

REQUEST FOR PROPOSALS



UTAH DEPARTMENT OF TRANSPORTATION



4 Interchanges on Bangerter HWY (SR-154)

Project No. S-0154(12)11

Salt Lake County

INSTRUCTIONS TO PROPOSERS (ITP)

Final Addendum 1 - Issued September 15²⁹, 2016

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1.7. Proposal and Contract Award Schedule

1.7.1. Anticipated Schedule for Proposal and Contract Award Process

The following is the anticipated schedule for this procurement. The Department reserves the right to alter these dates. All deadlines areas shown in Table ITP-1, prevailing (Daylight or Standard) Mountain Time, unless otherwise noted.

**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	1/10/17	Central Construction
Selection of and Notification of Design-Builder (anticipated date)		1/23/17	

To protect information under a Claim of Business Confidentiality, the Proposer must, at the time the information is provided to the Department, include a Claim of Business Confidentiality on Form BC. It is the responsibility of the Design-Builder to complete Form BC in accordance with Subsection §63G-2-309.

If nothing in the Proposal is being protected under a Claim of Business Confidentiality, indicate on Form BC by stating “NA” on the submitted form.

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 chooses 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 Project schedule.

Section 2.7.3 (Withdrawal of a Proposal; Proposal Validity Period)) or at any time prior to execution and delivery of the Contract if the Proposer has received Notice of Award.

Each Proposer further understands and agrees that it forfeits its Proposal Guaranty if it should:

- A. Withdraw any part, or all, of its Proposal except as specifically permitted by this ITP or as approved in writing by the Department.
- B. Refuse or be unable to enter into the Contract, as provided under this Section 4.3.
- C. Refuse or be unable to furnish adequate and acceptable Performance and Payment Bonds.
- D. Refuse or be unable to furnish adequate and acceptable insurance, as provided herein.
- E. Refuse or be unable to furnish the Proposal information (in Appendix ITP-A), all pricing information specified (in Appendix ITP-B), or Best-and-Final-Offer (BAFO) documents (in the event of a BAFO).

The Proposer understands that any material alteration of documents specified in this Section 4.3 (Proposal Guaranty) or of the form of the Proposal Bond, other than that requested, will render the Proposal non-responsive.

4.4. Escrowed Proposal Documentation

Requirements regarding the contents of the Escrowed Proposal Documents (EPDs) are set forth in Contract Documents Part 2, Section 23.1 (Escrowed Proposal Documents).

Deliver the Escrowed Proposal Documentation (EPD) together with the signed Escrow Agreement, into escrow not later than the date specified in Section 1.7 (Proposal [and Contract Award Schedule](#)). The Proposer may use a third party or the Department to act as the escrow holder. In either scenario Form EPD must be completed.

Deliver a copy of the signed Escrow Agreement (Form EPD, in Appendix ITP-C) within the same time period to:

Utah Department of Transportation
Salt Lake City Construction Division Desk
4501 South 2700 West—Fourth Floor
West Valley City, UT 84119

4.5. Proposal Signatures, Quantities, and Costs

4.5.1. Required Signatures

The Proposer's Authorized Representative is required to sign the Proposal Letter Form (in Appendix ITP-C) and the Price Proposal Cover Sheet (Form PP, also in Appendix ITP-C). If the Proposer is a joint venture (JV), all members of the JV board are required to sign. If any signatures are provided pursuant to a power of attorney, provide the original or a certified copy of the power of attorney together with evidence of authorization.

5 — PROPOSAL EVALUATION

The Department expects to establish a fair and uniform basis for the evaluation of the Proposals in compliance with all applicable legal requirements governing this procurement as well as complying with relevant policies and procedures within the Department. The evaluation and selection process will follow the Department's *Design-Build Selection Manual of Instruction* which is available on the Department's public website.

The Best Value Proposal will be the Proposal which, in the judgment of the Department, best meets the goals of the Project and associated evaluation criteria in the most cost-effective manner as determined through a qualitative evaluation of the Technical Proposal, including Base Build Price + Build Alternative (within the Project funding) + Time (in accordance with ITP Appendix B).

Many of the technical elements to be evaluated are highly important to the Department and could justify selecting as Best Value a Proposal with a highly rated Technical Proposal which does not include the lowest cost Price Proposal. This will include the analysis and assessment of added value components of each Proposal. The [Department may conduct an independent](#) added value analysis [which](#) may result in a + or – dollar value that is considered in conjunction with the Technical and Price Proposal in making a Best Value selection. However, it is unlikely that a Proposal would be selected if the associated Price Proposal is more than ten percent higher than the Proposal with the lowest Price Proposal.

The key areas will be considered in determining added value as follows:

- Maintenance of Traffic
- Elimination of design exceptions
- Risk reduction in schedule criticality

5.1. Evaluation Criteria

5.1.1. Pass/Fail Criteria

Each Proposal is required to achieve a rating of “Pass” on every Pass/Fail Criteria or sub-criteria listed in Sections 5.1.1.1 through 5.1.1.5 to receive further consideration. Failure to achieve such a “Pass” rating will result in the Proposal being declared non-responsive as described in Section 2.7.2 (Responsive Proposal).

Proposers are encouraged to submit the following pass/fail criteria, except for the Legal and Financial Pass/Fail criteria, for Department review and comment prior to the due date for the Pass/Fail criteria:

5.1.1.1. Key Personnel

The Key Personnel requirements are as follows. The following Key Personnel and qualifications were required to be submitted with the SOQ. Submit with the Proposal the Organizational Chart only, do not resubmit the Key Personnel. Identify the Key Personnel on the Organization Chart.

- Project Manager:** Must have the authority to represent, make decisions for, and oversee the performance of the Design-Builder. Should demonstrate a minimum of ten years experience managing at least three projects with similar cost, size, type of work, and complexity as this Project, including Projects on bridges and freeways, including interchanges in urbanized areas. The Project Manager should demonstrate experience managing Projects with funding limitations, compressed timelines, Third-Party coordination, and community information requirements. The Project Manager

- 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. If a Proposer has been advised that a guaranty will be required but has not previously submitted financial statements for the guarantor, financial documents and associated documents for the guarantor for the periods specified in the RFQ and meeting the requirements specified in the RFQ.
- I. A description and detailed breakdown of each element of cost that comprise the Compensable Project Overhead, including information and back-up documentation used to develop the lump sum cost.

5.1.1.4. Other

The Pass/Fail requirements include provision of all required forms included in Appendix ITP-C (Forms), properly completed and signed (if applicable), and provision of all information specified in Appendices ITP-A and ITP-B, in the manner, format, and detail specified, without alteration of the forms, except as expressly permitted by the instructions.

5.1.2. Technical Evaluation Criteria

The technical evaluation criteria detailed below will be evaluated and rated with special attention given to the desired qualities expressed in the statement of each criteria. No Proposal that receives a technical rating of Unacceptable for any overall technical evaluation criteria category will be selected for award.

The ITP evaluation criteria present the relative importance of the technical evaluation criteria relative to the Project goals. The weighting in those criteria denoted as “Critical” are approximately three times the weight of “Important”. The criteria denoted as “Significant” are approximately twice the weight of “Important”.

5.1.2.1. Maintenance of Traffic (Critical)

Goal:

Minimize Impacts to Bangerter Highway and Provide Mobility through the Project (MOT)

Provide continued and effective flow of traffic through the Project and for each interchange during construction. Use innovative design and construction techniques to deliver the Project with the least possible impacts to the traveling public while maintaining or exceeding the standards for quality. Implement a comprehensive construction phasing and maintenance of traffic (MOT) plan that maintains continuous access to businesses, residences, and schools; provides safe routing for pedestrians and school children; maintains existing vehicle movements throughout construction; and minimizes delay (including duration of impact) to traffic during construction of the Project.

Submittals:

Narratives

- A. Provide an overall 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. **(Critical)**
- B. Include a 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. **(Significant)**
- 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. **(Important)**

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 (Significant)

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. **(Critical)**
- B. Provide a description of any design exceptions that have been eliminated. The Department's priority for the design exceptions is below. **(Critical)**
 - 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. **(Critical)**
- D. Provide an overall description of the proposed design enhancements and innovations that reduce risk. **(Significant)**
- E. Provide a description to mitigate risks for the Bingham Creek culvert. **(Important)**

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~~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~~schedule; include price information only in the Price Proposal (see Appendix ITP-B).

5.1.2.3. Third Party (Significant)

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 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. **(Critical)**

- 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. **(Significant)**
 - 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.
- 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. **(Significant)**

Plans

- D. Provide a Utility conflict matrix identifying Third Party Utility impacts, relocations, and mitigation strategies. **(To be evaluated with the Narratives)**
- E. Provide plan sheets identifying potential impacts to Third Party Utilities and the anticipated mitigation of those impacts. **(To be evaluated with the Narratives).**
- F. Include activities in the Proposal Project ~~Schedule~~ 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

REQUEST FOR PROPOSALS



UTAH DEPARTMENT OF TRANSPORTATION



4 Interchanges on Bangerter HWY (SR-154)

Project No. S-0154(12)11

Salt Lake County

INSTRUCTIONS TO PROPOSERS

APPENDIX A:

TECHNICAL PROPOSAL INSTRUCTIONS

~~Final Issued~~ Addendum 1 - September ~~15~~29, 2016

1—GENERAL INSTRUCTIONS

This Appendix A provides specific instructions for preparing Technical Proposals for the Utah Department of Transportation (Department) 4 Interchanges on Bangerter Highway (SR-154).

Submit the information required by this Appendix A of the Instructions to Proposers (ITP) in the organization and format specified herein.

Organization. Organize the Technical Proposal in separate tabbed sections or volumes in accordance with Table ITP-A-1 (Outline for Submittal of Technical Proposal). Provide the Proposal in three-ring binders, with each binder within each set numbered in “X of Y” fashion. Also label each Proposal set with either “Original” or the Copy number of the Proposal set; label each binder in each set.

Forms. All forms named herein are found in Appendix ITP-C, unless otherwise noted.

Text, Type font, and Pages. Format text in a standard font, a minimum of 10 points in height, and single-spaced. Use 8½ -inch x 11-inch white paper, with simple lettered or numbered dividers for each section. Number each page in each volume consecutively (i.e., 1-1, 1-2,...; 2-1, 2-2....; etc.), and center page numbers at the bottom of each page.

Non-text Items. Submit drawings and sketches on 11-inch x 17-inch and/or 8 ½ -inch x 11-inch white paper. Submit one Proposal ~~led~~ Project ~~Schedule~~ schedule on 24 -inch x 36 -inch or 22 -inch x 34 -inch paper, folded and inserted in an envelope or a similar holder that is incorporated into the original volume.

Only submit color photographs, renderings, and brochures that are adequately bound and suitably protected for handling and circulation during review.

Readability. Present information clearly and concisely. Documentation that is difficult to read may be rejected and may lead to disqualification.

Reproducibility. Provide information that is easily reproducible by normal black and white photocopying machines.

Submittal. Provide the Proposal in hard copies and electronic format, and limit number of pages as required in Table ITP-A-2.

2—FORMAT AND ORGANIZATION OF THE TECHNICAL PROPOSAL

The Technical Proposal shall be prepared in accordance with Table ITP-A-1 (Outline for Submittal of Technical Proposal), with covers on the Proposal documents entitled as follows:

[NAME OF PROPOSER]
TECHNICAL PROPOSAL
Volume _____
(Enter title from Table ITP-A-1)

Proposers shall submit a complete and total Proposal including previously submitted Pass/Fail elements, ATCs, and accompanying Department responses and Approval documentation.

REQUEST FOR PROPOSALS



UTAH DEPARTMENT OF TRANSPORTATION



4 Interchanges on Bangerter HWY (SR-154)

Project No. S-0154(12)11

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INSTRUCTIONS TO PROPOSERS

APPENDIX B:

PRICE PROPOSAL INSTRUCTIONS

~~Final Issued~~ Addendum 1 - September ~~1529~~, 2016

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

<i>ID</i>	<i>Utility Company</i>	<i>Notes</i>	<i>Interchange</i>
	UDOT’s Cost share	100%	
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.~~

5— BID AMOUNT FOR AWARD CONSIDERATION

The Bid Amount for Award Consideration includes the Base Build and the Build Alternative (as described in Part 4 (Project Configuration)), Time Components, and associated Utility Costs. The

3. When determining the number of consecutive Calendar Days for column F in Table ITP-B-3 (Time Components), make certain that the Work can be accomplished within the minimum and maximum number of Calendar Days indicated in columns E and F. Bids with Calendar Days that are outside the corresponding limits in column E and F are considered non-responsive. A Proposal [Project](#) schedule that shows a completion date prior to the minimum limit in column D is considered responsive; however, the Proposer shall adjust to the minimum number of Calendar Days in column D for the purpose of calculating the Time component of the bid.
 4. Multiply time related cost-rate in Column C by the Calendar Days in column F and enter amount into the respective items in EBS bid file.
- B. If the Bidder does not submit a bid for the time components in EBS, the Department will consider the proposal non-responsive.
- C. Negative amounts are not permitted for the time related bid items.
- D. Bidders are advised not to spread anticipated time costs within other items of the contract, as unbalancing will occur and the bid proposal may be rejected.

TABLE ITP-B-3 TIME COMPONENT

	A	B	C	D	E	F
Project Component	Start Milestone	Finish Milestone	Time Related Cost Rate (Dollars per Calendar Day)	Minimum Calendar Days	Maximum Calendar Days	Proposed Calendar Days
Project (Note 2)	March 6, 2017	Substantial Completion Deadline (See Note 1)	5,000	365	606	
5400 S Interchange	5400 South Interchange Start Date	5400 South Interchange Completion Date (See Note 1)	5,000	0	606	
7000 S Interchange	7000 South Interchange Start Date	7000 South Interchange Completion Date (See Note 1)	10,000	0	256	
9000 S Interchange	9000 South Interchange Start Date	9000 South Interchange Completion Date (See Note 1)	5,000	0	606	
11400 S Interchange	11400 South Interchange Start Date	11400 South Interchange Completion Date (See Note 1)	7,500	0	606	

Note 1: Refer to Part 2, Section 20 (Incentives, Disincentives, and Damages)

Note 2: Project Component includes all Work as defined in Part 1, Appendix A (Acronyms and Definitions List)

REQUEST FOR PROPOSALS



UTAH DEPARTMENT OF TRANSPORTATION



4 Interchanges on Bangerter HWY (SR-154)

Project No. S-0154(12)11

Salt Lake County

PART 1, APPENDIX A – ACRONYMS AND DEFINITIONS LIST

Final Issued Addendum 1 - September 15²⁹, 2016

<i>Term</i>	<i>Meaning</i>
Addenda / Addendum	Supplemental addition, deletions, and modifications to the provision of the RFP after the advertisement date of the RFP.
Affidavit requesting Contract Completion	As described in Part 2, Section 13.6 (Request for Contract Completion).
Affiliate	<p>(i) Any Person that directly or indirectly through one or more intermediaries controls, or is controlled by, or is under common control with the: (A) Design-Builder or (B) any Principal Participant; and</p> <p>(ii) Any Person for which 10 percent or more of the equity interest in such Person is held directly or indirectly, beneficially, or of record by the: (A) Design-Builder, (B) any Principal Participant, or (C) any Affiliate of the Design-Builder under clause (i) of this definition.</p> <p>For purposes of this definition, the term “control” means the possession, directly or indirectly, of the power to cause the direction of the management of a Person, whether through voting securities, by contract, family relationship, or otherwise.</p>
Alternative Technical Concept	The Design-Builder’s written request to conduct Work that differs from the design, construction, and/or technical requirements of the Contract, which was included with the Proposal and Approved by the Department.
Approval	Formal conditional determination in writing by the Department’s Project Manager that a particular matter or item is good or satisfactory for the Project. Such determination may be based on requirements beyond those set forth in the Contract Documents and may reflect preferences of the Department <u>be subject to Changes in the Work as defined in Part 2, Section 16.</u>
As-Built Documents	Documents that reflect all changes made in the drawings and specifications during the construction process, and show the exact dimensions, geometry, and location (including alignment points) of all elements of the Work completed under the contract.
Award	The Department’s acceptance of a Proposal after selection and review of the Design-Builder’s EPD.
Betterment	As related to Utilities, a Betterment is generally defined as the upgrading; (e.g., increase in capacity) of a Utility being relocated that is not attributable to the construction of the Project or is made solely for the benefit of and at the election of the Utility Company (not including a technological improvement which is able to achieve such upgrade at a cost equal to or less than the cost of a “like for like” replacement or relocation). The use of new materials or compliance with current standards in the performance of the Utility Work is not considered a Betterment. As related to Third Parties, a Betterment is generally defined as an upgrading (e.g., increase in capacity or update of design of work) or additional work that is conducted for the Third-Party and is not required by construction of the Project and is solely requested for the benefit of the Third Party.
Calendar Day	Any day shown on the calendar, beginning and ending at midnight.
Certification	A written document or affidavit officially declaring confirmation of a statement or information as being true, accurate, or genuine.
Change Order	As defined in Part 2, Section 16.1.1 (Change Orders).
Claim	A separate demand by the Design-Builder for: (i) a time extension that is disputed by the Department, or (ii) payment of money or damages arising from

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 4:

PROJECT DESIGN AND CONSTRUCTION REQUIREMENTS

Final Issued Addendum 1 - September 1529, 2016

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- B. Do not use multiple-barrel or multiple-cell drainage pipes or structures.
- C. Do not decrease the diameter of a drainage pipe in the downstream direction.
- D. Locate cross drainage culverts and storm drain outfalls so that the outlet elevation is as close to the receiving channel flow line as possible.
- E. Provide flared end sections or head walls on drainage pipe ends. Use headwalls on all drainage pipes with a diameter of 48 inches and greater; use end sections on drainage pipes less than 48 inches in diameter. Do not place end sections on irrigation pipes.
- F. Do not allow new storm drain pipes to cross under the USBOR Aqueduct.

4D-4 Storm Drain Systems

Storm drain systems consist of ditches, swales, culverts, gutters, inlets, pipes, ponds, and other appropriate features designed to collect, convey, treat, and discharge stormwater to the receiving systems.

- A. Place inlets based upon spread requirements in Table 4D-3 (Storm Drainage Maximum Spread), while meeting the maximum access spacing in Table 4D-4 (Access Spacing).

**TABLE 4D-3
 STORM DRAINAGE MAXIMUM SPREAD**

ROAD FUNCTIONAL CLASS	DESIGN SPEED	MAXIMUM SPREAD
INTERSTATE AND ARTERIAL	< 45 mph	SHOULDER + 3 ft
	≥ 45 mph	SHOULDER
	Sag	SHOULDER + 3 ft
COLLECTOR AND LOCAL ROADS	< 45 mph	1/2 DRIVING LANE
	≥ 45 mph	SHOULDER
	Sag	1/2 DRIVING LANE
<u>STRUCTURES</u>	<u>NA</u>	<u>SHOULDER</u>

- B. Design and locate inlets to limit stormwater to 0.25 cfs or less during the design storm event at intersection features including entrances, driveways, and pedestrian ramps. Exclude residential and detention facility maintenance access driveways.
- C. At sag locations where stormwater has no outlet except through the inlet and storm drain system and failure of the drainage system could result in flooding or inundation of the roadway, use the sag location check event for both the inlet and the downstream conveyance system. Low points where water can overtop the curb and escape do not warrant being designed for the sag location design event.
 - 1. Provide flanking inlets on either side of the sag point inlet. Flanking inlets are not to be considered as intercepting flow to reduce the bypass flow to the sag point.
 - 2. Use combination curb and grate inlets for all sag and low points located within the curb and gutter.
- D. Determine inlet efficiency using Department standard grates, refer to UDOT Standard Drawings. Design inlets located in roadside ditches, interstate mainline, Bangerter Highway, and ramps with standard grates; design inlets located elsewhere with

4D-6 Bridge Deck and Approach Slab ~~Drainage~~ Drainage System

- A. Design and construct ~~deck-bridge~~ drainage systems so that drainage does not encroach upon travel lanes during the design storm. [See Table 4D-3 Storm Drainage Maximum Spread.](#) Collect and convey stormwater to a nearby roadway storm drain system. Design ~~deck-bridge~~ 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.C.~~ Position the ~~deck-bridge~~ 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.D.~~ 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.E.~~ 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.F.~~ 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.

Interchange	Detention Basin/Storage Facility ID and Location	Status	Improvements	Approval Required for Location Change ¹
5400 South	54-A (3687 West Whitewood Court)	Proposed Facility	Provide 12-foot access driveway along noise wall; full perimeter access not required. Provide compacted riprap on pond bottom.	No
5400 South	54-B (3695 West Alveron Drive)	Proposed Facility	Provide 12-foot access driveway along noise wall; full perimeter access not required. Provide compacted riprap on pond bottom.	No
5400 South	54-C (3765 West 5400 South)	Proposed Facility	Provide 12-foot access driveway along noise wall and curb; full perimeter access not required road. Provide compacted riprap on pond bottom.	No
5400 South	54-D	Proposed Storage Facility	Provide storage to meet allowable discharge requirements; see Table 4D-5, Discharge Location 54-2. <u>Underground-Subsurface storage is allowed outside pavement limits. Discharge via infiltration is not allowed.</u>	No
7000 South	70-A (Approx. 6700 South & Bangerter Hwy.)	Existing UDOT Facility	Re-grade facility to meet requirements specified in Section 4D-5. Reconstruct emergency spillway. Provide 12-foot perimeter access road on south, east, and north sides of facility. Provide access driveway to pond bottom.	Yes
9000 South	90-A (Approx. 9600 South & 3400 West)	Existing UDOT Facility	Re-grade facility to meet requirements specified in Section 4D-5. Provide emergency spillway. Provide 12-foot access road on east, north, and west sides. Provide turn-around on west side. Provide access driveway to pond bottom. Provide separate farmer access outside of perimeter fence.	Yes
11400 South	114-A (Approx. 12000 South, East of Bangerter Hwy.)	Existing UDOT Facility	No proposed improvements; direct stormwater runoff from Bangerter Highway sag to Detention Basin 114-B to reduce runoff directed to Detention Basin 114-A.	Yes
11400 South	114-B (South Jordan City 23-DET08 at 11800 South & 3600 West)	Existing South Jordan City Facility	Re-grade facility to provide 4.3 AF of additional storage volume with a minimum pond bottom slope of 0.7% and a minimum pond bottom elevation of 4579.5 feet. Grade to facilitate recreational use and replace landscaping in kind. Modify inlet and outlet structures and low flow piping system as required to restore system functionality. Obtain South Jordan City approval for proposed improvements in accordance with Part 4-07 (Landscaping and Aesthetics). No detention basin fencing required; protect existing east wall in place.	Yes
11400 South	114-C (Tippecanoe Way)	Proposed South Jordan City Facility	Provide new detention facility to detain stormwater runoff from Jordan Heights Phase 3. Obtain South Jordan City and Jordan Heights HOA approval in accordance with Part 4-07 (Landscaping and Aesthetics) for proposed improvements. Provide low flow channel or other as approved by City and Jordan Heights HOA. Replace detention basin landscaping in kind. Locate facility outside PUE. No detention basin fencing required.	Yes

¹Changes to storage facility or detention basin locations require Department approval as indicated in the table.

4D-10 Cross Drainage

Cross drainage consists of pipe culverts or structures designed to convey off-site flows from one

- C. Obtain approved Conditional Letters of Map Revision (CLOMR) and Letters of Map Revision (LOMR) as required by City and FEMA regulations. The Design-Builder bears all responsibility for the cost and time associated with obtaining new or revised CLOMRs and LOMRs, including submittal fees. The Design-Builder is responsible for preparation of all applicable permit applications, map revisions, and supporting documentation. The Department will be the applicant for all CLOMRs and LOMRs. Provide one hardcopy and one electronic copy of applications for CLOMRs and LOMRs to the Department, the appropriate floodplain administrator, and Salt Lake County.

4D-13 Groundwater

- A. Provide an underdrain system to remove water from the pavement section when a free draining pavement section is not obtained or alternatively provide a modified pavement design.
 - 1. Minimum pipe diameter is ~~12~~8 inches.
 - 2. Select geotextiles according to AASHTO M 288 and based on in-situ soil conditions.
 - ~~2.3.~~ Underdrain systems are required along Bangerter Highway through the limits of the sag curve under 11400 South. For other roadway facilities, underdrain systems are not required if it is demonstrated through geotechnical investigation that the groundwater elevation is greater than 10 feet below the bottom of the pavement section.
- B. Protect the flow quantity and quality of the wells and/or springs during and after construction.
- C. Adhere to the standards of the Utah Division of Water Rights when abandoning a well is required.

4D-14 Erosion Control

Provide temporary and permanent erosion control measures that reduce sediment from being discharged from Department ROW in accordance with the requirements of all applicable Project documents and permits.

- A. Size each erosion control measure using the same design storm event that was used for the discharging facility.

4D-15 Drainage Report

Prepare a Drainage Report following the outline shown in Table 4D-6 (Drainage Report Outline). Retain the existing section and subsection headings. If a section or subsection is not used, or is pending a future design submittal, indicate under the given section heading the reason why it is not included or not applicable to the Project. Provide new sections as necessary. Provide line numbering in all draft reports to facilitate review. Provide a page number for each report page including appendices.

9C-6 Maintenance of Miscellaneous Equipment/Devices

Provide AASHTO HL-93 load-bearing junction boxes and lids, cable vaults and lids, and drainage grates within two feet of travel lanes. Weld drainage grates within two feet of travel lanes on Bangerter Highway to prevent them from dislodging and causing a hazard.

9C-7 Maintenance of Access to Facilities

Maintain uninterrupted access to all public and private facilities affected by the Project. Access shall mean providing a clear and easily understood route into and out of an existing residence, facility, or business, and providing access for all types of vehicles using the access. Provide all necessary signing in accordance with the Utah MUTCD to convey that the route to the residence, facility, or business is open to traffic.

9C-8 Maintenance of Pedestrian Access Routes

Maintain or relocate the pedestrian access routes within the Project limits in on a paved surface and in accordance with the Americans with Disabilities Act (ADA), the Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG), and the Utah MUTCD. Obtain Approval of all pedestrian detour plans needed to accommodate construction.

Maintain the existing pedestrian structure near Bangerter Highway and 7000 South intersection until the new pedestrian structure is open.

9C-9 Maintenance of River and Flood Control Channels

Keep construction material away from drainage structures, flood control channels, rivers, and waterways. Do not allow debris or contaminants of any nature to be deposited in the above-mentioned waterways. If any such item is found floating in a waterway near the site, immediately remove it. Maintain all water courses, drainage ways, drainage systems, and irrigation systems. Collect and convey storm water flows that are less than or equal to the 10-year storm event to avert flooding of active roadways and properties abutting the ROW.

9C-10 Maintenance of Landscape

Existing Landscape: Maintain existing landscape within the Project limits that are to remain after construction until Substantial Completion. Limits of Work include any area within the Project limits that has been disturbed, including staging areas. Maintenance Work includes the following:

- A. **Watering:** Keep trees, shrubs, and other plantings watered. Use automatic irrigation, if present.
- B. **Weed Control:** Monitor and control invasive weeds as specified in Part 5 (Special Provisions and Exceptions) 02924S (Invasive Weed Control).
- C. **Erosion Control:** Follow the Project Storm Water Pollution Prevention Plan (SWPPP). Repair, maintain, and replace erosion and sediment control measures according to Part 4-05 (Environmental Compliance).
- D. **Irrigation System:** Perform annual winterization activities to shut down the system, including cleaning out all water in the system with compressed air. Check bubbler heads, valves, and other system components for damage or wear, and repair them prior to restarting the system the next season.
- E. **Plant Replacement:** Replace plant materials.

MOT Peak Periods: All peak periods as defined in Tables 10C-1, through 10C-5 where all existing [through](#) 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 of any individual Movement, compared to the Existing Configuration, so long as each Movement is accommodated within each intersection. A Storage Length Reduction is also considered a Partial Closure.

Storage Length Reduction: A 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.

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 Partial Closure, and Storage Length Reduction.
- F. The process to obtain Approval from the Department of a detour plan used for each Full Closure.
- G. The process of coordinating and notifying the Department's TOC of a Storage Length Reduction 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~~15 (MOT Personnel) who will plan, direct, implement, and maintain the Traffic Management Plan.
- I. A pedestrian and bicyclist access plan that provides for safe pedestrian and bicyclist routing.
- J. A student access plan that provides for safe pedestrian routing to and from all the schools within the Project limits, see section 10C-8.
- K. The procedures to adjust the required traffic control devices, including advanced signing, to provide advance warning to motorists of slowed or stopped traffic.
- L. The procedure to stage the implementation of traffic control for a closure and detour; including placing all of the signs and channelizing devices needed for the closure or detour on the shoulder of the road, turning signs to facing away from traffic, turning

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 retroreflectivity standards.

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

Stage the implementation of each Partial 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 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 Quirrh 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 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.

Detour trailblazing signing shall indicate the route number or street name of the road being closed.

The detour plan shall include the installation and maintenance of static signs and portable CMS at key regional locations, in addition to the point of closure.

10C-10 Flagging

Flagging is not permitted on Bangerter Highway.

Use a law enforcement officer when construction activities are impacting an operating signalized intersection. Signalized intersections shall be in flash mode when law enforcement officers are controlling traffic. Use of flaggers at traffic signals is only permitted when, under the direction of a law enforcement officer, the signals have been turned off or are inoperable.

10C-11 Changeable Message Signs (CMS)

Place a portable CMS at all ends of the Project to notify motorists of upcoming construction and to warn motorists of the pending changes to existing conditions.

Provide 10 portable CMS that the Department can access remotely to change the message. Equip each CMS with GPS tracking capability. ~~Make Provide~~ two additional CMS that the Department can access remotely to change the message. to be placed at the Department's discretion. Obtain Department approval for all messages for each CMS.

Place CMS in view of oncoming traffic without obstructing traffic flow. Relocate CMS, as necessary, to match field conditions.

Remove CMS from the site of work when they are not needed for the immediate control of traffic. Provide locked cabinets on all CMS in the field. Verify the security of all CMS during each work shift. The controller on the CMS used to change messages shall be password protected.

Unless directed otherwise by the Department, display advance notification CMS messages for six Calendar Days prior to any traffic impacts, such as lane closures or change in traffic patterns, to cover all impacted roadways of the Project and intermittently at the Department's direction.

When providing six Calendar Days notice for construction activities, state the day of the week (e.g. Monday) on which the construction will occur instead of indicating the date (e.g. June 13).

10C-12 Limitations of Operations

Tables 10C-1 through 10C-5 establish the MOT Peak Periods, and MOT Off-Peak Periods by direction of travel and day of the week on Bangerter Highway and each cross-street respectively.

10D. SUBMITTALS

Provide submittals to the Department in accordance with Table 10D-1.

TABLE 10D-1
DESIGN-BUILDER SUBMITTALS FOR MAINTENANCE OF TRAFFIC

<i>Submittal</i>	<i>For Approval</i>	<i>Schedule</i>
Request for Closure	Yes	In accordance with Section 10C-12.1
Closure Notification	No	In accordance with Section 10C-12.1
Pedestrian detour plans	Yes	Obtain Approval prior to implementation
Project Notification Sign Layouts & Installation Plans	Yes	Obtain Approval prior to ordering the signs
Traffic Management Plan (TMP) including an emergency services plan, Incident Management Plan & pedestrian/bicyclist access plan, & student access plan	Yes	Obtain Approval prior to start of construction
Request for Traffic Engineering Order (TEO) for temporary speed limit reductions	Yes	Obtain Approval prior to implementation
Traffic detour plans	Yes	Obtain Approval as part of Request for Closure
MOT plans	No	Submit RFC Plans 14 days prior to implementation.
CMS messages	No	Obtain approval of messages through the design process
<u>MOT Status Report</u>	<u>No</u>	<u>Monthly</u>
Verification of each Traffic Control Maintainer's qualifications	No	With the TMP, and again if changes are made
Daily MOT Inspection Reports	No	Weekly

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

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

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
6 inches of new or existing Untreated Base Course; if the vertical profile is lowered.
12 inches of new or existing Granular Borrow if the vertical profile is lowered.
 - (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 Bangarter provide a 1.5 inch rotomill and fill with HMA over existing asphalt to the limits of new striping.
 - (9) At 4015 West Build Alternative 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-new~~ 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 9000 South and 11400 South on Bangarter Highway, whenever existing pavement is widened or to the furthest limits of permanent striping, whichever is greater. ~~when re-striping is required.~~

11C-1 Ride Quality

Evaluate ride quality in accordance with Standard Specification, Section 01452, and Section 8-

- 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. The free right turn movements at the SPUI's are excluded from minimum vertical curve lengths and minimum grade break differences.

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, gutter pan or shoulder pavement.
- B. For all multiple lane turning movements, an AASHTO WB-67 design vehicle wheels must stay within the outside lane, gutter pan 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**

<i>Ramp</i>	<i>Required Ramp Meter Storage Length (Lane-Feet)</i>	<i>Desired Ramp Meter Storage Length (Lane-Feet)</i>	<i>Length of two lane section between tapers (Feet)</i>	<i>Length of one lane section between tapers (Feet)</i>
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	2,400	300	300
Northbound	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.

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 or provide a 42-inch cast in place barrier at the edge of the pavement next to travel lanes when the wall is inside the clear zone.

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.

Appendix 1: PROJECT DESIGN CRITERIA

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

Comments

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

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 - 20 mph (20 MPH design speed continues through left turn movement)
 Within 300 ft of 5400 S

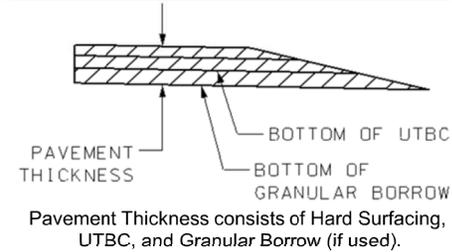
Ramps A2, B2, C2 & D2:
 Design Speed - 20 mph (Right Turn Lanes within 300' of 5400 S)

Proposed Roadway Characteristics

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

Pavement Thickness

See Typical Sections in Part 7



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

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	Location Ramp B 0 to 65 (SB On) Ramp D 0 to 65 (NB On)	L 1410' 1410'	<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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	
			0	1410					
			14	1350					
			18	1310					
			22	1220					
26	1120								
Deceleration Lanes	V 65 mph	Va 55 mph	V'a	L	Location Ramp A 65 to 0 (NB Off) Ramp C 65 to 0 (SB Off)	L 570' 570'	<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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	
			0	570					
			14	540					
			18	520					
			22	500					
26	470								
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.		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> Approved	SD BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.				30'		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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.		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> Approved	GB pp. 9-28:54, MOI 7-64:67	
Ramp Terminal Sight Distance	Along the Ramp			Along the Ramp			<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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	
	<u>Design Speed</u>		<u>SSD (ft)</u>	<u>Design Speed</u>		<u>SSD (ft)</u>			
	70 mph		730	65 mph		645			
	55 mph		495	55 mph		495			
	50 mph		425	45 mph		360			
	45 mph		360	25 mph		155			
	40 mph		305	20 mph		115			
	35 mph		250						
	30 mph		200						
	25 mph		155						
Along the Freeway or Street Preceding Approach Nose of Exit Ramp				Along the Freeway or Street Preceding Approach Nose of Exit Ramp			<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> Approved		
<u>Design Speed</u>	<u>SSD (ft)*</u>	<u>DSD (ft)**</u>	<u>Location</u>	<u>SSD*</u>	<u>DSD**</u>				
70 mph	915	1445	SR-154	810'	1365'				
55 mph	620	1135	Approaching Ramp A (NB Off)						
50 mph	535	1030		810'	1365'				
45 mph	450	930	SR-154						
40 mph	385	825	Approaching Ramp C (SB Off)						
35 mph	315	720							
30 mph	250	620							
25 mph	200	N/A							
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.		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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	Meets all Requirements?	<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> Approved	GB pp. 10-96:101; SD DD 6, ST 3A:3B		
		5400 South	YES				
Ramp Terminals	Platform		Platform		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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	
	Location	Length	Location	Length			
	Ramp side of the approach nose or merging end.	200 ft	Ramp side of the approach nose or merging end.	200 ft			
	At-grade terminal of ramp.	Varies	t-grade terminal of ramp.	Varies			
On Ramp Design	Type	Parallel	Ramp Loc.	Type	Parallel	<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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.
	Curve Radius	1000 ft	5400 South Ramps	Curve Rad.	1000 ft		
	Dist. From Physical Nose to Ramp Control Line Terminus	200 ft		Dist.	200 ft		
	Taper	300 ft min		Taper	300'		
Off Ramp Design	Type	Taper	Ramp Loc.	Type	Taper	<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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.
	Divergence Angle (deg)	2-5	5400 South Ramps	Angle	2-5		
	Dist. from outer edge alignment break to ramp control line	200 ft		Dist.	200 ft		
Curb Configuration	2011 AASHTO p.10-103	Type M1		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> Approved	SD TC series		
Rumble Strips	Meet Paving Standard Drawings requirements	Meet Paving Standard Drawings requirements		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> Approved	SD PV 6A:8B		

Prepared by  Date 9/22/2016

Verified Only _____ Date _____
 - Local Government Projects Only

Approved by  Charles Mason-Hill
 Sep 23 2016 1:01 PM 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	AAADT= 38,000	Terrain	Flat	
Design Yea	2040	AAADT= 45,000	% Trucks (current)	4%	
Design Vehicle	WB-67		Posted / Design Speed	45	50

*8' shoulders will be provided in the interchange limits (through pork chop islands between left and right hand turns on each leg of the interchange)

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

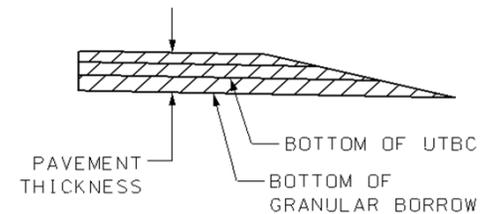
Curb Radius From T.B.C.

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



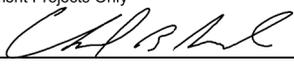
Pavement Thickness consists of Hard Surfacing, UTBC, and Granular Borrow (if used).

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

Design Waivers	UDOT Standard				RFP Requirement		Design Waiver	References	Date of Decision, Comments, Mitigation, etc.
	V	Va	V'a	L	Location	L			
Acceleration Lanes	50 mph	39 mph	0	720	N/A		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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	
			14	660					
			18	610					
			22	550					
			26	450					
Deceleration Lanes	50 mph	44 mph	0	435	EB Left Turn WB Left Turn WB Left Turn Onto 3900 W	*140' 435' *140'	<input type="checkbox"/> Not Required <input type="checkbox"/> Required <input checked="" type="checkbox"/> 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
			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		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> Approved	SD BA 4B1:4B2, UDOT Design Exception Form	
Clear Zone	Meet clear zone compliant requirements defined in Standard Drawings.				20'		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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.		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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.		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> 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		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> Approved	SD TC series	
Rumble Strips	Meet Paving Standard Drawings requirements				N/A		<input checked="" type="checkbox"/> Not Required <input type="checkbox"/> Required <input type="checkbox"/> Approved	SD PV 6A:8B	

Prepared by  Date 9/22/2016

Verified Only _____ Date _____
 - Local Government Projects Only

Approved by  Charles Mason-Hill Date _____
 Sep 23 2016 1:02 PM

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 :

Total Project Cost Savings Identified Using Practical Design:

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:

Date: 2016.09.13
15:39:39 -06'00'

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.

Appendix 2: PROJECT DESIGN EXCEPTIONS & DEVIATIONS

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	Accident History Years:	2012-2014
Severity	N/A	N/A	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 <small>(This amount may be part of or all of the above amounts for Design Exceptions and/or Waivers):</small>	\$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*			<input type="radio"/> Guardrail	<input type="radio"/> Precast Barrier
Height				
Attached			<input type="radio"/> Yes	<input type="radio"/> No
Meets Standards	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> 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 - 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 Ran

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 Bangarter 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.

