TABLE OF CONTENTS

INSTRUCTIONS TO PROPOSERS

1 —INTRODUCTION 1

1.1. Department Project Goals 1
1.2. General Project Description and Obligations of Design-Builder 2
1.2.1. General Project Description 2
1.3. RFP Requirements and Proposal Contents 2
1.3.1. Proposal Contents 2
1.3.2. Proposal Contents and Required Forms 2
1.3.3. Property of the Department 3
1.3.4. Federal Requirements 3
1.3.5. Errors 3
1.4. Definitions 3
1.5. Improper Conduct 3
1.5.1. Prohibited Activities 3
1.5.2. Noncollusive Proposal Certification (Form NC) 3
1.6. Language Requirement 4
1.7. Proposal Schedule 5
1.7.1. Anticipated Schedule for Proposal and Contract Award Process 5
1.7.2. Proposal Due Date 7
1.8. The Proposer's Organization 7
1.8.1. Changes to Proposer's Organization 7
1.8.2. Pre-Qualification and Joint Ventures 7
1.9. Organizational Conflicts and Ineligible Firms 8

2 —PROCUREMENT PROCESS 8

2.1. Method of Procurement 8
2.2. Pre-Proposal Informational Meetings 9
2.2.1. One-on-One Meetings 9
2.2.2. Other Meetings 10
2.3. Examination of RFP Package and Work Site 10
2.4. Receipt of the Request for Proposal Documents and Other Information 10
2.4.1. Department-Designated Point of Contact 10
2.4.2. Identification of Proposer Authorized Representative 11
2.4.3. Rules of Contact 11
2.5. Proposer Questions 12
2.6. Addenda and Responses to Questions 13~~13~~~~12~~
2.6.1. Addenda ..... 13~~13~~~~12~~
2.6.2. Correspondence and Information 13
2.6.3. Responses to Questions 13
2.7. Submission of Proposals 13
2.7.1. Submission Requirements 13
2.7.2. Responsive Proposal 14
2.7.3. Withdrawal of a Proposal; Proposal Validity Period ..... 15~~15~~~~14~~
2.7.4. No Public Opening of Proposals 15
2.7.5. Late Proposals 15

2.8. Government Records Access and Management Act (GRAMA) 15
2.9. Proposal Stipend 16~~16~~~~15~~

3 —ALTERNATIVE TECHNICAL CONCEPTS (ATC) 16

3.1. ATC Goals and Eligibility 16
3.2. Pre-Proposal Submission of ATC 17
3.2.1. Pre-Proposal Requirements.... 18~~18~~~~17~~
3.2.2. ATC Disclosures.... 18
3.2.3. Department Review of Submission of ATCs.... 19
3.2.4. Incorporation of ATCs into the Contract Documents.... 19
3.2.5. ATC Confidentiality 20

4 —PROPOSAL REQUIREMENTS....20

4.1. Legal Authority and Licensing Requirements 20
4.2. Currency 20
4.3. Proposal Guaranty 20
4.3.1. Proposal Guaranty Requirements 20
4.3.2. Return of Proposal Guaranty 21
4.3.3. Rights Reserved.... 21
4.4. Escrowed Proposal Documentation 22
4.5. Proposal Signatures, Quantities, and Costs 22
4.5.1. Required Signatures.... 22
4.5.2. Quantities of Proposal Documents 22
4.5.3. Cost of Preparing Proposal 23
4.6. Obligation to Award 23
4.7. Additional Submittals Before Contract Execution 23
4.8. Resource Availability 23

5 —PROPOSAL EVALUATION....23

5.1. Evaluation Criteria 24
5.1.1. Pass/Fail Criteria.... 24
5.1.2. Technical Evaluation Criteria 29
~~Goal:~~ .... 30~~30~~~~30~~
~~Goal:~~ .... 31~~31~~~~31~~
5.1.3. Price Proposal 32
5.2. Evaluation Guidelines 33
5.2.1. Price Reasonableness Analysis.... 33
5.2.2. Technical Evaluation Criteria 33
5.3. Proposal Revisions; Best and Final Offers 34
5.4. Best Value Determination 34
5.5. Debriefings 34
5.6. Post-Selection Meetings 35~~34~~~~34~~

6 —CONTRACT AWARD AND EXECUTION 35

6.1. Contract Award 35
6.2. Execution of Contract 36

7 —PROTESTS ....37~~36~~~~36~~

7.1. Written Protests Only 37~~36~~~~36~~
7.2. Protest Contents 37

8 —DEPARTMENT RIGHTS AND DISCLAIMERS.....37

8.1. Department Rights 37
8.2. Department Disclaimers 393838

TABLES

ITP-1 Proposal and Contract Award Schedule……7

APPENDICES

ITP-A Technical Proposal Instructions

ITP-B Price Proposal Instructions

ITP-C Forms

TABLE ITP-1
PROPOSAL AND CONTRACT AWARD SCHEDULE

Event	Time	Date	Location
Issue Draft RFP		8/18/16	
Draft Industry Review Meeting	Assigned by Department	9/8/16	Region 2
Issue Final RFP		9/15/16	
One-on-One Meetings with Proposers	Assigned by Department	10/5/16	Region 2
One-on-One Meetings with Proposers	Assigned by Department	10/19/16	Region 2
One-on-One Meeting with Cities and USBOR	Assigned by Department	10/26/16	Region 2
One-on-One Meetings with Proposers	Assigned by Department	11/14/16	Region 2
Last day for initial submittal of an ATC	5:00 PM	11/9/16	
Last day for Department Responses to initial ATC requests	5:00 PM	11/17/16	
One-on-One Meetings with Proposers	Assigned by Department	11/28/16	Region 2
Last day for Resubmittal of ATCs	5:00 PM	11/29/16	
Last day to submit or resubmit Pass/Fails; Last day to respond to resubmit ATCs	5:00 PM	12/05/16	
Receipt of Proposers' Questions and Clarifications by Department (due date)	5:00 PM	12/1/16	
Issue Date for Final Clarification & Addenda	5:00 PM	12/8/16	
Submittal of Technical & Price Proposals (Proposal Due Date)	2:00 PM	12/22/16	Central Const. Desk
Submittal of Escrowed Proposal Documentation (due date)	1:00 PM	1/~~3~~10/17	Central Construction
Selection of and Notification of Design-Builder (anticipated date)		1/23/17	
Selected Proposer Escrow Documentation Review	8:00 AM	1/25/17	Central Construction
Notice of Award (anticipated date)		1/26/17	
Proposer Teams' Proposal Debriefings (anticipated date)	TBD	2/16/17	Central
Contract Execution (anticipated date)		2/15/17	

F. The Design-Builder is required to submit an agenda for the meeting at least ~~24~~48-hours prior to each scheduled meeting. Indicate the disciplines that need to be in attendance.

G. The Design-Builder is required to notify the Department of the discipline leads that need to be in attendance

Persons attending the One-on-One meetings are required to sign an acknowledgment of the foregoing rules. Attendance at meetings remotely via phone or internet conference will not be allowed.

2.2.2. Other Meetings

Additional meetings may be requested by the Department in writing to the Proposers.

2.3. Examination of RFP Package and Work Site

It is the sole responsibility of the Proposer to examine, with appropriate care and diligence prior to submitting its Proposal, the RFP and all conditions which may in any way affect its Proposal or performance under the Contract (if awarded), including final design. This includes responsibility for investigating the condition of existing facilities and the Project Site, including undertaking all activities sufficient to familiarize itself with the surface and subsurface conditions affecting the Project. The Proposer's receipt of Department-furnished information does not relieve the Proposer of such responsibility.

The Department encourages each Proposer to perform additional soil borings and other exploratory investigations on the Project Site, as appropriate, subject to the Proposer securing required permits, rights of entry, or approvals. The submission of a Proposal shall be considered *prima facie* evidence that the Proposer has made the above-described examination and is satisfied as to the conditions to be encountered in performing the Work and as to the requirements of the Contract. Failure by the Proposer to so examine and inform itself shall be at its sole risk, and the Department will provide no relief for any error or omission. Change orders for differing site conditions will not be considered for lack of field investigations during the RFP period.

2.4. Receipt of the Request for Proposal Documents and Other Information

The RFP and other information may be obtained by Proposers who have been notified of their inclusion on the Short-List from the person designated as the Department point of contact in Section 2.4.1 (Department-Designated Point of Contact). The Department will provide access to the RFP on the Project Portal.

2.4.1. Department-Designated Point of Contact

Submit all Project communications (including Request For Clarification's and ATC's) electronically to the Department's point of contact indicated below. Mark all communication with the "4 Interchanges on Bangerter Highway (SR-154)" and "Procurement—Sensitive":

ATTN: **Marwan Farah, PE, Project Director**
UDOT Region 2
2010 South 2760 West
Salt Lake City, UT 84104
Project Email: Bangerter4InterchangesRFP@interchange.udot.utah.gov
Project Portal: https://interchange.udot.utah.gov/cp/12566/4bangerterRFP/SitePages/Home.aspx

B. The Proposers will correspond with the Department regarding this RFP only through the Department's Designated Point of Contact and the Proposer's Authorized Representative.

C. Proposers may not contact Department employees (including department heads, members of the evaluation committee[s], and any official who will or who will potentially participate in the decision to award the Contract) regarding the Project, except through the process identified in Section 2.4.3. (Rules of Contact) Also, Proposers may not contact any stakeholder staff regarding the Project, including employees of:

1) US Bureau Of Reclamation
2) Jordan Valley Water Conservancy District (JVWCD)
3) Cities
   a) Taylorsville City
   b) West Jordan City
   c) South Jordan City
4) Salt Lake County, and
5) Program Management Team as specified in Section 1.9

D. Any communication determined to be improper may result in disqualification, at the sole discretion of the Department.

E. Any official information regarding the Project will be disseminated from the Department on Department letterhead and signed by the Department Designated Point of Contact or through the Project Portal.

F. The Department will not be responsible for or bound by any oral exchange or any other information or exchange that occurs outside the official process specified herein.

2.5. Proposer Questions

Review the RFP and any addenda issued by the Department prior to the Proposal Due Date, and request written clarification or interpretation of any perceived discrepancy, deficiency, ambiguity, error, or omission contained therein, or of any provision that Proposer fails to understand clearly. Failure of Proposer to so examine and inform itself places the Proposer at the sole risk, and the Department will provide no relief for error or omission.

The Department will consider questions submitted in writing by Proposers regarding the RFP, including requests for clarification and requests to correct errors. All questions must be received by the Department at the Project Email specified in Section 2.4.1 (Department Designated Point of Contact) no later than the date specified in Section 1.7.1 (Anticipated Schedule for Proposal and Contract Award Process). Questions received after the deadline will be answered at the sole discretion of the Department. All questions must be submitted on Form CF (RFP Comment Form) in electronic format using Microsoft Word.

2.9. Proposal Stipend

By submitting a Proposal in response to the RFP, submitting an executed Stipend Agreement, Form SA (Stipend Agreement), and accepting the stipend, the Proposer acknowledges that the Department reserves the right to use any ideas or information contained in the Proposal in connection with any Contract awarded for the Project, or in connection with a subsequent procurement.

The Department will offer a stipend in the amount of $300,000 to each unsuccessful Proposer. To qualify as an unsuccessful Proposer, a Proposer will have:

A. Received a rating of "Pass" on all Pass/Fail criteria and an overall technical rating of at least Acceptable (-) for each overall evaluation criteria category.

B. Submitted a responsive Price Proposal.

If the Proposer choses to accept the stipend, the Proposer shall provide an executed Stipend Agreement, Form SA (Stipend Agreement) provided in Appendix ITP-C (Forms), within 10 Days of date of Proposer debrief.

If the procurement is cancelled prior to the Proposal Due Date, each Proposer has the option, to attend an interview (if the Department chooses to conduct interviews) and deliver to the Department the work product of its Proposal preparations to date. There is no specific format required for such work product.

Each Proposer that chooses to attend such an interview and deliver its work product may be paid a portion of the stipend amount, at the Department's discretion, for the work product. The Department pays no portion of the stipend amount if a Proposer chooses to not attend the interview or not deliver its work product.

2.10. Build Alternative

The Base Build and Build Alternative as defined in Part 4-01 – (Project Configuration) are described and should be priced in accordance with ITP Appendices A and B.

Submit a price for the Base Build and Build Alternative. The Base Build and the Build Alternative will only be awarded if it does not exceed Project funding.

Include the Base Build and the Build Alternative in the Proposal schedule.

3 —ALTERNATIVE TECHNICAL CONCEPTS (ATC)

3.1. ATC Goals and Eligibility

Sections 3.1 (ATC Goals and Eligibility) and 3.2 (Pre-Proposal Submission of ATC) set forth a process for pre-Proposal review of Alternative Technical Concepts (ATCs) that conflict with the requirements for design and construction of the Project, or otherwise require a modification of the technical requirements of the Project. This process is intended to:

A. Allow Proposers to incorporate innovation and creativity into the Proposals.
B. Allow the Department to consider Proposer ATCs in making the selection decision.
C. Avoid delays and potential conflicts in the design associated with the deferring of reviews of ATCs to the post-award period.

B. Provision of updated financial information, showing that the Proposer has the financial capacity to undertake design and construction of the Project, including the capability of effectively managing ~~the scheduled cash flow as well as~~ any unanticipated cash flow needs of the Project.

C. Provision of all other specified forms and documents, properly completed and signed (if required), and compliance with any other financial requirements.

The Proposer must provide the following:

D. Financial statements for the Proposer and equity members of Proposer for the three most recent fiscal years, audited by a certified public accountant in accordance with generally accepted accounting principles (GAAP). If the Proposer is a newly formed entity and does not have independent financial statements, financial statements for the equity owners will be sufficient (and the Proposer shall expressly state that the Proposer is a newly formed entity and does not have independent financial statements). Financial statements must be provided in U.S. dollars. If audited financials are not available for an equity owner, the Proposal shall include unaudited financials for such member, certified as true, correct, and accurate by the chief financial officer or treasurer of the entity. Required financial statements shall include:

1. Opinion Letter (Auditor's Report);
2. Balance Sheet;
3. Income Statement;
4. Statement of Changes in Cash Flow; and
5. Footnotes.

E. If any entity for which financial information is submitted as required hereby files reports with the Securities and Exchange Commission, then such financial statements shall be provided through a copy of their annual report on Form 10K. For all subsequent quarters, provide a copy of any report filed on Form 10-Q or Form 8-K which has been filed since the latest filed 10K. Provide information regarding any material changes in financial condition for Proposer and each of its equity members for the past three years and anticipated for the next reporting period. If no material change has occurred and none is pending, the Proposer and/or equity member, as applicable, shall provide a letter from its chief financial officer or treasurer so certifying.

F. If financial statements are prepared in accordance with principles other than U.S. GAAP, provide a letter from the certified public accountant of the applicable entity, discussing the areas of the financial statements that would be affected by a conversion to U.S. GAAP, should be provided.

G. Provide a letter from the chief financial officer or treasurer of the entity or the certified public accountant for each entity for which financial information is submitted, identifying all off balance sheet liabilities.

~~H. A description of the Proposer's plan to meet the maximum cash flow curve, including information regarding any line of credit that will be available, if needed, for such purpose, the lender(s) providing such credit, and the security for repayment.~~

~~I.~~H. If a Proposer has been advised that a guaranty will be required but has not previously

C. Include a description of maintaining access to properties and a description of an approach that minimizes impacts to business accesses, residences, pedestrians, and schools.

Plans

D. Provide plans showing maintenance of traffic and construction sequencing/phasing; including any necessary temporary construction. **(To be evaluated with the Narratives)**

E. Provide a pedestrian access plan that provides for safe pedestrian routing and includes safe routes for school children to cross the project. **(To be evaluated with the Narratives)**

5.1.2.2. Technical Approach

Goal:

Provide a Technical Approach that Exceeds Project Requirements

Exceed the Department's standards for design and construction to provide additional value to the Project, such as improved functionality and quality, reduced long-term maintenance, elimination of design exceptions and an increased service life. As appropriate, use innovative techniques and methods to provide increased value for the Project. Approach to design and construction should minimize or eliminate risk to the Department, specifically schedule risk associated with right-of-way limitations.

Submittals:

Narratives

A. Provide a description that minimizes or eliminates schedule risks to the Department; include any commitments to provide Project schedule float on critical parcels. Provide milestones in the schedule for all right-of-way limitation dates.

~~A. Provide an overall description of the proposed design enhancements and reduction in risk, including a summary of proposed innovations.~~

B. Provide a description of design exceptions that have been eliminated. The Department's priority for the design exceptions is below.

1. Proposed 6% grade at 5400 South and/or proposed 6% grade at 9000 South
2. Reduced outside shoulder width along Bangerter Highway (SR-154) at 11400 South on-ramps
3. Reduced shoulder width SB on ramp at 5400 South
4. Reduced inside shoulder for high mast lighting and overhead guide signs at each interchange
5. Not meeting minimum K-value for the sag at 11400 South
6. Reduced inside shoulder width on Bangerter Highway (SR-154) under Old Bingham Highway

C. Describe proposed Project elements that promote improved system functionality, improved quality and safety, increased life of Project elements, and reduced long-term

maintenance.

~~C.~~D. Provide an overall description of the proposed design enhancements and innovations that reduce risk.

~~D.~~E. Provide a description to mitigate risks for the Bingham Creek culvert.

~~Provide a description that minimizes or eliminates schedule risks to the Department; include any commitments to provide Project schedule float on critical parcels. Provide milestones in the schedule for all right-of-way limitation dates~~.

Plans

~~E.~~F. Include plan sheets, profiles, typical sections, situation and layout drawings, and details as necessary to demonstrate the proposed design enhancements. **(To be evaluated with the Narratives)**

1. Do not simply re-propose the Preliminary Engineering Concept (PEC) Plans provided as reference, instead provide plans for design enhancements or improvements to that plan. If the Proposal is to forward the design shown in the Reference Documents without modification, then state that in the narrative. Clearly identify where the Proposal Plans differ from the PEC Plans.

~~F.~~G. Provide proposed Proposal Project Schedule, including ROW, design and construction activities, in PDF and XER formats. **(To be evaluated with the Narratives)**

1. Do not show or submit any price information with the Proposal Project Schedule; include price information only in the Price Proposal (see Appendix ITP-B).

5.1.2.3. Third Party

Goal:
Minimize risk to, and effectively coordinate with Third Party Entities

Minimize Third Party facility relocations and mitigate impacts to Third Parties with an emphasis made to minimize or eliminate impacts to the U.S. Bureau of Reclamation's (USBOR) aqueduct at 9000 South, 7000 South, and 5400 South. Demonstrate effective methods for communicating, coordinating, and partnering to reduce impacts to their Facilities, reduce potential for impacts to the Project schedule, and promote a positive working relationship.

Submittals:

Narratives

~~A. Provide an approach to coordinating with the Jordan Valley Water Conservancy District (JVWCD) and USBOR for design and construction of Project elements within the USBOR aqueduct easement.~~

~~1. Include a description of the communication and construction strategies with JVWCD and the USBOR to obtain approvals for design and construction affecting the USBOR aqueduct Easement, including other impacts affecting the USBOR aqueduct Easement.~~

A. Provide an overall description of the potential impacts to existing Third Party facilities and the proposed Third Party mitigation and relocation strategies including a summary of proposed innovations to avoid, or mitigate impacts to the Third Party facilities. Include a description of methods to mitigate risk to the Project from Third Party facility and utility relocations.

B. Provide an approach to coordinating with the Jordan Valley Water Conservancy District (JVWCD) and USBOR for design and construction of Project elements within the USBOR aqueduct easement.

~~2.~~1. Include a description of the communication and construction strategies with JVWCD and the USBOR to obtain approvals for design and construction affecting the USBOR aqueduct Easement, including other impacts affecting the USBOR aqueduct Easement.

~~B.~~C. Include a description of Third Party, Department, and Design-Builder communication and coordination that will facilitate scheduling of the Third Party Utility Work, coordinate the design and construction, and expedite the preparation of Supplemental Agreements.

Plans

~~C.~~D. Provide a Utility conflict matrix identifying Third Party Utility impacts, relocations, and mitigation strategies. **(To be evaluated with the Narratives)**

~~D.~~E. Provide plan sheets identifying potential impacts to Third Party Utilities and the anticipated mitigation of those impacts. **(To be evaluated with the Narratives).**

~~E.~~F. Include activities in the Proposal Project Schedule that represent the scheduling of Third Party Work and coordination with the Department, including Supplemental Agreement preparation and execution. **(To be evaluated with the Narratives)**

5.1.3. Price Proposal

Submit Pricing Information as part of the Price Proposal in accordance with Appendix ITP-B (Price Proposal Instructions) for the Project.

Base the Price Proposal on the following assumptions:

A. Contract execution is in accordance with timeframes in Section 6.2 (Execution of Contract). The Design-Builder completes the Work on or before the Completion Deadline.

5.1.3.1. Evaluation Criteria

Specific information to be submitted is identified in Appendix ITP-B (Price Proposal Instructions). The following criteria are considered in the price evaluations:

A. Bid Amount for Award Consideration

Specify the sum for which the Work is performed according to the RFP (the Contract Amount).

The Department reserves the right to reject any Proposal if it determines that the Price Proposal is significantly unbalanced to the potential detriment of the Department.

An unbalanced Proposal is considered to be one (a) which is front-end-loaded or (b) for which the line item amounts or amounts shown in the Price Allocation do not reflect reasonable actual costs, plus a

3—EXECUTIVE SUMMARY

The Executive Summary is intended for presentation to, and review by, the Department prior to selection of the Design-Builder, and may be released to the news media after selection. Therefore, do not include any information regarding price or any other sensitive or confidential information.

3.1 EXECUTIVE SUMMARY

Include sufficient information in the Executive Summary to familiarize reviewers with the Proposer's Project approach and its ability to satisfy the legal requirements of the Contract. Highlight those items that, in the opinion of the Proposer, represent significant value to the Department and that may distinguish the Proposal from others.

At a minimum, the Executive Summary shall include the following sections:

A. **Legal.** A description of the Proposer's form of organization, identifying the percentage interest held by each of the Principal Participants with a direct equity interest in the Proposer, the lead entity, and all entities that will have joint and several liability for the Contract or that will provide guaranties (if required) to the Department.

B. **Financial.** Information regarding Proposer's financial strength and capability of undertaking and completing the Work.

C. **Technical.** Summary of the project approach and concepts to be utilized in connection with the Work, specifically addressing how the Proposer will forward UDOT's goals for the project.

4—ALTERNATIVE TECHICAL CONCEPTS (ATC) AND BUILD ALTERNATIVE FOR VOLUME 4 OF THE TECHNICAL PROPOSAL

4.1 ALTERNATIVE TECHICAL CONCEPTS

Prepare and Submit:

A. Submit Form ATC-S (Alternative Technical Concept Submittal).

B. Submit the Department's response letter Approving inclusion of any ATC.

4.2 BUILD ALTERNATIVE INFORMATION

The Build Alternative consists of removal of the existing "Thru-Turn" intersection at 5400 South and 4015 West and replacing it with a standard signalized intersection.

Prepare and Submit:

A. Summary of the Work proposed to be completed for the Build Alternative. Include the following information (Limited to 2 pages, not including plan sheets):

1. A description of the Build Alternative and supporting information describing the construction of the Build Alternative;

TABLE ITP-A-1
OUTLINE FOR SUBMITTAL OF TECHNICAL PROPOSAL

Proposal Volume Section	*Volume and Section Titles and Required Information*
	EXECUTIVE SUMMARY
VOL. 1	**LEGAL AND FINANCIAL INFORMATION (PASS/FAIL)**
Sec. 1	Proposal Letter Form; Form BC (Claim of Business Confidentiality) Form C (Single Point of Contact) Form NC (Noncollusion Affidavit) Form IC (Ineligible Contractors) Form LC (Lobbying Certificate) Form OC (Opinion of Counsel) Form NS (Named Subcontractors); and Licensing information. Form IS (Ineligible Subcontractors) Form SR (Statement of Representations) Form CR (Commitment Resources) Relevant Professional Licenses
VOL. 2	**TECHNICAL PROPOSAL INFORMATION**
Sec. 1	**Maintenance of Traffic** Description of the proposed maintenance of traffic and construction phasing including a summary of proposed innovations. Focus on an approach that is designed to minimize disruption and maximize safety for the Project Traffic impact and mitigation plan for maintenance of traffic for each construction stage. Include descriptions of detours and plans for full or partial roadway closures. Description of maintaining access to properties and a description of an approach that minimizes impacts to business accesses, residences, pedestrians, and schools.
Sec. 2	**Technical Approach** Description of the proposed design enhancements and reduction in risk, including a summary of proposed innovations Provide a description of design exceptions that have been eliminated. ~~s~~ Description of the proposed Project elements that promote improved system functionality, improved quality and safety, increased life of Project elements, and reduced long-term maintenance. Description to mitigate risks for the Bingham Creek culvert Description that minimizes or eliminates schedule risks to the Department; include any commitments to provide Project schedule float on critical parcels. Provide milestones in the schedule for all right-of-way limitation dates.
Sec. 3	**Third Party coordination and minimization of risk** An approach to coordinating with the Jordan Valley Water Conservancy District (JVWCD) and USBOR for design and construction of Project elements within the USBOR aqueduct easement. 1. Include a description of the communication and construction strategies with JVWCD and the USBOR to obtain approvals for design and construction affecting the USBOR aqueduct Easement, including other impacts affecting the USBOR aqueduct Easement.

TABLE ITP-A-2
TECHNICAL PROPOSAL PAGE LIMITS AND NUMBER OF COPIES

Proposal Volume	***Page Limit****	***Number of Copies*****
Executive Summary	3 pages total (8 ½" x 11")	One Original and 10 Copies bound together with Volumes 1 and 2.
Volume 1 – Legal & Financial	Limited to the Forms and Letters required.	One Original and 1 Copy. Bind together in the Original and the Copy 1 of 10, with the Executive Summary, and Volume 2.
Volume 2 – Technical Proposal	A maximum of ~~40~~ 60 single sided pages (including a maximum of 8 pages 11" x 17"), with the sole exception of tabbed dividers, cover letters, the executive summary, required forms, and appendices.	One Original and 10 Copies bound together with the Executive Summary, and Volume 1.
Volume 3 – Plan Sheets	Limited to the technical content required, no page limit.	One Original and 10 Copies bound separately from the other Volumes. One Original - For the Proposed Project Schedule only one 36 x 24 full-sized plot copy is required.
Volume 4 – ATC Information	Limited to the ATC Information required, no page limit.	One Original and 10 Copies bound separately from the other Volumes.
Appendix A – Legal & Financial Confidential	Limited to the Forms, Letters, and other required elements, no page limit.	One Original bound separately from the other Appendices. May be sealed and marked "Confidential" and addressed to Renee Spooner.
Appendix C – Electronic Files & Schedule .xer	Limited to the Electronic Files requirements, no page limit.	4 USB Flash Drive included with Volume 2, copies 1 of 10 through 4 of 10.

*The Department does not commit to review any information in appendices or exhibits other than that which it requires to be provided, and the Proposal evaluation process will focus on the requested Proposal elements. Proposers must limit the information provided in the Proposal to that which is required in the RFP. Any additional pages or appendices will be removed from the Proposal and returned to the Proposer.

All Volumes and Appendices must also be provided in electronic format on USB Flash Drive with a separate PDF (and other required format files) for each Proposal **volume and section as shown in Table ITP-A-1. Legal and Financial Confidential elements may be included on a separate USB Flash Drive and included in the sealed envelope marked "confidential."

TABLE OF CONTENTS

1 —INTRODUCTION 1

2 —PRICE PROPOSAL 1

2.1 Price Proposal Submittal 1
2.2 Letter of Subcontractor Intent (Form LSI) 2
2.3 Price Allocation (Form PA) 2
2.4 UTILITY COSTS (Form UC) 2
2.5 Build Alternative (Form BA) 2

3 —PROPOSAL GUARANTY 2

4 —ESCROWED PROPOSAL DOCUMENTS 3

4.1 Project-Wide Utility Relocations 3
4.1.1 Utility Costs Included in the Utility Relocations Proposal Line Item 3
4.1.2 Utility Cost Allocations 5
4.1.3 Utility Relocation Incentive/Disincentive 9

5 — BID AMOUNT FOR AWARD CONSIDERATION 10~~9~~

6 —PROPOSAL GUARANTY 10

7 —ESCROWED PROPOSAL DOCUMENTS 10

8 —FORMAT FOR SUBMITTAL OF PRICING DOCUMENTS 10

9 —TIME SUBMITTAL REQUIREMENTS 11

9.1 SUMMARY 11
9.2 TIME COMPONENT 11

~~**1 INTRODUCTION 1**~~

~~**2 PRICE PROPOSAL 1**~~

~~**2.1 Price Proposal Submittal 1**~~
~~**2.2 Letter of Subcontractor Intent (Form LSI) 2**~~
~~**2.3 Price Allocation (Form PA) 2**~~
~~**2.4 UTILITY COSTS (Form UC) 2**~~
~~**2.5 Build Alternative (Form BA) 2**~~

~~**3 PROPOSAL GUARANTY 2**~~

~~**4 ESCROWED PROPOSAL DOCUMENTS 3**~~

~~**4.1 Project-Wide Utility Relocations 3**~~
~~4.1.1 Utility Costs Included in the Utility Relocations Proposal Line Item 3~~
~~4.1.2 Utility Cost Allocations 5~~
~~4.1.3 Utility Relocation Incentive/Disincentive 9~~

~~**5 BID AMOUNT FOR AWARD CONSIDERATION 9**~~

~~**6 PROPOSAL GUARANTY 9**~~

~~**7 ESCROWED PROPOSAL DOCUMENTS 9**~~

~~**8 FORMAT FOR SUBMITTAL OF PRICING DOCUMENTS** 10~~

~~**9 TIME SUBMITTAL REQUIREMENTS** 10~~

~~**9.1 SUMMARY** 10~~
~~**9.2 TIME COMPONENT** 10~~

TABLES

ITP-B-1 Allocation Percentages for Utility Costs 6
ITP-B-2 Price Proposal Format 10
ITP-B-3 Time Component 12

Table ITP-B-1 – Allocation Percentages for Utility Relocation Costs

ID	*Utility Company*	*Notes*	*Interchange*
	UDOT's Cost share	100%	
~~19~~	~~XO Communications~~	~~Private Company~~	~~(All Interchanges)~~
	~~Type of Agreement~~	~~No Agreement~~	
	~~Design Relocation~~	~~Design-Builder~~	
	~~Construct Relocation~~	~~Design-Builder~~	
	~~UDOT's Cost share~~	~~100%~~	
~~19~~ 20	**Zayo Group LLC.**	***Private Company***	**All Interchanges**
	Type of Agreement	Master Utility Agreement	
	Design Relocation	Design-Builder	
	Construct Relocation	Design-Builder except cable/pedestal procurement, pulling, and splicing	
		Zayo Group LLC cable/pedestal procurement, pulling, and splicing	
	UDOT's Cost share	50%	
	Design-Builder Miscellaneous Costs (DBMC) (all utilities herein)	100% of costs to be included in DB's Bid	

The Design-Builder shall be bound to Utah Law per Utah Code 72-6-116, unless otherwise specifically noted in the master agreement between UDOT and each third party utility company, in-case of discrepancy the executed Master Agreement shall govern.

4.1.3 Utility Relocation Incentive/Disincentive

The utility relocation incentive/disincentive applies to those utility companies listed as being responsible for the relocation design/construction of their facilities and is described in Part 2, Section 20.4 (Utility Relocation Incentive/Disincentive).

A. Payments/deductions to the Design-Builder will be based on the difference between the utility relocation bid amount and the actual utility relocation charges assessed. Payment for the incentive, or a credit for the disincentive, will be made administratively in the project accounting system by an administrative incentive/disincentive detail.

1. DISINCENTIVE - PAYMENTS DEDUCTED FROM THE DESIGN-BUILDER – if applicable, by lump sum. If the accrued utility relocation charges exceed the amount of utility relocation bid by the Design-Builder, the Department will deduct 40% of the difference from moneys due the Design-Builder. These deductions will begin on the first progress payment when the accrued Utility Relocation charges exceed the utility relocation bid by the Design-Builder.

2. INCENTIVE - PAYMENTS TO THE DESIGN-BUILDER - if applicable, by lump sum. If the actual utility relocation charges accrued after completion of the project are less than the utility relocation bid amount, UDOT will pay the Design-Builder 60% of the difference. The maximum payment shall not exceed $100,000.00.

TABLE OF CONTENTS

Form ATC-R	Alternative Technical Concept Response
Form ATC-S	Alternative Technical Concept Submittal
Form BA	Build Alternative Price Allocation
Form BC	Claim of Business Confidentiality
Form C	Single Point of Contact
Form CF	RFP Comment Form
Form CR	Commitment to Assign Identified Resources to Project
Form EPD	Escrow Agreement
	Exhibit A: Escrow Agreement for the Contract
	Exhibit B: Escrow Agent Holding Fees
Form IC	Certificate Regarding Ineligible Contractors
Form IS	Certificate Regarding Ineligible Subcontractors
Form KP	Key Personnel Information
Form LC	Lobbying Certificate
Form LSI	Letter of Subcontractor Intent
Form NC	Noncollusion Affidavit
Form NS	Named Subcontractors
Form OC	Opinion of Council
Form PA	Price Allocation - Revised
Form PP	Price Proposal Cover Sheet
Form Proposal Letter	Proposal Letter
Form SA	Stipend Agreement
Form SR	Statement of Representations in Proposal
Form UC	Utility Cost - Revised

FORM PA: PRICE ALLOCATION

Line No.	Activity	Days (input into EBS)	This column not input into EBS	Lump Sum Prices (input into EBS)
1	Compensable Project Overhead		$ -	
2a	Design - 5400 South		$ -	
2b	Design - 7000 South		$ -	
2c	Design - 9000 South		$ -	
2d	Design - 11400 South		$ -	
3	Mobilization (Not to exceed 5% of Contract Amount)		$ -	
4a	Construction - 5400 South		$ -	
4b	Construction - 7000 South		$ -	
4c	Construction - 9000 South		$ -	
4d	Construction - 11400 South		$ -	
5	Project Aesthetics & Landscaping Enhancements (this is for enhancements only and amount does not include baseline aesthetic treatments)		$ 400,000	
6	Utility Work performed by the Design-Builder - Subtotal from Form UC line A		$ -	
			CONTRACT AMOUNT (Total of Items 1 - 6)	**$ 400,000**
INNOVATIVE CONTRACTING - (the following values are not included in the Contract Amount but are included in the evaluation of the Price Proposal and used for administration of the Utility cost share):				
7	Department's cost share responsibility for Utility Work performed by Third-Parties - Subtotal from Form UC line B		$ -	
8	Third-Parties' cost share responsibility for Utility Work performed by Design-Builder (credit/negative $) - Subtotal from Form UC line C		$ -	
	Utility Work Cost Share Adjustment If total of lines 7-8 is positive enter value in line 9a If total of lines 7-8 is negative enter value in line 9b			
9a	9a Positive Value (Total of Items 7 - 8); enter 0.01 if 9b is used			$ -
9b	9b Negative Value (Total of Items 7 - 8); enter 0.01 if 9a is used; enter negatives as a positive value into EBS			$ -
10a	Time Component - Project (Based on column F multiplied by column C From ITP Table B-3) Maximum Days 606, Minimum Days 365		$5,000 ~~$2,500~~	
10b	Time Component - 5400 S Interchange (Based on column F multiplied by column C From ITP Table B-3) Maximum Days 606		$5,000 ~~$4,000~~	
10c	Time Component - 7000 S Interchange (Based on column F multiplied by column C From ITP Table B-3) Maximum Days 256		$10,000 ~~$7,500~~	
10d	Time Component - 9000 S Interchange (Based on column F multiplied by column C From ITP Table B-3) Maximum Days 606		$5,000 ~~$4,000~~	
10e	Time Component - 11400 S Interchange (Based on column F multiplied by column C From ITP Table B-3) Maximum Days 606		$7,500	
11	Build Alternative (Total from line 6 on Form BA)			
			(Total of Items 9 - 11)	**$ -**
			BID AMOUNT FOR AWARD CONSIDERATION (Total of Items 1-6 & 9-11)	**$ 400,000**

FORM UC: UTILITY COSTS

Line No.	Form PA No.	Utility ID	Activity	This column not input into EBS	Lump Sum Prices (to be entered into Form PA)
	6	Utility Work performed by the Design-Builder			
		01	AT&T Corp.	$ -	
		02	CenturyLink	$ -	
		03	Comcast Cable	$ -	
		04	Daybreak Secondary Water	$ -	
		05	First Digital Telcom	$ -	
		06	Granger Hunter Improvement District	$ -	
		07	Kearns Improvement District	$ -	
		08	Manuel Bros., Inc.	$ -	
		09	MCI (Verizon Business)	$ -	
		10	Questar Gas Company	$ -	
		11	Rocky Mountain Power 5400 S (exclude Build Alternative)	$ -	
		11	Rocky Mountain Power 7000 S	$ -	
		11	Rocky Mountain Power 9000 S	$ -	
		11	Rocky Mountain Power 11400 S	$ -	
		12a	South Jordan City	$ -	
		12b	South Jordan City Betterment	$ -	
		13	South Valley Sewer District	$ -	
		14	Syringa Networks, LLC	$ -	
		15	Taylorsville City	$ -	
		16a	Taylorsville Bennion Improvement District	$ -	
		16b	Taylorsville Bennion Improvement District Betterment	$ -	
		17	US Bureau of Reclamation	$ -	
		18a	West Jordan City	$ -	
		18b	West Jordan City Betterment - 7000 South	$ -	
		18c	West Jordan City Betterment - 9000 South	$ -	
		~~19~~	~~XO Communications~~	$ -	
		19 ~~20~~	Zayo Group	$ -	
A	6		Subtotal to be entered on Form PA Item 6a (Subtotal of Utility Work performed by the Design-Builder)		$ -
	7	Department's cost share responsibility for Utility Work performed by Third-Parties			
		01	AT&T Corp.	$ -	
		02	CenturyLink	$ -	
		03	Comcast Cable	$ -	
		05	First Digital Telcom	$ -	
		08	Manuel Bros., Inc.	$ -	
		09	MCI (Verizon Business)	$ -	
		10	Questar Gas Company	$ -	
		11	Rocky Mountain Power 5400 S (exclude Build Alternative)	$ -	
		11	Rocky Mountain Power 7000 S	$ -	
		11	Rocky Mountain Power 9000 S	$ -	
		11	Rocky Mountain Power 11400 S	$ -	
		14	Syringa Networks, LLC	$ -	
		~~19~~	~~XO Communications~~	$ -	
		19 ~~20~~	Zayo Group	$ -	
B	7		Subtotal to be entered on Form PA Item 7 (Subtotal of Department's cost share responsibility for Utility Work performed by Third-Parties)		$ -
	8	Third-Parties' cost share responsibility for Utility Work performed by Design-Builder (credit/negative $)			
		01	AT&T Corp.	$ -	
		02	Century Link	$ -	
		03	Comcast Cable	$ -	
		05	First Digital Telcom	$ -	
		08	Manuel Bros., Inc.	$ -	
		09	MCI (Verizon Business)	$ -	
		10	Questar Gas Company	$ -	
		11	Rocky Mountain Power 5400 S (exclude Build Alternative)	$ -	
		11	Rocky Mountain Power 7000 S	$ -	
		11	Rocky Mountain Power 9000 S	$ -	
		11	Rocky Mountain Power 11400 S	$ -	
		12b	South Jordan City Betterment	$ -	
		14	Syringa Networks, LLC	$ -	
		16b	Taylorsville Bennion Improvement District Betterment	$ -	
		18b	West Jordan City Betterment - 7000 South	$ -	
		18c	West Jordan City Betterment - 9000 South	$ -	
		~~19~~	~~XO Communications~~	$ -	
		19 ~~20~~	Zayo Group	$ -	
C	8		Subtotal to be entered on Form PA Item 8 (Subtotal of Third-Parties' cost share responsibility for Utility Work performed by Design-Builder (credit/negative $))		$ -

6. Schedule of Values Approved by the Department as required by Part 2 (General Provisions)
7. Site-specific Safety Plan
8. Quality Management Plan Approved by the Department as required by Part 3 (Quality Program)
9. Environmental Protection Program Approved by the Department as required in Part 4-05 (Environmental Compliance)
10. Traffic Management Plan, Approved by the Department as required in Part 4-10 (Maintenance of Traffic)
11. Evidence that the Design-Builder has obtained the accreditation required to be obtained in accordance with Part 3 (Quality Program).
12. Released for Construction Documents have been issued for that portion of the Work.
13. Any additional conditions for construction set forth in the Contract Documents have been fully satisfied.

4.4 Completion Deadlines

The following are the completion deadlines for the Project.

4.4.1 Substantial Completion Deadline

The Design-Builder shall achieve Substantial Completion within ____ Calendar Days from March 6, 2017. Substantial Completion must be achieved no later than November 2, 2018. Said deadlines for Substantial Completion, as it may be extended hereunder, are referred to as the "Substantial Completion Deadline".

4.4.2 Physical Completion Deadline

The Design-Builder shall achieve Physical Completion no later than 60 Days from receipt of Notice of Substantial Completion. Said deadline for Physical Completion, as it may be extended hereunder, is referred to as the "Physical Completion Deadline."

4.4.3 Contract Completion Deadline

The Design-Builder shall achieve Contract Completion no later than 60 Days from receipt of Notice of Physical Completion. Said deadline for Contract Completion, as it may be extended hereunder, is referred to as the "Contract Completion Deadline."

4.4.4 No Time Extensions

Except as otherwise specifically provided in Part 2, Sections 15 (Change Order Risk Allocation) and 16 (Changes in the Work), the Department shall have no obligation to extend any Completion Deadline, and the Design-Builder shall not be relieved of its obligation to comply with the Project Schedule and to achieve the applicable Completion Deadlines for any reason.

4.5 Project Milestones

The following are the milestones for the Project.

4.5.1 Start Milestones

~~Demolition of homes identified in Part 4-14 (Right-of-Way), potholing, and geotechnical investigation are not considered part of the Work associated with the following interchange Project Start Milestones~~.

A. 5400 South Interchange Start Date

This is defined in Part 1 Appendix A (Acronyms and Definitions List).

2. Definition of Terms and Phrases

Interpret the following phrases and capitalized terms used in the Contract as follows:

Term	*Meaning*
5400 South Interchange Start Date	The date Work begins on the 5400 South and Bangerter Interchange, excluding the Build Alternative (if exercised), ~~,~~ demolition of homes identified in Part 4-14 (Right-of-Way), potholing, and geotechnical investigation. Also excluded is clearing, grubbing, and traffic control associated with the Rocky Mountain Power Utility Work. Work may not begin any earlier than March 6, 2017.
5400 South Interchange Completion Date	The date the 5400 South and Bangerter Highway Interchange is complete in accordance with the requirements defined in Part 2, Section 13.1.1.1 (Interchange Completion), excluding the Build Alternative (if exercised).
7000 South Interchange Start Date	The date Work begins on the 7000 South and Bangerter Interchange, excluding~~.~~ demolition of homes identified in Part 4-14 (Right-of-Way), potholing, and geotechnical investigation. Work may not begin any earlier than March 6, 2017.
7000 South Interchange Completion Date	The date the 7000 South and Bangerter Highway Interchange is complete in accordance with the requirements defined in Part 2, Section 13.1.1.1 (Interchange Completion)
9000 South Interchange Start Date	The date Work begins on the 9000 South and Bangerter Interchange, excluding~~.~~ demolition of homes identified in Part 4-14 (Right-of-Way), potholing, and geotechnical investigation. Also excluded is clearing, grubbing, and traffic control associated with the Rocky Mountain Power Utility Work. Work may not begin any earlier than March 6, 2017.
9000 South Interchange Completion Date	The date the 9000 South and Bangerter Highway Interchange is complete in accordance with the requirements defined in Part 2, Section 13.1.1.1 (Interchange Completion).
11400 South Interchange Start Date	The date Work begins on the 11400 South and Bangerter Interchange, excluding~~.~~ demolition of homes identified in Part 4-14 (Right-of-Way), potholing, and geotechnical investigation. Also excluded is clearing, grubbing, and traffic control associated with the Rocky Mountain Power Utility Work. Work may not begin any earlier than March 6, 2017.
11400 South Interchange Completion Date	The date the 11400 South and Bangerter Highway Interchange is complete in accordance with the requirements defined in Part 2, Section 13.1.1.1 (Interchange Completion).
Abandonment	After a Utility Company has decommissioned a Utility, the Work necessary for each Utility (including appurtenances) for a Utility that is not removed, using proper Utility Company and/or industry procedures (e.g., flushing, capping, filling with grout or sand) or other procedures Approved by the Department. Design-Builder is responsible to coordinate with the Utility Company when it is necessary for the Utility Company to be involved in the decommissioning of a Utility (including appurtenances).
Acceleration Cost	The meaning set forth in Part 2, Section 16.6.2 (Limitation on Acceleration Costs and Delay Damages).
Actual Cost	Design-Builder's direct Cost to provide labor, material, equipment (owned or invoiced rental), and administrative overhead necessary for the Work; excludes profit.

Term	*Meaning*
	affecting Utilities or Utility Companies.
Verification/Verify	The act of substantiating, through the collection of objective evidence by the Department or its designated agent to independently establish Conformity to the Contract.
Warranty	Any warranty made by the Design-Builder in the Contract Documents, including in Part 2, Section 28 (Warranties).
Warranty Bond	As defined in Part 2, Section 27.3 (Bond Terms and Conditions).
Work	All duties and services to be furnished and provided by Design-Builder as required by the Contract Documents, including the administrative, design, engineering, Quality Control, Quality Assurance, Relocation, procurement, legal, professional, manufacturing, supply, installation, construction, supervision, management, testing, verification, labor, materials, equipment, documentation and other efforts necessary or appropriate to achieve Contract Completion except for those efforts which the Contract Documents specify will be performed by the Department or other Persons. Work includes alterations, amendments, or extensions made by Change Order or other written orders of the Department. In certain cases Work is also used to mean the Work Product. This includes the Build Alternative (if exercised).
Work Product	All the data, information, documentation and other work product produced, prepared, obtained or deliverable by or on behalf of the Design-Builder under the Contract, including but not limited to Plans, engineering documents, geotechnical soils and soil boring data, analyses, reports and records, property acquisition files, agreements and documents, engineers' and inspectors' diaries and reports, Utility relocation plans and agreements, ROW record maps and surveys, traffic and revenue studies, and other feasibility data, analyses, studies and reports, correspondence and memoranda relevant to design or construction decisions, contracting plans, air quality monitoring data, environmental reviews, studies and reports, mitigation studies and reports, data, assessments, studies and reports regarding Hazardous Materials investigations, tests, borings, monitoring and analyses, manifests regarding handling, storage or transportation of Hazardous Materials, final quantities, pile driving records, records of accidents and traffic management, field test records and reports, concrete pour records, surfacing depth check records, grade and alignment books, cross-section notes, drainage notes, photographs, false work and form plans, records of construction materials, and any other documents which can be reasonably described as technical or engineering documents. Work Product expressly excludes, however, documents and information which is determined to be exempted or protected from public disclosure under GRAMA.
Working Day	Any Calendar Day, except Saturdays, Sundays, and Holidays.
Working Drawing	See Plan.

9.5. Title 27

10— Project Communications 27

10.1. Project Directory 27

10.2. Organization Chart 27

10.3. Project Meetings 27

11— Scheduling and Progress 28

11.1. Scheduler 28

11.2. Project Baseline Schedules 28

11.2.1. ***Baseline Schedule*** ***28***
11.2.2. ***Revised Baseline Schedules*** ***28***
11.2.3. ***Recovery Schedule*** ***28***
11.2.4. ***Baseline Schedule Development*** ***29***
11.2.5. ***Accelerated Project Baseline Schedule*** ***34***
11.2.6. ***Project Baseline Schedule Narrative Requirements*** ***34***

11.3. Project Schedule Updates 35

11.3.1. ***Monthly Progress Meetings*** ***35***
11.3.2. ***Submission of Project Schedule Updates*** ***35***
11.3.3. ***Project Schedule Update Requirements*** ***36***
11.3.4. ***Project Schedule Update Narrative Requirements*** ***37***

11.4. Look-Ahead Detail Schedule 39

11.5. Project Float 39

12— Invoicing and Payment 39

12.1. Schedule of Values 39

12.1.1. ***General*** ***39***
12.1.2. ***Payment Activities*** ..... ***39~~39~~40***
12.1.3. ***Continuing Activities*** ***40***

12.2. Progress, Invoicing, and Payment 40

12.2.1. ***Measurement of Progress*** ***40***
12.2.2. ***Power for In-place Equipment*** ***41***
12.2.3. ***Progress Reports*** ***41***
12.2.4. ***Request for Progress Payment*** ***42***
12.2.5. ***Processing and Payment*** ***43***
12.2.6. ***Partial Payment for Material Delivered to the Site of work*** ***43***
12.2.7. ***Certification for Periodic Payment*** ***45***

12.3. Cost Adjustments 45

12.3.1. ***Pay Adjustment Factors for Quality*** ***45***
12.3.2. ***Price Reductions for Nonconforming Work*** ***45***

12.4. Retention 46

12.4.1. ***Release of Retention to Subcontractors*** ***46***

12.5. Other Deductions 46

12.6. Prompt Payment to Subcontractors 47

16.2. Equal or Better Change Orders 62

16.2.1. ***Required Information*** ***62***
16.2.2. ***Department Review and Approval or Rejection*** ***63***

16.3. Lump Sum Change Orders 63

16.3.1. ***Issuance of Request for Change Proposal by Department*** ***63***
16.3.2. ***Unilateral Change Orders*** ***64***
16.3.3. ***Changes in Law*** ***64***
16.3.4. ***Procedures for Design-Builder-Initiated Lump Sum Change Orders*** ***64***

16.4. Force Account Change Orders 66

16.4.1. ***Force Account Records*** ***67***

16.5. Contents of Change Orders (excluding Equal or Better Change Orders) 68

16.5.1. ***Justification*** ***696968***
16.5.2. ***Design-Builder Representation*** ***69***
16.5.3. ***Incomplete Change Orders*** ***69***
16.5.4. ***Phased Change Orders*** ***707069***
16.5.5. ***Not Applicable to Equal or Better Change Orders*** ***707069***

16.6. Certain Limitations for all Change Orders (excluding Equal or Better Change Orders) 70

16.6.1. ***Limitation on Contract Amount Increases*** ***70***
16.6.2. ***Limitation on Acceleration Costs and Delay Damages*** ***70***
16.6.3. ***Limitation on Time Extensions*** ***71***
16.6.4. ***Not Applicable to Equal or Better Change Orders*** ***71***

16.7. Pricing of Change Orders (excluding Equal or Better Change Orders) 727271

16.7.1. ***Labor Costs*** ***727271***
16.7.2. ***Material Costs*** ***72***
16.7.3. ***Equipment*** ***737372***
16.7.4. ***Permit Fees*** ***74***
16.7.5. ***Subcontracted Work*** ***74***
16.7.6. ***Overhead and Profit*** ***757574***
16.7.7. ***Compliance with Cost Principles Regulations*** ***75***
16.7.8. ***Not Applicable to Equal or Better Change Orders*** ***75***

16.8. Waiver 75

16.9. Disputes 767675

16.10. No Release or Waiver 76

16.10.1. ***Extension of Time for Performance*** ***76***
16.10.2. ***No Change Order Based on Course of Conduct or Order by Unauthorized Person*** ***76***

17— Suspension of Work 777776

17.1. Suspension for Convenience 777776

17.2. Suspension for Cause 777776

17.3. Design-Builder Responsibilities during Suspension 77

18— Termination For Convenience 77

18.1. Notice of Termination 77
18.2. Design-Builder Responsibilities Upon Termination ..... 787~~877~~
18.3. Responsibility After Notice of Termination 79
18.4. Negotiated Termination Settlement 79
18.4.1. ***Settlement Proposal*** ***79***
18.4.2. ***Negotiated Settlement Amount*** ..... ***808~~079~~***
18.5. Determination of Termination Amount if Negotiations Fail 80
18.5.1. ***Payment Amount*** ***80***
18.5.2. ***Maximum Compensation*** ***81***
18.5.3. ***Excluded Items*** ***81***
18.5.4. ***Payment of Termination Amount*** ***81***
18.6. Partial Termination ..... 828~~281~~
18.7. Reduction in Amount of Claim ..... 828~~281~~
18.8. Partial Payments ..... 828~~281~~
18.9. Inclusion in Subcontracts 82
18.10. Limitation on Payments to Subcontractor 82
18.11. No Unearned Profit or Consequential Damages 82
18.12. No Waiver ..... 838~~382~~
18.13. Dispute Resolution ..... 838~~382~~
18.14. Allowability of Costs ..... 838~~382~~
18.15. Suspension of Work ..... 838~~382~~
19— DEFAULT 83
19.1. Default by Design-Builder 83
19.1.1. ***Events of Default*** ***83***
19.1.2. ***Right to Cure*** ***84***
19.2. Remedies ..... 858~~584~~
19.2.1. ***Rights of the Department*** ..... ***858~~584~~***
19.2.2. ***Liability of Design-Builder*** ..... ***868~~685~~***
19.3. Right to Stop Work if Undisputed Payment is Not Made ..... 878~~786~~
20— Incentives, Disincentives, and Damages 87
20.1. Citizen Coordination Team Incentives 87
20.1.1. *Community Coordination Team* ***87***
20.1.2. *Evaluation* ***87***
20.1.3. *Evaluation and Award of Public Involvement/CRB Incentive* ..... ***888~~887~~***
20.2. Incentives/Disincentives Related to "Time" 88
20.3. Liquidated Damages and Closure Disincentives ..... 898~~988~~
20.3.1. ***Failure to Meet Contract Requirements*** ..... ***898~~988~~***
20.3.2. ***Assessments of Liquidated Damages and Disincentives*** ..... ***909~~089~~***

20.3.3. ***Reasonableness of Liquidated Damage and Disincentive Assessment Amounts*** ***909089***

20.4. Utility Relocation Incentive/Disincentive 909089

20.5. Offset; Waiver 919190

20.5.1. ***Offset*** ***919190***
20.5.2. ***No Waiver*** ***919190***

20.6. Payment of Liquidated Damages and Disincentives 919190

21— INDEMNIFICATION 919190

21.1. Indemnifications by Design-Builder 919190

21.1.1. ***General Indemnities*** ***919190***
21.1.2. ***Design Defects*** ***929291***
21.1.3. ***Losses Due to Negligence of Indemnified Parties*** ***92***
21.1.4. ***Claims by Employees*** ***92***
21.1.5. ***Reliance on Design-Builder's Performance*** ***939392***
21.1.6. ***Indemnities in Connection with Utilities and other Third Parties*** ***939392***

21.2. Responsibility of the Department for Certain Hazardous Substances 939392

21.2.1. ***Pre-Existing Site Contamination*** ***939392***
21.2.2. ***Generator Number for Hazardous Waste Remediation*** ***949493***

21.3. No Effect on Other Rights 949493

21.4. Comprehensive Environmental Response, Compensation, and Liability Act Agreement 949493

22— Partnering and Dispute Resolution 94

22.1. Partnering Program 94

22.2. Written Notice and Appeals 96

22.3. Dispute Resolution Procedure 979796

22.4. Appeals 989897

22.5. Claims Review Board 999998

23— Records 999998

23.1. Escrowed Proposal Documents 999998

23.1.1. ***Review of Escrowed Proposal Documents*** ***99***
23.1.2. ***Confidentiality*** ***10010099***
23.1.3. ***Representation and Warranty*** ***10010099***
23.1.4. ***Contents of Escrowed Proposal Documents*** ***10010099***
23.1.5. ***Format of Escrowed Proposal Documents*** ***100***
23.1.6. ***Review by the Department*** ***101101100***

23.2. Subcontractor Pricing Documents 101101100

23.3. Project Records 101101100

23.3.1. ***Maintenance of Records*** ***101101100***
23.3.2. ***Audit and Inspection Rights*** ***101***
23.3.3. ***Audit of Force Account Work*** ***102102101***
23.3.4. ***Change Order Pricing Data*** ***102102101***
23.3.5. ***Claims Audits*** ***102102101***

23.4. Retention of Records ..... 103~~103~~~~102~~

23.5. Utah Government Records Access and Management Act (GRAMA) 103

23.5.1. ***Applicability of Act*** ***103***
23.5.2. ***Design-Builder to Defend Against Disclosure Request*** ..... ***104~~104~~~~103~~***
23.5.3. ***Cooperation with the Department Regarding GRAMA Requests*** ..... ***104~~104~~~~103~~***

24— Cooperation And Coordination With Others ..... 104~~104~~~~103~~

24.1. Cooperation with Other Contractors ..... 104~~104~~~~103~~

24.2. Interference by Other Contractors ..... 104~~104~~~~103~~

25— Insurance 104

25.1. Owner-Controlled Insurance Program (OCIP) 104

25.2. Insurance Claims ..... 105~~105~~~~104~~

25.3. Insurance Proceeds ..... 105~~105~~~~104~~

25.4. Coverage of Third Party Work ..... 105~~105~~~~104~~

26— Liability 105

26.1. Third-Party Beneficiary Clause 105

26.2. Department Employees' Personal Liability ..... 106~~106~~~~105~~

26.3. No Waiver of Legal Rights Upon Completion ..... 106~~106~~~~105~~

26.4. Responsibility for Damage Claims ..... 106~~106~~~~105~~

27— Surety Bonds 107

27.1. Performance Bond ..... 108~~108~~~~107~~

27.2. Payment Bond ..... 108~~108~~~~107~~

27.3. Bond Terms and Conditions ..... 108~~108~~~~107~~

27.4. Utility Work 109

27.5. No Relief of Liability ..... 110~~110~~~~109~~

28— Warranties ..... 110~~110~~~~109~~

28.1. Warranties by Design-Builder ..... 110~~110~~~~109~~

28.1.1. ***Project Warranties*** ..... ***110~~110~~~~109~~***
28.1.2. ***Project Warranty Term*** ..... ***110~~110~~~~109~~***
28.1.3. ***Corrective Work*** ***110***
28.1.4. ***Design-Builder's Costs of Correction of Work*** ..... ***111~~111~~~~110~~***

28.2. Subcontractor Warranties ..... 111~~111~~~~110~~

28.2.1. ***Assignment*** ..... ***111~~111~~~~110~~***
28.2.2. ***Enforcement*** ..... ***111~~111~~~~110~~***

28.3. No Limitation of Liability 111

28.4. Warranty Beneficiaries ..... 112~~112~~~~111~~

28.5. Remedies for Breach of Warranty ..... 112~~112~~~~111~~

28.6. Disputes ..... 112~~112~~~~111~~

29— Miscellaneous Provisions ..... 112~~112~~~~111~~

29.1. Waiver ..... 112~~112~~~~111~~

29.1.1. ***No Waiver of Subsequent Rights*** ..... ***112~~112~~~~111~~***

29.1.2. ***Custom Does not Constitute Waiver*** ***112***

29.1.3. ***Waivers Must be in Writing*** ..... ***113~~113~~~~112~~***

29.2. Independent Contractor ..... 113~~113~~~~112~~

29.3. Successors and Assigns ..... 113~~113~~~~112~~

29.3.1. ***Assignment by the Department*** ..... ***113~~113~~~~112~~***

29.3.2. ***Subcontracts and Assignment by Design-Builder*** ..... ***113~~113~~~~112~~***

29.4. Gratuities and Conflicts of Interest ..... 113~~113~~~~112~~

29.5. Survival 113

29.6. Limitation on Third-Party Beneficiaries 113

29.7. No Personal Liability ..... 114~~114~~~~113~~

29.8. Further Assurances ..... 114~~114~~~~113~~

29.9. Sufficient Funding ..... 114~~114~~~~113~~

29.10. Set-Off Rights ..... 114~~114~~~~113~~

29.11. Severability 114

29.12. Governing Law ..... 115~~115~~~~114~~

29.13. Patented Devices, Materials, and Processes ..... 115~~115~~~~114~~

29.14. Ownership of Documents ..... 115~~115~~~~114~~

1.3.4. Review of Site Information

The Design-Builder has, prior to submitting its Proposal, in accordance with prudent and generally accepted engineering and construction practices, reviewed the boring logs provided by the Department in Part 8 (Engineering Data), inspected and examined the Project Site and surrounding locations, and undertaken other appropriate activities sufficient to determine the surface conditions and subsurface conditions affecting the Project, to the extent the Design-Builder deemed necessary for submittal of its Proposal. The Design-Builder acknowledges that it is responsible for obtaining any additional information the Design-Builder needs to perform the Work that has not been provided in the Contract Documents. As a result of its review, inspection, examination, and other activities, the Design-Builder is familiar with and accepts the physical requirements of the Work and the risk allocations associated with such Work set forth in the Contract Documents, including Section 4 (Differing Site Conditions), Section 15 (Change Order Risk Allocation) and Section 16 (Changes in the Work). The Design-Builder acknowledges and agrees that changes in conditions at the Site may occur after the Proposal Due Date, and that the Design-Builder shall not be entitled to any Change Order in connection therewith except as specifically permitted under Sections 4 (Differing Site Conditions), ~~Section~~ 15 (Change Order Risk Allocation) and ~~Section~~ 16 (Changes in the Work). Before commencing any Work on a particular aspect of the Project, the Design-Builder shall verify all dimensions and conditions at the Site and shall examine all adjoining work, which may have an impact on such Work. The Design-Builder shall be responsible for ensuring that the Design Documents accurately depict all adjoining dimensions and conditions.

1.3.5. Governmental Approvals

The Design-Builder has no reason to believe that any Governmental Approval required to be obtained by the Design-Builder will not be granted in due course and thereafter remain in effect so as to enable the Work to proceed in accordance with the Contract Documents. If any Governmental Approvals required to be obtained by the Design-Builder must formally be issued in the name of the Department, the Design-Builder shall undertake all efforts to obtain such Governmental Approvals, including execution and delivery of appropriate applications and other documentation in a form Approved by the Department. The Department shall reasonably cooperate with the Design-Builder in obtaining any such Government Approvals at the Design-Builder's sole cost. If the Department obtains any Governmental Approval for the benefit of the Design-Builder at the Design-Builder's request, all costs shall be borne by the Design-Builder. If the Design-Builder is required to assist the Department in obtaining any Governmental Approvals pursuant to Section 5.3 (New Environmental Documents to be Obtained by the Department) that the Department may be obligated to obtain due to a Department-Directed Change, including providing information requested by the Department and participating in meetings regarding such Governmental Approvals, the Design-Builder may seek additional time and money in accordance with Sections 15 (Change Order Risk Allocation) and 16 (Changes in the Work).

1.3.6. Progression of Work

The Design-Builder shall at all times schedule and direct its Work to provide an orderly progression of the Work to achieve the Completion Deadlines in accordance with the Project Schedule, including furnishing such employees, materials, facilities and equipment, and working such hours (including extra shifts, overtime operations, Saturdays, Sundays and Legal Holidays) as may be necessary to achieve the Completion Deadlines, all at the Design-Builder's own expense, except as otherwise specifically provided in Sections 15 (Change Order Risk Allocation) and 16 (Changes in the Work).

1.3.7. Design and Engineering Personnel

All design and engineering Work furnished by the Design-Builder shall be performed by or under the supervision of Persons licensed to practice the relevant technical profession of architecture, landscape architecture, engineering, geology or surveying in the State, and performed by personnel who are careful,

stated in Part 6 (Third-Party Agreements). Such review, oversight, audit, inspection, testing, or intervention does not make such Person a party to the Contract. The Design-Builder hereby consents to such review, oversight, inspection and testing, or intervention by the Department and other Persons. Upon request from the Department, the Design-Builder shall furnish information to such Persons as are designated in such request and shall permit such Persons access to the Project site and all parts of the Work. Failure to provide such information and access to the site and all parts of the Work prior to covering such Work shall result in the Design-Builder uncovering the Work as directed to provide access, without compensation or a time extension.

3.5.3. Obligation to Uncover Finished Work

At all times before Contract Completion, the Design-Builder shall remove or uncover such portions of the finished construction Work as directed by the Department. After examination by the Department, the Design-Builder shall restore the Work to the standard required by the Contract Documents. If the Work exposed or examined is not in conformance with the requirements of the Contract Documents, then the cost of uncovering, removing and restoring the Work, or making good the parts removed, and recovery of any delay to the Critical Path occasioned thereby shall be at the Design-Builder's expense. If Work exposed or examined under this Section 3.5.3 is in conformance with the requirements of the Contract Documents, then the cost of uncovering, removing, and restoring the Work shall be at the Department's expense, and any delay in the Critical Path from uncovering, removing, and restoring Work shall be the Department's responsibility. Notwithstanding the foregoing, the Department may require the Design-Builder to uncover, remove and restore any Work done or materials used without adequate prior notice to and opportunity for prior inspection by the Department, as required by Section 3.5.4 and/or the Quality Management Plan (QMP), at the Design-Builder's expense, even if the Work proves acceptable after uncovering.

3.5.4. Control Points

Control Points shall be established at certain stages of the construction process to confirm compliance with specified requirements in accordance with Part 3-4.1 (Control Point Inspection). As Work is accomplished, the Department shall review the Work to determine compliance. The Design-Builder shall provide the Department with a minimum 24 hours' written notice prior to reaching any Control Point.

3.6. Effect of Oversight, Spot Checks, Assessment, Tests, Acceptances, and Approvals

3.6.1. Oversight and Acceptance

The Design-Builder shall not be relieved of its obligation to perform the Work in accordance with the Contract Documents, or any of its other obligations under the Contract Documents, by any action or inaction of the Department, Third Parties, or other Persons, related to review, oversight, spot checks, assessments, reviews, tests, inspections, acceptances, Approvals, or other approvals. Such actions or inaction does not constitute acquiescence for the purposes of Contract Completion of the particular material or Work, or waiver of any legal or equitable right with respect to the particular material or Work. At any time prior to Contract Completion and at the Design-Builder's expense, the Department may reject Work and require the Design-Builder to repair, remove and replace, or otherwise correct any Nonconforming Work and/or identify additional Work which must be done to bring the Project into compliance with Contract requirements, it being understood that oversight, spot checks, assessments, reviews, tests, inspections, acceptances, Approvals, and other approvals by the Department, Third Parties, or other Persons are for their benefit and not to relieve the Design-Builder of its responsibilities for quality control and compliance with the Contract requirements.

3.6.2. No Estoppel

The Department shall not be precluded or estopped, by any measurement, estimate, or certificate made either before or after Contract Completion and payment therefor, from showing that any such measurement, estimate or certificate is incorrectly made or untrue, or from showing the true amount and character of the Work performed and materials furnished by the Design-Builder, or from showing that the Work or materials do not conform in fact to the requirements of the Contract Documents. Notwithstanding any such measurement, estimate or certificate, or payment made in accordance therewith, the Department shall not be precluded or estopped from recovering from the Design-Builder and its Surety such damages as the Department may sustain by reason of the Design-Builder's failure to comply or to have complied with the terms of the Contract Documents.

3.7. Nonconforming Work

3.7.1. Rejection, Removal, and Replacement of Work

Subject to the Department's right, in its sole discretion, to accept Nonconforming Work, the Design-Builder shall repair, remove, replace, or otherwise correct rejected Nonconforming Work so as to comply with the requirements of the Contract Documents, at the Design-Builder's expense and without any time extension, and the Design-Builder shall promptly take all action necessary to prevent similar deficiencies from occurring in the future. The fact that the Department may not have discovered the Nonconforming Work shall not constitute an acceptance of such Nonconforming Work. If the Design-Builder fails to correct any Nonconforming Work within seven Calendar Days of receipt of notice from the Department requesting correction, the Department may, in its sole discretion, cause the Nonconforming Work to be repaired, removed, replaced, or otherwise corrected, and may deduct the cost of doing so from any monies due or to become due the Design-Builder and/or obtain reimbursement from the Design-Builder for such cost.

3.7.2. Nonconforming Work Pay Adjustment

In its sole discretion, the Department may accept any Nonconforming Work or require Design-Builder to repair or restore such Nonconforming Work, in which case the Department shall be entitled to a pay adjustment (or reimbursement of a portion of the Contract Amount, if applicable) or additional assurances (including additional warranties). If the Department accepts any Nonconforming Work, the Department shall be entitled to reimbursement of a portion of the Contract Amount in an amount determined by the Department. In general, the pay adjustment (or reimbursement) shall equal any one or combination of the following, at the Department's election, (i) the amount allocated to such Work in the Approved Schedule of Values (SOV); (ii) the Design-Builder's cost savings associated with its failure to perform the Work in accordance with the Contract requirements; (iii) the amount deemed appropriate by the Department to provide compensation for impacts to affected parties such as inconvenience to the public or future maintenance and/or other costs relating to the Nonconforming Work; or (iv) by the amount indicated for nonconforming work items specified in Part 5 (Special Provisions and Exceptions). In certain events, the Department shall be entitled to a pay adjustment (or reimbursement) as expressly set forth elsewhere in the Contract Documents. All pay adjustments or reimbursements shall be deducted from future payments or shall be payable to the Department within 30 Calendar Days after the Design-Builder's receipt of an invoice therefor.

If the Design-Builder proceeds with Nonconforming Work , then such Work and any subsequent payment (partial or full) for such items of Work will be at the Department's sole discretion.

as activities in the Project Baseline Schedule. All Payment Activities shall be incorporated into one of the Payment Items in Form PA (Price Allocation) and Form UC (Utility Costs). Incorporate Change Orders into new or revised Payment Activities as they are Approved; new or revised Payment Activities must be agreed upon with the Department. If the Design-Builder anticipates requesting payment for stored-materials, include these materials as Payment Activities. Cost-loading of activities is described in Section 11.2.4~~11.2.4~~~~11.1.4~~ (Baseline Schedule Development).

12.1.3. Continuing Activities

The SOV shall include Payment Activities sufficient to cover all efforts necessary to fulfill all Contract requirements and successfully complete the Work for the following continuing activities:

A. Project Management
B. Quality Control
C. Safety and security
D. Maintenance During Construction
E. Environmental
F. Insurance

The total value for the continuing activities, except Quality Control, and Insurance, shall be equal to the value of Compensable Project Overhead listed on Form PA (Price Allocation) and shall be distributed so as to capture estimated expenditures in equal monthly increments within each continuing activity from NTP until Contract Completion.

12.2. Progress, Invoicing, and Payment

12.2.1. Measurement of Progress

Payments shall be made for Payment Activities and no payment is made until the Payment Activity is at least 50, 90 or 100 percent complete. The Department will consider payment of 50 percent of the budgeted amount when at least 50 percent of the physical progress of a Payment Activity is achieved in accordance with the Contract requirements. The Department will consider payment of 90 percent of the budgeted amount when 90-100 percent of the physical progress of a Payment Activity is achieved in accordance with the Contract requirements but required documentation is pending. Full payment of the budgeted amount will be paid when a payment activity is 100 percent complete and all required documentation is received and substantiated by the Department.

For continuing activities, payment shall be made for the amount apportioned for the period in which payment is being requested.

The amount payable to the Design-Builder for bond premiums is a dollar-for-dollar pass-through of the Design-Builder's costs (not to exceed the amount shown in the Payment Activities for such premiums). Where a Payment Activity requires submittal of a bond, the Payment Activity is met when the bond has been provided in the amount and under the terms required in the Contract and by a Surety that the Department accepts;

Invoice mobilization at the amount listed in Proposal Price Allocation Form PA upon issuance of NTP.

The Department will not pay for direct costs of equipment used to construct the Project. The Design-Builder shall allocate costs for equipment, whether new, used, or rented, as part of the activities with which the equipment is associated.

later audit. The Design-Builder's (and each Subcontractor's) cost records pertaining to Work paid for on a Force Account basis shall be open, during all regular business hours, to inspection or audit by representatives of the Department during the life of the Contract and for a period of not less than seven years after Contract Completion, and the Design-Builder (and each Subcontractor) shall retain such records for that period. If an audit is to be commenced more than 60 days after Contract Completion, the Design-Builder will be given a 14-day notice of the time when such audit is to begin.

16.5. Contents of Change Orders (excluding Equal or Better Change Orders)

Each lump sum, force account Change Order form and RCO shall meet all applicable requirements of Sections 15 (Change Order Risk Allocation) and 16 (Changes in the Work). The completed and/or modified Supplemental Agreement described in Section 6.1.3 (Change in Allocation of Responsibility Decreasing the Work) and Part 4-19 (Utilities) shall be considered an appropriate form, where applicable.

The Design-Builder shall prepare a scope of work, cost estimate, time impact analysis, if any and other information as required by this Section for each Change Order form and RCO.

Scope of Work: The scope of work shall describe in detail satisfactory to the Department all activities associated with the Change Order, including a description of additions, deletions and modifications to the existing Contract requirements.

Cost Estimate: Unless the Department agrees otherwise, the cost estimate shall set out the estimated costs in such a way that a fair evaluation can be made. It shall be in the form of Appendix J (Cost Analysis for Request for Change Order) or such other form as required by the Department and shall include as separate items: labor, materials, equipment, overhead (which includes all indirect costs) and profit, as allowed under Section 15 (Change Order Risk Allocation) and this Section 16 (Changes in the Work), if any. If the work is to be performed by Subcontractors and if the work is sufficiently defined to obtain Subcontractor quotes, the Design-Builder shall obtain quotes (with breakdowns showing cost of labor, materials, equipment, overhead and profit) on the Subcontractor's stationery and shall include such quotes as back-up for the Design-Builder's estimate. No additional payment shall be allowed in excess of the provisions under Sections 15 (Change Order Risk Allocation) and 16 (Changes in the Work).

Time Impact Analysis:

If the Design-Builder claims that an event, situation or change impacts the Critical Path affecting a Completion Deadline, it shall provide a time impact analysis (TIA). The TIA shall illustrate the impacts of each change or delay to the Project Completion Deadline or Project milestone (defined in Part 1 (Agreement)), as appropriate. The TIA shall use the accepted Project schedule update that has the closest data date prior to the event and compare it to the proposed TIA schedule which incorporates the impact event. If the Department determines that the most recently accepted Project schedule update does not appropriately represent the conditions prior to the event, then the Design-Builder shall provide a schedule updated to one day before the impact event and provide this schedule for acceptance to use in the TIA. Alternatively, if an event or change affects activities that were already in-progress at the time of the impact, then, with the approval of the Department, it may be appropriate to provide analysis using actual dates and durations from the Project schedule update at the time of the event to quantify the impact.

The TIA shall include schedule layouts and a narrative report representing specific activities affected by the event or change; including activity numbers, durations, dates, predecessor and successor activities, resource and cost, and all supporting documentation needed to evaluate the change in a form satisfactory to the Department.~~If the Design-Builder claims that such event, situation or change affects the Critical Path affecting a Completion Deadline, it shall provide a time impact analysis indicating all activities represented or affected by the change, with activities numbers, durations, predecessor and successor activities, resources and cost, and with a narrative report, in form satisfactory to the Department and in accordance with Section 11.1.6 (Project Baseline Schedule Narrative Requirements). If the time impact~~

~~analysis is associated with a proposed change of scope, then the time impact analysis shall compare the proposed new schedule to the then most current Project Schedule Update. Except as otherwise provided in this Section, the impacted delay analysis shall only modify the activities that have been impacted by the event that justifies the extension.~~

Other Supporting Documentation: The Design-Builder shall provide such other supporting documentation as may be required by the Department.

16.5.1. Justification

All requests for Change Orders shall include a narrative justification detailing all causes of the proposed change, making specific reference to the applicable provisions of Sections 15 (Change Order Risk Allocation) and 16 (Changes in the Work) that permit a Change Order to be issued, and describing the data and documents that establish the necessity of such proposed change.

16.5.2. Design-Builder Representation

Each Change Order shall contain a sworn certification, in the form of Appendix L, Change Order Certification, by the Design-Builder (and Subcontractor(s), for any Subcontractor involved in the Work or event contemplated by the Change Order).

16.5.3. Incomplete Change Orders

Each RCO provided under Section 16 (Changes in the Work) shall meet all requirements set forth in this Section 16.5, provided that if any such requirements cannot be met due to the nature of the occurrence, the Design-Builder shall provide an incomplete RCO, which shall:

A. Comply with all requirements capable of being met.

B. Include a list of requirements, which are not fulfilled together with an explanation reasonably satisfactory to the Department stating why such requirements cannot be met.

C. Provide such information regarding projected impact on the Critical Path affecting a Completion Deadline as is requested by the Department.

D. In all events include sufficient detail to ascertain the basis for the proposed Change Order and for any price increase associated therewith, to the extent such amount is then ascertainable.

The Design-Builder shall furnish, when requested by the Department, such further information and details as may be required to determine the facts or contentions involved. The Design-Builder agrees that it shall give the Department access to any and all of the Design-Builder's books, records, and other materials relating to the Work, and shall require its Subcontractors to do the same, so that the Department can investigate the basis for such proposed Change Order. The Design-Builder shall provide the Department with a monthly update to all outstanding incomplete requests for Change Order, describing the status of all previously unfulfilled requirements and stating any changes in projections previously delivered to the Department, time expenditures to date and time anticipated for completion of the activities for which the time extension is claimed. Failure to provide the above monthly information as required shall prevent the Design-Builder from being compensated for that month for any RCO amounts that otherwise may be owed or become owed.

The Department may reject the Design-Builder's claim at any point in the process. Once a complete RCO is provided, the Department's failure to respond thereto within 14 days of delivery of the request shall be deemed a rejection of such request. Although the Department intends to review incomplete Change Orders for the purposes of determining whether delivery was timely as described in Section 16.3.4 (Procedures for Design-Builder-Initiated Lump Sum Change Orders), the Department shall have no

F. Comply with the following insurance claims notification and processing procedures:

1. Notify the Department of all claims within seven Calendar Days of receiving notification;
2. Provide written notification for all pending claims to the Department before Contract Completion.
   a. Notify claimants of denied or partially denied claims of $5,000 or less of their right to request re-examination by the:

UDOT Claims Re-Examination Board
4501 South 2700 West
West Valley City, UT 84114-8430
Phone: (801) 965-4116~~Phone: (801) 964-4556~~

   b. The information provided to the claimant includes:
      1) A time deadline for requesting re-examination equal to seven Calendar Days after notification of denial or partial denial;
      2) Address and name of the person to whom it should be directed;
      3) General information helpful in making a determination; and
      4) The Board's prerogative to waive the time deadline.

G. Cooperate with the UDOT Claims Re-Examination Board in resolving disputes regarding denials or partial denials from an insurance carrier:

1. Design-Builder shall provide any information possessed by the carrier that the Board believes is pertinent to the determination;
2. The Board may refer to an insurance carrier's decision and the reason for it;
3. The determination is based on general applicable standards of insurance adjusting;
4. The Board does not grant in-person hearings, but relies on documentation prepared by the Design-Builder, the insurance carrier, the claimant, and the Department;
5. Neither the insurance carrier nor the Design-Builder has the right to intervene in a re-examination before the Board;
6. The Board decides the claim as expeditiously as possible; and
7. The decision by the Claims Re-Examinations Board is administratively final.

H. The Department deducts from any amounts due and payable to the Design-Builder, claims that the Design-Builder's liability insurance carrier denied but are directed to be paid by the Claims Re-Examination Board.

27— SURETY BONDS

The Design-Builder shall provide to the Department, and maintain at all times during the term of the Contract, Payment and Performance Bonds as described below, or other assurance satisfactory to the

OWNER CONTROLLED INSURANCE PROGRAM (OCIP)

1. GENERAL

The Department will implement an Owner-Controlled Insurance Program (OCIP) on this Project. The Design-Builder shall enroll in and comply with all OCIP requirements. The OCIP requirements are not intended to create any contract between Subcontractors and the Department. The Design-Builder shall ensure that all eligible Subcontractors enroll in and comply with all OCIP requirements, and shall be responsible for enforcing any OCIP provisions that relate to Subcontractors based on the contract let by the Design-Builder.

The OCIP shall minimally provide the following types of insurance coverage for the Design-Builder and all eligible Subcontractors of every tier enrolled in the OCIP and performing Work at the Project site. As used in this Appendix B, the term "eligible Subcontractor" shall mean Subcontractors of every tier enrolled in the OCIP that have employees working on the Work Site. The term "eligible Subcontractor" specifically excludes suppliers, materialmen, vendors, haulers, truckers and "owner/operators" whose employee(s) perform no work on the Work Site or are engaged solely in loading, unloading, stocking, testing, or hauling equipment, supplies or materials.

For purposes of this Appendix B, the term "Work Site" shall not include any locations outside of the Project Right-of-Way that have not been specifically identified by the Design-Builder and Approved in writing by the Department and the insurer(s) for addition to the OCIP.

The OCIP shall minimally provide the following types of insurance coverage: workers' compensation, employer's liability, general liability, contractor's pollution liability, railroad protective (as required), excess liability, and builder's risk. The Department agrees to pay all premiums associated with the OCIP, including deductibles or self-insured retentions, except as otherwise stated in the Contract Documents.

A. The Design-Builder and eligible Subcontractors will not be allowed to commence performance of Work without enrolling in the OCIP.

B. The current OCIP carriers are as follows:

1. Workers' Compensation and Employer's Liability: To be determined~~Trumbull Insurance Company (The Hartford)~~;
2. General Liability: To be determined~~Hartford Fire Insurance Company~~;
3. Contractor's Pollution Liability: To be determined~~Chartis Specialty Insurance Company~~;
4. Excess Liability Coverage: To be determined~~Allied World National Assurance Company and Great American Insurance Co. of New York~~;
5. Railroad Protective Liability: To be determined; and
6. Builder's Risk: To be determined.

C. Ineligible and eligible contractors, at their own expense, shall be required to maintain their own insurance of the types and with the limits as set forth in Section 13 (Design-Builder/Subcontractor-Provided Coverage), with such coverage acknowledging the Work Site, and shall promptly furnish to Department certificates of insurance giving evidence that all required insurance is in force.

D. The Design-Builder shall enroll in the OCIP by completing the attached OCIP Enrollment Form and submitting it to the Department Project Director along with the required certificate(s) per Section 14 (Certificates of Insurance) at the time it returns the executed

a. The Design-Builder shall require all parties, including subcontractors, to obtain Workers Compensation Insurance as described in this section prior to their entry on the Work Site.

2. Employer's Liability Insurance: Employer's liability insurance with the following minimum limits of liability:

   a. $100,000, each Accident;

   b. $500,000, Disease, policy limit; and

   c. $100,000, Disease, each Employee;

3. Commercial General Liability Insurance: Commercial general liability insurance, on an "occurrence basis", including insurance for operations, independent contractors, products and completed operations. Such insurance must be endorsed with a Broad Form Property Damage Endorsement (including Completed Operations) and afford coverage for explosion, collapse, and underground hazards. The insurance required by this subparagraph (C)(3) shall have limits not less than the following:

   a. **$3,000,000**~~$2,000,000~~, General Aggregate;

   b. $1,000,000, Products—Completed Operations Aggregate;

   c. $1,000,000, Personal and Advertising Injury;

   d. $1,000,000, each occurrence;

   e. $50,000 , Fire Damage (any one fire); and

   f. $5,000, Medical Expense (any one person).

   The certificate of insurance shall state that the policy required by this subparagraph 13.C.3 has been endorsed to name the Department and the State as additional insureds. See item 13.B above and 16 (Subcontractor Participation) for waiver of subrogation requirements;

4. Automobile Liability (insurance coverage not provided in OCIP): Automobile liability insurance for claims arising from the ownership, maintenance, or use of a motor vehicle in connection with the Work at, upon, or away from the Work Site. The following minimum limits of liability apply:

   a. $1,000,000, Combined Single Limit Bodily Injury and Property Damage, each occurrence.

   The certificate of insurance shall state that the policy required by this subparagraph 13.C.4 has been endorsed to name the Department and the State as additional insureds;

5. Aircraft Liability (insurance coverage not provided in OCIP): For each entity using its own aircraft or employing aircraft in connection with the Work, aircraft liability insurance with a combined single limit of not less than $1,000,000 per occurrence.

   The certificate of insurance shall state that the policy required by this subparagraph 13.C.5 has been endorsed to name the Department and the State as additional insureds; and

6. Valuable Papers and Records and/or Electronic Data Processing (Data and Media) Coverage (insurance coverage not provided in OCIP): Coverage for the physical

as defined in the SDDM. Structure Type selection reports and Plan-in-hand Review forms are not required for Design Build projects.

B. Final Design Milestone Review – Conduct a final design milestone review at 100 percent design progress prior to the issuance of Released for Construction documents. For structural design packages conduct the final design milestone review in conformance with a Stage 4 review as defined in the SDDM.

Follow the requirements in Part 4-04 (Drainage) for an intermediate design milestone review. For all other disciplines, if intermediate reviews are needed, establish a process for additional intermediate design milestone reviews that occur between the initial and final design milestone review.

Follow the requirements in Part 4-06 (Geotechnical) for the review of MSE walls.

Follow the requirements in Part 4-10 (Maintenance of Traffic) for the Traffic Management Plans review.

Include the Department in these reviews and provide the submittals to the Department in advance of the review meeting to allow for review periods required per Table 3D-1. Submit two hard copies and one electronic copy in computer-aided design and drafting (CADD) format and PDF format, of all relevant design memoranda, reports, data, review plans and specifications for each submittal package. No more than five design packages may be in to the Department for review at any one time. The schedule impacts of revisions arising from the Department's review and caused by nonconformance with Contract requirements, including the Department's time for reviewing revisions, is borne by the Design-Builder.

3.5 Early Released for Construction

Early Release for Construction (ERFC) is only allowed for girders, ~~7000 South~~ Maintenance of Traffic Plans, clearing and grubbing and the 7000 South pedestrian bridge superstructure. Identify the procedure in the QMP for which design drawings are ERFC. Describe the process to resolve all comments prior to issuing ERFC drawings. Submit two hard copies of ERFC documents and one electronic copy in PDF format. ERFC drawings may be submitted in electronic format.

3.6 Released for Construction

Identify the procedure in the QMP for which design drawings are Released for Construction (RFC). Include a procedure for how ERFC drawings will be included in a RFC submittal. Describe the process to resolve all comments prior to issuing RFC drawings. Submit two hard copies of RFC documents, one electronic copy in PDF format and all associated CADD files. Identify a process and/or feature to allow near real time distribution of RFC plans, or updates to previous RFC plans to all parties.

3.7 Design Changes After Plans have been Released for Construction

Follow the Field Design-Change (FDC) or Notice of Design-Change (NDC) process outlined in Appendix A for changes to documents that are Released for Construction (RFC). Identify the procedure in the QMP for ensuring the most current version of the design is available for use in the field, including Department personnel. Submit two hard copies and one electronic copy in PDF format with every NDC package.

2. Safety: Provide safe access to all drainage facilities for post-construction maintenance activities.

K. Completely remove all drainage structures and appurtenances that are abandoned by the Project. Abandon or remove drainage pipes in accordance with Department Standard Specifications.

L. Do not use permanent pump stations for stormwater or groundwater.

M. Do not use openings in walls or barriers to convey stormwater.

N. In addition to analysis and design for the Project, analyze and design storm drain facilities within 100 feet of the Project limits of each interchange and ~~A~~analyze storm drain facilities within contributing drainage areas of existing and proposed detention facilities affected by the Project. . Adhere to all requirements of Section 4-04 Drainage. ~~Analyze storm drain facilities within contributing drainage areas of existing and proposed detention facilities affected by the Project.~~

4D. DESIGN AND CONSTRUCTION CRITERIA

4D-1 Hydrology

A. Perform hydrologic analyses for all on-site drainage areas and for all off-site drainage areas (or basins that contribute runoff to the Project site. On-site drainage areas are defined as contributing drainage areas within Department ROW; off-site drainage areas are those outside of Department ROW. Identify all impacts to any existing storm drainage system based on the hydrologic analyses.

B. Use the design frequencies in accordance with Table 4D-1 (Design Frequency Requirements) when designing Department owned drainage facilities. The design frequencies for all other drainage facilities are to conform to the local municipality's criteria.

TABLE 4D-1
DESIGN FREQUENCY REQUIREMENTS (YEAR)

FACILITY TYPE	ROAD CHARACTERISTICS		
	BANGERTER HWY.	OTHER THAN BANGERTER HWY. (OVER 1000 AADT*)	LOW VOLUME (UNDER 1000 AADT*)
BRIDGE	50	50	25
CROSS DRAINAGE	50	50	25
STORM DRAINAGE	10	10	10
STORM DRAINAGE CHECK EVENT (SAG LOCATION)	50	25	10

~~*BASED ON A 20 YEAR TRAFFIC PROJECTION~~

C. Design all natural rivers and streams that have a floodplain designation by the Federal Emergency Management Administration (FEMA) to accommodate the 100-yr storm event in accordance with State and Federal requirements.

D. Use the 2-year, 1-hour storm event for designing water quality systems.

E. Design canals and irrigation facilities based on existing capacity and functionality as determined by coordination with the owner unless modified by written agreement in

TABLE 4D-2C
DEPTH/INTENSITY-DURATION-FREQUENCY DATA
BANGERTER HWY. AT 9000 SOUTH

Duration	2-Year		5-Year		10-Year		25-Year		50-Year		100-Year	
	inches	in/hr	inches	in/hr	inches	in/hr	inches	in/hr	inches	in/hr	inches	in/hr
5-min	0.16	1.90	0.22	2.60	0.27	3.26	0.36	4.32	0.44	5.32	0.54	6.48
10-min	0.24	1.45	0.33	1.99	0.41	2.48	0.55	3.28	0.67	4.04	0.82	4.93
15-min	0.30	1.20	0.41	1.64	0.51	2.05	0.68	2.72	0.83	3.34	1.02	4.07
30-min	0.40	0.80	0.55	1.10	0.69	1.38	0.91	1.83	1.12	2.25	1.37	2.74
1-hr	0.50	0.50	0.68	0.68	0.85	0.85	1.13	1.13	1.39	1.39	1.70	1.70
2-hr	0.62	0.31	0.80	0.40	0.98	0.49	1.27	0.63	1.53	0.77	1.85	0.92
3-hr	0.71	0.24	0.89	0.30	1.06	0.35	1.33	0.44	1.58	0.53	1.88	0.63
6-hr	0.91	0.15	1.10	0.18	1.28	0.21	1.54	0.26	1.76	0.29	2.02	0.34
12-hr	1.13	0.09	1.36	0.11	1.56	0.13	1.86	0.15	2.10	0.17	2.37	0.20
24-hr	1.30	0.05	1.56	0.06	1.77	0.07	2.05	0.09	2.27	0.09	2.50	0.10

TABLE 4D-2D
DEPTH/INTENSITY-DURATION-FREQUENCY DATA
BANGERTER HWY. AT 11400 SOUTH

Duration	2-Year		5-Year		10-Year		25-Year		50-Year		100-Year	
	inches	in/hr	inches	in/hr	inches	in/hr	inches	in/hr	inches	in/hr	inches	in/hr
5-min	0.16	1.88	0.22	2.59	0.27	3.24	0.36	4.28	0.44	5.27	0.54	6.42
10-min	0.24	1.43	0.33	1.97	0.41	2.46	0.54	3.26	0.67	4.01	0.81	4.88
15-min	0.30	1.18	0.41	1.63	0.51	2.04	0.67	2.70	0.83	3.31	1.01	4.04
30-min	0.40	0.80	0.55	1.10	0.69	1.37	0.91	1.81	1.11	2.23	1.36	2.72
1-hr	0.49	0.49	0.68	0.68	0.85	0.85	1.12	1.12	1.38	1.38	1.68	1.68
2-hr	0.61	0.30	0.80	0.40	0.97	0.48	1.25	0.63	1.51	0.76	1.82	0.91
3-hr	0.69	0.23	0.88	0.29	1.04	0.35	1.31	0.44	1.55	0.52	1.85	0.62
6-hr	0.89	0.15	1.08	0.18	1.26	0.21	1.51	0.25	1.73	0.29	1.98	0.33
12-hr	1.09	0.09	1.32	0.11	1.52	0.13	1.81	0.15	2.04	0.17	2.29	0.19
24-hr	1.27	0.05	1.52	0.06	1.72	0.07	1.99	0.08	2.20	0.09	2.42	0.10

H. Develop a runoff hydrograph based on a 24-hour duration frequency storm ~~time~~ distribution for drainage systems involving detention storage and/or large or complex storm systems.

4D-2 Pavement Drainage

A. Maintain a positive grade toward a storm drain system on all pavements. Do not allow stormwater to pond.

B. In areas where there is no curb and gutter, design and construct the Project to minimize concentrated stormwater runoff in accordance with the provisions of Section 4D-~~13~~ 14 ~~(Erosion Control).~~

C. To minimize hydroplaning, optimize roadway geometric component configurations to comply with the following hydroplaning criteria. In tangents, confirm compliance

4D-6 Bridge Deck and Approach Slab Drainage

A. Design and construct deck drainage systems so that drainage does not encroach upon travel lanes during the design storm. Collect and convey stormwater to a nearby roadway storm drain system. Design deck drainage systems in accordance with Part 4-17 (Structures). Do not allow runoff from bridge decks to drain onto travel lanes, shoulders, sidewalk, or other features below the bridge.

B. Design the bridge deck drainage system to be compatible with the structural reinforcement, components, and aesthetics of the bridge.

C. Provide a minimum profile grade across bridge decks in accordance with Part 4-17 (Structures).

D. Position the deck drainage outfalls to avoid corrosion, runoff from falling or blowing onto bridge structural elements or, erosion of embankments, and splashing of moving traffic and sidewalk areas below the bridge deck. Daylight outlets above ground for maintenance access.

E. Design and construct downspouts with a minimum diameter of eight inches. Provide cleanouts for downspout systems at all bends and turns in the downspout system. Do not run the drain pipe inside of structural elements.

F. Where the pipe is located behind a retaining wall or slope protection, the pipe is to have seamless joints. Allow for movement at bridge joints (provide an acceptable joint) to maintain integrity and function when accommodating thermal bridge movements.

G. Intercept pavement drainage at both ends of roadway crossing structures to prevent runoff from crossing the bridge expansion joints. Use 0.1 cfs as the maximum allowable bypass flow across bridge expansion joints for the 10-year event.

4D-7 Drainage Ditches

A. The bottom of the roadside ditch is to be one foot minimum below the bottom of the granular borrow layer of the roadway pavement section or provide other measures to drain the pavement section.

B. Ditch side slopes are not to be steeper than 2:1.

C. Provide one foot or two velocity heads minimum freeboard for roadside ditches, whichever is larger.

D. Provide an appropriate channel liner when the velocity within the ditch exceeds the permissible shear stress; adhere to the requirements of 4D-13 (Erosion Control).

4D-8 Stormwater Quality

Treat all stormwater runoff generated from areas of pavement in accordance with the requirements of all applicable Project documents and permits, including the Department's UPDES Municipal Separate Storm Sewer System (MS4) Permit, the Project Environmental Documents, the Project 401 Water Quality Certification (if applicable)), and/or approved TMDLs (if applicable), and Third-Party agreements.

A. Post construction controls that will prevent or minimize water quality impacts are required. Water quality controls may include a combination of structural and/or non-structural controls. Document the effectiveness of the water quality controls selected.

A. The maximum headwater elevation is to meet to following criteria:
   1. Below the bottom of the pavement section.
   2. No greater than 4 feet above the crown of the culvert.
   3. Below the elevation where flows diverts around the culvert.
   4. No flooding beyond the Department ROW, easement, or prescriptive right.
   5. No change in elevations established to delineate National Flood Insurance Program (NFIP) or other floodplain mapping.

B. The minimum pipe diameter is 24 inches.

C. All changes in horizontal and/or vertical alignment require junction boxes.

D. Provide a concrete apron on the upstream and downstream ends for culverts larger than 48 inches.

E. Increase the diameter of proposed cross drainage pipes by six inches when the embankment over the top of the pipe exceeds eight feet.

F. Analyze and design Bingham Creek cross drainage structure improvements using a 100-year peak discharge of 603 cfs. Replace culvert and provide a 75-year design service life; see Section 4D-3~~ Drainage Pipe~~. Coordinate with the local floodplain administrator (West Jordan City) and Salt Lake County Flood Control. Provide a minimum culvert rise of 6 feet for maintenance purposes, and provide maintenance access. Prepare and obtain floodplain and flood control permits and comply with all floodplain requirements; see this Section 4D and Part 4-05 (Environmental Compliance). The Department will be the applicant for Salt Lake County flood control permits.

4D-11 Irrigation

A. Extend irrigation facilities from one side of the Department ROW to the other. Headwalls, wingwalls, and aprons are to be located within Department ROW or permanent easements. Install no access fencing to allow for third party maintenance access to irrigation facilities.

B. Coordinate any impacts to irrigation facilities with the owner of the facility. Maintain full functionality of irrigation systems from April 1 through October 31 each calendar year, unless otherwise approved by the facility owner in writing.

C. Relocate irrigation system downstream of Welby Canal Turnout 200, located near 4000 West, to maintain existing capacity and functionality for associated downstream water users. Obtain Welby Canal Company approval for turnout location and improvements. Obtain water user approval for downstream system improvements.

4D-12 Floodplains

A. Coordinate all impacts to FEMA-regulated floodplains and changes to bridges and culverts located in FEMA-regulated floodplains with the Department, FEMA, the local floodplain administrator, and Salt Lake County. Obtain all required stream alteration and floodplain-related permits and comply with the requirements of these permits and all applicable National Flood Insurance Program requirements.

B. As required by FEMA and/or local floodplain administrators, develop hydraulic models of the waterways and crossing structures to demonstrate hydraulic performance of new and existing structures.

Subject	*Source*	*Commitment*	*Implementation Period(s)*
	UDOT Noise Abatement Policy 08A2-01 (Feb 2014)	as specified by the Department. The location and height of noise abatement measures described in the Final State Environmental Study and Noise Evaluation could change based on any changes to the final design and receptors. Changes to the final design and receptors will be evaluated by the Department prior to making a final determination on the location and height of the noise abatement measures. The final determination on noise wall height and location will also depend on the approval by a sufficient number of affected residents/property owners as defined in the UDOT Noise Abatement Policy (08A2-01, Feb. 2014).	
USBOR Aqueduct	USBOR/JVWCD Project Agreement	Follow all processes and conditions described in Project Agreement between UDOT, Bureau of Reclamation, and Jordan Valley Water Conservancy District.	Construction
Pedestrians	7000 South SES – page 13	In accordance with Part 4.	Construction
Demolitions		In accordance with Department Standard Specifications and local jurisdictions.	Construction
9000 South			
Air Quality	9000 South SES – Page 14	Follow requirements listed in UDOT Standard Specification 01572, Dust Control and Watering and UDOT Standard Specification 01355, Section 3.5, Fugitive Dust.	Construction
Cultural	9000 South SES – Page 14	Follow UDOT Standard Specification 01355, Parts 3.7 and 3.8	Construction
Hazardous Waste	9000 South SES – Page 14	Follow UDOT Standard Specification 01355, Parts 3.1 In accordance with the Phase I and Phase II in Part 8 (Engineering Data)	Construction
Invasive Species	9000 South SES – Page 14	Follow UDOT Supplemental Specification 02924S, Invasive Weed Control	Construction
Water Quality	9000 South SES – Page 14	Prepare, implement, and maintain a Stormwater Pollution Prevention Plan (SWPPP) in accordance with UPDES Permit No. UTRC0000 throughout construction of the Project.	Prior to and during Construction
Noise	UDOT Standard Specification 01355 UDOT Noise Abatement Policy 08A2-01 (Feb 2014)	Follow requirements listed in UDOT Standard Specification 01355, Section 3.6, Noise Control. The Design-Builder will install or replace noise abatement measures, as specified by the Department. The location and height of noise abatement measures described in the Final State Environmental Study and Noise Evaluation could change based on any changes to the final design and receptors. Changes to the final design and receptors will be evaluated by the Department prior to making a final determination on the location and height of the noise abatement measures. The final determination on noise wall height and location will also depend on the approval by a sufficient number of affected residents/property owners as defined in the UDOT Noise Abatement Policy (08A2-01, Feb. 2014).	Construction
USBOR Aqueduct	USBOR/JVWCD Project Agreement	Follow all processes and conditions described in Project Agreement between UDOT, Bureau of Reclamation, and Jordan Valley Water Conservancy District.	Construction
Wetlands and Waters of the U.S.	Permit	Conform to all general and special conditions of the nationwide permit for impacts to Bingham Creek. Obtain stream alteration permit and follow all conditions.	Construction
Floodplains		Obtain approved Conditional Letter of Map Revision (CLOMR) as	Prior to

Exceptions) 02924S (Invasive Weed Control). Control invasive weeds for the duration of the Project.

7C-8 Irrigation

Meet the standards for the local municipality for any proposed irrigation. Submit the design of the irrigation to the local municipality and Department for Approval. Irrigation systems should be designed without any overhead spray irrigation (pop-up or rotor) immediately adjacent to the roadway.

7C-9 Park Strip, Median, and Island Treatments

Apply one of the following treatment options to park strips, medians, and islands within the Project limits:

A. Stamped Colored Concrete:

1. Use integral concrete color Fed. Std. 36081 or approved equal.
2. Use ashlar slate pattern or approved equal.
3. Provide construction joints that parallel the ashler slate pattern.

B. Cobble Rock:

1. Use 3 to 6-inch cobble rock placed 6 inches in depth.
2. Place weed barrier fabric under rock..
3. For island areas, use a 4-foot wide band of stamped colored concrete (see above) around the perimeter and cobble rock for the interior portion.

7C-10 Landscape Treatments at Specific Locations

Provide landscape treatment at specific locations as follows:

A. Parcels 536, 562, and 565. Use a combination of landscape rock and stamped colored concrete in accordance with this section. Landscape treatments should be used in a manner compatible with the primary use of the parcel.

~~A.~~B. The Oval-A-Bout on 11400 South between River Heights Drive and Summer Heights Drive and District Drive and Parkway Plaza Drive. Place native borrow 4-inch below sidewalk and/or top back of curb. Native borrow must be free of petroleum products, construction waste, and other contaminants, including large rocks greater than 3-inches in diameter.

C. New Detention Basins. Use landscape rock in accordance with this section.

TABLE 10B-1
STANDARDS FOR MAINTENANCE OF TRAFFIC

Priority	*Author or Agency*	*Title*
1	UDOT	Special Provisions included in Part 5
2	UDOT	*Supplemental Specifications to 2012 Standard Specifications for Road and Bridge Construction,* as modified by Part 5
3	UDOT	*2012 Standard Specifications for Road and Bridge Construction,* as modified by Part 5
4	UDOT	*Supplemental Drawings to 2012 Standard Drawings for Road and Bridge Construction*
5	UDOT	*2012 Standard Drawings for Road and Bridge Construction*
6	UDOT	*Utah Manual on Uniform Traffic Control Devices (Utah MUTCD)*
7	AASHTO	*A Policy on Geometric Design of Highways and Streets*
8	AASHTO	*Roadside Design Guide*
9	UDOT	*UDOT Sign Manual*
10	UDOT	*Utah Standard Highway Signs Supplement*
11	FHWA	*Standard Highway Signs*
12	TRB	*Highway Capacity Manual*
13	UDOT	*UDOT Design Guidelines for Signalized Intersections*
14	UDOT	*UDOT Flagger Training Handbook*
15	FHWA	National Cooperative Highway Research Program, *Recommended Procedures for the Safety Performance Evaluation of Highway Features* (NCHRP Report 350)
16	ATSSA	*Quality Standards for Work Zone Traffic Control Devices*

10C. REQUIREMENTS

10C-1 Definitions

Cross Streets: Streets with more than one travel lane per direction that cross Bangerter Highway, including but not limited to 5400 South, 7000 South, 9000 South, ~~and~~ 11400 South, and public streets that intersect 5400 South, 7000 South, 9000 South and 11400 South.

Existing Configuration: The existing lane configuration on the Proposal Due Date, including existing lanes, lane widths, shoulder widths, and storage lengths.

Full Closure: The closure of all lanes in any one direction of an individual ~~Roadway Element~~Movement.

~~**Full Movement Closure:** The closure of all lanes in any one direction of a single movement compared to the Existing Configuration.~~

Holiday Periods: All Holiday Periods as defined in Table 10C-6 (Holiday Periods Table).

MOT Peak Periods: All peak periods as defined in Tables 10C-1, through 10C-5 where all existing lanes must remain open to traffic.

MOT Off-Peak Periods: All periods outside the MOT Peak Periods as defined in Tables 10C-1 through 10C-5, excluding Holiday Periods.

Movement: A direction of travel; either a left turn, right turn or through travel path of a vehicle on any ramp, Cross Street, or highway.

Partial Closure: The closure of one or more lanes ~~in~~ of any ~~one direction of an~~ individual Movement ~~within an intersection~~, compared to the Existing Configuration, so long as each ~~turning~~ Movement is accommodated within each intersection. ~~The closure of one or more, but not all lanes in any one direction of an individual Roadway Element between intersections compared to the Existing Configuration.~~ A Storage Length Reduction is also considered a Partial Closure.

Storage Length Reduction ~~in Capacity~~: A~~n~~ ~~increase in the average delay, increase in queue lengths,~~ decrease in storage length of a turning Movement at an intersection compared to the storage lengths outlined in Table 10C-7, Table 10C-8, and Section 10C-12.8.~~, or decrease in traffic throughput resulting from modified traffic control in comparison to the Existing Condition (for example, reduction in storage length, modified lane, Traffic Split, modified traffic signal configuration, displaced left-turn, etc.).~~

~~**Roadway Element:** Each ramp, cross-street, Movement, Bangerter Highway (SR-154), within each interchange between adjacent intersections.~~

Rolling Slowdown: The use of a law enforcement vehicle to close a travel lane(s) or impede traffic for less than fifteen minutes between 12:00 AM and 5:00 AM.

Traffic Split: A Traffic Split is the separation of lanes in the same direction of travel of an individual Movement.

Traveled Way: Any public or private street, sidewalk, or Cross Street.

10C-2 General MOT Requirements

Coordinate, plan, provide, and implement traffic control for all Work, including work performed by Third Parties.

A. Provide for the safe and efficient passage of traffic through construction zones. Begin maintenance of traffic activities at the start of construction work (including preparatory MOT work) or when first hauling construction materials and/or equipment, whichever is earliest, and continue MOT activities until Substantial Completion and removal of all construction traffic control.

B. Minimize traffic impacts to the traveling public, residents, schools and businesses. During the MOT Peak Period, maintain all intersection turning Movements, lane configurations (e.g., dual left-turn lanes), and storage lengths consistent with roadway conditions prior to construction, unless otherwise Approved (see Section 10C-12 for additional Closure Restrictions).

C. Design, place, and maintain all required traffic control, MOT elements, and detour routes required during construction.

D. Obtain all necessary permits from all agencies impacted by the Project for temporary construction of roadways and/or haul routes. Identify and obtain required permits for all construction roads to be used for delivery of heavy loads such as fill, asphalt,

concrete, and bridge girders required for the Project.

E. Obtain Approval of any temporary work zone speed limit reductions on state highways in accordance with UDOT Policy 06C-61. Obtain Approval of any temporary work zone speed limit reductions on city and Cross Streets from the respective jurisdiction.

F. Notify the Jordan and/or Granite School Districts of MOT changes that impact their schools, coordinate school bus circulation and schedules with the Districts.

10C-3 Traffic Management Plan

Prior to start of any construction activities obtain Approval of a Traffic Management Plan (TMP). Develop, implement, and maintain a TMP that describes how the MOT plans and requirements will be met. The TMP shall describe the procedures that will be implemented and followed on the Project to provide for the safe and efficient passage of traffic, pedestrians and cyclists. The TMP shall comply with the Contract Documents and not be used as a means for waiving requirements. The TMP shall be submitted in accordance with this Section and Part 3 (Quality Program). The TMP shall include the following:

A. The processes to produce MOT plans, including development, dissemination, implementation, monitoring, refinement, and maintenance of the MOT plans.

B. An emergency services plan to coordinate and cooperate with emergency service providers and the hospital at 9000 South. Ensure that emergency access is provided at all times and regularly communicated to the proper authorities.

C. An Incident Management Plan (IMP) including:

1. Protocols for notifying emergency service providers, the Department's Traffic Operations Center (TOC), and others in the event of an incident

2. Roles and responsibilities in the event of an incident

3. In the event of an incident, identify the processes to be used to modify construction activities or lane closures to allow traffic flow to return to normal conditions.

D. The processes to be used to provide and maintain access to properties and how this will be incorporated into the MOT plans.

E. The process to obtain Approval and notify the Department of every Full Closure~~, Full Movement Closure,~~ Partial Closure, and Storage Length Reduction~~ in Capacity~~.

F. The process to obtain Approval from the Department of a detour plan used for each Full Closure~~ or Full Movement Closure~~.

G. The process of coordinating and notifying the Department's TOC of a Storage Length Reduction~~ in Capacity, Full Movement Closure, or~~ Full or Partial Closures. This includes coordinating the usage of technology with the TOC, including ATMS devices, Changeable Message Signs (CMS), traffic signal timing modifications, approval of CMS messages, etc.

H. A description of roles, responsibilities, qualifications, and contact information of MOT personnel identified in Section 10C-16 (MOT Personnel) who will plan, direct, implement, and maintain the Traffic Management Plan.

Design and construct all geometric aspects of temporary roadways for 10 MPH below ~~each Roadway Element's~~the posted speed in effect on the Proposal Due Date. Meet all sight distance requirements for the posted speed limit in effect on the roadway on the Proposal Due Date.

Maintain traffic on a paved surface at all times. ~~Use temporary asphalt pavement for all unpaved locations under traffic. Meet the standard for permanent paving smoothness for all temporary pavement.~~ Provide smooth transitions between existing and temporary paving. The Design-Builder is responsible to provide smooth transitions if trench plates are used. See Part 4-09 (Maintenance During Construction) and Part 4-11 (Pavement) for additional temporary paving requirements.

Maintain a travel lane width of 11 feet. The minimum width applies to travel lanes, turn lanes and auxiliary lanes.

Maintain a shoulder width of at least two feet where shoulders exist on the Proposal Due Date.

Provide acceleration and deceleration lanes for temporary roadways, including construction access points, accessing Bangerter Highway (SR-154).

Maintain at all times a concrete barrier between opposing mainline Bangerter travel lanes where barrier exists prior to construction. When a work zone is in the median, construction access points (i.e., openings in the median barrier) shall be staggered to prevent any cross-over collisions should a vehicle enter the work zone.

Design and install or modify temporary and existing traffic signals in coordination with MOT and temporary traffic control plans. For lane shifts through an intersection use a taper rate as defined in the Department Standard Drawings and no more than three feet. Align signal heads over the center of the lanes they serve. Obtain approval of all traffic signal phasing and timing changes. Provide radar vehicle detection at all temporary traffic signals.

Replace all junction boxes and lids, cable vaults and lids, and drainage grates within two feet of a temporary travel lane with load bearing infrastructure designed to support AASHTO HL-93 loads. Weld shut all lids located within the temporary travel lane.

10C-6 Temporary Traffic Control

Maintain existing regulatory signs, warning signs, guide signs, airport signs, hospital signs, and logo signs during all phases of construction.

All temporary signing shall meet or exceed retroreflectivity standards for ASTM Type XI sheeting. Use fluorescent orange sheeting when orange sheeting is specified.

Travel lanes shall be defined by painted lines at all times where striping exists prior to construction. Temporary striping shall meet minimum retrorelectivity standards.

Stripe travel lanes or provide temporary traffic markings before removing temporary traffic control devices.

Stage the implementation of each Partial Closure~~, Full Movement Closure,~~ or Full Closure by placing signs and channelizing devices needed for the closure on the shoulder of the road. Prior to the closure, signs shall be turned facing away from traffic, with the exception of detour signs that shall be turned to face traffic an hour prior to the closure. All signage and channelizing devices shall be placed in accordance with the RFC MOT plans when the closure is implemented.

Provide Project Notification Signs (see Utah Standard Highway Signs Supplement) on both sides of each interchange Cross Street approaching Bangerter Highway (SR-154) and on Bangerter Highway (SR-154) approaching the Project Limits (two signs on each 5400 South, 7000 South, 9000 South,

11400 South, and on Bangerter Highway (SR-154)). Prepare and obtain Approval of the Project Notification Sign layout and installation plan prior to ordering the signs.

10C-7 Business and Private Property Access

Maintain and provide access to every property except as otherwise Approved by the Department.

Provide temporary business access signs during construction according to UDOT Standard Drawings.

No two accesses that serve the same business will be permitted to be under construction concurrently. See Part 4-14 (Right of Way) for additional requirements.

10C-8 Accommodations for Bicyclists and Pedestrians

Maintain the current pedestrian accommodations within the Project limits during construction unless otherwise Approved by the Department.

Obtain Approval of all pedestrian and bicycle detour plans. All existing Safe Routes to School must be maintained throughout the duration of construction. Obtain Approval of a Pedestrian Access Plan that provides for safe pedestrian routing and includes a safe route for school children to cross the Project. Coordinate and obtain approval from the school district for any modifications to the Student Neighborhood Access Plan (SNAP).

The existing pedestrian bridge at 7000 South shall remain ~~functional~~ open until a new pedestrian bridge is opened to pedestrians~~.~~, unless the Design-Builder pays Jordan School District to bus students to and from the Qquirrh Elementary School during the pedestrian bridge closure. If the pedestrian bridge is closed prior to the new bridge being open, the Design-Builder is required to pay ~~the Jordan School District~~ for the cost of busing students on a school day as well as for activities and programs during the summer and normal school year. The cost of Jordan School District to provide busing is $178.12 per bus per school day; four buses are needed on a school day. Busing must be done continuously during the closure. Notify the Department and Jordan School District a minimum of 30 days prior to closing the pedestrian bridge.

10C-9 Detours

Provide convenient and logical rerouting of traffic (by using advance warning systems, directional and informational signing, lighting, and striping) to provide driver-friendly detours and to maximize the safety of the traveling public and construction workers. Coordinate detour routes with the Department to ensure detour traffic signal timing plans are in place to accommodate detoured traffic.

Obtain Approval of all traffic detour plans.

Implement a signed detour in accordance with the MOT plans.

Provide motorist guidance to and along the entire length of every detour route prior to implementing a roadway closure.

Use state routes for the detour of other state routes. If the detour cannot be limited to state facilities, obtain Approval for the detour and written approval from the jurisdiction whose facilities will be utilized.

Identify and coordinate with other construction projects in the vicinity of the Project area, to ensure that both projects detours routes do not conflict with each other.

Detours for multiple closures shall not go through the same intersection.

TABLE 10C-1
BANGERTER HIGHWAY (SR-154) MOT PEAK AND OFF-PEAK TIMES (NUMBER OF THROUGH LANES REQUIRED TO BE OPEN IN EACH DIRECTION)

Hour Starting	Monday-Thursday		Friday		Saturday		Sunday	
	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	1	1	1	1	1	1	1	1
1:00 AM	1	1	1	1	1	1	1	1
2:00 AM	1	1	1	1	1	1	1	1
3:00 AM	1	1	1	1	1	1	1	1
4:00 AM	1	1	1	1	1	1	1	1
5:00 AM	2	2	2	2	1	1	1	1
6:00 AM	All	2	All	2	1	1	1	1
7:00 AM	All	All	All	All	2	2	1	1
8:00 AM	All	All	All	All	2	2	1	1
9:00 AM	All	All	All	All	2	2	1	1
10:00 AM	2	2	2	2	2	2	1	1
11:00 AM	2	2	2	2	2	2	2	2
12:00 PM	2	2	2	2	2	All	2	2
1:00 PM	2	2	All	All	2	All	2	2
2:00 PM	2	All	All	All	2	All	2	2
3:00 PM	All	All	All	All	2	All	2	2
4:00 PM	All	All	All	All	2	All	2	2
5:00 PM	All	All	All	All	2	All	2	2
6:00 PM	All	All	All	All	2	All	2	2
7:00 PM	2	2	2	All	2	2	2	2
8:00 PM	2	2	2	2	2	2	2	2
9:00 PM	2	2	2	2	2	2	2	2
10:00 PM	2	2	2	2	2	2	1	1
11:00 PM	1	1	1	~~2~~1	1	~~2~~1	1	1

1 or 2 through lanes open equals MOT Off-Peak Period
All through lanes open equals MOT Peak Period

TABLE 10C-2
5400 SOUTH MOT PEAK AND OFF-PEAK TIMES (NUMBER OF THROUGH LANES REQUIRED TO BE OPEN IN EACH DIRECTION)

Hour Starting	Monday-Thursday		Friday		Saturday		Sunday	
	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	1	1	1	1	1	1	1	1
1:00 AM	1	1	1	1	1	1	1	1
2:00 AM	1	1	1	1	1	1	1	1
3:00 AM	1	1	1	1	1	1	1	1
4:00 AM	1	1	1	1	1	1	1	1
5:00 AM	1	1	1	1	1	1	1	1
6:00 AM	2	1	2	1	1	1	1	1
7:00 AM	All	2	All	2	1	1	1	1
8:00 AM	All	2	All	2	2	1	1	1
9:00 AM	All	2	All	2	2	2	1	1
10:00 AM	2	2	2	2	2	2	2	1
11:00 AM	2	2	2	2	2	2	2	2
12:00 PM	2	2	2	2	All	All	2	2
1:00 PM	2	2	2	2	All	All	2	2
2:00 PM	2	2	2	All	All	All	2	2
3:00 PM	2	All	2	All	2	All	2	2
4:00 PM	2	All	2	All	2	All	2	2
5:00 PM	2	All	2	All	2	All	2	2
6:00 PM	2	All	2	All	2	2	2	2
7:00 PM	2	2	2	All	2	2	2	2
8:00 PM	2	2	2	2	2	2	1	2
9:00 PM	1	2	2	2	2	2	1	1
10:00 PM	1	1	1	~~2~~1	1	1	1	1
11:00 PM	1	1	1	1	1	1	1	1

1 or 2 through lanes open equals MOT Off-Peak Period
All through lanes open equals MOT Peak Period

TABLE 10C-4
9000 SOUTH MOT PEAK AND OFF-PEAK TIMES (NUMBER OF THROUGH LANES REQUIRED TO BE OPEN IN EACH DIRECTION)

Hour Starting	Monday-Thursday		Friday		Saturday		Sunday	
	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	1	1	1	1	1	1	1	1
1:00 AM	1	1	1	1	1	1	1	1
2:00 AM	1	1	1	1	1	1	1	1
3:00 AM	1	1	1	1	1	1	1	1
4:00 AM	1	1	1	1	1	1	1	1
5:00 AM	1	1	1	1	1	1	1	1
6:00 AM	All	1	All	1	1	1	1	1
7:00 AM	All	All	All	All	1	1	1	1
8:00 AM	All	All	All	All	All	1	1	1
9:00 AM	All	All	All	All	All	1	1	1
10:00 AM	All	All	All	All	All	All	1	1
11:00 AM	All	All	All	All	All	All	All	All
12:00 PM	All	All	All	All	All	All	All	All
1:00 PM	All	All	All	All	All	All	All	All
2:00 PM	All	All	All	All	All	All	1	All
3:00 PM	All	All	All	All	All	All	1	All
4:00 PM	All	All	All	All	All	All	1	All
5:00 PM	All	All	All	All	All	All	1	All
6:00 PM	All	All	All	All	All	All	1	1
7:00 PM	All	All	All	All	1	1	1	1
8:00 PM	1	All	1	All	1	1	1	1
9:00 PM	1	~~All~~1	1	1	1	1	1	1
10:00 PM	1	1	1	1	1	1	1	1
11:00 PM	1	1	1	1	1	1	1	1

1 through lane open equals MOT Off-Peak Period
All through lanes open equals MOT Peak Period

TABLE 10C-5
11400 SOUTH MOT PEAK AND OFF-PEAK TIMES (NUMBER OF THROUGH LANES REQUIRED TO BE OPEN IN EACH DIRECTION)

Hour Starting	Monday-Thursday		Friday		Saturday		Sunday	
	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	1	1	1	1	1	1	1	1
1:00 AM	1	1	1	1	1	1	1	1
2:00 AM	1	1	1	1	1	1	1	1
3:00 AM	1	1	1	1	1	1	1	1
4:00 AM	1	1	1	1	1	1	1	1
5:00 AM	1	1	1	1	1	1	1	1
6:00 AM	1	1	1	1	1	1	1	1
7:00 AM	All	All	All	All	1	1	1	1
8:00 AM	All	All	All	All	1	1	1	1
9:00 AM	All	All	All	All	All	1	1	1
10:00 AM	All	All	All	All	All	All	1	1
11:00 AM	All	All	All	All	All	All	All	1
12:00 PM	All	All	All	All	All	All	All	All
1:00 PM	All	All	All	All	All	All	All	All
2:00 PM	All	All	All	All	All	All	All	All
3:00 PM	All	All	All	All	All	All	All	All
4:00 PM	All	All	All	All	All	All	All	All
5:00 PM	All	All	All	All	All	All	All	All
6:00 PM	All	All	All	All	All	All	All	All
7:00 PM	All	All	All	All	All	All	1	1
8:00 PM	All	All	All	All	All	All	1	1
9:00 PM	1	All	1	All	1	All	1	1
10:00 PM	1	1	1	~~All~~1	1	~~All~~1	1	1
11:00 PM	1	1	1	1	1	1	1	1

1 through lane open equals MOT Off-Peak Period
All through lanes open equals MOT Peak Period

No Partial Closure, ~~Full Movement Closure,~~ Full Closure, or Storage Length Reduction ~~in Capacity~~ will be allowed during Holiday Periods for the dates and times shown Table 10C-6 below. Partial Closures, Full Closures, and Storage Length Reductions that are Approved for periods longer than 48 hours and begin at least seven Calendar Days prior to a Holiday Period are permitted to continue through Holiday Periods, except as identified in Section 10C-12.5 (Bangerter Highway Closures).

TABLE 10C-6 HOLIDAY PERIODS

Holiday/Event	From	Date	To	Date
Memorial Day	3:00 PM	May 25, 2017	12:00 AM	May 30, 2017
Independence Day	3:00 PM	June 29, 2017	1:00 AM	July 5, 2017
Pioneer Day	3:00 PM	July 20, 2017	12:00 AM	July 25, 2017
Labor Day	3:00 PM	August 31, 2017	12:00 AM	September 5, 2017
Thanksgiving Day	12:00 PM	November 21, 2017	12:00 AM	November 27, 2017
Christmas Day	3:00 PM	December 21, 2017	12:00 PM	December 26, 2017
New Year's Day	3:00 PM	December 28, 2017	5:00 AM	January 2, 2018
Memorial Day	3:00 PM	May 24, 2018	12:00 AM	May 29, 2017
Independence Day	3:00 PM	July 3, 2018	1:00 AM	July 5, 2018
Pioneer Day	3:00 PM	July 23, 2018	12:00 AM	July 25, 2018
Labor Day	3:00 PM	August 30, 2018	12:00 AM	September 4, 2018
Thanksgiving Day	3:00 PM	November 20, 2018	12:00 AM	November 26, 2018
Christmas Day	3:00 PM	December 21, 2018	12:00 AM	December 26, 2018
New Year's Day	3:00 PM	December 28, 2018	5:00 AM	January 2, 2019

10C-12.1 Requests for Closure

Obtain Approval for any Full Closure, ~~Full Movement Closure,~~ Partial Closure, or Storage Length Reduction ~~in Capacity~~ from the Department and the local government that has jurisdiction over the impacted roadway prior to providing the required advanced notification.

The Design-Builder shall submit a request for closure for each Full, ~~Full~~ Movement, and Partial Closures, and any Storage Length Reduction ~~in Capacity~~. In order to provide advanced notification of each closure, obtain Approval a minimum of:

A. 21 Calendar Days prior to implementing a Full Closure ~~or Full Movement Closure~~
B. 14 Calendar Days prior to implementing a Partial Closure or Storage Length Reduction ~~in Capacity~~ during MOT Peak Periods
C. 7 Calendar Days prior to implementing a Partial Closure or Storage Length Reduction ~~in Capacity~~ during MOT Off-Peak Periods.

Provide sufficient time in the schedule to accommodate the Department's review of each Request for Closure, including addressing comments. Allow for 7 Calendar Days for the Department to review each request.

Each request for closure shall include:

A. Plan sheets showing the location and limits of the closure
B. Applicable detour plans
C. Applicable CMS locations and messages to be displayed to the public in advance of

and during the closure

D. A detailed description of the closure including duration, date(s), need for the closure, construction activities to occur, etc.

E. Lane and shoulder widths modifications, if applicable

F. Locations, and limits of varying cross section, if applicable

For each request for a Storage Length Reduction~~ in Capacity~~ during MOT Peak Periods, submit a traffic analysis to demonstrate the level of impact anticipated during peak hours.

The Department may revoke Approval of any closure due to significant weather events or other unanticipated civic events at the Department's sole discretion.

10C-12.2 Notifications

Provide notification of each closure or modification to the Traveled Way as follows:

A. Once a Request for Closure has been Approved, notify the Department a minimum of:

1. 21 Calendar Days in advance of implementing a Full Closure~~ or Full Movement Closure~~,
2. 14 Calendar Days in advance of implementing a Partial Closure, or Storage Length Reduction~~ in Capacity~~ during MOT Peak Periods,
3. 5 Calendar Days in advance of implementing a Partial Closure or Storage Length Reduction~~ in Capacity~~ during MOT Off-Peak Periods, or
4. Sooner if otherwise required by permit.

B. Notify the Department 7 Calendar Days prior to implementing lane shifts.

C. Notify ports of entry (Troy Richins at troyrichins@utah.gov; carbon copy the Design-Builder's Public Involvement Manager) of any lane restrictions (including reduced lane widths) for oversized loads and of any closures associated with this Project at least 14 Calendar Days in advance of the closure or lane restrictions.

D. Provide advanced notification to the Department of any upcoming lane closure cancelation at least 24 hours prior to the original start date of the closure.

E. Provide real-time notification of every lane closure and subsequent lane opening on Bangerter Highway (SR-154) to the Department's TOC at 801-887-3700.

1. Lane Closure: Notify the TOC within 10 minutes before placing the first traffic control device in the travel lane.
2. Lane Opening: Notify the TOC within 10 minutes after removing the last traffic control device in the lane.

F. Provide five Calendar Days notice before starting night work.

G. Each Closure Notification shall include:

1. The specific location and limits of the closure (route number, street name, the beginning and ending mile point, inside vs. outside lanes, direction of closure, etc.)
2. The number of lanes to be closed

3. The date and time of the beginning of the closure
4. The date and time of the ending of the closure
5. The proposed detour plan, if applicable
6. The purpose of the closure

10C-12.3 Required Storage Lengths

Table 10C-7 and Table 10C-8 outline the required number of lanes and the associated storage lengths for each turning Movement at intersections within the Project configured as a conventional intersection (standard NEMA phasing/ring-barrier structure). Maintain the Existing Configuration during construction on Bangerter Highway at 11400 South and 9000 South in accordance with the minimum number of lanes and storage lengths outlined in Table 10C-7 unless otherwise Approved. Modification to the Existing Configuration during construction on Bangerter Highway at 7000 South and 5400 South and at the oval-about on 11400 South will be allowed in accordance with the minimum number of lanes and storage lengths outlined in Table 10C-8 unless otherwise Approved.

TABLE 10C-7
TURNING MOVEMENT STORAGE REQUIREMENTS ON BANGERTER HIGHWAY AT 9000 SOUTH AND 11400 SOUTH

Turning Movement	Intersection Turn-Lane Storage Requirements[a]		
	11400 South & Bangerter Highway	11400 South & 4000 West	9000 South & Bangerter Highway
Northbound Left-Turn	Two 420 ft Lanes	One 130 ft Lane	Two 460 ft Lanes
Northbound Right-Turn	One 450 ft Lane	Maintain Existing Trap Lane	One 580 ft Lane
Westbound Left-Turn	Two 200 ft Lanes	Two 100 ft Lanes	Two 480 ft Lanes
Westbound Right-Turn	One 200 ft Lane	One 140 ft Lane	One 350 ft Lane – Maintain Free-Right with Merge Condition
Southbound Left-Turn	Two 500 ft Lanes	One 100 ft Lane	Two 500 ft Lanes
Southbound Right-Turn	One 490 ft Lane	One 100 ft Lane	One 380 ft Lane
Eastbound Left-Turn	Two 220 ft Lanes	One 130 ft Lane	Two 300 ft Lanes
Eastbound Right-Turn	One 240 ft Lane	One 100 ft Lane	One 240 ft Lane

[a]Turn-lane storage length is measured from the ~~end of~~ taper to the stop bar (not including the required taper length).

TABLE 10C-8
TURNING MOVEMENT STORAGE REQUIREMENTS AS CONVENTIONAL INTERSECTIONS ON BANGERTER HIGHWAY AT 5400 SOUTH AND 7000 SOUTH AND AT THE OVAL-ABOUT ON 11400 SOUTH

Turning Movement	Intersection Turn-Lane Storage Requirements[a] as Conventional Intersection			
	5400 South & Bangerter Highway	7000 South & Bangerter Highway	11400 South & River Heights Dr	11400 South & Summer Heights Dr
Northbound Left-Turn	Two 400 ft Lanes	Two 400 ft Lanes	One 100 ft Lane	One 100 ft Lane
Northbound Right-Turn	One 400 ft Lane	One 200 ft Lane	One 100 ft Lane	One 100 ft Lane
Westbound Left-Turn	Two 250 ft Lanes with continuous storage in a Two-way Left-turn Lane	Two 200 ft Lanes	One 100 ft Lane	One 100 ft Lane
Westbound Right-Turn	N/A	One 200 ft Lane	One 100 ft Lane – Maintain Free Right Turn Movement	One 100 ft Lane
Southbound Left-Turn	Two 480 ft Lanes plus an additional 700 ft of single left-turn lane storage (see 5400 South Aqueduct Relocation plans)	Two 200 ft Lanes	One 100 ft Lane	One 100 ft Lane
Southbound Right-Turn	One 200 ft Lane	One 980 ft Lane	One 100 ft Lane	One 100 ft Lane
Eastbound Left-Turn	Two 200 ft Lanes	Two 400 ft Lanes	One 150 ft Lane	One 150 ft Lane
Eastbound Right-Turn	One 200 ft Lane	One 300 ft Lane	One 100 ft Lane – Maintain Free Right Turn Movement	One 100 ft Lane – Maintain Free Right Turn Movement

[a]Turn-lane storage length is measured from the ~~end of~~ taper to the stop bar (not including the required taper length).

Provide temporary traffic signals at each intersection to modify the existing CFI and oval-about intersections from the Existing Configuration.

10C-12.4 General Closure Restrictions

All closures require Approval, including closures for work performed by Third Parties, unless otherwise specified below.

Full Closures during MOT Off-Peak Periods will only be allowed during the hours identified in Table

10C-9 (Allowable Full Closure Timeframes During MOT Off-Peak Periods).

TABLE 10C-9
ALLOWABLE FULL CLOSURE TIMEFRAMES DURING MOT OFF-PEAK PERIODS

Location	Closure Window
Bangerter Highway	11:00 PM Saturday through 8:00 AM Sunday
Cross Streets	10:00 PM Saturday through 8:00 AM Sunday

No Full or Partial Closures will be allowed with the exception of those identified in Table 10C-10 (Summary of MOT Closure Restrictions).

~~No Full Movement Closures will be allowed with the exception of those identified in Table 10C-10 (Summary of MOT Closure Restrictions).~~

Maintain the existing left-turn phase at each of the intersections where either a protected phase or protected/permitted phase exists in the Existing Configuration, except when a Full ~~Movement~~ Closure of the left-turn Movement has been Approved.

No Full~~, Full Movement,~~ or Partial Closures will be allowed to occur along an active detour route for any construction project, unless otherwise Approved.

No ~~traffic~~ Traffic ~~splits~~ Splits will be allowed.

Do not walk construction equipment that is not street legal across any roadway or Traveled Way during MOT Peak Periods. Transport the equipment across the Traveled Way or walk across the roadway or Traveled Way in conjunction with a Rolling Slowdown during MOT Off-Peak Periods. Violation of this requirement will be deemed as Nonconforming Work and is subject to disincentive as identified in Part 5 (Special Provisions and Exceptions), Table 5-1 (Unit Prices for Determining Pay Adjustments for Nonconforming Work)~~a Full Closure~~.

All traffic signal shut-downs and turn-ons shall occur during between 12:00 AM and 5:00 AM~~ and are subject to Disincentives as identified in Table 10C-11 (MOT Closure/Nonconformance Summary and Associated Disincentives) as a Full Closure~~. Violation of this requirement will be deemed as Nonconforming Work and is subject to disincentive as identified in Part 5 (Special Provisions and Exceptions), Table 5-1 (Unit Prices for Determining Pay Adjustments for Nonconforming Work)

Table 10C-10 (Summary of MOT Closure Restrictions) summarizes the general MOT closure restrictions outlined in this section:

TABLE 10C-10
SUMMARY OF MOT CLOSURE RESTRICTION

Type of Closure	Closure Location	Traffic Movement	MOT Peak Periods	MOT Off-Peak Periods
~~Full Closures~~	~~Bangerter Highway~~	~~All~~	~~Not allowed~~	~~Up to 6 nights per direction at each interchange and for the pedestrian bridge over Bangerter Highway in accordance with the timeframes in Table 10C-9~~
	~~Cross Streets~~	~~All~~	~~Not allowed except at 7000 South for no more than 14 consecutive days as long as right-turn Movements to and from Bangerter Highway are maintained and the Full Closure is Approved by West Jordan City~~	~~Up to 6 nights per Cross Street~~
	~~Pedestrian Bridge~~	~~All~~	~~Not allowed~~	~~Not allowed.~~
Full ~~Movement~~ Closures	Bangerter Highway	Left-turn	Up to 45 consecutive days – see Section 10C-12.5. At 7000 South, up to 60 days will be allowed in coordination with the Full Closure of the 7000 South through Movements (see details below).	Permitted with Approved detour
		Through	Not allowed	Up to 6 nights per direction at each interchange and for the pedestrian bridge over Bangerter Highway in accordance with the timeframes in Table 10C-9~~Not allowed~~
		Right-turn	Not allowed	Not allowed, except in coordination with the Full Closure of the through Movement outlined above
	Cross Streets	Left-turn	Up to 90 consecutive days at each Cross Street or up to 60 days on 7000 South in conjunction with the Full Closure of the through Movement as outlined below. (also see Section 10C-12.5)	Permitted with Approved Detour

TABLE 10C-10
SUMMARY OF MOT CLOSURE RESTRICTION

Type of Closure	Closure Location	Traffic Movement	MOT Peak Periods	MOT Off-Peak Periods
		Through	Not allowed, except at 7000 South for no more than 60 days as long as right-turn Movements to and from Bangerter Highway are maintained.	Up to 6 nights per Cross Street in accordance with the timeframes in Table 10C-9~~Not allowed~~
		Right-turn	Not allowed	Not allowed, except in coordination with Full Closures of Bangerter Highway
	Pedestrian Bridge	All	Not allowed, except as outlined in Section 10C-8.	Not allowed, except as outlined in Section 10C-8.
Partial Closures	Bangerter Highway	Left-turn	Not allowed	Permitted
		Through	Not allowed, except for the closure of one lane in each direction for ~~Up~~ up to 45 consecutive days ~~to accommodate construction under~~at the Old Bingham Highway bridge north of 9000 South, if all existing lanes are provided within 500 feet of adjacent traffic signals	Permitted - see Table 10C-1
		Right-turn	Not allowed	Not allowed
	Cross Streets	Left-turn	Not allowed	Permitted
		Through	Not allowed, except for: ~~on 11400 South for up to 60 consecutive days if Approved by South Jordan City~~ • The closure of flex lane system for up to 90 consecutive days - see Part 4-18 (Traffic Signals) and Section 10C-12.6	Permitted - see Table 10C-2 through Table 10C-5
		Right-turn	Not allowed	Permitted
~~Reduction of Capacity~~	~~Bangerter Highway~~	~~Left-turn~~	~~Approval required pending traffic analysis, see Section 10C-12.1~~	~~Permitted~~
		~~Through~~	~~Not Allowed~~	~~Permitted~~
		~~Right-turn~~	~~Approval required pending traffic analysis, see Section 10C-12.1~~	~~Permitted~~

TABLE 10C-10
SUMMARY OF MOT CLOSURE RESTRICTION

Type of Closure	Closure Location	Traffic Movement	MOT Peak Periods	MOT Off-Peak Periods
	~~Cross Streets~~	~~Left turn~~	~~Approval required pending traffic analysis, see Section 10C-12.1~~	~~Permitted~~
		~~Through~~	~~Not allowed, except for the closure of flex lane system for up to 90 consecutive days – see Part 4-18 (Traffic Signals) and Section 10C-12.6~~	~~Permitted~~
		~~Right turn~~	~~Approval required pending traffic analysis, see Section 10C-12.1~~	~~Permitted~~

10C-12.5 Bangerter Highway Closures

Full ~~Movement~~ Closures of all left-turn ~~lanes~~ Movements at 11400 South and 7000 South are not permitted beginning with the Thanksgiving Holiday Period through the Christmas Holiday Period.

Provide right-turn lanes on Bangerter Highway at all times.

10C-12.6 Cross Street Closures

Do not close 7000 South during the City's waterline project to the east when closures are taking place on 7000 South between 3200 West and 2700 West.

~~Partial Closures of the through Movement in each direction on 11400 South are allowed for 60 consecutive days if approved by South Jordan City.~~

The flex lanes are permitted to operate in a three-one-three (three lanes each direction with a center turn lane) configuration all day for up to 90 consecutive days. Anything beyond 90 days will be considered a Partial Closure and be subject to Disincentives as identified in Table 10C-11 (MOT Closure~~/Nonconformance~~ Summary and Associated Disincentives). Notify Matt Luker at mluker@utah.gov 14 Calendar days prior to any impacts to the flex lane system. Coordinate with Matt Luker for any adjustments or impacts to the system, including the fiber optic network.

10C-12.7 Rolling Slowdowns

Law enforcement officers shall perform all Rolling Slowdowns. Do not use construction vehicles to perform Rolling Slowdowns.

All Rolling Slowdowns shall be Approved unless otherwise specified below.

10C-12.8 4015 West Build Alternative

For Work performed for the 4015 West Build Alternative on 5400 South, follow the requirements outlined above as it relates to closures on 5400 South. On 4015 West, a Partial Closure of the through Movement in each direction is permitted for up to 60 consecutive days. Full Closures of 4015 West are not permitted. Provide a minimum storage length measured from the taper to the stop bar (not including the required taper length) for the following turn lanes associated with the 5400 South and 4015 West intersection:

A. Southbound right: 150 feet

B. Southbound left (at thru-turn intersection to the south): 300 feet

C. Eastbound right: 180 feet

D. Northbound right: Maintain the continuous auxiliary lane between the thru-turn intersection to the south of 5400 South

E. Northbound left (at thru-turn intersection to the north): 250 feet

F. Westbound right: 180 feet

G. Westbound left (at thru-turn intersection to the west): 250 feet

10C-13 MOT Inspection & Quality

Perform daily MOT inspection reports in accordance with UDOT Standard Specification Section 01554 and submit these reports to the Department on a weekly basis.

Correct all traffic control deficiencies upon notification or observance of the deficiency within 1 hour of notice or observation.

10C-14 MOT Disincentives

Price reductions for nonconformance of traffic control on Bangerter Highway (SR-154) and Cross Streets are assessed according to Part 5 (Special Provisions and Exceptions) Table 5-1 (Unit Prices For Determining Pay Adjustments For Nonconforming Work).

The Design-Builder is responsible for ensuring that the traffic control and the number of lanes provided for the traveling public are returned to the required state in accordance with the timeframes defined in Tables 10C-1 through 10C-5. If not, a disincentive in the amount as shown in Table 10C-11 (MOT Closure~~/Nonconformance~~ Summary and Associated Disincentive) will be assessed for non-compliance with the time periods above. The disincentives will be assessed in the amount of twenty-five percent of the hourly disincentive shown in Table 10C-11 (MOT Closure~~/Nonconformance~~ Summary and Associated Disincentive) for every 15 minute period in which the closure is in place beyond the timeframe that is allowed or Approved. If the closure is in place for any portion of a 15 minute period that has not been allowed or Approved, the disincentive will be assessed in full for that 15 minute period. ~~The maximum disincentive per 24 hour period for any particular closure will be the maximum disincentive shown in Table 10C-11 (MOT Closure/Nonconformance Summary and Associated Disincentive).~~

For nonconformance regarding flagging or Rolling Slowdowns such nonconformance will be deemed as a Partial Closure of the ~~Roadway Element~~Movement where the nonconformance occurred and a Disincentive will be assessed in the amount as shown in Table 10C-11 (MOT Closure~~/Nonconformance~~ Summary and Associated Disincentives).

These Disincentives are separate from the non-conformance traffic control pay adjustment in Part 5 (Special Provisions and Exceptions) Table 5-1 (Unit Prices For Determining Pay Adjustments for Nonconforming Work).

TABLE 10C-11
MOT CLOSURE/~~NONCONFORMANCE~~ SUMMARY AND ASSOCIATED DISINCENTIVES

Location of Closure ~~or Nonconformance~~	**Type of Closure ~~or Nonconformance~~**	**Disincentive Per Hour of Closure ~~or Nonconformance~~**	**~~Maximum Disincentive Per 24 hour Period of Closure or Nonconformance~~**
Bangerter Highway (SR-154)~~ and Cross Streets~~	Full or Partial Closure	$~~30~~10,000 per lane closed	~~no maximum~~
~~Bangerter Highway &~~ Cross Streets	Full or Partial ~~Movement~~ Closure	$~~20~~5,000 per ~~Lane~~ lane ~~Closed~~closed	~~$100,000 per Lane Closed~~
~~Bangerter Highway & Cross Streets~~	~~Partial Closure~~	~~$10,000 per lane closed~~	~~$100,000 per lane closed~~

10C-15 MOT Personnel

10C-15.1 Traffic Operations Manager

The Traffic Operations Manager's duties include the following:

A. Develop MOT plans for review at milestones specified by the QMP.

B. Develop and implement the TMP.

C. Coordinate MOT activities with the Design-Builder's, the Department's signal timing staff, and the Traffic Operation Center (TOC).

D. Supervise the activities of the Traffic Control Maintainer(s).

E. Interface with the design engineers and participate in the review of the MOT Plans prior to submittal to the Department.

10C-15.2 Traffic Control Maintainer

In the event of a traffic incident, the Traffic Control Maintainer is authorized, under the direction of law enforcement, to direct changes in traffic control, coordinate with the Department to provide traffic signal timing and signal phasing that ensures safe and continuous traffic flow, and to direct traffic operations. A Traffic Control Maintainer shall be available at all times and shall be on site within 30 minutes of notification throughout the duration of the Project.

11—PAVEMENT

11A. GENERAL

Conduct all Work necessary to meet the requirements of this Section 11 (Pavement) and satisfy all functional needs of the Project including pavement and associated items.

11B. STANDARDS

Complete Work for pavements in accordance with the requirements of the standards listed by priority in Table 11B-1 (Standards for Pavement).

If there is any conflict in Standards, adhere to the Standard with the highest priority.

TABLE 11B-1
STANDARDS FOR PAVEMENT

Priority	*Author or Agency*	*Title*
1	UDOT	Special Provisions included in Part 5
2	UDOT	*Supplemental Specifications to 2012 Standard Specifications for Road and Bridge Construction,* as modified by Part 5
3	UDOT	*2012 Standard Specifications for Road and Bridge Construction,* as modified by Part 5
4	UDOT	*Supplemental Drawings to 2012 Standard Drawings for Road and Bridge Construction*
5	UDOT	*2012 Standard Drawings for Road and Bridge Construction*
6	UDOT	*DARWin-ME 2012 (Pavement Design) Manual of Instruction*
7	UDOT	*Materials Manual of Instruction*
8	AASHTO	*A Policy on Geometric Design of Highways and Street*

11C. REQUIREMENTS

Construct pavements that meet the following requirements:

A. The term "Pavement Section," is defined as the entire pavement structural section, including all structural layers (e.g., Portland Cement Concrete Pavement (PCCP), hot-mix asphalt (HMA), additional wearing courses, base and sub-base materials) in any combination as defined by the pavement design.

B. Provide Pavement Sections as follows:

(1) Bangerter Highway (SR-154), ramps and 11400 South East of Bangerter

10 inches PCCP

4 inches HMA or Lean Concrete Base

6 inches Untreated Base Course; adjust and regrade to final grade

12 inches Granular Borrow

Separation Fabric

(2) For widening adjacent to existing asphalt for 5400 South, 7000 South, 9000 South, & 11400 South

6 inches HMA

6 inches Untreated Base Course

12 inches Granular Borrow

Separation Fabric

(3) Remove existing concrete pavement and lean base course at 5400 South, 7000 South, & 9000 South and replace with:

10 inches PCCP

4 inches HMA or Lean Concrete Base

(4) Local Streets:

4 inches HMA

6 inches Untreated Base Course

(5) At 5400 South provide a micro surface over asphalt full width including the full reconstruct sections to the limits of new striping.

(6) At 7000 South provide a 1.5 inch rotomill and fill with HMA over existing asphalt to the limits of new striping.

(7) At 9000 South provide a 1.5 inch rotomill and fill with HMA over existing asphalt to the limits of new striping.

(8) At 11400 South West of Bangerter provide a 1.5 inch rotomill and fill with HMA over existing asphalt to the limits of new striping.

(9) At 4015 West provide a micro surface over existing asphalt to the limits of new striping.

C. Overlays of existing flexible pavements are required whenever the existing pavement is widened or when re-striping is required due to lane shifts and/or transitions. The overlays shall be applied to the entire width of the pavement prior to final striping to provide a continuous and homogeneous riding surface.

For the purpose of this Section 11, overlays are defined as follows:

1. Structural HMA overlays: The final full-width overlay shall include the top HMA layer and SMA wearing course.

D. Grind existing pavement and seal joints for Bangerter Highway whenever existing pavement is widened or when re-striping is required.

11C-1 Ride Quality

Evaluate ride quality in accordance with Standard Specification, Section 01452, and Section 8-995 (Procedure for Certifying Profilographs/Profilers and Qualifying Profilograph Technicians).

11C-2 Surface Texture

Provide longitudinal tining as defined in Standard Specification, Section 02742S.

requirements for working in and around UTA's property can be found at the following web site: http://www.rideuta.com/mc/?page=DoingBusiness-PropertyManagement. Obtain all permits and approvals necessary to accommodate any Project work or impacts to/within UTA's right-of-way. Include time in the schedule to obtain said permits/approvals. Any cost incurred for obtaining the agreements(s) shall be borne by the Design-Builder.

Before commencing work on UTA property, obtain and submit executed Contract Right-of-Entry Agreements as described in Section 13C-2.2 (Right of Entry/Insurance Requirements).

13C-1 General Provisions

13C-1.1 Cleaning of Right-of-Way

Upon completion of the Work performed by Design-Builder on UTA's premises, and over or beneath the tracks of UTA, promptly remove from the UTA ROW all of the Design-Builder's tools, implements, and other materials, whether brought onto the ROW by Design-Builder or any Subcontractor, employee, or agent of Design-Builder, and leave the ROW in a clean and presentable condition to the satisfaction of UTA.

13C-1.2 Traffic Control

Submit MOT Plans to UTA for all Work in, above, or affecting the railroad ROW. Design-Builder's operations that control traffic across or around rail facilities shall be coordinated with and approved by UTA's Designated Representative.

13C-1.3 Construction Excavations

Take special precaution and care in connection with excavating and shoring. Excavations for construction of footings, piers, columns, walls, or other facilities that require shoring shall comply, at a minimum, with requirements of OSHA, AREMA, and UTA / UPRR guidelines.

Contact Utah "Call Before You Dig" service (Bluestakes; www.bluestakes.org) at 811 to determine location of Utility Facilities. If Utility Facilities are buried anywhere on or near UTA ROW, coordinate with any of the Utility Facilities to arrange for relocation or other protection of the system prior to beginning any Work on UTA ROW.

For construction or maintenance of any grade-separated crossing, submit to UTA plans setting out the method and manner of handling all Work to be performed under the track and bridge structure, including shoring and cribbing, if any, to protect the operations of UTA and the freight operator. The Design-Builder shall not proceed with any such Work until Design-Builder's proposed methods have been approved by UTA.

13C-2 UTA Company Interests, Insurance, Worker Protection, Flagging, and Plan Submittal

13C-2.1 UTA Contact Persons

Coordinate and cooperate with UTA for all Work on, over, or under the railroad ROW or Work that may impact current or future railroad operations.

The primary UTA point of contact for this Project is:

Mailia Lauto'o
Property Administrator
Utah Transit Authority
669 West 200 South
Salt Lake City, UT 84101

Right-of-Way). The Department will acquire the approved ROW unless otherwise agreed upon with the Design-Builder. If the Design-Builder acquires the ROW on behalf of the Department, follow the procedures outlined in Attachment 14C (ROW Acquisition for the Design-Builders Convenience) unless otherwise directed by the Department.

If the Department does not Approve the ROW request, the Department will notify the Design-Builder that the ROW is for their convenience and acquisition of such ROW will be the responsibility of the Design-Builder in accordance with Part 2, Section 7.3.2.2 (Acquisition Process for ROW for Design-Builder's Convenience). The Design-Builder shall comply with the Section 14C-1.3 (Request for Project Right-of-Way – ROW Acquisition for the Design-Builder's Convenience) for acquisition procedures.

Department Approved Right-of-Way

Upon Department Approval of the request, the Design-Builder shall submit the following information:

Design Package/Electronic Summary:

A. **Right-of-Way Design Sheets:** Provide 11-by-17 inch plan sheets outlining and defining ROW acquisition boundary. ROW acquisition boundary shall be designed using Project ROW alignment. Provide station and offset references/calls to property line, intersections, and points of deflection. Provide all horizontal curve data necessary to adequately describe new property line limits.

B. **Right-of-Way Design Sheets with Aerials:** Provide 11-by-17 inch plan sheets outlining and defining ROW acquisition boundary with the project Aerial Imagery projected on each of the Right-of-Ray Design Sheets. ROW acquisition boundary shall be designed using Project ROW alignment. Provide station and offset references/calls to property line, intersections, and points of deflection. Provide all horizontal curve data necessary to adequately describe new property line limits. In addition, provide Total Tract Sheets.

C. **Ownership Record**: Provide an Ownership Record, verifying all owners and the percentages of ownership dating back five years or until a Warranty Deed is found for each ownership and/or percentages. This shall include the legal description of the full parcel along with the size of the full parcel in acreage or square footage. Provide a copy of the vesting instruments.

D. **Acquisition Package**: Provide documents in accordance with Part 4 Appendix C.

E. **Documentation**: Deliver all summaries in accordance with Part 4 Appendix C, designs, records, reports, correspondence, and documents relating to ROW acquisition to the Department in electronic, MicroStation CADD files (DGN files), and hardcopy formats, or as otherwise requested by the Department. All documents submitted to the Department must be in accordance with the Right-of-Way ProjectWise Guide found at (http://udot.utah.gov/go/rowprojectwiseguide). Complete a final quality check to ensure that all documents have been entered into ProjectWise and/ or UDOT's ePM ROW module.

Access to the additional ROW, easement, or modification shall be granted upon written notification to the Design-Builder.

ROW Acquisition for the Design-Builder's Convenience

Any additional ROW other than what is shown on the ROW Plans in Part 7 (Contract Drawings) and ROW Approved from Section 14C-1.3 (Request for Project Right-of-Way), is designated as ROW for the Design-Builder's Convenience. The Design-Builder shall be solely responsible for the acquisition of these

properties and easements. The Design-Builder shall follow the ROW acquisition procedures as outlined in Attachment 14-C (ROW Acquisition Procedures) for ROW Acquisition for the Design-Builder's Convenience.

Permission to Enter Property

Any additional ROW other than what is shown on the ROW Plans in Part 7 (Contract Drawings) and ROW Approved from Section 14C-1.3 (Request for Project Right-of-Way), is designated as ROW for the Design-Builder's Convenience. The Design-Builder shall secure Permits to Enter and Construct forms prior to entering any property outside the ROW shown on the ROW Plans in Part 7 (Contract Drawings) for survey, environmental, appraisal purposes, and Project-related Work. It shall be the Design-Builder's sole responsibility for any and all damages and claims. The Design-Builder shall submit copies of all executed Permit to Enter and Construct forms to the Department prior to performing any Work on property outside the ROW shown on the ROW Plans in Part 7 (Contract Drawings). A copy of the form is provided in UDOT's ePM ROW module system. Do not request Permits to Enter and Construct with property owners who are currently or will be in negotiations with the Department without Approval.

14C-1.4 Temporary Construction Easements (TCEs)

The Design-Builder shall be responsible for acquiring and obtaining all TCEs not shown in the ROW Drawings in Part 7 (Contract Drawings) that are necessary to meet the requirements of the Contract Documents.

All TCEs shall be appraised and valued in accordance with the UDOT *Right-of-Way Operations Manual.* If a TCE is to be acquired on a property on which the Department has an unsettled condemnation case, ~~the same original appraiser shall value the TCE. Obtain~~ obtain Department Approval ~~of the valuation~~ prior to any ~~offers~~ communication with the~~to~~ property owners.

After each TCE is acquired, the Design-Builder shall prepare a complete parcel acquisition file, which includes copies of offer letters, fair market valuation, fully executed easement documents and/or agreements, the agent log, and a statement signed by the property owner acknowledging receipt of payment in full. Parcel acquisition files shall be submitted through UDOT's ePM ROW module and in accordance with Sections 1.2.7 and 1.2.8 of the UDOT *Right-of-Way Operations Manual and* this Section 14C-1.3.D.

If the Design-Builder cannot reach an agreement with a property owner for the acquisition, the Design-Builder may request in writing that the Department acquire the easement(s) through condemnation proceedings.

Cost of TCEs and ROW Acquisition for the Design-Builder's Convenience Design-Builder shall pay the cost of, and be responsible for, processing and issuing all payments of agreed purchase prices or awards; relocation assistance payments and all legal, administrative, and incidental expenses of or related to the Design-Builder's temporary construction easements and ROW Acquisition for the Design-Builder's Convenience.

In addition, the Design-Builder shall:

A. Be solely responsible for all costs and be responsible for (the process of) acquiring/obtaining environmental approvals and the cost associated with obtaining the approvals.

B. Be solely responsible for cost and time delays associated with the Department's proceeding with condemnation.

C. Not be entitled to any Change Order for time or money as a result of site condition (e.g., hazardous materials, differing site conditions, geotechnical issues, Utilities) on such

Attachment 14-A: Right-of-Way Schedule

5400 South Interchange

Parcel No.	*Owner Name*	*Property Address*	*Demolition*	*Committed Clearance Date*
716	CHAVEZ, KRIS S	3661 W 5695 S	N/A	April 1, 2017
718	SONG, DOOHYUN K	3676 W 5695 S	N/A	~~June~~ April 16, 2017
720	LUNA, JORGE	3670 W 5695 S	N/A	April 1, 2017
722	LOVEDAY, CLINT & CARYN; JT	3671 W 5650 S	Department	NTP
724	LOVEDAY, KENNETH L & DARLENE N; JT	3677 W 5650 S	Department	NTP
726	FISHER, GARY & MALISSA; JT	3674 W 5650 S	Department	NTP
728	CRANE, DAVID L & KATHY M (JT)	3687 W WHITEWOOD CT	Department	NTP
728B	Schytler		N/A	NTP
730	SAWYER, ROBERT H; TR (RHS TR)	3688 W WHITEWOOD CT	Department	NTP
732	BLANK, CATHY L	3686 W WHITEWOOD CT	Department	NTP
734	MONTOYA, SONDRA C	3695 W ALVERON DR	Department	NTP
736	ALMEIDA, JESSICA A D S	5580 S ALVERON DR	Department	NTP
738	SMITH, STEWART	5568 S ALVERON DR	Department	NTP
740	WILLIS, KILEY	5556 S ALVERON DR	Department	NTP
744	SEARLE, DOUGLAS E & MONA L; JT	5544 S ALVERON DR	Department	NTP
745	STEELE, KENT H & KAREN S (JT)	5532 S ALVERON DR	Department	NTP
746	BEAMON, JAMES E & CHALLI R; JT	5520 S ALVERON DR	Design-Builder	September 8, 2017
747	ROWLEY, RUSSELL J & KATHLEEN L (JT)	5512 S ALVERON DR	Design-Builder	September 5, 2017
748	HEFFRON, HOLLY	5498 S ALVERON DR	Department	NTP
749	HETRICK, MOLLY A	5490 S ALVERON DR	Department	NTP
750	HARRIS, JEREMY T	5480 S ALVERON DR	Department	NTP
751	THIEM, THIEN M &	5472 S ALVERON DR	Department	NTP

	VU, LUAN B; JT			
752	LECHTENBERG, DANNY & ANAST, VALARIE C; JT	5462 S ALVERON DR	Department	NTP
753	GREMAR LLC	3815 W 5400 S	N/A	June 7, 2017
754	SOUKPHOUANGHAM, PATRICIA M	3740 W CHRISTYANN DR	N/A	NTP
754B	PADILLA, LARRY AND JANELLE	3736 W CHRISTYANN DR	Department	NTP
775	FPA WEST POINT LLC	3855-3879 W 5400 S	N/A	June 7~~April 1~~, 2017
776	SJ, LLC	3770 W 5400 S	Design-Builder	May 31~~9~~, 2017
777	M S C INC	3765 W 5400 S	Department	NTP
777B	COUNTY OF SALT LAKE	3738 W CHRISTYANN DR.	Department	NTP
778	21ST STREET PROPERTIES, LLC	3762 W 5400 S	~~Design-Builder~~N/A	July~~May 3~~1, 2017
779	GUBLER PROPERTIES, LLC	3725 W 5400 S	N/A	April 14, 2017
780	21ST STREET PROPERTIES, LLC	3712 W 5400 S	~~Design-Builder~~N/A	~~May~~ July ~~26~~1, 2017
781	IVERSON FAMILY INVESTMENTS LLC	3705 W 5400 S	N/A	April 14, 2017
783	REDWOOD EQUITY PARTNERS	3685 W 5400 S	N/A	April 14, 2017
784	21ST STREET PROPERTIES LLC	3692 W 5400 S	~~Design-Builder~~N/A	July 1~~May 26~~, 2017
785	HALLE PROPERTIES LLC	3665 W 5400 S	N/A	April 14, 2017
786	BURT, BRAD L & CARLEEN D; JT	3684 W 5400 S	N/A	April 14, 2017
798	SU CASA MULBERRY, LLC	5287 S DEWBERRY LN	N/A	May 26, 2017
806	MILLER, PAUL	5262 S 3760 W	Department	NTP
808	GRUNDVIG, NICHOLAS C & JUELEE V; JT	5256 S 3760 W	Department	NTP
810	WHITING, ERIC J & VICKIE L; JT	5244 S 3760 W	Department	NTP
812	ROULEAU, WILLIAM F JR & JEAN M; JT	5238 S 3760 W	Department	NTP
814	CHATTERTON PROPERTIES LLC	5228 S 3760 W	Department	NTP

816	HIGBY, LACIE & TROY; JT	5218 S 3760 W	Department	NTP
818	LAM, HOANG M & KIM NGAN S; TC	5208 S 3760 W	Department	NTP
819	WHITTED, DEBORAH L	5198 S 3760 W	Department	NTP
820	PRINSTON PROPERTIES, L.L.C.	5198 S 3760 W	Department	NTP
821	SORENSEN, BEN & JACQUELLE; JT	5178 S 3760 W	Department	NTP
822	HALATOA, KILIFI & BROWN, SALOTE	5168 S 3760 W	Department	NTP
823	BAILEY, KATHLEEN A	5160 S 3760 W	N/A	~~April~~ July 14, 2017
824	CHRISTENSON, BERT	5150 S 3760 W	N/A	July 14~~April 28~~, 2017
825	ATTERMANN, SHARON J; TR (SJA REV TR)	5140 S 3760 W	N/A	July 14~~April 28~~, 2017
826	GREER, DENNIS J & BLIGHT-GREER,KAREN E;	5128 S 3760 W	N/A	July 14~~April 28~~, 2017
828	MALMSTROM, CHARLES & JOHNSON, ERICA H; JT	5116 S 3760 W	N/A	July 14, 2017
829	KOEHLER, DALLAS	5106 S 3760 W	N/A	July 14~~April 28~~, 2017
830	STRUM, GREGORY W	5096 S 3760 W	N/A	July 14~~April 28~~, 2017
831	JENSEN, MICHAEL R	5086 S 3760 W	N/A	July 14~~April 28~~, 2017
832	BRIONES, GABINO H	5074 S 3760 W	N/A	July 14~~April 28~~, 2017
833	HUDSON, JOHN G	5064 S 3760 W	N/A	July 14~~April 28~~, 2017

7000 South Interchange

Parcel No.	*Owner Name*	*Property Address*	*Demolition*	*Committed Clearance Date*
506	PREECE, MCCOY D & KAREN L G (JT)	3536 W PIERA CIR	N/A	NTP
508	STARKS, TONIA M & DANIEL J; JT	3535 W NEW WORLD DR	N/A	NTP
512	LOW, RICHARD D & TAMARA J; JT	3536 W NEW WORLD DR	Department	NTP
514	MITCHELL, JANICE E; TR (DR&JEMRT)	3541 W FOXTON CIR	N/A	~~March~~ May ~~3~~19, 2017
515	LOWRY, CALEB AND JENNIFER	3542 W FOXTON CIR	Department	NTP
516	ABBOTT, WADE R & ALICIA A; JT	3540 W FOXTON CIR	N/A	NTP
518	HEGERHORST, WALTER F & ORA M; TRS (W&OHFT)	3541 W WHEATWOOD CIR	N/A	NTP
519	WILSON, DOUGLAS E & DIANE A; TRS (W FAM TR)	3542 W WHEATWOOD CIR	Department	NTP
520	J&P FAMILY INVESTMENTS, LLC	3540 W WHEATWOOD CIR	Department	NTP
521	GUSTAFSON, JOHN A	3541 W MILLERBERG CIR	Department	NTP
522	GARN, NORMA M	3542 W MILLERBERG CIR	Department	NTP
523	PLAZA AT JORDAN LANDING LLC	7111 S PLAZA CENTER DR	N/A	NTP
524	MALDONADO, JOSE G & AMINTA I; TRS	3540 W MILLERBERG CIR	Department	NTP
526	MAYER, YVETTE	3533 W BRANDY CIR	N/A	NTP
527	WELCH, GREGORY L & BARBARA R; JT	3536 W BRANDY CIR	Department	NTP
528	WATKINS, HUBERT L & SHERIE; JT	7026 S ANGELSEA DR	N/A	NTP
536	D & B BYERS, LLC	6989 S DIXIE DR	Department	NTP
536B:E	PLAZA AT JORDAN LANDING LLC	7111 S PLAZA CENTER DR	Department	NTP
537	RUSK, RICHARD D & PATRICIA L; TRS (RD&PLRRT)	6980 S 3535 W	Department	NTP

553	6D HOLDINGS TRUST; ET AL DANA K; TC	6977 S DIXIE DR	N/A	~~March~~ May ~~17~~19, 2017
554	GOSS, EMILY A; ET AL	6968 S 3535 W	Department	NTP
556	ANDREWS, ROBERT L & TERRIE L; JT	6954 S 3535 W	Department	NTP
558	DUPAIX, JOSEPH H & ALICE S	6944 S 3535 W	N/A	NTP
560	PEARSON, ERIC N & SHALISE L; JT	6932 S 3535 W	N/A	NTP
562	DEARING, RYAN C & KRISTI; JT	6922 S 3535 W	Design-Builder	May 19, 2017
564	ANDREWS, STEVEN D & KATHERINE E; JT	6912 S 3535 W	N/A	May 19, 2017
565	BADER, TERRY	6919 S DIXIE DR	Design-Builder	May 19, 2017
566	PETERSON, MARK W & MEGAN D; JT	6900 S 3535 W	N/A	NTP
568	BLANCO, HEIDDY C	6890 S 3535 W	N/A	NTP
570	MADSEN, JOHN G & SHARILYN; JT	6880 S 3535 W	N/A	NTP
572	DOCKSTADER, MAX L & LISA M; JT	6868 S 3535 W	N/A	NTP
574	FERGUSON, WILLIAM S & SHERRI S	6858 S 3535 W	N/A	NTP
576	BARROWS, STEWART G	6848 S 3535 W	N/A	NTP
578	KLEPACZ, MATTHEW A & NICOLE L; JT	6836 S 3535 W	N/A	NTP
580	GIFFORD, QUINTEN	6826 S 3535 W	N/A	NTP
582	CANNING, DENNIS L & KATHLEEN M	3538 W 6825 S	N/A	NTP
588	CORP OF PB OF CH JC OF LDS	6780 S 3420 W	N/A	NTP
596	CITY OF WEST JORDAN	6778 S 3420 W	N/A	NTP

9000 South Interchange

Parcel No.	*Owner Name*	*Property Address*	*Demolition*	*Committed Clearance Date*
330	AMERICAN HOMES 4 RENT PROPERTIES FIVE, LLC	9379 S NEW HERITAGE DR	N/A	~~February~~ May 1~~7~~, 2017
331	BRUSCH, DUSTIN	9367 S NEW HERITAGE DR	N/A	~~February~~ May 1~~7~~, 2017
332	NEWMAN, NATHAN L	9351 S NEW HERITAGE DR	N/A	~~February~~ May 1~~7~~, 2017
333	ERDMANN, KYLE M & AMANDA JEAN; JT	9339 S NEW HERITAGE DR	Department	NTP
334	LEITER, JASON	9327 S NEW HERITAGE DR	N/A	~~February~~ May 1~~7~~, 2017
335	BLACKMER, BENN W & JANICE L; TC	9313 S NEW HERITAGE DR	N/A	~~February~~ May 1~~7~~, 2017
336	SALT LAKE COMMUNITY COLLEGE	9301 S WIGHTS FORT RD	N/A	~~February~~ May 1~~7~~, 2017
337	CARTER, WILLIS, TR; ET AL	9301 S NEW HERITAGE DR	N/A	~~February~~ May 1~~7~~, 2017
338	PEREZ, OLEGARIO	9287 S NEW HERITAGE DR	Department	NTP
339	HUYNH, HOA K	9275 S NEW HERITAGE DR	Design-Builder	March 3, 2017
340	LARSEN, JARED R & JAMIE R; JT	9261 S NEW HERITAGE DR	Department	NTP
341	DENNIS, ADRIAN	9249 S NEW HERITAGE DR	Department	NTP
342	JOHNSON, JEROD G & STEPHANIE J; JT	9235 S NEW HERITAGE DR	Department	NTP
343	HILL, BRIDGER W & BRANDI A; JT	9223 S NEW HERITAGE DR	Department	NTP
344	CRAIG, SCOTT M & AUBREY L; JT	9209 S NEW HERITAGE DR	Department	NTP
345	ROSALES, JAMIE L & MERRILL, MAUREEN W; JT	9197 S NEW HERITAGE DR	Department	NTP
347	PEZELY, FRANCO P & SANDI M; JT	9185 S NEW HERITAGE DR	Department	NTP
348	TOSTADO, HUMBERTO F & MARIA A; JT	9173 S NEW HERITAGE DR	Department	NTP
349	SESE, PATRICIA C	9161 S NEW HERITAGE DR	Department	NTP

350	SPENCER, SUSAN	9149 S NEW HERITAGE DR	Department	NTP
351	RUSSELL, DEANNE T & JEFFERY R; JT	9137 S NEW HERITAGE DR	Department	NTP
352	BENKOVSKIY, ALEKSANDR L & YELENA B; JT	9125 S NEW HERITAGE DR	Department	NTP
353	GARRARD, MICHAEL J & ANGELA S; JT	3642 W VISTA WEST DR	Design-Builder	March 24, 2017
355	CITY OF WEST JORDAN	9098 S WINTHROPE DR	N/A	NTP
356	MILLER, TYLER & ANNE; JT	3657 W WINTHROPE CIR	Department	NTP
358	GEDICKS, CHRISTOPHER W & KELLY L; JT	3659 W WINTHROPE CIR	N/A	May 19, 2017
368	Jordan Health Properties		N/A	June 23, 1017
370	Baeza		N/A	June 23, 1017
371	Weenig		N/A	June 23, 1017
373	Baker		N/A	June 23, 1017
375	Deniro		N/A	~~June 23, 1017~~NTP
376	LARSEN, STEVEN L & LINDA L	3666 W WINTHROPE CIR	Department	June 23, 1017
378	LARSEN, RICHARD J	3655 W WINTHROPE CIR	Department	NTP
380	DENIRO REICHMAN, DAWNDI	3644 W 9000 S	N/A	~~March 17, 2017~~NTP
381	UNITED STATES OF AMERICA	3596 W 9000 S	N/A	March 17, 2017
386	DEASON, HENRY H & MAYE W; JT	8871 S 3680 W	N/A	March 17, 2017
387	KELLY, JASON P & JESSICA A; JT	3647 W 8850 S	Department	NTP
388	STOLL, CALLIE H	8845 S 3645 W	Department	NTP
389	BESSEY, BARRY M & AUTUMN G; JT	8833 S 3645 W	Department	NTP
390	MARKUS, KURT W & MARILYN J (JT)	8821 S 3645 W	Department	NTP
391	HANSEN, BUDDY & WHITNEY; JT	8809 S 3645 W	Department	NTP
392	RESTORE UTAH PROPERTY I LLC	8795 S 3645 W	Department	NTP

393	BUTTON, TREVA P	8783 S 3645 W	Department	NTP
395	BENTLEY, CLIFFORD & DANA; JT	8769 S 3645 W	Design-Builder	March 31, 2017
396	DANISE, BRETT A & KELLY A; JT	8757 S 3645 W	Design-Builder	March 31, 2017
397	DUARTE, MARCOS	8745 S 3645 W	Department	NTP
398	BEHUNIN, SETH & ANJANETTE; TC	3638 W VALLEYWEST DR	N/A	March 17, 2017
404	UTAH TRANSIT AUTHORITY	8632 S 3320 W	N/A	~~March~~ May 1~~7~~, 2017

11400 South Interchange

Parcel No.	*Owner Name*	*Property Address*	*Demolition*	*Committed Clearance Date*
121	South Jordan City		N/A	July 7, 2017
121B	SJ Marketplace		N/A	~~June~~ July ~~2~~7, 2017
123	District		N/A	July 7~~March 31~~, 2017
124			N/A	July 7, 2017
128	South Jordan City		N/A	July 7~~March 31~~, 2017
138	IREIT SOUTH JORDAN OQUIRRH MOUNTAIN LLC	11501 S 4000 W	N/A	July 7~~March 31~~, 2017
140	DISTRICT LC	11422 S DISTRICT DR	N/A	July 7~~April 28~~, 2017
141	DISTRICT LC	11426 S DISTRICT DR	N/A	July 7~~April 28~~, 2017
142	THE DISTRICT-NORTH LC	11364 S RIVER HEIGHTS DR	N/A	July 7~~April 28~~, 2017
143	DISTRICT LC	11428 S DISTRICT DR	N/A	July 7~~April 28~~, 2017
144	THE DISTRICT-NORTH LC	11374 S RIVER HEIGHTS DR	N/A	July 7~~April 28~~, 2017
145	DISTRICT LC	11432 S DISTRICT DR	N/A	July 7~~April 28~~, 2017
147	DISTRICT LC	11426 S PARKWAY PLAZA DR	N/A	July 7~~March 17~~, 2017
151	SOUTH JORDAN W, LLC	3754 W 11400 S	N/A	July 7~~March 17~~, 2017
152	DISTRICT LC	11453 S PARKWAY PLAZA DR	N/A	July 7~~March 31~~, 2017
153	DISTRICT PROPERTIES INVESTMENTS, LLC	3668 W 11400 S	N/A	July 7~~April 28~~, 2017
154	JORDAN HEIGHTS HOA, INC	11291 S TIPPECANOE WY	N/A	July 7~~March 1~~, 2017
155	DISTRICT-NORTH II LLC, THE	11332 S RIVER HEIGHTS DR	N/A	July 7~~April 28~~, 2017
156	WB II LAND INVESTMENT LC; ET AL	11248 S RIVER HEIGHTS DR	N/A	July 7~~March 17~~, 2017
157	BARBER, MELISSA K	11281 S TIPPECANOE WY	Department	NTP

158	COBURN, YUNG	11273 S TIPPECANOE WY	N/A	NTP
159	LUCERO, PATRICK JR.	11263 S TIPPECANOE WY	Design-Builder	May 12, 2017
160	BURTON, CHARLES E & KRISTA A; JT	11253 S TIPPECANOE WY	Department	NTP
161	RICHES, BRADLEY M & ASHLEY R; JT	11243 S TIPPECANOE WY	Department	NTP
162	PECK, NICHOLAS	11233 S TIPPECANOE WY	Department	NTP
163	SEENAPPA, CHANDRASHEKAR & VESARAPU, RAMYA; JT	11227 S TIPPECANOE WY	Department	NTP
164	LUNDQUIST, DALLAS & ANGELA; JT	11217 S TIPPECANOE WY	Department	NTP
165	PILLEY, JAMES R & VANESSA L; JT	11209 S TIPPECANOE WY	Department	NTP
166	FOSTER, DENNIS K	11199 S TIPPECANOE WY	Department	NTP
167	DUONG, BAO H & DIEU, QUYNH M; TC	11191 S TIPPECANOE WY	N/A	NTP
168	THATCHER, REED & GLORIA; JT	11181 S TIPPECANOE WY	Department	NTP
169	KROGH, ASHLEY	11173 S TIPPECANOE WY	Department	NTP
170	KFJ PARTNERSHIP	11163 S TIPPECANOE WY		NTP
171	YATES, WALTER G & MICHELLE L; JT	11157 S TIPPECANOE WY	Department	NTP
172	MIRANDA, ELVIS R & MELVA R; JT	11147 S TIPPECANOE WY	Department	NTP
173	ISON, JOHN N & KIMBERLY; JT	11141 S TIPPECANOE WY	Department	NTP
174	CARNESECCA, ZACHARY C & NATALIE M; JT	11137 S TIPPECANOE WY	N/A	NTP
175	BECKER, MERCEDES	11123 S TIPPECANOE WY	N/A	NTP
176	PIZZO, STEPHEN G & SMITH-PIZZO, VICTORIA A; JT	11117 S TIPPECANOE WY	N/A	NTP
177	HANSEN, JACOB & BOBBI	11109 S TIPPECANOE WY	N/A	July 7~~April 1~~, 2017

178	CONNELL, CHRIS & AMIEE; JT	11103 S TIPPECANOE WY	N/A	July 7~~April 1~~, 2017
179	DUNCAN, JAMES EDWARD; TR (2011 D REV TR)	11093 S TIPPECANOE WY	N/A	July 7~~April 1~~, 2017
180	WB II LAND INVESTMENT LC; ET AL	11164 S RIVER HEIGHTS DR	N/A	July 7~~March 17~~, 2017
181	HUNTER, JACQUELINE	11087 S TIPPECANOE WY	N/A	July 7~~April 1~~, 2017
193			N/A	July 7~~March 21~~, 2017

Build Alternative – 4015 West

Parcel No.	***Owner Name***	***Property Address***	***Demolition***	***Committed Clearance Date***
755			N/A	TBD
755B			N/A	TBD
756			N/A	TBD
756B			N/A	TBD
757			N/A	TBD
757B			N/A	TBD
758			N/A	TBD
758B	Parrish		N/A	TBD
760			N/A	TBD
762			N/A	TBD

at 4000 West to the west curb return at 3600 West. See Part 4-11 (Pavement) for additional requirements.

