedures.

Noticing and Public Comment:
A public notice regarding the Planning Advisory/Zoning Commission hearing was published in the Great Falls Tribune on Sunday, August 10, 2025. In accordance with telecommunications code

requirements, notices were mailed to property owners within three hundred (300) feet of Dudley Anderson Park, greater than the typical noticing requirements of one hundred and fifty (150) feet. Staff has received public comments expressing concerns about the proposed telecommunication tower, which are provided as an attachment to this agenda report. Key concerns include potential negative impacts on nearby property values, safety and health risks to children and animals, and the fact that the tower's current location, between the play structure and the pool, is the most heavily used area of the park. A southern location is considered more suitable.

City Staff Concurrences:
Representatives from multiple departments, including Planning and Community Development, Park and Recreation, Legal, and Public Works have been involved throughout the review process for this request. Both the Park and Recreation and the Legal Departments have collaborated on the proposed Lease Agreement.

Fiscal Impact:
Approval of the Conditional Use Permit would have no adverse fiscal impacts on the City of Great Falls. The applicant will pay for the cost of all site improvements. Additionally, the proposed Lease Agreement will generate an annual revenue of $30,000 for the City of Great Falls Park and Recreation Department.

Staff Recommendation:
Staff recommends approval of the Conditional Use Permit with the following conditions:

Conditions of Approval:

1. **Building Permits:** The applicant shall submit all required building permit applications to the City of Great Falls for review and approval prior to the start of construction.
2. **Code Compliance**: The applicant shall comply with all applicable building, fire, and safety codes, as well as zoning requirements.
3. **Height Restriction:** Verizon Wireless and the Park and Recreation Board have agreed that the maximum height of the telecommunication tower shall not exceed 60 feet at the approved location. This height limit is final and shall not be increased to remain visually unobtrusive and compatible with the surrounding park environment.
4. **Height Variance Approval:** Verizon shall apply for a height variance to allow for the increased tower height of 60 feet, as required by OCCGF.
5. **Lease Agreement:** A formal lease agreement between Verizon and the City shall be executed prior to the issuance of building permits.
6. **Design Restrictions:** The concealed tower shall include the monopine design to remain visually unobtrusive and compatible with the surrounding park environment.
7. **Safety and Access:** A secure, locked fence shall be installed around the facility to prevent unauthorized access. Access roads shall be paved or stabilized, with limited vehicle traffic expected for routine maintenance only.
8. **Removal and Decommissioning:** If the facility is abandoned or not in use for a continuous period of six (6) months, it shall be removed by the lessee, and the site shall be restored to its original condition to the satisfaction of the City and the conditional use permit is void.
9. **Modifications:** It is understood that minor changes are often necessary during the development and operation of a conditional use. The Administrator (the Administrator is the City employee assigned by the City Manager to administer conditional uses) is hereby authorized to permit minor changes.

10. **Expiration:** The conditional use permit shall expire one (1) year after the date of issuance, if the operation has not been established for the applicant's request. The Administrator may extend the expiration date if substantial work is ongoing.
11. **Acceptance of Conditions:** No zoning or building permits shall be issued until the property owner acknowledges in writing that it has received, understands, and agrees to comply with the conditions of approval.

Alternatives: The Zoning Commission could choose to deny the Conditional Use Permit (CUP). For such an action, the Zoning Commission must provide Basis of Decision findings to support the denial.

Attachments/Exhibits:

- Basis of Decision
- Lease Agreement
- Location and Zoning Map
- Applicant Narrative
- Preliminary Plans
- Public Comment

CONDITIONAL USE PERMIT - BASIS OF DECISION

The applicant is requesting a Conditional Use Permit (CUP) to allow to allow a concealed telecommunication facility within a POS, Public and Open Space, zoning district, upon Dudley Anderson Park, which is addressed as 701 33rd St S, and located within the Dudley-Anderson Addition, Section 8, T20N, R4E, PMM, Great Falls, Cascade County, MT

The procedures and basis of decision for a Conditional Use Permit can be found within the Official Code of the City of Great Falls Title 17, Chapter 16, Article 36.

1. The conditional use is consistent with the City's growth policy and applicable neighborhood plans, if any.

The proposed conditional use for the subject property is consistent with the overall intent and purpose of the 2013 City Growth Policy Update. The proposed project specifically supports the following Goals and Policy from the Social portions of the Growth Policy:

Social Policy 1.1.2: Respond to public safety and emergency medical needs in a timely and safe manor (page 130)

Social Policy 1.3.3: Partner with other governmental and non-governmental entities to coordinate improvement projects, promote joint uses, avoid duplication, and maximize the public benefit of facilities and services. (Page 132)

According to OCCGF 4.1.010, the purpose of telecommunication facilities in the City of Great Falls is to establish and maintain infrastructure that serves as a critical component of the city’s emergency response network. This connectivity allows for coordinated efforts among all emergency response agencies, as well as Wireless Emergency Alerts (WEAs).

2. The establishment, maintenance, or operation of the conditional use will not be detrimental to, or endanger the public health, safety, morals, comfort or general welfare.

To ensure public health and safety, the proposed telecommunication facility will be required to undergo a building permit review and comply with all applicable building codes and regulations, which are in place to ensure the structural safety and integrity of the installation. In addition, as a condition of approval, the Conditional Use Permit (CUP) will require the construction of a secure, fenced enclosure around the facility. This measure is intended to restrict unauthorized access and provide a clear physical barrier to protect park users.

3. The conditional use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood.

The proposed monopine telecommunications tower is replacing a previous Verizon antenna located upon the water tower within the park. Additionally, the park currently accommodates other utility services, including power lines and the aforementioned water tower. Although a new structure is being constructed, continuing to use the site for utility purposes and maintaining the lease with Verizon aligns with the park’s historical use.

The location of the telecommunication facility has been reviewed by the Park and Recreation Advisory Board to ensure the tower is placed in a location that allows for the lowest possible height while still meeting operational requirements. Specifically, the location enables the telecommunication facility to be limited to a height of 60 feet. The lower height and design requirements of a monopine help preserve the visual character of the area and minimize any potential impact on neighboring properties. As stated within

the conditions of approval, the height of sixty (60) feet requires the approval of a dimensional variance, and will not be allowed to increase in the future, to minimize visual impacts and ensure compatibility with the surrounding park environment.

4. The conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.

The proposed project will not impede the normal and orderly development and improvement of surrounding properties. To the west, north, and east of the subject property is the R-3 Single-Family High Density zoning district, consisting of existing single-family homes. To the south of the park is the C-2 General Commercial zoning district. This area has a mix of existing commercial uses. For these reasons, the CUP will not impede the existing or future development of the surrounding properties.

5. Adequate utilities, access roads, drainage and/or necessary facilities have been or are being provided.

Adequate utilities, access roads, drainage, and other necessary facilities have been provided and are being required as part of the building permit process, including a Public Works approach permit. The site plan includes a 15-foot paved access road to ensure reliable access to the facility.

6. Adequate measures have been or will be taken to provide ingress and egress so as to minimize traffic congestion in the public streets.

Ingress and egress to the site will be provided via a 15-foot paved access road, ensuring safe and efficient entry and exit. Verizon will be required to obtain an approach permit, which will ensure compliance with local standards for access. As the facility is not intended to serve the public or function as a service site, traffic volume will be very minimal. Therefore, no significant impact on public street congestion is anticipated.

7. The conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located, except as such regulations may, in each instance, be modified by the City Commission.

Verizon Wireless shall be required to comply with all applicable provisions of the Official Code of the City of Great Falls, including those pertaining to height restrictions. Pursuant to OCCGF §4.2.060, towers located within residential neighborhoods are limited to a maximum height of forty-five (45) feet. To accommodate the proposed facility, Verizon will submit a request for a dimensional variance to increase the tower height to sixty (60) feet. This request will be subject to review and final approval, by the Board of Adjustment in accordance with established procedures.

SITE NAME: GFA ELLA RELO
MDG LOCATION ID: 500096073
LEGAL CONTACT: Warren Tock – Tock & Corl
DATE: July 15, 2025

LAND LEASE AGREEMENT

This Land Lease Agreement (the "**Agreement**") is made by and between the City of Great Falls ("**Lessor**"), with a mailing address of PO Box 5021 Great Falls, Montana 59403, and Gold Creek Cellular of Montana Limited Partnership d/b/a Verizon Wireless ("**Lessee**"), with a mailing address of One Verizon Way, Mail Stop 4AW100, Basking Ridge, New Jersey 07920. Lessor and Lessee are at times collectively referred to hereinafter as the "Parties" or individually as the "**Party**."

WITNESSETH

In consideration of the mutual covenants contained herein and intending to be legally bound hereby, the Parties hereto agree as follows:

1. GRANT. Lessor, for an in consideration of the rent to be paid and this Agreement to be performed by Lessee, hereby grants to Lessee the right to install, maintain, replace, and operate a 59-foot monopine cell tower ("monopine tower" or "tower") with a 1-foot pedestal and related necessary communications equipment ("**Use**") upon a portion of that real property owned, leased or controlled by Lessor located in Dudley Anderson Park, near 33rd Street and 7th Avenue South, Great Falls, County of Cascade, State of Montana, APN: 0000740350 (the "**Property**"). The portion of the Property Lessee has rights to for its Use is approximately 1,575 square feet and is more particularly described and/or depicted on Exhibit "A" attached hereto and made a part hereof (together with access pursuant to Paragraph 5, collectively referred to herein as the "**Premises**"). Lessee's Use of the Premises shall not interfere with the public use of the rest of the Property.

2. INITIAL TERM. This Agreement shall be effective as of the date of execution by both Parties ("**Effective Date**"). The initial term of the Agreement shall be for 5 years beginning on the first day of the month after Lessee begins installation of Lessee's communications equipment on the Premises (the "**Commencement Date**") and will be acknowledged by the Parties in writing, including electronic mail. The parties agree installation of Lessee's communications equipment begins when Lessee, or anyone on Lessee's behalf, enters the Property or Premises for the purpose of preparing the Premises for the Use, which includes, but is not limited to, storage of materials, removal of existing concrete, etc. If Lessee fails to begin installation of communication equipment on the Premises within one (1) year from the Effective Date, this Agreement shall automatically terminate without notice from either Party.

3. EXTENSIONS. The initial term of this Agreement shall automatically be extended for 2 additional 5-year terms unless Lessee gives Lessor written notice of intent to terminate at least 3 months prior to the end of the initial term or then current extension term, as applicable. The initial term and any extension terms shall be collectively referred to herein as the "**Term**."

4. RENT.

a. Rent payments shall begin on the Commencement Date and be due at a total annual rent of $30,000.00, to be paid in equal monthly installments on the first day of the month, in advance, to Lessor at 1700 River Drive North, Great Falls, Montana 59403, or to such other person, firm, or place as Lessor may, from time to time, designate in writing at least 30 days in advance of any rent payment due date by notice given in accordance with this Agreement. Rent shall accrue starting on the Commencement Date; however, the initial rent payment(s) will be delivered no later than 90 days after: the

Commencement Date. Upon agreement of the Parties, Lessee may pay rent by electronic funds transfer and in such event, Lessor agrees to provide to Lessee bank routing information for such purpose upon request of Lessee.

b. Lessor must register in the Verizon Landlord Connect portal ("**VLC Portal**") at https://landlordconnect.verizon.com and shall utilize the VLC Portal to submit changes to Lessor's account information (e.g. notice address, ownership information, banking details, email address), view rental payments, submit an invoice/bill for payment, and to access this Agreement or certificates of insurance. Any costs or fees associated with Lessor's use of the VLC Portal shall be paid or otherwise waived by Lessee.

c. The annual rent for the second (2nd) year of the initial term and for each year thereafter, including any and all extension terms, shall be equal to 103% of the annual rent payable with respect to the immediately preceding year,.

d. Lessee represents and agrees that it shall not allow other wireless communication service providers on the monopine tower without the prior written mutual agreement of Lessor and Lessee.

5. ACCESS/UTILITIES. For the Term of this Agreement, Lessee shall have a 15-foot-wide non-exclusive right of ingress and egress from the public right-of-way, 7th Ave South, 7 days a week, 24 hours a day, to and from the Premises, and for the purpose of installation, operation and maintenance of Lessee's communications equipment. The location of ingress and egress to the Premises from 7th Ave South, the location of Lessee's communications equipment, as referred to below, and any other specific requirements (or those stated herein) for said access is generally shown on Exhibit "A", but the final location of said ingress and egress and equipment shall be approved by Lessor prior to installation by Lessee at Lessee's sole cost. Lessee agrees to properly concrete the 15-foot-wide area from 7th Ave South to the nearest portion of the Premises in compliance with the Official Code of the City of Great Falls (OCCGF). Further, Lessee understands and acknowledges that OCCGF 9.3.10.010 dictates that City of Great Falls owned Parks are closed to vehicles and people from dusk to daylight.

Lessee's communications equipment includes wires, cables, conduits and pipes for all necessary electrical, telephone, fiber and other similar support services as deemed necessary or appropriate by Lessee, with prior notice to Lessor, for the Use. In the event of any power interruption at the Premises, Lessee shall be permitted to install and maintain a temporary power source that complies with the OCCGF to be located on the Premises, including related equipment and necessary appurtenances. Lessee shall install separately metered electrical service to its equipment and shall pay for all charges for utilities used, rendered or supplied upon or in connection with the Premises and/or Use.