Safety Impacts: \$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
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 :

Total Project Cost Savings Identified Using Practical Design:

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:

Date: 2016.09.13
15:37:43 -06'00'

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-0154(12)11 PIN: 12566
 Location: Bangerter Hwy; 4 Locations; 11400 South to 5400 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 = 80,000	Projected % Trucks:	6 %
Projected:	25 Years AADT = 115,000	Projected % Trucks:	6 %
Terrain:	Rolling	Posted Speed:	60 mph
Project Design Life:	Years	Design Speed:	65 mph
Design Vehicle:	WB-67		

Geometric Data:

Number of Lanes:	6	Clear Zone Distance:	30 ft.
Pavement Width:	97 ft.	ROW Width:	200 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	Accident History Years:	2012-2014
Severity	N/A	N/A	Date of OSR:	2/18/2016

Remarks:

Accident data is not applicable due the at-grade intersections will be converted to grade separated interchanges.

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 to 5400 South

Adjoining Section Geometry Compatibility:

Direction: North Pavement Width: 49 Shoulder Width 0
Shoulder Type: N/A (No Shoulder)
Compatibility: Lanes are compatible

Direction: South Pavement Width: 49 Shoulder Width 0
Shoulder Type: N/A (No Shoulder)
Compatibility: Lanes are compatible

Programmed Future Improvements:

Cost Data:

Project Cost as Proposed:	\$208,000,000.00
Additional Project Cost to Attain FHWA 13 Critical Elements (Design Exceptions):	\$770,000.00
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:

Reduced inside shoulders for median light poles and median sign structure foundations.
Along Bangerter at:

11400 South:
2 High Mast Poles

9000 South:
3 back to back cobra head light poles on top the median barrier
1 butterfly sign structure north of 9000 S

7000 South:
5 back to back cobra head light poles on top the median barrier

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 to 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 | 13. Lateral Offset to Obstruction | | |
- (Notify FHWA on any changes on the NHS and STRAHNET routes. See detailed instructions for more information.)

Design Exception #1		Additional information in attached file:		
Element:	Shoulder Width	Existing	UDOT Standard	Proposed
Location:	Inside Shoulder Project Wide Various Locations	12'	12'	10'

Mitigation: None

Remarks: The shoulder widths at overhead sign locations will be reduced by 2 feet in both directions to accommodate the overhead signs. The shoulders will be immediately widened out to meet standards outside of the sign structure limits.

In order to meet the shoulder width standard at the overhead sign locations Bangerter Highway would need to be widened by an additional 4 ft (2 ft in each direction) at all sign locations. This would result in additional construction costs of approximately \$70,000 as well as additional impacts to right-of-way.

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 to 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 | |

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 to 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*			<input type="radio"/> Guardrail	<input type="radio"/> Precast Barrier
Height				
Attached			<input type="radio"/> Yes	<input type="radio"/> No
Meets Standards	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> 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 to 5400 South

Approval / Signatures:

Prepared and Submitted by: Justin A Beddoes



Justin Beddoes

Comments:

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-R299(210)

PIN: 12566

Location: Bangerter Hwy; 4 Locations; 11400 South to 5400 South

Description: 4 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: BA 1C

Spec/Dwg Name: Conc Barrier Shoulder UDOT Standard: 1.0'

Proposed Deviation: 0.0'

Explanation of Deviation and Mitigation Measures:

This will reduce the overall width of the mainline and ramp pavement, which will minimize the foot print of each interchange; It is proposed that 42 inch Cast-in-place Concrete Half Barrier will be used for this project. The barrier will have #8 bars dowelled into the concrete pavement at a spacing of two-foot intervals. This is considered a rigid barrier, which will not deflect. The standard drawing does not define why the 1-foot is required behind the barrier so whether it's part of the deflection area or if it is for being able to construct the barrier on the pavement is not known. It has been demonstrated on recent projects that the additional width is not needed for contractors to install the barrier properly. Therefore, we have determined that by eliminating this additional foot it does not create a safety concern or constructability problem

Safety Impacts: No safety impacts

Cost to Attain UDOT Standard: 190,000

Practical Design :

No

Total Project Cost Savings Identified Using Practical Design:

Utah Department of Transportation Deviation from UDOT Standards



www.udot.utah.gov/go/designexceptionprocess

12566

S-R299(210)

Bangerter Hwy; 4 Locations; 11400 South to 5400 South

Approval / Signatures:

Comments:

Prepared By

Marwan
Farah

Digitally signed by
Marwan Farah
Date: 2016.09.27
08:39:27 -06'00'

UDOT Project Manager

Comments:

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.

and must be submitted and Approved as an Alternative Technical Concept (ATC). Approval of an ATC does not constitute approval of a design deviation as defined in the SDDM.

When this Section refers to “approval” request acceptance using the Structural Design Criteria Deviation Request template and Structural Design Criteria Deviation Acceptance form found on the UDOT website. The Structural Design Criteria Deviations request cannot be used to request approval for design that does not meet requirements. Structural Design Deviation Requests must include justification for the request. ~~Deviation requests will not be reviewed during the Proposal development.~~ Submit and receive approval for requests for deviations in accordance with Part 3 (Quality Program). Submit deviations and receive approval before incorporation into the design and before each Milestone Review.

17B. REQUIREMENTS

The requirements set forth provide Project specific clarification and supplement the requirements in 17A-1.

17B-1 Materials

17B-1.1 Structural Concrete

See Part 5 (Special Provisions and Exceptions), Section 03310M (Structural Concrete).

17B-1.2 Structural Concrete for Decks and Approach Slabs

See Part 5 (Special Provisions and Exceptions), Section 03312S (Structural Concrete for Decks and Approach Slabs).

17B-1.3 Penetrating Concrete Sealer and Concrete Coating

Seal or coat all columns, bent caps, abutment seats and exposed faces, wing walls and parapets on new and existing bridges. Meet the requirements in Part 4-07 (Landscaping and Aesthetics). Show required limits of sealing or coating on the plans.

17B-1.4 Prestressed Concrete Members

Use low-relaxation strand from plants certified by the Precast/Prestressed Concrete Institute (PCI).

17B-1.5 Post-Tensioning Steel

All personnel grouting post-tensioning ducts must be American Segmental Bridge Institute (ASBI) or PCI -certified as grouting technicians.

17B-1.6 Reinforcing

Stainless steel reinforcing conforming to ASTM A 955 Type XM-28 may be used.

17B-2 Design

17B-2.1 Loads and Forces

Comply with the following minimum design and load requirements as follows:

- A. **Uplift:** Proportion the bridge spans to eliminate uplift at supports due to non-seismic loads. Designs resulting in uplift at the supports require approval. Approval is not required when widening existing structures with uplift at supports.
- B. **Wind Forces.** Use wind exposure category C for design.

support conditions necessitated by the chosen method of moving the bridge. Specify the maximum anticipated and maximum allowable deflections for all stages of construction.

- C. **Bridge Movement System:** When transporting the bridge using SPMTs, include a 10 percent contingency factor for loss of support or function of individual axles.
- D. **Placement Tolerances:** As shown on the RFC plans.
- E. **Utility Agreements and Mitigation Plans:** Obtain and provide written agreements to cross all affected above- and below-ground Utilities. Include in each agreement a plan to mitigate Utility issues via partial shut-down of Utility, complete shut-down of Utility, redistribution of load, etc.

17B-3 Bridges

17B-3.1 Bridge Geometry

A. Geometric Layout (including Cut-and-Fill Slopes and Retaining Walls):

- 1. Modifications from the RFP and the design provided as Reference Documents for the following structure geometrics require Approval:
 - a. Horizontal alignment shift greater than five feet;
 - b. Increasing structure skew greater than five degrees;
 - c. Span configuration (number of spans and/or span length proportions);
 - d. Locations of retaining walls relative to the abutments and wingwalls including changes to the abutment type or shape.
 - e. Deck Slope: Provide a minimum profile grade of 0.5% measured from the high point to the ends of the bridge to accommodate deck drainage. Do not use deck drains to deviate from the minimum profile grade required
 - a. Evaluate the potential for ponding due to flat profiles and residual camber or long-term deflections. Adjust the profile to prevent ponding.
 - b. Do not place the low point of profile on the bridge. See 17B-2.4 (Prestressed Girders) and Part 4-15 (Roadways) for additional requirements.
 - c. See Part 4-04 (Drainage) for additional deck drainage requirements.-
 - a.d. Do not use deck drains.

B. Vertical Clearances: Provide the following minimum vertical clearances for all new structures whether in a temporary or final location:

- 1. During Construction: Do not reduce the vertical clearance for a bridge over a road from the minimum existing vertical clearance or 16'-0", whichever is greater. For vertical clearance less than 16'-6", provide a mitigation strategy for Approval. The Department approves all submittals to address any impacts to the structure.
- 2. Bridges over railroads: 23.83 feet.

- 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 [the Department Utility Database Template 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 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 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. Coordinate all Work within the USBOR's Aqueduct Easement through the single point of contact listed in the Project Agreement and receive approval from the USBOR /JVWCD prior to performing any Work within the USBOR's Aqueduct 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

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2. CenturyLink Statewide Utility Relocation Agreement (Executed)
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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 (Executed)
10. Rocky Mountain Power (PacifiCorp) Statewide Utility Relocation Agreement (Executed)
11. Rocky Mountain Power (PacifiCorp) Project Agreement No. 1 (Executed)
12. South Jordan City Master Utility Agreement (Draft)
13. South Valley Sewer District Master Utility Agreement (Executed)
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~~Executed)
18. Welby Jacobs Canal (~~Revised~~ Draft)
19. City of West Jordan Master Utility Agreement (~~Draft~~Executed)
20. Zayo Group, LLC Master Utility Agreement (~~Partially~~-Executed)



- 25914

**A T & T CORP.
MASTER UTILITY AGREEMENT**

THIS MASTER UTILITY AGREEMENT, made and entered into this 12 day of Sept, 2016, by and between the **Utah Department of Transportation**, ("UDOT") and **AT&T Corp.**, doing business as AT & T Corp., a Registered Corporation in the State of New York licensed to operate 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, 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 necessitated by the Project with the exception of cable/hand hold procurement, pulling, and splicing; and

WHEREAS, the Company will perform the necessary design review, inspection, cable/hand hold procurement, pulling, and splicing 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 Rob Williamson, telephone number (208) 338-2816, and e-mail rwilliamson@att.com.

After awarding the Project, UDOT will provide the Company with the Design-Builder contact information, hereinafter referred to as "Design-Builder Third Party Manager".

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:

- a. The Company requires two 2 months per location to engineer Utility Work estimates.
- b. Exercise all due caution while working near the facilities in order to prevent damage to the facilities.
- c. To notify Company by telephone at (800) 252-1133 at least 48 hours prior to performing any construction, demolition or repairs at the facilities location.
- d. To perform construction, demolition, repair, modifications, additions, and any other activities in compliance with all applicable laws and regulations and in a manner that does not interfere with the operations of Company.

6. UDOT TO DESIGN AND CONSTRUCT A PORTION OF UTILITY WORK

UDOT shall perform the necessary design work, cost estimating for its Utility Work, field and office engineering, furnish all materials (except cables and hand holds necessary to accommodate the Utility Work), 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 shall protect existing facilities, including services, which are not to be relocated or adjusted, belonging to Company after notice to and in coordination with Company.

UDOT will supply as-constructed plans for the Utility Work it performs, in AutoCAD format, upon completion of any required Utility Work.

7. COMPANY TO PERFORM 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, hand holds, pulling, and splicing, necessary to accommodate the Utility Work of its facilities on the Project. The Company requires 30 days' 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 COMPANY PERFORMED 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

UDOT's Field Representative, 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, 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
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 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. 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, which by way of illustration can include, but is not limited to the following:

- a. riot, war, invasion, act of foreign enemies, hostilities, acts of terrorism, civil war or rebellion;
- b. tornados, earthquakes, flood, fire or other physical natural disaster; and
- c. strikes at a national level or industrial disputes at a national level, or strike or industrial disputes by labor not employed by the affected party, its subcontractors or its suppliers and which affect an essential portion of the works but excluding any industrial dispute



which is specific to the performance of the utility relocation or this Agreement.

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 effected 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. UDOT shall not be responsible for any costs or losses to the Company caused by the event of force majeure.

27. 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.



Project No. S-0154(12)11, Salt Lake County
4 Interchanges on Bangerter Highway
AT & T CORP
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.

AT & T Corp.

Alvin S. Richards

Title: Senior Technical Project Mgr.

Date: 8/4/16

Recommended For Approval:

Utah Department of Transportation

Alana Spurlin
Title: Utility and Railroad Leader

[Signature]
Title: Project Director

Date: 9/12/16

Date: Sept 12, 2016

Approved as to Form

UDOT Comptroller Office Contract
Administrator

Renee Spruce
Title: Assistant Attorney General

Cherise Young
Title:

Date: 09/19/2016

Date: 9-21-16



**AT & T CORP
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 **AT & T**, a Registered Corporation of the State of New York licensed to operate 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:

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, Rob Williamson, Telephone No. (208) 338-2816, email rlwilliamson@att.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.



Project No. S-0154(12)11, Salt Lake County
4 Interchanges on Bangerter Highway

AT & T CORP

Charge ID No. 71939 PIN 12566

EXHIBIT A – SAMPLE SUPPLEMENTAL AGREEMENT

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.

AT & T Corp.

Title: _____

Date: _____

Recommended For Approval:

Utah Department of Transportation

Title: Utility and Railroad Leader

Title: Project Director

Date: _____

Date: _____

UDOT Comptroller Office Contract
Administrator

Title:

Date: _____



178260

Project No. S-0154(12)11, Salt Lake County
4 Interchanges on Bangerter Highway
CENTURYLINK QC

25912



Charge ID No. 71939 PIN 12566

CenturyLink™

CENTURYLINK QC PROJECT AGREEMENT

Supplement to Statewide Utility Relocation Agreement, Finance No. 158015

THIS PROJECT AGREEMENT, made and entered into this 12 day of Sept, 2016, 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.



Project No. S-0154(12)11, Salt Lake County
4 Interchanges on Bangert Highway
CENTURYLINK QC
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 written above.

QWEST CORPORATION DBA CENTURYLINK QC,
A Registered Corporation in the State of Colorado

By: K.C. [Signature]
Title: Mgr Engineering, Construction
Date: 8/24/16

Recommended For Approval:

Utah Department of Transportation

[Signature]
Title: Utility and Railroad Leader

[Signature]
Title: Project Director

Date: 9/6/16

Date: Sept 12, 2016

Approved as to Form

UDOT Comptroller Office Contract Administrator

[Signature]
Title: Assistant Attorney General

[Signature]
Title:

Date: 09/19/2016

Date: 9-21-16



178263

Project No. S-0154(12)11, Salt Lake County
4 Interchanges on Bangerter Highway
CITY OF WEST JORDAN

25915 Charge ID No. 71939 PIN 12566

CITY OF WEST JORDAN MASTER UTILITY AGREEMENT

THIS MASTER UTILITY AGREEMENT, made and entered into this 12 day of Sept, 2016, by and between the **Utah Department of Transportation**, ("UDOT"), and the **City of West Jordan**, a Municipal Corporation of the State of Utah, ("City") 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 No. 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 City facilities within the limits of the Project which may necessitate the relocation, protection, or adjustment of the facilities, ("Utility Work"); and

WHEREAS, the City desires for the Design-Builder to design and perform the Utility Work on the City's facilities necessitated by the Project; and

WHEREAS, the City 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 City'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 aspndlove@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.

City's contact person is David Murphy, telephone number (801) 569-5074, and e-mail davidm@wjordan.com.

After awarding the Project, UDOT will provide the City 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 City's facilities and requirements for inclusion in this Agreement and the Request for Proposals, UDOT gave the City 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 City.



5. PROJECT COORDINATION

The City requested that UDOT include items of Utility Work for relocating and adjusting City's facilities in the Project.

During the development of the Project design, the City and UDOT, along with its Design-Builder, shall consult as necessary in an effort to determine if conflicts with the City's facilities can be avoided. If Utility Work for the City'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 City's facilities. The City 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 City's facilities.

6. CITY REQUIREMENTS

UDOT will comply with the following City Utility Work requirements:

- a. The City will require 14-day advance shut down notification for all water and sewer connections. A copy of the City's Water System Disruption of Service Approval Process is marked Exhibit "A" that is incorporated by reference.
 - i. Notifications shall include, but are not limited to the following:
 - 1. Scope and schedule of work.
 - 2. City water, storm drain, and sewer system activities.
 - 3. City 16-inch water feed connection activities as it relates to the BOR Jordan Aqueduct Reach 2 & 3.
 - 4. Lateral connections to homes, businesses, and service retirements at all property takes and/or incidental work activities.
 - ii. Allow 14-days for review and approval from the City.
- b. UDOT will supply as-constructed plans, in AutoCAD version 16 format specified by the City, upon completion of any required Utility Work including betterment work.
- c. Coordinate Project Work and Maintenance of Traffic activities/requirements for City's independent project for its 2017 Master Plan Sewer Improvements crossing Bangerter Highway at 3200 West.
 - i. City shall request a permit from UDOT prior to beginning its 2017 Master Plan Sewer Improvement work.
- d. Approval of plans in an executed Storm Drain Agreement(s) prior to contributing temporary and permanent Project storm drain into City system.

7. UDOT TO DESIGN AND CONSTRUCT CITY'S UTILITY WORK

UDOT will schedule and meet with the City to review the design and scheduling of the Utility Work for the City'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 design the Utility Work in accordance with City's standards regularly followed by the City in its own work and not considered a betterment. In the event of a conflict between UDOT and City standards, the higher standard will be applied.



- i. A copy of the City's standards can be found at <http://www.wjordan.com/Engineering.aspx?pgID=3.7.1> that is incorporated by reference.
- b. UDOT will secure permits required for Utility Work of City's facilities.
 - i. A copy of the City's Encroachment Permit is marked Exhibit "B" that is incorporated by reference.
 - ii. A copy of the City's Demolition Permit is marked Exhibit "C" that is incorporated by reference.

8. **RIGHT-OF-WAY**

Any easements or replacement right-of-way required in conjunction with the Utility Work of City's facilities will be acquired by UDOT in accordance with the requirements of Utah Administrative Code R930-8.

9. **BETTERMENT WORK**

City Betterment Work is described in attached Exhibit "D" that is incorporated by reference.

City Aesthetics and Landscaping Betterment Work is described in attached Exhibit "E" that is incorporated by reference.

If the City desires to include additional 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 City's desired betterment work that is not required by the Project shall be at the sole cost of the City 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 City.

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 City 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 City prior to start of the Utility Work. A copy of the format of the proposed supplemental agreement is marked EXHIBIT "F" that is incorporated by reference.

The City will require a 2 week review and approval period for any final supplemental agreement submitted to the City by UDOT. The City does not require council review for supplemental agreement approval.

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 CITY BEFORE BEGINNING UTILITY WORK

UDOT will notify the City at least 2 business days in advance of beginning any Utility Work covered by any supplemental agreements hereto, to allow the City 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.

12. CITY TO NOTIFY UDOT

City's personnel shall notify UDOT's Field Representative upon arriving and leaving the Project site for verification of inspecting Utility Work. City's personnel will comply with all applicable OSHA and Project safety requirements while within the Project limits.

13. INSPECTION

The City shall provide on-call engineering support by City'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 City's facilities installed by UDOT.

- a. The City'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 City's facilities in accordance with the plans and specifications provided and/or approved by the City, including changes or additions to the plans and specifications, which are approved by the Parties hereto.
- b. The City shall immediately notify UDOT's Project Representative and the Design-Builder Project Representative of any deficiencies in the Utility Work on the City's facilities. The City 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 City's concerns within 24-hours of written notification.
- d. The City, through its inspection of the Utility Work, will provide UDOT's Project Representative with information covering any problems or concerns the City 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 City of its duty in the performance of the Utility Work or to ensure compliance with acceptable standards.



14. DAILY RECORDKEEPING

UDOT's Resident Engineer will keep daily records of the inspection performed by the City. Daily inspection records will be in duplicate on a form to be prepared by the City 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 City or its authorized representatives. Copies of the inspection records shall be retained by the parties to this Agreement.

15. REIMBURSEMENT

UDOT will not reimburse the City for costs incurred by City personnel for design review, observation, inspection, and operation of valves performed as part of their regularly assigned duties. Should it become necessary for the City to procure outside services to perform design review, observation, or inspection to accommodate UDOT's Utility Work and Project schedule, the City shall notify UDOT. Upon concurrence by UDOT, a supplemental agreement for the cost of the services will be executed at which time the City may procure outside services through appropriate solicitation.

16. SUBMITTAL OF ITEMIZED BILLS

The City shall submit itemized bills covering the actual costs incurred for outside services to perform design review, oversight, and inspection 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 by the City on the Project. Otherwise, previous payments to the City may be considered final, except as agreed to between the Parties in advance.

UDOT will reimburse the City 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 City 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 City.

17. SALVAGED MATERIALS

All materials from City'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.

18. RIGHT TO AUDIT



UDOT and the Federal Highway Administration shall have the right to audit all cost records and accounts of the City 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 City has been underpaid, the City will be reimbursed by UDOT within 60 days upon submission of additional billing to cover the underpayment. Should this audit disclose that the City has been overpaid, the City will reimburse UDOT within 60 days of notification of audit findings in the amount of the overpayment. For purpose of audit the City is required to keep and maintain its records of outsidess services covered herein for a minimum of 3 years after final payment is received by the City from UDOT.

19. ACCEPTANCE AND MAINTENANCE

Upon completion of the Utility Work of City facilities by UDOT, the City will accept, own, and maintain its own facilities. The City shall be the sole owner of the facilities upon completion of the Project unless otherwise agreed to by the Parties. To the extent it may lawfully do so, City further agrees to relieve UDOT from any responsibility or liability that may result from its new facilities or the operation thereof.

20. ACCESS

It is understood that access for maintenance and servicing of City's facilities located on the right-of-way of the Project will be allowed only by permit issued by UDOT to the City, and that the City will obtain the permit and abide by conditions thereof for policing and other controls in conformance with Utah Administrative Code R930-7.

21. INDEMNIFICATION

UDOT and the City 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.

22. MISCELLANEOUS

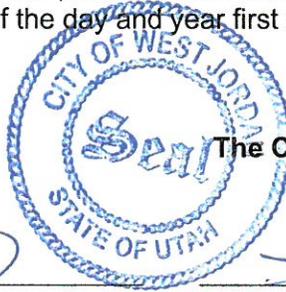
- a. Each Party agrees to undertake and perform all further acts that are reasonably necessary to carry out the intent and purpose of this Agreement at the request of the other Party.
- b. This Agreement in no way creates any type of agency relationship, joint venture, or partnership between UDOT and City.



- 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.



The City of West Jordan

ATTEST:

Melanie Buss

[Signature]

Title: City Clerk Melanie Buss

Title: Mayor Kim V Rolfe

Date: 8/24/16

Date: 8/24/16

(IMPRESS SEAL)

Recommended For Approval:

Utah Department of Transportation

Arlene Spurr
Title: Utility and Railroad Leader

[Signature]
Title: Project Director

Date: 9/12/16

Date: Sept 12, 2016

Approved as to Form

Comptroller Office

[Signature]
Title: Assistant Attorney General

[Signature]
Title: Contract Administrator

Date: 09/19/2016

Date: 9-21-16

EXHIBIT A



Department of Public Works

STANDARD OPERATIONAL GUIDELINE

Subject: Water System, Disruption of Service Approval Process	SOG No.: WS002
Origin Date: May 1, 2010	Revision Date: April 4, 2011
	Page(s): 5

1. INTRODUCTION

- A. Purpose: To allow for the planning, proper coordination, notifications and approvals required for a safe and timely disruption of water service to City water customers in cases of planned construction, due to either City capital improvement projects or private development projects. Planning for such disruptions must begin during the design phase of the project, and continue through construction and project acceptance phases of the work.
- B. Scope: Affects Engineering, Construction Inspections, Water, and Streets divisions of the Public Works Department. Also affect City Capital Improvement Projects and private development projects.
- C. Definitions:
- D. Precautions/Safety: Trench safety and planning for safe evacuation of staff from areas where pipelines may be under construction.
- E. Responsibility: The City's Project Engineer has primary responsibility for this work. Others such as the City's Water Division also have key roles in the work, and the City's or Developer's Contractor has a key role to play in the safe and timely completion of the work.
- F. Equipment:
- G. Notifications: The Director of Public Works is to be notified at least 24-hours in advance of the actual shut-down by email.

2. PROCEDURE

Water disruptions or outages which are a result of planned construction projects are required to be coordinated from the inception of the project through construction. This means that all of the Department divisions indicated above, will need to be continually coordinated with during all phases of the project. The paragraphs below indicate the various phases of the project, which divisions and positions are involved, and how these activities are to be carried out. Extreme carefulness must be observed in planning and carrying out these activities as

EXHIBIT A

they can significantly affect City water customers and others

- A. Design Process: As part of the design process, the City's Project Engineer and Consultant are to keep all affected parties involved and informed. This is critical to the success, safe, and timely completion of the construction and water service disruption/outage.
- 1) Adequate System Information: This process assumes reasonable amounts of adequate water system information is available. Existing drawings must be researched, and potholing will be required to fully answer any questions the Project Engineer and Consultant may have. Reasonable amounts of funds spent on potholing are worth the money and this area of project investigation should not be short-changed. It is understood that full information is not possible in many instances, but efforts need to be made to have as much information available if reasonably possible.
 - 2) Existing As-built Drawings: Use existing as-built drawings to begin with and improve on them through additional coordination with Field Staff and through potholing. The GIS/Technical Support Division of the Department is responsible for managing the as-built drawings with assistance for all of the other divisions in the Department.
 - 3) Roadway Intersection Drawings: Use the existing Roadway Intersection Drawings which show all valves, water lines, other utilities, improve these as needed, and then include them in the Released for Construction Drawings. Ensure the drawings are as correct as possible before bidding. If the Project Engineer does not feel comfortable with the accuracy of these drawings, they should be noted as 'schematic drawings' with indications that locations, sizes, etc. are for general information only and are not to be relied on.
 - 4) Planning/research of Needs and Impacts (Preliminary): All Engineering, Inspection, O&M, and Consultant staff is to participate in this planning work for water outages. The following need to be included:
 - Identify options for providing water service.
 - Field Research of Water System: Water Division is to identify existing valves, mark, and exercises them to make sure they operate properly.
 - Impacted Customers – Staff is to identify the water customers of the City who will be impacted by any disruption or outage of the Water System.
 - Night outage(s) – If night outages are required, coordinate with the SLVHD for work to be done between the hours of 10 p.m. and 7 a.m. O&M staff will also need to be coordinated with for actual water valve closures and only O&M staff is to open/close these valves.
 - 5) Identification of Possible Water Outages: Project Engineer/Consultant identifies possible/required shut-downs as part of the design process. These are to be noted in the project Contract Documents and conditions indicated for water outages.
 - 6) Engineering Inspector Review of Contract Documents: The Engineering Inspector is to review the 'Released for Construction Drawings', and coordinate with the Project Engineer and remainder of the Project Team on how to address outage(s).
 - Determine proposal for how the work might be done. Suggest or require process to contractor as part of Contract Documents.

EXHIBIT A

- 7) **Constructability Review Meeting:** As part of the design process, a meeting or set of meetings as needed, with the design staff, project engineer, O&M staff, and inspection staff to identify potential outages. The Engineer, O&M staff, and Inspector are to then begin working through how to plan for these outages and the impacts of those outages.
 - 7) **PW O&M Review of Drawings –** Engineering staff are to make sure O&M staff has reviewed the preliminary documents (30-50% review) and their comments have been incorporated into the final documents (80-90%), prior to putting the Documents out for bid.
- B. **Preconstruction/Construction Meeting Coordination:** As part of the process, a mandatory preconstruction/construction meeting is to be held where water disruptions/outages are discussed. City staff is to express their concerns and present the information they have prepared and require the Contractor to develop a written water disruption/outage plan.
- 1) **Scheduling:** Schedule the meeting through Outlook at least 2 weeks in advance of the meeting.
 - 2) **Persons to Attend:** The Project Engineer, Consultant, Engineering Inspector, Water Division staff and Contractor must be invited and must attend. If the Contractor's Superintendent does not show up at the meeting, the meeting is to be cancelled and rescheduled.
 - 3) **Communications:** Establish City and Contractor chain of command and which persons are the point-to-point contacts on the City's, and the Contractor's sides of the work.
 - 4) **Agenda Item:** Water service disruptions/outages are to be identified and discussed as part of meeting agenda. The Engineering Inspection Supervisor is responsible for this meeting and this item.
 - 5) **Contractor's Proposal and Schedule:** The Contractor is to take all of the available information available and propose methods/processes/timelines for disruption/outages. Contractor is to prepare and submit a Contract Schedule for the work to the Project Inspector.
 - 6) **Approval Process:** Once the Contractor has submitted a proposed plan and schedule for the disruption/outage, City staff is to meet and go over the Plan to make sure it meets all of their requirements. Corrections need to be submitted back to the Contractor in writing and a new Plan prepared. The Plan is not approved until the Water Division, Engineering Inspection, Engineering, and Contractor, signs off on the Plan.
- C. **Request for Water Disruption/Outage:** The Contractor is to make a written request for any water disruption or outage he feels is necessary, as part of the project. The following applies to this process:
- 1) Request is made by the Contractor to Engineering Inspector and must include:
 - o Request indicates answers to the questions of 'what, when, where, why'.
 - o The request must be made in writing. A letter or email will suffice as long as it contains the correct information.

EXHIBIT A

- The Water Division requires a minimum of 72-hours notice to begin customer notification of outage and implementation of the City's portion of the Plan in the Field.
 - 2) Engineering Inspector begins coordination with Water Division through the Water Superintendent. The Water Superintendent will coordinate with his staff including the Water Operations Supervisor.
 - 3) Notification of Utilities Manager and Public Works Director: Both the Utilities Operations Manager and the Public Works Director are to be kept up-to-date on planning and approval processes and especially as the project moves closer to the actual water service disruption/outage.
- D. Planning/Research of Needs and Impacts: The purpose of this section is to take the Plan submitted by the Contractor and make sure that it will actually work. City staff is the most familiar with the Water System, and will have the final approval on whether the Plan is approved. The following steps need to be considered in doing this phase of the work.
- 1) Engineering inspector schedules meeting with Water Division staff/Contractor to coordinate outage.
 - 2) Staff brings all information developed as part of the design process and proposals from the Contractor.
 - 3) Project Team develops reviews the proposed plan and develops an actual written water outage plan and prepares a scope of work, or step by step plan, of what is going to be done. This will include detail such as which pipe will be cut first, which one second, which valves will be closed, how much time will it take, etc. Make sure everyone involved in the outage: contractor, contractor's on-site superintendent, workers, City project engineer, city inspector, and O&M staff all have copies and understand the order of the work. Deviations must be coordinated with everyone (Refer to KHP, Mid-Jordan Light Rail, Redwood PNR Waterline Tie-in plan. Includes "Overview", "Safety", "Quality", "Compliance", "Survey", and "Discussion Items").
 - 4) Plan for Contingencies – Look at all drawings, identify the scope of work (work to be done), and identify contingency plans if things should go wrong. For instance, if we cut this pipe, do we understand how to close off all flow to the pipe and have we tried it out before hand.
 - 5) Additional Potholing – If the Contractor feels that additional potholing is required, work out a solution for doing so and pay him, if additional compensation is warranted.
 - 6) Obtain all Permits: Make sure all appropriate permits have been obtained as part of the planning process. This may include:
 - SLVHD Permit - for night work
 - UDOT Permit
 - City of West Jordan Encroachment Permit
 - Others as needed
- E. Pre-activity Meeting/Actual Water Disruption/Outage: Just prior to the actual beginning of the outage, and work preliminary to the outage, a pre-activity meeting is to be held to discuss in detail the work to be done as part of the water disruption/outage. The following need to be discussed:

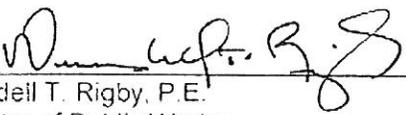
EXHIBIT A

- 1) Communications - Reaffirm City and Contractor's organizations, who are in charge, and who are the point-to-point contacts on the Contractor's side and who on the City's side. Make sure everyone has the correct phone numbers.
 - 2) Implement final water outage plan – Needs to include priority of construction: which lines to cut first, second, etc. Plan needs to include a flushing plan and safety plan.
 - 3) Contingency Plan(s) - Implement plan(s) for contingencies as required.
 - 4) Schedule – execute work within appropriate time windows.
 - 5) Permits: Make sure all the permits have been obtained.
 - 6) Approval form: (Do you want an approval form where everyone signs off on the outage, basically a permit?) (1st comment – No – cover page of plan/excavation permit is the form.)
 - 7) Inspections and Testing: Inspections and sampling are to be accomplished per City and AWWA standards.
 - 8) Documentation of Work: The Engineering Inspector is responsible for taking pictures of the work with excavation open, take measurements and survey of critical points to document what is in the intersection, or other location, for future reference.
 - 9) Questions regarding Unknown Pipelines/Conduits/Structures: If there are questions about what pipelines, conduits do, identify them prior to closing the excavation.
 - 10) As-built Drawings: The Contractor is responsible for ensuring as-built drawings are prepared and meet the Engineering Inspector's requirements, and are turned over to the Inspector as the end of the project. The Engineering Inspector is responsible for collecting all as-built information from the Contractor and transferring them to the Project Engineer. The Project Engineer will work with the GIS Division is making the changes to the City's as-built drawings to keep them up-to-date.
- F. Post-activity Meeting: Once the work is complete, all City and Contractor are to meet to go over the actual outage. Go over what went right and wrong and improve the process.
- 1) Process for as-built drawings – City Engineer/Supervising Inspector need to look at the requirements for as-building drawings and make sure they are complied with.

3. REFERENCE DOCUMENTS

- A City of West Jordan, Water Design & Construction Standards.
- B City of West Jordan, Encroachment Ordinance and Permit.

Approved by:


Wendell T. Rigby, P.E.
Director of Public Works

Date 4/4/2011

EXHIBIT B



City of West Jordan Public Works
Engineering Department
8000 South Redwood Road
West Jordan, Utah 84088
801-569-5070

Public Right-of-Way Encroachment Permit Application and Agreement

Company Name:	Permit No.:
License No.:	Date Issued:
Applicant Name:	Cost of Permit:
Title:	Check No.:
Address:	Receipt No.:
City, State, Zip:	Work No.:
Contractor Performing Work:	Cell No.:
Nature of Work: Telephone • Electrical • CATV • Gas • Water • Stormdrain • Wastewater • Secondary Water • Other:	Email:

FAILURE OF THE PERMITTEE TO FOLLOW THE PROVISIONS OF THIS PERMIT SHALL RESULT IN THE RETRACTION OF THE PERMIT BY THE CITY AND LOSS OF PRIVILEGE TO WORK WITHIN THE CITY'S RIGHT-OF-WAY.

1. Standards/Location of Work

The above indicated applicant is hereby granted subject to **Title 8, Chapter 8** of the City's Municipal Code, the City's Policies and Design Criteria Manuals, the Construction Specifications Manual, Standard Drawings Manual, State Occupational Safety and Health Laws, Manual on Uniform Traffic Control Devices (MUTCD), Instructions to Flaggers, the approved plans, and any special limitations set herein, permission for the purpose of:

_____ within the right of way limits in the following locations _____

2. Prior to Work

Prior to Work being performed in the public right-of-way, the Permittee will make proper provisions for protecting the public's safety and property. This permit is a binding agreement between the Permittee and the City and shall be only for the location listed on this permit.

3. Permit Fee

The City of West Jordan Encroachment Permit Fee shall apply, for an excavation in public right-of-way, as listed on the Current Uniform Schedule of Fees and Services Charges:

_____ feet long, _____ feet wide, and _____ feet deep.

4. Beginning and Ending of Work

The work permitted herewith shall commence on _____ and shall be diligently prosecuted to completion. The work shall be completed and all disturbed surface or objects restored on or before _____. In the event work is commenced under this permit and the permittee fails or refuses to complete the work, the City of West Jordan may, at its election, fill in or otherwise correct any existing deficiencies at the expense of the permittee and subject to immediate payment by the permittee.

5. Performance Bond and Insurance

The Permittee shall supply to the City a Performance Bond for a period of three (3) years after completion of the work to guarantee satisfactory performance. Amount of the bond shall be determined by the encroachment department upon review of this application. The bond shall be in the name of the Permittee.

Insurance

The Permittee shall provide to the City copies of workers compensation insurance and liability insurance that names the City its elected officials, appointed officials, employees, volunteers, and agents as additionally insured (This verbiage must be a part of your Liability Insurance under Special Items). The Permittee shall be responsible for any liability or personal injury involved through neglect. The Permit Holder agrees to indemnify the City, its elected officials, appointed officials, employees, volunteers, and agents against all claims, demands, costs, damages, attorney fees or other expenses of any kind by such neglect

EXHIBIT B

6. Notice of Work to Begin

Before work permitted herewith is commenced, the permittee shall call in on the inspection line (801) 569-5051 before 3:00 p.m. Commencement of said work is understood to indicate that the permittee will comply with all instruction and regulations of the City of West Jordan (as listed) with respect to performance of said work and that she/he will properly control and warn the public of said work to prevent accident. The Permittee shall inform all emergency services, school districts, UDOT and UTA two (2) working days in advance of any approved road closures or detours.

7. Restoration of Right-of-Way

This permit is issued with the understanding that the Permittee will restore the right-of-way to its original or better condition. Such restoration shall take place within two (2) working days from the time of completion of the Work. If the Permittee fails to meet this obligation within the time indicated herein, the City may make all the necessary restorations at the Permittee's expense.

8. Limits of Work Area

Permittee shall not perform any work on City of West Jordan right-of-way beyond those areas of operation stipulated on this permit. This permit in no way allows the Permittee access to private properties; the individual property owners must grant access.

9. Suspension of Work

If permittee fails to comply with City of West Jordan regulations, specifications or instructions pertinent to this permit, the City Engineer or his duly authorized representative, may by verbal order, suspend the work until the violation is corrected. If permittee fails or refuses to comply promptly, the City Engineer or his authorized representative may issue a written order stopping all or any part of the work. When satisfactory corrective action is taken, an order permitting resumption of work may be issued.

10. Permit Period/Extensions

This permit is valid forty-five (45) days from issue date. The City may grant an extension of time with a written request from the Permittee to the Engineering Department. Such request must be submitted five (5) working days before the expiration date of the permit.

11. On-Site Permit Requirements

A copy of the City's current trench detail, approved plan of the Work, approved traffic control plan, a signed copy of this Permit, and a copy of the City's Public Improvement Standards, Specifications, and Plans shall be on the work site at all times. The City shall be granted access to these papers at all times.

12. Temporary Asphalt Patching

Asphalt patching to roads between October 15 and March 1 will be considered temporary only and must be replaced after March 1 following APWA standards.

Special Limitations:

- Traffic Control Plans, signs and channelizing devices shall conform to MUTCD Standards as a minimum. Traffic Control Plan to be approved by City's Traffic Engineer.
- Contact the inspection line at (801) 569-5051 48-hours prior to the time of lane or shoulder closure, with route, location and duration. Call again when the job is complete.
- This Agreement and/or permit are for City of West Jordan approval only. You are responsible to obtain clearances from UDOT, UTA, railroads, private property owners and other local jurisdictions that you are working with.
- Call for Blue Stakes and check for other utilities in the area prior to excavation.
- Saw cut and tack coat joints. Replace asphalt to the existing depth plus 1-inch, with a minimum of 4-inches, or as directed by City Engineer.
- Untreated Base Course with 97-percent compaction for the full depth of the trench with 6-inch lifts.
- Licensee is responsible for repairing and/or restoring any portion of the roadway damaged during construction.
- Licensee must restore shoulder of highway to its original or better condition to include reseeded, replacing sidewalk, fencing, pipe, culverts or signs removed or damaged during construction.
- Striping is to be replaced with the same material within 48-hours of completion of the permit. The materials must maintain City of West Jordan standard specifications for 6-months.
- No storage of backfill material or pipe will be allowed within the ASHTO Clear Zone. Excavations to be backfilled daily if possible.
- If excavation is within 350-feet of an intersection, permittee is required to contact the City Traffic Engineer for requirements.
- Permittee will comply with all applicable environmental laws.