2. Construct Bangerter Highway under 11400 South. The elevation of 11400 South cannot be raised more than ~~5~~ five feet above existing elevation.

E. 4015 West Build Alterative

1. Construct the roadway in accordance with the Typical Sections in Part 7 (Contract Drawings).
2. At each U-turn intersection (U-turn intersections are 4015 West & Sam's Boulevard, 4015 West & Point Lane, and 5400 South & 4120 West):
   a. Remove all U-turn roadway elements such as (but not limited to) existing curb, gutter, sidewalk, raised island, associated U-turn signs, signals, striping and asphalt pavement in the bulb-out area (bulb-out area is the area of the U-turn outside of the standard travel lane and shoulder of the main street, 4105 West or 5400 South, and side street, Sam's Boulevard, Point Lane or 4120 West). Refer to Part 4, Section 18 (Traffic Signals) for removal and salvage of existing traffic signal.
   b. Reconstruct curb, gutter, drainage structure, parkstrip, sidewalk, and asphalt pavement, signing and striping to eliminate the bulb-out and to reconfigure the intersections as a standard intersection configuration. Relocate any necessary utilities such as fire hydrants in the parkstrip.

F. Local Streets

1. For parcels where buildings are demolished, remove curb and gutter curb cuts, driveway aprons, and driveways.
2. Place full-height curb and gutter matching existing width and shape of the existing curb and gutter.
3. Remove the existing sidewalk from parcel 154 to 173 on east side of Tippecanoe Way.
4. Provide crosswalk and pedestrian ramps from east side to west side of Tippecanoe where sidewalk removal ends south of parcel 174 along east side of Tippecanoe.
5. Reconstruct the knuckle at the corner of New Heritage Drive and 9150 South. Construct a turn-around area for an AASHTO City Bus and obtain Approval from West Jordan City for the design.
6. Remove the existing cul-de-sac at Winthrope Circle; pavement, curb, sidewalk. Construct a turn-around area for an AASHTO City Bus and obtain Approval from West Jordan City for the design.

15C-3 Interchange Criteria

Provide a Single-Point Urban Interchange (SPUI) at each interchange. A concept is provided in Reference Documents. If an alternate configuration is proposed, seek approval through the ATC process.

A. Provide a minimum of 4.0 feet from front face of curb to face, side or corner of bridge abutment or MSE wall unless barrier is provided.

B. Left hand exits or entrances are not allowed.

C. Provide parallel-type entrance ramps. Place the noise wall and grade to accommodate dual-lane off-ramps. Construct all other items of Work associated with the off ramps in a single-lane off-ramp configuration.

D. For on-ramps, provide acceleration lengths from the ramp meter stop bar.

E. For off-ramps, provide the deceleration lengths to the back of the ramp terminal intersection storage lengths in accordance with the PDC.

F. Provide ramp meter storage as shown in Table 15C-1.

G. Provide a minimum separation width of 10 feet between opposing left turning lanes.

H. Stop Bars for all movements will not be staggered.

I. Provide a maximum 2:1 (larger radius: small radius) compound ratio between the radii of the two curves on each ramp. Place the larger radius first in the direction of travel for on-ramps and the smaller radius first in the direction of travel for the off ramps.

J. Provide a southbound auxiliary lane between 7800 South and 7000 South.

15C-4 Horizontal and Superelevation Design

Provide horizontal curves for all horizontal alignment deflection angles greater than 0.5 degrees (30 minutes). Provide a minimum of 800 feet tangent between deflection angles.

15C-5 Vertical Design

Use a minimum vertical curve length in accordance with AASHTO design speed k values. Pavement transitions are subject to vertical design requirements. The minimum vertical curve length is 500 feet for mainlines, 200 feet for ramp bodies and State facilities, and 100 feet for ramp terminals. For all other non-State facilities, the minimum vertical curve length shall be 100 feet.

A vertical curve is required for grade breaks with an algebraic difference greater than 0.2 percent on mainline and ramps, and 0.5 percent for all other facilities. Provide a minimum of 500 feet between grade breaks along mainline and ramps, and minimum of 200 feet between grade breaks on all other facilities.

Design the maximum final pavement elevation of Bangerter Highway, ramps, and cross streets to not exceed the following elevations within a 100 foot zone, 50 feet north and 50 feet south of the existing Rocky Mountain Power (RMP) overhead power lines that run parallel to 5400 South, 9000 South, and 11400 South, and cross Bangerter Highway within the Project limits.

- 5400 South 4584.00
- 9000 South 4529.00
- 11400 South 4663.50

15C-6 Design Vehicle

For all turning movements along 5400 South, 7000 South, 9000 South, 11400 South, Bangerter Highway (SR-154) and ramps, comply with the following requirements:

A. For all single lane turning movements, an AASHTO WB-67 design vehicle must be

able to turn from turning lane to receiving lane with its wheels entirely on lane or shoulder pavement.

B. For all multiple lane turning movements, an AASHTO WB-67 design vehicle wheels must stay within the outside lane and shoulder pavement without crossing the inside lane line. For the inside lane, AASHTO WB-50 must be used.

For all other turning movements use an AASHTO WB-50 design vehicle for all lanes of all turning movements.

For the design of a cul-de-sac when existing cul-de-sacs are modified or new ones are created on City streets use an AASHTO City Bus design vehicle and the respective City standard requirements for all turning movements.

15C-7 On-Ramps

Provide pavement to accommodate future ramp meters on all on-ramps. Provide a minimum of three lanes on all on-ramps from the ramp terminal to the stop bar without impacting cross-street traffic or pedestrian movements for 5400 South, 7000 South and 9000 South. Provide a minimum of two lanes on all on-ramps from the ramp terminal to the stop bar without impacting cross-street traffic or pedestrian movements at 11400 South.

Use a minimum 300-foot taper for each lane drop on each on-ramp except for approved deviations in the appendix to this Section.

Provide the following ramp storage lengths from the cross street curb return to the ramp meter stop bar and ramp lengths between end of taper to beginning of taper (lengths in Table 15C-1 (On-Ramp Lengths) do not include taper lengths):

TABLE 15C-1
ON-RAMP LENGTHS

Ramp	*Required Ramp Meter Storage Length (Lane-Feet)*	*Desired Ramp Meter Storage Length (Lane-Feet)*	*Length of two lane section between tapers (Feet)*	*Length of one lane section between tapers (Feet)*
	5400 South			
Southbound	3,000	4,100	300	300
Northbound	1,200	1,200	300	300
	7000 South			
Southbound	1,875	1,875	300	300
Northbound	900	900	300	300
	9000 South			
Southbound	2,400	2400	300	300
Northbound	~~2,790~~1,900	2,790	300	300
	11400 South			
Southbound	2,520	2,520	300	300

North bound	2715	3,200	300	300

15C-8 Off Ramps

Provide the required deceleration length from the painted gore to the beginning of the required queue length as shown in the PDC.

15C-9 Project Design Criteria (PDC) Changes

The Department has approved the Project Design Criteria (PDC) for the Project as shown in Attachment 15-A to this Section 15. The Department has approved Project Design Criteria for the 4015 West Build Alternative as shown in Attachment 15-A to this Section. Any updates or modifications to the PDC must be Approved by the Department before the subject Work is performed.

15C-10 Design Exceptions/Waivers

The Department has approved Design Exceptions/Waivers for the Project as shown in the appendix to this Section. The Design-Builder shall be responsible for obtaining any other necessary Design Exceptions/Waivers for the Project.

15C-11 Typical Sections

Design roadways in accordance with Part 7 (Contract Drawings).

Provide the structure clear spans illustrated the Structure Clearance Envelope included in Part 7 (Contract Drawings) free of all bridge substructure, retaining walls, and slope paving.

15C-12 Intersections

Provide turn-lane storage lengths and number of turn lanes in accordance with the (PDC) for the Project as shown in Attachment 15-A to this Section 15.

15C-13 Barrier

For all roadside locations where clear zone requirements are not met, provide a 42-inch minimum cast-in-place constant-slope barrier or 42-inch minimum cast-in-place constant-slope half-barrier based on the required length of need for any obstruction within the clear zone. ~~Based on Standard Drawing BA 1C if there is less than 1 foot of pavement behind the barrier a deviation from Standards is required. End pavement section at the back of any cast-in-place barrier.~~

Provide a 42-inch minimum cast-in-place constant-slope barrier in the median along Bangerter Highway (SR-154) if existing median barrier is impacted or removed. Tie new median barrier to existing barrier using required barrier transition element from 42 inch to 32 inch barrier.

Provide 32-inch pre-cast concrete half barrier along the front face of the MSE walls next to travel lanes.

If existing barrier along structural columns is impacted or removed provide 54-inch minimum cast-in-place barrier around structural columns per Standard Drawing BA 1E. See Part 4-17 (Structures) for additional requirements.

15C-14 Curb, Curb & Gutter, and Median Curb

In locations where barrier is not installed along the edge of Bangerter Highway (SR-154) and the ramps, provide concrete curb and gutter Type M1. Extend M1 curb and gutter until it ties back to existing curb and gutter along Bangerter Highway (SR-154). Extend M1 curb and gutter along ramps up to the curb returns at the ramp terminal. Provide Concrete M1 curb and gutter at the edge of pavement along 5400 South, 7000 South, 9000 South, and 11400 South between ramps unless the street is on the structure.

Provide concrete curb Type M2 at ramp terminals for splitter islands.

Provide concrete curb Type B5 in the median along 5400 South, 7000 South, 9000 South, and 11400 South until it ties back to existing curb.

Provide back-to-back B5 curb along left turn pockets.

Provide concrete curb and gutter Type B1 along 5400 South, 7000 South, 9000 South, and 11400 South from the outside of the ramp curb returns to existing curb and gutter.

Provide concrete curb and gutter that meets the governing City for any local street that needs to be reconstructed as part of this Project.

4105 West Build Alternative: Provide concrete curb Type B5 in the median along 5400 South between 4120 West and 3900 West. Remove raised median curbs on 4015 West from Sam's Boulevard to Point Lane.

15C-15 Sidewalk and Parkstrips

Provide concrete sidewalk and/or parkstrips on any street that is being reconstructed as part of this project that currently has sidewalk and parkstrip that is being removed. Match existing widths for sidewalk and parkstrip. Replace in-kind aesthetic treatment in parkstrip areas.

Provide concrete sidewalk and a pedestrian crossing across the south side of the 7000 South interchange that ties into existing sidewalk on the east and west side. Provide width for a future sidewalk and pedestrian crossing on the north side of the 7000 South interchange between ramp intersections.

15C-16 Pedestrian Ramps

Provide new ADA-compliant pedestrian access ramps where a pedestrian path intersects a roadway being constructed, reconstructed, or repaved. Provide documentation and calculations at design submittal reviews that show the pedestrian ramps will meet ADA requirements.

Coordinate with the Department and each city for guidance on the color of truncated domes for pedestrian access ramps on City-owned streets. A single color shall be used for all ramps at a single intersection.

Complete the UDOT *Pedestrian Access Ramp Evaluation Form (Form C-170)* upon completion of each pedestrian ramp and provide in As-builts.

15C-17 Fencing

Provide new 6-foot chain link fence type III, ~~adjacent to~~within the pavement reconstruction limits along Bangerter Highway (SR-154) and at each cross street along the No-Access line. Replace any fence damaged or removed for construction activities with new fence of the same size and type.

For all other roadways, provide new fence along each parcel that currently has fencing with the same type and size. Obtain permission from the property owner(s) for elimination of fencing.

Fencing is not required along the No-Access line where noise walls are required. Install a gate if there is an existing gap for access to the noise wall.

Connect existing fence~~ing~~ into the new noise wall locations, match the existing fence type.

15C-18 Maintenance Access Zone

Provide a continuous 10-foot-wide maintenance access zone between the ROW fencing and the face of retaining wall or between the ROW fencing and the toe of any slope greater than 4:1 (H:V). Limit the slope of the maintenance access zone to less than 4:1 (H:V). Deviations from maintenance access requirements are not permitted at the bottom of walls retaining the roadway. During design development, provide a description of areas that deviate from the maintenance access requirement that includes length, width, location, point of access and distance from point of access. Provide 12-foot-wide gates in the ROW fence and a drivable transition between the local street network and each segment of the maintenance access zone. Do not place above-grade appurtenances, including ATMS cabinets, sign structures, lighting supports, trees, shrubs, walls, drainage features or structures, within the maintenance access zone.

9000 South

Provide access from the northbound off ramp to the existing driveways for the USBOR Aqueduct Easement.

15C-19 Snow Storage Area

Provide a minimum 5-foot-wide area that can be used for snow storage between roadway barriers and noise walls. Include drainage of this area in the design and construction of drainage facilities.

15C-20 Walls

Provide noise walls in accordance with Right of Way Drawings in Part 7 (Contract Drawings). Reconstruction of noise walls is limited to the wall that is impacted by the Project.

Provide 1 foot between the face of noise wall, retaining noise wall to the N/A line.

15C-21 Survey

Perform any survey necessary to complete the Work. Survey and confirm the location, accuracy, and datum of all information provided, regardless of the source of the information. Existing horizontal and vertical survey control is provided in Part 7 (Contract Drawings).

Provide a statement before beginning design indicating all Department-provided horizontal and vertical control has been field checked and the control has been determined to be accurate within the tolerances specified in the UDOT Survey & Geomatics Standards which can be found at http://www.udot.utah.gov/main/f?p=100:pg:0::::1:T,V:1521,. Attach field survey information used to verify control. Notify the Department verbally and in writing if discrepancies are found.

PROJECT DESIGN CRITERIA - URBAN ARTERIAL - OTHER

I. PROJECT DESCRIPTION

DATE: 7/7/2016

Project No	**S-0154(12)11**	**Location**	**4 Interchanges on Bangerter Highway**
PIN	**12566**	**Concept**	**4 Interchanges on Existing Freeway**

Describe the scope of the project Construct 4 New Interchanges

II. DESIGN STANDARDS BY ROADWAY

(Complete a separate PDC for each roadway on your project)

Date of OSR: 2/18/2016

Roadway Name: **SR-154 (Bangerter Hwy) - 5400 South**

Roadway Characteristics

Functional Class	Urban Arterial - Other			**Pavement Type**	Rigid	
Current Year	2015	**AADT=**	**56,000**	**Terrain**	Rolling Terrain	
Design Year	2040	**AADT=**	**109,000**	**% Trucks (current)**	6%	
Design Vehicle	WB-67			**Posted / Design Speed**	55	65

Proposed Roadway Characteristics

Total Number of Lanes 6

Shoulder Width (Typ) 12'

Curb & Gutter Type & Width (Typ) Type M1 (2.5')

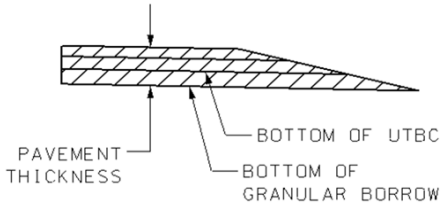
Comments

Ramps A, B, C & D
- Design Speed - 55 mph
  - 300 ft along ramp beyond painted gore in the travel direction
- Design Speed - 45 mph
  - Ramp Body
- Design Speed - 25 mph
  - Within 300 ft of 5400 S

* A design speed of 20 mph will be used for SSD near the 5400 S. Intersection.

Pavement Thickness

See Typical Sections in Part 7



Pavement Thickness consists of Hard Surfacing, UTBC, and Granular Borrow (if used).

Order of Precedence: SD - 2012 Standard Drawings; MOI - Roadway Design Manual of Instruction; GB - AASHTO Green Book 2011 Edition

FHWA 13 Critical Elements	UDOT Standard	RFP Requirement	Design Exception	References	Date of Decision, Comments, Mitigation, etc.
Design Speed	65 mph	65 mph	☑ Not Required ☐ Required ☐ Approved	**MOI** 2-1; **GB** pp. 2-53:58, 8-1:2	Determined by Concept Team
Lane Width	**Mainline** 12' **LT Turn Lane(s)** 12' **RT Turn Lane(s)** 12'	12' 12' 12'	☑ Not Required ☐ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-1, 43:47, 107; **GB** pp. 8-2:3	
Shoulder Width	**Outside** 12'; **Inside** 12'; **Barrier Offset** 2'	Outside *12'; **Inside** 12'; **Barrier Offset** 2'	☐ Not Required ☐ Required ☑ Approved	**SD** (DD & ST series); **MOI** 7-44:46; **GB** pp. 4-8:11, 8-2:3	*Design exception to reduce the outside shoulder for the SB On Ramp only.
Superelevation	**Maximum Superelevation** 6%	**Maximum Superelevation** 6%	☑ Not Required ☐ Required ☐ Approved	**SD** DD 1; **MOI** 7-26:29; **GB** pp. 8-3, 3-45 (T. 3-9)	
Horizontal Alignment	**Minimum Radii Value** 1660'	**Minimum Radii Value** 1660'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-30:33, 50:55; **GB** pp. 8-6, 3-32 (T. 3-7), 3-45 (T. 3-9)	
Vertical Alignment	**Sag Curve Min. K Value** 157; **Crest Curve Min. K Value** 193	**Sag Curve Min. K Value** 157; **Crest Curve Min. K Value** 193	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-56:60; **GB** pp. *crest* 3-155: 157 (T. 3-34:35), *sag* 3-161 (T. 3-36)	
Profile Grades	**% Min** 0.30%; **% Max** 5.00%	**% Min** 0.30%; **% Max** 6.00%	☐ Not Required ☐ Required ☑ Approved	**MOI** 7-58:62; **GB** pp. 3-119, 8-3:4 (T. 8-1)	0.50% preferred
Cross Slope	**Standard Value** 2%	**Value Proposed/Used** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** (DD, DD 4); **MOI** 7-47:48; **GB** pp. 4-1:6, 8-2:3	
Stopping-Sight Distance	**Minimum** 645'	**Minimum** 645'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-62; **GB** pp. 3-2:8, 3-106:110, 3-4 (T. 3-1)	
Structural Capacity	**Design Loading** HL-93	**Design Loading** HL-93	☑ Not Required ☐ Required ☐ Approved	**MOI** 11-2:3; **GB** p. 8-4	HS-20 for existing; HL-93 for new construction
Bridge Width	**Minimum** 62'-10"	**Minimum** 62'-10"	☑ Not Required ☐ Required ☐ Approved	**SD** DD 9; **MOI** 11-3; **GB** p. 8-4	Bridge width per direction
Vertical Clearance*	**Minimum** 16.5' over road, 23.5' over rail	**Minimum** 16.5'	☑ Not Required ☐ Required ☐ Approved	**SD** DD 8:0; **MOI** 11-4:5; **GB** p. 8-4	* Notify FHWA on any changes to Vertical Clearance on the National Highway System
Lateral Offset to Obstruction	**Minimum** Urban environments shoulder + 2', other locations clearzone.	**Minimum** Urban environments shoulder + 2', other locations clearzone.	☑ Not Required ☐ Required ☐ Approved	**SD** DD 17; **GB** p. 8-5, 10-19:21	

Design Waivers	UDOT Standard	RFP Requirement	Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Acceleration Lanes	V: 65 mph Va: 50 mph V'a / L: 0 / 1410 14 / 1350 18 / 1310 22 / 1220 26 / 1120	Location / L: Ramp B 0 to 65 (SB On) 1410' Ramp D 0 to 65 (NB On) 1410'	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. A part of the ramp proper may also be considered in the acceleration length as a design waiver. Table 10-3 **GB** p. 10-110. See also **GB** pp. 9-124:125, 10-107:110, 116:122; **SD** DD 13A:14B, ST 1; **MOI** 7-106	
Deceleration Lanes	V: 65 mph Va: 55 mph V'a / L: 0 / 570 14 / 540 18 / 520 22 / 500 26 / 470	Location / L: Ramp A 65 to 0 (NB Off) 570' Ramp C 65 to 0 (SB Off) 570'	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. Table 10-5 **GB** p. 10-115. See also **GB** pp. 9-124:125, 10-107,112:120, 123:124; **SD** DD 13A:14B, ST 3A:3B; **MOI** 7-106	
Guardrail Bridge Connection	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.	☑ Not Required ☐ Required ☐ Approved	**SD** BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.	30'	☑ Not Required ☐ Required ☐ Approved	2006 Roadside Design Guide pg. 3-6 and Figure 3.2 pg. 3-8; **SD** DD 4, 8, 10-12,17	
Intersection Sight Distance	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 9-28:54, **MOI** 7-64:67	
Ramp Terminal Sight Distance	Along the Ramp **Design Speed** / **SSD (ft)**: 70 mph 730 55 mph 495 50 mph 425 45 mph 360 40 mph 305 35 mph 250 30 mph 200 25 mph 155 Along the Freeway or Street Preceeding Approach Nose of Exit Ramp **Design Speed** / **SSD (ft)*** / **DSD (ft)****: 70 mph 915 1445 55 mph 620 1135 50 mph 535 1030 45 mph 450 930 40 mph 385 825 35 mph 315 720 30 mph 250 620 25 mph 200 N/A	Along the Ramp **Design Speed** / **SSD (ft)**: 65 mph 645 55 mph 495 45 mph 360 25 mph 155 20 mph 115 Along the Freeway or Street Preceed Approach Nose of Exit Ramp **Location** / **SSD*** / **DS**: SR-154 Approaching Ramp A (NB Off) 810' 1: SR-154 Approaching Ramp C (SB Off) 810' 1:	☑ Not Required ☐ Required ☐ Approved ☐ Approved	SSD (Stopping Sight Distance) should be at least as great as design SSD *SSD is 25% greater than minimum SSD. **DSD is Decision Sight Distance based on avoidance maneuver 'E' and is desired where feasible. Document DSD but do not obtain waiver if DSD is not met. **GB** p. 3-4 (T. 3-1) **GB** p. 3-7 (T. 3-3) **GB** p. 10-92	
Shoulder/Travel way (gutter pan)	The gutter pan is not considered a part of the traveled way or shoulder.	The gutter pan is not considered part of the traveled way or shoulc		**GB** pp. 4-19, 10-103; **MOI** 7-1, 43:44	

Design Waivers	UDOT Standard	RFP Requirement	Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Gores	Follow the key points from 2011 AASHTO: • Should be uniform along the freeway; • Geometric shape is appropriate for given speeds; • Mitigation required for major obstructions in a gore; and • Unpaved area beyond the gore nose should be graded nearly level with the roadways as practical.	Location: 5400 South Meets all Requirements?: YES	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-96:101; **SD** DD 6, ST 3A:3B	
Ramp Terminals	Platform Location: Ramp side of the approach nose or merging end. Length: 200 ft At- grade terminal of ramp. Varies	Platform Location: Ramp side of the approach nose or merging end. Length: 200 ft t- grade terminal of ramp. Varies	☑ Not Required ☐ Required ☐ Approved	Avoid left hand entrances and exits. **GB** pp. 10 103:104. Ramp Terminal means: 1) the exit terminal from the side street onto the freeway entrance ramp; 2) the entrance terminal onto the freeway; 3) the exit terminal from the freeway onto the exit ramp; and 4) the entrance terminal from the freeway exit ramp onto the side street. Refer to **GB** 10-104 for platform lengths. **MOI** 7-105:106	
On Ramp Design	Type: Parallel Curve Radius: 1000 ft Dist. From Physical Nose to Ramp Control Line Terminus: 200 ft Taper: 300 ft min	Ramp Loc.: 5400 South Ramps Type: Parallel Curve Rad.: 1000 ft Dist.: 200 ft Taper: 300'	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-107:112; **SD** DD 6, ST 1; **MOI** p. 1-2. UDOTs preferred approach is to utilize parallel entrance ramps. See **GB** pp. 10-89:90; **MOI** 7-105:106.	
Off Ramp Design	Type: Taper Divergence Angle (deg): 2-5 Dist. from outer edge alignment break to ramp control line: 200 ft	Ramp Loc.: 5400 South Ramps Type: Taper Angle: 2-5 Dist.: 200 ft	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-112:116; **SD** DD 6, ST 3A:3B; **MOI** p. 1-2. UDOTs preferred approach is to utilize tapered exit ramps for single lane exits. If multi lane exit, one lane must be parallel. See **GB** pp. 10-89:90; **MOI** 7-105:106.	
Curb Configuration	2011 AASHTO p.10-103	Type M1	☑ Not Required ☐ Required ☐ Approved	Determine if the curb is appropriate for the type of facility. **GB** pp. 4-16:19, 10-103; **SD** GW 2	
Traffic Control	Meet Traffic Control Standard Drawings requirements	Meet Traffic Control Standard Drawings requirements	☑ Not Required ☐ Required ☐ Approved	**SD** TC series	
Rumble Strips	Meet Paving Standard Drawings requirements	Meet Paving Standard Drawings requirements	☑ Not Required ☐ Required ☐ Approved	**SD** PV 6A:8B	

Prepared by _____ Date 9/12/2016

Verified Only _____ Date _____
- Local Government Projects Only

Approved by _____ Date: 2016.09.12 08:33:48 -06'00' Date _____

On local government projects that are not on a UDOT road, the Region Preconstruction Engineer signs the "Verified Only" line and the Engineer of Record signs the "Approved by" line. For all other projects, the "Verified Only" line is left blank and the Region Preconstruction Engineer signs the "Approved by" line.

PROJECT DESIGN CRITERIA - URBAN ARTERIAL

I. PROJECT DESCRIPTION

DATE: 7/7/2016

Project No	**S-0154(12)11**	**Location**	**4 Interchanges on Bangerter Highway**
PIN	**12566**	**Concept**	**4 Interchanges on Existing Freeway**

Describe the scope of the project Construct 4 New Interchanges

II. DESIGN STANDARDS BY ROADWAY

(Complete a separate PDC for each roadway on your project)

Date of OSR: 2/18/2016

Roadway Name: **5400 South**

Comments

Roadway Characteristics

Functional Class	Urban Arterial			**Pavement Type**	Rigid	
Current Yea	2015	**AADT=**	38,000	**Terrain**	Flat	
Design Yea	2040	**AADT=**	45,000	**% Trucks (current)**	4%	
Design Vehicle	WB-67			**Posted / Design Speed**	45	50

Proposed Roadway Characteristics

Total Number of Lanes	6	**Park Strip Width (Typ)**	5'
Shoulder Width (Typ)	0	**Sidewalk Width (Typ)**	4' - 6'
Curb & Gutter Type & Width (Typ)	Type B1 (2.5')		

Intersection #1:

Roadway Name	Dir.	# of LT Lanes	Storage Length	# of Thru Lanes	# of RT Lanes	Storage Length
5400 South	**EB**	2	250	3	1	N/A
5400 South	**WB**	2	185	3	0	N/A
NB Off Ramp	**NB**	2	525	0	2	525
SB Off Ramp	**SB**	2	450	0	1	450

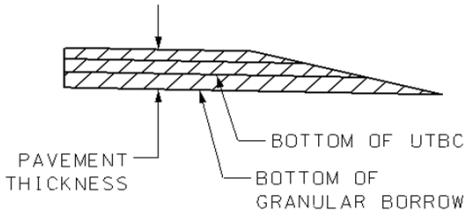
Curb Radius From T.B.C.

NW Curb Radius:	25'
SW Curb Radius:	68.5'
NE Curb Radius:	70.5'
SE Curb Radius:	25'

Pavement Thickness

See Typical Sections in Part 7

Ramp	Required Ramp Meter Storage (Lane-Feet)
SB On Ramp	3000
NB On Ramp	1200



Pavement Thickness consists of Hard Surfacing, UTBC, and Granular Borrow (if used).

Order of Precedence: SD - 2012 Standard Drawings; MOI - Roadway Design Manual of Instruction; GB - AASHTO Green Book 2011 Edition

FHWA 13 Critical Elements	UDOT Standard	RFP Requirement	Design Exception	References	Date of Decision, Comments, Mitigation, etc.
Design Speed	50 MPH	50 MPH	☑ Not Required ☐ Required ☐ Approved	**MOI** 2-1; **GB** pp. 2-53:58, 7-27	Determined by Concept Team
Lane Width	**Mainline** 12' **LT Turn Lane(s)** 12' **RT Turn Lane(s)** 11'	11' 11' 11'	☐ Not Required ☐ Required ☑ Approved	**SD** (DD & ST series); **MOI** 7-1, 43:47, 107; **GB** pp. 7-29:30	11' lanes allowed per existing design exception, PIN 8523
Shoulder Width	**Outside** 8'; **Inside** N/A; **Barrier Offset** N/A	**Outside** 0'; **Inside** N/A; **Barrier Offset** N/A	☐ Not Required ☐ Required ☑ Approved	**SD** (DD & ST series); **MOI** 7-44:46; **GB** pp. 4-8:11, 7-30	
Superelevation	**Maximum Superelevation** 4%	**Maximum Superelevation** 4%	☑ Not Required ☐ Required ☐ Approved	**SD** DD 1; **MOI** 7-26:29; **GB** pp. 7-29, 3-44 (T. 3-8)	
Horizontal Alignment	**Minimum Radii Value** 926'	**Minimum Radii Value** 926'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-30:33, 50:55; **GB** pp. 7-28, 3-32 (T. 3-7), 3-44 (T. 3-8)	
Vertical Alignment	**Sag Curve Min. K Value** 96; **Crest Curve Min. K Value** 84	**Sag Curve Min. K Value** 96; **Crest Curve Min. K Value** 84	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-56:60; **GB** pp. *crest* 3-155: 157 (T. 3-34:35), *sag* 3-161 (T. 3-36)	
Profile Grades	**% Min** 0.30%; **% Max** 6.0%	**% Min** 0.30%; **% Max** 6.0%	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-58:62; **GB** pp. 3-119, 7-28:29 (T. 7-4)	0.50% preferred
Cross Slope	**Standard Value** 2%	**Value Proposed/Used** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** (DD series); **MOI** 7-47:48; **GB** pp. 4-1:6, 7-29	
Stopping-Sight Distance	**Minimum** 425'	**Minimum** 425'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-62; **GB** pp. 3-2:8, 3-106:110, 7-28, 7-3 (T. 7-1)	
Structural Capacity	**Design Loading** HL-93 for New Construction	**Design Loading** HL-93 for New Construction	☑ Not Required ☐ Required ☐ Approved	**MOI** 11-2:3; **GB** p. 7-38	HS-20 for existing; HL-93 for new construction
Bridge Width	**Minimum** N/A	**Minimum** N/A	☑ Not Required ☐ Required ☐ Approved	**SD** DD 9; **MOI** 11-3; **GB** pp. 7-37:38	
Vertical Clearance*	**Minimum** 16.5' over road, 23.5' over rail	**Minimum** 16.5'	☑ Not Required ☐ Required ☐ Approved	**SD** DD 8:9; **MOI** 11-4:5; **GB** p. 7-38	* Notify FHWA on any changes to Vertical Clearance on the National Highway System
Lateral Offset to Obstruction	**Minimum** 1.5' tangent / 3' radius	**Minimum** 1.5' tangent / 3' radius	☑ Not Required ☐ Required ☐ Approved	**SD** DD 17; **GB** pp. 7-37:38	

Design Waivers	UDOT Standard				RFP Requirement		Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Acceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. A part of the ramp proper may also be considered in the acceleration length as a design waiver. Table 10-3 **GB** p. 10-110. See also **GB** pp. 9-124:125, 10-107:110, 116:122; **SD** DD 13A:14B, ST 1; **MOI** 7-106	
	50 mph	39 mph	0	720	N/A				
			14	660					
			18	610					
			22	550					
			26	450					
Deceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☐ Not Required ☐ Required ☑ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. Table 10-5 **GB** p. 10-115. See also **GB** pp. 9-124:125, 10-107,112:120, 123:124; **SD** DD 13A:14B, ST 3A:3B; **MOI** 7-106	*Design waiver provided
	50 mph	44 mph	0	435	EB Left Turn	*140'			
			14	405	WB Left Turn	435'			
			18	385	WB Left Turn Onto 3900 W	*140'			
			22	355					
			26	315					
Guardrail Bridge Connection	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.				N/A		☑ Not Required ☐ Required ☐ Approved	**SD** BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.				20'		☑ Not Required ☐ Required ☐ Approved	2006 Roadside Design Guide pg. 3-6 and Figure 3.2 pg. 3-8; **SD** DD 4, 8, 10:12,17	
Intersection Sight Distance	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.				Sight triangles cases A-F and skew are met.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 9-28:54, **MOI** 7-64:67	
Shoulder/Travel way (gutter pan)	The gutter pan is not considered a part of the traveled way or shoulder.				The gutter pan is not a part of the shoulder or traveled way.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 4-19, 10-103; **MOI** 7-1, 43:44	
Curb Configuration	2011 AASHTO p. 10-103				Type B1,Type B5, Type M2		☑ Not Required ☐ Required ☐ Approved	Determine if the curb is appropriate for the type of facility. **GB** pp. 4-16:19, 10-103; **SD** GW 2	
Traffic Control	Meet Traffic Control Standard Drawings requirements				Meet Traffic Control Standard Drawings requirements		☑ Not Required ☐ Required ☐ Approved	**SD** TC series	
Rumble Strips	Meet Paving Standard Drawings requirements				N/A		☑ Not Required ☐ Required ☐ Approved	**SD** PV 6A:8B	

Prepared by _____ Date 9/12/2016

Verified Only _____ Date _____
- Local Government Projects Only

Approved by _____ Date: 2016.09.12 08:34:27 -06'00' Date _____

On local government projects that are not on a UDOT road, the Region Preconstruction Engineer signs the "Verified Only" line and the Engineer of Record signs the "Approved by" line. For all other projects, the "Verified Only" line is left blank and the Region Preconstruction Engineer signs the "Approved by" line.

PROJECT DESIGN CRITERIA - URBAN ARTERIAL

I. PROJECT DESCRIPTION

DATE: 7/28/2016

Project No	**S-0154(12)11**	**Location**	**4 Interchanges on Bangerter Highway**
PIN	**12566**	**Concept**	**4 Interchanges on Existing Freeway**

Describe the scope of the project Construct 4 New Interchanges

II. DESIGN STANDARDS BY ROADWAY

(Complete a separate PDC for each roadway on your project)

Date of OSR: 2/18/2016

Roadway Name: **5400 South (at 4015 West)**

Roadway Characteristics

Functional Class	Urban Arterial			**Pavement Type**	Asphalt	
Current Year	2015	**AADT=**	38,000	**Terrain**	Level	
Design Year	2040	**AADT=**	45,000	**% Trucks (current)**	4%	
Design Vehicle	WB-67			**Posted / Design Speed**	40*	45*

Comments

This PDC is for 5400 South at 4015 West only. As shown in the additive bidding plans.

*Low speed urban design is assumed through the 45 MPH design speed section of 5400 South. This eastern limit of this section is just east of the reverse curves through the 4015 intersection. The 45 design speed zone then continues to the west. The design speed is classified as 50 MPH east of this zone.

Proposed Roadway Characteristics

Total Number of Lanes	6	**Park Strip Width (Typ)**	0' - 5'
Shoulder Width (Typ)	0	**Sidewalk Width (Typ)**	4' - 6'
Curb & Gutter Type & Width (Typ)	Type B1 (2.5')		

Intersection #1: **4015 West at 5400 South**

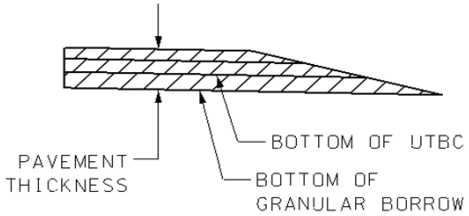
Roadway Name	Dir.	# of LT Lanes	Storage Length	# of Thru Lanes	# of RT Lanes	Storage Length
5400 South	**EB**	1	375	3	1	250
5400 South	**WB**	1	450	3	1	100
4015 West	**NB**	1	250	1	1	250
4015 West	**SB**	1	250	1	1	250

Curb Radius From T.B.C.

NW Curb Radius:	55'
SW Curb Radius:	60' (existing)
NE Curb Radius:	45'
SE Curb Radius:	60' (existing)

Pavement Thickness

See Typical Sections in Part 7



Pavement Thickness consists of Hard Surfacing, UTBC, and Granular Borrow (if used).

Order of Precedence: SD - 2012 Standard Drawings; MOI - Roadway Design Manual of Instruction; GB - AASHTO Green Book 2011 Edition

FHWA 13 Critical Elements	UDOT Standard	RFP Requirement	Design Exception	References	Date of Decision, Comments, Mitigation, etc.
Design Speed	50 MPH	50 MPH	☑ Not Required ☐ Required ☐ Approved	**MOI** 2-1; **GB** pp. 2-53:58, 7-27	
Lane Width	**Mainline** 12' **LT Turn Lane(s)** 12' **RT Turn Lane(s)** 11'	11 11 11	☐ Not Required ☐ Required ☑ Approved	**SD** (DD & ST series); **MOI** 7-1, 43:47, 107; **GB** pp. 7-29:30	Existing design exception for 11' lanes exists in this location from PIN 8523.
Shoulder Width	**Outside** 4', **Inside** N/A, **Barrier Offset** N/A	**Outside** 0', **Inside** N/A, **Barrier Offset** N/A	☐ Not Required ☐ Required ☑ Approved	**SD** (DD & ST series); **MOI** 7-44:46; **GB** pp. 4-8:11, 7-30	Existing design exception for 0' shoulders exists in this location from PIN 8523.
Superelevation	**Maximum Superelevation** 4%	**Maximum Superelevation** 4%	☑ Not Required ☐ Required ☐ Approved	**SD** DD 1; **MOI** 7-26:29; **GB** pp. 7-29, 3-44 (T. 3-8)	
Horizontal Alignment	**Minimum Radii Value** 1039'	**Minimum Radii Value** 1039'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-30:33, 50:55; **GB** pp. 7-28, 3-32 (T. 3-7), 3-44 (T. 3-8)	PIN 8523 assumed low speed urban design for the 45 MPH design section. That will be continued.
Vertical Alignment	**Sag Curve Min. K Value** 96 **Crest Curve Min. K Value** 84	**Sag Curve Min. K Value** 96 **Crest Curve Min. K Value** 84	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-56:60; **GB** pp. *crest* 3-155: 157 (T. 3-34:35), *sag* 3-161 (T. 3-36)	
Profile Grades	**% Min** 0.30% **% Max** 6.0%	**% Min** 0.30% **% Max** 6.0%	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-58:62; **GB** pp. 3-119, 7-28:29 (T. 7-4)	0.50% preferred
Cross Slope	**Standard Value** 2%	**Value Proposed/Used** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** (DD series); **MOI** 7-47:48; **GB** pp. 4-1:6, 7-29	
Stopping-Sight Distance	**Minimum** 425'	**Minimum** 425'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-62; **GB** pp. 3-2:8, 3-106:110, 7-28, 7-3 (T. 7-1)	
Structural Capacity	**Design Loading** HL-93 for New Construction	**Design Loading** HL-93 for New Construction	☑ Not Required ☐ Required ☐ Approved	**MOI** 11-2:3; **GB** p. 7-38	HS-20 for existing; HL-93 for new construction
Bridge Width	**Minimum** N/A	**Minimum** N/A	☑ Not Required ☐ Required ☐ Approved	**SD** DD 9; **MOI** 11-3; **GB** pp. 7-37:38	
Vertical Clearance*	**Minimum** 16.5' over road, 23.5' over rail	**Minimum** 16.5'	☑ Not Required ☐ Required ☐ Approved	**SD** DD 8:9; **MOI** 11-4:5; **GB** p. 7-38	* Notify FHWA on any changes to Vertical Clearance on the National Highway System
Lateral Offset to Obstruction	**Minimum** 1.5' tangent / 3' radius	**Minimum** 1.5' tangent / 3' radius	☑ Not Required ☐ Required ☐ Approved	**SD** DD 17; **GB** pp. 7-37:38	

Design Waivers	UDOT Standard				RFP Requirement		Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Acceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. A part of the ramp proper may also be considered in the acceleration length as a design waiver. Table 10-3 **GB** p. 10-110. See also **GB** pp. 9-124:125, 10-107:110, 116:122; **SD** DD 13A:14B, ST 1; **MOI** 7-106	
	50 mph	39 mph	0	720	N/A				
			14	660					
			18	610					
			22	550					
			26	450					
Deceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. Table 10-5 **GB** p. 10-115. See also **GB** pp. 9-124:125, 10-107,112:120, 123:124; **SD** DD 13A:14B, ST 3A:3B; **MOI** 7-106	
	50 mph	44 mph	0	435	N/A				
			14	405					
			18	385					
			22	355					
			26	315					
Guardrail Bridge Connection	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.				N/A		☑ Not Required ☐ Required ☐ Approved	**SD** BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.				20'		☑ Not Required ☐ Required ☐ Approved	2006 Roadside Design Guide pg. 3-6 and Figure 3.2 pg. 3-8; **SD** DD 4, 8, 10:12,17	
Intersection Sight Distance	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.				Sight triangles cases A-F and skew are met.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 9-28:54, **MOI** 7-64:67	
Shoulder/Travel way (gutter pan)	The gutter pan is not considered a part of the traveled way or shoulder.				The gutter pan is not a part of the shoulder or traveled way.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 4-19, 10-103; **MOI** 7-1, 43:44	
Curb Configuration	2011 AASHTO p. 10-103				Type B1		☑ Not Required ☐ Required ☐ Approved	Determine if the curb is appropriate for the type of facility. **GB** pp. 4-16:19, 10-103; **SD** GW 2	
Traffic Control	Meet Traffic Control Standard Drawings requirements				Meet Traffic Control Standard Drawings requirements		☑ Not Required ☐ Required ☐ Approved	**SD** TC series	
Rumble Strips	Meet Paving Standard Drawings requirements				N/A		☑ Not Required ☐ Required ☐ Approved	**SD** PV 6A:8B	

Prepared by _____ Date 9/01/16

Verified Only _____ Date _____
- Local Government Projects Only

Approved by _____ Date: 2016.09.07 07:50:54 -06'00' Date _____

On local government projects that are not on a UDOT road, the Region Preconstruction Engineer signs the "Verified Only" line and the Engineer of Record signs the "Approved by" line. For all other projects, the "Verified Only" line is left blank and the Region Preconstruction Engineer signs the "Approved by" line.

PROJECT DESIGN CRITERIA - URBAN COLLECTOR

I. PROJECT DESCRIPTION

DATE: 7/28/2016

Project No	**S-0154(12)11**	**Location**	**4 Interchanges on Bangerter Highway**
PIN	**12566**	**Concept**	**4 Interchanges on Existing Freeway**

Describe the scope of the project Construct 4 New Interchanges

II. DESIGN STANDARDS BY ROADWAY

(Complete a separate PDC for each roadway on your project)

Date of OSR: 2/18/2016

Roadway Name: **4015 West**

Comments

As shown in the additive bidding plans.

Roadway Characteristics

Functional Class	Urban Collector			**Pavement Type**	Asphalt	
Current Year	2015	**AADT=**	15,500	**Terrain**	Level	
Design Year	2040	**AADT=**	16,900	**% Trucks (current)**	2% (assumed)	
Design Vehicle	WB-67			**Posted / Design Speed**	35	40

Proposed Roadway Characteristics

Total Number of Lanes	2	**Park Strip Width (Typ)**	0' - 5'
Shoulder Width (Typ)	0-10'	**Sidewalk Width (Typ)**	4' - 6'
Curb & Gutter Type & Width (Typ)	Type B1 (2.5')		

Intersection #1: **4015 West at 5400 South**

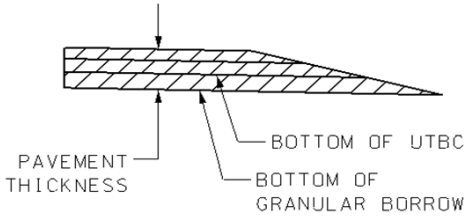
Roadway Name	Dir.	# of LT Lanes	Storage Length	# of Thru Lanes	# of RT Lanes	Storage Length
5400 South	**EB**	1	375	3	1	250
5400 South	**WB**	1	450	3	1	100
4015 West	**NB**	1	250	1	1	250
4015 West	**SB**	1	250	1	1	250

Curb Radius From T.B.C.

NW Curb Radius:	55'
SW Curb Radius:	60' (existing)
NE Curb Radius:	45'
SE Curb Radius:	60' (existing)

Pavement Thickness

See Typical Sections in Part 7



Pavement Thickness consists of Hard Surfacing, UTBC, and Granular Borrow (if used).

Order of Precedence: SD - 2012 Standard Drawings; MOI - Roadway Design Manual of Instruction; GB - AASHTO Green Book 2011 Edition

FHWA 13 Critical Elements	UDOT Standard	RFP Requirement	Design Exception	References	Date of Decision, Comments, Mitigation, etc.
Design Speed	40 MPH	40 MPH	☑ Not Required ☐ Required ☐ Approved	**MOI** 2-1; **GB** pp. 2-53:58, 7-27	
Lane Width	**Mainline** 12' **LT Turn Lane(s)** 12' **RT Turn Lane(s)** 11'	11' 11' 11'	☐ Not Required ☐ Required ☑ Approved	**SD** (DD & ST series); **MOI** 7-1, 43:47, 107; **GB** pp. 7-29:30	Existing design exception for 11' lanes exists in this location from PIN 8523.
Shoulder Width	**Outside** 4', **Inside** N/A, **Barrier Offset** N/A	**Outside** 0', **Inside** N/A, **Barrier Offset** N/A	☐ Not Required ☐ Required ☑ Approved	**SD** (DD & ST series); **MOI** 7-44:46; **GB** pp. 4-8:11, 7-30	Existing design exception for 0' shoulders exists in this location from PIN 8523.
Superelevation	**Maximum Superelevation** 4%	**Maximum Superelevation** 4%	☑ Not Required ☐ Required ☐ Approved	**SD** DD 1; **MOI** 7-26:29; **GB** pp. 7-29, 3-44 (T. 3-8)	PIN 8523 assumed low speed urban design
Horizontal Alignment	**Minimum Radii Value** 1039'	**Minimum Radii Value** 1039'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-30:33, 50:55; **GB** pp. 7-28, 3-32 (T. 3-7), 3-44 (T. 3-8)	PIN 8523 assumed low speed urban design
Vertical Alignment	**Sag Curve Min. K Value** 64, **Crest Curve Min. K Value** 44	**Sag Curve Min. K Value** 64, **Crest Curve Min. K Value** 44	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-56:60; **GB** pp. *crest* 3-155: 157 (T. 3-34:35), *sag* 3-161 (T. 3-36)	
Profile Grades	**% Min** 0.30%, **% Max** 6.0%	**% Min** 0.30%, **% Max** 6.0%	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-58:62; **GB** pp. 3-119, 7-28:29 (T. 7-4)	0.50% preferred
Cross Slope	**Standard Value** 2%	**Value Proposed/Used** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** (DD series); **MOI** 7-47:48; **GB** pp. 4-1:6, 7-29	
Stopping-Sight Distance	**Minimum** 305'	**Minimum** 305'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-62; **GB** pp. 3-2:8, 3-106:110, 7-28, 7-3 (T. 7-1)	
Structural Capacity	**Design Loading** HL-93 for New Construction	**Design Loading** HL-93 for New Construction	☑ Not Required ☐ Required ☐ Approved	**MOI** 11-2:3; **GB** p. 7-38	HS-20 for existing; HL-93 for new construction
Bridge Width	**Minimum** N/A	**Minimum** N/A	☑ Not Required ☐ Required ☐ Approved	**SD** DD 9; **MOI** 11-3; **GB** pp. 7-37:38	
Vertical Clearance*	**Minimum** 16.5' over road, 23.5' over rail	**Minimum** 16.5'	☑ Not Required ☐ Required ☐ Approved	**SD** DD 8:9; **MOI** 11-4:5; **GB** p. 7-38	* Notify FHWA on any changes to Vertical Clearance on the National Highway System
Lateral Offset to Obstruction	**Minimum** 1.5' tangent / 3' radius	**Minimum** 1.5' tangent / 3' radius	☑ Not Required ☐ Required ☐ Approved	**SD** DD 17; **GB** pp. 7-37:38	

Design Waivers	UDOT Standard				RFP Requirement		Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Acceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. A part of the ramp proper may also be considered in the acceleration length as a design waiver. Table 10-3 **GB** p. 10-110. See also **GB** pp. 9-124:125, 10-107:110, 116:122; **SD** DD 13A:14B, ST 1; **MOI** 7-106	
	40	31	0	360	N/A				
			14	300					
			18	270					
			22	210					
			26	120					
Deceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. Table 10-5 **GB** p. 10-115. See also **GB** pp. 9-124:125, 10-107,112:120, 123:124; **SD** DD 13A:14B, ST 3A:3B; **MOI** 7-106	
	40	31	0	360	N/A				
			14	300					
			18	270					
			22	210					
			26	120					
Guardrail Bridge Connection	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.				N/A		☑ Not Required ☐ Required ☐ Approved	**SD** BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.				14'		☑ Not Required ☐ Required ☐ Approved	2006 Roadside Design Guide pg. 3-6 and Figure 3.2 pg. 3-8; **SD** DD 4, 8, 10:12,17	
Intersection Sight Distance	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.				Sight triangles cases A-F and skew are met.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 9-28:54, **MOI** 7-64:67	
Shoulder/Travel way (gutter pan)	The gutter pan is not considered a part of the traveled way or shoulder.				The gutter pan is not a part of the shoulder or traveled way.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 4-19, 10-103; **MOI** 7-1, 43:44	
Curb Configuration	2011 AASHTO p. 10-103				Type B1		☑ Not Required ☐ Required ☐ Approved	Determine if the curb is appropriate for the type of facility. **GB** pp. 4-16:19, 10-103; **SD** GW 2	
Traffic Control	Meet Traffic Control Standard Drawings requirements				Meet Traffic Control Standard Drawings requirements		☑ Not Required ☐ Required ☐ Approved	**SD** TC series	
Rumble Strips	Meet Paving Standard Drawings requirements				N/A		☑ Not Required ☐ Required ☐ Approved	**SD** PV 6A:8B	

Prepared by _____ Date 9/01/16

Verified Only _____ Date _____
- Local Government Projects Only

Approved by _____ Date: 2016.09.07 07:53:58 -06'00' Date _____

On local government projects that are not on a UDOT road, the Region Preconstruction Engineer signs the "Verified Only" line and the Engineer of Record signs the "Approved by" line. For all other projects, the "Verified Only" line is left blank and the Region Preconstruction Engineer signs the "Approved by" line.

PROJECT DESIGN CRITERIA - URBAN ARTERIAL - OTHER

I. PROJECT DESCRIPTION

DATE: 7/6/2016

Project No	**S-0154(12)11**	**Location**	**4 Interchanges on Bangerter Highway**
PIN	**12566**	**Concept**	**4 Interchanges on Bangerter Highway**

Describe the scope of the project Construct 4 New Interchanges

II. DESIGN STANDARDS BY ROADWAY

(Complete a separate PDC for each roadway on your project)

Date of OSR: 2/18/2016

Roadway Name: **SR-154 (Bangerter Highway) at 7000 S Interchange**

Roadway Characteristics

Functional Class	Urban Arterial - Other			**Pavement Type**	Rigid	
Current Year	2015	**AADT=**	**57,000**	**Terrain**	Rolling Terrain	
Design Year	2040	**AADT=**	**121,000**	**% Trucks (current)**	6%	
Design Vehicle	WB-67			**Posted / Design Speed**	55	65

Proposed Roadway Characteristics

Total Number of Lanes 6

Shoulder Width (Typ) 12'

Curb & Gutter Type & Width (Typ) Type M1 (2.5')

Comments

Ramps A1, B1, C1, & D1:* (Right Turn Lanes Within 300' of 7000 S)

Design Speed - 20 mph

Ramps A2, B2, C2, & D2:*

Design Speed (300 ft along ramp beyond the painted gore in the travel direction) - 55 mph

Design Speed (Ramp Body) - 45 mph

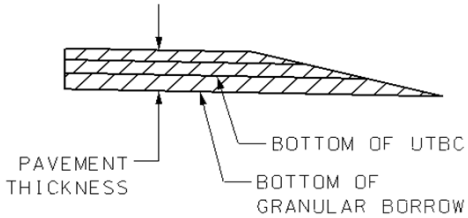
Design Speed (Within 300 ft of 7000 S) - 20 mph

20-mph Design Speed continues through the left turn movement

*Refer to Standard Drawings DD 5 and DD 6 for design of ramp elements, use the design speeds listed above for determining superelevation, minimum radii, vertical curve k values, stopping sight distance, and clear zone.

Pavement Thickness

See Typical Sections in Part 7



Pavement Thickness consists of Hard Surfacing, UTBC, and Granular Borrow (if used).

Order of Precedence: SD - 2012 Standard Drawings; MOI - Roadway Design Manual of Instruction; GB - AASHTO Green Book 2011 Edition

FHWA 13 Critical Elements	UDOT Standard	RFP Requirement	Design Exception	References	Date of Decision, Comments, Mitigation, etc.
Design Speed	65 mph	65 mph	☑ Not Required ☐ Required ☐ Approved	**MOI** 2-1; **GB** pp. 2-53:58, 8-1:2	Determined by Concept Team
Lane Width	**Mainline** 12' **LT Turn Lane(s)** 12' **RT Turn Lane(s)** 11'	12' 12' 12'	☑ Not Required ☐ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-1, 43:47, 107; **GB** pp. 8-2:3	
Shoulder Width	**Outside** 12' / **Inside** 12' / **Barrier Offset** 2'	**Outside** 12' / **Inside** 12' / **Barrier Offset** 2'	☑ Not Required ☐ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-44:46; **GB** pp. 4-8:11, 8-2:3	Barrier offset not required for 12' shoulders
Superelevation	**Maximum Superelevation** 6%	**Maximum Superelevation** 6%	☑ Not Required ☐ Required ☐ Approved	**SD** DD 1; **MOI** 7-26:29; **GB** pp. 8-3, 3-45 (T. 3-9)	
Horizontal Alignment	**Minimum Radii Value** 1660'	**Minimum Radii Value** 1660'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-30:33, 50:55; **GB** pp. 8-6, 3-32 (T. 3-7), 3-45 (T. 3-9)	
Vertical Alignment	**Sag Curve Min. K Value** 157 / **Crest Curve Min. K Value** 193	**Sag Curve Min. K Value** 157 / **Crest Curve Min. K Value** 193	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-56:60; **GB** pp. *crest* 3-155: 157 (T. 3-34:35), *sag* 3-161 (T. 3-36)	
Profile Grades	**% Min** 0.30% / **% Max** 5.00%	**% Min** 0.30% / **% Max** 5.00%	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-58:62; **GB** pp. 3-119, 8-3:4 (T. 8-1)	0.50% preferred
Cross Slope	**Standard Value** 2%	**Value Proposed/Used** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** (DD, DD 4); **MOI** 7-47:48; **GB** pp. 4-1:6, 8-2:3	
Stopping-Sight Distance	**Minimum** 645'	**Minimum** 645'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-62; **GB** pp. 3-2:8, 3-106:110, 3-4 (T. 3-1)	
Structural Capacity	**Design Loading** HL-93	**Design Loading** HL-93	☑ Not Required ☐ Required ☐ Approved	**MOI** 11-2:3; **GB** p. 8-4	HS-20 for existing; HL-93 for new construction
Bridge Width	**Minimum** 62'-10"	**Minimum** 62'-10"	☑ Not Required ☐ Required ☐ Approved	**SD** DD 9; **MOI** 11-3; **GB** p. 8-4	
Vertical Clearance*	**Minimum** 16.5' over road, 23.5' over rail	**Minimum** 16.5'	☑ Not Required ☐ Required ☐ Approved	**SD** DD 8:0; **MOI** 11-4:5; **GB** p. 8-4	* Notify FHWA on any changes to Vertical Clearance on the National Highway System
Lateral Offset to Obstruction	**Minimum** Urban environments shoulder + 2', other locations clearzone.	**Minimum** Urban environments shoulder + 2', other locations clearzone.	☑ Not Required ☐ Required ☐ Approved	**SD** DD 17; **GB** p. 8-5, 10-19:21	

Design Waivers	UDOT Standard	RFP Requirement	Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Acceleration Lanes	**V** / **Va** / **V'a** / **L** 65 mph / 50 mph / 0 mph / 1410' 14 mph / 1350' 18 mph / 1310' 22 mph / 1220' 26 mph / 1120'	**Location** / **L** Ramp B 0 to 65 (SB On) / 1410' Ramp D 0 to 65 (NB On) / 1410'	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. A part of the ramp proper may also be considered in the acceleration length as a design waiver. Table 10-3 **GB** p. 10-110. See also **GB** pp. 9-124:125, 10-107:110, 116:122; **SD** DD 13A:14B, ST 1; **MOI** 7-106	
Deceleration Lanes	**V** / **Va** / **V'a** / **L** 65 mph / 55 mph / 0 mph / 570' 14 mph / 540' 18 mph / 520' 22 mph / 500' 26 mph / 470'	**Location** / **L** Ramp A 65 to 0 (NB Off) / 570' Ramp C 65 to 0 (SB Off) / 570'	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. Table 10-5 **GB** p. 10-115. See also **GB** pp. 9-124:125, 10-107,112:120, 123:124; **SD** DD 13A:14B, ST 3A:3B; **MOI** 7-106	
Guardrail Bridge Connection	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.	☑ Not Required ☐ Required ☐ Approved	**SD** BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.	30'	☑ Not Required ☐ Required ☐ Approved	2006 Roadside Design Guide pg. 3-6 and Figure 3.2 pg. 3-8; **SD** DD 4, 8, 10-12,17	
Intersection Sight Distance	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 9-28:54, **MOI** 7-64:67	
Ramp Terminal Sight Distance	Along the Ramp **Design Speed** / **SSD (ft)** 70 mph / 730 55 mph / 495 50 mph / 425 45 mph / 360 40 mph / 305 35 mph / 250 30 mph / 200 25 mph / 155 Along the Freeway or Street Preceeding Approach Nose of Exit Ramp **Design Speed** / **SSD (ft)*** / **DSD (ft)**** 65 mph / 810 / 1365 55 mph / 620 / 1135 50 mph / 535 / 1030 45 mph / 450 / 930 40 mph / 385 / 825 35 mph / 315 / 720 30 mph / 250 / 620 25 mph / 200 / N/A	Along the Ramp **Design Speed** / **SSD (ft)** 65 mph / 645 55 mph / 495 45 mph / 360 20 mph / 115 Along the Freeway or Street Pr Approach Nose of Exit Ra **Location** / **SSD*** SR-154 Approaching Ram / 810' SR-154 Approaching Ram C / 810'	☑ Not Required Required Approved ☐ Required ☐ Approvec	SSD (Stopping Sight Distance) should be at least as great as design SSD *SSD is 25% greater than minimum SSD. **DSD is Decision Sight Distance based on avoidance maneuver 'E' and is desired where feasible. Document DSD but do not obtain waiver if DSD is not met. **GB** p. 3-4 (T. 3-1) **GB** p. 3-7 (T. 3-3) **GB** p. 10-92	
Shoulder/Travel way (gutter pan)	The gutter pan is not considered a part of the traveled way or shoulder.	The gutter pan is not cons part of the traveled way or shoulder.	ired ☐ Approved	**GB** pp. 4-19, 10-103; **MOI** 7-1, 43:44	

Design Waivers	UDOT Standard	RFP Requirement	Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Gores	Follow the key points from 2011 AASHTO: • Should be uniform along the freeway; • Geometric shape is appropriate for given speeds; • Mitigation required for major obstructions in a gore; and • Unpaved area beyond the gore nose should be graded nearly level with the roadways as practical.	Location: 7000 South Meets all Requirements?: YES	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-96:101; **SD** DD 6, ST 3A:3B	
Ramp Terminals	Platform Location: Ramp side of the approach nose or merging end. Length: 200 ft Location: At- grade terminal of ramp. Length: Varies	Platform Location: Ramp side of the approach nose or merging end. Length: 200 ft Location: At- grade terminal of ramp. Length: Varies	☑ Not Required ☐ Required ☐ Approved	Avoid left hand entrances and exits. **GB** pp. 10-103:104. Ramp Terminal means: 1) the exit terminal from the side street onto the freeway entrance ramp; 2) the entrance terminal onto the freeway; 3) the exit terminal from the freeway onto the exit ramp; and 4) the entrance terminal from the freeway exit ramp onto the side street. Refer to **GB** 10-104 for platform lengths. **MOI** 7-105:106	
On Ramp Design	Type: Parallel Curve Radius: 1000 ft Dist. From Physical Nose to Ramp Control Line Terminus: 200 ft Taper: 300 ft min	Ramp Loc.: 7000 South Ramps Type: Parallel Curve Rad.: 1400' Dist.: 327' Taper: 300'	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-107:112; **SD** DD 6, ST 1; **MOI** p. 1-2. UDOTs preferred approach is to utilize parallel entrance ramps. See **GB** pp. 10-89:90; **MOI** 7-105:106.	
Off Ramp Design	Type: Taper Divergence Angle (deg): 2-5 Dist. from outer edge alignment break to ramp control line: 200 ft	Ramp Loc.: 7000 South Ramps Type: Taper Angle: 2-5 Dist.: 200'	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-112:116; **SD** DD 6, ST 3A:3B; **MOI** p. 1-2. UDOTs preferred approach is to utilize tapered exit ramps for single lane exits. If multi lane exit, one lane must be parallel. See **GB** pp. 10-89:90; **MOI** 7-105:106.	
Curb Configuration	2011 AASHTO p.10-103	Type M1	☑ Not Required ☐ Required ☐ Approved	Determine if the curb is appropriate for the type of facility. **GB** pp. 4-16:19, 10-103; **SD** GW 2	
Traffic Control	Meet Traffic Control Standard Drawings requirements	Meet Traffic Control Standard Drawings requirements	☑ Not Required ☐ Required ☐ Approved	**SD** TC series	
Rumble Strips	Meet Paving Standard Drawings requirements	NA	☑ Not Required ☐ Required ☐ Approved	**SD** PV 6A:8B	

Prepared by David Clawson _____ Date 9/9/16

Verified Only _____ Date _____
- Local Government Projects Only

Approved by _____ Date: 2016.09.12 07:24:41 -06'00' Date _____

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PROJECT DESIGN CRITERIA - URBAN ARTERIAL

I. PROJECT DESCRIPTION

DATE: 7/6/2016

Project No	**S-0154(12)11**	Location	**4 Interchanges on Bangerter Highway**
PIN	**12566**	Concept	**4 Interchanges on Bangerter Highway**

Describe the scope of the project Construct 4 New Interchanges

II. DESIGN STANDARDS BY ROADWAY

(Complete a separate PDC for each roadway on your project)

Date of OSR: 2/18/2016

Roadway Name: **7000 South**

Comments

Roadway Characteristics

Functional Class	Urban Arterial			**Pavement Type**	Rigid	
Current Yea	2015	**AADT=**	20,000	**Terrain**	Rolling	
Design Yea	2040	**AADT=**	32,000	**% Trucks (current)**	3%	
Design Vehicle	WB-67			**Posted / Design Speed**	35	40

Proposed Roadway Characteristics

Total Number of Lanes 5 **Park Strip Width (Typ)** NA

Shoulder Width (Typ) 8' **Sidewalk Width (Typ)** 6'

Curb & Gutter Type & Width (Typ) Type B1 (2.5')

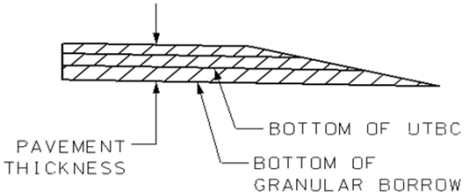
Intersection #1: **SPUI - 7000 South & Bangerter Hwy**

Roadway Name	Dir.	# of LT Lanes	Storage Length	# of Thru Lanes	# of RT Lanes	Storage Length
7000 South	**EB**	2	800	2	1	300
7000 South	**WB**	2	400	2	1	200
SB OFF Ramp	**SB**	2 (Including 1 Shared RT/LT Lane)	450	-	2 (Including 1 Shared RT/LT Lane)	800
NB OFF Ramp	**NB**	2	400	-	1	300

Pavement Thickness

See Typical Sections in Part 7

Ramp	Required Ramp Meter Storage (Lane-Feet)
SB On Ramp	1875
NB On Ramp	900



Pavement Thickness consists of Hard Surfacing, UTBC, and Granular Borrow (if used).

Order of Precedence: SD - 2012 Standard Drawings; MOI - Roadway Design Manual of Instruction; GB - AASHTO Green Book 2011 Edition

FHWA 13 Critical Elements	UDOT Standard	RFP Requirement	Design Exception	References	Date of Decision, Comments, Mitigation, etc.
Design Speed	40 MPH	40 MPH	☑ Not Required ☐ Required ☐ Approved	**MOI** 2-1; **GB** pp. 2-53:58, 7-27	Determined by Concept Team
Lane Width	**Mainline** 12' **LT Turn Lane(s)** 12' **RT Turn Lane(s)** 10'	12' 12' 12'	☑ Not Required ☐ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-1, 43:47, 107; **GB** pp. 7-29:30	
Shoulder Width	**Outside** / **Inside** / **Barrier Offset** 4'/8' / NA / NA	**Outside** / **Inside** / **Barrier Offset** 8' / NA / NA	☑ Not Required ☐ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-44:46; **GB** pp. 4-8:11, 7-30	5' Minimum outside shoulder/bike lane.
Superelevation	**Maximum Superelevation** 2%	**Maximum Superelevation** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** DD 1; **MOI** 7-26:29; **GB** pp. 7-29, 3-44 (T. 3-8)	Use low speed urban
Horizontal Alignment	**Minimum Radii Value** 762	**Minimum Radii Value** 762	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-30:33, 50:55; **GB** pp. 7-28, 3-32 (T. 3-7), 3-44 (T. 3-8)	
Vertical Alignment	**Sag Curve Min. K Value** / **Crest Curve Min. K Value** 64 / 44	**Sag Curve Min. K Value** / **Crest Curve Min. K Value** 64 / 44	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-56:60; **GB** pp. *crest* 3-155: 157 (T. 3-34:35), *sag* 3-161 (T. 3-36)	
Profile Grades	**% Min** / **% Max** 0.3% / 6%	**% Min** / **% Max** 0.3% / 6%	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-58:62; **GB** pp. 3-119, 7-28:29 (T. 7-4)	0.50% preferred
Cross Slope	**Standard Value** 2%	**Value Proposed/Used** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** (DD series); **MOI** 7-47:48; **GB** pp. 4-1:6, 7-29	
Stopping-Sight Distance	**Minimum** 305	**Minimum** 305	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-62; **GB** pp. 3-2:8, 3-106:110, 7-28, 7-3 (T. 7-1)	
Structural Capacity	**Design Loading** HL-93 for new construction	**Design Loading** HL-93 for new construction	☑ Not Required ☐ Required ☐ Approved	**MOI** 11-2:3; **GB** p. 7-38	HS-20 for existing; HL-93 for new construction
Bridge Width	**Minimum** 125.833'	**Minimum** 125.833'	☑ Not Required ☐ Required ☐ Approved	**SD** DD 9; **MOI** 11-3; **GB** pp. 7-37:38	
Vertical Clearance*	**Minimum** 16.5' over road, 23.5' over rail	**Minimum** 16.5'	☑ Not Required ☐ Required ☐ Approved	**SD** DD 8:9; **MOI** 11-4:5; **GB** p. 7-38	* Notify FHWA on any changes to Vertical Clearance on the National Highway System
Lateral Offset to Obstruction	**Minimum** 1.5' tangent / 3' radius	**Minimum** 1.5' tangent / 3' radius	☑ Not Required ☐ Required ☐ Approved	**SD** DD 17; **GB** pp. 7-37:38	

Design Waivers	UDOT Standard				RFP Requirement		Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Acceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. A part of the ramp proper may also be considered in the acceleration length as a design waiver. Table 10-3 **GB** p. 10-110. See also **GB** pp. 9-124:125, 10-107:110, 116:122; **SD** DD 13A:14B, ST 1; **MOI** 7-106	
	40 mph	31 mph	0 mph	360'	N/A	N/A			
			14 mph	300'					
			18 mph	270'					
			22 mph	210'					
			26 mph	120'					
Deceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. Table 10-5 **GB** p. 10-115. See also **GB** pp. 9-124:125, 10-107,112:120, 123:124; **SD** DD 13A:14B, ST 3A:3B; **MOI** 7-106	
	40 mph	36 mph	0 mph	320'	N/A	N/A			
			14 mph	295'					
			18 mph	265'					
			22 mph	235'					
			26 mph	185'					
Guardrail Bridge Connection	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.				UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.		☑ Not Required ☐ Required ☐ Approved	**SD** BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.				14'		☑ Not Required ☐ Required ☐ Approved	2006 Roadside Design Guide pg. 3-6 and Figure 3.2 pg. 3-8; **SD** DD 4, 8, 10:12,17	
Intersection Sight Distance	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.				Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 9-28:54, **MOI** 7-64:67	
Shoulder/Travel way (gutter pan)	The gutter pan is not considered a part of the traveled way or shoulder.				The gutter pan is not considered a part of the traveled way or shoulder.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 4-19, 10-103; **MOI** 7-1, 43:44	
Curb Configuration	2011 AASHTO p. 10-103				Type B1/Type B5/ Type M1/Type M2		☑ Not Required ☐ Required ☐ Approved	Determine if the curb is appropriate for the type of facility. **GB** pp. 4-16:19, 10-103; **SD** GW 2	
Traffic Control	Meet Traffic Control Standard Drawings requirements				Meet Traffic Control Standard Drawings requirements		☑ Not Required ☐ Required ☐ Approved	**SD** TC series	
Rumble Strips	Meet Paving Standard Drawings requirements				NA		☑ Not Required ☐ Required ☐ Approved	**SD** PV 6A:8B	

Prepared by David Clawson Date 9/9/16

Verified Only _____ Date _____
- Local Government Projects Only

Approved by _____ Date: 2016.09.12 08:35:27 -06'00' Date _____

On local government projects that are not on a UDOT road, the Region Preconstruction Engineer signs the "Verified Only" line and the Engineer of Record signs the "Approved by" line. For all other projects, the "Verified Only" line is left blank and the Region Preconstruction Engineer signs the "Approved by" line.

PROJECT DESIGN CRITERIA - URBAN ARTERIAL - OTHER

I. PROJECT DESCRIPTION

DATE: **8/26/2016**

Project No	**S-0154(12)11**	Location	**4 Interchanges on Bangerter Highway**
PIN	**12566**	Concept	**4 New Interchanges on Bangerter Highway**

Describe the scope of the project Construct 4 New Interchanges

II. DESIGN STANDARDS BY ROADWAY

Date of OSR: 2/18/2016

Roadway Name: **SR-154 Bangerter Hwy - 9000 South**

Roadway Characteristics

Functional Class	Urban Arterial - Other			**Pavement Type**	Rigid	
Current Year	2016	**AADT=**	50,000	**Terrain**	Rolling Terrain	
Design Year	2040	**AADT=**	115,000	**% Trucks (current)**	6%	
Design Vehicle	WB-67			**Posted / Design Speed**	60	65

Proposed Roadway Characteristics

Total Number of Lanes	6
Shoulder Width (Typ)	12'
Curb & Gutter Type & Width (Typ)	Type M1 (2.5')

Pavement Thickness

See Part 4-11 for Pavement Requirements

Comments

Ramps A, B, C, & D:*

Design Speed (300 ft along ramp beyond the painted gore in the travel direction) - 55 mph
Design Speed (Ramp Body) - 45 mph
Design Speed (Within 300 ft of 9000 S) - 20 mph
20-mph Design Speed continues through the left turn movement

Ramps A2, B2, C2, & D2:* (Right Turn Lanes Within 300 ft of 9000 S)

Design Speed - 20 mph

*Refer to Standard Drawings DD 5 and DD 6 for design of ramp elements, use the design speeds listed above for determining superelevation, minimum radii, vertical curve k values, stopping sight distance, and clear zone. Superelevation method 2 can be used for curves at the ramp terminal.

Order of Precedence: SD - 2012 Standard Drawings; MOI - Roadway Design Manual of Instruction; GB - AASHTO Green Book 2011 Edition

FHWA 13 Critical Elements	UDOT Standard	RFP Requirement	Design Exception	References	Date of Decision, Comments, Mitigation, etc.
Design Speed	65 mph	65 mph	☑ Not Required ☐ Required ☐ Approved	**MOI** 2-1; **GB** pp. 2-53:58, 8-1:2	Determined by Concept Team. See Comments box for Ramp Design Speeds.
Lane Width	**Through Lanes** 12' **LT Turn Lane(s)** 12' **RT Turn Lane(s)** 12'	12' 12' 12'	☑ Not Required ☐ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-1, 43:47, 107; **GB** pp. 8-2:3	
Shoulder Width	**Outside** 12'; **Inside** 12'; **Barrier Offset** 2'	**Outside** 12'; **Inside** 12'*; **Barrier Offset** 2'	☐ Not Required ☐ Required ☑ Approved	**SD** (DD & ST series); **MOI** 7-44:46; **GB** pp. 4-8:11, 8-2:3	*Inside Shoulder - narrows to 3 feet (shoulder + shy) under canal/ Old Bingham Highway Bridges
Superelevation	**Maximum Superelevation** 6.0%	**Maximum Superelevation** 6.0%	☑ Not Required ☐ Required ☐ Approved	**SD** DD 1; **MOI** 7-26:29; **GB** pp. 8-3, 3-45 (T. 3-9)	
Horizontal Alignment	**Minimum Radii Value** 1660'	**Minimum Radii Value** 1660'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-30:33, 50:55; **GB** pp. 8-6, 3-32 (T. 3-7), 3-45 (T. 3-9)	
Vertical Alignment	**Sag Curve Min. K Value** 157; **Crest Curve Min. K Value** 193	**Sag Curve Min. K Value** 157; **Crest Curve Min. K Value** 193	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-56:60; **GB** pp. *crest* 3-155: 157 (T. 3-34:35), *sag* 3-161 (T. 3-36)	
Profile Grades	**% Min** 0.30%; **% Max** 5.0%	**% Min** 0.30%; **% Max** 6.0%	☐ Not Required ☐ Required ☑ Approved	**MOI** 7-58:62; **GB** pp. 3-119, 8-3:4 (T. 8-1)	6% needed to reduce profile impacts
Cross Slope	**Standard Value** 2.0%	**Value Proposed/Used** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** (DD, DD 4); **MOI** 7-47:48; **GB** pp. 4-1:6, 8-2:3	
Stopping-Sight Distance	**Minimum** 645'	**Minimum** 645'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-62; **GB** pp. 3-2:8, 3-106:110, 3-4 (T. 3-1)	
Structural Capacity	**Design Loading** HL-93	**Design Loading** HL-93	☑ Not Required ☐ Required ☐ Approved	**MOI** 11-2:3; **GB** p. 8-4	HS-20 for existing; HL-93 for new construction
Bridge Width	**Minimum** 62'-10"	**Minimum** 62'-10"	☑ Not Required ☐ Required ☐ Approved	**SD** DD 9; **MOI** 11-3; **GB** p. 8-4	
Vertical Clearance*	**Minimum** 16.5' over road, 23.5' over rail	**Minimum** 16.5'	☑ Not Required ☐ Required ☐ Approved	**SD** DD 8:0; **MOI** 11-4:5; **GB** p. 8-4	* Notify FHWA on any changes to Vertical Clearance on the National Highway System
Lateral Offset to Obstruction	**Minimum** Edge of the Travel Lane to the Edge of the Shoulder.	**Minimum** Edge of the Travel Lane to the Edge of the Shoulder.	☑ Not Required ☐ Required ☐ Approved	**SD** DD 17; **GB** p. 8-5, 10-19:21	

Design Waivers	UDOT Standard	RFP Requirement	Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Acceleration Lanes	V: 65 mph Va: 50 mph V'a / L: 0 mph 1410' 14 mph 1350' 18 mph 1310' 22 mph 1220' 26 mph 1120'	Location / L: Ramp B 0 to 65 (SB On) 1410' Ramp D 0 to 65 (NB On) 1410'	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. A part of the ramp proper may also be considered in the acceleration length as a design waiver. Table 10-3 **GB** p. 10-110. See also **GB** pp. 9-124:125, 10-107:110, 116:122; **SD** DD 13A:14B, ST 1; **MOI** 7-106	*5-6% Downgrade = 0.5 Adjustment Factor for 0 mph to 50 mph acceleration
Deceleration Lanes	V: 65 mph Va: 55 mph V'a / L: 0 mph 570' 14 mph 540' 18 mph 520' 22 mph 500' 26 mph 470'	Location / L: Ramp A 65 to 0 (NB Off) 570' Ramp C 65 to 0 (SB Off) 570'	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. Table 10-5 **GB** p. 10-115. See also **GB** pp. 9-124:125, 10-107,112:120, 123:124; **SD** DD 13A:14B, ST 3A:3B; **MOI** 7-106	*3-4% Upgrade = 0.9 Adjustment Factor for 50 mph to 0 mph deceleration. **5-6% Upgrade = 0.8 Adjustment Factor for 50 mph to 0 mph deceleration.
Guardrail Bridge Connection	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.	☑ Not Required ☐ Required ☐ Approved	**SD** BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.	30'	☑ Not Required ☐ Required ☐ Approved	2006 Roadside Design Guide pg. 3-6 and Figure 3.2 pg. 3-8; **SD** DD 4, 8, 10-12,17	
Intersection Sight Distance	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 9-28:54, **MOI** 7-64:67	
Ramp Terminal Sight Distance	Along the Ramp: Design Speed / SSD (ft): 65 mph 645 55 mph 495 50 mph 425 45 mph 360 40 mph 305 35 mph 250 30 mph 200 25 mph 155 Along the Freeway or Street Preceeding Approach Nose of Exit Ramp: Design Speed / SSD (ft)* / DSD (ft)**: 65 mph 810 1365 55 mph 620 1135 50 mph 535 1030 45 mph 450 930 40 mph 385 825 35 mph 315 720 30 mph 250 620 25 mph 195 N/A	Along the Ramp: Design Speed / SSD (ft): 65 mph 645' 55 mph 495' 45 mph 360' 25 mph 155' Along the Freeway or Street Pre Approach Nose of Exit Ran Location / SSD*: SR-154 Approaching Ram 810' SR-154 Approaching Ramp C 810'	☑ Not Required ☐ Required ☐ Approved	SSD (Stopping Sight Distance) should be at least as great as design SSD *SSD is 25% greater than minimum SSD. **DSD is Decision Sight Distance based on avoidance maneuver 'E' and is desired where feasible. Document DSD but do not obtain waiver if DSD is not met. **GB** p. 3-4 (T. 3-1) **GB** p. 3-7 (T. 3-3) **GB** p. 10-92	
Shoulder/Travel way (gutter pan)	The gutter pan is not considered a part of the traveled way or shoulder.	The gutter pan is not conside of the traveled way or sho	ired	**GB** pp. 4-19, 10-103; **MOI** 7-1, 43:44	

Design Waivers	UDOT Standard	RFP Requirement	Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Gores	Follow the key points from 2011 AASHTO: • Should be uniform along the freeway; • Geometric shape is appropriate for given speeds; • Mitigation required for major obstructions in a gore; and • Unpaved area beyond the gore nose should be graded nearly level with the roadways as practical.	Location: 9000 South Meets all Requirements?: YES	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-96:101; **SD** DD 6, ST 3A:3B	
Ramp Terminals	Platform Location: Ramp side of the approach nose or merging end. Length: 200' At- grade terminal of ramp.: Varies	Platform Location: Ramp side of the approach nose or merging end. Length: 200' At- grade terminal of ramp.: Varies	☑ Not Required ☐ Required ☐ Approved	Avoid left hand entrances and exits. **GB** pp. 10 103:104. Ramp Terminal means: 1) the exit terminal from the side street onto the freeway entrance ramp; 2) the entrance terminal onto the freeway; 3) the exit terminal from the freeway onto the exit ramp; and 4) the entrance terminal from the freeway exit ramp onto the side street. Refer to **GB** 10-104 for platform lengths. **MOI** 7-105:106	
On Ramp Design	Type: Parallel Curve Radius: 1000' min Dist. From Physical Nose to Ramp Control Line Terminus: 200' min Taper: L(300' min)	Ramp Loc.: 9000 South Ramps Type: Parallel Curve Rad.: 1000' min Dist.: 200' min Taper: L(300' min)	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-107:112; **SD** DD 6, ST 1; **MOI** p. 1-2. UDOTs preferred approach is to utilize parallel entrance ramps. See **GB** pp. 10-89:90; **MOI** 7-105:106.	
Off Ramp Design	Type: Taper Divergence Angle (deg): 2-5 Dist. from outer edge alignment break to ramp control line: 200'	Ramp Loc.: 9000 South Ramps Type: Taper Angle: 2-5 Dist.: 200'	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-112:116; **SD** DD 6, ST 3A:3B; **MOI** p. 1-2. UDOTs preferred approach is to utilize tapered exit ramps for single lane exits. If multi lane exit, one lane must be parallel. See **GB** pp. 10-89:90; **MOI** 7-105:106.	
Curb Configuration	Low Profile, Sloping Design	Type M1	☑ Not Required ☐ Required ☐ Approved	Determine if the curb is appropriate for the type of facility. **GB** pp. 4-16:19, 10-103; **SD** GW 2	
Traffic Control	Meet Traffic Control Standard Drawings requirements	Meet Traffic Control Standard Drawings requirements	☑ Not Required ☐ Required ☐ Approved	**SD** TC series	
Rumble Strips	Meet Paving Standard Drawings requirements	NA	☑ Not Required ☐ Required ☐ Approved	**SD** PV 6A:8B	

Prepared by Justin Beddoes Justin Beddoes 2016.08.26 10:37:27 -06'00' Date _____

Verified Only _____ Date _____
- Local Government Projects Only

Approved by _____ Date: 2016.09.07 09:40:12 -06'00' Date _____

On local government projects that are not on a UDOT road, the Region Preconstruction Engineer signs the "Verified Only" line and the Engineer of Record signs the "Approved by" line. For all other projects, the "Verified Only" line is left blank and the Region Preconstruction Engineer signs the "Approved by" line.

PROJECT DESIGN CRITERIA - URBAN ARTERIAL

I. PROJECT DESCRIPTION

DATE: 8/26/2016

Project No	**S-0154(12)11**	Location	**9000 S/Bangerter Hwy**
PIN	**12566**	Concept	**SPUI Bangerter Over 9000 S**

Describe the scope of the project Construct New Interchange

II. DESIGN STANDARDS BY ROADWAY

Date of OSR: 2/18/2016

Roadway Name: **9000 South**

Comments

Intersections at 3695 W and Jordan Valley Way are right-in/right-out access only.

Roadway Characteristics

Functional Class	Urban Arterial			**Pavement Type**	Both	
Current Yea	2016	**AADT=**	29,000	**Terrain**	Rolling	
Design Yea	2040	**AADT=**	54,000	**% Trucks (current)**	4%	
Design Vehicle	WB-67			**Posted / Design Speed**	40	45

Proposed Roadway Characteristics

Total Number of Lanes	5	**Park Strip Width (Typ)**	NA
Shoulder Width (Typ)	8'	**Sidewalk Width (Typ)**	6'
Curb & Gutter Type & Width (Typ)	Type B1 (2.5')		

Intersection #1: **9000 South & Judd Ln**

Roadway Name	Dir.	# of LT Lanes	Storage Length	# of Thru Lanes	# of RT Lanes	Storage Length
9000 South	**EB**	-	-	2	-	-
9000 South	**WB**	1	100' Lane	2	-	-
Judd Ln	**NB**	1 Shared	-	-	1 Shared	-

Intersection #2: **SPUI - 9000 South & Bangerter Hwy**

Roadway Name	Dir.	# of LT Lanes	Storage Length	# of Thru Lanes	# of RT Lanes	Storage Length
9000 South	**EB**	2	300' Each Lane	2	1	100' Lane
9000 South	**WB**	2	300' Each Lane	2	1	100' Lane
SB OFF Ramp	**SB**	2	500' Each Lane	-	2	800' Each Lane
NB OFF Ramp	**NB**	2	400' Each Lane	-	2	1000' Each Lane

Intersection #3: **9000 South & 3400 West**

Roadway Name	Dir.	# of LT Lanes	Storage Length	# of Thru Lanes	# of RT Lanes	Storage Length
9000 South	**EB**	1	Maintain Existing	2	1	Maintain Existing
9000 South	**WB**	1	Maintain Existing	2	1	Maintain Existing
3400 West	**SB**	1	Maintain Existing	1	1	Maintain Existing
3400 West	**NB**	1	Maintain Existing	1	1	Maintain Existing

Pavement Thickness

See Part 4-11 for Pavement Requirements

Ramp	Ramp Meter Storage (Lane-Feet)
SB On Ramp	2,400
NB On Ramp	1,900

*Inside Shoulder - narrows to 1 foot

Order of Precedence: SD - 2012 Standard Drawings; MOI - Roadway Design Manual of Instruction; GB - AASHTO Green Book 2011 Edition

FHWA 13 Critical Elements	UDOT Standard	RFP Requirement	Design Exception	References	Date of Decision, Comments, Mitigation, etc.
Design Speed	45 MPH	45 MPH	☑ Not Required ☐ Required ☐ Approved	**MOI** 2-1; **GB** pp. 2-53:58, 7-27	Determined by Concept Team
Lane Width	**Mainline** 12' **LT Turn Lane(s)** 12' **RT Turn Lane(s)** 10'	12' 12'/14' 12'	☑ Not Required ☐ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-1, 43:47, 107; **GB** pp. 7-29:30	
Shoulder Width	**Outside** 4'/8'; **Inside** NA; **Barrier Offset** NA	**Outside** 5'; **Inside** NA; **Barrier Offset** NA	☑ Not Required ☐ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-44:46; **GB** pp. 4-8:11, 7-30	5' Minimum outside shoulder/bike lane.
Superelevation	**Maximum Superelevation** 2%	**Maximum Superelevation** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** DD 1; **MOI** 7-26:29; **GB** pp. 7-29, 3-44 (T. 3-8)	Use low speed urban
Horizontal Alignment	**Minimum Radii Value** 1039	**Minimum Radii Value** 1039	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-30:33, 50:55; **GB** pp. 7-28, 3-32 (T. 3-7), 3-44 (T. 3-8)	
Vertical Alignment	**Sag Curve Min. K Value** 79; **Crest Curve Min. K Value** 61	**Sag Curve Min. K Value** 79; **Crest Curve Min. K Value** 61	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-56:60; **GB** pp. *crest* 3-155: 157 (T. 3-34:35), *sag* 3-161 (T. 3-36)	
Profile Grades	**% Min** 0.3%; **% Max** 6%	**% Min** 0.5%; **% Max** 6%	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-58:62; **GB** pp. 3-119, 7-28:29 (T. 7-4)	0.50% preferred
Cross Slope	**Standard Value** 2%	**Value Proposed/Used** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** (DD series); **MOI** 7-47:48; **GB** pp. 4-1:6, 7-29	
Stopping-Sight Distance	**Minimum** 360	**Minimum** 360	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-62; **GB** pp. 3-2:8, 3-106:110, 7-28, 7-3 (T. 7-1)	
Structural Capacity	**Design Loading** HL-93 for new construction	**Design Loading** HL-93 for new construction	☑ Not Required ☐ Required ☐ Approved	**MOI** 11-2:3; **GB** p. 7-38	HS-20 for existing; HL-93 for new construction
Bridge Width	**Minimum** 125.833"	**Minimum** 125.833"	☑ Not Required ☐ Required ☐ Approved	**SD** DD 9; **MOI** 11-3; **GB** pp. 7-37:38	
Vertical Clearance*	**Minimum** 16.5' over road, 23.5' over rail	**Minimum** 16.5'	☑ Not Required ☐ Required ☐ Approved	**SD** DD 8:9; **MOI** 11-4:5; **GB** p. 7-38	* Notify FHWA on any changes to Vertical Clearance on the National Highway System
Lateral Offset to Obstruction	**Minimum** 1.5' tangent / 3' radius	**Minimum** 1.5' tangent / 3' radius	☑ Not Required ☐ Required ☐ Approved	**SD** DD 17; **GB** pp. 7-37:38	

Design Waivers	UDOT Standard				RFP Requirement		Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Acceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. A part of the ramp proper may also be considered in the acceleration length as a design waiver. Table 10-3 **GB** p. 10-110. See also **GB** pp. 9-124:125, 10-107:110, 116:122; **SD** DD 13A:14B, ST 1; **MOI** 7-106	
	45 mph	35 mph	0 mph	560'	NA	NA			
			14 mph	490'					
			18 mph	440'					
			22 mph	380'					
			26 mph	280'					
Deceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. Table 10-5 **GB** p. 10-115. See also **GB** pp. 9-124:125, 10-107,112:120, 123:124; **SD** DD 13A:14B, ST 3A:3B; **MOI** 7-106	
	45 mph	40 mph	0 mph	385'	Ramp B (45-0 mph) Ramp D (45-0 mph)	385' 385'			
			14 mph	350'					
			18 mph	325'					
			22 mph	295'					
			26 mph	250'					
Guardrail Bridge Connection	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.				UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.		☑ Not Required ☐ Required ☐ Approved	**SD** BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.				20'		☑ Not Required ☐ Required ☐ Approved	2006 Roadside Design Guide pg. 3-6 and Figure 3.2 pg. 3-8; **SD** DD 4, 8, 10:12,17	
Intersection Sight Distance	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.				Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 9-28:54, **MOI** 7-64:67	
Shoulder/Travel way (gutter pan)	The gutter pan is not considered a part of the traveled way or shoulder.				The gutter pan is not considered a part of the traveled way or shoulder.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 4-19, 10-103; **MOI** 7-1, 43:44	
Curb Configuration	2011 AASHTO p. 10-103				Type B1/Type M2		☑ Not Required ☐ Required ☐ Approved	Determine if the curb is appropriate for the type of facility. **GB** pp. 4-16:19, 10-103; **SD** GW 2	
Traffic Control	Meet Traffic Control Standard Drawings requirements				Meet Traffic Control Standard Drawings requirements		☑ Not Required ☐ Required ☐ Approved	**SD** TC series	
Rumble Strips	Meet Paving Standard Drawings requirements				NA		☑ Not Required ☐ Required ☐ Approved	**SD** PV 6A:8B	

Prepared by Justin Beddoes Justin Beddoes 2016.08.26 10:37:15 -06'00' Date _____

Verified Only _____ Date _____
- Local Government Projects Only

Approved by _____ Date: 2016.09.07 09:42:07 -06'00' Date _____

On local government projects that are not on a UDOT road, the Region Preconstruction Engineer signs the "Verified Only" line and the Engineer of Record signs the "Approved by" line. For all other projects, the "Verified Only" line is left blank and the Region Preconstruction Engineer signs the "Approved by" line.

PROJECT DESIGN CRITERIA - URBAN ARTERIAL - OTHER

I. PROJECT DESCRIPTION

DATE: 5/9/2016

Project No	**S-0154(12)11**	**Location**	11400 S/Bangerter Hwy
PIN	**12566**	**Concept**	4 New Interchanges on Bangerter Highway

Describe the scope of the project Construct 4 New Interchages

II. DESIGN STANDARDS BY ROADWAY

(Complete a separate PDC for each roadway on your project)

Date of OSR: 2/18/2016

Roadway Name: **SR-154 (Bangerter Highway) at 11400 S Interchange**

Roadway Characteristics

Functional Class	Urban Arterial - Other			**Pavement Type**	Rigid	
Current Year	2015	**AADT=**	**43,000**	**Terrain**	Rolling	
Design Year	2040	**AADT=**	**87,000**	**% Trucks (current)**	6	
Design Vehicle	WB-67			**Posted / Design Speed**	60	65

Proposed Roadway Characteristics

Total Number of Lanes 6

Shoulder Width (Typ) 12'

Curb & Gutter Type & Width (Typ) Type M1 (2.5')

Comments

Ramps A2, B2, C2, & D2:* (Right Turn Lanes)

Design Speed - 20 mph

Ramps A1, B1, C1, & D1:*

Design Speed (300 ft along ramp beyond the painted gore in the travel direction) - 55 mph

Design Speed (Ramp Body) - 45 mph

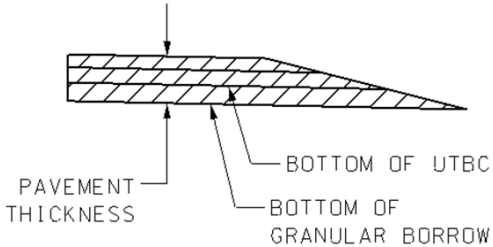
Design Speed (Within 300 ft of 11400 S) - 20 mph

20-mph Design Speed continues through the left turn movement

*Refer to Standard Drawings DD 5 and DD 6 for design of ramp elements, use the design speeds listed above for determining superelevation, minimum radii, vertical curve k values, stopping sight distance, and clear zone. Superelevation method 2 can be used for curves at the ramp terminal.

Pavement Thickness

See Typical Sections in Part 7



Pavement Thickness consists of Hard Surfacing, LCBC, UTBC, and Granular Borrow.

Order of Precedence: SD - 2012 Standard Drawings; MOI - Roadway Design Manual of Instruction; GB - AASHTO Green Book 2011 Edition

FHWA 13 Critical Elements	UDOT Standard	RFP Requirement	Design Exce tion	References	Date of Decision, Comments, Mitigation, etc.
Design Speed	65 MPH	65 MPH	☑ Not Required ☐ Required ☐ Approved	**MOI** 2-1; **GB** pp. 2-53:58, 7-27	Determined by Concept Team
Lane Width	**Mainline** 12' **LT Turn Lane(s)** 12' **RT Turn Lane(s)** 12'	12' 12' 12'	☑ Not Required ☐ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-1, 43:47, 107; **GB** pp. 7-29:30	
Shoulder Width	**Outside** 12' **Inside** 12' **Barrier Offset** 2'	**Outside** *12' **Inside** *12' **Barrier Offset** 2'	☐ Not Required ☑ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-44:46; **GB** pp. 4-8:11, 7-30	*Increase shoulder width as necessary to accommodate stopping sight distance. Barrier Offset not required for 12' shoulders. Design Exception is for the outside shoulder for the entrance ramps only. See Design Exception for limits of reduced shoulder
Superelevation	**Maximum Superelevation** 6%	**Maximum Superelevation** 6%	☑ Not Required ☐ Required ☐ Approved	**SD** DD 1; **MOI** 7-26:29; **GB** pp. 7-29, 3-44 (T. 3-8)	
Horizontal Alignment	**Minimum Radii Value** 1660'	**Minimum Radii Value** 1660'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-30:33, 50:55; **GB** pp. 7-28, 3-32 (T. 3-7), 3-44 (T. 3-8)	
Vertical Alignment	**Sag Curve Min. K Value** 157 **Crest Curve Min. K Value** 193	**Sag Curve Min. K Value** *157 **Crest Curve Min. K Value** 193	☐ Not Required ☑ Required ☐ Approved	**MOI** 7-56:60; **GB** pp. *crest* 3-155: 157 (T. 3-34:35), *sag* 3-161 (T. 3-36)	*AASHTO Design criteria for a "Comfort" Sag curve will be allowed for the sag curve under 11400 South only, meet min k value of 157 at all other locations on SR-154. Meet AASHTO GB requirements for length of comfort sag. See RFP for Lighting Requirements.
Profile Grades	**% Min** 0.30% **% Max** 5%	**% Min** 0.30% **% Max** 5%	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-58:62; **GB** pp. 3-119, 7-28:29 (T. 7-4)	0.50% preferred
Cross Slope	**Standard Value** 2%	**Value Proposed/Used** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** (DD, DD 4); **MOI** 7-47:48; **GB** pp. 4-1:6, 8-2:3	
Stopping-Sight Distance	**Minimum** 645	**Minimum** 645	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-62; **GB** pp. 3-2:8, 3-106:110, 3-4 (T. 3-1)	Adjust stopping sight distance for grades above 3% per AASHTO GB
Structural Capacity	**Design Loading** HL-93	**Design Loading** HL-93	☑ Not Required ☐ Required ☐ Approved	**MOI** 11-2:3; **GB** p. 8-4	HS-20 for existing; HL-93 for new construction
Bridge Width	**Minimum** Traffic Lanes+Shoulders+Barrier Offset+Parapets	**Minimum** Traffic Lanes+Shoulders+Barrier Offset+Parapets	☑ Not Required ☐ Required ☐ Approved	**SD** DD 9; **MOI** 11-3; **GB** p. 8-4	
Vertical Clearance*	**Minimum** 16.5' over road, 23.5' over rail	**Minimum** 16.5'	☑ Not Required ☐ Required ☐ Approved	**SD** DD 8:9; **MOI** 11-4:5; **GB** p. 7-38	* Notify FHWA on any changes to Vertical Clearance on the National Highway System
Lateral Offset to Obstruction	**Minimum** Edge of the Travel Lane to the Edge of the Shoulder.	**Minimum** Edge of the Travel Lane to the Edge of the Shoulder.	☑ Not Required ☐ Required ☐ Approved	**SD** DD 17; **GB** pp. 7-37:38	

Design Waivers	UDOT Standard	RFP Requirement	Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Acceleration Lanes	V: 65 mph; Va: 50 mph V'a / L: 0 / 1410; 14 / 1350; 18 / 1310; 22 / 1220; 26 / 1120	Location / L: Ramp B 0 to 65 (SB ON) / 1410' Ramp D 0 to 65 (NB ON) / 1410'	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. A part of the ramp proper may also be considered in the acceleration length as a design waiver. Table 10-3 **GB** p. 10-110. See also **GB** pp. 9-124:125, 10-107:110, 116:122; **SD** DD 13A:14B, ST 1; **MOI** 7-106	
Deceleration Lanes	V: 65 mph; Va: 55 mph V'a / L: 0 / 570; 14 / 540; 18 / 520; 22 / 500; 26 / 470	Location / L: Ramp A 65 to 0 (NB Off) / 570' Ramp C 65 to 0 (SB Off) / 570'	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. Table 10-5 **GB** p. 10-115. See also **GB** pp. 9-124:125, 10-107,112:120, 123:124; **SD** DD 13A:14B, ST 3A:3B; **MOI** 7-106	
Guardrail Bridge Connection	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.	☑ Not Required ☐ Required ☐ Approved	**SD** BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.	30'	☑ Not Required ☐ Required ☐ Approved	2006 Roadside Design Guide pg. 3-6 and Figure 3.2 pg. 3-8; **SD** DD 4, 8, 10-12,17	
Intersection Sight Distance	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 9-28:54, **MOI** 7-64:67	
Ramp Terminal Sight Distance	Along the Ramp **Design Speed** / **SSD (ft)**: 65 mph / 645 55 mph / 495 50 mph / 425 45 mph / 360 40 mph / 305 35 mph / 250 30 mph / 200 25 mph / 155 Along the Freeway or Street Preceeding Approach Nose of Exit Ramp **Design Speed** / **SSD (ft)*** / **DSD (ft)****: 65 mph / 810 / 1365 55 mph / 620 / 1135 50 mph / 535 / 1030 45 mph / 450 / 930 40 mph / 385 / 825 35 mph / 315 / 720 30 mph / 250 / 620 25 mph / 200 / N/	Along the Ramp **Design Speed** / **SSD (ft)**: 65 mph / 645 55 mph / 495 45 mph / 360 20 mph / 115 Along the Freeway or Street Preceeding Approach Nose of Exit Ramp **Location** / **SSD*** / **DSD****: SR-154 Approacing Ramp A & C / 810' / 1365'	☑ Not Required ☐ Required ☐ Approved	SSD (Stopping Sight Distance) should be at least as great as design SSD *SSD is 25% greater than minimum SSD. **DSD is Decision Sight Distance based on avoidance maneuver 'E' and is desired where feasible. Document DSD but do not obtain waiver if DSD is not met. **GB** p. 3-4 (T. 3-1) **GB** p. 3-7 (T. 3-3) **GB** p. 10-92	
Shoulder/Travel way (gutter pan)	The gutter pan is not considered a part of the traveled way or shoulder.	The gutter pan is not considered a part of the traveled way or shoulder.	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 4-19, 10-103; **MOI** 7-1, 43:44	

Design Waivers	UDOT Standard	RFP Requirement	Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Gores	Follow the key points from 2011 AASHTO: • Should be uniform along the freeway; • Geometric shape is appropriate for given speeds; • Mitigation required for major obstructions in a gore; and • Unpaved area beyond the gore nose should be graded nearly level with the roadways as practical.	Location: All Gores Meets all Requirements?: Yes	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-96:101; **SD** DD 6, ST 3A:3B	
Ramp Terminals	Platform Location: Ramp side of the approach nose or merging end. Length: 200 ft Location: At- grade terminal of ramp. Length: Varies	Platform Location: Ramp side of the approach nose or merging end. Length: 200 ft Location: At- grade terminal of ramp. Length: Varies	☑ Not Required ☐ Required ☐ Approved	Avoid left hand entrances and exits. **GB** pp. 10-103:104. Ramp Terminal means: 1) the exit terminal from the side street onto the freeway entrance ramp; 2) the entrance terminal onto the freeway; 3) the exit terminal from the freeway onto the exit ramp; and 4) the entrance terminal from the freeway exit ramp onto the side street. Refer to **GB** 10-104 for platform lengths. **MOI** 7-105:106	
On Ramp Design	Type: Parallel Curve Radius: 1000 ft Dist. From Physical Nose to Ramp Control Line Terminus: 200 ft Taper: 300 ft min	Ramp Loc.: All On Ramps Type: Parallel Curve Rad.: 1000 ft Dist.: 200 ft Taper: 300 ft	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-107:112; **SD** DD 6, ST 1; **MOI** p. 1-2. UDOTs preferred approach is to utilize parallel entrance ramps. See **GB** pp. 10-89:90; **MOI** 7-105:106.	
Off Ramp Design	Type: Taper Divergence Angle (deg): 2-5 Dist. from outer edge alignment break to ramp control line: 200 ft	Ramp Loc.: All Off Ramps Type: Taper Angle: 2-5 Dist.: 200 ft	☑ Not Required ☐ Required ☐ Approved	**GB** pp. 10-112:116; **SD** DD 6, ST 3A:3B; **MOI** p. 1-2. UDOTs preferred approach is to utilize tapered exit ramps for single lane exits. If multi lane exit, one lane must be parallel. See **GB** pp. 10-89:90; **MOI** 7-105:106.	
Curb Configuration	2011 AASHTO p.10-103	Type M1	☑ Not Required ☐ Required ☐ Approved	Determine if the curb is appropriate for the type of facility. **GB** pp. 4-16:19, 10-103; **SD** GW 2	
Traffic Control	Meet Traffic Control Standard Drawings requirements	Meet Traffic Control Standard Drawings requirements	☑ Not Required ☐ Required ☐ Approved	**SD** TC series	
Rumble Strips	Meet Paving Standard Drawings requirements	N/A	☑ Not Required ☐ Required ☐ Approved	**SD** PV 6A:8B	

Prepared by Mark Bedke Date 8/23/2016

Verified Only _____ Date _____
- Local Government Projects Only

Approved by _____ Date: 2016.09.07 09:43:37 -06'00' Date _____

On local government projects that are not on a UDOT road, the Region Preconstruction Engineer signs the "Verified Only" line and the Engineer of Record signs the "Approved by" line. For all other projects, the "Verified Only" line is left blank and the Region Preconstruction Engineer signs the "Approved by" line.

PROJECT DESIGN CRITERIA - URBAN ARTERIAL

I. PROJECT DESCRIPTION

DATE: 5/9/2016

Project No	**S-0154(12)11**	**Location**	11400 S/Bangerter Hwy
PIN	**12566**	**Concept**	SPUI Bangerter Under 11400 S

Describe the scope of the project Construct 4 New Interchages

II. DESIGN STANDARDS BY ROADWAY

(Complete a separate PDC for each roadway on your project)

Date of OSR: 2/18/2016

Roadway Name: **11400 South**

Comments

Roadway Characteristics

Functional Class	Urban Arterial			**Pavement Type**	Rigid	
Current Year	2015	**AADT=**	**26,000**	**Terrain**	Level	
Design Year	2040	**AADT=**	**47,000**	**% Trucks (current)**	3	
Design Vehicle	WB-67			**Posted / Design Speed**	40	45

Proposed Roadway Characteristics

Total Number of Lanes	5	**Park Strip Width (Typ)**	4
Shoulder Width (Typ)	8	**Sidewalk Width (Typ)**	5
Curb & Gutter Type & Width (Typ)	B1, 2.5'		

Intersection #1:

Roadway Name	Dir.	# of LT Lanes	Storage Length	# of Thru Lanes	# of RT Lanes	Storage Length
11400 S	**EB**	-	-	-	-	-
11400 S	**WB**	2	85	2	1	115
4000 West	**NB**	-	-	-	-	-
4000 West	**SB**	-	-	-	-	-

Curb Radius From T.B.C.

NW Curb Radius:	-
SW Curb Radius:	-
NE Curb Radius:	35
SE Curb Radius:	35

Intersection #2:

Roadway Name	Dir.	# of LT Lanes	Storage Length	# of Thru Lanes	# of RT Lanes	Storage Length
11400 S	**EB**	2	250	2	1	-
11400 S	**WB**	2	250	2	1	-
NB Off Ramp	**NB**	2	300	-	1	300
SB Off Ramp	**SB**	2	500	-	2	500

NW Curb Radius:	31.5
SW Curb Radius:	64.5
NE Curb Radius:	64.5
SE Curb Radius:	39.5

Intersection #3:

Roadway Name	Dir.	# of LT Lanes	Storage Length	# of Thru Lanes	# of RT Lanes	Storage Length
11400 S	**EB**	1	200	2	1	200
11400 S	**WB**	1	200	2	1	-
River Heights	**NB**	1	250	1	1	100
River Heights	**SB**	1	150	1	1	300

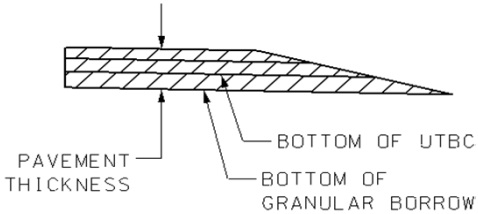
NW Curb Radius:	35
SW Curb Radius:	35
NE Curb Radius:	35
SE Curb Radius:	35

Intersection #4:

Roadway Name	Dir.	# of LT Lanes	Storage Length	# of Thru Lanes	# of RT Lanes	Storage Length
11400 S	**EB**	1	100	2	1	-
11400 S	**WB**	1	125	2	1	150
Summer Heights	**NB**	1	150	1	1	100
Summer Heights	**SB**	1	100	1	1	125

NW Curb Radius:	35
SW Curb Radius:	35
NE Curb Radius:	35
SE Curb Radius:	35

Pavement Thickness
See Typical Sections in Part 7



Pavement Thickness consists of Hard Surfacing, UTBC, and Granular Borrow (if used).

Order of Precedence: SD - 2012 Standard Drawings; MOI - Roadway Design Manual of Instruction; GB - AASHTO Green Book 2011 Edition

FHWA 13 Critical Elements	UDOT Standard	RFP Requirement	Design Exception	References	Date of Decision, Comments, Mitigation, etc.
Design Speed	45	45	☑ Not Required ☐ Required ☐ Approved	**MOI** 2-1; **GB** pp. 2-53:58, 7-27	Determined by Concept Team
Lane Width	**Mainline** 12' **LT Turn Lane(s)** 12' **RT Turn Lane(s)** 12'	12' 12' 12'	☑ Not Required ☐ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-1, 43:47, 107; **GB** pp. 7-29:30	
Shoulder Width	**Outside** 8; **Inside** N/A; **Barrier Offset** 2	**Outside** 8; **Inside** N/A; **Barrier Offset** 2	☑ Not Required ☐ Required ☐ Approved	**SD** (DD & ST series); **MOI** 7-44:46; **GB** pp. 4-8:11, 7-30	
Superelevation	**Maximum Superelevation** 6%	**Maximum Superelevation** 6%	☑ Not Required ☐ Required ☐ Approved	**SD** DD 1; **MOI** 7-26:29; **GB** pp. 7-29, 3-44 (T. 3-8)	
Horizontal Alignment	**Minimum Radii Value** 643	**Minimum Radii Value** 643	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-30:33, 50:55; **GB** pp. 7-28, 3-32 (T. 3-7), 3-44 (T. 3-8)	
Vertical Alignment	**Sag Curve Min. K Value** 79; **Crest Curve Min. K Value** 61	**Sag Curve Min. K Value** 79; **Crest Curve Min. K Value** 61	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-56:60; **GB** pp. *crest* 3-155: 157 (T. 3-34:35), *sag* 3-161 (T. 3-36)	
Profile Grades	**% Min** 0.30%; **% Max** 6%	**% Min** 0.30%; **% Max** 6%	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-58:62; **GB** pp. 3-119, 7-28:29 (T. 7-4)	0.50% preferred
Cross Slope	**Standard Value** 2%	**Value Proposed/Used** 2%	☑ Not Required ☐ Required ☐ Approved	**SD** (DD series); **MOI** 7-47:48; **GB** pp. 4-1:6, 7-29	
Stopping-Sight Distance	**Minimum** 360'	**Minimum** 360'	☑ Not Required ☐ Required ☐ Approved	**MOI** 7-62; **GB** pp. 3-2:8, 3-106:110, 7-28, 7-3 (T. 7-1)	
Structural Capacity	**Design Loading** HL-93 for New Construction	**Design Loading** HL-93 for New Construction	☑ Not Required ☐ Required ☐ Approved	**MOI** 11-2:3; **GB** p. 7-38	HS-20 for existing; HL-93 for new construction
Bridge Width	**Minimum** N/A	**Minimum** N/A	☑ Not Required ☐ Required ☐ Approved	**SD** DD 9; **MOI** 11-3; **GB** pp. 7-37:38	
Vertical Clearance*	**Minimum** 16.5' over road, 23.5' over rail	**Minimum** 16.5'	☑ Not Required ☐ Required ☐ Approved	**SD** DD 8:9; **MOI** 11-4:5; **GB** p. 7-38	* Notify FHWA on any changes to Vertical Clearance on the National Hi hwa S stem
Lateral Offset to Obstruction	**Minimum** 1.5' tangent / 3' radius	**Minimum** 1.5' tangent / 3' radius	☑ Not Required ☐ Required ☐ Approved	**SD** DD 17; **GB** pp. 7-37:38	

Design Waivers	UDOT Standard				RFP Requirement		Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
Acceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. A part of the ramp proper may also be considered in the acceleration length as a design waiver. Table 10-3 **GB** p. 10-110. See also **GB** pp. 9-124:125, 10-107:110, 116:122; **SD** DD 13A:14B, ST 1; **MOI** 7-106	
	70 mph	53 mph	22	1420	N/A				
			26	1350					
			36	1000					
			40	820					
			44	580					
Deceleration Lanes	**V**	**Va**	**V'a**	**L**	**Location**	**L**	☑ Not Required ☐ Required ☐ Approved	Refer to Table 10-4 **GB** pp. 10-111:112 to adjust for grade. Table 10-5 **GB** p. 10-115. See also **GB** pp. 9-124:125, 10-107,112:120, 123:124; **SD** DD 13A:14B, ST 3A:3B; **MOI** 7-106	
	70 mph	58 mph	22	550	N/A				
			26	520					
			36	440					
			40	390					
			44	340					
Guardrail Bridge Connection	UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception Form.				UDOT Std Dwg BA 4B1:4B2 & Bridge Rail or Parapet section of UDOT Design Exception		☑ Not Required ☐ Required ☐ Approved	**SD** BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.				20'		☑ Not Required ☐ Required ☐ Approved	2006 Roadside Design Guide pg. 3-6 and Figure 3.2 pg. 3-8; **SD** DD 4, 8, 10:12,17	
Intersection Sight Distance	Meet 2011 AASHTO requirements for sight triangles cases A-F and skew.				Sight triangles cases A-F and skew are met.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 9-28:54, **MOI** 7-64:67	
Shoulder/Travel way (gutter pan)	The gutter pan is not considered a part of the traveled way or shoulder.				The gutter pan is not considered a part of the traveled way or shoulder.		☑ Not Required ☐ Required ☐ Approved	**GB** pp. 4-19, 10-103; **MOI** 7-1, 43:44	
Curb Configuration	2011 AASHTO p. 10-103				Type B1		☑ Not Required ☐ Required ☐ Approved	Determine if the curb is appropriate for the type of facility. **GB** pp. 4-16:19, 10-103; **SD** GW 2	
Traffic Control	Meet Traffic Control Standard Drawings requirements				Meet Traffic Control Standard Drawings requirements		☑ Not Required ☐ Required ☐ Approved	**SD** TC series	
Rumble Strips	Meet Paving Standard Drawings requirements				Meet Paving Standard Drawings requirements		☑ Not Required ☐ Required ☐ Approved	**SD** PV 6A:8B	

Prepared by Mark Bedke _____ Date 8/23/2016

Verified Only _____ Date _____
- Local Government Projects Only

Approved by _____ Date: 2016.09.07 09:44:21 -06'00' Date _____

On local government projects that are not on a UDOT road, the Region Preconstruction Engineer signs the "Verified Only" line and the Engineer of Record signs the "Approved by" line. For all other projects, the "Verified Only" line is left blank and the Region Preconstruction Engineer signs the "Approved by" line.

Utah Department of Transportation - Deviation from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

Project Information:

Project No:	S-R299(210)	PIN:	12566
Location:	Bangerter Hwy; 4 Locations; 5400 South		
Description:	New Interchange on Existing Freeway		

All Deviations are approved at the Region Level

Deviations are any change that does one of the following:

1) Entirely or partially modifies or deletes a Standard or Supplemental Specification.
2) Modifies or deletes a Standard Drawing.
3) Modifies or deletes an internal design process.
4) Adds a project scope related special provision, adds a new section, or a new drawing.

Deviations that DO NOT need to be listed on this page include:

- Special Provisions obtained from UDOT's website.
- Modifications to Section 00555M or 00555S, Limitation of Operations.
- Any specification modified for the purposes of updating contact information.

Proposed Deviations:

Spec/Dwg Number:	SW 2	Spec/Dwg Name:	Noise Wall Placement UDOT Standard:	5'-0" Minimum	
Proposed Deviation:	0'-0"				
Explanation of Deviation and Mitigation Measures:	The northbound off ramp of SR-154 (Bangerter Highway) encroaches into an adjacent neighborhood. A 5' minimum distance between the noise wall and concrete barrier for a section adjacent to roadway is required. Providing this minimum distance will place the concrete barrier in the roadway requiring it to be re-aligned which will impact right-of-way of adjacent homes that are not currently being impacted by the project. Snow storage would be removed for approx. 520 feet.				
Safety Impacts:	No safety impacts				
Cost to Attain UDOT Standard:	49,300		Practical Design :	No	

Total Project Cost Savings Identified Using Practical Design: 0.00

Utah Department of Transportation
Deviation from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-R299(210) Bangerter Hwy; 4 Locations; 5400 South

Approval / Signatures:

Comments:

Prepared By

Comments:

Marwan Farah

Digitally signed by Marwan Farah
Date: 2016.09.12 09:18:21 -06'00'

UDOT Project Manager

Comments:

Region Pre-construction Engineer

* A completed copy of this form will be provided to the Region Director for informational purposes.

** If the Region Preconstruction Engineer deems a Deviation in need of escalation, it may be submitted to the Statewide Preconstruction Engineer for review and approval.

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

Type of Request: (select one or both) ☒ Design Exception ☐ Design Waiver

Project Information:

Project No: S-R299(210) PIN: 12566

Location: Bangerter Hwy; 4 Locations; 5400 South

Concept: New Interchange on Existing Freeway

Roadway Characteristics and Traffic Data:

Functional Class:	Urban Arterial			Pavement Type:	Rigid
Current Year:	2016	AADT =	56,000	Current % Trucks:	6 %
Projected:	10 Years	AADT =	76,000	Projected % Trucks:	6 %
Projected:	25 Years	AADT =	109,000	Projected % Trucks:	6 %
Terrain:	Level			Posted Speed:	60 mph
Project Design Life:	40 Years			Design Speed:	65 mph
Design Vehicle:	WB-67				

Geometric Data:

Number of Lanes:	6	Clear Zone Distance:	30 ft.
Pavement Width:	122 ft.	ROW Width:	150 ft.
Shoulder Width:	12 ft.	Shoulder Type:	Paved

Accident History as documented in the OSR:

	Actual Rate	Expected Rate
Accident History	N/A	N/A
Severity	N/A	N/A

Accident History Years: 2012-2014

Date of OSR: 2/18/2016

Remarks:

Accident data is not applicable because the at-grade intersection will be converted to a grade separated interchange.

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-R299(210) Bangerter Hwy; 4 Locations; 5400 South

Adjoining Section Geometry Compatibility:

Direction:	North	Pavement Width: 98'	Shoulder Width	In-12; Out-0
Shoulder Type:	Inside - Paved; Outside - None			
Compatibility:	At reconstruction limits the shoulders will be tapered in to match existing.			

Direction:	South	Pavement Width: 98'	Shoulder Width	In-12; Out-0
Shoulder Type:	Inside - Paved; Outside - None			
Compatibility:	At reconstruction limits the shoulders will be tapered in to match existing.			

Programmed Future Improvements:

Cost Data:

Project Cost as Proposed:	$62,927,617.07
Additional Project Cost to Attain FHWA 13 Critical Elements (Design Exceptions):	$7,343,000.00
Additional Project Cost to Attain Other Standards (Design Waivers):	$5,000,000.00
Project Cost Savings Identified Using Practical Design (This amount may be part of or all of the above amounts for Design Exceptions and/or Waivers):	

Attached Detailed Estimate: 12566_54_Exceptions_Costs.pdf

Comments:

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-R299(210) Bangerter Hwy; 4 Locations; 5400 South

Exceptions to FHWA's 13 Critical Elements:

1. Design Speed	2. Lane Width	3. Shoulder Width	4. Horizontal Alignment	5. Vertical Alignment
6. Grades	7. Stopping-Sight Distance	8. Cross Slopes	9. Superelevation	10. Structural Capacity
11.Bridge Width	12. Vertical Clearance (Notify FHWA on any changes on the NHS and STRAHNET routes. See detailed instructions for more information.)		13. Lateral Offset to Obstruction	

Design Exception #1		Additional information in attached file:		
Element:	Shoulder Width	Existing	UDOT Standard	Proposed
Location:	SB On Ramp	N/A	10' (Shoulder + Shy)	4' (Shoulder + Shy)

Mitigation: N/A

Remarks: The SB on ramp for Bangerter Hwy and 5400 South will be a three lane ramp with the ramp metering system located on the inside of the ramp due to the BOR aqueduct on the West side. The 4' (shoulder + shy) occurs for 50' along the ramp, but the shoulder is reduced from the 10' (shoulder + shy) for a total of 482' with the appropriate taper rates for the design speed. Reducing the shoulder will prevent impacts to the adjacent commercial property which has proved to be difficult to work with in the past. The cost for the impact could be more than an assumed square footage cost just due to the difficulty of the property owner.

Design Exception #2		Additional information in attached file:		
Element:	Grades	Existing	UDOT Standard	Proposed
Location:	SR-154 (Bangerter Hwy); North SR-173 (5400 South)	4.16%	5.00%	6.00%

Mitigation:

Remarks: The intersection improvements of Bangerter Hwy and 5400 South will implement a bridge over 5400 South for Bangerter travel. Currently North of the intersection the road slopes downward at 4.16%; with the addition of the bridge a steeper slope is necessary to connect the existing roadway with the design. Using a 6% grade for 434 ft will minimize the impacts to the surrounding urban environment. This grade allows for the design to tie in quicker taking advantage of the current roadway topography, reduces the amount of the retaining wall necessary, reduces the required length of aqueduct reconstruction by 380 linear feet, and prevents the total acquisition of 7 properties and 2 partial acquisitions.

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-R299(210) Bangerter Hwy; 4 Locations; 5400 South

Design Exception #3		Additional information in attached file:		
Element:	Shoulder Width	Existing	UDOT Standard	Proposed
Location:	SR-173 (5400 South)	0'	8'	0'

Mitigation:

Remarks: Currently SR-173 (5400 South) has no shoulders along the traveled way. To implement 8 foot shoulders would have major impacts on the surrounding urban environment. Property acquisitions would occur for each adjacent property and would cause a few businesses to close. Besides the major ROW/community impacts, there would also be major utility conflicts with the flex lane gantries and the power lines that run along SR-173. To avoid the major utility and ROW impacts with widening the road to construct the 8 foot shoulders the design will follow the existing condition of no shoulders.

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-R299(210) Bangerter Hwy; 4 Locations; 5400 South

Waivers of Additional Design Criteria:

1. Acceleration Lanes	2. Deceleration Lanes	3. Clear Zone	4. Intersection Sight Distance	5. Ramp Terminal Sight Distance
6. Shoulder/Travel Way (Gutter Pan)	7. Gores	8. Ramp Terminals	9. On Ramp Design	10. Off Ramp Design
11. Curb Configuration	12. Guardrail Bridge Connection (See next section)	13. Traffic Control	14. Rumble Strips	

Waiver #1		Additional information in attached file:		
Element:	Deceleration Lanes	Existing	UDOT Standard	Proposed
Location:	SR-173 (5400 South)	EB - LT : 200 ft WB - LT : 90 ft	EB - LT : 385 ft WB - LT : 385 ft	EB - LT : 140 ft WB - LT : 140 ft

Mitigation:

Remarks: The required deceleration length will not be provided for the Eastbound left turn from SR-173 (5400 South) onto SR-154 (Bangerter Hwy) and Westbound left turn from SR-173 (5400 South) onto 3900 West. For the EB left, providing the full deceleration length would extend the deceleration lane into the 3900 West intersection making it inoperative. Providing full deceleration for the WB left would have similar repercussions as the deceleration length would push the lane into the middle of the SPUI system. In order to provide the deceleration lengths required the 3900 West signal would need to be moved and redesigned. Both left turns have been designed to provide the required 140 ft gap length for the design speed and allows both intersections to operate

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-R299(210) Bangerter Hwy; 4 Locations; 5400 South

Waivers of Additional Design Criteria – Bridge Rail or Parapet:

Structure Number: _____ Sufficiency Rating: (from Structures Division) _____

Mainline or Overcrossing: _____

Location: _____

Existing Systems:

	Bridge		Approach	
Rail Type*			◯ Guardrail	◯ Precast Barrier
Height				
Attached			◯ Yes	◯ No
Meets Standards	◯ Yes	◯ No	◯ Yes	◯ No
Total Width				
Lane Width				
Shoulder Width				
Condition				
3 Year Accidents	Actual Rate	Expected Rate	Actual Rate	Expected Rate

*Attach Sketch of Rail Type

Remarks:

_____

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-R299(210) Bangerter Hwy; 4 Locations; 5400 South

Approval / Signatures:

Prepared and Submitted by: Aaron Rasmussen

PROFESSIONAL ENGINEER
09/09/16
No. 5049059-2202
Aaron Rasmussen
ELECTRONIC SEAL
STATE OF UTAH

Comments:

9/12/2016
UDOT Project Manager

Comments:

Region Pre-construction Engineer

Comments:

Statewide Traffic and Safety Engineer

Comments:

Statewide Pre-construction Engineer

Comments:

FHWA Approval*
(*If required per current Stewardship and Oversight Agreement)

Approval of Design Exceptions for all highway improvement projects on the NHS or Interstate System is considered to be a Federal Administrative Action as specified in 23 CFR 771.107, and as such must comply with the National Environmental Policy Act (NEPA). For Design Exceptions on a Federal-Aid project (or state funded project where a NEPA action was taken), the Design Exception is covered by the previous NEPA action. For Design Exceptions on projects where there has been no previous NEPA action FHWA intends to programmatically classify these actions as Categorical Exclusions (CE) pursuant to 23 CFR 771.117(a), provided there are no unusual circumstances (23 CFR 771.117(b)) or significant environmental impacts. Signature above by the Statewide Pre-construction Engineer confirms that NEPA has been completed for approved Design Exceptions.

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

Type of Request: (select one or both) ☒ Design Exception ☐ Design Waiver

Project Information:

Project No: S-0154(12)11 PIN: 12566

Location: Bangerter Hwy; 4 Locations; 9000 South

Concept: New Interchange on Existing Freeway

Roadway Characteristics and Traffic Data:

Functional Class:	Urban Arterial			Pavement Type:	Rigid
Current Year:	2016	AADT =	50,000	Current % Trucks:	6 %
Projected:	10 Years	AADT =	75,000	Projected % Trucks:	6 %
Projected:	25 Years	AADT =	115,000	Projected % Trucks:	6 %
Terrain:		Rolling		Posted Speed:	60 mph
Project Design Life:	40 Years			Design Speed:	65 mph
Design Vehicle:		WB-67			

Geometric Data:

Number of Lanes:	6	Clear Zone Distance:	30 ft.
Pavement Width:	125 ft.	ROW Width:	150 ft.
Shoulder Width:	12 ft.	Shoulder Type:	Paved

Accident History as documented in the OSR:

	Actual Rate	Expected Rate
Accident History	N/A	N/A
Severity	N/A	N/A

Accident History Years: 2012-2014

Date of OSR: 2/18/2016

Remarks:

Accident data is not applicable due the at-grade intersection will be converted to grade separated interchange.

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 9000 South

Adjoining Section Geometry Compatibility:

Direction:	North	Pavement Width: 49	Shoulder Width 0
Shoulder Type:	N/A (No Shoulder)		
Compatibility:	Full Shoulder will be added		

Direction:	South	Pavement Width: 49	Shoulder Width 0
Shoulder Type:	N/A (No Shoulder)		
Compatibility:	Full Shoulder will be added		

Programmed Future Improvements:

None

Cost Data:

Project Cost as Proposed:	$67,651,000.00
Additional Project Cost to Attain FHWA 13 Critical Elements (Design Exceptions):	$14,800,000.00
Additional Project Cost to Attain Other Standards (Design Waivers):	
Project Cost Savings Identified Using Practical Design (This amount may be part of or all of the above amounts for Design Exceptions and/or Waivers):	
Attached Detailed Estimate:	

Comments:

Remove 4 Bridges - $80,000
Build 4 bridges - $10,000,000
Remove existing wall - $200,000
Install New Wall - $2,600,000
Relocate JV Aqueduct - $2,000,000
Total $14,800,000

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 9000 South

Exceptions to FHWA's 13 Critical Elements:

1. Design Speed	2. Lane Width	3. Shoulder Width	4. Horizontal Alignment	5. Vertical Alignment
6. Grades	7. Stopping-Sight Distance	8. Cross Slopes	9. Superelevation	10. Structural Capacity
11.Bridge Width	12. Vertical Clearance (Notify FHWA on any changes on the NHS and STRAHNET routes. See detailed instructions for more information.)		13. Lateral Offset to Obstruction	

Design Exception #1		Additional information in attached file: 12566_9000 South_Profiles 5 and 6		
Element:	Vertical Alignment	Existing	UDOT Standard	Proposed
Location:	SR-154 (Bangerter Hwy) SR-209 (9000 South) Between Old Bingham Hwy and 90th South	5%	5%	6%

Mitigation: 400 feet at 6%; Avoid Bridge Structures, Canal, UTA, Old Bingham Hwy.

Remarks: Currently, there is a 55-foot elevation difference along Bangerter Hwy between 90th South (higher) and Old Bingham Hwy (lower). The current grade of Bangerter Hwy at this location is 5%. There are three bridges that cross over Bangerter Hwy in the vicinity of the Old Bingham Hwy, a canal bridge , two UTA bridges, and a bridge for the Old Bingham Hwy. If the standard 5% grade was used to set a new profile to go over 90th South; it would require to raise the profile of Bangerter Hwy under these structures that would require the full reconstruction of these bridges. If a 6% grade is used the geometry can be tied back in to existing Bangerter Hwy before these structures. Both Grades require 90th South to be lowered 1 to 2 feet. See Profile Figure.

Design Exception #2		Additional information in attached file:		
Element:	Shoulder Width	Existing	UDOT Standard	Proposed
Location:	SR-154 (Bangerter Hwy) under Old Bingham Hwy For Northbound only Inside Shoulder Width Outside Shoulder Width	 8' 0'	 12' 12'	 3' 3'

Mitigation: Object markers will be placed on end columns to enhance visibility of concrete columns.

Remarks: Due to center bents in the median for the Old Bingham Hwy, UTA Tracks, and the Canal structures the existing shoulder at this location is reduced from the standard 12' inside shoulder to 8'. The proposed design adds a fourth-lane in the northbound direction that extends past these bridge columns.

To add the fourth lane, it will require the removal of the slope paving between the outside edge of pavement and the retaining wall and re-striping the travel lanes. The new striping will be offset from the joint lines by about 5 feet.

The proposed inside shoulder will be 3-feet from the face of the barrier at the bridge columns, the 3-foot shoulders will run for 220 feet; then the barrier around the columns transitions back to single median barrier where the inside shoulder becomes 6-feet wide for 360 feet. Then the lanes shift back to the existing striping over a 370-foot taper where the inside shoulder is back to 12 feet wide.

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 9000 South

Waivers of Additional Design Criteria:

1. Acceleration Lanes	2. Deceleration Lanes	3. Clear Zone	4. Intersection Sight Distance	5. Ramp Terminal Sight Distance
6. Shoulder/Travel Way (Gutter Pan)	7. Gores	8. Ramp Terminals	9. On Ramp Design	10. Off Ramp Design
11. Curb Configuration	12. Guardrail Bridge Connection (See next section)	13. Traffic Control	14. Rumble Strips	

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 9000 South

Waivers of Additional Design Criteria – Bridge Rail or Parapet:

Structure Number: _____ Sufficiency Rating: (from Structures Division) _____

Mainline or Overcrossing: _____

Location: _____

Existing Systems:

	Bridge		Approach	
Rail Type*			◯ Guardrail	◯ Precast Barrier
Height				
Attached			◯ Yes	◯ No
Meets Standards	◯ Yes	◯ No	◯ Yes	◯ No
Total Width				
Lane Width				
Shoulder Width				
Condition				
3 Year Accidents	Actual Rate	Expected Rate	Actual Rate	Expected Rate

*Attach Sketch of Rail Type

Remarks:

_____

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 9000 South

Approval / Signatures:

Prepared and Submitted by: Justin A Beddoes

PROFESSIONAL ENGINEER
09/08/16
No. 362173
Justin A Beddoes
ELECTRONIC SEAL
STATE OF UTAH

Justin Beddoes

Comments:

9/12/2016

UDOT Project Manager

Comments:

Region Pre-construction Engineer

Comments:

Statewide Traffic and Safety Engineer

Comments:

Statewide Pre-construction Engineer

Comments:

FHWA Approval*

(*If required per current Stewardship and Oversight Agreement)

Approval of Design Exceptions for all highway improvement projects on the NHS or Interstate System is considered to be a Federal Administrative Action as specified in 23 CFR 771.107, and as such must comply with the National Environmental Policy Act (NEPA). For Design Exceptions on a Federal-Aid project (or state funded project where a NEPA action was taken), the Design Exception is covered by the previous NEPA action. For Design Exceptions on projects where there has been no previous NEPA action FHWA intends to programmatically classify these actions as Categorical Exclusions (CE) pursuant to 23 CFR 771.117(a), provided there are no unusual circumstances (23 CFR 771.117(b)) or significant environmental impacts. Signature above by the Statewide Pre-construction Engineer confirms that NEPA has been completed for approved Design Exceptions.

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

Type of Request: (select one or both) ☒ Design Exception ☐ Design Waiver

Project Information:

Project No: S-0154(12)11 PIN: 12566

Location: Bangerter Hwy; 4 Locations; 11400 South

Concept: New Interchange on Existing Freeway

Roadway Characteristics and Traffic Data:

Functional Class:	Urban Arterial			Pavement Type:	Rigid
Current Year:	2015	AADT =	43,000	Current % Trucks:	6 %
Projected:	10 Years	AADT =	56,500	Projected % Trucks:	6 %
Projected:	25 Years	AADT =	87,000	Projected % Trucks:	6 %
Terrain:	Rolling			Posted Speed:	60 mph
Project Design Life:	40 Years			Design Speed:	65 mph
Design Vehicle:	WB-67				

Geometric Data:

Number of Lanes:	6	Clear Zone Distance:	30 ft.
Pavement Width:	113 ft.	ROW Width:	150-250 ft.
Shoulder Width:	12 ft.	Shoulder Type:	Paved

Accident History as documented in the OSR:

	Actual Rate	Expected Rate
Accident History	N/A	N/A
Severity	N/A	N/A

Accident History Years: 2012-2014

Date of OSR: 2/18/2016

Remarks:

Accident data is not applicable due to the at-grade intersection will be converted to grade separated interchange.

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 11400 South

Adjoining Section Geometry Compatibility:

Direction:	South	Pavement Width: 105'	Shoulder Width	In-12' Out-4'
Shoulder Type:	Paved			
Compatibility:	Shoulders will be tapered to match existing at ends of reconstruction limits			

Direction:	North	Pavement Width: 97'	Shoulder Width	In-12' Out-0'
Shoulder Type:	Inside - Paved, Outside - None			
Compatibility:	Shoulders will be tapered to match existing at ends of reconstruction limits			

Programmed Future Improvements:

Cost Data:

Project Cost as Proposed:	$54,560,000.00
Additional Project Cost to Attain FHWA 13 Critical Elements (Design Exceptions):	$2,790,000.00
Additional Project Cost to Attain Other Standards (Design Waivers):	
Project Cost Savings Identified Using Practical Design (This amount may be part of or all of the above amounts for Design Exceptions and/or Waivers):	$2,790,000.00
Attached Detailed Estimate:	

Comments:

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 11400 South

Exceptions to FHWA's 13 Critical Elements:

1. Design Speed	2. Lane Width	3. Shoulder Width	4. Horizontal Alignment	5. Vertical Alignment
6. Grades	7. Stopping-Sight Distance	8. Cross Slopes	9. Superelevation	10. Structural Capacity
11.Bridge Width	12. Vertical Clearance (Notify FHWA on any changes on the NHS and STRAHNET routes. See detailed instructions for more information.)		13. Lateral Offset to Obstruction	

	Design Exception #1	Additional information in attached file:		
Element:	Shoulder Width	Existing	UDOT Standard	Proposed
Location:	Outside Shoulder on the entrance ramps through the limits of the ramp meter storage only.	N/A	10' Outside Shoulder (including barrier offset)	7' Outside Shoulder (including barrier offset)

Mitigation: None

Remarks: Design Exception would allow a minimum distance of 9' from back of barrier to all commercial buildings in the area. Without the design exception we will be able to provide approx 6'. Impacts to the parking lot for Buffalo Wild Wings and the parking lot for the new development to the north would be avoided. Full standard shoulders will be provided beyond the proposed ramp meter storage area.
$870,000 cost to attain standard includes approx $400,000 in property acquisition and damage costs, and $320,000 in pavement/earthwork/retaining wall costs, $150,000 in utility and commercial sign costs.

	Design Exception #2	Additional information in attached file:		
Element:	Vertical Alignment	Existing	UDOT Standard	Proposed
Location:	Sag curve on SR-154 under 11400 South	N/A	min K value of 157 for sag curves for a design speed of 65 mph	Design Sag curve for Comfort instead of headlight sight distance

Mitigation: Lighting will be provided through the limits of the comfort sag curve.

Remarks: Project will meet AASHTO design criteria for a comfort sag under 11400 South. All other sag curves will meet minimum k values for headlight sight distance.
$1,920,000 cost to attain standard includes approx $700,000 in residential property acquisitions, $800,000 in retaining wall costs, $230,000 in roadway excavation, $190,000 in other misc roadway/drainage costs

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 11400 South

Waivers of Additional Design Criteria:

1. Acceleration Lanes	2. Deceleration Lanes	3. Clear Zone	4. Intersection Sight Distance	5. Ramp Terminal Sight Distance
6. Shoulder/Travel Way (Gutter Pan)	7. Gores	8. Ramp Terminals	9. On Ramp Design	10. Off Ramp Design
11. Curb Configuration	12. Guardrail Bridge Connection (See next section)	13. Traffic Control	14. Rumble Strips	

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 11400 South

Waivers of Additional Design Criteria – Bridge Rail or Parapet:

Structure Number: _____ Sufficiency Rating: (from Structures Division) _____

Mainline or Overcrossing: _____

Location: _____

Existing Systems:

	Bridge		Approach	
Rail Type*			◯ Guardrail	◯ Precast Barrier
Height				
Attached			◯ Yes	◯ No
Meets Standards	◯ Yes	◯ No	◯ Yes	◯ No
Total Width				
Lane Width				
Shoulder Width				
Condition				
3 Year Accidents	Actual Rate	Expected Rate	Actual Rate	Expected Rate

*Attach Sketch of Rail Type

Remarks:

_____

Utah Department of Transportation
Design Exception / Design Waiver from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 11400 South

Approval / Signatures:

Prepared and Submitted by: Mark Bedke

PROFESSIONAL ENGINEER
09/08/16
No. 8562477
Mark Bedke
ELECTRONIC SEAL
STATE OF UTAH

Comments:

9/12/2016
UDOT Project Manager

Comments:

Region Pre-construction Engineer

Comments:

Statewide Traffic and Safety Engineer

Comments:

Statewide Pre-construction Engineer

Comments:

FHWA Approval*
(*If required per current Stewardship and Oversight Agreement)

Approval of Design Exceptions for all highway improvement projects on the NHS or Interstate System is considered to be a Federal Administrative Action as specified in 23 CFR 771.107, and as such must comply with the National Environmental Policy Act (NEPA). For Design Exceptions on a Federal-Aid project (or state funded project where a NEPA action was taken), the Design Exception is covered by the previous NEPA action. For Design Exceptions on projects where there has been no previous NEPA action FHWA intends to programmatically classify these actions as Categorical Exclusions (CE) pursuant to 23 CFR 771.117(a), provided there are no unusual circumstances (23 CFR 771.117(b)) or significant environmental impacts. Signature above by the Statewide Pre-construction Engineer confirms that NEPA has been completed for approved Design Exceptions.

Utah Department of Transportation - Deviation from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

Project Information:

Project No:	S-0154(12)11	PIN:	12566
Location:	Bangerter Hwy; 4 Locations; 11400 South		
Description:	New Interchange on Existing Freeway		

All Deviations are approved at the Region Level

Deviations are any change that does one of the following:

1) Entirely or partially modifies or deletes a Standard or Supplemental Specification.
2) Modifies or deletes a Standard Drawing.
3) Modifies or deletes an internal design process.
4) Adds a project scope related special provision, adds a new section, or a new drawing.

Deviations that DO NOT need to be listed on this page include:

- Special Provisions obtained from UDOT's website.
- Modifications to Section 00555M or 00555S, Limitation of Operations.
- Any specification modified for the purposes of updating contact information.

Proposed Deviations:

Spec/Dwg Number:	DD 5A	Spec/Dwg Name:	Entrance and Exit Ram	UDOT Standard:	300' Min Transition

Proposed Deviation: 180' Min Transition

Explanation of Deviation and Mitigation Measures: This deviation applies to the first transition from 3 lanes to 2 lanes on the SB On Ramp Only. Due to the close proximity of the newly developed commercial buildings there is not sufficient length to safely provide a 300' lane taper. Traffic and Safety wants to avoid a yield condition for the right turn movements, providing a shorter taper rather than a yield condition would be a safer option. The merging point begins within 300 ft of the cross street, traffic will be traveling at slower speeds.
Cost to attain standard includes approx $1,500,000 for property acquisition.

Safety Impacts: Traffic would have less distance to merge.

Cost to Attain UDOT Standard: 1,500,000

Practical Design : Yes

Utah Department of Transportation
Deviation from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 11400 South

Spec/Dwg Number:	SW 2	Spec/Dwg Name:	Noise Wall Placement UDOT Standard:	5' min snow storage	
Proposed Deviation:	3" min distance between noise wall and concrete barrier				
Explanation of Deviation and Mitigation Measures:	This deviation applies to the proposed noise wall along SR-154 on the east side between station 1050+00 RT to 1060+00 RT. All other locations where noise walls are located the 5 ft min storage area is required. Providing the snow storage would require a 3 ft Right-of-Way strip acquisition through the entire limits of the adjacent property of approx 1000 ft long. There is an existing retaining wall of about 5 ft high and 300 ft long that would be avoided with design deviation. Currently the proposed retaining/noise wall is retaining a max height of 5 ft, providing snow storage would increase the retaining portion of the wall to approx 7' high. The UDOT Standard shoulders are required through this area. $540,000 to attain standard includes approx $160,000 in property acquisition and temporary construction easements, $380,000 for reconstruction existing retaining wall and additional Ret/Noise wall				
Safety Impacts:	Snow would be pushed to the shoulder instead of behind the barrier creating a temporary hazard and reduced shoulder for emergencies.				
Cost to Attain UDOT Standard:	540,000		Practical Design :	Yes	

Total Project Cost Savings Identified Using Practical Design: 2,040,000

Utah Department of Transportation
Deviation from UDOT Standards

www.udot.utah.gov/go/designexceptionprocess

12566 S-0154(12)11 Bangerter Hwy; 4 Locations; 11400 South

Approval / Signatures:

Comments:

Prepared By

Comments:

Marwan Farah

Digitally signed by Marwan Farah
Date: 2016.09.12 09:24:36 -06'00'

UDOT Project Manager

Comments:

Region Pre-construction Engineer

* A completed copy of this form will be provided to the Region Director for informational purposes.

** If the Region Preconstruction Engineer deems a Deviation in need of escalation, it may be submitted to the Statewide Preconstruction Engineer for review and approval.

H. Reuse of existing sign structures or any components is not allowed.

I. **Signal Heads and Detection Devices**: Signal heads and detection devices for the SPUI are not considered a utility and may be attached to the exterior girder. If signal heads or detection devices must be placed on a structure, include the connection design, details, and calculations in the appropriate design milestone submittal and final documents.

17B-7 Miscellaneous Structures – Vaults

A. Design all vaults for HS-20 loading.

B. See Part 4-19 (Utilities) for additional information.

17B-8 Hydraulic Structures

A. Provide clearance for storm drains over box culverts following requirements of Part 4-04 (Drainage) and UDOT Standards.

17B-9 Interchange Specific Requirements

17B-9.1 5400 South

A. Meet the requirements for the Flex Lane Gantry Structures in accordance with Part 4-15 (Roadways)

17B-9.2 7000 South Pedestrian Bridge

A. Provide a pedestrian bridge over Bangerter Highway at the 7000 South interchange in accordance with Part 7 (Contract Drawings). Locate the landings/ramps on parcels 562 and 565 in accordance with the Part 7 (Contract Drawings) and tie into the existing sidewalk.

B. Enclose area below ramps to prevent public access with a 6-foot chain link fence type III. Provide access to the Department to allow future inspection of structural ramp elements.

C. Provide a concrete deck (4000 psi, Class AA(AE)). The concrete deck must be composite when supported by girders. The concrete deck must be connected to its supporting components to prevent vertical separation when supported by truss type superstructures. Timber decking is not allowed.

D. Provide a roof/cover that protects the deck from snow.

E. Pedestrian Bridge Roof/Cover Loads

1. Design for a roof snow load of 40 psf.

2. Roof Snow Load Factors:

a. Use a load factor of 1.0 for roof snow load for all Service Load Cases.

b. Use a load factor of 0.5 for roof snow load for all Strength Load Cases.

c. Use a load factor of 0.2 for roof snow load for all Extreme Event Load Cases. The effective snow load will be accounted for as dead load and included as mass in the Extreme Event Load Cases.

F. Salvage the existing pedestrian bridge at 7000 South. Store the bridge ~~at the~~

~~Department property located at approximately 6200 South and 3400 West~~in the property in the northwest corner of Bangerter Highway and 9000 South. Place the structure on temporary supports. ~~See City of Taylorsville betterment agreement in Part 6 (Third Party Agreements) for additional information.~~

G. Provide a detail sheet in the structure plans incorporating the aesthetics requirements.

17B-9.3 9000 South

A. Existing wall R-261 West along Bangerter Highway

1. Any modification to the existing retaining wall requires Approval.
2. Remove and modify existing wall to meet Project requirements while protecting existing bridge structures north of 9000 South.
   a. Provide cast-in-place coping along the top of the modified wall using the SDDM SD sheets.
   b. Provide 2 inches of cover for existing reinforcing not covered by a coping.

B. Existing wall R-260 East along Bangerter Highway

1. Any modification to the existing retaining wall requires Approval.
2. Protect the existing USBOR Aqueduct in place in accordance with Part 4-19 (Utilities)
3. Removal, replacement or modification to the existing barrier adjacent to structures R-288, F-576, F-764 and C-785 requires Approval.

C. Bingham Creek Culvert Replacement

1. Do not increase load on the existing USBOR Aqueduct structure. See Part 4-04 (Drainage) for additional requirements.

17B-9.4 11400 South

A. 11400 South Structure

1. Signal foundation must be isolated and independent of bridge elements.
2. Detail, design and phase construction of 11400 South structure to address temperature, shrinkage and creep effects in the bridge deck and approach slab. Design to accommodate expansion and contraction in the substructure.

17B-10 Structure Design Calculations

A. Organize the final structure calculations as required by the SDDM with the following exception:

1. SDDM 2.17.6 – Replace the Structure Design Criteria and Design Codes and References bullets with the following:

- Structure Design Criteria
  - Design codes and references
  - Design loads
  - Materials
  - Design assumptions relevant to the design of each element.

Develop Supplemental or Project Agreements on behalf of the Department for signature by the Utility Companies and signature and execution by the Department, for all Utility Work. Perform or coordinate the performance of the Utility Work for design and construction as specified herein. Obtain required permits necessary to perform Utility Work.

Repair any Utility damages caused by the Design-Builder which occur during construction within the Project limits. All repairs associated with such damages are the responsibility of the Design-Builder.

All costs for coordination, design, permits, construction, and coordination of all temporary Utility relocations that are implemented for the convenience of the Design-Builder's construction operation and schedule are the responsibility of the Design-Builder.

The Design-Builder is responsible to contact Blue Stakes at (800) 662-4111 before all Utility Work to have all utilities marked prior to construction.

The existing RMP transmission overhead power lines and poles (and any distribution lines on those transmission poles) located along 11400 South, 9000 South, and 5400 South will be relocated by others within the Project Limits; do not provide a price for these relocates in Form UC. The RMP transmission relocation project is being installed by others, see Part 4-15 (Roadway) for additional requirements. The anticipated completion date of the relocation is December 31, 2017. Coordinate with RMP to assure that the Design-Builder's design does not negatively impact the RMP transmission relocation project. All impacts to the RMP transmission relocation project must be accounted for in the Design-Builder's schedule and Price Proposal. Coordinate the relocation with each Utility Company for utilities located on the existing transmission power poles.

Price all other RMP relocates and the other utility relocates and include in Form UC.

If the Design-Builder's design has additional transmission relocations, it is the Design-Builder's responsibility to price those relocates and include them in Form UC.

19C-1 General Requirements

Coordinate all design and construction activities with the Department and the Utility Company Project Representative identified in each MUA or Statewide Utility Relocation Agreement (regardless of who performs or pays for any proposed Utility Work). Coordinate on finalizing the design, the location of the relocated Utility facility, the potential impacts of Utility Work, costs, and schedule. Design, protect, temporarily relocate, and/or construct the facility as applicable for the Utility type, subject to the requirements of the specific MUA or Statewide Utility Relocation Agreement.

Perform the Utility Work as follows:

A. Comply with all provisions of MUA(s), Statewide Utility Relocation Agreement(s), Supplemental Agreement(s), and other applicable agreements, whether included in Part 6 (Third-Party Agreements) or subsequently provided to the Design-Builder.

B. Minimize the impacts to Utility Companies and Third-Party.

C. Identify the extents of required protect-in-place measures and relocations, if Utility facility conflicts cannot reasonably be avoided. Coordinate with impacted Utility Companies as necessary to accomplish each mutually agreeable proposed protect-in-place measure and relocation solution. Coordinate the proposed Utility Work with other Utility facilities present at the site to ensure that all Utility facilities are accommodated.

D. Prepare Supplemental Agreement(s) as necessary and submit to the Department for review and approval prior to submitting them to the Utility Companies.

T. Provide to the Department a weekly report of events (including all Utility Company coordination meetings, design progress, and construction progress) and the revised schedule as it relates to design and construction progress of Utility Work.

U. Monitor the progress of Utility Company Utility Work and notify the Department if there is cause to believe that the Utility Company will not meet the specified time frame(s) for design review of the Design-Builder's plans, construction, or timely inspection. Provide such notice to the Department within seventy-two (72) hours of discovery.

V. Provide survey-grade (X,Y and Z coordinates) As-Built Utility locations and attributes for Utility Work performed by the Design-Builder and Third Parties in a .csv file weekly and at the completion of each specific Utility facility relocation.

W. Notify the Department's Utility Manager or designee, Communications Team (CT) Manager, and Utility Company Representative seven Calendar Days prior to starting any planned Utility Work. Also, for unforeseen Utility facility interruptions, contact the Resident Engineer, PM, and Utility Company Representative immediately.

X. Maintain the positive working relationships the Department has developed with the Utility Companies in their cooperative participation and support of the Project.

Y. Extend all existing Utility casings to limits defined in Utah Administrative Code R930-7. Design-Builder is responsible to work with Utility Companies to locate and extend existing Utility casings within the Project

Z. Be responsible for installing/obtaining all power service to ATMS, signals lighting, and ATMS/ITS equipment.

AA. Be responsible for the costs and schedule for all temporary Utility relocations.

BB. Ensure that all overhead and underground clearances and depth of bury meet both Department requirements as well as the Utility Company's requirements.

CC. Include the Department in all communications and coordination efforts with the Utility Companies.

DD. Extend all service laterals and meters to the new ROW line. Match existing sizes for laterals and meters.

Do not bury or conceal any portion of the Utility Work that has not been inspected and accepted by the Utility Company. Any Utility Work buried or concealed without being inspected and accepted by the Utility Company shall be exposed by the Design-Builder at no additional cost to the Department or Utility Company.

19C-2 U. S. Bureau of Reclamation/Jordan Valley Water Conservancy District

The Department entered into a~~n~~ ~~Easement Encroachment~~Project Agreement with the USBOR and Jordan Valley Water Conservancy District (JVWCD) for the protection of the USBOR Aqueduct Reaches 2 & 3 within the USBOR's Aqueduct Easement. The UDOT/ USBORJVWCD ~~Easement Encroachment~~Project Agreement is in Part 6 (Third Party Agreements) and contains restrictions on both temporary and permanent construction activities that are allowed within the USBOR's aqueduct ~~Easement~~easement. Coordinate all Work within the USBOR's Aqueduct Easement through the single point of contact listed in the Project ~~agreement~~ Agreement and receive approval from the USBOR /JVWCD prior to performing any Work within the USBOR's Aqueduct ~~easement~~ Easement area. Obtain approvals from the USBOR /JVWCD for any deviation from the terms of the agreement. The 2005 USBOR & UDOT Memorandum of Agreement is included as an exhibit to the Project

Agreement in Part 6 (Third Party Agreements) and the USBOR O&M Guidelines are included in Part 7 (Contract Drawings).

Below is a list of the USBOR's Jordan Aqueduct Reach 2 (JA-2) requirements and shutdown information:

1. Aqueduct 2 runs between the Bluffdale Water Treatment Plant and the Terminal Reservoirs on Bangerter Highway near 6000 S.
2. There are two mainline isolation valves that break JA2 into three segments, located at 12600 South and 9000 South.
3. Do not shut down the segment of the aqueduct on the north side of the 9000 South valve at the same time as the south side for operational reasons.
4. Perform all work on north side of 9000 South during the first shutdown period, followed by a separate shutdown to perform work on the south side.
5. The two aqueduct shutdown periods are allowed to be consecutive.
6. Schedule the north side shutdown first, followed by the south side shutdown.
7. Aqueduct shutdown periods must take place in accordance with the Project Agreement.

19C-3 City of West Jordan

Repair the damaged 12-inch sanitary sewer line at along the west side of the intersection approximately 212 feet east of the SSMH located at 7000 South and Dixie Drive if the West Jordan betterment is not performed. Pipe repair method required West Jordan City approval.

~~19C-3~~19C-4 Design-Builder Third Party-Manager

Provide a Third-Party Manager to act as the overall Utility coordinator to ensure adequate coordination during Supplemental Agreement development, mobilization activities, and performance reviews of Utility Work. Coordinate, cooperate, and work with the contact person designated in Part 6 (Third-Party Agreements) or as otherwise assigned by the Department. Responsibilities of the Third-Party Manager include coordinating Design-Builder oversight, coordinating and administering the Utility Work within the Project, site administration, standard and specification adherence, and performance reviews of the Design-Builder while working on and off-site, including but not limited to safety, quality, timeliness, and performance.

Coordinate Utility facility relocations until all Utility Work is completed.

Maintain a record of all design and construction activities for all Utility Work that has been performed by the Design-Builder, and all Utility Work that has been designed and Released for Construction after Notice to Proceed.

The Third-Party Manager responsibilities:

A. Act as a liaison between the Department, Utility Company, and Design-Builder workforces as needed.

B. Prepare Supplemental and Project Agreement(s) as necessary and submit to the Department for review and approval prior to submitting them to the Utility Companies.

C. Provide support in Utility Work problem resolution.

D. Communicate Utility Work Project status to various levels of site personnel including management, other company organizations, contractors, and suppliers.

E. Monitor the successful completion of assigned Project deliverables and milestones.

F. Distribute design plans that have been reviewed by the Utility Company and received consultation and written comment by the Department.

G. Provide notification of construction dates to the Department and Utility Company.

H. Keep a record of all meetings with Utility Companies and provide meeting minutes within seven Calendar Days.

I. Obtain a signature from the Utility Company on final design plans indicating that the plans are Released for Construction.

J. Keep a record of Utility Company inspector present at any time.

K. Provide any revisions to the design plans.

L. Provide date(s) that construction was completed.

M. Obtain signature and acceptance of Utility Companies on As-Built Plans and all other As-Built requirements stipulated in the Department's Utility Regulations.

N. Provide a weekly summary and schedule of Utility Work activities.

~~19C-4~~19C-5 Subsurface Utility Engineering (SUE) Information

Underground Utilities. The Department has performed a Utility investigation with subsequent depictions as per CI/ASCE 38-02 Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data. Subsurface Utility Engineering (SUE), and various Quality Levels have been obtained. Quality Level B/C/D has been achieved at various locations throughout the Project and Quality Level A at selected locations. These data are listed and depicted in the documented information shown in Part 8 (Engineering Data). Only the elevations and depths on Utilities at actual test holes or within manholes shall be considered accurate and reliable vertical data. The vertical component of Utility lines depictions in the three-dimensional SUE representation were interpolated between Quality Level A data points and at measured Utility elevations at points within vaults. All vertical Utility data except at these points should be considered as unverified and uncertain.

Various SUE quality levels of Utility location data have been achieved with "Reasonable Confidence" as follows:

A. Quality Level A is information gathered attest hole locations (a vertical location within +/- 0.5 feet tolerance at the test hole location only).

B. For Quality Level A data, actual pipe size does not differ from the size indicated by more than twenty-five percent (25%).

C. Quality Level B is horizontal location information gathered by application of non-destructive surface geophysical techniques, professional interpretation of the results, and appropriate survey control (horizontal accuracy is certified to within +/- 2-foot tolerance unless indicated otherwise); there are no estimates on vertical elevation). For Quality Level B data, actual pipe size does not differ from the size indicated by more than twenty-five percent (25%)

D. Quality Level C is information gathered from correlating Utility records to surveyed visible above-ground facilities, visible inspections, and all other obtained data.

E. For Quality Level C data, actual pipe size does not differ from the size indicated by more than twenty-five percent (25%)

F. Quality Level D is information gathered and interpreted from existing Utility records, and put into context with all other obtained data.

G. The depiction of this Utility data does not replace the statutory duty of the Design-Builder to utilize the One-Call system before any excavation activities. Nor does it relieve the Design-Builder of the responsibility to confirm the horizontal and vertical locations of all tie-in points.

The cost of any additional SUE information required by the Design-Builder for use during design and construction of the Project in addition to the information provided shall be performed at the Design-Builder's expense.

~~19C-5~~19C-6 Relocation Agreements

The Department has developed MUAs or Statewide Utility Relocation Agreements with the Utility Companies known to own and/or operate facilities affected by the Project. Copies of these proposed Agreements are in Part 6 (Third-Party Agreements). Each MUA or Statewide Utility Relocation Agreement includes the following:

A. Allocation of roles and responsibility for the design and construction of the Utility Work between the Design-Builder and the Utility Company.

B. Utility Company requirements, including time frames and commitments for Utility facility design, material acquisition, engineering review, supplemental agreement review and approval, and construction activities.

Authority to Execute Agreements. The terms of all MUAs and any amendments will be set by the Department and the Utility Company; the Design-Builder shall have no authority to enter into or execute any Agreements with any Utility Company on the Department's behalf.

If the Design-Builder identifies conflicts with a Utility facility owned by an entity other than as listed in Part 6 (Third-Party Agreements), the Department will execute a MUA or Relocation Reimbursement Agreement with the unlisted Utility Company.

In the case of an inconsistency between an executed MUA or Statewide Utility Relocation Agreement and information provided elsewhere in this document or Contract Documents, the terms and conditions in the executed MUA or Statewide Utility Relocation Agreement shall govern.

~~19C-6~~19C-7 Supplemental / Project Agreements

Submit Supplemental and Project Agreements for Department approval that provides the Utility Work scope, schedule, and cost to the affected Utility Company and to the Department for review. Develop, negotiate, and provide a schedule as part of the Supplemental or Project Agreement for defined Utility Work. Allow the specified amount of time in the Project Schedule for each Utility Work design, design review, Supplemental Agreement review and execution, and construction, as provided in the MUA(s) or Statewide Utility Relocation Agreements. Allow three Working Days for the Department to execute Supplemental and Project Agreements after it has been signed by the Third Party. Identify critical activities and sequences as they affect the Utility Work and plan to effectively mitigate impacts.

Coordinate the negotiations for and the preparation of all Supplemental and Project Agreements. Use the draft Supplemental and draft Project Agreement form as provided in Part 6 (Third-Party

Agreements) to accommodate the specific Utility Work identified as the design of the Project progresses. Prepare and provide any related documentation such as reports, plans, surveys, and estimates of cost and provide personnel to attend negotiation sessions with Utility Companies.

Include plans, cost, and schedule, as exhibits, for the Utility Work associated with each executed Supplemental or Project Agreement. Upon request, Design-Builder shall provide actual costs for Utility Work performed by Design-Builder which will be included in the Supplemental or Project Agreement.

Do not submit Supplemental and Project Agreements to the Department for approval until the Agreement is complete and includes scope, costs, and schedule. Incomplete Supplemental and Project Agreement submittals will not be reviewed.

The Department and Utility Company will sign each Supplemental Agreement indicating their concurrence with the Utility Work.

Once the draft Supplemental or Project Agreement has been approved by the Department, provide two copies of each proposed Supplemental or Project Agreement, along with the corresponding plans, schedules, and estimates of cost to the Utility Company for signature. Once the Supplemental or Project Agreements have been signed by the Utility Company provide the partially executed agreements to the Department's Utility Manager or designee for signature from the Department and full execution. The Design-Builder shall not perform any Utility Work until the Supplemental Agreement for the Utility Work is signed by the Company and the Department. The Department will issue an authorization to proceed to the Design-Builder for each specific Utility Work location.

~~19C-7~~19C-8 Cooperative Agreements

Department will prepare and negotiate Cooperative Agreements needed for the Project.

Design-Builder Responsibility - Prepare and provide any related documentation such as reports, plans, surveys, and estimates of cost and provide personnel to attend negotiation sessions with Third-Parties at no additional cost to the Department. Upon request of the Department, provide related documentation within seven Calendar Days

~~19C-8~~19C-9 Meetings and Correspondence

Keep Utility Companies well informed of Project changes and involved in making Project design decisions so they can provide uninterrupted service to their customers or minimize interruption of services. Notify Utility Companies at least 24 hours in advance of any Work in the vicinity of their facilities and provide 48 hours prior notice of potential impacts on service.

Startup Meeting Topics. Schedule startup meetings with each Utility Company and the Department's Utility Manager to review the following:

A. Inventory of Utility facilities.

B. Terms of the MUAs and Statewide Utility Relocation Agreements, including allocation of responsibilities.

C. All potential items of Work that affect the Project schedule.

D. The schedule for the Project.

E. Potential Utility conflicts and relocations.

F. Time frames to design, procure materials for, and construct Utility relocations.

G. Concurrence on the number and extent of known affected Utility facilities and issues.

H. Possibility of eliminating Utility conflicts.

I. Mitigation approach to be used at each specific location.

J. Procedures for addressing Utility conflicts discovered during design and/or construction.

Progress Meetings. Schedule at least bi-monthly Utility meetings with the Department to discuss Project progress, issues, and planned Work for all phases of Utility Work, including design and construction. Notify the Department at least seven Calendar Days in advance of each meeting. Invite Utility Companies to progress meetings.

Develop the agenda for these meetings jointly with the Department. At these meetings, include the Design-Builder's and the Department's Key Personnel who have responsibilities for Utilities. Take and maintain meeting minutes of all the Utility meetings and distribute copies of the minutes to participants, including representatives of Utility Companies who have facilities in the areas reviewed (even if they did not attend the meeting) within seven Calendar Days after the meeting.

Correspondence. Maintain documentation of contact and discussions with Utility Companies. Provide to the Department copies of all correspondence between the Design-Builder and any Utility Company within one Calendar Day of receiving it or sending it, as applicable.

~~19C-9~~19C-10 Design and Construction Responsibility

Coordinate all Project design and construction activities with the Department and Utility Companies, including design and construction of Utility facilities as applicable for each Utility type, subject to the requirements of the MUA(s), Statewide Utility Relocation Agreement(s), and Supplemental Agreement(s). Verify that the design plans prepared and the Utility Work performed is consistent and compatible with the executed Agreement(s) and with the Project design and construction.

The following Tables summarize the Utility requirements and responsibilities specified in the respective MUA(s), Statewide Utility Relocation Agreement(s), and Supplemental Agreement(s). In case of a discrepancy or conflict between the information in this section and an executed Agreement, the executed Agreement shall govern.

Table 19C-1 (Design-Builder to Design and Construct) lists the Utility Companies for which the engineering design and construction of Utility Work will be the responsibility of the Design-Builder. Design-Builder may be required to perform the Utility relocation design and/or construction using specific subcontractors and/or vendors in accordance with MUA(s).

TABLE 19C-1
DESIGN-BUILDER TO DESIGN AND CONSTRUCT

Utility Company	***Department Cost Share (Include on Form PA & Form UC)***
Daybreak Secondary Water	100%
Kearns Improvement District	100%
Manuel Bros., Inc	50%
South Jordan City	100%
South Valley Sewer District	100%
Taylorsville City	100%
Taylorsville Bennion Improvement District	100%

Cost share percentages provided as an example or guide. If a Utility Company is within their own Right-of-Way, easement, or in a Public Utility Easement, then the Department is responsible for one-hundred percent (100%) of the Utility relocation costs. Follow Utah Law per Utah Code 72-6-116, unless otherwise specifically noted in the MUA(s) or Statewide Utility Relocation Agreement(s) between the Department and each Utility Company. In-case of discrepancy the executed MUA(s) or Statewide Utility Relocation Agreement(s) shall govern.

~~19C-10~~19C-11 Utility Work Design Plans

After the Project design has been advanced sufficiently to clearly define Utility Work, prepare Utility Work design plans, or coordinate with Utility Companies to obtain company-prepared Utility Work plans. Utility Work design plans need to identify the extent of the Utility Work required and clearly show the proposed highway improvements. Coordinate as necessary with each Utility Company to accomplish each Utility relocation including providing and clearly indicating a mutually agreeable proposed location for the relocated Utility facility.

For Utility Work Design Plans Prepared by the Design-Builder, prepare Utility Work design plans:

A. Prepare a detail Utility Work design plan for each specific Utility relocation in the Project plan sheet format..

B. Plan set shall include sufficient information to perform survey verification.

C. Include a MOT and traffic control plan in compliance with Part 4-10 (Maintenance of Traffic) for each Utility Work that requires MOT and traffic control.

D. Include submittal information for proper material verification.

E. Include sufficient design detail to allow review and verification of Utility Work and show all proposed Utility Work design. Show all existing Utilities, as identified by the Department and Design-Builder.

F. Deliver electronic and hardcopy to the Department.

G. Identify the extent of the Utility Work and clearly show the proposed highway improvements.

H. If the Design-Builder makes changes to the approved Utility Work design plans, submit the revised plans to the Utility Company for approval. Allow additional time for the Utility Company to review the modifications to plans.

I. Obtain final design approval signatures for Utility Work design plans from authorized Utility Company personnel. The approval signature shall appear on the Released for Construction plan set.

J. Provide Released for Construction Documents signed by both the Utility Company and Design-Builder to the Department.

K. Correlate all Utility Work design plans with the Project design information and submit them to the Department, Design-Builder, and Department Utility Manager for review prior to construction.

For Utility Work Design Plans Prepared by the Utility Company, prepare plan sheets showing

the proposed highway improvements and existing Utility facility locations. Identify all Utility conflicts and required Utility Work on the plans and submit them to the Utility Company and the Department. The Utility Company will use these plans to prepare their Utility Work design plans. Correlate all Utility Company relocation plans with the Project design information and submit them to the Department for review prior to construction.

Review Utility Company-prepared relocation plans for consistency and compatibility with the Project design and obtain Utility Company Supplemental Agreement approval before construction on the utility for which the plans are prepared, whether construction is to be performed by the Design-Builder or the Utility Company.

~~19C-11~~19C-12 Notification

Notify the Department and each Utility Company in writing as required in the MUA(s) and Statewide Utility Relocation Agreement(s), prior to beginning any Utility Work that may affect any Utility facility, including shutdowns and diversions. Provide proper notification to each Utility Company of all temporary Utility Work implemented for the convenience of the Design-Builder's construction operation.

~~19C-12~~19C-13 Inspection

Utility Companies have the right to inspect and test the Utility Work performed by the Design-Builder on their facilities. The Utility Company and Design-Builder shall keep daily records of the Utility Work performed. The Utility Company and Design-Builder shall retain a copy of said daily records and upon request, supply a copy of each record to the Department. Utility Companies will communicate any concerns or irregularities with the progression of Utility Work to the Department, which will forward the concerns to the Design-Builder in accordance with the MUA(s) and Statewide Utility Relocation Agreement(s). Inspection and acceptance of the Utility Work by the Utility Company shall not relieve the Design-Builder from the obligation to perform all Utility Work in compliance with specifications and any other obligations in the MUA(s) or Statewide Utility Relocation Agreement(s).

~~19C-13~~19C-14 Utility Work Limits

The limits of Utility Work extend as far as is necessary to accommodate the Utility Work and the Utility Company's relocation requirements, whether inside or outside the ROW or Construction limits. Obtain all necessary permits as needed to complete the Utility Work.

The relocation of all existing Utility facilities that may have resided outside the existing ROW and will be located within the new ROW are the responsibility of the Design-Builder.

~~19C-14~~19C-15 Excavation

Give such notices of excavation as are required under Utah Code Title 54 Chapter 8a-2 (known as the Blue Stakes Law). Contact Blue Stakes at (800) 662-4111 before all Utility Work.

~~19C-15~~19C-16 Overhead Lines

Before working adjacent to overhead lines, give appropriate notice to the Utility Company. Obtain the minimum clearances requirements (between the Utility lines and the Project's construction equipment, permanent finished grade and appurtenances, and/or temporary grade) directly from the Utility Companies.

Inventory and determine existing vertical clearance of overhead lines over existing roadways and

appurtenances. Provide clearance between overhead electric wires and under-build communication systems and between top of finished ground and appurtenances (at the lowest sag).

~~19C-16~~19C-17 Fees and Construction Permits

Where performing Utility Work, obtain, pay the cost of, and comply with all relocation permits and application fees for Utility locations, both within and outside the ROW. Obtain a construction permit from the Department for construction of any new facility within the ROW. (No construction permit is required from the Department for the relocation, betterment, abandonment, or removal of an existing Utility within the ROW). Pay any fees associated with installation of new Utility services or maintenance of existing Utility services. Obtain other non-UDOT permits before beginning Utility Work.

~~19C-17~~19C-18 Abandonment and Protection-in-Place

Unless specifically noted otherwise in the Contract Documents or directed otherwise in writing by the Utility Company, removal of abandoned underground Utility or pipes within the planned ROW limits is not required of the Design-Builder. For underground Utilities, casings, and pipes that are to be left in place and are larger than six (6) inches in equivalent diameter, abandon them by placing or pumping in concrete slurry, sand slurry, or other material approved by the Department and then capping all open ends with concrete; for pipes eight (8) inches or greater in diameter, the cap must be at least twenty-four inches (24") thick. All abandoned pipelines shall be shown and identified on the As-built drawings

The following are exceptions to the abandonment process, listed above:

A. Remove the existing abandoned USBOR/JVWCD water main located starting on the north side of the 5400 South interchange and moving north.
B. Remove all manholes, vaults, and other underground structures to a depth of 2' below subgrade. Completely remove any underground structure that will be located under any structural element of the project.