6. CONDITION OF PROPERTY. Lessee acknowledges familiarity with the condition of said Property and states that no representation, statement or warranty, expressed or implied, has been made by or on behalf of the Lessor as to such condition. Specifically, Lessee acknowledges that the Premises contains an area of circular concrete. In the event Lessee deems it necessary to remove said concrete, Lessee, by this Agreement, has the permission of Lessor for Lessee, at its sole expense, to remove and appropriately dispose of the concrete. In addition, Lessee acknowledges that there is existing underground irrigation on the Property that may or may not be located within the Premises. Therefore, with the assistance and cooperation of Lessor, Lessee shall locate existing underground irrigation lines

before commencing work. If irrigation lines on the Property or Premises will be impacted by Lessee's activities on the Premises, Lessee, at Lessee's sole cost, shall modify the irrigation lines to the satisfaction of Lessor so Lessor can continue to water the Property and specifically the area of the Property surrounding the Premises. Lessee shall promptly repair any damage to the Property or adjacent property including, but not limited to the underground irrigation and the Property upon conclusion of construction, maintenance, repairs, etc., caused by activities of Lessee, subcontractors, agents. Damaged property shall be restored to original condition or better.

In no event shall Lessor be liable for any defect in such Property, except as otherwise provided herein, or for any limitation on its use.

7. CONSTRUCTION AND IMPROVEMENTS

a. The communications equipment including, without limitation, the tower structure, antennas, conduits, fencing and other screening, and other improvements shall be at Lessee's sole expense. Lessee agrees that the tower structure referred to herein is a monopine and is to look very similar to the living pine trees on the Property. Lessee shall provide detailed construction plans to Lessor prior to installation of any communications equipment. The construction, installation, maintenance, etc. of the communications equipment including, without limitation, the tower structure, antennas, conduits, fencing and other screening, and other improvements shall be in accordance with the approved plans and other conditions or restrictions, unless otherwise approved by Lessor in writing, and must comply with all applicable Federal, State and Local laws. Lessor may terminate this Lease if unapproved construction occurs.

b. Lessee agrees to install a minimum of 8-foot chain-link fence around the perimeter of the Premises and install Kelly green privacy slats in the fence.

c. The construction and installation, and later repair, maintenance and improvement shall be as inconspicuous as is practical and shall not be used to advertise Lessee's products or services in any manner. Lessee shall take measures necessary to prevent any nuisance caused by the installation or operation of its equipment including, but not limited to, interference with electrical or electronic devises, noise or unsightliness.

d. Lessee shall have the right, at its sole cost, to replace, repair, add, modify, or make other improvements or modifications to its communications equipment, tower structure, antennas, conduits, fencing and other screening, or other improvements or any portion thereof and the frequencies over which the communications equipment operates, at no additional rent. Any modifications, additions, modifications, replacements or improvements shall be in accordance with applicable laws, rules regulations, ordinances or code. Lessor shall approve significant modifications, defined herein as improvements that materially affect the exterior appearance, prior to installation, such approval not to be unreasonably withheld, condition or delayed if in compliance with applicable laws, rules, regulations, ordinances or code. Lessee shall also be required to obtain Lessor's consent for modifications that increase the square footage of Lessee's Premises. Lessor shall respond in writing to any Lessee consent request within 60 days of receipt or Lessor's consent shall be deemed granted, provided. Any increase to the size of the Premises shall be memorialized by the Parties in writing. Lessor is not entitled to a rent increase associated with any Lessee modification unless it is increasing the Premises, in which case, any

rent increase shall be proportionate to the additional square footage of ground space included in the Premises.

e. The construction, installation, maintenance, repair modification, improvement, as provided herein, of the communications equipment including, without limitation, the tower structure, antennas, conduits, fencing and other screening, other improvements; and the Premises shall be at Lessee's sole expense and Lessee's sole responsibility. Lessor has no construction, installation, maintenance, repair modification, improvement responsibility for Lessee's communications equipment and/or the Premises.

8. GOVERNMENT APPROVALS. Lessee's Use is contingent upon Lessee obtaining all of the certificates, permits and other approvals (collectively the "**Government Approvals**"), at Lessee's sole expense that may be required by any Federal, State or Local authorities (collectively, the "**Government Entities**") as well as a satisfactory soil boring test, environmental studies, or any other due diligence Lessee chooses that will permit Lessee's Use. Lessor shall cooperate, as necessary, with Lessee in its effort to obtain and maintain any Government Approvals. However, in no event will Lessor contribute monetarily for Lessee's obtaining the Government Approvals.

9. TERMINATION. Lessee may, unless otherwise stated, immediately terminate this Agreement upon written notice to Lessor in the event that (i) any applications for such Government Approvals should be finally rejected; (ii) any Government Approval issued to Lessee is canceled, expires, lapses or is otherwise withdrawn or terminated by any Government Entity; (iii) Lessee determines that such Government Approvals may not be obtained in a timely manner; (iv) Lessee determines any structural analysis is unsatisfactory; (v) Lessee, in its sole discretion, determines the Use of the Premises is obsolete or unnecessary; or (vi) with 3 months prior notice to Lessor, upon the annual anniversary of the Commencement Date.

After the Commencement Date, Lessor may terminate this Agreement at any time it determines, in its reasonable sole judgment, is in the best interest of Lessor to do so, upon six (6) months prior written notice to Lessee. Upon termination, Lessor shall retain all Rent payments made by Lessee.

10. INDEMNIFICATION. Each Party and/or any successor and/or assignees thereof, shall indemnify and hold harmless the other Party, and/or any successors and/or assignees thereof, against all claims, debts, liabilities, fines, loss, penalties, obligations, costs (including reasonable attorney's fees, expenses, and defense costs incurred by the indemnified Party) from bodily injury or property damage resulting from or arising out of the negligence or willful misconduct of the indemnifying Party, its employees, contractors or agents, except to the extent such claims or damages may be due to or caused by the negligence or willful misconduct of the other Party, or its employees, contractors or agents. The indemnified Party will provide the indemnifying Party with prompt, written notice of any claim that is subject to the indemnification obligations in this paragraph. The indemnified Party will cooperate appropriately with the indemnifying Party in connection with the indemnifying Party's defense of such claim. The foregoing duty to defend shall apply solely to any such defense obligations that are covered by the indemnifying party's insurance specified in this Agreement. The indemnity under this Section shall be without regard to and without any right to contribution for any insurance maintained by the indemnified party. The indemnifying Party shall not settle or compromise any such claim or consent to the entry of any judgment without the prior written consent of each indemnified Party and without an

unconditional release of all claims by each claimant or plaintiff in favor of each indemnified Party. All indemnification obligations shall survive the termination or expiration of this Agreement. Any obligation of Lessor shall be limited by the amounts set forth in Montana Code Annotated § 2-9-108 (2023).

11. INSURANCE. Lessee shall maintain during the Term of this Agreement the following insurance policies:

a. Commercial general liability with limits of $2,000,000 per occurrence for bodily injury and property damage and $4,000,000.00 general aggregate.

b. Commercial Auto liability coverage of $2,000,000 combined single limit each accident for bodily injury and property damage.

c. Contactors Pollution liability coverage with limits of $2,000,000 per occurrence.

d. "All-Risk" property insurance on a replacement cost basis insuring their respective property with no coinsurance requirement. Where legally permissible, Lessee agrees to waive subrogation and to ensure said waiver is recognized by the insurance policies insuring the property.

e. Worker's Compensation insurance in an amount not less than Montana statutory limits.

Lessee's insurance coverage except workers compensation shall include Lessor as an additional insured as their interest may appear under this Agreement. Upon receipt of notice from its insurer(s) Lessee shall provide Lessor with thirty (30) days' prior written notice of cancellation of any required coverage.

12. LIMITATION OF LIABILITY. Except for indemnification pursuant to Paragraphs 10 and 22, a violation of Paragraph 27, or a violation of law, neither Party shall be liable to the other, or any of their respective agents, representatives, or employees for any lost revenue, lost profits, diminution in value of business, loss of technology, rights or services, loss of data, or interruption or loss of use of service, incidental, punitive, indirect, special, trebled, enhanced or consequential damages, even if advised of the possibility of such damages, whether such damages are claimed for breach of contract, tort (including negligence), strict liability or otherwise, unless applicable law forbids a waiver of such damages.

13. VANDALISM. Lessee understands that Lessor is not responsible for the security of the Premises and/or Lessee's equipment from vandalism. Lessor understands that Lessee will be operating an unmanned communications facility at the Premises. Should vandalism occur, following written notice from Lessor, Lessee shall make the required repairs to restore its installation aesthetically so as not to maintain a nuisance. Lessee understands Lessor's position that damages caused by vandalism, if not repaired, serves to attract further vandalism and Lessee will therefore work expeditiously, following receipt of notice from Lessor of any vandalism, to repair damage to its equipment caused by vandalism to protect the Property from being a target for further vandalism. Lessee may provide reasonable protection from vandalism.

14. INTERFERENCE.

a. Lessee agrees that it will not interfere with Lessor's equipment, however, Lessor agrees that any future lease or license agreements for use of space on the Property for wireless communications purposes shall contain substantially the same requirements regarding non-interference to any of Lessee's existing equipment installed at the Property as set forth herein..

b. Lessee acknowledges the existence of a power pole on the Property near the Premises and agrees the Use shall not interfere with said power pole.

c. The Parties acknowledge that there will not be an adequate remedy at law for noncompliance with the provisions of this Paragraph and therefore the Parties shall have the right to equitable remedies such as, without limitation, injunctive relief and specific performance.

15. REMOVAL/HOLDOVER.

a. Within 90 days of the expiration or earlier termination of the Agreement, Lessee shall remove Lessee's communications equipment and restore the Premises and impacted areas of the Property (access area) to its original condition, reasonable wear and tear and casualty damage excepted. Lessor agrees and acknowledges that the communications equipment is the personal property of Lessee and Lessee shall have the right to remove the same at any time during the Term or as stated herein, whether or not said items are considered fixtures and attachments to real property under applicable laws. If Lessee fails to remove the communications equipment and restore the Premises to its original condition within 90 days of the expiration or termination of this Agreement, the personal property shall be the property of Lessor and Lessor may remove the communication equipment and restore the Premises. Lessor's costs and expenses of any such removal and restoration shall be due and payable by Lessee upon receipt of an invoice.

b. If the Parties are negotiating an amendment or new lease at the time of the expiration of the Term, Lessee may remain on the Premises until the amendment or new lease has been executed, provide Lessee shall pay rent at the then existing monthly rate, or on the existing monthly pro-rata basis if based upon a longer payment term, until the removal of the communications equipment is completed.

16. LESSOR'S TITLE. Lessor covenants that Lessee, upon paying the rent and performing the covenants herein, shall peaceably and quietly have, hold and enjoy the Premises. Lessor represents and warrants to Lessee as of the Effective Date and covenants during the Term that Lessor has full authority to enter into and execute this Agreement. Lessee covenants that the Use of the Premises shall not interfere with or prohibit, in any way, the public use of the rest of the Property.

17. ASSIGNMENT/SUBLETTING. Without any approval or consent of the other Party, this Agreement may be sold, assigned or transferred by either Party to (i) any entity in which the Party directly or indirectly holds an equity or similar interest; (ii) any entity which directly or indirectly holds an equity or similar interest in the Party; or (iii) any entity directly or indirectly under common control with the Party. Lessee may assign this Agreement to: (a) any entity which acquires all or substantially all of Lessee's assets in the market defined by the Federal Communications Commission in which the Property is located by reason of a merger, acquisition or other business reorganization without any notice to, or approval or consent of, Lessor without prior written approval or consent of Lessor. As to other parties, this Agreement

may not be sold, assigned or transferred without the written consent of the other Party, which such consent will not be unreasonably withheld, delayed or conditioned. No change of stock ownership, partnership interest or control of Lessee or transfer upon partnership or corporate dissolution of either Party shall constitute an assignment hereunder. Lessee may sublease the Premises, in Lessee's sole discretion, with prior written notice to Lessor. Any sublease that is entered into by Lessee shall be subject to the provisions of this Agreement and shall not relieve Lessee from the obligations as set forth herein.

18. NOTICE. Except as otherwise provided herein, all notices hereunder must be in writing and shall be deemed validly given if sent by certified mail, return receipt requested or by commercial courier, provided the courier's regular business is delivery service, addressed as follows (or any other address that Lessee may have designated to Lessor by like notice):, or that the Lessor may have designated to Lessee in the VLC Portal):

LESSOR:	City of Great Falls PO Box 5021 Great Falls, Montana 59403 Attn: Deputy City Attorney
With a copy to:	Park and Recreation Director
LESSEE:	Gold Creek Cellular of Montana Limited Partnership d/b/a Verizon Wireless Attention: Network Real Estate 180 Washington Valley Road Bedminster, New Jersey 07921
With a copy to:	Basking Ridge Mail Hub Attn: Legal Intake One Verizon Way Basking Ridge, New Jersey 07920

Notice shall be effective on the earlier of (i) actual receipt or refusal as shown on the receipt obtained pursuant to the foregoing or (ii) three (3) business days after the notice is deposited in the mail.

19. EMERGENCY RESPONSE. In addition to the contact provided in the NOTICE paragraph above, Lessee shall provide a representative that can respond 24 hours a day, can be on site within a reasonable time and has access to the Premises and the authority to address and correct any problems that may arise with Lessee's equipment, or otherwise address a concern with the Premises. The emergency contact for Lessee shall be contacted at: 1-800-264-6620 or 1-800-621-2622.

20. DEFAULT. It is a "Default" if (i) either Party fails to comply with this Agreement and does not remedy the failure within 30 days after written notice by the other Party or, if the failure cannot reasonably be remedied in such time, if the failing Party does not commence a remedy within the allotted 30 days and diligently pursue the cure to completion within 90 days after the initial written notice, or (ii) Lessor fails to comply with this Agreement and the failure interferes with Lessee's Use and Lessor does not remedy the failure within 15 days after written notice from Lessee or, if the failure cannot reasonably

be remedied in such time, if Lessor does not commence a remedy within the allotted 15 days and diligently pursue the cure to completion within 30 days after the initial written notice. The cure periods set forth in this Paragraph do not extend a period of time specifically stated in this Agreement.