EXHIBIT B

- All borings shall show an approved cross section showing all other existing utilities, and clearances from such.
- Steel drum vehicles or steel tracked vehicles or equipment shall use minimum ¾ inch plywood over railroad concrete pavement to protect the concrete while crossing the railroad track area.
- For concrete paved roadways, the permittee is responsible for all panels that have 2-inch holes bored into the panel. If these panels fail in the future due to the bores, the Permittee will be required to replace the affected panels.

Accepted By:

My carrying out the activities allowed by this permit is conclusive evidence that I have accepted all provisions, limitations, and restrictions of the permit and attachments, understand and agree to all penalties for failing to comply with them and understand my ability to review a sample permit and applicable attachments at the City Engineer's office.

Permit Applicant:

 Name Title Date

Attach the following documents: **All documents and fees must be paid before an Encroachment Permit will be issued.**

- | | |
|--|--|
| <input type="checkbox"/> Bond (\$10,000 for one cut / \$ 25,000 for multiple cuts) | <input type="checkbox"/> Current copy of Liability Insurance (See #5 for verbiage) |
| <input type="checkbox"/> Traffic Control Plan | <input type="checkbox"/> Site Plan |
| <input type="checkbox"/> Fees Paid | |

Processed and Approved By:		
_____ Name	_____ Title	_____ Date
_____ Name	_____ Title	_____ Date

Inspections

Beginning of Work: Phone call received:	Inspection Completed By/Date:		
Intermediate Work: Phone call received:	Inspection Completed By/Date:		
Intermediate Work: Phone call received:	Inspection Completed By/Date:		
Completion of Work: Phone call received:	Inspection Completed By/Date:		
Final Inspection and Release			
Inspector Approval		Administrative Approval to Release	
Signature	Date	Signature	Date

EXHIBIT C



City of West Jordan
Building & Safety
8000 South Redwood Road
West Jordan, UT 84088
(801) 569-5050
Fax (801) 569-5099

BUILDING DEMOLITION(S)

A Building Permit and fee are required for each building demolition. The fee for a building demolition permit is \$126.25 per building.

Follow these steps to expedite your demolition permit:

1. Fill out a building permit application, with the address, type of structure to be demolished, and contractor(s) information.
2. Submit approval letter from the State Division of Air Quality 801-536-4053. Jobs having Asbestos requires an inspection by a Utah Certified Asbestos Inspector prior to disturbing suspected asbestos. 801-536-4451.
3. Submit approval letter from the Salt Lake Valley Health Department. Ph. 801-313-6626, 788 E Woodoak Lane, Murray.
4. Notify and request disconnection from the following utilities and **provide a signature from the West Jordan Engineering department for water and sewer disconnection.**
5. If contractor/company disturbs or removes painted or coated surfaces greater than 6 sq ft in a room on the interior or 20 sq ft on the exterior of target housing or child-occupied facilities built before 1978, the company may be subject to the *new lead based paint and/or renovation, repair and painting rule*. 801-536-4018

-
- a. Rocky Mountain Power - ph. 888-221-7070
 - b. Questar Gas – ph. 800-323-5517
 - c. West Jordan Water & Sewer
Engineering Department _____
Ph. 801-831-7172 Signature (W.J. Representative) Print Name
 - d. Phone, Cable, and any other service to the building.

The above items must be submitted to this office before a permit will be issued.



CITY OF WEST JORDAN BETTERMENTS

The City has requested the following Betterment Work be included with the Project Work:

7000 Betterment Work

City has provided concept layouts for proposed Betterment Work as shown and described below. Final Betterment Work plans will be memorialized through a separate supplemental agreement between UDOT and the City.

1. Upgrade existing 12-inch sewer to 24-inch sewer from sta. 1+00 to sta. 5+25 +/-.
2. Install new 24-inch secondary water pipeline casing from sta. 1+00 to sta. 6+05 +/-.

9000 South Betterments

City has requested Betterment Work as listed below. Final Betterment Work plans will be memorialized through a separate supplemental agreement between UDOT and the City. City shall be responsible for permitting costs associated with Betterment Work.

1. Upgrade existing 12-inch sewer to 24-inch from Winthrop Circle to approximately 3450 West.
2. Water upgrades:
 - a. Replace existing 10-inch waterline with new 12-inch DIP waterline or equivalent from Winthrop Circle to hospital connection.
 - b. Replace 12-inch waterline with new 12-inch DIP waterline or equivalent from old PRV location to hospital connection.
 - c. Place new 16-inch waterline in same approximate alignment as the existing 16-inch water to replace Zone 1 pipe and connect to Zone 2 transmission with 16 inch pipe. Length of pipe installation shall be based on pressure class.
3. PRV upgrades:
 - a. Combine two existing PRV's vaults in 9000 South into one vault. It is anticipated that the exiting PRV vault located in 9000 South, within the south park-strip, will be a Project Work conflict resulting in Utility Work at UDOT's cost. City requests the existing PRV within 9000 South, within roadway, be placed into the PRV vault being relocated as Project Utility Work. The Utility Work to abandon the 9000 South PRV, within roadway, and to combine the two PRV vaults is pro-rated Betterment Work. Costs of the Betterment shall include, design, right-of-way, materials, and construction exceeding the Project Work conflict requirements.



EXHIBIT E – AESTHETIC AND LANDSCAPE BETTERMENTS

CITY OF WEST JORDAN AESTHETIC AND LANDSCAPE BETTERMENTS

The City has requested the following Betterment Work be included with the Project Work:

UDOT will include the following Aesthetics and Landscaping Betterment Work items into the Project Work. UDOT will supplement up to \$100,000.00 towards each City intersection at 7000 and 9000 South for Aesthetics and Landscaping Betterment Work. UDOT and the City shall enter into supplemental agreements to cover Aesthetics and Landscaping Betterment Work described below. City will be responsible for paying the actual costs greater than \$100,000.00 associated with the Aesthetics and Landscaping Betterment Work items, based on UDOT’s actual quantities placed.

Description of Aesthetics and Landscaping Betterment Work:

Element	Desired City Betterment
<u>Parapets:</u>	1. Add the City of West Jordan logo to one or two visible locations on each bridge at 7000 and 9000 South.
<u>Lighting and Traffic Signal Poles:</u>	1. Matching all City affected streetlights to new LED standards, both arterial and local streetlights. Lights must match Section 16500 and current manufacturer specifications. 2. Traffic Signal Poles shall be black powder coated as minimum standard.
<u>Landscaping Remnant Parcels:</u>	1. Sod, trees, plants, and sprinkler systems installed according to City Parks’ standards, which will be maintained by the City.



**CITY OF WEST JORDAN
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 **City of West Jordan** a Municipal Corporation of the State of Utah, (“City”) 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 requirements as shown in the MUA – City Requirements, are modified as follows:
 - i.
- c. Anticipated duration of Utility Work:
- d. Total estimated cost of City’s (100% reimbursable) outside services: (Detailed Estimate Attached)

2. UDOT will notify the City’s Project Representative, David Murphy, telephone number (801 569-5074, email davidm@wjordan.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.



Project No. S-0154(12)11, Salt Lake County
4 Interchanges on Bangerter Highway
CITY OF WEST JORDAN

Charge ID No. 71939 PIN 12566

EXHIBIT F – SAMPLE SUPPLEMENTAL AGREEMENT

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:

City of West Jordan

Title: _____

Title: _____

Date: _____

Date: _____

(Impress Seal)

.....

RECOMMENDED FOR APPROVAL:

UTAH DEPARTMENT OF TRANSPORTATION

Title: Utility and Railroad Leader

Title: Project Director

Date: _____

Date: _____

UDOT Comptroller Office
Contract Administrator

.....

178247

S-0154(12)11
4 Interchanges on Bangerter Highway
CID 71939 PIN 12566

United States Contract No. 16-LM-40-050350
UDOT Contract No. _____

25873

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

PROJECT AGREEMENT
AMONG THE
UNITED STATES OF AMERICA
AND
UTAH DEPARTMENT OF TRANSPORTATION
AND
JORDAN VALLEY WATER CONSERVANCY DISTRICT

THIS PROJECT AGREEMENT, made this 8th day of September, 2016, pursuant to the Act of Congress of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as Reclamation Laws, and particularly pursuant to Section 10 of the Act of August 4, 1939, (53 Stat. 1187) among the UNITED STATES OF AMERICA, represented by the officer executing this Project Agreement, his duly appointed successor, or his duly authorized representative, hereinafter referred to as the "United States," UTAH DEPARTMENT OF TRANSPORTATION hereinafter referred to as "UDOT," and JORDAN VALLEY WATER CONSERVANCY DISTRICT, hereinafter referred to as "Jordan Valley."

WITNESSETH THAT:

WHEREAS, the United States has constructed and continues to own large projects for the storage and delivery of water; and

WHEREAS, the United States has contracted with various water user organizations to use, care for, operate and maintain its project facilities; and

WHEREAS, as a result, the United States holds real property interests (fee title and easements), hereinafter referred to as "Land Interests of the United States," located throughout the State of Utah which are acquired through the Bureau of Reclamation ("Reclamation"); and

WHEREAS, the United States owns certain project facilities located on the Land Interests of the United States, including the Jordan Aqueduct, and appurtenant structures and improvements, located in the vicinity of SR-154, Bangerter Highway corridor, hereinafter referred to as the “US Facilities”; and

WHEREAS, the Central Utah Project Completion Act (Titles II-VI of P.L. 102-575, as amended) (“CUPCA”) was enacted on October 30, 1992; and

WHEREAS, Section 201(e) of CUPCA transferred Federal oversight responsibility for all phases of the Bonneville Unit of the Central Utah Project (“CUP”) from Reclamation to the Secretary of the Interior (“Secretary”); and

WHEREAS, the Secretary desires to use Reclamation’s engineering and technical services expertise to assist in the actions described herein; and

WHEREAS, UDOT, an agency of the State of Utah, constructed and continues to construct, operate, maintain, reconstruct, and rehabilitate highways throughout the State of Utah for the purpose of providing public transportation; and

WHEREAS, the parties entered into a Memorandum of Agreement 05-LM-40-02720 September 26, 2005, attached as Exhibit A; and

WHEREAS, UDOT will award a design–build contract to a third party, (“Design-Builder”), for the highway project identified as Project No. S-0154(12)11 4 Interchanges on Bangerter Highway (PIN 12566), in Salt Lake County, Utah, hereinafter referred to as the “Highway Project”; and

WHEREAS, UDOT shall require by contract that the Design-Builder administer construction of the Highway Project, including quality control; and

WHEREAS, the Highway Project necessitates expenditures consisting of design engineering and construction for protection of, or encroachment on, or impacts to, or relocation of Land Interests of the United States and/or US Facilities on the Highway Project, hereinafter referred to as “Work”; each encroachment or impact or relocation will be the subject of a separate agreement; and

WHEREAS, it is the desire of UDOT for the Design-Builder to construct the Work within a tightly controlled schedule that includes completion deadlines; and

WHEREAS, Jordan Valley and the Metropolitan Water District of Salt Lake & Sandy (“Metropolitan Water District”) are contractors of the United States, and they care for, operate and maintain Jordan Aqueduct Reaches 2 and 3 (“JA-2” and “JA-3”). These water districts have the right to the capacity of JA-2 and JA-3 (5/7ths Jordan Valley and 2/7ths Metropolitan Water District). The day-to-day care, operation and maintenance of JA-2 and JA-3 have been delegated to Jordan Valley for the benefit of both districts; and

WHEREAS, the United States, its contractors, agents, and assigns will inspect and accept the Work as appropriate to accommodate the Highway Project; and

WHEREAS, for the purpose of expediting the Highway Project, any Work that will impact or encroach on Land Interests of the United States and/or US Facilities will require a separate encroachment or license agreement; and

WHEREAS, it is the desire of UDOT, the United States, and Jordan Valley to enter into this Project Agreement with the understanding that future agreements may be entered into covering Work to be accomplished by UDOT at specific Highway Project locations (“Supplemental Agreements”); and

WHEREAS, in accordance with Utah Code § 72-6-116(3)(a)(ii), UDOT will pay the cost of relocation of US Facilities located on Land Interests of the United States in compliance with 23 C.F.R. §645, subpart A; and

WHEREAS, in accordance with 23 C.F.R. § 645, subpart A, the United States has determined, with the concurrence of UDOT, that accrued depreciation credit is not required as a result of the Work; and

WHEREAS, the US Facilities convey drinking water that serves the residents of Salt Lake County.

NOW, THEREFORE, for good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties agree as follows.

1. SEVERABILITY: Each provision of this Project Agreement shall be interpreted in such a manner as to be valid under applicable law, but if any provision of this Project Agreement shall be deemed or determined by competent authority to be invalid or prohibited hereunder, such provision shall be ineffective and void only to the extent of such invalidity or prohibition, but shall not be deemed ineffective or invalid as to the remainder of such provision or any other remaining provisions, or of the Project Agreement as a whole.

2. HOLD HARMLESS:

- a. In consideration of the United States agreeing to encroachment upon the Land Interests of the United States by UDOT, UDOT hereby agrees to indemnify and hold the United States, its officers, agents, employees, and assigns harmless from any and all claims whatsoever for personal injuries or damages to property when such injuries or damages directly or indirectly arise out of UDOT or its Design-Builder's Work concerning the Highway Project's construction, maintenance, repair, use or the presence of the Highway Project upon the Land Interests of the United States; provided, however, that nothing in this Project Agreement shall be construed as releasing the United States from responsibility for its own negligence. Nothing herein shall be deemed to increase the liability of the United States beyond the provisions of the Federal Tort Claims Act, Act of June 25, 1948, 62 Stat. 989 (28 U.S.C. §1346(b), 2671 et seq.) or other applicable law. Nothing in this Project Agreement shall be construed as a waiver by UDOT of the provisions of the Governmental Immunity Act of Utah (Utah Code Ann. §§ 63G-7-101 et seq.). UDOT's obligation to indemnify shall be limited to the negligence claims allowed by the Federal Tort Claims Act.

- b. In consideration of the United States agreeing to UDOT encroaching upon the Land Interests of the United States, UDOT agrees that the United States shall not be responsible for any damage caused to the Highway Project or related facilities of UDOT, unless such damage is caused by the negligence of the United States or by its contractors, officers, agents, employees or assigns as determined under the provisions of the Federal Tort Claims Act. UDOT hereby releases the United States, its officers, employees, agents, and assigns from liability for any and all loss or damage of every description or kind whatsoever which may result to UDOT from the construction, operation, and maintenance of the Highway Project upon Land Interests of the United States; provided that nothing in this Project Agreement shall be construed as releasing the United States from liability for its own negligence as determined under the provisions of the Federal Tort Claims Act.

- c. UDOT and Jordan Valley are both governmental entities subject to the Utah Governmental Immunity Act. Each party agrees to indemnify, defend, and save harmless the other party 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 and the negligent acts, errors or omissions of its officers, agents, contractors or employees in the performance of this Project Agreement. Nothing in this Project Agreement is intended to create additional rights for third parties or to waive any of the provisions of the Utah Governmental Immunity Act. The

obligation to indemnify is limited to the dollar amounts set forth in the Utah Governmental Immunity Act, provided the Act applies to the action or omission giving rise to indemnification under this subparagraph. The indemnification in this subparagraph shall survive the expiration or termination of this Agreement.

3. PROTECTION OF UNITED STATES INTERESTS: UDOT shall comply with all applicable laws, ordinances, rules, and regulations enacted or promulgated by any Federal, State, or local governmental body having jurisdiction over an issue applicable to the Highway Project.
4. ACCESS: The United States and Jordan Valley reserve the right of reasonable access for them and their respective contractors, officers, agents, employees, and assigns to make investigations of all kinds, dig test pits and drill test holes, and to survey for and construct, use, operate, and maintain US Facilities and other improvements related to or connected to JA-2 and JA-3. However, the United States and Jordan Valley and their respective contractors, officers, agents, employees, and assigns shall not access or perform any work on UDOT's right-of-way unless a permit is obtained from UDOT and such permit holder and its contractors, officers, agents, employees, and assigns comply with the permit requirements. The United States and Jordan Valley, and their respective contractors, officers, agents, employees, and assigns shall have the right to enter UDOT's right-of-way in the event of any emergency to make repairs required to prevent loss of life or significant damage to property. The party exercising such right of emergency access and its contractors, officers, agents, employees, and assigns must 1) provide notice to UDOT of entry onto the right-of-way via UDOT's right-of-way and permits officers as soon as practicable but in no event more than 24 hours after entering the right-of-way; and 2) follow guidelines for traffic control as outlined in the Manual of Uniform Traffic Control Devices (MUTCD).
5. PROJECT COORDINATION — FOR IMPACTS TO LAND INTERESTS OF THE UNITED STATES AND US FACILITIES:
 - a. During the development of the Highway Project design, UDOT will consult with Jordan Valley to determine if conflicts, encroachments, and interference with Land Interests of the United States and US Facilities can be avoided. The United States agrees that Jordan Valley will be the designated point of contact for UDOT and its Contactor to consult and coordinate with during the Highway Project. Jordan Valley will consult and coordinate with the United States and the Metropolitan Water District as necessary during the Highway Project.
 - b. If conflicts, encroachments, or interference with Land Interests of the United States and US Facilities are necessary and/or cannot be reasonably avoided, UDOT will

identify the extent of the conflict, encroachment, or interference and propose a solution. In the event of a relocation of US Facilities, the location to which such facilities are to be relocated must be acceptable to the United States and Jordan Valley.

- c. The United States, Jordan Valley, and UDOT have determined locations of encroachment on Land Interests of the United States and US Facilities which are shown in attached Exhibit B – Bangerter Interchanges Protect-in-Place.

6. DUTIES TO BE INCORPORATED INTO DESIGN-BUILD CONTRACT

a. UDOT's Responsibilities

- i. UDOT may inspect Work items as they pertain to its Highway Project, and UDOT shall be responsible for construction, relocation, or modification of US Facilities.
- ii. UDOT will remove certain longitudinal third-party utilities outside of the Land Interests of the United States upon completion of the 5400 South interchange Project Work as shown in Exhibit C – BOR Easement - Utility Relocation.
- iii. If Work is required on US Facilities, UDOT shall be responsible to identify the conflicts, encroachments, or interference, provide Jordan Valley with Highway Project design plans as early as possible, and schedule and meet with Jordan Valley to review the details of design, construction, estimates of cost, and scheduling for Work at specific locations within the Highway Project.
- iv. UDOT shall advise Jordan Valley of the approximate time required for completion of Work and shall diligently pursue its Work so that completion can be accomplished according to the pre-determined time schedule as negotiated by UDOT and Jordan Valley.
- v. UDOT shall provide to Jordan Valley for final approval any design documents addressing any conflict, encroachment, or interference with Land Interests of the United States and US Facilities.
 - 1. Design Preparation and Review Time: Jordan Valley requires up to one (1) week for design review after UDOT submits a relocation request and design documents.
 - 2. Address review documents to JT Cracroft, Property Manager, Jordan Valley.
 - 3. UDOT shall provide facility design documents incorporating Jordan Valley's specifications and drawings, which may be obtained from JT Cracroft.

- vi. UDOT shall provide all of the supervision, labor, tools, equipment, and materials for the Work. Jordan Valley shall approve, in advance, Work on Land Interests of the United States and US Facilities. Work by UDOT may include purchasing and hauling materials; cutting asphalt; trenching, equipment installation; backfilling; compacting; clean-up; and completing US Facilities to meet the requirements of this Project Agreement. UDOT shall perform the Highway Project in stages, including facility tie-in and putting US Facilities into service, to minimize disruption to the public and to the United States and its contractors.
- vii. Specifications: The specification which is of the higher standard between those of UDOT and Jordan Valley will control where duplication occurs. UDOT will provide to Jordan Valley as-constructed plans in AutoCAD and PDF format upon completion of the Work.
- viii. Water Service Disruption: Jordan Valley and the Metropolitan Water District rely upon the operation of JA-2 and JA-3, among other facilities, to provide water service to their respective customers. Uncoordinated or prolonged disruption to the operation of any facility may cause Jordan Valley and the Metropolitan Water District to incur additional expense, including but not limited to the purchase of replacement water, the loss of revenues from water sales, purchase payments made on take-or-pay water contracts although Jordan Valley or the Metropolitan Water District cannot take or use the contract water, additional pumping costs, additional treatment costs, and damages paid by Jordan Valley and the Metropolitan Water District for breach of contract with customers for failure to provide them water. Therefore, United States facilities may be taken out of service by UDOT only pursuant to the following schedule notwithstanding any other provision of this Agreement to the contrary:

Facility*	Maximum time facility may be out of service*	Time period when service disruption is permitted	Minimum prior notice to Jordan Valley to request a service disruption
JA-2	15 days	Nov. 1 thru Nov. 30	30 days
JA-3	20 days	Dec. 1 thru following Jan. 15 Sole exception: Dec. 1, 2017 thru Jan. 31, 2018	30 days

*Note: JA-2 and JA-3 cannot be taken out of service at the same time.

UDOT shall reimburse Jordan Valley and the Metropolitan Water District for their actual respective damages for UDOT's breach of the terms of this subparagraph 6(a)(viii).

- ix. Construction Inspection: UDOT shall not bury or conceal any portion of the Work that has not been inspected and accepted by Jordan Valley.
- x. Cost Allocations: UDOT shall pay the cost of relocation of US Facilities located on Land Interests of the United States in compliance with 23 C.F.R. §645, subpart A. UDOT is 100% responsible for traffic control and surveying.
- xi. Inspection of the Work by Jordan Valley shall not relieve UDOT from the obligation to perform all Work in compliance with Jordan Valley's specifications and any other obligations under this Project Agreement.
- xii. UDOT shall accomplish the Work on US Facilities in accordance with the plans and specifications approved by Jordan Valley. Any changes or additions to the plans and specifications shall be approved in writing by Jordan Valley.

b. United States and Jordan Valley Responsibilities

- i. The United States and Jordan Valley agree to the allocation of responsibilities, and commitments regarding UDOT specified in this Project Agreement. In case of a discrepancy or conflict between the information contained in this Project Agreement and any subsequently executed agreements, the subsequently executed agreements shall govern.
- ii. The United States will allow certain third-party utilities to remain longitudinally within the Land Interests of the United States during the Highway Project as shown in Exhibit C – BOR Easement - Utility Relocation. Such third-party utilities must be relocated outside of the Land Interests of the United States upon completion of the 5400 South interchange.
- iii. Jordan Valley will perform the necessary design reviews prior to the start of Work.
- iv. The United States and Jordan Valley will inspect UDOT's Design-Builder's Work, and will provide UDOT's Project Representative and the Design-Builder's Project Representative with information covering any problems or concerns the United States and Jordan Valley may have with acceptance of the facilities. The failure of either the United States or Jordan Valley to find a deficiency during inspection of the Work does not relieve UDOT or its Design-Builder from performing Work that complies with the plans and specifications.
- v. The United States or Jordan Valley shall notify UDOT's Project Representative of any deficiencies in the Work on US Facilities. UDOT's Project Representative will respond to the concerns within 24 hours of notification.

- vi. In the event the United States or Jordan Valley discovers any deficiencies in the Work, including any failure to comply with plans and specifications as required above, Jordan Valley shall make recommendations to UDOT's Project Representative to stop the Work or correct the deficiencies. Jordan Valley and UDOT will immediately thereafter meet to determine a plan to bring the Work into compliance. Any such plans to cure shall be approved by Jordan Valley. Jordan Valley may notify UDOT to stop the Work immediately upon discovery of safety deficiencies during Work in progress.
7. NOTIFICATION BEFORE BEGINNING CONSTRUCTION WORK: The required notification periods as indicated in this section are for the commencing of any Work provided for by Supplemental Agreements to allow sufficient time for Jordan Valley to schedule an inspection during the Work.
 - a. Jordan Valley maintains an 8:00 a.m. to 5:00 p.m., Monday through Friday work week, not including observed holidays. All Work schedule notifications shall be given during the identified time period to JT Cracroft, Property Manager, Jordan Valley.
 - b. Jordan Valley requires a minimum of 3 working days' notification prior to beginning weekend and/or night Work.
 - c. Jordan Valley requires a minimum of 2 working days' notification to schedule an inspection request.
 - d. Jordan Valley requires a minimum of 14 calendar days' notification prior to beginning Work on or affecting existing US Facilities (including limitations to access to US Facilities).
 - e. Jordan Valley requires a minimum of 30 calendar days' notification before Work is started on any betterments in order to schedule full-time inspection personnel.
 8. TRAFFIC CONTROL AND SURVEYING: UDOT will provide all coordination, traffic control per UDOT standards and Manual on Uniform Traffic Control Devices (MUTCD), and required surveying (line and grade), and will verify the proposed location of relocated US Facilities prior to them being placed in their final position. UDOT will coordinate with Jordan Valley for survey staking. The United States and Jordan Valley shall not be responsible for the costs of any coordination, traffic control, or surveying.
 9. FORCE MAJEURE: If, as a result of force majeure, either UDOT, Jordan Valley, or the United States is wholly or partially unable to meet its respective obligations under this Project Agreement other than for payment of monies due, the non-performing party shall give the other parties reasonable notice of such situation, describing it in reasonable

detail. Thereupon, the party giving the notice shall be released from its obligations under this Project Agreement to the extent that the force majeure prevents performance of obligations during the continuance of the force majeure. The party having the force majeure shall attempt to cure and mitigate the force majeure as quickly as possible, but if rectification is not possible, the parties shall negotiate an acceptable solution. The term “force majeure” means any cause or condition which is not reasonably within the control of the party claiming the suspension.

10. ACCEPTANCE OF THE WORK: The United States and Jordan Valley, as applicable, agree that upon completion and final inspection of construction, to accept, own (in the case of the United States), and maintain the relocated facilities covered herein at no further cost to UDOT and will notify UDOT of the acceptance.
11. COVENANT AGAINST CONTINGENT FEES: UDOT warrants that no person or agency has been employed or retained to solicit or secure this Project Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established agencies maintained by UDOT for the purpose of securing business. For breach or violation of this warranty, the United States and Jordan Valley shall have the right to annul this Project Agreement without liability or in their discretion to require UDOT to pay the full amount of such commission, percentage, brokerage, or contingent fee.
12. HAZARDOUS MATERIALS: UDOT shall comply with all applicable Federal, State, and local laws and regulations, and United States policies and directives and standards, existing or hereafter enacted or promulgated, concerning any hazardous material that will be used, produced, transported, stored, or disposed of on or in Federal lands, waters or facilities. Additional requirements related to specific impacts to US Facilities may be identified in Supplemental Agreements to this Project Agreement.
13. CONTACTS:
 - a. Jordan Valley Water Conservancy District: Jordan Aqueduct Reaches 2 & 3
JT Cracroft; Property Manager; 8215 South 1300 West, West Jordan, UT 84088; 801-565-4300; jtc@jvwcd.org
 - b. United States Representative: Jordan Aqueduct Reaches 2 & 3
 - i. Kieth Marvin; Lands Group; 302 East 1860 South, Provo, UT 84606; 801-379-1193; kmarvin@usbr.gov
 - ii. Alan Christensen, PE; Civil Engineer; 302 East 1860 South, Provo, UT 84606; 801-379-1098; achristensen@usbr.gov
 - c. UDOT Project Representative:

S-0154(12)11

4 Interchanges on Bangerter Highway
CID 71939 PIN 12566

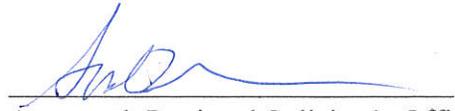
Alana Spendlove; Region 2 Utility and Railroad Leader; 2010 South 2760
West, SLC, UT 84104; 801-887-3462; aspendlove@utah.gov

d. Metropolitan Water District of Salt Lake & Sandy:

Wayne Winsor; Engineering and Maintenance Manager; 3430 East Danish
Road, Cottonwood Heights, UT, 84093; 801-942-9631;
winsor@mwdsls.org

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed the day and year first written above.

UNITED STATES OF AMERICA


Approved: Regional Solicitor's Office

By: 
Brent Rhee acting for
Regional Director
Date: 9/8/16

ACKNOWLEDGMENT OF THE UNITED STATES

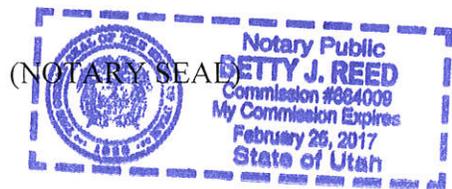
State of Utah)

) ss.

County of Salt Lake

On this 8th day of September, ^{Acting} 2016, personally appeared before me K. B. Jacobson, known to me to be the Regional Director of the Upper Colorado Region, Bureau of Reclamation, United States Department of Interior, the signer of the above instrument, who duly acknowledged to me that he executed the same on behalf of the United States of America pursuant to authority delegated to him.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.




Notary Public

UTAH DEPARTMENT OF
TRANSPORTATION

By: *Bryan Adams*
Bryan Adams
Region Two Director
Date: 8/26/16

ACKNOWLEDGMENT OF UTAH DEPARTMENT OF TRANSPORTATION (UDOT)

State of UT)

) ss.

County of Salt Lake

On this 26 day of August, 2016, personally appeared before me Bryan Adams, known to me to be the Region 2 Director of UDOT, the signer of the above instrument, who duly acknowledged to me that he executed the same on behalf of UDOT pursuant to authority delegated to him/her.

(NOTARY SEAL)

Michael Daryl Davis
Notary Public



Cherise Young 9-8-16
CONTRACT ADMINISTRATOR
COMPTROLLERS OFFICE

JORDAN VALLEY WATER
CONSERVANCY DISTRICT

By: Gary Swensen
Title: Chair Board of Trustees
Date: August 30, 2016

ACKNOWLEDGMENT OF JORDAN VALLEY WATER CONSERVANCY DISTRICT
(Jordan Valley)

State of UT)

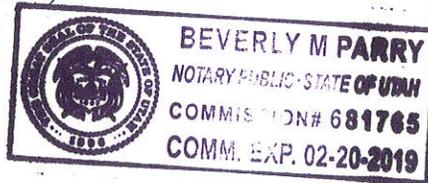
) ss.

County of Salt Lake)

On this 30th day of August, 2016, personally appeared before me Gary Swensen, known to me to be the Chair of the Board of Trustees of Jordan Valley Water Conservancy District, the signer of the above instrument, who duly acknowledged to me that he executed the same on behalf of Jordan Valley Water Conservancy District pursuant to authority delegated to him/her.

(NOTARY SEAL)

Beverly M Parry
Notary Public



CONCUR:

METROPOLITAN WATER DISTRICT OF SALT LAKE & SANDY

By: William L. White
Title: General Manager

EXHIBIT A

Memorandum of Agreement 05-LM-40-02720 September 26, 2005

MEMORANDUM OF AGREEMENT

Between

THE UNITED STATES OF AMERICA,
DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION

And

THE UTAH DEPARTMENT OF TRANSPORTATION

REGARDING USE OF RECLAMATION LANDS FOR HIGHWAY PROJECTS

THIS Memorandum of Agreement (Agreement), dated this 26th day of September, 2005, in pursuance of the Act of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, particularly Section 10 of the Reclamation Project Act of 1939 (53 Stat. 1196; Act of August 18, 1950; 64 Stat. 463; 43 U.S. C. § 387), between THE UNITED STATES OF AMERICA, and its assigns, hereinafter referred to as the United States, acting through the BUREAU OF RECLAMATION, hereinafter referred to as Reclamation, and the UTAH DEPARTMENT OF TRANSPORTATION, hereinafter referred to as UDOT;

WHEREAS, Reclamation, an agency of the United States Government, has constructed and continues to own large projects for the storage and delivery of water; and

WHEREAS, Reclamation, has contracted with various water user organizations to operate and maintain its project facilities; and

WHEREAS, as a result, the United States holds real property interests (fee title and easements) in real property located throughout the State of Utah which it acquired through Reclamation in connection with Reclamation's projects, and which continue to be administered by Reclamation for authorized project purposes; and

WHEREAS, UDOT, a department of the Utah State Government, constructed and continues to construct, operate, maintain, reconstruct, and rehabilitate highways throughout the State of Utah for the purpose of providing public transportation; and

WHEREAS, as a result, UDOT frequently needs to obtain easements over United States' lands administered by Reclamation for various highway construction projects; and

WHEREAS, Reclamation recognizes that UDOT's highway projects serve a public need and have public support, and such easements, if granted by the United States, would be used by UDOT for public benefit; and

WHEREAS, as a result of UDOT's highway projects, Reclamation frequently receives benefit of improved access to United States' lands and facilities which Reclamation administers; and

WHEREAS, as a result of UDOT's highway projects, Reclamation frequently receives benefit from enhanced safety on highways which are used by Reclamation, its employees and contractors, and the general public for access to United States' lands and facilities, as well as from diminished potential for claims of liability resulting from public use of said lands and facilities.

WHEREAS, as a result of UDOT's highway projects, the general public benefits from improved access and safety; and

WHEREAS, UDOT recognizes and agrees that it will be required to comply with environmental laws, including the National Environmental Policy Act, for each of its highway projects, and that it must obtain approval of said compliance by each and every required agency; and

WHEREAS, Reclamation and UDOT wish to cooperate for the best public good to facilitate each agency's respective missions; and

WHEREAS, Reclamation, acting pursuant to 43 CFR 429.6(c) has authority to waive all or part of administrative costs which may be incurred in issuing easements, as follows:

All [administrative] fees and costs may be waived or reduced at the discretion of the Regional Director, when . . . (3) the holder provides without charges, or at a reduced charge, a valuable service to the public or to the programs of the Department of the Interior.

WHEREAS, Reclamation, acting pursuant to 43 CFR 429.4 has authority to waive all or part of fair market value compensation for issuing said easements, as follows:

Rights of use requested by other Federal or other governmental agencies will be granted with fair market value reimbursement unless a reasonable opportunity exists for the exchange of rights-of use privileges, and there exists an interagency agreement providing for such exchange.

WHEREAS, Reclamation, acting pursuant to 43 CFR 429.4 has authority to waive all or part of fair market value compensation for issuing said easements, as follows:

Rights of use requested by nonprofit organizations or nonprofit corporations may be provided with no charge being made for the value of these rights-of-use when it is determined that the use will not interfere with the authorized current or planned use of the land by Reclamation.

NOW THEREFORE, whenever UDOT desires the United States to grant an easement for a UDOT highway project across United States lands administered by Reclamation, UDOT and Reclamation agree to follow the following general procedures:

1. UDOT shall submit all request(s) for grants of easement to Reclamation following the format attached as, Exhibit "A".
2. UDOT shall provide Reclamation with an environmental compliance document covering each request. Reclamation shall review and, if appropriate, approve said environmental compliance document prior to granting any easements to UDOT.
3. Reclamation shall waive reimbursement from UDOT for both administrative costs and compensation for fair market value for the granting easements to UDOT as long as UDOT's highway project meets requirements for such a waiver.
4. UDOT and Reclamation, upon mutual agreement, may enter into a temporary contract to allow UDOT to occupy and use areas it requires immediately, prior to the execution of a final contract and grant of easement.
5. Reclamation may alter the format of said easements prior to approval and signing of final contracts and grants of easement, but the legal descriptions and nature of use (perpetual easement) shall be the responsibility of UDOT and shall remain substantially the same.
6. Both parties agree to complete and execute all final contracts and grants of easement in a timely manner.
7. UDOT will obtain concurrence of any water user organization having contractual responsibility for operation and maintenance of the Reclamation project which is affected by UDOT's highway project on all temporary or final contracts.
8. UDOT agrees to conduct all activities within the any easement to be granted to UDOT by the United States in strict accordance with the Protective Criteria contained in Exhibit B attached hereto and by this reference made a part hereof.
9. UDOT shall not remove, relocate, damage, or destroy any facility or structure of the United States without first having entered into a separate contract with the United States covering such issues as design and specifications, funding, construction, and future operation and maintenance of said facility or structure.

10. UDOT shall notify the affected water user organization by telephone Five (5) days in advance of its intent to commence any construction operations.
11. UDOT agrees to reduce impact to soil, vegetation, wildlife and visual resources within the easement area by limiting the amount of surface disturbance.
12. All United States land areas (except portions presently covered by asphalt surfacing) where soils and surface materials are disturbed through actions incident to construction, operation, and maintenance shall be restored by the UDOT to their natural state insofar as practicable by water barring, scarifying, leveling, reseeding, or other practices as prescribed by the United States and to its satisfaction.
13. Unless authorized in writing by the United States, travel by UDOT, its agents or assigns is limited to the area covered by the easements and existing public roads.
14. Disturbance of any improvements encountered during construction, maintenance, and operation of the easements shall be kept to an absolute minimum. UDOT shall immediately restore any damaged improvements at least to their former state. Functional use of these improvements must be maintained at all times.
15. During construction, operation, and maintenance, UDOT shall be particularly alert to take all reasonable and necessary precautions to protect and preserve historic or prehistoric ruins and artifacts on or adjacent to the easements. Should sites, ruins, or artifacts be discovered during these operations, UDOT will immediately suspend work involving the area in question, and advise the United States of suspected values. UDOT shall promptly have the area inspected to determine significance of values and consult with the United States on appropriate actions to follow (recovery, etc., and resumption of work). Cost of any recovery work shall be borne by the UDOT. UDOT shall provide the United States with a copy of any cultural resources survey reports concerning sites located on the temporary easement and shall develop a mitigation plan acceptable to the State Historic Preservation Officer (SHPO) for those significant sites subject to an adverse impact. All objects of antiquity recovered from public lands are the property of the United States and shall be turned over to Reclamation. UDOT is responsible for obtaining required SHPO clearance for any additional survey and report completed.
16. Within sixty (60) days after conclusion of construction operations, all construction materials and related litter and debris, including vegetative cover accumulated through land clearing, shall be disposed of by UDOT in an appropriate manner (State of Utah approved sanitary landfill).
17. UDOT shall designate a representative for field operations who shall be the sole representative of UDOT and UDOT's contractors in dealings with the United States, and shall provide their name, address, and telephone number to the United States and the the Association prior to commencement of construction.

18. UDOT shall comply with existing County, State, and Federal laws concerning the protection and preservation of game, and non-game wildlife species.

19. UDOT shall comply with all State and Federal regulations and laws pertaining to water quality, public health and public safety.

20. UDOT shall be responsible for prevention and suppression of all uncontrolled fires that are caused by UDOT, its agents or assigns.

21. Subject to applicable Federal and State law, UDOT agrees to indemnify and hold harmless the United States against any and all loss or damage and from any liability on account of personal injury, property damage, or claims for personal injury or death arising from its occupancy or use of United States lands or any other rights covered under any temporary or final contract and grant of easement.

22. It is acknowledged and agreed by the parties hereto that, prior to start of construction by UDOT, the United States will have inspected the land area covered by the easements and found it to be free from contamination by hazardous materials of any kind. Removal and clean-up of future contamination, including broken asphalt, resulting from UDOT's use of the easements shall be the sole responsibility of UDOT. Removal and clean-up of any such future contamination, including broken or damaged asphalt, shall be at UDOT's sole expense and shall be accomplished in compliance with all applicable Federal and State laws and regulations.

23. UDOT agrees that in all operations conducted within the easements, it shall comply with applicable State and Federal laws and regulation concerning the use of poisonous substances, including insecticides, herbicides, fungicides, rodenticides, and other similar substances. Prior to the use of such substances on or near the easements, UDOT shall obtain from the United States, approval of a written plan of such use. The plan shall state the type and quantity of material to be used, the pest to be controlled, the method of application, or such other information as may be required. All use of such substances on or near the easements shall be in accordance with the approved plan. If the use of a poison is prohibited by the Environmental Protection Agency (EPA), it shall not be used. If use of a poison is limited by the EPA, it shall be used only in accordance with that limitation.

24. Any proposed additional or subsequent uses by UDOT or others of lands or facilities not covered by the easements must be authorized in advance, in writing by the United States. Additional construction, relocation, or use of the easements that is not in accordance with temporary or final contracts shall not be initiated without prior written approval of the United States and the affected water user organization. Copies of this and other applicable contracts shall be available to construction, operation, and maintenance personnel, as well as personnel of the United States and the Association, during operations.

25. If UDOT violates the terms and conditions of this or any temporary or final contract, the United States shall provide written notice to UDOT describing the violation. Following receipt of said written notice, UDOT shall have 45 days in which to correct said violation. In the event that UDOT fails to correct said violation to the satisfaction of the United States within that time period, title to the easements shall revert to the United States, following written notice by the United States to UDOT.

