ISSUED FOR BID

A CITY OF SPARKS PROJECT

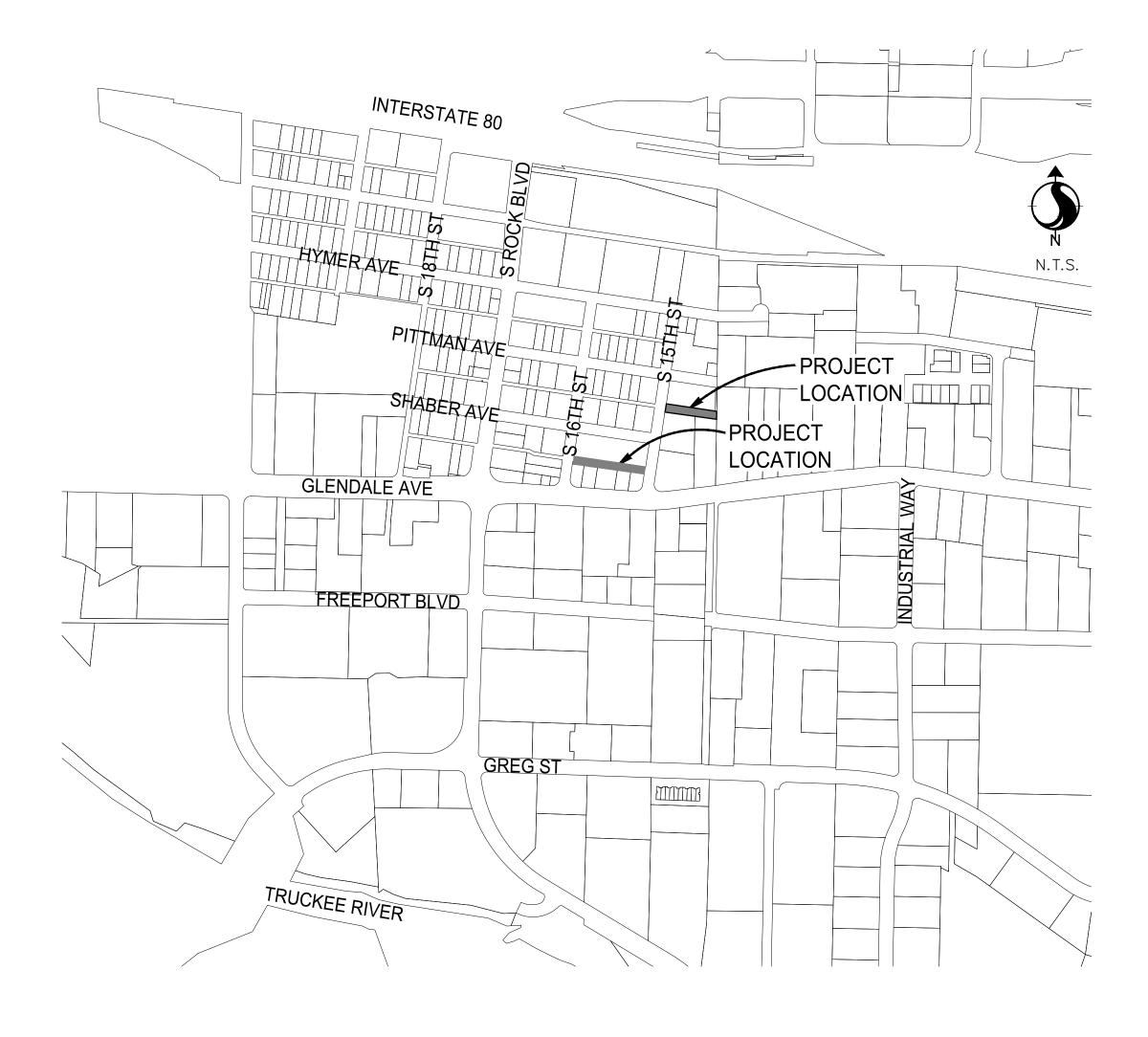
2021 PCC ALLEYS CITY OF SPARKS PROJECT BID NO. 20/21-017 PUBLIC WORKS PROJECT NO. WA-2021-255 SPARKS, WASHOE COUNTY, NEVADA

CITY OF SPARKS

ED LAWSON MAYOR

DONALD ABBOTT COUNCIL MEMBER WARD OF COUNCIL

NEIL KRUTZ CITY MANAGER



APPROVALS:



N R. ERICSON, P.E., P.T.O.E. Y ENGINEER

PLANS PREPARED AND SUBMITTED BY:





ENGINEER:



6995 Sierra Center Parkway

Reno, NV 89511

www.stantec.com



DATE

2. TOPOGRAPHIC INFORMATION CONTAINED WITHIN THESE CONSTRUCTION DOCUMENTS WAS PREPARED BY CONVENTIONAL FIELD TOPOGRAPHIC SURVEYS.

THE BASIS OF BEARING IS GRID NORTH, NAD 83 (2011) NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE, UTILIZING A COMBINED GRID TO GROUND FACTOR OF 1.000197939

THE BASIS OF ELEVATION IS NAVD '88, BASED UPON CITY OF SPARKS BENCH MARK No. 59 ELEVATION = 4422.01

- 3. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE EXECUTED TO COMPLETION WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC. THE CONSTRUCTION OF THE STREET IMPROVEMENTS SHALL ALLOW FOR THE PERPETUATION OF ALL EXISTING LEGAL ACCESSES AND EXISTING DRIVEWAYS, UNLESS OTHERWISE NOTED.
- 4. THE CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS OR UTILITY COMPANY FORCES WORKING ON THE SITE, AND WITH BUSINESS OWNERS ACTIVE OPERATIONS.
- 5. ALL SURFACES SHALL BE RESTORED TO THEIR ORIGINAL OR BETTER CONDITION AT THE COMPLETION OF CONSTRUCTION. EXISTING CONCRETE SUCH AS SIDEWALK, CURB, AND GUTTER SHALL BE REMOVED TO LIMITS MARKED IN FIELD BY THE ENGINEER. ALL REMOVAL MATERIALS SHALL BE DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING ON PRIVATE PROPERTY.
- 6. AT LOCATIONS WHERE NEW UNDERGROUND FACILITIES CROSS EXISTING FACILITIES THE CONTRACTOR SHALL EXPOSE THE EXISTING FACILITY AND VERIFY THAT SUFFICIENT HORIZONTAL AND VERTICAL CLEARANCE EXISTS FOR THE NEW FACILITY TO BE CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE PLANS. AT LOCATIONS WHERE NEW UNDERGROUND FACILITIES ARE TO BE CONNECTED TO EXISTING FACILITIES THE CONTRACTOR SHALL EXPOSE THE EXISTING FACILITY AND VERIFY THAT THE CONNECTION CAN BE MADE AS SHOWN ON THE PLANS. THIS VERIFICATION SHALL BE PERFORMED PRIOR TO ANY CONSTRUCTION. ANY CONFLICTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION AS SOON AS THEY ARE DISCOVERED.
- 7. ALL DIMENSIONS TO CURBS OR CURB AND GUTTERS ARE TO THE FRONT FACE OF CURB UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- 8. EXISTING DRAINAGE FACILITIES, OR INTERIM ENGINEER APPROVED ALTERNATIVES, SHALL BE KEPT IN SERVICE AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) OF THE SUPPLEMENTAL GENERAL PROVISIONS OF THE SOLICITATION DOCUMENTS FOR 2021 PCC ALLEYS.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS, BUILDINGS OR OTHER STRUCTURES RESULTING FROM HIS CONSTRUCTION ACTIVITIES. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE CITY OF SPARKS, THE PROPERTY OWNERS, AND THE ENGINEER AT NO ADDITIONAL COST.
- 10. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES BETWEEN THE INFORMATION SHOWN ON THESE DRAWINGS AND THE CONDITIONS EXISTING IN THE FIELD. THE CONTRACTOR SHALL COMPARE ALL DRAWINGS AND VERIFY THE FIGURES BEFORE STARTING THE WORK AND WILL BE RESPONSIBLE FOR ANY ERRORS WHICH MIGHT HAVE BEEN AVOIDED THEREBY. IF THE CONTRACTOR FAILS TO NOTIFY THE OWNER OR THEIR REPRESENTATIVE IN A TIMELY MANNER OF ANY APPARENT ERROR OR OMISSION ON THE PLANS OR SPECIFICATION. THE CONTRACTOR <u>BE RESPONSIBLE FOR CORRECTING WORK INCORRECTLY DONE AT THE CONTRACTOR'S </u>
- 11. THE USE OF POTABLE WATER FROM THE PUBLIC WATER SYSTEM FOR CONSTRUCTION PURPOSES IS PROHIBITED. CONSTRUCTION WATER USED FOR COMPACTION AND DUST CONTROL SHALL BE OBTAINED FROM THE RENO-SPARKS SEWAGE TREATMENT PLANT AT 8500 CLEAN WATER WAY, RENO NEVADA, TMWA'S TRUCK FILL STATIONS, OR ANOTHER APPROVED SOURCE.
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL MANHOLE RIMS AND ANY EXISTING UTILITY COVERS WITHIN THE CONSTRUCTION LIMITS ARE SET FLUSH WITH THE NEW FINISH
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING STAGING AREA LOCATIONS. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL PRIOR TO USING A STAGING AREA. THE CONTRACTOR SHALL OBTAIN ANY PERMITS FROM THE CITY OF SPARKS THAT ARE REQUIRED FOR STOCKPILING/PROCESSING MATERIALS.
- 14. PAYMENT FOR WORK SHOWN ON THESE PLANS EITHER SPECIFIED OR INFERRED, BUT NOT INCLUDED IN THE BID PROPOSAL, SHALL BE CONSIDERED AS INCLUDED IN THE PRICE PAID FOR OTHER ITEMS OF WORK.
- 15. DURING THE ENTIRE DURATION OF THIS CONSTRUCTION CONTRACT, THE CONTRACTOR SHALL IMPLEMENT STRINGENT DUST CONTROL MEASURES IN ACCORDANCE WITH THE TERMS OF THE APPROVED DUST CONTROL PERMIT AND WASHOE COUNTY HEALTH DEPARTMENT RULES AND REGULATIONS. THE CONTRACTOR IS REQUIRED TO SUPPRESS DUST AT ALL TIMES, 24 HOURS A DAY, SEVEN (7) DAYS A WEEK, REGARDLESS OF WHEN CONSTRUCTION ACTIVITIES ARE OCCURRING.
- 16. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS TO EXISTING LANDSCAPING DAMAGED BY OR THROUGH CONSTRUCTION ACTIVITIES. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE ENGINEER AND OWNER. THERE WILL BE NO DIRECT PAYMENT FOR THIS WORK.
- 17. CITY OF SPARKS STANDARD DETAILS SHALL APPLY EXCEPT WHERE OTHERWISE NOTED ON THE
- 18. BEFORE ANY WORK IS STARTED IN THE STREET RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ADVANCED WARNING SIGNS FOR THE CONSTRUCTION ZONE. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "NEVADA DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION" — CURRENT EDITION AND TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" - CURRENT EDITION AND BE APPROVED BY THE CITY OF SPARKS.
- 19. PROTECTION AND REPLACEMENT OF ALL SURVEY MONUMENTS OR PROPERTY STAKES NOT DELINEATED ON THE CONTRACT DRAWINGS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. DAMAGED OR REMOVED MONUMENTS AND/OR PROPERTY STAKES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- 20. PROTECT IN PLACE EXISTING WASHOE COUNTY MONITORING WELL. SEE PLANS AND DETAILS FOR ADJUSTING WELL TO FINISHED GRADE.