21. REMEDIES. In the event of a Default, without limiting the non-defaulting Party in the exercise of any right or remedy which the non-defaulting Party may have by reason of such default, the non-defaulting Party may terminate this Agreement and/or pursue any remedy now or hereafter available to the non-defaulting Party under the laws or judicial decisions of the state in which the Property is located. Further, upon a Default, the non-defaulting Party may at its option (but without obligation to do so), perform the defaulting Party's duty or obligation. The costs and expenses of any such performance by the non-defaulting Party shall be due and payable by the defaulting Party upon receipt of an itemized invoice.

22. ENVIRONMENTAL. Lessee shall conduct its business in compliance with all applicable laws governing the protection of the environment or employee health and safety ("**EH&S Laws**"). Lessee shall indemnify and hold harmless the Lessor from claims to the extent resulting from Lessee's violation of any applicable EH&S Laws or to the extent that Lessee causes a release of any regulated substance to the environment. Lessor shall indemnify and hold harmless Lessee from all claims resulting from the violation of any applicable EH&S Laws or a release of any regulated substance to the environment except to the extent resulting from the activities of Lessee. Any obligation of Lessor shall be limited by the amounts set forth in Montana Code Annotated § 2-9-108 (2023). The Parties recognize that Lessee is only leasing a small portion of the Property and that Lessee shall not be responsible for any environmental condition or issue except to the extent resulting from Lessee's specific activities and responsibilities. In the event that Lessee encounters any hazardous substances that do not result from its activities, Lessee may relocate its facilities to a mutually agreeable location to avoid such hazardous substances.

23. CASUALTY. If a fire or other casualty damages the Property or the Premises and impairs Lessee's Use, rent shall abate until Lessee's Use is restored. If Lessee's Use is not restored within 45 days, Lessee may terminate this Agreement.

24. CONDEMNATION. If a condemnation of any portion of the Property or Premises impairs Lessee's Use, Lessee may terminate this Agreement. Lessee may on its own behalf make a claim in any condemnation proceeding involving the Premises for losses related to Lessee's communications equipment, relocation costs and, specifically excluding loss of Lessee's leasehold interest, any other damages Lessee may incur as a result of any such condemnation.

25. APPLICABLE LAWS. Lessee shall, with respect to the condition of and equipment or monopole on the Premises and at Lessee's sole cost and expense, comply with (i) all Laws, rules, regulations, ordinances and codes relating solely to Lessee's specific and unique nature of use of the Premises; and (ii) all building codes, permits, etc. requiring modifications to the Premises due to the improvements being made by Lessee in the Premises.. All communication equipment and other appurtenances Lessee installs on the Premises shall be installed in a workmanlike manner, shall be in conformance with all applicable laws and shall not interfere with the current operations of Lessor.

26. TAXES. If Lessor is required by law to collect any federal, state, or local tax, fee, or other governmental imposition (each, a "**Tax**") from Lessee with respect to the transactions contemplated by this Agreement, then Lessor shall bill such Tax to Lessee in the manner and for the amount required by

law, Lessee shall promptly pay such billed amount of Tax to Lessor, and Lessor shall remit such Tax to the appropriate tax authorities as required by law; provided, however, that Lessor shall not bill to or otherwise attempt to collect from Lessee any Tax with respect to which Lessee has provided Lessor with an exemption certificate or other reasonable basis for relieving Lessor of its responsibility to collect such Tax from Lessee. Except as provided in this Paragraph, Lessor shall bear the costs of all Taxes that are assessed against or are otherwise the legal responsibility of Lessor with respect to itself, its property, and the transactions contemplated by this Agreement. However, Lessee shall, as required by law, be responsible for any personal property taxes due on Lessee's communications equipment. In addition, Lessee shall be responsible for all Taxes that are assessed against or are otherwise the legal responsibility of Lessee with respect to itself, its property, and the transactions contemplated by this Agreement.

27. DISCLOSURE. Lessee recognizes that this Agreement involves interaction with a public entity. Therefore, approval of this Agreement requires a public process. In addition, any oral or written information or communications provided to Lessor by Lessee may be subject to public inspection under Montana or other applicable law and may be subject to records retention laws. If a request for information exchanged between the Parties regarding this Agreement is made, Lessor will notify Lessee of such request. If Lessee intends to claim that any such requested documentation is "Confidential Information" or confidential, proprietary, or trade secret information as identified in Mont. Code Ann. §30-14-402, or otherwise under applicable law, it will be required to take any and all steps necessary, including court action, to establish that the information is not subject to public disclosure.

28. MISCELLANEOUS. This Agreement contains all agreements, promises and understandings between Lessor and Lessee regarding this transaction, and no oral agreement, promises or understandings shall be binding upon either Lessor or Lessee in any dispute, controversy or proceeding. This Agreement may not be amended or varied except in a writing signed by all Parties. This Agreement shall extend to and bind the heirs, personal representatives, successors and assigns hereto. The failure of either Party to insist upon strict performance of any of the terms or conditions of this Agreement or to exercise any of its rights hereunder shall not waive such rights and such Party shall have the right to enforce such rights at any time. The performance of this Agreement shall be governed, interpreted, construed and regulated by the laws of the state in which the Premises is located without reference to its choice of law rules. Except as expressly set forth in this Agreement, nothing in this Agreement shall grant, suggest or imply any authority for one Party to use the name, trademarks, service marks or trade names of the other for any purpose whatsoever. This Agreement may be executed in counterparts, including written and electronic forms. All executed counterparts shall constitute one Agreement, and each counterpart shall be deemed an original.

[SIGNATURE PAGE FOLLOWS]

SITE NAME: GFA ELLA RELO
MDG LOCATION ID: 500096073
LEGAL CONTACT: Warren Tock – Tock & Corl
DATE: July 15, 2025

IN WITNESS WHEREOF, this Agreement is entered into by the Parties as of the Effective Date.

LESSOR:

The City of Great Falls

By: _____
Gregory T. Doyon, City Manager

Date: _____

Attest:

By: _____ *(Seal of the City)*
Lisa Kunz, City Clerk

*Approved as to Form:

By: _____
David G. Dennis, City Attorney

* By law, the City Attorney may only advise or approve contract or legal document language on behalf of the City of Great Falls, and not on behalf of other parties. Review and approval of this document was conducted solely from the legal perspective, and for the benefit, of the City of Great Falls. Other parties should not rely on this approval and should seek review and approval by their own respective counsel.

LESSEE:
Gold Creek Cellular of Montana Limited Partnership d/b/a Verizon Wireless
By CommNet Cellular Inc., Its General Partner

By: _____

Name: _____

Its: _____

Date: _____

SITE NAME: GFA ELLA RELO
MDG LOCATION ID: 500096073
LEGAL CONTACT: Warren Tock – Tock & Corl
DATE: July 15, 2025

EXHIBIT "A"
PREMISES DESCRIPTION

(See Attached)

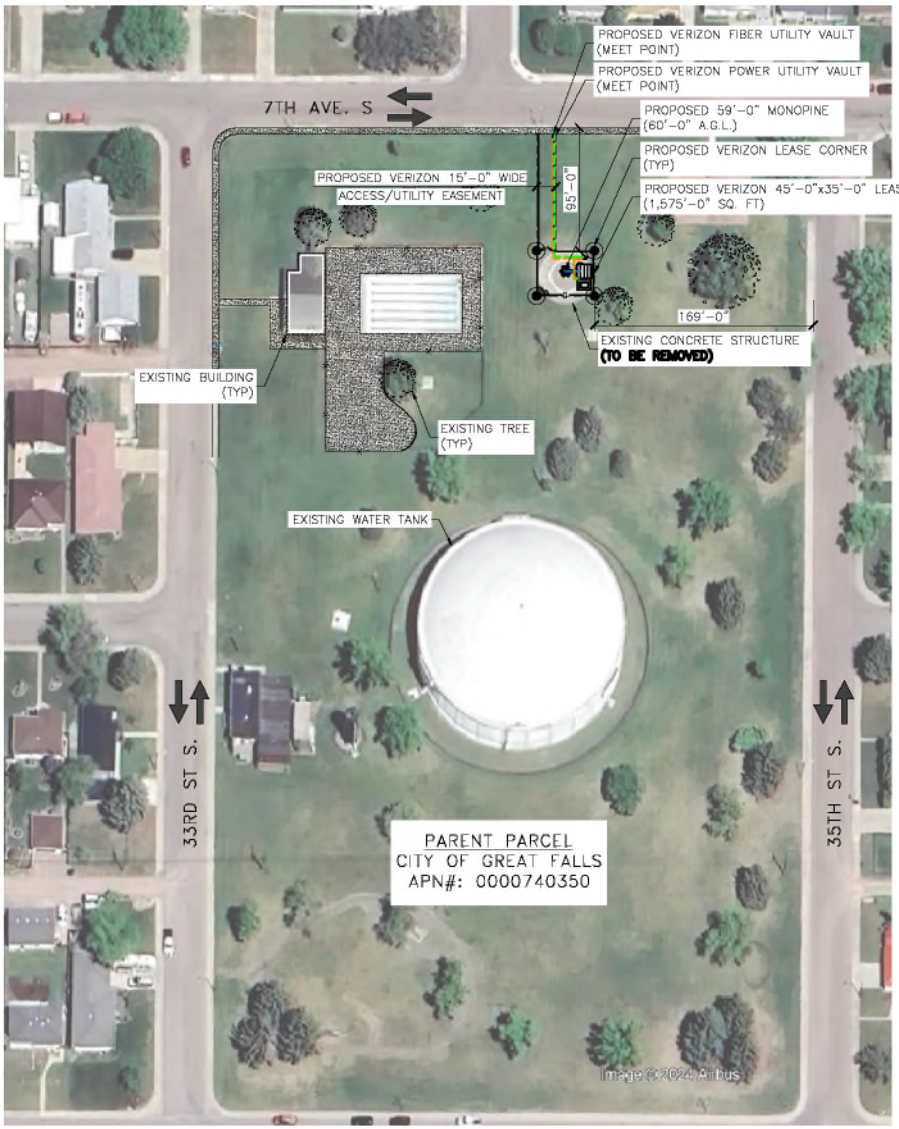
PENETRATIONS | RRH/MOVP | ANTENNAS / MICROWAVE | FIBER | POWER/GROUNDING | HYBRID/COAX

SITE NOTES:

1.	PRIOR TO EXCAVATION, CONTRACTOR SHALL CHECK THE AREA FOR UNDERGROUND FACILITIES.
2.	GRADE ENTIRE COMPOUND UP 1' ABOVE FINISHED GRADE PRIOR TO INSTALLING THE 4" OF CRUSHED ROCK.
3.	INFORMATION SHOWN BELOW FOR DEPICTION PURPOSES ONLY. ALL DATA GATHERED FROM PUBLIC RECORDS AND GENERATED FROM AERIAL IMAGES AND SITE VISITS. INFORMATION DOES NOT CONSTITUTE A LEGAL BOUNDARY SURVEY AND SHOULD NOT BE USED FOR SURVEYING OR OTHER RELATED PURPOSES.

NOTE:

1.	STRUCTURAL ANALYSIS MUST BE PERFORMED PRIOR TO THE INSTALLATION OF ANY NEW EQUIPMENT TO DETERMINE THE ADEQUACY OF THE EXISTING STRUCTURE. THIS SET OF CONSTRUCTION DRAWINGS DOES NOT CONSTITUTE A STRUCTURAL ANALYSIS.