26. UDOT warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by UDOT for the purpose of securing business. For breach or violation of this warranty, the United States shall have the right to annul this Contract and grant without liability.

27. No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this Agreement or to any benefit that may arise herefrom, but this restriction shall not be construed to extend to this instrument if made with a corporation or company for its general benefit.

28. The provisions of this Agreement shall run in favor of and bind the assigns of the United States and the successors and assigns of UDOT.

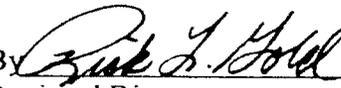
IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed the day and year first written above.

UNITED STATES OF AMERICA

Approved:

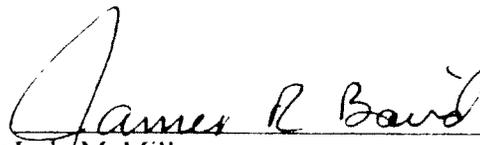


Office of the Regional Solicitor

By 

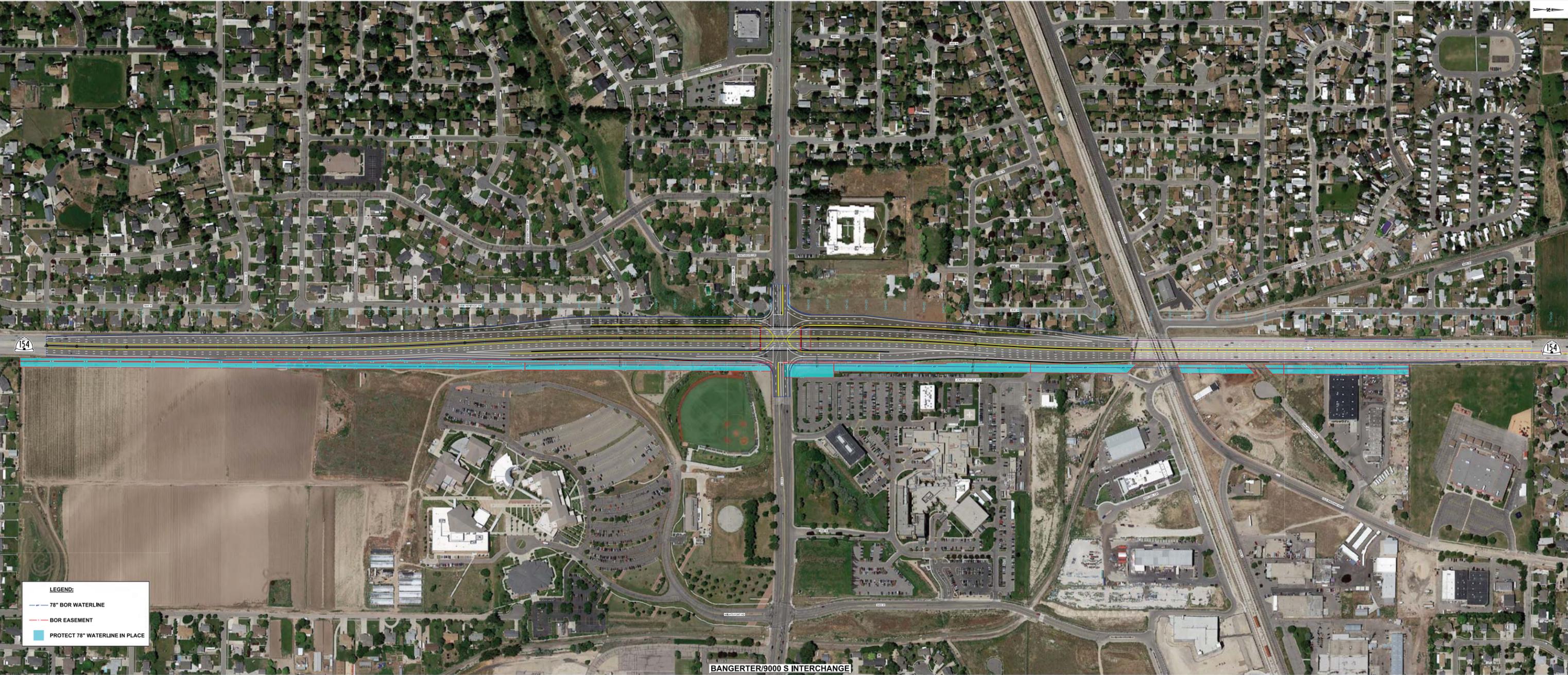
Regional Director
Upper Colorado Region
Bureau of Reclamation
Department of the Interior

UTAH DEPARTMENT OF
TRANSPORTATION

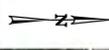
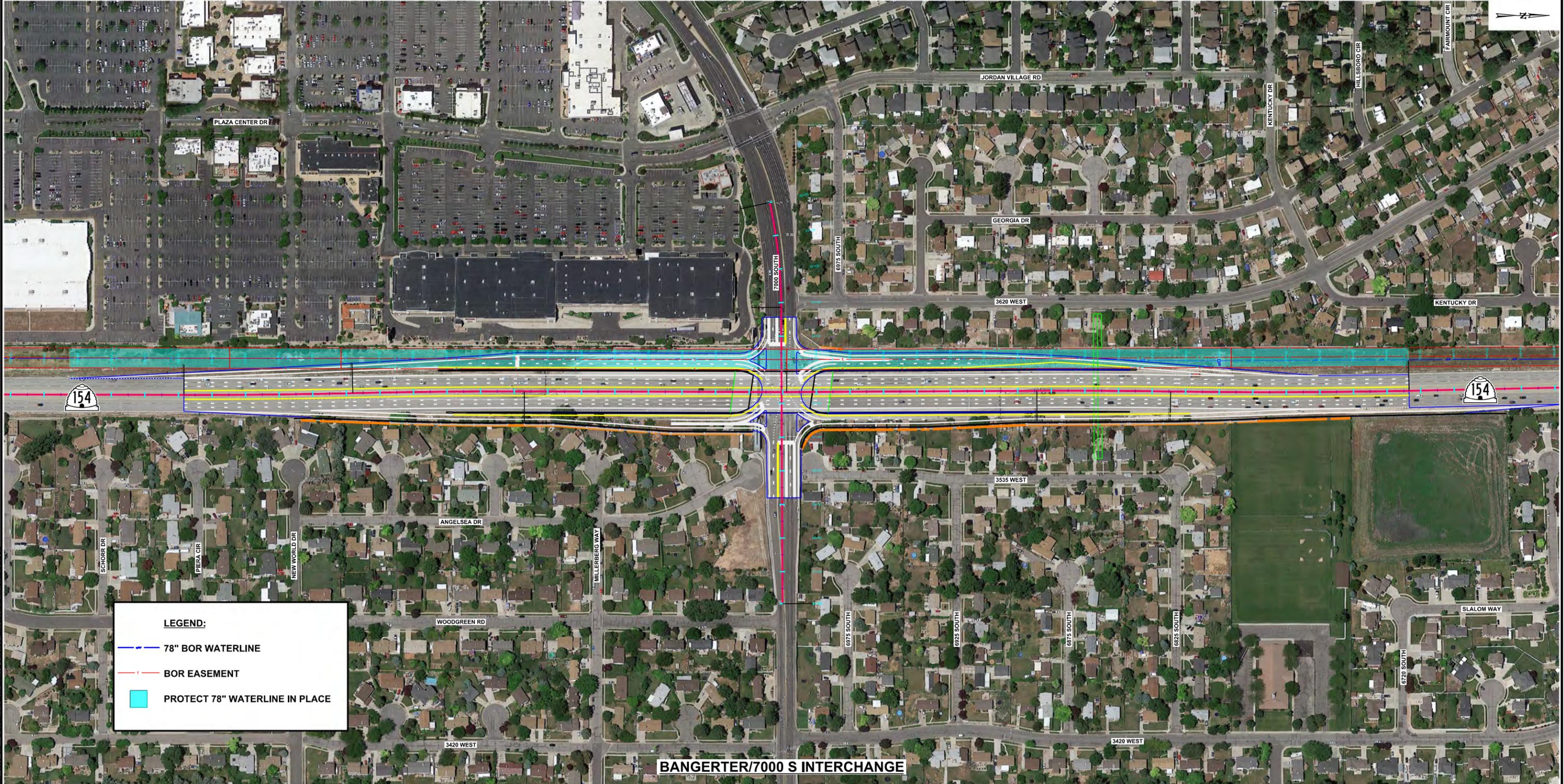


for Lyle McMillan
Director of Right of Way

EXHIBIT B
Bangerter Interchanges Protect-in-Place



BANGERTER/9000 S INTERCHANGE



BANGERTER/7000 S INTERCHANGE

LEGEND:

-  78" BOR WATERLINE
-  BOR EASEMENT
-  PROTECT 78" WATERLINE IN PLACE

PLAZA CENTER DR

JORDAN VILLAGE RD

GEORGIA DR

3620 WEST

KENTUCKY DR

ANGELSEA DR

WOODGREEN RD

3420 WEST

3535 WEST

SLALOM WAY

7000 SOUTH

6975 SOUTH

6975 SOUTH

6925 SOUTH

6875 SOUTH

6825 SOUTH

3420 WEST

6720 SOUTH

HILLSBORO CIR

FAIRMOUNT CIR

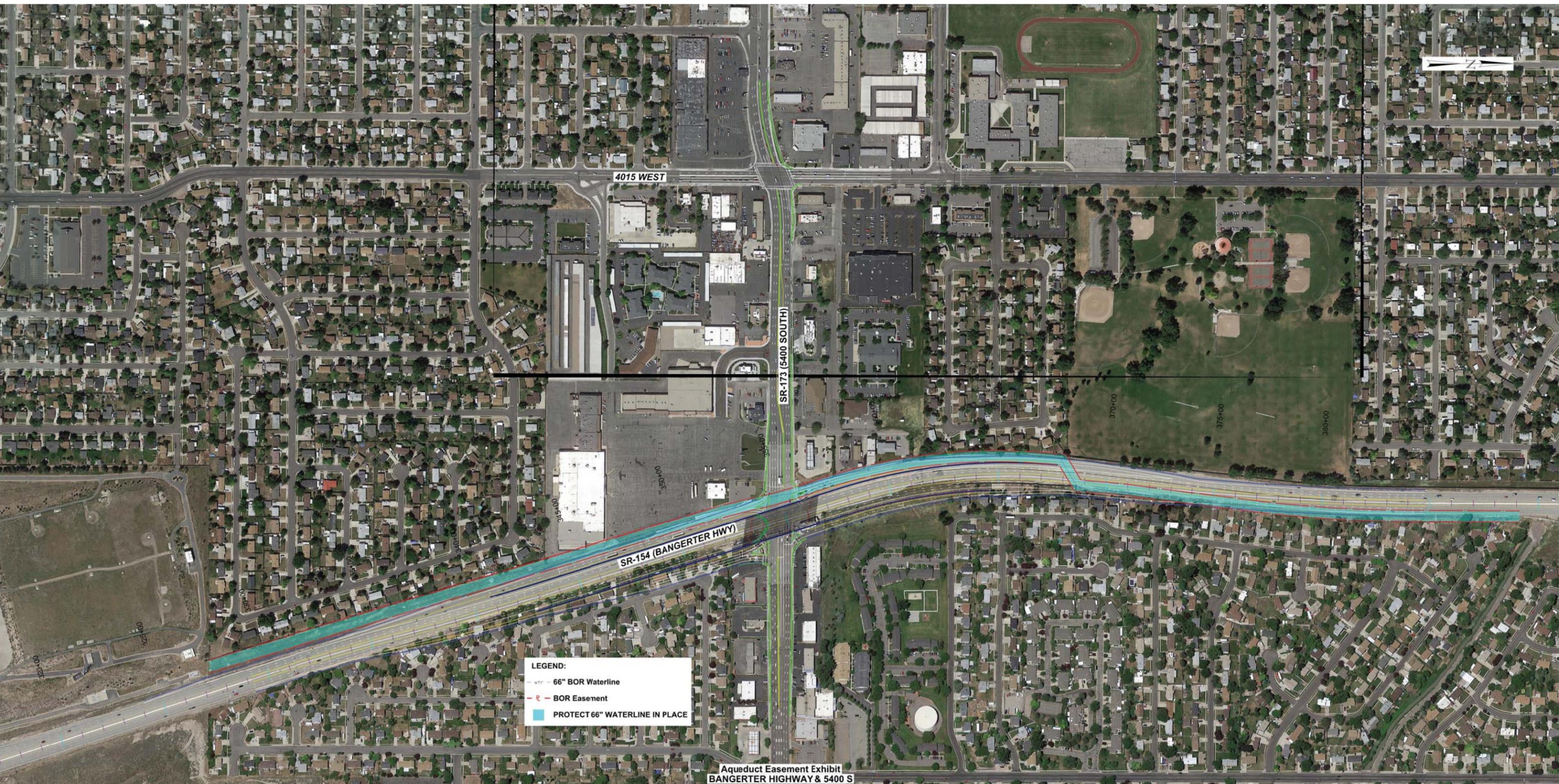
SCHORR DR

PIERA CIR

NEW WORLD DR

MILLERBERG WAY

KENTUCKY DR



LEGEND:

- 66" BOR Waterline
- - - BOR Easement
- PROTECT 66" WATERLINE IN PLACE

4015 WEST

SR-173 (5400 SOUTH)

SR-154 (BANGERTER HWY)

Aqueduct Easement Exhibit
BANGERTER HIGHWAY & 5400 S

S-0154(12)11
4 Interchanges on Bangerter Highway
CID 71939 PIN 12566

EXHIBIT C
BOR Easement - Utility Relocation



PROTECT IN PLACE
Buried Electric (UDOT)
Fiber (UDOT SYRINGIA)
Buried Electric (RMP)
Fiber (VERIZON)
12" Waterline (Taylorsville)
Telephone (Century Link)

RELOCATE
Telephone (Century Link)

PROTECT IN PLACE
8" Sewer (Taylorsville)

PROTECT IN PLACE
18" waterline (Taylorsville)

RELOCATE
Buried Electric (RMP)

RELOCATE
Fiber (MBI.ATT ZAYO FIRST DIGITAL)

RELOCATE
Fiber (UDOT SYRINGIA)

5400 S

NOTE:
ANY UTILITIES THAT RUN LONGITUDINALLY WITHIN THE BOR EASEMENT ARE TO BE RELOCATED OUTSIDE OF THE EASEMENT.
ANY EXISTING OR NEW UTILITIES CROSSING THE BOR EASEMENT WILL REQUIRE A NEW CROSSING PERMIT FROM THE BOR

BOR Easement - Utility Relocation

EXISTING BOR EASMENT PROPOSED BOR EASMENT

EXHIBIT B

17. COVENANT AGAINST CONTINGENT FEES: The Licensee warrants that no person or selling agency has been employed or retained to solicit or secure this License Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial agencies maintained by the Licensee for the purpose of securing business. For breach or violation of this warranty, the United States shall have the right to annul this License Agreement without liability or in its discretion to require the Licensee to pay, in addition to the License Agreement consideration, the full amount of such commission, percentage, brokerage, or contingent fee.

18. DISCOVERY OF CULTURAL RESOURCES: The Licensee shall immediately provide an oral notification to Reclamation's authorized official of the discovery of any and all antiquities or other objects of archaeological, cultural, historic, or scientific interest on Reclamation lands. The Licensee shall follow up with a written report of their finding(s) to Reclamation's authorized official within forty-eight (48) hours. Objects under consideration include, but are not limited to, historic or prehistoric ruins, human remains, funerary objects, and artifacts discovered as a result of activities under this authorization. The Licensee shall immediately cease the activity in the area of the discovery, make a reasonable effort to protect such discovery, and wait for written approval from the authorized official before resuming the activity. Protective and mitigative measures specified by Reclamation's authorized official shall be the responsibility of the Licensee.

19. ENVIRONMENTAL COMPLIANCE: The Licensee agrees to abide by all applicable Federal, State, and local laws and regulations pertaining to pollution control and environmental protection.

20. LANDSCAPE PRESERVATION AND NATURAL BEAUTY:

(a) The Licensee shall exercise care to preserve the natural landscape and shall conduct its construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage which may be caused by the Licensee's construction operations and equipment. Movement of crews and equipment within the rights-of-way and over routes provided for access to the work shall be performed in a manner to prevent damage to grazing land, crops, or property.

(b) Upon completion of the work, the construction site shall be smoothed and graded in a manner to conform to the natural topography of the landscape and shall be repaired, replanted, reseeded, or otherwise corrected as directed by the Contracting Officer at the Licensee's expense.

21. OFFICIALS NOT TO BENEFIT: No member of Congress shall be admitted to any share or part of any contract or agreement made, entered into, or accepted by or on behalf of the United States, or to any benefit to arise thereupon.

22. SUCCESSORS IN INTEREST OBLIGATED: The provisions of this Agreement shall inure to the benefit of and be binding upon the heirs, executors, administrators, personal

EXHIBIT B

representatives, successors, and assigns of the parties hereto; provided, however, that no such heir, executor, administrator, personal representative, successor or assign of the Licensee shall have the right to use, alter, or modify the encroachment in a manner which will increase the burden of the encroachment of the Easement of the United States.

23. SPECIAL PROVISIONS: The Special Provisions, attached hereto, are hereby made a part of this License Agreement the same as if they had been expressly set forth herein.

See Exhibit "A"

IN WITNESS WHEREOF, the parties hereto have caused this License Agreement to be executed the day and year first above written.

UNITED STATES OF AMERICA

By: _____
Wayne G. Pullan
Manager, Provo Area Office

LICENSEE:

By: _____
Title:

CONCUR:

CENTRAL UTAH WATER CONSERVANCY DISTRICT

By: _____
Title:

EXHIBIT B

ACKNOWLEDGMENT OF THE UNITED STATES

State of UT)
) ss.
County of UT)

On this _____ day of _____, 2014, personally appeared before me _____, known to me to be the _____ of the Provo Area Office, Bureau of Reclamation, Upper Colorado Region, United States Department of Interior, the signer of the above instrument, who duly acknowledged to me that he executed the same on behalf of the United States of America pursuant to authority delegated to him.

(NOTARY SEAL)

Notary Public

ACKNOWLEDGMENT OF

State of UT)
) ss.
County of UT)

On this _____ day of _____, 2014, personally appeared before me _____, known to me to be the _____ of _____, the signer of the above instrument, who duly acknowledged to me that he executed the same on behalf of _____ pursuant to authority delegated to him/her.

(NOTARY SEAL)

Notary Public

EXHIBIT B

ACKNOWLEDGMENT OF CENTRAL UTAH WATER CONSERVANCY DISTRICT

State of UT)
) ss.
County of UT)

On this _____ day of _____, 2014, personally appeared before me _____, known to me to be the _____ of the Central Utah Water Conservancy District, the signer of the above instrument, who duly acknowledged to me that he executed the same on behalf of the Central Utah Water Conservancy District pursuant to authority delegated to him/her.

(NOTARY SEAL)

Notary Public

EXHIBIT B

EXHIBIT "A"

PROTECTION CRITERIA

A. For and in consideration of the License Agreement herein granted, Licensee agrees to pay the United States the following amount:

(1) The sum of One Hundred Dollars (\$100), receipt of which is hereby acknowledged, which amount represents administrative expenses incurred by the United States in issuing this License Agreement.

(2) A sum of _____ (\$ _____) Dollars, which represents the appraised fair market value of the rights granted herein.

B. Prior to the expiration of the term of this License Agreement, and upon application in writing by Licensee and approval by the United States and the District, this License Agreement may be renewed for such period as the parties hereto may agree upon. If so renewed, the consideration to be paid for renewal will be determined by reappraisal by the United States. Furthermore, the renewed License Agreement, will be subject to the regulations existing at the time of renewal and such other terms and conditions as may be deemed necessary by the United States and the District to protect the public interest or its projects

C. The Licensee shall notify the United States at (801) 379-1000 and the District at (801) 226-7100, five (5) days in advance of its intent to commence any construction operations associated with rights herein granted.

D. Existing gravity drainage of the United States rights-of-way must be maintained. No new concentration of surface or subsurface drainage may be directed onto or under the United States rights-of-way without adequate provision for removal of drainage water or protection of the United States rights-of-way.

E. During construction, operation, and maintenance, the Licensee shall be particularly alert to take all reasonable and necessary precautions to protect and preserve historic or prehistoric ruins and artifacts on or adjacent to the lands herein described. Should sites, ruins, or artifacts be discovered during these operations, the Licensee will immediately suspend work involving the area in question, and advise the United States of suspected values. The Licensee shall promptly have the area inspected to determine significance of values and to consult with the United States on appropriate actions to follow (recovery, etc., and resumption of work). Cost of any recovery work shall be borne by the Licensee. The Licensee shall provide the United States with a copy of any cultural resources survey reports concerning sites located on the lands described herein and shall develop a mitigation plan acceptable to the Utah State Historic Preservation officer (SHPO) for those significant sites subject to an adverse impact. All objects of antiquity recovered from public lands are the property of the United States and shall be turned over to the Bureau of Reclamation. The Licensee is responsible for obtaining required Utah SHPO clearance for any additional survey and report completed. Any person who knows or has reason

EXHIBIT B

to know that he or she has inadvertently discovered possible human remains on Federal or Tribal land, must provide immediate telephone notification of the inadvertent discovery to the Bureau of Reclamation Provo Area Office archaeologist. Work will stop until the proper authorities are able to assess the situation on site. This action must promptly be followed by written confirmation to the responsible Federal Agency official with respect to Federal lands. On Tribal lands, it is to be reported to the responsible Indian Tribal official. This requirement is prescribed under the Native American Graves Protection and Repatriation Act (P.L. 101-601; 104 Stat. 3042) of November 1990.

F. Prior to construction of any structure that encroaches within United States rights-of-way, an excavation must be made to determine the location of existing United States facilities. The excavation must be made by or in the presence of the District or the United States.

G. Any contractor or individual constructing improvements in, on, or along United States rights-of-way must limit his construction to the encroachment structure previously approved and construct the improvements strictly in accordance with plans or specifications.

H. All United States land areas where soils and surface materials are disturbed through actions incident to construction, operation and maintenance shall be restored to their natural state insofar as practical by water barring, scarifying, leveling and reseeded, or other practices as prescribed by the United States and to its satisfaction.

I. The Licensee shall restore any damaged or disturbed improvements such as fences, roads, watering facilities, etc., encountered during construction, maintenance, and operation. Functional use of these improvements must be maintained at all times.

J. Within sixty (60) days after conclusion of construction operations, all construction materials and related litter and debris, including vegetative cover accumulated through land clearing, shall be disposed of in an appropriate manner (State of Utah approved sanitary landfill).

K. The owner of newly constructed facilities that encroach on United States rights-of-way shall notify the United States and/or the District upon completion of construction and shall provide the District with one copy and the United States with two copies of as-built drawings showing actual improvements in, on, or along the rights-of-way. Also, provide one copy of drawings on a 3 ½ IBM compatible floppy disk or CD in AutoCAD version 14 format or other format approved by United States, Bureau of Reclamation, within 30 days of completion.

L. Except in case of ordinary maintenance and emergency repairs, an owner of encroaching facilities shall give the District at least 10 days notice in writing before entering upon United States rights-of-way for the purpose of reconstructing, repairing, or removing the encroaching structure or performing any work on or in connection with the operation of the encroaching structure.

EXHIBIT B

M. If unusual conditions are proposed for the encroaching structure or unusual field conditions within United States rights-of-way are encountered, the United States reserves the right to impose more stringent criteria than those prescribed herein.

N. All backfill material within United States rights-of-way shall be compacted to 95 percent of maximum density unless otherwise shown. Mechanical compaction shall not be allowed within 6 inches of the projects works whenever possible. In no case will mechanical compaction using heavy equipment be allowed over the project works or within 18 inches horizontally of the projects works.

O. That the backfilling of any excavation or around any structure within the United States rights-of-way shall be compacted in layers not exceeding 6 inches thick to the following requirements: (1) cohesive soils to 90 percent maximum density specified by ASTM Part 19, D-698, method A; (2) noncohesive soils to 70 percent relative density specified by ANSI/ASTM Part 19, d-2049, par. 7.1.2, wet method.

P. Any nonmetallic encroaching structure below ground level shall be accompanied with warning tape. This tape shall be located 12 inches above the structure and extend from the right-of-way to right-of-way. If the encroaching structure is nonmetallic, the warning tape must include a metallic strip.

Q. No use of United States lands or rights-of-way shall be permitted that involve the storage of hazardous material.

R. For all utility crossings, a permanent placard shall be placed at each point that the utility enters or exits the right-of-way of the United States. This placard shall identify the type of utility located below it, the name of the utility company and a telephone number where the utility company can be reached.

8/9/16

S-0154(12)11

4 Interchanges on Bangerter Highway

CID 71939 PIN 12566

EXHIBIT C

Example Encroachment Agreement

DRAFT

EXHIBIT C

Contract No.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
CENTRAL UTAH PROJECT

EASEMENT ENCROACHMENT AGREEMENT
BETWEEN THE
UNITED STATES OF AMERICA
AND

This Easement Encroachment Agreement made this ____ day of _____ 2016, pursuant to the Act of Congress of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as Reclamation Laws, among the UNITED STATES OF AMERICA and its assigns, hereinafter referred to as the United States, and _____, hereinafter referred to as the Landowner.

WITNESSETH THAT:

WHEREAS, the United States is the Grantee of that certain easement granted by _____, which easement is recorded in the official records of _____, State of Utah, hereinafter referred to as the Easement of the United States; and

WHEREAS, the Landowner plans to utilize its property in such a manner as to encroach upon the Easement of the United States in a manner more particularly specified hereinafter; and

WHEREAS, the United States is willing to agree to said encroachment, upon conditions more particularly specified hereinafter;

NOW, THEREFORE, the United States hereby agrees to encroachment upon the Easement of the United States by the Landowner only to the extent and for the purposes set forth below:

1. The federal agency is the Department of the Interior, Bureau of Reclamation, represented by the officer executing this Agreement, his duly appointed successor, or his duly authorized representative.
2. The United States guidelines for agreeing to such encroachment upon the Easement of the United States are shown on Exhibit "A," attached hereto and by this reference made a part hereof.
3. The Landowner or its Contractor shall perform all work within the encroachment area in accordance with the plans, drawings, guidelines, and maps attached hereto, and in a manner satisfactory to the United States and _____, hereinafter called the District.

EXHIBIT C

4. **SEVERABILITY**: Each provision of this use authorization shall be interpreted in such a manner as to be valid under applicable law, but if any provision of this use authorization shall be deemed or determined by competent authority to be invalid or prohibited hereunder, such provision shall be ineffective and void only to the extent of such invalidity or prohibition, but shall not be deemed ineffective or invalid as to the remainder of such provision or any other remaining provisions, or of the use authorization as a whole.

5. **ILLEGAL USE**: Any activity deemed to be illegal on Federal lands will be cause for immediate termination of the use authorization.

6. **TERMINATION OF AGREEMENT**: This agreement will terminate and all rights of the Landowner hereunder will cease, and the Landowner will quietly deliver to the United States possession of the premises in like condition as when taken, reasonable wear and damage by the elements excepted, after failure of the Landowner to observe any of the conditions of this agreement, and on the tenth day following service of written notice on the Landowner of termination because of failure to observe such condition.

7. **HOLD HARMLESS**: The Landowner hereby agrees to indemnify and hold harmless the United States, its employees, agents, and assigns from any loss or damage and from any liability on account of personal injury, property damage, or claims for personal injury or death arising out of the Landowner activities under this agreement.

(a) In consideration of the United States agreeing to encroachment upon the Easement of the United States by the Landowner, the Landowner hereby agrees to indemnify and hold the United States and the District, their agents, employees, and assigns, harmless from any and all claims whatsoever for personal injuries or damages to property when such injuries or damages directly or indirectly arise out of the existence, construction, maintenance, repair, condition, use or presence of the encroachment upon the Easement of the United States, regardless of the cause of said injuries or damages; provided, however, that nothing in this agreement shall be construed as releasing the United States or the District from responsibility for their own negligence. Nothing herein shall be deemed to increase the liability of the United States beyond the provisions of the Federal Tort Claims Act, Act of June 25, 1948, 62 Stat. 989 (28 U.S.C. §1346(b), 2671 et seq.) or other applicable law.

(b) In consideration of the United States agreeing to the Landowner encroaching upon the Easement of the United States, the Landowner agrees that the United States shall not be responsible for any damage caused to facilities, equipment, structures, or other property if damaged by reason of encroachment upon the Easement of the United States by the Landowner. The Landowner hereby releases the United States and the District, their officers, employees, agents, or assigns, from liability for any and all loss or damage of every description or kind whatsoever which may result to the Landowner from the construction, operation, and maintenance of Project works upon said lands; provided that nothing in this Agreement shall be construed as releasing the United States or the District from liability for their own negligence. Nothing herein shall be deemed to increase the liability of the United States beyond the provisions of the Federal Tort Claims Act, Act of June 25, 1948, 62 Stat. 989 (28 U.S.C. §1346(b), 2671 et seq.) or other applicable law.

EXHIBIT C

(c) If the maintenance or repair of any or all structures and facilities of the United States located on the easement area should be made more expensive by reason of the existence of the encroachment improvements or works of the Landowner or its Contractor, the Landowner and /or its Contractor will promptly pay to the United States or the District, their agents or assigns, responsible for operation and maintenance of said structures or facilities, the full amount of such additional expense upon receipt of an itemized bill.

8. PROTECTION OF UNITED STATES INTERESTS: The Landowner shall comply with all applicable laws, ordinances, rules, and regulations enacted or promulgated by any Federal, state, or local governmental body having jurisdiction over the encroachment.

9. UNRESTRICTED ACCESS: The United States reserves the right of its officers, agents, and employees at all times to have unrestricted access and ingress to, passage over, and egress from all of said lands, to make investigations of all kinds, dig test pits and drill test holes, to survey for and construct reclamation and irrigation works and other structures incident to Federal Reclamation Projects, or for any purpose whatsoever. Reclamation will make every reasonable effort to keep damages to a minimum.

10. COVENANT AGAINST CONTINGENT FEES: The Landowner warrants that no person or agency has been employed or retained to solicit or secure this agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established agencies maintained by the Lessee for the purpose of securing business. For breach or violation of this warranty, the United States shall have the right to annul this agreement without liability or in its discretion to require Landowner to pay the full amount of such commission, percentage, brokerage, or contingent fee.

11. OFFICIALS NOT TO BENEFIT: No member of Congress shall be admitted to any share or part of any contract or agreement made, entered into, or accepted by or on behalf of the United States, or to any benefit to arise thereupon.

12. SUCCESSORS IN INTEREST OBLIGATED: The provisions of this Agreement shall inure to the benefit of and be binding upon the heirs, executors, administrators, personal representatives, successors, and assigns of the parties hereto; provided, however, that no such heir, executor, administrator, personal representative, successor or assign of the Landowner shall have the right to use, alter, or modify the encroachment in a manner which will increase the burden of the encroachment of the Easement of the United States.

EXHIBIT C

13. This agreement makes no finding as to the right, title, or validity of the Landowner or the encroaching interest, but merely defines the conditions under which the encroachment will not be deemed unreasonable by the United States.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

UNITED STATES OF AMERICA

By: _____
Wayne G. Pullan
Manager, Provo Area Office

LANDOWNER

By: _____
Title:

CONCUR:
DISTRICT

By: _____
Title:

EXHIBIT C

ACKNOWLEDGMENT OF THE UNITED STATES

State of UT)
) ss.
County of UT)

On this _____ day of _____, 2014, personally appeared before me _____, known to me to be the _____ of the Provo Area Office, Bureau of Reclamation, Upper Colorado Region, United States Department of Interior, the signer of the above instrument, who duly acknowledged to me that he executed the same on behalf of the United States of America pursuant to authority delegated to him.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

(NOTARY SEAL)

Notary Public

ACKNOWLEDGMENT OF

State of)
) ss.
County of)

On this _____ day of _____, 2014, personally appeared before me _____, to be known to be the _____ of _____, the signer of the above instrument, who duly acknowledged to me that he/she executed the same on behalf of _____, pursuant to authority delegated to him/her.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

(NOTARY SEAL)

Notary Public

EXHIBIT C

ACKNOWLEDGMENT OF

State of UT)
) ss.
County of SL)

On this _____ day of _____, 2014, personally appeared before me _____, to be known to be the _____ of _____, the signer of the above instrument, who duly acknowledged to me that he/she executed the same on behalf of _____, pursuant to authority delegated to him/her

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

(NOTARY SEAL)

Notary Public

EXHIBIT C

EXHIBIT "A"

ENCROACHMENT GUIDELINES FOR PROTECTION CRITERIA

- A. Surface structures that generally will be allowed to be constructed within United States rights-of-way include asphalt roadways, with no utilities within roadway, non reinforced parking lots, curbs, gutters and sidewalks, walkways, driveways. However, where United States system pipe has specific maximum and minimum cover designation the special requirements for roadways, parking lots and driveways crossing over the pipe shall be obtained from the United States for the maximum allowable external loading or minimum cover. **HOWEVER, IT IS UNDERSTOOD THAT ALL SURFACE STRUCTURES SHALL BE ANALYZED AND CONSIDERED ON AN INDIVIDUAL BASIS.**
- B. Structures that may not be constructed in, on, or along United States rights-of-way include but are not limited to, permanent structures such as fences, retaining walls, block walls, buildings, garages, decks, carports, trailers, and swimming pools as designated by the United States.
- C. No trees or vines will be allowed within the rights-of-way of the United States.
- D. All temporary or permanent changes in ground surfaces within United States rights-of-way are to be considered to be encroaching structures and must be handled as such. Earthfills and cuts on adjacent property shall not encroach onto United States rights-of-way without prior approval by the United States.
- E. Existing gravity drainage of the United States rights-of-way must be maintained. No new concentration of surface or subsurface drainage may be directed onto or under the United States rights-of-way without adequate provision for removal of drainage water or adequate protection of the United States rights-of-way.
- F. Prior to construction of any structure that encroaches within United States rights-of-way, an excavation must be made to determine the location of existing United States facilities. The excavation must be made by or in the presence of water users or the United States.
- G. Any contractor or individual constructing improvements in, on, or along United States rights-of-way must limit his construction to the encroaching structure previously approved and construct the improvements strictly in accordance with plans or specifications.
- H. The ground surfaces within United States rights-of-way must be restored to a condition equal to that which existed before the encroachment work began or as shown on the approved plans or specifications.
- I. The owner of newly constructed facilities that encroach on United States rights-of-way shall notify the United States and/or the District upon completion of construction and shall provide the

EXHIBIT C

District with one copy and the United States with two copies of as-built drawings showing actual improvements in, on, or along the rights-of-way.

J. Except in case of ordinary maintenance and emergency repairs, an owner of encroaching facilities shall give the District at least 10 days' notice in writing before entering upon United States rights-of-way for the purpose of reconstructing, repairing, or removing the encroaching structure or performing any work on or in connection with the operation of the encroaching structure.

K. If unusual conditions are proposed for the encroaching structure or unusual field conditions within United States rights-of-way are encountered, the United States reserves the right to impose more stringent criteria than those prescribed herein.

L. All backfill material within United States rights-of-way shall be compacted to 90 percent of maximum density unless otherwise shown. Mechanical compaction shall not be allowed within 6 inches of the projects works whenever possible. In no case will mechanical compaction using heavy equipment be allowed over the project works or within 18 inches horizontally of the projects works.

M. That the backfilling of any excavation or around any structure within the United States rights-of-way shall be compacted in layers not exceeding 6 inches thick to the following requirements: (1) cohesive soils to 90 percent maximum density specified by ASTM Part 19, D-698, method A; (2) non-cohesive soils to 70 percent relative density specified by ANSI/ASTM Part 19, d-2049, par. 7.1.2, wet method.

N. Any nonmetallic encroaching structure below ground level shall be accompanied with a metallic strip within the United States rights-of-way.

O. Owners of encroaching facilities shall notify the United States at (801) 379-1000 and/or the District at _____ at least forty-eight (48) hours in advance of commencing construction to permit inspection by the United States and/or the District.

