CITY OF RIO RANCHO
DEPARTMENT OF FINANCIAL SERVICES
PURCHASING DIVISION
3200 CIVIC CENTER CIRCLE NE 3rd FLOOR
RIO RANCHO, NEW MEXICO 87144
TELEPHONE: 505-891-5044 FAX: 505-891-5762

ADDENDUM NO (2) TWO
IFB 17-PW-002
HIGH RESORT BOULEVARD RECONSTRUCTION

October 13, 2016

Addendum Number (2) Two forms part of the contract documents and modifies them in the manner set forth below.

ATTENTION CONTRACTORS

- General Clarifications
- Questions and Answers
- Remove and Replace
- Attachments
    - Revised Bid Form
    - Re-issued Drawings 11-1 through 11-24
    - Revised Standard Drawing S-03

General Clarifications

1. Pipe for recycled water service shall be color-coded "purple" pipe manufactured with purple pigment and marked "Reclaimed Water – Do Not Drink."

2. Meter box Lids for recycled water service shall be color-coded "purple" pipe manufactured with purple pigment and marked "Reclaimed Water – Do Not Drink."

Questions and Answers

1. **QUESTION:** Item 6 on the bid form and the same item on Sheet 1-3 indicates the Base Course is only 1 sy. Sheet 2-2 has base course underneath all of the new asphalt. Please verify quantities?

   ANSWER: The correct quantity is 55,000 SY. The bid form has been revised and is included with this addendum.

2. **QUESTION:** Bid Item 53, Power Service Installation. Can you tell us what the fees will be from PNM or can this item be changed to an Allowance?

   ANSWER: Bid item 53 has been changed to an allowance in the revised bid form included with this addendum.

3. **QUESTION:** Bid Item 54, Type I Standard, 4' High. Can you verify the height? Is this a lighted bollard?

   ANSWER: Per section 9 of the plans, 4' high type I pole is called out for pedestrian push buttons.

4. **QUESTION:** Bid Item 83, are the weights of the fittings per C-110 or C-153?

   ANSWER: The weights are per C-110

5. **QUESTION:** Are the MJ Glands required for the gate valves incidental to the gate valves or paid by the associated items for the Mechanical Restrained Joints-Glands?

   ANSWER: MJ Glands associated with gate valves are to be paid by the associated items for the Mechanical Restrained Joints – Glands, See updated bid form for revised quantity.

6. **QUESTION:** Bid Item 76 is for a 12" Boring and Casing, but Sheet 11-11 indicates 16". Please verify the size for the new 8" Recycled Water Line

   ANSWER: Bid Item 76 has been corrected to read 16" Boring and Casing See updated bid form

7. **QUESTION:** Is the intent to connect the laterals southerly from the new 12" water main during phase 1 of the traffic control phasing? If so, can we have an item for temporary paving as we connect across phase 2? This would require temporary closures of High Resort which is not allowed If the connections occur during phase 2 construction, can we offset the new gate valves closer to the edge of new pavement so we can access these during phase 2 construction? Does this become a "Means and Methods" item to make sure the connections are made?

   ANSWER: No additional item will be added for temporary paving, contractor to decide the means and methods to complete the connection.

8. **QUESTION:** On sheets 2-3 to 2-6, there is a note to remove trees. Are ALL trees removed, or only those identified with an arrow specifically on the plans?

   ANSWER: Only the trees called out in the plans shall be removed.

9. **QUESTION:** There are several connections required for the existing storm system to the new system found on sheets 3-31 and 3-33. Are these connections incidental to the storm pipe of can we have a bid item for the connections?

   ANSWER: The connections shall be incidental to the storm drain pipe bid item.

10. **QUESTION:** On sheet 11-18, (and other examples for the Recycled Water line), there is a stub called out at Sta 89+56.62 but there are no fittings called out to install the stub, specifically the Tee and Cap. Can these stubs be reviewed to ensure correct call-outs? The two stubs at NM 528 each have their own separate gate valve to isolate, but all other stubs do not. Should we add gate valves on all stubs?

    ANSWER: See Revised Sheet for clarification.

11. **QUESTION:** On Sheet 11-18 (and other examples for the Recycled Water Line), there are 1" Recycled Water Service Meters called out. Can there be a bid item for these, or are they incidental to the bid item 100? There are several existing meters to be reconnected and bid item 100 would be used for those, but the call-outs are for new services.

    ANSWER: See updated bid form for added bid item.

12. **QUESTION:** On Sheet 11-18 at Sta 91+24.80 there is a call out for a 4" Recycled Water Service Meter. Can you provide a bid item for this? The note refers to a detail on sheet 11-25, but this detail is for smaller meters (1 ½"). Can you provide a detail for the 4" Service? Does this require it's own concrete vault or PRV?

    ANSWER: No meter will be installed at this location, contractor to provide a 6" stub with gate valve and cap. See Revised Sheet for clarification.

13. **QUESTION:** Starting the waterline connections, on sheet 11-19 C2, there Note 10 has a coupling connection to the existing 8" waterline from the new. Bid item 95 is for 12" Non-Pressure Connections. Can we have a bid item for 8" Non-Pressure Connections?

    ANSWER: See updated bid form for added bid item.

14. **QUESTION:** Note 6 has a cut and cap the existing 8" waterline. Bid item 99 is for the cutting and capping the 12" waterline. Can we have a bid item for cutting and capping the 8" water line?

    ANSWER: See updated bid form for added bid item.

15. **QUESTION:** Bid item 101 calls out for 4” PRV, 3 each. Could you identify where these are located and provide a detail?

    ANSWER: This bid item has been deleted from the project, see updated bid form.

16. **QUESTION:** There is 4” water line on the project but no bid item for either the pipe of mechanical joint glands. Can you please provide?

    ANSWER: See updated bid form for added bid item.

17. **QUESTION:** There are several tapping saddles for pressure connections. Can you let me know which bid item these should be under, or do we need an additional item(s)?

    ANSWER: See revised drawings for clarification. All connections shall be made as non-pressure connections.

18. ***QUESTION:*** Key Note 38 on Sheet 11-22 calls out the 20” water line as PVC, but bid item 90 calls out for Ductile Iron. Can you please verify the type of pipe?

    ANSWER: The 20” water line is Ductile Iron, see revised sheets for clarification.

19. **QUESTION:** Plan Sheet 11-22, Keyed Note #43 calls for a 20” Tapping Saddle. Please clarify what this is. This looks like an Inline Connection, should this be a 20” Insertion Valve? If this is a “Tapping Saddle”, what size is the “Tap”? And what does it connect to?

    ANSWER: 20” tapping saddle has been replaced with a 20”x20”x12” MJ tee and 12-inch gate valve, See Revised Sheet for clarification.

20. **QUESTION:** Plan Sheet 11-22, Keyed Note #34 calls for a 20” Insertion Valve, yet this callout appears at what looks like a 20”x12” TEE. Please Verify this Callout. Is this the “Wet Tap” mentioned in note #2, Detail C15? Then, if that is the case would the 12” Gate Valve (note #27), which is shown to be about 30’ (scaled) away from the connection to the 20” be right at the Tap (Tapping Valve)?

    ANSWER: 20” insertion valve has been removed, wet tap mentioned in note #2, Detail C15 has been removed, 20” tapping saddle has been replaced with a 20”x20”x12” MJ tee and 12-inch gate valve See Revised Sheet for clarification.

21. **QUESTION:** Plan Sheet 11-22, Keyed Note #38 calls for 20” PVC Pipe, while Bid Item #90 calls 20” Ductile Iron Restrained Joint Pipe. Please clarify the type of pipe required at this location.

ANSWER: New 20" pipe shall be ductile iron, See Revised Sheet for clarification.

22. **QUESTION:** Plan Sheet 11-22, Keyed Note #41 calls for a 20"x6" Tapping Saddle for the Reset Fire Hydrant. As this 20" is a New line would a 20"x6" MJxMJ or MJxFL Tee work here in lieu of a "Tapping Saddle"?

    ANSWER: 20"x6" Tapping Saddle has been replaced with a 20"x6" MJxMJ Tee. See Revised Sheet for clarification.

23. **QUESTION:** Plan Sheet 11-20, Keyed Note #25 calls for 12"x12" MJ TEE, these fittings look like Crosses in the Dwg. While on Plan sheet 11-5 these are Called out as 12"x8" MJ Crosses. Please confirm whether these are Crosses or Tees.

    ANSWER: Fittings are 12"x12" crosses, See Revised Sheet for clarification.

24. **QUESTION:** Plan Sheet 11-20, Detail 6 shows what looks like a Gate Valve on the Mainline between the Tees/Crosses for the PRV Assembly. Yet this Valve is NOT called out. Will this Valve be required?

    ANSWER: Yes, See Revised Sheet for clarification.

25. **QUESTION:** Plan Sheet 11-21, detail 12 has a Note #9 calling out an 8" Gate Valve yet no GV is shown on the line, please verify that a GV will be required.

    ANSWER: Yes, See Revised Sheet for clarification.

26. **QUESTION:** Plan Sheet 11-10, sta 89+81 calls for an 8" Stub Out. Shall an 8" Gate Valve be included on this Line?

    ANSWER: Yes, See Revised Sheet for clarification.

27. **QUESTION:** Bid Item #76 calls for 120 – LF of 12" Boring and Casing, is this referring to the 88 – LF of 16" Casing shown on sheet 11-11? Please clarify.

    ANSWER: Bid Item 76 has been corrected to read 16" Boring and Casing See updated bid form

28. **QUESTION:** Bid Item #77 (6" C900): This qty appears to account only for the "Recycled Waterline". It does not seem to include the 6" C900 Waterline for the Tie Ins detailed on sheets 11-19 thru 11-22 and elsewhere. What Bid Item should the additional (150 LF – scaled) 6" C900 be accounted in?

    ANSWER: See updated bid form for added bid item.

29. **QUESTION:** Bid Item #78 (8” C900): This qty does appears to account only for the “Recycled Waterline”. It does not seem to include the 8” C900 Waterline for the Tie Ins detailed on sheets 11-19 thru 11-22 and elsewhere. What Bid Item should the additional (600 LF – scaled) 8” C900 be accounted in?

    ANSWER: See updated bid form for added bid item.

30. **QUESTION:** Bid Item #79 (6” Gate Valve): Item calls for 19 EA, plans Show 13 EA (5 water and 8 Recycled). Please Verify Quantities.

    ANSWER: See updated bid form for added bid item.

31. **QUESTION:** Bid Item #80 (8” Gate Valve): Item calls for 24 EA, plans Show 21 EA (13 water and 8 Recycled). Please Verify Quantities.

    ANSWER: See updated bid form for added bid item.

32. **QUESTION:** Bid Item #81 (Valve Box Assembly): Item description references CORR Std W-4, and corresponding detail is shown on sheet 11-27. However the new CORR Std is W-5 dated April 22, 2016. Please confirm if W-5 is the standard that will be followed or if the “old” W-4 is acceptable for this project?

    ANSWER: W-5 is the standard and all current standards will be used on this project.

33. **QUESTION:** Bid Items #82 and #99 (CUT AND CAP 6" and 12” WATER LINE): There are MJ Plugs of various sizes throughout the Project shown on existing lines, Will these Plugs be paid in this Line Item (20"- 4 ea, 12" – 8 ea, 8" - 22 ea)? Additionally there are several new stubs which will, presumably, receive a cap, Will these Caps be paid in this Line Item (12" - 1 ea, 8" - 1 ea, 6" - 4" ea)?

    ANSWER: All plugs and caps shall be paid for under the line item for Ductile Iron Fittings. Restraints associated with plugs and caps shall be paid for under the respective Mechanical Restrained Joint bid item. See updated bid form.

34. **QUESTION:** Bid Item #85, #87, #97 and #98 MECHANICAL RESTRAINED JOINTS - GLAND 6”, 8”, 12” and 20”: Please clarify the scope of these Bid Items. Presumably, these cover the “Megalugs” appurtenant to the Fittings in included in Item #83, but if that is the case where are the 10” and 4” joining material to be paid? (Megalugs By my count for the fittings in Item #83: 20” – 10 ea, 12” – 94 ea, 10” – 7 ea, 8” – 95 ea, 6” – 37 ea, 4” – 2 ea, not including solid sleeve couplings at connections to existing)

    ANSWER: See updated bid form for added bid item.

35. **QUESTION:** Please confirm that the joining material appurtenant to the Valves are included in the Valve Bid Item?

    ANSWER: Mechanical Restrained Joint – Glands associated with valves shall be paid for under the respective bid items for Mechanical Restrained Joint – Glands, all other joining material and appurtenances associated with valve installation shall be considered incidental to the cost of the valve.

36. **QUESTION:** Plan Sheet 11-22, Keyed Note #42 calls for 20" Gate Valve (MJxMJ), while Bid Item #91 calls for 20" BUTTERFLY VALVE. Please clarify the type of Valve required at this location.

    ANSWER: 20" valve shall be butterfly valves, See Revised Sheet for clarification.

37. **QUESTION:** Bid Item #92 calls for 29 EA 12-Inch Gate Valves, while 37 EA are shown in the Plan and Profiles and Connection Details. Please verify quantities in Bid Schedule.

    ANSWER: See updated bid form for revised quantities

38. **QUESTION:** Bid Item #94 calls for 5 EA, FIRE HYDRANT, EXISTING, REMOVE & RESET, The Fire Hydrants shown on sheet 11-7 (Detail A-1) and sheet 11-22 (Detail C13) appear to be New FHs. Please confirm that this Item will include 2 ea New Fire Hydrants.

    ANSWER: See updated bid form for added bid item.

39. **QUESTION:** Bid Item #95 calls for 2 EA, WATER LINE CONNECTION, 12" NON-PRESSURIZED: Please clarify the scope of this Bid Item. By My count there are 5 EA - 12", 1 EA – 10", 11 EA – 8", and 1 EA - 6" NON-PRESSURIZED connections. Where will these other connections be paid?

    ANSWER: See updated bid form.

40. **QUESTION:** There are 1 EA: 20"x12" Pressurized Connection (C15), 20"x6" Pressurized Connection (C15), and 18"x6" Pressurized Connection (C16) requiring Tapping Sleeves and Valves, please clarify where these Items are to be paid?

    ANSWER: Tapping sleeves shall be considered incidental to the connection bid item. Valve shall be paid for under the respective valve bid items. All connections have been revised to non-pressure connections. ***See updated bid form for added bid item.***

41. **QUESTION:** Bid Item #100 calls for 14 EA, 5/8" SERVICE LINE REPLACEMENT: Please clarify the scope of this Bid Item. Plans show 14 EA - Install 1" Recycled Service Meter. Are these 1" Recycled Services paid in this item?

    ANSWER: Service to be installed per CoRR Std. Drawing W-6. See updated bid form for added bid items and revised quantities.

42. **QUESTION:** Plans show: Install 76 LF - New 1-1/2" Service Line Connect to Exist Irrig (Sheet 11-14). Please clarify where this Item is to be paid?

    ANSWER: Contractor to install 1" service line to be connected at a later date by the City. This item is to be paid as a 1" service.

43. **QUESTION:** Plans show: 3 EA – Tie In Existing Meter (sheets 11-5, 11-7, and 11-10), shall these items be paid in Bid Item #100 5/8" SERVICE LINE REPLACEMENT?

    ANSWER: See updated bid form for added bid item.

44. **QUESTION:** Please that Per detail sheet 11-25, a 5/8" service will require 1" copper line.

    ANSWER: Service to be installed per CoRR Std. Drawing W-6.

45. **QUESTION:** Bid Item #101 calls for 3 EA, STANDARD 4" PRESSURE REDUCING VALVE (PRV). Please provide locations for these items, none could be found in the drawings.

    ANSWER: This bid item has been deleted from the project, see updated bid form.

46. **QUESTION:** Plan Sheet 11-7, Detail A1 shows a Tie to Existing Meter (4"), and sheet 11-18 calls out: Install 4" Recycled Water Service Meter (Dtl sheet 11-25). Where will these items be paid? Detail W-06 sheet 11-25 makes no provisions for 4" lines, please provide pertinent detail for a 4" Recycled Water Service Meter.

    ANSWER: No meter will be installed at this location, contractor to provide a 4" stub with gate valve and cap. See Revised Sheet and updated bid form for clarification.

47. **QUESTION:** Bid Item #102 calls for 3 EA, 10" INSERTION VALVE: Only one is shown on sheet 11-21, detail C11. Please verify quantities in Bid Schedule.

    ANSWER: The other two valves are to be installed near 4005 High Resort Blvd., City Project Manager will coordinate exact location with selected contractor to verify location of these valves.

48. **QUESTION:** Will Domestic Material be required for this project?

    ANSWER: Domestic material is not required for this project.

49. **QUESTION:** There does not appear to be an item for Quality Control Testing. Can an allowance be established for quality control testing or is it CORR intent to make testing incidental to construction?

    ANSWER: A bid item has been added to the revised bid form for Quality Control Testing. Testing shall comply with the NMDOT minimum testing requirements and the NMAPWA testing requirements for utilities.

50. **QUESTION:** I would like to request item # 24 “Conc. Sidewalk 4” (Including HC Ramps and Det. Warning Surfaces) could be separated into 2 items. 1 Item for 4” Sidewalk and 1 Item for HC Ramps with Detectable Warning Surfaces. The cost for HC Ramps is considerable more that 4” Sidewalk and it would make more sense to separate these items so that each can be accounted for independently

    ANSWER: HC Ramps are included in payment for sidewalk per NMDOT specifications.

51. **QUESTION:** I am going through the demolition sheets and with the exception of the asphalt, all item are paid for by the bid item #20, Removal of Structures and Obstructions, 1 LS. I noticed select sections of infrastructure (i.e., curb and gutter) are identified to be removed and disposed.
    If during construction, the Contractor is instructed to remove more than what is identified on the plans, how is the Contractor compensated for the additional work if the bid item is 1 LS?

    ANSWER: The winning contractor shall provide a schedule of values for the removals. Any additional items removed shall be incidental to the Removal of Structures and Obstructions bid item and no additional payment will be made.

52. **QUESTION:** As I was looking at the drawings for the High Resort Blvd, I noticed that the scale on page 8-1 is off. The scale at the bottom of the page is correct, but when compared to the survey marks and conduit runs, they don't match up. It shows as half. How can we clarify what the actual scale for this drawing is?

    ANSWER: The correct scale is 200 half size and 100 full size.

53. **QUESTION:** Do the materials require 100% domestic, American Iron & Steel Act, Buy America, Buy American?

    ANSWER: The materials do not need to be domestic.

54. **QUESTION:** For the storm drain culvert is CMP Ultra-Flow what the City is wanting for bid items 16-19?

    ANSWER: The storm drain shall be per NMDOT specifications section 570.

55. **QUESTION:** Bid item 83 – Ductile Iron Fittings Per Pound – Are C153 Compact Mj Fittings allowed to be installed and Paid for at the C110 Full Body weight per Section NMAPWA 130.4.2 & 130.8.1

    ANSWER: bid quantities are per C-110, contractors will be paid based upon the actual weight of fittings installed (i.e. C153 fittings will not be paid at the C110 price.)

56. **QUESTION:** Why is the depth of the new water line 6' deep and the CORR Standard is 4" deep?

    ANSWER: The new line is placed at 6' to avoid existing water line utilities since the construction is to be completed while the existing water line is to remain in service during construction.

57. **QUESTION:** Can the new water line be shifted away from the existing line to help ensure safety on the project and reduce costs? If the existing waterline is 4 feet deep and the new line is deeper, there is potential for compromising the existing waterline during construction, especially when the lateral distance between the two lines is very close to each other.

    ANSWER: Yes the water line can be shifted for safety, value engineering is acceptable however the bid must be based on the design as shown.

58. **QUESTION:** What is the existing pipe made of? Is it class pipe or pvc? If not pvc or ductile iron, question (2) above becomes more critical.

    ANSWER: Existing pipe material is SDR-26 PVC.

59. **QUESTION:** What is the requirement for the existing line once taken out of service?

    ANSWER: All cut waterlines will need to be capped before abandonment.

60. **QUESTION:** Who will adjust the existing PRV once the contractor ties into it and if this is the contractor, can you provide a bid item for this along with the requirements, specifications, etc. Will the contractor even be qualified or allowed to adjust the PRV?

    ANSWER: The City will be responsible to make any adjustments to the PRV.

61. **QUESTION:** No bid items for the 6", 8", 10" or 20" non-pressurized waterline connections per NMAPWA 801.22.12.1

    ANSWER: See updated bid form for added bid item.

62. **QUESTION:** No bid items for the 10" mechanical restraint joint harnesses or glands per NMAPWA 801.22.13.3

    ANSWER: See updated bid form for added bid item.

63. **QUESTION:** No bid item for the 10" C-900 DR18 water main.

    ANSWER: See updated bid form for added bid item.

64. **QUESTION:** No bid items for the necessary materials needed for the 4" re-use water service meter on sh#11-18, also calls out detail per sh#11-25, however that is for the standard CORR 1" water service.

    ANSWER: 4" recycled water service meter has been deleted, 4" service line has been revised to a 6" stub-out and cap. See updated sheets and bid form for added bid item.

65. **QUESTION:** No bid item for the 18x8 tapping saddle for the re-use waterline connection per SH#11-22 detail C16.

    ANSWER: Tapping saddles shall be considered incidental to the connection bid items.

66. **QUESTION:** No bid item for the 1.5" service line on sh#11-14.

    ANSWER: The bid item for the 6' Dia Pill box MH is 37 per the original bid form.

67. **QUESTION:** No bid item for the 6' Dia Pill box MH per sh#3-32

    ANSWER: ***See updated bid form for added bid item.***

68. **QUESTION:** Bid item #90 is calling out for restrained joint ductile iron pipe, however sh#11-22 key note 38 is calling out 20" PVC. Please clarify intent.

    ANSWER: 20" pipe shall be ductile iron. See revised sheets and bid form for clarification.

69. **QUESTION:** Bid item #76 is calling for a 12" bore, however sh#11-11 & 11-27 call out for a 16" bore. Please clarify & verify quantity.

ANSWER: Bid Item has been corrected to read 16" Boring and Casing See updated bid form

70. **QUESTION:** Bid item #100 is calling out q/8" service line replacements, plan sheets & detail reference sh#11-25 call out for 1" service lines. Please clarify intent.

    ANSWER: Service to be installed per CoRR Std. Drawing W-6.

71. **QUESTION:** It was mentioned the 20" Insertion valve doesn't exist. Can an alternate be published prior to bid date?

    ANSWER: See revised sheets and bid form for clarification.

72. **QUESTION:** There are several major items that are incidental, including QA/QC testing and temporary traffic signals. Is there a list of incidentals available so that these items are not missed in the bids?

    ANSWER: A list of incidentals will not be provided.

73. **QUESTION:** Sheet 2-2 provides a summary of quantities for Add Alt # 1 and # 2, however does not indicate where the add alt quantities are going on the project. Can you please describe where the add alt # 1 quantities are going on the project

    ANSWER: The additional curb and gutter for Alt. #1 is throughout the project, where the curb and gutter is slightly damaged. An item for Removal of Structures and Obstructions has been added to the revised bid form included with this addendum.

74. **QUESTION:** One final questions. The concrete items reference NMDOT # 608 which indicates 4" of bedding course/base course to be included, however the standard details per CORR spec as shown in the drawings does not inclldicate that base/bedding course should be included. Please clarify which specification govern and if bedding course/base course is to be included under concrete work (curb/SW/drivepad, etc…

    ANSWER: No basecourse is required under concrete work per the City of Rio Rancho Standard Drawings CG-01, TS-01 and DW-02.

75. **QUESTION:** Please verify the 20" Insertion Valve is available for the design and construction of the project. If not, please offer the alternative for bidding

    ANSWER: See revised sheets and bid form for clarification.

76. **QUESTION:** Please confirm the contractor or subcontractor performing the work for the insertion valves (and pressure connects) must be certified and licensed through NM CID and follow the certified wages defined in the contract documents.

    ANSWER: Contractors and subcontractors shall be licensed and in good standing for the type of work they are performing, contractors and subcontractors shall adhere to all wage requirements stipulated in the contract documents.

77. **QUESTION:** What is the reason for the short time frame (180 calendar days) and high liquidated damages ($5000.00 per day)?

    ANSWER: The project needs to be fully completed prior to by the 4th of July, 2017 due to the City activities that occur during this timeframe. The liquidated damages ensure that the project is completed in a timely manner.

78. **QUESTION:** Would the City of Rio Rancho consider allowing 240 calendar days?

    ANSWER: No.

79. **QUESTION:** On sheet 1-5, note 6 under "Roadway General Notes" is states that millings are to be hauled to the City Yard at Kim and Idalia but then it states that the contractor may use the millings under alternate # 1. Alternate # 1 is for constructing curb and gutter so we are not sure if the reference to alternate # 1 is correct. Also, if we might be using the millings later why do we need to haul them so far away?

    ANSWER: No, the contractor will not be allowed to use millings under the new pavement. The millings will need to be hauled to the City Yard. Bid accordingly.

80. **QUESTION:** What is the purpose of bid item #6 calling for 4" base course, 1 SY?

    ANSWER: The correct quantity is 55,000 SY. The bid form has been revised, attached.

81. **QUESTION:** Will Wilson and Company be inspecting the project and if so, what will their level of authority be?

    ANSWER: The City of Rio Rancho will be inspecting the project. Wilson and Company will be involved with regular construction meetings, response to RFI's and submittal review.

82. **QUESTION:** Can the City of Rio Rancho make CAD drawings available immediately for bidding purposes?

ANSWER: No, CAD drawings will not be available.

83. **QUESTION:** Will the Contractor be responsible for Barricading permit fees or will they be waived as on some recent past projects?

    ANSWER: The City barricading permit fees will be waived per chapter 96 of the City Municipal Code. NMDOT fees will be required and shall be paid for under Item 702800 - Traffic Control Management.

84. **QUESTION:** Is there a sheet 11-28 as listed in the legend? If so, it seems to be missing from the PDF file for the plans.

    ANSWER: See Revised Sheets for clarification.

85. **QUESTION:** Is there a possibility of re-using the millings under new pavement for the entire project?

    ANSWER: No, the contractor will not be allowed to use millings under the new pavement. The millings will need to be hauled to the City Yard. Bid accordingly.

86. **QUESTION:** I have a question about the 20" Valve Insertion. With our years of experience of Linestops, Valve Insertion and Hot Taps it would be our recommendation that a 20" Double Linestop could be an option in replacing for the 20" Valve Insertion. By allowing a 20" Double Linestop the contractor can install a standard valve that is restrained and buried. Large diameter Insertion Valve have not been available for too long and are very costly item.

    ANSWER: See revised sheets and bid form for clarification.

87. **QUESTION:** The removals show several trees to be removed however there are several trees that do not have a keynote indicating removal. Can you please clarify which trees exactly get removed.

    ANSWER: Only the trees that are identified in the plans are to be removed.

88. **QUESTION:** Are the contractors required to pay the UEC fees for new water meter hookups for the irrigation of the new landscaping?

    ANSWER: The winning contractor is required to pay the UEC fees for the new water meter hookups. Payment for UEC fees shall be incidental to the LANDSCAPE COMPLETE IN PLACE lump sum bid item.

89. **QUESTION:** On the utility sheets for the Recycled Water, specifically Sheet 11-14, there is a note (1) to install Recycled Water Signs per Detail on Sheet 11-27. Can

you verify if these are paid through bid items 40 and 42 or do we need a bid item since these are specialized signs?

ANSWER: The recycled water signs per detail on Sheet 11-27 will be paid through bid items 40 and 42.

<u>Remove and Replace</u>
Remove the bid form in its entirety and replace with the revised bid form attached hereto.

As provided on page 63 of the Bid Documents, Bidders shall acknowledge receipt of Addendum Number (2) Two. All other provisions of the Contract Documents shall remain unchanged.

CITY OF RIO RANCHO
STATE OF NEW MEXICO

PURCHASING DIVISION
3200 Civic Center Circle NE - Suite 300
Rio Rancho, NM 87144

INVITES YOUR FIRM TO OFFER A BID ON:

IFB 17-PW-002
HIGH RESORT BOULEVARD RECONSTRUCTION

AS SPECIFIED IN THE ATTACHED BID DOCUMENTS.

Sealed bids will be received until 10:00 AM Local Mountain Time on Thursday, October 20, 2016

By the
City of Rio Rancho
Office of the City Clerk
1st Floor, Room # 150
3200 Civic Center Circle NE
Rio Rancho, NM 87144

_____
FIRM NAME

_____
STREET ADDRESS / P.O. BOX

_____
CITY, STATE, ZIP CODE

TELEPHONE NUMBER	E-MAIL ADDRESS	FAX NUMBER

Complete this form as well as the following forms in their entirety as specified in the Instruction to Bidders to ensure that your bid submission is complete.

BID FORM

This Bid is submitted to the City of Rio Rancho, New Mexico (hereinafter called "OWNER").

1. The undersigned (hereinafter called "BIDDER"), in compliance with your invitation for bids for the **High Resort Boulevard Reconstruction,** having examined the drawings and specifications, with related documents, and having examined the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of labor, materials and supplies, hereby proposes to furnish all labor, materials and supplies, and to construct the project in accordance with the contract documents at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the contract documents, of which this proposal is a part.

