



Purchasing Division

## ADDENDUM NO. 1

**DATE:** July 13, 2018  
**FROM:** City of Grand Junction Purchasing Division  
**TO:** All Offerors  
**RE:** Las Colonias Business Park Phase 2 IFB-4547-18-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. **Pre-Bid Agenda and Attendance list attached.**
2. **Water Valve Box** - Valve boxes shall weigh a minimum of 90 lbs.
3. **HP Storm Pipe** – Approved equal to Reinforced Concrete Pipe.
4. **Plan Set** – Revised Plan Set to include Composite Utility Plan Set.
5. **Bid Schedule** – Revised Bid Schedule.
6. **Clarification of concrete class for PCCP (D or P)** – Class P may be substituted on PCCP applications.
7. **Parking Lot at Plaza** – Spill gutter to be substituted for vertical curb. Quantities have been revised in Bid Schedule, Addendum No. 1.
8. **Existing Contour Maps** – Note contour maps are prior to completion of phase 1/1A. The City does not have survey data on embankment placed during this phase of work.
9. The “Manufacturer’s Certificate of Authorizing for Contractor” shall be removed from Section 3.6 Contractor Bid Documents, as it does not pertain to this project.

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,

A handwritten signature in black ink, appearing to read "Duane Hoff Jr.", written over a set of horizontal lines.

Duane Hoff Jr., Senior Buyer  
City of Grand Junction, Colorado

## Bid Schedule: Las Colonias Business Park Phase 2 Addendum No. 1

**Contractor:** \_\_\_\_\_

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	104.4	Cap top half of sewer in concrete per City Standard Detail GU-04	4.	EA	\$ _____	\$ _____
2	108.2	6" Water Pipe (C-900 PVC)	500.	LF	\$ _____	\$ _____
3	108.2	6" Storm Drain (C-900 PVC)	450.	LF	\$ _____	\$ _____
4	108.2	8" Water Pipe (C-900 PVC)	2,900.	LF	\$ _____	\$ _____
5	108.2	12" Water Pipe (C-900 PVC)	600.	LF	\$ _____	\$ _____
6	108.2	4" Sewer Service Pipe (SDR 35)	220.	LF	\$ _____	\$ _____
7	108.2	6" Sewer Service Pipe (SDR 35)	600.	LF	\$ _____	\$ _____
8	108.2	8" Gravity Sewer Pipe (SDR 35)	1,300.	LF	\$ _____	\$ _____
9	108.2	12" Storm Drain Pipe	650.	LF	\$ _____	\$ _____
10	108.2	12" Storm Drain Pipe (C-900 PVC)	63.	LF	\$ _____	\$ _____
11	108.2	18" Storm Drain Pipe (C-900 PVC)	21.	LF	\$ _____	\$ _____
12	108.2	18" Storm Drain Pipe	1,300.	LF	\$ _____	\$ _____
13	108.2	21" Storm Drain Pipe	415.	LF	\$ _____	\$ _____
14	108.2	24" Storm Drain Pipe	300.	LF	\$ _____	\$ _____
15	108.2	36" Storm Drain Pipe	675.	LF	\$ _____	\$ _____
16	108.3	1' Water Pipe (Schedule 40 PVC)	600.	LF	\$ _____	\$ _____
17	108.3	1" Water Yard Hydrant	10.	EA	\$ _____	\$ _____
18	108.2	Import Trench Backfill	550.	CY	\$ _____	\$ _____
19	108.3	6" Gate Valve	18.	EA	\$ _____	\$ _____
20	108.3	8" Gate Valve	3.	EA	\$ _____	\$ _____
21	108.3	12" Gate Valve	2.	EA	\$ _____	\$ _____
22	108.3	8" x 6" Tee	12.	EA	\$ _____	\$ _____
23	108.3	12" x 6" Tee	4.	EA	\$ _____	\$ _____
24	108.3	12" x 8" Tee	1.	EA	\$ _____	\$ _____
25	108.3	8", 90° Elbow	1.	EA	\$ _____	\$ _____
26	108.3	8", 22.5° Elbow	4.	EA	\$ _____	\$ _____
27	108.3	8", 45° Elbow	6.	EA	\$ _____	\$ _____
28	108.3	12", 22.5° Elbow	3.	EA	\$ _____	\$ _____
29	108.3	12", 45° Elbow	2.	EA	\$ _____	\$ _____
30	108.3	8" x 6" Reducer	2.	EA	\$ _____	\$ _____
31	108.3	8" End Cap/Plug	8.	EA	\$ _____	\$ _____
32	108.3	8" x 8" Tee	2.	EA	\$ _____	\$ _____
33	108.3	Fire Hydrant	10.	EA	\$ _____	\$ _____
34	108.3	12" x 8" Reducer	1.	EA	\$ _____	\$ _____
35	108.3	4" Sewer Service Tap	8.	EA	\$ _____	\$ _____
36	108.3	Sanitary Sewer Cleanout (2-way) to include appurtenances per City Standard Detail SS - 07.	8.	EA	\$ _____	\$ _____
37	108.3	1" Tapping Saddle	2.	EA	\$ _____	\$ _____
38	108.3	1" Corporation Stop	2.	EA	\$ _____	\$ _____
39	108.3	1" Tee	10.	EA	\$ _____	\$ _____
40	108.3	1" Backflow Prevention Device	2.	EA	\$ _____	\$ _____
41	108.4	2" Water Service Line (HDPE)	300.	LF	\$ _____	\$ _____
42	108.4	2" Water Service Assembly	9.	EA	\$ _____	\$ _____

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**Contractor:** \_\_\_\_\_

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
43	108.5	Sanitary Sewer Basic Manhole (48" I.D.)	10.	EA	\$ _____	\$ _____
44	108.5	Manhole Barrel Section (D>5')(48" I.D.)	30.	VLF	\$ _____	\$ _____
45	108.5	Storm Sewer Basic Manhole (48" I.D.)	4.	EA	\$ _____	\$ _____
46	108.5	Connect to Existing Manhole (8" Pipe)	1.	EA	\$ _____	\$ _____
47	108.5	Storm Sewer Flared End Section (36" I.D.)	3.	EA	\$ _____	\$ _____
48	108.5	Pour in Place Storm Drain Box. Box L2 on the plan set.	1.	EA	\$ _____	\$ _____
49	108.5	ADS Inlets or engineer approved equal	25.	EA	\$ _____	\$ _____
50	108.5	Storm Sewer Flared End Section (24" I.D.) (Directly in front of outlets structure pond 3)	1.	EA	\$ _____	\$ _____
51	108.6	Double Storm Drain Inlet (Vertical Curb)	3.	EA	\$ _____	\$ _____
52	108.6	Triple Large Storm Drain Area Inlet	1.	EA	\$ _____	\$ _____
53	108.6	Storm Sewer Basic Manhole (72" ID)	4.	EA	\$ _____	\$ _____
54	108.6	Special Small Storm Drain Area Inlet (see plan details)	10.	EA	\$ _____	\$ _____
55	108.6	Outlet Structure - See "Water Quality Outlet Structure Pond 3" to include all appurtenances (complete in place).	1.	EA	\$ _____	\$ _____
56	108.6	Single Storm Drain Inlet (Vertical Curb)	10.	EA	\$ _____	\$ _____
57	108.6	Large Area Inlet	7.	EA	\$ _____	\$ _____
58	108.7	Granular Stabilization Material (Type B)	1,500.	TON	\$ _____	\$ _____
59	203	Excavation and Embankment - See SP - 4.	47,800.	CY	\$ _____	\$ _____
60	207	Topsoil (6" Thick) (all areas subject to plantings)	60,500.	SY	\$ _____	\$ _____
61	207	Import Fill Material - Clean fill 12" Thick at all areas with ground cover not paved	60,500.	SY	\$ _____	\$ _____
62	208	Erosion Control (Complete in Place)	Lump	SUM	---	\$ _____
63	208	Stabilized Construction Entrance	2.	EA	\$ _____	\$ _____
64	209	Dust Abatement	270.	DAYS	\$ _____	\$ _____
65	304	Aggregate - River Cobble 1" -3" (6" Thick) to include approved fill below. (Butterfly Lake)	7,800.	SY	\$ _____	\$ _____
66	304	Subgrade Stabilization - Aggregate Base Course (Class 3) (12" Thick)	4,000.	SY	\$ _____	\$ _____
67	304	Aggregate Base Course (Class 6) (13" Thick)	12,250.	SY	\$ _____	\$ _____
68	306	Reconditioning (12" Deep)	16,000.	SY	\$ _____	\$ _____
69	304	Pond Aggregate (Generated on site) to be placed over engineer approved backfill. See Sp - 4.	4,200.	SY	\$ _____	\$ _____
70	401	Hot Mix Asphalt (5" thick) (Grading SX 75, Binder Grade 64-22)	3,400.	TON	\$ _____	\$ _____
71	420	Geosynthetics - Mirafi RS580i or approved equal	4,000.	SY	\$ _____	\$ _____
72	420	Geotextile Fabric (Non-Woven) Underlayment at Pond Liner.	108,000.	SF	\$ _____	\$ _____

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**Contractor:** \_\_\_\_\_

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
73	504	Concrete Wall (Class D) per M and S Standard M-601-20 (Wall Design Height 5'). Work shall include approximately 720 lbs. Reinforcing Steel (Epoxy Coated), Structural Concrete Coating (Exterior of wall), 38 cy Structural Backfill (Class 1) and any necessary appurtenances to complete work. Includes water spill adjustment flat bar. Refer to Plan Sheets for detail. (waterfall wall)	20.	CY	\$ _____	\$ _____
74	504	Concrete Wall (Class D) per M and S Standard M-601-20 (Wall Design Height 3'). Work shall include approximately 12,650 lbs. Reinforcing Steel (Epoxy Coated), Structural Concrete Coating (Exterior of wall), 540 cy Structural Backfill (Class 1) and any necessary appurtenances to complete work. Refer to Plan Sheets for detail. (pond perimeter walls, upper/lower waterfall trough walls, and check dam wall)	286.	CY	\$ _____	\$ _____
75	504	Concrete Wall (Class D) per M and S Standard M-601-20 (Wall Design Height 3'). Work shall include approximately 15,100 lbs. Reinforcing Steel (Epoxy Coated), Structural Concrete Coating (Exterior of wall), 640 cy Structural Backfill (Class 1) and any necessary appurtenances to complete work. Refer to Plan Sheets for detail. (lake perimeter wall)	350.	CY	\$ _____	\$ _____
76	506	Riprap (d50=12" to include geogrid)	120.	SY	\$ _____	\$ _____
77	607	Steel Hand Rail (adjacent to HVOHP pole remaining in place)	40.	LF	\$ _____	\$ _____
78	607	6' Black Vinyl Coated Chain Link Fencing to include gates and appurtenances.	1,845.	LF	\$ _____	\$ _____
79	608	Concrete Pavement (Roundabout and in and around Trash enclosure) (10" Thick) to include 6" of Class 6 Aggregate Base	1,800.	SY	\$ _____	\$ _____
80	608	Concrete Curb and Spill Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base	1,345.	LF	\$ _____	\$ _____
81	608	Concrete Median Edger (1.5' wide) to include 4" of Class 6 Aggregate Base Course)	410.	LF	\$ _____	\$ _____
82	608	Concrete Truck Apron (Roundabout) (10" Thick) to include 6" of Class 6 Aggregate Base Course.	300.	SY	\$ _____	\$ _____
83	608	Concrete Slope Pave (6" Thick) to include 6" of Class 6 Aggregate Base Course.	25.	SY	\$ _____	\$ _____
84	608	Concrete Terrace Edger to include 6" of Class 6 Aggregate Base Course. See Plan Details at both ends of Butterfly Bridge.	710.	LF	\$ _____	\$ _____
85	608	Concrete Art Pedestals (See Detail)	8.	EA	\$ _____	\$ _____
86	608	Concrete Curb (6" Wide, 14" High) to include 6" of Class 6 Aggregate Base Course.	1,925.	LF	\$ _____	\$ _____

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Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
87	608	Concrete Curb and Gutter (2' Wide) to include 6" of Class 6 Aggregate Base	3,600.	LF	\$ _____	\$ _____
88	608	Concrete Drive Over Curb and Gutter (2.5' Wide) to include 6" of Class 6 Aggregate	705.	LF	\$ _____	\$ _____
89	608	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course.	14,230.	SY	\$ _____	\$ _____
90	608	Concrete Pavement (Parking) (8" Thick) to include 6" of Class 6 Aggregate Base	2,250.	SY	\$ _____	\$ _____
91	608	Concrete Drainage Pan (3' Wide) to include 6" of Class 6 Aggregate Base Course.	270.	LF	\$ _____	\$ _____
92	608	Concrete Drainage Pan (6' Wide) to include 6" of Class 6 Aggregate Base Course.	600.	LF	\$ _____	\$ _____
93	608	Concrete Corner Fillet to include 6" of Class 6 Aggregate Base Course.	42.	SY	\$ _____	\$ _____
94	608	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.	180.	SY	\$ _____	\$ _____
95	608	Concrete Sidewalk (Pond Edger) (Spanish Gold) (6" Thick) to include 6" of Class 6 Aggregate Base Course.	660.	SY	\$ _____	\$ _____
96	608	Detectable Warning (Cast Iron, Wet Set) (2'x2)	50.	EA	\$ _____	\$ _____
97	613	2" Schedule 80 PVC (Century Link)	2,200.	LF	\$ _____	\$ _____
98	613	4" Schedule 80 PVC (Century Link)	2,200.	LF	\$ _____	\$ _____
99	613	6" Schedule 80 PVC (City Broadband)	2,200.	LF	\$ _____	\$ _____
100	613	Joint Trench	3,000.	LF	\$ _____	\$ _____
101	613	Large Splice Box (Quasite) (3' - 2 5/8" x 2'-2") Broadband Logo.	12.	EA	\$ _____	\$ _____
102	620	Sanitary Facility	1.	EA	\$ _____	\$ _____
103	625	Construction Surveying	Lump	SUM	---	\$ _____
104	626	Mobilization	Lump	SUM	---	\$ _____
105	627	Preformed Thermoplastic Pavement Marking	Lump	SUM	---	\$ _____
106	627	Preformed Thermoplastic Pavement Marking (X-walk) (2' x 10' TYP.)	800.	EA	\$ _____	\$ _____
107	627	Preformed Plastic Pavement Marking (8" White Solid)	300.	LF	\$ _____	\$ _____
108	627	Preformed Thermoplastic Pavement Marking (4" White Solid)	20,000.	LF	\$ _____	\$ _____
109	627	Preformed Plastic Pavement Marking (24" White Solid)	100.	LF	\$ _____	\$ _____
110	630	Traffic Control (Complete In Place)	Lump	SUM	---	\$ _____
111	630	Traffic Control Plan	Lump	SUM	---	\$ _____
112	712	Geomembrane (40 Mil) - See SP - 9.	108,000.	SQ. FT.	\$ _____	\$ _____
113	712	Batten Bar (complete in place) (irrigation ponds and butterfly lake) See Sp - 10 for details.	3,000.	LF	\$ _____	\$ _____
114	712	Plaza Area Surface Treatment (pour in place EPDM) (Engineer Approved)	1,250.	SY	\$ _____	\$ _____

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Item No.	CDOT, City Ref. Description	Quantity	Units	Unit Price	Total Price
115	<b><u>LANDSCAPE</u></b>				
116	Lawn, Hydroseeded, Fine Grade	345,620.	SF	\$ _____	\$ _____
117	Native Grass, Hydroseeded, Fine Grade	27,036.	SF	\$ _____	\$ _____
118	Shrub Bed - Wood mulch, No fabric	91,259.	SF	\$ _____	\$ _____
119	Shrub Bed - Decomposed Granite, No fabric	69,651.	SF	\$ _____	\$ _____
120	Pea Gravel	772.	SF	\$ _____	\$ _____
121	Concrete Edger	4,325.	LF	\$ _____	\$ _____
122	2" Canopy Trees	69.	EA	\$ _____	\$ _____
123	1-1/2" Ornamental Trees	17.	EA	\$ _____	\$ _____
124	6 ft Evergreen Trees	21.	EA	\$ _____	\$ _____
125	5 Gallon Deciduous Shrubs	814.	EA	\$ _____	\$ _____
126	1 Gallon Deciduous Shrubs	112.	EA	\$ _____	\$ _____
127	5 Gallon Evergreen Shrubs	248.	EA	\$ _____	\$ _____
128	1 Gallon Perennials	545.	EA	\$ _____	\$ _____
129	Boulders, 5'X3'	33.	EA	\$ _____	\$ _____
130	Boulders, 3'X2'	17.	EA	\$ _____	\$ _____
131	<b><u>IRRIGATION</u></b>				
132	4" Conduit Sleeves, includes trenching, backfill & compaction	920.	LF	\$ _____	\$ _____
133	6" Conduit Sleeves, includes trenching, backfill & compaction	30.	LF	\$ _____	\$ _____
134	2 Wire Irrigation Control Wire	4,560.	LF	\$ _____	\$ _____
135	Rainbird FD-101TURF decoder	71.	EA	\$ _____	\$ _____
136	LSP-1 Surge Protector	17.	EA	\$ _____	\$ _____
137	tap into existing irrigation system	1.	LS	\$ _____	\$ _____
138	6" C900 DR 18 PVC Mainline, including Trenching, Filling, and thrust blocking	4,560.	LF	\$ _____	\$ _____
139	4" Isolation Valve (at tap)	2.	EA	\$ _____	\$ _____
140	Flow Sensor	2.	EA	\$ _____	\$ _____
141	4" Master Valve	2.	EA	\$ _____	\$ _____
142	4" Pressure Reducing Valve	2.	EA	\$ _____	\$ _____
143	6" Isolation Valve	7.	EA	\$ _____	\$ _____
144	Drain Valve, 2" Mueller	1.	EA	\$ _____	\$ _____
145	1-1/2" Automatic Control Valve Assembly	28.	EA	\$ _____	\$ _____
146	2" Automatic Control Valve Assembly	43.	EA	\$ _____	\$ _____
147	Future Valve Location assembly	12.	EA	\$ _____	\$ _____
148	1401 Bubbler Heads, on riser, swing pipe	3,170.	EA	\$ _____	\$ _____
149	1804 Pop-up heads, spray nozzle	248.	LF	\$ _____	\$ _____
150	1804 Pop-up heads, R-VAN nozzle	100.	EA	\$ _____	\$ _____
151	5004 Gear Drive head, swing joint assembly	272.	EA	\$ _____	\$ _____
152	6504 Gear Drive head, swing joint assembly	171.	EA	\$ _____	\$ _____
153	Quick Coupler Valve	18.	EA	\$ _____	\$ _____
154	1" Poly Lateral for bubbler	13,930.	EA	\$ _____	\$ _____
155	1" Class 160 PVC Lateral Piping Including Trenching and Filling	11,360.	LF	\$ _____	\$ _____

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Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
156		1-1/2" Class 160 PVC Lateral Piping Including Trenching and Filling	8,310.	LF	\$ _____	\$ _____
157		2" Class 160 PVC Lateral Piping Including Trenching and Filling	3,640.	LF	\$ _____	\$ _____
158		2-1/2" Class 160 PVC Lateral Piping Including Trenching and Filling	810.	LF	\$ _____	\$ _____
159		Rainbird LDI (Large Decoder Interface)	1.	EA	\$ _____	\$ _____
160		Irrigation Controller Ground Plate and Grounding Rod Assembly	1.	EA	\$ _____	\$ _____
161		2 HP Otterbine Floating Fountain with anchor block	1.	EA	\$ _____	\$ _____
162		10 HP Recirculation Munro Pump and Slide Rail Assembly	1.	EA	\$ _____	\$ _____
163		60" manhole sump w/ 36" hatch	1.	EA	\$ _____	\$ _____
164		<b><u>Boat Ramp</u></b>				
165	<b>A</b>	<b>Preconstruction Services</b>	Lump	SUM	---	\$ _____
166	1	Mobilization, General Conditions & Best Management Practices	Lump	SUM	---	\$ _____
167	<b>B</b>	<b>Erosion Control and Care of Water</b>				
168	4	General Staging Area BMPs		SUM		
169	5	Care of Water (COW) Practices	Lump	SUM	---	\$ _____
170	<b>C</b>	<b>BOAT RAMP CONSTRUCTION AND SITE IMPROVEMENTS</b>				
171	6	Clear and grub site	40,000.	SF	\$ _____	\$ _____
172	7	Unclassified Bank Excavation	2,675.	CY	\$ _____	\$ _____
173	8	Placement and Rough Grading of Excavated Material On Site	400.	CY	\$ _____	\$ _____
174	9	Stockpile Excavated Alluvium Nearby	2,635.	CY	\$ _____	\$ _____
175	10	Scarify and Recompact Subgrade (Depicted Parking Area & Under Concrete)	27,000.	SF	\$ _____	\$ _____
176	11	Furnish and Rough Grade Suitable Subgrade Base Course per Geotechnical Specifications	447.	TONS	\$ _____	\$ _____
177	12	Furnish and Compact 8" min. of CDOT Class-6 Road Base (Depicted Parking Area and Turn Around)	990.	TONS	\$ _____	\$ _____
178	13	Furnish and Install 6" Concrete Sidewalk, Including Curb and Gutter	37.	CY	\$ _____	\$ _____
179	14	Furnish and Install Cedar Log Parking Delineation	660.	LF	\$ _____	\$ _____
180	15	Furnish and Install #3 Rebar for Cedar Log Installation	132.	LF	\$ _____	\$ _____
181	16	98% Compacted Subgrade on Undisturbed Alluvium (Boat Ramp)	4,000.	SF	\$ _____	\$ _____
182	17	Furnish and Compact 6" CDOT Class-6 Road Base (Boat Ramp)	124.	TONS	\$ _____	\$ _____
183	18	Reinforced Concrete Cast in Place and Texture Boat Ramp (8" Thick Slab)	79.	CY	\$ _____	\$ _____
184	19	Furnish and Install 3" Minus Ramp Shoulder (8" depth)	11.	CY	\$ _____	\$ _____

## Bid Schedule: Las Colonias Business Park Phase 2 Addendum No. 1

**Contractor:** \_\_\_\_\_

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
185	20	Furnish and Install 12" Minus Ramp Shoulder (18" depth)	25.	CY	\$ _____	\$ _____
186	21	Furnish and Install Boulder for Ramp Toe and Terraced Landing	49.	TONS	\$ _____	\$ _____
187	22	Place Boulder for Ramp Toe and Terraced Landing	200.	TONS	\$ _____	\$ _____
188	23	Furnish and Install Non-woven Filter Fabric	715.	SY	\$ _____	\$ _____
189	24	Furnish and Install 1-2mm Sand (8" depth)	63.	CY	\$ _____	\$ _____
190	25	Furnish and Install 5/8" Rounded Gravel (8" depth)	32.	CY	\$ _____	\$ _____
191	26	Furnish and Install 1" Rounded Gravel (8" depth)	28.	CY	\$ _____	\$ _____
192	27	Furnish and Install Boat Staging Tie-offs	4.	EA	\$ _____	\$ _____
193	28	Topsoil, Seeding, and Planting	Lump	SUM	---	\$ _____
194	29	Furnish and Install Erosion Control Blankets	328.	SY	\$ _____	\$ _____
195	30	Irrigation	Lump	SUM	---	\$ _____
196	<b><u>Composite Utility Schedules</u></b>					
197		2" Schedule 80 PVC	14,810.	LF	\$ _____	\$ _____
198		4" Schedule 80 PVC	700.	LF	\$ _____	\$ _____
199		Type One Pull Box	144.	EA	\$ _____	\$ _____
200		Wiring	Lump	SUM	---	\$ _____
201		Light Standard and Luminaire (Pedestrian)	90.	EA	\$ _____	\$ _____
202		Light Standard and Luminaire (Street)	12.	EA	\$ _____	\$ _____
203		Light Standard Foundation (Pedestrian)	90.	EA	\$ _____	\$ _____
204		Light Standard Foundation (Street)	12.	EA	\$ _____	\$ _____
205		Light Standard and Luminaire (Waterfall)	3.	EA	\$ _____	\$ _____
206		Nema 3R Enclosure (Waterfall Controls)	1.	EA	\$ _____	\$ _____
207		Nema Disconnect Panels	3.	EA	\$ _____	\$ _____
208		Lighting Control Center PWR Pedestal (Special)	3.	EA	\$ _____	\$ _____
209		RV/Food Truck Pedestals	10.	EA	\$ _____	\$ _____
MCR		Minor Contract Revisions	---	---	---	\$ 300,000.00

**Bid Amount:** \$ \_\_\_\_\_

**Bid Amount:** \_\_\_\_\_

dollars



Solicitation Name:	Las Colonias Business Park Phase 2
Solicitation #:	IFB-4547-18-DH
Date:	7/12/2018
Time:	10:00am

# SIGN-IN SHEET



	Company Name	Representative Name	Phone	Email
1	Huddleston-Berry Engineering	Jason Collard	970-255-8005	jcollard@huddlestonberry.com
2	MAYS CONCRETE	KEVIN COMBS	970/261-7799	KCOMBS@MAYSLCONCRETE.COM
3	City of GJT	DAN BLUMBERG	970 640-5033	dab@cityofgjt.org
4	NAVARRO	ERIC ROEMER	970 248 6158	ERIC.ROEMER@LM.DOE.GOV
5	ELAM	JIM DOODY	970-712-6634	jim.doody@gjrmx.com
6	ADVANCED DRAINAGE SYSTEMS	STEVE PETERSON	970-201-2335	STEVE.PETERSON@ADS-PIPE.COM
7	Navarro	Paul Wetherstein	970-248-6645	paul.wetherstein@lm.doe.gov
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<b>Solicitation Name:</b>	Las Colonias Business Park Phase 2
<b>Solicitation #:</b>	IFB-4547-18-DH
<b>Date:</b>	7/12/2018
<b>Time:</b>	10:00am

# SIGN-IN SHEET



	Company Name	Representative Name	Phone	Email
1	Dirtworks Construction	Branden Hughes	970-986-0142	dirtworksconstruction@gmail.com
2	Barnes Electric	Chad Currie	970-640-3678	chad@barneselectric.com
3	ELAM READY MIX	SEAN ELLIOTT	970 852 1013	SEAN.ELLIOTT@ELAMCONSTRUCTION.COM
4	Elam Construction	Gene Duran	970-242-5370	Gene.Duran@elamconstruction.com
5	Sorter Construction	Jesse Nelson	970-242-1436	jesse@sorterdigs.com
6	Core and Main	Joe Vesio	970-628-7104	Joe.Vesio@CoreandMain.com
7	CON-SY INC.	TANNER LESTER	970-712-7637	tannerlester@gmail.com
8	United Companies	Miles Downs	970-243-4900	miles.downs@unitedco.com
9	COPHE	Michael Cosby	970 248 7171	M.Chad.Cosby@state.co.us
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13				
14				

<b>Solicitation Name:</b>	Las Colonias Business Park Phase 2
<b>Solicitation #:</b>	IFB-4547-18-DH
<b>Date:</b>	7/12/2018
<b>Time:</b>	10:00am

# SIGN-IN SHEET



	Company Name	Representative Name	Phone	Email
1	SKYLINE CONTRACTORS	JOHN CHUTKA	970 434-9121	jchutka@skyconinc.com
2	WHITEWATER BLDG MAT	SCOTT BAUMGARTNER	243-4843	scott@whitewaterconstruction.com
3	Navarro	Sara Woods	970 248 6512	Sara.woods@lm.doe.gov
4	MA CONCRETE	JEFF WIMON	970-243-3221	MACONCRETE@WIMONCORP.COM
5	CDPHE	Joel Doebele	970-248-7177	joel.doebele@state.co.us
6	DEEP CREEK TRC	Bill Stouy	970-244-8768	deepcreek@deepcreekinc.com
7				
8				
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12				
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14				



## **Pre-Bid Meeting Agenda**

Date: July 12, 2018  
Project: Las Colonias Business Park Phase 2 Project  
Location: City Hall Auditorium  
Conducted by: Jerod Timothy, Project Manager

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1. **Introduction, attendance list.**
2. **Pre-Bid Meeting** – Attendance at this pre-bid meeting is mandatory for Contractor's submitting bids to become the general contractor.
3. **Project documents**
  - a. City of Grand Junction Standard Contract Documents, July, 2010 Edition
  - b. Project Bid Documents
  - c. Project Plan Set
  - d. CDOT Standard Specifications for Road and Bridge Construction, 2017 Edition.
  - e. CDOT M&S Standards, July 2012
4. **Bid submittal procedures**
  - a. Contractor's Bid Form
  - b. Price Bid Schedule
  - c. Attendance at bid opening is optional
  - d. Accepting Electronic Responses Only submitted through the Rocky Mountain E-Purchasing System (RMEPS).
5. **Insurance and bonding requirements**
  - a. 5% bid bond
  - b. Performance and payment bonds (100%)
  - c. Insurance in General Conditions
6. **Addenda**

Addendum No. 1 will be posted prior to the end of the Friday, July 13, 2018 and shall include the following:

- Pre-Bid meeting agenda and attendance list along with all notes and questions that are addressed during meeting.
  - Revised Plan Set to include revised Shoreline Amenities Plan Sheets and the Composite Utility Plan Set.
  - Revised Bid Schedule
  - HP Storm Pipe approved equal for RCP.
  - Storm Water Management Plan

It's the bidder's responsibility to make sure they have acknowledged all addendums issued for this project. The bidder can find addendums on the City of Grand Junction Engineering website.

7. **Project specific issues**

- a. **Hours of Operations:** The hours of operations for this Project are as follows:  
Monday – Friday, 7:00 a.m. to 5:00 p.m.
- b. **Project Start Date:** The project is scheduled begin on Tuesday, September 4, 2018
- c. **Time of Completion:** The scheduled time of completion for the project has been extended to 306 Calendar days (June 28, 2019) from the starting date specified on the Notice to Proceed.
- d. **Uranium Mill Tailings:** Radioactive mill tailings are not anticipated to be encountered on this Project but in accordance with deed restrictions and the history with the site the Contractor shall adhere to the Uranium Mill Tailings Management Plan supplied in Appendix F.
- e. **Dewatering:** Ground water is expected to be encountered during excavation for deep utilities and site ponds. When necessary to dewater the Contractor will be required to excavate a settlement pond(s) adjacent to the work to discharge to. The intent is to capture the water and allow to percolate. Within 30 days of construction of the pond(s) it shall be backfilled to comply with the exemption from the Authority of Solid Waste, Section 9, Temporary Discharge to Impoundment. Impoundment locations shall fall in green space areas outside of building footprints, roadways, etc.

- f. **Water Meter Vaults:** Per 108.4 Water Service Lines, 2" Water Service Assembly shall consist of the tap, tapping saddle, and the corporation stop. The City will supply the meter setter (yoke), pit and skirt. The cost shall include the installation of the 2" Water Service Assembly by the Contractor.
  
- g. **Work by Others:**
  - i) Xcel Energy and Charter will be providing and placing conduit and installing utilities in Joint Trench. The trench is to be excavated by the Contractor per plans and specifications. Along with said work the Contractor will also be responsible for providing and installing conduit in the trench for Century Link. Coordination with Xcel, Charter and Century Link will be required by the Contractor. The Contractor will be responsible for bedding, haunching and backfill of the trench. See Special Provisions 8 (SP – 8) for more information.
  - ii) The City Traffic Department will supply and install street/stop signs and double yellow striping.
  
- h. **Certified Flatwork Finisher and Technician:** Hand finishing concrete will be permitted only when performed under the direct supervision of a craftsman holding the following certificate: ACI Concrete Flatwork Finisher and Technician (ACICFFT) or other Flatwork Finisher certification program approved by the Project Engineer/Manager.

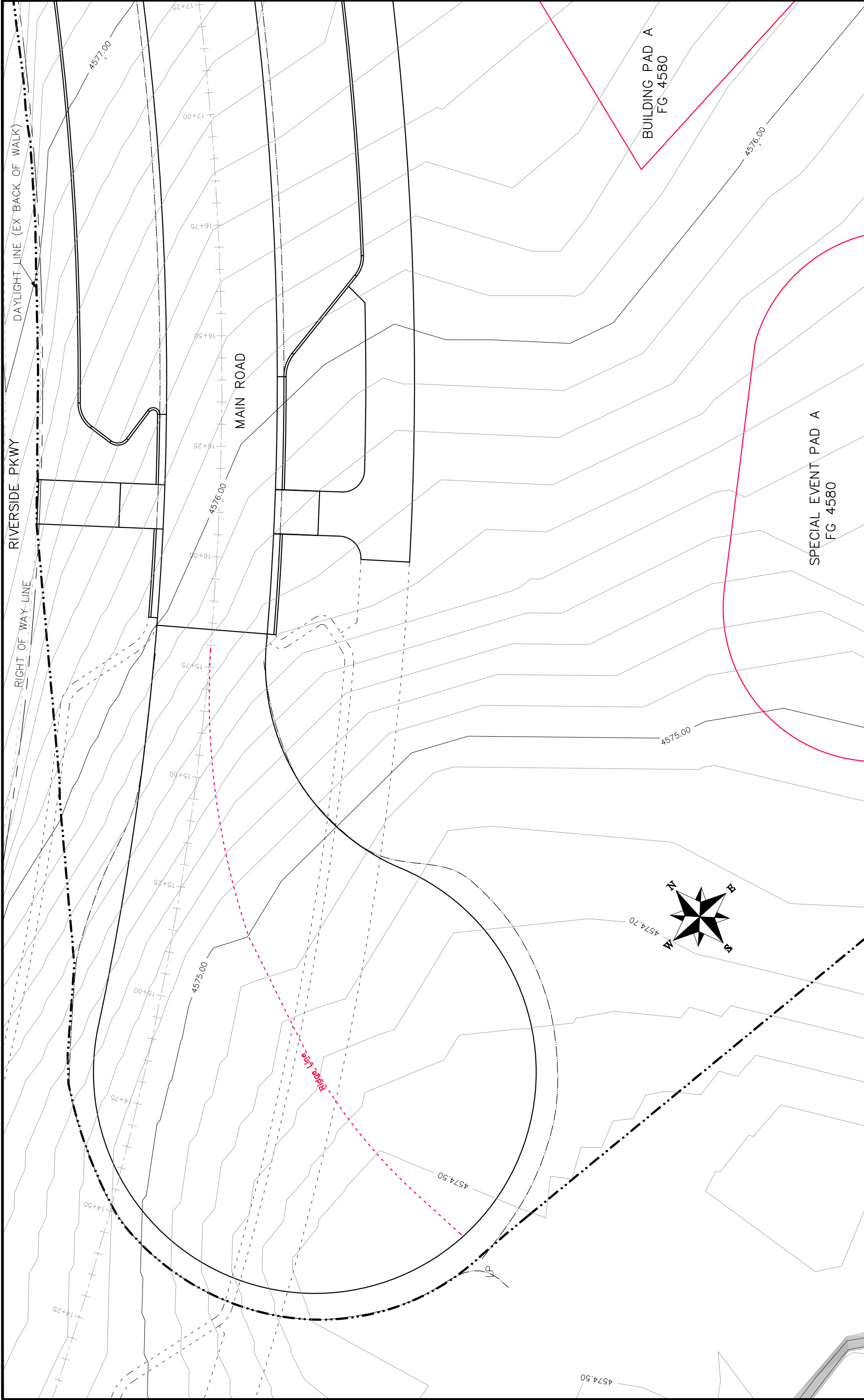
The Contractor shall submit a current certificate at or before the preconstruction meeting.

**8. Las Colonias Amphitheater:**

Access to the east entrance of the Amphitheater main parking lot shall remain open during all events. This will require close coordination between the Contractor and Parks and Recreation. Find a list of scheduled events at [www.gjcity.org/residents/parks-recreation/las-colonias-park-amphitheater/upcoming-events-list](http://www.gjcity.org/residents/parks-recreation/las-colonias-park-amphitheater/upcoming-events-list).

- 9. **Site Visit** - Suggested to all prospective bidders to visit the locations to see what obstacles they may encounter.





DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2017
REVISION Δ REV1_INT	REV1_DATE			DATE	2017
REVISION Δ REV2_INT	REV2_DATE			DATE	2017
REVISION Δ REV3_INT	REV3_DATE			DATE	2017
REVISION Δ REV4_INT	REV4_DATE			DATE	2017

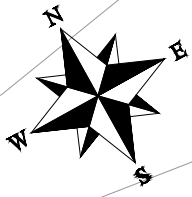
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ENGINEERING DIVISION

Las Colonias Business Park  
20th Scale Tenth Foot EX Contour Plan





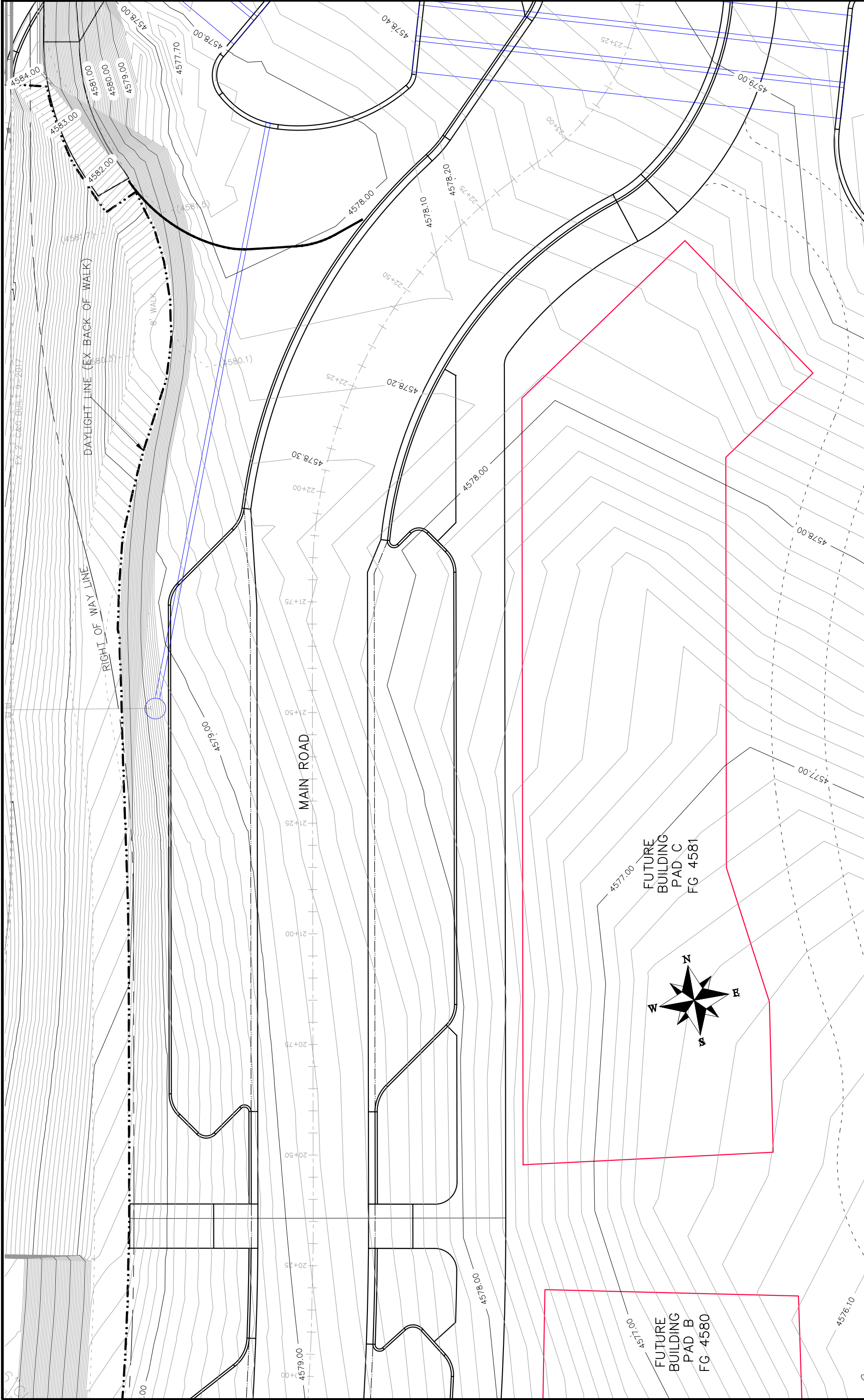
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SCALE	DATE	DATE
PLAN & PROFILE	2017	2017
HORIZONTAL	2017	2017
VERTICAL	2017	2017
NA	2017	2017
NA	2017	2017



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**Las Colonias Business Park  
20th Scale Tenth Foot EX Contour Plan**



REVISION	DATE	DESCRIPTION
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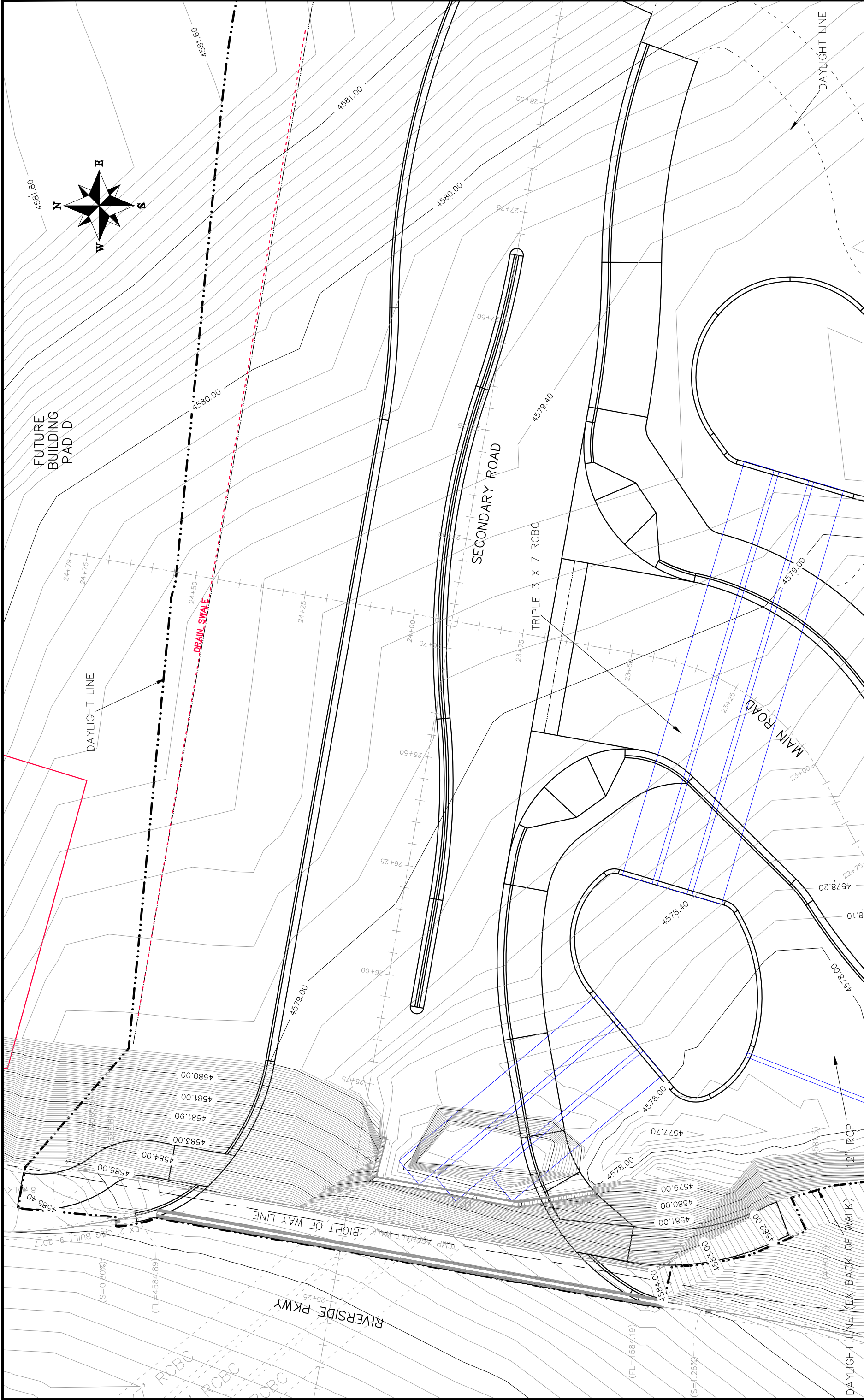
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DRAWN BY JCS	DATE 2017	DATE 2017	DATE 2017

PLAN & PROFILE	SCALE
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PROFILE	1" = 4'



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**Las Colonias Business Park  
20th Scale Tenth Foot EX Contour Plan**

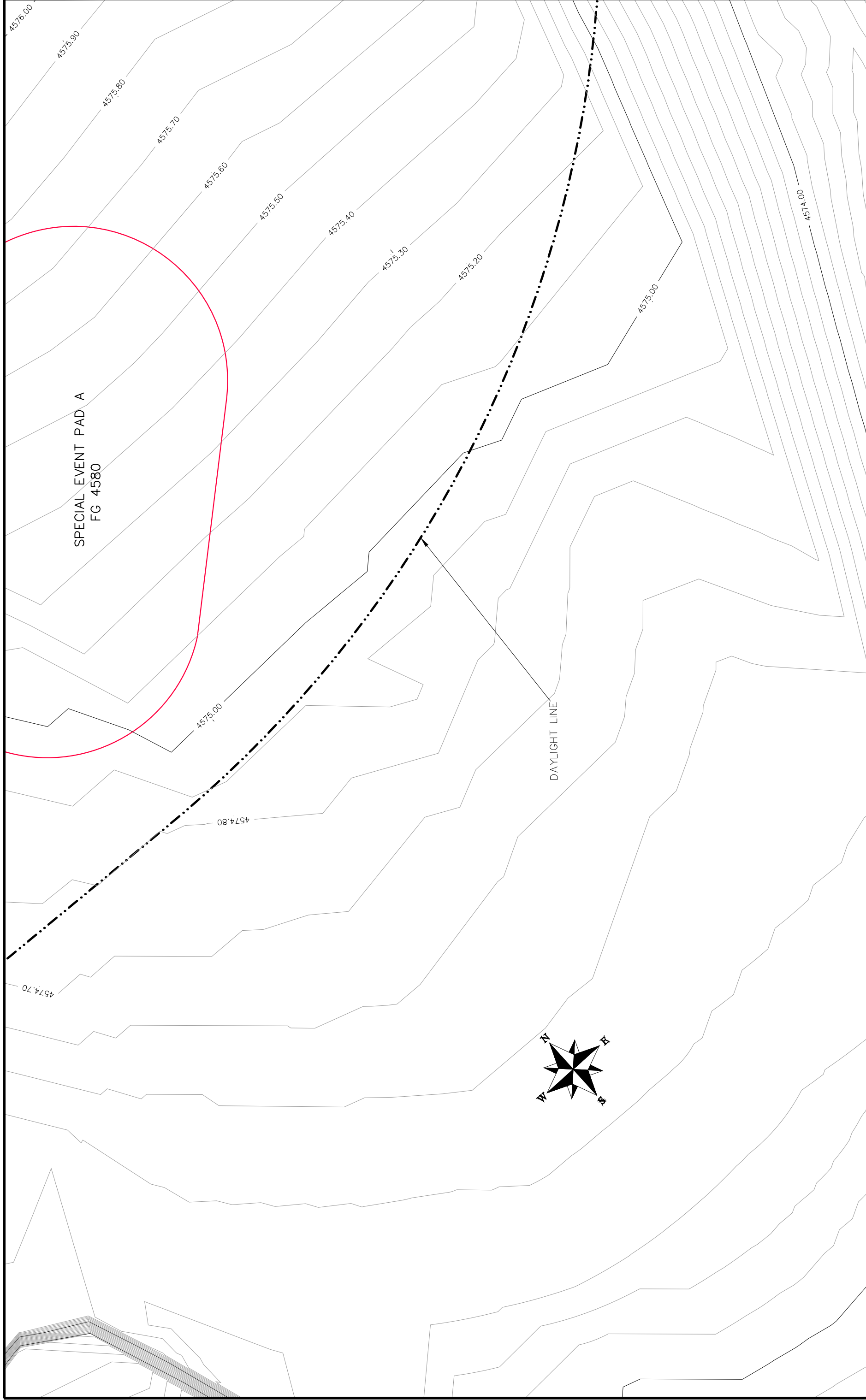


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REVISION 4	DATE 2017	

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**20th Scale Tenth Foot EX Contour Plan**



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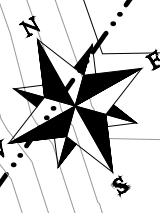


BUILDING PAD A  
FC 4580

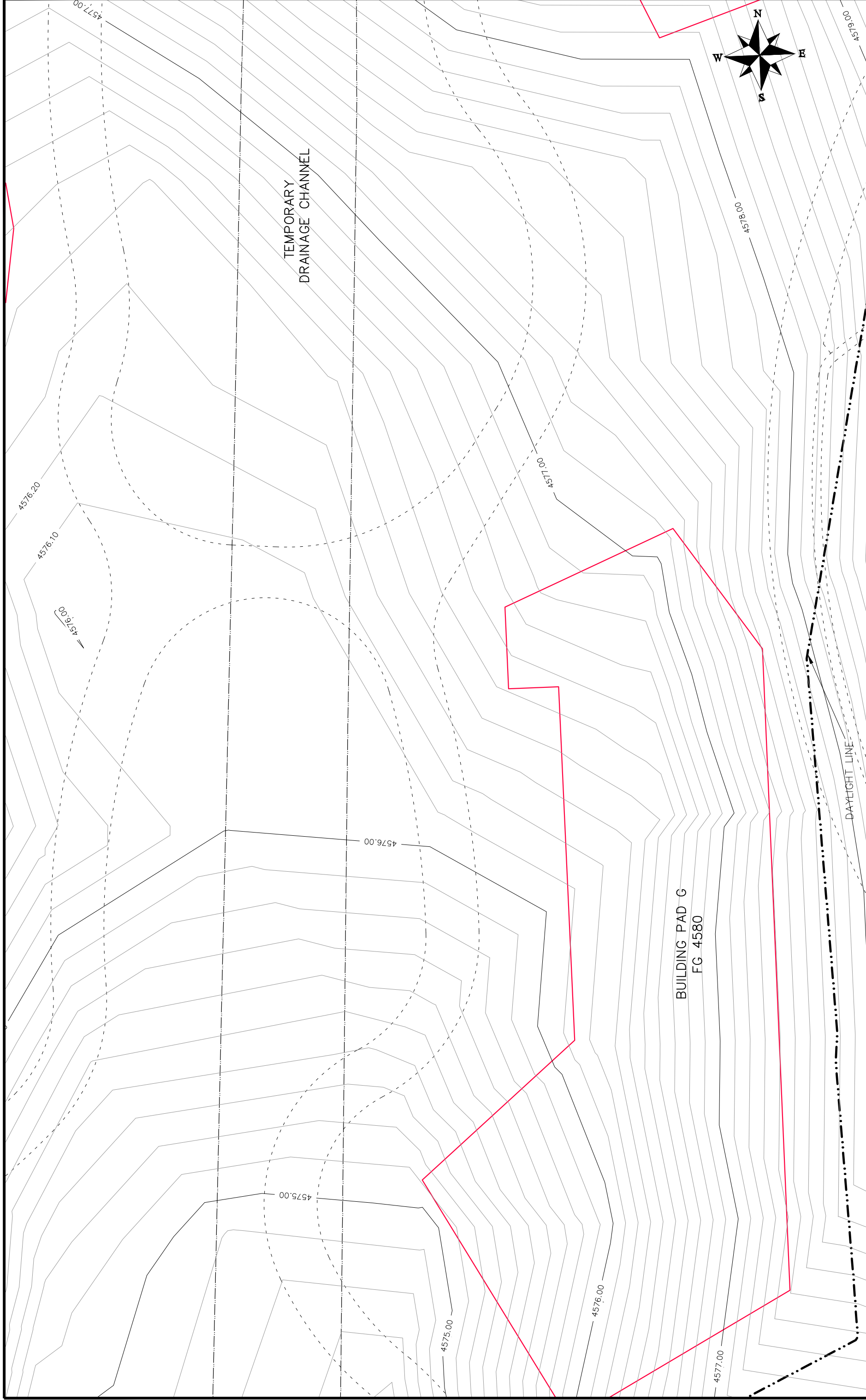
BUILDING PAD G  
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TEMPORARY  
DRAINAGE CHANNEL

-- DAYLIGHT LINE

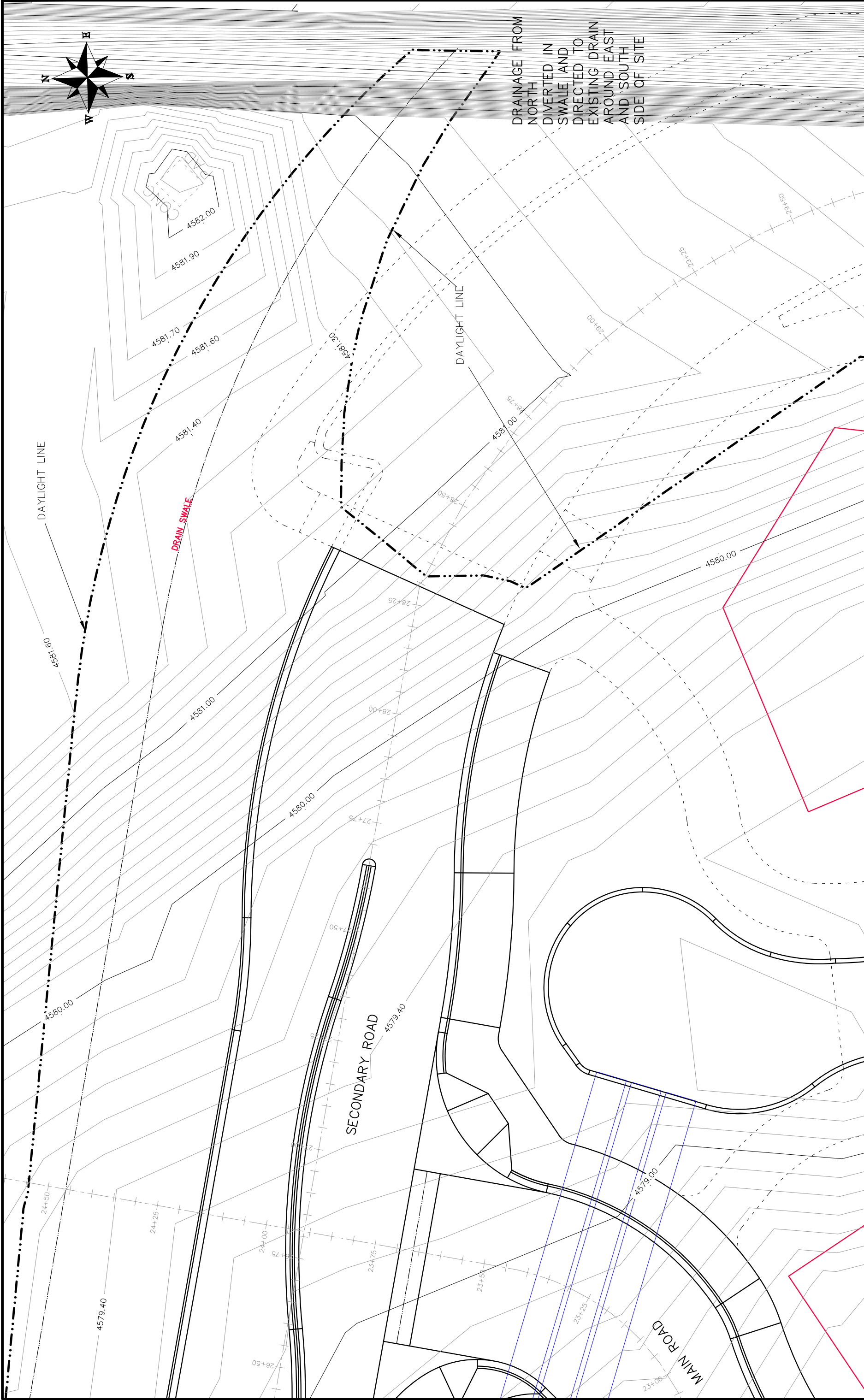


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<p>Las Colonias Business Park</p> <p>20th Scale Tenth Foot EX Contour Plan</p>					



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<b>Las Colonias Business Park</b> <b>20th Scale Tenth Foot EX Contour Plan</b>					





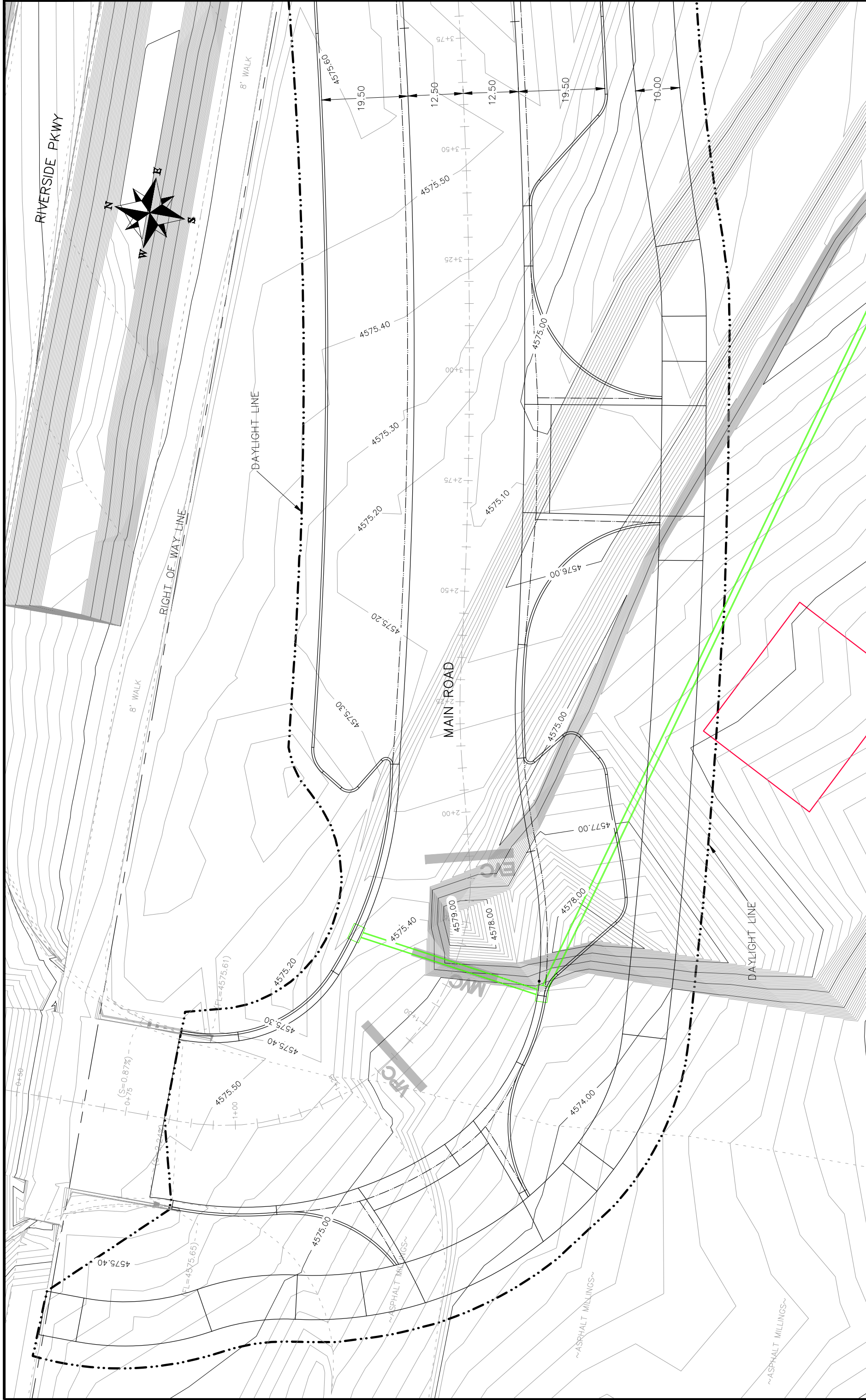
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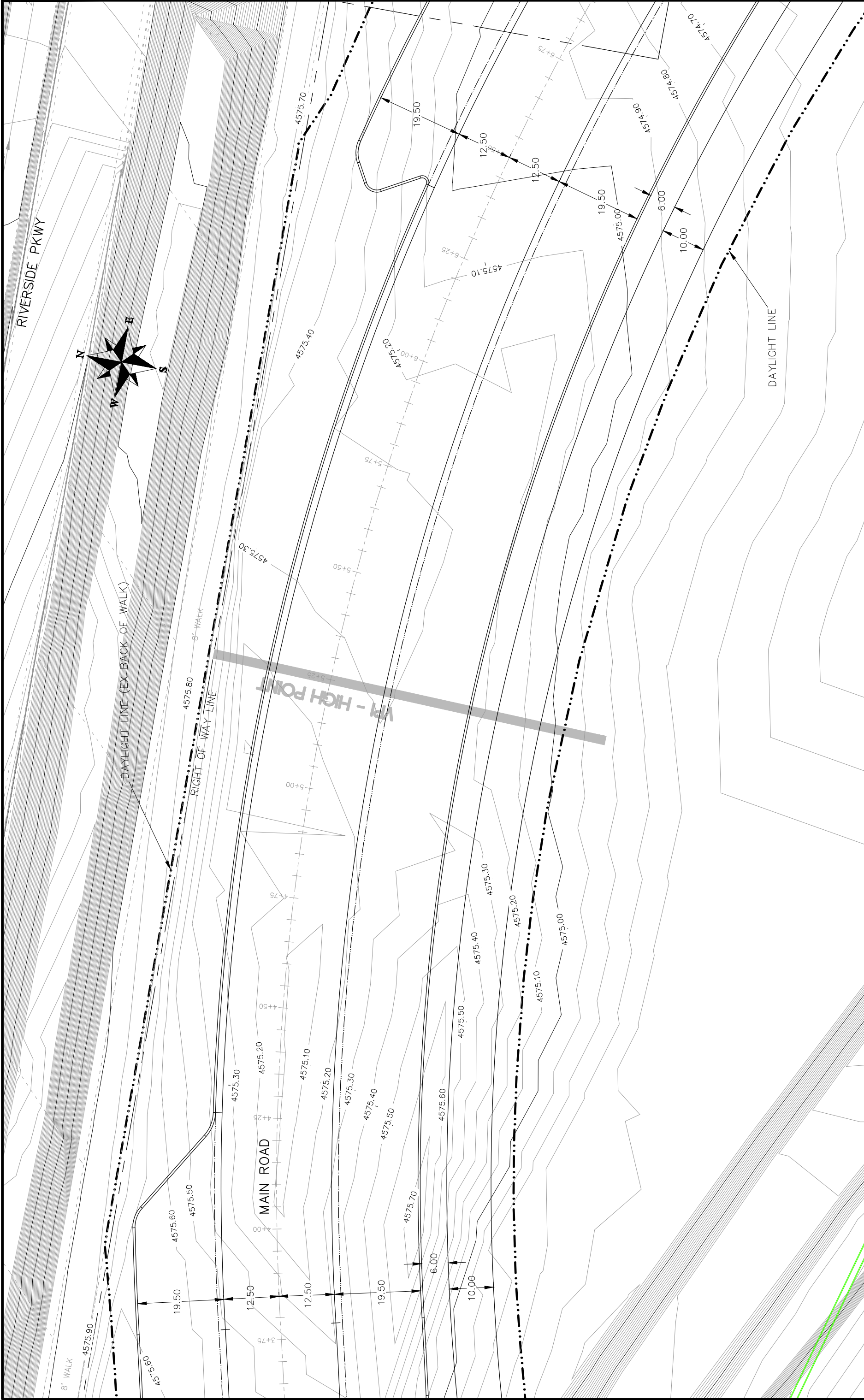
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SCALE	SCALE
1" = 20'	1" = 20'