Protect existing Utilities not requiring relocation, removal, or abandonment in accordance with the Utility Company's requirements. It is the Design-Builder's responsibility to fully understand the Utility Company's protect-in-place requirements prior to submitting their bid. Actively protect all Utilities to be left in place and communicate its status to the Subcontractors and other Utility Companies. Repair or replace any existing Utility facility that is damaged by the Design-Builder at no cost to the Department or Utility Company. All costs including costs of the facility being out of service as a result of the damage shall be borne by the Design-Builder.

Design-Builder shall submit an abandonment and/or protection-in-place plan to the Department as part of a Supplemental Agreement for Department approval. All protect-in-place measures must be approved by the Utility Company prior to the start of Utility Work. The Design-Builder must provide written acceptance of the Utility Company (or signed protect-in-place plans) to the Department. Survey the abandoned pipes and show them on the as-built drawings and provide the Department the locations in a .cvs file.

~~19C-18~~19C-19 Utility Company As-Built Plans

For all Utility Work designed and/or constructed by the Design-Builder, provide Utility As-built plans to each Utility Company in the electronic file format specified by the Utility Company. Show the locations of existing Utilities, structures, trees, streets, and highway ROW limits on the plans.

~~19C-19~~19C-20 Project-Wide Utility Plans

Transfer As-built information to a separate set of Project-wide Utility plans, prepared using the Project plan sheet format. The purpose of this set is to show a comprehensive picture of all As-built Utilities (both existing and adjusted as a part of the Project) for the Project on a single set of plans in the same format, as is required for all other Project As-built Plans.

Include on the plans Project survey control information and sheets. Show survey-grade points along the relocated Utility facilities via stations, offsets to the dominant control line at the following intervals along with northing coordinates, easting coordinates, Project elevation of natural ground, and facility elevation (invert or bottom of facility), as follows:

A. Every 100 feet and/or at angle points.

B. At ROW boundaries.

C. At roadway control points.

~~19C-20~~19C-21 Completion of Work

Obtain written approval by the respective Utility Company of all As-built Utility Work plans for which the Design-Builder has been responsible.

19D. SUBMITTALS

Provide submittals to the Department in accordance with Table 19D-1.

TABLE 19D-1
DESIGN-BUILDER SUBMITTALS FOR UTILITIES

Submittal	*Department Approval*	*Utility approval*	*Schedule*
Utility Work weekly work plan	No	No	Weekly
Supplemental Agreements	No	Yes	Prior to submission to Utility Company
Abandonment and Protection-in-Place Plan	Yes	Yes	Prior to Construction
Construction Permits	No	Yes	Prior to Construction
Utility Work design plans	No	Yes	Prior to Construction
Daily Records	No	No	As requested by Department
Utility As-Built plans	No	Yes	With As-Built Documents
Project-wide Utility plans	No	No	Upon completion of Utility Work

1—PRICE REDUCTIONS FOR NONCONFORMING WORK

Unit prices for materials are not utilized in the payment structure of this Contract. However, unit prices are required to utilize the pay factors and/or daily pay adjustments identified in the Standard Specifications and Special Provisions of this Contract. Unit prices listed in Table 5-1 (Unit Prices for Determining Pay Adjustments for Nonconforming Work) shall be applied and used in the calculation of Pay adjustments per specification requirements. Other prices for price reductions not listed below shall be established.

TABLE 5-1:
UNIT PRICES FOR DETERMINING PAY ADJUSTMENTS FOR NONCONFORMING WORK

Material or Activity	*Standard Specification Section*	*Unit*	*Unit Price*	*Pay Adjustment Type*
1. Traffic Control	01554	Day per interchange	$2,500	Daily Deduction
2. Driven Piles	02455	Cubic Yard, of concrete in place	$400	Unit Price for Pay Factor
2a. Driven Piles	02455	Linear Foot, in place	$65	Unit Price for Pay Factor
3. Drilled Shafts	02466	Cubic Yard, of concrete in place	$400	Unit Price for Pay Factor
4. Portland Cement Concrete Pavement	02752	Square Yard, in place	$42	Unit Price for Pay Factor
5. Lean Concrete Base	02712	Square Yard, in place	$25	Unit Price for Pay Factor
6. Structural Concrete (Structurally designed elements – bridges, box culverts, etc.)	03310	Cubic Yard, of concrete in place	$500	Unit Price for Pay Factor
7. Structural Concrete (all other structural elements)	03310	Cubic Yard, of concrete in place	$400	Unit Price for Pay Factor
8. Portland Cement Concrete (un-reinforced concrete items)	03055	Cubic Yard, of concrete in place	$200	Unit Price for Pay Factor
9. Hot-Mix Asphalt (HMA)	02741	Tons, in place	$65	Unit Price for Pay Factor
10. Asphalt Material (Binder)	02745	Ton of HMA, in place	$75	Unit Price for Pay Factor
11. Prestressed Concrete	03412	Cubic Yard, of concrete in place	$750	Unit Price for Pay Factor
12. MSE Walls – Single Stage	02831S	Square Feet, in place. Includes backfill material	$60	Unit Price for Pay Factor
13. MSE Walls – Two Stage	02837S	Square Feet, in place. Includes backfill material	$70	Unit Price for Pay Factor
14. Pavement Marking Paint	02765	Gallons, in place	$25	Unit Price for Pay Factor
15. Untreated Base Course	02721S	Tons, in place	$18	Unit Price for Pay Factor

* Based on current specifications, pay adjustments for these materials are "hard dollar" calculations and are not based on a pay factor (i.e., some percentage of a unit cost). These items are eligible for incentives as well as disincentives/reductions.

MICRO-SURFACING 215

SECTION 02742S 216
PROJECT SPECIFIC SURFACING REQUIREMENTS 216

SECTION 02746M 219
HYDRATED LIME 219

SECTION 02752S 220
PORTLAND CEMENT CONCRETE PAVEMENT 220

SECTION 02769S 238
GRINDING FOR GROOVED-IN PAVEMENT MARKINGS 238

SECTION 02776M 241
Concrete Flatwork 241

SECTION 02831S 242
RETAINING WALL- ALTERNATE SYSTEMS 242

SECTION 02832S 251
SELECT BACKFILL FOR MSE WALLS 251

SECTION 02833S .... 259~~258~~~~259~~
MSE WALLS USING CONCRETE FACING PANELS AND METAL REINFORCING ELEMENTS ....259~~258~~~~259~~

SECTION 02834S .... 269~~268~~~~269~~
MSE WALLS USING CONCRETE FACING PANELS AND GEOGRID REINFORCING ELEMENTS ....269~~268~~~~269~~

SECTION 02835S .... 279~~278~~~~279~~
MSE WALLS USING MODULAR BLOCK UNITS AND METAL REINFORCING ELEMENTS ....279~~278~~~~279~~

SECTION 02836S .... 288~~287~~~~288~~
MSE WALLS USING MODULAR BLOCK UNITS AND GEOGRID REINFORCING ELEMENTS ....288~~287~~~~288~~

SECTION 02837S .... 297~~296~~~~297~~
TWO-STAGE MSE WALLS USING CONCRETE FACING PANELS AND METAL REINFORCING ELEMENTS ....297~~296~~~~297~~

SECTION 02838S .... 308~~307~~~~308~~
TWO-STAGE MSE WALLS USING CONCRETE FACING PANELS AND GEOGRID REINFORCING ELEMENTS ....308~~307~~~~308~~

SECTION 02839S .... 319~~318~~~~319~~
PREFABRICATED MODULAR GRAVITY WALL (PMGW) SYSTEMS USING LARGE MODULAR BLOCK UNITS ....319~~318~~~~319~~

SECTION 02845S .... 327~~326~~~~327~~
MEDIAN REFLECTORS ....327~~326~~~~327~~

SECTION 02871S .... 329~~328~~~~329~~
SOIL NAIL RETAINING WALLS ....329~~328~~~~329~~

SECTION 02924S .... 356~~355~~~~356~~
NOXIOUS WEED CONTROL ....356~~355~~~~356~~

SECTION 03152M .... 363~~362~~~~363~~
CONCRETE JOINT CONTROL ....363~~362~~~~363~~

SECTION 03251S .... to be issued at a later date
POST-TENSIONING CONCRETE FOR STRUCTURES ....to be issued at a later date

SECTION 03310M .... 364~~363~~~~364~~
STRUCTURAL CONCRETE ....364~~363~~~~364~~

SECTION 03312S .... 365~~364~~~~365~~
STRUCTURAL CONCRETE FOR DECKS AND APPROACH SLABS ....365~~364~~~~365~~

Table 4

Sieve Size	**Percent Passing**	
	Coarse	**Medium**
3 inch	100	
1 inch	70-100	
3/4 inch	55-100	100
3/8 inch	40-100	80-100
No. 4	0-30	0-30
No. 50	0-15	0-15
No. 200	0-8	0-8

2.5 SEPARATION GEOTEXTILE

A. See Section 02075.

PART 3 EXECUTION

3.1 GENERAL

A. Do not extend lightweight aggregate borrow into the untreated base course. Cover side-slopes consisting of lightweight aggregate borrow in accordance with the landscape plans.

B. Cover the final surface of the lightweight aggregate borrow with Separation Geotextile.

3.2 TEST FILL PROCEDURES

A. Prior to using the material on the project, construct a test fill that is at least 30 feet by 60 feet in plan and 5 feet high using the lightweight aggregate material.

B. Place the material as specified in Article 3.3 and compact to a target moist unit weight equal to 96 percent of the maximum laboratory density as determined by AASHTO T-99.

C. Compact the test lifts with various numbers of passes with a small vibratory drum roller (such as a Cat CS-433C), at low amplitude; or a medium vibratory drum roller (such as a Cat CS- 563C), at low amplitude.

D. The Department will evaluate and approve the test fill to determine the production compaction methods to be used for the material.

3.3 CONSTRUCTION PROCEDURES

A. Place the lightweight aggregate borrow in uniformly thick lifts with a maximum loose thickness of 12 inches.

A. Submit working drawings and design calculations to the Engineer for approval, prepared and signed by a licensed professional engineer (referred to as the EPS engineer), for the EPS geofoam fill and load distribution slab construction.

B. Include plans, profiles, cross-sections, quantities, and details that address the following:
   1. Locations, types, and minimum compressive resistance of EPS geofoam used.
   2. A cast-in-place concrete load distribution slab.
      a. Do not use a precast load distribution slab without prior written approval from the Department.
   3. Provisions for facilities which penetrate the EPS geofoam blocks and load distribution slab (including, but not limited to, drainage catch basins, piping, utilities, and other buried facilities).
   4. Gradual transitions (at slopes no steeper than 4H:1V) between EPS geofoam fill and other embankment fill.
   ~~3.~~5. Methods, sequence, and equipment for placing the EPS geofoam blocks and load distribution slab.
   ~~4.~~6. Methods of providing continuity across horizontal and vertical planes.
   ~~5.~~7. Other applicable protective measures.

C. Allow up to three weeks for the Engineer's review. Within this time, the Engineer will provide either written acceptance of the submittals, with any exceptions noted, or notification the submittals are insufficient.
   1. Upon receiving notification the submittals are insufficient, provide new submittals and allow another two-week period for the Engineer's review.
   2. Do not start EPS geofoam fill and load distribution slab construction prior to receiving full written acceptance by the Engineer.
   3. Working drawings do not supersede the contract drawings.

D. Provide the Engineer with a certified test report from the manufacturer showing all data required to indicate compliance with specifications.

E. Submit a quality assurance plan for testing EPS geofoam blocks to the Engineer.

F. Material Submittals
   1. EPS Geofoam
      a. Provide certification as directed in Specification ASTM D 6817.
      b. Submit sampling and testing results to the Engineer for approval.
   2. Hydrocarbon-resistant Geomembrane
      a. Provide certificate of compliance stating that the hydrocarbon-resistant geomembrane has been tested and satisfies the requirements of this specification.
   3. Structural Concrete
      a. Refer to Section 03310.
   4. Reinforcing Steel and Welded Wire
      a. Refer to Section 03211.

M. Do not place EPS geofoam blocks above EPS geofoam blocks on which ice has developed on the surface.

N. Do not place EPS geofoam blocks when wind speeds exceed 40 mph.

O. Reinforcing steel supports (dobies) are permissible to support reinforcing steel during construction of load distribution slab with approval by the Engineer.

P. Do not use “gripper plates” or steel plates that pierce the EPS geofoam blocks during construction.

3.5 CAST-IN-PLACE LOAD DISTRIBUTION SLAB

A. Construct load distribution slab per Section 03211, Section 03310, and as shown in the roadway plans and/or EPS Geofoam working drawings.

~~B. At the option of the contractor, construct the load distribution slab to the optional closure pour construction joint, leaving a closure pour to bind the wall panels to the load distribution slab after initial slab loading.~~

~~C.~~B. Seal all cracks per Section 03924.

END OF SECTION

2.11 OTHER MISCELLANEOUS MATERIALS

A. Test Station Wire Terminations: One-piece, tin-plated crimp-on ring tongue connector as manufactured by Burndy Co. or Thomas and Betts.

PART 3 ~~WORKMANSHIP~~EXECUTION

3.1 GENERAL:

A. The installation of the facilities herein specified and described shall conform to the latest applicable NEC rules.

B. The workmanship shall be of the highest grade and shall be in strict accordance with material manufacturer's instructions. Equipment or materials damaged in shipment or in the course of installation shall be replaced.

C. Examine all Drawings and coordinate his work so as to avoid conflicts, errors, delays, and unnecessary interference with the construction of the facilities and to avoid duplication of the work such as excavation, filling, etc. In the event of any conflicts in the Specifications, the ENGINEER shall be consulted.

3.2 PIPE JOINT BONDING, NEW PIPE

A. To form an electrically continuous pipeline and associated appurtenances, all metallic pipe joints shall be electrically bonded; including buried, vault, and manhole pipe, fittings, and restrained joints; except threaded, welded, or insulated joints.

B. Install the quantity of joint bonds at each joint required to be bonded as specified this section or shown on the Drawings. Should the specifications and drawings conflict, the larger quantity shall apply.

C. Electrical connection of bonds to pipe and fittings shall be by thermite or arc welding process. Bolted, compression, or mechanical connections will not be permitted.

D. Test each bonded joint for electrical resistance as specified under CONTRACTOR QUALITY CONTROL TESTING, this section.

3.3 TEST STATION INSTALLATION

1. Thermite Weld Caps:
   a. Royston Laboratories Handi-Cap IP, prefabricated primerless thermite weld cap and coating system.
   b. Provide primer unless specifically stated in product data sheet that no primer is required.
2. Fast Cure Epoxy Coating:
   a. 100 percent solids, fast curing epoxy suitable for submerged or buried conditions.
   b. Acceptable products or equal:
      (1) Denso Protal 7125 (low temperature) or Protal 7300
      (2) Tapecoat TC 7010
      (3) 3M ScotchKote 323

2.16 CONCRETE

A. Class AA(AE) per UDOT specification Section 03055 Portland Cement Concrete.

2.17 ROCK MULCH

A. Where indicated on the Drawings for landscape rock mulch.

B. Color of rock mulch to be selected by Jordan Valley WCD.

C. Material shall consist of hard, durable particles of proper size and gradation, and it shall be free from loam, clay, excess fines, coal and coal byproduct materials, and deleterious materials. Submit certified laboratory testing depicting chloride limits of less than 100 parts per million and pH exceeding 6.5. The size of the particles shall be uniformly graded as follows:

Sieve No. or Size	Percent Passing (by weight)
1 1/2"-inch	100
3/4 inch	20 - 55
¼-inch or smaller	5

D. Acceptable aggregate shall be angular with some rounded aggregate.

PART 3 ~~WORKMANSHIP~~EXECUTION

3.1 GENERAL:

14. MSE Wall – Vertica Retaining Wall (refer to Section 02836S)

~~15. MSE Wall- TerraMesh Retaining Wall (refer to Section 02840S)~~

~~16. MSE Wall- HRW Welded Wire Wall (refer to Section 02840S)~~

~~17.~~15. PMGW – Mountain West Precast Redi-Rock Wall (refer to Section 02839S)

~~18.~~16. PMGW – Harper Precast ReCon Wall (refer to Section 02839S)

~~19.~~17. PMGW – Nephi Sandstone Precast Redi-Rock Wall (refer to Section 02839S)

1.2 RELATED SECTIONS

A. Section 02832S: Select Backfill for MSE Walls

B. Section 02833S: MSE Walls Using Concrete Facing Panels and Metal Reinforcing Elements

C. Section 02834S: MSE Walls Using Concrete Facing Panels and Geogrid Reinforcing Elements

D. Section 02835S: MSE Walls Using Modular Block Units and Metal Reinforcing Elements

E. Section 02836S: MSE Walls Using Modular Block Units and Geogrid Reinforcing Elements

F. Section 02837S: Two-Stage MSE Walls Using Concrete Facing Panels and Metal Reinforcing Elements

G. Section 02838S: Two-Stage MSE Walls Using Concrete Facing Panels and Geogrid Reinforcing Elements

H. Section 02839S: Prefabricated Modular Gravity Wall (PMGW) Systems Using Large Modular Block Units

~~I. Section 02840S: MSE Walls Using Wire Face and Metal Reinforcing Elements~~

1.3 REFERENCES

A. AASHTO LRFD Bridge Design Specifications

B. FHWA Design of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes – Volume I, Federal Highway Administration Report No. FHWA-NHI-10-024

1.4 DEFINITIONS Not Used

1.5 WALL SYSTEM SELECTION

A. Notify the Engineer in writing before the preconstruction conference which option listed in Article 1.1 will be used.

B. Use only one wall system for the Contractor-selected alternative.

C. Do not change the wall type after the preconstruction conference without written approval from the Engineer.

1.6 DESIGN REQUIREMENTS

A. Incorporate FHWA Design of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes guidelines, and AASHTO LRFD Specifications, and Interim Specifications for Highway Bridges in design of the selected wall system in addition to, or as modified by, the following:
   1. For all walls, or sections of walls, located within 50 feet of abutments for essential or critical bridges, use a design earthquake peak horizontal ground acceleration coefficient corresponding to a 3% probability of exceedance in 75 years. For walls near normal bridges and all other walls, or sections of walls, more than 50 feet away from bridge abutments, use an acceleration coefficient corresponding to a 7% probability of exceedance in 75 years.

a. Select Backfill for MSE Walls: properties determined by the Wall Company with the concurrence of the Design-Builder's Geotechnical Engineer, based on testing of representative samples of the material to be used, and consistent with the requirements of Section 02832S.

b. Retained soil and foundation soil: properties specified by the Design-Builder's Geotechnical Engineer based on the results of subsurface investigations and laboratory testing.

1.7 SUBMITTALS

A. Submit to the Design-Builder's Structural and Geotechnical Engineers for review and approval, and to the Engineer and the Department's Geotechnical Engineer, working drawings and design calculations for the wall construction prepared and signed by a licensed professional engineer, including all plans, profiles, cross sections, quantities, and details that address the following:

1. Cast-in-place concrete coping/cap to the facing panels/blocks to be aesthetically pleasing and to adequately support any fence and/or barrier. Do not use precast coping without prior written approval from the Engineer.

2. Provisions for facilities which penetrate the wall face or soil reinforcing elements (including, but not limited to, drainage catch basins, piping, foundation elements, guard-rail posts, and other buried facilities).

3. MSE wall design measures to accommodate surface and subsurface drainage details.

4. Proposed architectural treatment detail for wall facing elements and proposed color of concrete. Provide architectural treatment for all walls consistent throughout the project and matching all other structural elements incorporated in the project.

5. Design calculations sufficient to demonstrate the walls have been designed in accordance with the required criteria.

B. Allow up to 10 working days for ~~the Engineer's~~ review. Within this time, the Design-Builder's Engineers provide either written approval of the submittals with any exceptions noted, or notification the submittals are insufficient.

1. Upon receiving notification the submittals are insufficient, provide new or revised submittals for review and approval.
2. Do not start wall construction until receiving written approval.

3. Address to the Engineer's satisfaction any comments provided by the Department, prior to proceeding with the work.

1.8 ACCEPTANCE

A. Non-Conformance of Select Backfill for MSE Walls

1. Select Backfill placed and found to be out of conformance with the chemical characteristic requirements of Section 02832S may be allowed to remain in place at a reduced price in accordance with this paragraph as decided by the Engineer. Refer to Section 02832S for sampling and testing requirements.

2. The Engineer will use Table 5-1 (Unit Prices for Determining Pay Adjustments For Nonconforming Work) and the applicable pay factor in Table 1 to calculate the price adjustment.

3. When deviations exceed those listed for a pay factor of 0.50 in Table 1, ~~the Wall Company evaluates the backfill to determine whether the wall system meets the required design life.~~

~~a. If the Wall Company determines the wall system meets the required design life, the wall may be accepted with a pay factor less than 0.50 as decided by the Engineer~~replace nonconforming work.

B. Non-Conformance for Out-of-Tolerance Wall Facing Elements

1. If structural adequacy can be demonstrated, facing elements either placed or that become out-of-tolerance from those specified in the applicable wall system section (02833S through 02839S) before final acceptance may be allowed to remain in place at a reduced price in accordance with this paragraph as decided by the Engineer.
2. The Engineer will use the Table 5-1 (Unit Prices for Determining Pay Adjustments For Nonconforming Work) and the applicable pay factor in Table 2 to calculate the price adjustment.
3. The Wall Company and the Engineer will evaluate all wall facing element cases when deviations exceed those listed for a pay factor of 0.50 in Table 2 ~~to determine whether the wall system has sufficient structural integrity and is aesthetically acceptable.~~

~~a. If the Wall Company determines the wall system has sufficient structural integrity, the wall may be accepted at a pay factor less than 0.50 as decided by the Engineer~~, replace nonconforming work.

C. Price adjustment calculation. The applicable pay factors in Tables 1 and 2 will be applied to the entire wall. However, only the most critical of any one of the backfill criteria or the facing elements tolerances (i.e. the one having the lowest pay factor), will be applied.

Table 2

PAY FACTORSFOR OUT-OF-TOLERANCE MSE WALL FACING ELEMENTS						
Mean of the Deviations of Wall Placement Tolerances from the Limits Specified in Section 02833S to ~~02840S~~02839S (based on the percentage of wall face having the maximum out-of-tolerance measurements)						
	Pay Factor	**1 to 5%**	**6 to 10%**	**11 to 20%**	**21 to 30%**	**30% or more**
Horizontal Alignment (percent) Spec: 0.7%	1.00	0 to 0.40	0 to 0.35	0 to 0.30	0 to 0.25	0 to 0.20
	0.90	0.41 to 0.80	0.36 to 0.70	0.31 to 0.60	0.26 to 0.50	0.21 to 0.40
	0.80	0.81 to 1.20	0.71 to 1.05	0.61 to 0.90	0.51 to 0.75	0.41 to 0.60
	0.70	1.21 to 1.60	1.06 to 1.40	0.91 to 1.20	0.76 to 1.00	0.61 to 0.80
	0.60	1.61 to 2.00	1.41 to 1.75	1.21 to 1.50	1.01 to 1.25	0.81 to 1.00
	0.50	2.01 or more	1.76 or more	1.51 or more	1.26 or more	1.01 or more
Vertical Alignment* (percent) Spec: 0.7%	1.00	0 to 0.40	0 to 0.35	0 to 0.30	0 to 0.25	0 to 0.20
	0.90	0.41 to 0.80	0.36 to 0.70	0.31 to 0.60	0.26 to 0.50	0.21 to 0.40
	0.80	0.81 to 1.20	0.71 to 1.05	0.61 to 0.90	0.51 to 0.75	0.41 to 0.60
	0.70	1.21 to 1.60	1.06 to 1.40	0.91 to 1.20	0.76 to 1.00	0.61 to 0.80
	0.60	1.61 to 2.00	1.41 to 1.75	1.21 to 1.50	1.01 to 1.25	0.81 to 1.00
	0.50	2.01 or more	1.76 or more	1.51 or more	1.26 or more	1.01 or more
Plumbness* (percent) Spec: 0.5%	1.00	0 to 0.50	0 to 0.41	0 to 0.32	0 to 0.23	0 to 0.18
	0.95	0.51 to 0.64	0.42 to 0.54	0.33 to 0.43	0.24 to 0.33	0.19 to 0.26
	0.90	0.65 to 0.78	0.55 to 0.66	0.44 to 0.54	0.34 to 0.43	0.27 to 0.35
	0.85	0.79 to 0.92	0.67 to 0.79	0.55 to 0.66	0.44 to 0.52	0.36 to 0.43
	0.80	0.93 to 1.06	0.80 to 0.91	0.67 to 0.77	0.53 to 0.62	0.44 to 0.52
	0.70	1.07 to 1.20	0.92 to 1.04	0.78 to 0.88	0.63 to 0.72	0.53 to 0.60
	0.60	1.21 to 1.34	1.05 to 1.17	0.89 to 0.99	0.73 to 0.82	0.61 to 0.68
	0.50	1.35 or more	1.18 or more	1.00 or more	0.83 or more	0.69 or more
Levelness (percent) Spec: 0.5%	1.00	0 to 0.30	0 to 0.28	0 to 0.26	0 to 0.24	0 to 0.22
	0.90	0.31 to 0.60	0.29 to 0.56	0.27 to 0.52	0.25 to 0.48	0.23 to 0.44
	0.80	0.61 to 0.90	0.57 to 0.84	0.53 to 0.78	0.49 to 0.72	0.45 to 0.66
	0.70	0.91 to 1.20	0.85 to 1.12	0.79 to 1.04	0.73 to 0.96	0.67 to 0.88
	0.60	1.21 to 1.50	1.13 to 1.40	1.05 to 1.30	0.97 to 1.20	0.89 to 1.10
	0.50	1.51 or more	1.41 or more	1.31 or more	1.21 or more	1.11 or more
Joint Width (inches) Specs: Panel: 0.5 – 1.2 Block: 0.12– 0.5	1.00	0 to 0.10	0 to 0.09	0 to 0.08	0 to 0.07	0 to 0.06
	0.90	0.11 to 0.20	0.10 to 0.18	0.09 to 0.16	0.08 to 0.14	0.07 to 0.12
	0.80	0.21 to 0.30	0.19 to 0.27	0.17 to 0.24	0.15 to 0.21	0.13 to 0.18
	0.70	0.31 to 0.40	0.28 to 0.36	0.25 to 0.32	0.22 to 0.28	0.19 to 0.24
	0.60	0.41 to 0.50	0.37 to 0.45	0.33 to 0.40	0.29 to 0.35	0.25 to 0.30
	0.50	0.51 or more	0.46 or more	0.41 or more	0.36 or more	0.31 or more
Joint Offset (inches) Specs: Panel: 0.4 Block: 0.25	1.00	0 to 0.20	0 to 0.19	0 to 0.18	0 to 0.17	0 to 0.16
	0.90	0.21 to 0.40	0.20 to 0.38	0.19 to 0.36	0.18 to 0.34	0.17 to 0.32
	0.80	0.41 to 0.60	0.39 to 0.57	0.37 to 0.54	0.35 to 0.51	0.33 to 0.48
	0.70	0.61 to 0.80	0.58 to 0.76	0.55 to 0.72	0.52 to 0.68	0.49 to 0.64
	0.60	0.81 to 1.00	0.77 to 0.95	0.73 to 0.90	0.69 to 0.85	0.65 to 0.80
	0.50	1.01 or more	0.96 or more	0.91 or more	0.86 or more	0.81 or more

* For modular block walls these tolerances are measured from the specified wall batter as indicated in 02835 S and 02836 S.

END OF SECTION

~~July 11~~September 1, 2016

SECTION 02832S

SELECT BACKFILL FOR MSE WALLS

Add Section 02832:

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Placement procedures and requirements for backfill used in constructing MSE walls.

1.2 RELATED SECTIONS

A. Section 02056: Embankment, Borrow, and Backfill

B. Section 02831S: Retaining Wall-Alternate Systems

1.3 REFERENCES

A. AASHTO T 27: Sieve Analysis of Fine and Coarse Aggregates

B. AASHTO T 90: Determining the Plastic Limit and Plasticity Index of Soils

C. AASHTO T 99: Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12 in.) Drop

D. AASHTO T 104: Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate

E. AASHTO T 236: Direct Shear Test of Soils Under Consolidated Drained Conditions

F. AASHTO T 267: Determination of Organic Content in Soils by Loss on Ignition

G. AASHTO T 288: Determining Minimum Laboratory Soil Resistivity

H. AASHTO T 289: Determining pH of Soil for Use in Corrosion Testing

I. AASHTO T 290: Determining Water-Soluble Sulfate Ion Content in Soil

J. AASHTO T 291: Determining Water-Soluble Chloride Ion Content in Soil

K. AASHTO T 310: In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

~~L.~~ FHWA Publication No. FHWA-NHI-09-087, Corrosion/Degradation of Soil Reinforcements for MSE Walls and Reinforced Soil Slopes ~~FHWA Publication No. FHWA-NHI-00-044~~

1.4 SUBMITTALS

A. Provide the Engineer with a certificate of compliance, from an AASHTO accredited and UDOT qualified testing lab, certifying the material complies with this section.
   1. Provide the Engineer with copies of the results of all tests performed to determine the Select Backfill source meets the requirements of this section.

B. Provide the Engineer with copies of test results from a UDOT qualified lab for the tests described under article 1.5, Acceptance.

1.5 ACCEPTANCE

A. In addition to the initial testing to verify the Select Backfill source meets the requirements of this section, at a minimum, obtain on-site samples during construction and perform testing at the following frequencies.
   1. Gradation: Every 5,000 cubic yards of backfill used
   2. Electrochemical: Every 10,000 cubic yards of backfill used

B. Include all costs for sampling and testing in the bid price for the work.
   1. The Department will make no separate payment for the cost of sampling and testing required in accordance with this section, except as follows:
   2. The Engineer reserves the right to require additional testing, such as when suspecting a change in the Select Backfill.
      a. When additional testing performed at the direction of the Engineer indicates there is no change in the material and the material is in compliance with the requirements of this section, the Department will pay for the cost of additional sampling and testing as extra work.

C. Density
   1. The Department will perform at least one in-place moisture/density determination per lift of backfill for each 100 feet of wall length (minimum two tests per lift) in accordance with AASHTO T 310.
      a. Tests will be made at random locations and/or at specific locations determined by the Engineer.
   2. Do not proceed with the placement of each layer of soil reinforcement and overlying lift of backfill until the Engineer

indicates and records that all backfill placement and density requirements (including in the 3-foot light equipment zone) have been met.

PART 2 PRODUCTS

2.1 SELECT BACKFILL

A. Use backfill free from frozen, organic, and otherwise deleterious materials. Conform to the following gradation limits as determined by AASHTO T 27:

Table 1

Select Backfill Gradation (percent passing)		
Sieve Size	**Metallic Reinforcement**	**Geogrid Reinforcement**
4 inch	100	–
¾ inch	–	100
No. 40	0 – 60	0 – 60
No. 200	0 –15	0 –15

B. Geogrid reinforcement may use the Select Backfill gradation specified in Table 1 for metallic reinforcement only under the following conditions:

1. Make arrangements with the wall company to perform site and material specific installation damage testing with a representative sample of the proposed backfill.
   a. Perform testing in accordance with the guidelines provided in ~~sections 4.5 and 5.1 of~~ FHWA Publication No. FHWA-NHI-09~~0~~-08~~744~~. Determine the installation damage reduction factor in accordance with the test, but no less than 1.2.
   b. Assume all costs for performing the tests and certification of the test results by a registered engineer qualified in this subject/field.
   c. Assume any additional costs for the purchase of materials and/or construction of the wall based on the installation damage reduction factor obtained from the testing.

2. Provide additional material specific installation damage testing at the direction of the Engineer when a change in the backfill characteristics from the original tested representative sample is suspected.
   a. Assume all costs for performing this additional testing and certification of the test results by a registered engineer.
   b. Assume any additional costs for the purchase of materials and/or construction of the wall based on the installation damage reduction factor obtained from additional testing.

Sulfates	Maximum 200 ppm	N/A	AASHTO T 290

*Do not follow Note 6 of AASHTO T 288 to find lowest possible resistivity (where soil is in a slurry state). Only saturate soil to 100% saturation, where a sheen of water is seen at the top surface of the sample in the soil box.
**Maximum pH value for polyester geogrid is 9.0 unless long-term immersion testing performed according to FHWA-NHI-09-087 shows acceptable performance.~~;~~ ~~and f~~For pH>~~values between~~ 8.0, ~~and 9.0, or when saturated conditions are anticipated,~~ use a~~n~~ durability reduction factor (RF_D) ~~value~~ of 1.3 for polyester geogrid.

PART 3 EXECUTION

3.1 INSTALLATION

A. Excavation and Foundation Preparation:
   1. Excavate and grade foundation area to the lines and grades shown on the drawings, or as directed by the Engineer.
   2. Make the width of excavation equal to or exceeding the length of soil reinforcing elements.
   3. Compact the foundation using at least three passes of a lightweight, steel, smooth-drum vibratory roller, or as otherwise determined by the Engineer before the wall construction.
   4. Remove unsuitable foundation soils and replace with Select Backfill, or with other suitable material determined by the Engineer, placed and compacted as specified in this article

B. MSE Wall:
   1. Follow erection of each course of panel/modular block with placement of Select Backfill.
      a. Complete backfill at the front of the wall before backfilling more than 4 feet above the bottom of the lowermost facing element. ~~Place and compact required backfill in front of base wall facing element before the third tier of panels are placed, or within 14 calendar days, whichever comes first.~~
   2. Do not damage or disturb wall materials or misalign facing panels/modular blocks during backfill placement.
   3. Remove and replace or correct, as directed by the Engineer, wall materials damaged or disturbed during backfill placement at no cost to the Department.
   4. Remove and replace or correct, as directed by the Engineer, Select Backfill not meeting the specified requirements at no cost to the Department.
   5. Make the moisture content of the Select Backfill during placement and compaction uniform throughout each layer.

D. Centralizers

~~5.~~1. For SBSNs, ~~provide~~ use centralizers manufactured from Schedule 20 or 40 PVC pipe securely attached to the soil nail bar with coated wire.

~~a. Do not use wood for centralizers.~~

~~b.~~a. Size centralizers to position the soil nail bar within 1.0 inch of the center of the drill hole

~~c.~~b. Space centralizers no greater than 10 ft apart and 1.5 ft from the end of each nail.

c. Use centralizers that ~~A~~allow tremie pipe insertion to the bottom of the hole, and to allow grout to freely flow up the hole.

~~6.~~2. For HBSNs used in permanent applications, use steel centralizers attached to the bar in front of the couplings, at spacing no greater than 10 feet.

~~D.~~E. Provide nail grout consisting of neat cement or sand/cement mixture having a minimum 3-day compressive strength of 1,500 psi and a minimum 28-day compressive strength of 3,000 psi per AASHTO T 106, and specific gravity between 1.80 and 1.90.

1. For SBSNs, use sand for grout and meeting requirements of ASTM C33.
2. For HBSNs, do not use sand in the nail grout mix.
3. Use Type II Portland Cement meeting AASHTO M 85.
4. Admixtures may be used to control bleed, improve flowability, reduce water content, and/or retard set as specified in the accepted submittals.
   a. Use only admixtures that are compatible with the grout and mixed according to the manufacturer's recommendations.
   b. Do not use accelerators.
5. Do not add water to grout conforming to the mix design to improve workability.
6. Test grout specific gravity with a mud balance according to the procedure in ASTM D4380.
   a. Comply with any requests by the Engineer to test the grout with a mud balance at any time, particularly if the specific gravity appears to be less than 1.80.

2.2 SHOTCRETE

A. Use shotcrete conforming to Section 02342S.
   1. Produce shotcrete by either a wet-mix or dry-mix process.
   2. Apply shotcrete in one or more layers, pneumatically projected through a hose at high velocity against a prepared surface.

2.3 CONCRETE

a. Alternatively, fill bird's beaks with shotcrete.

E. Soil Nail Testing

1. General

a. Conduct verification tests on sacrificial nails at locations shown on the Nailing Pattern sheets in the plans.

b. Perform proof testing on production soil nails.

1. ~~For SBSNs with centralizers, t~~Test at least 5 percent of production soil nails, and~~.~~

~~2. For HBSNs without centralizers, test at least 10 percent of production soil nails.~~

~~3.~~2. ~~In all cases, t~~Test no fewer than one production nail per row on each soil nail wall, and distribute the locations of proof tests evenly across the vertical and horizontal extent of the wall face.

c. Perform testing at any nail after the nail grout and shotcrete facing have cured for at least 72 hours, or have attained their specified 3-day compressive strength.

d. Do not apply loads greater than 80% of the minimum guaranteed ultimate tensile strength of the soil nail bar for Grade 150 bars, or 90% of the yield strength of the soil nail bar for minimum Grade 75 bars.

e. Calculate nominal pullout resistance per unit length of soil nail utilizing a bond strength q_u of 16psi.

1. Alternately calculate the design load DL based on the allowable design soil-grout adhesion bond strength of 8psi.

f. Use Verification and Proof test nails having a minimum 3 feet unbonded length.

1. Clean out the hollow bar unbonded length after bar installation.

2. Placing a PVC pipe bond breaker without cleanout will not be sufficient to provide unbonded length.

g. Measure and verify void for unbonded length prior to testing.

h. Provide Verification test nails having a minimum 10-ft bonded length and Proof test nails having a minimum of 10 feet bonded length, unless tests are performed on production nails less than 12 feet in length.

2. Equipment

a. Provide testing equipment including dial gages, dial gage support, jack and pressure gage, load cell, and a reaction frame as shown on plans.

b. Use a pressure gage with a maximum graduation of 50 psi or use calibrated load cell for load steps.

c. Support dial gages on a frame that is independent from the jacking and the wall.

REQUEST FOR PROPOSALS

UTAH DEPARTMENT OF TRANSPORTATION

4 Interchanges on Bangerter HWY (SR-154)

Project No. S-0154(12)11

Salt Lake County

CONTRACT DOCUMENTS

PART 6:

THIRD-PARTY AGREEMENTS

Final Issued September 15, 2016

TABLE OF CONTENTS

1. AT&T Corp. Master Utility Agreement (Draft)
2. CenturyLink Statewide Utility Relocation Agreement (Executed)
3. CenturyLink QC Project Agreement (~~Draft~~Partially Executed)
4. Comcast Cable Master Utility Agreement (~~Draft~~Executed)
5. First Digital Telecom Master Utility Agreement (Draft)
6. Kearns Improvement District (Draft)
7. Manuel Bros., Inc. Master Utility Agreement (Draft)
8. MCI Communications Services (Verizon Business) Master Utility Agreement (Draft)
9. Questar Gas Company Statewide Utility Relocation Agreement (~~Partially~~ Executed)
10. Rocky Mountain Power (PacifiCorp) Statewide Utility Relocation Agreement (Executed)
11. Rocky Mountain Power (PacifiCorp) Project Agreement No. 1 (Executed~~Draft~~)
12. South Jordan City Master Utility Agreement (Draft)
13. South Valley Sewer District Master Utility Agreement (Executed~~Draft~~)
14. Syringa Networks, LLC Telecommunications Facility Exchange Agreement (Executed)
15. Taylorsville City Master Utility Agreement (Draft)
16. Taylorsville Bennion Improvement District Master Utility Agreement (Draft)
17. United States Bureau of Reclamation & Jordan Valley Water Conservancy District Project Agreement (Draft)
18. Welby Jacobs Canal (Draft)
19. City of West Jordan Master Utility Agreement (Draft)
20. Zayo Group, LLC Master Utility Agreement (~~Draft~~Partially Executed)

158015

STATEWIDE UTILITY RELOCATION AGREEMENT

E 20832

THIS STATEWIDE UTILITY RELOCATION AGREEMENT, made and entered into this 1st day of April, 2014, by and between the **UTAH DEPARTMENT OF TRANSPORTATION**, hereinafter referred to as **"UDOT"** and Qwest Corporation dba CenturyLink QC (**CENTURYLINK**), a Registered Corporation in the State of Colorado, and on behalf of itself and its affiliates, hereinafter referred to as the **"COMPANY."**

RECITALS:

WHEREAS, UDOT has jurisdiction over state Highway Rights of Way and administers the programming, development and completion of State and Federal highway projects (referred to herein as Project or collectively as Projects); and

WHEREAS, the **COMPANY** is a telecommunication utility owning and operating cable and fiber optic and related facilities (Facilities), within state highway rights-of-way under Statewide License Agreement and within **COMPANY** owned easements and fee title property; and

WHEREAS, certain highway Projects will require the relocation, adjustment, or protection of **COMPANY** Facilities; and

WHEREAS, for the purpose of expediting the performance and reimbursement of required relocation work on State and Federal Aid Highway Projects, it is the desire of the parties to enter into this Statewide Utility Relocation Agreement (Agreement) with the understanding that the parties will enter into future Project Agreements, which are supplemental to this Agreement, to address the scope of work, schedule, and other requirements for specific Projects; and

WHEREAS, this Agreement, along with the Project Agreements supplemental hereto, is made to set out the terms and conditions that will govern the relocation work.

TERMS:

1. PROJECT AGREEMENTS

A. For each Project, **UDOT** will prepare a Project Agreement. All terms in the Project Agreements shall be supplemental to the terms of this Agreement. In the case of an inconsistency between the terms of this Agreement and the terms of a Project Agreement, the terms of the Project Agreement shall control. In some cases, particularly when **UDOT** engages a design builder or a construction manager general contractor, the parties may enter into Supplemental Agreements to the Project Agreement. The Project Agreements and Supplemental Agreements should address utility relocation work for specific Project locations and include a description of the work, the party to perform the work, the location of the work, review times, the estimated duration of the work, scheduled completion date, an estimate of the cost to each party, any proposed betterments, including a plan showing the existing and proposed locations of the Facilities, and any necessary right-of-way documents as applicable. The estimates contained in the Project Agreements will be based upon material and labor prices as of the date of the estimate and do not account for increases due to unforeseen circumstances in accomplishing the relocation work.

B. The parties hereto agree to use a form Project Agreement to describe and perform the actual work on individual Projects, a copy of which is marked "EXHIBIT B" attached hereto and thereby made a part hereof.

2. PROJECT DEVELOPMENT AND COORDINATION

A. During the design phase of any Project, **UDOT** and **COMPANY** will identify the extent of the conflicts and propose and provide a mutually agreeable location to which the Facilities can be relocated. **UDOT** will provide the **COMPANY** with Project design plans as early as possible, and will schedule and meet with the **COMPANY** to review the right-of-way and environmental requirements, design, construction, cost estimates, and scheduling for the **COMPANY's** utility relocation work at specific locations on the Project to ensure maximum lead time for advance order of materials and scheduling of work force.

B. **COMPANY** shall advise **UDOT** of the approximate time required for completion of the Relocation Work and all known limitations including permit and regulatory approvals, dependency upon work of other parties, lead times for acquiring materials, notifications, and scheduling work crews. **UDOT** will, by its standard specifications and/or special provisions, make its contractor aware of the coordination and cooperation required for timely completion of utility work. **UDOT**'s contractor shall be advised of the approximate schedule for completion of said work and the **COMPANY** shall diligently pursue its work so that completion can be accomplished according to an agreed upon schedule, and as soon as possible after having been authorized to proceed.

C. If either party or their contractors intend to implement a redesign, scope or schedule change, **UDOT** and **COMPANY** shall meet in advance and coordinate to identify the change and the potential impact to both parties, including but not limited to costs and scheduling.

D. The **COMPANY** shall notify **UDOT**, or its contractor if so designated by **UDOT**, within seventy two (72) hours of its discovery of any occurrence or unforeseen circumstances that would prevent the **COMPANY** from completing the Relocation Work according to the time schedule established in the Project Agreement.

E. For Projects subject to federal Buy America requirements, as determined by **UDOT**, materials composed predominantly of iron or steel that are permanently incorporated into the work are subject to 23 CFR 635.410, Buy America requirements. **COMPANY** will provide **UDOT's** Resident Engineer with signed Buy America Certifications prior to or at the time subject materials are delivered to the project site, according to the specific instructions and format set forth in the attached Exhibit A.

3. DESIGN BUILD PROJECTS

A. During the proposal phase of any design build Project, **UDOT** shall schedule a meeting with **COMPANY** and **UDOT's** prospective contractors. The purpose of the meeting will be to determine if conflicts with the **COMPANY's** Facilities can be avoided and to provide prospective contractors with parameters within which **COMPANY's** Facilities can be relocated. **COMPANY** and **UDOT** will also meet one time individually with each prospective contractor.

B. All provisions of this Agreement apply to Design Build Projects unless stated otherwise.

4. BETTERMENT WORK

If the **COMPANY** desires to include a betterment in the utility work at any specific location, **UDOT** will allow for betterment work to be performed, provided the parties can reasonably coordinate the Project schedule to accommodate the betterment work without increasing Project costs or delaying the Project. Betterment is defined as set forth in 23 CFR 645, Section 645.105, Definitions. Specifically, betterment is any upgrading of the facility being relocated that is not attributable to the highway construction and is made solely for the benefit of and at the election of the **COMPANY**. Any upgraded facility due solely to the lack of equivalent replacement does not constitute a betterment. The difference in costs between the minimum construction required as a result of the Project and the **COMPANY's** desired construction shall be at the **COMPANY's** sole expense. The actual costs for the **COMPANY's** participation shall be determined upon completion and final billing for the relocation work.

5. COMPANY REQUIREMENTS

A. The **COMPANY** is required to comply with all applicable service interruption notification times and restrictions required by their customer service contracts, the Public Service Commission, Public Safety Agencies, the Federal Aviation Administration, etc.

B. Existing fiber loops will not be cut to add additional splices. Replacement fiber will be placed between designated splice points, even if it extends beyond the project limits. Replacement copper will be placed from pedestal to pedestal. No buried splices will be allowed under new pavement sections. These requirements may be modified upon written agreement by the Parties.

6. UDOT PROJECT RESPONSIBILITIES

A. In accordance with current policies and directives, **UDOT** may perform Subsurface Utility Engineering, Quality Levels A and B, within the limits of a Project. Additional work required to determine the vertical location of underground Facilities at specific, critical locations will be reviewed and if test holes are required, such costs will be shared between the parties on the same basis of responsibility as described in Section 7. A summary of the costs will be provided to the **COMPANY,** and the **COMPANY's** proportional share of the actual cost will be withheld from the **COMPANY**'s relocation reimbursement.

B. If, during the design phase of a Project, a major scope change is implemented after **COMPANY**'s design has been finalized and approved, **COMPANY** will be reimbursed 100% for redesign costs. **UDOT** will adjust any existing schedules to allow for any reasonable time that may be required for the **COMPANY** to redesign or modify its plans and relocate its Facilities when **UDOT** or its contractors requires the redesign.

C. **UDOT,** through its contractors, will provide surveying and staking of roadway facilities as required by the **COMPANY,** in accordance with **UDOT's** Standard Specifications, Section 01721, Survey, 3.16, Utilities. The cost of the surveying and staking will be at **UDOT**'s expense and will not be recovered from the **COMPANY**. Any of **UDOT**'s survey control stakes or bench markers which are removed or damaged by the **COMPANY** shall be reestablished by **UDOT** at **COMPANY's** expense.

D. **UDOT** will require its contractors to protect in place any existing facilities belonging to the **COMPANY**, including services, which, with the concurrence of the **COMPANY**, will not be relocated or adjusted during the proposed construction activities.

E. If, during the construction phase, **UDOT**'s contractor is allowed to accelerate the agreed upon baseline or proposal schedule, **UDOT** will hold the contractor responsible for 100% of the cost for a **COMPANY** approved contract engineer to perform tasks needed to meet the accelerated schedule which exceeds the **Company's** anticipated engineering schedule.

F. **UDOT** will require its contractor to reopen any splice pits the contractor covered prior to **COMPANY** crews completing splicing activities at no cost to the **COMPANY**, provided **COMPANY** is following their work schedule as agreed upon by **UDOT** and **COMPANY**.

7. COMPANY TO DESIGN AND CONSTRUCT UTILITY WORK

A. The **COMPANY**, with its regular engineering and construction forces at its standard schedule of wages and working hours, or through its qualified contractors with whom it has continuing contracts or has obtained contracts upon appropriate solicitation, will perform the necessary design work, field and office engineering, and shall furnish all materials and perform the construction work on its Facilities, necessitated by the Project. In performance of said work, the **COMPANY** and its contractors will adhere to the requirements of Utah Administrative Code R930-7 Utility Accommodation, as amended.

B. The **COMPANY** is required to meet clear zone requirements as defined in AASHTO's "Roadside Design Guide" and minimum vertical and horizontal clearances as defined in R930-7 Utility Accommodation, as amended.

C. The **COMPANY**, while engaged in the relocation of its Facilities, shall comply with **UDOT's** Standard Specification for Road and Bridge Construction Section 01355, Subpart 1.13, Discovery of Historical, Archeological or Paleontological Objects, if performing work within UDOT's right-of-way.

D. **COMPANY** provided traffic control devices shall conform to the standards set forth in the Manual on Uniform Traffic Control Devices ("MUTCD"), as adopted by **UDOT**. All flagging personnel shall be certified.

E. **COMPANY** employees and contractors working in the highway right-of-way shall comply with requirements of MUTCD Section 6D.03. concerning high-visibility safety apparel, as amended.

8. UDOT MAY DESIGN AND CONSTRUCT CERTAIN UTILITY FACILITIES

A. The **COMPANY** will perform design review and cost estimating; provide electronic equipment and splicing; and perform inspection with its own forces. The **COMPANY** may, at its discretion, allow **UDOT** to perform relocation design and/or construction work through qualified engineering and construction contractors appearing on the **COMPANY's** current preapproved list to perform the Utility Work, necessitated by a Project. If conduit, cable, fiber, pedestals and placing of such are required for the Utility Work, **UDOT** will obtain the materials from the contractors on the **COMPANY's** preapproved list. The **COMPANY** makes no representations as to the quality of work performed by the engineers and construction contractors on the **COMPANY's** preapproved list.

B. The **COMPANY** will require a four (4) week period after proposed design plans are delivered to the **COMPANY**, to review **UDOT**'s engineer's or contractor's design plans and the **COMPANY**'s pricing, and for internal approvals**. UDOT,** or its engineer or contractor shall provide to **COMPANY,** design plans in the following two (2) formats: (1) a civil engineered design package and (2) a format consistent with **COMPANY**'s internal telecommunications record keeping system. The **COMPANY** will approve the relocation plans and cost estimates in writing before incorporation into the Project or Supplemental Agreements.

C. **UDOT's** engineer or contractor will be required to provide the **COMPANY** with a schedule for the completion of their performed work before the **COMPANY** can prepare and submit a schedule for their performed work.

D. The **COMPANY** will perform inspection of the work on the **COMPANY's** facilities that will be performed by **UDOT**'s contractor. It is agreed that **UDOT**'s contractor will accomplish the work on the **COMPANY's** facilities in accordance with the plans and specifications approved by the **COMPANY**. Changes or additions to said plans and specifications shall be approved by the **COMPANY**. The **COMPANY** through their inspection of the contractor's work, will provide **UDOT's** Resident Engineer with information covering any problems or concerns the **COMPANY** may have with acceptance of said Facilities upon completion of construction.

E. The **COMPANY** will require two (2) business days notice to schedule a construction inspector for each location.

F. The **COMPANY** requires at least ninety (90) days notice to schedule splicing, and will determine the splicing window based on the types of circuit(s) and the requirements of Home Land Security and the Federal Aviation Administration (FAA).

G. If **UDOT's** contractor will be installing betterment facilities for the **COMPANY**, the Contractor will provide the **COMPANY** with a schedule of prices or a price breakdown for any betterment work requested. If the cost of the betterment work is not within 15% of the standard **COMPANY** costs, **COMPANY** will be allowed to have one of its approved contractors perform the betterment work in accordance with Paragraph 4 of this agreement. If **COMPANY's** contractor is to place the betterment, UDOT's contractor will grant reasonable access to open trenches and any area within the project limits required to construct the betterment, as determined by UDOT.

9. CHANGES IN WORK

In the event there are changes in the scope of the work, extra work, or changes in the planned work covered by this Agreement or Project Agreement, a modification will be approved in writing by the parties thereto prior to the start of work on said changes or additions.

10. COMPANY TO NOTIFY UDOT AND ITS CONTRACTOR BEFORE BEGINNING CONSTRUCTION WORK

The **COMPANY** will notify **UDOT's** Resident Engineer or authorized representative as identified in the Project Agreement at least 48 hours in advance of beginning any work. Such notification can be by telephone, email or in writing.

11. EMERGENCY WORK

When the **COMPANY** experiences an emergency unrelated to its work on the highway Project, it will take care of said emergency, after which it will again notify **UDOT** as to when work will be resumed on the Project.

12. DAILY RECORD KEEPING

UDOT, through its Resident Engineer or authorized representative, will keep daily record of the work performed by the **COMPANY**. The daily record shall be signed by **UDOT's** Project representative and the **COMPANY** or their authorized representatives as required and a copy shall be retained by the parties to this Agreement. If emergencies occur requiring the **COMPANY's** work forces to leave the job, record keeping shall be resumed upon return to the Project.

13. REIMBURSEMENT FOR COMPANY'S WORK

A. Pursuant to Utah Code Section 72-6-116, as amended, **UDOT** will reimburse the **COMPANY** 50% of the cost of all **COMPANY** costs related to the relocation work for its Facilities within State right-of-way, and 100% of the cost of all **COMPANY** costs related to the relocation work for its Facilities located within **COMPANY** owned easement, fee property or a public utility easement as defined in Section 54-3-27.

If the **COMPANY**'s Facilities are relocated from a **COMPANY** owned easement, fee title or public utility easement to State right-of-way and the **COMPANY** transfers its property interest without cost to **UDOT**, **UDOT** will reimburse the **COMPANY** 100% of the relocation costs caused by **UDOT**'s projects in the future.

B. Reimbursable costs will be developed in accordance with 23 CFR, Part 645, Subpart A.

C. The **COMPANY** will submit itemized bills covering its actual costs incurred for performing the work covered by the Project Agreements hereto, bearing the Project number together with supporting sheets on a monthly or quarterly basis.

D. **COMPANY** will also send one final and complete billing of all actual costs incurred within six months following completion of the work by the **COMPANY** on the Project to:

UDOT Contracts, Estimates and Agreements Specialist
4501 South 2700 West, Box 148220
Salt Lake City, Utah 84114-8220

E. In the event **COMPANY** fails to send a final bill to **UDOT** within six months of completion of **Company** work, **UDOT** may send notice to **COMPANY** requesting a final bill. **COMPANY** will have 45 days to respond with a final bill or will forfeit payment for the unbilled portion of the work. Both parties agree to cooperatively work together in good faith to resolve any disputes on the final billing within sixty (60) days after UDOT receives the final bill from **COMPANY**.

F. **UDOT** will reimburse the **COMPANY** within sixty (60) days after receipt of said billings but only for items complying fully with the provisions of 23 CFR, Part 645, Subpart A, Utility Relocations, Adjustments and Reimbursements. **UDOT** will provide a written explanation of any billings not reimbursed and the **COMPANY** shall have thirty (30) days from the date of such explanation to cure any deficiencies and re-submit to **UDOT**.

14. SALVAGE CREDIT

All materials from the existing **COMPANY** Facilities, which are recovered in suitable condition for reuse by the **COMPANY** and not reused on the Project, shall be credited to the cost of the Project at current stock prices in accordance with 23 CFR 645.117. If the recovered materials are not suitable for reuse, they shall be credited at salvage prices or such other prices as agreed upon between the **COMPANY** and **UDOT** following inspection of the recovered material.

15. COSTS DIFFER BY MORE THAN TEN PERCENT

If **COMPANY's** actual costs incurred for its reimbursable work differs more than 10% (plus or minus) per line item from the amount contained in the Project Agreement Cost Estimate, then **COMPANY** is required to submit a letter of explanation with its billings indicating why and how said difference in costs occurred.

16. AUDIT

UDOT and/or the Federal Highway Administration shall have the right to audit all cost records and accounts of the **COMPANY** pertaining to the Project in accordance with 23 CFR, Part 645, Subpart A. Should this audit disclose that the **COMPANY** has been underpaid, the **COMPANY** will be reimbursed by **UDOT** upon submission of additional billing to cover the underpayment. Should this audit disclose that the **COMPANY** has been overpaid, the **COMPANY** will reimburse **UDOT** in the amount of the overpayment. For the purpose of audit the **COMPANY** is required to keep and maintain its records of work covered herein for a minimum of three years after final payment is received by the **COMPANY** from **UDOT**.

17. MISCELLANEOUS

A. In the event of any dispute relating to this Agreement, resulting in litigation, the prevailing party shall be entitled to recover all costs, including reasonable attorney fees.The provisions of this Agreement are severable, and should any provision be deemed void, unenforceable or invalid, such provision shall not affect the remainder of this Agreement.

B. This Agreement shall be governed by the laws of the State of Utah and applicable federal law. Any litigation shall be instituted only in a court of competent jurisdiction, whether state or federal, located within the State of Utah.

C. This Agreement may be terminated by either party by providing 30 day written notice of termination to the other party. Any such termination shall not affect the validity of any previously executed Project Agreements or any other agreements supplemental to this Agreement.

****

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized officers as of the day and year first above written.

STATE OF UTAH)

) §

COUNTY OF Salt Lake)

Subscribed and sworn to before me this 1 Day of April, 2014.

Notary Public

Residing in: Davis County

Commissions Expires: 2/12/17

(IMPRESS SEAL)

APPROVED AS TO FORM:

By: _____
Counsel for **COMPANY**

Qwest Corporation dba CenturyLink QC (CENTURYLINK), A Registered Corporation in the State of Colorado on behalf of itself and its affiliates

By: _____

Title:: Director of Network operations

Date: 4/1/14

WHITNEY BENTZ
Notary Public State of Utah
My Commission Expires on:
February 12, 2017
Comm. Number: 662761

****

UTAH DEPARTMENT OF TRANSPORTATION

RECOMMENDED FOR APPROVAL:

By: _____

Title: UDOT Statewide Utilities Engineer

Date: 02 April 2014

APPROVED:

By: _____

Title: UDOT Project Development Director

Date: 4/2/14

APPROVED AS TO FORM:

By: _____

Title: Assistant Attorney General

Date: 4/1/2014

COMPTROLLER'S OFFICE

By: _____

Title: UDOT Comptroller Office Contract Administrator

Date: 4-15-14

Exhibit A
BUY AMERICA

Federal-aid projects are subject to Title 23 CFR Part 635.410, Buy America Requirements. This federal regulation requires a domestic manufacturing process for all steel or iron products that are permanently incorporated into federal-aid highway construction projects. This includes relocation projects performed by utility companies and reimbursed by the Utah Department of Transportation. This exhibit establishes the required documentation and Utility Company responsibilities to demonstrate compliance with this federal law. A copy of the federal regulation can be found at: http://www.fhwa.dot.gov/construction/contracts/buyam_qa.cfm

A. All products predominantly manufactured from steel and iron must be manufactured in the United States to be considered domestic.

   1. All manufacturing processes of the steel and iron material in a product such as melting, rolling, extruding, machining, bending, grinding, drilling, and coating must occur within the United States.
   2. Coating includes all processes that protect or enhance the value of the material to which the coating is applied. The material applied as a coating is not subject to Buy America.

B. Maintain Material Certifications of Compliance for each manufacturing and coating process for three (3) years after delivery to project site. Upon request provide access to these documents to the Utah Department of Transportation and the Federal Highway Administration.

   1. Include as a minimum the following information for Material Certifications of Compliance for Buy America:
      a. Signed mill test report.
      b. Signed certification by each Fabricator and Manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States.
      c. Material descriptions, quantities, and means of material identification such as heat numbers, lot numbers, and other industry identification markings for each process the material underwent so the final product can be tracked through a step process from melting to final product.
      d. Tracking of quantities is not required for coating operations.

   2. Include all steel or iron materials that can't be substantiated as being of domestic origin in cost documentation for foreign steel or iron.

C. The above requirement does not preclude a minimal use of foreign steel or iron, provided the cost of the steel or iron used does not exceed one tenth of one percent (0.1 percent) of the total contract amount or $2,500, whichever is greater. The contract referenced here is the contract between the Utah Department of Transportation and the Utility Company. Maintain satisfactory cost documentation to describe the minimal use materials being incorporated into the project when foreign steel or iron is used.

D. The following are exempt from Buy America:
   1. Temporary steel or iron materials.
   2. Materials left in place for the contractor's convenience
   3. Nuts, bolts, washers, screws, tie wire, spacers, and other miscellaneous steel or iron parts that are considered common off-the-shelf products.
   4. Fencing stays, clips, staples, or other miscellaneous fencing components.
   5. Manufactured products that are less than 90% steel or iron content by volume when it is delivered to the job site for installation. Pre-cast concrete items such as pipe, manholes, boxes and vaults still need to meet the Buy America requirements.
   6. Miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct predominately steel or iron products are not subject to Buy America requirements. These miscellaneous items include but are not limited to, lifting hooks, concrete chairs, cabinets, covers, shelves, clamps, fittings, and sleeves.

E. Provide a written Company Certification (using the included form below) that all delivered steel and iron items subject to Buy America as defined above are manufactured domestically.

COMPANY CERTIFICATION

Certification Requirement for 23 CFR 635.410 Buy America

This project will be utilizing federal funds. Please complete, sign and submit this Buy America Certification to UDOT's Resident Engineer prior to or at the time subject materials are delivered to the project site.

Buy America Certification

I certify that all materials provided for use on Federal Aid Highway Project #_____, except for minimal use materials, meet the requirements of 23 CFR 635.410 Buy America and any amendments thereto. Material Certificates of Compliance for each manufacturing and coating process performed during the production of these materials are on file and will be made available for review by the Utah Department of Transportation and the Federal Highway Administration upon request.

Signature _____

Name _____

Title _____

Company Name _____

Date _____

Estimated Dollar Value of Minimal Use Materials Provided _____

Project No. _____; _____ County
Project Name:_____
CenturyLink
Job No. _____
CID No. _____ PIN _____

EXHIBIT B

CENTURYLINK

PROJECT AGREEMENT

Supplement to Statewide Utility Relocation Agreement, Finance No. XXXXXX

THIS PROJECT AGREEMENT, made and entered into this_____ day of _____, 20_____, by and between the **UTAH DEPARTMENT OF TRANSPORTATION**, hereinafter referred to as **"UDOT"** and **QWEST CORPORATION DBA CENTURYLINK QC**, a Registered Corporation in the State of Colorado, hereinafter referred to as the **"COMPANY",**

The parties hereto entered in to a **STATEWIDE UTILITY RELOCATION AGREEMENT** dated _____ **UDOT** Finance No. XXXXXX. All the terms of said **STATEWIDE AGREEMENT** remain in full force and effect unless otherwise specified herein.

NOW THEREFORE, it is agreed by and between the parties hereto as follows:

1. The **COMPANY** will perform the following described work in accordance with the terms and conditions of the **STATEWIDE UTILITY RELOCATION AGREEMENT.**

   Description of work to be performed, including location:

   (Plan Sheets and Right of Way Documents, if applicable, attached)

   Party performing the work:

   Anticipated duration of work:

   Estimated Total Cost of Work:
   (Detailed Estimate attached)

Project No. _____; _____ County
Project Name:_____
CenturyLink
Job No. _____
CID No. _____ PIN _____

Betterments Included:

2. **UDOT** will perform the following described work in accordance with the terms and conditions of the **STATEWIDE UTILITY RELOCATION AGREEMENT.**

   Description of work to be performed, including location:

3. Work to be completed under this Project Agreement is subject to the following:

   Special Provisions

   -
   -
   -

4. The **COMPANY** shall be reimbursed by **UDOT** for XXX% of the actual costs incurred by the **COMPANY** for performing the work covered herein. An Estimate of the total cost of said work was furnished by the **COMPANY** to **UDOT** under date of _____ in the total amount of _____Dollars ($_____). A copy of the details of said estimates are marked "EXHIBIT A" attached hereto and thereby made a part hereof.

   TOTAL ESTIMATED COST TO UDOT IS $_____

   TOTAL ESTIMATED COST TO THE COMPANY IS $_____

   NOTE: The above are estimates only. Total payment to the **COMPANY** by **UDOT** will be based on the actual costs incurred as determined after completion of construction.

5. Upon signature and return of four copies of this Project Agreement to **UDOT**, the **COMPANY** is authorized to proceed with the work covered herein.

Project No. _____; _____ County
Project Name:_____
CenturyLink
Job No. _____
CID No. _____ PIN _____

****

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first written above.

STATE OF UTAH)
§
COUNTY OF)

Subscribed and sworn to before me this
_____Day of _____, 20____.

_____
Notary Public
Residing in:
Commissions Expires:

QWEST CORPORATION DBA CENTURYLINK QC, A Registered Corporation
in the State of Colorado

By: _____

Title:: _____

Date: _____

(IMPRESS SEAL)
****

RECOMMENDED FOR APPROVAL:

_____
Utility and Railroad Coordinator
Date: _____

UTAH DEPARTMENT OF TRANSPORTATION

By_____
Region Director
Date: _____

APPROVED AS TO FORM:

The Utah State Attorney General's Office has previously approved all paragraphs in this Agreement as to form.

UDOT COMPTROLLER'S OFFICE:

_____
Contract Administrator
Date: _____

01 April 2014

CENTURYLINK QC
PROJECT AGREEMENT

Supplement to Statewide Utility Relocation Agreement, Finance No. 158015

THIS PROJECT AGREEMENT, made and entered into this_____ day of _____, 20___, by and between the **UTAH DEPARTMENT OF TRANSPORTATION**, hereinafter referred to as **"UDOT"** and **QWEST CORPORATION DBA CENTURYLINK QC**, a Registered Corporation in the State of Colorado, hereinafter referred to as the **"COMPANY."**

The parties hereto entered in to a **STATEWIDE UTILITY RELOCATION AGREEMENT** dated April 2, 2014, **UDOT** Finance No. 158015. All the terms of the **STATEWIDE UTILITY RELOCATION AGREEMENT** remain in full force and effect unless otherwise specified herein.

NOW THEREFORE, it is agreed by and between the parties hereto as follows:

1. **PROJECT INFORMATION**

UDOT is preparing to request proposals for and award a design-build contract for the highway project identified as S-0154(12)11, Salt Lake County, 4 Interchanges on Bangerter Highway hereinafter referred to as the "Project". UDOT's design-build contractor will complete the design and administer construction of the Project. The project contractor will hereinafter be referred to as the "Design-Builder".

2. **PROJECT CONTACT INFORMATION**

UDOT's Project Representative is Alana Spendlove, UDOT Project Utility and Railroad Leader, telephone number (801) 887-3462 and e-mail aspendlove@utah.gov.

UDOT's Resident Engineer for 5400 South and 7000 South interchanges is Bryan Chamberlain, telephone number (801) 887-3405, and e-mail bchamberlain@utah.gov, or their designated representative, as assigned.

UDOT's Resident Engineer for 9000 South and 11400 South interchanges is Ken Talbot, telephone number (801) 360-8750, and e-mail kentalbot@utah.gov, or their designated representative, as assigned.

Company's contact person for the Project is Daren Keller, telephone number (801) 356-6975, e-mail darren.keller@centurylink.com, and mailing address 75 East 100 North, Provo, Utah 84601.

After awarding the Project, UDOT will provide the Company with the Design Builder contact information, hereinafter referred to as "Design-Builder Project Representative."

3. AUTHORIZATION FOR DESIGN WORK

In order to facilitate coordination and obtain technical information about the Company's Utilities and requirements for inclusion in this Agreement and the Request for Proposals, UDOT gave the Company authorization for preliminary design engineering on April 26, 2016.

4. PROJECT REQUIREMENTS

The Company desires to design and construct its own Utility Work necessitated by the Project and shall conduct the Utility Work in accordance with the specific terms of the Statewide Utility Relocation Agreement.

The Company shall not commence performing any Utility Work until the Project Agreement is executed by both Parties and the Company receives an Authorization to Proceed letter.

****

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first written above.

QWEST CORPORATION DBA CENTURYLINK QC,
A Registered Corporation in the State of Colorado

By: K.C. [illegible]

Title: Mgr Engineering & Construction

Date: 8/24/16

Recommended For Approval:

Title: Utility and Railroad Leader

Date: _____

Utah Department of Transportation

Title: Project Director

Date: _____

Approved as to Form

Title: Assistant Attorney General

Date: _____

UDOT Comptroller Office Contract Administrator

Title: _____

Date: _____

178140

Project No. S-0154(12)11, Salt Lake County
4 Interchanges on Bangerter Highway
COMCAST CABLE
Charge ID No. 71939 PIN 12566

25695

COMCAST CABLE
MASTER UTILITY AGREEMENT

THIS MASTER UTILITY AGREEMENT, made and entered into this 8 day of Aug, 2016, by and between the **Utah Department of Transportation**, ("UDOT") and **Comcast Cable**, doing business as Comcast Cable, a Registered Corporation in the State of Utah, ("Company") (each as "Party" and jointly as "Parties").

RECITALS

WHEREAS, UDOT is preparing to request proposals for and award a design-build contract for the highway project identified as Project Number S-0154(12)11, 4 Interchanges on Bangerter Highway in Salt Lake County, Utah, ("Project"); and

WHEREAS, the design-build contractor will complete the design and administer construction of the Project ("Design-Builder"); and

WHEREAS, UDOT has identified Company facilities within the limits of the Project, which may necessitate the relocation, protection or adjustment of the facilities ("Utility Work"); and

WHEREAS, the Company desires to design and construct its own Utility Work necessitated by the Project; and

WHEREAS, for the purpose of expediting any required Utility Work and reimbursement, the Parties are entering into this Project Master Utility Agreement with the understanding that future supplemental agreements to this Agreement will be entered into covering Utility Work to be accomplished by the Company at specific Project locations.

THIS AGREEMENT is made to set out the terms and conditions where under the Utility Work shall be performed.

AGREEMENT

NOW THEREFORE, the Parties agree as follows:

1. CONTACT INFORMATION

UDOT's Project Representative is Alana Spendlove, UDOT Project Utility and Railroad Leader, telephone number (801) 887-3462, and e-mail aspendlove@utah.gov.

UDOT's Resident Engineer for 5400 South and 7000 South interchanges is Bryan Chamberlain, telephone number (801) 887-3405, and e-mail bchamberlain@utah.gov, or their designated representative, as assigned.

UDOT's Resident Engineer for 9000 South and 11400 South interchanges is Ken Talbot, telephone number (801) 360-8750, and e-mail kentalbot@utah.gov, or their designated representative, as assigned.

UDOT's Field Representative contact person will be identified in subsequent supplemental agreements.

Company's contact person is David Mascarenas, telephone number (801) 831-6622, and e-mail david_mascarenas@cable.comcast.com.

After awarding the Project, UDOT will provide the Company with the Design-Builder contact information, hereinafter referred to as "Design-Builder Project Representative."

2. AUTHORIZATION FOR DESIGN WORK

In order to facilitate coordination and obtain technical information about the Company's facilities and requirements for inclusion in this Agreement and the request for proposals, UDOT gave the Company authorization for preliminary design engineering on April 26, 2016.

3. SUBSURFACE UTILITY ENGINEERING

UDOT has performed Subsurface Utility Engineering (SUE) within the limits of the Project. Additional SUE work to determine the precise location of underground facilities at specific, critical locations on the Project will be reviewed with the Company

4. PROJECT COORDINATION

During the development of the Project design, Company and UDOT, along with its Design-Builder, shall consult as necessary in an effort to determine if conflicts with the Company's facilities can be avoided. The Parties shall confer until a resolution is reached on each potential conflict.

If Utility Work for the Company's facilities is required to accommodate the Project, UDOT will be responsible to propose and provide a location for the facilities. UDOT will provide the Company with Project design plans as early as possible, and will schedule and meet with the

Company to review the design, construction, estimates of cost, and scheduling for the Company's Utility Work at specific locations on the Project to insure maximum lead time for advance order of materials and work force scheduling.

The Company shall advise UDOT's Project Representative of the approximate time required for completion of the Utility Work and shall diligently pursue its Utility Work so that completion can be accomplished according to the pre-determined time schedule negotiated by the Company and UDOT in the supplemental agreement issued hereto for a specific Project location. The Company shall immediately notify UDOT's Project Representative by, phone call or email, of its discovery of any occurrence or unforeseen circumstances that would prevent the Company from completing its Utility Work according to the time schedule provided. In addition, the Company shall describe the circumstances in writing within 24-hours of the discovery to UDOT's Project Representative.

5. COMPANY REQUIREMENTS

UDOT will comply with the following Company requirements:

a. Company requires advance notice of 72 hours for emergency splicing, 5 business days for normal splicing, and 2-4 weeks' notice for larger distribution lines.

b. Company's maintenance hours of operation are between 1:00 a.m. and 6:00 a.m. The Company does not allow disruption of its cable television services.

6. COMPANY TO DESIGN AND CONSTRUCT ITS UTILITY WORK

The Company, with its regular engineering and construction forces at its standard schedule of wages and working hours, or through qualified contractors with whom they have continuing contracts, shall perform the necessary design work in accordance with Company's standards regularly followed by the Company and not considered a betterment, cost estimating, field and office engineering, furnish all materials, and perform the Utility Work necessitated by the Project.

7. STANDARD SPECIFICATIONS AND REGULATIONS

The Company, while engaged in the preliminary design and Utility Work of its facilities, shall comply with UDOT's 2012 Standard Specifications for Road and Bridge Construction and Utah Administrative Code R930-7.

8. UNDERBUILT AND FACILITY REMOVAL REQUIREMENTS

The Company is responsible to remove all Company-owned underbuilt facilities from utility poles that will be relocated or removed due to the Project.

9. RIGHT-OF-WAY

Any easements or replacement right-of-way required in conjunction with the Utility Work of Company's facilities will be acquired by UDOT in accordance with the requirements of Utah Administrative Code R930-8-7.

10. MAINTENANCE OF TRAFFIC (MOT), TRAFFIC CONTROL, CLEAR/GRUB, AND SURVEYING

UDOT will provide MOT and traffic control for Utility Work at no cost to the Company. The Company is responsible to coordinate Utility Work schedules and traffic control needs with UDOT to facilitate the Project schedule and minimize impacts to the public. Except in the case of emergencies, Company's Utility Work on the Project will be scheduled in compliance with the requirements of the Limitation of Operations contained in UDOT's Design-Builder contract with respect to lane closures, peak hour work restrictions, holiday and special event limitations, etc.

UDOT will provide, at no cost to the Company, clearing and grubbing of the roadway as required by the Company and in accordance with UDOT's Standard Specifications.

Surveying and staking of roadway facilities as required by the Company will be provided by UDOT in accordance with UDOT's Standard Specifications. The cost of the surveying and staking will be at UDOT's expense and the Company will have no obligation for the cost of surveying. Any of UDOT's survey control stakes or bench markers which are removed or damaged by the Company shall be reestablished by UDOT at the Company's expense.

11. BETTERMENT WORK

If the Company desires to include betterment work in the Project at any specific location, UDOT may agree to the betterment work provided the difference in costs between the functionally equivalent required Utility Work and the Company's desired betterment work shall be at the sole cost of the Company, and the betterment work can reasonably be accommodated without delaying UDOT's Project. The betterment work will be addressed by a separate supplemental agreement between UDOT and the Company.

Once a Design-Builder has been selected by UDOT, any betterment work request will be negotiated directly with the Design-Builder. However, it is at UDOT's sole discretion to approve the betterment work.

12. SUPPLEMENTAL AGREEMENTS

UDOT and the Company shall enter into individual supplemental agreements to cover Utility Work at specific Project locations. Each supplemental agreement will include a description and location of the Utility Work to be performed, design drawings showing the original and proposed locations of the facilities, Utility Work schedules, cost estimates, participation shares for UDOT and the Company, any proposed betterment work, and any necessary right-of-way documents. The cost estimates will be based upon the prices of materials and labor current as of the date of the estimates. The estimates do not account for increases due to unknown and unforeseen hardships in accomplishing the Utility Work. A copy of the format of the proposed supplemental agreement is marked Exhibit "A" that is incorporated by reference.

The Company will require a 2 week review and approval period for any final supplemental agreement submitted to the Company by UDOT.

In the event there are changes in the scope of the Utility Work, extra Utility Work, or changes in the planned Utility Work covered by a supplemental agreement, a modification to the supplemental agreement signed by the Parties is required prior to the start of Utility Work on the changes or additions.

13. UDOT AUTHORIZATION TO PROCEED WITH UTILITY WORK

The Company shall not perform any Utility Work until the supplemental agreement for the Utility Work is signed by the Company and received by UDOT. UDOT will review and approve the supplemental agreement and will issue an authorization to proceed to the Company for each specific Utility Work location.

14. COMPANY TO NOTIFY UDOT AND THE DESIGN-BUILDER BEFORE BEGINNING COMPANY-PERFORMED UTILITY WORK

The Company will notify UDOT's Resident Engineer as well as the Design-Builder Project Representative at least 2 business days in advance of beginning any Utility Work covered by any supplemental agreements hereto. The Company will give subsequent notifications of when and where the Company will be performing Utility Work to UDOT's Field Representative and the Design-Builder Project Representative on a day-to-day basis. Such subsequent notifications can be informal. Failure on the part of the Company to give proper notification to UDOT's Field Representative and the Design-Builder Project Representative will be cited to the Company and that portion of the Company's Utility Work performed while not under the surveillance of the UDOT Field Representative may be deducted from the reimbursement at UDOT's discretion

15. DAILY RECORD KEEPING

UDOT's Field Representative will keep daily records of the Utility Work performed by the Company forces. Daily records will be kept on forms to be prepared by the Company or UDOT. The type of form to be used shall be preapproved by UDOT's Contracts, Compliance, and Certification Manager. The daily records shall be signed by UDOT's Field Representative, and the Company or its authorized representative. Copies of the Utility Work daily records shall be retained by the Parties.

16. REIMBURSEMENT FOR COMPANY'S UTILITY WORK

In accordance with Utah Code §72-6-116(3)(a)(ii), UDOT will reimburse the Company 50% of the cost of Utility Work to accommodate a state highway project and the Company shall pay the remainder of the cost. UDOT will reimburse the Company 100% of the cost of Utility Work for facilities located on a public utility easement or subdivision plat, on a Company-owned private easement, or fee property. The Company shall provide UDOT with a copy of the public utility easement, private easement or fee title. The Utility Work and reimbursement will be in conformance with the requirements of Utah Administrative Code R930-8.

The Company shall submit itemized bills covering its actual costs incurred for performing the Utility Work covered by supplemental agreements to UDOT's Contracts and Compliance Specialist:

UDOT Contracts and Compliance Specialist
4501 South 2700 West
Construction Office, Box 148220
Salt Lake City, Utah 84114-8220

Itemized bills shall bear the Project number, supplemental agreement number, supporting sheets, and a complete billing statement of all actual costs incurred, following the order of the items in the detailed estimates contained in the supplemental agreement and be submitted to UDOT within 60 days following completion of the Utility Work by the Company on the Project. Otherwise, previous payments to the Company may be considered final, except as agreed to between the Parties in advance.

UDOT will reimburse the Company within 60 days after receipt of the billings, but only for those items complying fully with the provisions of Utah Administrative Code R930-8. Failure on the part of the Company to submit the billings within 6 months of the completion of the Utility Work will result in UDOT's disallowance of reimbursement for that portion of Utility Work.

17. SALVAGE CREDIT

In accordance with 23 C.F.R. §645.117, all materials from the existing facilities, which are recovered in suitable condition for reuse by the Company and not reused on the Project, shall be credited to the cost of the Project at current stock prices. If the materials are not suitable for reuse, they shall be credited at such other prices as agreed upon between the Company and UDOT following inspection of the recovered material.

18. REDESIGN AND REWORK OF UTILITY WORK DUE TO PROJECT CHANGES

If the Company's design of Utility Work has been completed and accepted by UDOT and the Company is required to redesign the Utility Work or redesign and reconstruct the Utility Work as a result of UDOT changing the Project design, the cost of the redesign or redesign and increased cost for the reconstruction of Utility Work will be paid in full by UDOT. UDOT will make adjustments for any additional time that may be required for the Company to redesign or modify its plans or re-work Utility Work due to UDOT changing the design after acceptance of the design plans for the Utility Work.

19. COMPANY'S COSTS DIFFER BY MORE THAN 10%

If the Company's actual costs incurred for its force account work differs more than 10% plus or minus per line item from the amount contained in the supplemental agreements, the Company is required to submit a letter of explanation with its billings indicating how and why the difference in costs occurred.

20. AUDIT

UDOT and the Federal Highway Administration shall have the right to audit all cost records and accounts of the Company pertaining to the Project in accordance with the auditing procedure of the Federal Highway Administration and 23 C.F.R. §645, subpart A. Should this audit disclose that the Company has been underpaid, UDOT will reimburse the Company upon submission of

additional billing to cover the underpayment. The Company shall submit the additional billing within 60 days from the date of the notification of the underpayment. Should this audit disclose that the Company has been overpaid, the Company will reimburse UDOT in the amount of the overpayment within 60 days of notification of audit findings. For the purpose of audit the Company is required to keep and maintain its records of Utility Work covered herein for a minimum of 3 years after final payment is received by the Company from UDOT.

21. ACCESS AND MAINTENANCE

Access for maintenance and servicing of Company's facilities located on the right-of-way of the Project will be allowed only by permit issued by UDOT to the Company. The Company will obtain the permit and abide by conditions thereof for policing and other controls in conformance with Utah Administrative Code R930-7.

22. MISCELLANEOUS

a. Each Party agrees to undertake and perform all further acts that are reasonably necessary to carry out the intent and purpose of the Agreement at the request of the other Party.

b. This Agreement in no way creates any type of agency relationship, joint venture, or partnership between UDOT and Company.

c. The failure of either Party to insist upon strict compliance of any of the terms and conditions, or failure or delay by either Party to exercise any rights or remedies provided in this Agreement, or by law, will not release either Party from any obligations arising under this Agreement.

d. This Agreement shall be deemed to be made under and shall be governed by the laws of the State of Utah in all respects. Each person signing this Agreement warrants that the person has full legal capacity, power, and authority to execute this Agreement for and on behalf of the respective Party and to bind such Party. This Agreement may be executed in one or more counterparts, each of which shall be an original, with the same effect as if the signatures were made upon the same instrument. This Agreement may be delivered by facsimile or electronic mail.

****

IN WITNESS WHEREOF, the Parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

Comcast Cable

Title: Merlin Jensen
VP of Operations

Date: 7/26/16

. . . . . .

Recommended For Approval:

Title: Utility and Railroad Leader

Date: 8/8/16

Utah Department of Transportation

Title: Project Director

Date: Aug 8, 2016

Approved as to Form

Title: Assistant Attorney General

Date: 8/09/2016

UDOT Comptroller Office Contract Administrator

Title:

Date: 8-10-16

COMCST CABLE
SUPPLEMENTAL AGREEMENT NO. ___

Supplement to UDOT Finance No. _____

THIS SUPPLEMENTAL AGREEMENT, made and entered into this _____ day of _____, 20____, **Utah Department of Transportation**, ("UDOT") and **Comcast Cable**, **doing business as** Comcast Cable, a Registered Corporation in the State of Utah, ("Company") (each as "Party" and jointly as "Parties").

The Parties hereto entered in to a Master Utility Agreement (MUA) dated _____, UDOT Finance No. _____. All the terms of the MUA remain in full force and effect unless otherwise specified herein.

The Parties agree as follows:

1. Company will perform the following described Utility Work in accordance with the terms and conditions of the MUA:

   a. Description of Utility Work to be performed, including proposed location, described in Exhibit "A" that is incorporated by reference: (Plan Sheets Attached)

   b. The Company requirements as shown in MUA – Company Requirements, are modified as follows:

   c. Anticipated duration of Utility Work as shown on Exhibit "B" that is incorporated by reference:

   d. Betterments included:

TOTAL ESTIMATED COST OF SUPPLEMENTAL AGREEMENT _____	**$0.00**
TOTAL ESTIMATED AMOUNT OF COMPANY PARTICIPATION @ 50%	$0.00
TOTAL ESTIMATED AMOUNT OF UDOT PARTICIPATION @ 50%	$0.00

2. The Company will notify UDOT's Project Representative, _____, Telephone No. _____, email_____ and the Design-Builder's Representative, _____, Telephone No. _____, email_____ at least 48 hours in advance of beginning the Utility Work covered herein, or in accordance with the specific terms of the MUA, as applicable.

IN WITNESS WHEREOF, the Parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first written above.

Comcast Cable

_____

Title: _____

Date: _____

. . . . . .

Recommended For Approval:

_____

Title: Utility and Railroad Leader

Date: _____

Utah Department of Transportation

_____

Title: Project Director

Date: _____

UDOT Comptroller Office Contract Administrator

_____

Title:

Date: _____

E 25592 178083

Statewide Agreement Covering the Coordination and Reimbursement for **COMPANY's** Facility Adjustments and Relocations Throughout the State of Utah
QUESTAR GAS COMPANY

STATEWIDE UTILITY RELOCATION AGREEMENT

THIS STATEWIDE UTILITY RELOCATION AGREEMENT, (Agreement) is made and entered into this 19 day of July, 2016, by and between the **UTAH DEPARTMENT OF TRANSPORTATION**, hereinafter referred to as "**UDOT**" and **QUESTAR GAS COMPANY**, a Registered Corporation in the State of Utah, hereinafter referred to as the "**COMPANY**." The Utah Department of Transportation and Questar Gas Company are referred to herein individually as a "Party" or collectively as the "Parties."

RECITALS:

WHEREAS, UDOT has jurisdiction over State Highway Rights of Way and administers the programming, development and completion of State and Federal-aid eligible projects (referred to herein as Project or collectively as Projects); and

WHEREAS, COMPANY is a natural gas utility and owns natural gas facilities (Facilities), that are located within State Highway Rights of Way under a Statewide Utility License Agreement and within **COMPANY** owned easements or fee title property; and

WHEREAS, certain Projects will require the relocation, adjustment, or protection of **COMPANY** Facilities, and the **COMPANY** is required by State Law to perform this work (Utility Work) when necessary to accommodate a Project; and

WHEREAS, to expedite the Utility Work and reimbursement of Utility Work on Projects, it is the desire of the Parties to enter into this Agreement with the understanding that the Parties will enter into future Project Agreements, which are supplemental to this Agreement, to address the scope of work, schedule, reimbursement amounts, and other requirements for each Project; and

WHEREAS, this Agreement, along with the Project Agreements shall govern the terms and conditions for each Project;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which hereby acknowledged, the Parties agree to the following terms and conditions.

TERMS AND CONDITIONS

1. PROJECT IDENTIFICATION AND DEVELOPMENT

A. For each Project the Parties agree to enter into a Project Agreement. **UDOT** will prepare a Project Agreement in substantially the same form as the agreement attached hereto as Exhibit A. All terms in the Project Agreements shall be supplemental to the terms of this Agreement. In the case of an inconsistency between the terms of this Agreement and the terms of a Project Agreement, the terms of the Project Agreement shall control.

B. In some cases, particularly when **UDOT** engages a Design Builder or a Construction Manager General Contractor, the Parties may enter into Supplemental Agreements to the Project

Agreement. In this case, the Project Agreement may be limited to contact information and a description of anticipated work. The Supplemental Agreements will address Utility Work for specific Project locations and include a description of the work, the Party to perform the work, the location of the work, the estimated duration of the work, an estimate of the cost to each Party, any proposed betterments, a plan showing the existing and proposed location of the Facilities, and any necessary right-of-way documents. The estimates contained in the Project Agreement and Supplemental Agreements will be based upon material and labor prices as of the date of the estimate and do not account for increases due to unforeseen circumstances in accomplishing the Utility Work.

2. PROJECT COORDINATION

A. During the request for proposal phase of any Design Build Project, **UDOT** shall schedule a meeting with **COMPANY** and **UDOT's** prospective contractors. The purpose of the meeting will be to determine if conflicts with the **COMPANY's** Facilities can be avoided and to provide prospective contractors with parameters within which **COMPANY's** Facilities can be relocated. **COMPANY** and **UDOT** will also meet one (1) time individually with each prospective contractor for the same purpose.

B. During the design phase of any Project, **UDOT** and **COMPANY** will work in good faith to identify the extent of any conflicts and propose and provide a mutually agreeable location to which the Facilities can be relocated. **UDOT** will provide the **COMPANY** with Project design plans as early as possible, and will schedule and meet with the **COMPANY** to review the right-of-way and environmental requirements, design, construction, cost estimates, and scheduling for the **COMPANY's** Utility Work at specific locations on the Project to ensure maximum lead time for advance order of materials and scheduling of work force.

C. **COMPANY** shall provide **UDOT** with an estimated time for completion of the Utility Work and any potential limitations including permit and regulatory approvals, dependency upon work of other parties, lead times for acquiring materials, outage windows, and scheduling work crews. **UDOT** will, by its standard specifications and/or special provisions, make its contractor aware of the coordination and cooperation required for timely completion of the Utility Work and will advise the contractor of the approximate schedule for completion of the Utility Work during Project advertisement. After UDOT awards the Project to its contractor, UDOT will schedule a meeting with the COMPANY and the COMPANY shall meet with UDOT's representative and UDOT's contractor to develop a detailed work plan and schedule for Utility Work. The COMPANY shall submit to UDOT written acknowledgement of the approved schedule. The **COMPANY** shall diligently pursue its work so that completion can be accomplished according to the approved schedule after receiving written authorization to proceed.

D. The **COMPANY** shall notify **UDOT**, or its contractor if so designated by **UDOT**, as soon as practicable but no later than two (2) working days of its discovery of any occurrence or unforeseen circumstances that would prevent the **COMPANY** from completing the Utility Work according to the time schedule established in the Project Agreement.

E. After the Project Agreement is executed by the Parties, any change in the scope of the work, extra work, or change in the planned work covered by this Agreement or the Project Agreement will be noted in the daily records and is valid only if made by written authorization and Change Order executed by both Parties prior to the start of the revised work. The **COMPANY** will provide to **UDOT** detailed estimates for the Change Order work. If the change of work is significant, **UDOT** may require a Supplemental Agreement.

3. COMPANY REQUIREMENTS

A. After design work is complete and the Project Agreement has been executed, **COMPANY** may require up to six (6) months for the acquisition of materials for high pressure (HP) Facilities and seven (7) weeks for acquisition of materials for intermediate high pressure (IHP) Facilities.

B. The Parties shall develop a Project schedule for the relocation of **COMPANY's** Facilities. Utility Work on **COMPANY** Facilities from October 1 through April 15 will be avoided, unless otherwise agreed to in writing. Utility Work between April 16 and September 30 may be performed depending upon the **COMPANY's** system requirements.

C. The Parties may agree to abandon retired lines in place in accordance with **UDOT** and **COMPANY** procedures. Abandoned lines remain the property of **COMPANY**. If abandoned lines are removed, **COMPANY** will perform the work and the cost of removal will be included in the Project costs and shared by **UDOT** and **COMPANY** under the terms of the Project Agreement.

4. UDOT PROJECT RESPONSIBILITIES

A. **UDOT**, through its contractors, will provide surveying and staking of roadway facilities as required by the **COMPANY,** in accordance with **UDOT's** Standard Specifications, Section 01721, Survey, 3.16, Utilities. The cost of the surveying and staking will be at **UDOT's** sole expense and the **COMPANY** will have no obligation for surveying. Any of **UDOT's** survey control stakes or bench markers which are removed or damaged by the **COMPANY** shall be reestablished by **UDOT** at **COMPANY's** expense.

B. **UDOT** will adjust any existing schedule to allow for any reasonable time that may be required for the **COMPANY** to redesign or modify its plans and relocate its Facilities when **UDOT** requires the redesign. If **UDOT** substantially changes the Project design after the **COMPANY** has completed or is in the process of completing its relocation design; or if the **COMPANY** has completed the relocation of its Facilities based on previously approved design plans, the cost of the second design and/or relocation is to be paid in full by **UDOT**.

C. In accordance with current policies and directives, **UDOT** may perform Subsurface Utility Engineering, Quality Levels A and B, within the limits of a Project. Additional work required to determine the vertical location of underground Facilities at specific, critical locations will be reviewed with the **COMPANY**. A summary of the costs will be provided to the **COMPANY**, and the **COMPANY's** proportional share of the actual cost will be withheld from the **COMPANY's** relocation reimbursement.

5. COMPANY TO DESIGN AND CONSTRUCT UTILITY WORK

A. **COMPANY**, with its regular engineering and construction forces at its standard schedule of wages and working hours, or through its qualified contractors with whom it has continuing contracts or has obtained contracts upon appropriate solicitation, shall perform the necessary design work, field and office engineering, and shall furnish all materials and perform the construction work on its Facilities, necessitated by the Project.

The need for overtime or other additional costs necessary to meet **UDOT's** schedule, allowable outage windows or available lane closures for the completion of the Utility Work will be evaluated and agreed upon in advance by the Parties. In performance of the Utility Work, the **COMPANY**

and its contractors will adhere to the requirements of Utah Administrative Codes R930-7 and R930-8.

B. **COMPANY**, while engaged in the adjustment or relocation of its Facilities, will comply with any applicable requirements of 23 C.F.R. § 635.410, Buy America Requirements. Buy America Certification forms, if required, shall be included in Project Agreements. **COMPANY** may require additional time for the acquisition of materials due to the Buy America requirements.

C. **COMPANY** shall include within its design of the relocated Facilities the clear zone requirements as defined in AASHTO's "Roadside Design Guide" and minimum vertical and horizontal clearances as defined in R930-7.

D. **COMPANY**, while engaged in the relocation of its Facilities shall comply with **UDOT's** Standard Specification for Road and Bridge Construction Section 01355, Subpart 1.13, Discovery of Historical, Archeological or Paleontological Objects if performing work within **UDOT's** right-of-way.

E. **COMPANY** provided traffic control devices shall conform to the standards set forth in the Manual on Uniform Traffic Control Devices (MUTCD) as adopted by **UDOT**. All flagging personnel shall be certified.

F. **COMPANY** employees and contractors working in the highway right-of-way shall comply with current requirements of MUTCD Section 6D.03. concerning high-visibility safety apparel.

6. COMPANY TO NOTIFY UDOT AND ITS CONTRACTOR BEFORE BEGINNING CONSTRUCTION WORK

Parties agree to cooperatively work together during construction, communicate frequently and coordinate the Utility Work. The **COMPANY** will notify **UDOT's** Project Representative as identified in the Project Agreement at least forty-eight (48) hours in advance of beginning any work. Such notification can be by telephone, email, in person or in writing. Subsequent notification of when and where the **COMPANY** will be performing work will be given by the **COMPANY** to **UDOT's** Project Representative on a day-to-day basis. In the event **COMPANY** fails to provide notice of work, which results in conflicts with other contractors on the Project site, **COMPANY** will demobilize its personnel and contractor at its own cost. Any work performed without proper notification to **UDOT's** Project Representative must be made available at **COMPANY's** expense for inspection by **UDOT** upon request or verified in another acceptable manner to **UDOT**. Failure on the part of the **COMPANY** to give proper notification to **UDOT** may result in **UDOT's** disallowance of reimbursement for that portion of the **COMPANY's** work performed while not under the surveillance of the **UDOT's** Project Representative.

7. DAILY RECORD KEEPING

UDOT, through its Project Representative, will keep a daily record of the Utility Work performed by the **COMPANY** for each Project, in a form acceptable to both Parties. The daily record shall be signed by **UDOT's** Project Representative and the **COMPANY**, or its authorized representatives, as required and a copy shall be retained by the Parties to this Agreement. If emergencies occur requiring the **COMPANY's** work forces to leave the job, record keeping shall be resumed upon return to the Project.

8. EMERGENCY WORK

When the **COMPANY** experiences an emergency unrelated to its work on the Project, it will take care of said emergency, after which it will again notify **UDOT** as to when work will be resumed on the Project.

9. REIMBURSEMENT FOR COMPANY'S UTILITY WORK

A. Reimbursement eligibility will be determined in accordance with Utah Code Section 72-6-116 and Utah Administrative Code R930-8.

B. Reimbursable costs for the Utility Work will be developed in accordance with 23 C.F.R. § 645, Subpart A. The **COMPANY** will submit itemized bills covering its actual costs incurred for performing the work covered by the Project Agreements hereto, bearing the Project number together with supporting sheets on a monthly or quarterly basis.

C. **COMPANY** will send one (1) final and complete billing of all actual costs incurred within six (6) months following completion of Utility Work by the **COMPANY** on the Project to:

UDOT Contracts and Compliance Specialist
4501 South 2700 West, Box 148220
Salt Lake City, Utah 84114-8220

In the event **COMPANY** fails to send a final bill to **UDOT** within six (6) months of completion of its work, **UDOT** may send notice to **COMPANY** requesting a final bill. **COMPANY** will have forty-five (45) days to respond with a final bill or will forfeit payment for the unbilled portion of the work. Both Parties agree to cooperatively work together in good faith to resolve any disputes on the final billing within sixty (60) days after **UDOT** receives the final bill from **COMPANY**. **UDOT** will reimburse the **COMPANY** within sixty (60) days after receipt of said billings or after disputes on final bill are resolved. Reimbursement will be limited to items complying fully with the provisions of 23 C.F.R. § 645, Subpart A.

10. BETTERMENT WORK

Betterment work is defined as set forth in 23 C.F.R. § 645, Section 645.105, Definitions. Specifically, betterment is "any upgrading of the facility being relocated that is not attributable to the highway construction and is made solely for the benefit of and at the election of the utility". If the **COMPANY** desires to include betterment in the Utility Work at any specific location, **UDOT** will allow betterment work to be performed, provided the Parties can reasonably coordinate the Project schedule to accommodate the betterment work without delaying the Project. The difference in costs between the minimum construction required as a result of the Project and the **COMPANY's** desired construction shall be made at the sole expense of **COMPANY**.

11. SALVAGE CREDIT

All materials from the existing Facilities, which are recovered in suitable condition for reuse by the **COMPANY** and not reused on the Project, shall be credited to the cost of the Project at current stock prices in accordance with 23 C.F.R. § 645.117. If the recovered materials are not suitable for reuse, they shall be credited at salvage prices, if any, or such other prices as agreed upon between the **COMPANY** and **UDOT** following inspection of the recovered material.

12. COSTS DIFFER BY MORE THAN TEN PERCENT

The **COMPANY's** final billings of completed Utility Work should follow as closely as possible the order of the items in the detailed estimates contained in the Project Agreements or Supplemental Agreements, and will be provided in a format that allows comparisons to be made with the approved plans and estimates. If the **COMPANY's** actual costs incurred for its force account work differs more than ten percent (10%) plus or minus per cost category from the estimated amount contained in the Project Agreements or Supplemental Agreements, the **COMPANY** is required to submit a letter of explanation with its billings indicating how and why the difference in costs occurred.

13. AUDIT

UDOT and the Federal Highway Administration shall have the right to audit all cost records and accounts of the **COMPANY** pertaining to the Project in accordance with 23 C.F.R. § 645, Subpart A. Should this audit disclose that the **COMPANY** has been underpaid, the **COMPANY** will be reimbursed by **UDOT** upon submission of additional billing to cover the underpayment. Should this audit disclose that the **COMPANY** has been overpaid, the **COMPANY** will reimburse **UDOT** in the amount of the overpayment. For the purpose of audit the **COMPANY** is required to keep and maintain its records of Utility Work covered herein for a minimum of three (3) years after final payment is received by the **COMPANY** from **UDOT**.

14. RIGHT-OF-WAY ACQUISITION

COMPANY owns rights-of-way, easements and fee property (collectively the Existing Property) from which Facilities are relocated to accommodate Projects. For all Existing Property **COMPANY** relinquishes to accommodate a Project, **UDOT** will replace the property with new property (collectively, the New Property). The New Property will be at a location agreeable to both Parties, with dimensions comparable to the Existing Property, and the terms of the conveyance documents shall be acceptable to **COMPANY**. For New Property that **UDOT** may acquire through eminent domain, **COMPANY** may elect to have **UDOT** acquire such New Property on behalf of **COMPANY**. In the event **COMPANY** elects to have New Property with dimensions greater than the dimensions of the Existing Property, **COMPANY** shall be responsible for the incremental costs due to the increased dimensions of the New Property unless the increased dimensions are required by law or regulation.

15. FORCE MAJEURE

An event of force majeure is an unforeseeable event or circumstance which is beyond the control and without the fault or negligence of the party affected and which by the exercise of reasonable diligence the party affected was unable to prevent, including without limitation strikes, riots, earthquakes, epidemics, sabotage, terrorist actions, wars, fires, floods, weather, materials shortage, power failure, telecommunications outage, acts of God, governmental restrictions, regulations or controls, judicial orders, or other failures, interruptions or errors not directly caused by the parties.

Neither party is responsible for any failure to perform its obligations under this Agreement if it is prevented or delayed in performing those obligations by an event of force majeure. Only those obligations directly affected by an event of force majeure are excused.

Where there is an event of force majeure, the party prevented from or delayed in performing its obligations in this Agreement must immediately notify the other party giving full particulars of the event of force majeure preventing that party from, or delaying that party in performing its obligations in this Agreement and that party must use its reasonable efforts to mitigate the effect of the event of force majeure upon its performance of the contract and to fulfill its obligations.

Upon completion of the event of force majeure, the party affected must as soon as reasonably practicable recommence the performance of its obligations in this agreement. If the affected party is the Company, the Company must provide a revised schedule to minimize the effects of the prevention or delay caused by the event of force majeure.

An event of force majeure does not relieve a party from liability for an obligation to perform according to the Agreement. Neither party shall be responsible to the other for any costs or losses caused by the event of force majeure.

16. CONFIDENTIAL INFORMATION

UDOT is subject to the requirements of the Government Records Access Management Act ("GRAMA") or other applicable law. If Company provides a record that it believes should be protected pursuant to Utah Code Section 63G-2-305(1) or (2), the Company shall comply with Utah Code Section 63G-2-309 and mark the documents as confidential.

17. TERM AND TERMINATION

A. This Agreement expires five (5) years from the date of execution. Upon expiration of this Agreement, the parties will negotiate in good faith the terms of renewal. The terms and conditions of this Agreement will remain in effect until the new agreement between the parties becomes effective, but in no event shall such renewal period exceed twelve (12) months following expiration of this Agreement unless otherwise agreed to by the Parties.

B. This Agreement may be terminated by either party by providing sixty (60) day written notice of termination. Any such termination shall not affect the validity of any previously executed Project Agreement or Supplemental Agreement. Notice shall be given as follows:

UDOT:	Questar Gas Company:
UDOT Legal Counsel 4501 South 2700 West P.O. Box 148455 Salt Lake City, UT 84144	Questar Gas Company General Counsel P.O. Box 45360 Salt Lake City, UT 84145

18. ASSIGNMENT:

COMPANY may assign or transfer its rights and obligations under this Agreement to any parent, affiliate, or subsidiary of COMPANY, to any entity having fifty percent (50%) or more direct or indirect common ownership with COMPANY, or to any successor-in-interest, provided the assignee or transferee

agrees to be bound by all terms and conditions of this Agreement. Otherwise, COMPANY shall not transfer, assign or delegate its rights or obligations under this Agreement without the prior written consent of UDOT. This Agreement shall be binding upon and inure to the benefit of the Parties' permitted successors and assigns.

19. MISCELLANEOUS

A. In the event of any dispute relating to this Agreement, resulting in litigation, the prevailing Party shall be entitled to recover all costs, including reasonable attorney fees.

B. The provisions of this Agreement are severable, and should any provision be deemed void, unenforceable or invalid, such provision shall not affect the remainder of this Agreement.

C. This Agreement shall be governed by the laws of the State of Utah.

D. This Agreement supersedes the previously executed STATEWIDE UTILITY RELOCATION AGREEMENT between the Parties dated November 4th, 2009.

****

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized officers as of the day and year first above written.

ATTEST:

By: _____
Name

Date: _____

QUESTAR GAS COMPANY, a Registered Corporation of the State of Utah

By: _____
Vaughn W. Shosted
Title: Vice President Operations

Date: 30 June 2016

APPROVED AS TO FORM:

By: _____
Counsel for **COMPANY**

****

UTAH DEPARTMENT OF TRANSPORTATION

RECOMMENDED FOR APPROVAL:

By: _____

Title: Statewide Utilities & Railroads Engineer

Date: 14 July 2016

APPROVED:

By: _____

Title: Project Development Director

Date: July 19, 2016

APPROVED AS TO FORM:

By: _____

Title: Assistant Attorney General

Date: 07/18/2016

COMPTROLLER'S OFFICE

By: _____

Title: Contract Administrator

Date: 7-27-16

Exhibit A
PROJECT AGREEMENT

Project No. _____, _____ County
Address
QUESTAR GAS COMPANY
QGC Ref No. _____
CID No._____ PIN _____

QUESTAR GAS COMPANY

PROJECT AGREEMENT

Supplement to Statewide Utility Relocation Agreement, Finance No. 160000

THIS PROJECT AGREEMENT, made and entered into this _____day of _____, 20__, by and between the **UTAH DEPARTMENT OF TRANSPORTATION**, hereinafter referred to as "**UDOT**" and **QUESTAR GAS COMPANY**, a Registered Corporation in the State of Utah, hereinafter referred to as the "**Company**."

This Project Agreement is part of and subject to the terms and conditions of the **STATEWIDE UTILITY RELOCATION AGREEMENT** dated _____ **UDOT** Finance No. 160000, hereinafter referred to as "Statewide Agreement". All the terms of the Statewide Agreement remain in full force and effect unless otherwise specified herein.

The parties hereto agree as follows:

1. **Company's** contact person for the Project is, [insert name], telephone number (XXX) XXX-XXXX and email, XXXX@XXXX.com.

   UDOT's Project Representative is [Insert name and title], telephone number (XXX) XXX-XXXX and email XXXXX@utah.gov.

   UDOT's Resident Engineer is [Insert name], telephone number (XXX) XXX-XXXX and email XXXX@utah.gov.

2. The **Company** will perform the following described Utility Work in accordance with the terms and conditions of the Statewide Agreement:

   Location of Utility Work:

   Description of Utility Work to be performed, including proposed location:

   (Plan Sheets and Right of Way Documents attached as "**EXHIBIT A**", that is incorporated by reference.)

   Party performing the Utility Work:

   Anticipated duration of Utility Work:

   Estimated dates of Utility Work:
   (Includes allowable outage windows)

   Estimated Total Cost of Utility Work:
   (Detailed Estimate attached)

SAMPLE

Betterments Included:

*[**UDOT** and **Company** will discuss and include these items in Project Agreement if applicable:*

- *Party responsible for and timing of removal of pavement, other hard surface, trees, fencing, signs, buildings etc.*
- *Party responsible for backfill, material and compaction requirements for backfill.*
- *Party responsible for final grading and hard surface restoration.*
- *Party responsible for traffic control, including safety barriers, plates, and restrictions/requirements for lane closures.]*

3. Utility Work to be completed under this Project Agreement is subject to the following:

Special Provisions

- Buy America. [*List specific Buy America requirements applicable to this Project.*] Specific certification requirements are marked "**EXHIBIT C**" that is incorporated by reference.

- Other limitations to the Project.

  [***UDOT** and **Company** will discuss and include these items in Project Agreement if applicable:*

  - *Limits of loading over pipe, including cover/equipment restrictions*
  - *High pressure inspection*
  - *Night Work]*

4. The **Company** shall be reimbursed by **UDOT** for XXX% of the actual costs incurred by the **Company** for performing the Utility Work covered herein. An estimate of the total cost of said Utility Work was furnished by the **Company** to **UDOT** in the total amount of $_____. A copy of the details of the estimate are marked "**EXHIBIT B**" that is incorporated by reference.

TOTAL ESTIMATED COST TO UDOT IS $_____

TOTAL ESTIMATED COST TO THE COMPANY IS $_____

NOTE: The above are estimates only. Total payment to the **Company** by **UDOT** will be based on the actual costs incurred as determined after completion of construction.

5. Upon signature and return of this Project Agreement to **UDOT**, the **Company** is authorized to proceed with the Utility Work covered herein.

****

SAMPLE

Project No. _____, _____ County
Address

QUESTAR GAS COMPANY

QGC Ref No. _____

CID No._____ PIN _____

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first written above.

ATTEST:

By:_____

Title:_____

Date: _____

QUESTAR GAS COMPANY (IHP),
a Registered Corporation of the State of Utah

By:_____

Title:_____

Date: _____

(IMPRESS SEAL)

****

RECOMMENDED FOR APPROVAL:

By:_____
Region Utility and Railroad Leader

Date: _____

UTAH DEPARTMENT OF TRANSPORTATION

By:_____
Region Director

Date: _____

APPROVED AS TO FORM:

The Utah State Attorney General's Office has previously approved all paragraphs in this Agreement as to form.

UDOT COMPTROLLER'S OFFICE:

_____
Contract Administrator

Date: _____

SAMPLE

168511

STATEWIDE UTILITY RELOCATION AGREEMENT

between

Utah Department of Transportation

&

PacifiCorp -24210

This Statewide Utility Relocation Agreement (referred to herein as Agreement), made and entered into this 7 day of Dec, 20 15, by and between the UTAH DEPARTMENT OF TRANSPORTATION, hereinafter referred to as "UDOT" and Rocky Mountain Power, an unincorporated division of PACIFICORP, an Oregon Corporation, hereinafter referred to as the "Company" or "RMP". The Utah Department of Transportation and Rocky Mountain Power are referred to herein individually as a "Party" or collectively as the "Parties."

RECITALS

1. UDOT has jurisdiction over state Highway rights of way and administers the programming, development and completion of State and Federal-aid eligible projects (referred to herein as "Project" or collectively as "Projects") in Utah.

2. RMP is a regulated electricity utility serving Utah, and owns, operates and maintains an extensive utility infrastructure, including transmission and distribution wirelines, poles, vaults, substations, plants and all associated facilities (referred to herein as "Facilities"). Some Facilities are located within State highway rights-of-way under Statewide Utility License Agreements.

3. Certain projects to expand or alter the transportation infrastructure occasionally necessitate the protection or relocation of Facilities.

4. The Parties have entered into an agreement titled Statewide Agreement for the Acquisition or Replacement of Utility Easements and Rights of Way, dated the 19th day of January 2005 that sets forth the manner in which property interests are addressed for the relocation of Facilities.

5. For the purpose of expediting the performance and reimbursement of the relocation work on Projects, it is the desire of the Parties to enter into this Agreement with the understanding that the Parties will enter into future Project Agreements which are supplemental to this Agreement which will address the scope of work, schedule, reimbursement amounts, and other requirements for each specific Project.

AGREEMENT

NOW THEREFORE, in accordance with the foregoing Recitals, which are incorporated into this Agreement by reference, and for and in consideration of the mutual covenants and agreements hereafter set forth, the mutual benefits to the Parties to be derived herefrom, and other valuable consideration, the receipt and sufficiency of which the Parties acknowledge, it is hereby agreed as follows:

1. Notification and Preliminary Design. UDOT will notify the Company of Projects where Company Facilities may require relocation or protection in place and will meet with the Company to review and discuss proposed Project plans.

2. Project Meetings. The Parties will participate in periodic Project status meetings, to be held at such times and places as the Parties mutually agree.

3. Company and UDOT Design Coordination. The Company and UDOT shall consult in good faith to reasonably minimize Facility relocation costs, Project costs and delays and determine an appropriate Project strategy for each potentially impacted Facility. The Parties will share Project design details throughout the design process. Company will submit documentation of existing property rights for Facilities within the proposed project limits as early as possible and proposed property rights needed as a result of the Project and Facility relocation designs.

4. Relocation Design, Betterments, Estimate and Construction Duration.

a. The Company, with its regular engineering forces at its standard schedule of wages and working hours, or through its qualified contractors with whom it has continuing contracts or has obtained contracts pursuant to a competitive process, shall diligently perform the necessary design, field and office engineering. Designs will adhere to Company's current standards. The Company may use external consultants to oversee any or all aspects of design, and permitting.

b. The Company will submit to UDOT any betterment requests as early as possible. UDOT will allow for betterment work to be performed, provided the Parties can reasonably coordinate the Project schedule to accommodate the betterment work without delaying the Project. Betterment is defined as set forth in 23 CFR, Section 645.105. Specifically, betterment is any upgrading of the Facility being relocated that is not attributable to the highway construction and is made solely for the benefit of and at the election of the Company. Betterment credit to a Project is not required for improvements which are required by law under governmental and appropriate regulatory commission code, or required by current design practices regularly followed by the Company in its own work, and there is a direct benefit to the highway project. The Company will be responsible for increased costs due to betterment. The actual costs for the Company's participation shall be determined upon completion and final billing for the relocation work.

c. UDOT may perform Subsurface Utility Engineering, Quality Levels A and B, within the limits of a Project. Additional work required to determine the vertical location of underground facilities at specific locations will be reviewed with the Company and subject to the proportional cost share as set forth in the Project Agreement.

d. UDOT and Company will work together in good faith to identify and resolve conflicts between the Project and Company's Facilities. UDOT acknowledges that, for typical projects, Company's design requires up to three (3) months for both underground and overhead power lines after approved roadway design plans are delivered to the Company. Facility design for relocation of transmission Facilities may require significantly longer lead time.

e. The Company shall include within its design of the relocated Facilities within UDOT's right of way the minimum vertical and horizontal clearances as defined in Utah Administrative Code R930-7 Utility Accommodation, as amended.

f. Company will submit to UDOT the Company's proposed design; detailed cost estimates; a reasonable construction duration including all known limitations including permit and regulatory approvals, anticipated outage windows, advance ordering of materials, dependency upon work of

other parties, and scheduling of work crews; communication contacts; and other details necessary for UDOT to prepare contract documents and a Project Agreement.

5. Project Agreements.

a. For each Project, UDOT will prepare a Project Agreement. In the case of an inconsistency between the terms of this Agreement and the terms of a Project Agreement, the terms of the Project Agreement shall control, unless expressly stated otherwise. The Project Agreement form is attached as "EXHIBIT A".

b. The Company shall designate a representative in the Project Agreement, who will be the Company's liaison with respect to the matters covered by the Project Agreement. The Company's representative shall coordinate with UDOT's Utilities Coordinator for the Project regarding the matters described in the Project Agreement.

6. Rights of Way. The replacement of rights-of-way shall be consistent with the terms and conditions set forth in the Statewide Agreement for the Acquisition or Replacement of Utility Easements and Rights of Way and Utah Administrative Code R930-8. In the event of a conflict Utah Administrative Code R930-8 controls.

7. UDOT Contractor Selection process. UDOT will engage in its process to bid and award Project work to a contractor. During the proposal phase of any Design Build Project, at UDOT's discretion, the Company and UDOT will meet with each prospective contractor to review the preliminary design with UDOT's bidders.

8. Notice to Proceed.

a. The Company shall not commence performing the work under any Project Agreement until the Project Agreement is executed by both Parties and the Company is authorized in writing by UDOT to begin work.

b. UDOT, through its contractors, will provide surveying and staking of roadway facilities as required by the Company, in accordance with UDOT's Standard Specifications, Section 01721, Survey, 3.16, Utilities. The cost of the surveying and staking will be at UDOT's expense and will not be recovered from the Company. Any of UDOT's survey control stakes or bench markers which are removed or damaged by the Company shall be reestablished by UDOT at Company's expense.

c. UDOT will adjust any existing schedule to allow for any reasonable time that may be required for the Company to redesign or modify its plans and relocate its Facilities when UDOT requires the redesign.

9. Company to Construct.

a. The Company, with its regular engineering and construction forces at its standard schedule of wages and working hours, or through its qualified contractors with whom it has continuing contracts or has obtained contracts pursuant to a competitive process, shall perform the necessary design work, construction and relocation work with commercially reasonable diligence. The Company may use external consultants to oversee any or all aspects of permitting, construction and relocation.

b. The Company while engaged in the relocation of its Facilities shall comply with UDOT's Standard Specification for Road and Bridge Construction Section 01355, Subpart 3.8, Discovery of Historical, Archeological or Paleontological Objects, Features, Sites, or Human Remains if performing work within UDOT's right-of-way.

c. Company provided traffic control devices shall conform to the standards set forth in the Manual on Uniform Traffic control Devices ("MUTCD") as adopted by UDOT. All flagging personnel shall be certified.

d. Company employees and contractors working in the highway right-of-way shall comply with current requirements of MUTCD Section 6D.03, concerning high-visibility apparel.

e. The Company shall notify UDOT's Project Representative as identified in the Project Agreement at least forty-eight (48) hours in advance of initiating construction under the Project Agreement. Subsequent notification of when and where the Company will be performing work will be given by the Company to UDOT's Project Representative on a day-to-day basis. In the event the Company fails to give proper notification to UDOT and UDOT's Project Representative is not available to execute the daily work record, UDOT may disallow reimbursement for that portion of the Company's work performed while not under the surveillance of UDOT's Project Representative. Notwithstanding the foregoing, in the event UDOT's Project Representative is not present while work is being performed despite notice having been given by the Company, then UDOT may not disallow reimbursement for such work for the sole reason that UDOT's Project Representative was not present. At its election, UDOT shall be permitted to observe the performance of all construction. The Company and its contractors will perform their work in adherence with the requirements of Utah Administrative Code R930-7 Utility Accommodation, as amended.

10. Company to Perform Work Consistent With Project Schedule.

a. The Parties hereby acknowledge the importance of completing the work in a manner consistent with the overall schedule for the Project. Accordingly, the Parties shall coordinate and agree upon a schedule for the design, construction and final completion of the work, including any Company elected betterment work to be performed by the Company in conjunction with the work. The Parties shall execute a written acknowledgement of the approved schedule which shall, upon execution, be incorporated into and made a part of a Project Agreement.

b. The Company agrees to begin its work as soon as possible after having received a written authorization to proceed and to use reasonable efforts to complete all work in accordance with the agreed upon schedule. The need for additional costs necessary to meet the Project schedule will be evaluated and agreed upon in advance by the Parties.

c. The Company shall notify UDOT within seventy two (72) hours of its discovery of any occurrence or unforeseen circumstances that would prevent the Company from completing its work according to the agreed upon Project schedule.

d. When the Company experiences an emergency unrelated to its work on the highway Project, it will address of said emergency, after which the Company will again notify UDOT as to when work will be resumed on the Project.

11. Daily Record Keeping. UDOT, through its Project Representative, will keep a daily record of the relocation work performed by the Company. The daily record shall be signed by UDOT's Project Representative and the Company's authorized representative and a copy shall be retained by the Parties to this Agreement. If emergencies occur requiring the Company's work forces to leave the job, record keeping shall be resumed upon return to the Project.

12. Change in Work. After each Project Agreement is executed by the Parties, significant changes in the planned scope of work covered by the Project Agreement or extra work is valid only if made in writing and executed by both Parties prior to the start of the revised work or extra work.

13. Standard of Care. The Company shall be solely responsible for the performance of all its work. The Company (including its contractors, consultants and other agents) shall perform all work in a good and workmanlike manner and in conformance with all applicable federal, state and local laws and regulations.

14. Company to Submit Invoices for Reimbursable Work.

a. Reimbursement eligibility will be determined in accordance with Utah Code Section 72-6-116, as amended. Reimbursable costs for the relocation work will be limited to items complying fully with the provisions of 23 CFR Part 645, Subpart A

RM 07 Dec '15

b. The Company will submit itemized bills to UDOT covering Company's actual costs incurred for performing the work covered by the Project Agreements, bearing the Project number together with supporting sheets on a monthly or quarterly basis.

c. The Company shall submit to UDOT one final and complete billing within six months of completion of the work for the actual Project costs, together with supporting documentation. In the event Company fails to send a final bill to UDOT within six months of completion of its work, UDOT may send notice to Company requesting a final bill. Company will have 45 days to respond with a final bill or will forfeit payment for the unbilled portion of the work.

d. The Parties agree to cooperatively work together in good faith to resolve any disputes on billings. UDOT will reimburse the Company within sixty (60) days after receipt of Company's billings or after disputes are resolved.

e. The billings and supporting documentation shall be submitted to:

UDOT Contracts, Estimates and Agreements Specialist
4501 South 2700 West, Box 148220
Salt Lake City, Utah 84114-8220

RM 07 Dec '15

15. Salvage Credit. All materials from the existing Facilities, which are recovered in suitable condition for reuse by the Company and not reused on the Project, shall be credited to the cost of the Project at current stock prices in accordance with 23 CFR 645.117. If the recovered materials are not suitable for reuse, they shall be credited at salvage prices or such other prices as agreed upon between the Company and UDOT following inspection of the recovered material.

16. Company's Costs Differ by More Than 10%. The Company shall match its billings of completed work with the detailed estimates contained in the Project Agreements. If the Company's actual costs incurred for reimbursable work differs more than ten percent (10%) plus or minus from the estimated amount contained in the Project Agreements, the Company shall submit a letter of explanation to UDOT with its billings describing how and why said difference in costs occurred.

17. Audit. UDOT and the Federal Highway Administration shall have the right to audit all cost records and accounts of the Company pertaining to the Project in accordance with 23 CFR, Part 645, Subpart A. Should this audit disclose that the Company has been underpaid, the Company will be reimbursed by

UDOT upon submission of additional billing to cover the underpayment. Should this audit disclose that the Company has been overpaid, the Company will reimburse UDOT in the amount of the overpayment after written notice. For the purpose of audit the Company is required to keep and maintain its records of work covered herein for a minimum of three years after final payment is received by the Company from UDOT.

18. Buy America. Materials composed primarily of iron or steel that are permanently incorporated into the work on this project are subject to 23 CFR 635.410, Buy America requirements. Company's responsibility for "Buy America" compliance is limited to providing UDOT's Project Representative with signed supplier certifications (which may be in electronic form) at or prior to the time of installation, according to the specific instructions and format set forth in the attached "EXHIBIT B". Buy America Certification is required only for the following specific items identified by UDOT: (i) steel transmission or distribution pole structures (exclusive of any cross arms, guy wires and anchors, transformers, insulators, cutouts, surge arrestors, switches, hardware, fasteners, brackets, base plate, conductor or other separately-provided attachments to be ordered separately and thereafter affixed to the poles structures); (ii) steel or iron conduit and risers; (iii) steel rebar to be furnished in conjunction with: concrete foundations, concrete transmission or distribution pole structures, or any pre-fabricated concrete vaults or similar concrete structures; and (iv) grates and covers for utility vaults and similar structures. Company shall have no obligation to furnish Buy America certificates with respect to any other materials, and shall have no further obligations regarding the domestic content of goods furnished.

Company has developed estimating, supply chain and materials handling procedures to implement these requirements and agrees to follow such procedures. In the event that Company fails to furnish Buy America certificates for any of the foregoing items in accordance with these requirements, UDOT may withhold reimbursement with respect to those items. Except for claims involving Company's fraud, willful misconduct or gross negligence, in no event shall Company's liability for its failure to comply with this Section exceed the reimbursement value of the items for which Company has failed to deliver the required certificate.

19. Terms.

a. The provisions of this Agreement are severable, and should any provision be deemed void, unenforceable or invalid, such provision shall not affect the remainder of this Agreement.

b. This Agreement does not supersede or modify any applicable federal or state statute, regulation, or rule.

c. This Agreement shall be governed by the laws of the State of Utah and applicable federal law. Any litigation shall be instituted only in a court of competent jurisdiction, whether state or federal, located within the State of Utah.

d. This Agreement supersedes the previously executed Master Agreement, State of Utah, Finance No. 998240, between the Parties dated January 6th, 1999.

e. This Agreement may be terminated by either Party by providing 30 day written notice of termination to the other Party. Any such termination shall not affect the validity of any Project Agreement executed prior to the date of termination of this Agreement.

f. To the fullest extent permitted by law, each of the Parties hereto waives any right it may have to a trial by jury in respect of litigation directly or indirectly arising out of, under or in connection with this Agreement. Each Party further waives any right to consolidate any action in which a jury trial has been waived with any other action in which a jury trial cannot be or has not been waived.

****

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized officers as of the day and year first above written.

Rocky Mountain Power, a division of PACIFICORP, an Oregon Corporation doing business as Rocky Mountain Power

By: _____
Vice President, Operations
Rocky Mountain Power

Title: _____

Date: 11-24-15

****

UTAH DEPARTMENT OF TRANSPORTATION

RECOMMENDED FOR APPROVAL:

By: _____
Title: Statewide Utilities & Railroads Engineer

Date: 07 Dec 2015

APPROVED:

By: _____
Title: Project Development Director

Date: 12/07/15

APPROVED AS TO FORM:

By: _____
Title: Assistant Attorney General

Date: 12/07/15

COMPTROLLER'S OFFICE

By: _____
Title: Contract Administrator

Date: 12-16-15

Exhibit A

ROCKY MOUNTAIN POWER PROJECT AGREEMENT NO. _____

Supplement to Statewide Utility Relocation Agreement

This Project Agreement is made and entered into this _____ day of _____, 20___, by and between the UTAH DEPARTMENT OF TRANSPORTATION, an agency of the State of Utah hereinafter referred to as "UDOT" and Rocky Mountain Power, an unincorporated division of PACIFICORP, an Oregon Corporation, hereinafter referred to as the "Company" or "RMP", to that certain Statewide Utility Relocation Agreement between the Parties dated _____, UDOT Finance No. _____. All the terms of said Agreement remain in full force and effect unless otherwise specified herein.

The Parties hereto agree as follows:

1. The Company will perform the following described work in accordance with the terms and conditions of the Statewide Utility Relocation Agreement.

   Location of work:

   Description of work:

   Detailed work plans, specifications, and proposed locations are included in Exhibit A and incorporated by reference.

   Anticipated duration of work:

   Project specific special provisions:

   Betterments included:

   Buy America requirements:

   A detailed cost estimate is included in Exhibit B and incorporated by reference.

TOTAL ESTIMATED COST	**$_____**
TOTAL ESTIMATED UDOT PARTICIPATION	**$_____**
TOTAL ESTIMATED COMPANY PARTICIPATION	**$_____**

2. UDOT's Project Representative is, _____, Telephone No. ___-___-____, email _____. Company's Representative is, _____, Telephone No. ___-___-____, email _____.

3. Company shall notify UDOT's Project Representative at least forty-eight (48) hours in advance of beginning the work covered herein, in accordance with the specific terms of the Statewide Utility Relocation Agreement, as applicable.

(Add additional Paragraphs, if required)

3. The Company shall not commence performing the work covered herein until the Project Agreement is executed by both Parties and the Company receives an Authorization to Proceed letter.

IN WITNESS WHEREOF, the Parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first written above.

Rocky Mountain Power, a division of PACIFICORP, an Oregon Corporation doing business as Rocky Mountain Power

By: _____

Title: _____

Date: _____

****

RECOMMENDED FOR APPROVAL:

_____
Region Utility and Railroad Leader
Date: _____

UTAH DEPARTMENT OF TRANSPORTATION

By_____
Region Director
Date: _____

APPROVED AS TO FORM:

The Utah State Attorney General's Office has previously approved all paragraphs in this Agreement as to form.

Date__/__/__

UDOT COMPTROLLER'S OFFICE:

_____
Contract Administrator
Date: _____

Exhibit B

FORM OF BUY AMERICA CERTIFICATE TO BE UTILIZED

Certification Requirement for 23 CFR 635.410 Buy America

This project will be utilizing federal funds. Please complete this Buy America Certification and return at or prior to the time the applicable materials are delivered.

Buy America Certification

I certify that all materials provided to _____for use on a Federal Aid Highway Project meet the requirements of 23 CFR 635.410 Buy America and any amendments thereto. Material Certificates of Compliance for each manufacturing and coating process performed during the production of these materials are attached.

Signature _____

Name _____

Title _____

Supplier Company Name _____

Date _____

Purchase Order Number _____

INSTRUCTIONS FOR COMPLETING THE BUY AMERICA CERTIFICATE

A. All products manufactured from steel and iron must be manufactured in the United States to be considered domestic.
   1. All manufacturing processes of the steel and iron material in a product such as melting, rolling, extruding, machining, bending, grinding, drilling, and coating must occur within the United States.
   2. Nondomestic raw materials are permitted so long as the melting and all subsequent manufacturing processes occur domestically.
   3. Coating includes all processes that protect or enhance the value of the material to which the coating is applied. The material applied as a coating is not subject to Buy America.

B. Include as a minimum the following information for Material Certifications of Compliance for Buy America:
   1. Signed mill test report.
   2. Signed certification by each Fabricator and Manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States.
   3. Material descriptions, quantities, and means of material identification such as heat numbers, lot numbers, and other industry identification markings for each process the material underwent so the final product can be tracked through a step process from melting to final product.
   4. Tracking of quantities is not required for coating operations.

C. Include all steel or iron materials that can't be substantiated as being of domestic origin in cost documentation for foreign steel or iron.

178092

ROCKY MOUNTAIN POWER PROJECT AGREEMENT NO. 1

Supplement to Statewide Utility Relocation Agreement

This Project Agreement is made and entered into this 19 day of July, 2016, by and between the UTAH DEPARTMENT OF TRANSPORTATION, an agency of the State of Utah hereinafter referred to as "UDOT" and Rocky Mountain Power, an unincorporated division of PACIFICORP, an Oregon Corporation, hereinafter referred to as the "Company" or "RMP", to that certain Statewide Utility Relocation Agreement between the Parties dated December 7, 2015, UDOT Finance No. 168511. All the terms of said Agreement remain in full force and effect unless otherwise specified herein.

The Parties hereto agree as follows:

1. **PROJECT INFORMATION**

   UDOT is preparing to request proposals for and award a design-build contract for the highway project identified as S-0154(12)11, 4 Interchanges on Bangerter Highway in Salt Lake County, Utah, hereinafter referred to as the "Project". UDOT's design-build contractor will complete the design and administer construction of the Project. The Project contractor will hereinafter be referred to as the "Design-Builder".

2. **PROJECT CONTACT INFORMATION**

   UDOT's Project Representative is Alana Spendlove, UDOT Project Utility and Railroad Leader, telephone number (801) 887-3462 and e-mail aspendlove@utah.gov.

   UDOT's Resident Engineer for 5400 South and 7000 South interchanges is Bryan Chamberlain, telephone number (801) 887-3405, and e-mail bchamberlain@utah.gov, or their designated representative, as assigned.

   UDOT's Resident Engineer for 9000 South and 11400 South interchanges is Ken Talbot, telephone number (801) 360-8750, and e-mail kentalbot@utah.gov, or their designated representative, as assigned.

   Company's Representative is Suzan Jensen, telephone number (801) 220-2444, and e-mail Suzan.Jensen@rockymountainpower.net.

3. **COMPANY PROJECT REQUIREMENTS**

   Company and UDOT shall conduct the Utility Work in accordance with the specific terms of the Statewide Utility Relocation Agreement.

   The Company shall not commence performing the Utility Work covered in any subsequent Project Agreement until each Project Agreement is executed by both Parties and the

Company receives an Authorization to Proceed letter from UDOT's Project Utility and Railroad Leader.

4. **UDOT PROJECT RESPONSIBILITIES**

After awarding the Project, UDOT will provide the Company with the Design-Builder contact information, hereinafter referred to as "Design-Builder Third Party Manager".

UDOT shall provide trenching, conduit, and bedding material per Company specifications for all underground Utility Work, unless otherwise agreed upon and coordinated through a Project Agreement with the Company. Reimbursement eligibility will be determined in accordance with Utah Code Section 72-6-116.

UDOT shall provide all coordination, survey, maintenance of traffic, traffic control, and clearing and grubbing for all Utility Work at no cost to the Company.

IN WITNESS WHEREOF, the Parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first written above.

Rocky Mountain Power

By:

Title: Vice President, Operations
Rocky Mountain Power

Date: 7-14-16

Recommended For Approval:

Title: Utility and Railroad Leader

Date: 7/19/16

Utah Department of Transportation

Title: Project Director

Date: Jul 19, 2016

Approved as to Form

Title: Assistant Attorney General

Date: 7/27/2016

UDOT Comptroller Office Contract Administrator

Title:

Date: 7-27-16

178159

BANGERTER

Project No. S-0154(12)11, Salt Lake County
4 Interchanges on Bangerter Highway
SOUTH VALLEY SEWER DISTRICT
Charge ID No. 71939 PIN 12566

25725

SOUTH VALLEY SEWER DISTRICT
MASTER UTILITY AGREEMENT

THIS MASTER UTILITY AGREEMENT, made and entered into this 19th day of July, 2016, by and between the **Utah Department of Transportation**, ("UDOT"), and **South Valley Sewer District**, a political subdivision of the State of Utah, ("District") each as ("Party") and jointly as ("Parties").

RECITALS

WHEREAS, UDOT is preparing to request proposals for and award a design-build contract for the highway project identified as Project Number S-0154(12)11, 4 Interchanges on Bangerter Highway in Salt Lake County, Utah, ("Project"); and

WHEREAS, the design-build contractor will complete the design and administer construction of the Project ("Design-Builder"); and

WHEREAS, UDOT has identified District facilities within the limits of the Project which may necessitate the relocation, protection, or adjustment of the facilities, ("Utility Work"); and

WHEREAS, the District desires for the Design-Builder to design and perform the Utility Work on the District's facilities necessitated by the Project; and

WHEREAS, the District will perform the necessary design review and inspection to accommodate the Project; and

WHEREAS, for the purpose of expediting any required Utility Work and reimbursement, the Parties are entering into this Project Master Utility Agreement with the understanding that future supplemental agreements to this Agreement will be entered into covering the Utility Work to be accomplished by UDOT at specific Project locations.

THIS AGREEMENT is made to set out the terms and conditions where under the Utility Work shall be performed.

AGREEMENT

NOW THEREFORE, the Parties agree as follows:

1. PROJECT RESPONSIBLE FOR COST

In accordance with Utah Code § 72-6-116(3)(a)(ii), UDOT is responsible for 100% of the cost of the Utility Work of District's facilities for those costs that comply with Utah Administrative Code R930-8.

2. CONTACT INFORMATION

UDOT's Project Representative is Alana Spendlove, UDOT Project Utility and Railroad Leader, telephone number (801) 887-3462, and e-mail aspendlove@utah.gov.

UDOT's Project Representative is Alana Spendlove, UDOT Project Utility and Railroad Leader, telephone number (801) 887-3462, and e-mail aspendlove@utah.gov.

UDOT's Resident Engineer for 5400 South and 7000 South interchanges is Bryan Chamberlain, telephone number (801) 887-3405, and e-mail bchamberlain@utah.gov, or their designated representative, as assigned.

UDOT's Resident Engineer for 9000 South and 11400 South interchanges is Ken Talbot, telephone number (801) 360-8750, and e-mail kentalbot@utah.gov, or their designated representative, as assigned.

UDOT's Field Representative contact person will be identified in subsequent supplemental agreements.

District's contact person is Mike Foerster, telephone number (801) 571-1166, and e-mail mikef@svsewer.com.

After awarding the Project, UDOT will provide the District with the Design Builder contact information, hereinafter referred to as "Design-Builder Project Representative".

3. AUTHORIZATION FOR DESIGN WORK

In order to facilitate coordination and obtain technical information about the District's facilities and requirements for inclusion in this Agreement and the Request for Proposals, UDOT gave the District authorization for preliminary design engineering on April 26, 2016.

4. SUBSURFACE UTILITY ENGINEERING

UDOT has performed Subsurface Utility Engineering (SUE) within the limits of the Project. Additional SUE work to determine the precise location of underground facilities at specific, critical locations on the Project will be reviewed with the District.

5. PROJECT COORDINATION

The District requested that UDOT include items of Utility Work for relocating and adjusting District's facilities in the Project.

During the development of the Project design, the District and UDOT, along with its Design-Builder, shall consult as necessary in an effort to determine if conflicts with the District's facilities can be avoided. If Utility Work for the District's facilities is required by the Project, UDOT will be responsible to identify the conflicts and to design and construct the Utility Work of the District's facilities. The District will perform the necessary design reviews prior to the start of Utility Work. UDOT's Project Representative will be responsible for coordinating with other utility companies as it relates to District's facilities.

6. UDOT TO DESIGN AND CONSTRUCT DISTRICT'S UTILITY WORK

UDOT will schedule and meet with the District to review the design and scheduling of the Utility Work for the District's facilities at specific locations on the Project to ensure maximum lead time for advance order of materials and work force scheduling.

a. UDOT will secure permits required for Utility Work of District's Utilities.
b. UDOT will supply as-constructed plans, in PDF format specified by the District, upon completion of any required Utility Work.
c. UDOT will issue a satisfactory 1 year warranty bond covering the Utility Work completed on the District's Utilities. UDOT will cause the bond to be issued by the Design Builder directly to the District.

7. DISTRICT REQUIREMENTS

UDOT will comply with the following District requirements:

a. The design and construction of the District's Utility Work shall be in accordance with the District's standards regularly followed by the District in its own work and not considered a betterment. In the event of a conflict between UDOT and District standards, the higher standard will be applied. A copy of the District's standards dated May 23, 2012 standards can be found at http://www.svsewer.com/wp-content/uploads/2012/08/Design-Standars-and-Construction-Specifications-of-SVSD-October-30-2014.pdf and are incorporated by reference.

8. REPLACEMENT RIGHT-OF-WAY

The District owns certain easements granting it the right to operate, construct and maintain its Utilities at its existing locations. To accommodate the Project, UDOT will relocate the District's existing Utilities by constructing a replacement facility that is both functionally equivalent to the existing facility and necessary for continuous operation of the District's Utilities, the Project economy, or sequence of highway construction in accordance with Utah Administrative Code R930-8. UDOT will acquire, at UDOT's sole expense, replacement right-of-way required for the Utility Work in

accordance with Utah Administrative Code R930-8. If the District's Utilities are relocated outside of UDOT's right-of-way, UDOT will obtain an easement for the District using the form provided by the District that is attached hereto as EXHIBIT "A". If the District's Utilities are relocated from a District-owned easement or fee property into UDOT's right-of-way and UDOT does not compensate the District for the easement or fee property, UDOT shall pay 100% of the costs to relocate the District's Utilities when future UDOT projects require the relocation. When the District's Utilities are relocated from a District-owned easement or fee property into UDOT's right-of-way and UDOT does not compensate the District for the easement or fee property, UDOT shall issue encroachment permits at no cost to the District in accordance with R930-7 to allow the District to operate, maintain, and replace its Utilities.

9. BETTERMENT WORK

If the District desires to include betterment work in the Project at any specific location UDOT may agree to the betterment providing the difference in costs between the functionally equivalent required Utility Work and the District's desired betterment work that is not required by the Project shall be at the sole cost of the District and the betterment work can be accommodated without delaying UDOT's Project. The betterment work will be addressed by separate supplemental agreement between UDOT and the District.

Once a Design-Builder has been selected by UDOT, any betterment work request will be negotiated directly with the Design-Builder. However, it is at UDOT's sole discretion to approve the betterment work.

10. SUPPLEMENTAL AGREEMENTS

UDOT and the District shall enter into supplemental agreements to cover Utility Work at specific Project locations. As part of the supplemental agreement, UDOT will provide design plans and Utility Work schedules for review and approval by the District prior to start of the Utility Work.

Should it become necessary for the District to schedule internal over-time inspection hours or to procure outside services to perform preliminary engineering, plan review, observation, or inspection, to accommodate UDOT's Utility Work and Project schedule, the District shall include an estimate of cost, to include in the supplemental agreement.

A copy of the format of the proposed supplemental agreement is marked EXHIBIT "B" that is incorporated by reference.

The District will require a 2 week review and approval period prior to its submission for Board approval for any final supplemental agreement submitted to the District by UDOT. District Board of Directors meets regularly on the 3rd Tuesday of each month, with the exception of holidays.

In the event there are changes in the scope of the Utility Work, extra Utility Work, or changes in the planned Utility Work covered by a supplemental agreement, a modification to the supplemental agreement approved in writing by the Parties is required prior to the start of Utility Work on the changes or additions.

11. UDOT TO NOTIFY DISTRICT BEFORE BEGINNING UTILITY WORK

UDOT shall not perform any Utility Work until the supplemental agreement for the Utility Work is signed by the District and received by UDOT. UDOT will review and approve the supplemental agreement and will issue an authorization to proceed to the District for each specific Utility Work location.

UDOT will notify the District at least 2 business days in advance of beginning any Utility Work covered by any supplemental agreement hereto, to allow the District to schedule an inspector to be present during the Utility Work.

12. DISTRICT TO PERFORM DESIGN REVIEW AND INSPECTION

District's personnel shall notify UDOT's Field Representative upon arriving and leaving the Project site for verification of inspecting Utility Work for reimbursement purposes. District's personnel will comply with all applicable OSHA and Project safety requirements while within the Project limits.

The District shall provide on-call engineering support by District's engineer or appropriate representative for design review, schedule coordination, or to correct or clarify issues during Utility Work, and to perform the necessary inspection on the District's facilities installed by UDOT.

a. The District's engineer and/or inspector shall work with and through UDOT's Project Representative and shall give no orders directly to UDOT's Design-Builder unless authorized in writing to do so. UDOT will accomplish the Utility Work covered herein on District's facilities in accordance with the plans and specifications provided and/or approved by the District, including changes or additions to the plans and specifications, which are approved by the Parties hereto.
b. The District shall immediately notify UDOT's Project Representative and the Design-Builder Project Representative of any deficiencies in the Utility Work on the District's facilities. The District shall follow up with written detail to UDOT's Project Representative and the Design-Builder Project Representative of its findings within 24-hours of making its initial notification.
c. UDOT will respond to District's concerns within 24-hours of written notification.
d. The District, through its inspection of the Utility Work, will provide UDOT's Project Representative with information covering any problems or concerns the District may have with acceptance of the facilities upon completion of the Utility Work.
e. Any periodic plan and specification review or construction inspection performed by UDOT arising out of the performance of the Utility Work does not relieve the District of its duty in the performance of the Utility Work or to ensure compliance with acceptable standards.

13. DAILY RECORDKEEPING

UDOT's Field Representative will keep daily records of the inspection performed by the District. Daily inspection records will be in duplicate on a form to be prepared by the District or UDOT. The type of form to be used shall be preapproved by UDOT's Contracts, Compliance and

Certification Manager. The inspection records shall be signed by UDOT's Field Representative, and the District or its authorized representatives. Copies of the inspection records shall be retained by the parties to this Agreement.

14. REIMBURSEMENT

The District shall notify UDOT in advance should it become necessary for the District to procure outside services to perform preliminary engineering, design review, observation, or inspection to accommodate UDOT's Utility Work and Project schedule. Upon concurrence by UDOT, the District may procure outside services through appropriate solicitation.

The District and UDOT will negotiate necessary internal over-time inspection hours during the development of each supplemental agreement. Upon execution of each supplemental agreement, the District may proceed with approved internal over-time inspection hours, and the cost will be reimbursed by UDOT. Upon completion of the Utility Work, the District must submit actual labor hours for approved internal over-time inspection hours, external service invoices, and daily records signed by all Parties for reimbursement to the District as outlined in Sections 11 and 12 above.

15. SUBMITTAL OF ITEMIZED BILLS

The District shall submit itemized bills covering the actual costs incurred for outside services to perform preliminary engineering, design review, oversight, and inspection work or for preapproved internal over-time inspection hours of the Utility Work covered by supplemental agreements to UDOT's Contracts and Compliance Specialist:

UDOT Contracts and Compliance Specialist
4501 South 2700 West
Construction Office, Box 148220
Salt Lake City, Utah 84114-8220

Itemized bills shall bear the Project and supplemental agreement numbers, supporting sheets, and a complete billing statement of all actual costs incurred, following the order of the items in the detailed estimates contained in the supplemental agreement and be submitted to UDOT within 60 days following completion of outside services or internal over-time inspection hours by the District on the Project. Otherwise, previous payments to the District may be considered final, except as agreed to between the Parties in advance.

UDOT will reimburse the District within 60 days after receipt of the billings, but only for items complying fully with the provisions of Utah Administrative Code R930-8. Failure on the part of the District to submit final billings within 6 months of the completion of outside services will result in UDOT's disallowance of that portion of outside services performed by the District.

16. SALVAGED MATERIALS

All materials from District's existing facilities which are recovered by UDOT while performing the Utility Work and not reused on this Project, except for manhole rings and covers, shall become the property of the Design-Builder unless otherwise agreed to in advance by the Parties hereto.

17. RIGHT TO AUDIT

UDOT and the Federal Highway Administration shall have the right to audit all cost records and accounts of the District pertaining to this Project in accordance with the auditing procedure of the Federal Highway Administration and 23 C.F.R. § 645, subpart A. Should this audit disclose that the District has been underpaid, the District will be reimbursed by UDOT within 60 days upon submission of additional billing to cover the underpayment. Should this audit disclose that the District has been overpaid, the District will reimburse UDOT within 60 days of notification of audit findings in the amount of the overpayment. For purpose of audit the District is required to keep and maintain its records of outsides services covered herein for a minimum of 3 years after final payment is received by the District from UDOT.

18. ACCEPTANCE AND MAINTENANCE

UDOT will provide notification to the District for acceptance of the Utility Work upon completion of the final inspection of the District's facilities. The District will have 60 days to respond in writing to UDOT with any additional comments in regards to the Utility Work. In the event that UDOT does not receive a written response within 60 days, UDOT will designate the Utility Work accepted by the District, subject to any outstanding warranties or warranty issue.

The District will accept, own, and maintain its own facilities. The District shall be the sole owner of the facilities upon completion of the Project unless otherwise agreed to by the Parties in writing. To the extent it may lawfully do so, District further agrees to relieve UDOT from any responsibility or liability that may result from its new facilities or the operation thereof, except for any repairs necessary under any applicable warranties.

19. ACCESS

It is understood that access for maintenance and servicing of District's facilities located on the right-of-way of the Project will be allowed only by permit issued by UDOT to the District, and that the District will obtain the permit and abide by conditions thereof for policing and other controls in conformance with Utah Administrative Code R930-7.

20. INDEMNIFICATION

UDOT and the District are both governmental entities subject to the Governmental Immunity Act. Each Party agrees to indemnify, defend, and save harmless the other from and against all claims, suits and costs, including attorneys' fees for injury or damage of any kind, arising out of its negligent acts, errors or omissions of its officers, agents, contractors or employees in the performance of this Agreement, and from and against all claims, suits, and costs, including attorneys' fees for injury or damage of any kind. Nothing in this paragraph is intended to create additional rights

to third parties or to waive any of the provisions of the Governmental Immunity Act. The obligation to indemnify is limited to the dollar amounts set forth in the Governmental Immunity Act, provided the Act applies to the action or omission giving rise to the protections in this paragraph. The indemnification in this paragraph shall survive the expiration or termination of this Agreement.

21. **MISCELLANEOUS**

a. Each Party agrees to undertake and perform all further acts that are reasonably necessary to carry out the intent and purpose of this Agreement at the request of the other Party.

b. This Agreement in no way creates any type of agency relationship, joint venture, or partnership between UDOT and District.

c. The failure of either Party to insist upon strict compliance of any of the terms and conditions, or failure or delay by either Party to exercise any rights or remedies provided in this Agreement, or by law, will not release either Party from any obligations arising under this Agreement.

d. This Agreement shall be deemed to be made under and shall be governed by the laws of the State of Utah in all respects. Each person signing this Agreement warrants that the person has full legal capacity, power and authority to execute this Agreement for and on behalf of the respective Party and to bind such Party. This Agreement may be executed in one or more counterparts, each of which shall be an original, with the same effect as if the signatures were made upon the same instrument. This Agreement may be delivered by facsimile or electronic mail.

e. If any portion of this Agreement is held to be invalid or unenforceable for any reason by a court of competent jurisdiction, such invalidity or unenforceability shall not affect any other provision hereof, and this Agreement shall be construed as if such invalid or unenforceable provision had never been contained herein.

****

BANGERTER

Project No. S-0154(12)11, Salt Lake County
4 Interchanges on Bangerter Highway
SOUTH VALLEY SEWER DISTRICT
Charge ID No. 71939 PIN 12566

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

ATTEST:

Title: District Clerk

Date: 7-19-16

South Valley Sewer District

Title: Chairman of the Board of Trustees

Date: 7-19-16

(IMPRESS SEAL)

Recommended For Approval:

FOR ALANA SPENDLOVE

Title: Utility and Railroad Leader

Date: 15 Aug 2016

Utah Department of Transportation

Title: Project Director

Date: Aug 15, 2016

Approved as to Form

Title: Assistant Attorney General

Date: 8/16/2016

Comptroller Office

Title: Contract Administrator

Date: 8-16-16

When Recorded Return to:
Mr. Craig L. White
South Valley Sewer District
P.O. Box 908
Draper, Utah 84020

PARCEL I.D.# _____
GRANTOR: _____

EASEMENT

A twenty (20) foot wide sanitary sewer easement located in the _____ Quarter of Section _____, Township _____, Range _____, Salt Lake Base and Meridian, U.S. Survey.

For the sum of One Dollar ($1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the undersigned as GRANTORS hereby grant, convey, sell, and set over unto South Valley Sewer District, a body politic of the State of Utah, hereinafter referred to as GRANTEE, its successors and assigns, a perpetual right-of-way and easement to construct, maintain, operate, repair, inspect, protect, install, remove and replace sewer pipelines, valves, valve boxes and other sewer transmission and distribution structures and facilities, hereinafter called the FACILITIES, said right-of-way and easement, being situate in Salt Lake County, State of Utah, over and through a parcel of the GRANTORS' land lying within a strip twenty (20) feet wide, said strip extending ten (10) feet on each side of and lying parallel and adjacent to a line of reference and projection thereof, more particularly described as follows:

Contains: _____ acres (approx. _____l.f.)

TO HAVE AND HOLD the same unto the GRANTEE, its successors and assigns, with the right of ingress and egress in the GRANTEE, its officers, employees, agents and assigns to enter upon the above-described property with such equipment as is necessary to construct, install, maintain, operate, repair, inspect, protect, remove and replace the FACILITIES. During construction periods, GRANTEE and its contractors may use such portion of GRANTORS' property along and adjacent to the right-of-way and easement as may be reasonably necessary in connection with the construction or repair of the FACILITIES. The contractor performing the work shall restore all property, through which the work traverses, to as near its original condition as is reasonably possible. GRANTORS shall have the right to use the above-described property except for the purposes for which this right-of-way and easement is granted to the GRANTEE, provided such use shall not interfere with the FACILITIES or with the discharge and conveyance of sewage through the FACILITIES, or any other rights granted to the GRANTEE hereunder.

GRANTORS shall not build or construct, or permit to be built or constructed, any building or other improvement over or across this right-of-way and easement nor change the contour thereof without the written consent of GRANTEE. This right-of-way and easement grant shall be binding upon, and inure to the benefit of, the successors and assigns of the GRANTORS and the successors and assigns of the GRANTEE, and may be assigned in whole or in part by GRANTEE.

IN WITNESS WHEREOF, the GRANTORS have executed this right-of-way and Easement this _____ day of _____, _____.

County Parcel No.	Acreage	GRANTOR(S)
_____	_____ (approx. _____l.f.)	

_____

_____

STATE OF UTAH)
:ss
COUNTY OF SALT LAKE)

On the _____ day of _____, 20_____ _____, the signers of the above instrument, personally appeared before me and duly acknowledged to me they executed the same.

_____
Notary Public

My Commission Expires:_____

Residing in:_____

SOUTH VALLEY SEWER DISTRICT
SUPPLEMENTAL AGREEMENT NO. ___

Supplement to UDOT Finance No. _____

THIS SUPPLEMENTAL AGREEMENT, made and entered into this _____ day of _____, 20____, **Utah Department of Transportation**, ("UDOT"), and **South Valley Sewer District**, a political subdivision of the State of Utah, ("District") each as ("Party") and jointly as ("Parties").

The parties hereto entered in to a Master Utility Agreement (MUA) dated _____, UDOT Finance No. _____. All the terms of the Master Utility Agreement remain in full force and effect unless otherwise specified herein.

The Parties agree as follows:

1. UDOT will perform the following described Utility Work in accordance with the terms and conditions of the MUA:

   a. Description of Utility Work to be performed, including proposed location, described in Exhibit "A" that is incorporated by reference: (Plan Sheets Attached)

   b. The City/District requirements as shown in the MUA – District Requirements, are modified as follows:
      i.

   c. Anticipated duration of Utility Work:

   d. Total estimated cost of City/District's (100% reimbursable) outside services: (Detailed Estimate Attached)

2. UDOT will notify the District's Project Representative, Mike Foerster, telephone No. (801) 571-1166, email mikef@svsewer.com at least 48 hours in advance of beginning the Utility Work covered herein, or in accordance with the specific terms of the MUA, as applicable.

IN WITNESS WHEREOF, the Parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first written above.

ATTEST:

South Valley Sewer District

_____ _____

Title: District Clerk

Title: Chairman of the Board of Trustees

Date: _____ _____

(IMPRESS SEAL)

. . . . . .

Recommended For Approval:

Utah Department of Transportation

_____ _____

Title: Utility and Railroad Leader

Title: Project Director

Date: _____

Date: _____

Approved as to Form

Comptroller Office

_____ _____

Title: Assistant Attorney General

Title: Contract Administrator

Date: _____

Date: _____

ZAYO GROUP, LLC
MASTER UTILITY AGREEMENT

THIS MASTER UTILITY AGREEMENT, made and entered into this 30th day of August, 2016, by and between the **Utah Department of Transportation**, ("UDOT") and **Zayo Group, LLC**, a Company of the State of Colorado, ("Company") (each as "Party" and jointly as "Parties").

RECITALS

WHEREAS, UDOT is preparing to request proposals for and award a design-build contract for the highway project identified as Project Number S-0154(12)11, 4 Interchanges on Bangerter Highway in Salt Lake County, Utah, ("Project"); and

WHEREAS, UDOT's design-build contractor ("Design-Builder") will complete the design and administer construction of the Project; and

WHEREAS, UDOT has identified Company facilities within the limits of the Project which may necessitate the relocation, protection, or adjustment of the facilities, ("Utility Work"); and

WHEREAS, the Company desires for the Design-Builder to design and construct the Company's Utility Work except cable/pedestal procurement, pulling, and splicing necessitated by the Project; and

WHEREAS, the Company will perform the necessary review and approval for the design and construction of its Utility Work, provide cable/pedestal procurement, pulling, splicing, and construction inspection to accommodate the Project; and

WHEREAS, for the purpose of expediting any required Utility Work and reimbursement the Parties are entering into this Project Master Utility Agreement with the understanding that future supplemental agreements to this Agreement will be entered into covering Utility Work to be accomplished by the Company and UDOT at specific Project locations.

THIS AGREEMENT is made to set out the terms and conditions where under the Utility Work shall be performed.

AGREEMENT

NOW THEREFORE, the Parties agree as follows:

1. CONTACT INFORMATION

UDOT's Project Representative is Alana Spendlove, UDOT Project Utility and Railroad Leader, telephone number (801) 887-3462, and e-mail aspendlove@utah.gov.

UDOT's Resident Engineer for 5400 South and 7000 South interchanges is Bryan Chamberlain, telephone number (801) 887-3405, and e-mail bchamberlain@utah.gov, or their designated representative, as assigned.

UDOT's Resident Engineer for 9000 South and 11400 South interchanges is Ken Talbot, telephone number (801) 360-8750, and e-mail kentalbot@utah.gov, or their designated representative, as assigned.

UDOT's Field Representative contact person will be identified in subsequent supplemental agreements.

Company's contact person is Michael Sullivan, telephone number (602) 354-9486 and e-mail michael.sullivan@zayo.com.

After awarding the Project, UDOT will provide the Company with the Design-Builder contact information, hereinafter referred to as "Design-Builder Project Representative".

2. AUTHORIZATION FOR DESIGN WORK

In order to facilitate coordination and obtain technical information about the Company's facilities and requirements for inclusion in this Agreement and the request for proposals, UDOT gave the Company authorization for preliminary design engineering on April 26, 2016.

3. SUBSURFACE UTILITY ENGINEERING

UDOT has performed Subsurface Utility Engineering (SUE) within the limits of the Project. Additional SUE work to determine the precise location of underground facilities at specific, critical locations on the Project will be reviewed with the Company

4. PROJECT COORDINATION

Company and UDOT agree to have the Design-Builder include in the Project, items of Utility Work for the Company's facilities.

During the development of the Project design, the Company and UDOT, along with its Design-Builder, shall consult as necessary in an effort to determine if conflicts with the Company's facilities can be avoided. If Utility Work is required, UDOT will be responsible to propose and provide a location for the facilities. UDOT will provide the Company with Project design plans as early as possible, and will schedule and meet with the Company to review the design, construction, estimates of cost, and scheduling for the Company's Utility Work at specific locations

on the Project to ensure maximum lead time for advance order of materials and work force scheduling.

The Company shall advise UDOT's Project Representative of the approximate time required for completion of the Utility Work and shall diligently pursue its Utility Work so that completion can be accomplished according to the pre-determined time schedule negotiated by the Company and UDOT in the supplemental agreement issued hereto for a specific Project location. The Company shall immediately notify UDOT's Project Representative by phone call or email, of its discovery of any occurrence or unforeseen circumstances that would prevent the Company from completing its Utility Work according to the time schedule provided. In addition, the Company shall describe the circumstances in writing within 24-hours of the discovery to UDOT's Project Representative.

5. COMPANY REQUIREMENTS

UDOT will comply with the following Company Utility Work requirements:

1. Company splicing hours are from 12:00 p.m. to 5:00 a.m.
2. Provide minimum 12 inch separation of conduit from power in joint trench.
3. Include #14 gauge tracer wires in all conduits.
4. The Company will require a 2 week review and approval period for proposed designs, estimate review, and internal approvals after design plans and estimates are delivered to the Company.

6. UDOT TO DESIGN AND CONSTRUCT A PORTION OF UTILITY WORK

UDOT shall perform the necessary design work, cost estimating, field and office engineering, furnish all materials except cables and pedestals, and perform the Utility Work except pulling and splicing, necessitated by the Project.

UDOT will design the Utility Work in accordance with Company's standards regularly followed by the Company in its own work and not considered a betterment. In the event of a conflict between UDOT and Company standards, the higher standard will be applied.

UDOT will secure permits required for Utility Work for Company's facilities.

UDOT will supply as-constructed plans for the Utility Work it performs, in _____ format, upon completion of any required Utility Work.

7. COMPANY TO PERORM INSPECTION AND CONSTRUCT A PORTION OF THE UTILITY WORK

The Company will perform inspection of the Utility Work for the Company's facilities that will be performed by UDOT. UDOT will accomplish the Utility Work on the Company's facilities in accordance with the plans and specifications approved by the Company. Changes or additions to the plans and specifications shall be approved by the Company and UDOT through a supplemental agreement.

The Company will provide all cables, pedestals, pulling, and splicing necessary to accommodate the Utility Work of its facilities on the Project. The Company requires 2 weeks' notice to schedule splicing and fiber pulls and will determine the splicing window based on the circuit.

8. STANDARD SPECIFICATIONS AND REGULATIONS

The Company, while engaged in the preliminary design and Utility Work of its facilities, shall comply with UDOT's 2012 Standard Specifications for Road and Bridge Construction and Utah Administrative Code R930-7.

9. UNDERBUILT AND FACILITY REMOVAL REQUIREMENTS

The Company is responsible to see to the removal of all Company-owned underbuilt facilities from utility poles that will be relocated or removed due to the Project.

10. RIGHT-OF-WAY

Any easements or replacement right-of-way required in conjunction with the Utility Work of Company's facilities will be acquired by UDOT in accordance with the requirements of Utah Administrative Code R930-8-7.

11. MAINTENANCE OF TRAFFIC (MOT), TRAFFIC CONTROL, CLEAR/GRUB, AND SURVEYING

UDOT will provide MOT and traffic control for Utility Work at no cost to the Company. The Company is responsible to coordinate Utility Work schedules and traffic control needs with UDOT to facilitate the Project schedule and minimize impacts to the public. Except in the case of emergencies, Company's Utility Work on the Project will be scheduled in compliance with the requirements of the Limitation of Operations contained in UDOT's Design-Builder contract with respect to lane closures, peak hour Utility Work restrictions, holiday and special event limitations, etc.

UDOT will provide, at no cost to the Company, clearing and grubbing for the Utility Work as required by the Company and in accordance with UDOT's Standard Specifications.

Surveying and staking of roadway facilities as required by the Company will be provided by UDOT in accordance with UDOT's Standard Specifications. The cost of the surveying and staking will be at UDOT's expense and the Company will have no obligation for the cost of surveying. Any of UDOT's survey control stakes or bench markers, which are removed or damaged by the Company, shall be reestablished by UDOT at Company's expense.

12. BETTERMENT WORK

If the Company desires to include betterment work in the Project at any specific location, UDOT may agree to the betterment work providing the difference in costs between the functionally equivalent required Utility Work and the Company's desired betterment work, that is not required by the Project, shall be at the sole cost of the Company and the betterment work can reasonably

be accommodated without delaying UDOT's Project. The betterment work will be addressed by a separate supplemental agreement between UDOT and the Company.

Once a Design-Builder has been selected by UDOT, any betterment work request will be negotiated directly with the Design-Builder. However, it is at UDOT's sole discretion to approve the betterment work.

13. SUPPLEMENTAL AGREEMENTS

UDOT and the Company shall enter into individual supplemental agreements to cover Utility Work at specific Project locations. Each supplemental agreement will include a description and location of the Utility Work to be performed, design drawings showing the original and proposed locations of the Company's facilities, Utility Work schedules, cost estimates from all Parties, participation shares for UDOT and the Company, any proposed betterment work, and any necessary right-of-way documents. The estimates do not account for increases due to unknown and unforeseen hardships in accomplishing the Utility Work. A copy of the format of the proposed supplemental agreement is marked Exhibit "A" that is incorporated by reference.

The Company will require a 2 week review and approval period for any final supplemental agreement submitted to the Company by UDOT.

In the event there are changes in the scope of the Utility Work, extra Utility Work, or changes in the planned Utility Work covered by a supplemental agreement, a modification to the supplemental agreement approved in writing by the Parties is required prior to the start of Utility Work on the changes or additions.

14. UDOT AUTHORIZATION TO PROCEED WITH UTILITY WORK

The Company shall not perform any Utility Work until the supplemental agreement for the Utility Work is signed by the Company and received by UDOT. UDOT will review and approve the supplemental agreement and will issue an authorization to proceed to the Company for each specific Utility Work location.

15. UDOT TO NOTIFY THE COMPANY BEFORE BEGINNING UTILITY WORK

UDOT will notify the Company at least 2 business days in advance of beginning any Utility Work covered by any supplemental agreements hereto, to allow the Company time to schedule an inspector to be present during the Utility Work. Subsequent notification of when and where Utility Work will be performed will be given on a day-to-day basis. Should UDOT fail to give advance notification and Utility Work is performed without the presence of a Company inspector, UDOT will, at no cost to the Company, facilitate inspection of the Utility Work including, if necessary, uncovering the Utility Work.

16. COMPANY TO NOTIFY UDOT AND THE DESIGN-BUILDER BEFORE BEGINNING UTILITY WORK

The Company will notify UDOT's Project Representative as well as the Design-Builder Project Representative at least 2 business days in advance of beginning any Utility Work covered by any supplemental agreements hereto. The Company will give subsequent notifications of when

and where the Company will be performing Utility Work to UDOT's Field Representative and the Design-Builder Project Representative on a day-to-day basis. Such subsequent notifications can be informal. Failure on the part of the Company to give proper notification to UDOT's Field Representative and the Design-Builder Project Representative will be cited to the Company and that portion of the Company's Utility Work performed while not under the surveillance of the UDOT Field Representative may be deducted from the reimbursement at UDOT's discretion for.

17. INSPECTION

The Company shall provide on-call engineering support by the Company's engineer or appropriate representative for design review, schedule coordination, or to correct or clarify issues during the Utility Work, and to perform the necessary inspection for the Company's Utility Work installed by UDOT.

a. The Company engineer and/or inspector shall work with and through UDOT's Project Representative and shall give no orders directly to UDOT's Design-Builder unless authorized in writing to do so. UDOT will accomplish the Utility Work covered herein on Company's facilities in accordance with the plans and specifications provided and/or approved by the Company, including changes or additions to the plans and specifications, which are approved by the Parties hereto.
b. The Company shall immediately notify UDOT's Project Representative and the Design-Builder Project Representative of any deficiencies in the Utility Work on the Company's facilities. The Company shall follow up with written detail to UDOT's Project Representative and the Design-Builder Project Representative of its findings within 24-hours of making its initial notification.
c. UDOT will respond to the Company's concerns within 24-hours of written notification.
d. The Company, through its inspection of the Utility Work, will provide UDOT's Project Representative with information covering any problems or concerns the Company may have with acceptance of the facilities upon completion of the Utility Work.
e. Any periodic plan and specification review or construction inspection performed by UDOT arising out of the performance of the Company's Utility Work does not relieve the Company of its duty in the performance of the Utility Work or to ensure compliance with acceptable standards.

18. DAILY RECORDKEEPING

The Company will keep daily records of the inspection and Utility Work performed by the Company forces. Daily records will be in duplicate on a form to be prepared by the Company or UDOT. The type of form to be used shall be preapproved by UDOT's Contracts, Compliance, and Certification Manager. The daily records shall be signed by UDOT's Field Representative and the Company or its authorized representatives.

19. REIMBURSEMENT FOR COMPANY'S UTILITY WORK

In accordance with Utah Code §72-6-116(3)(a)(ii), UDOT will reimburse the Company 50% of the cost of Utility Work of its facilities on state highways and the Company shall pay the remainder of the cost of the Utility Work. UDOT will reimburse the Company 100% of the cost of Utility Work of its facilities located on a public utility easement, on a Company-owned private easement or fee property. The Company shall provide UDOT with a copy of the public utility

easement or subdivision plat, private easement or fee title. The Utility Work and reimbursement for Company's facilities required by the Project will be in conformance with the requirements of Utah Administrative Code R930-8.

The Company shall submit itemized bills covering its actual costs incurred for performing the Utility Work covered by supplemental agreements to UDOT's Contracts and Compliance Specialist:

UDOT Contracts and Compliance Specialist
Utah Department of Transportation
PO Box 141510
SLC UT 84114-1510

Itemized bills shall bear the Project and supplemental agreement numbers, supporting sheets, and a complete billing statement of all actual costs incurred, following the order of the items in the detailed estimates contained in the supplemental agreement, and be submitted to UDOT within 60 days following completion of the Utility Work by the Company on the Project. Otherwise, previous payments to the Company may be considered final, except as agreed to between the Parties in advance. UDOT will reimburse the Company within 60 days after receipt of the billings, but only for those items complying fully with the provisions of Utah Administrative Code R930-8. Failure on the part of the Company to submit final billings within 6 months of the completion of the Utility Work will result in UDOT's disallowance of that portion of Utility Work reimbursement.

If the Company owes a balance to UDOT, the Company will reimburse UDOT within 60 days after receipt of billing from UDOT.

20. SALVAGE CREDIT

In accordance with 23 C.F.R. §645.117 all materials from Company's existing facilities which are recovered by UDOT while performing the Utility Work and not reused on this Project shall become the property of the Design-Builder unless otherwise agreed to in advance by the Parties hereto.

In accordance with 23 C.F.R. §645.117, all materials from the existing facilities, which are recovered in suitable condition for reuse by the Company and not reused on the Project, shall be credited to the cost of the Project at current stock prices. If the materials are not suitable for reuse, they shall be credited at such other prices as agreed upon between the Company and UDOT following inspection of the recovered material.

21. PROJECT DESIGN CHANGES

If UDOT changes the Project design after the Company has completed its design review; or if the Company has completed its portion of the Utility Work of its facilities based on previously approved design plans; the cost of the second design review and/or Utility Work is to be paid in full by UDOT. UDOT will make adjustments for any additional time that may be required for the Company to perform Utility Work on its facilities when required.

22. COMPANY'S COSTS DIFFER BY MORE THAN 10%

If the Company's actual costs incurred for its force account work differs more than 10% plus or minus per line item from the amount contained in the supplemental agreements, the Company is required to submit a letter of explanation with its billings indicating how and why the difference in costs occurred.

23. RIGHT TO AUDIT

UDOT and FHWA shall have the right to audit all cost records and accounts of the Company pertaining to this Project in accordance with the auditing procedure of the Federal Highway Administration and 23 C.F.R. §645, subpart A. Should this audit disclose that the Company has been underpaid, UDOT will reimburse the Company within 60 days upon submission of additional billing to cover the underpayment. Should this audit disclose that the Company has been overpaid, the Company will reimburse UDOT within 60 days of notification of audit findings in the amount of the overpayment. For the purpose of audit the Company is required to keep and maintain its records of Utility Work covered herein for a minimum of 3 years after final payment is received by the Company from UDOT.

The Company shall have the right to review UDOT's cost documentation for the Utility Work performed on behalf of the Company.

24. ACCEPTANCE

UDOT will provide notification to the Company for acceptance of the Utility Work upon completion of the final inspection. Company will have 60 days to respond in writing to UDOT with any additional comments in regards to the Utility Work. In the event that UDOT does not receive a written response within 60 days, UDOT will designate the Utility Work accepted by the Company. Upon acceptance of the Utility Work, the Company will accept, own and maintain its facilities. To the extent it may lawfully do so, Company further agrees to relieve UDOT from any responsibility or liability that may result for its new facilities or the operation thereof.

25. ACCESS & MAINTENANCE

Access for maintenance and servicing of Company's facilities located on the Project right-of-way will be allowed only by permit issued by UDOT. Company will obtain the permit and abide by conditions thereof for policing and other controls in conformance with Utah Administrative Code R930-7.

26. MISCELLANEOUS

a. Each Party agrees to undertake and perform all further acts that are reasonably necessary to carry out the intent and purpose of this Agreement at the request of the other Party.
b. This Agreement in no way creates any type of agency relationship, joint venture, or partnership between UDOT and Company.
c. The failure of either Party to insist upon strict compliance of any of the terms and conditions, or failure or delay by either Party to exercise any rights or remedies

provided in this Agreement, or by law, will not release either Party from any obligations arising under this Agreement.

d. This Agreement shall be deemed to be made under and shall be governed by the laws of the State of Utah in all respects. Each person signing this Agreement warrants that the person has full legal capacity, power, and authority to execute this Agreement for and on behalf of the respective Party and to bind such Party. This Agreement may be executed in one or more counterparts, each of which shall be an original, with the same effect as if the signatures were made upon the same instrument. This Agreement may be delivered by facsimile or electronic mail.

****

IN WITNESS WHEREOF, the Parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

Zayo Group, LLC

Title: General Counsel

Date: 8/30/2016

Recommended For Approval:

Title: Utility and Railroad Leader

Date: _____

Utah Department of Transportation

Title: Project Director

Date: _____

Approved as to Form

Title: Assistant Attorney General

Date: _____

UDOT Comptroller Office Contract Administrator

Title: _____

Date: _____

ZAYO GROUP, LLC
SUPPLEMENTAL AGREEMENT NO. ___

Supplement to UDOT Finance No. _____

THIS SUPPLEMENTAL AGREEMENT, made and entered into this 30th day of August, 2016, **Utah Department of Transportation**, ("UDOT"), and **Zayo Group, LLC**, a Company in the State of Colorado, ("Company") each as ("Party") and jointly as ("Parties").

The Parties hereto entered in to a Master Utility Agreement (MUA) dated August 30, 2016, UDOT Finance No. _____. All the terms of the MUA remain in full force and effect unless otherwise specified herein.

The Parties agree as follows:

1. UDOT and Company will perform the following described Utility Work in accordance with the terms and conditions of the MUA:

   a. Description of Utility Work to be performed, including proposed location, described in Exhibit "A" that is incorporated by reference: (Plan Sheets Attached)

   b. The Company requirements as shown in the MUA – Company Requirements, are modified as follows:

   c. Anticipated duration of Utility Work as shown on Exhibit "B" that is incorporated by reference:

   d. Betterments included:

TOTAL ESTIMATED COST OF SUPPLEMENTAL AGREEMENT _____	**$0.00**
TOTAL ESTIMATED COST OF COMPANY PERFORMED UTILITY WORK	$0.00
TOTAL ESTIMATED COST OF UDOT PERFORMED UTILITY WORK	$0.00
COMBINED TOTAL ESTIMATED COST OF UTILITY WORK	**$0.00**
TOTAL ESTIMATED AMOUNT OF COMPANY PARTICIPATION @ 50%	$0.00
TOTAL ESTIMATED AMOUNT OF UDOT PARTICIPATION @ 50%	$0.00

2. UDOT will notify the Company's contact person, Michael Sullivan, telephone number (602) 354-9486 and e-mail michael.sullivan@zayo.com at least 48 hours in advance of beginning the Utility Work covered herein, or in accordance with the specific terms of the MUA, as applicable.