2. **<u>BID SUBMISSION</u>: The Bidder agrees to perform all of the following Base Work and any/or all Bid Alternative work for the amount(s) submitted for High Resort Boulevard Reconstruction as follows:**

CITY OF RIO RANCHO
High Resort Boulevard Reconstruction

BASE BID							
BID ITEM NO.	**SPEC. TYPE**	**SPEC. ITEM NO.**	**ITEM DESCRIPTION**	**UNIT**	**EST. QTY**	**UNIT PRICE**	**AMOUNT**
ROADWAY							
1	NMDOT		PROJECT SIGNS	EA	4		
2	NMDOT	201000	CLEARING AND GRUBBING	LS	1		
3	NMDOT	203000	UNCLASSIFIED EXCAVATION	CY	7500		
4	NMDOT	203200	SUBEXCAVATION	CY	2000		
5	NMDOT	207000	SUBGRADE PREPARATION	SY	57973		
6	NMDOT	303015	BASE COURSE 4"	SY	55000		
7	NMDOT	407000	BITUMINOUS MATERIAL FOR TACK COAT	TON	23		

BID ITEM NO.	SPEC. TYPE	SPEC. ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY	UNIT PRICE	AMOUNT
8	NMDOT	408100	PRIME COAT MATERIAL	TON	105		
9	NMDOT	411000	HOT POURED CRACK SEALING	LBS	7407		
10	NMDOT	423283	HMA SP-IV COMPLETE 4" (64-22 BINDER), NON-QLA FOR ROADWAY	TON	12250		
11	NMDOT	423283	HMA SP-IV COMPLETE 1.5" (64-22 BINDER), NON-QLA FOR TRAIL OVERLAY	TON	633		
12	NMDOT	416000	MINOR PAVEMENT 2" THICK (TRAIL)	SY	957		
13	NMDOT	511000	STRUCTURAL CONCRETE-CLASS A	CY	38		
14	NMDOT	516000	FLOWABLE FILL	CY	100		
15	NMDOT	540060	REINFORCING BARS-GRADE 60	LBS	5216		
16	NMDOT	570437	24" STORM DRAIN CULVERT PIPE	LF	1335		
17	NMDOT	570449	30" STORM DRAIN CULVERT PIPE	LF	90		
18	NMDOT	570467	42" STORM DRAIN CULVERT PIPE	LF	1052		
19	NMDOT	570625	42" EQUIVALENT STORM DRAIN CULVERT PIPE ARCH	LF	144		
20	NMDOT	601000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1		
21	NMDOT	601110	REMOVAL OF SURFACING	SY	64957		
22	NMDOT	603251	DROP INLET PROTECTION TYPE II	EA	14		
23	NMDOT	603280	SWPPP MANAGEMENT	LS	1		
24	NMDOT	608004	CONCRETE SIDEWALK 4" (INCL. HC RAMPS, DET. WARNING SURFACE)	SY	2300		
25	NMDOT	608106	DRIVE PAD 6"	SY	100		
26	NMDOT	608304	CONC MED PVMT 4" (COLRD)	SY	1320		

BID ITEM NO.	SPEC. TYPE	SPEC. ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY	UNIT PRICE	AMOUNT
27	NMDOT	609444	CONCRETE VERTICAL CURB AND GUTTER TYPE B 8" X 24"	LF	3900		
28	NMDOT	609478	CONCRETE VERTICAL CURB AND GUTTER TYPE D 6" X 18"	LF	9200		
29	NMDOT	609650	CONCRETE VALLEY GUTTER 6" X 72"	LF	628		
30	NMDOT	617000	VIBRATION MONITORING	LS	1		
31	NMDOT	621000	MOBILIZATION	LS	1		
32	NMDOT	623312	CURB DROP INLET TYPE II-B, TO 4'	EA	2		
33	NMDOT	623332	CURB DROP INLET TYPE II-B, OVER 4'	EA	4		
34	NMDOT	632000	CLASS A SEEDING	AC	1		
35	NMDOT	662000	MANHOLE TYPE C- 4' DIAMETER 0' TO 6' DEPTH	EA	6		
36	NMDOT	662010	MANHOLE TYPE C- 6' DIAMETER 6' TO 10' DEPTH	EA	5		
37	NMDOT	662022	MANHOLE TYPE C- 6' DIAMETER 6' TO 10' DEPTH, PILL BOX	EA	1		
38	NMDOT	662052	MANHOLE TYPE E-4' DIAMETER 6' TO 10' DEPTH	EA	3		
39	NMDOT	662072	MANHOLE TYPE E-6' DIAMETER 6' TO 10' DEPTH	EA	3		
40	NMDOT	701000	PANEL SIGNS	SF	400		
41	NMDOT	701030	REMOVE AND RESET PANEL SIGN	EA	4		
42	NMDOT	701100	STEEL POST AND BASE POST FOR PANEL SIGNS	LF	600		
43	NMDOT	702800	TRAFFIC CONTROL MANAGEMENT	LS	1		
44	NMDOT	702810	TRAFFIC CONTROL DEVICES FOR CONSTRUCTION	LS	1		
45	NMDOT	702810	TRAFFIC CONTROL PLAN	LS	1		

BID ITEM NO.	SPEC. TYPE	SPEC. ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY	UNIT PRICE	AMOUNT
46	NMDOT	704700	HOT THERMOPLASTIC PAVEMENT MARKINGS	LF	33000		
47	NMDOT	704717	HOT THERMOPLASTIC RIGHT ARROW	EA	10		
48	NMDOT	704718	HOT THERMOPLASTIC LEFT ARROW	EA	36		
49	NMDOT	704719	HOT THERMOPLASTIC THRU ARROW	EA	1		
50	NMDOT	704720	HOT THERMOPLASTIC WORD (ONLY)	EA	21		
51	NMDOT	704858	REFLECTIVE RAISED PAVEMENT MARKER, TYPE G	EA	30		
52	NMDOT	706200	METER PEDESTAL (SIGNAL)	EA	2		
53	NMDOT	706350	POWER SERVICE INSTALLATION	ALLOW	2	$10,000.00	$ 20,000.00
54	NMDOT	707004	TYPE I STANDARD, 4' HIGH	EA	1		
55	NMDOT	707010	TYPE I STANDARD, 10' HIGH	EA	1		
56	NMDOT	707015	TYPE I STANDARD, 15' HIGH	EA	4		
57	NMDOT	707540	TYPE V STANDARD, 40'	EA	13		
58	NMDOT	709020	RIGID ELECTRICAL CONDUIT 2" (DIA.)	LF	1608		
59	NMDOT	709030	RIGID ELECTRICAL CONDUIT 3" (DIA.)	LF	3500		
60	NMDOT	710000	ELECTRICAL PULL BOX (STANDARD)	EA	29		
61	NMDOT	710010	ELECTRICAL PULL BOX (LARGE)	EA	1		
62	NMDOT	711005	MULTI CONDUCTOR CABLE 5	LF	1321		
63	NMDOT	711110	SINGLE CONDUCTOR 10	LF	2283		
64	NMDOT	712010	1 SECTION TRAF SIGNAL ASSEMBLY	EA	8		

BID ITEM NO.	SPEC. TYPE	SPEC. ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY	UNIT PRICE	AMOUNT
65	NMDOT	713010	LOOP VEHICLE DETECTOR	EA	3		
66	NMDOT	713020	PUSH BUTTON STATION	EA	6		
67	NMDOT	713030	LOOP DETECTOR WIRE	LF	648		
68	NMDOT	713250	LOOP LEAD-IN CABLE	LF	284		
69	NMDOT	713300	DETECTOR SAW CUT	LF	320		
70	NMDOT	714100	ACTUATED FLASHER W/CABINET	EA	2		
71	NMDOT	716025	ROADWAY LUMINAIRE TYPE 250 S	EA	13		
72	NMDOT	801000	CONSTRUCTION STAKING BY THE CONTRACTOR	LS	1		
73	NMDOT		UTILITY COORDINATION ALLOWANCE	ALLOW	1	$75,000.00	$ 75,000.00
74	NMAPWA	SECTION 1000	LANDSCAPE COMPLETE IN PLACE	LS	1		
75	NMDOT		QUALITY CONTROL TESTING	LS	1		
UTILITIES							
76	NMAPWA	710.01.03	16" BORING AND CASING, CARRIER PIPE NOT INCLUDED, COMPLETE-IN-PLACE	LF	120		
77	NMAPWA	710.01.04	16” STEEL CASING, INCLUDED SPACER & END SEALS, COMPLETE-IN-PLACE	LF	120		
78	NMAPWA	801.03.02.01	4" C900 WATER LINE PIPE, INCL. TRENCH, COMPACTION & BACKFILL UP TO 6' DEPTH, COMPLETE-IN-PLACE (EXCLUDING FITTINGS)	LF	5		
79	NMAPWA	801.03.02.03	6" C900 WATER LINE PIPE, INCL. TRENCH, COMPACTION & BACKFILL UP TO 6' DEPTH, COMPLETE-IN-PLACE (EXCLUDING FITTINGS)	LF	3930		
80	NMAPWA	801.03.02.05	8" C900 WATER LINE PIPE, INCL. TRENCH, COMPACTION & BACKFILL UP TO 6' DEPTH, COMPLETE-IN-PLACE (EXCLUDING FITTINGS)	LF	5534		
81	NMAPWA	801.03.02.07	10" C900 WATER LINE PIPE, INCL. TRENCH, COMPACTION & BACKFILL UP TO 6' DEPTH, COMPLETE-IN-PLACE (EXCLUDING FITTINGS)	LF	50		

BID ITEM NO.	SPEC. TYPE	SPEC. ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY	UNIT PRICE	AMOUNT
82	NMAPWA	801.03.02.09	12" C900 WATER LINE PIPE, INCL. TRENCH, COMPACTION & BACKFILL UP TO 6' DEPTH, COMPLETE-IN-PLACE (EXCLUDING FITTINGS)	LF	8784		
83	NMAPWA	801.03.02.61	20" DUCTILE IRON RESTRAINED JOINT WATER LINE PIPE, INCL. TRENCH, COMPACTION & BACKFILL UP TO 6' DEPTH, COMPLETE-IN-PLACE (EXCLUDING FITTINGS)	LF	115		
84	NMAPWA	801.03.03.06	6" GATE VALVE, COMPLETE-IN-PLACE	EA	16		
85	NMAPWA	801.03.03.08	8" GATE VALVE, COMPLETE-IN-PLACE	EA	24		
86	NMAPWA	801.03.03.10	10" GATE VALVE, COMPLETE-IN-PLACE	EA	1		
87	NMAPWA	801.03.03.12	12" GATE VALVE, COMPLETE-IN-PLACE	EA	37		
88	NMAPWA	801.03.04.20	20" BUTTERFLY VALVE, COMPLETE-IN-PLACE	EA	2		
89	NMAPWA	801.03.05.01	VALVE BOX ASSEMBLY, PER CoRR STANDARD DETAIL W-5, COMPLETE-IN-PLACE	EA	80		
90	NMAPWA	801.03.07.02	FIRE HYDRANT ASSEMBLY, PER CORR STANDARD DETAIL W -3, COMPLETE-IN PLACE	EA	2		
91	NMAPWA	801.03.07.02	FIRE HYDRANT, EXISTING, REMOVE & RESET, COMPLETE-IN-PLACE	EA	5		
92	NMAPWA	801.10.05.06	CUT AND CAP 6" WATER LINE, COMPLETE-IN-PLACE	EA	9		
93	NMAPWA	801.10.05.08	CUT AND CAP 8" WATER LINE, COMPLETE-IN-PLACE	EA	14		
94	NMAPWA	801.10.05.10	CUT AND CAP 10" WATER LINE, COMPLETE-IN-PLACE	EA	1		
95	NMAPWA	801.10.05.12	CUT AND CAP 12" WATER LINE, COMPLETE-IN-PLACE	EA	8		
96	NMAPWA	801.10.05.20	CUT AND CAP 20" WATER LINE, COMPLETE-IN-PLACE	EA	8		
97	NMAPWA	801.22.04	DUCTILE IRON FITTINGS, ALL SIZE WATER LINE, COMPLETE-IN-PLACE	LB	20550		
98	NMAPWA	801.22.12.01.0	WATER LINE CONNECTION, 6" NON-PRESSURIZED, COMPLETE-IN-PLACE	EA	1		
99	NMAPWA	801.22.12.01.0	WATER LINE CONNECTION, 8" NON-PRESSURIZED, COMPLETE-IN-PLACE	EA	11		

BID ITEM NO.	SPEC. TYPE	SPEC. ITEM NO.	ITEM DESCRIPTION	UNIT	EST. QTY	UNIT PRICE	AMOUNT
100	NMAPWA	801.22.12.01.1	WATER LINE CONNECTION, 12" NON-PRESSURIZED, COMPLETE-IN-PLACE	EA	7		
101	NMAPWA	801.22.12.01.2	WATER LINE CONNECTION, 20" NON-PRESSURIZED, COMPLETE-IN-PLACE	EA	2		
102	NMAPWA	801.22.13.02.0	MECHANICAL RESTRAINED JOINTS - HARNESS 6"	EA	14		
103	NMAPWA	801.22.13.02.1	MECHANICAL RESTRAINED JOINTS - HARNESS 8"	EA	26		
104	NMAPWA	801.22.13.02.0	MECHANICAL RESTRAINED JOINTS - HARNESS 10"	EA	26		
105	NMAPWA	801.22.13.02.0	MECHANICAL RESTRAINED JOINTS - HARNESS 12"	EA	79		
106	NMAPWA	801.22.13.02.1	MECHANICAL RESTRAINED JOINTS - GLAND 4"	EA	2		
107	NMAPWA	801.22.13.02.1	MECHANICAL RESTRAINED JOINTS - GLAND 6"	EA	40		
108	NMAPWA	801.22.13.02.1	MECHANICAL RESTRAINED JOINTS - GLAND 8"	EA	100		
109	NMAPWA	801.22.13.02.1	MECHANICAL RESTRAINED JOINTS - GLAND 10"	EA	8		
110	NMAPWA	801.22.13.02.1	MECHANICAL RESTRAINED JOINTS - GLAND 12"	EA	98		
111	NMAPWA	801.22.13.02.2	MECHANICAL RESTRAINED JOINTS - GLAND 20"	EA	10		
112	NMAPWA	801.22.15.01	AIR RELEASE VALVE - COMPLETE-IN-PLACE	EA	5		
113	NMAPWA	802.03.02.01	5/8 ' SERVICE LINE REPLACEMENT, INCL. TAPPING SADDLE & COPPER TUBING, SINGLE SERVICE PER CORR STANDARD DETAIL W-5, COMPLETE-IN-PLACE.	EA	3		
114	NMAPWA	802.03.02.03	1" SERVICE LINE REPLACEMENT INCL. TAPPING SADDLE & COPPER TUBING, SINGLE SERVICE PER CORR STANDARD DETAIL W-5, COMPLETE-IN PLACE,	EA	15		
115	NMAPWA	802.03.04.02	1" METERS, PER CORR STANDARD DETAIL W-5, COMPLETE-IN-PLACE.	EA	15		
116			10" INSERTION VALVE, COMPLETE-IN-PLACE	EA	3		

Subtotal of Base Bid (Bid Items 1 - 116): _____

NM Gross Receipts on Base Bid Submission @ 7.4375%: _____

Total Base Bid Submission plus NMGRT: _____

BID ALTERNATIVE 1 - CURB & GUTTER							
BID ITEM NO.	**SPEC. TYPE**	**SPEC. ITEM NO.**	**ITEM DESCRIPTION**	**UNIT**	**EST. QTY**	**UNIT PRICE**	**AMOUNT**
117	NMDOT	609444	CONCRETE VERTICAL CURB AND GUTTER TYPE B 8" X 24"	LF	1045		
118	NMDOT	609478	CONCRETE VERTICAL CURB AND GUTTER TYPE D 6" X 18"	LF	924		
119	NMDOT	601000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1		

Subtotal of Bid Alternative #1 (Bid Items 117 - 119): _____

NM Gross Receipts on Bid Alternative #1 @ 7.4375%: _____

Total Bid Alternative #1 Submission plus NMGRT: _____

BID ALTERNATIVE 2 - ASPHALT TRAIL							
BID ITEM NO.	**SPEC. TYPE**	**SPEC. ITEM NO.**	**ITEM DESCRIPTION**	**UNIT**	**EST. QTY**	**UNIT PRICE**	**AMOUNT**
120	NMDOT	207000	SUBGRADE PREPARATION	SY	6643		
121	NMDOT	303015	BASE COURSE 3"	SY	7600		
122	NMDOT	416000	MINOR PAVEMENT 2" (TRAIL)	SY	6643		
123	NMDOT	423283	HMA SP-IV COMPLETE 1.5" (64-22 BINDER), NON-QLA FOR TRAIL OVERLAY	TON	-633		
124	NMDOT	411000	HOT POURED CRACK SEALING	LBS	-7407		
125	NMDOT	601110	REMOVAL OF SURFACING	SY	6643		

Subtotal of Bid Alternative #2 (Bid Items 120 - 125): _____

NM Gross Receipts on Bid Alternative #2 @ 7.4375%: _____

Total Bid Alternative #2 Submission plus NMGRT: _____

Subtotal of Total Bid Submission (Bid Items 1 - 124): _____

NM Gross Receipts on Total Bid Submission @ 7.4375%: _____

Total Bid Submission plus NMGRT: _____

3. BIDDER acknowledges receipt of the following Addenda:

   Addendum No. _____ Date _____ Addendum No. _____ Date _____

   Addendum No. _____ Date _____ Addendum No. _____ Date _____

   Addendum No. _____ Date _____ Addendum No. _____ Date _____

4. BIDDER agrees that this Bid Proposal may not be withdrawn for a period of sixty (60) calendar days after the scheduled closing time for receipt of bids.

5. If the Contract is to be awarded. OWNER will give the apparent Successful Bidder a Notice of Recommendation to Award within sixty (60) days after the scheduled closing time for receipt of bids.

6. Upon receipt of Notice of Recommendation to Award, BIDDER shall execute the formal Contract Documents within ten (10) days and deliver the Performance Bond, Labor and Material Payment Bond, and Certificates of Insurance as required herein.

7. The attached Bid Security is to become the property of the OWNER, in the event the Agreement and bonds are not executed within the time specified in this Bid Proposal, as liquidated damages for the delay and additional expenses caused to the OWNER.

8. BIDDER hereby agrees to commence Work under this Contract in accordance with the Notice to Proceed from the OWNER and to fully complete the Project as provided in the Contract Documents within **One Hundred Eighty (180)** consecutive calendar days after the date Contract Time begins as provided in the Contract Documents.

   BIDDER further agrees to pay, as liquidated damages, the amount of **Five Thousand dollars ($ 5,000.00)** for each consecutive calendar day thereafter as provided in the Supplementary Conditions.

9. BIDDER hereby declares that the only persons or firms interested in the Bid Proposal as principal or principles is or are named herein and that no other persons or firms than herein mentioned have any interest in the Bid or in the Contract to be entered into; that this Bid is made without collusion with any person, company, or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud.

10. BIDDER hereby agrees if awarded the Contract, to comply with the Affirmative Action/Equal Employment Opportunity and Nondiscrimination requirements of the Supplementary Conditions and to submit all information and reports required therein.

11. If requested, BIDDER agrees to furnish to the OWNER all information and data necessary for the OWNER to determine the ability of BIDDER to perform the Work.

This Bid is hereby respectfully submitted by:

_____	_____
Name of BIDDER	Federal Tax ID Number

_____
By: Printed Name

_____
Authorized Signature

_____
Title

_____
Date

_____
Bidder's Mailing Address

_____
Bidder's NM Contractor's License Number(s) and Classifications(s)

_____
Additional Address Information

_____
City, State, Zip Code

_____
Contractor's Department of Labor Registration Number

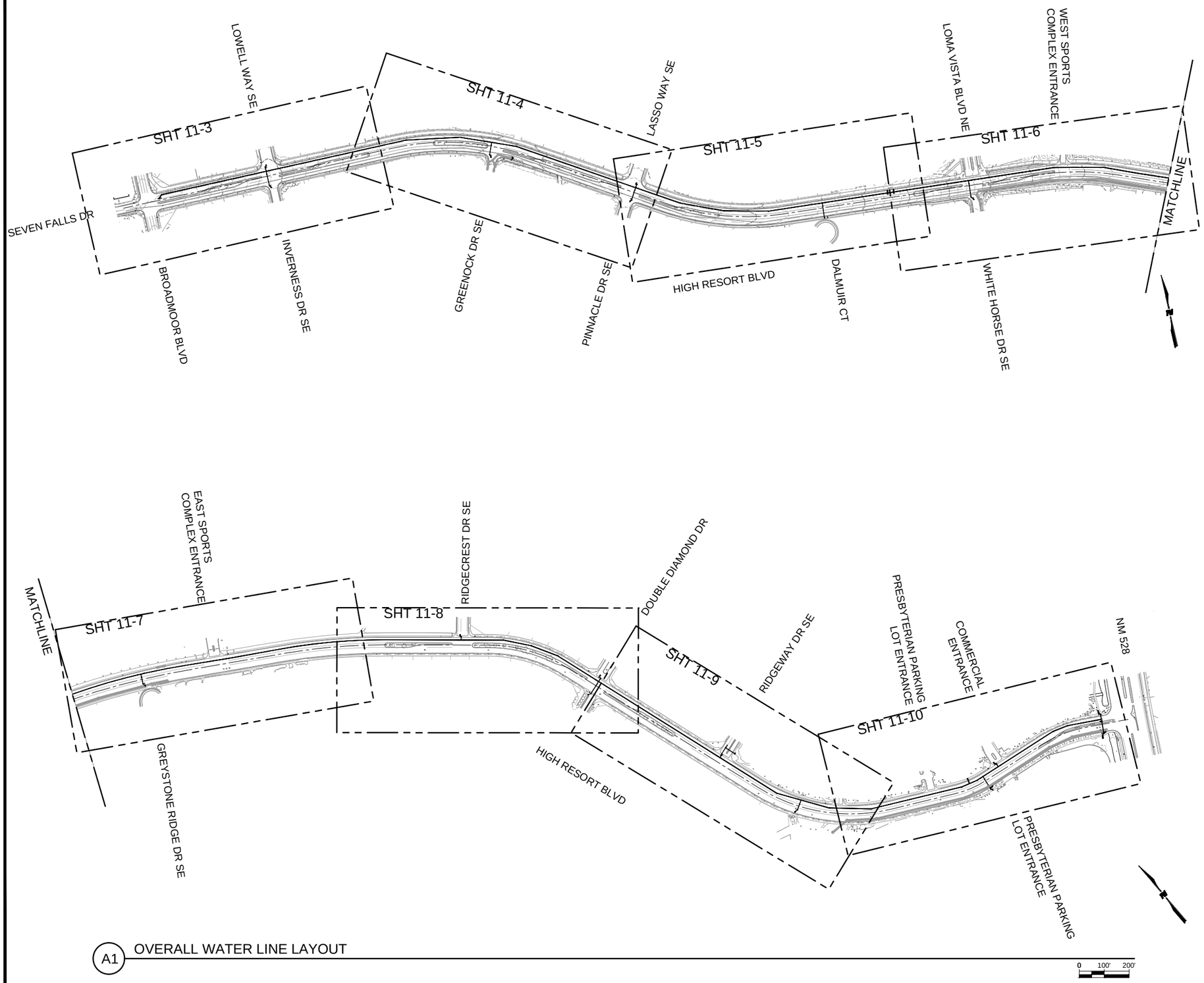
_____
Bidder's Telephone Number

_____
Bidder's Fax Number

_____
New Mexico State Corporation Commission Number

_____
Bidder's E-Mail Address

_____
Bidder's Gross Receipts Tax No.



A1 OVERALL WATER LINE LAYOUT

GENERAL SURVEY NOTES:

1. DTM AND PLANIMETRY COMPILED BY A COMBINATION OF AERIAL PHOTOGRAMMETRIC MAPPING AND SUPPLEMENTAL FIELD SURVEY. AERIAL PHOTOGRAPHY WAS ACQUIRED WITH A ULTRACAM Lp DIGITAL MAPPING CAMERA ON 05/10/2016 AT 1900 FT ABOVE MEAN TERRAIN AND REFERENCED TO SURVEYED GROUND CONTROL BY ANALYTICAL AEROTRIANGULATION. SUPPLEMENTAL FIELD SURVEY WAS PERFORMED FROM 05/09/2016 TO 05/25/2016.

2. HORIZONTAL DATUM: NAD 83
   VERTICAL DATUM: NAVD 88
   COORDINATE SYSTEM: BASED ON NEW MEXICO STATE PLANE CENTRAL ZONE 3002 SCALED TO GROUND
   COMBINED GRID TO GROUND SCALE FACTOR: 1.0003350235
   GEOID:A:A: 03
   UNITS:A:B: US SURVEY FEET

3. DTM DATA WILL MEET 1990 ASPRS TOPOGRAPHIC ELEVATION ACCURACY FOR CONTOUR INTERVAL 1, CLASS 1. PLANIMETRIC AND ORTHOPHOTO DATA WILL MEET 1990 ASPRS PLANIMETRIC FEATURE COORDINATE ACCURACY FOR TARGET MAP SCALE 1" = 50' CLASS 1; FOR WELL-DEFINED POINTS WHEN COMPARED TO THE GROUND CONTROL USED FOR THE PHOTOGRAMMETRIC MAPPING

RioRancho City of Vision

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			
6			
7			

REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
2600 AMERICAN RD. SE, STE. 100
RIO RANCHO, NEW MEXICO 87124
PH. (505) 896-8801
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

OVERALL WATER LINE LAYOUT

BRIAN J. AMBROSI NEW MEXICO 17610 LICENSED PROFESSIONAL ENGINEER 8-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	

SHEET

11-1

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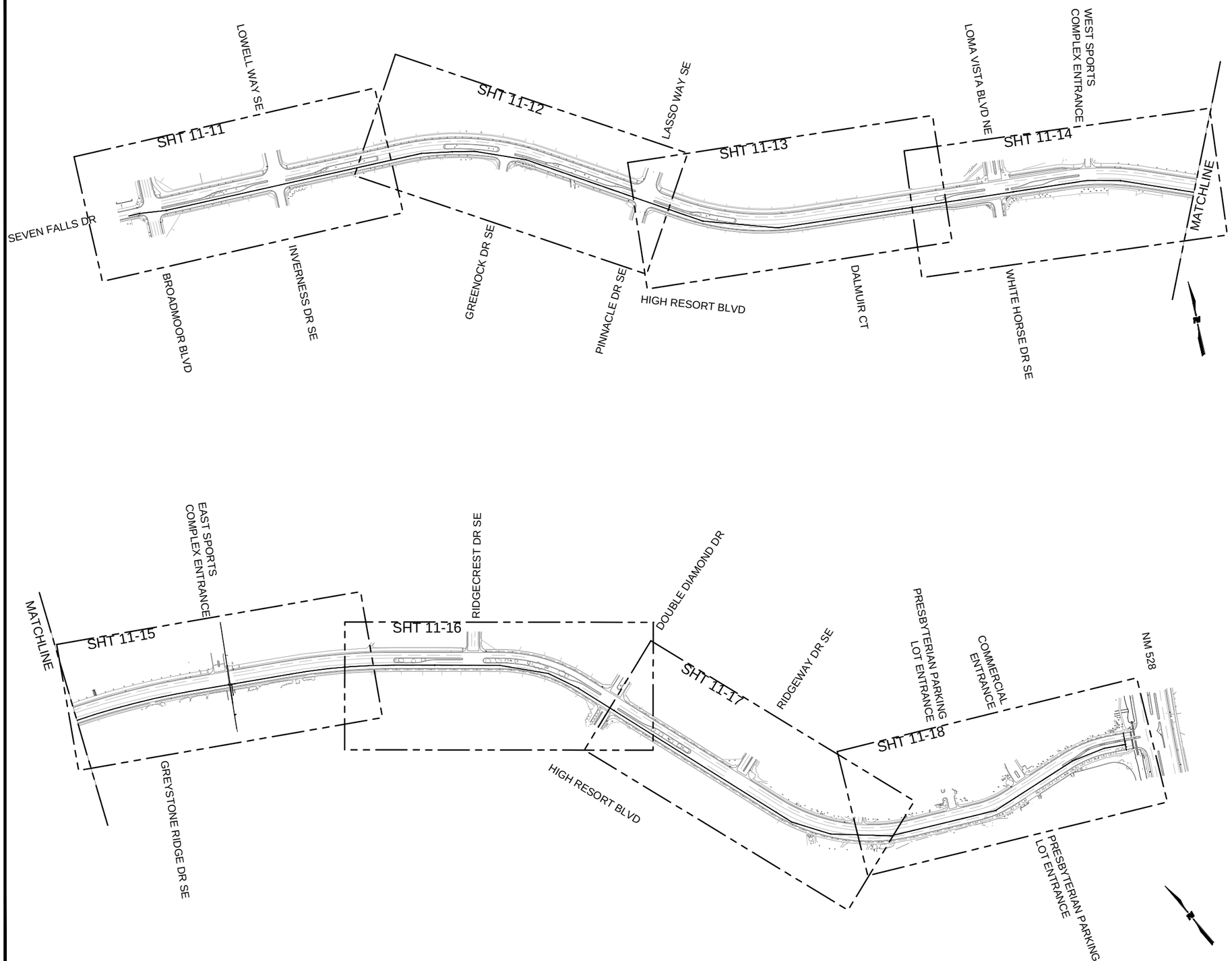

A1 OVERALL RECYCLED WATER LINE LAYOUT

GENERAL SURVEY NOTES:

1. DTM AND PLANIMETRY COMPILED BY A COMBINATION OF AERIAL PHOTOGRAMMETRIC MAPPING AND SUPPLEMENTAL FIELD SURVEY. AERIAL PHOTOGRAPHY WAS ACQUIRED WITH A ULTRACAM Lp DIGITAL MAPPING CAMERA ON 05/10/2016 AT 1900 FT ABOVE MEAN TERRAIN AND REFERENCED TO SURVEYED GROUND CONTROL BY ANALYTICAL AEROTRIANGULATION. SUPPLEMENTAL FIELD SURVEY WAS PERFORMED FROM 05/09/2016 TO 05/25/2016.

2. HORIZONTAL DATUM: NAD 83
   VERTICAL DATUM: NAVD 88
   COORDINATE SYSTEM: BASED ON NEW MEXICO STATE PLANE CENTRAL ZONE 3002 SCALED TO GROUND
   COMBINED GRID TO GROUND SCALE FACTOR: 1.0003350235
   GEOID:A:A: 03
   UNITS:A:B: US SURVEY FEET

3. DTM DATA WILL MEET 1990 ASPRS TOPOGRAPHIC ELEVATION ACCURACY FOR CONTOUR INTERVAL 1, CLASS 1. PLANIMETRIC AND ORTHOPHOTO DATA WILL MEET 1990 ASPRS PLANIMETRIC FEATURE COORDINATE ACCURACY FOR TARGET MAP SCALE 1" = 50' CLASS 1; FOR WELL-DEFINED POINTS WHEN COMPARED TO THE GROUND CONTROL USED FOR THE PHOTOGRAMMETRIC MAPPING

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			
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6			
7			

REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
2600 AMERICAN RD. SE, STE. 100
RIO RANCHO, NEW MEXICO 87124
PH. (505) 898-8021
FAX (505) 898-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

OVERALL RECYCLED WATER LINE LAYOUT

BRIAN J. AMBROSI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
7-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	

SHEET
11-2

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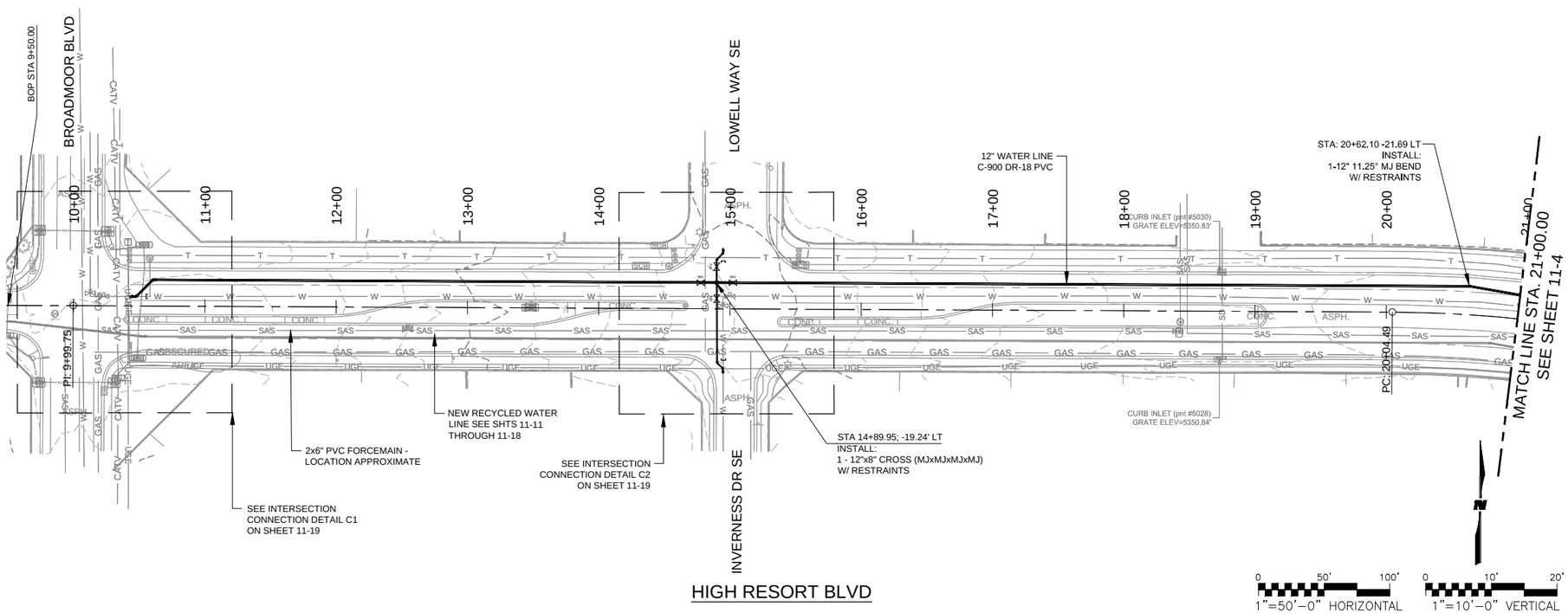

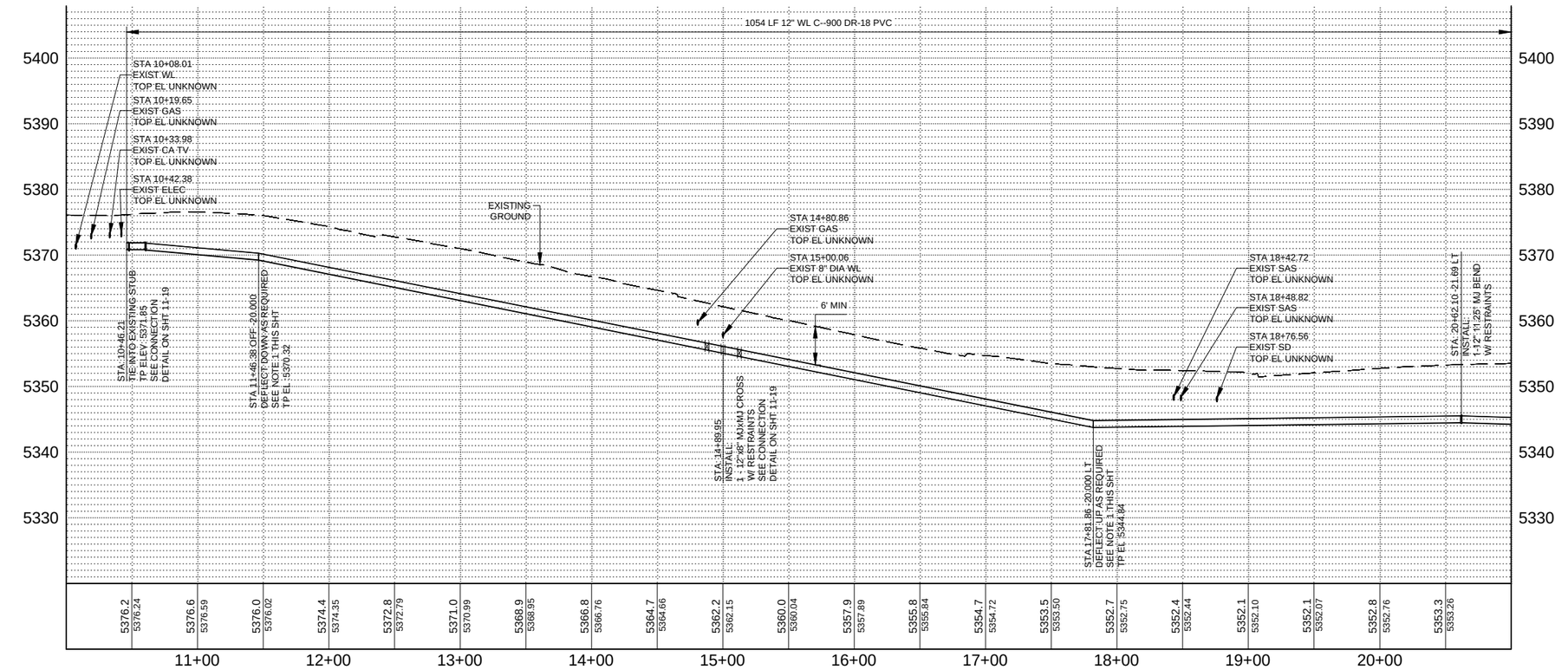

GENERAL NOTES

1. DEFLECT PIPE JOINTS AS NECESSARY TO MAINTAIN ALIGNMENT SHOWN. MAXIMUM DEFLECTION SHALL BE NO MORE THAN 75% OF PIPE MANUFACTURER'S RECOMMENDATION.
2. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE LOCATIONS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE COMMENCING WORK.
3. CONTRACTOR SHALL COORDINATE WITH THE CITY TRAFFIC SECTION IN THE EVENT OF ANY CONDUIT IMPACTS.
4. ALL MECHANICAL JOINT FITTINGS SHALL BE RESTRAINED PER THE MECHANICAL RESTRAINT JOINT TABLE ON SHT 11-27
5. CONTRACTOR SHALL COORDINATE W/ CITY IRRIGATION TO CONFIRM THAT IRRIGATION METERS ARE TAKEN OFF POTABLE & RE-CONNEDTED TO RECYCLED WATER W/O CROSS CONNECTION.
6. EACH METER CONNECTION SHALL BE TESTED AFTER POTABLE IS CUT TO VERIFY SECOND CONNECTION IS NOT PRESENT, PRIOR TO CONNECTING TO RECYCLED WATER SYSTEM.
7. VALVE CANS FOR RECYCLED WATER SYSTEM SHALL UTILIZE CITY STANDARD "TRIANGULAR" VALVE CAN COVER, SEE DETAIL SHT 11-27.

