

RECLAMATION

Managing Water in the West

Environmental Assessment Blanding Irrigation Company Dry Wash Pipeline

PRO-EA-18-003

Upper Colorado Region
Provo Area Office
Provo, Utah



U.S. Department of the Interior
Bureau of Reclamation
Provo Area Office
Provo, Utah

July 2018

Mission Statements

The mission of the Department of the Interior is to protect and manage the Nation's natural resources and cultural heritage; provide scientific and other information about those resources; and honor its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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PRO-EA-18-003

Upper Colorado Region
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U.S. Department of the Interior
Bureau of Reclamation
Provo Area Office
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FINDING OF NO SIGNIFICANT IMPACT

Environmental Assessment Blanding Irrigation Company Dry Wash Pipeline
San Juan County, Utah

EA-18-003

Recommended by:



Rick Jones
Wildlife Biologist

July 26, 2018
Date

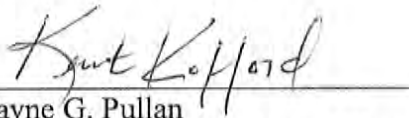
Concur:



Rick Baxter
Water, Environmental, and Lands
Division Manager

July 26, 2018
Date

Approved by:



Wayne G. Pullan
Area Manager, Provo Area Office

7/27/18
Date

Introduction

In compliance with the National Environmental Policy Act of 1969, as amended (NEPA), the Bureau of Reclamation Provo Area Office has conducted an Environmental Assessment (EA) for a Proposed Action to provide funding to the Blanding Irrigation Company (Company) to replace approximately 2.2 miles of open canal with 1.7 miles of pipeline, which would convey water to the Dry Wash Reservoir.

The EA was prepared by Reclamation to address the impacts associated with abandoning and replacing the existing pipe with new galvanized steel pipe. The purpose of the Proposed Action is to provide a more reliable and efficient method of conveying water to the reservoir, ensuring greater water availability for the users downstream. Downstream irrigators have been deprived of water allotments for several years due to drought conditions and water losses from the canal. The storage capacity of Dry Wash Reservoir was increased from 185 acre-feet to 550 acre-feet in 2015; however, storage capacity is not fully utilized due to water losses from the canal. The need for the project is to prevent water loss from the canal and increase delivery efficiency to the reservoir.

Alternatives

The EA analyzed the No Action Alternative and the Proposed Action which is to replace approximately 2.2 miles of open canal with 1.7 miles of pipeline, which would convey water to the Dry Wash Reservoir.

Minimization Measures Incorporated into the Proposed Action

The minimization measures, along with other measures listed under each resource in Chapter 3 and Chapter 4 of the EA, have been incorporated into the Proposed Action to lessen the potential adverse effects.

- The project construction area would be located in previously disturbed sites and would have as small a footprint as possible.
- Staging areas would be located where they would minimize new disturbance to soils and vegetation.
- Ground disturbance would be minimized to the greatest extent possible.
- Only certified weed-free hay, straw or mulch if needed, would be used to minimize the potential spread of nonnative invasive plants.
- Construction vehicles and equipment would be inspected and cleaned prior to entry into the project area to ensure that they are free of weed seed.
- Stockpiling of materials would be limited to those areas approved and cleared in this EA.

Environmental commitments that are integral to the Proposed Action are as follows:

1. **Standard Reclamation Best Management Practices** - Standard Reclamation BMPs will be applied during construction activities to minimize environmental effects and will be implemented during construction, and included in construction specifications. Such practices and specifications include sections in the present EA on public safety, dust abatement, air pollution, noise abatement, water pollution abatement, archaeological and historical resources, vegetation, and fish and wildlife. Excavated material and construction debris may not be wasted in any stream or river channel in flowing waters. This includes material such as grease, oil, joint coating, or any other possible pollutant. Excess materials must be wasted at a Reclamation-approved upland site, well away from any channel. Construction materials, bedding material, excavation material, etc. may not be stockpiled in riparian, wetland, or water channel areas. Machinery must be fueled and properly cleaned of dirt, weeds, organisms, or any other possibly contaminating substances offsite prior to construction.
2. **Additional Analyses** - If the Proposed Action were to change significantly from that described in this EA because of additional or new information, or if work areas beyond those outlined in this analysis are required outside the defined project construction area, additional environmental analyses may be necessary.
3. **UPDES Permit** - A UPDES Permit will be required from the State of Utah for construction activities which disturb more than one acre of land. Appropriate measures will be taken to ensure that construction related sediments will not enter streams either during or after construction.
4. **Fugitive Dust Control Permit** - The Utah Division of Air Quality (UDAQ) regulates fugitive dust from construction sites, requiring compliance with rules for sites disturbing greater than $\frac{1}{4}$ of an acre. Utah Administrative Code R307-205-5, requires steps be taken to minimize fugitive dust from construction activities. Sensitive receptors include those individuals working at the site or motorists that could be affected by changes in air quality due to emissions from the construction activity.
5. **Cultural Resources** - In the case that any cultural resources, either on the surface or subsurface, are discovered during construction, Reclamation's Provo Area Office archeologist shall be notified and construction in the area of the inadvertent discovery will cease until an assessment of the resource and recommendations for further work can be made by a professional archeologist.
6. **Human Remains** - Any person who knows or has reason to know that he/she has inadvertently discovered possible human remains on Federal land, he/she must provide immediate telephone notification of the discovery to Reclamation's Provo Area Office archeologist. Work will stop until the proper authorities are able to

assess the situation onsite. This action will promptly be followed by written confirmation to the responsible Federal agency official, with respect to Federal lands. The Utah State Historic Preservation Officer (USHPO) and interested Native American Tribal representatives will be promptly notified. Consultation will begin immediately. This requirement is prescribed under the Native American Graves Protection and Repatriation Act (43 CFR Part 10); and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470).

7. **Paleontological Resources** - Should vertebrate fossils be encountered by the proponent during ground disturbing actions, construction must be suspended until a qualified paleontologist can be contacted to assess the find.

8. **Wildlife Resources** – In the case that bald and/or golden eagles are observed within the project area and vicinity, Reclamation’s Provo Area Office wildlife biologist shall be notified and construction in the area shall cease until an assessment of eagle presence can be made by a professional wildlife biologist. The Bald and Golden Eagle Protection Act prohibits anyone, without a permit issued by the Secretary of the Interior, from “taking” eagles, including their parts, nests, or eggs. The Act defines “take” as pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. "Disturb" means: “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

New guidance pertaining to the Migratory Bird Treaty Act (MBTA) was issued on December 22, 2017 by the U.S. Department of the Interior under Secretarial Order 3345. Furthermore, the U.S. Fish and Wildlife Service (USFWS) issued guidance through an M-Opinion. That guidance states MBTA’s prohibitions on take apply when the purpose of an action is to take migratory birds, their eggs, or their nests. Therefore, the take of birds, eggs or nests resulting from an action in which the purpose is to *not* take birds, eggs or nests, is not prohibited by the MBTA.

9. **Public Access** - Construction sites will be closed to public access; only project personnel will be allowed to access the project site.

10. **Previously Disturbed Areas** - Construction activities will be confined to previously disturbed areas where possible for such activities as work, staging,

storage, waste areas, and vehicle and equipment parking areas. Vegetation disturbance will be minimized as much as possible.

11. **Disturbed Areas** - All disturbed areas resulting from the project will be smoothed, shaped, contoured, and rehabilitated to as near the pre-project construction condition as practicable. After completion of the construction and restoration activities, disturbed areas will be seeded at appropriate times with weed-free, native seed mixes having a variety of appropriate species (especially woody species where feasible) to help hold the soil around structures, prevent excessive erosion, and to help maintain other riverine and riparian functions. The composition of seed mixes will be coordinated with wildlife habitat specialists and Reclamation biologists. Weed control on all disturbed areas will be required. Successful revegetation efforts must be monitored and reported to Reclamation, along with photos of the completed project.

Related NEPA Documents

The Manti-La Sal National Forest issued Special Use permit No. MON1701 in January 2018 to authorize the right-of-way for installation, operation, maintenance, and termination of the proposed Dry Wash pipeline.

Decision and Finding of No Significant Impact

Based upon a review of the EA and supporting documents, I have determined that implementing the Proposed Action will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the area. No environmental effects meet the definition of significance in context or intensity as defined at 40 CFR 1508.27. Therefore, an Environmental Impact Statement is not required for this Proposed Action. This finding is based on consideration of the context and intensity as summarized here from the EA.

Context

The affected locality is San Juan County, Utah. Affected interests include Reclamation and the Blanding Irrigation Company.

Intensity

The following discussion is organized around the 10 significance criteria described in 40 CFR 1508.27. These criteria were incorporated into the resource analysis and issues considered in the EA.

1. Impacts may be both beneficial and adverse. The Proposed Action will impact resources as described in the EA. Environmental commitments to reduce impacts to cultural resources, paleontological resources, and biological resources were incorporated into the design of the Proposed Action. The following short-term effects of the Proposed Action are predicted: road/traffic delays, increased noise levels from construction on campground visitors, closure of canal trail during construction, and ground disturbance along the pipeline alignment. No long-term predicted effects are anticipated from the Proposed Action. Beneficial effects include providing a more reliable and efficient method of conveying water and ensuring greater was availability.

None of the environmental effects discussed in detail in the EA are considered significant.

2. The degree to which the selected alternative will affect public health or safety or a minority or low-income population. The Proposed Action will have no significant impacts on public health or safety. No minority or low income community will be disproportionately affected by the Proposed Action.

3. Unique characteristics of the geographic area. There are no unique characteristics associated with the Project area. There are no wetlands, floodplains, park lands, prime

farmlands, wild and scenic rivers, or other ecologically critical areas that will be affected by the Proposed Action.

4. **The degree to which the effects on the quality of the human environment are likely to be highly controversial.** Reclamation contacted representatives of other Federal agencies, state and local governments, Indian tribes, public and private organization, and individuals/users regarding the Proposed Action and its effects on resources. Based on the responses received, the effects from the Proposed Action on the quality of the human environment are not highly controversial.

5. **The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.** When uncertainty about impacts to the human environment was identified in the EA, mitigation and monitoring measures were identified and included in the formulation of the alternatives. There are no predicted effects on the human environment that are considered highly uncertain or that involve unique or unknown risks.

6. **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.** The Proposed Action will not establish a precedent for future actions with significant effects.

7. **Whether the action is related to other actions which are individually insignificant but cumulatively significant.** Cumulative impacts are possible when the effects of the Proposed Action are added to other past, present, and reasonably foreseeable future actions as described under Related NEPA Documents above; however, significant cumulative effects are not predicted, as described in the EA.

8. **The degree to which the action may adversely affect sites, districts, buildings, structures, and objects listed in or eligible for listing in the National Register of Historic Places.** The State Historic Preservation Officer has concurred with a determination of no historic properties affected by the Proposed Action.

9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.** Although seven listed species had potential to occur in the project boundary, they will not be affected because suitable habitat for the listed species does not occur within project area. Reclamation's finding was No Effect.

10. **Whether the action threatens a violation of Federal, state, local, or tribal law, regulation or policy imposed for the protection of the environment.** The project does not violate any Federal, state, local, or tribal law, regulation, or policy imposed for the protection of the environment. In addition, this project is consistent with applicable land management plans, policies, and programs.

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Chapter 1 Purpose of and Need for Proposed Action

1.1 Introduction

This Environmental Assessment (EA) was prepared to examine the potential environmental impacts of the Dry Wash Pipeline Project, proposed by the Blanding Irrigation Company (BIC) in San Juan County, Utah. If approved, the Bureau of Reclamation would authorize the use of Federal funds to replace approximately 2.2 miles of open canal with 1.7 miles of pipeline, which would convey water to the Dry Wash Reservoir (Figure 1-1, Project Location Map) without loss to seepage, leakage, and evaporation.

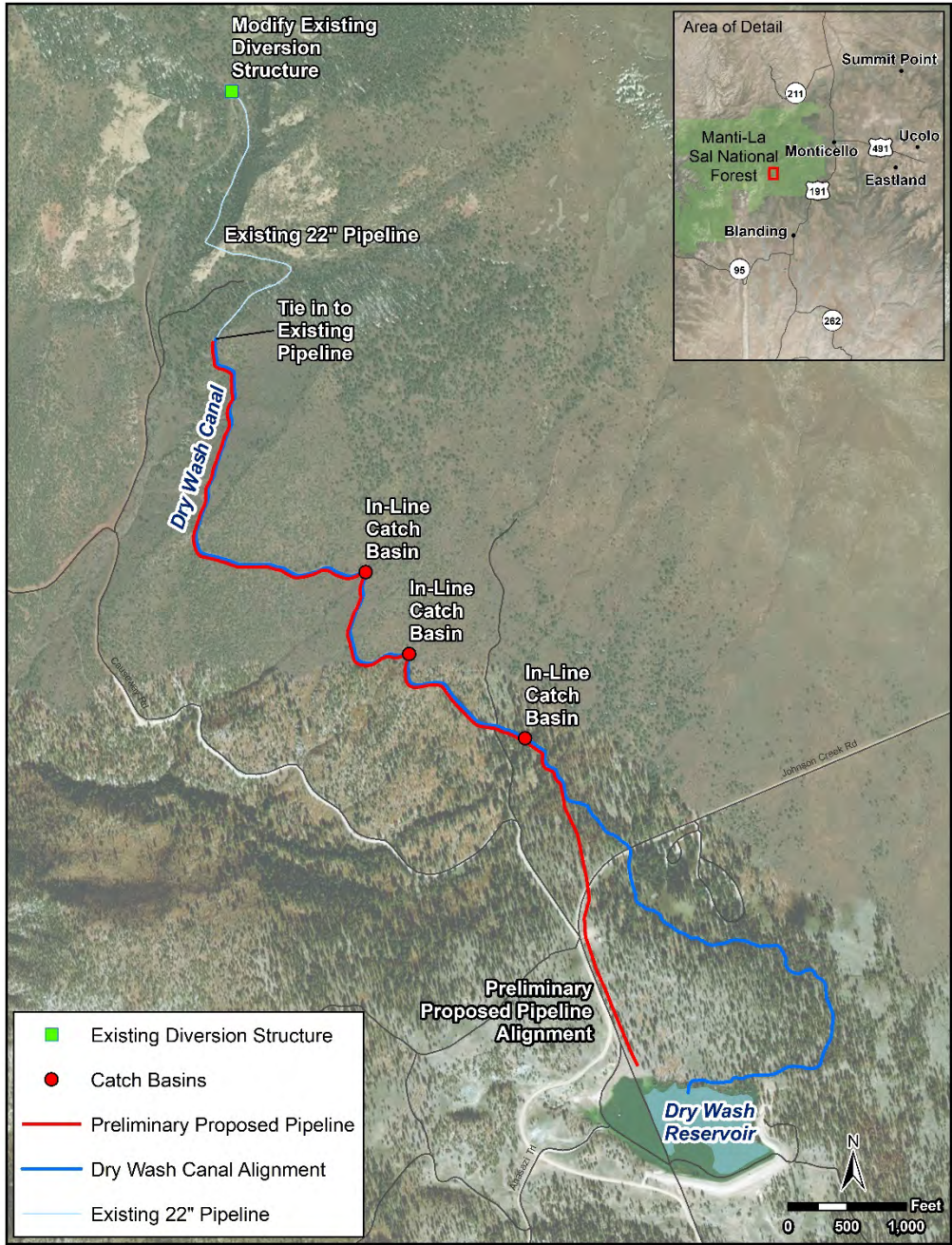


Figure 1-1 Project Location Map

1.2 Background

1.2.1 WaterSMART

As the U.S. Department of Interior's primary water management agency, Reclamation's mission is to manage, develop, and protect water and water-related resources in an environmentally and economically sound manner. A key component to Reclamation's activities is to support water conservation and assist resource managers in making decisions regarding water use. Reclamation's WaterSMART program administers grants, funds, and scientific studies, and provides technical assistance to state and local entities to support water conservation activities. Established in February 2010 by U.S. Secretary of the Interior, Mr. Ken Salazar, the WaterSMART program was developed to meet the goals outlined in the Omnibus Public Land Management Act of 2009. Subtitle F of the Act, also known as the SECURE Water Act, established that "adequate and safe supplies of water are fundamental to the health, economy, and ecology of the United States" and authorizes Federal agencies to work with local entities to address issues that jeopardize the security and supply of water (Reclamation 2011).

1.2.2 Blanding Irrigation Company

The BIC operates and maintains the Dry Wash Canal in San Juan County, Utah. The canal is an open transmission canal and serves as the exclusive source to fill Dry Wash Reservoir. Downstream water users include the Ute Mountain Utes, Blanding City, Blanding Irrigation Company, and San Juan County Water Conservancy District.

Depending on the flow rate, the unlined portions of the open canal experience water losses from 30 to 100 percent due to leakage, seepage, and evaporation. Approximately 2,000 feet of the canal is on a narrow ledge carved into the mountainside, just wide enough to allow for the canal and all-terrain vehicle (ATV) access. Rocks and debris frequently fall into the canal, partially obstructing flow; an obstructed canal could overtop its banks and rapidly cause catastrophic canal failure. Seepage from the canal undermines the adjacent soil and slope stability, increasing the risk of slope movement and canal failure. Maintenance costs are an average of \$5,000 annually, and suitable repair materials are not readily available in the area. These canal deficiencies lead to reduced availability of water for downstream users.

The project area is located on the Moab-Monticello Ranger District of the Manti-La Sal National Forest in San Juan County, Utah. The project area is approximately 5 acres, and contained within secs. 30 and 31, T. 34 S., R. 22 E. (Figure 1-1, Project Overview Map). The elevation in the project area ranges from approximately 7,850 to 7,740 feet above sea level. Land use in the area is primarily managed for range and timber.

1.3 Purpose of and Need for Proposed Action

This EA evaluates the potential effects of the Proposed Action in order to determine whether it would cause significant impacts to the human or natural environment, as defined by the National Environmental Policy Act (NEPA) of 1969. If the EA shows no significant impacts associated with implementation of the proposed project, then a Finding of No Significant Impact (FONSI) will be issued by Reclamation. Otherwise, an Environmental Impact Statement will be necessary prior to implementation of the Proposed Action.

The purpose of the Proposed Action is to provide a more reliable and efficient method of conveying water to the reservoir, ensuring greater water availability for the users downstream. Downstream irrigators have been deprived of water allotments for several years due to drought conditions and water losses from the canal. The storage capacity of Dry Wash Reservoir was increased from 185 acre-feet to 550 acre-feet in 2015; however, storage capacity is not fully utilized due to water losses from the canal. The need for the project is to prevent water loss from the canal and increase delivery efficiency to the reservoir.

1.4 Public Scoping and Involvement

The public includes all groups or individuals outside Reclamation. Reclamation's public involvement process presents the public with opportunities to obtain information about a given project and allows interested parties to participate in the project through written comments. Scoping letters were sent to 97 shareholders, government agencies, and Native American tribes in February 2018. Four response letters were received: two in support of the project, and two expressing no concern with the project. No comments were received that expressed opposition to the project.