IN WITNESS WHEREOF, the Parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first written above.

Zayo Group, LLC

_____

Title: General Counsel

Date: 8/30/2016

. . . . . .

Recommended For Approval:

_____

Title: Utility and Railroad Leader

Date: _____

Utah Department of Transportation

_____

Title: Project Director

Date: _____

UDOT Comptroller Office Contract Administrator

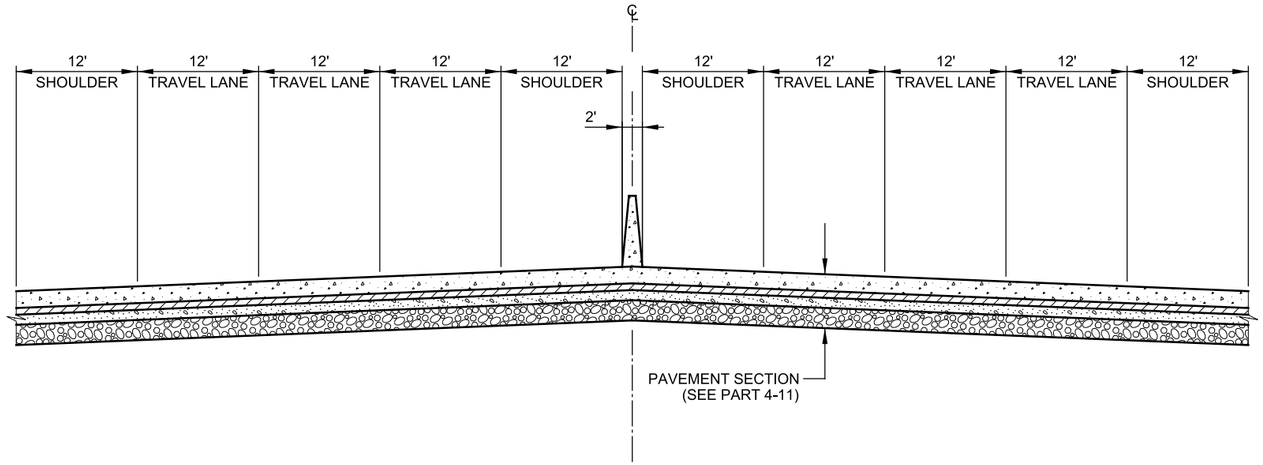
_____

Title:

Date: _____

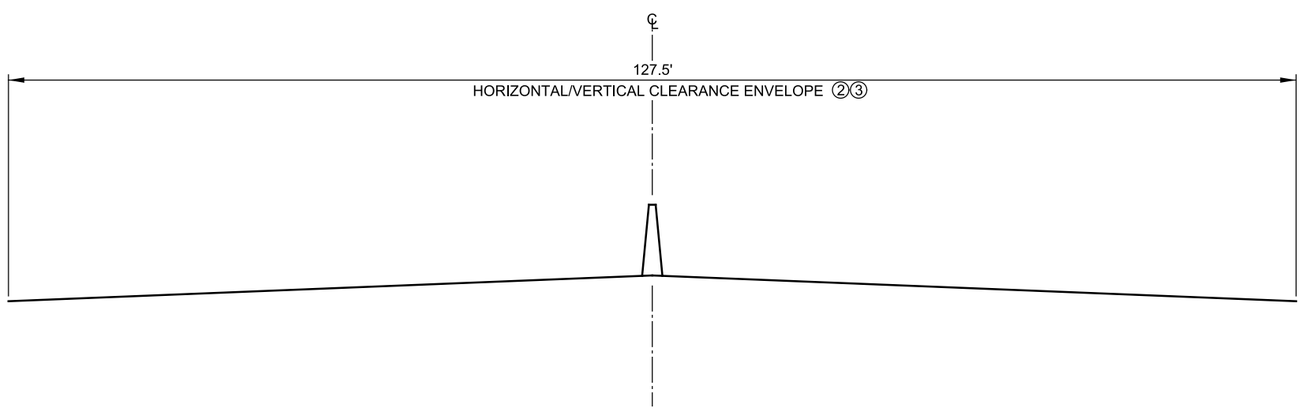
TABLE OF CONTENTS

1. Typical Sections - Revised
2. Survey Control
3. Right-of-Way Drawings - Revised
4. Utility Plans - Revised
5. Utility Details - Revised
6. Utility Summaries - Revised
7. Traffic Volumes
8. Signing Details
9. Signal Details ~~– TO BE ADDED IN FINAL RFP~~
10. ATMS Details
11. Partial Interchange Lighting Detail
12. Off Ramp Grading for Future Lane Detail
13. Pedestrian Bridge Location at 7000 South
14. USBOR Manway and Vault Details
15. USBOR O&M Guidelines



TYPICAL SECTION 1

SR-154



TYPICAL SECTION 2

SR-154

NOTES:

1. TRANSITION LANES, SHOULDER, AND MEDIAN TO MATCH EXISTING STRIPING AT OUTER CONSTRUCTION LIMITS.

②NO PART OF THE STRUCTURE ENCROACHES INTO THE VERTICAL CLEAR SPACE.

③NO FIXED OBJECTS WITHIN THE HORIZONTAL CLEAR SPACE.

4. INCREASE SHOULDER WIDTHS TO ACHIEVE REQUIRED SIGHT DISTANCE AS NECESSARY.

5. SHOULDER WIDTH VARIES FROM 12 FEET TO 10 FEET FOR HIGH MAST LIGHTING AND SIGN STRUCTURES.

6. SEE PDC FOR DESIGN SPEED AND CLEAR ZONE REQUIREMENTS.

7. SEE DESIGN EXCEPTIONS FOR LOCATIONS WHERE SHOULDER WIDTHS ARE ALLOWED TO BE REDUCED.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY DRK
MM/DD/YY
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY
PROJECT NUMBER: S-0154(12)11 PIN 12566
TYPICAL SECTION

SHEET NO. TS-01

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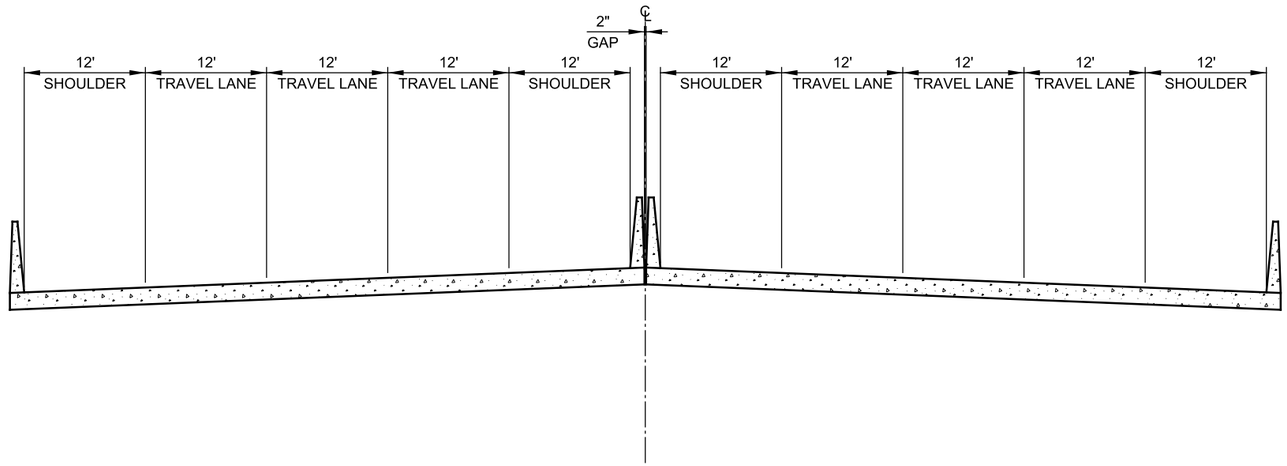
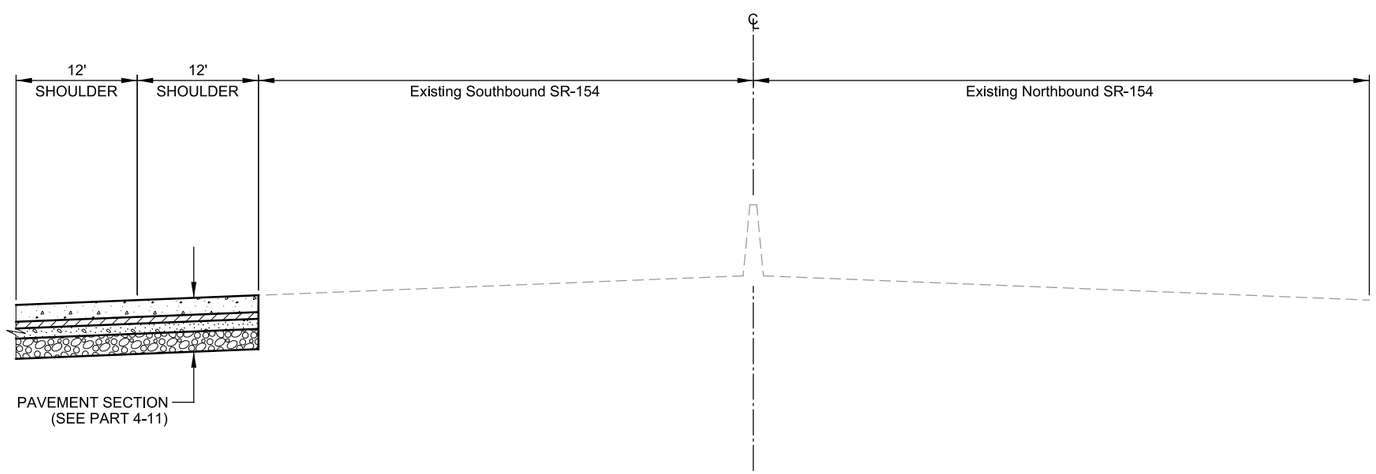


TYPICAL SECTION 3

SR-154 BRIDGE STRUCTURE (OVER CROSS STREET)



TYPICAL SECTION 4

SR-154

BETWEEN 7800 S INTERCHANGE AND 7000 S INTERCHANGE

NOTES:

1. TRANSITION LANES, SHOULDER, AND MEDIAN TO MATCH EXISTING STRIPING AT OUTER CONSTRUCTION LIMITS.

2. INCREASE SHOULDER WIDTHS TO ACHIEVE REQUIRED SIGHT DISTANCE AS NECESSARY.

3. SHOULDER WIDTH VARIES FROM 12 FEET TO 10 FEET FOR HIGH MAST LIGHTING AND SIGN STRUCTURES.

4. SEE PDC FOR DESIGN SPEED AND CLEAR ZONE REQUIREMENTS.

REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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MM/DD/YY
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY
PROJECT NUMBER: S-0154(12)11 PIN 12566
TYPICAL SECTION

SHEET NO. TS-02

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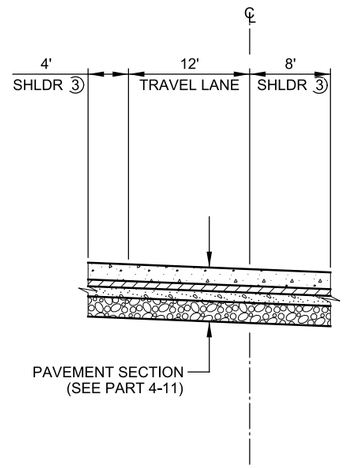
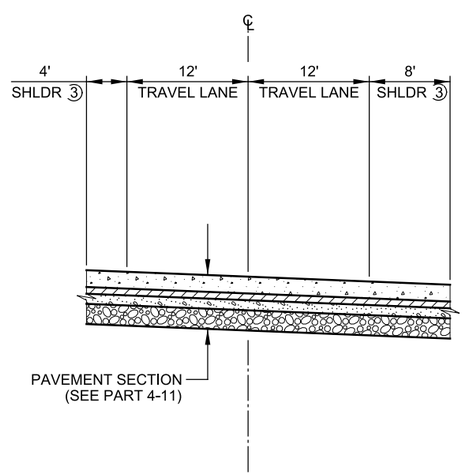


TYPICAL SECTION 5

1 LANE RAMP



TYPICAL SECTION 6

2 LANE RAMP

NOTES:

1. TRANSITION LANES, SHOULDER, AND MEDIAN TO MATCH EXISTING STRIPING AT OUTER CONSTRUCTION LIMITS.

2. INCREASE SHOULDER WIDTHS TO ACHIEVE REQUIRED SIGHT DISTANCE AS NECESSARY.

③ ADD TWO FEET OF SHOULDER WIDTH WHEN BARRIER IS USED.

4. SEE PDC FOR DESIGN SPEED AND CLEAR ZONE REQUIREMENTS.

5. SEE DESIGN EXCEPTIONS FOR LOCATIONS WHERE SHOULDER WIDTHS ARE ALLOWED TO BE REDUCED.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY
PROJECT NUMBER: S-0154(12)11 PIN 12566
TYPICAL SECTION

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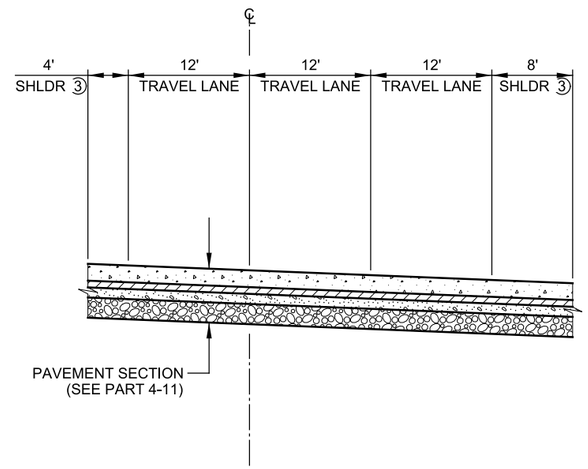
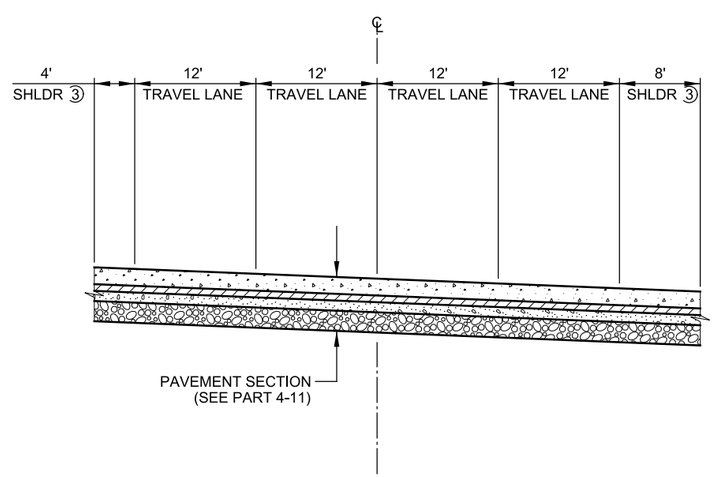


TYPICAL SECTION 7

3 LANE RAMP



TYPICAL SECTION 8

4 LANE RAMP

NOTES:

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2. INCREASE SHOULDER WIDTHS TO ACHIEVE REQUIRED SIGHT DISTANCE AS NECESSARY.

③ ADD TWO FEET OF SHOULDER WIDTH WHEN BARRIER IS USED.

4. SEE PDC FOR DESIGN SPEED AND CLEAR ZONE REQUIREMENTS.

5. SEE DESIGN EXCEPTIONS FOR LOCATIONS WHERE SHOULDER WIDTHS ARE ALLOWED TO BE REDUCED.

REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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MM/DD/YY
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY
PROJECT NUMBER: S-0154(12)11 PIN 12566
TYPICAL SECTION

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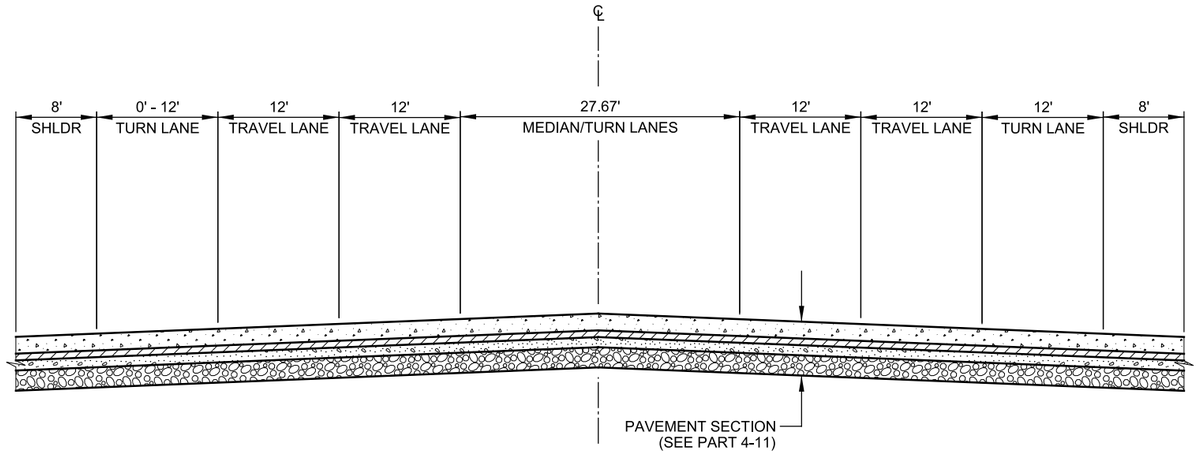
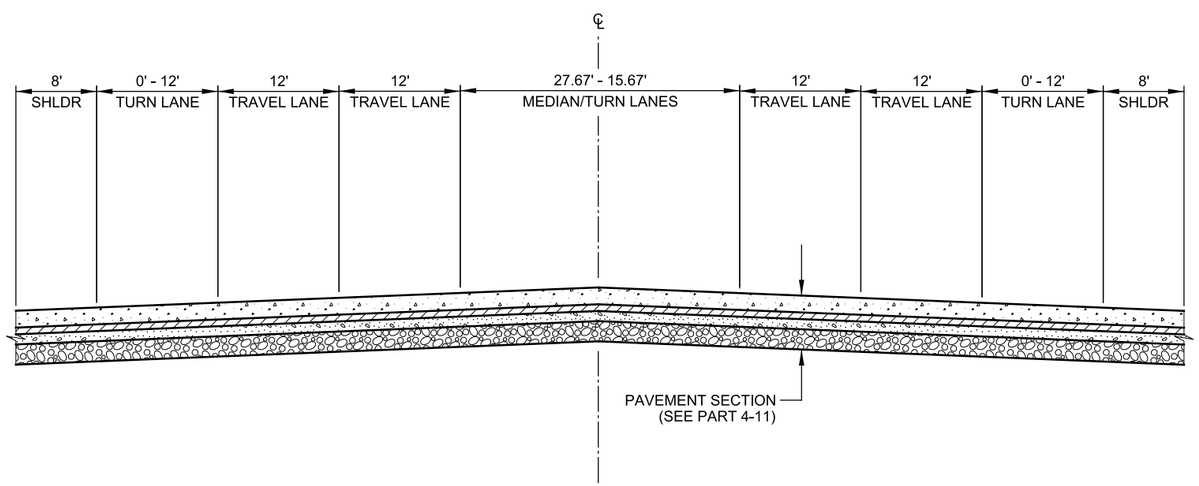


TYPICAL SECTION 9

11400 SOUTH

WEST OF SR-154



TYPICAL SECTION 10

11400 SOUTH

EAST OF SR-154

NOTES:

1. TRANSITION LANES, SHOULDER, AND MEDIAN TO MATCH EXISTING STRIPING AT OUTER CONSTRUCTION LIMITS.

2. SEE PDC FOR DESIGN SPEED AND CLEAR ZONE REQUIREMENTS.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH

QC CHECKED BY DRK

MM/DD/YY DATE

APPROVED

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY

PROJECT NUMBER: S-0154(12)11 PIN 12566

TYPICAL SECTION

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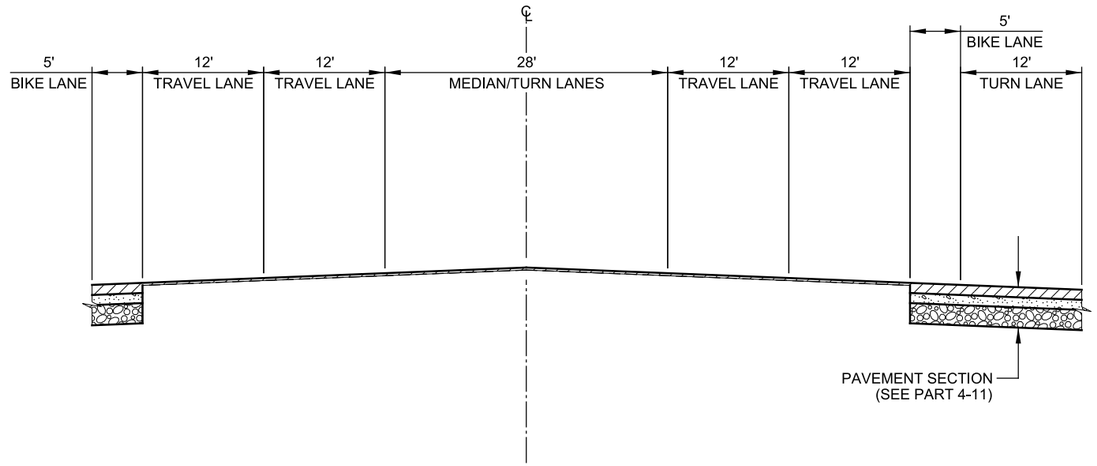
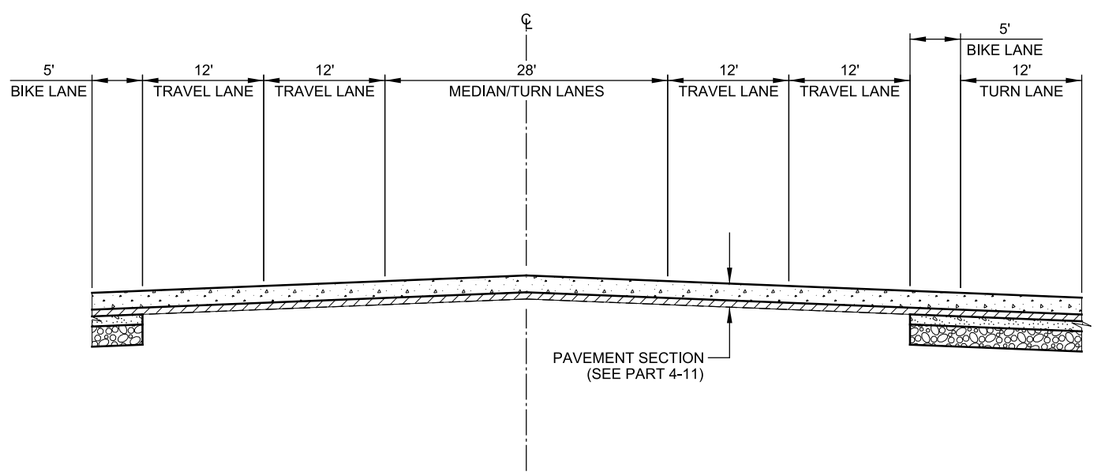


TYPICAL SECTION 11

9000 S

OUTSIDE EXISTING CONCRETE PAVEMENT LIMITS



TYPICAL SECTION 12

9000 S

INSIDE EXISTING CONCRETE PAVEMENT LIMITS

NOTES:

1. TRANSITION LANES, SHOULDER, AND MEDIAN TO MATCH EXISTING STRIPING AT OUTER CONSTRUCTION LIMITS.

2. SEE PDC FOR DESIGN SPEED AND CLEAR ZONE REQUIREMENTS.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH

QC CHECKED BY DRK

APPROVED

DATE MM/DD/YY

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY

PROJECT NUMBER: S-0154(12)11 PIN 12566

TYPICAL SECTION

SHEET NO. TS-06

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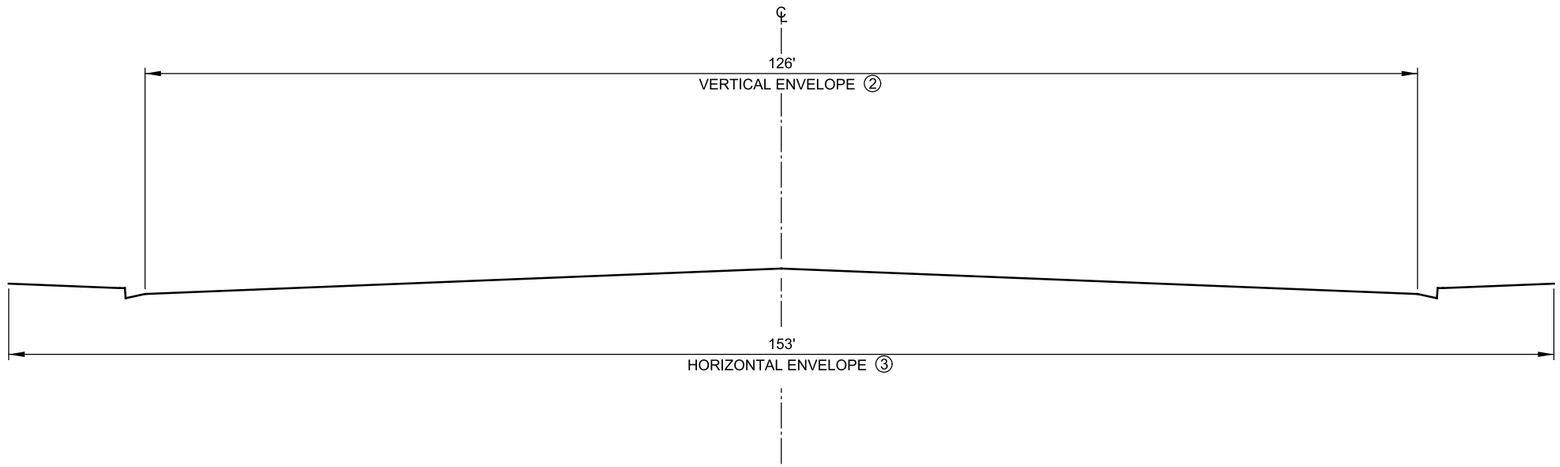
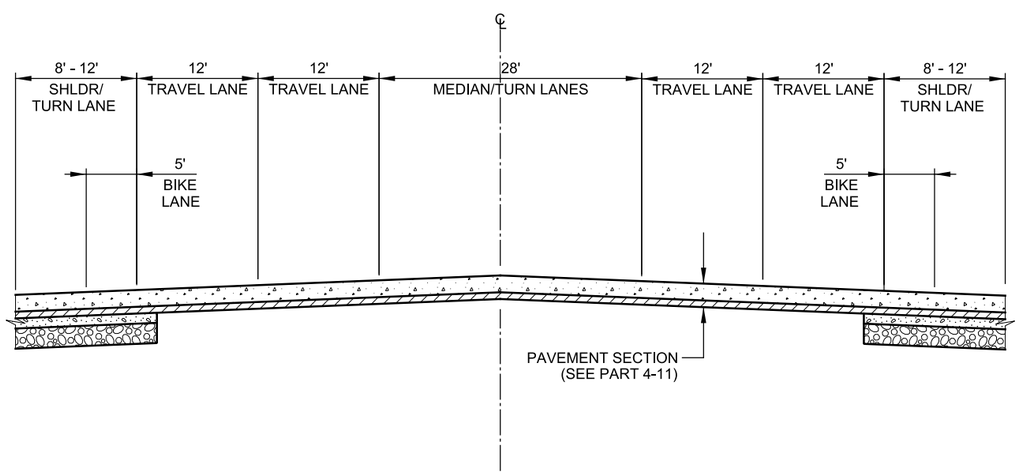


TYPICAL SECTION 13

9000 S



TYPICAL SECTION 14

7000 S

INSIDE EXISTING CONCRETE PAVEMENT LIMITS

NOTES:

1. TRANSITION LANES, SHOULDER, AND MEDIAN TO MATCH EXISTING STRIPING AT OUTER CONSTRUCTION LIMITS.

② NO PART OF THE STRUCTURE ENCROACHES INTO THE VERTICAL CLEAR SPACE.

③ NO FIXED OBJECTS WITHIN THE HORIZONTAL CLEAR SPACE.

4. ACTUAL BRIDGE WIDTH OR SPAN DEPENDS ON SPUI RAMP GEOMETRY

5. SEE PDC FOR DESIGN SPEED AND CLEAR ZONE REQUIREMENTS.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY DRK
APPROVED
MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY
PROJECT NUMBER: S-0154(12)11
PIN: 12566
TYPICAL SECTION

SHEET NO. TS-07

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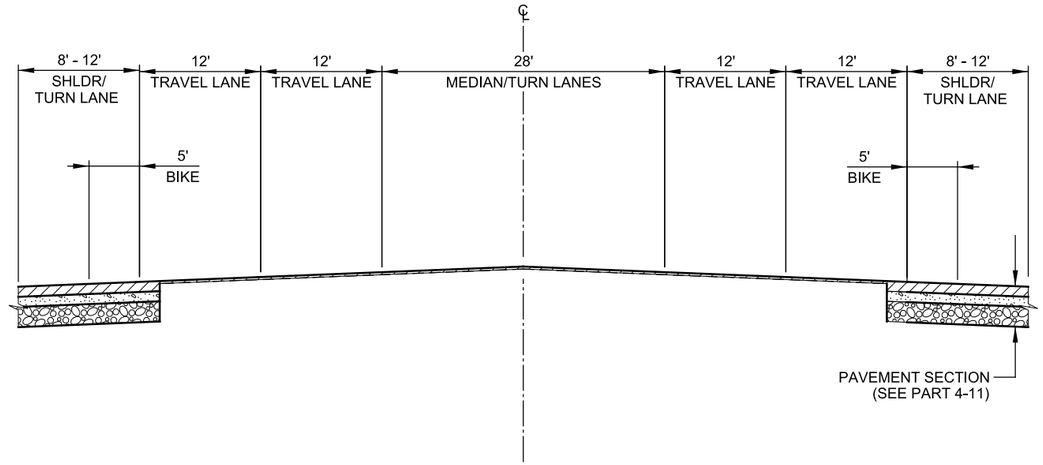
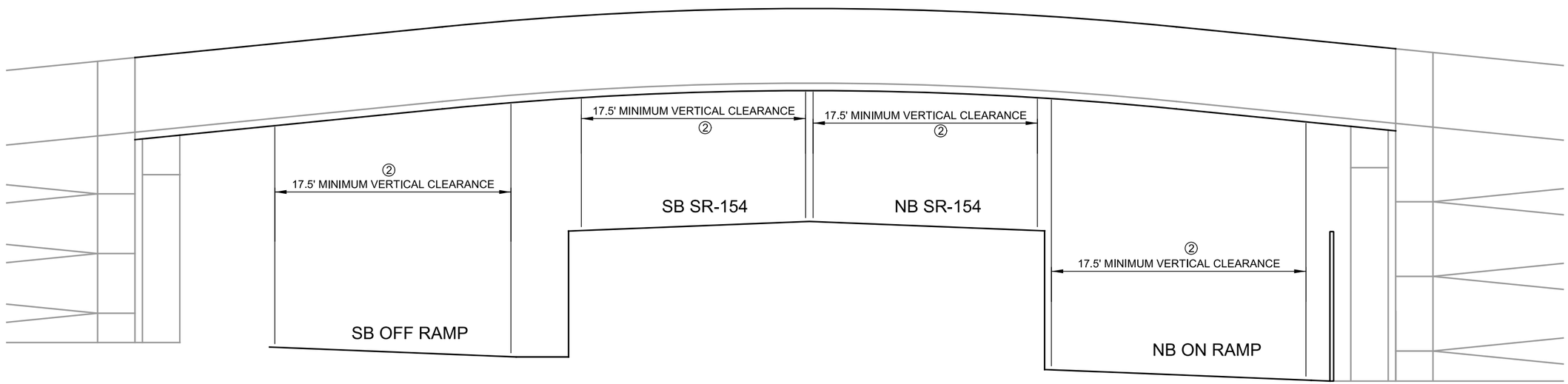


TYPICAL SECTION 15

7000 S

OUTSIDE EXISTING CONCRETE PAVEMENT LIMITS



TYPICAL SECTION 16

PEDESTRIAN BRIDGE CLEARANCE AT 7000 SOUTH INTERCHANGE

NOTES:

1. TRANSITION LANES, SHOULDER, AND MEDIAN TO MATCH EXISTING STRIPING AT OUTER CONSTRUCTION LIMITS.

② NO PART OF THE STRUCTURE ENCROACHES INTO THE VERTICAL CLEAR SPACE.

③ NO FIXED OBJECTS WITHIN THE HORIZONTAL CLEAR SPACE.

4. ACTUAL BRIDGE WIDTH OR SPAN DEPENDS ON SPUI RAMP GEOMETRY

5. SEE PDC FOR DESIGN SPEED AND CLEAR ZONE REQUIREMENTS.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY DRK
MM/DD/YY
DATE

APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY
PROJECT NUMBER: S-0154(12)11 PIN 12566
TYPICAL SECTION

SHEET NO. TS-08

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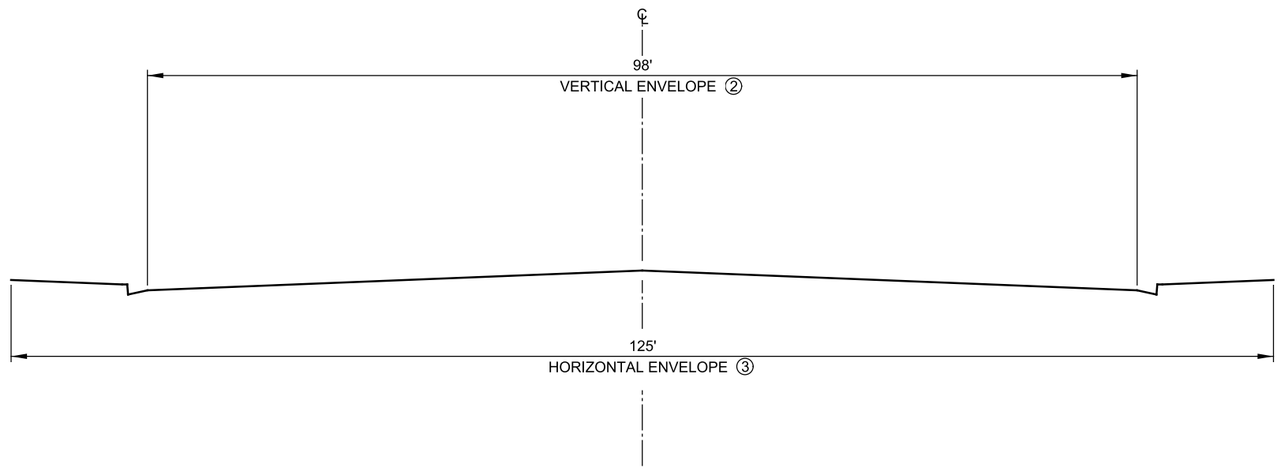
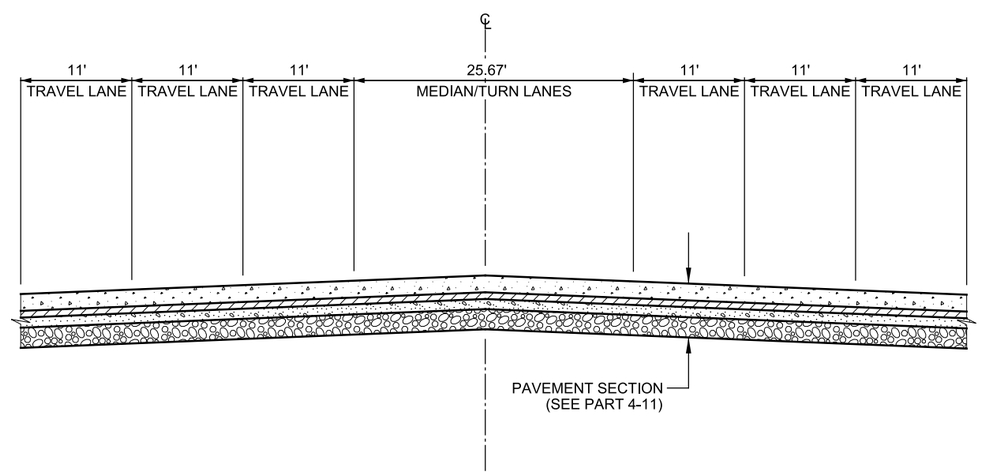


TYPICAL SECTION 17

7000 S



TYPICAL SECTION 18

SR-173 (5400 SOUTH)

NOTES:

1. TRANSITION LANES, SHOULDER, AND MEDIAN TO MATCH EXISTING STRIPING AT OUTER CONSTRUCTION LIMITS.

② NO PART OF THE STRUCTURE ENCROACHES INTO THE VERTICAL CLEAR SPACE.

③ NO FIXED OBJECTS WITHIN THE HORIZONTAL CLEAR SPACE.

4. ACTUAL BRIDGE WIDTH OR SPAN DEPENDS ON SPUI RAMP GEOMETRY.

5. SEE PDC FOR DESIGN SPEED AND CLEAR ZONE REQUIREMENTS.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY DRK
APPROVED
MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY
PROJECT NUMBER: S-0154(12)11 PIN 12566
TYPICAL SECTION

SHEET NO. TS-09

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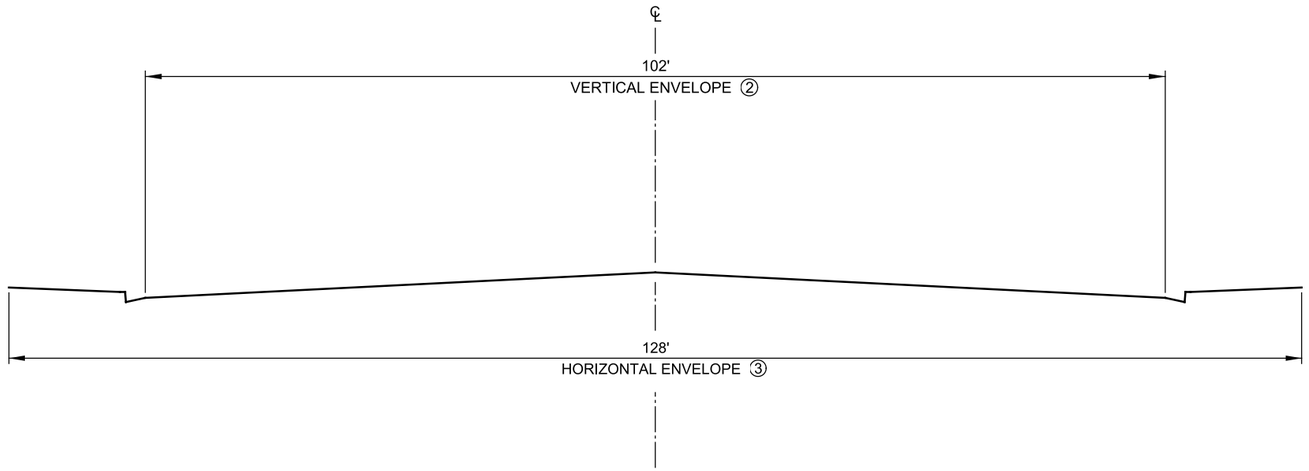

TYPICAL SECTION 19

SR-173 (5400 SOUTH)

NOTES:

1. TRANSITION LANES, SHOULDER, AND MEDIAN TO MATCH EXISTING STRIPING AT OUTER CONSTRUCTION LIMITS.

② NO PART OF THE STRUCTURE ENCROACHES INTO THE VERTICAL CLEAR SPACE.

③ NO FIXED OBJECTS WITHIN THE HORIZONTAL CLEAR SPACE.

4. ACTUAL BRIDGE WIDTH OR SPAN DEPENDS ON SPUI RAMP GEOMETRY.

5. SEE PDC FOR DESIGN SPEED AND CLEAR ZONE REQUIREMENTS.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY DRK
APPROVED
MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY
PROJECT NUMBER: S-0154(12)11 PIN 12566
TYPICAL SECTION

SHEET NO. TS-10

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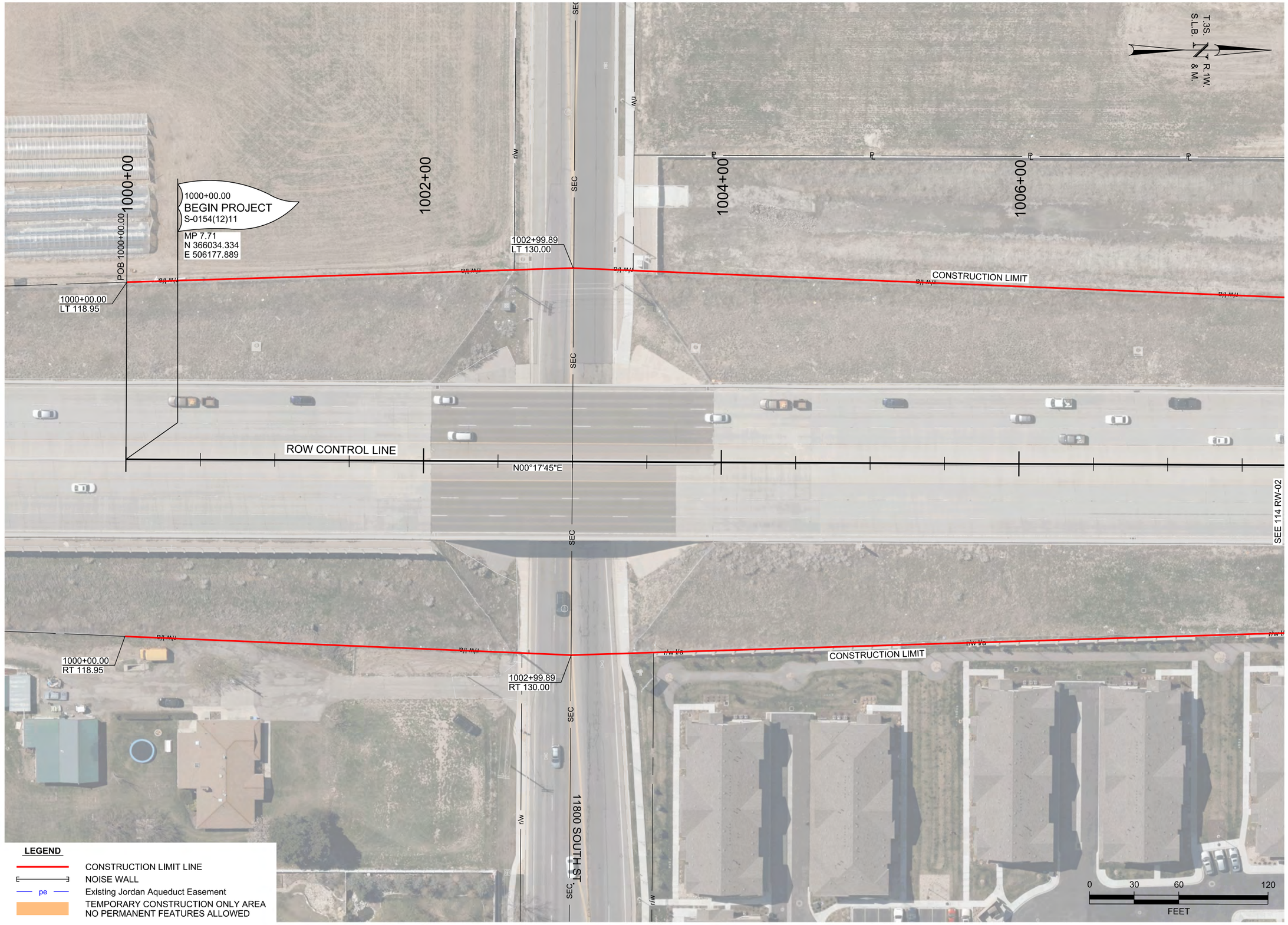

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
MM/DD/YY
DATE

APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 114RW-01

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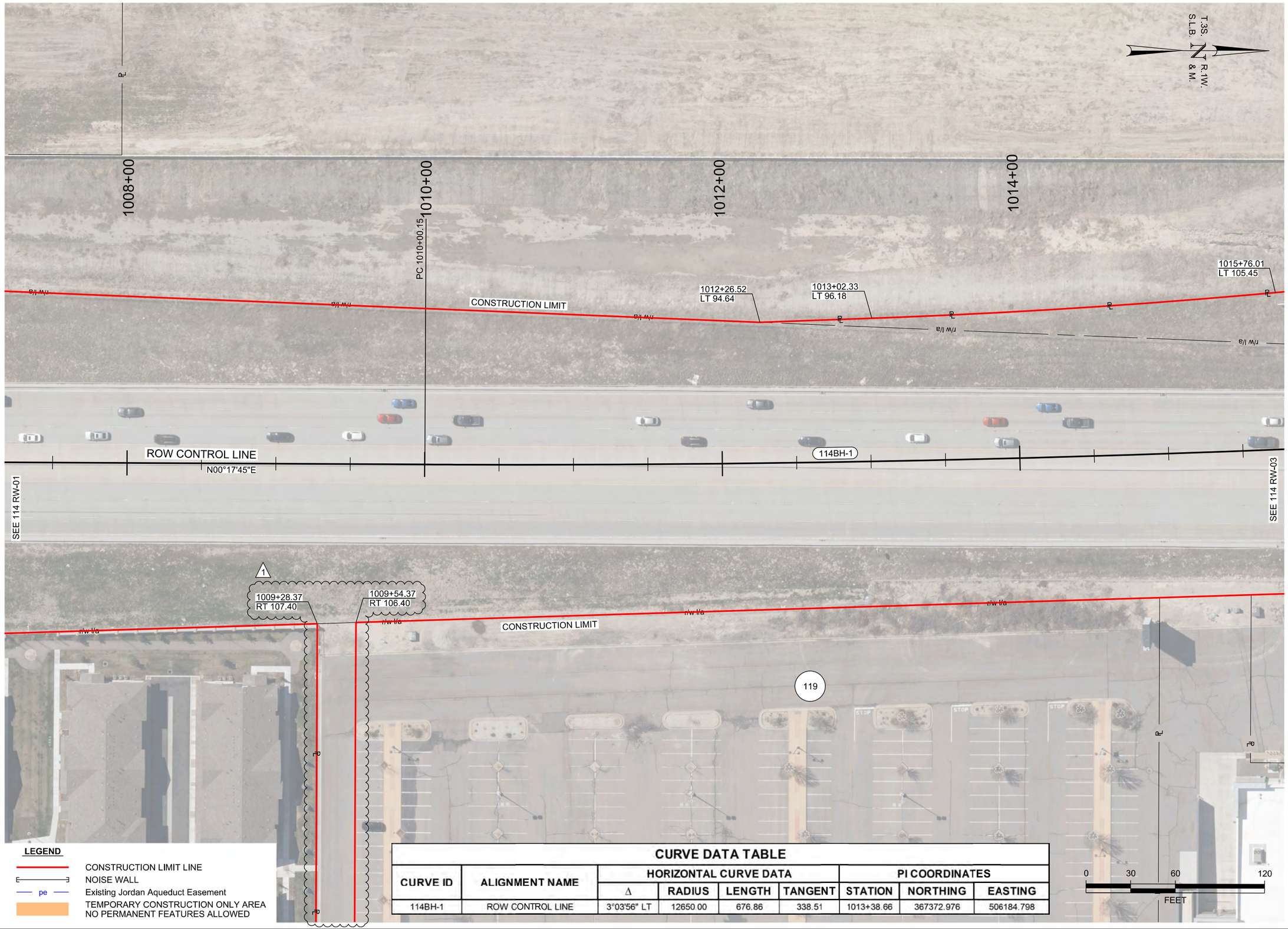

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
114BH-1	ROW CONTROL LINE	3°03'56" LT	12650.00	676.86	338.51	1013+38.66	367372.976	506184.798

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	08/16	CSB	WIDENED FOR TCE.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
APPROVED
MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 114RW-02

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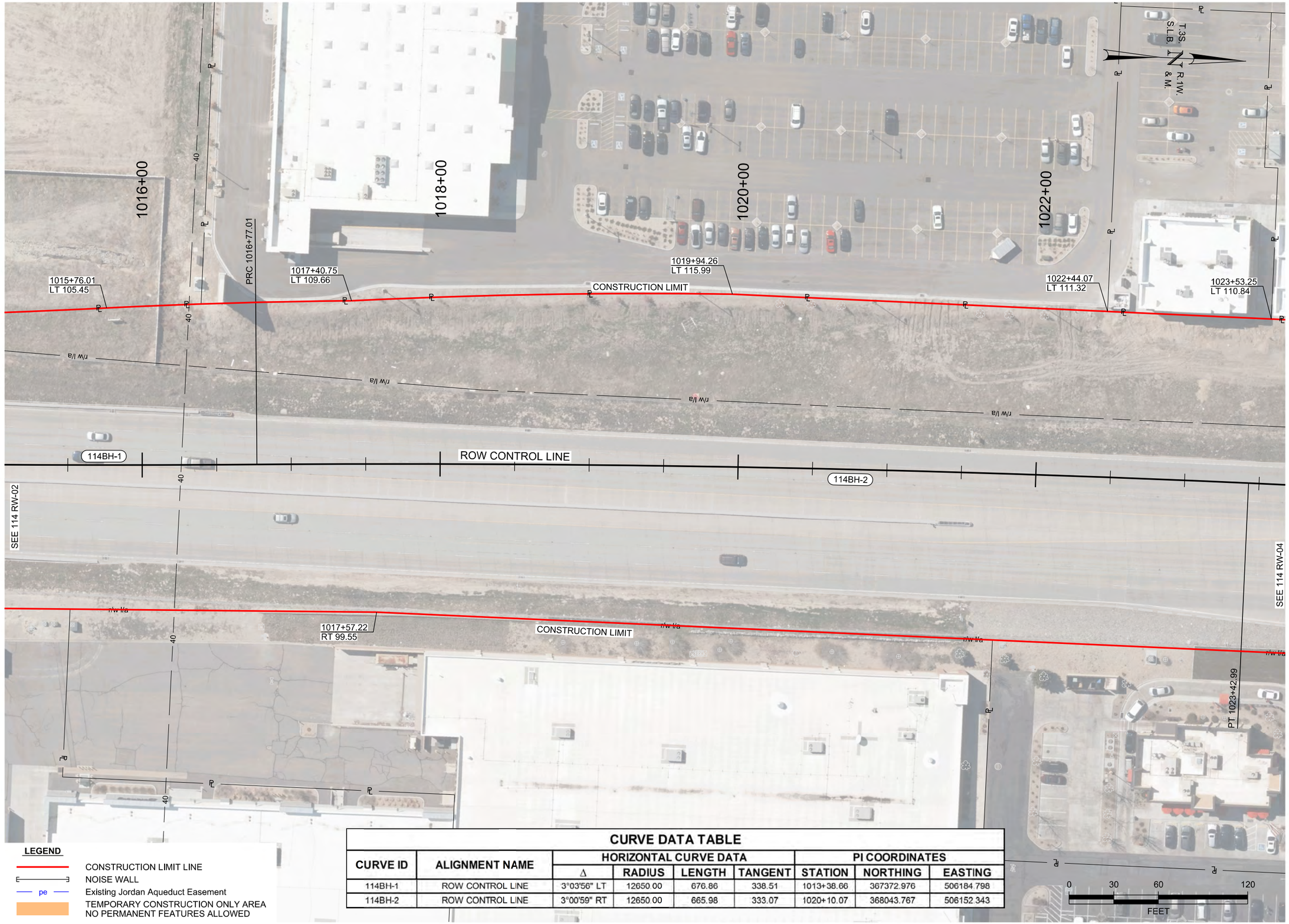

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
114BH-1	ROW CONTROL LINE	3°03'56" LT	12650.00	676.86	338.51	1013+38.66	367372.976	506184.798
114BH-2	ROW CONTROL LINE	3°00'59" RT	12650.00	665.98	333.07	1020+10.07	368043.767	506152.343

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
MM/DD/YY
DATE
APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 114RW-03

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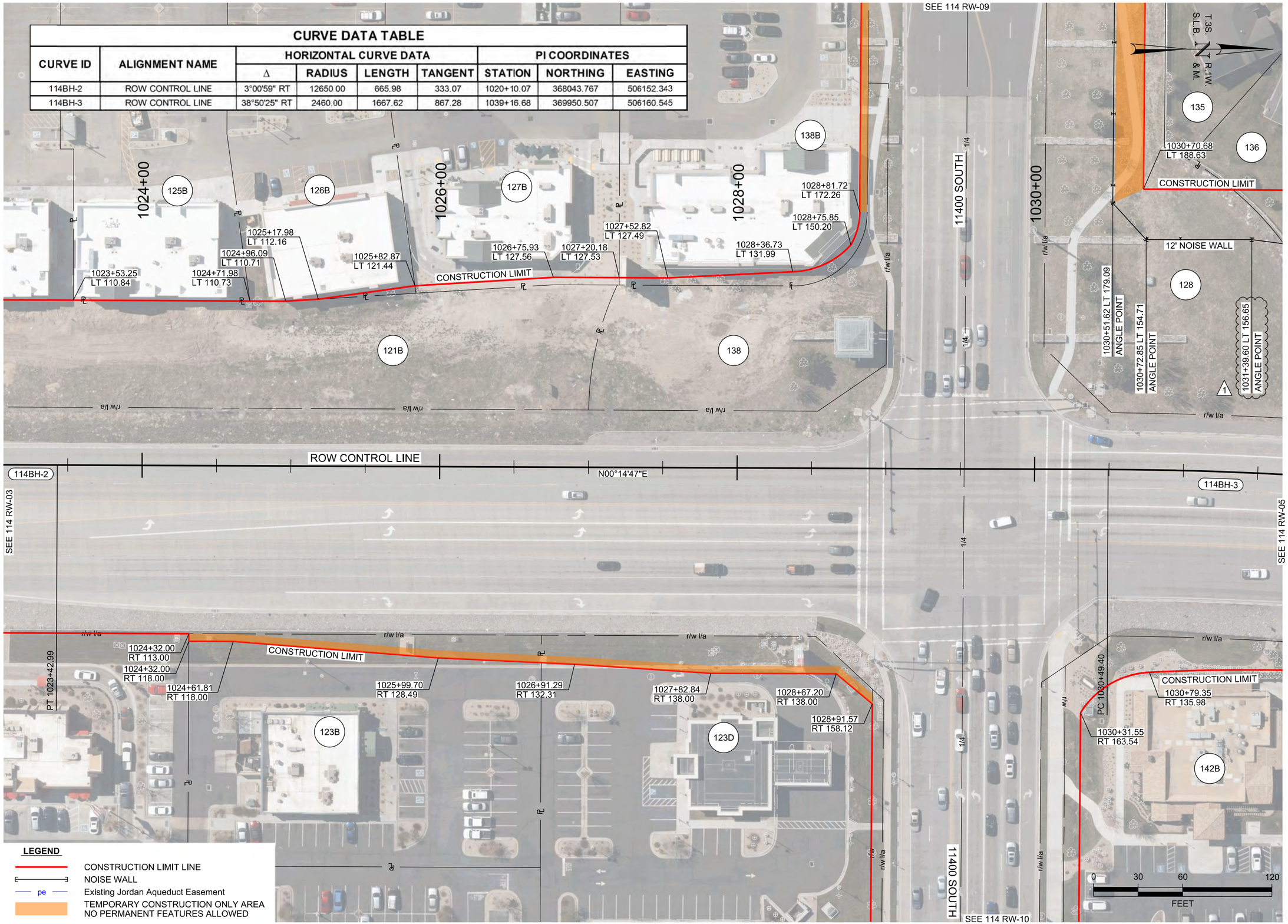
CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
114BH-2	ROW CONTROL LINE	3°00'59" RT	12650.00	665.98	333.07	1020+10.07	368043.767	506152.343
114BH-3	ROW CONTROL LINE	38°50'25" RT	2460.00	1667.62	867.28	1039+16.68	369950.507	506160.545



LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	REMARKS
1	08/16	UPDATED NOISE WALL ANGLE POINT.

APPROVED BY: CSB

DRAWN BY: KKH

QC CHECKED BY: CSB

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

APPROVED

MM/DD/YY
DATE

PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11

PIN: 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 114RW-04

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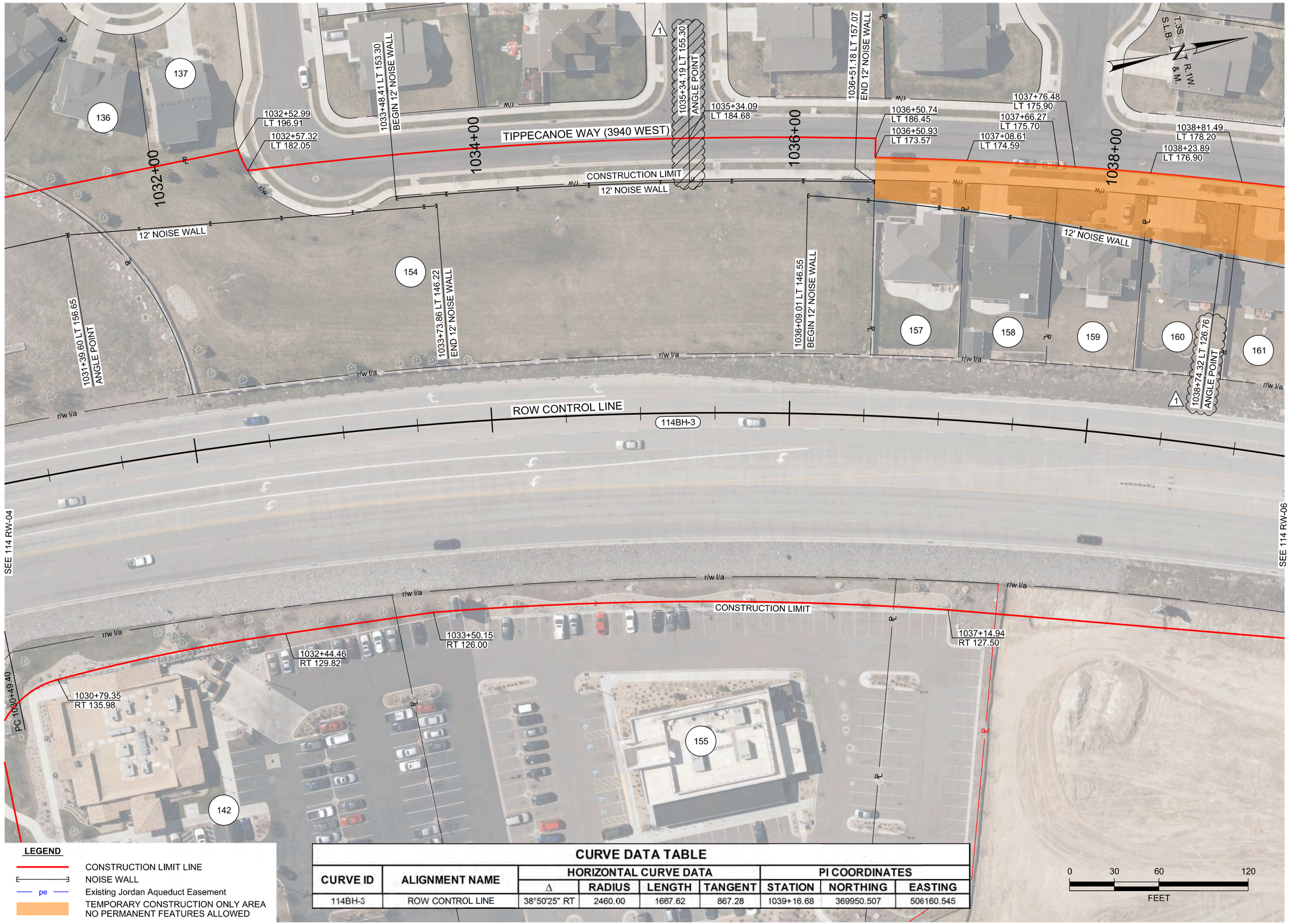

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
114BH-3	ROW CONTROL LINE	38°50'25" RT	2460.00	1667.62	867.28	1039+16.68	369950.507	506160.545

0 30 60 120
FEET

REVISIONS

NO.	DATE	REMARKS
1	08/16	UPDATED NOISE WALL ANGLE POINTS.

APPROVED BY: CSB

DRAWN BY: KKH
QC CHECKED BY: CSB

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

APPROVED
MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 114RW-05

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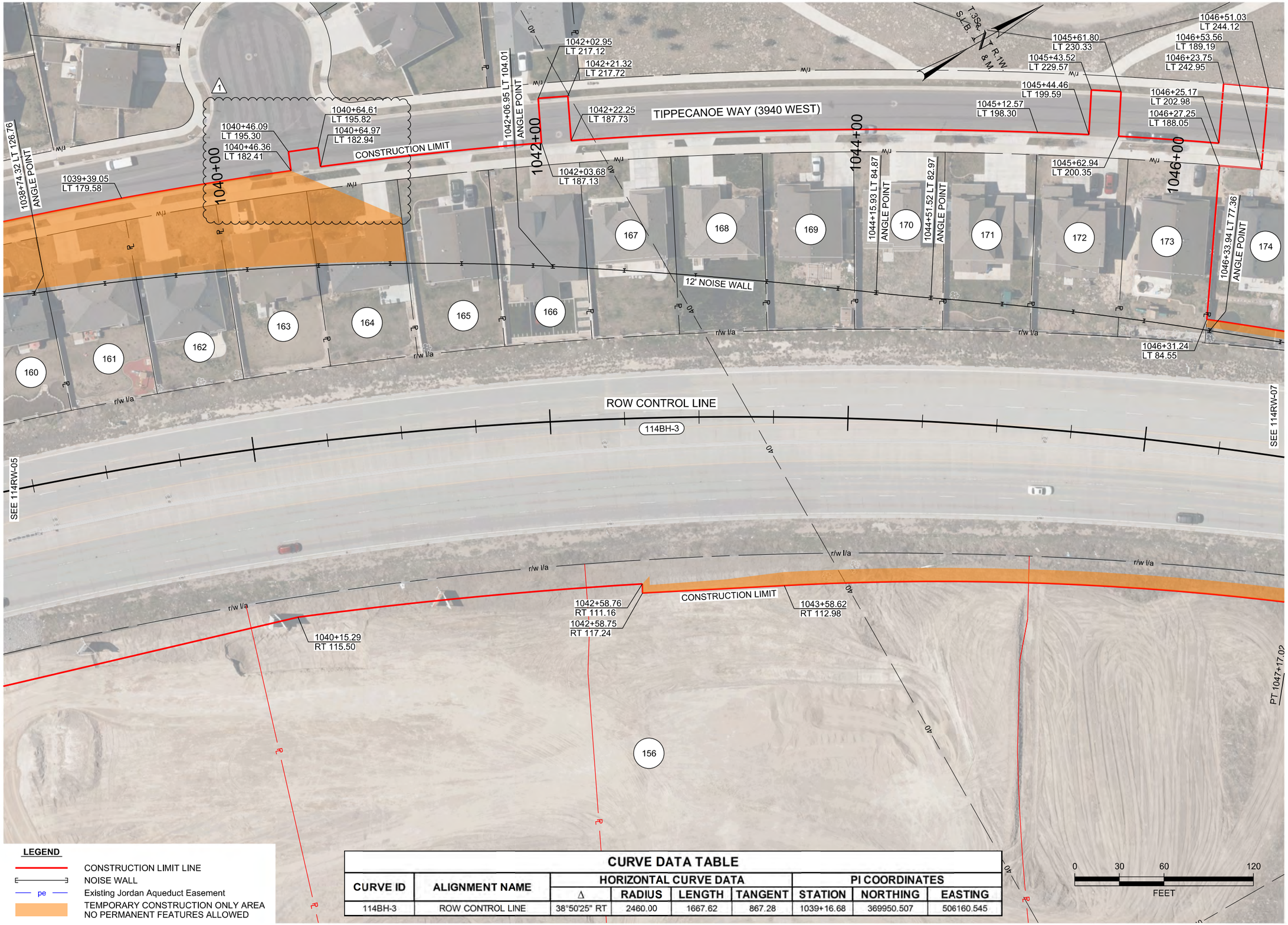

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
114BH-3	ROW CONTROL LINE	38°50'25" RT	2460.00	1667.62	867.28	1039+16.68	369950.507	506160.545

REVISIONS

NO.	DATE	REMARKS
1	08/16	UPDATED CONSTRUCTION LIMITS AND SHADING.

DRAWN BY KKH
QC CHECKED BY CSB
APPROVED BY CSB

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

APPROVED

MM/DD/YY
DATE

PROFESSIONAL LAND SURVEYOR

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT

PROJECT NUMBER S-0154(12)11 PIN 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE
COUNTY

TEMP 14P
SHEET NO. 114RW-06

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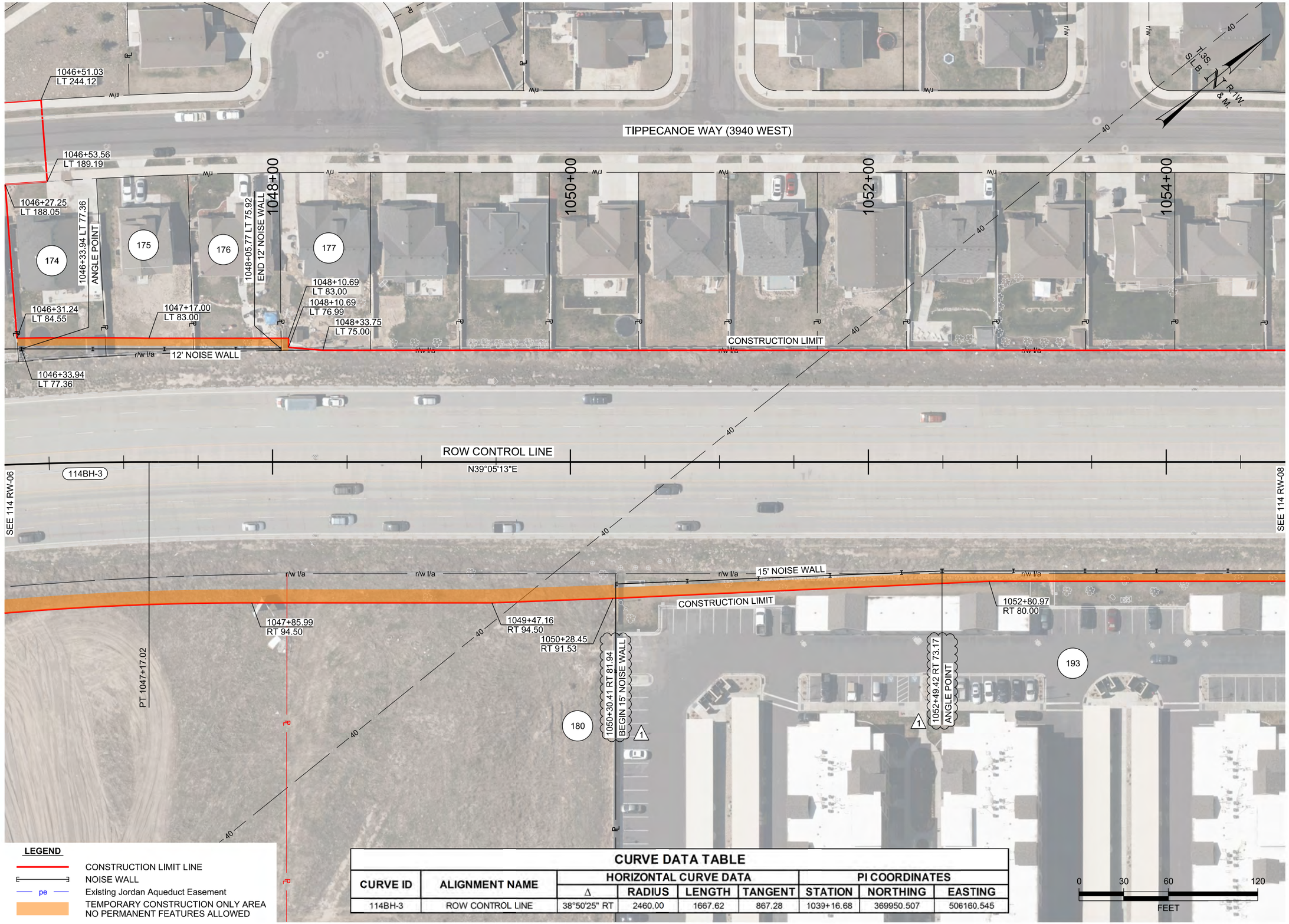

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
114BH-3	ROW CONTROL LINE	38°50'25" RT	2460.00	1667.62	867.28	1039+16.68	369950.507	506160.545

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	08/16	CSB	UPDATED NOISE WALL ANGLE POINTS.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
APPROVED
MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 114RW-07

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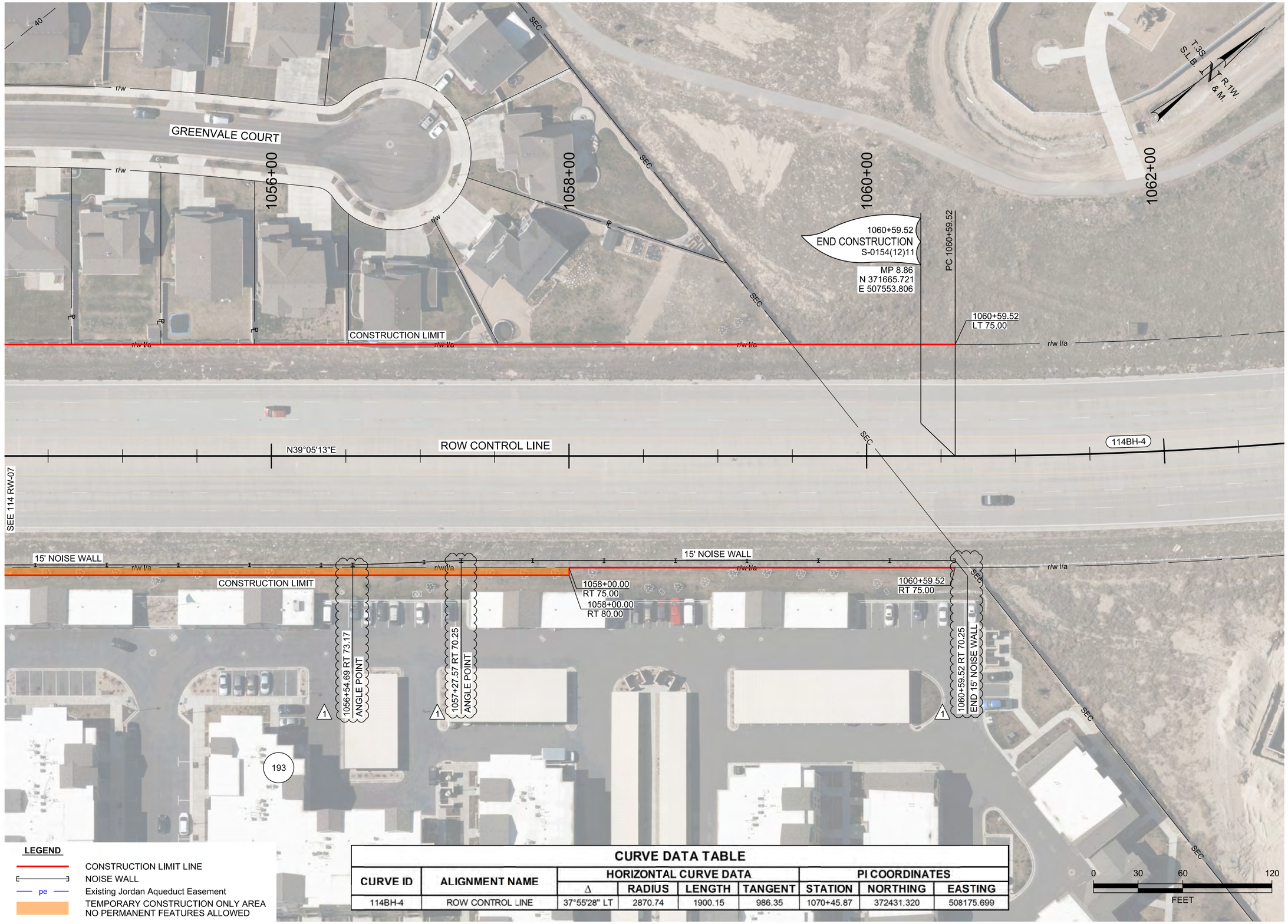

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
114BH-4	ROW CONTROL LINE	37°55'28" LT	2870.74	1900.15	986.35	1070+45.87	372431.320	508175.699

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	08/16	CSB	UPDATED NOISE WALL ANGLE/END POINTS.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
APPROVED MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 114RW-08

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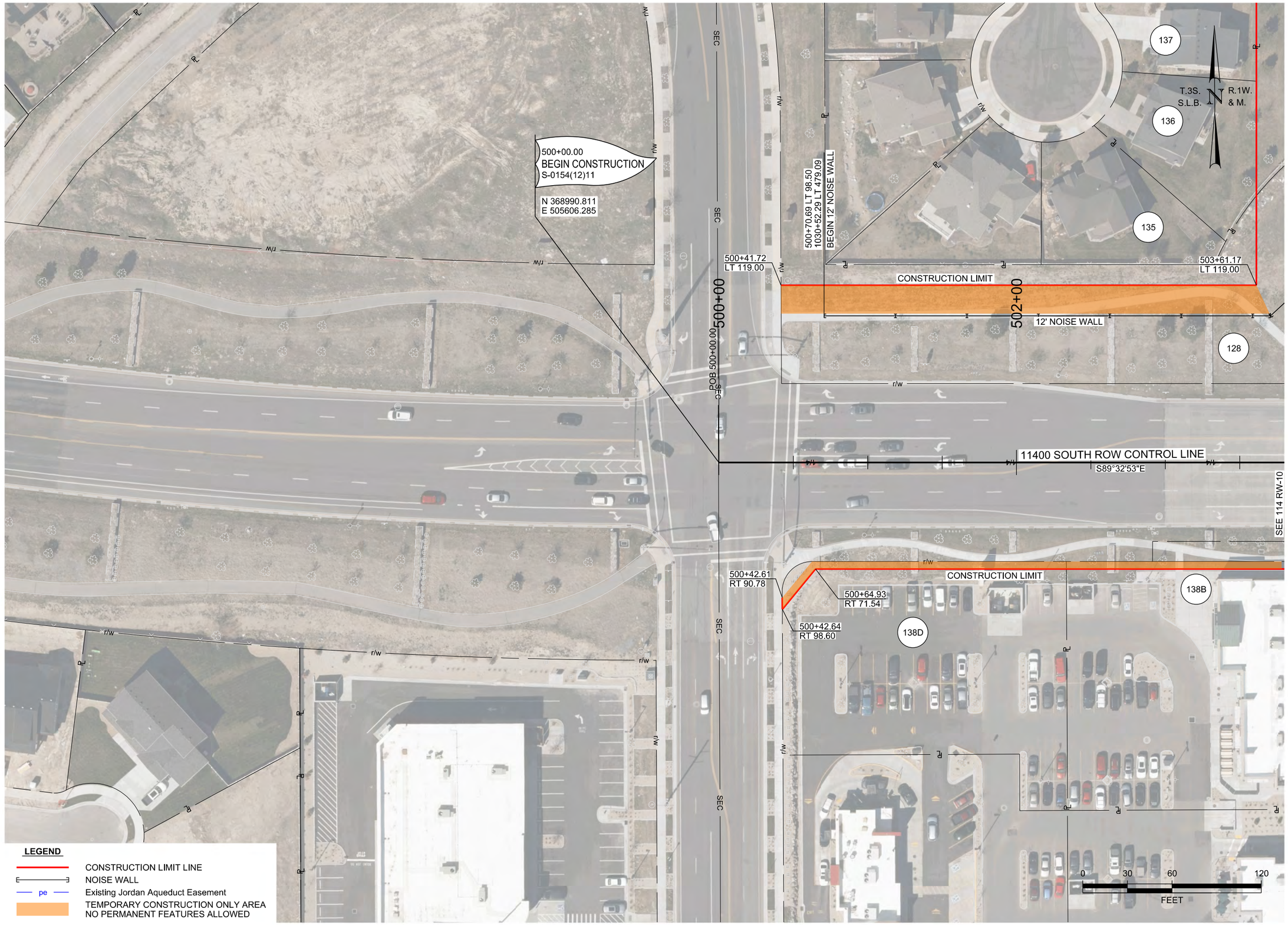

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
MM/DD/YY
DATE
APPROVED
PROFESSIONAL LAND SURVEYOR

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE
COUNTY

SHEET NO. 114RW-09

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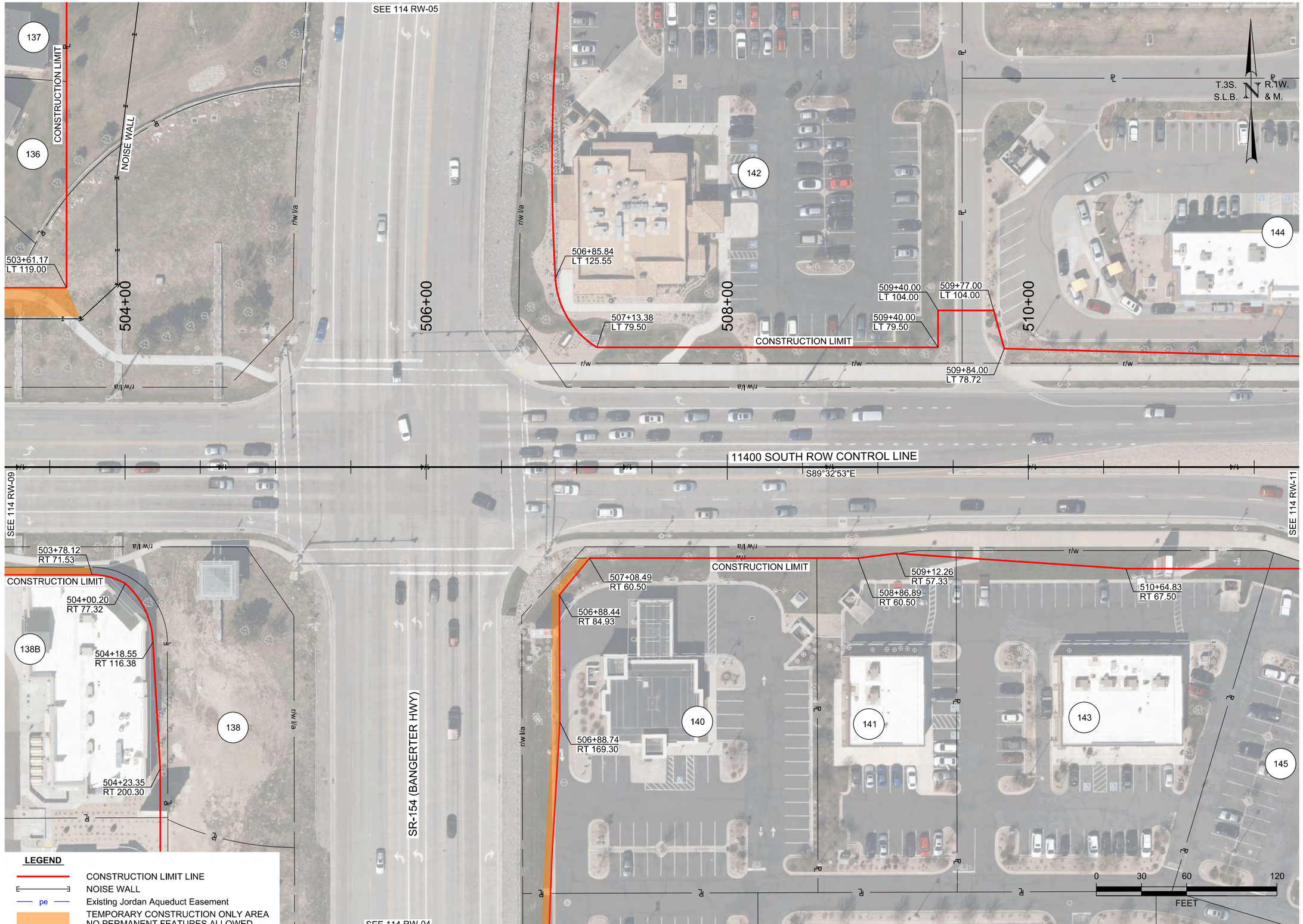

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

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NO.	DATE	REVISIONS	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
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PROFESSIONAL LAND SURVEYOR
MM/DD/YY
DATE

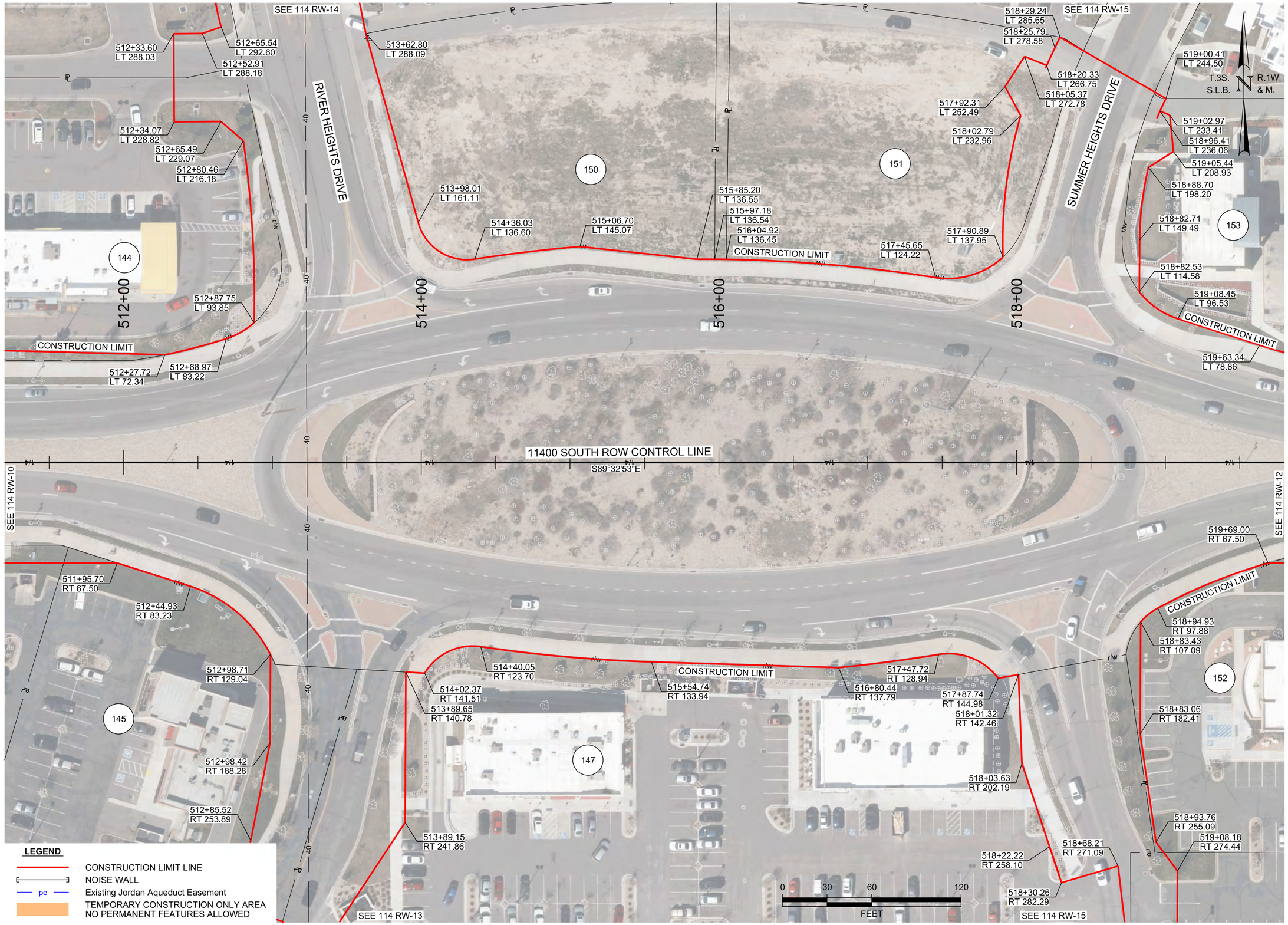
PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 114RW-10



REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 114RW-11

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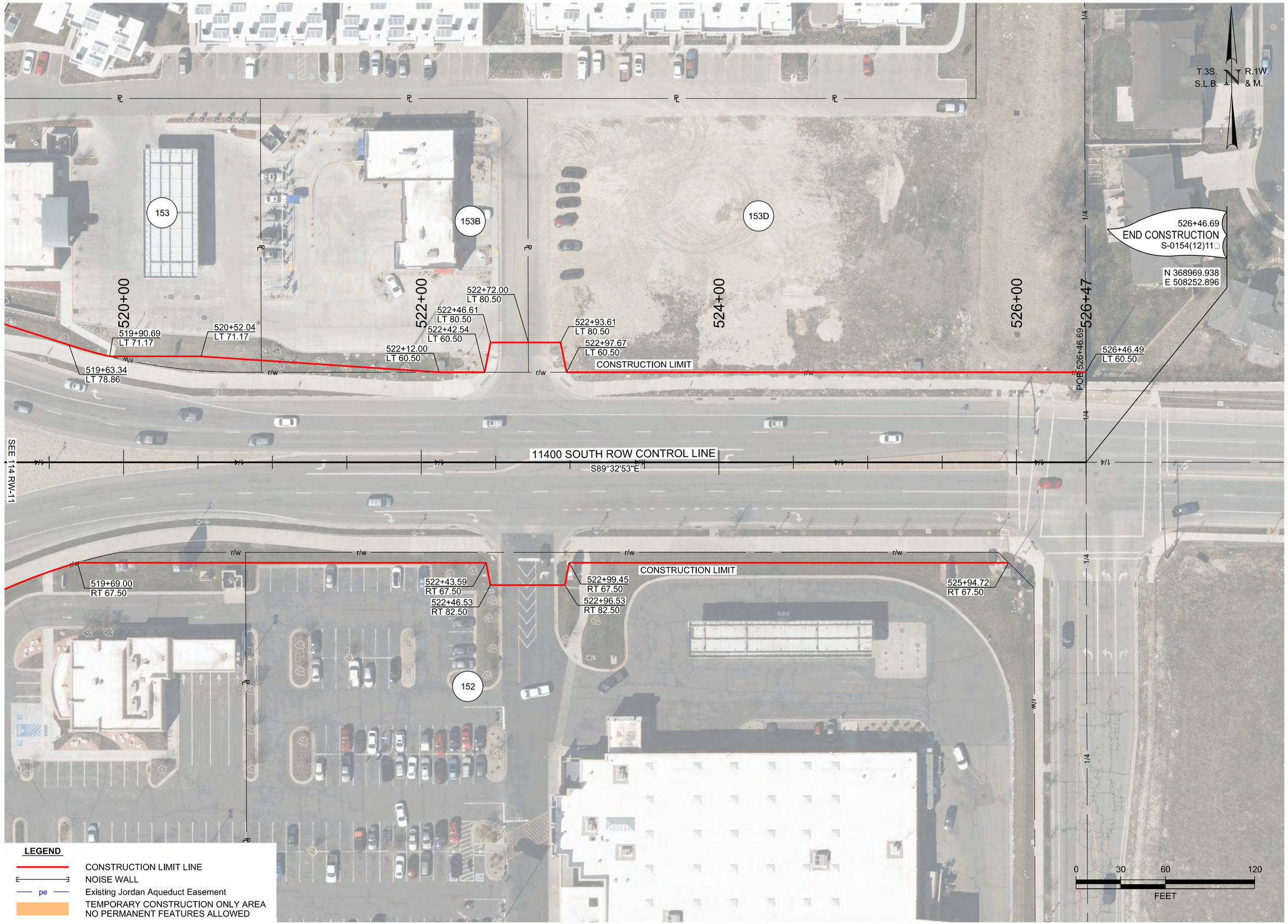

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

NO.	DATE	REVISIONS	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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APPROVED ..... MM/DD/YY DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 114RW-12

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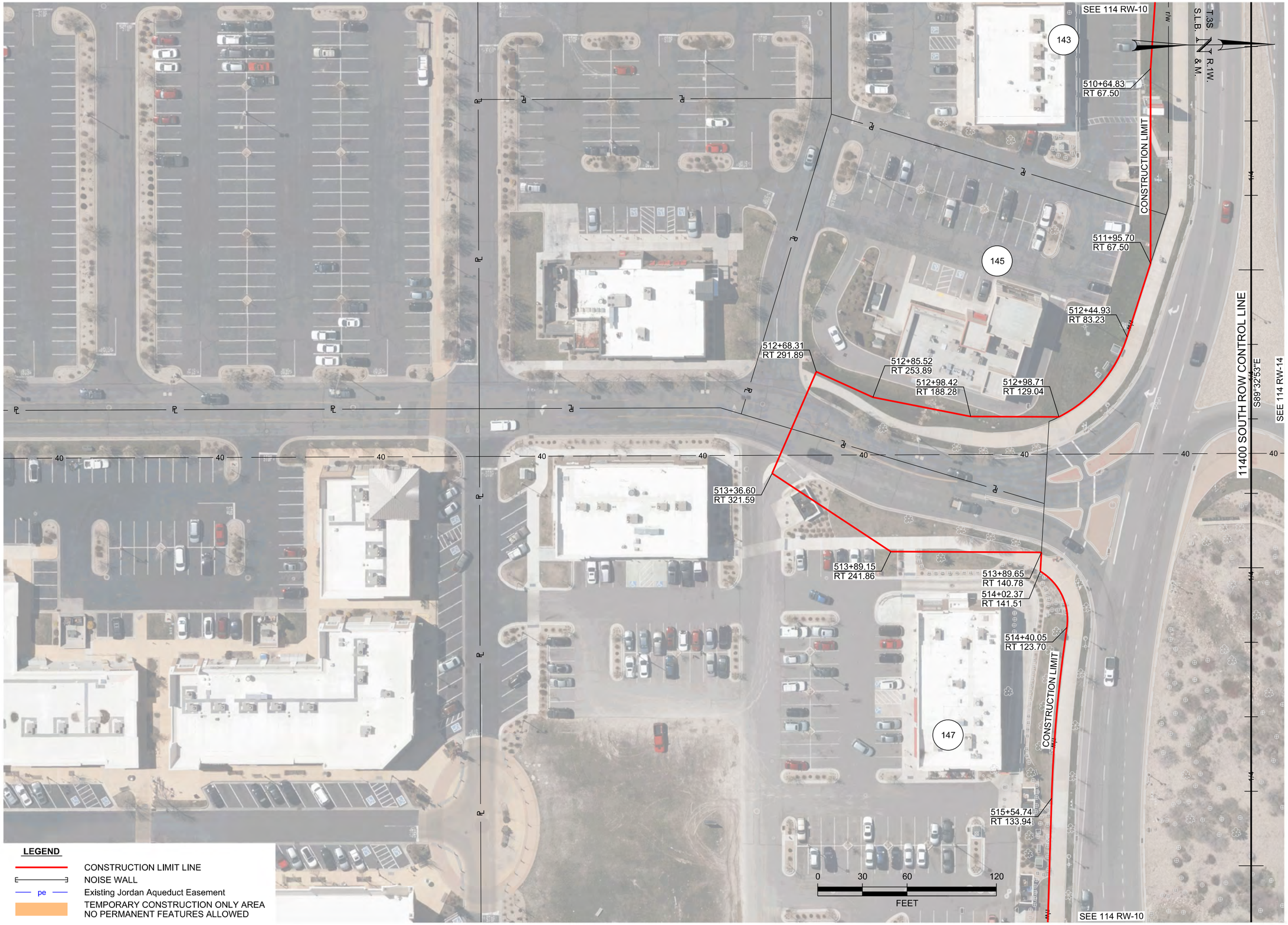

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

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SALT LAKE COUNTY

SHEET NO. 114RW-13

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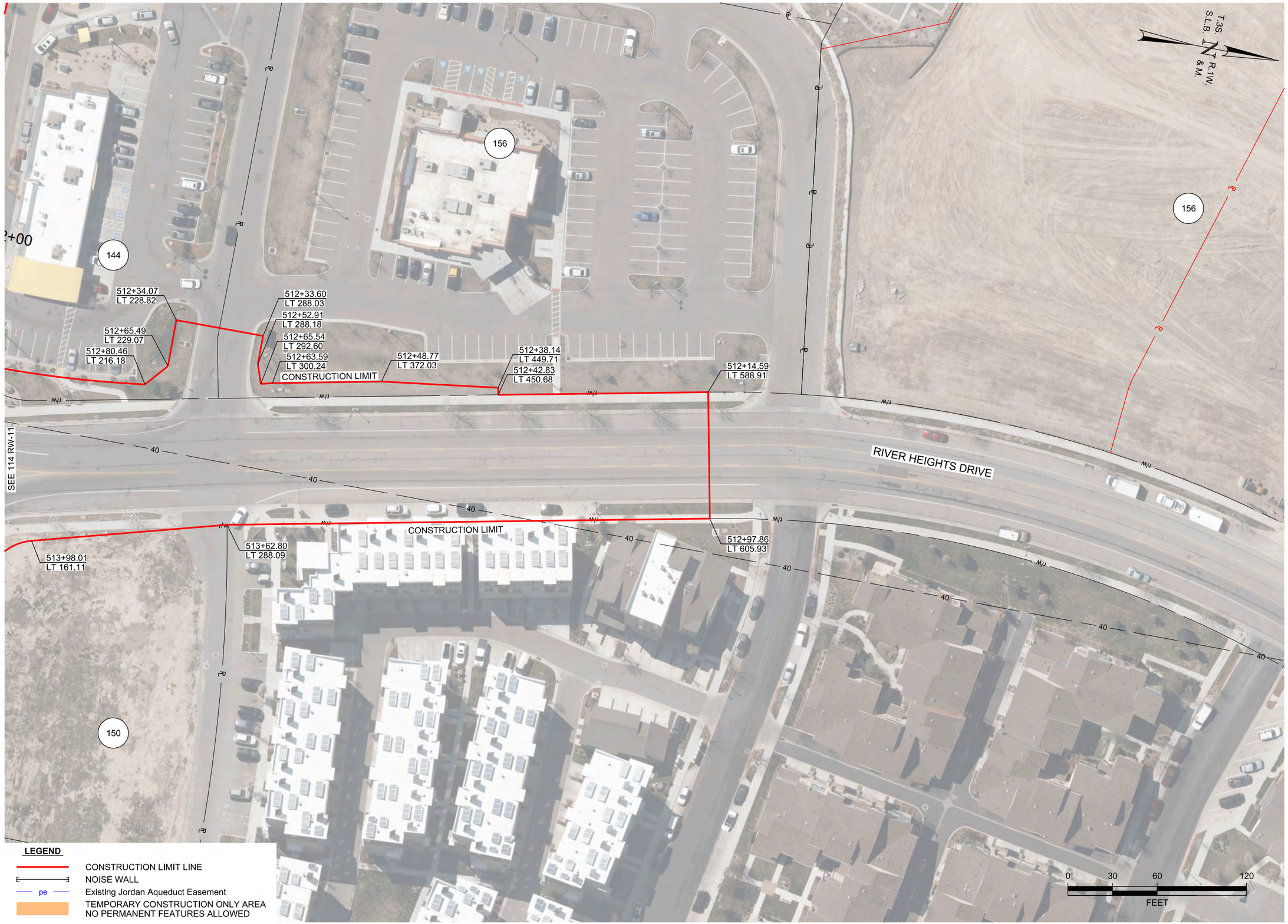

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
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PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

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SHEET NO. 114RW-14

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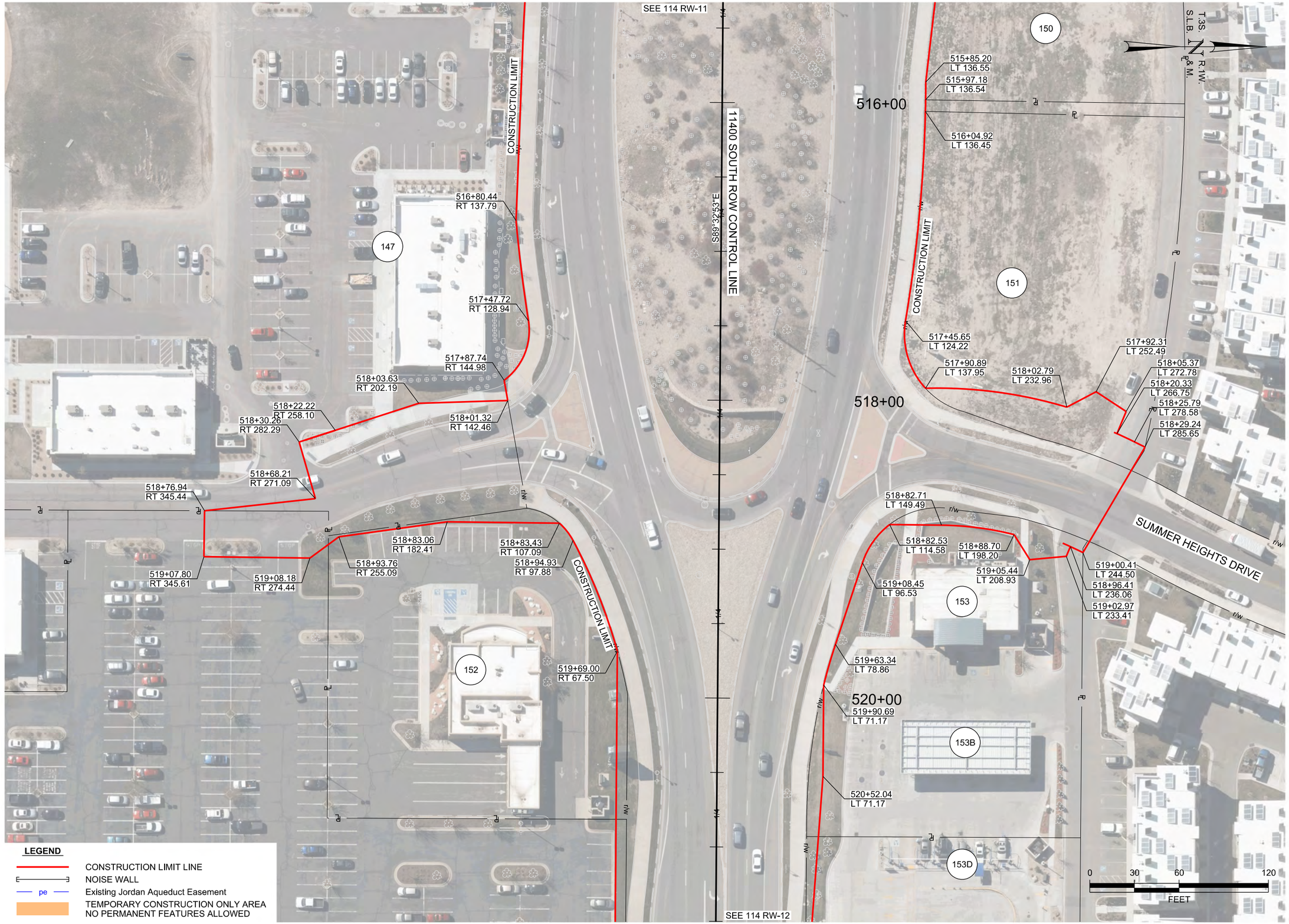

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

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NO.	DATE	REVISIONS	APPROVED BY	REMARKS

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REGION 2 - HORROCKS ENGINEERS

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PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

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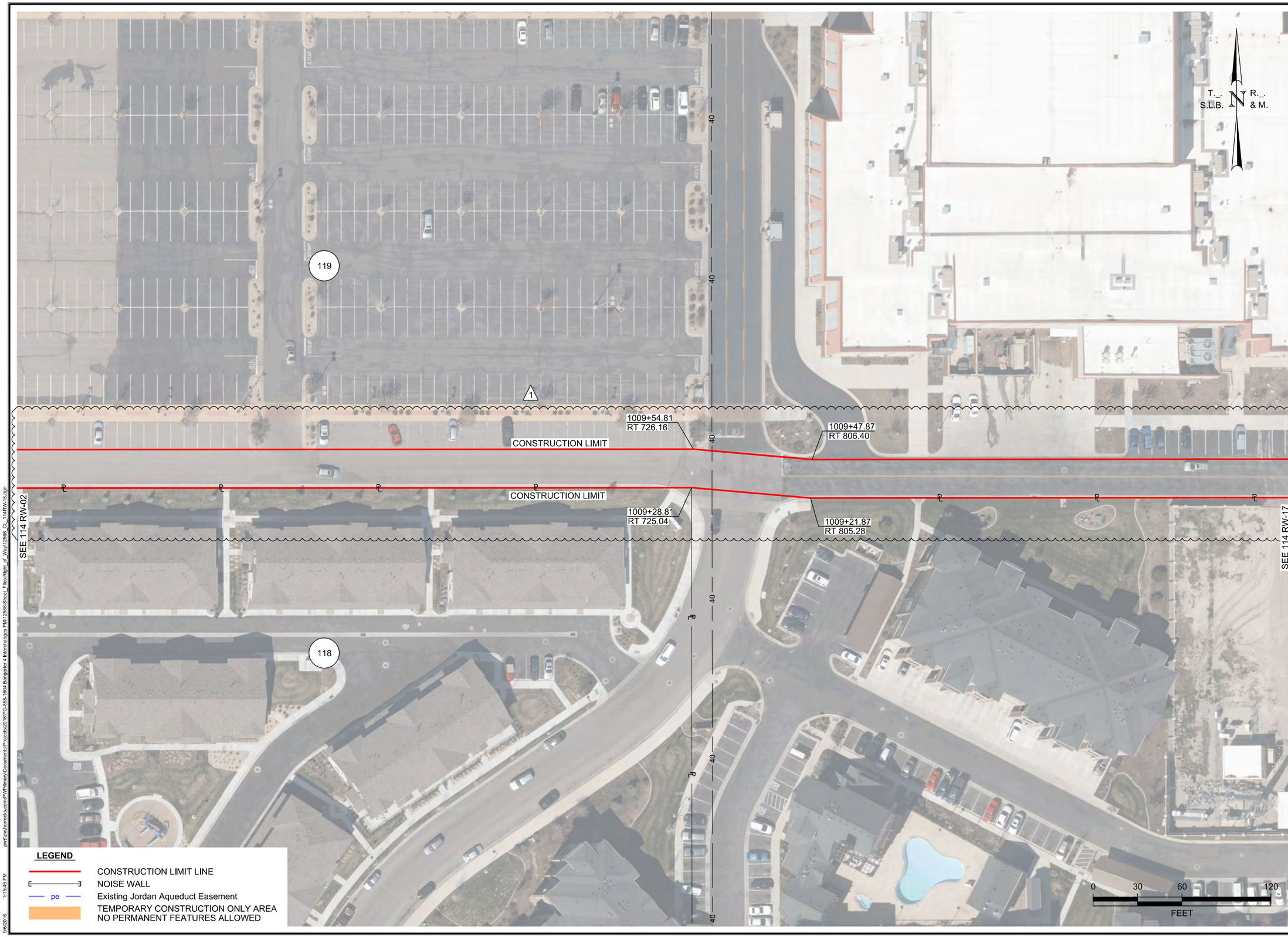
SALT LAKE COUNTY

SHEET NO. 114RW-15



REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	08/16	CSB	WIDENED FOR TCE.

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QC CHECKED BY CSB

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DATE

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

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PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

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SALT LAKE COUNTY

SHEET NO. 114RW-16

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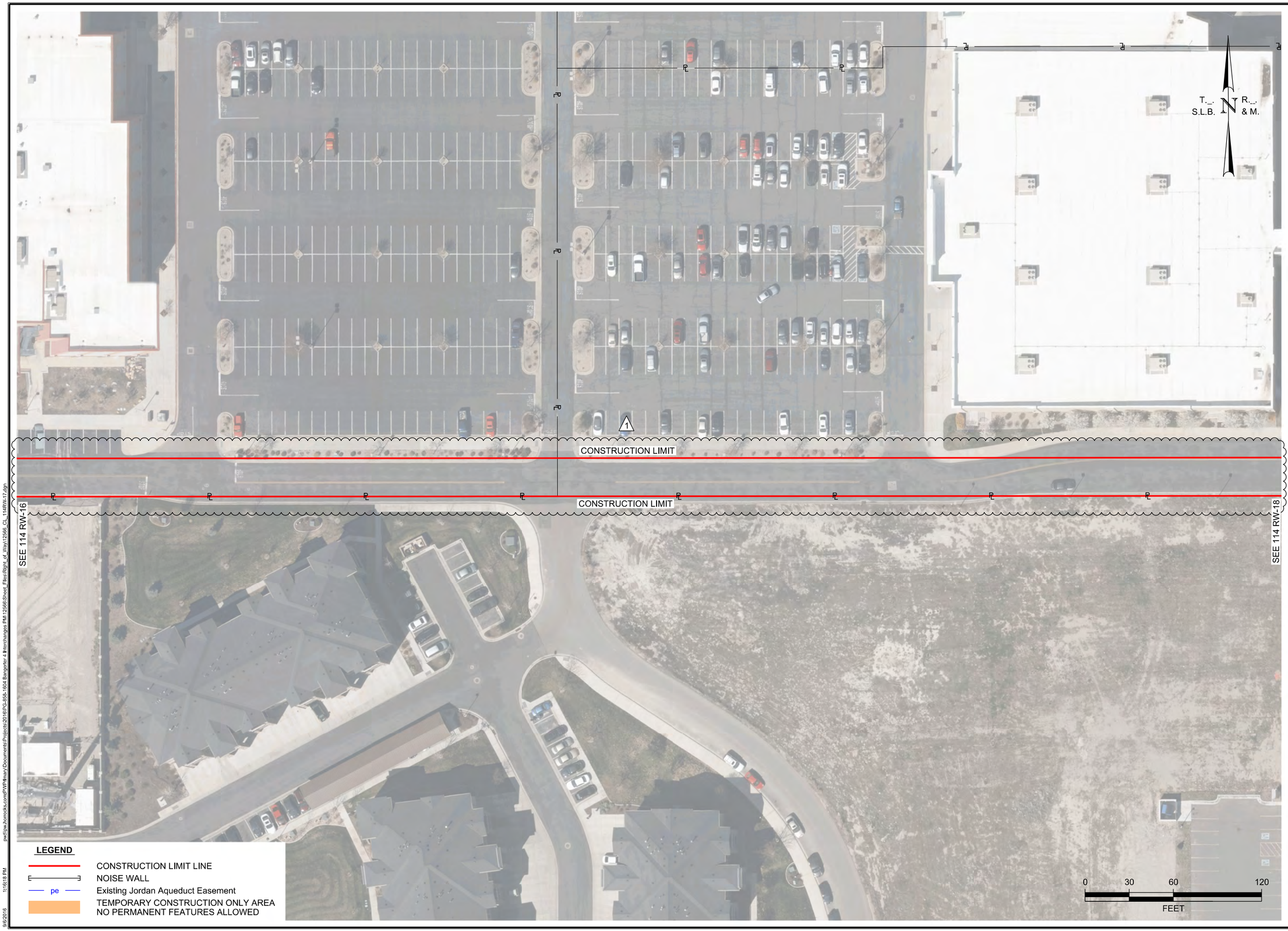

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	08/16	CSB	WIDENED FOR TCE.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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DATE

PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

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SALT LAKE COUNTY

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REVISIONS

NO.	DATE		
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		APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

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PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

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SALT LAKE COUNTY

SHEET NO. 114RW-18

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LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS			
NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 90RW-01

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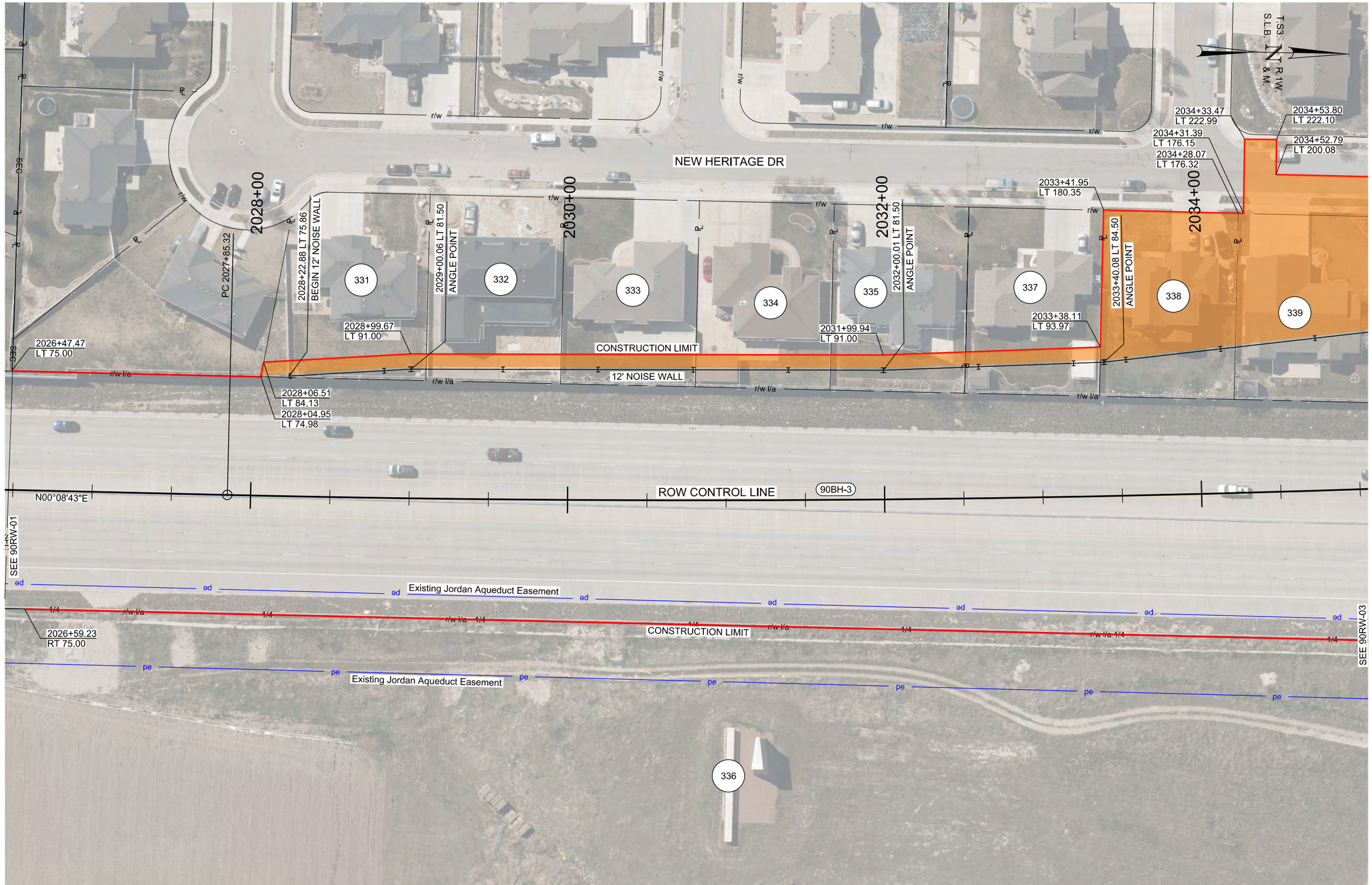

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
90BH-3	ROW CONTROL LINE	4°32'33" LT	12650.00	1002.93	501.73	2032+87.05	382864.734	508225.607

0 30 60 120
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NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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DATE
APPROVED
PROFESSIONAL LAND SURVEYOR

4 INTERCHANGES ON
BANGERTER HIGHWAY - 9000 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

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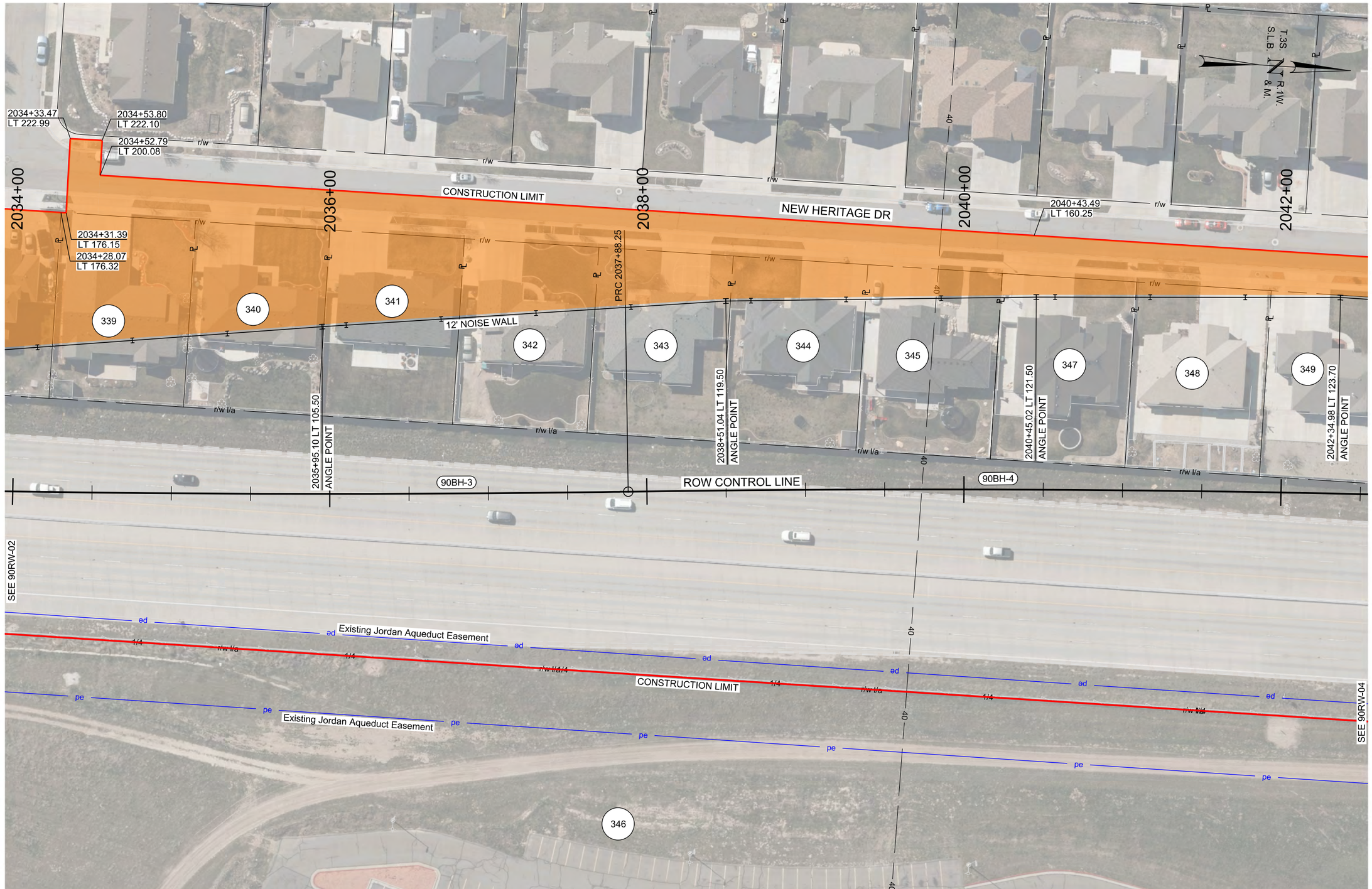

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
90BH-3	ROW CONTROL LINE	4°32'33" LT	12650.00	1002.93	501.73	2032+87.05	382864.734	508225.607
90BH-4	ROW CONTROL LINE	5°46'19" RT	12650.00	1274.38	637.73	2044+25.98	384000.839	508138.239

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

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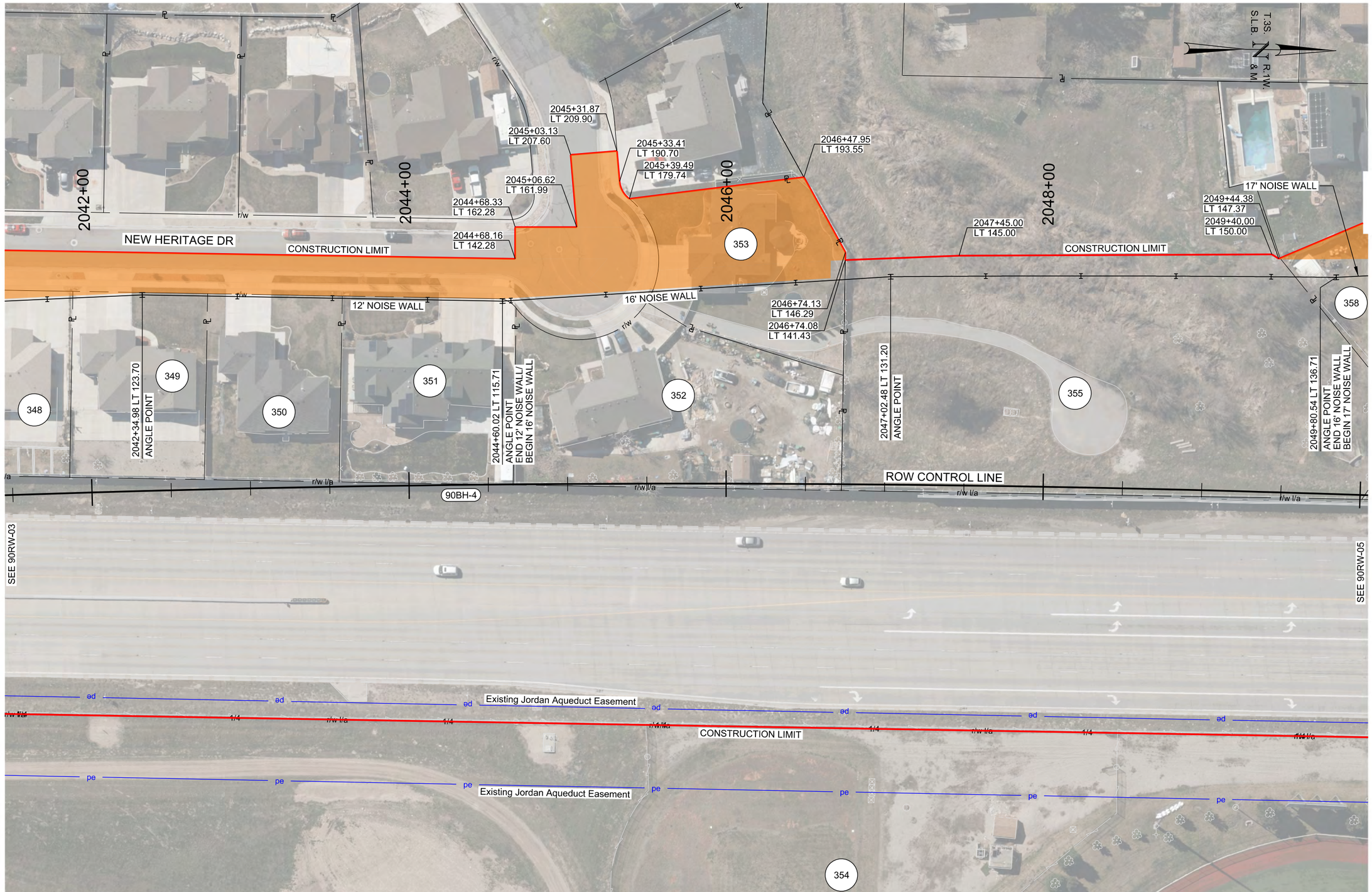

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
90BH-4	ROW CONTROL LINE	5°46'19" RT	12650.00	1274.38	637.73	2044+25.98	384000.839	508138.239

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

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SALT LAKE COUNTY

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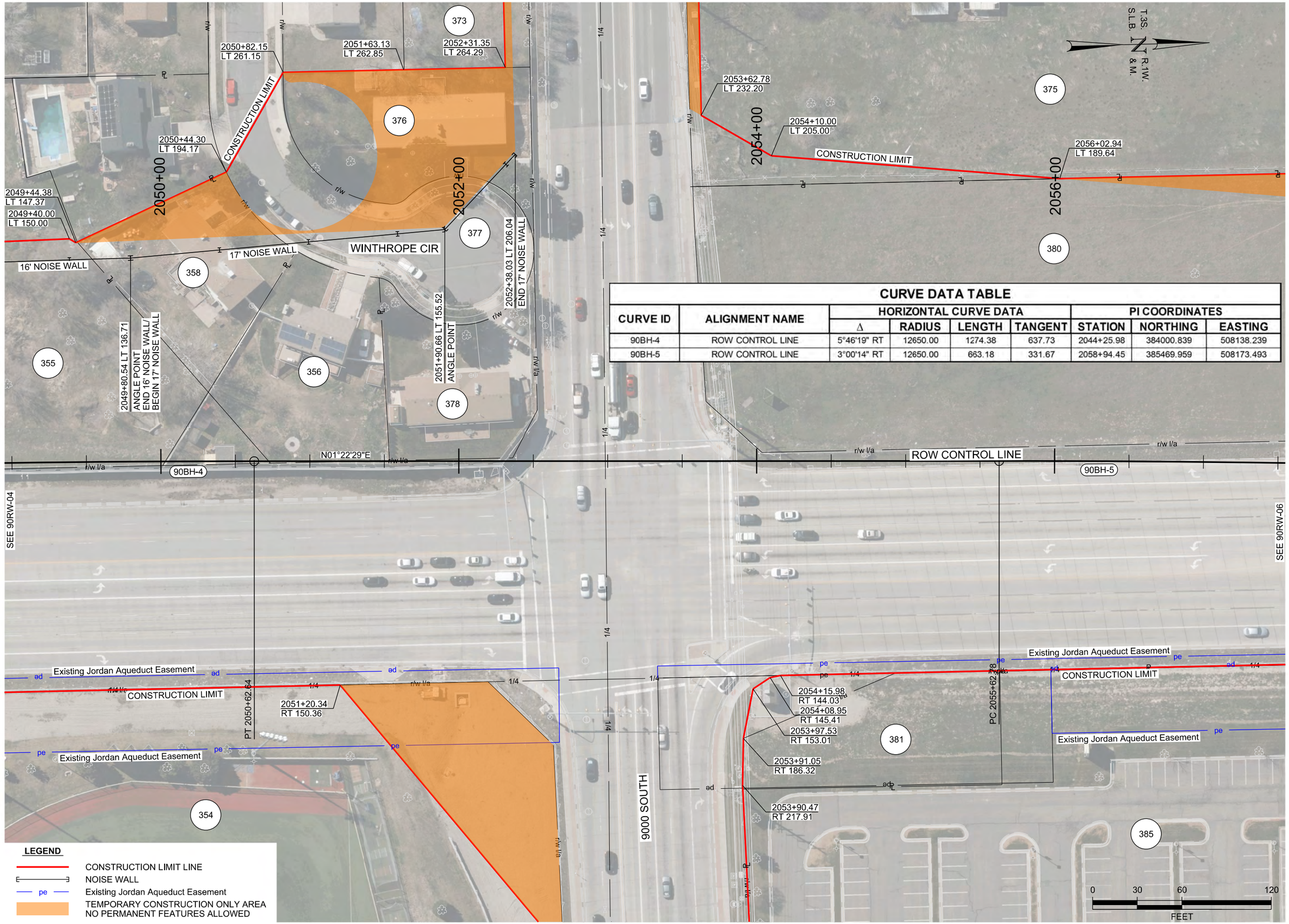

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
90BH-4	ROW CONTROL LINE	5°46'19" RT	12650.00	1274.38	637.73	2044+25.98	384000.839	508138.239
90BH-5	ROW CONTROL LINE	3°00'14" RT	12650.00	663.18	331.67	2058+94.45	385469.959	508173.493

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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DATE

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PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566

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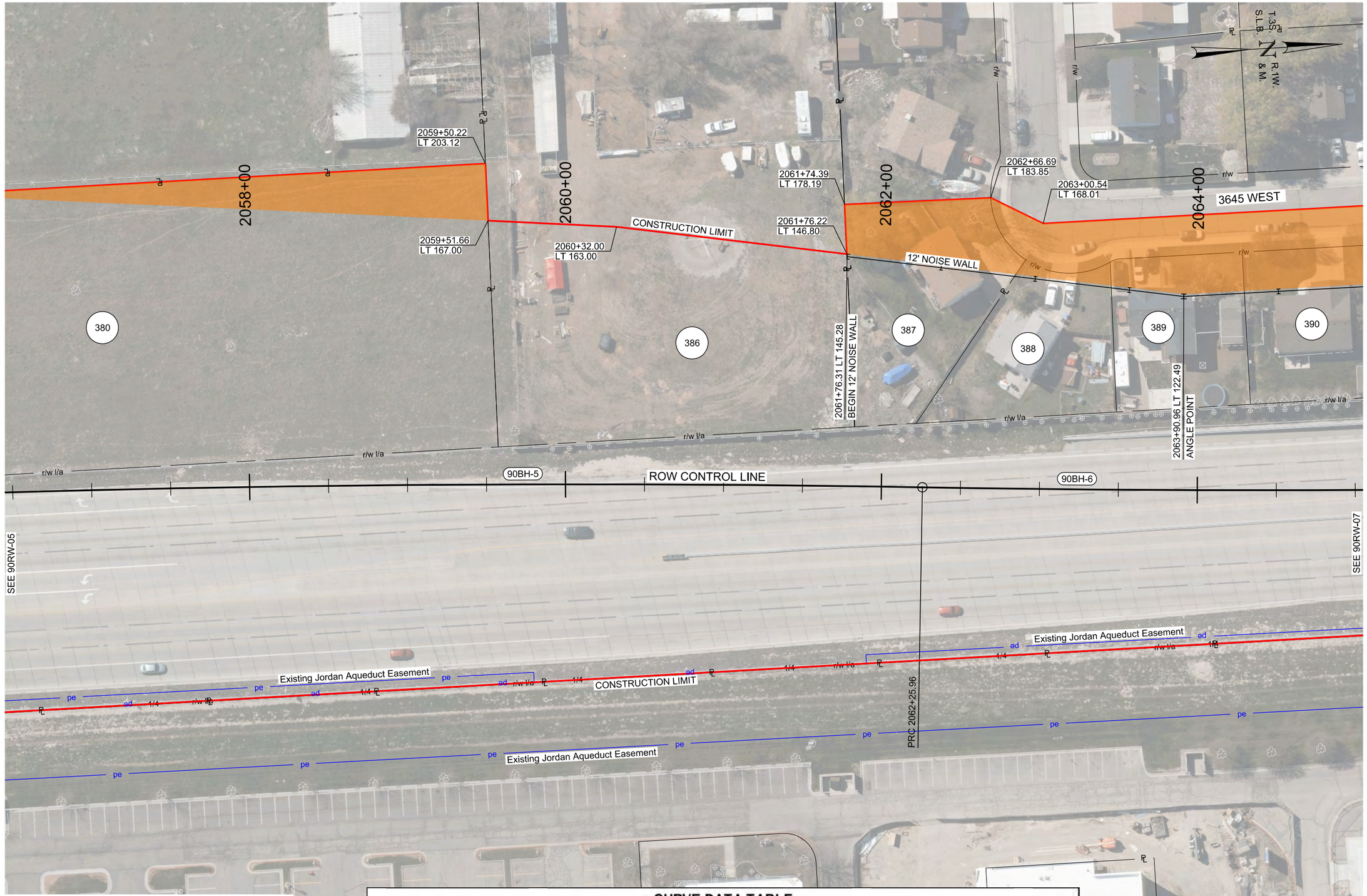

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
90BH-5	ROW CONTROL LINE	3°00'14" RT	12650.00	663.18	331.67	2058+94.45	385469.959	508173.493
90BH-6	ROW CONTROL LINE	4°13'29" LT	12650.00	932.72	466.57	2066+92.53	386265.869	508234.433

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

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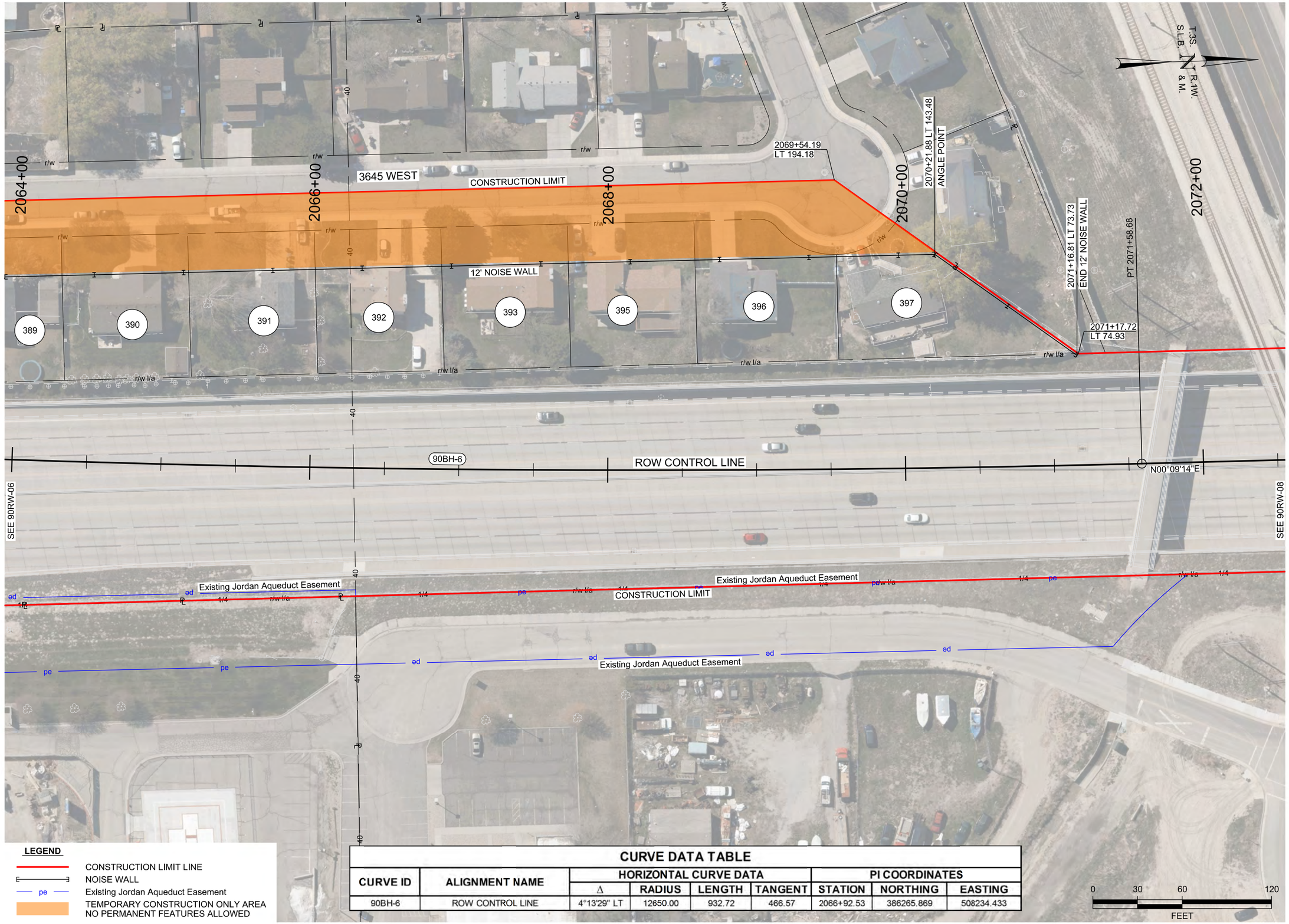

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
90BH-6	ROW CONTROL LINE	4°13'29" LT	12650.00	932.72	466.57	2066+92.53	386265.869	508234.433

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
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SALT LAKE
COUNTY

SHEET NO. 90RW-07

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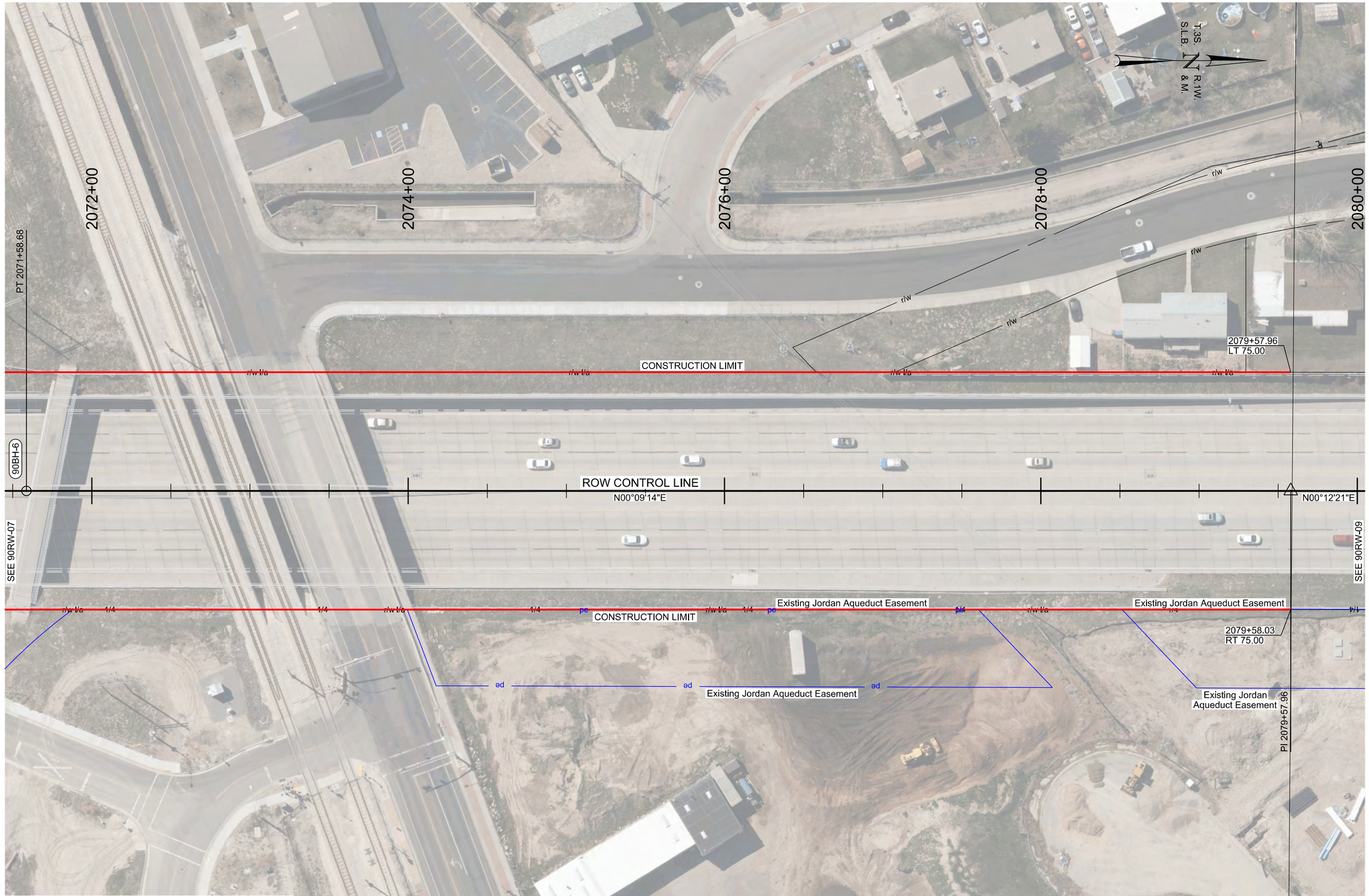

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
90BH-6	ROW CONTROL LINE	4°13'29" LT	12650	932.72	466.57	2066+92.53	386265.869	508234.433

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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DATE
APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 90RW-08

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 90RW-09

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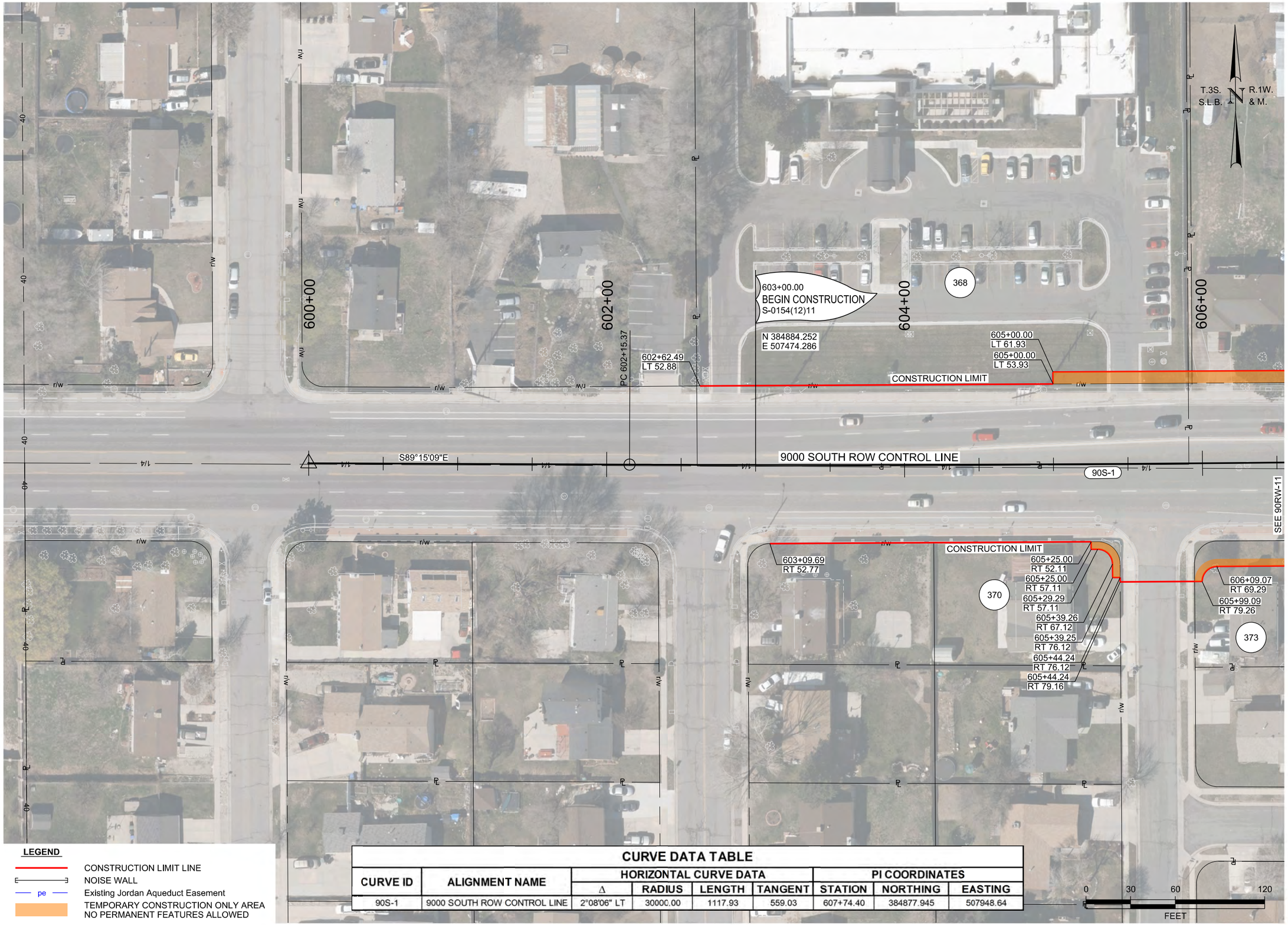

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
90S-1	9000 SOUTH ROW CONTROL LINE	2°08'06" LT	30000.00	1117.93	559.03	607+74.40	384877.945	507948.64

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 90RW-10

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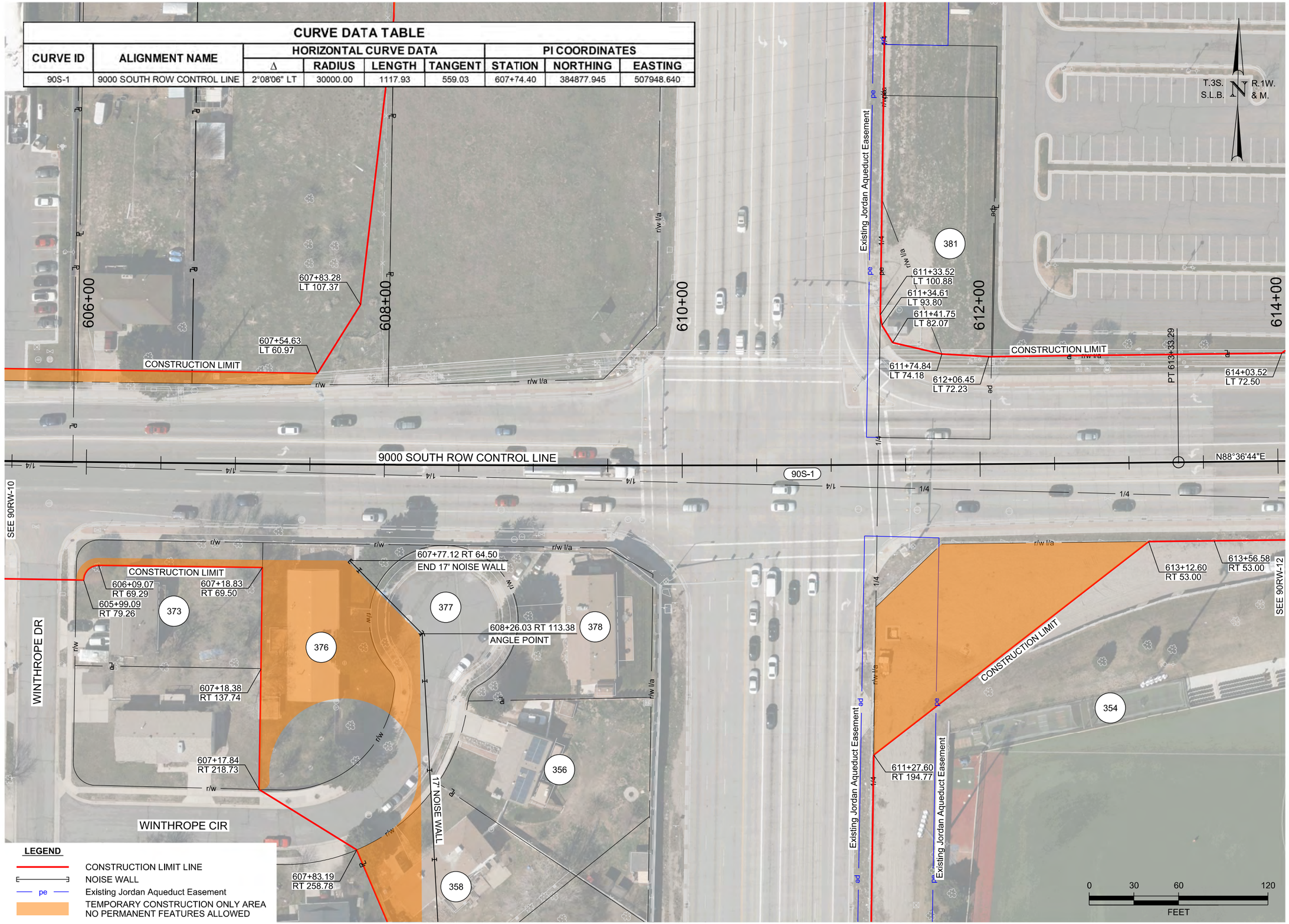
CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
90S-1	9000 SOUTH ROW CONTROL LINE	2°08'06" LT	30000.00	1117.93	559.03	607+74.40	384877.945	507948.640



REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
APPROVED
MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 90RW-11

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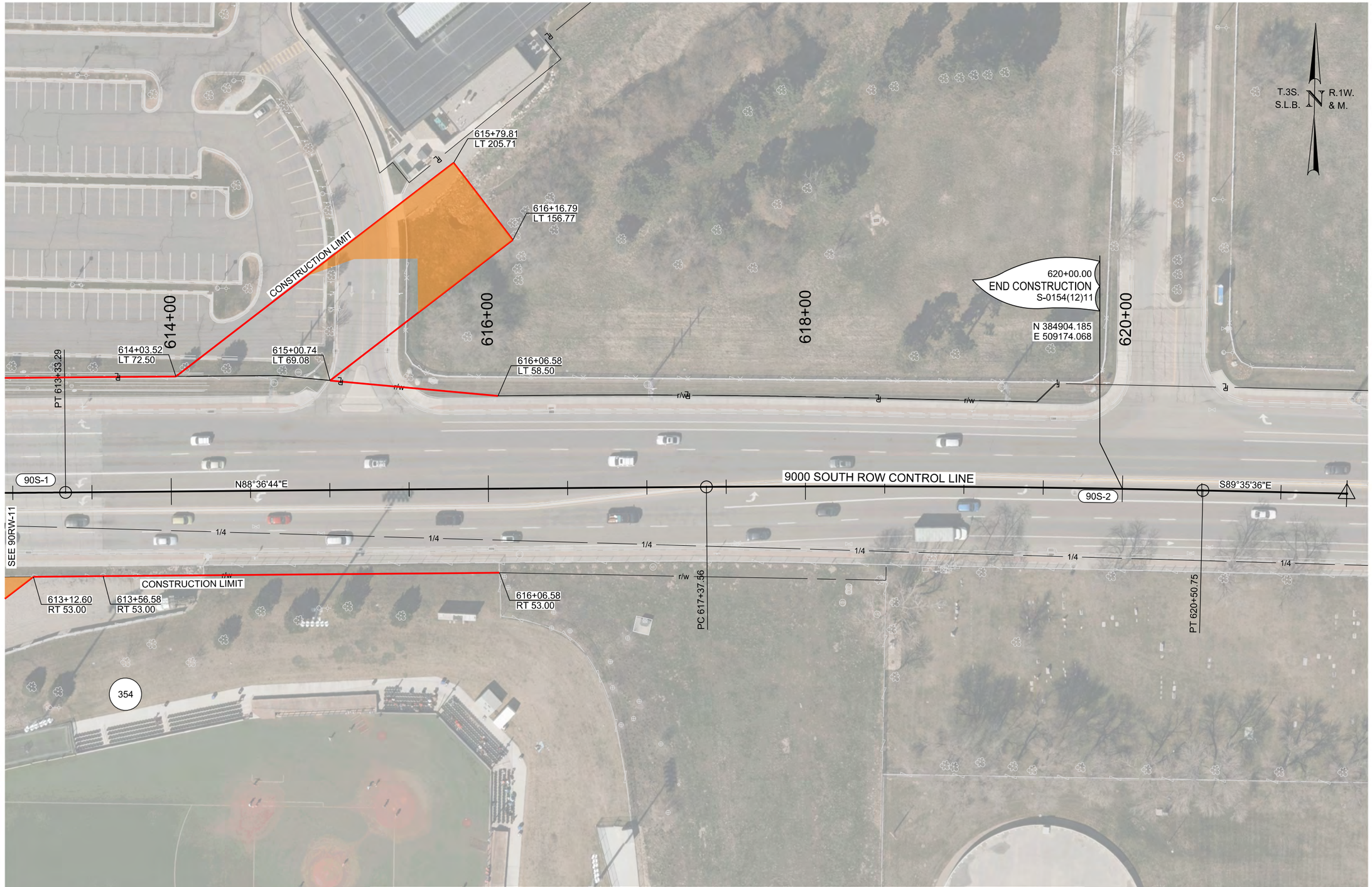

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
90S-1	9000 SOUTH ROW CONTROL LINE	2°08'06" LT	30000.00	1117.93	559.03	607+74.40	384877.945	507948.640
90S-2	9000 SOUTH ROW CONTROL LINE	1°47'40" RT	10000.00	313.19	156.61	618+94.17	384905.066	509068.215

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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MM/DD/YY
DATE
APPROVED
PROFESSIONAL LAND SURVEYOR

4 INTERCHANGES ON
BANGERTER HIGHWAY - 9000 SOUTH

PROJECT NUMBER S-0154(12)11
PIN 12566

CONTRACT RIGHT-OF-WAY

PROJECT

SALT LAKE
COUNTY

SHEET NO. 90RW-12

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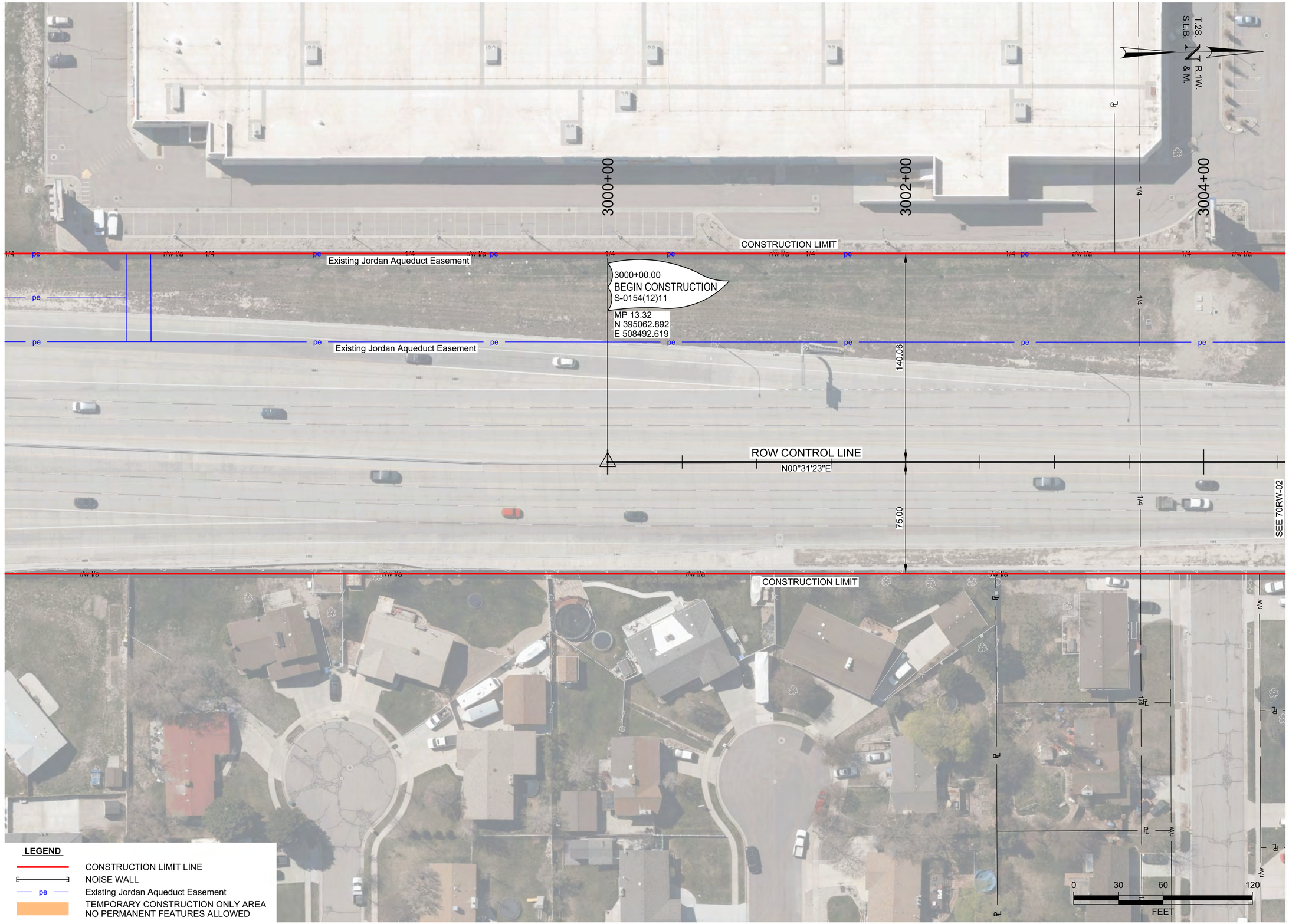

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: CSB
APPROVED
MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 70RW-01

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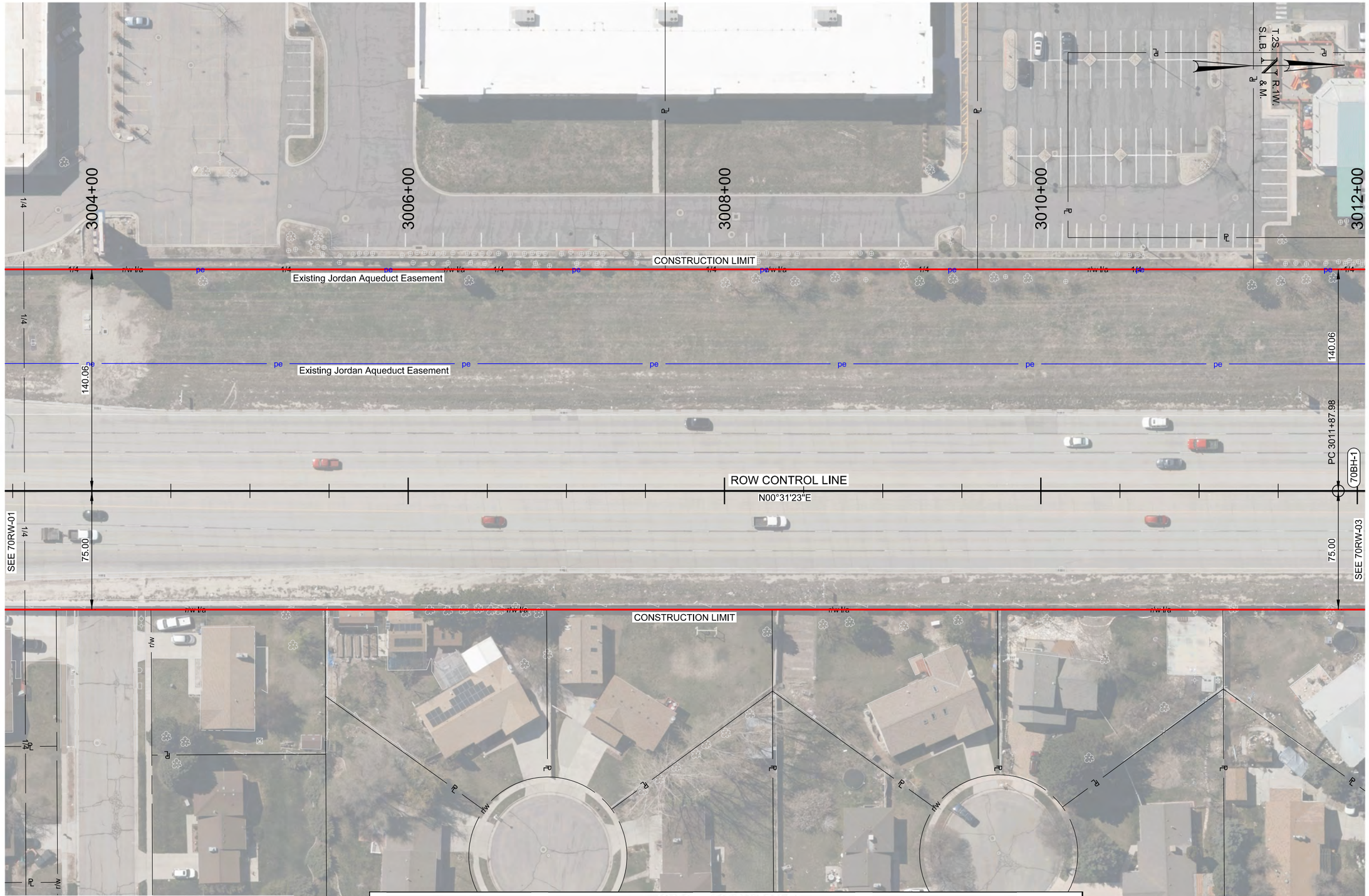

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
70BH-1	ROW CONTROL LINE	1°25'39" LT	20000.00	498.33	249.18	3014+37.16	396499.997	508505.739

NO.	DATE	REVISIONS	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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MM/DD/YY
DATE
APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 70RW-02

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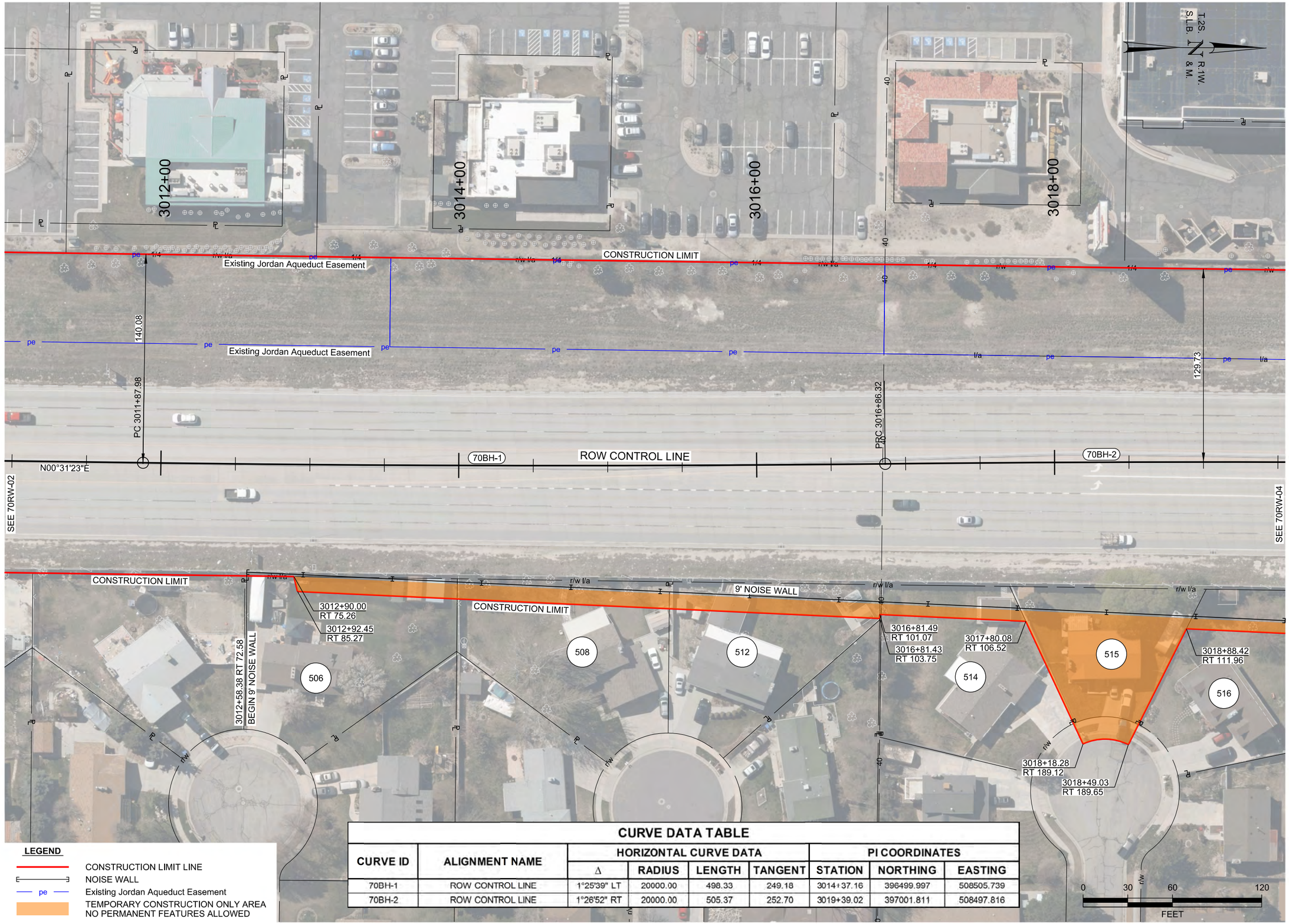

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
70BH-1	ROW CONTROL LINE	1°25'39" LT	20000.00	498.33	249.18	3014+37.16	396499.997	508505.739
70BH-2	ROW CONTROL LINE	1°26'52" RT	20000.00	505.37	252.70	3019+39.02	397001.811	508497.816

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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QC CHECKED BY CSB
MM/DD/YY
DATE

APPROVED

PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 70RW-03

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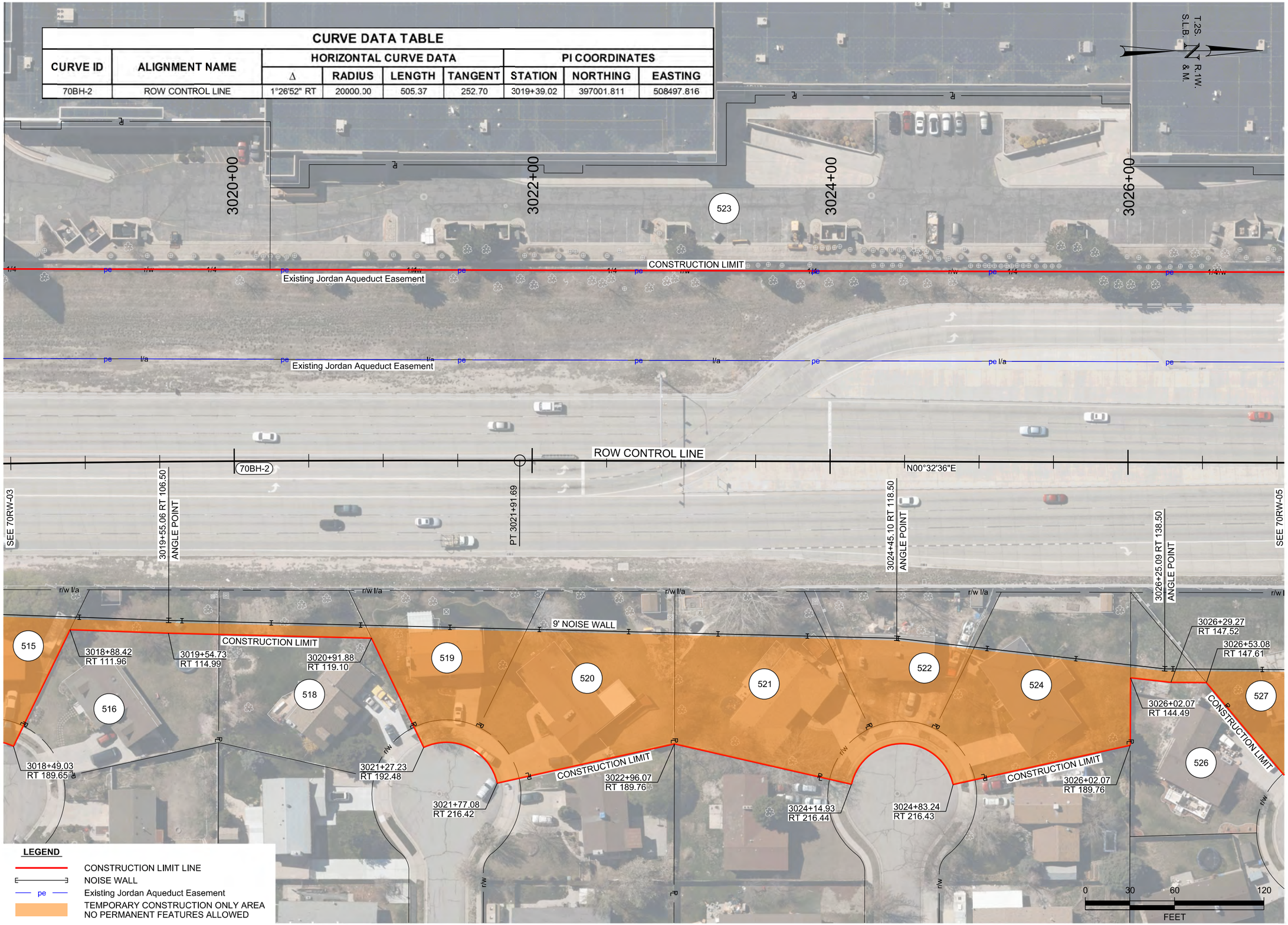
CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
70BH-2	ROW CONTROL LINE	1°26'52" RT	20000.00	505.37	252.70	3019+39.02	397001.811	508497.816



LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
APPROVED
MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 70RW-04

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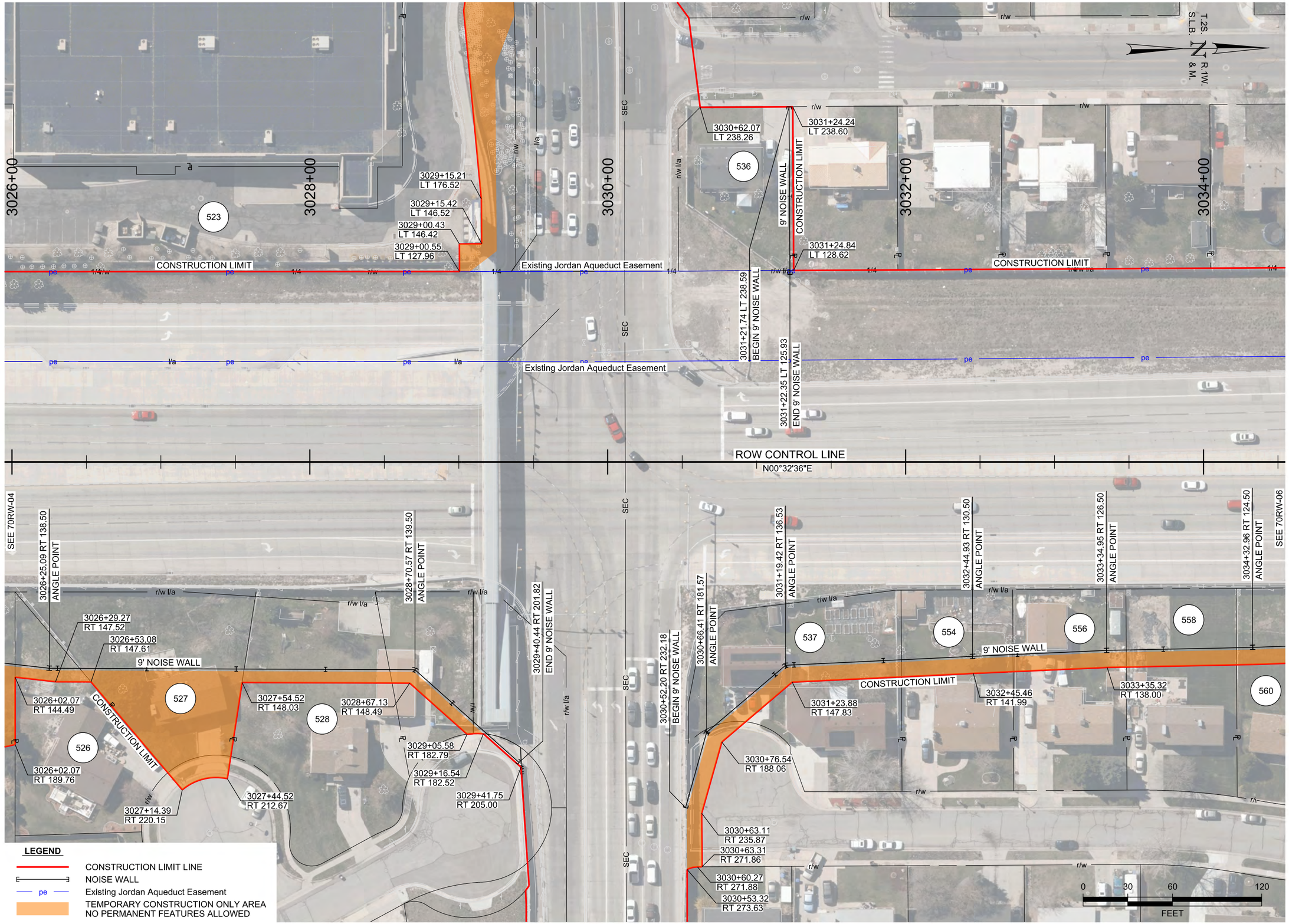

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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DATE

PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

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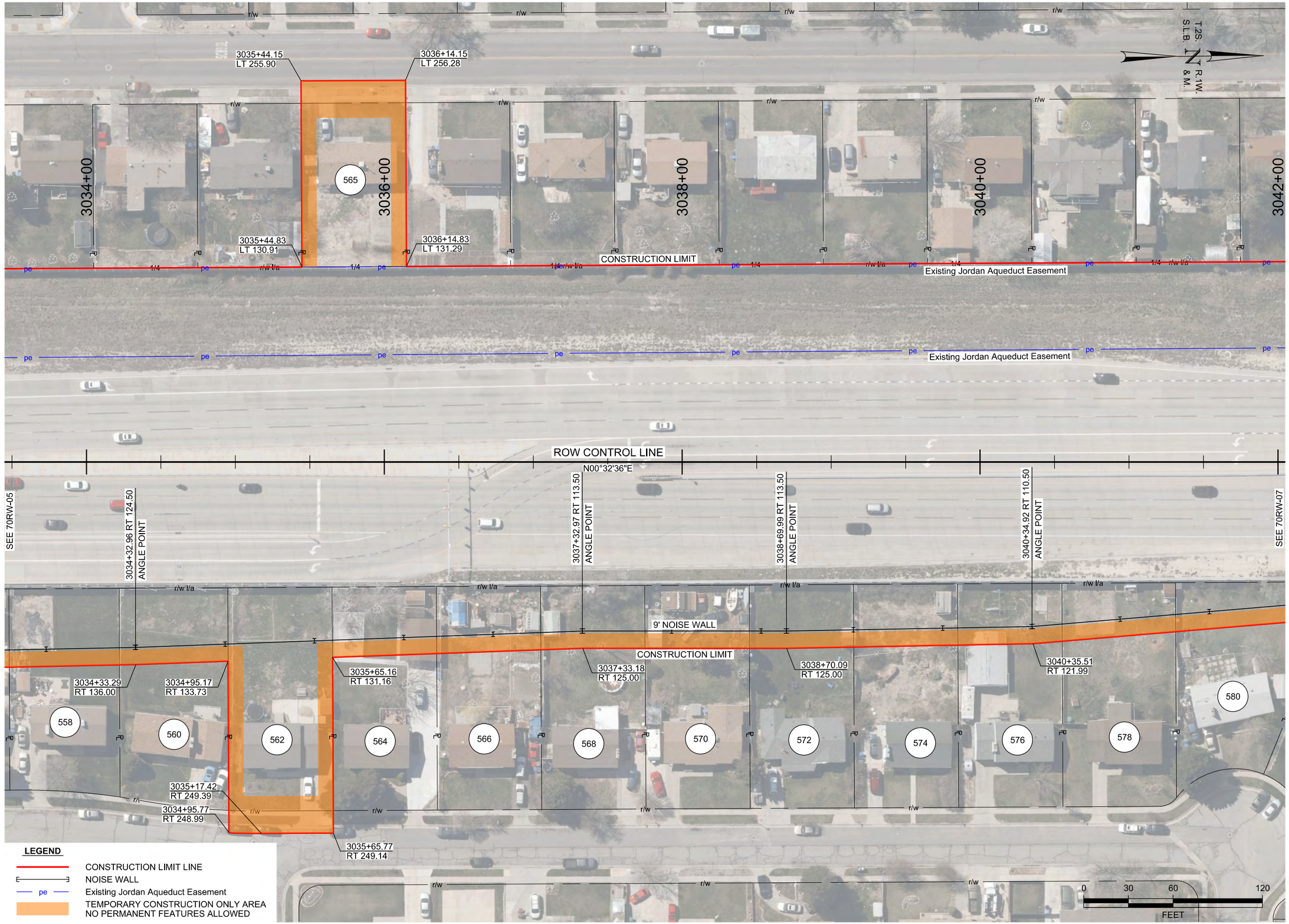

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

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NO.	DATE	APPROVED BY	REMARKS

REVISIONS

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

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APPROVED

MM/DD/YY
DATE

PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH

PROJECT NUMBER: S-0154(12)11

PIN: 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE
COUNTY

SHEET NO. 70RW-06

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
70BH-3	ROW CONTROL LINE	1°21'09" LT	20000.00	472.08	236.05	3044+97.43	399560.141	508522.072

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FEET

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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DATE
APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 70RW-07