SITE PLAN NORTH

100'-0" 0 100'-0"

60' 20'

SCALE: 1" = 100'-0"

DESIGNED FOR:

verizon

2730 BOZEMAN AVE.
HELENA, MONTANA 59601

DESIGNED BY

PM&A

A CENTERLINE COMMUNICATIONS COMPANY

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY – NOT FOR CONSTRUCTION	01/10/25	MDA	–
B	PRELIMINARY – NOT FOR CONSTRUCTION	02/28/25	MDA	–
C	PRELIMINARY – NOT FOR CONSTRUCTION	07/11/25	MDA	–

PRELIMINARY NOT FOR CONSTRUCTION

PROJECT NAME:

GFA ELLA PERMANENT
NEW 59'-0" MONOPINE
(OVERALL HEIGHT: 60'-0" A.G.L.)
RAW LAND

PROJECT ADDRESS:

3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

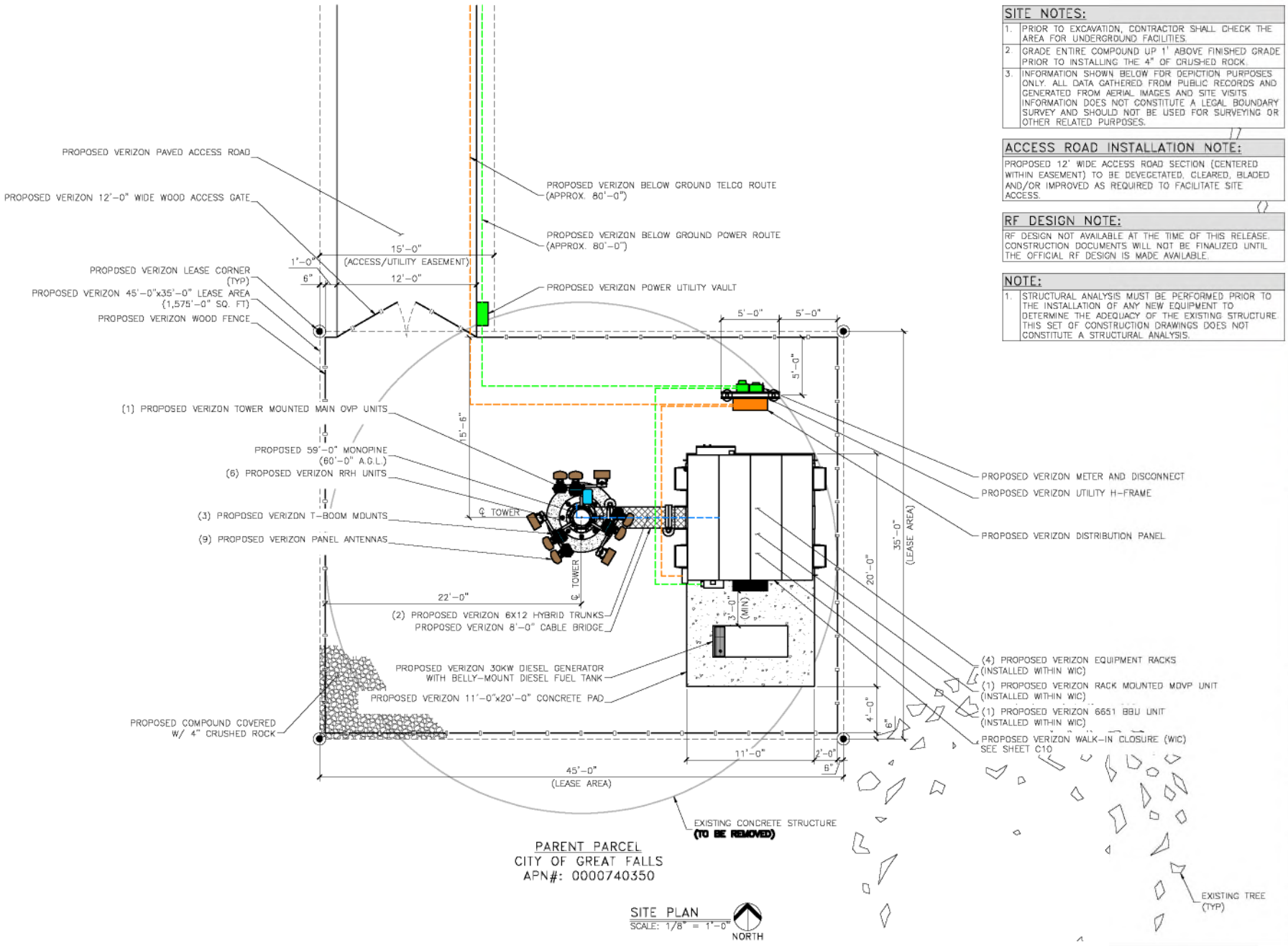
SHEET TITLE:

SITE PLAN

SAVE DATE:

7/11/2025 6:25 PM

SHEET NUMBER:



PARENT PARCEL
CITY OF GREAT FALLS
APN#: 0000740350

SITE PLAN
SCALE: 1/8" = 1'-0"
NORTH

SITE NOTES:

1. PRIOR TO EXCAVATION, CONTRACTOR SHALL CHECK THE AREA FOR UNDERGROUND FACILITIES.
2. GRADE ENTIRE COMPOUND UP 1' ABOVE FINISHED GRADE PRIOR TO INSTALLING THE 4" OF CRUSHED ROCK.
3. INFORMATION SHOWN BELOW FOR DEPICTION PURPOSES ONLY. ALL DATA GATHERED FROM PUBLIC RECORDS AND GENERATED FROM AERIAL IMAGES AND SITE VISITS. INFORMATION DOES NOT CONSTITUTE A LEGAL BOUNDARY SURVEY AND SHOULD NOT BE USED FOR SURVEYING OR OTHER RELATED PURPOSES.

ACCESS ROAD INSTALLATION NOTE:

PROPOSED 12' WIDE ACCESS ROAD SECTION (CENTERED WITHIN EASEMENT) TO BE DEVEGETATED, CLEARED, BLADED AND/OR IMPROVED AS REQUIRED TO FACILITATE SITE ACCESS.

RF DESIGN NOTE:

RF DESIGN NOT AVAILABLE AT THE TIME OF THIS RELEASE. CONSTRUCTION DOCUMENTS WILL NOT BE FINALIZED UNTIL THE OFFICIAL RF DESIGN IS MADE AVAILABLE.

NOTE:

1. STRUCTURAL ANALYSIS MUST BE PERFORMED PRIOR TO THE INSTALLATION OF ANY NEW EQUIPMENT TO DETERMINE THE ADEQUACY OF THE EXISTING STRUCTURE. THIS SET OF CONSTRUCTION DRAWINGS DOES NOT CONSTITUTE A STRUCTURAL ANALYSIS.

DESIGNED FOR:

verizon

2730 BOZEMAN AVE.
HELENA, MONTANA 59601

DESIGNED BY

PM&A
A CENTERLINE COMMUNICATIONS COMPANY

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY - NOT FOR CONSTRUCTION	01/10/25	MDA	-
B	PRELIMINARY - NOT FOR CONSTRUCTION	02/26/25	MDA	-
C	PRELIMINARY - NOT FOR CONSTRUCTION	07/11/25	MDA	-

PRELIMINARY NOT FOR CONSTRUCTION

PROJECT NAME:

GFA ELLA PERMANENT
NEW 59'-0" MONOPINE
(OVERALL HEIGHT: 60'-0" A.G.L.)
RAW LAND

PROJECT ADDRESS:

3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

SHEET TITLE:

ENLARGED SITE PLAN

SAVE DATE:

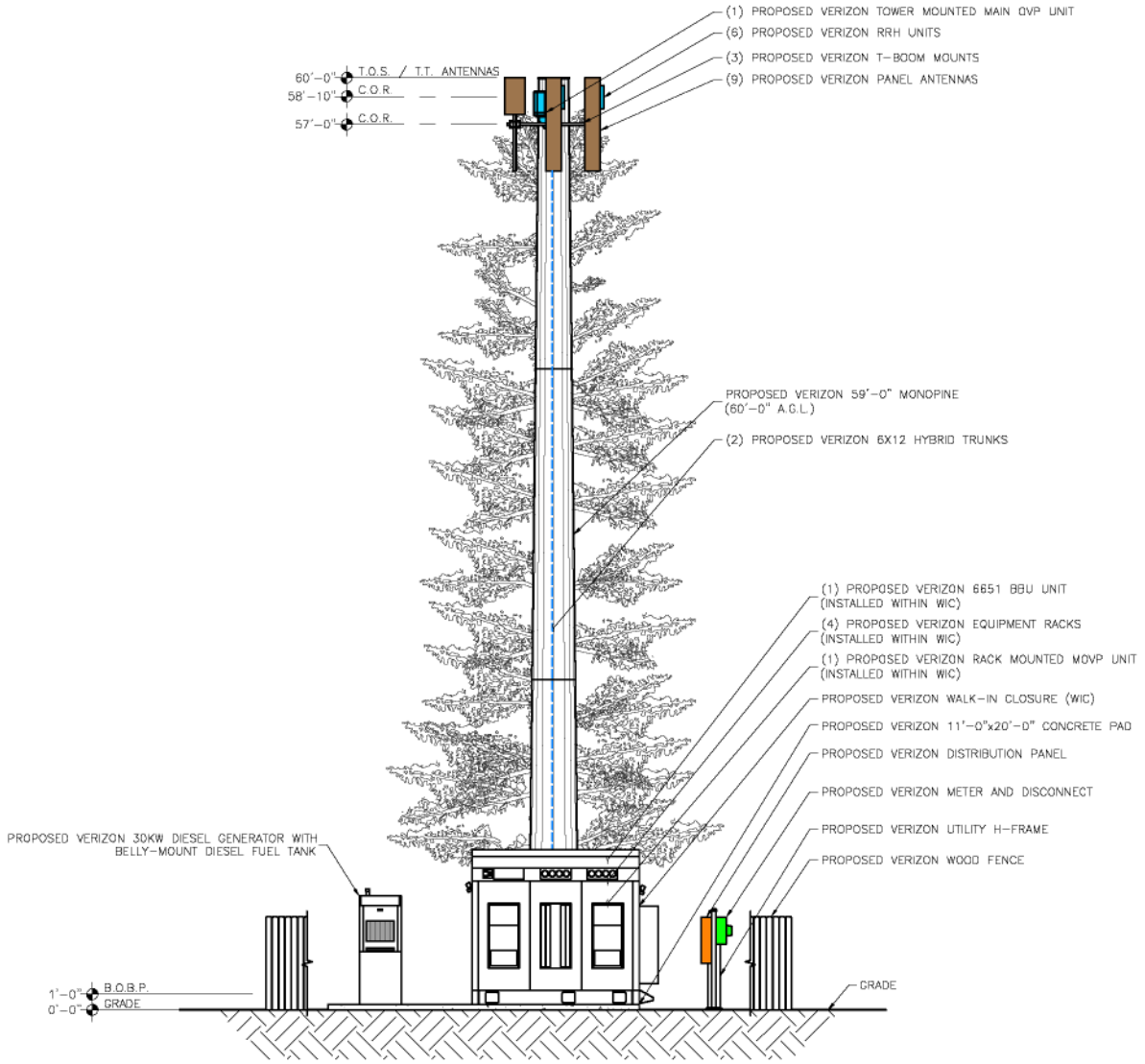
7/11/2025 6:25 PM

SHEET NUMBER:

PENETRATIONS | RRH/MOVP | ANTENNAS / MICROWAVE | FIBER | POWER/GROUNDING | HYBRID/COAX

PENETRATIONS | RRH/MOVP | ANTENNAS / MICROWAVE | FIBER | POWER/GROUNDING | HYBRID/COAX

KEY:	
C.O.R. =	CENTER OF RADIATION
A.L. =	ATTACHMENT LEVEL
B.T. =	BOTTOM TIP LEVEL
T.T. =	TOP TIP LEVEL
A.G.L. =	ABOVE GRADE LEVEL
B.O.B.P. =	BOTTOM OF BASE PLATE
T.O.S. =	TOP OF STRUCTURE



PROPOSED EAST ELEVATION
SCALE: N.T.S.

DESIGNED FOR:

verizon

2730 BOZEMAN AVE.
HELENA, MONTANA 59601

DESIGNED BY

PM&A
A CENTERLINE COMMUNICATIONS COMPANY

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY - NOT FOR CONSTRUCTION	01/10/25	MDA	-
B	PRELIMINARY - NOT FOR CONSTRUCTION	02/28/25	MDA	-
C	PRELIMINARY - NOT FOR CONSTRUCTION	07/11/25	MDA	-

PRELIMINARY NOT FOR CONSTRUCTION

PROJECT NAME:
GFA ELLA PERMANENT
NEW 59'-0" MONOPINE
(OVERALL HEIGHT: 60'-0" A.G.L.)
RAW LAND

PROJECT ADDRESS:
3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

SHEET TITLE:
ELEVATIONS

SAVE DATE:
7/11/2025 6:25 PM

SHEET NUMBER:

PENETRATIONS
RRH/MOVP
ANTENNAS / MICROWAVE
FIBER
POWER/GROUNDING
HYBRID/COAX

KEY:	
C.O.R. =	CENTER OF RADIATION
A.L. =	ATTACHMENT LEVEL
B.T. =	BOTTOM TIP LEVEL
T.T. =	TOP TIP LEVEL
A.G.L. =	ABOVE GRADE LEVEL
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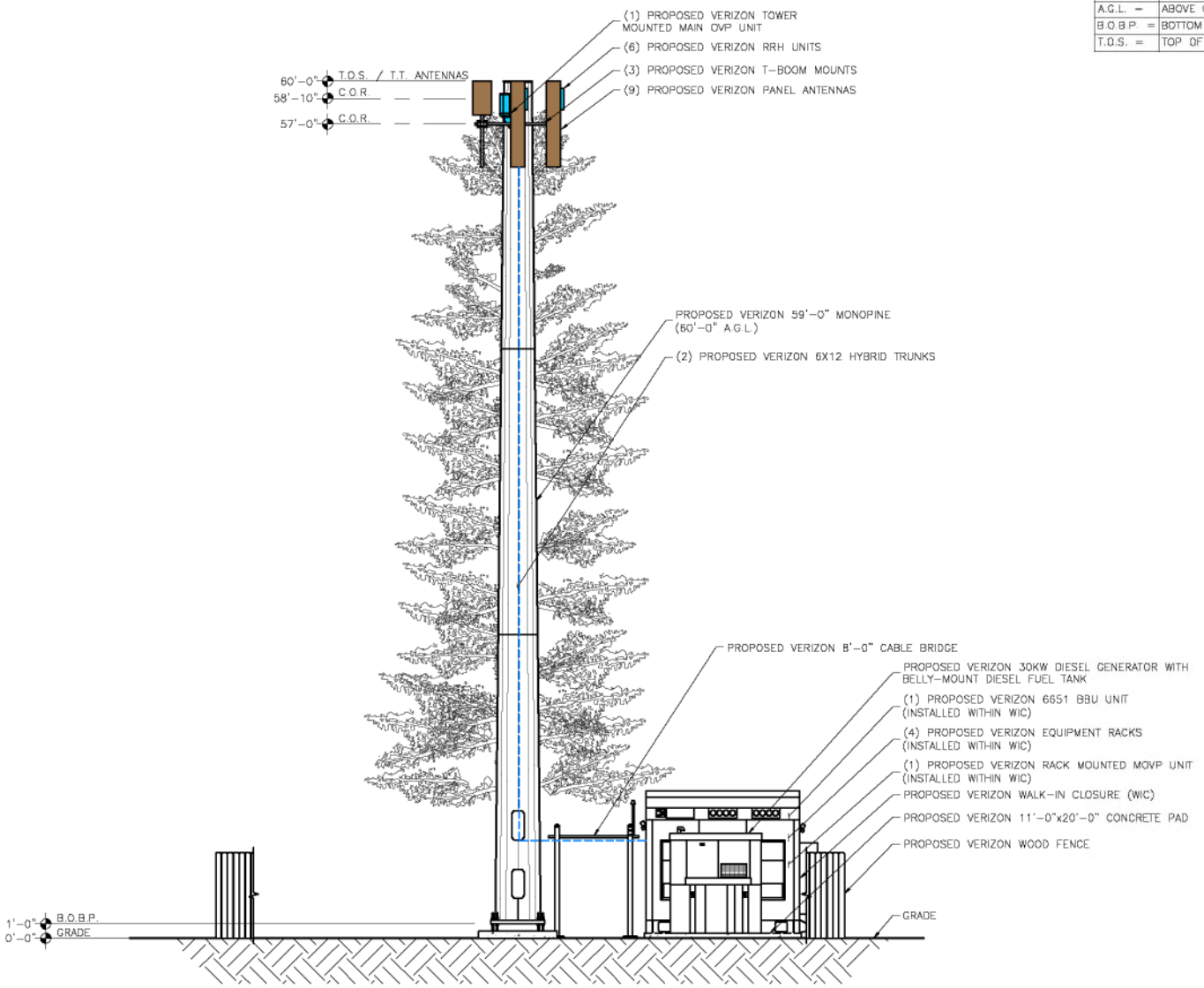
T.O.S. =	TOP OF STRUCTURE



PROPOSED SOUTH ELEVATION
SCALE: N.T.S.