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Las Colonias Business Park Phase 1a  
20th Scale Tenth Foot EX Contour Plan



REVISION	DATE	DESCRIPTION
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REVISION 2	DATE	DESCRIPTION
REVISION 3	DATE	DESCRIPTION
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Las Colonias Business Park Phase 1a  
20th Scale Tenth Foot EX Contour Plan



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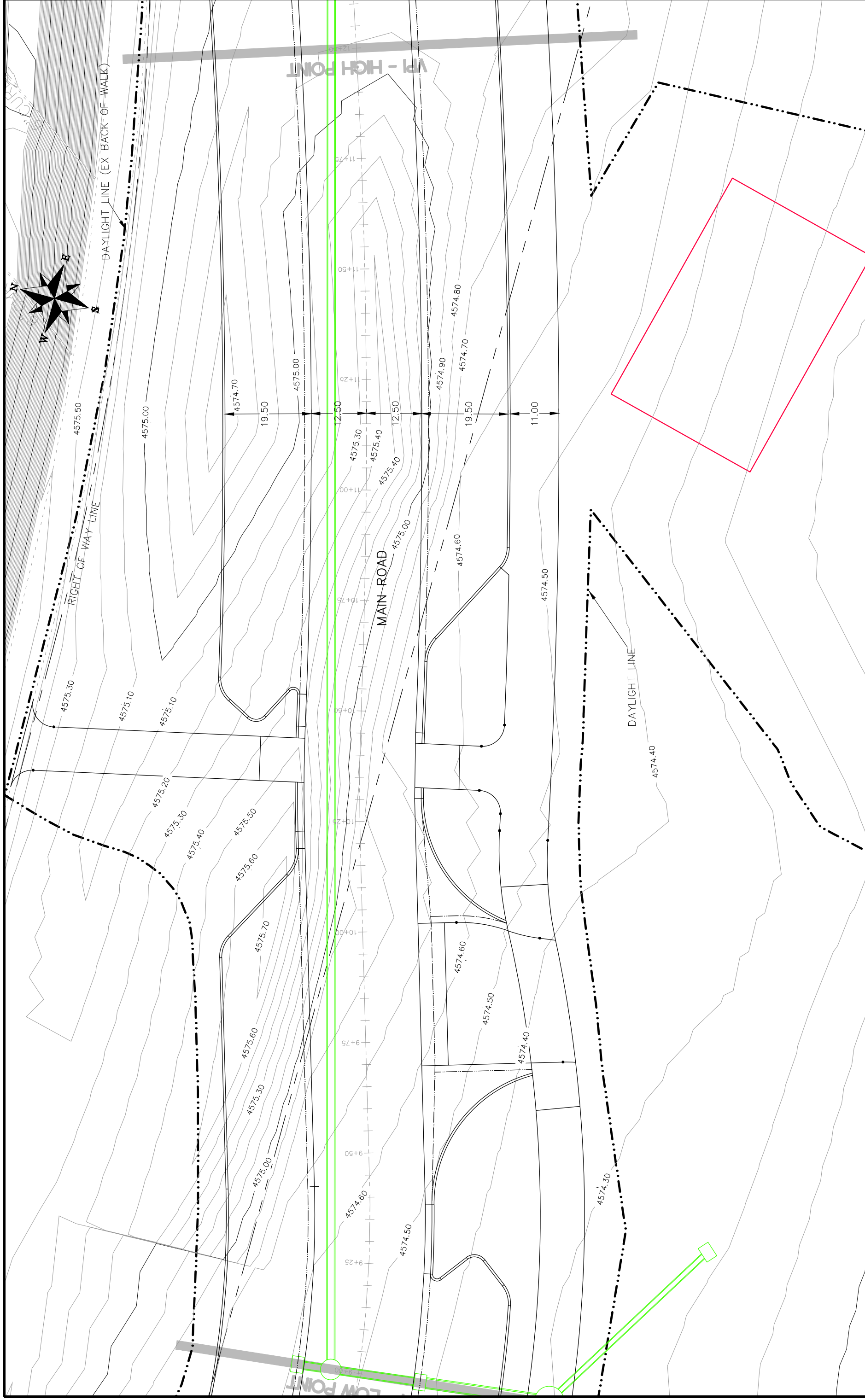
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3	REV3_INT					
4	REV4_INT					



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Las Colonias Business Park Phase 1a  
20th Scale Tenth Foot EX Contour Plan

PLAN & PROFILE	SCALE
PLAN	1" = 40'
PROFILE	1" = 10'



REVISION	DATE	DESCRIPTION
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REVISION 3	DATE 2017	VERTICAL
REVISION 4	DATE 2017	NA

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 APPROVED BY JCP DATE 2017

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 20th Scale Tenth Foot EX Contour Plan

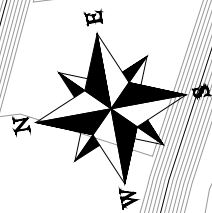
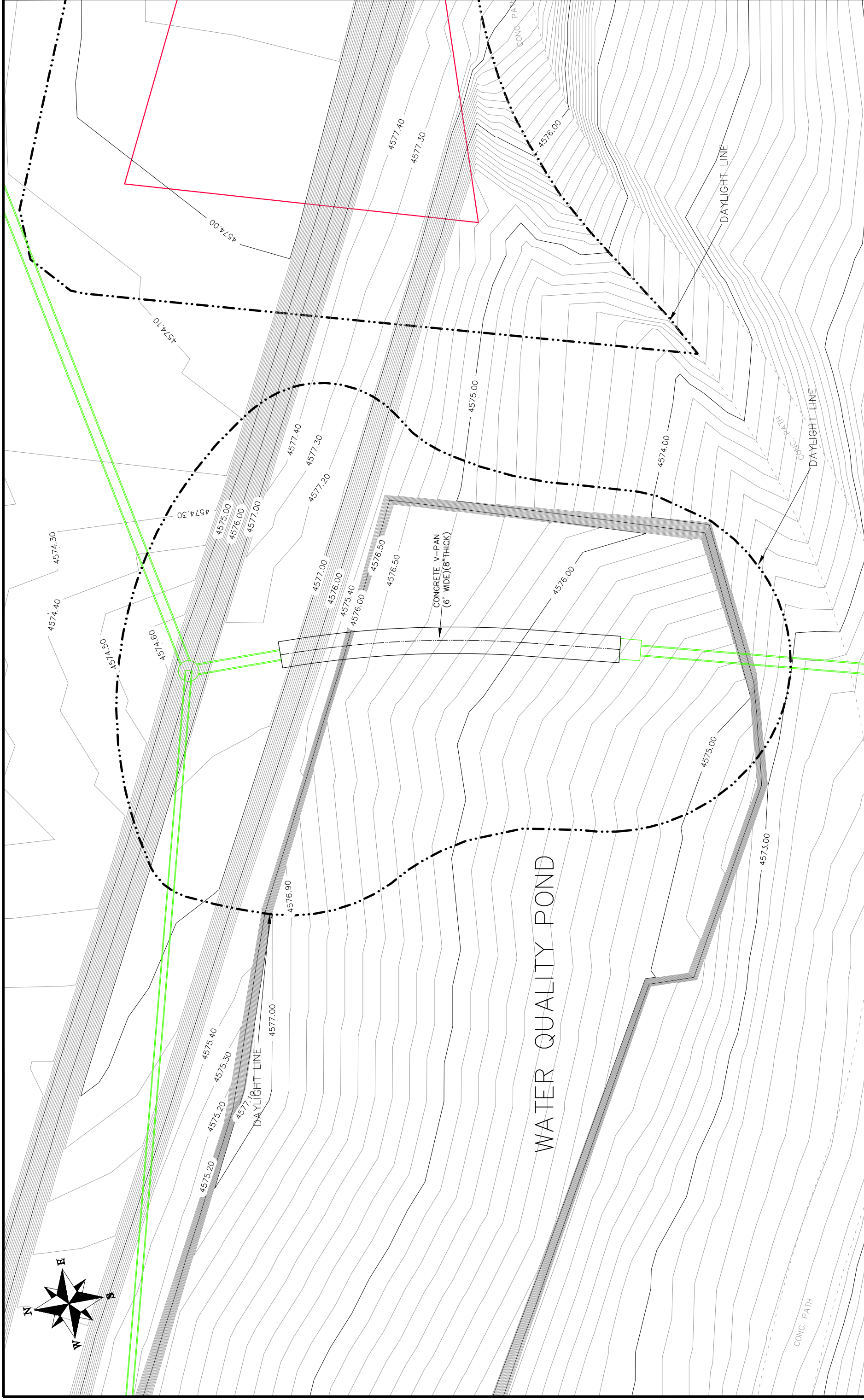


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REVISION Δ REV4_INT	____	TOP	2017	NA



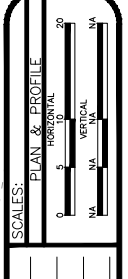
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Las Colonias Business Park Phase 1a  
20th Scale Tenth Foot EX Contour Plan



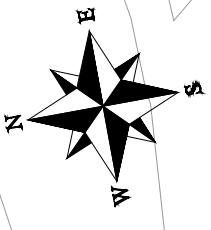
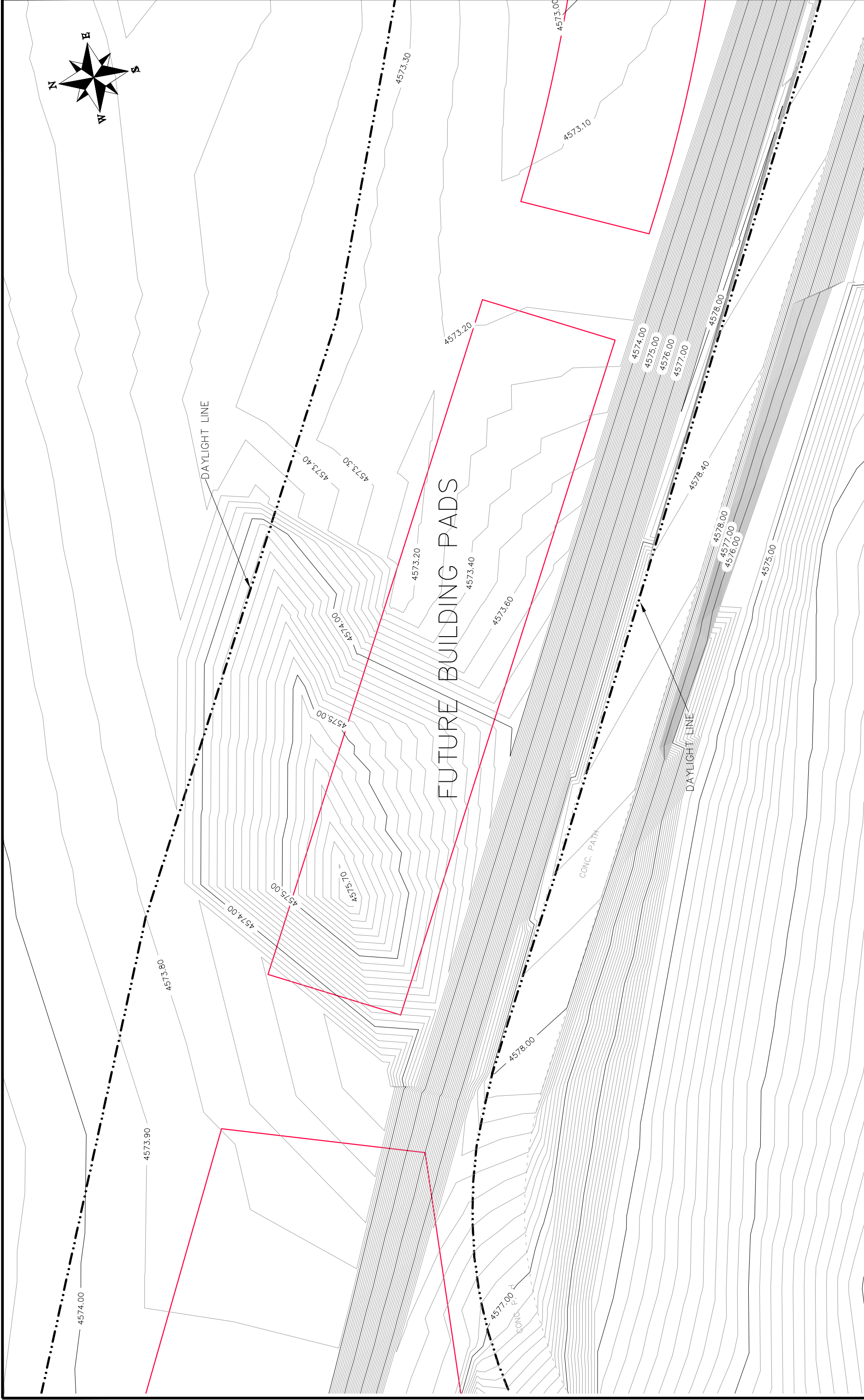
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SCALE:	PLAN & PROFILE
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3	VERTICAL
NA	NA



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**20th Scale Tenth Foot EX Contour Plan**



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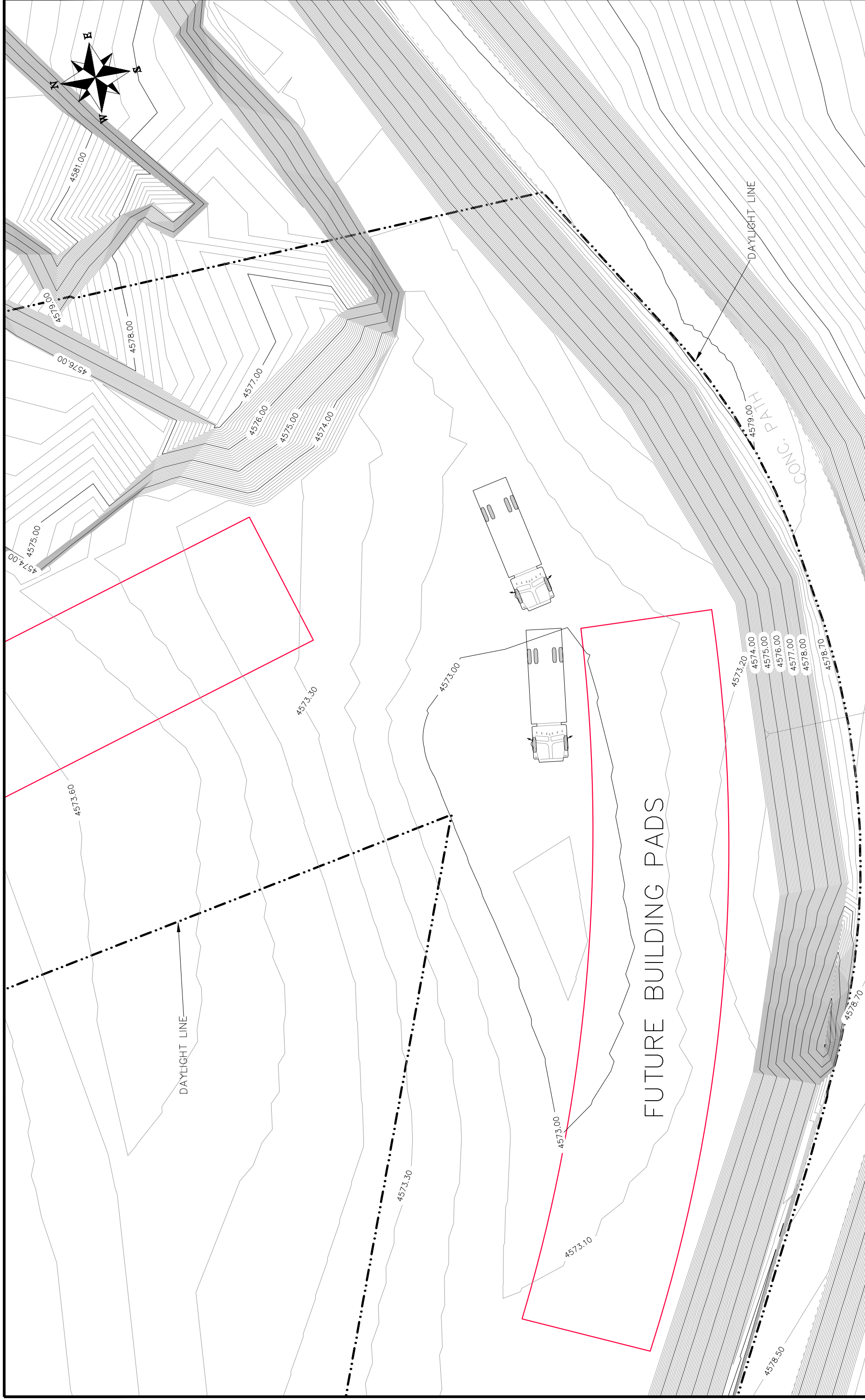
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HORIZONTAL	1" = 40'
VERTICAL	1" = 10'



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20th Scale Tenth Foot EX Contour Plan**





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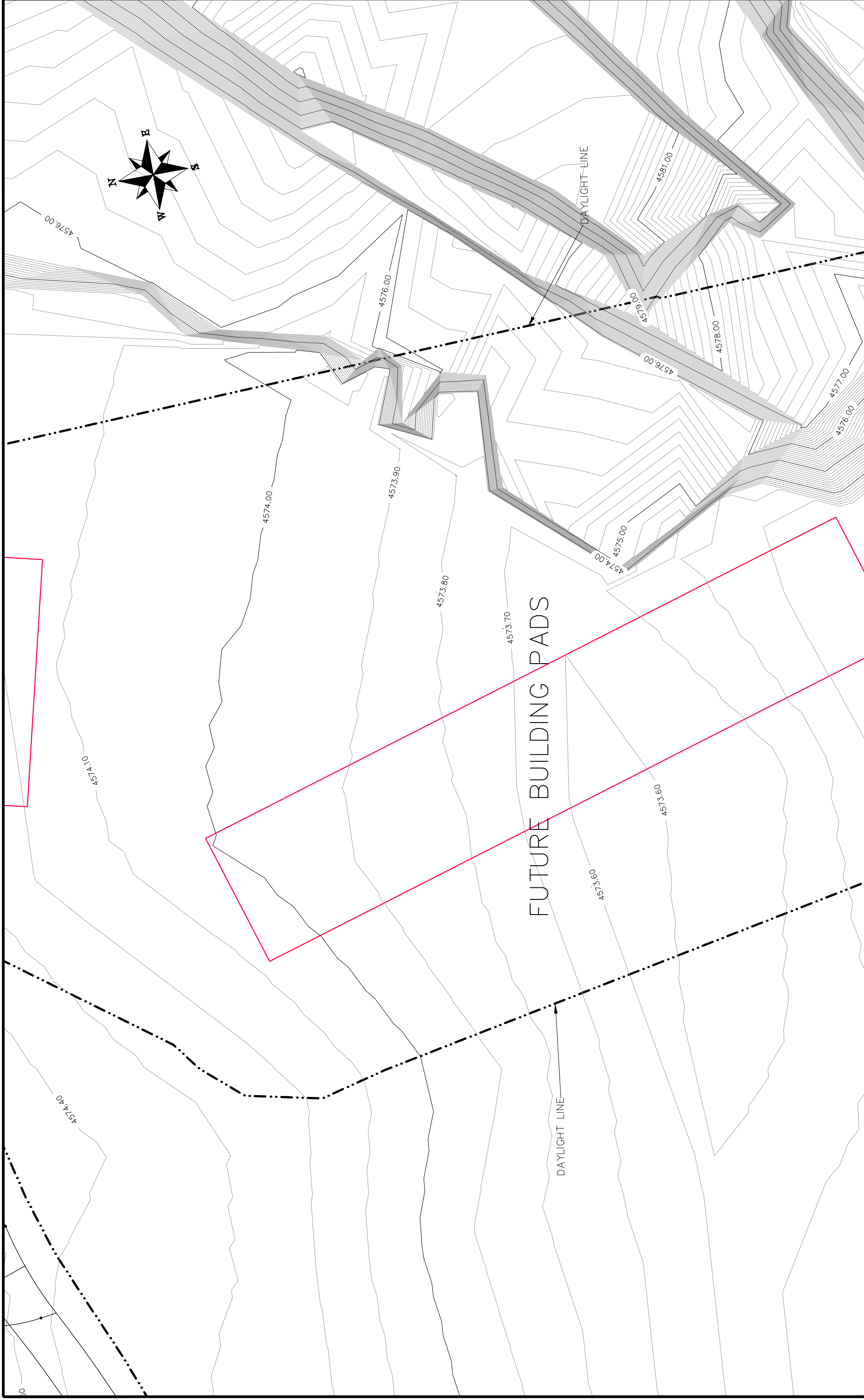
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Las Colonias Business Park Phase 1a  
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REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
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4	REV4_INT		TOP	2017



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**Las Colonias Business Park Phase 1a  
20th Scale Tenth Foot EX Contour Plan**

# LAS COLONIAS BUSINESS PARK PHASE 2 IMPROVEMENTS - BID SET

ADDENDUM NO 1

~~JULY 13~~  
JULY 13

- 1 Cover Sheet
- 2 Project Overview
- 3 Paving Sections
  - 4-8 Sanitary Sewer Plan and Profile
  - 9-15 Water Line Plan and Profile
  - 16-29 Storm Drain Plan and Profile
  - 30-39 Improvement Plan
  - 40-49 Site Profiles
  - 50-72 Site Cross Sections
  - 73 Tenth Foot Contour Plan Sheet Key
  - 74-105 Tenth Foot Contour Plan
  - 106-112 Signing and Striping Plan
  - 113-116 Storm Water Management Plan
  - 117-138 Project Details (Civil)
- 139-153 Boat Launch Plans **UPDATED - ADDENDUM 1**
- 154-182 Irrigation and Landscape Plans
- 183-200 Site Electrical Plans **ADDED - ADDENDUM 1**



Know what's below.  
Call before you dig.

NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.



REVISION	DESCRIPTION	DATE
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APPROVED BY	TOP	DATE	2018



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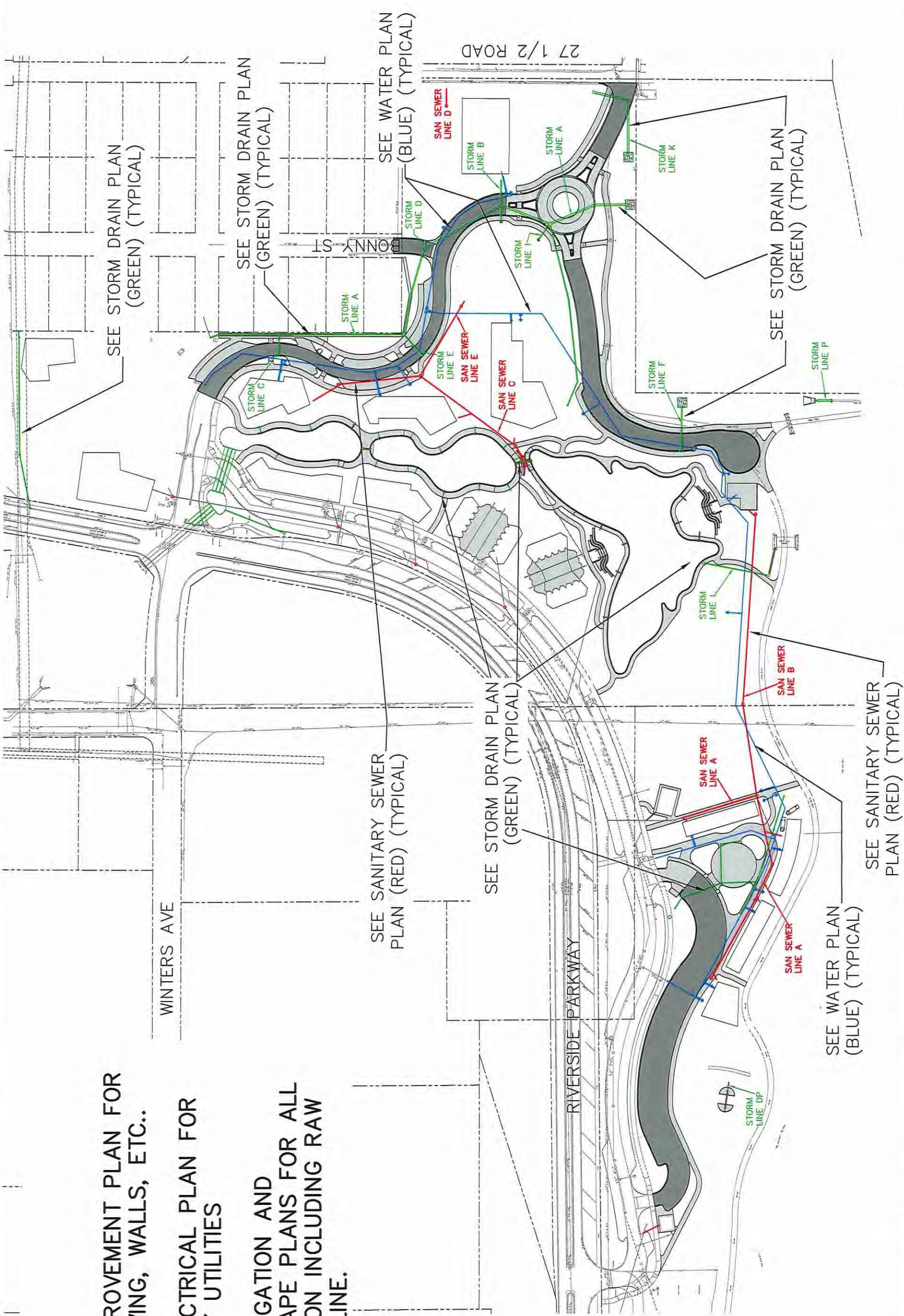
COVER SHEET

**NOTE:**

SEE IMPROVEMENT PLAN FOR ALL PAVING, WALLS, ETC..

SEE ELECTRICAL PLAN FOR ALL DRY UTILITIES

SEE IRRIGATION AND LANDSCAPE PLANS FOR ALL IRRIGATION INCLUDING RAW WATER LINE.



SEE STORM DRAIN PLAN (GREEN) (TYPICAL)

SEE STORM DRAIN PLAN (GREEN) (TYPICAL)

SEE WATER PLAN (BLUE) (TYPICAL)

SEE STORM DRAIN PLAN (GREEN) (TYPICAL)

SEE STORM DRAIN PLAN (GREEN) (TYPICAL)

SEE WATER PLAN (BLUE) (TYPICAL)

SEE SANITARY SEWER PLAN (RED) (TYPICAL)

REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018
REVISION A						
REVISION B						
REVISION C						
REVISION D						

DATE	DATE	DATE	DATE

SCALE:	PLAN
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50	50'
100	25'
200	12.5'

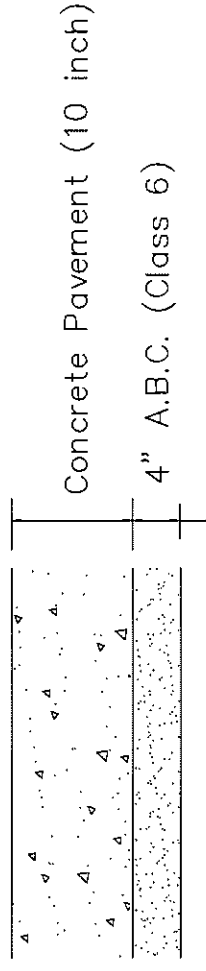


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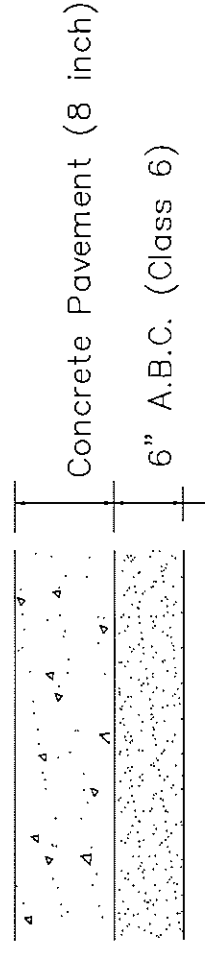
LAS COLONIAS BUSINESS PARK PHASE 2  
PROJECT OVERVIEW

**Notes:**

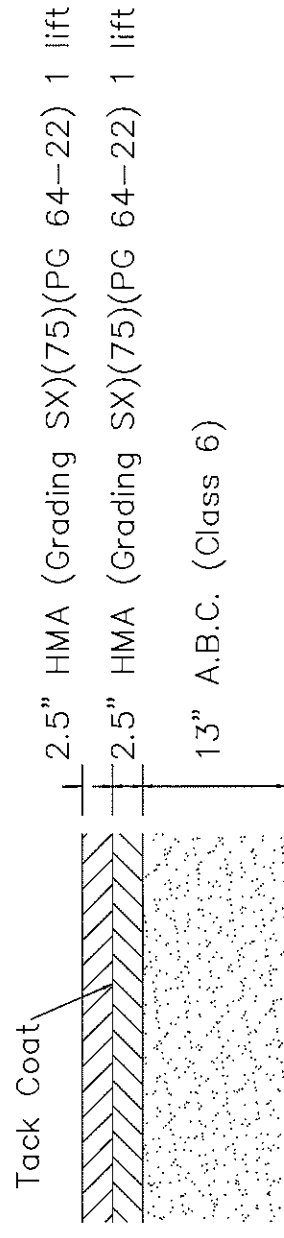
- Extend Full Pavement Base Section 6" Beyond Back Of Curbs (Typical)
- See Plan set for layout and geometry of walks, curbs, gutters, walls, etc..



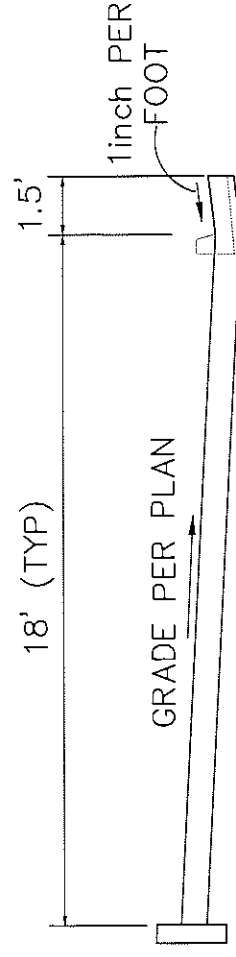
CONCRETE PAVEMENT SECTION (10" THICK) (ROUNDABOUT)



CONCRETE PAVEMENT SECTION (8" THICK) (PARKING AND PLAZA)



ROADWAY AND PARKING ASPHALT PAVEMENT SECTION



GUTTER OF ALL PARKING AREAS SHALL CONTINUE SAME ALIGNMENT AND CROSS SLOPE OF CURB AND GUTTER ON EITHER ENDS OF SAID PARKING AS SHOWN

ON STREET PARKING GUTTER

REVISION	DATE	DESCRIPTION

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0	VERTICAL

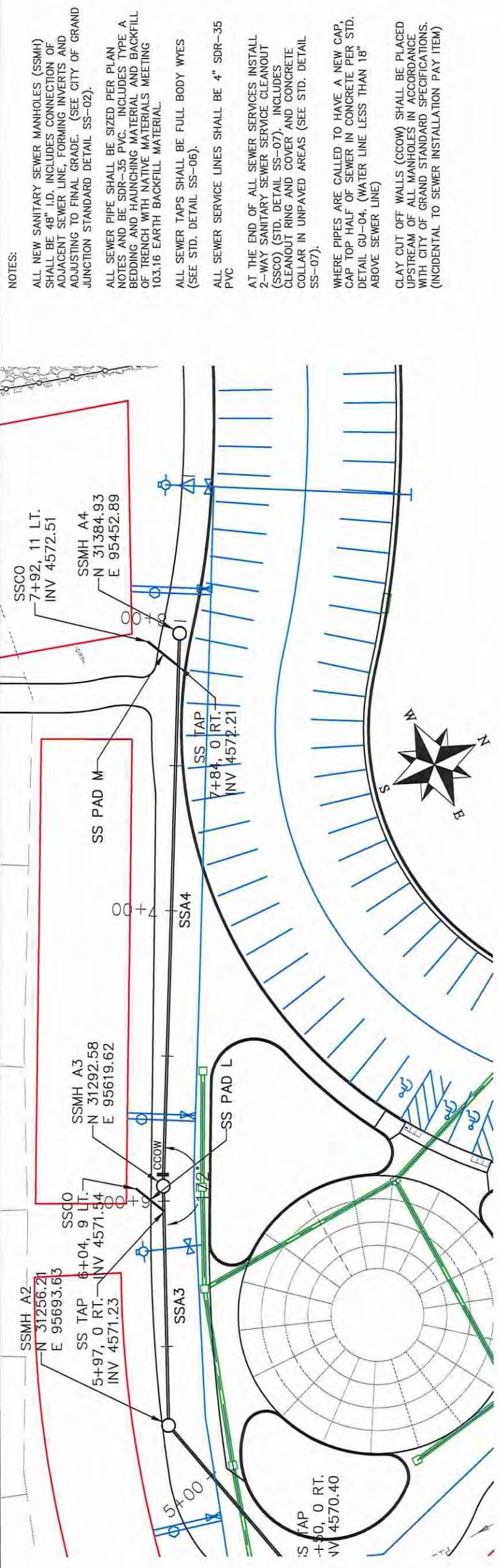
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CHECKED BY	TCF	DATE	2018
APPROVED BY	ICP	DATE	2018



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Las Colonias Business Park  
Typical Cross Sections





**NOTES:**

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE 48" I.D. INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

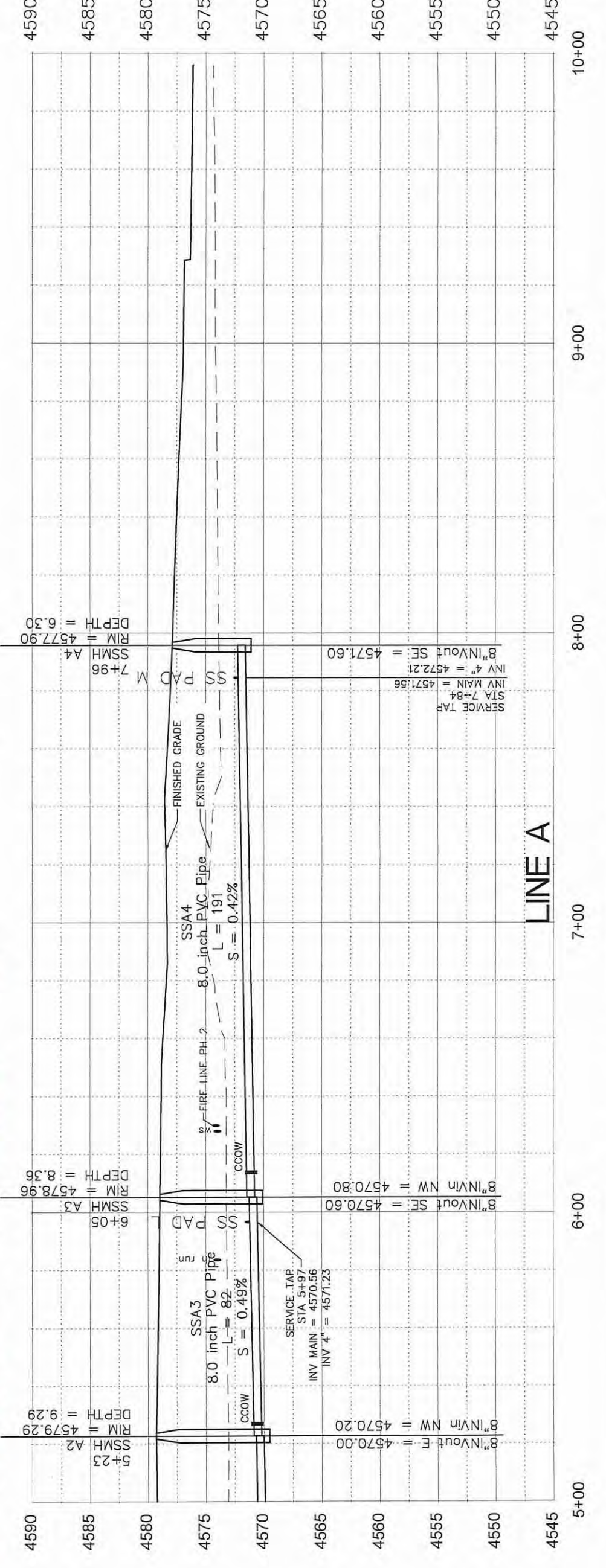
ALL SEWER TAPS SHALL BE FULL BODY WYES (SEE STD. DETAIL SS-06).

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED UPSTREAM OF ALL MANHOLES IN ACCORDANCE WITH CITY OF GRAND STANDARD SPECIFICATIONS. (INCIDENTAL TO SEWER INSTALLATION PAY ITEM)



REVISION A	DATE	DRAWN BY	JCS	DATE	2018
REVISION B	DATE	DESIGNED BY	JCS	DATE	2018
REVISION C	DATE	CHECKED BY	TOP	DATE	2018
REVISION D	DATE	APPROVED BY	TOP	DATE	2018

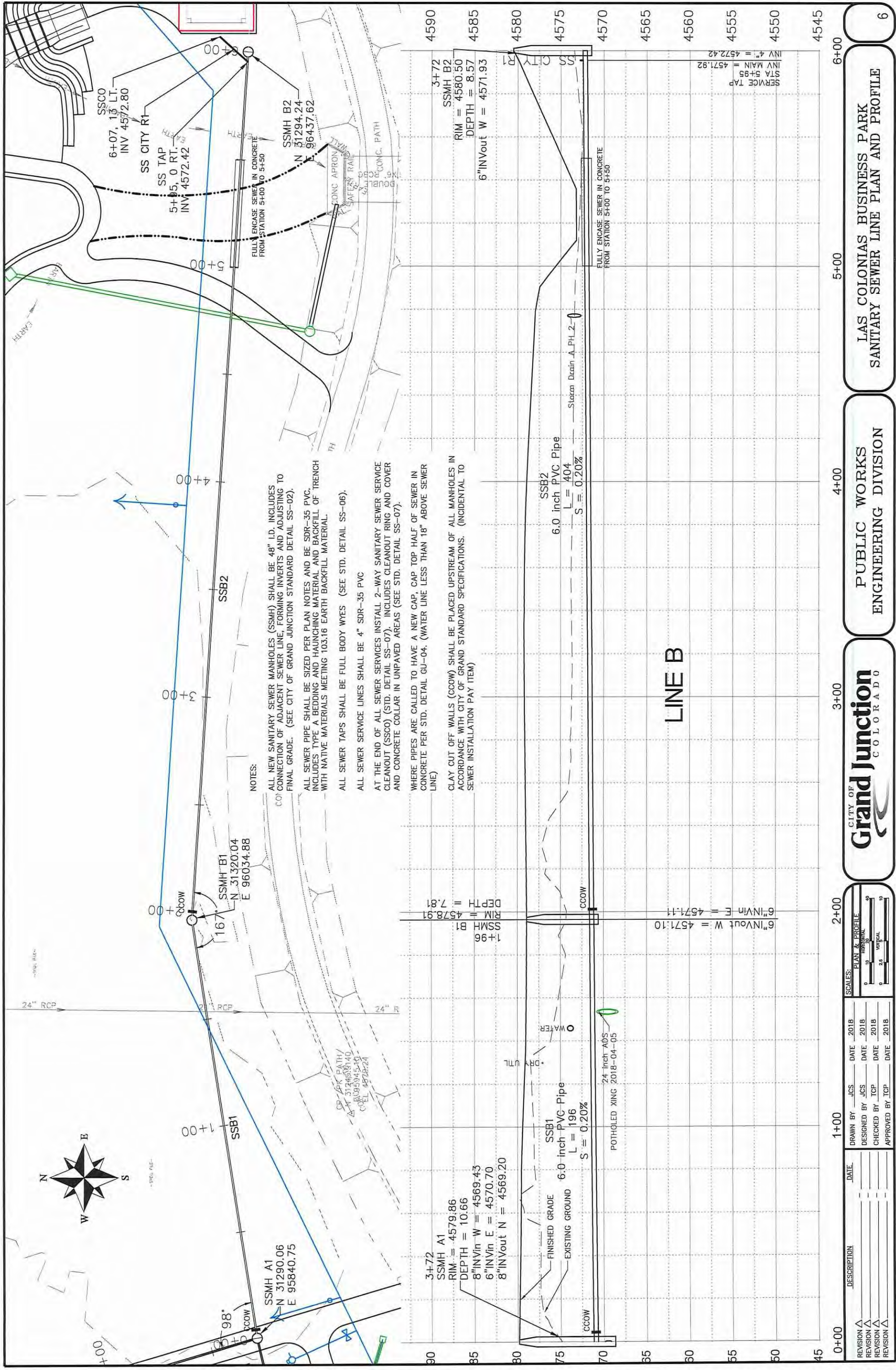
SCALES: PLAN & PROFILE: 1" = 30' HORIZONTAL, 1" = 3' VERTICAL

CITY OF **Grand Junction** COLORADO

PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SANITARY SEWER LINE PLAN AND PROFILE

5



**NOTES:**

ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE 48" I.D. INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).

ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

ALL SEWER TAPS SHALL BE FULL BODY WYES (SEE STD. DETAIL SS-06).

ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC

AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).

WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED UPSTREAM OF ALL MANHOLES IN ACCORDANCE WITH CITY OF GRAND STANDARD SPECIFICATIONS. (INCIDENTAL TO SEWER INSTALLATION PAY ITEM)

**LINE B**

REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018
REVISION Δ						
REVISION Δ						
REVISION Δ						
REVISION Δ						

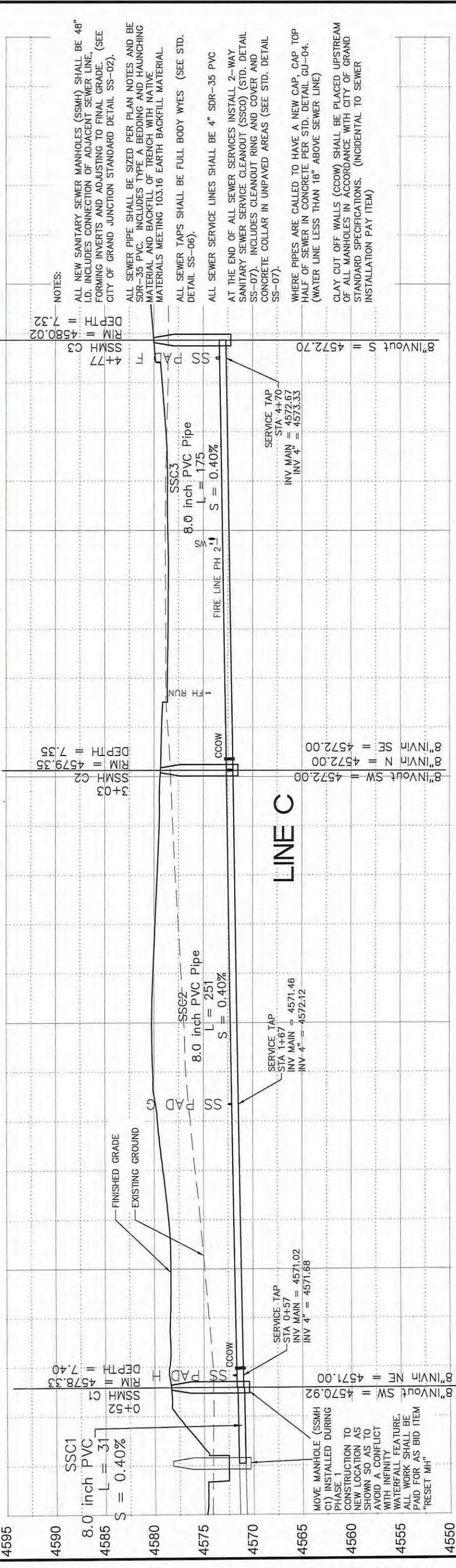
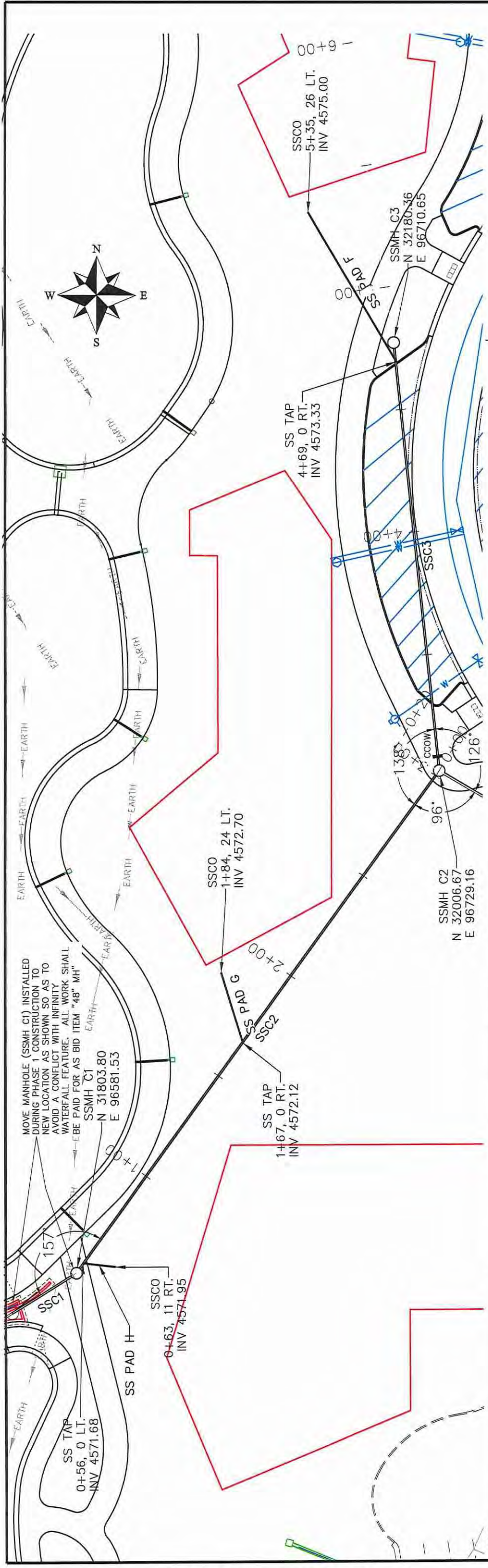
DATE	DATE	DATE	DATE
2018	2018	2018	2018
2018	2018	2018	2018
2018	2018	2018	2018

CITY OF  
**Grand Junction**  
COLORADO

PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SANITARY SEWER LINE PLAN AND PROFILE





NOTES:

- ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE 48" I.D. INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
- ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
- ALL SEWER TAPS SHALL BE FULL BODY WYES (SEE STD. DETAIL SS-06).
- ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC
- AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).
- WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)
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REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	2018
			JCS		
			DESIGNED BY		
			CHECKED BY		
			APPROVED BY		

SCALES: PLAN & PROFILE: 1" = 10' HORIZONTAL, 1" = 2' VERTICAL

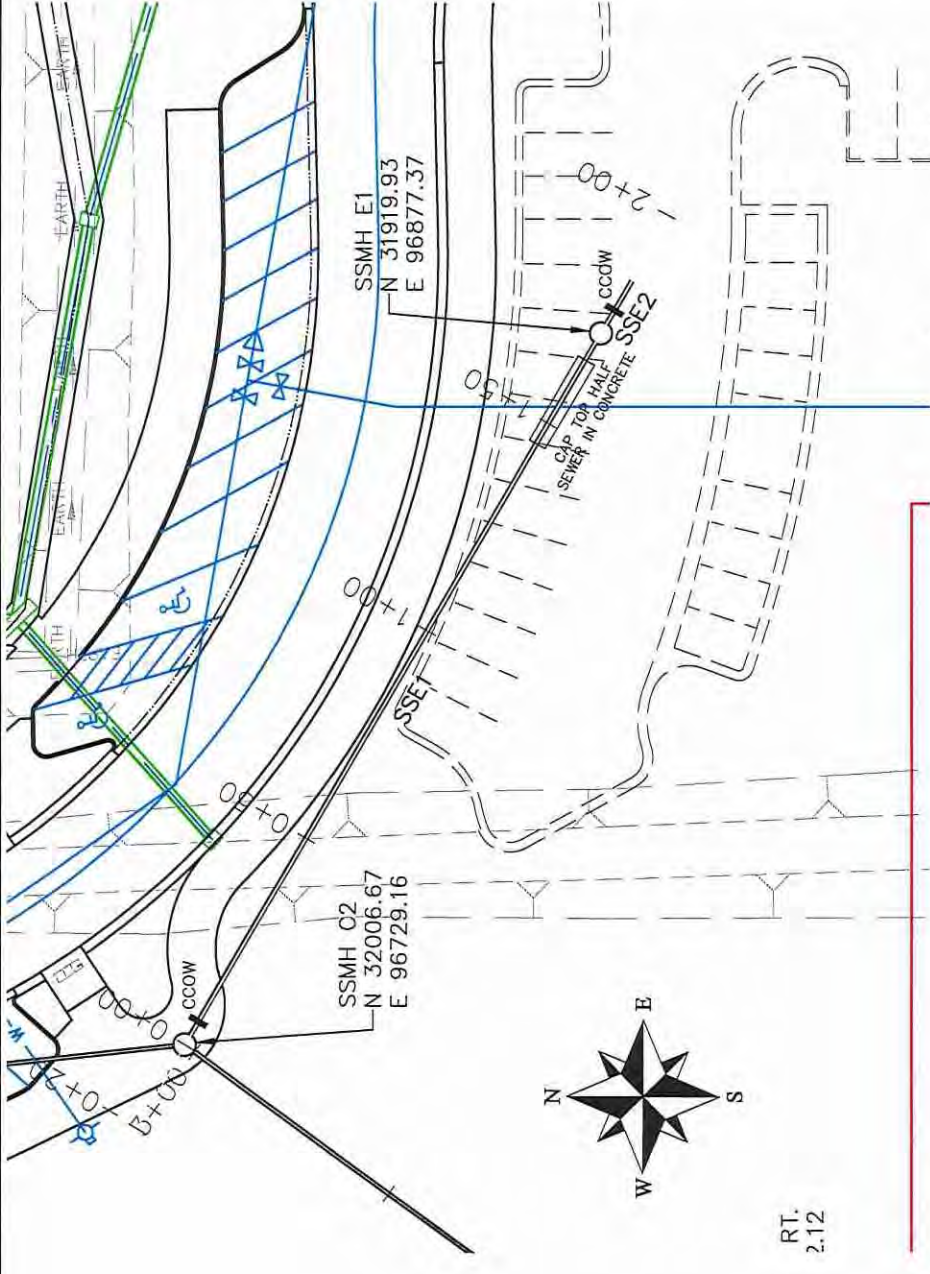
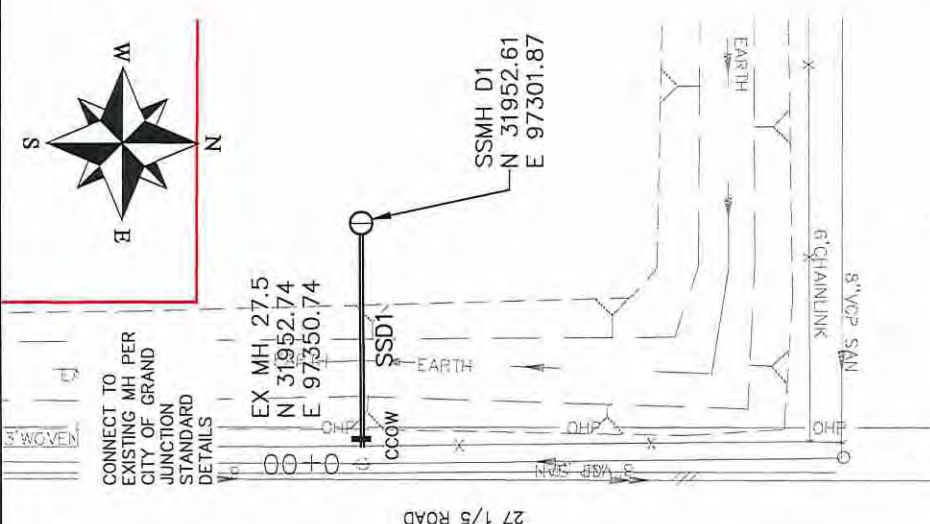
STATIONING: 0+00, 1+00, 2+00, 3+00, 4+00, 5+00, 6+

CITY OF **Grand Junction** COLORADO

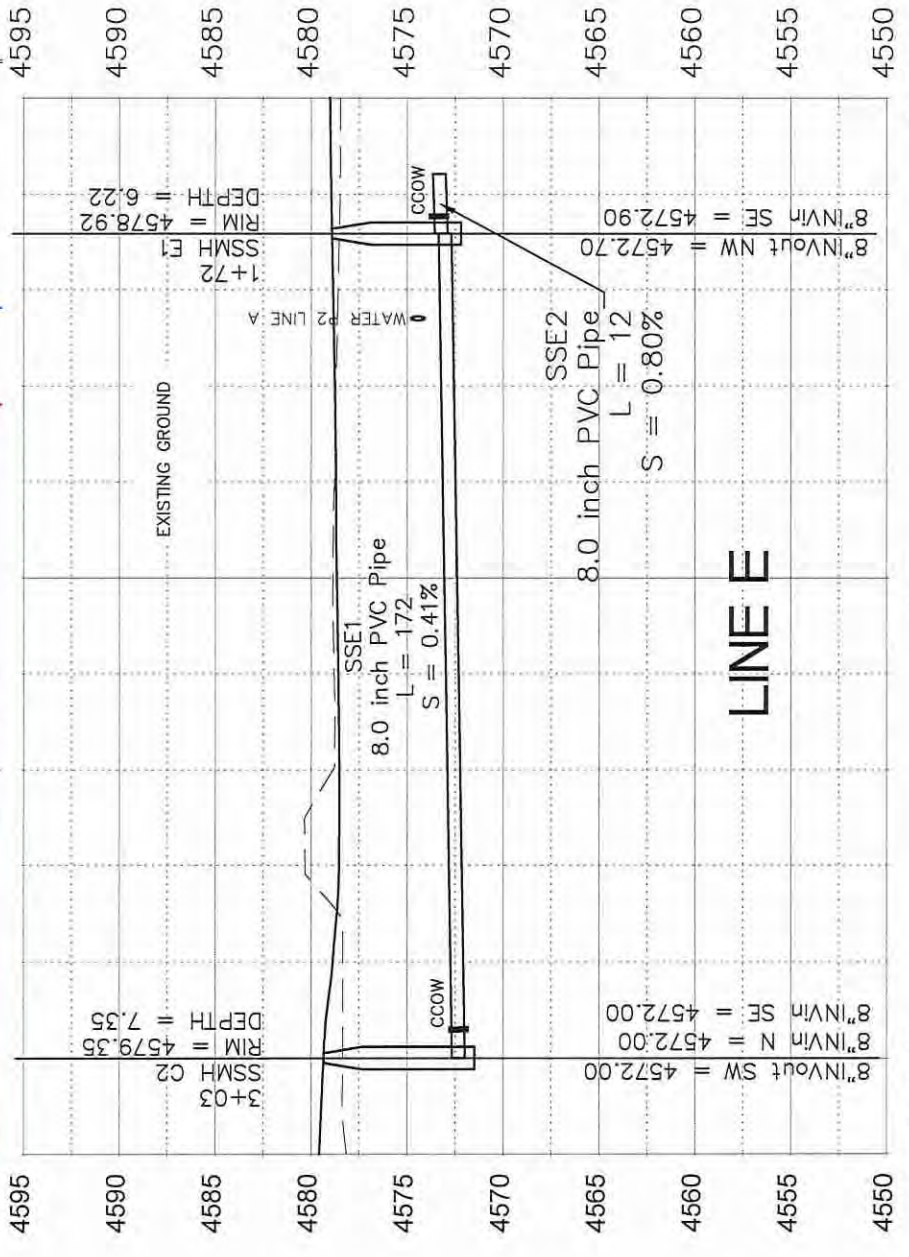
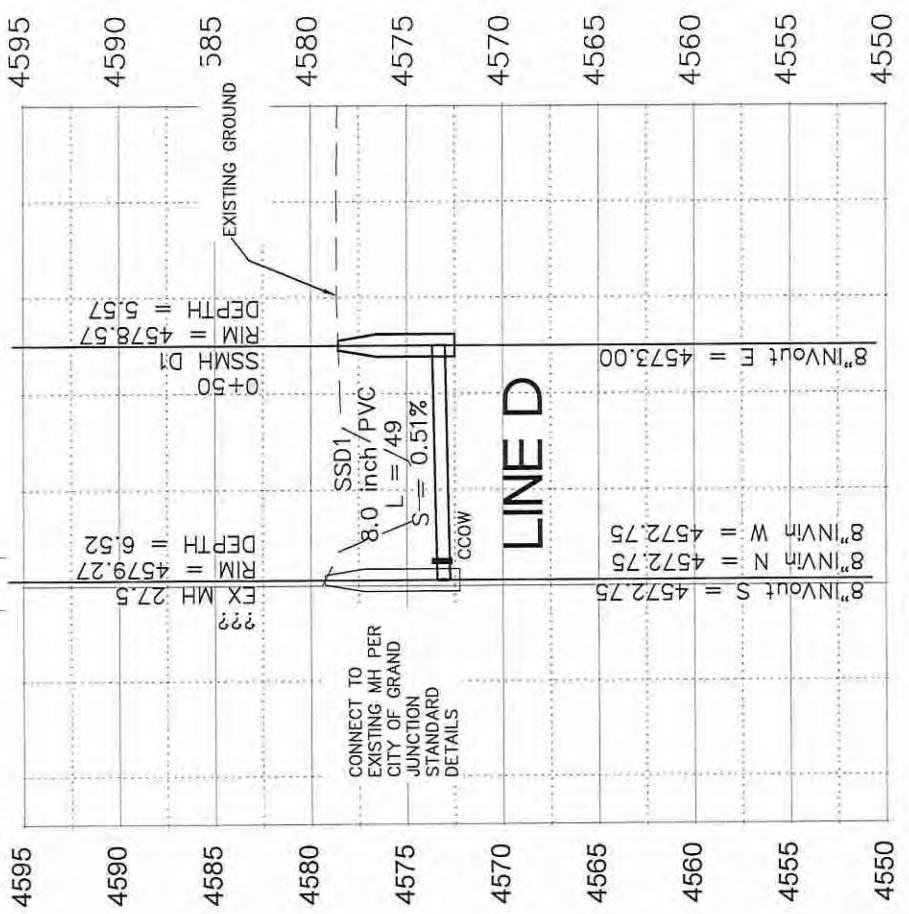
PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SANITARY SEWER LINE PLAN AND PROFILE

7



- NOTES:**
- ALL NEW SANITARY SEWER MANHOLES (SSMH) SHALL BE 48" I.D. INCLUDES CONNECTION OF ADJACENT SEWER LINE, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL SS-02).
  - ALL SEWER PIPE SHALL BE SIZED PER PLAN NOTES AND BE SDR-35 PVC. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
  - ALL SEWER TAPS SHALL BE FULL BODY WYES (SEE STD. DETAIL SS-06).
  - ALL SEWER SERVICE LINES SHALL BE 4" SDR-35 PVC
  - AT THE END OF ALL SEWER SERVICES INSTALL 2-WAY SANITARY SEWER SERVICE CLEANOUT (SSCO) (STD. DETAIL SS-07). INCLUDES CLEANOUT RING AND COVER AND CONCRETE COLLAR IN UNPAVED AREAS (SEE STD. DETAIL SS-07).
  - WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)
  - CLAY CUT OFF WALLS (CCOW) SHALL BE PLACED UPSTREAM OF ALL MANHOLES IN ACCORDANCE WITH CITY OF GRAND STANDARD SPECIFICATIONS. (INCIDENTAL TO SEWER INSTALLATION PAY ITEM)



REVISION	DATE	BY	DESCRIPTION

DESIGNATED BY	DATE	DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
JCS	2018	JCS	2018	TOP	2018	TOP	2018
JCS	2018	JCS	2018	TOP	2018	TOP	2018