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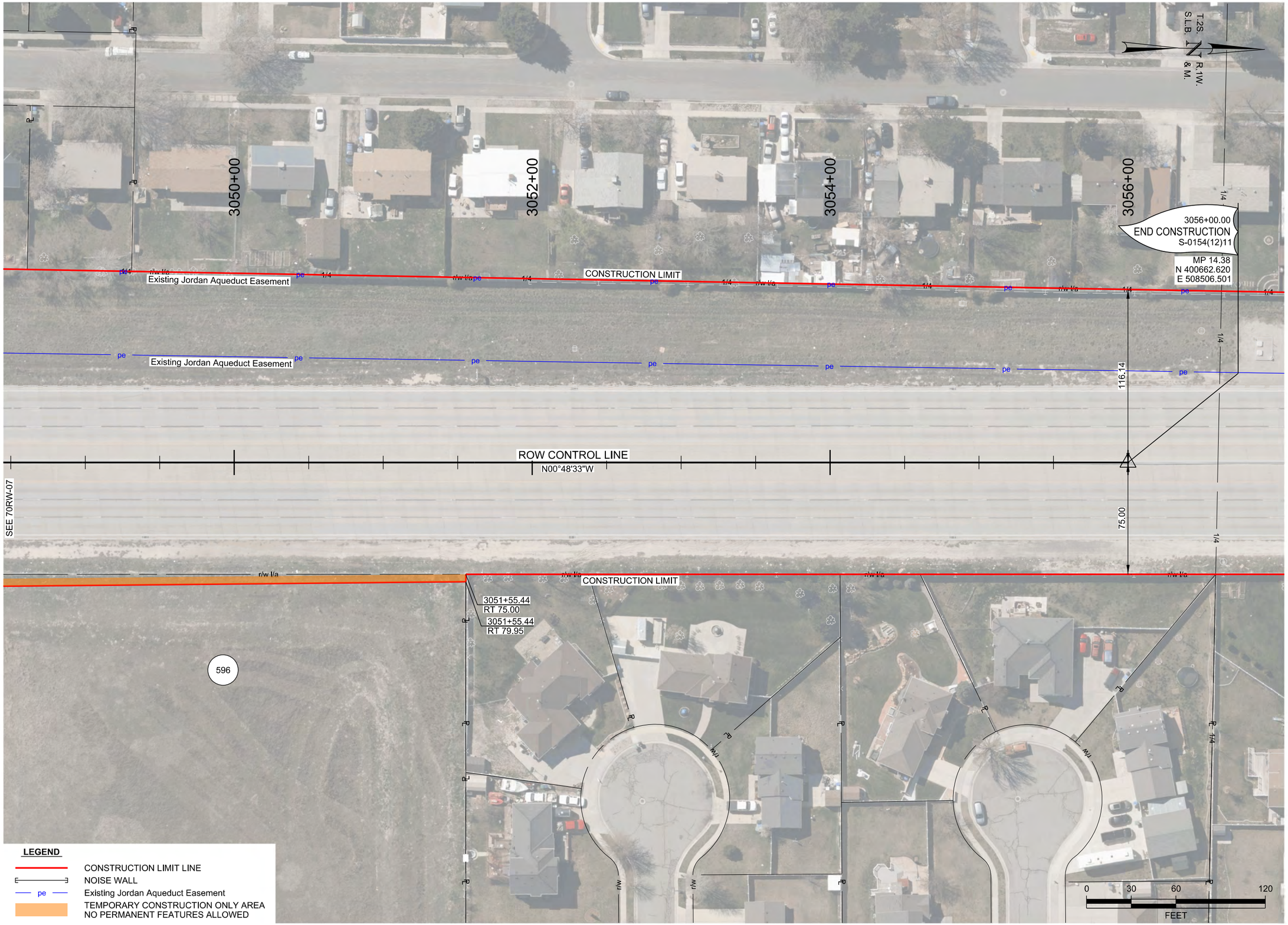

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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QC CHECKED BY CSB
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MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 70RW-08

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LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
70S-1	7000 SOUTH ROW CONTROL LINE	21°33'41" RT	1500.00	564.48	285.62	702+85.62	398060.560	507969.616

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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QC CHECKED BY CSB
MM/DD/YY
DATE

APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 70RW-09

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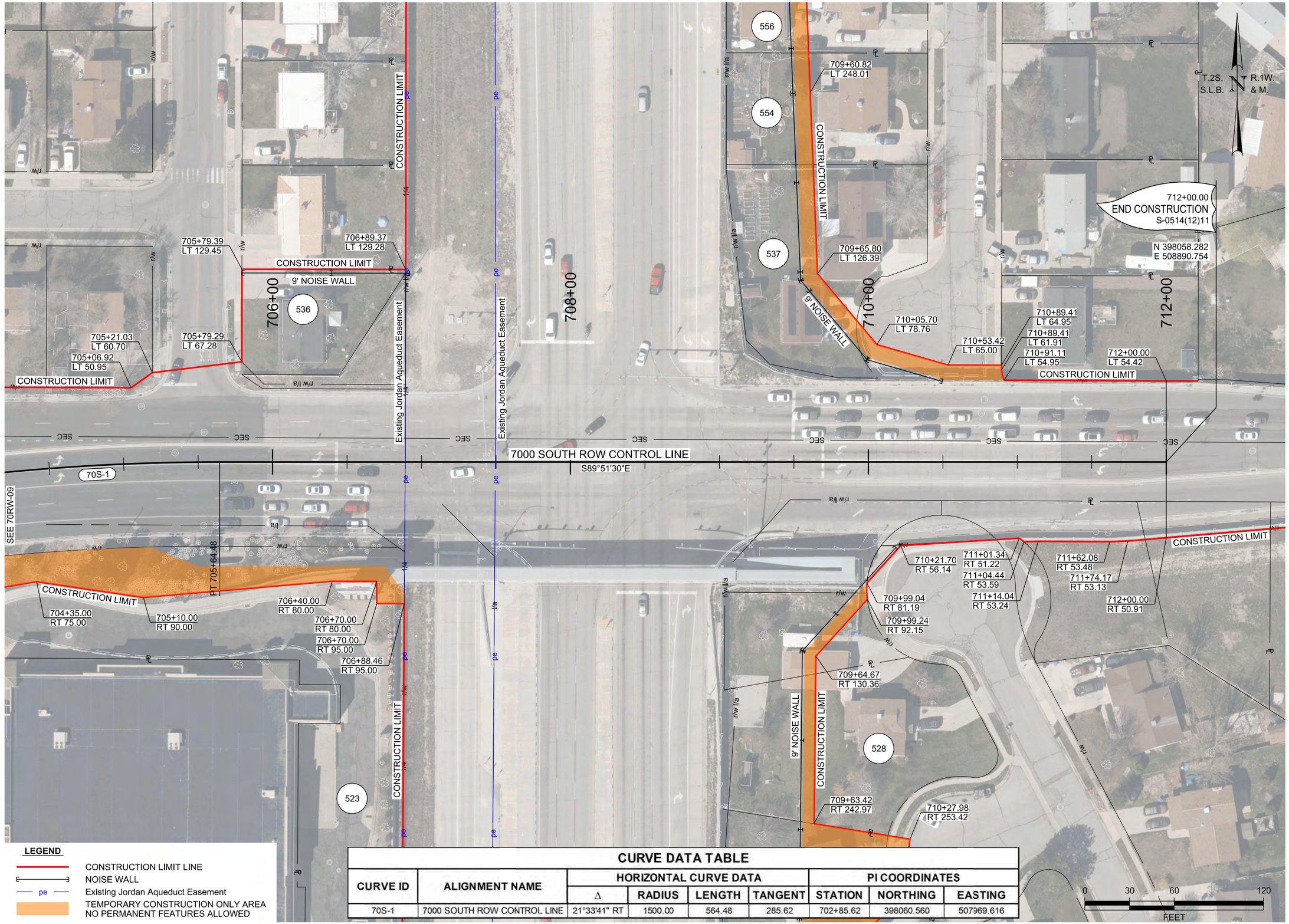

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
70S-1	7000 SOUTH ROW CONTROL LINE	21°33'41" RT	1500.00	564.48	285.62	702+85.62	398060.560	507969.616

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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QC CHECKED BY CSB
APPROVED MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 70RW-10

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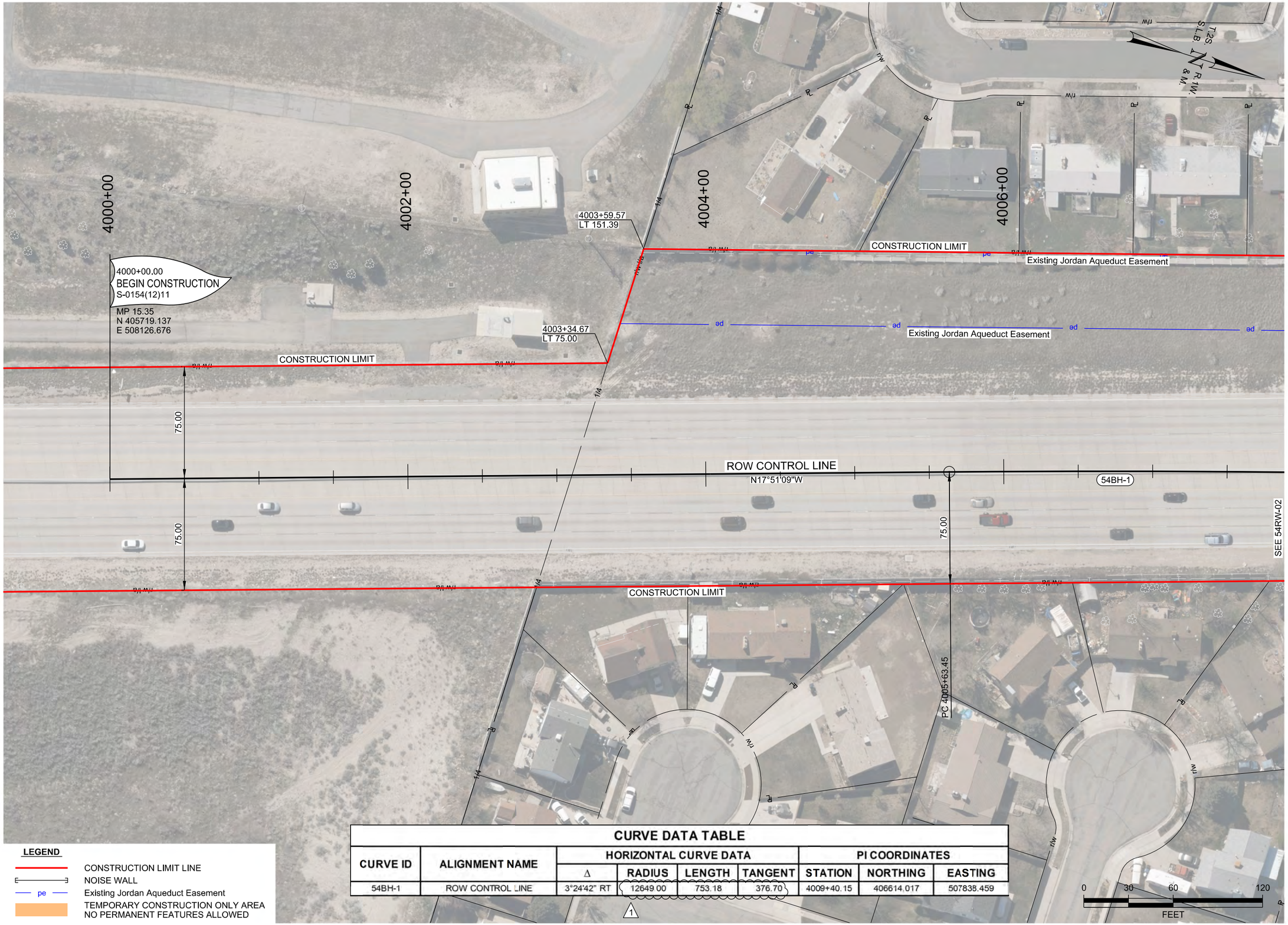

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
54BH-1	ROW CONTROL LINE	3°24'42" RT	12649.00	753.18	376.70	4009+40.15	406614.017	507838.459

1

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	REMARKS
1	08/16	UPDATED CURVE DATA TABLE

APPROVED BY: CSB

DRAWN BY: KKH
QC CHECKED BY: CSB

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

APPROVED

MM/DD/YY
DATE

PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH

PROJECT NUMBER: S-0154(12)11

PIN: 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 54RW-01

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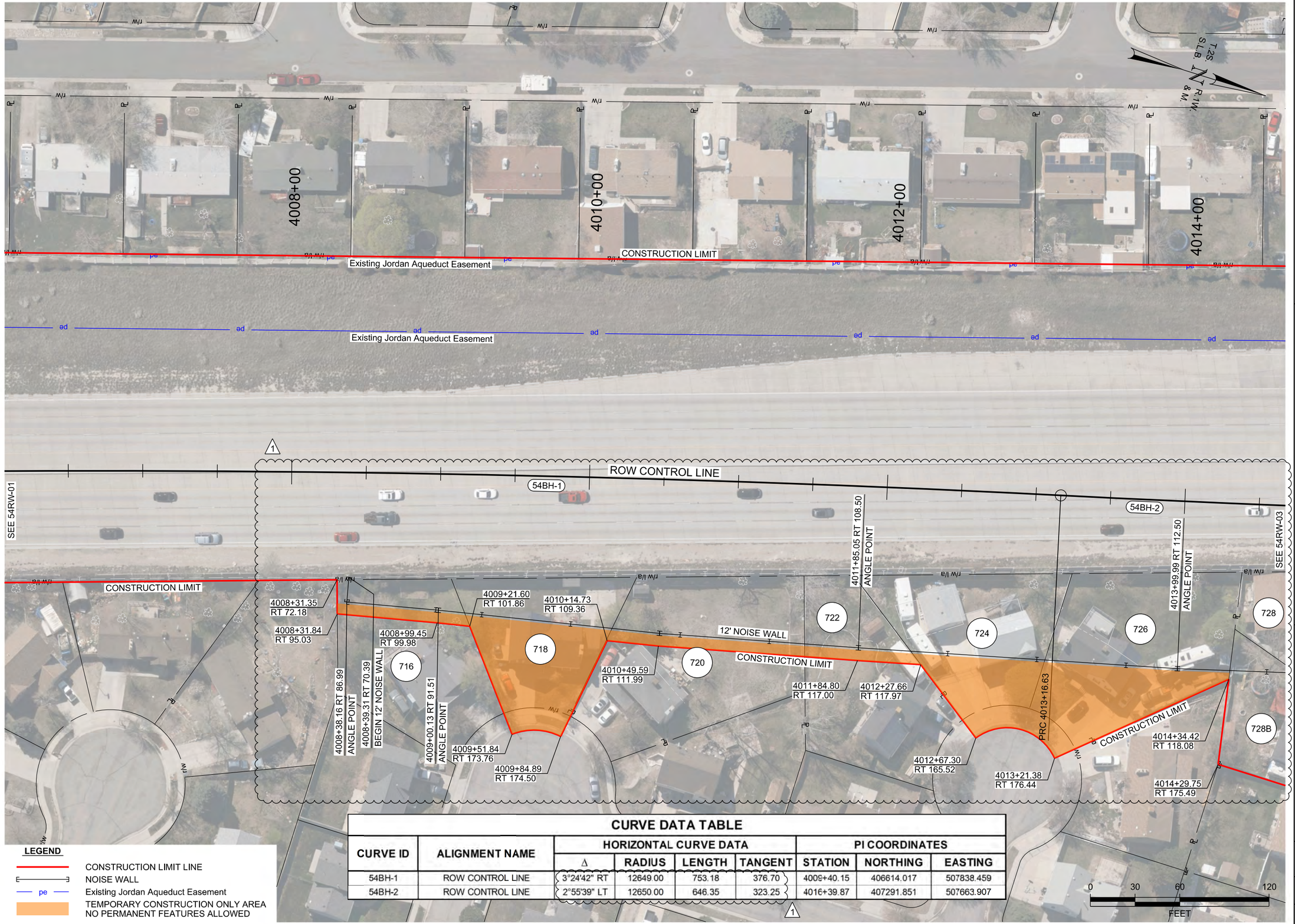

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
54BH-1	ROW CONTROL LINE	3°24'42" RT	12649.00	753.18	376.70	4009+40.15	406614.017	507838.459
54BH-2	ROW CONTROL LINE	2°55'39" LT	12650.00	646.35	323.25	4016+39.87	407291.851	507663.907

REVISIONS

NO.	DATE	REMARKS
1	08/16	UPDATED CURVE DATA, LIMITS & NOISE WALL

APPROVED BY CSB

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
MM/DD/YY
DATE
APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 54RW-02

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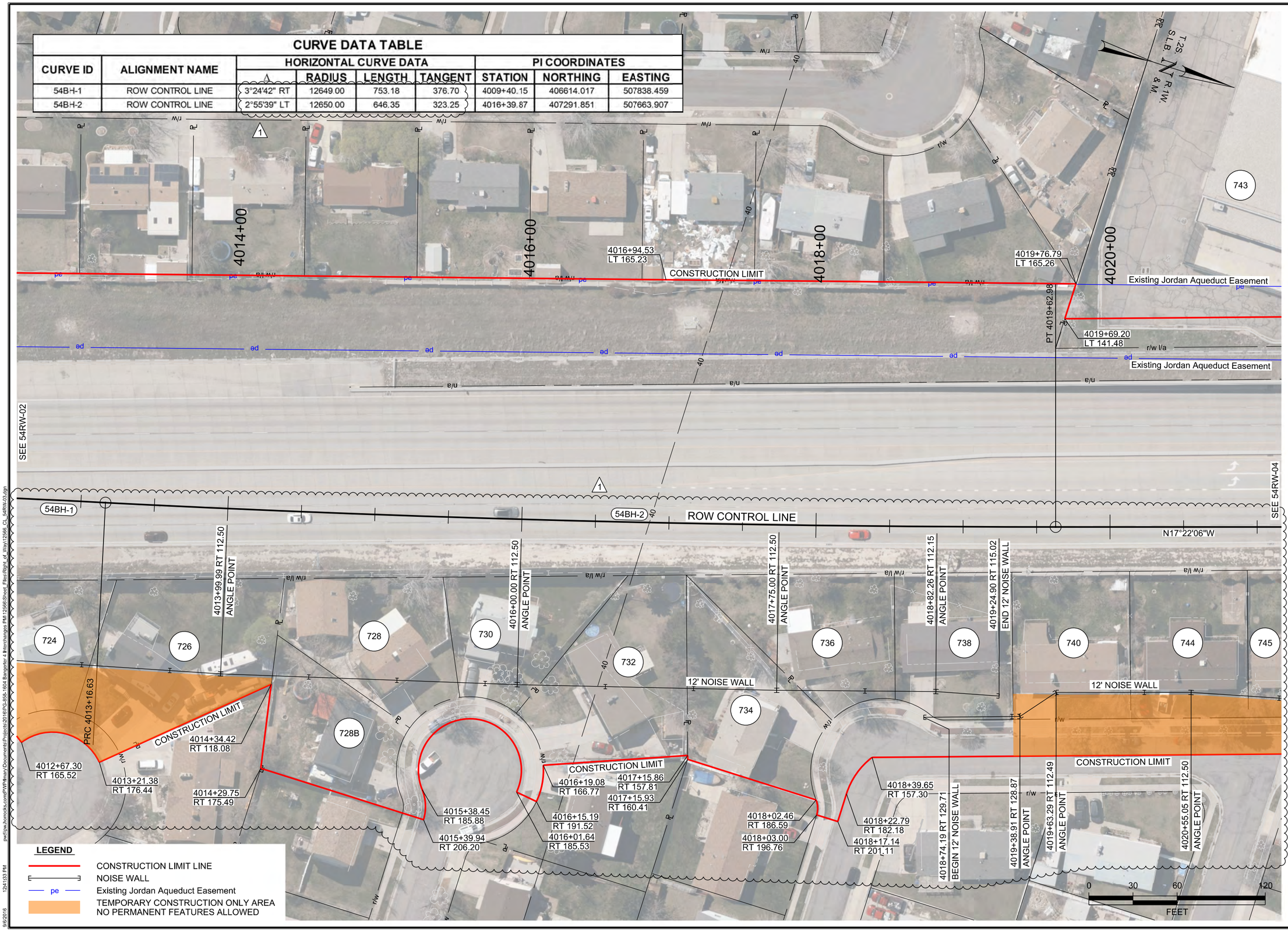
CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
54BH-1	ROW CONTROL LINE	3°24'42" RT	12649.00	753.18	376.70	4009+40.15	406614.017	507838.459
54BH-2	ROW CONTROL LINE	2°55'39" LT	12650.00	646.35	323.25	4016+39.87	407291.851	507663.907



LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	08/16	CSB	UPDATED CURVE DATA, LIMITS & NOISE WALL.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
APPROVED MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 54RW-03

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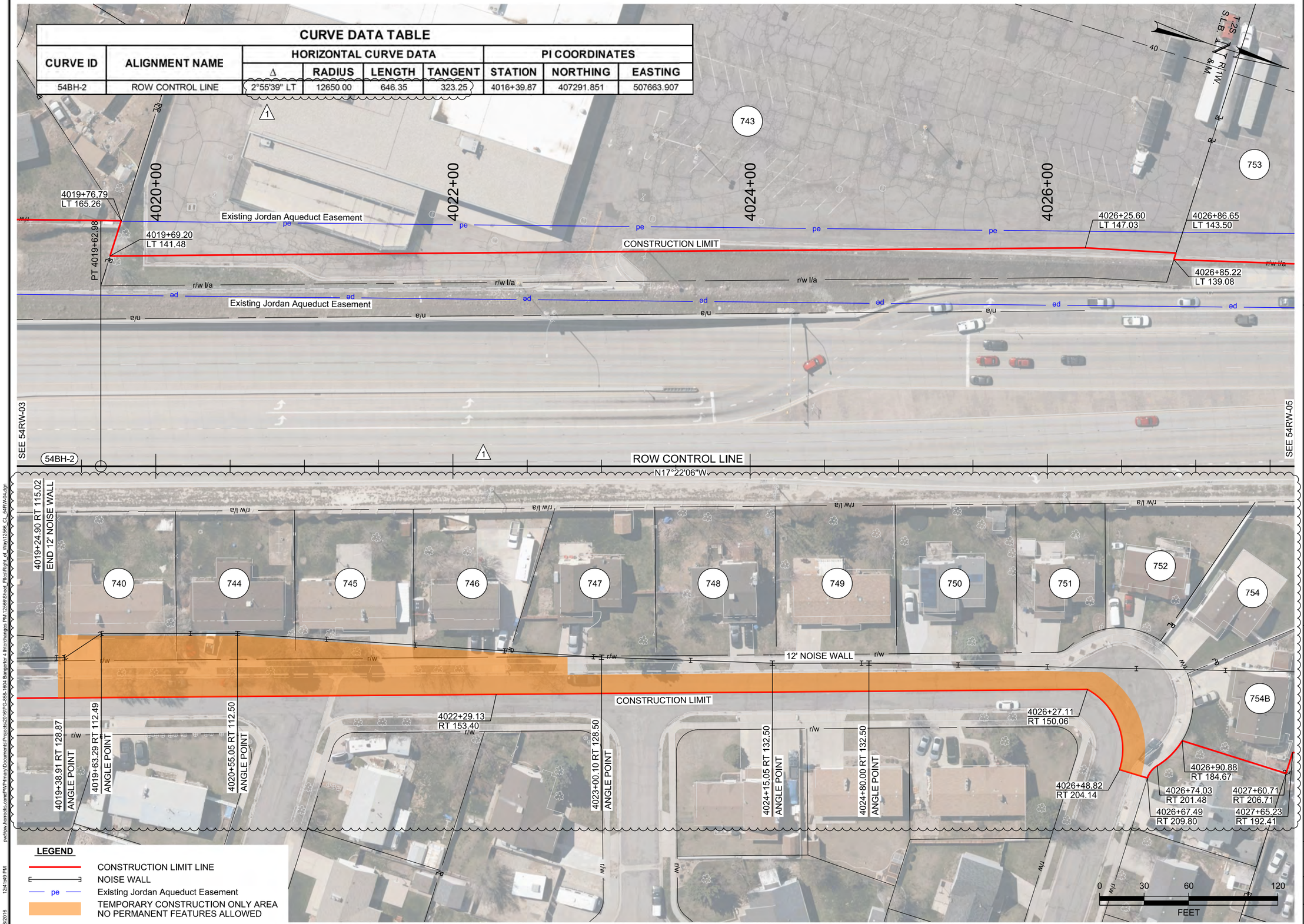
CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
54BH-2	ROW CONTROL LINE	2°55'39" LT	12650.00	646.35	323.25	4016+39.87	407291.851	507663.907



LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	08/16	CSB	UPDATED CURVE DATA, LIMITS & NOISE WALL.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
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MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 54RW-04

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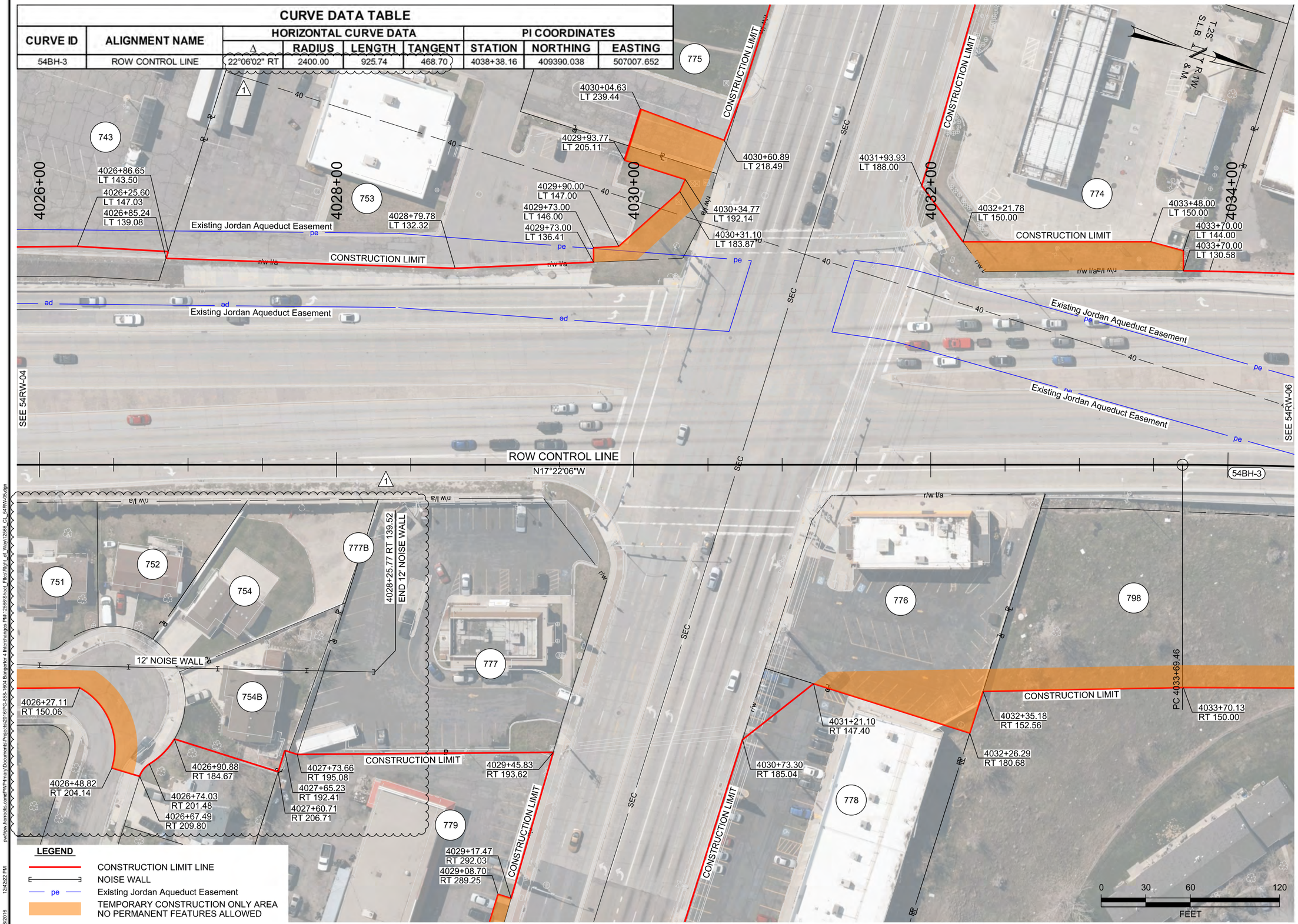
CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
54BH-3	ROW CONTROL LINE	22°06'02" RT	2400.00	925.74	468.70	4038+38.16	409390.038	507007.652



LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	08/16	CSB	UPDATED CURVE DATA, LIMITS & NOISE WALL.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
APPROVED
MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 54RW-05

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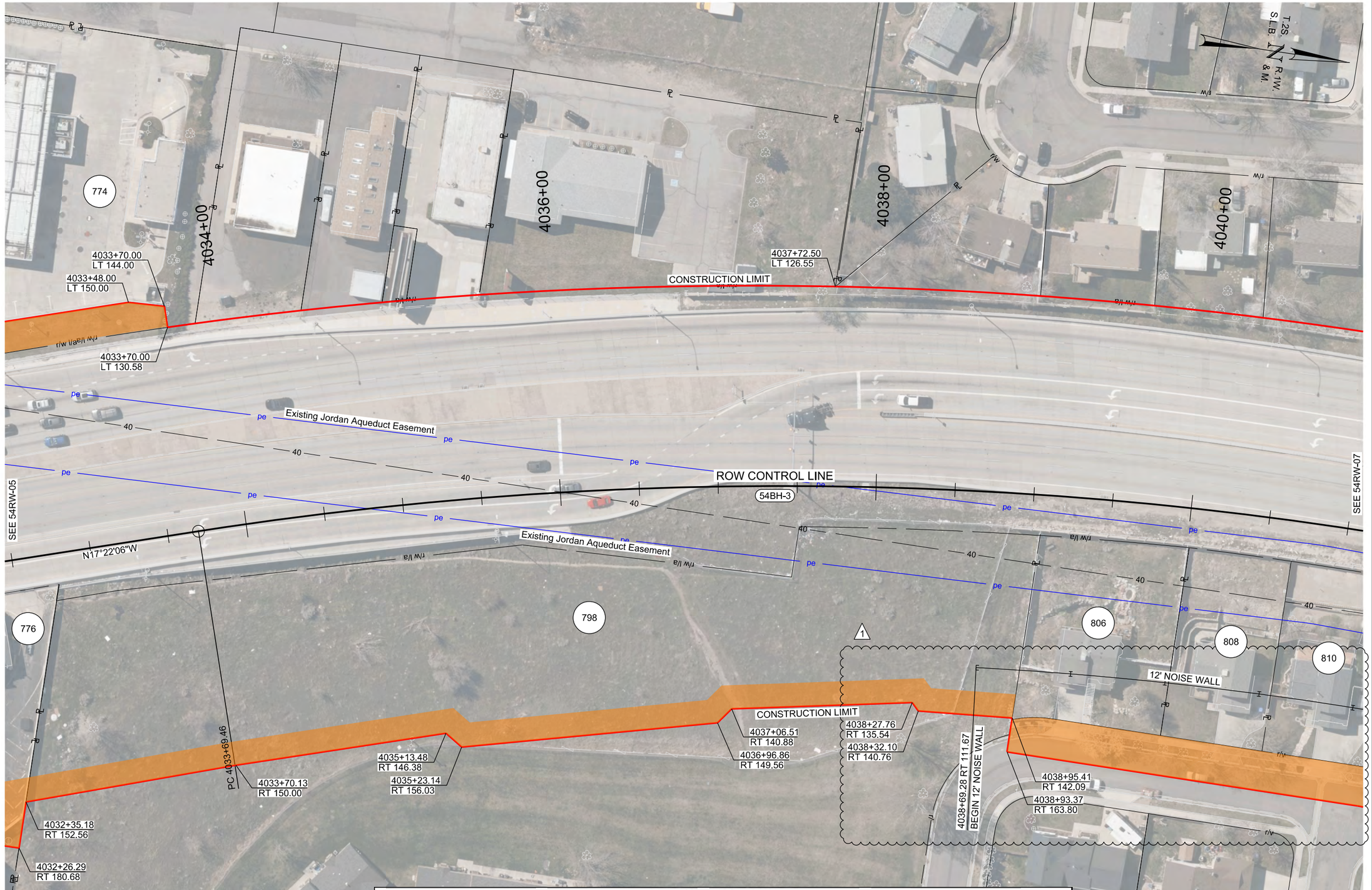

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
54BH-3	ROW CONTROL LINE	22°06'02" RT	2400.00	925.74	468.70	4038+38.16	409390.038	507007.652

1

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	08/16	CSB	UPDATED CURVE DATA, LIMITS & NOISE WALL.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB

APPROVED
MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 54RW-06

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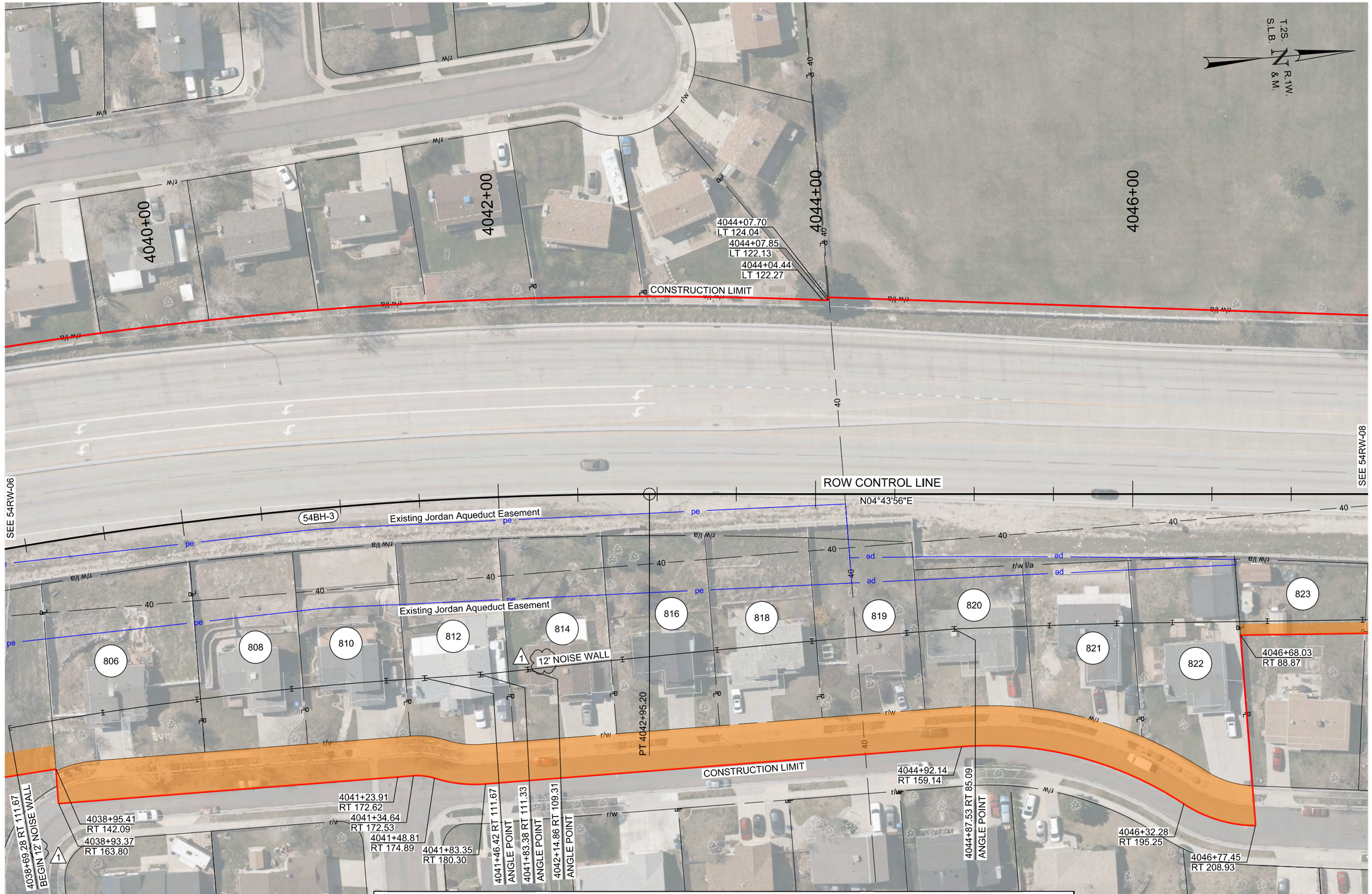

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
54BH-3	ROW CONTROL LINE	22°06'02" RT	2400.00	925.74	468.70	4038+38.16	409390.038	507007.652

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	08/16	CSB	UPDATED CURVE DATA & NOISE WALL.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
MM/DD/YY
DATE

APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 54RW-07

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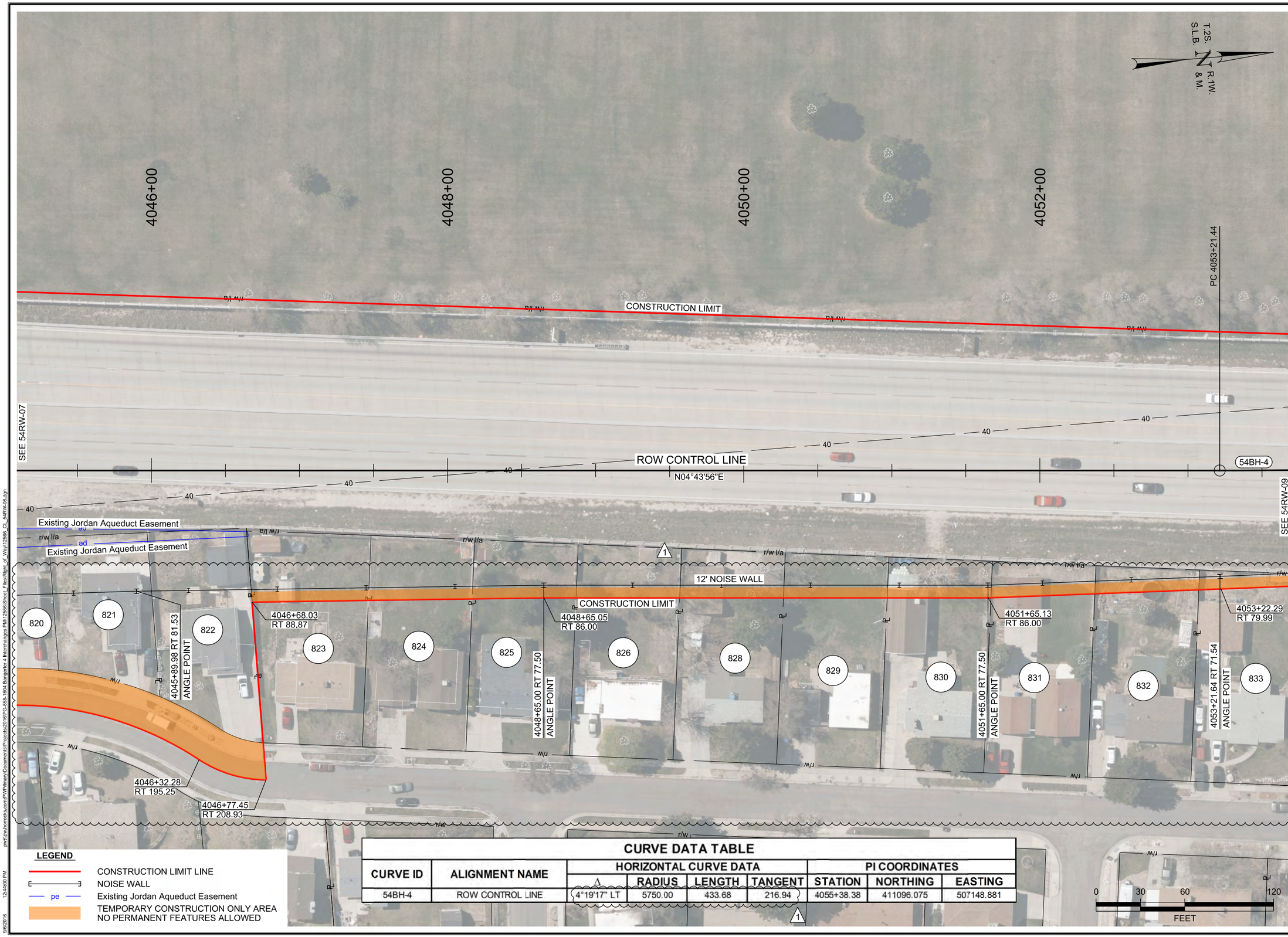

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
54BH-4	ROW CONTROL LINE	4°19'17" LT	5750.00	433.68	216.94	4055+38.38	411096.075	507148.881

1

REVISIONS			
1	08/16	CSB	UPDATED CURVE DATA, LIMITS & NOISE WALL.
NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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MM/DD/YY
DATE
APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 54RW-08

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CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
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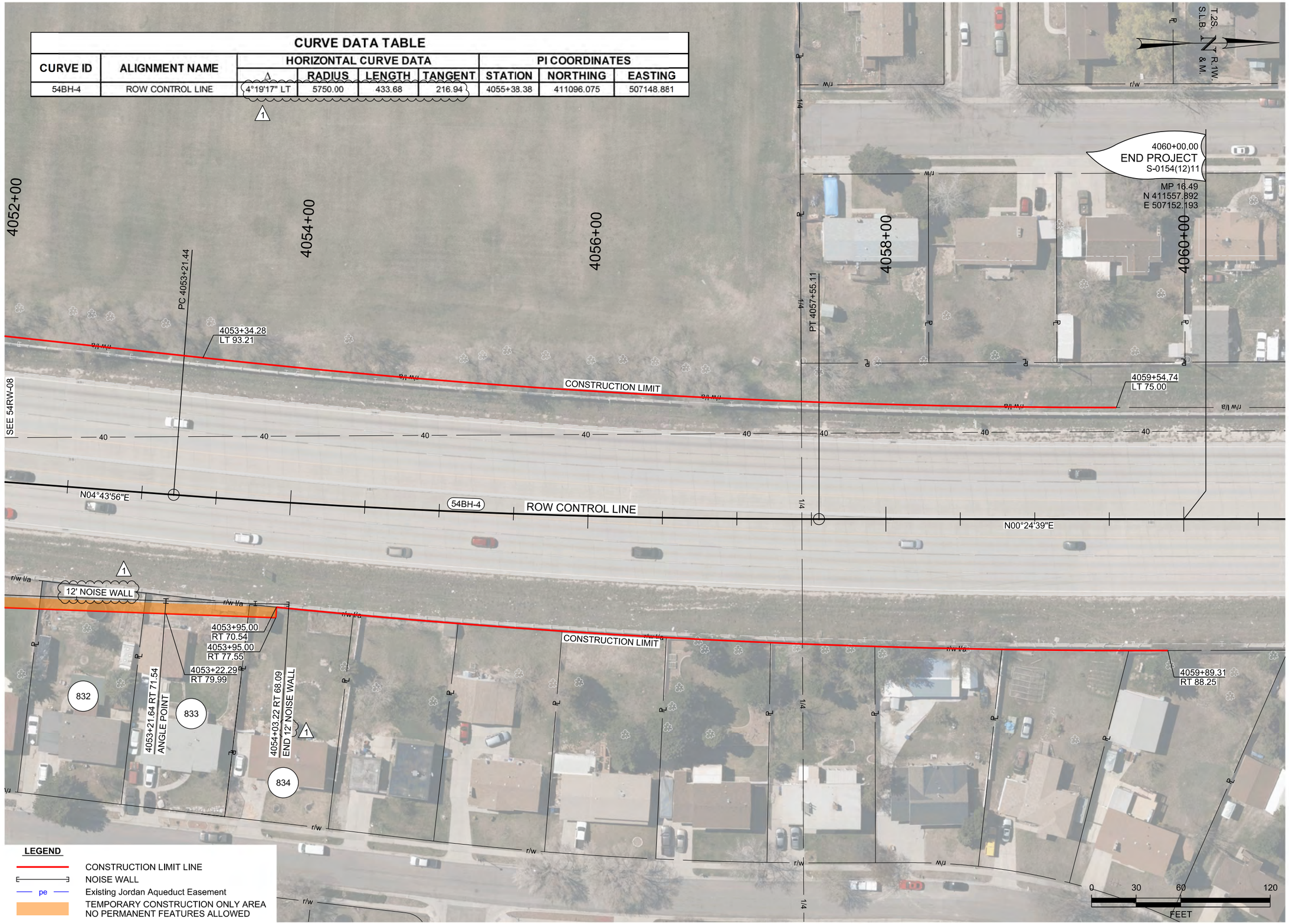

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	REMARKS
1	08/16	UPDATED CURVE DATA & NOISE WALL.

APPROVED BY: CSB

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY: KKH
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APPROVED: MM/DD/YY
DATE

PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 54RW-09

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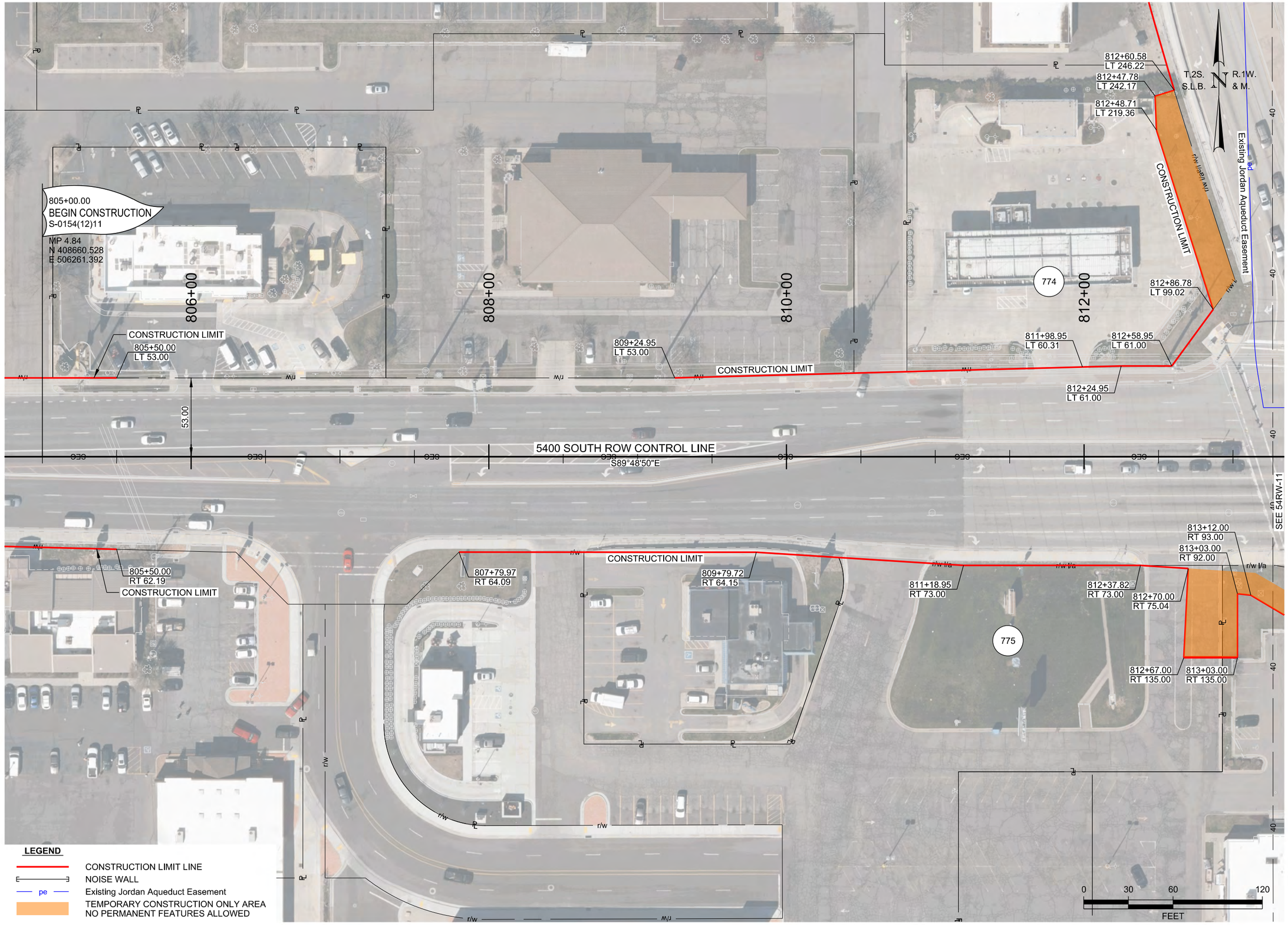

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH

QC CHECKED BY CSB

MM/DD/YY
DATE

APPROVED

PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 54RW-10

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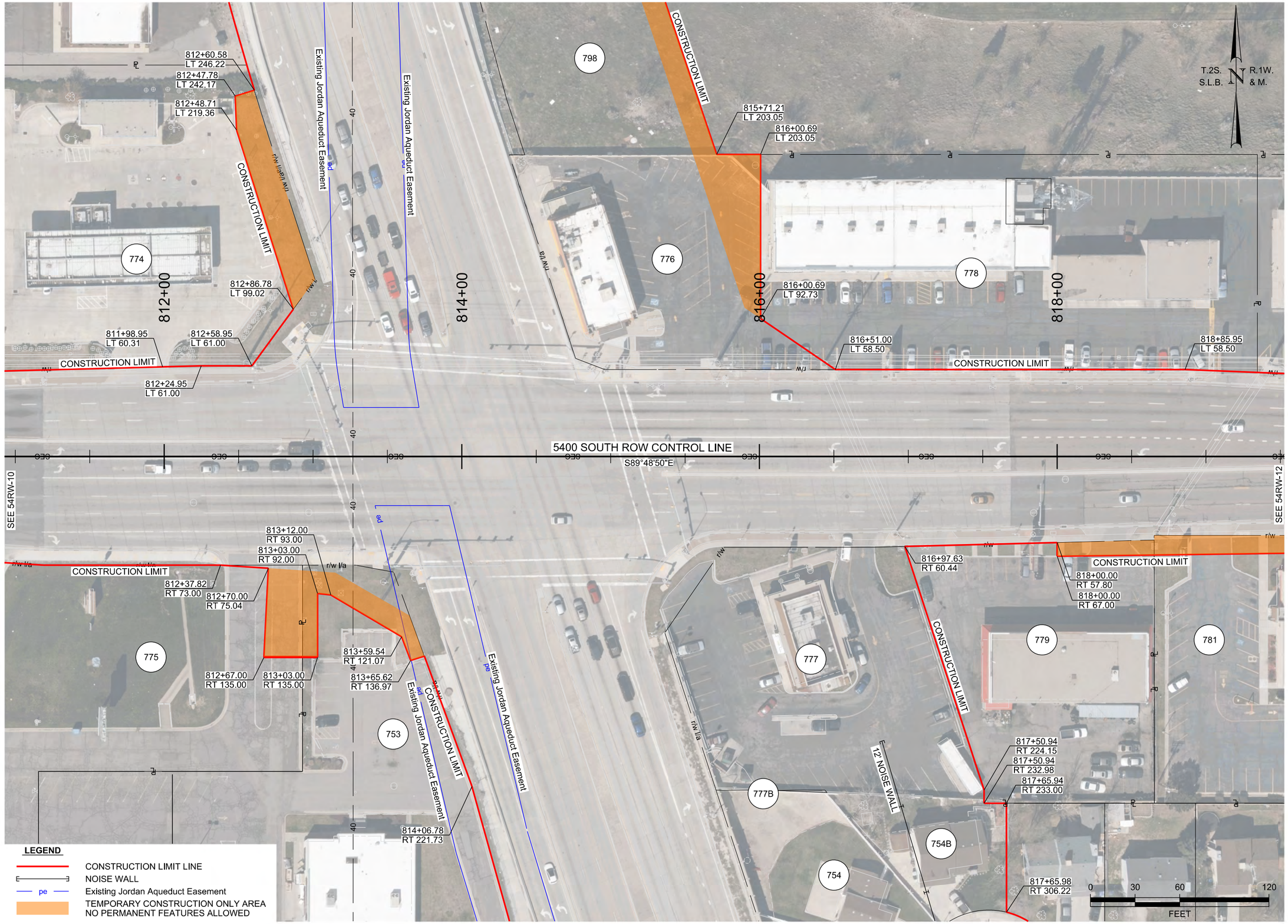

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
MM/DD/YY
DATE
APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE
COUNTY

SHEET NO. 54RW-11

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LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS			
NO.	DATE	APPROVED BY	REMARKS
1	08/16	CSB	UPDATED END CONSTRUCTION EASTING.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
MM/DD/YY
DATE
APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE
COUNTY

SHEET NO. 54RW-12

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LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB

APPROVED
PROFESSIONAL LAND SURVEYOR
MM/DD/YY
DATE

4 INTERCHANGES ON
BANGERTER HIGHWAY - 4015 WEST

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE
COUNTY

SHEET NO. 40RW-01

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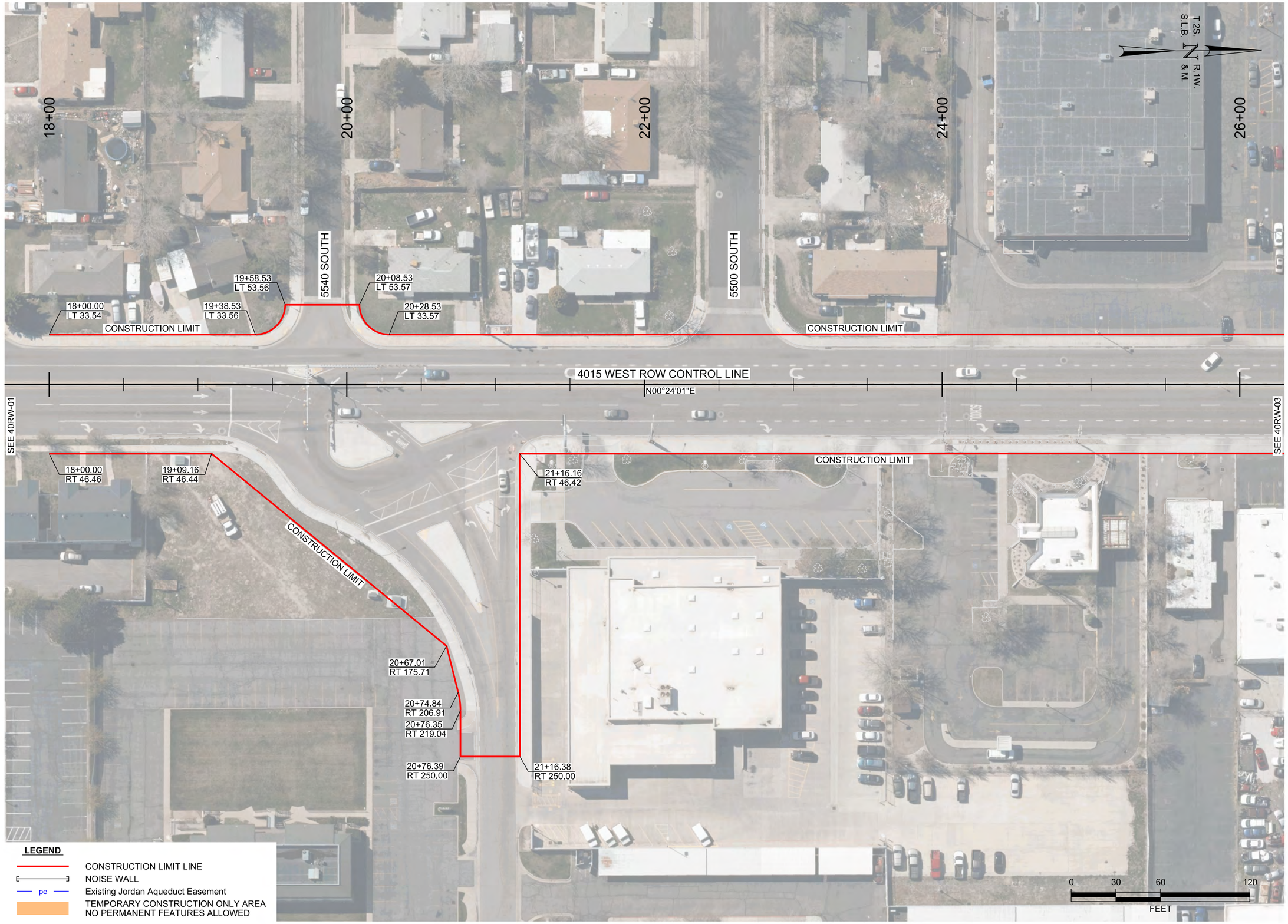

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
APPROVED
MM/DD/YY
DATE
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 4015 WEST
PROJECT NUMBER: S-0154(12)11 PIN 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 40RW-02

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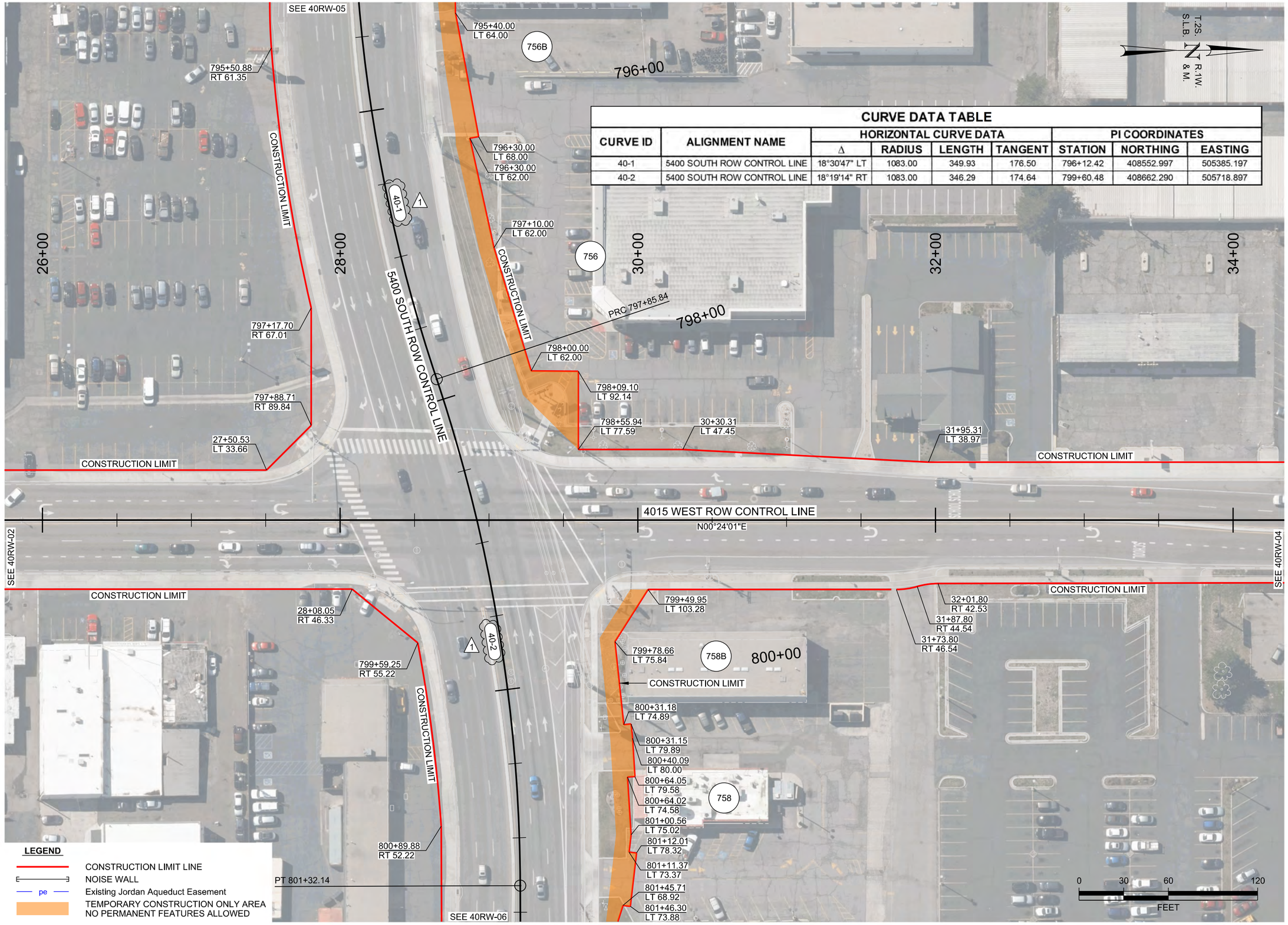

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
40-1	5400 SOUTH ROW CONTROL LINE	18°30'47" LT	1083.00	349.93	176.50	796+12.42	408552.997	505385.197
40-2	5400 SOUTH ROW CONTROL LINE	18°19'14" RT	1083.00	346.29	174.64	799+60.48	408662.290	505718.897

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

REVISIONS

NO.	DATE	REMARKS
1	08/16	UPDATE CURVE NUMBERING.

APPROVED BY: CSB

DRAWN BY: KKH
QC CHECKED BY: CSB

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

APPROVED

MM/DD/YY
DATE

PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 4015 WEST

PROJECT NUMBER: S-0154(12)11 PIN 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 40RW-03

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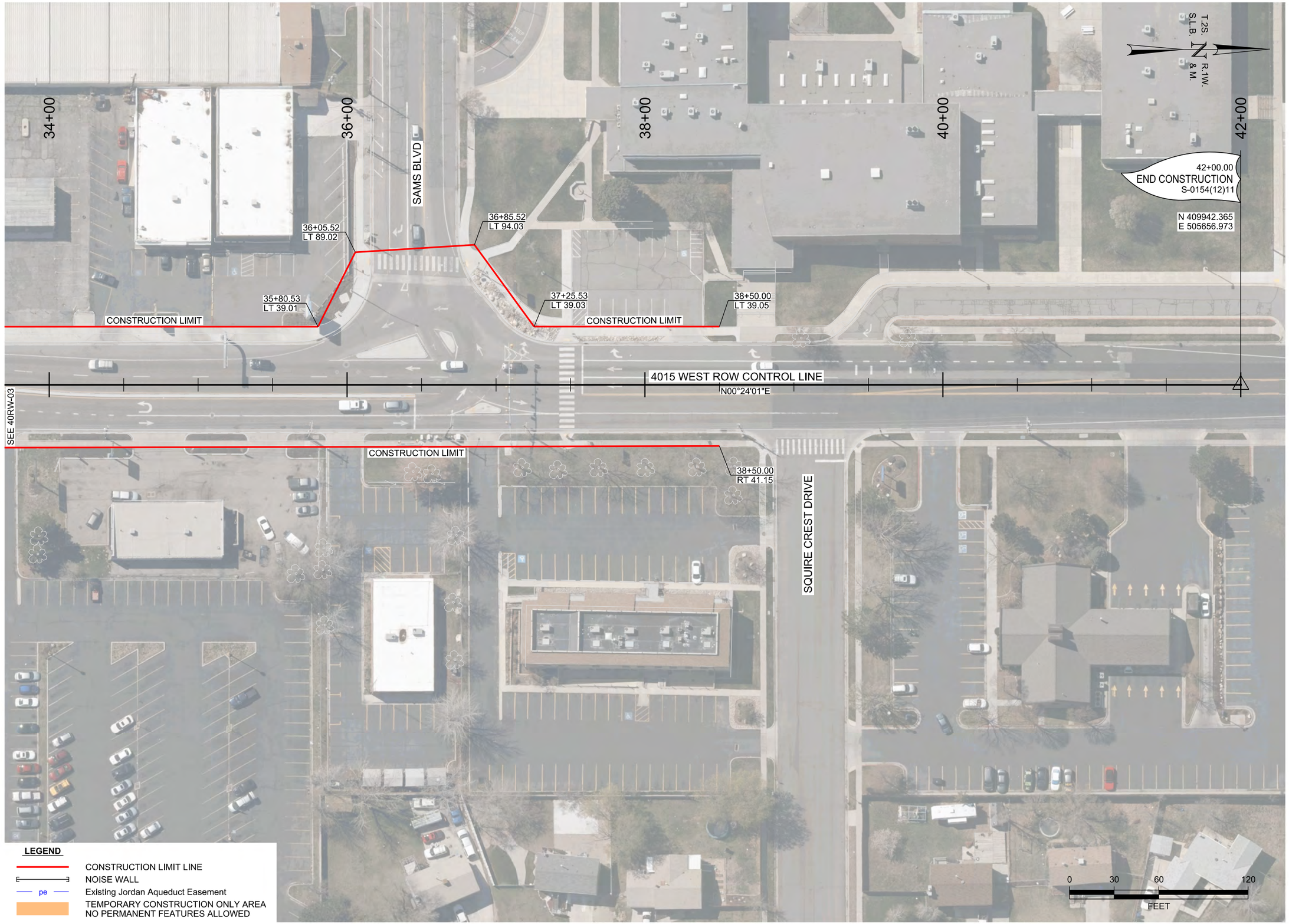

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
MM/DD/YY
DATE

APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 4015 WEST
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE
COUNTY

SHEET NO. 40RW-04

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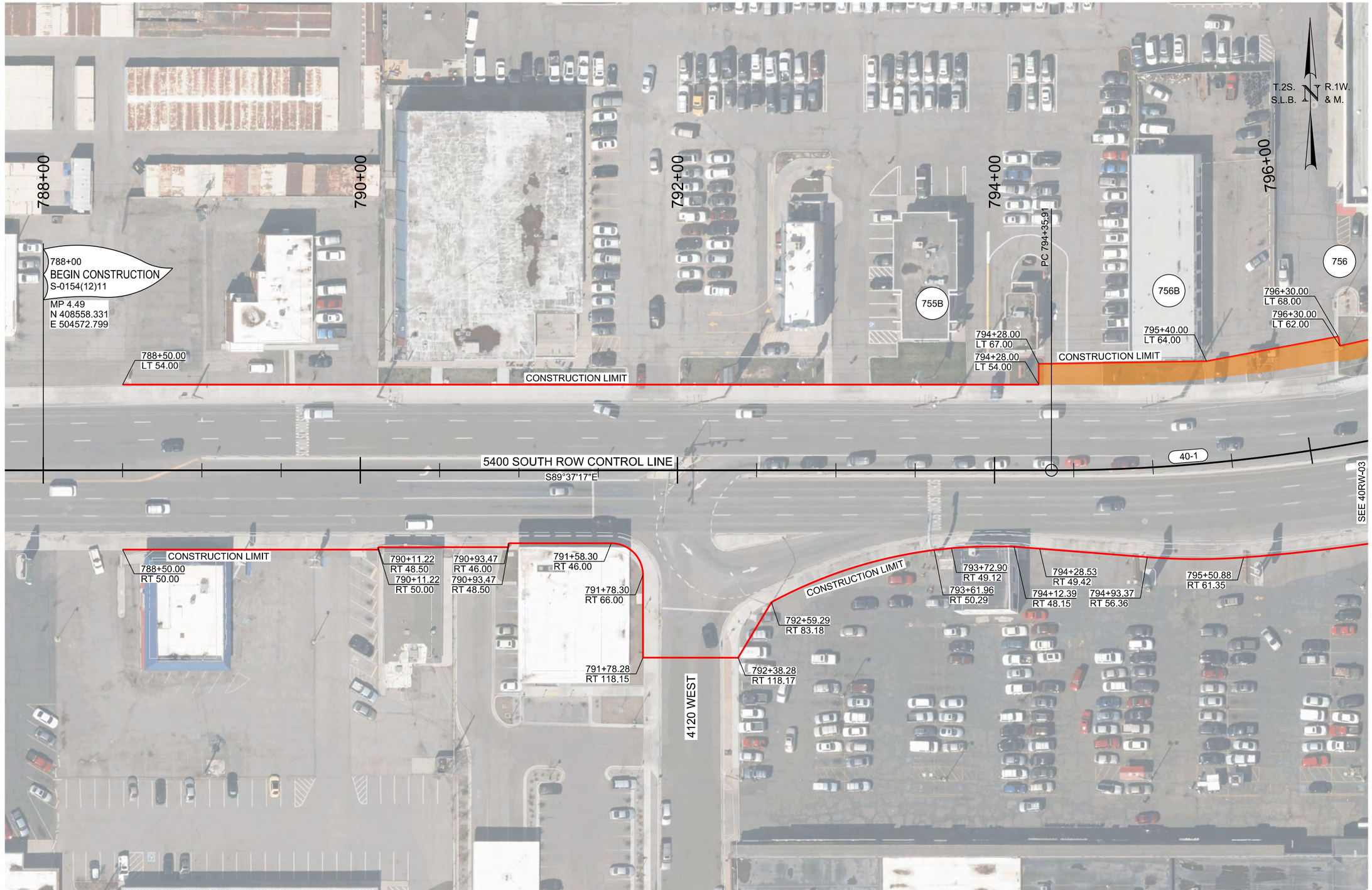

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
40-1	5400 SOUTH ROW CONTROL LINE	18°30'47" LT	1083.00	349.93	176.50	796+12.42	408552.997	505385.197

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY CSB
MM/DD/YY
DATE

APPROVED
PROFESSIONAL LAND SURVEYOR

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 4015 WEST
PROJECT NUMBER: S-0154(12)11
PIN: 12566
CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 40RW-05

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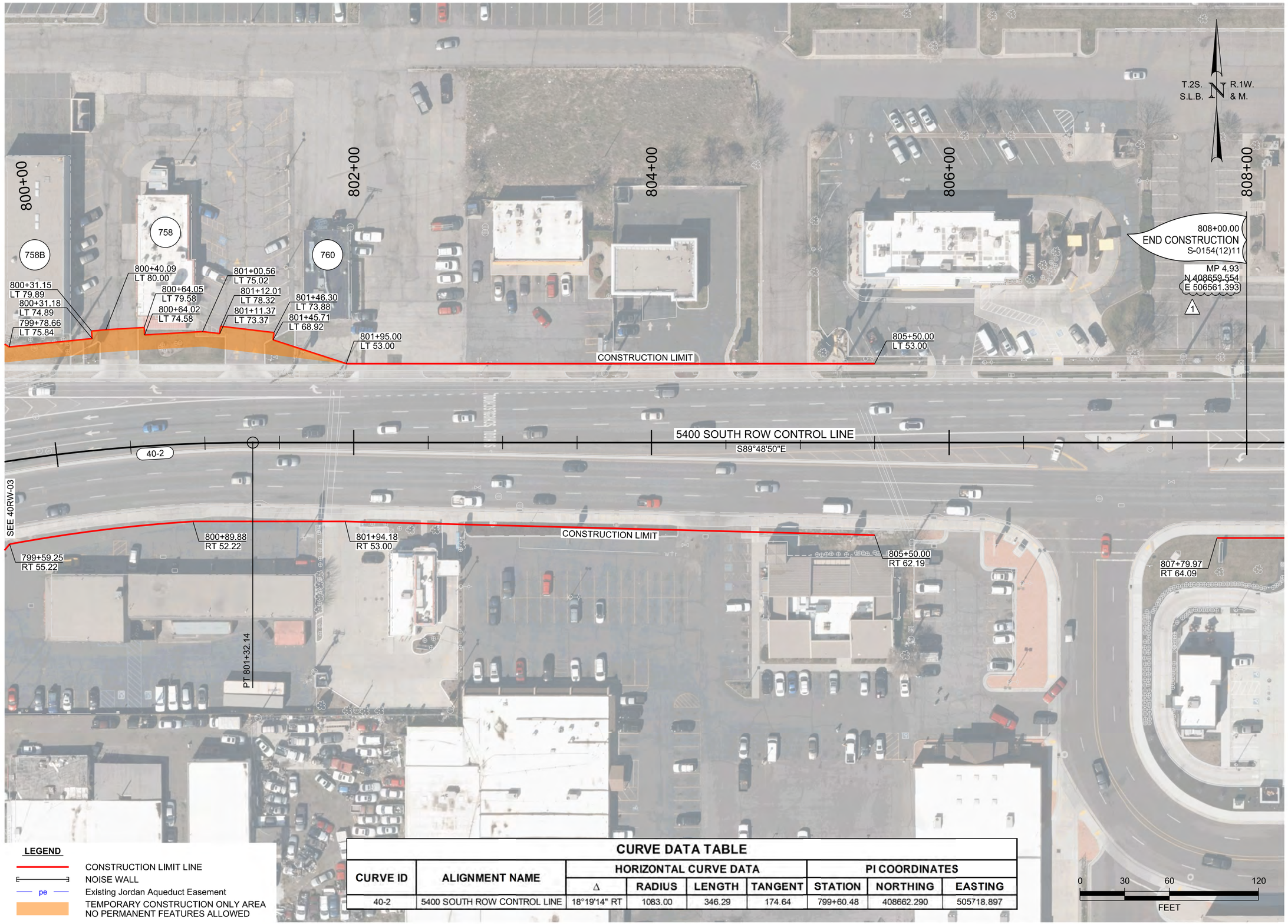

LEGEND

- CONSTRUCTION LIMIT LINE
- NOISE WALL
- pe — Existing Jordan Aqueduct Easement
- TEMPORARY CONSTRUCTION ONLY AREA NO PERMANENT FEATURES ALLOWED

CURVE DATA TABLE

CURVE ID	ALIGNMENT NAME	HORIZONTAL CURVE DATA				PI COORDINATES		
		Δ	RADIUS	LENGTH	TANGENT	STATION	NORTHING	EASTING
40-2	5400 SOUTH ROW CONTROL LINE	18°19'14" RT	1083.00	346.29	174.64	799+60.48	408662.290	505718.897

REVISIONS

NO.	DATE	REMARKS
1	08/16	UPDATE END CONSTRUCTION EASTING.

APPROVED BY: CSB

DRAWN BY: KKH

QC CHECKED BY: CSB

DATE: MM/DD/YY

APPROVED

PROFESSIONAL LAND SURVEYOR

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 4015 WEST

PROJECT NUMBER: S-0154(12)11 PIN 12566

CONTRACT RIGHT-OF-WAY

SALT LAKE COUNTY

SHEET NO. 40RW-06

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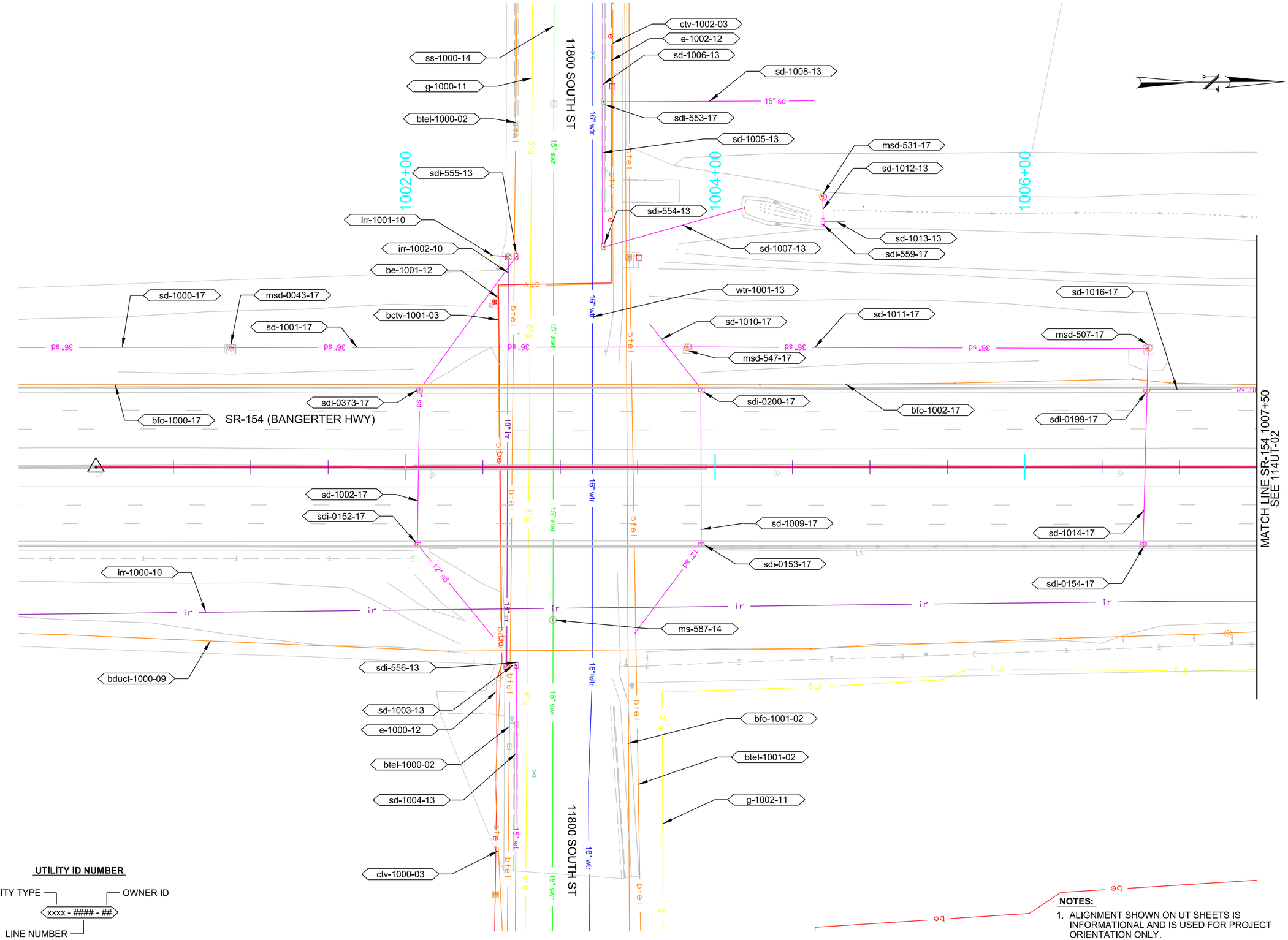

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY	GS	APPROVED	
QC CHECKED BY	BDW		
DATE	9/15/2016	PROFESSIONAL ENGINEER	

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT	PROJECT NUMBER	PIN
	S-0154(12)11	12566

UTILITIES

SHEET NO. 114UT-01

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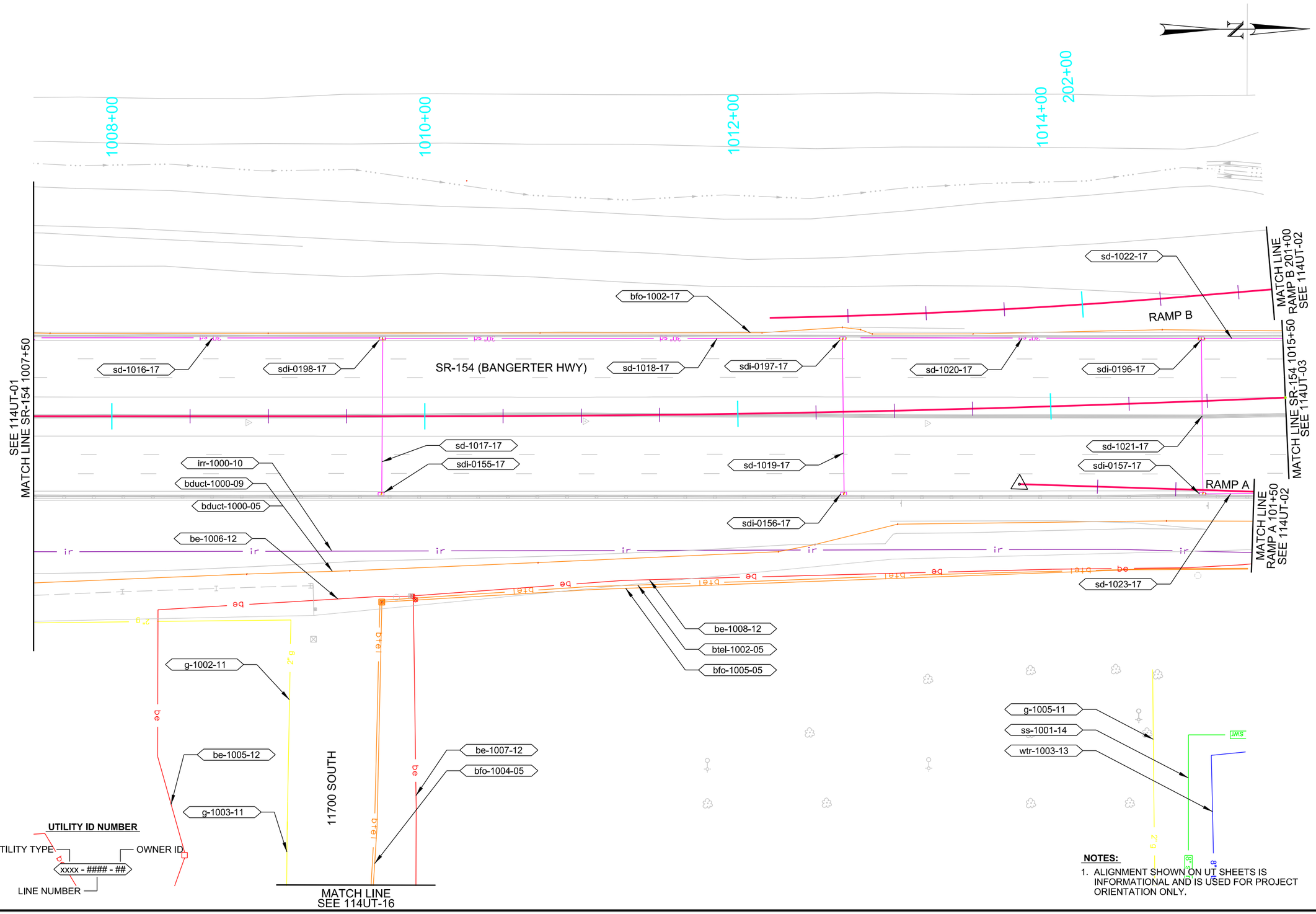

NOTES:

1. ALIGNMENT SHOWN ON UT SHEETS IS INFORMATIONAL AND IS USED FOR PROJECT ORIENTATION ONLY.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
9/15/2016
DATE
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITIES

SHEET NO. 114UT-02

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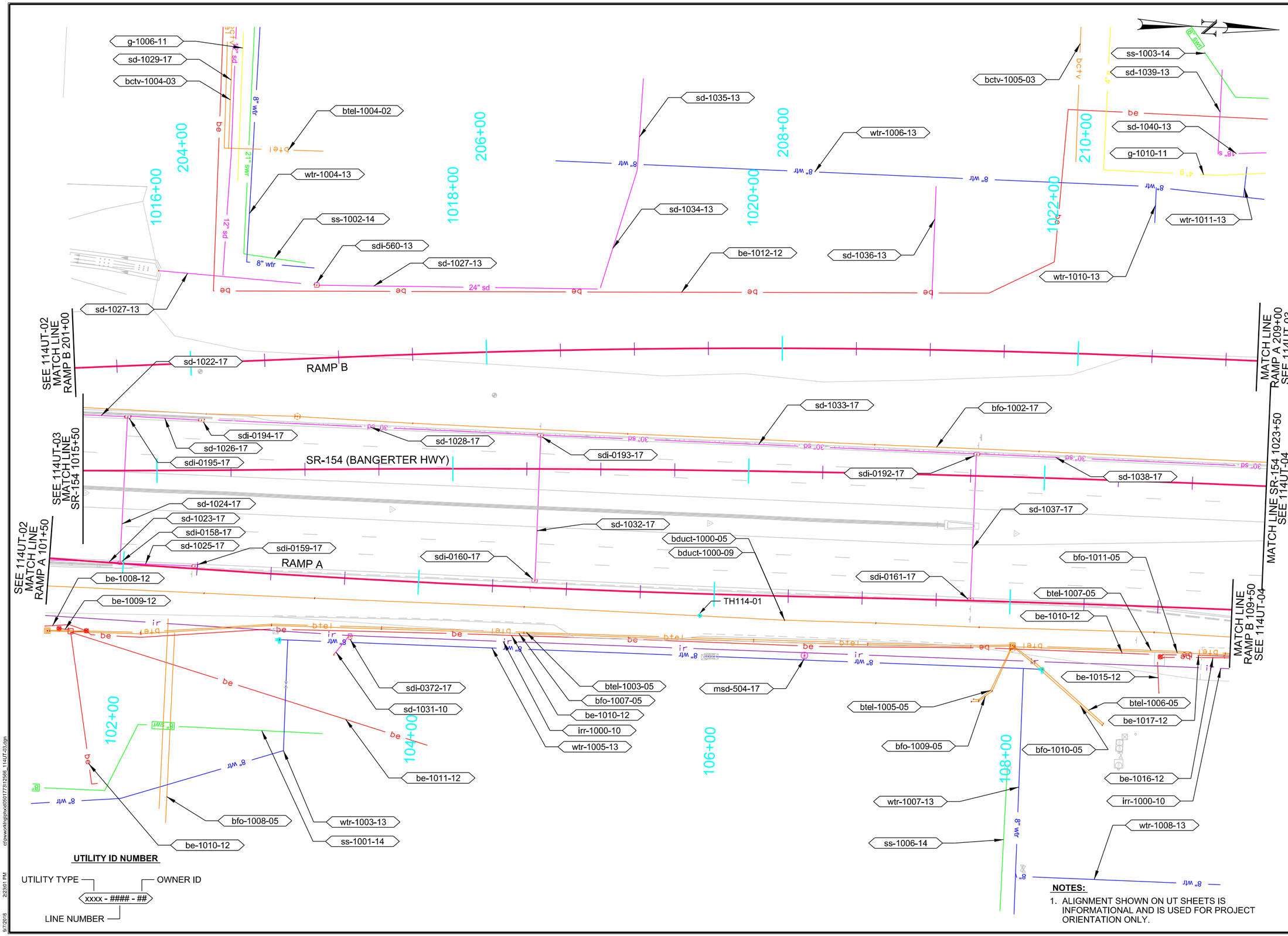
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ss-1003-14
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sd-1040-13
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wtr-1011-13
wtr-1010-13
1016+00
204+00
1018+00
206+00
1020+00
208+00
1022+00
210+00
SEE 114UT-02
MATCH LINE
RAMP B 201+00
sd-1022-17
RAMP B
MATCH LINE
RAMP A 209+00
SEE 114UT-03
sd-1033-17
bfo-1002-17
sdi-0194-17
sd-1026-17
sdi-0195-17
sd-1028-17
SR-154 (BANGERTER HWY)
sdi-0193-17
sdi-0192-17
sd-1038-17
SEE 114UT-03
MATCH LINE
SR-154 1015+50
MATCH LINE SR-154 1023+50
SEE 114UT-04
sd-1024-17
sd-1023-17
sdi-0158-17
sd-1025-17
sdi-0159-17
sd-1032-17
bduct-1000-05
bduct-1000-09
sd-1037-17
SEE 114UT-02
MATCH LINE
RAMP A 101+50
RAMP A
sdi-0160-17
sdi-0161-17
bfo-1011-05
be-1008-12
be-1009-12
TH114-01
btel-1007-05
be-1010-12
MATCH LINE
RAMP B 109+50
SEE 114UT-04
sdi-0372-17
sd-1031-10
btel-1003-05
bfo-1007-05
be-1010-12
irr-1000-10
wtr-1005-13
msd-504-17
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be-1017-12
bfo-1009-05
bfo-1010-05
be-1011-12
be-1016-12
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be-1010-12
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104+00
106+00
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UTILITY ID NUMBER
UTILITY TYPE
OWNER ID
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LINE NUMBER
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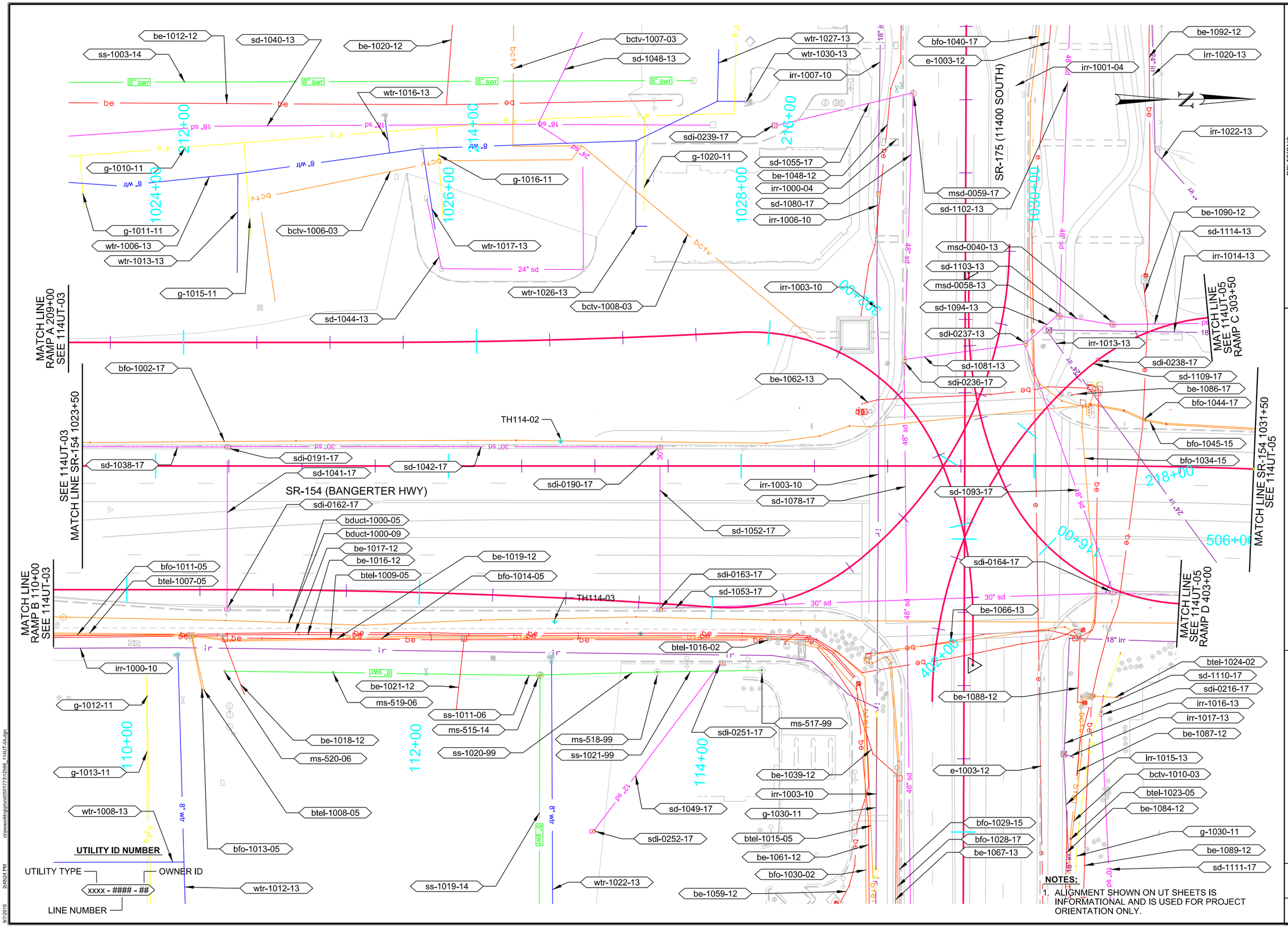
1. ALIGNMENT SHOWN ON UT SHEETS IS INFORMATIONAL AND IS USED FOR PROJECT ORIENTATION ONLY.
REVISIONS
NO.
DATE
APPROVED BY
REMARKS
UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR
DRAWN BY
QC CHECKED BY
9/15/2016
DATE
APPROVED
PROFESSIONAL ENGINEER
4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH
PROJECT
PROJECT NUMBER
S-0154(12)11
PIN
12566
UTILITIES
SHEET NO.
114UT-03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RAMP A 209+00
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SEE 114UT-05
MATCH LINE
SEE 114UT-05
RAMP C 303+50
MATCH LINE
SEE 114UT-05
RAMP D 403+00
SR-154 (BANGERTER HWY)
SR-175 (11400 SOUTH)
TH114-02
TH114-03
110+00
112+00
114+00
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UTILITY ID NUMBER
UTILITY TYPE
OWNER ID
xxxx - #### - ##
LINE NUMBER
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REVISIONS
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DATE
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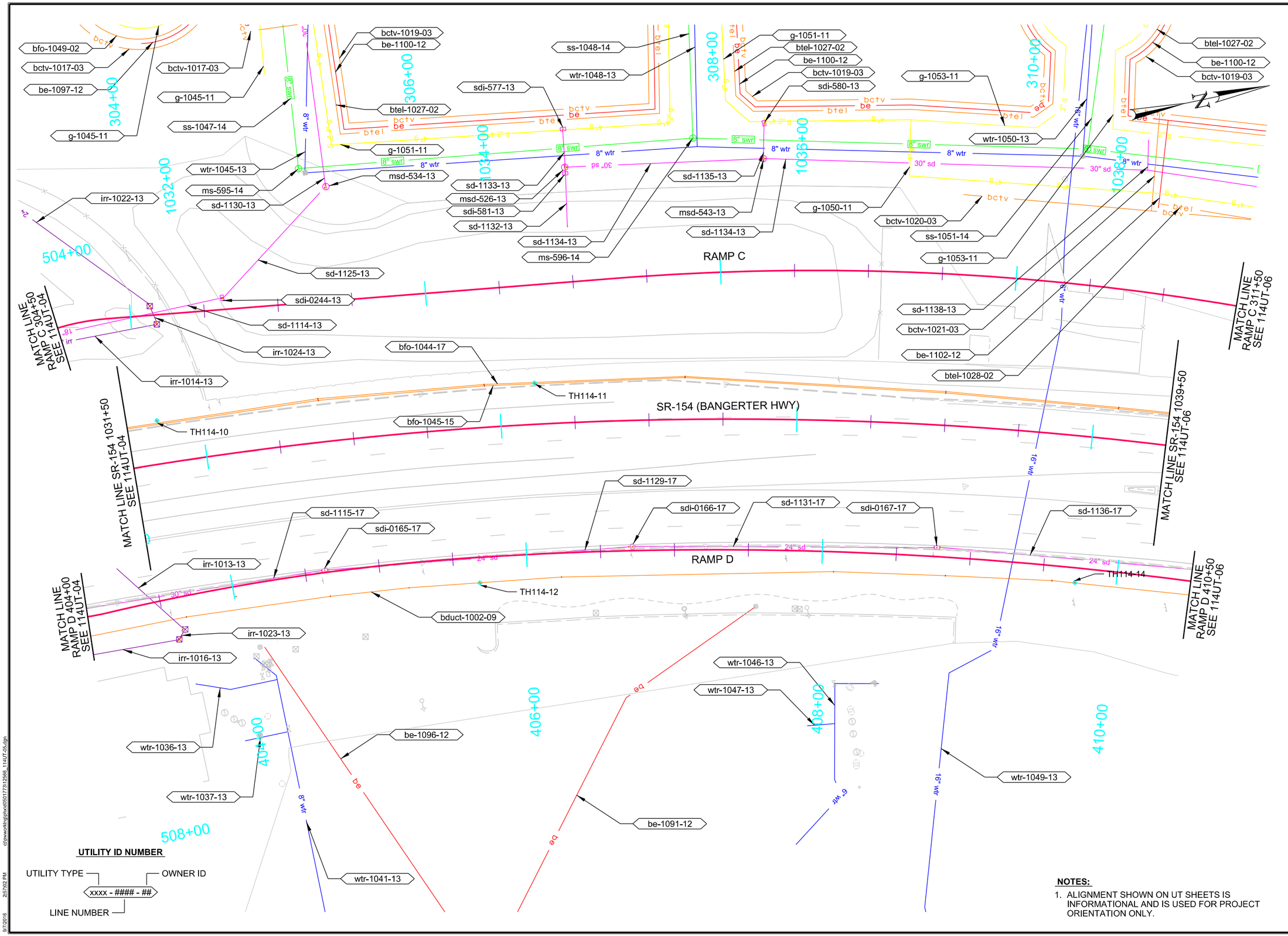
UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR
APPROVED
PROFESSIONAL ENGINEER
DRAWN BY
QC CHECKED BY
9/15/2016
DATE
4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH
PROJECT
PROJECT NUMBER
S-0154(12)11
PIN
12566
UTILITIES
SHEET NO.
114UT-04



UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

NOTES:

1. ALIGNMENT SHOWN ON UT SHEETS IS INFORMATIONAL AND IS USED FOR PROJECT ORIENTATION ONLY.

REVISIONS					
NO.	DATE	APPROVED BY	REMARKS		

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HDR

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9/15/2016
DATE

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITIES

SHEET NO. 114UT-05

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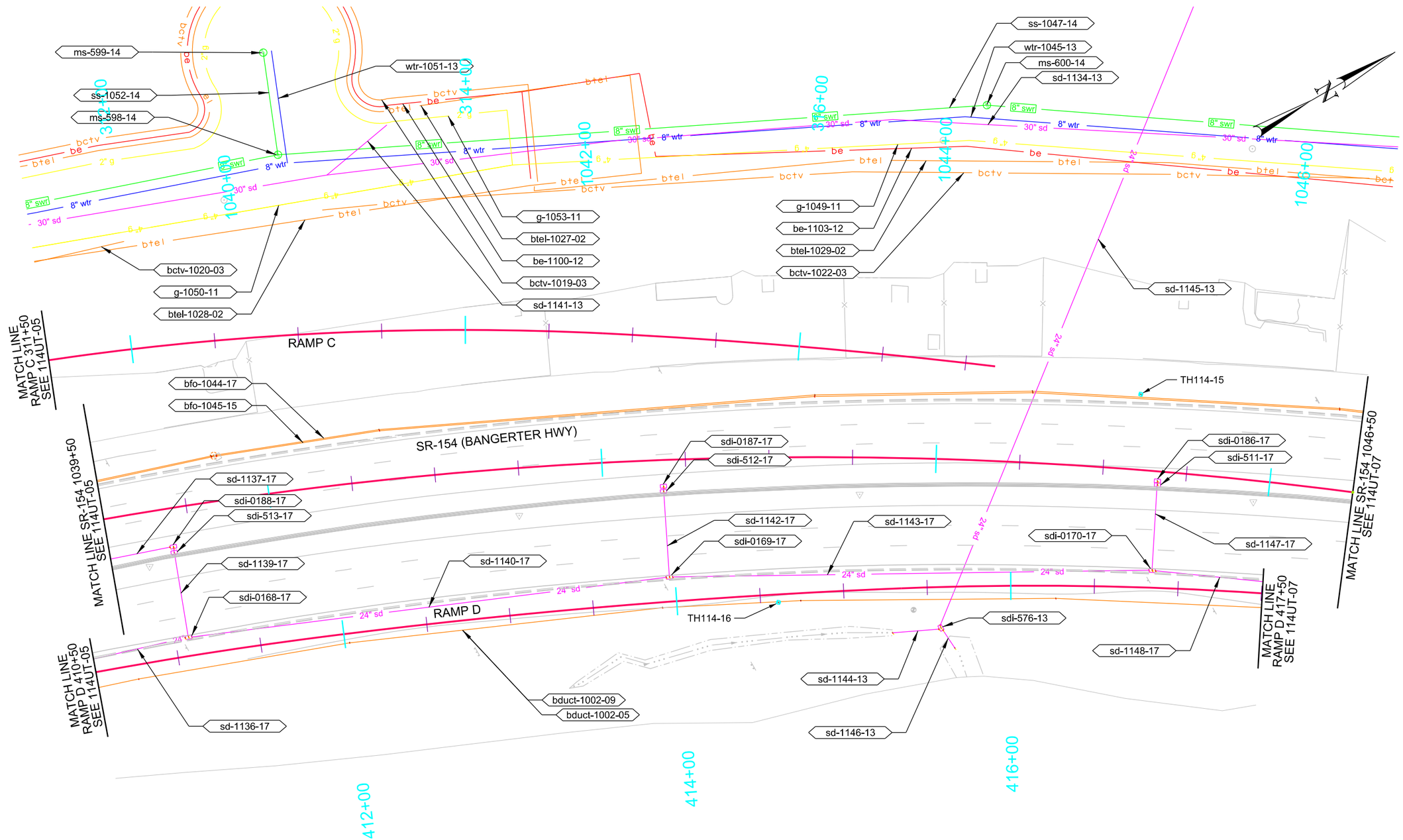

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

NOTES:

1. ALIGNMENT SHOWN ON UT SHEETS IS INFORMATIONAL AND IS USED FOR PROJECT ORIENTATION ONLY.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HDR

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9/15/2016 DATE

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PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITIES

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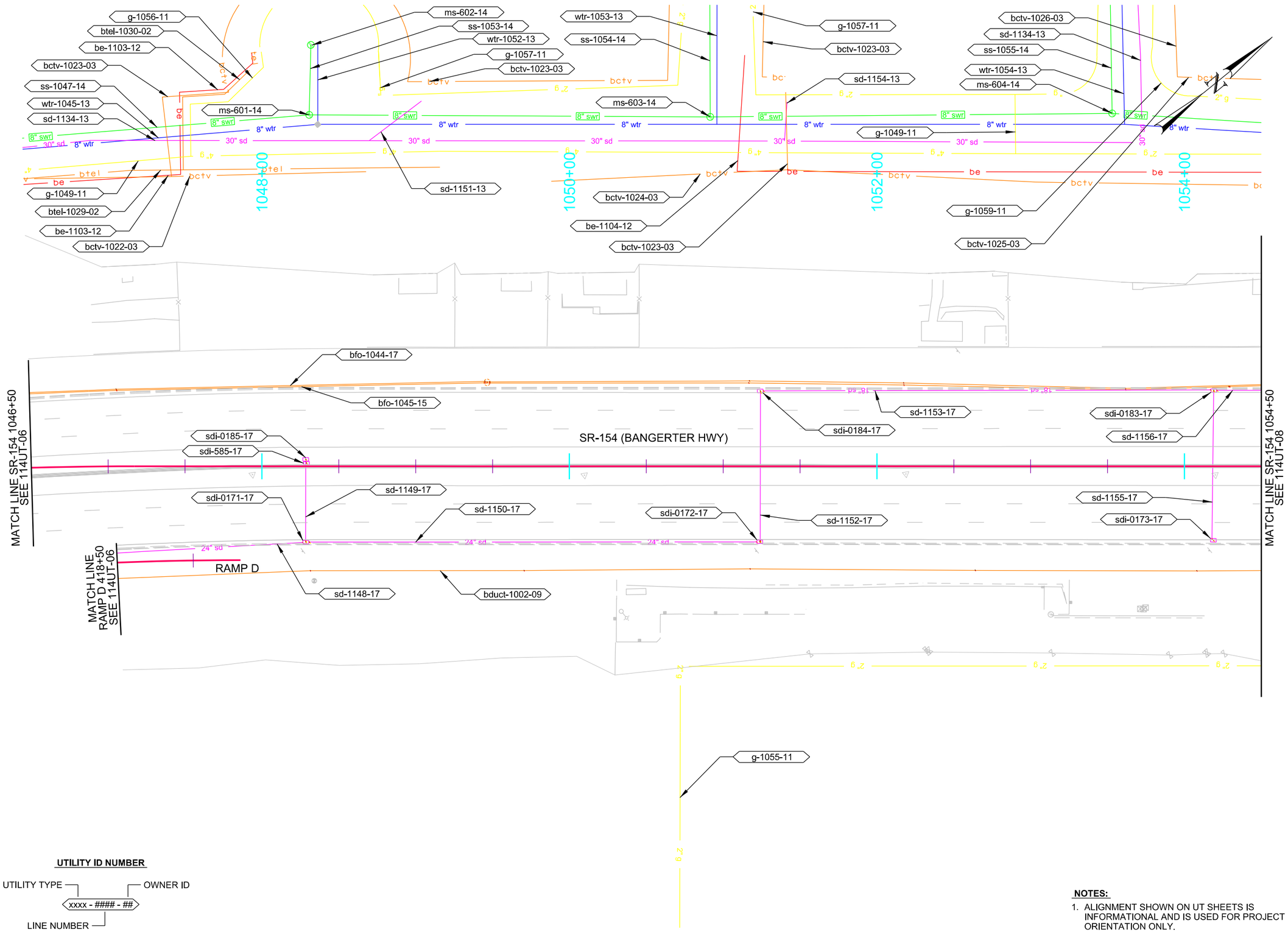

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

NOTES:

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REVISIONS			
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UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HDR

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QC CHECKED BY BDW

9/15/2016 DATE

APPROVED

PROFESSIONAL ENGINEER

4 INTERCHANGES ON

BANGERTER HIGHWAY - 11400 SOUTH

PIN 12566

S-0154(12)11

UTILITIES

PROJECT

PROJECT NUMBER

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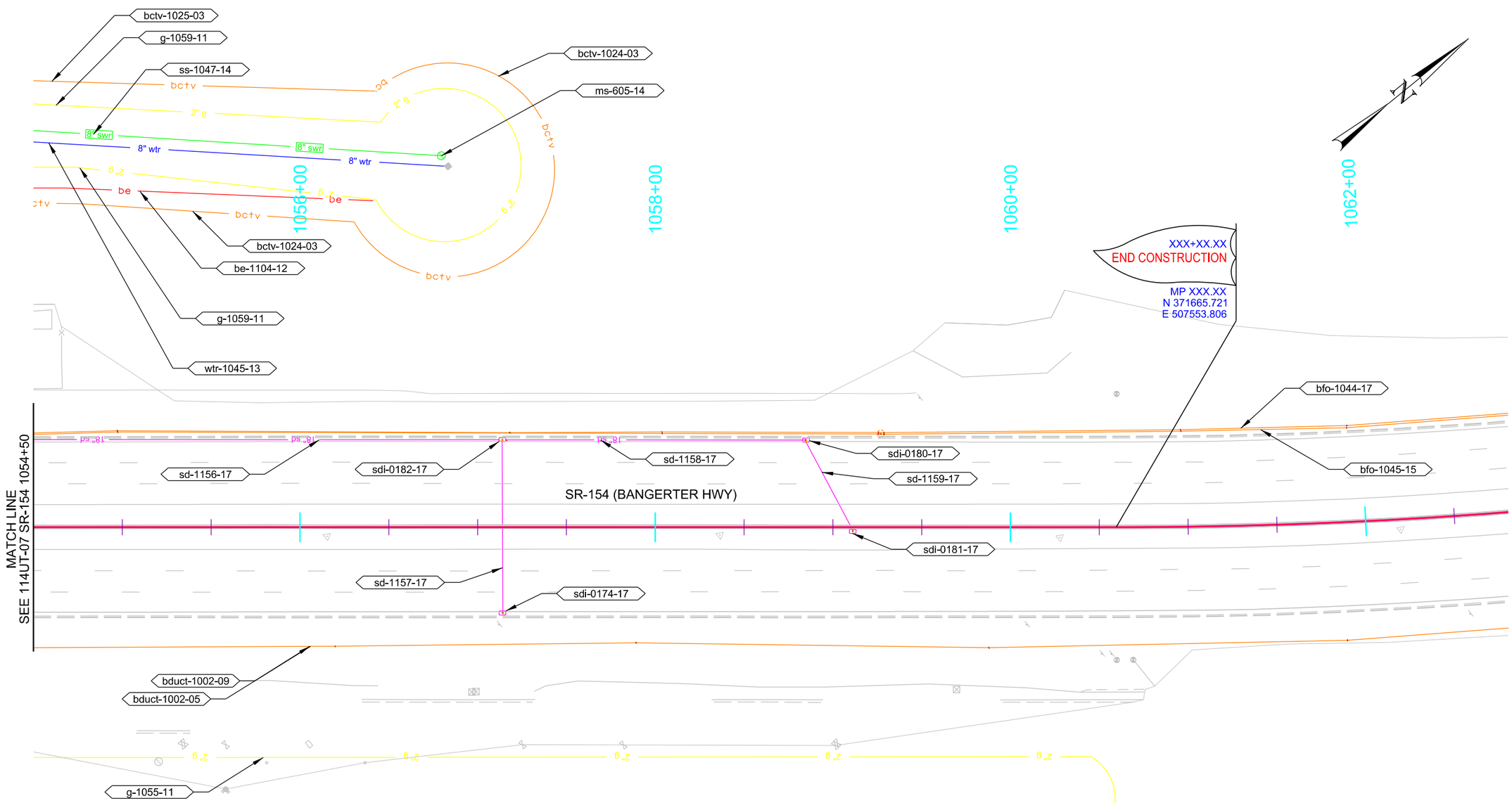

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

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REVISIONS

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REGION 2 - HDR

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DATE 9/15/2016

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PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

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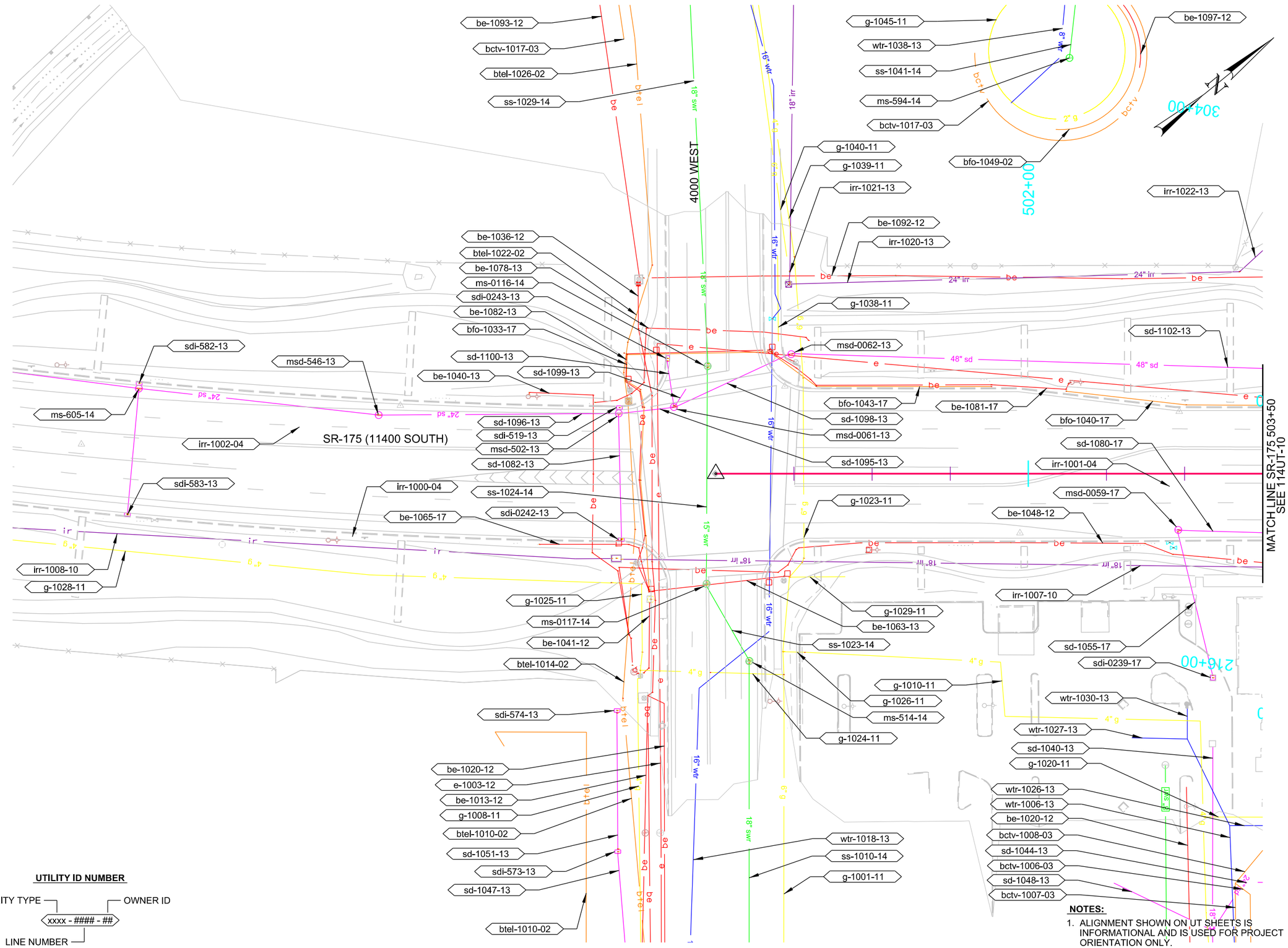

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

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REVISIONS			
NO.	DATE	APPROVED BY	REMARKS

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REGION 2 - HDR

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9/15/2016 DATE

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PROFESSIONAL ENGINEER

4 INTERCHANGES ON

BANGERTER HIGHWAY - 11400 SOUTH

PROJECT

PROJECT NUMBER S-0154(12)11

PIN 12566

UTILITIES

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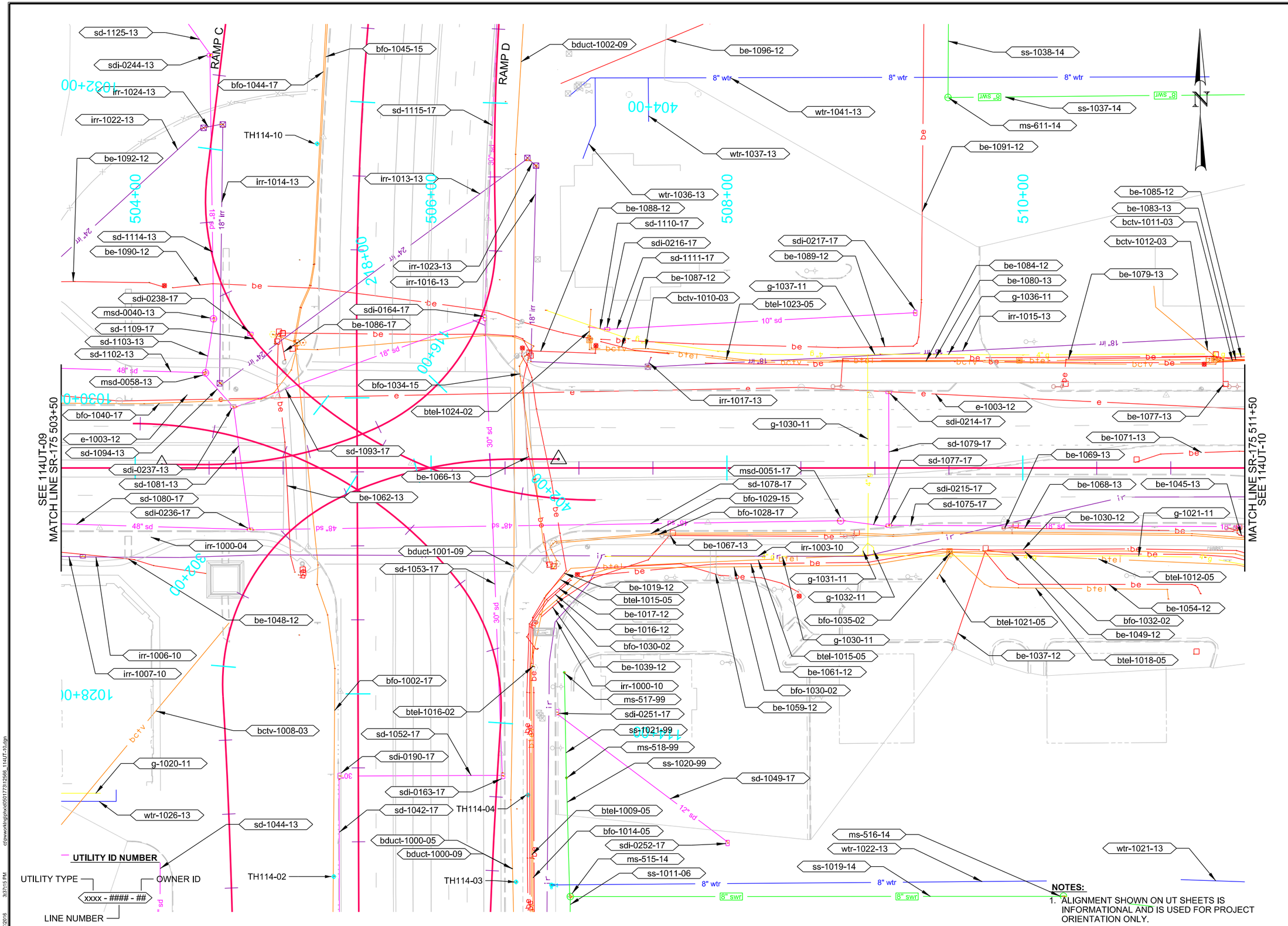

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NO.	DATE	APPROVED BY	REMARKS

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REGION 2 - HDR

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PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN 12566

UTILITIES

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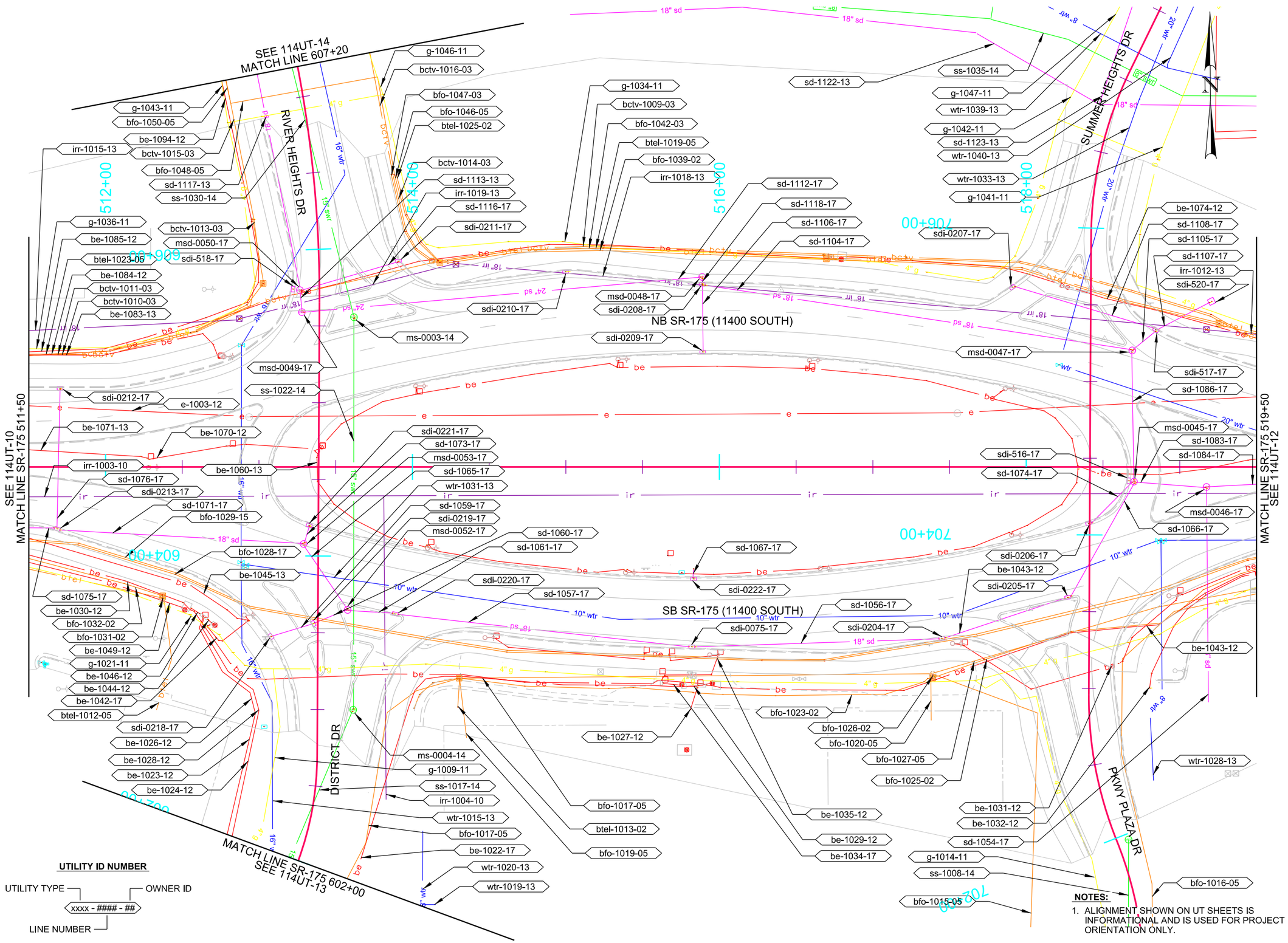

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

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QC CHECKED BY: BDW
DATE: 9/15/2016
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11
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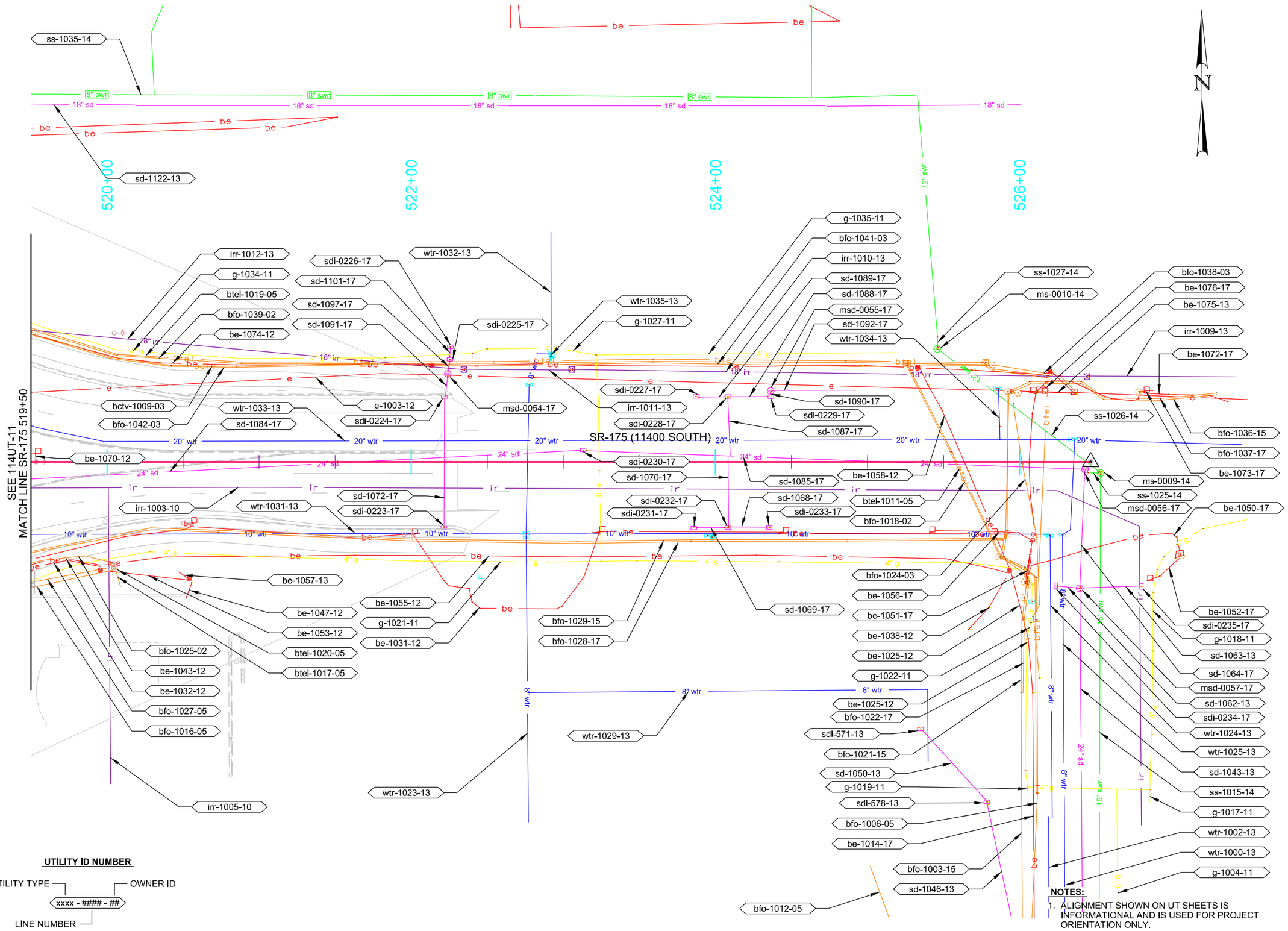

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

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DATE 9/15/2016
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11
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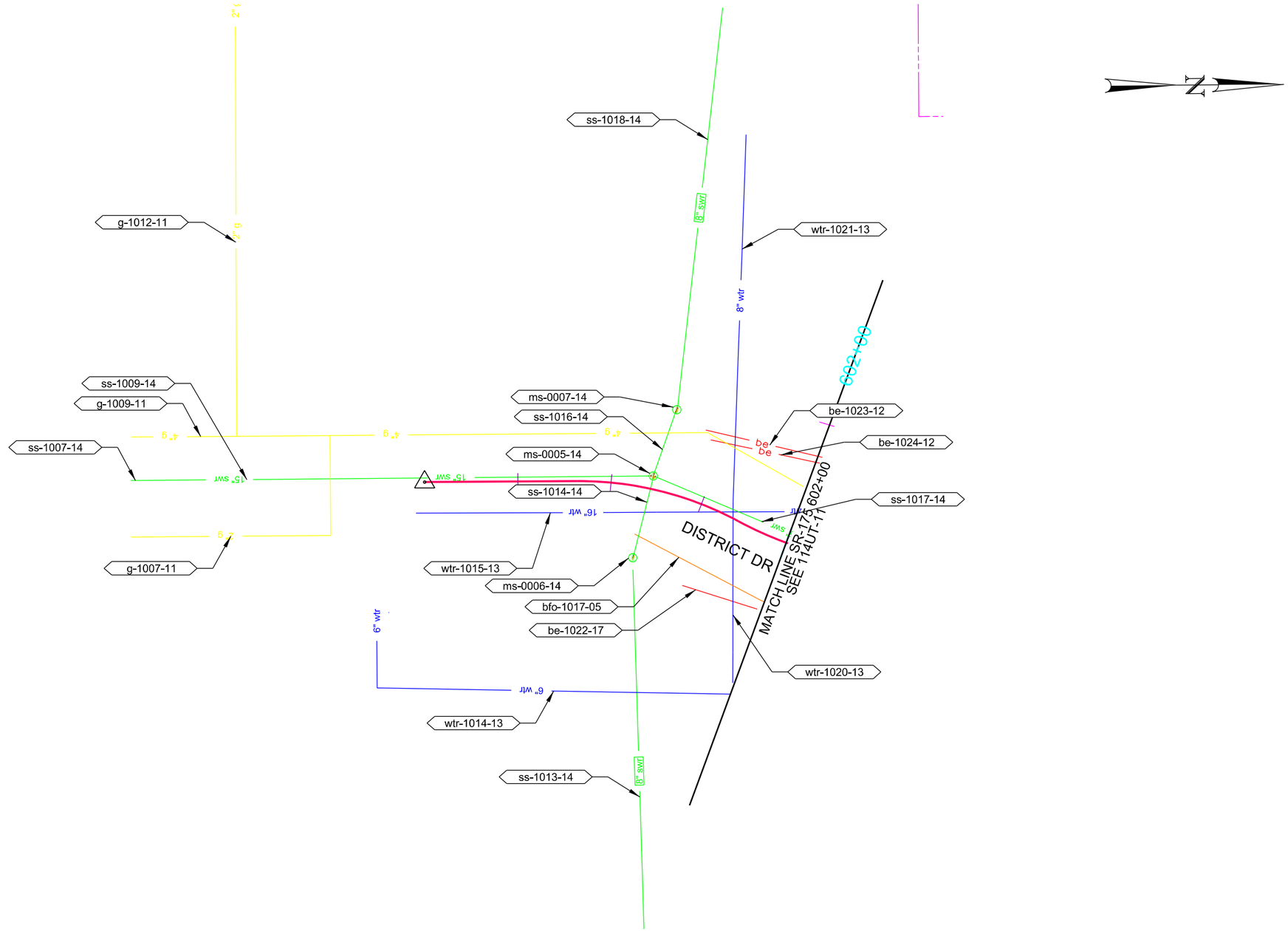

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HDR

DRAWN BY GS

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DATE 9/15/2016

APPROVED

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITIES

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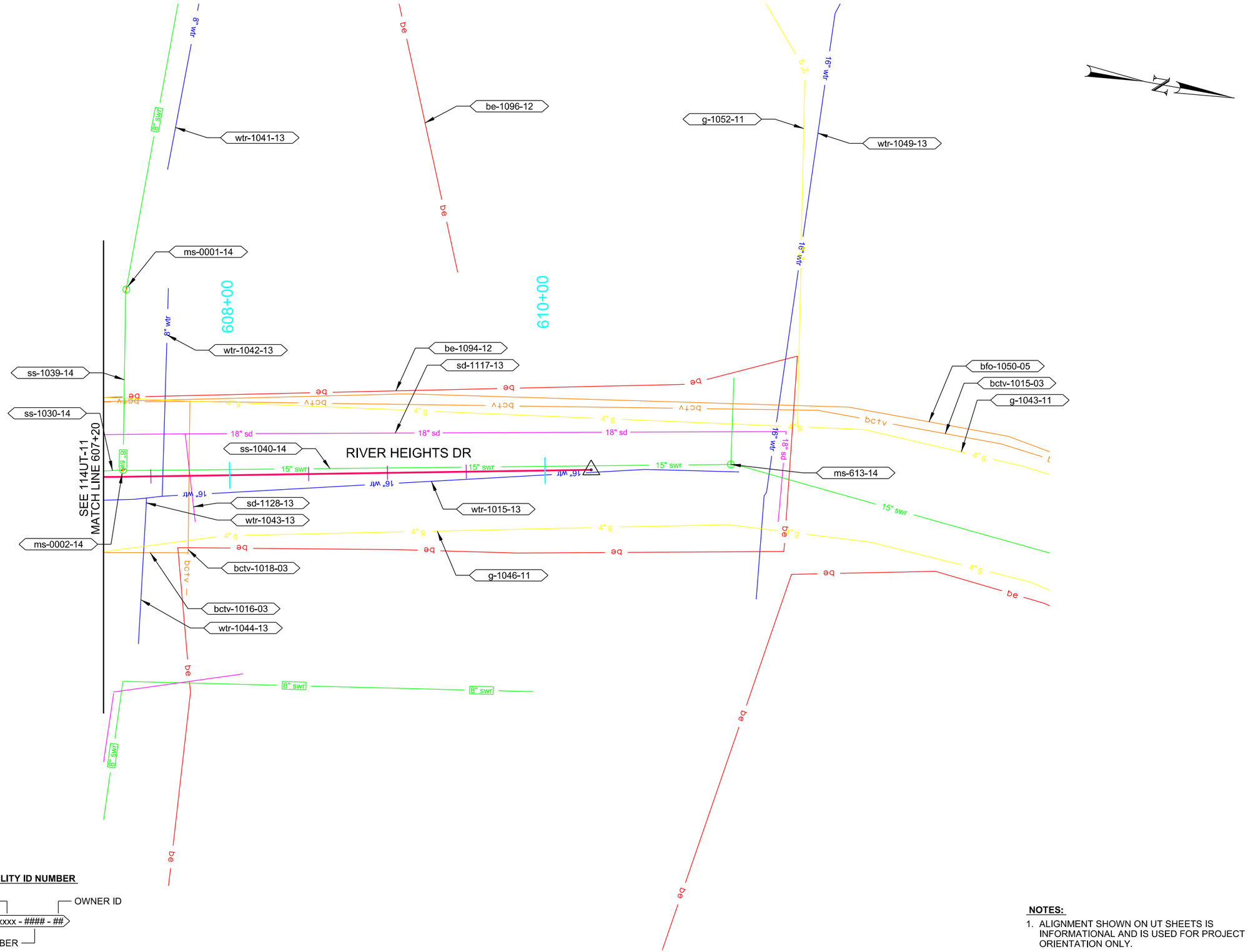

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HDR

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DATE 9/15/2016

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PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

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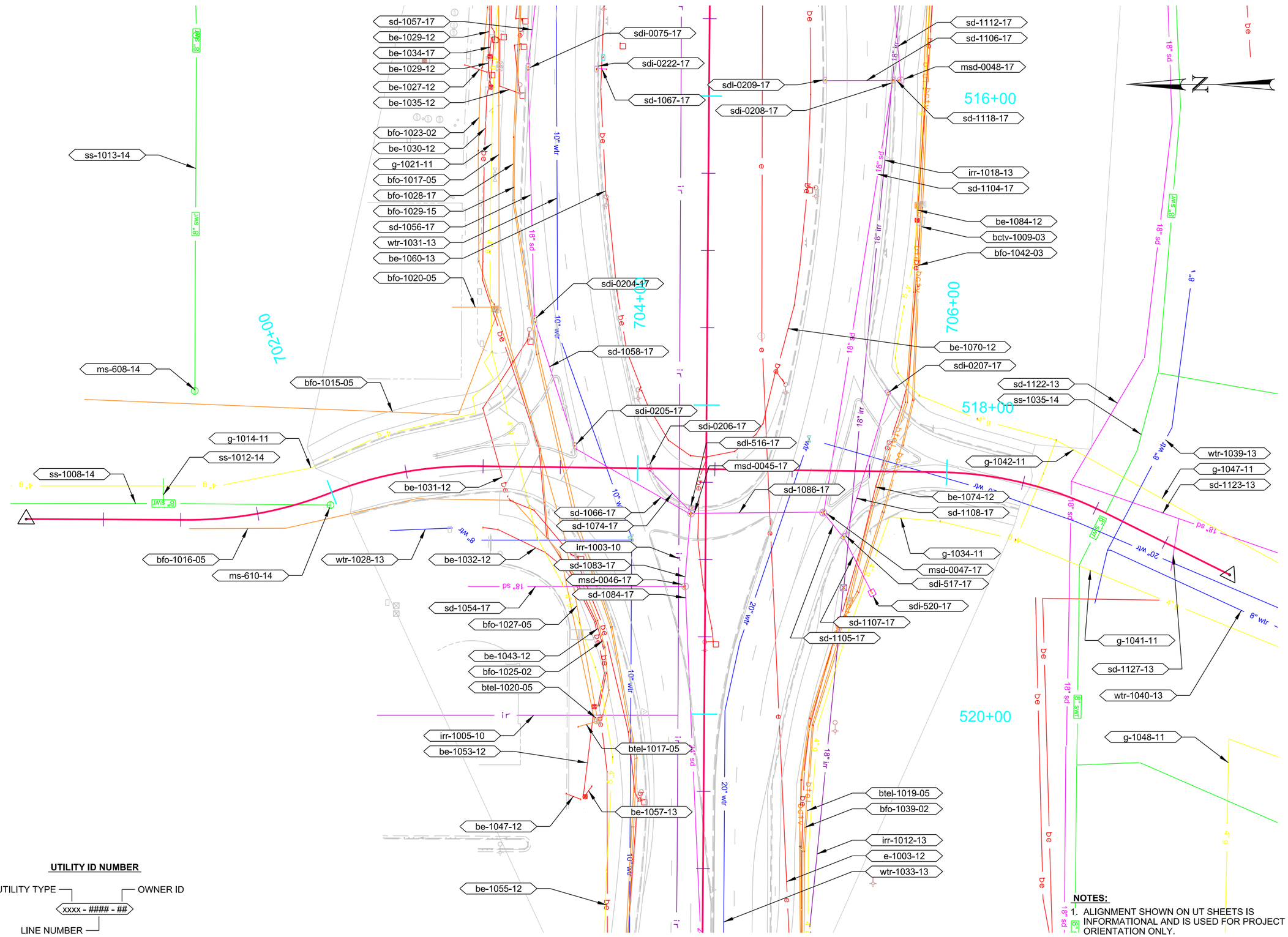

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

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UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HDR

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DATE

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PROJECT 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER S-0154(12)11 PIN 12566

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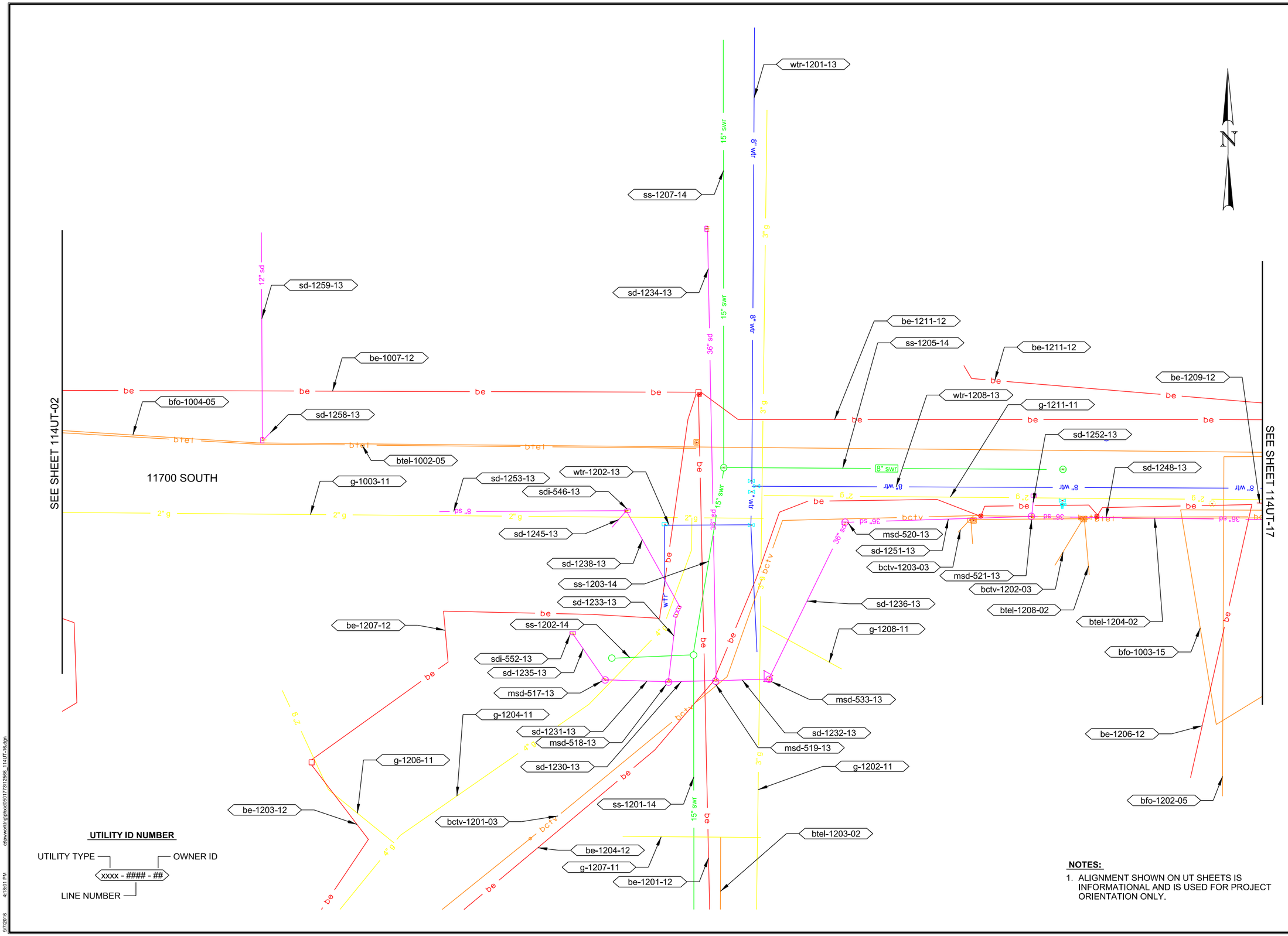

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UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HDR

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9/15/2016 DATE

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PROFESSIONAL ENGINEER

4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT

PROJECT NUMBER S-0154(12)11

PIN 12566

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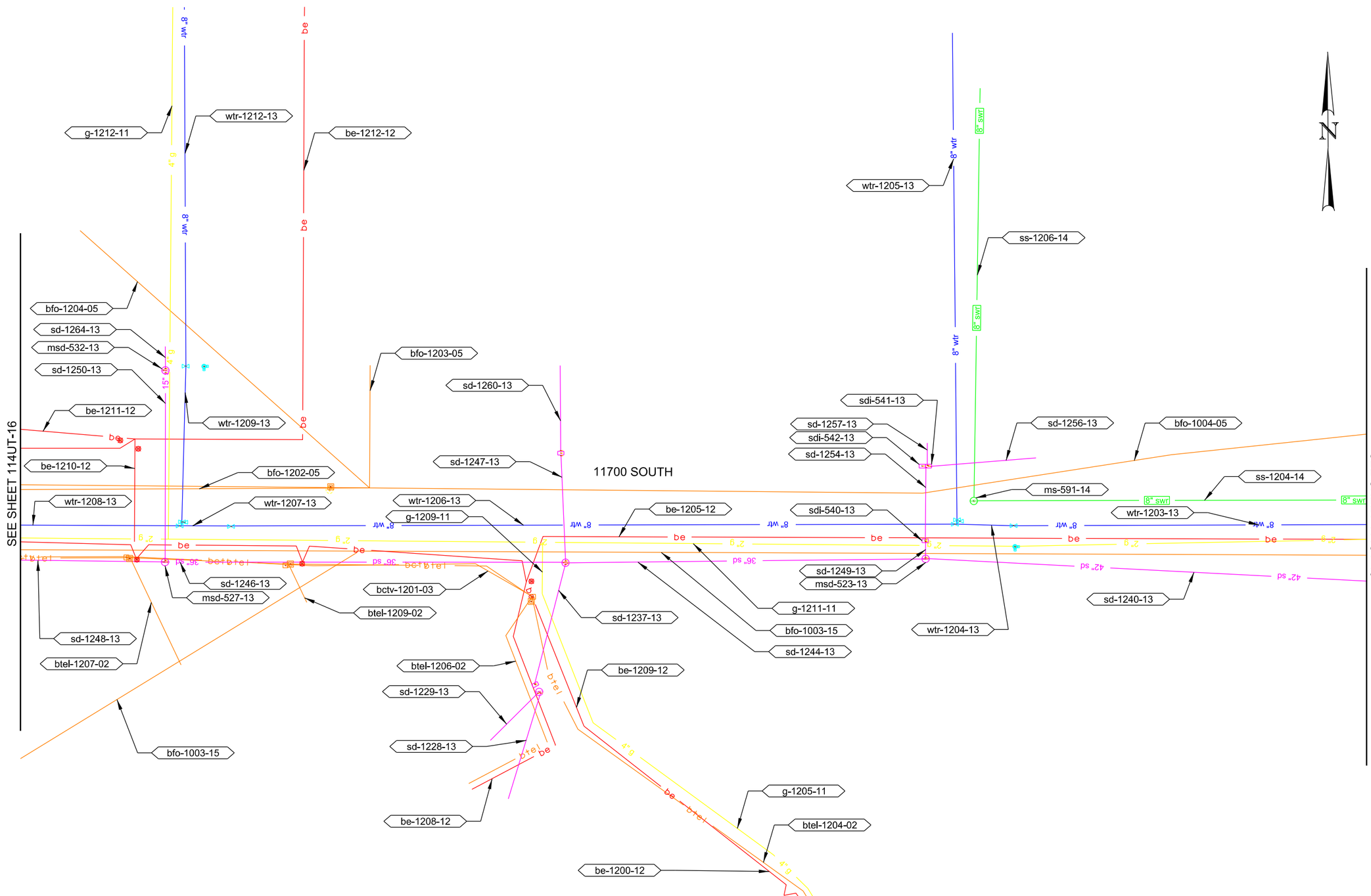

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

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REGION 2 - HDR

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DATE 9/15/2016

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PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

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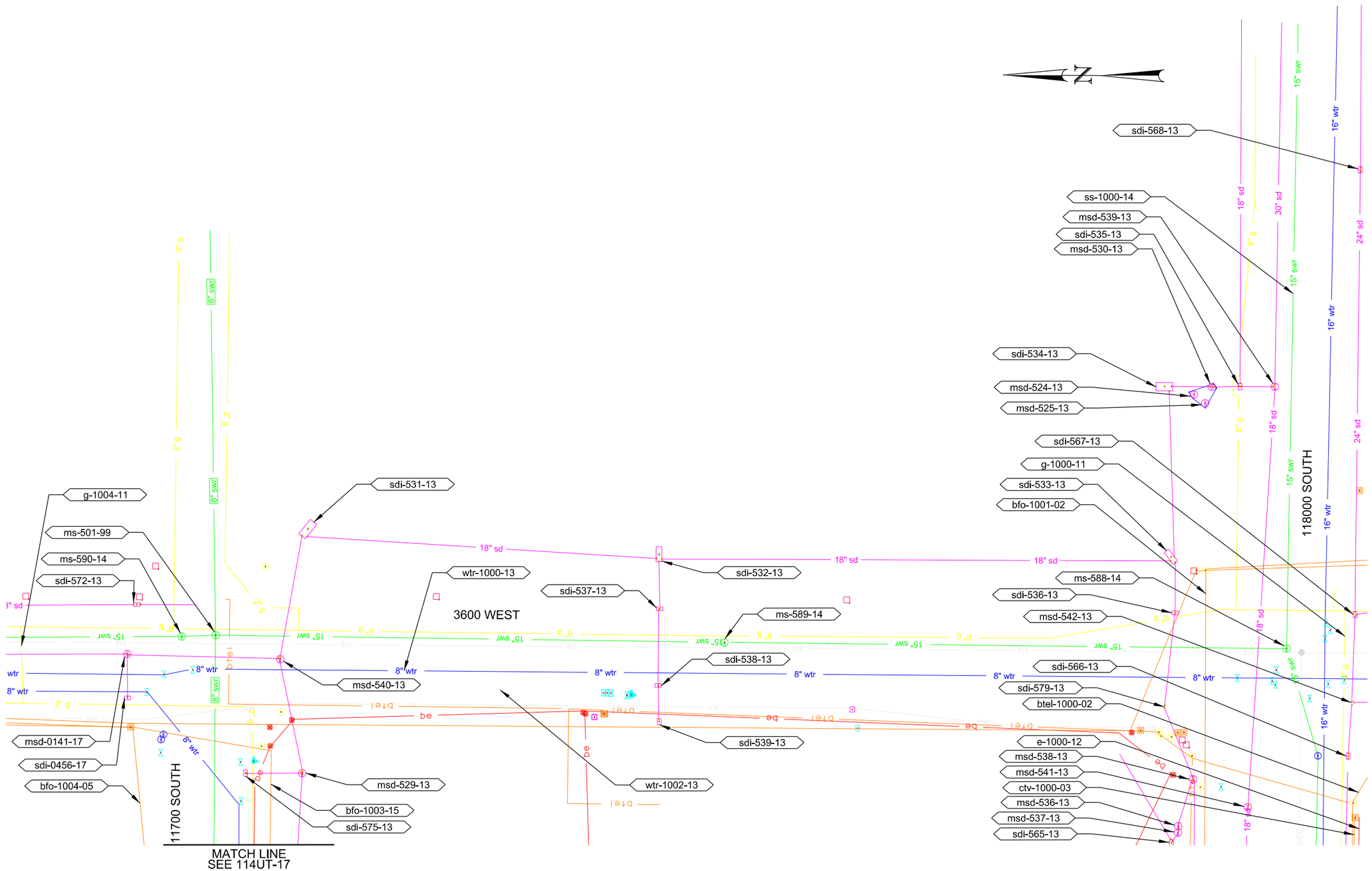

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

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DATE 9/15/2016
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PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
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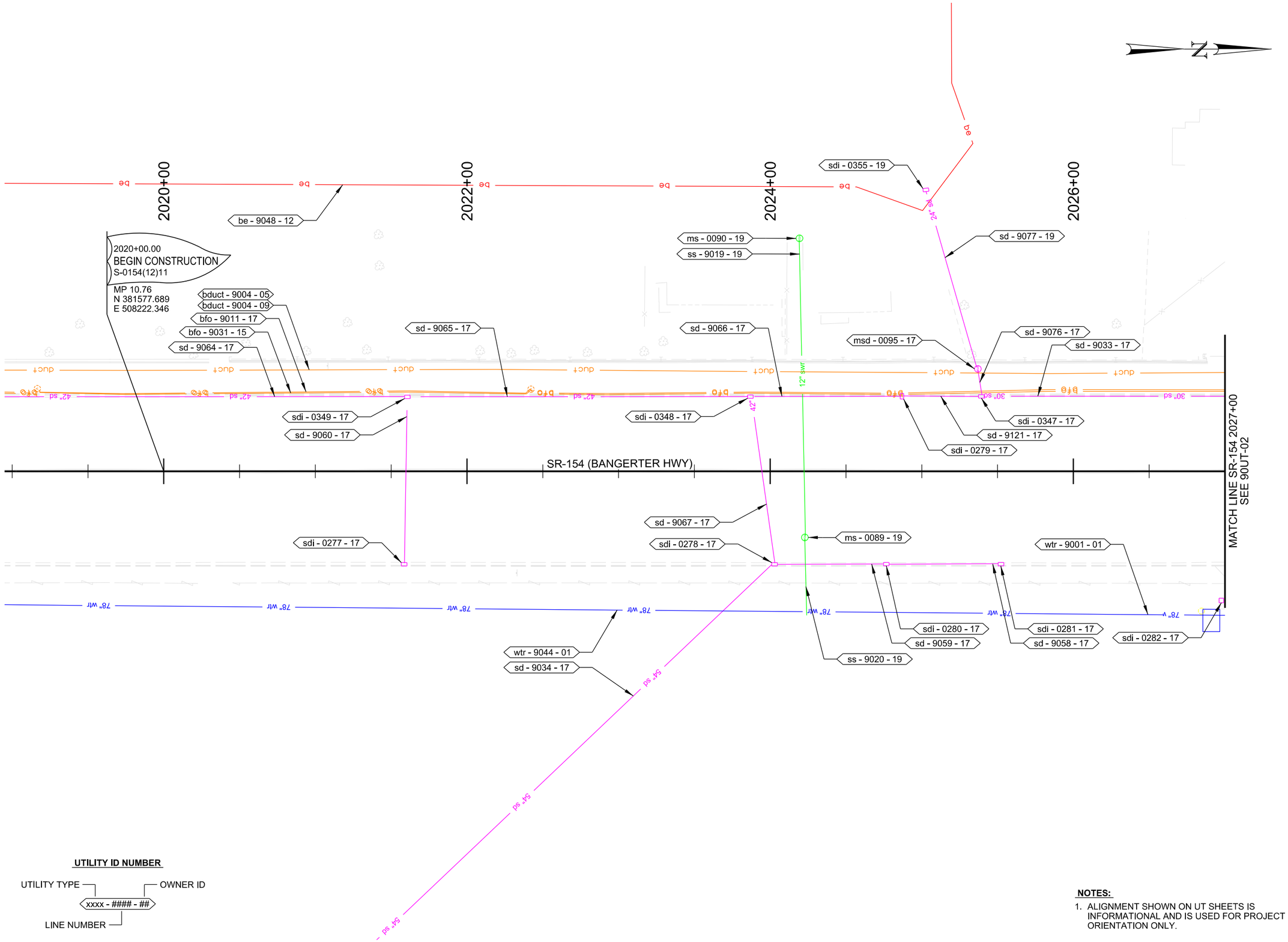

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

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REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

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PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY

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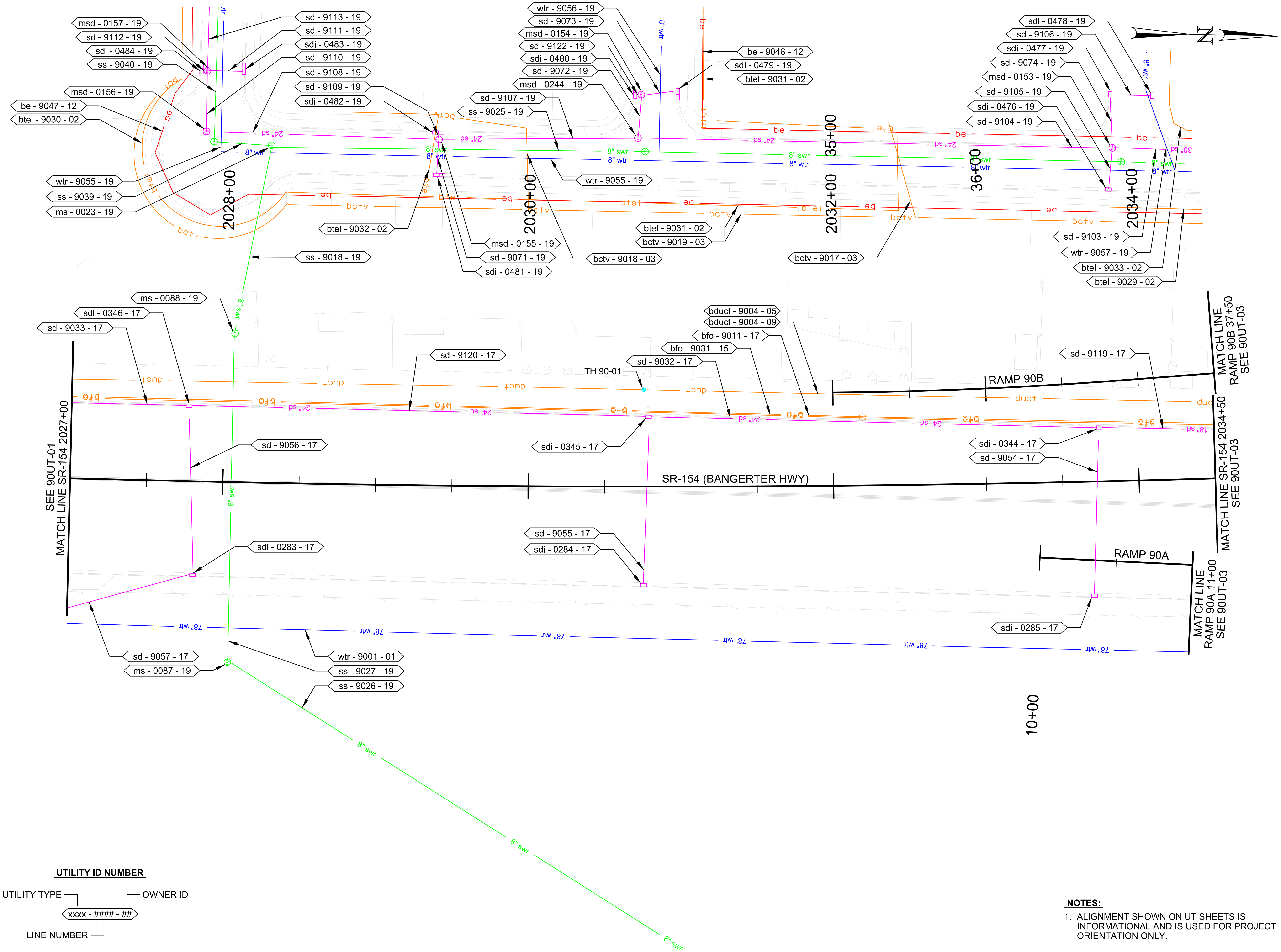

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

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1. ALIGNMENT SHOWN ON UT SHEETS IS INFORMATIONAL AND IS USED FOR PROJECT ORIENTATION ONLY.