The Draft EA was sent to interested agencies and members of the public with a 30-day comment period that took place from May 14, 2018, to June 12, 2018. Three response letters were received; two in support of the project, and an additional recommendation from the Forest Service to reduce visual impacts. No opposing comments were received.

Additional information about the public involvement process is located in Section 5.2 (Public Involvement) of this EA. Comment letters are provided in Appendix A.

1.5 Permits, Licenses, and Authorizations

Implementation of the Proposed Action may require authorizations or permits from state and federal agencies. The BIC would be responsible for obtaining all permits, licenses, and authorizations required for the Proposed Action.

Table 1 1
Permits and Authorizations

Agency/Department	Purpose
Utah Department of Environmental Quality; the Division of Water Quality and the Division of Water Resources	A Utah Pollutant Discharge Elimination System (UPDES) permit for construction activities would be required to help prevent erosion and ensure sediment controls are utilized to minimize construction impacts. The project contractor would obtain coverage under this permit.
San Juan County	A Construction Permit would be obtained from San Juan County for project construction activities.
Utah State Historic Preservation Office	Consultation pursuant to Section 106 of the National Historic Preservation Act (NHPA), 16 USC 470. The Utah State Historic Preservation Office (SHPO) concurred with a determination of “No Historic Properties Affected” on November 21, 2011, and August 1, 2017.
Manti-La Sal National Forest	The Manti-La Sal National Forest issued Special Use Permit No. MON1701 in January 2018 to authorize the right-of-way for installation, operation, maintenance, and termination of the proposed pipeline.

1.6 Related Projects and Documents

1.6.1 Blanding Dry Wash Pipeline Project Decision Memorandum

A categorical exclusion (CE) was prepared in 2017 to authorize a U.S. Forest Service special use permit for installation of the Dry Wash pipeline because of its location within the Manti-La Sal National Forest. The Decision Memorandum states, “Approving this special use application does not have individual or cumulative significant effects on the quality of the human environment.”

1.6.2 Dry Wash Reservoir Expansion and Pipeline Environmental Assessment

An environmental assessment was prepared in 2014 to authorize raising the dam and expanding the Dry Wash Reservoir, and constructing approximately 1 mile of 12-inch pipeline from the reservoir south to the Blue Mountain Irrigation pipeline. The project that is evaluated in this environmental assessment is located upstream of the reservoir.

1.7 Scope of Analysis

The purpose of this EA is to determine whether Reclamation should authorize, provide funding for, and enter into an agreement with the BIC for the construction of the pipeline to prevent water loss during conveyance. That determination includes consideration of whether there would be significant impacts to the human environment. To construct the pipeline, this EA must be completed and a FONSI issued. Analysis in the EA includes temporary impacts from construction activities and permanent impacts resulting from constructing the pipeline and abandoning the canal.

Chapter 2 Alternatives

2.1 Introduction

The Proposed Action evaluated in this EA is Reclamation's authorization of federal funds for the improvements deemed most appropriate for the BIC under present-day conditions. Information contained within this EA will be used to determine the potential effects on the human and natural environment. This document will guide Reclamation's decision on the implementation of the Proposed Action. The Proposed Action (the Action Alternative) is analyzed in comparison with a No Action Alternative to determine potential effects to the existing/baseline conditions.

If Reclamation decides to implement the Proposed Action, the BIC would be authorized to proceed with the Proposed Action (below). If authorized to proceed, the BIC would construct, own, operate, and maintain the proposed pipeline.

2.2 No Action Alternative

Under the No Action alternative, the pipeline would not be constructed. Water would continue to be lost during conveyance to the reservoir, reducing availability to downstream water users. The BIC would need to perform repairs to slow the seepage, and continue stabilization and debris removal efforts on the canal indefinitely.

2.3 Proposed Action (Preferred Alternative)

The Proposed Action is the preferred alternative. Under the Proposed Action, the BIC would construct a 22-inch buried pipeline to convey up to 10 cubic feet per second (cfs) of irrigation water from an existing 22-inch pipe to the Dry Wash Reservoir. The pipeline would be constructed within a 23-foot-wide right-of-way authorized by the Manti-La Sal National Forest in January 2018 (No. MON1701). The pipeline would be 1.7 miles (9,157 feet) long, and buried largely within the existing canal (approximately 1.3 miles/6,747 feet), reducing impacts to undisturbed areas. Approximately 0.1 mile (757 feet) of pipeline would be buried in previously undisturbed area, and the last 0.3 mile (1,653 feet) would be buried adjacent to an existing road.

Where the pipeline is buried in the canal (1.3 miles), the canal banks would be pulled in to fill the canal and provide sufficient cover depth over the pipeline. If needed, additional fill or bedding material would be acquired from a commercial source off-site. The remaining 1.0 mile of canal below the pipeline would remain open and would not be disturbed by project activities. The Proposed Action would disturb up to 5 acres.

The unheated pipeline would be buried at least 3-feet-deep, below the frost line, allowing water flow at ambient ground temperatures (estimated to be 40 degrees Fahrenheit minimum).

Air vents would be installed at appropriate locations along the alignment, within the right-of-way. The air vents would typically be 3- to 4-foot high gooseneck pipes, and would be 3-inch-diameter galvanized steel. The vents would be painted shale green to reduce visual contrast.

The preferred alternative would reduce water loss from the canal, stabilize the canal and surrounding soils, and reduce the risk of canal failure. Engineered drawings are provided in Appendix B.

2.3.1 Construction Schedule

Construction is anticipated to take up to 3 months, and would occur between August and December 2018. The work schedule would be based on a 5-day week, daylight hours only, unless specified otherwise by the Forest Service. The construction schedule would be based on the following sequence: trench excavation, pipeline and appurtenances installation, trench backfilling and regrading, and reseeding the disturbed area.

2.3.2 Construction Procedures

The 23-foot-wide right-of-way would accommodate project activities, including trench excavation, pipeline installation, and equipment access. Existing disturbed areas associated with the roadway and reservoir would also be used for equipment and pipeline staging and storage. The pipeline alignment and right-of-way limits would be flagged or staked by a professional survey company prior to initiation of construction. A majority of the right-of-way is already cleared because it includes the unvegetated canal and roadway. In the limited areas where clearing is necessary, clearing will only occur within the 23-foot-wide right-of-way. A Storm Water Pollution Prevention Plan (SWPPP) would be prepared prior to construction, and would detail the site-specific implementation of stabilization and erosion control measures.

The trench would be excavated with a track hoe excavator. Topsoil and subsoil would be segregated and stockpiled separately adjacent to the trench. Pipe segments would be laid out end-to-end along the trench at each active site. The pipeline segments would be 50-foot-long, and would be heat-welded together on-site. A tracer wire would be buried above the pipeline. The stockpiled subsoil would be used to backfill the trench, and the topsoil would be replaced on the

surface and graded to pre-disturbance contours. With the exclusion of the existing roadway, disturbed areas would be reseeded with a Forest Service approved seed mix. No new or expanded access would be required for operation and maintenance. Existing roads and the right-of-way itself would be used for access.

2.4 Alternatives Considered and Eliminated from Further Study

The following alternatives were evaluated but eliminated because they did not meet the purpose of or need for the Project.

2.4.1 Burying the Pipeline Entirely Within the Canal

The alternative considered was to bury the pipeline entirely within the canal to reduce impacts to undisturbed areas; however, this would require an additional 5,109 feet of buried pipeline at significantly more cost. Piping entirely within the canal was not financially feasible for the BIC.

2.4.2 Lining the Canal

This alternative considered lining the canal through various methods, which would have maintained the open flow nature of the canal. Lining the canal would not eliminate the risk of canal obstruction and failure, as material could still fall in the open canal. A liner would not prevent water loss due to evaporation.

2.5 Comparison of Alternatives

The suitability of the No Action and Proposed Action Alternatives were compared based on two objectives identified for the project. The objectives are to:

- Prevent seepage, leakage, and evaporation; and
- Reduce the risk of canal obstruction and failure.

As shown in Table 2-1, the No Action Alternative did not meet the project's objectives, while the Proposed Action met both objectives.

**Table 2-1
Comparison of Alternatives**

Project Objective	Does the No Action Meet the Objective?	Does the Proposed Action Meet the Objective?
Prevent water loss	No	Yes
Reduce risk of failure	No	Yes

2.6 Minimization Measures Incorporated into the Proposed Action

The minimization measures, along with other measures listed under each resource in Chapters 3 and 4, have been incorporated into the Proposed Action to lessen the potential adverse effects. Most of the listed measures are requirements of the Forest Service authorization (No. MON1701).

- The proposed project construction area would be located within the existing right-of-way, and would have as small a footprint as practicable.
- Staging areas would be located within the existing right-of-way, where new disturbance of area soils and vegetation would be minimized.
- Vegetation removal would be avoided when practicable; if removal was necessary, irregular edges would be created to look more natural.
- The project would avoid the use of highly visible large white pipe and other permanent structures.
- Ground disturbance would be minimized to the extent practicable to reduce disturbance to trees and associated root systems.
- Construction vehicles and equipment would be inspected and cleaned with a power wash prior to entry onto public land to ensure that they are free of weed seed.
- Noxious weed free certification would be required for all straw or hay bales used for mulch, and for any seed mixes used for the project. Any seeding would use the Forest Service-approved seed mix specified for this project.
- Noxious weeds would be controlled.
- Discovery of previously unknown cultural resources, surface or subsurface, could occur during project implementation. If cultural resources were discovered, proximal project activity would cease. A Forest Service representative and Reclamation's Provo Area Office Archaeologist would be notified immediately. All cultural resources would be protected in accordance with federal laws.
- All persons associated with this project would be informed that they will be subject to prosecution for knowingly disturbing Native American Indian historic and prehistoric archaeology sites, or for collecting artifacts of any kind, including historic items or arrowheads and pottery fragments from Federal lands.
- No fossils (including vertebrate and non-vertebrate) would be removed by the maintenance crew or anyone else working on the pipeline. If vertebrate fossils were found, the work would halt and the U.S. Forest Service and Reclamation's Provo Area Archaeologist would be notified. The Forest Service and Reclamation's Provo Area Archaeologist would be contacted immediately to determine if the site requires excavation before continuing with the work in that area.
- A trough with float valves would be installed on the pipeline. The Forest Service would supply the trough that would be added to the pipeline. The

irrigation company would install the outlet; the Forest Service and grazing allotment permittees would be in charge of maintaining it.

- The project would avoid the closure of main roads in the area (Johnson Creek [095], North Creek [079] and Causeway [095]), or provide a detour.
- The project would not block access to adjacent roads or trails that lead to dispersed camping sites and developed campgrounds (Boy Scout Camp and Nizhoni).
- All access routes that are not roads open to the public would be blocked with rocks or gated to prohibit unauthorized motorized use. No temporary or permanent roads would be constructed.
- The construction contractor would be responsible for limiting public access to the project site.
- Construction work would only occur between 6:30 a.m. and 8:00 p.m.
- Vegetation removal would not occur between May 15 and July 15, to protect nesting migratory birds.
- If work is performed in a season other than the fall, raptor surveys would be performed for approval from the U.S. Forest Service.
- Mechanical operation would not occur on wet soils exceeding the plastic limit or when ruts exceed 4 inches in depth for 10 feet or more.
- Vehicle traffic and equipment operation would be restricted during wet periods to prevent rutting in excess of 1 inch on gravel roads and 2 inches on native surface roads. Vehicle traffic and equipment operation could also be restricted during dry periods if native surface roads become powdered.
- All surface disturbance would be re-contoured to original conditions.
- Refueling areas would be a minimum of 200 feet from perennial and intermittent stream channels, seeps and springs, wetlands, lakes and reservoirs, stock water developments, and other water features. All heavy equipment and service vehicles would have a supply of absorbent and other cleanup materials on hand for initial containment of spills.

Chapter 3 Affected Environment and Environmental Consequences

3.1 Introduction

This chapter describes the environment that could be affected by the Proposed Action. These impacts are discussed under the following resource issues: geology and soils resources; visual resources; cultural resources; paleontological resources; wilderness and wild and scenic rivers; hydrology; water quality; system operations; health, safety, air quality, and noise; prime and unique farmlands; flood plains; wetlands, riparian, noxious weeds, and existing vegetation; fish and wildlife resources; threatened, endangered, and sensitive species; recreation; socioeconomics; access and transportation; water rights; Indian Trust Assets (ITAs); environmental justice; and cumulative effects. The present condition or characteristics of each resource are discussed first, followed by a discussion of the predicted impacts caused by the Proposed Action. The environmental effects are summarized in Section 3.7.

Implementing minimization measures would ensure impacts are minimal and short-term. Chapter 3 presents the impact analysis for resources after minimization measures and best management practices have been successfully implemented.

3.2 Resources Considered and Eliminated from Further Analysis

The following resources were considered but eliminated from further analysis because they do not occur in the project area or impacts would be so minor (negligible) that they were discounted.

Table 3 1
Resources Eliminated from Further Analysis

Resource	Rationale for Elimination from Further Analysis
Visual Resources	The majority of project activities would occur within remote forest areas, and would not be seen by a casual observer. Project activities adjacent to Johnson Creek Road would be of short duration. Air vents would be painted shale green to reduce visual contrast. The disturbed right-of-way would be restored to pre-disturbance conditions; therefore, visual resources would not be adversely impacted by the Proposed Action.
Paleontological Resources	A paleontological reconnaissance survey of the project area was conducted in 2017. The survey found no fossils that meet the criteria for scientific significance (Engels 2017).
Wilderness and Wild and Scenic Rivers	There are no Wilderness Areas or Wild and Scenic Rivers or segments listed on the Nationwide Rivers Inventory within the project area; therefore, there would be no impact to these resources from the Proposed Action.
Water Quality	The canal would be dewatered during construction by closing the diversion, and erosion control measures would be implemented during construction; therefore, there would be no impacts to water quality.
System Operations	The canal would be temporarily dewatered during project construction activities, but flows would resume upon completion and prior to the next irrigating season. There would be no changes to long-term operations of the system; however, the project would result in conserved water.
Health, Safety, Air Quality, and Noise	The project area is within a remote forest area and adjacent to the canal right-of-way, with no designated public access; the construction contractor would be responsible for limiting public access to the project site. There would be no impact to health or public safety as a result of the project. Air quality impacts would be temporary (during construction) and negligible due to the short construction schedule and remote nature of the project area. Noise impacts are analyzed in the Recreation Section.
Prime and Unique Farmlands	There are no prime or unique farmlands within 5 miles of the project area.

Resource	Rationale for Elimination from Further Analysis
Flood plains	The proposed project work does not occur within a flood plain. The proposed project would not impact flood plains.
Fish and Wildlife Resources	Fish have been eliminated from further consideration because fish do not occur in the canal, as the canal is regularly dewatered. Other wildlife species are analyzed further in this document.
Threatened, Endangered, and Sensitive Species	<p>A biological assessment/biological evaluation (BA/BE) was prepared by the Forest Service in 2017 to evaluate the potential impacts of the project on listed and sensitive species. Based on analysis in the BA/BE, the Forest Service documented that there would be no effect to listed species in their Decision Memorandum for the right-of-way (U.S. Forest Service 2017b).</p> <p>U.S. Forest Service-sensitive species that could be present within the project area include flammulated owl (<i>Otus flammeolus</i>), peregrine falcon (<i>Falco peregrinus</i>), spotted bat (<i>Euderma maculatum</i>), three-toed woodpecker (<i>Picoides dorsalis</i>), Townsend’s big-eared bat (<i>Corynorhinus townsendii</i>), Geyer’s onion (<i>Allium geeyeri</i> var. <i>chatterleyi</i>), Kachina daisy (<i>Erigeron kachinensis</i>), and pinnate spring-parsley (<i>Cymopterus beckii</i>). Based on analysis in the BA/BE, the Forest Service documented that “implementation of the Proposed Action may impact individuals or habitat of the peregrine falcon, spotted bat, and Townsend’s big-eared bat, but will not likely contribute to a trend toward federal listing or cause a loss of persistence to these populations or species” (U.S. Forest Service 2017a).</p>
Access and Transportation	The proposed project would not impact access or transportation due to the remote location of the project area and the restricted right-of-way.

3.3 Affected Environment and Environmental Consequences

This chapter describes the affected environment (baseline conditions) and environmental consequences (impacts resulting from the Proposed Action) on the quality of the human environment that could be impacted by construction and operation of the Proposed Action, as described in Chapter 2. The human environment is defined in this study as all environmental resources, including social and economic conditions, occurring in the impact area of influence.

3.3.1 Cultural Resources

Cultural resources are defined as physical or other expressions of human activity or occupation that are over 50 years in age. Such resources include culturally significant landscapes, prehistoric and historic archaeological sites as well as isolated artifacts or features, traditional cultural properties, Native American and other sacred places, and artifacts and documents of cultural and historic significance.

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, mandates that Reclamation take into account the potential effects of a proposed Federal undertaking on historic properties. Historic properties are defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for, inclusion in the National Register of Historic Places (NRHP). Potential effects of the described alternatives on historic properties are the primary focus of this analysis.

In compliance with the regulations specified in Section 106 of the NHPA (36 CFR 800.16), the affected environment for cultural resources is identified as the area of potential effects (APE). The APE is defined as the geographic area within which federal actions may directly or indirectly cause alterations in the character or use of historic properties. The APE for this proposed action includes the area that could be physically affected by any of the proposed project alternatives (the maximum limit of disturbance).

Montgomery Archaeological Consultants, Inc. (MOAC) conducted a Class I literature review for the project area in March 2017 and completed a Class III inventory of the southern project APE in June 2017 (Del Bozque 2017). The northern 6,447 feet of the project APE was previously surveyed for the Monticello Ditch Bill Cultural Resource Survey in 2011 (Freels 2011).

Class III cultural inventories of the project area identified only one cultural resource within the APE: the historic Dry Wash Ditch, previously recorded by the Manti-La Sal National Forest in 2011.

In accordance with 36 CFR 800.4, the Dry Wash Ditch was evaluated for significance in terms of NRHP eligibility. The significance criteria applied to evaluate cultural resources are defined in 36 CFR 60.4 as follows:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

1. That are associated with events that have made a significant contribution to the broad patterns of our history; or
2. That are associated with the lives of persons significant in our past; or

3. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
4. That have yielded, or may be likely to yield, information important in prehistory or history.

Based upon these criteria, the Manti-La Sal National Forest recommended that the Dry Wash Ditch is ineligible for the NRHP in 2011. The U.S. Forest Service received concurrence from the SHPO on their determination of eligibility in a letter dated November 21, 2011.

3.3.1.1 No Action

Under the No Action Alternative, there would be no effects to cultural resources. There would be no ground disturbance or construction associated with construction activities. Existing conditions would continue.

3.3.1.2 Proposed Action

There are no identified NRHP-eligible historic properties within the project APE. The proposed action would have no effect on known historic properties.