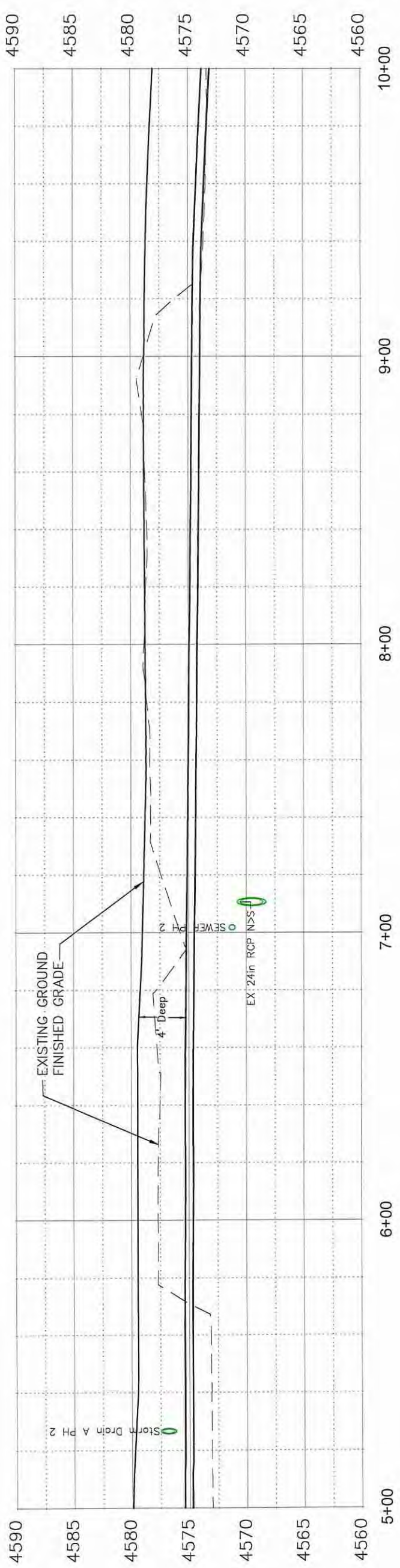
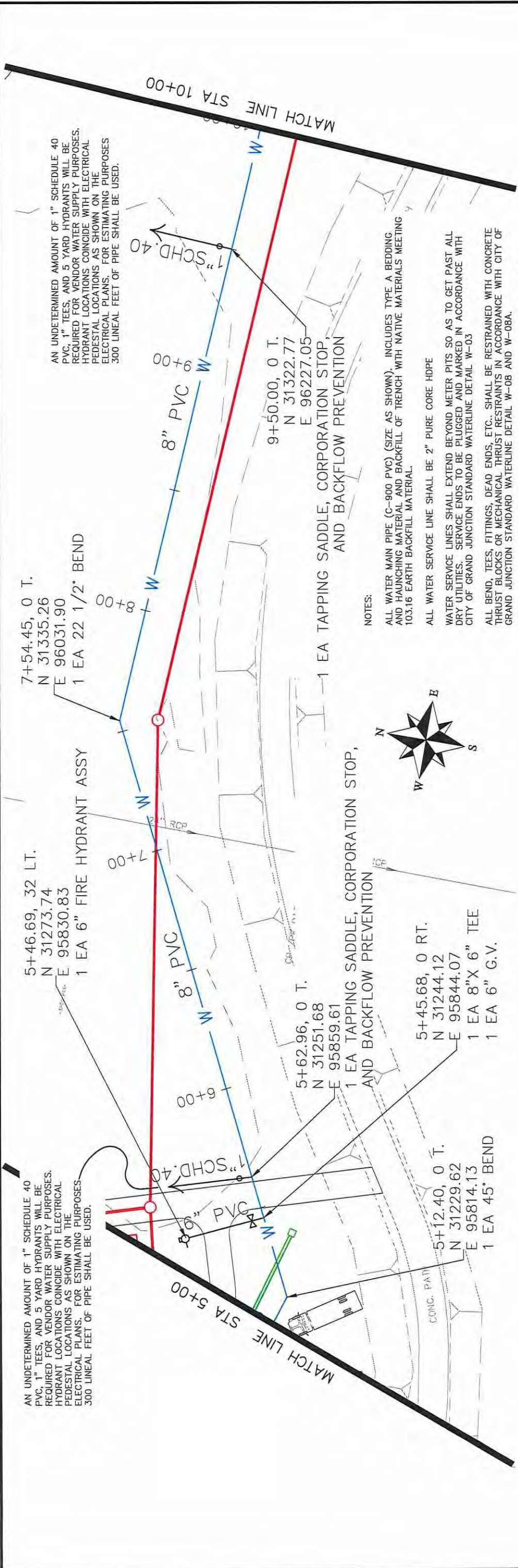
SCALE	PLAN & PROFILE
1" = 10'	1" = 20'
1" = 25'	1" = 50'



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**LAS COLONIAS BUSINESS PARK  
SANITARY SEWER LINE PLAN AND PROFILE**





REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018

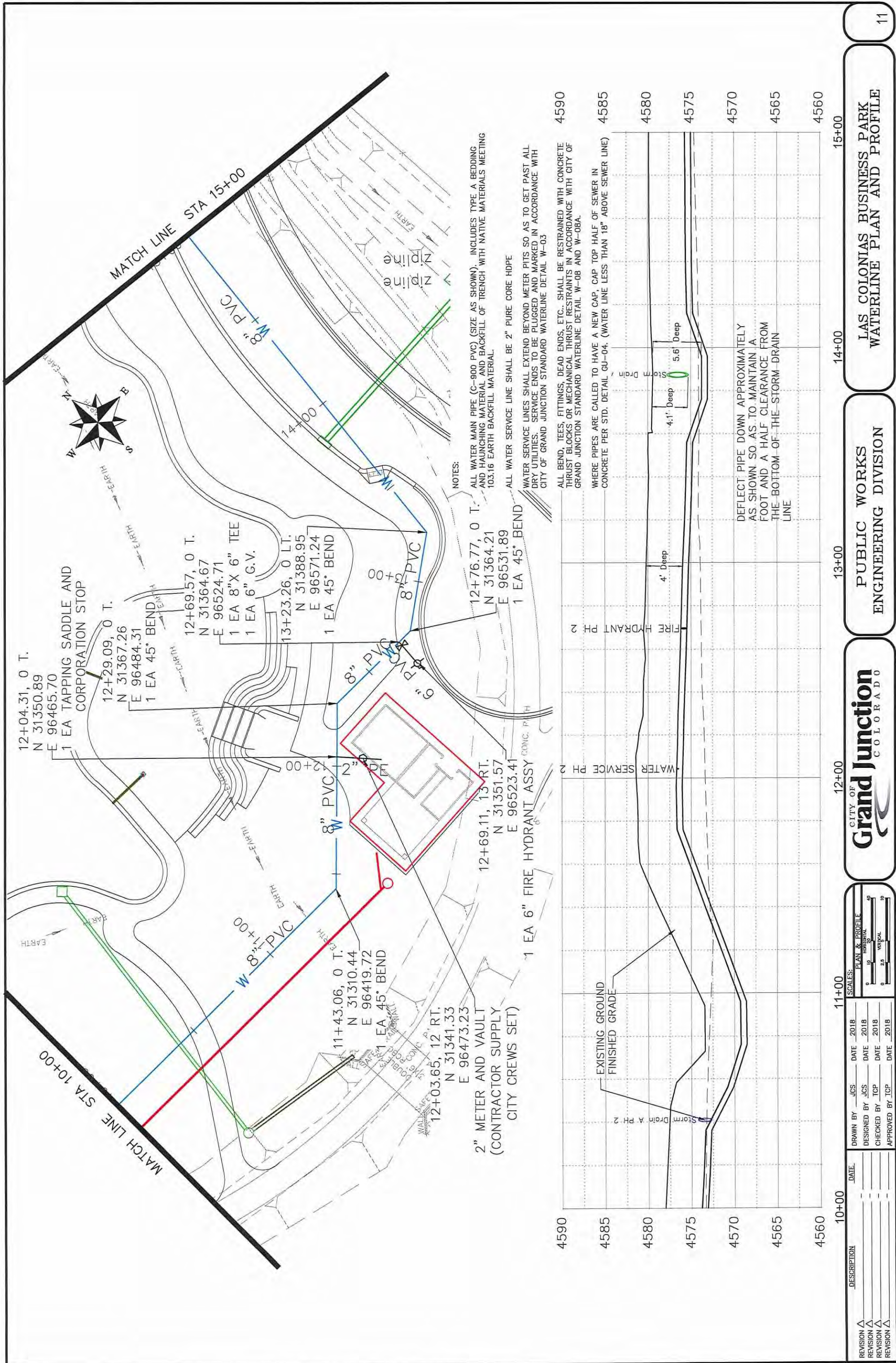
SCALES:	PLAN & PROFILE
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0	25
0	50
0	100

DESIGNED BY	DATE	2018
JCS		
CHECKED BY	DATE	2018
TCP		
APPROVED BY	DATE	2018



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
WATERLINE PLAN AND PROFILE



NOTES:  
 ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN) INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.  
 ALL WATER SERVICE LINE SHALL BE 2" PURE CORE HDPE  
 WATER SERVICE LINES SHALL EXTEND BEYOND METER PITS SO AS TO GET PAST ALL DRY UTILITIES. SERVICE ENDS TO BE PLUGGED AND MARKED IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-03  
 ALL BEND, TEES, FITTINGS, DEAD ENDS, ETC., SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS OR MECHANICAL THRUST RESTRAINTS IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-08 AND W-08A.  
 WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)

DEFLECT PIPE DOWN APPROXIMATELY AS SHOWN SO AS TO MAINTAIN A FOOT AND A HALF CLEARANCE FROM THE BOTTOM OF THE STORM DRAIN LINE

REVISION $\Delta$	DATE	DRAWN BY	JCS	DATE	2018	SCALES:	PLAN & PROFILE
REVISION $\Delta$		DESIGNED BY	JCS	DATE	2018	0' = 10' HORIZONTAL	
REVISION $\Delta$		CHECKED BY	TCP	DATE	2018	0' = 25' VERTICAL	
REVISION $\Delta$		APPROVED BY	TCP	DATE	2018		

DESCRIPTION

10+00 11+00 12+00 13+00 14+00 15+00

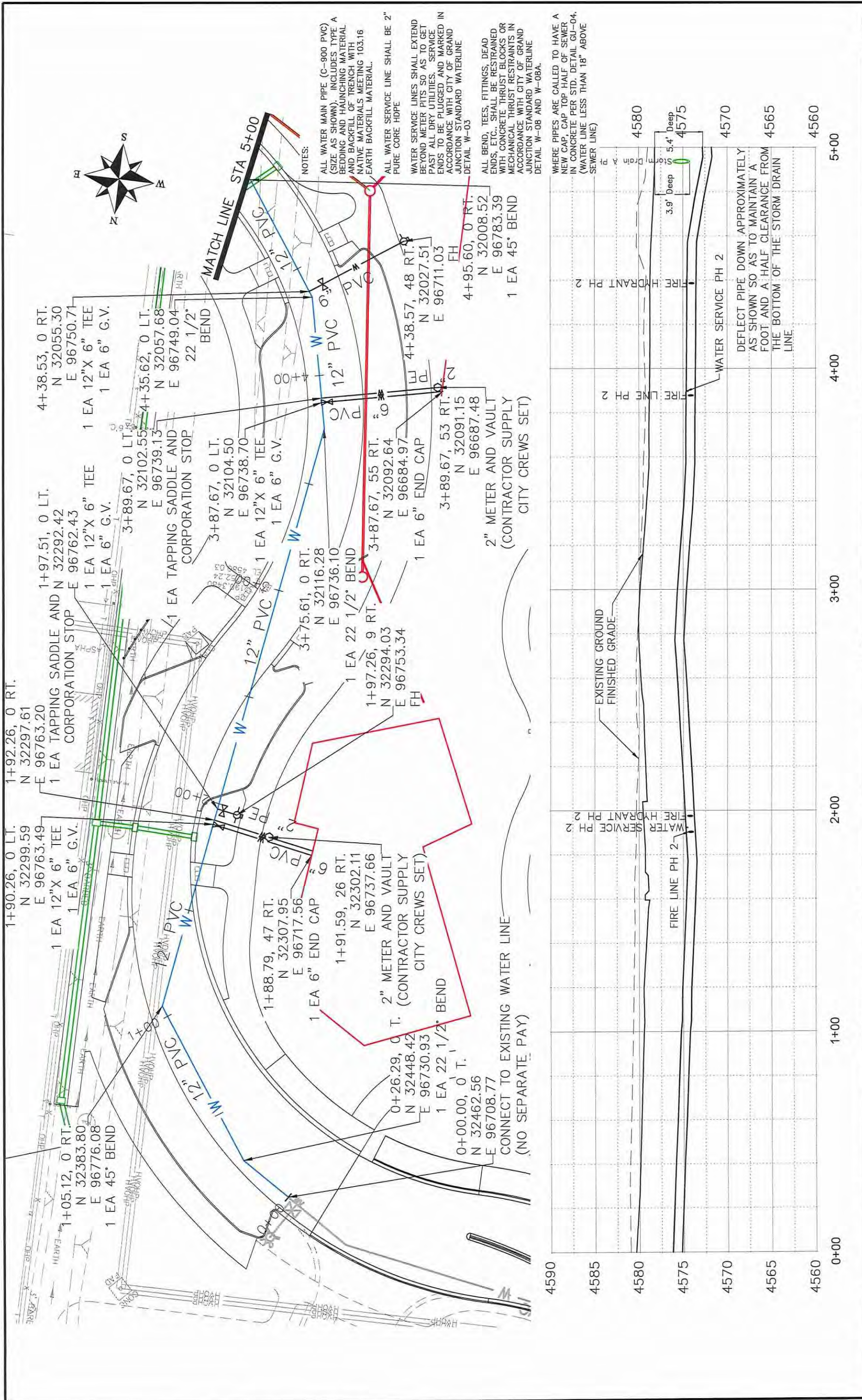
CITY OF **Grand Junction** COLORADO

PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK WATERLINE PLAN AND PROFILE

11



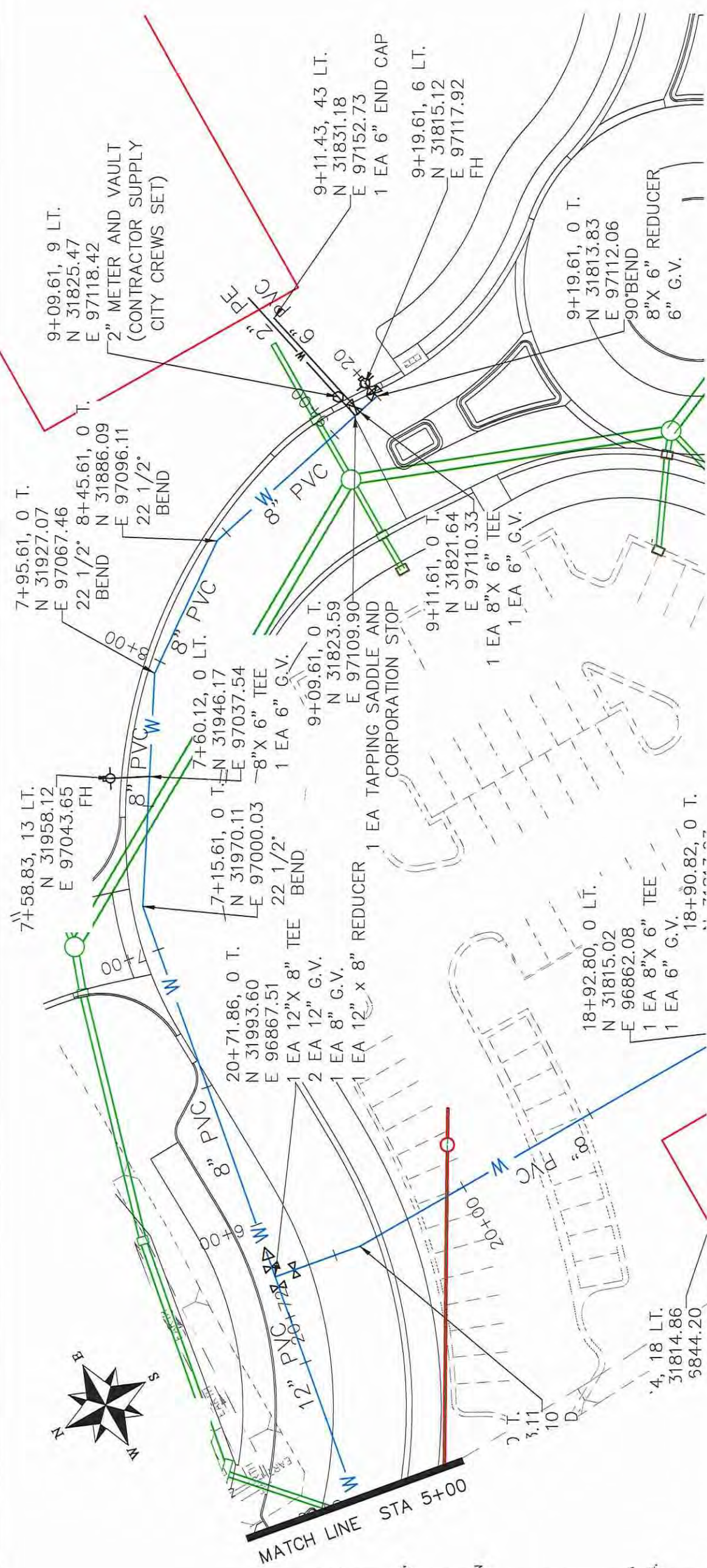


REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018

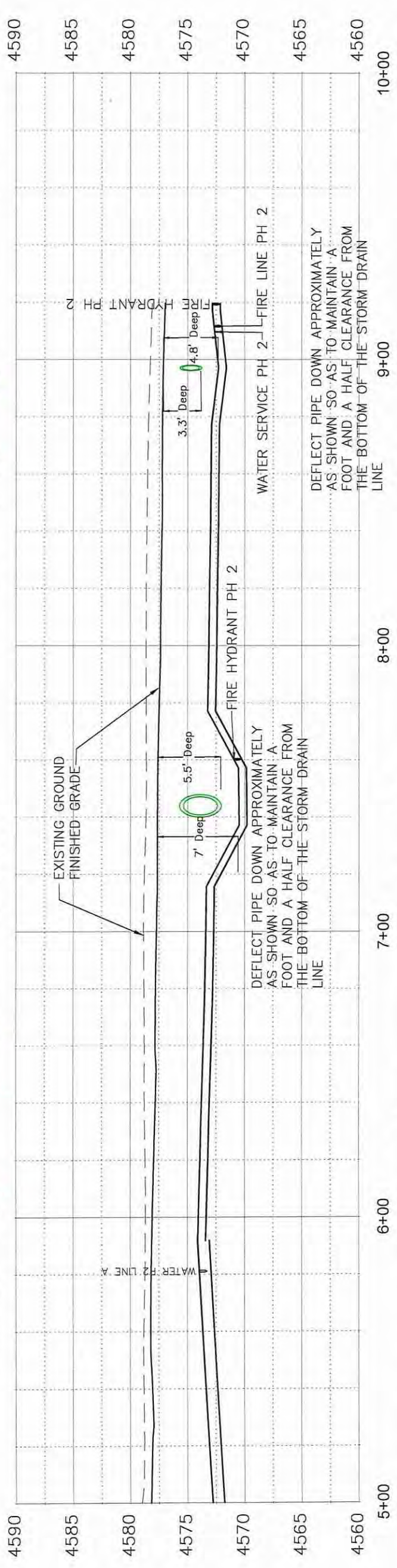
SCALES: PLAN & PROFILE  
 1" = 50' HORIZONTAL  
 1" = 25' VERTICAL

CITY OF  
**Grand Junction**  
 COLORADO

PUBLIC WORKS  
 ENGINEERING DIVISION



- NOTES:**
- ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN), INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
  - ALL WATER SERVICE LINE SHALL BE 2" PURE CORE HDPE
  - WATER SERVICE LINES SHALL EXTEND BEYOND METER PITS SO AS TO GET PAST ALL DRY UTILITIES. SERVICE ENDS TO BE PLUGGED AND MARKED IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-03
  - ALL BEND, TEES, FITTINGS, DEAD ENDS, ETC., SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS OR MECHANICAL THRUST RESTRAINTS IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD WATERLINE DETAIL W-08 AND W-08A.
  - WHERE PIPES ARE CALLED TO HAVE A NEW CAP, CAP TOP HALF OF SEWER IN CONCRETE PER STD. DETAIL GU-04. (WATER LINE LESS THAN 18" ABOVE SEWER LINE)



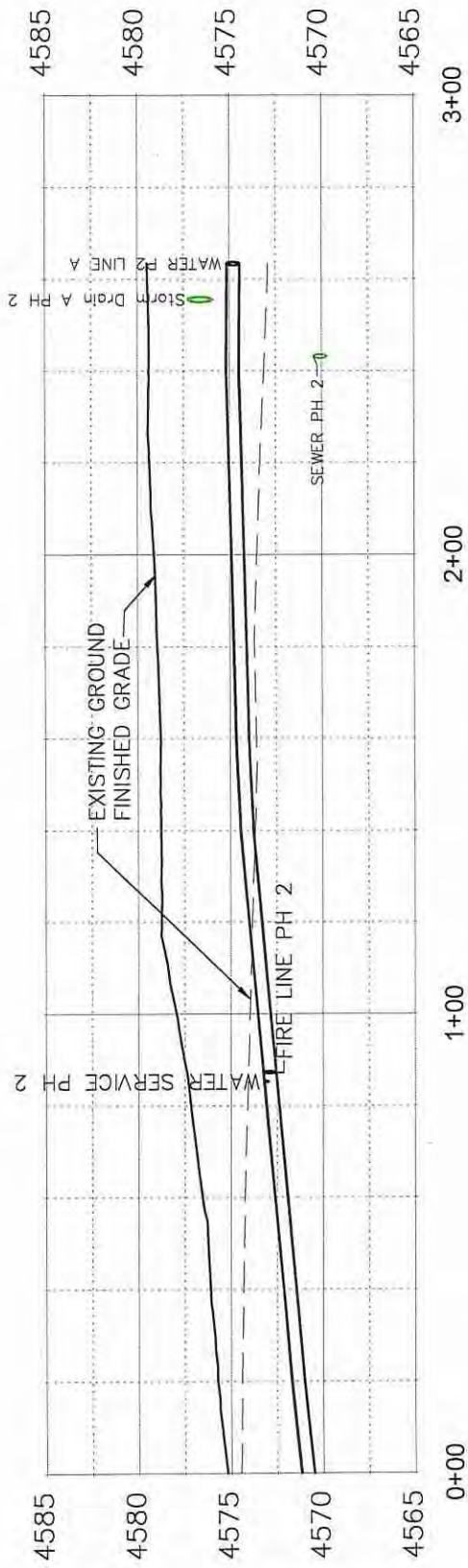
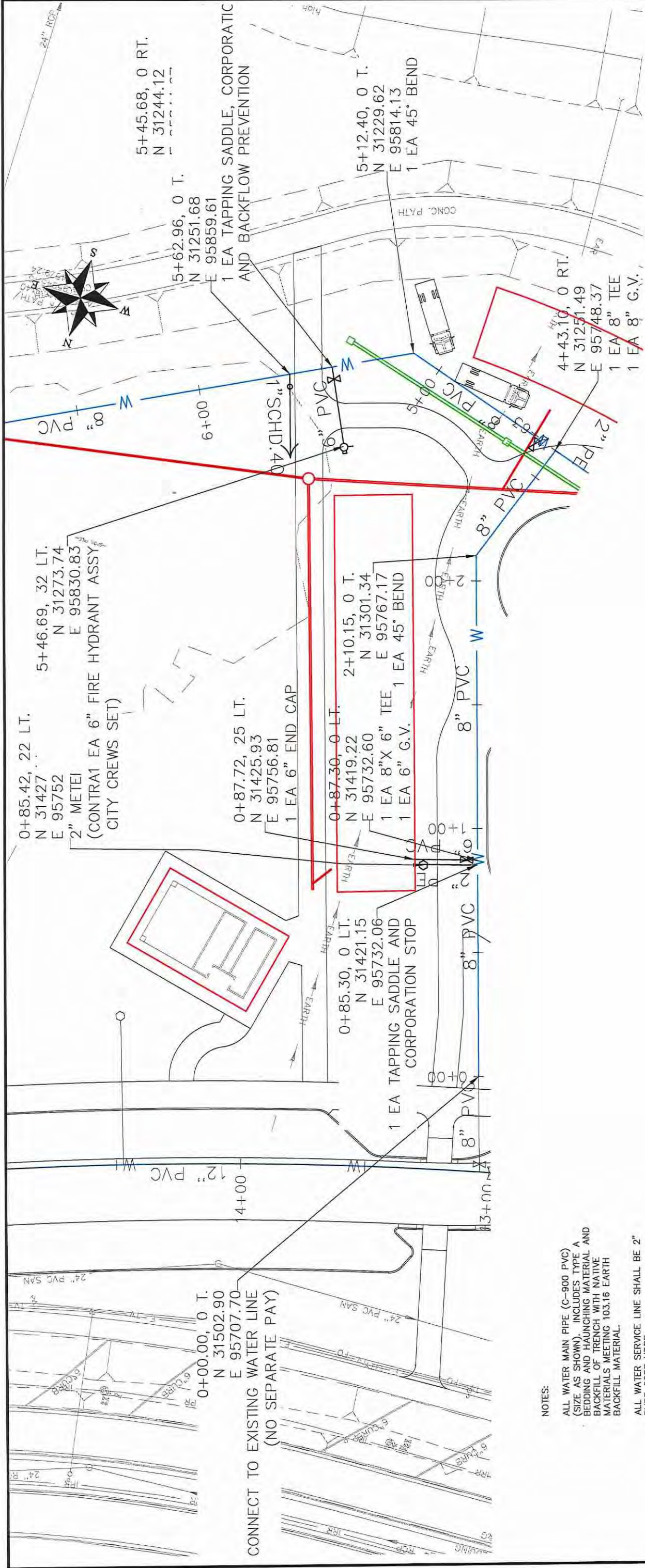
REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018



**PUBLIC WORKS  
ENGINEERING DIVISION**

**LAS COLONIAS BUSINESS PARK  
WATERLINE PLAN AND PROFILE**





- NOTES:**
- ALL WATER MAIN PIPE (C-900 PVC) (SIZE AS SHOWN). INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.
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REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018



**PUBLIC WORKS  
ENGINEERING DIVISION**

**LAS COLONIAS BUSINESS PARK  
WATERLINE PLAN AND PROFILE**

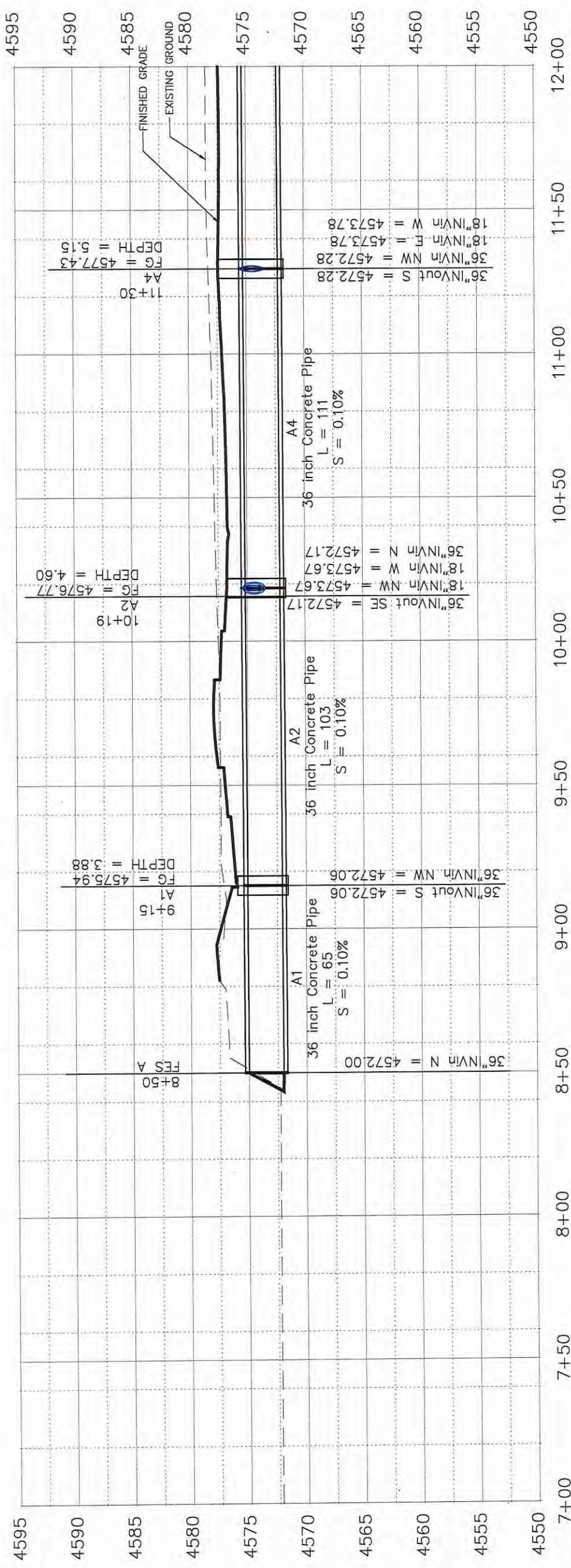
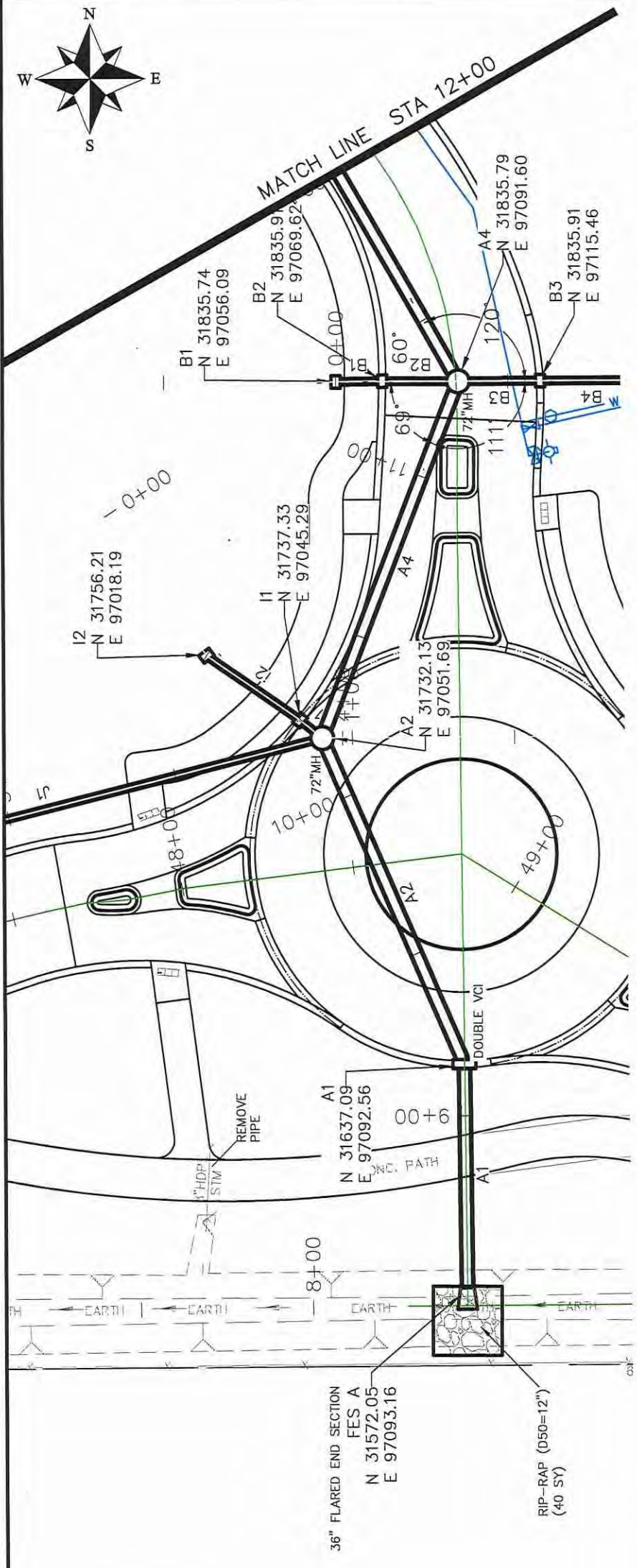


NOTES:

ALL NEW STORM DRAIN MANHOLES (MH) SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).

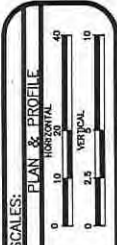
ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS (VCI) OR AREA INLET (AI) PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



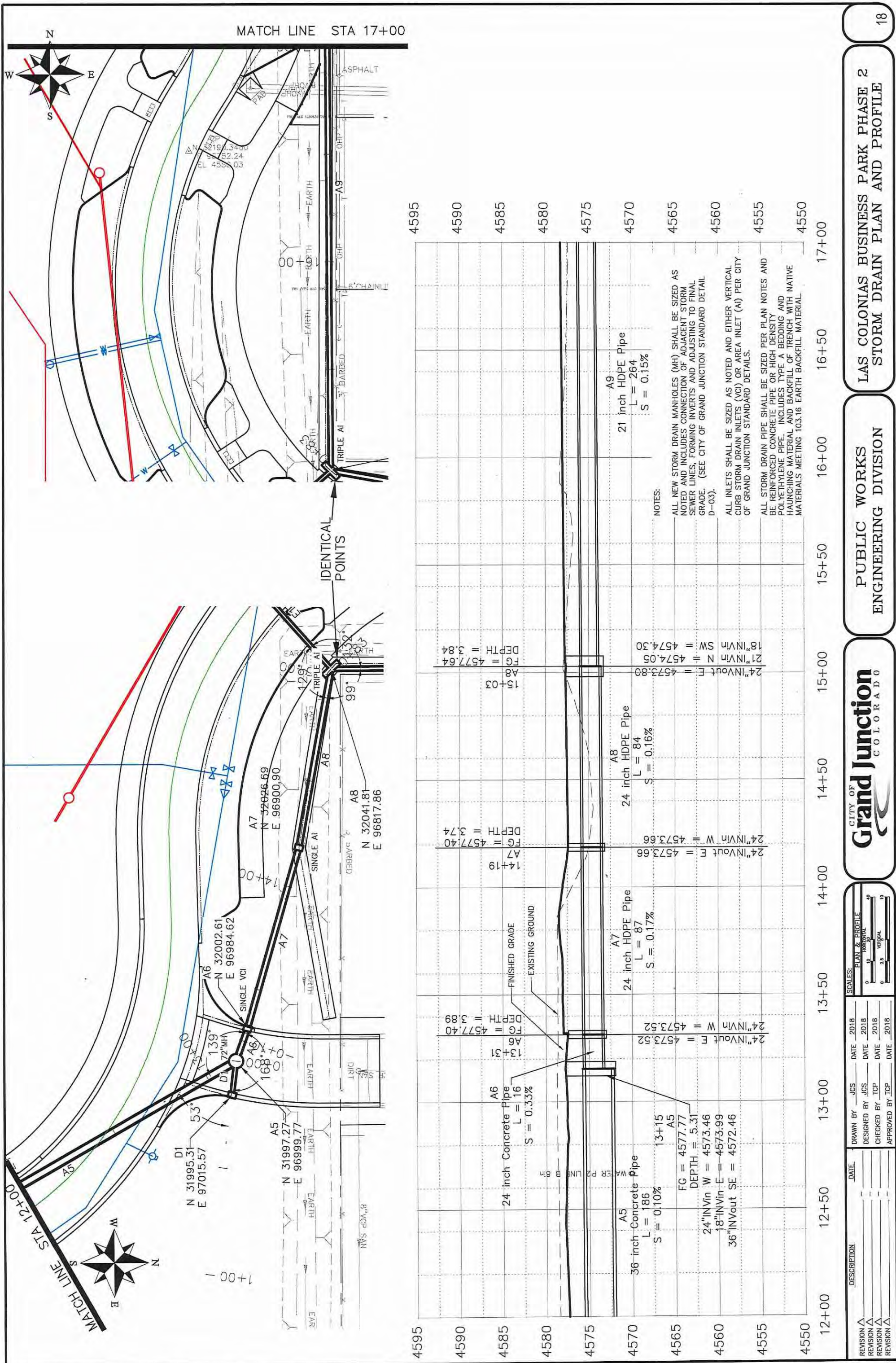
REVISION	DESCRIPTION	DATE

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	ICP	DATE	2018
APPROVED BY	ICP	DATE	2018



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ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
STORM DRAIN PLAN AND PROFILE



REVISION	DATE	DESCRIPTION

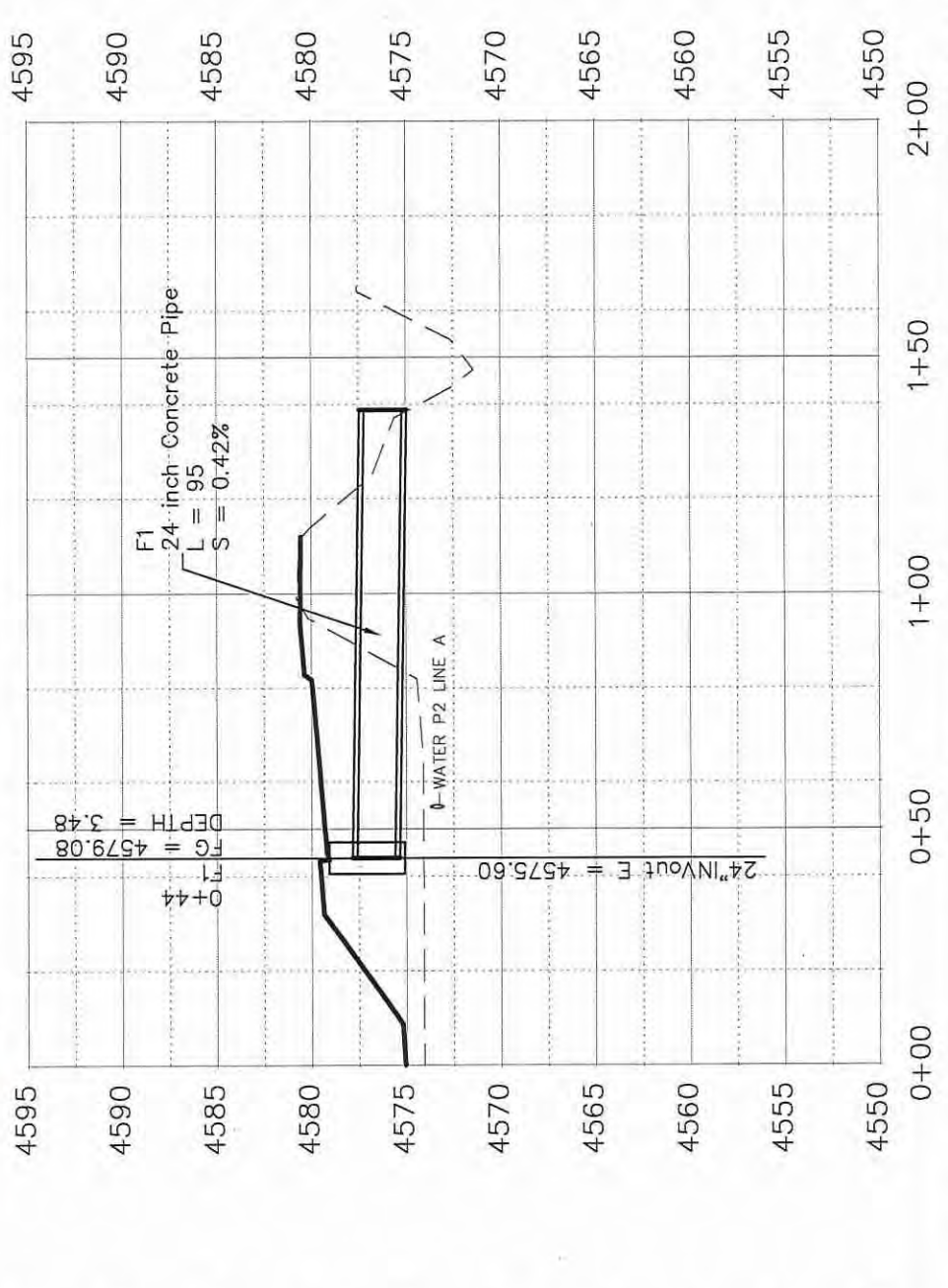
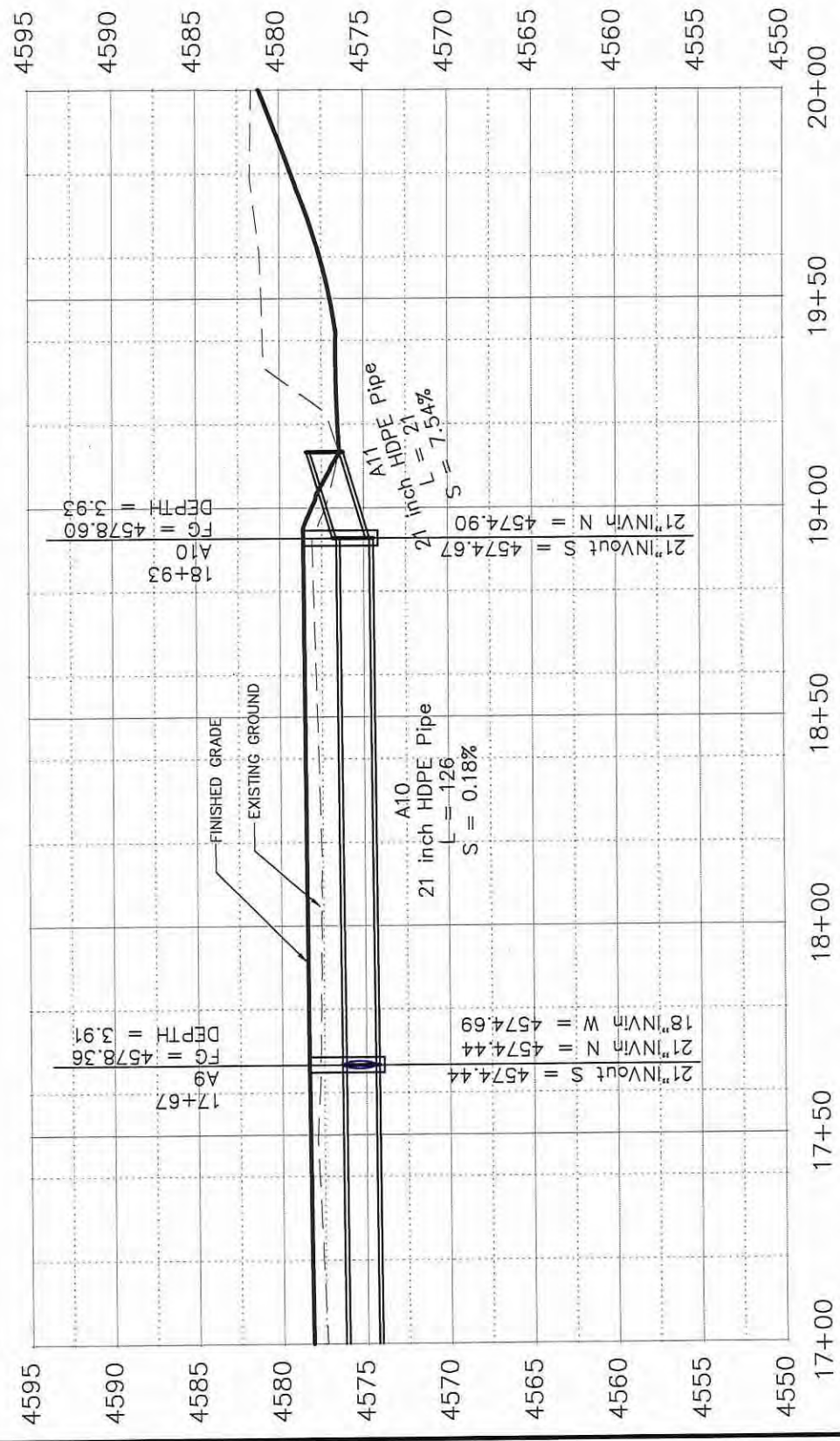
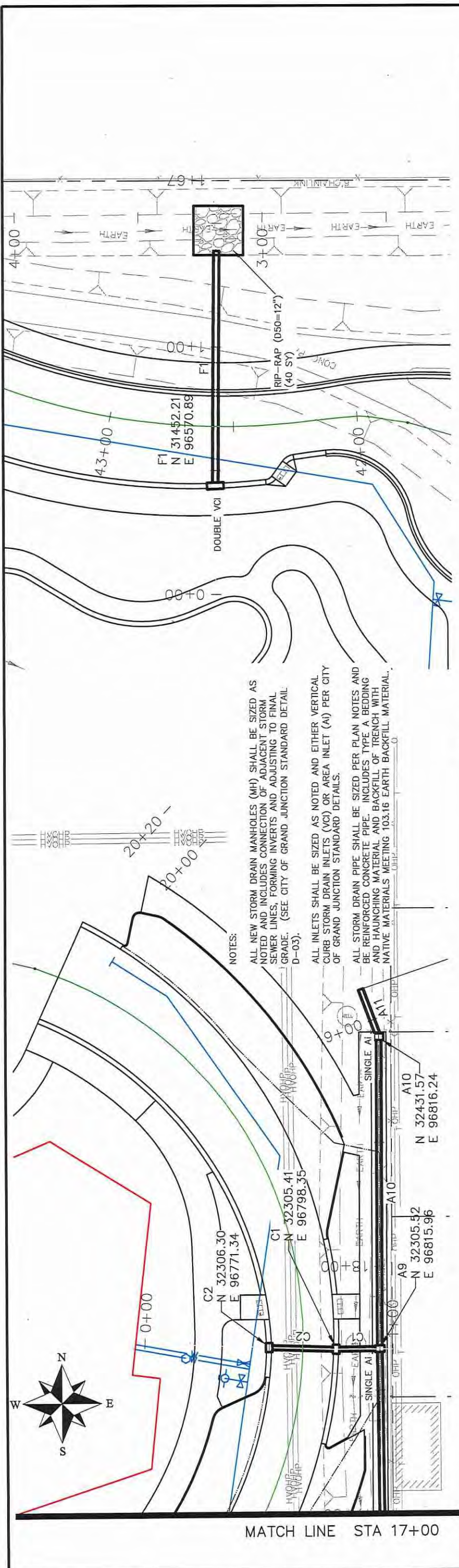
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DATE	DATE	DATE	DATE



**PUBLIC WORKS ENGINEERING DIVISION**

**LAS COLONIAS BUSINESS PARK PHASE 2 STORM DRAIN PLAN AND PROFILE**

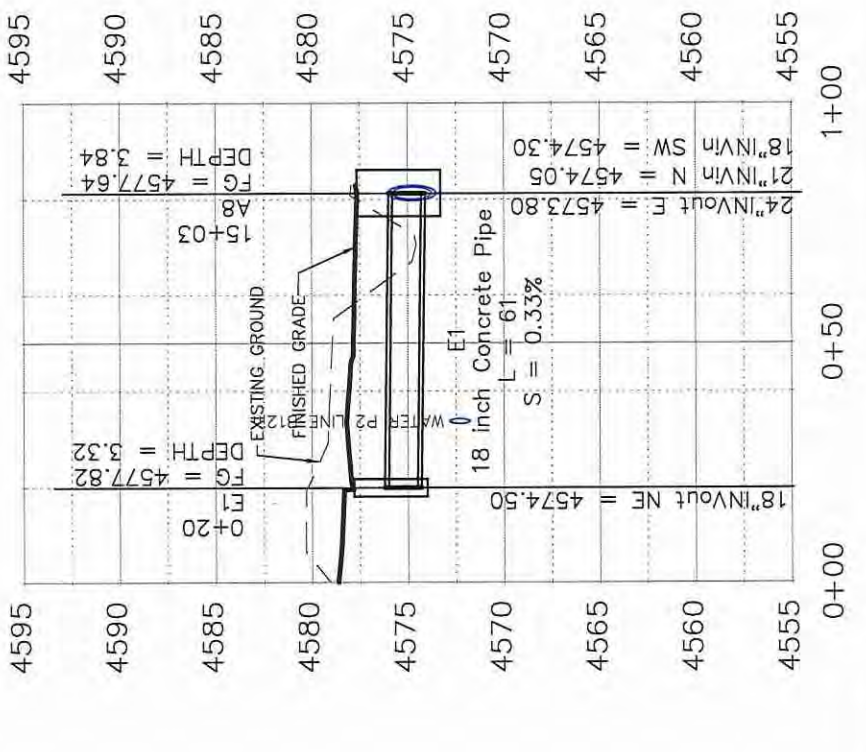
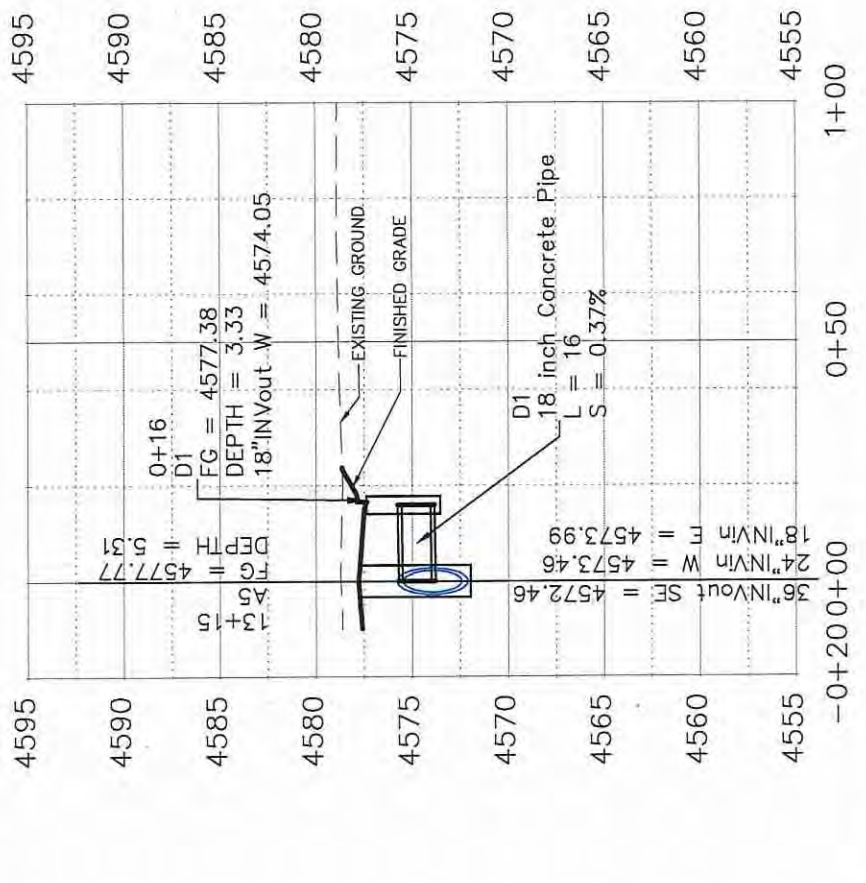
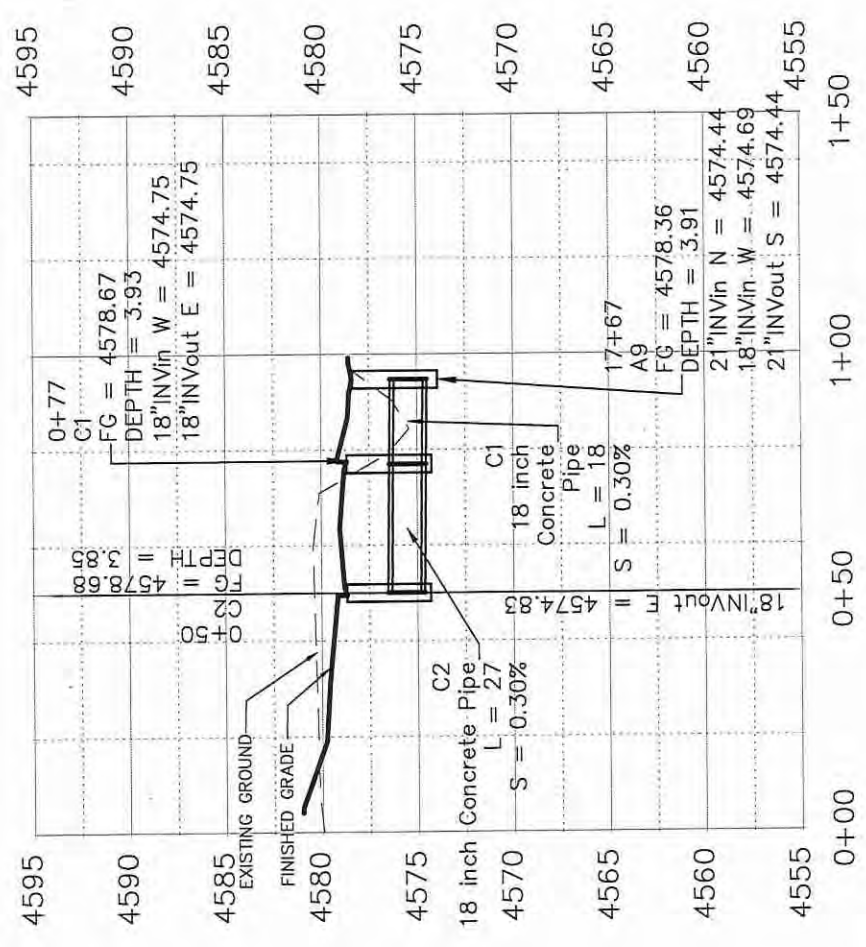
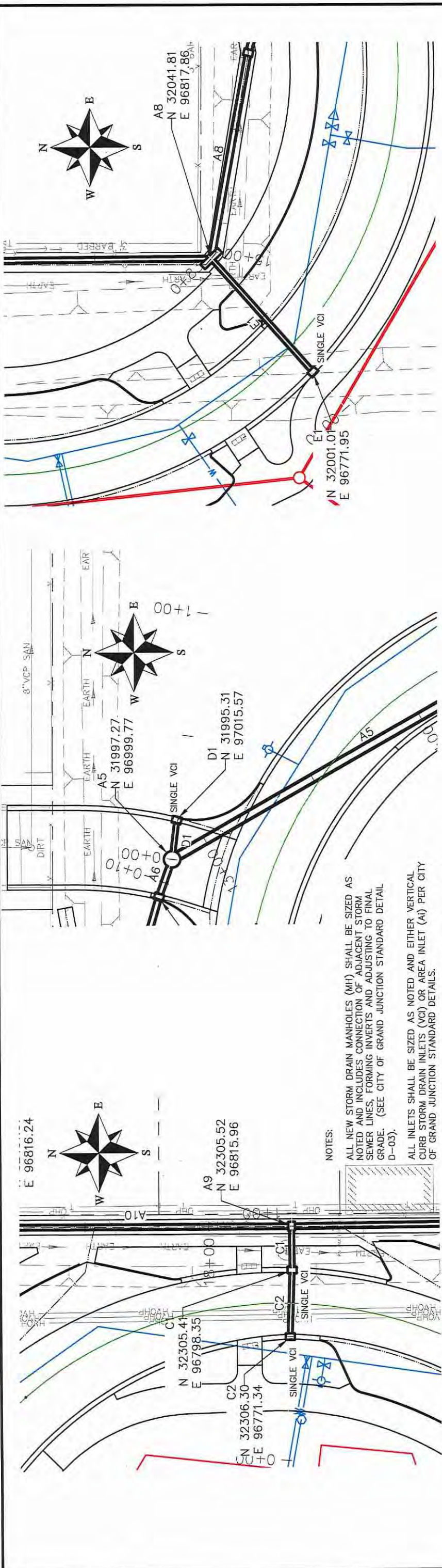


REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018



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ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
STORM DRAIN PLAN AND PROFILE



REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018

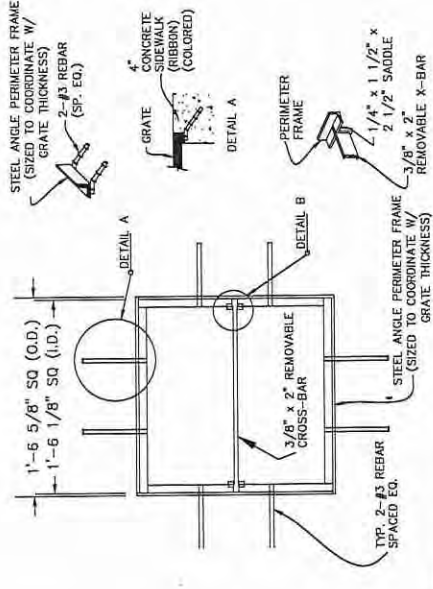
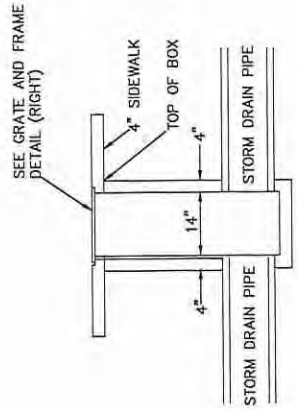


PUBLIC WORKS  
ENGINEERING DIVISION

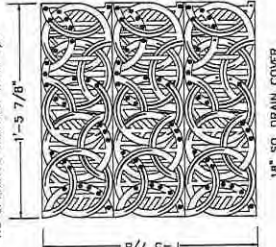
LAS COLONIAS BUSINESS PARK PHASE 2  
STORM DRAIN PLAN AND PROFILE

NOTES:  
 INLETS SHALL BE SPECIAL SMALL AREA INLETS (SP SMALL AI) PER DETAILS THIS PAGE  
 OR  
 VERTICAL CURB STORM DRAIN INLETS (VCI) PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



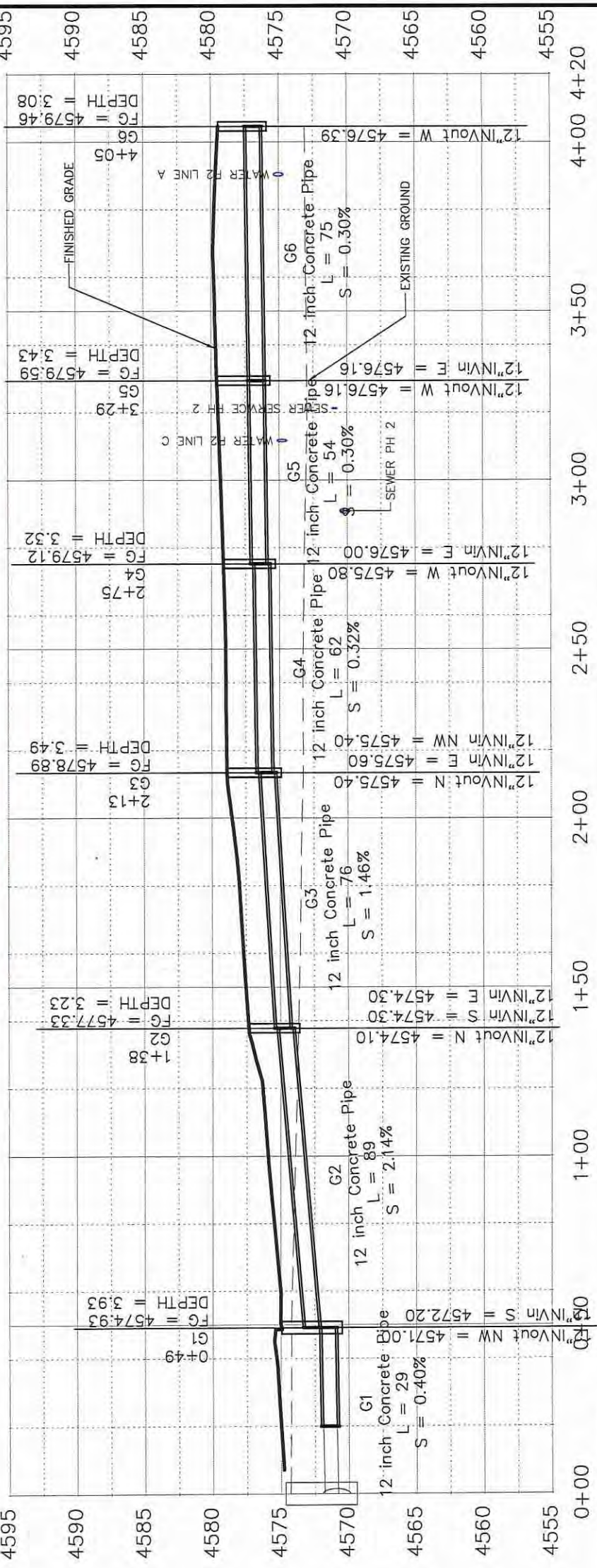
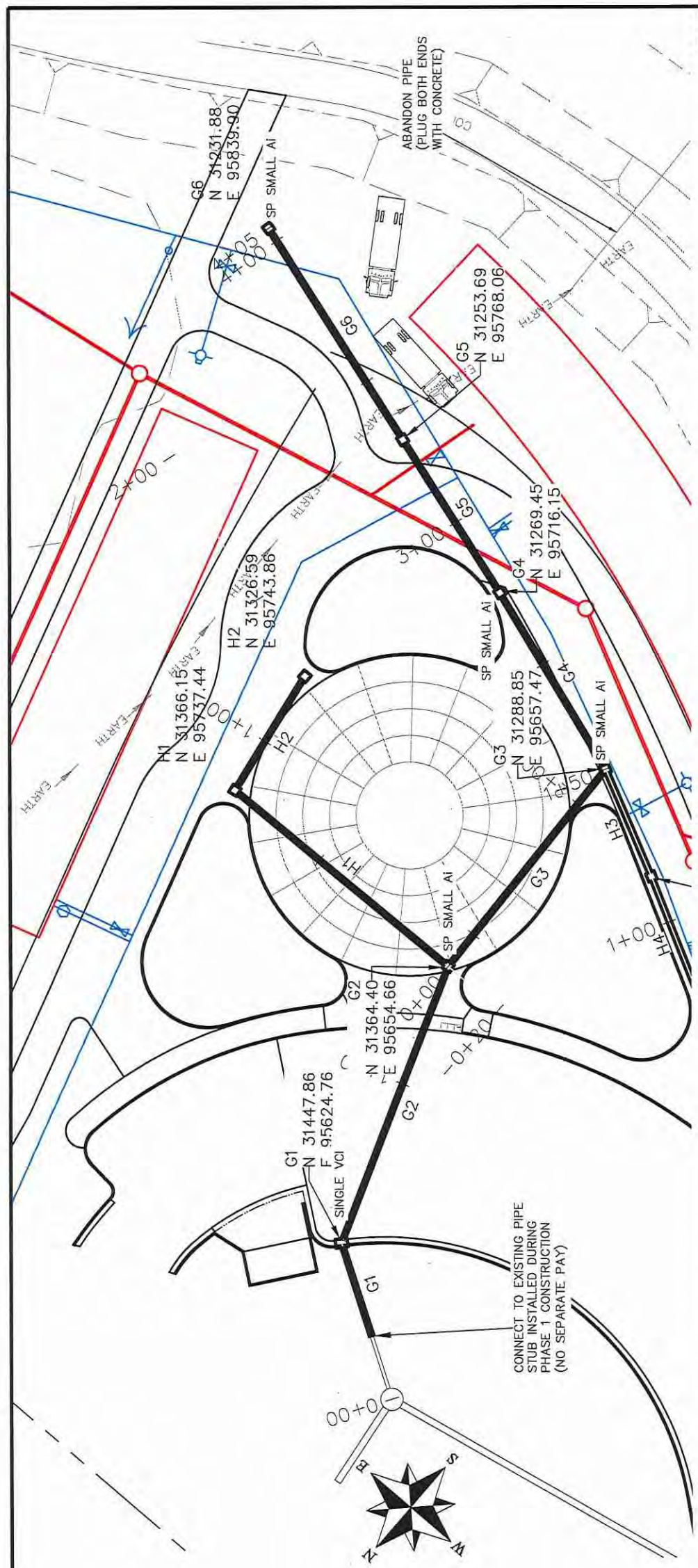
NOTES:  
 1. CAST IN ONE PIECE, 3/4" THICK  
 2. NO OPENINGS GREATER THAN 3/8"



NOTE

1. URBAN ACCESSORIES 18 INCH SQ. MEDIUM DUTY "S" FRAME, UN APPROVED EQUAL.
2. URBAN ACCESSORIES OF TITLE-24, 18 INCH SQ. DRAIN COVER OR APPROVED EQUAL.