LEGEND ----SS----- SANITARY SEWER ——(S)—SS- SANITARY SEWER MANHOLE DROP INLET UTILITY POLE UTILITY POLE ANCHOR WATER LINE WATER METER WATER VALVE FIRE HYDRANT GAS LINE GAS VALVE EFFLUENT WATER LINE EFFLUENT WATER LINE MANHOLE OVERHEAD POWER UNDERGROUND COMMUNICATIONS TRAFFIC SIGNAL POLE PULL BOX STORM DRAIN STORM DRAIN MANHOLE (EXISTING) STORM DRAIN MANHOLE (PROPOSED) STORM DRAIN FLARED END SECTION EX. CATCH BASIN CURB & GUTTER CONTROL POINT BENCH MARK TELEPHONE MANHOLE

TELEPHONE LINE ELECTRIC FACILITIES (MANHOLE)

UTILITY POLE W/ LIGHT

LIGHT POLE

GUARDRAIL 0000 FENCE

BOLLARD

— — PROPERTY LINE

CENTERLINE RIGHT OF WAY

 ∞ GRADE BREAK

— · · · — FLOWLINE

NOTE: ALL SYMBOLS OR ABBREVIATIONS MAY NOT BE USED ON PLANS

ABBREVIATIONS

ASPHALTIC CEMENT ALGEBRAIC DIFFERENCE ANGLE POINT ASPHALT PAVEMENT PATH AIR RELEASE VALVE BEGINNING OF CURVE BOTTOM OF FOOTING
BACK FACE OF CURB
BEGINNING OF VERTICAL CURVE STATION BACK OF SIDEWALK CATCH BASIN ORRUGATED METAL PIPE CONC. CONST. ONCRETI CONSTRUCT DROP INLET DUCTILE IRON PIPE END OF CURVE EXISTING GROUND LEVATION EDGE OF PAVEMENT
END OF VERTICAL CURVE ELEVATION
END OF VERTICAL CURVE STATION EXISTING EXISTING FINISH FLOOR FRONT FACE OF CURB FINISH GRADE FIRE HYDRANT FLOWLINE LANGED LUSH VALVE GRADE BREAK HORIZONTAL HEAD WALL INVERT ELEVATION RATE OF VERTICAL CURVATURE LENGTH LATERAL LINEAL FEET LOW POINT MAXIMUM DRY DENSITY MINIMUM MECHANICAL JOINT MID POINT OF CURVE POINT OF CURVATURE PORTLAND CEMENT CONCRETE
POINT OF COMPOUND CURVATURE
POINT OF INTERSECTION POINT ON CURVE POINT ON TANGENT PEDESTRIAN PUSH BUTTON
POINT OF REVERSE CURVATURE
POINT OF TANGENCY POLYVINYL CHLORIDE POINT OF VERTICAL INTERSECTION REINFORCED CONCRETE PIPE REFERENCE RETURN RADIUS POINT RIGHT OF WAY STORM DRAIN STORM DRAIN MANHOLE SQUARE FEET SANITARY SEWER SANITARY SEWER MANHOLE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SHARED USE PATH SIDEWALK TOP OF CURB TOP OF DEPRESSED CURB TOP OF PAVEMENT VERT. VERTICAL CURVE VERTICAL POINT OF INTERSECTION

		INDEX OF SHEETS				
SHEET NO.	SHEET NAME	SHEET NAME SHEET DESCRIPTION				
1	C-0	COVER SHEET				
2	C-1	GENERAL NOTES, LEGEND, AND ABBREVIATIONS				
3	SI-1	ALLEY C - PROPOSED SECTIONS OF IMPROVEMENTS				
4	SI-2	ALLEY D - PROPOSED SECTIONS OF IMPROVEMENTS				
5	SP-1	KEY SHEET				
6	HC-1	ALLEY C - HORIZONTAL CONTROL PLAN				
7	HC-2	ALLEY D - HORIZONTAL CONTROL PLAN				
8	PP-1	ALLEY C - PLAN AND PROFILE				
9	PP-2	ALLEY D - PLAN AND PROFILE				
10	DT-1	DETAILS				
11	DT-2	DETAILS				
12	DT-3	DETAILS				

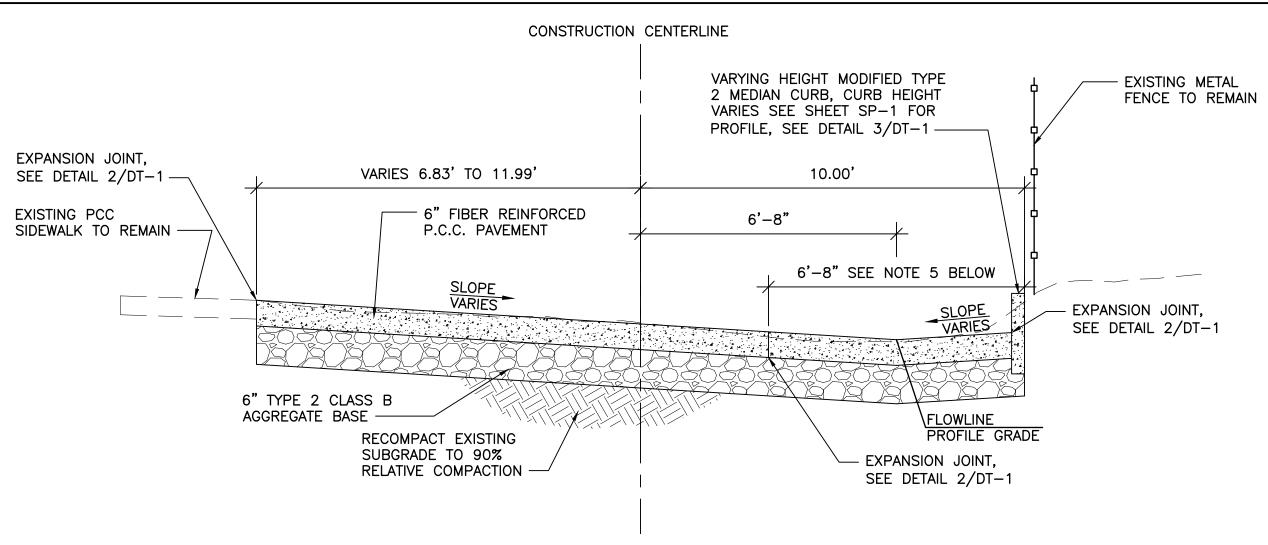
Permit-Seal CKINT J. ALVERSON 8 Exp: 12.31.22 CIVIL

Project Number: 180101424

File Name: 01424 SA-C C1.dwa

JAM CJA 21.04.01 Drawing No. C-1 Sheet Revision

2 of 12



PROPOSED SECTION OF IMPROVEMENT - FLOWLINE OFFSET TO CENTERLINE ALLEY "C" STA. 9+98.57 TO STA. 11+62.73

NOTES:

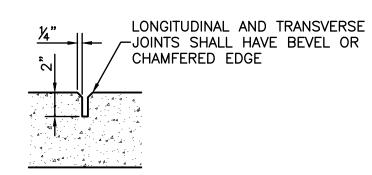
- 1. PCC PAVEMENT SHALL BE JOINTED AT 6'-8" ON CENTER FOR LONGITUDINAL JOINTS AND 8'-0" ON CENTER FOR TRANSVERSE JOINTS. DEVIATIONS FROM THIS LAYOUT MUST BE APPROVED BY THE ENGINEER. JOINTS TO BE CUT A MINIMUM OF 4 HOURS TO A MAXIMUM OF 12 HOURS AFTER CONCLUSION OF BRUSH FINISHING. SEE DETAIL A, THIS SHEET.
- 2. SEE SPECIFICATIONS FOR MIX DESIGN.
- 3. AT STA. 9+98.57 INTERFACE WITH THE EXISTING PCC DRIVEWAY SHALL BE DOWELED WITH #4 BAR IF THE EXISTING DRIVEWAY THICKNESS IS 6" OR GREATER.
- 4. FIBER REINFORCEMENT SHALL BE TUF STRAND, SEE SPECIAL TECHNICAL SPECIFICATIONS FOR DOSAGE.
- 5. CONTRACTOR TO POUR VALLEY GUTTER LIMITS AS SHOW ON PLAN ABOVE FIRST AND SEPARATELY FROM REMAINING PCC

CONSTRUCTION CENTERLINE EXPANSION JOINT, 10.00' - EXISTING WALL VARIES 10.00' TO 11.78' SEE DETAIL 2/DT-1 — TO REMAIN — 6" FIBER REINFORCED EXISTING PCC SIDEWALK TO REMAIN -P.C.C. PAVEMENT EXPANSION JOINT, SEE DETAIL 2/DT-1 6'-8" SEE NOTE 4 BELOW 6" TYPE 2 CLASS B AGGREGATE BASE — RECOMPACT EXISTING SUBGRADE TO 90% EXPANSION JOINT, RELATIVE COMPACTION -SEE DETAIL 2/DT-1

PROPOSED SECTION OF IMPROVEMENT - FLOWLINE OFFSET TO CENTERLINE ALLEY "C" STA. 11+62.73 TO STA. 12+77.39

- 1. PCC PAVEMENT SHALL BE JOINTED AT 6'-8" ON CENTER FOR LONGITUDINAL JOINTS AND 8'-0" ON CENTER FOR TRANSVERSE JOINTS, DEVIATIONS FROM THIS LAYOUT MUST BE APPROVED BY THE ENGINEER. JOINTS TO BE CUT A MINIMUM OF 4 HOURS TO A MAXIMUM OF 12 HOURS AFTER CONCLUSION OF BRUSH FINISHING. SEE DETAIL A, THIS SHEET.
- 2. SEE SPECIFICATIONS FOR MIX DESIGN.
- 3. FIBER REINFORCEMENT SHALL BE TUF STRAND, SEE SPECIAL TECHNICAL SPECIFICATIONS FOR DOSAGE.
- 4. CONTRACTOR TO POUR VALLEY GUTTER LIMITS AS SHOW ON PLAN ABOVE FIRST AND SEPARATELY FROM REMAINING PCC

