



STAFF REPORT

Report To: Board of Supervisors

Meeting Date: August 18, 2022

Staff Contact: Carol Akers, Purchasing & Contracts Administrator and Darren Schulz, Public Works Director

Agenda Title: For Possible Action: Discussion and possible action regarding a proposed amendment to Contract No. 21300207 (“Amendment”) for Farr West Engineering (“FWE”) to provide engineering design and construction support services for Zone A of the Southeast Mandatory Sewer Extension Project (“Project”) and engineering design services for Zone B of the Project, for an additional \$346,505, resulting in a total not to exceed amount of \$396,494. (Carol Akers, CAkers@carson.org and Randall Rice, RRice@carson.org)

Staff Summary: The Project will design and construct sanitary sewer infrastructure in southeastern Carson City where groundwater contaminate levels are high, due in part to the high density of residential septic systems. City staff completed a formal Request for Qualifications process (RFQ 21300207) before selecting FWE. FWE completed the preliminary engineering phase of the Project under Contract No. 21300207 for \$49,989. The proposed Amendment includes surveying, a geotechnical investigation and design for Zones A and B of the Project, plus construction support services necessary to complete construction for Zone A.

Agenda Action: Formal Action / Motion

Time Requested: Consent

Proposed Motion

I move to approve the Amendment as presented.

Board's Strategic Goal

Efficient Government

Previous Action

August 5, 2021 – The Board of Supervisors approved \$1,000,000 in funding for the Project under the Plan of Expenditure through the Coronavirus Local Fiscal Recovery Fund, American Rescue Plan Act (ARPA).

Background/Issues & Analysis

The high density of septic systems in the Project area have resulted in groundwater nitrates exceeding the federally mandated levels for drinking water in the Project area. Due to the contamination issue identified, a program was developed approximately 20 years ago to construct City sewer throughout the affected areas and require properties to abandon their septic systems and connect to City sewer. The program consisted of 12 phases, with 9 of the 12 phases completed to date (Phases 1 through 8 and 11).

To address these final phases, a formal RFQ was released on October 7, 2021, with proposals accepted through 2:00 pm on November 4, 2021. The RFQ included the full scope of the services and the federal requirements for this project. Three proposals were received, and the City’s Review and Selection Committee selected FWE for this contract. FWE was selected above the other firms based on its qualifications, project

experience, technical capacity and project approach. FWE achieved the highest combined average ranking among all committee members during the evaluation.

The initial goal of the project which is now complete, was for FWE to provide preliminary engineering services for the remaining Project phases, which included evaluating alternatives to address groundwater contamination and impacts to City well numbers 38 and 43. This preliminary engineering design phase was initiated based on the estimated high construction costs to finish all remaining portions of the sewer connection program and the lack of available funding to complete them all.

As part of the preliminary engineering stage, FWE developed a technical memorandum which identified the increasing trend in nitrate accumulation and summarized the recommended alternatives, including preliminary layouts, costs, maintenance, operation and efficiency to address nitrate contamination. It also included recommended priorities for the remaining phases.

During the preliminary engineering stage, FWE established alternative options for the Project. In doing so, FWE combined Project Phases 9 and 10, then sub-divided that combined area into four zones: Zones A, B, C and D. Staff is now recommending moving to final design under the Amendment to this Contract, for FWE to provide (1) concurrent design services for Alternative A1 for Zone A of the Project and Alternative B1.3 for Zone B, and (2) construction engineering for Alternative A1 in Zone A.

Staff recommends designing Zone B as part of this project even though construction funds have not been identified, to provide "shovel-ready projects" if grants or other funding becomes available. FWE will perform Zone B design under the Amendment, and staff anticipates designing Phase 12 using in-house resources.

Applicable Statute, Code, Policy, Rule or Regulation

NRS 625.530(3); NRS chapter 332

Financial Information

Is there a fiscal impact? Yes

If yes, account name/number: Sub-Project P320121007 of master grant G070121010 (ARPA Grant)
Grant Fund Capital Improvements Account / 2750600-507010

Is it currently budgeted? Yes

Explanation of Fiscal Impact: This Project was approved as part of the ARPA Plan of Expenditures and tracked as Project P320121007; this will be a sub-project of the ARPA master grant No. G070121010. Account 2750600-507010 will be reduced by a not to exceed amount of \$396,494; the budget available is \$961,641.75.

Alternatives

Do not approve the amendment and/or provide alternative direction to staff.

Attachments:

[Sewer Extension Program Alt Analysis for Phases 9,10,12 - Final Draft.pdf](#)

[21300207 Amendment 1.pdf](#)

[21300207 Executed Contract.pdf](#)

Board Action Taken:

Motion: _____ 1) _____ Aye/Nay
2) _____

(Vote Recorded By)

Carson City Public Works

Mandatory Sewer Extension Program for Phases 9, 10 and 12

OWNER:

Carson City Public Works

ENGINEER:

FARR WEST
ENGINEERING

5510 LONGLEY LANE
RENO, NEVADA 89511
(775) 851-4788



08/11/2022

Prepared by Keith Karpstein, P.E.

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TECHNICAL MEMORANDUM #1

CARSON CITY PUBLIC WORKS

SE MANDATORY SEWER EXTENSION PROJECT

Prepared For: Carson City Public Works
Prepared By: Savannah Hughes, EI
Reviewed By: Keith Karpstein, PE
Date: August 11, 2022
Subject: Preliminary Alternatives Analysis

1.0 BACKGROUND

Nitrate contamination in groundwater underlying areas of southeast Carson City has long been established. In the early 1990s, a study was commissioned reviewing water supply well sample results and potential nitrate sources; ultimately the widespread use of septic systems in the southeast area of Carson City was determined to be the cause. In 1994, sanitary sewer collection system piping began to be installed into the area of concern. Installation of piping continued over the next 15 years; to date the project is approximately 75% complete. Three project phases encompassing up to approximately 140 current and future connections remain to be completed in the subject area.

Widespread literature and region-specific studies correlate the density of septic tanks to the presence of nitrate concentrations. “Fate and Transport of Septic Tank Derived Nitrogen in an Alluvial Aquifer, Carson Valley, Nevada” was a study conducted in partnership with the United States Geological Survey, Desert Research Institute, and the University of Nevada, Reno, Hydrological Science Program. This study concluded that the elevated nitrate concentrations are “most likely the result of septic tank use” [Jacobson, J., et. al.]. This conclusion was based partly on data showing the nitrate levels decreasing over time after the removal of the septic tanks. These reduced levels were shown to decrease at a faster rate particularly when the aquifer continued to be pumped. High density septic tank areas are defined within the study as more than 0.6 septic tanks per acre. Low septic tank densities are defined as less than 0.3 septic tanks per acre. The areas classified as “high septic tank density” have two to three times greater nitrate concentrations.

The existing properties located within this area, referenced as phases 9, 10, and 12 of the *Southeast Carson Sewer Extension Plan*, are currently served by individual septic systems. These systems are contributing to the continuing rise in nitrate levels that are negatively impacting groundwater resources. **Figure 1** shows the location of the phases within Carson City, as well as the location of each active well.



Figure 1: Vicinity map of Carson City and phase locations

Table 1 summarizes the attributes of phases 9, 10, and 12 in relation to septic tank densities.

Table 1: Septic tank densities by phase

	Area (acres)	Septic Tanks (units)	Density (tanks per acre)
Phase 9	60	58	0.96
Phase 10	98	54	0.55
Phase 12	38	20	0.52

A study specific to the Carson Valley supports the causal relationship between the use of septic tanks and high nitrate levels (Shiple and Rosen, 2005). This is of great interest to the Carson City Public Works Department due to the negative impacts of nitrate.

Nitrate is a chemical compound with one nitrate ion and three oxygen atoms. Many nitrate salts are soluble in water and are therefore a highly discussed constituent in both drinking water and wastewater. The maximum contaminant level (MCL) for nitrates is 10 mg/L, as a measurement of nitrogen. Some health complications that may arise due to high nitrate exposure include methemoglobinemia, otherwise known as blue baby syndrome, thyroid disease, and birth defects [NDEP].

Exceeding the nitrate MCL is a Tier 1 violation under 40 CFR 141.202(b). In addition to staying below the MCL of 10 mg/L, the utility has additional requirements if nitrate levels exceed specific levels below the MCL. If levels exceed 5 mg/L sampling frequency is increased to three times per week. If levels exceed 8 mg/L, the water will be pumped to waste until levels drop below 8 mg/L. These requirements make operation of the wells difficult, costly, and time intensive. This also greatly impacts the reliability of the water source.

Figure 2 and Figure 3 illustrate the rising nitrate levels over time, for wells 38 and 43, respectively.

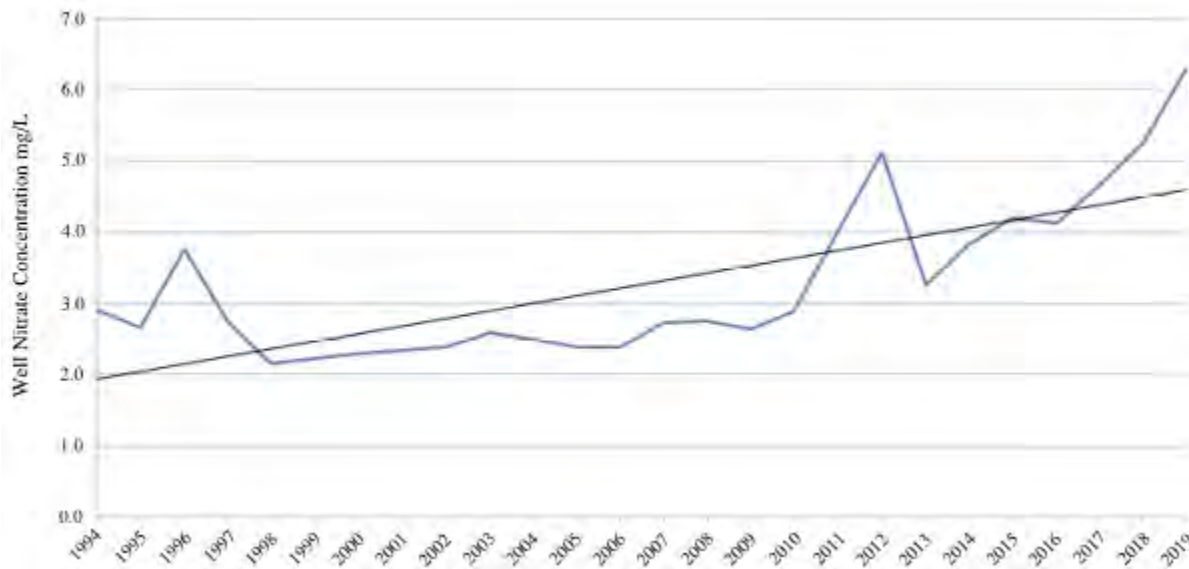


Figure 2: Well 38 nitrate concentrations from 1994-2019, during the summer months (July to October).

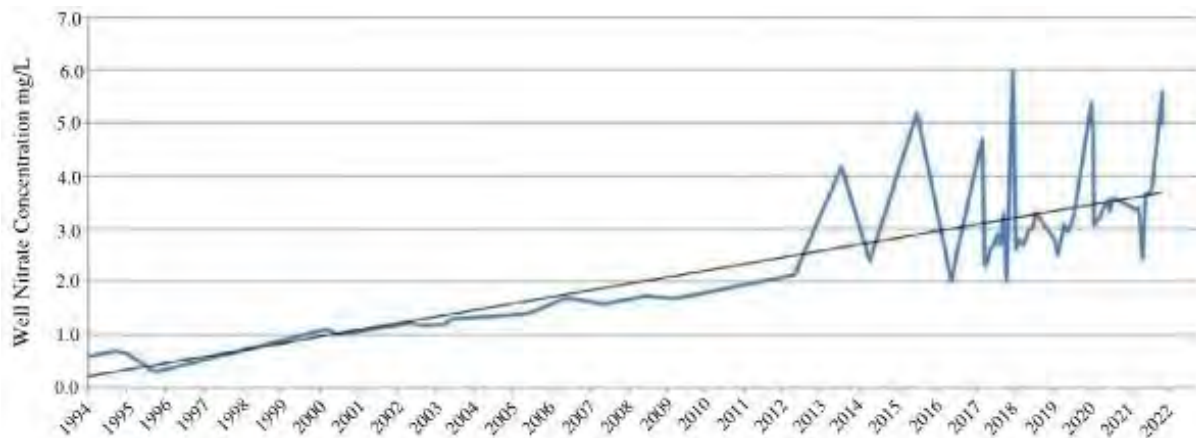


Figure 3: Well 43 nitrate concentrations from 1994 to 2022, taken on March 30th of each year, provided by Carson City Public Works.

1.1 PURPOSE

Several alternatives are being explored with the intent of reducing nitrogen concentrations at wells 38 and 43. These alternatives can be generally grouped into the following:

- **Alternative 1:** Extending the existing sewage collection system with the use of gravity sewer mains, force mains, municipal and residential lift stations;
- **Alternative 2:** Extending the existing sewage collection system with limited residential lift stations and septic tank denitrification systems installed at residencies not feasible to connect to the gravity sewer system without the installation of a municipal lift station;
- **Alternative 3:** Denitrification systems installed in all residential septic systems;
- **Alternative 4:** Nitrate treatment installed at wells no. 38 and 43. This alternative is not fully investigated within the scope of the technical memorandum but is mentioned to provide a more holistic explanation of the project options.

This technical memorandum explores several iterations of these alternatives to develop the best solution for Carson City Public Works and residents. **Appendix A** includes all the plan and profile drawings for the alternatives. **Appendix B** includes the corresponding cost estimates for all the alternatives and sub-alternatives.

2.0 PHASES 9 AND 10 ALTERNATIVES

For the preliminary evaluation of this project, three main alternatives have been established for Phase 9 and 10. Phases 9 and 10 are being evaluated jointly due to their close geographic proximity, and therefore the interconnected nature of the proposed improvements.

2.1 ALTERNATIVE 1

Alternative 1 includes collection system extension with gravity sewer, force mains, and residential and municipal lift stations. Residential lift stations are generally referring to prefabricated grinder pump stations that service an individual residence. These are proposed when the sewer laterals are unable to gravity flow into the sewer main. Municipal lift stations would be part of the overall collection system, connecting to a gravity sewer main and a force main. Any house connecting to the collections system will have their septic tank abandoned. It is assumed the individual homeowners will bear the cost of septic tank abandonment, lateral extensions, and prefabricate grinder pump stations, if required.

Alternative 1 consists of several sub-alternatives to provide multiple considerations to avoid the installation of a municipal lift station. Because of the complexities of Alternative 1 and these sub-alternatives, they have been further categorized by geographical Zones, as shown in **Figure 4**. These Zones have been established, corresponding to the houses serviced by each municipal lift station and direction of flow. The total number of lots in Phases 9 and 10 accumulate to be 114. A summary of each Zone is provided.

- Zone A – No municipal lift station and 1 residential lift stations; 47 lots.
- Zone B – Bennett lift station and 4 residential lift stations; 39 lots.
- Zone C – Heidi lift station and no residential lift stations; 24 lots.
- Zone D – No municipal lift station and 4 residential lift stations; 4 lots.

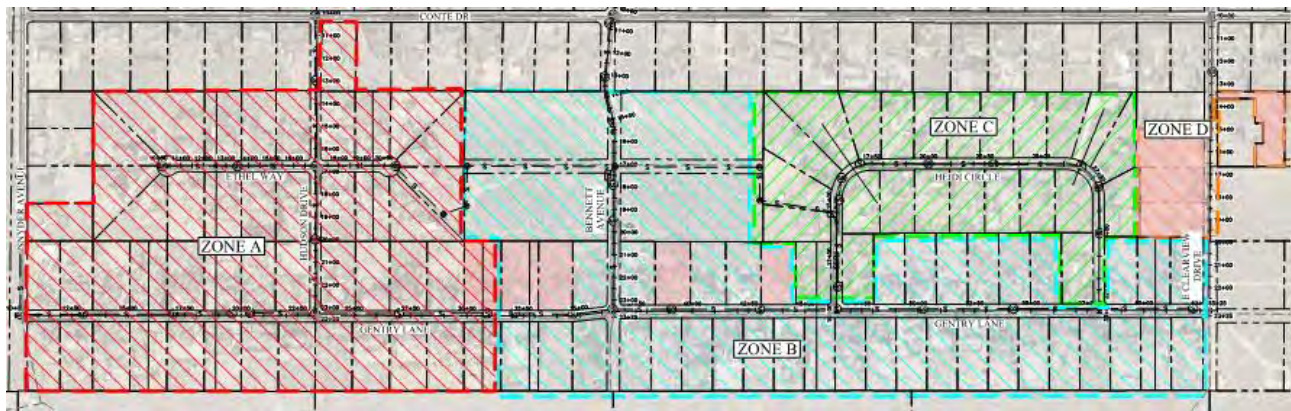


Figure 4: Phases 9 & 10, Alternative 1 Zones

2.1.1 Zone A

Zone A has one feasible alternative within Alternative 1. Zone A will consist of gravity sewer mains and one private residential lift station is anticipated. Gravity sewer within Zone A conveys collected sewage from Gentry Lane to Snyder Avenue and Hudson Drive. The flow from Hudson Drive collects from Ethel

and conveys the sewage to the existing system on Conte Drive. See sheets P1, P4 and P6 for the plan and profile design of Zone A.

Zone A is estimated to cost \$3,772,239 and will be installed independently of the preferred sub-alternatives for each Zone within Alternative 1. All costs for each zone are developed based on high, volatile prices seen in 2021 and 2022 and include a 30% contingency along with a 15% design and construction management add on. See Sheet 1 in Appendix B for a detailed cost breakdown of Alternative 1 in Zone A.

2.1.2 Zone B (Bennett Lift Station)

Zone B includes three sub-alternatives. The three different sub-alternatives and their respective costs are provided in **Table 2**.

Table 2: Zone B, Alternative 1 Capital Costs

Zone B Alternatives	Total Capital Cost
B 1.1	\$3,573,717
B 1.2	\$3,493,719
B 1.3	\$3,151,094

Alternative B 1.1: Gravity sewer mains will convey wastewater from Gentry Lane and down Bennett Avenue. A lift station on Bennett will be installed to then convey the wastewater to an existing manhole on Conte Drive. Four residential lift stations will be required. See sheet P5 in Appendix A for plan and profile design and Sheet 2 in Appendix B for a detailed cost estimate.

Alternative B 1.2: Gravity sewer mains will convey wastewater from Gentry Lane and down Bennett Avenue. In place of the Bennett Lift Station, gravity mains will be installed within existing easements as well as acquiring a new property easement parcel to the south (APN 010-261-08). This will convey sewage to Ethel Way solely via gravity. Four residential lift stations will be required. Gravel surfacing is proposed along the easements to provide maintenance as needed. See sheet BC 1.2 within Appendix A and Sheet 3 in Appendix B for a detailed cost estimate.

Alternative B 1.3: To avoid installing the Bennett lift station, the gravity sewer main along Gentry Lane can be deepened to approximately 25 feet, allowing wastewater to be conveyed to the Zone A gravity sewer main. This alternative will eliminate the need to provide any immediate gravity mains or a lift station along Bennett Avenue. However, if the empty lots along Bennett Avenue were to be developed, a future main and lift station would still be necessary. This Alternative would not work in conjunction with Zone C Alternative 1.2, unless the gravity main were to be extended all the way to Ethel Way. See sheet P1 within Appendix A and Sheet 4 in Appendix B for a detailed cost estimate.

2.1.3 Zone C (Heidi Lift Station)

Zone C includes two sub-alternatives. **Table 3** summarizes the capital costs for each sub-alternative for Zone C Alternative 1.

Table 3: Zone C, Alternative 1 Capital Costs

Zone C Alternatives	Total Capital Cost
C 1.1	\$1,922,055
C 1.2	\$2,112,949

Alternative C 1.1: Install gravity sewer, the Heidi Lift Station, and accompanying force main to convey sewage to Gentry Lane. See sheet P7 within Appendix A and Sheet 5 in Appendix B for a detailed cost estimate.

Alternative C 1.2: To avoid installing the Heidi Lift Station, a new property easement parcel (APN 010-333-08) would need to be acquired to then install a gravity sewer main from Heidi to transport sewage south to Bennett Avenue. Gravel surfacing is proposed along the easements to provide maintenance as needed. The alternative is the most compatible when working in conjunction with Zone B, Alternative 1.1 and 1.2 and does not work with Zone B, 1.3. See sheet BC 1.2 within Appendix A and Sheet 6 in Appendix B for a detailed cost estimate.

2.1.4 Zone D (Clearview)

Zone D includes three sub-alternatives. **Table 5** summarizes the cost of each sub-alternative for Zone D Alternative 1.

Table 4: Zone D, Alternative 1 Capital Costs

Zone D Alternatives	Total Capital Cost
D 1.1	\$145,464
D 1.2	\$488,636
D 1.3	\$702,562

Alternative D 1.1: Involves the installation of a manifold sanitary sewer force main and residential lift stations for four parcels. The manifold force main would connect to the Zone B infrastructure at a manhole at the Gentry Lane and E Clearview Drive intersection. The manifold system will be routed to the existing system on Conte Drive or routed to Gentry Lane and Zone B infrastructure. The estimate shown examines the route to Conte Drive. All residential lift stations would be provided by owners. See sheet P3 within Appendix A and Sheet 7 in Appendix B for a detailed cost estimate.

Alternative D 1.2: Install shallow gravity sewer main with four residential lift stations provided by owners. The main would convey sewage to Gentry Lane. See Sheet D 1.2 within Appendix A and Sheet 8 in Appendix B for a detailed cost estimate.

Alternative D 1.3: To avoid the installation of residential lift stations, the gravity sewer main will be deeper than it otherwise would be in Alternative 1.2, allowing all laterals to connect to the sewer main and flow via gravity, roughly 22' at its deepest point. While this does result in the elimination of residential lift station expenses, it increases the cost of construction due to the deeper trench excavation and the need for 60" manholes. See Sheet D 1.3 within Appendix A and Sheet 9 in Appendix B for a detailed cost estimate.

2.2 ALTERNATIVE 2

Alternative 2 involves the installation of denitrification units at the residential septic tanks, as a means of avoiding the use of municipal lift stations. This alternative assumes that easements cannot be acquired, and the Heidi and Bennett Lift Stations would be needed. All parcels within Zones B, C, and D would require denitrification units, Zone A does not require the use of denitrification as it can utilize gravity sewer mains without the need for a municipal lift station. Carson City would be responsible for the installation of the denitrification units, whereas operation and maintenance would be the financial responsibility of the either the homeowner or an outside agency called the Responsible Management Entity (RME). This approach is discussed further in Section 5.0 and operation and maintenance in Section 7.0.

Table 5: Alternative 2 – Capital Costs

Alternative 2	Capital Cost
Zone A	\$3,772,239
Zone B	\$2,947,850
Zone C	\$1,861,800
Zone D	\$310,300

*These costs are capital only and do not consider the present worth of service and RME

2.2.1 Zone A

Zone A will not require any denitrification as all lots can collectively work without the need of a municipal lift station. See **Section 2.1.1 Zone A** for a description of the proposed gravity system. See Sheet 1 of Appendix B for a detailed cost estimate.

2.2.2 Zone B

Alternative 2 for Zone B will opt out of the installation of the Bennett lift station, instead proposing that all residencies within Zone B will have denitrification units installed. Zone B also dictates Alternative 2 for Zone C as Zone C would require flow into Zone B. Therefore, choosing this alternative for Zone B includes all lots for Zone B and C combined (39 lots in Zone B and 24 lots in Zone C). See Sheet 10 of Appendix B for a detailed cost estimate.

2.2.3 Zone C

Zone C consists of 24 lots around Heidi Circle. These lots would require flow to Gentry Lane located within Zone B under Alternative C 1.1. If Zone B Alternative 2 is chosen, then no other option is possible except the denitrification of the 24 lots within Zone C. However, if one of the sub-alternatives proposed in Alternative 1 for Zone B is installed, Zone C denitrification can still be used independently of Zone B. See Sheet 11 of Appendix B for a detailed cost estimate.

2.2.4 Zone D

Zone D consists of 4 lots on Clearview Drive. Denitrification of these lots can work independently of any other option for the other zones. See Sheet 12 of Appendix B for a detailed cost estimate.

2.3 ALTERNATIVE 3

Alternative 3 is the least complex alternative that is being explored. Rather than extending the collection system to connect to the houses in Phases 9 & 10, each septic tank will be retrofitted to have a denitrification system installed. No collection system infrastructure would be considered. This alternative would require the installation of 113 denitrification units as one lot is currently vacant. This alternative has an associated capital cost of \$8,765,975. This number does not consider the present worth of service and RME. Operation and maintenance responsibilities and challenges are further discussed in Section 5.0. See sheet 13 in Appendix B for a detailed cost estimate.

3.0 PHASE 12

Phase 12 consists of 15 lots and exists independently of Phases 9 & 10. Phase 12 considers three design approaches, consistent with the three alternatives that are considered for Phases 9 & 10. Because Phase 12 is independent of Phases 9 & 10, those cost of the chosen alternatives for each Phase group will be additive. Phase 12 does not include Zones as applied in Phase 9 and 10 as there are no municipal lift stations included in the alternative options. **Table 6** summarizes the costs for each alternative for Phase 12. **Appendix A** includes all of the plan and profile drawings for the alternatives.

Table 6: Phase 12 Alternatives Capital Costs

Alternatives	Total Capital Cost
1	\$1,368,749
2	\$1,517,284
3	\$1,163,625

3.1 ALTERNATIVE 1

Alternative 1 for Phase 12 includes the use of gravity sewer main, residential lift stations, and a manifold force main. The gravity sewer main will flow the length of Arthur Drive, conveying sewage to an existing manhole at Center Drive. A manifold force main will be serviced by a residential lift station at each of the parcels requiring one along Silver Sage Drive (4 parcels total), north of Arthur Drive. Installation of residential lift stations will be the responsibility of the homeowners. See Sheets P17 and P18 for the plan and profile views and sheet 14 in Appendix B for a detailed cost estimate.

3.2 ALTERNATIVE 2

Alternative 2 proposes a gravity sewer main along Arthur Drive. However, rather than installing a manifold force main and residential lift stations along Silver Sage Drive, the parcels that would otherwise require them would opt for individual denitrification systems at each of the septic tanks (4 parcels total). See sheet 15 in Appendix B for a detailed cost estimate.

3.3 ALTERNATIVE 3

Alternative 3 proposes the installation of denitrification systems at each of the septic tanks within Phase 9. A total of 15 lots and denitrification units. This alternative does not involve any infrastructure associated with the public collection system. See sheet 16 in Appendix B for a detailed cost estimate.

4.0 ALTERNATIVE 4 -WELL DENITRIFICATION

Rather than installing infrastructure to prevent the contamination of groundwater with nitrates from the septic tanks, Alternative 4 explores the option of removing nitrates at the wells. This alternative would need to be installed at each well that has high nitrate levels.

The Environmental Protection Agency (EPA) has approved three methods for nitrate removal. These options include ion exchange, reverse osmosis, and electro dialysis.

Ion exchange is the most common option for treating larger amounts of water. Ion exchange produces deionized water that is highly pure and void of most minerals. A resin acts to facilitate the ion exchange mechanism, which requires routine recharging. This can only be done at special facilities. Failing to regenerate or replace the resin will lead to an increase in nitrate concentrations within the potable water so maintaining the resins is incredibly important.

University of California Davis provides “Technical Report 6: Drinking Water Treatment for Nitrate”. **Table 7** of this Report provides estimated costs for ion exchange treatment.

Table 7: Selected Published Costs* of Ion Exchange Systems for Nitrate Removal [UC Davis]

System Flow**	< 0.5 MGD	0.5 – 5 MGD	5 + MGD
Annualized Capital Cost (\$/1000 Gal)	0.37 – 1.21 [1]	0.28 – 0.94 [2,3]	0.28 – 0.61 [3,4,5]
O&M Cost (\$/1000 gal)	0.60 - 4.65 [1]	0.46 – 1.25 [2,3]	0.37 – 0.87 [3,4,5]
Total Annualized Cost (\$/1000 gal)	0.97 – 5.71 [1]	0.74 – 2.19 [2,3]	0.65 – 1.44 [3,4,5]

*Costs have been adjusted to 2010 dollars with 7% interest over 20 years.

**When available, costs are based on actual system flow rather than design capacity.

[1] Minnesota Department of Agriculture (N.D), not adjusted to 2010 dollars, 20 year amortization without interest. [2] Guter (1995). [3] Conlon et al. (1995). [4] Meyer et al. (2010). [5] Drewry (2010).

Within the UC Davis Report, several case studies are provided. Case #1 has similar flow and nitrate levels as the Carson City wells.

Table 8 provides a summary of the treatment system attributes to illustrate what a system for Carson City would resemble. The capital costs given in the study were given in 2007 dollars and converted to 2022 dollars using the Engineering News-Record historical Construction Cost Index (ENR-CCI) inflation factors. The annual operation and maintenance values were converted utilizing the U.S. Bureau of Labor Statistics Consumer Price Index factors to provide a better assessment of labor cost changes associated with labor maintenance. These costs are estimated for a single well and would be applicable to both Well 38 and Well 43.

Table 8: Case #1 Ion Exchange Treatment Characteristics [UC Davis]

Characteristic	Value	
Flow	400 GPM	
Nitrate Concentration (as N)	7 – 12 mg/L	
Treatment System Footprint	30' x 35'	
Gallons Treated Before Regeneration is Needed	220,000 – 300,000	
Brine Disposal Option	Wastewater	
Capital Cost	\$350,000	(2007 Dollars)
	\$576,000	(2022 Dollars)
Annual Operation and Maintenance	\$66,500	(2007 Dollars)
	\$92,000	(2022 Dollars)

An important consideration with these treatment options is the disposal of brine. The waste product of ion exchange is a highly concentrated brine, consisting of all the ions removed during the treatment process.

The utility will need a method of disposing this brine. Oceans are the optimal disposal option, however, due to the inland nature of Carson City, this is not practical. The disposal option in the Case referred to previously disposed of the brine via the sewage system, one of the least expensive options. An assessment of the impact this would have on sewage treatment would need to be done prior to considering this as a viable option for Carson City. Other disposal options include deep well injection, trucking off-site, drying beds, and advanced treatment.

5.0 SEPTIC TANK DENITRIFICATION SYSTEM

Onsite wastewater treatment and disposal systems have been a well-known practice for several years. In 1980 the U.S Environmental Protection Agency issued the *Design Manual: Onsite Wastewater Treatment and Disposal Systems*. **Table 9** is modified from Table 1 of the *Design Manual* and provides the percent of total nitrogen removal from various on-site nitrogen removal processes. While multiple processes are included for reference, only some of them are practical options for the needs of Carson City. **Figure 5** provides a process flow schematic of a residential nitrate removal system, provided by Lombardo Associates.

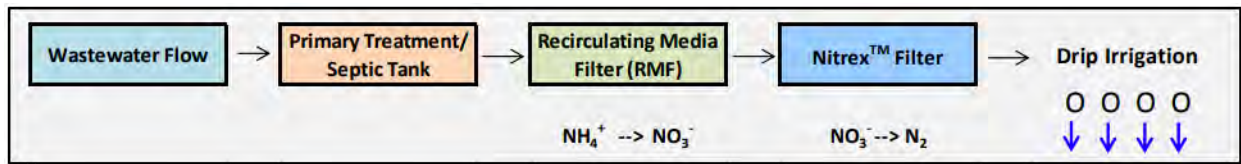


Figure 5: Residential Nitrate removal flow diagram from Lombardo Associates.

Table 9: Nitrogen removal processes and removal percentages [EPA, 1980].

Process	Percent Total Nitrogen Removal
Recirculating Sand Filters	40-50
Recirculating Sand Filters (w/ recycle to septic tank or anaerobic upflow filter)	70-80
Septic Tank Fixed Film System (w/ recycle to septic tank or anaerobic upflow filter) ^a	65-75
Sequencing batch reactor	50-80
Source Separation and removal	60-80
Source separation treatment applied to both systems, recombined	40-60
Intermittent Sand Filter, Anaerobic Upflow Filter	55-75

^a Commercially available systems

^b Source separation options are only available for new homes due to the cost prohibiting nature of retrofitting them for installation.

Several manufacturers are available for septic tank denitrification systems. When these systems are installed, it is typical for the manufacturer to also act as a Responsible Management Entity for the units due to the fallibility of homeowners maintaining these systems themselves. These are typically achieved through Public Private Partnerships and involve utility payments by the serviced parcels.

6.0 CAPITAL COSTS

Capital costs for each alternative include mobilization, demobilization, temporary erosion control, temporary traffic control where applicable and a 15% design and construction management cost. A 30% contingency is included to account for volatility in the supply chain in recent years, preliminary nature of the cost estimate, and unknown construction date. A complete breakdown of each alternative and sub-alternative is provided in Appendix B of this memorandum.

Table 10: Phases 9 & 10, Alternative 1 Capital Costs

ALTERNATIVE 1 – LIFT STATIONS OR GRAVITY MAINS								
ZONE A		ZONE B		ZONE C		ZONE D		Total Range
Sub-Alt	Cost	Sub-Alt	Cost	Sub-Alt	Cost	Sub-Alt	Cost	
A1.1	\$3,772,238	B1.1	\$3,573,717	C1.1	\$1,922,055	D1.1	\$145,464	8.9-10.1 million
		B1.2	\$3,493,719	C1.2	\$2,112,949	D1.2	\$488,636	
		B1.3	\$3,151,094			D1.3	\$702,562	

Table 11: Phases 9 & 10, Alternative 2 Capital Costs

ALTERNATIVE 2 – GRAVITY MAIN IN ZONE A AND DENITRIFICATION IN ZONES B, C, D				
ZONE A	ZONE B	ZONE C	ZONE D	TOTAL
\$3,695,479	\$2,947,850	\$1,861,800	\$310,300	\$8,815,429

Table 12: Phases 9 & 10, Alternative 3 Capital Costs

ALTERNATIVE 3 – ALL ZONES USE DENITRIFICATION
\$8,765,975

Table 13: Phase 12 Alternatives

PHASE 12 ALTERNATIVES	COST
ALTERNATIVE 1 – Gravity Main On Arthur And SSFM Manifold On Silver Age	\$1,368,749
ALTERNATIVE 2 – Denitrification On Silver Sage Lots, Gravity Main On Arthur	\$1,517,284
ALTERNATIVE 3 - Denitrification For All Lots	\$1,163,625

7.0 OPERATION AND MAINTENANCE

The different alternatives will vary in terms of operational and maintenance requirements. Municipal lift stations require significantly more maintenance and operator hours than a gravity sewer system does. The power required also adds to annual operating costs.

Gravity sewer mains and manholes typically require routine inspection via closed-caption television video (CCTV).

In a scenario where septic tank denitrification is used, the maintenance could be the responsibility of the homeowner, however as mentioned previously, it is recommended that an RME take control of denitrification maintenance. Assuming RME cost is approximately \$100,000 in labor and testing per year and a total of 128 denitrification systems between Phases 9, 10 and 12, the monthly payment per household would be approximately \$65. Providing maintenance over a 20-year period would cost \$2,000,000 without interest or 2.7 million with the notion of a flat forward rate of inflation at 3%.

The residential lift stations installation costs are expected to be the responsibility of the homeowners, therefore all maintenance associated with them will be the homeowner's responsibility as well.

8.0 CONCLUSION

The recommended solution for Carson City Public Works is to expand the sewer collection system to include Phases 9, 10, and 12. When comparing the first three alternatives with Alternative 4, the most important distinction is that the sewer collection alternatives provide a method of preventing the contamination at the source, rather than removing it at a later point. This approach also provides protection to the critical aquifer to the city. The primary benefit to this regarding efficacy, is that it is a solution that will prevent contamination of all groundwater and would be effective even if new wells are drilled in the future. In terms of principal alone, it is preferable to prevent contamination; therefore, Alternative 4 is the least favorable option.