REVISION	DESCRIPTION	DATE	DATE	DATE	DATE
1		JCS	2018	JCS	2018
2		TCP	2018	TCP	2018
3		TCP	2018	TCP	2018



GRATE FRAME FOR SPECIAL SMALL AREA INLET

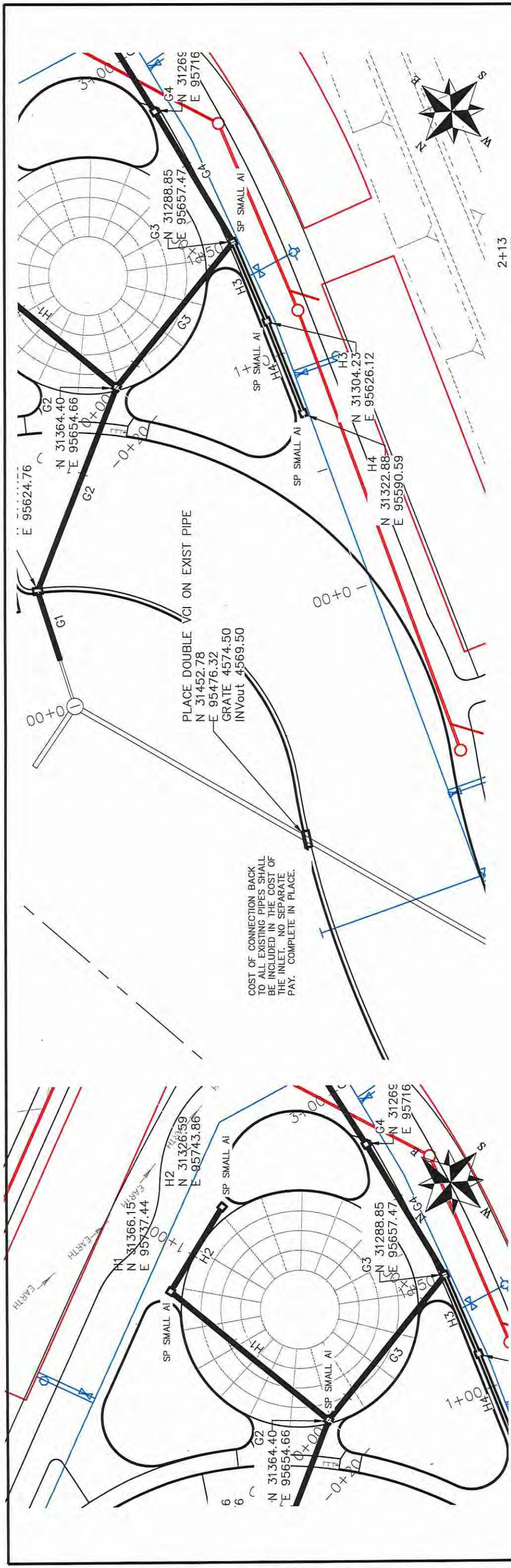
SCALES:

PLAN & PROFILE	1" = 20'
HORIZONTAL	1" = 20'
VERTICAL	1" = 2.5'



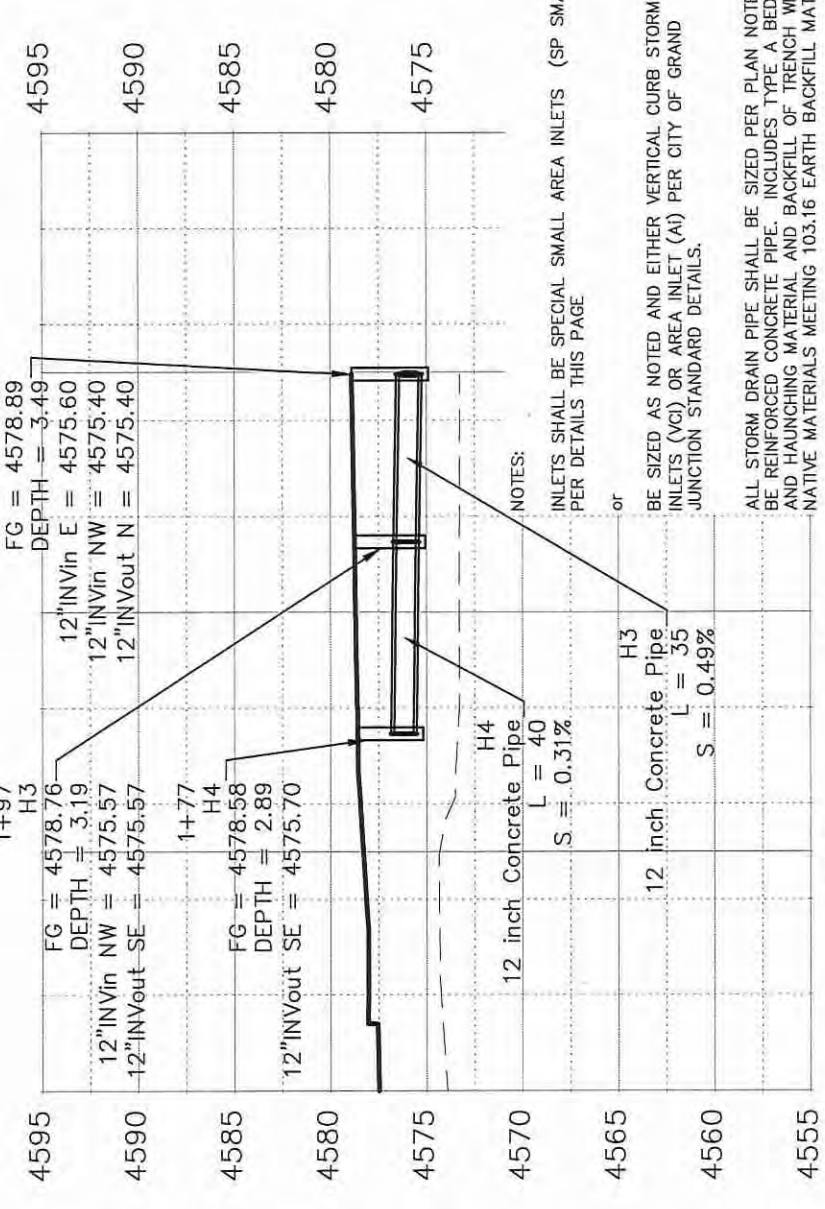
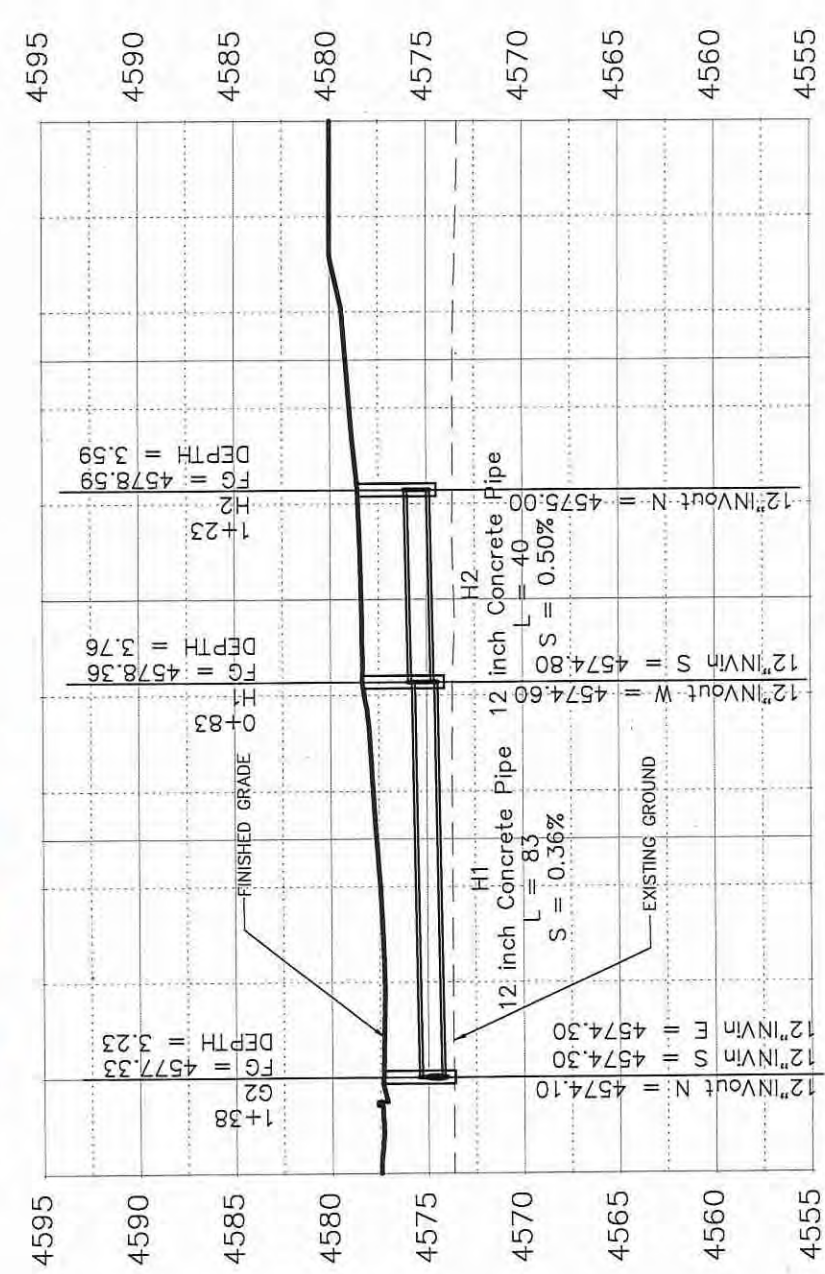
PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 1A  
 STORM DRAIN PLAN AND PROFILE



PLACE DOUBLE VGI ON EXIST PIPE  
 N 31452.78  
 E 95476.32  
 GRATE 4574.50  
 INVout 4569.50

COST OF CONNECTION BACK TO ALL EXISTING PIPES SHALL BE INCLUDED IN THE COST OF THE INLET. NO SEPARATE PAY. COMPLETE IN PLACE.



NOTES:  
 INLETS SHALL BE SPECIAL SMALL AREA INLETS (SP SMALL AI) PER DETAILS THIS PAGE  
 or  
 BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS (VGI) OR AREA INLET (AI) PER CITY OF GRAND JUNCTION STANDARD DETAILS.  
 ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

REVISION	DATE	DESCRIPTION

DATE	DATE	DATE	DATE

SCALE	SCALE
PLAN & PROFILE	PLAN & PROFILE
1" = 20'	1" = 20'
1" = 20'	1" = 20'



PUBLIC WORKS  
 ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 1A  
 STORM DRAIN PLAN AND PROFILE



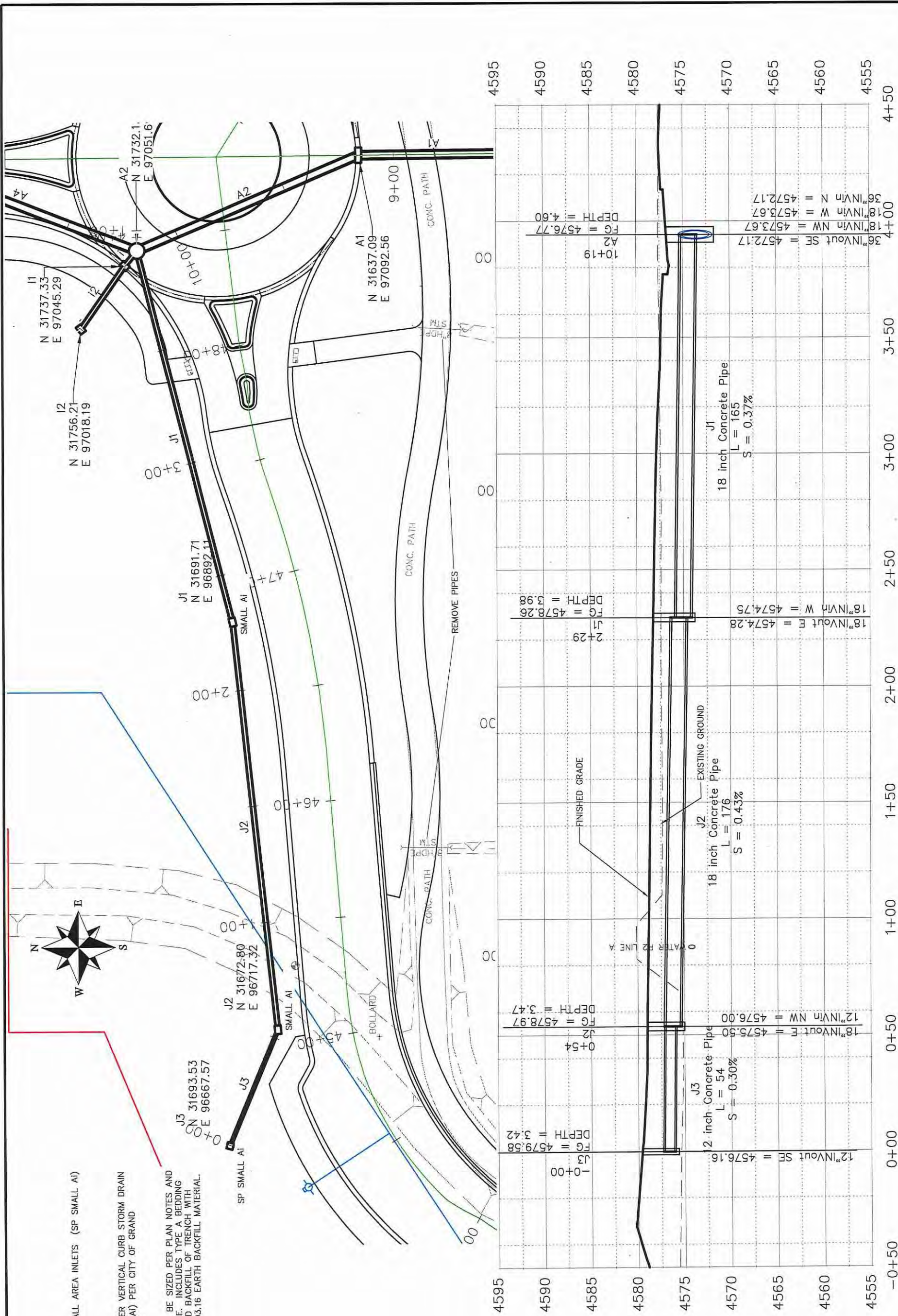
NOTES:

INLETS SHALL BE SPECIAL SMALL AREA INLETS (SP SMALL AI) PER DETAILS THIS PAGE

or

BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS (VCI) OR AREA INLET (AI) PER CITY OF GRAND JUNCTION STANDARD DETAILS.

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REVISION	DATE	DESCRIPTION

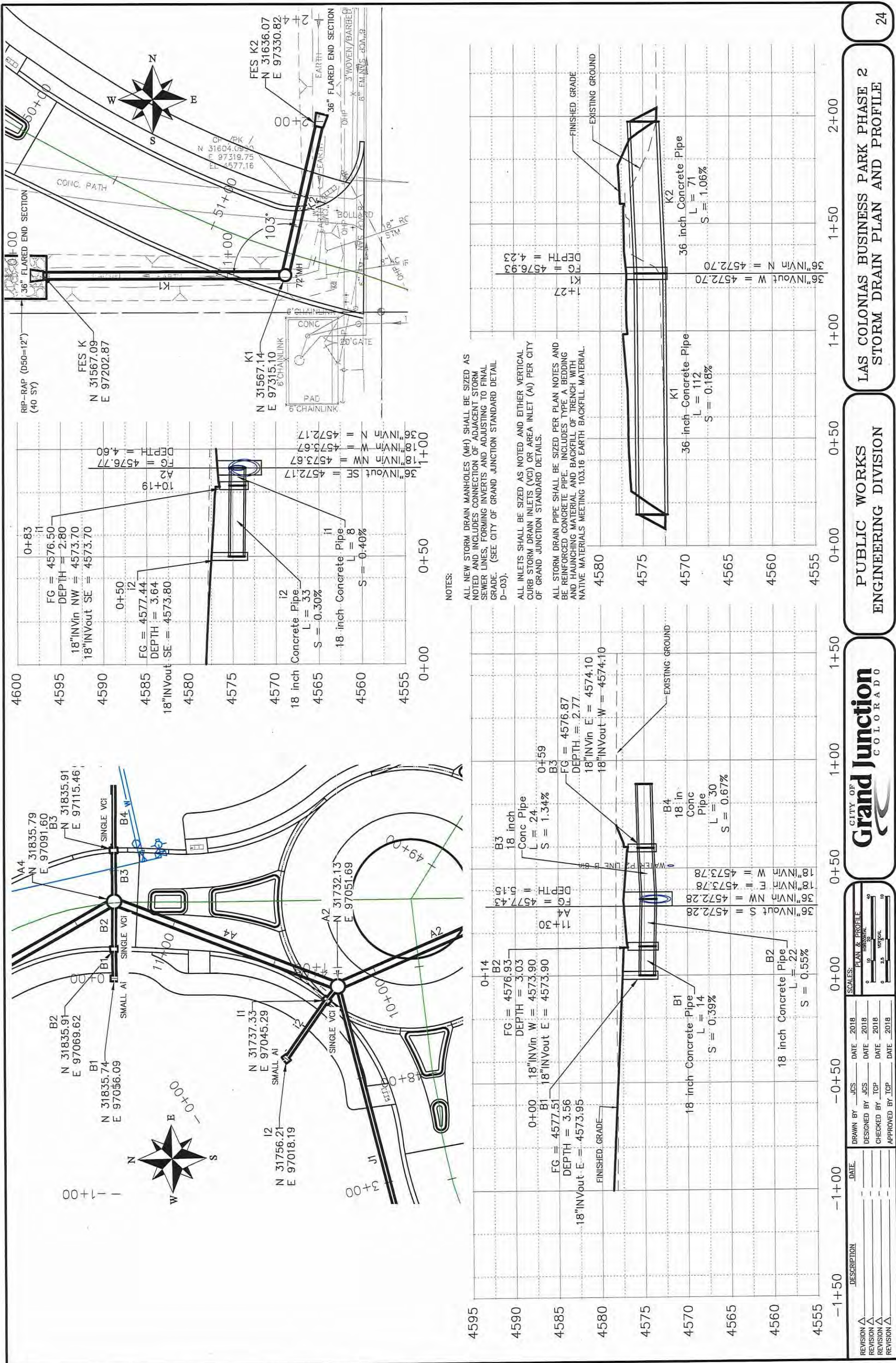
DRAWN BY	DATE	JCS
DESIGNED BY	DATE	JCS
CHECKED BY	DATE	TCP
APPROVED BY	DATE	TCP

SCALES:	PLAN & PROFILE
0	1" = 20'
0	1" = 25'
0	1" = 30'
0	1" = 40'
0	1" = 50'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 1A  
STORM DRAIN PLAN AND PROFILE



**NOTES:**

ALL NEW STORM DRAIN MANHOLES (MH) SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).

ALL INLETS SHALL BE SIZED AS NOTED AND EITHER VERTICAL CURB STORM DRAIN INLETS (VCI) OR AREA INLET (AI) PER CITY OF GRAND JUNCTION STANDARD DETAILS.

ALL STORM DRAIN PIPE SHALL BE SIZED PER PLAN NOTES AND BE REINFORCED CONCRETE PIPE. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

REVISION	DATE	DESCRIPTION

SCALES: PLAN & PROFILE  
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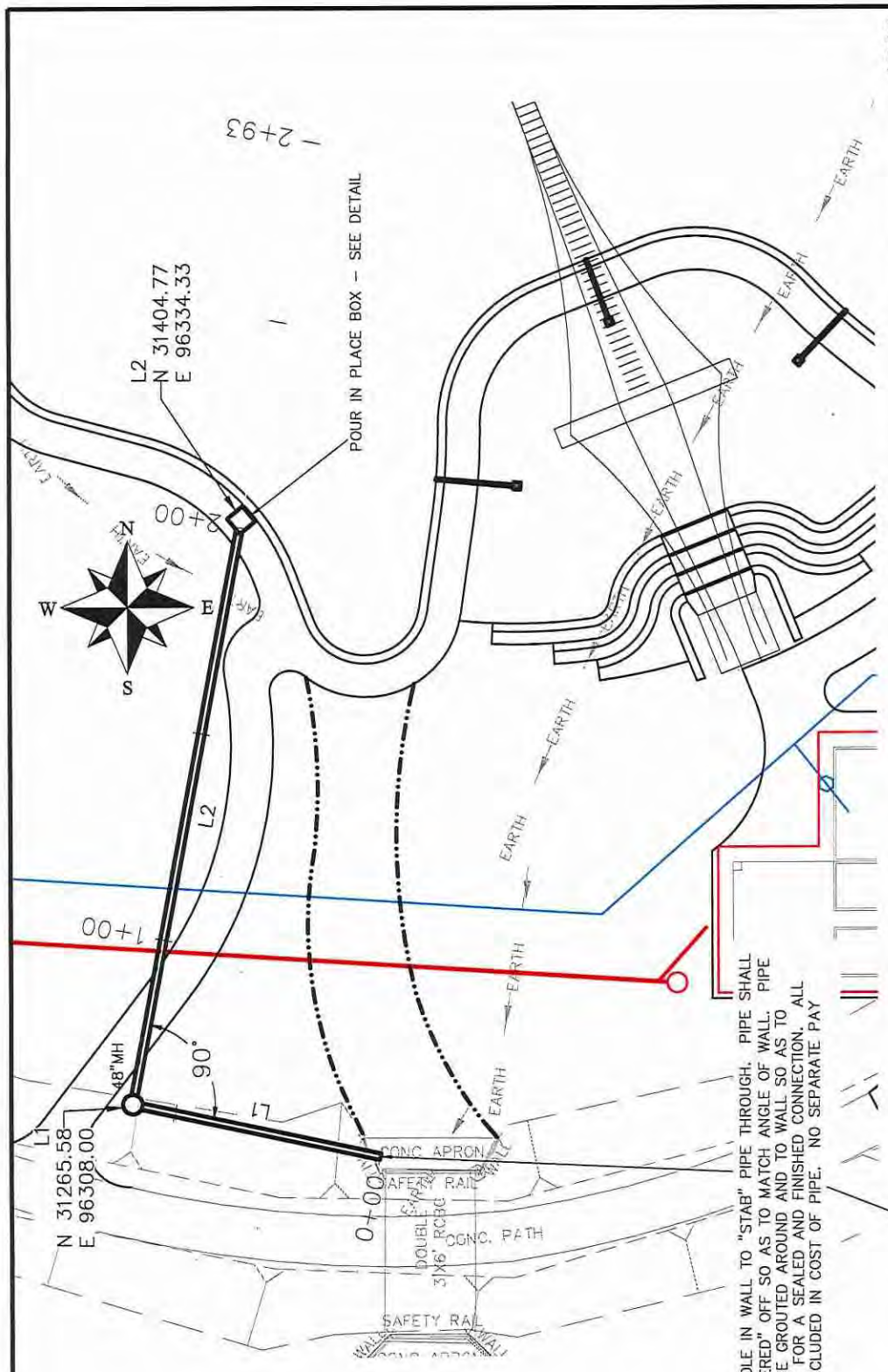
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**CITY OF Grand Junction**  
 COLORADO

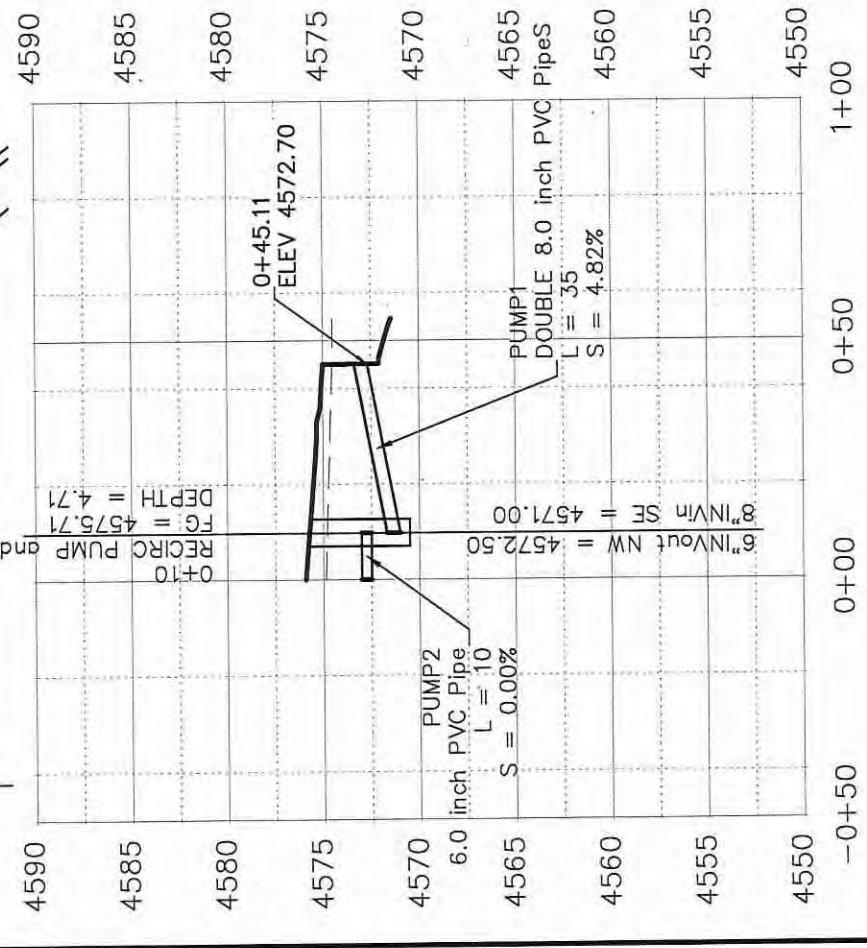
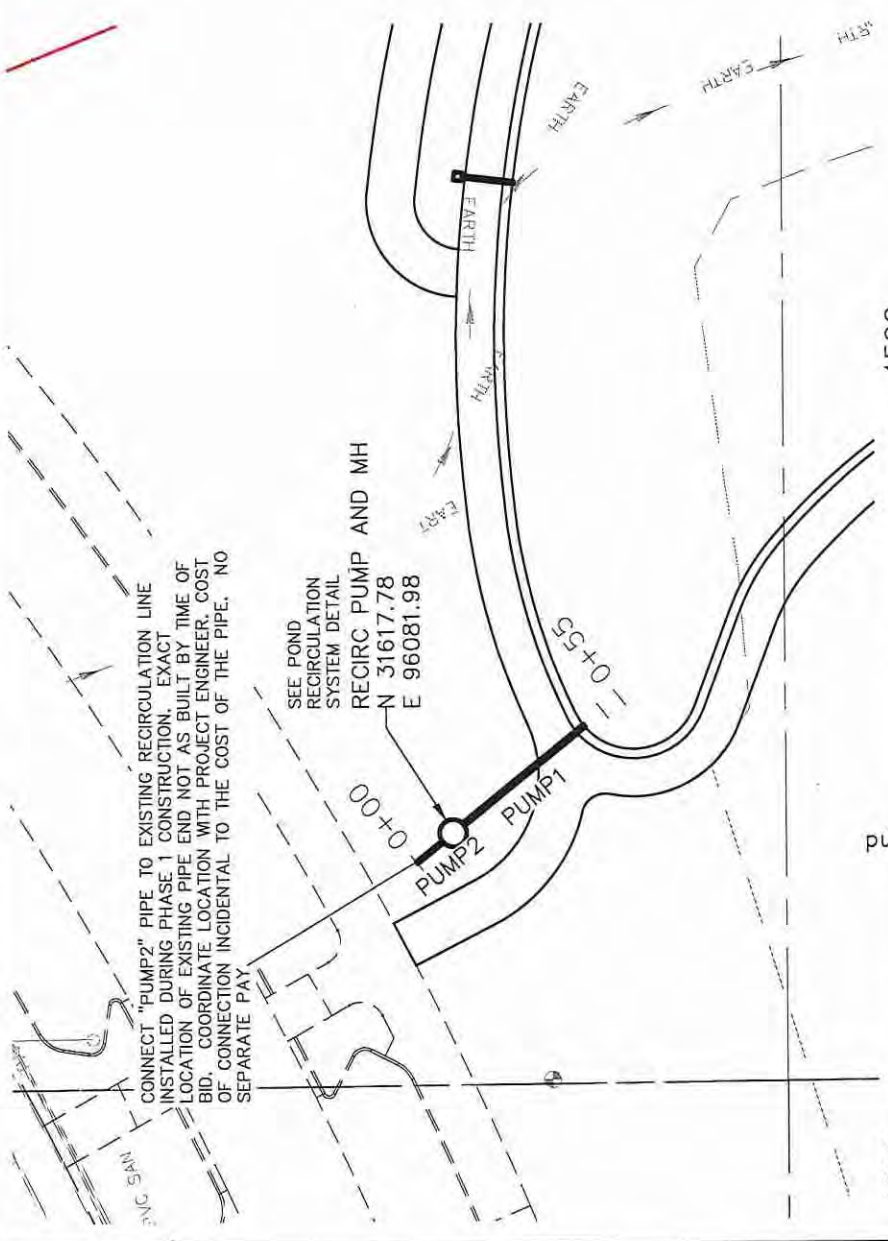
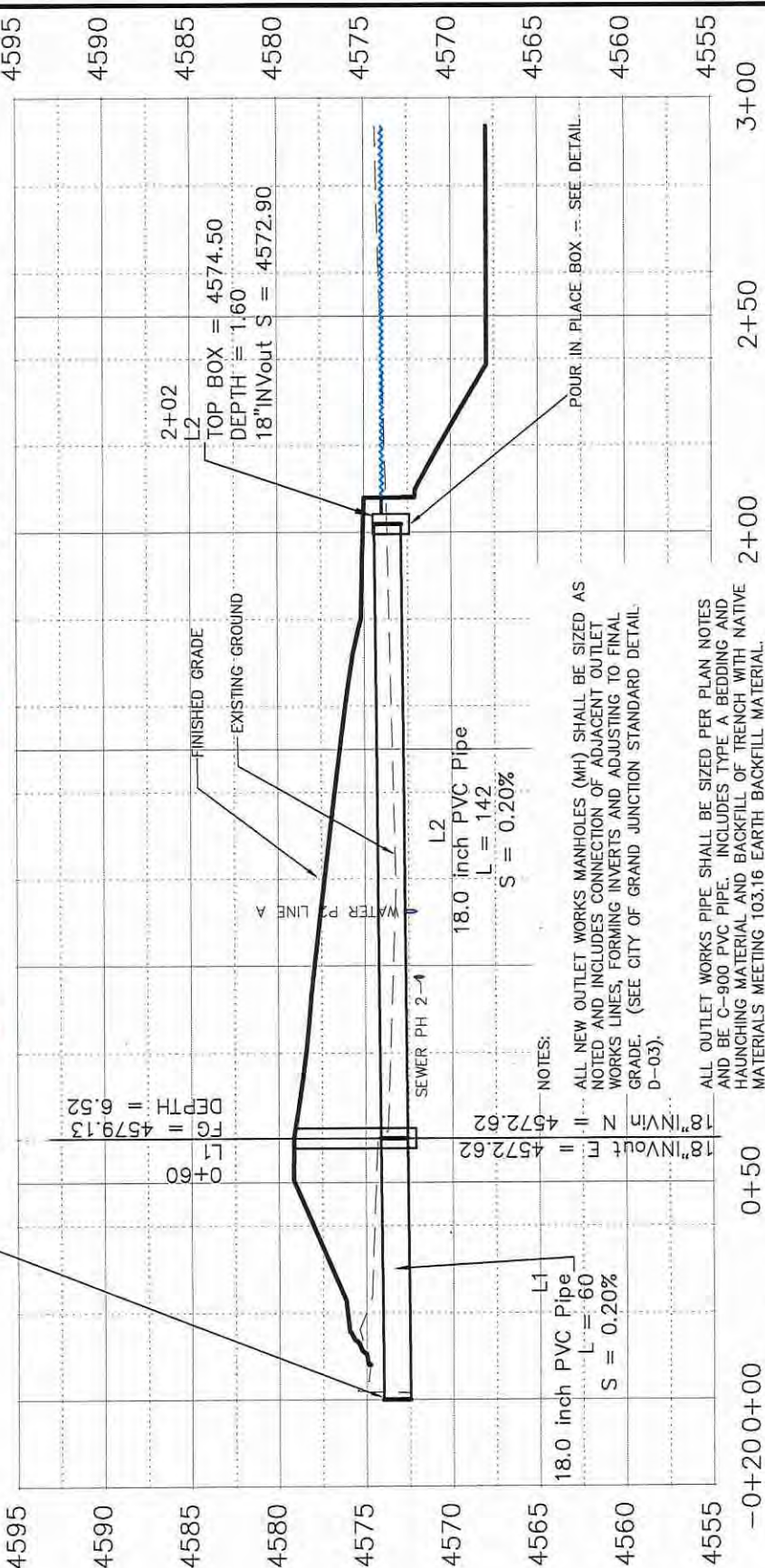
**PUBLIC WORKS**  
**ENGINEERING DIVISION**

**LAS COLONIAS BUSINESS PARK PHASE 2**  
**STORM DRAIN PLAN AND PROFILE**

24



CORE HOLE IN WALL TO "STAB" PIPE THROUGH. PIPE SHALL BE "MITERED" OFF SO AS TO MATCH ANGLE OF WALL. PIPE SHALL BE GROUTED AROUND AND TO WALL SO AS TO PROVIDE FOR A SEALED AND FINISHED CONNECTION. ALL WORK INCLUDED IN COST OF PIPE. NO SEPARATE PAY

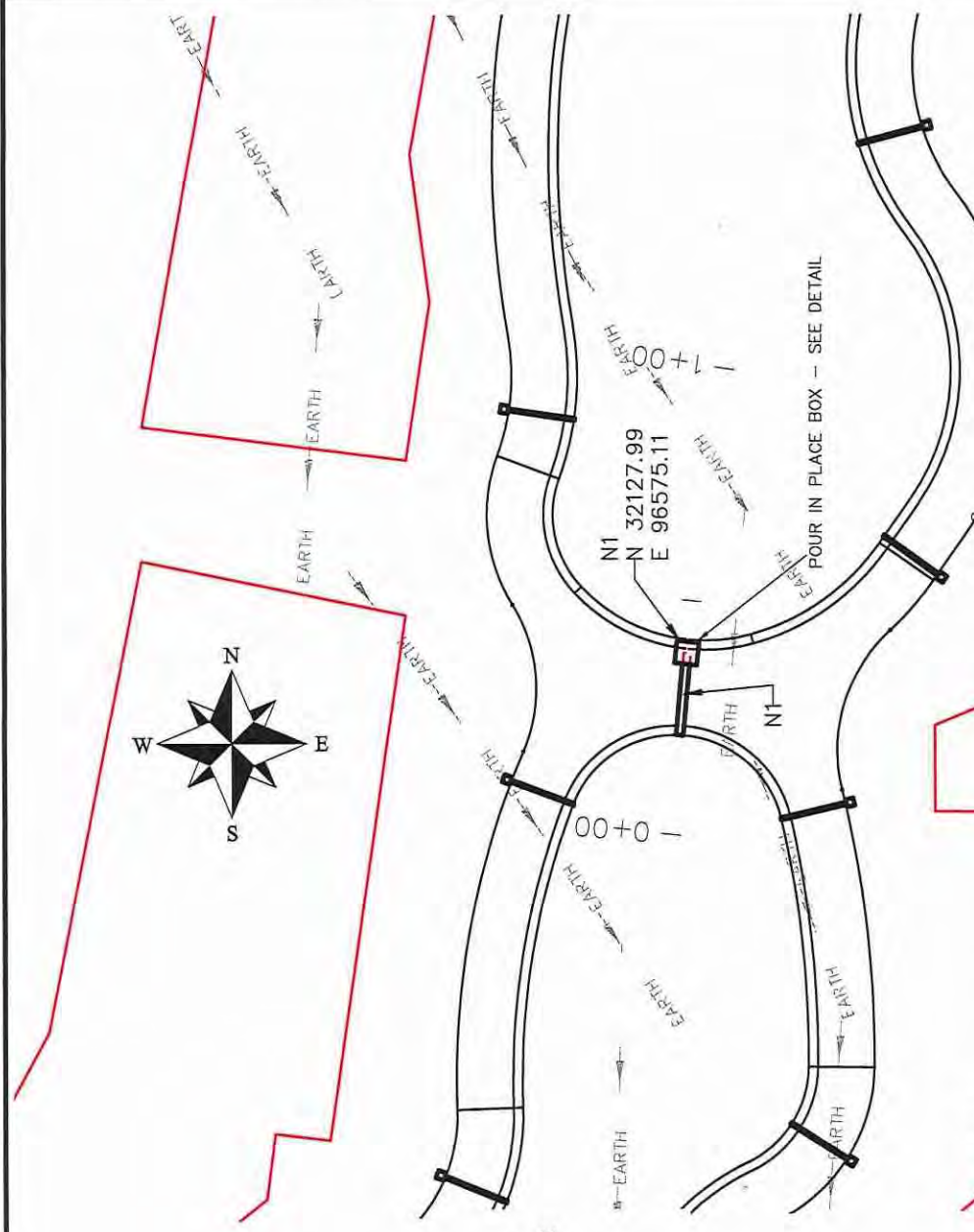


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REVISION Δ			CHECKED BY	TCP	DATE
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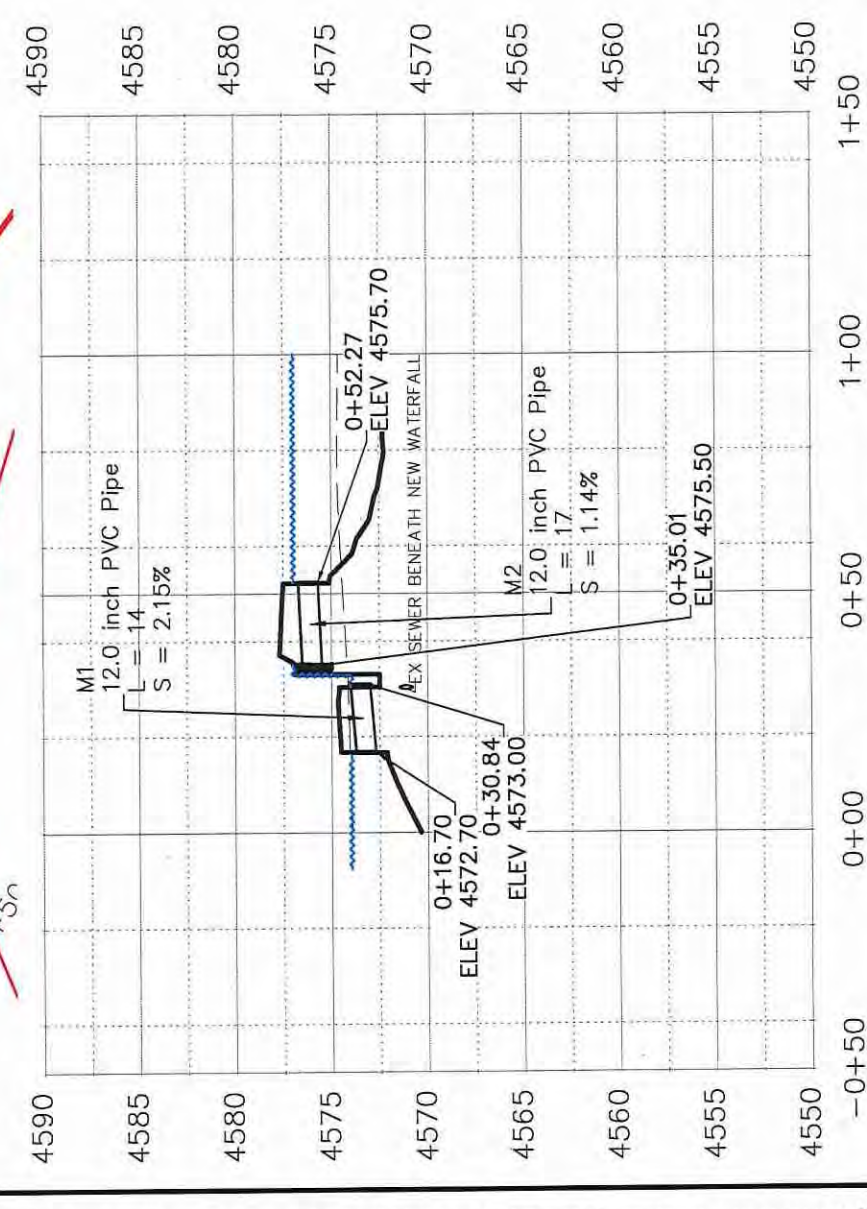
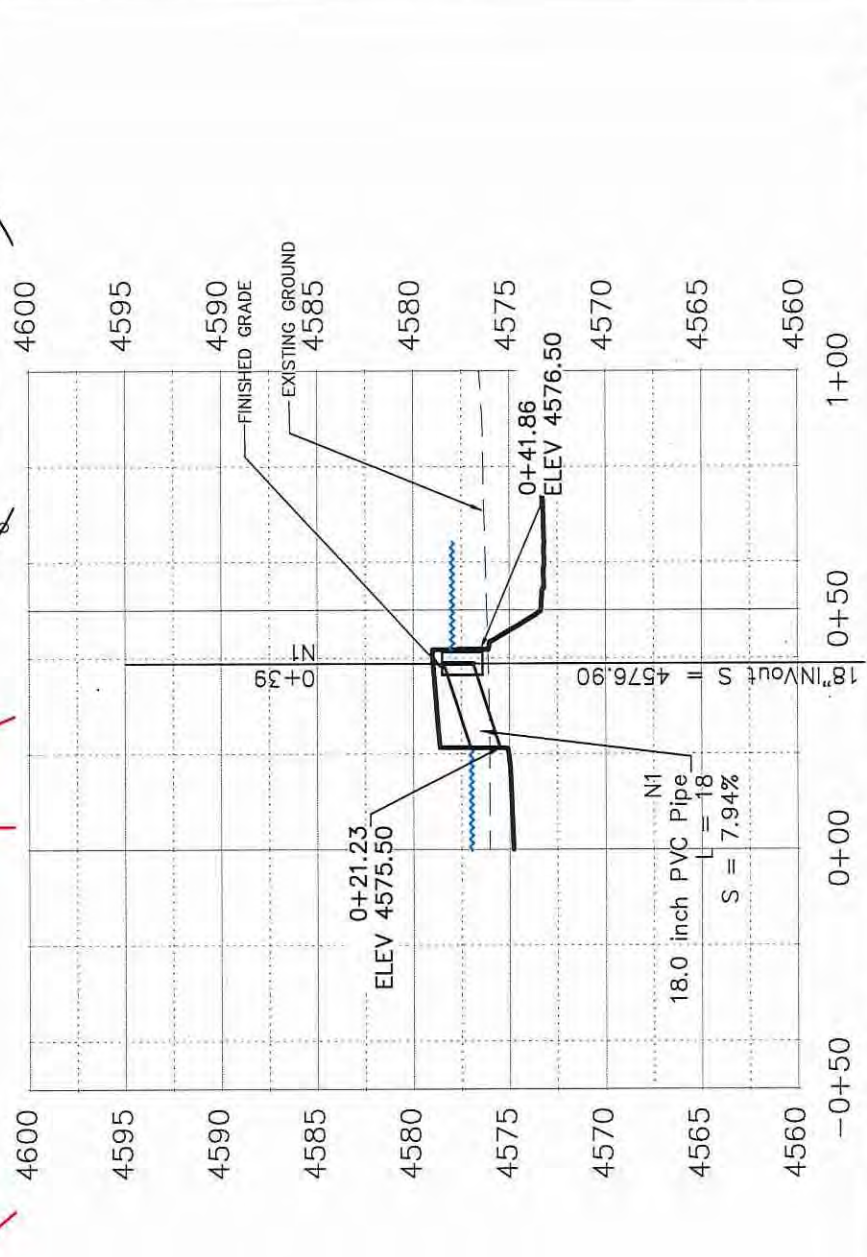
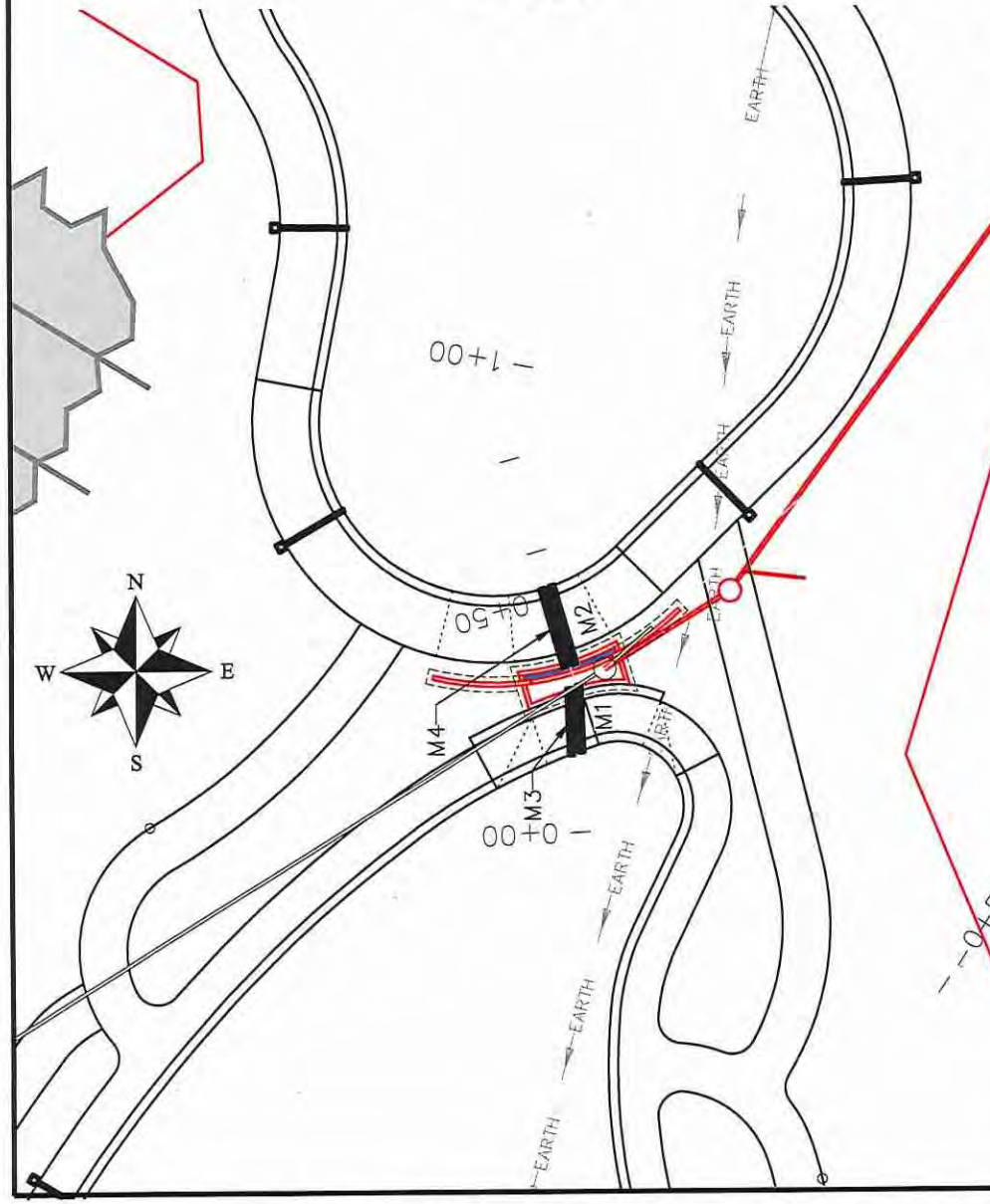


PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
OUTLET WORKS PLAN AND PROFILE



NOTE:  
ALL OUTLET WORKS PIPE SHALL BE SIZED PER PLAN NOTES AND BE C-900 PVC PIPE. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



REVISION	DATE	DESCRIPTION

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DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCF	DATE	2018
APPROVED BY	ICP	DATE	2018

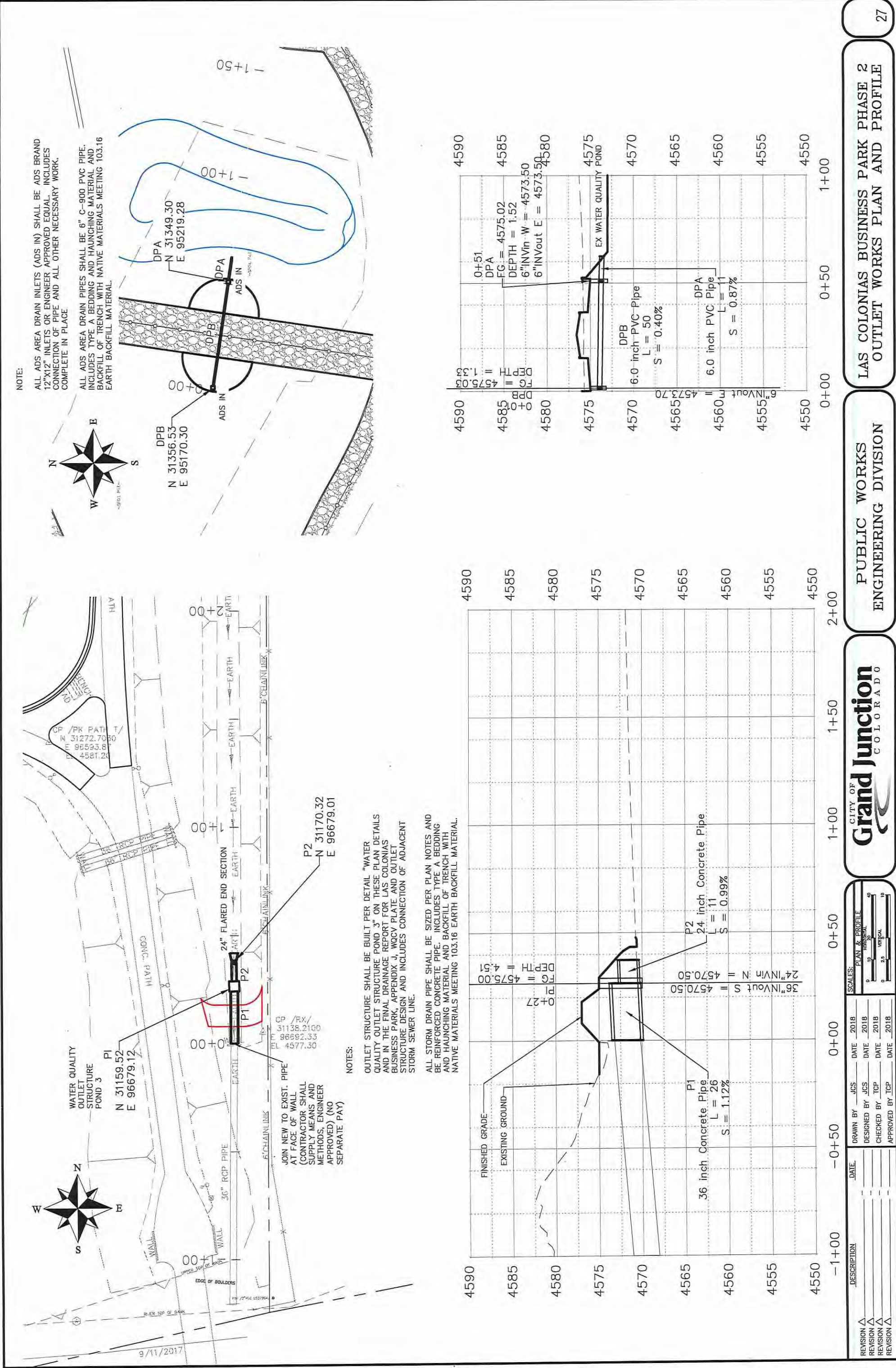
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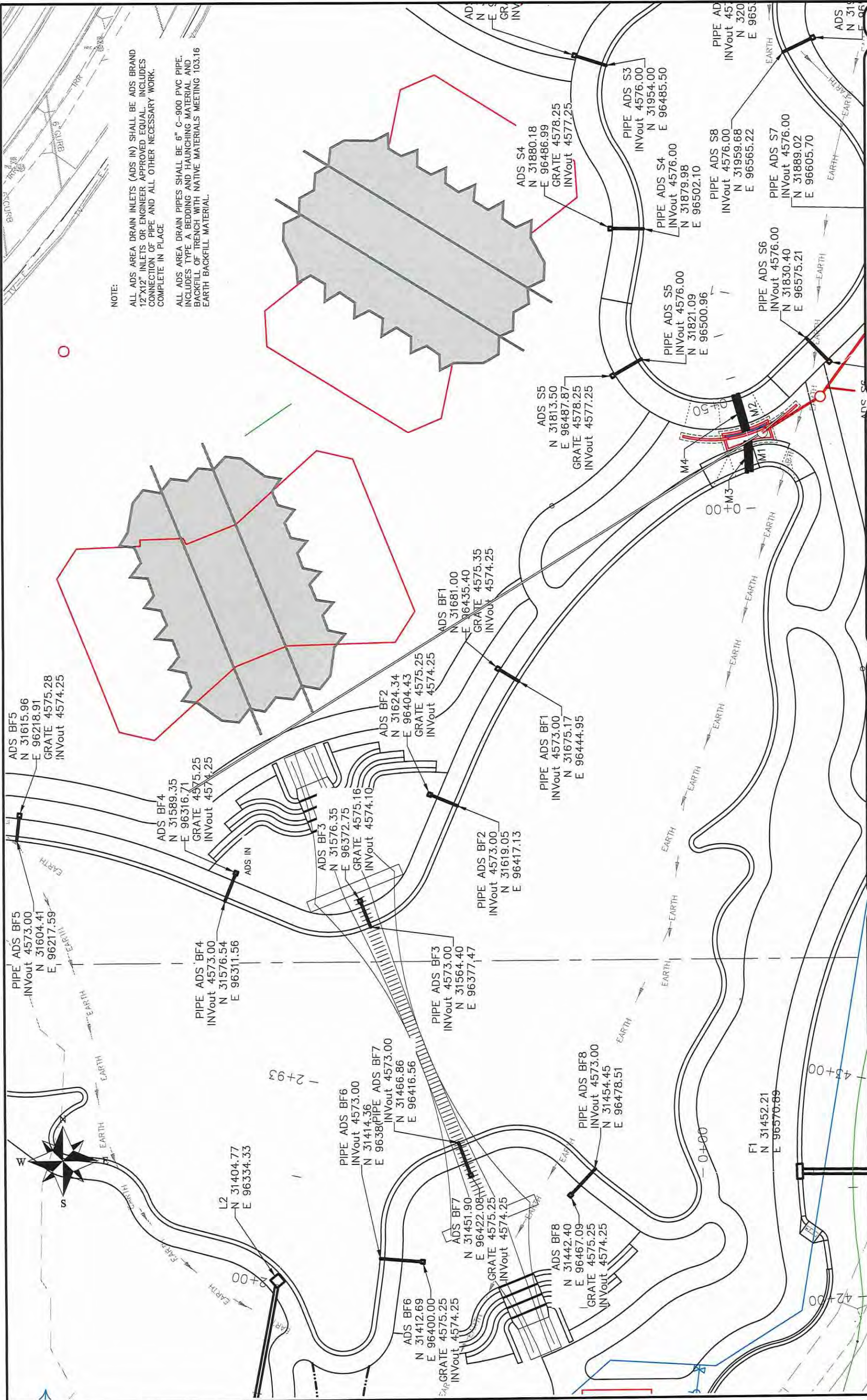
CITY OF **Grand Junction** COLORADO

PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2 OUTLET WORKS PLAN AND PROFILE

26





NOTE:  
 ALL ADS AREA DRAIN INLETS (ADS IN) SHALL BE ADS BRAND 12"x12" INLETS OR ENGINEER APPROVED EQUAL. INCLUDES CONNECTION OF PIPE AND ALL OTHER NECESSARY WORK, COMPLETE IN PLACE.  
 ALL ADS AREA DRAIN PIPES SHALL BE 6" C-900 PVC PIPE, INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



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 ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
 ADS AREA DRAIN PLAN

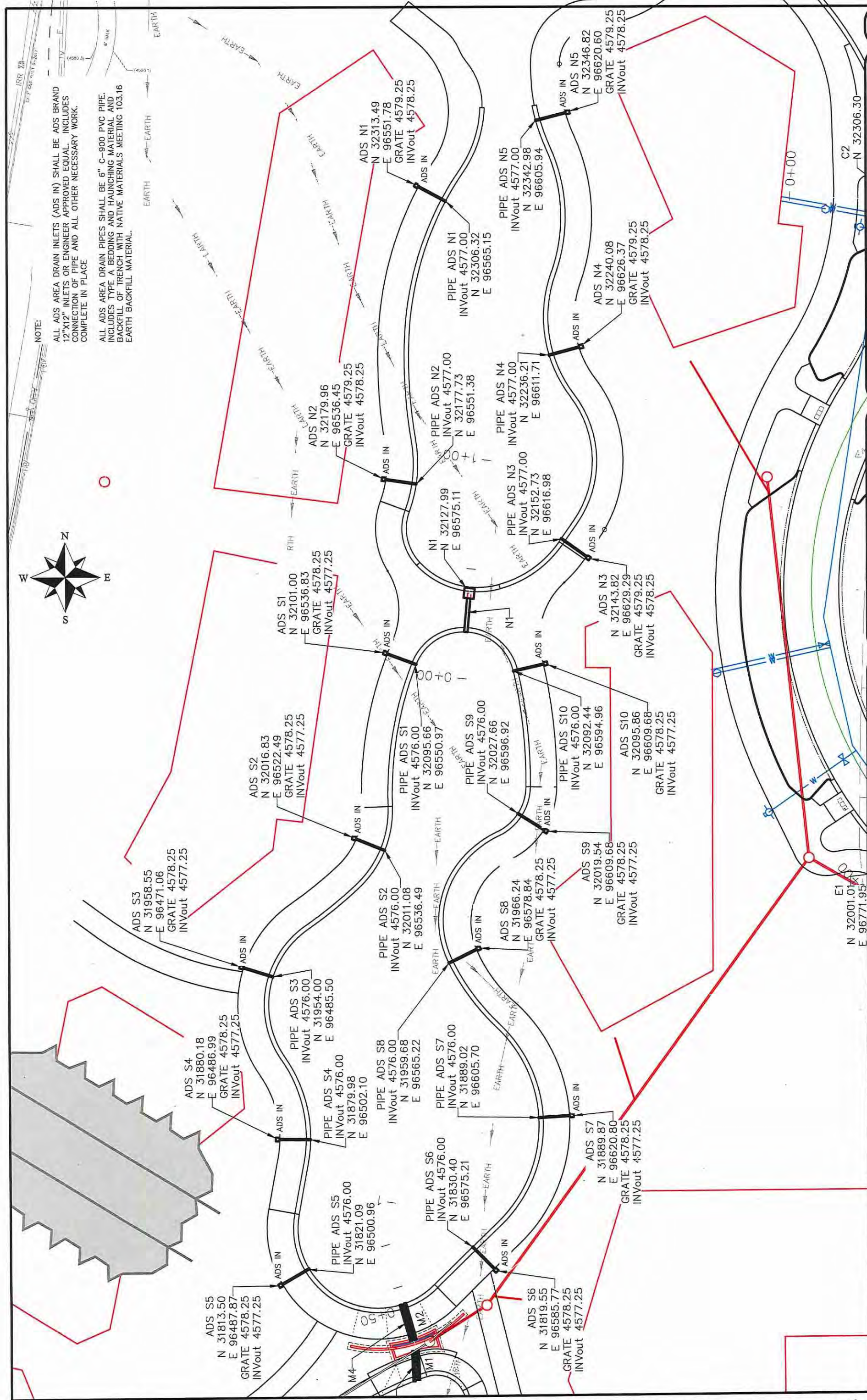
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0 10 20 30	0 10 20 30

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TOP	DATE	2018
APPROVED BY	TOP	DATE	2018



**NOTE:**

ALL ADS AREA DRAIN INLETS (ADS IN) SHALL BE ADS BRAND 12"x12" INLETS OR ENGINEER APPROVED EQUAL. INCLUDES CONNECTION OF PIPE AND ALL OTHER NECESSARY WORK. COMPLETE IN PLACE

ALL ADS AREA DRAIN PIPES SHALL BE 6" C-900 PVC PIPE. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

REVISION	DESCRIPTION	DATE
REVISION Δ		
REVISION Δ		
REVISION Δ		

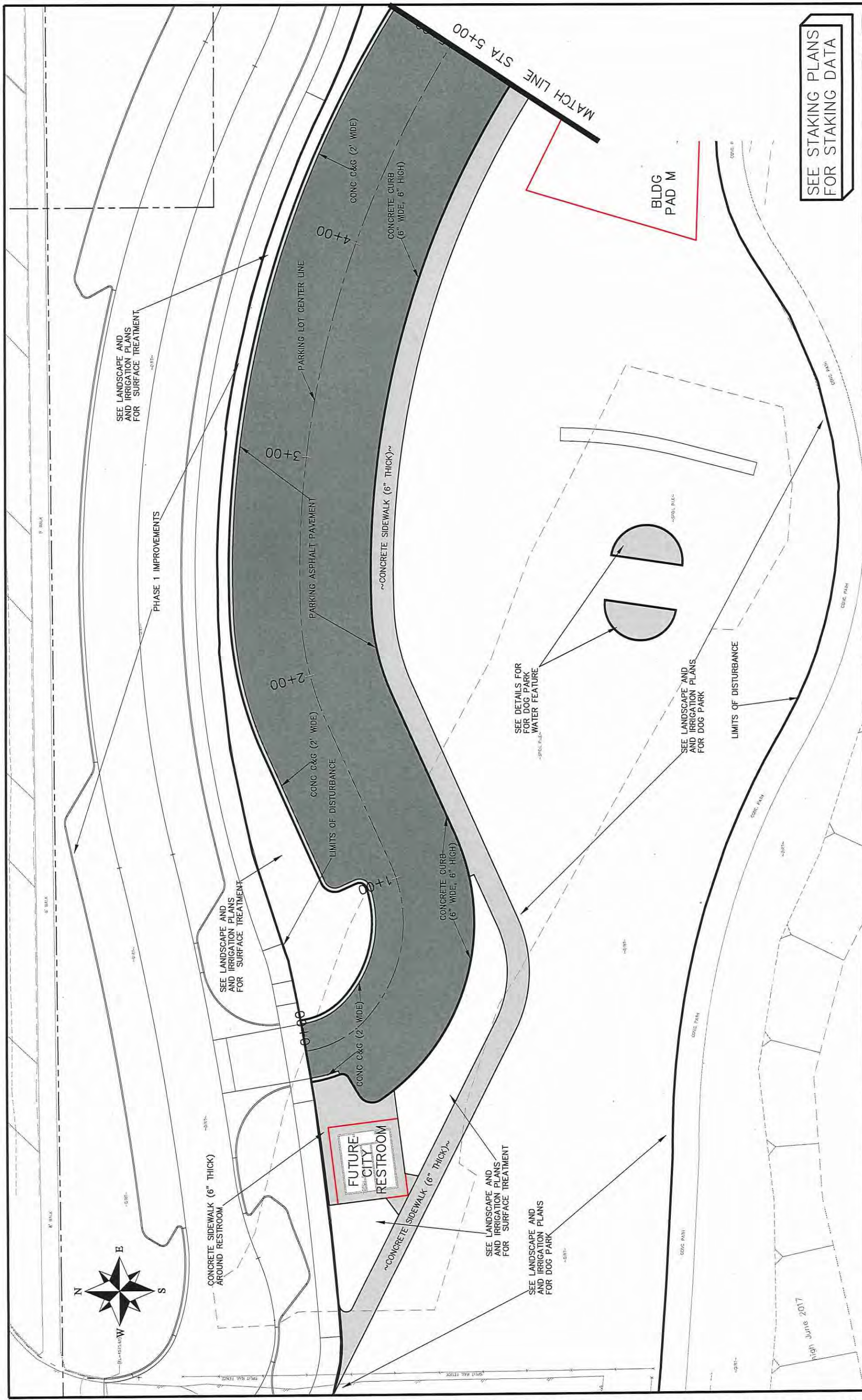
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DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALES:	PLAN & PROFILE
0	1" = 40'
0	1" = 20'
0	1" = 10'