DESIGNED FOR:
verizon
2730 BOZEMAN AVE.
HELENA, MONTANA 59601

DESIGNED BY

PM&A
A CENTERLINE COMMUNICATIONS COMPANY

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY - NOT FOR CONSTRUCTION	01/10/25	MDA	-
B	PRELIMINARY - NOT FOR CONSTRUCTION	02/28/25	MDA	-
C	PRELIMINARY - NOT FOR CONSTRUCTION	07/11/25	MDA	-

PRELIMINARY NOT FOR CONSTRUCTION

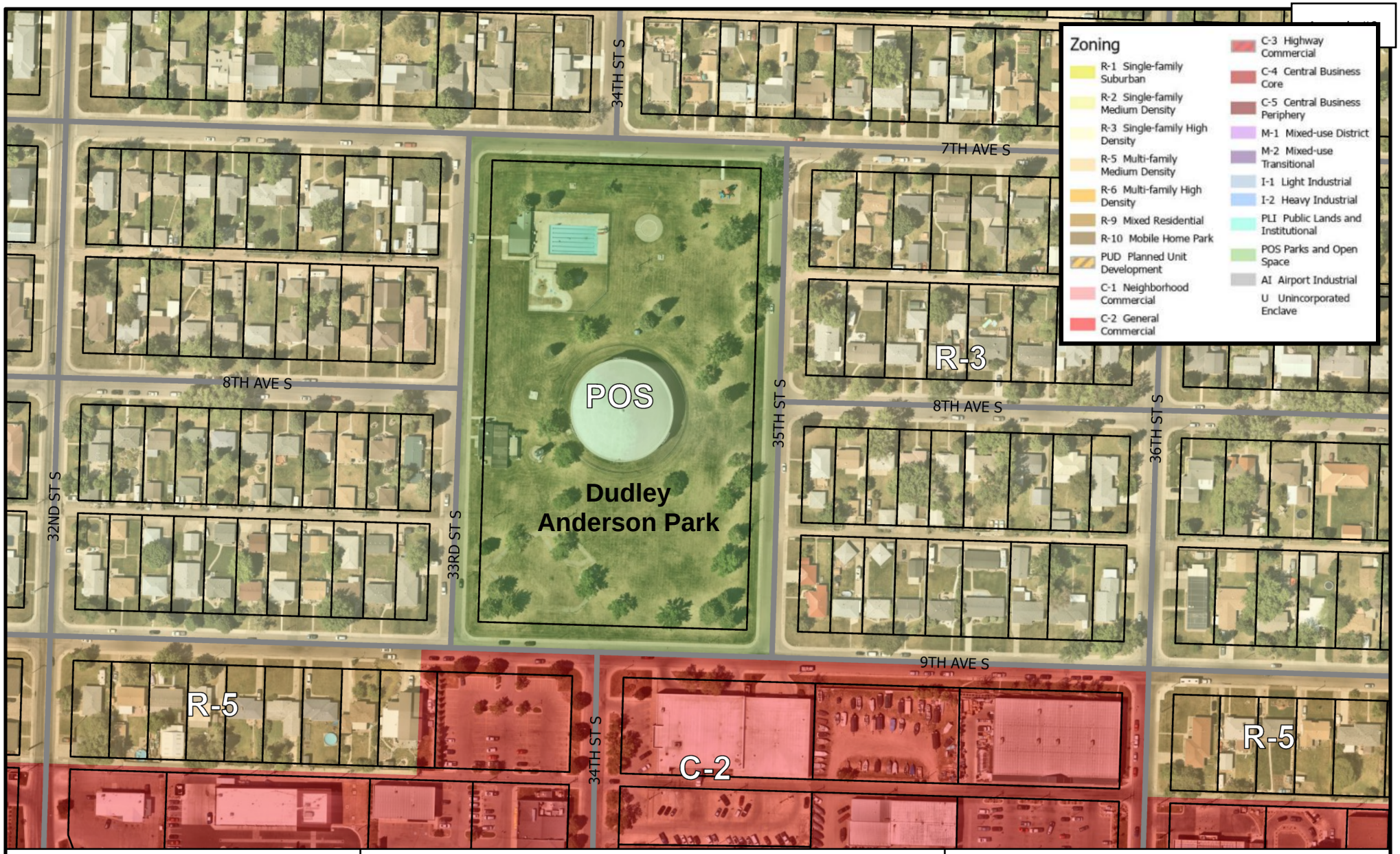
PROJECT NAME:
GFA ELLA PERMANENT
NEW 59'-0" MONOPINE
(OVERALL HEIGHT: 60'-0" A.G.L.)
RAW LAND

PROJECT ADDRESS:
3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

SHEET TITLE:
ELEVATIONS

SAVE DATE:
7/11/2025 6:25 PM

SHEET NUMBER:



CITY OF GREAT FALLS MONTANA

Location/Zoning Map

Dudley Anderson Park

City Streets

Parcels

N

0 125 250 500 Feet

April 3, 2025

City of Great Falls Montana
Planning & Community Development Dept.
Email: Sara Doermann sdoermann@greatfallsmt.net

RE: Neighborhood Council #9 Meeting & Park Board Meeting – Centerline LLC, submitting on behalf of Verizon Wireless' Proposal to Install Mono-pine Cell Tower in the park at 3301 9th Ave., Great Falls, MT 59405

To Whom It May Concern,

Verizon Wireless has had antennas installed on the reservoir water tank located in the park at 3301 9th Ave., Great Falls, MT 59405, since approximately 2010. In June 2024, Verizon received notification of an upcoming Reservoir Rehabilitation Project and was requested to schedule the temporary removal of its equipment to facilitate necessary exterior concrete maintenance and surface coatings on the water tank. It was further indicated that the exterior rehabilitation work was expected to be completed by October 1st, 2024, and that Verizon's equipment could be reinstalled once the work was finalized.

In response to this request and in accordance with the need to maintain uninterrupted service, Verizon deployed a temporary Cell on Wheels (COW) to the park to ensure continued network coverage for the surrounding areas. As the continuity of Verizon's service is crucial due to emergency communication requirements and FCC regulations, the temporary COW was quickly installed, and the equipment was removed from the reservoir water tank.

Subsequently, on September 9th, 2024, Verizon received correspondence from the City of Great Falls, acting on behalf of the Public Works Department. The letter indicated that, after further evaluation of the aging 33rd Street Reservoir, the Public Works Department had decided to cease the practice of permitting private equipment to be mounted on public infrastructure. Verizon was given a six-month notice to remove its equipment from the site.

Currently, Verizon is working in good faith with the City of Great Falls to identify an appropriate location for the relocation of its site, ensuring that service to the community and Verizon's network remains uninterrupted. After evaluating potential sites in the vicinity, Verizon has determined that the most suitable location for the new installation would be on the north side of the park, near the existing circular concrete structure.

To provide adequate coverage for the surrounding residential area, it is necessary for the monopine (a faux pine tree structure housing the antennas) to be positioned at a height of 59 feet, which will allow the antennas to cover the required service area.

Please find the preliminary site drawings and photos of examples of the stealth monopine tree, attached, for your reference.

Thank you.

Sincerely,

Keleigh Glass Adams | Site Acquisition Specialist II
Phone: 707-205-5731
kglass@clinellc.com | www.centerlinecommunications.com

PENETRATIONS | RRH/MOVP | ANTENNAS / MICROWAVE | FIBER | POWER/GROUNDING | HYBRID/COAX

DRIVING DIRECTIONS:

LATITUDE:	47°29'49.0687"N
LONGITUDE:	111°14'54.2135"W

FROM THE VERIZON OFFICE LOCATED AT 2730 BOZEMAN AVE. HELENA MT HEAD WEST ON BOZEMAN AVE (0.2 MILES). TURN RIGHT ONTO BLAINE ST (0.2 MILES). TURN LEFT ONTO AIRPORT RD (0.6 MILES). TURN LEFT TO MERGE ONTO I-15 N (85 MILES). TAKE EXIT 278 FOR MT-200 E (0.4 MILES). CONTINUE ONTO I-15BL (4.3 MILES). TURN LEFT ONTO 32ND ST S (0.2 MILES). TURN RIGHT ONTO 7TH AVE S (0.1 MILES).

verizon

GFA ELLA PERMANENT

PUBLIC RECORD PARCEL NO. 0000740350

3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

NEW 59'-0" MONOPINE
(OVERALL HEIGHT: 60'-0" A.G.L.)
RAW LAND

PROJECT DESCRIPTION:

THIS PROJECT CONSISTS OF THE FOLLOWING:

REMOVAL
- ONE (1) EXISTING CONCRETE STRUCTURE

INSTALLATION
- PROPOSED WOOD FENCE
- ONE (1) PROPOSED WOOD ACCESS GATE
- ONE (1) PROPOSED WALK IN CLOSURE (WIC)
- FOUR (4) PROPOSED EQUIPMENT RACKS
- ONE (1) PROPOSED RACK MOUNTED OVP UNIT
- ONE (1) PROPOSED OUTDOOR GENERATOR
- ONE (1) PROPOSED 11'-0"x20'-0" CONCRETE PAD
- ONE (1) PROPOSED CABLE BRIDGE
- TWELVE (9) PROPOSED PANEL ANTENNAS
- TWELVE (6) PROPOSED RRH UNITS
- ONE (1) PROPOSED TOWER MOUNTED OVP UNIT
- THREE (3) PROPOSED T-BOOMS
- TWO (2) PROPOSED 6X12 HYBRID TRUNKS
- ONE (1) PROPOSED BELOW GROUND POWER ROUTE
- ONE (1) PROPOSED BELOW GROUND FIBER ROUTE
- ONE (1) PROPOSED 6651 BBU UNIT
- ONE (1) PROPOSED IXRE ROUTER
- ONE (1) PROPOSED -48 POWERED FUSE PANEL
- ONE (1) PROPOSED 16"X16"X6" NEMA RATED ENCLOSURE

VICINITY MAP
SCALE: N.T.S.

NORTH

811 Know what's below. Call before you dig.

SHEET INDEX:

SHEET	TITLE	REV.
T1	TITLE SHEET	A
PS1	PHOTO SHEET	A
SU1	SITE SURVEY	–
SU2	1A CERTIFICATION LETTER	–
C1	SITE PLAN	A
C2	ENLARGED SITE PLAN	A
C3	ELEVATIONS	A
C4	ELEVATIONS	A

PROJECT INDEX:

APPLICANT:
VERIZON
2730 BOZEMAN AVENUE
HELENA, MT 59601

CONTACT: KENT MCDERMOTT
PHONE: 406-461-1359

ENGINEERS/DESIGNERS:
CENTERLINE COMMUNICATIONS
3327 NORTH EAGLE RD. SUITE 110-131
MERIDIAN, ID 83646

CONTACT: LUCAS SAUNDERS
PHONE: 208-515-6227

SITE ACQUISITION:
CENTERLINE
3327 NORTH EAGLE RD. STE 110-131
MERIDIAN, ID 83646

CONTACT: KELEIGH GLASS
PHONE: 707-205-5731

ABBREVIATED LEGAL DESCRIPTION:

BLOCK 20, DUDLEY ANDERSON PLAT, GREAT FALLS CITY

GENERAL PROJECT NOTES:

1. PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF/HERSELF WITH THE SCOPE OF WORK AND ALL CONDITIONS AFFECTING THE PROPOSED PROJECT.
2. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS OF THE JOB SITE AND CONFIRM THAT WORK AS INDICATED ON THESE CONSTRUCTION DOCUMENTS CAN BE ACCOMPLISHED AS SHOWN PRIOR TO COMMENCEMENT OF ANY WORK.
3. ALL FIELD MODIFICATIONS BEFORE, DURING, OR AFTER CONSTRUCTION SHALL BE APPROVED IN WRITING BY A VERIZON REPRESENTATIVE.
4. INSTALL ALL EQUIPMENT AND MATERIALS PER THE MANUFACTURER'S RECOMMENDATIONS, U.N.O.
5. NOTIFY VERIZON, IN WRITING, OF ANY MAJOR DISCREPANCIES REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND DESIGN INTENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATIONS FROM A VERIZON REPRESENTATIVE AND ADJUSTING THE BID ACCORDINGLY.
6. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF THE WORK UNDER THE CONTRACT.
7. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS AND FINISHES THAT ARE TO REMAIN. CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY OCCUR DURING THE CONSTRUCTION TO THE SATISFACTION OF A VERIZON REPRESENTATIVE.
8. THE CONTRACTOR IS RESPONSIBLE FOR RED-LINING THE CONSTRUCTION PLANS TO ILLUSTRATE THE AS BUILT CONDITION OF THE SITE. FOLLOWING THE FINAL INSPECTION BY VERIZON, THE CONTRACTOR SHALL PROVIDE VERIZON WITH ONE COPY OF ALL RED-LINED DRAWINGS.
9. VERIFY ALL FINAL EQUIPMENT WITH A VERIZON REPRESENTATIVE. ALL EQUIPMENT LAYOUT, SPECS, PERFORMANCE INSTALLATION AND THEIR FINAL LOCATION ARE TO BE APPROVED BY VERIZON. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS/HER WORK WITH THE WORK AND CLEARANCES REQUIRED BY OTHERS RELATED TO SAID INSTALLATIONS.