The recommended solution for Phases 9 and 10 is a combination of the sub-alternatives within Alternative 1, with the exact alignments and sewer main depths to be determined in the design phase. As previous studies have shown, nitrate levels do drop consistently with the removal of septic tank systems. The denitrification units that are proposed in Alternatives 2 and 3 result in a few key issues. Primarily, the denitrification units present a notable constructability, maintenance, and reliability issue. Several site constraints will exist, solely due to the unique nature of the 128 occupied residential parcels. If the denitrification units are not installed or are unable to be installed, this will greatly decrease the effectiveness of the nitrate prevention efforts. Lastly, it has been shown that denitrification units have not generally been well maintained by homeowners. If these systems are left unmaintained then they offer no advantage over a typical septic system. Without the ability to enforce maintenance, homeowner-maintained denitrification units are not considered to be a reliable solution to the nitrate levels. Because of the lack of responsibility homeowners have shown in maintaining these systems, it is industry practice for these denitrification units to be maintained by an outside entity. This option will result in increased coordination expenses for Carson City. For these reasons, it is preferred that Phases 9 and 10 opt for sewer expansion via a combination of gravity sewer mains and municipal lift stations.

The recommended solution for Phase 12 is Alternative 1. This alternative includes gravity main and a manifold sanitary sewer force main, connected to residential lift stations where needed.

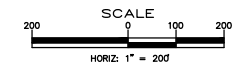
For properties requiring a residential lift station to connect to the extended sewer system, the best way to achieve effective nitrate prevention would be for the utility to provide additional funding for the residential lift stations. This would eliminate the risk of homeowners opting out of connecting to the newly extended system as allowed per Carson City Municipal Code. However, if Carson City does not provide this funding, Alternative 1 - for all phases - is still the most favorable option because it provides a mechanism for the proper disposal of sewage.

9.0 REFERENCES

- EPA, *Work Breakdown Structure-Based Cost Model for Reverse Osmosis/Nanofiltration Drinking Water Treatment*, June 2019. Website. Retrieved from: <https://www.epa.gov/sites/default/files/2019-07/documents/wbs-ronf-documentation-june-2019.pdf>
- NDEP, *Drinking Water Quality In Nevada: Common Problems for the Well Owner*, 2012, PDF. Retrieved from: https://ndep.nv.gov/uploads/water-labcert-dwtesting-docs/common_probs.pdf
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- UC Davis, *Technical Report 6: Drinking Water Treatment for Nitrate*, PDF, Retrieved from: 139107.pdf (ucdavis.edu)
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APPENDIX A

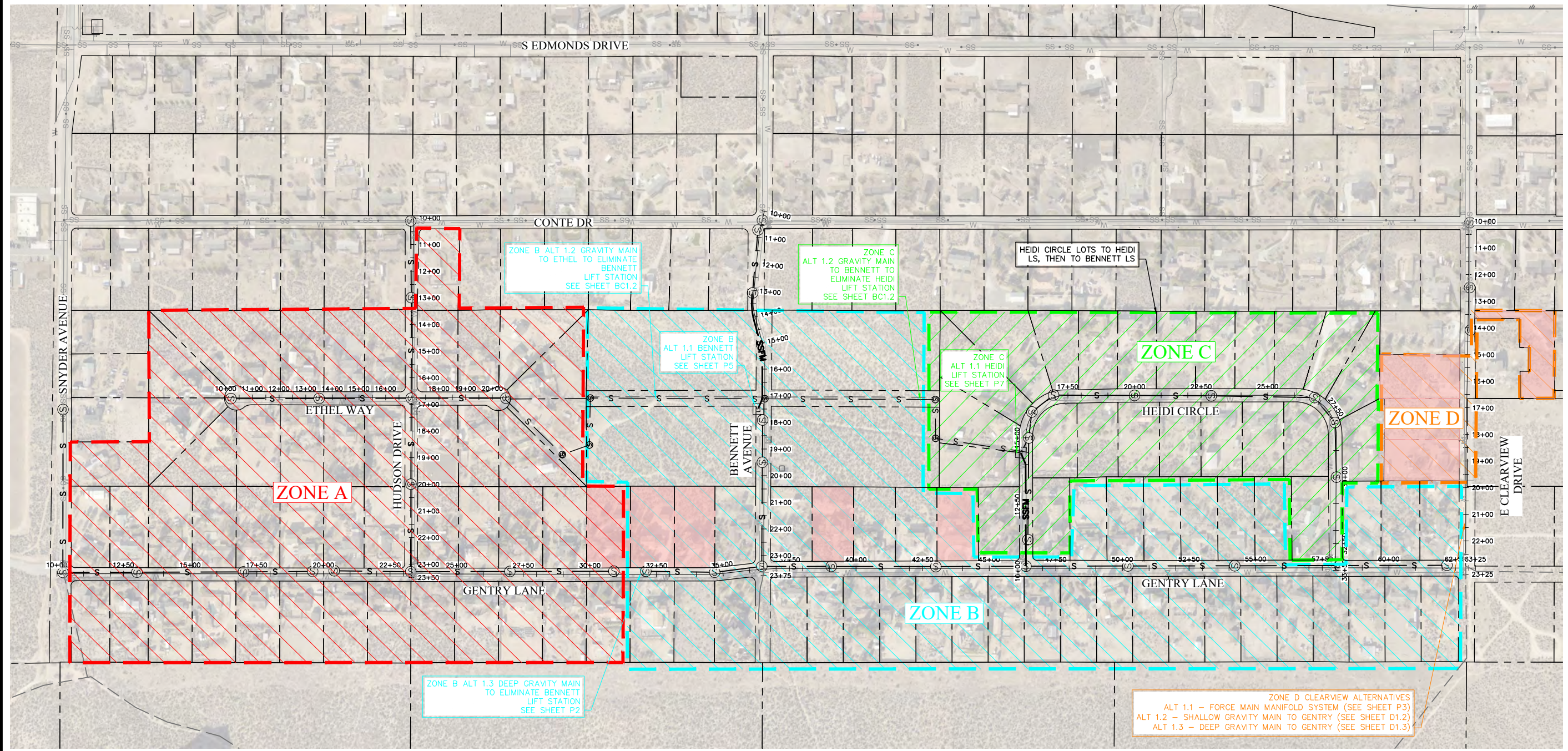
PRILIMINARY PLAN SET



DESIGNED BY: KK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

CARSON CITY PUBLIC WORKS DEPARTMENT
 3505 BUTTI WAY
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- LOTS REQUIRING INDIVIDUAL LIFT STATIONS - 9 TOTAL.
- ZONE A, 47 LOTS TOTAL, NO MUNICIPAL LIFT STATION REQUIRED.
- ZONE B - BENNETT LIFT STATION, 63 LOTS BEING SERVED WITH MUNICIPAL LIFT STATION WHICH INCLUDE 24 LOTS FROM HEIDI CIRCLE.
- ZONE C - HEIDI LIFT STATION, 24 LOTS BEING SERVED WITH MUNICIPAL LIFT STATION.
- ZONE D, 4 LOTS, NO MUNICIPAL LIFT STATIONS PROPOSED.

ZONE B ALT 1.3 DEEP GRAVITY MAIN TO ELIMINATE BENNETT LIFT STATION SEE SHEET P2

ZONE B ALT 1.2 GRAVITY MAIN TO ETHEL TO ELIMINATE BENNETT LIFT STATION SEE SHEET BC1.2

ZONE C ALT 1.2 GRAVITY MAIN TO BENNETT TO ELIMINATE HEIDI LIFT STATION SEE SHEET BC1.2

ZONE B ALT 1.1 BENNETT LIFT STATION SEE SHEET P5

ZONE C ALT 1.1 HEIDI LIFT STATION SEE SHEET P7

HEIDI CIRCLE LOTS TO HEIDI LS, THEN TO BENNETT LS

ZONE D CLEARVIEW ALTERNATIVES
 ALT 1.1 - FORCE MAIN MANIFOLD SYSTEM (SEE SHEET P3)
 ALT 1.2 - SHALLOW GRAVITY MAIN TO GENTRY (SEE SHEET D1.2)
 ALT 1.3 - DEEP GRAVITY MAIN TO GENTRY (SEE SHEET D1.3)

PHASES 9 AND 10



REV.	DATE	DESCRIPTION	BY	APP'D

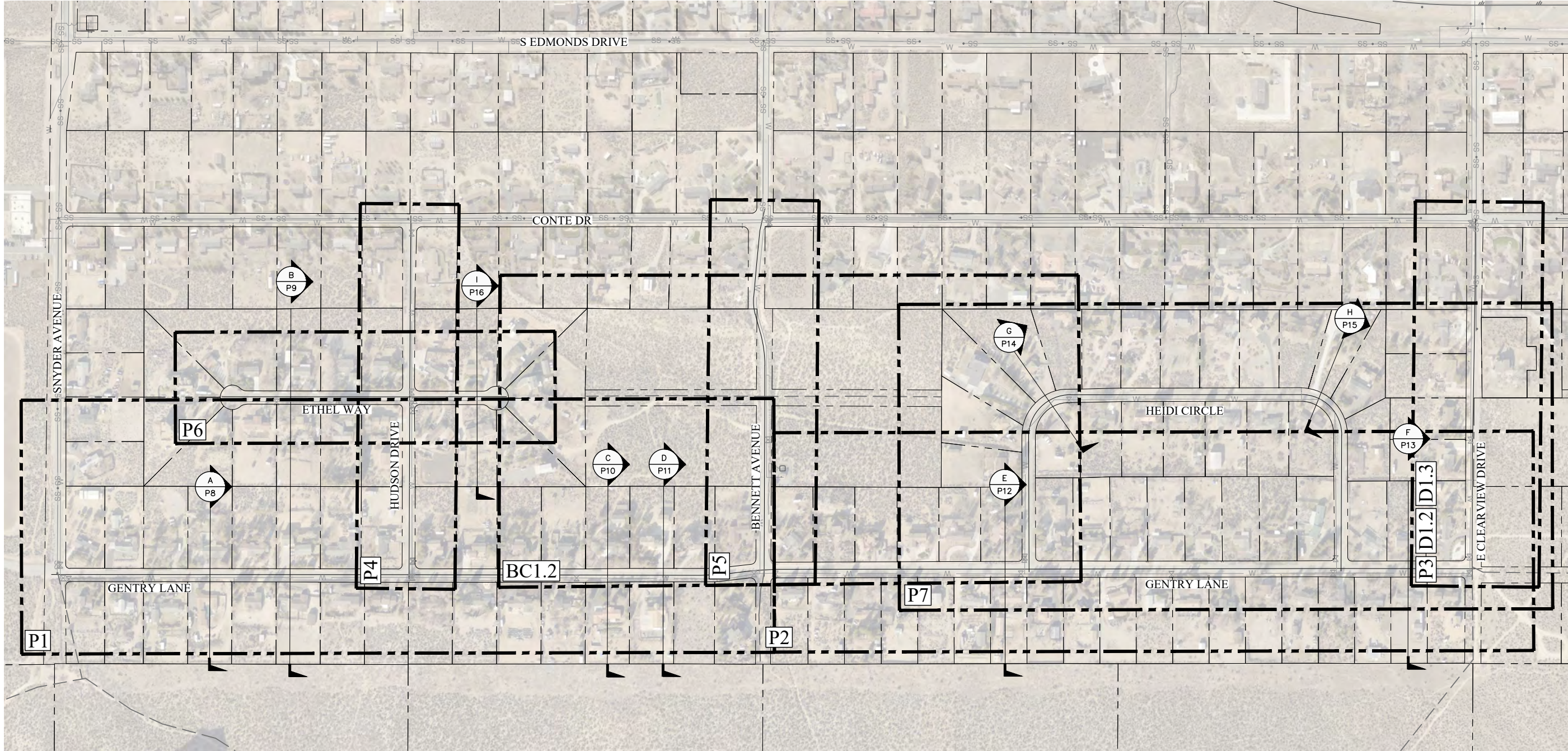
CARSON CITY - MANDATORY SEWER EXTENSION PROJECT
PHASE 9 AND 10 OVERALL MAP

SHEET **C1** OF **24**

PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

P:\Client Projects\Carson City of 115\1193 Carson City - SE Mandatory Sewer Extension Project - Phase 9, 10, and 12\5.0 Drawings\5.2 DWG\5.2.9 SHEET FILES\1193_C1-C2-OVERALL MAP.dwg, edits: 8/11/22

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PHASES 9 AND 10



DESIGNED BY: KK
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 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

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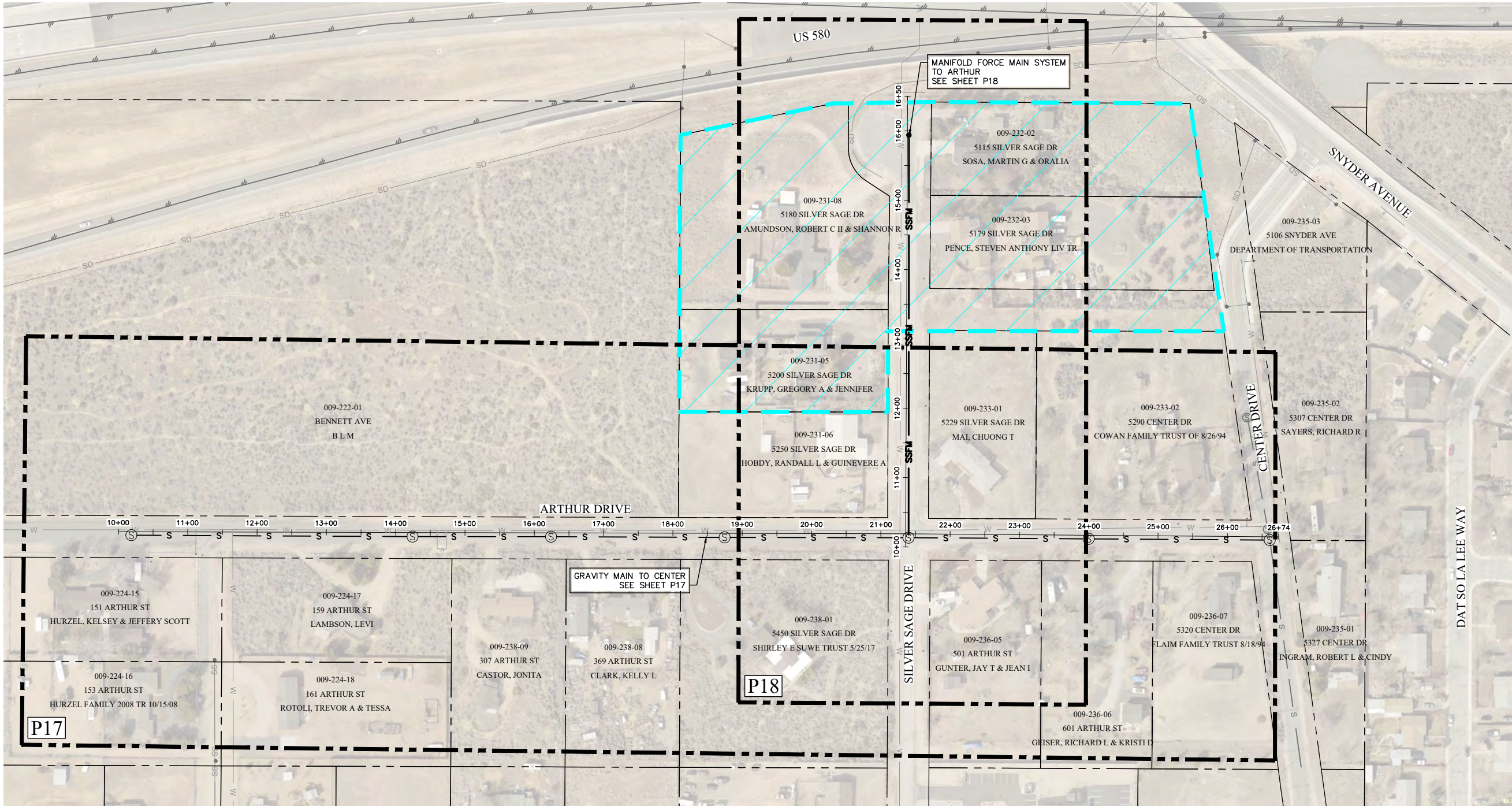
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 billing@farrwestengineering.com-USA

REV.	DATE	DESCRIPTION	BY	APP'D

CARSON CITY - MANDATORY SEWER EXTENSION PROJECT
PHASE 9 AND 10
SHEET INDEX

SHEET
C2
 OF
24

PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)



PHASE 12

LOTS BEING SERVED WITH MANIFOLD FORCE MAIN SYSTEM (4 LOTS TOTAL, NO RESIDENTIAL LIFT STATIONS REQUIRED)

DESIGNED BY: KK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

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REV.	DATE	DESCRIPTION	BY	APP'D

CARSON CITY - MANDATORY SEWER EXTENSION PROJECT
PHASE 12
OVERALL MAP AND SHEET INDEX



SHEET
C3
 OF
24

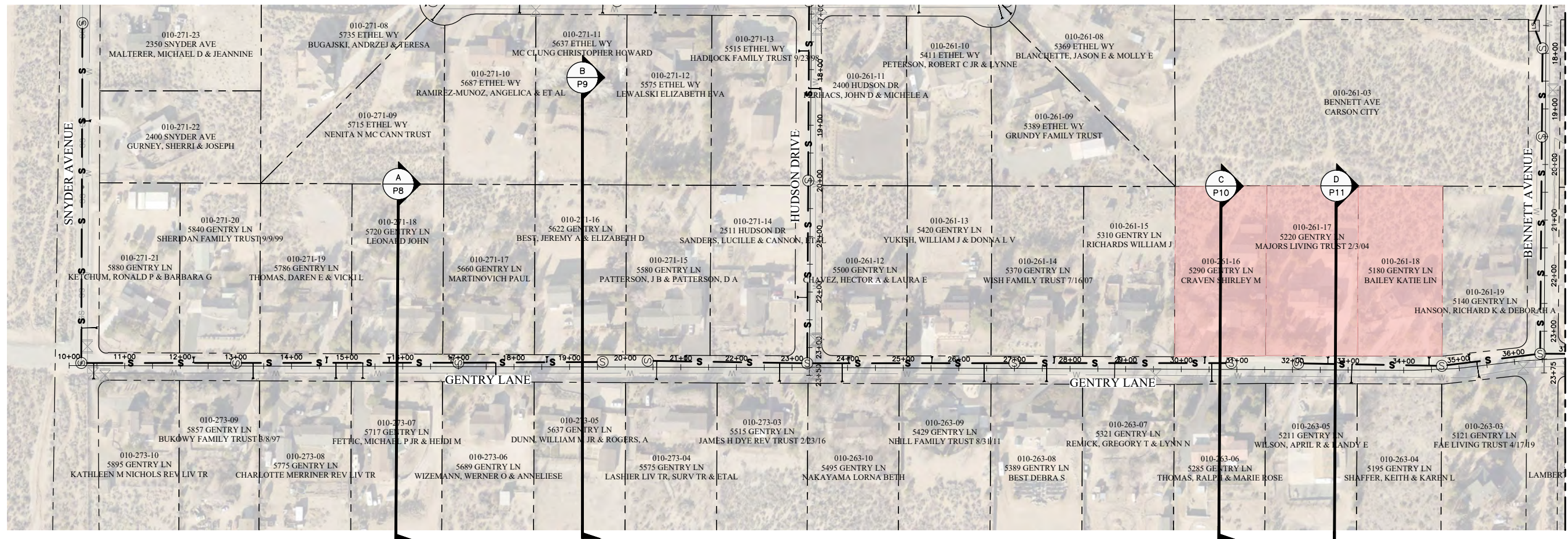
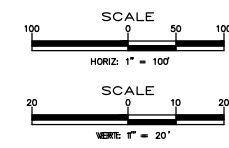
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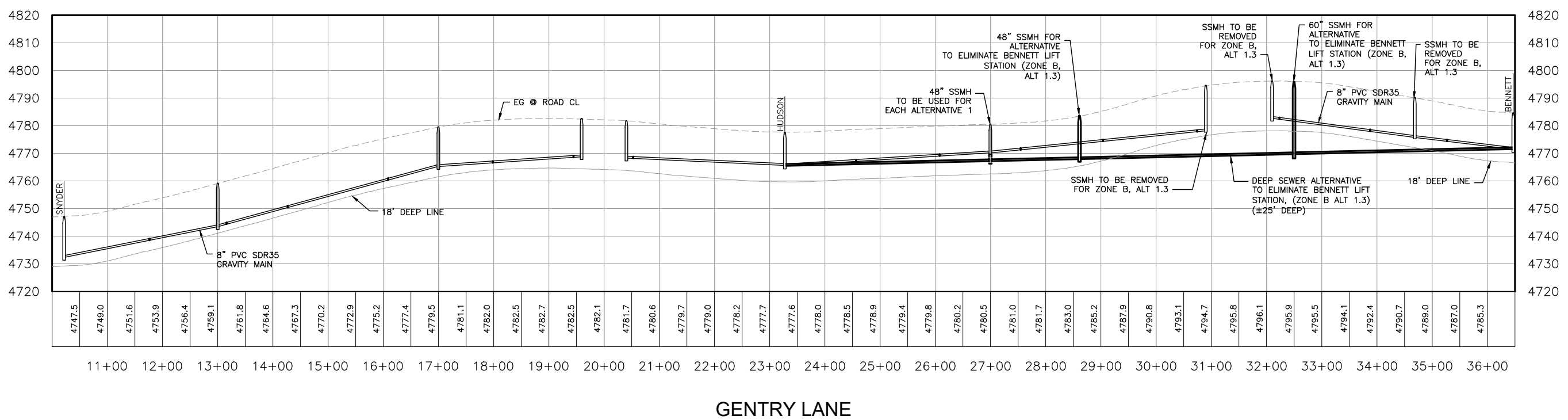
GENERAL NOTES:

1. EXACT LOCATION OF LATERAL STUBS TO BE DETERMINED IN THE DESIGN PHASING OF THE PROJECT.
2. ALL LATERALS TO BE STUBBED AT PROPERTY LINE FOR FUTURE CONNECTION TO BE PROVIDED BY HOME OWNER.

LEGEND:



36+50 MATCHLINE SEE SHT P2



GENTRY LANE

DESIGNED BY: KK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

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REV.	DATE	DESCRIPTION	BY	APP'D

CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 GENTRY LANE PLAN AND PROFILE STA 10+00 to STA 36+50

SHEET
P1
 OF
24

PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

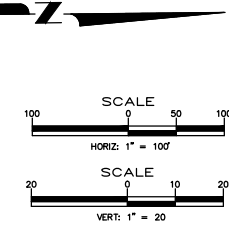
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GENERAL NOTES:

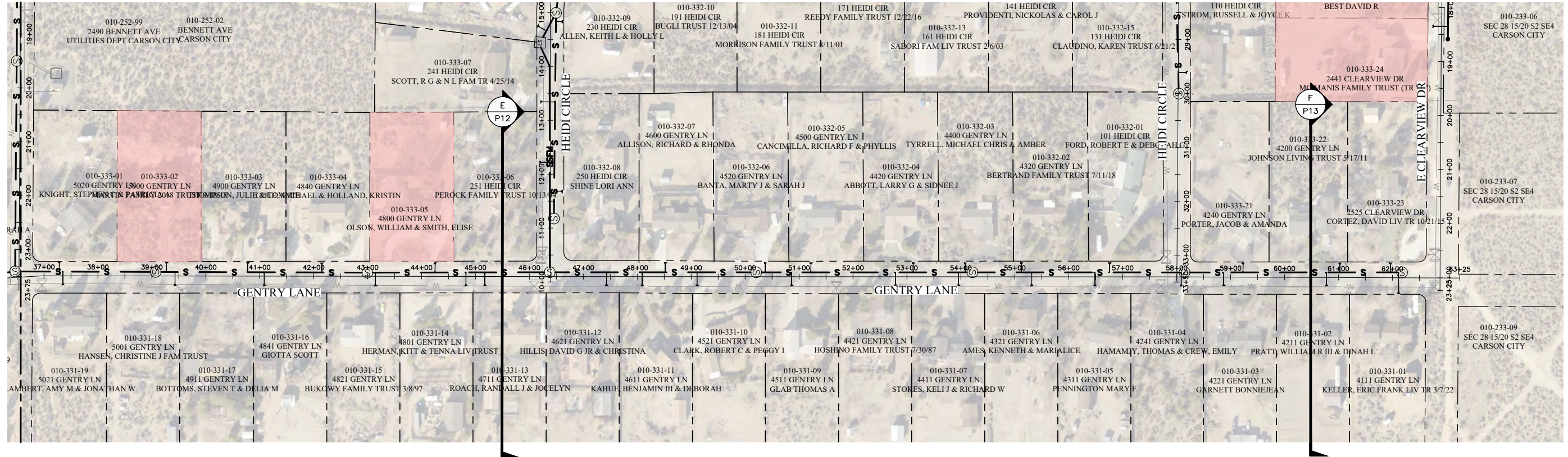
- EXACT LOCATION OF LATERAL STUBS TO BE DETERMINED IN THE DESIGN PHASING OF THE PROJECT.
- ALL LATERALS TO BE STUBBED AT PROPERTY LINE FOR FUTURE CONNECTION TO BE PROVIDED BY HOME OWNER.

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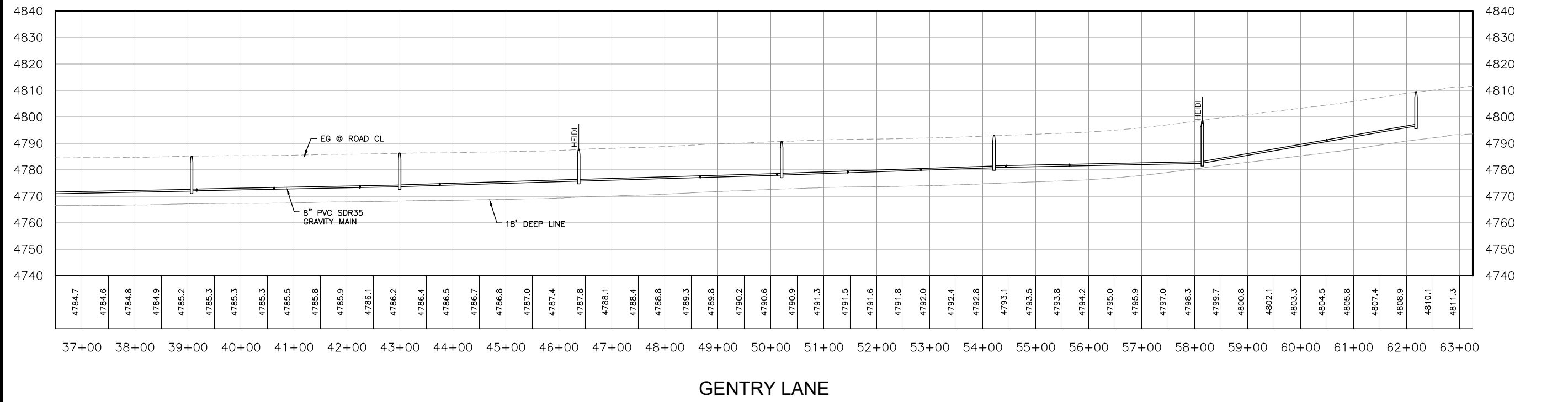
 LOTS REQUIRING INDIVIDUAL LIFT STATIONS



36+50 MATCHLINE SEE SHT P1



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GENTRY LANE

DESIGNED BY: KKK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

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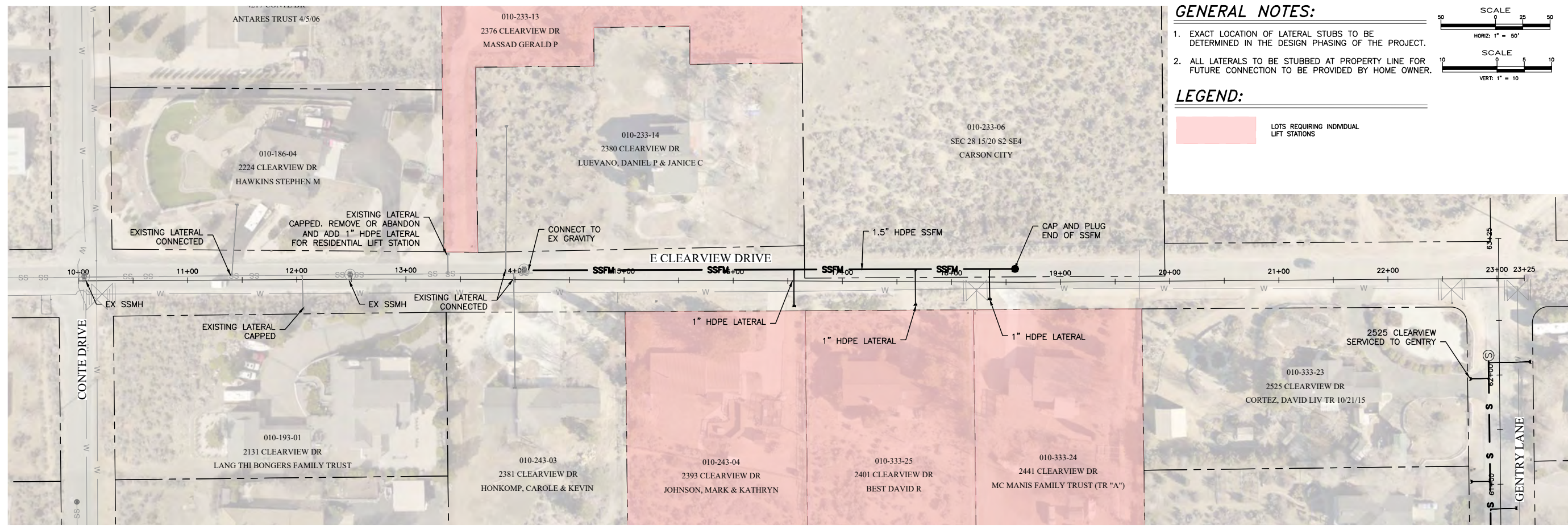
REV.	DATE	DESCRIPTION	BY	APP'D

CARSON CITY - MANDATORY SEWER EXTENSION PROJECT
PHASE 9 AND 10
GENTRY LANE
PLAN AND PROFILE
STA 36+50 to STA 63+00

SHEET
P2
 OF
24

PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

P:\Client Projects\Carson City of 115\1193 Carson City - SE Mandatory Sewer Extension Project Phase 9, 10, and 12\5.0 Drawings\5.2 DWG\5.2.9 SHEET FILES\193_P1-P7-PLAN AND PROFILE.dwg, edmits, 8/11/22

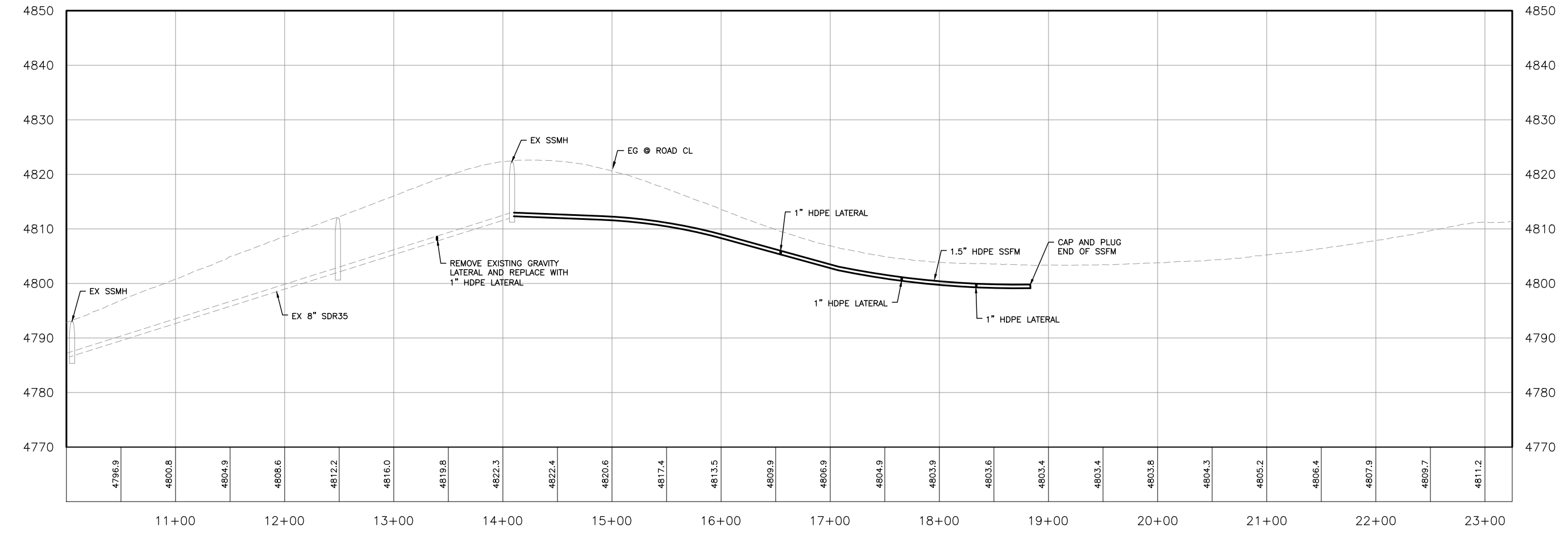


GENERAL NOTES:

1. EXACT LOCATION OF LATERAL STUBS TO BE DETERMINED IN THE DESIGN PHASING OF THE PROJECT.
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LEGEND:

LOTS REQUIRING INDIVIDUAL LIFT STATIONS



E CLEARVIEW DRIVE

DESIGNED BY: KKK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
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REV.	DATE	DESCRIPTION	BY	APP'D

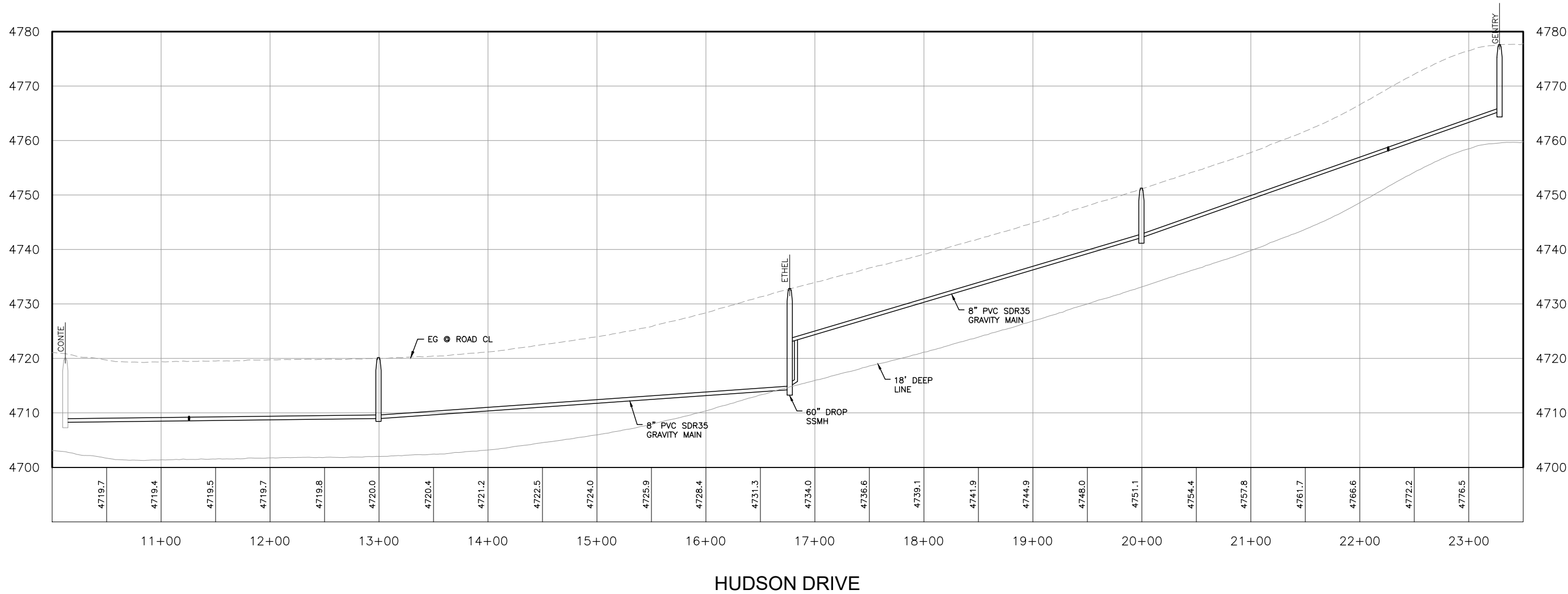
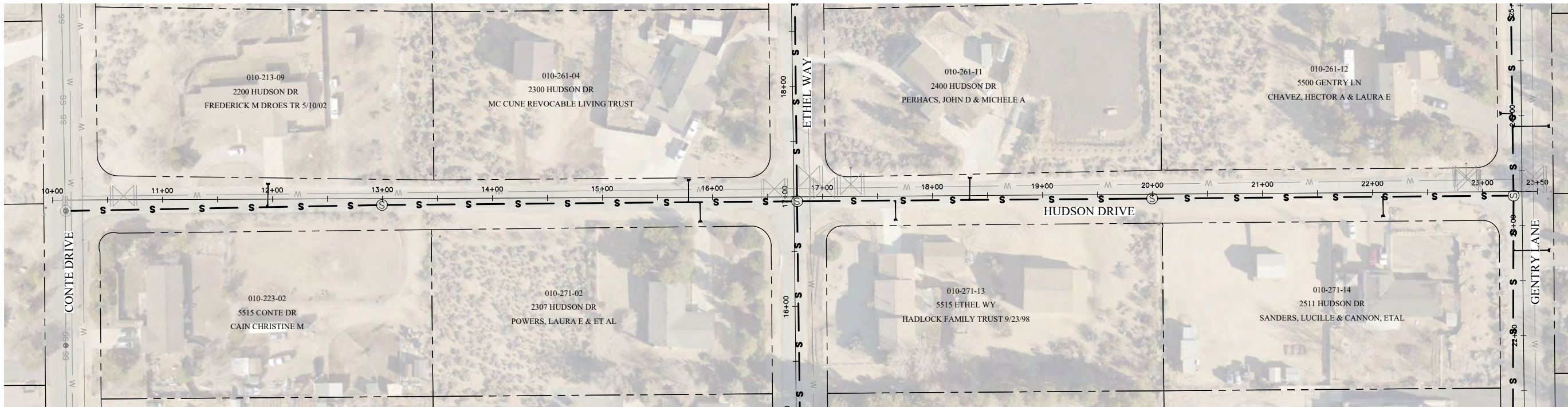
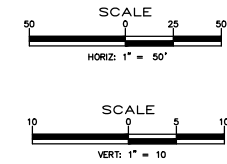
CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 E CLEARVIEW DRIVE PLAN AND PROFILE STA 10+00 to STA 23+00

GENERAL NOTES:

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- ALL LATERALS TO BE STUBBED AT PROPERTY LINE FOR FUTURE CONNECTION TO BE PROVIDED BY HOME OWNER.