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ENGINEERING DIVISION**

**LAS COLONIAS BUSINESS PARK PHASE 2  
ADS AREA DRAIN PLAN**



SEE STAKING PLANS FOR STAKING DATA

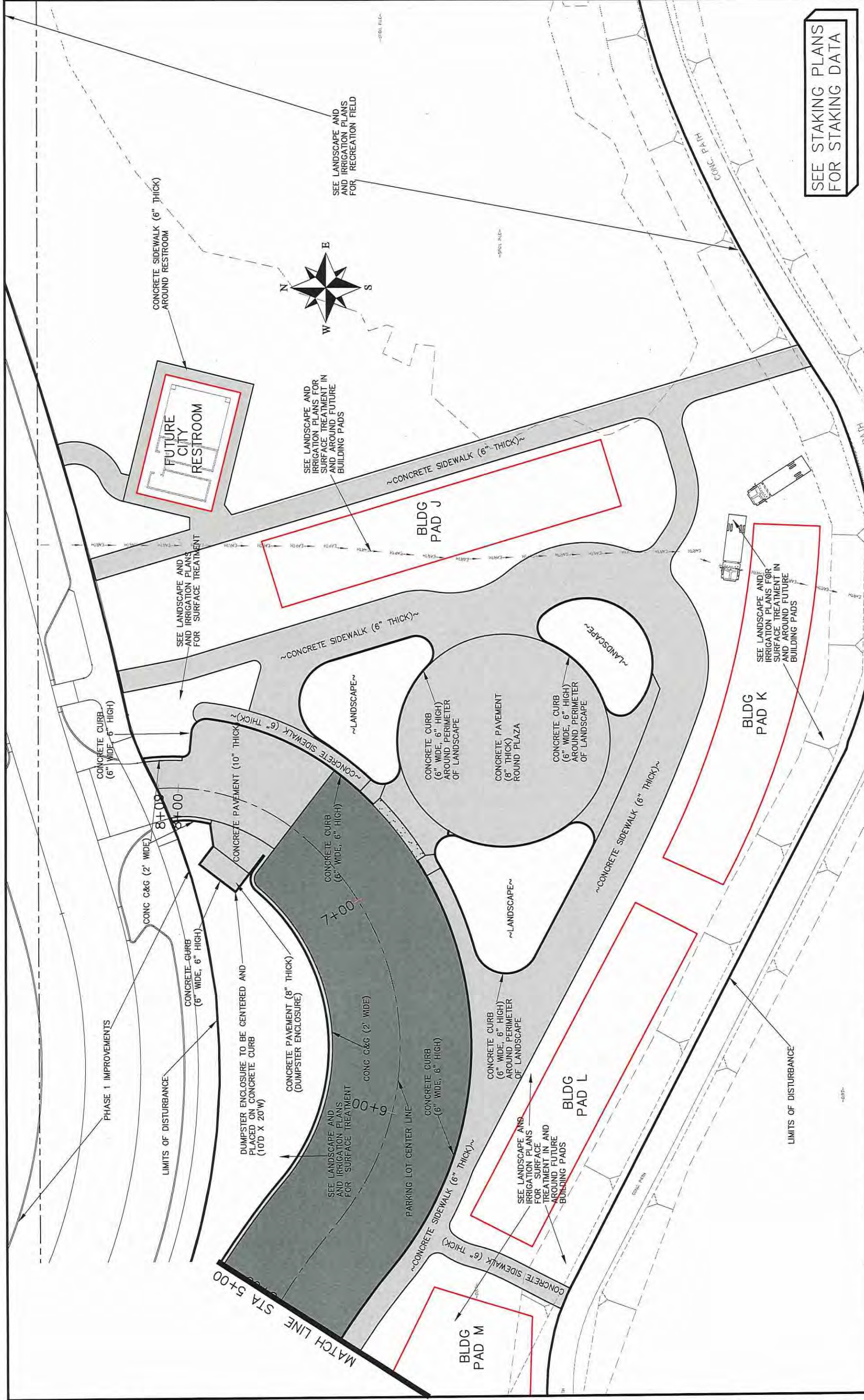
Las Colonias Business Park Phase 2 Improvement Plan

PUBLIC WORKS ENGINEERING DIVISION

CITY OF Grand Junction COLORADO

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
REVISION			JCS	2017	JCS	2017	TOP	2017		2017
REVISION										
REVISION										
REVISION										





SEE STAKING PLANS FOR STAKING DATA

REVISION Δ	DATE	DRAWN BY	JCS	DATE	2017
REVISION Δ	DATE	DESIGNED BY	JCS	DATE	2017
REVISION Δ	DATE	CHECKED BY	TCF	DATE	2017
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SCALES: PLAN & PROFILE 1" = 10' HORIZONTAL 1" = 4' VERTICAL

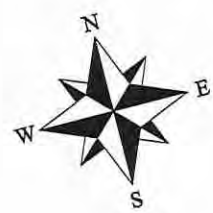
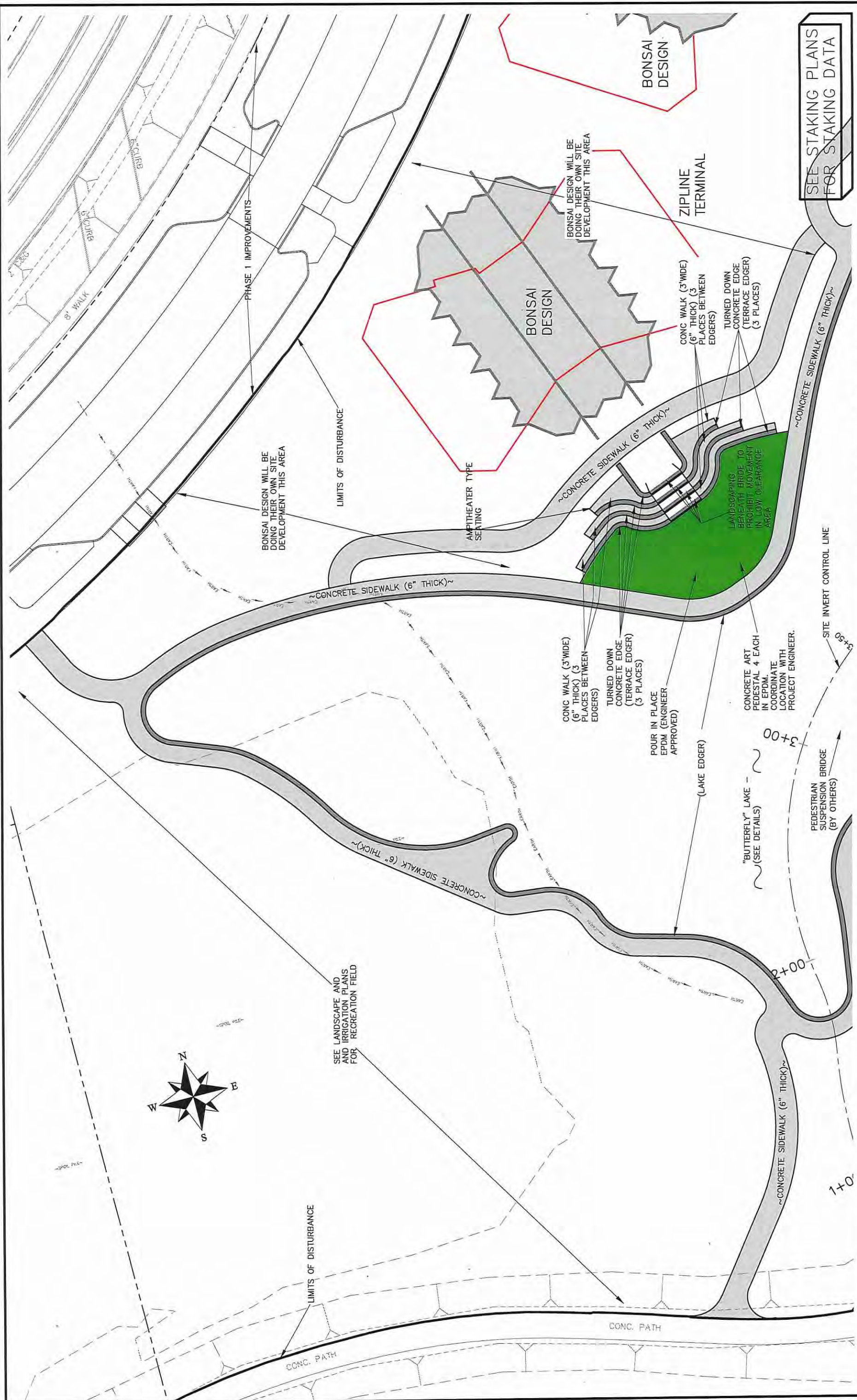
DESCRIPTION

CITY OF **Grand Junction** COLORADO

PUBLIC WORKS ENGINEERING DIVISION

Las Colonias Business Park Phase 2 Improvement Plan

31



REVISION	DATE	DESCRIPTION
REVISION Δ		
REVISION Δ		
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REVISION Δ		

DATE	DATE	DATE	DATE
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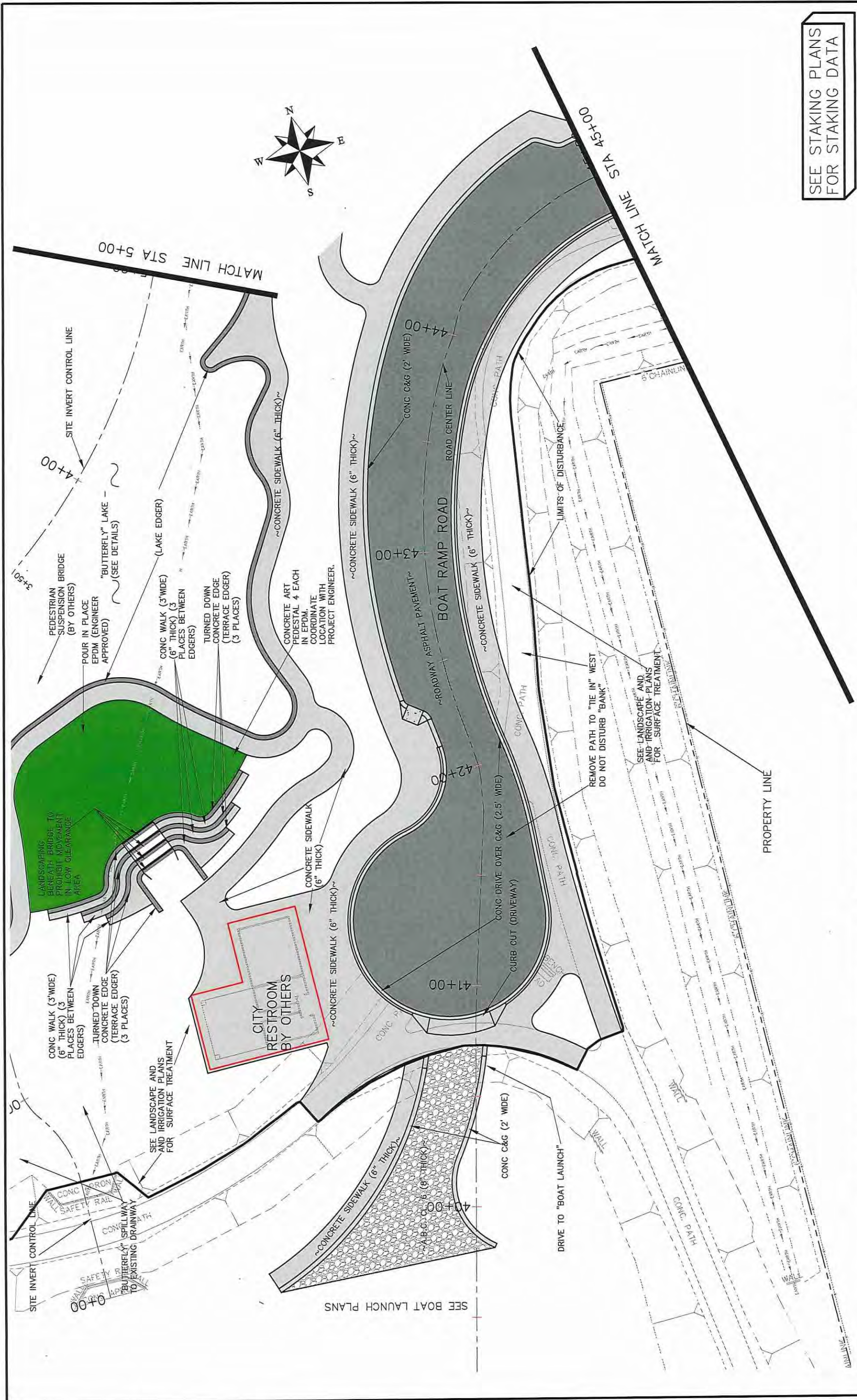
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2017	2017	2017	2017

DATE	DATE	DATE	DATE
2017	2017	2017	2017



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ENGINEERING DIVISION**

**Las Colonias Business Park Phase 2  
Improvement Plan**



SEE STAKING PLANS  
FOR STAKING DATA

REVISION	DATE	DESCRIPTION

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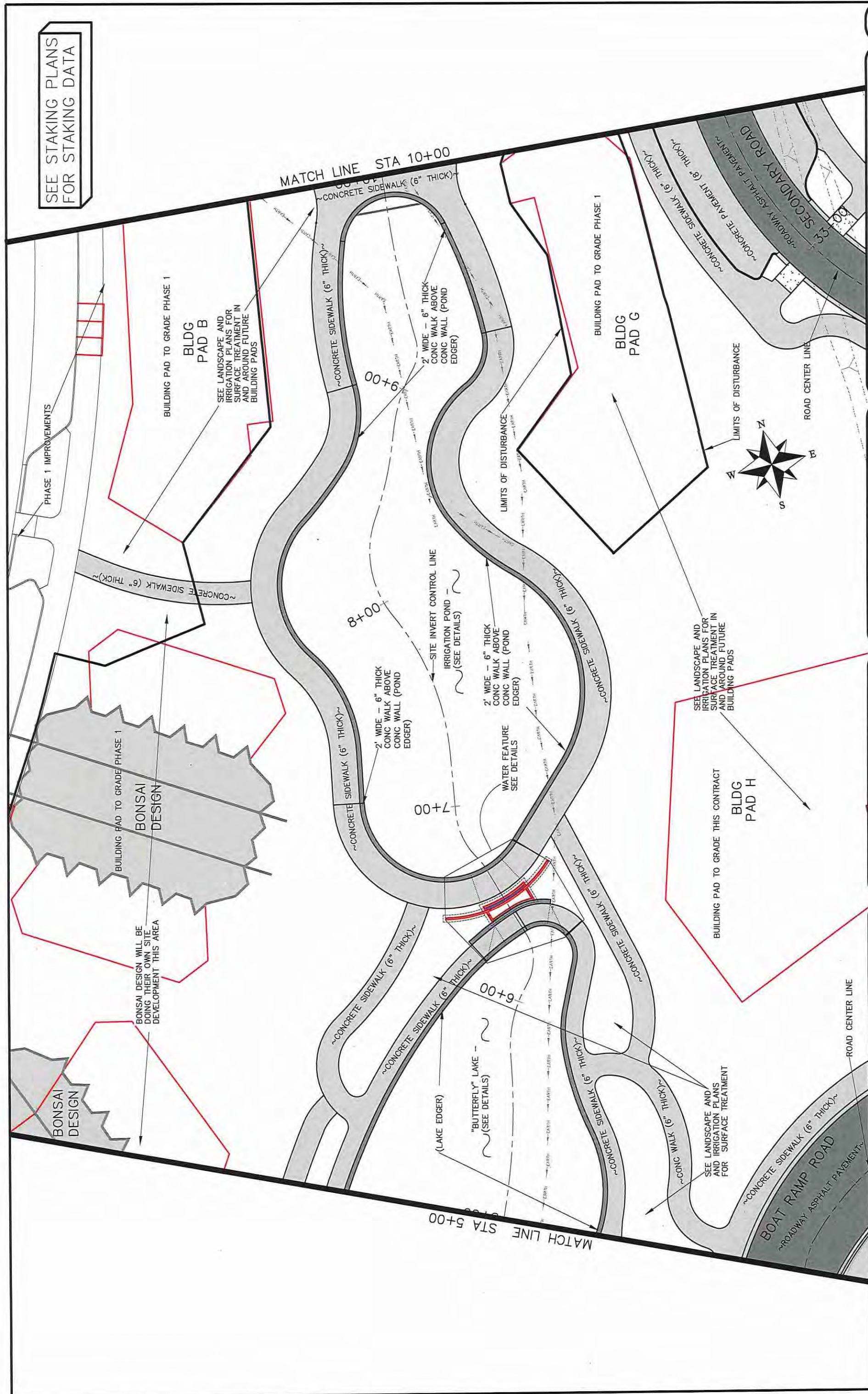
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PUBLIC WORKS  
ENGINEERING DIVISION

Las Colonias Business Park Phase 2  
Improvement Plan

SEE STAKING PLANS FOR STAKING DATA



REVISION	DATE	DESCRIPTION

SCALE	PLAN & PROFILE
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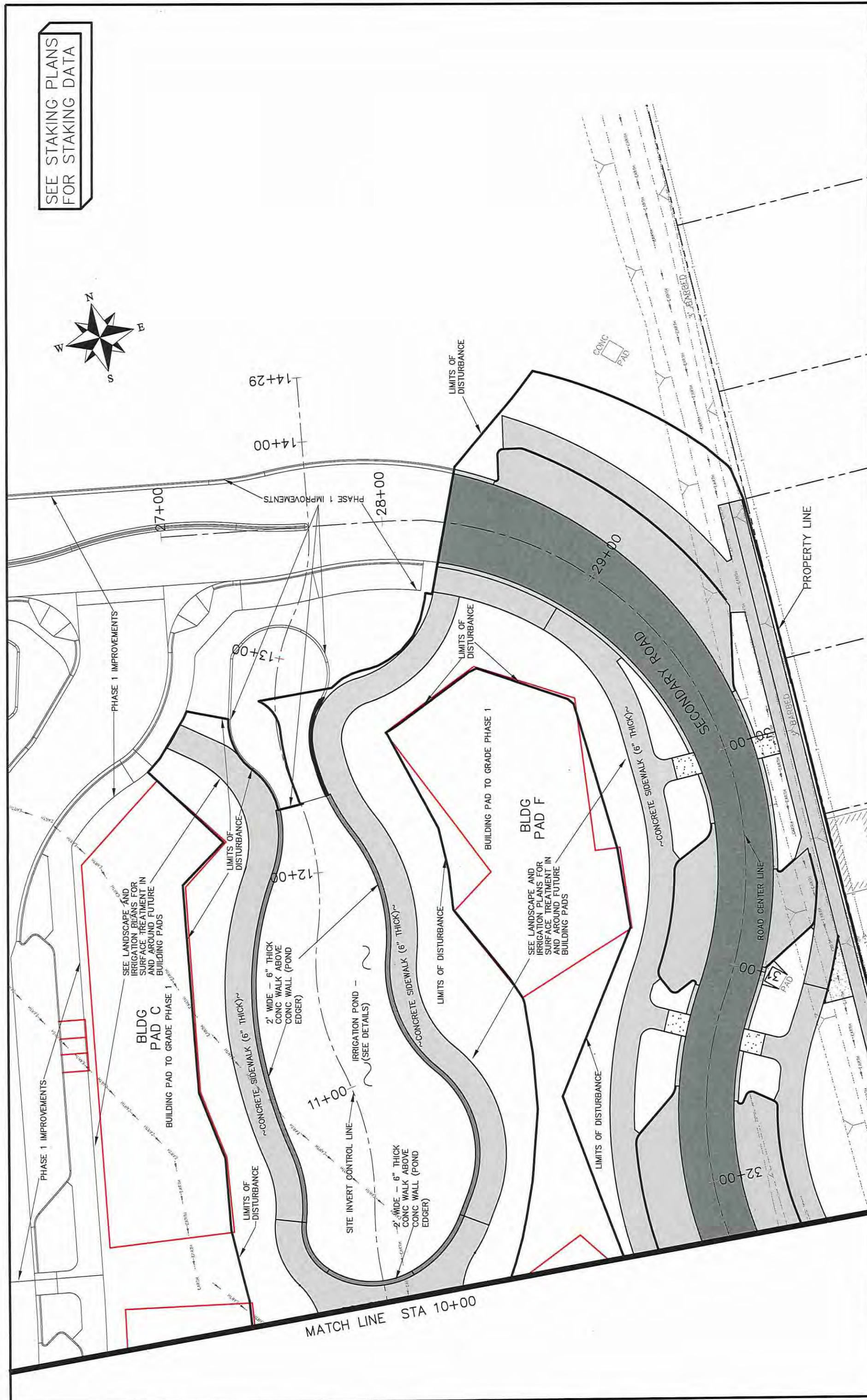
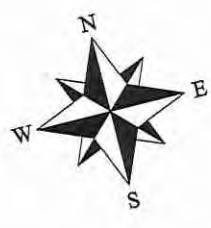
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CHECKED BY	TOP	2017
APPROVED BY	TOP	2017



PUBLIC WORKS  
ENGINEERING DIVISION

Las Colonias Business Park Phase 2  
Improvement Plan

SEE STAKING PLANS FOR STAKING DATA



REVISION	DATE	DESCRIPTION

SCALE	PLAN & PROFILE
0' = 1" HORIZONTAL	0' = 1" HORIZONTAL
0' = 1" VERTICAL	0' = 1" VERTICAL

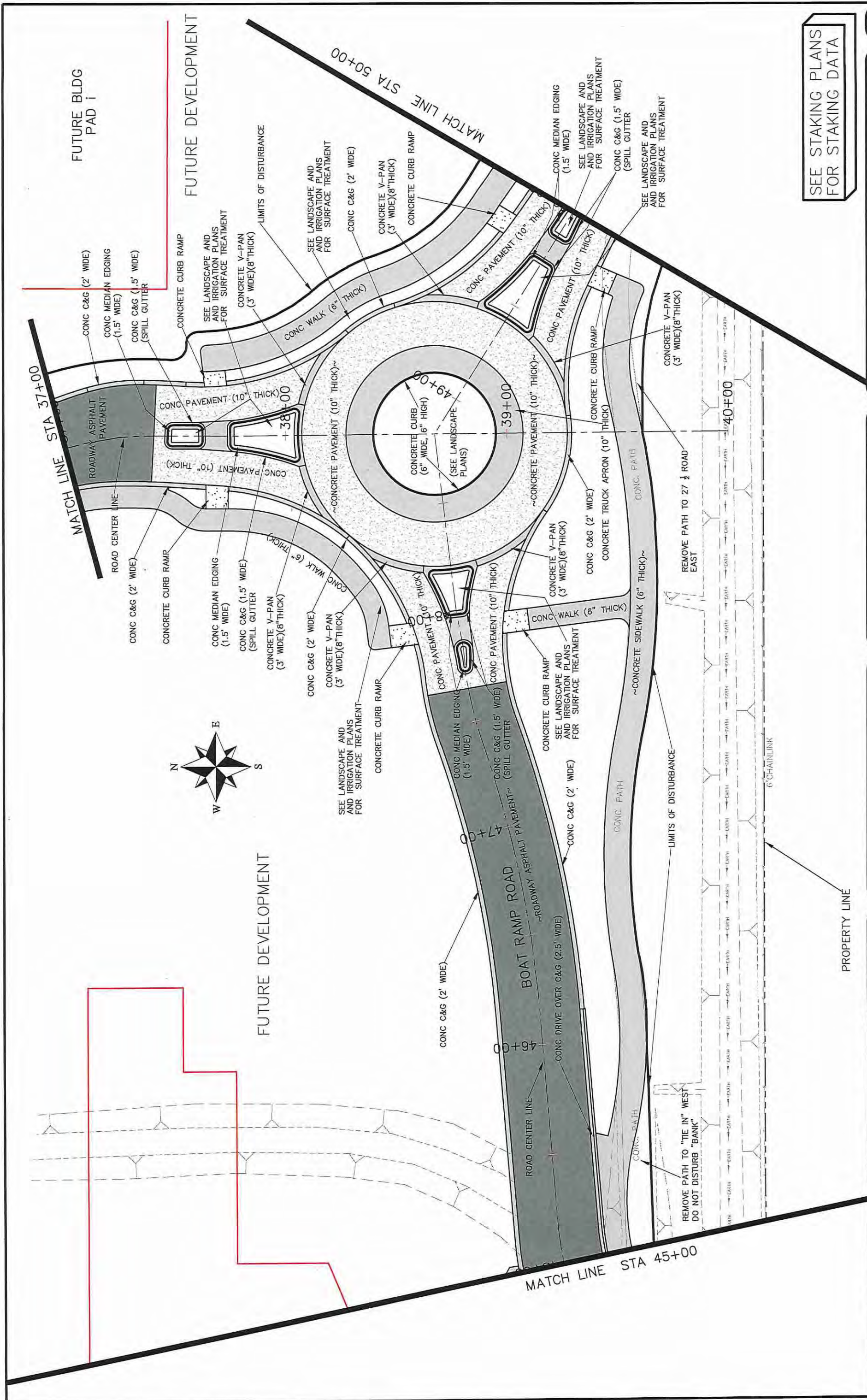
  

DRAWN BY	DATE	DATE	DATE
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JCS	2017	2017	2017
TCP	2017	2017	2017
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PUBLIC WORKS  
ENGINEERING DIVISION

Las Colonias Business Park Phase 2  
Improvement Plan



SEE STAKING PLANS FOR STAKING DATA

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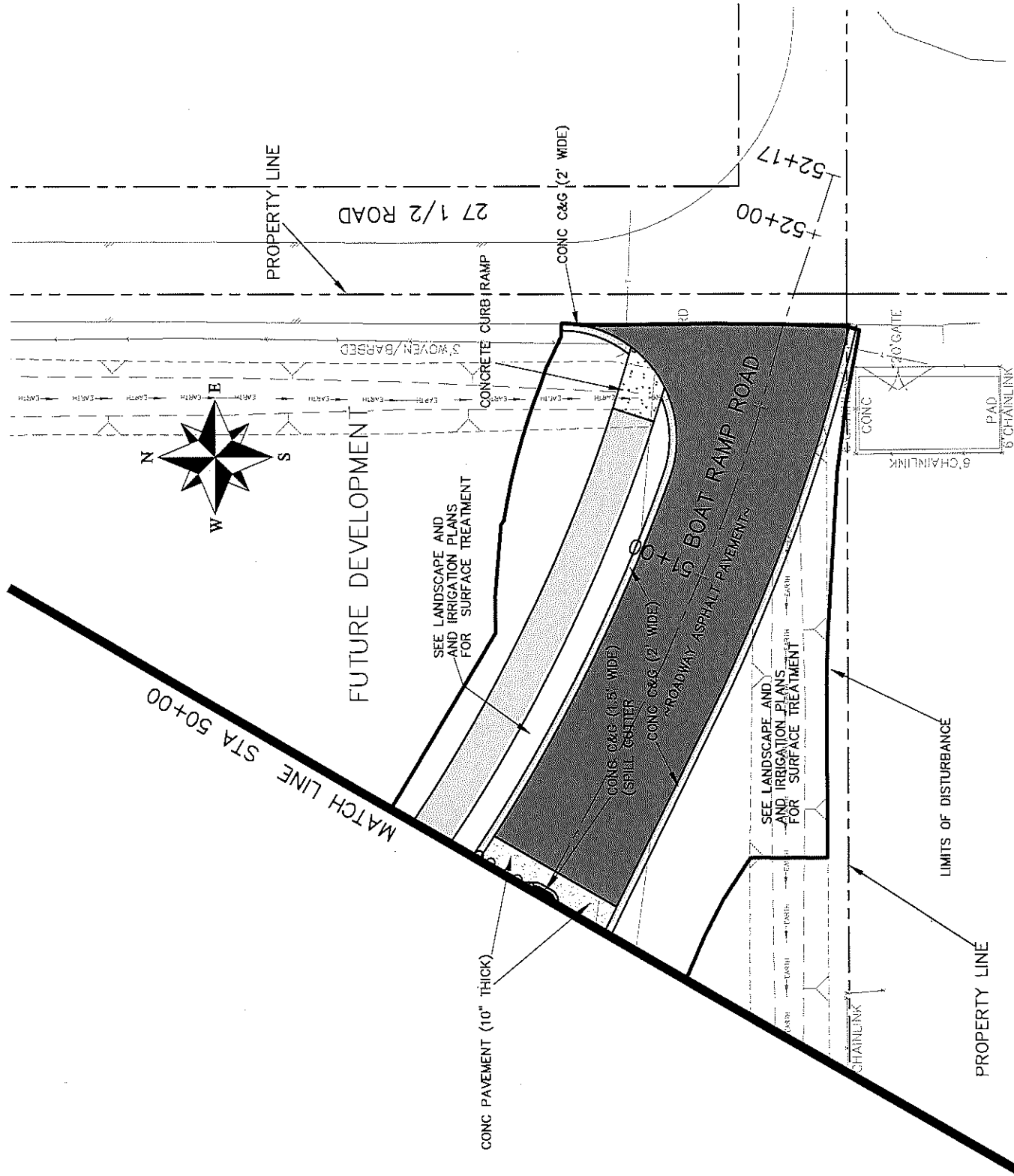
DATE	DATE	DATE	DATE

PLAN & PROFILE	SCALE



PUBLIC WORKS ENGINEERING DIVISION

Las Colonias Business Park Phase 2 Improvement Plan



SEE STAKING PLANS  
FOR STAKING DATA

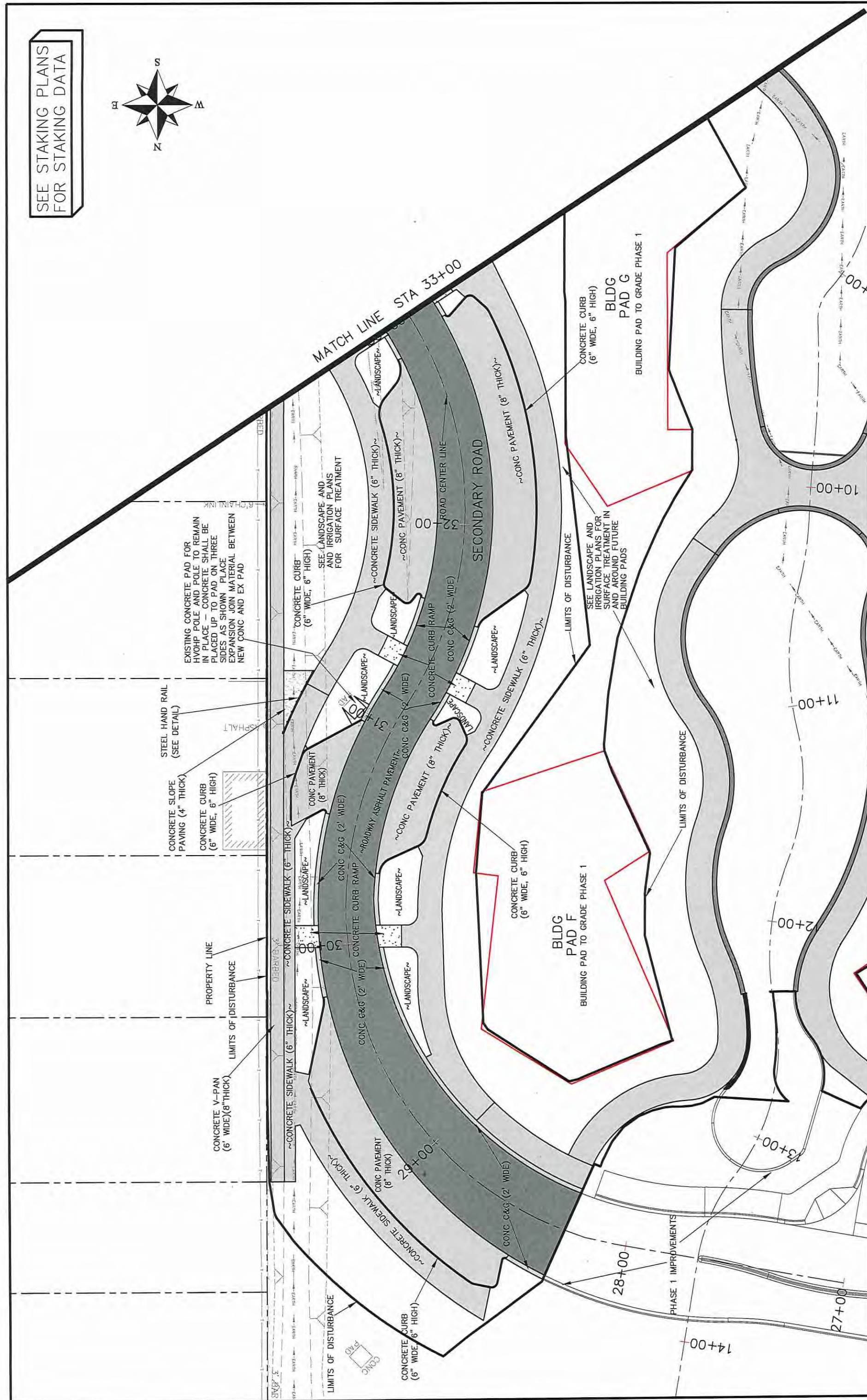
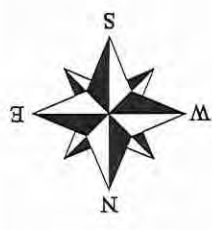
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REVISION 2			JCS	2017	10' HORIZONTAL
REVISION 3			TCF	2017	5' VERTICAL
REVISION 4			JCP	2017	AS SHOWN



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ENGINEERING DIVISION

Las Colonias Business Park Phase 2  
Improvement Plan

SEE STAKING PLANS FOR STAKING DATA



EXISTING CONCRETE PAD FOR HYDHP POLE AND POLE TO REMAIN IN PLACE - CONCRETE SHALL BE PLACED UP TO PAD ON THREE SIDES AS SHOWN. PLACE EXPANSION JOIN MATERIAL BETWEEN NEW CONC AND EX PAD

STEEL HAND RAIL (SEE DETAIL)

CONCRETE SLOPE PAVING (4" THICK)

CONCRETE CURB (6" WIDE, 6" HIGH)

PROPERTY LINE

LIMITS OF DISTURBANCE

CONCRETE V-PAN (6' WIDE)(8" THICK)

MATCH LINE STA 33+00

SECONDARY ROAD

BLDG PAD F  
BUILDING PAD TO GRADE PHASE 1

BLDG PAD G  
BUILDING PAD TO GRADE PHASE 1

PHASE 1 IMPROVEMENTS

REVISION	DATE	DESCRIPTION

DATE	DATE	DATE	DATE

SCALE	PLAN & PROFILE
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1" = 10'	1" = 10'
1" = 10'	1" = 10'

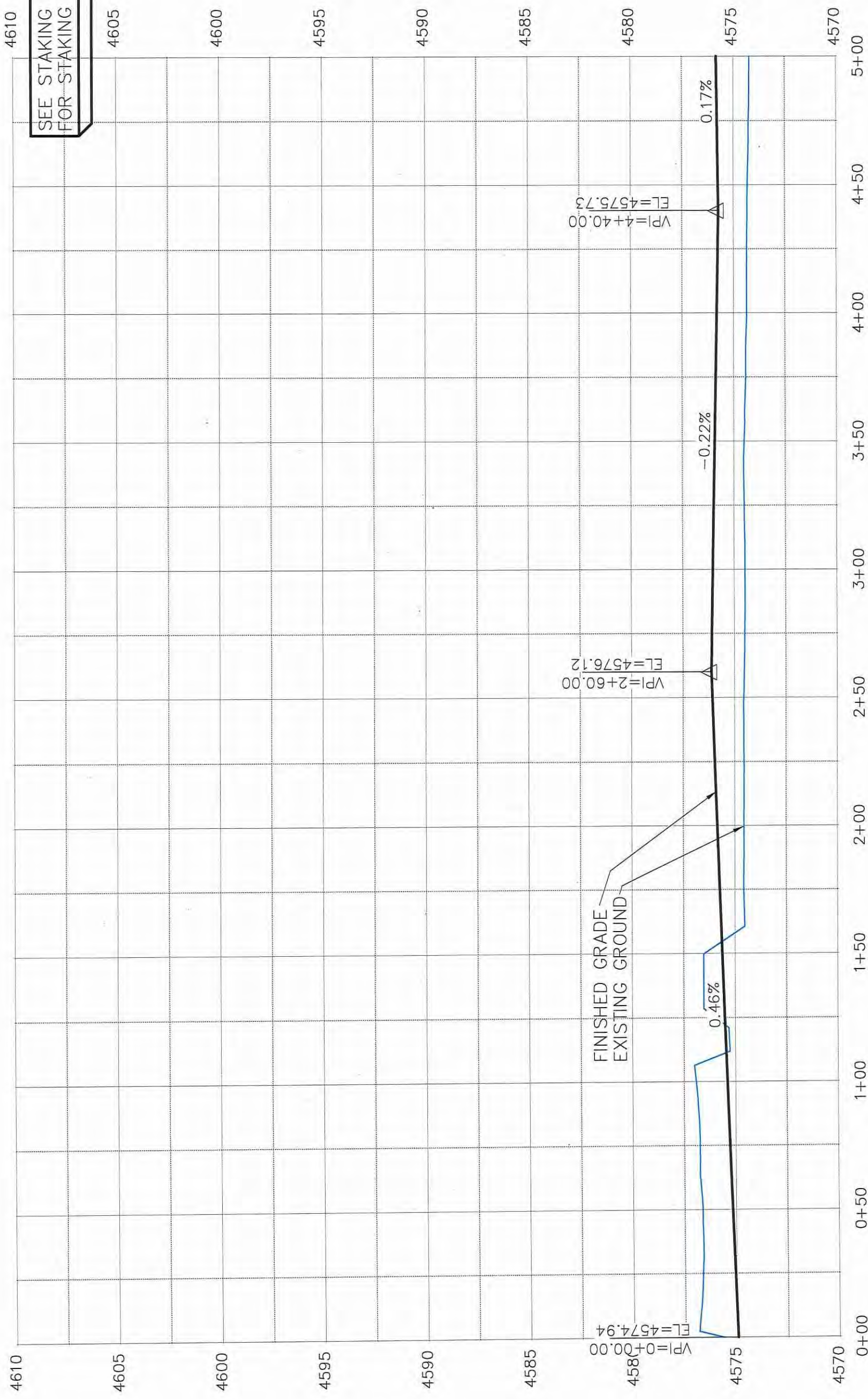


PUBLIC WORKS ENGINEERING DIVISION

Las Colonias Business Park Phase 2 Improvement Plan







PLAZA PARKING LOT VIEW 1

REVISION	DESCRIPTION	DATE

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DESIGNED BY	JCS	DATE	2018
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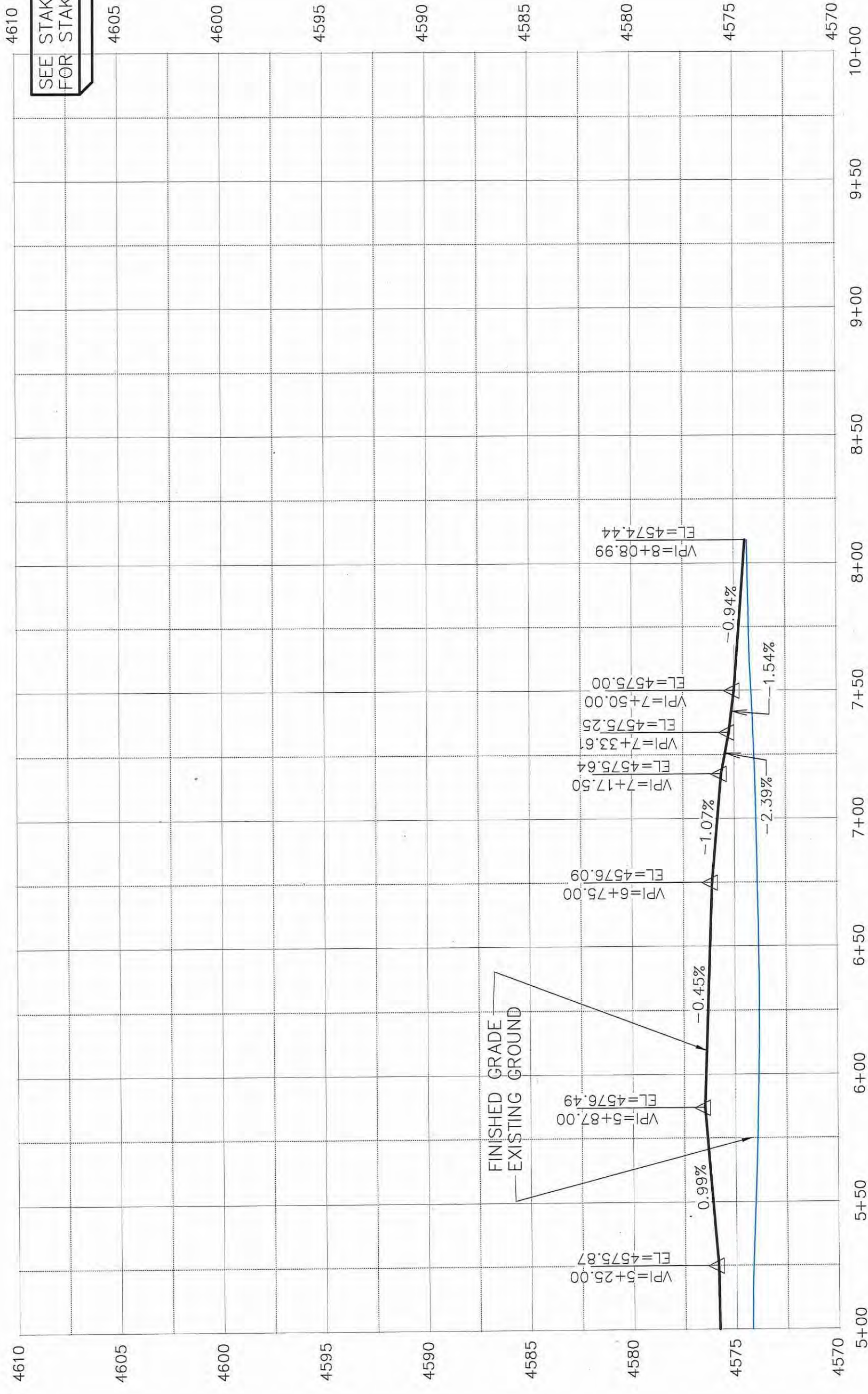
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	PROFILE	1" = 10'



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ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE II  
SITE PROFILE

N:\Landproj\2018 LAS COLONIAS BUSINESS PARK (Phase II and Later)\DWG\Phase 2\SITE PROFILE PH II.dwg, (001), 7/3/2018 6:29:45 AM



SEE STAKING PLANS FOR STAKING DATA

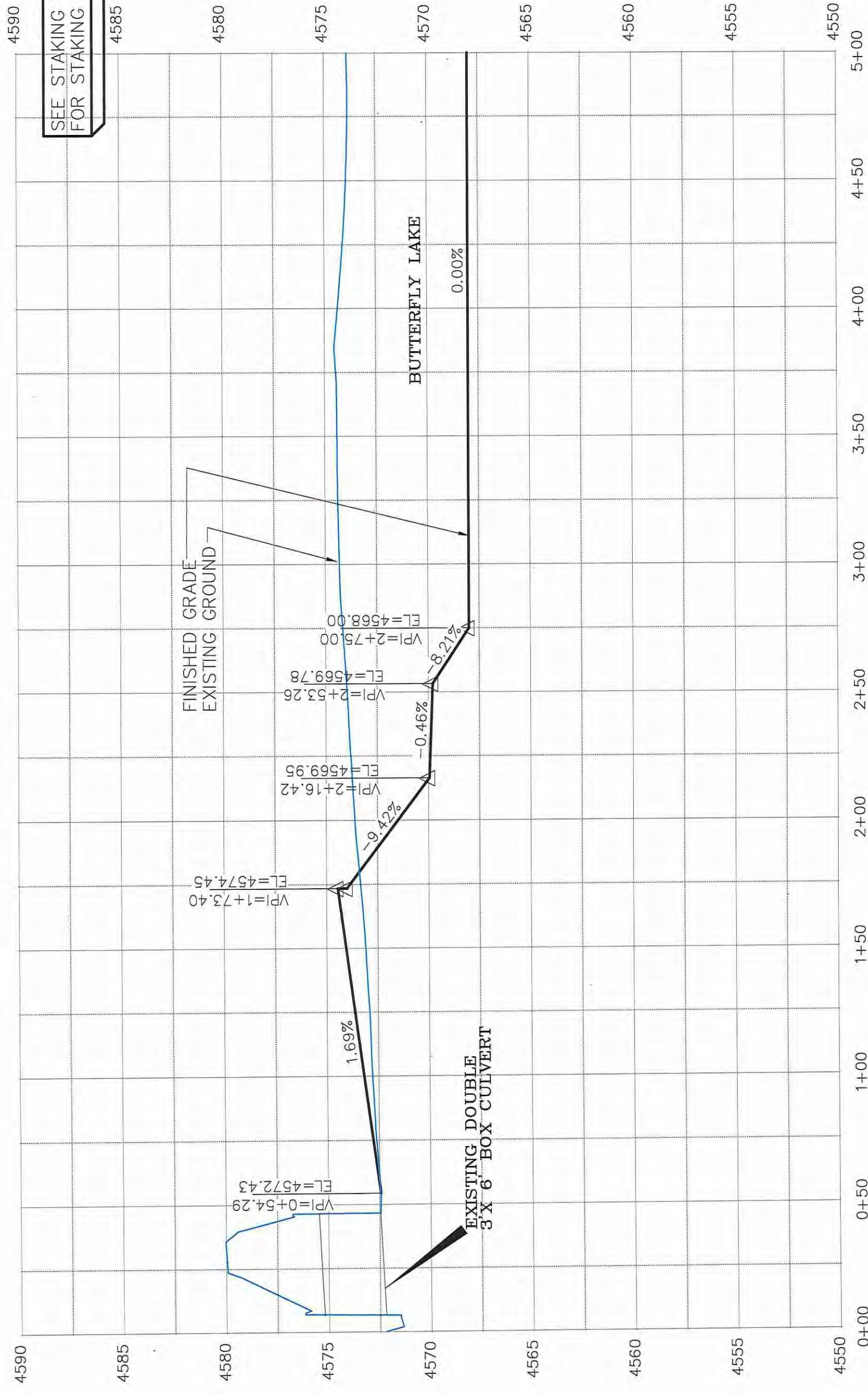
PLAZA PARKING LOT VIEW 2

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
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			JCS	2018
			TCP	2018
			TCP	2018



PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE II SITE PROFILE



SEE STAKING PLANS FOR STAKING DATA

SITE INVERT CONTROL LINE VIEW 1

REVISION	DESCRIPTION	DATE

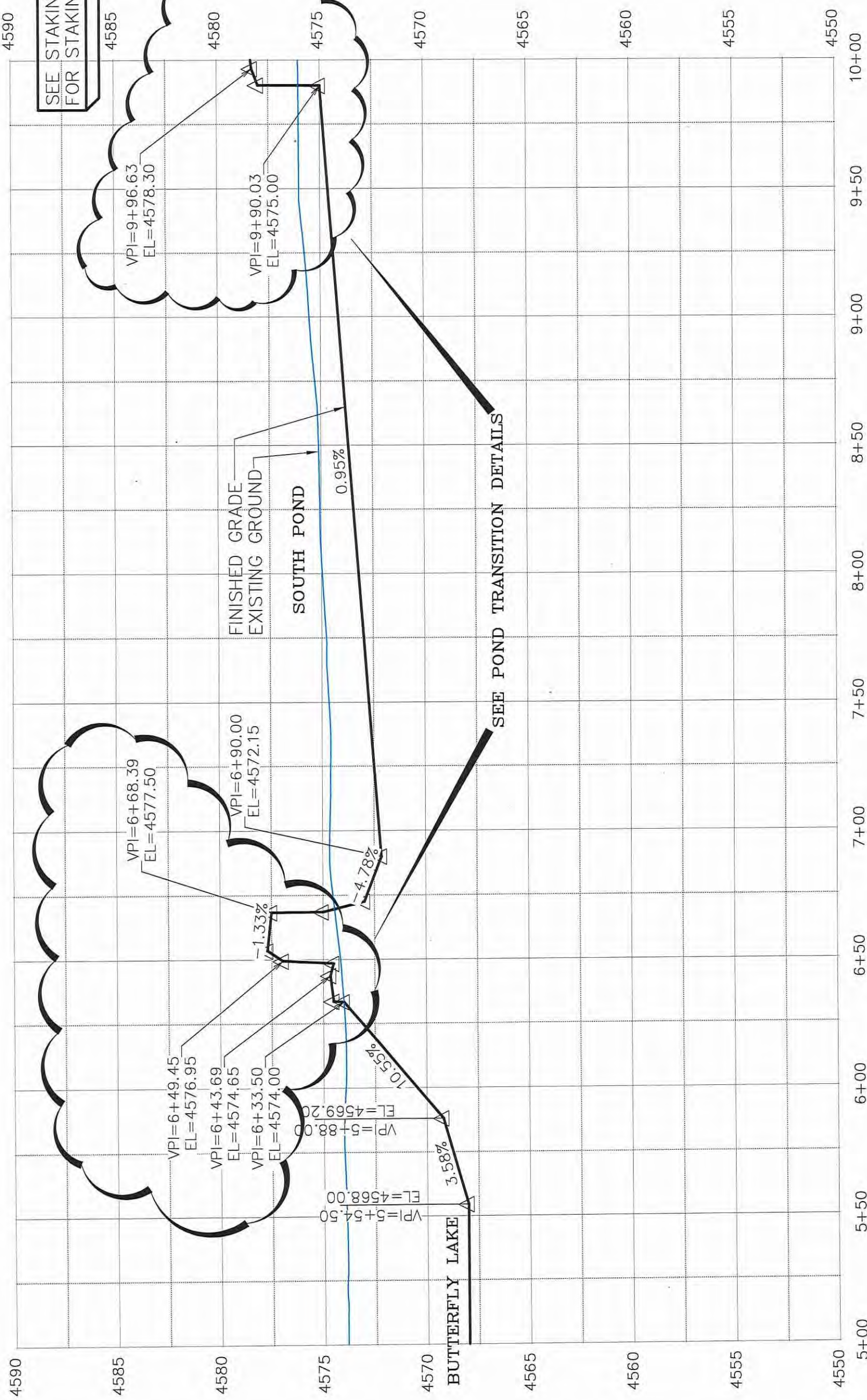
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SCALES:	PLAN & PROFILE
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0 125 250	1" = 250'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE II  
SITE PROFILE



SEE STAKING PLANS FOR STAKING DATA

SITE INVERT CONTROL LINE VIEW 2

REVISION	DESCRIPTION	DATE

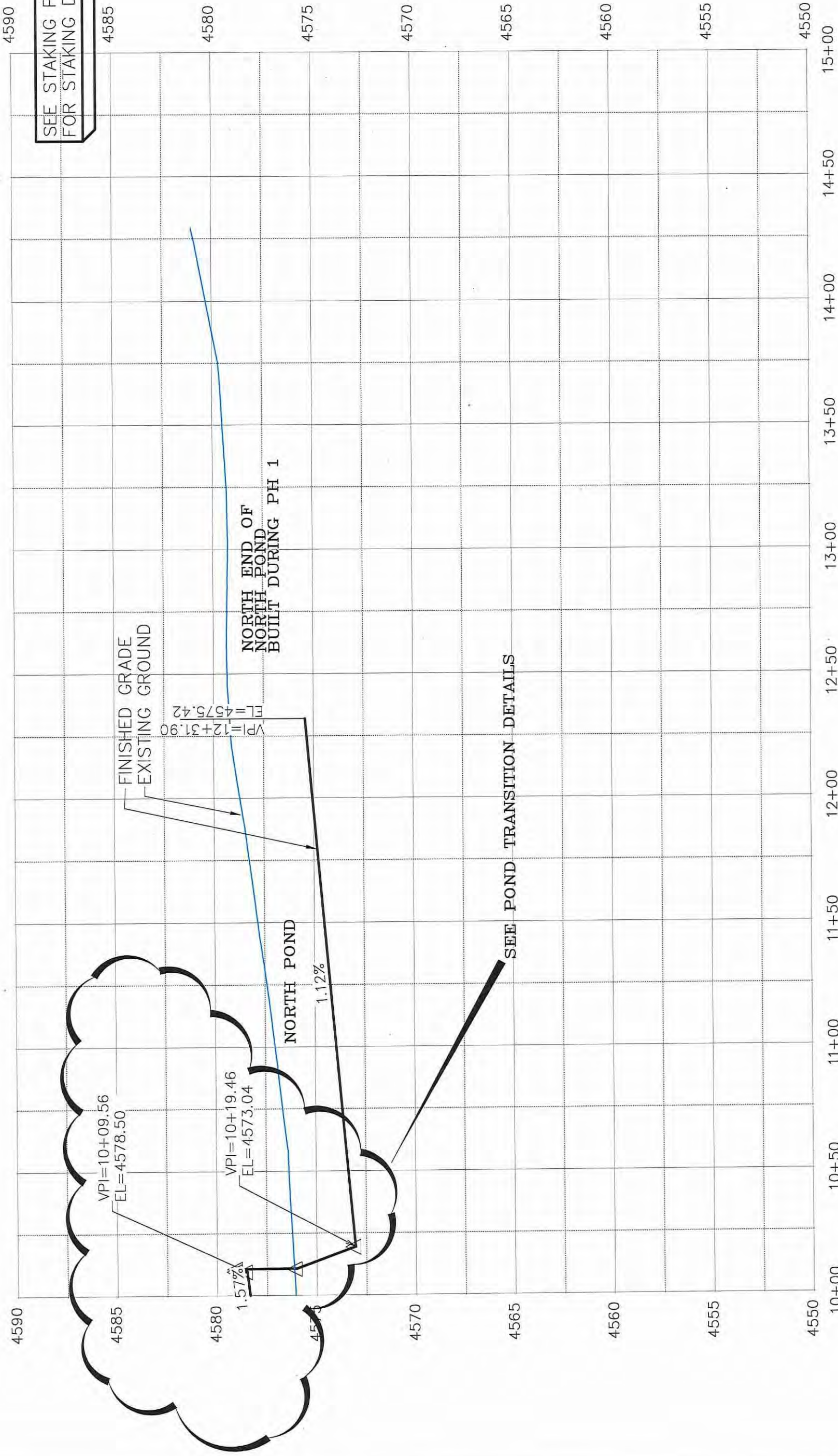
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CHECKED BY	TOP	DATE	2018
APPROVED BY	TOP	DATE	2018

SCALES:	PLAN & PROFILE
0	1" = 100'
0	1/2" = 50'



PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE II SITE PROFILE



SEE STAKING PLANS FOR STAKING DATA

SITE INVERT CONTROL LINE VIEW 3

REVISION	DESCRIPTION	DATE	BY

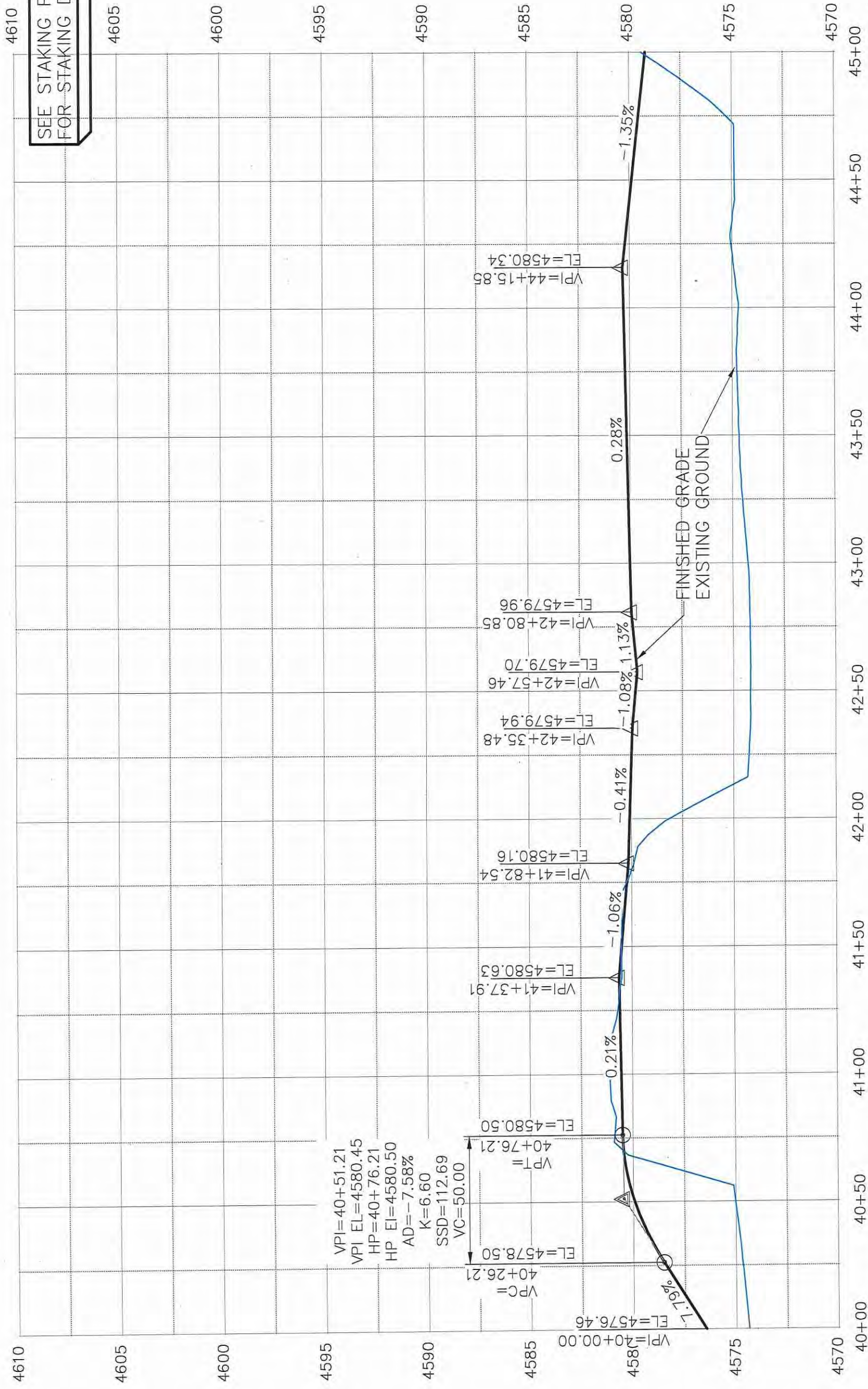
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CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALE:	PLAN & PROFILE
0	10' HORIZONTAL
0	1" VERTICAL



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ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE II  
SITE PROFILE



BOAT RAMP ROAD VIEW 1

REVISION	DESCRIPTION	DATE

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DESIGNED BY	JCS	DATE	2018
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APPROVED BY	TCP	DATE	2018

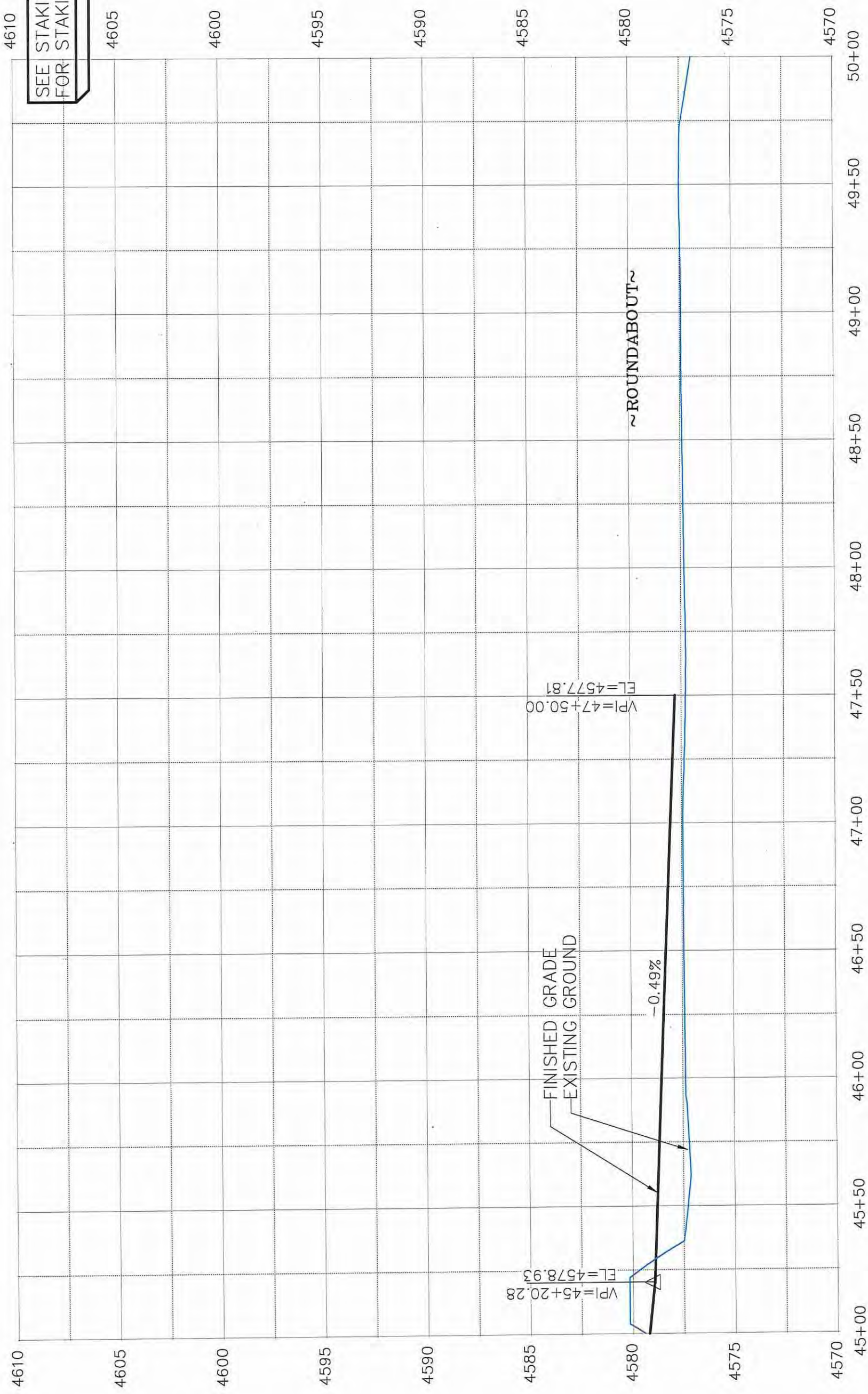
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0	1" = 20'