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
2600 AMERICAN RD. SE, STE. 100
RIO RANCHO, NEW MEXICO 87124
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

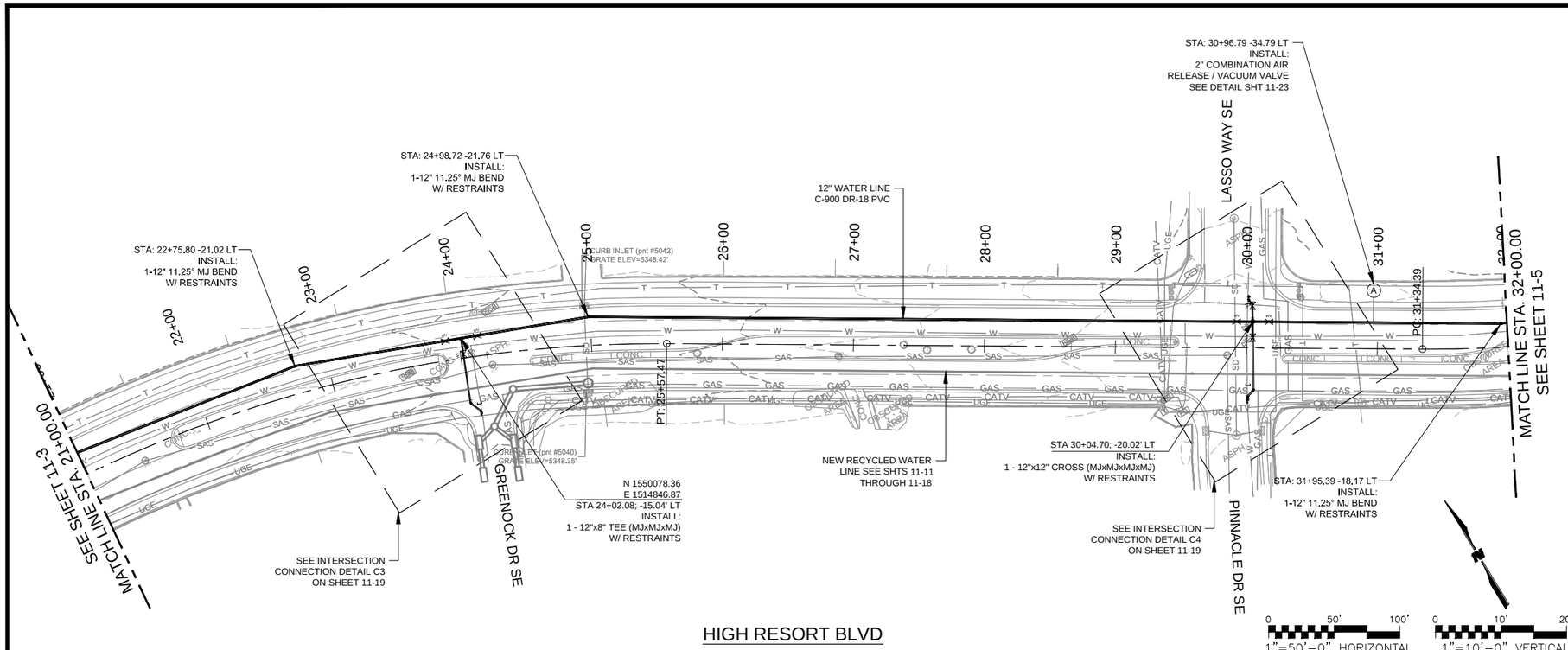
UTILITY PLAN AND PROFILE
WATER LINE 01

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
9-12-16

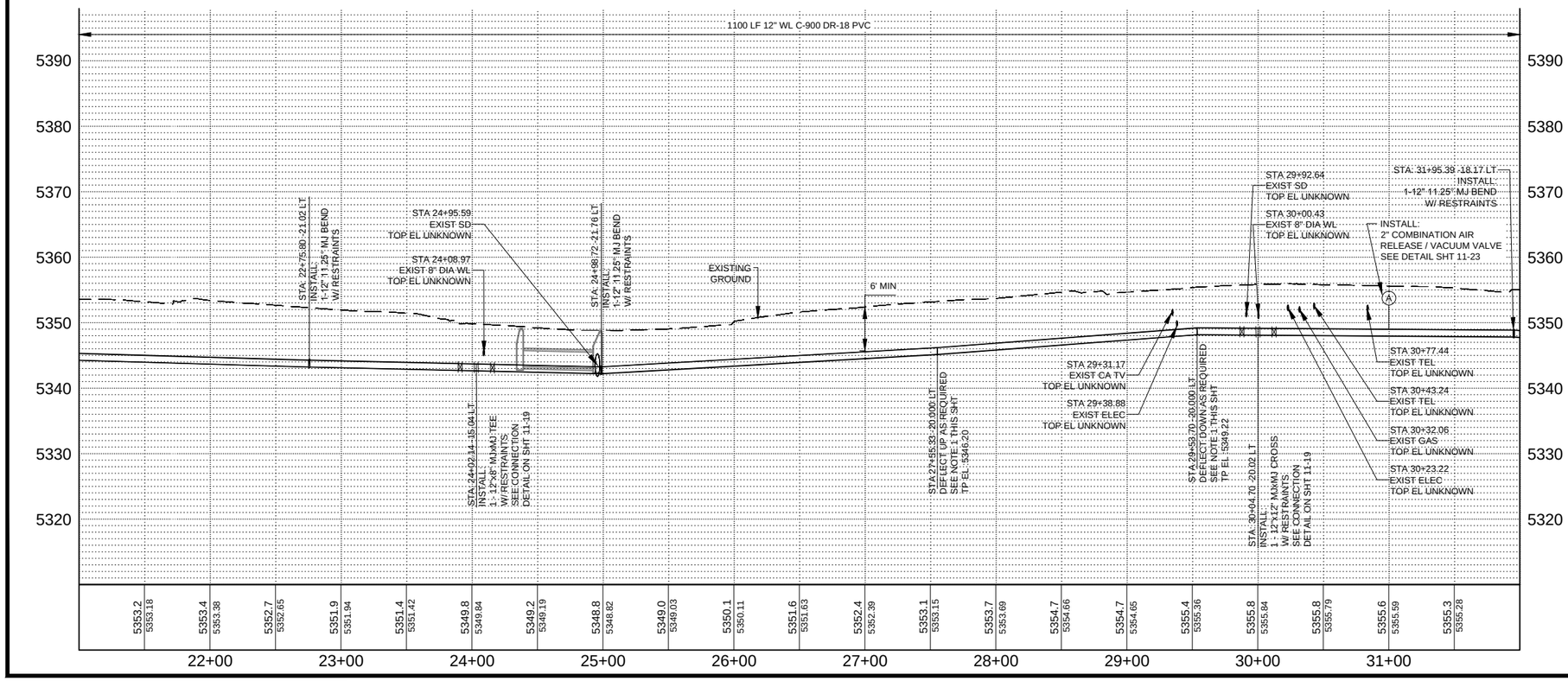
PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET
11-3

M:\MSD\16-600-034-00\2_DISCIPLINES_SHEETS\03_PLAN & PROFILES\UTILITY\66034_P&P_WATR.DWG10/12/2016 2:49 PM



HIGH RESORT BLVD



GENERAL NOTES

1. DEFLECT PIPE JOINTS AS NECESSARY TO MAINTAIN ALIGNMENT SHOWN. MAXIMUM DEFLECTION SHALL BE NO MORE THAN 75% OF PIPE MANUFACTURER'S RECOMMENDATION.
2. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE LOCATIONS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE COMMENCING WORK.
3. CONTRACTOR SHALL COORDINATE WITH THE CITY TRAFFIC SECTION IN THE EVENT OF ANY CONDUIT IMPACTS.
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5. CONTRACTOR SHALL COORDINATE W/ CITY IRRIGATION TO CONFIRM THAT IRRIGATION METERS ARE TAKEN OFF POTABLE & RE-CONNEDTED TO RECYCLED WATER W/O CROSS CONNECTION.
6. EACH METER CONNECTION SHALL BE TESTED AFTER POTABLE IS CUT TO VERIFY SECOND CONNECTION IS NOT PRESENT, PRIOR TO CONNECTING TO RECYCLED WATER SYSTEM.
7. VALVE CANS FOR RECYCLED WATER SYSTEM SHALL UTILIZE CITY STANDARD "TRIANGULAR" VALVE CAN COVER, SEE DETAIL SHT 11-27.

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
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FAX (505) 896-8501
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HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
WATER LINE 02

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET

11-4

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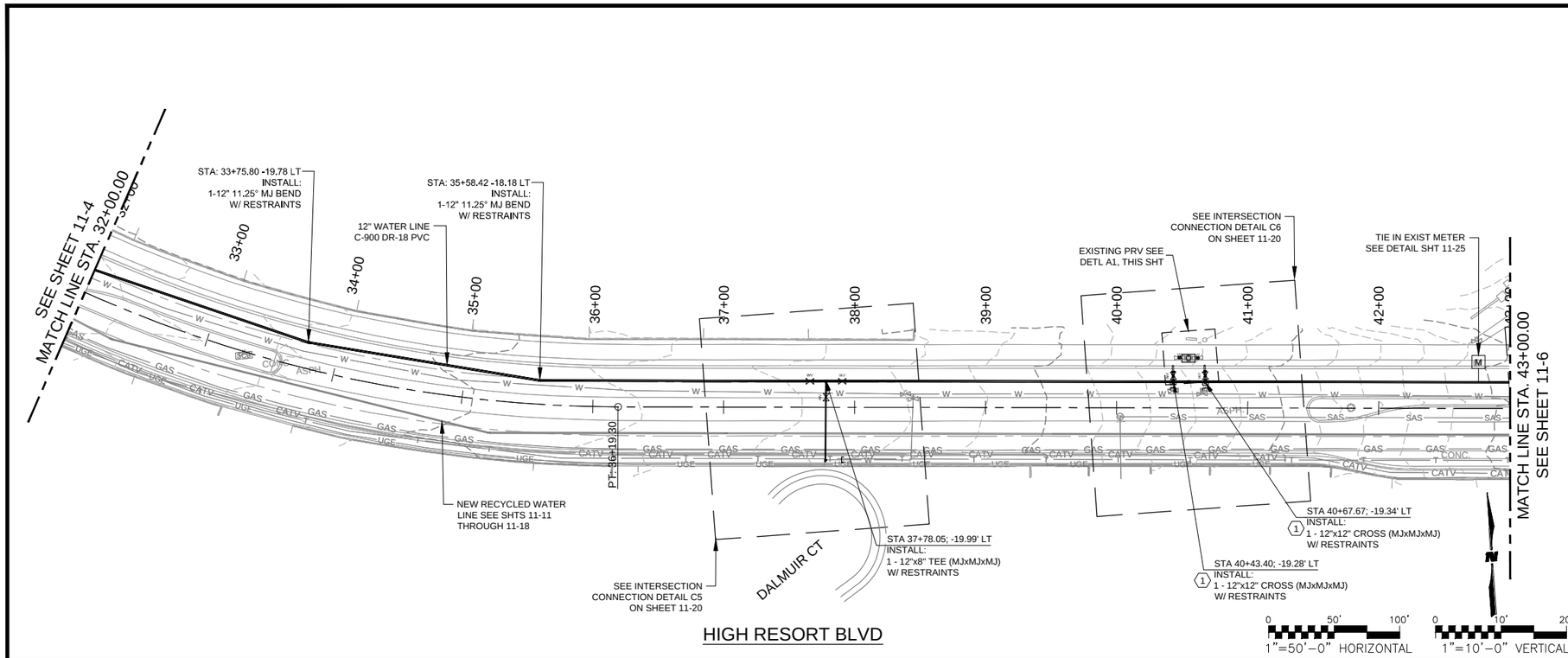

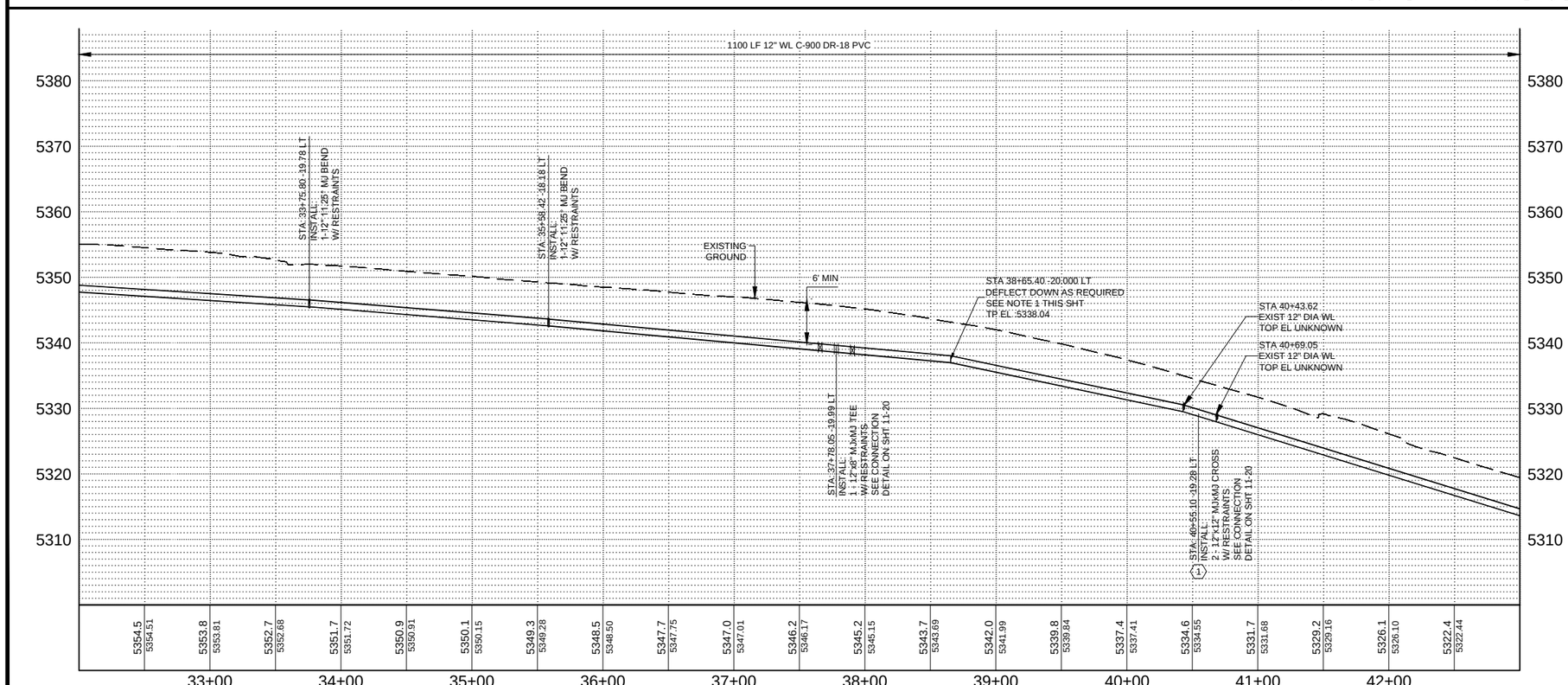

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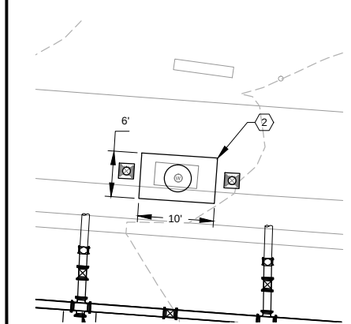
7. VALVE CANS FOR RECYCLED WATER SYSTEM SHALL UTILIZE CITY STANDARD "TRIANGULAR" VALVE CAN COVER, SEE DETAIL SHT 11-27.

KEYNOTES

1. MATCH EXISTING WL ELEVATION TO CUT IN CROSS.
1. CONTRACTOR TO REMOVE ASPHALT ABOVE PRV VAULT & REPLACE W/ PORTLAND CEMENT PAVING REINFORCED WITH WELDED WIRE FABRIC 6x6-W1.4@1.4 PORTLAND CEMENT PAVING SHALL BE FLUSH WITH SURROUNDING ASPHALT FOR SMOOTH TRANSITION.



A1 PRV DETAIL
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CITY of RIO RANCHO

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REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
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PH. (505) 896-8501
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
WATER LINE 03

BRIAN J. AMBROGI
NEW MEXICO
17610
PROFESSIONAL ENGINEER
LICENSED
9-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	
SHEET	11-5

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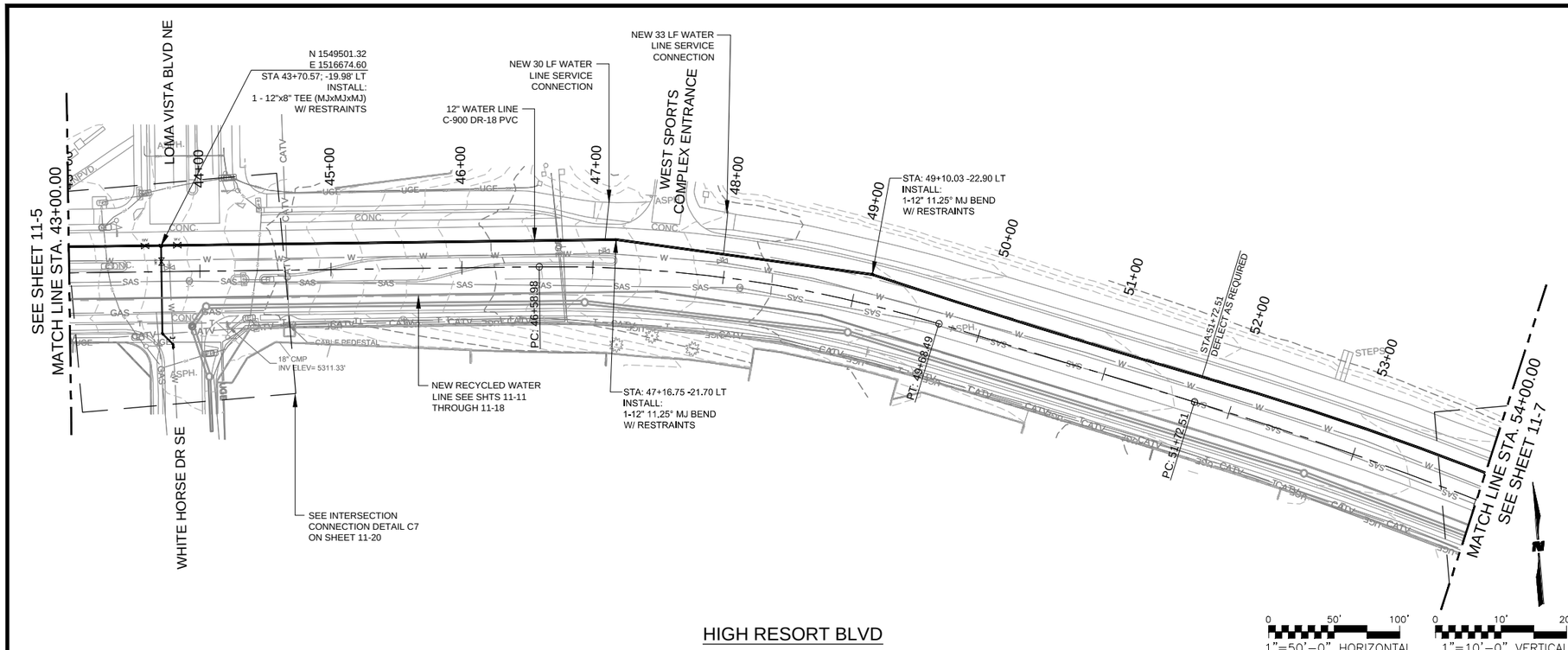

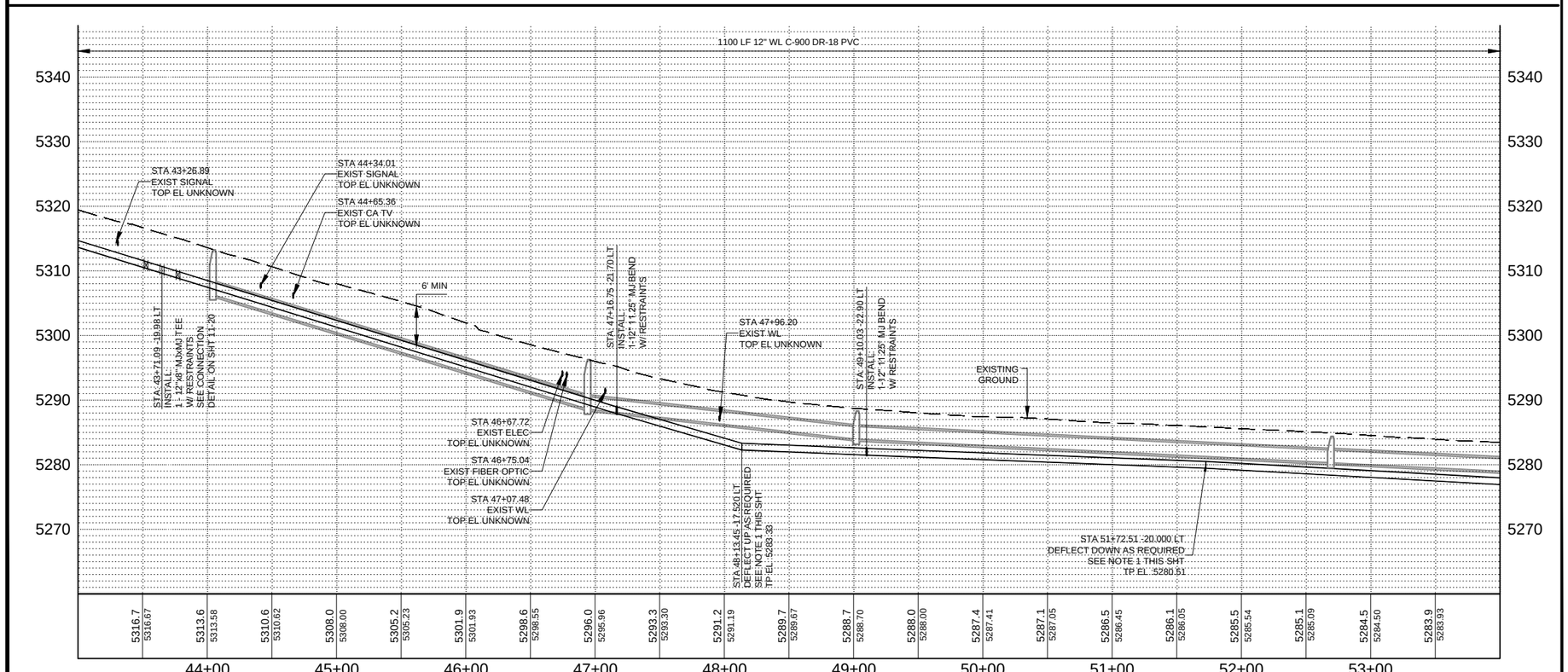

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CITY of RIO RANCHO

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REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
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FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
WATER LINE 04

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
9-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	
SHEET	11-6

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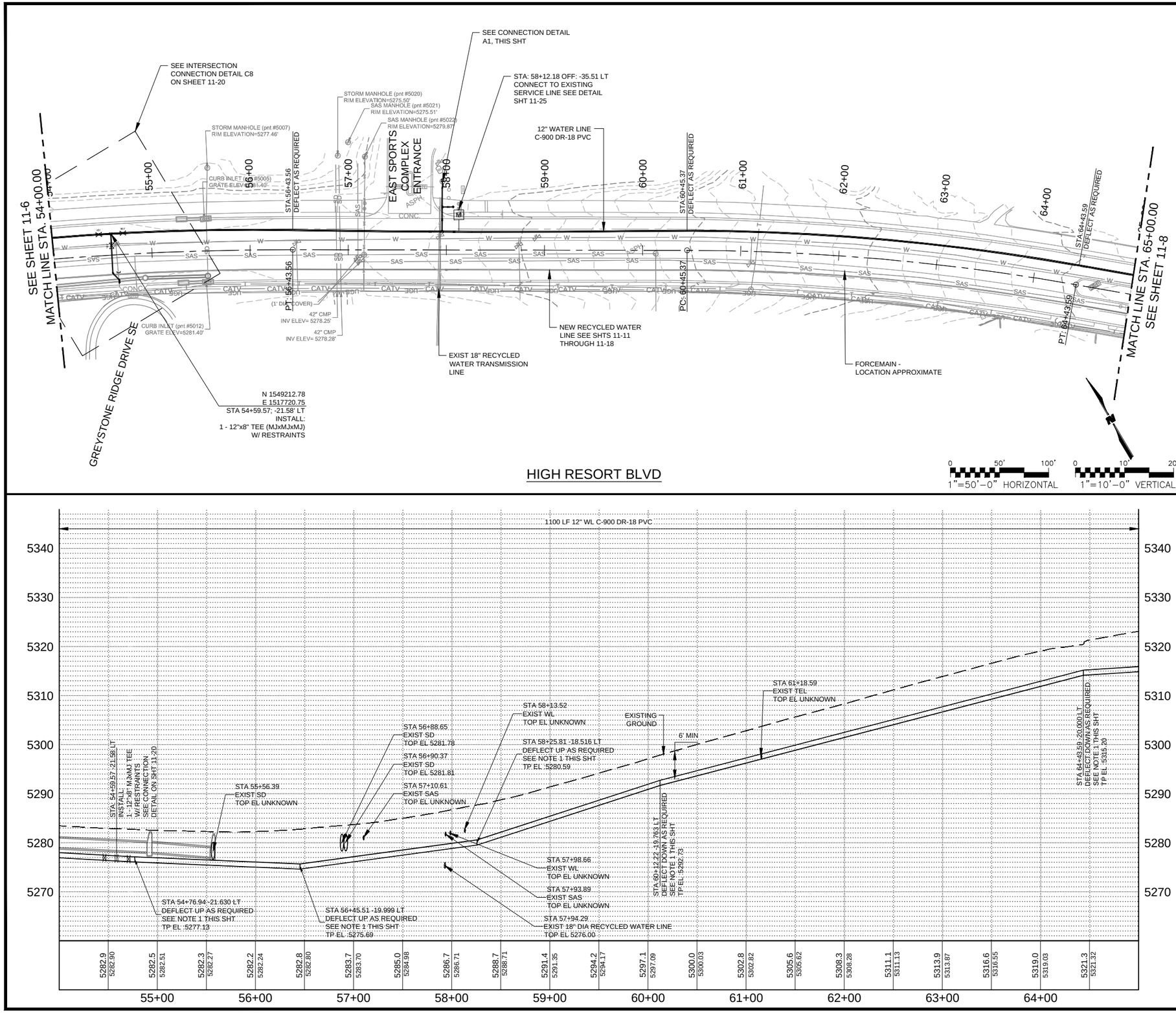

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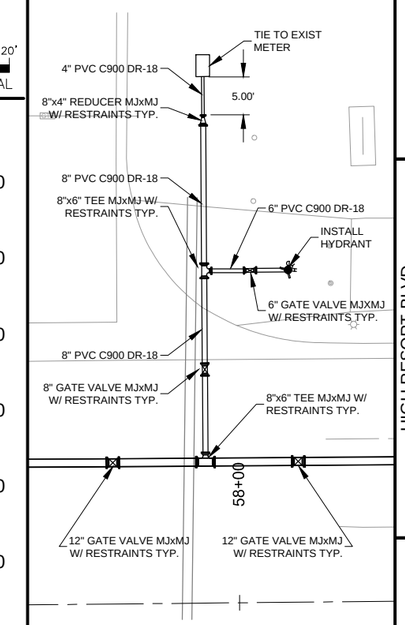

A1 CONNECTION DETAIL
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REVISIONS (OR CHANGE NOTICES)

CITY of RIO RANCHO

WILSON & COMPANY
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RIO RANCHO, NEW MEXICO 87124
PH. (505) 896-8501
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE WATER LINE 05