ALLEY "C" LIP/EP ELEVATIONS AND SLOPE FROM FLOWLINE									
LT. OFFSET	LT. ELEV	LT. SLOPE	STATION	RT. SLOPE	RT. ELEV	RT. OFFSET			
13.50	4417.49	1.24%	10+00.00	0.03%	4417.14'	2.67			
18.26	4418.18'	5.32%	10+25.00	2.00%	4417.27	2.67			
18.32	4418.26'	5.31%	10+50.00	2.00%	4417.34	2.67			
18.21	4418.38'	5.58%	10+75.00	2.00%	4417.42	2.67			
18.46	4418.11'	3.63%	11+00.00	2.00%	4417.49	2.67			
18.58	4418.33'	4.42%	11+25.00	2.00%	4417.57	2.67			
18.07	4418.41'	4.54%	11+50.00	2.00%	4417.64	2.67			
18.07	4418.31'	3.57%	11+75.00	2.00%	4417.73'	3.33			
18.11	4418.35'	3.39%	12+00.00	2.00%	4417.80'	3.33			
18.09	4418.40'	3.25%	12+25.00	2.00%	4417.88'	3.33			
18.23	4418.27	2.11%	12+50.00	2.00%	4417.95'	3.33			
16.67	4418.26'	1.80%	12+75.00	2.00%	4418.03'	3.33			

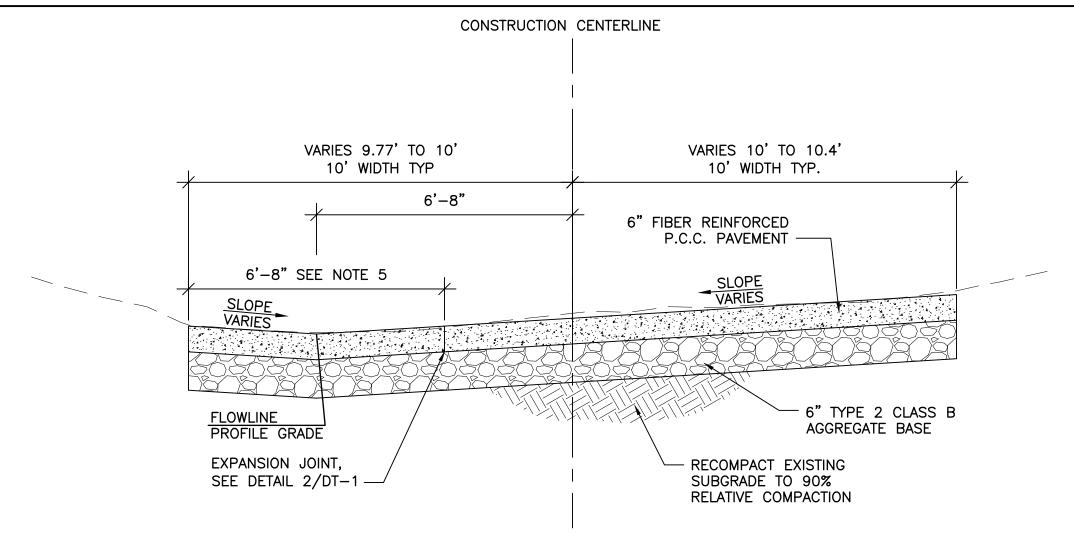


DETAIL A (CONTROL JOINT)

Permit-Seal Project Number: 180101424 File Name: 01424_SA-C_SI.dwg Drawing No. $S\overline{l-1}$ Revision

JAM CJA 21.04.01

3 of 12

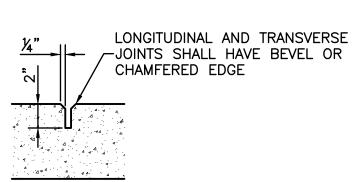


PROPOSED SECTION OF IMPROVEMENT - FLOWLINE OFFSET TO CENTERLINE ALLEY "D" STA. 9+98.64 TO STA. 14+01.25

NOTES:	
--------	--

- 1. PCC PAVEMENT SHALL BE JOINTED AT 6'-8" ON CENTER FOR LONGITUDINAL JOINTS AND 8'-0" ON CENTER FOR TRANSVERSE JOINTS. DEVIATIONS FROM THIS LAYOUT MUST BE APPROVED BY THE ENGINEER. JOINTS TO BE CUT A MINIMUM OF 4 HOURS TO A MAXIMUM OF 12 HOURS AFTER CONCLUSION OF BRUSH FINISHING. SEE DETAIL A, THIS SHEET.
- 2. SEE SPECIFICATIONS FOR MIX DESIGN.
- 3. AT STA. 9+98.64 AND STA. 14+01.25 INTERFACES WITH THE EXISTING PCC DRIVEWAYS SHALL BE DOWELED WITH #4 BAR IF THE EXISTING DRIVEWAY THICKNESS IS 6" OR GREATER.
- 4. FIBER REINFORCEMENT SHALL BE TUF STRAND, SEE SPECIAL TECHNICAL SPECIFICATIONS FOR DOSAGE.
- 5. CONTRACTOR TO POUR VALLEY GUTTER LIMITS AS SHOW ON PLAN ABOVE FIRST AND SEPARATELY FROM REMAINING PCC

ALLEY "D" LIP/EP ELEVATIONS AND SLOPE FROM FLOWLINE								
LT. OFFSET	LT. ELEV	LT. SLOPE	STATION	RT. SLOPE	RT. ELEV	RT. OFFSET		
3.33	4418.10'	0.15%	10+00.00	0.34%	4418.15'	16.67		
3.33	4418.38'	3.00%	10+25.00	3.30%	4418.83'	16.67		
3.33	4418.70'	3.00%	10+50.00	0.60%	4418.70'	16.67		
3.33	4418.72'	3.00%	10+75.00	1.38%	4418.85	16.67		
3.33	4418.55	3.00%	11+00.00	2.34%	4418.84	16.67		
3.33	4418.38'	3.00%	11+25.00	1.26%	4418.82	16.67		
3.33	4418.20'	3.00%	11+50.00	1.32%	4418.31'	16.67		
3.33	4417.76	3.00%	11+75.00	0.48%	4417.88'	16.67		
3.33	4417.42'	3.00%	12+00.00	1.44%	4417.40'	16.67		
3.33	4417.29	3.00%	12+25.00	3.18%	4417.43'	16.67		
3.33	4417.17	3.00%	12+50.00	3.42%	4417.60 '	16.67		
3.33	4417.05	3.00%	12+75.00	3.72%	4417.52'	16.67		
3.33	4416.92'	3.00%	13+00.00	3.90%	4417.44'	16.67		
3.27	4416.80'	3.00%	13+25.00	3.36%	4417.35'	16.67		
3.14	4416.65	3.00%	13+50.00	3.36%	4417.12'	17.00		
3.16	4416.47	3.00%	13+75.00	2.76%	4416.84	17.06		
2.98	4416.25	0.01%	14+00.00	-0.63%	4416.09'	16.67		



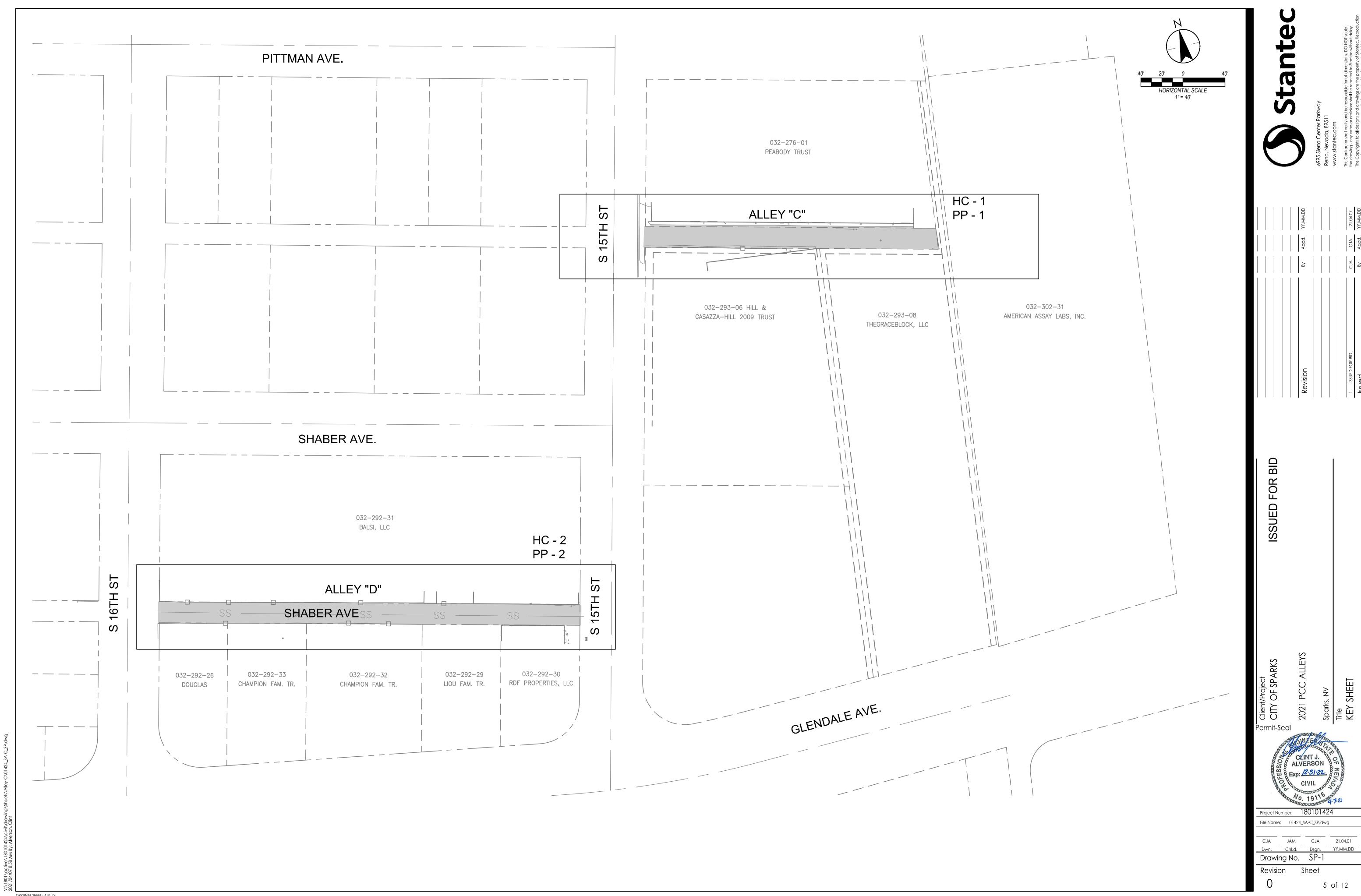
DETAIL A (CONTROL JOINT)