PUBLIC WORKS  
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LAS COLONIAS BUSINESS PARK PHASE II  
SITE PROFILE

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BOAT RAMP ROAD VIEW 2

REVISION Δ	DESCRIPTION	DATE	DRAWN BY JCS	DATE 2018
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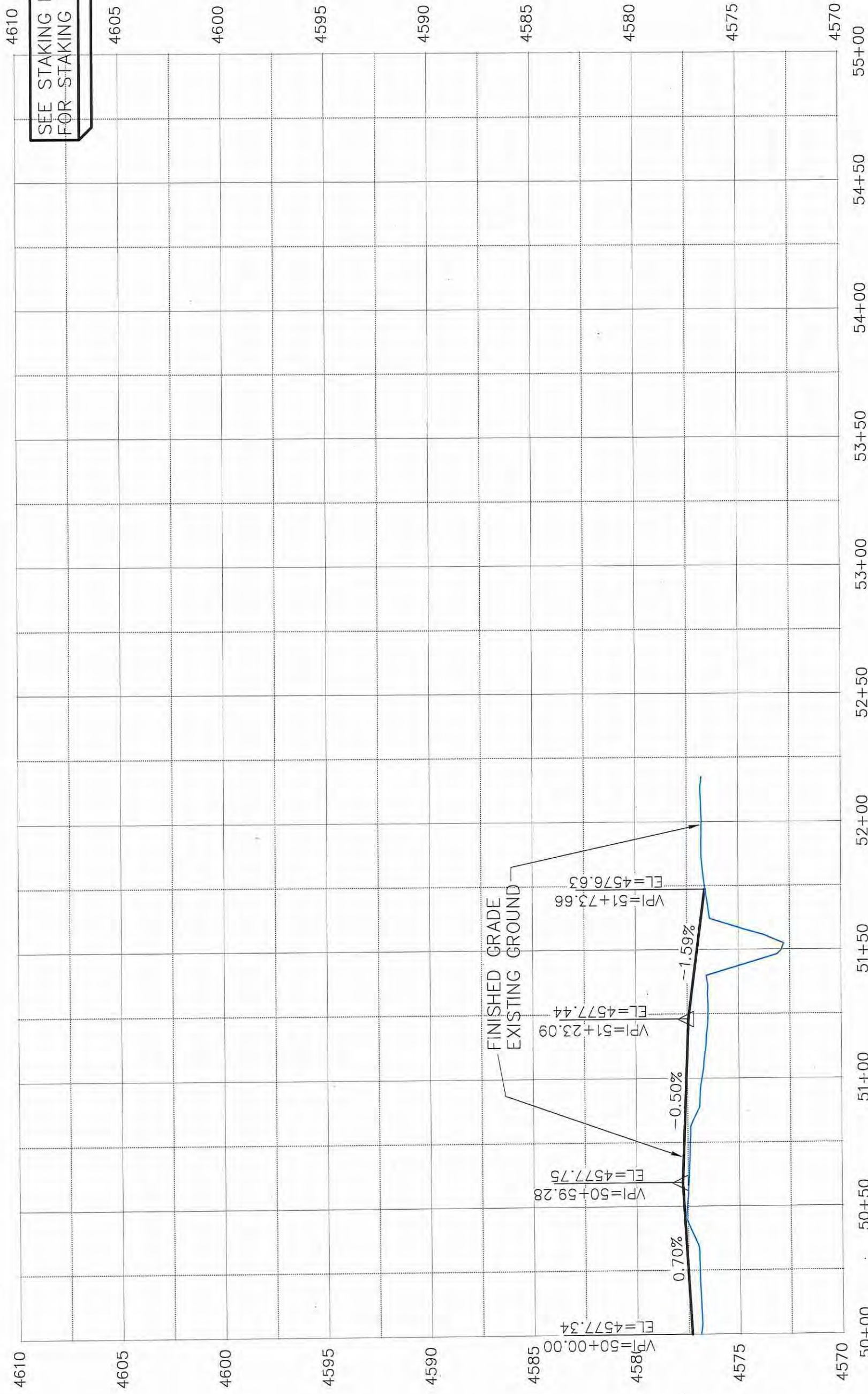
SCALES: PLAN & PROFILE  
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 1" = 20' PL  
 0 125 250  
 1" = 125' PR



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE II  
SITE PROFILE





SEE STAKING PLANS FOR STAKING DATA

BOAT RAMP ROAD VIEW 3

REVISION	DESCRIPTION	DATE

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DESIGNED BY	JCS	DATE	2018
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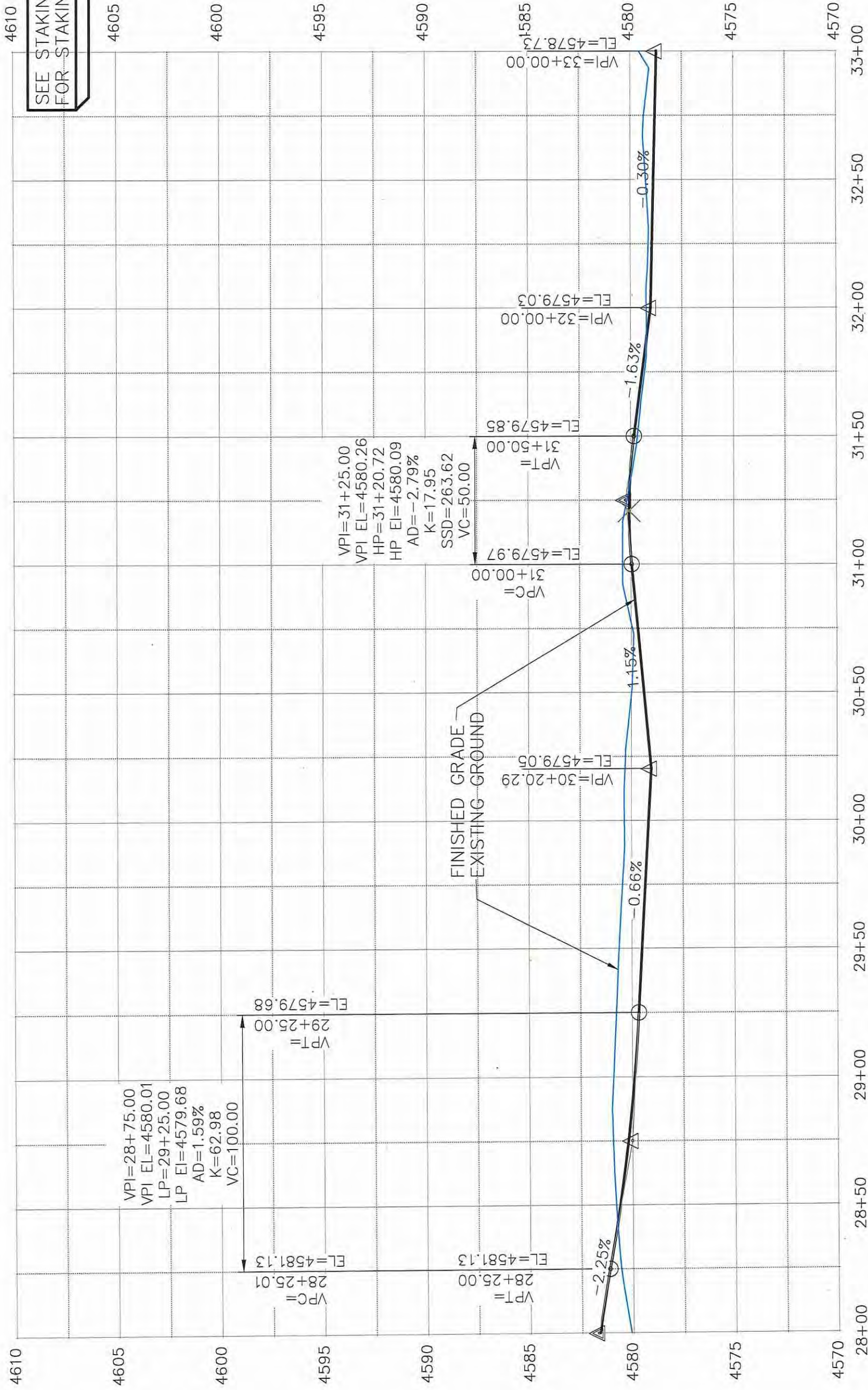
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0	1" = 10' VERTICAL



PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE II SITE PROFILE

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SEE STAKING PLANS FOR STAKING DATA

SECONDARY ROAD VIEW 1

REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018

SCALES: PLAN & PROFILE 1"=100'-0" (Horizontal), 1"=10'-0" (Vertical)



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LAS COLONIAS BUSINESS PARK PHASE II SITE PROFILE

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SEE STAKING PLANS FOR STAKING DATA

SECONDARY ROAD VIEW 2

REVISION	DATE

DESCRIPTION	DATE

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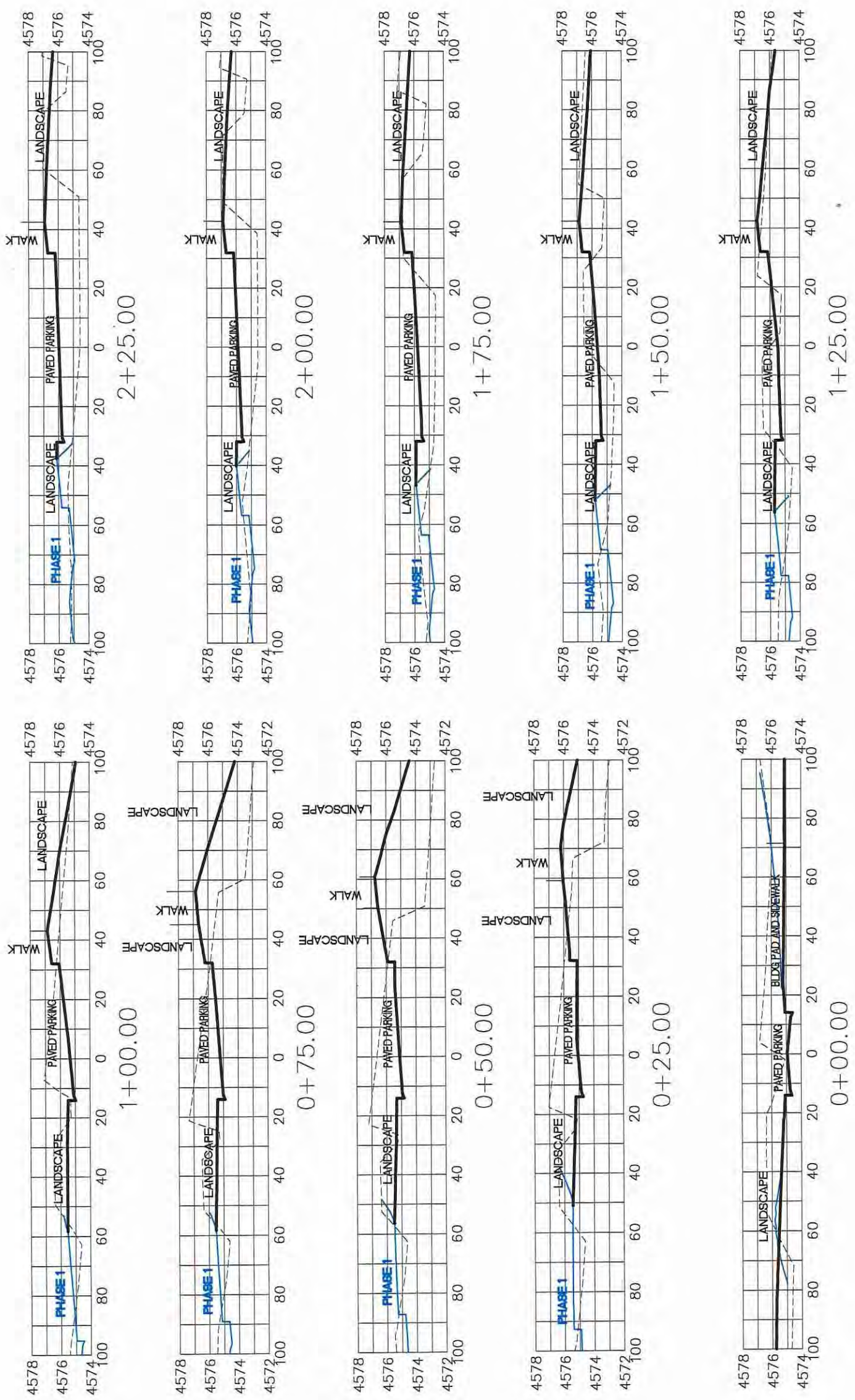
SCALES: PLAN & PROFILE 1"=100'-0" 1/2"=100'-0"



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LAS COLONIAS BUSINESS PARK PHASE II SITE PROFILE

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WESTLERLY PARKING LOT

REVISION	DATE

DESCRIPTION	DATE

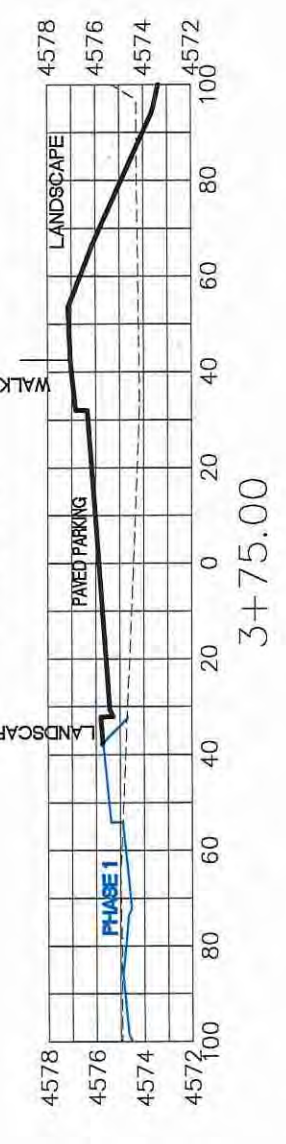
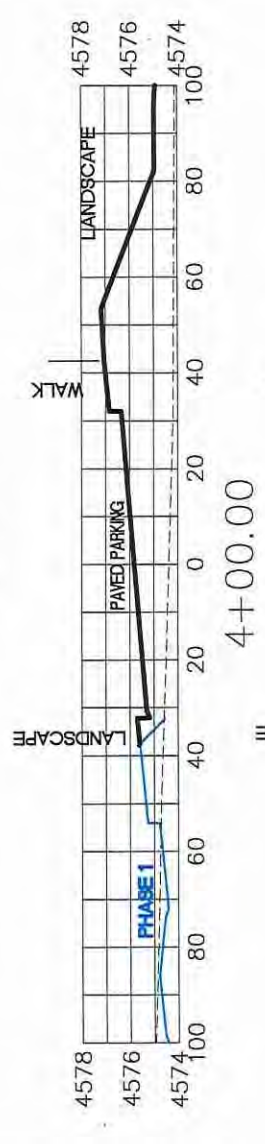
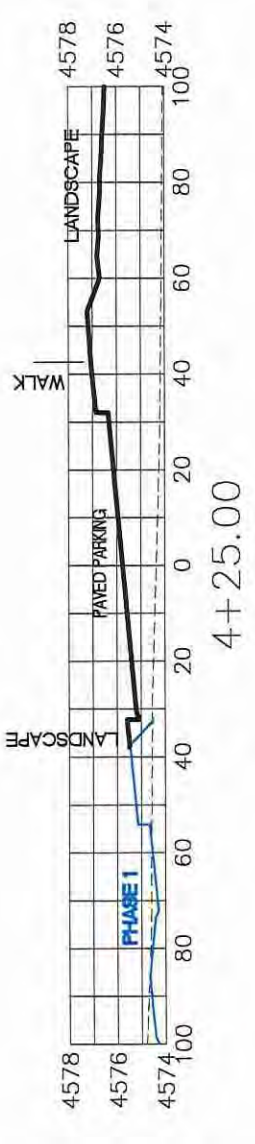
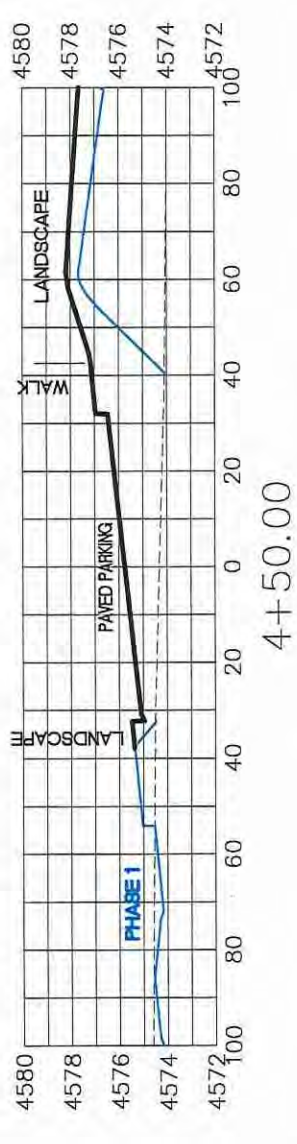
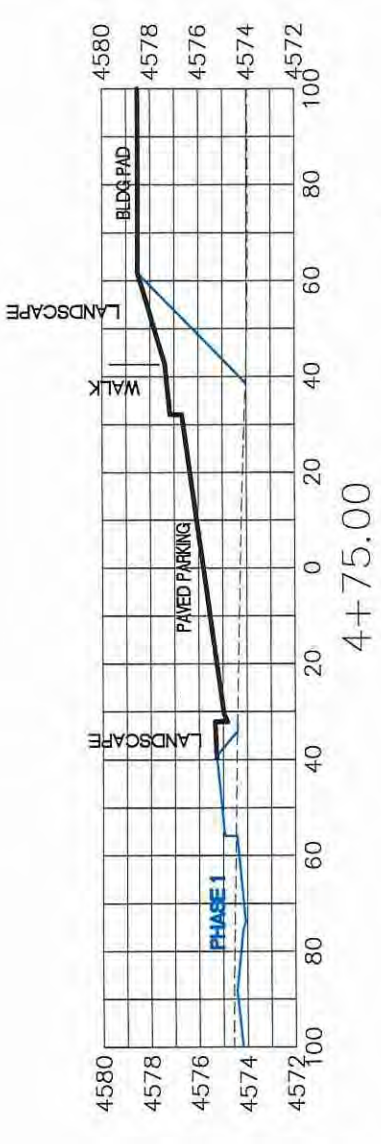
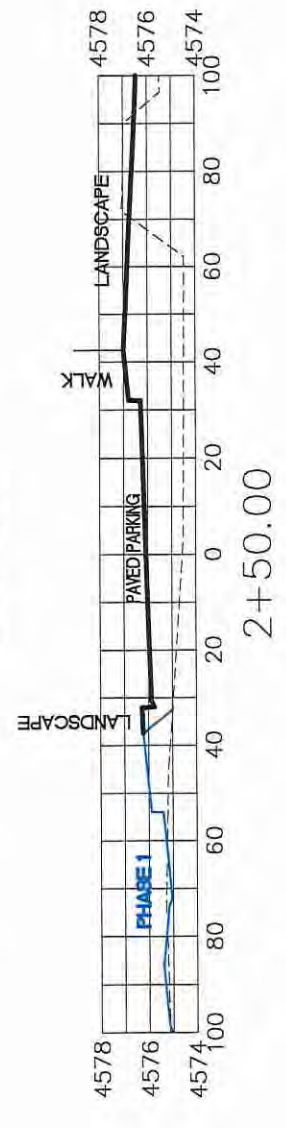
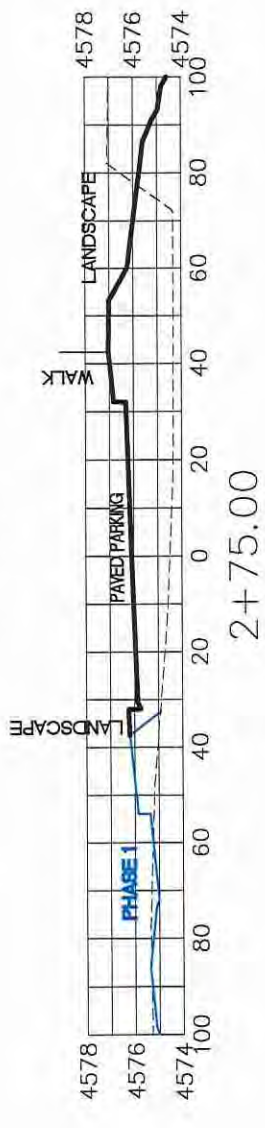
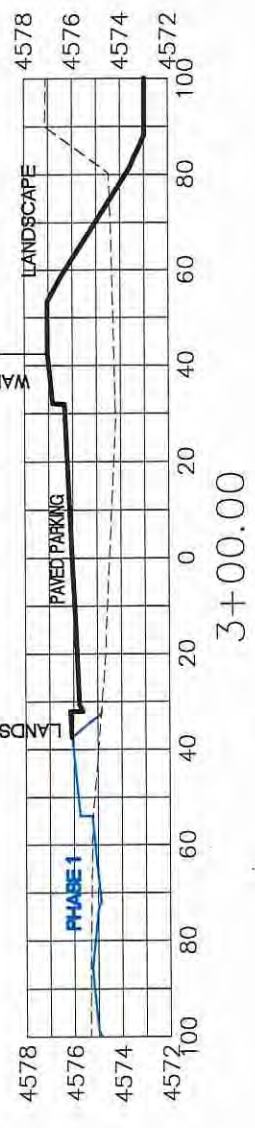
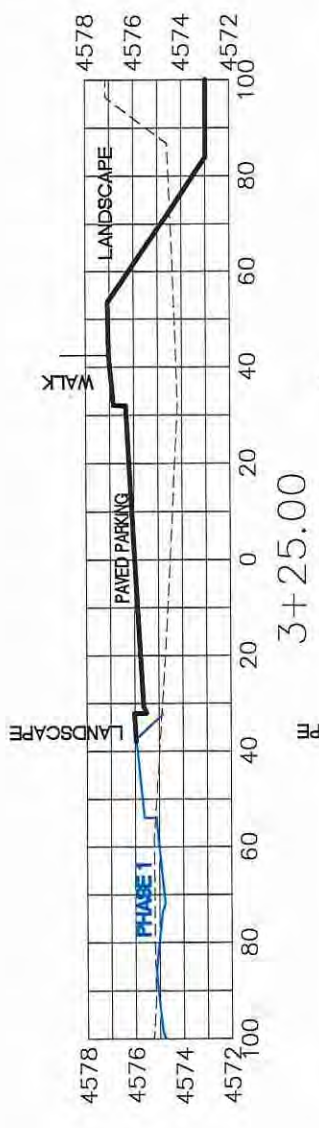
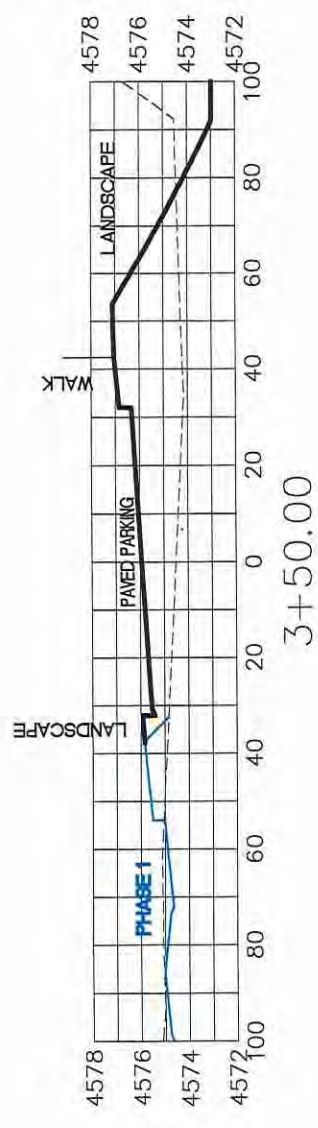
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APPROVED BY	TCF	DATE	2018

SCALE:	PLAN & PROFILE
0	1" = 20'
0	1" = 10'
0	1" = 5'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



WESTERLY PARKING LOT

REVISION	DESCRIPTION	DATE

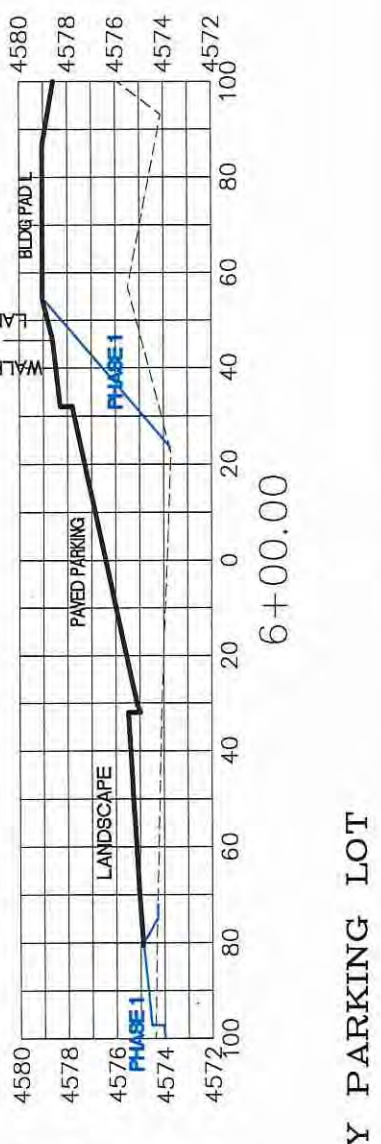
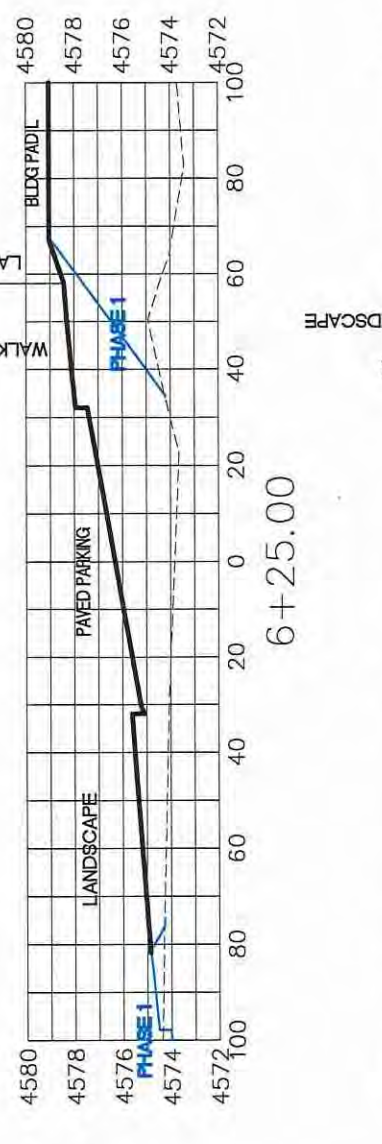
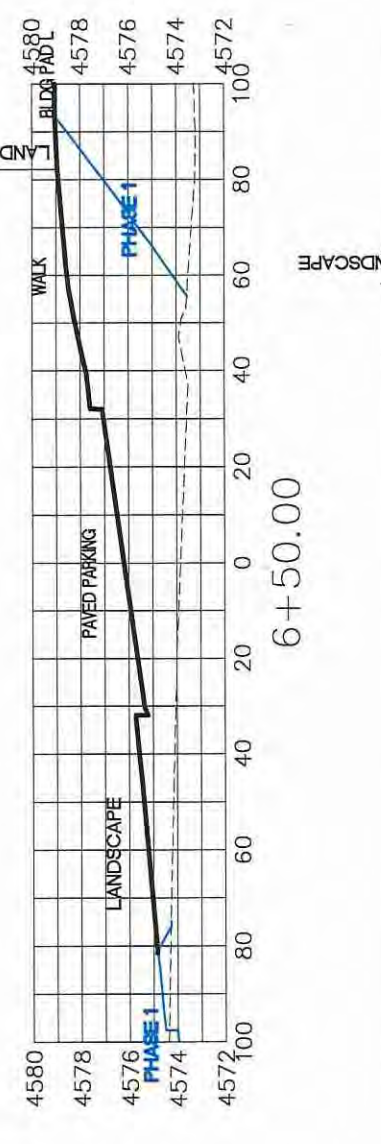
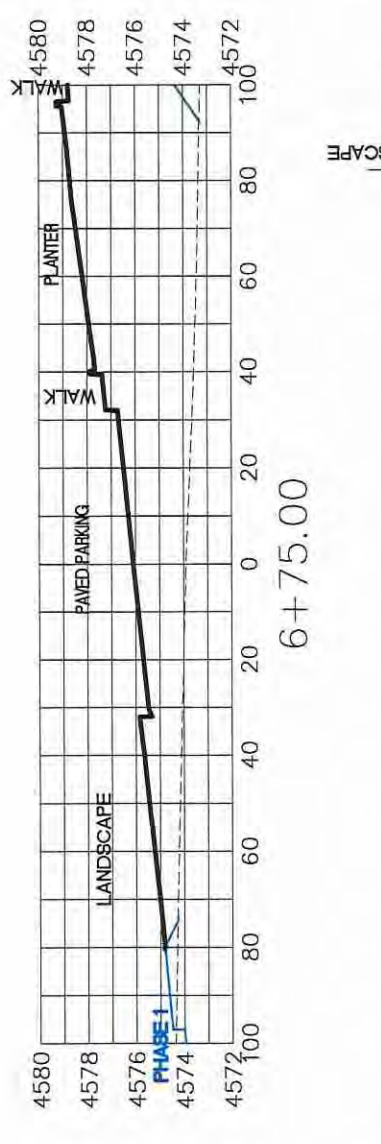
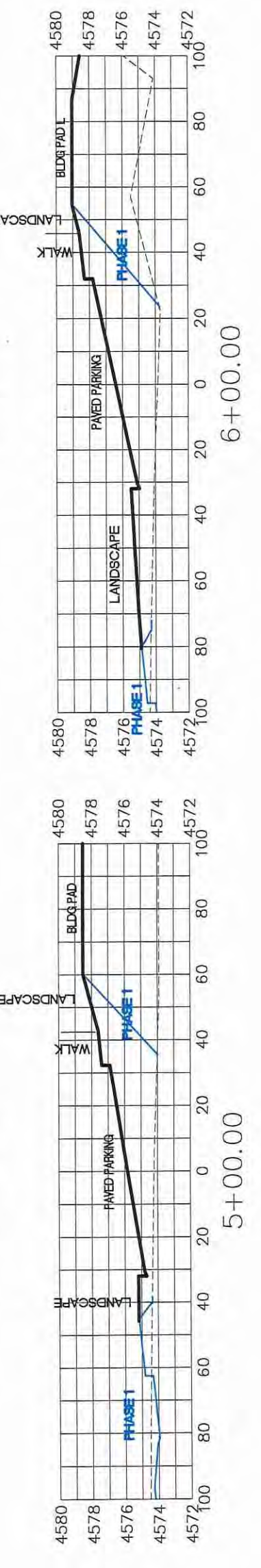
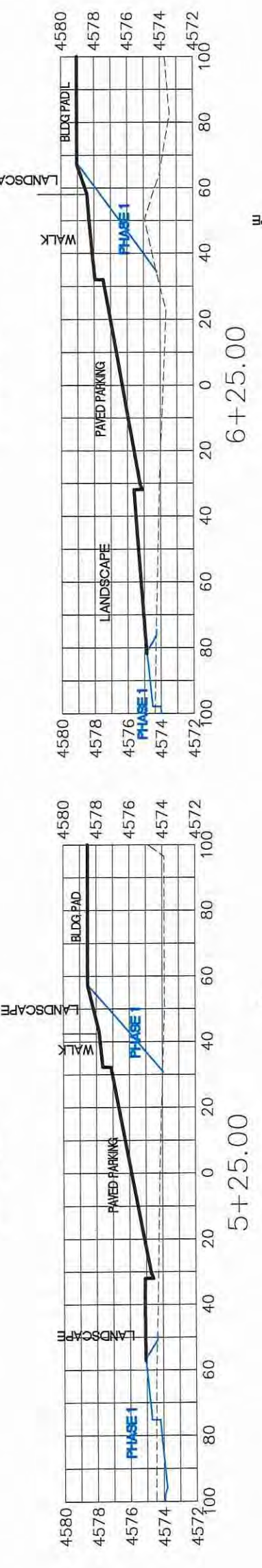
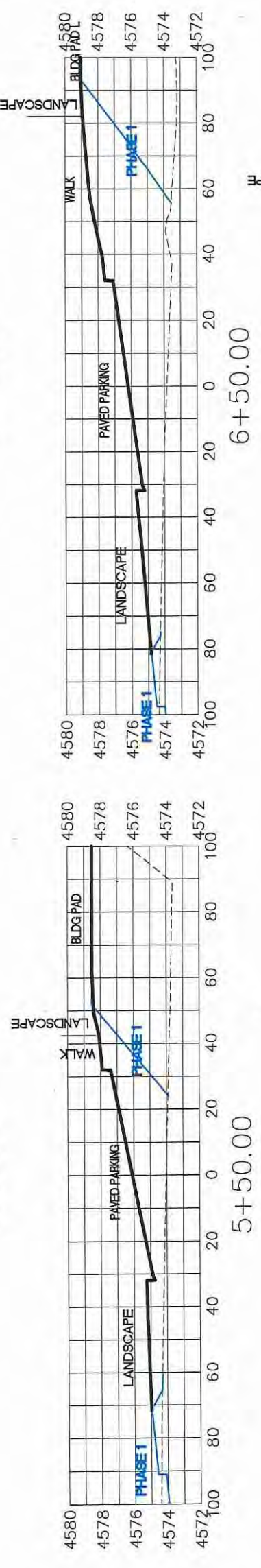
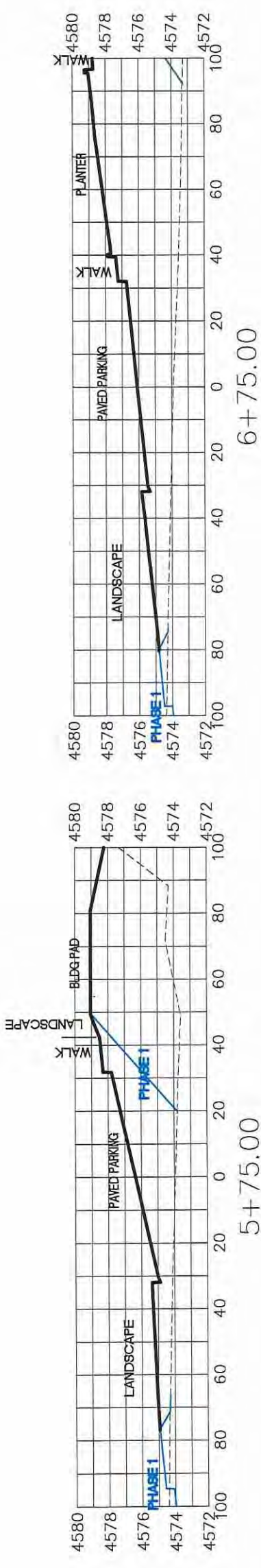
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALE:	PLAN & PROFILE



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



WESTERLY PARKING LOT

REVISION	DESCRIPTION	DATE

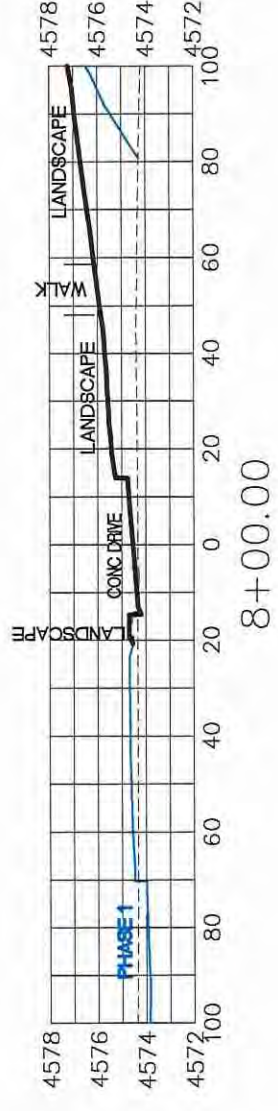
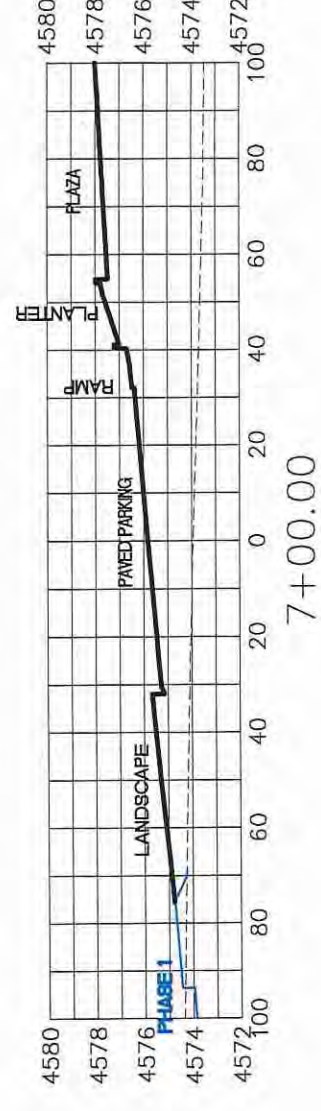
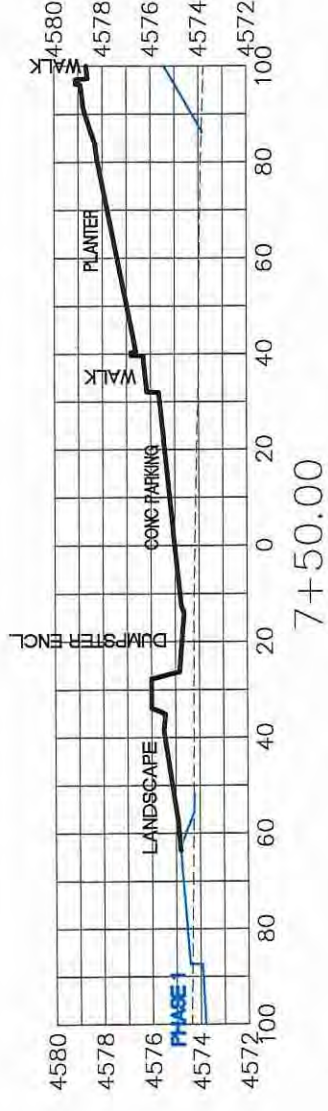
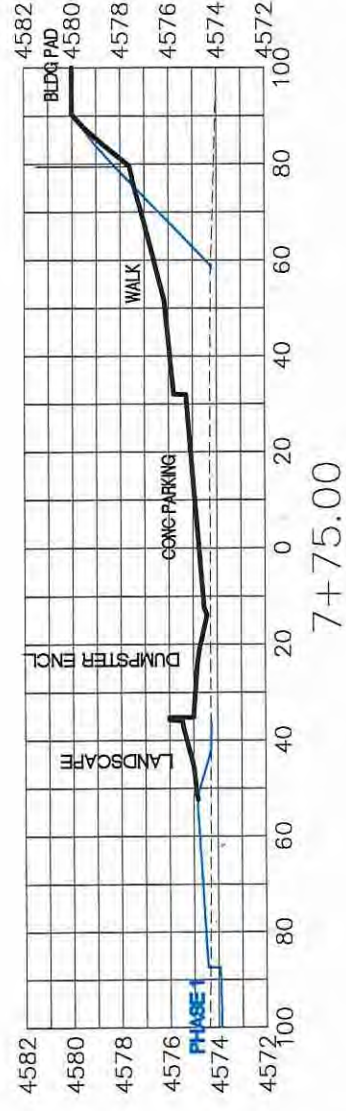
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCF	DATE	2018
APPROVED BY	TCF	DATE	2018

SCALES:	PLAN & PROFILE
0	1" = 20'
0	1" = 40'
0	1" = 80'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



WESTERLY PARKING LOT

REVISION	DESCRIPTION	DATE

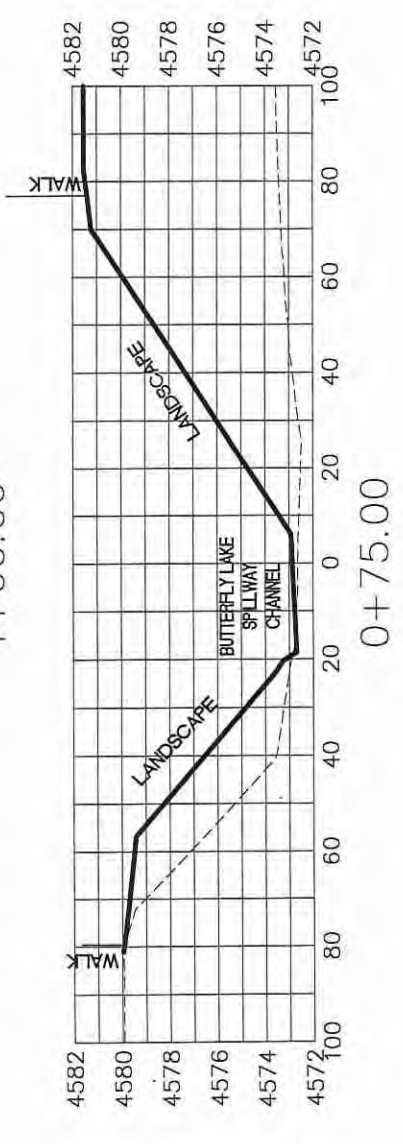
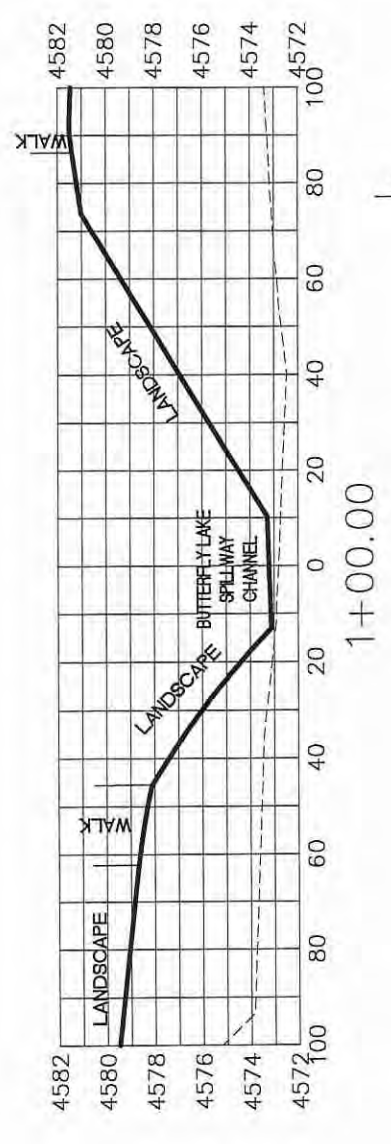
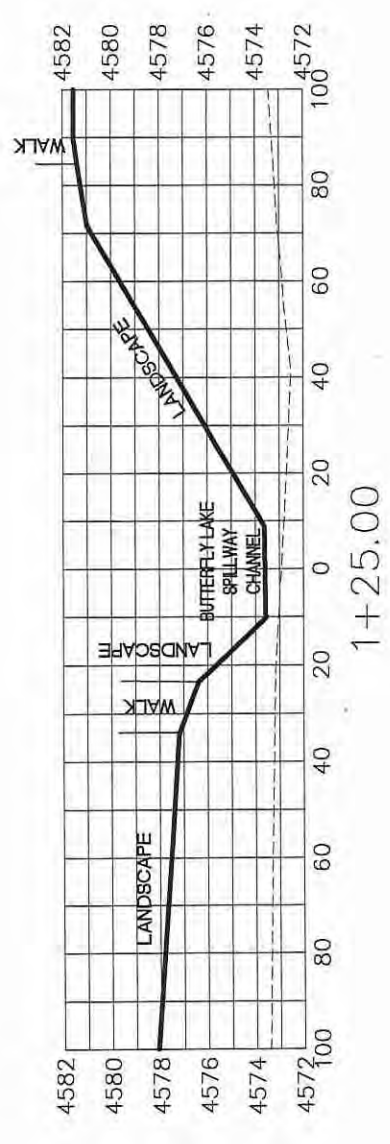
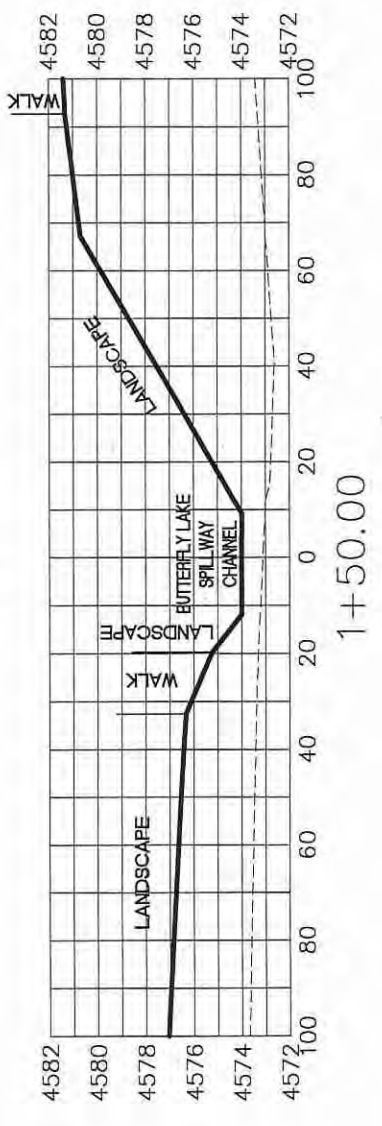
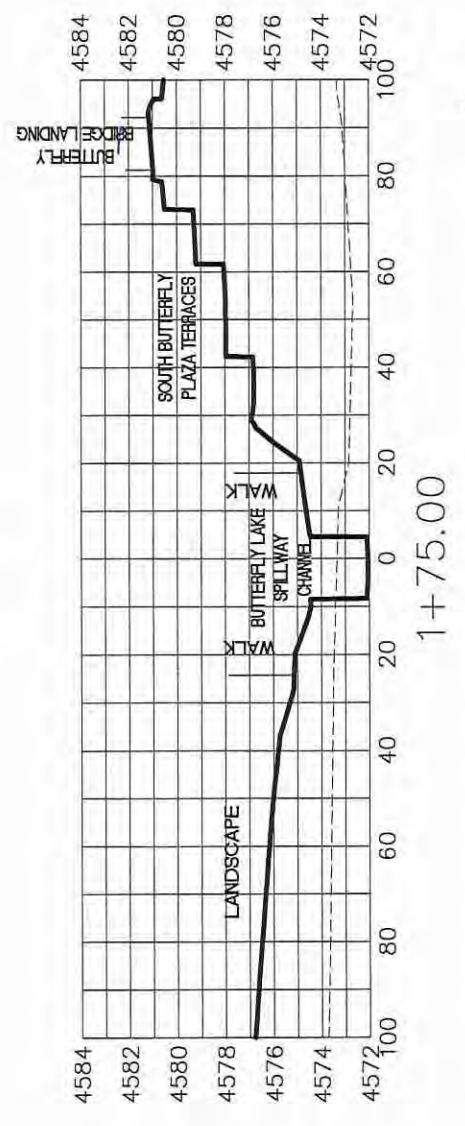
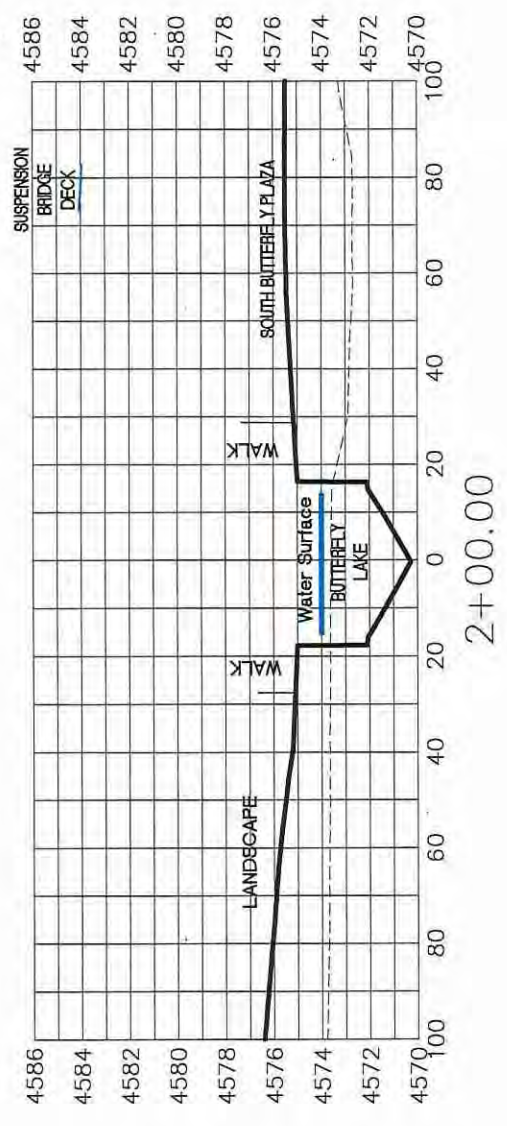
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALES:	PLAN & PROFILE
0	1" = 40'
0	1" = 20'
0	1" = 10'
0	VERTICAL



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



APPROXIMATE SITE INVERT

REVISION	DESCRIPTION	DATE

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCF	DATE	2018
APPROVED BY	TCF	DATE	2018

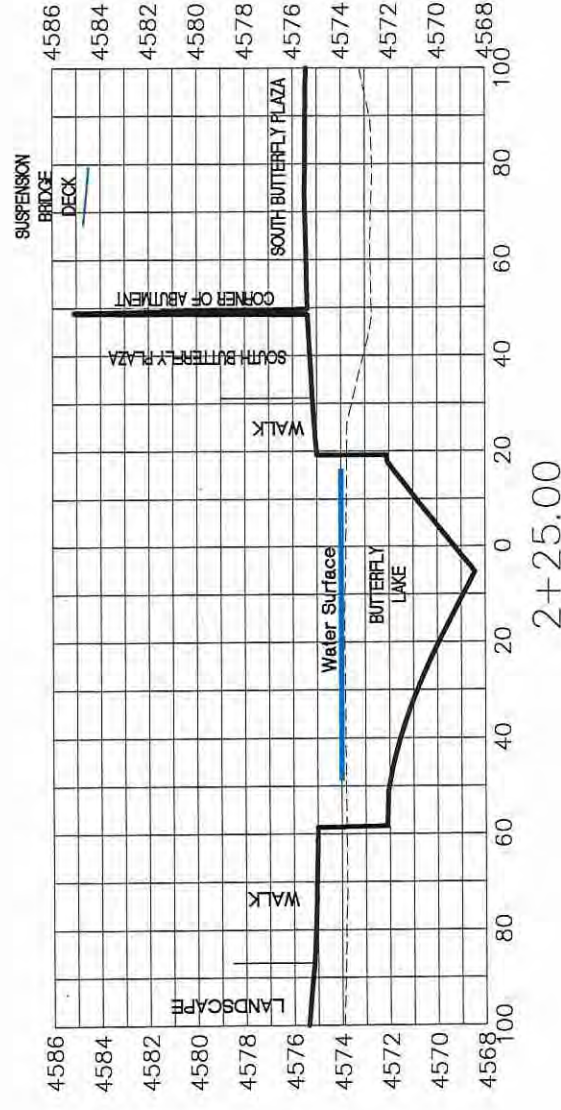
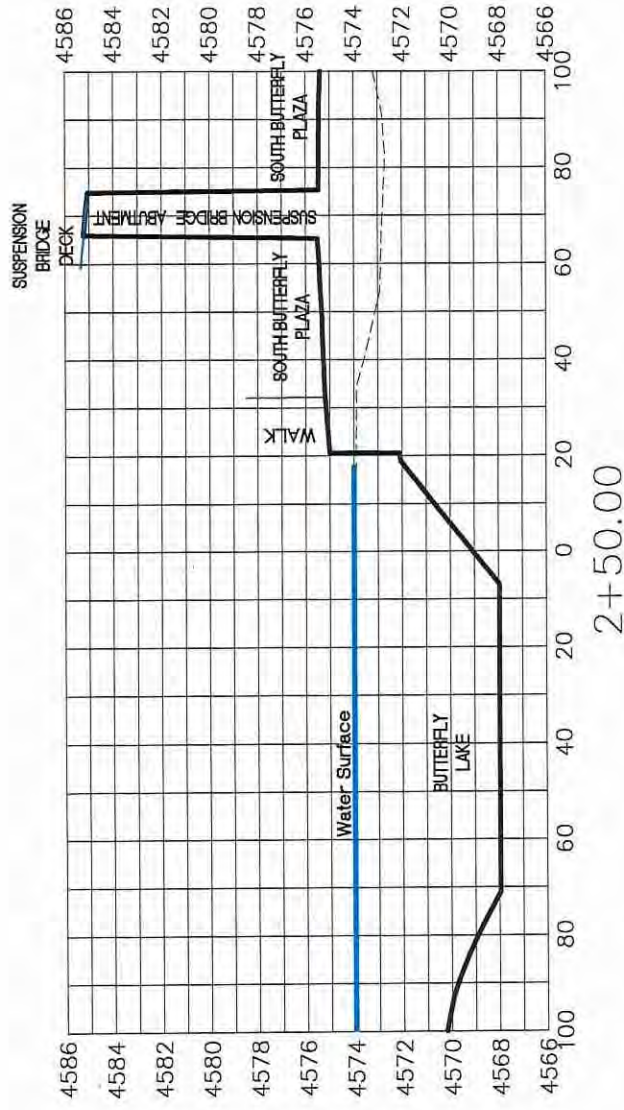
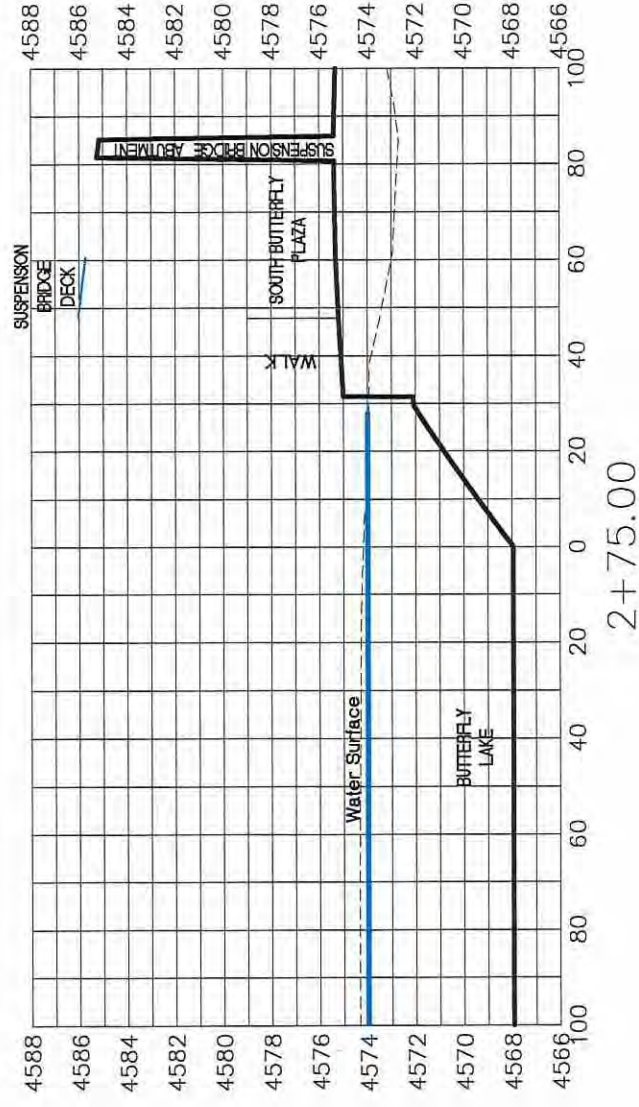
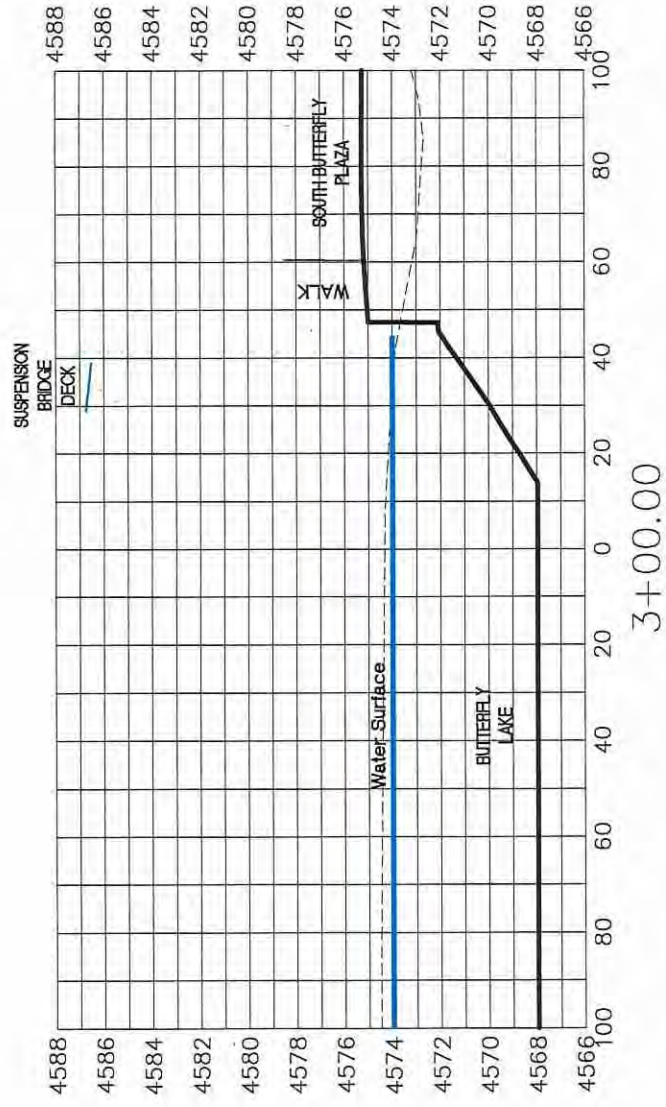
SCALES:	PLAN & PROFILE
	0 20 40 60 80
	1" = 40' HORIZONTAL
	1" = 10' VERTICAL