BRIAN J. AMBROGI NEW MEXICO 17610 PROFESSIONAL ENGINEER LICENSED 9-12-2016

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET 11-7

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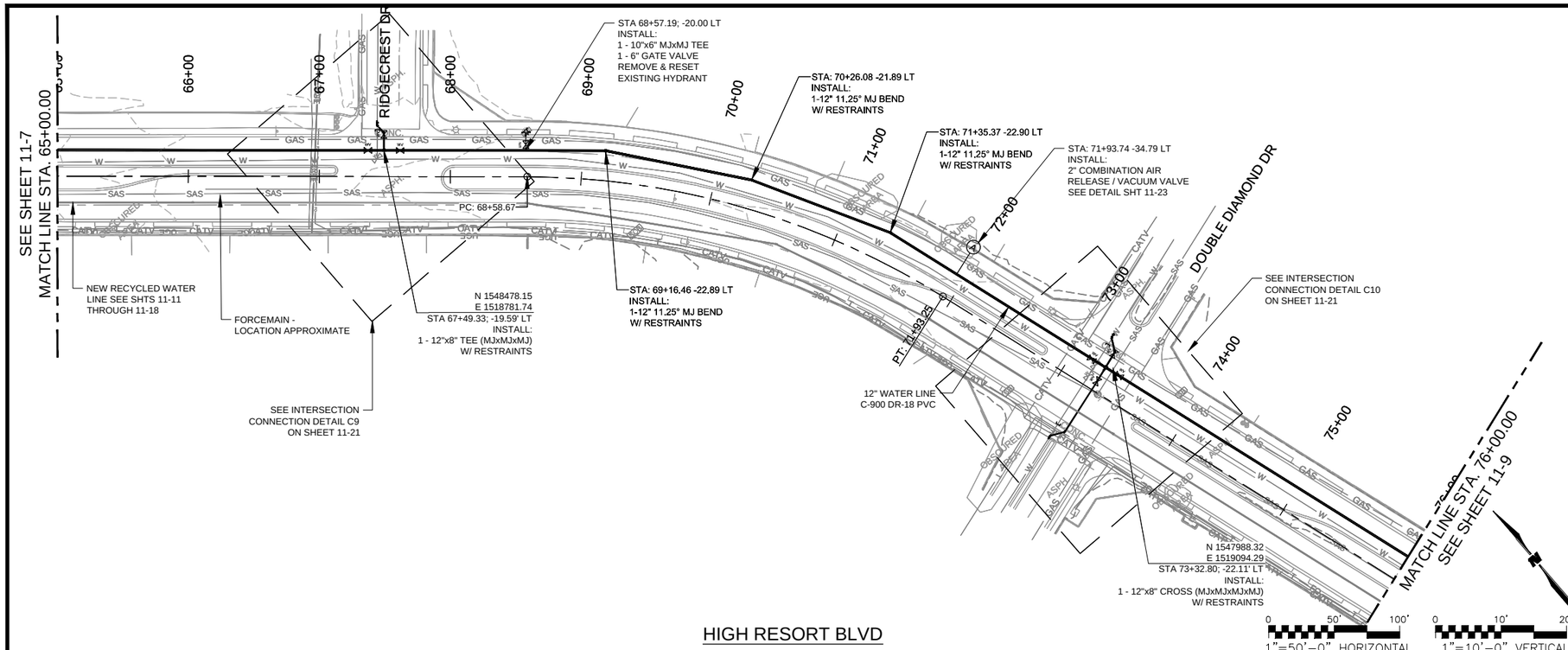
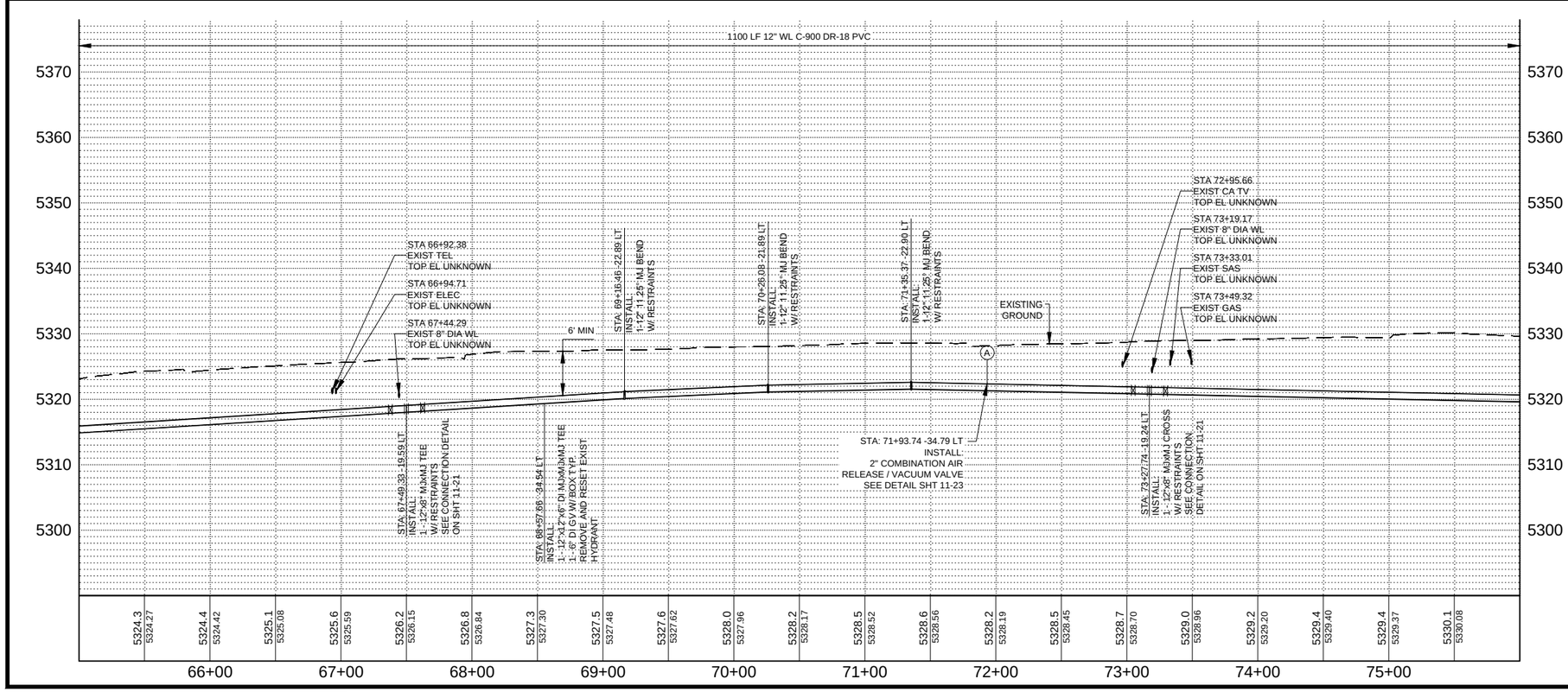


HIGH RESORT BLVD



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7. VALVE CANS FOR RECYCLED WATER SYSTEM SHALL UTILIZE CITY STANDARD "TRIANGULAR" VALVE CAN COVER, SEE DETAIL SHT 11-27.

CITY of RIO RANCHO

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REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
2600 AMERICAN RD. SE, STE. 100
RIO RANCHO, NEW MEXICO 87124
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
WATER LINE 06

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
9-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET

11-8

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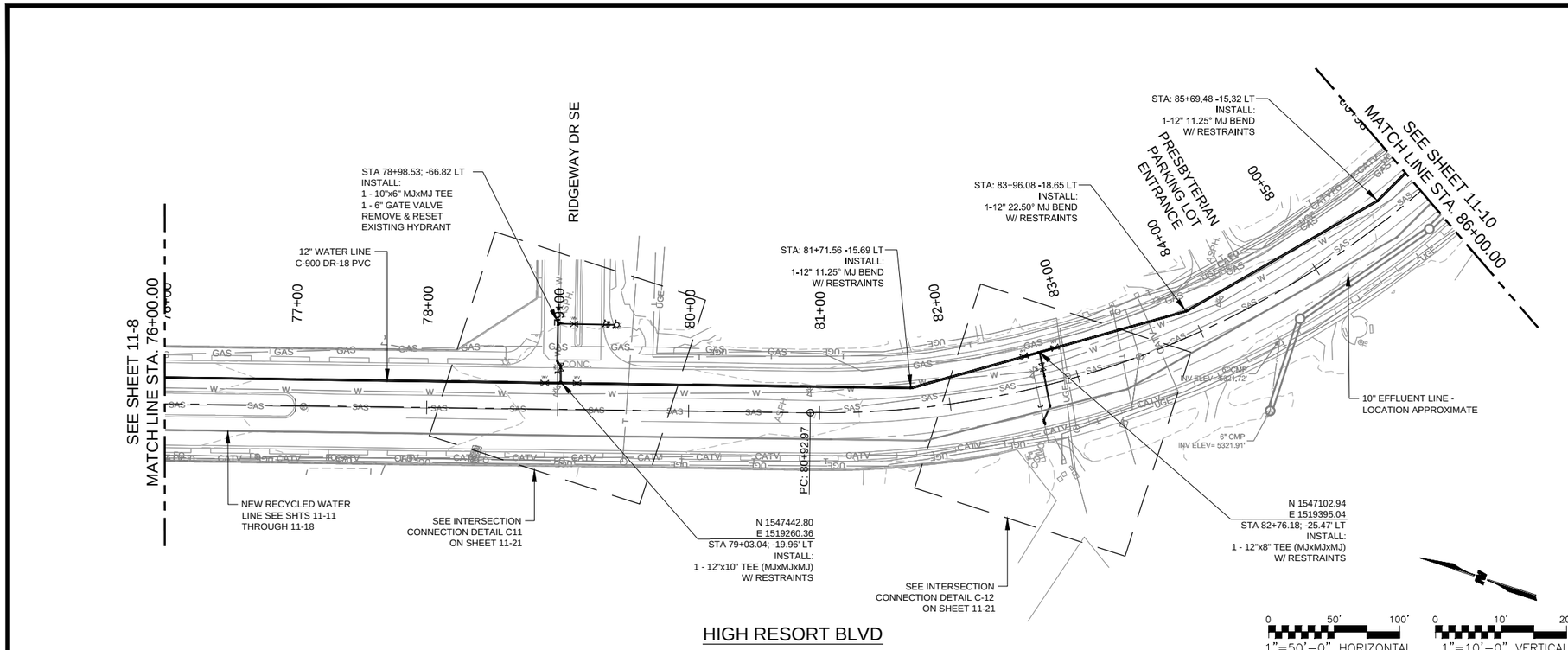
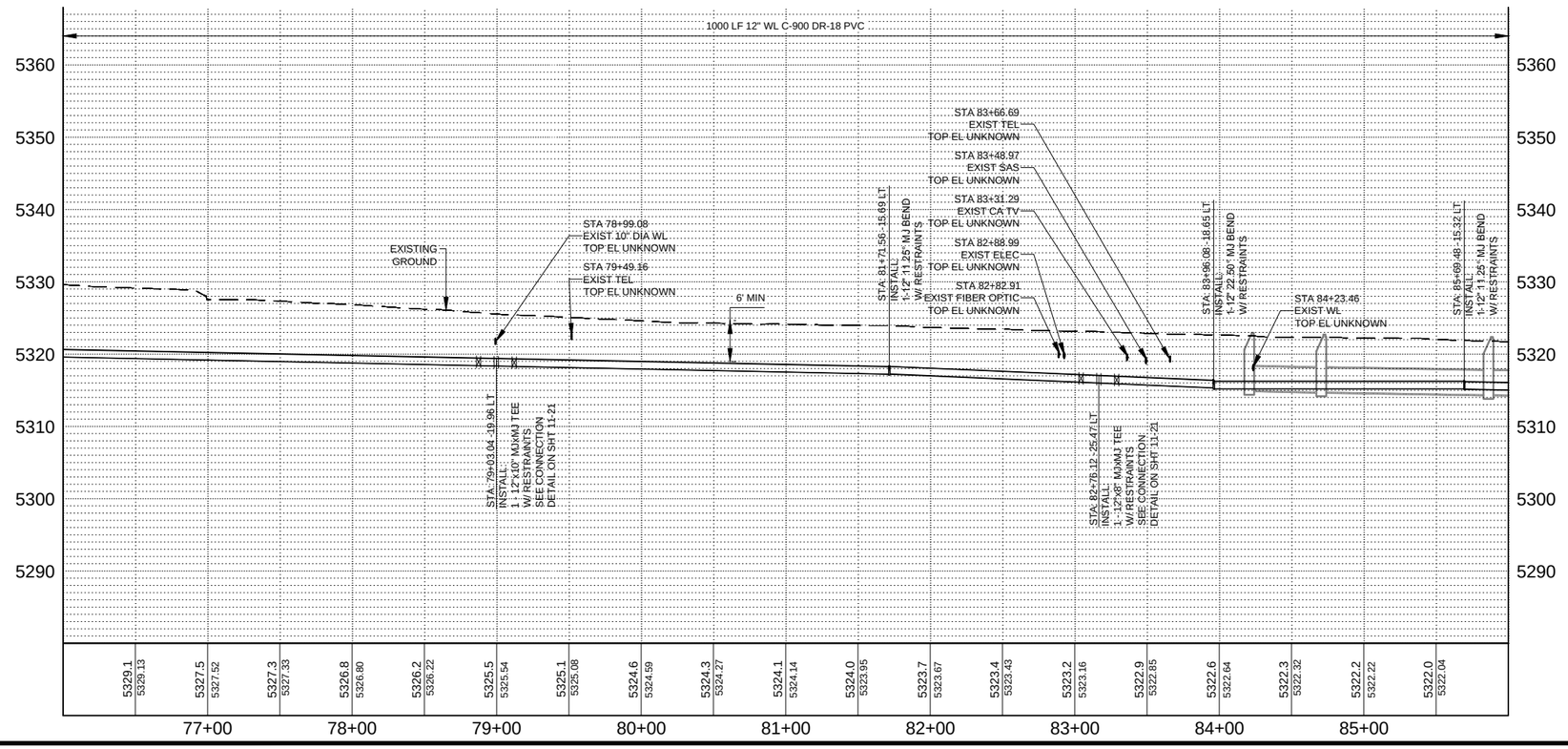


HIGH RESORT BLVD



GENERAL NOTES

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CITY of RIO RANCHO

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www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
WATER LINE 07

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
9-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET

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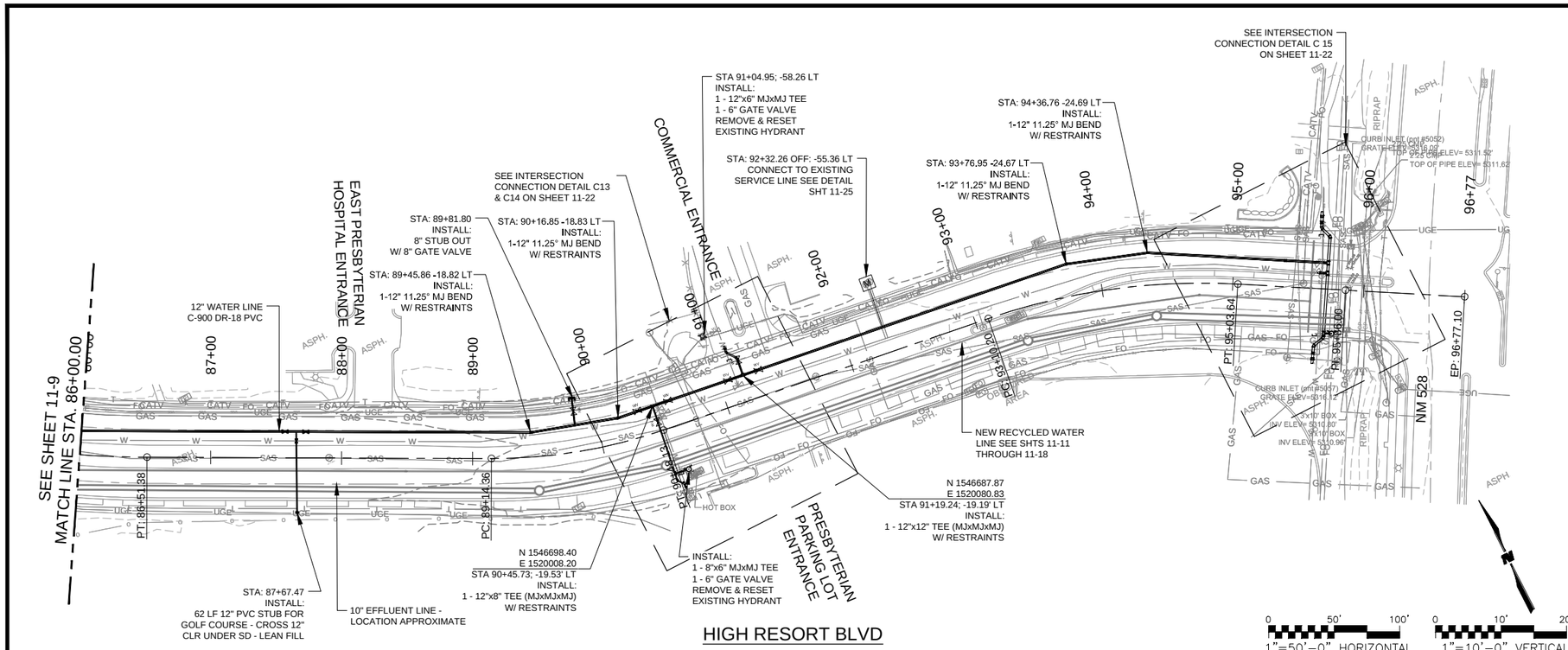

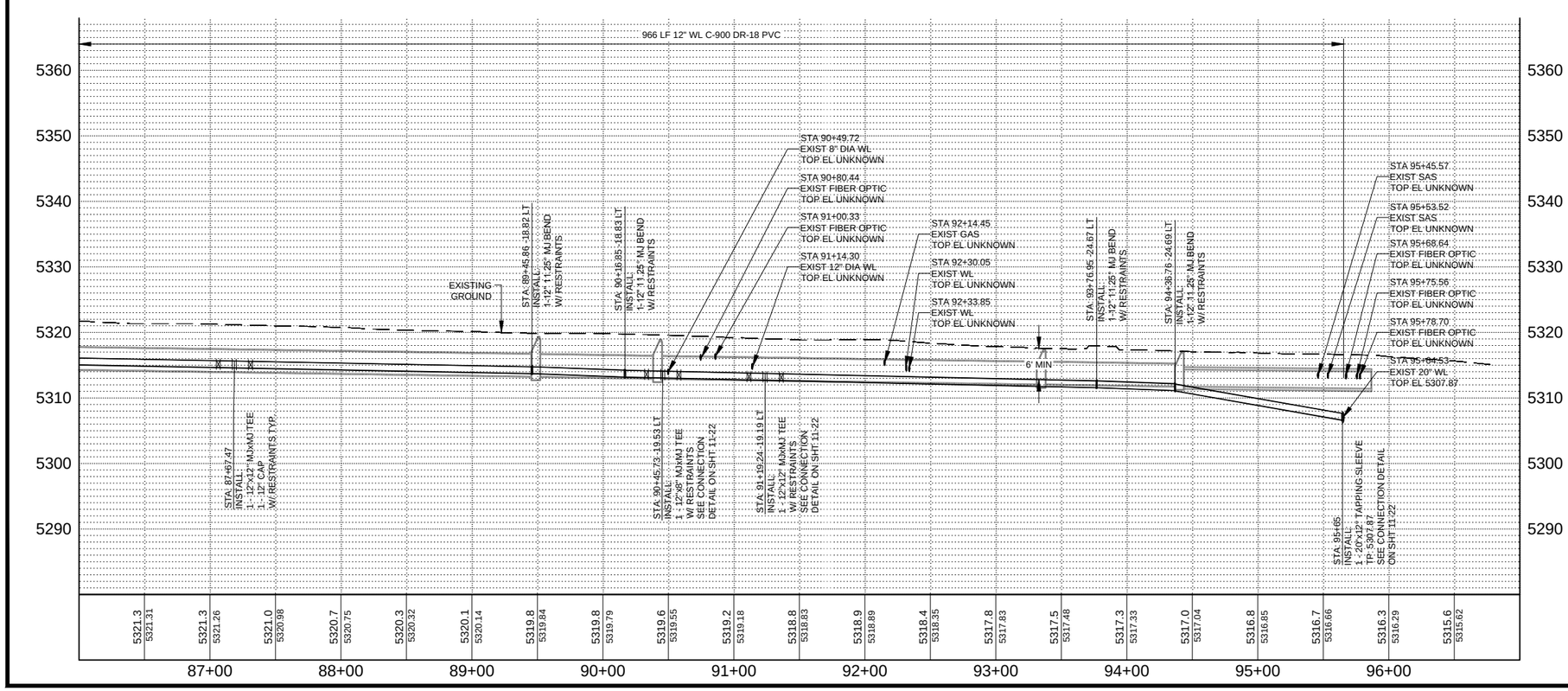

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CITY of RIO RANCHO

REVISIONS (OR CHANGE NOTICES)

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www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
WATER LINE 08

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
9-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET
11-10

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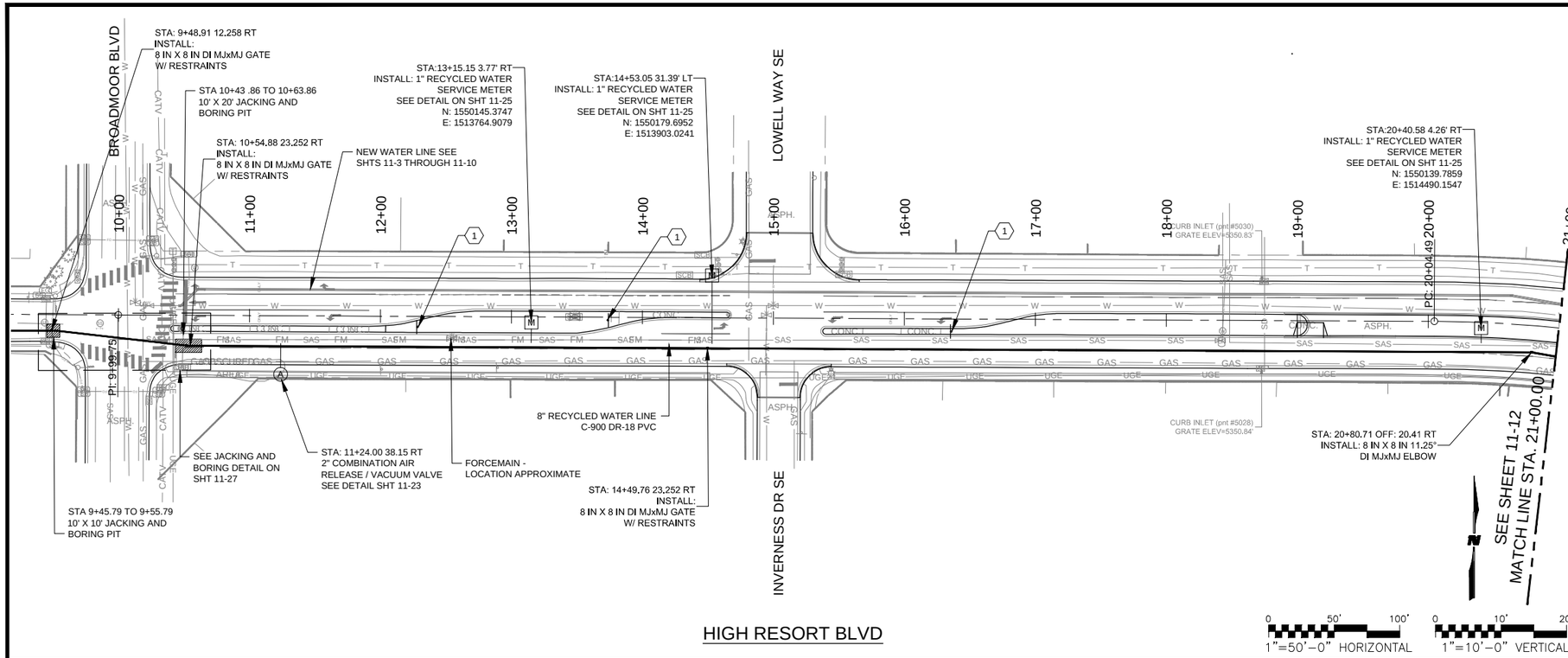
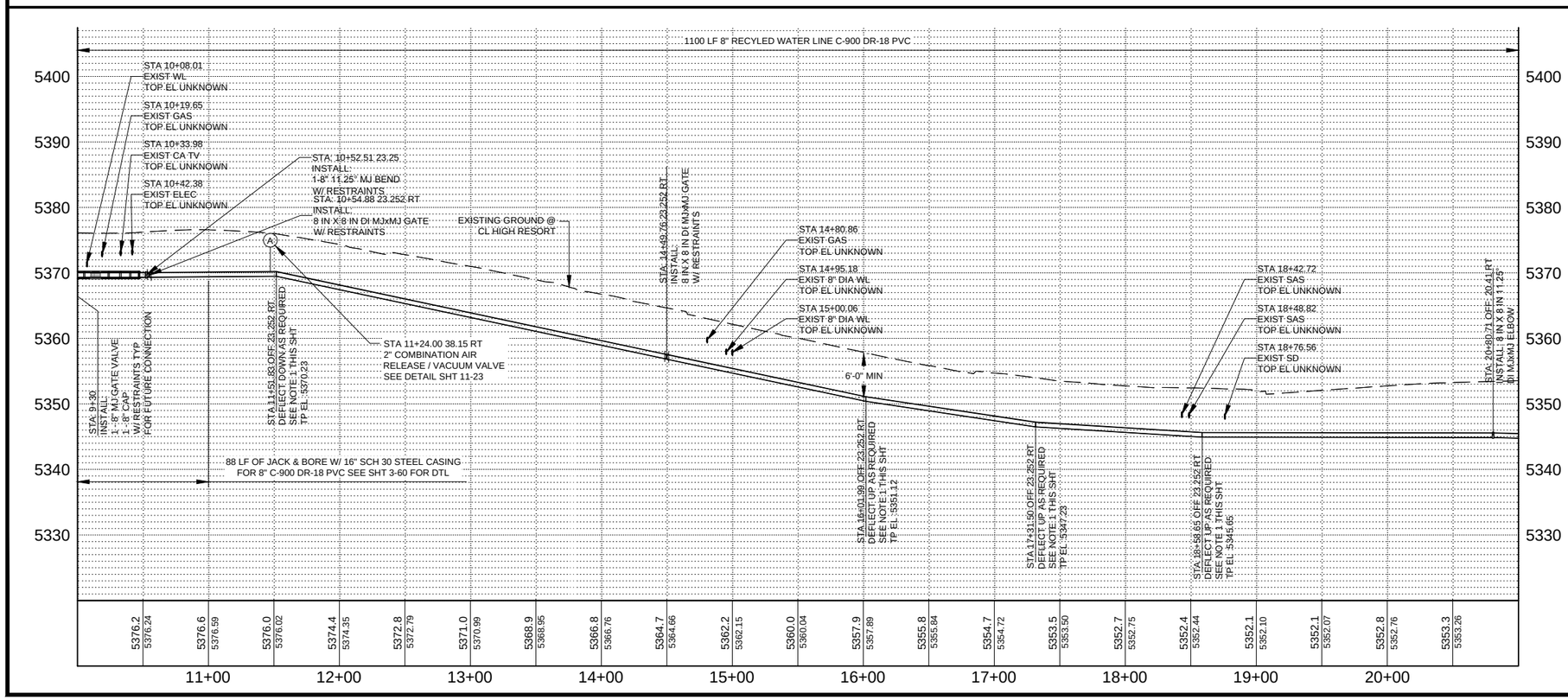


HIGH RESORT BLVD



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KEYNOTES

1. INSTALL RECYCLED WATER SIGN PER DETAIL ON SHT 11-27

RioRancho City of Vision

CITY of RIO RANCHO

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REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
2600 AMERICAN RD. SE, STE. 100
RIO RANCHO, NEW MEXICO 87124
PH. (505) 896-8501
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
RECYCLED WATER LINE 01

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
9-22-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET

11-11

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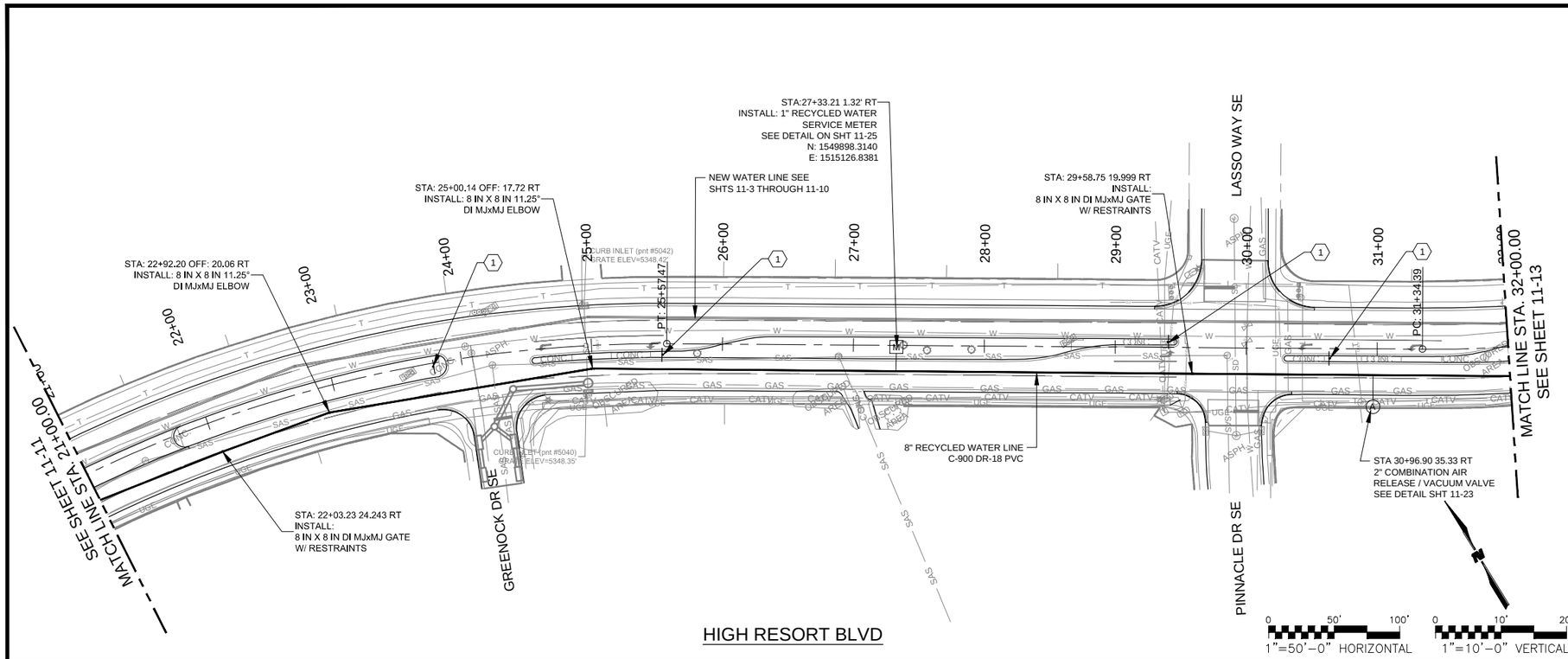

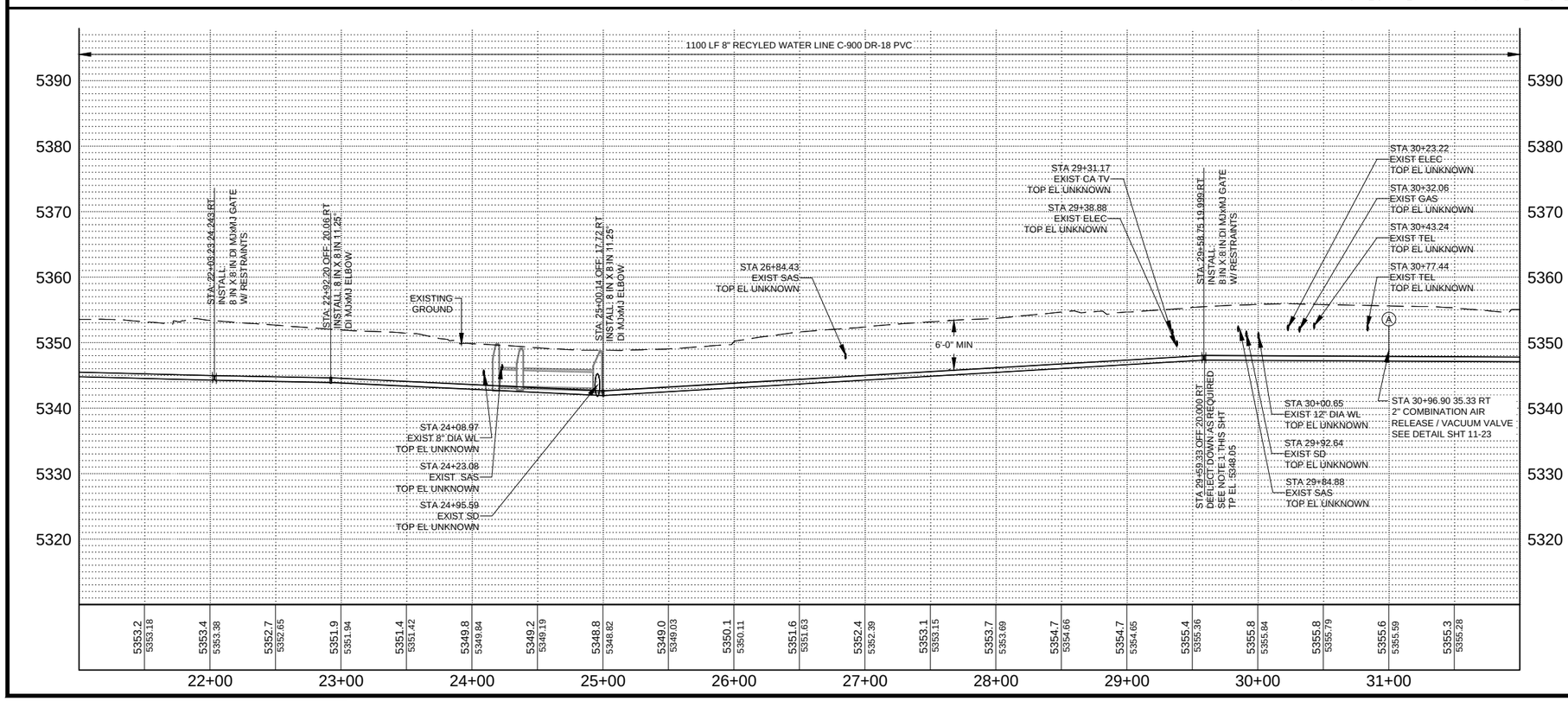

GENERAL NOTES

1. DEFLECT PIPE JOINTS AS NECESSARY TO MAINTAIN ALIGNMENT SHOWN. MAXIMUM DEFLECTION SHALL BE NO MORE THAN 75% OF PIPE MANUFACTURER'S RECOMMENDATION.
2. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE LOCATIONS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE COMMENCING WORK.
3. CONTRACTOR SHALL COORDINATE WITH THE CITY TRAFFIC SECTION IN THE EVENT OF ANY CONDUIT IMPACTS.
4. ALL MECHANICAL JOINT FITTINGS SHALL BE RESTRAINED PER THE MECHANICAL RESTRAINT JOINT TABLE ON SHT 11-27
5. CONTRACTOR SHALL COORDINATE W/ CITY IRRIGATION TO CONFIRM THAT IRRIGATION METERS ARE TAKEN OFF POTABLE & RE-CONNEDTED TO RECYCLED WATER W/O CROSS CONNECTION.
6. EACH METER CONNECTION SHALL BE TESTED AFTER POTABLE IS CUT TO VERIFY SECOND CONNECTION IS NOT PRESENT, PRIOR TO CONNECTING TO RECYCLED WATER SYSTEM.
7. VALVE CANS FOR RECYCLED WATER SYSTEM SHALL UTILIZE CITY STANDARD "TRIANGULAR" VALVE CAN COVER, SEE DETAIL SHT 11-27.