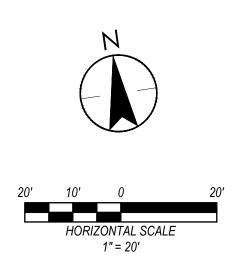
ORIGINAL SHEET - ANSI D

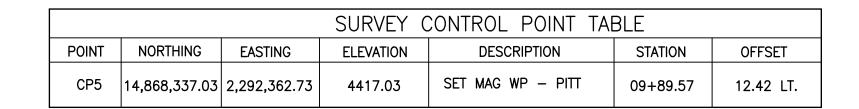
 CJA
 JAM
 CJA
 21.04.01

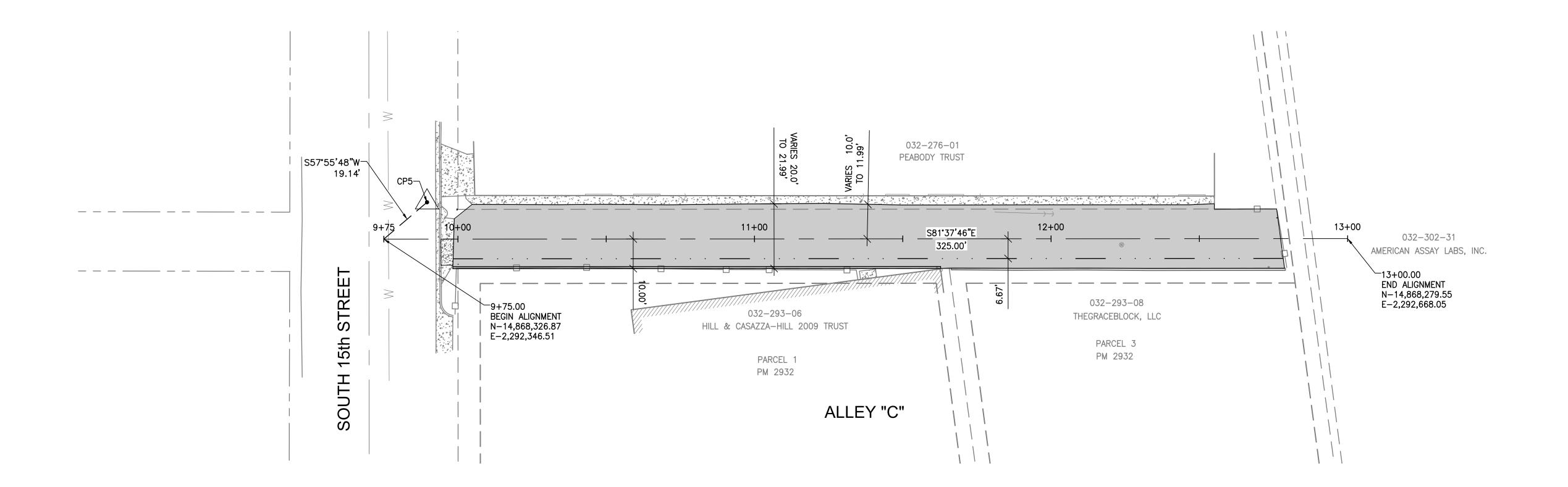
 Dwn.
 Chkd.
 Dsgn.
 YY.MM.DD

4 of 12









Stante

St

6995 Sierra Center Par Reno, Nevada, 89511

By Appd. YY.MM

CJA CJA 21.04

OR BID

Revision

NTAL CONTROL PLAN

021 PCC ALLEYS

Permit-Seal

CLINT J.

ALVERSON

Exp: 12.31.22

Sparks

Project Number: 180101424

File Name: 01424_SA-C_HC.dwg

CJA JAM CJA

CJA JAM CJA 21.04.01

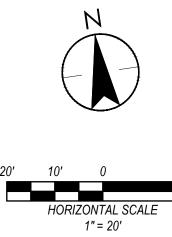
Dwn. Chkd. Dsgn. YY.MM.DD

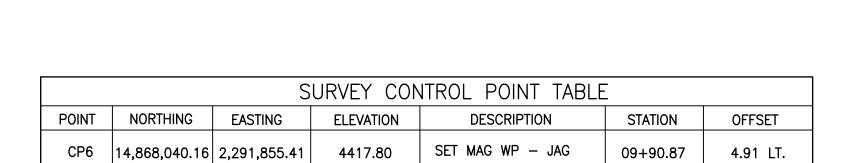
Drawing No. HC-1

Revision Sheet

6 of 12

V:\1801\active\180101424\civil\drawing\Sheets\Alley-C\01424_; 2021/04/07 8:58 AM By: Alverson, Clint