3.3.2 Geology and Soil Resources

Much of the canal is built along a steep, rocky slope covered by exposed and fractured rock. Water infiltrates the fractures, and, due to the extreme slopes, flows belowground along the cliff face and increases the risk of slope failure. Rocks and debris frequently enter the canal, partially obstructing the passage of water; bank failure has occurred in the past, and is a continuing risk. At locations closer to the reservoir, the canal has been built up in order to keep grade and velocity consistent. The elevated water level relative to the surrounding soil has caused widespread seepage, which has manifested itself by springs that have surfaced and consolidated into channels of flowing water.

Detailed soil information is not available in this area; however, STATSGO2 data indicates the following broad soil types make up the project area.

**Table 3-2
Soil Composition**

Soil Type	Approximate Percentage of Soils in Project Area
Strych-Skos-Bookcliff (s7943)	45 percent
Tolman Family-Harpole Family-Cabin-Bookcliff (s8001)	55 percent

3.3.2.1 No Action

The No Action Alternative would allow for continued seepage along the canal, which would saturate the soils and reduce slope stability below the canal. If rockfall blocked the channel, the canal could overrun its banks, increasing the risk of bank failure and catastrophic slope failure.

3.3.2.2 Proposed Action

Disturbance would be minimized as much as practicable, and would remain within the authorized right-of-way. Total ground disturbance would be 5 acres or less. Project design also includes measures to reduce erosion, such as restricting operations and access on wet soils or during wet periods to prevent rutting. Access and construction activities could also be restricted during dry periods if native surface roads became powdered, to reduce wind erosion.

Trenching and backfilling activities would have no noticeable effect to soils where the pipeline was buried within the existing disturbed canal, but would result in mixing of soil horizons where buried outside the canal. During trenching activities, topsoil (approximately 12-inches-deep) would be salvaged and stockpiled separately from subsoil. Subsoil would be used first in backfilling activities, with the topsoil replaced on the surface. Soil stockpiling would be temporary, as open trenches would be filled at the end of each working day, or as soon as practicable. If soil was stockpiled for more than 1 day, erosion control measures would be applied to the stockpile. All surface disturbance would be re-contoured to original conditions. Disturbed areas outside of the canal and roadway would be reseeded to provide permanent stabilization and prevent erosion.

Piping the canal would eliminate seepage from the canal and saturation of the adjacent soils, and preclude the risk of bank and slope failure. Implementation of the Proposed Action would not result in long-term adverse impacts to geologic or soil resources, and would likely result in increased slope stability.

3.3.3 Hydrology

The proposed project is within two 6th field Hydrologic Unit Code (HUC) subwatersheds: Dry Wash (140802010406) and Johnson Creek (140802010302). The BIC diverts up to 10 cfs of water from the Dry Wash drainage in the Dry Wash subwatershed to Dry Wash Reservoir in the Johnson Creek subwatershed. Water is channeled from Dry Wash Reservoir to Recapture Reservoir or diverted into the Johnson Creek Canal, which conveys water to other storage reservoirs on the upper end of the system. The system delivers water to approximately 2,000 cultivated acres.

The open canal experiences losses from 30 to 100 percent, depending on the flow and season. Water lost from the canal drains down the Dry Wash subwatershed into Cottonwood Creek, which is in a different subwatershed than the reservoir. Storage capacity at the reservoir is underutilized, and shareholders typically receive less water than their allotment.

3.3.3.1 No Action

The No Action Alternative would allow for continued seepage along the canal; water would continue to drain away from the reservoir, resulting in reduced water availability for shareholders.

3.3.3.2 Proposed Action

The Proposed Action Alternative would eliminate canal seepage and allow for more efficient filling of the reservoir and irrigation flow deliveries. The pipeline would deliver sufficient water to meet or significantly increase the shareholder allotments, while retaining the first 100 acre-feet in Dry Wash Reservoir to serve as a conservation pool.

3.3.4 Wetlands, Riparian, Noxious Weeds, and Existing Vegetation

Fringe wetlands adjacent to the canal are induced by the water seepage from the canal. Riparian vegetation is limited to the wetland areas and is primarily comprised of grasses and rushes. Noxious weeds are limited within the project area; no significant infestations were noted during site visits. Existing vegetation consists of native species commonly found in mountain brush, ponderosa pine, and oak-maple shrubland communities. A list of plant species that were commonly observed within the survey area is provided in Table 3-3.

**Table 3-3
Plant Species Commonly Observed in the Project Area**

Scientific Name	Common name
<i>Eleocharis palustris</i>	spike rush
<i>Juncus balticus</i>	Baltic rush
<i>Phleum pratense</i>	timothy
<i>Dactylis glomerata</i>	orchard grass
<i>Bromus inermis</i>	smooth brome
<i>Poa bulbosa</i>	bulbous bluegrass
<i>Poa secunda</i>	sandberg bluegrass
<i>Elymus hispidus</i>	intermediate wheatgrass
<i>Bromus tectorum</i>	cheatgrass
<i>Taraxacum officinale</i>	dandelion
<i>Lupinus argenteus</i>	silvery lupine
<i>Packera multilobata</i>	lobeleaf groundsel
<i>Melilotus officinalis</i>	yellow sweetclover
<i>Crepis acuminata</i>	tapertip hawksbeard
<i>Gutierrezia sarothrae</i>	broom snakeweed
<i>Mahonia repens</i>	Oregon grape
<i>Symphoricarpos albus</i>	common snowberry
<i>Arctostaphylos pungens</i>	pointleaf manzanita
<i>Artemisia tridentata</i>	big sagebrush
<i>Quercus gambelii</i>	gambel oak
<i>Juniperus sp.</i>	juniper
<i>Pinus edulis</i>	pinyon pine
<i>Pinus ponderosa</i>	ponderosa pine

3.3.4.1 No Action

The No Action Alternative would have no effect on wetlands associated with the canal; seepage from the canal would continue to support the wetlands and riparian vegetation. Existing vegetation would remain largely undisturbed.

3.3.4.2 Proposed Action

The Proposed Action Alternative would eliminate canal seepage, and would eliminate seepage-created wetlands and riparian vegetation. Noxious weeds could be introduced and spread by construction activities; however, weed control measures are incorporated into the project design, as required in the authorization from the U.S. Forest Service.

A majority of the project disturbance would occur within the existing canal channel, which is devoid of vegetation. Approximately 1 acre of vegetation would be temporarily disturbed for pipeline construction activities. Per U.S.

Forest Service requirements, vegetation removal would be avoided and ground disturbance would be minimized where practicable to reduce disturbance to trees and associated root systems. Disturbed areas within the right-of-way, excluding the roadway footprint, would be reseeded with a .U.S. Forest Service-approved seed mix upon completion of construction activities.

3.3.5 Wildlife Resources

3.3.5.1 Birds (*raptors, upland game birds, and migratory birds*)

Suitable habitat occurs within cliff, forested, and riparian areas within and adjacent to the project area. Species may include golden eagle (*Aquila chrysaetos*), wild turkey (*Meleagris gallopavo*), northern goshawk (*Accipiter gentilis*), and various songbirds.

3.3.5.1.1 No Action

The No Action Alternative would have no effect on raptors, game birds, or other migratory birds.

3.3.5.1.2 Proposed Action

Project activities would be anticipated to begin as early as August 2018; however, vegetation removal would not occur between May 15 and July 15 to protect nesting migratory birds. In addition, raptor surveys would be conducted prior to construction if construction would occur in a season other than the fall. Appropriate spatial and seasonal buffers would be applied if birds were identified nesting within the area.

Noise disturbance associated with construction activities could be experienced by local bird species and may result in temporary habitat displacement. Disturbance to foraging birds could occur as a result of the proposed activities, but is unlikely, as birds would be expected to avoid these areas as adjacent habitat is available.

3.3.5.2 Water-Dependent Bird Species

The canal runs water throughout the year, but typically only contains sufficient open water habitat between March and June, during high runoff periods. Water-dependent bird species use would be limited due to the isolated, inaccessible nature of the 2.2 miles of open canal.

3.3.5.2.1 No Action

The No Action Alternative would have no effect on water birds.

3.3.5.2.2 Proposed Action

The project would result in the loss of up to 2.2 miles of open water habitat during high runoff periods. Upon project initiation, water-dependent bird species would be permanently displaced to other open water sites such as the Dry Wash Reservoir. The canal is considered of low importance to these species due to the ephemeral and inaccessible nature of open water in the canal and the abundant available open water of the reservoir.

3.3.5.3 Big Game

The proposed project is within Utah Division of Wildlife Resources (UDWR)-mapped crucial summer habitat for mule deer (*Odocoileus hemionus*) and crucial spring/fall habitat for Rocky Mountain elk (*Cervus canadensis*). Crucial summer habitat is typically occupied between May 15 and July 5. Crucial spring/fall habitat is used for migration, and varies by year depending on weather conditions.

The habitat is characterized by abundant suitable forage (e.g., grasses and forbs) and cover (e.g., ponderosa pine and mountain brush-associated plant species) at higher elevations. Big game may also drink from the canal.

3.3.5.3.1 No Action

The No Action Alternative would have no effect on big game species.

3.3.5.3.2 Proposed Action

The Proposed Action Alternative would be implemented in the late summer and fall, after fawning season. Less than 5 acres of suitable forage would be lost as a result of project activities, as a majority of the project area is bare canal or disturbed roadway. Disturbed areas outside of the roadway would be reseeded with a U.S. Forest Service-approved seed mix upon completion of construction activities; reseeded areas would be expected to provide suitable forage in the next fawning season.

The project would result in the loss of up to 2.2 miles of available water in the canal; however, this water is typically only available in the spring, when flows are high enough to maintain open water in the canal. Per the U.S. Forest Service permit, a trough with float valves would be installed on the pipeline to provide water for livestock. Big game would also be able to drink from the trough. The trough would provide a reliable source of available water year-round.

Disturbance to big game could occur as a result of the construction-related noise and human presence; disturbance could result in temporary displacement to adjacent suitable habitat during 3 months of construction. Suitable habitat surrounds the project area, which is located in a relatively remote forest area. Big game would be anticipated to either avoid where construction activities would be occurring or become habituated, as has been observed in more-developed areas.

3.3.5.4 Small Mammals, Reptiles, and Amphibians

The canal and adjacent uplands may provide suitable habitat for nesting, breeding, foraging, cover, and movement corridors for an array of small mammal, reptile, and amphibian species.

3.3.5.4.1 No Action

The No Action Alternative would have no effect on these species.

3.3.5.4.2 Proposed Action

Potential impacts to amphibians, reptiles, and small mammals include mortality or displacement during construction activities. Small animal species may experience reduced populations in direct proportion to the amount of disturbed habitat; however, these species and their habitats are relatively common throughout the area and the Proposed Action would not adversely affect population persistence. Pipeline trenches would be filled at the end of each working day for public safety and to eliminate potential entrainment of animals. The Proposed Action would not adversely affect populations of small mammals, reptiles, or amphibians within the project area.

3.3.6 Recreation

The project area is within 500 feet of the Nizhoni Campground, and parallels the road between Dry Wash Reservoir and the campground. The canal maintenance road is infrequently used for hiking to the Dry Wash Indian ruins, though the official trail is to the west of the project area. If authorized, construction would have to occur during the summer and fall, when recreation use in the area is highest.

3.3.6.1 No Action

The No Action Alternative would not impact recreational use in the area, because no project activities or associated disturbance would occur.

3.3.6.2 Proposed Action

The proposed project would not impact occupancy of the campground or reservoir; however, noise from construction activities on the southern half of the project would likely be audible at both the campground and reservoir. Construction activities would also be visible to recreation users at the reservoir. Hiking access along the canal would be prohibited during construction.

To mitigate potential impacts to recreation uses in the area, the U.S. Forest Service included the following design features as part of their authorization for the project:

- The project would avoid the closure of main roads in the area (Johnson Creek [095], North Creek [079], and Causeway [095]), or provide a detour.
- The project would not block access to adjacent roads or trails that lead to dispersed camping sites and developed campgrounds (Boy Scout Camp and Nizhoni).
- All access routes that are not roads open to the public would be blocked with rocks or gated to prohibit unauthorized motorized use. No temporary or permanent roads would be constructed.
- Construction work would only occur between 6:30 a.m. and 8:00 p.m.
- Vegetation removal would be avoided when practicable; if removal was necessary, irregular edges would be created to look more natural.

- The project would avoid the use of highly visible large white pipe and other permanent structures.

Based on these mitigation measures, impacts will be localized to the project area and during daylight hours. Impacts to recreational uses at the campground and reservoir would be short-term (construction phase only) and limited to relatively minor visual and auditory disturbance. Closure of hiking access along the canal maintenance road would also be short-term, as the pipeline would be buried and the surface disturbance rehabilitated. The designated Dry Wash Indian Ruins Trail would remain open and provide access to the interpretive site at the ruins.

The project would not result in long-term adverse impacts to recreation use in the area, and increased water delivery may result in increased recreational use of the Dry Wash Reservoir, as higher water levels would be expected.

3.3.7 Socioeconomics

Water from the Dry Wash Reservoir supports agricultural uses on approximately 2,000 acres within the southeastern portion of San Juan County, primarily for the towns of Blanding, White Mesa on the Ute Mountain Ute Reservation, and unincorporated areas in the county. Primary production includes alfalfa, grass hay, livestock production, and various grains. Agricultural development in the area is limited by the amount of available water to irrigate crops.

3.3.7.1 No Action

The No Action Alternative would not benefit the water users who receive water from the Dry Wash drainage. Water would continue to seep from the canal and be lost for irrigation purposes. Economic benefits of increased water availability would not be realized.

3.3.7.2 Proposed Action

During the construction period, a brief uptick in economic activity would be anticipated in the area due to construction activity. The sectors of the economy that would benefit in the short-term from construction are generally lodging, food, fuel, and associated services. The largest long-term economic impact of the Proposed Action would be increased crop production due to the increased delivery of irrigation water no longer lost to seepage, leakage, and evaporation. Under the Proposed Action, project engineering estimates anticipate an annual water savings of 806 acre-feet.

According to Hill and Keyes (2002), “for every acre-foot of water supplied to an efficient sprinkler system, a farmer can expect to harvest about 1 3/4 tons of alfalfa.” (Note: while grass hay and other grains are commonly grown in San Juan County, this analysis assumes all saved water will be used for alfalfa production.) The 806 acre-feet multiplied by 1.75 tons per acre-foot applied equals 1,410.5 additional tons harvested each year. At the current Utah 5-year average price per ton for alfalfa hay of \$170.60 (Larsen and Lee 2017), the increased production would increase gross farm revenues by nearly \$241,000 annually. The present

value of \$241,000 annually for 50 years at the 2018 Reclamation planning interest rate of 2.75 percent is approximately \$6,685,000.

With an enclosed pipeline, the BIC could also save as much as \$5,000 annually on operation and maintenance costs; under the same present value scenario of 50 years, this reduction would save the BIC approximately \$139,000 in 2018.

The Proposed Action would allow for more efficient delivery of water through the pipeline, which would allow for greater water availability throughout the area and support the local agricultural economy.

3.3.8 Water Rights

The Utah Board of Water Resources currently holds the title to Water Right 09-125, which is for 10 cfs from Dry Wash, and will retain water rights throughout the project's repayment term. Therefore, baseline conditions would remain the same for both alternatives related to water rights.

3.3.8.1 No Action

The No Action Alternative would have no effect on water rights; however, seepage losses would directly affect the water users' ability to utilize the water being diverted.

3.3.8.2 Proposed Action

The Proposed Action would allow the BIC to more efficiently divert water to the Dry Wash Reservoir; this would increase the efficient beneficial use of diversion flows, with the intent of providing more water for users in the system.

3.4 Indian Trust Assets

Indian Trust Assets are legal interests in property held in trust by the United States for federally recognized Indian Tribes or Indian individuals. Assets can be real property, physical assets, or intangible property rights, such as lands, minerals, hunting and fishing rights, and water rights. The United States has an Indian trust responsibility to protect and maintain rights reserved by or granted to such tribes or individuals by treaties, statutes, and executive orders. These rights are sometimes further interpreted through court decisions and regulations. This trust responsibility requires that all federal agencies take all actions reasonably necessary to protect trust assets. Reclamation carries out its activities in a manner which protects these assets and avoids adverse impacts when practicable. When impacts cannot be avoided, Reclamation would provide appropriate mitigation or compensation. Implementation of the Proposed Action would have no foreseeable negative impacts on Indian Trust Assets, and the Ute Mountain Ute Tribe is a shareholder of water from the system.

3.5 Environmental Justice

Executive Order 12898 established Environmental Justice as a Federal agency priority to ensure that minority and low-income groups are not disproportionately affected by Federal actions. According to the Environmental Protection Agency's EJSCREEN tool, the project area is a remote, forest location; there are no residences or communities within 4 miles of the proposed project. This information, combined with the socioeconomic information detailed in Section 3.3.7 of this EA, indicates that there is no potential for an environmental justice population to exist in or near the project area.

In addition to the Ute Mountain Ute Tribe that receives water from the BIC, nearly half of San Juan County residents are Native American. Efficiencies in irrigation systems boost crop production and stimulate the local economy; therefore, the improvement of the system has the potential to beneficially impact minority and low-income communities.

Implementation of the Proposed Action would not disproportionately (unequally) affect any low-income or minority communities within the project area. The reason for this is that the proposed project would not involve major facility construction, population relocation, health hazards, hazardous waste, property takings, or substantial economic impacts. This action would therefore have no adverse human health or environmental effects on minority and low-income populations.

3.6 Cumulative Effects

In addition to project-specific impacts, Reclamation analyzed the potential for significant cumulative impacts to resources affected by the project and by other past, present, and reasonably foreseeable activities within the watershed.

According to the Council on Environmental Quality's regulations for implementing NEPA (50 CFR §1508.7), a "cumulative impact" is an impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period. It focuses on whether the Proposed Action, considered together with any known or reasonably foreseeable actions by Reclamation, other federal or state agencies, or some other entity, combined to cause an effect.

Based on Reclamation resource specialists' review of the Proposed Action, Reclamation has determined that this action would not have a significant adverse cumulative effect on any resources.

3.7 Summary of Environmental Effects

Table 3-4 summarizes environmental effects under the No Action and the Proposed Action Alternatives.

**Table 3-4
Summary of Environmental Effects**

Project Resource	No Action	Proposed Action
Cultural Resources	No Effect	No effect on known historic properties
Geology and Soil Resources	No Beneficial Effect	No Adverse Effect; may increase slope stability
Hydrology	No Effect	Increased efficiency in diversions from Dry Wash
Wetlands, Riparian, Noxious Weeds, and Existing Vegetation	No Effect	May eliminate irrigation-induced wetlands
Wildlife Resources	No Effect	No Adverse Effect
Recreation	No Effect	No Permanent Adverse Effect; additional available water for recreation
Socioeconomics	No Beneficial Effect	Additional available water for agricultural use
Water Rights	No Beneficial Effect	More consistent flows for efficient use of water rights
Indian Trust Assets	No Effect	No Adverse Effect
Environmental Justice	No Effect	Potential benefit
Cumulative Effects	No Effect	No Effect

Chapter 4 Environmental Commitments

Environmental Commitments, along with Minimization Measures in Section 2.6, have been developed to lessen the potential adverse effects of the Proposed Action.