LEGEND:

LOTS REQUIRING INDIVIDUAL LIFT STATIONS



DESIGNED BY: KKK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

CARSON CITY PUBLIC WORKS DEPARTMENT
 3505 BUTTI WAY
 CARSON CITY, NEVADA 89701
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REV.	DATE	DESCRIPTION	BY	APP'D

CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 HUDSON DRIVE PLAN AND PROFILE STA 10+00 to STA 23+50

SHEET
P4
 OF
24

PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

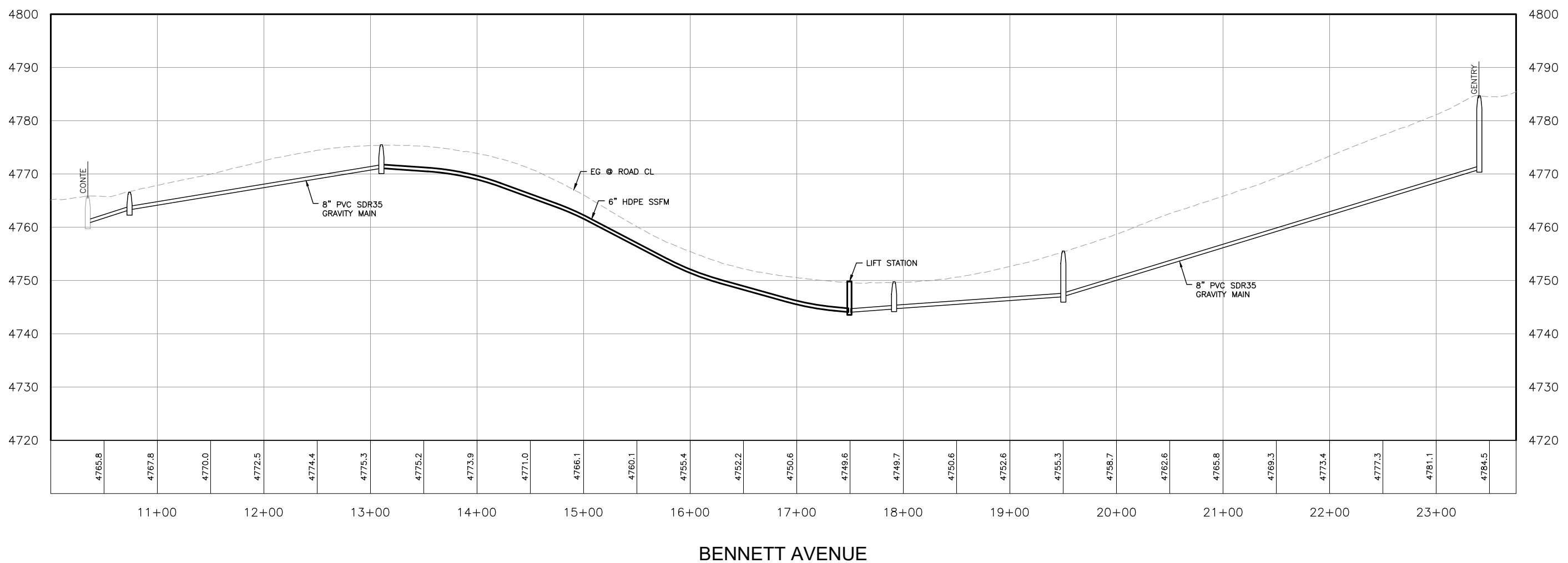
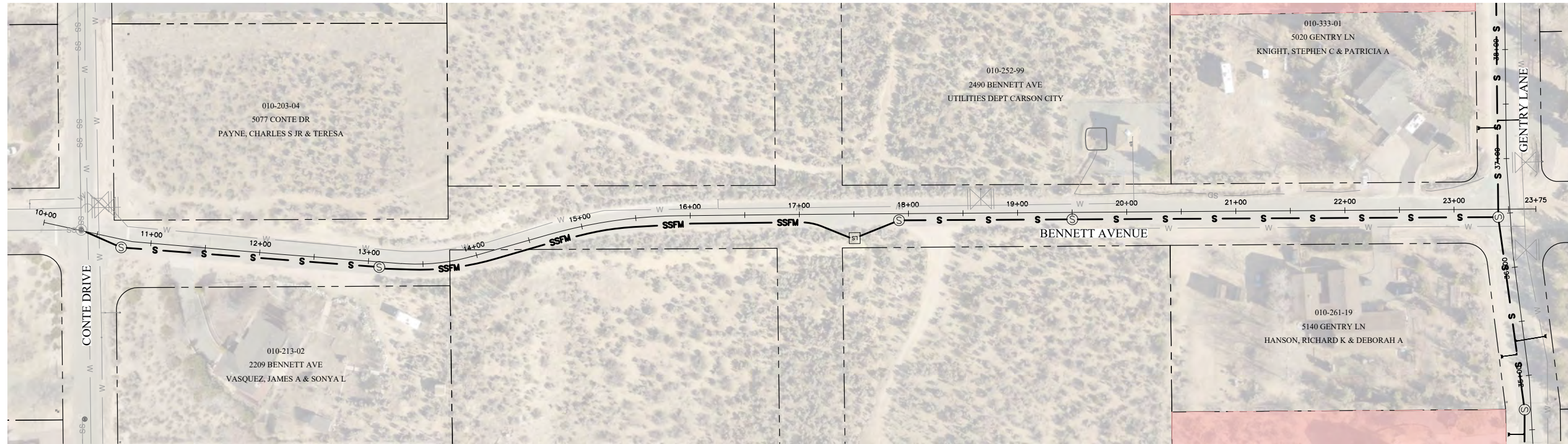
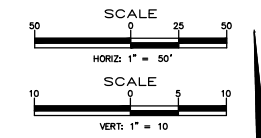
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GENERAL NOTES:

1. EXACT LOCATION OF LATERAL STUBS TO BE DETERMINED IN THE DESIGN PHASING OF THE PROJECT.
2. ALL LATERALS TO BE STUBBED AT PROPERTY LINE FOR FUTURE CONNECTION TO BE PROVIDED BY HOME OWNER.

LEGEND:

 LOTS REQUIRING INDIVIDUAL LIFT STATIONS



DESIGNED BY: KKK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

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REV.	DATE	DESCRIPTION	BY	APP'D

CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 BENNETT AVENUE PLAN AND PROFILE STA 10+00 to STA 23+75

SHEET
P5
 OF
24

PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

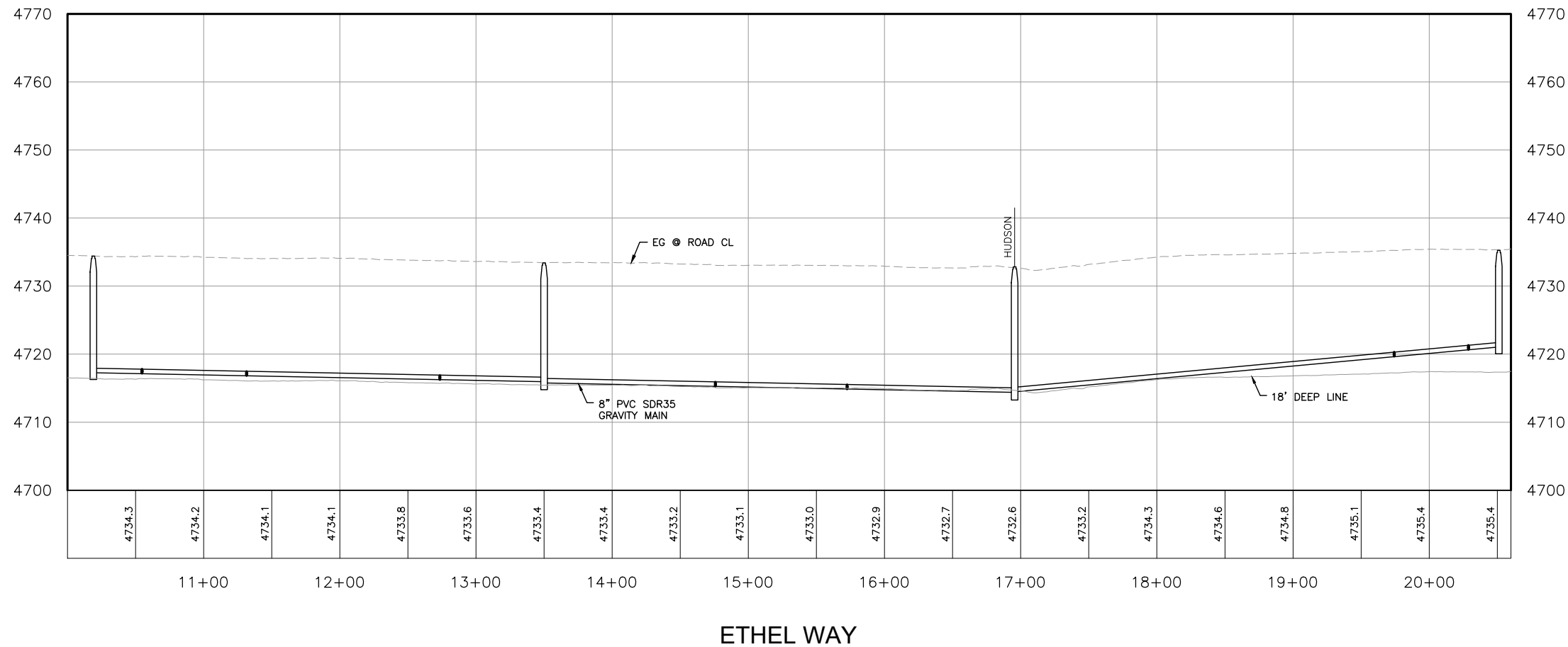
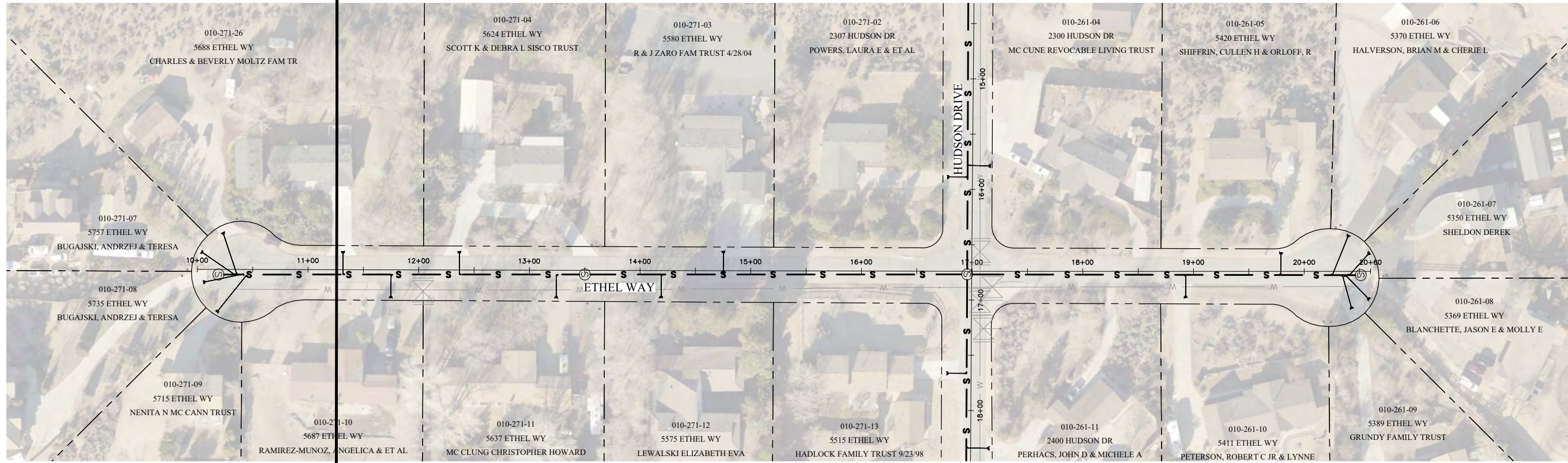
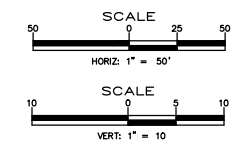
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GENERAL NOTES:

1. EXACT LOCATION OF LATERAL STUBS TO BE DETERMINED IN THE DESIGN PHASING OF THE PROJECT.
2. ALL LATERALS TO BE STUBBED AT PROPERTY LINE FOR FUTURE CONNECTION TO BE PROVIDED BY HOME OWNER.

LEGEND:

LOTS REQUIRING INDIVIDUAL LIFT STATIONS



ETHEL WAY

DESIGNED BY: KKK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

CARSON CITY PUBLIC WORKS DEPARTMENT
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REV.	DATE	DESCRIPTION	BY	APP'D

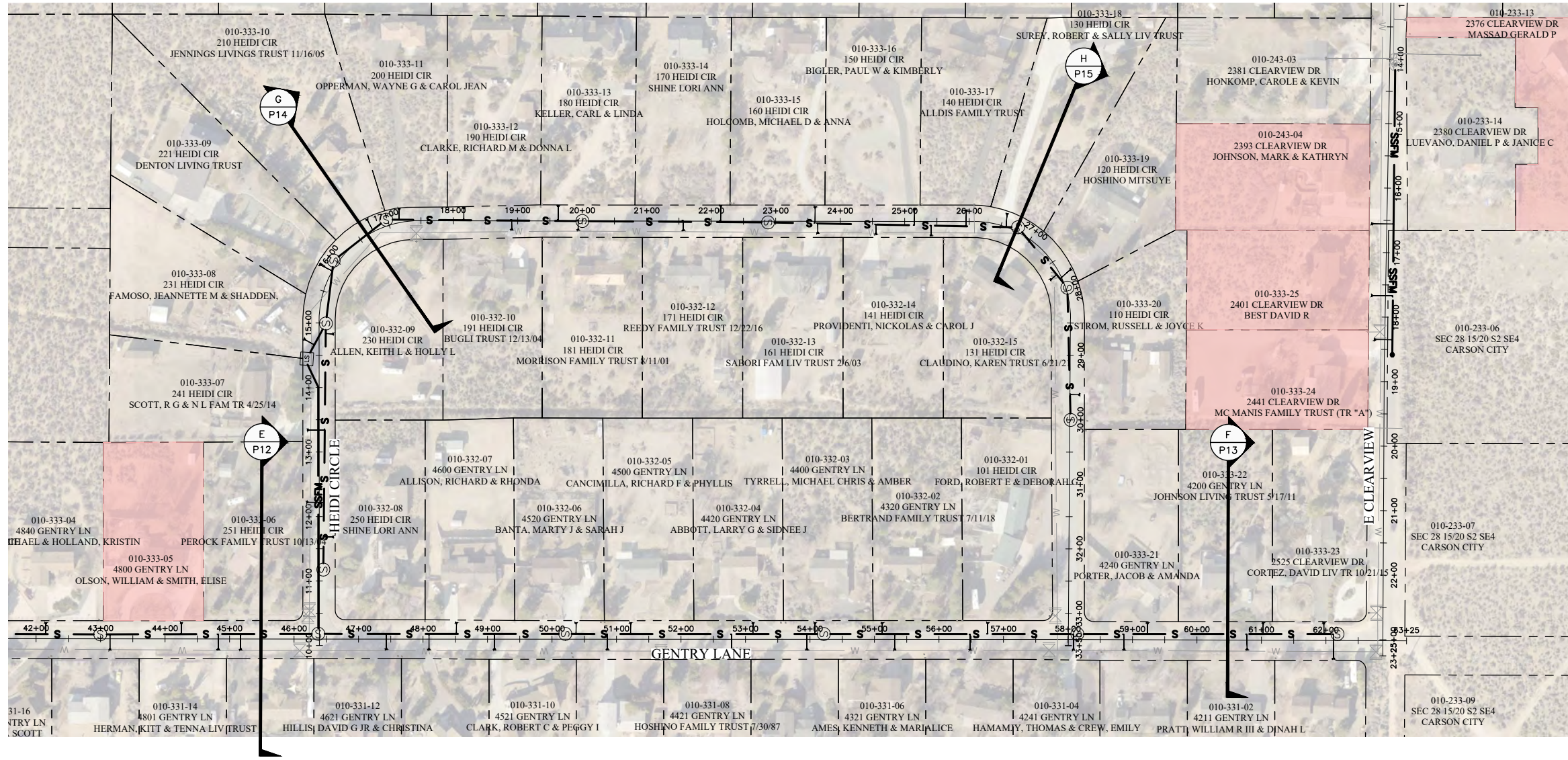
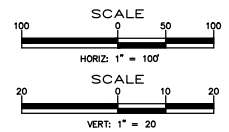
CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10
ETHEL WAY
PLAN AND PROFILE
STA 10+00 to STA 20+60

SHEET
P6
 OF
24

PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

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GENERAL NOTES:

- 1. EXACT LOCATION OF LATERAL STUBS TO BE DETERMINED IN THE DESIGN PHASING OF THE PROJECT.
- 2. ALL LATERALS TO BE STUBBED AT PROPERTY LINE FOR FUTURE CONNECTION TO BE PROVIDED BY HOME OWNER.

LEGEND:

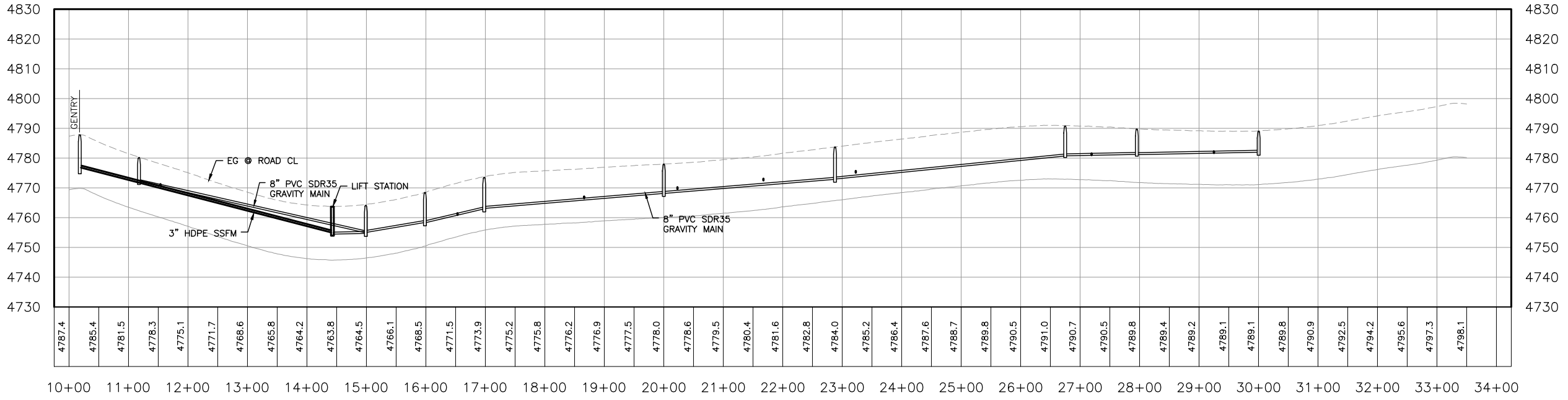
LOTS REQUIRING INDIVIDUAL LIFT STATIONS

DESIGNED BY: KKC
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

CARSON CITY PUBLIC WORKS DEPARTMENT

3505 BUTTI WAY
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HEIDI CIRCLE

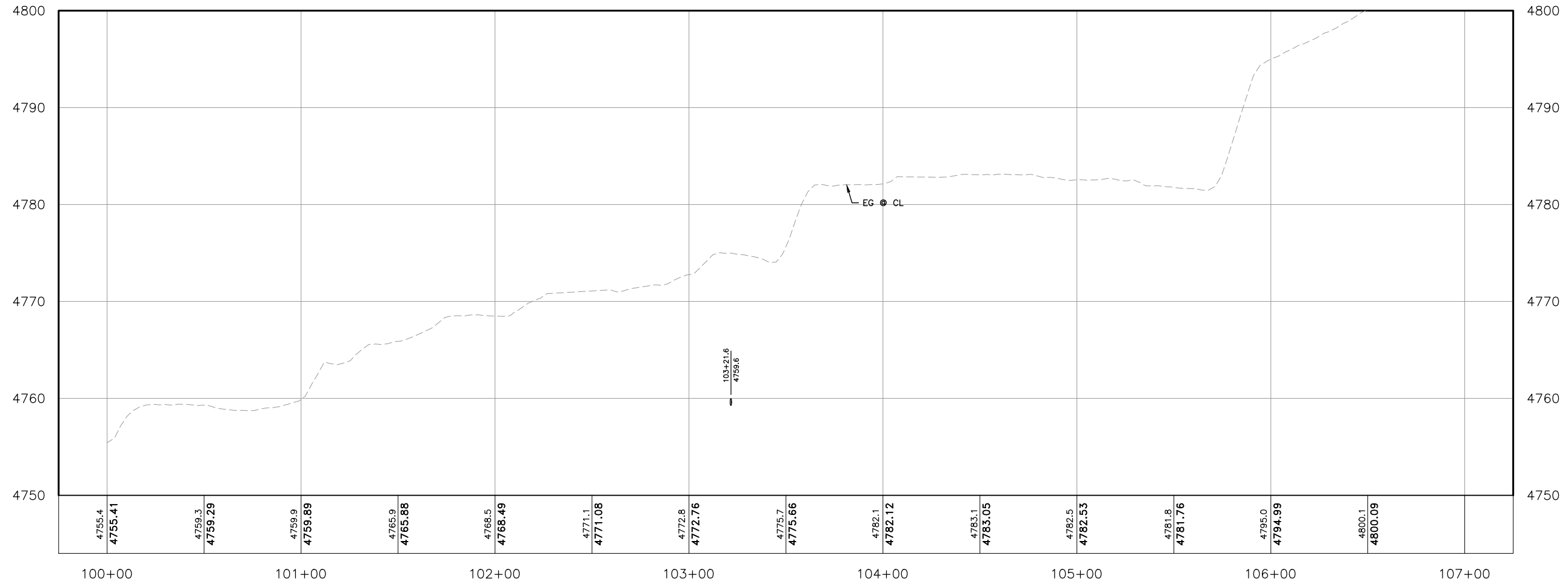
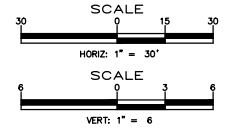
REV.	DATE	DESCRIPTION	BY	APP'D

CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 HEIDI CIRCLE PLAN AND PROFILE STA 10+00 to STA 33+50

SHEET **P7** OF **24**

PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

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CROSS SECTION A

DESIGNED BY: KK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

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 3505 BUTTI WAY
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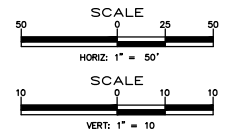
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CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 GENTRY LANE CROSS SECTION

SHEET
P8
 OF
24

PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

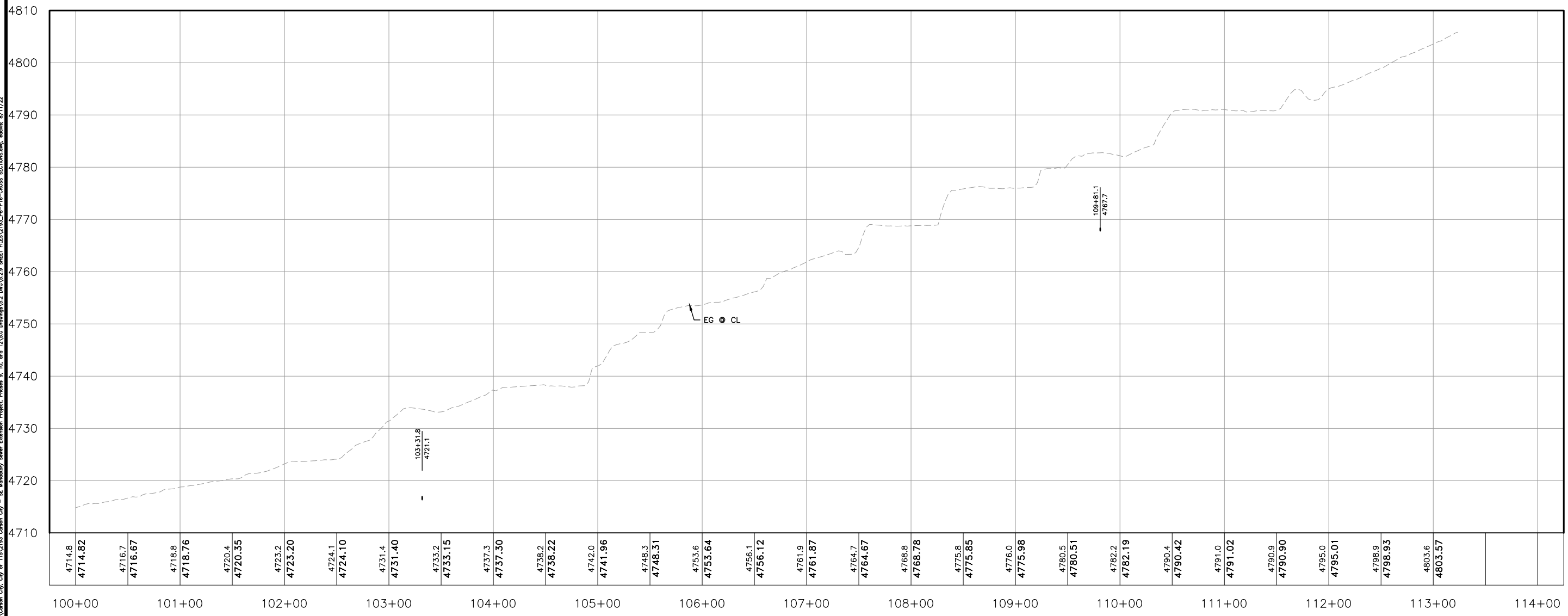
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DESIGNED BY: KKK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

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 3505 BUTTI WAY
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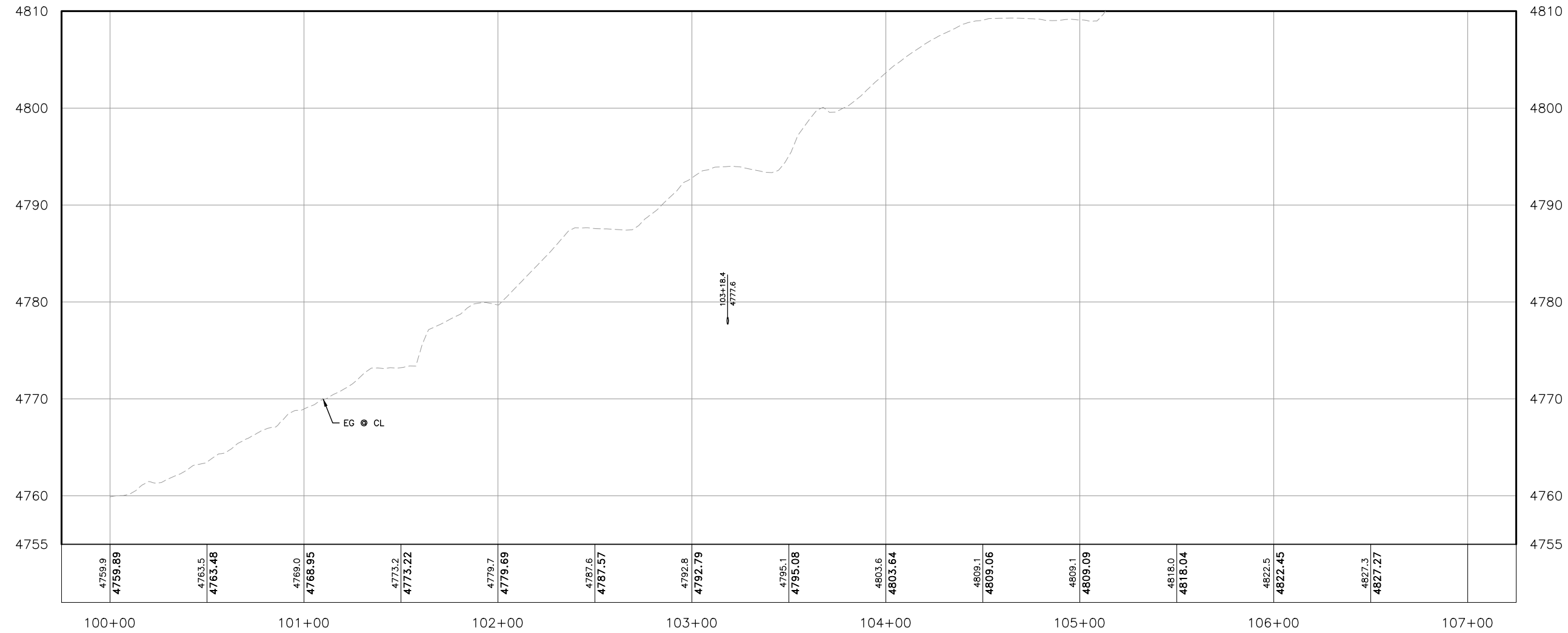
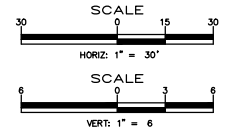
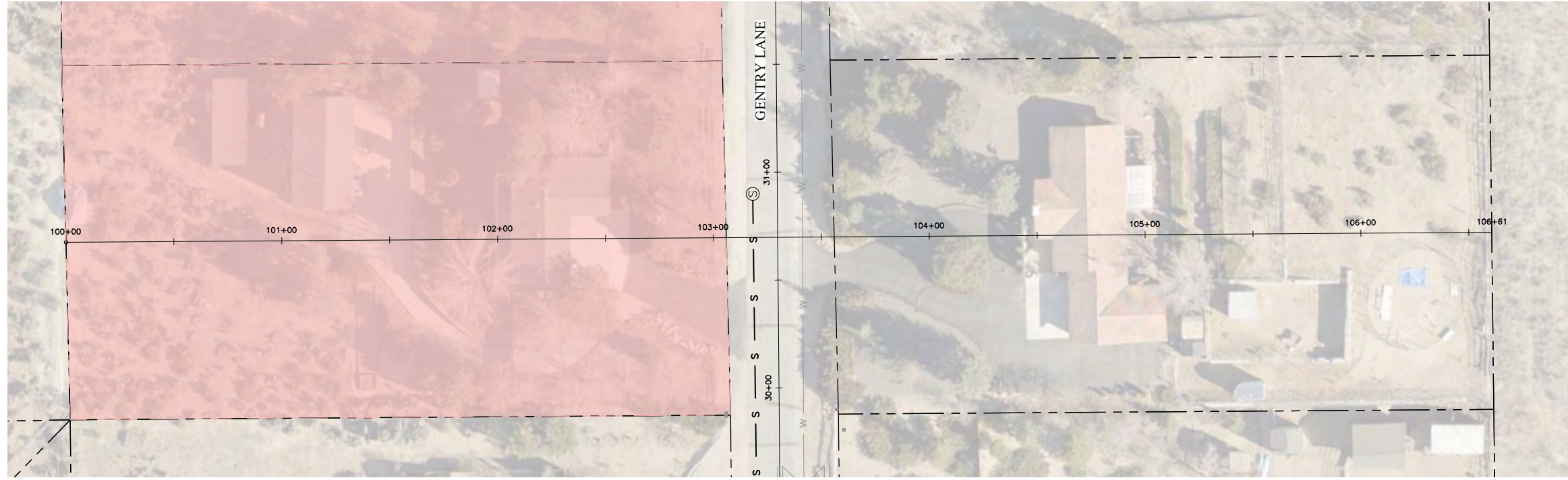
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CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10
ETHEL WAY AND GENTRY LANE CROSS SECTION