PROJECT INFORMATION:

PROPERTY OWNER:	CITY OF GREAT FALLS
JURISDICTION:	CASCADE COUNTY
PUBLIC RECORD PARCEL NO:	0000740350
OCCUPANCY CLASSIFICATION:	U – UTILITY & MISC.
TYPE OF CONSTRUCTION:	TYPE II-B

ITEM:	REQUIRED/ALLOWED:	PROVIDED:	COMPLIANCE:
FIRE SPRINKLERS:	NO	NO	YES
FIRE ALARM:	NO	YES, ALARMED BACK TO MARKET SWITCH FACILITY	YES
BUILDING HEIGHT:	UP TO 50'	10'	YES
BUILDING STORIES:	2	1	YES
BUILDING AREA:	UP TO 9,000 SQ. FT.	228 SQ. FT.	YES
OCCUPANT LOAD:	N/A	UNOCCUPIED	YES
NUMBER OF EXITS:	1	1	YES
FIRE RESISTANCE OF EXTERIOR WALLS:	1 HOUR	1 HOUR	YES
FIRE RESISTANCE RATING OF BUILDING ELEMENTS:	1 HOUR	1 HOUR	YES
PROTECTION OF OPENINGS:	N/A	N/A	YES
NON-SEPERATED OR SEPARATED USES	N/A	N/A	YES
ROOF COVERING MATERIAL:	CLASS B	CLASS B	YES
PLUMBING FIXTURES:	NONE	UNOCCUPIED, NO PLUMBING	YES

ADA COMPLIANCE:

THIS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. LANDINGS AND EXITS SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES.

DESIGNED FOR:
verizon
2730 BOZEMAN AVE.
HELENA, MONTANA 59601

DESIGNED BY:

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY – FOR LEASING & ZONING	07/28/25	MDA	–

PM&A
A CENTERLINE COMMUNICATIONS COMPANY

PRELIMINARY FOR LEASING/ZONING

PROJECT NAME:
GFA ELLA PERMANENT
NEW 59'-0" MONOPINE
(OVERALL HEIGHT: 60'-0" A.G.L.)
RAW LAND

PROJECT ADDRESS:
3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

SHEET TITLE:
TITLE SHEET

SAVE DATE:
7/28/2025 6:38 PM

SHEET NUMBER:
T1

PENETRATIONS
RRH/MOVP
ANTENNAS / MICROWAVE
FIBER
POWER/GROUNDING
HYBRID/COAX

LEGEND OF SYMBOLS:

- REFERENCE LETTER OR NUMBER / SECTION OR DETAIL / SCALE: / SHEET WHERE DRAWN / SHEET WHERE TAKEN
- SECTION LETTER / SHEET WHERE DRAWN / SHEET WHERE TAKEN
- DETAIL NUMBER / SHEET WHERE DRAWN / SHEET WHERE TAKEN
- EQUIPMENT OR FIXTURE NUMBER
- KEYED NOTE
- T.C. 1631.33 / F.L. 1631.00 — SPOT ELEVATION
- TOP OF WALL 1639.00 — CONTROL OR DATUM POINT
- PROPERTY LINE
- 1631 — EXISTING CONTOUR
- 1631 — NEW CONTOUR
- ℄ CENTERLINE
- d PENNY
- ∅ ROUND/DIAMETER
- ~ APPROXIMATELY

VIEW OF PROPOSED LEASE AREA
(LOOKING SOUTHEAST)

DESIGNED FOR:

verizon

2730 BOZEMAN AVE.
HELENA, MONTANA 59601

DESIGNED BY:

PM&A
A CENTERLINE COMMUNICATIONS COMPANY

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY – FOR LEASING & ZONING	07/28/25	MDA	-

PRELIMINARY FOR LEASING/ZONING

PROJECT NAME:

GFA ELLA PERMANENT
NEW 59'-0" MONOPINE
(OVERALL HEIGHT: 60'-0" A.G.L.)
RAW LAND

PROJECT ADDRESS:

3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

SHEET TITLE:

PHOTO SHEET

SAVE DATE:

7/28/2025 6:38 PM

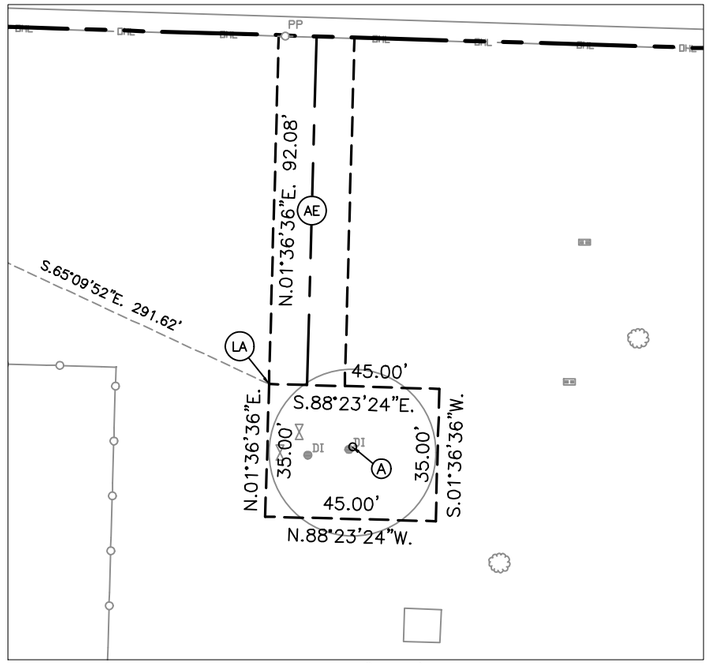
SHEET NUMBER:

PS1

GFA ELLA

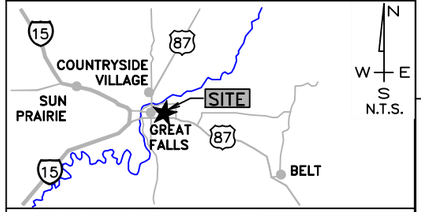
SCALE: 1" = 120'

LEASE AREA DETAIL



SCALE: 1" = 40'

VICINITY MAP: (MONTANA)



FEMA PUBLIC FLOOD MAP INFO:

ZONE: X PANEL: 30013C0626E DATE: 3/19/2013

Flood Note: Area of Minimal Flood Hazard

SITE LOCATION:

LOT 8, BLOCK 20, DUDLEY ANDERSON PLAT. SW¼ SE¼ OF SECTION 8, TOWNSHIP 20 NORTH, RANGE 4 EAST, MONTANA MERIDIAN. CASCADE COUNTY, MONTANA

701 33rd Street South, Great Falls, MT 59405

PREPARED FOR:

verizon

12877 W. MCMILLAN RD.
BOISE, ID 83713

PREPARED BY:

PM&A

A CENTERLINE COMMUNICATIONS COMPANY

DRAWN BY:	CHK BY:	APV BY:
LSP	CIS	CIS

Rev:	Date:	Description:	By:
1	6/5/25	90% CD	LSP

PREPARED BY:

CIS
PROFESSIONAL LAND SURVEYING

1025 N 300 W NEPHI, UT 84648
PH:(435)660-0816 EMAIL: CORY@CISPLS.COM

LICENSURE NO:

MONTANA
JOSEPH L. KAUFFMAN
12211 LS
LICENSED PROFESSIONAL LAND SURVEYOR

I, Joseph L. Kauffman, of Sidney, Montana do hereby certify that this Lease Area Map as prepared from field notes taken during an actual survey made under my direct supervision by CIS Professional Land Surveying, for whose work I stand personally responsible, on (6/4/25), that this map correctly shows the results of said survey and that this map represents the positions of the monuments and lines as found at the time of said survey; and that it is a correct and accurate representation of said survey to the best of my knowledge and belief.

PROJECT NAME:
GFA ELLA

PROJECT NUMBER:
CIS198-585

SHEET 1 OF 1

(LA) Lease Area Description:

An area of land (45'X35') for the purpose of a telecommunications equipment lease area, situate within Block 20, Dudley Anderson Plat, Great Falls City; Also situate within SW¼SE¼ of Section 8, Township 20 North, Range 4 East, Montana Meridian, (Cascade County); more particularly described by metes and bounds as follows: Beginning at a point which lies 291.62 feet S.65°09'52"E. from a Great Falls City street monument marking the centerline intersection of 7th Ave. and 33rd St., Running thence S.88°23'24"E. 45.00 feet, thence S.01°36'36"W. 35.00 feet, thence N.88°23'24"W. 45.00 feet, thence N.01°36'36"E. 35.00 feet to the point of beginning.
The above described parcel of land contains 1575 square feet in area or 0.04 acres, more or less (as described).

(AE) Access/Utility Easement Description:

A strip of land twenty feet (20') wide for the purpose of serving a telecommunications equipment lease area, situated within Block 20, Dudley Anderson Plat, Great Falls City; Also situate within SW¼SE¼ of Section 8, Township 20 North, Range 4 East, Montana Meridian, (Cascade County); the centerline of said strip more particularly described by metes and bounds as follows: Beginning at a point which lies 300.84 feet S.65°54'56"E. from a Great Falls City street monument marking the centerline intersection of 7th Ave. and 33rd St., Running thence N.01°36'36"E. 92.08 feet more or less to the Southerly right-of-way line of 7th Ave., and the point of terminus.
The above described strip of land contains 1,842 square feet in area or 0.04 acres, more or less (as described).

LEGEND & NOTES

- Parent Parcel
- Right-of-Way
- Fence Line
- Section Line
- Proposed Lease Area & Easements
- FOUND CITY STREET MONUMENT
- (A) TOWER LOCATION

BASIS OF BEARING AND DATUM NOTE:

NAD83 (2011) EPOCH 2010 COORDINATES

(A) LATITUDE: 47°29'49.0687"N
LONGITUDE: 111°14'54.2135"W

HORZ. DATUM NAD83 VERT. DATUM NAVD88 [GEOID18]

GRID POSITION (SURVEY FT)

NORTHING:	EASTING:	ELEVATION:
1188528.391 sft	1536573.404 sft	3507 sft

1.) All distances are shown in ground level US survey feet and all bearings are Based on the Montana Coordinate System, 1983 (State Plane Bearings.)

PENETRATIONS | RRH/MOVP | ANTENNAS / MICROWAVE | FIBER | POWER/GROUNDING | HYBRID/COAX

PREPARED FOR:

verizon

12877 W. MCMILLAN RD.
BOISE, ID 83713

1A CERTIFICATION LETTER

FOR

VERIZON

FACILITY KNOWN AS:

GFA ELLA

CASCADE COUNTY, MONTANA

ELEVATION REPORT:	LOCATED WITHIN:	APPROX. SITE LOCATION:
NAVD88 - GROUND ELEVATION: 3507 sft [ELEVATION METERS]: 1068.936 m	BLOCK 20, DUDLEY ANDERSON PLAT, GREAT FALLS, CITY. SW¼ SE¼ OF SECTION 8, TOWNSHIP 20 NORTH, RANGE 4 EAST, MONTANA MERIDIAN. CASCADE COUNTY, MONTANA	701 33rd Street, Great Falls, MT 59405

PLAN VIEW: SCALE 1" = 100'

BASIS OF GEODETIC COORDINATES:

(1) HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83) [PRIMARY] EXPRESSED IN DEGREES (°) MINUTES (') AND SECONDS (") AND CARRIED TO THE 100TH OF A SECOND, AND ALSO EXPRESSED IN DEGREES AND DECIMAL DEGREES.

(2) VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) EXPRESSED IN U.S. SURVEY FEET AND METERS (METER EQUIVALENT TO 39.37 INCHES).

(3) NAD83 GEODETIC DATA SHOWN HEREON WAS DERIVED FROM AND IS TIED TO THE NATIONAL GEODETIC SURVEY, NATIONAL C.O.R.S. VIA THE O.P.U.S. UTILITY AND OR TRIMBLE GEOMATICS SOFTWARE.

1A GEODETIC COORDINATES:

NAD 83:	47°29'49.0687"N 111°14'54.2135"W
DECIMAL DEGREES:	47.496964°N 111.248393°W

SURVEYOR'S CERTIFICATION:

I HEREBY CERTIFY THAT THE GEODETIC COORDINATES REPORTED HEREON ARE ACCURATE AND MEET FAA/FCC REPORTING REQUIREMENTS OF 1A: FIFTEEN FEET (15') HORIZONTALLY AND THREE FEET (3') VERTICALLY.