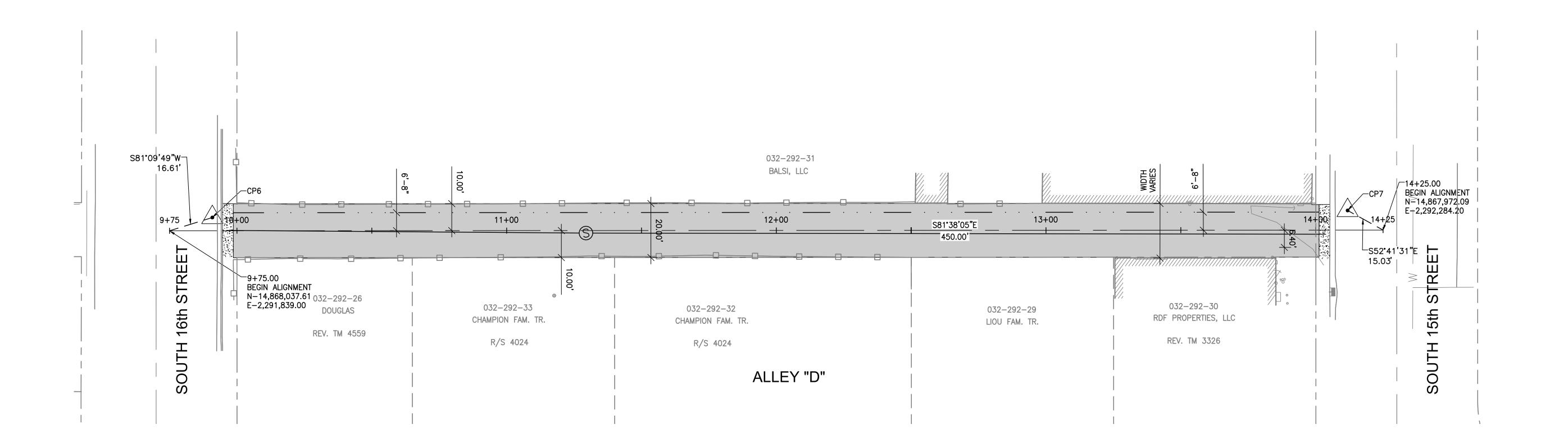


4415.98

CP7 | 14,867,981.25 | 2,292,272.25 |

SET MAG WP - VALLEY | 14+11.85

7.27 LT.



Permit-Seal

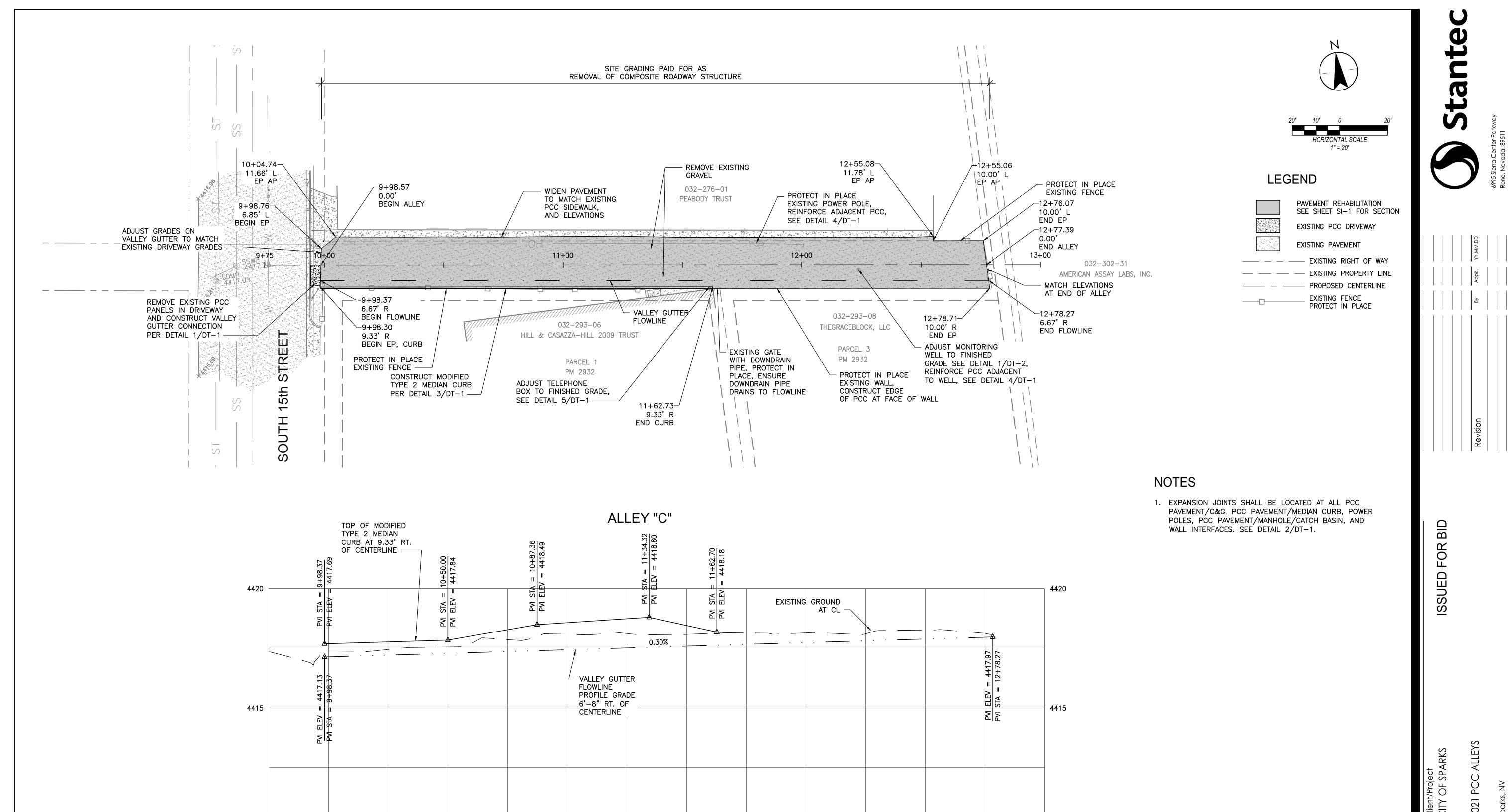
Project Number: 180101424

File Name: 01424_SA-D_HC.dwg CJA JAM CJA 21.04.01

Dwn. Chkd. Dsgn. YY.MM.DD

Drawing No. HC-2 Revision Sheet

7 of 12



12+00

13+00

10+00

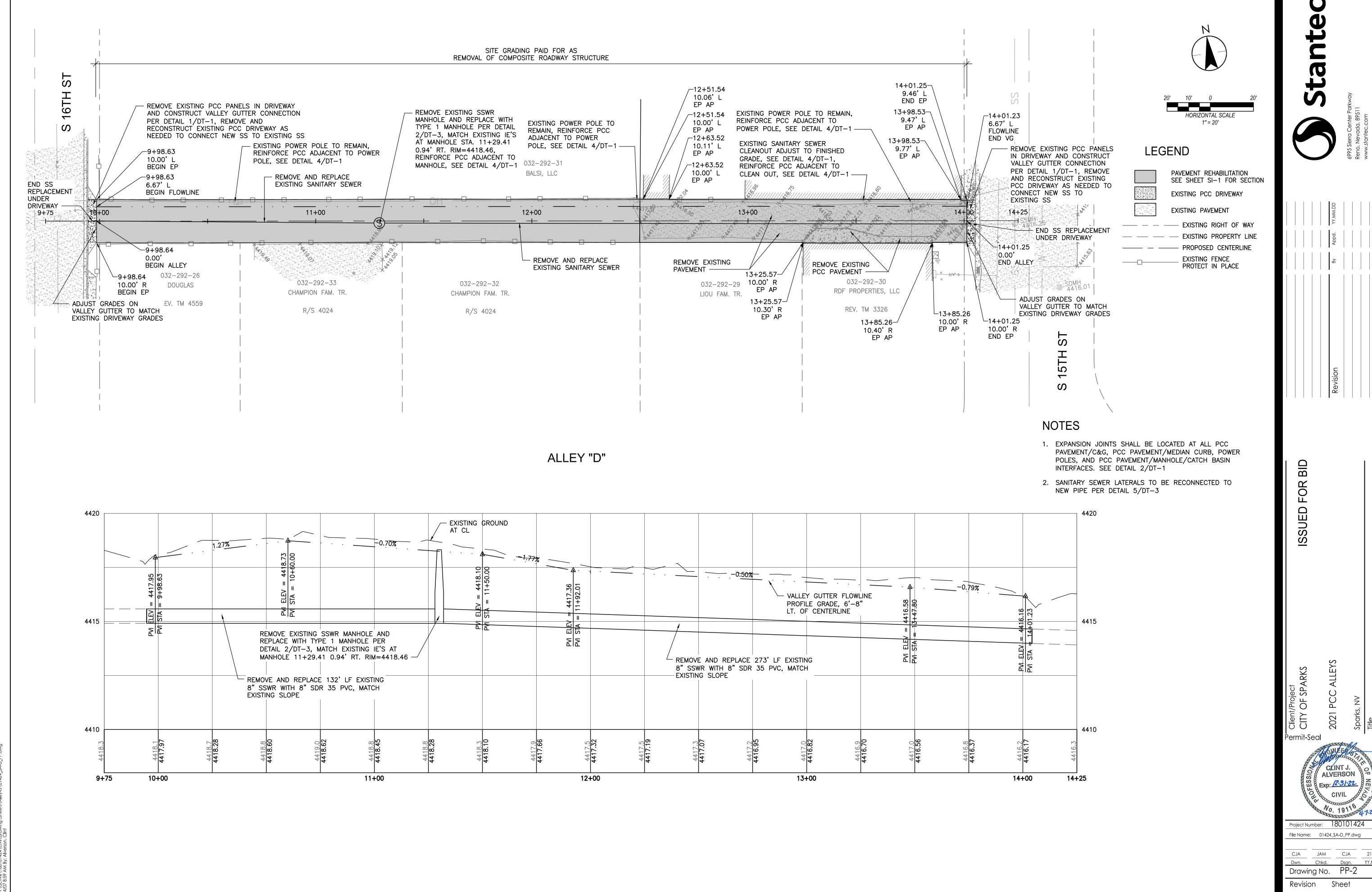
11+00

9+75

ORIGINAL SHEET - ANSI D

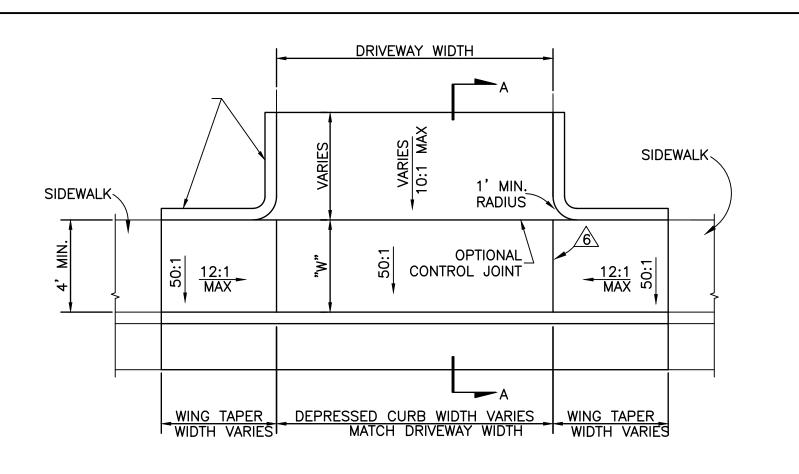
. Permit-Seal File Name: 01424_SA-C_PP.dwg
 JAM
 CJA
 21.04.01

 Chkd.
 Dsgn.
 YY.MM.DD
 Drawing No. PP-1 8 of 12



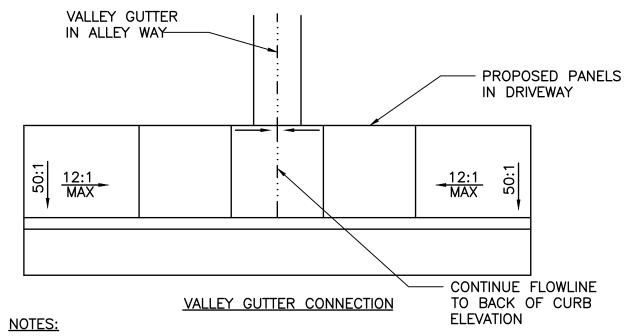
JAM CJA 21.04.01

9 of 12



4' MIN. **EXISTING** _ P.C.C GUTTER 1" LIP 6" P.C.C¬ DRIVEWAY OR AC BEVELED @ 1:1 10:1 ASPHALT PAVEMENT 8" MIN. AGGREGATE BASE 8" MIN. AGGREGATE BASE -COMPACTED TO A MINIMUM COMPACTED TO A MINIMUM-95% RELATIVE COMPACTION 95% RELATIVE COMPACTION SECTION A-A

<u>PLAN</u>



1. SEE SPECIFICATIONS FOR CONCRETE MIX DESIGN.

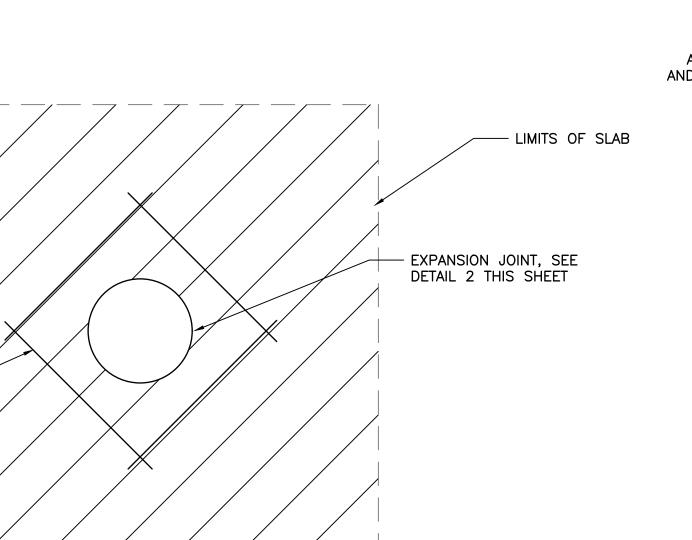
COMMERCIAL DRIVEWAY

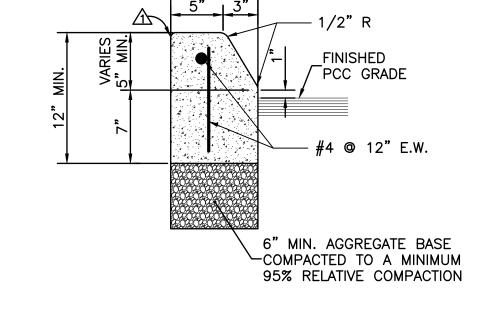
REINFORCE PANEL ADJACENT

TO MANHOLE, VALVE, BOX, OR POWER POLE, DETAIL BELOW —

#4 REBAR

- 2. AGGREGATE BASE MATERIAL UNDER DRIVEWAYS AND SIDEWALKS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 200.
- 3. COMMERCIAL DRIVEWAYS MAY BE POURED MONOLITHIC WITH CURB AND GUTTER. COMMERCIAL DRIVEWAYS TO HAVE #4 BARS AT 18" ON CENTER LONGITUDINAL & TRANSVERSE EXTENDING INTO GUTTER PAN AND DRIVEWAY WINGS. MINIMUM 2" CONCRETE COVER FOR ALL REINFORCING BARS. WHEN COMMERCIAL DRIVEWAY APPROACH AND CURB & GUTTER IS POURED SEPARATELY, IT SHALL BE REQUIRED FOR EACH REINFORCING BAR TO BE DOWELED INTO ADJACENT CURB & GUTTER. DOWELS SHALL #4 REBAR, PENETRATE INTO CURB & GUTTER MINIMUM OF 6", SPACED AT 18" ON CENTER AND BE SECURELY TIED TO THE DRIVEWAY APPROACH REINFORCING.
- 4. IF JOINT EXISTS WITHIN 4 FEET OF DRIVEWAY, REMOVE SIDEWALK AND CURB AND GUTTER TO THAT JOINT.
- 5. ALL ADJACENT CONCRETE REMOVAL SHALL BE TO NEAT SAW CUT LINES AT RIGHT ANGLES. DOWEL INTO EXISTING ADJACENT CONCRETE DRIVEWAY APPROACH OR SIDEWALK WITH (2) No. 4 REINFORCEMENT BARS EQUALLY SPACED ACROSS WIDTH "W". DOWELS SHALL PENETRATE A MINIMUM OF 4" INTO EXISTING CONCRETE.
- © WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 5 FT INTERVALS AND IN ACCORDANCE WITH SECTION 312 OF THE SSPWC.