4.1 Environmental Commitments

The following environmental commitments would be implemented as an integral part of the Proposed Action.

1. **Standard Reclamation Best Management Practices** - Standard Reclamation Best Management Practices will be applied during construction activities to minimize environmental effects and will be implemented by construction forces, or included in construction specifications. Such practices or specifications include sections in the present EA on water pollution abatement, erosion control, vegetation, and wildlife. Excavated material and construction debris may not be wasted in any stream or river channel in flowing waters. This includes material such as grease, oil, joint coating, or any other possible pollutant. Excess materials must be wasted at a Reclamation-approved upland site well away from any channel. Construction materials, bedding material, excavation material, etc. may not be stockpiled in riparian or water channel areas.
2. **Additional Analyses** - If the Proposed Action were to change significantly from that described in this EA because of additional or new information, or if other spoil or work areas beyond those outlined in this analysis are required outside the defined project construction area, additional environmental analyses may be necessary.
3. **UPDES Permit** - A UPDES Permit will be required from the State of Utah for construction activities which disturb more than 1 acre of land. Appropriate measures will be taken to ensure that construction-related sediments will not enter streams either during or after construction.
4. **Cultural Resources** - In the event that any cultural resources, either on the surface or subsurface, are discovered during construction, Reclamation's Provo Area Office archaeologist and a U.S. Forest Service representative shall be notified immediately and construction in the area of the inadvertent discovery will cease until an assessment of the resource

and recommendations for further work can be made by a professional archaeologist.

5. **Human Remains** - Any person who knows or has reason to know that he/she has inadvertently discovered possible human remains on Federal land must provide immediate telephone notification of the discovery to Reclamation's Provo Area Office archaeologist and a Forest Service representative. Work will stop until the proper authorities are able to assess the situation on-site. This action will promptly be followed by written confirmation to the responsible Federal agency official with respect to Federal lands. The SHPO and interested Native American Tribal representatives will be promptly notified and consultation will begin immediately. This requirement is prescribed under the Native American Graves Protection and Repatriation Act (43 CFR Part 10) and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470).
6. **Paleontological Resources** - Should vertebrate fossils be encountered by the proponent during ground-disturbing actions, construction must be suspended until a qualified paleontologist can be contacted to assess the find. A U.S. Forest Service representative and Reclamation's Provo Area Office Archaeologist would be notified immediately.
7. **Wildlife Resources**
 - a. **Migratory Bird Protection**
 - i. Perform any ground-disturbing activities or vegetation treatments before migratory birds begin nesting in the spring or after all young have fledged in the fall.
 - ii. If activities must be scheduled to start during the migratory bird breeding season, take appropriate steps to prevent migratory birds from establishing nests in the potential impact area. These steps could include covering equipment and structures, and the use of various excluders (e.g., noise). Prior to nesting, birds can be harassed to prevent them from nesting on the site.
 - iii. If activities must be scheduled during the migratory bird breeding season, a site-specific survey for nesting birds should be performed starting at least 2 weeks prior to groundbreaking activities or vegetation treatments. Established nests with eggs or young cannot be moved, and the birds cannot be harassed until all young have fledged and are capable of leaving the nest site.
 - iv. If nesting birds are found during the survey, appropriate spatial buffers should be established around nests. Vegetation treatments or ground-disturbing activities within the buffer areas should be postponed until the birds

have left the nest. Confirmation that all young have fledged should be made by a qualified biologist.

- b. **Raptor Protection** - Raptor protection measures will be implemented to provide full compliance with environmental laws. Raptor surveys will be conducted using the U.S. Fish and Wildlife Service's Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances (Romin and Muck 2002), to ensure that the proposed project will avoid adverse impacts to raptors, including bald and golden eagles. Locations of existing raptor nests and eagle roosting areas will be identified prior to the initiation of project activities. Appropriate spatial buffer zones of inactivity will be established during breeding, nesting, and roosting periods. Arrival at nesting sites can occur as early as December for certain raptor species. Nesting and fledging can continue through August. Wintering bald eagles may roost from November through March.
8. **Public Access** - Construction sites will be closed to public access; only project personnel will be allowed to access the project site.
9. **Previously Disturbed Areas** - Construction activities will be confined to previously disturbed areas where practicable for such activities as work, staging, storage, waste areas, and vehicle and equipment parking areas. Vegetation disturbance will be minimized as much as practicable.
10. **Disturbed Areas** - All disturbed areas resulting from the project will be smoothed, shaped, contoured, and rehabilitated to as near the pre-project construction condition as practicable. After completion of the construction and restoration activities, disturbed areas will be seeded at appropriate times with weed-free, native seed mixes having a variety of appropriate species (especially woody species where feasible) to help hold the soil around structures, prevent excessive erosion, and to help maintain other riverine and riparian functions. The composition of seed mixes will be coordinated with wildlife habitat specialists and Reclamation biologists. Weed control on all disturbed areas will be required. Successful revegetation efforts must be monitored and reported to Reclamation, along with photos of the completed project.

Chapter 5 Consultation and Coordination

5.1. Introduction

This chapter details other consultation and coordination between Reclamation and other Federal, state, and local government agencies, Native American Tribes, and the public during the preparation of this EA. Compliance with NEPA is a Federal responsibility that involves the participation of all of these entities in the planning process. The NEPA requires full disclosure about major actions taken by Federal agencies and accompanying alternatives, impacts, and potential mitigation of impacts. Table 5-1 contains a list of agencies consulted during the preparation of this EA.

**Table 5-1
Consultation List for EA Preparation**

Name	Purpose and Authorities for Consultation or Coordination	Contacts
Utah State Historic Preservation Office	Cultural Resources	Chris Merritt, Deputy SHPO
Utah Division of Water Quality	Water Quality	Jim Harris, Assistant Director
U.S. Fish and Wildlife Service	Endangered Species Act Compliance	Amy Defreese, Supervisory Fish and Wildlife Biologist
Utah Division of Wildlife Resources	State Sensitive Species	Ashley Green, Habitat Section Chief
U.S. Forest Service	Special Use Permit	Michael Diem, District Ranger
San Juan County	Building Permits, County Roadways	Kelly Pehrson, Chief Administrative Officer
U.S. Army Corps of Engineers	Clean Water Act Compliance	Craig Brown, Senior Project Manager

5.2 Public Involvement

Reclamation's public involvement process presents the public with opportunities to obtain information about a given project and allows interested parties to participate in the project through written comments. The key objective is to create and maintain a well-informed, active public that assists decision makers throughout the process, culminating in the implementation of the Proposed Action.

A notice of the Proposed Action was mailed to 97 shareholders, the BIC board of directors, tribes, city and county officials, and state and Federal agencies in February 2018; the public comment period was open from February 17 to March 18, 2018. Comments in support of the project were received from San Juan County and Blanding City. The Paiute Indian Tribe of Utah and the Navajo Nation commented that they had no concerns or objections to the project. No other comments were received during the comment period.

The Draft EA was sent to the same entities listed above with a 30-day comment period that took place from May 14, 2018, to June 12, 2018. Comments in support of the project were again received from San Juan County and Blanding City. The U.S. Forest Service provided a recommendation to reduce visual impacts from visible galvanized vent pipes; in response, the proposal was modified to include painting the air vents shale green. No opposing comments were received.

5.3 Native American Consultation

Reclamation conducted Native American consultation throughout the public involvement process. A Section 106 consultation letter and copies of the Class III Cultural Resource Inventory Reports were sent to the Kaibab Band of Paiute Indians of the Kaibab Indian Reservation, the Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony, the Moapa Band of Paiute Indians of the Moapa River Indian Reservation, the Navajo Nation, the Paiute Indian Tribe of Utah, the Ute Mountain Ute Tribe, the Ute Indian Tribe of the Uintah and Ouray Reservation, and the Hopi Tribe of Arizona.

This consultation was conducted in compliance with 36 CFR 800.2(c)(2) on a government-to-government basis. Through this effort, the tribes are given a reasonable opportunity to identify any concerns about historic properties; to advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance; to express their views on the effects of the Proposed Action on such properties; and to participate in the resolution of adverse effects.

Reclamation received responses to the Section 106 consultation letters from the Paiute Indian Tribe of Utah and the Navajo Nation. Both stated that they agreed with the determination of no historic properties affected for the project and that they had no concerns about the project area at the time. The Hopi Tribe of Arizona responded to Section 106 consultation by forwarding Reclamation their previous 2017 response letters to the Manti-La Sal National Forest about the project. In these letters, the Hopi Tribe expressed their agreement that if any currently unknown, prehistoric cultural resources were inadvertently discovered during project implementation, construction would halt and the SHPO and tribes would be notified.

5.4 Utah State Historic Preservation Office (SHPO)

For the purposes of this undertaking, the area of potential effect (APE) is the same as the cultural resources survey area. The northern 6,447 feet of the APE was surveyed in 2011 (Freels 2011), and a literature review and Class III cultural resource inventory for the remainder of the APE were completed by MOAC for this project in 2017 (Del Bozque 2017). The SHPO concurred with the Forest Service's 2011 determination of no historic properties affected for the northern portion on November 21, 2011. The SHPO concurred with the Forest Service's 2017 determination of no historic properties affected for the remainder of the APE in a letter dated July 25, 2017.

5.5 U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service was consulted during project planning to determine whether listed species could be impacted by the proposed project. No listed species or critical habitats were identified within or near the project area.

Chapter 6 Preparers

The following is a list of preparers who participated in the development of the EA. They include environmental summary preparers, Reclamation team members, and federal, state, and district members.

**Table 6-1
List of Preparers**

Name	Title/Position	Contributions
Agency Representatives		
Jared Baxter	Fish and Wildlife Biologist, Reclamation Provo Area Office	Biological Resources
Peter Crookston	Environmental Group Chief, Reclamation Provo Area Office	Project Oversight
Rick Jones	Wildlife Biologist, Reclamation Provo Area Office	Biological Resources
Carley Smith	Archaeologist, Reclamation Provo Area Office	Cultural Resources, Paleontological Resources, Indian Trust Assets
Consultants		
Jenna Jorgensen	Environmental Coordinator, Jones and DeMille Engineering	Environmental Project Manager

Chapter 7 Abbreviations

Abbreviations	Meaning
APE	Area of Potential Effect
BA	Biological Assessment
BE	Biological Evaluation
BIC	Blanding Irrigation Company
CE	Categorical Exclusion
CFR	Code of Federal Regulations
cfs	Cubic feet per second
EA	Environmental Assessment
FONSI	Finding of No Significant Impact
HUC	Hydrologic Unit Code
ITA	Indian Trust Assets
MOAC	Montgomery Archaeological Consultants
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
Reclamation	U.S. Bureau of Reclamation
SHPO	State Historic Preservation Office
SWPPP	Stormwater Pollution Prevention Plan
USC	United States Code
UDWR	Utah Division of Wildlife Resources
UPDES	Utah Pollutant Discharge Elimination System

Chapter 8 References

- Del Bozque, J. 2017. Cultural Resource Inventory of the Blanding Irrigation Company's Proposed Dry Wash Pipeline, San Juan County, Utah. Montgomery Archaeological Consultants, Inc. Moab, Utah.
- Engels, C. 2017. Paleontological Reconnaissance Survey Report – Dry Wash Pipeline Survey (Section 31, T34S, R22E). PaleoWest Archaeology.
- Freels, D. 2011. Monticello Ditch Bill Cultural Resource Survey, San Juan County, Utah. Agency Report ML-11-1358. October 25, 2011.
- Hill, R. W. and J. D. Keyes. 2002. Sprinklers, Crop Water Use, and Irrigation Time: San Juan County. All Archived Publications. Paper 179. https://digitalcommons.usu.edu/extension_histall/179
- Larsen, R., and R. Lee. 2017. Report to the Farmland Advisory Committee - prepared for the Utah Tax Commission. Department of Applied Economics, Utah State University. September 20, 2017.
- Romin, L. A., and J. A. Muck. 2002. Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances. U.S. Fish and Wildlife Service, Utah Field Office. Salt Lake City. January 2002 update.
- U.S. Bureau of Reclamation (Reclamation) 2011. WaterSMART. Accessed February 28, 2017, <http://www.usbr.gov/WaterSMART/water/html>.
- U.S. Forest Service. 2017a. Blanding Irrigation Company Dry Wash Pipeline Biological Assessment and Biological Evaluation of Sensitive Species. Signed October 12, 2017.
- 2017b. Decision Memo for the Blanding Dry Wash Pipeline Project, Special Use Permit No. MON1701. Signed December 13, 2017.

Chapter 9 Appendices

Appendix A - Comments



THE PAIUTE INDIAN TRIBE OF UTAH

440 North Paiute Drive • Cedar City, Utah 84721 • (435) 586-1112

PRO Official File Copy

Received

MAR 12 '18

March 7, 2018

Wayne G. Pullan/Area Manager
Bureau of Reclamation
Upper Colorado Region
Provo Area Office
302 East 1860 South
Provo, Utah 84606-7317

Mr. Pullan,

Subject: *Blanding Irrigation Company Dry Wash Pipeline, San Juan County, Utah; State Historic Preservation Office Project No. U-17-MQ-0365f; Bureau of Reclamation Project No. PRO-EA-18-003-WaterSMART Grant*

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Action
Project *Blanding Irrigation*
Classifier *ENV 6.00/2.14.17*
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The Paiute Indian Tribe of Utah is receipt of your letter dated February 15, 2018 and has reviewed the material and do not have any objections pertaining to the above named project. As you are aware the tribes supports the identification and avoidance of prehistoric archaeological sites and Traditional Cultural Properties.

At this time we are not aware of any cultural resource sites, practices, or locations of importance in the tribe's traditional religious culture. The Paiute Tribe concurs with your determination of eligibility and effort for this undertaking.

The Paiute Indian Tribe of Utah sincerely appreciates your accomplishments and consideration you and your staff have made to consult with the tribes.

Sincerely,

Dorena Martineau

Dorena Martineau/Cultural Resources
Paiute Indian Tribe of Utah



PRO Official File Copy
Received

FEB 26 2018

Herman G. Honanie
CHAIRMAN

Alfred Lomahquahu Jr.
VICE-CHAIRMAN

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Action
July 17, 2017 Project Bureau of Reclamation project
Classification ENV 3.00 water NO. 1920-FA-
Control smart 18-003-
Folder Grant

Brian M. Pentecost, Forest Supervisor
Manti-La Sal National Forest
599 West Price Drive
Price, Utah 84501

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Dear Supervisor Pentecost,

Thank you for your correspondence dated July 6, 2017, in response to our June 27, 2017 letter regarding an environmental review of the Blanding Irrigation Company's request for authorization to install an irrigation water pipeline in an existing canal and roadway on the Moab/Monticello District in San Juan County, the Blanding Dry Wash Pipeline Project. The Hopi Tribe claims cultural affiliation to prehistoric cultural groups in the Manti-La Sal National Forest. The Hopi Cultural Preservation Office supports identification and avoidance of prehistoric archaeological sites and Traditional Cultural Properties, and we consider the archaeological sites that are habitations of our ancestors to be "footprints" and Hopi Traditional Cultural Properties. Therefore, we appreciate the Forest's continuing solicitation of our input and your efforts to address our concerns.

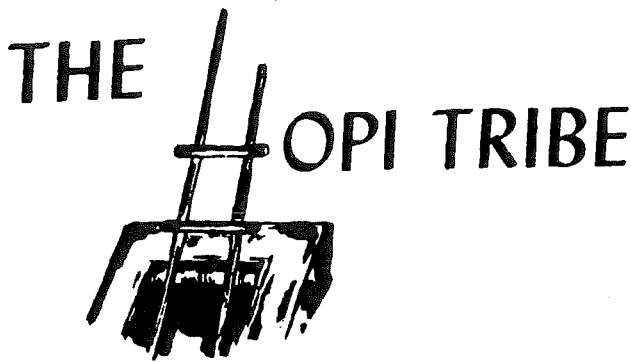
The Hopi Cultural Preservation Office understands the Forest is currently in the process of revising the 1986 Land and Resource Management Plan, including a portion of Bears Ears National Monument. We have previously consulted and are currently consulting on several Forest Management Plan updates for Forests in Arizona and New Mexico. We also understand the Forest has prepared a draft Assessment Report as part of the first phase of the process. Therefore, we look forward to receiving a copy of the draft Assessment Report for review and comment.

Regarding ongoing consultation on the Forest Plan relative to Bears Ears National Monument, the Hopi Tribe will consult with the Forest on the Bears Ears National Monument Management Plan through the Tribal Commission. Should you have any questions or need additional information, please contact Terry Morgart at tmorgart@hopi.nsn.us. Thank you for your consideration.

Respectfully,

Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: Bears Ears National Monument Commission, Alfred Lomahquahu, Jr. Vice Chairman
Michael Diem, Moab/Monticello Ranger District, Utah State Historic Preservation Office



PRO Official File Copy
Received

FEB 26 '18

Herman G. Honanie
CHAIRMAN

Alfred Lomahquahu Jr.
VICE-CHAIRMAN

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Brian M. Pentecost, Forest Supervisor
Manti-La Sal National Forest
599 West Price Drive
Price, Utah 84501

June 27, 2017 Action
Project Bureau of Reclamation Project
Classification FNU 3.00 Watershed NO
Control Grant - EA - 003
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Dear Supervisor Pentecost,

Thank you for your correspondence dated June 13, 2017, regarding an environmental review of the Blanding Irrigation Company's request for authorization to install an irrigation water pipeline in an existing canal and roadway on the Moab/Monticello District in San Juan County, the Blanding Dry Wash Pipeline Project. The Hopi Tribe claims cultural affiliation to prehistoric cultural groups in the Manti-La Sal National Forest. The Hopi Cultural Preservation Office supports identification and avoidance of prehistoric archaeological sites and Traditional Cultural Properties, and we consider the archaeological sites that are habitations of our ancestors to be "footprints" and Hopi Traditional Cultural Properties. Therefore, we appreciate the Forest's continuing solicitation of our input and your efforts to address our concerns.

The Hopi Cultural Preservation Office requests consultation on any proposal that has the potential to adversely affect prehistoric cultural resources on the Manti La Sal National Forest. Therefore, if the cultural resources survey of the area of potential effects identifies prehistoric cultural resources that may be affected by project activities, please provide us with copies of the survey report and any proposed treatment plans for review and comment.

We appreciate that if any cultural features or deposits are encountered during project activities, these activities will be discontinued in the immediate area of the remains, and the State Historic Preservation Office will be consulted to evaluate their nature and significance and if any Native American human remains or funerary objects are discovered during construction they will be immediately reported as required by law. Should you have any questions or need additional information, please contact Terry Morgart at tmorgart@hopi.nsn.us. Thank you for your consideration.