P. No use of United States lands or rights-of-way shall be permitted that involve the storage of hazardous material.

8/9/16

S-0154(12)11

4 Interchanges on Bangerter Highway

CID 71939 PIN 12566

EXHIBIT D

Bangerter Interchanges Protect-in-Place

DRAFT

EXHIBIT D

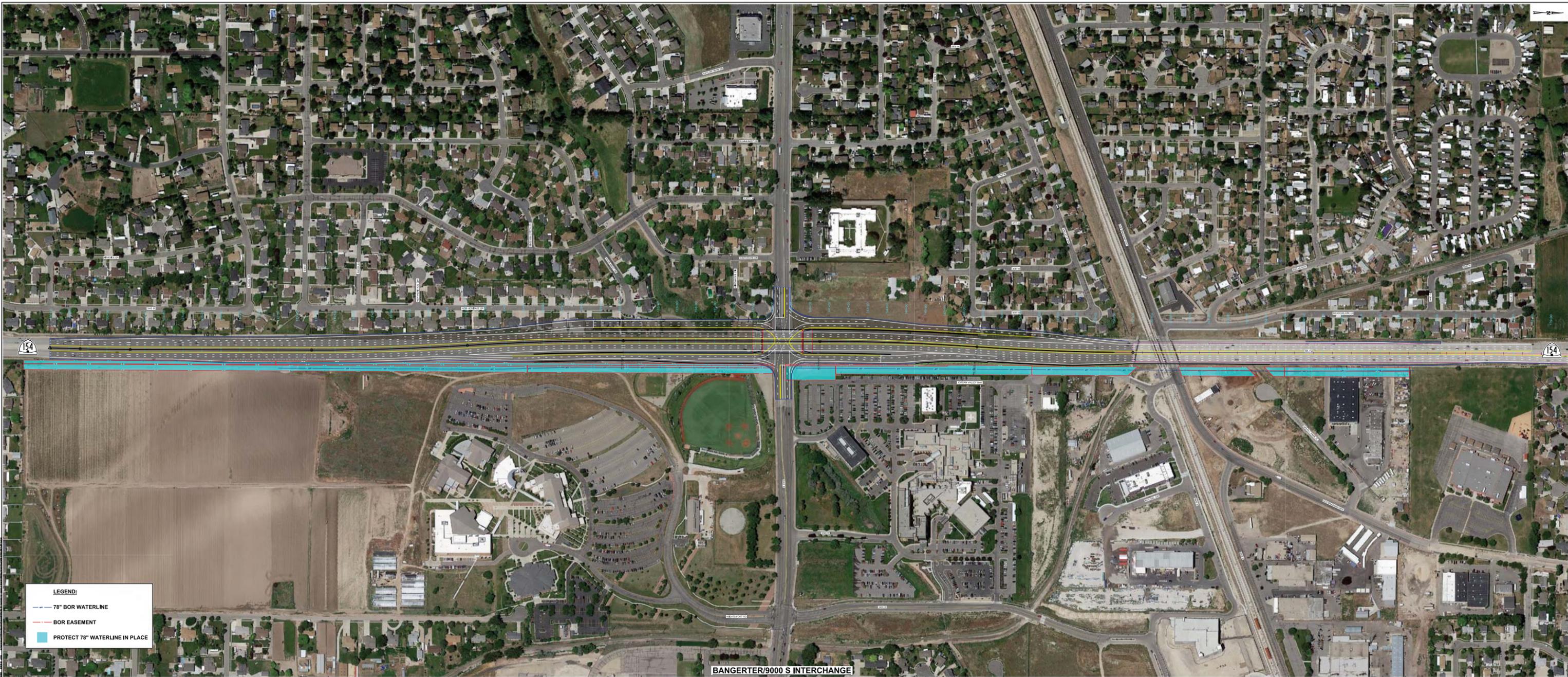


EXHIBIT D

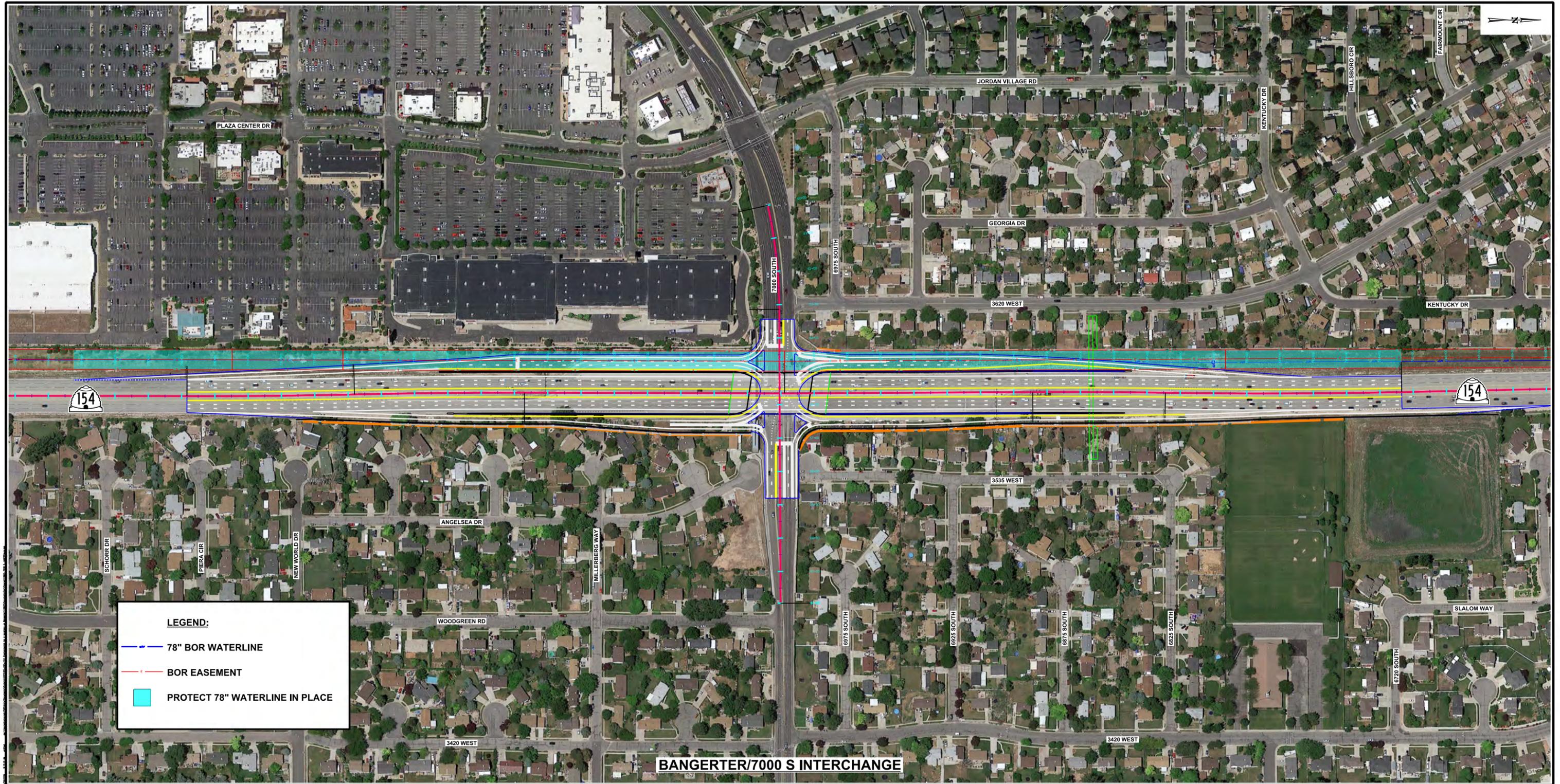


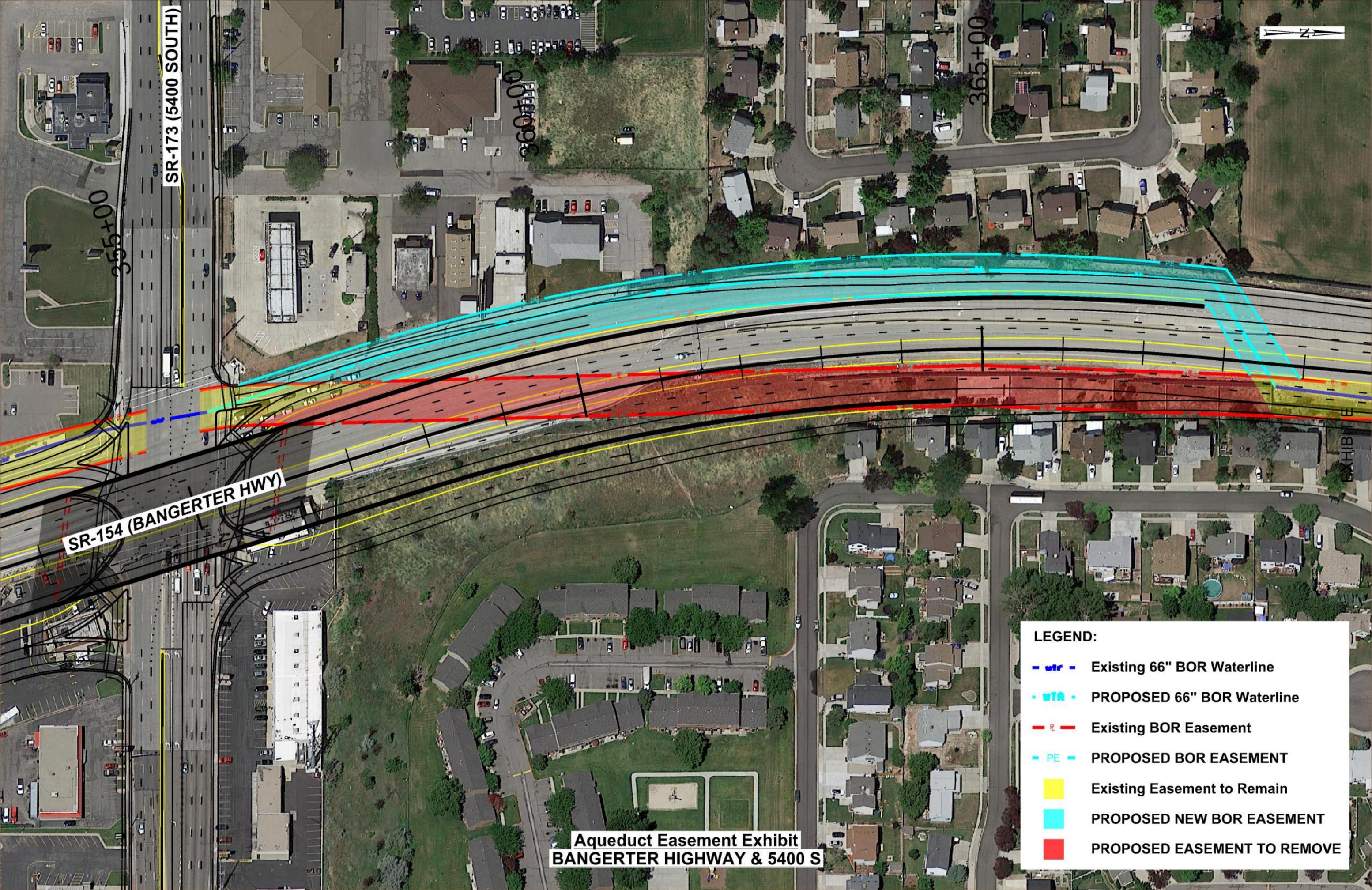
EXHIBIT D



Aqueduct Easement Exhibit
BANGERTER HIGHWAY & 5400 S

EXHIBIT E
5400 South and Bangerter Highway, Jordan Aqueduct Relocation
and BOR Aqueduct Existing Utility Actions

DRAFT



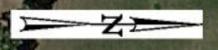
SR-173 (5400 SOUTH)

SR-154 (BANGERTER HWY)

355+00

360+00

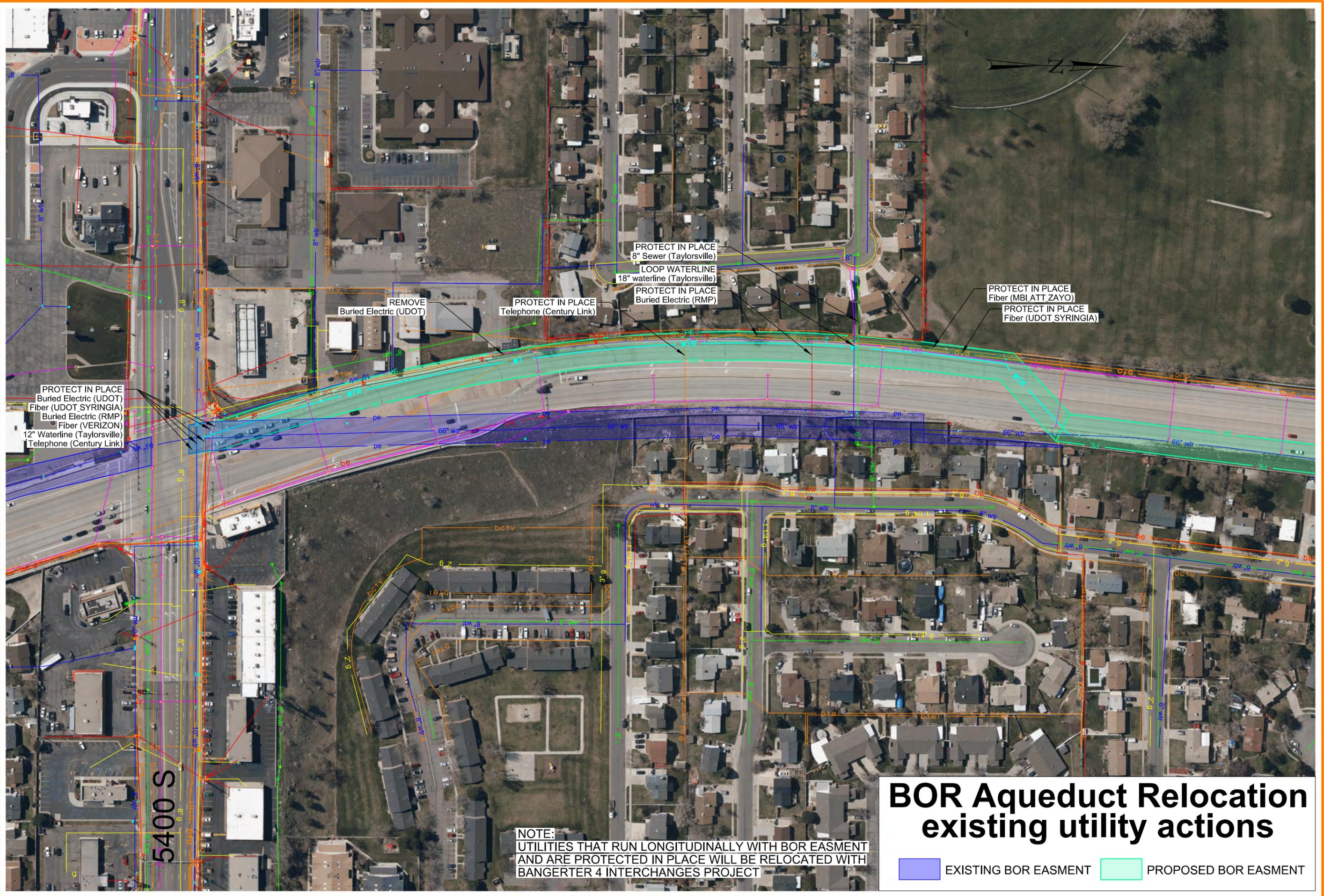
365+00



Aqueduct Easement Exhibit
BANGERTER HIGHWAY & 5400 S

LEGEND:

- - **wtr** - Existing 66" BOR Waterline
- - **wtr** - PROPOSED 66" BOR Waterline
- - **E** - Existing BOR Easement
- - **PE** - PROPOSED BOR EASEMENT
- Existing Easement to Remain
- PROPOSED NEW BOR EASEMENT
- PROPOSED EASEMENT TO REMOVE



PROTECT IN PLACE
Buried Electric (UDOT)
Fiber (UDOT SYRINGIA)
Buried Electric (RMP)
Fiber (VERIZON)
12" Waterline (Taylorsville)
Telephone (Century Link)

REMOVE
Buried Electric (UDOT)

PROTECT IN PLACE
Telephone (Century Link)

PROTECT IN PLACE
8" Sewer (Taylorsville)

LOOP WATERLINE
18" waterline (Taylorsville)

PROTECT IN PLACE
Buried Electric (RMP)

PROTECT IN PLACE
Fiber (MBI.ATT.ZAYO)

PROTECT IN PLACE
Fiber (UDOT SYRINGIA)

5400 S

NOTE:
UTILITIES THAT RUN LONGITUDINALLY WITH BOR EASMENT
AND ARE PROTECTED IN PLACE WILL BE RELOCATED WITH
BANGERTER 4 INTERCHANGES PROJECT

BOR Aqueduct Relocation existing utility actions

EXISTING BOR EASMENT PROPOSED BOR EASMENT

UTAH

DEPARTMENT OF TRANSPORTATION

SEE SHEET 1-A FOR INDEX TO SHEETS

SHEET NO.
1

U.S. Standard Units
(Inch-Pound Units)

ALL UNITS IN FEET UNLESS
OTHERWISE NOTED

PLANS OF PROPOSED STATE ROAD STATE FUNDED

S-0154(82)16 PIN: 14785

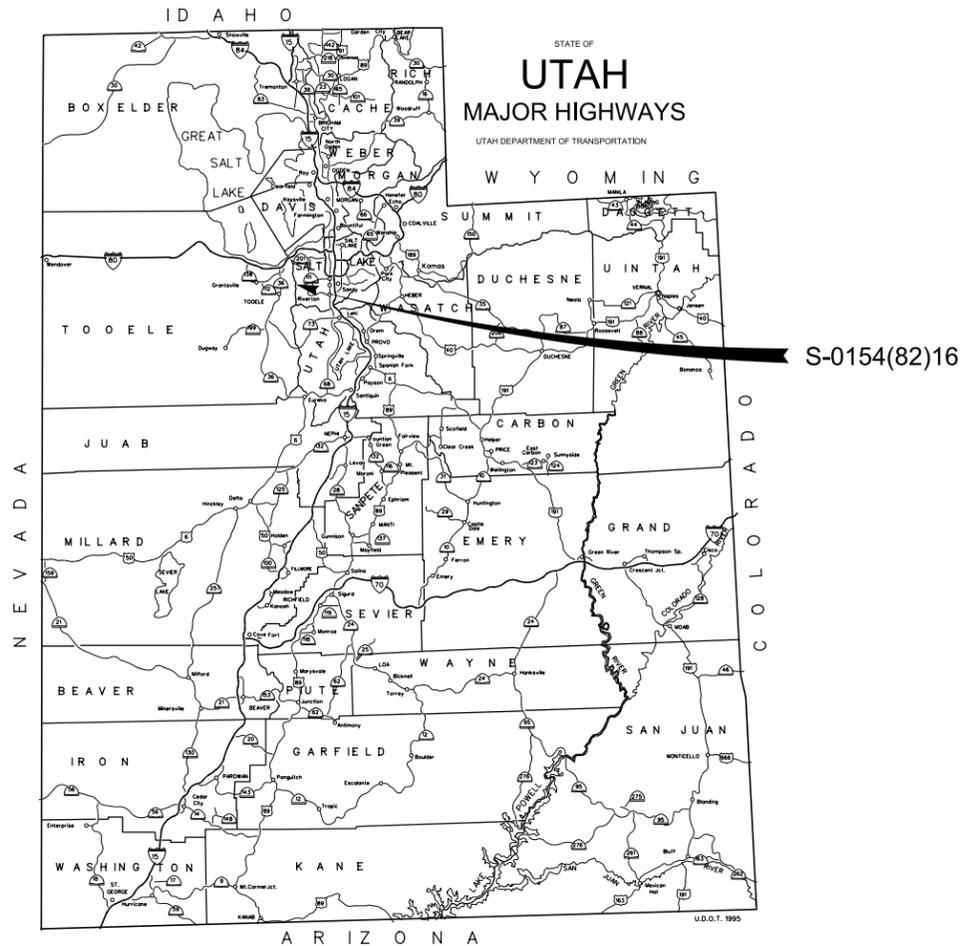
BANGERTER HWY. @ 5400 S. AQUEDUCT RELOCATION

SR-154; MP 15.84-16.09

SALT LAKE COUNTY

LENGTH 0.25 MILES

Sections 8, 17, 20 & 29; Township 2 South; Range 1 West



07/18/2016

THIS SEAL APPLIES TO ALL SHEETS
CONTAINING THIS SIGNATURE

BEGIN PROJECT
S-0154(82)16

MP 13.717
N 397162.814
E 508499.553

49+58.00
BEGIN CONSTRUCTION
S-0154(82)16

MP 15.83
N 408153.968
E 507342.481

75+66.00
END CONSTRUCTION
END PROJECT
S-0154(82)16

MP 16.32
N 410707.016
E 507092.150



ACCEPTED

MANAGER, FIELD ENGINEERING DIVISION I

VERIFIED FOR SUBMISSION FOR ADVERTISEMENT

DESIGN ENGINEER

UTAH DEPARTMENT OF TRANSPORTATION

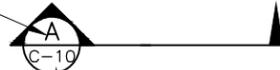
APPROVED FOR USE BY UDOT

REGION TWO PRECONSTRUCTION ENGINEER

EXHIBIT E

SECTION IDENTIFICATION

(1) SECTION CUT SHOWN ON DRAWING AS:
SECTION LETTER



DRAWING NUMBER WHERE THE SECTION IS SHOWN (SEE NOTE A)

(2) THIS SECTION IS IDENTIFIED AS: SECTION LETTER

SECTION

SCALE: AS DESIGNATED



DRAWING NUMBER WHERE THE SECTION CUT IS SHOWN (SEE NOTE A)

DETAIL IDENTIFICATION

(1) DETAIL IDENTIFICATION SHOWN ON DRAWING AS:

DETAIL NUMBER THE DETAIL NAME IS OPTIONAL AND LOCATED HERE, FOLLOWING DETAIL CALLOUT
DRAWING NUMBER WHERE THE DETAIL IS SHOWN



(2) THIS DETAIL IS IDENTIFIED AS: DETAIL NUMBER

DETAIL

SCALE: AS DESIGNATED (SEE NOTE A)



DRAWING NUMBER WHERE THE DETAIL IS SHOWN

TYPICAL DETAIL IDENTIFICATION

DETAIL NAME

NOT TO SCALE



TYPICAL DETAIL NUMBER, SEE INDEX OF DRAWINGS FOR LOCATION OF GENERAL DRAWINGS

DRAWING IDENTIFICATION SYSTEM

LETTER	DISCIPLINE
G	GENERAL
C	CIVIL
CP	CATHODIC PROTECTION
GC	GENERAL CIVIL

S-2 _____ INDIVIDUAL DRAWING NUMBER
DISCIPLINE

NOTES:

- A. IF PLAN AND SECTION (OR DETAIL CALL-OUT AND DETAIL) ARE SHOWN ON SAME DRAWING, DRAWING NUMBER IS REPLACED BY A HORIZONTAL LINE.
- B. ELECTRICAL SYMBOLS SHOWN ON ELECTRICAL DRAWINGS. FOR WELDING SYMBOLS USE AMERICAN WELDING SOCIETY STANDARD SYMBOLS. SEE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.

- 1 COORDINATE IDENTIFICATION
- ELEVATION INDICATOR
- SECTION CORNER
- BENCH MARK
- MONUMENT INDICATOR
- POTHOLE
- TEST HOLE
- BORING HOLE
- SECTION LINE
- PROPERTY LINE
- EASEMENT
- PARCEL
- RIGHT-OF-WAY
- NEW ASPHALT
- EXISTING ASPHALT
- CENTERLINE
- 4500 CONTOUR LINE, FINISHED GRADE
- 4500 CONTOUR LINE, EXISTING GRADE
- 4500.20 FINISHED ELEVATION
- 4500.20 EXISTING ELEVATION
- CUT OR FILL SLOPE TO BE CONSTRUCTED
- SILT FENCE
- FENCE
- RAILING
- DITCH
- CULVERT
- RIPRAP
- TREE LINE/VEGETATION
- EXISTING STRUCTURE OR FACILITY
- NEW STRUCTURE OR FACILITY
- FUTURE STRUCTURE OR FACILITY
- NEW PIPELINE (CIVIL SHEETS)
- NEW PIPELINE 10" DIA AND SMALLER (CIVIL SHEETS)
- EXISTING UTILITY PIPELINE
- ATMS ATMS
- CTV CABLE
- C(ug) COMMUNICATION BURIED
- COMM COMMUNICATION OVERHEAD
- P(ug) ELECTRICAL BURIED
- OHP ELECTRICAL OVERHEAD
- FO FIBER OPTICS
- GAS GAS
- HPG HIGH PRESSURE GAS
- IRR IRRIGATION
- PETRO PETROLEUM LINE
- SS SANITARY SEWER
- SD STORM DRAIN
- T(ug) TELEPHONE BURIED
- TEL TELEPHONE OVERHEAD
- W WATERLINE
- TV CABLE BOX
- CATCH BASIN
- EB ELECTRICAL BOX
- HYDRANT
- G GAS MANHOLE
- S SEWER MANHOLE
- D STORM DRAIN MANHOLE
- T TELEPHONE MANHOLE
- W WATER MANHOLE
- WM WATER METER

- POWER POLE
- TELEPHONE BOX
- LIGHT POLE ONE LUMINAIRE
- LIGHT POLE TWO LUMINAIRES
- LIGHT POLE
- STREET LIGHT WITH BRACKET
- MASONRY
- STEEL
- INSULATION
- GRAVEL
- CONCRETE
- EARTH
- SAND
- GRATING
- PLASTIC, RUBBER OR NEOPRENE
- WOOD (ROUGH FRAMING) OR OPENING OR DEPRESSION IN SLAB OR WALL
- CHANGE IN PIPING MATERIAL
- REVISION WORK

- ANSI AMERICAN NATIONAL STANDARDS INSTITUTE
- ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS
- ASTM AMERICAN SOCIETY FOR TESTING AND MATERIAL
- AWWA AMERICAN WATER WORKS ASSOCIATION
- BF BLIND FLANGE, BUTTERFLY VALVE
- BHD BULKHEAD
- BO BLOW-OFF ASSEMBLY, BLOW-OFF
- BOR U.S. BUREAU OF RECLAMATION
- CCP CONCRETE CYLINDER PIPE
- CML & C CEMENT MORTAR LINED AND COATED
- COMB COMBINED
- CONC CONCRETE, CONCENTRIC
- CONN CONNECTION
- COORD COORDINATE
- CYL CYLINDER
- DI DUCTILE IRON, DROP INLET
- DIA DIAMETER
- DIP DUCTILE IRON PIPE
- DWG DRAWING
- E EAST
- EF EACH FACE, EXHAUST FAN
- EG EXISTING GRADE
- EL ELEVATION

- GENERAL NOTES:**
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING IMPROVEMENTS FROM DAMAGE WHICH ARE TO REMAIN IN PLACE. ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO ORIGINAL OR BETTER CONDITION TO THE SATISFACTION OF THE OWNER AT THE EXPENSE OF THE CONTRACTOR.
 - CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMANCE WITH LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES. CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF THE PUBLIC AND PROTECTION OF PERSONNEL AND WORKERS.
 - DEWATERING: GROUND WATER AND SURFACE WATER CONTROL SHALL BE PERFORMED AND RESPONSIBLY HANDLED BY THE CONTRACTOR ACCORDING TO, AND IN COMPLIANCE WITH, ALL LOCAL GOVERNING AUTHORITIES. GROUND WATER AND/OR SURFACE WATER PUMPING MAY BE REQUIRED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE POTENTIAL PUMPING NEEDS. CONTRACTOR SHALL OBTAIN DEWATERING PERMIT AS NECESSARY.
 - CONTRACTOR SHALL PREVENT ANY GROUND WATER OR DEBRIS FROM ENTERING NEW PIPES DURING CONSTRUCTION. THE ENDS OF THE PIPES SHALL BE SEALED AT THE END OF EACH WORKDAY.
 - PROFILE DRAWINGS ARE HORIZONTAL PROJECTIONS OF THE PIPELINE CENTERLINE, UNLESS OTHERWISE NOTED.
 - LAY PIPE TO DEPTH AND ALONG HORIZONTAL ALIGNMENT AS DEFINED IN THESE DRAWINGS. CONTRACTOR SHALL NOT DEVIATE FROM PROPOSED ALIGNMENT OR GRADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. AVOID HIGH AND LOW POINTS EXCEPT WHERE DESIGNED.
 - CONTRACTOR SHALL PERFORM CHLORINATION TEST, PRESSURE TEST, AND BACTERIA TEST. ALL WATERLINES INSTALLED SHALL BE DISINFECTED IN ACCORDANCE WITH THE "AMERICAN WATER WORKS ASSOCIATION STANDARD FOR DISINFECTING WATER MAINS" (AWWA C651). ALL CHLORINATED WATER SHALL BE DISPOSED OF IN ACCORDANCE WITH THE UTAH DEPT OF ENVIRONMENTAL QUALITY RULES AND REQUIREMENTS FOR SURFACE DISCHARGE.
 - PRESSURE TEST ALL PIPELINES TO 100 PSI FOR FOUR HOURS WITH ZERO LEAKAGE. IN THE CASE OF PIPELINES THAT FAIL TO PASS THE LEAKAGE TEST, THE CONTRACTOR SHALL DETERMINE THE CAUSE OF THE EXCESSIVE LEAKAGE, SHALL TAKE CORRECTIVE MEASURES NECESSARY TO REPAIR THE LEAKS, AND SHALL AGAIN TEST THE PIPELINES, ALL AT NO COST TO THE OWNER.
 - ALL MATERIALS WHICH MAY CONTACT DRINKING WATER INCLUDING PIPES, GASKETS, LUBRICANTS, AND O-RINGS, SHALL BE ANSI-CERTIFIED AS MEETING THE REQUIREMENTS OF NSF STANDARD 61, DRINKING WATER SYSTEM COMPONENTS-HEALTH EFFECTS. TO PERMIT FIELD VERIFICATION OF THIS CERTIFICATION, ALL SUCH COMPONENTS SHALL BE APPROPRIATELY STAMPED WITH THE NSF LOGO.
 - HYDRAULIC DESIGN CRITERIA OF JA-3 RELOCATION SEGMENT - 50 PSI WORKING PRESSURE AND 100 PSI TEST PRESSURE.
 - CONTRACTOR SHALL PROTECT THE EXISTING JORDAN AQUEDUCT. DO NOT STOCKPILE MATERIALS OVER THE EXISTING PIPELINE OR OTHERWISE INCREASE OR DECREASE THE COVER ON THE EXISTING PIPELINE. CONTRACTOR SHALL CONDUCT OPERATIONS AS TO PREVENT OPERATION OF HEAVY EQUIPMENT THAT MAY POINT LOAD OR OTHERWISE NEGATIVELY IMPACT THE EXISTING AQUEDUCT. OPERATION OF CONSTRUCTION EQUIPMENT WITHIN THE AQUEDUCT EASEMENT SHALL BE SUBJECT TO BOR APPROVAL.

ABBREVIATIONS:

ELEV	ELEVATION	LF	LINEAR FEET	SD	STORM DRAIN
EW	EACH WAY, EYE WASH			SHT	SHEET
EX	EXISTING			SIM	SIMILAR
EXT	EXTERIOR, EXTENSION, EXTERNAL			SPEC	SPECIFIED, SPECIFICATION
		MH	MANHOLE, MONORAIL HOIST	SPECS	SPECIFICATIONS
F	FAHRENHEIT, FACE	MTL	METAL OR MATERIAL	SS	SANITARY SEWER, SERVICE SINK
FAB	FABRICATION, FABRICATE, OR FABRICATED	MW	MANWAY	SST	STAINLESS STEEL
FF	FLAT FACE, FAR FACE, FINISH FLOOR			STA	STATION
		N	NORTH	STD	STANDARD
		NPT	NATIONAL PIPE THREAD	STL	STEEL
		NTS	NOT TO SCALE	T	THICKNESS, TOP, TOILET
GALV	GALVANIZED			T&B	TOP AND BOTTOM
GI	GALVANIZED IRON			TEL	TELEPHONE
GR	GRADE			THR'D	THREADED
GB	GRADE BREAK, GRADE CHANGE	PC	POINT OF CURVE	TYP	TYPICAL
GRV	GROOVED	PE	PLAIN END, POLYELECTROLYTE POLYMER, POLYETHYLENE PRESSURE GAUGE		
		PG	POINT OF INTERSECTION		
		PI	POINT OF BEGINNING		
		POB	POUNDS PER SQUARE FOOT	UG	UNDERGROUND
		PSF	POUNDS PER SQUARE INCH	UNO	UNLESS OTHERWISE NOTED
		PSI	POUNDS PER SQUARE INCH GAUGE		
		PSIG	POINT OF TANGENT, PRESSURE TREATED		
		PT	POINT OF VERTICAL INTERSECTION	VC	VERTICAL CURVE
		IN	POTABLE WATER	VERT	VERTICAL
				VPI	VERTICAL POINT OF INFLECTION
		JA	JORDAN AQUEDUCT		
		JT	JOINT		
		JTS	JOINTS		
		JWTP	JORDAN VALLEY WATER TREATMENT PLANT		
		RCP	REINFORCED CONCRETE PIPE		
		R/W	RIGHT OF WAY		
				W	WEST
				WSP	WELDED STEEL PIPE

JA - 3 RELOCATION HORIZONTAL ALIGNMENT

ELEMENT	STATION	NORTHING	EASTING	PI NORTHING	PI EASTING	DELTA	RADIUS	TANGENT	CURVE LENGTH
POB	1250+15.59	408714.63	507105.98					N09°30'42"W	
PI	1250+18.99	408717.99	507105.42					N17°54'48"W	
PI	1251+43.24	408836.21	507067.21					N16°58'20"W	
PC	1252+10.39	408900.43	507047.61	409342.27	506912.76	021°18'19"	2455.94'	N06°19'10"W	913.24'
PT	1261+23.62	409802.90	506947.66					N04°19'59"E	
PI	1263+22.42	410001.13	506962.68					N06°43'10"E	
PI	1264+45.25	410123.12	506977.05					N47°24'08"E	
PI	1266+11.59	410235.71	507099.50					N01°33'50"E	
POE	1266+18.47	410242.58	507099.69					N01°33'50"E	

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.

PROJECT: SR-154 BANGER TER HWY
PROJECT NUMBER: S-0154(82)16
PIN: 14785

DATE: 07/14/16

PROFESSIONAL ENGINEER: [Signature]

APPROVED: [Signature]

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.

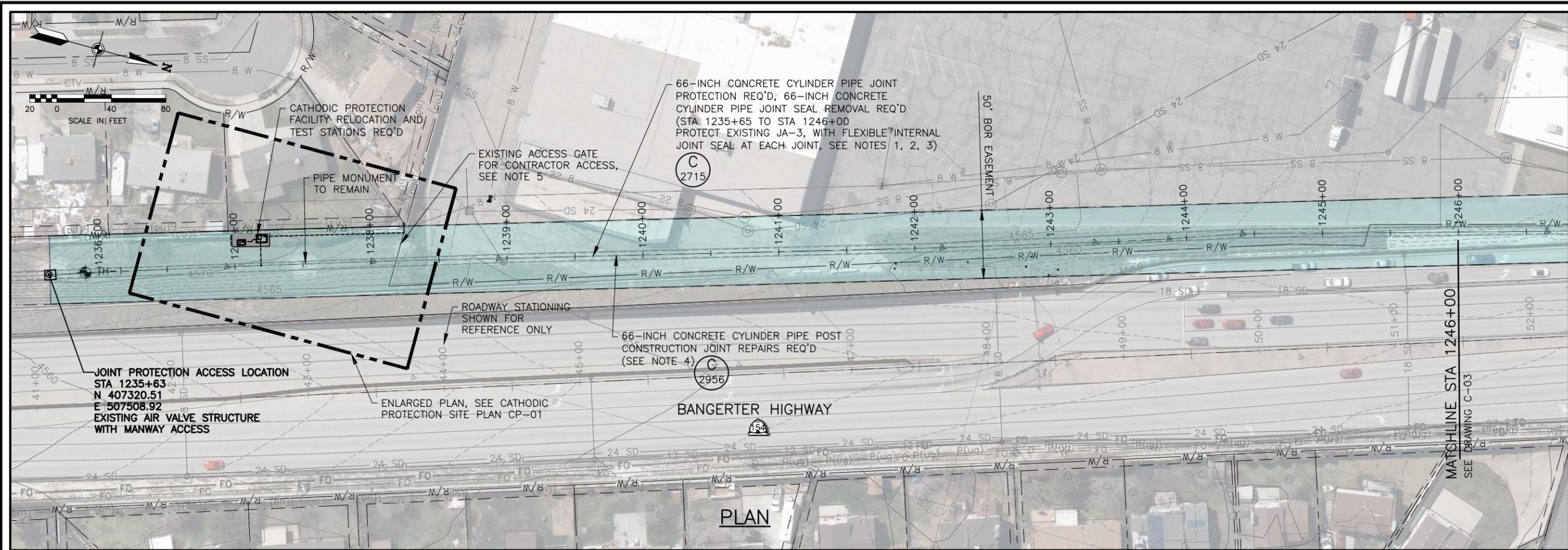
STATION: PROVO, UTAH

MANAGER, FIELD ENGINEERING DIVISION: BART LEFLANG, P.E.

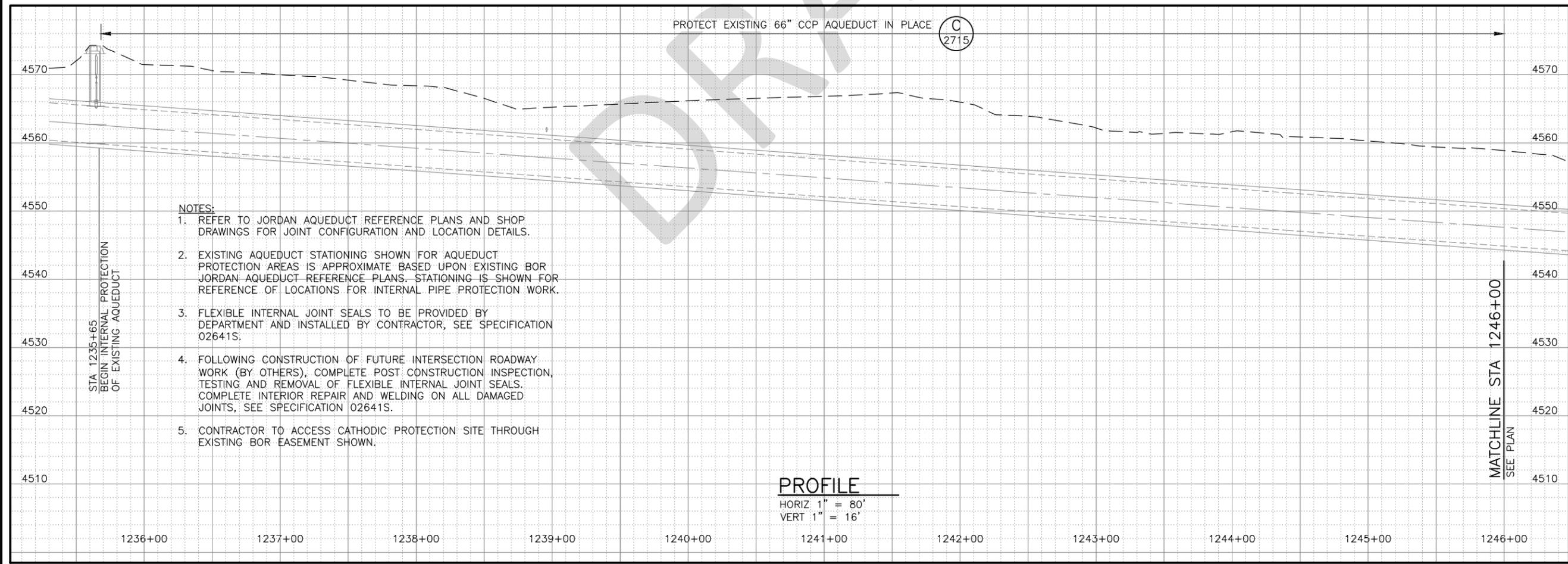
REVISIONS:

NO.	DATE	APPROVED BY	REMARKS

SHEET NO. G-01



PLAN



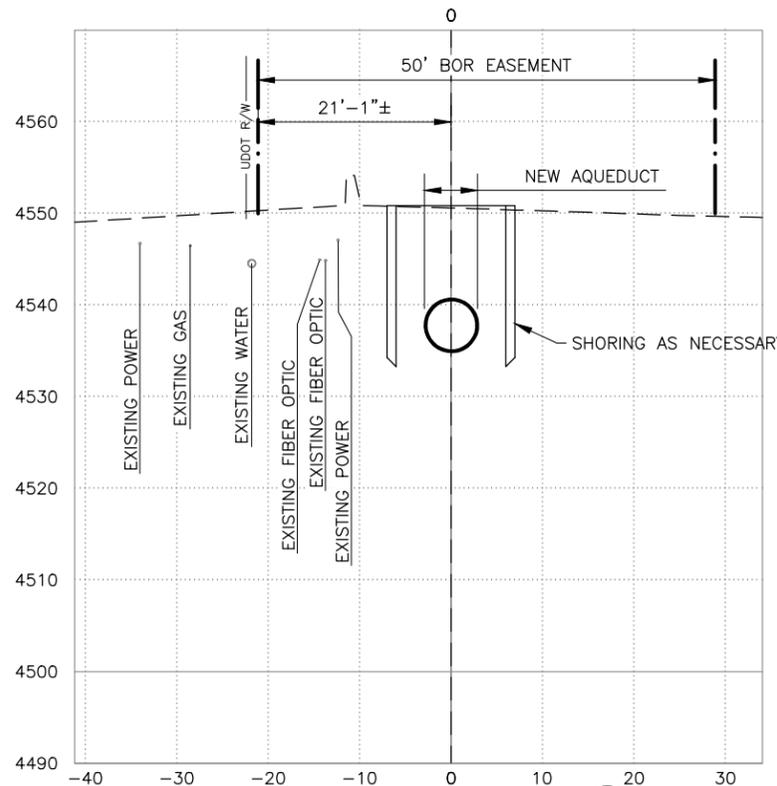
PROFILE

HORIZ 1" = 80'
VERT 1" = 16'

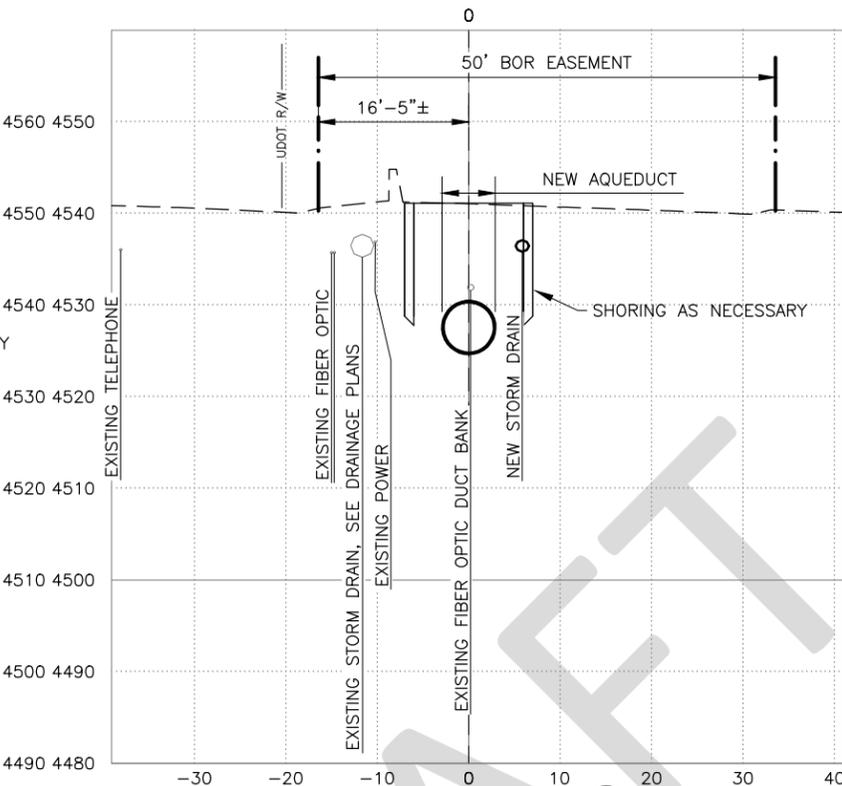
- NOTES:
- REFER TO JORDAN AQUEDUCT REFERENCE PLANS AND SHOP DRAWINGS FOR JOINT CONFIGURATION AND LOCATION DETAILS.
 - EXISTING AQUEDUCT STATIONING SHOWN FOR AQUEDUCT PROTECTION AREAS IS APPROXIMATE BASED UPON EXISTING BOR JORDAN AQUEDUCT REFERENCE PLANS. STATIONING IS SHOWN FOR REFERENCE OF LOCATIONS FOR INTERNAL PIPE PROTECTION WORK.
 - FLEXIBLE INTERNAL JOINT SEALS TO BE PROVIDED BY DEPARTMENT AND INSTALLED BY CONTRACTOR, SEE SPECIFICATION 02641S.
 - FOLLOWING CONSTRUCTION OF FUTURE INTERSECTION ROADWAY WORK (BY OTHERS), COMPLETE POST CONSTRUCTION INSPECTION, TESTING AND REMOVAL OF FLEXIBLE INTERNAL JOINT SEALS. COMPLETE INTERIOR REPAIR AND WELDING ON ALL DAMAGED JOINTS, SEE SPECIFICATION 02641S.
 - CONTRACTOR TO ACCESS CATHODIC PROTECTION SITE THROUGH EXISTING BOR EASEMENT SHOWN.