SHEET **P9** OF **24**

PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

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CROSS SECTION C

DESIGNED BY: KK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

CARSON CITY PUBLIC WORKS DEPARTMENT
 3505 BUTTI WAY
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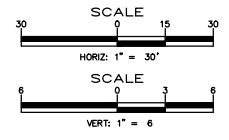
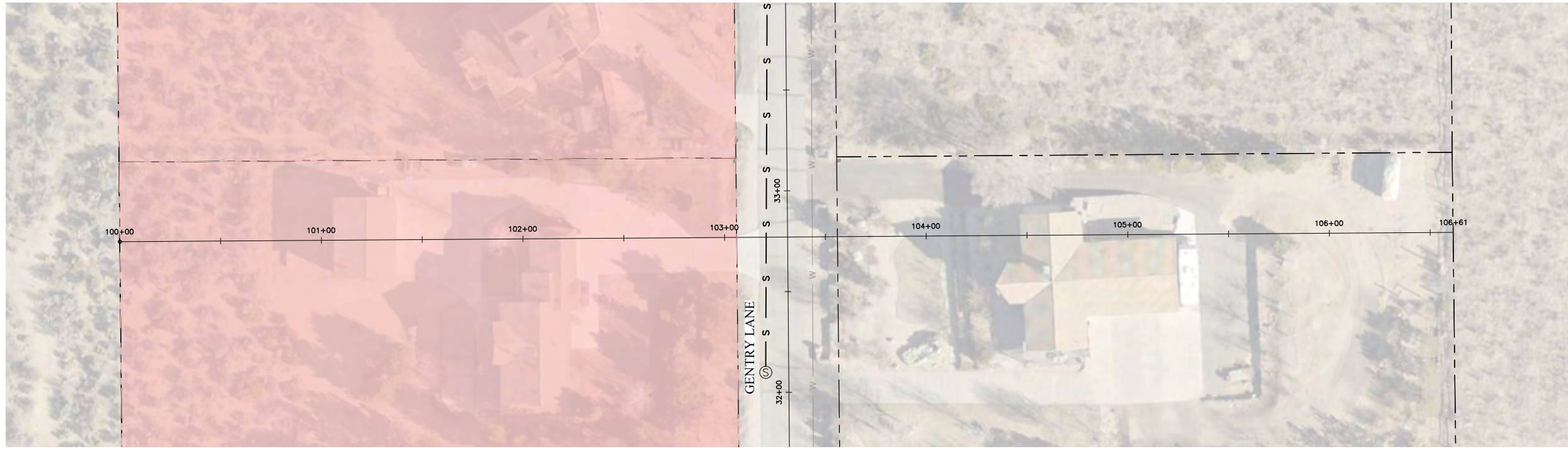
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CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 GENTRY LANE CROSS SECTION

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 OF
24

PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

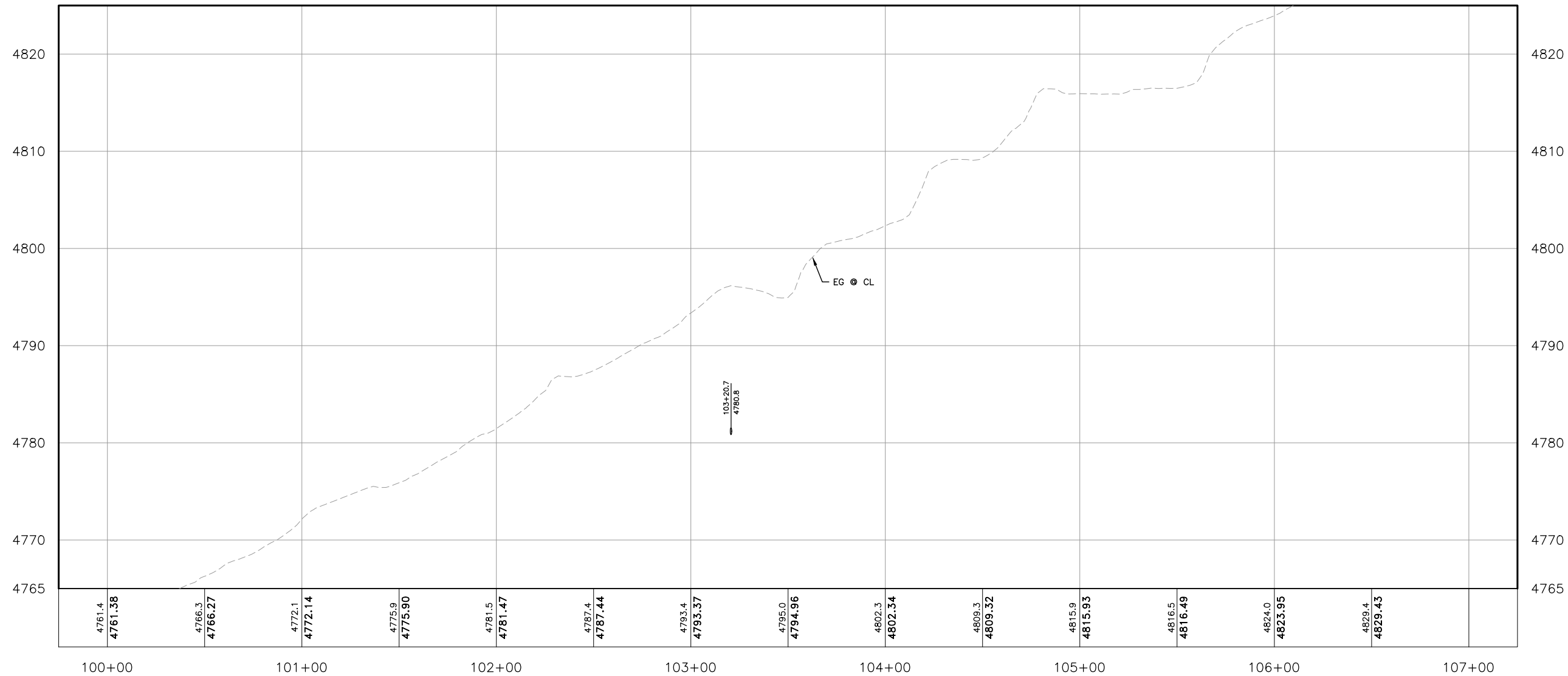
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DESIGNED BY: KKK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

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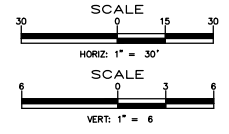
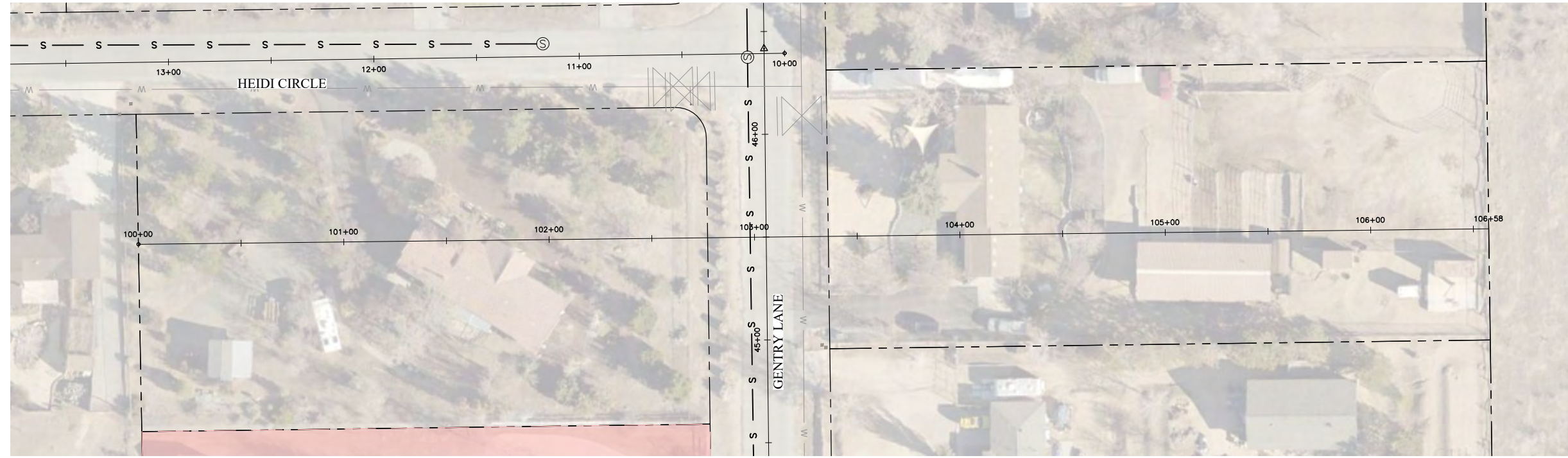
CROSS SECTION D

REV.	DATE	DESCRIPTION	BY	APP'D

CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 GENTRY LANE CROSS SECTION

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P11
 OF
24

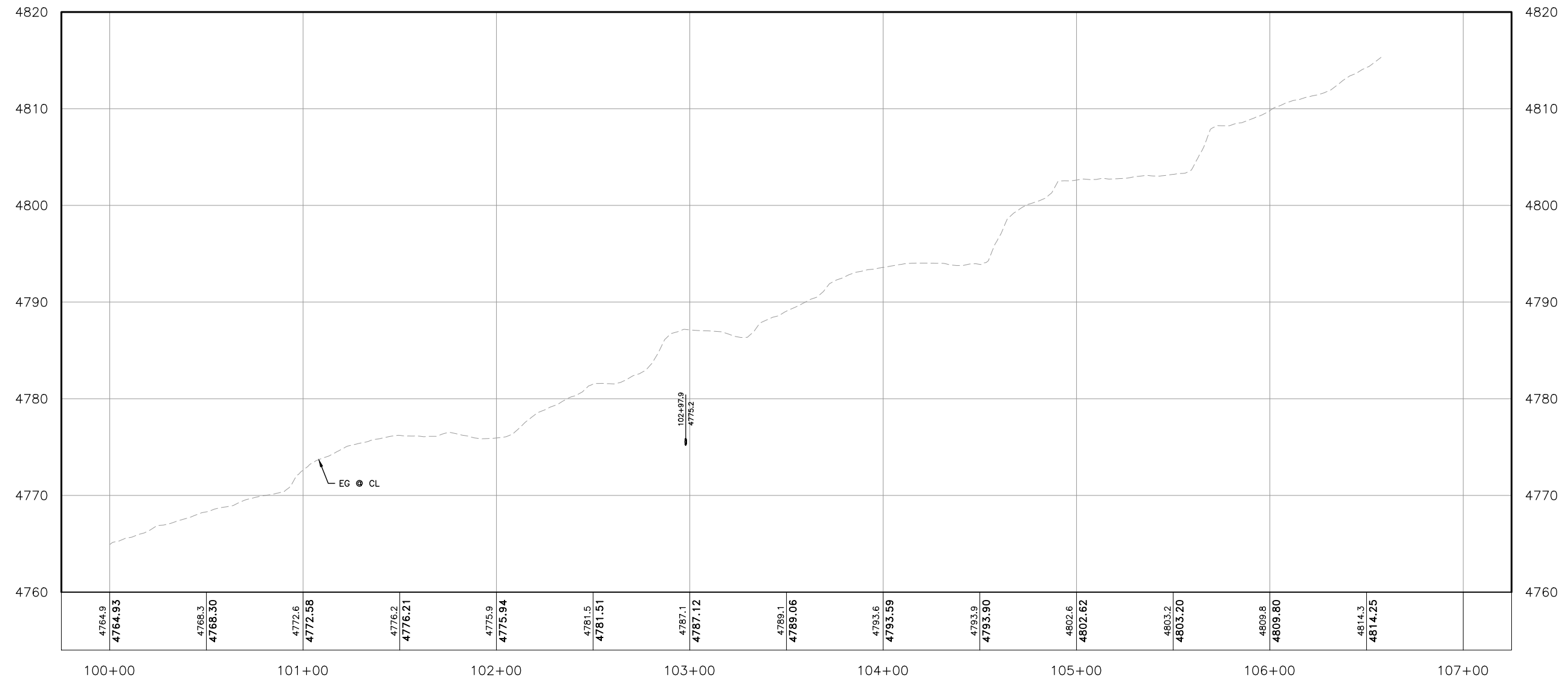
PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)



DESIGNED BY: KKK
 DRAWN BY: ED
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 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
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CROSS SECTION E

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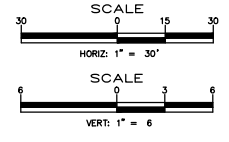
CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 GENTRY LANE CROSS SECTION

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PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

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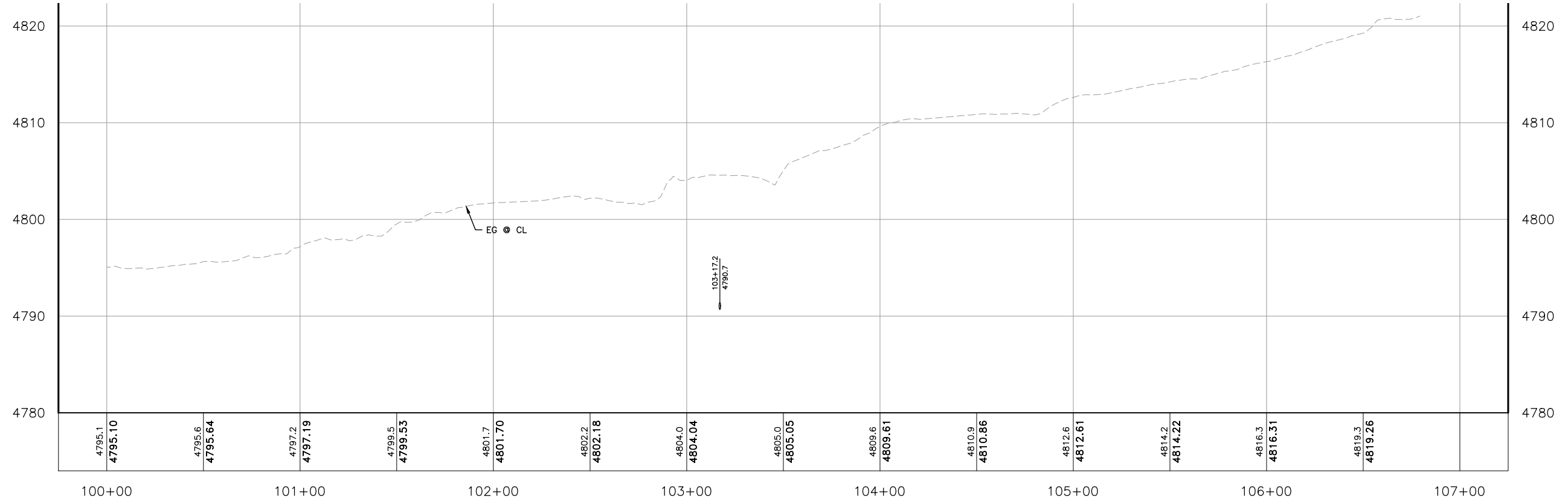
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DESIGNED BY: KKK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

**CARSON CITY
 PUBLIC WORKS
 DEPARTMENT**
 3505 BUTTI WAY
 CARSON CITY, NEVADA 89701
 PH: 887-2355 FAX: 887-2112

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 5510 LONGLEY LANE
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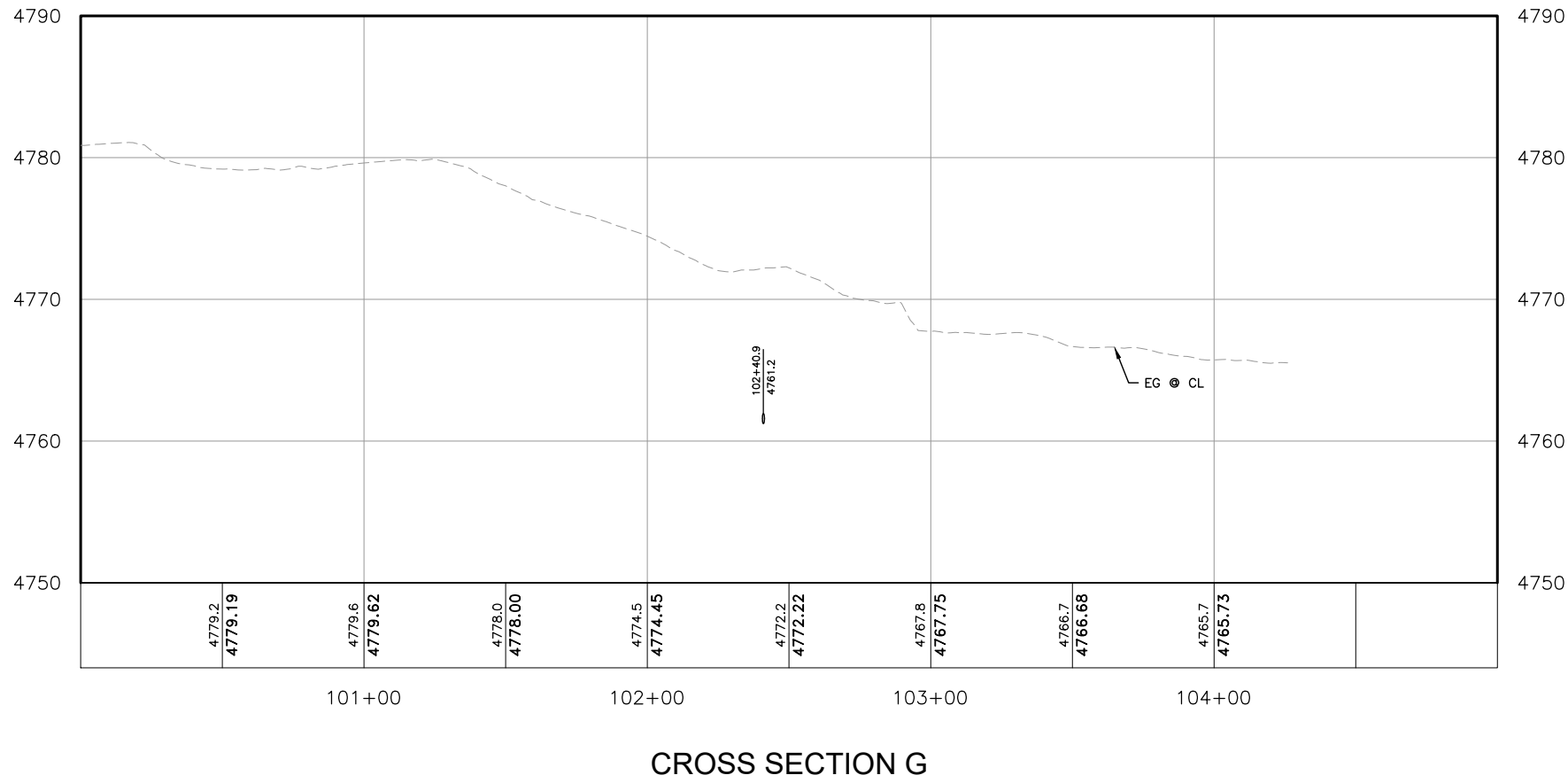
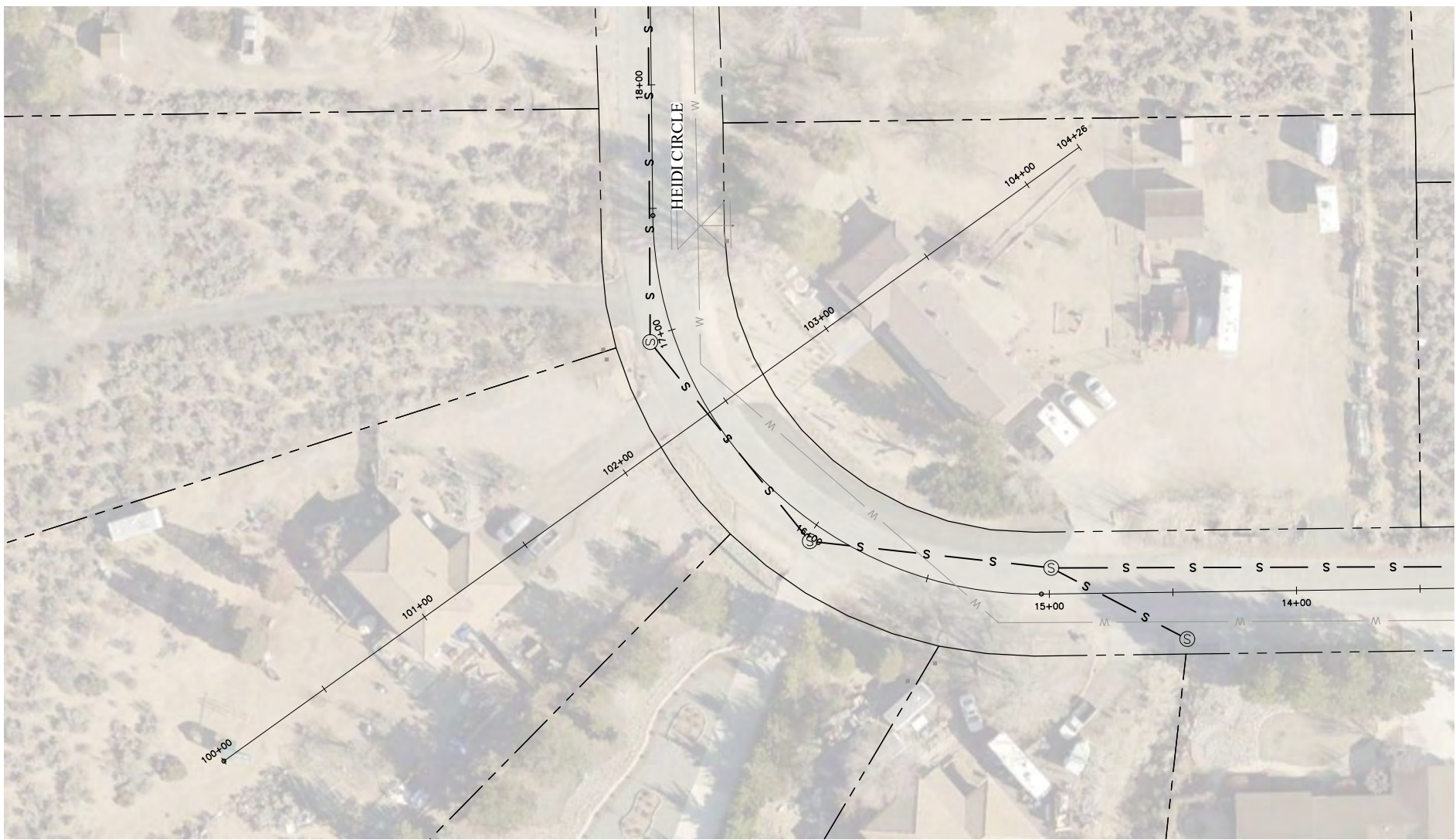
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**CARSON CITY - MANDATORY SEWER
 EXTENSION PROJECT
 PHASE 9 AND 10
 GENTRY LANE
 CROSS SECTION**

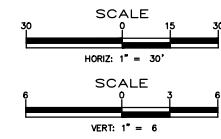
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PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

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CROSS SECTION G



DESIGNED BY: KKK
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 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

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 3505 BUTTI WAY
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 PH: 887-2355 FAX: 887-2112

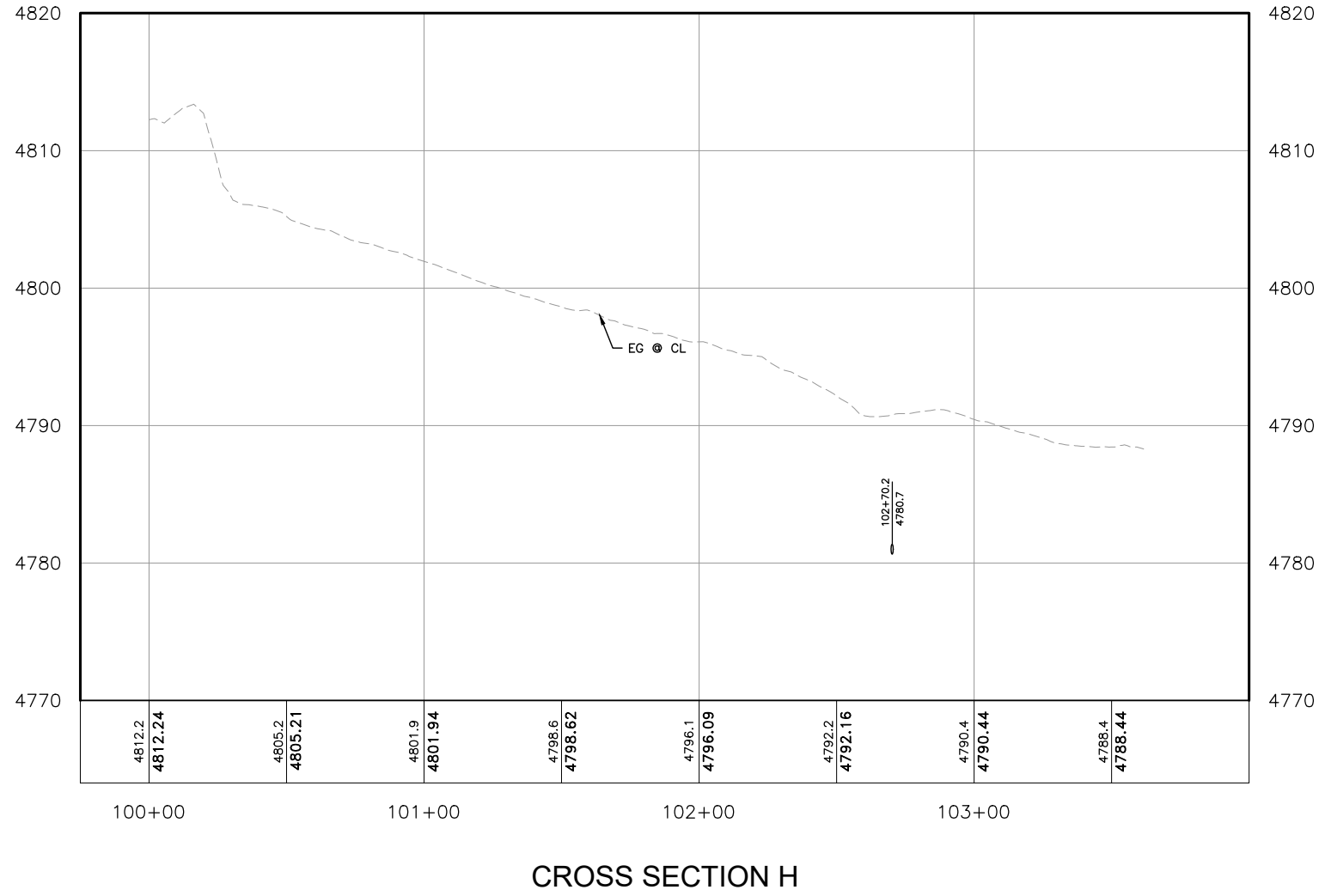
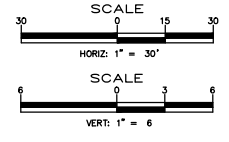
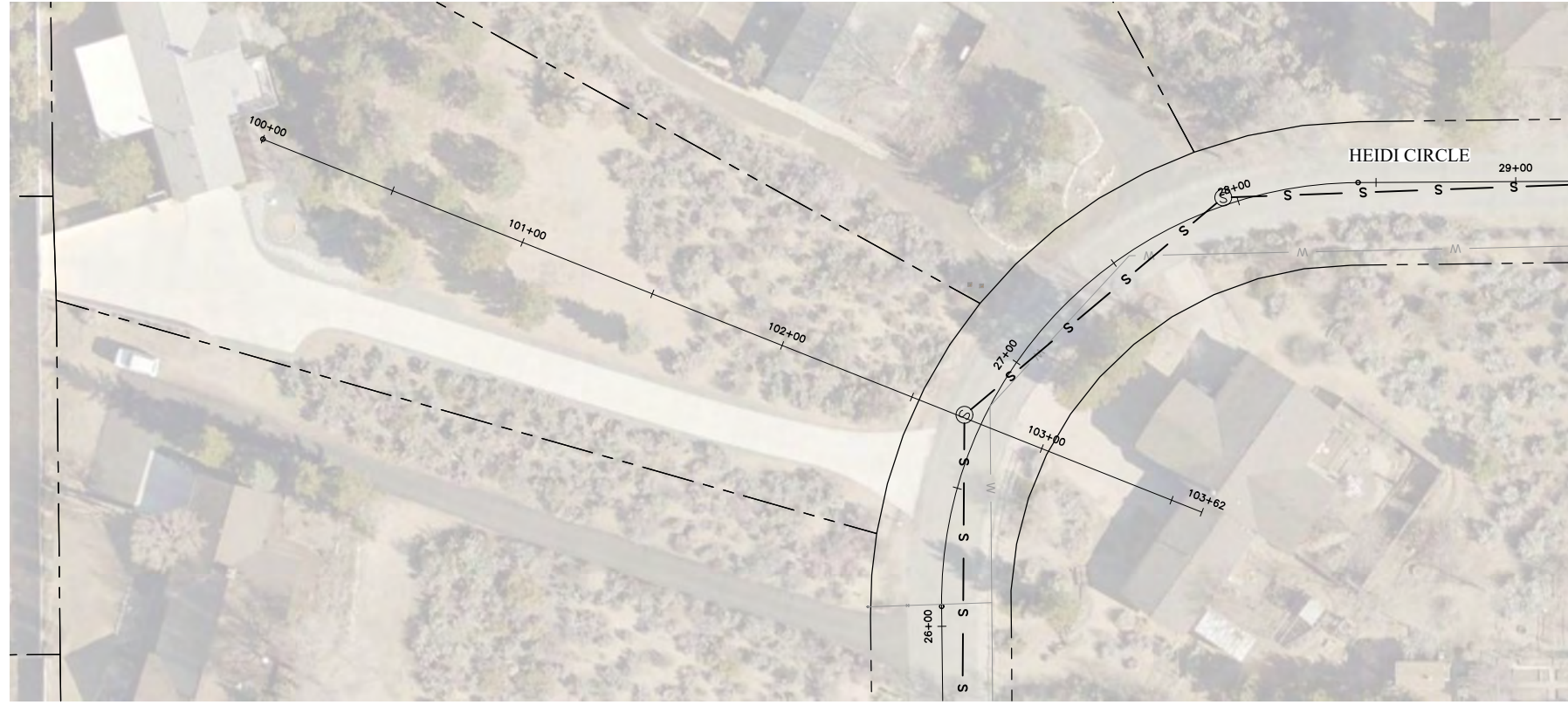
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CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 HEIDI CIRCLE CROSS SECTION

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PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)



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 3505 BUTTI WAY
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 PH: 887-2355 FAX: 887-2112

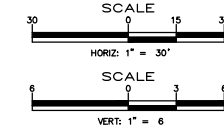
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 SCALE (VERT): AS SHOWN
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CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 HEIDI CIRCLE CROSS SECTION

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 SCALE (VERT): AS SHOWN
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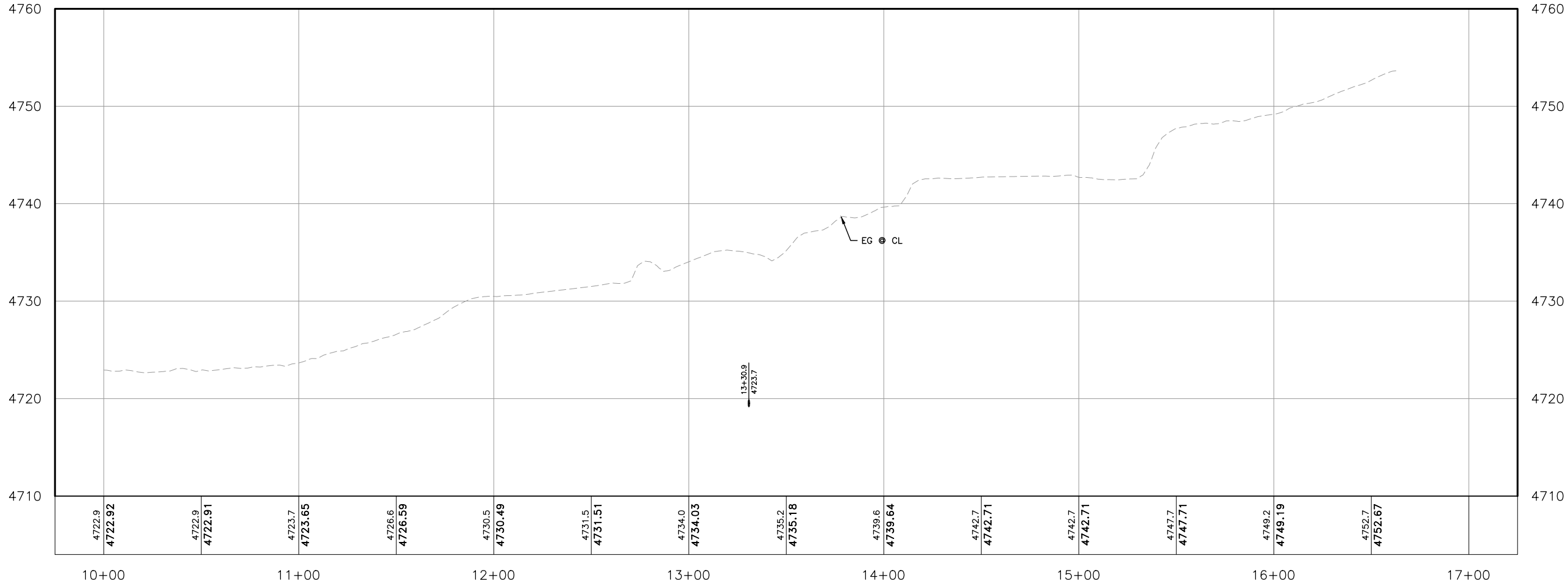
CARSON CITY PUBLIC WORKS DEPARTMENT
 3505 BUTTI WAY
 CARSON CITY, NEVADA 89701
 PH: 887-2355 FAX: 887-2112

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CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10
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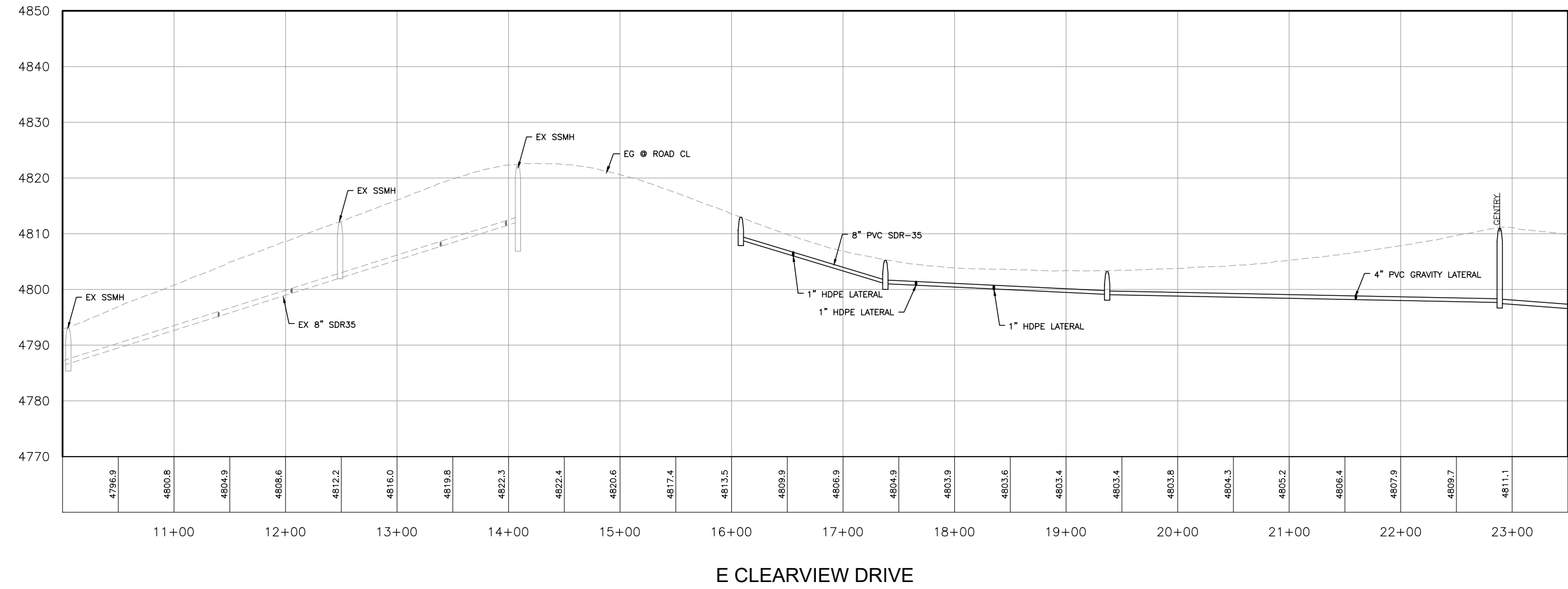
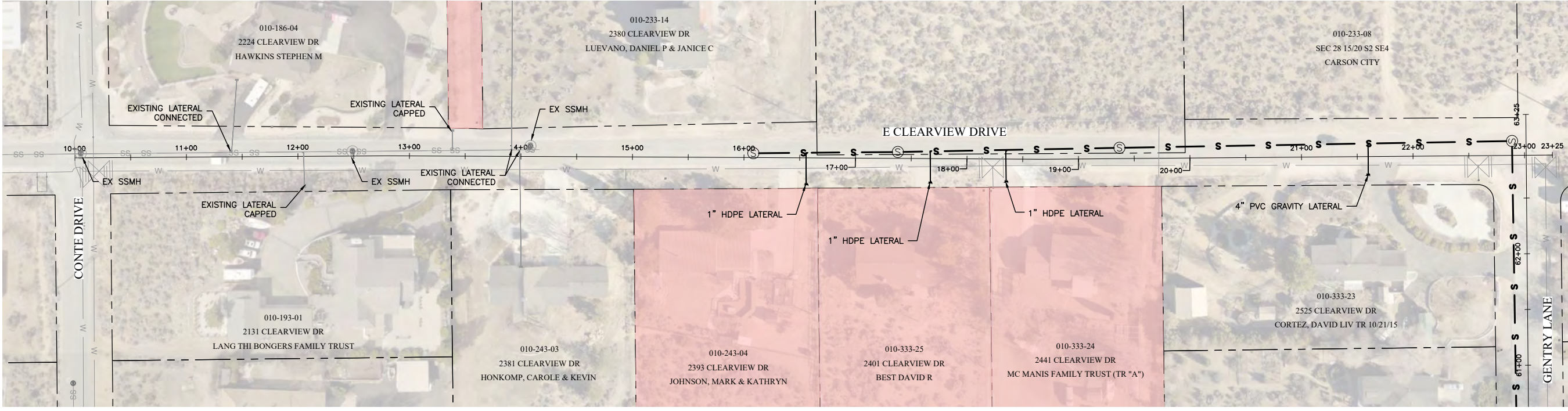
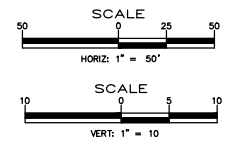
PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

GENERAL NOTES:

1. EXACT LOCATION OF LATERAL STUBS TO BE DETERMINED IN THE DESIGN PHASING OF THE PROJECT.
2. ALL LATERALS TO BE STUBBED AT PROPERTY LINE FOR FUTURE CONNECTION TO BE PROVIDED BY HOME OWNER.