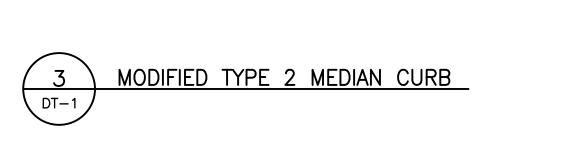


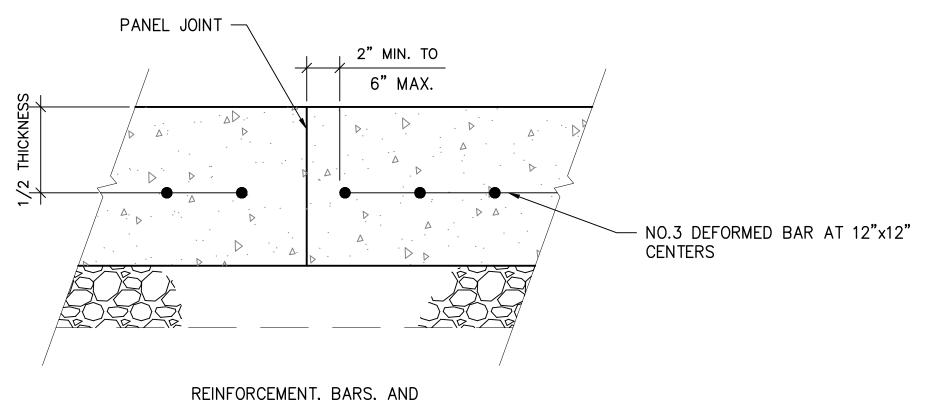


NOTES

A RADIUS TO BE 1/2 INCH, OMIT ROUNDING IF CURBS ARE BACK TO BACK.

- 2. SEE SPECIFICATIONS FOR CONCRETE MIX DESIGN.
- 3. AGGREGATE BASE MATERIAL UNDER MEDIAN CURBS SHALL BE TYPE 2, CLASS B CRUSHED AGGREGATE BASE. MATERIALS SHALL CONFORM TO SSPWC SECTION 200.

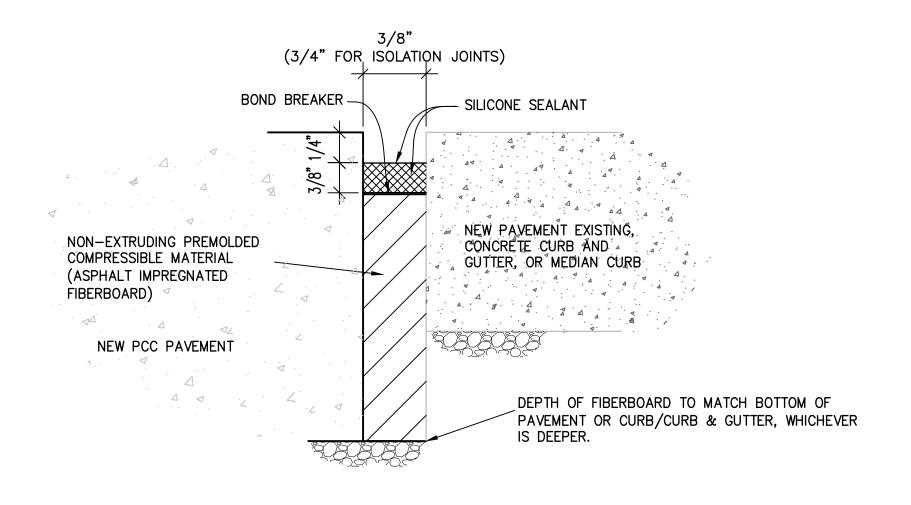




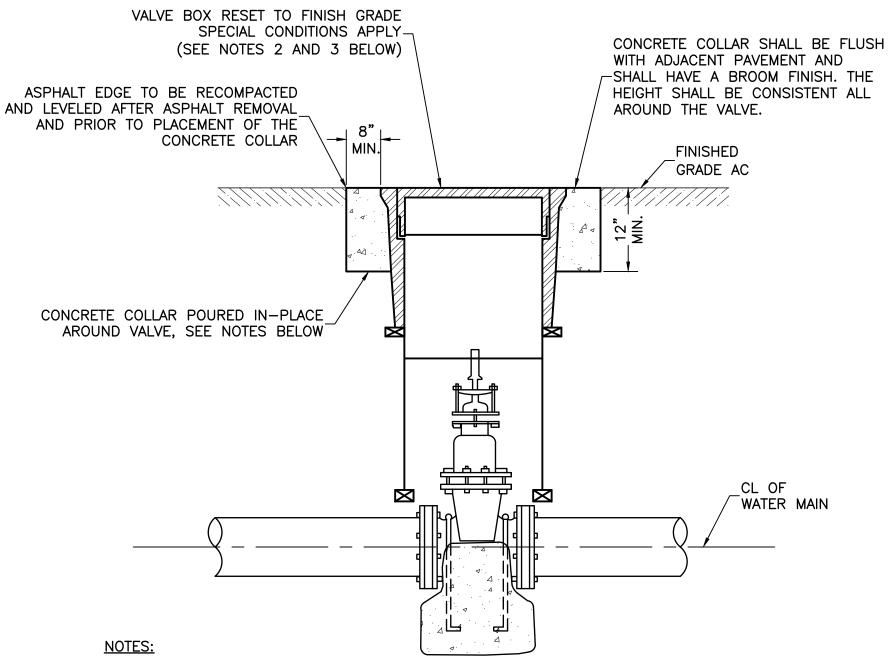
REINFORCEMENT, BARS, AND EXPANSION ARE INCIDENTAL TO THE PCC PAVEMENT COST



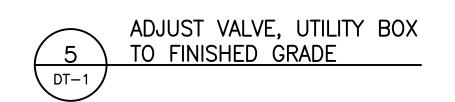
REINFORCEMENT DETAIL



2 TYPICAL EXPANSION JOINT



- 1. SEE SPECIFICATIONS FOR CONCRETE MIX DESIGN.
- 2. SPECIAL CONDITIONS APPLY TO P.E. GAS VALVES WITH TELESCOPING RISERS. CONTRACTORS SHALL NOT RAISE TO GRADE RISERS THAT HAVE BEEN CUT—OFF DURING LOWERING. RISERS CUT—OFF DURING LOWERING SHALL BE REMOVED COMPLETELY TO MAIN AND TAKEN TO NVENERGY FOR EXACT MATERIAL REPLACEMENT PRIOR TO RAISING TO GRADE.
- SPECIAL CONDITIONS APPLY TO WATER VALVES. CONTRACTORS SHALL RAISE RISERS TO GRADE USING RISER PIPE BELLS OR COUPLERS.



2021 Permit-Seal

1801\active\180101424\civil\drawing\Sheets\Alley-C\01424_SA-C_DT.dw

ORIGINAL SHEET - ANSI D

10 of 12

CJA 21.04.01

File Name: 01424_SA-C_DT.dwg

JAM

Drawing No. DT-1

Revision

4930 Energy Way Reno, NV 89502-4106 Tel: (775) 954-4600 Fax: (775) 954-4610

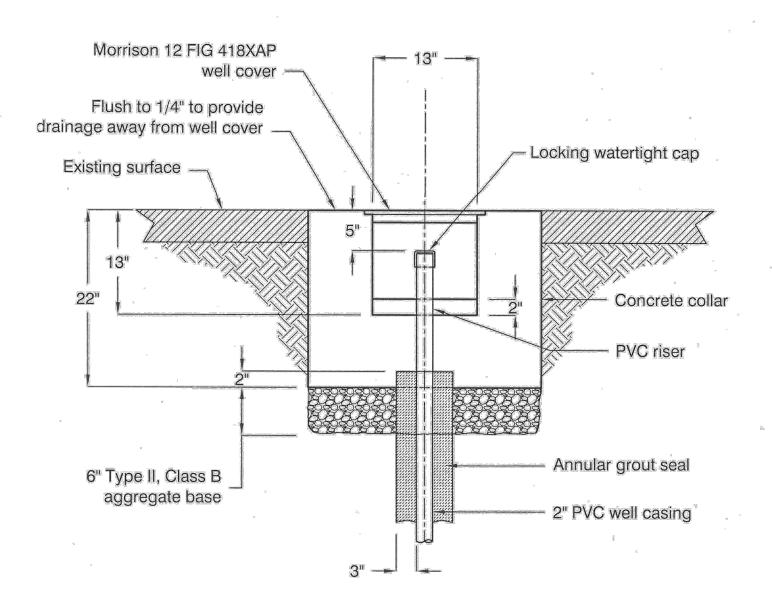
Department of

Specifications for Preserving and Reconstructing WCDWR CTMRD Program Groundwater Monitoring Wells

- Contact Tim Donahoe (954-4635/544-3826) immediately when a monitoring well is identified near the footprint of planned construction
- 2. The Washoe County Department of Water Resources asks that Tim Donahoe (954-4635/544-3826) be contacted before a well is to be lowered or raised to provide oversight for the process.
- 3. See the next page (Fig. 1) for the Preconstruction Condition of the

REQUIRED MATERIALS:

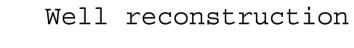
- 1. Well Cover: Morrison 12" diameter manhole with 12" sleeve (MODEL #12 FIG 418XAP).
- 2. Portland Cement Concrete that meets current standard detail for City or County agency overseeing construction
- 3. ASTM F480 well casing PVC to be used in raising well after construction (It is best to save the old piece, which is cut off, and reuse it)
- 4. PVC coupling to join buried pipe and riser to be attached *NO PVC glue or primer are to be used.



Preconstruction condition

Figure 1





- 1. Contact Tim Donahoe (954-4635/544-3826) before reconstructing and raising
- a monitoring well to provide oversight of the process. Excavate around the well to a circular diameter of at least 28" and a depth of 28". Square-shape excavation is not recommended unless required by
- 3. Place 6" of Type 2, Class B aggregate base at the base of the excavation and compact manually.
- Add the PVC riser pipe by dry-fitting a PVC coupling. Use either the piece of pipe that was cut off and saved or an ASTM F480 pipe which matches the schedule and diameter of the buried pipe. Do not use any glue or adhesive!
- 5. Pour concrete to cover the road base, grout seal around the pipe, and PVC
- 6. Set the Morrison manhole/valve box so that the lip is no more than 1/4" above the final grade of the road. The triangle on the lid should point North.
- 7. Check the final dimensions (Fig. 3) and complete the apron with a broom finish.