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS





APPROXIMATE SITE INVERT

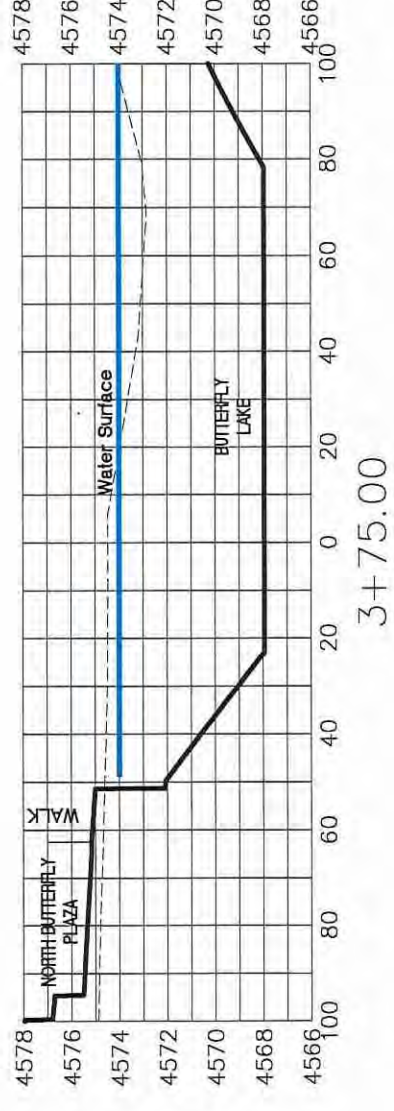
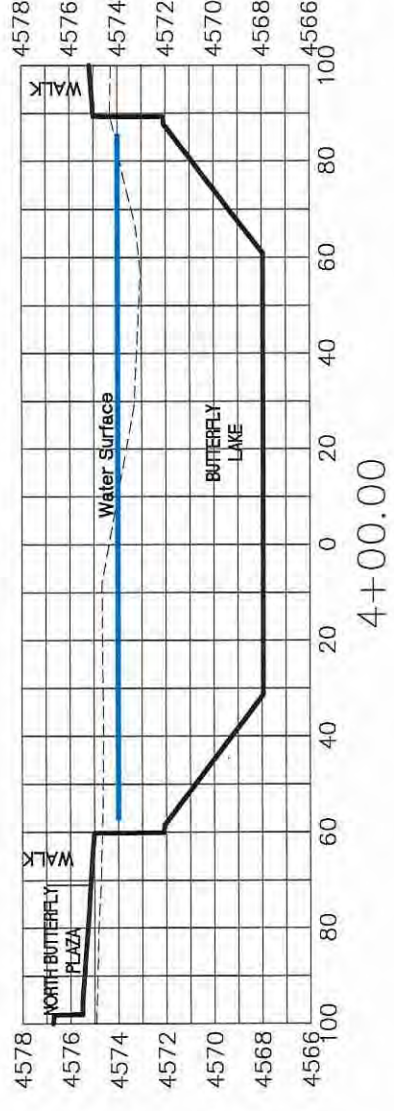
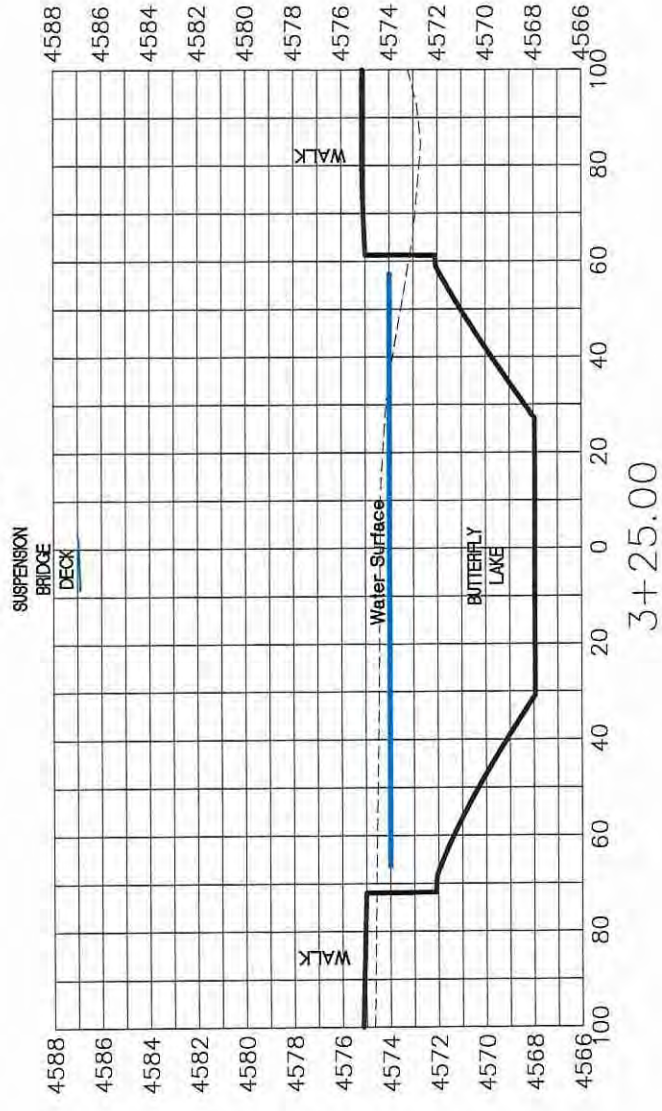
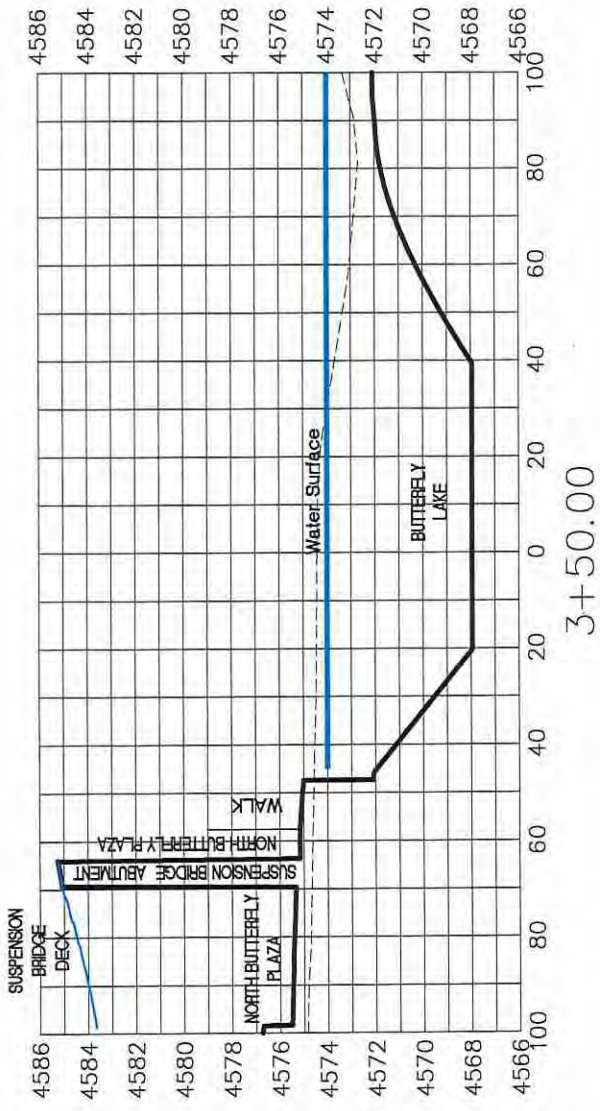
REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	2018
			JCS		
			JCS		
			TCF		
			TCF		

SCALES:	PLAN & PROFILE
0	1" = 40'
0	1" = 20'
0	1" = 10'
0	VERTICAL



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



APPROXIMATE SITE INVERT

REVISION	DESCRIPTION	DATE

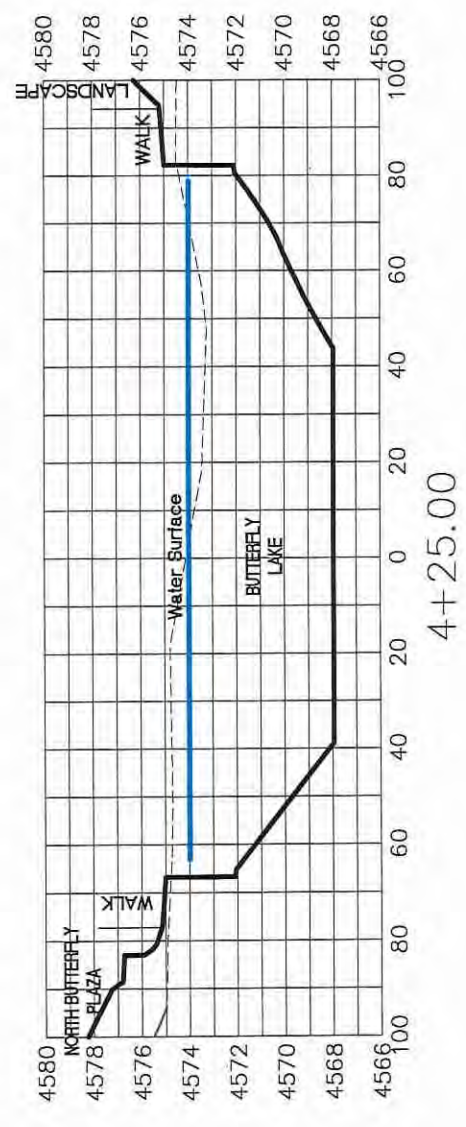
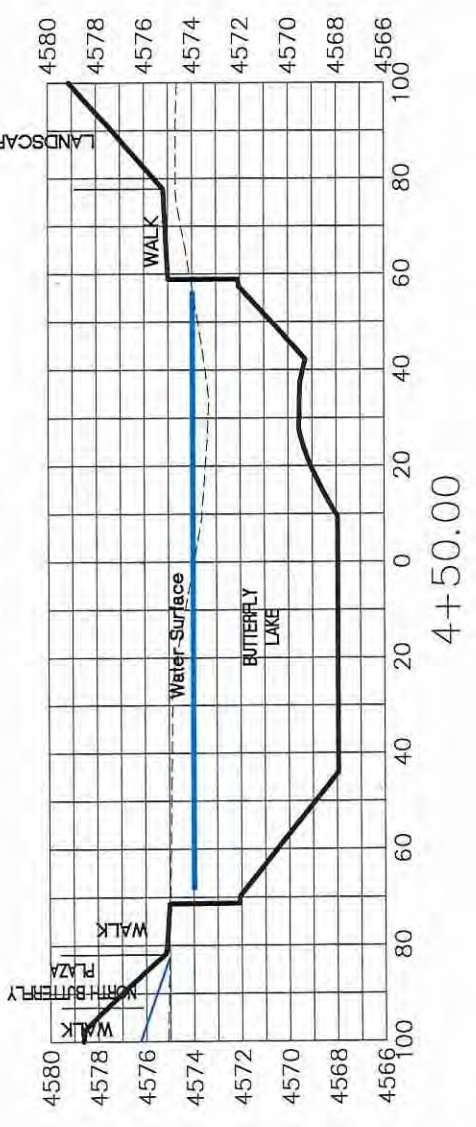
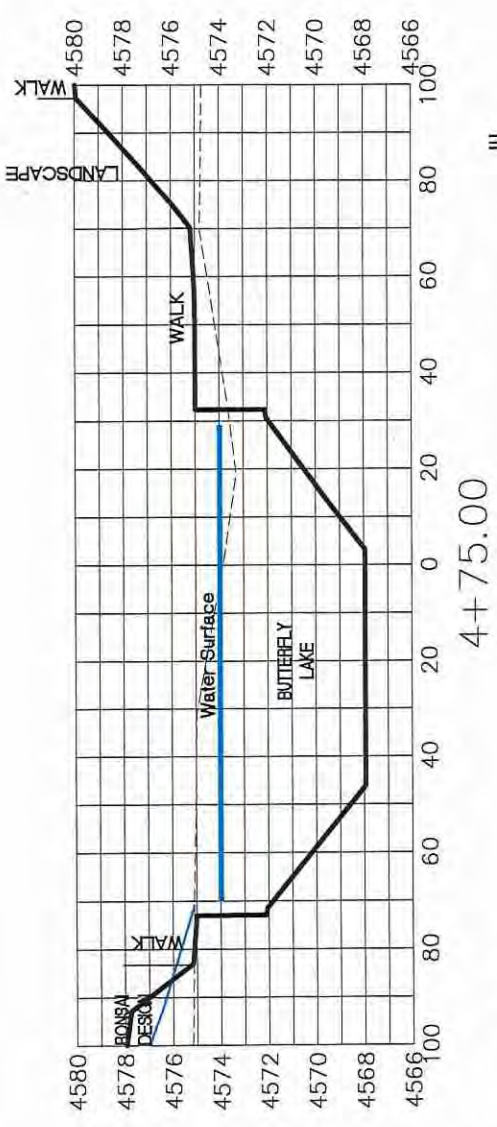
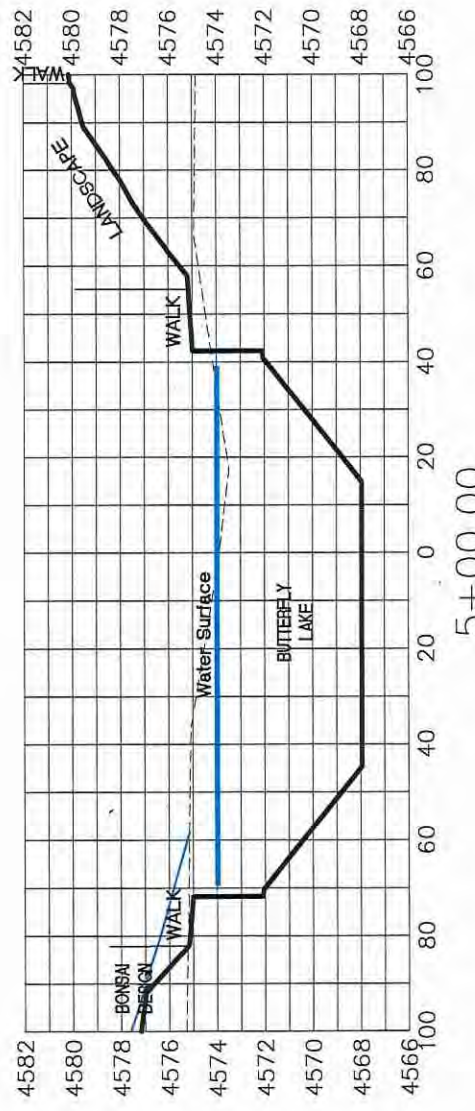
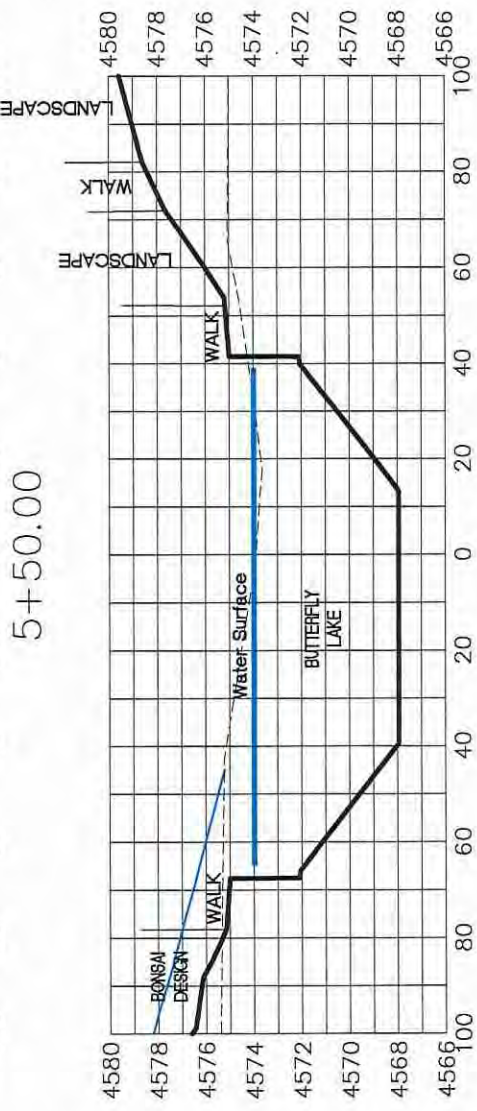
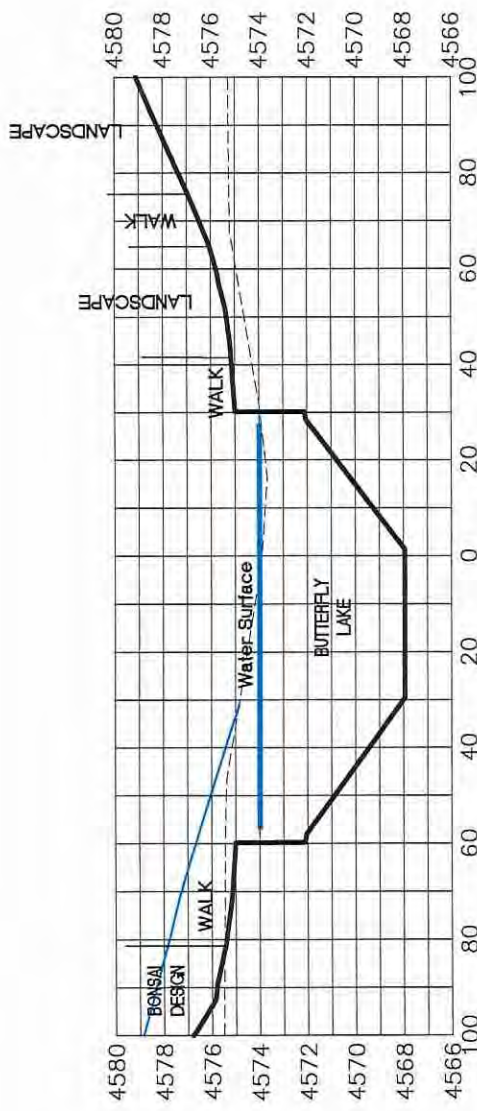
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TOP	DATE	2018
APPROVED BY	TOP	DATE	2018

SCALES:	PLAN & PROFILE



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



APPROXIMATE SITE INVERT

REVISION	DESCRIPTION	DATE

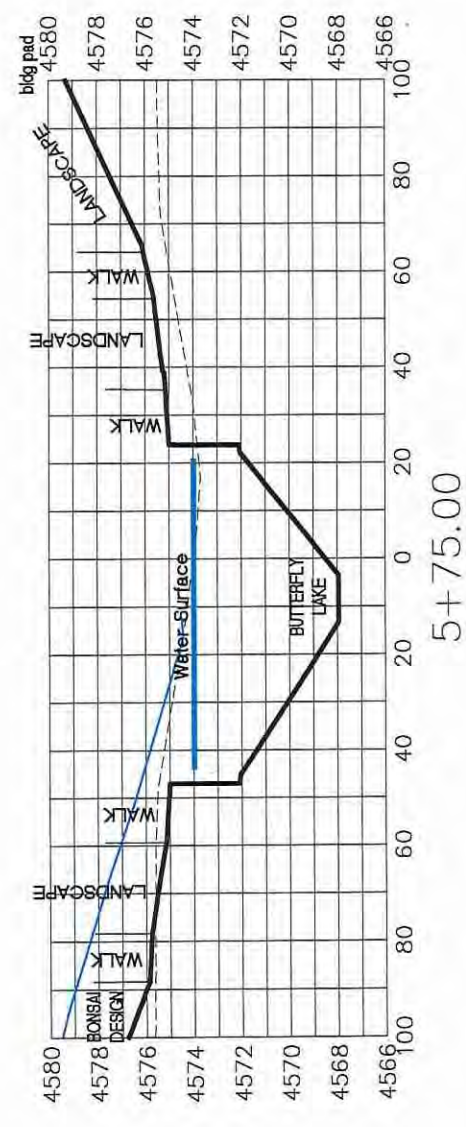
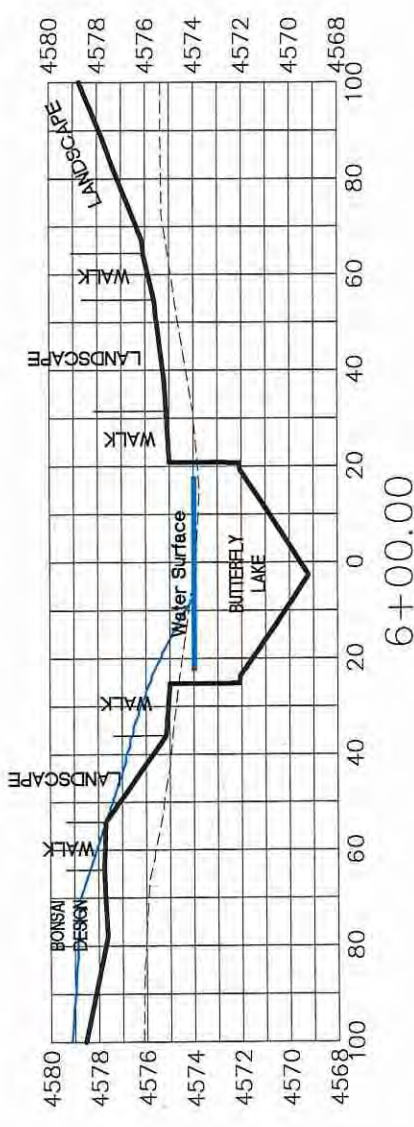
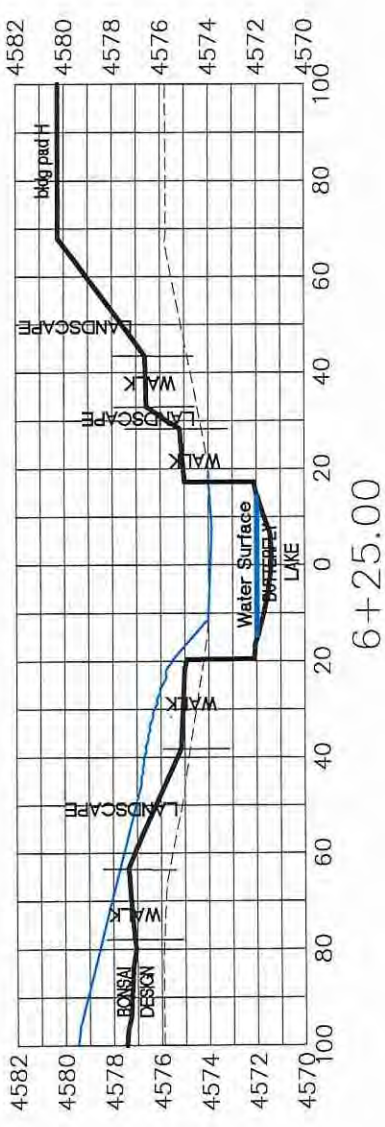
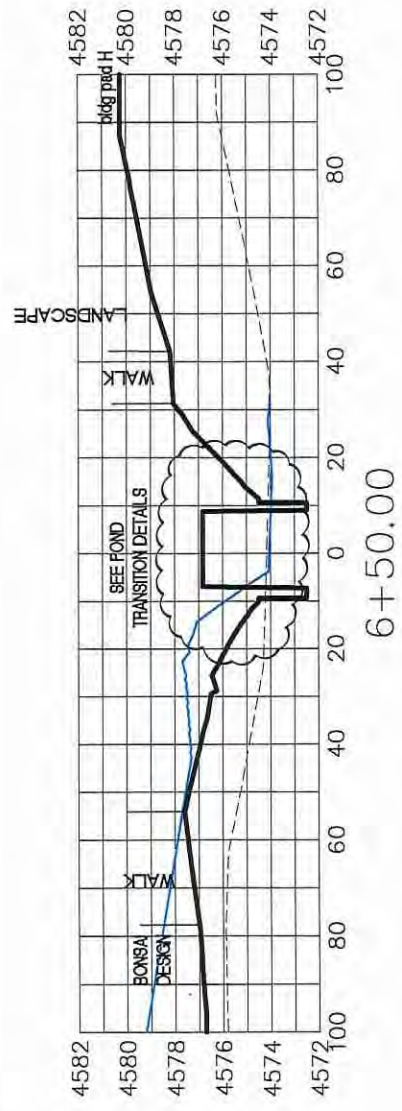
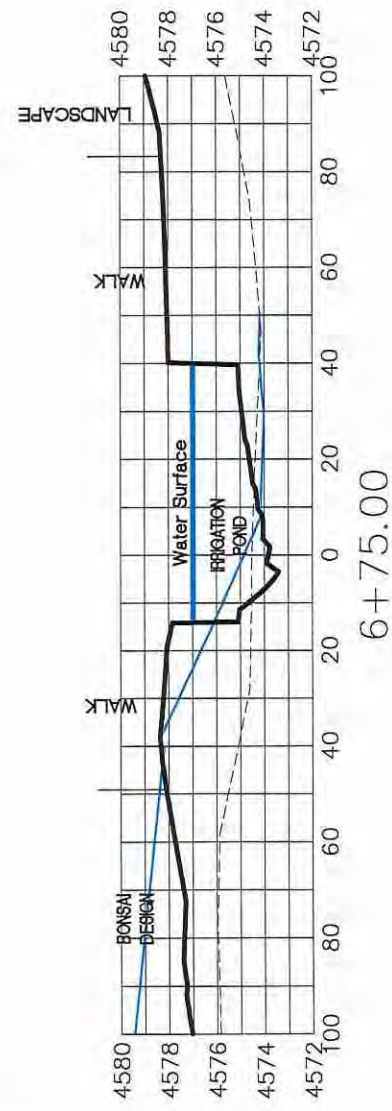
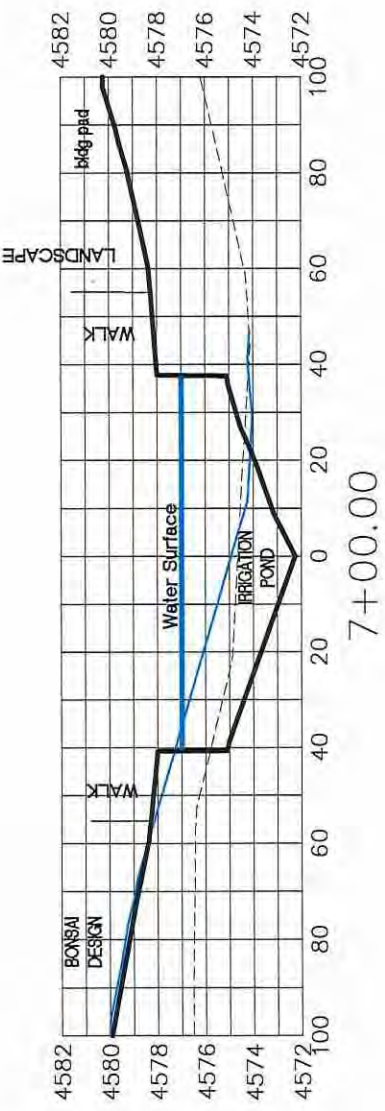
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALES:	
PLAN & PROFILE	1" = 40'
VERTICAL	1" = 4'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



APPROXIMATE SITE INVERT

andproj\2018 LAS COLONIAS BUSINESS PARK (Phase II and Later)\DWG\Phase 2\SITE CROSS SECTIONS.dwg, 009, 7/3/2018 6:34:04 AM

REVISION	DESCRIPTION	DATE

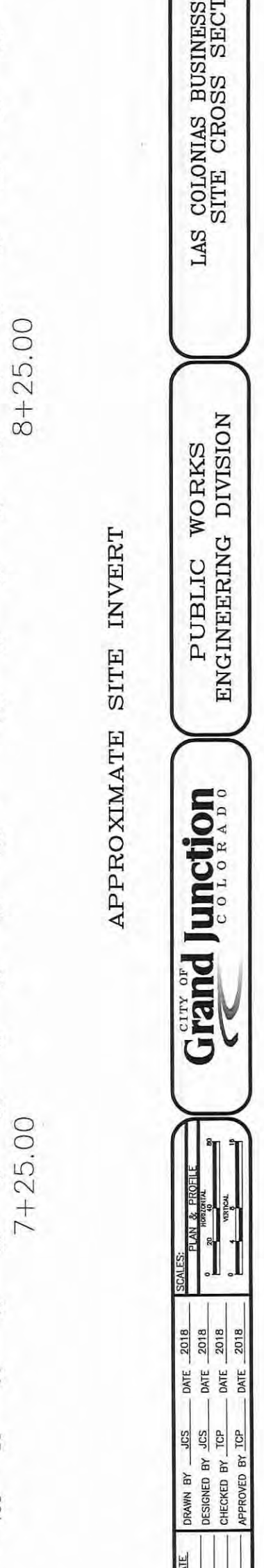
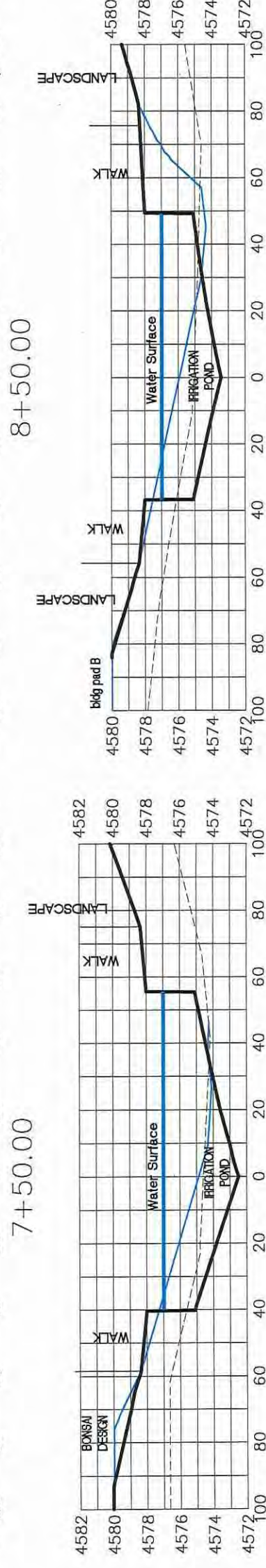
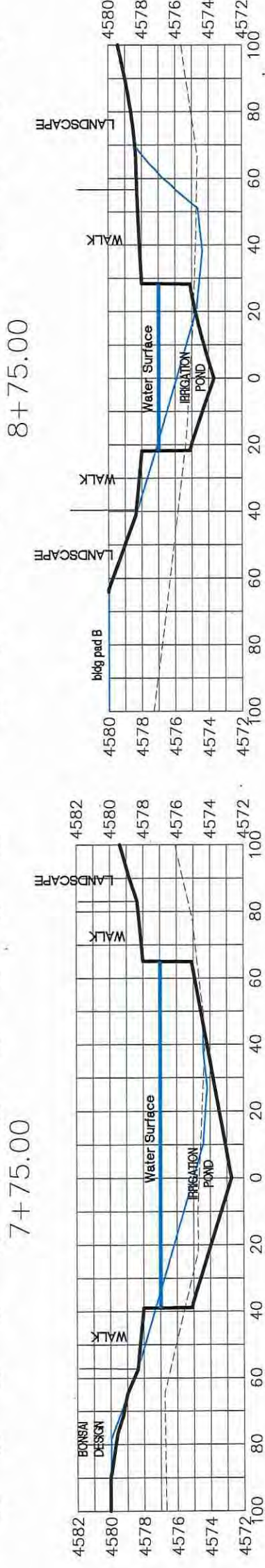
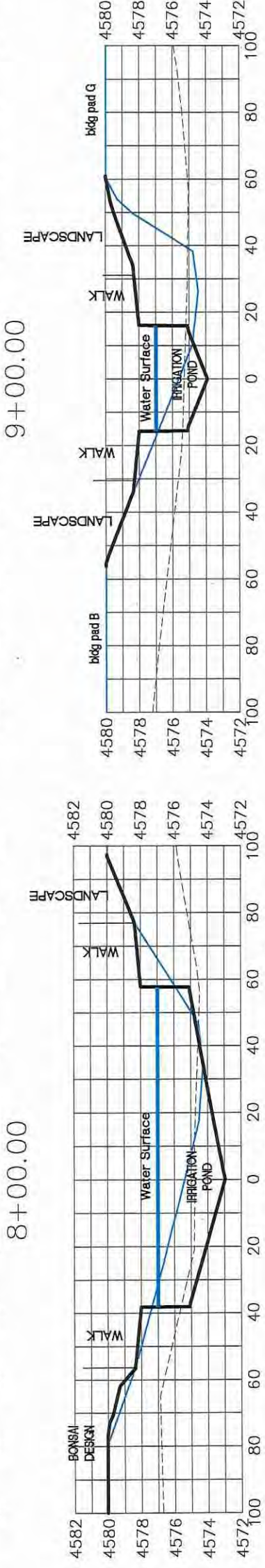
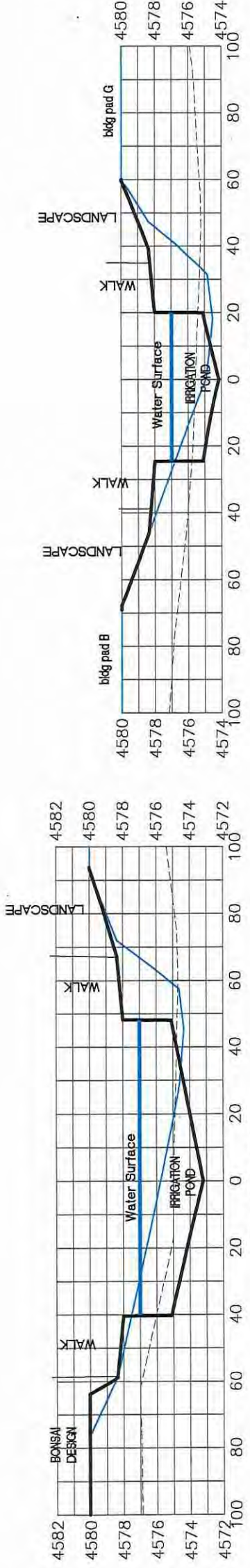
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALES:	PLAN & PROFILE
	1" = 20'
	1" = 10'
	1" = 5'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



APPROXIMATE SITE INVERT

REVISION	DESCRIPTION	DATE

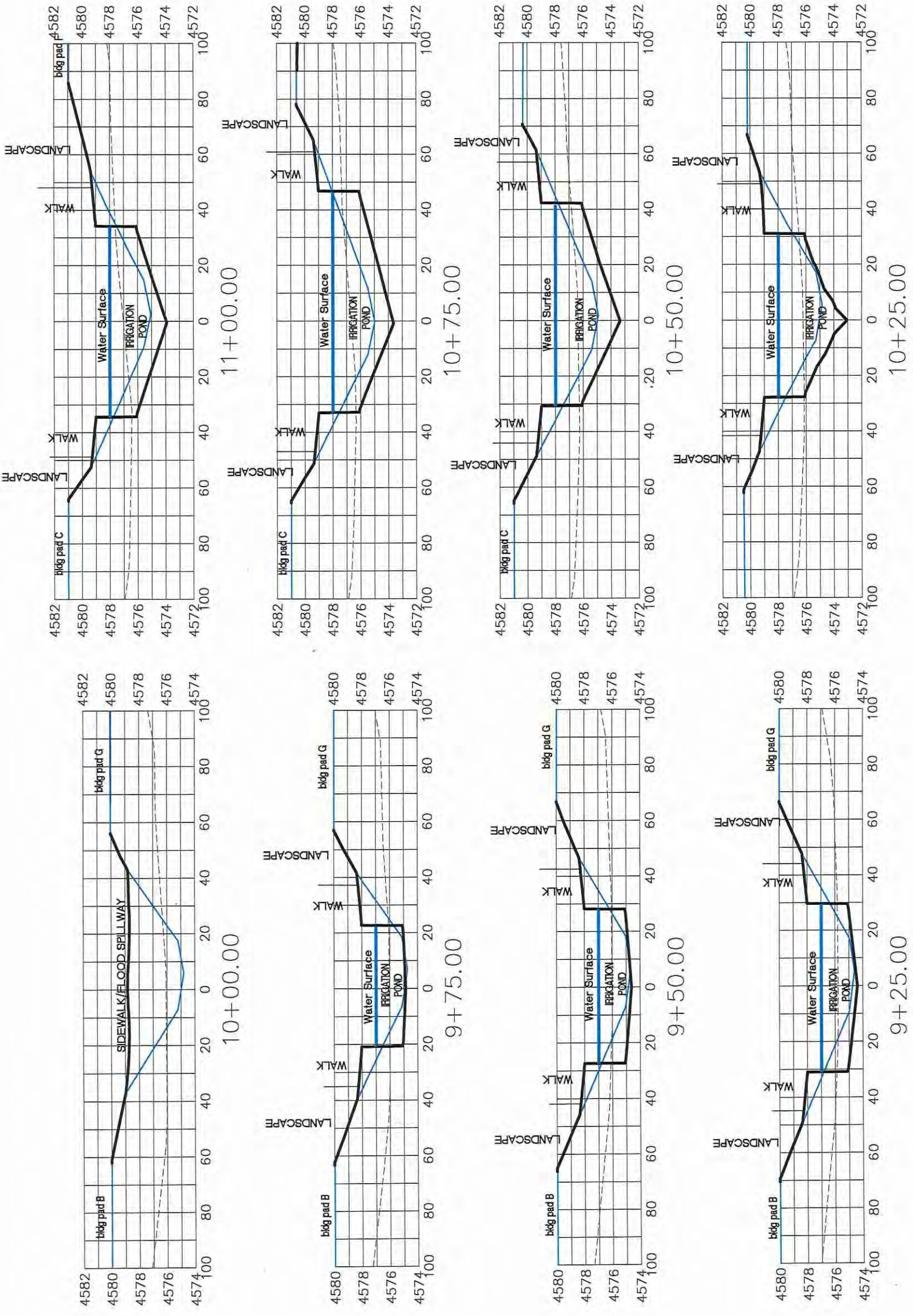
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALES:	PLAN & PROFILE
	HORIZONTAL
	VERTICAL



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



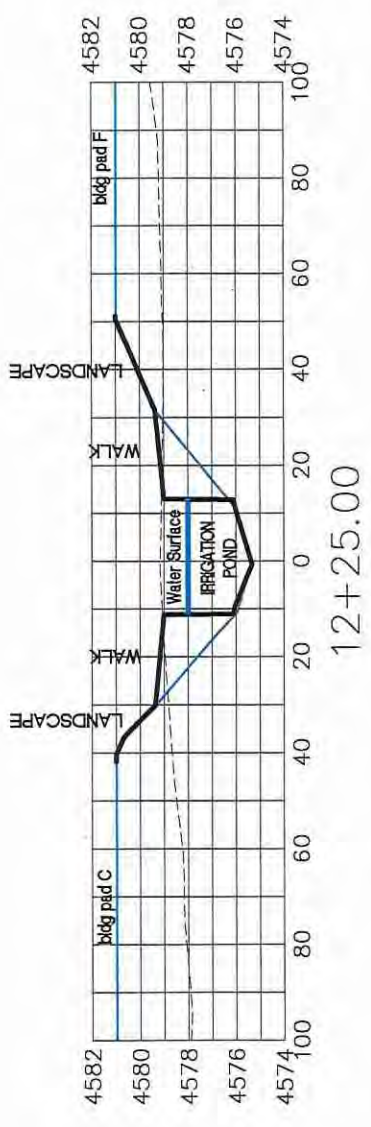
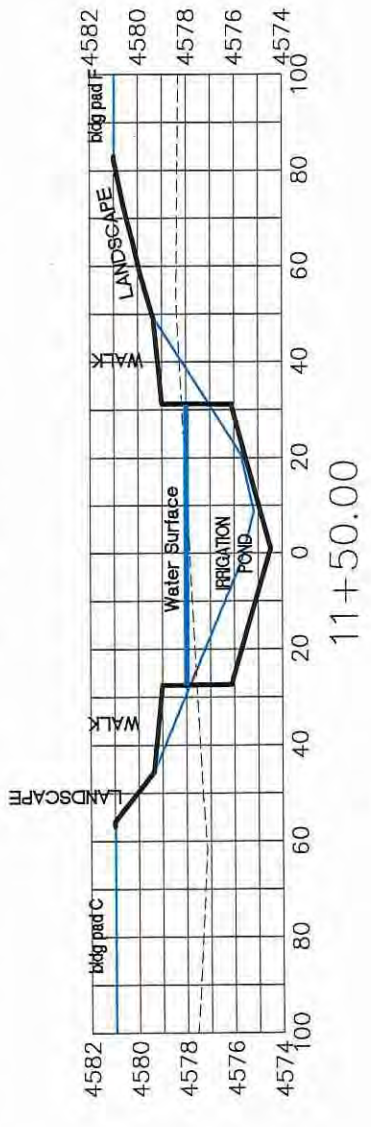
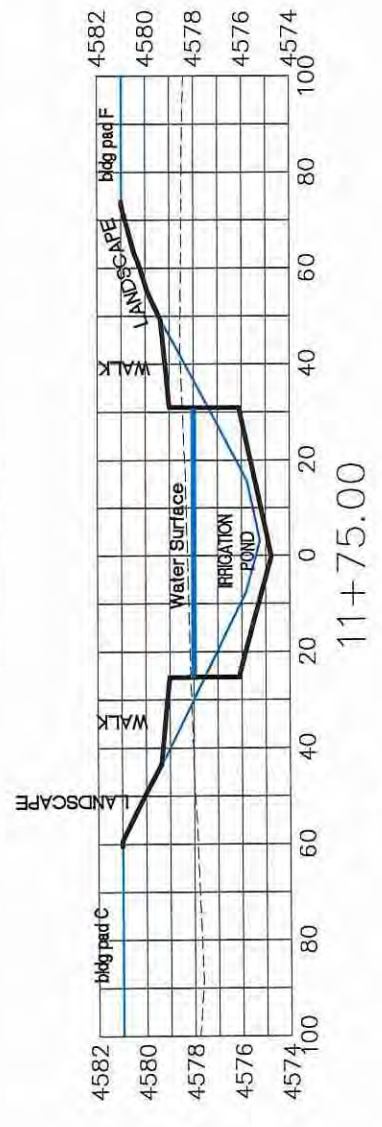
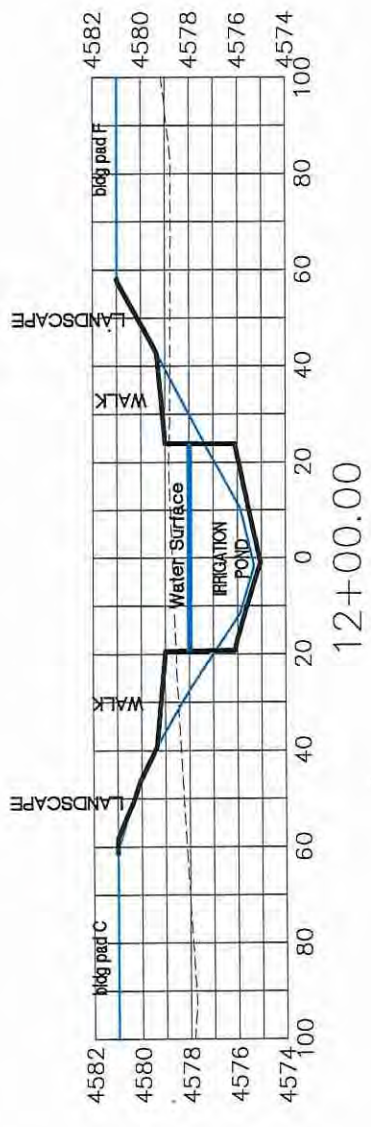
APPROXIMATE SITE INVERT

REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



APPROXIMATE SITE INVERT

REVISION	DESCRIPTION	DATE

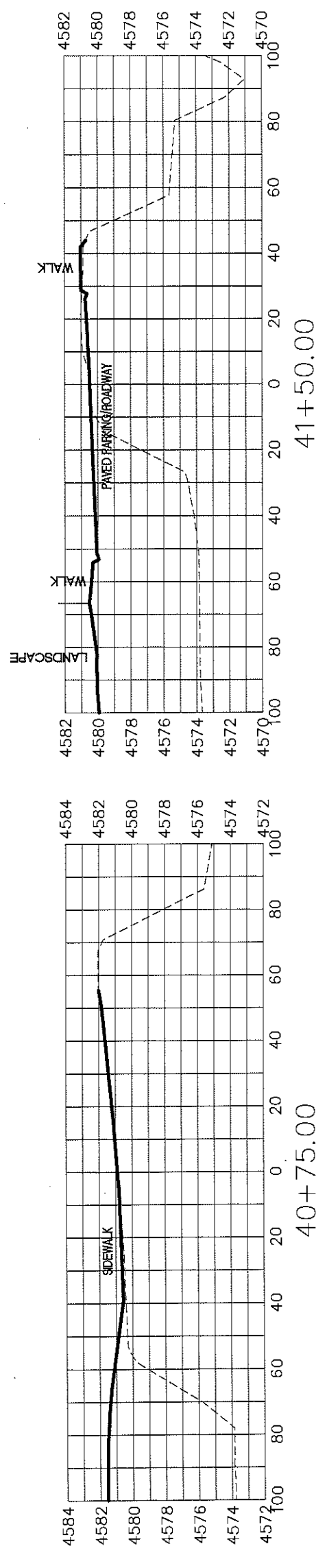
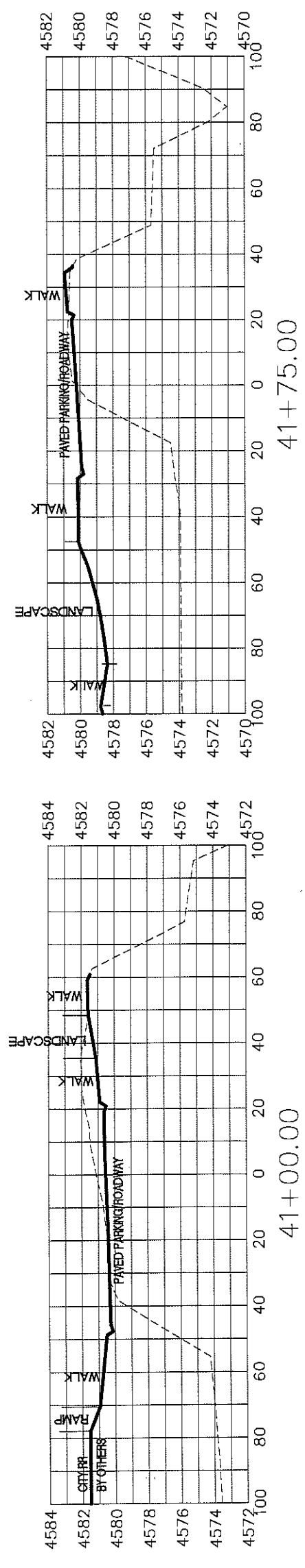
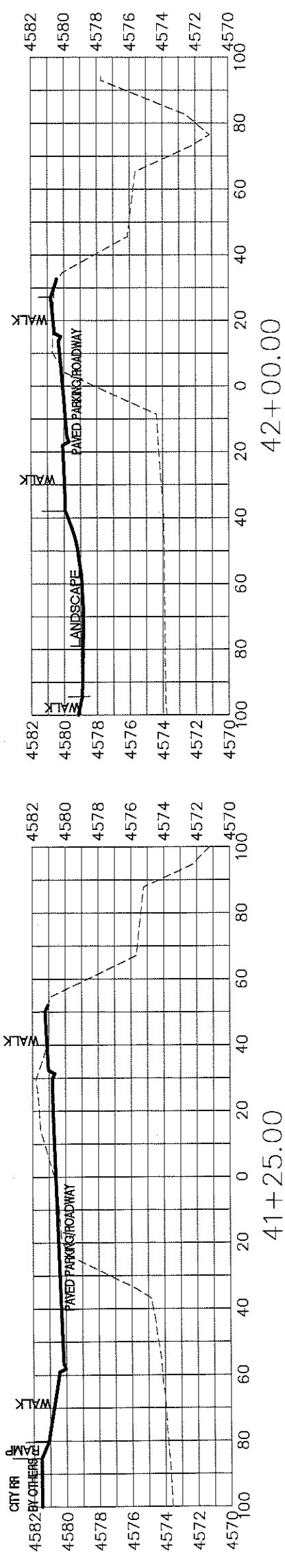
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALES:  
 PLAN & PROFILE  
 1" = 100'-0"  
 1" = 10'-0" (vertical)



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



BOAT RAMP ROAD

REVISION	DESCRIPTION	DATE

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	ICP	DATE	2018
APPROVED BY	ICP	DATE	2018

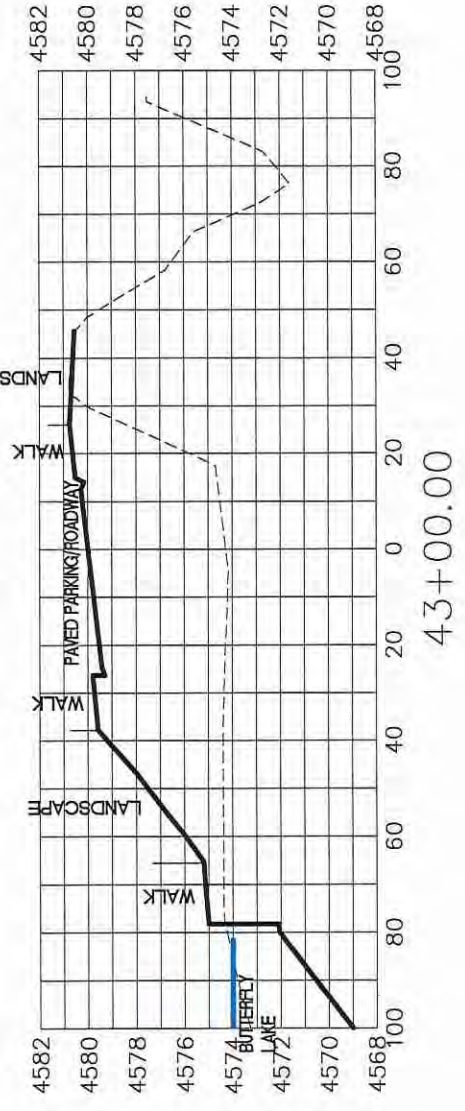
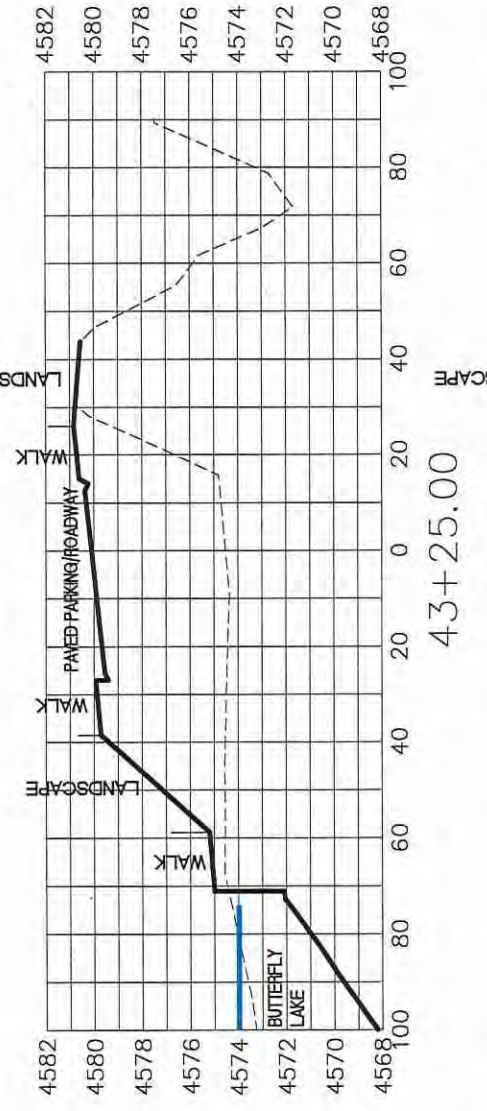
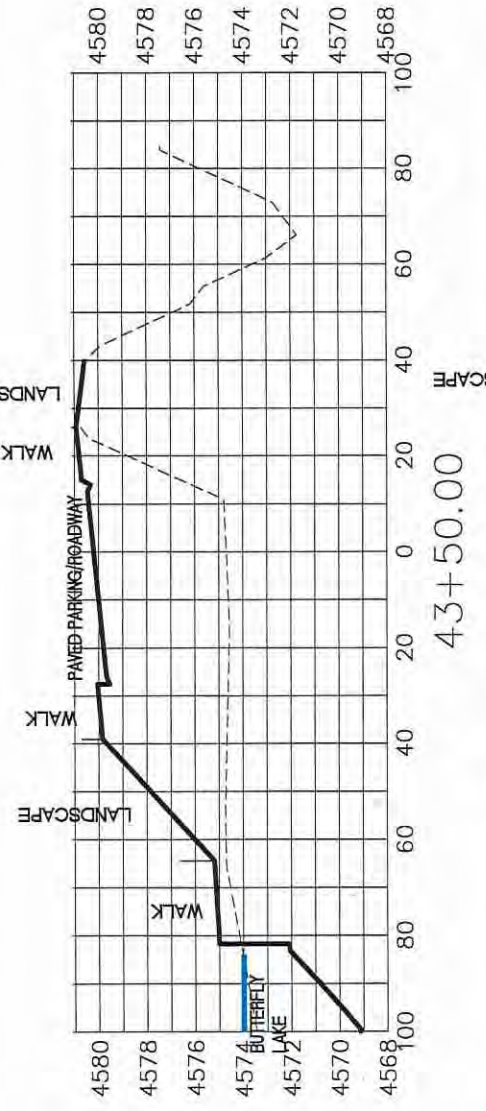
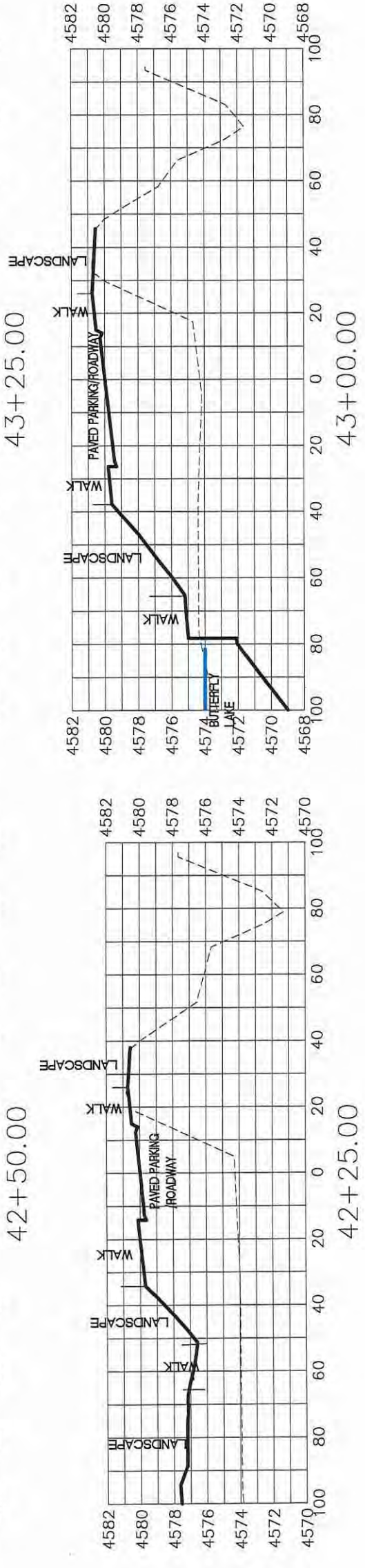
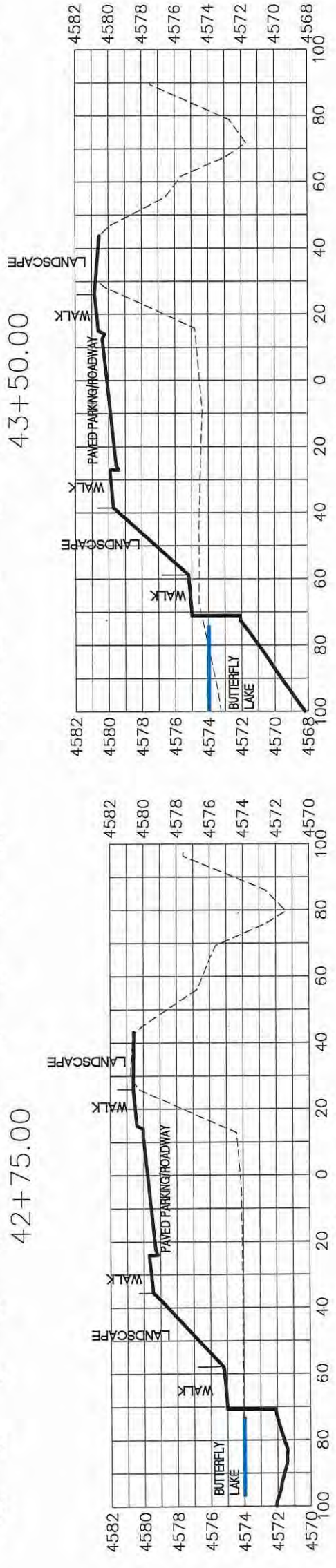
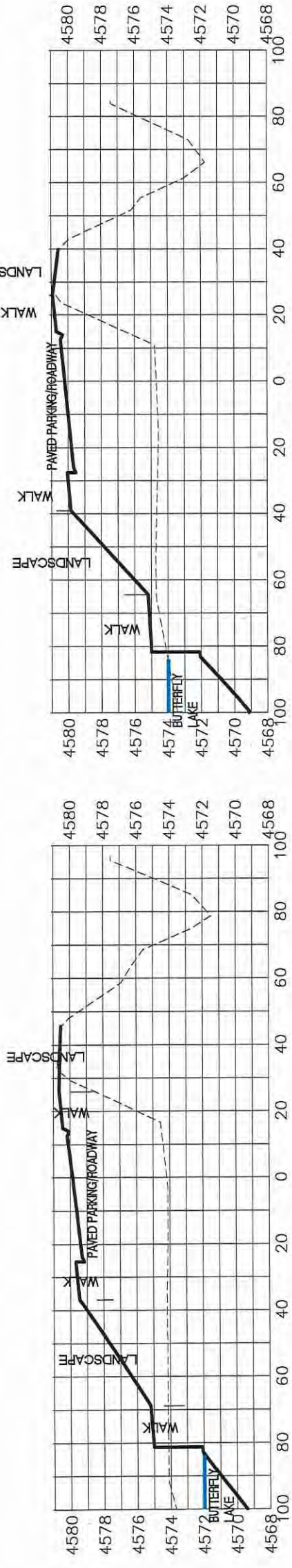
SCALES:	PLAN & PROFILE
0	1" = 20'
0	1" = 40'
0	1" = 80'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS





BOAT RAMP ROAD

REVISION	DESCRIPTION	DATE

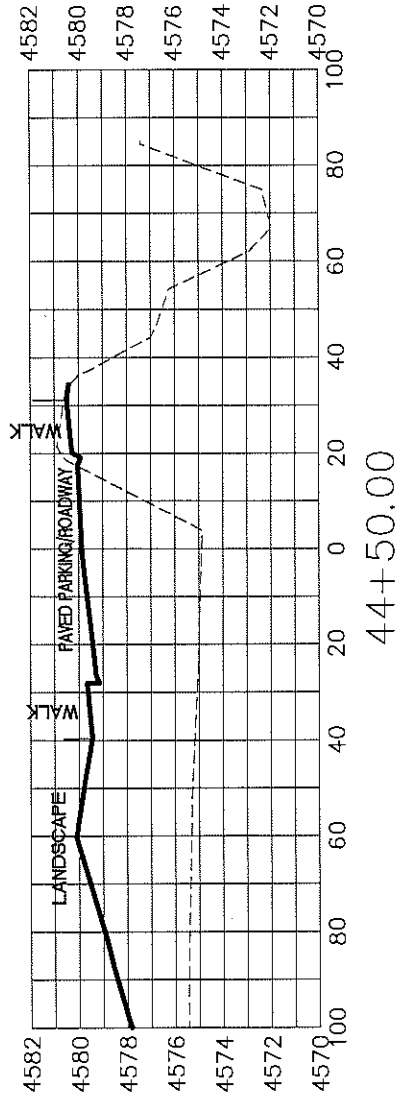
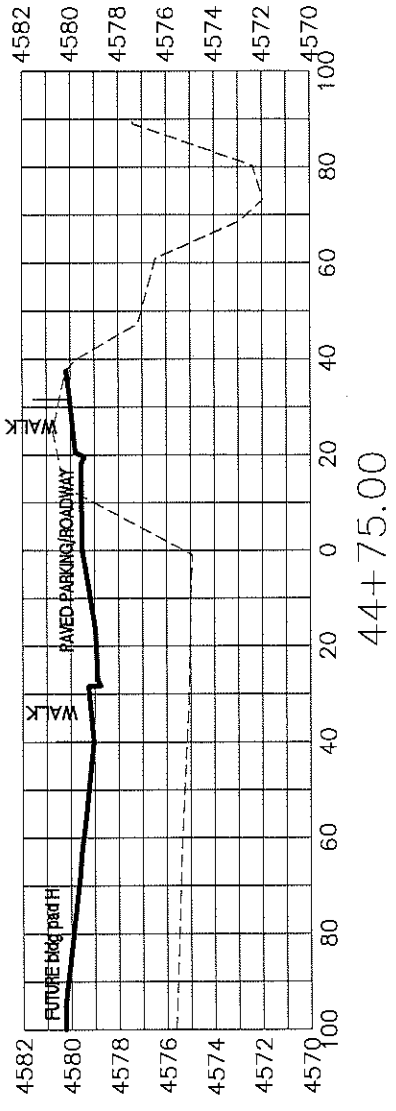
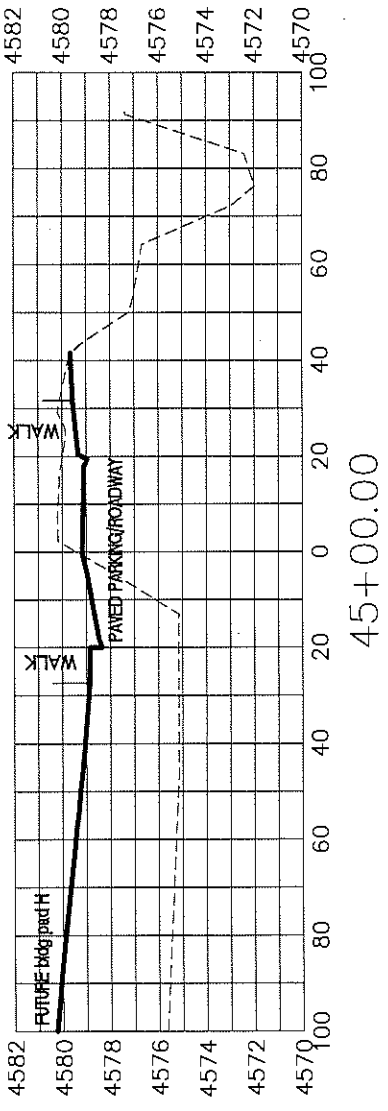
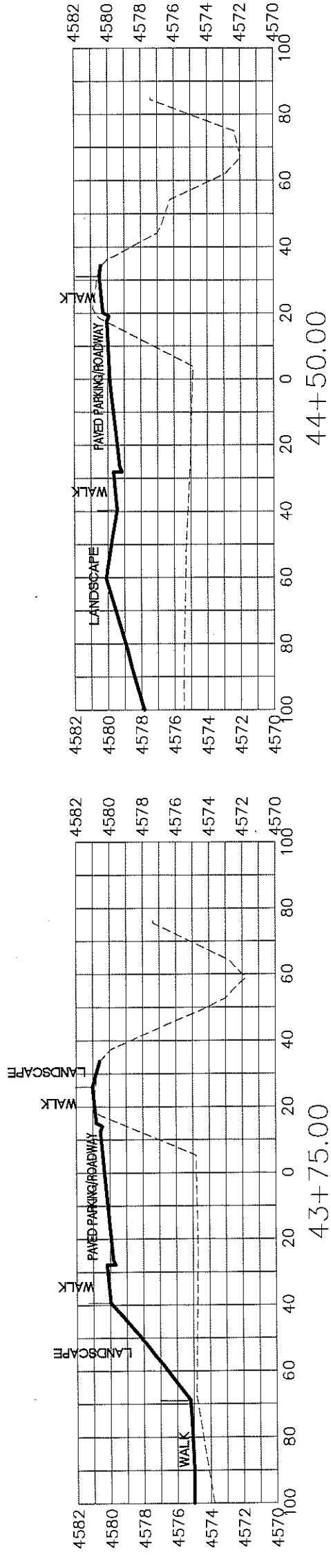
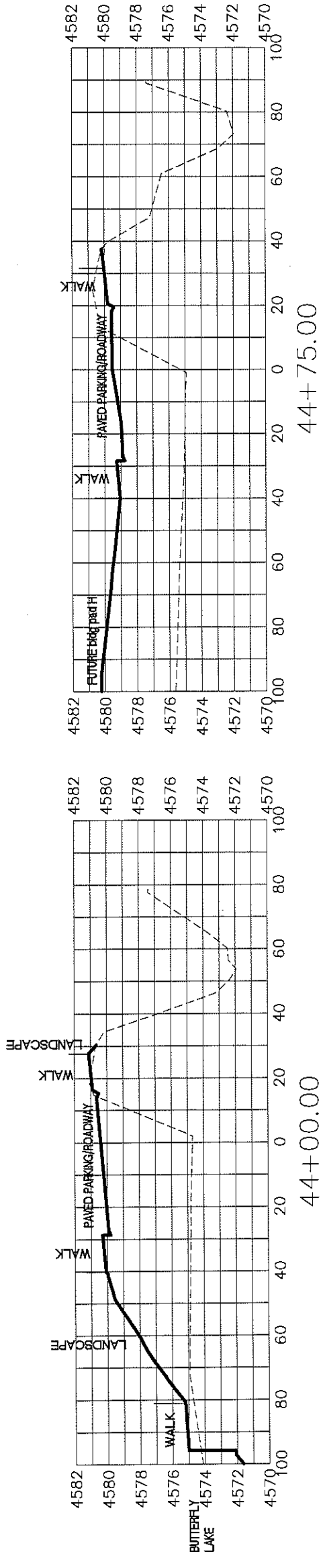
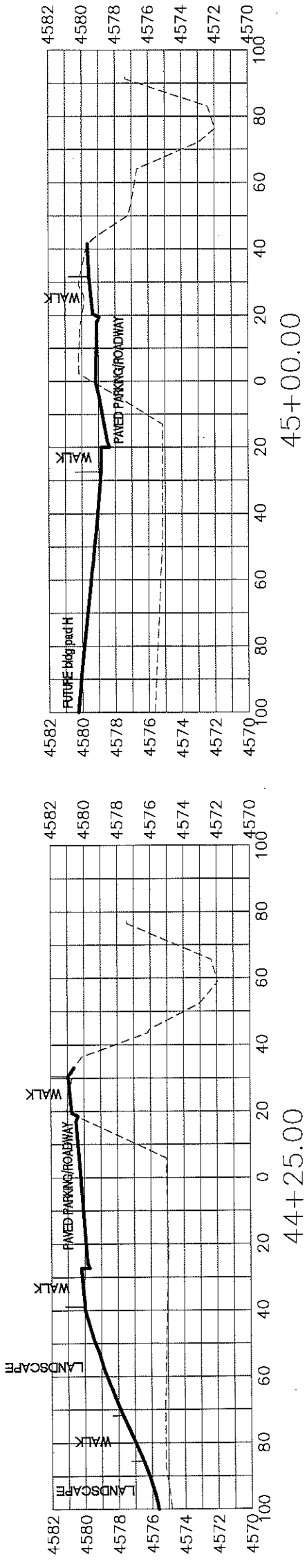
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	ICP	DATE	2018
APPROVED BY	ICP	DATE	2018