LEGEND:

LOTS REQUIRING INDIVIDUAL LIFT STATIONS



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 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

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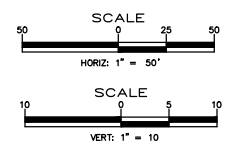
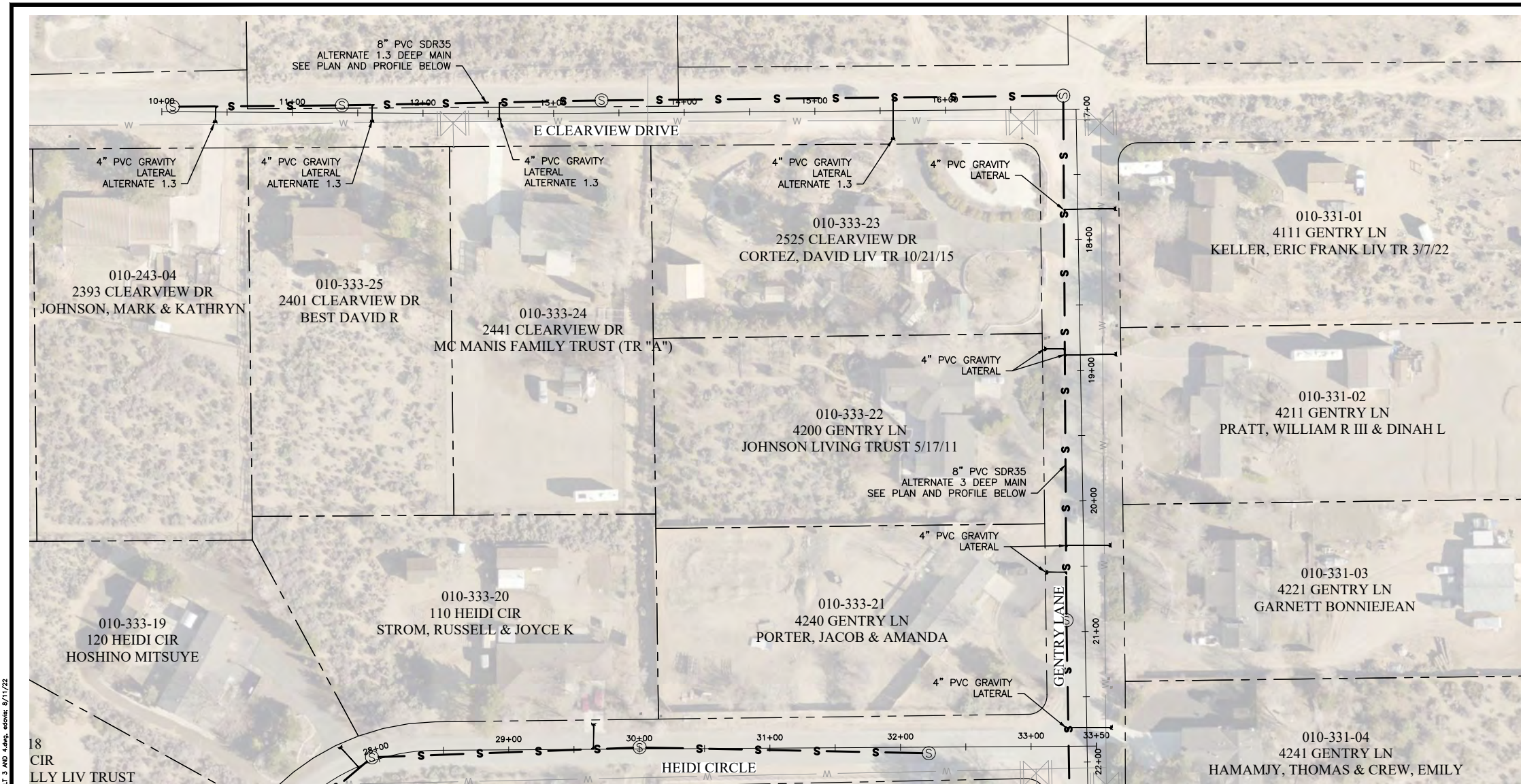
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CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 E CLEARVIEW DRIVE PLAN AND PROFILE ZONE D ALTERNATIVE 1.2

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GENERAL NOTES:

1. EXACT LOCATION OF LATERAL STUBS TO BE DETERMINED IN THE DESIGN PHASING OF THE PROJECT.
2. ALL LATERALS TO BE STUBBED AT PROPERTY LINE FOR FUTURE CONNECTION TO BE PROVIDED BY HOME OWNER.

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 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

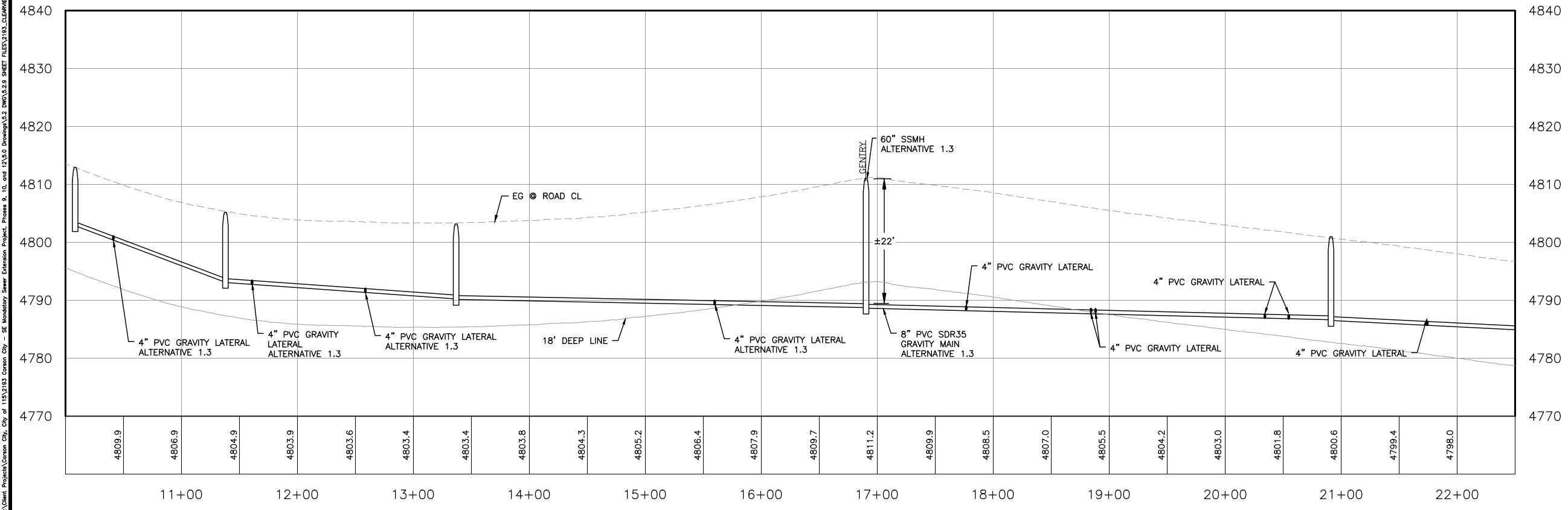
CARSON CITY PUBLIC WORKS DEPARTMENT
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CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 9 AND 10 E CLEARVIEW DRIVE PLAN AND PROFILE ZONE D ALTERNATIVES 1.3

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PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

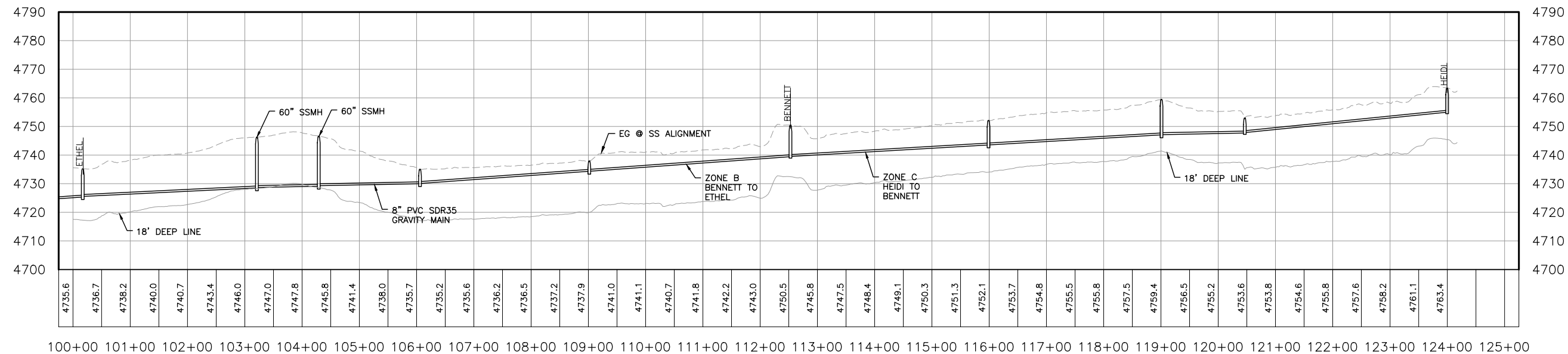
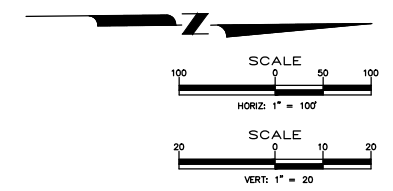
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GENERAL NOTES:

1. EXACT LOCATION OF LATERAL STUBS TO BE DETERMINED IN THE DESIGN PHASING OF THE PROJECT.
2. ALL LATERALS TO BE STUBBED AT PROPERTY LINE FOR FUTURE CONNECTION TO BE PROVIDED BY HOME OWNER.

LEGEND:

LOTS REQUIRING INDIVIDUAL LIFT STATIONS



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DESIGNED BY: KKK
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 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

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CARSON CITY - MANDATORY SEWER EXTENSION PROJECT
PHASE 9 AND 10
BENNETT AND HEIDI LIFT STATIONS
ZONES B & C ALTERNATIVES 1.2

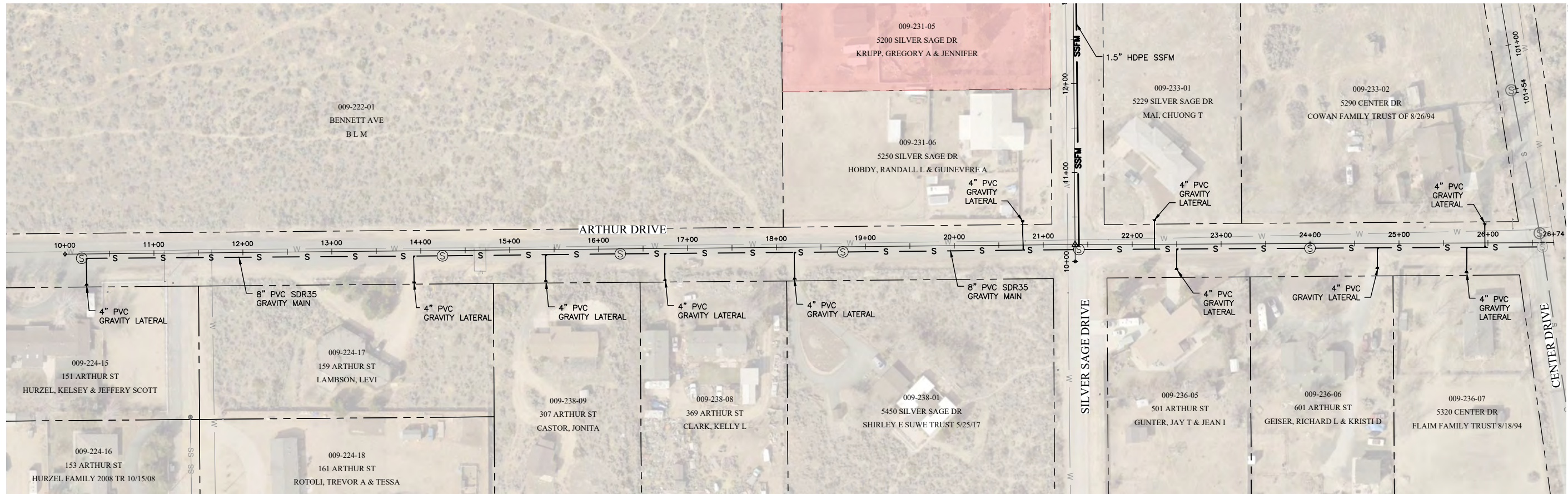
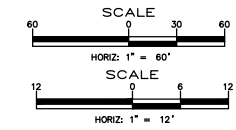
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PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

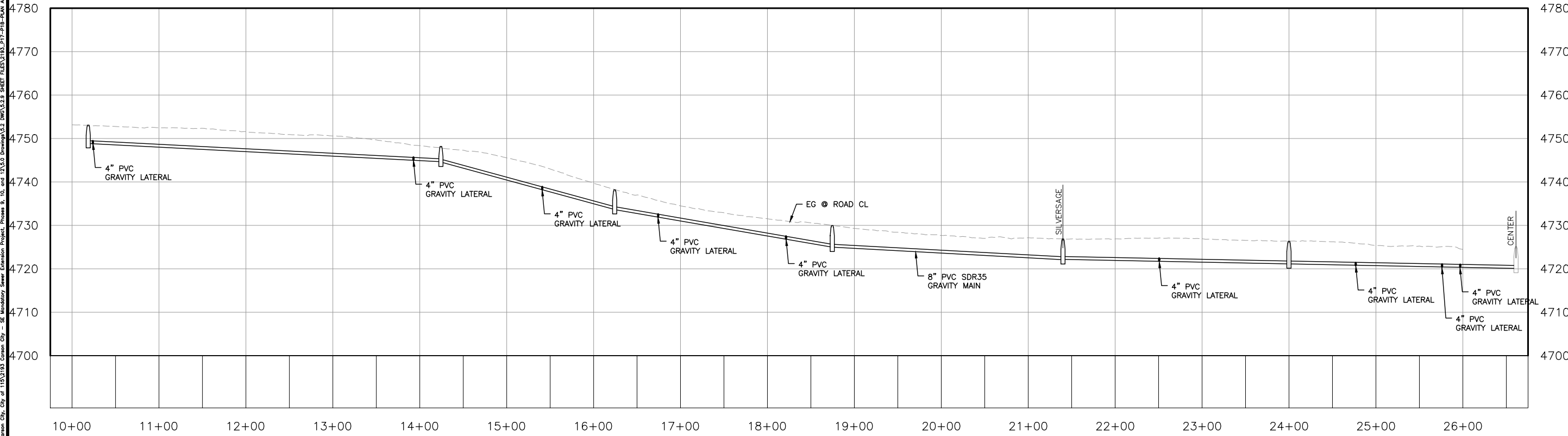
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GENERAL NOTES:

1. EXACT LOCATION OF LATERAL STUBS TO BE DETERMINED IN THE DESIGN PHASING OF THE PROJECT.
2. ALL LATERALS TO BE STUBBED AT PROPERTY LINE FOR FUTURE CONNECTION TO BE PROVIDED BY HOME OWNER.



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ARTHUR DRIVE

DESIGNED BY: KKK
 DRAWN BY: ED
 CHECKED BY: CL
 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
 PLOT DATE: 8/11/22

CARSON CITY PUBLIC WORKS DEPARTMENT
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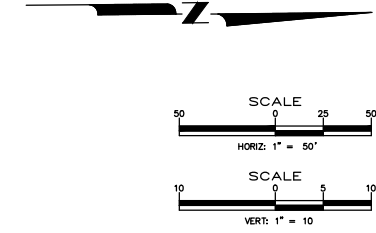
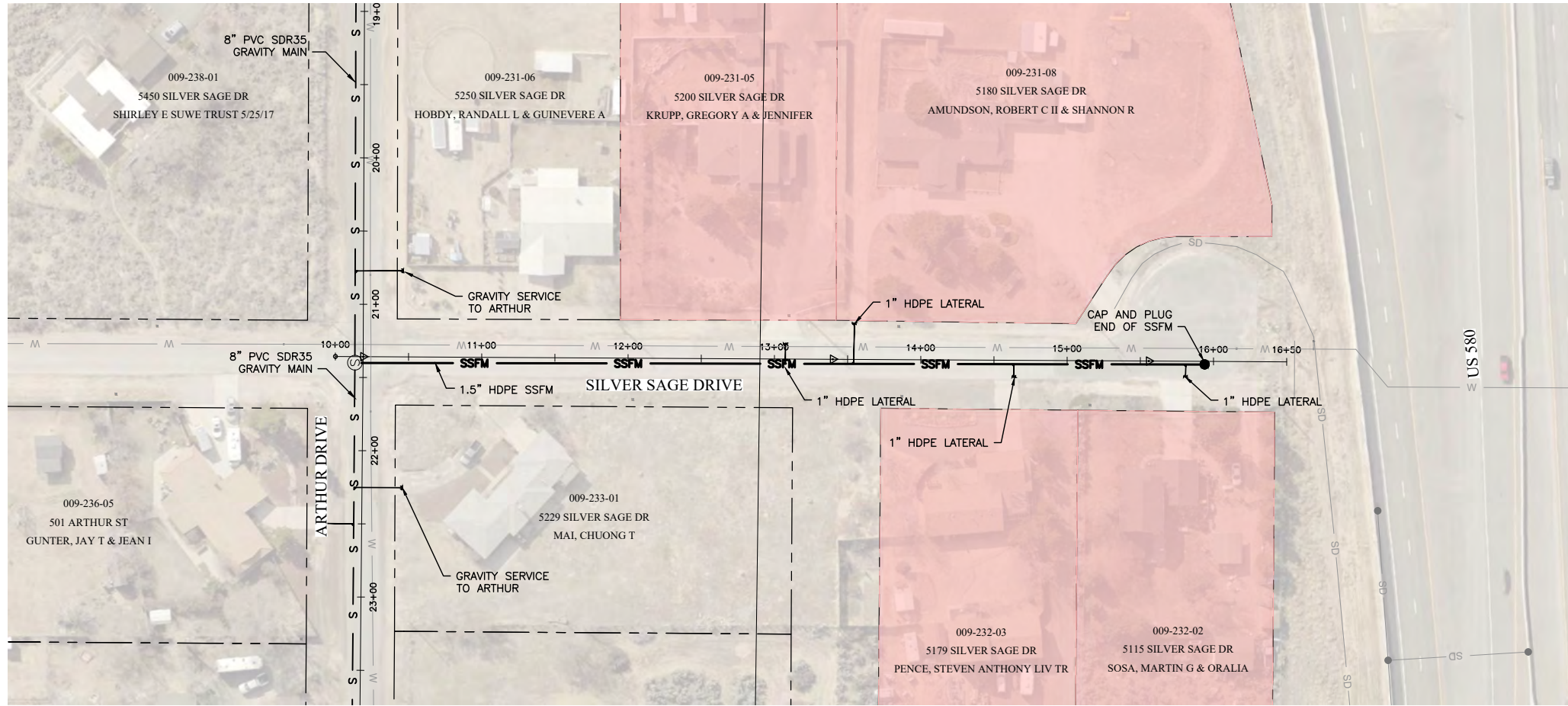
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CARSON CITY - MANDATORY SEWER EXTENSION PROJECT PHASE 12 ARTHUR DRIVE PLAN AND PROFILE STA 10+00 to STA 26+75

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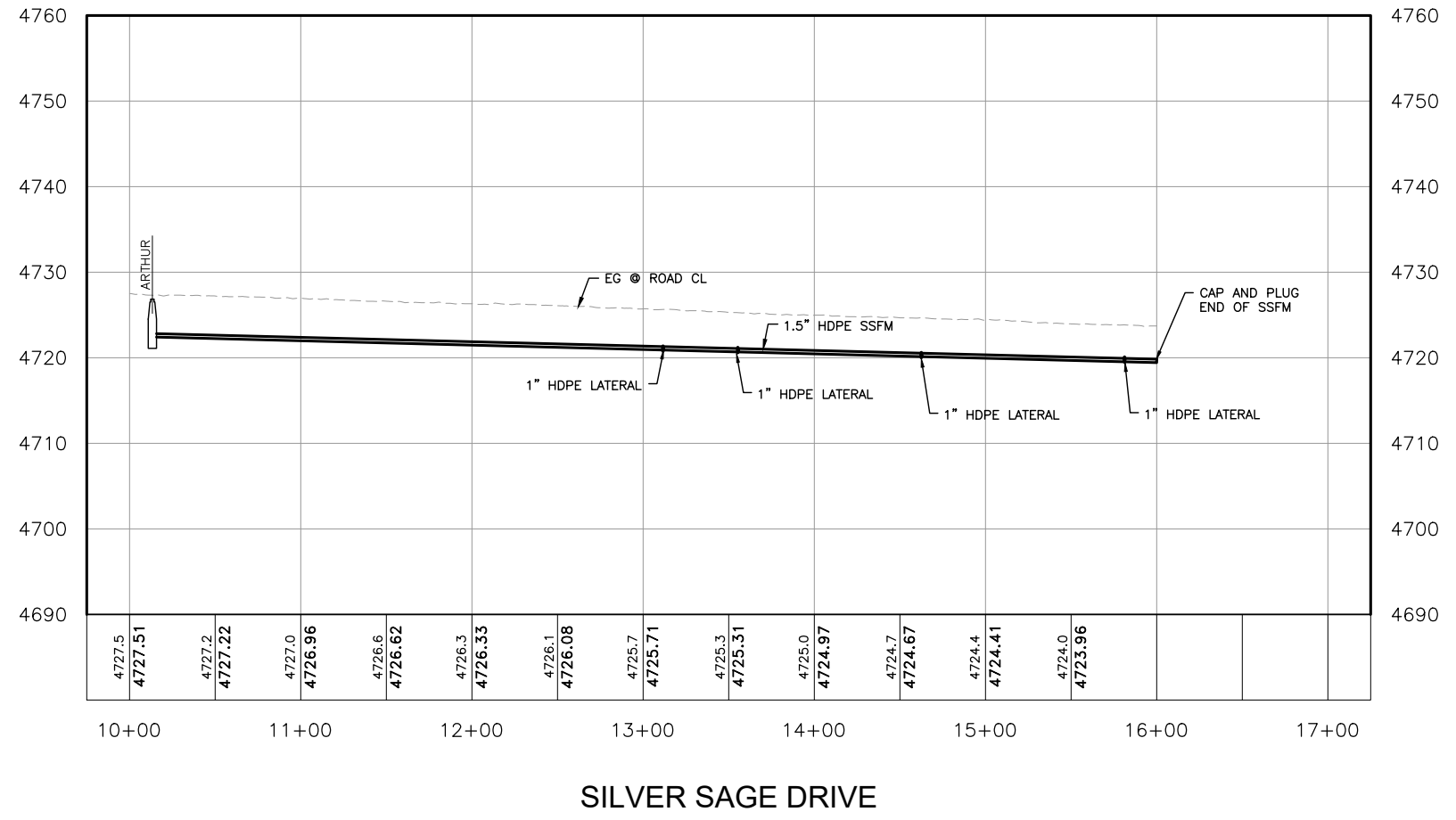
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GENERAL NOTES:

1. EXACT LOCATION OF LATERAL STUBS TO BE DETERMINED IN THE DESIGN PHASING OF THE PROJECT.
2. ALL LATERALS TO BE STUBBED AT PROPERTY LINE FOR FUTURE CONNECTION TO BE PROVIDED BY HOME OWNER.



DESIGNED BY: KKK
 DRAWN BY: ED
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 DWG NO.:
 SCALE (HORIZ): AS SHOWN
 SCALE (VERT): AS SHOWN
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CARSON CITY PUBLIC WORKS DEPARTMENT
 3505 BUTTI WAY
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 billing@farrwestengineering.com-USA

REV.	DATE	DESCRIPTION	BY	APP'D

CARSON CITY - MANDATORY SEWER EXTENSION PROJECT
PHASE 12
SILVER SAGE DRIVE
PLAN AND PROFILE
STA 10+00 to STA 16+50

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PRELIMINARY ENGINEERING (NOT FOR CONSTRUCTION)

APPENDIX B

PRELIMINARY COST ESTIMATES

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone A Alternative 1.1
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/11/22
 QC Check by: Keith Karpstein
 Date: 08/11/22

ZONE A - ALTERNATIVE 1.1

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 118,252.00	\$ 118,252.00
2	Temporary Traffic Control (2.5%)	1	LS	\$ 59,126.00	\$ 59,126.00
3	Temporary Erosion Control (2.5%)	1	LS	\$ 59,126.00	\$ 59,126.00
4	8" PVC SDR 35 Gravity Sewer Main <18' Deep	4,621	LF	\$ 275.00	\$ 1,270,775.00
5	8" PVC SDR 35 Gravity Sewer Main >18' Deep	350	LF	\$ 412.50	\$ 144,375.00
6	48" Manhole	14	EA	\$ 12,000.00	\$ 168,000.00
7	60" Manhole	0	EA	\$ 16,000.00	\$ -
8	Pavement Restoration	4,971	LF	\$ 90.00	\$ 447,390.00
9	1.5" HDPE DR 11 Sanitary Sewer Force Main	0	LF	\$ 75.00	\$ -
10	1" HDPE Residential Force Main Lateral Stub	4	EA	\$ 3,000.00	\$ 12,000.00
11	4" PVC Residential Gravity Lateral Stub	43	EA	\$ 7,500.00	\$ 322,500.00
12	Municipal Lift Station	0	EA	\$ 250,000.00	\$ -
13	12' Wide Access Road w/ 6" Gravel	0	SF	\$ 1.50	\$ -
14	Property Easements	0	SF	\$ 5.00	\$ -

Construction Subtotal: \$ 2,601,544.00
30% Contingency: \$780,463.20
Design and CM: \$390,231.60
Base Bid Total: \$ 3,772,238.80

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone B Alternative 1.1
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

ZONE B - ALTERNATIVE 1.1

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 112,028.75	\$ 112,028.75
2	Temporary Traffic Control (2.5%)	1	LS	\$ 56,014.38	\$ 56,014.38
3	Temporary Erosion Control (2.5%)	1	LS	\$ 56,014.38	\$ 56,014.38
4	8" PVC SDR 35 Gravity Sewer Main <18' Deep	3,864	LF	\$ 275.00	\$ 1,062,600.00
5	8" PVC SDR 35 Gravity Sewer Main >18' Deep	0	LF	\$ 412.50	\$ -
6	48" Manhole	14	EA	\$ 12,000.00	\$ 168,000.00
7	60" Manhole	0	EA	\$ 16,000.00	\$ -
8	Pavement Restoration	4,325	LF	\$ 90.00	\$ 389,250.00
9	6" HDPE DR 11 Sanitary Sewer Force Main	461	LF	\$ 225.00	\$ 103,725.00
10	1" HDPE Residential Force Main Lateral Stub	4	EA	\$ 3,000.00	\$ 12,000.00
11	4" PVC Residential Gravity Lateral Stub	34	EA	\$ 7,500.00	\$ 255,000.00
12	Municipal Lift Station	1	EA	\$ 250,000.00	\$ 250,000.00
13	12' Wide Access Road w/ 6" Gravel	0	SF	\$ 1.50	\$ -
14	Property Easements	0	SF	\$ 5.00	\$ -

Construction Subtotal: \$ 2,464,632.50
30% Contingency: \$739,389.75
Design and CM: \$ 369,694.88
Base Bid Total: \$ 3,573,717.13

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone B Alternative 1.2
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

ZONE B - ALTERNATIVE 1.2

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 109,520.98	\$ 109,520.98
2	Temporary Traffic Control (2.5%)	1	LS	\$ 54,760.49	\$ 54,760.49
3	Temporary Erosion Control (2.5%)	1	LS	\$ 54,760.49	\$ 54,760.49
4	8" PVC SDR 35 Gravity Sewer Main <18' Deep	4,743	LF	\$ 275.00	\$ 1,304,325.00
5	8" PVC SDR 35 Gravity Sewer Main >18' Deep	105	LF	\$ 412.50	\$ 43,312.50
6	48" Manhole	14	EA	\$ 12,000.00	\$ 168,000.00
7	60" Manhole	2	EA	\$ 16,000.00	\$ 32,000.00
8	Pavement Restoration	3,619	LF	\$ 90.00	\$ 325,710.00
9	6" HDPE DR 11 Sanitary Sewer Force Main	0	LF	\$ 225.00	\$ -
10	1" HDPE Residential Force Main Lateral Stub	4	EA	\$ 3,000.00	\$ 12,000.00
11	4" PVC Residential Gravity Lateral Stub	34	EA	\$ 7,500.00	\$ 255,000.00
12	Municipal Lift Station	0	EA	\$ 250,000.00	\$ -
13	12' Wide Access Road w/ 6" Gravel	14,748	SF	\$ 1.50	\$ 22,122.00
14	Property Easements	5590	SF	\$ 5.00	\$ 27,950.00

Construction Subtotal: \$ 2,409,461.45
30% Contingency: \$722,838.44
Design and CM: \$361,419.22
Base Bid Total: \$ 3,493,719.10

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone B Alternative 1.3
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

ZONE B - ALTERNATIVE 1.3

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 98,780.38	\$ 98,780.38
2	Temporary Traffic Control (2.5%)	1	LS	\$ 49,390.19	\$ 49,390.19
3	Temporary Erosion Control (2.5%)	1	LS	\$ 49,390.19	\$ 49,390.19
4	8" PVC SDR 35 Gravity Sewer Main <18' Deep	3,273	LF	\$ 275.00	\$ 900,075.00
5	8" PVC SDR 35 Gravity Sewer Main >18' Deep	585	LF	\$ 412.50	\$ 241,312.50
6	48" Manhole	10	EA	\$ 12,000.00	\$ 120,000.00
7	60" Manhole	1	EA	\$ 16,000.00	\$ 16,000.00
8	Pavement Restoration	3,858	LF	\$ 90.00	\$ 347,220.00
9	6" HDPE DR 11 Sanitary Sewer Force Main	0	LF	\$ 225.00	\$ -
10	1" HDPE Residential Force Main Lateral Stub	2	EA	\$ 3,000.00	\$ 6,000.00
11	4" PVC Residential Gravity Lateral Stub	46	EA	\$ 7,500.00	\$ 345,000.00
12	Municipal Lift Station	0	EA	\$ 250,000.00	\$ -
13	12' Wide Access Road w/ 6" Gravel	0	SF	\$ 1.50	\$ -
14	Property Easements	0	SF	\$ 5.00	\$ -

Construction Subtotal: \$ 2,173,168.25
30% Contingency: \$651,950.48
Design and CM: \$325,975.24
Base Bid Total: \$ 3,151,093.96

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone C Alternative 1.1
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

ZONE C - ALTERNATIVE 1.1

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 60,252.50	\$ 60,252.50
2	Temporary Traffic Control (2.5%)	1	LS	\$ 30,126.25	\$ 30,126.25
3	Temporary Erosion Control (2.5%)	1	LS	\$ 30,126.25	\$ 30,126.25
4	8" PVC SDR 35 Gravity Sewer Main <18' Deep	1,925	LF	\$ 275.00	\$ 529,375.00
5	8" PVC SDR 35 Gravity Sewer Main >18' Deep	0	LF	\$ 412.50	\$ -
6	48" Manhole	9	EA	\$ 12,000.00	\$ 108,000.00
7	60" Manhole	0	EA	\$ 16,000.00	\$ -
8	Pavement Restoration	2,085	LF	\$ 90.00	\$ 187,650.00
9	3" HDPE DR 11 Sanitary Sewer Force Main	435	LF	\$ 115.00	\$ 50,025.00
10	1" HDPE Residential Force Main Lateral Stub	0	EA	\$ 3,000.00	\$ -
11	4" PVC Residential Gravity Lateral Stub	24	EA	\$ 7,500.00	\$ 180,000.00
12	*Municipal Lift Station	1	EA	\$ 150,000.00	\$ 150,000.00
13	12' Wide Access Road w/ 6" Gravel	0	SF	\$ 1.50	\$ -
14	Property Easements	0	SF	\$ 5.00	\$ -

*Lift Station priced differently than others as it will take in less flow and be smaller in size.