UTAH DEPARTMENT OF TRANSPORTATION REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.		DRAWN		REVISIONS	
PROJECT	SR-154 BANGERTER HWY	APPROVED	ACCEPTED	NO.	DATE
PROJECT NUMBER	JORDAN AQUEDUCT PROTECTION AND RELOCATION	DATE	MANAGER, FIELD ENGINEERING DIVISION	DATE	APPROVED BY
	S-0154(82)16	07/14/16	BART LEFLANG, P.E.		
	PIN 14785		MANAGER, FIELD ENGINEERING DIVISION		
	5400 SOUTH PLAN AND PROFILE		STATION: PROVO, UTAH		
SHEET NO.	C-02				

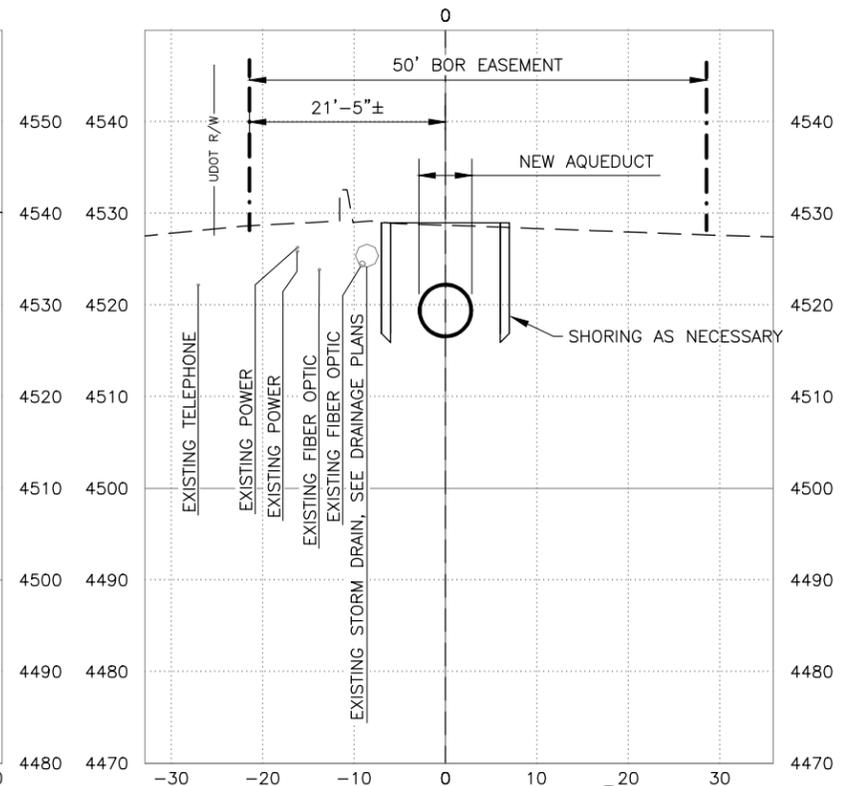
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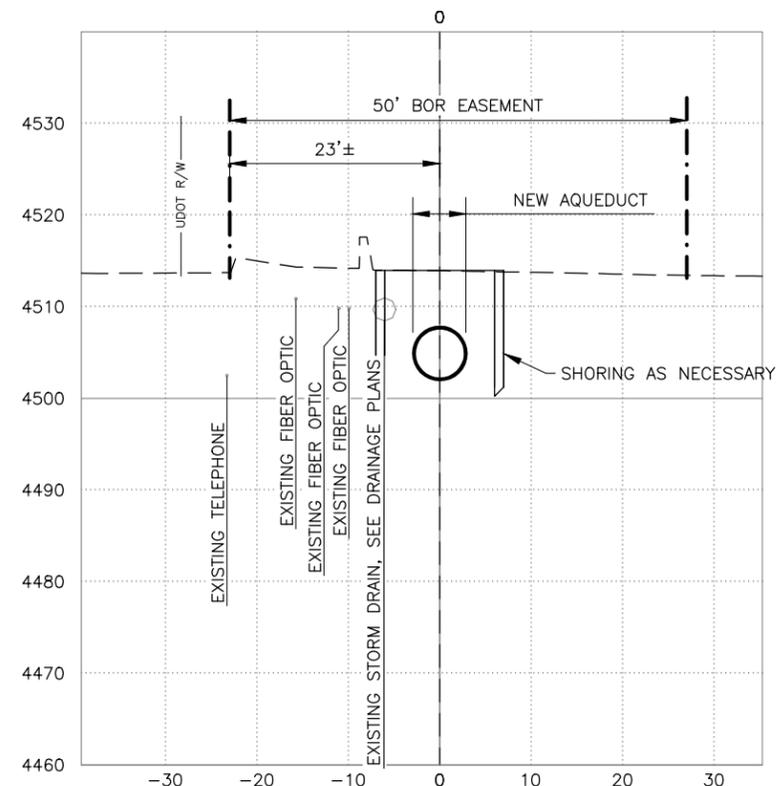
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C-03



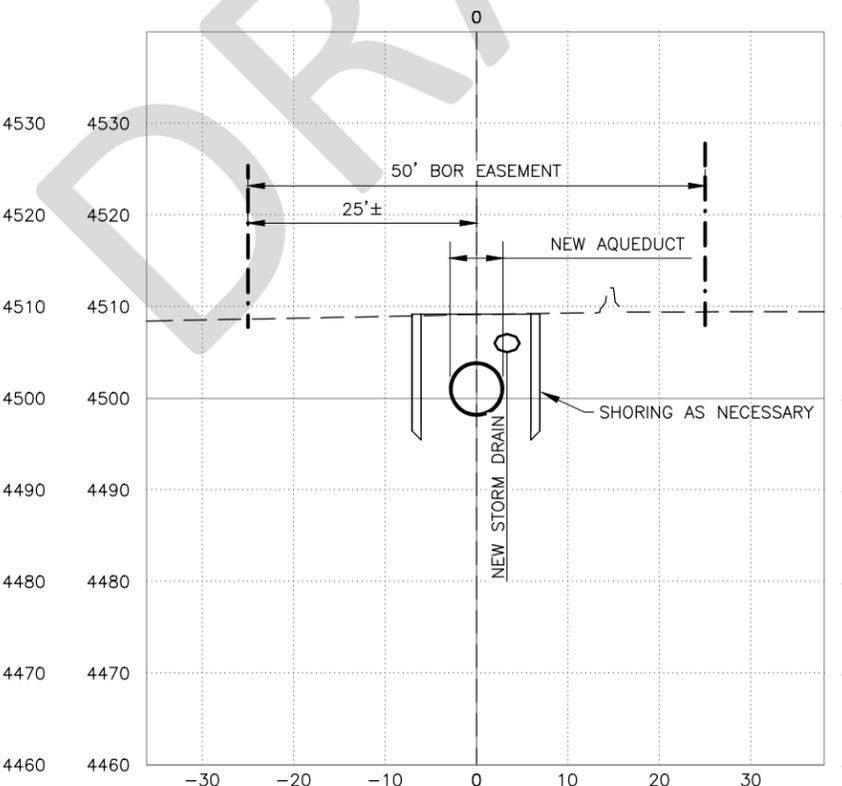
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C-03



CROSS SECTION C
SCALE: 1" = 20'-0"
C-04



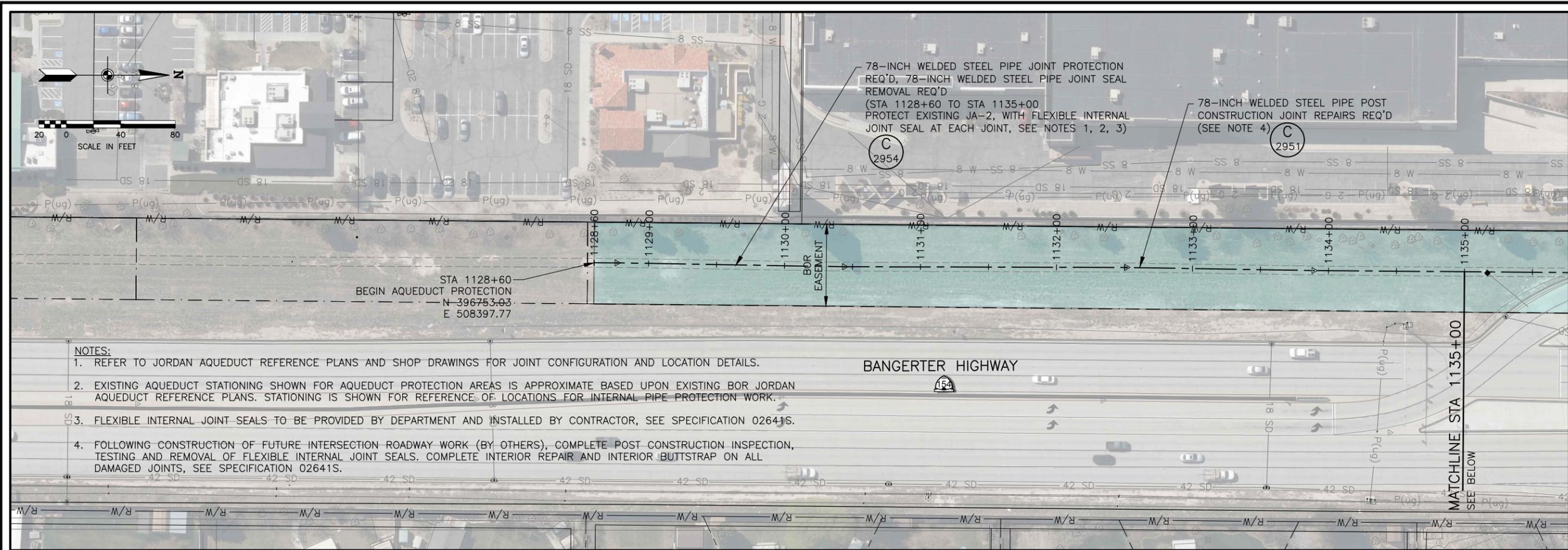
CROSS SECTION D
SCALE: 1" = 20'-0"
C-04



CROSS SECTION E
SCALE: 1" = 20'-0"
C-04

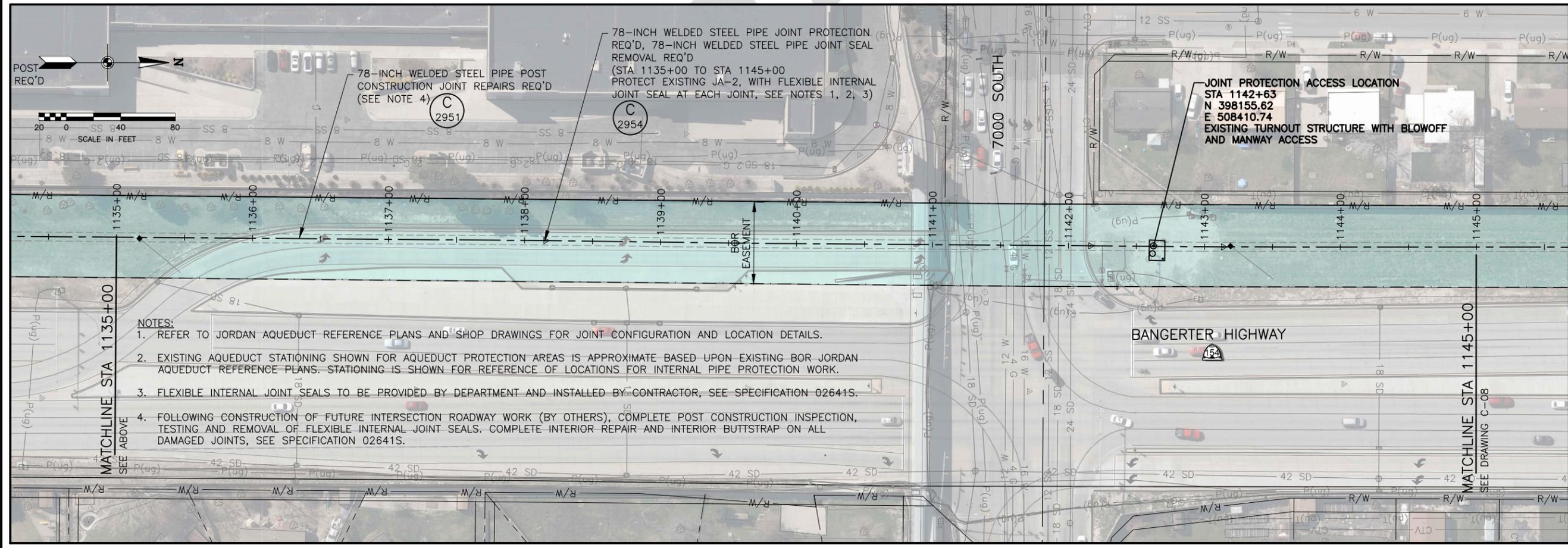
PROJECT		SR-154 BANGERTER HWY	
PROJECT NUMBER		S-0154(82)16	
PROJECT PIN		14785	
5400 SOUTH CROSS SECTIONS			
UTAH DEPARTMENT OF TRANSPORTATION REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.			
DRAWN		ACCEPTED BART LEEFLANG, P.E. MANAGER, FIELD ENGINEERING DIVISION	
DRAWN BY		SR	
QC CHECKED BY		JL	
DATE		07/14/16	
PROFESSIONAL ENGINEER		STATION: PROVO, UTAH	
APPROVED		DATE	
NO.		DATE	
APPROVED BY		REMARKS	

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NOTES:

- REFER TO JORDAN AQUEDUCT REFERENCE PLANS AND SHOP DRAWINGS FOR JOINT CONFIGURATION AND LOCATION DETAILS.
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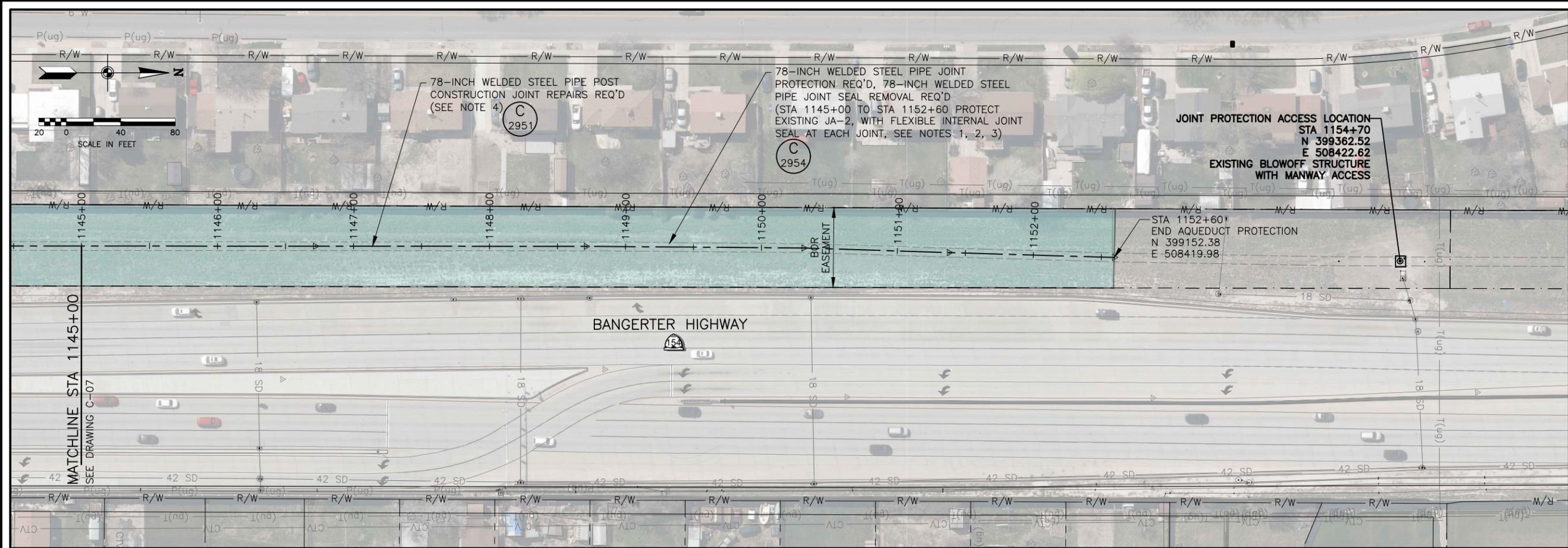


NOTES:

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PROJECT		SR-154 BANGERTER HWY		UTAH DEPARTMENT OF TRANSPORTATION		DRAWN		REVISIONS	
PROJECT NUMBER		S-0154(82)16		REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.		ACCEPTED BY BART LEFLANG, P.E. MANAGER, FIELD ENGINEERING DIVISION		NO. DATE APPROVED BY	
PIN		14785		APPROVED		STATION: PROVO, UTAH		REMARKS	
SHEET NO.		C-07		DATE		07/14/16			
PROJECT NUMBER		7000 SOUTH PLANS		PROFESSIONAL ENGINEER		CHECKED BY JL			

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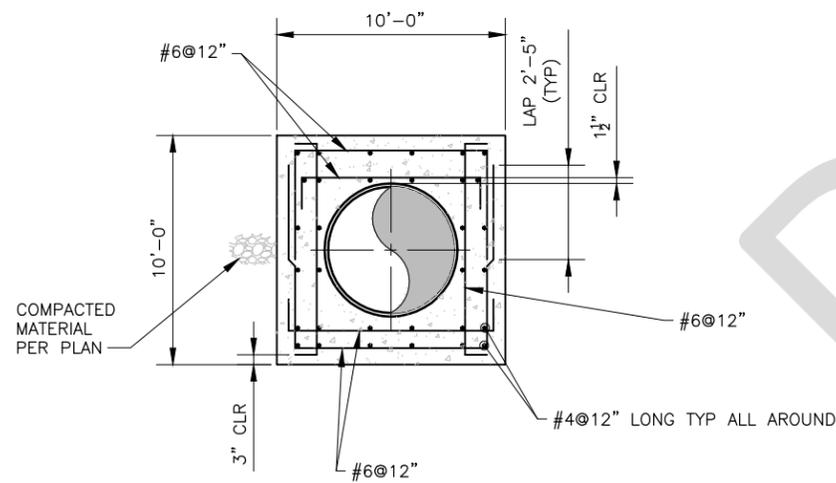
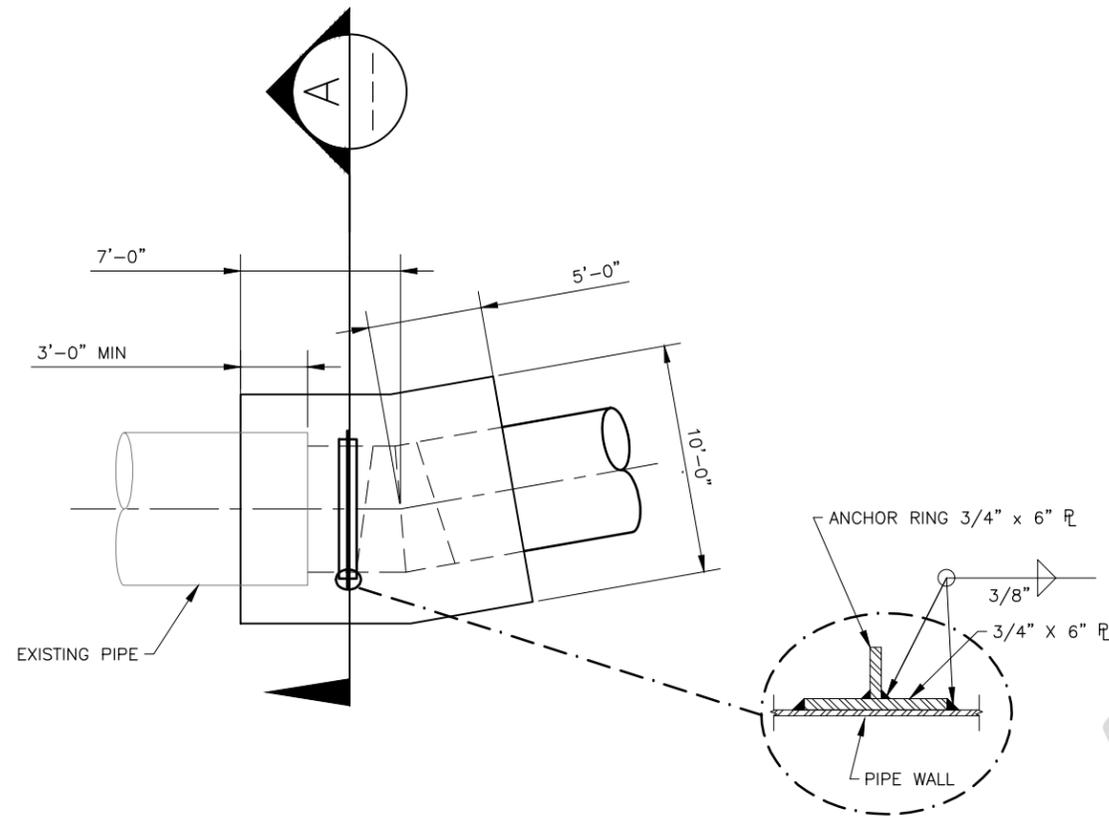


NOTES:

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2. EXISTING AQUEDUCT STATIONING SHOWN FOR AQUEDUCT PROTECTION AREAS IS APPROXIMATE BASED UPON EXISTING BOR JORDAN AQUEDUCT REFERENCE PLANS. STATIONING IS SHOWN FOR REFERENCE OF LOCATIONS FOR INTERNAL PIPE PROTECTION WORK.
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4. FOLLOWING CONSTRUCTION OF FUTURE INTERSECTION ROADWAY WORK (BY OTHERS). COMPLETE POST CONSTRUCTION INSPECTION, TESTING AND REMOVAL OF FLEXIBLE INTERNAL JOINT SEALS. COMPLETE INTERIOR REPAIR AND INTERIOR BUTTSTRAP ON ALL DAMAGED JOINTS, SEE SPECIFICATION 02641S.

PROJECT		SR-154 BANGERTER HWY	
PROJECT NUMBER		S-0154(82)16	
PROJECT PIN		14785	
PROJECT TITLE		7000 SOUTH PLANS	
APPROVED		DATE 07/14/16	
DRAWN BY		SR	
CHECKED BY		JL	
PROFESSIONAL ENGINEER		DATE	
UTAH DEPARTMENT OF TRANSPORTATION		REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.	
DRAWN		ACCEPTED BART LEFLANG, P.E. MANAGER, FIELD ENGINEERING DIVISION	
REVISIONS		STATION: PROVO, UTAH	
NO.		DATE	
APPROVED BY		REMARKS	
SHEET NO. C-08			

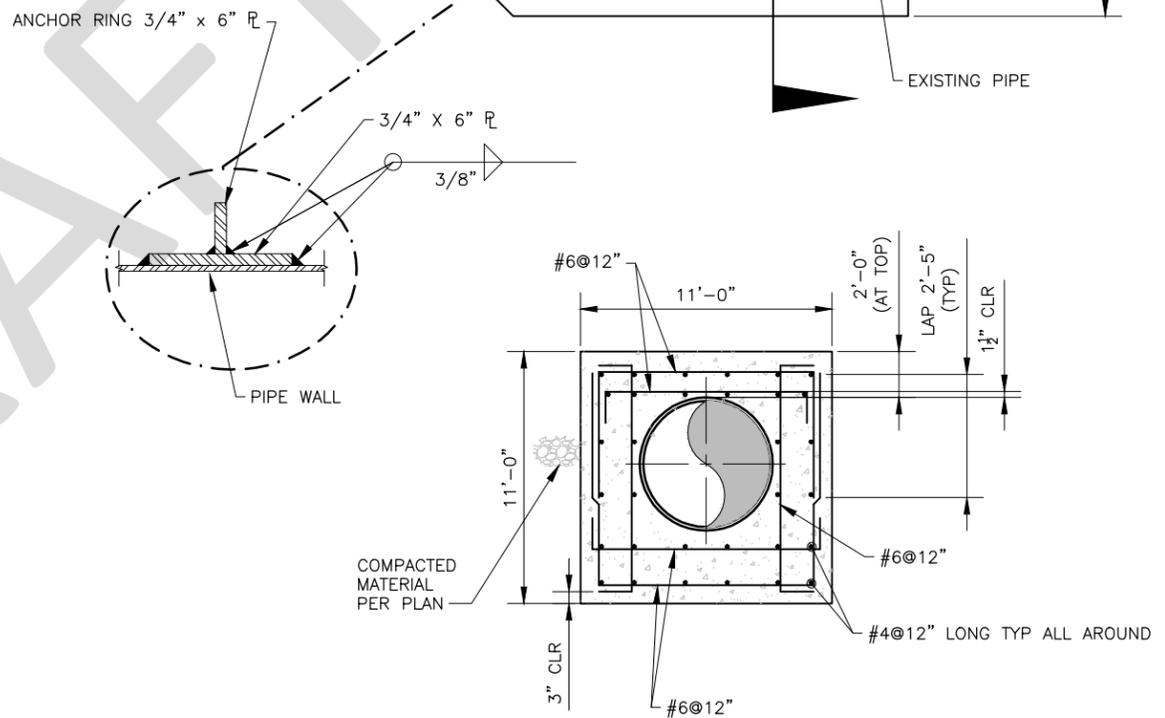
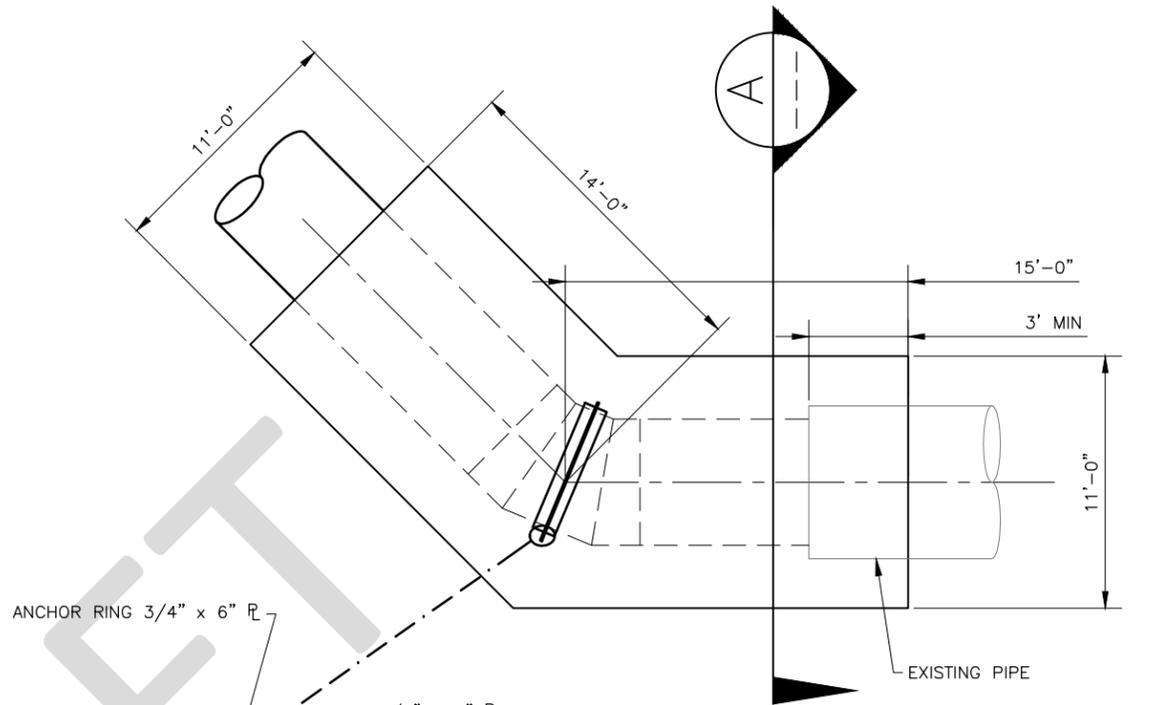
EXHIBIT E



SECTION A
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REINFORCED CONCRETE
COLLAR STA 1250+19
SCALE: NTS

1
C-05



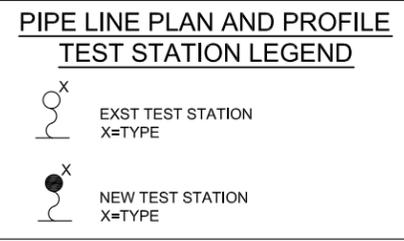
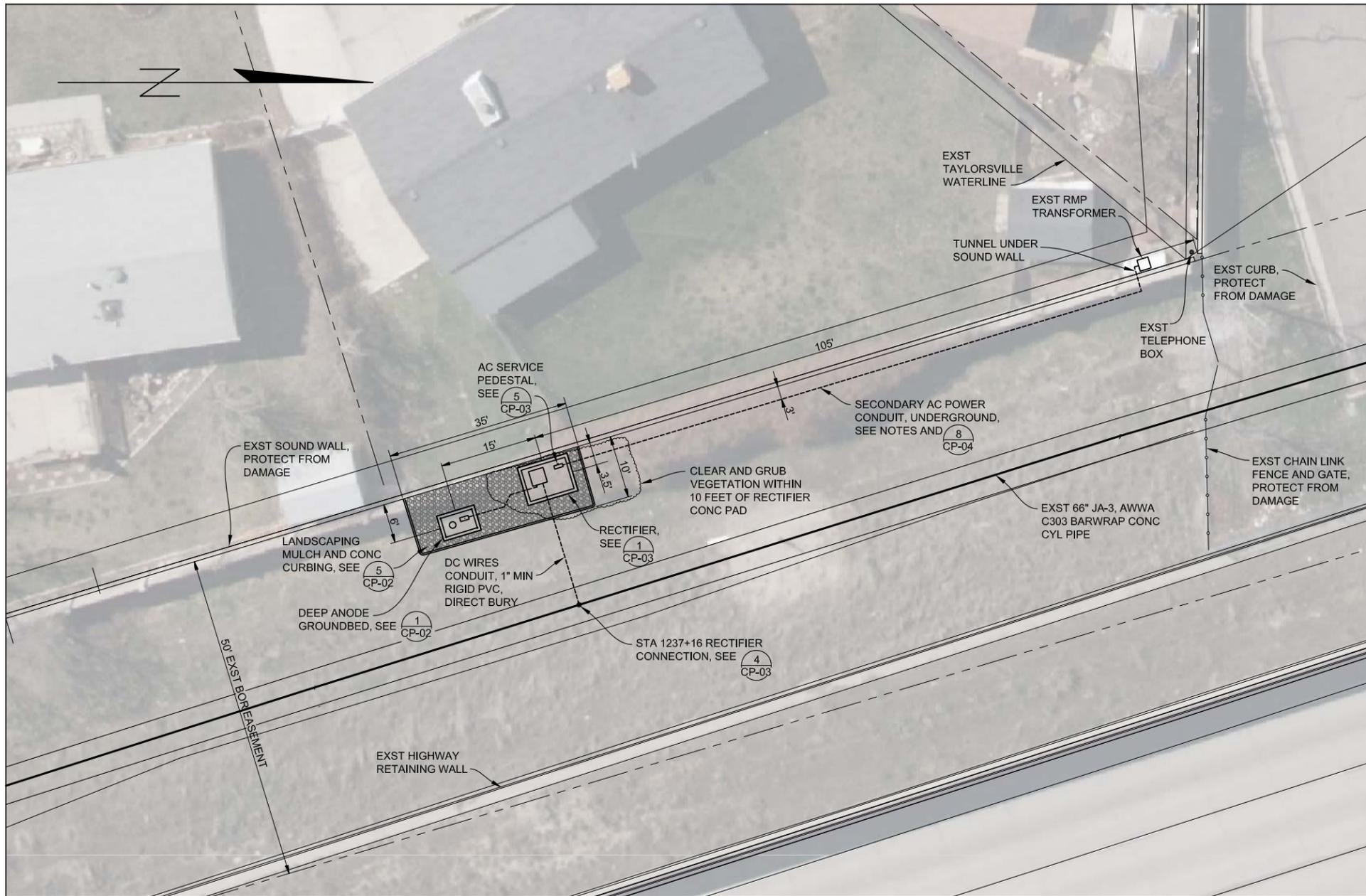
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REINFORCED CONCRETE
COLLAR STA 1266+13
SCALE: NTS

2
C-05

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PROJECT		SR-154 BANGERTER HWY	
PROJECT NUMBER		S-0154(82)16	
PROJECT PIN		14785	
PROJECT SECTION		REINFORCED CONCRETE THRUST COLLARS - PLAN & SECTION	
APPROVED		DATE	
DRAWN BY		DATE	
CHECKED BY		DATE	
QC		DATE	
DRAWN		DATE	
ACCEPTED		DATE	
MANAGER, FIELD ENGINEERING DIVISION		DATE	
STATION: PROVO, UTAH		DATE	
NO.		DATE	
APPROVED BY		DATE	
REMARKS		DATE	



- TEST STATION NOTES:**
- CONTRACTOR TO INSTALL NEW TEST STATION WHERE INDICATED ON THE PIPELINE PLAN AND PROFILE SHEETS.
 - EXISTING TEST STATION SHALL BE RELOCATED OR REPLACED WHERE INDICATED OR WHEN DAMAGED BY PIPE CONSTRUCTION WORK.
 - ALL TEST STATIONS SHALL BE STEEL CONDUIT POST MOUNT STYLE.
 - MARK TEST STATIONS WITH JWCD DISTRICT APPROVED LABEL WITH DISTRICT NAME, PIPELINE, AND PIPE STATIONING.
 - PROVIDE WIRE LOOP AT BASE OF TEST STATION AND AT PIPE CONNECTIONS TO MINIMIZE SETTLEMENT STRESSES ON WIRE.
 - PROVIDE SUFFICIENT WIRE TO ALLOW FOR PROPER TERMINATION IN TEST STATIONS.
 - ALL WIRES TO BE INSTALLED SPICE FREE.
 - ALL WIRE CONNECTIONS TO PIPE SHALL BE THERMITE WELDED CONNECTIONS, EACH WIRE CONNECTION TO BE SEPARATED A MINIMUM OF 6-INCHES.
 - QUANTITY OF TERMINALS AND WIRING CONNECTIONS VARIES, SEE APPLICABLE DETAIL FOR TEST STATION TYPE.
 - ALL WIRES UNDER ROADWAY MUST BE PROTECTED BY 2" PVC COATED RIGID STEEL CONDUIT AS SHOWN IN DETAILS, SEAL ENDS OF CONDUIT WITH DUCT COMPOUND OR URETHANE FOAM.
 - DO NOT DIRECTLY CONNECT ROADWAY OFFSET CONDUIT TO TEST STATION CONDUIT.

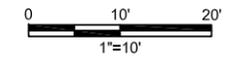
CATHODIC PROTECTION SCHEDULE	
GROUNDBED INSTALLATION	
GROUNDBED STYLE	DEEP ANODE
GROUNDBED TERMINATION	TYPE 1
SURFACE CASING LENGTH	40 FEET
INACTIVE LENGTH	130 FEET
ACTIVE LENGTH	220 FEET
TOTAL LENGTH	350 FEET
DIAMETER	10-INCH
ANODE TYPE	TA-2
QUANTITY	20 EACH
ANODE SPACING	10 FOOT OC
GROUNDBED RAIL	YES
RECTIFIER INSTALLATION	
STYLE	TYPE 1
DC VOLTS OUTPUT	50 VOLTS
DC AMPS OUTPUT	15 AMPS
AC POWER INPUT	120/240 VAC, SINGLE
AC SERVICE STYLE	UNDERGROUND
AC METER REQUIRED	YES
RECTIFIER RAIL	YES
REMOTE MONITORING	SCOUT

- JA-56S SITE PLAN NOTES:**
- ELECTRICAL SERVICE:**
- CONTRACTOR TO COORDINATE ELECTRICAL SERVICE PER WORK ORDER #621105, RMP CONTACT IS HENRY TSOSIE.
 - CONTRACTOR SHALL INSTALL NEW AC POWER SERVICE IN ACCORDANCE WITH ROCKY MOUNTAIN POWER REQUIREMENTS, NEW UTILITY SERVICE INSTALLATION COST TO BE PAID BY DEPARTMENT.
 - UTILITY AC SERVICE TO INCLUDE CONDUIT WITHIN 1 FOOT FROM TRANSFORMER BOX, UNDERGROUND CONDUIT, AND UNDERGROUND AC SERVICE PEDESTAL.
 - CONTRACTOR TO PROVIDE ALL EXCAVATION, BACKFILL, CONDUIT AND PULL STRING FOR AC POWER SERVICE TO METER PEDESTAL, UTILITY TO PROVIDE AND INSTALL CONDUCTORS, SPLICES, AND CONNECTIONS TO METER BASE.
- GROUNDBED CONSTRUCTION**
- DRILLING MUD, WATER AND CUTTINGS SHALL BE FULLY CONTAINED ON THE PROJECT SITE AND SHALL NOT BE PERMITTED TO FLOW OVER THE GROUND SURFACE.
 - ANY SPILLAGE OR LEAKAGE OF DRILLING MUD AND CUTTINGS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND THE SITE RESTORED.
 - DIGGING OF MUD PIT WILL NOT BE PERMITTED.
 - DRILL CUTTINGS TO BE REMOVED FROM SITE AND DISPOSED AT OFFSITE LANDFILL OR OTHER APPROVED LOCATION.

- RECTIFIER INSTALLATION**
- CONCRETE WORK SHALL BE AA (AE) PER UDOT STANDARDS.
 - FORMS SHALL BE SET LEVEL AND SQUARE.
 - CONCRETE FINISH SHALL BE TROWELED SURFACE AND RADIUS EDGES.
 - ALL FORM WORK SHALL BE REMOVED FROM THE CONCRETE AFTER CURING IS COMPLETED.
 - RECTIFIER SHALL BE ORIENTED AS SHOWN ON THE PLANS, ADJUSTMENT IN THE LOCATION AND ORIENTATION OF THE RECTIFIERS AND VENT PIPES SHALL BE APPROVED BY THE ENGINEER.