Department of

4930 Energy Way Reno, NV 89502-4106

Tel: (775) 954-4600 Fax: (775) 954-4610

During construction

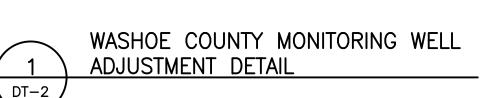
Annular grout seal

2" PVC well casing

Figure 2

Existing surface —

*Do not use any PVC glue, primer, or any type of adhesive on the coupling!





4930 Energy Way

Reno, NV 89502-4106 Fax: (775) 954-4610

Department of

*SAVE the piece of PVC well casing to reuse in raising the well as it is a special well casing ASTM F480 standard.

Lowering of PVC well casing during construction

lowered to provide oversight for the process.

5. See Figure 2 on the next page for details.

1. Contact Tim Donahoe (954-4635/544-3826) before a monitoring well is to be

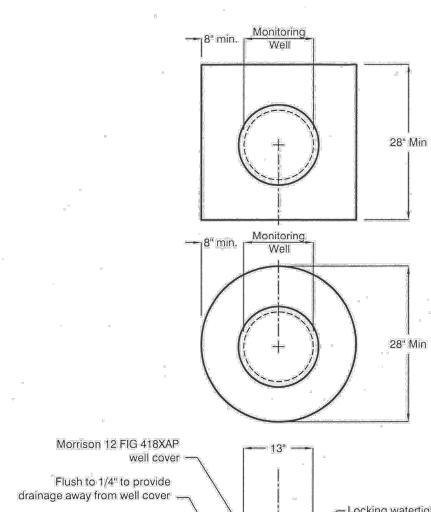
the water-tight cap from the top of the casing into the top and tighten.

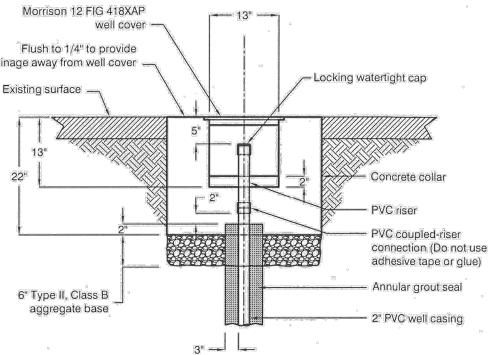
leave 2" or more of the seal exposed above the bottom of the excavation.

2. Excavate around the well casing to a depth of 23" below the existing

3. Cut the PVC well casing flush 19" below the ground surface, and place

4. Expose 2" of PVC casing below the cut by removing the grout seal, but





and is flush or extends no more than one-quarter inch above the roadway surface. The concrete apron will be graded such that the well cover rim is flush with the from the well cover creating a watertight configuration. Well cover and concrete collar shoall be appropriately traffic-rated and meet City or County specifications.

WCDWR Monitoring Well Vault specifications Figure 3

CJA

Drawing No. DT-2 Revision

11 of 12

- 1. SEE SPECIFICATIONS FOR CONCRETE MIX DESIGN.
- 2. CIRCUMSTANCES MAY REQUIRE THE NEED FOR SPECIAL TYPES OF TOP OF MANHOLE CONFIGURATIONS SUCH AS FLAT TOP, ABOVE GROUND, ETC. AS DIRECTED BY THE OWNING AGENCY. DETAILED PLANS OF ANY SPECIAL TOP OF MANHOLE CONFIGURATIONS AND ASSOCIATED COLLARS MUST BE APPROVED BY THE ENGINEER.
- 3. IN UNPAVED AREAS, IT SHALL BE NECESSARY TO SET THE MANHOLE RIM APPROXIMATELY 6 INCHES ABOVE THE SURROUNDING AREA. INSTALL A 6 INCH THICK RING OF CONCRETE, TAPERED AT A 3:1 SLOPE, FROM THE TOP, OUTSIDE EDGE OF THE COLLAR TO THE EXISTING GROUND SURFACE.
- 4. MANHOLE LIDS SHALL NOT BE LOCATED IN GUTTER PANS. UNLESS OTHERWISE APPROVED BY THE OWNING AGENCY.
- 5. ALL GRADE RING JOINTS ARE TO BE GROUTED WITH NON-SHRINK GROUT CONFORMING TO SSPWC SECTION 202 "CEMENT AND RELATED MATERIALS.".

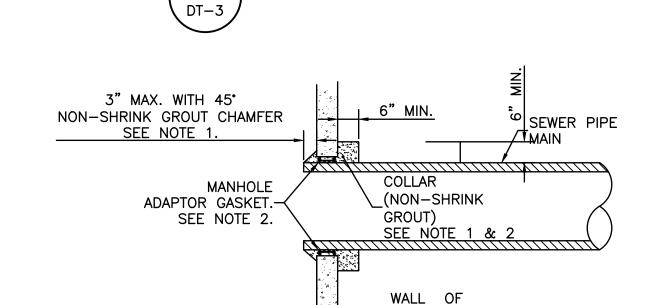
-MANHOLE

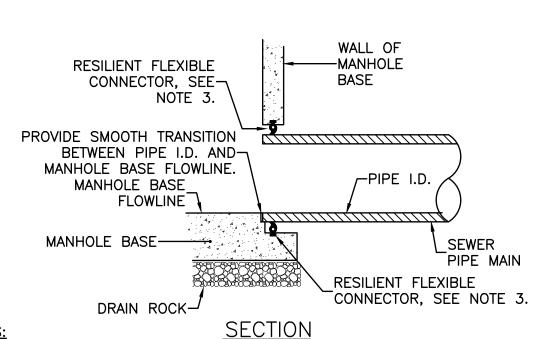
SECTION (TYP.)

ALL GRADE RINGS SHALL BE PORTLAND CEMENT CONCRETE. PVC GRADE RINGS ARE NOT ALLOWED.

ADJUSTMENT MANHOLE

TO FINISHED GRADE

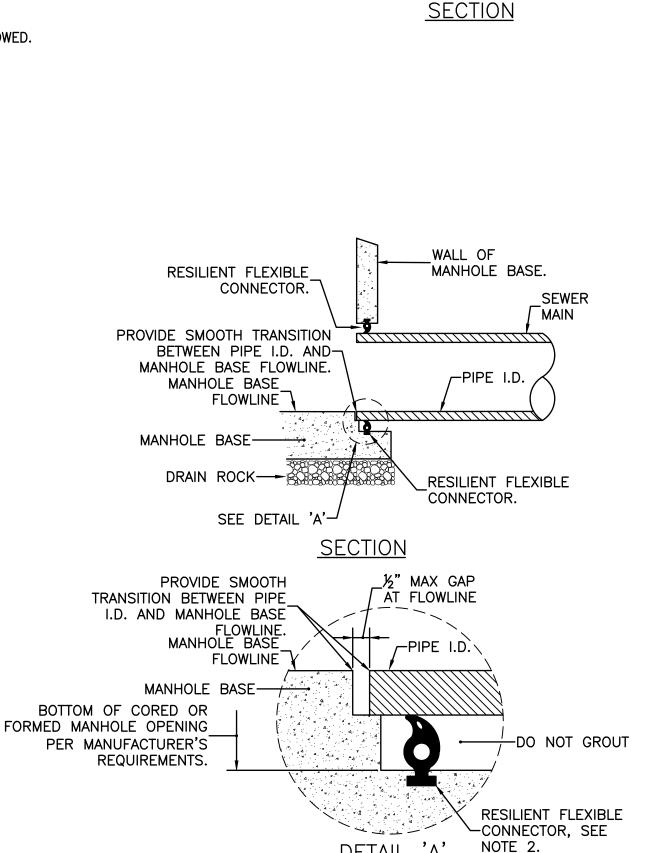




- NOTES:
- NON-SHRINK GROUT SHALL HAVE THE FOLLOWING CHARACTERISTICS: 3000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS, MIN. 6 SACKS OF CEMENT PER CUBIC YARD AND SLUMP AT 1 TO 4 INCHES. ALL MATERIAL SHALL CONFORM TO STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC) SECTION 202, AS ADOPTED BY CITY COUNCIL.
- SANITARY SEWER PIPE CONNECTION TO MANHOLE SECTIONS (DROP MANHOLES) REQUIRE AN AGENCY-APPROVED FORM OF SEAL OR WATER STOP TO PROVIDE A WATERTIGHT CONNECTION. UTILIZE A ROMAC STYLE "LCT" MANHOLE ADAPTOR GASKET OR APPROVED EQUAL IN CONJUNCTION WITH NON-SHRINK GROUT.
- SANITARY SEWER PIPE CONNECTION TO MANHOLE BASE SHALL REQUIRE A RESILIENT FLEXIBLE CONNECTOR INSTALLED IN ACCORDANCE WITH STANDARD DETAIL S-211C.
- 4. ALL PIPE OPENINGS TO NEW MANHOLES MUST BE EITHER CAST-IN-PLACE OR PRE-FORMED AND PIPE OPENINGS TO EXISTING MANHOLES MUST BE CORE DRILLED.

SANITARY SEWER PIPE TO

MANHOLE CONNECTION



DRAIN ROCK-

-FRAME & COVER

BROOM

FINISH

SMOOTH

-FINISH SEE

NOTE

13.

18" MIN.

24" MAX.

CONCRETE BASE

26" MIN.

FINISH ROADWAY

-CONCRETE COLLAR

MANHOLE CONE

WATER TIGHT SEAL (TYP)-

SEE NOTE 2.

PIPE

CONCRÉTE

BASE SMOOTH RADIUS-

CHANNELS

SEE NOTE 16.