MONTANA
JOSEPH L. KAUFFMAN
12211 LS
LICENSED PROFESSIONAL LAND SURVEYOR

DATE OF SURV.: 6/5/25

CIS
PROFESSIONAL LAND SURVEYING

295 N 200 E
MONA, UT 84645
(435)660-0816
cory@cispls.com

PREPARED BY:

PM&A
A CENTERLINE COMMUNICATIONS COMPANY

DESIGNED FOR:

verizon

2730 BOZEMAN AVE.
HELENA, MONTANA 59601

DESIGNED BY: PM&A A CENTERLINE COMMUNICATIONS COMPANY

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY – FOR LEASING & ZONING	07/28/25	MDA	–

PRELIMINARY FOR LEASING/ZONING

PROJECT NAME:

GFA ELLA PERMANENT
NEW 59'–0" MONOPINE
(OVERALL HEIGHT: 60'–0" A.G.L.)
RAW LAND

PROJECT ADDRESS:

3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

SHEET TITLE:

1A CERTIFICATION LETTER

SAVE DATE:

7/28/2025 6:38 PM

SHEET NUMBER: SU2

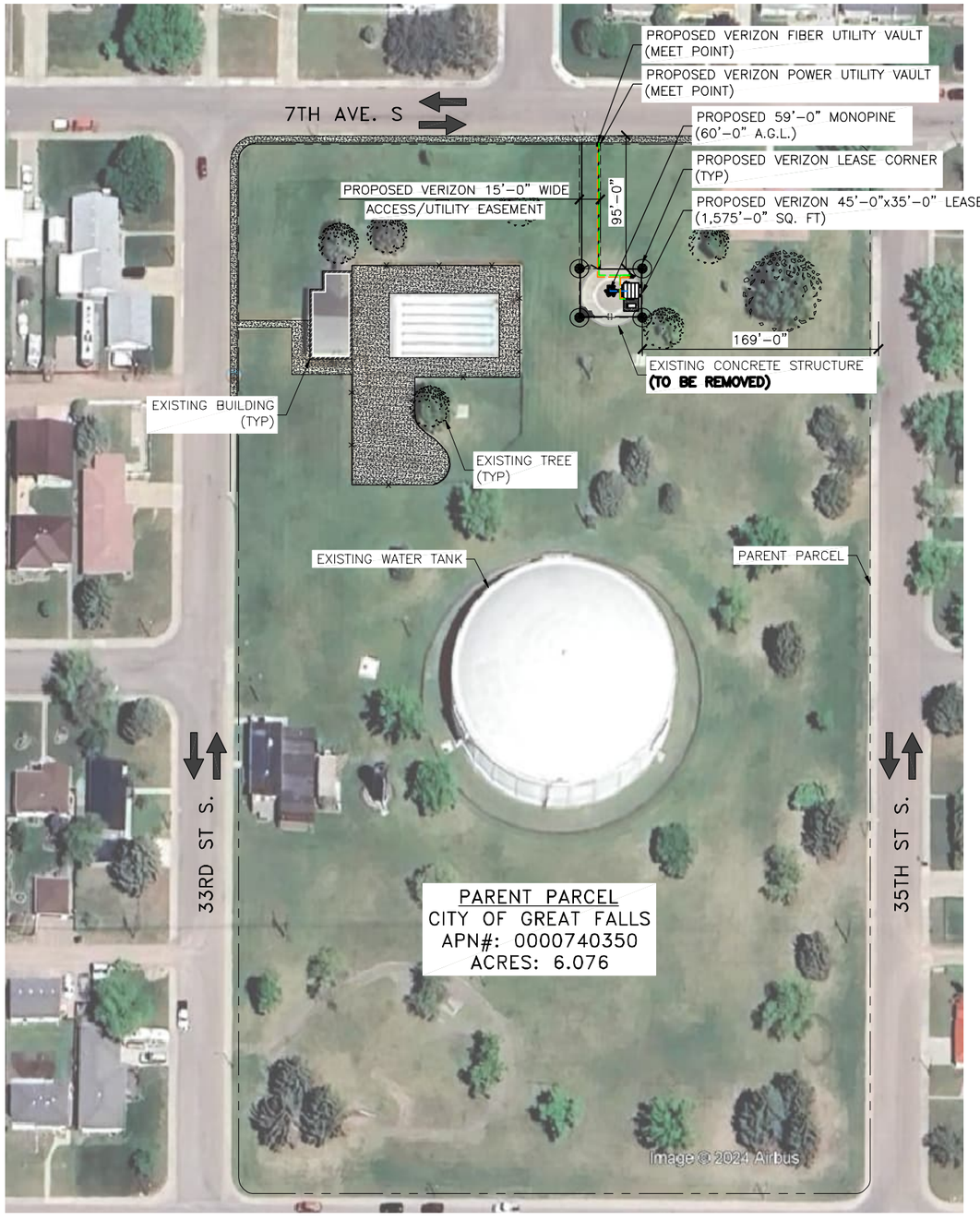
PENETRATIONS
RRH/MOVP
ANTENNAS / MICROWAVE
FIBER
POWER/GROUNDING
HYBRID/COAX

SITE NOTES:

1.	PRIOR TO EXCAVATION, CONTRACTOR SHALL CHECK THE AREA FOR UNDERGROUND FACILITIES.
2.	GRADE ENTIRE COMPOUND UP 1' ABOVE FINISHED GRADE PRIOR TO INSTALLING THE 4" OF CRUSHED ROCK.
3.	INFORMATION SHOWN BELOW FOR DEPICTION PURPOSES ONLY. ALL DATA GATHERED FROM PUBLIC RECORDS AND GENERATED FROM AERIAL IMAGES AND SITE VISITS. INFORMATION DOES NOT CONSTITUTE A LEGAL BOUNDARY SURVEY AND SHOULD NOT BE USED FOR SURVEYING OR OTHER RELATED PURPOSES.

NOTE:

1.	STRUCTURAL ANALYSIS MUST BE PERFORMED PRIOR TO THE INSTALLATION OF ANY NEW EQUIPMENT TO DETERMINE THE ADEQUACY OF THE EXISTING STRUCTURE. THIS SET OF CONSTRUCTION DRAWINGS DOES NOT CONSTITUTE A STRUCTURAL ANALYSIS.



SITE PLAN NORTH

100'-0" 0 100'-0"
60' 20'

SCALE: 1" = 100'-0"

DESIGNED FOR:

verizon

2730 BOZEMAN AVE.
HELENA, MONTANA 59601

DESIGNED BY: PM&A A CENTERLINE COMMUNICATIONS COMPANY

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY – FOR LEASING & ZONING	07/28/25	MDA	-

PRELIMINARY FOR LEASING/ZONING

PROJECT NAME:

GFA ELLA PERMANENT
NEW 59'-0" MONOPINE
(OVERALL HEIGHT: 60'-0" A.G.L.)
RAW LAND

PROJECT ADDRESS:

3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

SHEET TITLE:

SITE PLAN

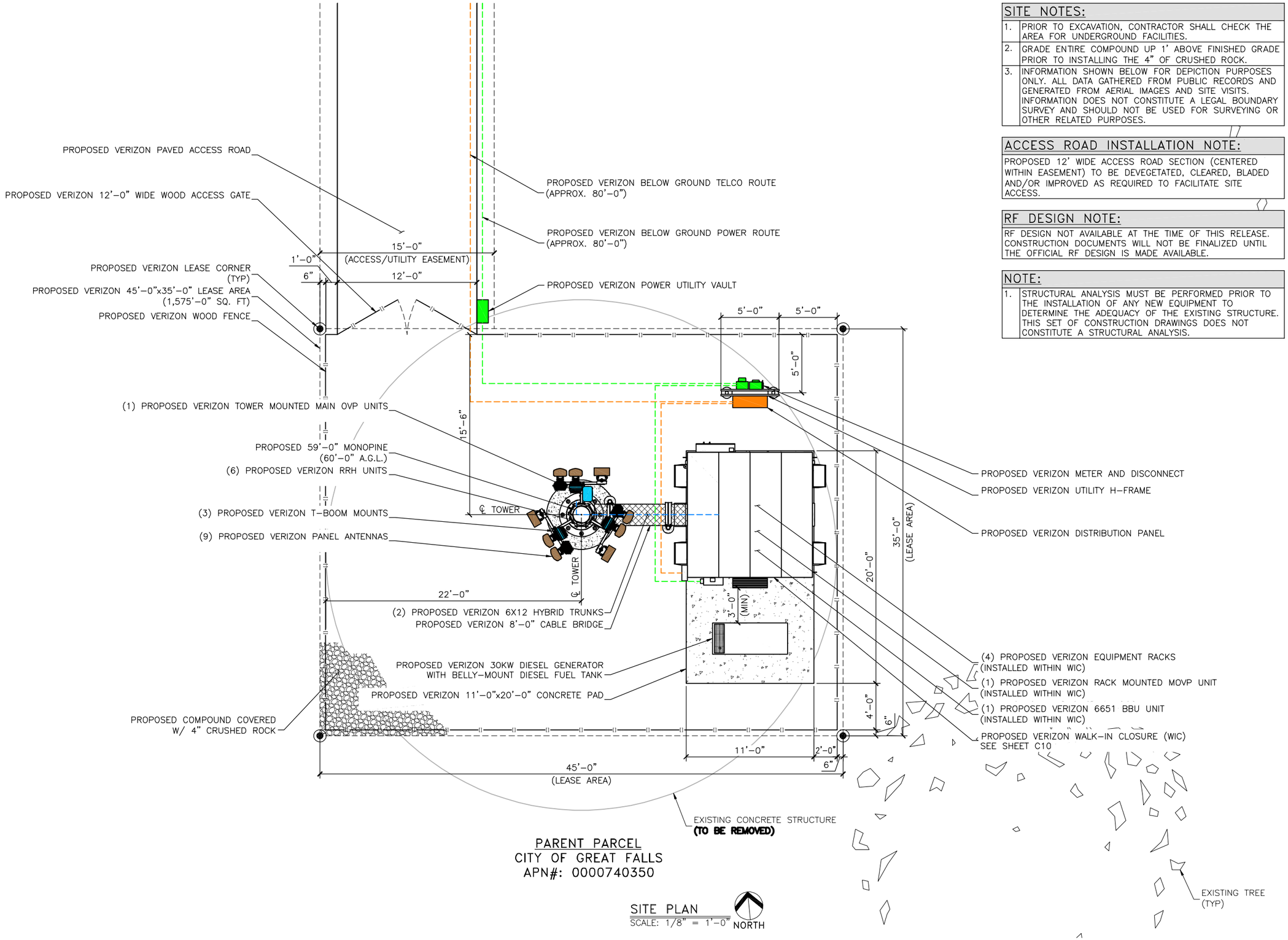
SAVE DATE:

7/28/2025 6:38 PM

SHEET NUMBER:

C1

PENETRATIONS
RRH/MOVP
ANTENNAS / MICROWAVE
FIBER
POWER/GROUNDING
HYBRID/COAX



PARENT PARCEL
CITY OF GREAT FALLS
APN#: 0000740350

SITE PLAN
SCALE: 1/8" = 1'–0"
NORTH

SITE NOTES:

1. PRIOR TO EXCAVATION, CONTRACTOR SHALL CHECK THE AREA FOR UNDERGROUND FACILITIES.
2. GRADE ENTIRE COMPOUND UP 1' ABOVE FINISHED GRADE PRIOR TO INSTALLING THE 4" OF CRUSHED ROCK.
3. INFORMATION SHOWN BELOW FOR DEPICTION PURPOSES ONLY. ALL DATA GATHERED FROM PUBLIC RECORDS AND GENERATED FROM AERIAL IMAGES AND SITE VISITS. INFORMATION DOES NOT CONSTITUTE A LEGAL BOUNDARY SURVEY AND SHOULD NOT BE USED FOR SURVEYING OR OTHER RELATED PURPOSES.

ACCESS ROAD INSTALLATION NOTE:

PROPOSED 12' WIDE ACCESS ROAD SECTION (CENTERED WITHIN EASEMENT) TO BE DEVEGETATED, CLEARED, BLADED AND/OR IMPROVED AS REQUIRED TO FACILITATE SITE ACCESS.

RF DESIGN NOTE:

RF DESIGN NOT AVAILABLE AT THE TIME OF THIS RELEASE. CONSTRUCTION DOCUMENTS WILL NOT BE FINALIZED UNTIL THE OFFICIAL RF DESIGN IS MADE AVAILABLE.

NOTE:

1. STRUCTURAL ANALYSIS MUST BE PERFORMED PRIOR TO THE INSTALLATION OF ANY NEW EQUIPMENT TO DETERMINE THE ADEQUACY OF THE EXISTING STRUCTURE. THIS SET OF CONSTRUCTION DRAWINGS DOES NOT CONSTITUTE A STRUCTURAL ANALYSIS.