KEYNOTES

1. INSTALL RECYCLED WATER SIGN PER DETAIL ON SHT 11-27

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
2600 AMERICAN RD. SE, STE. 100
RIO RANCHO, NEW MEXICO 87124
PH. (505) 898-8501
FAX (505) 898-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
RECYCLED WATER LINE 02

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
9-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	
SHEET	11-12

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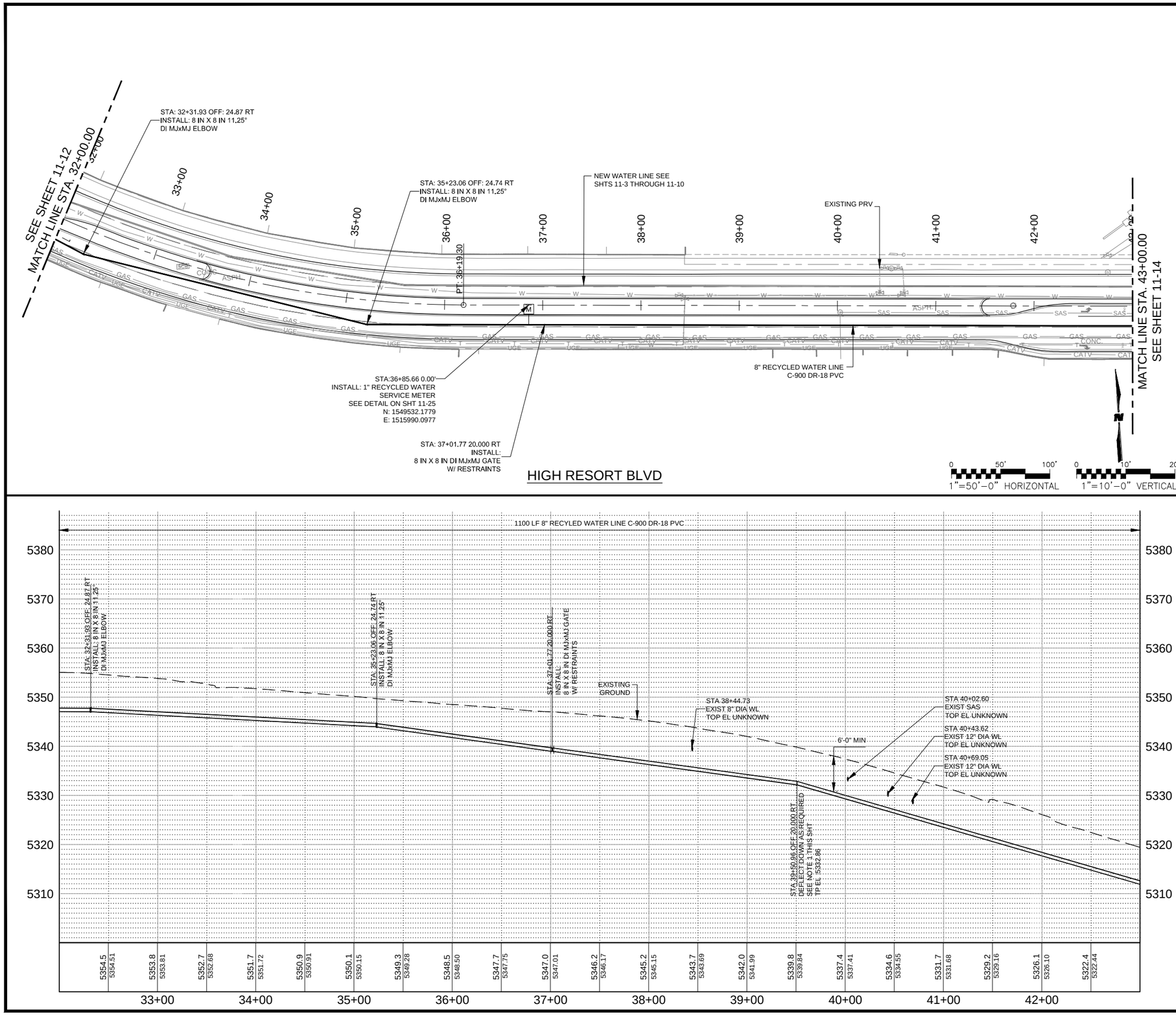

GENERAL NOTES

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7. VALVE CANS FOR RECYCLED WATER SYSTEM SHALL UTILIZE CITY STANDARD "TRIANGULAR" VALVE CAN COVER, SEE DETAIL SHT 11-27.

KEYNOTES

1. INSTALL RECYCLED WATER SIGN PER DETAIL ON SHT 11-27

RioRancho City of Vision

CITY of RIO RANCHO

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REVISIONS (OR CHANGE NOTICES)

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FAX (505) 896-8501
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HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
RECYCLED WATER LINE 03

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
8-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET

11-13

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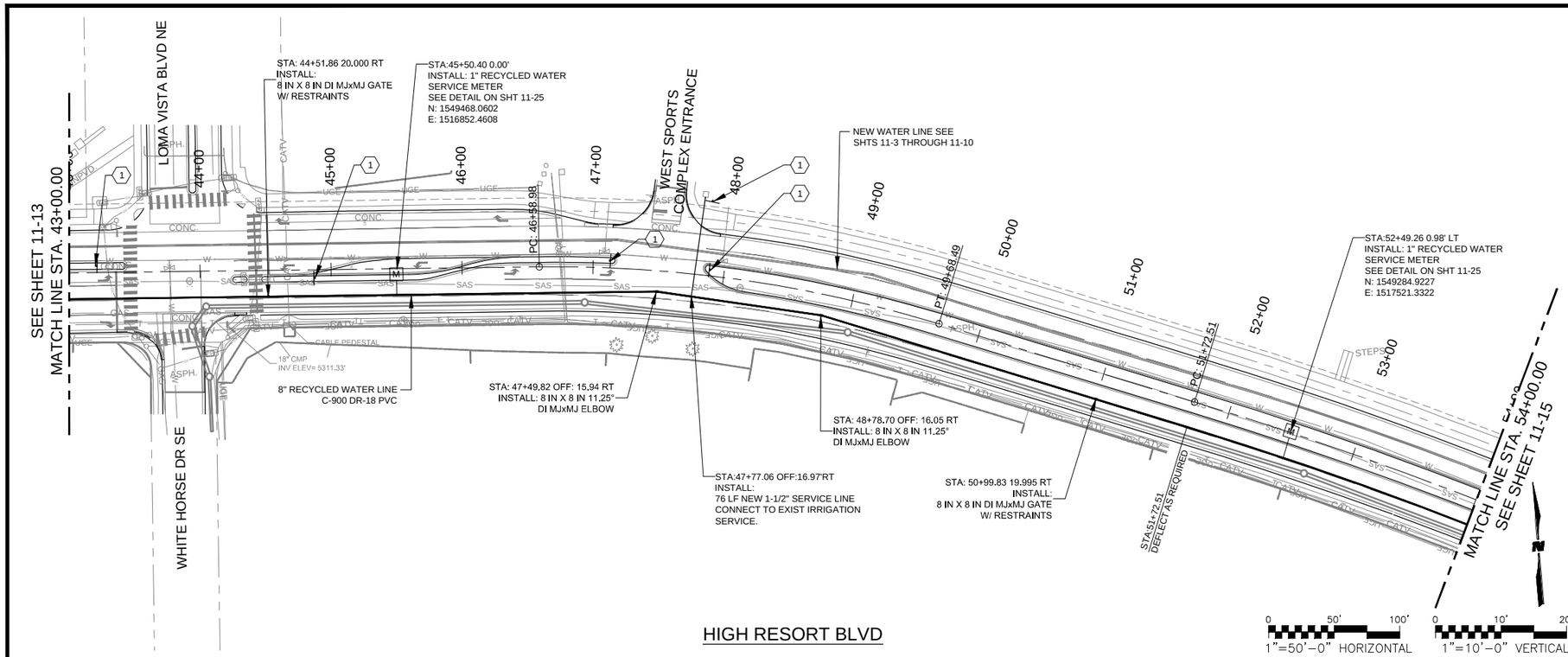

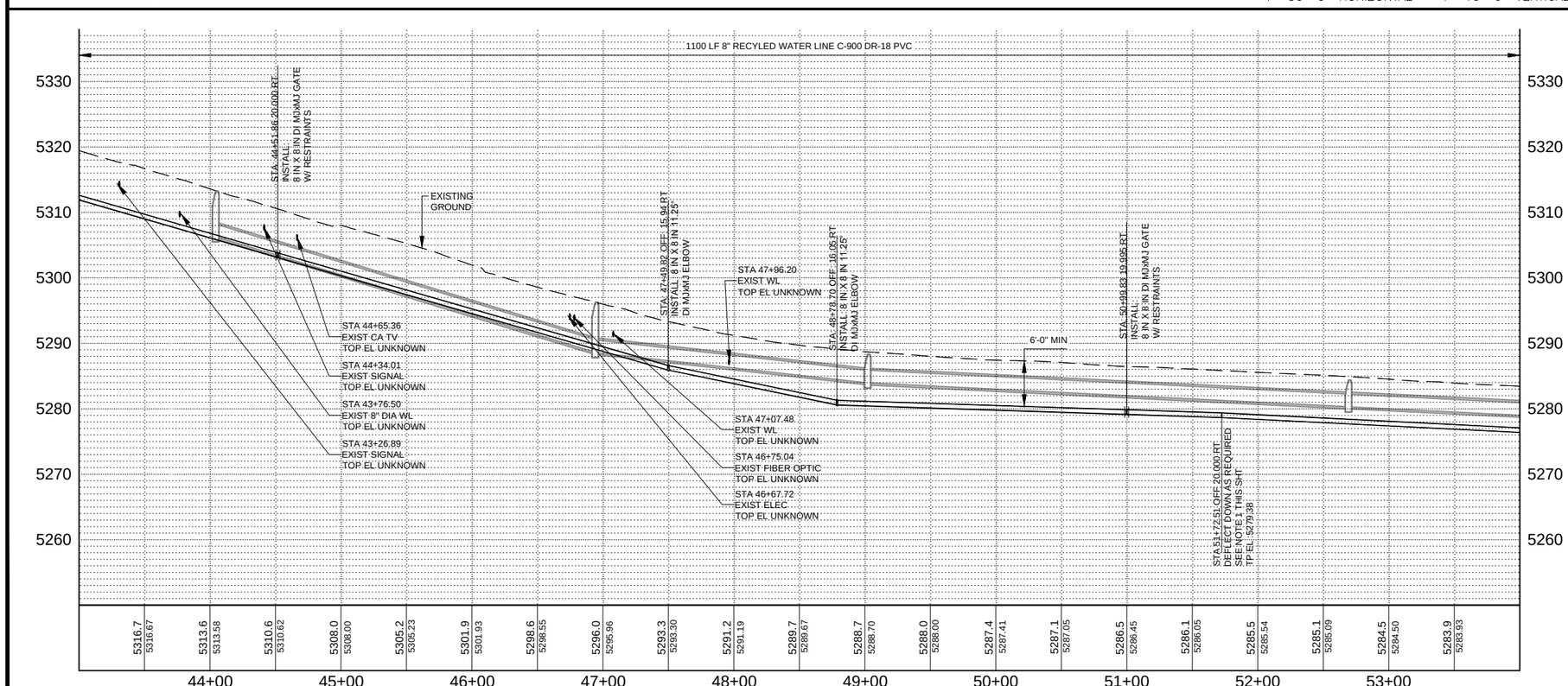

GENERAL NOTES

1. DEFLECT PIPE JOINTS AS NECESSARY TO MAINTAIN ALIGNMENT SHOWN. MAXIMUM DEFLECTION SHALL BE NO MORE THAN 75% OF PIPE MANUFACTURER'S RECOMMENDATION.
2. ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE LOCATIONS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES BEFORE COMMENCING WORK.
3. CONTRACTOR SHALL COORDINATE WITH THE CITY TRAFFIC SECTION IN THE EVENT OF ANY CONDUIT IMPACTS.
4. ALL MECHANICAL JOINT FITTINGS SHALL BE RESTRAINED PER THE MECHANICAL RESTRAINT JOINT TABLE ON SHT 11-27
5. CONTRACTOR SHALL COORDINATE W/ CITY IRRIGATION TO CONFIRM THAT IRRIGATION METERS ARE TAKEN OFF POTABLE & RE-CONNEDTED TO RECYCLED WATER W/O CROSS CONNECTION.
6. EACH METER CONNECTION SHALL BE TESTED AFTER POTABLE IS CUT TO VERIFY SECOND CONNECTION IS NOT PRESENT, PRIOR TO CONNECTING TO RECYCLED WATER SYSTEM.
7. VALVE CANS FOR RECYCLED WATER SYSTEM SHALL UTILIZE CITY STANDARD "TRIANGULAR" VALVE CAN COVER, SEE DETAIL SHT 11-27.

KEYNOTES

1. INSTALL RECYCLED WATER SIGN PER DETAIL ON SHT 11-27

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

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PH. (505) 896-8501
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www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
RECYCLED WATER LINE 04

BRIAN J. AMBROGI
NEW MEXICO
17610
PROFESSIONAL ENGINEER
LICENSED
9-12-2016

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET
11-14

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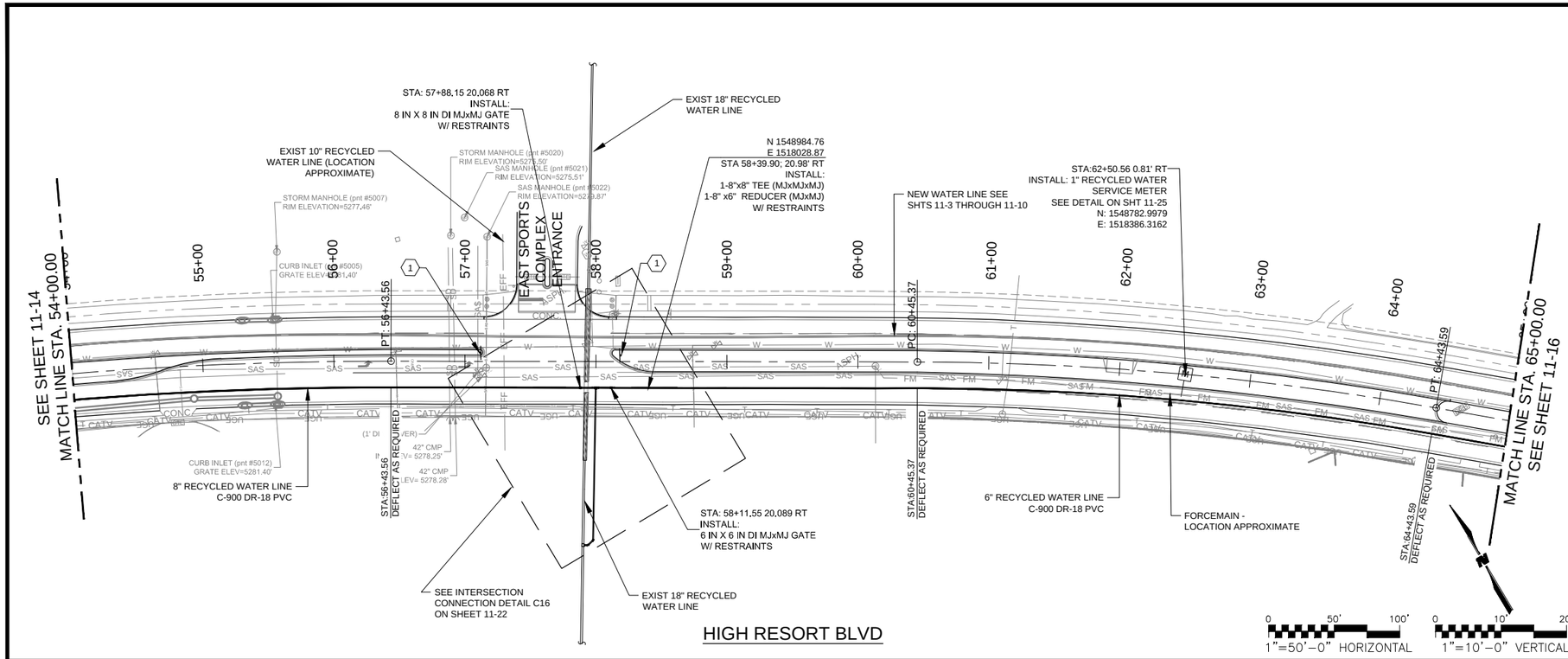

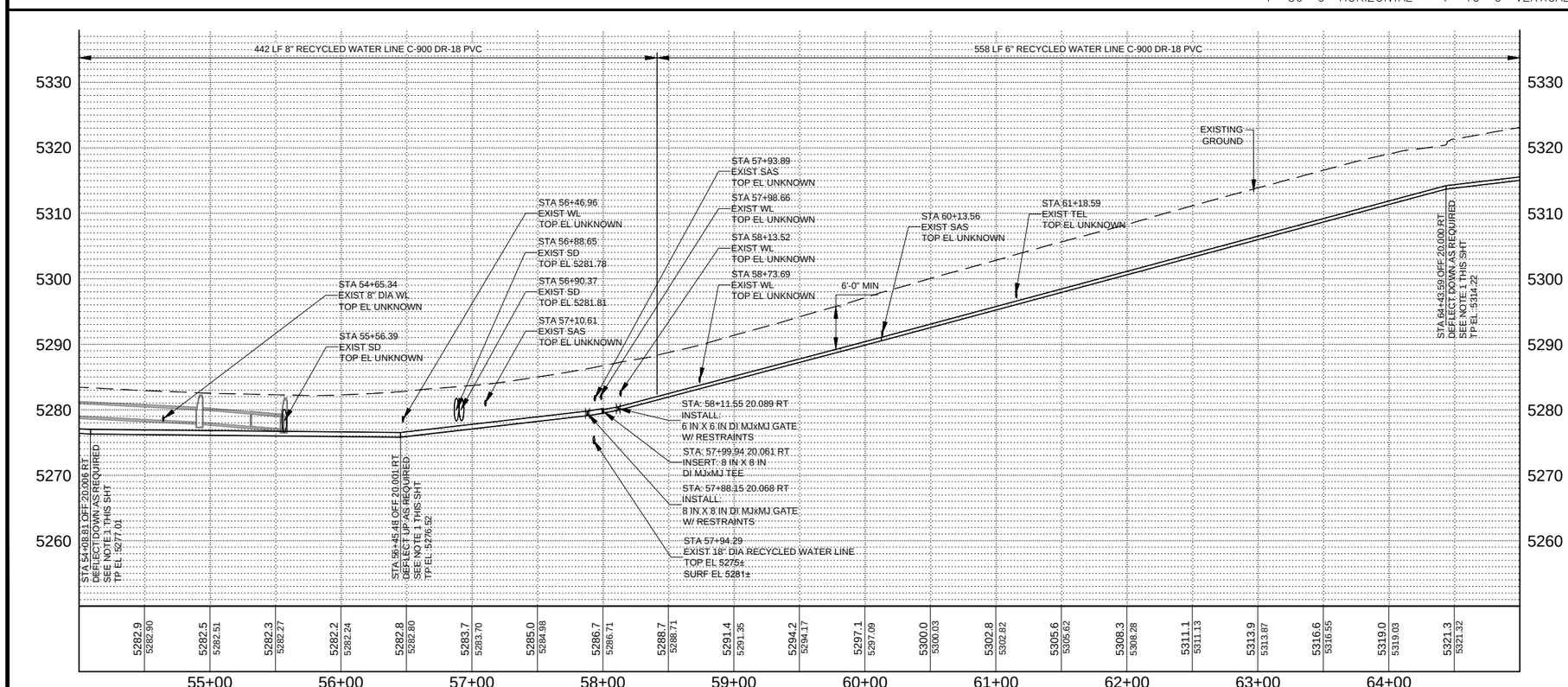

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7. VALVE CANS FOR RECYCLED WATER SYSTEM SHALL UTILIZE CITY STANDARD "TRIANGULAR" VALVE CAN COVER, SEE DETAIL SHT 11-27.

KEYNOTES

1. INSTALL RECYCLED WATER SIGN PER DETAIL ON SHT 11-27

CITY of RIO RANCHO

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REVISIONS (OR CHANGE NOTICES)

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PH (505) 896-8501
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
RECYCLED WATER LINE 05

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
9-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET
11-15

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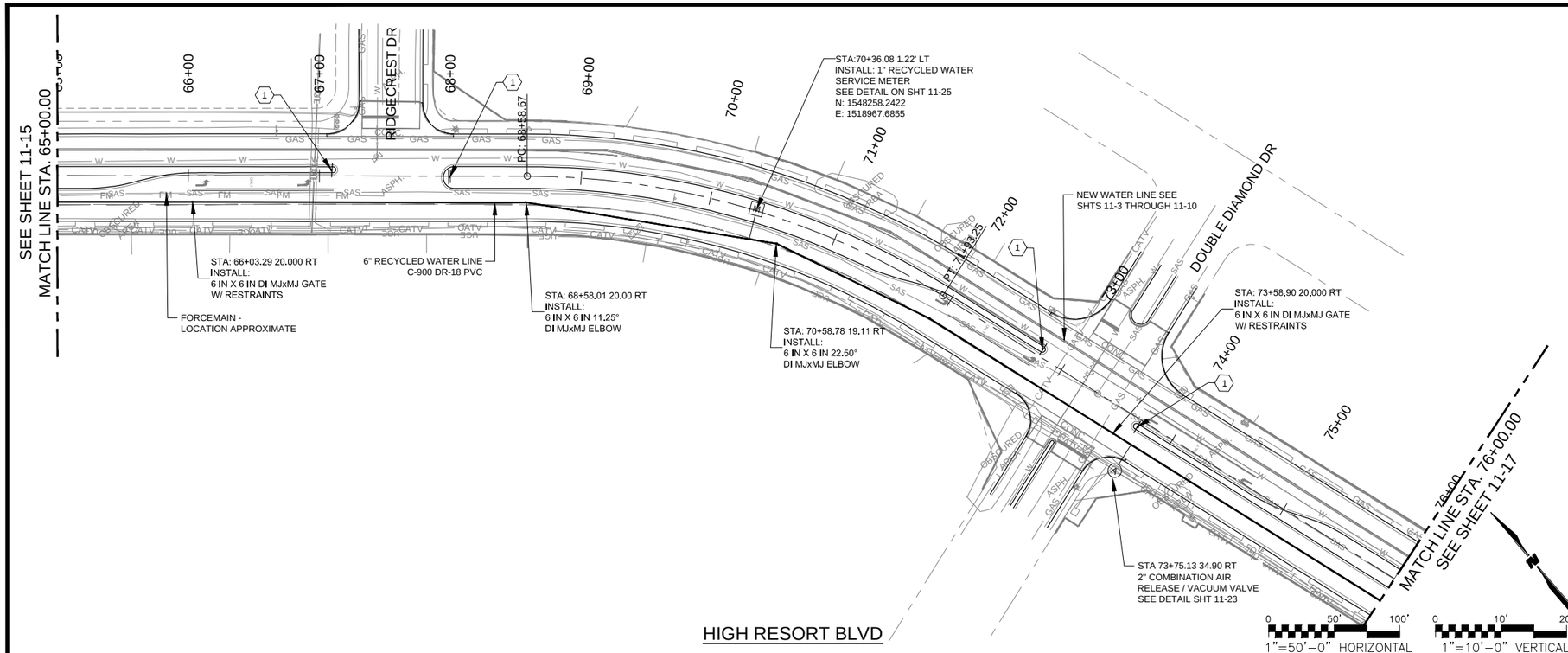

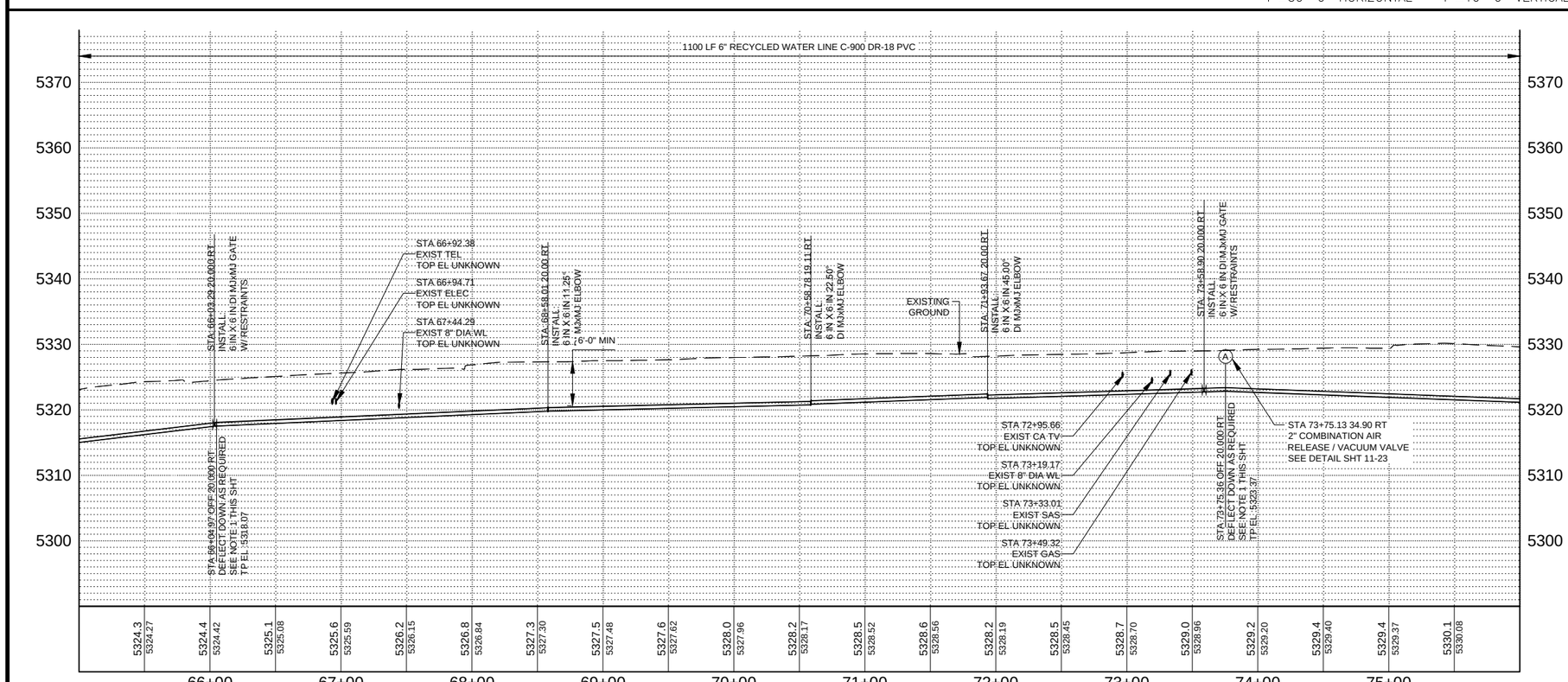

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7. VALVE CANS FOR RECYCLED WATER SYSTEM SHALL UTILIZE CITY STANDARD "TRIANGULAR" VALVE CAN COVER, SEE DETAIL SHT 11-27.