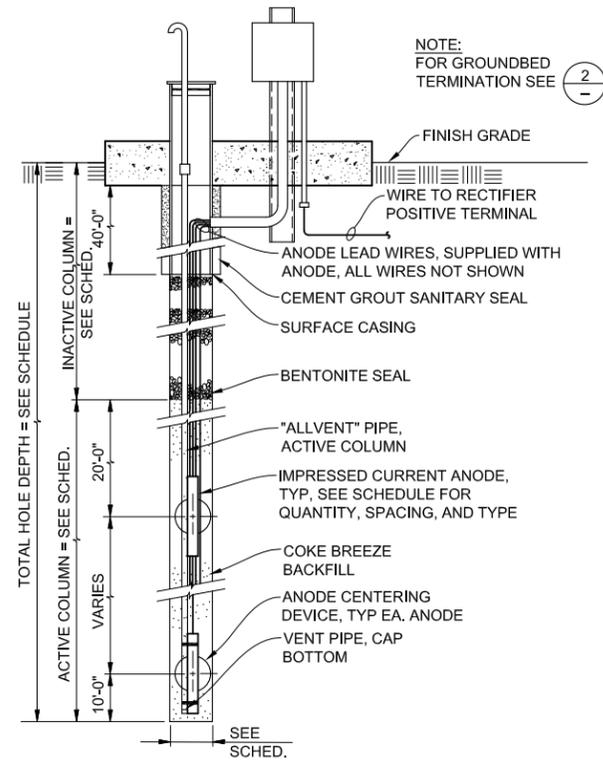
- SITE WORK AND RESTORATION:**
- EXISTING VEGETATION TO BE CLEARED AND GRUBBED TO A DEPTH OF 12-INCHES WHERE INDICATED ON THE PLAN OR WHERE TRENCHING IS REQUIRED.
 - ALL DISTURBED AREAS TO BE RE-SEEDED FOLLOWING CONSTRUCTION PER UDOT STANDARD SPECIFICATIONS.

**JA3 CATHODIC PROTECTION STATION
JA-56S SITE PLAN**



UTAH DEPARTMENT OF TRANSPORTATION REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.		APPROVED	DATE	07/14/16	DATE	07/14/16	
PROJECT	SR-154 BANGERTER HWY AT 5400 SOUTH AQUEDUCT RELOCATION	PROJECT NUMBER	S-0154(82)16	PIN	14785	DATE	07/14/16
CATHODIC PROTECTION SITE PLAN		PROFESSIONAL ENGINEER	DATE				
SHEET NO. CP-01		STATION: PROVO, UTAH					
REVISIONS		NO. DATE APPROVED BY					
DRAWN		ACCEPTED BART LEEFLANG, P.E. MANAGER, FIELD ENGINEERING DIVISION					

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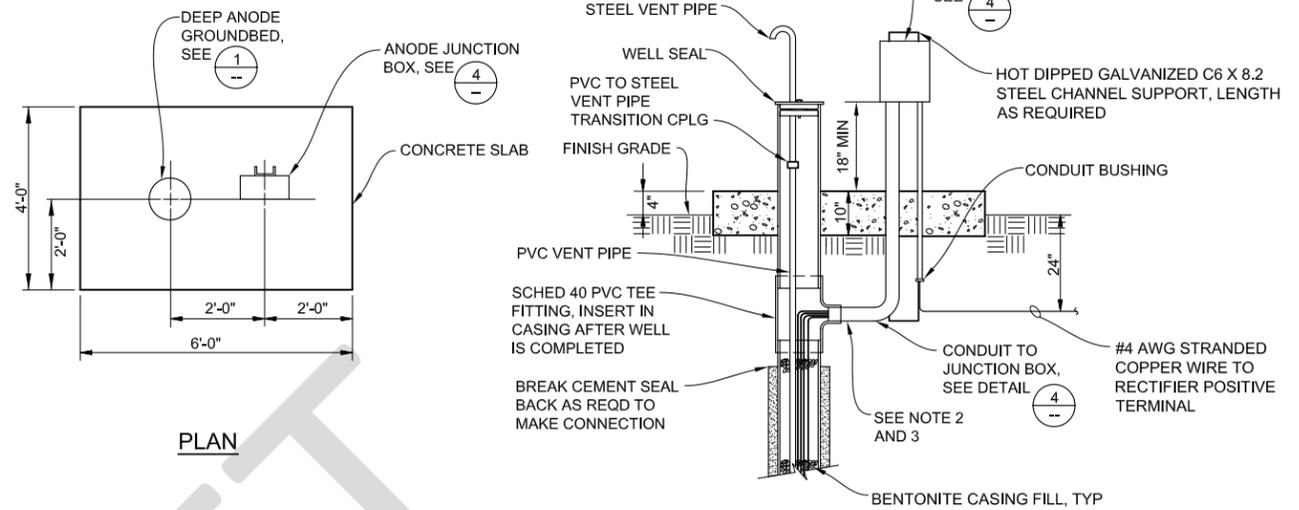
NOTE:
FOR GROUND BED
TERMINATION SEE (2)

- NOTES:
1. CASING LENGTH IS MINIMUM LENGTH, CONTRACTOR TO PROVIDE CASING LENGTH AS REQUIRED FOR DRILLING CONDITIONS AND AS SPECIFIED.
 2. SEE CATHODIC PROTECTION SITE PLAN FOR GROUND BED LOCATION AND SCHEDULE.
 3. ALL PIPE AND CONDUIT PENETRATIONS THROUGH SURFACE CASING SHALL BE WATERTIGHT, SOLVENT WELDED, PENETRATIONS OR AN APPROVED EQUAL.

DEEP ANODE GROUND BED - TYPE 1

NOT TO SCALE

(1)
CP-01



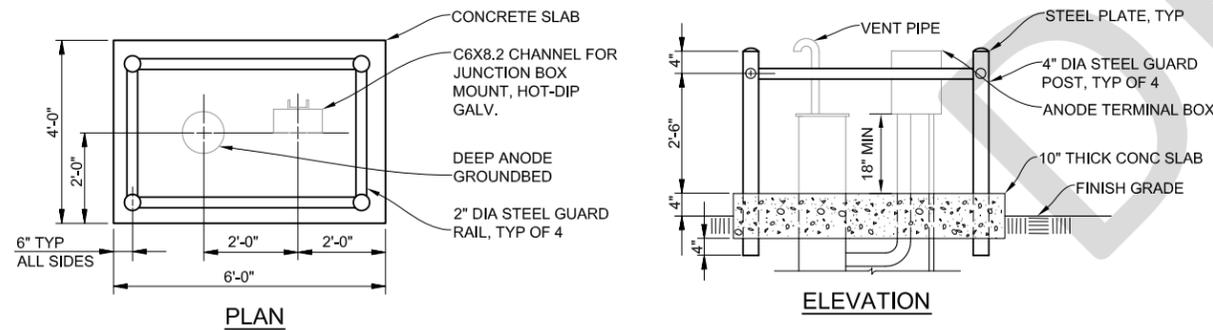
PLAN

- NOTES:
1. PROTECT WIRES FROM NICKS, CUTS, OR OTHER DAMAGE WHEN CUTTING CASING.
 2. SEAL CONDUIT AT EACH END WITH URETHANE FOAM TO PREVENT ENTRY OF GROUND BED GASES OR MOISTURE INTO JUNCTION BOX.
 3. ALL BURIED CASING AND CONDUIT JOINTS TO BE SOLVENT WELDED FOR WATERTIGHT CONNECTIONS.
 4. FINISH GRADE AWAY FROM WELL CASING.

TYPE 1 SURFACE CASING AND TERMINATION

NOT TO SCALE

(2)
-



PLAN

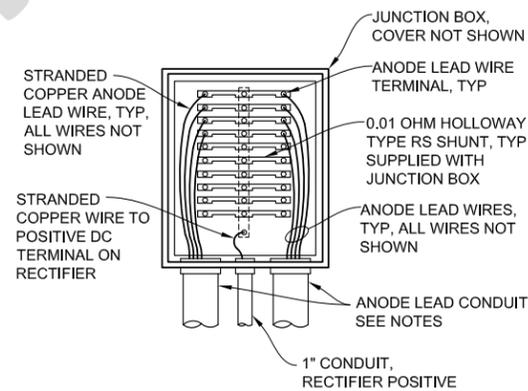
ELEVATION

- NOTES:
1. BOLT TWO FRONT RAILS TO GUARD POSTS AND WELD ALL REMAINING RAILS TO GUARD POSTS.
 2. ORIENTATION OF ANODE JUNCTION BOX TO BE DETERMINED IN THE FIELD.
 3. HOT DIP GALVANIZE GUARD RAIL AND VENT PIPE AFTER FABRICATION.
 4. ORIENT EQUIP TO ALLOW ACCESS DOORS TO FULLY OPEN WITHOUT OBSTRUCTION.

GROUND BED GUARD RAIL

NOT TO SCALE

(3)
-

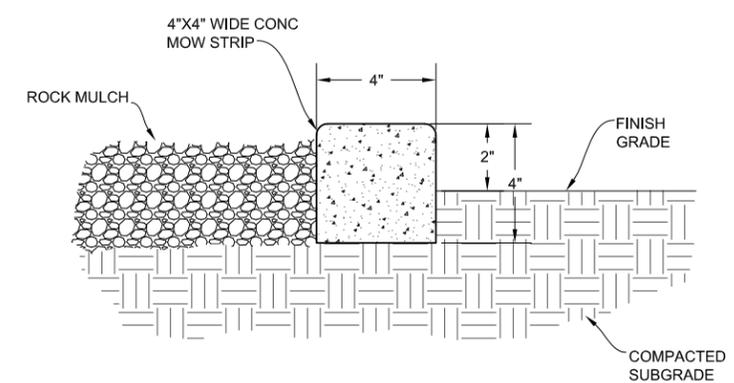


- NOTES:
1. SIZE ANODE LEAD CONDUIT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. PROVIDE ONE CONDUIT WITH UP TO 15 ANODES, TWO WITH 16 TO 30 ANODES.

ANODE JUNCTION BOX

NOT TO SCALE

(4)
-



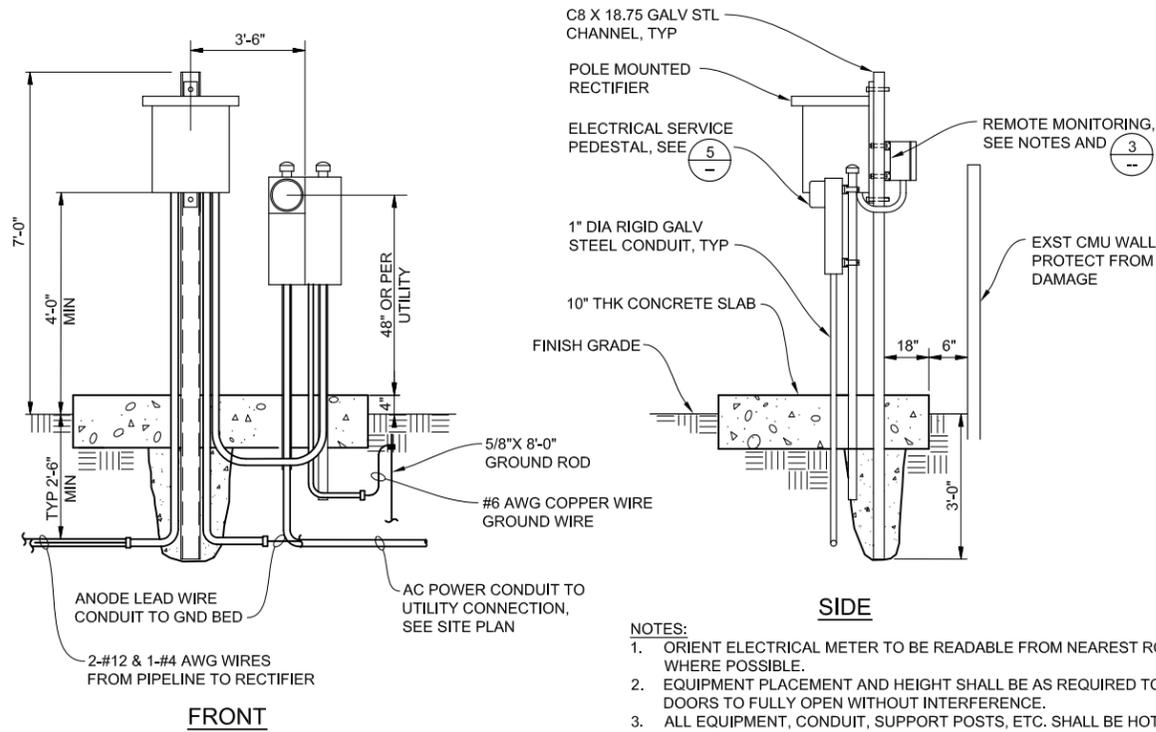
- NOTES:
1. ALL ROCK MULCH BEDS TO BE SEPARATED FROM NATIVE SEED AREAS WITH CONC CURB MOW STRIP.
 2. INSTALL ROCK MULCH TO A MINIMUM 4" DEPTH OVERLYING COMPACTED SUBGRADE; ROCK MULCH TO BE SPECIFIED IN SECTION 02651S.
 3. FOR LANDSCAPING PLACEMENT SEE SITE PLAN, SHT CP-01.
 4. CONCRETE CURBING AND ROCK MULCH AS SPECIFIED.

ROCK MULCH LANDSCAPING

NOT TO SCALE

(5)
CP-01

REVISIONS		DRAWN		ACCEPTED BART LEEFLANG, P.E. MANAGER, FIELD ENGINEERING DIVISION		STATION: PROVO, UTAH		NO. DATE APPROVED BY		REMARKS	
UTAH DEPARTMENT OF TRANSPORTATION REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.		DRAWN BY JLM		CHECKED BY JLM		DATE 07/14/16		APPROVED PROFESSIONAL ENGINEER		SR-154 BANGERTER HWY AT 5400 SOUTH AQUEDUCT RELOCATION PROJECT NUMBER S-0154(82)16 PIN 14785 DEEP WELL GROUND BED DETAILS	
SHEET NO.		CP-02									



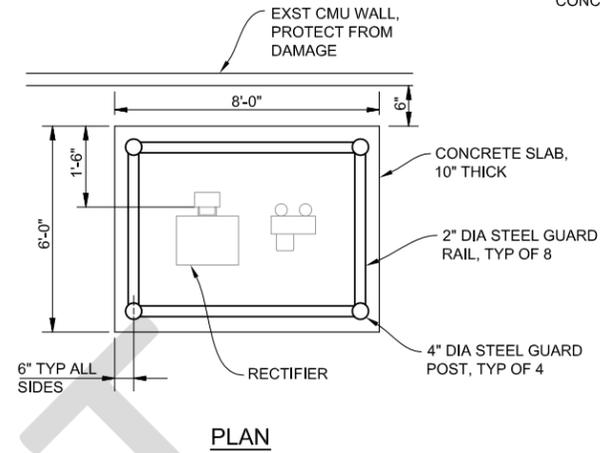
FRONT

SIDE

TYPE 1-POLE MOUNTED RECTIFIER (1) CP-01
NOT TO SCALE

NOTES:

- ORIENT ELECTRICAL METER TO BE READABLE FROM NEAREST ROAD WHERE POSSIBLE.
- EQUIPMENT PLACEMENT AND HEIGHT SHALL BE AS REQUIRED TO ALLOW DOORS TO FULLY OPEN WITHOUT INTERFERENCE.
- ALL EQUIPMENT, CONDUIT, SUPPORT POSTS, ETC. SHALL BE HOT DIPPED GALVANIZED.
- RMU MAY BE MOUNTED ON NON-DOOR SIDE OF RECTIFIER FOR ACCESS AT CONTRACTOR'S OPTION.

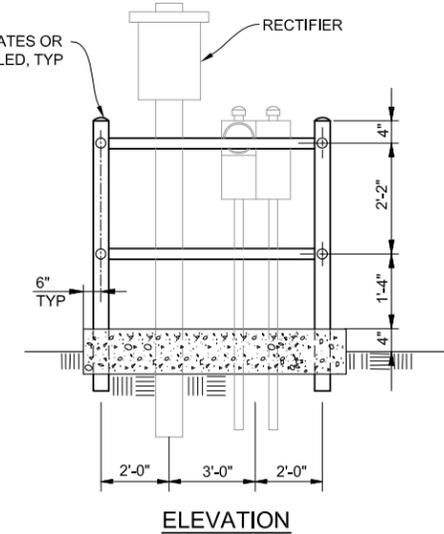


PLAN

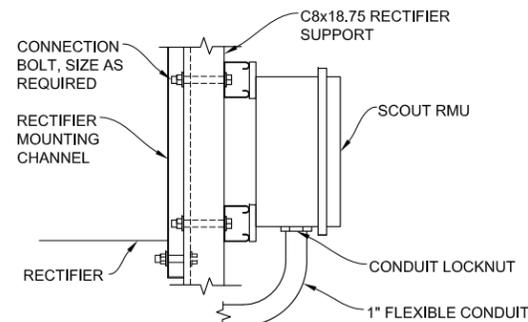
NOTES:

- ALL RAIL TO POST CONNECTIONS SHALL BE WELDED, EXCEPT FRONT RAILS SHALL HAVE BOLTED CONNECTIONS FOR REMOVAL.
- ORIENTATION OF RECTIFIER AND AC PEDESTAL TO BE DETERMINED IN THE FIELD.
- ALL EQUIPMENT DOORS SHALL BE FULLY OPENABLE AND WITHOUT OBSTRUCTION
- HOT DIP GALVANIZE RAILING AFTER FABRICATION.

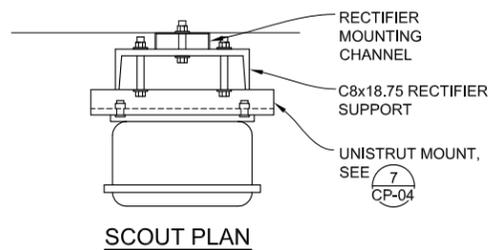
TYPE 1 - RECTIFIER RAIL (2) -
NOT TO SCALE



ELEVATION



SCOUT ELEVATION

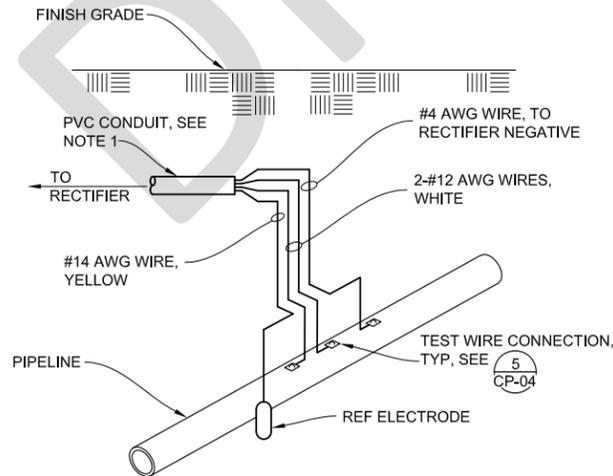


SCOUT PLAN

NOTES:

- SCOUT MOUNTING PLATE NOT USED, REMOVE AND MOUNT TO UNISTRUT.
- BACK OF RECTIFIER MOUNT SHOWN, MOUNTING ON NON-DOOR SIDE OF RECTIFIER ALLOWED AS OPTION.

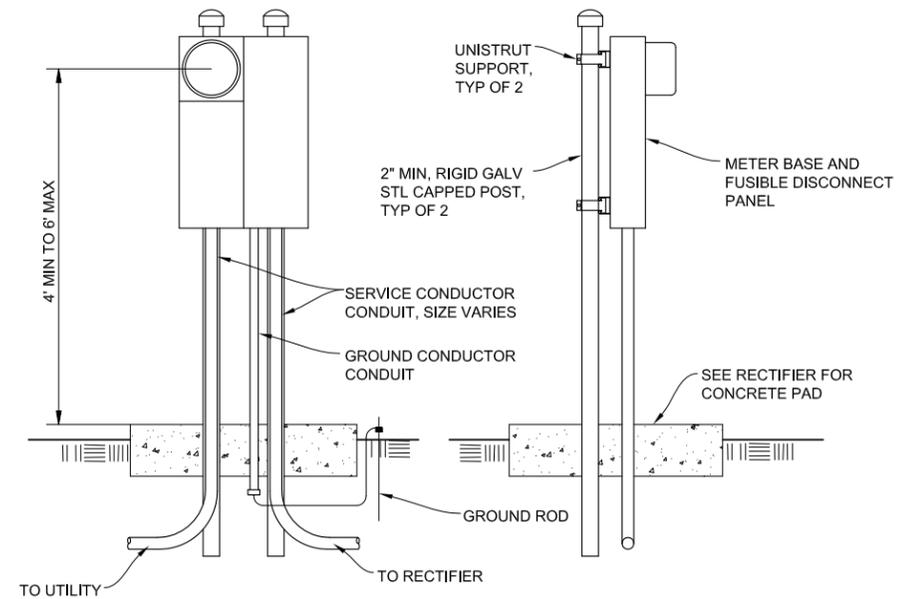
REMOTE MONITORING UNIT MOUNT (3) -
NOT TO SCALE



NOTES:

- ALL WIRES SHALL BE PLACED IN CONDUIT FROM CENTERLINE OF PIPE TO CATHODIC PROTECTION STATIONS.
- LOCATE REFERENCE ELECTRODE 6" FROM EDGE OF PIPE.

RECTIFIER CONNECTION (4) CP-01
NOT TO SCALE

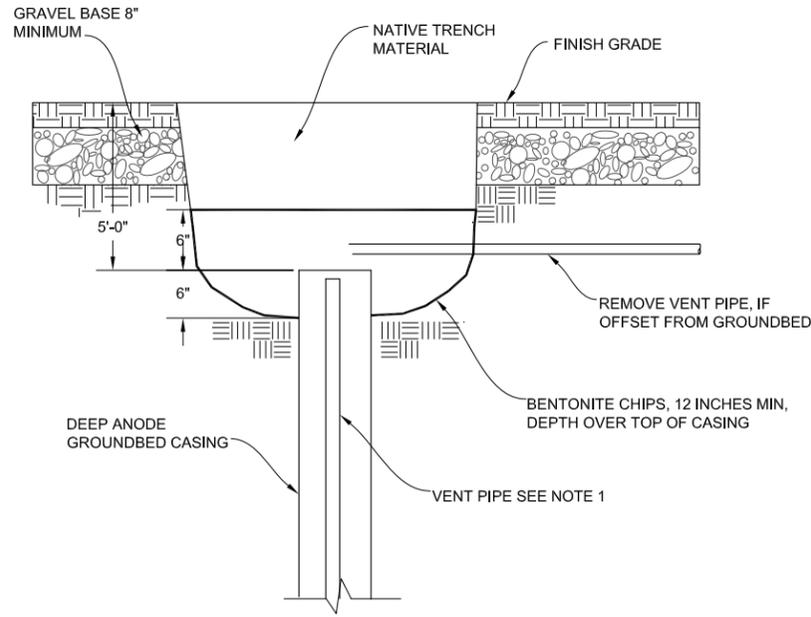


NOTES:

- METER BASE TO HAVE MANUAL LINK BYPASS SOCKETS AND CONFORM TO ELECTRICAL UTILITY REQUIREMENTS
- SEE CATHODIC PROTECTION SCHEDULE, FOR SERVICE TYPE.

UNDERGROUND AC SERVICE PEDESTAL (5) CP-01
NOT TO SCALE

REVISIONS		DRAWN		ACCEPTED		STATION: PROVO, UTAH		REMARKS	
UTAH DEPARTMENT OF TRANSPORTATION REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.				DRAWN BY: JLM		CHECKED BY: JLM		DATE: 07/14/16	
SR-154 BANGERTE HWY AT 5400 SOUTH AQUEDUCT RELOCATION				PROJECT NUMBER: S-0154(82)16		PIN: 14785		PROFESSIONAL ENGINEER	
RECTIFIER PLANS AND DETAILS				APPROVED		DATE: 07/14/16		DATE: 07/14/16	
SHEET NO. CP-03				PROJECT		PROJECT NUMBER		REMARKS	



NOTES:

1. FILL VENT PIPE WITH NEAT CEMENT SLURRY, BY PUMPING THROUGH TREMIE PIPE TO BOTTOM OF VENT PIPE.
2. CUT OFF CASING, VENT PIPE, AND ALL WIRES 5- FEET BELOW FINISH GRADE AND LEAVE CASING 6 TO 8-INCHES ABOVE NATIVE SOIL.
3. COVER CASING AND VENT PIPE WITH BENTONITE CHIPS FOR A MINIMUM OF 12-INCHES OVER THE CASING AND 2 FEET RADIUS OF CASING CENTER.
4. SAW CUT ASPHALT EDGES FOR PATCHING, MATCH EXISTING ASPHALT THICKNESS.
5. TRENCH BACKFILL TO BE MECHANICALLY COMPACTED TO 95 PERCENT OF MODIFIED PROCTOR.

EXISTING CATHODIC PROTECTION SYSTEM ABANDONMENT

NOT TO SCALE

1
C-04

CPS ABANDONMENT NOTES:

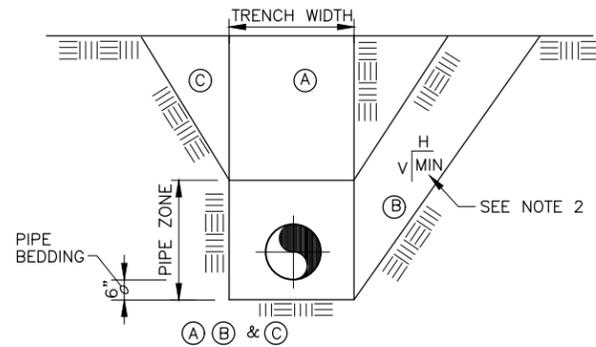
1. CPS TO BE ABANDONED LOCATIONS SHOWN ON SHT CP-04.
2. SEE REFERENCE DWGS FOR ORIGINAL CONSTRUCTION DETAILS AND ORIENTATION, CATHODIC PROTECTION STATION NO. 1.
3. CATHODIC PROTECTION STATION, INCLUDING RECTIFIER, METER BASE, ANODE JUNCTION BOX, AND CONC PADS TO BE REMOVED AND DISPOSED OFFSITE BY CONTRACTOR.
4. REMOVE ELECTRIC SERVICE AND COORDINATE DISCONNECTION OF SERVICE WITH ROCKY MOUNTAIN POWER.
5. ABANDON DEEP ANODE GROUND BED IN ACCORDANCE WITH STATE OF UTAH WATER WELL REGULATIONS AND OBTAIN ABANDONMENT PERMIT FROM STATE OF UTAH.
6. GROUND BED TO BE ABANDONED AS SHOWN IN DETAIL 1, SHT CP-05, AND STATE OF UTAH REGULATIONS, WHICHEVER IS MORE STRINGENT.

DRAFT

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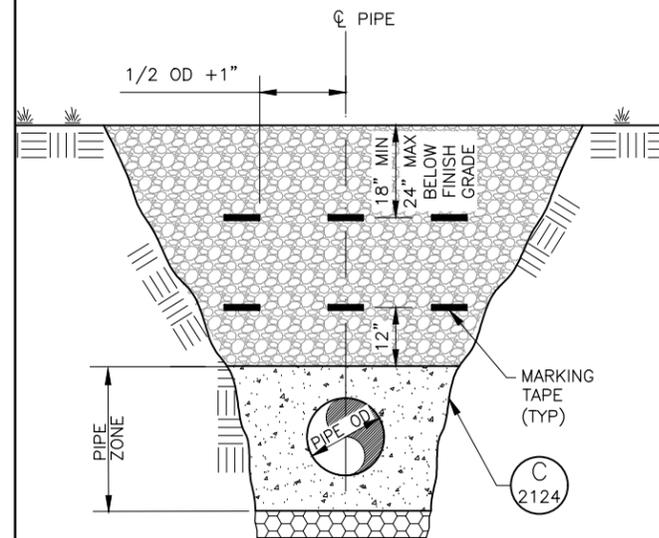
UTAH DEPARTMENT OF TRANSPORTATION REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.		DRAWN ACCEPTED: BART LEEFLANG, P.E. MANAGER, FIELD ENGINEERING DIVISION STATION: PROVO, UTAH	REVISIONS
PROJECT SR-154 BANGERTER HWY AT 5400 SOUTH AQUEDUCT RELOCATION	APPROVED JLM DRAWN BY JLM	DATE 07/14/16	
PROJECT NUMBER S-0154(82)16	PIN 14785	OC CHECKED BY JLM	NO. DATE APPROVED BY REMARKS
CPS ABANDONMENT DETAILS		PROFESSIONAL ENGINEER	
SHEET NO. CP-05			

EXHIBIT E

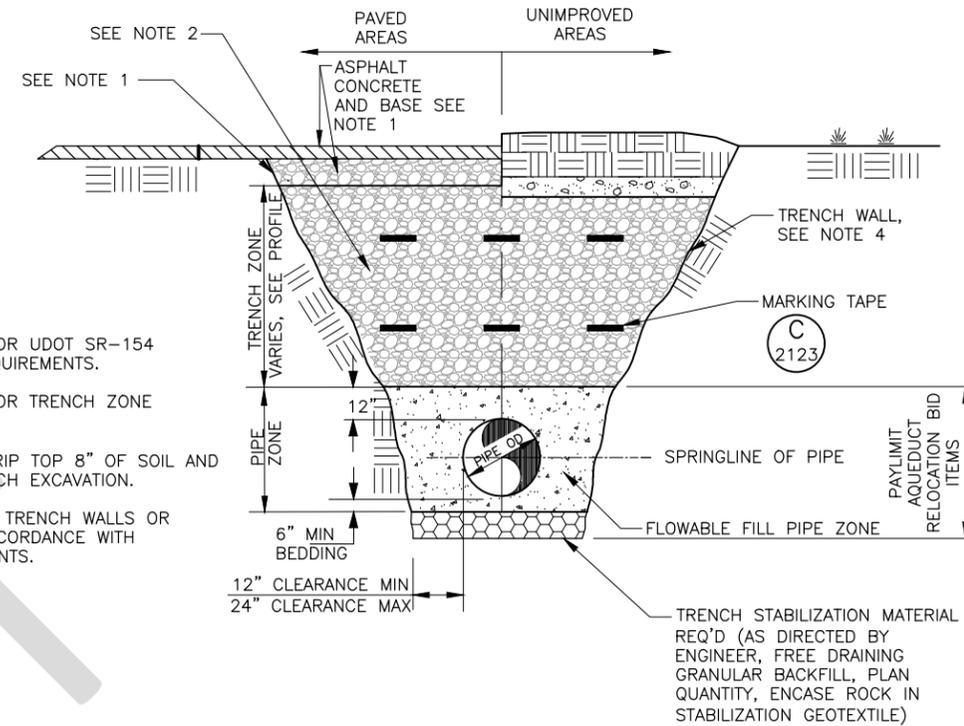


- A VERTICAL TRENCH WALL**
 1. MAX UNSUPPORTED HEIGHT=3.5 FT.
 2. FOR DEPTH OVER 3.5 FT SHORING OR SHEATHING REQUIRED.
- B SLOPING TRENCH WALL**
 1. NOT TO BE USED WITHOUT APPROVAL OF ENGINEER.
 2. REQUIRES IMPROVED PIPE ZONE BACKFILL OR INCREASE IN PIPE CLASS
- C COMBINATION VERTICAL/SLOPING TRENCH**
 1. TRENCH IN PIPE ZONE SHALL HAVE VERTICAL WALLS WHERE STABLE SOIL EXISTS.
- NOTES:**
 1. TRENCH EXCAVATIONS TO BE IN ACCORDANCE WITH OSHA SAFETY AND HEALTH STANDARDS FOR CONSTRUCTION. (29 CFR 1926).
 2. CONTRACTOR TO PROVIDE SHORING OR TRENCH BOX IN ROADWAY AREAS TO MINIMIZE TRENCH WIDTH.
 3. CONTRACTOR TO PROVIDE ALL DEWATERING MEASURES AS REQUIRED.

TYPICAL TRENCH EXCAVATION SECTION (C) 2122
 NOT TO SCALE

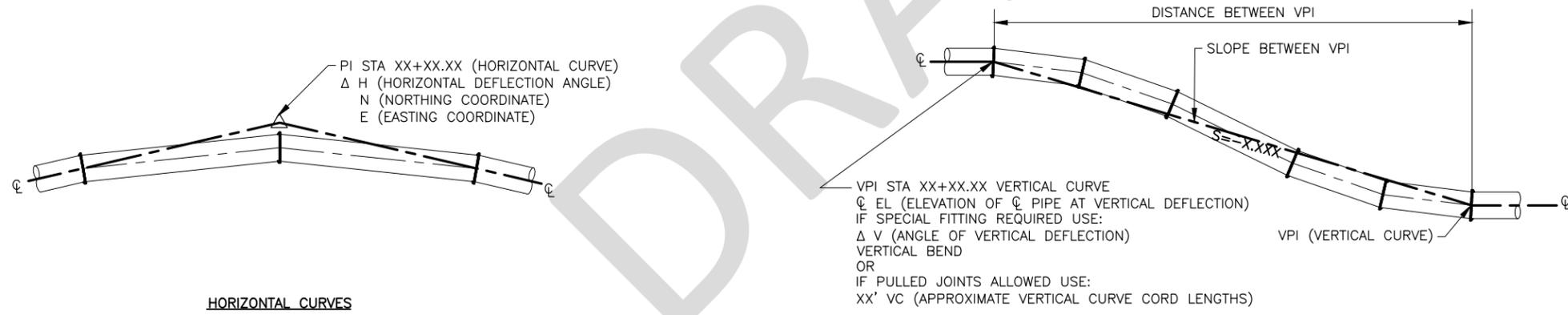


MARKING TAPE PLACEMENT (C) 2123
 NOT TO SCALE



- NOTES:**
 1. SEE ROADWAY DRAWINGS FOR UDOT SR-154 SURFACE RESTORATION REQUIREMENTS.
 2. SEE ROADWAY DRAWINGS FOR TRENCH ZONE BACKFILL REQUIREMENTS.
 3. IN UNIMPROVED AREAS, STRIP TOP 8" OF SOIL AND STOCKPILE PRIOR TO TRENCH EXCAVATION.
 4. CONTRACTOR SHALL SLOPE TRENCH WALLS OR SHORE EXCAVATIONS IN ACCORDANCE WITH CURRENT OSHA REQUIREMENTS.

TYPICAL TRENCH BACKFILL SECTION (C) 2124
 NOT TO SCALE



HORIZONTAL CURVES

VERTICAL CURVES

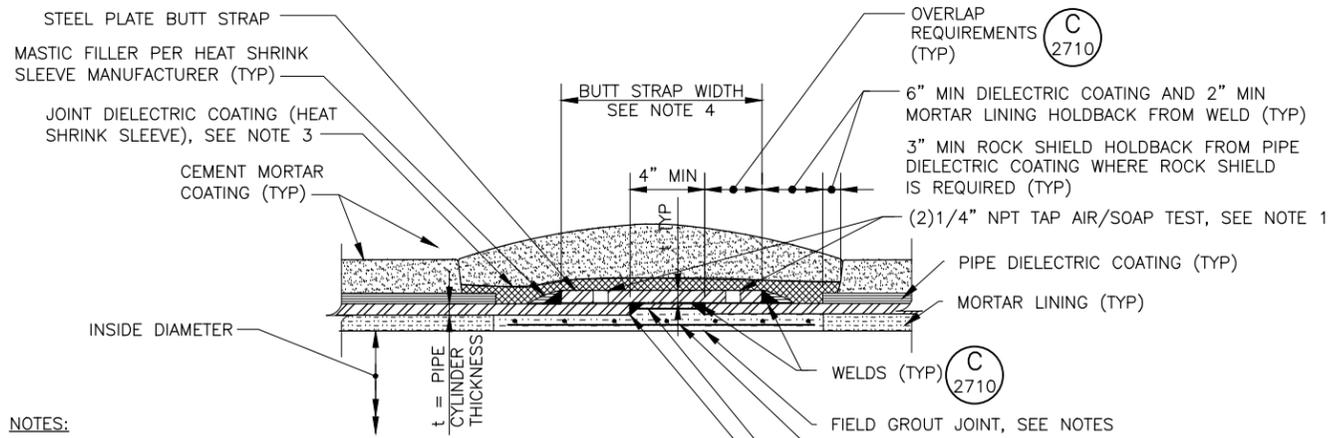
- NOTES:**
- ALL HORIZONTAL AND VERTICAL CURVES ARE CIRCULAR.
 - HORIZONTAL AND VERTICAL CURVES SHALL BE MADE USING BEVELED JOINTS AND/OR DEFLECTED JOINTS. DO NOT USE COMBINED BEVELED AND DEFLECTED JOINTS.
 - THE MAXIMUM BEVEL ANGLE FOR BEVELED PIPE ENDS SHALL BE 5 DEGREES. SEE SPECIFICATIONS FOR MAXIMUM (NON-BEVELED) JOINT DEFLECTIONS.
 - ALL BEVEL OR DEFLECTION ANGLES SHALL BE EQUALLY DIVIDED THROUGHOUT THE CURVE.
 - FOR COMBINATION VERTICAL AND HORIZONTAL CURVES THE REQUIREMENTS FOR BOTH CONDITIONS SHALL BE COMBINED.
 - REFER TO PLAN AND PROFILE DRAWINGS FOR VERTICAL AND HORIZONTAL CURVE LOCATIONS.
 - 50' PIPE LENGTHS WERE ASSUMED TO DEVELOP VERTICAL CURVE DATA SHOWN ON PLANS. COORDINATE WITH ENGINEER IF DIFFERENT.
 - ALL PROFILE ELEVATIONS ARE SHOWN TO CENTERLINE OF PIPE.
 - REDUCED PIPE SEGMENTS LENGTHS MAY BE USED IN LIEU OF BEVELED OR MITERED JOINTS THROUGH CURVES. COORDINATE SHOP DRAWINGS WITH ENGINEER.

PIPELINE CURVES (C) 2600
 NOT TO SCALE

REVISIONS		NO.		DATE		APPROVED BY		REMARKS	
DRAWN		SR		JL		ACCEPTED		BART LEFLANG, P.E. MANAGER, FIELD ENGINEERING DIVISION	
UTAH DEPARTMENT OF TRANSPORTATION		REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.		DATE		STATION		PROVO, UTAH	
SR-154 BANGERTE HWY		JORDAN AQUEDUCT PROTECTION AND RELOCATION		07/14/16		PROFESSIONAL ENGINEER			
PROJECT		PROJECT NUMBER		DATE		APPROVED			
S-0154(82)16		PIN 14785		07/14/16		QC CHECKED BY			
GENERAL CIVIL DETAILS - 1									
SHEET NO.		GC-01							

EXHIBIT E

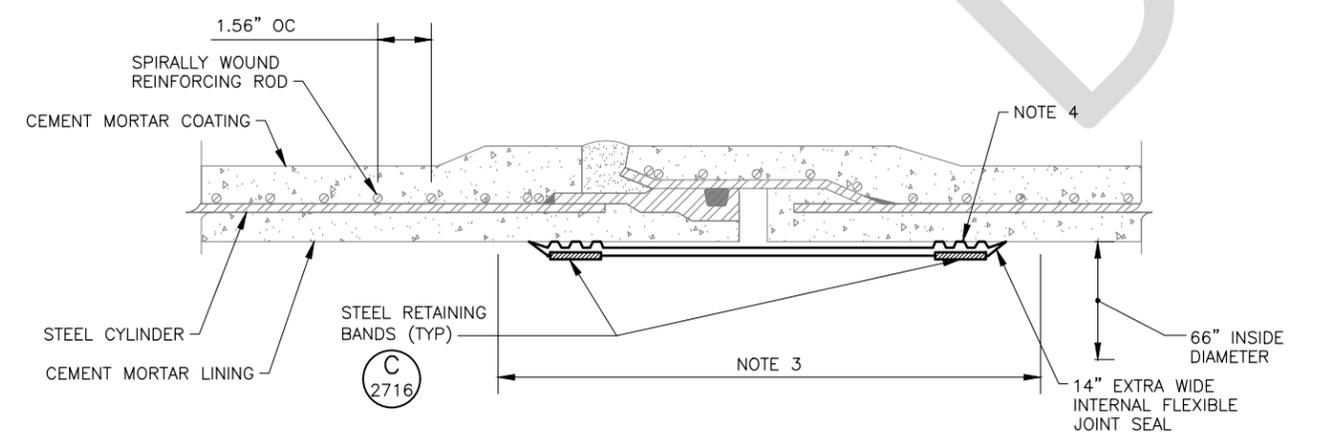
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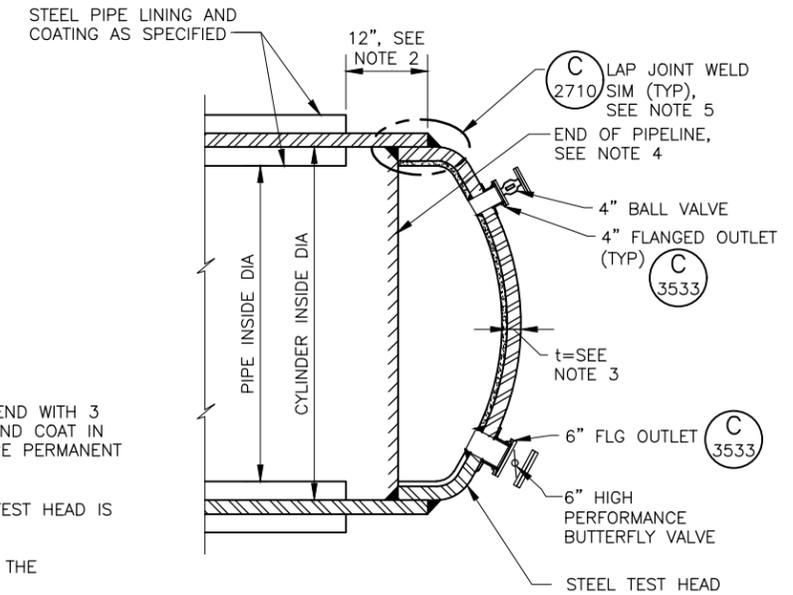
- NOTES:**
- CONDUCT AN AIR/SOAP SOLUTION LEAK TEST AT 40 PSI AIR PRESSURE IN ADDITION TO DYE PENETRATE OR MAGNETIC PARTICLE TESTING AS REQ'D BY SPECIFICATIONS. IF LEAKS ARE DETECTED, THE CONTRACTOR SHALL REPAIR AND RETEST THE WELDS UNTIL THERE ARE NO DEFECTS. PLUG TAPS WITH THREADED PLUG AND SEAL WELD PLUG AT COMPLETION OF TEST AND COAT AS SHOWN OR SPECIFIED. TAP HOLES MAY BE ON INSIDE OR OUTSIDE OF JOINT.
 - FOR FIELD WELDING OF INDIVIDUAL BUTT STRAP PIECES TO EACH OTHER USING BUTT WELDS. C 2711
 - AFTER INSTALLATION OF JOINT DIELECTRIC COATING, A HOLIDAY TEST SHALL BE COMPLETED AS SPECIFIED BY NACE CERTIFIED SPECIALIST.
 - UNLESS OTHERWISE NOTED, BUTT STRAP WIDTH SHALL CONFORM TO THE LIMITATIONS SHOWN FOR PIPE END SEPARATION AND STEEL OVERLAP REQUIREMENTS.
 - GROUT FOR JOINT LINING SHALL BE ONE PART CEMENT TO TWO PARTS SAND AND SUFFICIENT WATER FOR DRY-PACK CONSISTENCY.