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UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

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DATE: MM/DD/YY

APPROVED

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH

PIN: 12566

PROJECT NUMBER: S-0154(12)11

UTILITY

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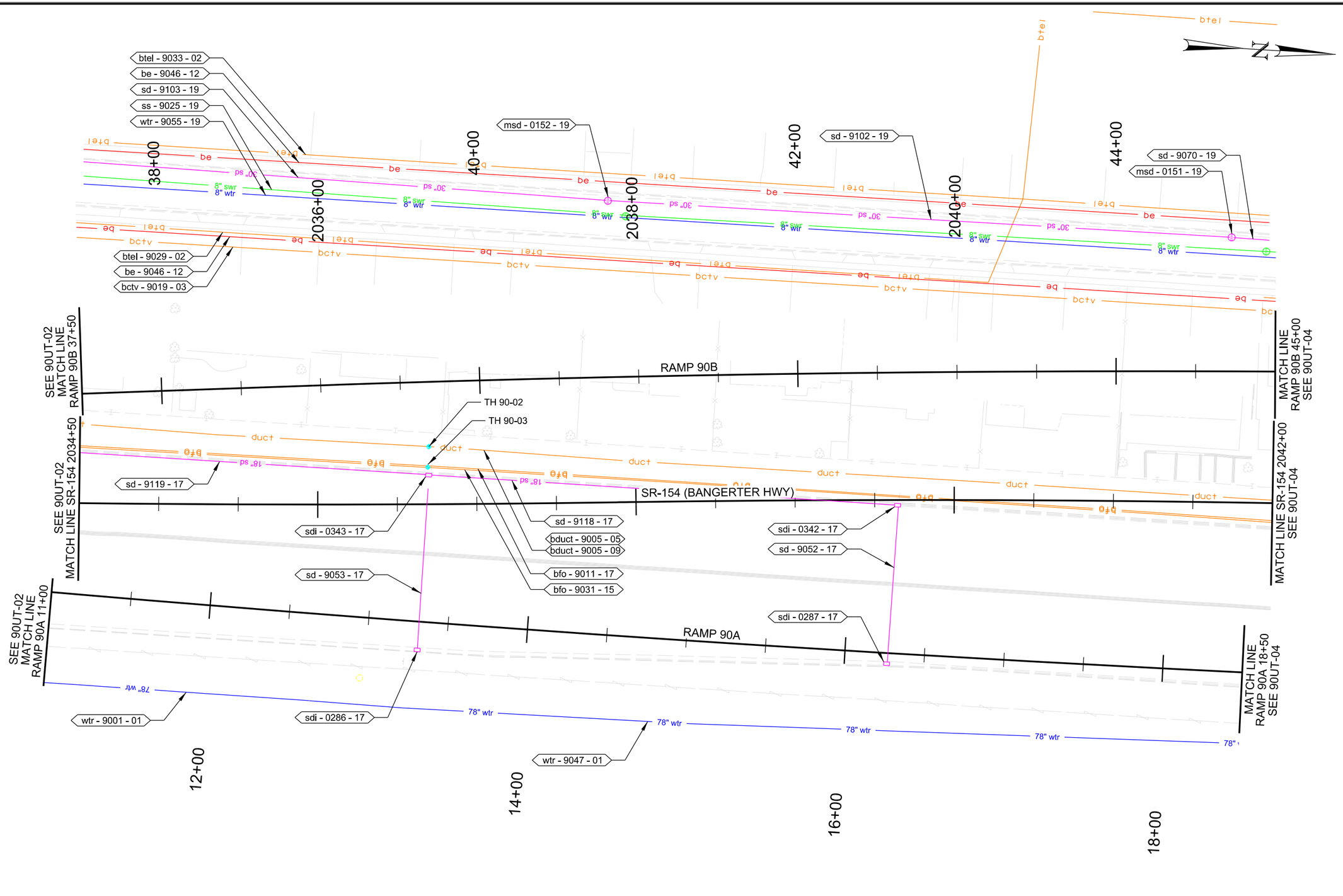

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

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UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

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PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 90UT-03

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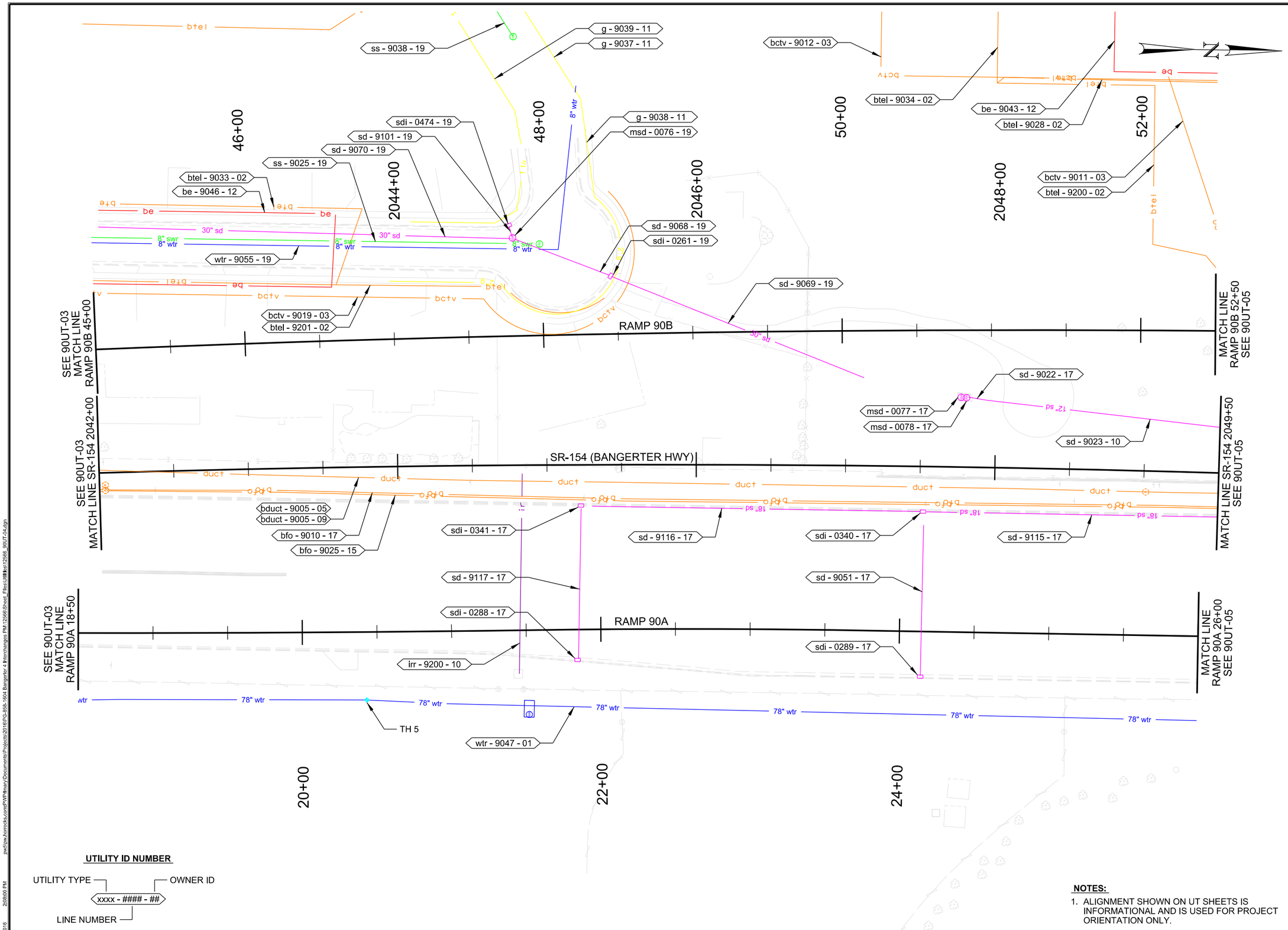

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

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PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY

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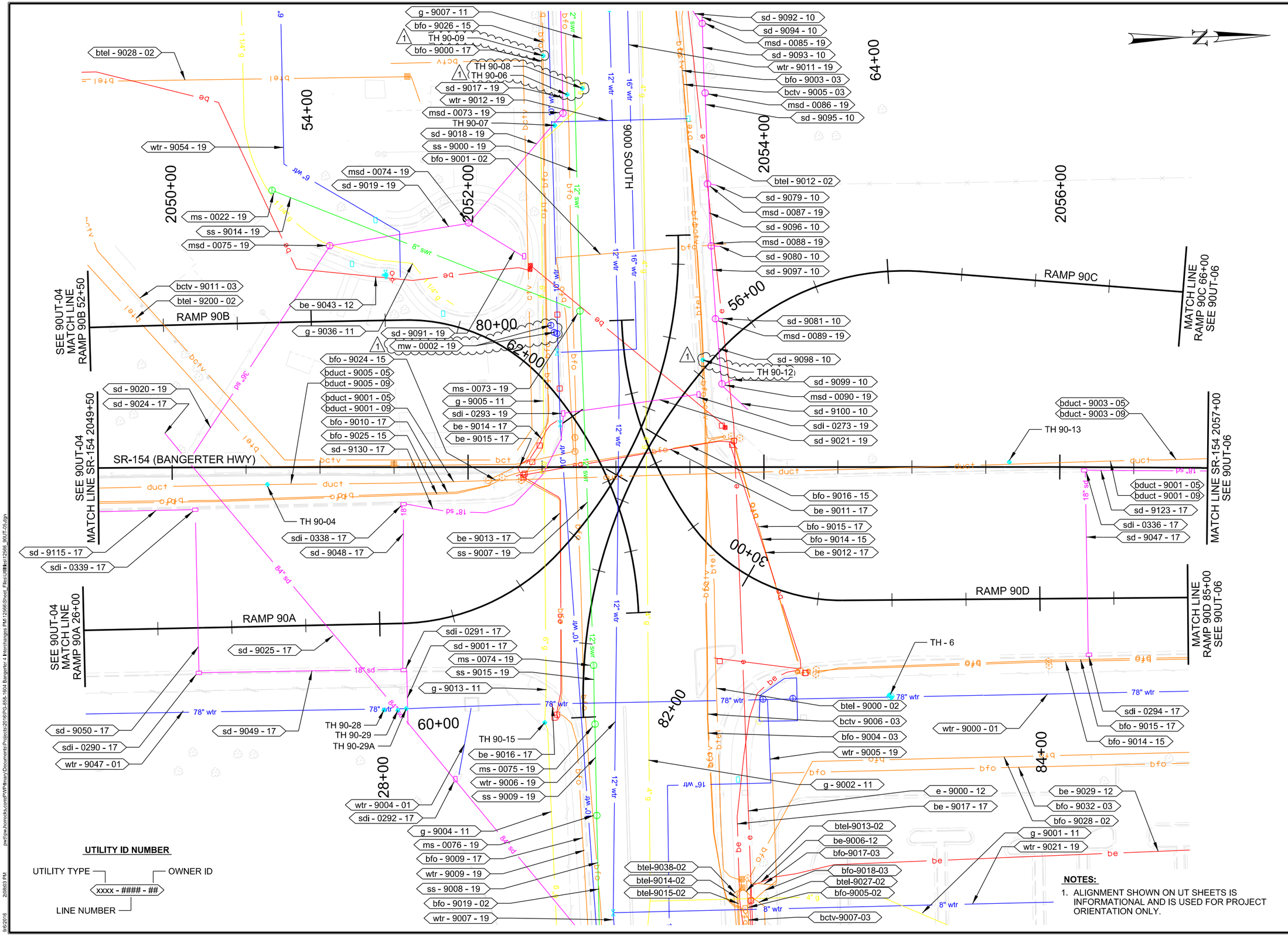

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

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LINE NUMBER

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS
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PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 90UT-05

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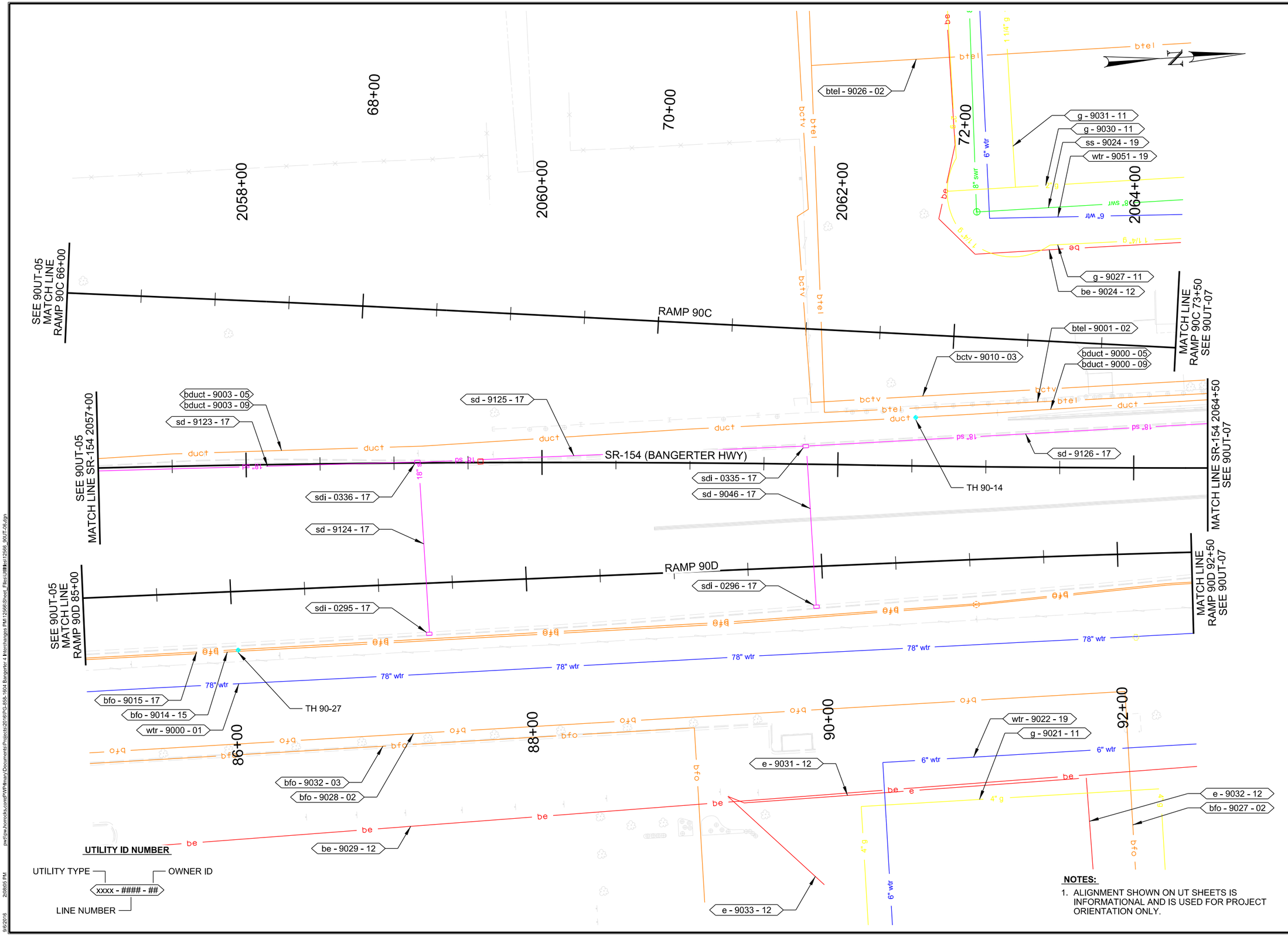

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REGION 2 - HORROCKS ENGINEERS

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APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
UTILITY

SHEET NO. 90UT-06

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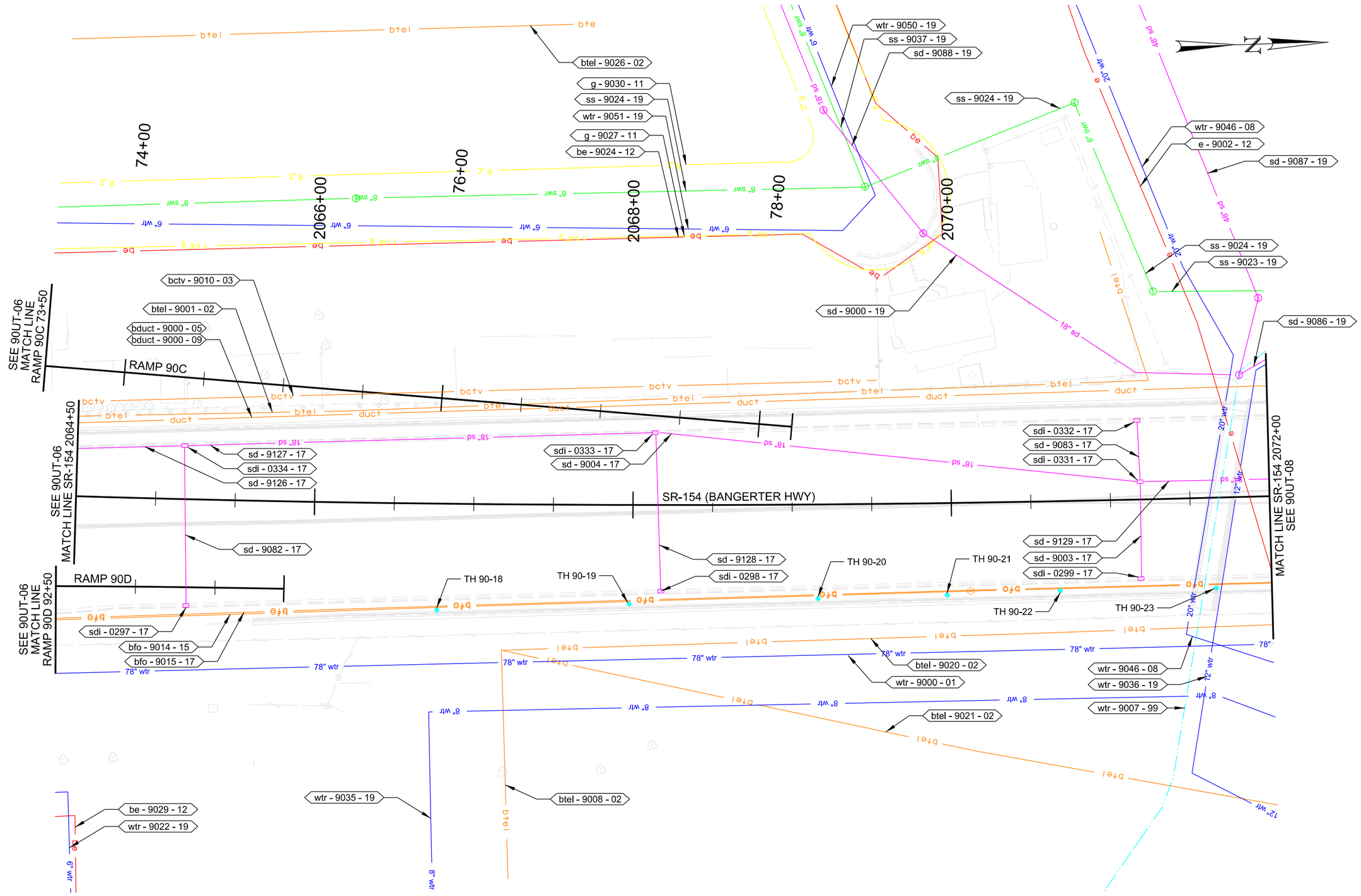

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

NOTES:

1. ALIGNMENT SHOWN ON UT SHEETS IS INFORMATIONAL AND IS USED FOR PROJECT ORIENTATION ONLY.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH

QC CHECKED BY VR

MM/DD/YY DATE

APPROVED

PROFESSIONAL ENGINEER

4 INTERCHANGES ON

BANGERTER HIGHWAY - 9000 SOUTH

PROJECT

PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 90UT-07

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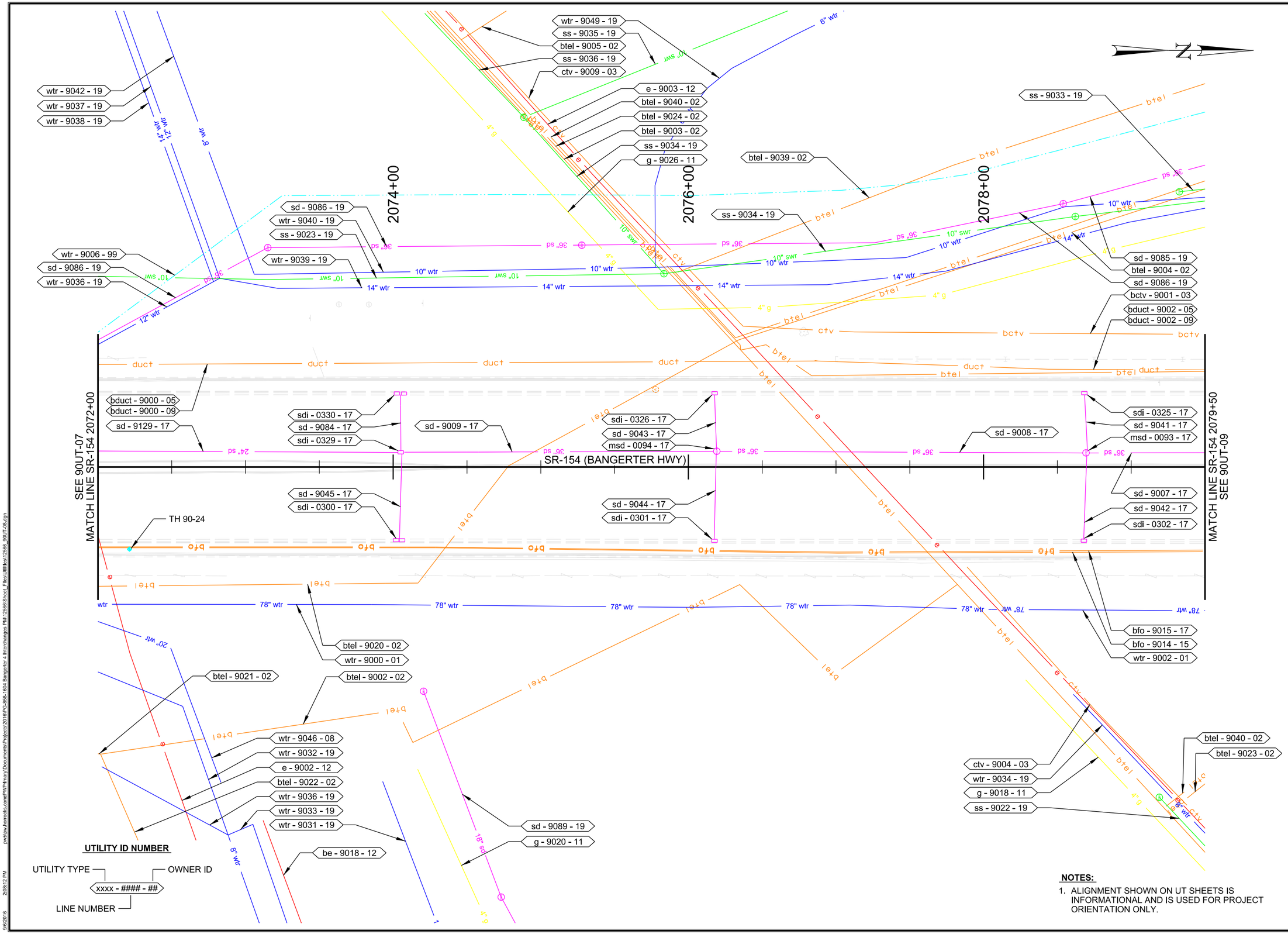

NOTES:

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REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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MM/DD/YY
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
UTILITY

SHEET NO. 90UT-08

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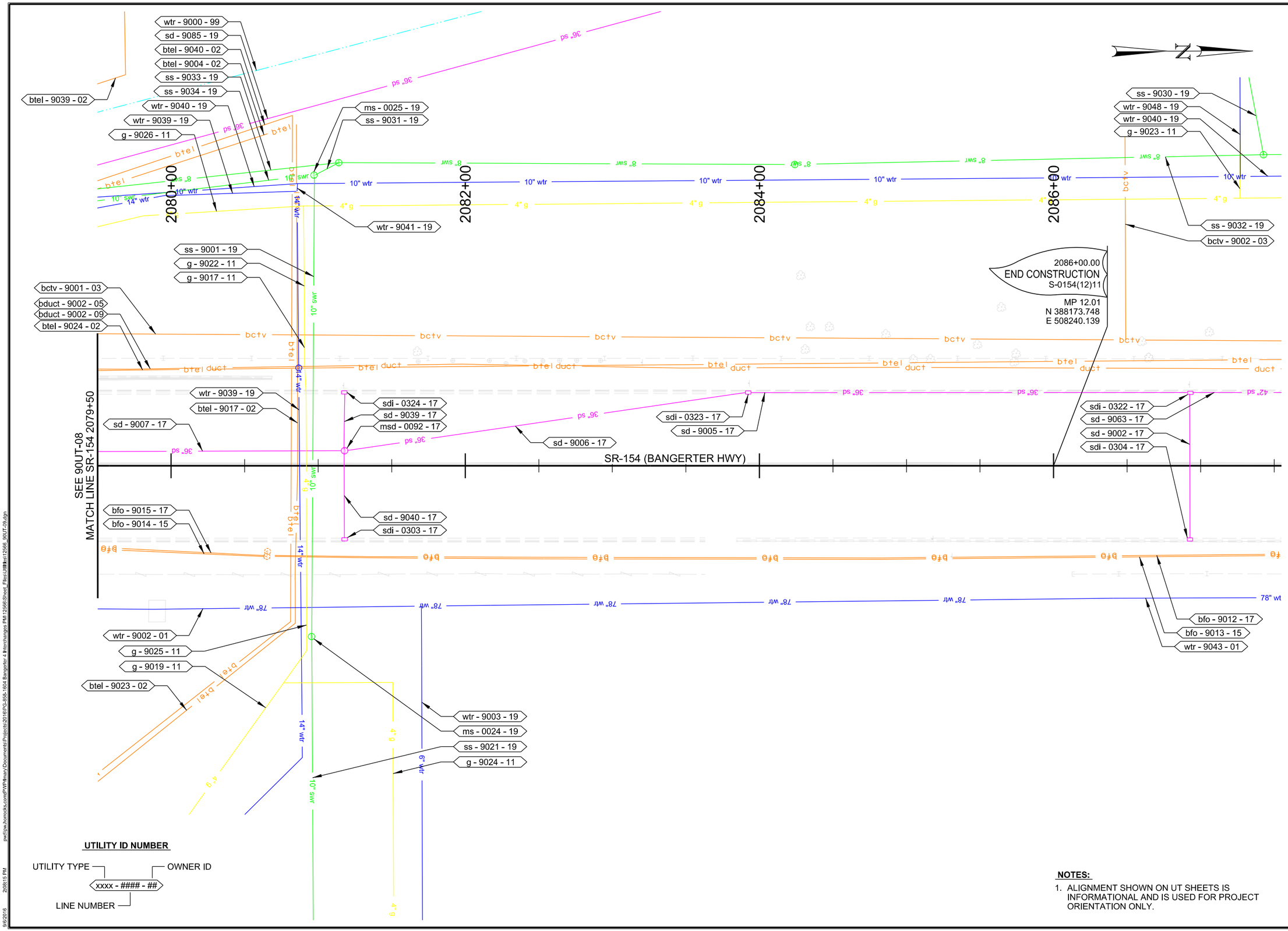

NOTES:

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NO.	DATE	APPROVED BY	REMARKS

REVISIONS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY VR
MM/DD/YY DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
UTILITY

SHEET NO. 90UT-09

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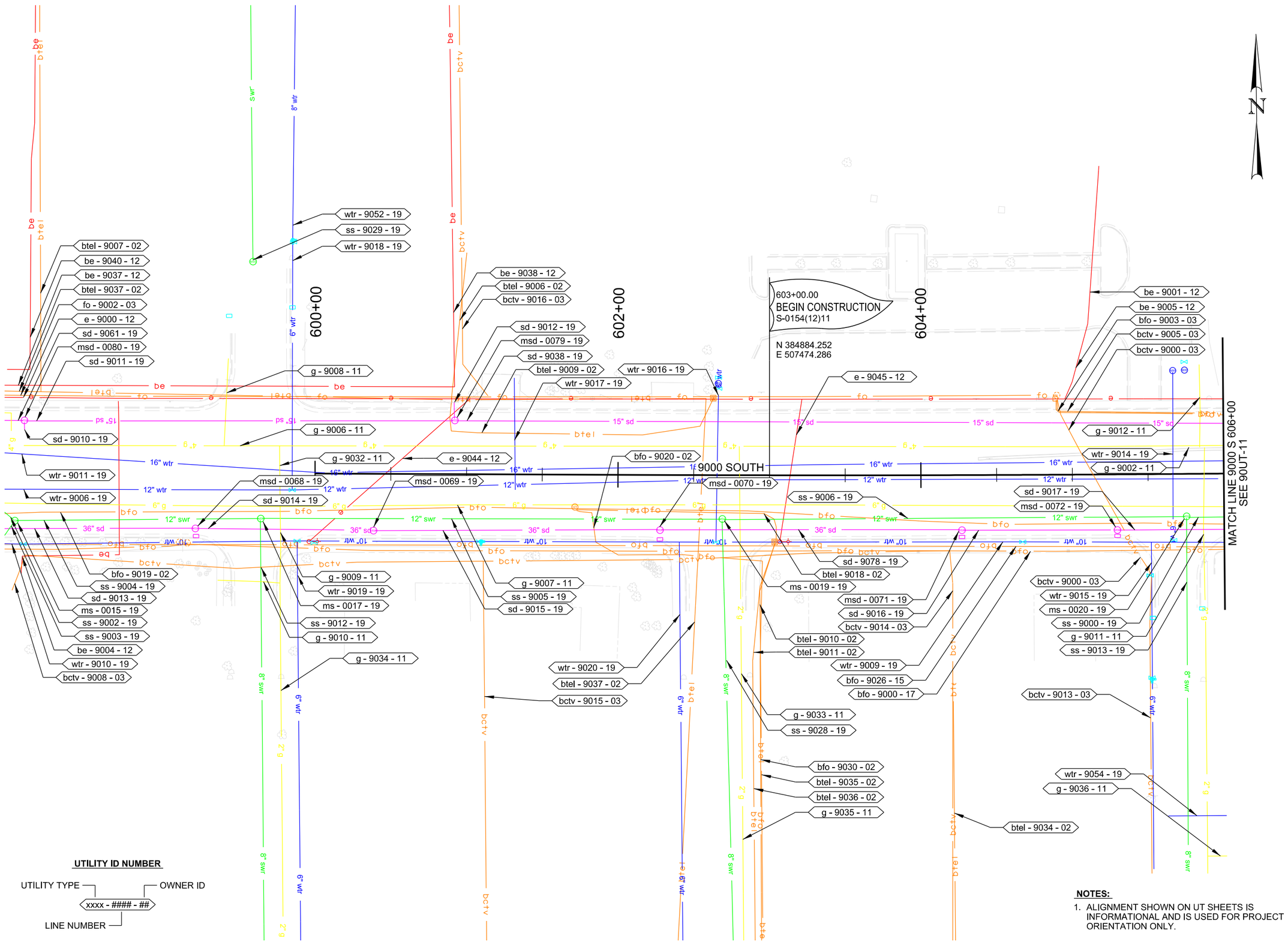

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

NOTES:

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REVISIONS			
NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: VR
MM/DD/YY
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
UTILITY

SHEET NO. 90UT-10

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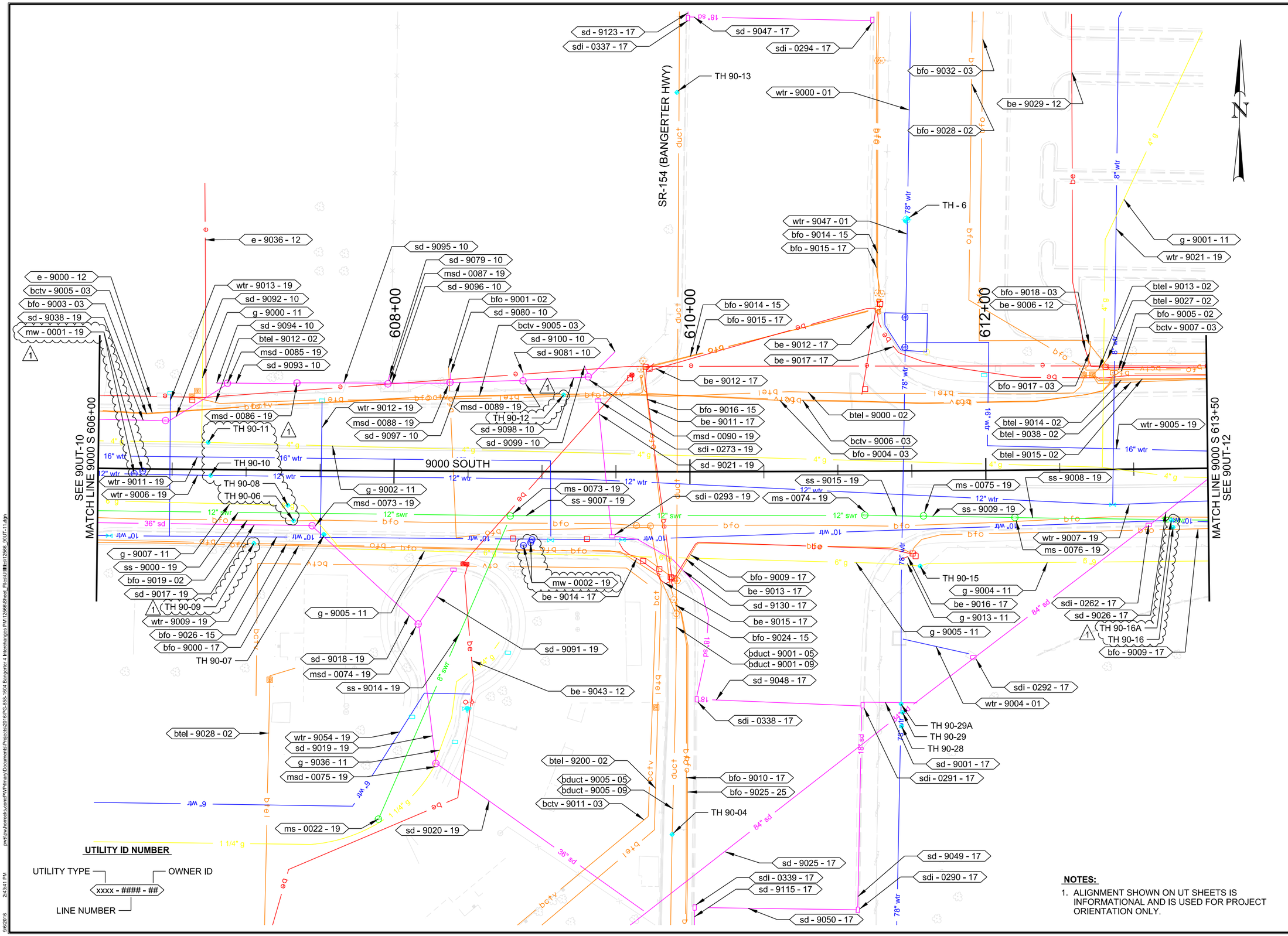

NOTES:

1. ALIGNMENT SHOWN ON UT SHEETS IS INFORMATIONAL AND IS USED FOR PROJECT ORIENTATION ONLY.

REVISIONS			
NO.	DATE	APPROVED BY	REMARKS
1	09/16	DCO	ADDED TESTHOLES AND UPDATED UTILITIES.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: VR
MM/DD/YY
DATE
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 9000 SOUTH

PROJECT
PROJECT NUMBER: S-0154(12)11
PIN: 12566
UTILITY

SHEET NO. 90UT-11

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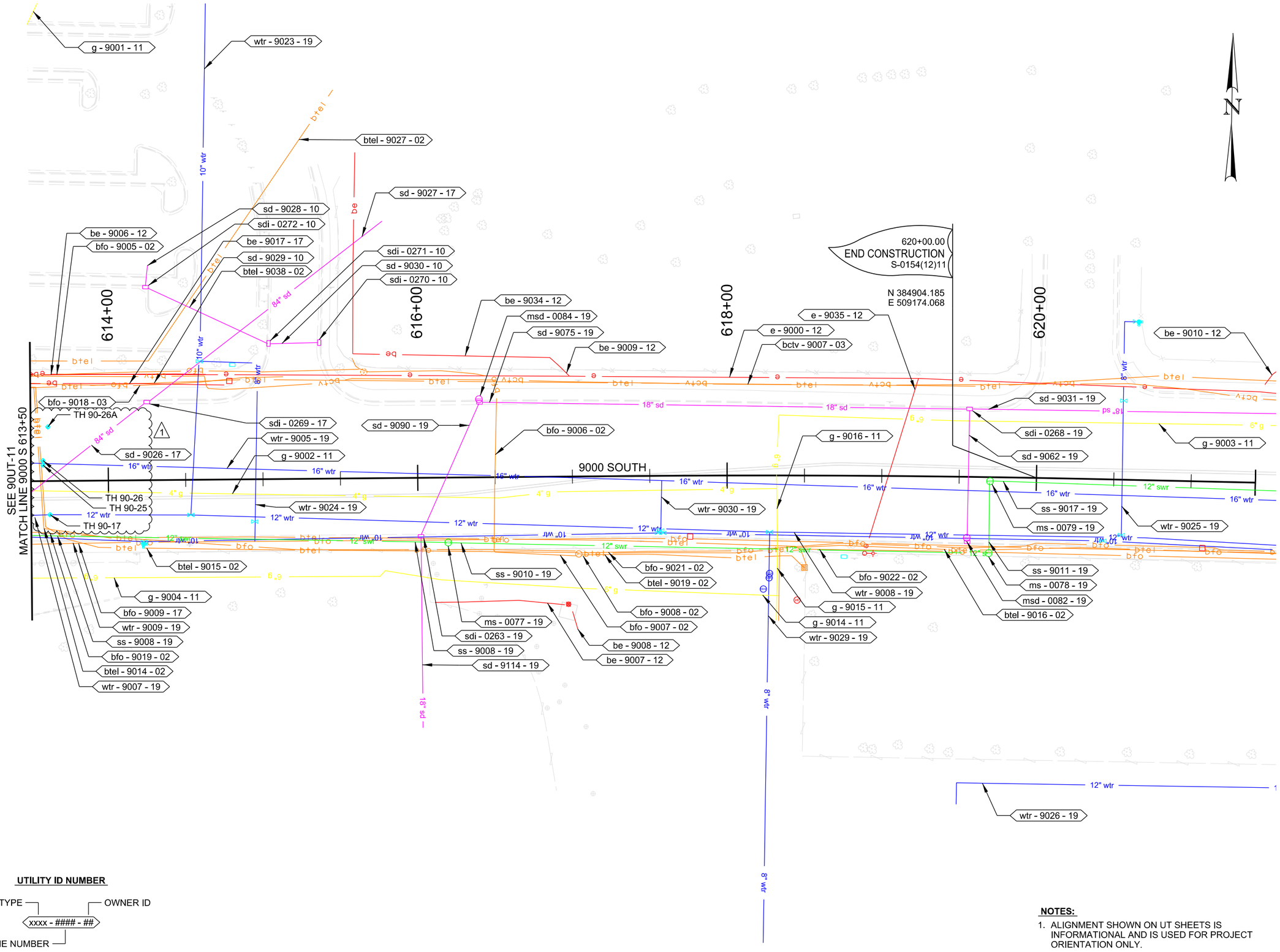

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

NOTES:

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REVISIONS			
NO.	DATE	APPROVED BY	REMARKS
1	09/16	DCO	ADDED TESTHOLES.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY VR

APPROVED
MM/DD/YY
DATE

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 90UT-12

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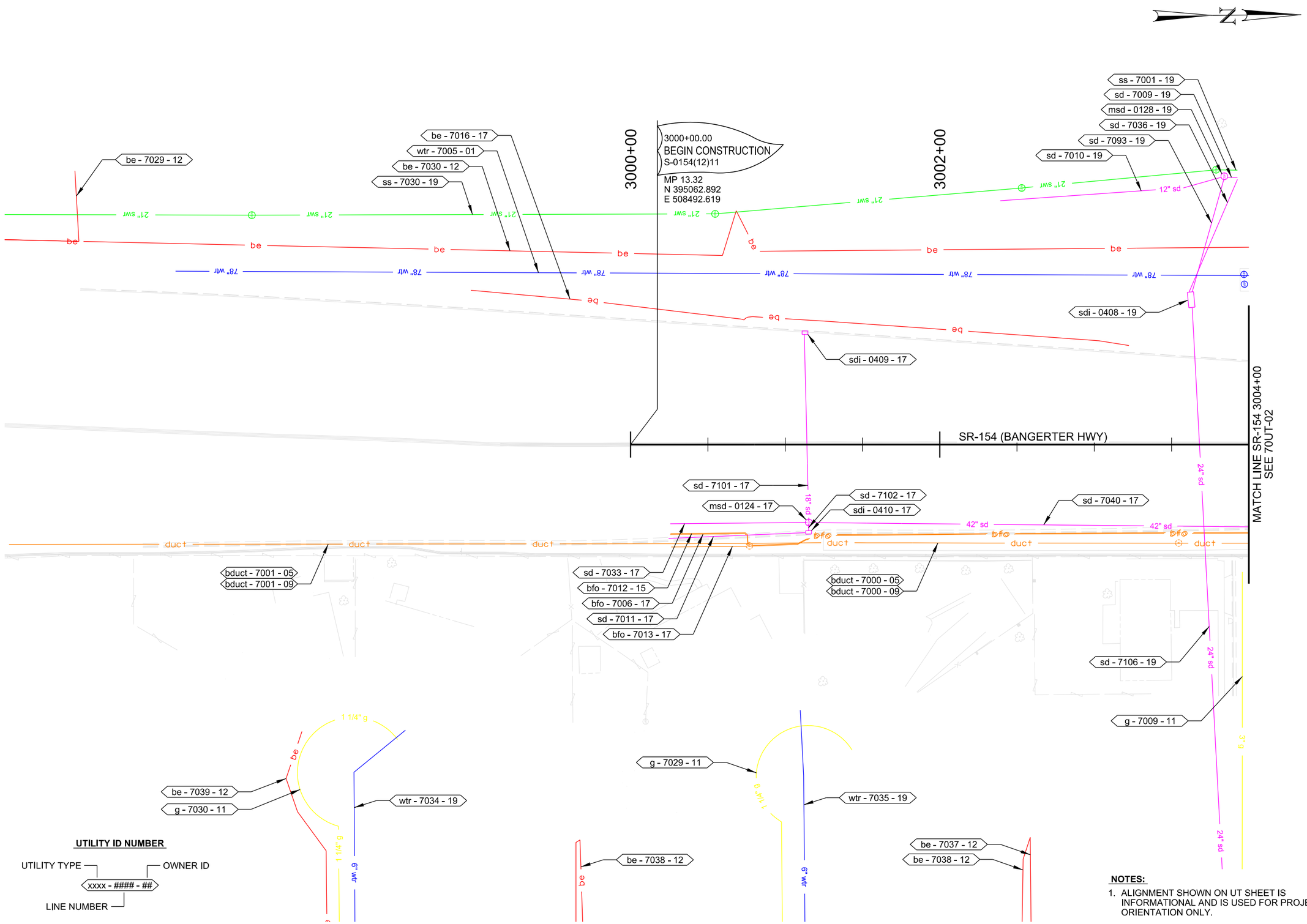

NOTES:

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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QC CHECKED BY WLS
DATE MM/DD/YY
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN 12566
UTILITY

SHEET NO. 70UT-01

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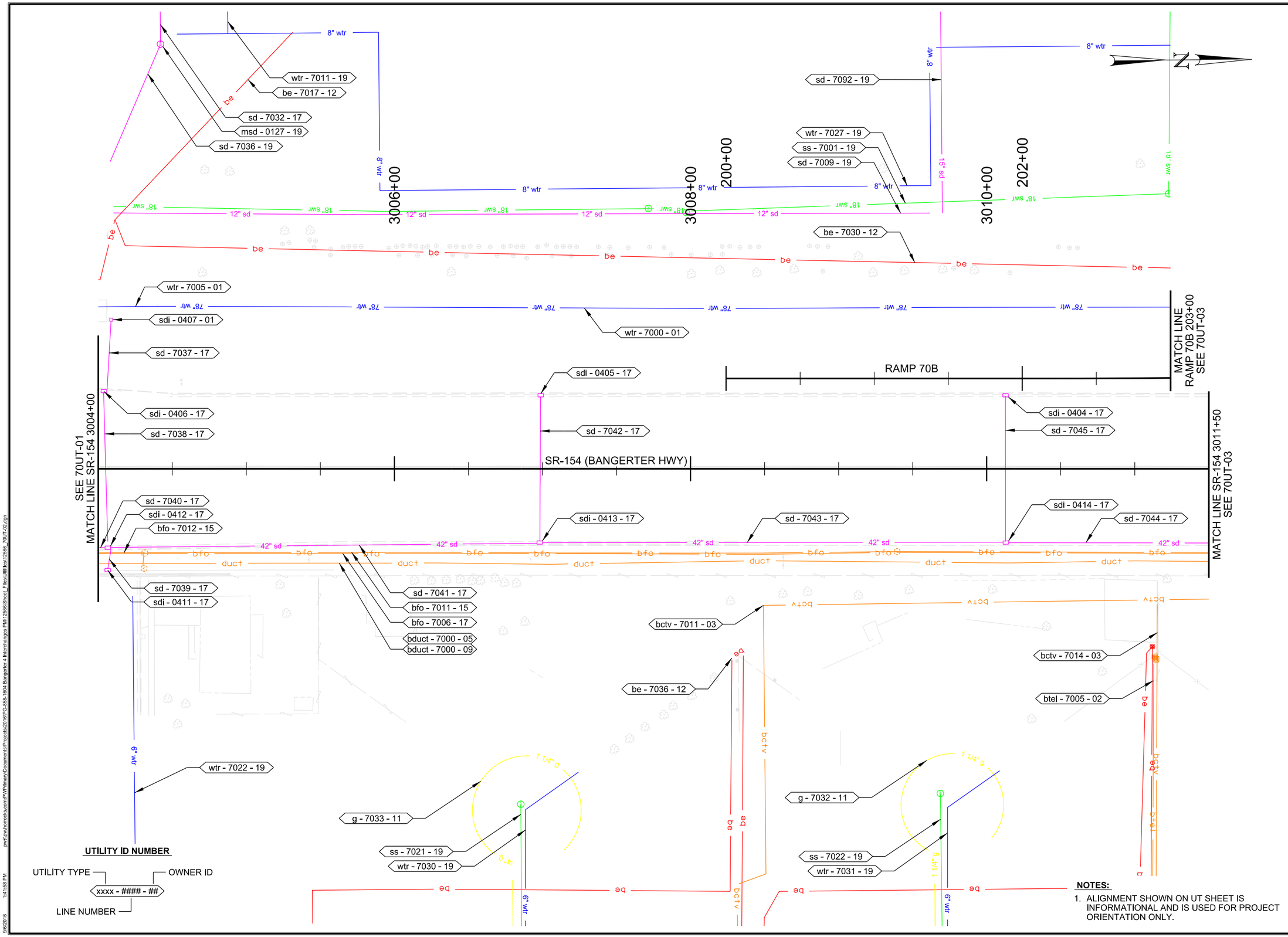

NOTES:

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

APPROVED

PROFESSIONAL ENGINEER

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QC CHECKED BY	WLS
DATE	MM/DD/YY

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 70UT-02

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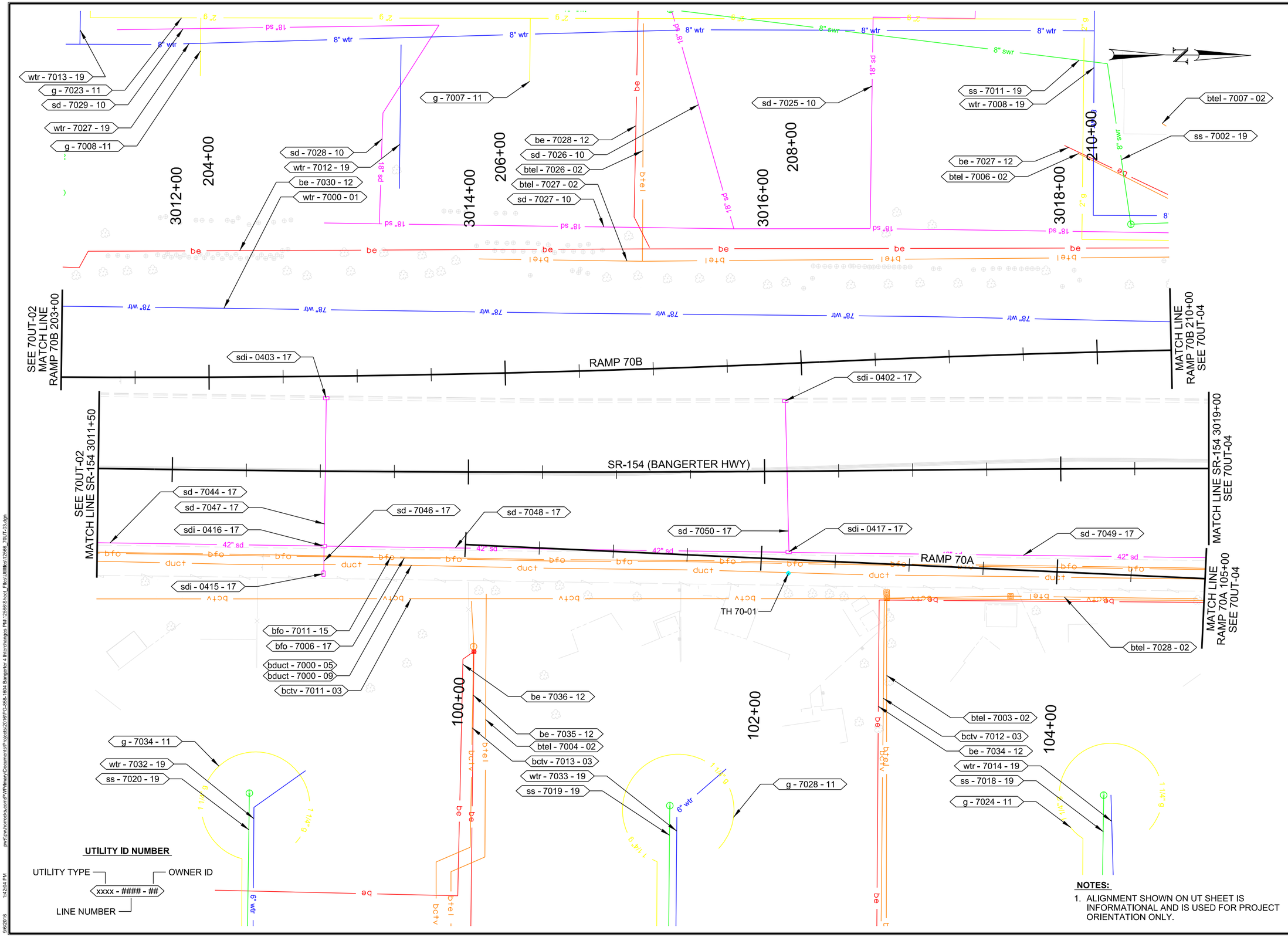

NOTES:

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY	KKH
QC CHECKED BY	WLS
DATE	MM/DD/YY

APPROVED

PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 7000 SOUTH

PIN 12566

S-0154(12)11

UTILITY

PROJECT

PROJECT NUMBER

SHEET NO. 70UT-03

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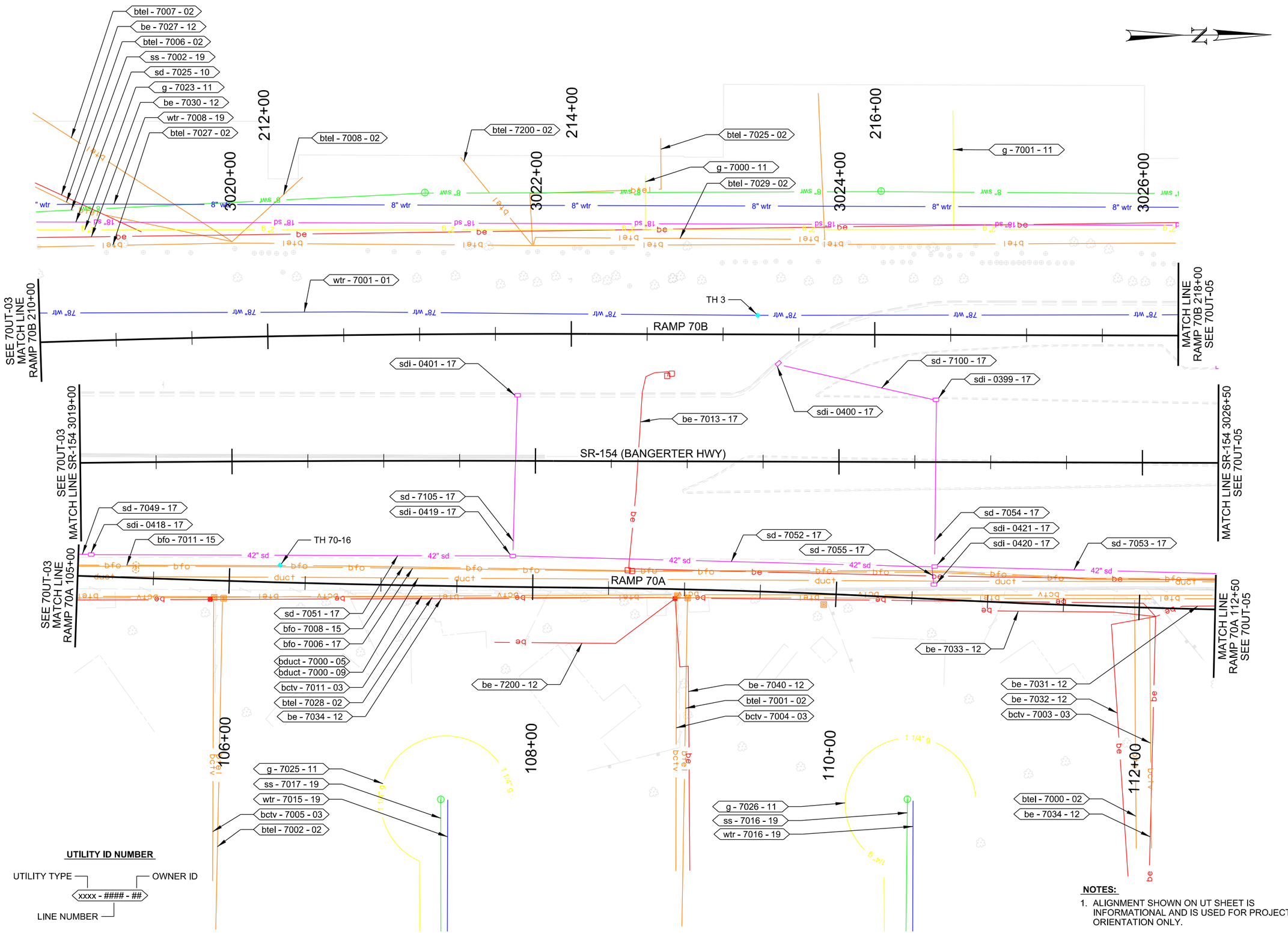

NOTES:

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NO.	DATE	REVISIONS	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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QC CHECKED BY WLS
DATE MM/DD/YY
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
UTILITY

SHEET NO. 70UT-04

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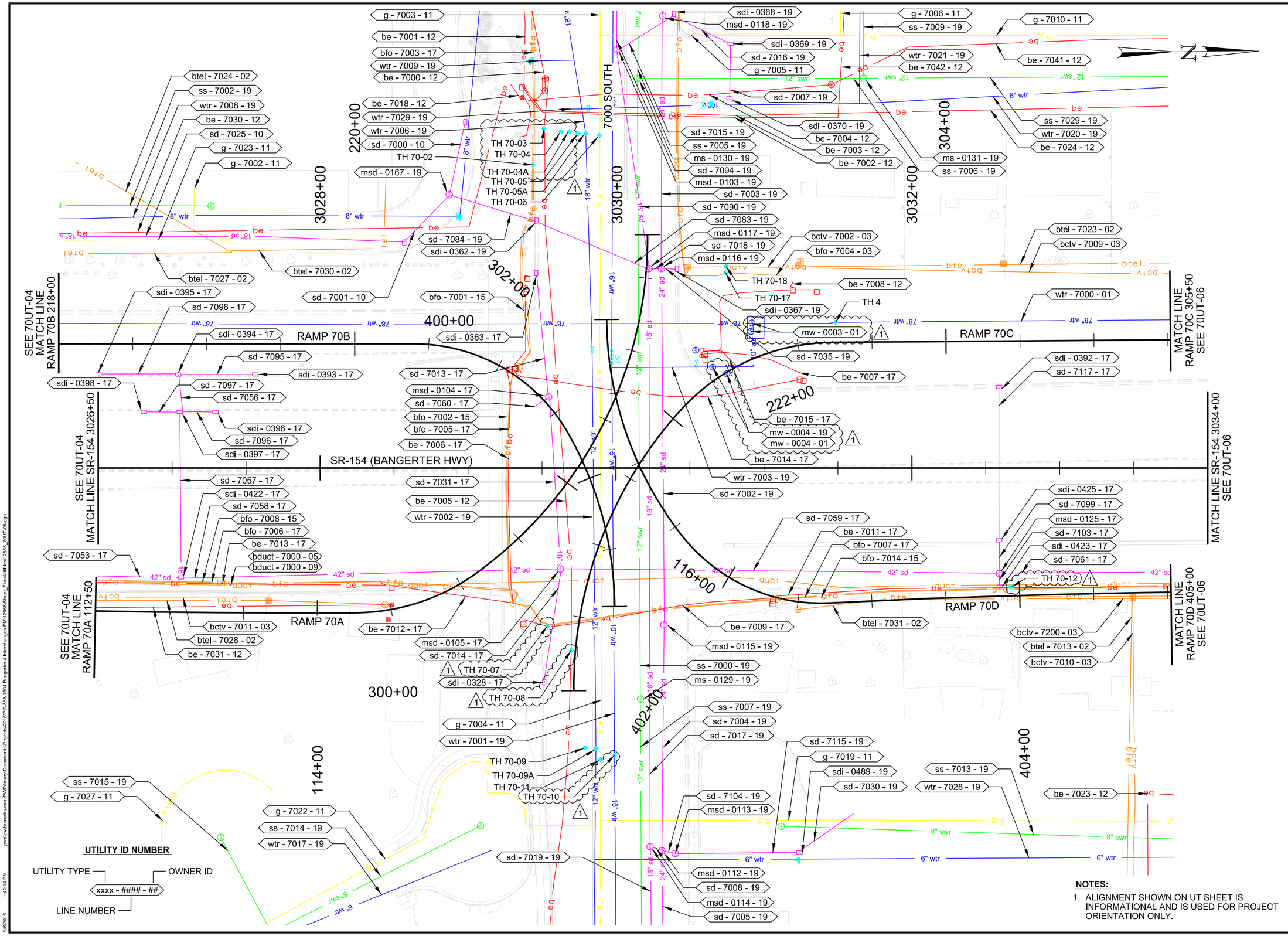

NOTES:

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REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	
1	09/16	DCO	ADDED TESTHOLES, UPDATED UTILITIES	

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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QC CHECKED BY WLS
MM/DD/YY DATE
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 7000 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 70UT-05

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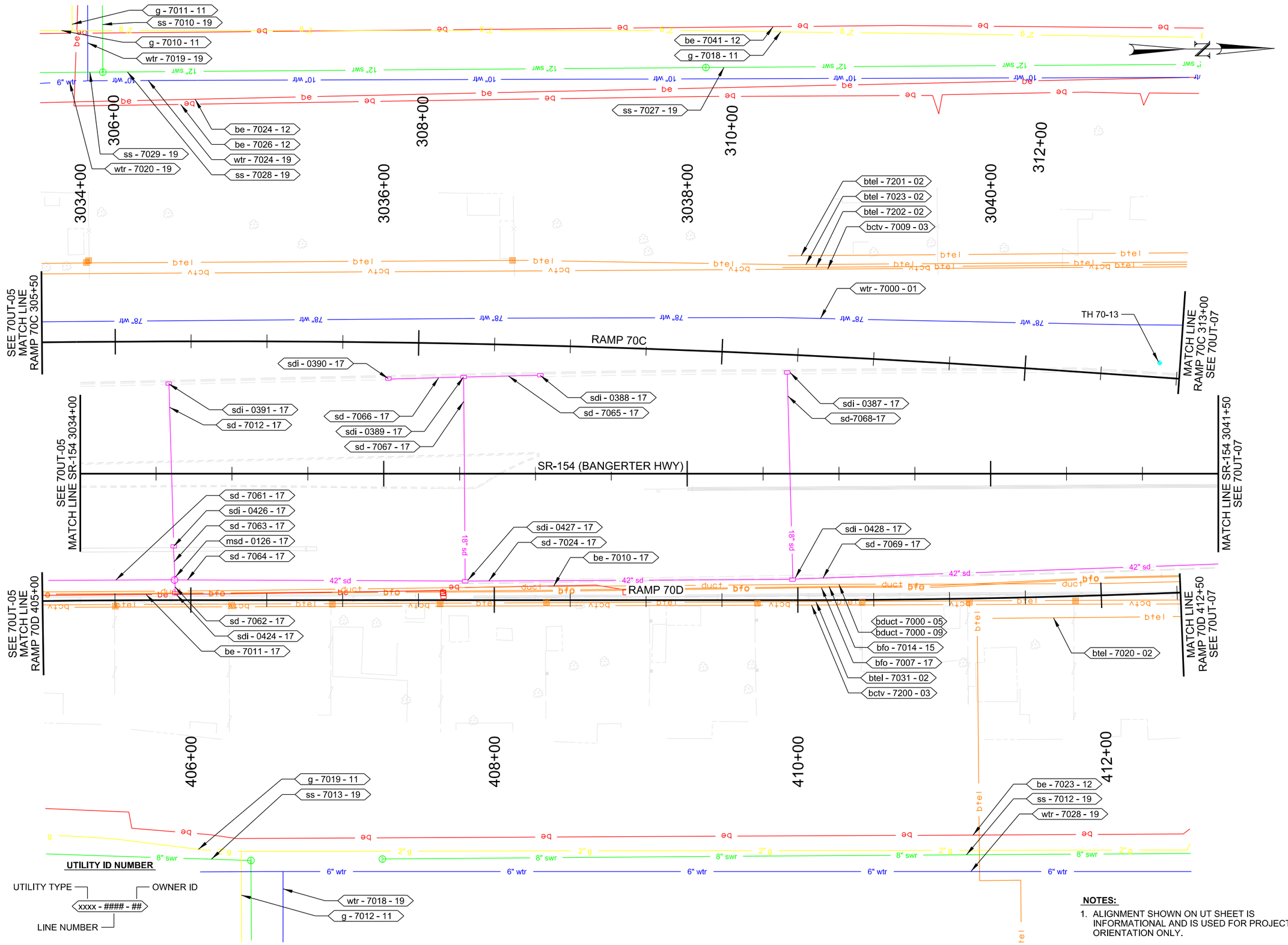

NOTES:

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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QC CHECKED BY WLS
MM/DD/YY
DATE

APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 7000 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 70UT-06

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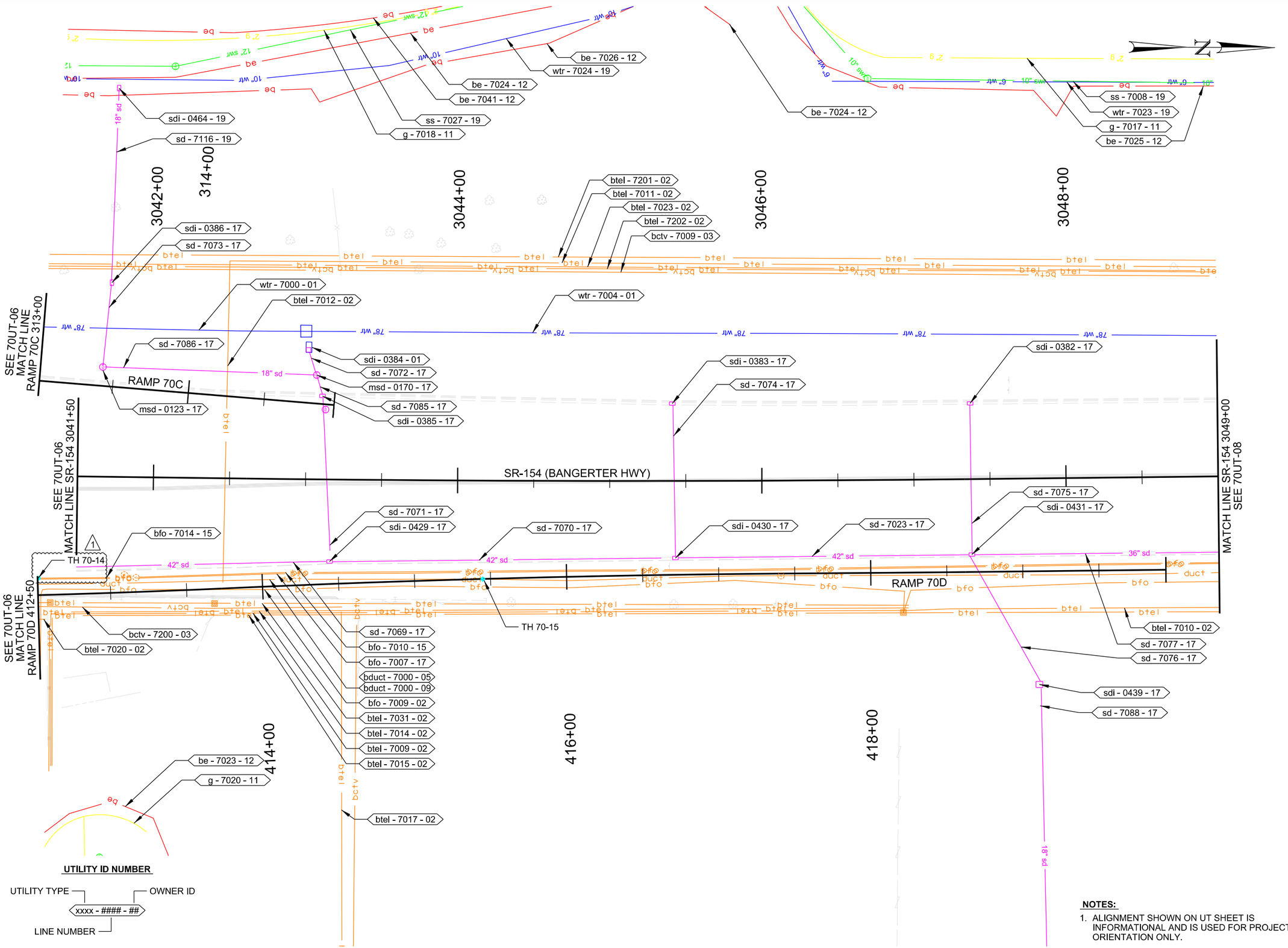

NOTES:

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REVISIONS				
NO.	DATE	APPROVED BY	REMARKS
1	09/16	DCO	ADDED TESTHOLE

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: WLS
DATE: MM/DD/YY
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY

SHEET NO. 70UT-07

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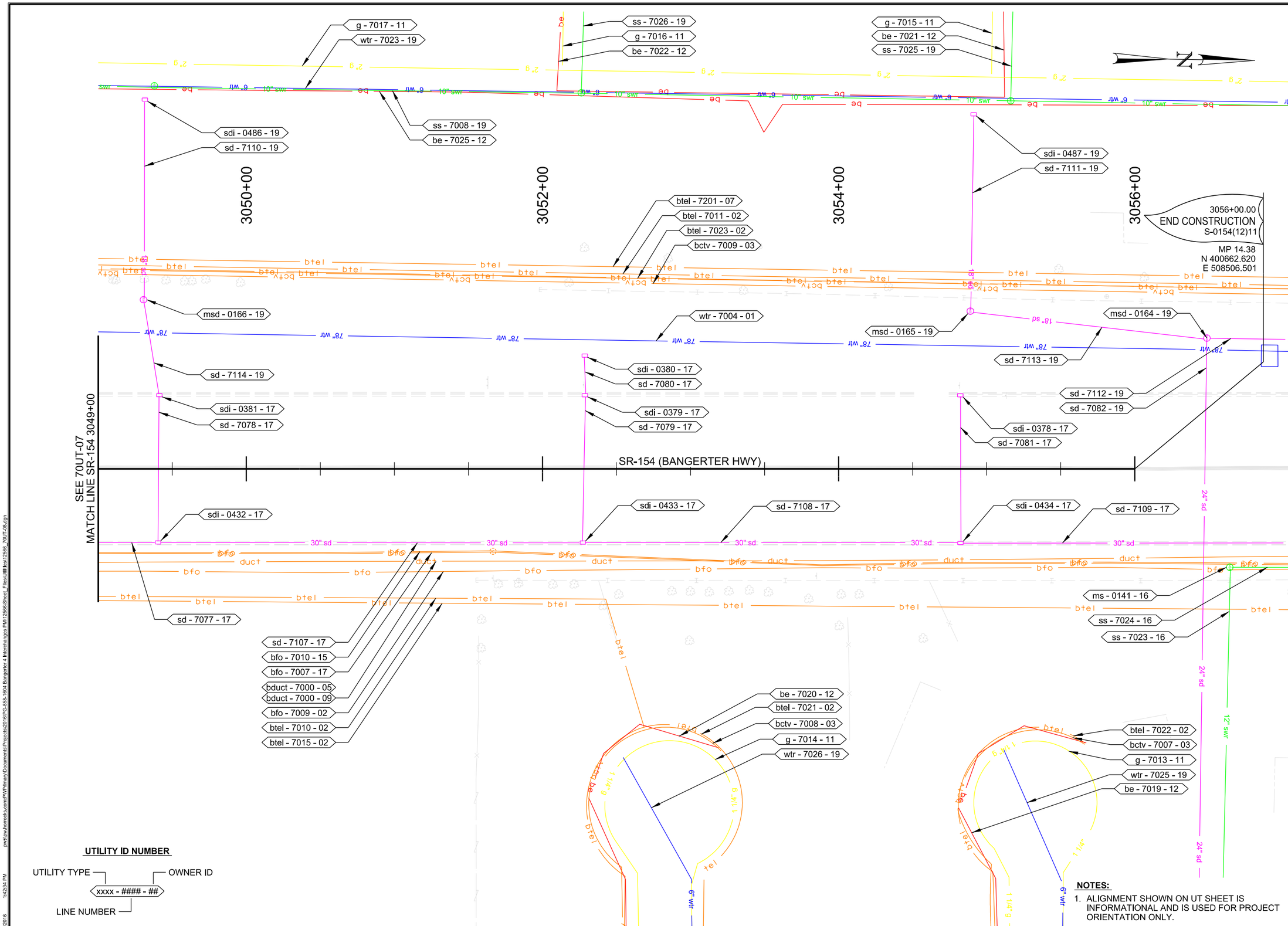

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY WLS
DATE MM/DD/YY
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 7000 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566

UTILITY

SHEET NO. 70UT-08

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BEGIN CONSTRUCTION
S-0154(12)11
N 397956.253
E 507703.727

700+00
702+00
704+00

7000 SOUTH

MATCH LINE 7000 S 705+00
SEE 70UT-10

wtr - 7255 - 19
g - 7255 - 11
sd - 7271 - 19
g - 7253 - 11
be - 7255 - 12
ss - 7252 - 19
wtr - 7254 - 19
g - 7254 - 11
btel - 7019 - 02
sd - 7252 - 19
bctv - 7250 - 03
bfo - 7254 - 03
bfo - 7250 - 02
sd - 7260 - 19
msd - 0121 - 19
msd - 0120 - 19
sd - 7259 - 19
sd - 7261 - 19
be - 7250 - 19
bctv - 7001 - 03
btel - 7018 - 02
ss - 7009 - 19
wtr - 7021 - 19
be - 7042 - 12
g - 7006 - 11
be - 7254 - 17
sdi - 0371 - 19
msd - 0102 - 19
sd - 7266 - 19
sdi - 0361 - 17
bfo - 7000 - 03
ms - 0128 - 19
sd - 7091 - 19
ss - 7005 - 19
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g - 7003 - 11
wtr - 7001 - 19
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g - 7250 - 11
g - 7256 - 11
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sd - 7253 - 19
sd - 7254 - 19
msd - 0100 - 19
sd - 7258 - 19
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sd - 7265 - 19
msd - 0122 - 19
sd - 7257 - 19
sd - 7272 - 19
msd - 0101 - 19
ms - 0126 - 19
ss - 7250 - 19
be - 7251 - 17
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bctv - 7251 - 03
sd - 7272 - 19
ss - 7003 - 19
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ms - 0127 - 19
be - 7252 - 17
g - 7252 - 11
wtr - 7253 - 19
msd - 0171 - 19
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UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

NOTES:

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY: KKH
QC CHECKED BY: WLS
DATE: MM/DD/YY
APPROVED: .....
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
UTILITY

SHEET NO. 70UT-09

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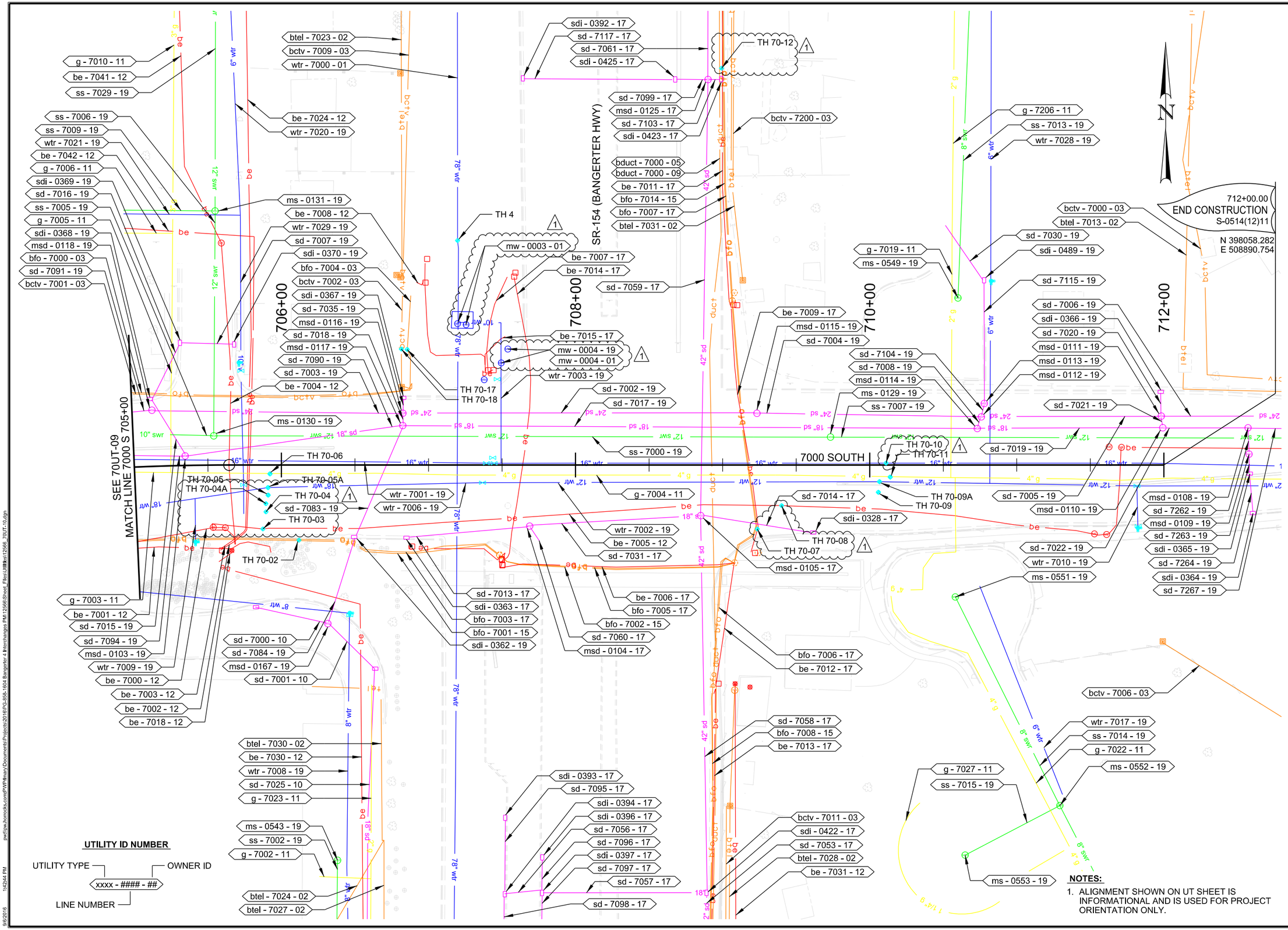

NOTES:

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REVISIONS			
NO.	DATE	APPROVED BY	REMARKS
1	09/16	DCO	ADDED TESTHOLES, UPDATED UTILITIES.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY WLS
MM/DD/YY DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN 12566
UTILITY

SHEET NO. 70UT-10

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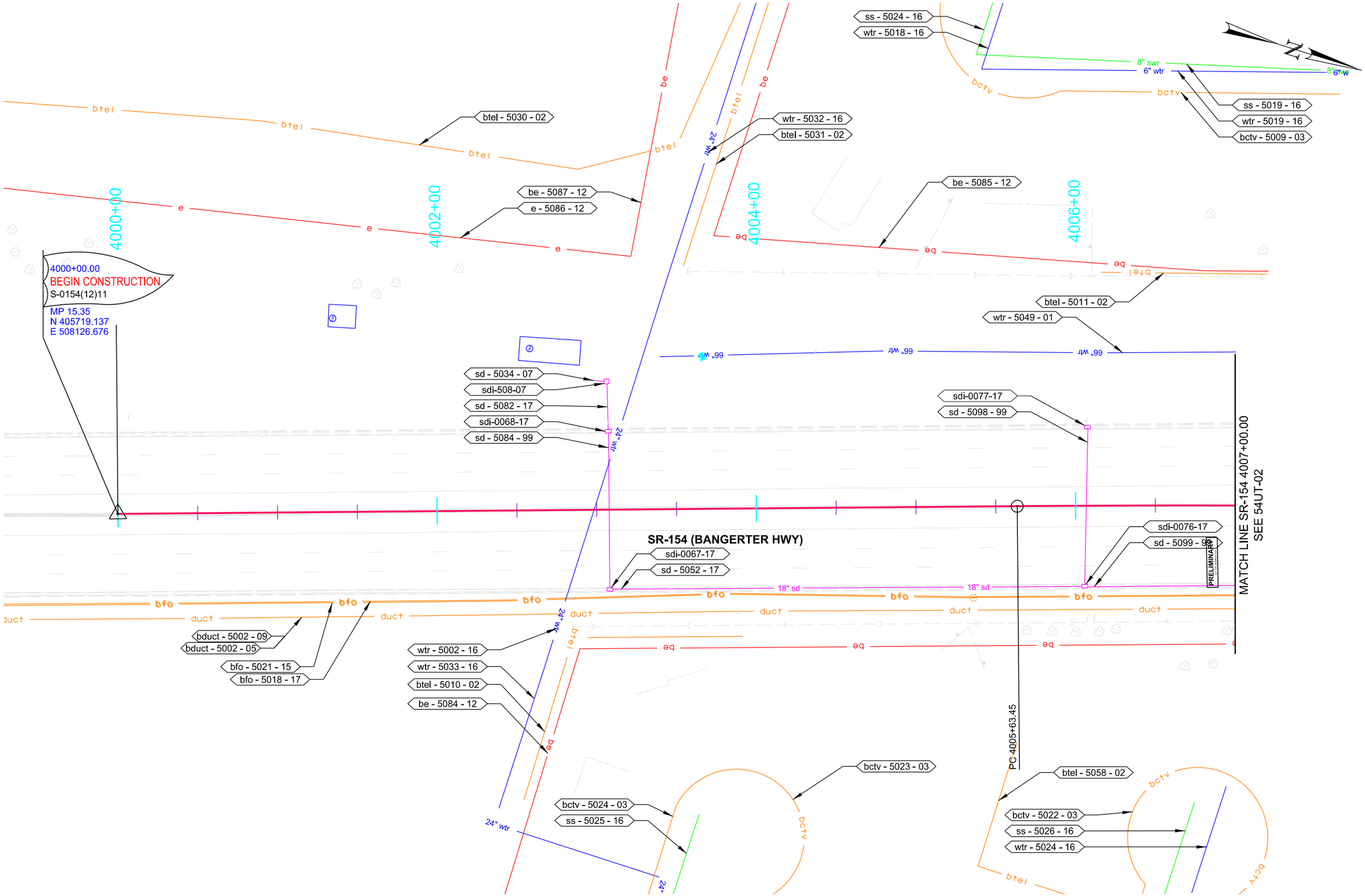

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

NOTES:

1. ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED.
2. XXXX
3. XXXX

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY XXX
QC CHECKED BY XXX
DATE

APPROVED

PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 54UT-01

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$$username$$
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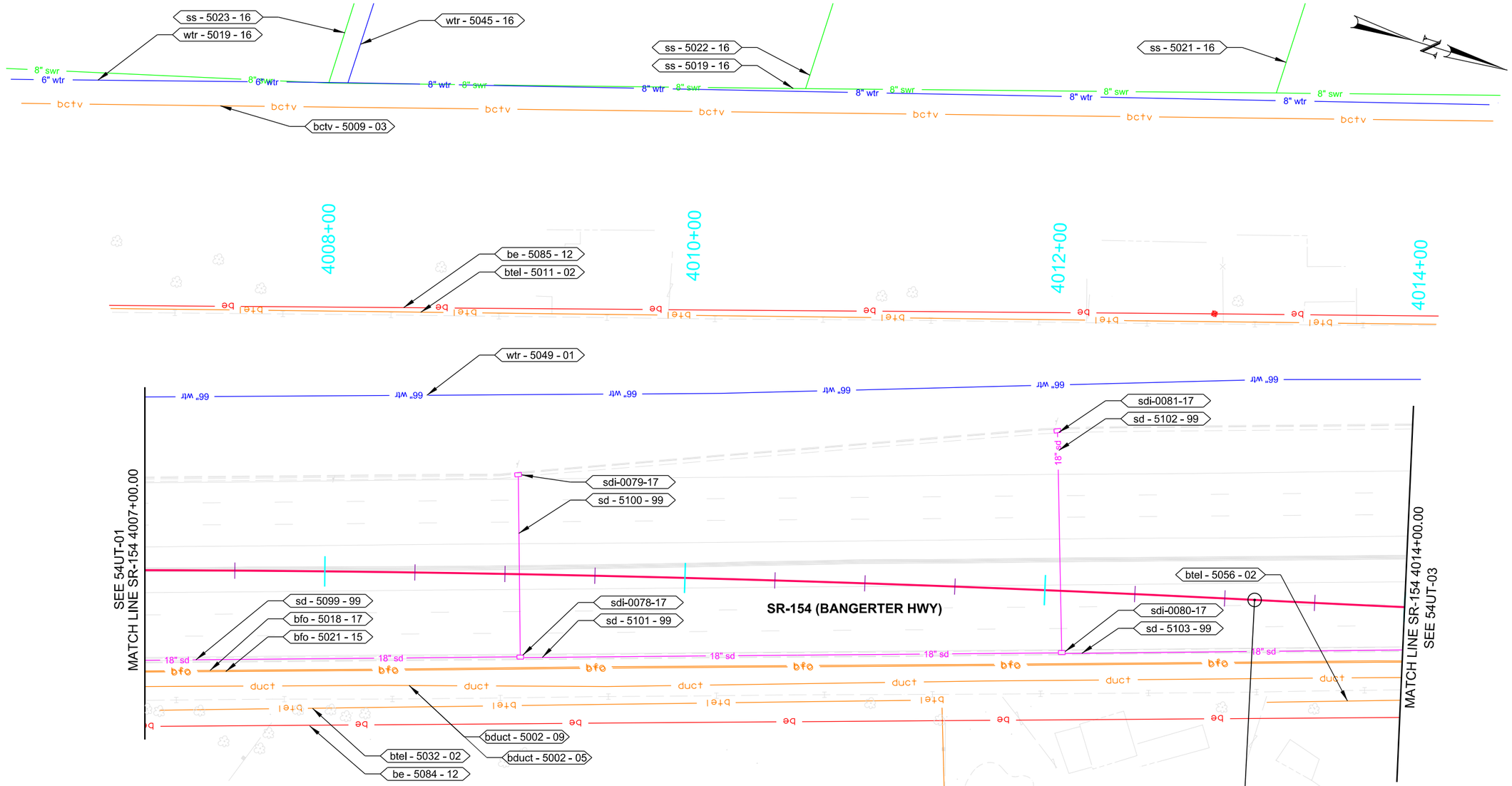
9/8/2016



UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

NOTES:

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - CONSULTANT NAME

DRAWN BY XXX

QC CHECKED BY XXX

APPROVED

MM/DD/YY

DATE

PROFESSIONAL ENGINEER

4 INTERCHANGES ON

BANGERTER HIGHWAY - 5400 SOUTH

PROJECT

PROJECT NUMBER

S-0154(12)11

PIN 12566

UTILITY

SHEET NO. 54UT-02

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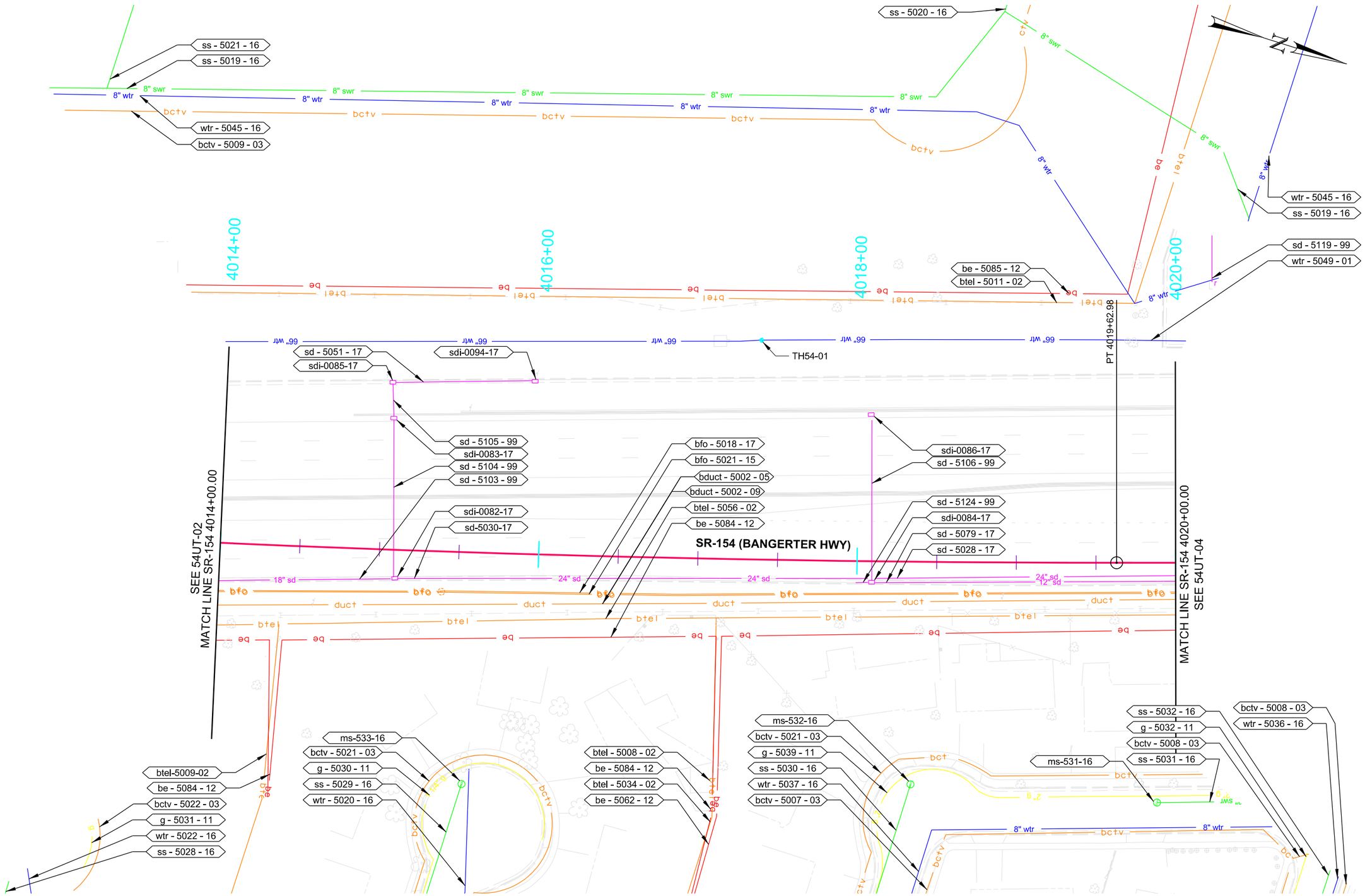
9/8/2016



UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

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REVISIONS				
NO.	DATE	APPROVED BY	REMARKS	

UTAH DEPARTMENT OF TRANSPORTATION

REGION 2 - CONSULTANT NAME

DRAWN BY: GS

QC CHECKED BY: BDW

APPROVED

MM/DD/YY

DATE

PROFESSIONAL ENGINEER

4 INTERCHANGES ON

BANGERTER HIGHWAY - 5400 SOUTH

PROJECT

PROJECT NUMBER: S-0154(12)11

PIN: 12566

UTILITY

SHEET NO. 54UT-03

3/8/2016 4:43:51 PM

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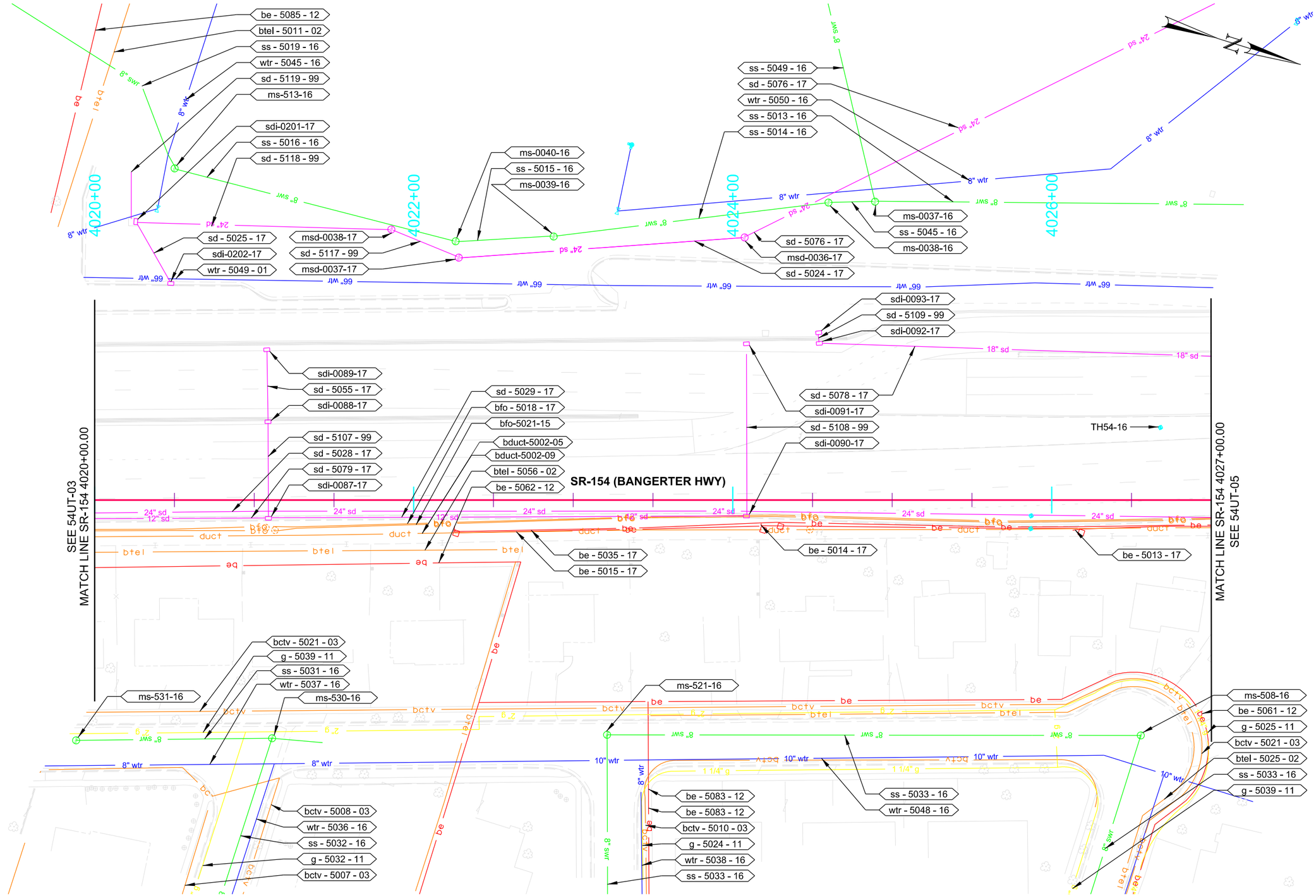

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

NOTES:

1. ALIGNMENT SHOWN ON UT SHEETS IS INFORMATIONAL AND IS USED FOR PROJECT ORIENTATION ONLY.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
DATE
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566

UTILITY

SHEET NO. 54UT-04

$$pentbiss$$
$$username$$
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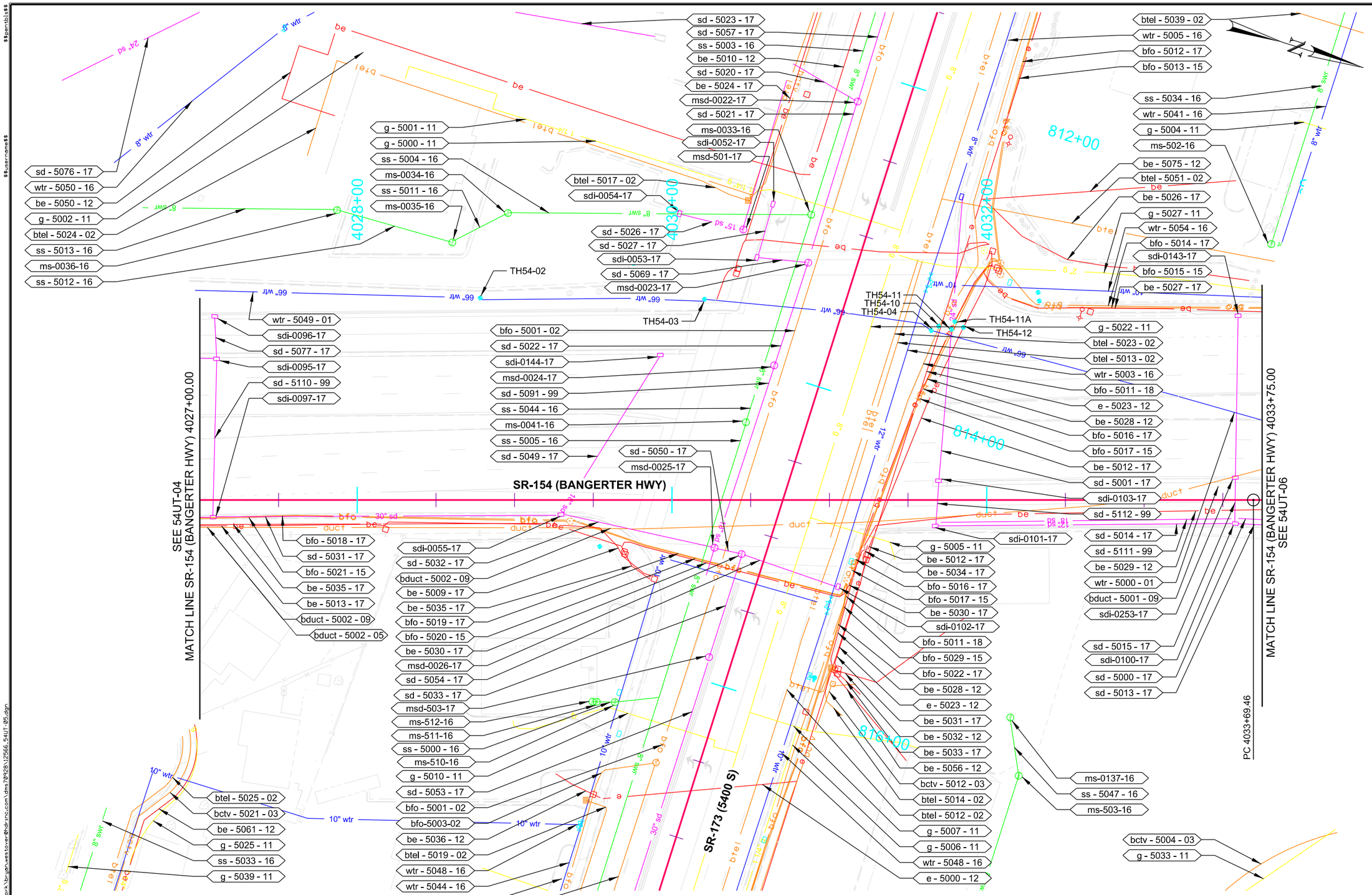
9/8/2016



NOTES:

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

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QC CHECKED BY BDW
DATE
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566

UTILITY

SHEET NO. 54UT-05

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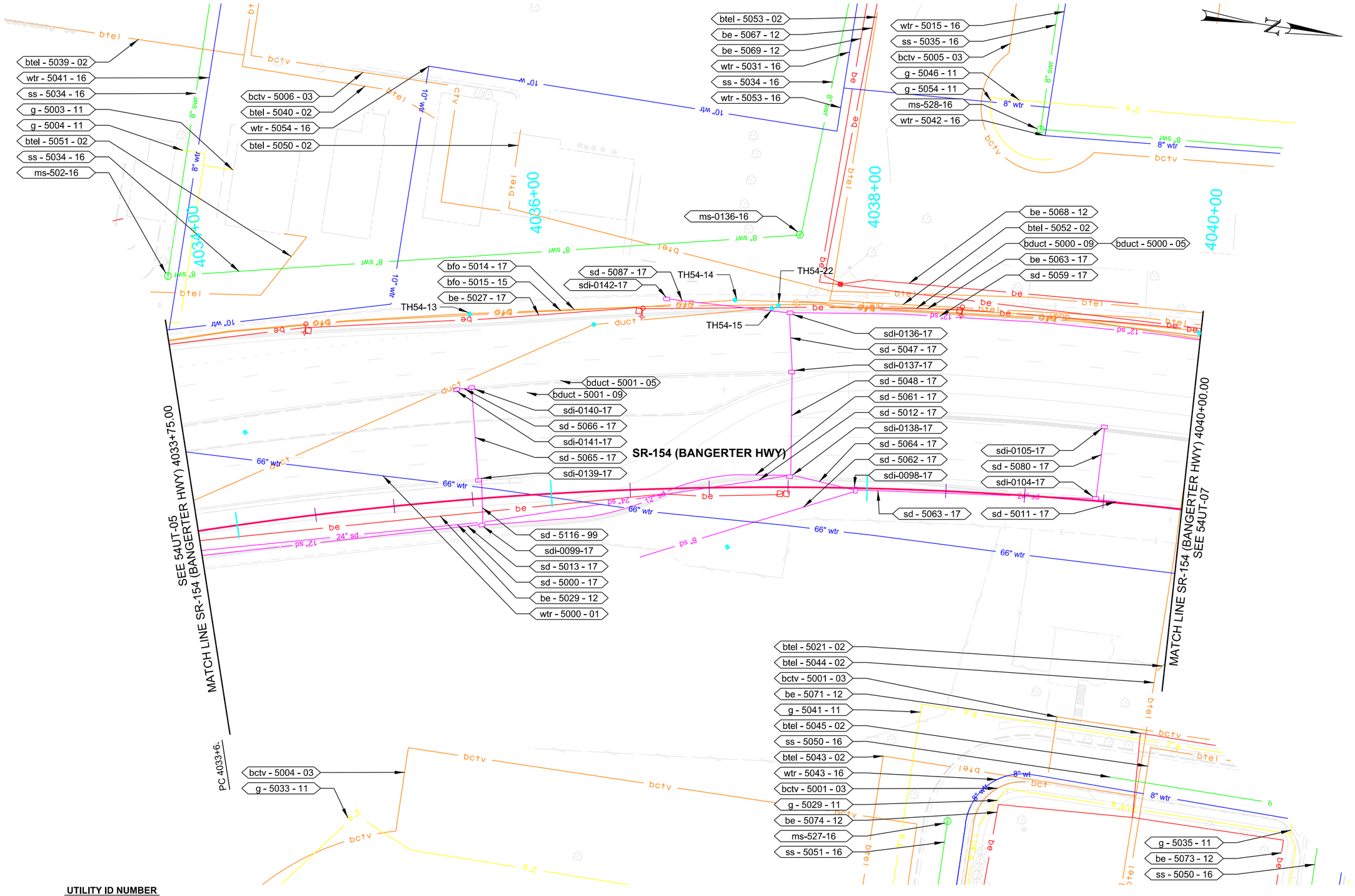
9/8/2016



UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

NOTES:

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REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

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DATE

APPROVED

PROFESSIONAL ENGINEER

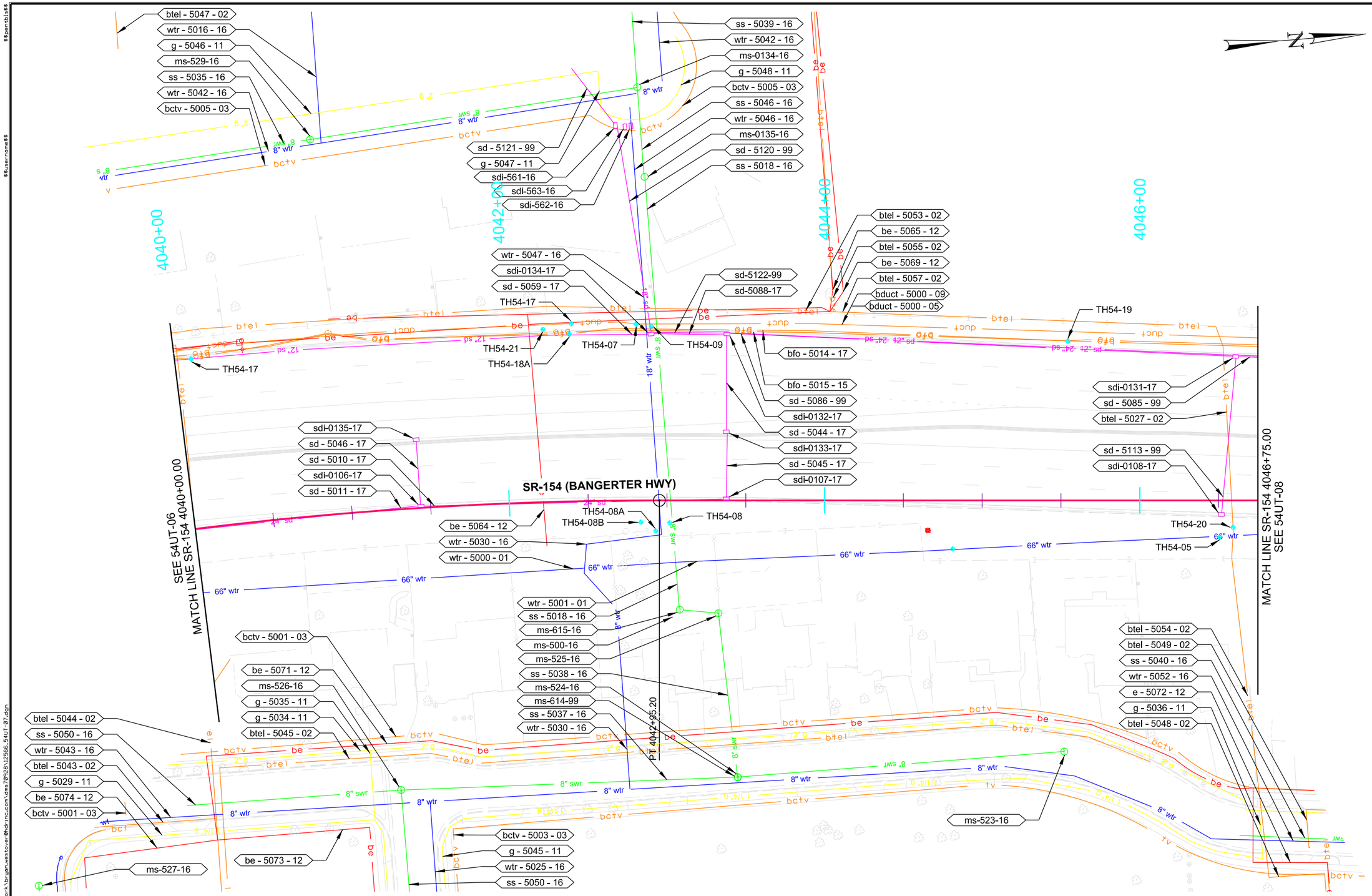
PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 54UT-06

$$pentbis$$
$$username$$
c:\pw_work\brigham.westover@hdr-inc.com\dms78928\12566_54UT-06.dgn
9/8/2016



UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

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REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

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DATE
APPROVED
PROFESSIONAL ENGINEER

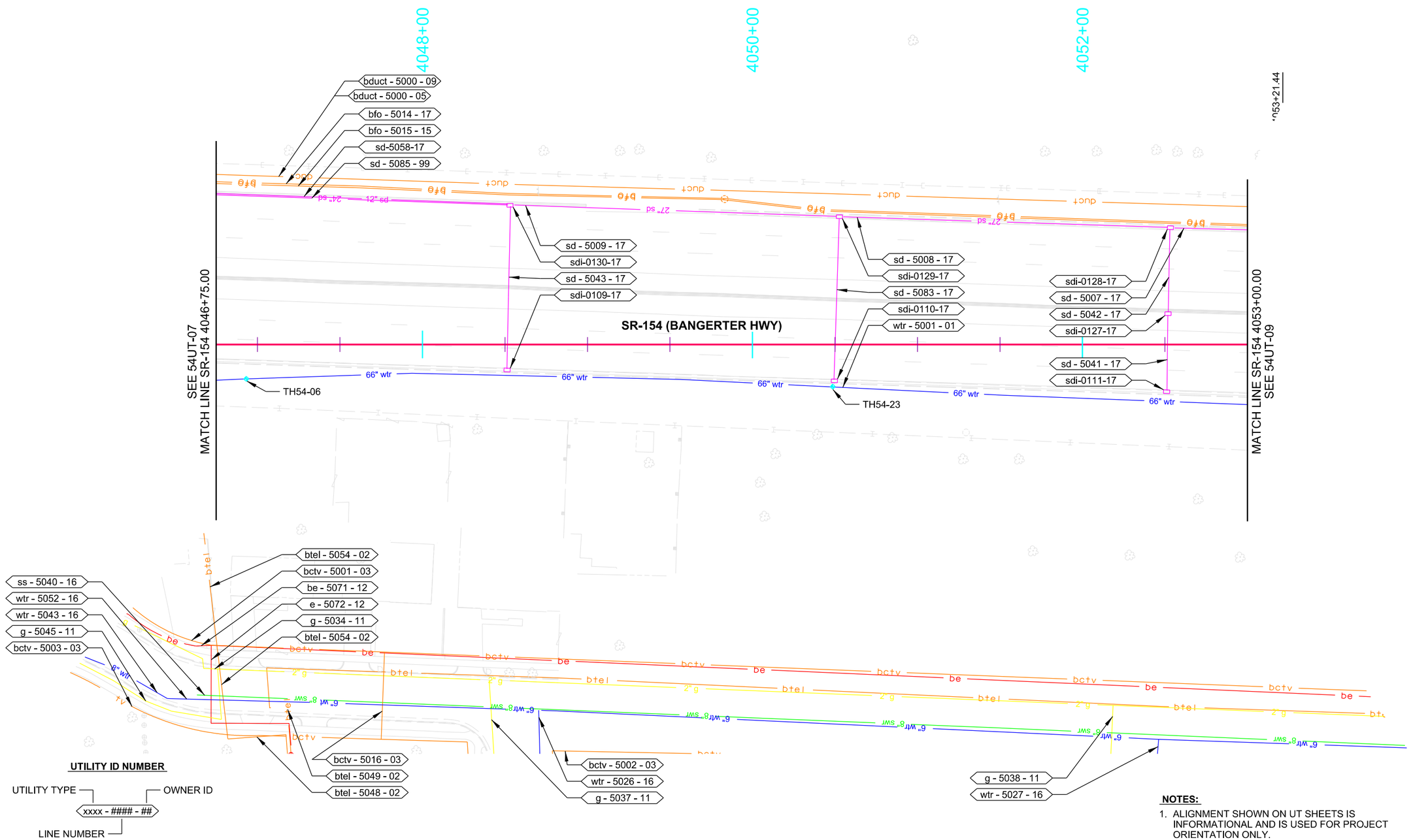
4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566

UTILITY

SHEET NO. 54UT-07

$$pentbis$$
$$username$$
c:\pw_work\brianwestover@hdrinc.com\dms78928\12566_54UT-07.dgn
9/8/2016



NOTES:

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

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DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
UTILITY

SHEET NO. 54UT-08

$$pentbis$$
$$username$$
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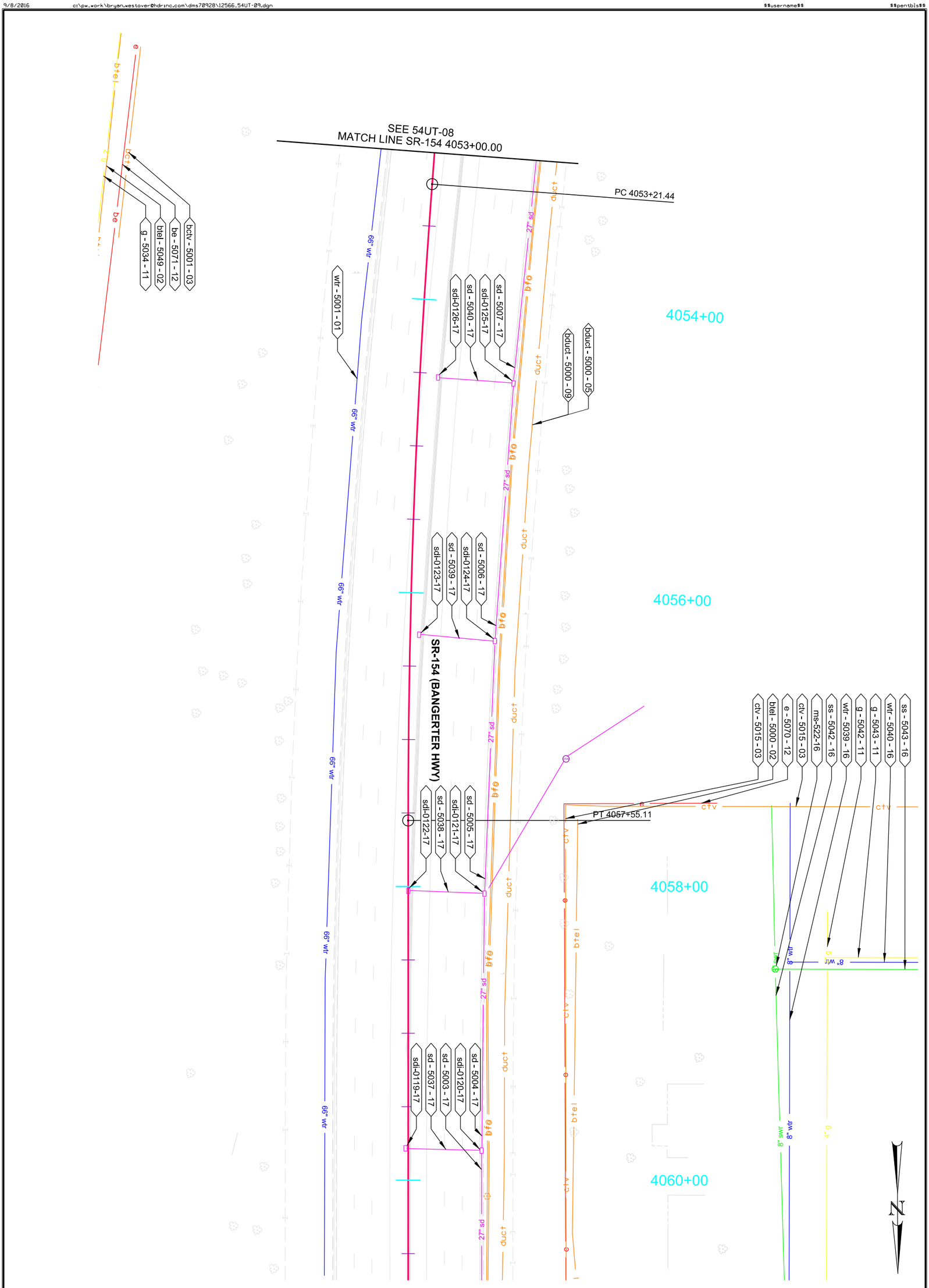
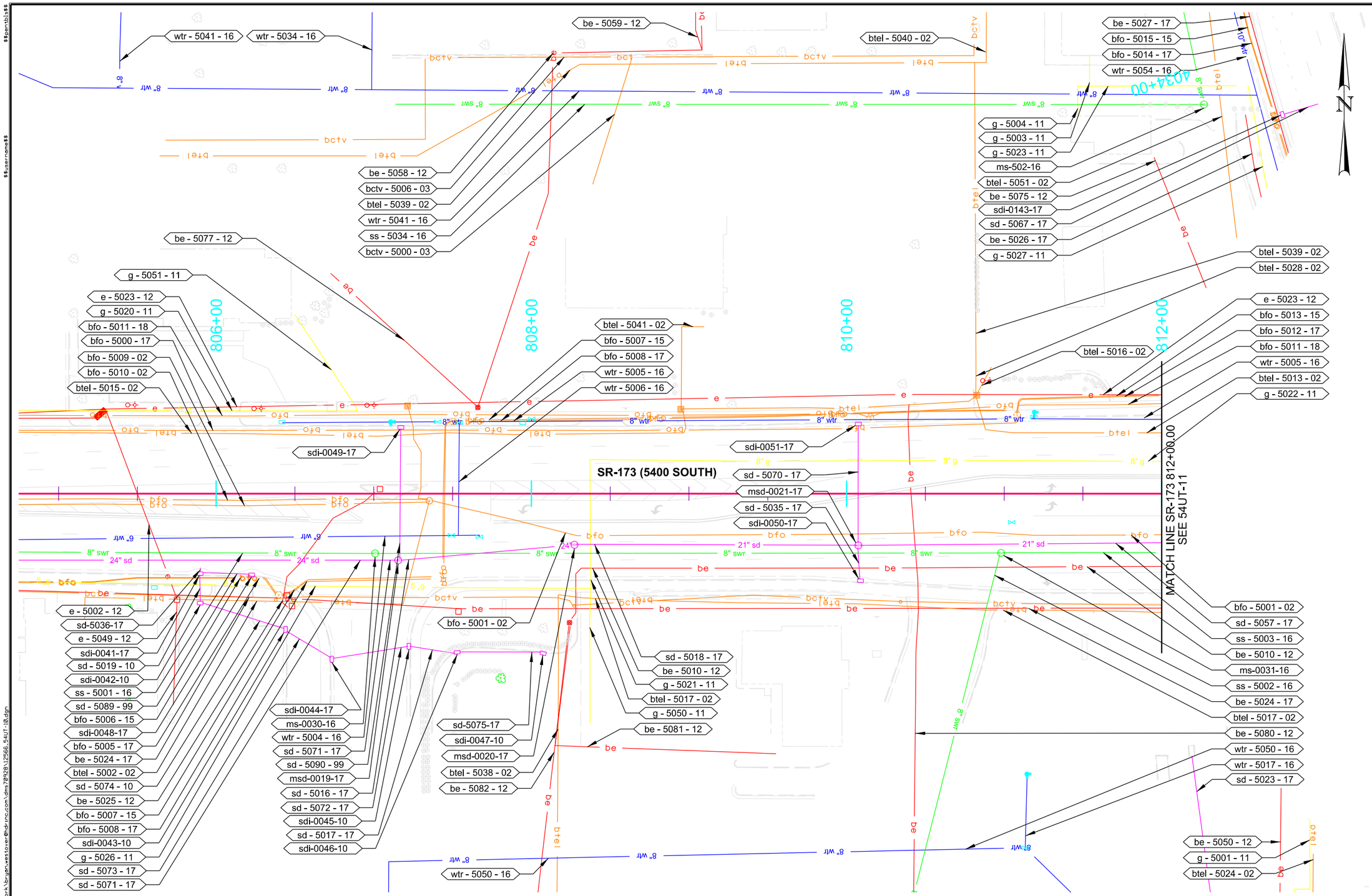
9/8/2016



SHEET NO. 54UT-09	PROJECT	4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH		**UTAH DEPARTMENT OF TRANSPORTATION** REGION 2 - AVENUE CONSULTANTS	REVISIONS
	PROJECT NUMBER	S-0154(12)11	PIN 12566	APPROVED / PROFESSIONAL ENGINEER / DATE	DRAWN BY GS
		UTILITY			QC CHECKED BY BDW

NO.	DATE	APPROVED BY	REMARKS



UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

NOTES:

1. ALIGNMENT SHOWN ON UT SHEETS IS INFORMATIONAL AND IS USED FOR PROJECT ORIENTATION ONLY.

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
DATE

APPROVED

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 54UT-10

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$$username$$
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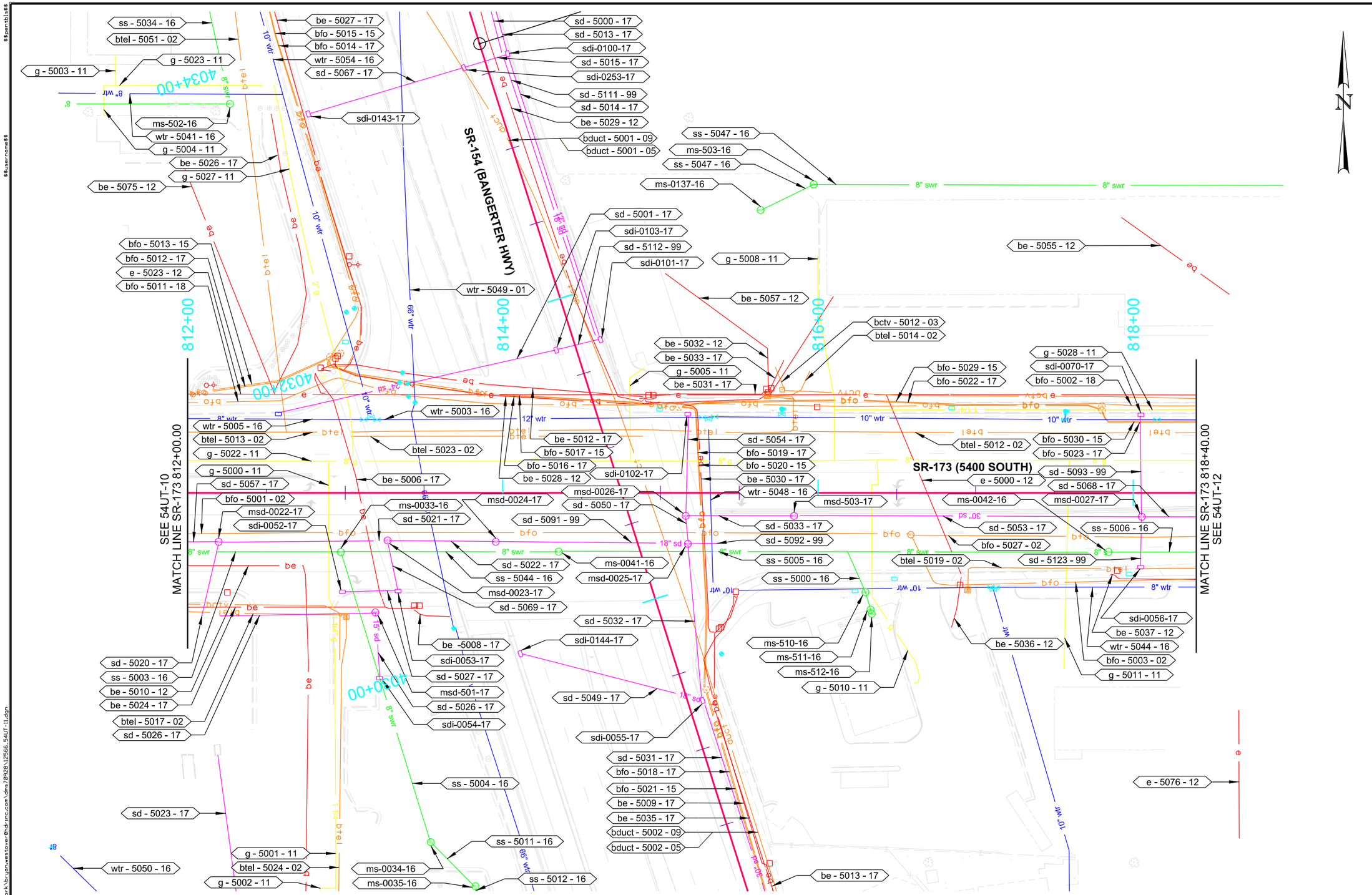
9/8/2016



UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW

APPROVED

PROFESSIONAL ENGINEER — DATE

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH

PROJECT NUMBER: S-0154(12)11 — PIN 12566

UTILITY

SHEET NO. 54UT-11

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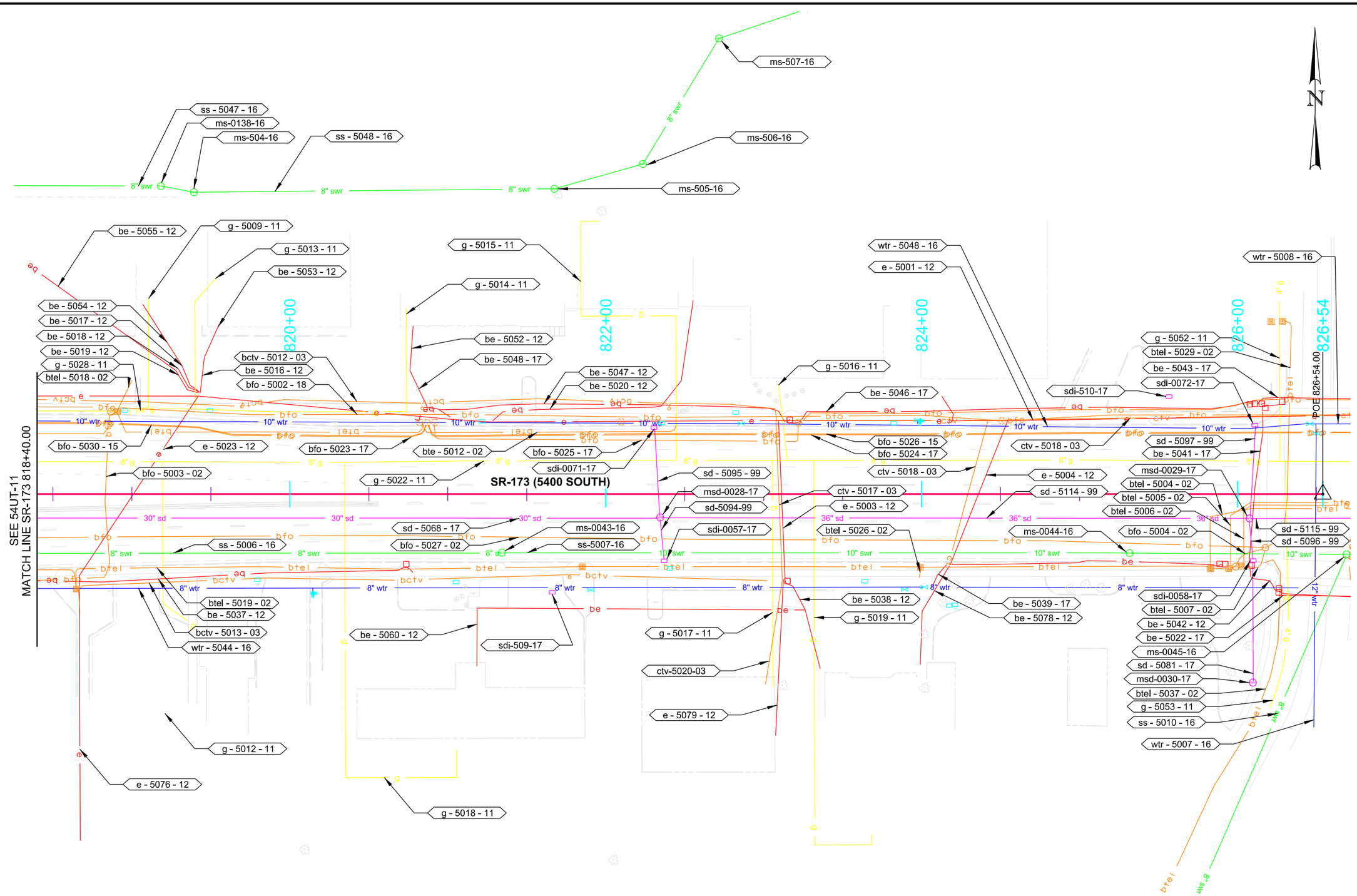
9/8/2016



NOTES:

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
UTILITY

SHEET NO. 54UT-12

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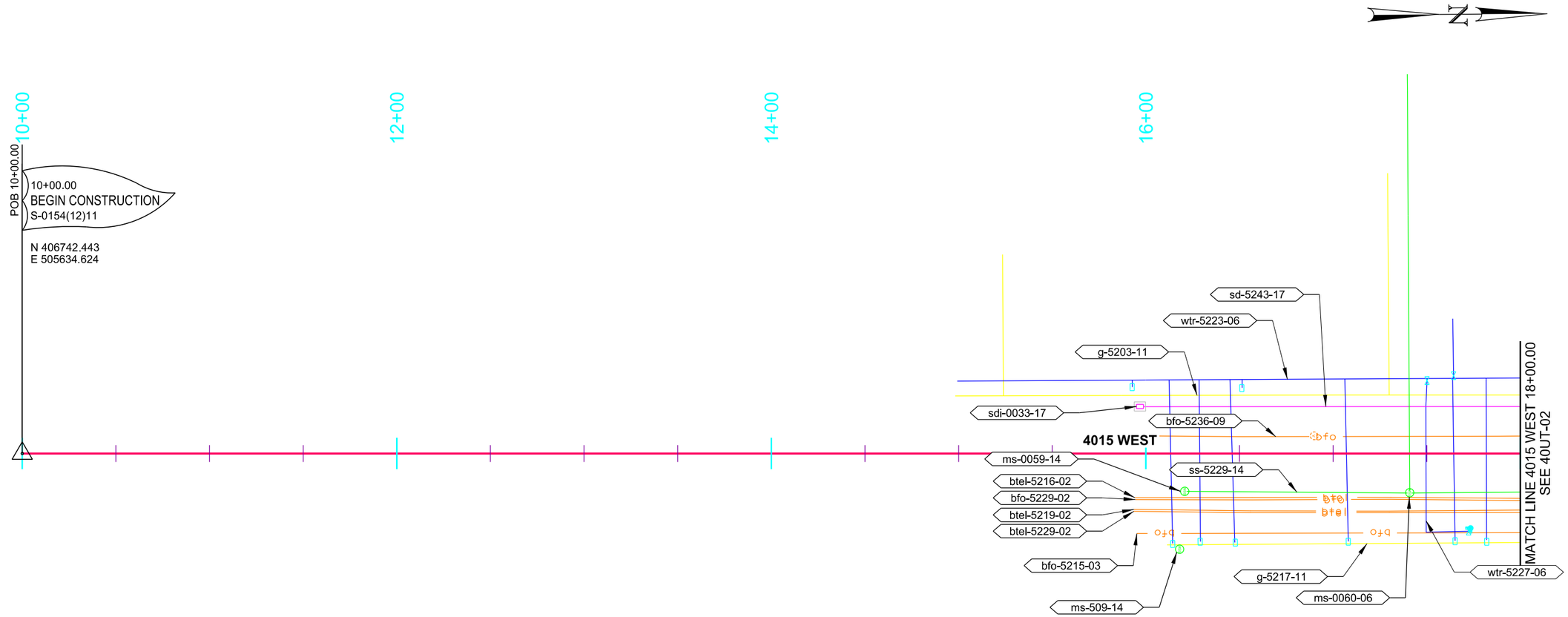
9/8/2016



UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

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DATE

APPROVED

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITIES

SHEET NO. 40UT-01

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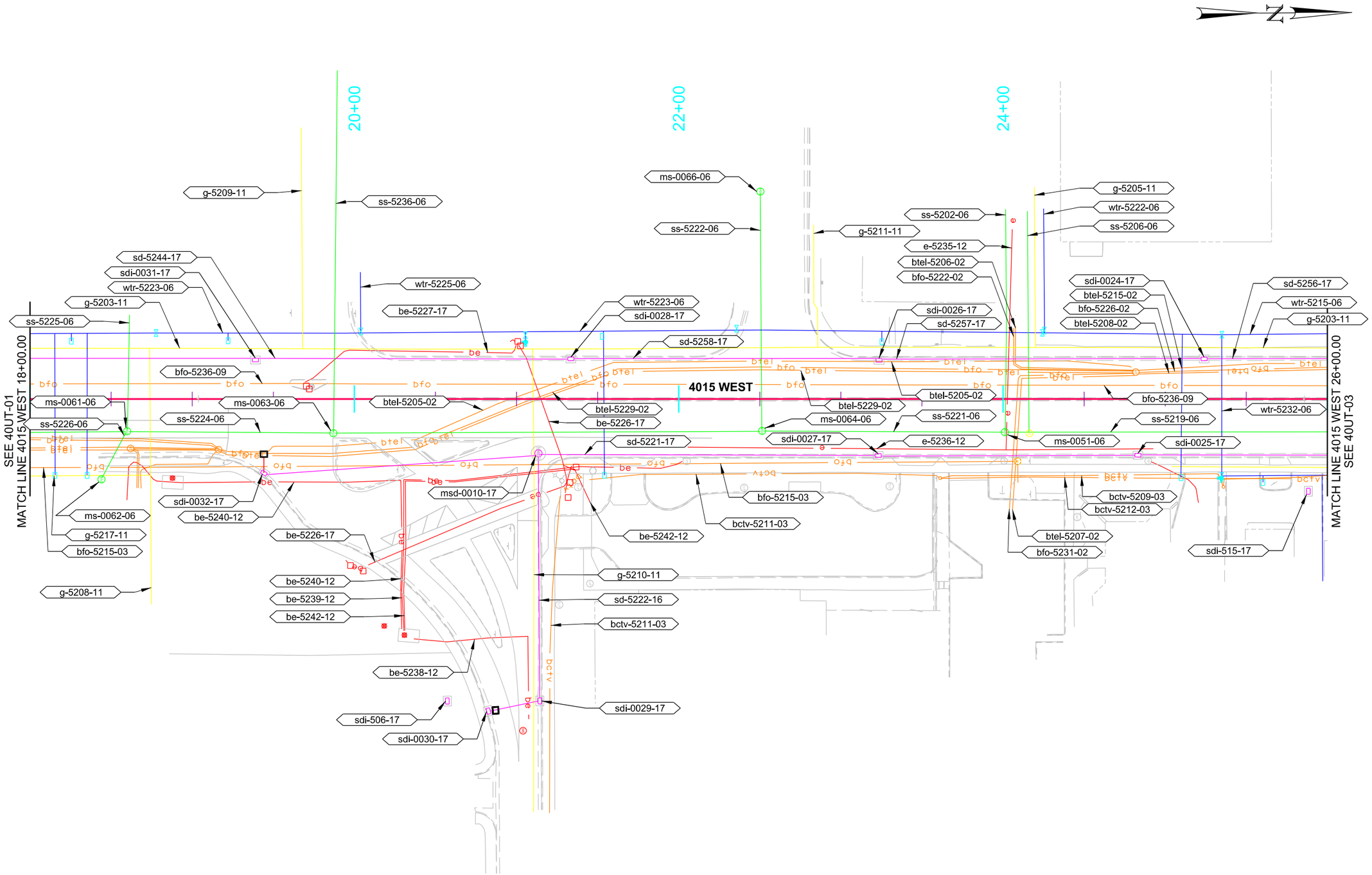

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

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DATE
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566

UTILITIES

SHEET NO. 40UT-02

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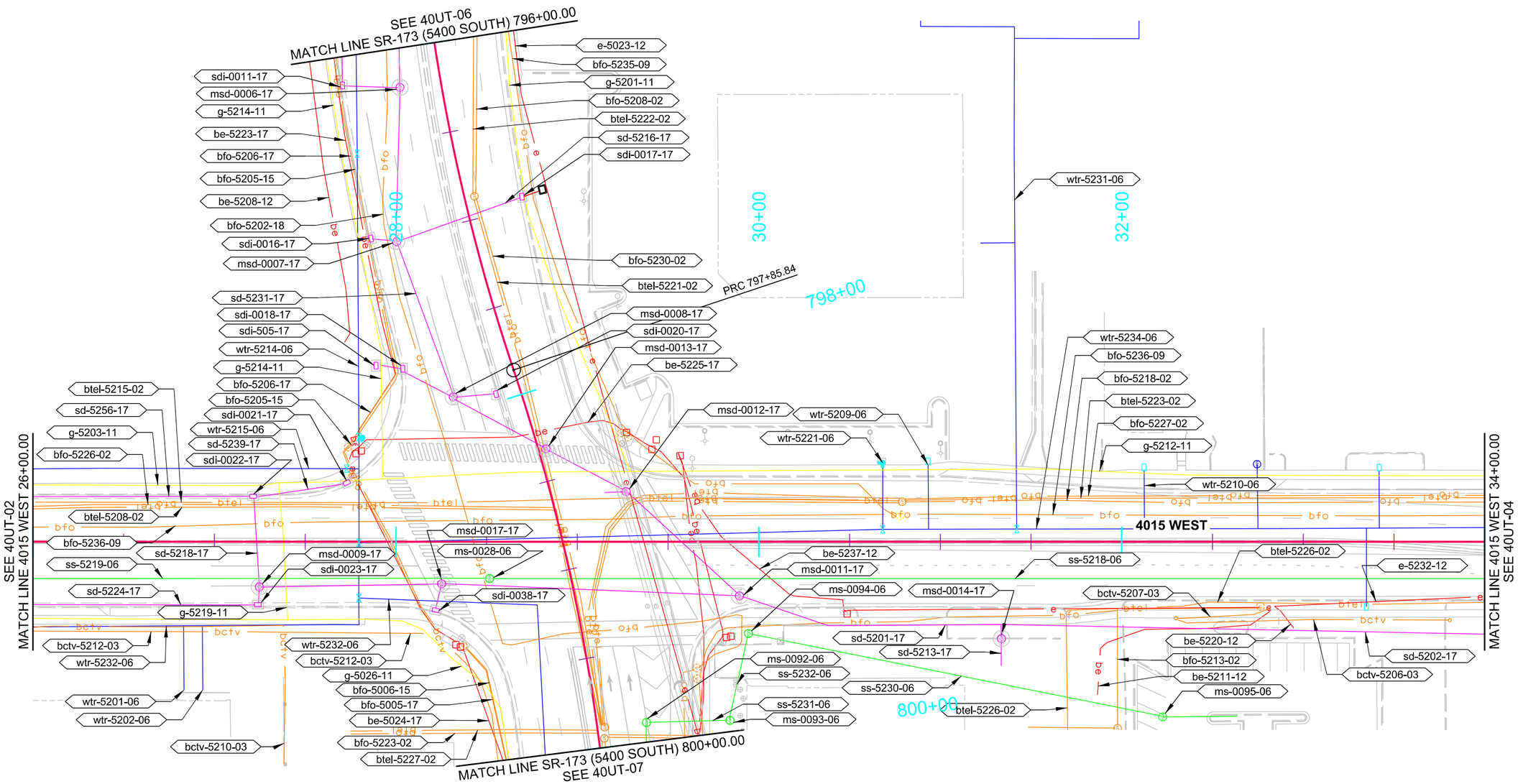
9/8/2016



UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

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REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
DATE
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566

UTILITIES

SHEET NO. 40UT-03

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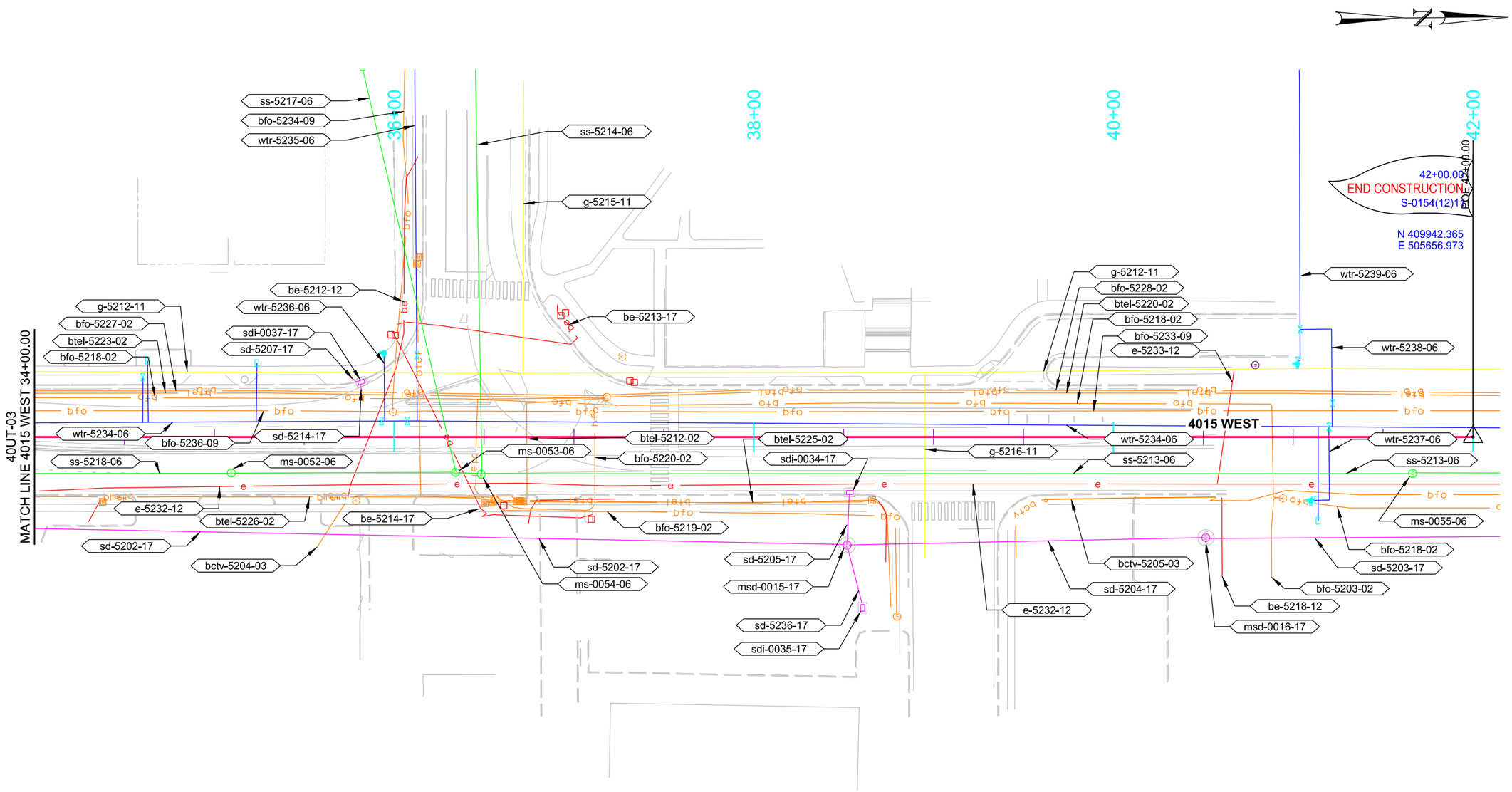

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
DATE

APPROVED

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILTIES

SHEET NO. 40UT-04

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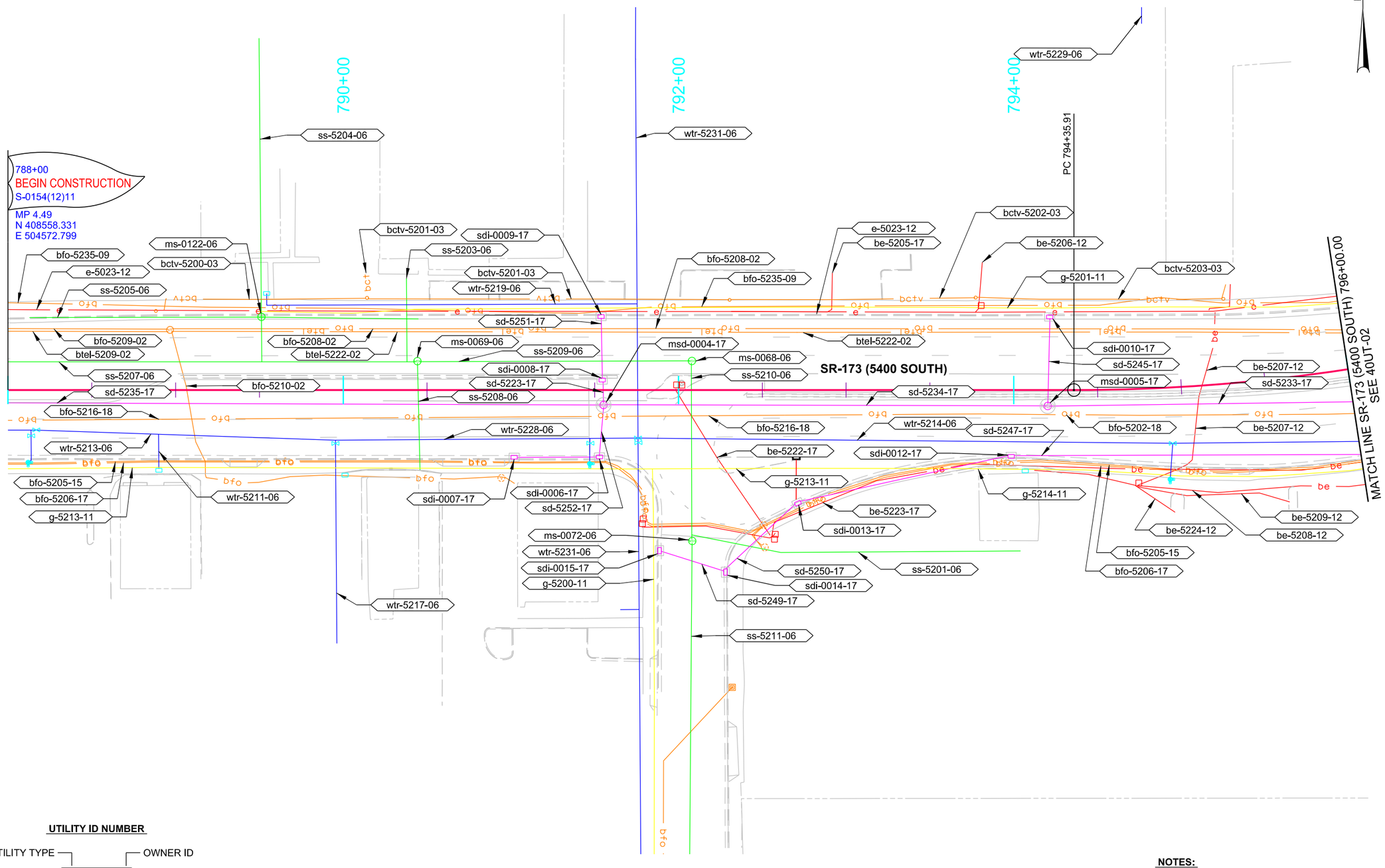

UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

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REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER
HIGHWAY - BUILD ALTERNATIVE

PROJECT NUMBER: S-0154(12)11
PIN 12566

UTILITIES

SHEET NO. 40UT-05

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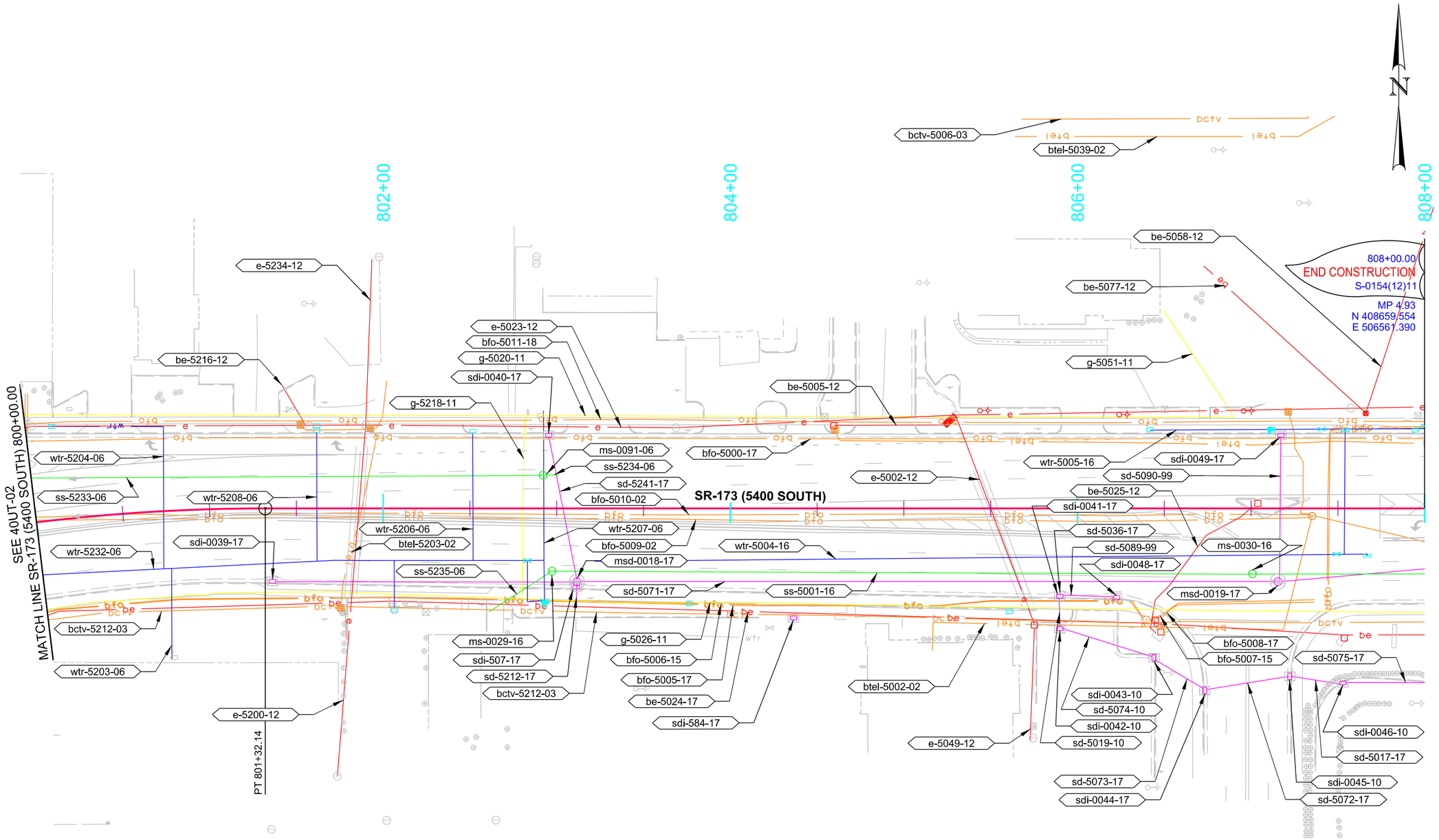
9/8/2016



UTILITY ID NUMBER

UTILITY TYPE — OWNER ID

xxxx - #### - ##

LINE NUMBER

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
DATE
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON BANGERTER
HIGHWAY - BUILD ALTERNATIVE

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566

UTILTIES

SHEET NO. 40UT-06

$$pentbis$$
$$username$$
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9/8/2016

UTILITY CONTACTS

ID Number	Company Name	Contact	Phone Number	Cell Number	E-mail
1	United States Department of the Interior Bureau of Reclamation	Alan Christensen, Kieth Marvin		(801) 379-1098, (801) 379-1193	achristensen@usbr.gov, kmarvin@usbr.gov
2	CenturyLink (with a cc: to Terra Technologies, Koby Dutson)	Darren Keller	(801) 356-6975	(385) 312-6525	darren.keller@centurylink.com, kdutson@terratechllc.com
3	Comcast Cable (with a cc: to Jay Koenig)	David Mascarenas		(801) 831-6622	david_mascarenas@cable.comcast.com jay_koenig@cable.comcast.com
4	Day Break Secondary Water DC	Keith Hanson		(801) 278-9660	keith@canyonwater.com
5	First Digital Telecom	Ryan Finch		(801) 636-5350	rfinch@firstdigital.com
6	Kearns Improvement District	Greg Anderson		(801) 912-0282	ganderson@kearnsid.org
7	Jordan Valley Water Conservancy District	J T Cracroft		(801) 565-4390	jtc@jvwcd.org
8	Kennecott				
9	AT&T	Rob Williamson	(208) 338-2816	(208) 850-7448	rlwilliamson@att.com, duanew@clearwaterconsulting.net
9	Manuel Bros., Inc. (Quanta Power)	Tony Cole, Tony Spagnola	(303) 459-8368	(303) 419-2629, (303) 459-8355	tcole@quantapower.net, tspagnola@quantaservices.com
9	Zayo Group LLC. Fiber Solutions	Kenneth Carter	(720) 334-9505		kenneth.carter@zayo.com
10	Private				
11	Questar Gas Company	Jason McGee, Kyle Secretan	(801) 324-360 (801) 324-3389		Jason.McGee@Questar.com Kyle.secretan@questar.com
12	Rocky Mountain Power	Suzan Jensen		(801) 220-2444	suzan.jensen@rockymountainpower.com
13	South Jordan City Public Works	Raymond Garrison		(801) 253-5230	rgarrison@sjc.utah.gov
14	South Valley Sewer District	Mike Foerster	(801) 571-1166		mikef@svsewer.com
15	Syringa Networks, LLC.	Brandon Wilson	(385) 235-0800	(385) 235-0800	bwilson@syringanetworks.net
16	Taylorsville Bennion Improvement District	Kevin Fenn		(801) 968-9081	kevin@tbid.org
17	UDOT				
18	MCI (Verizon Business)	David McAllister	(303) 214-7115	(801) 301-0937	david.mcallister@verizon.com
19	West Jordan City	David Murphy		(801) 569-5074	davidm@wjordan.com
20	Granger Hunter Improvement District	Brad Paxman		(801) 955-2203	brad@ghid.org
21	Riverton City	Trace Robinson, Scott Hill		(801) 208-3137 (801) 254-0704	trobinson@rivertoncity.com, kshill@rivertoncity.com
22	Salt Lake County Operations Division	Jodi Ballif		(385) 468-6124	jballif@slco.org
23	X O Communications (with a cc: to Jeff McKay, RMWT)	John Davies		(801) 983-2662	john.davies@xo.com, jmckay@rmwt.com
24	Welby Jacob Canal Company	Darryl Lehmitz	(801) 718-3327		darryllehmitz@yahoo.com
99	Unknown				

QUALITY LEVEL	DEFINITION
A	ONLY AT LOCATION WHERE UTILITY IS EXPOSED AND SURVEYED FOR VERTICAL DEPTH
B	LOCATION OBTAINED THROUGH SURFACE GEOPHSYSICAL METHODS
C	LOCATION BASED ON OBSERVANCE OF ABOVE GROUND FEATURES
D	LOCATION BASED ON EXISTING RECORDS AND/OR RECOLLECTIONS

LEGEND

- EXISTING FIBER DUCT
- swr — EXISTING SEWER LINE
- be — EXISTING BURIED ELECTRIC
- e — EXISTING OVERHEAD ELECTRIC
- fo — EXISTING OVERHEAD FIBER OPTIC LINE
- EXISTING BURIED FIBER OPTIC LINE
- g — EXISTING GAS LINE
- ir — EXISTING PRESS./PIPED IRRIG.
- sd — EXISTING STORM DRAIN
- tel — EXISTING OVERHEAD TELEPHONE
- btel — EXISTING BURIED TELEPHONE
- wtr — EXISTING WATER LINE
- td — EXISTING DUCT BANK CONDUIT
- tal3 — EXISTING TAIL CIRCUIT CONDUIT
- OPEN DITCH
- xc — EXISTING EMPTY CONDUIT
- BE — PROPOSED BURIED ELECTRIC
- E — PROPOSED OVERHEAD ELECTRIC
- FO — PROPOSED FIBER OPTIC LINE
- G — PROPOSED GAS LINE
- IR — PROPOSED IRRIGATION LINE
- SD — PROPOSED STORM DRAIN LINE
- BTEL — PROPOSED BURIED TELEPHONE LINE
- SWR — PROPOSED SEWER LINE
- WTR — PROPOSED WATER LINE
- 1D — PROPOSED ATMS

ACP	ASBESTOS CEMENT PIPE	MSS	SANITARY SEWER MANHOLE
DIP	DUCTILE IRON PIPE	MSD	STORM DRAIN MANHOLE
	CATCH BASIN / JUNCTION BOX		WATER MH
	FIRE HYDRANT		WATER/IRRIG VALVE
	JUNCTION BOX		PROPOSED CATCH BASIN
	POWER POLE		PROPOSED POWER POLE
	SANITARY SEWER MANHOLE	PB	PULL BOX
	STREET LIGHT		IRRIGATION MH
	STORM DRAIN MANHOLE	PUE	PUBLIC UTILITY EASEMENT
	TELCOM MH	PVC	POLY VINYL CHORIDE
	TELEPHONE PEDESTAL/ CABLE TV BOX		TEST HOLE
TH XX	TESTHOLE I.D.	IDB	IRRIGATION DIVERSION BOX
	WATER METER	CPP	CORRUGATED PLASTIC PIPE

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
DATE 9/15/2016
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PIN 12566
S-0154(12)11

UTILITY LEGEND AND NOTES

PROJECT
PROJECT NUMBER
SHEET NO. 114UTDT-01

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TEST HOLE	DATE	STREET	UTILITY TYPE	STATION	OFFSET	GROUND ELEVATION	DEPTH TOP OF UTILITY	TOP OF UTILITY ELEVATION	BOTTOM OF UTILITY ELEVATION	OWNER	SIZE (IN.)	MATERIAL	NOTES
TH 114-01	8/16/2016	Bangerter Hwy	Fiber	1019+68.48	98.2 RT	4642.008	5.26	4636.748	N/A	MBI, ATT, Zayo, First Digital	Duct	Poly	Offset facing North
TH 114-02	8/12/2016	Bangerter Hwy	Fiber	1026+76.57	16.8 LT	4650.339	2.71	4647.629	4647.379	UDOT	(1) 2 In (1) 3 In	PVC	Offset facing North. Had to locate no blue stakes, location of dig site said "no power and no fiber"
TH 114-03	8/12/2016	Bangerter Hwy	Fiber	1026+72.51	106.3 RT	4649.460	5.63	4643.830	N/A	First Digital	Duct	Poly	Offset facing North
TH 114-04	8/12/2016	Bangerter Hwy	Power / Fiber	1027+31.22	114.6 RT	4649.563	3.78	4645.783	4644.950	RMP / First Digital	(1) 6 In (1) 4 In	PVC	Offset facing North
TH 114-10	8/10/2016	Bangerter Hwy	Fiber	1031+70.42	29.4 LT	4659.719	3.70	4656.019	4655.769	UDOT/Syringa	(1) 3 In, (1) 2 In	PVC	Offset facing North
TH 114-11	8/10/2016	Bangerter Hwy	Fiber	1034+24.04	27.9 LT	4663.058	3.62	4659.438	4659.188	UDOT/Syringa	(1) 3 In, (1) 2 In	PVC	Offset facing North
TH 114-12	8/18/2016	Bangerter Hwy	Fiber	1033+78.16	104.7 RT	4657.492	5.62	4651.872	N/A	First Digital	Duct	Poly	Offset facing North
TH 114-13	8/10/2016	Bangerter Hwy	Fiber	1038+95.87	24.1 LT	4666.012	2.71	4663.302	4663.052	UDOT/Syringa	3 Inches	PVC	Offset facing North
TH 114-14	8/17/2016	Bangerter Hwy	Fiber	1037+97.98	99.1 RT	4661.325	3.85	4657.475	N/A	MBI, ATT, Zayo, First Digital	Duct	Poly	Offset facing North
TH 114-15	8/10/2016	Bangerter Hwy	Fiber	1045+19.00	45.1 LT	4667.724	2.37	4665.354	4665.104	UDOT/Syringa	3 Inches	PVC	Offset facing North
TH 114-16	8/16/2016	Bangerter Hwy	Fiber	1043+04.85	86.7 RT	4660.069	5.12	4654.949	N/A	MBI, ATT, Zayo, First Digital	Duct	Poly	Offset facing North

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
9/15/2016 DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY TEST HOLE DATA

SHEET NO. 114UTDT-02

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UTILITY CONTACTS

ID Number	Company Name	Contact	Phone Number	Cell Number	E-mail
1	United States Department of the Interior Bureau of Reclamation	Alan Christensen, Kieth Marvin		(801) 379-1098, (801) 379-1193	achristensen@usbr.gov, kmarvin@usbr.gov
2	CenturyLink (with a cc: to Terra Technologies, Koby Dutson)	Darren Keller	(801) 356-6975	(385) 312-6525	darren.keller@centurylink.com, kdutson@terratechllc.com
3	Comcast Cable (with a cc: to Jay Koenig)	David Mascarenas		(801) 831-6622	david_mascarenas@cable.comcast.com jay_koenig@cable.comcast.com
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5	First Digital Telecom	Ryan Finch		(801) 636-5350	rfinch@firstdigital.com
6	Kearns Improvement District	Greg Anderson		(801) 912-0282	ganderson@kearnsid.org
7	Jordan Valley Water Conservancy District	J T Cracroft		(801) 565-4390	jtc@jvwcd.org
8	Kennecott				
9	AT&T	Rob Williamson	(208) 338-2816	(208) 850-7448	rlwilliamson@att.com, duanew@clearwaterconsulting.net
9	Manuel Bros., Inc. (Quanta Power)	Tony Cole, Tony Spagnola	(303) 459-8368	(303) 419-2629, (303) 459-8355	tcole@quantapower.net, tspagnola@quantaservices.com
9	Zayo Group LLC. Fiber Solutions	Kenneth Carter	(720) 334-9505		kenneth.carter@zayo.com
10	Private				
11	Questar Gas Company	Jason McGee, Kyle Secretan	(801) 324-360 (801) 324-3389		Jason.McGee@Questar.com Kyle.secretan@questar.com
12	Rocky Mountain Power	Suzan Jensen		(801) 220-2444	suzan.jensen@rockymountainpower.com
13	South Jordan City Public Works	Raymond Garrison		(801) 253-5230	rgarrison@sjc.utah.gov
14	South Valley Sewer District	Mike Foerster	(801) 571-1166		mikef@svsewer.com
15	Syringa Networks, LLC.	Brandon Wilson	(385) 235-0800	(385) 235-0800	bwilson@syringanetworks.net
16	Taylorsville Bennion Improvement District	Kevin Fenn		(801) 968-9081	kevin@tbid.org
17	UDOT				
18	MCI (Verizon Business)	David McAllister	(303) 214-7115	(801) 301-0937	david.mcallister@verizon.com
19	West Jordan City	David Murphy		(801) 569-5074	davidm@wjordan.com
20	Granger Hunter Improvement District	Brad Paxman		(801) 955-2203	brad@ghid.org
21	Riverton City	Trace Robinson, Scott Hill		(801) 208-3137 (801) 254-0704	trobinson@rivertoncity.com, kshill@rivertoncity.com
22	Salt Lake County Operations Division	Jodi Ballif		(385) 468-6124	jballif@slco.org
23	X O Communications (with a cc: to Jeff McKay, RMWT)	John Davies		(801) 983-2662	john.davies@xo.com, jmckay@rmwt.com
24	Welby Jacob Canal Company	Darryl Lehmitz	(801) 718-3327		darryllehmitz@yahoo.com
99	Unknown				

QUALITY LEVEL	DEFINITION
A	ONLY AT LOCATION WHERE UTILITY IS EXPOSED AND SURVEYED FOR VERTICAL DEPTH
B	LOCATION OBTAINED THROUGH SURFACE GEOPHYSICAL METHODS
C	LOCATION BASED ON OBSERVANCE OF ABOVE GROUND FEATURES
D	LOCATION BASED ON EXISTING RECORDS AND/OR RECOLLECTIONS

LEGEND

duct	EXISTING FIBER DUCT
swr	EXISTING SEWER LINE
be	EXISTING BURIED ELECTRIC
e	EXISTING OVERHEAD ELECTRIC
fo	EXISTING OVERHEAD FIBER OPTIC LINE
bfo	EXISTING BURIED FIBER OPTIC LINE
g	EXISTING GAS LINE
ir	EXISTING PRESS./PIPED IRRIG.
sd	EXISTING STORM DRAIN
tel	EXISTING OVERHEAD TELEPHONE
btel	EXISTING BURIED TELEPHONE
wtr	EXISTING WATER LINE
1d	EXISTING DUCT BANK CONDUIT
tal3	EXISTING TAIL CIRCUIT CONDUIT
	OPEN DITCH
xc	EXISTING EMPTY CONDUIT
BE	PROPOSED BURIED ELECTRIC
E	PROPOSED OVERHEAD ELECTRIC
FO	PROPOSED FIBER OPTIC LINE
G	PROPOSED GAS LINE
IR	PROPOSED IRRIGATION LINE
SD	PROPOSED STORM DRAIN LINE
BTEL	PROPOSED BURIED TELEPHONE LINE
SWR	PROPOSED SEWER LINE
WTR	PROPOSED WATER LINE
1D	PROPOSED ATMS

ACP	ASBESTOS CEMENT PIPE	MSS	SANITARY SEWER MANHOLE
DIP	DUCTILE IRON PIPE	MDS	STORM DRAIN MANHOLE
	CATCH BASIN / JUNCTION BOX		WATER MH
	FIRE HYDRANT		WATER/IRRIG VALVE
	JUNCTION BOX		PROPOSED CATCH BASIN
	POWER POLE		PROPOSED POWER POLE
	SANITARY SEWER MANHOLE	PB	PULL BOX
	STREET LIGHT		IRRIGATION MH
	STORM DRAIN MANHOLE	PUE	PUBLIC UTILITY EASEMENT
	TELCOM MH	PVC	POLY VINYL CHLORIDE
	TELEPHONE PEDESTAL/ CABLE TV BOX		TEST HOLE
TH XX	TESTHOLE I.D.	IDB	IRRIGATION DIVERSION BOX
	WATER METER	CPP	CORRUGATED PLASTIC PIPE

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY HAB
QC CHECKED BY VR
MM/DD/YY DATE
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 9000 SOUTH
S-0154(12)11 PIN 12566
UTILITY DETAILS

PROJECT
PROJECT NUMBER

SHEET NO. 90UTDT-01

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TEST HOLE	DATE	STREET	UTILITY TYPE	STATION	OFFSET	GROUND ELEVATION	DEPTH TOP OF UTILITY	TOP OF UTILITY ELEVATION	BOTTOM OF UTILITY ELEVATION	OWNER	SIZE (IN.)	MATERIAL	NOTES
TH-5	2/8/2016	Bangerter Hwy	Water	2043+76.98	156.0 RT	4606.064	4.26	4601.804	4601.804	JVWA	66 inches	Concrete lined steel pipe	
TH-6	2/3/2016	Bangerter Hwy	Water	2054+85.47	154.9 RT	4596.206	5.19	4591.016	4591.016	JVWA	78 inches	RCP	Offset facing north
TH 90-01	6/8/2016	Bangerter Hwy	Comm	2030+75.65	63.4 LT	4600.535	5.33	4595.205	N/A	AT&T/MBI	Duct	Poly	Offset facing North
TH 90-02	6/8/2016	Bangerter Hwy	Comm	2036+70.01	36.2 LT	4605.519	5.28	4600.239	N/A	AT&T/MBI	Duct	Poly	Offset facing North
TH 90-03	6/8/2016	Bangerter Hwy	Comm	2036+69.32	23.3 LT	4603.444	3.04	4600.404	4600.154	UDOT/Syringa	3 Inches	Concrete cap PVC	Offset facing North
1 TH 90-04	6/7/2016	Bangerter Hwy	Comm	2050+64.43	11.7 RT	4598.294	8.35	4589.944	N/A	AT&T/MBI	Duct	Poly	Offset facing North
TH 90-06	8/10/2016	9000 South	Fiber	2052+67.10	251.7 LT	4603.215	3.25	4599.965	N/A	Century Link	24 In x 24 In	Concretee duct bank	Offset facing East
1 TH 90-07	8/2/2016	9000 South	Water	2052+58.52	230.8 LT	4602.775	3.75	4599.025	4598.942	West Jordan	1 Inches	Plastic	Offset facing East
TH 90-08	8/10/2016	9000 South	Gas	2052+77.37	255.9 LT	4603.423	3.76	4599.663	4599.163	Questar	6 Inches	Plastic	Offset facing East
TH 90-09	8/9/2016	9000 South	Fiber	2052+50.84	277.9 LT	4604.069	7.26	4596.809	4596.142	UDOT/Syringa	(4) 2 Inches	Poly	Offset facing East
TH 90-10	8/15/2016	9000 South	Water	2052+95.66	308.8 LT	4604.518	4.45	4600.068	4599.068	West Jordan	12 Inches	Ductile Iron	Offset facing East
TH 90-11	8/15/2016	9000 South	Gas	2053+18.00	311.3 LT	4604.375	3.35	4601.025	4600.692	Questar	4 Inches	Poly	Offset facing East
TH 90-12	8/9/2016	9000 South	Fiber/CATV	2053+58.77	72.4 LT	4600.090	3.29	4596.800	4596.467	Comcast	(3) 2 In (1) 4 In	PVC	Offset facing East
TH 90-13	6/13/2016	Bangerter Hwy	Comm	2055+65.92	3.3 LT	4596.946	N/A	N/A	N/A	AT&T/MBI	N/A	N/A	Offset facing North. Dug 11' x 4' wide, dry hole. Found unknown 1 "2" PVC HM 1'. Had utility located, he said +20' in this location
TH 90-14	6/13/2016	Bangerter Hwy	Comm	2062+52.13	32.7 LT	4579.703	5.19	4574.513	N/A	AT&T/MBI	Duct	Poly	Offset facing North
TH 90-15	8/2/2016	9000 South	Gas	2052+51.82	172.6 RT	4596.458	4.41	4592.048	4590.715	Questar	10 In Casing 6 In Gas	Steel	Offset facing NorthOffset facing North. Concrete side wall 1st measure down is 1.90', 2nd measure down is 3.80', 3rd measure down is 4.90'.
1 TH 90-16	8/16/2016	9000 South	Water	2052+84.22	342.5 RT	4593.146	N/A	N/A	N/A	West Jordan	N/A	N/A	offset facing NorthOffset facing North. Concrete side wall 1st measure down is 2.0', 2nd measure down is 3.95', 3rd measure down is 4.70'.
TH 90-16A	8/17/2016	9000 South	Water	2052+88.84	341.1 RT	4593.032	6.15	4586.882	4585.632	West Jordan	15 Inches	Ductile Iron	Offset facing NorthOffset facing North. Concrete side wall 1st measure down is 2.10', 2nd measure down is 4.10', 3rd measure down is 5.0'.
TH 90-17	8/16/2016	9000 South	Water	2053+03.78	377.6 RT	4593.042	5.27	4587.772	4586.772	West Jordan	12 Inches	Ductile Iron	Offset facing North. Lots of debris and garbageOffset facing North. Lots of debris and garbage. Concrete side wall 1st measure down is 2.70', 2nd measure down is 4.70', 3rd measure down is 5.50'.
TH 90-18	6/28/2016	Bangerter Hwy	Wall Footing	2066+77.51	66.8 RT	4557.244	N/A	N/A	N/A	N/A	N/A	Concrete	Offset facing North
TH 90-19	6/28/2016	Bangerter Hwy	Wall Footing	2067+97.69	62.3 RT	4551.274	N/A	N/A	N/A	N/A	N/A	Concrete	offset facing North
TH 90-20	6/29/2016	Bangerter Hwy	Wall Footing	2069+15.86	59.2 RT	4545.519	N/A	N/A	N/A	N/A	N/A	Concrete	Offset facing North
TH 90-21	6/21/2016	Bangerter Hwy	Wall Footing	2069+96.61	57.8 RT	4542.104	N/A	N/A	N/A	N/A	N/A	Concrete	Offset facing North. Lots of debris and garbage
TH 90-22	6/29/2016	Bangerter Hwy	Wall Footing	2070+67.40	56.2 RT	4539.455	N/A	N/A	N/A	N/A	N/A	Concrete	Offset facing North
TH 90-23	6/30/2016	Bangerter Hwy	Wall Footing	2071+64.99	56.8 RT	4536.700	N/A	N/A	N/A	N/A	N/A	Concrete	Offset facing North. 3 - 1" poly lines, HM 2.55
TH 90-24	6/30/2016	Bangerter Hwy	Wall Footing	2072+21.38	55.7 RT	4535.406	N/A	N/A	N/A	N/A	N/A	Concrete	Offset facing North
1 TH 90-25	8/15/2016	9000 South	Gas	2053+35.63	371.8 RT	4593.551	N/A	N/A	N/A	Questar	18 Inches	N/A	Offset facing East. Dry Hole - dug 8' deep x 4' wide. Dug on Blue Stakes
TH 90-26	8/15/2016	9000 South	Water	2053+38.55	371.7 RT	4593.495	N/A	N/A	N/A	West Jordan	N/A	N/A	Offset facing East. Dry Hole - dug 8' deep x 4' wide. Dug on Blue Stakes
TH 90-26A	8/17/2016	9000 South	Water	2053+60.47	374.0 RT	4593.087	N/A	N/A	N/A	West Jordan	N/A	N/A	Offset facing East. Dry Hole - dug 8' deep x 4.5' wide.
TH 90-27	6/13/2016	Bangerter Hwy	Comm	2057+92.51	125.0 RT	4592.719	4.98	4587.739	4587.239	UDOT/Syringa	(4) 1 1/2 Inches	PVC	Offset facing North
TH 90-28	7/29/2016	Bangerter Hwy	Water	2051+43.15	164.1 RT	4597.025	19.26	4577.765	4571.265	Bureau of Reclamation	78 inches	MLSP	Offset Facing North
TH 90-29	8/1/2016	Bangerter Hwy	Storm Drain	2051+52.51	164.3 RT	4596.876	N/A	N/A	N/A	Salt Lake County Flood Control	84 Inches	Metal	Offset facing North. No water line. Found 84" storm drain. Hand Measure - 7.60' running east-west
TH 90-29A	8/1/2016	Bangerter Hwy	Water	2051+58.20	163.1 RT	4596.752	19.63	4577.122	4570.622	Bureau of Reclamation	78 inches	CMP	Offset facing North

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	09/16	DCO	ADDED TESTHOLES.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY WLS
MM/DD/YY DATE
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 9000 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITY DETAILS

SHEET NO. 90UTDT-02

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UTILITY CONTACTS

ID Number	Company Name	Contact	Phone Number	Cell Number	E-mail
1	United States Department of the Interior Bureau of Reclamation	Alan Christensen, Kieth Marvin		(801) 379-1098, (801) 379-1193	achristensen@usbr.gov, kmarvin@usbr.gov
2	CenturyLink (with a cc: to Terra Technologies, Koby Dutson)	Darren Keller	(801) 356-6975	(385) 312-6525	darren.keller@centurylink.com, kdutson@terratechllc.com
3	Comcast Cable (with a cc: to Jay Koenig)	David Mascarenas		(801) 831-6622	david_mascarenas@cable.comcast.com jay_koenig@cable.comcast.com
4	Day Break Secondary Water DC	Keith Hanson		(801) 278-9660	keith@canyonwater.com
5	First Digital Telecom	Ryan Finch		(801) 636-5350	rfinch@firstdigital.com
6	Kearns Improvement District	Greg Anderson		(801) 912-0282	ganderson@kearnsid.org
7	Jordan Valley Water Conservancy District	J T Cracroft		(801) 565-4390	jtc@jvwcd.org
8	Kennecott				
9	AT&T	Rob Williamson	(208) 338-2816	(208) 850-7448	rlwilliamson@att.com, duanew@clearwaterconsulting.net
9	Manuel Bros., Inc. (Quanta Power)	Tony Cole, Tony Spagnola	(303) 459-8368	(303) 419-2629, (303) 459-8355	tcole@quantapower.net, tspagnola@quantaservices.com
9	Zayo Group LLC. Fiber Solutions	Kenneth Carter	(720) 334-9505		kenneth.carter@zayo.com
10	Private				
11	Questar Gas Company	Jason McGee, Kyle Secretan	(801) 324-360 (801) 324-3389		Jason.McGee@Questar.com Kyle.secretan@questar.com
12	Rocky Mountain Power	Suzan Jensen		(801) 220-2444	suzan.jensen@rockymountainpower.com
13	South Jordan City Public Works	Raymond Garrison		(801) 253-5230	rgarrison@sjc.utah.gov
14	South Valley Sewer District	Mike Foerster	(801) 571-1166		mikef@svsewer.com
15	Syringa Networks, LLC.	Brandon Wilson	(385) 235-0800	(385) 235-0800	bwilson@syringanetworks.net
16	Taylorsville Bennion Improvement District	Kevin Fenn		(801) 968-9081	kevin@tbid.org
17	UDOT				
18	MCI (Verizon Business)	David McAllister	(303) 214-7115	(801) 301-0937	david.mcallister@verizon.com
19	West Jordan City	David Murphy		(801) 569-5074	davidm@wjordan.com
20	Granger Hunter Improvement District	Brad Paxman		(801) 955-2203	brad@ghid.org
21	Riverton City	Trace Robinson, Scott Hill		(801) 208-3137 (801) 254-0704	trobinson@rivertoncity.com, kshill@rivertoncity.com
22	Salt Lake County Operations Division	Jodi Ballif		(385) 468-6124	jballif@slco.org
23	X O Communications (with a cc: to Jeff McKay, RMWT)	John Davies		(801) 983-2662	john.davies@xo.com, jmckay@rmwt.com
24	Welby Jacob Canal Company	Darryl Lehmitz	(801) 718-3327		darryllehmitz@yahoo.com
99	Unknown				

QUALITY LEVEL	DEFINITION
A	ONLY AT LOCATION WHERE UTILITY IS EXPOSED AND SURVEYED FOR VERTICAL DEPTH
B	LOCATION OBTAINED THROUGH SURFACE GEOPHYSICAL METHODS
C	LOCATION BASED ON OBSERVANCE OF ABOVE GROUND FEATURES
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LEGEND

duct	EXISTING FIBER DUCT
swr	EXISTING SEWER LINE
be	EXISTING BURIED ELECTRIC
e	EXISTING OVERHEAD ELECTRIC
fo	EXISTING OVERHEAD FIBER OPTIC LINE
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G	PROPOSED GAS LINE
IR	PROPOSED IRRIGATION LINE
SD	PROPOSED STORM DRAIN LINE
BTEL	PROPOSED BURIED TELEPHONE LINE
SWR	PROPOSED SEWER LINE
WTR	PROPOSED WATER LINE
1D	PROPOSED ATMS

ACP	ASBESTOS CEMENT PIPE	MSS	SANITARY SEWER MANHOLE
DIP	DUCTILE IRON PIPE	MSD	STORM DRAIN MANHOLE
	CATCH BASIN / JUNCTION BOX		WATER MH
	FIRE HYDRANT		WATER/IRRIG VALVE
	JUNCTION BOX		PROPOSED CATCH BASIN
	POWER POLE		PROPOSED POWER POLE
	SANITARY SEWER MANHOLE		PULL BOX
	STREET LIGHT		IRRIGATION MH
	STORM DRAIN MANHOLE	PUE	PUBLIC UTILITY EASEMENT
	TELCOM MH	PVC	POLY VINYL CHLORIDE
	TELEPHONE PEDESTAL/ CABLE TV BOX		TEST HOLE
TH XX	TESTHOLE I.D.	IDB	IRRIGATION DIVERSION BOX
	WATER METER	CPP	CORRUGATED PLASTIC PIPE

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY HAB
QC CHECKED BY WLS
DATE MM/DD/YY
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 7000 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITY DETAILS

SHEET NO. 70UTDT-01

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TEST HOLE	DATE	STREET	UTILITY TYPE	STATION	OFFSET	GROUND ELEVATION	DEPTH TOP OF UTILITY	TOP OF UTILITY ELEVATION	BOTTOM OF UTILITY ELEVATION	OWNER	SIZE (IN.)	MATERIAL	NOTES
TH-3	2/3/2016	Bangerter Hwy	Water	3023+46.19	96.4 LT	4517.599	6.98	4510.619	4510.619	JVWA	78 inches	RCP	Offset facing north
TH-4	2/2/2016	Bangerter Hwy	Water	3031+48.43	98.4 LT	4517.665	8.59	4509.075	4509.075	JVWA	78 inches	RCP	Offset facing north
TH 70-01	6/6/2016	Bangerter Hwy	Comm	3016+15.54	68.8 RT	4515.974	8.12	4507.854	N/A	AT&T/MBI	Duct	Poly	Offset facing North
1 TH 70-02	6/14/2016	Bangerter Hwy	Comm	3029+43.90	204.8 LT	4518.909	1.18	4517.729	4517.146	UDOT/Syringa	(1) 1 Inch (4) 1 1/2 Inches	Plastic/PVC	Offset facing East
TH 70-03	7/17/2016	Bangerter Hwy	Power	3029+51.37	229.4 LT	4518.992	2.96	4516.032	4515.532	West Jordan	6 IN	PVC	Offset facing East
TH 70-04	7/18/2016	Bangerter Hwy	Water	3029+68.57	227.4 LT	4519.504	N/A	N/A	N/A	West Jordan	N/A	N/A	Offset facing East Dry Hole Dug 2 1/2' Deep X 4' Wide Big Rocks
TH 70-04A	7/19/2016	Bangerter Hwy	Water	3029+62.98	227.4 LT	4519.293	N/A	N/A	N/A	West Jordan	N/A	N/A	Offset facing East No water line - dug 8'x4' - Found 3, 2" Plastic- No blue stakse- Hand Mesure 3.40
TH 70-05	7/7/2016	7000 South	Water	3029+74.40	226.0 LT	4519.671	N/A	N/A	N/A	West Jordan	N/A	N/A	Offset facing East
TH 70-05A	7/8/2016	7000 South	Water	3029+79.56	226.0 LT	4519.769	3.45	4516.319	4514.986	West Jordan	16 Inches	Ductile Iron	Offset facing East
1 TH 70-06	7/8/2016	7000 South	Gas	3029+88.83	224.8 LT	4519.927	3.50	4516.427	4516.094	Questar	4 Inches	Steel	Offset facing East
TH 70-07	7/18/2016	Bangerter Hwy	Comm	3029+53.65	106.8 RT	4511.600	4.70	4506.900	N/A	UDOT	Duct Bank	Poly	Offset facing East
TH 70-08	7/18/2016	Bangerter Hwy	Power	3029+69.69	123.2 RT	4511.212	5.14	4506.072	4505.572	Rocky Mountain Power	6 Inches	PVC	Offset facing East
TH 70-09	7/7/2016	7000 South	Water	3029+79.25	188.9 RT	4509.036	N/A	N/A	N/A	West Jordan	N/A	N/A	Offset facing East. Dug on Blue Stakes, Dug 9' deep 4' wide dry hole. Found 2 - 1' steel cables at 3.0, HM
1 TH 70-09A	7/8/2016	7000 South	Water	3029+86.47	189.6 RT	4509.094	6.14	4502.954	4501.954	West Jordan	12 Inches	Ductile Iron	Offset facing East
TH 70-10	7/17/2016	Bangerter Hwy	Water	3029+99.10	194.0 RT	4509.066	3.82	4505.246	4503.913	West Jordan	16 Inches	Ductile Iron	Offset facing East
1 TH 70-11	7/8/2016	7000 South	Gas	3029+89.60	196.9 RT	4508.878	3.92	4504.958	4504.625	Questar	4 Inches	Steel	Offset facing East
TH 70-12	7/17/2016	Bangerter Hwy	Comm	3032+66.86	80.3 RT	4511.553	3.71	4507.843	N/A	UDOT/Syringa	Duct Bank	PVC/ Poly	Offset facing North
1 TH 70-13	6/14/2016	Bangerter Hwy	Comm	3041+11.34	73.0 LT	4511.887	N/A	N/A	N/A	Century Link	N/A	N/A	Dug 10' deep x 4' wide dry hole
TH 70-14	7/19/2016	Bangerter Hwy	Comm	3041+25.15	67.1 RT	4511.855	N/A	N/A	N/A	AT&T	N/A	N/A	Offset Facing North- No Crossing- Found Comm lines running North/South - Hand Mesure 10.51
TH 70-15	6/6/2016	Bangerter Hwy	Comm	3044+16.85	64.7 RT	4510.491	7.70	4502.791	N/A	AT&T/MBI	Duct	Poly	Offset facing North
TH 70-16	6/6/2016	Bangerter Hwy	Comm	3020+31.43	68.5 RT	4516.736	4.33	4512.406	4512.281	UDOT/Syringa	(3) .5 Inches	Poly	Offset facing North
TH 70-17	7/27/2016	Bangerter Hwy	Fiber	3030+74.09	132.1 LT	4518.522	2.77	4515.752	4515.335	Comcast	(2) 2.5 Inches	PVC/Plastic	Offset Facing East
TH 70-18	7/27/2016	Bangerter Hwy	Cable TV	3030+74.38	136.0 LT	4518.445	2.86	4515.585	4515.543	Comcast	1/2 Inch	Direct Buried Cable	Offset Facing East

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	09/16	DCO	ADDED TESTHOLES

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY WLS
MM/DD/YY DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY DETAILS

SHEET NO. 70UTDT-02

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UTILITY CONTACTS

ID Number	Company Name	Contact	Phone Number	Cell Number	E-mail
1	United States Department of the Interior Bureau of Reclamation	Alan Christensen, Kieth Marvin		(801) 379-1098, (801) 379-1193	achristensen@usbr.gov, kmarvin@usbr.gov
2	CenturyLink (with a cc: to Terra Technologies, Koby Dutson)	Darren Keller	(801) 356-6975	(385) 312-6525	darren.keller@centurylink.com, kdutson@terratechllc.com
3	Comcast Cable (with a cc: to Jay Koenig)	David Mascarenas		(801) 831-6622	david_mascarenas@cable.comcast.com jay_koenig@cable.comcast.com
4	Day Break Secondary Water DC	Keith Hanson		(801) 278-9660	keith@canyonwater.com
5	First Digital Telecom	Ryan Finch		(801) 636-5350	rfinch@firstdigital.com
6	Kearns Improvement District	Greg Anderson		(801) 912-0282	ganderson@kearnsid.org
7	Jordan Valley Water Conservancy District	J T Cracroft		(801) 565-4390	jtc@jvwcd.org
8	Kennecott				
9	AT&T	Rob Williamson	(208) 338-2816	(208) 850-7448	rlwilliamson@att.com, duanew@clearwaterconsulting.net
9	Manuel Bros., Inc. (Quanta Power)	Tony Cole, Tony Spagnola	(303) 459-8368	(303) 419-2629, (303) 459-8355	tcole@quantapower.net, tspagnola@quantaservices.com
9	Zayo Group LLC. Fiber Solutions	Kenneth Carter	(720) 334-9505		kenneth.carter@zayo.com
10	Private				
11	Questar Gas Company	Jason McGee, Kyle Secretan	(801) 324-360 (801) 324-3389		Jason.McGee@Questar.com Kyle.secretan@questar.com
12	Rocky Mountain Power	Suzan Jensen		(801) 220-2444	suzan.jensen@rockymountainpower.com
13	South Jordan City Public Works	Raymond Garrison		(801) 253-5230	rgarrison@sjc.utah.gov
14	South Valley Sewer District	Mike Foerster	(801) 571-1166		mikef@svsewer.com
15	Syringa Networks, LLC.	Brandon Wilson	(385) 235-0800	(385) 235-0800	bwilson@syringanetworks.net
16	Taylorsville Bennion Improvement District	Kevin Fenn		(801) 968-9081	kevin@tbid.org
17	UDOT				
18	MCI (Verizon Business)	David McAllister	(303) 214-7115	(801) 301-0937	david.mcallister@verizon.com
19	West Jordan City	David Murphy		(801) 569-5074	davidm@wjordan.com
20	Granger Hunter Improvement District	Brad Paxman		(801) 955-2203	brad@ghid.org
21	Riverton City	Trace Robinson, Scott Hill		(801) 208-3137 (801) 254-0704	trobinson@rivertoncity.com, kshill@rivertoncity.com
22	Salt Lake County Operations Division	Jodi Ballif		(385) 468-6124	jballif@slco.org
23	X O Communications (with a cc: to Jeff McKay, RMWT)	John Davies		(801) 983-2662	john.davies@xo.com, jmckay@rmwt.com
24	Welby Jacob Canal Company	Darryl Lehmitz	(801) 718-3327		darryllehmitz@yahoo.com
99	Unknown				

QUALITY LEVEL	DEFINITION
A	ONLY AT LOCATION WHERE UTILITY IS EXPOSED AND SURVEYED FOR VERTICAL DEPTH
B	LOCATION OBTAINED THROUGH SURFACE GEOPHSYSICAL METHODS
C	LOCATION BASED ON OBSERVANCE OF ABOVE GROUND FEATURES
D	LOCATION BASED ON EXISTING RECORDS AND/OR RECOLLECTIONS

LEGEND

duct	EXISTING FIBER DUCT
swr	EXISTING SEWER LINE
be	EXISTING BURIED ELECTRIC
e	EXISTING OVERHEAD ELECTRIC
fo	EXISTING OVERHEAD FIBER OPTIC LINE
bfo	EXISTING BURIED FIBER OPTIC LINE
g	EXISTING GAS LINE
ir	EXISTING PRESS./PIPED IRRIG.
sd	EXISTING STORM DRAIN
tel	EXISTING OVERHEAD TELEPHONE
btel	EXISTING BURIED TELEPHONE
wtr	EXISTING WATER LINE
1d	EXISTING DUCT BANK CONDUIT
tal3	EXISTING TAIL CIRCUIT CONDUIT
	OPEN DITCH
xc	EXISTING EMPTY CONDUIT
BE	PROPOSED BURIED ELECTRIC
E	PROPOSED OVERHEAD ELECTRIC
FO	PROPOSED FIBER OPTIC LINE
G	PROPOSED GAS LINE
IR	PROPOSED IRRIGATION LINE
SD	PROPOSED STORM DRAIN LINE
BTEL	PROPOSED BURIED TELEPHONE LINE
SWR	PROPOSED SEWER LINE
WTR	PROPOSED WATER LINE
1D	PROPOSED ATMS

ACP	ASBESTOS CEMENT PIPE	MSS	SANITARY SEWER MANHOLE
DIP	DUCTILE IRON PIPE	MSD	STORM DRAIN MANHOLE
	CATCH BASIN / JUNCTION BOX		WATER MH
	FIRE HYDRANT		WATER/IRRIG VALVE
	JUNCTION BOX		PROPOSED CATCH BASIN
	POWER POLE		PROPOSED POWER POLE
	SANITARY SEWER MANHOLE	PB	PULL BOX
	STREET LIGHT		IRRIGATION MH
	STORM DRAIN MANHOLE	PUE	PUBLIC UTILITY EASEMENT
	TELCOM MH	PVC	POLY VINYL CHORIDE
	TELEPHONE PEDESTAL/ CABLE TV BOX		TEST HOLE
TH XX	TESTHOLE I.D.	IDB	IRRIGATION DIVERSION BOX
	WATER METER	CPP	CORRUGATED PLASTIC PIPE