KEYNOTES

1. INSTALL RECYCLED WATER SIGN PER DETAIL ON SHT 11-27

CITY of RIO RANCHO

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REVISIONS (OR CHANGE NOTICES)

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PH. (505) 896-8501
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
RECYCLED WATER LINE 06

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
9-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET
11-16

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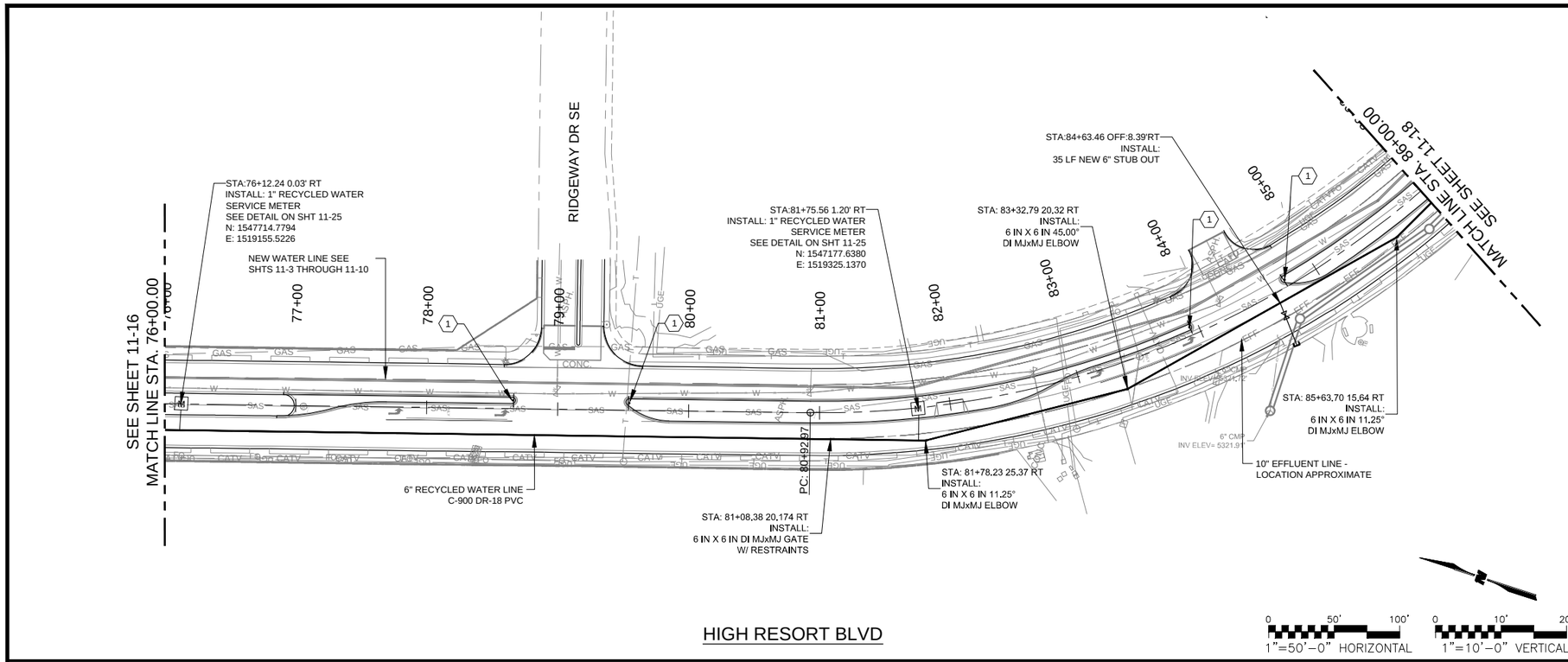
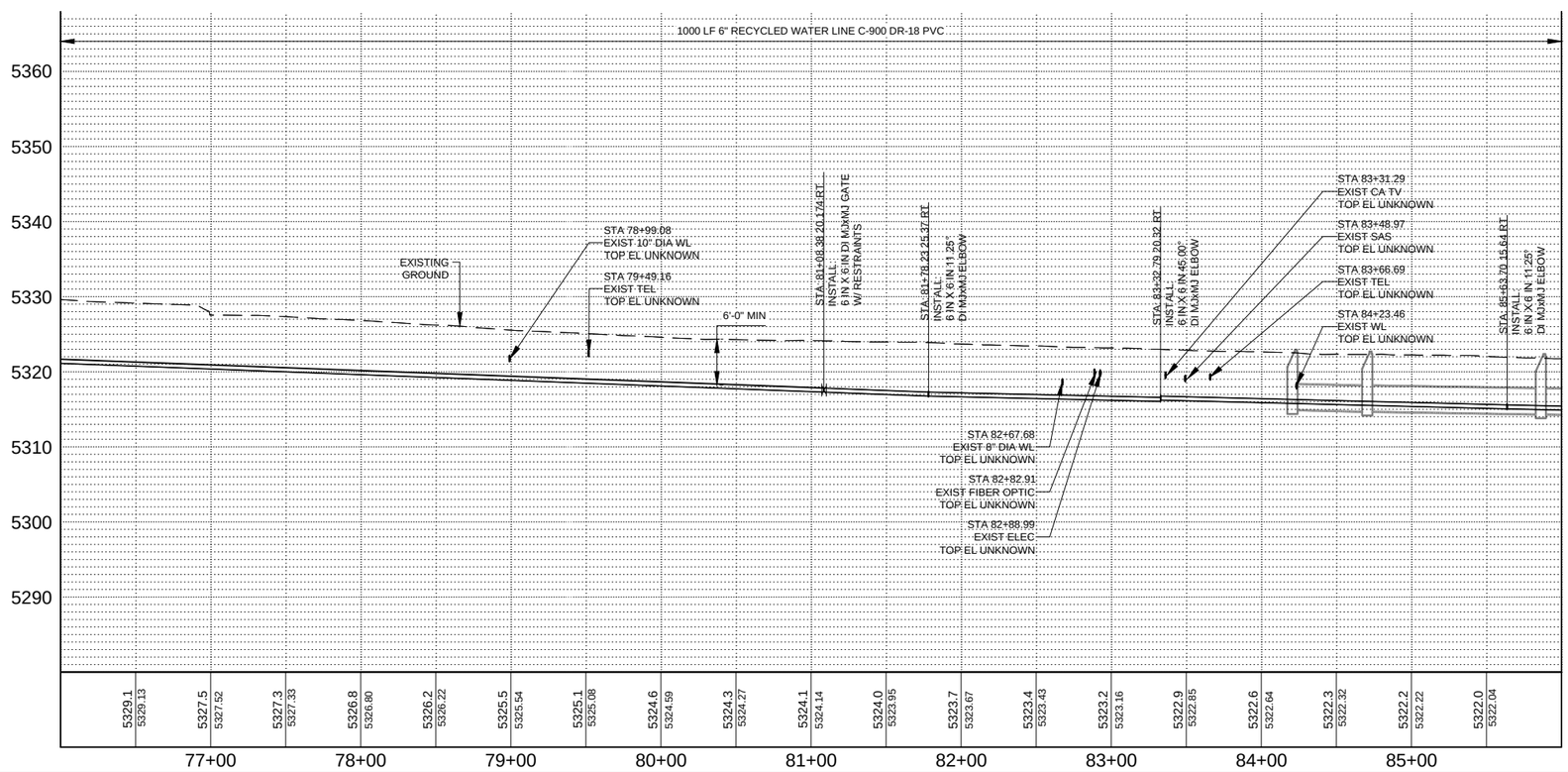


HIGH RESORT BLVD



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7. VALVE CANS FOR RECYCLED WATER SYSTEM SHALL UTILIZE CITY STANDARD "TRIANGULAR" VALVE CAN COVER, SEE DETAIL SHT 11-27.

KEYNOTES

(1) INSTALL RECYCLED WATER SIGN PER DETAIL ON SHT 11-27

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
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RIO RANCHO, NEW MEXICO 87124
PH. (505) 896-8501
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
RECYCLED WATER LINE 07

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
9-16-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET

11-17

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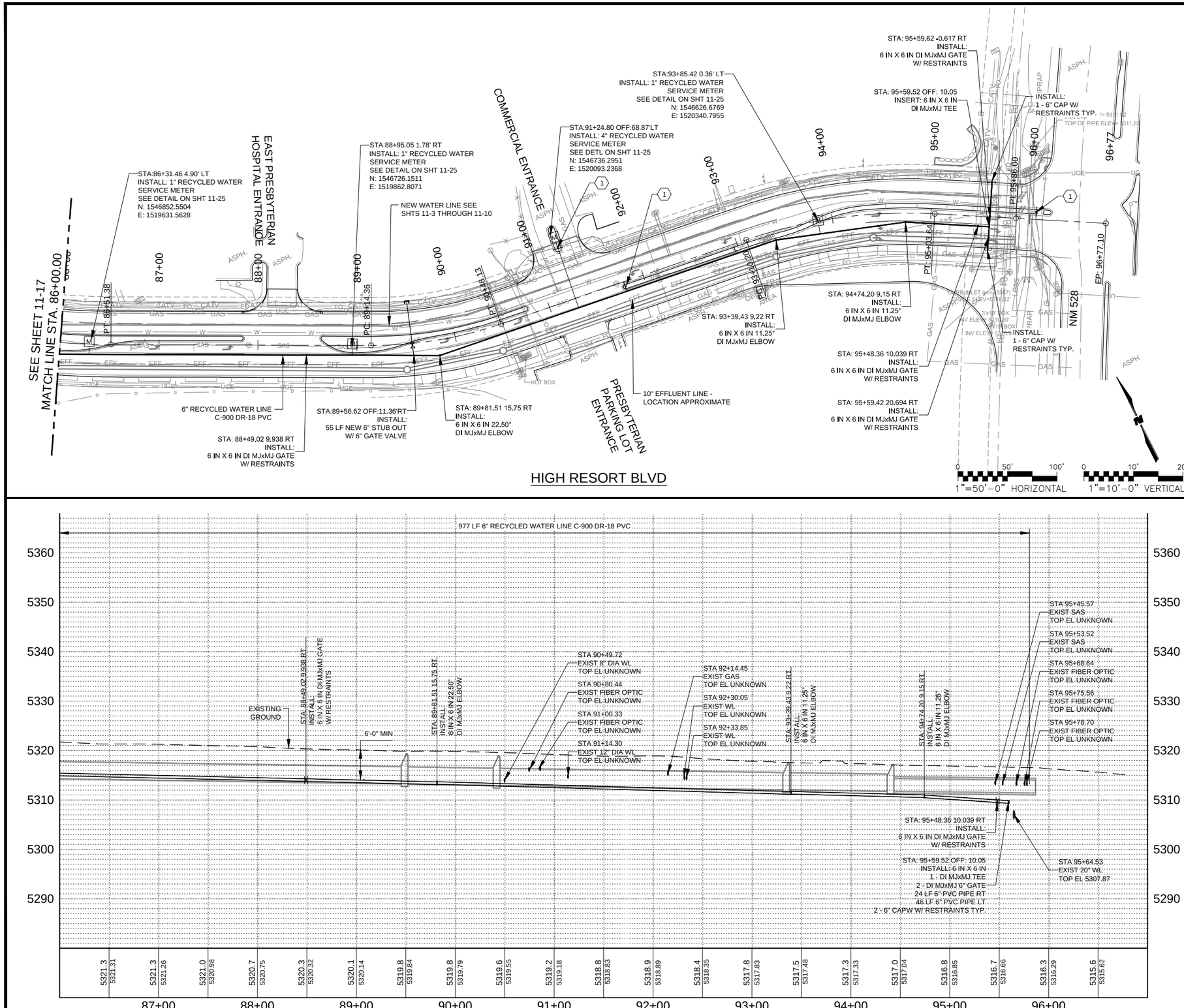

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KEYNOTES

1. INSTALL RECYCLED WATER SIGN PER DETAIL ON SHT 11-27

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www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY PLAN AND PROFILE
RECYCLED WATER LINE 08

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
7-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	SEPTEMBER 2016
DPW CHK:	

SHEET
11-18

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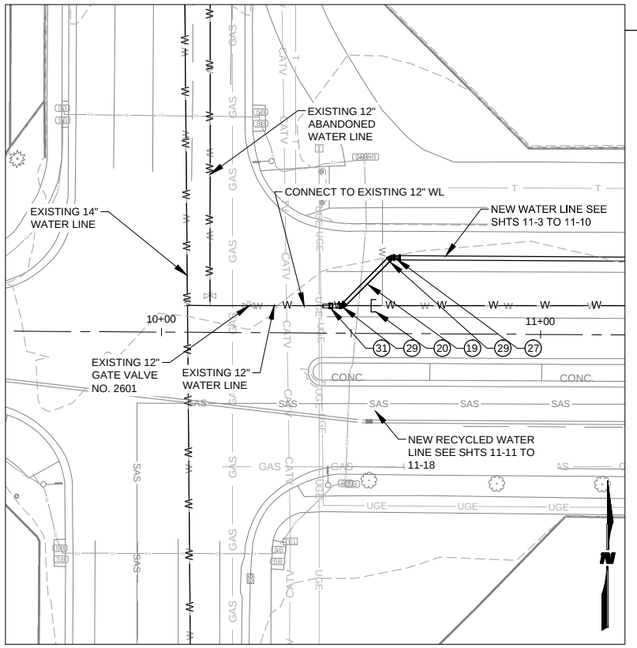


C1 CONNECTION DETAIL 1 (STA10+46.93)

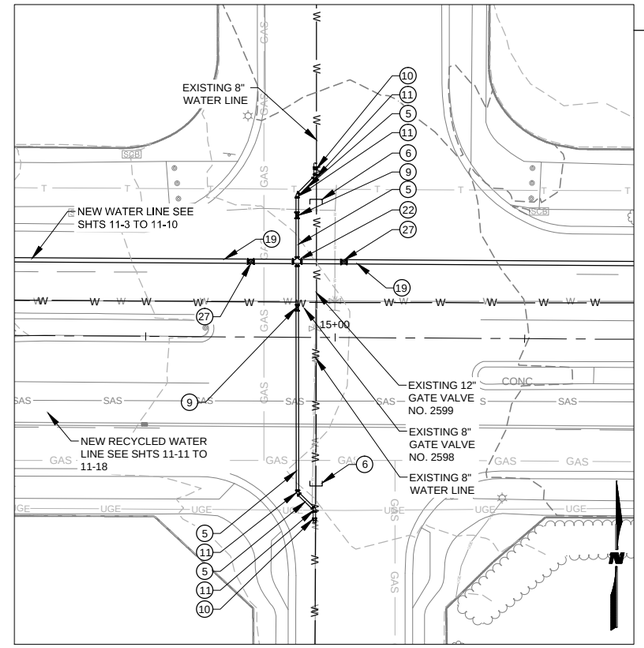
1" : 20'

@ BROADMOOR DR

CONSTRUCTION SEQUENCE

1. CONSTRUCT NEW 12" WATER LINE FROM BROADMOOR BLVD TO HIGH RESORT PRV
2. CLOSE VALVES LISTED IN TABLE BELOW
3. CONNECT NEW 12" WATER LINE TO EXISTING 12" WATER LINE AS SHOWN.
4. OPEN VALVES LISTED IN TABLE BELOW.
5. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
6. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
2601	NONE	2601



C2 CONNECTION DETAIL 2 (STA 14+89.95)

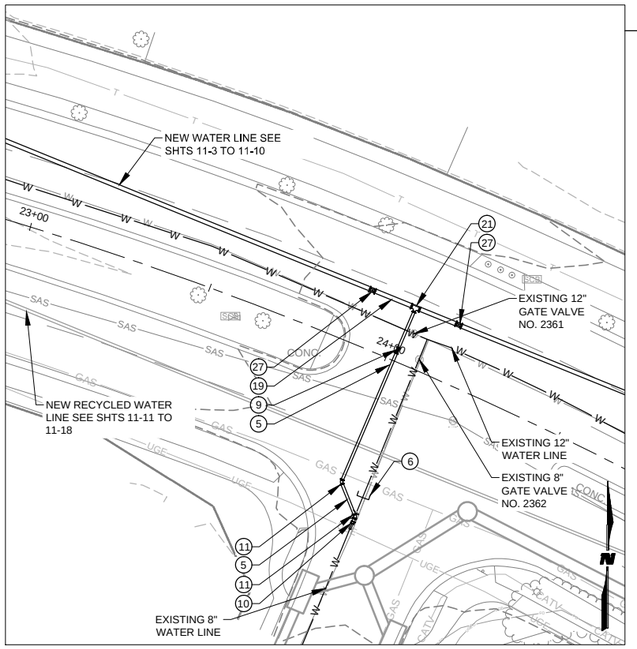
1" : 20'

@ INVERNESS & LOWELL WAY

CONSTRUCTION SEQUENCE

1. PRIOR TO WATER LINE CONNECTION CLOSE NEW 8" GATE VALVE AND VALVES LISTED IN TABLE BELOW
2. CONNECT NEW 12" WATER LINE TO EXISTING 8" WATER LINE AS SHOWN.
3. AFTER CONNECTION IS COMPLETE OPEN BOTH NEW GATE VALVES AND VALVES LISTED IN TABLE BELOW.
4. 4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
2601	NONE	2601



C3 CONNECTION DETAIL 3 (STA 24+02.14)

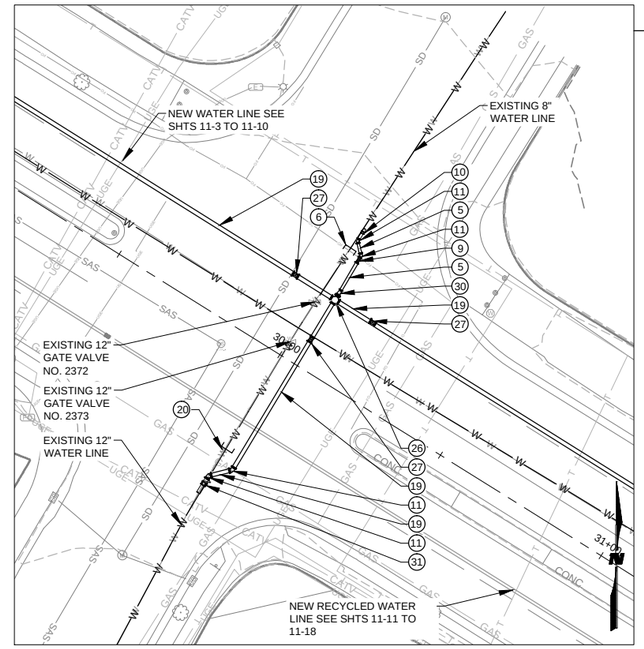
1" : 20'

@ GREENOCK DR SE

CONSTRUCTION SEQUENCE

1. PRIOR TO WATER LINE CONNECTION CLOSE NEW 8" GATE VALVE AND VALVES LISTED IN TABLE BELOW.
2. CONNECT NEW 12" WATER LINE TO EXISTING 8" WATER LINE AS SHOWN.
3. AFTER CONNECTION IS COMPLETE OPEN NEW 8" GATE VALVE AND VALVES LISTED IN TABLE BELOW.
4. 4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
2361	2361	8291
2362	2362	2372
8291		2373
2372		
2373		



C4 CONNECTION DETAIL 4 (STA 30+05.38)

1" : 20'

@ LASSO WAY & PINNACLE DR

CONSTRUCTION SEQUENCE

1. PRIOR TO WATER LINE CONNECTION CLOSE NEW 8" GATE VALVE AND VALVES LISTED IN TABLE BELOW.
2. CONNECT NEW 12" WATER LINE TO EXISTING 8" WATER LINE AS SHOWN.
3. AFTER CONNECTION IS COMPLETE OPEN BOTH NEW GATE VALVES AND VALVES LISTED IN TABLE BELOW.
4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
2459	2372	2459
2429	2373	2429
2372		2371
2371		2370
2373		
2370		

GENERAL NOTES

1. DETAILS SHOW FINAL CONDITION OF CONSTRUCTION. EXISTING AFTER LINE TO REMAIN IN SERVICE UNTIL NEW WATER LINE IS OPERATIONAL AND ALL TRANSFERRED CONNECTIONS MADE.
2. ALL FITTINGS AND VALVES SHALL BE RESTRAINED IN ACCORDANCE W/ THE RESTRAINED JOINT TABLE SHEET 11-22.
3. ALL VALVE NUMBERS ARE BASED ON THE CITY OF RIO RANCHO GIS OBJECT ID NO. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR VALVE IDENTIFICATION AND CLOSURES.
4. CONSTRUCTION SEQUENCE LISTED ON THESE SHEETS ARE FOR THE LOCAL CONSTRUCTION AREA SHOWN IN THE DETAILS. FOR THE OVERALL PROJECT CONNECTION PLAN SEE SPECIFICATIONS.

KEYED NOTES

	ITEM DESCRIPTION
1	6" PVC PIPE
2	6" GATE VALVE (MJxMJ)
3	6" COUPLING
4	6" 45° BEND (MJxMJ)
5	8" PVC PIPE
6	8" PLUG W/ RESTRAINTS SEE SHT 11-27
7	8"x 8" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
8	8"x6" REDUCER (MJxMJ)
9	8" GATE VALVE (MJxMJ)
10	8" COUPLING
11	8" 45° BEND (MJxMJ)
12	8" WYE W/ PLUG (MJxMJ)
13	10" PVC PIPE
14	10" PLUG W/ RESTRAINTS
15	10"x6" TEE W/ RESTRAINTS SEE SHT 11-27
16	10" GATE VALVE (MJxMJ)
17	10" COUPLING
18	10" 45° BEND (MJxMJ)
19	12" PVC PIPE
20	12" PLUG W/ RESTRAINTS SEE SHT 11-27
21	12"X8" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
22	12"X8" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
23	12"X10" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
24	12"x10" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
25	12x12 TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
26	12"x12" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
27	12" GATE VALVE (MJxMJ)
28	12" COUPLING
29	12" 45° BEND (MJxMJ)
30	12"X8" REDUCER (MJxMJ)
31	12" COUPLING
32	18"x8" TAPPING SADDLE
33	10" INSERTION VALVE
34	MJxMJ TEE
35	6" PLUG W/ RESTRAINTS SEE SHT 11-27
36	8"X6" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
37	20" DI PIPE
38	20"x12" TEE
39	20" 45° BEND (MJxMJ)
40	MJxMJ TEE
41	20" BUTTERFLY VALVE FULL BODY (FLxFL) SEE SHT 11-28
42	20" SOLID SLEEVE COUPLING
43	20" PLUG W/ RESTRAINTS SEE SHT 11-27

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			
6			
7			

REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
2600 AMERICAN RD. SE, STE. 100
RIO RANCHO, NEW MEXICO 87124
(505) 896-8501
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

INTERSECTION CONNECTION DETAILS 01

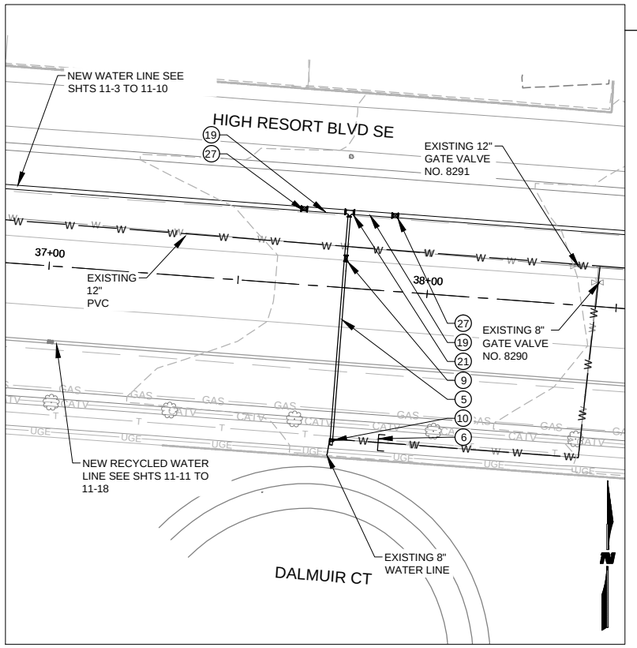
BRIAN J. AMBROGI NEW MEXICO 17610 PROFESSIONAL ENGINEER LICENSED 4-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	

SHEET

11-19

M:\MSD\16-600-034-0012_DISCIPLINES_SHEETS\03_PLAN & PROFILES\UTILITY\INTERSECTION CONNECTION DETAILS\66034_CONN_DET_01.DWG\10/12/2016 3:07 PM



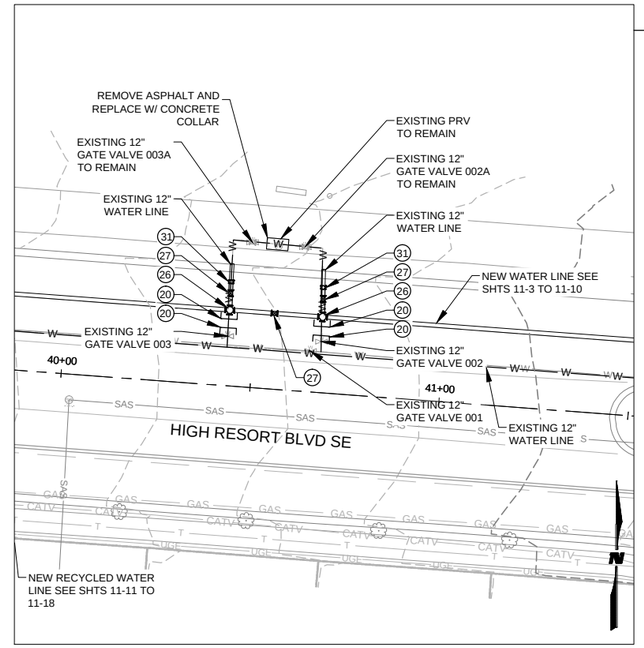
CONSTRUCTION SEQUENCE

1. PRIOR TO WATER LINE CONNECTION CLOSE NEW 8" GATE VALVE AND CLOSE VALVES LISTED IN TABLE BELOW
2. CONNECT NEW 12" WATER LINE TO EXISTING 8" WATER LINE AS SHOWN.
3. AFTER CONNECTION IS COMPLETE OPEN NEW 8" GATE VALVE AND VALVES LISTED IN TABLE BELOW.
4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
8290	8290	2440
2440	8291	

C5 CONNECTION DETAIL 5 (STA 37+78.00)

1" : 20' @ DALMUIR CT



CONSTRUCTION SEQUENCE

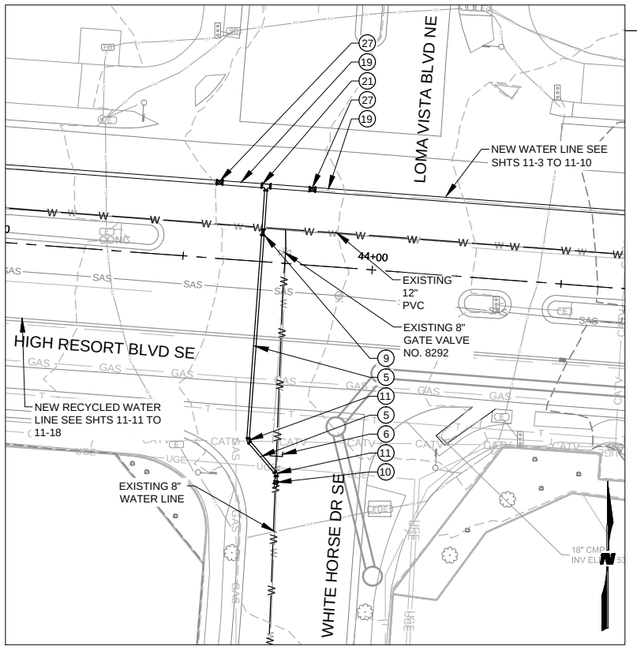
1. CLOSE VALVES LISTED IN TABLE BELOW.
2. INTER-CONNECT NEW 12" WATER LINE TO EXISTING PRV AS SHOWN.
3. AFTER 12" WATER LINE ALONG HIGH RESORT HAS BEEN CONSTRUCTED AND TESTED FROM RIDGEWAY DR OPEN VALVES 0003, 0003A, 0002A, 0004, AND 0002 TO PLACE LINE IN SERVICE. VALVE 0005 IS TO REMAIN CLOSED.
4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
8287	8287*	8287
8286	8286*	8286

* See Water Line Construction Sequence in Supplemental Conditions

C6 CONNECTION DETAIL 6 (STA 40+55.10)

1" : 20' @ HIGH RESORT PRV



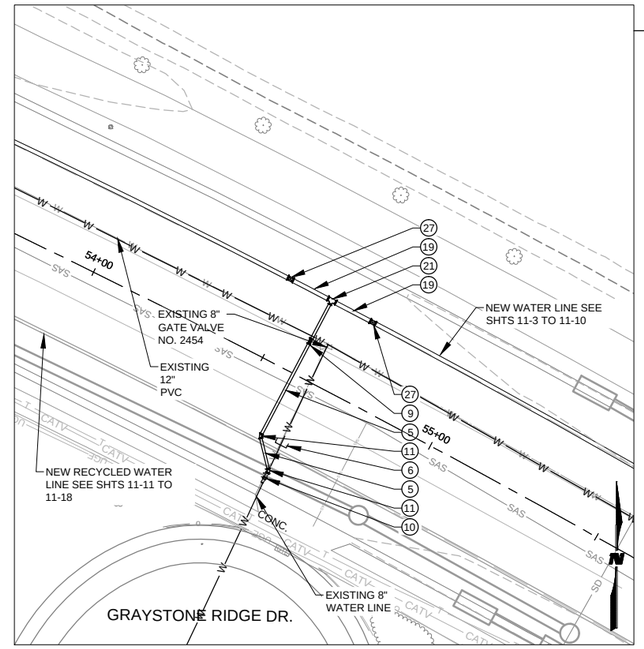
CONSTRUCTION SEQUENCE

1. PRIOR TO WATER LINE CONNECTION CLOSE NEW 8" GATE VALVE AND VALVES LISTED IN TABLE BELOW
2. CONNECT NEW 12" WATER LINE TO EXISTING 8" WATER LINE AS SHOWN.
3. AFTER CONNECTION IS COMPLETE OPEN NEW 8" GATE VALVE. AND VALVES LISTED IN TABLE BELOW
4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
8292	8292	2445
2445		2444
2444		2442
2442		2443
2443		

C7 CONNECTION DETAIL 7 (STA 43+71.09)

1" : 20' @ WHITEHORSE DR SE



CONSTRUCTION SEQUENCE

1. PRIOR TO WATER LINE CONNECTION CLOSE NEW 8" GATE VALVE AND CLOSE VALVES LISTED IN TABLE BELOW
2. CONNECT NEW 12" WATER LINE TO EXISTING 8" WATER LINE AS SHOWN.
3. AFTER CONNECTION IS COMPLETE OPEN VALVES LISTED IN TABLE BELOW
4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
2454	2454	2449
2449		

C8 CONNECTION DETAIL 8 (STA 54+59.57)

1" : 20' @ GRAYSTONE RIDGE DR

GENERAL NOTES

1. DETAILS SHOW FINAL CONDITION OF CONSTRUCTION. EXISTING AFTER LINE TO REMAIN IN SERVICE UNTIL NEW WATER LINE IS OPERATIONAL AND ALL TRANSFERRED CONNECTIONS MADE.
2. ALL FITTINGS AND VALVES SHALL BE RESTRAINED IN ACCORDANCE W/ THE RESTRAINED JOINT TABLE SHEET 11-22.
3. ALL VALVE NUMBERS ARE BASED ON THE CITY OF RIO RANCHO GIS OBJECT ID NO. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR VALVE IDENTIFICATION AND CLOSURES.
4. CONSTRUCTION SEQUENCE LISTED ON THESE SHEETS ARE FOR THE LOCAL CONSTRUCTION AREA SHOWN IN THE DETAILS. FOR THE OVERALL PROJECT CONNECTION PLAN SEE SPECIFICATIONS.

KEYED NOTES

◯	ITEM DESCRIPTION
1	6" PVC PIPE
2	6" GATE VALVE (MJxMJ)
3	6" COUPLING
4	6" 45° BEND (MJxMJ)
5	8" PVC PIPE
6	8" PLUG W/ RESTRAINTS SEE SHT 11-27
7	8"x 8" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
8	8"x6" REDUCER (MJxMJ)
9	8" GATE VALVE (MJxMJ)
10	8" COUPLING
11	8" 45° BEND (MJxMJ)
12	8" WYE W/ PLUG (MJxMJ)
13	10" PVC PIPE
14	10" PLUG W/ RESTRAINTS
15	10"x6" TEE W/ RESTRAINTS SEE SHT 11-27
16	10" GATE VALVE (MJxMJ)
17	10" COUPLING
18	10" 45° BEND (MJxMJ)
19	12" PVC PIPE
20	12" PLUG W/ RESTRAINTS SEE SHT 11-27
21	12"X8" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
22	12"X8" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
23	12"X10" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
24	12"x10" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
25	12x12 TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
26	12"x12" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
27	12" GATE VALVE (MJxMJ)
28	12" COUPLING
29	12" 45° BEND (MJxMJ)
30	12"X8" REDUCER (MJxMJ)
31	12" COUPLING
32	18"x8" TAPPING SADDLE
33	10" INSERTION VALVE
34	MJxMJ TEE
35	6" PLUG W/ RESTRAINTS SEE SHT 11-27
36	8"X6" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
37	20" DI PIPE
38	20"x12" TEE
39	20" 45° BEND (MJxMJ)
40	MJxMJ TEE
41	20" BUTTERFLY VALVE FULL BODY (FLxFL) SEE SHT 11-28
42	20" SOLID SLEEVE COUPLING
43	20" PLUG W/ RESTRAINTS SEE SHT 11-27

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
1			
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REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
2600 AMERICAN RD. SE, STE 100
RIO RANCHO, NEW MEXICO 87124
PH (505) 896-8501
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

INTERSECTION CONNECTION DETAILS 02

BRIAN J. AMBROGI NEW MEXICO 17610 PROFESSIONAL ENGINEER LICENSED
9-21-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	

SHEET 11-20

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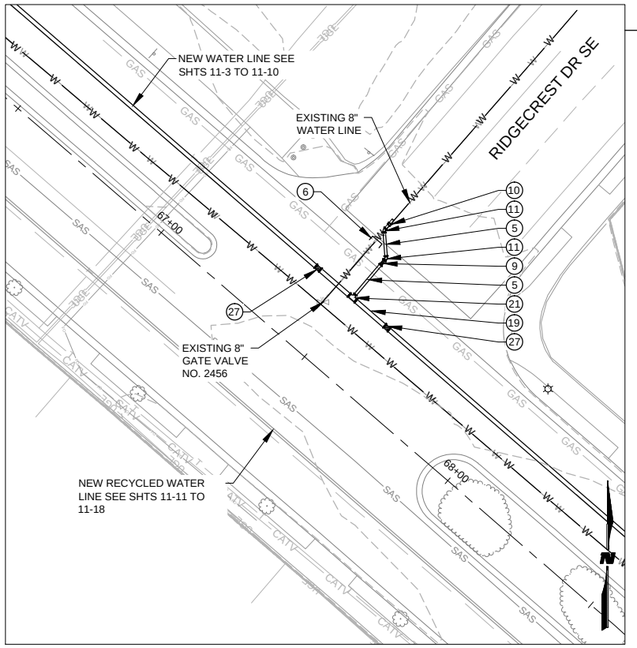


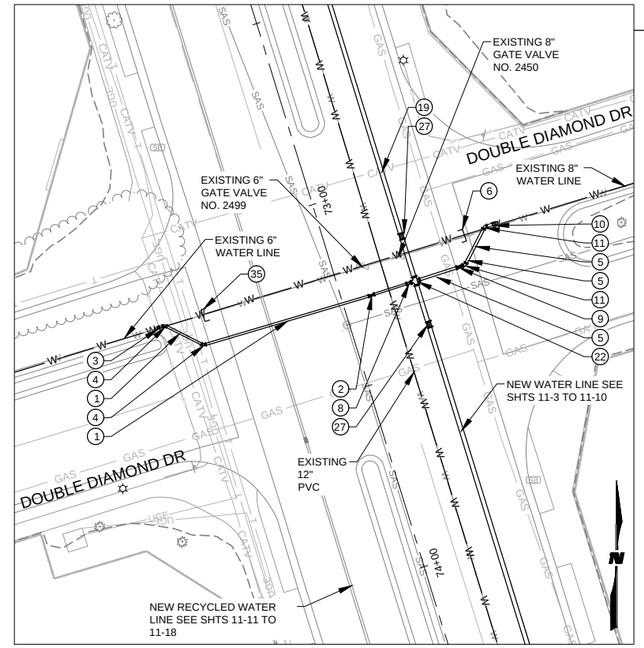
C9 CONNECTION DETAIL 9 (STA 67+49.33)

1" : 20' @ RIDGECREST DR

CONSTRUCTION SEQUENCE

1. CLOSE VALVES LISTED IN TABLE BELOW.
2. CONNECT NEW 12" WATER LINE TO EXISTING 8" WATER LINE AS SHOWN.
3. AFTER CONNECTION IS COMPLETE OPEN NEW 8" GATE VALVE AND VALVES IN TABLE BELOW.
4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
2456	2456	2813
2813		2814
2814		2180
2180		



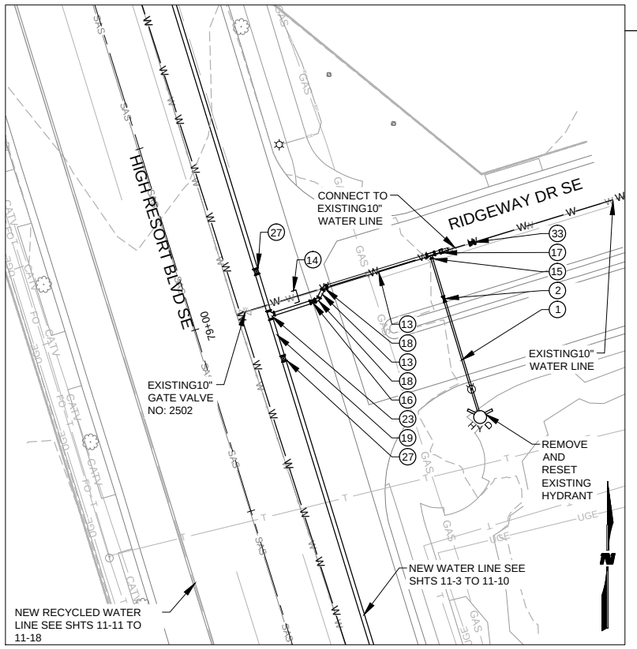
C10 CONNECTION DETAIL 10 (STA 73+27.74)

1" : 20' @ DOUBLE DIAMOND DR.