EXTERIOR BUTT-STRAP JOINT C 2713
NOT TO SCALE

- NOTES:**
- FLEXIBLE JOINT SEALS PROVIDED BY OWNER FOR INSTALLATION BY CONTRACTOR.
 - SEALS AND RETAINING BANDS BASED UPON WEKO-SEAL INTERNAL JOINT SEALS, MILLER PIPELINE CO.
 - CLEAN CONCRETE SURFACE OF DEBRIS 3" BEYOND EITHER SIDE OF THE SEAL POSITION.
 - ALL HIGH/LOW SURFACE IMPERFECTIONS RUNNING THROUGH OR PART WAY THROUGH THE SEALING SURFACE MUST BE REMOVED BEFORE INSTALLATION OF SEALS.

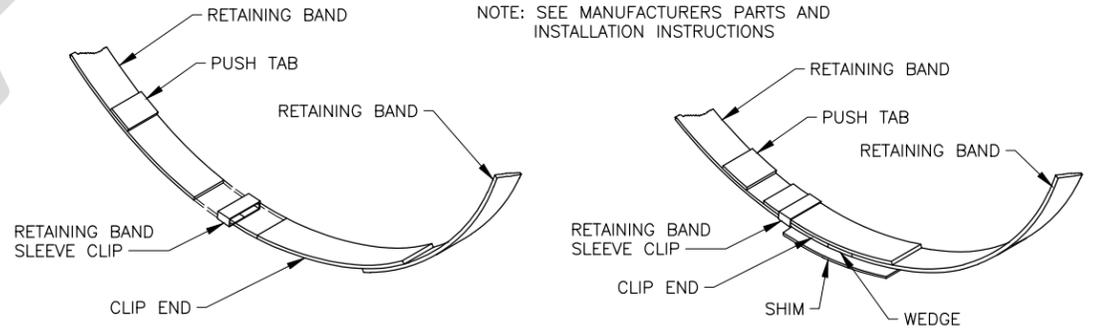


FLEXIBLE INTERNAL JOINT SEAL FOR CCP C 2716
NOT TO SCALE

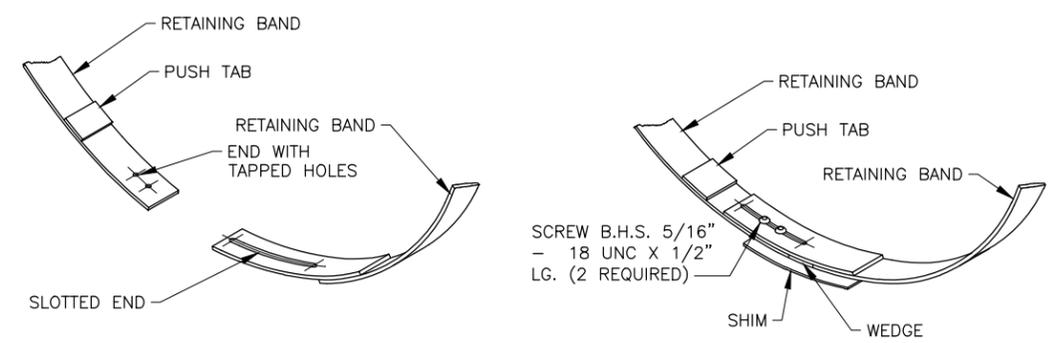


- NOTES:**
- COAT TEMPORARY TEST HEAD AND PLAIN END WITH 3 MILS MIN RUST INHIBITING PRIMER. LINE AND COAT IN ACCORDANCE WITH SECTION 02621S WHERE PERMANENT END CAP IS SHOWN ON PLANS.
 - MINIMUM 8" HOLDBACK REQUIRED AFTER TEST HEAD IS CUT OFF.
 - WALL THICKNESS SHALL BE THE SAME AS THE ADJOINING PIPE.
 - FOR STATION AND LOCATION OF PIPELINE ENDS, SEE DRAWINGS.
 - BUTT STRAP CONNECTION, OR FULL PENETRATION BUTT WELDS MAY BE SUBSTITUTED FOR LAP JOINT SHOWN.

DISH HEAD END CAP C 2714
NOT TO SCALE



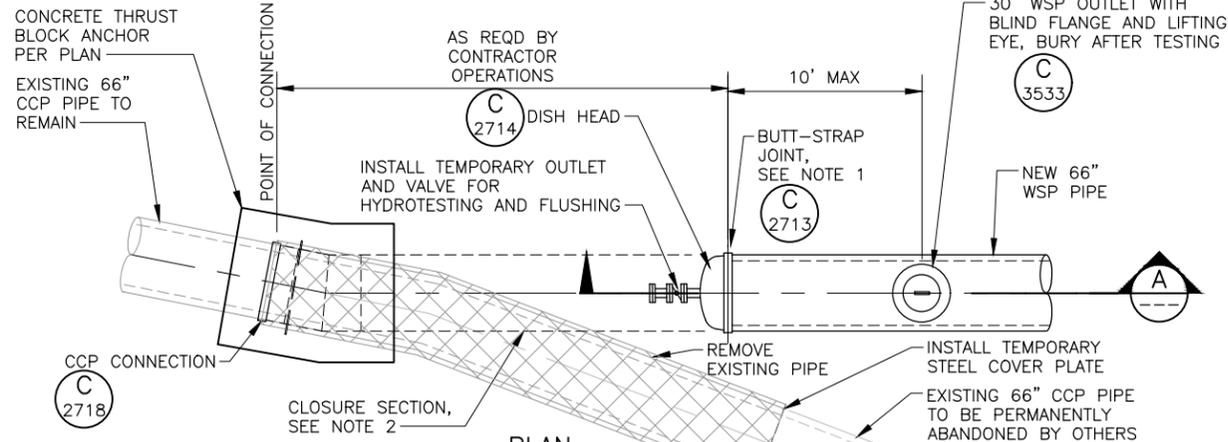
DETAIL - RETAINING BAND SLEEVE CLIP OVERLAP RETAINER



DETAIL - RETAINING BAND MECHANICAL LOCK OVERLAP SCREW LOCK

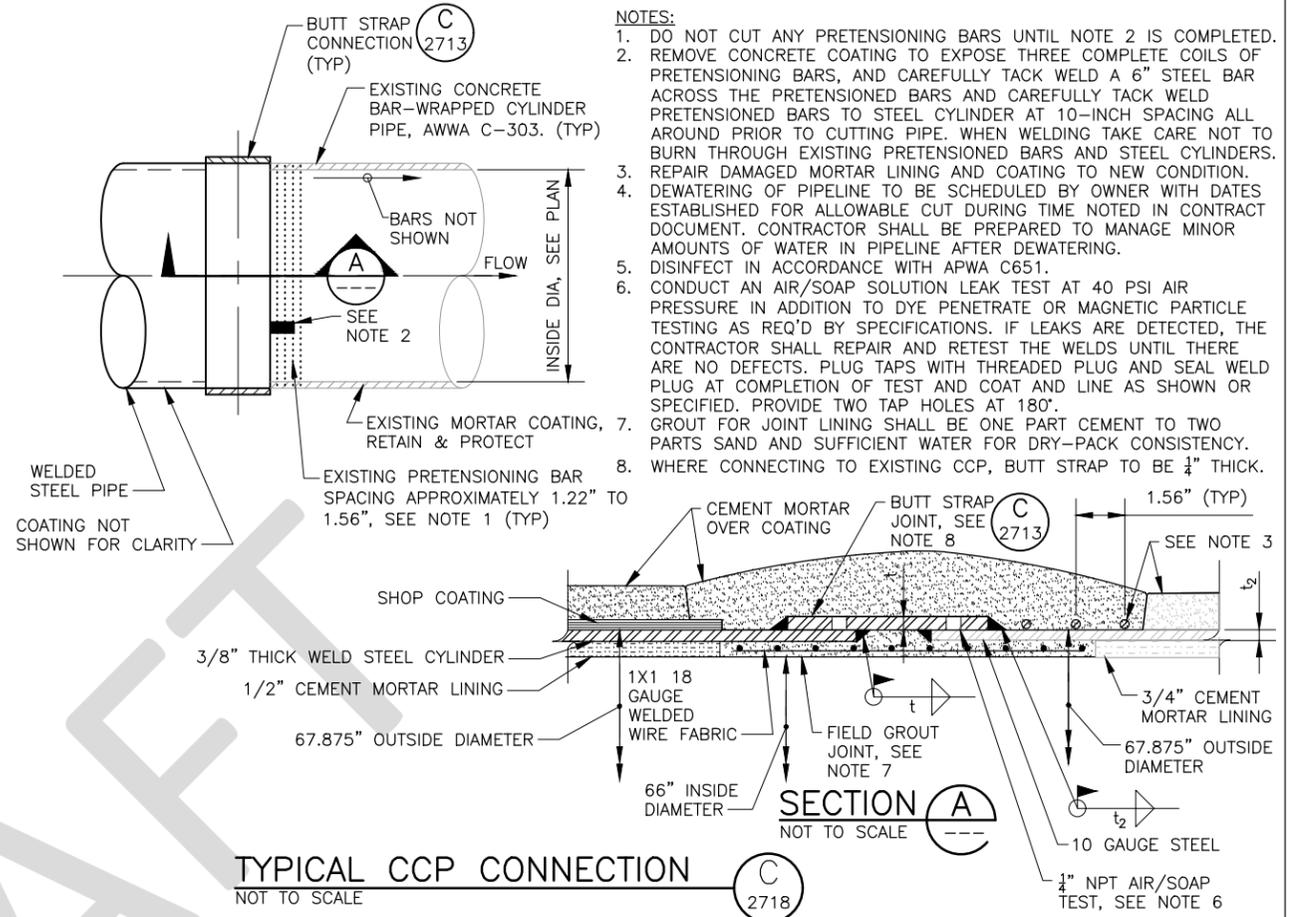
INTERNAL JOINT REPAIR STEEL RETAINING BANDS C 2716
NOT TO SCALE

REVISIONS		NO.		DATE		APPROVED BY		REMARKS	
DRAWN		ACCEPTED		STATION: PROVO, UTAH		MANAGER, FIELD ENGINEERING DIVISION			
UTAH DEPARTMENT OF TRANSPORTATION		REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.		DATE		DATE			
SR-154 BANGER TER HWY		PROJECT NUMBER		DATE		DATE			
JORDAN AQUEDUCT PROTECTION AND RELOCATION		S-0154(82)16		07/14/16		07/14/16			
GENERAL CIVIL DETAILS - 3		PIN 14785		DATE		DATE			
PROJECT		PROJECT NUMBER		DATE		DATE			
SR-154 BANGER TER HWY		S-0154(82)16		07/14/16		07/14/16			
JORDAN AQUEDUCT PROTECTION AND RELOCATION		S-0154(82)16		07/14/16		07/14/16			
GENERAL CIVIL DETAILS - 3		PIN 14785		DATE		DATE			
PROJECT		PROJECT NUMBER		DATE		DATE			
SR-154 BANGER TER HWY		S-0154(82)16		07/14/16		07/14/16			
JORDAN AQUEDUCT PROTECTION AND RELOCATION		S-0154(82)16		07/14/16		07/14/16			
GENERAL CIVIL DETAILS - 3		PIN 14785		DATE		DATE			
PROJECT		PROJECT NUMBER		DATE		DATE			
SR-154 BANGER TER HWY		S-0154(82)16		07/14/16		07/14/16			
JORDAN AQUEDUCT PROTECTION AND RELOCATION		S-0154(82)16		07/14/16		07/14/16			
GENERAL CIVIL DETAILS - 3		PIN 14785		DATE		DATE			
PROJECT		PROJECT NUMBER		DATE		DATE			
SR-154 BANGER TER HWY		S-0154(82)16		07/14/16		07/14/16			
JORDAN AQUEDUCT PROTECTION AND RELOCATION		S-0154(82)16		07/14/16		07/14/16			
GENERAL CIVIL DETAILS - 3		PIN 14785		DATE		DATE			
PROJECT		PROJECT NUMBER		DATE		DATE			
SR-154 BANGER TER HWY		S-0154(82)16		07/14/16		07/14/16			
JORDAN AQUEDUCT PROTECTION AND RELOCATION		S-0154(82)16		07/14/16		07/14/16			
GENERAL CIVIL DETAILS - 3		PIN 14785		DATE		DATE			
PROJECT		PROJECT NUMBER		DATE		DATE			
SR-154 BANGER TER HWY		S-0154(82)16		07/14/16		07/14/16			
JORDAN AQUEDUCT PROTECTION AND RELOCATION		S-0154(82)16		07/14/16		07/14/16			
GENERAL CIVIL DETAILS - 3		PIN 14785		DATE		DATE			
PROJECT		PROJECT NUMBER		DATE		DATE			
SR-154 BANGER TER HWY		S-0154(82)16		07/14/16		07/14/16			
JORDAN AQUEDUCT PROTECTION AND RELOCATION		S-0154(82)16		07/14/16		07/14/16			
GENERAL CIVIL DETAILS - 3		PIN 14785		DATE		DATE			
PROJECT		PROJECT NUMBER		DATE		DATE			
SR-154 BANGER TER HWY		S-0154(82)16		07/14/16		07/14/16			
JORDAN AQUEDUCT PROTECTION AND RELOCATION		S-0154(82)16		07/14/16		07/14/16			
GENERAL CIVIL DETAILS - 3		PIN 14785		DATE		DATE			
PROJECT		PROJECT NUMBER		DATE		DATE			
SR-154 BANGER TER HWY		S-0154(82)16		07/14/16		07/14/16			
JORDAN AQUEDUCT PROTECTION AND RELOCATION		S-0154(82)16		07/14/16		07/14/16			
GENERAL CIVIL DETAILS - 3		PIN 14785		DATE		DATE			
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- NOTES:**
- SEQUENCE FOR TESTING NEW CONNECTIONS TO THE EXISTING AQUEDUCT:
 - INSTALL TEST HEAD ON NEW PIPE.
 - TEST AND DISINFECT NEW PIPE IN ACCORDANCE WITH SPECIFICATIONS.
 - COORDINATE WITH JWCD AND BOR TO REMOVE EXISTING AQUEDUCT FROM SERVICE. DEWATER EXISTING AQUEDUCT AND REMOVE EXISTING PIPE AT CONNECTION LOCATIONS. SEE SPECIFICATIONS.
 - CONNECT THE EXISTING PIPE TO THE NEW PIPE USING CLOSURE SECTIONS AS SHOWN, PER PLAN.
 - TEST JOINTS AS REQUIRED.
 - INSTALL FIELD APPLIED LININGS AND COATINGS AT THE CLOSURE SECTION JOINTS.
 - DISINFECT CONNECTION FITTING AND SURROUNDING AQUEDUCT. COORDINATE WITH JWCD TO RETURN AQUEDUCT TO SERVICE.
 - CONCRETE THRUST COLLAR TO CURE MINIMUM 48 HRS PRIOR TO RETURNING AQUEDUCT TO SERVICE.
 - VERIFY OD, GEOMETRY AND ALIGNMENT OF EXISTING PIPE PRIOR TO ORDERING CLOSURE PIECES.
 - FIELD LOCATION AND CONNECTION DETAILS SHALL BE INCLUDED WITH THE SHOP DRAWINGS SUBMITTALS. FOLLOWING THE INSTALLATION OF THE CLOSURE SECTION, THE CONTRACTOR SHALL BACKFILL THE NEW AND EXISTING PIPELINE AND RESTORE THE GROUND SURFACE.
 - SOUTH AQUEDUCT CONNECTION SHOWN. SIMILAR FOR NORTH AQUEDUCT CONNECTION.

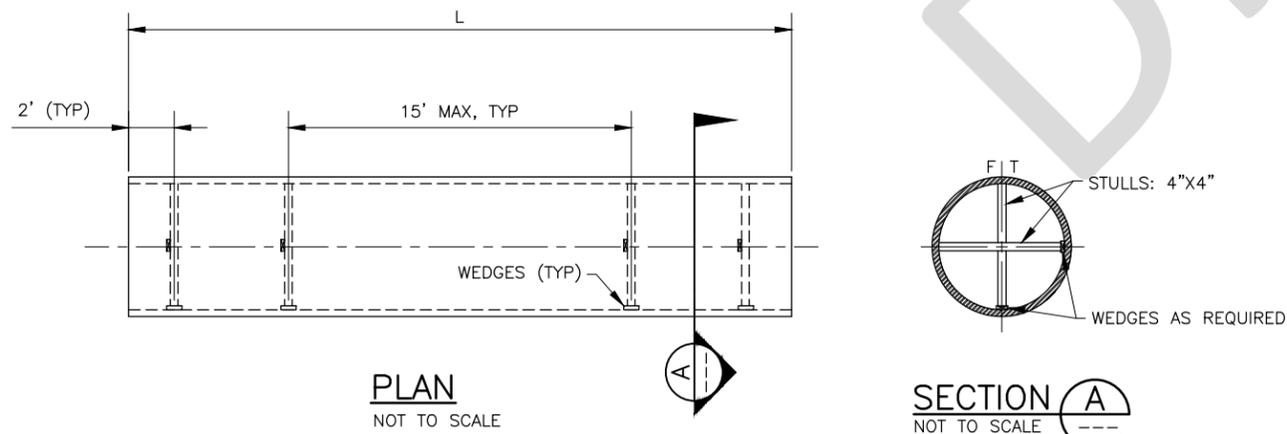
FINAL TIE-IN CONNECTION TO EXISTING AQUEDUCT (C) 2717
NOT TO SCALE



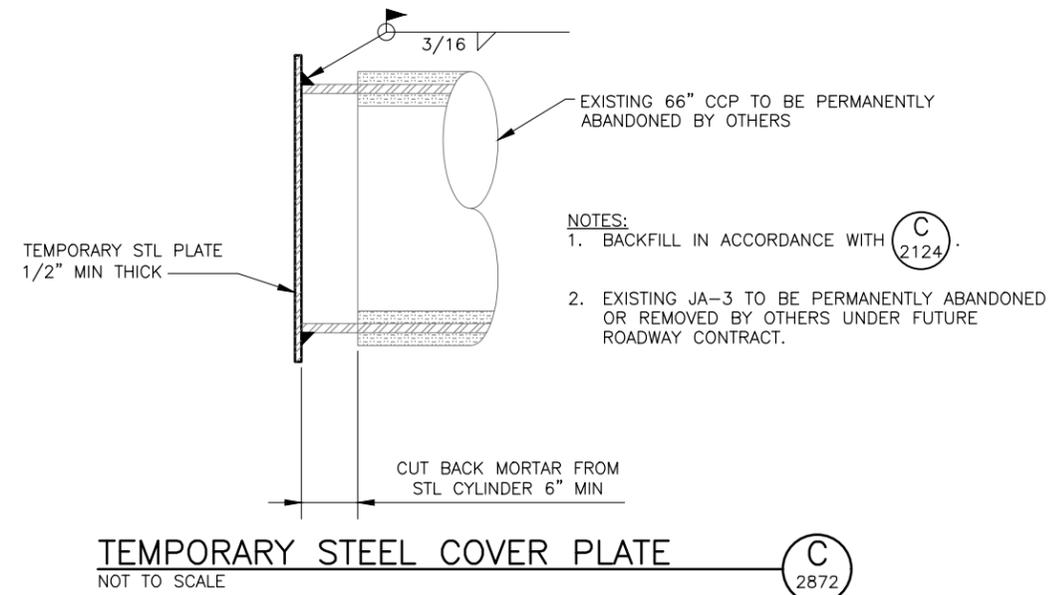
- NOTES:**
- DO NOT CUT ANY PRETENSURING BARS UNTIL NOTE 2 IS COMPLETED.
 - REMOVE CONCRETE COATING TO EXPOSE THREE COMPLETE COILS OF PRETENSURING BARS, AND CAREFULLY TACK WELD A 6" STEEL BAR ACROSS THE PRETENSIONED BARS AND CAREFULLY TACK WELD PRETENSIONED BARS TO STEEL CYLINDER AT 10-INCH SPACING ALL AROUND PRIOR TO CUTTING PIPE. WHEN WELDING TAKE CARE NOT TO BURN THROUGH EXISTING PRETENSIONED BARS AND STEEL CYLINDERS.
 - REPAIR DAMAGED MORTAR LINING AND COATING TO NEW CONDITION.
 - DEWATERING OF PIPELINE TO BE SCHEDULED BY OWNER WITH DATES ESTABLISHED FOR ALLOWABLE CUT DURING TIME NOTED IN CONTRACT DOCUMENT. CONTRACTOR SHALL BE PREPARED TO MANAGE MINOR AMOUNTS OF WATER IN PIPELINE AFTER DEWATERING.
 - DISINFECT IN ACCORDANCE WITH APWA C651.
 - CONDUCT AN AIR/SOAP SOLUTION LEAK TEST AT 40 PSI AIR PRESSURE IN ADDITION TO DYE PENETRATE OR MAGNETIC PARTICLE TESTING AS REQ'D BY SPECIFICATIONS. IF LEAKS ARE DETECTED, THE CONTRACTOR SHALL REPAIR AND RETEST THE WELDS UNTIL THERE ARE NO DEFECTS. PLUG TAPS WITH THREADED PLUG AND SEAL WELD PLUG AT COMPLETION OF TEST AND COAT AND LINE AS SHOWN OR SPECIFIED. PROVIDE TWO TAP HOLES AT 180°.
 - GROUT FOR JOINT LINING SHALL BE ONE PART CEMENT TO TWO PARTS SAND AND SUFFICIENT WATER FOR DRY-PACK CONSISTENCY.
 - WHERE CONNECTING TO EXISTING CCP, BUTT STRAP TO BE 1/4" THICK.

TYPICAL CCP CONNECTION (C) 2718
NOT TO SCALE

- NOTES:**
- STULLING IS DESIGNED FOR HAULING PURPOSE ONLY. PERFORMANCE OF PIPE BRACING USED DURING INSTALLATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



WSP TEMPORARY BRACING LOCATIONS (C) 2853
NOT TO SCALE

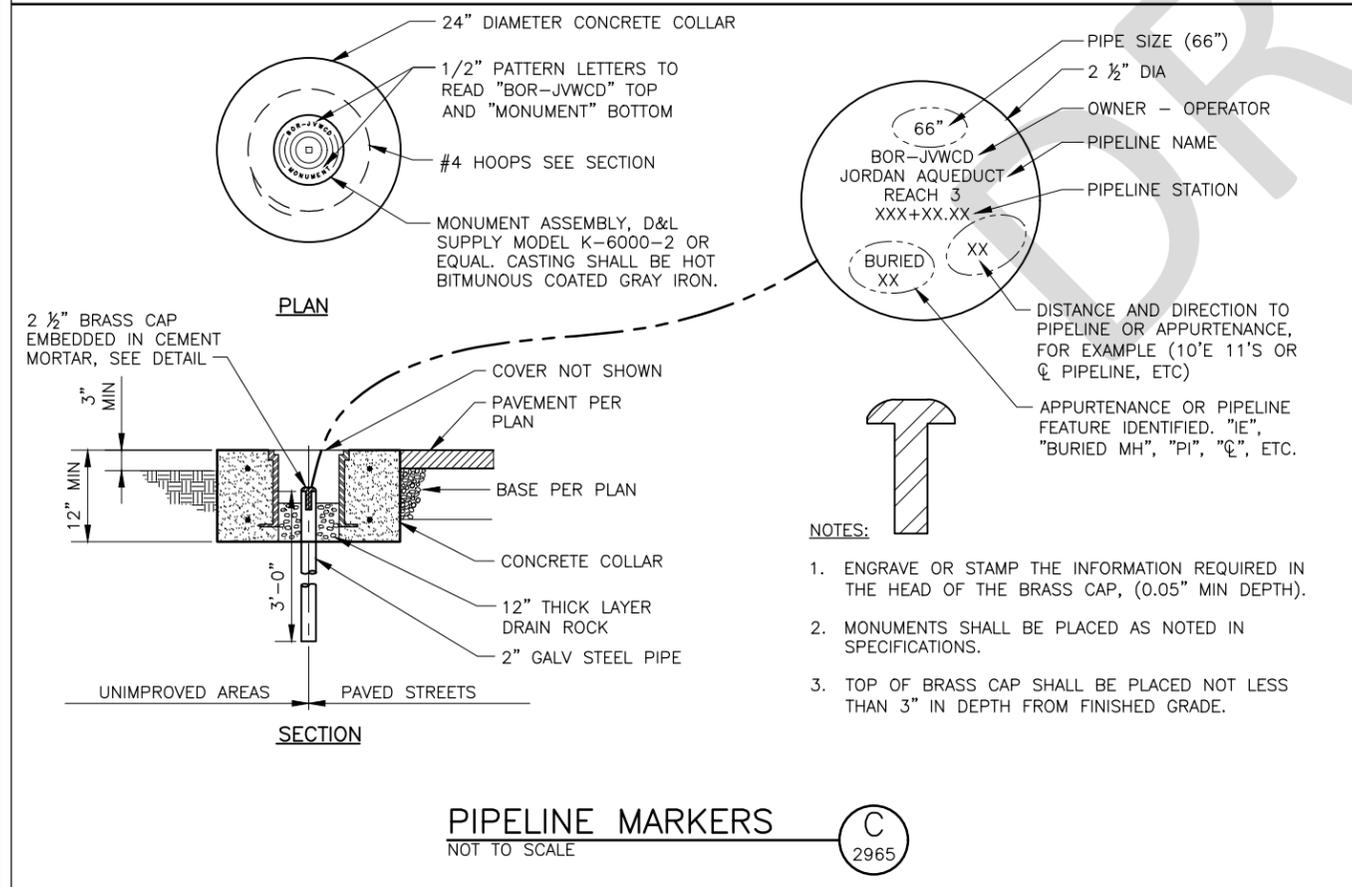


TEMPORARY STEEL COVER PLATE (C) 2872
NOT TO SCALE

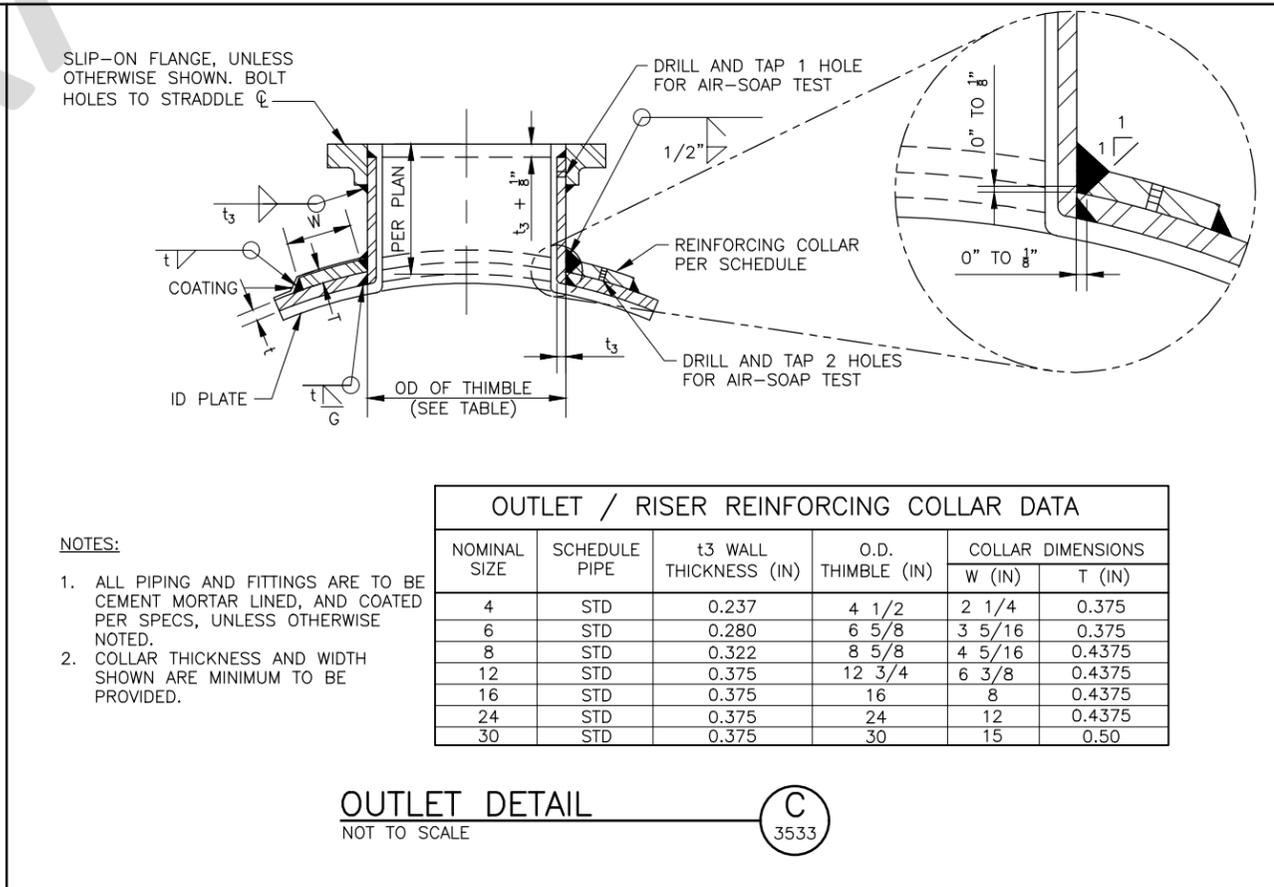
- NOTES:**
- BACKFILL IN ACCORDANCE WITH (C) 2124.
 - EXISTING JA-3 TO BE PERMANENTLY ABANDONED OR REMOVED BY OTHERS UNDER FUTURE ROADWAY CONTRACT.

REVISIONS		NO.		DATE	APPROVED BY	REMARKS
DRAWN						
ACCEPTED						
BART LEEFLANG, P.E.						
MANAGER, FIELD ENGINEERING DIVISION						
STATION: PROVO, UTAH						
UTAH DEPARTMENT OF TRANSPORTATION						
REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.						
APPROVED	DATE	07/14/16	DATE	07/14/16	DATE	07/14/16
PROFESSIONAL ENGINEER	DATE	07/14/16	DATE	07/14/16	DATE	07/14/16
SR-154 BANGERTE HWY	PROJECT NUMBER	S-0154(82)16	PIN	14785	PROJECT NUMBER	S-0154(82)16
JORDAN AQUEDUCT PROTECTION AND RELOCATION	GENERAL CIVIL DETAILS - 4					
SHEET NO. GC-04						

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C
2965



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3533

UTAH DEPARTMENT OF TRANSPORTATION
REGION 2 - BOWEN COLLINS & ASSOCIATES, INC.

PROJECT: SR-154 BANGERTER HWY
PROJECT NUMBER: S-0154(82)16
PIN: 14785
GENERAL CIVIL DETAILS - 6

APPROVED: _____ DATE: 07/14/16
DRAWN BY: RG
CHECKED BY: J.L.
DATE: _____
PROFESSIONAL ENGINEER: _____

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

DRAWN: _____
ACCEPTED: BART LEEFLANG, P.E., MANAGER, FIELD ENGINEERING DIVISION
STATION: PROVO, UTAH

SHEET NO. GC-06



**WELBY JACOB WATER USERS COMPANY
MASTER UTILITY AGREEMENT**

THIS MASTER UTILITY AGREEMENT, made and entered into this _____ day of _____, 20____, by and between the **Utah Department of Transportation**, (“UDOT”), and **Welby Jacob Water Users Company**, a Utah Non-Profit Corporation, Registered Corporation of 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, 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 necessitated by the Project; and

WHEREAS, the Company will perform the necessary review and approval for the design and construction of its Utility Work 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 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 Darryl Lehmitz, telephone number (801) 718-3327, and e-mail darryllehmitz@yahoo.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 August 9, 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.



UDOT shall advise the Company 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. UDOT shall immediately notify the Company 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, UDOT shall describe the circumstances in writing within 24-hours of the discovery to the Company.

5. COMPANY REQUIREMENTS

UDOT will comply with the following Company Utility Work requirements:

- a. Adhere to Company Encroachment Requirements to construct within or crossing Company right-of-way marked Exhibit "A" that is incorporated by reference.
- b. Maintain full functionality of irrigation systems from April 1 through October 15 each calendar year, unless otherwise approved by the Company owner in writing.
- c. Coordinate with the Company for water user scheduling as needed for Project Utility Work scheduling.
- d. 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.
 - i. Include Company's engineer in all engineer review, preparation of agreements, and construction activities and notifications:
Franson Civil Engineers
Attn: Vince Hogge
1276 South 820 East, Suite 100 American Fork, UT 84003
Telephone: (801) 756-0309 and email: vhogge@fransoncivil.com
- e. See Supplemental Agreement section below for time limitations and Weir/Turnout requirements.

6. UDOT TO DESIGN AND CONSTRUCT THE UTILITY WORK

UDOT shall perform the necessary design work, cost estimating, field and office engineering, furnish all materials, and perform the Utility Work 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. Refer to City standards at http://www.fransoncivil.com/images/pdfs/WJWUC%20Standard%20Drawings%2003_2013.pdf that is incorporated by reference.

UDOT will secure permits required for Utility Work for Company's facilities. Obtain a copy of the Company's Encroachment Application www.fransoncivil.com/WJWUC that is incorporated by reference.

UDOT will supply as-constructed plans for the Utility Work it performs, in AutoCAD format, upon completion of any required Utility Work.



7. COMPANY TO PERFORM INSPECTION 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.

8. STANDARD SPECIFICATIONS AND REGULATIONS

UDOT, 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. 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.

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 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.

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 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.



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 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 "B" 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.

Include Application for Weir/Turnout with the Supplemental Agreement where applicable.

Supplemental Agreements are valid for 6 months from the execution date, with a 12 month completion limitation for Work on Company facilities. Additional fees may apply if these Supplemental Agreement schedules are not met.

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.

13. UDOT AUTHORIZATION TO PROCEED WITH UTILITY WORK

UDOT 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. 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.

15. CITY TO NOTIFY UDOT

City's personnel shall notify UDOT's Resident Engineer upon arriving and leaving the Project site for verification of inspecting Utility Work. City's personnel will comply with all applicable OSHA and Project safety requirements while within the Project limits.



16. 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.

17. DAILY RECORDKEEPING

UDOT's Resident Engineer will keep daily records of the inspection performed by the Company. Daily inspection 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 inspection records shall be signed by UDOT's Field Representative, and the Company or its authorized representatives. Copies of the inspection records shall be retained by the parties to this Agreement.

18. 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
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 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.

19. 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.

20. 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.

21. 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.

22. 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.

23. 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.

24. 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.

25. 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.

Welby Jacob Water Users Company

Title: _____

Date: _____

Recommended For Approval:

Utah Department of Transportation

Title: Utility and Railroad Leader

Title: Project Director

Date: _____

Date: _____

Approved as to Form

UDOT Comptroller Office Contract
Administrator

Title: Assistant Attorney General

Title:

Date: _____

Date: _____



Encroachment Requirements
for Encroachment Authorization
to Construct Within or Cross Canal Right-of-Way

1. Application fees are listed below. For initial submittal, the fee below will begin the review process.

Application Type	Application Fee	Possible Refund
Bridge or Box Culvert	\$8,400	\$2,00
Canal Parkway	\$7,300	\$1,00
Excavation of Canal	\$7,300	\$1,00
Large Bore (over 24 inches in diameter)	\$6,500	\$500
New Weir & Turnout	\$6,500	None
Small Boring or Directional Drilling	\$4,000	\$500
Overhead Crossing	\$4,000	\$2,00
Use of Existing Conduit	\$1,500	\$500

Application fees will be used by WJWUC for purposes of administration, coordination, engineer review, preparation of agreements, review during construction, legal guidance, and any other expenses it incurs related to this application.



**ZAYO GROUP, LLC
MASTER UTILITY AGREEMENT**

THIS MASTER UTILITY AGREEMENT, made and entered into this 12 day of Sept, 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 PDF format, upon completion of any required Utility Work.

2016/11/25

7. COMPANY TO PERFORM 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:

Utah Department of Transportation

Title: Utility and Railroad Leader

Date: 9/12/16

Title: Project Director

Date: Sept 12, 2016

Approved as to Form

UDOT Comptroller Office Contract Administrator

Title: Assistant Attorney General

Date: 09/19/2016

Title:

Date: 9-21-16



**ZAYO GROUP, LLC
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 **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 _____, 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.



Project No. S-0154(12)11, Salt Lake County
4 Interchanges on Bangerter Highway
ZAYO GROUP, LLC
Charge ID No. 71939 PIN 12566
EXHIBIT A – SAMPLE EASEMENT

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: _____

Date: _____

.....

Recommended For Approval:

Utah Department of Transportation

Title: Utility and Railroad Leader

Title: Project Director

Date: _____

Date: _____

UDOT Comptroller Office Contract Administrator

Title:

Date: _____

REQUEST FOR PROPOSALS



UTAH DEPARTMENT OF TRANSPORTATION



4 Interchanges on Bangerter HWY (SR-154)

Project No. S-0154(12)11

Salt Lake County

REFERENCE DOCUMENTS

(RD)

~~Final Issued~~ Addendum 1 - September ~~1529~~, 2016

- 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

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

17. Splice Details

- a) First Digital Splicing
- b) AT&T Box Splice Maps
- c) AT&T Sheets 64-103

18. Department Utility Database Template .csv

REFERENCE DOCUMENTATION NOT INCLUDED IN MAIN PDF DOCUMENT; INCLUDED AS SEPARATE DOCUMENTS/ELECTRONIC FILES.