DESIGNED FOR:
verizon
2730 BOZEMAN AVE.
HELENA, MONTANA 59601

PM&A
A CENTERLINE COMMUNICATIONS COMPANY

DESIGNED BY:

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY – FOR LEASING & ZONING	07/28/25	MDA	-

PRELIMINARY FOR LEASING/ZONING

PROJECT NAME:
GFA ELLA PERMANENT
NEW 59'–0" MONOPINE
(OVERALL HEIGHT: 60'–0" A.G.L.)
RAW LAND

PROJECT ADDRESS:
3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

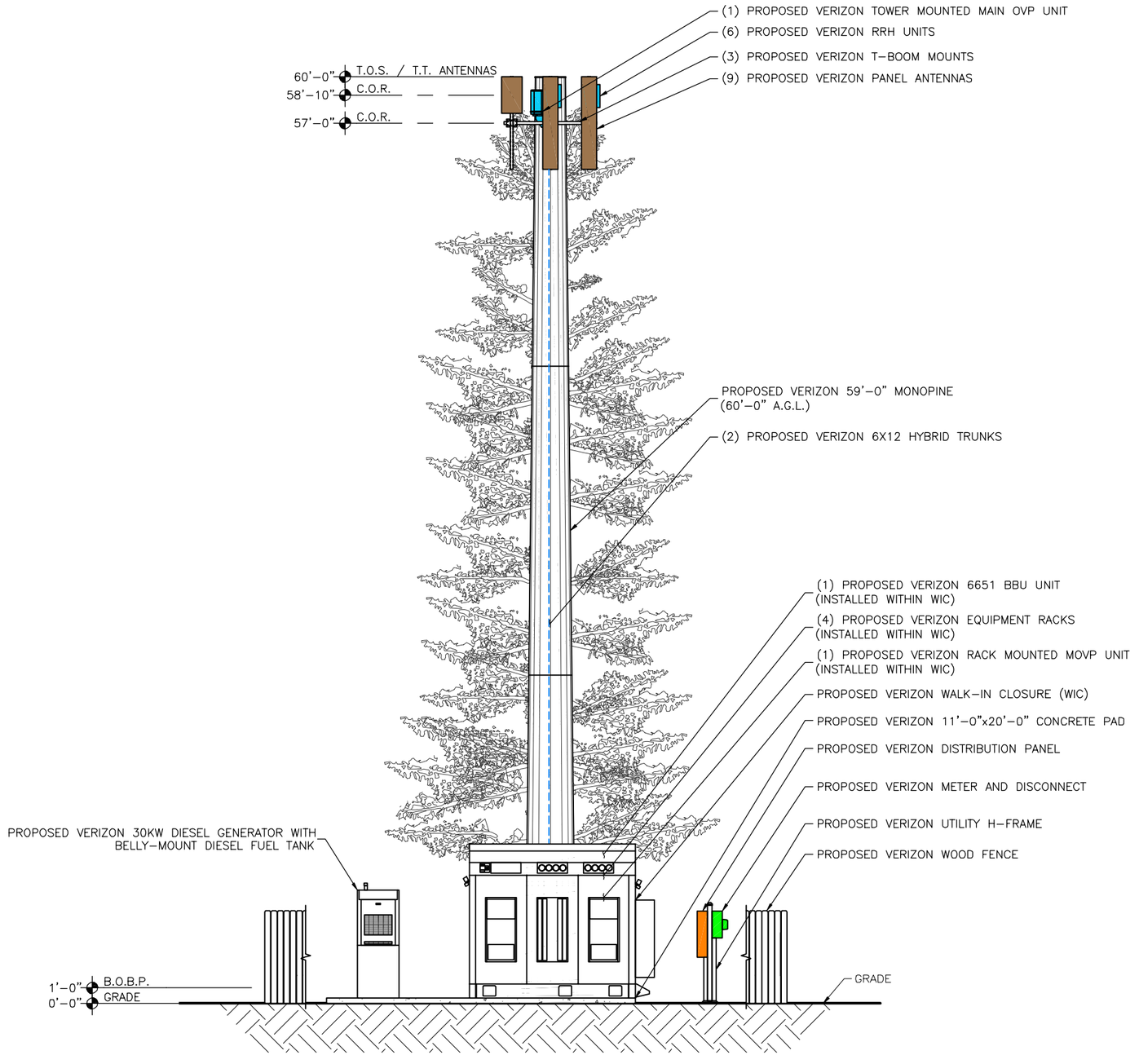
SHEET TITLE:
ENLARGED SITE PLAN

SAVE DATE:
7/28/2025 6:38 PM

SHEET NUMBER:
C2

PENETRATIONS
RRH/MOVP
ANTENNAS / MICROWAVE
FIBER
POWER/GROUNDING
HYBRID/COAX

KEY:	
C.O.R. =	CENTER OF RADIATION
A.L. =	ATTACHMENT LEVEL
B.T. =	BOTTOM TIP LEVEL
T.T. =	TOP TIP LEVEL
A.G.L. =	ABOVE GRADE LEVEL
B.O.B.P. =	BOTTOM OF BASE PLATE
T.O.S. =	TOP OF STRUCTURE



PROPOSED EAST ELEVATION
SCALE: N.T.S.

DESIGNED FOR:
verizon
2730 BOZEMAN AVE.
HELENA, MONTANA 59601

DESIGNED BY:

PM&A
A CENTERLINE COMMUNICATIONS COMPANY

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY - FOR LEASING & ZONING	07/28/25	MDA	-

PRELIMINARY FOR LEASING/ZONING

PROJECT NAME:
GFA ELLA PERMANENT
NEW 59'-0" MONOPINE
(OVERALL HEIGHT: 60'-0" A.G.L.)
RAW LAND

PROJECT ADDRESS:
3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

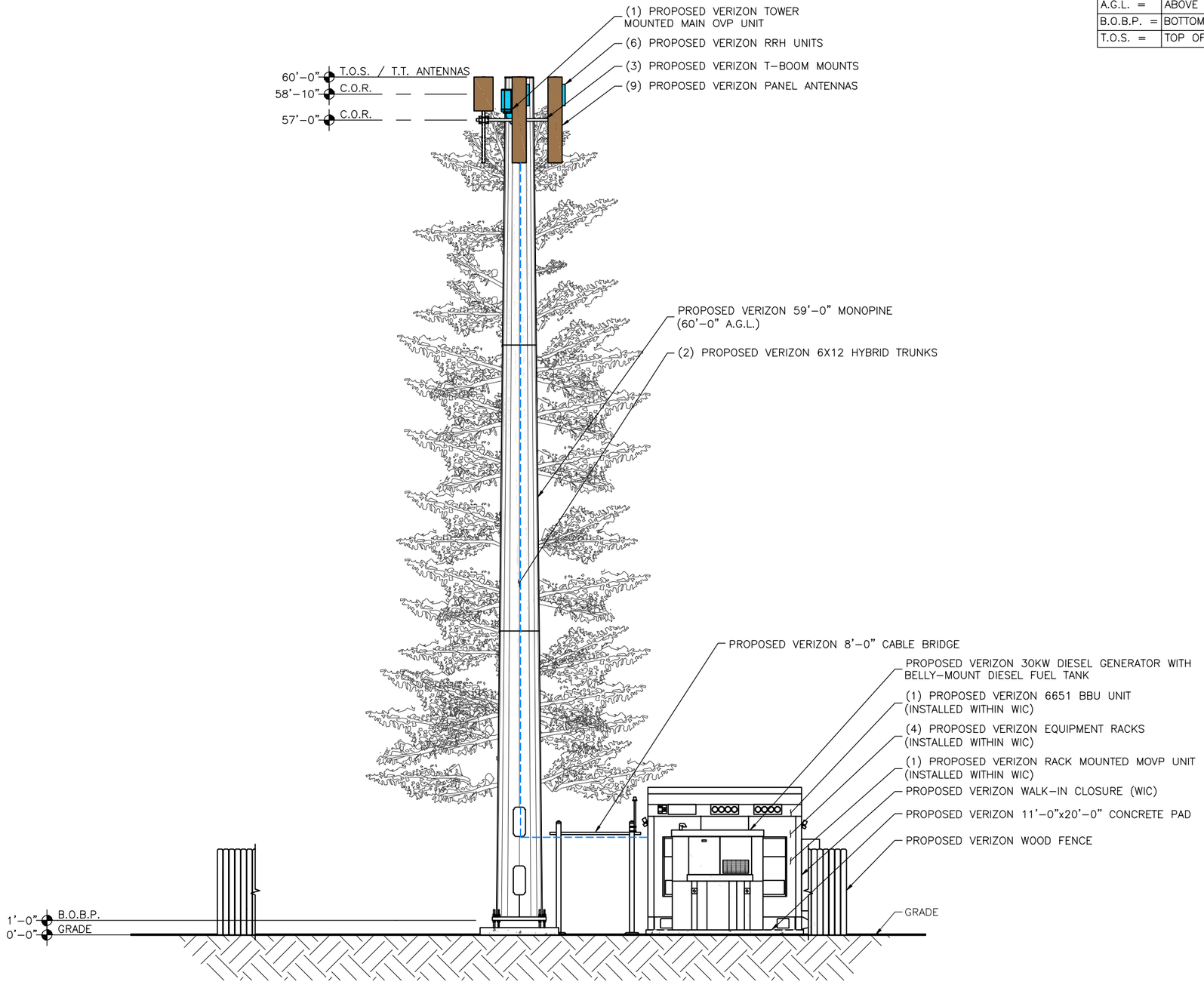
SHEET TITLE:
ELEVATIONS

SAVE DATE:
7/28/2025 6:38 PM

SHEET NUMBER:
C3

PENETRATIONS
RRH/MOVP
ANTENNAS / MICROWAVE
FIBER
POWER/GROUNDING
HYBRID/COAX

KEY:	
C.O.R. =	CENTER OF RADIATION
A.L. =	ATTACHMENT LEVEL
B.T. =	BOTTOM TIP LEVEL
T.T. =	TOP TIP LEVEL
A.G.L. =	ABOVE GRADE LEVEL
B.O.B.P. =	BOTTOM OF BASE PLATE
T.O.S. =	TOP OF STRUCTURE



PROPOSED SOUTH ELEVATION
SCALE: N.T.S.

DESIGNED FOR:

verizon

2730 BOZEMAN AVE.
HELENA, MONTANA 59601

DESIGNED BY:

PM&A
A CENTERLINE COMMUNICATIONS COMPANY

REV	DESCRIPTION	DATE	BY	CHK
A	PRELIMINARY – FOR LEASING & ZONING	07/28/25	MDA	-

PRELIMINARY FOR LEASING/ZONING

PROJECT NAME:

GFA ELLA PERMANENT
NEW 59'-0" MONOPINE
(OVERALL HEIGHT: 60'-0" A.G.L.)
RAW LAND

PROJECT ADDRESS:

3301 9TH AVE. SOUTH
GREAT FALLS, MT 59405
CASCADE COUNTY

SHEET TITLE:

ELEVATIONS

SAVE DATE:

7/28/2025 6:38 PM

SHEET NUMBER:

C4

From: Emmett Whall <emmett.whall@gmail.com>

Sent: Monday, September 15, 2025 7:11 PM

To: Jamie Nygard <jnygard@greatfallsmt.net>

Subject: Concealed Telecommunication Facility in Dudley Anderson park

You don't often get email from emmett.whall@gmail.com. Learn why this is important

Good evening,

I live down the street from Dudley Anderson Park. I am in favor of the cell tower in the park. However I recommend that the location be moved to the South Side of the park instead.

1. The current location will crowd the playground and pool end of the park even more.

2. Most park visitors hangout on the north side of the park so reducing the area on that end will disturb more people.

3. The south side would be better because that end of the park is up against businesses and is much less visited than the north side.(My observation from walking around and visiting the park with my family.)

Once again I am in favor of the cell tower. I just think the south side is a better spot for it. I hope this helps the commission to make an informed decision.

Thank you,

Emmett Whall

715-808-2239

7th Ave South Resident

-----Original Message-----

From: Rick H <gonagain21@gmail.com>

Sent: Thursday, September 11, 2025 10:59 AM

To: Jamie Nygard <jnygard@greatfallsmt.net>

Subject: Verizon Wireless Tower

[You don't often get email from gonagain21@gmail.com. Learn why this is important at https://aka.ms/LearnAboutSenderIdentification]

To whom it may concern,

I'm writing again in regards to the proposed cell tower planned for Dudley Anderson Park. I live directly across the street at 3249 7th Ave S and I can see the activity in that park. The site where the construction is planned is the most used quadrant of this park because it's the closest to the neighborhood. It's right next to the existing playground and it's where adults and children go to run, throw balls, throw frisbees for their dogs and enjoy themselves. I'm also concerned that this fake looking tree tower is going to hurt the value of my home and others that are within sight of it. I suggest you find another location for this tower.

Sincerely,

Erich Herzog

-----Original Message-----

From: Rick H <gonagain21@gmail.com>

Sent: Thursday, August 14, 2025 10:19 AM

To: Jamie Nygard <jnygard@greatfallsmt.net>

Subject: Concealed Telecommunications Facility

Hello.

My name is Erich Herzog and I live at 3249 7th Ave S, which is directly across the street from the proposed Concealed Telecommunications Facility to be installed in Dudley Anderson Park here in Great Falls. I'm against this project because of the popularity of that particular area. It's right next to the children's playground and is where they run and throw balls. It's also used by

the many dog owners in this neighborhood who walk past my house each

day to exercise their dogs on that patch of ground. I suggest a different place for this facility, one that isn't so well liked and used by the neighborhood.

Sincerely,

Erich Herzog

From: Kelsi Betreaud kelsi.betreaud@gmail.com

Sent: Monday, August 11, 2025 5:28 PM

To: Jamie Nygard <jnygard@greatfallsmt.net>

Subject: NO 'concealed' telecommunication facility!!

I live right next door to dudley anderson park with my small child, as many other families in this area do. We all visit the park, we all will feel and see the harmful effects of a monstrosity like that within our quiet, one of the last safe areas in this city! This is our sanctuary. Our quiet. We already have been experiencing issues with the hell that was installed and upgraded next to the tank. DO NOT HARM OUR CHILDREN. DO NOT HARM OUR ANIMALS. DO NOT BRING OUR HOUSING PRICES DOWN! DO NOT SACRIFICE OUR SAFETY AND HEALTH. This is a HUGE no. It does more harm than good. If this is gone through with, Great Falls needs to be held accountable! Thank you