CONSTRUCTION SEQUENCE

1. CLOSE VALVES LISTED IN TABLE BELOW.
2. CONNECT NEW 12" WATER LINE TO EXISTING 6" WATER LINE AND 8" WATER LINE AS SHOWN.
3. AFTER CONNECTION IS COMPLETE OPEN BOTH NEW GATE VALVES AND VALVES LISTED IN TABLE BELOW.
4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
2499	2499	2489
2500	2500	2490
2489		2304
2490		2305
2304		2187
2305		2188
2187		
2188		



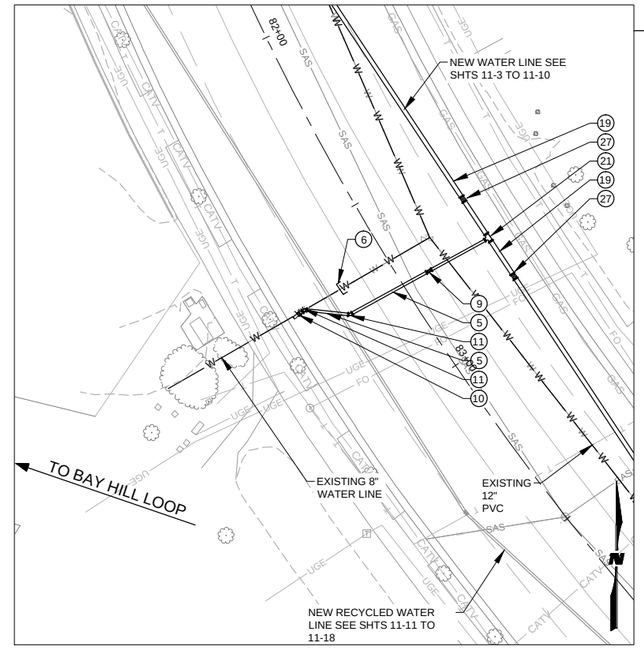
C11 CONNECTION DETAIL 11 (STA 79+03.04)

1" : 20' @ RIDGEWAY DR SE

CONSTRUCTION SEQUENCE

1. INSTALL 10" INSERTION VALVE ON EXISTING 10" WATER LINE.
2. CLOSE NEW INSERTION VALVE, CLOSE VALVES LISTED IN TABLE BELOW.
3. OPEN VALVE 2504 TO MAINTAIN WATER SERVICE TO SURROUNDING AREA
4. CONNECT NEW 12" WATER LINE TO EXISTING 10" WATER LINE AS SHOWN.
5. AFTER CONNECTION IS COMPLETE OPEN NEW 10" INSERTION VALVE, VALVES 2469 AND 2488 TO REMAIN CLOSED UNTIL WATERLINE IS COMPLETE.
6. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
7. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
2502	2502	NEW VLV*
NEW VLV*		



C12 CONNECTION DETAIL 12 (STA 82+76.12)

1" : 20' @ BAY HILL LOOP

CONSTRUCTION SEQUENCE

1. CLOSE VALVES LISTED IN TABLE BELOW.
2. CONNECT NEW 12" WATER LINE TO EXISTING 8" WATER LINE AS SHOWN.
3. AFTER CONNECTION IS COMPLETE VALVES 2720 AND 2673 TO REMAIN CLOSED. OPEN VALVES LISTED IN TABLE BELOW.
4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
2495	2502	2495
2541		2541
2502		2502
2455		2455
2456		2456
2454		2454
8286		8286
8282		8282

* See Water Line Construction Sequence in Supplemental Conditions

GENERAL NOTES

1. DETAILS SHOW FINAL CONDITION OF CONSTRUCTION. EXISTING AFTER LINE TO REMAIN IN SERVICE UNTIL NEW WATER LINE IS OPERATIONAL AND ALL TRANSFERRED CONNECTIONS MADE.
2. ALL FITTINGS AND VALVES SHALL BE RESTRAINED IN ACCORDANCE W/ THE RESTRAINED JOINT TABLE SHEET 11-22.
3. ALL VALVE NUMBERS ARE BASED ON THE CITY OF RIO RANCHO GIS OBJECT ID NO. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR VALVE IDENTIFICATION AND CLOSURES.
4. CONSTRUCTION SEQUENCE LISTED ON THESE SHEETS ARE FOR THE LOCAL CONSTRUCTION AREA SHOWN IN THE DETAILS. FOR THE OVERALL PROJECT CONNECTION PLAN SEE SPECIFICATIONS.

KEYED NOTES

	ITEM DESCRIPTION
1	6" PVC PIPE
2	6" GATE VALVE (MJxMJ)
3	6" COUPLING
4	6" 45° BEND (MJxMJ)
5	8" PVC PIPE
6	8" PLUG W/ RESTRAINTS SEE SHT 11-27
7	8"x 8" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
8	8"x6" REDUCER (MJxMJ)
9	8" GATE VALVE (MJxMJ)
10	8" COUPLING
11	8" 45° BEND (MJxMJ)
12	8" WYE W/ PLUG (MJxMJ)
13	10" PVC PIPE
14	10" PLUG W/ RESTRAINTS
15	10"x6" TEE W/ RESTRAINTS SEE SHT 11-27
16	10" GATE VALVE (MJxMJ)
17	10" COUPLING
18	10" 45° BEND (MJxMJ)
19	12" PVC PIPE
20	12" PLUG W/ RESTRAINTS SEE SHT 11-27
21	12"X8" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
22	12"X8" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
23	12"X10" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
24	12"x10" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
25	12x12 TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
26	12"x12" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
27	12" GATE VALVE (MJxMJ)
28	12" COUPLING
29	12" 45° BEND (MJxMJ)
30	12"X8" REDUCER (MJxMJ)
31	12" COUPLING
32	18"x8" TAPPING SADDLE
33	10" INSERTION VALVE
34	MJxMJ TEE
35	6" PLUG W/ RESTRAINTS SEE SHT 11-27
36	8"X6" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
37	20" DI PIPE
38	20"x12" TEE
39	20" 45° BEND (MJxMJ)
40	MJxMJ TEE
41	20" BUTTERFLY VALVE FULL BODY (FLxFL) SEE SHT 11-28
42	20" SOLID SLEEVE COUPLING
43	20" PLUG W/ RESTRAINTS SEE SHT 11-27

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
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REVISIONS (OR CHANGE NOTICES)

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PH. (505) 896-8501
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HIGH RESORT BLVD RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

INTERSECTION CONNECTION DETAILS 03

BRIAN J. AMBROGI NEW MEXICO 17610 PROFESSIONAL ENGINEER
7-21-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	

SHEET 11-21

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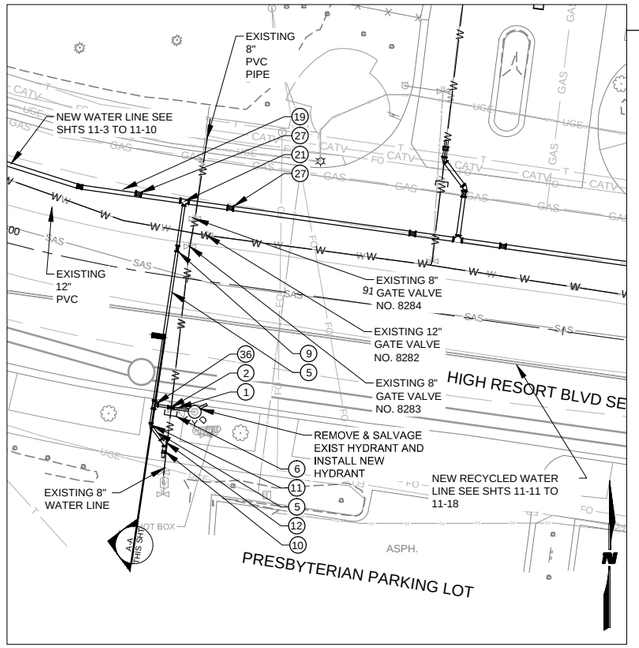


C13 CONNECTION DETAIL 13 (STA 90+45.73)

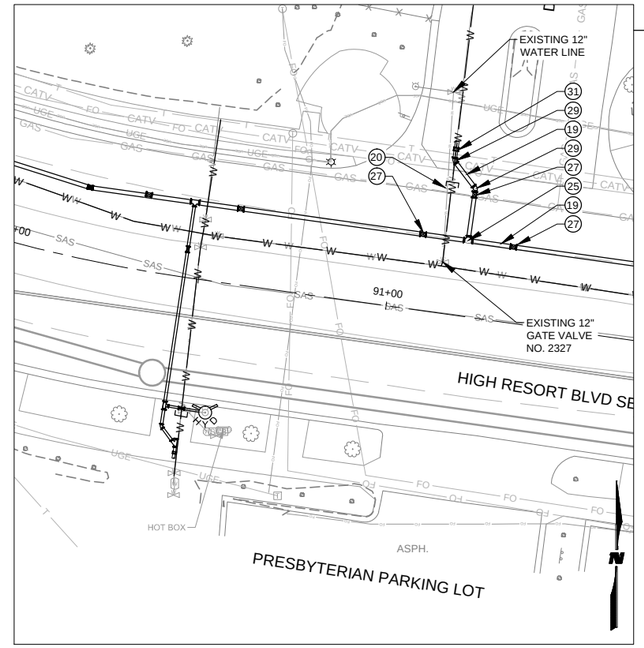
1" : 20' @ PRESBYTERIAN

CONSTRUCTION SEQUENCE

1. PRIOR TO CONNECTION CONTRACTOR TO COORDINATE WITH HOSPITAL.
2. CLOSE VALVES LISTED IN TABLE BELOW.
3. CONNECT NEW 12" WATER LINE TO EXISTING 8" WATER LINE AS SHOWN.
4. AFTER CONNECTION IS COMPLETE OPEN ALL VALVES LISTED TO BE OPENED IN TABLE BELOW.
5. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
6. REMOVE ALL VALVE BOXES, AND COLLARS FOR VALVES TO BE ABANDONED LISTED IN TABLE BELOW.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
8283*	8283	

* See Water Line Construction Sequence in Supplemental Conditions



C14 CONNECTION DETAIL 14 (STA 91+19.24)

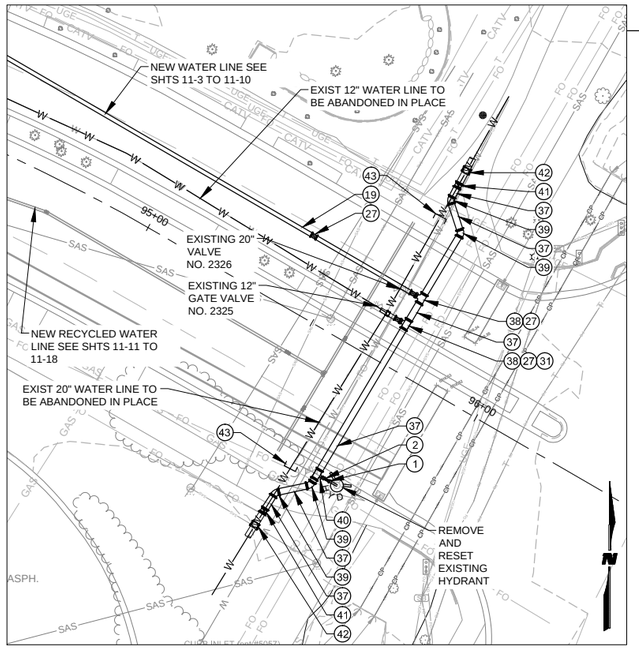
1" : 20' @ COMFORT INN

CONSTRUCTION SEQUENCE

1. PRIOR TO WATER LINE CONNECTION CLOSE VALVES LISTED IN TABLE BELOW.
2. CONNECT NEW 12" WATER LINE TO EXISTING 12" WATER LINE AS SHOWN.
3. AFTER CONNECTION IS COMPLETE OPEN ALL VALVES LISTED TO BE OPENED IN TABLE BELOW.
4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL VALVE BOXES, AND COLLARS FOR VALVES TO BE ABANDONED LISTED IN TABLE BELOW.

Valves To Be Closed	Valves to Be Abandoned	Valves to be Opened
2327 2329	2327	2329*

* See Water Line Construction Sequence in Supplemental Conditions

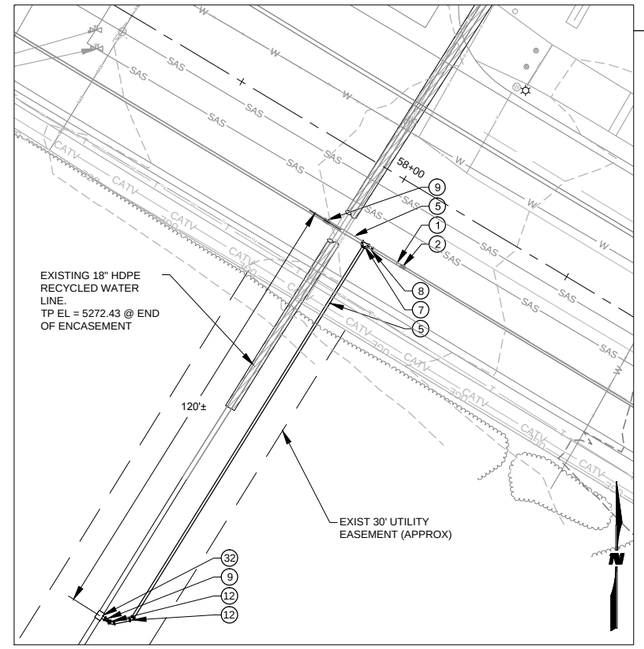


C15 CONNECTION DETAIL 15 (STA 95+65.00)

1" : 20' @ NM 528

CONSTRUCTION SEQUENCE

1. CONSTRUCT 20" DUCTILE IRON PIPE ACROSS HIGH RESORT.
2. TIE IN EXISTING 12" WATER LINE TO NEW 20" AND PLACE IN SERVICE.
3. NEW 12" WATERLINE CONNECTION TO 20" DUCTILE IRON WILL BE MADE BY REMOVING THE 12" CAP AND CONNECTING TO STUB OUT.
4. EXPOSE, CUT, AND CAP ENDS OF WATER MAINS WHERE SHOWN.
5. REMOVE ALL ABANDONED VALVES, VALVE BOXES, AND COLLARS.

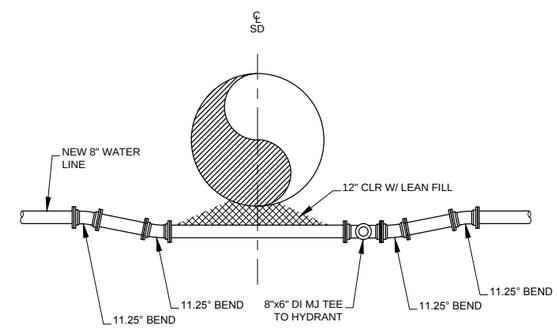


C16 RECYCLED WATER CONNECTION DETAIL 16 (STA 58+00.00)

1" : 20' @ NM 528

CONSTRUCTION SEQUENCE

1. PRIOR TO CONNECTION TO RECYCLED WATER LINE SHUT UPSTREAM VALVE.
2. MAKE CONNECTION TO EXISTING 18" HDPE WATER LINE WITH TAPPING SADDLE.
3. AFTER CONNECTION IS COMPLETE OPEN UPSTREAM VALVE TO RESTORE SERVICE.



SECTION A-A

NTS

GENERAL NOTES

1. DETAILS SHOW FINAL CONDITION OF CONSTRUCTION. EXISTING AFTER LINE TO REMAIN IN SERVICE UNTIL NEW WATER LINE IS OPERATIONAL AND ALL TRANSFERRED CONNECTIONS MADE.
2. ALL FITTINGS AND VALVES SHALL BE RESTRAINED IN ACCORDANCE W/ THE RESTRAINED JOINT TABLE SHEET 11-22.
3. ALL VALVE NUMBERS ARE BASED ON THE CITY OF RIO RANCHO GIS OBJECT ID NO. CONTRACTOR SHALL COORDINATE WITH THE CITY FOR VALVE IDENTIFICATION AND CLOSURES.
4. CONSTRUCTION SEQUENCE LISTED ON THESE SHEETS ARE FOR THE LOCAL CONSTRUCTION AREA SHOWN IN THE DETAILS. FOR THE OVERALL PROJECT CONNECTION PLAN SEE SPECIFICATIONS.

KEYED NOTES

	ITEM DESCRIPTION
1	6" PVC PIPE
2	6" GATE VALVE (MJxMJ)
3	6" COUPLING
4	6" 45° BEND (MJxMJ)
5	8" PVC PIPE
6	8" PLUG W/ RESTRAINTS SEE SHT 11-27
7	8"x 8" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
8	8"x6" REDUCER (MJxMJ)
9	8" GATE VALVE (MJxMJ)
10	8" COUPLING
11	8" 45° BEND (MJxMJ)
12	8" WYE W/ PLUG (MJxMJ)
13	10" PVC PIPE
14	10" PLUG W/ RESTRAINTS
15	10"x6" TEE W/ RESTRAINTS SEE SHT 11-27
16	10" GATE VALVE (MJxMJ)
17	10" COUPLING
18	10" 45° BEND (MJxMJ)
19	12" PVC PIPE
20	12" PLUG W/ RESTRAINTS SEE SHT 11-27
21	12"X8" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
22	12"X8" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
23	12"X10" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
24	12"x10" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
25	12x12 TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
26	12"x12" CROSS (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
27	12" GATE VALVE (MJxMJ)
28	12" COUPLING
29	12" 45° BEND (MJxMJ)
30	12"X8" REDUCER (MJxMJ)
31	12" COUPLING
32	18"x8" TAPPING SADDLE
33	10" INSERTION VALVE
34	MJxMJ TEE
35	6" PLUG W/ RESTRAINTS SEE SHT 11-27
36	8"X6" TEE (MJxMJ) W/ RESTRAINTS SEE SHT 11-27
37	20" DI PIPE
38	20"x12" TEE
39	20" 45° BEND (MJxMJ)
40	MJxMJ TEE
41	20" BUTTERFLY VALVE FULL BODY (FLxFL) SEE SHT 11-28
42	20" SOLID SLEEVE COUPLING
43	20" PLUG W/ RESTRAINTS SEE SHT 11-27

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
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FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

INTERSECTION CONNECTION DETAILS 04

BRIAN J. AMBROGI NEW MEXICO 17610 PROFESSIONAL ENGINEER LICENSED
9-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	

SHEET 11-22

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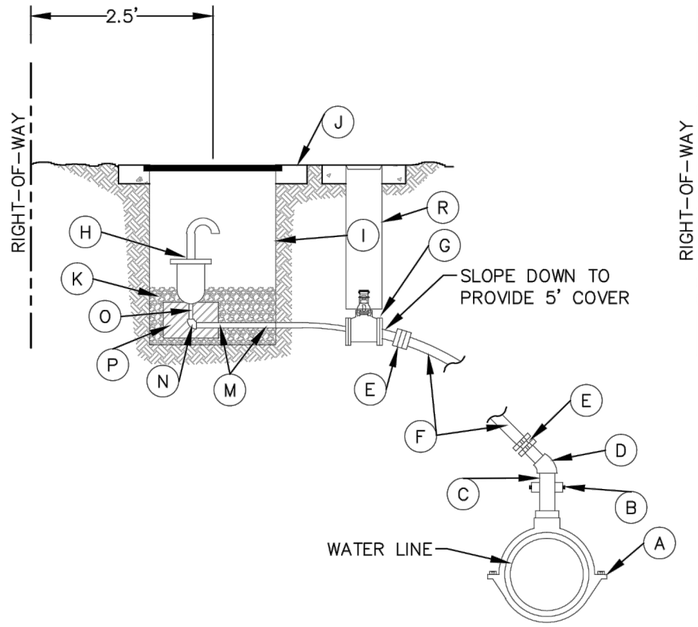

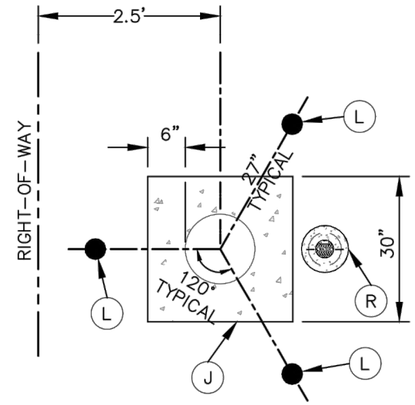

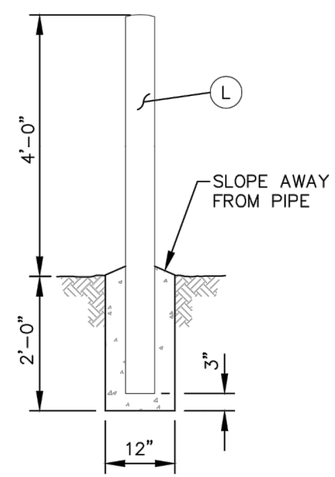

GUARD POST
DETAIL

KEYNOTES:

A. 2" FEMALE IRON PIPE THREAD SERVICE SADDLE (LEAD FREE) WITH DOUBLE 316 STAINLESS STEEL STRAPS AND 316 STAINLESS STEEL BOLTS, NUTS, AND HARDWARE.
B. 2" BRASS CORPORATION STOP (LEAD FREE), MALE IRON PIPE THREAD INLET BY FEMALE IRON PIPE THREAD OUTLET.
C. 2" BY CLOSE BRASS NIPPLE (LEAD FREE).
D. 2" BRASS 45° BEND (LEAD FREE), FEMALE IRON PIPE THREAD BY FEMALE IRON PIPE THREAD.
E. 2" BRASS ADAPTER (LEAD FREE), MALE IRON PIPE THREAD BY PACK JOINT (COPPER TUBING SIZE).
F. 2" COPPER TUBING (TYPE "K").
G. 2" BRONZE BALL VALVE (LEAD FREE) WITH HANDWHEEL.
H. 2" STAINLESS STEEL COMBINATION AIR RELEASE/VACUUM VALVE.
I. 13" BY 24" METER CAN WITH CAST IRON LID.
J. 30" BY 30" BY 6" CONCRETE COLLAR AROUND METER CAN. CONCRETE SHALL BE f'c=3,000 POUNDS PER SQUARE INCH AT 28 DAYS)
K. 6" THICK CLEAN PEA GRAVEL BED.
L. 4" STEEL POST (6' LONG) FILLED WITH CONCRETE (f'c=3,000 POUNDS PER SQUARE INCH AT 28 DAYS) AND PAINTED WITH 2 COATS OF CHROME YELLOW.
M. 2" BY 6" SCHEDULE 80 POLYVINYL CHLORIDE NIPPLE, MALE IRON PIPE THREAD BY MALE IRON PIPE THREAD.
N. 2" BRASS 90° BEND, FEMALE IRON PIPE THREAD BY FEMALE IRON PIPE THREAD.
O. 2" BY CLOSE BRASS NIPPLE, MALE IRON PIPE THREAD BY MALE IRON PIPE THREAD.
P. CONCRETE BLOCK TO STABILIZE AIR VALVE, 2 REQUIRED.
Q. WHERE WATER MAINS ARE 10" OR LESS IN DIAMETER, A 1" COMBINATION AIR RELEASE/VACUUM VALVE AND 1" TYPE "K" COPPER TUBING MAY BE USED.
R. 6" DIMENSION RATIO-18 POLYVINYL CHLORIDE PIPE AND COVER WITH CONCRETE COLLAR PER DWG. W-05.

DATE MODIFIED: APRIL 2016

The Official Seal of the City of Rio Rancho New Mexico 1981

City of Rio Rancho
Department of Public Works

2" COMBINATION AIR RELEASE/
VACUUM VALVE

DWG. NO. W-10 APRIL 22, 2016

RioRancho City of Vision

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
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2600 AMERICAN RD. SE, STE. 100
RIO RANCHO, NEW MEXICO 87124
PH. (505) 896-8001
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY DETAIL 01

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
7-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	

SHEET
11-23

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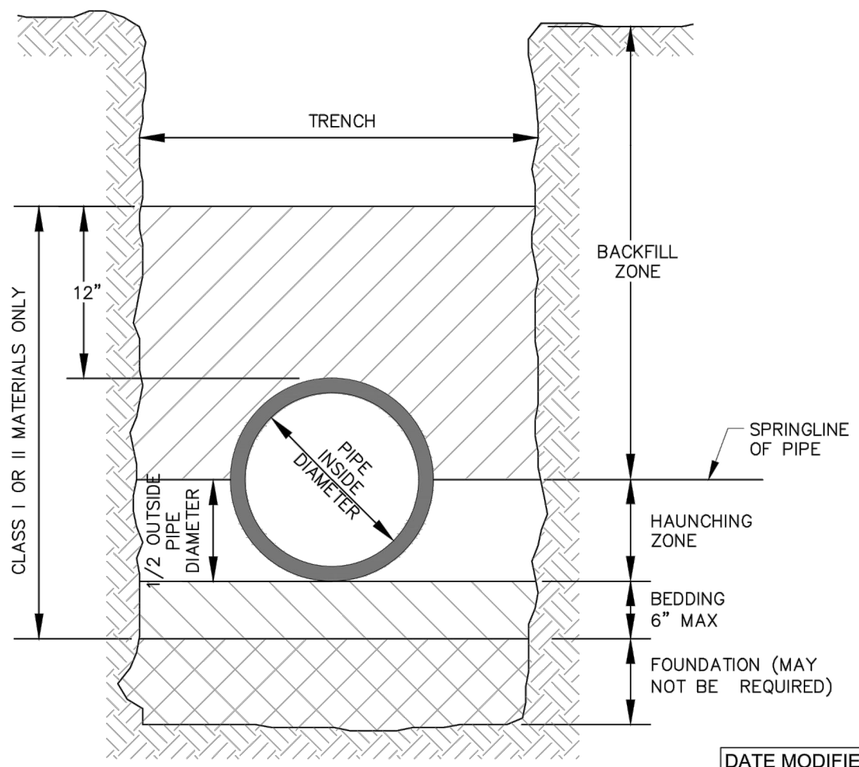
EMBEDMENT SOILS CLASSIFICTIONS		
SOILS CLASS	SOIL TYPE	DESCRIPTION
CLASS I SOILS*		MANUFACTURED ANGULAR, GRANULAR MATERIAL, 1/4 TO 1 1/2 INCHES (6 TO 40 MM) SIZE, INCLUDING MATERIALS HAVING A REGIONAL SIGNIFICANCE SUCH AS CRUSHED STONE OR ROCK, BROKEN CORAL, CRUSHED SLAG, CINDERS, OR CRUSHED SHELLS, COMPLYING TO THE REQUIREMENTS OF CLASS II SOILS.
CLASS II SOILS**	GW	WELL-GRADED GRAVELS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES. 50% OR MORE COARSE FRACTION RETAINED ON NO. 4 SIEVE. MORE THAN 95% RETAINED ON NO. 200 SIEVE. CLEAN.
CLASS II SOILS**	GP	POORLY GRADED GRAVELS AND GRAVEL-SAND MIXYURES, LITTLE OR NO FINES. 50% OR MORE COARSE FRACTION RETAINED ON NO. 4 SIEVE. MORE THAN 95% RETAINED ON NO. 200 SIEVE. CLEAN.
CLASS II SOILS**	SW	WELL GRADED SANDS AND GRAVELLY SANDS, LITTLE OR NO FINES.MORE THAN 50% OF COARSE FRACTION PASSES NO. 4 SIEVE. MORE THAN 95% RETAINED ON NO. 200 SIEVE. CLEAN.
CLASS II SOILS**	SP	POORLY GRADED SANDS AND GRAVELLY SANDS, LITTLE OR NO FINES. MORE THAN 50% OF COARSE FRACTION PASSES NO. 4 SIEVE. MORE THAN 95% RETAINED ON NO. 200 SIEVE. CLEAN.

* SOILS ARE AS DEFINED IN ASTM D2487, EXCEPT FOR CLASS I SOILS WHICH ARE DEFINED IN ASTM D2321.
** IN ACCORDANCE WITH ASTM D2487, LESS THAN 5% PASSES NO. 200 SIEVE.
FROM TABLE 701.3.A. NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2006 EDITION



GENERAL CONSTRUCTION NOTES:

1. BEDDING MATERIALS SHALL BE CLASSED AS DEFINED IN AMERICAN SOCIETY FOR TESTING AND MATERIALS STANDARD D2321. REFER TO TABLE 701.3.A OF THE CITY OF RIO RANCHO STANDARD SPECIFICATIONS, AS AMENDED FOR SOIL CLASSIFICATION DESCRIPTIONS.
2. COMPACTION TESTING SHALL BE TAKEN AT SPRINGLINE OF PIPE.
3. COMPACTION TESTING SHALL BE TAKEN AT INITIAL BACKFILL ZONE.
4. FOR PAVED AREAS, COMPACTION SHALL BE 95% STANDARD MODIFIED PROCTOR PER AMERICAN SOCIETY FOR TESTING AND MATERIALS STANDARD D1557.
5. FOR UNPAVED AREAS, COMPACTION SHALL BE 90% STANDARD MODIFIED PROCTOR PER AMERICAN SOCIETY FOR TESTING AND MATERIALS STANDARD D1557.