Respectfully,

Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: Michael Diem, Moab/Monticello Ranger District, 432 E. Center St., P.O. Box 820, Monticello, Utah 84535
Utah State Historic Preservation Office



Smith, Carley <csmith@usbr.gov>

Blanding Irrigation Company/BOR project No. PRO-EA-18-3 Water SMART Grant
1 message

Timothy Begay <tbegay@navajo-nsn.gov>
To: "csmith@usbr.gov" <csmith@usbr.gov>

Tue, Feb 27, 2018 at 11:24 AM

Dear Ms. Smith,

The Navajo Nation Heritage and Historic Preservation Department is in receipt of your letter dated February 14, 2018, regarding the Blanding Irrigation Company Dry Wash Pipeline Bureau of Reclamation Project No. PRO-EA-18-003 Water SMART Grant Project, located near Blanding, San Juan County, Utah.

The Navajo Nation has no concerns and agrees with determination of "No Historic Properties Affected" at this time. Thank you for your consultation with Navajo Nation.

Sincerely,
Timothy C. Begay, Navajo Cultural Specialist
Navajo Nation Heritage and Historic Preservation Department



sanjuancounty.org

SAN JUAN COUNTY PLANNING DEPARTMENT

February 28, 2018

Bureau of Reclamation
Attn: Rick Jones
302 East 1860 South
Provo, Utah 84606-7317

Re: Proposed Blanding Irrigation Company's Dry Wash Canal Pipeline

Dear Mr. Jones:

San Juan County fully supports the proposed construction of a pipeline to deliver water to Dry Wash Reservoir on the Manti- La Sal National Forest in San Juan County. We understand the purpose of the proposed pipeline is to replace the existing open canal delivery system and thereby provide a more reliable and efficient method of water delivery.

This proposal is consistent with canal and irrigation policies in the San Juan County Resource Management Plan. Such policies support the improvement of irrigation water delivery systems to improve efficiency and water conservation.

We also support design and best management practices for control of noxious weeds as stated in the Forest Service's Decision Memo of December 13, 2017, for Special Use Permit MON-1701. Cleaning all equipment to remove noxious weed seed prior to entry onto the work area is consistent with County policy for management and control of noxious and invasive plants.

Potential impacts to County-maintained roads have been satisfactorily addressed in the project design through consultation with County staff.

We appreciate this opportunity for comment.

Sincerely,

Nick Sandberg
County Planner

cc: Ben Musselman, County Public Works Director
Mike Diem, District Ranger, USFS



PRO Official File Copy
Received

MAR 05 '18

February 27, 2018

Mr. Rick Jones
United States Department of the Interior
302 East 1860 South
Provo, UT 84606-7317

Mr. Jones,

Thank you for your letter regarding the proposed Blanding Irrigation Company pipeline to Drywash Reservoir.

For all the reasons mentioned in your letter Blanding City supports the pipeline. It will be a tremendous benefit to water users and help preserve this most valuable resource.

With regards to the Environmental Assessment I see no concerns whatsoever. With the exception of less than 1/4 mile, the right of way for the pipeline runs along an existing constructed ditch and roadway. Environmental impacts, if any, would have happened decades ago.

Sincerely,

Joe B. Lyman
Mayor
City of Blanding

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Project Blanding Irrigation Center
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FOR PROUD AREA OFFICE
MAY 9 '18 10:43

File Code: 2700
Date: March 28, 2018

Dear Wayne G. Pullan,

In response to the Proposed Blanding Irrigation Company Dry Wash Canal Pipeline project commenting period, the Manti-La Sal National Forest, Monticello Ranger District would like to show their support for the proposed project. Currently, the Monticello Ranger District has issued a permit (MON1701) for construction, operation, and maintenance of the proposed project.

The Monticello Ranger District believes that the Dry Wash Canal Pipeline project will in many ways benefit the communities of San Juan County. Whether it be for the sustainability of water supply for the local communities or further secure way of conveying water for the health and safety of its consumers... everyone will benefit from this project. With the consistent and ever impending droughts it is essential to insure that a more effective way to prevent loss through evaporation and ground seep is being adopted in a time of "every drop counts". Everyday there is something new that poses a risk to the health and safety of the public interest and a closed water transportation system will help alleviate some of those concerns.

The Manti La-Sal National Forest, Monticello Ranger District is supportive of this proposed project and is looking forward towards its completion.

If you require any information regarding current use on the existing permit, contact Natural Resource Specialist, Francisco Castillo at 435-636-3336 or franciscojcastillo@fs.fed.us.

Sincerely,

MICHAEL DIEM
District Ranger



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Dry wash candl project



May 22, 2018

Mr. Rick Jones
United States Department of the Interior
Bureau of Reclamation
302 East 1860 South
Provo, UT 84606
rljones@usbr.gov

RE: Dry Wash Pipeline Draft Environmental Assessment

Mr. Jones:

Blanding City has reviewed the draft environmental assessment for the proposed Dry Wash Pipeline. We are supportive of the project moving forward and support the proposed action (preferred alternative).

We often see very dry drought conditions in our area, and converting 2.2 miles of open canal to 1.7 miles of pipeline will greatly enhance the ability of the Blanding Irrigation Company to store water when runoff is available. The pipeline will increase the amount of water in Dry Wash Reservoir and greatly reduce seepage, leakage, and evaporation from the open ditch.

We encourage you to issue a finding of "No Significant Impact" for this project so construction can begin on the pipeline this fall.

Sincerely,

A handwritten signature in blue ink that reads "Joe B. Lyman". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Joe B. Lyman
Mayor

San Juan County



sanjuancounty.org

SAN JUAN COUNTY PLANNING DEPARTMENT

June 1, 2018

Rick Jones
Bureau of Reclamation
302 East 1860 South
Provo, Utah 84606

Re: Draft Environmental Assessment – Blanding Irrigation Company's Dry Wash Pipeline

Dear Mr. Jones:

We have reviewed the draft Environmental Assessment (EA) for Blanding Irrigation Company's Dry Wash Pipeline and have no comments on the analysis.

As noted in our February 28, 2018, letter, the proposed action addressed in this EA is consistent with canal and irrigation policies as well as agricultural resource policies in the San Juan County Resource Management Plan of 2017.

We find that the County's concerns with the proposed project have been adequately addressed in the EA and construction stipulations as follows.

- Concerns with the disruption of traffic on County Road B285 (Johnson Creek) will be mitigated through detour or single lane traffic.
- Concerns with the pipeline crossing of this road have been adequately addressed in design and engineering plans and will be permitted through an Encroachment Permit from the County.
- Noxious weed concerns have been addressed through a permit issued by the Forest Service and in the minimization measures.

We appreciate this opportunity to comment.

Sincerely,

Nick Sandberg
County Planner

BOR-PROVO AREA OFFICE
JUN 4 '18 PM 1:18

cc: Ben Musselman, County Public Works Director
Mike Diem, District Ranger, USFS

File Code: 2700
Date: June 4, 2018

Bureau of Reclamation
Mr. Rick Jones
302 East 1860 South
Provo, UT 84606

Dear Rick Jones,

This letter is in response to the Draft Environmental Assessment – Dry Wash Pipeline – Blanding Irrigation Company Water Conservation Project – WaterSMART in San Juan County, Utah.

The Manti-La Sal National Forest, Monticello Ranger District would like to share their comment involving this project. A Decision Memo was completed in December 2017 for issuing permit MON1701 for the purpose of replacing the existing Dry Wash Ditch for a 24", single wall HDPE, and gravity flow pipeline. Within the Decision Memo document there are design features that need to be implemented in order for the Blanding Dry Wash Pipeline to be implemented as a part of the authorized use under MON1701.

- In the Bureau of Reclamation's Draft EA there is mention of installing vent pipes, made of galvanized steel, at appropriate locations along the existing alignment. As there is no mitigation in place for the galvanized vent pipes within the authorized use, the Moab Ranger District is recommending that these vent pipes be either camouflaged or designed to minimize its visibility and impact on the surrounding environment.

This request will help the Forest Service with maintaining visual objectives within the area. The Manti La-Sal National Forest, Monticello Ranger District is supportive of this proposed project and is looking forward towards its completion.

If you require any information regarding current use on the existing permit, contact Natural Resource Specialist, Francisco Castillo at 435-636-3336 or franciscojcastillo@fs.fed.us.

Sincerely,



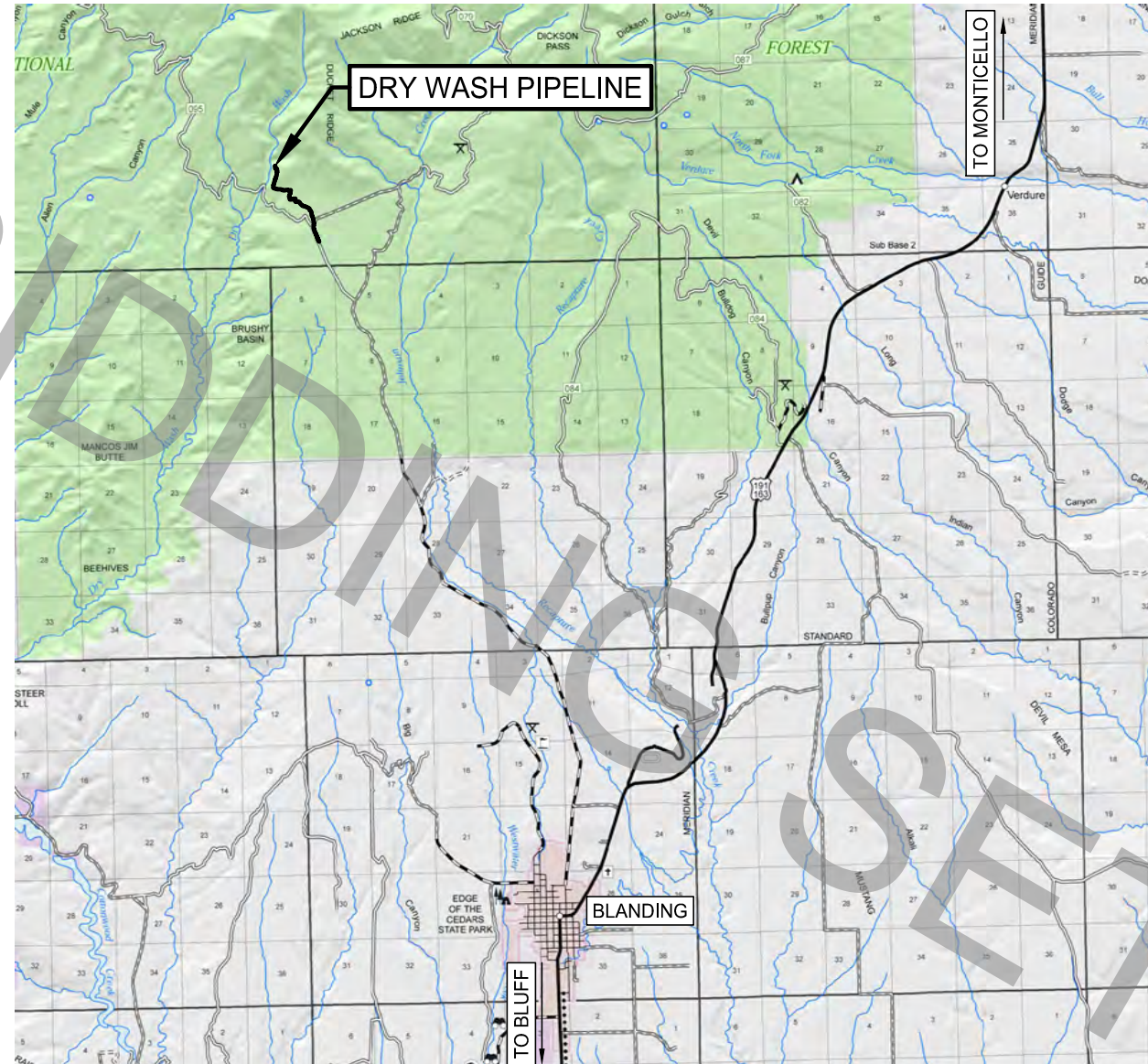
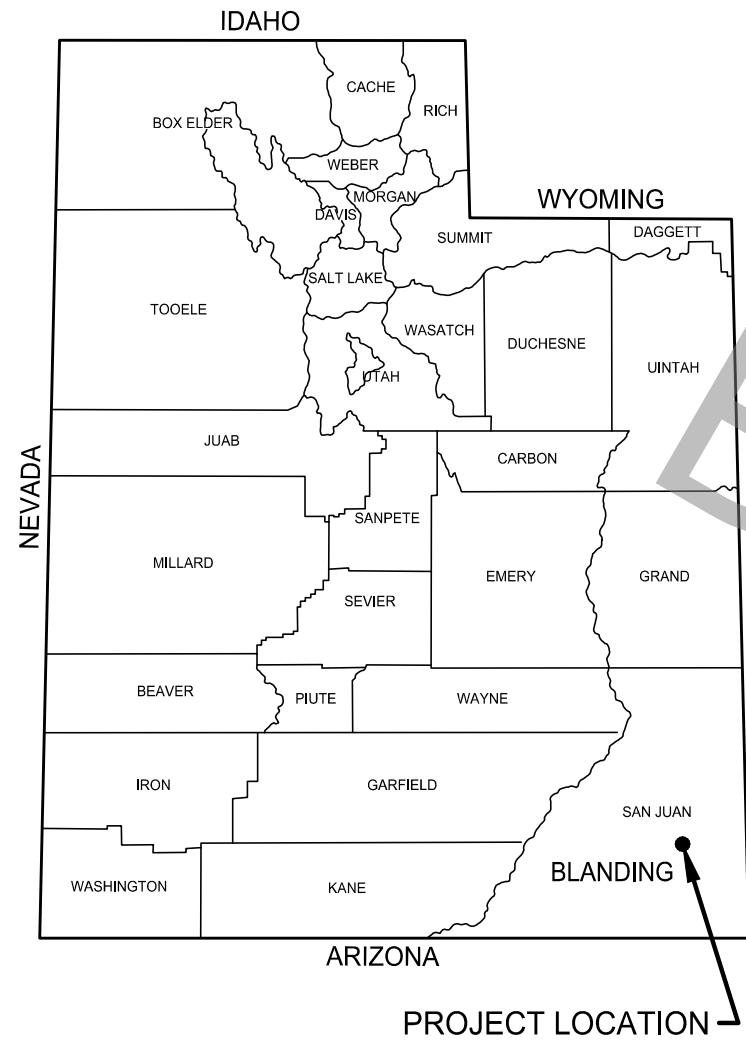
MICHAEL DIEM
District Ranger



Appendix B - Engineered Drawings

BLANDING IRRIGATION COMPANY DRY WASH PIPELINE BLANDING, SAN JUAN, UTAH 2017

PROJECT NO.	SHEET NO.
1610-288	1



VICINITY MAP

APPROVAL

RECOMMENDED FOR APPROVAL:	
ENGINEER	DATE
APPROVED:	
BLANDING IRRIGATION COMPANY	DATE



Jones & DeMille Engineering, Inc.

CIVIL ENGINEERING - SURVEYING - TESTING
GIS - ENVIRONMENTAL

- infrastructure professionals -

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INDEX TO SHEETS

SHEET NUMBER	SHEET TITLE
1	TITLE
1A	INDEX
GN-01	GENERAL NOTES
TS-01	TRENCH SECTION
DT-01 TO DT-04	DETAILS
PL-01	PLAN
PP-01 TO PP-09	PLAN AND PROFILE

LEGEND

	IRRIGATION LINE
	AIR VALVE
	DRAIN VALVE
	FLOW METER
	RIPRAP
	EASEMENT



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 CIVIL ENGINEERING - SURVEYING - TESTING
 GIS - ENVIRONMENTAL
 1,800.748.5275 www.jonesandmille.com

APPROVAL: _____ DATE: _____
 RECOMM: _____ DATE: _____
 APPROVED: _____ DATE: _____
 PROJECT DESIGN ENGINEER
 QUALITY MANAGEMENT REVIEW

BLANDING IRRIGATION COMPANY
 DRY WASH PIPELINE
 INDEX
 PROJECT NUMBER: 1610-288

SAN JUAN COUNTY
 SHEET NO. 1A

SCALE: 1" = 1000'
 DWG NAME: H:\JDI\Proj\1610-288.dwg\Title.dwg
 REVISIONS
 NO. DATE
 UPDATED: 11/15/2017
 PLOTTED: 11/15/2017

GENERAL NOTES

GENERAL CONSTRUCTION NOTES:

1. NOTIFY BLANDING IRRIGATION COMPANY, PRIOR TO BEGINNING ANY CONSTRUCTION.
2. ANY MODIFICATION TO THIS CONSTRUCTION PACKAGE OR TO THE CONSTRUCTION SCHEDULE SHALL BE APPROVED BY THE ENGINEER.
3. ALL SURPLUS EXCAVATION SHALL BE REMOVED FROM THE SITE. TOPSOIL OR OTHER NATIVE MATERIAL MAY BE USED IN LANDSCAPE GRADING. STOCKPILE TOPSOIL SEPARATELY FROM OTHER EXCAVATED MATERIALS IN THE LOCATION DESIGNATED BY THE OWNER'S REPRESENTATIVE.
4. TRACER WIRE SHALL BE PLACED ABOVE ALL NON-METALLIC WATER LINES
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER BACKFILLING, COMPACTING, AND PAVEMENT RESTORATION WITHIN STREET RIGHT-OF-WAY. REFER TO APPROPRIATE COUNTY DETAILS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS FROM COUNTY TO WORK WITHIN THE RIGHT-OF-WAY.
6. CONTRACTOR SHALL PROVIDE CONSTRUCTION SCHEDULE TO INSPECTOR AFTER SAID SCHEDULE HAS BEEN APPROVED BY ENGINEER AND OWNER.
7. CONTRACTOR TO PROVIDE 48 HR. NOTICE TO COUNTY PRIOR TO IMPACTING SERVICE, ACCESS, OR ANY OTHER IMPACTS.

WATER NOTES:

1. WATER LINE TRENCHES IN PUBLIC AND PRIVATE ROADWAYS AND TRAFFIC AREAS ARE TO BE THOROUGHLY COMPACTED AT 95% OF MAXIMUM DENSITY PER ASTM D1557. DENSITY CHECKS MAY BE REQUIRED BY THE BLANDING IRRIGATION COMPANY AT ANY TIME.
2. A MINIMUM OF 24" OF COVER FROM THE TOP OF THE PIPE TO THE FINISH GRADE IS REQUIRED UNLESS OTHERWISE NOTED.
3. HDPE PIPE SHALL BE USED. PLACE 10 GAUGE WIRE ON TOP OF THE PIPE FOR FUTURE LOCATING. NO DEFLECTION IN PIPE JOINTS WILL BE ALLOWED ON HDPE PIPES, AND RADIUS MUST MEET MANUFACTURE'S RECOMMENDATION FOR MINIMUM RADIUS. IN NO CASE SHALL THE COLD BENDING RADIUS OF ANY PIPE BE LESS THAN 25 X THE DIAMETER.
4. ALL WATERLINES SHALL BE BEDDED IN 2" MINUS (SE MINIMUM) 6" UNDER, 12" AROUND.
5. PLUG END OF PIPE AFTER EACH WORK DAY.
6. HDPE PIPE SHALL BE IRON PIPE SIZE (IPS) UNLESS OTHERWISE NOTED.