Construction Subtotal: \$ 1,325,555.00
30% Contingency: \$397,666.50
Design and CM: \$198,833.25
Base Bid Total: \$ 1,922,054.75

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone C Alternative 1.2
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

ZONE C - ALTERNATIVE 1.2

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 66,236.65	\$ 66,236.65
2	Temporary Traffic Control (2.5%)	1	LS	\$ 33,118.33	\$ 33,118.33
3	Temporary Erosion Control (2.5%)	1	LS	\$ 33,118.33	\$ 33,118.33
4	8" PVC SDR 35 Gravity Sewer Main <18' Deep	2,990	LF	\$ 275.00	\$ 822,250.00
5	8" PVC SDR 35 Gravity Sewer Main >18' Deep	0	LF	\$ 412.50	\$ -
6	48" Manhole	11	EA	\$ 12,000.00	\$ 132,000.00
7	60" Manhole	0	EA	\$ 16,000.00	\$ -
8	Pavement Restoration	1,854	LF	\$ 90.00	\$ 166,860.00
9	1.5" HDPE DR 11 Sanitary Sewer Force Main	0	LF	\$ 75.00	\$ -
10	1" HDPE Residential Force Main Lateral Stub	0	EA	\$ 3,000.00	\$ -
11	4" PVC Residential Gravity Lateral Stub	24	EA	\$ 7,500.00	\$ 180,000.00
12	Municipal Lift Station	0	EA	\$ 150,000.00	\$ -
13	12' Wide Access Road w/ 6" Gravel	13,632	SF	\$ 1.50	\$ 20,448.00
14	Property Easements	635	SF	\$ 5.00	\$ 3,175.00

Construction Subtotal: \$ 1,457,206.30
30% Contingency: \$437,161.89
Design and CM: \$218,580.95
Base Bid Total: \$ 2,112,949.14

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone D Alternative 1.1
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

ZONE D - ALTERNATIVE 1.1

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 4,560.00	\$ 4,560.00
2	Temporary Traffic Control (2.5%)	1	LS	\$ 2,280.00	\$ 2,280.00
3	Temporary Erosion Control (2.5%)	1	LS	\$ 2,280.00	\$ 2,280.00
4	8" PVC SDR 35 Gravity Sewer Main <18' Deep	0	LF	\$ 275.00	\$ -
5	8" PVC SDR 35 Gravity Sewer Main >18' Deep	0	LF	\$ 412.50	\$ -
6	48" Manhole	0	EA	\$ 12,000.00	\$ -
7	60" Manhole	0	EA	\$ 16,000.00	\$ -
8	Pavement Restoration	480	LF	\$ 90.00	\$ 43,200.00
9	1.5" HDPE DR 11 Sanitary Sewer Force Main	480	LF	\$ 75.00	\$ 36,000.00
10	1" HDPE Residential Force Main Lateral Stub	4	EA	\$ 3,000.00	\$ 12,000.00
11	4" PVC Residential Gravity Lateral Stub	0	EA	\$ 7,500.00	\$ -
12	Municipal Lift Station	0	EA	\$ 150,000.00	\$ -
13	12' Wide Access Road w/ 6" Gravel	0	SF	\$ 1.50	\$ -
14	Property Easements	0	SF	\$ 5.00	\$ -

Construction Subtotal: \$ 100,320.00
30% Contingency: \$30,096.00
Design and CM \$15,048.00
Base Bid Total: \$ 145,464.00

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone D Alternative 1.2
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

ZONE D - ALTERNATIVE 1.2

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 15,317.75	\$ 15,317.75
2	Temporary Traffic Control (2.5%)	1	LS	\$ 7,658.88	\$ 7,658.88
3	Temporary Erosion Control (2.5%)	1	LS	\$ 7,658.88	\$ 7,658.88
4	8" PVC SDR 35 Gravity Sewer Main <18' Deep	677	LF	\$ 275.00	\$ 186,175.00
5	8" PVC SDR 35 Gravity Sewer Main >18' Deep	0	LF	\$ 412.50	\$ -
6	48" Manhole	3	EA	\$ 12,000.00	\$ 36,000.00
7	60" Manhole	0	EA	\$ 16,000.00	\$ -
8	Pavement Restoration	752	LF	\$ 90.00	\$ 67,680.00
9	1.5" HDPE DR 11 Sanitary Sewer Force Main	0	LF	\$ 75.00	\$ -
10	1" HDPE Residential Force Main Lateral Stub	3	EA	\$ 3,000.00	\$ 9,000.00
11	4" PVC Residential Gravity Lateral Stub	1	EA	\$ 7,500.00	\$ 7,500.00
12	Municipal Lift Station	0	EA	\$ 150,000.00	\$ -
13	12' Wide Access Road w/ 6" Gravel	0	SF	\$ 1.50	\$ -
14	Property Easements	0	SF	\$ 5.00	\$ -

Construction Subtotal: \$ 336,990.50
30% Contingency: \$101,097.15
Design and CM: \$50,548.58
Base Bid Total: \$ 488,636.23

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone D Alternative 1.3
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

ZONE D - ALTERNATIVE 1.3

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 22,023.88	\$ 22,023.88
2	Temporary Traffic Control (2.5%)	1	LS	\$ 11,011.94	\$ 11,011.94
3	Temporary Erosion Control (2.5%)	1	LS	\$ 11,011.94	\$ 11,011.94
4	8" PVC SDR 35 Gravity Sewer Main <18' Deep	576	LF	\$ 275.00	\$ 158,400.00
5	8" PVC SDR 35 Gravity Sewer Main >18' Deep	295	LF	\$ 412.50	\$ 121,687.50
6	48" Manhole	3	EA	\$ 12,000.00	\$ 36,000.00
7	60" Manhole	1	EA	\$ 16,000.00	\$ 16,000.00
8	Pavement Restoration	871	LF	\$ 90.00	\$ 78,390.00
9	1.5" HDPE DR 11 Sanitary Sewer Force Main	0	LF	\$ 75.00	\$ -
10	1" HDPE Residential Force Main Lateral Stub	0	EA	\$ 3,000.00	\$ -
11	4" PVC Residential Gravity Lateral Stub	4	EA	\$ 7,500.00	\$ 30,000.00
12	Municipal Lift Station	0	EA	\$ 150,000.00	\$ -
13	12' Wide Access Road w/ 6" Gravel	0	SF	\$ 1.50	\$ -
14	Property Easements	0	SF	\$ 5.00	\$ -

Construction Subtotal: \$ 484,525.25
30% Contingency: \$145,357.58
Design and CM: \$72,678.79
Base Bid Total: \$ 702,561.61

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone B Alternative 2
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

ZONE B ALTERNATIVE 2

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 95,000.00	\$ 95,000.00
2	Temporary Erosion Control (1%)	1	LS	\$ 19,000.00	\$ 19,000.00
3	Temporary Traffic Control (1%)	1	LS	\$ 19,000.00	\$ 19,000.00
4	Zone B Denitrification Units	38	LF	\$ 50,000.00	\$ 1,900,000.00

Construction Subtotal: \$2,033,000.00
30% Contingency: \$609,900.00
Design and CM: \$304,950.00
Base Bid Total: \$2,947,850.00

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone C Alternative 2
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

ZONE C - ALTERNATIVE 2

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 60,000.00	\$ 60,000.00
2	Temporary Erosion Control (1%)	1	LS	\$ 12,000.00	\$ 12,000.00
3	Temporary Traffic Control (1%)	1	LS	\$ 12,000.00	\$ 12,000.00
4	Zone C Denitrification Units	24	EA	\$ 50,000.00	\$ 1,200,000.00

Construction Subtotal: \$1,284,000.00
30% Contingency: \$385,200.00
Design and CM: \$192,600.00
Base Bid Total: \$1,861,800.00

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Zone D Alternative 2
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

ZONE D - ALTERNATIVE 2

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 10,000.00	\$ 10,000.00
2	Temporary Erosion Control (1%)	1	LS	\$ 2,000.00	\$ 2,000.00
3	Temporary Traffic Control (1%)	1	LS	\$ 2,000.00	\$ 2,000.00
4	Zone D Denitrification Units	4	EA	\$ 50,000.00	\$ 200,000.00

Construction Subtotal: \$214,000.00
30% Contingency: \$64,200.00
Design and CM: \$32,100.00
Base Bid Total: \$310,300.00

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 9 & 10 Alternative 3
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

PHASE 9 AND 10 - ALTERNATIVE 3

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 282,500.00	\$ 282,500.00
2	Temporary Traffic Control (Zone A) (1%)	1	LS	\$ 56,500.00	\$ 56,500.00
3	Temporary Erosion Control (1%)	1	LS	\$ 56,500.00	\$ 56,500.00
4	Zone A Denitrification Units	47	LS	\$ 50,000.00	\$ 2,350,000.00
5	Zone B Denitrification Units	38	LF	\$ 50,000.00	\$ 1,900,000.00
6	Zone C Denitrification Units	24	EA	\$ 50,000.00	\$ 1,200,000.00
7	Zone D Denitrification Units	4	EA	\$ 50,000.00	\$ 200,000.00

Construction Subtotal: \$6,045,500.00
30% Contingency: \$1,813,650.00
Design and CM: \$906,825.00
Base Bid Total: \$8,765,975.00

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 12 Alternative 1
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

PHASE 12 ALTERNATIVE 1

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 42,907.50	\$ 42,907.50
2	Temporary Traffic Control (2.5%)	1	LS	\$ 21,453.75	\$ 21,453.75
3	Temporary Erosion Control (2.5%)	1	LS	\$ 21,453.75	\$ 21,453.75
4	8" PVC SDR 35 Gravity Sewer Main <18' Deep	1,635	LF	\$ 275.00	\$ 449,625.00
5	8" PVC SDR 35 Gravity Sewer Main >18' Deep	0	LF	\$ 412.50	\$ -
6	48" Manhole	6	EA	\$ 12,000.00	\$ 72,000.00
7	60" Manhole	0	EA	\$ 16,000.00	\$ -
8	Pavement Restoration	2,210	LF	\$ 90.00	\$ 198,900.00
9	1.5" HDPE DR 11 Sanitary Sewer Force Main	575	LF	\$ 75.00	\$ 43,125.00
10	1" HDPE Residential Force Main Lateral Stub	4	EA	\$ 3,000.00	\$ 12,000.00
11	4" PVC Residential Gravity Lateral Stub	11	EA	\$ 7,500.00	\$ 82,500.00
12	Municipal Lift Station	0	EA	\$ 150,000.00	\$ -
13	12' Wide Access Road w/ 6" Gravel	0	SF	\$ 1.50	\$ -
14	Property Easements	0	SF	\$ 5.00	\$ -

Construction Subtotal: \$ 943,965.00
30% Contingency: \$283,189.50
Design and CM: \$141,594.75
Base Bid Total: \$ 1,368,749.25

City of Carson City
Southeast Mandatory Sewer Extension Project - Phases 12 Alternative 2
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 08/02/22
 QC Check by: Keith Karpstein
 Date: 08/02/22

PHASE 12 - ALTERNATIVE 2

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 47,563.75	\$ 47,563.75
2	Temporary Traffic Control (2.5%)	1	LS	\$ 23,781.88	\$ 23,781.88
3	Temporary Erosion Control (2.5%)	1	LS	\$ 23,781.88	\$ 23,781.88
4	8" PVC SDR 35 Gravity Sewer Main <18' Deep	1,635	LF	\$ 275.00	\$ 449,625.00
5	8" PVC SDR 35 Gravity Sewer Main >18' Deep	0	LF	\$ 412.50	\$ -
6	48" Manhole	6	EA	\$ 12,000.00	\$ 72,000.00
7	60" Manhole	0	EA	\$ 16,000.00	\$ -
8	Pavement Restoration	1,635	LF	\$ 90.00	\$ 147,150.00
9	1.5" HDPE DR 11 Sanitary Sewer Force Main	0	LF	\$ 75.00	\$ -
10	1" HDPE Residential Force Main Lateral Stub	0	EA	\$ 3,000.00	\$ -
11	4" PVC Residential Gravity Lateral Stub	11	EA	\$ 7,500.00	\$ 82,500.00
12	Denitrification Units	4	EA	\$ 50,000.00	\$ 200,000.00

Construction Subtotal: \$1,046,402.50
30% Contingency: \$313,920.75
Design and CM: \$156,960.38
Base Bid Total: \$1,517,283.63

City of Carson City
Southeast Mandatory Sewer Extension Project - Phase 12 Alternative 3
Engineer's Opinion of Probable Construction Costs (Preliminary Submittal)

Estimate by: Eric Davis
 Project No. 2193
 Date: 8/2/2022
 QC Check by: Keith Karpstein
 Date: 8/2/2022

PHASE 12 - ALTERNATIVE 3

Bid Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization and Demobilization (NTE 5%)	1	LS	\$ 37,500.00	\$ 37,500.00
2	Temporary Erosion Control (1%)	1	LS	\$ 7,500.00	\$ 7,500.00
3	Temporary Traffic Control (1%)	1	LS	\$ 7,500.00	\$ 7,500.00
4	Septic Denitrification System	15	EA	\$ 50,000.00	\$ 750,000.00

Construction Subtotal: \$802,500.00
30% Contingency: \$240,750.00
Design and CM: \$120,375.00
Base Bid Total: \$1,163,625.00

AMENDMENT FOR CONTRACT

Contract No.: 21300207
Title: Design Services for the Southeast Mandatory Sewer Extension Project
Amendment No.: 1

If Consideration will be amended, please indicate amount: Increase \$346,505.

Reason for amendment: To extend the contract from December 31, 2022 through December 31, 2023 and to increase the contract an additional \$346,505 for the design phase services described in Exhibit A to this Amendment, for a new total contract amount of \$396,494.

It is also agreed, that all unaffected conditions, requirements, and restrictions of Contract No. 21300207, and Amendment No. 1 thereto, remain in full force and effect for the duration of the Contract term.

Amendment will become effective when approved by the Carson City Board of Supervisors and executed by the Carson City Mayor.

CONSULTANT

Approved by:

Farr West Engineering.:

Name/Title: Brent Farr, President

Signature: _____ Date: _____

CITY

Approved by:

City Department: Public Works

Name/Title: Darren Schulz, Director

Signature: _____ Date: _____

Carson City Purchasing and Contracts:

Name/Title: Carol Akers, Purchasing and Contracts Administrator

Signature: _____ Date: _____

Approved as to form by:

District Attorney's Office:

Name/Title: Adam Tully, Deputy District Attorney

Signature: _____ Date: _____

**Sub-Project P320121007
Master Grant G070121010 (ARPA Grant)
2750600-507010**

AMENDMENT FOR CONTRACT

Contract No.: 21300207

Title: Design Services for the Southeast Mandatory Sewer Extension Project

Amendment No.: 1

CONTRACT ACCEPTANCE AND EXECUTION:

The Board of Supervisors for Carson City, Nevada at their publicly noticed meeting of August 18, 2022, approved the acceptance of the attached Amendment for Contract hereinbefore identified as Amendment No. 1 to CONTRACT No. 21300207. Further, the Board of Supervisors authorizes the Mayor of Carson City, Nevada to sign this document and record the signature for the execution of this Amendment for Contract in accordance with the action taken.

CARSON CITY, NEVADA

LORI BAGWELL, MAYOR

DATED this 18th day of August, 2022.

ATTEST:

AUBREY ROWLATT
Clerk-Recorder

DATED this 18th day of August, 2022.

**Sub-Project P320121007
Master Grant G070121010 (ARPA Grant)
2750600-507010**

EXHIBIT A SCOPE OF WORK

Carson City Public Works

SE Mandatory Sanitary Sewer Extension Project – Phases 9 and 10, Zones A and B

INTRODUCTION

Carson City has observed high nitrate levels in groundwater samples pulled from existing wells in the surrounding area of Southeast Carson. The existing properties located within phases 9 and 10 of the Southeast Carson Sewer Extension Plan are currently served by individual septic systems that are contributing to the continuing rise in nitrate levels that are negatively impacting surrounding water sources. The proposed work will follow the recommendations contained within the technical memorandum previously completed by Farr West Engineering for alternative A1 and B1.3. The expansion of the existing sewer system will include main line extensions, private lateral extensions, pavement patching and surface restoration. Private lateral extensions on private property are excluded from this scope of work, however all properties will be evaluated and recommendations provided for connection to the new sewer system. Both alternatives will be designed concurrently with only Zone A being constructed in year 2023. Zone B will be constructed in a later year depending on funding availability. Farr West Engineering (Farr West) will provide project management, public outreach assistance, preliminary engineering, survey and mapping, geotechnical investigation, final design, bid support, and construction administration assistance as described in the following task descriptions.

The phase and task breakdown for the project is designated as follows:

Design Services

- Task 1 – Project Management
- Task 2A – Survey and Mapping
- Task 2B – Boundary Survey
- Task 3 – Public Outreach
- Task 4 - Preliminary Engineering
- Task 5 – Geotechnical Investigation
- Task 6 – Final Design
- Task 7 – Bid Support
- Task 8 – Owner Directed Services

DESIGN SERVICES

Task 1 – Project Management

Objective

To plan, organize, direct, control, and communicate all relevant activities set forth in this Scope of Work within the approved budget and schedule.

Approach

Farr West will routinely review project progress and communicate project status on a regular basis. Communication will be through email and telephone, and with monthly project coordination meetings with Carson City Public Works and Farr West staff. This task will include the following activities:

- Project administration includes scheduling maintenance, cost control, monthly invoicing, filing, resource allocation, subconsultant management, and routine communications.
- Conducting a project kick-off meeting with Farr West and Carson City Public Works staff.
- Team coordination, including conference calls and internal meetings.
- Monitoring changes to the scope, budget, or schedule and developing change management strategies with Carson City Public Works.

Deliverables

The following deliverables will be submitted under this task:

- Project schedule.
- Monthly status reports.

Assumptions

The following assumptions apply:

- Monthly reports will be provided with timely invoices.
- Project-related issues will be identified, communicated, and resolved.

Task 2A – Survey and Mapping

Objective

To generate survey and mapping data for development of CAD base maps in support of design activities.

Approach

The following approach applies:

- Farr West will utilize Carson City GIS data for boundary lines between private parcels. Street right-of-way will be established by locating property corners at the edge of right-of-way, if locatable, and referencing record map data. Street right-of-way accuracy will be within 1' of actual boundary line. A boundary survey will not be required.
- Farr West will establish project control for base map preparation. The horizontal and vertical control will be based on published data. Horizontal control will conform to North American Datum of 1983 (NAD 83), and vertical control will conform to North American Vertical Datum of 1988 (NAVD 88). Constrained to Carson City Control Network.
- Farr West will provide a topographic survey to support development of design drawings. The final drawing will be prepared showing one - foot Contour intervals with drawing scale of 1" = 20'.

- Farr West will locate existing conditions including, but not be limited to curbs, walks and utility features including water and sewer, drainage features and structures which are visible from the surface of the ground. These features will be mapped and shown on the topographic map.
- Existing manholes, catch basins and valves will be dipped to establish vertical profiles for existing utilities.
- Farr West will locate and provide elevation data for each affected property owner's private sewer laterals where cleanouts are visible.

Deliverables

- Electronic CAD files for use in preparing design plans conforming to Carson City Mapping Standards.

Assumptions

The following assumptions apply:

- Carson City will be responsible for obtaining any required off-site right of entries, easements, or right-of-way.
- Boundary survey and record map recordation are not included.
- Permission to enter private property will be obtained through Task 3.

Task 2B – Boundary Survey

Objective

To generate right-of-way limits for roadways where sanitary sewer work is anticipated in support of design activities.

Approach

The following approach applies:

- Farr West will conduct a boundary survey for the right-of-way where sanitary sewer work is anticipated, in accordance with state and local statutes, to locate the right-of-way. If necessary, adjacent parcel corners will be located to assist in the establishment of the project boundary(ies).
- Farr West will complete document research including record maps, deed documents, and preliminary title reports for the subject right-of-way and adjacent parcels.

Deliverables

- Electronic CAD files for use in preparing design plans conforming to Carson City Mapping Standards.

Assumptions

The following assumptions apply:

- This task will only be used if the data produced under Task 2A cannot achieve boundary accuracy to within 1' of actual boundary line due to unlocatable boundary corners or road monuments.
- Record map recordation is not included.

Task 3 – Public Outreach

Objective

To inform the affected property owners of the project and to coordinate private improvements for municipal sewer connection with each affected property owner.

Approach

This task will include the following activities:

- Prepare a draft mass mailer to notify affected property owners of the project.
- Prepare a draft mass mailer to notify affected property owners of public meeting.
- Attend public meeting and prepare project exhibits for presentation. Exhibits will include:
 - Project overview, including scope and purpose of project (map and text)
 - Preliminary sewer alignments for each phase, with potential lift stations identified (maps)
 - Details for sewer trenching and patching (maps)
 - Preliminary schedule for construction (text/ghantt chart)
- Prepare a residential septic system conversion letter for mass mailer with specific private lateral layout options for each affected property owner.
- Prepare private lateral layout acceptance letter for each affected property owner.
- Prepare tracking sheet and map and maintain throughout project design. This will keep Carson City informed of status of acceptance for each affected property owner.
- Meet with each affected property owner to discuss details of private lateral layouts.

Deliverables

The following deliverables will be submitted under this task:

- Electronic files of all mass mailers listed above
- Electronic and hard copies of the exhibits listed above for public meeting (maps will be full size sheets 22" x 34")
- Electronic files of tracking sheet and map (provided monthly throughout design)

Assumptions

The following assumptions apply:

- Layout design for each affected property owner will be provided under Task 4.
- Carson City will mail/deliver all mass mailers.
- Carson City will provide venue and issue public notices for public meeting.
- Public meeting will be scheduled after acceptance of the preliminary design by Carson City (Task 4).

Task 4 – Preliminary Engineering

Objective

To develop a preliminary design and opinion of probable construction costs for each phase of the sewer main extension project.

Approach

This task will include the following activities:

- Coordinate with utility owners in the project area to obtain record drawings and/or maps. Fees, if applicable, are included in this task. A third-party utility locator to mark buried utilities is not included. This information will be transferred to the base map for use in design.
- Review existing septic system data for each affected property owner. This effort will include research of existing building permits, NDEP permits, Carson City Health Department data, and field verification. Elevation verification of cleanouts and/or septic tanks is included in Task 2. This effort will assist with establishing the depth of the new sewer main and verifying the need for private lift stations.
- Prepare preliminary sewer main alignments and profiles based on existing topography, utility, and septic information.
- Complete a site visit to verify the topographic data and existing utility information. Conflicts between the preliminary alignments and existing utilities will be identified, noted and addressed in the design plans. Areas of uncertainty of existing utility locations will be identified and measures implemented to verify the location. This effort will include coordinating with utility owner representatives to locate and verify the utility locations in the field. Utility potholing is not proposed at this time, but may be required if utility owner verification of location/depth cannot be achieved.
- Prepare a preliminary sewer model to determine sewer main sizes based on the number of homes served. This effort will be preliminary and assume minimum pipe slopes to determine pipe sizes.
- Prepare an opinion of probable cost for review by Carson City. The intent of this effort is to notify Carson City of the anticipated costs related to construction. Cost may be a factor in the final verification of the limits of work. Farr West will utilize historic cost data from projects of similar scope and size.
- The Farr West design team will meet with Carson City Public Works staff to discuss the preliminary design to receive concurrence on the limits of work and proposed alignment, pipe diameters, tie-in concepts, and lift station locations and ownership, if applicable.

Deliverables

The following deliverables will be submitted under this task:

- Preliminary design plans (11”x17”) and opinion of probable costs in hard copy and pdf format. (2 hard copies will be hand delivered to Carson City 2 weeks prior to the preliminary engineering review meeting.)

Assumptions

The following assumptions apply:

*Carson City Public Works
SE Mandatory Sanitary Sewer Extension Project –
Phases 9 and 10, Zones A and B
Exhibit A – Scope of Work*

A-5

*FWE #2193
August 2022*

- No utility potholing is required.
- Drawings will be at 1"=20' scale horizontal (22"x34").
- No connection details will be provided with this task.
- A preliminary profile will be provided with this task.
- No technical specifications will be provided with this task.
- A geotechnical investigation will not be completed until the preliminary design is approved by Carson City.
- Carson City will provide review comments on the preliminary design within 3 weeks of submission.
- No municipal lift stations are required.
- The sewer model effort will be used internally to verify pipe sizes and no technical memorandum or documentation will be submitted.

Task 5 – Geotechnical Investigation

Objective

To identify subsurface conditions in the proposed trenching/excavation areas to assist with design and for use by Contractors during bidding.

Approach

This task will include the following activities:

- Review published geotechnical reports, geologic maps, fault hazard reports, and soils maps to identify the presence of documented geologic hazards at the site.
- Complete up to five (5) borings to depths ranging from 15 to 30 feet below existing ground surface.
- Obtain up to four (4) asphalt concrete pavement cores, two within each phase.
- Complete laboratory testing of soil samples from borings. Testing for index properties including moisture determination, grain size distribution, and plasticity. Testing will also include corrosion testing including soluble sulfates for corrosion to concrete and two (2) modified proctors.
- Upon completion of our field, laboratory and office studies, a Geotechnical Investigation report will be completed for the project and will include the following:
 - Description of the project site with the approximate locations of our field exploration and previous field explorations, shown on a site plan;
 - Descriptive logs of the explorations performed for this study;
 - General summary of the site soils and geology;
 - General summary of the structural section thicknesses observed within the borings and asphalt cores (excludes descriptions of pavement overlays, observed distress, and/or aggregate type used for pavement).
 - Discussion of groundwater conditions and potential for dewatering during construction;
 - Construction and design recommendations for pipeline replacement:

- Trench excavatability, backfill, and bottom of trench preparation;
- Recommendations for trench excavations and shoring requirements as required by soil conditions including anticipated caving and/or sloughing soil conditions;
- Corrosion potential to concrete of site soils;
- Anticipated construction difficulties.

Deliverables

The following deliverables will be submitted under this task:

- Geotechnical Report and Analysis. (Draft and Final in pdf and word format.)

Assumptions

The following assumptions apply:

- Traffic control, USA dig coordination and permits are included in this task.
- Permit fees for encroachment permit will be waived.
- Borings will be completed using a 2-wheel drive truck mounted drill rig, equipped with solid or hollow-stem auger and automatic hammer.
- Bulk sample collection of base or subgrade R-value and index testing is not proposed.
- Pavement cores will be collected using a hand coring rig equipped with a 4-inch diameter barrel. The underlying base thickness will not be measured nor collected.

Task 6 – Final Design

Objective

To develop a detailed design of the approved preliminary design, technical specifications, and engineer's opinion of probable construction costs for each phase.

Approach

This task will include the following activities:

- Prepare 60% design drawings, technical specifications and engineer's opinion of probable cost for each phase for Carson City review and comment. Plan sets will be prepared for each zone with the option to bid separately based on available funding. This milestone will incorporate Carson City's comments from the preliminary design review completed in Task 4. The intent of this milestone is to ensure that all design features are addressed and the design is proceeding in accordance with Carson City standards and expectations. The submittal will include:
 - General sheets, which include the cover sheet, vicinity map and sheet index; general notes, abbreviations and legend; survey and alignment control; and sheet layouts. (4 sheets estimated for each zone – 8 total.)
 - Plan and profile sheets of sewer main improvements (1"=20' scale horizontal and 1"=5' vertical). (21 sheets estimated total.)
 - General detail sheets. (6 sheets estimated for each zone – 12 total.)

- Private sanitary sewer lateral layout plans (8.5" x 11"). (85 sheets estimated total.)
 - Technical specifications.
 - Engineer's opinion of probable costs.
 - Internal quality assurance and quality control of deliverables.
 - One (1) 60% submittal review meeting with Carson City.
- Prepare 90% design drawings, technical specifications and engineer's opinion of probable costs for bidding. This milestone will incorporate Carson City's comments from the 60% review. The following details/sheets will be included with this submittal in addition to those listed above for a total estimated sheet count of 53:
 - Connection detail sheet. (1 sheets total.)
 - Restoration sheets. (11 sheets total.)
 - Prepare 100% design drawings, technical specifications and engineer's opinion of probable costs for bidding. This milestone will incorporate Carson City's comments from the 90% review and is considered the final submittal.
 - Submit construction documents to Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control (BWPC) for review and approval.

Deliverables

The following deliverables will be submitted under this task:

- 60% design drawings, technical specifications and engineer's opinion of probable costs in hard copy and pdf format. (2 hard copies hand delivered to Carson City 2 weeks prior to 60% submittal review meeting.)
- 90% design drawings, technical specifications and engineer's opinion of probable costs in hard copy and pdf format. (2 hard copies hand delivered to Carson City 2 weeks prior to 90% submittal review meeting.)
- 100% design drawings, technical specifications and engineer's opinion of probable costs in pdf format. Plans and technical specifications will include electronic stamp and signature for use in bidding.
- An AutoCAD 2020 electronic transmittal that contains supporting files, including plot files, shape files, fonts, and reference files; an electronic Word file of Specifications.

Assumptions

The following assumptions apply:

- No utility potholing is required. If determined required, it will be billed under Task 8 – Owner Directed Services.
- Carson City will provide review comments on the preliminary design within 3 weeks of submission.
- Carson City will prepare “front-end” bid documents.
- Farr West will pay required permit fees and Carson City will pay as a reimbursable expense to Farr West.

Task 7 – Bid Support

Objective

Assist Carson City with responding to bidder questions and issuing responses and addendums for Zone A.

Approach

This task will include the following activities:

- Attend pre-bid meeting.
- Responding to bidder questions and RFIs.
- Issue addendums as required to address bidder questions and RFIs.

Deliverables

The following deliverables will be submitted under this task:

- Addendums as required.

Assumptions

The following assumptions apply:

- Carson City will handle “front-end” contract documents, advertisement, pre-bid meeting, and issuing addendums to bidders.
- Farr West will attend the pre-bid meeting.
- Farr West will not attend the bid opening.
- This excludes bid support for Zone B.

Task 8 – Owner Directed Services

Objective

The intent of this task is to cover out of scope costs agreed to between Farr West and Carson City that may arise throughout the duration of the project. No work will be completed under this task without written authorization from Carson City.

Approach

The following activities will be performed as part of this task:

- Utility potholing.
- Additional services other than those listed in Tasks 1-7 above.

Deliverables:

The following deliverables will be submitted under this task:

- Deliverables will be negotiated if services are approved under this task.

Assumptions:

The following assumptions apply:

- Work in this task may only proceed after approval is given from Carson City.

**EXHIBIT B
SCHEDULE**

Notice to Proceed:	September 2022
Survey Base Map Completion:	October 2022
Preliminary Design Completion:	January 2023
Geotechnical Investigation Completion:	February 2023
Final Design Completion:	May 2023
Bid Completion:	July 2023

**EXHIBIT C
BUDGET**

Task 1	Project Management	\$10,812
Task 2A	Survey and Mapping	\$30,000
Task 2B	Boundary Survey	\$11,940
Task 3	Public Outreach	\$33,298
Task 4	Preliminary Engineering	\$78,769
Task 5	Geotechnical Investigation	\$28,555
Task 6	Final Design	\$120,034
Task 7	Bid Support	\$3,097
Task 8	Owner Directed Services	\$30,000
	TOTAL:	\$346,505

Notes:

1. Owner shall pay Engineer an amount equal to the cumulative hours charged to the Project by each class of Engineer's employees times standard hourly rates for each applicable billing class for all services performed on the Project, plus reimbursable expenses and Engineer's consultants' charges, if any. Engineer's standard hourly rates and reimbursable expenses will be adjusted on January 1st of each year that this Agreement is in effect to reflect equitable changes in the compensation payable to Engineer. Adjusted standard hourly rates and reimbursable expenses will become effective immediately.
2. Engineer's Rate Schedule is included as Exhibit D.
3. The total compensation for services and reimbursable expenses is not to exceed the amount shown above.

**EXHIBIT D
2022 ENGINEER’S RATE SCHEDULE**

Title	Hourly Rate	Title	Hourly Rate
Principal Engineer	\$189	Project Coordinator	\$105
Senior Engineer II	\$182	Project Assistant I	\$80
Senior Engineer	\$170	Admin IV	\$110
Engineer IV	\$150	Admin III	\$95
Engineer III	\$140	Admin II	\$85
Engineer II	\$130	Admin I	\$75
Engineer I	\$120	Intern	\$50
Engineer in Training II	\$108	GIS Analyst II	\$150
Engineer in Training I	\$100	GIS Analyst I	\$125
Senior Electrical Engineer	\$170	GIS Specialist	\$110
Electrical Engineer III	\$150	GIS Technician II	\$100
Electrical Engineer II	\$140	GIS Technician I	\$90
Electrical Engineer I	\$130	Water Resource Specialist	\$150
Electrical and Controls Engineer in Training	\$125	Water Rights Specialist II	\$140
Electrical Engineer in Training II	\$120	Water Rights Specialist I	\$115
Electrical Engineer in Training I	\$110	Water Rights Technician III	\$100
Senior Hydrogeologist	\$176	Water Rights Technician II	\$90
Hydrogeologist II	\$125	Water Rights Technician I	\$80
Hydrogeologist I	\$110	Regulatory & Env. Specialist	\$110
Construction Inspector III	\$125	Professional Surveyor	\$155
Construction Inspector II	\$120	Senior Survey Technician	\$135
Construction Inspector I	\$110	Survey Technician III	\$125
Designer III	\$130	Survey Technician II	\$115
Designer II	\$125	Survey Technician I	\$100
Designer I	\$115	1 Man Survey Crew	\$160
Proposal Specialist	\$85	2 Man Survey Crew	\$270

Other Fees and Charges:

1. All direct project expenses, including subconsultants, will be billed at actual cost plus 15%.
2. An overtime surcharge of 25% will be applied to the hourly rates of non-salaried employees for authorized overtime work.
3. Different survey and construction inspection labor rates will apply on prevailing wage projects. Rates for prevailing wage projects will be provided on a case by case basis.