DATE MODIFIED: APRIL 2016

City of Rio Rancho
Department of Public Works

PIPE BEDDING

DWG. NO. S-04 APRIL 22, 2016

CITY of RIO RANCHO

REVISIONS (OR CHANGE NOTICES)

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2600 AMERICAN RD. SE, STE. 100
RIO RANCHO, NEW MEXICO 87124
PH. (505) 896-8501
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY DETAIL 02

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
7-22-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	

SHEET
11-24

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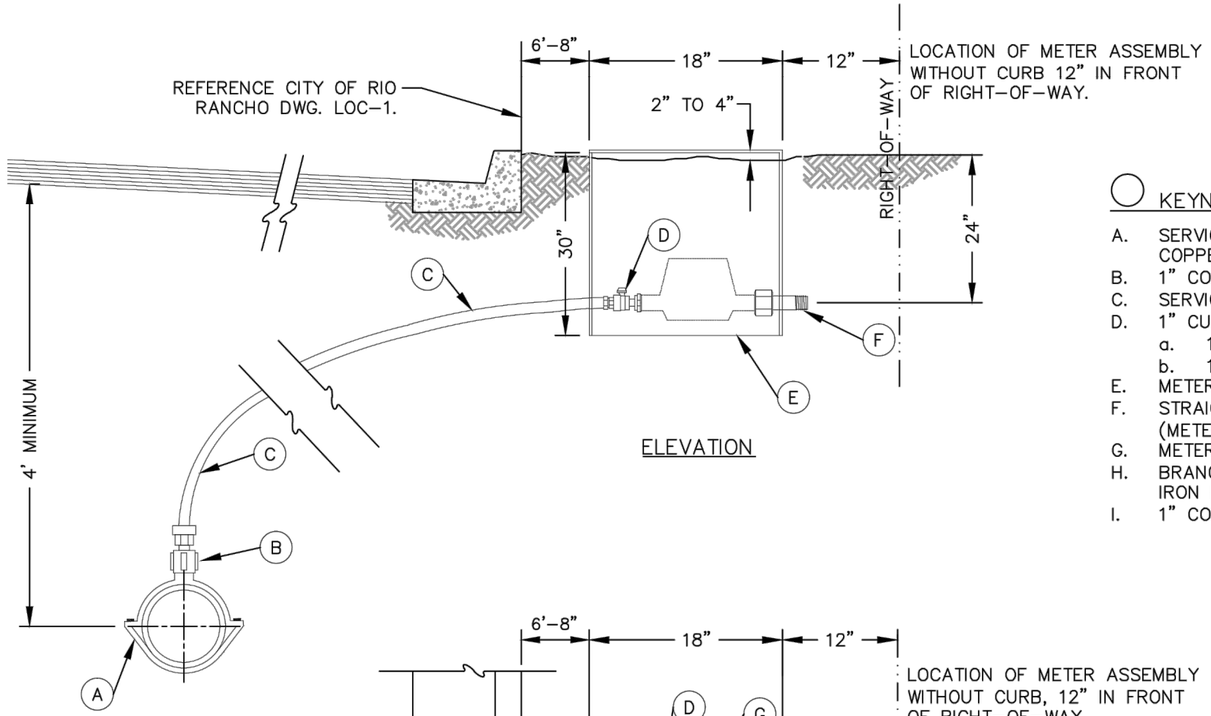

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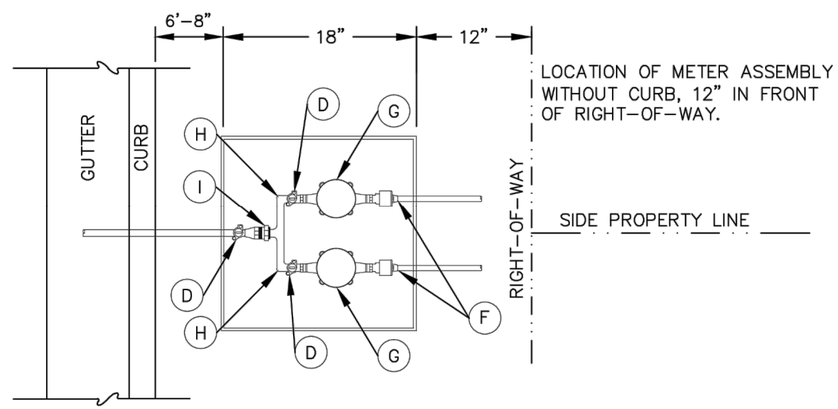

PLAN

KEYNOTES:

A. SERVICE SADDLE: MATCH MAIN LINE SIZE AND PROVIDE 1" TAP FOR TYPE "K" COPPER SERVICE LINE.
B. 1" CORPORATION STOP
C. SERVICE LINE – 1" TYPE "K" COPPER FOR SINGLE AND DOUBLE SERVICES.
D. 1" CURB STOP:
   a. 1" SERVICE LINE TO 5/8" METER
   b. 1" SERVICE LINE TO 1" METER
E. METER BOX.
F. STRAIGHT SWIVEL TAIL-PIECE – MIN 6" LENGTH. TO BE INSTALLED BY OTHERS. (METER COUPLING)
G. METER
H. BRANCH CONNECTION: 1 1/2" OR 2" SERVICE PIPE INLET AND 2 – 3/4" MALE IRON PIPE THREAD. OUTLETS.
I. 1" COMPRESSION FITTING.

GENERAL CONSTRUCTION NOTES:

1. WATER SERVICE SHALL BE FLUSHED AFTER INSTALLATION.
2. TRENCH FOR LATERAL SHALL BE A MINIMUM OF 8" WIDE.
3. SNAKE THE PIPE IN TRENCH TO ALLOW FOR EXPANSION OR CONTRACTION. ALLOW A MINIMUM OF 12" PER 100' LENGTH.
4. NEW METER BOX TO BE INSTALLED AT LOCATION OF EXISTING METER BOX.
5. SERVICE CONFIGURATIONS FOR MULTI-FAMILY LOTS SHALL BE APPROVED BY THE CITY OF RIO RANCHO'S UTILITIES OPERATIONS DIVISION PRIOR TO CONSTRUCTION.
6. ALL BRASS AND COPPER TO BE LEAD FREE PER SECTION 1417 OF THE SAFE DRINKING WATER ACT. THE "SAFE DRINKING WATER ACT" CONSISTS OF TITLE XIV OF THE PUBLIC HEALTH SERVICE ACT (42 U.S.C. 300F-300J-9) AS ADDED BY PUBLIC LAW 93-523 (DEC. 16, 1974) AND THE AMENDMENTS MADE BY SUBSEQUENT ENACTMENTS.

DATE MODIFIED: APRIL 2016

City of Rio Rancho
Department of Public Works

SINGLE OR DOUBLE SERVICE LINE & METER BOX REPLACEMENT

DWG. NO. W-06 APRIL 22, 2016

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
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2600 AMERICAN RD. SE, STE. 100
RIO RANCHO, NEW MEXICO 87124
PH. (505) 896-8021
FAX (505) 896-8501
www.wilsonco.com

HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY DETAIL 03

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	

SHEET 11-25

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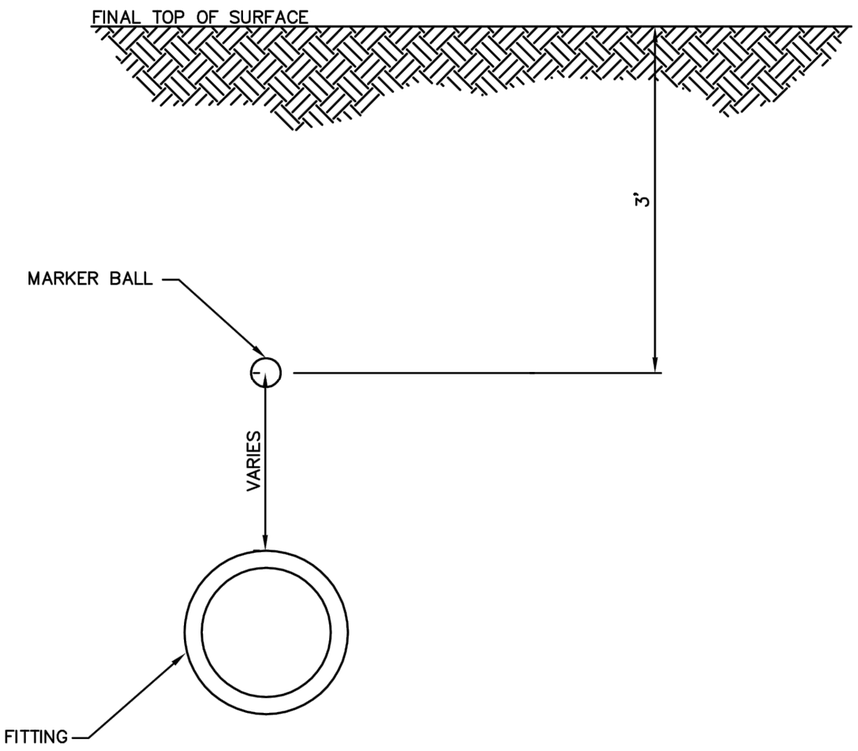

GENERAL NOTES:

1. MARKER BALL PLACEMENT LOCATIONS SHALL BE DENOTED BY THE ENGINEER OF RECORD ON THE PLANS. THESE LOCATIONS SHALL BE AS SPECIFIED WITHIN THE CITY OF RIO RANCHO'S DEVELOPMENT PROCESS MANUAL, CHAPTER II.7. THE CONTRACTOR SHALL ENSURE THAT ALL MARKER BALLS ARE PLACED IN ACCORDANCE WITH THE PLANS AND/OR AS DIRECTED BY THE CITY'S PROJECT MANAGER.
2. MARKER BALLS SHALL BE PROGRAMMABLE. PROGRAMMING WILL BE COMPLETED BY THE CITY.
3. MARKER BALLS WILL BE PURCHASED AND INSTALLED BY THE CONTRACTOR/DEVELOPER.
4. BEFORE CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A SCHEDULE WITH APPLICABLE MARKER BALL INFORMATION TO THE CITY.
5. THE MARKER BALL IDENTIFICATION NUMBER TAGS SHALL BE INCLUDED WITHIN THE RECORD DRAWINGS.

DATE MODIFIED: DEC 12, 2014

City of Rio Rancho
Department of Public Works

MARKER BALL DETAIL

DWG. NO. GU-01 NOV 2, 2012

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
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www.wilsonco.com

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PW 1611
BROADMOOR BLVD TO NM 528

UTILITY DETAIL 04

BRIAN J. AMBROSI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
7-12-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	

SHEET
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PRESSURE PIPE RESTRAINED JOINT LENGTH REQUIREMENTS–THIS PROJECT ONLY

TEST PRESSURE @ 200 PSI

LENGTHS OF PIPE TO BE RESTRAINED (APPLIES TO UNWRAPPED DUCTILE IRON AND PVC, ONLY) (2)
(FEET)

FITTING TYPE								VERTICAL BEND					
					TEE	TEE		45°		22 1/2°		11 1/4°	
PIPE SIZE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	RESTRAINED LENGTH ALONG 6"–12" BRANCH	RESTRAINED LENGTH ALONG MAIN LINE	DEAD END OR VALVE	UPPER BEND RESTRAINT	LOWER BEND RESTRAINT	UPPER BEND RESTRAINT	LOWER BEND RESTRAINT	UPPER BEND RESTRAINT	LOWER BEND RESTRAINT
4" (3)	13'	5'	3'	2'	35'	1'	27' (1)	11'	4'	6'	2'	3'	1'
6" (3)	17'	8'	4'	2'	34'	1'	38' (1)	16'	6'	8'	3'	4'	2'
8" (3)	23'	10'	5'	3'	46'	1'	50' (1)	21'	8'	10'	4'	5'	2'
10" (3)	27'	12'	6'	3'	56'	1'	60' (1)	25'	9'	12'	5'	6'	3'
12" (3)	32'	14'	7'	4'	67'	1'	71' (1)	30'	11'	15'	5'	7'	3'
20" (3)	58'	24'	12'	6'	103'	1'	105' (1)	44'	17'	21'	8'	11'	4'

(1) RESTRAINED LENGTH FOR VALVES SHALL BE PROVIDED ON BOTH SIDES OF VALVE.
(2) WHERE POSSIBLE, CONTRACTOR SHALL INSTALL FULL 20–FT JOINT OF PIPE ON EITHER SIDE OF ALL MECHANICAL JOINT VALVES, FITTINGS, AND APPURTENANCES. FOR ALL CIRCUMSTANCES WHERE A 20–FT JOINT CAN BE UTILIZED AND THE CONTRACTOR ELECTS TO USE A SHORTER PIPE JOINT, CONTRACTOR SHALL PROVIDE, AT CONTRACTOR'S SOLE EXPENSE, ALL NECESSARY JOINT RESTRAINTS REQUIRED BY TABLE ABOVE. NUMBER OR WEIGHT OF EXTRA JOINT RESTRAINTS SHALL NOT BE INCLUDED IN MEASUREMENT OR PAYMENT.
(3) PVC PIPE

THRUST RESTRAINT NOTE:

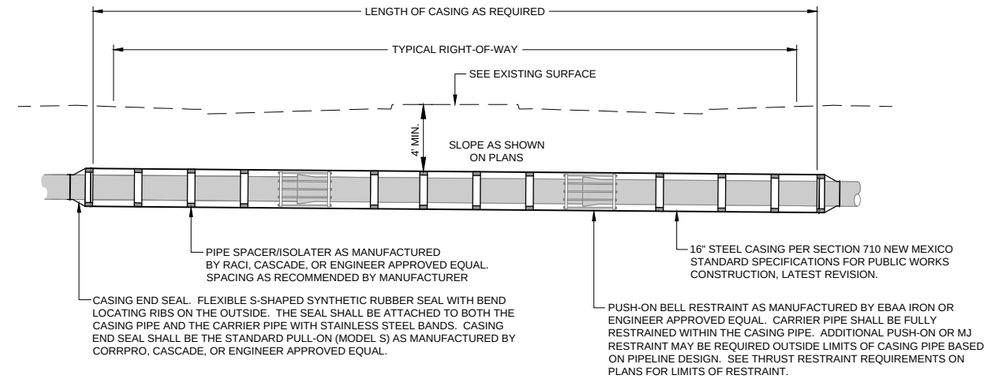
ALL BURIED VALVES, FITTINGS, AND APPURTENANCES SHALL BE MECHANICAL JOINT–TYPE UTILIZING "MEGA–LUG" STYLE MECHANICAL JOINT RESTRAINTS IN CONJUNCTION WITH "MEGA–LUG" PIPE BELL–HARNESS RESTRAINTS WHEN ADEQUATE RESTRAINED LENGTH CAN BE OBTAINED. IN THE EVENT ADEQUATE RESTRAINED LENGTHS CANNOT BE OBTAINED, CONTRACTOR SHALL IMMEDIATELY CONTACT ENGINEER FOR DETERMINATION OF APPROPRIATE ACTION TO BE TAKEN. THE EBAA IRON "RESTRAINED LENGTH CALCULATION" PROGRAM (VERSION 5.4) HAS BEEN USED TO DETERMINE MINIMUM RESTRAINED LENGTHS SHOWN IN TABLE ABOVE. THE FOLLOWING GENERAL ASSUMPTIONS APPLY TO ALL CALCULATIONS:

TRENCH TYPE ——— 3 (ACTUAL TRENCH TYPE SHALL BE PER DETAILS FOR THIS PROJECT.)
SOIL TYPE ——— SM (SILTY SAND, SAND SILT MIXTURES)
SAFETY FACTOR ——— 1.5 TO 1

TYPICAL BURY DEPTH:
4" THROUGH 12" DIAMETER PIPE 6' FT MINIMUM

TYPICAL BURY DEPTHS FOR VERTICAL OFFSETS:
4" THROUGH 12" DIAMETER PIPE 6 FT TO TOP OF UPPER BRANCH
8 FT TO TOP OF LOWER BRANCH

CONTRACTOR MAY SUBMIT SUBSTITUTE REDUCED RESTRAINED JOINT LENGTHS IF SOIL AND DEPTH OF BURY CONDITIONS WARRANT. CONTRACTOR SHALL PROVIDE SOIL TEST RESULTS AND APPROPRIATE CALCULATIONS TO SUPPORT THE LENGTH REDUCTION. SOIL TESTING AND CALCULATIONS SHALL BE PERFORMED AT CONTRACTOR'S SOLE EXPENSE.



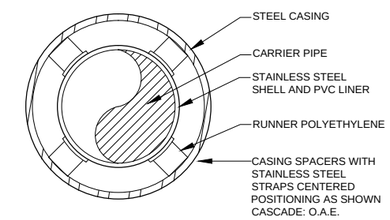
TYPICAL STEEL CASING DETAIL BORE AND JACKING

NOT TO SCALE

TABLE 710.4.2 CASING SIZE VERSUS CARRIER PIPE SIZE	
STEEL CASING DIAMETER AND WALL THICKNESS (INCHES)	DUCTILE IRON CARRIER PIPE SIZE (INSIDE DIAMETER) (INCHES)
14 SCHEDULE 30	6
16 SCHEDULE 30	8
18 STANDARD CLASS	10
22 STANDARD CLASS	12
24 SCHEDULE 20	14
26 SCHEDULE 20	16
30 0.375" WALL	18
36 0.375" WALL	24

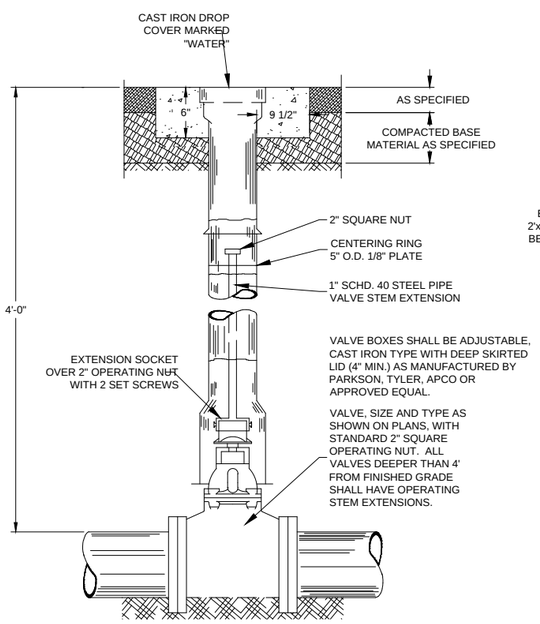
TABLE 710.4.2

NOT TO SCALE



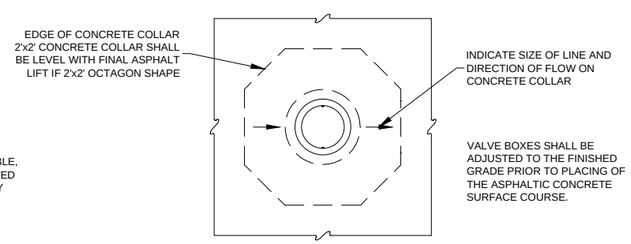
CASING SPACER DETAIL SECTION THRU SPACER

NOT TO SCALE



VALVE BOX ASSEMBLY DETAIL

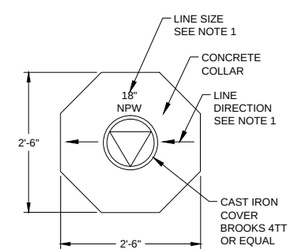
NOT TO SCALE



NOTES:
1. MECHANICAL RESTRAINTS REQUIRED ON ALL FITTINGS AND VALVES.
2. ALL FITTINGS SHALL USE MEGA LUGS RESTRAINTS.
3. GATE VALVE AND BOXES IN UNIMPROVED ROADS OR EASMENTS SHALL HAVE A 2'x2' CONCRETE COLLAR INSTALLED AT ONE FOOT BELOW EXISTING GRADE OR NATURAL GRADE.
4. A MECHANICAL RESTRAINT SYSTEM SHALL BE UTILIZED ON FITTINGS AND PIPING FOR THRUST RESTRAINT. CONCRETE THRUST BLOCKING TO BE USED ONLY FOR SPECIAL CONDITIONS, (SUCH AS, CAPS WHERE MAIN WILL BE EXTENDED IN THE FUTURE) OR AS SPECIFICALLY APPROVED BY THE ENGINEER.
5. FOR VALVES IN UNIMPROVED ROADS, THE VALVE BOX AND COVER SHALL BE BURIED 12" BELOW EXISTING GRADE AND SHALL ALSO BE MARKED (FOR LOCATION PURPOSES) BY TWO REBAR.

POTABLE WATER LINE LID DETAIL

NOT TO SCALE



NOTES

1. TOP OF CONCRETE COLLAR SHALL BE STAMPED WITH THE LINE SIZE, CONTENTS, AND DRIECTION. MINMUM LETTER SIZE SHALL BE 3" IN HEIGHT.

RECYCLED WATER LINE LID DETAIL

NOT TO SCALE

AS PART OF THE CITY'S CONSERVATION EFFORT, THIS SITE USES RECYCLED WATER FOR IRRIGATION

DO NOT DRINK
NO BEBER

COMO PARTE DEL PROGRAMA DE CONSERVACION DE AGUA DE LA CIUDAD, EN ESTE LUGAR SE USA AGUA RECICLADA PARA IRIGAR

NON-POTABLE WATER SIGN

NOT TO SCALE

A8 TYPICAL BFV ASSEMBLY (WITH VALVE BOX)
NOT TO SCALE

CITY of RIO RANCHO

NO.	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			
6			
7			

REVISIONS (OR CHANGE NOTICES)

WILSON & COMPANY
2600 AMERICAN RD. SE, STE. 100
RIO RANCHO, NEW MEXICO 87124
PH. (505) 896-8501
FAX (505) 896-8501
www.wilsonco.com

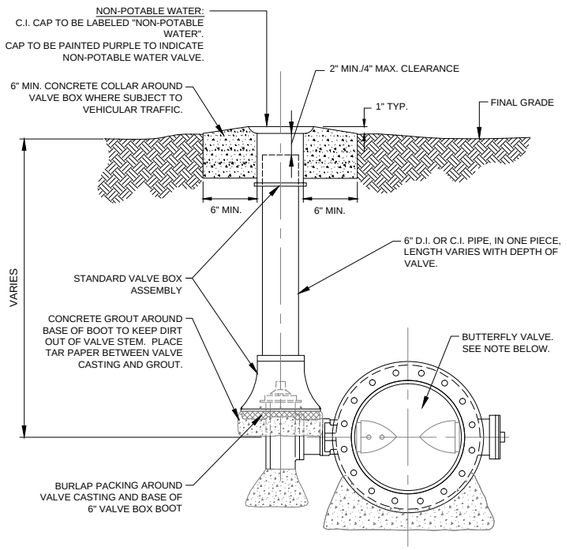
HIGH RESORT BLVD RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

UTILITY DETAILS 05

BRIAN J. AMBROGI NEW MEXICO 17610 PROFESSIONAL ENGINEER 7-27-16

PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	
SHEET	11-27

M:\MSD\16-600-034-00\2_DISCIPLINES_SHEETS\03_PLAN & PROFILES\UTILITY\DETAILS\UTILITY DETAILS\66034_DET_02.DWG10/12/2016 3:23 PM



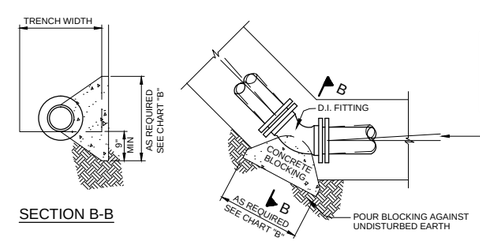
VALVE REQUIREMENT NOTES:

250 PSI SERVICE:
MUELLER CO. MODEL, XPII CLASS 250B, FOR BURIED SERVICE, MJ X MJ, OR ENGINEER APPROVED EQUAL.

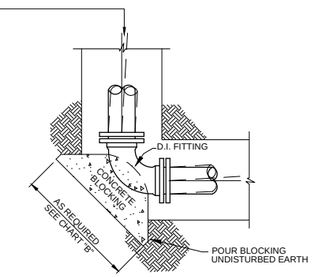
A1 TYPICAL BFV ASSEMBLY (WITH VALVE BOX)
NOT TO SCALE

	THRUST BLOCK SIZE - CHART "B"				
FITTING OR APPURTENANCE	MINIMUM SQUARE FOOT OF SOIL BEARING AREA *				
PIPE SIZES AND PRESSURES / BLOCKING ARRANGEMENT	20" PIPE	12" PIPE	10" PIPE	8" PIPE	6" PIPE
	150 PSI	150 PSI	150 PSI	150 PSI	150 PSI
90° BEND	40.26	20.4	14.4	9.4	5.5
45° BEND	24.09	12.3	8.7	5.8	3.4
22-1/2" BEND	14.63	7.5	5.3	3.5	2.2
11-1/4" BEND	9.57	4.9	3.5	2.3	2.2
DEAD ENDS, TEES, AND HYDRANTS	28.16	14.4	10.1	6.7	3.9

* BASED ON ASSUMED 2,000 PSF SOIL BEARING CAPACITY AND ALLOWABLE DEFLECTION TOLERANCE.



FOR DUCTILE IRON (D.I.) PIPE ONLY, A MAXIMUM ALLOWABLE DEFLECTION ANGLE OF ±2.5 DEGREES IS PERMITTED AT EACH SIDE OF 90°, 45°, 22-1/2°, OR 11-1/4° HORIZONTAL BENDS AND AT VALVES. FOR PCV PIPE - A ZERO DEGREE (0°) DEFLECTION ANGLE IS ALLOWED.



45° HORIZONTAL BEND
CONCRETE THRUST BLOCKING DETAIL
N.T.S. (22 1/2° & 11 1/4° BEND SIMILAR)

90° HORIZONTAL BEND
CONCRETE THRUST BLOCKING DETAIL
N.T.S.

CITY of RIO RANCHO
City of Vision

NO.	DESCRIPTION	DATE	BY
7			
6			
5			
4			
3			
2			
1			

REVISIONS (OR CHANGE NOTICES)

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HIGH RESORT BLVD
RECONSTRUCTION PROJECT
PW 1611
BROADMOOR BLVD TO NM 528

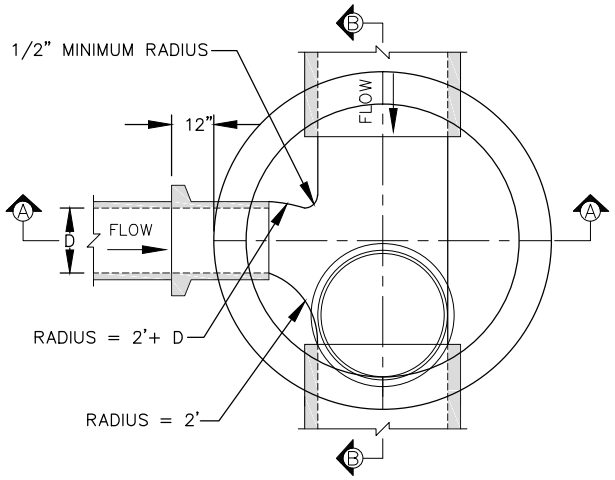
UTILITY DETAILS 06

BRIAN J. AMBROGI
NEW MEXICO
17610
LICENSED PROFESSIONAL ENGINEER
7-21-16

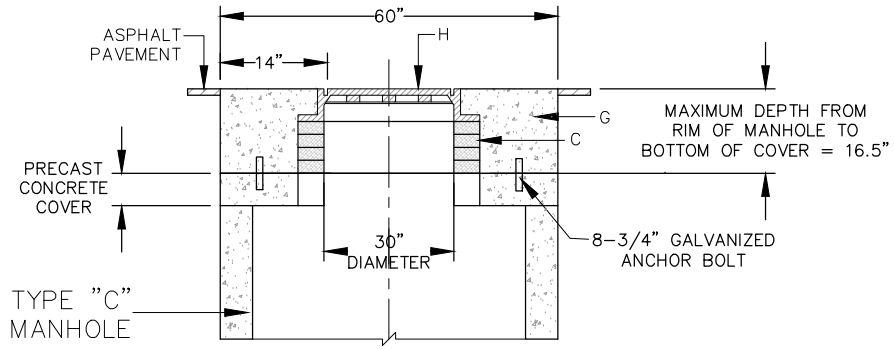
PROJECT NO.	1660003400
DESIGNED BY:	BJA, JMW
DRAWN BY:	CRU, RMG
CHECKED BY:	BJA, CAP
DATE:	AUGUST 2016
DPW CHK:	

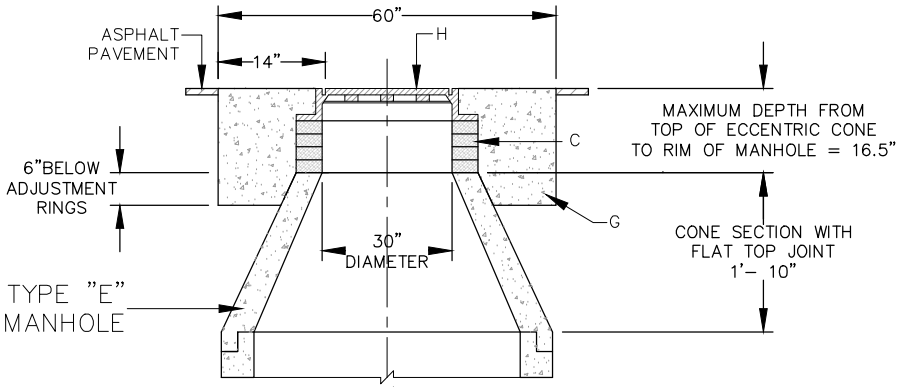
SHEET
11-28

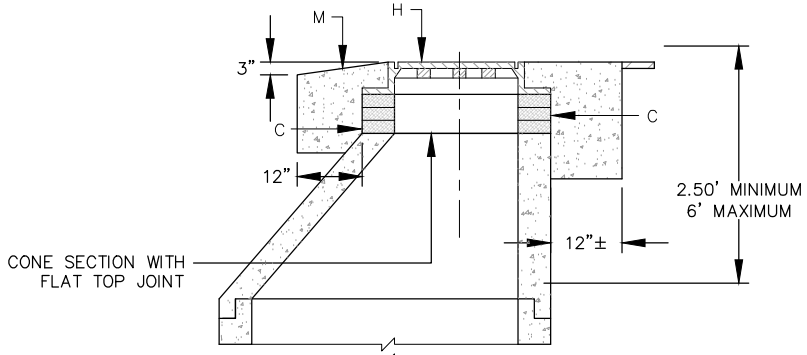
M:\MSD\16-600-034-00\2_DISCIPLINES_SHEETS\03_PLAN & PROFILES\UTILITY\DETAILS\UTILITY DETAILS\66034_DET_03.DWG10/12/2016 3:23 PM

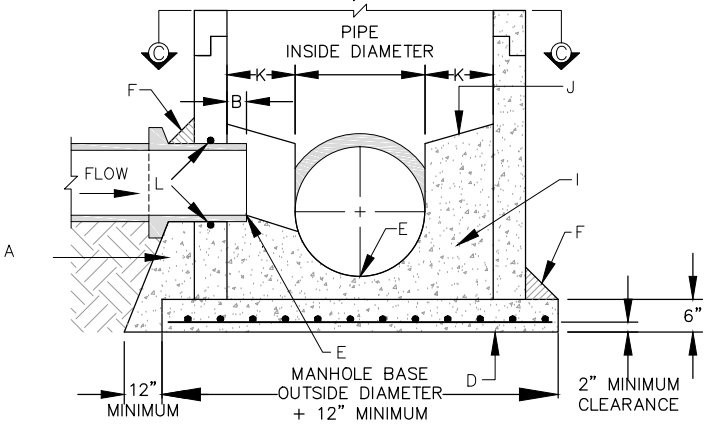


SECTION C

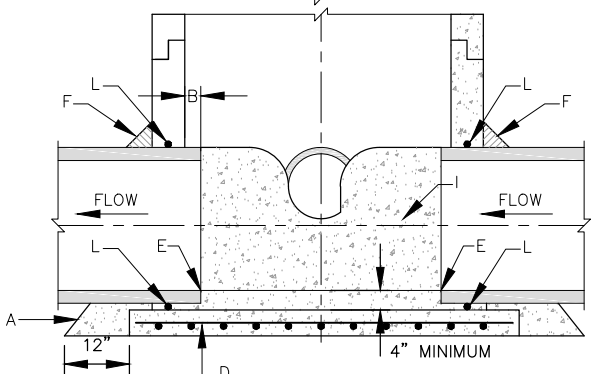








SECTION A



SECTION B

DATE MODIFIED: SEPTEMBER 2016

City of Rio Rancho
Department of Public Works

STANDARD CONCRETE MANHOLE
TYPE "C" & "E"

DWG. NO. S-03-01

APRIL 22, 2016