CONSTRUCTION SPECIFICS

1. CONTRACTOR SHALL NOT STORE ANY MATERIALS INSIDE THE PIPE.
2. STAGING AREAS (IF ANY) MUST BE ACCEPTED BY THE ENGINEER PRIOR TO CONSTRUCTION. CONTRACTOR TO RESTORE STAGING AREA TO PRECONSTRUCTION CONDITION.

BACKFILL, COMPACTION, AND EMBANKMENT

1. USE ALL MEANS NECESSARY TO PROTECT IMPORTED BACKFILL MATERIAL BEFORE, DURING AND AFTER INSTALLATION. PROTECT THE INSTALLED WORK AND MATERIALS OF ALL OTHER TRADES.
2. DO NOT STORE CONSTRUCTION MATERIAL ON STREETS, ROADS, OR HIGHWAYS UNLESS APPROVED BY THE ENGINEER.
3. DO NOT PLACE, SPREAD OR ROLL ANY FILL MATERIAL DURING UNFAVORABLE WEATHER CONDITIONS. DO NOT RESUME OPERATIONS UNTIL MOISTURE CONTENT IS AT +/- 2% OF OPTIMUM OR AS APPROVED BY ENGINEER.
4. PROVIDE BERMS OR CHANNELS AS NECESSARY TO PREVENT FLOODING OR SATURATION OF SUBGRADE. PROMPTLY REMOVE ALL WATER COLLECTING IN DEPRESSIONS BY APPROVED MEANS AS NECESSARY.
5. DO NOT PLACE BACKFILL ON FROZEN OR SNOW COVERED GROUND.
6. COMPLETE CONSTRUCTION OF BEDDING AND BACKFILL IN PIPE ZONE ON SAME DAY PIPE IS PLACED IN TRENCH.
7. THE PIPE ZONE IS DEFINED AS THE AREA FROM SIX INCHES BELOW THE BOTTOM OF THE PIPE TO TWELVE INCHES ABOVE THE TOP OF THE PIPE.
8. DO NOT BACKFILL TRENCH UNTIL THE INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER OR INSPECTOR.

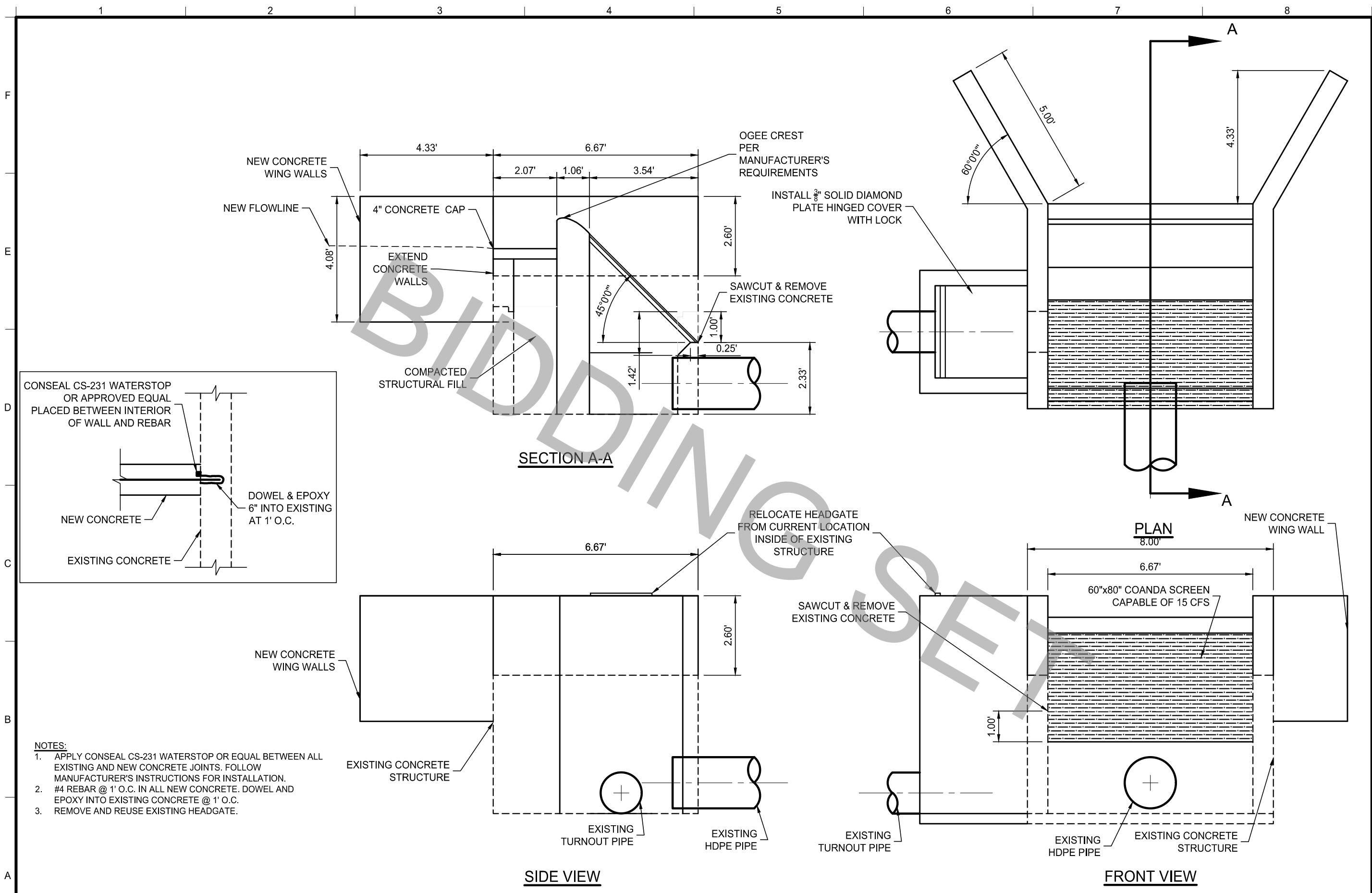
REGULATORY REQUIREMENTS

1. REQUIREMENTS OF ALL REGULATORY PERMITS WILL BE ADHERED TO.
2. IN CASES WHERE THE DRAWINGS AND THE PERMITS CONFLICT THE PERMIT REQUIREMENTS WILL GOVERN, UNLESS DRAWINGS ARE MORE STRINGENT, IN WHICH CASE CONTACT ENGINEER.

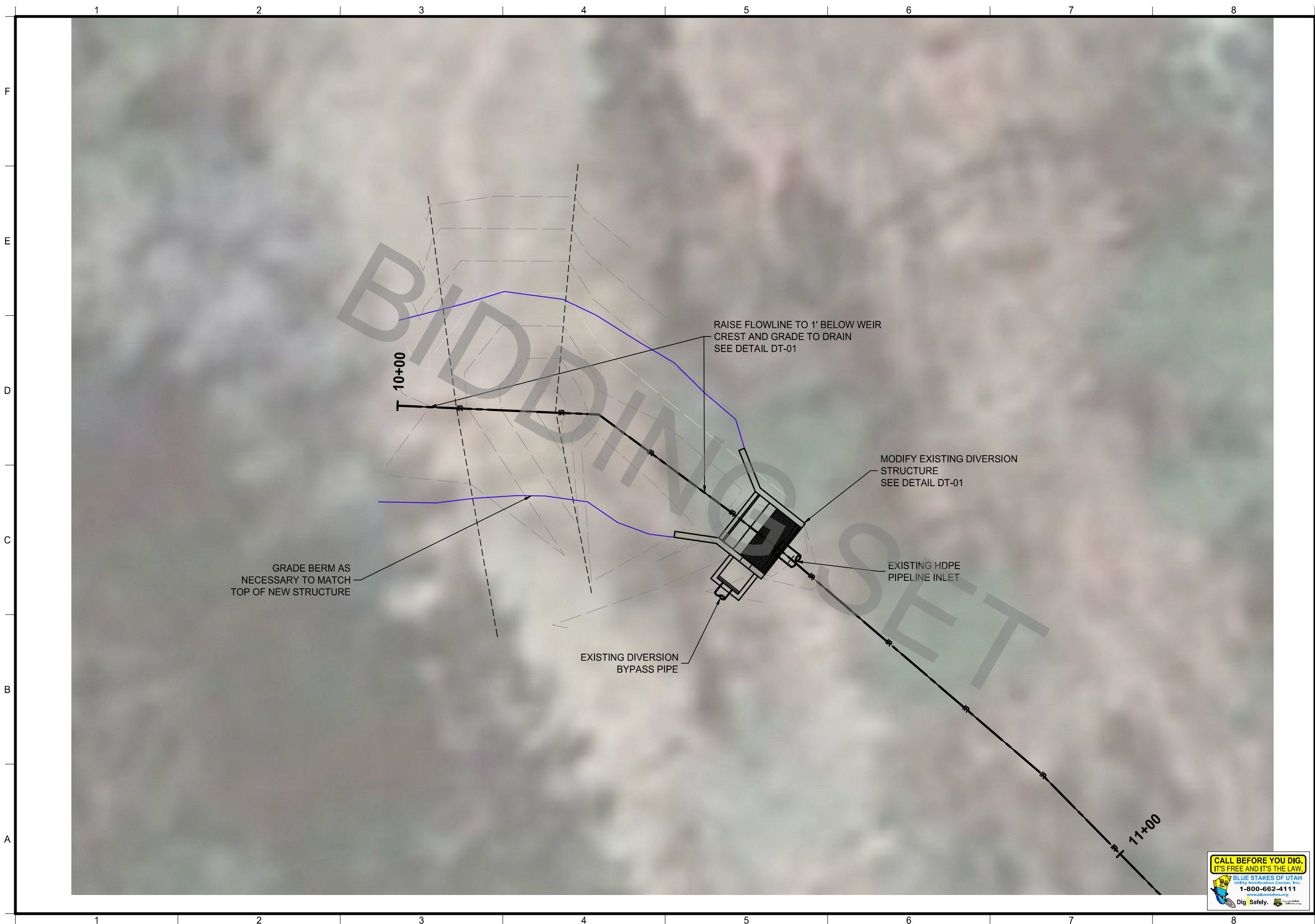
GENERAL EROSION CONTROL NOTES:

1. AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING AND CONTROLLING EROSION DUE TO WIND AND RUNOFF.
2. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO UNFORESEEN PROBLEMS OR IF THE PLAN DOES NOT FUNCTION AS INTENDED. A REPRESENTATIVE OF THE BLANDING IRRIGATION COMPANY MAY REQUIRE ADDITIONAL CONTROL DEVICES UPON INSPECTION OF PROPOSED FACILITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE STREETS CLEAN AND FREE FROM DEBRIS DURING CONSTRUCTION
4. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT WITH STORM WATER DISCHARGES FROM THE SITE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) DUE TO GRADE CHANGES DURING THE CONSTRUCTION OF THE PROJECT.
6. ALL OFF-SITE CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF ASPHALT PAVING FOR ROAD CONSTRUCTION.
7. ALL MEASURES CONTAINED IN THIS PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT. ANY NEEDED CLEANING AND REPAIRS NEED TO BE DONE IMMEDIATELY UPON DISCOVERY.
8. ALL UTILITY LINES SHALL BE CLEANED OF DIRT AND DEBRIS PRIOR TO BEING PUT INTO SERVICE. DOWN-GRADE LINES MUST BE PROTECTED FROM WASH-WATER DURING THE CLEANING PROCESS TO AVOID CONTAMINATION AND COMPROMISING OUTFALL CLEANLINESS.
9. DUST, MUD AND EROSION SHALL BE CONTROLLED BY WHATEVER MEANS NECESSARY, AND THE ADJACENT ROADWAY SHALL BE KEPT FREE OF MUD AND DEBRIS AT ALL TIMES.
10. EROSION CONTROL MEASURES WILL BE INSTALLED PER THE PROJECT SWPPP PLAN.

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BLANDING IRRIGATION COMPANY		DETAILS		
DRY WASH PIPELINE		1610-288		
SCALE		PROJECT NUMBER:		
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DIVERSION INLET STRUCTURE		SHEET NO. DT-01		