MANHOLE

SECTIONS

I.D. DEPTH

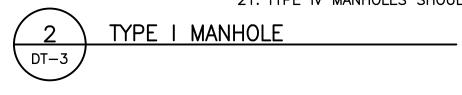
SURFACE

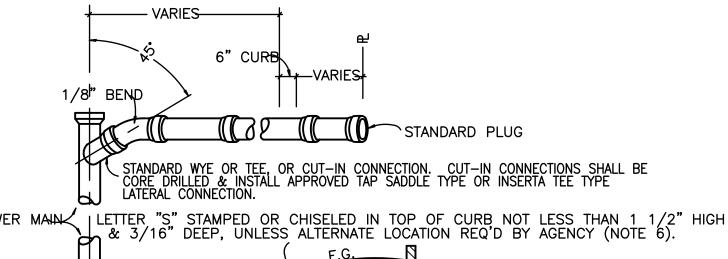
GRADE RINGS

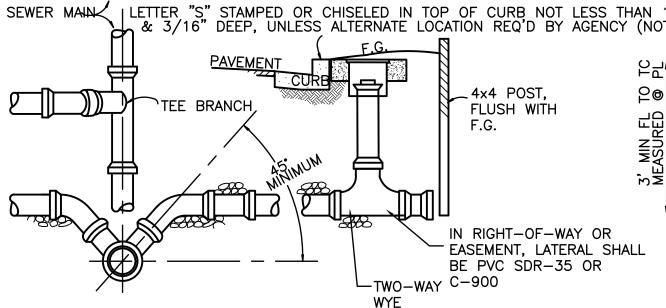
- 1. A SEAL OR WATER STOP IS REQUIRED ON ALL SANITARY SEWER INSTALLATIONS AND IN OTHER APPLICATIONS AS REQUIRED BY THE CITY TO PROVIDE A WATERTIGHT CONNECTION.
- 2. A RESILIENT FLEXIBLE CONNECTOR PER ASTM C 923-89 SHALL BE USED AT THE MANHOLE/PIPE CONNECTION TO SATISFY THE REQUIREMENTS OF NOTE 1. FOR PRE-CAST CONCRETE STRUCTURES, THE RESILIENT FLEXIBLE CONNECTOR SHALL BE AN "A-LOK" TYPE PIPE-TO-MANHOLE CONNECTOR OR APPROVED EQUAL. FOR CAST-IN-PLACE STRUCTURES, THE RESILIENT FLEXIBLE CONNECTOR SHALL BE A "KOR-N-SEAL I - TOGGLE KORBAND" TYPE PIPE-TO-MANHOLE CONNECTOR OR APPROVED EQUAL.
- 3. THE INTERIOR MANHOLE CONNECTION SHALL HAVE A SMOOTH TRANSITION BETWEEN PIPE I.D. AND MANHOLE BASE FLOWLINE. NO GROUT OR CONCRETE SHALL BE PLACED AROUND THE RESILIENT FLEXIBLE CONNECTOR.

GENERAL MANHOLE NOTES

- ALL PRECAST MANHOLE COMPONENTS SHALL CONFORM TO ASTM C-478
- 2. PIPES SHALL NOT PROTRUDE MORE THAN 3" INSIDE MANHOLE SECTION AS MEASURED AT THE OUTSIDE EDGES OF THE PIPE, VERTICALLY ALIGNED WITH THE SPRINGLINE. PIPE CONNECTION TO MANHOLE SHALL BE WATERTIGHT PER STANDARD DETAILS S-211A, S-211B AND S-211C.
- 3. MANHOLE BASE SHALL BE PORTLAND CEMENT CONCRETE (P.C.C.) AND SHALL HAVE THE FOLLOWING CHARACTERISTICS: 3000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM 6 SACKS OF CEMENT PER CUBIC YARD WITH SLUMP AT 1 TO 4 INCHES. ALL MATERIAL SHALL CONFORM TO STANDARD SPECIFICATIONS OF PUBLIC WORKS CONSTRUCTION (SSPWC), AS ADOPTED BY CITY COUNCIL. PRECAST CONCRETE BASE MAY BE USED IN LIEU OF CAST-IN-PLACE BASE.
- 4. TYPE I MANHOLE TO BE UTILIZED FOR PIPE DIAMETERS OF 12" OR SMALLER AND DEPTHS NOT EXCEEDING 18 FEET.
- 5. TYPE V MANHOLE TO BE UTILIZED FOR PIPE DIAMETERS OF 15" THROUGH 27" OR DEPTHS EXCEEDING 18 FEET.
- 6. MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE STANDARD SPECIFICATIONS.
- PRECAST MANHOLE SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE GASKET MATERIAL SUCH AS "RAM-NEK" OR EQUAL AS PER MANUFACTURER'S RECOMMENDATIONS.
- EXCAVATION AND BACKFILL SHALL BE AS SPECIFIED FOR "TRENCH EXCAVATION AND BACKFILL" IN SECTION 305 OF THE STANDARD SPECIFICATIONS.
- EXCAVATION SHALL BE AS NEARLY VERTICAL AS POSSIBLE (SHEET AND SHORE IF SOIL CONDITIONS REQUIRE) IN EXISTING STREET SECTIONS, ALLEY SECTIONS, AND CONFINED AREAS, SUCH AS LIMITED EASEMENTS OR ADJACENT STRUCTURES.
- 10. MANHOLE PRECAST SECTION LENGTH SHALL BE ARRANGED TO FIT THE REQUIRED DEPTH.
- 11. NO LATERALS OR PIPES LESS THAN 8" IN DIAMETER SHALL BE CONNECTED TO THE MANHOLE.
- 12. PRECAST CONCRETE BASE MAY BE USED IN LIEU OF CAST-IN-PLACE BASE.
- 13. MATCH PIPE INVERTS TO MANHOLE INVERTS WHERE PIPES CONNECT TO MANHOLE BASE
- 14. ALL MANHOLES SHALL BE WATERTIGHT.
- 15. SEE DETAIL FOR INSIDE DROP MANHOLE FOR SANITARY SEWERS WITH MORE THAN 2 FEET VERTICAL DROP AT THE MANHOLE. THE USE OF "OUTSIDE DROP" MANHOLES IS NOT PERMITTED
- 16. THE USE OF FLAT TOP MANHOLE CONES REQUIRES PRIOR APPROVAL FROM THE CITY ENGINEER.
- 17. PRIOR TO BACKFILLING, ALL MANHOLES SHALL BE VACUUM TESTED PER ASTM C-1244.
- 18. NO STEPS, LADDERS, OR OTHER CLIMBING DEVICES SHALL BE INSTALLED IN THE MANHOLE.
- 19. REINFORCING STEEL SHALL BE AS SHOWN, WIRED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED AT LEAST 1½" CLEAR, UNLESS OTHERWISE NOTED.
- 20. WHEN PIPE CONNECTIONS TO EXISTING MANHOLES ARE ALLOWED, THEY SHALL BE MADE BY CORE DRILLING THE MANHOLE AND CONNECTING THE PIPE PENETRATION PER DETAIL S-211A & S-211B.
- 21. TYPE IV MANHOLES SHOULD ONLY BE USED AS APPROVED BY CITY ENGINEER







- 1. SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF 2%, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- 2. LATERAL SHALL BE CUT BACK TO SOUND MATERIAL FOR COUPLING.
- 3. ALL CONNECTIONS TO THE CITY SEWER MAINS MUST BE CORE DRILLED.
- 4. ENCASE LATERAL CONNECTION IN CEMENT, STABILIZED SAND OR 2000 PSI CONCRETE FOLLOWING INSTALLATION. CONNECTION MUST BE INSPECTED BY CITY PRIOR TO BACKFILL.
- 5. NO LATERAL CONNECTIONS SHALL BE MADE TO SANITARY SEWER "INTERCEPTOR" LINES WITHOUT THE APPROVAL OF THE CITY ENGINEER.
- 6. ALL APPLICABLE SANITARY SEWER PIPE INSTALLATION WORK SHALL BE IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE.

- SEWER LATERALS SHALL HAVE A MINIMUM PIPE DIAMETER OF 4-INCHES.
- ALL PLASTIC PIPE USED FOR SEWER SERVICE LATERAL CONSTRUCTION SHALL BE SOLID WALL AND SHALL MEET THE REQUIREMENTS OF D-2412, HAVE A MINIMUM STIFFNESS OF 46 PSI AS DEFINED BY THE REQUIREMENTS OF ASTM D-3034.
- SERVICE LATERALS SHALL HAVE A MINIMUM SLOPE OF 1/4-INCH PER FOOT UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER
- SEWER LATERALS SHALL HAVE A MINIMUM COVER OF 36-INCHES IN THE PUBLIC RIGHT-OF-WAY AND IN EASEMENTS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER. THE DEFINITION OF "COVER" IS THE DISTANCE FROM THE TOP OF PIPE TO FINISHED GRADE.
- USE OF SEWER SERVICE TAP SADDLE CONNECTIONS SHALL NOT BE ALLOWED FOR NEW SEWER MAIN CONSTRUCTION. WHEN A TAP SADDLE CONNECTION IS TO BE USED ON AN EXISTING SEWER MAIN, IT SHALL BE A WYE SADDLE AND BE INSTALLED PER DETAIL S-212C.
- 6. SEWER LATERALS SHALL HAVE A CLEANOUT INSTALLED BETWEEN SIDEWALK AND RIGHT-OF-WAY. A G5 BOX CLEARLY MARKED "SEWER" SHALL BE INSTALLED OVER THE TOP OF THE CLEANOUT RISER CAP PIPE.
- 7. SEWER LATERALS SHALL NOT BE CONNECTED DIRECTLY TO OR WITHIN 5-FEET OF A MANHOLE STRUCTURE.
- EXISTING SEWER LATERALS SHALL BE CUT BACK TO SOUND MATERIAL FOR COUPLING. PLACE 6-INCH THICK CONCRETE PAD UNDER CONNECTION.
- SEWER LATERAL CONNECTION SHALL BE STABILIZED WITH APPROVED MATERIAL FOLLOWING INSTALLATION. CONNECTION TO CITY SEWER MAIN MUST BE INSPECTED BY THE CITY PRIOR TO BACKFILL
- 10. NO LATERAL CONNECTIONS SHALL BE MADE DIRECTLY TO A SANITARY SEWER "INTERCEPTOR" UNLESS APPROVED BY THE CITY ENGINEER.
- CONNECTION POINT IS BETWEEN TWO MANHOLE STRUCTURES.
- 13. SANITARY SEWER LATERAL IDENTIFICATION AND LOCATING REQUIREMENTS SHALL BE PER SPARKS MUNICIPAL CODE 17.16.130 (SMC 17.16.130).
- 14. DISCONTINUANCE OF USE OF AN EXISTING SEWER LATERAL REQUIRES ABANDONMENT OF THE LATERAL. CUT, REMOVE 1—FOOT OF EXISTING LATERAL AND CAP BOTH ENDS OF THE EXISTING SEWER LATERAL TO BE ABANDONED WITHIN 6-INCHES OF THE SEWER MAIN. ABANDONMENT MUST BE INSPECTED BY CITY PRIOR TO BACKFILL.
- REPAIR OF THE SEWER LATERAL WITHIN THE PUBLIC RIGHT-OF-WAY PER SPARKS MUNICIPAL CODE.

Permit-Seal CKINT J. ALVERSON 8 Exp: 12.31.22 CIVIL Project Number: 1801014<u>24</u>

File Name: 01424 SA-C DT.dwa CJA 21.04.01 JAM

Drawing No. DT-3 Sheet

RESILIENT FLEXIBLE CONNECTOR

SANITARY SEWER LATERAL

ORIGINAL SHEET - ANSI D

11. SEWER LATERALS SHALL NOT BE CONNECTED TO A SEWER MAIN UNLESS THE

12. EACH INDIVIDUAL PARCEL SHALL HAVE A MINIMUM OF ONE SEWER LATERAL.

TWO OR MORE PARCELS SHALL NOT SHARE ONE SEWER LATERAL.

15. PROPERTY OWNER SHALL BE RESPONSIBLE FOR OPERATION, MAINTENANCE AND

Revision 12 of 12