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - CONSULTANT NAME

DRAWN BY HAB
QC CHECKED BY DCO
DATE MM/DD/YY
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITY DETAILS

SHEET NO. 54UTDT-01

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TEST HOLE	DATE	STREET	UTILITY TYPE	STATION	OFFSET	GROUND ELEVATION	DEPTH TOP OF UTILITY	TOP OF UTILITY ELEVATION	BOTTOM OF UTILITY ELEVATION	OWNER	SIZE (IN.)	MATERIAL	NOTES
TH-2	2/2/2016	Bangerter Hwy	Water	0+00.00	0.00	4510.535	4.78	4505.755	4505.755	JVWA	78 inches	RCP	Offset facing north
TH 54-01	5/26/2016	Bangerter Hwy	Water	4017+37.72	137.8 LT	4572.329	6.72	4565.609	4560.109	Bureau of Reclamation	66 Inches	MLSP	Offset facing North
TH 54-02	5/26/2016	Bangerter Hwy	Water	4028+80.14	128.4 LT	4557.411	8.30	4549.111	4543.611	Bureau of Reclamation	66 Inches	MLSP	Offset facing North
TH 54-03	5/25/2016	Bangerter Hwy	Water	4030+22.76	127.6 LT	4552.821	9.11	4543.711	4538.211	Bureau of Reclamation	66 Inches	MLSP	Offset facing North
TH 54-04	5/26/2016	Bangerter Hwy	Water	4031+66.90	107.7 LT	4551.221	8.09	4543.131	4537.631	Bureau of Reclamation	66 Inches	MLSP	Offset facing North
TH 54-05	5/25/2016	Bangerter Hwy	Water	4046+48.26	23.2 RT	4506.884	4.57	4502.314	4496.814	Bureau of Reclamation	66 Inches	MLSP	Offset facing North
TH 54-06	5/25/2016	Bangerter Hwy	Water	4046+90.80	20.9 RT	4505.841	4.76	4501.081	4495.581	Bureau of Reclamation	66 Inches	MLSP	Offset facing North
TH 54-07	6/15/2016	Bangerter Hwy	Water	4042+81.11	111.8 LT	4520.253	N/A	N/A	N/A	TBID	N/A	N/A	Offset facing North, Dug 18' x 6' wide were probiing to 12'. Dug on blue stakes, Hand Measure on Comm 6.90
TH 54-08	6/7/2016	Bangerter Hwy	Water	4043+01.74	14.2 RT	4515.498	N/A	N/A	N/A	TBID	N/A	N/A	Offset facing North Dug 10' x 8' wide on cities Blue Stake. Will need to re-evaluate & dig again
TH 54-08A	6/9/2016	Bangerter Hwy	Water	4042+92.87	19.3 RT	4514.037	N/A	N/A	N/A	TBID	N/A	N/A	Offset facing North. Dug 10.5' deep x 5' wide Dry hole
TH 54-08B	6/9/2016	Bangerter Hwy	Water	4042+83.45	13.8 RT	4515.836	N/A	N/A	N/A	TBID	N/A	N/A	Offset facing North
TH 54-09	6/15/2016	Bangerter Hwy	Sewer	4042+90.24	110.4 LT	4519.937	N/A	N/A	N/A	West Jordan	N/A	N/A	Offset facing North, Dug on cities blue stakes 11' deep x 6' wide, probing 15'. Found storm drain pipe 18" CMP. Hand Measure - 5', filled vac tank
TH 54-10	6/22/2016	Bangerter Hwy	Comm	4031.69.54	110.4 LT	4551.206	3.67	4547.536	4547.036	1/0/1900	(4) 1.5 Inches	Poly	Offset facing North
TH 54-11	6/22/2016	Bangerter Hwy	Comm	4031.77.63	108.5 LT	4551.167	N/A	N/A	N/A	1/0/1900	N/A	N/A	Found storm drain (top) HM 1.7' in the way (18" storm drain)
TH 54-11A	6/23/2016	Bangerter Hwy	Comm	4031+79.74	113.3 LT	4551.183	3.55	4547.633	4546.883	UDOT/Syringa	(1) 3 (4) 1.5 Inches	Poly/PVC	Offset facing North
TH 54-12	6/23/2016	Bangerter Hwy	Power	4031.85.15 3	109.7 LT	4551.133	2.44	4548.693	4547.818	1/0/1900	(3) 1.5 (3) 2 Inches	PVC	Offset facing North
TH 54-13	6/23/2016	Bangerter Hwy	Comm	4035+57.06	117.0 LT	4544.419	5.63	4538.789	4538.289	UDOT/Syringa	(4) 1.5 Inches	Poly	Offseet facing North
TH 54-14	6/21/2016	Bangerter Hwy	Comm	4037+17.54	118.7 LT	4540.235	4.38	4535.855	4535.355	UDOT	(3) 2 Inches	Slurry Casing Poly	Offset facing North
TH 54-15	6/21/2016	Bangerter Hwy	Comm	4037+39.74	113.3 LT	4540.165	7.76	4532.405	4531.738	AT&T	(4) 2 Inches	Poly	Offset facing North
TH 54-16	6/21/2016	Bangerter Hwy	Comm	4039+98.90	112.2 LT	4530.316	N/A	N/A	N/A	Century Link	N/A	N/A	Offset facing North. Found the duct running north to south HM 6'. Dug 11' deep x 4' wide no Century Link - Dry Hole
TH 54-17	6/22/2016	Bangerter Hwy	Comm	4040+10.09	107.4 LT	4529.394	4.95	4524.444	4523.944	UDOT/Syringa	(4) 1.5 Inches	Poly	Offset facing North
TH 54-18	6/15/2016	Bangerter Hwy	Comm	4042+41.71	112.8 LT	4521.001	7.85	4513.151	N/A	UDOT/Syringa	Duct	Poly	Offset facing North
TH 54-18A	6/20/2016	Bangerter Hwy	Comm	4042+40.40	106.0 LT	4521.240	4.03	4517.210	4516.543	UDOT/Syringa	(4) 2 Inch	Poly	Offset facing North. Slurry casing, 1' storm drain. Hand Measure - 13", 3 layers of gomat (1st gomat - 12", 2nd - 24", 3rd - 3.60')
TH 54-19	6/20/2016	Bangerter Hwy	Comm	4045+54.50	100.9 LT	4510.628	4.29	4506.338	4505.671	UDOT/Syringa	(4) 2 Inch	Poly	Offset facing North. Slurry casing.
TH 54-20	6/17/2016	Bangerter Hwy	Comm	4046+59.23	17.1 RT	4506.353	4.39	4501.963	4501.546	Century Link	(1) 1 inch (1) 4 Inch	Plastic/PVC	Offset facing North
TH 54-21	7/28/2016	Bangerter Hwy	Power	4042+24.52	109.5 LT	4521.760	N/A	N/A	N/A	West Jordan	N/A	N/A	Offset facing north dry hole. No blue stakes. Dug 9.5 ft depth x 4 ft wide
TH 54-24	7/28/2016	Bangerter Hwy	Fiber	4036+31.72	105.6 LT	4543.903	13.92	4529.983	4529.483	Manul Bro	(3) 2 Inches	Poly	Offset facing North

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - CONSULTANT NAME

DRAWN BY HAB
QC CHECKED BY DCO
MM/DD/YY
DATE
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566

UTILITY TEST HOLE DATA

SHEET NO. 54UTDT-02

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
bctv-1001-03	1	COMCAST	CABLE TV			D	BURIED		
bduct-1000-09	1, 2, 3, 4, 10	MBI, ATT, ZAYO	FIBER DUCT			B	BURIED	TH 114-01, 114-03	
bduct-1000-05	1, 2, 3, 4, 10	FIRST DIGITAL	FIBER DUCT			B	BURIED		
be-1001-12	1	RMP	POWER			D	BURIED		
be-1004-12	1, 2, 16	RMP	POWER			D	BURIED		
bfo-1000-17	1	UDOT	FIBER			B	BURIED		
bfo-1001-02	1, 18	CENTURY LINK	FIBER			D	BURIED		
bfo-1002-17	1, 2, 3, 4, 10	UDOT	FIBER			B	BURIED	TH 114-02	
btel-1000-02	1, 18	CENTURY LINK	TELEPHONE			D	BURIED		
btel-1001-02	1	CENTURY LINK	TELEPHONE			D	BURIED		
ctv-1000-03	1, 18	COMCAST	CABLE TV			D	AERIAL		
ctv-1002-03	1	COMCAST	CABLE TV			D	AERIAL		
e-1000-12	1, 18	RMP	POWER			D	AERIAL		
e-1002-12	1	RMP	POWER			D	AERIAL		
g-1000-11	1, 18	QUESTAR	GAS	6 IN		D			
g-1002-11	1, 2	QUESTAR	GAS	2 IN		D			
irr-1000-10	1, 2, 3, 4, 10	PRIVATE	IRRIGATION			D			
irr-1001-10	1	PRIVATE	IRRIGATION	18 IN		C			
irr-1002-10	1	PRIVATE	IRRIGATION	18 IN		C			
ms-0587-14	1	SVSD	SANITARY SEWER			B			
msd-0043-17	1	UDOT	STORM DRAIN			B			
msd-0507-17	1	UDOT	STORM DRAIN			B			
msd-0531-17	1	UDOT	STORM DRAIN			B			
msd-0547-17	1	UDOT	STORM DRAIN			B			
sd-1000-17	1	UDOT	STORM DRAIN	36 IN		C			
sd-1001-17	1	UDOT	STORM DRAIN	36 IN		C			
sd-1002-17	1	UDOT	STORM DRAIN	12 IN		D			
sd-1003-13	1	SOUTH JORDAN	STORM DRAIN	15 IN		C			
sd-1004-13	1	SOUTH JORDAN	STORM DRAIN	15 IN		C			
sd-1005-13	1	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sd-1006-13	1	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sd-1007-13	1	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sd-1008-13	1	SOUTH JORDAN	STORM DRAIN	15 IN		D			
sd-1009-17	1	UDOT	STORM DRAIN	12 IN		D			
sd-1010-17	1	UDOT	STORM DRAIN	12 IN		D			
sd-1011-17	1	UDOT	STORM DRAIN	36 IN		C			
sd-1012-13	1	SOUTH JORDAN	STORM DRAIN	6 IN		C			
sd-1013-13	1	SOUTH JORDAN	STORM DRAIN	8 IN		D			
sd-1014-17	1	UDOT	STORM DRAIN	18 IN		C			
sd-1015-17	1	UDOT	STORM DRAIN	36 IN		C			
sd-1016-17	1, 2	UDOT	STORM DRAIN	30 IN		C			
sdi-0152-17	1	UDOT	STORM DRAIN			B			
sdi-0153-17	1	UDOT	STORM DRAIN			B			
sdi-0154-17	1	UDOT	STORM DRAIN			B			
sdi-0199-17	1	UDOT	STORM DRAIN			B			
sdi-0200-17	1	UDOT	STORM DRAIN			B			
sdi-0373-17	1	UDOT	STORM DRAIN			B			
sdi-0553-17	1	UDOT	STORM DRAIN			B			
sdi-0554-13	1	SOUTH JORDAN	STORM DRAIN			B			
sdi-0555-13	1	SOUTH JORDAN	STORM DRAIN			B			
sdi-0556-13	1	SOUTH JORDAN	STORM DRAIN			B			
sdi-0559-17	1	UDOT	STORM DRAIN			B			
ss-1000-14	1, 18	SVSD	SANITARY SEWER	15 IN		D			
wtr-1001-13	1, 18	SOUTH JORDAN	WATER	16 IN		D			
be-1005-12	2	RMP	POWER			D	BURIED		
be-1006-12	2	RMP	POWER			D	BURIED		
be-1007-12	2, 16	RMP	POWER			D	BURIED		
be-1008-12	2, 3	RMP	POWER			D	BURIED		
be-1009-12	2, 3	RMP	POWER			D	BURIED		

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW

APPROVED
9/15/2016
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITIES

SHEET NO. 114UTSM-01

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
be-1010-12	2, 3	RMP	POWER			D	BURIED		
be-1011-12	2, 3	RMP	POWER			D	BURIED		
bfo-1004-05	2, 16, 17, 18	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1005-05	2, 3	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1007-05	2, 3	FIRST DIGITAL	FIBER			B	BURIED		
btel-1002-05	2, 3, 16	FIRST DIGITAL	TELEPHONE			D	BURIED		
btel-1003-05	2, 3	FIRST DIGITAL	TELEPHONE			B	BURIED		
g-1003-11	2, 16	QUESTAR	GAS	2 IN		D			
g-1005-11	2	QUESTAR	GAS	2 IN		D			
sd-1017-17	2	UDOT	STORM DRAIN	18 IN		C			
sd-1018-17	2	UDOT	STORM DRAIN	30 IN		C			
sd-1019-17	2	UDOT	STORM DRAIN	18 IN		C			
sd-1020-17	2	UDOT	STORM DRAIN	30 IN		C			
sd-1021-17	2	UDOT	STORM DRAIN	18 IN		C			
sd-1022-17	2, 3	UDOT	STORM DRAIN	30 IN		C			
sd-1023-17	2, 3	UDOT	STORM DRAIN	18 IN		C			
sd-1024-17	2, 3	UDOT	STORM DRAIN	18 IN		C			
sdi-0155-17	2	UDOT	STORM DRAIN			B			
sdi-0156-17	2	UDOT	STORM DRAIN			B			
sdi-0157-17	2	UDOT	STORM DRAIN			B			
sdi-0158-17	2, 3	UDOT	STORM DRAIN			B			
sdi-0195-17	2, 3	UDOT	STORM DRAIN			B			
sdi-0196-17	2	UDOT	STORM DRAIN			B			
sdi-0197-17	2	UDOT	STORM DRAIN			B			
sdi-0198-17	2	UDOT	STORM DRAIN			B			
ss-1001-14	2, 3	SVSD	SANITARY SEWER	8 IN		D			
wtr-1003-13	2, 3	SOUTH JORDAN	WATER	8 IN		D			
bctv-1004-03	3	COMCAST	CABLE TV			D	BURIED		
bctv-1005-03	3	COMCAST	CABLE TV			D	BURIED		
be-1012-12	3, 4	RMP	POWER			D	BURIED		
be-1015-12	3	RMP	POWER			D	BURIED		
be-1016-12	3, 4, 10	RMP	POWER			D	BURIED		
be-1017-12	3, 4, 10	RMP	POWER			D	BURIED	TH 114-04	
bfo-1008-05	3	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1009-05	3	FIRST DIGITAL	FIBER			B	BURIED		
bfo-1010-05	3	FIRST DIGITAL	FIBER			B	BURIED		
bfo-1011-05	3, 4	FIRST DIGITAL	FIBER			B	BURIED		
btel-1004-02	3	CENTURY LINK	TELEPHONE			D	BURIED		
btel-1005-05	3	FIRST DIGITAL	TELEPHONE			B	BURIED		
btel-1006-05	3	FIRST DIGITAL	TELEPHONE			B	BURIED		
btel-1007-05	3, 4	FIRST DIGITAL	TELEPHONE			B	BURIED		
g-1006-11	3	QUESTAR	GAS	2 IN		D			
g-1010-11	3, 4, 9	QUESTAR	GAS	4 IN		D			
g-1011-11	3, 4	QUESTAR	GAS	2 IN		D			
msd-0504-17	3	UDOT	STORM DRAIN			B			
sd-1025-17	3	UDOT	STORM DRAIN	18 IN		C			
sd-1026-17	3	UDOT	STORM DRAIN	30 IN		C			
sd-1027-13	3	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1028-17	3	UDOT	STORM DRAIN	30 IN		C			
sd-1029-17	3	UDOT	STORM DRAIN	12 IN		D			
sd-1030-13	3	SOUTH JORDAN	STORM DRAIN	24 IN		D			
sd-1031-10	3	PRIVATE	STORM DRAIN	12 IN		D			
sd-1032-17	3	UDOT	STORM DRAIN	18 IN		C			
sd-1033-17	3	UDOT	STORM DRAIN	30 IN		C			
sd-1034-13	3	SOUTH JORDAN	STORM DRAIN	24 IN		D			
sd-1035-13	3	SOUTH JORDAN	STORM DRAIN	24 IN		D			
sd-1036-13	3	SOUTH JORDAN	STORM DRAIN	24 IN		D			
sd-1037-17	3	UDOT	STORM DRAIN	18 IN		C			
sd-1038-17	3, 4	UDOT	STORM DRAIN	30 IN		C			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
DATE 9/15/2016
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PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITIES

SHEET NO. 114UTSM-02

9/8/2016 3:04:58 PM c:\pwworking\jaxu\d0501773\12566_114UTSM-02.dgn

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sd-1039-13	3	SOUTH JORDAN	STORM DRAIN	24 IN		D			
sd-1040-13	3, 4, 9	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sdi-0159-17	3	UDOT	STORM DRAIN			B			
sdi-0160-17	3	UDOT	STORM DRAIN			B			
sdi-0161-17	3	UDOT	STORM DRAIN			B			
sdi-0192-17	3	UDOT	STORM DRAIN			B			
sdi-0193-17	3	UDOT	STORM DRAIN			B			
sdi-0194-17	3	UDOT	STORM DRAIN			B			
sdi-0372-17	3	UDOT	STORM DRAIN			B			
sdi-0560-13	3	SOUTH JORDAN	STORM DRAIN			B			
ss-1002-14	3	SVSD	SANITARY SEWER	21 IN		D			
ss-1003-14	3, 4, 9	SVSD	SANITARY SEWER	8 IN		D			
ss-1006-14	3, 13	SVSD	SANITARY SEWER	8 IN		D			
wtr-1004-13	3	SOUTH JORDAN	WATER	8 IN		D			
wtr-1005-13	3	SOUTH JORDAN	WATER	8 IN		D			
wtr-1006-13	3, 4, 9, 10	SOUTH JORDAN	WATER	8 IN		D			
wtr-1007-13	3, 13	SOUTH JORDAN	WATER	8 IN		D			
wtr-1008-13	3, 4	SOUTH JORDAN	WATER	8 IN		D			
wtr-1009-13	3	SOUTH JORDAN	WATER	6 IN		D			
wtr-1010-13	3	SOUTH JORDAN	WATER	6 IN		D			
wtr-1011-13	3	SOUTH JORDAN	WATER	6 IN		D			
bctv-1006-03	4, 9, 10	COMCAST	CABLE TV			D	BURIED		
bctv-1007-03	4, 9, 10	COMCAST	CABLE TV			D	BURIED		
bctv-1008-03	4, 9, 10	COMCAST	CABLE TV			D	BURIED		
bctv-1010-03	4, 5, 10, 11	COMCAST	CABLE TV			D	BURIED		
bduct-1001-09	4, 5, 10	MBI, ATT, ZAYO	FIBER DUCT			D	BURIED		
bduct-1001-05	4, 5, 10	FIRST DIGITAL	FIBER DUCT			D	BURIED		
be-1018-12	4	RMP	POWER			D	BURIED		
be-1019-12	4, 10	RMP	POWER			D	BURIED		
be-1020-12	4, 9	RMP	POWER			D	BURIED		
be-1021-12	4	RMP	POWER			D	BURIED		
be-1039-12	4, 10	RMP	POWER			D	BURIED		
be-1048-12	4, 9, 10	RMP	POWER			D	BURIED		
be-1059-12	4, 10	RMP	POWER			D	BURIED		
be-1061-12	4, 10	RMP	POWER			D	BURIED		
be-1062-13	4, 10	SOUTH JORDAN	POWER			D	BURIED		
be-1066-13	4, 10	SOUTH JORDAN	POWER			D	BURIED		
be-1067-13	4, 10	SOUTH JORDAN	POWER			D	BURIED		
be-1084-12	4, 5, 10, 11, 15	RMP	POWER			D	BURIED		
be-1086-17	4, 10	UDOT	POWER			D	BURIED		

REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

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PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566

UTILITIES

SHEET NO. 114UTSM-03

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
be-1087-12	4, 5, 10	RMP	POWER			D	BURIED		
be-1088-12	4, 10	RMP	POWER			D	BURIED		
be-1089-12	4, 5, 10	RMP	POWER			D	BURIED		
be-1090-12	4, 5, 10	RMP	POWER			D	BURIED		
be-1092-12	4, 9, 10	RMP	POWER			D	BURIED		
bfo-1013-05	4	FIRST DIGITAL	FIBER			B	BURIED		
bfo-1014-05	4, 10	FIRST DIGITAL	FIBER			B	BURIED		
bfo-1028-17	4, 10, 11, 12, 13, 15	UDOT	FIBER			B	BURIED		
bfo-1029-15	4, 10, 11, 12, 13, 15	SYRINGA	FIBER			B	BURIED		
bfo-1030-02	4, 10	CENTURY LINK	FIBER			B	BURIED		
bfo-1034-15	4, 10	SYRINGA	FIBER			B	BURIED		
bfo-1040-17	4, 9, 10	UDOT	FIBER			B	BURIED		
bfo-1044-17	4, 5, 6, 7, 8, 10	UDOT	FIBER			B	BURIED	TH 114-10, -11, -12, -13, -15	
bfo-1045-18	4, 5, 6, 7, 8, 10	VERIZON	FIBER			B	BURIED		
btel-1008-05	4	FIRST DIGITAL	TELEPHONE			B	BURIED		
btel-1009-05	4, 10	FIRST DIGITAL	TELEPHONE			B	BURIED		
btel-1015-05	4, 10	FIRST DIGITAL	TELEPHONE			B	BURIED		
btel-1016-02	4, 10	CENTURY LINK	TELEPHONE			B	BURIED		
btel-1023-05	4, 5, 10, 11, 14	FIRST DIGITAL	TELEPHONE			B	BURIED		
btel-1024-02	4, 5, 10	CENTURY LINK	TELEPHONE			B	BURIED		
e-1003-12	4, 9, 10, 11, 12, 15	RMP	POWER			D	AERIAL		
g-1012-11	4, 13	QUESTAR	GAS	2 IN		D			
g-1013-11	4	QUESTAR	GAS	2 IN		D			
g-1015-11	4	QUESTAR	GAS	2 IN		D			
g-1016-11	4	QUESTAR	GAS	2 IN		D			
g-1020-11	4, 9, 10	QUESTAR	GAS	2 IN		D			
g-1030-11	4, 5, 10	QUESTAR	GAS	4 IN		B			
irr-1000-04	4, 9, 10	DAYBREAK	IRRIGATION PRESSURIZED	6 IN		D			
irr-1001-04	4, 9	DAYBREAK	IRRIGATION PRESSURIZED	6 IN		D			
irr-1003-10	4, 10, 11, 12, 13, 15	PRIVATE	IRRIGATION			D			
irr-1006-10	4, 9, 10	PRIVATE	IRRIGATION	18 IN		D			
irr-1007-10	4, 9, 10	PRIVATE	IRRIGATION	18 IN		C			
irr-1013-13	4, 5, 10	SOUTH JORDAN	IRRIGATION	24 IN		C			
irr-1014-13	4, 5, 10	SOUTH JORDAN	IRRIGATION	18 IN		C			
irr-1015-13	4, 5, 10, 11, 14	SOUTH JORDAN	IRRIGATION	18 IN		C			
irr-1016-13	4, 5, 10	SOUTH JORDAN	IRRIGATION	18 IN		C			
irr-1017-13	4, 10	SOUTH JORDAN	IRRIGATION	18 IN		C			
irr-1020-13	4, 9, 10	SOUTH JORDAN	IRRIGATION	24 IN		C			
irr-1022-13	4, 5, 9, 10	SOUTH JORDAN	IRRIGATION	24 IN		C			
ms-0515-14	4, 10	SVSD	SANITARY SEWER			B			
ms-0517-99	4, 10	UNKNOWN	SANITARY SEWER			B			
ms-0518-99	4, 10	UNKNOWN	SANITARY SEWER			B			
ms-0519-06	4	KEARNS	SANITARY SEWER			B			
ms-0520-06	4	KEARNS	SANITARY SEWER			B			
msd-0040-13	4, 10	SOUTH JORDAN	STORM DRAIN			B			
msd-0058-13	4, 10	SOUTH JORDAN	STORM DRAIN			B			
msd-0059-17	4, 9	UDOT	STORM DRAIN			B			
sd-1041-17	4	UDOT	STORM DRAIN	18 IN		C			
sd-1042-17	4, 10	UDOT	STORM DRAIN	30 IN		C			
sd-1044-13	4, 9, 10	SOUTH JORDAN	STORM DRAIN	24 IN		D			
sd-1048-13	4, 9	SOUTH JORDAN	STORM DRAIN	24 IN		D			
sd-1049-17	4, 10	UDOT	STORM DRAIN	12 IN		C			
sd-1052-17	4, 10	UDOT	STORM DRAIN	30 IN		C			
sd-1053-17	4, 5, 10	UDOT	STORM DRAIN	30 IN		C			
sd-1055-17	4, 9	UDOT	STORM DRAIN	8 IN		C			
sd-1078-17	4, 10	UDOT	STORM DRAIN	48 IN		C			
sd-1080-17	4, 9, 10	UDOT	STORM DRAIN	48 IN		C			
sd-1081-13	4, 10	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1093-17	4, 5, 10	UDOT	STORM DRAIN	18 IN		C			

REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
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DATE 9/15/2016
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PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITIES

SHEET NO. 114UTSM-04

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sd-1094-13	4, 10	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1102-13	4, 9, 10	SOUTH JORDAN	STORM DRAIN	48 IN		C			
sd-1103-13	4, 10	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1109-17	4, 10	UDOT	STORM DRAIN	8 IN		C			
sd-1110-17	4, 5, 10	UDOT	STORM DRAIN	10 IN		C			
sd-1111-17	4, 5, 10	UDOT	STORM DRAIN	10 IN		C			
sd-1114-13	4, 5, 10	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1115-17	4, 5, 10	UDOT	STORM DRAIN	30 IN		C			
sdi-0162-17	4	UDOT	STORM DRAIN			B			
sdi-0163-17	4, 10	UDOT	STORM DRAIN			B			
sdi-0164-17	4, 5, 10	UDOT	STORM DRAIN			B			
sdi-0190-17	4, 10	UDOT	STORM DRAIN			B			
sdi-0191-17	4	UDOT	STORM DRAIN			B			
sdi-0216-17	4, 5, 10	UDOT	STORM DRAIN			B			
sdi-0236-17	4, 10	UDOT	STORM DRAIN			B			
sdi-0237-13	4, 10	SOUTH JORDAN	STORM DRAIN			B			
sdi-0238-17	4, 10	UDOT	STORM DRAIN			B			
sdi-0239-17	4, 9	UDOT	STORM DRAIN			B			
sdi-0240-10	4, 9, 10	PRIVATE	IRRIGATION			B			
sdi-0251-17	4, 10	UDOT	STORM DRAIN			B			
sdi-0252-17	4, 10	UDOT	STORM DRAIN			B			
ss-1011-06	4, 10	KEARNS	SANITARY SEWER	8 IN		C			
ss-1019-14	4, 10, 13	SVSD	SANITARY SEWER	8 IN		C			
ss-1020-99	4, 10	UNKNOWN	SANITARY SEWER	6 IN		C			
ss-1021-99	4, 10	UNKNOWN	SANITARY SEWER	6 IN		C			
wtr-1012-13	4, 13	SOUTH JORDAN	WATER	8 IN		D			
wtr-1013-13	4	SOUTH JORDAN	WATER	6 IN		D			
wtr-1016-13	4	SOUTH JORDAN	WATER	6 IN		D			
wtr-1017-13	4	SOUTH JORDAN	WATER	6 IN		D			
wtr-1022-13	4, 10, 13	SOUTH JORDAN	WATER	8 IN		D			
wtr-1026-13	4, 9, 10	SOUTH JORDAN	WATER	6 IN		D			
wtr-1027-13	4, 9, 10	SOUTH JORDAN	WATER	8 IN		D			
wtr-1030-13	4, 9	SOUTH JORDAN	WATER	6 IN		D			
bctv-1017-03	5, 9	COMCAST	CABLE TV			D	BURIED		
bctv-1019-03	5, 6	COMCAST	CABLE TV			D	BURIED		
bctv-1020-03	5, 6	COMCAST	CABLE TV			D	BURIED		
bctv-1021-03	5	COMCAST	CABLE TV			D	BURIED		
bduct-1002-09	5, 6, 7, 8, 10	MBI, ATT, ZAYO	FIBER DUCT			B	BURIED	TH 114-14, 114-16	
bduct-1002-05	5, 6, 7, 8, 10	FIRST DIGITAL	FIBER DUCT			B	BURIED		
be-1091-12	5, 10	RMP	POWER			D	BURIED		
be-1096-12	5, 10, 14	RMP	POWER			D	BURIED		
be-1097-12	5, 9	RMP	POWER			D	BURIED		
be-1100-12	5, 6	RMP	POWER			D	BURIED		
be-1102-12	5	RMP	POWER			D	BURIED		
bfo-1049-02	5, 9	CENTURY LINK	FIBER			D	BURIED		
btel-1027-02	5, 6	CENTURY LINK	TELEPHONE			D	BURIED		
btel-1028-02	5, 6	CENTURY LINK	TELEPHONE			D	BURIED		
g-1044-11	5, 9	QUESTAR	GAS	2 IN		D			
g-1049-11	5, 6, 7	QUESTAR	GAS	4 IN		D			
g-1050-11	5, 6	QUESTAR	GAS	4 IN		D			
g-1051-11	5	QUESTAR	GAS	2 IN		D			
g-1052-11	5, 14	QUESTAR	GAS	2 IN		D			
g-1053-11	5, 6	QUESTAR	GAS	2 IN		D			
irr-1023-13	5, 10	SOUTH JORDAN	IRRIGATION	18 IN		C			
irr-1024-13	5, 10	SOUTH JORDAN	IRRIGATION	18 IN		C			
ms-0595-14	5	SVSD	SANITARY SEWER			D			
ms-0596-14	5	SVSD	SANITARY SEWER			D			
ms-0597-14	5	SVSD	SANITARY SEWER			D			
msd-0526-13	5	SOUTH JORDAN	STORM DRAIN			B			
msd-0534-13	5	SOUTH JORDAN	STORM DRAIN			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

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9/15/2016
DATE
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566

UTILITIES

SHEET NO. 114UTSM-05

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
msd-0543-13	5	SOUTH JORDAN	STORM DRAIN			B			
sd-1125-13	5, 10	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sd-1129-17	5	UDOT	STORM DRAIN	24 IN		C			
sd-1130-13	5	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sd-1131-17	5	UDOT	STORM DRAIN	24 IN		C			
sd-1132-13	5	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sd-1133-13	5	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1134-13	5, 6, 7	SOUTH JORDAN	STORM DRAIN	30 IN		D			
sd-1135-13	5	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1136-17	5, 6	UDOT	STORM DRAIN	24 IN		C			
sd-1137-17	5, 6	UDOT	STORM DRAIN	18 IN		C			
sd-1138-13	5	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1139-17	5, 6	UDOT	STORM DRAIN	18 IN		C			
sd-1140-17	5, 6	UDOT	STORM DRAIN	24 IN		C			
sd-1272-13	5	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sdi-0165-17	5	UDOT	STORM DRAIN			B			
sdi-0166-17	5	UDOT	STORM DRAIN			B			
sdi-0167-17	5	UDOT	STORM DRAIN			B			
sdi-0168-17	5, 6	UDOT	STORM DRAIN			B			
sdi-0189-17	5, 6	UDOT	STORM DRAIN			B			
sdi-0244-13	5, 10	SOUTH JORDAN	STORM DRAIN			B			
sdi-0514-17	5, 6	UDOT	STORM DRAIN			B			
sdi-0577-13	5	SOUTH JORDAN	STORM DRAIN			B			
sdi-0580-13	5	SOUTH JORDAN	STORM DRAIN			B			
sdi-0581-13	5	SOUTH JORDAN	STORM DRAIN			B			
ss-1047-14	5, 6, 7, 8	SVSD	SANITARY SEWER	8 IN		D			
ss-1048-14	5	SVSD	SANITARY SEWER	8 IN		D			
ss-1051-14	5	SVSD	SANITARY SEWER	8 IN		D			
wtr-1036-13	5, 10	SOUTH JORDAN	WATER	8 IN		D			
wtr-1037-13	5, 10	SOUTH JORDAN	WATER	6 IN		D			
wtr-1041-13	5, 10, 11, 14	SOUTH JORDAN	WATER	8 IN		D			
wtr-1045-13	5, 6, 7, 8	SOUTH JORDAN	WATER	8 IN		D			
wtr-1046-13	5	SOUTH JORDAN	WATER	6 IN		D			
wtr-1047-13	5	SOUTH JORDAN	WATER	6 IN		D			
wtr-1048-13	5	SOUTH JORDAN	WATER	8 IN		D			
wtr-1049-13	5, 14	SOUTH JORDAN	WATER	16 IN		D			
wtr-1050-13	5	SOUTH JORDAN	WATER	8 IN		D			
bctv-1022-03	6, 7	COMCAST	CABLE TV			D	BURIED		
be-1103-12	6, 7	RMP	POWER			D	BURIED		
btel-1029-02	6, 7	CENTURY LINK	TELEPHONE			D	BURIED		
ms-0598-14	6	SVSD	SANITARY SEWER			D			
ms-0599-14	6	SVSD	SANITARY SEWER			D			
ms-0600-14	6	SVSD	SANITARY SEWER			D			
sd-1141-13	6	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1142-17	6	UDOT	STORM DRAIN	18 IN		C			
sd-1143-17	6	UDOT	STORM DRAIN	24 IN		C			
sd-1144-13	6	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1145-13	6	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1146-13	6	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1147-17	6	UDOT	STORM DRAIN	18 IN		C			
sd-1148-17	6, 7	UDOT	STORM DRAIN	24 IN		C			
sdi-0169-17	6	UDOT	STORM DRAIN			B			
sdi-0170-17	6	UDOT	STORM DRAIN			B			
sdi-0186-17	6	UDOT	STORM DRAIN			B			
sdi-0187-17	6	UDOT	STORM DRAIN			B			
sdi-0188-17	6	UDOT	STORM DRAIN			B			
sdi-0511-17	6	UDOT	STORM DRAIN			B			
sdi-0512-17	6	UDOT	STORM DRAIN			B			
sdi-0513-17	6	UDOT	STORM DRAIN			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

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DATE
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PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITIES

SHEET NO. 114UTSM-06

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sdi-0576-13	6	SOUTH JORDAN	STORM DRAIN			B			
ss-1052-14	6	SVSD	SANITARY SEWER	8 IN		D			
wtr-1051-13	6	SOUTH JORDAN	WATER	8 IN		D			
bctv-1023-03	7	COMCAST	CABLE TV			D	BURIED		
bctv-1024-03	7, 8	COMCAST	CABLE TV			D	BURIED		
bctv-1025-03	7, 8	COMCAST	CABLE TV			D	BURIED		
bctv-1026-03	7	COMCAST	CABLE TV			D	BURIED		
be-1104-12	7, 8	RMP	POWER			D	BURIED		
btel-1030-02	7	CENTURY LINK	TELEPHONE			D	BURIED		
g-1055-11	7, 8	QUESTAR	GAS	2 IN		D			
g-1056-11	7	QUESTAR	GAS	2 IN		D			
g-1057-11	7	QUESTAR	GAS	2 IN		D			
g-1058-11	7	QUESTAR	GAS	2 IN		D			
g-1059-11	7, 8	QUESTAR	GAS	2 IN		D			
ms-0601-14	7	SVSD	SANITARY SEWER			D			
ms-0602-14	7	SVSD	SANITARY SEWER			D			
ms-0603-14	7	SVSD	SANITARY SEWER			D			
ms-0604-14	7	SVSD	SANITARY SEWER			D			
sd-1149-17	7	UDOT	STORM DRAIN	18 IN		C			
sd-1150-17	7	UDOT	STORM DRAIN	24 IN		C			
sd-1151-13	7	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1152-17	7	UDOT	STORM DRAIN	24 IN		C			
sd-1153-17	7	UDOT	STORM DRAIN	18 IN		C			
sd-1154-13	7	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1155-17	7	UDOT	STORM DRAIN	18 IN		C			
sd-1156-17	7, 8	UDOT	STORM DRAIN	18 IN		C			
sdi-0171-17	7	UDOT	STORM DRAIN			B			
sdi-0172-17	7	UDOT	STORM DRAIN			B			
sdi-0173-17	7	UDOT	STORM DRAIN			B			
sdi-0183-17	7	UDOT	STORM DRAIN			B			
sdi-0184-17	7	UDOT	STORM DRAIN			B			
sdi-0185-17	7	UDOT	STORM DRAIN			B			
sdi-0585-17	7	UDOT	STORM DRAIN			B			
ss-1053-14	7	SVSD	SANITARY SEWER	8 IN		D			
ss-1054-14	7	SVSD	SANITARY SEWER	8 IN		D			
ss-1055-14	7	SVSD	SANITARY SEWER	8 IN		D			
wtr-1052-13	7	SOUTH JORDAN	WATER	8 IN		D			
wtr-1053-13	7	SOUTH JORDAN	WATER	8 IN		D			
wtr-1054-13	7	SOUTH JORDAN	WATER	8 IN		D			
ms-0605-14	8	SVSD	SANITARY SEWER			D			
sd-1157-17	8	UDOT	STORM DRAIN	18 IN		C			
sd-1158-17	8	UDOT	STORM DRAIN	18 IN		C			
sd-1159-17	8	UDOT	STORM DRAIN	18 IN		C			
sdi-0174-17	8	UDOT	STORM DRAIN			B			
sdi-0180-17	8	UDOT	STORM DRAIN			B			
sdi-0181-17	8	UDOT	STORM DRAIN			B			
sdi-0182-17	8	UDOT	STORM DRAIN			B			
bctv-1003-03	9	COMCAST	CABLE TV			D	BURIED		
be-1013-12	9	RMP	POWER			D	BURIED		
be-1036-12	9	RMP	POWER			D	BURIED		
be-1040-13	9	SOUTH JORDAN	POWER			D	BURIED		
be-1041-12	9	RMP	POWER			D	BURIED		
be-1063-13	9	SOUTH JORDAN	POWER			D	BURIED		
be-1064-17	9	UDOT	POWER			D	BURIED		
be-1065-17	9	UDOT	POWER			D	BURIED		
be-1078-13	9	SOUTH JORDAN	POWER			D	BURIED		
be-1081-17	9	UDOT	POWER			D	BURIED		
be-1082-13	9	SOUTH JORDAN	POWER			D	BURIED		
be-1093-12	9	RMP	POWER			D	BURIED		

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
9/15/2016
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITIES

SHEET NO. 114UTSM-07

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
bfo-1033-17	9	UDOT	FIBER			B	BURIED		
bfo-1043-17	9	UDOT	FIBER			B	BURIED		
bfo-1051-02	9	CENTURY LINK	FIBER			D	BURIED		
btel-1010-02	9	CENTURY LINK	TELEPHONE			D	BURIED		
btel-1014-02	9	CENTURY LINK	TELEPHONE			B	BURIED		
btel-1022-02	9	CENTURY LINK	TELEPHONE			B	BURIED		
btel-1026-02	9	CENTURY LINK	TELEPHONE			D	BURIED		
g-1001-11	9	QUESTAR	GAS	6 IN		D			
g-1008-11	9	QUESTAR	GAS	4 IN		D			
g-1023-11	9	QUESTAR	GAS	6 IN		B			
g-1024-11	9	QUESTAR	GAS	4 IN		D			
g-1025-11	9	QUESTAR	GAS	4 IN		B			
g-1026-11	9	QUESTAR	GAS	4 IN		B			
g-1028-11	9	QUESTAR	GAS	4 IN		D			
g-1029-11	9	QUESTAR	GAS	6 IN		D			
g-1038-11	9	QUESTAR	GAS	6 IN		D			HIGH PRESSURE
g-1039-11	9	QUESTAR	GAS	4 IN		D			
g-1040-11	9	QUESTAR	GAS	6 IN		D			
irr-1002-04	9	DAYBREAK	IRRIGATION PRESSURIZED	6 IN		D			
irr-1008-10	9	PRIVATE	IRRIGATION			D			
irr-1021-13	9	SOUTH JORDAN	IRRIGATION	18 IN		C			
irr-1200-13	9	SOUTH JORDAN	IRRIGATION	18 IN		C			
ms-0116-14	9	SVSD	SANITARY SEWER			B			
ms-0117-14	9	SVSD	SANITARY SEWER			B			
ms-0514-14	9	SVSD	SANITARY SEWER			B			
ms-0594-14	9	SVSD	SANITARY SEWER			D			
msd-0061-13	9	SOUTH JORDAN	STORM DRAIN			B			
msd-0062-13	9	SOUTH JORDAN	STORM DRAIN			B			
msd-0502-13	9	SOUTH JORDAN	STORM DRAIN			B			
msd-0544-13	9	SOUTH JORDAN	STORM DRAIN			B			
msd-0546-13	9	SOUTH JORDAN	STORM DRAIN			B			
sd-1045-13	9	SOUTH JORDAN	STORM DRAIN	12 IN		D			
sd-1047-13	9	SOUTH JORDAN	STORM DRAIN	12 IN		C			
sd-1051-13	9	SOUTH JORDAN	STORM DRAIN	12 IN		C			
sd-1082-13	9	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1095-13	9	SOUTH JORDAN	STORM DRAIN	60 IN		C			
sd-1096-13	9	SOUTH JORDAN	STORM DRAIN	24 IN		D			
sd-1098-13	9	SOUTH JORDAN	STORM DRAIN	48 IN		C			
sd-1099-13	9	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1100-13	9	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1268-13	9	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1269-13	9	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1270-13	9	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1271-13	9	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sdi-0241-10	9	PRIVATE	IRRIGATION			B			
sdi-0242-13	9	SOUTH JORDAN	STORM DRAIN			B			
sdi-0243-13	9	SOUTH JORDAN	STORM DRAIN			B			
sdi-0519-13	9	SOUTH JORDAN	STORM DRAIN			B			
sdi-0573-13	9	SOUTH JORDAN	STORM DRAIN			B			
sdi-0574-13	9	SOUTH JORDAN	STORM DRAIN			B			
sdi-0582-13	9	SOUTH JORDAN	STORM DRAIN			B			
sdi-0583-13	9	SOUTH JORDAN	STORM DRAIN			B			
ss-1010-14	9	SVSD	SANITARY SEWER	18 IN		C			
ss-1023-14	9	SVSD	SANITARY SEWER	18 IN		C			
ss-1024-14	9	SVSD	SANITARY SEWER	15 IN		C			
ss-1029-14	9	SVSD	SANITARY SEWER	18 IN		C			
ss-1041-14	9	SVSD	SANITARY SEWER	8 IN		D			
wtr-1018-13	9	SOUTH JORDAN	WATER	16 IN		D			
wtr-1038-13	9	SOUTH JORDAN	WATER	8 IN		D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
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APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITIES

SHEET NO. 114UTSM-08

9/8/2016 3:33:43 PM c:\pwworking\phxd05\917731\12566_114UTSM-08.dgn

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
bctv-1011-03	10, 11	COMCAST	CABLE TV			D	BURIED		
bctv-1012-03	10, 11, 14	COMCAST	CABLE TV			D	BURIED		
be-1030-12	10, 11, 13, 15	RMP	POWER			D	BURIED		
be-1037-12	10	RMP	POWER			D	BURIED		
be-1045-13	10, 11, 13	SOUTH JORDAN	POWER			D	BURIED		
be-1049-12	10, 11, 13	RMP	POWER			D	BURIED		
be-1054-12	10, 11, 13	RMP	POWER			D	BURIED		
be-1068-13	10, 11, 13	SOUTH JORDAN	POWER			D	BURIED		
be-1069-13	10	SOUTH JORDAN	POWER			D	BURIED		
be-1071-13	10, 11, 13	SOUTH JORDAN	POWER			D	BURIED		
be-1077-13	10, 11	SOUTH JORDAN	POWER			D	BURIED		
be-1079-13	10, 11	SOUTH JORDAN	POWER			D	BURIED		
be-1080-13	10, 11	SOUTH JORDAN	POWER			D	BURIED		
be-1083-13	10, 11	SOUTH JORDAN	POWER			D	BURIED		
be-1085-12	10, 11, 14	RMP	POWER			D	BURIED		
bfo-1032-02	10, 11, 13	CENTURY LINK	FIBER			B	BURIED		
bfo-1035-02	10	CENTURY LINK	FIBER			B	BURIED		
btel-1012-05	10, 11, 13	FIRST DIGITAL	TELEPHONE			B	BURIED		
btel-1018-05	10, 13	FIRST DIGITAL	TELEPHONE			B	BURIED		
btel-1021-05	10	FIRST DIGITAL	TELEPHONE			B	BURIED		
g-1021-11	10, 11, 12, 13, 15	QUESTAR	GAS	4 IN		B			
g-1031-11	10	QUESTAR	GAS	4 IN		D			
g-1032-11	10	QUESTAR	GAS	4 IN		D			
g-1036-11	10, 11, 14	QUESTAR	GAS	4 IN		B			
g-1037-11	10	QUESTAR	GAS	4 IN		D			
ms-0516-14	10, 13	SVSD	SANITARY SEWER			B			
ms-0611-14	10	SVSD	SANITARY SEWER			D			
msd-0051-17	10	UDOT	STORM DRAIN			B			
sd-1071-17	10, 11, 13	UDOT	STORM DRAIN	18 IN		C			
sd-1075-17	10, 11, 13	UDOT	STORM DRAIN	18 IN		C			
sd-1076-17	10, 11, 13	UDOT	STORM DRAIN	18 IN		C			
sd-1077-17	10	UDOT	STORM DRAIN	8 IN		C			
sd-1079-17	10	UDOT	STORM DRAIN	18 IN		C			
sdi-0212-17	10, 11	UDOT	STORM DRAIN			B			
sdi-0213-17	10, 11, 13	UDOT	STORM DRAIN			B			
sdi-0214-17	10	UDOT	STORM DRAIN			B			
sdi-0215-17	10	UDOT	STORM DRAIN			B			
sdi-0217-17	10	UDOT	STORM DRAIN			B			
ss-1018-14	10, 11, 13	SVSD	SANITARY SEWER	8 IN		C			
ss-1037-14	10, 11, 14	SVSD	SANITARY SEWER	8 IN		D			
ss-1038-14	10	SVSD	SANITARY SEWER	8 IN		D			
wtr-1021-13	10, 11, 13	SOUTH JORDAN	WATER	8 IN		D			
bctv-1009-03	11, 12, 15	COMCAST	CABLE TV			D	BURIED		
bctv-1013-03	11, 14	COMCAST	CABLE TV			D	BURIED		
bctv-1014-03	11, 14	COMCAST	CABLE TV			D	BURIED		
bctv-1015-03	11, 14	COMCAST	CABLE TV			D	BURIED		
bctv-1016-03	11, 14	COMCAST	CABLE TV			D	BURIED		
bctv-1018-03	11, 14	COMCAST	CABLE TV			D	BURIED		
be-1022-17	11, 13	UDOT	POWER			D	BURIED		
be-1023-12	11, 13	RMP	POWER			D	BURIED		
be-1024-12	11, 13	RMP	POWER			D	BURIED		
be-1026-12	11, 13	RMP	POWER			D	BURIED		
be-1027-12	11, 13, 15	RMP	POWER			D	BURIED		
be-1028-12	11, 13	RMP	POWER			D	BURIED		
be-1029-12	11, 13, 15	RMP	POWER			D	BURIED		
be-1031-12	11, 12, 15	RMP	POWER			D	BURIED		
be-1032-12	11, 12, 15	RMP	POWER			D	BURIED		
be-1033-12	11, 13, 15	RMP	POWER			D	BURIED		
be-1034-17	11, 13, 15	UDOT	POWER			D	BURIED		

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
DATE 9/15/2016
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PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITIES

SHEET NO. 114UTSM-09

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
be-1035-12	11, 13, 15	RMP	POWER			D	BURIED		
be-1042-17	11, 13	UDOT	POWER			D	BURIED		
be-1043-12	11, 12, 15	RMP	POWER			D	BURIED		
be-1044-12	11, 13	RMP	POWER			D	BURIED		
be-1046-12	11, 13	RMP	POWER			D	BURIED		
be-1060-13	11, 13, 15	SOUTH JORDAN	POWER			D	BURIED		
be-1070-12	11, 12, 13, 15	RMP	POWER			D	BURIED		
be-1074-12	11, 12, 15	RMP	POWER			D	BURIED		
be-1094-12	11, 14	RMP	POWER			D	BURIED		
be-1095-12	11, 12, 15	RMP	POWER			D	BURIED		
bfo-1015-05	11, 15	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1016-05	11, 12, 15	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1017-05	11, 13, 15	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1019-05	11, 13	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1020-05	11, 15	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1023-02	11, 13, 15	CENTURY LINK	FIBER			B	BURIED		
bfo-1025-02	11, 12, 15	CENTURY LINK	FIBER			B	BURIED		
bfo-1026-02	11, 15	CENTURY LINK	FIBER			B	BURIED		
bfo-1027-05	11, 12, 15	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1031-02	11, 13	CENTURY LINK	FIBER			B	BURIED		
bfo-1039-02	11, 12, 15	CENTURY LINK	FIBER			B	BURIED		
bfo-1042-03	11, 12, 15	COMCAST	FIBER			B	BURIED		
bfo-1046-05	11, 14	FIRST DIGITAL	FIBER			B	BURIED		
bfo-1047-03	11, 14	COMCAST	FIBER			B	BURIED		
bfo-1048-05	11, 14	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1050-05	11, 14	FIRST DIGITAL	FIBER			D	BURIED		
btel-1013-02	11, 13	CENTURY LINK	TELEPHONE			B	BURIED		
btel-1019-05	11, 12, 15	FIRST DIGITAL	TELEPHONE			B	BURIED		
btel-1025-02	11, 14	CENTURY LINK	TELEPHONE			B	BURIED		
g-1009-11	11, 13	QUESTAR	GAS	4 IN		D			
g-1014-11	11, 15	QUESTAR	GAS	4 IN		D			
g-1034-11	11, 12, 15	QUESTAR	GAS	4 IN		B			
g-1041-11	11, 12, 15	QUESTAR	GAS	4 IN		D			
g-1042-11	11, 15	QUESTAR	GAS	4 IN		D			
g-1043-11	11, 14	QUESTAR	GAS	4 IN		D			
g-1046-11	11, 14	QUESTAR	GAS	4 IN		D			
g-1047-11	11, 15	QUESTAR	GAS	2 IN		D			
irr-1004-10	11, 13	PRIVATE	IRRIGATION			D			
irr-1012-13	11, 12, 15	SOUTH JORDAN	IRRIGATION	18 IN		C			
irr-1018-13	11, 15	SOUTH JORDAN	IRRIGATION	18 IN		C			
irr-1019-13	11	SOUTH JORDAN	IRRIGATION	18 IN		C			
ms-0001-14	11, 14	SVSD	SANITARY SEWER			B			
ms-0002-14	11, 14	SVSD	SANITARY SEWER			B			
ms-0003-14	11	SVSD	SANITARY SEWER			B			
ms-0004-14	11, 13	SVSD	SANITARY SEWER			B			
ms-0610-14	11, 15	SVSD	SANITARY SEWER			D			
msd-0045-17	11, 15	UDOT	STORM DRAIN			B			
msd-0046-17	11, 15	UDOT	STORM DRAIN			B			
msd-0047-17	11, 15	UDOT	STORM DRAIN			B			
msd-0048-17	11, 15	UDOT	STORM DRAIN			B			
msd-0049-17	11	UDOT	STORM DRAIN			B			
msd-0050-17	11	UDOT	STORM DRAIN			B			
msd-0052-17	11, 13	UDOT	STORM DRAIN			B			
msd-0053-17	11, 13	UDOT	STORM DRAIN			B			
sd-1054-17	11, 15	UDOT	STORM DRAIN	18 IN		D			
sd-1056-17	11, 13, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1057-17	11, 13, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1058-17	11, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1059-17	11, 13	UDOT	STORM DRAIN	18 IN		C			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
9/15/2016 DATE
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PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITIES

SHEET NO. 114UTSM-10

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sd-1060-17	11, 13	UDOT	STORM DRAIN	18 IN		C			
sd-1061-17	11, 13	UDOT	STORM DRAIN	18 IN		C			
sd-1065-17	11, 13	UDOT	STORM DRAIN	18 IN		C			
sd-1066-17	11, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1067-17	11, 13, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1073-17	11, 13	UDOT	STORM DRAIN	18 IN		C			
sd-1074-17	11, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1083-17	11, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1084-17	11, 12, 15	UDOT	STORM DRAIN	24 IN		C			
sd-1086-17	11, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1104-17	11, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1105-17	11, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1106-17	11, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1107-17	11, 15	UDOT	STORM DRAIN	8 IN		C			
sd-1108-17	11, 15	UDOT	STORM DRAIN	18 IN		C			
sd-1112-17	11, 15	UDOT	STORM DRAIN	24 IN		C			
sd-1113-13	11	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1116-17	11	UDOT	STORM DRAIN	18 IN		C			
sd-1117-13	11, 14	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1118-17	11, 15	UDOT	STORM DRAIN	24 IN		C			
sd-1122-13	11, 12, 15	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1123-13	11, 15	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1124-13	11, 14, 15	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1126-13	11, 14	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1127-13	11, 15	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1128-13	11, 14	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sdi-0075-17	11, 13, 15	UDOT	STORM DRAIN			B			
sdi-0204-17	11, 15	UDOT	STORM DRAIN			B			
sdi-0205-17	11, 15	UDOT	STORM DRAIN			B			
sdi-0206-17	11, 15	UDOT	STORM DRAIN			B			
sdi-0207-17	11, 15	UDOT	STORM DRAIN			B			
sdi-0208-17	11, 15	UDOT	STORM DRAIN			B			
sdi-0209-17	11, 15	UDOT	STORM DRAIN			B			
sdi-0210-17	11	UDOT	STORM DRAIN			B			
sdi-0211-17	11	UDOT	STORM DRAIN			B			
sdi-0218-17	11, 13	UDOT	STORM DRAIN			B			
sdi-0219-17	11, 13	UDOT	STORM DRAIN			B			
sdi-0220-17	11, 13	UDOT	STORM DRAIN			B			
sdi-0221-17	11, 13	UDOT	STORM DRAIN			B			
sdi-0222-17	11, 13, 15	UDOT	STORM DRAIN			B			
sdi-0516-17	11, 15	UDOT	STORM DRAIN			B			
sdi-0517-17	11, 15	UDOT	STORM DRAIN			B			
sdi-0518-17	11	UDOT	STORM DRAIN			B			
sdi-0520-17	11, 12, 15	UDOT	STORM DRAIN			B			
ss-1008-14	11, 15	SVSD	SANITARY SEWER	8 IN		D			
ss-1017-14	11, 13	SVSD	SANITARY SEWER	15 IN		C			
ss-1022-14	11, 13	SVSD	SANITARY SEWER	15 IN		C			
ss-1030-14	11, 14	SVSD	SANITARY SEWER	15 IN		C			
ss-1035-14	11, 12, 15	SVSD	SANITARY SEWER	8 IN		D			
ss-1039-14	11, 14	SVSD	SANITARY SEWER	8 IN		C			
ss-1040-14	11, 14	SVSD	SANITARY SEWER	15 IN		D			
ss-1043-14	11, 15	SVSD	SANITARY SEWER	8 IN		D			
ss-1044-14	11, 14, 15	SVSD	SANITARY SEWER	8 IN		D			
ss-1045-14	11, 14, 15	SVSD	SANITARY SEWER	8 IN		D			
ss-1046-14	11, 14	SVSD	SANITARY SEWER	8 IN		D			
wtr-1014-13	11, 13	SOUTH JORDAN	WATER	6 IN		D			
wtr-1015-13	11, 13, 14	SOUTH JORDAN	WATER	16 IN		D			
wtr-1019-13	11, 13	SOUTH JORDAN	WATER	8 IN		D			
wtr-1020-13	11, 13	SOUTH JORDAN	WATER	8 IN		D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
9/15/2016
DATE
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITIES

SHEET NO. 114UTSM-11

9/8/2016 3x4250 PM c:\pwworking\hdr\d0501773\12566_114UTSM-11.dgn

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
wtr-1028-13	11, 15	SOUTH JORDAN	WATER	8 IN		D			
wtr-1031-13	11, 12, 13, 15	SOUTH JORDAN	WATER	10 IN		D			
wtr-1033-13	11, 12, 15	SOUTH JORDAN	WATER	20 IN		D			
wtr-1039-13	11, 12, 15	SOUTH JORDAN	WATER	8 IN		D			
wtr-1040-13	11, 15	SOUTH JORDAN	WATER	8 IN		D			
wtr-1042-13	11, 14	SOUTH JORDAN	WATER	8 IN		D			
wtr-1043-13	11, 14	SOUTH JORDAN	WATER	8 IN		D			
wtr-1044-13	11, 14	SOUTH JORDAN	WATER	8 IN		D			
be-1014-17	12	UDOT	POWER			D	BURIED		
be-1025-12	12	RMP	POWER			D	BURIED		
be-1038-12	12	RMP	POWER			D	BURIED		
be-1047-12	12, 15	RMP	POWER			D	BURIED		
be-1050-17	12	UDOT	POWER			D	BURIED		
be-1051-17	12	UDOT	POWER			D	BURIED		
be-1052-17	12	UDOT	POWER			D	BURIED		
be-1053-12	12, 15	RMP	POWER			D	BURIED		
be-1055-12	12, 15	RMP	POWER			D	BURIED		
be-1056-17	12	UDOT	POWER			D	BURIED		
be-1057-13	12, 15	SOUTH JORDAN	POWER			D	BURIED		
be-1058-12	12	RMP	POWER			D	BURIED		
be-1072-17	12	UDOT	POWER			D	BURIED		
be-1073-17	12	UDOT	POWER			D	BURIED		
be-1075-13	12	SOUTH JORDAN	POWER			D	BURIED		
be-1076-17	12	UDOT	POWER			D	BURIED		
be-1098-12	12	RMP	POWER			D	BURIED		
bfo-1003-15	12, 16, 17, 18	SYRINGA	FIBER			D	BURIED		
bfo-1006-05	12	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1012-05	12	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1018-02	12	CENTURY LINK	FIBER			B	BURIED		
bfo-1021-15	12	SYRINGA	FIBER			B	BURIED		
bfo-1022-17	12	UDOT	FIBER			B	BURIED		
bfo-1024-03	12	COMCAST	FIBER			B	BURIED		
bfo-1036-15	12	SYRINGA	FIBER			B	BURIED		
bfo-1037-17	12	UDOT	FIBER			B	BURIED		
bfo-1038-03	12	COMCAST	FIBER			B	BURIED		
bfo-1041-03	12	COMCAST	FIBER			B	BURIED		
btel-1011-05	12	FIRST DIGITAL	TELEPHONE			B	BURIED		
btel-1017-05	12, 15	FIRST DIGITAL	TELEPHONE			B	BURIED		
btel-1020-05	12, 15	FIRST DIGITAL	TELEPHONE			B	BURIED		
g-1004-11	12, 18	QUESTAR	GAS	6 IN		D			
g-1017-11	12	QUESTAR	GAS	4 IN		D			
g-1018-11	12	QUESTAR	GAS	4 IN		B			
g-1019-11	12	QUESTAR	GAS	4 IN		D			
g-1022-11	12	QUESTAR	GAS	4 IN		D			
g-1027-11	12	QUESTAR	GAS	4 IN		B			
g-1033-11	12	QUESTAR	GAS	4 IN		D			
g-1035-11	12	QUESTAR	GAS	4 IN		D			
irr-1005-10	12, 15	PRIVATE	IRRIGATION			D			
irr-1009-13	12	SOUTH JORDAN	IRRIGATION	15 IN		C			
irr-1010-13	12	SOUTH JORDAN	IRRIGATION	18 IN		C			
irr-1011-13	12	SOUTH JORDAN	IRRIGATION	18 IN		C			
ms-0009-14	12	SVSD	SANITARY SEWER			B			
ms-0010-14	12	SVSD	SANITARY SEWER			B			
msd-0054-17	12	UDOT	STORM DRAIN			B			
msd-0055-17	12	UDOT	STORM DRAIN			B			
msd-0056-17	12	UDOT	STORM DRAIN			B			
msd-0057-17	12	UDOT	STORM DRAIN			B			
sd-1043-13	12	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1046-13	12	SOUTH JORDAN	STORM DRAIN	15 IN		C			

REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
DATE 9/15/2016
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITIES

SHEET NO. 114UTSM-12

9/8/2016 3:44:45 PM c:\inwwo\kingjohn\d0501773\12566_114UTSM-12.dgn

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sd-1050-13	12	SOUTH JORDAN	STORM DRAIN	15 IN		C			
sd-1062-13	12	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1063-13	12	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1064-17	12	UDOT	STORM DRAIN	18 IN		C			
sd-1068-17	12	UDOT	STORM DRAIN	18 IN		C			
sd-1069-17	12	UDOT	STORM DRAIN	18 IN		C			
sd-1070-17	12	UDOT	STORM DRAIN	18 IN		C			
sd-1072-17	12	UDOT	STORM DRAIN	18 IN		C			
sd-1085-17	12	UDOT	STORM DRAIN	24 IN		C			
sd-1087-17	12	UDOT	STORM DRAIN	18 IN		C			
sd-1088-17	12	UDOT	STORM DRAIN	18 IN		C			
sd-1089-17	12	UDOT	STORM DRAIN	18 IN		C			
sd-1090-17	12	UDOT	STORM DRAIN	12 IN		C			
sd-1091-17	12	UDOT	STORM DRAIN	18 IN		C			
sd-1092-17	12	UDOT	STORM DRAIN	12 IN		C			
sd-1097-17	12	UDOT	STORM DRAIN	8 IN		C			
sd-1101-17	12	UDOT	STORM DRAIN	8 IN		C			
sd-1119-13	12	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1120-13	12	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1121-13	12, 15	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sdi-0223-17	12	UDOT	STORM DRAIN			B			
sdi-0224-17	12	UDOT	STORM DRAIN			B			
sdi-0225-17	12	UDOT	STORM DRAIN			B			
sdi-0226-17	12	UDOT	STORM DRAIN			B			
sdi-0227-17	12	UDOT	STORM DRAIN			B			
sdi-0228-17	12	UDOT	STORM DRAIN			B			
sdi-0229-17	12	UDOT	STORM DRAIN			B			
sdi-0230-17	12	UDOT	STORM DRAIN			B			
sdi-0231-17	12	UDOT	STORM DRAIN			B			
sdi-0232-17	12	UDOT	STORM DRAIN			B			
sdi-0233-17	12	UDOT	STORM DRAIN			B			
sdi-0234-17	12	UDOT	STORM DRAIN			B			
sdi-0235-17	12	UDOT	STORM DRAIN			B			
sdi-0571-13	12	SOUTH JORDAN	STORM DRAIN			B			
sdi-0578-13	12	SOUTH JORDAN	STORM DRAIN			B			
ss-1015-14	12	SVSD	SANITARY SEWER	15 IN		C			
ss-1025-14	12	SVSD	SANITARY SEWER	12 IN		C			
ss-1026-14	12	SVSD	SANITARY SEWER	12 IN		C			
ss-1027-14	12	SVSD	SANITARY SEWER	12 IN		D			
ss-1028-14	12	SVSD	SANITARY SEWER	12 IN		D			
ss-1031-14	12	SVSD	SANITARY SEWER	12 IN		D			
ss-1032-14	12	SVSD	SANITARY SEWER	8 IN		D			
ss-1033-14	12	SVSD	SANITARY SEWER	8 IN		D			
ss-1034-14	12, 15	SVSD	SANITARY SEWER	8 IN		D			
ss-1036-14	12, 15	SVSD	SANITARY SEWER	8 IN		D			
ss-1042-14	12, 15	SVSD	SANITARY SEWER	8 IN		D			
wtr-1000-13	12, 18	SOUTH JORDAN	WATER	8 IN		D			
wtr-1002-13	12, 18	SOUTH JORDAN	WATER	8 IN		D			
wtr-1023-13	12	SOUTH JORDAN	WATER	8 IN		D			
wtr-1024-13	12	SOUTH JORDAN	WATER	8 IN		D			
wtr-1025-13	12	SOUTH JORDAN	WATER	8 IN		D			
wtr-1029-13	12	SOUTH JORDAN	WATER	8 IN		D			
wtr-1032-13	12	SOUTH JORDAN	WATER	8 IN		D			
wtr-1034-13	12	SOUTH JORDAN	WATER	12 IN		D			
wtr-1035-13	12	SOUTH JORDAN	WATER	6 IN		D			
g-1007-11	13	QUESTAR	GAS	2 IN		D			
ms-0005-14	13	SVSD	SANITARY SEWER			B			
ms-0006-14	13	SVSD	SANITARY SEWER			B			
ms-0007-14	13	SVSD	SANITARY SEWER			B			

REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
9/15/2016
DATE
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT
PROJECT NUMBER
S-0154(12)11
PIN 12566

UTILITIES

SHEET NO. 114UTSM-13

9/8/2016 3:47:01 PM c:\pwworking\phxd05\177312566_114UTSM-13.dgn

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
ms-0606-14	13	SVSD	SANITARY SEWER			D			
ms-0607-14	13	SVSD	SANITARY SEWER			D			
ms-0609-14	13, 15	SVSD	SANITARY SEWER			D			
ss-1004-14	13	SVSD	SANITARY SEWER	15 IN		D			
ss-1005-14	13	SVSD	SANITARY SEWER	8 IN		D			
ss-1007-14	13	SVSD	SANITARY SEWER	15 IN		D			
ss-1009-14	13	SVSD	SANITARY SEWER	15 IN		D			
ss-1013-14	13, 15	SVSD	SANITARY SEWER	8 IN		D			
ss-1014-14	13	SVSD	SANITARY SEWER	8 IN		C			
ss-1016-14	13	SVSD	SANITARY SEWER	8 IN		C			
be-1099-12	14, 15	RMP	POWER			D	BURIED		
be-1101-12	14	RMP	POWER			D	BURIED		
g-1054-11	14	QUESTAR	GAS	4 IN		D			
ms-0613-14	14	SVSD	SANITARY SEWER			D			
ss-1049-14	14	SVSD	SANITARY SEWER	8 IN		D			
ss-1050-14	14	SVSD	SANITARY SEWER	15 IN		D			
g-1048-11	15	QUESTAR	GAS	4 IN		D			
ms-0608-14	15	SVSD	SANITARY SEWER			D			
ss-1012-14	15	SVSD	SANITARY SEWER	8 IN		D			
bctv-1201-03	16, 17	COMCAST	CABLE TV			D	BURIED		
bctv-1202-03	16	COMCAST	CABLE TV			D	BURIED		
bctv-1203-03	16	COMCAST	CABLE TV			D	BURIED		
be-1201-12	16	RMP	POWER			D	BURIED		
be-1203-12	16	RMP	POWER			D	BURIED		
be-1204-12	16	RMP	POWER			D	BURIED		
be-1206-12	16	RMP	POWER			D	BURIED		
be-1207-12	16	RMP	POWER			D	BURIED		
be-1209-12	16, 17	RMP	POWER			D	BURIED		
be-1211-12	16, 17	RMP	POWER			D	BURIED		
bfo-1202-05	16, 17	FIRST DIGITAL	FIBER			D	BURIED		
btel-1203-02	16	CENTURY LINK	TELEPHONE			D	BURIED		
btel-1204-02	16, 17	CENTURY LINK	TELEPHONE			D	BURIED		
btel-1208-02	16	CENTURY LINK	TELEPHONE			D	BURIED		
g-1202-11	16	QUESTAR	GAS	3 IN		D			
g-1204-11	16	QUESTAR	GAS	4 IN		D			
g-1206-11	16	QUESTAR	GAS	2 IN		D			
g-1207-11	16	QUESTAR	GAS	2 IN		D			
g-1208-11	16	QUESTAR	GAS	2 IN		D			
g-1211-11	16, 17, 18	QUESTAR	GAS	2 IN		D			
ms-0592-14	16	SVSD	SANITARY SEWER			B			
ms-0593-14	16	SVSD	SANITARY SEWER			B			
msd-0517-13	16	SOUTH JORDAN	STORM DRAIN			B			
msd-0518-13	16	SOUTH JORDAN	STORM DRAIN			B			
msd-0519-13	16	SOUTH JORDAN	STORM DRAIN			B			
msd-0520-13	16	SOUTH JORDAN	STORM DRAIN			B			
msd-0521-13	16	SOUTH JORDAN	STORM DRAIN			B			
msd-0533-13	16	SOUTH JORDAN	STORM DRAIN			B			
sd-1230-13	16	SOUTH JORDAN	STORM DRAIN	36 IN		C			
sd-1231-13	16	SOUTH JORDAN	STORM DRAIN	36 IN		C			
sd-1232-13	16	SOUTH JORDAN	STORM DRAIN	36 IN		C			
sd-1233-13	16	SOUTH JORDAN	STORM DRAIN	10 IN		C			
sd-1234-13	16	SOUTH JORDAN	STORM DRAIN	36 IN		C			
sd-1235-13	16	SOUTH JORDAN	STORM DRAIN	15 IN		C			
sd-1236-13	16	SOUTH JORDAN	STORM DRAIN	36 IN		D			
sd-1238-13	16	SOUTH JORDAN	STORM DRAIN	12 IN		C			
sd-1245-13	16	SOUTH JORDAN	STORM DRAIN	4 IN		D			
sd-1248-13	16, 17	SOUTH JORDAN	STORM DRAIN	36 IN		C			
sd-1251-13	16	SOUTH JORDAN	STORM DRAIN	36 IN		D			
sd-1252-13	16	SOUTH JORDAN	STORM DRAIN	12 IN		C			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
9/15/2016
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITIES

SHEET NO. 114UTSM-14

9/9/2016 3:49:26 PM c:\pwworking\jobs\050\17231\2566_114UTSM-14.dgn

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sd-1253-13	16	SOUTH JORDAN	STORM DRAIN	8 IN		D			
sd-1258-13	16	SOUTH JORDAN	STORM DRAIN	12 IN		D			
sd-1259-13	16	SOUTH JORDAN	STORM DRAIN	12 IN		D			
sdi-0545-13	16	SOUTH JORDAN	STORM DRAIN			B			
sdi-0546-13	16	SOUTH JORDAN	STORM DRAIN			B			
sdi-0547-13	16	SOUTH JORDAN	STORM DRAIN			B			
sdi-0548-13	16	SOUTH JORDAN	STORM DRAIN			B			
sdi-0549-13	16	SOUTH JORDAN	STORM DRAIN			B			
sdi-0550-13	16	SOUTH JORDAN	STORM DRAIN			B			
sdi-0551-13	16	SOUTH JORDAN	STORM DRAIN			B			
sdi-0552-13	16	SOUTH JORDAN	STORM DRAIN			B			
ss-1201-14	16	SVSD	SANITARY SEWER	15 IN		D			
ss-1202-14	16	SVSD	SANITARY SEWER	8 IN		D			
ss-1203-14	16	SVSD	SANITARY SEWER	15 IN		D			
ss-1205-14	16	SVSD	SANITARY SEWER	8 IN		D			
ss-1207-14	16	SVSD	SANITARY SEWER	15 IN		D			
wtr-1201-13	16	SOUTH JORDAN	WATER	8 IN		D			
wtr-1202-13	16	SOUTH JORDAN	WATER			D			
wtr-1208-13	16, 17	SOUTH JORDAN	WATER	8 IN		D			
be-1200-12	17	RMP	POWER			D	BURIED		
be-1205-12	17, 18	RMP	POWER			D	BURIED		
be-1208-12	17	RMP	POWER			D	BURIED		
be-1210-12	17	RMP	POWER			D	BURIED		
be-1212-12	17	RMP	POWER			D	BURIED		
bfo-1203-05	17	FIRST DIGITAL	FIBER			D	BURIED		
bfo-1204-05	17	FIRST DIGITAL	FIBER			D	BURIED		
btel-1206-02	17	CENTURY LINK	TELEPHONE			D	BURIED		
btel-1207-02	17	CENTURY LINK	TELEPHONE			D	BURIED		
btel-1209-02	17	CENTURY LINK	TELEPHONE			D	BURIED		
g-1205-11	17	QUESTAR	GAS	4 IN		D			
g-1209-11	17	QUESTAR	GAS	2 IN		D			
g-1212-11	17	QUESTAR	GAS	4 IN		D			
ms-0591-14	17	SVSD	SANITARY SEWER			B			
msd-0522-13	17	SOUTH JORDAN	STORM DRAIN			B			
msd-0523-13	17	SOUTH JORDAN	STORM DRAIN			B			
msd-0527-13	17	SOUTH JORDAN	STORM DRAIN			B			
msd-0528-13	17	SOUTH JORDAN	STORM DRAIN			B			
msd-0532-13	17	SOUTH JORDAN	STORM DRAIN			B			
sd-1228-13	17	SOUTH JORDAN	STORM DRAIN	12 IN		D			
sd-1229-13	17	SOUTH JORDAN	STORM DRAIN	12 IN		D			
sd-1237-13	17	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1240-13	17, 18	SOUTH JORDAN	STORM DRAIN	42 IN		C			
sd-1244-13	17	SOUTH JORDAN	STORM DRAIN	36 IN		C			
sd-1246-13	17	SOUTH JORDAN	STORM DRAIN	36 IN		C			
sd-1247-13	17	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1249-13	17	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sd-1250-13	17	SOUTH JORDAN	STORM DRAIN	15 IN		C			
sd-1254-13	17	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sd-1256-13	17	SOUTH JORDAN	STORM DRAIN	6 IN		D			
sd-1257-13	17	SOUTH JORDAN	STORM DRAIN	30 IN		D			
sd-1260-13	17	SOUTH JORDAN	STORM DRAIN	24 IN		D			
sd-1264-13	17	SOUTH JORDAN	STORM DRAIN	15 IN		D			
sdi-0540-13	17	SOUTH JORDAN	STORM DRAIN			B			
sdi-0541-13	17	SOUTH JORDAN	STORM DRAIN			B			
sdi-0542-13	17	SOUTH JORDAN	STORM DRAIN			B			
sdi-0543-13	17	SOUTH JORDAN	STORM DRAIN			B			
sdi-0544-13	17	SOUTH JORDAN	STORM DRAIN			B			
ss-1204-14	17, 18	SVSD	SANITARY SEWER	8 IN		D			
ss-1206-14	17	SVSD	SANITARY SEWER	8 IN		D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
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APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITIES

SHEET NO. 114UTSM-15

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9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
wtr-1203-13	17, 18	SOUTH JORDAN	WATER	8 IN		D			
wtr-1204-13	17	SOUTH JORDAN	WATER	8 IN		D			
wtr-1205-13	17	SOUTH JORDAN	WATER	8 IN		D			
wtr-1206-13	17	SOUTH JORDAN	WATER	8 IN		D			
wtr-1207-13	17	SOUTH JORDAN	WATER	8 IN		D			
wtr-1209-13	17	SOUTH JORDAN	WATER	8 IN		D			
wtr-1212-13	17	SOUTH JORDAN	WATER	8 IN		D			
be-1202-12	18	RMP	POWER			D	BURIED		
bfo-1200-02	18	CENTURY LINK	FIBER			D	BURIED		
bfo-1201-05	18	FIRST DIGITAL	FIBER			D	BURIED		
btel-1200-02	18	CENTURY LINK	TELEPHONE			D	BURIED		
btel-1201-02	18	CENTURY LINK	TELEPHONE			D	BURIED		
btel-1202-02	18	CENTURY LINK	TELEPHONE			D	BURIED		
btel-1205-02	18	CENTURY LINK	TELEPHONE			D	BURIED		
g-1200-11	18	QUESTAR	GAS	6 IN		D			
g-1201-11	18	QUESTAR	GAS	6 IN		D			
g-1203-11	18	QUESTAR	GAS	6 IN		D			
g-1210-11	18	QUESTAR	GAS	2 IN		D			
g-1213-11	18	QUESTAR	GAS	3 IN		D			
g-1214-11	18	QUESTAR	GAS	2 IN		D			
ms-0501-99	18	UNKNOWN	SANITARY SEWER			D			
ms-0588-14	18	SVSD	SANITARY SEWER			B			
ms-0589-14	18	SVSD	SANITARY SEWER			B			
ms-0590-14	18	SVSD	SANITARY SEWER			B			
msd-0141-17	18	UDOT	STORM DRAIN			B			
msd-0524-13	18	SOUTH JORDAN	STORM DRAIN			B			
msd-0525-13	18	SOUTH JORDAN	STORM DRAIN			B			
msd-0529-13	18	SOUTH JORDAN	STORM DRAIN			B			
msd-0530-13	18	SOUTH JORDAN	STORM DRAIN			B			
msd-0536-13	18	SOUTH JORDAN	STORM DRAIN			B			
msd-0537-13	18	SOUTH JORDAN	STORM DRAIN			B			
msd-0538-13	18	SOUTH JORDAN	STORM DRAIN			B			
msd-0539-13	18	SOUTH JORDAN	STORM DRAIN			B			
msd-0540-13	18	SOUTH JORDAN	STORM DRAIN			B			
msd-0541-13	18	SOUTH JORDAN	STORM DRAIN			B			
msd-0542-13	18	SOUTH JORDAN	STORM DRAIN			B			
sd-1200-13	18	SOUTH JORDAN	STORM DRAIN	15 IN		C			
sd-1201-13	18	SOUTH JORDAN	STORM DRAIN	15 IN		C			
sd-1202-13	18	SOUTH JORDAN	STORM DRAIN	24 IN		D			
sd-1203-13	18	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1204-13	18	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1205-13	18	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1206-13	18	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1207-13	18	SOUTH JORDAN	STORM DRAIN	30 IN		D			
sd-1208-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1209-13	18	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sd-1210-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1211-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1212-13	18	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sd-1213-13	18	SOUTH JORDAN	STORM DRAIN	30 IN		C			
sd-1214-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1215-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1216-13	18	SOUTH JORDAN	STORM DRAIN	12 IN		C			
sd-1217-13	18	SOUTH JORDAN	STORM DRAIN	6 IN		C			
sd-1218-13	18	SOUTH JORDAN	STORM DRAIN	12 IN		C			
sd-1219-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1220-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1221-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1222-13	18	SOUTH JORDAN	STORM DRAIN	8 IN		D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
DATE 9/15/2016
APPROVED
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 11400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITIES

SHEET NO. 114UTSM-16

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sd-1223-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1224-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1225-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1226-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1227-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1239-13	18	SOUTH JORDAN	STORM DRAIN	42 IN		C			
sd-1241-13	18	SOUTH JORDAN	STORM DRAIN	42 IN		C			
sd-1242-13	18	SOUTH JORDAN	STORM DRAIN	15 IN		C			
sd-1243-13	18	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1255-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		D			
sd-1261-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1262-13	18	SOUTH JORDAN	STORM DRAIN	18 IN		C			
sd-1263-13	18	SOUTH JORDAN	STORM DRAIN	24 IN		C			
sd-1265-13	18	SOUTH JORDAN	STORM DRAIN	12 IN		C			
sdi-0456-17	18	UDOT	STORM DRAIN			B			
sdi-0531-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0532-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0533-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0534-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0535-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0536-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0537-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0538-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0539-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0565-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0566-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0567-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0568-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0569-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0572-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0575-13	18	SOUTH JORDAN	STORM DRAIN			B			
sdi-0579-13	18	SOUTH JORDAN	STORM DRAIN			B			
ss-1200-14	18	SVSD	SANITARY SEWER	15 IN		D			
wtr-1200-13	18	SOUTH JORDAN	WATER	16 IN		D			
wtr-1210-13	18	SOUTH JORDAN	WATER			D			
wtr-1211-13	18	SOUTH JORDAN	WATER			D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HDR

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
9/15/2016 DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 11400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITIES

SHEET NO. 114UTSM-17

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
bduct-9004-05	1, 2	FIRST DIGITAL	FIBER DUCT			B	BURIED		
bduct-9004-09	1, 2	MBI, ATT, ZAYO	FIBER DUCT			B	BURIED	TH 90-01	
be-9048-12	1	RMP	POWER			D	BURIED		
bfo-9011-17	1, 2, 3, 4	UDOT	FIBER			B	BURIED	TH 90-03	
bfo-9031-15	1, 2, 3, 4	SYRINGA	FIBER			B	BURIED	TH 90-03	
ms-0089-19	1	WEST JORDAN	SANITARY SEWER			B			
ms-0090-19	1	WEST JORDAN	SANITARY SEWER			B			
msd-0095-17	1	UDOT	STORM DRAIN			B			
sd-9033-17	1, 2	UDOT	STORM DRAIN	30 IN	CPP	C			
sd-9034-17	1	UDOT	STORM DRAIN	54 IN	RCP	C			
sd-9057-17	1, 2	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9058-17	1	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9059-17	1	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9060-17	1	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9064-17	1	UDOT	STORM DRAIN	42 IN	CPP	C			
sd-9065-17	1	UDOT	STORM DRAIN	42 IN	RCP	C			
sd-9066-17	1	UDOT	STORM DRAIN	36 IN	CPP	C			
sd-9067-17	1	UDOT	STORM DRAIN	42 IN	CPP	C			
sd-9076-17	1	UDOT	STORM DRAIN	24 IN	CPP	C			
sd-9077-19	1	WEST JORDAN	STORM DRAIN	24 IN	CPP	C			
sd-9121-17	1	UDOT	STORM DRAIN	30 IN	CPP	C			
sdi-0277-17	1	UDOT	STORM DRAIN			B			
sdi-0278-17	1	UDOT	STORM DRAIN			B			
sdi-0280-17	1	UDOT	STORM DRAIN			B			
sdi-0281-17	1	UDOT	STORM DRAIN			B			
sdi-0282-17	1	UDOT	STORM DRAIN			B			
sdi-0347-17	1	UDOT	STORM DRAIN			B			
sdi-0348-17	1	UDOT	STORM DRAIN			B			
sdi-0349-17	1	UDOT	STORM DRAIN			B			
sdi-0355-19	1	WEST JORDAN	STORM DRAIN			B			
sdi-0530-17	1	UDOT	STORM DRAIN			B			
ss-9019-19	1	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9020-19	1	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
wtr-9001-01	1, 2, 3	BOR	WATER	78 IN		B			
wtr-9044-01	1	BOR	WATER	78 IN		D			
bctv-9017-03	2	COMCAST	CABLE TV			D	BURIED		
bctv-9018-03	2	COMCAST	CABLE TV			D	BURIED		
bctv-9019-03	2, 3, 4	COMCAST	CABLE TV			D	BURIED		
bduct-9005-05	2, 3, 4, 5, 11	FIRST DIGITAL	FIBER DUCT			B	BURIED	TH 90-02, TH 90-04	
bduct-9005-09	2, 3, 4, 5, 11	MBI, ATT, ZAYO	FIBER DUCT			B	BURIED	TH 90-02, TH 90-04	
be-9046-12	2, 3, 4	RMP	POWER		PVC -AL	D	BURIED		
be-9047-12	2	RMP	POWER		PVC -AL	D	BURIED		
btel-9029-02	2, 3	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9030-02	2	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9031-02	2	CENTURY LINK	TELEPHONE		CBO	D	BURIED		
btel-9032-02	2	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9033-02	2, 3	CENTURY LINK	TELEPHONE		CBO	D	BURIED		
ms-0023-19	2	WEST JORDAN	SANITARY SEWER			B			
ms-0087-19	2	WEST JORDAN	SANITARY SEWER			B			
ms-0088-19	2	WEST JORDAN	SANITARY SEWER			B			
ms-0584-19	2	WEST JORDAN	SANITARY SEWER			D			
ms-0585-19	2	WEST JORDAN	SANITARY SEWER			D			
ms-0586-19	2	WEST JORDAN	SANITARY SEWER			D			
msd-0153-19	2	WEST JORDAN	STORM DRAIN			B			
msd-0154-19	2	WEST JORDAN	STORM DRAIN			B			
msd-0155-19	2	WEST JORDAN	STORM DRAIN			B			
msd-0156-19	2	WEST JORDAN	STORM DRAIN			B			
msd-0157-19	2	WEST JORDAN	STORM DRAIN			B			
msd-0516-19	2	WEST JORDAN	STORM DRAIN			B			
msd-0244-19	2	WEST JORDAN	STORM DRAIN	48X48		B			
sd-9032-17	2	UDOT	STORM DRAIN	24 IN	CPP	C			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY VR
APPROVED
MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 90UTSM-01

9/6/2016 2:06:16 PM pw:\\pw.horrocks.com:PWPrimary\Documents\Projects\2016\PG-958-1604 Bangerter 4 Interchanges PM-12566\Sheet_Files\Utilities\12566_90UTSM-01.dgn

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sd-9054-17	2	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9055-17	2	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9056-17	2	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9071-19	2	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9072-19	2	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9073-19	2	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9074-19	2	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9103-19	2, 3	WEST JORDAN	STORM DRAIN	30 IN	RCP	C			
sd-9104-19	2	WEST JORDAN	STORM DRAIN	24 IN	RCP	C			
sd-9105-19	2	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9106-19	2	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9107-19	2	WEST JORDAN	STORM DRAIN	24 IN	RCP	C			
sd-9108-19	2	WEST JORDAN	STORM DRAIN	24 IN	RCP	C			
sd-9109-19	2	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9110-19	2	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9111-19	2	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9112-19	2	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9113-19	2	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9119-17	2, 3	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9120-17	2	UDOT	STORM DRAIN	24 IN	CPP	C			
sd-9122-19	2	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sdi-0283-17	2	UDOT	STORM DRAIN			B			
sdi-0284-17	2	UDOT	STORM DRAIN			B			
sdi-0285-17	2	UDOT	STORM DRAIN			B			
sdi-0344-17	2	UDOT	STORM DRAIN			B			
sdi-0345-17	2	UDOT	STORM DRAIN			B			
sdi-0346-17	2	UDOT	STORM DRAIN			B			
sdi-0476-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0477-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0478-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0479-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0481-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0482-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0483-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0484-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0500-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0501-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0502-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0503-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0504-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0557-19	2	WEST JORDAN	STORM DRAIN			B			
sdi-0558-19	2	WEST JORDAN	STORM DRAIN			B			
ss-9018-19	2	WEST JORDAN	SANITARY SEWER	8 IN	PVC	C			
ss-9025-19	2, 3, 4	WEST JORDAN	SANITARY SEWER	8 IN	PVC	D			
ss-9026-19	2	WEST JORDAN	SANITARY SEWER	8 IN	PVC	D			
ss-9027-19	2	WEST JORDAN	SANITARY SEWER	8 IN	PVC	C			
ss-9039-19	2	WEST JORDAN	SANITARY SEWER	8 IN	PVC	D			
ss-9040-19	2	WEST JORDAN	SANITARY SEWER	8 IN	PVC	D			
wtr-9055-19	2, 3, 4	WEST JORDAN	WATER	8 IN		D			
wtr-9056-19	2	WEST JORDAN	WATER	8 IN		D			
wtr-9057-19	2	WEST JORDAN	WATER	8 IN		D			
btel-9202-02	3, 4	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9203-02	3, 4	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9204-02	3, 4	CENTURY LINK	TELEPHONE			D	BURIED		
ms-0582-19	3	WEST JORDAN	SANITARY SEWER			D			
ms-0583-19	3	WEST JORDAN	SANITARY SEWER			D			
msd-0151-19	3	WEST JORDAN	STORM DRAIN			B			
msd-0152-19	3	WEST JORDAN	STORM DRAIN			B			
sd-9052-17	3	UDOT	STORM DRAIN	18 IN	CPP	C			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY VR
MM/DD/YY
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 90UTSM-02

9/6/2016 2:06:25 PM pw:\\pw.horrocks.com\PWPrimary\Documents\Projects\2016\PG-858-160\4 Bangerter 4 Interchanges PM-12566\Sheet_Files\Utilities\12566_90UTSM-02.dgn

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sd-9053-17	3	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9070-19	3, 4	WEST JORDAN	STORM DRAIN	30 IN	RCP	C			
sd-9102-19	3	WEST JORDAN	STORM DRAIN	30 IN	RCP	C			
sd-9118-17	3	UDOT	STORM DRAIN	18 IN	CPP	C			
sdi-0286-17	3	UDOT	STORM DRAIN			B			
sdi-0287-17	3	UDOT	STORM DRAIN			B			
sdi-0342-17	3	UDOT	STORM DRAIN			B			
sdi-0343-17	3	UDOT	STORM DRAIN			B			
wtr-9047-01	3, 4, 5, 11	BOR	WATER	78 IN		B		TH 90-28, TH-90-29A 1	
bctv-9011-03	4, 5, 11	COMCAST	CABLE TV			D	BURIED		
bctv-9012-03	4, 5	COMCAST	CABLE TV			D	BURIED		
be-9043-12	4, 5, 11	RMP	POWER		PVC - AL	D	BURIED		
bfo-9010-17	4, 5, 11	UDOT	FIBER			B	BURIED		
bfo-9025-15	4, 5, 11	SYRINGA	FIBER			B	BURIED		
btel-9028-02	4, 5, 11	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9034-02	4, 10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9200-02	4, 5, 11	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9201-02	4	CENTURY LINK	TELEPHONE			D	BURIED		
g-9037-11	4	QUESTAR	GAS	3 IN	PTR Plastic	D			
g-9038-11	4	QUESTAR	GAS	2 IN	PTR Plastic	D			
g-9039-11	4	QUESTAR	GAS	1 AND QUARTER IN	PTR Plastic	D			
irr-9200-10	4	PRIVATE	IRRIGATION			D			
ms-0568-19	4	WEST JORDAN	SANITARY SEWER			D			
ms-0581-19	4	WEST JORDAN	SANITARY SEWER			D			
msd-0076-19	4	WEST JORDAN	STORM DRAIN			B			
msd-0077-17	4	UDOT	STORM DRAIN			B			
msd-0078-17	4	UDOT	STORM DRAIN			B			
sd-9022-17	4	UDOT	STORM DRAIN	8 IN	PVC	C			
sd-9023-10	4	PRIVATE	STORM DRAIN	12 IN	RCP	C			
sd-9051-17	4	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9068-19	4	WEST JORDAN	STORM DRAIN	30 IN	RCP	C			
sd-9069-19	4	WEST JORDAN	STORM DRAIN	30 IN	RCP	C			
sd-9101-19	4	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-9115-17	4, 5, 11	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9116-17	4	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9117-17	4	UDOT	STORM DRAIN	18 IN	CPP	C			
sdi-0261-19	4	WEST JORDAN	STORM DRAIN			B			
sdi-0288-17	4	UDOT	STORM DRAIN			B			
sdi-0289-17	4	UDOT	STORM DRAIN			B			
sdi-0340-17	4	UDOT	STORM DRAIN			B			
sdi-0341-17	4	UDOT	STORM DRAIN			B			
sdi-0474-19	4	WEST JORDAN	STORM DRAIN			B			
ss-9038-19	4	WEST JORDAN	SANITARY SEWER	8 IN		D			
bctv-9005-03	5, 10, 11	COMCAST	CABLE TV			D	BURIED		
bctv-9006-03	5, 11	COMCAST	CABLE TV			D	BURIED		
bctv-9007-03	5, 11, 12	COMCAST	CABLE TV			D	BURIED		
bduct-9001-09	5, 11	MBI, ATT, ZAYO	FIBER DUCT			D	BURIED	TH 90-13	
bduct-9003-09	5, 6	MBI, ATT, ZAYO	FIBER DUCT			B	BURIED	TH 90-14	
bduct-9001-05	5, 11	FIRST DIGITAL	FIBER DUCT			D	BURIED	TH 90-13	
bduct-9003-05	5, 6	FIRST DIGITAL	FIBER DUCT			B	BURIED	TH 90-14	
be-9006-12	5, 11, 12	RMP	POWER		AL	D	BURIED		
be-9011-17	5, 11	UDOT	POWER			D	BURIED		
be-9012-17	5, 11	UDOT	POWER			D	BURIED		
be-9013-17	5, 11	UDOT	POWER			D	BURIED		
be-9014-17	5, 11	UDOT	POWER			D	BURIED		
be-9015-17	5, 11	UDOT	POWER			D	BURIED		
be-9016-17	5, 11	UDOT	POWER			D	BURIED		
be-9017-17	5, 11, 12	UDOT	POWER			D	BURIED		
be-9029-12	5, 6, 7, 11	RMP	POWER		AL	D	BURIED		
bfo-9000-17	5, 10, 11	UDOT	FIBER			B	BURIED		
bfo-9001-02	5, 11	CENTURY LINK	FIBER			D	BURIED		

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	09/16	DCO	UPDATE UTILITY SUMMARY

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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APPROVED
MM/DD/YY
DATE

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY SUMMARY

SHEET NO. 90UTSM-03

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
bfo-9003-03	5, 10, 11	COMCAST	FIBER			B	BURIED		
bfo-9004-03	5, 11	COMCAST	FIBER			B	BURIED		
bfo-9005-02	5, 11, 12	CENTURY LINK	FIBER			B	BURIED		
btel-9009-17	5, 11, 12	UDOT	FIBER			B	BURIED		
bfo-9014-15	5, 6, 7, 8, 9, 11	SYRINGA	FIBER			B	BURIED	TH 90-18, TH 90-19, TH 90-20, TH 90-21, TH 90-22	
bfo-9015-17	5, 6, 7, 8, 9, 11	UDOT	FIBER			B	BURIED	TH 90-27	
bfo-9016-15	5, 11	SYRINGA	FIBER			B	BURIED		
bfo-9017-03	5, 11	COMCAST	FIBER			B	BURIED		
bfo-9018-03	5, 11, 12	COMCAST	FIBER			B	BURIED		
bfo-9019-02	5, 10, 11, 12	CENTURY LINK	FIBER			B	BURIED		
bfo-9024-15	5, 11	SYRINGA	FIBER			B	BURIED		
bfo-9026-15	5, 10, 11	SYRINGA	FIBER			D	BURIED		
bfo-9028-02	5, 6, 11	CENTURY LINK	FIBER			D	BURIED		
bfo-9032-03	5, 6, 11	COMCAST	FIBER			D	BURIED		
btel-9000-02	5, 11	CENTURY LINK	TELEPHONE			B	BURIED		
btel-9012-02	5, 11	CENTURY LINK	TELEPHONE			B	BURIED		
btel-9013-02	5, 11	CENTURY LINK	TELEPHONE			B	BURIED		
btel-9014-02	5, 11, 12	CENTURY LINK	TELEPHONE			B	BURIED		
btel-9015-02	5, 11, 12	CENTURY LINK	TELEPHONE			B	BURIED		
irr-9200-10	4	PRIVATE	IRRIGATION			D			
btel-9027-02	5, 11, 12	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9036-02	5, 11, 12	CENTURY LINK	TELEPHONE			D	BURIED		
e-9000-12	5, 10, 11, 12	RMP	POWER		AL	D	AERIAL		
g-9001-11	5, 11, 12	QUESTAR	GAS	4 IN	PAL Plastic	D			
g-9002-11	5, 10, 11, 12	QUESTAR	GAS	4 IN	PAL Plastic	D			
g-9004-11	5, 11, 12	QUESTAR	GAS	6 IN	PTR Plastic	D			
g-9005-11	5, 11	QUESTAR	GAS	6 IN	PTR Plastic	D			
g-9007-11	5, 10, 11	QUESTAR	GAS	6 IN	PTR Plastic	B			
g-9013-11	5, 11	QUESTAR	GAS	6 IN	PTR Plastic	B			
g-9036-11	5, 10, 11	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
ms-0022-19	5, 11	WEST JORDAN	SANITARY SEWER			B			
ms-0073-19	5, 11	WEST JORDAN	SANITARY SEWER			B			
ms-0074-19	5, 11	WEST JORDAN	SANITARY SEWER			B			
ms-0075-19	5, 11	WEST JORDAN	SANITARY SEWER			B			
ms-0076-19	5, 11	WEST JORDAN	SANITARY SEWER			B			
msd-0073-19	5, 11	WEST JORDAN	STORM DRAIN			B			
msd-0074-19	5, 11	WEST JORDAN	STORM DRAIN			B			
msd-0075-19	5, 11	WEST JORDAN	STORM DRAIN			B			
msd-0085-19	5, 11	WEST JORDAN	STORM DRAIN			B			
msd-0086-19	5, 11	WEST JORDAN	STORM DRAIN			B			
msd-0087-19	5, 11	WEST JORDAN	STORM DRAIN			B			
msd-0088-19	5, 11	WEST JORDAN	STORM DRAIN			B			
msd-0089-19	5, 11	WEST JORDAN	STORM DRAIN			B			
msd-0090-19	5, 11	WEST JORDAN	STORM DRAIN			B			
1 mw-0002-19	5, 11	WEST JORDAN	WATER	10.5 FT X 13.00 FT		B			PRV Vault
sd-9001-17	5, 11	UDOT	STORM DRAIN	18 IN	CMP	D			
sd-9017-19	5, 10, 11	WEST JORDAN	STORM DRAIN	36 IN	RCP	C			
sd-9018-19	5, 11	WEST JORDAN	STORM DRAIN	36 IN	RCP	C			
sd-9019-19	5, 11	WEST JORDAN	STORM DRAIN	36 IN	RCP	C			
sd-9020-19	5, 11	WEST JORDAN	STORM DRAIN	36 IN	RCP	C			
sd-9021-19	5, 11	WEST JORDAN	STORM DRAIN	15 IN	CMP	C			
sd-9024-17	5, 11	UDOT	STORM DRAIN	84 IN	CMP	C			
sd-9025-17	5, 11	UDOT	STORM DRAIN	84 IN	CMP	C		TH 90-29 1	
sd-9047-17	5, 11	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9048-17	5, 11	UDOT	STORM DRAIN	18 IN	RCP	C			
sd-9049-17	5, 11	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9050-17	5, 11	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-9079-10	5, 11	PRIVATE	STORM DRAIN	18 IN	CMP	C			
sd-9080-10	5, 11	PRIVATE	STORM DRAIN	18 IN	CMP	C			
sd-9081-10	5, 11	PRIVATE	STORM DRAIN	18 IN	CMP	C			
sd-9091-19	5, 11	WEST JORDAN	STORM DRAIN	15 IN	RCP	D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PIN 12566
PROJECT NUMBER S-0154(12)11
UTILITY SUMMARY

SHEET NO. 90UTSM-04

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sd-9092-10	5, 11	PRIVATE	STORM DRAIN	18 IN	RCP	C			
sd-9093-10	5, 11	PRIVATE	STORM DRAIN	18 IN	CMP	C			
sd-9094-10	5, 11	PRIVATE	STORM DRAIN	18 IN	CMP	C			
sd-9095-10	5, 11	PRIVATE	STORM DRAIN	18 IN	CMP	C			
sd-9096-10	5, 11	PRIVATE	STORM DRAIN	18 IN	CMP	C			
sd-9097-10	5, 11	PRIVATE	STORM DRAIN	18 IN	CMP	C			
sd-9098-10	5, 11	PRIVATE	STORM DRAIN	18 IN	CMP	C			
sd-9099-10	5, 11	PRIVATE	STORM DRAIN	18 IN	CMP	C			
sd-9100-10	5, 11	PRIVATE	STORM DRAIN	18 IN	CMP	C			
sd-9123-17	5, 6, 11	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9130-17	5, 11	UDOT	STORM DRAIN	18 IN	CMP	C			
sdi-0273-19	5, 11	WEST JORDAN	STORM DRAIN			B			
sdi-0290-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0291-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0292-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0293-19	5, 11	WEST JORDAN	STORM DRAIN			B			
sdi-0294-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0338-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0339-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0529-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0564-19	5, 11	WEST JORDAN	STORM DRAIN			B			
ss-9000-19	5, 10, 11	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9007-19	5, 11	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9008-19	5, 11, 12	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9009-19	5, 11	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9014-19	5, 11	WEST JORDAN	SANITARY SEWER	8 IN	PVC	C			
ss-9015-19	5, 11	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
wtr-9000-01	5, 6, 7, 8, 11	BOR	WATER	78 IN	CONCRETE	B			
wtr-9004-01	5, 11	BOR	WATER	6 IN	STEEL	B			
wtr-9005-19	5, 11, 12	WEST JORDAN	WATER	16 IN		D			
wtr-9006-19	5, 10, 11	WEST JORDAN	WATER	12 IN		D			
wtr-9007-19	5, 11, 12	WEST JORDAN	WATER	12 IN		D			
wtr-9009-19	5, 10, 11, 12	WEST JORDAN	WATER	10 IN		D			
wtr-9011-19	5, 10, 11	WEST JORDAN	WATER	16 IN		D			
wtr-9012-19	5, 11	WEST JORDAN	WATER	10 IN		D			
wtr-9021-19	5, 11	WEST JORDAN	WATER	8 IN		D			
wtr-9054-19	5, 10, 11	WEST JORDAN	WATER	6 IN		D			
bctv-9010-03	6, 7	COMCAST	CABLE TV			D	BURIED		
bduct-9000-09	6, 7, 8	MBI, ATT, ZAYO	FIBER DUCT			D	BURIED		
bduct-9000-05	6, 7, 8	FIRST DIGITAL	FIBER DUCT			D	BURIED		
be-9024-12	6, 7	RMP	POWER		AL	D	BURIED		
bfo-9027-02	6	CENTURY LINK	FIBER			D	BURIED		
btel-9001-02	6, 7	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9026-02	6, 7	CENTURY LINK	TELEPHONE			D	BURIED		
e-9030-12	6	RMP	POWER			D	AERIAL		
e-9031-12	6	RMP	POWER		PVC - ALXLP	D	AERIAL		
e-9032-12	6	RMP	POWER		QX	D	AERIAL		
e-9033-12	6	RMP	POWER		AL	D	AERIAL		
g-9021-11	6	QUESTAR	GAS	4 IN	PTR Plastic	D			
g-9027-11	6, 7	QUESTAR	GAS	1 AND QUARTER IN	PTR Plastic	D			
g-9030-11	6, 7	QUESTAR	GAS	2 IN	PTR Plastic	D			
g-9031-11	6	QUESTAR	GAS	1 AND QUARTER IN	PTR Plastic	D			
ms-0580-19	6	WEST JORDAN	SANITARY SEWER			D			
sd-9046-17	6	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9124-17	6	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9125-17	6	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9126-17	6, 7	UDOT	STORM DRAIN	18 IN	CMP	C			
sdi-0295-17	6	UDOT	STORM DRAIN			B			
sdi-0296-17	6	UDOT	STORM DRAIN			B			
sdi-0335-17	6	UDOT	STORM DRAIN			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 90UTSM-05

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sdi-0336-17	6	UDOT	STORM DRAIN			B			
sdi-0336-17	6	UDOT	STORM DRAIN	36x48					
ss-9024-19	6, 7	WEST JORDAN	SANITARY SEWER	8 IN		D			
wtr-9022-19	6, 7	WEST JORDAN	WATER	6 IN		D			
wtr-9051-19	6, 7	WEST JORDAN	WATER	6 IN		D			
btel-9008-02	7	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9020-02	7, 8	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9021-02	7, 8	CENTURY LINK	TELEPHONE			D	BURIED		
e-9002-12	7, 8	RMP	POWER			D	AERIAL		
ms-0575-19	7	WEST JORDAN	SANITARY SEWER			B			
ms-0576-19	7	WEST JORDAN	SANITARY SEWER			B			
ms-0578-19	7	WEST JORDAN	SANITARY SEWER			B			
ms-0579-19	7	WEST JORDAN	SANITARY SEWER			D			
msd-0509-19	7	WEST JORDAN	STORM DRAIN			D			
msd-0510-19	7	WEST JORDAN	STORM DRAIN			D			
msd-0511-19	7	WEST JORDAN	STORM DRAIN			D			
msd-0512-19	7	WEST JORDAN	STORM DRAIN			D			
sd-9000-19	7	WEST JORDAN	STORM DRAIN	18 IN		D			
sd-9003-17	7	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9004-17	7	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9082-17	7	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9083-17	7	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9086-19	7, 8	WEST JORDAN	STORM DRAIN	36 IN		D			
sd-9087-19	7	WEST JORDAN	STORM DRAIN	48 IN		D			
sd-9088-19	7	WEST JORDAN	STORM DRAIN	18 IN		D			
sd-9127-17	7	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9128-17	7	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9129-17	7, 8	UDOT	STORM DRAIN	24 IN	CMP	C			
sdi-0297-17	7	UDOT	STORM DRAIN			B			
sdi-0298-17	7	UDOT	STORM DRAIN			B			
sdi-0299-17	7	UDOT	STORM DRAIN			B			
sdi-0331-17	7	UDOT	STORM DRAIN			B			
sdi-0332-17	7	UDOT	STORM DRAIN			B			
sdi-0333-17	7	UDOT	STORM DRAIN			B			
sdi-0334-17	7	UDOT	STORM DRAIN			B			
ss-9023-19	7, 8	WEST JORDAN	SANITARY SEWER	10 IN		D			
ss-9037-19	7	WEST JORDAN	SANITARY SEWER	8 IN		D			
wtr-9007-99	7	UNKNOWN	WATER			D			
wtr-9035-19	7, 8	WEST JORDAN	WATER	8 IN		D			
wtr-9036-19	7, 8	WEST JORDAN	WATER	12 IN		D			
wtr-9046-08	7, 8	KENNECOTT	WATER	26 IN		D			
wtr-9050-19	7	WEST JORDAN	WATER	6 IN		D			
bctv-9001-03	8, 9	COMCAST	CABLE TV			D	BURIED		
bduct-9002-05	8, 9	MBI, ATT, ZAYO	FIBER DUCT			B	BURIED		
bduct-9002-09	8, 9	FIRST DIGITAL	FIBER DUCT			B	BURIED		
be-9018-12	8	RMP	POWER		PVC - AS	D	BURIED		
btel-9002-02	8	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9003-02	8	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9004-02	8, 9	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9005-02	8	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9022-02	8	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9023-02	8, 9	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9024-02	8, 9	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9039-02	8, 9	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9040-02	8, 9	CENTURY LINK	TELEPHONE			D	BURIED		
ctv-9004-03	8	COMCAST	CABLE TV			D	AERIAL		
ctv-9009-03	8	COMCAST	CABLE TV			D	AERIAL		
e-9003-12	8	RMP	POWER		AS, AW	D	AERIAL		
g-9018-11	8	QUESTAR	GAS	4 IN	STEEL	D			
g-9019-11	8	QUESTAR	GAS	4" DISTRIBUTION					
g-9020-11	8	QUESTAR	GAS	4 IN		D			
g-9026-11	8, 9	QUESTAR	GAS	4 IN	STEEL	D			
ms-0572-19	8	WEST JORDAN	SANITARY SEWER			D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 90UTSM-06

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
ms-0574-19	8	WEST JORDAN	SANITARY SEWER			D			
ms-0577-19	8	WEST JORDAN	SANITARY SEWER			D			
ms-0616-19	8	WEST JORDAN	SANITARY SEWER			D			
msd-0093-17	8	UDOT	STORM DRAIN			B			
msd-0094-17	8	UDOT	STORM DRAIN			B			
msd-0508-19	8	WEST JORDAN	STORM DRAIN			D			
msd-0513-19	8	WEST JORDAN	STORM DRAIN			D			
msd-0514-19	8	WEST JORDAN	STORM DRAIN			D			
msd-0515-19	8	WEST JORDAN	STORM DRAIN			D			
msd-0545-19	8	WEST JORDAN	STORM DRAIN			D			
sd-9007-17	8, 9	UDOT	STORM DRAIN	36 IN	CMP	C			
sd-9008-17	8	UDOT	STORM DRAIN	36 IN	CMP	C			
sd-9009-17	8	UDOT	STORM DRAIN	36 IN	CMP	C			
sd-9041-17	8	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9042-17	8	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9043-17	8	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9044-17	8	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9045-17	8	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9084-17	8	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9085-19	8, 9	WEST JORDAN	STORM DRAIN	36 IN		D			
sd-9089-19	8	WEST JORDAN	STORM DRAIN	18 IN		D			
sdi-0300-17	8	UDOT	STORM DRAIN			B			
sdi-0301-17	8	UDOT	STORM DRAIN			B			
sdi-0302-17	8	UDOT	STORM DRAIN			B			
sdi-0325-17	8	UDOT	STORM DRAIN			B			
sdi-0326-17	8	UDOT	STORM DRAIN			B			
sdi-0329-17	8	UDOT	STORM DRAIN			B			
sdi-0330-17	8	UDOT	STORM DRAIN			B			
sdi-0527-17	8	UDOT	STORM DRAIN			B			
sdi-0528-17	8	UDOT	STORM DRAIN			B			
ss-9022-19	8, 9	WEST JORDAN	SANITARY SEWER	10 IN		D			
ss-9033-19	8, 9	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-9034-19	8, 9	WEST JORDAN	SANITARY SEWER	10 IN		D			
ss-9035-19	8	WEST JORDAN	SANITARY SEWER	10 IN		D			
ss-9036-19	8	WEST JORDAN	SANITARY SEWER	8 IN		D			
wtr-9002-01	8, 9	BOR	WATER	78 IN		D			
wtr-9006-99	8	UNKNOWN	WATER			D			
wtr-9031-19	8	WEST JORDAN	WATER	10 IN		D			
wtr-9032-19	8	WEST JORDAN	WATER	8 IN		D			
wtr-9033-19	8	WEST JORDAN	WATER	12 IN		D			
wtr-9034-19	8, 9	WEST JORDAN	WATER	8 IN		D			
wtr-9037-19	8	WEST JORDAN	WATER	12 IN		D			
wtr-9038-19	8	WEST JORDAN	WATER	14 IN		D			
wtr-9039-19	8, 9	WEST JORDAN	WATER	14 IN		D			
wtr-9040-19	8, 9	WEST JORDAN	WATER	10 IN		D			
wtr-9042-19	8	WEST JORDAN	WATER	8 IN		D			
wtr-9049-19	8	WEST JORDAN	WATER	6 IN		D			
bctv-9002-03	9	COMCAST	CABLE TV			D	BURIED		
bfo-9012-17	9	UDOT	FIBER			B	BURIED		
bfo-9013-15	9	SYRINGA	FIBER			B	BURIED		
btel-9017-02	9	CENTURY LINK	TELEPHONE			B	BURIED		
btel-9025-02	9	CENTURY LINK	TELEPHONE			D	BURIED		
g-9017-11	9	QUESTAR	GAS	4 IN	PAL Plastic	B			
g-9019-11	9	QUESTAR	GAS	4 IN	PAL Plastic	D			
g-9022-11	9	QUESTAR	GAS	4 IN	PAL Plastic	D			
g-9023-11	9	QUESTAR	GAS	2 IN	PTR Plastic	D			
g-9024-11	9	QUESTAR	GAS	4 IN	PTR Plastic	D			
g-9025-11	9	QUESTAR	GAS	4 IN	PTR Plastic	D			
ms-0024-19	9	WEST JORDAN	SANITARY SEWER			B			
ms-0025-19	9	WEST JORDAN	SANITARY SEWER			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY VR
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MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 90UTSM-07

9/6/2016 2:07:06 PM pw:\\pw.horrocks.com:PWPrimary\Documents\Projects\2016\PG-858-1604 Bangerter 4 Interchanges PM\12566\Sheet_Files\UtilitiesUtilities\12566_90UTSM-07.dgn

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
ms-0569-19	9	WEST JORDAN	SANITARY SEWER			D			
ms-0570-19	9	WEST JORDAN	SANITARY SEWER			D			
ms-0571-19	9	WEST JORDAN	SANITARY SEWER			D			
msd-0092-17	9	UDOT	STORM DRAIN			B			
sd-9002-17	9	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9005-17	9	UDOT	STORM DRAIN	36 IN	CMP	C			
sd-9006-17	9	UDOT	STORM DRAIN	36 IN	CMP	C			
sd-9039-17	9	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9040-17	9	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-9063-17	9	UDOT	STORM DRAIN	42 IN	CMP	C			
sdi-0303-17	9	UDOT	STORM DRAIN			B			
sdi-0304-17	9	UDOT	STORM DRAIN			B			
sdi-0322-17	9	UDOT	STORM DRAIN			B			
sdi-0323-17	9	UDOT	STORM DRAIN			B			
sdi-0324-17	9	UDOT	STORM DRAIN			B			
ss-9001-19	9	WEST JORDAN	SANITARY SEWER	10 IN	PVC	C			
ss-9021-19	9	WEST JORDAN	SANITARY SEWER	10 IN		D			
ss-9030-19	9	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-9031-19	9	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-9032-19	9	WEST JORDAN	SANITARY SEWER	8 IN		D			
wtr-9000-99		UNKNOWN	water						
wtr-9003-19	9	WEST JORDAN	WATER	6 IN		D			
wtr-9041-19	9	WEST JORDAN	WATER	14 IN		D			
wtr-9043-01	9	BOR	WATER	78 IN		D			
wtr-9048-19	9	WEST JORDAN	WATER	10 IN		D			
bctv-9000-03	10	COMCAST	CABLE TV			D	BURIED		
bctv-9008-03	10	COMCAST	CABLE TV			D	BURIED		
bctv-9013-03	10	COMCAST	CABLE TV			D	BURIED		
bctv-9014-03	10	COMCAST	CABLE TV			D	BURIED		
bctv-9015-03	10	COMCAST	CABLE TV			D	BURIED		
bctv-9016-03	10	COMCAST	CABLE TV			D	BURIED		
be-9001-12	10	RMP	POWER		AL	D	BURIED		
be-9004-12	10	RMP	POWER		AL	D	BURIED		
be-9005-12	10	RMP	POWER		AL	D	BURIED		
be-9037-12	10	RMP	POWER		AL	D	BURIED		
be-9038-12	10	RMP	POWER		AL	D	BURIED		
be-9039-12	10	RMP	POWER			D	BURIED		
bfo-9020-02	10	CENTURY LINK	FIBER			B	BURIED		
bfo-9030-02	10	CENTURY LINK	FIBER			D	BURIED		
btel-9006-02	10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9007-02	10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9009-02	10	CENTURY LINK	TELEPHONE			B	BURIED		
btel-9010-02	10	CENTURY LINK	TELEPHONE			B	BURIED		
btel-9011-02	10	CENTURY LINK	TELEPHONE			B	BURIED		
btel-9018-02	10	CENTURY LINK	TELEPHONE			B	BURIED		
btel-9035-02	10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9036-02	10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-9037-02	10	CENTURY LINK	TELEPHONE			D	BURIED		
e-9044-12	10	RMP	POWER			D	AERIAL		
e-9045-12	10	RMP	POWER			D	AERIAL		
fo-9002-03	10	COMCAST	FIBER			D	AERIAL		
g-9006-11	10	QUESTAR	GAS	4 IN	PAL Plastic	D			
g-9008-11	10	QUESTAR	GAS	2 IN	PAL Plastic	B			
g-9009-11	10	QUESTAR	GAS	2 IN	PAL Plastic	B			
g-9010-11	10	QUESTAR	GAS	1 AND QUARTER IN	HP Service	B			
g-9011-11	10	QUESTAR	GAS	2 IN	PAL Plastic	B			
g-9012-11	10	QUESTAR	GAS	1 AND QUARTER IN	HP Service	B			
g-9032-11	10	QUESTAR	GAS	2 IN	PAL Plastic	D			
g-9033-11	10	QUESTAR	GAS	2 IN	PAL Plastic	D			
g-9034-11	10	QUESTAR	GAS	2 IN	PAL Plastic	D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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QC CHECKED BY VR
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MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 90UTSM-08

9/6/2016 2:07:28 PM pw:\\pw.horrocks.com:PWPrimary\Documents\Projects\2016\PG-858-1604 Bangerter 4 Interchanges PM\12566\Sheet_Files\UtilitySs\12566_90UTSM-08.dgn

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
g-9035-11	10	QUESTAR	GAS	2 IN	PAL Plastic	D			
ms-0015-19	10	WEST JORDAN	SANITARY SEWER			B			
ms-0017-19	10	WEST JORDAN	SANITARY SEWER			B			
ms-0019-19	10	WEST JORDAN	SANITARY SEWER			B			
ms-0020-19	10	WEST JORDAN	SANITARY SEWER			B			
ms-0567-19	10	WEST JORDAN	SANITARY SEWER			D			
msd-0068-19	10	WEST JORDAN	STORM DRAIN			B			
msd-0069-19	10	WEST JORDAN	STORM DRAIN			B			
msd-0070-19	10	WEST JORDAN	STORM DRAIN			B			
msd-0071-19	10	WEST JORDAN	STORM DRAIN			B			
msd-0072-19	10	WEST JORDAN	STORM DRAIN			B			
msd-0079-19	10	WEST JORDAN	STORM DRAIN			B			
msd-0080-19	10	WEST JORDAN	STORM DRAIN			B			
sd-9010-19	10	WEST JORDAN	STORM DRAIN	12 IN	RCP	C			
sd-9011-19	10	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9012-19	10	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-9013-19	10	WEST JORDAN	STORM DRAIN	36 IN	RCP	C			
sd-9014-19	10	WEST JORDAN	STORM DRAIN	36 IN	RCP	C			
sd-9015-19	10	WEST JORDAN	STORM DRAIN	36 IN	RCP	C			
sd-9016-19	10	WEST JORDAN	STORM DRAIN	36 IN	RCP	C			
sd-9038-19	10, 11	WEST JORDAN	STORM DRAIN	15 IN	CPP	C			
sd-9061-19	10	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-9078-19	10	WEST JORDAN	STORM DRAIN	36 IN	RCP	C			
sdi-0521-19	10	WEST JORDAN	STORM DRAIN			B			
sdi-0522-19	10	WEST JORDAN	STORM DRAIN			B			
sdi-0523-19	10	WEST JORDAN	STORM DRAIN			B			
sdi-0524-19	10	WEST JORDAN	STORM DRAIN			B			
ss-9002-19	10	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9003-19	10	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9004-19	10	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9005-19	10	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9006-19	10	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9012-19	10	WEST JORDAN	SANITARY SEWER	8 IN	PVC	C			
ss-9013-19	10	WEST JORDAN	SANITARY SEWER	8 IN	PVC	C			
ss-9028-19	10	WEST JORDAN	SANITARY SEWER	8 IN	PVC	C			
ss-9029-19	10	WEST JORDAN	SANITARY SEWER	8 IN		D			
wtr-9010-19	10	WEST JORDAN	WATER	12 IN		D			
wtr-9014-19	10	WEST JORDAN	WATER	6 IN		D			
wtr-9015-19	10	WEST JORDAN	WATER	6 IN		D			
wtr-9016-19	10	WEST JORDAN	WATER	8 IN		D			
wtr-9017-19	10	WEST JORDAN	WATER	1 IN		D			
wtr-9018-19	10	WEST JORDAN	WATER	6 IN		D			
wtr-9019-19	10	WEST JORDAN	WATER	6 IN		D			
wtr-9020-19	10	WEST JORDAN	WATER	6 IN		D			
wtr-9052-19	10	WEST JORDAN	WATER	8 IN		D			
e-9036-12	11	RMP	POWER		AS	D	AERIAL		
g-9000-11	11	QUESTAR	GAS			D			
msd-0505-19	11	WEST JORDAN	STORM DRAIN			B			
1 mw-0001-19	11	WEST JORDAN	WATER	10.25 FT X 13.00 FT		B			PRV Vault
sd-9026-17	11, 12	UDOT	STORM DRAIN	84 IN	CMP	C			
sdi-0262-17	11	UDOT	STORM DRAIN			B			
wtr-9013-19	11	WEST JORDAN	WATER	1 IN		D			
be-9007-12	12	RMP	POWER			D	BURIED		
be-9008-12	12	RMP	POWER			D	BURIED		
be-9009-12	12	RMP	POWER		AL	D	BURIED		
be-9010-12	12	RMP	POWER		PVC -AL	D	BURIED		
be-9034-12	12	RMP	POWER		AL	D	BURIED		
bfo-9006-18	12	VERIZON	FIBER			B	BURIED		
bfo-9007-02	12	CENTURY LINK	FIBER			B	BURIED		
bfo-9008-02	12	CENTURY LINK	FIBER			B	BURIED		

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	09/16	DCO	UPDATE UTILITY SUMMARY

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY VR
APPROVED
MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 90UTSM-09

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
bfo-9022-02	12	CENTURY LINK	FIBER			B	BURIED		
btel-9016-02	12	CENTURY LINK	TELEPHONE			B	BURIED		
btel-9019-02	12	CENTURY LINK	TELEPHONE			B	BURIED		
e-9035-12	12	RMP	POWER			D	AERIAL		
g-9003-11	12	QUESTAR	GAS	6 IN	PTR Plastic	D			
g-9014-11	12	QUESTAR	GAS	6 IN	PTR Plastic	B			
g-9015-11	12	QUESTAR	GAS	6 IN	PTR Plastic	B			
g-9016-11	12	QUESTAR	GAS	6 IN	PTR Plastic	B			
ms-0077-19	12	WEST JORDAN	SANITARY SEWER			B			
ms-0078-19	12	WEST JORDAN	SANITARY SEWER			B			
ms-0079-19	12	WEST JORDAN	SANITARY SEWER			B			
msd-0082-19	12	WEST JORDAN	STORM DRAIN			B			
msd-0084-19	12	WEST JORDAN	STORM DRAIN			B			
sd-9027-17	12	UDOT	STORM DRAIN	84 IN	CMP	C			
sd-9028-10	12	PRIVATE	STORM DRAIN	12 IN	RCP	C			
sd-9029-10	12	PRIVATE	STORM DRAIN	12 IN	RCP	C			
sd-9030-10	12	PRIVATE	STORM DRAIN	12 IN	RCP	C			
sd-9031-19	12	WEST JORDAN	STORM DRAIN	18 IN	CMP	C			
sd-9062-19	12	WEST JORDAN	STORM DRAIN	18 IN	CMP	C			
sd-9075-19	12	WEST JORDAN	STORM DRAIN	18 IN	CMP	C			
sd-9090-19	12	WEST JORDAN	STORM DRAIN	18 IN	CPP	C			
sd-9114-19	12	WEST JORDAN	STORM DRAIN	18 IN		D			
sdi-0263-19	12	WEST JORDAN	STORM DRAIN			B			
sdi-0268-19	12	WEST JORDAN	STORM DRAIN			B			
sdi-0269-17	12	UDOT	STORM DRAIN			B			
sdi-0270-10	12	PRIVATE	STORM DRAIN			B			
sdi-0271-10	12	PRIVATE	STORM DRAIN			B			
sdi-0272-10	12	PRIVATE	STORM DRAIN			B			
sdi-0525-19	12	WEST JORDAN	STORM DRAIN			B			
sdi-0526-19	12	WEST JORDAN	STORM DRAIN			B			
ss-9010-19	12	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9011-19	12	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
ss-9017-19	12	WEST JORDAN	SANITARY SEWER	12 IN	PVC	C			
wtr-9008-19	12	WEST JORDAN	WATER	12 IN		D			
wtr-9023-19	12	WEST JORDAN	WATER	10 IN		D			
wtr-9024-19	12	WEST JORDAN	WATER	8 IN		D			
wtr-9025-19	12	WEST JORDAN	WATER	8 IN		D			
wtr-9026-19	12	WEST JORDAN	WATER	12 IN		D			
wtr-9027-19	12	WEST JORDAN	WATER	18 IN		D			
wtr-9028-19	12	WEST JORDAN	WATER	8 IN		D			
wtr-9029-19	12	WEST JORDAN	WATER	8 IN		D			
wtr-9030-19	12	WEST JORDAN	WATER	12 IN		D			

REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY VR
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MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 9000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 90UTSM-10

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
bduct-7000-05	1, 2, 3, 4, 5, 6, 7, 8, 10	FIRST DIGITAL	FIBER DUCT			B			
bduct-7000-09	1, 2, 3, 4, 5, 6, 7, 8, 10	MBI_ATT_ZAYO_FIRST DIGITAL	FIBER DUCT		HDPE	B	BURIED	TH 70-01, TH 70-15	
bduct-7001-09	1	MBI_ATT_ZAYO_FIRST DIGITAL	FIBER DUCT		HDPE	D	BURIED		
be-7016-17	1	UDOT	POWEER			D	BURIED		
be-7029-12	1	RMP	POWER		AL	D	BURIED		
be-7030-12	1, 2, 3, 4, 5, 10	RMP	POWER		AL	D	BURIED		
be-7037-12	1	RMP	POWER			D	BURIED		
be-7038-12	1	RMP	POWER			D	BURIED		
be-7039-12	1	RMP	POWER			D	BURIED		
bfo-7006-17	1, 2, 3, 4, 5, 10	UDOT	FIBER			B	BURIED		
bfo-7012-15	1, 2	SYRINGA	FIBER			B	BURIED		
bfo-7013-17	1	UDOT	FIBER			B	BURIED		
g-7009-11	1	QUESTAR	GAS	3 IN		D			
g-7029-11	1	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
g-7030-11	1	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
ms-0561-19	1	WEST JORDAN	SANITARY SEWER			D			
ms-0564-19	1	WEST JORDAN	SANITARY SEWER			D			
ms-0565-19	1	WEST JORDAN	SANITARY SEWER			D			
ms-0566-19	1	WEST JORDAN	SANITARY SEWER			D			
msd-0124-17	1	UDOT	STORM DRAIN			B			
msd-0128-19	1	WEST JORDAN	STORM DRAIN			B			
sd-7009-19	1, 2	WEST JORDAN	STORM DRAIN	12 IN	CPP	D			
sd-7010-19	1	WEST JORDAN	STORM DRAIN	12 IN		D			
sd-7011-17	1	UDOT	STORM DRAIN	18 IN	CPP	D			
sd-7033-17	1	UDOT	STORM DRAIN	42 IN	PVC	D			
sd-7036-19	1, 2	WEST JORDAN	STORM DRAIN	24 IN	PVC	C			
sd-7040-17	1, 2	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7093-19	1	WEST JORDAN	STORM DRAIN	12 IN	CPP	D			
sd-7101-17	1	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7102-17	1	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7106-19	1	WEST JORDAN	STORM DRAIN	24 IN	RCP	C			
sdi-0408-19	1	WEST JORDAN	STORM DRAIN			B			
sdi-0409-17	1	UDOT	STORM DRAIN			B			
sdi-0410-17	1	UDOT	STORM DRAIN			B			
ss-7001-19	1, 2	WEST JORDAN	SANITARY SEWER	18 IN		D			
ss-7030-19	1	WEST JORDAN	SANITARY SEWER	21 IN		D			
wtr-7005-01	1, 2	BOR	WATER	78 IN		D			
wtr-7034-19	1	WEST JORDAN	WATER	6 IN		D			
wtr-7035-19	1	WEST JORDAN	WATER	6 IN		D			
bctv-7011-03	2, 3, 4, 5, 10	COMCAST	CABLE TV		COPPER	D	BURIED		
bctv-7014-03	2	COMCAST	CABLE TV		COPPER	D	BURIED		
bduct-7001-05	1	FIRST DIGITAL	FIBER DUCT			D			
be-7017-12	2	RMP	POWER		PVC - AL	D	BURIED		
be-7036-12	2, 3	RMP	POWER		SVS15	D	BURIED		
bfo-7011-15	2, 3, 4	SYRINGA	FIBER			B	BURIED		
btel-7005-02	2	CENTURY LINK	TELEPHONE			D	BURIED		
g-7031-11	2	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
g-7032-11	2	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
g-7033-11	2	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
ms-0547-19	2	WEST JORDAN	SANITARY SEWER			D			
ms-0559-19	2	WEST JORDAN	SANITARY SEWER			D			
ms-0560-19	2	WEST JORDAN	SANITARY SEWER			D			
ms-0562-19	2	WEST JORDAN	SANITARY SEWER			D			
ms-0563-19	2	WEST JORDAN	SANITARY SEWER			D			
msd-0127-19	2	WEST JORDAN	STORM DRAIN			B			
sd-7032-17	2	UDOT	STORM DRAIN	24 IN	RCP	D			
sd-7037-17	2	UDOT	STORM DRAIN	12 IN	CPP	C			
sd-7038-17	2	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7039-17	2	UDOT	STORM DRAIN	18 IN	PVC	C			

REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 70UTSM-01

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sd-7041-17	2	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7042-17	2	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7043-17	2	UDOT	STORM DRAIN	42 IN	CPP	C			
sd-7044-17	2, 3	UDOT	STORM DRAIN	42 IN	CPP	C			
sd-7045-17	2	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7092-19	2	WEST JORDAN	STORM DRAIN	15 IN		D			
sdi-0404-17	2	UDOT	STORM DRAIN			B			
sdi-0405-17	2	UDOT	STORM DRAIN			B			
sdi-0406-17	2	UDOT	STORM DRAIN			B			
sdi-0407-01	2	BOR	STORM DRAIN			B			
sdi-0411-17	2	UDOT	STORM DRAIN			B			
sdi-0412-17	2	UDOT	STORM DRAIN			B			
sdi-0413-17	2	UDOT	STORM DRAIN			B			
sdi-0414-17	2	UDOT	STORM DRAIN			B			
ss-7021-19	2	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-7022-19	2	WEST JORDAN	SANITARY SEWER	8 IN		D			
wtr-7000-01	2, 3, 4, 5, 6, 7, 10	BOR	WATER	78 IN		B		TH 70-13	
wtr-7011-19	2	WEST JORDAN	WATER	8 IN		D			
wtr-7022-19	2	WEST JORDAN	WATER	6 IN		D			
wtr-7027-19	2, 3	WEST JORDAN	WATER	8 IN		D			
wtr-7030-19	2	WEST JORDAN	WATER	6 IN		D			
wtr-7031-19	2	WEST JORDAN	WATER	6 IN		D			
bctv-7012-03	3	COMCAST	CABLE TV		Copper	D	BURIED		
bctv-7013-03	3	COMCAST	CABLE TV		Copper	D	BURIED		
be-7027-12	3, 4	RMP	POWER		PVC - AL	D	BURIED		
be-7028-12	3	RMP	POWER		PVC - AL	D	BURIED		
be-7034-12	3, 4	RMP	POWER		AL	D	BURIED		
be-7035-12	3	RMP	POWER		AL	D	BURIED		
btel-7003-02	3	CENTURY LINK	TELEPHONE		Copper	D	BURIED		
btel-7004-02	3	CENTURY LINK	TELEPHONE		Copper	D	BURIED		
btel-7006-02	3, 4	CENTURY LINK	TELEPHONE		PVC	D	BURIED		
btel-7007-02	3, 4	CENTURY LINK	TELEPHONE		PVC	D	BURIED		
btel-7026-02	3	CENTURY LINK	TELEPHONE		PVC	D	BURIED		
btel-7027-02	3, 4, 5, 10	CENTURY LINK	TELEPHONE		PVC	D	BURIED		
btel-7028-02	3, 4, 5, 10	CENTURY LINK	TELEPHONE			D	BURIED		
g-7007-11	3	QUESTAR	GAS	2 IN	PTR Plastic	D			
g-7008-11	3	QUESTAR	GAS	2 IN	PTR Plastic	D			
g-7023-11	3, 4, 5, 10	QUESTAR	GAS	2 IN	PAL Plastic	D			
g-7024-11	3	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
g-7028-11	3	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
g-7034-11	3	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
ms-0546-19	3	WEST JORDAN	SANITARY SEWER			D			
ms-0556-19	3	WEST JORDAN	SANITARY SEWER			D			
ms-0557-19	3	WEST JORDAN	SANITARY SEWER			D			
ms-0558-19	3	WEST JORDAN	SANITARY SEWER			D			
sd-7025-10	3, 4, 5, 10	PRIVATE	STORM DRAIN	18 IN		D			
sd-7026-10	3	PRIVATE	STORM DRAIN	18 IN		D			
sd-7027-10	3	PRIVATE	STORM DRAIN	18 IN		D			
sd-7028-10	3	PRIVATE	STORM DRAIN	18 IN		D			
sd-7029-10	3	PRIVATE	STORM DRAIN	18 IN		D			
sd-7046-17	3	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7047-17	3	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7048-17	3	UDOT	STORM DRAIN	42 IN	CPP	C			
sd-7049-17	3, 4	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7050-17	3	UDOT	STORM DRAIN	18 IN	CPP	C			
sdi-0402-17	3	UDOT	STORM DRAIN			B			
sdi-0403-17	3	UDOT	STORM DRAIN			B			
sdi-0415-17	3	UDOT	STORM DRAIN			B			
sdi-0416-17	3	UDOT	STORM DRAIN			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY WLS

APPROVED MM/DD/YY
DATE

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY SUMMARY

SHEET NO. 70UTSM-02

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sdi-0417-17	3	UDOT	STORM DRAIN			B			
ss-7002-19	3, 4, 5, 10	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-7011-19	3	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-7018-19	3	WEST JORDAN	SANITARY SEWER	8 IN	Concrete Reinf.	D			
ss-7019-19	3	WEST JORDAN	SANITARY SEWER	8 IN	Concrete Reinf.	D			
ss-7020-19	3	WEST JORDAN	SANITARY SEWER	8 IN	Concrete Reinf.	D			
wtr-7008-19	3, 4, 5, 10	WEST JORDAN	WATER	8 IN		D			
wtr-7012-19	3	WEST JORDAN	WATER	8 IN		D			
wtr-7013-19	3	WEST JORDAN	WATER	8 IN		D			
wtr-7014-19	3	WEST JORDAN	WATER	6 IN		D			
wtr-7032-19	3	WEST JORDAN	WATER	6 IN		D			
wtr-7033-19	3	WEST JORDAN	WATER	6 IN		D			
bctv-7003-03	4	COMCAST	CABLE TV		Copper	D	BURIED		
bctv-7004-03	4	COMCAST	CABLE TV		Copper	D	BURIED		
bctv-7005-03	4	COMCAST	CABLE TV		Copper	D	BURIED		
be-7013-17	4, 5, 10	UDOT	POWER			D	BURIED		
be-7031-12	4, 5, 10	RMP	POWER		AL	D	BURIED		
be-7032-12	4	RMP	POWER		PVC	D	BURIED		
be-7033-12	4	RMP	POWER		PVC	D	BURIED		
be-7040-12	4	RMP	POWER		PVC	D	BURIED		
be-7200-12	4	RMP	POWER			D	BURIED		
bfo-7008-15	4, 5, 10	SYRINGA	FIBER			B	BURIED	TH 70-16	
btel07200-12	4	RMP	POWER			D			
btel-7000-02	4	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7001-02	4	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7002-02	4	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7008-02	4	CENTURY LINK	TELEPHONE		PVC	D	BURIED		
btel-7025-02	4	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7029-02	4	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7200-02	4	CENTURY LINK	TELEPHONE			B	BURIED		
btel-7200-02	4	CENTURY LINK	TELEPHONE			D			
g-7000-11	4	QUESTAR	GAS			D			
g-7001-11	4	QUESTAR	GAS			D			
g-7025-11	4	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
g-7026-11	4	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
ms-0544-19	4	WEST JORDAN	SANITARY SEWER			D			
ms-0545-19	4	WEST JORDAN	SANITARY SEWER			D			
ms-0554-19	4	WEST JORDAN	SANITARY SEWER			D			
ms-0555-19	4	WEST JORDAN	SANITARY SEWER			D			
sd-7051-17	4	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7052-17	4	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7053-17	4, 5, 10	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7054-17	4	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7055-17	4	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7100-17	4	UDOT	STORM DRAIN	18 IN	RCP	C			
sd-7105-17	4	UDOT	STORM DRAIN	18 IN	CPP	C			
sdi-0399-17	4	UDOT	STORM DRAIN			B			
sdi-0400-17	4	UDOT	STORM DRAIN			B			
sdi-0401-17	4	UDOT	STORM DRAIN			B			
sdi-0418-17	4	UDOT	STORM DRAIN			B			
sdi-0419-17	4	UDOT	STORM DRAIN			B			
sdi-0420-17	4	UDOT	STORM DRAIN			B			
sdi-0421-17	4	UDOT	STORM DRAIN			B			
ss-7016-19	4	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-7017-19	4	WEST JORDAN	SANITARY SEWER	8 IN		D			
wtr-7015-19	4	WEST JORDAN	WATER	6 IN		D			
wtr-7016-19	4	WEST JORDAN	WATER	6 IN		D			
bctv-7002-03	5, 10	COMCAST	CABLE TV			D	BURIED	TH 70-18 1	
bctv-7009-03	5, 6, 7, 8, 10	COMCAST	CABLE TV		Copper	D	BURIED		

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	09/16	DCO	ADDED TESTHOLES.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY WLS
MM/DD/YY
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 70UTSM-03

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
bctv-7010-03	5, 10	COMCAST	CABLE TV		Copper	D	BURIED		
bctv-7200-03	5, 6, 7, 10	COMCAST	CABLE TV			D	BURIED		
be-7000-12	5, 9, 10	RMP	POWER		AL	D	BURIED		
be-7001-12	5, 9, 10	RMP	POWER		AL	D	BURIED		
be-7002-12	5, 10	RMP	POWER			D	BURIED		
be-7003-12	5, 10	RMP	POWER		AL	D	BURIED		
be-7004-12	5, 10	RMP	POWER		AL	D	BURIED		
be-7005-12	5, 10	RMP	POWER		HDPE -AL	D	BURIED		
be-7006-17	5, 10	UDOT	POWER			D	BURIED		
be-7007-17	5, 10	UDOT	POWER			D	BURIED		
be-7008-12	5, 10	RMP	POWER			D	BURIED		
be-7009-17	5, 10	UDOT	POWER			D	BURIED		
be-7011-17	5, 6, 10	UDOT	POWER			D	BURIED		
be-7012-17	5, 10	UDOT	POWER			D	BURIED		
be-7014-17	5, 10	UDOT	POWER			D	BURIED		
be-7015-17	5, 10	UDOT	POWER			D	BURIED		
be-7018-12	5, 10	RMP	POWER		AL	D	BURIED		
be-7023-12	5, 6, 7	RMP	POWER		AL	D	BURIED		
be-7024-12	5, 6, 7, 10	RMP	POWER		AL	D	BURIED		
be-7041-12	5, 6, 7, 10	RMP	POWER		AL	D	BURIED		
be-7042-12	5, 9,10	RMP	POWER		AL	D	BURIED		
bfo-7001-15	5, 9, 10	SYRINGA	FIBER			B	BURIED	TH 70-02	
bfo-7002-15	5, 10	SYRINGA	FIBER			B	BURIED		
bfo-7003-17	5, 9, 10	UDOT	FIBER			B	BURIED	TH 70-02	
bfo-7004-03	5, 10	COMCAST	FIBER			B	BURIED	TH 70-17 1	
bfo-7005-17	5, 10	UDOT	FIBER			B	BURIED		
bfo-7007-17	5, 6, 7, 8, 10	UDOT	FIBER			B	BURIED		
bfo-7014-15	5, 6, 7, 10	SYRINGA	FIBER			B	BURIED		
btel-7013-02	5, 10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7023-02	5, 6, 7, 8, 10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7024-02	5, 10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7030-02	5, 10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7031-02	5, 6, 7, 10	CENTURY LINK	TELEPHONE			D	BURIED		
g-7002-11	5, 10	QUESTAR	GAS			D			
g-7003-11	5, 9, 10	QUESTAR	GAS	6 IN	PTR Plastic	B			
g-7004-11	5, 10	QUESTAR	GAS	4 IN	Steel	B		TH 70-05A, TH 70-06, TH 70-11	
g-7005-11	5, 10	QUESTAR	GAS	3 IN	Steel	B			
g-7006-11	5, 9, 10	QUESTAR	GAS	2 IN	Steel	D			
g-7010-11	5, 6, 10	QUESTAR	GAS	3 IN	Steel	D			
g-7019-11	5, 10	QUESTAR	GAS	2 IN	PAL Plastic	D			
g-7022-11	5, 10	QUESTAR	GAS	4 IN	PAL Plastic	D			
g-7027-11	5, 10	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
g-7200-11	5, 6, 7, 10	QUESTAR	GAS	2 IN		D			
ms-0129-19	5, 10	WEST JORDAN	SANITARY SEWER			B			
ms-0130-19	5, 10	WEST JORDAN	SANITARY SEWER			B			
ms-0131-19	5, 10	WEST JORDAN	SANITARY SEWER			B			
ms-0543-19	5, 10	WEST JORDAN	SANITARY SEWER			D			
ms-0549-19	5, 10	WEST JORDAN	SANITARY SEWER			D			
ms-0551-19	5, 10	WEST JORDAN	SANITARY SEWER			D			
ms-0553-19	5, 10	WEST JORDAN	SANITARY SEWER			D			
msd-0103-19	5, 10	WEST JORDAN	STORM DRAIN			B			
msd-0104-17	5, 10	UDOT	STORM DRAIN			B			
msd-0105-17	5, 10	UDOT	STORM DRAIN			B			
msd-0112-19	5, 10	WEST JORDAN	STORM DRAIN			B			
msd-0113-19	5, 10	WEST JORDAN	STORM DRAIN			B			
msd-0114-19	5, 10	WEST JORDAN	STORM DRAIN			B			
msd-0115-19	5, 10	WEST JORDAN	STORM DRAIN			B			
msd-0116-19	5, 10	WEST JORDAN	STORM DRAIN			B			
msd-0117-19	5, 10	WEST JORDAN	STORM DRAIN			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	09/16	DCO	ADDED TESTHOLES

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY WLS
APPROVED
MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 70UTSM-04

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
msd-0118-19	5, 10	WEST JORDAN	STORM DRAIN			B			
msd-0125-17	5, 10	UDOT	STORM DRAIN			B			
msd-0167-19	5, 10	WEST JORDAN	STORM DRAIN			B			
mw-0003-01	5, 10	BOR	WATER	11.50 X 15.00 FT		B			Aqueduct Vault
1 mw-0004-01	5, 10	BOR	WATER	10.00 X 19.00 FT		B			PRV/Meter Vault
mw-0004-19	5, 10	WEST JORDAN	WATER	10.00 X 19.00 FT		B			PRV/Meter Vault
sd-7000-10	5, 10	PRIVATE	STORM DRAIN	12 IN	CPP	D			
sd-7001-10	5, 10	PRIVATE	STORM DRAIN	12 IN	CPP	D			
sd-7002-19	5, 10	WEST JORDAN	STORM DRAIN	24 IN	CPP	C			
sd-7003-19	5, 10	WEST JORDAN	STORM DRAIN	24 IN	RCP	C			
sd-7004-19	5, 10	WEST JORDAN	STORM DRAIN	24 IN	RCP	C			
sd-7005-19	5, 10	WEST JORDAN	STORM DRAIN	24 IN		C			
sd-7007-19	5, 10	WEST JORDAN	STORM DRAIN	15 IN	CMP	C			
sd-7008-19	5, 10	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-7013-17	5, 10	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7014-17	5, 10	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7015-19	5, 10	WEST JORDAN	STORM DRAIN	18 IN	CPP	C			
sd-7016-19	5, 10	WEST JORDAN	STORM DRAIN	18 IN	CMP	C			
sd-7017-19	5, 10	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-7018-19	5, 10	WEST JORDAN	STORM DRAIN	18 IN	CMP	C			
sd-7019-19	5, 10	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-7030-19	5, 10	WEST JORDAN	STORM DRAIN	15 IN		D			
sd-7031-17	5, 10	UDOT	STORM DRAIN	18 IN	Concrete Reinf.	C			
sd-7035-19	5, 10	WEST JORDAN	STORM DRAIN	18 IN	CMP	C			
sd-7056-17	5, 10	UDOT	STORM DRAIN	18 IN	RCP	C			
sd-7057-17	5, 10	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7058-17	5, 10	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7059-17	5, 10	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7060-17	5, 10	UDOT	STORM DRAIN	18 IN	CMP	D			
sd-7061-17	5, 6, 10	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7083-19	5, 10	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-7084-19	5, 10	WEST JORDAN	STORM DRAIN	12 IN	CPP	C			
sd-7090-19	5, 10	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-7091-19	5, 9, 10	WEST JORDAN	STORM DRAIN	24 IN	RCP	D			
sd-7094-19	5, 9, 10	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-7095-17	5, 10	UDOT	STORM DRAIN	18 IN	RCP	C			
sd-7096-17	5, 10	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7097-17	5, 10	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7098-17	5, 10	UDOT	STORM DRAIN	18 IN	RCP	C			
sd-7099-17	5, 10	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7103-17	5, 10	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7104-19	5, 10	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-7115-19	5, 10	WEST JORDAN	STORM DRAIN	15 IN	RCP	C			
sd-7117-17	5, 10	UDOT	STORM DRAIN	18 IN	CPP	C			
sdi-0328-17	5, 10	UDOT	STORM DRAIN			B			
sdi-0362-19	5, 10	WEST JORDAN	STORM DRAIN			B			
sdi-0363-17	5, 10	UDOT	STORM DRAIN			B			
sdi-0367-19	5, 10	WEST JORDAN	STORM DRAIN			B			
sdi-0368-19	5, 10	WEST JORDAN	STORM DRAIN			B			
sdi-0369-19	5, 10	WEST JORDAN	STORM DRAIN			B			
sdi-0370-19	5, 10	WEST JORDAN	STORM DRAIN			B			
sdi-0392-17	5, 10	UDOT	STORM DRAIN			B			
sdi-0393-17	5, 10	UDOT	STORM DRAIN			B			
sdi-0394-17	5, 10	UDOT	STORM DRAIN			B			
sdi-0395-17	5	UDOT	STORM DRAIN			B			
sdi-0396-17	5, 10	UDOT	STORM DRAIN			B			
sdi-0397-17	5, 10	UDOT	STORM DRAIN			B			
sdi-0398-17	5	UDOT	STORM DRAIN			B			
sdi-0422-17	5, 10	UDOT	STORM DRAIN			B			
sdi-0423-17	5, 10	UDOT	STORM DRAIN			B			
sdi-0425-17	5, 10	UDOT	STORM DRAIN			B			
sdi-0489-19	5, 10	WEST JORDAN	STORM DRAIN			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS
1	09/16	DCO	WATER VAULTS ADDED.

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY WLS
APPROVED
MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 70UTSM-05

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
ss-7000-19	5, 10	WEST JORDAN	SANITARY SEWER	12 IN	Concrete Reinf.	C			
ss-7005-19	5, 9, 10	WEST JORDAN	SANITARY SEWER	10 IN	PVC	C			
ss-7006-19	5, 10	WEST JORDAN	SANITARY SEWER	12 IN	Concrete Reinf.	C			
ss-7007-19	5, 10	WEST JORDAN	SANITARY SEWER	12 IN	Concrete Reinf.	C			
ss-7009-19	5, 9, 10	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-7013-19	5, 6,10	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-7014-19	5, 10	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-7015-19	5, 10	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-7029-19	5, 6, 10	WEST JORDAN	SANITARY SEWER	12 IN	Concrete Reinf.	D			
wtr-7001-19	5, 9, 10	WEST JORDAN	WATER	16 IN		D			
wtr-7002-19	5, 10	WEST JORDAN	WATER	12 IN		D		TH 70-09A	
wtr-7003-19	5, 10	WEST JORDAN	WATER	10 IN		D			
wtr-7006-19	5, 9, 10	WEST JORDAN	WATER	18 IN		D		TH 70-05A	
wtr-7009-19	5, 10	WEST JORDAN	WATER	6 IN		D			
wtr-7017-19	5, 10	WEST JORDAN	WATER	6 IN		D			
wtr-7020-19	5, 6, 10	WEST JORDAN	WATER	6 IN		D			
wtr-7021-19	5, 9, 10	WEST JORDAN	WATER	6 IN		D			
wtr-7028-19	5, 6, 7, 10	WEST JORDAN	WATER	6 IN		D			
wtr-7029-19	5, 10	WEST JORDAN	WATER	10 IN		D			
bctv-7200-03	6, 7	COMCAST	CABLE TV			D			
be-7010-17	6	UDOT	POWER			D	BURIED		
be-7026-12	6, 7	RMP	POWER		AL	D	BURIED		
btel-7020-02	6, 7	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7202-02	6, 7	CENTURY LINK	TELEPHONE			D			
g-7011-11	6	QUESTAR	GAS	2 IN	PAL Plastic	D			
g-7012-11	6	QUESTAR	GAS	2 IN	PAL Plastic	D			
g-7018-11	6, 7	QUESTAR	GAS	2 IN	PAL Plastic	D			
ms-0541-19	6	WEST JORDAN	SANITARY SEWER			D			
ms-0542-19	6	WEST JORDAN	SANITARY SEWER			D			
ms-0548-19	6	WEST JORDAN	SANITARY SEWER			D			
ms-0550-19	6	WEST JORDAN	SANITARY SEWER			D			
msd-0126-17	6	UDOT	STORM DRAIN			B			
mvc en	6, 7, 8	CENTURY LINK	TELEPHONE			D			
sd-7012-17	6	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7024-17	6	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7062-17	6	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7063-17	6	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7064-17	6	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7065-17	6	UDOT	STORM DRAIN	18 IN	RCP	C			
sd-7066-17	6	UDOT	STORM DRAIN	18 IN	RCP	C			
sd-7067-17	6	UDOT	STORM DRAIN	18 IN	RCP	C			
sd-7068-17	6	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7069-17	6, 7	UDOT	STORM DRAIN	42 IN	PVC	C			
sdi-0387-17	6	UDOT	STORM DRAIN			B			
sdi-0388-17	6	UDOT	STORM DRAIN			B			
sdi-0389-17	6	UDOT	STORM DRAIN			B			
sdi-0390-17	6	UDOT	STORM DRAIN			B			
sdi-0391-17	6	UDOT	STORM DRAIN			B			
sdi-0424-17	6	UDOT	STORM DRAIN			B			
sdi-0426-17	6	UDOT	STORM DRAIN			B			
sdi-0427-17	6	UDOT	STORM DRAIN			B			
sdi-0428-17	6	UDOT	STORM DRAIN			B			
ss-7010-19	6	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-7012-19	6, 7	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-7027-19	6, 7	WEST JORDAN	SANITARY SEWER	12 IN		D			
ss-7028-19	6	WEST JORDAN	SANITARY SEWER	12 IN		D			
wtr-7018-19	6	WEST JORDAN	WATER	6 IN		D			
wtr-7019-19	6	WEST JORDAN	WATER	6 IN		D			
wtr-7024-19	6, 7	WEST JORDAN	WATER	10 IN		D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

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QC CHECKED BY WLS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

APPROVED

MM/DD/YY
DATE

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY SUMMARY

SHEET NO. 70UTSM-06

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
be-7025-12	7, 8	RMP	POWER		AL	D	BURIED		
bfo-7009-02	7, 8	CENTURY LINK	FIBER			B	BURIED		
bfo-7010-15	7, 8	SYRINGA	FIBER			B	BURIED		
btel-7009-02	7	CENTURY LINK	TELEPHONE		PVC	D	BURIED		
btel-7010-02	7, 8	CENTURY LINK	TELEPHONE		PVC	D	BURIED		
btel-7011-02	7, 8	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7012-02	7	CENTURY LINK	TELEPHONE		PVC	D	BURIED		
btel-7014-02	7	CENTURY LINK	TELEPHONE		PVC	D	BURIED		
btel-7015-02	7, 8	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7017-02	7	CENTURY LINK	TELEPHONE			D	BURIED		
g-7017-11	7, 8	QUESTAR	GAS	2 IN	PAL Plastic	D			
g-7020-11	7	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
ms-0535-19	7	WEST JORDAN	SANITARY SEWER			D			
ms-0539-19	7	WEST JORDAN	SANITARY SEWER			D			
ms-0540-19	7	WEST JORDAN	SANITARY SEWER			D			
msd-0123-17	7	WEST JORDAN	STORM DRAIN			B			
msd-0170-17	7	UDOT	STORM DRAIN			B			
msd-0500-17	7	UDOT	STORM DRAIN			B			
sd-7023-17	7	UDOT	STORM DRAIN	42 IN	RCP	C			
sd-7070-17	7	UDOT	STORM DRAIN	42 IN	PVC	C			
sd-7071-17	7	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7072-17	7	UDOT	STORM DRAIN	18 IN	RCP	C			
sd-7073-17	7	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-7074-17	7	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7075-17	7	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7076-17	7	UDOT	STORM DRAIN	42 IN	RCP	C			
sd-7077-17	7, 8	UDOT	STORM DRAIN	36 IN	CMP	C			
sd-7085-17	7	UDOT	STORM DRAIN	18 IN	CPP	C			
sd-7086-17	7	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-7088-17	7	UDOT	STORM DRAIN	18 IN	RCP	D			
sd-7116-19	7	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sdi-0382-17	7	UDOT	STORM DRAIN			B			
sdi-0383-17	7	UDOT	STORM DRAIN			B			
sdi-0384-01	7	BOR	STORM DRAIN			B			
sdi-0385-17	7	UDOT	STORM DRAIN			B			
sdi-0386-17	7	WEST JORDAN	STORM DRAIN			B			
sdi-0429-17	7	UDOT	STORM DRAIN			B			
sdi-0430-17	7	UDOT	STORM DRAIN			B			
sdi-0431-17	7	UDOT	STORM DRAIN			B			
sdi-0439-17	7	UDOT	STORM DRAIN			B			
sdi-0464-19	7	WEST JORDAN	STORM DRAIN			B			
ss-7008-19	7, 8	WEST JORDAN	SANITARY SEWER	10 IN		D			
wtr-7004-01	7, 8	BOR	WATER	78 IN		B			
wtr-7023-19	7, 8	WEST JORDAN	WATER	6 IN		D			
bctv-7007-03	8	COMCAST	CABLE TV		Copper	D	BURIED		
bctv-7008-03	8	COMCAST	CABLE TV		Copper	D	BURIED		
be-7019-12	8	RMP	POWER		AL	D	BURIED		
be-7020-12	8	RMP	POWER		AL	D	BURIED		
be-7021-12	8	RMP	POWER		AL	D	BURIED		
be-7022-12	8	RMP	POWER		AL	D	BURIED		
btel-7021-02	8	CENTURY LINK	TELEPHONE		PVC	D	BURIED		
btel-7022-02	8	CENTURY LINK	TELEPHONE		PVC	D	BURIED		
g-7013-11	8	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
g-7014-11	8	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
g-7015-11	8	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
g-7016-11	8	QUESTAR	GAS	1 AND QUARTER IN	PAL Plastic	D			
ms-0141-16	8	TAYLORSVILLE	SANITARY SEWER			B			
ms-0536-19	8	WEST JORDAN	SANITARY SEWER			D			
ms-0537-19	8	WEST JORDAN	SANITARY SEWER			D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
QC CHECKED BY WLS
APPROVED
MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 70UTSM-07

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
ms-0538-19	8	WEST JORDAN	SANITARY SEWER			D			
msd-0164-19	8	WEST JORDAN	STORM DRAIN			B			
msd-0165-19	8	WEST JORDAN	STORM DRAIN			B			
msd-0166-19	8	WEST JORDAN	STORM DRAIN			B			
msd-0535-19	8	WEST JORDAN	STORM DRAIN			B			
sd-7078-17	8	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7079-17	8	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7080-17	8	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7081-17	8	UDOT	STORM DRAIN	18 IN	CMP	C			
sd-7082-19	8	WEST JORDAN	STORM DRAIN	24 IN	CMP	D			
sd-7107-17	8	UDOT	STORM DRAIN	30 IN	CMP	C			
sd-7108-17	8	UDOT	STORM DRAIN	30 IN	CMP	C			
sd-7109-17	8	UDOT	STORM DRAIN	30 IN	CMP	C			
sd-7110-19	8	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-7111-19	8	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-7112-19	8	WEST JORDAN	STORM DRAIN	18 IN	CMP	C			
sd-7113-19	8	WEST JORDAN	STORM DRAIN	18 IN	CMP	C			
sd-7114-19	8	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sdi-0378-17	8	UDOT	STORM DRAIN			B			
sdi-0379-17	8	UDOT	STORM DRAIN			B			
sdi-0380-17	8	UDOT	STORM DRAIN			B			
sdi-0381-17	8	UDOT	STORM DRAIN			B			
sdi-0432-17	8	UDOT	STORM DRAIN			B			
sdi-0433-17	8	UDOT	STORM DRAIN			B			
sdi-0434-17	8	UDOT	STORM DRAIN			B			
sdi-0440-19	8	WEST JORDAN	STORM DRAIN			B			
sdi-0486-19	8	WEST JORDAN	STORM DRAIN			B			
sdi-0487-19	8	WEST JORDAN	STORM DRAIN			B			
ss-7023-16	8	TAYLORSVILLE	SANITARY SEWER	12 IN	Concrete Reinf.	D			
ss-7024-16	8	TAYLORSVILLE	SANITARY SEWER	12 IN	Concrete Reinf.	C			
ss-7025-19	8	WEST JORDAN	SANITARY SEWER	8 IN		D			
ss-7026-19	8	WEST JORDAN	SANITARY SEWER	8 IN		D			
wtr-7025-19	8	WEST JORDAN	WATER	6 IN		D			
wtr-7026-19	8	WEST JORDAN	WATER	6 IN		D			
bctv-7001-03	9, 10	COMCAST	CABLE TV		Copper	D	BURIED		
bctv-7250-03	9	COMCAST	CABLE TV			D	BURIED		
bctv-7251-03	9	COMCAST	CABLE TV			D	BURIED		
bctv-7252-03	9	COMCAST	CABLE TV			D	BURIED		
be-7250-19	9	WEST JORDAN	POWER			D	BURIED		
be-7251-17	9	UDOT	POWER			D	BURIED		
be-7252-17	9	UDOT	POWER			D	BURIED		
be-7253-17	9	UDOT	POWER			D	BURIED		
be-7254-17	9	UDOT	POWER			D	BURIED		
be-7255-12	9	RMP	POWER			D	BURIED		
be-7256-12	9	RMP	POWER			D	BURIED		
bfo-7000-03	9, 10	COMCAST	FIBER		Copper	D	BURIED		
bfo-7250-02	9	CENTURY LINK	FIBER			D	BURIED		
bfo-7252-03	9	COMCAST	FIBER			B	BURIED		
bfo-7253-17	9	UDOT	FIBER			B	BURIED		
bfo-7254-03	9	COMCAST	FIBER			D	BURIED		
bfo-7255-03	9	COMCAST	FIBER			D	BURIED		
btel-7018-02	9	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7019-02	9	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7250-02	9	CENTURY LINK	TELEPHONE			D	BURIED		
btel-7251-02	9	CENTURY LINK	TELEPHONE			D	BURIED		
g-7250-11	9	QUESTAR	GAS	4 IN		B			
g-7251-11	9	QUESTAR	GAS	6 IN		B			
g-7252-11	9	QUESTAR	GAS	1 AND QUARTER IN		B			
g-7253-11	9	QUESTAR	GAS	2 IN		D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

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DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY SUMMARY

SHEET NO. 70UTSM-08

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
g-7254-11	9	QUESTAR	GAS	2 IN		D			
g-7255-11	9	QUESTAR	GAS	4 IN		D			
g-7256-11	9	QUESTAR	GAS	6 IN		D			
ms-0125-19	9	WEST JORDAN	SANITARY SEWER			B			
ms-0126-19	9	WEST JORDAN	SANITARY SEWER			B			
ms-0127-19	9	WEST JORDAN	SANITARY SEWER			B			
ms-0128-19	9	WEST JORDAN	SANITARY SEWER			B			
msd-0100-19	9	WEST JORDAN	STORM DRAIN			B			
msd-0101-19	9	WEST JORDAN	STORM DRAIN			B			
msd-0102-19	9	WEST JORDAN	STORM DRAIN			B			
msd-0119-19	9	WEST JORDAN	STORM DRAIN			B			
msd-0120-19	9	WEST JORDAN	STORM DRAIN			B			
msd-0121-19	9	WEST JORDAN	STORM DRAIN			B			
msd-0122-19	9	WEST JORDAN	STORM DRAIN			B			
msd-0126-19	9	WEST JORDAN	SANITARY SEWER			B			
msd-0171-19	9	WEST JORDAN	STORM DRAIN			B			
sd-7250-19	9	WEST JORDAN	STORM DRAIN	24 IN		D			
sd-7251-19	9	WEST JORDAN	STORM DRAIN	15 IN		D			
sd-7252-19	9	WEST JORDAN	STORM DRAIN	10 IN		D			
sd-7253-19	9	WEST JORDAN	STORM DRAIN	18 IN		D			
sd-7254-19	9	WEST JORDAN	STORM DRAIN	15 IN		D			
sd-7255-19	9	WEST JORDAN	STORM DRAIN	15 IN		D			
sd-7256-19	9	WEST JORDAN	STORM DRAIN	18 IN		C			
sd-7257-19	9	WEST JORDAN	STORM DRAIN	18 IN		C			
sd-7258-19	9	WEST JORDAN	STORM DRAIN	15 IN		C			
sd-7259-19	9	WEST JORDAN	STORM DRAIN	24 IN		C			
sd-7260-19	9	WEST JORDAN	STORM DRAIN	24 IN		D			
sd-7261-19	9	WEST JORDAN	STORM DRAIN	10 IN		C			
sd-7265-19	9	WEST JORDAN	STORM DRAIN	15 IN		C			
sd-7266-19	9	WEST JORDAN	STORM DRAIN	18 IN		C			
sd-7268-19	9	WEST JORDAN	STORM DRAIN	15 IN		D			
sd-7269-19	9	WEST JORDAN	STORM DRAIN	18 IN		D			
sd-7270-19	9	WEST JORDAN	STORM DRAIN	18 IN		D			
sd-7271-19	9	WEST JORDAN	STORM DRAIN	24 IN		D			
sd-7272-19	9	WEST JORDAN	STORM DRAIN	18 IN		C			
sdi-0361-17	9	UDOT	STORM DRAIN			B			
sdi-0371-19	9	WEST JORDAN	STORM DRAIN			B			
ss-7003-19	9	WEST JORDAN	SANITARY SEWER	10 IN		C			
ss-7004-19	9	WEST JORDAN	SANITARY SEWER	10 IN		C			
ss-7250-19	9	WEST JORDAN	SANITARY SEWER	10 IN		C			
ss-7251-19	9	WEST JORDAN	SANITARY SEWER	10 IN		D			
ss-7252-19	9	WEST JORDAN	SANITARY SEWER	8 IN		D			
wtr-7250-19	9	WEST JORDAN	WATER	6 IN		D			
wtr-7251-19	9	WEST JORDAN	WATER	6 IN		D			
wtr-7252-19	9	WEST JORDAN	WATER	12 IN		D			
wtr-7253-19	9	WEST JORDAN	WATER	8 IN		D			
wtr-7254-19	9	WEST JORDAN	WATER	6 IN		D			
wtr-7255-19	9	WEST JORDAN	WATER	8 IN		D			
wtr-7256-19	9	WEST JORDAN	WATER	12 IN		D			
bctv-7000-03	10	COMCAST	CABLE TV		Copper	D	BURIED		
bctv-7006-03	10	COMCAST	CABLE TV		Copper	D	BURIED		
msd-0108-19	10	WEST JORDAN	STORM DRAIN			C			
msd-0109-19	10	WEST JORDAN	STORM DRAIN			C			
msd-0110-19	10	WEST JORDAN	STORM DRAIN			B			
msd-0111-19	10	WEST JORDAN	STORM DRAIN			B			
sd-7006-19	10	WEST JORDAN	STORM DRAIN	24 IN		C			
sd-7020-19	10	WEST JORDAN	STORM DRAIN	18 IN	CMP	C			
sd-7021-19	10	WEST JORDAN	STORM DRAIN	18 IN	CMP	C			
sd-7022-19	10	WEST JORDAN	STORM DRAIN	18 IN	RCP	C			
sd-7262-19	10	WEST JORDAN	STORM DRAIN	12 IN		C			
sd-7263-19	10	WEST JORDAN	STORM DRAIN	12 IN		C			
sd-7264-19	10	WEST JORDAN	STORM DRAIN	12 IN		C			
sd-7267-19	10	WEST JORDAN	STORM DRAIN	18 IN		C			
sdi-0364-19	10	WEST JORDAN	STORM DRAIN			C			
sdi-0365-19	10	WEST JORDAN	STORM DRAIN			C			
sdi-0366-19	10	WEST JORDAN	STORM DRAIN			B			
wtr-7010-19	10	WEST JORDAN	WATER	6 IN		D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY KKH
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MM/DD/YY
DATE
PROFESSIONAL ENGINEER

PROJECT
4 INTERCHANGES ON
BANGERTER HIGHWAY - 7000 SOUTH
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITY SUMMARY

SHEET NO. 70UTSM-09

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Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
bctv-5009-03	1, 2, 3	COMCAST	CABLE TV			D	BURIED		
bctv-5022-03	1, 2	COMCAST	CABLE TV			D	BURIED		
bctv-5023-03	1	COMCAST	CABLE TV			D	BURIED		
bctv-5024-03	1	COMCAST	CABLE TV			D	BURIED		
bduct-5002-09	1, 2, 3, 4, 5, 11	MBI, ATT, ZAYO	FIBER DUCT			B	BURIED		
bduct-5002-05	1, 2, 3, 4, 5, 11	FIRST DIGITAL	FIBER DUCT			B	BURIED		
be-5084-12	1, 2, 3	RMP	POWER			D	BURIED		
be-5085-12	1, 2, 3, 4	RMP	POWER			D	BURIED		
be-5087-12	1	RMP	POWER			D	BURIED		
bfo-5018-17	1, 2, 3, 4, 5, 11	UDOT	FIBER			B	BURIED		
bfo-5021-15	1, 2, 3, 4, 5, 11	SYRINGA	FIBER			B	BURIED		
btel-5010-02	1	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5011-02	1, 2, 3, 4	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5030-02	1	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5031-02	1	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5058-02	1, 2	CENTURY LINK	TELEPHONE			D	BURIED		
e-5086-12	1	RMP	POWER			D	AERIAL		
sd-5034-07	1	JVWCD	STORM DRAIN	18 IN		D			
sd-5052-17	1	UDOT	STORM DRAIN	18 IN		C			
sd-5082-17	1	UDOT	STORM DRAIN	18 IN		C			
sd-5084-99	1	UDOT	STORM DRAIN	18 IN		C			
sd-5098-99	1	UDOT	STORM DRAIN	18 IN		C			
sd-5099-99	1, 2	UDOT	STORM DRAIN	18 IN		C			
sdi-0067-17	1	UDOT	STORM DRAIN			B			
sdi-0068-17	1	UDOT	STORM DRAIN			B			
sdi-0076-17	1	UDOT	STORM DRAIN			B			
sdi-0077-17	1	UDOT	STORM DRAIN			B			
sdi-0508-07	1	JVWCD	STORM DRAIN			B			
ss-5019-16	1, 2, 3, 4	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5024-16	1	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5025-16	1	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5026-16	1	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
wtr-5002-16	1	TAYLORSVILLE	WATER	24 IN		B			
wtr-5018-16	1	TAYLORSVILLE	WATER	6 IN		D			
wtr-5019-16	1, 2	TAYLORSVILLE	WATER	6 IN		D			
wtr-5024-16	1	TAYLORSVILLE	WATER	6 IN		D			
wtr-5032-16	1	TAYLORSVILLE	WATER	24 IN		D			
wtr-5033-16	1	TAYLORSVILLE	WATER	24 IN		D			
wtr-5049-01	1, 2, 3, 4, 5, 11	BOR	WATER	66 IN		B		TH 54-01, TH 54-02, TH 54-03, TH 54-04	
btel-5032-02	2	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5033-02	2, 3	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5056-02	2, 3, 4	CENTURY LINK	TELEPHONE			D	BURIED		
g-5031-11	2	QUESTAR	GAS	1 AND QUARTER IN		D			
g-5040-11	2	QUESTAR	GAS	2 IN		D			
ms-0534-16	2	TAYLORSVILLE	SANITARY SEWER			D			
sd-5100-99	2	UDOT	STORM DRAIN	18 IN		C			
sd-5101-99	2	UDOT	STORM DRAIN	18 IN		C			
sd-5102-99	2	UDOT	STORM DRAIN	18 IN		C			
sd-5103-99	2, 3	UDOT	STORM DRAIN	18 IN		C			
sdi-0078-17	2	UDOT	STORM DRAIN			B			
sdi-0079-17	2	UDOT	STORM DRAIN			B			
sdi-0080-17	2	UDOT	STORM DRAIN			B			
sdi-0081-17	2	UDOT	STORM DRAIN			B			
ss-5021-16	2	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5022-16	2	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5023-16	2	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5027-16	2	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5028-16	2	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
wtr-5021-16	2	TAYLORSVILLE	WATER	6 IN		D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY

SHEET NO. 54UTSM-01

$$pentbls$$
$$username$$
c:\pw_work\bryanwestover@hdrinc.com\dms70928\12566_54UTSM-01.dgn
9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
wtr-5022-16	2	TAYLORSVILLE	WATER	6 IN		D			
wtr-5023-16	2	TAYLORSVILLE	WATER	6 IN		D			
wtr-5028-16	2	TAYLORSVILLE	WATER	8 IN		D			
wtr-5045-16	2, 3, 4	TAYLORSVILLE	WATER	8 IN		D			
bctv-5007-03	3, 4	COMCAST	CABLE TV			D	BURIED		
bctv-5021-03	3, 4, 11	COMCAST	CABLE TV			D	BURIED		
be-5062-12	3, 4	RMP	POWER			D	BURIED		
btel-5008-02	3	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5009-02	3	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5034-02	3	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5035-02	3	CENTURY LINK	TELEPHONE			D	BURIED		
g-5030-11	3	QUESTAR	GAS	1 AND QUARTER IN		D			
g-5039-11	3, 4	QUESTAR	GAS	2 IN		D			
ms-0531-16	3	TAYLORSVILLE	SANITARY SEWER			D			
ms-0532-16	3	TAYLORSVILLE	SANITARY SEWER			D			
ms-0533-16	3	TAYLORSVILLE	SANITARY SEWER			D			
sd-5028-17	3, 4, 5	UDOT	STORM DRAIN	24 IN		C			
sd-5030-17	3	UDOT	STORM DRAIN	24 IN		C			
sd-5051-17	3	UDOT	STORM DRAIN	18 IN		C			
sd-5079-17	3, 4	UDOT	STORM DRAIN	12 IN		C			
sd-5104-99	3	UDOT	STORM DRAIN	18 IN		C			
sd-5105-99	3	UDOT	STORM DRAIN	18 IN		C			
sd-5106-99	3	UDOT	STORM DRAIN	18 IN		C			
sd-5124-99	3	UDOT	STORM DRAIN	12 IN		C			
sdi-0082-17	3	UDOT	STORM DRAIN			B			
sdi-0083-17	3	UDOT	STORM DRAIN			B			
sdi-0084-17	3	UDOT	STORM DRAIN			B			
sdi-0085-17	3	UDOT	STORM DRAIN			B			
sdi-0086-17	3	UDOT	STORM DRAIN			B			
sdi-0094-17	3	UDOT	STORM DRAIN			B			
ss-5020-16	3	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5029-16	3	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5030-16	3	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5031-16	3, 4	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
wtr-5020-16	3	TAYLORSVILLE	WATER	6 IN		D			
wtr-5037-16	3, 4	TAYLORSVILLE	WATER	8 IN		D			
bctv-5008-03	4	COMCAST	CABLE TV			D	BURIED		
bctv-5010-03	4	COMCAST	CABLE TV			D	BURIED		
be-5013-17	4, 5, 11	UDOT	POWER			D	BURIED		
be-5014-17	4	UDOT	POWER			D	BURIED		
be-5015-17	4	UDOT	POWER			D	BURIED		
be-5035-17	4, 5, 11	UDOT	POWER			D	BURIED		
be-5061-12	4, 11	RMP	POWER			D	BURIED		
be-5083-12	4	RMP	POWER			D	BURIED		
btel-5025-02	4	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5036-02	4	CENTURY LINK	TELEPHONE			D	BURIED		
g-5024-11	4	QUESTAR	GAS	1 AND QUARTER IN		B			
g-5025-11	4, 11	QUESTAR	GAS	1 AND QUARTER IN		B			
g-5032-11	4	QUESTAR	GAS	2 IN		D			
ms-0037-16	4	TAYLORSVILLE	SANITARY SEWER			B			
ms-0038-16	4	TAYLORSVILLE	SANITARY SEWER			B			
ms-0039-16	4	TAYLORSVILLE	SANITARY SEWER			B			
ms-0040-16	4	TAYLORSVILLE	SANITARY SEWER			B			
ms-0508-16	4	TAYLORSVILLE	SANITARY SEWER			D			
ms-0513-16	4	TAYLORSVILLE	SANITARY SEWER			B			
ms-0521-16	4	TAYLORSVILLE	SANITARY SEWER			D			
ms-0530-16	4	TAYLORSVILLE	SANITARY SEWER			D			
msd-0036-17	4	UDOT	STORM DRAIN			B			
msd-0037-17	4	UDOT	STORM DRAIN			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PIN 12566
PROJECT NUMBER S-0154(12)11
UTILITY