GRADE BERM AS NECESSARY TO MATCH TOP OF NEW STRUCTURE

RAISE FLOWLINE TO 1' BELOW WEIR CREST AND GRADE TO DRAIN SEE DETAIL DT-01

MODIFY EXISTING DIVERSION STRUCTURE SEE DETAIL DT-01

EXISTING HDPE PIPELINE INLET

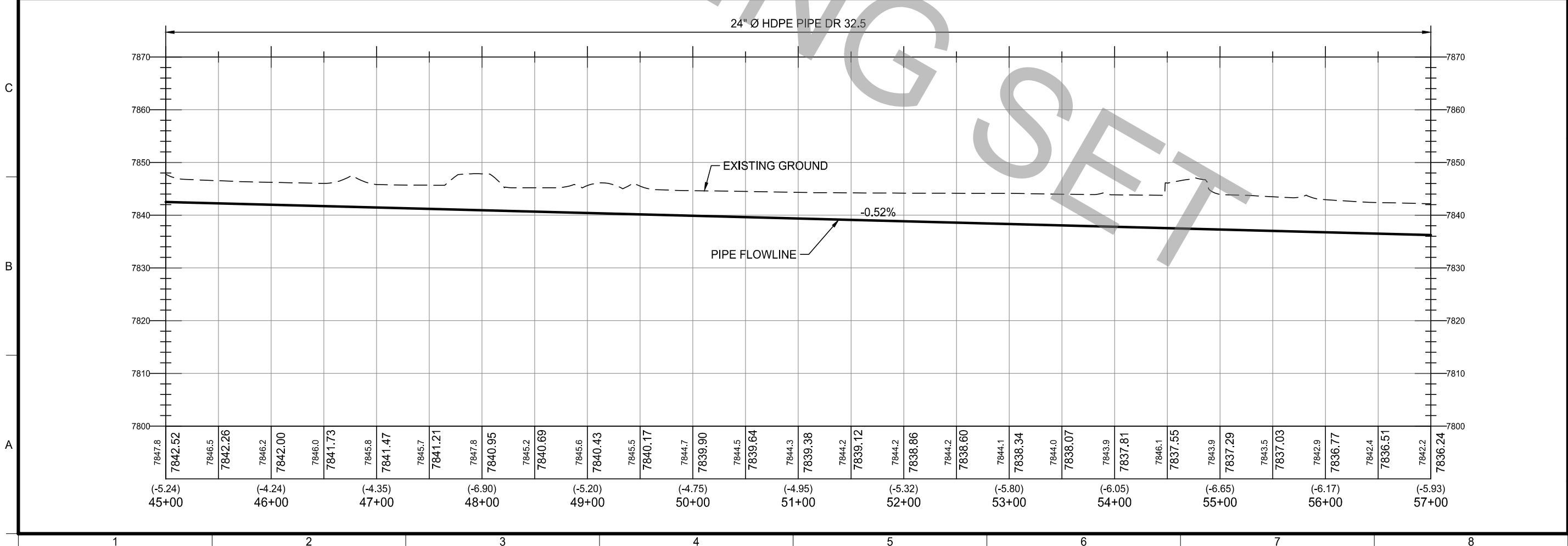
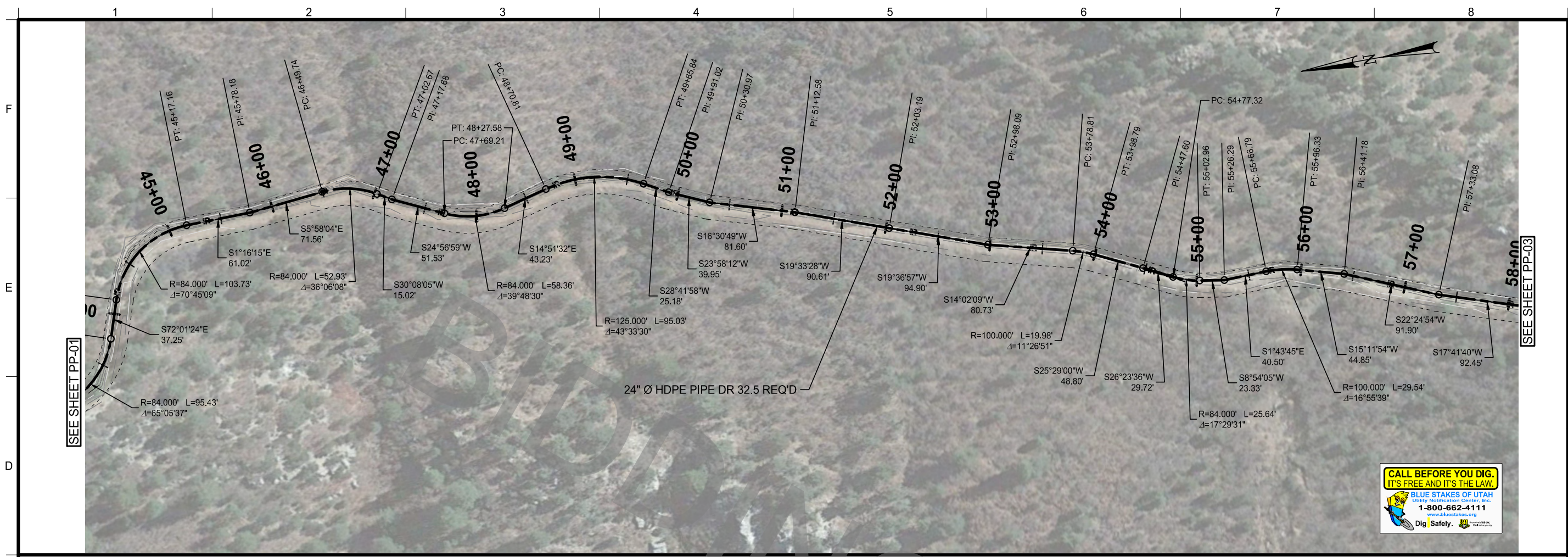
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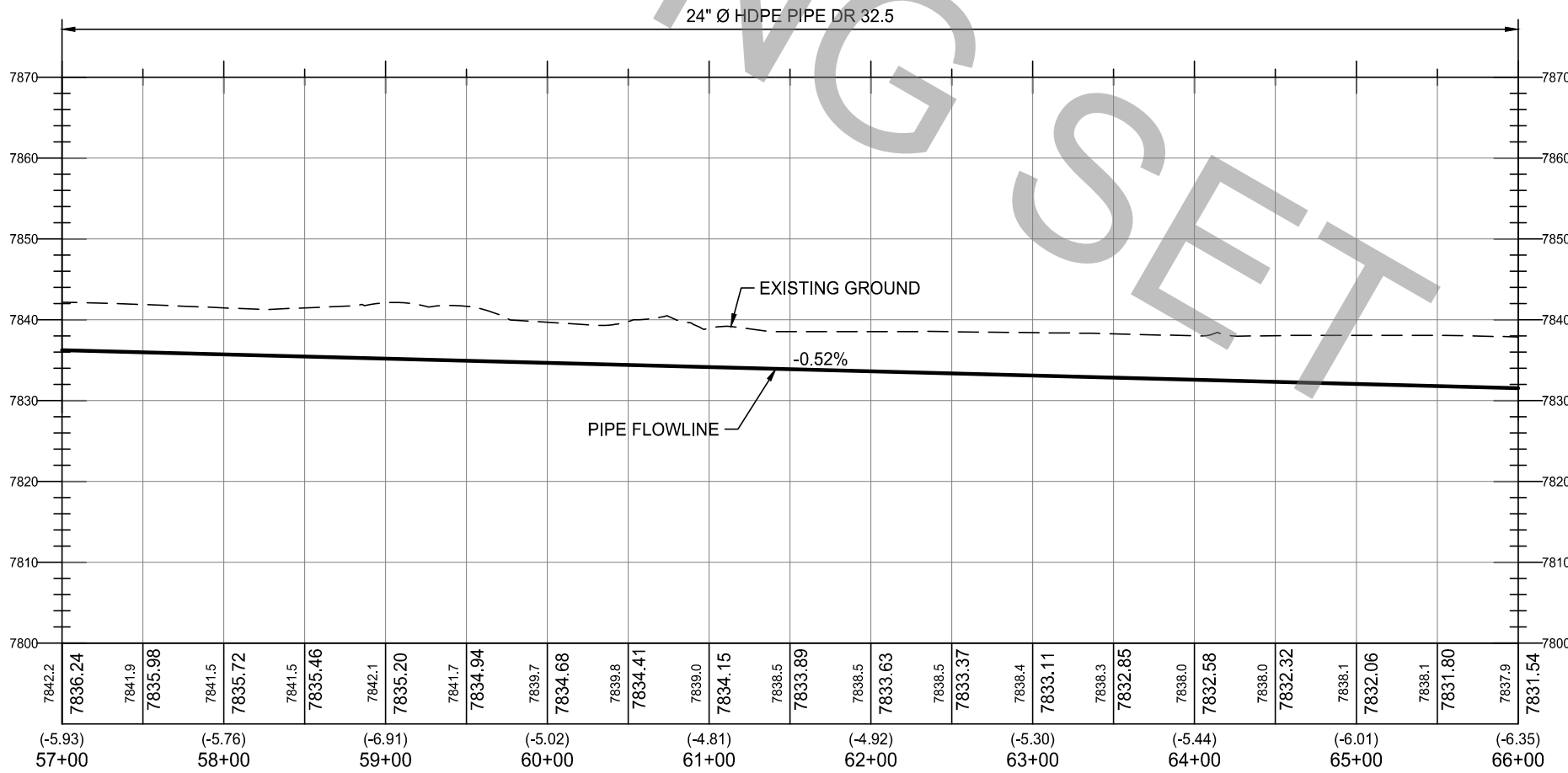
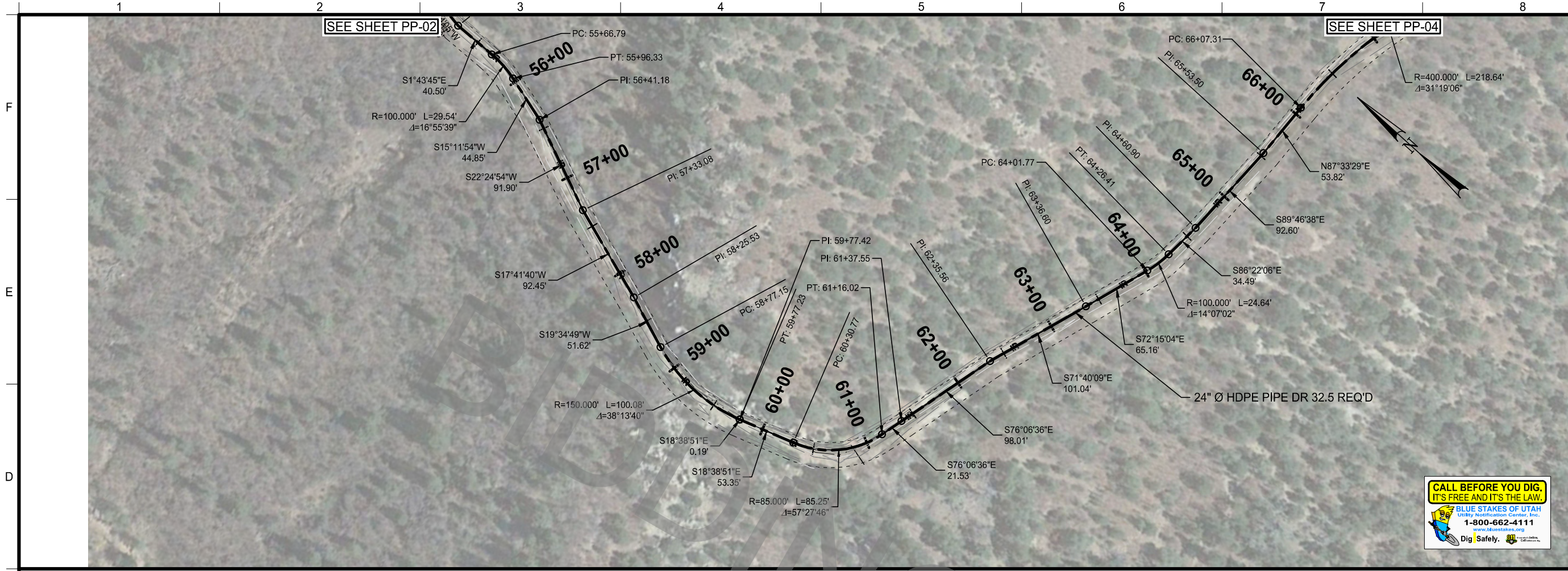
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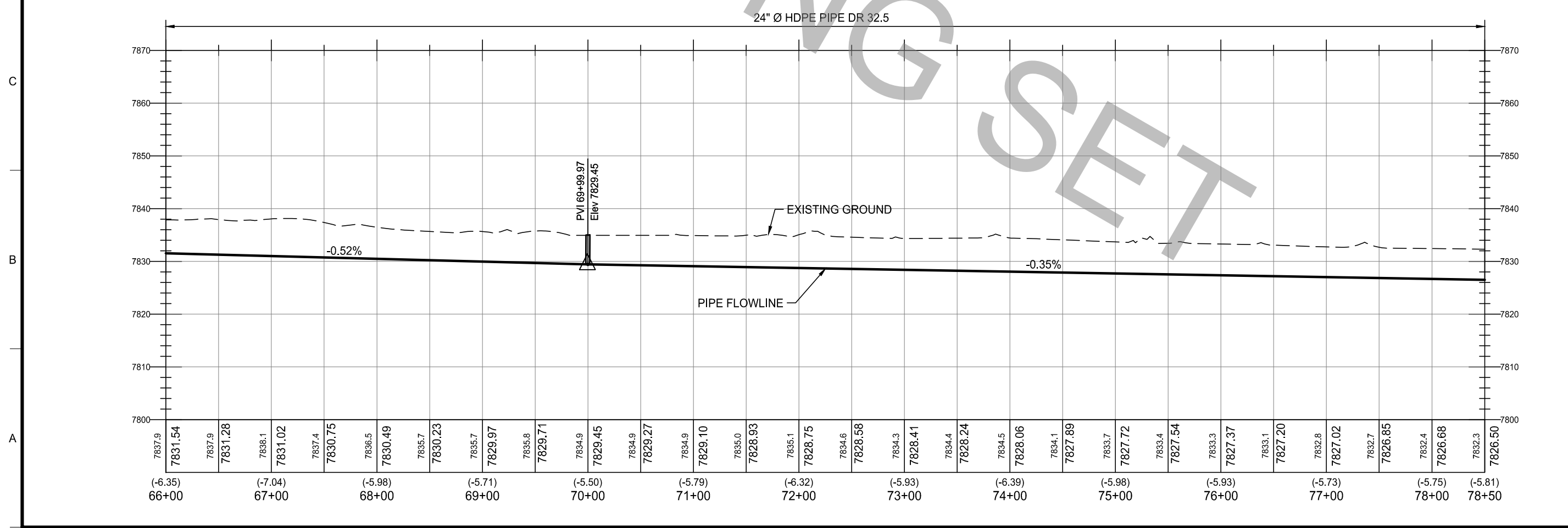
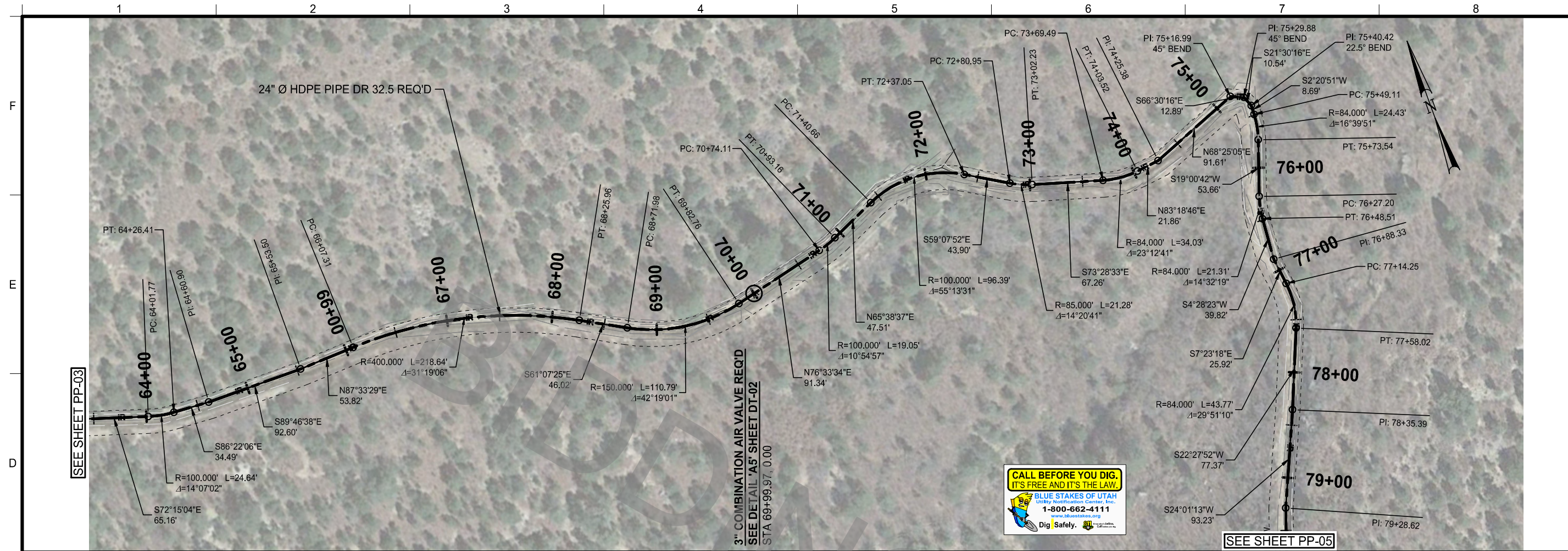
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COUNTY SAN JUAN	
SHEET NO. PP-02	
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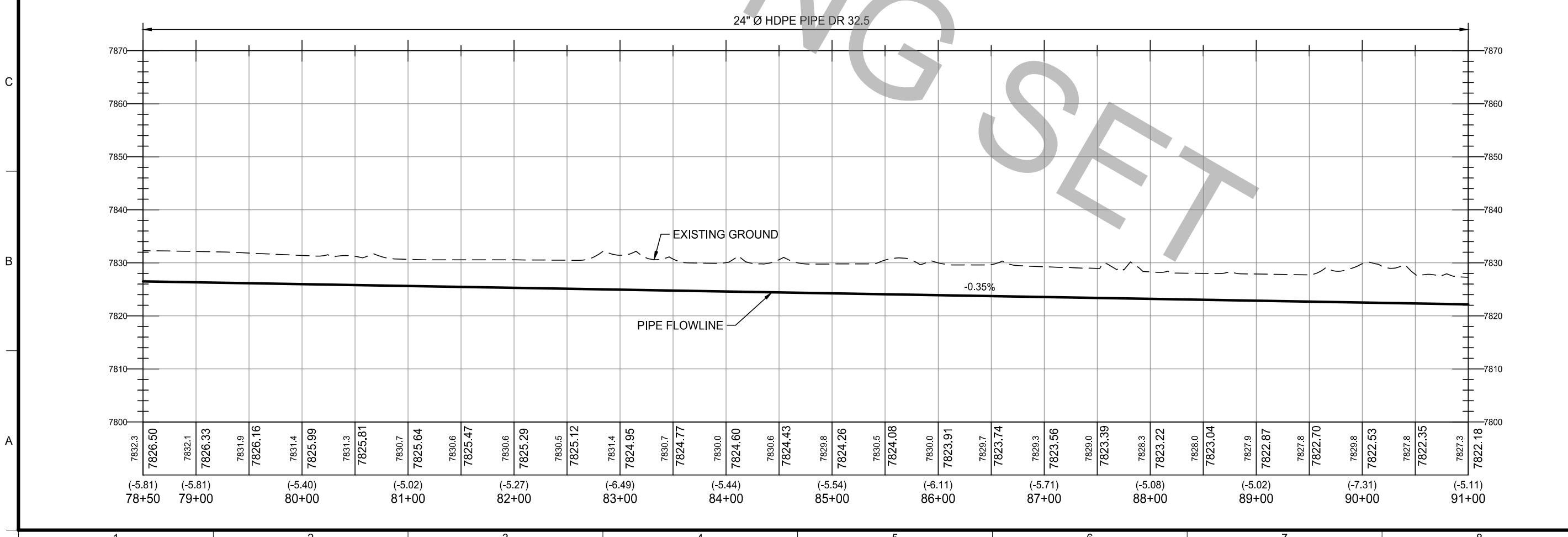
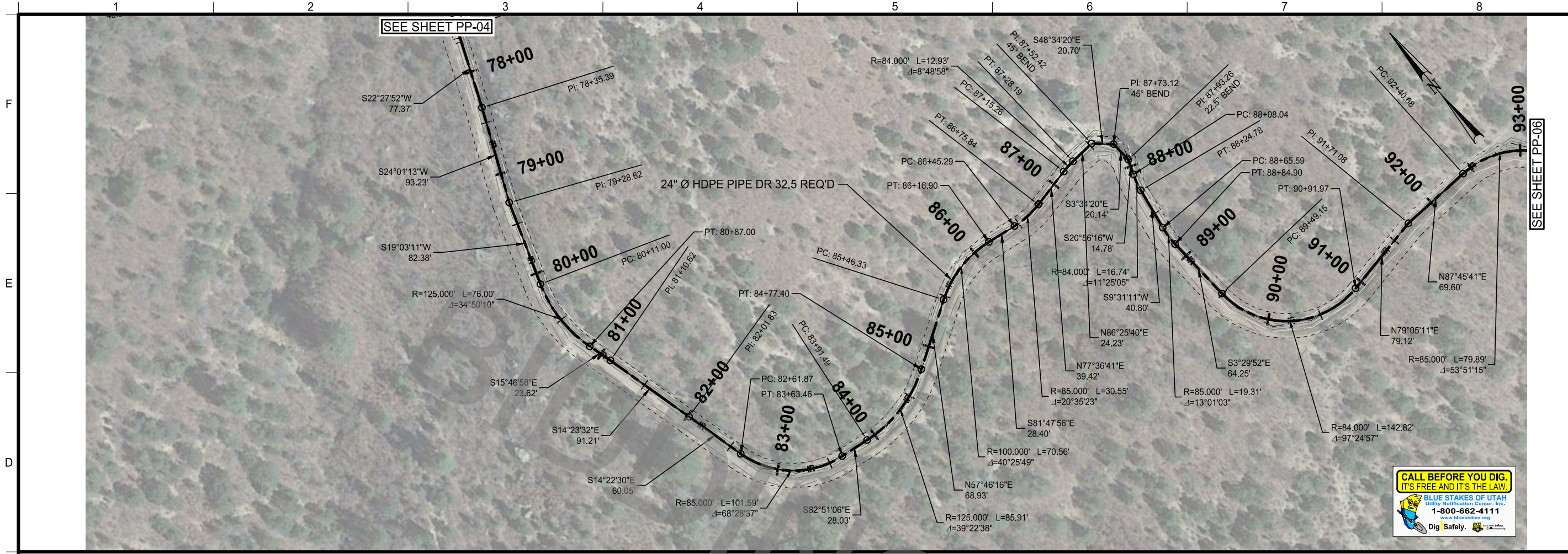