Carson City Public Works
SE Mandatory Sanitary Sewer Extension Project - Phases 9 and 10, Zones A and B
Engineering Fee Estimate

	Principal Civil Engineer -	Senior Engineer II -	Engineer III -	Engineer I -	Engineer in Training II -	Engineer in Training I -	Senior Electrical Engineer	Electrical Engineer	Project Assistant -	Administrator IV -	GIS Analyst II -	GIS Analyst I -	GIS Specialist -	GIS Technician -	Professional Surveyor -	Senior Survey Technician -	Survey Technician I -	1 Man Survey Crew	2 Man Survey Crew	Total Labor	Expenses	CME	TOTAL		
	2023 Rate (\$/hr)	\$198	\$191	\$147	\$126	\$113	\$105	\$179	\$137	\$84	\$116	\$158	\$126	\$105	\$95	\$163	\$142	\$105	\$168	\$284	Hours	(\$)	(\$)	(\$)	(\$)
TASKS	2022 Rate (\$/hr)	\$189	\$182	\$140	\$120	\$108	\$100	\$170	\$130	\$80	\$110	\$150	\$120	\$100	\$90	\$155	\$135	\$100	\$160	\$270	Hours	(\$)	(\$)	(\$)	(\$)
1.0 Project Management																									
Project Coordination and Management (12 months)		4	40																		44	\$8,036			\$8,036
Monthly Reports/Progress Billings (12 months)			8							12											20	\$2,776			\$2,776
Subtotal		4	48							12											64	\$10,812			\$10,812
2A Survey and Mapping																									
Project Management															4						4	\$620			\$620
Office Control																4					4	\$540			\$540
Field Flight and Control																			8		8	\$2,160			\$2,160
Field Locate Roadway Utilities																			24		24	\$6,480			\$6,480
Field Locate Private Sewer Laterals																			40		40	\$10,800			\$10,800
Office Mapping																40	40				80	\$9,400			\$9,400
Subtotal															4	44	40		72	160	\$30,000				\$30,000
2B Boundary Survey																									
Project Management															4						4	\$620			\$620
Field Survey																		10	28		38	\$9,160			\$9,160
Office Mapping																16					16	\$2,160			\$2,160
Subtotal															4	16		10	28	58	\$11,940				\$11,940
3.0 Public Outreach																									
Public Notification (Mass Mailer) - Notice of Project Kickoff		1	2																		3	\$553			\$553
Public Notification (Mass Mailer) - Notice of Public Meeting		1	2																		3	\$553			\$553
Public Meeting, Preparation and Follow Up		8	12		16	24															60	\$8,016			\$8,016
Property Owner Notification - SS Lateral Layout Options		1	4		40	60			40												145	\$14,917			\$14,917
Property Owner Notification - Acceptance of SS Lateral Layout		1	2		4	16			16												39	\$3,913			\$3,913
Tracking Sheets and Maps		2	4		8	16					4			12							46	\$5,346			\$5,346
Subtotal		14	26		68	116			56		4			12							296	\$33,298			\$33,298
4.0 Preliminary Engineering																									
Existing Utility Data/As-builts Research and Mapping			4		32	60															96	\$10,568			\$10,568
Research, Review and Map Existing Septic System Data (85 properties)			24		48	96															168	\$19,728			\$19,728
Site Visits (Incl. homeowner visits)			72		72																144	\$21,744			\$21,744
Preliminary Plan and Profile		4	16		40	80															140	\$16,468			\$16,468
Preliminary Engineer's Opinion of Probable Costs		1	4		12	32		4													53	\$6,077			\$6,077
Preliminary Sewer Model			2	4		12															18	\$2,220			\$2,220
South Lift Station Evaluation/Technical Memorandum																									
Preliminary Design Review Meeting		4	4		4																12	\$1,964			\$1,964
Subtotal		9	126	4	208	12			4												631	\$78,769			\$78,769
5.0 Geotechnical Investigation																									
Farr West Labor					12																12	\$1,440			\$1,440
Subconsultant																						\$2,465	\$24,650		\$27,115

**Carson City Public Works
SE Mandatory Sanitary Sewer Extension Project - Phases 9 and 10, Zones A and B
Engineering Fee Estimate**

	Principal Civil Engineer -	Senior Engineer II -	Engineer III -	Engineer I -	Engineer in Training II -	Engineer in Training I -	Senior Electrical Engineer	Electrical Engineer	Project Assistant -	Administrator IV -	GIS Analyst II -	GIS Analyst I -	GIS Specialist -	GIS Technician -	Professional Surveyor -	Senior Survey Technician -	Survey Technician I -	1 Man Survey Crew	2 Man Survey Crew	Total Labor		Expenses	CME	TOTAL	
	2023 Rate (\$/hr)	2022 Rate (\$/hr)	2023 Rate (\$/hr)	2022 Rate (\$/hr)	2023 Rate (\$/hr)	2022 Rate (\$/hr)	2023 Rate (\$/hr)	2022 Rate (\$/hr)	2023 Rate (\$/hr)	2022 Rate (\$/hr)	2023 Rate (\$/hr)	2022 Rate (\$/hr)	2023 Rate (\$/hr)	2022 Rate (\$/hr)	2023 Rate (\$/hr)	2022 Rate (\$/hr)	2023 Rate (\$/hr)	2022 Rate (\$/hr)	2023 Rate (\$/hr)	2022 Rate (\$/hr)	Hours	(\$)	(\$)	(\$)	(\$)
TASKS																					Hours	(\$)	(\$)	(\$)	(\$)
Subtotal					12																12	\$1,440	\$2,465	\$24,650	\$28,555
6.0 Final Design																									
2023	Finalize Sewer Model/Prepare Technical Memorandum																								
	8	36		96	144		10														294	\$37,046		\$37,046	
	4	8		40			8	24													84	\$10,472		\$10,472	
	2	6		16	36		8														68	\$8,434		\$8,434	
	6	24		48	96		8														182	\$22,996		\$22,996	
	2	6		24			16	8													56	\$7,430		\$7,430	
	1	2		8	20		6														37	\$4,510		\$4,510	
	6	14		24	48		8														100	\$13,022		\$13,022	
	2	4		16			4	4													30	\$4,060		\$4,060	
	1	2		4	10		4														21	\$2,682		\$2,682	
	12						8														20	\$3,808		\$3,808	
	2	6		12	24																44	\$5,574		\$5,574	
Subtotal	46	108		288	378	8	72	36													936	\$120,034		\$120,034	
7.0 Bid Support																									
2023	Attend Pre-Bid Meeting (Virtual)																								
		1		1																	2	\$317		\$317	
		2		6	12																20	\$2,398		\$2,398	
		2																			2	\$382		\$382	
Subtotal		5		7	12																24	\$3,097		\$3,097	
8.0 Owner Directed Services																									
	Owner Directed Services																								
																								\$30,000	
Subtotal																								\$30,000	
TOTAL	73	313	4	583	12	774	8	76	92	12	4			12	8	60	40	10	100	2,181	289,390	2,465	24,650	346,505	

PROFESSIONAL SERVICES CONSULTANT AGREEMENT
Contract No. 21300207
Title: Preliminary Design Services for SE Mandatory Sanitary Sewer Extension Project

THIS CONTRACT is made and entered into this 8th day of March, 2022, by and between Carson City, a consolidated municipality, a political subdivision of the State of Nevada, hereinafter referred to as "**CITY**", and Farr West Engineering, hereinafter referred to as "**CONSULTANT**".

WITNESSETH:

WHEREAS, the Purchasing and Contracts Manager for **CITY** is authorized pursuant to Nevada Revised Statutes (hereinafter referred to as "NRS") 332 and 338 and Carson City Purchasing Resolution #1990-R71, to approve and accept this Contract as set forth in and by the following provisions; and

WHEREAS, this Contract is for consulting services from one or more licensed architects, engineers and/or land surveyors; and

WHEREAS, this Contract (does involve X) (does not involve) a "public work" construction project, which pursuant to NRS 338.010(18) means any project for the new construction, repair or reconstruction of an applicable project financed in whole or in part from public money; and

WHEREAS, CONSULTANT'S compensation under this agreement (does X) (does not) utilize in whole or in part money derived from one or more federal grant funding source(s) as set forth in **Exhibit B**; and

WHEREAS, it is deemed necessary that the services of **CONSULTANT** for **CONTRACT No. 21300207** (hereinafter referred to as "Contract") are both necessary and in the best interest of **CITY**; and

NOW, THEREFORE, in consideration of the aforesaid premises, and the following terms, conditions and other valuable consideration, the parties mutually agree as follows:

1. REQUIRED APPROVAL:

This Contract shall not become effective until signed by all parties and insurance certificates are received.

2. SCOPE OF WORK (Incorporated Contract Documents):

2.1 **CONSULTANT** shall provide and perform the following services set forth in **Exhibit A**, which shall all be attached hereto and incorporated herein by reference for and on behalf of **CITY** and hereinafter referred to as the "SERVICES".

2.2 **CONSULTANT** represents that it is duly licensed by **CITY** for the purposes of performing the SERVICES.

2.3 **CONSULTANT** represents that it is duly qualified and licensed in the State of Nevada for the purposes of performing the SERVICES.

For P&C Use Only	
CCBL expires	12/31/22
GL expires	11/7/22
AL expires	11/7/22
PL expires	1/17/23
WC expires	11/7/22

PROFESSIONAL SERVICES CONSULTANT AGREEMENT

Contract No. 21300207

Title: Preliminary Design Services for SE Mandatory Sanitary Sewer Extension Project

2.4 **CONSULTANT** represents that it and/or the persons it may employ possess all skills and training necessary to perform the SERVICES described herein and required hereunder. **CONSULTANT** shall perform the SERVICES faithfully, diligently, in a timely and professional manner, to the best of its ability, and in such a manner as is customarily performed by a person who is in the business of providing such services in similar circumstances. **CONSULTANT** shall be responsible for the professional quality and technical accuracy of all SERVICES furnished by **CONSULTANT** to **CITY**.

2.5 **CONSULTANT** represents that neither the execution of this Contract nor the rendering of services by **CONSULTANT** hereunder will violate the provisions of or constitute a default under any other contract or agreement to which **CONSULTANT** is a party or by which **CONSULTANT** is bound, or which would preclude **CONSULTANT** from performing the SERVICES required of **CONSULTANT** hereunder, or which would impose any liability or obligation upon **CITY** for accepting such SERVICES.

2.6 Before commencing with the performance of any work under this Contract, **CONSULTANT** shall obtain all necessary permits and licenses as may be necessary. Before and during the progress of work under this Contract, **CONSULTANT** shall give all notice and comply with all the laws, ordinances, rules and regulations of every kind and nature now or hereafter in effect promulgated by any Federal, State, County, or other Governmental Authority, relating to the performance of work under this Contract. If **CONSULTANT** performs any work that is contrary to any such law, ordinance, rule or regulation, it shall bear all the costs arising therefrom.

2.7 Special Terms and Conditions for Engineers, Architects, and Land Surveying/Testing:

2.7.1 *Use of **CONSULTANT'S** Drawings, Specifications and Other Documents:*

2.7.1.1 The drawings, specifications and other documents prepared by **CONSULTANT** for this Contract are instruments of **CONSULTANT'S** service for use solely with respect to this Contract and, unless otherwise provided, **CONSULTANT** shall be deemed the author of these documents and shall retain all common law statutory and other reserved rights, including the copyright.

2.7.2 *Cost Accounting and Audits:*

2.7.2.1 If required by **CITY**, **CONSULTANT** agrees to make available to **CITY** for three (3) years after the completion of the SERVICES under this Contract, such books, records, receipts, vouchers, or other data as may be deemed necessary by **CITY** to enable it to arrive at appropriate cost figures for the purpose of establishing depreciation rates for the various materials and other elements which may have been incorporated into the SERVICES performed under this Contract.

2.7.3 *If Land Surveying or Testing SERVICES are provided to a Public Work Project involving actual Construction (not solely design work):*

2.7.3.1 DAVIS-BACON & RELATED ACTS 29 CFR PARTS 1,3,5,6,&7 AND NRS 338.070(5): **CONSULTANT** shall comply with Davis-Bacon Act and NRS 338.070(5). **CONSULTANT** and each covered contractor or subcontractor must provide a weekly statement of wages paid to each of its employees engaged in covered SERVICES. The

PROFESSIONAL SERVICES CONSULTANT AGREEMENT

Contract No. 21300207

Title: Preliminary Design Services for SE Mandatory Sanitary Sewer Extension Project

statement shall be executed by **CONSULTANT** or subcontractor or by an authorized officer or employee of **CONSULTANT** or subcontractor who supervised the payment of wages and shall be on the "Statement of Compliance" form. **CONSULTANT** shall submit a Statement of Compliance that is prescribed by the Nevada Labor Commissioner or contains identical wording. Per NRS 338.070(6) the records maintained pursuant to subsection 5 of this statute must be open at all reasonable hours to the inspection of the public body (the **CITY'S** representative) awarding the contract. The **CONSULTANT** engaged on the public work or subcontractor engaged on the public work shall ensure that a copy of each record for each calendar month is received by the public body awarding the contract (the **City**) **no later than 15 days after the end of the month.**

2.7.3.2 FEDERAL FUNDING: In the event federal funds are used for payment of all or part of this Contract, **CONSULTANT** shall submit a Statement of Compliance form WH347 or a form with identical wording and a Statement of Compliance prescribed by the Nevada Labor Commissioner **within 7 days after the regular pay date for the pay period.** The original Statements shall be delivered to Carson City Public Works, 3505 Butti Way, Carson City, Nevada 89703, attention Davis-Bacon/Federal Funding Compliance.

2.7.3.3 CERTIFIED PAYROLLS FOR DAVIS-BACON AND PREVAILING WAGE PROJECTS: The higher of the Federal or local prevailing wage rates for **CITY**, as established by the Nevada Labor Commission and the Davis-Bacon Act, shall be paid for all classifications of labor on this project SERVICES. Should a classification be missing from the Davis-Bacon rates the **CONSULTANT** shall complete a request of authorization for additional classification or rate form SF1444 in its entirety and submit it to the **CITY** for approval and submission to the U.S. Department of Labor. Also, in accordance with NRS 338, the hourly and daily wage rates for the State and Davis-Bacon must be posted at the work site by **CONSULTANT**. **CONSULTANT** shall ensure that a copy of **CONSULTANT'S** and subcontractor's certified payrolls for each calendar week are received by **CITY**.

2.7.3.3.1 Per NRS 338.070(5) a **CONSULTANT** engaged on a public work and each subcontractor engaged on the public work shall keep or cause to be kept:

(a) An accurate record showing, for each worker employed by the consultant or subcontractor in connection with the public work:

- (1) The name of the worker;
- (2) The occupation of the worker;
- (3) The gender of the worker, if the worker voluntarily agreed to specify that information pursuant to subsection 4, or an entry indicating that the worker declined to specify such information;
- (4) The ethnicity of the worker, if the worker voluntarily agreed to specify that information pursuant to subsection 4, or an entry indicating that the worker declined to specify such information;
- (5) If the worker has a driver's license or identification card, an indication of the state or other jurisdiction that issued the license or card; and

PROFESSIONAL SERVICES CONSULTANT AGREEMENT

Contract No. 21300207

Title: Preliminary Design Services for SE Mandatory Sanitary Sewer Extension Project

(6) The actual per diem, wages and benefits paid to the worker; and

(b) An additional accurate record showing, for each worker employed by the consultant or subcontractor in connection with the public work who has a driver's license or identification card:

(1) The name of the worker;

(2) The driver's license number or identification card number of the worker; and

(3) The state or other jurisdiction that issued the license or card.

2.7.3.3.2 The original payroll records shall be certified and shall be submitted weekly to Carson City Public Works, 3505 Butti Way, Carson City, Nevada 89703, attention Davis-Bacon/Federal Funding Compliance. Submission of such certified payrolls shall be a condition precedent for processing the monthly progress payment. **CONSULTANT**, as General Contractor, shall collect the wage reports from the subcontractors and ensure the receipt of a certified copy of each weekly payroll for submission to **CITY** as one complete package.

2.7.3.3.3 Pursuant to NRS 338.060 and 338.070, **CONSULTANT** hereby agrees to forfeit, as a penalty to **CITY**, not less than Twenty Dollars (\$20) nor more than Fifty Dollars (\$50) for each calendar day or portion thereof that each worker employed on the Contract is paid less than the designated rate for any WORK done under the Contract, by **CONSULTANT** or any subcontractor under him/her, or is not reported to **CITY** as required by NRS 338.070.

2.7.3.4 FAIR EMPLOYMENT PRACTICES: Pursuant to NRS 338.125, Fair Employment Practices, the following provisions must be included in any contract between **CONSULTANT** and a public body such as **CITY**:

2.7.3.4.1 *In connection with the performance of work or SERVICES under this Contract, CONSULTANT agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, sexual orientation, gender identity, or age, including, without limitation, with regard to employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including without limitation, apprenticeship.*

2.7.3.4.2 **CONSULTANT** further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials.

2.7.3.5 PREFERENTIAL EMPLOYMENT: Unless, and except if, this Contract is funded in whole or in part by federal grant funding (see 40 C.F.R. § 31.36(c) *Competition*), pursuant to NRS 338.130, in all cases where persons are employed in the construction of public works, preference must be given, the qualifications of the applicants being equal: (1) First: To persons who have been honorably discharged from the Army, Navy, Air Force, Marine Corps or Coast Guard of the United States, a reserve component thereof

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or the National Guard; and are citizens of the State of Nevada. (2) Second: To other citizens of the State of Nevada.

2.7.3.5.1 In connection with the performance of SERVICES under this Contract, **CONSULTANT** agrees to comply with the provisions of NRS 338.130 requiring certain preferences to be given to which persons are employed in the construction of a public work. If **CONSULTANT** fails to comply with the provisions of NRS 338.130, pursuant to the terms of NRS 338.130(3), this Contract is void, and any failure or refusal to comply with any of the provisions of this section renders this Contract void.

2.7.4 If the CITY was required by NRS 332.039(1) to advertise or request a proposal for this Agreement, by signing this Agreement, the **CONSULTANT** provides a written certification that the **CONSULTANT** is not currently engaged in, and during the Term shall not engage in, a Boycott of Israel. The term "Boycott of Israel" has the meaning ascribed to that term in Section 3 of Nevada Senate Bill 26 (2017). The **CONSULTANT** shall be responsible for fines, penalties, and payment of any State of Nevada or federal funds that may arise (including those that the CITY pays, becomes liable to pay, or becomes liable to repay) as a direct result of the **CONSULTANT's** non-compliance with this Section.

2.8 **CITY Responsibilities:**

2.8.1 **CITY** shall make available to **CONSULTANT** all technical data that is in **CITY'S** possession, reasonably required by **CONSULTANT** relating to the SERVICES.

2.8.2 **CITY** shall provide access to and make all provisions for **CONSULTANT** to enter upon public and private lands, to the fullest extent permitted by law, as reasonably required for **CONSULTANT** to perform the SERVICES.

2.8.3 **CITY** shall examine all reports, correspondence, and other documents presented by **CONSULTANT** upon request of **CITY**, and render, in writing, decisions pertaining thereto within a reasonable time so as not to delay the work of **CONSULTANT**.

2.8.4 It is expressly understood and agreed that all work done by **CONSULTANT** shall be subject to inspection and acceptance by **CITY** and approval of SERVICES shall not forfeit the right of **CITY** to require correction, and nothing contained herein shall relieve **CONSULTANT** of the responsibility of the SERVICES required under the terms of this Contract until all SERVICES have been completed and accepted by **CITY**.

3. **CONTRACT TERM:**

3.1 The term of this Contract begins March 28, 2022 and ends on December 31, 2022, unless sooner terminated by either party as specified in **Section 7** (CONTRACT TERMINATION).

4. **NOTICE:**

4.1 Except any applicable bid and award process where notices may be limited to postings by **CITY** on its Bid Opportunities website (www.carson.org), all notices or other communications required or permitted to be given under this Contract shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by e-mail, by regular mail, by telephonic facsimile with simultaneous

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regular mail, or by certified mail, return receipt requested, postage prepaid on the date posted, and addressed to the other party at the address specified below.

4.2 Notice to **CONSULTANT** shall be addressed to:

Brent Farr, President
Farr West Engineering
5510 Longley Lane
Reno, NV 89511
775-851-4788
brent@farrwestengineering.com

4.3 Notice to **CITY** shall be addressed to:

Carson City Purchasing and Contracts Department
Carol Akers, Purchasing and Contracts Administrator
201 North Carson Street, Suite 2
Carson City, NV 89701
775-283-7362 / FAX 775-887-2286
CAkers@carson.org

5. COMPENSATION:

5.1 The parties agree that **CONSULTANT** will provide the SERVICES specified in **Section 2** (SCOPE OF WORK) and **CITY** agrees to pay **CONSULTANT** the Contract's compensation based upon Time and Materials and the Scope of Work Fee Schedule for a not to exceed maximum amount of Forty Nine Thousand Nine Hundred Eighty Nine Dollars and 00/100 (\$49,989.00) and hereinafter referred to as "Contract Sum".

5.2 Contract Sum represents full and adequate compensation for the completed SERVICES, and includes the furnishing of all materials; all labor, equipment, tools, and appliances; and all expenses, direct or indirect, connected with the proper execution of the SERVICES.

5.3 **CITY** has provided a sample invoice and **CONSULTANT** shall submit its request for payment using said sample invoice.

5.4 Payment by **CITY** for the SERVICES rendered by **CONSULTANT** shall be due within thirty (30) calendar days from the date **CITY** acknowledges that the performance meets the requirements of this Contract or from the date the correct, complete, and descriptive invoice is received by **CITY** employee designated on the sample invoice, whichever is the later date.

5.5 **CITY** does not agree to reimburse **CONSULTANT** for expenses unless otherwise specified.

6. TIMELINESS OF BILLING SUBMISSION:

6.1 The parties agree that timeliness of billing is of the essence to this Contract and recognize that **CITY** is on a fiscal year which is defined as the period beginning July 1 and ending June 30 of the following year. All billings for dates of service prior to July 1 must be submitted to **CITY** no later than the first Friday in August of the same year. A billing submitted after the first Friday in August will subject

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CONSULTANT to an administrative fee not to exceed \$100.00. The parties hereby agree this is a reasonable estimate of the additional costs to **CITY** of processing the billing as a stale claim and that this amount will be deducted from the stale claim payment due to **CONSULTANT**.

7. CONTRACT TERMINATION:

7.1 Termination Without Cause:

7.1.1 Any discretionary or vested right of renewal notwithstanding, this Contract may be terminated upon written notice by mutual consent of both parties or unilaterally by either party without cause.

7.1.2 **CITY** reserves the right to terminate this Contract for convenience whenever it considers termination, in its sole and unfettered discretion, to be in the public interest. In the event that the Contract is terminated in this manner, payment will be made for SERVICES actually completed. If termination occurs under this provision, in no event shall **CONSULTANT** be entitled to anticipated profits on items of SERVICES not performed as of the effective date of the termination or compensation for any other item, including but not limited to, unabsorbed overhead. **CONSULTANT** shall require that all subcontracts which it enters related to this Contract likewise contain a termination for convenience clause which precludes the ability of any subconsultant to make claims against **CONSULTANT** for damages due to breach of contract, of lost profit on items of SERVICES not performed or of unabsorbed overhead, in the event of a convenience termination.

7.2 Termination for Nonappropriation:

7.2.1 All payments and SERVICES provided under this Contract are contingent upon the availability of the necessary public funding, which may include various internal and external sources. In the event that Carson City does not acquire and appropriate the funding necessary to perform in accordance with the terms of the Contract, the Contract shall automatically terminate upon **CITY'S** notice to **CONSULTANT** of such nonappropriation, and no claim or cause of action may be based upon any such nonappropriation.

7.3 Cause Termination for Default or Breach:

7.3.1 A default or breach may be declared with or without termination.

7.3.2 This Contract may be terminated by either party upon written notice of default or breach to the other party as follows:

7.3.2.1 If **CONSULTANT** fails to provide or satisfactorily perform any of the conditions, work, deliverables, goods, or any SERVICES called for by this Contract within the time requirements specified in this Contract or within any granted extension of those time requirements; or

7.3.2.2 If any state, county, city or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by **CONSULTANT** to provide the goods or SERVICES or any services required by this Contract is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed, or not renewed; or

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7.3.2.3 If **CONSULTANT** becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of the bankruptcy court; or

7.3.2.4 If **CITY** materially breaches any material duty under this Contract and any such breach impairs **CONSULTANT'S** ability to perform; or

7.3.2.5 If it is found by **CITY** that any quid pro quo or gratuities in the form of money, services, entertainment, gifts, or otherwise were offered or given by **CONSULTANT**, or any agent or representative of **CONSULTANT**, to any officer or employee of **CITY** with a view toward securing a contract or securing favorable treatment with respect to awarding, extending, amending, or making any determination with respect to the performing of such contract; or

7.3.2.6 If it is found by **CITY** that **CONSULTANT** has failed to disclose any material conflict of interest relative to the performance of this Contract.

7.4 Time to Correct (Declared Default or Breach):

7.4.1 Termination upon a declared default or breach may be exercised only after providing 7 (seven) calendar days written notice of default or breach, and the subsequent failure of the defaulting or breaching party, within five (5) calendar days of providing that default or breach notice, to provide evidence satisfactory to the aggrieved party demonstrating that the declared default or breach has been corrected. Time to correct shall run concurrently with any notice of default or breach and such time to correct is not subject to any stay with respect to the nonexistence of any Notice of Termination. Untimely correction shall not void the right to termination otherwise properly noticed unless waiver of the noticed default or breach is expressly provided in writing by the aggrieved party. There shall be no time to correct with respect to any notice of termination without cause or termination for nonappropriation.

7.5 Winding Up Affairs Upon Termination:

7.5.1 In the event of termination of this Contract for any reason, the parties agree that the provisions of this **Subsection 7.5** (Winding Up Affairs Upon Termination) survive termination:

7.5.1.1 The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Contract. Neither party may withhold performance of winding up provisions solely based on nonpayment of fees or expenses accrued up to the time of termination; and

7.5.1.2 **CONSULTANT** shall satisfactorily complete SERVICES in progress at the agreed rate (or a pro rata basis if necessary) if so requested by **CITY**; and

7.5.1.3 **CONSULTANT** shall execute any documents and take any actions necessary to effectuate an assignment of this Contract if so requested by **CITY**; and

7.5.1.4 **CONSULTANT** shall preserve, protect, and promptly deliver into **CITY** possession all proprietary information in accordance **Section 19** (CITY OWNERSHIP OF PROPRIETARY INFORMATION).

7.6 Notice of Termination:

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7.6.1 Unless otherwise specified in this Contract, termination shall not be effective until seven (7) calendar days after a party has provided written notice of default or breach, or notice of without cause termination. Notice of Termination may be given at the time of notice of default or breach, or notice of without cause termination. Notice of Termination may be provided separately at any time after the running of the 7-day notice period, and such termination shall be effective on the date the Notice of Termination is provided to the party unless a specific effective date is otherwise set forth therein. Any delay in providing a Notice of Termination after the 7-day notice period has run without a timely correction by the defaulting or breaching party shall not constitute any waiver of the right to terminate under the existing notice(s).

8. REMEDIES:

Except as otherwise provided for by law or this Contract, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including, without limitation, actual damages, and to a prevailing party reasonable attorney's fees and costs. The parties agree that, in the event a lawsuit is filed and a party is awarded attorney's fees by the court, for any reason, the amount of recoverable attorney's fees shall not exceed the rate of \$125 per hour. **CITY** may set off consideration against any unpaid obligation of **CONSULTANT** to **CITY**.

9. LIMITED LIABILITY:

CITY will not waive and intends to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. Liquidated damages shall not apply unless otherwise expressly provided for elsewhere in this Contract. Damages for any **CITY** breach shall never exceed the amount of funds appropriated for payment under this Contract, but not yet paid to **CONSULTANT**, for the fiscal year budget in existence at the time of the breach. **CONSULTANT'S** tort liability shall not be limited.

10. FORCE MAJEURE:

Neither party shall be deemed to be in violation of this Contract if it is prevented from performing any of its obligations hereunder due to strikes, failure of public transportation, civil or military authority, act of public enemy, accidents, fires, explosions, or acts of God, including, without limitation, earthquakes, floods, winds, or storms. In such an event the intervening cause must not be through the fault of the party asserting such an excuse, and the excused party is obligated to promptly perform in accordance with the terms of this Contract after the intervening cause ceases.

11. INDEMNIFICATION:

11.1 To the extent permitted by law, including, but not limited to, the provisions of NRS Chapter 41, each party shall indemnify, hold harmless and defend, not excluding the other's right to participate, the other party from and against all liability, claims, actions, damages, losses, and expenses, including but not limited to reasonable attorney's fees and costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of the indemnity which would otherwise exist as to any party or person described in this Section.

11.2 As required by NRS 338.155, if this Contract involves a "public work" construction project as defined above, **CONSULTANT** shall defend, indemnify and hold harmless the **CITY**, and the employees, officers and agents of the public body from any liabilities, damages, losses, claims, actions or proceedings, including without limitation, reasonable attorney's fees, to the extent that such liabilities, damages, losses, claims, actions or proceedings are caused by the negligence, errors, omissions, recklessness or intentional misconduct of the **CONSULTANT** or the employees or agents of the **CONSULTANT** in the performance of the Contract. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of the indemnity which would otherwise exist as to any party or person described in this section. However, with respect to any anticipated benefits to

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CITY resulting from the Scope of Work, **CONSULTANT** shall not be responsible or liable to **CITY** for any warranties, guarantees, fitness for a particular purpose or loss of anticipated profits resulting from any termination of this Contract. Additionally, **CONSULTANT** shall not be responsible for acts and decisions of third parties, including governmental agencies, other than **CONSULTANT'S** subcontractors, that impact project completion and/or success.

11.3 Except as otherwise provided in **Subsection 11.5** below, the indemnifying party shall not be obligated to provide a legal defense to the indemnified party, nor reimburse the indemnified party for the same, for any period occurring before the indemnified party provides written notice of the pending claim(s) or cause(s) of action to the indemnifying party, along with:

11.3.1 a written request for a legal defense for such pending claim(s) or cause(s) of action; and

11.3.2 a detailed explanation of the basis upon which the indemnified party believes that the claim or cause of action asserted against the indemnified party implicates the culpable conduct of the indemnifying party, its officers, employees, and/or agents.

11.4 After the indemnifying party has begun to provide a legal defense for the indemnified party, the indemnifying party shall not be obligated to fund or reimburse any fees or costs provided by any additional counsel for the indemnified party, including counsel through which the indemnified party might voluntarily choose to participate in its defense of the same matter.

11.5 After the indemnifying party has begun to provide a legal defense for the indemnified party, the indemnifying party shall be obligated to reimburse the reasonable attorney's fees and costs incurred by the indemnified party during the initial thirty (30) day period of the claim or cause of action, if any, incurred by separate counsel.

12. **INDEPENDENT CONTRACTOR:**

12.1 **CONSULTANT**, as an independent contractor, is a natural person, firm or corporation who agrees to perform SERVICES for a fixed price according to his or its own methods and without subjection to the supervision or control of the **CITY**, except as to the results of the SERVICES, and not as to the means by which the SERVICES are accomplished.

12.2 It is mutually agreed that **CONSULTANT** is associated with **CITY** only for the purposes and to the extent specified in this Contract, and in respect to performance of the contracted SERVICES pursuant to this Contract. **CONSULTANT** is and shall be an independent contractor and, subject only to the terms of this Contract, shall have the sole right to supervise, manage, operate, control, and direct performance of the details incident to its duties under this Contract.

12.3 Nothing contained in this Contract shall be deemed or construed to create a partnership or joint venture, to create relationships of an employer-employee or principal-agent, or to otherwise create any liability for **CITY** whatsoever with respect to the indebtedness, liabilities, and obligations of **CONSULTANT** or any other party.

12.4 **CONSULTANT**, in addition to **Section 11** (INDEMNIFICATION), shall indemnify and hold **CITY** harmless from, and defend **CITY** against, any and all losses, damages, claims, costs, penalties, liabilities, expenses arising out of or incurred in any way because of, but not limited to, **CONSULTANT'S** obligations or legal duties regarding any taxes, fees, assessments, benefits, entitlements, notice of benefits, employee's eligibility to work, to any third party, subcontractor, employee, state, local or federal governmental entity.

12.5 Neither **CONSULTANT** nor its employees, agents, or representatives shall be considered employees, agents, or representatives of **CITY**.

13. **INSURANCE REQUIREMENTS (GENERAL):**

13.1 **NOTICE: The following general insurance requirements shall apply unless these general**

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requirements are altered by any specific requirements set forth in CITY'S solicitation for bid document, the adopted bid or other document incorporated into this Contract by the parties.

13.2 **CONSULTANT**, as an independent contractor and not an employee of **CITY**, must carry policies of insurance in amounts specified and pay all taxes and fees incident hereunto. **CITY** shall have no liability except as specifically provided in this Contract.

13.3 **CONSULTANT** shall not commence work before: (1) **CONSULTANT** has provided the required evidence of insurance to **CITY** Purchasing and Contracts, and (2) **CITY** has approved the insurance policies provided by **CONSULTANT**.

13.4 Prior approval of the insurance policies by **CITY** shall be a condition precedent to any payment of consideration under this Contract and **CITY'S** approval of any changes to insurance coverage during the course of performance shall constitute an ongoing condition subsequent this Contract. Any failure of **CITY** to timely approve shall not constitute a waiver of the condition.

13.5 *Insurance Coverage (13.6 through 13.23):*

13.6 **CONSULTANT** shall, at **CONSULTANT'S** sole expense, procure, maintain and keep in force for the duration of this Contract the following insurance conforming to the minimum requirements specified below. Unless specifically specified herein or otherwise agreed to by **CITY**, the required insurance shall be in effect prior to the commencement of work by **CONSULTANT** and shall continue in force as appropriate until the later of:

13.6.1 Final acceptance by **CITY** of the completion of this Contract; or

13.6.2 Such time as the insurance is no longer required by **CITY** under the terms of this Contract.

13.6.3 Any insurance or self-insurance available to **CITY** under its coverage(s) shall be in excess of and non-contributing with any insurance required from **CONSULTANT**. **CONSULTANT'S** insurance policies shall apply on a primary basis. Until such time as the insurance is no longer required by **CITY**, **CONSULTANT** shall provide **CITY** with renewal or replacement evidence of insurance no less than thirty (30) calendar days before the expiration or replacement of the required insurance. If at any time during the period when insurance is required by this Contract, an insurer or surety shall fail to comply with the requirements of this Contract, as soon as **CONSULTANT** has knowledge of any such failure, **CONSULTANT** shall immediately notify **CITY** and immediately replace such insurance or bond with an insurer meeting the requirements.

13.7 *General Insurance Requirements (13.8 through 13.23):*

13.8 **Certificate Holder:** Each certificate shall list Carson City c/o Carson City Purchasing and Contracts, 201 N. Carson Street, Suite 2, Carson City, NV 89701 as a certificate holder.

13.9 **Additional Insured:** By endorsement to the general liability insurance policy evidenced by **CONSULTANT**, The City and County of Carson City, Nevada, its officers, employees and immune contractors shall be named as additional insureds for all liability arising from this Contract.

13.10 **Waiver of Subrogation:** Each liability insurance policy, except for professional liability, shall provide for a waiver of subrogation in favor of City.

13.11 **Cross-Liability:** All required liability policies shall provide cross-liability coverage as would be achieved under the standard ISO separation of insureds clause.

13.12 **Deductibles and Self-Insured Retentions:** Insurance maintained by **CONSULTANT** shall apply on a first dollar basis without application of a deductible or self-insured retention unless otherwise specifically agreed to by **CITY**. Such approval shall not relieve **CONSULTANT** from the obligation to pay

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any deductible or self-insured retention. Any deductible or self-insured retention shall not exceed \$5,000.00 per occurrence, unless otherwise approved by CITY.

13.13 **Policy Cancellation:** Except for ten (10) calendar days' notice for non-payment of premium, **CONSULTANT** or its insurers must provide thirty (30) calendar days prior written notice to Carson City Purchasing and Contracts if any policy will be canceled, non-renewed or if required coverage and /or limits reduced or materially altered, and shall provide that notices required by this paragraph shall be sent by mail to Carson City Purchasing and Contracts, 201 N. Carson Street, Suite 2, Carson City, NV 89701. When available, each insurance policy shall be endorsed to provide thirty (30) days' notice of cancellation, except for ten (10) days' notice for non-payment of premium, to City.

13.14 **Approved Insurer:** Each insurance policy shall be issued by insurance companies authorized to do business in the State of Nevada or eligible surplus lines insurers under federal and Nevada law and having agents in Nevada upon whom service of process may be made, and currently rated by A.M. Best as "A-VII" or better.

13.15 **Evidence of Insurance:** Prior to commencement of work, **CONSULTANT** must provide the following documents to Carson City Purchasing and Contracts, 201 North Carson Street, Suite 2, Carson City, NV 89701:

13.16 **Certificate of Insurance:** **CONSULTANT** shall furnish City with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth herein. The Acord 25 Certificate of Insurance form or a form substantially similar must be submitted to Carson City Purchasing and Contracts to evidence the insurance policies and coverages required of **CONSULTANT**.

13.17 **Additional Insured Endorsement:** An Additional Insured Endorsement (CG20 10 or C20 26), signed by an authorized insurance company representative, must be submitted to Carson City Purchasing and Contracts to evidence the endorsement of **CITY** as an additional insured per **Subsection 13.9** (Additional Insured).

13.18 **Schedule of Underlying Insurance Policies:** If Umbrella or Excess policy is evidenced to comply with minimum limits, a copy of the Underlying Schedule from the Umbrella or Excess insurance policy may be required.

13.19 **Review and Approval:** Documents specified above must be submitted for review and approval by **CITY** Purchasing and Contracts prior to the commencement of work by **CONSULTANT**. Neither approval by **CITY** nor failure to disapprove the insurance furnished by **CONSULTANT** shall relieve **CONSULTANT** of **CONSULTANT'S** full responsibility to provide the insurance required by this Contract. Compliance with the insurance requirements of this Contract shall not limit the liability of **CONSULTANT** or its subcontractors, employees or agents to **CITY** or others, and shall be in addition to and not in lieu of any other remedy available to **CITY** under this Contract or otherwise. **CITY** reserves the right to request and review a copy of any required insurance policy or endorsement to assure compliance with these requirements.