SHEET NO. 54UTSM-02

$$pentbls$$
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9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
msd-0038-17	4	UDOT	STORM DRAIN			B			
sd-5002-17	4	UDOT	STORM DRAIN	24 IN		C			
sd-5025-17	4	UDOT	STORM DRAIN	8 IN		C			
sd-5029-17	4	UDOT	STORM DRAIN	12 IN		C			
sd-5055-17	4	UDOT	STORM DRAIN	18 IN		C			
sd-5076-17	4, 5	UDOT	STORM DRAIN	24 IN		C			
sd-5078-17	4, 5	UDOT	STORM DRAIN	18 IN		C			
sd-5107-99	4	UDOT	STORM DRAIN	18 IN		C			
sd-5108-99	4	UDOT	STORM DRAIN	18 IN		C			
sd-5109-99	4	UDOT	STORM DRAIN	18 IN		C			
sd-5117-99	4	PRIVATE	STORM DRAIN	24 IN		C			
sd-5118-99	4	PRIVATE	STORM DRAIN	24 IN		C			
sd-5119-99	4	PRIVATE	STORM DRAIN	24 IN		C			
sdi-0087-17	4	UDOT	STORM DRAIN			B			
sdi-0088-17	4	UDOT	STORM DRAIN			B			
sdi-0089-17	4	UDOT	STORM DRAIN			B			
sdi-0090-17	4	UDOT	STORM DRAIN			B			
sdi-0091-17	4	UDOT	STORM DRAIN			B			
sdi-0092-17	4	UDOT	STORM DRAIN			B			
sdi-0093-17	4	UDOT	STORM DRAIN			B			
sdi-0201-17	4	UDOT	STORM DRAIN			B			
sdi-0202-17	4	UDOT	STORM DRAIN			B			
ss-5013-16	4, 5	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5014-16	4	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5015-16	4	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5016-16	4	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5032-16	4	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5033-16	4	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5045-16	4	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5049-16	4	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
wtr-5035-16	4	TAYLORSVILLE	WATER	6 IN		D			
wtr-5036-16	4	TAYLORSVILLE	WATER	6 IN		D			
wtr-5038-16	4	TAYLORSVILLE	WATER	8 IN		D			
wtr-5048-16	4, 5, 11, 12	TAYLORSVILLE	WATER	10 IN		D			
wtr-5050-16	4, 5, 10, 11	TAYLORSVILLE	WATER	8 IN		D			
wtr-5051-16	4	TAYLORSVILLE	WATER	6 IN		D			
bctv-5004-03	5, 6	COMCAST	CABLE TV			D	BURIED		
bctv-5012-03	5, 11, 12	COMCAST	CABLE TV			D	BURIED		
bctv-5208-03	5, 10, 11, 40-6	COMCAST	CABLE TV			D	BURIED		
bduct-5001-09	5, 6, 11	MBI, ATT, ZAYO	FIBER DUCT			B	BURIED		
bduct-5001-05	5, 6, 11	FIRST DIGITAL	FIBER DUCT			B	BURIED		
be-5006-17	5, 11	UDOT	POWER			D	BURIED		
be-5007-17	5, 11	UDOT	POWER			D	BURIED		
be-5008-17	5, 11	UDOT	POWER			D	BURIED		
be-5009-17	5, 11	UDOT	POWER			D	BURIED		
be-5010-12	5, 10, 11	RMP	POWER			D	BURIED		
be-5012-17	5, 11	UDOT	POWER			D	BURIED	TH 54-12	
be-5024-17	5, 10, 11, 40-2, 40-6	UDOT	POWER			D	BURIED		
be-5026-17	5, 11	UDOT	POWER			D	BURIED		
be-5027-17	5, 6, 11	UDOT	POWER			D	BURIED		
be-5028-12	5, 11	RMP	POWER			D	BURIED		
be-5029-12	5, 6, 11	RMP	POWER			D	BURIED		
be-5030-17	5, 11	UDOT	POWER			D	BURIED		
be-5031-17	5, 11	UDOT	POWER			D	BURIED		
be-5032-12	5, 11	RMP	POWER			D	BURIED		
be-5033-17	5, 11	UDOT	POWER			D	BURIED		
be-5034-17	5, 11	UDOT	POWER			D	BURIED		
be-5036-12	5, 11	RMP	POWER			D	BURIED		
be-5037-12	5, 11, 12	RMP	POWER			D	BURIED		
be-5050-12	5, 11	RMP	POWER			D	BURIED		

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY

SHEET NO. 54UTSM-03

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c:\pw_work\bryanwestover@hdr-inc.com\dms78928\12566_54UTSM-03.dgn
9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
be-5056-12	5, 11	RMP	POWER			D	BURIED		
be-5057-12	5, 11	RMP	POWER			D	BURIED		
be-5075-12	5, 10, 11	RMP	POWER			D	BURIED		
bfo-5001-02	5, 10, 11	CENTURY LINK	FIBER			B	BURIED		
bfo-5002-18	5, 11, 12	VERIZON	FIBER			B	BURIED		
bfo-5003-02	5, 11, 12	CENTURY LINK	FIBER			B	BURIED		
bfo-5011-18	5, 10, 11, 40-2, 40-6	VERIZON	FIBER			B	BURIED	TH-54-10	
bfo-5012-17	5, 10, 11	UDOT	FIBER			B	BURIED		
bfo-5013-15	5, 10, 11	SYRINGA	FIBER			B	BURIED		
bfo-5014-17	5, 6, 7, 8, 9, 11	UDOT	FIBER			B	BURIED	TH 54-13, TH 54-14, TH 54-16	
bfo-5015-15	5, 6, 7, 8, 9, 11	SYRINGA	FIBER			B	BURIED	TH 54-19	
bfo-5016-17	5, 11	UDOT	FIBER			B	BURIED	TH- 54-11A	
bfo-5017-15	5, 11	SYRINGA	FIBER			B	BURIED		
bfo-5019-17	5, 11	UDOT	FIBER			B	BURIED		
bfo-5020-15	5, 11	SYRINGA	FIBER			B	BURIED		
bfo-5022-17	5, 11	UDOT	FIBER			B	BURIED		
bfo-5023-17	5, 11, 12	UDOT	FIBER			B	BURIED		
bfo-5027-02	5, 11, 12	CENTURY LINK	FIBER			B	BURIED		
bfo-5029-15	5, 11	SYRINGA	FIBER			B	BURIED		
bfo-5030-15	5, 11, 12	SYRINGA	FIBER			B	BURIED		
btel-5012-02	5, 11, 12	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5013-02	5, 10, 11	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5014-02	5, 11	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5017-02	5, 10, 11	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5019-02	5, 11, 12	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5023-02	5, 11	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5024-02	5, 11	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5039-02	5, 6, 10, 40-6	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5042-02	5, 6	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5051-02	5, 6, 11	CENTURY LINK	TELEPHONE			D	BURIED		
e-5000-12	5, 11	RMP	POWER			D	AERIAL		
e-5023-12	5, 10, 11, 12, 40-2, 40-5, 4	RMP	POWER			D	AERIAL		
g-5000-11	5, 11	QUESTAR	GAS	1 AND QUARTER IN		D			
g-5001-11	5, 11	QUESTAR	GAS	3 QUARTERS IN		D			
g-5002-11	5, 11	QUESTAR	GAS	1 AND QUARTER IN		D			
g-5003-11	5, 6, 10	QUESTAR	GAS			D			
g-5004-11	5, 6, 10	QUESTAR	GAS			D			
g-5005-11	5, 11	QUESTAR	GAS			D			
g-5006-11	5, 11	QUESTAR	GAS	1 AND QUARTER IN		D			
g-5007-11	5, 11	QUESTAR	GAS	1 AND QUARTER IN		D			
g-5008-11	5, 11	QUESTAR	GAS			D			
g-5010-11	5, 11	QUESTAR	GAS			D			
g-5011-11	5, 11	QUESTAR	GAS			D			
g-5022-11	5, 10, 11, 12	QUESTAR	GAS	8 IN		B			
g-5023-11	5, 6, 10, 11	QUESTAR	GAS	2 IN		D			
g-5027-11	5, 11	QUESTAR	GAS	2 IN		B			
g-5033-11	5, 6	QUESTAR	GAS	2 IN		D			
ms-0033-16	5, 11	TAYLORSVILLE	SANITARY SEWER			B			
ms-0034-16	5, 11	TAYLORSVILLE	SANITARY SEWER			B			
ms-0035-16	5, 11	TAYLORSVILLE	SANITARY SEWER			B			
ms-0036-16	5	TAYLORSVILLE	SANITARY SEWER			B			
ms-0041-16	5, 11	TAYLORSVILLE	SANITARY SEWER			B			
ms-0042-16	5, 11	TAYLORSVILLE	SANITARY SEWER			B			
ms-0137-16	5, 11	TAYLORSVILLE	SANITARY SEWER			B			
ms-0502-16	5, 6, 11	TAYLORSVILLE	SANITARY SEWER			D			
ms-0503-16	5, 11	TAYLORSVILLE	SANITARY SEWER			B			
ms-0510-16	5, 11	TAYLORSVILLE	SANITARY SEWER			B			
ms-0511-16	5, 11	TAYLORSVILLE	SANITARY SEWER			B			
ms-0512-16	5, 11	TAYLORSVILLE	SANITARY SEWER			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 54UTSM-04

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$$username$$
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9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
msd-0022-17	5, 11	UDOT	STORM DRAIN			B			
msd-0023-17	5, 11	UDOT	STORM DRAIN			B			
msd-0024-17	5, 11	UDOT	STORM DRAIN			B			
msd-0025-17	5, 11	UDOT	STORM DRAIN			B			
msd-0026-17	5, 11	UDOT	STORM DRAIN			B			
msd-0501-17	5, 11	UDOT	STORM DRAIN			B			
msd-0503-17	5, 11	UDOT	STORM DRAIN			B			
sd-5000-17	5, 6, 11	UDOT	STORM DRAIN	24 IN		C			
sd-5001-17	5, 11	UDOT	STORM DRAIN	24 IN		D		TH 54-11	
sd-5013-17	5, 6, 11	UDOT	STORM DRAIN	12 IN		C			
sd-5014-17	5, 11	UDOT	STORM DRAIN	12 IN		C			
sd-5015-17	5, 11	UDOT	STORM DRAIN	10 IN		C			
sd-5020-17	5, 11	UDOT	STORM DRAIN	24 IN		C			
sd-5021-17	5, 11	UDOT	STORM DRAIN	24 IN		C			
sd-5022-17	5, 11	UDOT	STORM DRAIN	24 IN		C			
sd-5023-17	5, 11	UDOT	STORM DRAIN	24 IN		C			
sd-5026-17	5, 11	UDOT	STORM DRAIN	15 IN		C			
sd-5027-17	5, 11	UDOT	STORM DRAIN	15 IN		C			
sd-5031-17	5, 11	UDOT	STORM DRAIN	30 IN		C			
sd-5032-17	5, 11	UDOT	STORM DRAIN	30 IN		C			
sd-5033-17	5, 11	UDOT	STORM DRAIN	30 IN		C			
sd-5049-17	5, 11	UDOT	STORM DRAIN	18 IN		C			
sd-5050-17	5, 11	UDOT	STORM DRAIN	18 IN		C			
sd-5053-17	5, 11	UDOT	STORM DRAIN	30 IN		C			
sd-5054-17	5, 11	UDOT	STORM DRAIN	18 IN		C			
sd-5057-17	5, 10, 11	UDOT	STORM DRAIN	21 IN		C			
sd-5067-17	5, 11	UDOT	STORM DRAIN	18 IN		C			
sd-5069-17	5, 11	UDOT	STORM DRAIN	18 IN		C			
sd-5077-17	5	UDOT	STORM DRAIN	18 IN		C			
sd-5091-99	5, 11	UDOT	STORM DRAIN	18 IN		C			
sd-5092-99	5, 11	UDOT	STORM DRAIN	18 IN		C			
sd-5110-99	5	UDOT	STORM DRAIN	18 IN		C			
sd-5111-99	5, 11	UDOT	STORM DRAIN	18 IN		C			
sd-5112-99	5, 11	UDOT	STORM DRAIN	18 IN		C			
sd-5123-99	5, 11	UDOT	STORM DRAIN	12 IN		C			
sdi-0052-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0053-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0054-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0055-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0056-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0095-17	5	UDOT	STORM DRAIN			B			
sdi-0096-17	5	UDOT	STORM DRAIN			B			
sdi-0097-17	5	UDOT	STORM DRAIN			B			
sdi-0100-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0101-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0102-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0103-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0143-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0144-17	5, 11	UDOT	STORM DRAIN			B			
sdi-0253-17	5, 11	UDOT	STORM DRAIN			B			
ss-5000-16	5, 11	TAYLORSVILLE	SANITARY SEWER	4 IN		D			
ss-5003-16	5, 10, 11	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5004-16	5, 11	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5005-16	5, 11	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5006-16	5, 11, 12	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5011-16	5, 11	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5012-16	5, 11	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5034-16	5, 6, 10, 11	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5036-16	5, 6	TAYLORSVILLE	SANITARY SEWER	8 IN		D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY

SHEET NO. 54UTSM-05

$$pentbls$$
$$username$$
c:\pw_work\brianwestover@hdr-inc.com\dms70928\12566_54UTSM-05.dgn
9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
ss-5044-16	5, 11	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5047-16	5, 11, 12	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
wtr-5000-01	5, 6, 7, 11	BOR	WATER	66 IN		B			
wtr-5003-16	5, 11	TAYLORSVILLE	WATER	12 IN		D			
wtr-5005-16	5, 10, 11	TAYLORSVILLE	WATER	8 IN		D			
wtr-5010-16	5, 11	TAYLORSVILLE	WATER	6 IN		D			
wtr-5041-16	5, 6, 10, 11, 40-3, 40-6	TAYLORSVILLE	WATER	8 IN		D			
wtr-5044-16	5, 11, 12	TAYLORSVILLE	WATER	8 IN		D			
wtr-5054-16	5, 6, 11	TAYLORSVILLE	WATER	10 IN		D			
bctv-5001-03	6, 7, 8, 9	COMCAST	CABLE TV			D	BURIED		
bctv-5005-03	6, 7	COMCAST	CABLE TV			D	BURIED		
bctv-5006-03	6, 10, 40-6	COMCAST	CABLE TV			D	BURIED		
bduct-5000-09	6, 7, 8, 9	MBI, ATT, ZAYO	FIBER DUCT			B	BURIED	TH 54-07, TH 54-18	
bduct-5000-05	6, 7, 8, 9	FIRST DIGITAL	FIBER DUCT			B	BURIED		
bduct-5003-09	6	MBI, ATT, ZAYO	FIBER DUCT			D	BURIED		
bduct-5003-05	6	FIRST DIGITAL	FIBER DUCT			D	BURIED		
bduct-5004-09	6	MBI, ATT, ZAYO	FIBER DUCT			D	BURIED		
bduct-5004-05	6	FIRST DIGITAL	FIBER DUCT			D	BURIED		
be-5063-17	6, 7	UDOT	POWER			D	BURIED	TH 54-15	
be-5067-12	6	RMP	POWER			D	BURIED		
be-5068-12	6	RMP	POWER			D	BURIED		
be-5069-12	6, 7	RMP	POWER			D	BURIED		
be-5071-12	6, 7, 8, 9	RMP	POWER			D	BURIED		
be-5073-12	6, 7	RMP	POWER			D	BURIED		
be-5074-12	6	RMP	POWER			D	BURIED		
btel-5020-02	6, 7	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5021-02	6, 7	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5040-02	6, 10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5043-02	6	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5044-02	6	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5045-02	6, 7	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5046-02	6	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5047-02	6	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5050-02	6	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5052-02	6, 7	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5053-02	6, 7	CENTURY LINK	TELEPHONE			D	BURIED		
g-5029-11	6, 7	QUESTAR	GAS	1 AND QUARTER IN		D			
g-5034-11	6, 7, 8, 9	QUESTAR	GAS	2 IN		D			
g-5041-11	6	QUESTAR	GAS	3 IN		D			
g-5046-11	6, 7	QUESTAR	GAS	2 IN		D			
g-5054-11	6	QUESTAR	GAS	2 IN		D			
ms-0136-16	6	TAYLORSVILLE	SANITARY SEWER			B			
ms-0527-16	6	TAYLORSVILLE	SANITARY SEWER			D			
ms-0528-16	6	TAYLORSVILLE	SANITARY SEWER			D			
sd-5011-17	6, 7	UDOT	STORM DRAIN	24 IN		C			
sd-5012-17	6	UDOT	STORM DRAIN	24 IN		C			
sd-5047-17	6	UDOT	STORM DRAIN	18 IN		C			
sd-5048-17	6	UDOT	STORM DRAIN	18 IN		C			
sd-5059-17	6, 7	UDOT	STORM DRAIN	12 IN		D		TH 54-17, TH 54-18A	
sd-5061-17	6	UDOT	STORM DRAIN	12 IN		D			
sd-5062-17	6	UDOT	STORM DRAIN	8 IN		D			
sd-5063-17	6	UDOT	STORM DRAIN	24 IN		C			
sd-5064-17	6	UDOT	STORM DRAIN	24 IN		C			
sd-5065-17	6	UDOT	STORM DRAIN	18 IN		C			
sd-5066-17	6	UDOT	STORM DRAIN	18 IN		C			
sd-5080-17	6	UDOT	STORM DRAIN	18 IN		C			
sd-5087-17	6	UDOT	STORM DRAIN	18 IN		C			
sd-5116-99	6	UDOT	STORM DRAIN	18 IN		C			
sdi-0098-17	6	UDOT	STORM DRAIN			B			
sdi-0099-17	6	UDOT	STORM DRAIN			B			
sdi-0104-17	6	UDOT	STORM DRAIN			B			
sdi-0105-17	6	UDOT	STORM DRAIN			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566
UTILITY

SHEET NO. 54UTSM-06

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9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sdi-0136-17	6	UDOT	STORM DRAIN			B			
sdi-0137-17	6	UDOT	STORM DRAIN			B			
sdi-0138-17	6	UDOT	STORM DRAIN			B			
sdi-0139-17	6	UDOT	STORM DRAIN			B			
sdi-0140-17	6	UDOT	STORM DRAIN			B			
sdi-0141-17	6	UDOT	STORM DRAIN			B			
sdi-0142-17	6	UDOT	STORM DRAIN			B			
ss-5035-16	6, 7	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5050-16	6, 7	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5051-16	6	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
wtr-5015-16	6	TAYLORSVILLE	WATER	6 IN		D			
wtr-5029-16	6	TAYLORSVILLE	WATER	8 IN		D			
wtr-5031-16	6	TAYLORSVILLE	WATER	8 IN		D			
wtr-5042-16	6, 7	TAYLORSVILLE	WATER	8 IN		D			
wtr-5043-16	6, 7	TAYLORSVILLE	WATER	8 IN		D			
wtr-5053-16	6	TAYLORSVILLE	WATER	10 IN		D			
bctv-5003-03	7, 8	COMCAST	CABLE TV			D	BURIED		
be-5064-12	7	RMP	POWER			D	BURIED		
be-5065-12	7	RMP	POWER			D	BURIED		
be-5066-12	7	RMP	POWER			D	BURIED		
btel-5022-02	7	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5027-02	7	CENTURY LINK	TELEPHONE			B	BURIED	TH 54-20	
btel-5054-02	7, 8	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5055-02	7	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5057-02	7	CENTURY LINK	TELEPHONE			D	BURIED		
e-5072-12	7, 8	RMP	POWER			D	AERIAL		
g-5035-11	7	QUESTAR	GAS	2 IN		D			
g-5045-11	7, 8	QUESTAR	GAS	1 AND QUARTER IN		D			
g-5047-11	7	QUESTAR	GAS	1 AND QUARTER IN		D			
g-5048-11	7	QUESTAR	GAS	1 AND QUARTER IN		D			
ms-0134-16	7	TAYLORSVILLE	SANITARY SEWER			B			
ms-0135-16	7	TAYLORSVILLE	SANITARY SEWER			B			
ms-0500-16	7	TAYLORSVILLE	SANITARY SEWER			B			
ms-0523-16	7	TAYLORSVILLE	SANITARY SEWER			D			
ms-0524-16	7	TAYLORSVILLE	SANITARY SEWER			D			
ms-0525-16	7	TAYLORSVILLE	SANITARY SEWER			D			
ms-0526-16	7	TAYLORSVILLE	SANITARY SEWER			D			
ms-0529-16	7	TAYLORSVILLE	SANITARY SEWER			D			
ms-0614-99	7	UNKNOWN	SANITARY SEWER			D			
ms-0615-16	7	TAYLORSVILLE	SANITARY SEWER			B			
sd-5010-17	7	UDOT	STORM DRAIN	24 IN		C			
sd-5044-17	7	UDOT	STORM DRAIN	18 IN		C			
sd-5045-17	7	UDOT	STORM DRAIN	18 IN		C			
sd-5046-17	7	UDOT	STORM DRAIN	18 IN		C			
sd-5058-17	7, 8	UDOT	STORM DRAIN	12 IN		D			
sd-5085-99	7, 8	UDOT	STORM DRAIN	24 IN		C			
sd-5086-99	7	UDOT	STORM DRAIN	24 IN		C			
sd-5088-17	7	UDOT	STORM DRAIN	18 IN		C			
sd-5113-99	7	UDOT	STORM DRAIN	18 IN		C			
sd-5120-99	7	TAYLORSVILLE	STORM DRAIN	18 IN		C		TH 54-09	
sd-5121-99	7	TAYLORSVILLE	STORM DRAIN	18 IN		C			
sd-5122-99	7	UDOT	STORM DRAIN	12 IN		C			
sd-5225-17	7	UDOT	STORM DRAIN	12 IN		D			
sdi-0106-17	7	UDOT	STORM DRAIN			B			
sdi-0107-17	7	UDOT	STORM DRAIN			B			
sdi-0108-17	7	UDOT	STORM DRAIN			B			
sdi-0131-17	7	UDOT	STORM DRAIN			B			
sdi-0132-17	7	UDOT	STORM DRAIN			B			
sdi-0133-17	7	UDOT	STORM DRAIN			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11
PIN 12566

UTILITY

SHEET NO. 54UTSM-07

$$pentbls$$
$$username$$
c:\pw_work\brigandwestover@hdr-inc.com\dms78928\12566_54UTSM-07.dgn
9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sdi-0134-17	7	UDOT	STORM DRAIN			B			
sdi-0135-17	7	UDOT	STORM DRAIN			B			
sdi-0561-16	7	TAYLORSVILLE	STORM DRAIN			C			
sdi-0562-16	7	TAYLORSVILLE	STORM DRAIN			C			
sdi-0563-16	7	TAYLORSVILLE	STORM DRAIN			C			
ss-5018-16	7	TAYLORSVILLE	SANITARY SEWER	8 IN		C		TH 54-08	
ss-5037-16	7	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5038-16	7	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5039-16	7	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5040-16	7, 8, 9	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5046-16	7	TAYLORSVILLE	SANITARY SEWER	12 IN		C			
wtr-5001-01	7, 8, 9	BOR	WATER	66 IN		B		TH 54-05, TH 54-06	
wtr-5016-16	7	TAYLORSVILLE	WATER	6 IN		D			
wtr-5025-16	7	TAYLORSVILLE	WATER	6 IN		D			
wtr-5030-16	7	TAYLORSVILLE	WATER	8 IN		D		TH 54-08A, TH 54-08B	
wtr-5046-16	7	TAYLORSVILLE	WATER	12 IN		D			
wtr-5047-16	7	TAYLORSVILLE	WATER	18 IN		D			
wtr-5052-16	7, 8, 9	TAYLORSVILLE	WATER	6 IN		D			
bctv-5002-03	8	COMCAST	CABLE TV			D	BURIED		
bctv-5016-03	8	COMCAST	CABLE TV			D	BURIED		
btel-5048-02	8	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5049-02	8, 9	CENTURY LINK	TELEPHONE			D	BURIED		
g-5036-11	8	QUESTAR	GAS	2 IN		D			
g-5037-11	8	QUESTAR	GAS	2 IN		D			
g-5038-11	8	QUESTAR	GAS	2 IN		D			
sd-5007-17	8, 9	UDOT	STORM DRAIN	27 IN		C			
sd-5008-17	8	UDOT	STORM DRAIN	27 IN		C			
sd-5009-17	8	UDOT	STORM DRAIN	27 IN		C			
sd-5041-17	8	UDOT	STORM DRAIN	18 IN		C			
sd-5042-17	8	UDOT	STORM DRAIN	18 IN		C			
sd-5043-17	8	UDOT	STORM DRAIN	18 IN		C			
sd-5083-17	8	UDOT	STORM DRAIN	18 IN		C			
sdi-0109-17	8	UDOT	STORM DRAIN			B			
sdi-0110-17	8	UDOT	STORM DRAIN			B			
sdi-0111-17	8	UDOT	STORM DRAIN			B			
sdi-0127-17	8	UDOT	STORM DRAIN			B			
sdi-0128-17	8	UDOT	STORM DRAIN			B			
sdi-0129-17	8	UDOT	STORM DRAIN			B			
sdi-0130-17	8	UDOT	STORM DRAIN			B			
wtr-5026-16	8	TAYLORSVILLE	WATER	6 IN		D			
wtr-5027-16	8	TAYLORSVILLE	WATER	6 IN		D			
btel-5000-02	9	CENTURY LINK	TELEPHONE			D	BURIED		
ctv-5015-03	9	COMCAST	CABLE TV			D	AERIAL		
e-5070-12	9	RMP	POWER			D	AERIAL		
g-5042-11	9	QUESTAR	GAS	4 IN		D			
g-5043-11	9	QUESTAR	GAS	2 IN		D			
g-5044-11	9	QUESTAR	GAS	1 AND QUARTER IN		D			
ms-0522-16	9	TAYLORSVILLE	SANITARY SEWER			D			
sd-5003-17	9	UDOT	STORM DRAIN	27 IN		C			
sd-5004-17	9	UDOT	STORM DRAIN	27 IN		C			
sd-5005-17	9	UDOT	STORM DRAIN	27 IN		C			
sd-5006-17	9	UDOT	STORM DRAIN	27 IN		C			
sd-5037-17	9	UDOT	STORM DRAIN	18 IN		C			
sd-5038-17	9	UDOT	STORM DRAIN	18 IN		C			
sd-5039-17	9	UDOT	STORM DRAIN	18 IN		C			
sd-5040-17	9	UDOT	STORM DRAIN	18 IN		C			
sdi-0119-17	9	UDOT	STORM DRAIN			B			
sdi-0120-17	9	UDOT	STORM DRAIN			B			
sdi-0121-17	9	UDOT	STORM DRAIN			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
UTILITY

SHEET NO. 54UTSM-08

$$pentbls$$
$$username$$
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9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sdi-0122-17	9	UDOT	STORM DRAIN			B			
sdi-0123-17	9	UDOT	STORM DRAIN			B			
sdi-0124-17	9	UDOT	STORM DRAIN			B			
sdi-0125-17	9	UDOT	STORM DRAIN			B			
sdi-0126-17	9	UDOT	STORM DRAIN			B			
ss-5041-16	9	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5042-16	9	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
ss-5043-16	9	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
wtr-5014-16	9	TAYLORSVILLE	WATER	4 IN		D			
wtr-5039-16	9	TAYLORSVILLE	WATER	8 IN		D			
wtr-5040-16	9	TAYLORSVILLE	WATER	8 IN		D			
bctv-5000-03	10	COMCAST	CABLE TV			D	BURIED		
be-5011-12	10	RMP	POWER			D	BURIED		
be-5025-12	10	RMP	POWER			D	BURIED		
be-5058-12	10	RMP	POWER			D	BURIED		
be-5059-12	10	RMP	POWER			D	BURIED		
be-5077-12	10	RMP	POWER			D	BURIED		
be-5080-12	10	RMP	POWER			D	BURIED		
be-5081-12	10	RMP	POWER			D	BURIED		
be-5082-12	10	RMP	POWER			D	BURIED		
bfo-5000-17	10, 22, 26	UDOT	FIBER			B	BURIED		
bfo-5007-15	10	SYRINGA	FIBER			B	BURIED		
bfo-5008-17	10	UDOT	FIBER			B	BURIED		
bfo-5009-02	10, 22, 26	CENTURY LINK	FIBER			B	BURIED		
bfo-5010-02	10, 22, 26	CENTURY LINK	FIBER			B	BURIED		
btel-5001-02	10	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5002-02	10, 26	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5003-02	10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5015-02	10, 26	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5016-02	10	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5028-02	10	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5038-02	10	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5041-02	10	CENTURY LINK	TELEPHONE			D	BURIED		
g-5020-11	10, 22, 26	QUESTAR	GAS	2 IN		D			
g-5021-11	10	QUESTAR	GAS	6 IN		D			
g-5026-11	10, 22, 26	QUESTAR	GAS	6 IN		D			
g-5049-11	10	QUESTAR	GAS	4 IN		D			
g-5050-11	10	QUESTAR	GAS	2 IN		D			
g-5051-11	10	QUESTAR	GAS			D			
ms-0030-16	10	TAYLORSVILLE	SANITARY SEWER			B			
ms-0031-16	10	TAYLORSVILLE	SANITARY SEWER			B			
msd-0019-17	10	UDOT	STORM DRAIN			B			
msd-0020-17	10	UDOT	STORM DRAIN			B			
msd-0021-17	10	UDOT	STORM DRAIN			B			
sd-5016-17	10	UDOT	STORM DRAIN	24 IN		C			
sd-5017-17	10	UDOT	STORM DRAIN	12 IN		C			
sd-5018-17	10	UDOT	STORM DRAIN	21 IN		C			
sd-5035-17	10	UDOT	STORM DRAIN	15 IN		C			
sd-5070-17	10	UDOT	STORM DRAIN	18 IN		C			
sd-5071-17	10, 26	UDOT	STORM DRAIN	24 IN		C			
sd-5072-17	10	UDOT	STORM DRAIN	18 IN		C			
sd-5073-17	10	UDOT	STORM DRAIN	18 IN		C			
sd-5074-10	10, 26	PRIVATE	STORM DRAIN	18 IN		C			
sd-5075-17	10	UDOT	STORM DRAIN	12 IN		C			
sd-5090-99	10	UDOT	STORM DRAIN	18 IN		C			
sdi-0043-10	10	PRIVATE	STORM DRAIN			B			
sdi-0044-17	10	UDOT	STORM DRAIN			B			
sdi-0045-10	10	PRIVATE	STORM DRAIN			B			
sdi-0046-10	10	PRIVATE	STORM DRAIN			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY

SHEET NO. 54UTSM-09

$$pentbls$$
$$username$$
c:\pw_work\brigan.westover@hdr-inc.com\dms78928\12566_54UTSM-09.dgn
9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sdi-0047-10	10	PRIVATE	STORM DRAIN			B			
sdi-0049-17	10	UDOT	STORM DRAIN			B			
sdi-0050-17	10	UDOT	STORM DRAIN			B			
sdi-0051-17	10	UDOT	STORM DRAIN			B			
ss-5001-16	10, 26	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5002-16	10	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5017-16	10	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
wtr-5004-16	10, 26	TAYLORSVILLE	WATER	6 IN		D			
wtr-5006-16	10	TAYLORSVILLE	WATER	12 IN		D			
wtr-5009-16	10	TAYLORSVILLE	WATER	6 IN		D			
wtr-5013-16	10	TAYLORSVILLE	WATER	8 IN		D			
wtr-5017-16	10	TAYLORSVILLE	WATER	6 IN		D			
wtr-5034-16	10	TAYLORSVILLE	WATER	6 IN		D			
be-5055-12	11, 12	RMP	POWER			D	BURIED		
g-5028-11	11, 12	QUESTAR	GAS	1 AND QUARTER IN		B			
msd-0027-17	11	UDOT	STORM DRAIN			B			
sd-5068-17	11, 12	UDOT	STORM DRAIN	30 IN		C			
sd-5093-99	11	UDOT	STORM DRAIN	18 IN		C			
sdi-0070-17	11	UDOT	STORM DRAIN			B			
bctv-5011-03	12	COMCAST	CABLE TV			D	BURIED		
bctv-5013-03	12	COMCAST	CABLE TV			D	BURIED		
bctv-5014-03	12	COMCAST	CABLE TV			D	BURIED		
be-5016-12	12	RMP	POWER			D	BURIED		
be-5017-12	12	RMP	POWER			D	BURIED		
be-5018-12	12	RMP	POWER			D	BURIED		
be-5019-12	12	RMP	POWER			D	BURIED		
be-5020-12	12	RMP	POWER			D	BURIED		
be-5021-12	12	RMP	POWER			D	BURIED		
be-5022-17	12	UDOT	POWER			D	BURIED		
be-5038-12	12	RMP	POWER			D	BURIED		
be-5039-17	12	UDOT	POWER			D	BURIED		
be-5040-17	12	UDOT	POWER			D	BURIED		
be-5041-17	12	UDOT	POWER			D	BURIED		
be-5042-12	12	RMP	POWER			D	BURIED		
be-5043-17	12	UDOT	POWER			D	BURIED		
be-5044-17	12	UDOT	POWER			D	BURIED		
be-5045-17	12	UDOT	POWER			D	BURIED		
be-5046-17	12	UDOT	POWER			D	BURIED		
be-5047-12	12	RMP	POWER			D	BURIED		
be-5048-17	12	UDOT	POWER			D	BURIED		
be-5051-12	12	RMP	POWER			D	BURIED		
be-5052-12	12	RMP	POWER			D	BURIED		
be-5053-12	12	RMP	POWER			D	BURIED		
be-5054-12	12	RMP	POWER			D	BURIED		
be-5060-12	12	RMP	POWER			D	BURIED		
be-5078-12	12	RMP	POWER			D	BURIED		
bfo-5004-02	12	CENTURY LINK	FIBER			B	BURIED		
bfo-5024-17	12	UDOT	FIBER			B	BURIED		
bfo-5025-17	12	UDOT	FIBER			B	BURIED		
bfo-5026-15	12	SYRINGA	FIBER			B	BURIED		
bfo-5028-17	12	UDOT	FIBER			B	BURIED		
btel-5004-02	12	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5005-02	12	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5006-02	12	CENTURY LINK	TELEPHONE			D	BURIED		
btel-5007-02	12	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5018-02	12	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5026-02	12	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5029-02	12	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5037-02	12	CENTURY LINK	TELEPHONE			D	BURIED		

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 54UTSM-10

$$pentbls$$
$$username$$
c:\pw_work\brigonwestover@hdrinc.com\dms78928\12566_54UTSM-10.dgn
9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
ctv-5017-03	12	COMCAST	CABLE TV			D	AERIAL		
ctv-5018-03	12	COMCAST	CABLE TV			D	AERIAL		
ctv-5019-03	12	COMCAST	CABLE TV			D	AERIAL		
ctv-5020-03	12	COMCAST	CABLE TV			D	AERIAL		
e-5001-12	12	RMP	POWER			D	AERIAL		
e-5003-12	12	RMP	POWER			D	AERIAL		
e-5004-12	12	RMP	POWER			D	AERIAL		
e-5076-12	12	RMP	POWER			D	AERIAL		
e-5079-12	12	RMP	POWER			D	AERIAL		
g-5009-11	12	QUESTAR	GAS			D			
g-5012-11	12	QUESTAR	GAS			D			
g-5013-11	12	QUESTAR	GAS			D			
g-5014-11	12	QUESTAR	GAS			D			
g-5015-11	12	QUESTAR	GAS			D			
g-5016-11	12	QUESTAR	GAS			D			
g-5017-11	12	QUESTAR	GAS			D			
g-5018-11	12	QUESTAR	GAS			D			
g-5019-11	12	QUESTAR	GAS			D			
g-5052-11	12	QUESTAR	GAS	4 IN		D			
g-5053-11	12	QUESTAR	GAS	4 IN		D			
ms-0043-16	12	TAYLORSVILLE	SANITARY SEWER			B			
ms-0044-16	12	TAYLORSVILLE	SANITARY SEWER			B			
ms-0045-16	12	TAYLORSVILLE	SANITARY SEWER			B			
ms-0138-16	12	TAYLORSVILLE	SANITARY SEWER			B			
ms-0504-16	12	TAYLORSVILLE	SANITARY SEWER			D			
ms-0505-16	12	TAYLORSVILLE	SANITARY SEWER			D			
ms-0506-16	12	TAYLORSVILLE	SANITARY SEWER			D			
ms-0507-16	12	TAYLORSVILLE	SANITARY SEWER			D			
msd-0028-17	12	UDOT	STORM DRAIN			B			
msd-0029-17	12	UDOT	STORM DRAIN			B			
msd-0030-17	12	UDOT	STORM DRAIN			B			
sd-5081-17	12	UDOT	STORM DRAIN	27 IN		C			
sd-5094-99	12	UDOT	STORM DRAIN	18 IN		C			
sd-5095-99	12	UDOT	STORM DRAIN	18 IN		C			
sd-5096-99	12	UDOT	STORM DRAIN	18 IN		C			
sd-5097-99	12	UDOT	STORM DRAIN	18 IN		C			
sd-5114-99	12	UDOT	STORM DRAIN	36 IN		C			
sd-5115-99	12	UDOT	STORM DRAIN	36 IN		C			
sdi-0057-17	12	UDOT	STORM DRAIN			B			
sdi-0058-17	12	UDOT	STORM DRAIN			B			
sdi-0071-17	12	UDOT	STORM DRAIN			B			
sdi-0072-17	12	UDOT	STORM DRAIN			B			
sdi-0509-17	12	UDOT	STORM DRAIN			B			
sdi-0510-17	12	UDOT	STORM DRAIN			B			
ss-5007-16	12	TAYLORSVILLE	SANITARY SEWER	10 IN		C			
ss-5008-16	12	TAYLORSVILLE	SANITARY SEWER	10 IN		C			
ss-5009-16	12	TAYLORSVILLE	SANITARY SEWER	10 IN		C			
ss-5010-16	12	TAYLORSVILLE	SANITARY SEWER	8 IN		C			
ss-5048-16	12	TAYLORSVILLE	SANITARY SEWER	8 IN		D			
wtr-5007-16	12	TAYLORSVILLE	WATER	12 IN		D			
wtr-5008-16	12	TAYLORSVILLE	WATER	12 IN		D			
wtr-5011-16	12	TAYLORSVILLE	WATER	6 IN		D			
wtr-5012-16	12	TAYLORSVILLE	WATER	6 IN		D			
bctv-5211-03	21, 22	COMCAST	CABLE TV			D	BURIED		
be-5204-17	21	UDOT	POWER			D	BURIED		
be-5226-17	21	UDOT	POWER			D	BURIED		
be-5227-17	21	UDOT	POWER			D	BURIED		
be-5228-17	21	UDOT	POWER			D	BURIED		
be-5229-17	21	UDOT	POWER			D	BURIED		

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW

APPROVED

DATE

PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT NUMBER S-0154(12)11 PIN 12566

PROJECT

UTILITY

SHEET NO. 54UTSM-11

$$pentbl$$
$$username$$
c:\pw_work\brianwestover@hdr-inc.com\dms78928\12566_54UTSM-11.dgn
9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
be-5230-17	21	UDOT	POWER			D	BURIED		
be-5238-12	21	RMP	POWER			D	BURIED		
be-5239-12	21	RMP	POWER			D	BURIED		
be-5240-12	21	RMP	POWER			D	BURIED		
be-5242-12	21	RMP	POWER			D	BURIED		
bfo-5212-02	21	CENTURY LINK	FIBER			D	BURIED		
bfo-5215-03	21, 22	COMCAST	FIBER			B	BURIED		
bfo-5221-02	21	CENTURY LINK	FIBER			B	BURIED		
bfo-5229-02	21, 22	CENTURY LINK	FIBER			B	BURIED		
bfo-5236-09	21, 22, 23	MBI, ATT, ZAYO, FIRST DIGITAL	FIBER			B	BURIED		
btel-5205-02	21, 22	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5216-02	21	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5217-02	21	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5218-02	21	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5219-02	21	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5229-02	21, 22	CENTURY LINK	TELEPHONE			B	BURIED		
e-5236-12	21, 22	RMP	POWER			D	AERIAL		
g-5203-11	21, 22	QUESTAR	GAS	4 IN		D			
g-5206-11	21	QUESTAR	GAS	2 IN		D			
g-5207-11	21	QUESTAR	GAS	2 IN		D			
g-5208-11	21	QUESTAR	GAS	3 IN		D			
g-5209-11	21	QUESTAR	GAS	2 IN		D			
g-5210-11	21	QUESTAR	GAS	4 IN		D			
g-5211-11	21	QUESTAR	GAS	4 IN		D			
g-5217-11	21	QUESTAR	GAS	2 IN		D			
ms-0059-14	21	SVSD	SANITARY SEWER			B			
ms-0060-06	21	KEARNS	SANITARY SEWER			B			
ms-0061-06	21	KEARNS	SANITARY SEWER			B			
ms-0062-06	21	KEARNS	SANITARY SEWER			B			
ms-0063-06	21	KEARNS	SANITARY SEWER			B			
ms-0064-06	21	KEARNS	SANITARY SEWER			B			
ms-0066-06	21	KEARNS	SANITARY SEWER			B			
ms-0067-06	21	KEARNS	SANITARY SEWER			B			
ms-0509-14	21	SVSD	SANITARY SEWER			B			
msd-0010-17	21	UDOT	STORM DRAIN			B			
sd-5221-17	21, 22	UDOT	STORM DRAIN	18 IN		C			
sd-5222-16	21	TAYLORSVILLE	STORM DRAIN	18 IN		C			
sd-5226-17	21	UDOT	STORM DRAIN	18 IN		C			
sd-5227-17	21	UDOT	STORM DRAIN	18 IN		C			
sd-5243-17	21	UDOT	STORM DRAIN	18 IN		C			
sd-5244-17	21	UDOT	STORM DRAIN	18 IN		C			
sd-5258-17	21, 22	UDOT	STORM DRAIN	18 IN		C			
sdi-0028-17	21	UDOT	STORM DRAIN			B			
sdi-0029-17	21	UDOT	STORM DRAIN			B			
sdi-0030-17	21	UDOT	STORM DRAIN			B			
sdi-0031-17	21	UDOT	STORM DRAIN			B			
sdi-0032-17	21	UDOT	STORM DRAIN			B			
sdi-0033-17	21	UDOT	STORM DRAIN			B			
sdi-0506-17	21	UDOT	STORM DRAIN			B			
ss-5221-06	21, 22	KEARNS	SANITARY SEWER	8 IN		C			
ss-5222-06	21	KEARNS	SANITARY SEWER	8 IN		C			
ss-5223-06	21	KEARNS	SANITARY SEWER	8 IN		C			
ss-5224-06	21	KEARNS	SANITARY SEWER	8 IN		C			
ss-5225-06	21	KEARNS	SANITARY SEWER	8 IN		C			
ss-5226-06	21	KEARNS	SANITARY SEWER	8 IN		C			
ss-5227-06	21	KEARNS	SANITARY SEWER	8 IN		C			
ss-5228-06	21	KEARNS	SANITARY SEWER	8 IN		C			
ss-5229-14	21	SVSD	SANITARY SEWER	8 IN		C			
ss-5236-06	21	KEARNS	SANITARY SEWER	8 IN		C			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY

SHEET NO. 54UTSM-12

$$pentbl$$
$$username$$
c:\pw_work\brignowestover@hdrinc.com\dms78928\12566_54UTSM-12.dgn
9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
wtr-5215-06	21, 22	KEARNS	WATER	8 IN		D			
wtr-5223-06	21	KEARNS	WATER	6 IN		D			
wtr-5224-06	21	KEARNS	WATER	6 IN		D			
wtr-5225-06	21	KEARNS	WATER	6 IN		D			
wtr-5226-06	21	KEARNS	WATER	6 IN		D			
wtr-5227-06	21	KEARNS	WATER	6 IN		D			
bctv-5209-03	22	COMCAST	CABLE TV			D	BURIED		
bctv-5210-03	22	COMCAST	CABLE TV			D	BURIED		
bctv-5212-03	22, 26	COMCAST	CABLE TV			D	BURIED		
be-5202-12	22, 25	RMP	POWER			D	BURIED		
be-5208-12	22, 25	RMP	POWER			D	BURIED		
be-5209-12	22, 25	RMP	POWER			D	BURIED		
be-5210-12	22	RMP	POWER			D	BURIED		
be-5216-12	22, 26	RMP	POWER			D	BURIED		
be-5223-17	22, 25	UDOT	POWER			D	BURIED		
be-5225-17	22	UDOT	POWER			D	BURIED		
be-5237-12	22	RMP	POWER			D	BURIED		
be-5241-12	22	RMP	POWER			D	BURIED		
bfo-5005-17	22, 26	UDOT	FIBER			B	BURIED		
bfo-5006-15	22, 26	SYRINGA	FIBER			B	BURIED		
bfo-5202-18	22, 25	VERIZON	FIBER			B	BURIED		
bfo-5205-15	22, 25	SYRINGA	FIBER			B	BURIED		
bfo-5206-17	22, 25	UDOT	FIBER			B	BURIED		
bfo-5207-15	22, 23	SYRINGA	FIBER			B	BURIED		
bfo-5208-02	22, 25	CENTURY LINK	FIBER			B	BURIED		
bfo-5217-03	22	COMCAST	FIBER			D	BURIED		
bfo-5218-02	22, 23, 24	CENTURY LINK	FIBER			B	BURIED		
bfo-5222-02	22	CENTURY LINK	FIBER			B	BURIED		
bfo-5223-02	22	CENTURY LINK	FIBER			B	BURIED		
bfo-5224-02	22	CENTURY LINK	FIBER			B	BURIED		
bfo-5226-02	22	CENTURY LINK	FIBER			B	BURIED		
bfo-5227-02	22, 23	CENTURY LINK	FIBER			B	BURIED		
bfo-5230-02	22	CENTURY LINK	FIBER			B	BURIED		
bfo-5231-02	22	CENTURY LINK	FIBER			B	BURIED		
bfo-5232-99	22, 23	UNKNOWN	FIBER			D	BURIED		
bfo-5235-09	22, 23, 25	MBI, ATT, ZAYO, FIRST DIGITAL	FIBER			B	BURIED		
btel-5202-02	22, 26	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5206-02	22	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5207-02	22	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5208-02	22	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5210-02	22, 23	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5215-02	22, 23	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5221-02	22	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5222-02	22, 25	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5223-02	22, 23	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5224-02	22, 23	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5227-02	22	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5228-02	22	CENTURY LINK	TELEPHONE			B	BURIED		
e-5201-12	22, 23	RMP	POWER			D	AERIAL		
e-5235-12	22	RMP	POWER			D	AERIAL		
g-5201-11	22, 25	QUESTAR	GAS	2 IN		B			
g-5202-11	22	QUESTAR	GAS	2 IN		D			
g-5204-11	22	QUESTAR	GAS	2 IN		D			
g-5205-11	22	QUESTAR	GAS	3 IN		D			
g-5212-11	22, 23, 24	QUESTAR	GAS	6 IN		B			
g-5214-11	22, 25	QUESTAR	GAS	6 IN		B			
g-5219-11	22	QUESTAR	GAS	6 IN		D			
ms-0028-06	22	KEARNS	SANITARY SEWER			B			
ms-0051-06	22	KEARNS	SANITARY SEWER			B			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW

APPROVED

DATE

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 54UTSM-13

$$pentbls$$
$$username$$
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9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
ms-0092-06	22	KEARNS	SANITARY SEWER			B			
ms-0093-06	22	KEARNS	SANITARY SEWER			B			
ms-0094-06	22	KEARNS	SANITARY SEWER			B			
msd-0006-17	22	UDOT	STORM DRAIN			B			
msd-0007-17	22	UDOT	STORM DRAIN			B			
msd-0008-17	22	UDOT	STORM DRAIN			B			
msd-0009-17	22	UDOT	STORM DRAIN			B			
msd-0011-17	22	UDOT	STORM DRAIN			B			
msd-0012-17	22	UDOT	STORM DRAIN			B			
msd-0013-17	22	UDOT	STORM DRAIN			B			
msd-0014-17	22, 23	UDOT	STORM DRAIN			B			
msd-0017-17	22	UDOT	STORM DRAIN			B			
sd-5200-17	22	UDOT	STORM DRAIN	42 IN		D			
sd-5201-17	22, 23	UDOT	STORM DRAIN	42 IN		D			
sd-5202-17	22, 23, 24	UDOT	STORM DRAIN	42 IN		D			
sd-5206-17	22, 23	UDOT	STORM DRAIN	15 IN		C			
sd-5208-17	22	UDOT	STORM DRAIN	24 IN		C			
sd-5209-17	22	UDOT	STORM DRAIN	24 IN		C			
sd-5210-17	22	UDOT	STORM DRAIN	42 IN		C			
sd-5211-17	22	UDOT	STORM DRAIN	24 IN		C			
sd-5213-17	22, 23	UDOT	STORM DRAIN	15 IN		C			
sd-5216-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5217-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5218-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5219-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5220-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5224-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5228-17	22	UDOT	STORM DRAIN	24 IN		C			
sd-5229-17	22	UDOT	STORM DRAIN	30 IN		C			
sd-5230-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5231-17	22	UDOT	STORM DRAIN	30 IN		C			
sd-5232-17	22	UDOT	STORM DRAIN	30 IN		C			
sd-5233-17	22, 25	UDOT	STORM DRAIN	30 IN		C			
sd-5237-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5238-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5239-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5240-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5242-17	22, 26	UDOT	STORM DRAIN	18 IN		C			
sd-5247-17	22, 25	UDOT	STORM DRAIN	18 IN		C			
sd-5248-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5256-17	22	UDOT	STORM DRAIN	18 IN		C			
sd-5257-17	22	UDOT	STORM DRAIN	18 IN		C			
sdi-0011-17	22	UDOT	STORM DRAIN			B			
sdi-0016-17	22	UDOT	STORM DRAIN			B			
sdi-0017-17	22	UDOT	STORM DRAIN			B			
sdi-0018-17	22	UDOT	STORM DRAIN			B			
sdi-0020-17	22	UDOT	STORM DRAIN			B			
sdi-0021-17	22	UDOT	STORM DRAIN			B			
sdi-0022-17	22	UDOT	STORM DRAIN			B			
sdi-0023-17	22	UDOT	STORM DRAIN			B			
sdi-0024-17	22	UDOT	STORM DRAIN			B			
sdi-0025-17	22	UDOT	STORM DRAIN			B			
sdi-0026-17	22	UDOT	STORM DRAIN			B			
sdi-0027-17	22	UDOT	STORM DRAIN			B			
sdi-0038-17	22	UDOT	STORM DRAIN			B			
sdi-0039-17	22, 26	UDOT	STORM DRAIN			B			
sdi-0505-17	22	UDOT	STORM DRAIN			B			
sdi-0515-17	22	UDOT	STORM DRAIN			B			
ss-5202-06	22	KEARNS	SANITARY SEWER	8 IN		D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
APPROVED
DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 54UTSM-14

$$pentbls$$
$$username$$
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9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
ss-5206-06	22	KEARNS	SANITARY SEWER	8 IN		D			
ss-5218-06	22, 23	KEARNS	SANITARY SEWER	8 IN		C			
ss-5219-06	22	KEARNS	SANITARY SEWER	8 IN		C			
ss-5220-06	22	KEARNS	SANITARY SEWER	8 IN		C			
ss-5230-06	22, 23	KEARNS	SANITARY SEWER	8 IN		C			
ss-5231-06	22	KEARNS	SANITARY SEWER	8 IN		C			
ss-5232-06	22	KEARNS	SANITARY SEWER	8 IN		C			
ss-5233-06	22, 26	KEARNS	SANITARY SEWER	8 IN		C			
wtr-5200-06	22	KEARNS	WATER	6 IN		D			
wtr-5201-06	22	KEARNS	WATER	6 IN		D			
wtr-5202-06	22	KEARNS	WATER	6 IN		D			
wtr-5203-06	22, 26	KEARNS	WATER	3 QUARTERS IN		D			
wtr-5204-06	22, 26	KEARNS	WATER	3 QUARTERS IN		D			
wtr-5209-06	22, 23	KEARNS	WATER	1 IN		D			
wtr-5214-06	22, 25	KEARNS	WATER	10 IN		D			
wtr-5221-06	22	KEARNS	WATER	6 IN		D			
wtr-5222-06	22	KEARNS	WATER	6 IN		D			
wtr-5230-06	22, 23	KEARNS	WATER	6 IN		D			
wtr-5231-06	22, 23, 25	KEARNS	WATER	6 IN		D			
wtr-5232-06	22, 26	KEARNS	WATER	6 IN		D			
wtr-5233-06	22	KEARNS	WATER	6 IN		D			
wtr-5234-06	22, 23, 24	KEARNS	WATER	8 IN		D			
bctv-5204-03	23	COMCAST	CABLE TV			D	BURIED		
bctv-5206-03	23	COMCAST	CABLE TV			D	BURIED		
bctv-5207-03	23	COMCAST	CABLE TV			D	BURIED		
be-5211-12	23	RMP	POWER			D	BURIED		
be-5212-12	23	RMP	POWER			D	BURIED		
be-5213-17	23	UDOT	POWER			D	BURIED		
be-5214-17	23	UDOT	POWER			D	BURIED		
be-5215-12	23	RMP	POWER			D	BURIED		
be-5217-17	23	UDOT	POWER			D	BURIED		
be-5219-12	23	RMP	POWER			D	BURIED		
be-5220-12	23	RMP	POWER			D	BURIED		
bfo-5213-02	23	CENTURY LINK	FIBER			D	BURIED		
bfo-5219-02	23, 24	CENTURY LINK	FIBER			B	BURIED		
bfo-5220-02	23	CENTURY LINK	FIBER			B	BURIED		
bfo-5225-02	23	CENTURY LINK	FIBER			B	BURIED		
bfo-5228-02	23, 24	CENTURY LINK	FIBER			B	BURIED		
bfo-5233-09	23, 24	MBI, ATT, ZAYO, FIRST DIGITAL	FIBER			B	BURIED		
bfo-5234-09	23	MBI, ATT, ZAYO, FIRST DIGITAL	FIBER			B	BURIED		
btel-5200-02	23	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5201-02	23	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5204-99	23, 24	UNKNOWN	TELEPHONE			D	BURIED		
btel-5211-02	23	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5212-02	23	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5213-02	23	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5214-02	23	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5220-02	23, 24	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5225-02	23, 24	CENTURY LINK	TELEPHONE			B	BURIED		
btel-5226-02	23	CENTURY LINK	TELEPHONE			B	BURIED		
e-5232-12	23, 24	RMP	POWER			D	AERIAL		
g-5215-11	23	QUESTAR	GAS	2 IN		D			
ms-0052-06	23	KEARNS	SANITARY SEWER			B			
ms-0053-06	23	KEARNS	SANITARY SEWER			B			
ms-0054-06	23	KEARNS	SANITARY SEWER			B			
ms-0058-19	23	WEST JORDAN	SANITARY SEWER			B			
ms-0095-06	23	KEARNS	SANITARY SEWER			B			
sd-5207-17	23	UDOT	STORM DRAIN	12 IN		C			
sd-5214-17	23	UDOT	STORM DRAIN	15 IN		C			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

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QC CHECKED BY BDW
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DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11 PIN 12566
UTILITY

SHEET NO. 54UTSM-15

$$pentbls$$
$$username$$
c:\pw_work\brigonwestover@hdr-inc.com\dms78928\12566_54UTSM-15.dgn
9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sdi-0037-17	23	UDOT	STORM DRAIN			B			
ss-5200-06	23	KEARNS	SANITARY SEWER	8 IN		D			
ss-5213-06	23, 24	KEARNS	SANITARY SEWER	8 IN		C			
ss-5214-06	23	KEARNS	SANITARY SEWER	8 IN		C			
ss-5215-14	23	SVSD	SANITARY SEWER	8 IN		C			
ss-5216-06	23	KEARNS	SANITARY SEWER	8 IN		C			
ss-5217-06	23	KEARNS	SANITARY SEWER	8 IN		C			
wtr-5210-06	23	KEARNS	WATER	1 IN		D			
wtr-5235-06	23	KEARNS	WATER	6 IN		D			
wtr-5236-06	23	KEARNS	WATER	6 IN		D			
bctv-5205-03	24	COMCAST	CABLE TV			D	BURIED		
bctv-5213-03	24	COMCAST	CABLE TV			D	BURIED		
be-5203-12	24	RMP	POWER			D	BURIED		
be-5218-12	24	RMP	POWER			D	BURIED		
bfo-5203-02	24	CENTURY LINK	FIBER			B	BURIED		
bfo-5204-03	24	COMCAST	FIBER			B	BURIED		
bfo-5214-03	24	COMCAST	FIBER			D	BURIED		
e-5231-12	24	RMP	POWER			D	AERIAL		
e-5233-12	24	RMP	POWER			D	AERIAL		
g-5216-11	24	QUESTAR	GAS	2 IN		D			
ms-0055-06	24	KEARNS	SANITARY SEWER			B			
ms-0056-14	24	SVSD	SANITARY SEWER			B			
msd-0015-17	24	UDOT	STORM DRAIN			B			
msd-0016-17	24	UDOT	STORM DRAIN			B			
sd-5203-17	24	UDOT	STORM DRAIN	48 IN		D			
sd-5204-17	24	UDOT	STORM DRAIN	48 IN		C			
sd-5205-17	24	UDOT	STORM DRAIN	15 IN		C			
sd-5215-17	24	UDOT	STORM DRAIN	15 IN		C			
sd-5236-17	24	UDOT	STORM DRAIN	15 IN		C			
sdi-0034-17	24	UDOT	STORM DRAIN			B			
sdi-0035-17	24	UDOT	STORM DRAIN			B			
sdi-0036-17	24	UDOT	STORM DRAIN			B			
ss-5212-06	24	KEARNS	SANITARY SEWER	15 IN		C			
wtr-5237-06	24	KEARNS	WATER	6 IN		D			
wtr-5238-06	24	KEARNS	WATER	6 IN		D			
wtr-5239-06	24	KEARNS	WATER	6 IN		D			
wtr-5240-06	24	KEARNS	WATER	6 IN		D			
bctv-5200-03	25	COMCAST	CABLE TV			D	BURIED		
bctv-5201-03	25	COMCAST	CABLE TV			D	BURIED		
bctv-5202-03	25	COMCAST	CABLE TV			D	BURIED		
bctv-5203-03	25	COMCAST	CABLE TV			D	BURIED		
be-5205-17	25	UDOT	POWER			D	BURIED		
be-5206-12	25	RMP	POWER			D	BURIED		
be-5207-12	25	RMP	POWER			D	BURIED		
be-5221-17	25	UDOT	POWER			D	BURIED		
be-5222-17	25	UDOT	POWER			D	BURIED		
be-5224-12	25	RMP	POWER			D	BURIED		
bfo-5200-15	25	SYRINGA	FIBER			B	BURIED		
bfo-5201-17	25	UDOT	FIBER			B	BURIED		
bfo-5209-02	25	CENTURY LINK	FIBER			B	BURIED		
bfo-5210-02	25	CENTURY LINK	FIBER			B	BURIED		
bfo-5211-02	25	CENTURY LINK	FIBER			D	BURIED		
bfo-5216-18	25	VERIZON	FIBER			D	BURIED		
btel-5209-02	25	CENTURY LINK	TELEPHONE			B	BURIED		
g-5200-11	25	QUESTAR	GAS	2 IN		D			
g-5213-11	25	QUESTAR	GAS	6 IN		B			
ms-0068-06	25	KEARNS	SANITARY SEWER			B			
ms-0069-06	25	KEARNS	SANITARY SEWER			B			
ms-0072-06	25	KEARNS	SANITARY SEWER			B			

REVISIONS

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UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

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QC CHECKED BY BDW
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DATE
PROFESSIONAL ENGINEER

4 INTERCHANGES ON
BANGERTER HIGHWAY - 5400 SOUTH

PROJECT
PROJECT NUMBER S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 54UTSM-16

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9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
ms-0122-06	25	KEARNS	SANITARY SEWER			B			
msd-0003-17	25	UDOT	STORM DRAIN			B			
msd-0004-17	25	UDOT	STORM DRAIN			B			
msd-0005-17	25	UDOT	STORM DRAIN			B			
sd-5223-17	25	UDOT	STORM DRAIN	18 IN		C			
sd-5234-17	25	UDOT	STORM DRAIN	30 IN		C			
sd-5235-17	25	UDOT	STORM DRAIN	30 IN		C			
sd-5245-17	25	UDOT	STORM DRAIN	18 IN		C			
sd-5246-17	25	UDOT	STORM DRAIN	18 IN		C			
sd-5249-17	25	UDOT	STORM DRAIN	18 IN		C			
sd-5250-17	25	UDOT	STORM DRAIN	18 IN		C			
sd-5251-17	25	UDOT	STORM DRAIN	18 IN		C			
sd-5252-17	25	UDOT	STORM DRAIN	18 IN		C			
sd-5253-17	25	UDOT	STORM DRAIN	18 IN		C			
sd-5254-17	25	UDOT	STORM DRAIN	18 IN		C			
sd-5255-17	25	UDOT	STORM DRAIN	18 IN		C			
sdi-0004-17	25	UDOT	STORM DRAIN			B			
sdi-0005-17	25	UDOT	STORM DRAIN			B			
sdi-0006-17	25	UDOT	STORM DRAIN			B			
sdi-0007-17	25	UDOT	STORM DRAIN			B			
sdi-0008-17	25	UDOT	STORM DRAIN			B			
sdi-0009-17	25	UDOT	STORM DRAIN			B			
sdi-0010-17	25	UDOT	STORM DRAIN			B			
sdi-0012-17	25	UDOT	STORM DRAIN			B			
sdi-0013-17	25	UDOT	STORM DRAIN			B			
sdi-0014-17	25	UDOT	STORM DRAIN			B			
sdi-0015-17	25	UDOT	STORM DRAIN			B			
ss-5201-06	25	KEARNS	SANITARY SEWER	8 IN		D			
ss-5203-06	25	KEARNS	SANITARY SEWER	8 IN		D			
ss-5204-06	25	KEARNS	SANITARY SEWER	8 IN		D			
ss-5205-06	25	KEARNS	SANITARY SEWER	8 IN		D			
ss-5207-06	25	KEARNS	SANITARY SEWER	8 IN		C			
ss-5208-06	25	KEARNS	SANITARY SEWER	8 IN		C			
ss-5209-06	25	KEARNS	SANITARY SEWER	8 IN		C			
ss-5210-06	25	KEARNS	SANITARY SEWER	8 IN		C			
ss-5211-06	25	KEARNS	SANITARY SEWER	8 IN		C			
wtr-5211-06	25	KEARNS	WATER	1 IN		D			
wtr-5212-06	25	KEARNS	WATER	1 IN		D			
wtr-5213-06	25	KEARNS	WATER	16 IN		D			
wtr-5216-06	25	KEARNS	WATER	6 IN		D			
wtr-5217-06	25	KEARNS	WATER	6 IN		D			
wtr-5218-06	25	KEARNS	WATER	6 IN		D			
wtr-5219-06	25	KEARNS	WATER	2 IN		D			
wtr-5220-06	25	KEARNS	WATER	6 IN		D			
wtr-5228-06	25	KEARNS	WATER	10 IN		D			
wtr-5229-06	25	KEARNS	WATER	6 IN		D			
be-5005-12	26	RMP	POWER			D	BURIED		
btel-5203-02	26	CENTURY LINK	TELEPHONE			B	BURIED		
e-5002-12	26	RMP	POWER			D	AERIAL		
e-5049-12	26	RMP	POWER			D	AERIAL		
e-5200-12	26	RMP	POWER			D	AERIAL		
e-5234-12	26	RMP	POWER			D	AERIAL		
g-5218-11	26	QUESTAR	GAS	2 IN		D			
ms-0029-16	26	TAYLORSVILLE	SANITARY SEWER			B			
ms-0091-06	26	KEARNS	SANITARY SEWER			B			
msd-0018-17	26	UDOT	STORM DRAIN			B			
sd-5019-10	26	PRIVATE	STORM DRAIN	8 IN		C			
sd-5036-17	26	UDOT	STORM DRAIN	15 IN		C			
sd-5089-99	26	UDOT	STORM DRAIN	18 IN		C			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW
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DATE
PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH
PROJECT NUMBER: S-0154(12)11
PIN: 12566
UTILITY

SHEET NO. 54UTSM-17

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9/8/2016

Utility ID Number	Plan Sheet	Owner	Utility Type	Size	Material	Quality Level	Aerial Buried	Test Hole Number	Comments
sd-5212-17	26	UDOT	STORM DRAIN	12 IN		C			
sd-5241-17	26	UDOT	STORM DRAIN	18 IN		C			
sdi-0040-17	26	UDOT	STORM DRAIN			B			
sdi-0041-17	26	UDOT	STORM DRAIN			B			
sdi-0042-10	26	PRIVATE	STORM DRAIN			B			
sdi-0048-17	26	UDOT	STORM DRAIN			B			
sdi-0507-17	26	UDOT	STORM DRAIN			B			
sdi-0584-17	26	UDOT	STORM DRAIN			B			
ss-5234-06	26	KEARNS	SANITARY SEWER	8 IN		C			
ss-5235-06	26	KEARNS	SANITARY SEWER	8 IN		C			
wtr-5205-06	26	KEARNS	WATER	3 QUARTERS IN		D			
wtr-5206-06	26	KEARNS	WATER	3 QUARTERS IN		D			
wtr-5207-06	26	KEARNS	WATER	3 QUARTERS IN		D			
wtr-5208-06	26	KEARNS	WATER	1 IN		D			

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - AVENUE CONSULTANTS

DRAWN BY GS
QC CHECKED BY BDW

APPROVED

PROFESSIONAL ENGINEER ____ DATE ____

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY - 5400 SOUTH

PROJECT NUMBER: S-0154(12)11 PIN 12566

UTILITY

SHEET NO. 54UTSM-18

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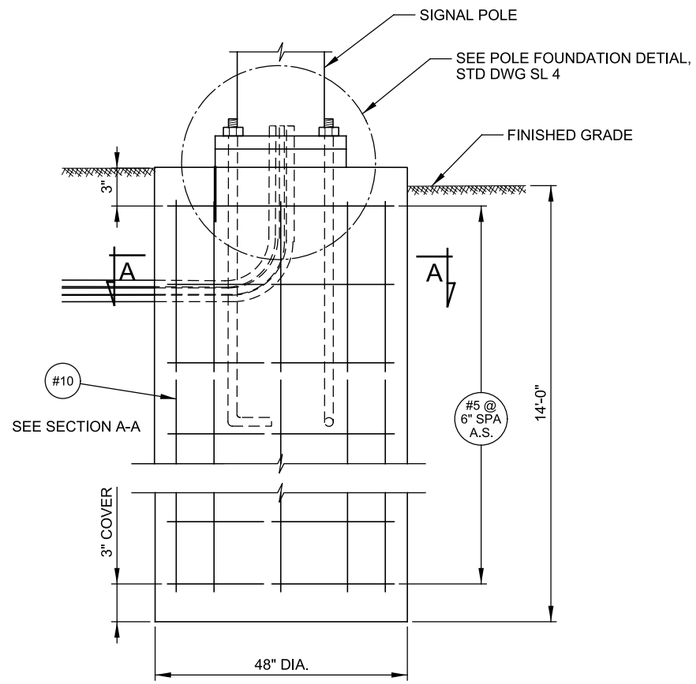
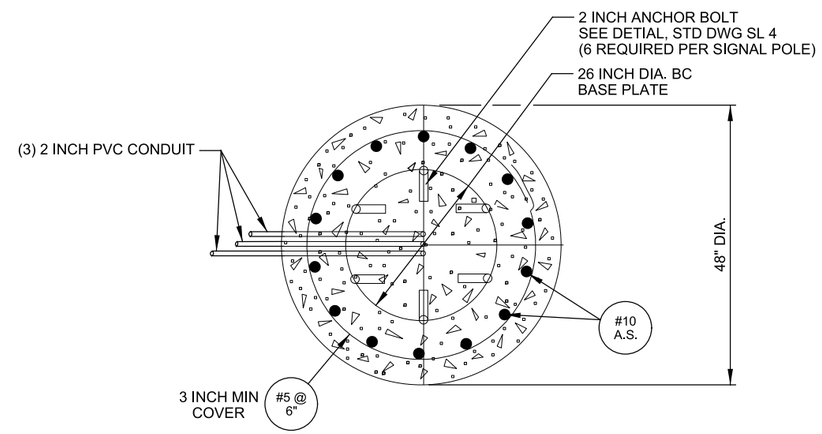


80' - 85' MAST ARM POLE FOUNDATION



SECTION A-A

PRELIMINARY
NOT FOR CONSTRUCTION

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - HORROCKS ENGINEERS

DRAWN BY	KKH
QC CHECKED BY	KGA
MM/DD/YY DATE	

APPROVED

PROFESSIONAL ENGINEER

PROJECT: 4 INTERCHANGES ON BANGERTER HIGHWAY

PROJECT NUMBER: S-0154(12)11 PIN 12566

SIGNAL POLE FOUNDATION DETAIL

SHEET NO. SG-01

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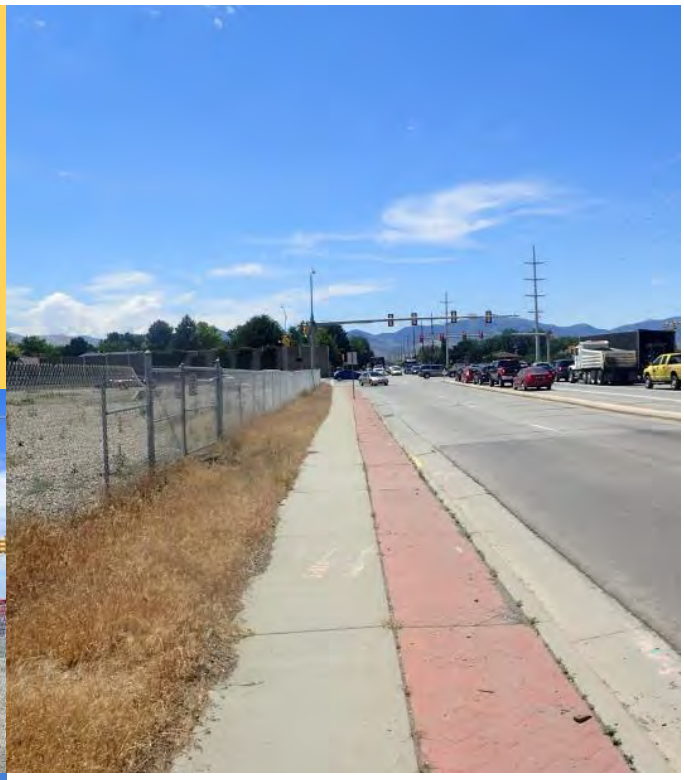
TABLE OF CONTENTS

1. Geotechnical Data
2. Phase I Site Assessment/Utah DERR Remediation Report
~~2.~~3. Phase II Site Assessment/Utah DERR Remediation Report

PART 8 DOCUMENTATION NOT INCLUDED IN MAIN PDF DOCUMENT; INCLUDED AS SEPARATE DOCUMENTS/ELECTRONIC FILES



Final Phase II Environmental Site Assessment Report

Bangerter Highway W 9000 S Interchange

Prepared for Utah Department of Transportation

West Jordan, Utah

August 2016

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Table of Contents

1 Introduction 1
2 Site Description 5
2.1 Location and Legal Description 5
2.2 Site and Vicinity Characteristics 5
2.3 Description of Structures, Roads, and Other Site Improvements 5
2.4 Area Geology, Hydrogeology, and Soil Characteristics 5
3 Previous Soil Investigations 7
4 Soil Investigation Activities 9
4.1 Data Objectives and Needs 9
4.2 On-Site Soil Investigation 9
4.2.1 Discrete Soil Samples 9
4.2.2 Composite Soil Samples for TCLP analysis 11
4.2.3 Equipment Decontamination 12
4.2.4 Quality Assurance and Quality Control 12
4.2.5 Laboratory Analyses 12
4.3 Health and Safety 13
5 Results and Conclusions 15
5.1 Arsenic and Lead 15
5.2 TCLP 15
5.3 Equipment Rinsate 15
5.4 Conclusions 15
6 References 17

Figures

Figure 1. Vicinity Map 2
Figure 2. 9000 South and Bangerter Highway 3
Figure 3. Boring Locations 10

Tables

Table 2-1. Dominant Soils Mapped by NRCS for Subject Property 6
Table 4-1. Number of Soil Samples that were collected from each Boring 11
Table 4-2. Proposed Laboratory Analyses 12
Table 5-1. Analytical Results for Lead and Arsenic 16

Appendices

Appendix A – Compilation of Soil and Groundwater Action Levels
Appendix B – Laboratory Results

List of Acronyms

Term	Definition
ASTM	American Society for Testing and Materials
CFR	Code of Federal Regulations
COC	constituents of concern
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
ESC	ESC Lab Sciences
HDR	HDR, Inc.
NRCS	Natural Resources Conservation Service
OU1	operable unit 1
TCLP	Toxic characteristic leaching procedure
UDEQ	Utah Department of Environmental Quality
UDOT	Utah Department of Transportation

1 Introduction

The Utah Department of Transportation (UDOT) proposes a project that includes replacing an existing 720-foot-long, 84-inch-diameter corrugated pipe, that extends from the west side of Bangerter Highway, just south of Winthrope Circle in the Vista West Subdivision, to the Jordan Valley Hospital property east of Bangerter Highway and north of W 9000 S (**Figure 1** and **Figure 2**).

In July 2016 at UDOT's request, HDR, Inc. (HDR) conducted a Phase I Environmental Site Assessment (ESA) of properties at the Bangerter Highway and W 9000S Street intersection (Subject Property). The Subject Property includes several landowners (HDR 2016a).

HDR conducted this ESA in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Practice E 1527-13; the ESA satisfies the requirements of Title 40 of the Code of Federal Regulations (CFR) Part 312 (40 CFR 312).

As reported in the Phase 1 ESA, the Subject Property includes a portion of Bingham Creek, which was part of response actions implemented at the Kennecott South Zone Superfund Site near Copperton, Utah. Response actions in the 1990s, within and adjacent to the Subject Property, included three phases of soil removal activities from the Bingham Creek channel and its banks along residential areas to address lead and arsenic contaminated soils. Contaminated sediments were also removed from Bingham Creek in 1992 during construction of the Jordan Valley Hospital.

HDR included the following recommendation in the Phase I ESA:

- **Recommendation 1**: Conduct a Phase II site investigation to determine concentrations of lead and arsenic in the soil along Bingham Creek, which was part of response actions implemented at the Kennecott South Zone Superfund Site near Copperton, Utah.

A Phase II site investigation was necessary to assess the concentrations of constituents of concern (COCs)—arsenic and lead—in the soil along Bingham Creek and adjacent areas that could be disturbed during the Bangerter Highway W 9000 S Interchange Project. The City of West Jordan also requested that UDOT collect samples for toxic characteristic leaching procedure (TCLP) analysis. This report presents data objectives and needs, the field activities, and the results of this Phase II ESA.

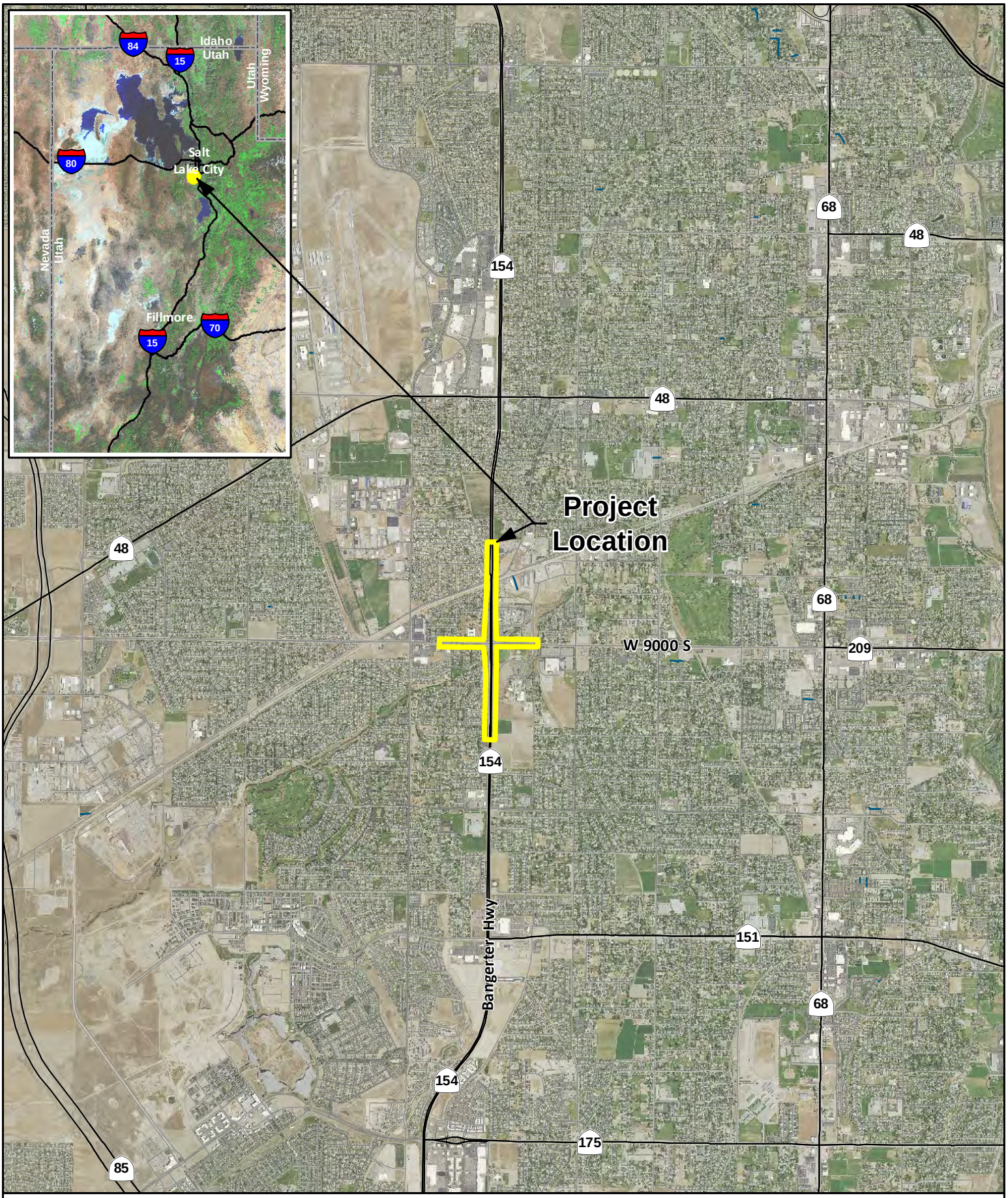

Figure 1. Vicinity Map
UDOT, 9000 South and Bangerter Highway

Imagery: 2014 NAIP, 1 Meter Resolution
Source: USDA/NRCS Digital Gateway
Other Data Sources: Utah Automated Geographic Reference Center (AGRC); USGS

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Map Date: 7/6/2016
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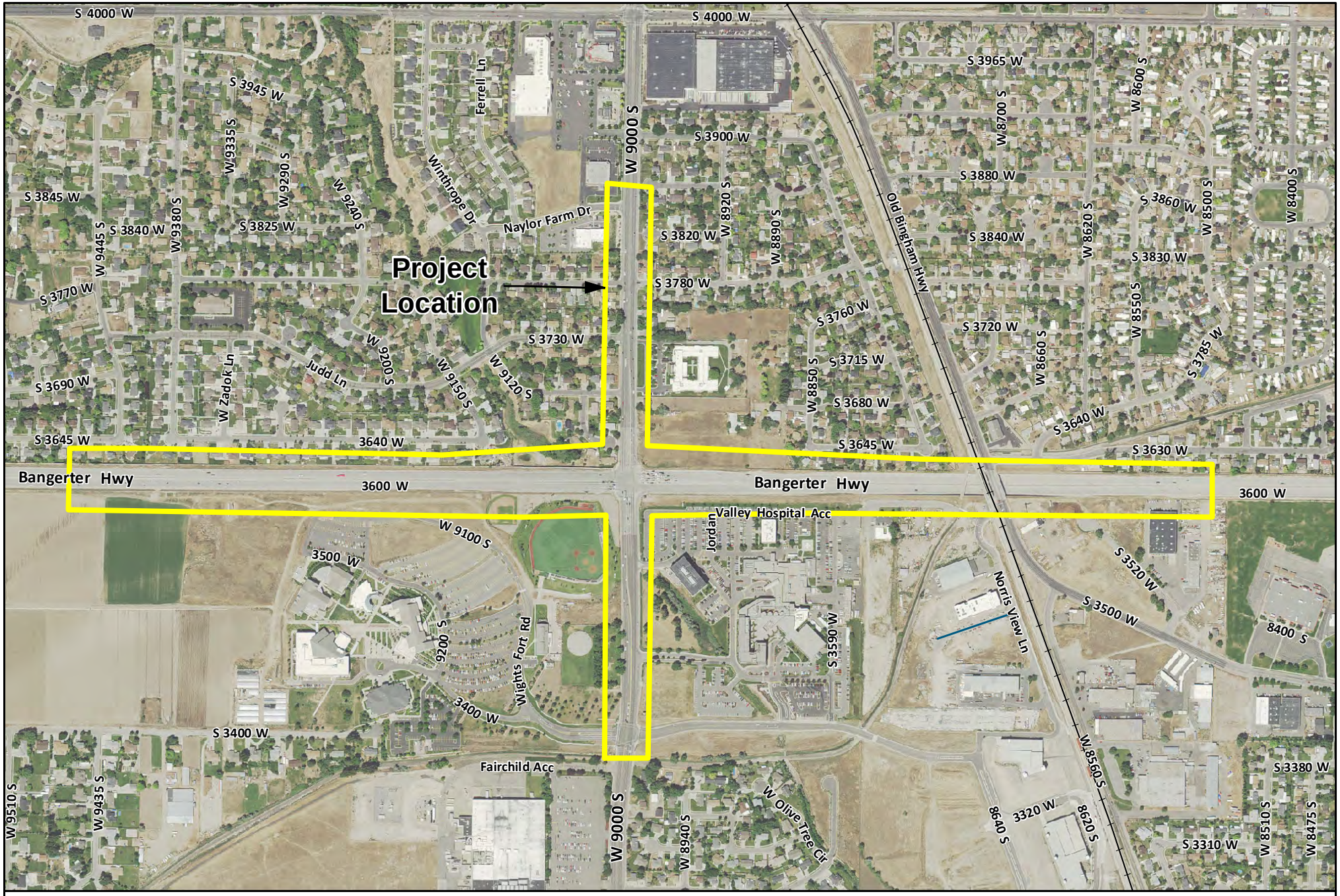

Figure 2. 9000 South and Bangerter Highway
UDOT

Imagery: 2014 NAIP, 1 Meter Resolution
Source: USDA/NRCS Digital Gateway
Other Data Sources: Utah Automated Geographic Reference Center (AGRC); USGS

Map Date: 7/6/2016
Document: Q:\UDOT\Bangerter\Work_in_Progress\map_docs\Site_land.mxd

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2 Site Description

2.1 Location and Legal Description

The Subject Property is comprised of UDOT-owned, right-of-way property along the Bangerter Highway and W 9000 S intersection and multiple adjoining parcels (private property and City owned property) in West Jordan, Utah, 84088. The various portions of the Subject Property are located in Section 5 of Township 03 South, Range 01 West in Salt Lake County (**Figure 2**).

2.2 Site and Vicinity Characteristics

The Subject Property is comprised of single-family residential lots and one residual lot, owned by the City of West Jordan, which consists of Bingham Creek and its banks. The Subject Property also includes UDOT right-of-way along the east and west side of Bangerter Highway and the north and south side of W 9000 S Street. Primary access to the Subject Property is by Bangerter Highway or W 9000 S Street. Access to the residential lots (Vista West subdivision) in the southwest corner of the intersection of Bangerter and W 9000 S is by heading south from W 9000 S on Winthrope Drive. The Subject Property is located within a mixed residential and commercial area, which includes the Jordan Valley Hospital northeast of the intersection, the Salt Lake Community College campus in the southeast corner of the intersection, and a currently fallow pasture on the northwest corner of the intersection.

2.3 Description of Structures, Roads, and Other Site Improvements

The Subject Property is developed except the fallow pasture located on the northwest corner of the intersection of Bangerter Highway and W 9000 S Street. Development includes residential subdivisions, athletic fields, and parking lots associated with the Salt Lake Community College Jordan Campus, and medical facilities and parking lots associated with the Jordan Valley Medical Center.

2.4 Area Geology, Hydrogeology, and Soil Characteristics

West Jordan, Utah, is located between the Jordan River and the Oquirrh Mountains within the Jordan River Basin. The Subject Property is located within the historic floodplain of Bingham Creek, which consists of Post-Lake Bonneville (Holocene) alluvial deposits ranging from silty, fine- to coarse-grained sand, and pebbles and cobbles. The area to the north and south of the historic floodplain along Bingham Creek consists of Bonneville Lake Cycle (late Pleistocene) fine-grained lacustrine deposits. The area to the west consists of late Pleistocene gravel of lacustrian and/or alluvial origin.

Depth to groundwater varies near the Subject Property; however, in general, it is at least 80 feet below land surface. The groundwater gradient is toward Jordan River to the east (Stolp 2007).

Table 2-1 characterizes the dominant soils in the area, based on a Natural Resource Conservation Service (NRCS) soil survey for Salt Lake County (2016).

Table 2-1. Dominant Soils Mapped by NRCS for Subject Property

Soil Component Name (surface texture)	Red Rock Silt Loam
Characteristics	The Red Rock Silt Loam occurs along the historic floodplain of Bingham Creek, with a typical profile of silt loam from 0-4 inches, silty clay loam from 4-28 inches, clay loam from 28-40 inches, silt loam from 40 to 45 inches, and silty clay loam from 45 to 60 inches. The parent material is alluvium.
Soil drainage class	Well drained. Moderately low to moderately high transmissivity (0.06 to 0.20 inches per hour). The available water storage is high.
Depth to bedrock	More than 80 inches
Soil Component Name (surface texture)	Bingham Gravelly Loam
Characteristics	The Bingham Gravelly Loam occurs to the south of the historic floodplain of Bingham Creek, with a typical profile of gravelly loam from 0-6 inches, gravelly sandy clay loam from 6-12 inches, gravelly fine sand loam from 12-18 inches, very gravelly sand loam from 18 to 27 inches, and extremely gravelly sand from 27 to 60 inches. The parent material is fine-loamy slope alluvium derived from quartzite and/or limestone over sandy and gravelly lacustrine deposits derived from quartzite and/or limestone.
Soil drainage class	Well drained. Moderately high to high transmissivity (0.60 to 2.00 inches per hour). The available water storage is very low.
Depth to bedrock	More than 80 inches
Soil Component Name (surface texture)	Butterfield Soils
Characteristics	The Butterfield soils occur to the north of the historic floodplain of Bingham Creek, with a typical profile of gravelly silt loam from 0-5 inches, very gravelly silt loam from 5-10 inches, extremely gravelly loam from 10-22 inches, very gravelly loam from 22 to 50 inches, and unweathered bedrock from 50 to 60 inches. The parent material is colluvium and/or residuum.
Soil drainage class	Well drained. Very low to moderately high transmissivity (0.00 to 0.20 inches per hour). The available water storage is very low.
Depth to bedrock	50 inches

3 Previous Soil Investigations

The Subject Property includes a portion of Bingham Creek, which was part of response actions implemented at the Kennecott South Zone Superfund Site near Copperton, Utah. The Subject Property is part of Operable Unit 1 (OU1), which consists of Bingham Creek downstream of the Kennecott South Zone Superfund Site. Response actions in the 1990s, within and adjacent to the Subject Property, included three phases of soil removal activities from the Bingham Creek channel and its banks along residential areas to address lead and arsenic contaminated soils. Contaminated sediments were also removed from Bingham Creek in 1992 during construction of the Jordan Valley Hospital. Bingham Creek flows through a 84-inch diameter, 720-foot-long, corrugated metal pipe from the Vista West Subdivision towards the Jordan Valley Hospital (northeasterly direction).

The executive summary of the *Second Five Year Review Report* for the Kennecott South Zone (EPA 2010) states the following:

> *"Although the residential area response actions at OU1 were conducted in accordance with the Action Memoranda (and therefore may be functioning as intended), it is not clear from the site files whether all residential properties ultimately were cleaned to the final lead standard of 1,100 mg/Kg. This is due to an inconsistency in the lead action level required in the Action Memoranda for the Phase I residential removal action (2,500 mg/Kg) and the Phase II and III residential removal actions (1,100 mg/Kg). The OU1 ROD identifies the appropriate action level for lead in a residential setting as 1,100 mg/Kg. Therefore, if the Phase I residential cleanup achieved a lead standard of 2,500 mg/Kg, this portion of the remedy would not be functioning as intended by the ROD."*

The December 29, 2015, Utah Department of Environmental Quality's (UDEQ) technical memorandum, "Compilation of soil and groundwater action levels," for Kennecott north and s zones is attached in Appendix A. See the Phase 1 ESA (HDR 2016a) for more details on the Kennecott site.

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4 Soil Investigation Activities

This section presents data objectives and needs, and describes HDR's field activities conducted August 3 and 4, 2016, for this Phase II ESA.

4.1 Data Objectives and Needs

As addressed in the *Second Five Year Review Report,* the status of response actions at OU1 are in post-construction operation and maintenance with wastes remaining in place. Future development could affect potentially contaminated soils along Bingham Creek. UDEQ and the U.S. Environmental Protection Agency (EPA), Region 8, have compiled soil action levels for Bingham Creek, necessitating soil sampling to assess COC concentrations for arsenic and lead in the soil along Bingham Creek.

The soil action levels for OU1 are compiled in UDEQ's December 29, 2015 technical memorandum (Appendix A). The listed residential action levels for lead are 1,100 milligrams per kilogram (mg/kg) and 100 mg/kg for arsenic.

4.2 On-Site Soil Investigation

HDR conducted on-site activities in accordance with the document, *Phase II Environmental Site Assessment Work Plan* (HDR 2016b).

4.2.1 Discrete Soil Samples

The proposed project includes replacing an existing 720-foot-long, 84-inch-diameter corrugated pipe, that extends from the west side of Bangerter Highway, just south of Winthrope Circle in the Vista West Subdivision, to the hospital property east of Bangerter Highway and north of W 9000 S. The existing culvert would be replaced with a box culvert or similar hydraulic structure (to be determined). During construction of the new culvert, soil would likely be excavated within Bingham Creek. For planning purposes, a total depth of excavation at the bottom of Bingham Creek is assumed to be approximately 3.5 feet.

With a goal to determine lead and arsenic concentrations in areas of disturbance within Bingham Creek and the areas adjacent to Bingham Creek, HDR advanced soil borings using a hand auger and collected soil samples at the following locations (see **Figure 3** and **Table 4-1**):

- 10 borings within Bingham Creek (5 upstream of Bangerter Highway and 5 downstream),
- 4 borings adjacent to Bingham Creek (2 upstream of Bangerter Highway and 2 downstream), and
- 2 borings near the Bangerter Highway W 9000 S intersection (1 northwest quadrant and 1 southeast quadrant)

At each boring location, HDR collected one sample at 0 to 12 inches and one sample at 24 to 36 inches.

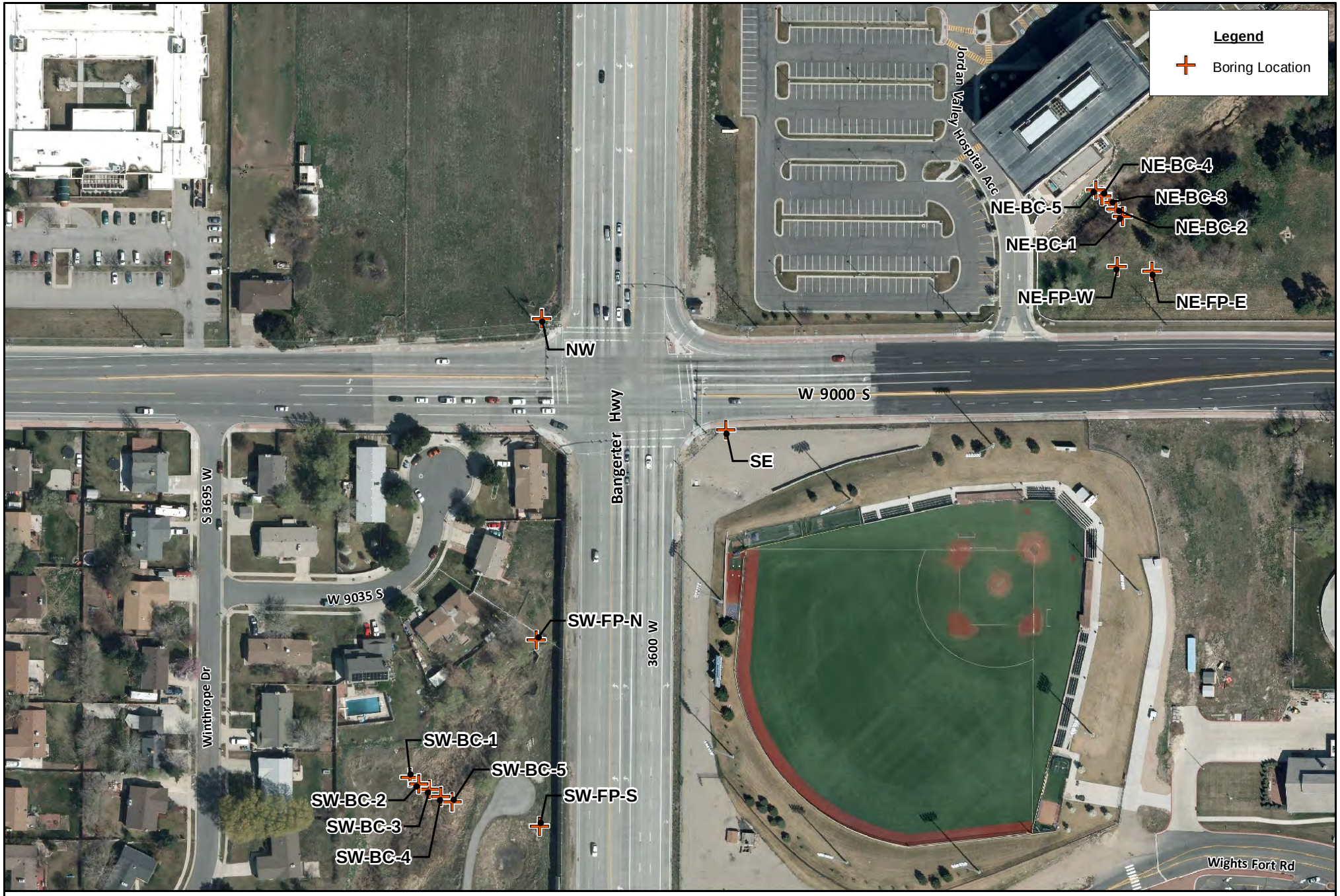

Figure 3. Boring Locations
UDOT

Imagery: 2012 HRO, 1/8 Meter Resolution
Source: Utah Automated Geographic Reference Center (AGRC)
Other Data Sources: Utah Automated Geographic Reference Center (AGRC); USGS

Map Date: 8/17/2016
Document: Q:\UDOT\Bangerter\Work_in_Progress\map_docs\Site_land.mxd

N

0 150 300
Feet

Table 4-1. Number of Soil Samples that were collected from each Boring

Boring Location	Number of Borings	Number of Soil Samples	Sample per Boring
Bed and Bank of Bingham Creek	10	20	Sample 1: 0-12 inches from surface Sample 2: 24-36 inches from surface
Areas adjacent to Bingham Creek	4	8	Sample 1: 0-12 inches from surface Sample 2: 24-36 inches from surface
Northwest quadrant	1	2	Sample 1: 0-12 inches from surface Sample 2: 24-36 inches from surface
Southeast quadrant	1	2	Sample 1: 0-12 inches from surface Sample 2: 24-36 inches from surface
Total	16	32	Note: 30 discrete samples were collected for laboratory analysis, as 2 samples could not be collected due to auger refusal or collapsing boring)

HDR's sampling team determined the exact sampling locations in the field following a review of accessibility, utility locations, and consideration of personnel safety.

For each boring, the sampling team collected a discrete soil sample at the specified depth, placed the soil sample into a clean (decontaminated) mixing bowl, mixed lightly, and then placed a subset of the sample into a laboratory sample jar for laboratory analysis. In addition, they placed a subset of each sample into a clean bucket to serve as part of a composite sample as described in Section 4.2.2. This approach of collecting discrete soil samples at a specified depth allows for assessing concentrations of lead and arsenic with depth and specific locations. The sampling team collected 30 soil samples out of a goal of 32 samples. They could not collect 2 samples; in one case, the boring collapsed due to water flowing over the boring, and in the other case, the boring could not be advanced past a depth of 1 foot (auger refusal).

Upon collection, the sampling team labeled each sample container and placed it in a clean ice chest, where the samples chilled until delivery to the laboratory. The sampling team followed standard chain-of-custody procedures from the time they collected samples until the samples arrived at the laboratory. After sampling, the sampling team backfilled each opening with soil cuttings.

4.2.2 Composite Soil Samples for TCLP analysis

The sampling team collected four composite samples for TCLP analysis, by taking a small sample volume from each of the discrete samples at the appropriate depth and combining them in a mixing bowl.

Two composite samples are from the southwest quadrant (Vista West subdivision); one of these composite samples consisted of soil collected from each discrete sample at a depth from 0 to 1 feet; and the second composite sample consisted of soils collected from each discrete sample from 2 to 3 feet.

- SW-TCLP-0-1= composite of all samples (Bingham Creek and floodplain) taken from 0-1 feet in the south west quadrant.
- SW-TCLP-2-3= composite of all samples (Bingham Creek and floodplain) taken from second depth increment (variable depths) in the south west quadrant

Similarly, two composite samples are from the northeast quadrant (Jordan Valley Hospital), and collected from the same depth increments as the southwest quadrant samples.

- NE-TCLP-0-1= composite of all samples (Bingham Creek and floodplain) taken from 0-1 feet in the north east quadrant.
- NE-TCLP-2-3= composite of all samples (Bingham Creek and floodplain) taken from second depth increment (variable depths) in the north east quadrant.

4.2.3 Equipment Decontamination

The sampling team decontaminated sampling equipment (hand auger, mixing bowl, mixing spoon) prior to collecting the next sample, using the following procedure:

- Wash and scrub equipment with phosphate-free, laboratory-grade detergent (e.g., Alconox™ or equivalent)
- Rinse with distilled water
- Air dry

The sampling team also used disposable nitrile gloves for each sample collected.

4.2.4 Quality Assurance and Quality Control

To assess the effectiveness of equipment decontamination, the sampling team collected a “decon” blank sample. They poured distilled water over the decontaminated hand auger and mixing bowl, collected the water and placed an aliquot of the water into a laboratory supplied sample jar, and had the water sample analyzed for lead and arsenic.

4.2.5 Laboratory Analyses

HDR shipped overnight a chilled and secured cooler with soil samples and the decon blank sample to ESC Lab Sciences (ESC) in Mt. Juliet, Tennessee. ESC laboratory analyses and methods are summarized in **Table 4-2**.

Table 4-2. Proposed Laboratory Analyses

Analytical Parameter	Method
Lead	EPA Method 6010b
Arsenic	EPA Method 6010b
TCLP RCRA Metals[1]	EPA Method 6010/7470

[1]RCRA Metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and sliver.

4.3 Health and Safety

The sampling team conducted all activities under the supervision of senior HDR project personnel and in strict accordance with a health and safety plan, which was completed prior to beginning field activities.

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5 Results and Conclusions

5.1 Arsenic and Lead

Table 5-1 summarizes the analytical results (laboratory reports are presented in Appendix B). The listed UDEQ residential action levels for lead are 1,100 mg/kg and 100 mg/kg for arsenic. Discrete soil samples ranged from 48.9 to 351 mg/Kg for lead and 7.43 to 49.4 mg/Kg for arsenic. Values are below the residential action levels identified in the UDEQ technical memorandum (Appendix A).

5.2 TCLP

All four TCLP samples (NE-TCLP-0-1, NE-TCLP-2-3, SW-TCLP-0-1, and SW-TCLP-2-3) were non-detect for mercury, arsenic, barium, cadmium, chromium, lead, selenium, and silver. Laboratory reports are presented in Appendix B.

5.3 Equipment Rinsate

The equipment rinsate (ER-1) was non-detect for lead and arsenic.

5.4 Conclusions

Soil sample results are below the action levels established by UDEQ (Appendix A) for soil lead and arsenic under a residential scenario. This suggest that no remedial action would be required by UDEQ for these soils. Furthermore, soils are below the TCLP threshold values, indicating that the excavation of soils would not result in the generation of hazardous waste.

Table 5-1. Analytical Results for Lead and Arsenic

Sample ID	Total Solids %	Arsenic (mg/kg, dry)	Lead (mg/kg, dry)	Sample Depth (feet)	Comments
NE-BC-1-0-1	87.0	17.4	196	0-1	Upper south bank.
NE-BC-1-2-3	88.6	22.2	183	2-3	Upper south bank.
NE-BC-2-0-1	76.5	26.3	351	0-1	Middle south bank.
NE-BC-2-1.5-2.5	77.5	49.4	264	1.5-2.5	Middle south bank. Cobbles at 2.5 feet.
NE-BC-3-0-1	71.9	23.8	255	0-1	Bottom of stream channel with 1.5 feet of water flowing.
NE-BC-3	NA	NA	NA	NA	Stream flow caused hole to collapse, so no deeper sample could be collected.
NE-BC-4-0-1	77.8	24.9	257	0-1	Middle north bank.
NE-BC-4-2-3	76.0	23.9	312	2-3	Middle north bank.
NE-BC-5-0-1	92.3	13.2	53.5	0-1	Upper north bank.
NE-BC-5-1.5-2	93.6	14.7	78.0	1.5-2	Upper north bank. Cobbles at 2.0 feet
NE-FP-W-0-1	91.1	10.8	111	0-1	Floodplain west.
NE-FP-W-2-2.5	92.3	16.9	174	2-2.5	Floodplain west.
NE-FP-E-0-1	94.6	9.36	87.4	0-1	Floodplain east.
NE-FP-E-2-3	97.2	7.43	48.9	2-3	Floodplain east.
SW-BC-1-0-1	95.4	15.2	102	0-1	Upper bank west.
SW-BC-1-1.75-2.25	93.3	15.5	100	1.75-2.25	Upper bank west. Cobble at 2.25 feet.
SW-BC-2-0-1	87.2	15.4	86.8	0-1	Middle bank west.
SW-BC-2-1.5-2	88.7	14.4	87.2	1.5-2	Middle bank west. Cobble/roots at 2.0 feet.
SW-BC-3-0-1	79.8	12.1	78.5	0-1	Bottom of stream channel. Saturated soil.
SW-BC-3-1.75-2.25	76.7	16.7	97.9	1.75-2.25	Bottom of stream channel. Saturated soil. Cobble at 2.25 feet.
SW-BC-4-0-1	81.3	16.5	104	0-1	Middle bank east.
SW-BC-4-1.25-1.75	91.4	23.1	160	1.25-1.75	Middle bank east. Cobble/roots at 1.75 feet.
SW-BC-5-0-1	89.6	15.6	117	0-0.8	Upper bank east. Cobble at 0.8 feet
SW-BC-5	NA	NA	NA	NA	Cobble at 0.8 feet, so no deeper sample could be collected.
SW-FP-N-0-1	99.4	14.6	108	0-1	Floodplain north.
SW-FP-N-2-3	96.4	11.8	96.6	2-3	Floodplain north.
SW-FP-S-0-1	98.6	15.6	101	0-1	Floodplain south.
SW-FP-S-2-3	97.7	18.1	109	2-3	Floodplain south.
SE-0-1	95.7	10.2	54.8	0-1	Sample along W 9000 S. Appeared to be fill material.
SE-1.25-1.5	97.8	12.3	79.7	1.25-1.5	Sample along W 9000 S. Appeared to be fill material. Cobble at 1.5 feet.
NW-0-1	88.8	11.1	108	0-1	Sample from NW quadrant of intersection.
NW-2-3	90.7	14.8	126	2-3	Sample from NW quadrant of intersection.

NE= north east quadrant of intersection; SW=south west; SE=south east; NW=north west; BC= Bingham Creek; FP= flood plain

6 References

HDR [HDR, Inc.]. 2016a. Phase 1 Environmental Site Assessment. Bangerter Highway W 9000 S Interchange. July 2016.

HDR 2016b. Phase II Environmental Site Assessment Work Plan. Bangerter Highway W 9000 S Interchange. July 2016.

NRCS [Natural Resource Conservation Service]. 2016. Custom Soil Resource Report for Salt Lake Area, Utah. July 5, 2016, http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

Stolp, B.J., 2007, Hydrogeologic setting and ground-water flow simulations of the Salt Lake Valley Regional Study Area, Utah, Section 2 of Paschke, S.S., ed., Hydrogeologic settings and ground-water flow simulations for regional studies of the transport of anthropogenic and natural contaminants to public-supply wells—studies begun in 2001: Reston, Va., U.S. Geological Survey Professional Paper 1737–A, pp. 2–1 – 2–22.

UDEQ [Utah Department of Environmental Quality]. Technical Memorandum, Compilation of soil and groundwater action levels. December 29, 2015.

Utah Geological Survey and Utah Department of Natural Resources, 2000. Geologic Map of the Midvale Quadrangle, Salt Lake County, Utah. Fitzhugh D. Davis, 2000

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A

Compilation of Soil and Groundwater Action Levels

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State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF ENVIRONMENTAL
RESPONSE AND REMEDIATION

Brent H. Everett
Director

TECHNICAL MEMORANDUM

SUBJECT: Compilation of soil and groundwater action levels

FROM: Douglas Bacon, UT DEQ–DERR DCB

Kerri Fiedler, U.S. EPA Region 8 KF

TO: Kennecott North and South Zones Administrative File

DATE: December 29, 2015

Since 1998, four records of decision (RODs) have been issued for the Kennecott North and South Zone operable units (OUs). Under each of these RODs various land use action levels for metals in soils were selected. Similarly, various action levels for groundwater contaminants were established under the RODs or by the State of Utah's Groundwater Protection Program (GWPP). This technical memorandum compiles all the action levels into a single document and clarifies inconsistencies determined during recent five-year reviews.

The UT DEQ-DERR and the EPA Region 8 (Agencies) have compiled the soil action levels for OUs 1, 3-15, 17-20, 22, and 24 (Attachment 1). Listed action levels are obtained from existing risk assessment and risk management documents which are part of the administrative record. There are footnotes at the end of the soil action levels table which explain the applicability of the action levels and define the action which can be performed to address an exceedance. Numbered notes on the table provide reference where each of the listed action levels are obtained.

The Agencies have compiled the groundwater action levels for OUs 2, 12, 16, and 23 (Attachment 2). Listed action levels are obtained from existing human health and ecological risk assessment and risk management documents which are part of the administrative record. The listed action levels also take into account the Agencies' selected remedy to rely on the permitting restrictions of the State of Utah's GWPP, overseen by the UT DEQ - Division of Water Quality (UT DEQ-DWQ) for OUs 12 and 16. Remedial actions being implemented at OUs 12 and 16 are being overseen by UT DEQ-DWQ under the permit program to ensure that OU2 is not further impacted.

It is the intent of the Agencies that this technical memorandum will be used as reference under various site-wide and OU-specific management plans, to ensure the mining impacted soils and groundwater are effectively managed until such time that unrestricted use/unlimited exposure action levels are attained. The action levels listed in the two attachments are amendable by the Agencies premised on further risk assessment and risk management decisions, or recommendations by UT DEQ-DWQ.

Attachment 1

Table of Soil Action Levels for Kennecott North and South Zones

Site Wide Summary of Soil Action Levels for Kennecott North and South Zones								
Land Use, Media or Receptor	**As**	**Cd**	**Cr**	**Cu**	**Mo**	**Pb**	**Se**	**Zn**
OU1 Bingham Creek (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Commercial[2]	-	-	-	-	-	2000	-	-
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
Residential[2]	100	-	-	-	-	1100	-	-
Discrete Bingham Creek Channel Parcels (Daybreak Community) - Residential[8]	100	-	-	-	-	700	-	-
Discrete Bingham Creek Channel Parcels (Daybreak Community) - Commercial[8]	450	-	-	-	-	2000	-	-
Discrete Daybreak Commerce Park Parcels[8]	450	-	-	-	-	2000	-	-
OU2 South End Groundwater (SOUTH ZONE)								
Groundwater	See Groundwater Action Levels Table							
OU3 Butterfield Waste Rock (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
Residential, Day Care and Playgrounds[3]	100	-	-	-	-	1200	-	-
OU3 Butterfield Canyon Creek (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
Residential, Day Care and Playgrounds[3]	100	-	-	-	-	1200	-	-
OU3 Herriman Residential and Agricultural (SOUTH ZONE)								
Industrial[5]	850	2794	8381	10.3%	13972	4000	13972	83%
Agricultural[5]	300	2148	6444	79689	10740	10,000	10740	64%
Recreational[5]	300	758	114	25.2%	34067	10,000	34067	100%
Residential, Day Care and Playgrounds[3]	100	-	-	-	-	1200	-	-
OU4 Large Bingham Reservoir (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
OU5 Anaconda Tailings (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
OU5 Bastian Ditch (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
OU5 Bastian Ditch Daybreak Area (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Commercial[4]	450	-	-	-	-	2000	-	-
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
Residential[4]	100	-	-	-	-	700	-	-
OU6 Lark Waste Rock and Tailings (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%

Site Wide Summary of Soil Action Levels for Kennecott North and South Zones								
Land Use, Media or Receptor	**As**	**Cd**	**Cr**	**Cu**	**Mo**	**Pb**	**Se**	**Zn**
OU7 South Jordan Evaporation Ponds (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Commercial[4]	450	-	-	-	-	2000	-	-
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
Residential[4]	100	-	-	-	-	700	-	-
OU8 Waste Water Treatment Plan and Sludge Ponds (NORTH ZONE)								
Industrial[6]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[6]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[6]	283	758	114	25.2%	34067	2207	34067	100%
OU9 Magna Soils (NORTH ZONE)								
Industrial[6]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[6]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[6]	283	758	114	25.2%	34067	2207	34067	100%
OU10 Copperton Soils (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
OU11 Historic Facilities (SOUTH ZONE)								
Industrial[7]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[7]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[7]	283	758	114	25.2%	34067	2207	34067	100%
OU12 Eastside Collection System (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
Groundwater	See Groundwater Action Levels Table							
OU13 Smelter and Acid Plant (NORTH ZONE)								
Industrial[6]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[6]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[6]	283	758	114	25.2%	34067	2207	34067	100%
OU14 Refinery (NORTH ZONE)								
Industrial[6]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[6]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[6]	283	758	114	25.2%	34067	2207	34067	100%
OU15 Magna Mills and Tailings Ponds (NORTH ZONE)								
Industrial[6]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[6]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[6]	283	758	114	25.2%	34067	2207	34067	100%
OU16 Bingham Creek Underflow (SOUTH ZONE)								
Groundwater	See Groundwater Action Levels Table							
OU17 Bastian Sink (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Commercial[4]	450	-	-	-	-	2000	-	-
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
Residential[4]	100	-	-	-	-	700	-	-
OU18 Acid Mine Drainage (Tooele County Areas) (SOUTH ZONE)								
Industrial[1]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[1]	100	2148	6444	79689	10740	8500	10740	64%

Site Wide Summary of Soil Action Levels for Kennecott North and South Zones								
Land Use, Media or Receptor	**As**	**Cd**	**Cr**	**Cu**	**Mo**	**Pb**	**Se**	**Zn**
Recreational[1]	283	758	114	25.2%	34067	2207	34067	100%
OU19 Smelter Fallout (NORTH ZONE)								
Industrial[6]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[6]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[6]	283	758	114	25.2%	34067	2207	34067	100%
OU20 Pine Canyon (SOUTH ZONE)								
Industrial[6]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[6]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[6]	283	758	114	25.2%	34067	2207	34067	100%
OU22 Great Salt Lake and Wetlands (NORTH ZONE)								
Industrial[6]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[6]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[6]	283	758	114	25.2%	34067	2207	34067	100%
OU23 North Zone Groundwater (NORTH ZONE)								
Groundwater	See Groundwater Action Levels Table							
OU24 Precipitation Plant (SOUTH ZONE)								
Industrial[6]	261	2794	8381	10.3%	13972	4414	13972	83%
Agricultural[6]	100	2148	6444	79689	10740	8500	10740	64%
Recreational[6]	283	758	114	25.2%	34067	2207	34067	100%

Notes for Site Wide Summary of Soil Action Levels for Kennecott North and South Zones

† The table provides a listing of the action levels for various metals of concern which can be found in soils located in the operable units of the Kennecott South and North Zones. The table provides concentration levels (or percentage values) to compare against soil characterization results. If a particular land use action level is exceeded, then, prior to redevelopment a person will have to undertake action to assess and/or mitigate the potential for exposure risk.

The term "action" may include but is not limited to: further site characterization, further site specific risk assessment, remedial/response action to mitigate exposure risk, implementation of institutional controls (ICs), and/or ongoing site management after development activities.

†† *The soil action levels listed in this table can only be used when comparing metals concentrations in soils/sediments collected from the operable units of the Kennecott South and North Zone.* As part of assessing the potential exposure risk caused by the listed metals of concern, certain variables specific to the Kennecott operable units were considered. These variables include, but are not limited to, the following: speciation and bioavailability of the metals of concern, the industrial processes that produced the specific mine waste with the metals of concern, and the types of specific land use activities that are likely to take place in each operable unit.

The listed action levels presented herein do not apply to other sites within the State of Utah located beyond the boundaries of the Kennecott operable units (except as otherwise explained below as it pertains to the site wide unrestricted land use action levels).

††† Default site wide (Kennecott South or North Zone) unrestricted land use action levels for arsenic (50 mg/kg), cadmium (70 mg/kg), lead (500 mg/kg), and selenium (390 mg/kg) have been derived for those portions of the site where a site specific, risk based, residential action level has not been established and for locations not modeled during the site specific risk assessments. Using default numbers for exposure parameters, conservative values for bioavailability and intake ratios under standard risk assessment and management methodology, the Agencies calculated the default unrestricted land use action levels. The unrestricted land use action levels are protective of public health for all land uses without restrictions, including relocation beyond the Kennecott boundaries. It is important to note, that while the arsenic, cadmium, lead, and selenium unrestricted land use action levels may be protective for a residential land use, they may not protective of other exposure scenarios (e.g., ecological risk).

Both the arsenic and lead unrestricted land use action levels are based on risk assessment and risk management methods. Due to possibility of contaminated media associated with mining and smelting operations and the uncertainty associated with the limited environmental information (i.e., bioavailability) these unrestricted land use action levels should be used when limited characterization data is available and potential off-site (meaning beyond the Kennecott boundaries) relocation is being considered. The arsenic and lead unrestricted land use action levels are derived from the September 2002 Record of Decision.

The cadmium and selenium unrestricted land use action levels have been calculated by using a residential exposure scenario based on the "Risk Assessment Guidance for Superfund (RAGS) part B" (http://www.epa.gov/swerrims/riskassessment/ragsb/index.htm). Also considered were the screening values that are found in the Regional Screening Levels Tables dated May 2014. The unrestricted land use action levels for cadmium and selenium are the residential RSLs.

[1] The listed industrial, agricultural, and recreational land use action levels are located in the document entitled, *Final Preliminary Remediation Goals Report for Addressing Risks to Human Health From Exposure to Chemicals in Kennecott Soils*, December 30, 1999. These action levels are applicable site wide, absent operable unit specific risk based concentrations listed in the November

Notes for Site Wide Summary of Soil Action Levels for Kennecott North and South Zones
1998, September 2001, and September 2002 Records of Decision.
[2] For Operable Unit #1, the residential and commercial action levels for lead (respectively 1100 mg/kg and 2000 mg/kg lead) are obtained from two documents: (1) U.S. EPA Region 8 June 1995 Action Memo for the Bingham Creek Phase III residential removal action, and (2) U.S. EPA Region 8 February 1993 Unilateral Administrative Orders to Kennecott and ARCO (CERCLA-VIII-93-10) for the Bingham Creek Channel removal action. The residential action level for arsenic (100 mg/kg) is obtained from the November 1998 Record of Decision for Operable Unit 1.
[3] For Operable Unit #3, the action levels for residential, day care and playground land use application are obtained from the September 28, 2001 Record of Decision. The arsenic and lead action levels for these land use applications are based on speciation and exposure pathways which were considered as part of the risk assessment performed for the City of Herriman.
[4] Commercial and Residential action levels for undeveloped areas within the Daybreak Master Planned Community were proposed by Kennecott Utah Copper in the May 26, 2006 Exponent document entitled *Evaluation of Cleanup Levels for Arsenic and Lead in Soil for Undeveloped Portions of the Daybreak Area* and accepted by the CERCLA Agencies in a letter dated September 22, 2006.
[5] The listed industrial, agricultural, and recreational land use action levels are located in the document entitled, *Final Preliminary Remediation Goals Report for Addressing Risks to Human Health From Exposure to Chemicals in Kennecott Soils*, December 30, 1999, and as modified in the *Record of Decision* dated September 28, 2001 for Operable Unit #3.
[6] The listed industrial, agricultural, and recreational land use action levels are located in the document entitled, *Final Preliminary Remediation Goals Report for Addressing Risks to Human Health From Exposure to Chemicals in Kennecott Soils*, December 30, 1999, and as modified in the *Record of Decision Kennecott North Zone Site/Kennecott South Zone Site*, September 26, 2002.
[7] The listed industrial, agricultural and recreational land use action levels are obtained from the document entitled, *Final Preliminary Remediation Goals Report for Addressing Risks to Human Health From Exposure to Chemicals in Kennecott Soils*, December 30, 1999. At the time of land use change, the location of a historic site needs to consider the operable unit specific applicable land use standards (listed in the November 1998, September 2001 and September 2002 Records of Decision) to ascertain if an operable unit specific risk based land use standard is applicable.
[8] There are discrete parcels located within the Bingham Creek Channel and in the Daybreak Commerce Park that were considered in 2006 to be part of the overall Daybreak Community. The May 26, 2006 Exponent document entitled *Evaluation of Cleanup Levels for Arsenic and Lead in Soil for Undeveloped Portions of the Daybreak Area* addressed the establishment of residential and commercial land use action levels for the Daybreak Community as defined in the Exponent document and represented herein on Figure 1-A. Though limited, site specific data from the portions of Bingham Creek Channel and the Daybreak Commerce Park areas (located within the Daybreak Community) were included in the risk assessment. The CERCLA Agencies in a letter dated September 22, 2006 accepted the proposed land use action levels for the Daybreak Community. Figure 1-B herein portrays those portions of OU1 which are subject to the residential and commercial land use action levels for arsenic and lead, for the Daybreak Community.

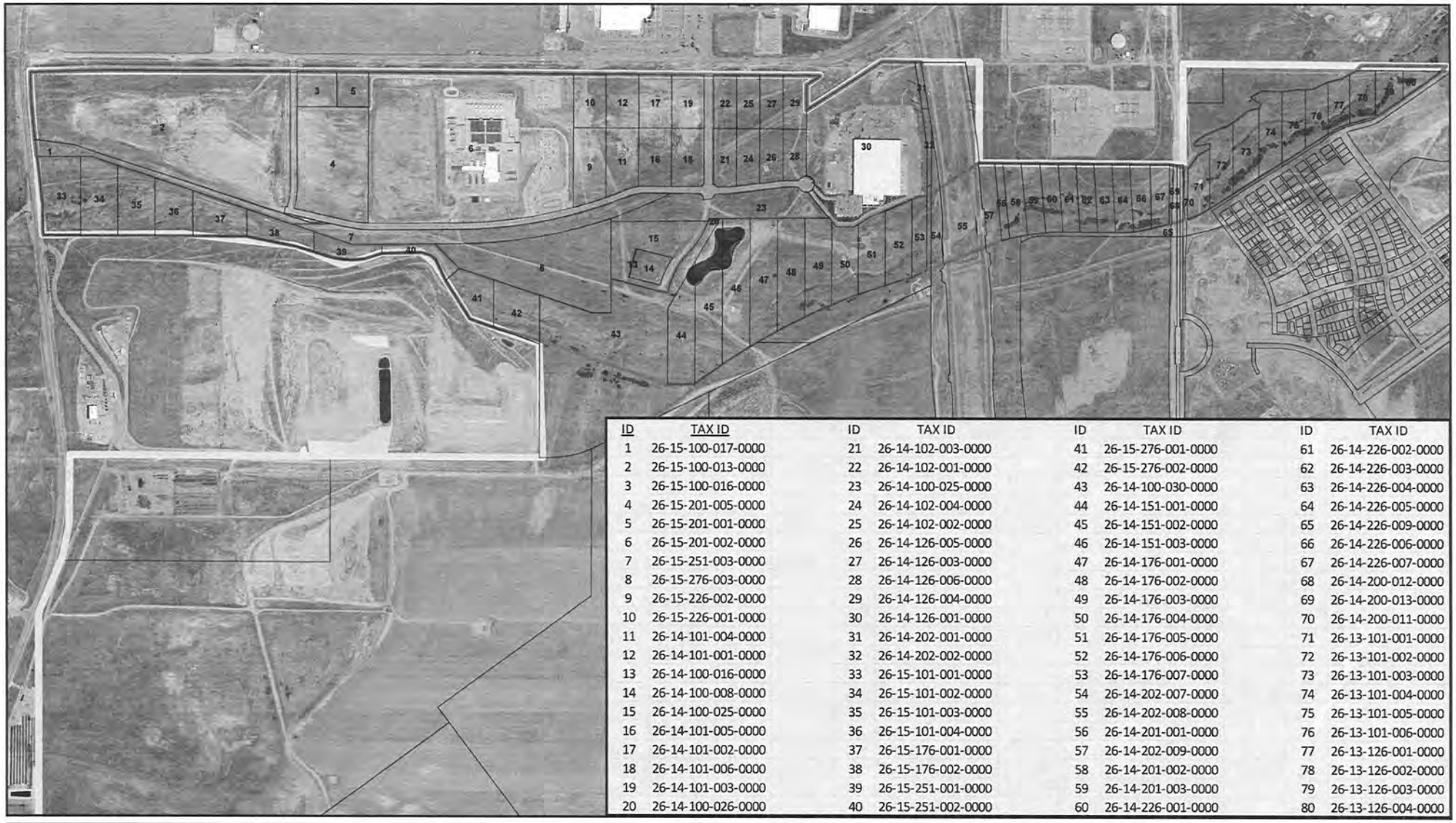
Rio Tinto
Kennecott Copper

N W E S

0 0.125 0.25 0.5 MI
0 250 500 1,000 1,500 2,000 2,500 FT

DaybreakDevelopment
Commerce Park
Bingham Creek Drainage

DAYBREAK DEVELOPMENT
FIGURE 1-A



ID	TAX ID	ID	TAX ID	ID	TAX ID	ID	TAX ID
1	26-15-100-017-0000	21	26-14-102-003-0000	41	26-15-276-001-0000	61	26-14-226-002-0000
2	26-15-100-013-0000	22	26-14-102-001-0000	42	26-15-276-002-0000	62	26-14-226-003-0000
3	26-15-100-016-0000	23	26-14-100-025-0000	43	26-14-100-030-0000	63	26-14-226-004-0000
4	26-15-201-005-0000	24	26-14-102-004-0000	44	26-14-151-001-0000	64	26-14-226-005-0000
5	26-15-201-001-0000	25	26-14-102-002-0000	45	26-14-151-002-0000	65	26-14-226-009-0000
6	26-15-201-002-0000	26	26-14-126-005-0000	46	26-14-151-003-0000	66	26-14-226-006-0000
7	26-15-251-003-0000	27	26-14-126-003-0000	47	26-14-176-001-0000	67	26-14-226-007-0000
8	26-15-276-003-0000	28	26-14-126-006-0000	48	26-14-176-002-0000	68	26-14-200-012-0000
9	26-15-226-002-0000	29	26-14-126-004-0000	49	26-14-176-003-0000	69	26-14-200-013-0000
10	26-15-226-001-0000	30	26-14-126-001-0000	50	26-14-176-004-0000	70	26-14-200-011-0000
11	26-14-101-004-0000	31	26-14-202-001-0000	51	26-14-176-005-0000	71	26-13-101-001-0000
12	26-14-101-001-0000	32	26-14-202-002-0000	52	26-14-176-006-0000	72	26-13-101-002-0000
13	26-14-100-016-0000	33	26-15-101-001-0000	53	26-14-176-007-0000	73	26-13-101-003-0000
14	26-14-100-008-0000	34	26-15-101-002-0000	54	26-14-202-007-0000	74	26-13-101-004-0000
15	26-14-100-025-0000	35	26-15-101-003-0000	55	26-14-202-008-0000	75	26-13-101-005-0000
16	26-14-101-005-0000	36	26-15-101-004-0000	56	26-14-201-001-0000	76	26-13-101-006-0000
17	26-14-101-002-0000	37	26-15-176-001-0000	57	26-14-202-009-0000	77	26-13-126-001-0000
18	26-14-101-006-0000	38	26-15-176-002-0000	58	26-14-201-002-0000	78	26-13-126-002-0000
19	26-14-101-003-0000	39	26-15-251-001-0000	59	26-14-201-003-0000	79	26-13-126-003-0000
20	26-14-100-026-0000	40	26-15-251-002-0000	60	26-14-226-001-0000	80	26-13-126-004-0000

Rio Tinto
Kennecott Copper

N W E S

0 0.125 0.25 0.5 MI

0 250 500 1,000 1,500 2,000 2,500 FT

DaybreakDevelopment

Commerce Park

Bingham Creek Drainage

DAYBREAK DEVELOPMENT

FIGURE 1-B

Attachment 2

Table of Groundwater Action Levels for Kennecott North and South Zones

Site Wide Summary of Groundwater Action Levels for Kennecott North and South Zones

	std units	mg/L	mg/L	Reported mg/L (Dissolved)									
	pH	**Sulfate[8]**	**TDS[8]**	**D-As**	**D-B[9]**	**D-Ba-**	**D-Cd**	**D-Cr**	**D-Cu**	**D-Pb**	**T-Hg**	**D-Ni**	**D-Se**
Groundwater Use	Std. Units	mg/L	mg/L	Reported mg/L (Dissolved) (except where noted)									
OU2[1] South End Groundwater, Zone A Acid Plume (SOUTH ZONE)													
Drinking	6.5 - 8.5	1500 (A) // 500 (P)[A]	NA[A]	0.01[B]		2.0	0.005	0.1	1.3[C]	0.015[D]	0.002	0.1	0.05
OU2[1] South End Groundwater, Zone A Sulfate Plume (SOUTH ZONE)													
Drinking	6.5 - 8.5	1500 (A) // 500 (P)[A]	NA[A]	0.01[B]		2.0	0.005	0.1	1.3[C]	0.015[D]	0.002	0.1	0.05
OU2[1] South End Groundwater, Zone B Plume[2] (SOUTH ZONE)													
Drinking	6.5 - 8.5	500	1000	0.01[B]		2.0	0.005	0.1	1.3[C]	0.015[D]	0.002	0.1	0.05
OU12[3] Eastside Collection System (SOUTH ZONE)													
Non-Drinking[4]	Refer to Footnote 4												
OU16[3] Bingham Creek Underflow (SOUTH ZONE)													
Non-Drinking[5]	Refer to Footnote 5												
OU23[3] North Zone Groundwater (NORTH ZONE)													
Non-Drinking[6]	Refer to Footnote 6												
Drinking[7]	6.5 - 8.5	500	1000	0.01[B]		2.0	0.005	0.1	1.3[C]	0.015[D]	0.002	0.1	0.05

Notes for Site Wide Summary of Groundwater Action Levels for Kennecott North and South Zones

† *This table summarizing CERCLA selected action levels and State of Utah protection limitations for groundwater is intended for use only at the Kennecott South and North Zones where mining influenced groundwater is managed.*

[1] The action levels listed are derived from UAC R309-200-5 (State of Utah Primary Drinking Water Standards) and the June 2007 ESD for OU2. Review of the April 2014 remedial progress report determined that for the 2012 and 2013 data sets there were some samples of groundwater extracted from the Zone A acid plume which contained un-speciated chromium results in exceedance of the State Primary Drinking Water Standard. Thus chromium is added until it can be demonstrated that this standard is complied with throughout the entirety of the Zone A plume.

[2] The December 2000 Record of Decision denotes that EPA Region 8 was deferring the selection of a remedy for the Zone B Plume pursuant to the State of Utah's Natural Resource Damage project addressing the mining influence to the aquifer in Zone B. The project being implemented in Zone B pursuant to the 2004 NRD Three Party Agreement (as amended in 2009) is producing treated water (in compliance with municipal water quality standards) from extracted groundwater from the impacted aquifer in Zone B. The contaminant specific limitations listed are derived from R309-200-5 for reference purposes (and are applicable for the treated water).

[3] The action levels listed (or referenced) are pursuant to the selected remedies for these three operable units and the 1995 Memorandum of Understanding. Kennecott manages mining influenced groundwater (in part) under the requirements of the State of Utah Groundwater Protection Program.

[4] Pursuant to the Utah Groundwater Protection Program, to ensure the protection of the underlying aquifer, discharge limits for the following contaminants are listed in Table 1 of Permit #UGW350010: pH, Sulfate, TDS, Cd-D, Cu-D, and Zn-D. The compliance limits are established from background concentrations at each compliance well (pursuant to R317-6-4). The permit can be found at: http://www.waterquality.utah.gov/GroundWater/gwpermits/index.htm

[5] Pursuant to the Utah Groundwater Protection Program, to ensure the protection of the underlying aquifer, discharge limits for the following contaminants are listed in Table 2 of Permit #UGW350010: pH, Sulfate, TDS, Cd-D, Cu-D, and Zn-D. The compliance limits are established from background concentrations at each compliance well (pursuant to R317-6-4). The permit can be found at: http://www.waterquality.utah.gov/GroundWater/gwpermits/index.htm

[6] Pursuant to the Utah Groundwater Protection Program, to ensure the protection of the underlying aquifer, discharge limits for the following contaminants are listed in Table 3 of Permit #UGW350008 (Smelter): pH, Chloride, Sulfate, TDS, As-D, Ba-D, Cd-D, Cr-D, Cu-D, PB-D, Se-D, Zn-D; Table 1 of Permit #UGW350011 (Tailings Impoundment): pH, Sulfate, TDS, As-D, Ba-D, Cd-D, Cr-D, Cu-D, Pb-D, Se-D, Zn-D, Table 1 of Permit #UGW350015 (North Concentrator): pH, Sulfate, TDS, As-D, B-D, Cd-D, Cr-D, Cu-D, Pb-D, Se-D, Zn-D. The compliance limits are established from historical trends at each compliance well (pursuant to R317-6-4). The permits can be found at: http://www.waterquality.utah.gov/GroundWater/gwpermits/index.htm

[7] Absent the mining influence and naturally occurring elevated TDS at OU23, the aquifer represents a potential source of drinking water for nearby communities. Though a drilling restriction (to prevent the development of the aquifer as a source of drinking water) is pending, the State of Utah Primary Drinking Water Standards (R309-200-5) are relevant if the impacted aquifer is somehow developed as a source of drinking water in the future.

[8] Pursuant to R309-200-5 (1)(c)(2) & (1)(c)(3) the State of Utah Primary Drinking Water Standards for Sulfate (500 mg/L) and TDS (1000 mg/L) can be allowed by the Division of Drinking Water Board to be higher. As it pertains to sulfate, (1)(c)(2), if the primary standard is to be set to 1000 mg/L a supplier will demonstrate: (a) no better quality water is available, and (b) the water is not for human consumption from commercial establishments. As it pertains to TDS, (1)(c)(3), if TDS is greater than 1000 mg/L (i.e. 2000 mg/L), a supplier shall demonstrate that no better water is available.

Notes for Site Wide Summary of Groundwater Action Levels for Kennecott North and South Zones
[9] Pursuant to the Groundwater Protection Permit #UGW350015 DWQ has established a permit limitation for Dissolved Boron due to the storage and use of coal at the RTKC Power Plant. Refer to note 6 and the reference to Permit #UGW350015 therein.
[A] The OU2 selected remedy (Dec. 2000 Record of Decision) requires active ("A") cleanup of the Zone A plume (extract and treat) until it can be demonstrated that sulfate concentrations comply with the site specific action level of 1,500 mg/L and drinking water standards for metals are attained. Thereafter, a passive ("P") cleanup requirement (monitored natural attenuation) is to be used to document that sulfate concentrations comply with the State of Utah Primary Drinking Water Standard for sulfate of 500 mg/L. No TDS action level was established under the selected remedy.
[B] Pursuant to R309-200-5(5) the primary drinking water standard for arsenic is 0.010 mg/L as of January 23, 2006.
[C] Pursuant to UAC R309-200-5(2)(b) "the copper action level is exceeded if the concentration of copper in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with R309-210-6(3) is greater than 1.3 mg/L (i.e. if the 90th percentile copper level is greater than 1.3 mg/L).
[D] Pursuant to UAC R309-200-5(2)(a) "the lead action level is exceeded if the concentration of lead in more than 10 percent of tap water samples collected during any monitoring period conducted in accordance with R309-210-6(3) is greater than 0.015 mg/L (i.e. if the 90th percentile lead level is greater than 0.015 mg/L).

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B

Laboratory Reports

ANALYTICAL REPORT

August 12, 2016

HDR - Boise, ID

Sample Delivery Group:	L851587
Samples Received:	08/05/2016
Project Number:	
Description:	Bangerter
Report To:	Manuel Rauhut 412 E. Park Center Blvd, Ste 100 Boise, ID 83706

Entire Report Reviewed By:

Shane Gambill
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

[1]Cp: Cover Page 1

[2]Tc: Table of Contents 2

[3]Ss: Sample Summary 4

[4]Cn: Case Narrative 9

[5]Sr: Sample Results 10

NE-BC-1-0-1 L851587-01 10

NE-BC-1-2-3 L851587-02 11

NE-BC-2-0-1 L851587-03 12

NE-BC-2-1.5-2.5 L851587-04 13

NE-BC-3-0-1 L851587-05 14

NE-BC-4-0-1 L851587-06 15

NE-BC-4-2-3 L851587-07 16

NE-BC-5-0-1 L851587-08 17

NE-BC-5-1.5-2 L851587-09 18

NE-FP-W-0-1 L851587-10 19

NE-FP-W-2-2.5 L851587-11 20

NE-FP-E-0-1 L851587-12 21

NE-FP-E-2-3 L851587-13 22

NE-TCLP-0-1 L851587-14 23

NE-TCLP-2-3 L851587-15 24

SW-BC-1-0-1 L851587-16 25

SW-BC-1-1.75-2.25 L851587-17 26

SW-BC-2-0-1 L851587-18 27

SW-BC-2-1.5-2 L851587-19 28

SW-BC-3-0-1 L851587-20 29

SW-BC-3-1.75-2.25 L851587-21 30

SW-BC-4-0-1 L851587-22 31

SW-BC-4-1.25-1.75 L851587-23 32

SW-BC-5-0-1 L851587-24 33

SW-FP-N-0-1 L851587-25 34

SW-FP-N-2-3 L851587-26 35

SW-FP-S-0-1 L851587-27 36

SW-FP-S-2-3 L851587-28 37

SW-TCLP-0-1 L851587-29 38

SW-TCLP-2-3 L851587-30 39

SE-0-1 L851587-31 40

SE-1.25-1.5 L851587-32 41

NW-0-1 L851587-33 42

NW-2-3 L851587-34 43

ER-1 L851587-35 44

[6]Qc: Quality Control Summary 45

Total Solids by Method 2540 G-2011 45

Mercury by Method 7470A 48

Metals (ICP) by Method 6010B 49

[7]Gl: Glossary of Terms 54

[8]Al: Accreditations & Locations 55

[9]Sc: Chain of Custody 56

NE-BC-1-0-1 L851587-01 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 06:30 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 03:47	CCE
Total Solids by Method 2540 G-2011	WG896805	1	08/09/16 08:54	08/09/16 09:15	MEL

NE-BC-1-2-3 L851587-02 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 06:45 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 03:49	CCE
Total Solids by Method 2540 G-2011	WG896805	1	08/09/16 08:54	08/09/16 09:15	MEL

NE-BC-2-0-1 L851587-03 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 07:30 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 03:57	CCE
Total Solids by Method 2540 G-2011	WG896805	1	08/09/16 08:54	08/09/16 09:15	MEL

NE-BC-2-1.5-2.5 L851587-04 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 08:00 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:00	CCE
Total Solids by Method 2540 G-2011	WG896805	1	08/09/16 08:54	08/09/16 09:15	MEL

NE-BC-3-0-1 L851587-05 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 08:20 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:02	CCE
Total Solids by Method 2540 G-2011	WG896805	1	08/09/16 08:54	08/09/16 09:15	MEL

NE-BC-4-0-1 L851587-06 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 08:40 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:05	CCE
Total Solids by Method 2540 G-2011	WG896805	1	08/09/16 08:54	08/09/16 09:15	MEL

NE-BC-4-2-3 L851587-07 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 09:00 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:08	CCE
Total Solids by Method 2540 G-2011	WG896805	1	08/09/16 08:54	08/09/16 09:15	MEL

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

NE-BC-5-0-1 L851587-08 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 09:20 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:10	CCE
Total Solids by Method 2540 G-2011	WG896805	1	08/09/16 08:54	08/09/16 09:15	MEL

NE-BC-5-1.5-2 L851587-09 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 09:40 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:13	CCE
Total Solids by Method 2540 G-2011	WG896805	1	08/09/16 08:54	08/09/16 09:15	MEL

NE-FP-W-0-1 L851587-10 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 10:00 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:15	CCE
Total Solids by Method 2540 G-2011	WG896805	1	08/09/16 08:54	08/09/16 09:15	MEL

NE-FP-W-2-2.5 L851587-11 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 10:20 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:18	CCE
Total Solids by Method 2540 G-2011	WG896808	1	08/09/16 08:43	08/09/16 08:53	MEL

NE-FP-E-0-1 L851587-12 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 10:40 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:21	CCE
Total Solids by Method 2540 G-2011	WG896808	1	08/09/16 08:43	08/09/16 08:53	MEL

NE-FP-E-2-3 L851587-13 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 10:55 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:29	CCE
Total Solids by Method 2540 G-2011	WG896808	1	08/09/16 08:43	08/09/16 08:53	MEL

NE-TCLP-0-1 L851587-14 Waste

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 11:10 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG897334	1	08/10/16 11:15	08/10/16 16:03	TRB
Metals (ICP) by Method 6010B	WG897260	1	08/09/16 23:29	08/10/16 03:09	CCE
Preparation by Method 1311	WG896731	1	08/08/16 18:12	08/08/16 18:13	LJN

NE-TCLP-2-3 L851587-15 Waste

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 11:15 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG897334	1	08/10/16 11:15	08/10/16 16:06	TRB
Metals (ICP) by Method 6010B	WG897260	1	08/09/16 23:29	08/10/16 03:12	CCE
Preparation by Method 1311	WG896731	1	08/08/16 18:12	08/08/16 18:13	LJN

SW-BC-1-0-1 L851587-16 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 11:45 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:31	CCE
Total Solids by Method 2540 G-2011	WG896808	1	08/09/16 08:43	08/09/16 08:53	MEL

SW-BC-1-1.75-2.25 L851587-17 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 12:00 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:34	CCE
Total Solids by Method 2540 G-2011	WG896808	1	08/09/16 08:43	08/09/16 08:53	MEL

SW-BC-2-0-1 L851587-18 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 12:20 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:37	CCE
Total Solids by Method 2540 G-2011	WG896808	1	08/09/16 08:43	08/09/16 08:53	MEL

SW-BC-2-1.5-2 L851587-19 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 12:40 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:39	CCE
Total Solids by Method 2540 G-2011	WG896808	1	08/09/16 08:43	08/09/16 08:53	MEL

SW-BC-3-0-1 L851587-20 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 13:00 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:42	CCE
Total Solids by Method 2540 G-2011	WG896808	1	08/09/16 08:43	08/09/16 08:53	MEL

SW-BC-3-1.75-2.25 L851587-21 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 13:20 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897300	1	08/10/16 20:56	08/11/16 04:45	CCE
Total Solids by Method 2540 G-2011	WG896808	1	08/09/16 08:43	08/09/16 08:53	MEL

SW-BC-4-0-1 L851587-22 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 13:50 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897303	1	08/11/16 10:47	08/12/16 02:06	LTB
Total Solids by Method 2540 G-2011	WG896808	1	08/09/16 08:43	08/09/16 08:53	MEL

SW-BC-4-1.25-1.75 L851587-23 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 14:00 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897303	1	08/11/16 10:47	08/12/16 02:18	LTB
Total Solids by Method 2540 G-2011	WG896809	1	08/09/16 08:31	08/09/16 08:42	MEL

SW-BC-5-0-1 L851587-24 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 14:20 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897303	1	08/11/16 10:47	08/12/16 02:21	LTB
Total Solids by Method 2540 G-2011	WG896809	1	08/09/16 08:31	08/09/16 08:42	MEL

SW-FP-N-0-1 L851587-25 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 14:30 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897303	1	08/11/16 10:47	08/12/16 02:29	LTB
Total Solids by Method 2540 G-2011	WG896809	1	08/09/16 08:31	08/09/16 08:42	MEL

SW-FP-N-2-3 L851587-26 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 14:50 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897303	1	08/11/16 10:47	08/12/16 02:32	LTB
Total Solids by Method 2540 G-2011	WG896809	1	08/09/16 08:31	08/09/16 08:42	MEL

SW-FP-S-0-1 L851587-27 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 15:10 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897303	1	08/11/16 10:47	08/12/16 02:34	LTB
Total Solids by Method 2540 G-2011	WG896809	1	08/09/16 08:31	08/09/16 08:42	MEL

SW-FP-S-2-3 L851587-28 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 15:25 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897303	1	08/11/16 10:47	08/12/16 02:37	LTB
Total Solids by Method 2540 G-2011	WG896809	1	08/09/16 08:31	08/09/16 08:42	MEL

SW-TCLP-0-1 L851587-29 Waste

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 15:45 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG897334	1	08/10/16 11:15	08/10/16 16:09	TRB
Metals (ICP) by Method 6010B	WG897260	1	08/09/16 23:29	08/10/16 03:15	CCE
Preparation by Method 1311	WG896731	1	08/08/16 18:12	08/08/16 18:13	LJN

SW-TCLP-2-3 L851587-30 Waste

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 15:50 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG897334	1	08/10/16 11:15	08/10/16 16:12	TRB
Metals (ICP) by Method 6010B	WG897260	1	08/09/16 23:29	08/10/16 03:17	CCE
Preparation by Method 1311	WG896731	1	08/08/16 18:12	08/08/16 18:13	LJN

SE-0-1 L851587-31 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 07:40 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897303	1	08/11/16 10:47	08/12/16 02:40	LTB
Total Solids by Method 2540 G-2011	WG896809	1	08/09/16 08:31	08/09/16 08:42	MEL

SE-1.25-1.5 L851587-32 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 08:00 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897303	1	08/11/16 10:47	08/12/16 02:43	LTB
Total Solids by Method 2540 G-2011	WG896809	1	08/09/16 08:31	08/09/16 08:42	MEL

NW-0-1 L851587-33 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 06:20 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897303	1	08/11/16 10:47	08/12/16 02:45	LTB
Total Solids by Method 2540 G-2011	WG896809	1	08/09/16 08:31	08/09/16 08:42	MEL

NW-2-3 L851587-34 Solid

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 06:40 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG897303	1	08/11/16 10:47	08/12/16 02:48	LTB
Total Solids by Method 2540 G-2011	WG896809	1	08/09/16 08:31	08/09/16 08:42	MEL

ER-1 L851587-35 GW

Collected by: Manuel Ranhut | Collected date/time: 08/03/16 09:00 | Received date/time: 08/05/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG896849	1	08/09/16 11:50	08/09/16 17:36	ST

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Shane Gambill
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.0		1	08/09/2016 09:15	WG896805

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	17.4		0.747	2.30	1	08/11/2016 03:47	WG897300
Lead	196		0.218	0.574	1	08/11/2016 03:47	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	88.6		1	08/09/2016 09:15	WG896805

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	22.2		0.733	2.26	1	08/11/2016 03:49	WG897300
Lead	183		0.214	0.564	1	08/11/2016 03:49	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	76.5		1	08/09/2016 09:15	WG896805

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	26.3		0.850	2.61	1	08/11/2016 03:57	WG897300
Lead	351		0.248	0.654	1	08/11/2016 03:57	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	77.5		1	08/09/2016 09:15	WG896805

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	49.4		0.839	2.58	1	08/11/2016 04:00	WG897300
Lead	264		0.245	0.645	1	08/11/2016 04:00	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	71.9		1	08/09/2016 09:15	WG896805

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	23.8		0.904	2.78	1	08/11/2016 04:02	WG897300
Lead	255		0.264	0.695	1	08/11/2016 04:02	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	77.8		1	08/09/2016 09:15	WG896805

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	24.9		0.835	2.57	1	08/11/2016 04:05	WG897300
Lead	257		0.244	0.642	1	08/11/2016 04:05	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	76.0		1	08/09/2016 09:15	WG896805

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	23.9		0.855	2.63	1	08/11/2016 04:08	WG897300
Lead	312		0.250	0.657	1	08/11/2016 04:08	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.3		1	08/09/2016 09:15	WG896805

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	13.2		0.704	2.17	1	08/11/2016 04:10	WG897300
Lead	53.5		0.206	0.542	1	08/11/2016 04:10	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.6		1	08/09/2016 09:15	WG896805

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	14.7		0.695	2.14	1	08/11/2016 04:13	WG897300
Lead	78.0		0.203	0.534	1	08/11/2016 04:13	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.1		1	08/09/2016 09:15	WG896805

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	10.8		0.714	2.20	1	08/11/2016 04:15	WG897300
Lead	111		0.209	0.549	1	08/11/2016 04:15	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.3		1	08/09/2016 08:53	WG896808

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	16.9		0.704	2.17	1	08/11/2016 04:18	WG897300
Lead	174		0.206	0.542	1	08/11/2016 04:18	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.6		1	08/09/2016 08:53	WG896808

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	9.36		0.687	2.11	1	08/11/2016 04:21	WG897300
Lead	87.4		0.201	0.528	1	08/11/2016 04:21	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.2		1	08/09/2016 08:53	WG896808

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	7.43		0.669	2.06	1	08/11/2016 04:29	WG897300
Lead	48.9		0.195	0.514	1	08/11/2016 04:29	WG897300

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		8/8/2016 6:12:30 PM	WG896731

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.0100	0.20	1	08/10/2016 16:03	WG897334

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.450	5	1	08/10/2016 03:09	WG897260
Barium	ND		1.35	100	1	08/10/2016 03:09	WG897260
Cadmium	ND		0.450	1	1	08/10/2016 03:09	WG897260
Chromium	ND		0.450	5	1	08/10/2016 03:09	WG897260
Lead	ND		0.450	5	1	08/10/2016 03:09	WG897260
Selenium	ND		0.450	1	1	08/10/2016 03:09	WG897260
Silver	ND		0.450	5	1	08/10/2016 03:09	WG897260

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		8/8/2016 6:12:30 PM	WG896731

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.0100	0.20	1	08/10/2016 16:06	WG897334

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.450	5	1	08/10/2016 03:12	WG897260
Barium	ND		1.35	100	1	08/10/2016 03:12	WG897260
Cadmium	ND		0.450	1	1	08/10/2016 03:12	WG897260
Chromium	ND		0.450	5	1	08/10/2016 03:12	WG897260
Lead	ND		0.450	5	1	08/10/2016 03:12	WG897260
Selenium	ND		0.450	1	1	08/10/2016 03:12	WG897260
Silver	ND		0.450	5	1	08/10/2016 03:12	WG897260

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.4		1	08/09/2016 08:53	WG896808

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	15.2		0.681	2.10	1	08/11/2016 04:31	WG897300
Lead	102		0.199	0.524	1	08/11/2016 04:31	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	93.3		1	08/09/2016 08:53	WG896808

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	15.5		0.697	2.14	1	08/11/2016 04:34	WG897300
Lead	100		0.204	0.536	1	08/11/2016 04:34	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.2		1	08/09/2016 08:53	WG896808

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	15.4		0.745	2.29	1	08/11/2016 04:37	WG897300
Lead	86.8		0.218	0.573	1	08/11/2016 04:37	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	88.7		1	08/09/2016 08:53	WG896808

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	14.4		0.733	2.25	1	08/11/2016 04:39	WG897300
Lead	87.2		0.214	0.564	1	08/11/2016 04:39	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	79.8		1	08/09/2016 08:53	WG896808

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	12.1		0.815	2.51	1	08/11/2016 04:42	WG897300
Lead	78.5		0.238	0.627	1	08/11/2016 04:42	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	76.7		1	08/09/2016 08:53	WG896808

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	16.7		0.848	2.61	1	08/11/2016 04:45	WG897300
Lead	97.9		0.248	0.652	1	08/11/2016 04:45	WG897300

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	81.3		1	08/09/2016 08:53	WG896808

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	16.5		0.799	2.46	1	08/12/2016 02:06	WG897303
Lead	104		0.234	0.615	1	08/12/2016 02:06	WG897303

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.4		1	08/09/2016 08:42	WG896809

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	23.1		0.711	2.19	1	08/12/2016 02:18	WG897303
Lead	160		0.208	0.547	1	08/12/2016 02:18	WG897303

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.6		1	08/09/2016 08:42	WG896809

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	15.6		0.725	2.23	1	08/12/2016 02:21	WG897303
Lead	117		0.212	0.558	1	08/12/2016 02:21	WG897303

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	99.4		1	08/09/2016 08:42	WG896809

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	14.6		0.654	2.01	1	08/12/2016 02:29	WG897303
Lead	108		0.191	0.503	1	08/12/2016 02:29	WG897303

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.4		1	08/09/2016 08:42	WG896809

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	11.8		0.674	2.07	1	08/12/2016 02:32	WG897303
Lead	96.6		0.197	0.519	1	08/12/2016 02:32	WG897303

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.6		1	08/09/2016 08:42	WG896809

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	15.6		0.659	2.03	1	08/12/2016 02:34	WG897303
Lead	101		0.193	0.507	1	08/12/2016 02:34	WG897303

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.7		1	08/09/2016 08:42	WG896809

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	18.1		0.665	2.05	1	08/12/2016 02:37	WG897303
Lead	109		0.194	0.512	1	08/12/2016 02:37	WG897303

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		8/8/2016 6:12:30 PM	WG896731

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.0100	0.20	1	08/10/2016 16:09	WG897334

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.450	5	1	08/10/2016 03:15	WG897260
Barium	ND		1.35	100	1	08/10/2016 03:15	WG897260
Cadmium	ND		0.450	1	1	08/10/2016 03:15	WG897260
Chromium	ND		0.450	5	1	08/10/2016 03:15	WG897260
Lead	ND		0.450	5	1	08/10/2016 03:15	WG897260
Selenium	ND		0.450	1	1	08/10/2016 03:15	WG897260
Silver	ND		0.450	5	1	08/10/2016 03:15	WG897260

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		8/8/2016 6:12:30 PM	WG896731

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.0100	0.20	1	08/10/2016 16:12	WG897334

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.450	5	1	08/10/2016 03:17	WG897260
Barium	ND		1.35	100	1	08/10/2016 03:17	WG897260
Cadmium	ND		0.450	1	1	08/10/2016 03:17	WG897260
Chromium	ND		0.450	5	1	08/10/2016 03:17	WG897260
Lead	ND		0.450	5	1	08/10/2016 03:17	WG897260
Selenium	ND		0.450	1	1	08/10/2016 03:17	WG897260
Silver	ND		0.450	5	1	08/10/2016 03:17	WG897260

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.7		1	08/09/2016 08:42	WG896809

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	10.2		0.679	2.09	1	08/12/2016 02:40	WG897303
Lead	54.8		0.198	0.522	1	08/12/2016 02:40	WG897303

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.8		1	08/09/2016 08:42	WG896809

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	12.3		0.665	2.05	1	08/12/2016 02:43	WG897303
Lead	79.7		0.194	0.511	1	08/12/2016 02:43	WG897303

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	88.8		1	08/09/2016 08:42	WG896809

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	11.1		0.732	2.25	1	08/12/2016 02:45	WG897303
Lead	108		0.214	0.563	1	08/12/2016 02:45	WG897303

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.7		1	08/09/2016 08:42	WG896809

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	14.8		0.716	2.20	1	08/12/2016 02:48	WG897303
Lead	126		0.209	0.551	1	08/12/2016 02:48	WG897303

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic	U		0.00650	0.0100	1	08/09/2016 17:36	WG896849
Lead	U		0.00190	0.00500	1	08/09/2016 17:36	WG896849

Method Blank (MB)

(MB) R3155566-1 08/09/16 09:15

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000400			

L851587-02 Original Sample (OS) • Duplicate (DUP)

(OS) L851587-02 08/09/16 09:15 • (DUP) R3155566-3 08/09/16 09:15

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	88.6	88.7	1	0.0635		5

Laboratory Control Sample (LCS)

(LCS) R3155566-2 08/09/16 09:15

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3155565-1 08/09/16 08:53

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00130			

L851587-18 Original Sample (OS) • Duplicate (DUP)

(OS) L851587-18 08/09/16 08:53 • (DUP) R3155565-3 08/09/16 08:53

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	87.2	87.1	1	0.189		5

Laboratory Control Sample (LCS)

(LCS) R3155565-2 08/09/16 08:53

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3155564-1 08/09/16 08:42

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00130			

L851587-33 Original Sample (OS) • Duplicate (DUP)

(OS) L851587-33 08/09/16 08:42 • (DUP) R3155564-3 08/09/16 08:42

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	88.8	88.5	1	0.316		5

Laboratory Control Sample (LCS)

(LCS) R3155564-2 08/09/16 08:42

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3155832-1 08/10/16 15:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.00333	0.0100

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3155832-2 08/10/16 15:25 • (LCSD) R3155832-3 08/10/16 15:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.0300	0.0298	0.0297	99	99	80-120			0	20

L851616-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L851616-01 08/10/16 15:31 • (MS) R3155832-4 08/10/16 15:33 • (MSD) R3155832-5 08/10/16 15:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.0300	ND	0.0285	0.0307	95	102	1	75-125			7	20

L851449-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L851449-02 08/10/16 15:39 • (MS) R3155832-6 08/10/16 15:48 • (MSD) R3155832-7 08/10/16 15:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.0300	ND	ND	ND	0	0	1	75-125	J6	J6	0	20

Method Blank (MB)

(MB) R3155483-1 08/09/16 14:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.0065	0.0100
Lead	U		0.0019	0.00500

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3155483-2 08/09/16 14:21 • (LCSD) R3155483-3 08/09/16 14:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	1.00	1.04	1.04	104	104	80-120			1	20
Lead	1.00	1.00	1.01	100	101	80-120			1	20

L851516-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L851516-01 08/09/16 14:26 • (MS) R3155483-5 08/09/16 14:32 • (MSD) R3155483-6 08/09/16 14:34

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	1.00	ND	1.04	1.05	104	105	1	75-125			1	20
Lead	1.00	ND	0.992	1.00	99	100	1	75-125			1	20

Method Blank (MB)

(MB) R3155576-1 08/10/16 02:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.15	0.450
Barium	U		0.45	1.35
Cadmium	U		0.15	0.450
Chromium	U		0.15	0.450
Lead	U		0.15	0.450
Selenium	U		0.15	0.450
Silver	U		0.15	0.450

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3155576-2 08/10/16 02:31 • (LCSD) R3155576-3 08/10/16 02:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	9.11	9.07	91	91	80-120			0	20
Barium	10.0	9.31	9.29	93	93	80-120			0	20
Cadmium	10.0	9.21	9.17	92	92	80-120			0	20
Chromium	10.0	8.94	8.93	89	89	80-120			0	20
Lead	10.0	9.29	9.28	93	93	80-120			0	20
Selenium	10.0	9.38	9.29	94	93	80-120			1	20
Silver	10.0	9.00	8.99	90	90	80-120			0	20

L851449-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L851449-02 08/10/16 02:36 • (MS) R3155576-5 08/10/16 02:42 • (MSD) R3155576-6 08/10/16 02:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	ND	9.26	9.49	93	95	1	75-125			3	20
Barium	10.0	ND	9.50	9.70	90	92	1	75-125			2	20
Cadmium	10.0	ND	9.29	9.46	93	95	1	75-125			2	20
Chromium	10.0	ND	8.81	8.93	88	89	1	75-125			1	20
Lead	10.0	ND	9.44	9.57	93	94	1	75-125			1	20
Selenium	10.0	ND	9.64	9.82	96	98	1	75-125			2	20
Silver	10.0	ND	9.13	9.31	91	93	1	75-125			2	20

L851884-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L851884-01 08/10/16 02:47 • (MS) R3155576-7 08/10/16 02:49 • (MSD) R3155576-8 08/10/16 02:52

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	ND	9.18	9.07	92	91	1	75-125			1	20
Barium	10.0	ND	9.45	9.32	94	93	1	75-125			1	20
Cadmium	10.0	ND	9.32	9.17	93	92	1	75-125			2	20
Chromium	10.0	ND	9.01	8.86	90	89	1	75-125			2	20
Lead	10.0	ND	9.35	9.21	93	92	1	75-125			2	20
Selenium	10.0	ND	9.46	9.36	95	94	1	75-125			1	20
Silver	10.0	ND	9.46	9.26	92	90	1	75-125			2	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3155936-1 08/11/16 03:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.65	2.00
Lead	U		0.19	0.500

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3155936-2 08/11/16 03:29 • (LCSD) R3155936-3 08/11/16 03:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	94.6	93.9	95	94	80-120			1	20
Lead	100	94.5	94.1	94	94	80-120			0	20

L851480-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L851480-22 08/11/16 03:34 • (MS) R3155936-6 08/11/16 03:42 • (MSD) R3155936-7 08/11/16 03:44

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	3.21	91.7	92.3	88	89	1	75-125			1	20
Lead	100	11.7	106	107	95	95	1	75-125			0	20

Method Blank (MB)

(MB) R3156243-1 08/12/16 01:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.65	2.00
Lead	0.251	J	0.19	0.500

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3156243-2 08/12/16 02:01 • (LCSD) R3156243-3 08/12/16 02:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	97.9	108	98	108	80-120			10	20
Lead	100	99.8	110	100	110	80-120			10	20

L851587-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L851587-22 08/12/16 02:06 • (MS) R3156243-6 08/12/16 02:13 • (MSD) R3156243-7 08/12/16 02:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	123	16.5	152	137	110	98	1	75-125			10	20
Lead	123	104	248	234	117	106	1	75-125			6	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

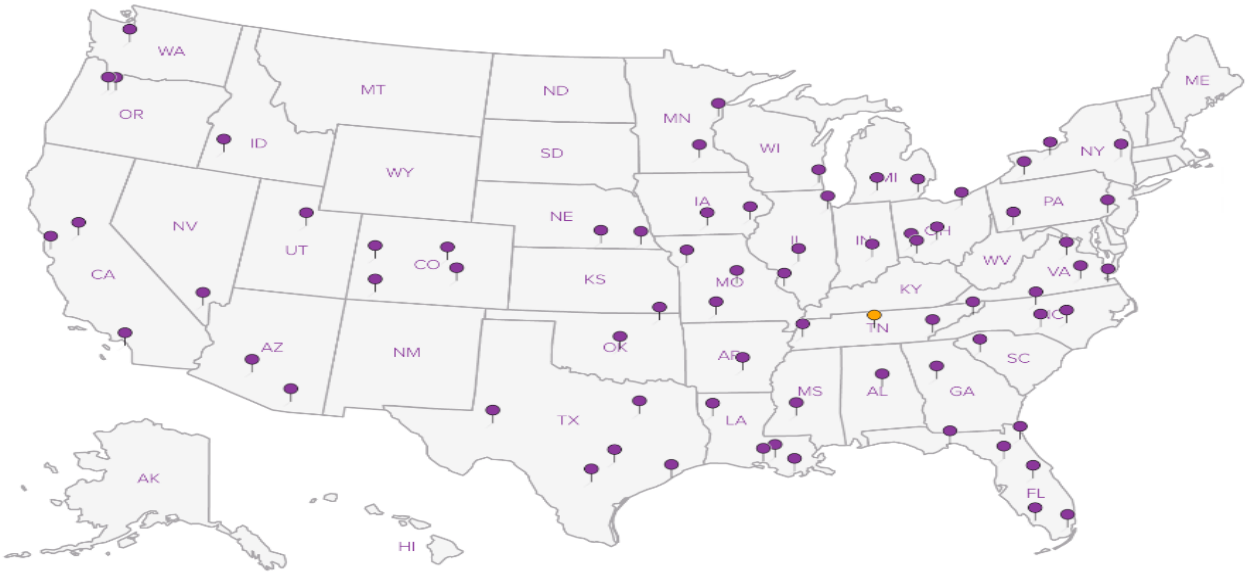
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



HDR - Boise, ID

412 E. Park Center Blvd, Ste 100
Boise, ID 83706

Billing Information:
Accounts Payable- Zelma Miller
412 E. Park Center Blvd, Ste 100
Boise, ID 83706

Report to: Manuel Rauhut

Email To: Manuel.Rauhut@hdrinc.com

Project Description: Bangerter

City/State Collected:

Phone: 208-850-4668
Fax:

Client Project #

Lab Project # HDRBID-UTSOIL

Collected by (print): Manuel Rauhut

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No X__Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1851587

J059

Acctnum: HDRBID
Template: T114381
Prelogin: P562337
TSR: 728 - Shane Gambill
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TCLP Metals 4ozClr-NoPres	TS, ASICP,PBICP 4ozClr-NoPres	Rem./Contaminant	Sample # (lab only)
NE-BC-1-0-1		SS		8/3/16	0630	1		X		-01
NE-BC-1-2-3		SS		8/3/16	0645	1		X		-02
NE-BC-2-0-1		SS		8/3/16	0730	1		X		-03
NE-BC-2-1.5-2.5		SS		8/3/16	0800	1		X		-04
NE-BC-3-0-1		SS		8/3/16	0820	1		X		-05
NE-BC-4-0-1		SS		8/3/16	0840	1		X		-06
NE-BC-4-2-3		SS		8/3/16	0900	1		X		-07
NE-BC-5-0-1		SS		8/3/16	0920	1		X		-08
NE-BC-5-1.5-2		SS		8/3/16	0940	1		X		-09
NE-FP-W-0-1		SS		8/3/16	1000	1		X		-10

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

6617 3618 7130

Hold #

Condition: (lab use only) Jw 7

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 2.9 °C Bottles Received: 35

COC Seal Intact: ____Y ____N ___NA

pH Checked: NCF: X

Relinquished by : (Signature)	Date: 8/4/16	Time: 1500	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Date: 8-5-16 Time: 0800

HDR - Boise, ID

412 E. Park Center Blvd, Ste 100
Boise, ID 83706

Billing Information:
Accounts Payable- Zelma Miller
412 E. Park Center Blvd, Ste 100
Boise, ID 83706

Report to: **Manuel Rauhut**

Email To: **Manuel.Rauhut@hdrinc.com**

Project Description: Bangerter

City/State Collected: West Jordan Utah

Phone: **208-850-4668**
Fax:

Client Project #

Lab Project # **HDRBID-UTSOIL**

Collected by (print): Manuel Rauhut

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No X__Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L851587

Table #

Acctnum: **HDRBID**
Template: **T114381**
Prelogin: **P562337**
TSR: **728 - Shane Gambill**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TCLP Metals 4ozClr-NoPres	TS, ASICP,PBICP 4ozClr-NoPres	Rem./Contaminant	Sample # (lab only)
NE-FP-W-2-2.5	G	SS		8/3/16	1020	1		X		-11
NE-FP-E-0-1	G	SS		8/3/16	1040	1		X		-12
NE-FP-E-2-3	G	SS		8/3/16	1055	1		X		-13
NE-TCLP-0-1	C	SS		8/3/16	1110	1	X	X		-14
NE-TCLP-2-3	C	SS		8/3/16	1115	1	X	X		-15
SW-BC-1-0-1	G	SS		8/3/16	1145	1		X		-16
SW-BC-1-1.75-2.25	G	SS		8/3/16	1200	1		X		-17
SW-BC-2-0-1	G	SS		8/3/16	1220	1		X		-18
SW-BC-2-1.5-2	G	SS		8/3/16	1240	1		X		-19
SW-BC-3-0-1	G	SS		8/3/16	1300	1		X		-20

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
[signature]	8/4/16	1500	[signature]
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			[signature]

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 2.9 °C Bottles Received: 35

Date: 8-5-16 Time: 0900

Condition: (lab use only) JW7

COC Seal Intact: ___Y ___N ✓NA

pH Checked: NCF: X

HDR - Boise, ID

412 E. Park Center Blvd, Ste 100
Boise, ID 83706

Billing Information:
Accounts Payable- Zelma Miller
412 E. Park Center Blvd, Ste 100
Boise, ID 83706

Report to: Manuel Rauhut

Email To: Manuel.Rauhut@hdrinc.com

Project Description: Bangerter

City/State Collected: West Jordan Utah

Phone: 208-850-4668
Fax:

Client Project #

Lab Project #: HDRBID-UTSOIL

Collected by (print): Manuel Rauhut

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No X__Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L851587

Table #

Acctnum: HDRBID
Template: T114381
Prelogin: P562337
TSR: 728 - Shane Gambill
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TCLP Metals 4ozClr-NoPres	TS, ASICP,PBICP 4ozClr-NoPres									Rem./Contaminant	Sample # (lab only)
SW-BC-3-1.75-2.25		SS		8/3/16	1320	1		X										-21
SW-BC-4-0-1		SS		8/3/16	1350	1		X										-22
SW-BC-4-1.25-1.75		SS		8/3/16	1400	1		X										-23
SW-BC-5-0-1		SS		8/3/16	1420	1		X										-24
SW-FP-N-0-1		SS		8/3/16	1430	1		X										-25
SW-FP-N-2-3		SS		8/3/16	1450	1		X										-26
SW-FP-S-0-1		SS		8/3/16	1510	1		X										-27
SW-FP-S-2-3		SS		8/3/16	1525	1		X										-28
SW-TCLP-0-1		SS		8/3/16	1545	1	X	X										-29
SW-TCLP-2-3		SS		8/3/16	1550	1	X	X										-30

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/4/16	1500	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 2.9 °C Bottles Received: 35

Date: 8-5-16 Time: 0900

Hold #

Condition: (lab use only)

COC Seal Intact: ____Y ____N ✓ NA

pH Checked:

NCF: X

HDR - Boise, ID

412 E. Park Center Blvd, Ste 100
Boise, ID 83706

Billing Information:
Accounts Payable- Zelma Miller
412 E. Park Center Blvd, Ste 100
Boise, ID 83706

Report to: Manuel Rauhut

Email To: Manuel.Rauhut@hdrinc.com

Project Description: Bangerter

City/State Collected: West Jordan Utah

Phone: 208-850-4668
Fax:

Client Project #

Lab Project #: HDRBID-UTSOIL

Collected by (print): Manuel Rauhut

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No X__Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L851587

Table #

Acctnum: HDRBID
Template: T114381
Prelogin: P562337
TSR: 728 - Shane Gambill
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TCLP Metals 4ozClr-NoPres	TS, ASICP,PBICP 4ozClr-NoPres	Rem./Contaminant	Sample # (lab only)
SE-0-1		SS			0740	1		X		-31
SE-1.25-1.5		SS			0800	1		X		-32
NW-0-1		SS			0620	1		X		-33
NW-2-3		SS			0640	1		X		-34
		SS				1	X			
		TCLP				1	X			
		SS				1	X			
ER-1		H_2O			0900					-35

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: ER-1 Rinsate: Lead & Arsenic

pH _____ Temp _____
Flow _____ Other _____

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8/4/16	1500	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 2.9 °C Bottles Received: 35

Date: 8-5-16 Time: 0900

Hold #

Condition: (lab use only) Jw7 ok

COC Seal Intact: ___Y ___N ✓ NA

pH Checked: NCF: X

ESC
L·A·B S·C·I·E·N·C·E·S
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Cooler Receipt Checklist

Client: HDRBID SDG# L851587

Cooler Received/Opened On: 8-5-2016 By: Richard Hughes

Temperature Upon Receipt: 3.9 °c

(Signature)

Cooler Receipt Check List	Yes	No	N/A
Were custody seals on outside of cooler and intact?	✓		
Were custody papers properly filled out (ink, signed, etc.)?	✓		
Did all bottles arrive in good condition?	✓		
Were correct bottles used for the analyses requested?	✓		
Was sufficient amount of sample sent in each bottle?	✓		
Were correct preservatives used?			✓
Were all applicable sample containers checked for preservation? (Any samples not in accepted pH range noted on COC .)			✓
If applicable, was an observable VOA headspace present?			✓
Non Conformance Generated? (If yes see attached NCF)	✓	✗	

TO

ESC Lab Sciences
Non-Conformance Form

Login #: L851587	Client: HDRBID	Date: 8/5/16	Evaluated by: Troy Dunlap

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type	X	Please specify Metals requested.		Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courie
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Container received unpreserved for ER-1. Total or Dissolved?

Client informed by:		Call		Email		Voice Mail		Date:	Time:
TSR Initials: CSG	Client Contact:								

Login Instructions:

Please pour up and preserve for Total metals – PBICP, ASICP

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

TABLE 9C-2
DISTRESS TRIGGER VALUES FOR FLEXIBLE PAVEMENTS

Distress Type	*Allowable Severity*		*Corrective Action **
	Level	*Extent*	
Polished Aggregate	Reduction in surface friction.	Low Extent: 2% of surface area per lane-mile	Surface-treat with plant mix friction course.
Raveling	Low Severity: Aggregate or binder beginning to wear away, but no significant progression yet; some loss of fine aggregate.	Low Extent: <2% of surface area per lane-mile.	Surface-treat with plant mix surface treatment.
Miscellaneous Distress:			
Lane-to-Shoulder Dropoff	Allowable: Maximum ¼"; and Mean width, <¼".	Low Extent: 5% of joint length per lane-mile	Restore shoulder elevation.
Water Bleeding and Pumping	Seeping or ejection of water from beneath the pavement through cracks	Not allowed	Seal or reseal.
Differential Settlement at approach slab/pavement interface	Allowable: Maximum = ½ inch	At any location	Slab-jack or remove and replace pavement
**** All corrective action(s) apply to full width of paving pass for full length of distress, except where noted otherwise.***			

9C-3 Lamps and Luminaires

Warrant all luminaires for ~~8~~ 10 years.

9C-4 Pedestrian Bridge

Warrant the pedestrian bridge against defects in material and workmanship.

9C-5 Drainage

A. Warrant the quality and function of drainage features constructed under this contract for the duration of the Warranty Period.

B. Warrant the quality and function of irrigation facilities constructed under this Contract for the duration of the Warranty Period.

9D. SUBMITTALS

Provide submittals to the Department in accordance with Table 9D-1.

TABLE 9D-1
DESIGN-BUILDER SUBMITTALS FOR WARRANTIES

Submittal	*For Approval*	*Schedule*
Warranty Bond and Letter of Credit for Pavement Markings	No	Prior to Placing

TABLE OF CONTENTS

1. Aerial Images

2. Preliminary Engineering Concept (PEC) Base Build - Revised

3. PEC Build Alternative – 4015 West Reconstruction - Revised

4. Electronic Files - Revised

a) 5400 South
   1. 4015 West - Build Alternative
b) 7000 South
c) 9000 South
d) 11400 South

5. Environmental Documentation - Revised

a) Final State Environmental Study (SES) Bangerter Hwy & 5400 South
b) Final SES Bangerter Hwy & 7000 South
c) Final SES Bangerter Hwy & 9000 South
d) Final SES Bangerter Hwy & 11400 South
e) USBOR Aqueduct Environmental Assessment (EA) Draft
f) Section 404 Permit 9000 South

6. Municipal & County Standards

a) Salt Lake County Standards
b) South Jordan City Standards
c) South Valley Sewer District Standards
d) Taylorsville City Standards
e) Taylorsville Bennion Improvement District Standards
f) West Jordan City Standards

7. USBOR Aqueduct Relocation Plans

8. Drainage Basin Maps and Supporting Information

a) Drainage Basin Maps
b) South Jordan City Bangerter Hwy. and 9000 South Supporting Drainage and Utilities Information
c) South Jordan City Bangerter Hwy. and 11400 South Supporting Drainage Information

9. As-Builts

a) Bangerter Hwy (SR-154) at 6200, 7000 & 7800 South DB
b) Bangerter Hwy (SR-154) at 4700 & 5400 South (SR-173) Flex Lanes CFI
c) 5400 South (SR-173) from Bangerter Hwy (SR-154) to 4800 West
d) 7000 South & WVH Pedestrian Bridge
e) Original Bangerter
   1. SR-154 WVH 4100 South to 5400 South

f) USBOR Aqueduct As-Builts

10. West Jordan Betterment

11. Draft Aesthetics Plan

a) Bangerter Highway Aesthetics Treatment
b) Aesthetics Land Form

12. Right-of-Way Plans - Revised

13. Utility General Estimated Costs

a) Estimated Costs for AT&T
b) Estimated Costs for First Digital and Questar
c) Estimated Costs for Syringa

14. Miscellaneous Agreements

a) MOA UDOT and SJ Marketplace
b) SLCC RIRO Letter
c) UTA-UDOT Partnering Agreement June 2015

15. Utility Structure Sheets

a) Water Vaults
b) Storm Drain
c) Sewer

16. Traffic Models

a) 5400 South
b) 7000 South
c) 9000 South
d) 11400 South