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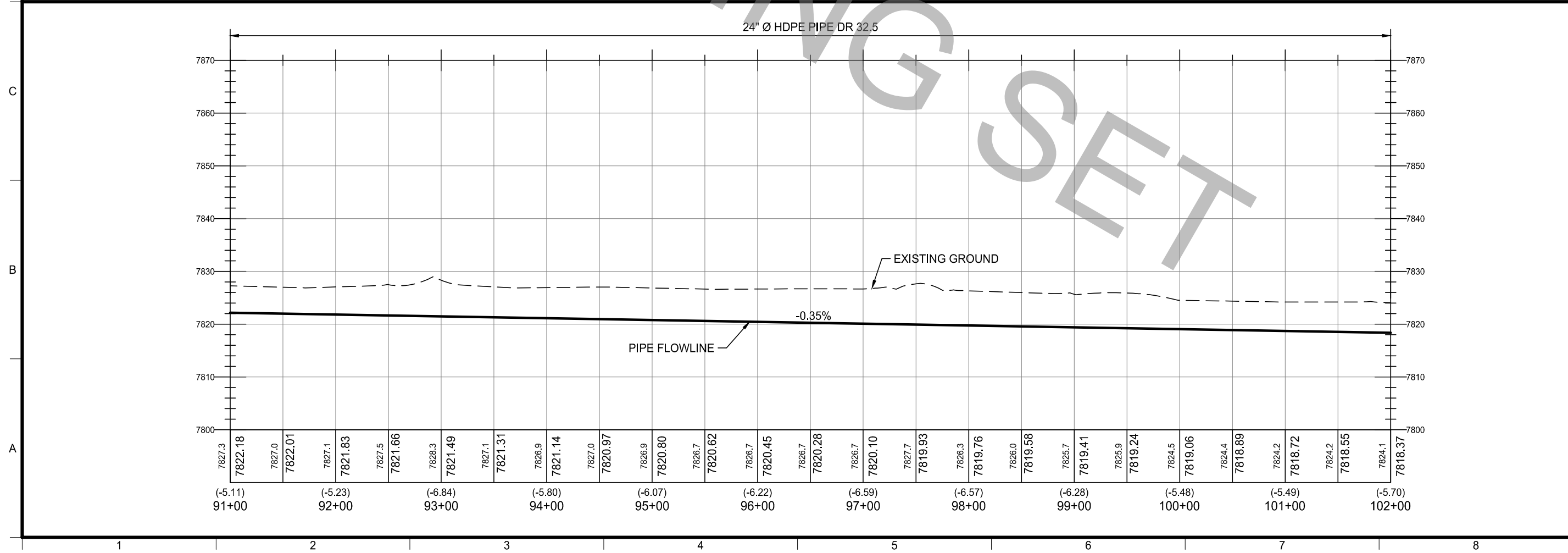
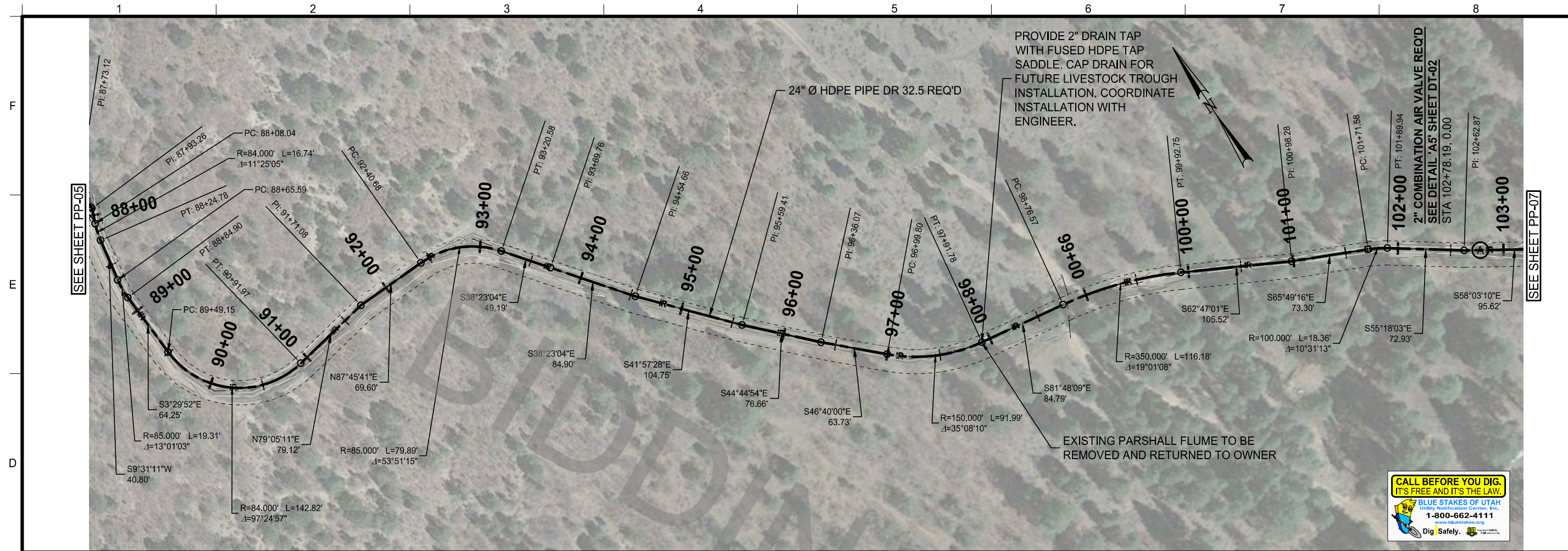
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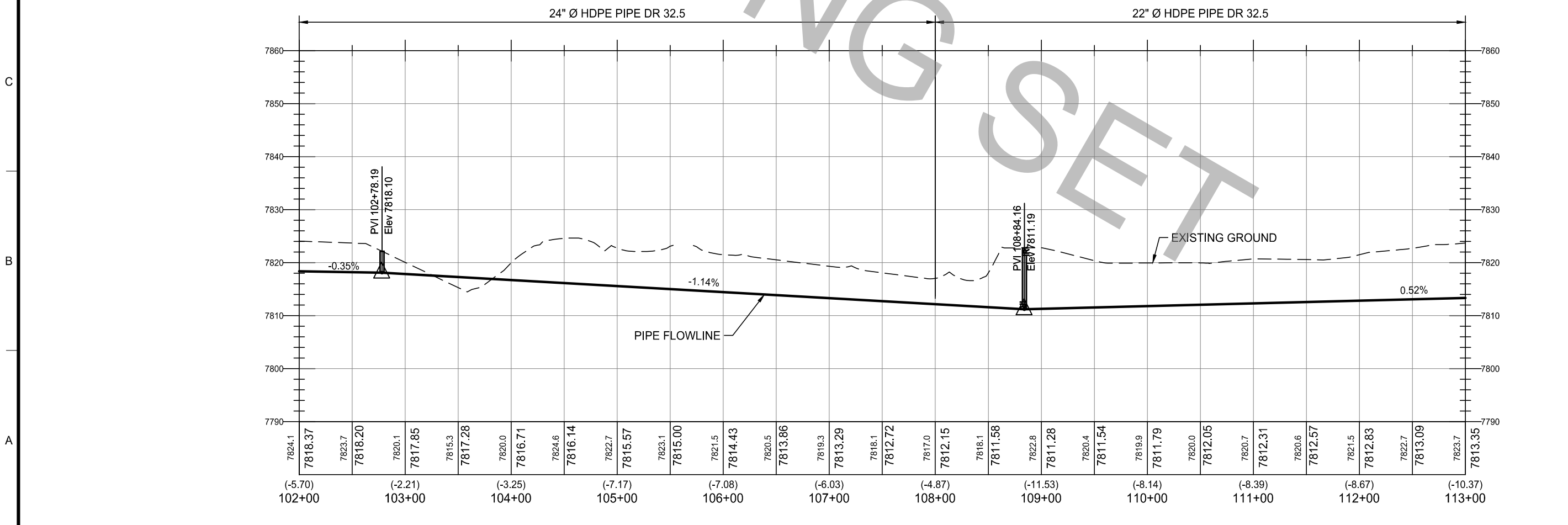
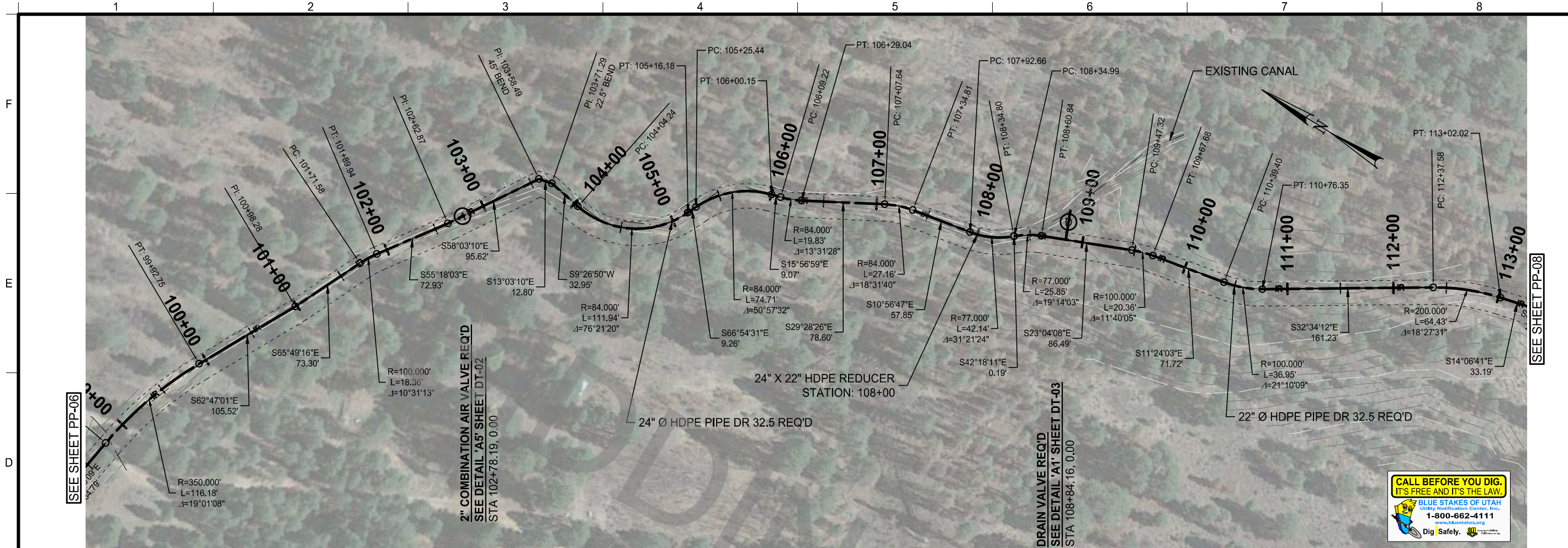


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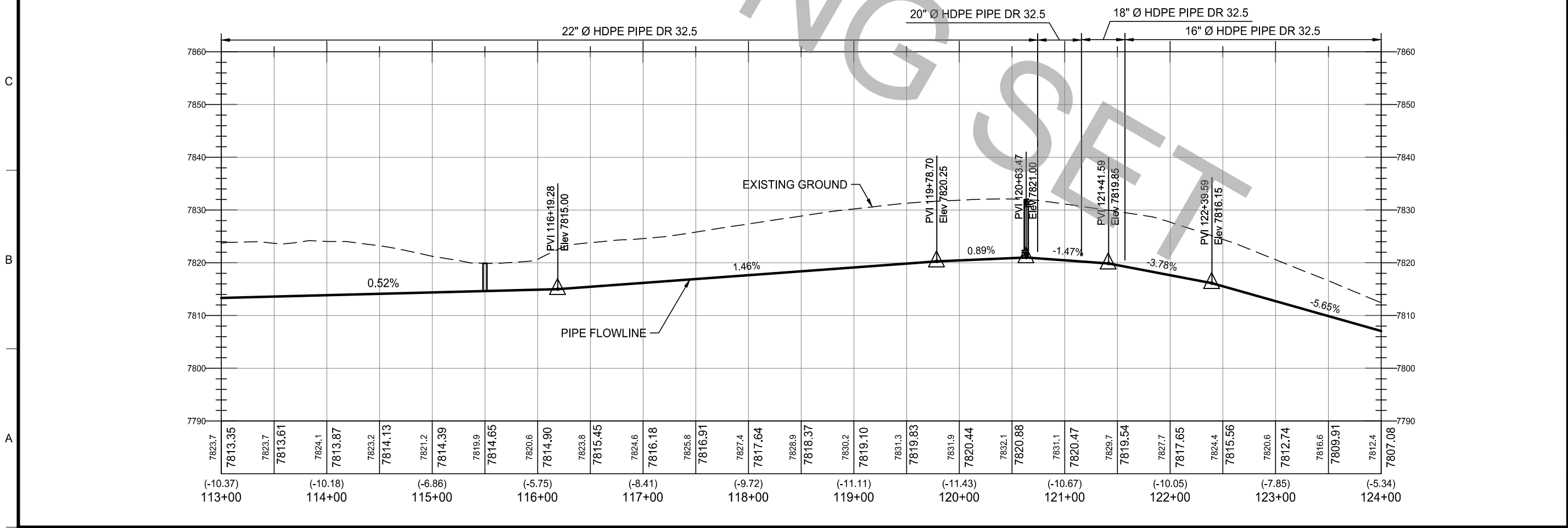
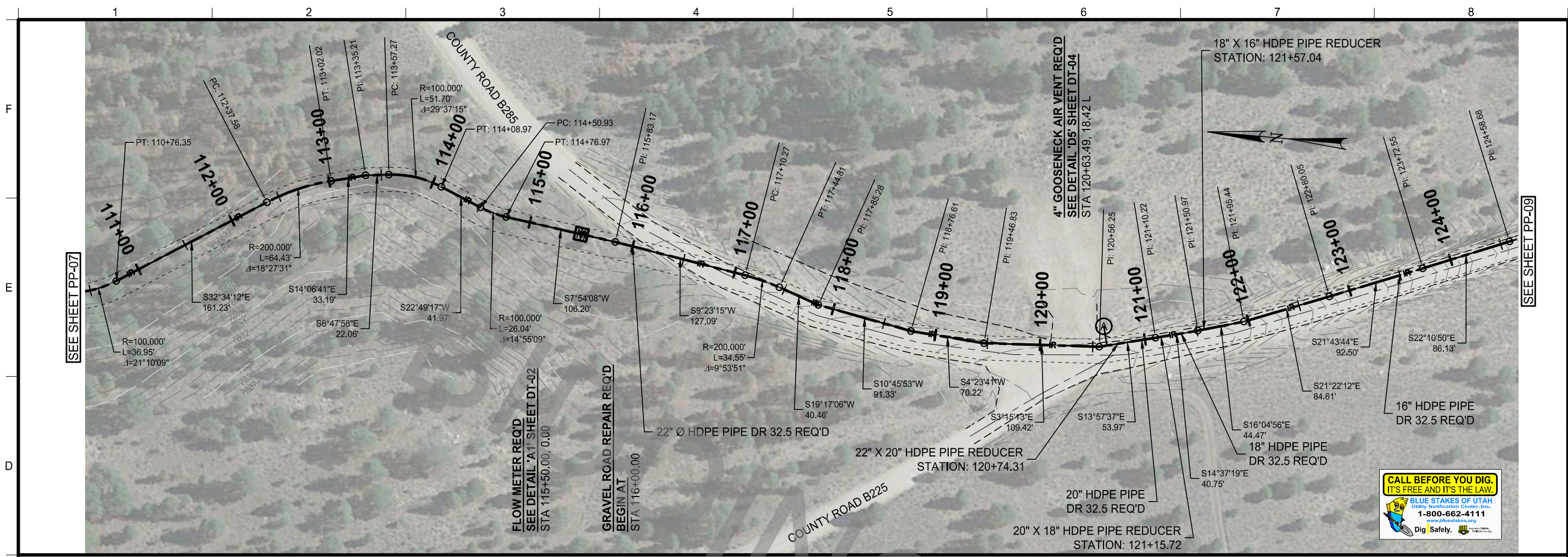


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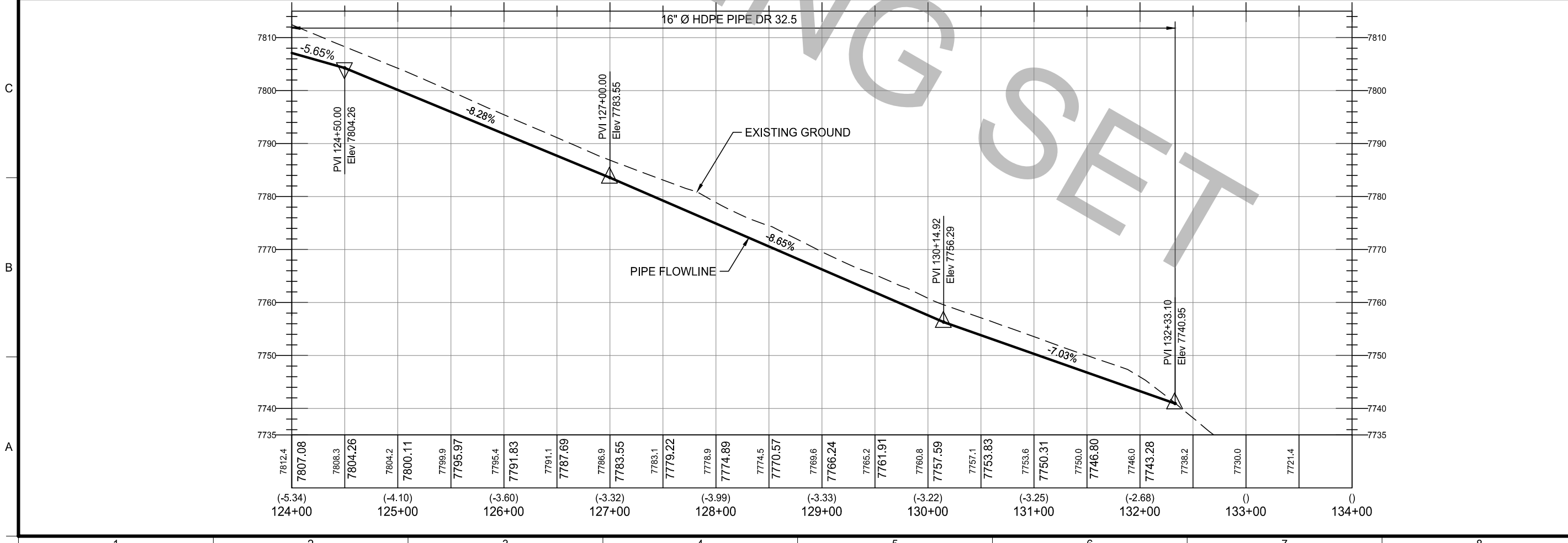
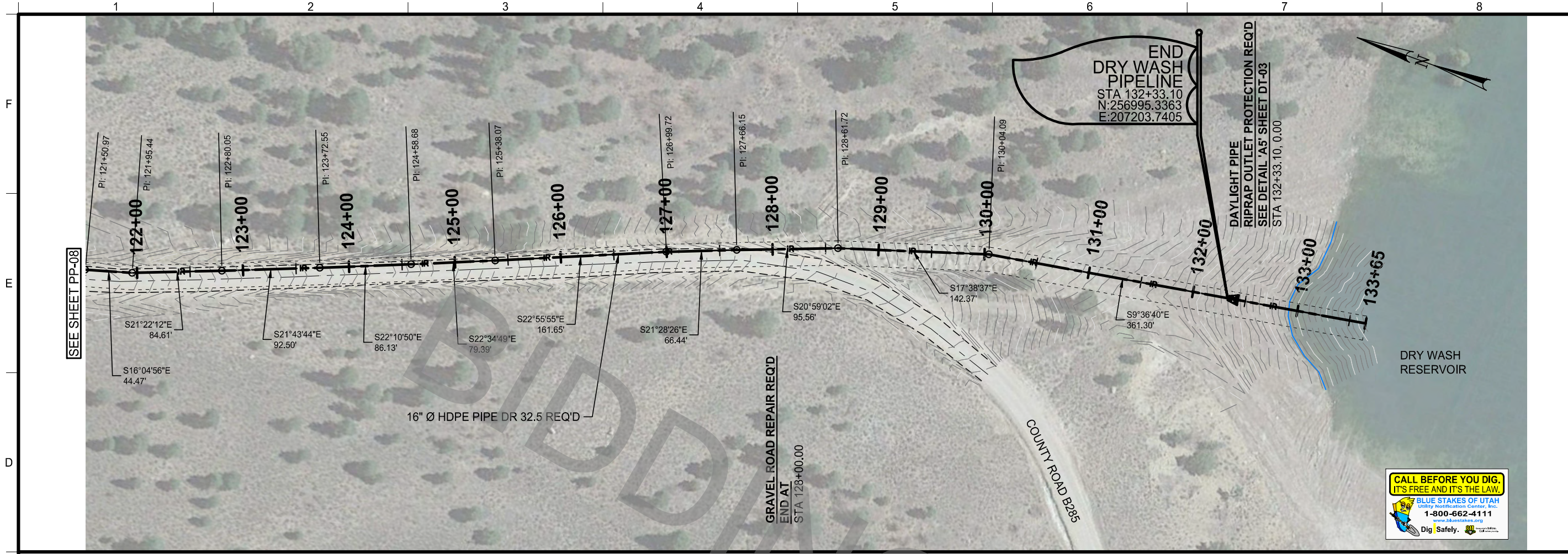




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