13.20 **COMMERCIAL GENERAL LIABILITY INSURANCE:**

CONSULTANT shall maintain commercial general liability (CGL) and, if necessary, commercial umbrella insurance with a limit of not less than \$1,000,000 each occurrence.

13.20.1 *Minimum Limits required:*

13.20.2 Two Million Dollars (\$2,000,000.00) - General Aggregate.

13.20.3 Two Million Dollars (\$2,000,000.00) - Products & Completed Operations Aggregate.

13.20.4 One Million Dollars (\$1,000,000.00) - Each Occurrence.

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- 13.20.5 CGL insurance shall be written on ISO occurrence form CG 00 01 04 13 (or a substitute form providing equivalent coverage) and shall cover liability arising from premises, operations, products-completed operations, personal and advertising injury, and liability assumed under an insured contract [(including the tort liability of another assumed in a business contract)].
- 13.20.6 City and County of Carson City, Nevada, its officers, employees and immune contractors shall be included as an additional insured under the CGL, using ISO additional insured endorsement CG 20 10 or CG 20 26, or a substitute providing equivalent coverage, and under the commercial umbrella, if any.
- 13.20.7 This insurance shall apply as primary insurance with respect to any other insurance or self-insurance programs afforded to City There shall be no endorsement or modification of the CGL to make it excess over other available insurance; alternatively, if the CGL states that it is excess or pro rata, the policy shall be endorsed to be primary with respect to the additional insured.
- 13.20.8 There shall be no endorsement or modification of the CGL limiting the scope of coverage for liability assumed under a contract.
- 13.20.9 Consultant waives all rights against City and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the commercial general liability or commercial umbrella liability insurance maintained pursuant to this Contract. Insurer shall endorse CGL policy as required to waive subrogation against City with respect to any loss paid under the policy.
- 13.21 **BUSINESS AUTOMOBILE LIABILITY INSURANCE:**
- 13.21.1 *Minimum Limit required:*
- 13.21.2 Consultant shall maintain automobile liability and, if necessary, commercial umbrella liability insurance with a limit of not less than \$1,000,000 each accident for bodily injury and property damage.
- 13.21.3 Such insurance shall cover liability arising out of owned, hired, and non-owned autos (as applicable). Coverage as required above shall be written on ISO form CA 00 01, CA 00 05, CA 00 25, or a substitute form providing equivalent liability coverage.
- 13.21.4 Consultant waives all rights against City and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the automobile liability or other liability insurance obtained by **CONSULTANT** pursuant this Contract.
- 13.22 **PROFESSIONAL LIABILITY INSURANCE**
- 13.22.1 *Minimum Limit required:*
- 13.22.2 **CONSULTANT** shall maintain professional liability insurance applying to all activities performed under this Contract with limits not less than One Million Dollars (\$1,000,000.00) and Two Million Dollars (\$2,000,000) in the aggregate.
- 13.22.3 Retroactive date: Prior to commencement of the performance of this Contract.
- 13.22.4 **CONSULTANT** will maintain professional liability insurance during the term of this Contract and for a period of three (3) years after termination of this Contract unless waived by the City. In the event of non-renewal or other lapse in

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coverage during the term of this Contract or the three (3) year period described above, **CONSULTANT** shall purchase Extended Reporting Period coverage for claims arising out of **CONSULTANT's** negligence acts, errors and omissions committed during the term of the Professional Liability Policy. The Extended Reporting Period shall continue through a minimum of three (3) years after termination date of this Contract.

13.22.5 A certified copy of this policy may be required.

13.23 **WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE:**

13.23.1 **CONSULTANT** shall provide workers' compensation insurance as required by NRS Chapters 616A through 616D inclusive and Employer's Liability insurance with a minimum limit not less than \$1,000,000 each accident for bodily injury by accident or \$1,000,000 each employee for bodily injury by disease.

13.23.2 **CONSULTANT** may, in lieu of furnishing a certificate of an insurer, provide an affidavit indicating that **CONSULTANT** is a sole proprietor; that **CONSULTANT** will not use the services of any employees in the performance of this Contract; that **CONSULTANT** has elected to not be included in the terms, conditions, and provisions of NRS Chapters 616A-616D, inclusive; and that **CONSULTANT** is otherwise in compliance with the terms, conditions, and provisions of NRS Chapters 616A-616D, inclusive.

13.23.3 **CONSULTANT** waives all rights against City and its agents, officers, directors, and employees for recovery of damages to the extent these damages are covered by the workers' compensation and employer's liability or commercial umbrella liability insurance obtained by Consultant pursuant to this Contract. Consultant shall obtain an endorsement equivalent to WC 00 03 13 to affect this waiver.

14. **BUSINESS LICENSE:**

14.1 **CONSULTANT** shall not commence work before **CONSULTANT** has provided a copy of his Carson City business license to Carson City Purchasing and Contracts.

14.2 The Carson City business license shall continue in force until the later of: (1) final acceptance by **CITY** of the completion of this Contract; or (2) such time as the Carson City business license is no longer required by **CITY** under the terms of this Contract.

15. **COMPLIANCE WITH LEGAL OBLIGATIONS:**

CONSULTANT shall procure and maintain for the duration of this Contract any state, county, city, or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by **CONSULTANT** to provide the goods or SERVICES or any services of this Contract. **CONSULTANT** will be responsible to pay all government obligations, including, but not limited to, all taxes, assessments, fees, fines, judgments, premiums, permits, and licenses required or imposed by law or a court. Real property and personal property taxes are the responsibility of **CONSULTANT** in accordance with NRS Chapter 361 generally and NRS 361.157 and 361.159, specifically regarding for profit activity. **CONSULTANT** agrees to be responsible for payment of any such government obligations not paid by its subcontractors during performance of this Contract. **CITY** may set-off against consideration due any delinquent government obligation.

16. **WAIVER OF BREACH:**

Failure to declare a breach or the actual waiver of any particular breach of this Contract or its material or nonmaterial terms by either party shall not operate as a waiver by such party of any of its rights or remedies as to any other breach.

PROFESSIONAL SERVICES CONSULTANT AGREEMENT
Contract No. 21300207
Title: Preliminary Design Services for SE Mandatory Sanitary Sewer Extension Project

17. SEVERABILITY:

If any provision contained in this Contract is held to be unenforceable by a court of law or equity, this Contract shall be construed as if such provision did not exist and the nonenforceability of such provision shall not be held to render any other provision or provisions of this Contract unenforceable.

18. ASSIGNMENT / DELEGATION:

To the extent that any assignment of any right under this Contract changes the duty of either party, increases the burden or risk involved, impairs the chances of obtaining the performance of this Contract, attempts to operate as a novation, or includes a waiver or abrogation of any defense to payment by **CITY**, such offending portion of the assignment shall be void, and shall be a breach of this Contract. **CONSULTANT** shall neither assign, transfer nor delegate any rights, obligations or duties under this Contract without the prior written approval of **CITY**. The parties do not intend to benefit any third party beneficiary regarding their respective performance under this Contract.

19. CITY OWNERSHIP OF PROPRIETARY INFORMATION:

Any files, reports, histories, studies, tests, manuals, instructions, photographs, negatives, blue prints, plans, maps, data, system designs, computer programs, computer codes, and computer records (which are intended to be consideration under this Contract), or any other documents or drawings, prepared or in the course of preparation by **CONSULTANT** (or its subcontractors) in performance of its obligations under this Contract shall be the exclusive property of **CITY** and all such materials shall be delivered into **CITY** possession by **CONSULTANT** upon completion, termination, or cancellation of this Contract. **CONSULTANT** shall not use, willingly allow, or cause to have such materials used for any purpose other than performance of **CONSULTANT'S** obligations under this Contract without the prior written consent of **CITY**. Notwithstanding the foregoing, **CITY** shall have no proprietary interest in any materials licensed for use by **CITY** that are subject to patent, trademark or copyright protection.

20. PUBLIC RECORDS:

Pursuant to NRS 239.010, information or documents received from **CONSULTANT** may be open to public inspection and copying. **CITY** will have the duty to disclose unless a particular record is made confidential by law or a common law balancing of interests. **CONSULTANT** may clearly label specific parts of an individual document as a "trade secret" or "confidential" in accordance with NRS 332.061, provided that **CONSULTANT** thereby agrees to indemnify and defend **CITY** for honoring such a designation. The failure to so label any document that is released by **CITY** shall constitute a complete waiver of any and all claims for damages caused by any release of the records.

21. CONFIDENTIALITY:

CONSULTANT shall keep confidential all information, in whatever form, produced, prepared, observed or received by **CONSULTANT** to the extent that such information is confidential by law or otherwise required by this Contract.

22. FEDERAL FUNDING:

22.1 *In the event federal grant funds are used for payment of all or part of this Contract:*

22.1.1 **CONSULTANT** certifies, by signing this Contract, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency. This certification is made pursuant to the regulations implementing Executive Order 12549, Debarment and Suspension, 28 C.F.R. pt. 67, § 67.510, as published as pt. VII of the May 26, 1988, Federal Register (pp. 19160-19211), and any relevant program-specific regulations. This provision shall be required of every subcontractor receiving any payment in whole or in part from federal funds.

PROFESSIONAL SERVICES CONSULTANT AGREEMENT

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22.1.2 **CONSULTANT** and its subcontractors must be registered in the US Government System for Award Management (SAM) for verification on projects with federal funding.

22.1.3 **CONSULTANT** and its subcontractors shall comply with all terms, conditions, and requirements of the Americans with Disabilities Act of 1990 (P.L. 101-136), 42 U.S.C. 12101, as amended, and regulations adopted thereunder contained in 28 C.F.R. 26.101-36.999, inclusive, and any relevant program-specific regulations.

22.1.4 **CONSULTANT** and its subcontractors shall comply with the requirements of the Civil Rights Act of 1964, as amended, the Rehabilitation Act of 1973, P.L. 93-112, as amended, and any relevant program-specific regulations, and Executive Order 11478 (July 21, 2014) and shall not discriminate against any employee or offeror for employment because of race, national origin, creed, color, sex, sexual orientation, gender identity, religion, age, disability or handicap condition (including AIDS and AIDS-related conditions).

22.1.5 If and when applicable to the particular federal funding and the Scope of Work under this Contract, **CONSULTANT** and its subcontractors shall comply with: American Iron and Steel (AIS) provisions of P.L. 113- 76, Consolidated Appropriations Act, 2014, Section 1605 – Buy American (100% Domestic Content of iron, steel and manufactured goods); Federal Highway Administration (FHWA) 23 U.S.C. § 313 – Buy America, 23 C.F.R. §635.410 (100% Domestic Content of steel, iron and manufactured products); Federal Transit Administration (FTA) 49 U.S.C. § 5323(j), 49 C.F.R. Part 661 – Buy America Requirements (See 60% Domestic Content for buses and other Rolling Stock).

23. **LOBBYING:**

23.1 The parties agree, whether expressly prohibited by federal law, or otherwise, that no funding associated with this Contract will be used for any purpose associated with or related to lobbying or influencing or attempting to lobby or influence for any purpose the following:

23.1.1 Any federal, state, county or local agency, legislature, commission, council or board;

23.1.2 Any federal, state, county or local legislator, commission member, council member, board member, or other elected official; or

23.1.3 Any officer or employee of any federal, state, county or local agency; legislature, commission, council or board.

24. **GENERAL WARRANTY:**

CONSULTANT warrants that it will perform all SERVICES required hereunder in accordance with the prevailing standard of care by exercising the skill and care normally required of individuals performing the same or similar SERVICES, under the same or similar circumstances, in the State of Nevada.

25. **PROPER AUTHORITY:**

The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract. **CONSULTANT** acknowledges that this Contract is effective only for the period of time specified in this Contract. Any SERVICES performed by **CONSULTANT** before this Contract is effective or after it ceases to be effective is performed at the sole risk of **CONSULTANT**.

26. **ALTERNATIVE DISPUTE RESOLUTION (Public Work):**

If the SERVICES under this Contract involve a “public work” as defined under NRS 338.010(18), then pursuant to NRS 338.150, a public body charged with the drafting of specifications for a public work shall include in the

PROFESSIONAL SERVICES CONSULTANT AGREEMENT

Contract No. 21300207

Title: Preliminary Design Services for SE Mandatory Sanitary Sewer Extension Project

specifications a clause requiring the use of a method of alternative dispute resolution (“ADR”) before initiation of a judicial action if a dispute arising between the public body and the **CONSULTANT** engaged on the public work cannot otherwise be settled. Therefore, unless ADR is otherwise provided for by the parties in any other incorporated attachment to this Contract, in the event that a dispute arising between **CITY** and **CONSULTANT** regarding that public work cannot otherwise be settled, **CITY** and **CONSULTANT** agree that, before judicial action may be initiated, **CITY** and **CONSULTANT** will submit the dispute to non-binding mediation. **CITY** shall present **CONSULTANT** with a list of three potential mediators. **CONSULTANT** shall select one person to serve as the mediator from the list of potential mediators presented by **CITY**. The person selected as mediator shall determine the rules governing the mediation.

27. GOVERNING LAW / JURISDICTION:

This Contract and the rights and obligations of the parties hereto shall be governed by, and construed according to, the laws of the State of Nevada, without giving effect to any principle of conflict-of-law that would require the application of the law of any other jurisdiction. **CONSULTANT** consents and agrees to the jurisdiction of the courts of the State of Nevada located in Carson City, Nevada for enforcement of this Contract.

28. ENTIRE CONTRACT AND MODIFICATION:

This Contract and its integrated attachment(s) constitute the entire Contract of the parties and such are intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other Contracts that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Contract specifically displays a mutual intent to amend a particular part of this Contract, general conflicts in language between any such attachment and this Contract shall be construed consistent with the terms of this Contract. Unless otherwise expressly authorized by the terms of this Contract, no modification or amendment to this Contract shall be binding upon the parties unless the same is in writing and signed by the respective parties hereto. Conflicts in language between this Contract and any other agreement between **CITY** and **CONSULTANT** on this same matter shall be construed consistent with the terms of this Contract. The parties agree that each has had their respective counsel review this Contract which shall be construed as if it was jointly drafted.

PROFESSIONAL SERVICES CONSULTANT AGREEMENT
Contract No. 21300207
Title: Preliminary Design Services for SE Mandatory Sanitary Sewer
Extension Project

29. ACKNOWLEDGMENT AND EXECUTION:

This Contract may be executed in counterparts. The parties hereto have caused this Contract to be signed and intend to be legally bound thereby as follows:

CITY


Executive Office
Purchasing and Contracts Department
201 North Carson Street, Suite 2
Carson City, Nevada 89701
Telephone: 775-283-7362
Fax: 775-887-2286
CAkers@carson.org

By: 
Sheri Russell, Chief Financial Officer

Dated 3/7/2022

CITY'S LEGAL COUNSEL

Carson City District Attorney
I have reviewed this Contract and approve
as to its legal form.

By: 
Deputy District Attorney

Dated 3/7/22

CITY'S ORIGINATING DEPARTMENT
CONSULTANT will not be given authorization
to begin work until this Contract has been
signed by Purchasing and Contracts

BY: Carol Akers
Purchasing & Contracts Administrator

By: 

Dated 3/8/2022

Project: P320121007
Account: ~~5X882885-507010~~
2750600-507010

PROFESSIONAL SERVICES CONSULTANT AGREEMENT

Contract No. 21300207

**Title: Preliminary Design Services for SE Mandatory Sanitary Sewer
Extension Project**

Undersigned deposes and says under penalty of perjury: That he/she is **CONSULTANT** or authorized agent of **CONSULTANT**; that he/she has read the foregoing Contract; and that he/she understands the terms, conditions and requirements thereof.

CONSULTANT

BY: Brent Farr

TITLE: President

FIRM: Farr West Engineering

CARSON CITY BUSINESS LICENSE #: BL-003768

Address: 5510 Longley Lane

City: Reno **State:** NV **Zip Code:** 89511

Telephone: 775-851-4788

E-mail Address: brent@farrwestengineering.com



(Signature of Consultant)

DATED

3.7.22

PROFESSIONAL SERVICES CONSULTANT AGREEMENT
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Title: Preliminary Design Services for SE Mandatory Sanitary Sewer Extension Project

SAMPLE INVOICE

Invoice Number: _____
 Invoice Date: _____
 Invoice Period: _____

Invoice shall be submitted to:

Carson City Public Works
 Attn: Lucy Bourland, email: LBourland@carson.org
 3505 Butti Way
 Carson City NV 89701

Line Item #	Description	Unit Cost	Units Completed	Total \$\$
Total for this invoice				

Original Contract Sum	\$	_____
Less amount previously billed	\$	_____
= contract sum prior to this invoice	\$	_____
Less this invoice	\$	_____
=Dollars remaining on Contract	\$	_____

ENCLOSE COPIES OF RECEIPTS & INVOICES FOR EXPENSES & OUTSIDE SERVICES

EXHIBIT A SCOPE OF WORK

Carson City Public Works

SE Mandatory Sanitary Sewer Extension Project – Phases 9, 10 and 12

Revision 1

INTRODUCTION

Since the early 1990s, Carson City has observed a steady rise in nitrate levels in groundwater samples pulled from existing wells no. 38 and 43 in the surrounding area of Southeast Carson. The existing properties located within this area, referenced as phases 9, 10, and 12 of the Southeast Carson Sewer Extension Plan, are currently served by individual septic systems. These systems are contributing to the continuing rise in nitrate levels that are negatively impacting groundwater resources. Farr West Engineering will evaluate up to four alternatives to address this issue which include:

- Sewer main extension with private and public lift stations.
- Sewer main extension with denitrification systems installed in residential septic systems not feasible to serve by gravity.
- Denitrification systems installed in all residential septic systems.
- Nitrate treatment installed at wells no. 38 and 43.

Farr West Engineering (Farr West) will provide a technical memorandum that summarizes the above alternatives, including preliminary layouts, costs, maintenance and operation, and efficiency to address nitrate contamination.

The phase and task breakdown for the project is designated as follows:

Engineering Services

- Task 1 – Project Management
- Task 2 - Preliminary Engineering

DESIGN SERVICES

Task 1 – Project Management

Objective

To plan, organize, direct, control, and communicate all relevant activities set forth in this Scope of Work within the approved budget and schedule.

Approach

Farr West will routinely review project progress and communicate project status on a regular basis. Communication will be through email and telephone, and with monthly project coordination meetings with Carson City Public Works and Farr West staff. This task will include the following activities:

- Project administration includes scheduling maintenance, cost control, monthly invoicing, filing, resource allocation, subconsultant management, and routine communications.
- Conducting a project kick-off meeting with Farr West and Carson City Public Works staff.
- Team coordination, including conference calls and internal meetings.
- Monitoring changes to the scope, budget, or schedule and developing change management strategies with Carson City Public Works.

Deliverables

The following deliverables will be submitted under this task:

- Project schedule.
- Monthly status reports.

Assumptions

The following assumptions apply:

- Monthly reports will be provided with timely invoices.
- Project-related issues will be identified, communicated, and resolved.

Task 2 – Preliminary Engineering

Objective

To develop a preliminary design and opinion of probable construction costs for each alternative and compile in a technical memorandum to allow Carson City to decide on the preferred alternative.

Approach

This task will include the following activities:

- Communicate with Carson City staff to obtain data of the existing sewer main infrastructure adjacent to the project limits. The intent of this effort is to verify and establish points of connection for the sewer main extension.
- Coordinate with utility owners in the project area to obtain record drawings and/or maps. Fees, if applicable, are included in this task. A third-party utility locator to mark buried utilities is not included. The intent of this effort is to identify areas of conflict that may impact construction feasibility and/or cost.
- Research and provide recommendations for denitrification systems for individual septic systems. The findings will be summarized in the technical memorandum.
- Research and provide recommendations for nitrate treatment at the well sites. The findings will be summarized in the technical memorandum.
- Prepare preliminary design for each alternative. General layouts will be provided with minor detail where necessary to depict the design intent. Main extensions will not include profiles. Main extensions will be evaluated for feasibility by reviewing existing GIS topography data provided by Carson City. Lift station locations will be identified and no design will be provided.

- Complete a site visit to verify points of connection, utility conflicts, and construction challenges.
- Prepare an opinion of probable cost for each alternative for review by Carson City. Costs will be summarized in the technical memorandum.
- The Farr West design team will meet with Carson City Public Works staff to discuss comments on the draft technical memorandum prior to finalizing.

Deliverables

The following deliverables will be submitted under this task:

- Technical memorandum. (Draft and Final in pdf and word format.)

Assumptions

The following assumptions apply:

- Topographic or boundary survey will not be provided.
- Utility potholing is not required.
- Drawings will be schematic (11"x17") with varying scale as necessary to clearly identify the proposed improvements.
- A geotechnical investigation will not be completed.
- Carson City will provide review comments on the technical memorandum within 2 weeks of submission.

**EXHIBIT B
SCHEDULE**

Notice to Proceed: **March 2022**

Draft Preliminary Alternatives Memorandum: **May 2022**

Final Preliminary Alternatives Memorandum: **July 2022**

**EXHIBIT C
BUDGET**

Task 1	Project Management	\$3,744
Task 2	Preliminary Engineering	\$46,245
	TOTAL:	\$49,989

Notes:

1. Owner shall pay Engineer an amount equal to the cumulative hours charged to the Project by each class of Engineer's employees times standard hourly rates for each applicable billing class for all services performed on the Project, plus reimbursable expenses and Engineer's consultants' charges, if any. Engineer's standard hourly rates and reimbursable expenses will be adjusted on January 1st of each year that this Agreement is in effect to reflect equitable changes in the compensation payable to Engineer. Adjusted standard hourly rates and reimbursable expenses will become effective immediately.
2. Engineer's Rate Schedule is included as Exhibit D.
3. The total compensation for services and reimbursable expenses is not to exceed the amount shown above.

EXHIBIT D
2022 ENGINEER'S RATE SCHEDULE

Title	Hourly Rate	Title	Hourly Rate
Principal Engineer	\$189	Project Coordinator	\$105
Senior Engineer II	\$182	Project Assistant I	\$80
Senior Engineer	\$170	Admin IV	\$110
Engineer IV	\$150	Admin III	\$95
Engineer III	\$140	Admin II	\$85
Engineer II	\$130	Admin I	\$75
Engineer I	\$120	Intern	\$50
Engineer in Training II	\$108	GIS Analyst II	\$150
Engineer in Training I	\$100	GIS Analyst I	\$125
Senior Electrical Engineer	\$170	GIS Specialist	\$110
Electrical Engineer III	\$150	GIS Technician II	\$100
Electrical Engineer II	\$140	GIS Technician I	\$90
Electrical Engineer I	\$130	Water Resource Specialist	\$150
Electrical and Controls Engineer in Training	\$125	Water Rights Specialist II	\$140
Electrical Engineer in Training II	\$120	Water Rights Specialist I	\$115
Electrical Engineer in Training I	\$110	Water Rights Technician III	\$100
Senior Hydrogeologist	\$176	Water Rights Technician II	\$90
Hydrogeologist II	\$125	Water Rights Technician I	\$80
Hydrogeologist I	\$110	Regulatory & Env. Specialist	\$110
Construction Inspector III	\$125	Professional Surveyor	\$155
Construction Inspector II	\$120	Senior Survey Technician	\$135
Construction Inspector I	\$110	Survey Technician III	\$125
Designer III	\$130	Survey Technician II	\$115
Designer II	\$125	Survey Technician I	\$100
Designer I	\$115	1 Man Survey Crew	\$160
Proposal Specialist	\$85	2 Man Survey Crew	\$270

Other Fees and Charges:

1. All direct project expenses, including subconsultants, will be billed at actual cost plus 15%.
2. An overtime surcharge of 25% will be applied to the hourly rates of non-salaried employees for authorized overtime work.
3. Different survey and construction inspection labor rates will apply on prevailing wage projects. Rates for prevailing wage projects will be provided on a case by case basis.

Appendix II to Part 200—Contract Provisions for Non-Federal Entity Contracts Under Federal Awards

In addition to other provisions required by the Federal agency or non-Federal entity, all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable.

(A) Contracts for more than the simplified acquisition threshold currently set at \$150,000, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

(B) All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

(C) Equal Employment Opportunity.

Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 CFR Part 60–1.3 must include the equal opportunity clause provided under 41 CFR 60–1.4(b), in accordance with Executive Order 11246, “Equal Employment Opportunity” (30 FR 12319, 12935, 3 CFR Part, 1964–1965 Comp., p. 339), as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and implementing regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”

(D) Davis-Bacon Act, as amended (40 U.S.C. 3141–3148).

When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141–3144, and 3146–3148) as supplemented by Department of Labor regulations (29 CFR Part 5, “Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction”). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland “Anti-Kickback” Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). The Act

provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

(E) Contract Work Hours and Safety Standards Act (40 U.S.C. 3701–3708).

Where applicable, all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

(F) Rights to Inventions Made Under a Contract or Agreement.

If the Federal award meets the definition of “funding agreement” under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.

(G) Clean Air Act (42 U.S.C. 7401–7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251–1387), as amended—

Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401–7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251–1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

(H) Debarment and Suspension (Executive Orders 12549 and 12689)—

A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide Excluded Parties List System in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR Part 1986 Comp., p. 189) and 12689 (3 CFR Part 1989 Comp., p. 235), “Debarment and Suspension.” The Excluded Parties List System in SAM contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as

parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

(I) Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—

Contractors that apply or bid for an award of \$100,000 or more must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

(J) See § 200.323 Procurement of recovered materials.

(K) See §200.216 Prohibition on certain telecommunications and video surveillance services or equipment.

(L) See §200.322 Domestic preferences for procurements.

[78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75888, Dec. 19, 2014; 85 FR 49577, Aug. 13, 2020]

**AFFIDAVIT REQUIRED UNDER 23 USC SECTION 112(c)
AND 2 CFR PARTS 180 AND 1200 - SUSPENSION OR DEBARMENT**

STATE OF NEVADA
COUNTY OF WASHOE } SS

I, Brent Farr (Name of party signing this affidavit and the Proposal Form) President (title).

being duly sworn do depose and say: That Farr West Engineering (name of person, firm, association, or corporation) has not, either directly or indirectly, entered into agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this contract; and further that, except as noted below to the best of knowledge, the above named and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public or private agreement or transaction; violation of Federal or State antitrust statutes, including those proscribing price fixing between competitors, allocation of customers between competitors, and bid rigging; commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice; commission of any other offense indicating a lack of business integrity or business honesty that seriously and directly affects your present responsibility;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

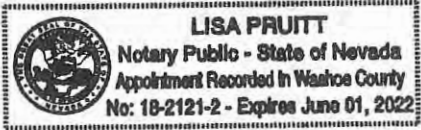
(Insert Exceptions, attach additional sheets)

The above exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility and whether or not the [Agency Name] will enter into contract with the party. For any exception noted, indicate on an attached sheet to whom it applies, initiating agency, and dates of action. Providing false information may result in criminal prosecution or administrative sanctions. The failure to furnish this affidavit and required exceptions if any shall disqualify the party.

Brent Farr
Signature
President
Title

Sworn to before me this 2nd day of November, 20 21

(SEAL)



[Signature]
Notary Public, Judge or other Official

CERTIFICATION REQUIRED BY SECTION 1352 OF TITLE 31, UNITED STATES CODE
RESTRICTIONS OF LOBBYING USING APPROPRIATED FEDERAL FUNDS

The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriate funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Brent Farr

Name (please type or print)

Brent Farr

Signature

President

Title

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity in and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, first Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.
15. Check whether or not a SF-LL-A Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

Approved by OMB

0348-0046

<p>1. Type of Federal Actions:</p> <p><input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance</p>	<p>2. Status of Federal Action:</p> <p><input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> c. Initial award <input type="checkbox"/> d. post-award</p>	<p>3. Report Type:</p> <p><input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change</p> <p>For Material Change Only: year _____ quarter _____ date of last report _____</p>
<p><input type="checkbox"/> 4. Name and Address of Reporting Entity: Prime <input type="checkbox"/> Sub-awardee Tier _____, if known:</p> <p>Congressional District, if known: _____</p>		<p>5. If Reporting Entity in No. 4 is Sub-awardee, Enter Name and Address of Prime:</p> <p>Congressional District, if known: _____</p>
<p>6. Federal Department/Agency:</p>	<p>7. Federal Program Name/Description:</p> <p>CFDA Number, if applicable: _____</p>	
<p>8. Federal Action Number, if known:</p>	<p>9. Award Amount, if known: \$ _____</p>	
<p>10. a. Name and Address of Lobbying Entity <i>(if individual, last name, first name, MI):</i></p> <p><small>(attach Continuation Sheet(s) SF-LLL-A, if necessary)</small></p>	<p>b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i></p> <p><small>(attach Continuation Sheet(s) SF-LLL-A, if necessary)</small></p>	
<p><input type="checkbox"/> 11. Amount of Payment <i>(check all that apply):</i></p> <p><input type="checkbox"/> \$ _____ <input type="checkbox"/> actual <input type="checkbox"/> planned</p>	<p>13. Type of Payment <i>(check all that apply):</i></p> <p><input type="checkbox"/> a. retainer <input type="checkbox"/> b. one-time fee <input type="checkbox"/> c. commission <input type="checkbox"/> d. contingent fee <input type="checkbox"/> e. deferred <input type="checkbox"/> f. other; specify: _____</p>	
<p>12. Form of Payment <i>(check all that apply):</i></p> <p><input type="checkbox"/> a. cash <input type="checkbox"/> b. In-kind; specify: nature _____ value _____</p>		
<p>14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s), or Member(s) contacted, for Payment indicated in Item 11:</p> <p><small>(attach Continuation Sheet(s) SF-LLL-A, if necessary)</small></p>		
<p>15. Continuation Sheet(s) SF-LLL-A attached: <input type="checkbox"/> Yes <input type="checkbox"/> No</p>		
<p>16. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</p>		<p>Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____</p>
<p>Federal Use Only:</p>		<p>Authorized for Local Reproduction Standard Form - LLL</p>

Conflict of Interest Disclosure Form

Date: **November 3, 2021**

Project: **RFQ #21300207 - Surveying, Engineering Design, and Construction Support Services**

Title: **SE Mandatory Sewer Extension Project, Phases 9, 10, and 12**

Name: **Brent Farr, PE**

Position: **President**

Please describe below any relationships, transactions, positions you hold (volunteer or otherwise), or circumstances that you believe could contribute to a conflict of interest:

I have no conflict of interest to report.

I have the following conflict of interest to report (please specify other nonprofit and for-profit boards you (and your spouse) sit on, any for-profit businesses for which you or an immediate family member are an officer or director, or a majority shareholder, and the name of your employer and any businesses you or a family member own:

NONE

I hereby certify that the information set forth above is true and complete to the best of my knowledge.

Signature: 

Date: **November 3, 2021**

DUNS Number & SAM Verification

Information Required

DUNS Number

Proposers need to have a DUNS number (obtained from Dun & Bradstreet: <http://www.sba.gov/content/getting-d-u-n-s-number>) and be registered in the US Government System for Award Management (SAM: <https://www.sam.gov>) for ease of verification they are not debarred from working on projects with federal funding.

SAM registration must be completed and valid to execute the Contract.

Farr West Engineering
DUNS #097569987

FARR WEST ENGINEERING

DUNS Unique Entity ID 097569987	SAM Unique Entity ID CHLYMVCXC4U9	CAGE / NCAGE 5ENV4
Purpose of Registration All Awards	Registration Status Active	Expiration Date May 25, 2022
Physical Address 5510 Longley LN Reno, Nevada 89511-1825 United States	Mailing Address 5510 Longley Lane Reno, Nevada 89511-1825 United States	

Business Information

Doing Business as (blank)	Division Name Farr West Engineering	Division Number (blank)
Congressional District Nevada 02	State / Country of Incorporation Nevada / United States	URL http://www.farrwestengineering.com

Registration Dates

Activation Date May 26, 2021	Submission Date May 25, 2021	Initial Registration Date Apr 15, 2009
--	--	--

Entity Dates

Entity Start Date Mar 1, 2001	Fiscal Year End Close Date Dec 31
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Immediate Owner

CAGE (blank)	Legal Business Name (blank)
------------------------	---------------------------------------

Highest Level Owner

CAGE (blank)	Legal Business Name (blank)
------------------------	---------------------------------------

Executive Compensation

Registrants in the System for Award Management (SAM) respond to the Executive Compensation questions in accordance with Section 6202 of P.L. 110-252, amending the Federal Funding Accountability and Transparency Act (P.L. 109-282). This information is not displayed in SAM. It is sent to USAspending.gov for display in association with an eligible award. Maintaining an active registration in SAM demonstrates the registrant responded to the questions.

Proceedings Questions

Registrants in the System for Award Management (SAM) respond to proceedings questions in accordance with FAR 52.209-7, FAR 52.209-9, or 2.C.F.R. 200 Appendix XII. Their responses are not displayed in SAM. They are sent to FAPIIS.gov for display as applicable. Maintaining an active registration in SAM demonstrates the registrant responded to the proceedings questions.

SAM Search Authorization

I authorize my entity's non-sensitive information to be displayed in SAM public search results:

Yes

Entity Types

Business Types

Entity Structure Corporate Entity (Not Tax Exempt)	Entity Type Business or Organization	Organization Factors Subchapter S Corporation
Profit Structure For Profit Organization		

Socio-Economic Types

Self Certified Small Disadvantaged Business

Check the registrant's Reqs & Certs, if present, under FAR 52.212-3 or FAR 52.219-1 to determine if the entity is an SBA-certified HUBZone small business concern. Additional small business information may be found in the SBA's Dynamic Small Business Search if the entity completed **114**

SBA supplemental pages during registration.

Exhibit B

Financial Information

Accepts Credit Card Payments No	Debt Subject To Offset No
EFT Indicator 0000	CAGE Code 5ENV4

Points of Contact

Electronic Business

♀
Coralee Griswold, Sr. Businesss Administrator **5510 Longley Lane
Reno, Nevada 89511
United States**

Government Business

♀
Lisa Pruitt, Office Manager **5510 Longley Lane
Reno, Nevada 89511
United States**

Coralee Griswold, Sr. Businesss Administrator 421 Court Street
Elko, Nevada 89801
United States

Past Performance

♀
BRENT Farr, President **5510 Longley Lane
Reno, Nevada 89511
United States**

Greg Lyman, Engineering Manager 5510 Longley Lane
Reno, Nevada 89511
United States

Service Classifications

NAICS Codes

Primary	NAICS Codes	NAICS Title
Yes	541330	Engineering Services
	541310	Architectural Services
	541340	Drafting Services
	541370	Surveying And Mapping (Except Geophysical) Services

Product and Service Codes

PSC	PSC Name
C1KA	Architect And Engineering- Construction: Dams
C1KB	Architect And Engineering- Construction: Canals
C1LB	Architect And Engineering- Construction: Highways, Roads, Streets, Bridges, And Railways
C1PC	Architect And Engineering- Construction: Unimproved Real Property (Land)
C1PD	Architect And Engineering- Construction: Waste Treatment And Storage Facilities
C213	Architect And Engineering- General: Inspection (Non-Construction)
C214	Architect And Engineering- General: Management Engineering
C219	Architect And Engineering- General: Other
C221	Architect And Engineering- General: Plumbing Systems
C222	Architect And Engineering- General: Electrical Systems
R425	Support- Professional: Engineering/Technical
R499	Support- Professional: Other

Disaster Response

Exhibit B

Yes, this entity appears in the disaster response registry.

States	Counties	Metropolitan Statistical Areas
California		
Nevada		