SCALES:	PLAN & PROFILE
0	1" = 20' HORIZONTAL
0	1" = 10' VERTICAL



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



BOAT RAMP ROAD

DESCRIPTION	DATE
REGION	△
REVISION	△
REVISION	△
REVISION	△

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	ICP	DATE	2018
APPROVED BY	ICP	DATE	2018

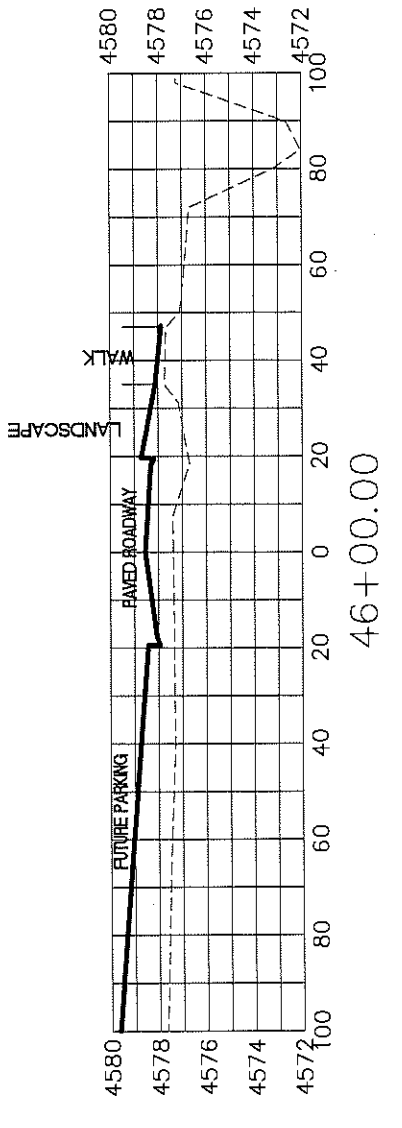
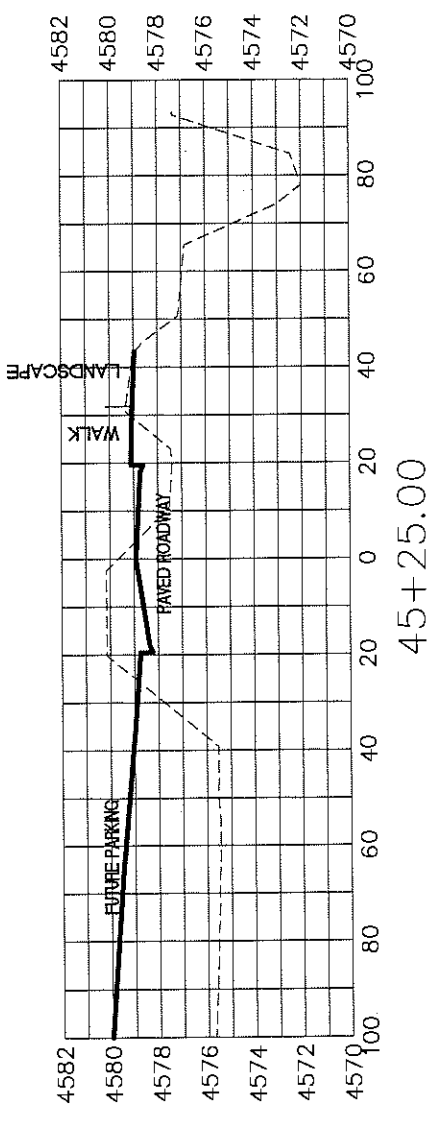
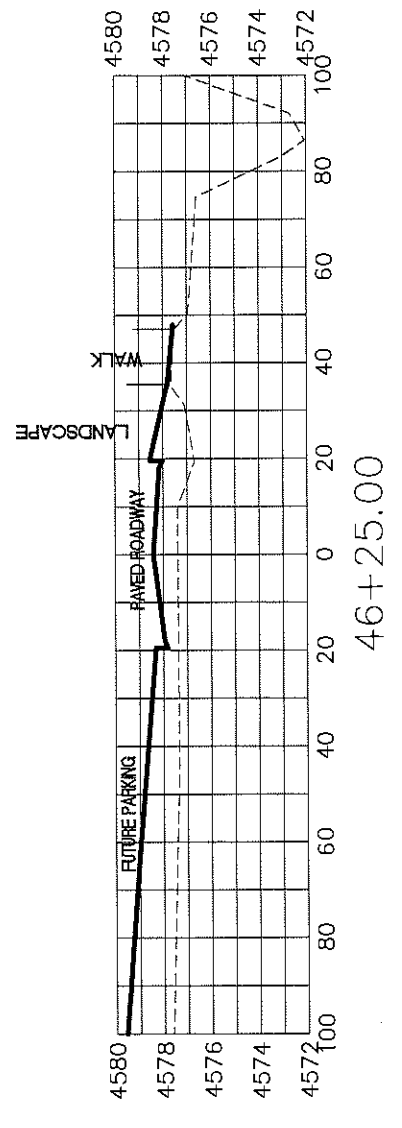
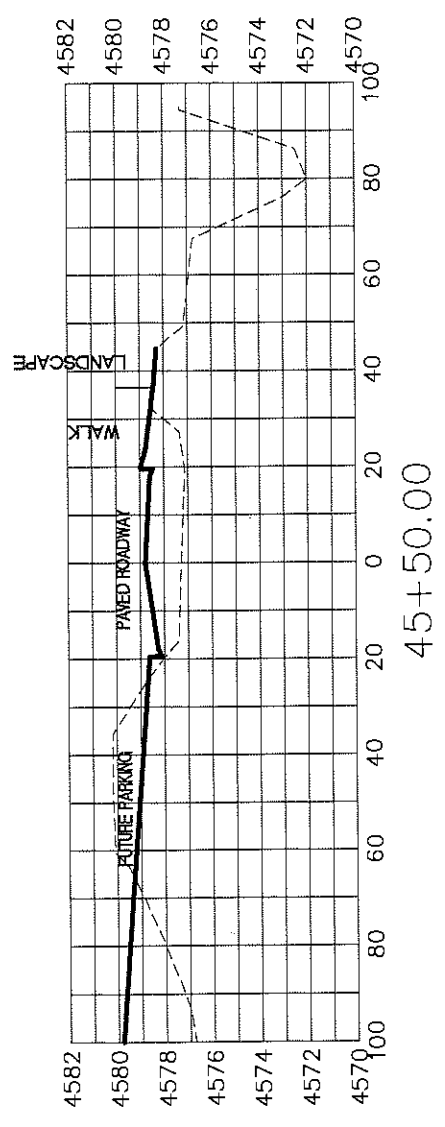
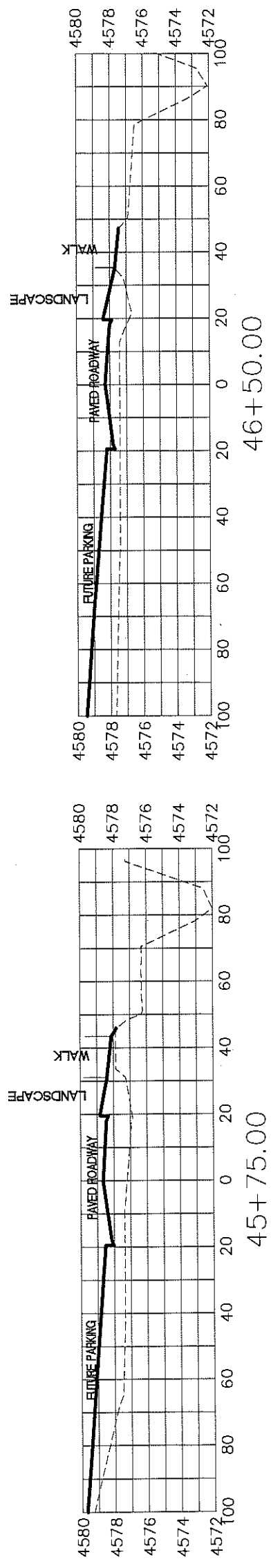
SCALES: PLAN & PROFILE

0	20	40	80
HORIZONTAL			
0	10	20	30
VERTICAL			



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



BOAT RAMP ROAD

REVISION	DESCRIPTION	DATE

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	ICP	DATE	2018
APPROVED BY	ICP	DATE	2018

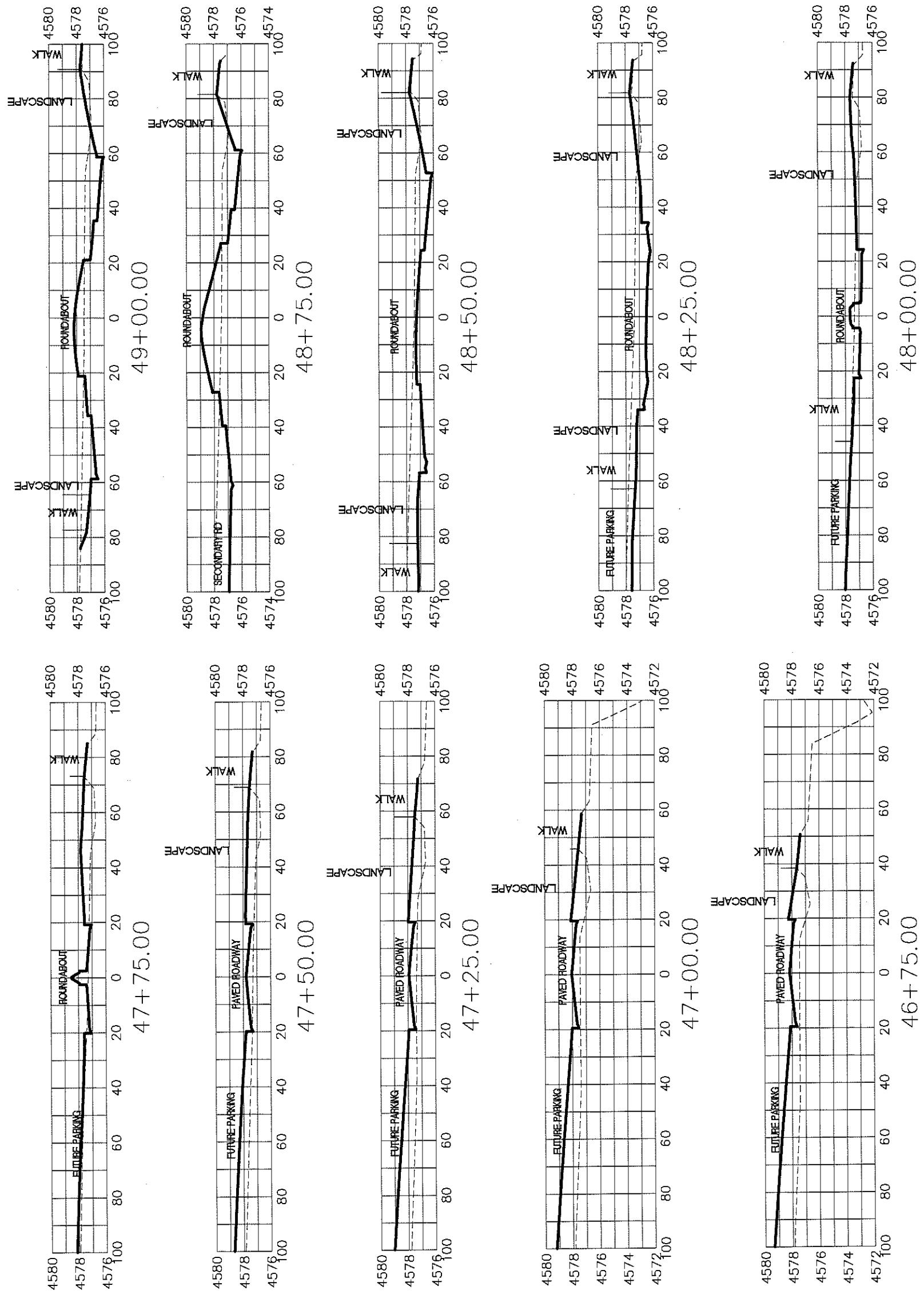
SCALES:

PLAN & PROFILE	1" = 40'
VERTICAL	1" = 4'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



BOAT RAMP ROAD

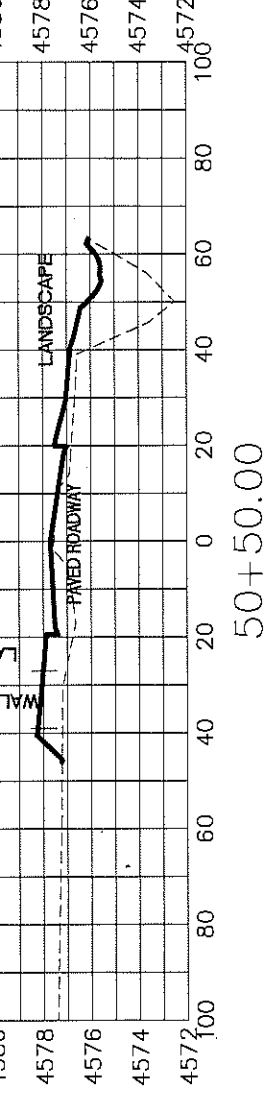
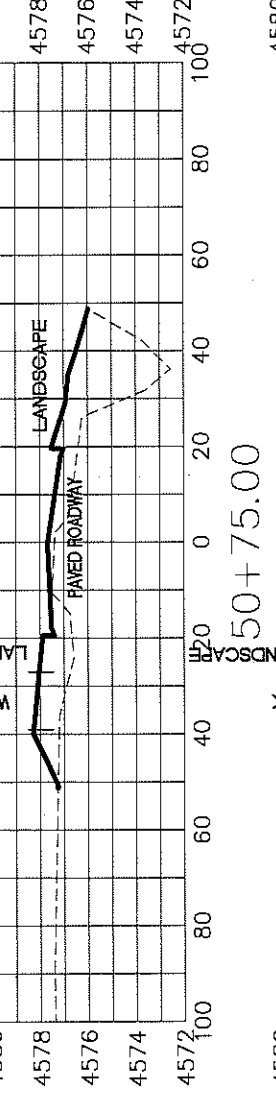
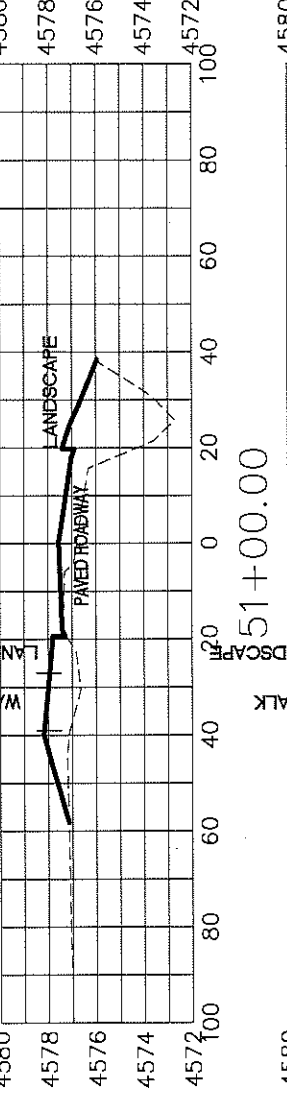
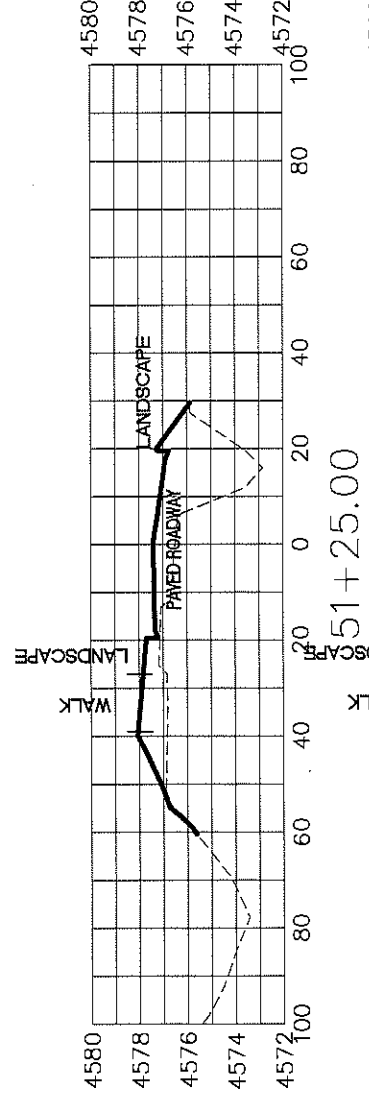
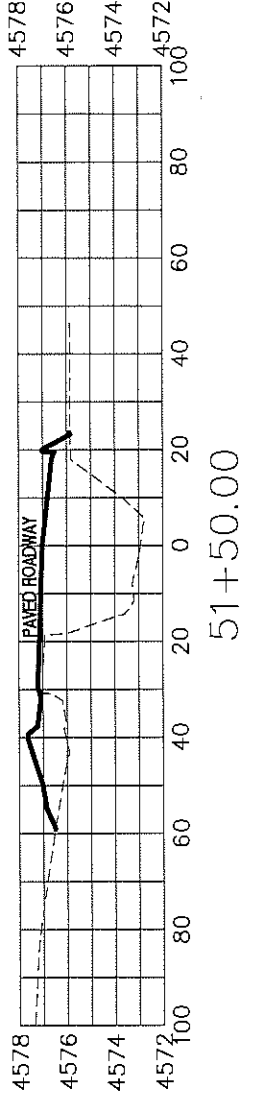
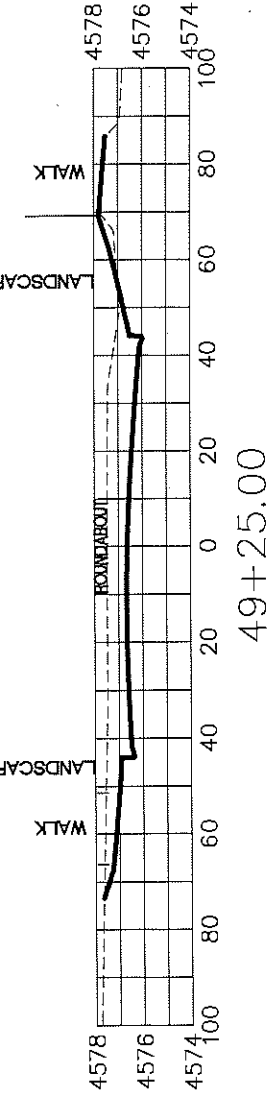
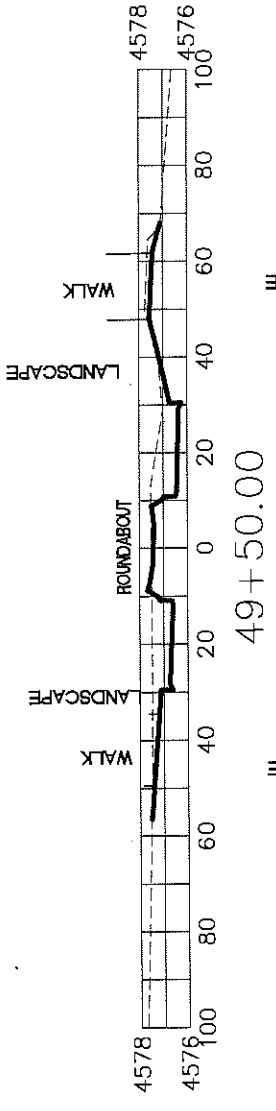
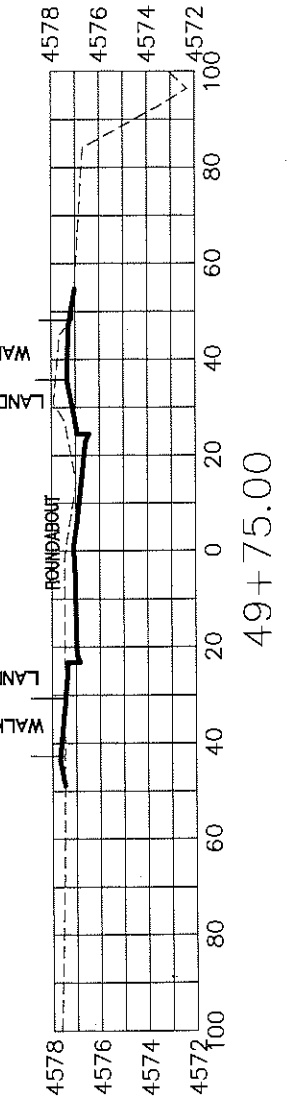
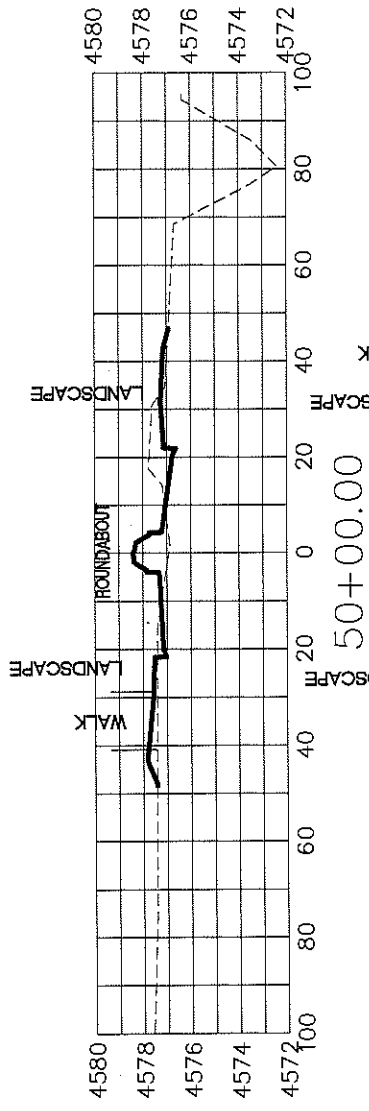
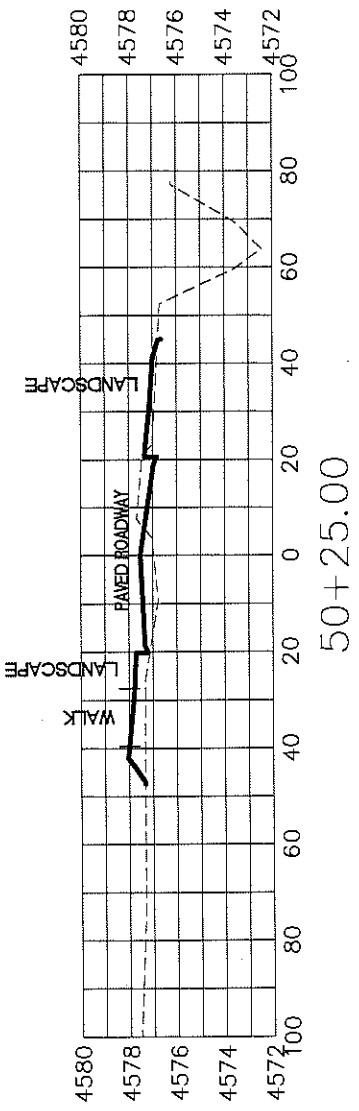
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REVISION	Δ	DESIGNED BY	JCS	DATE	2018
REVISION	Δ	CHECKED BY	TCP	DATE	2018
REVISION	Δ	APPROVED BY	TCP	DATE	2018

SCALES:  
 PLAN & PROFILE  
 1" = 20' HORIZONTAL  
 1" = 4' VERTICAL



PUBLIC WORKS  
 ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
 SITE CROSS SECTIONS



BOAT RAMP ROAD

REVISION	DESCRIPTION	DATE

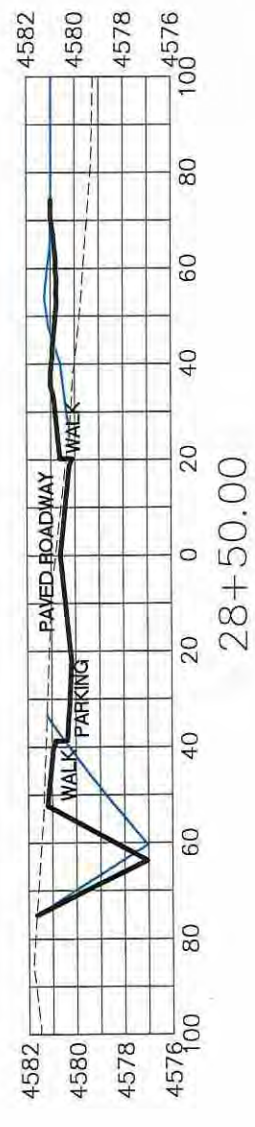
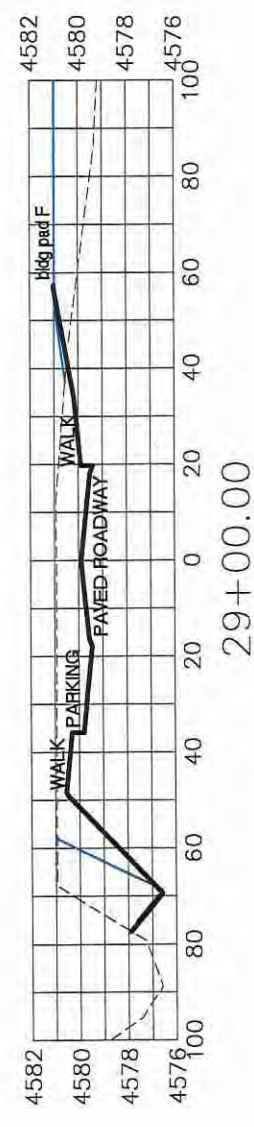
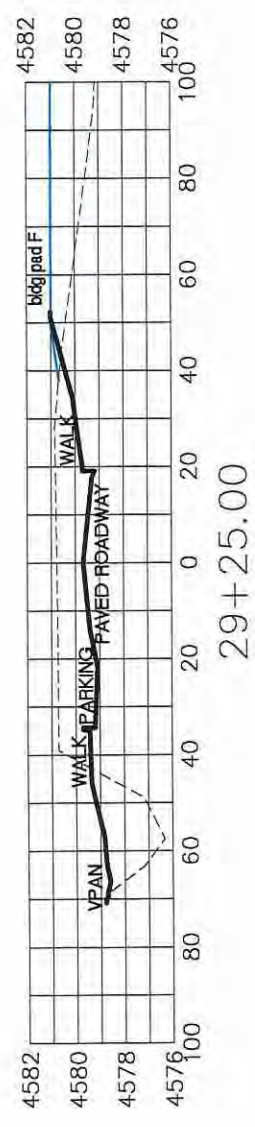
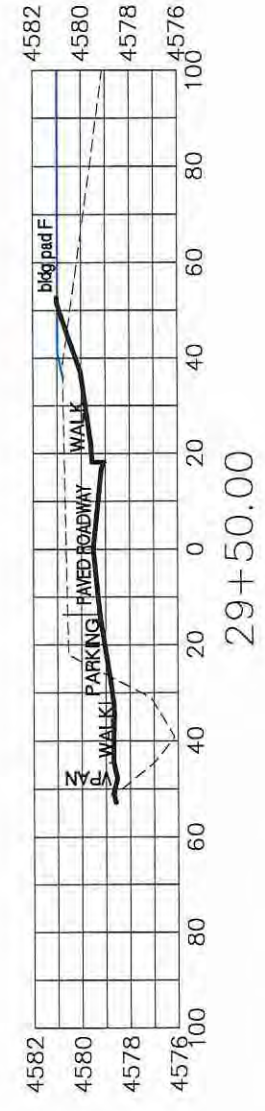
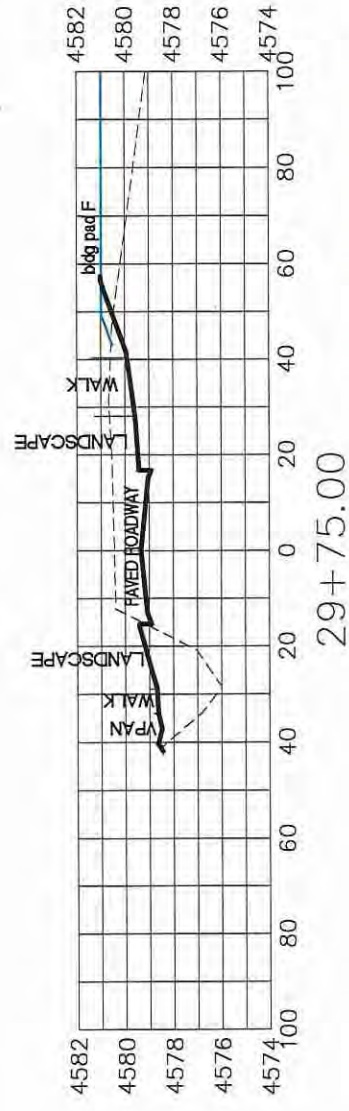
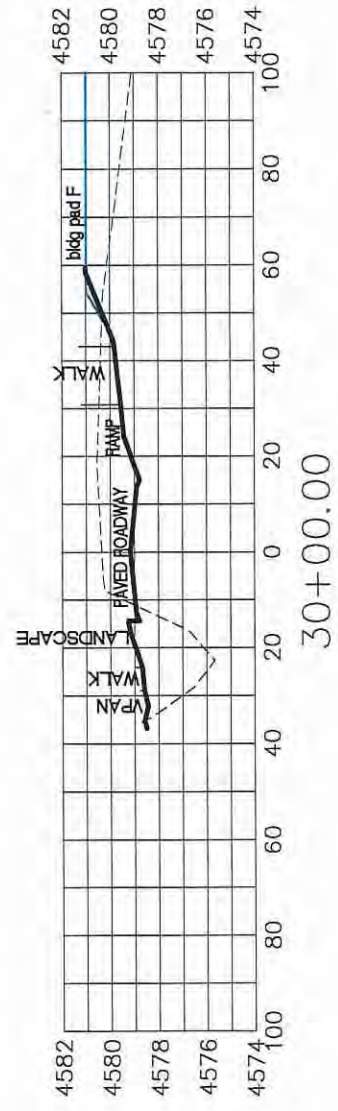
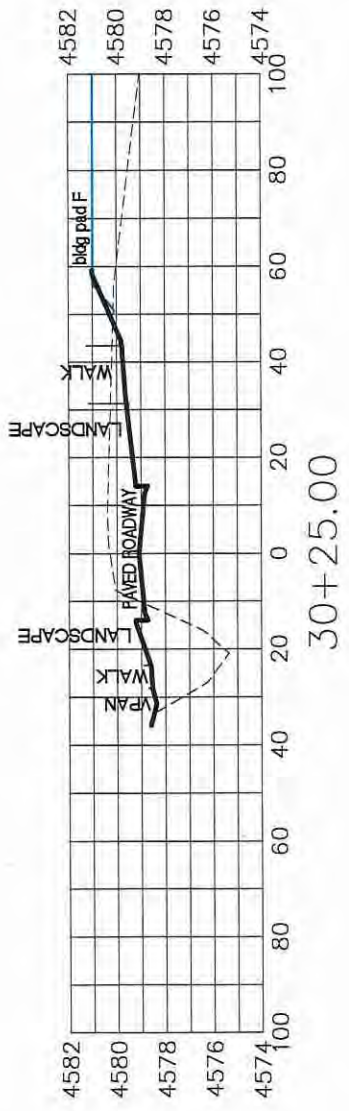
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALE:	PLAN & PROFILE
0	1" = 20'
1	1" = 40'
2	1" = 80'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



SECONDARY ROAD

REVISION	DESCRIPTION	DATE

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

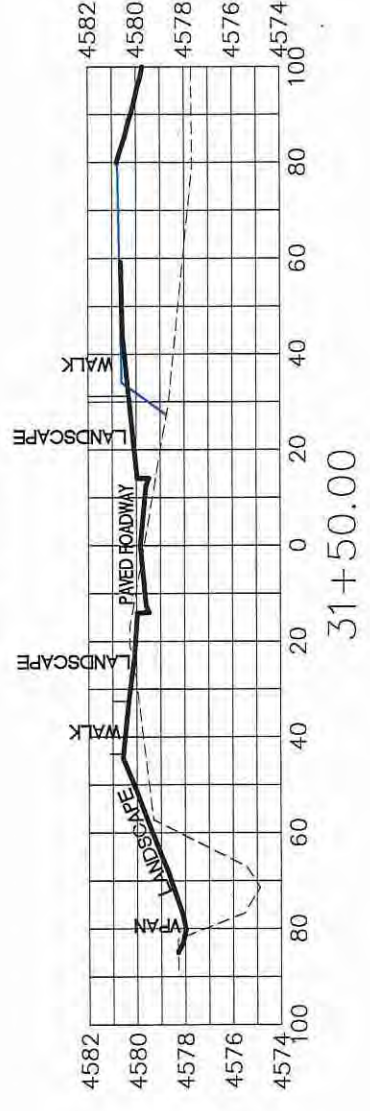
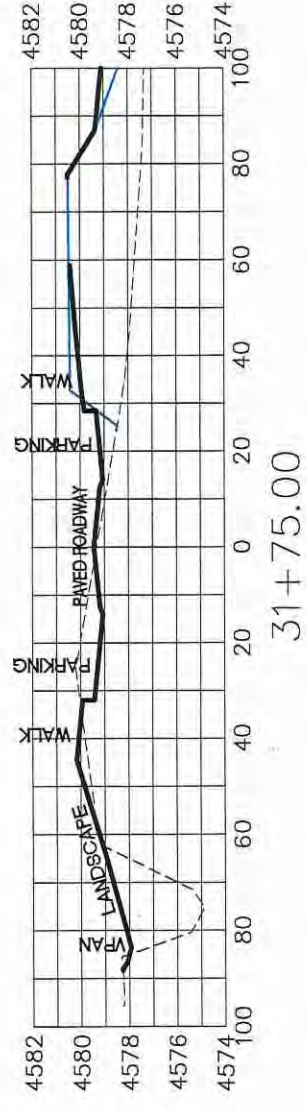
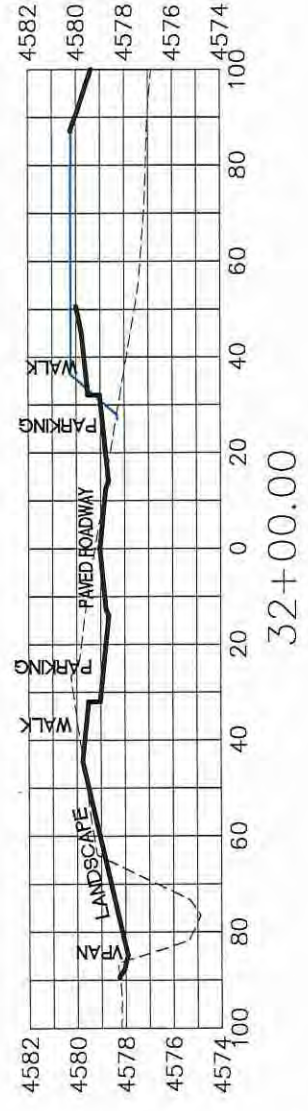
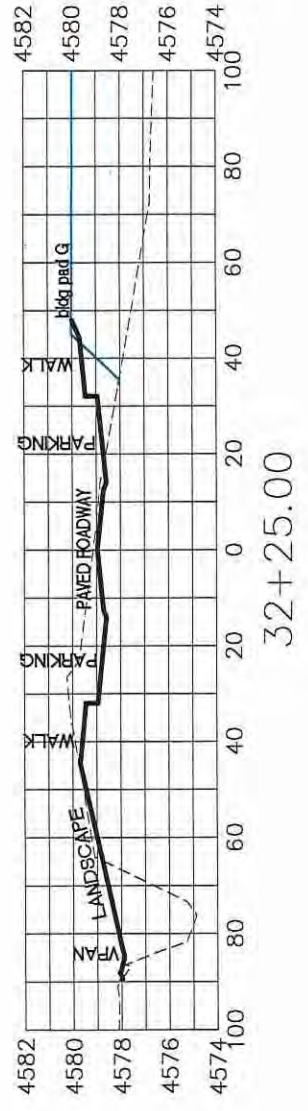
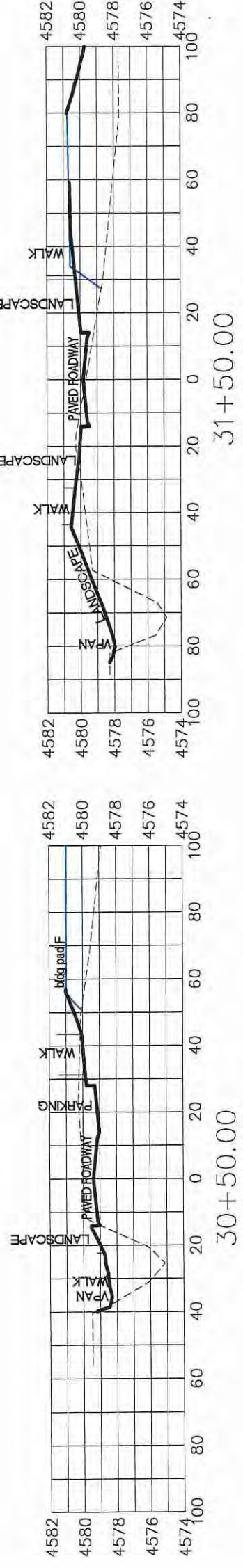
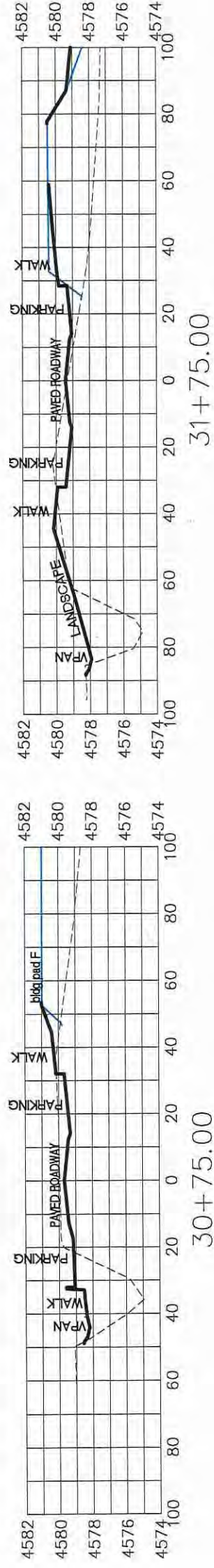
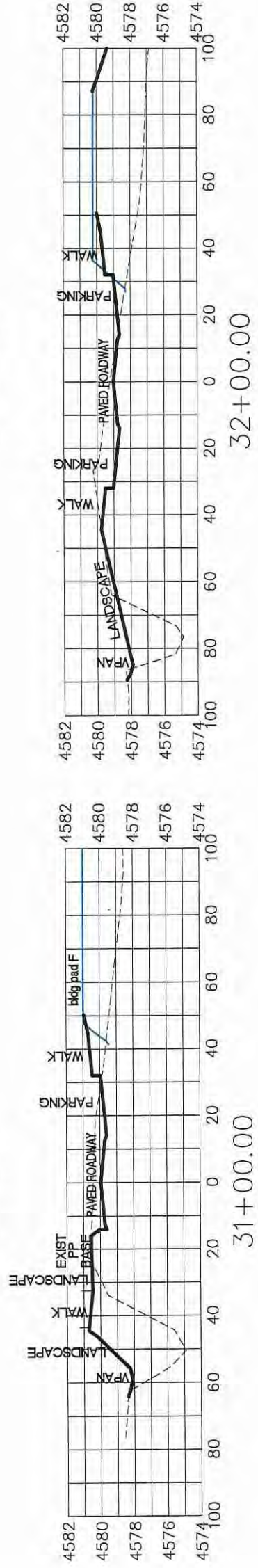
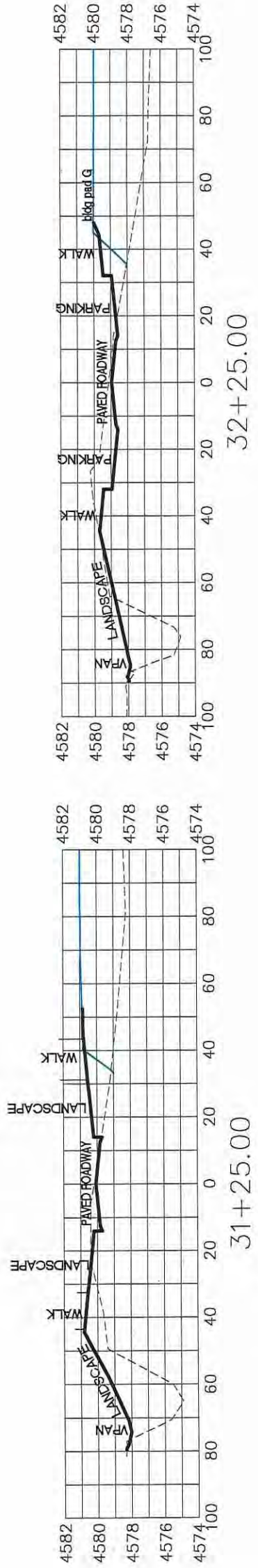
SCALES:

PLAN & PROFILE	1" = 20'
VERTICAL	1" = 10'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



SECONDARY ROAD

REVISION	DESCRIPTION	DATE

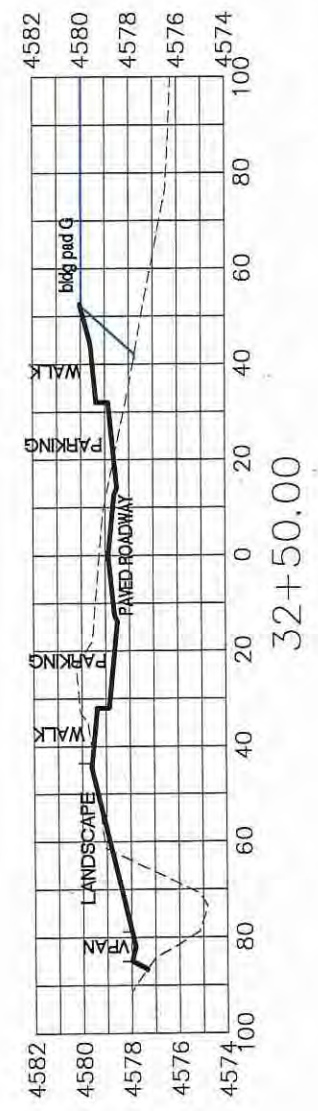
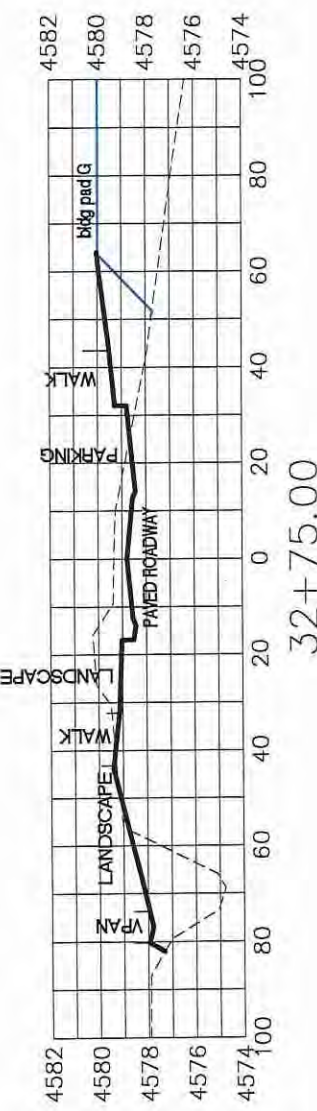
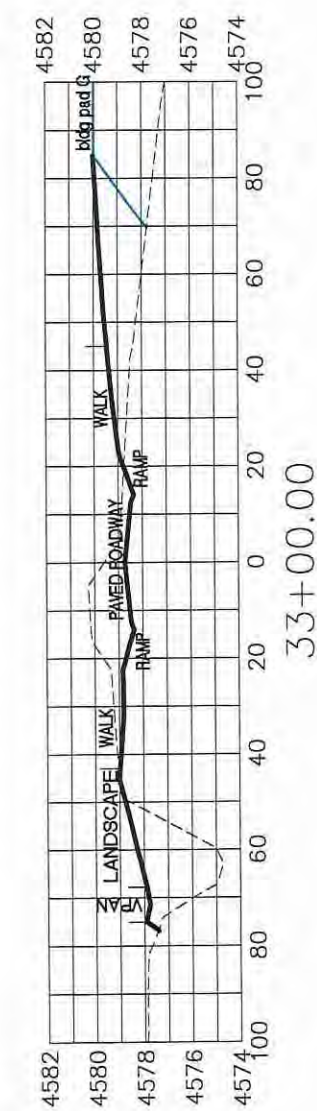
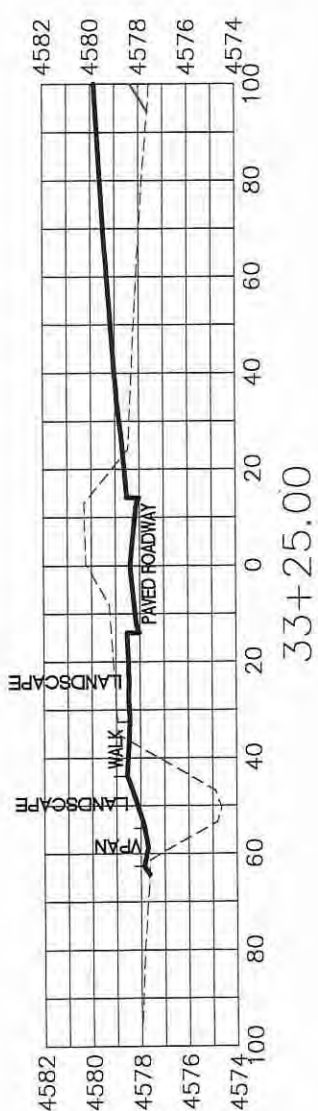
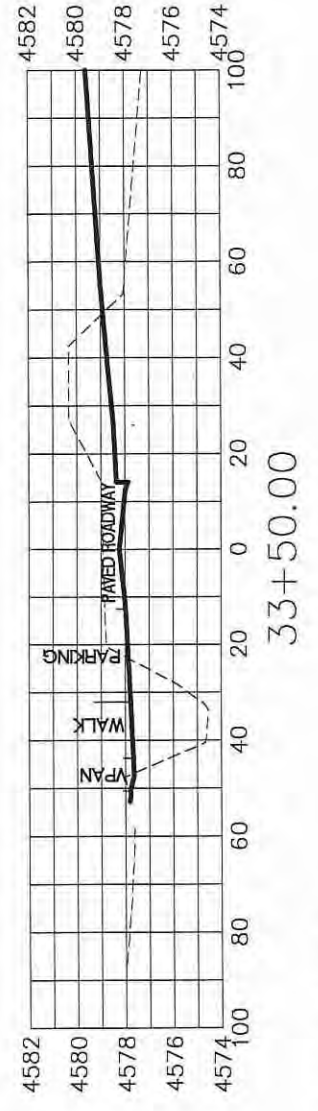
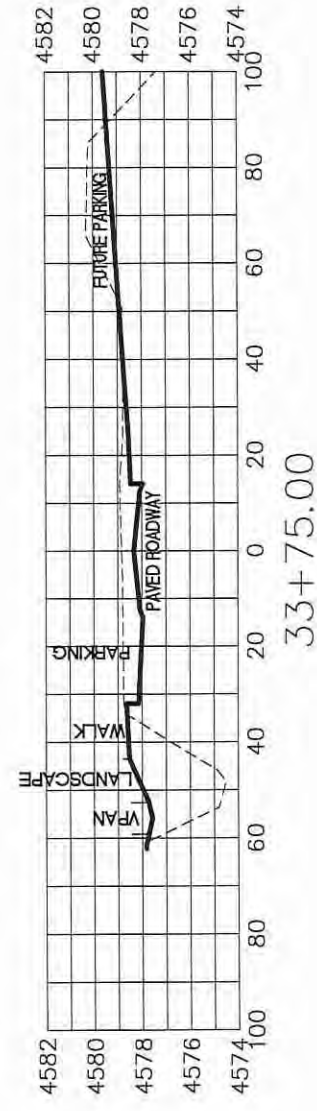
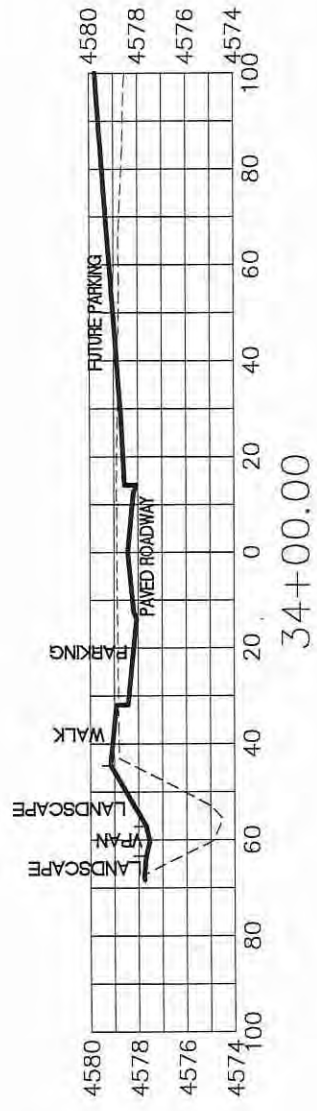
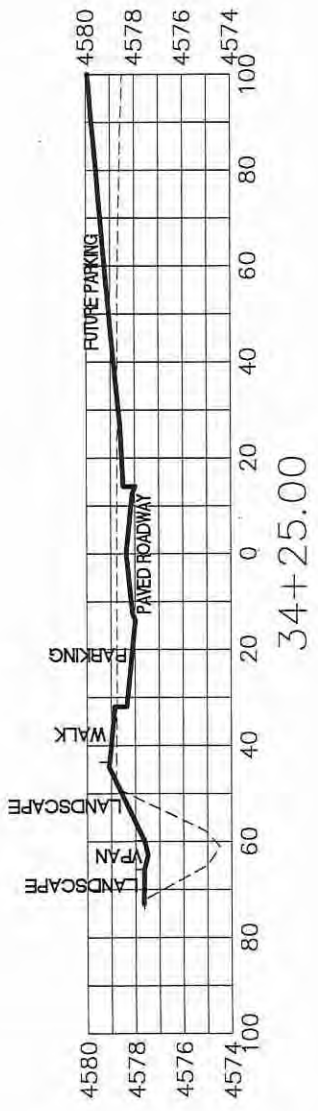
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALES:	
PLAN & PROFILE	1" = 40'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



SECONDARY ROAD

REVISION	DESCRIPTION	DATE

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCF	DATE	2018
APPROVED BY	TCF	DATE	2018

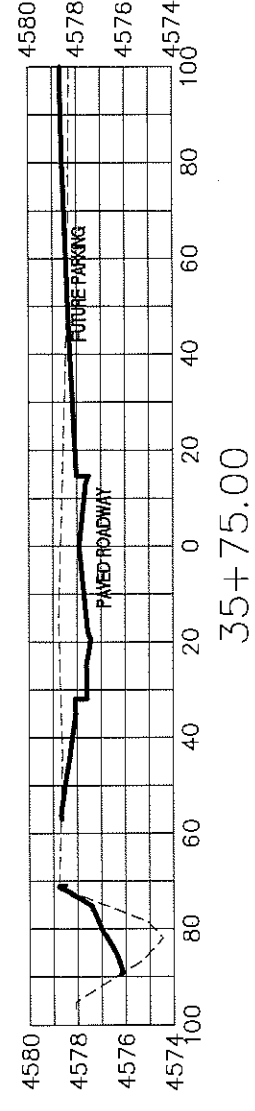
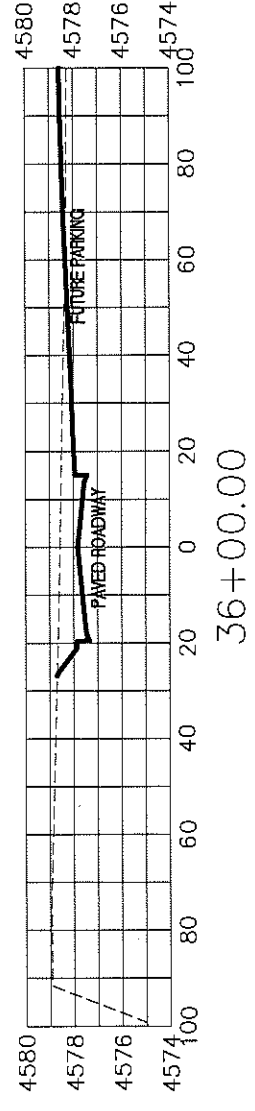
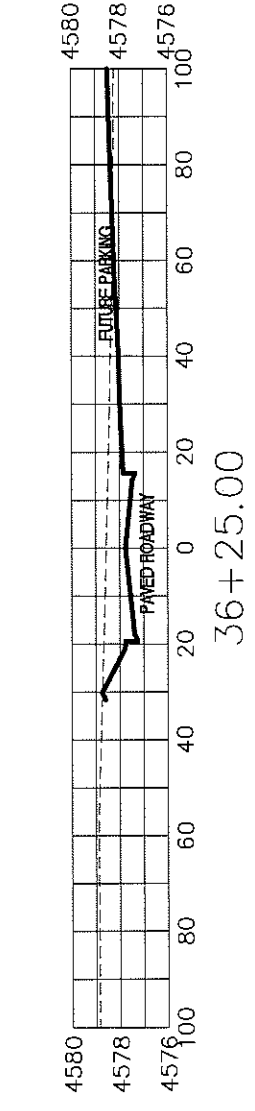
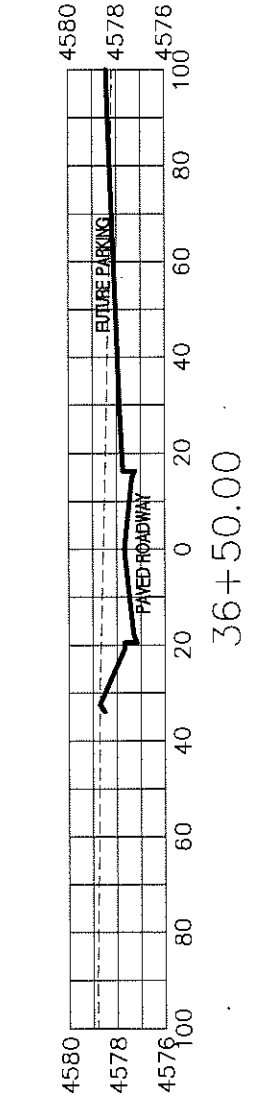
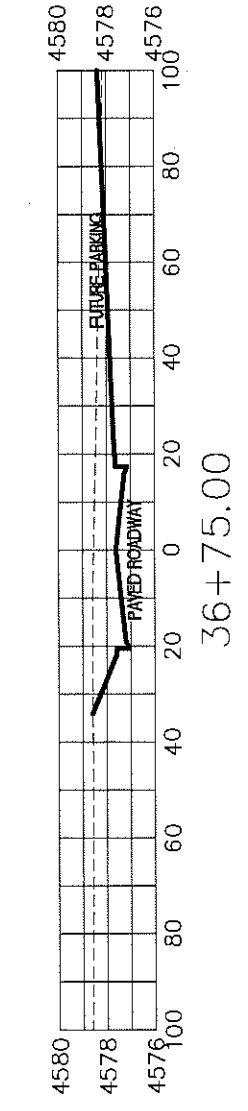
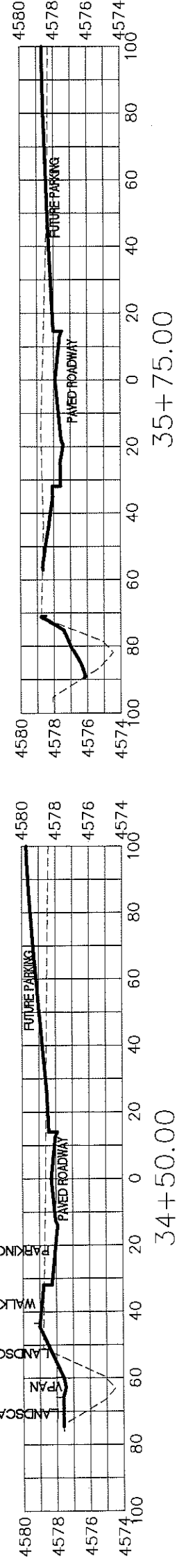
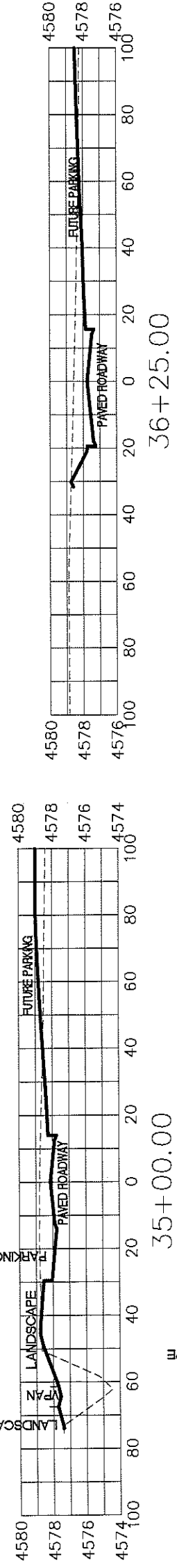
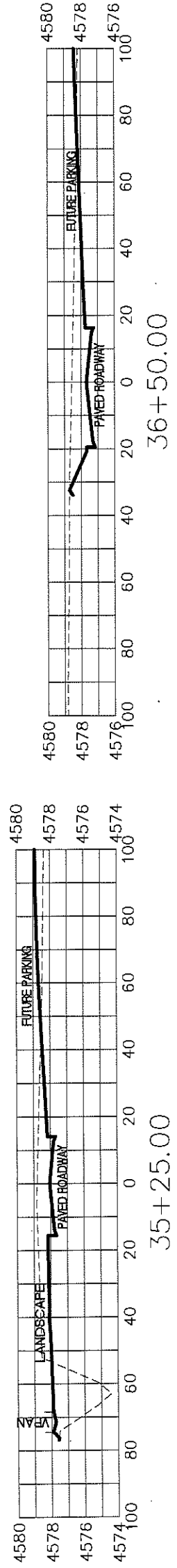
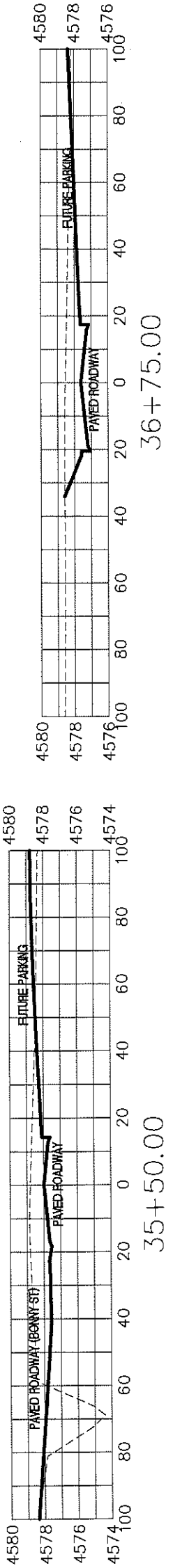
SCALES:	
PLAN & PROFILE	1" = 40'
HORIZONTAL	1" = 40'
VERTICAL	1" = 4'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS





SECONDARY ROAD

REVISION	DESCRIPTION	DATE

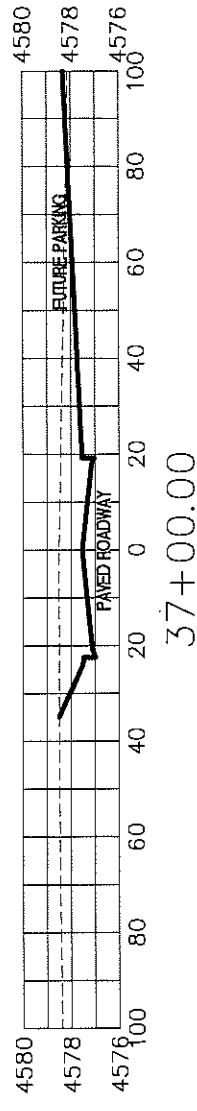
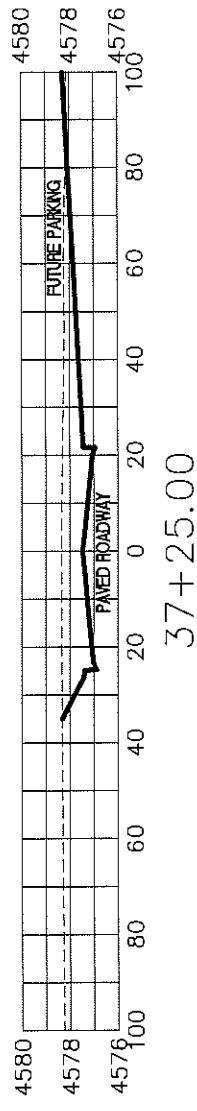
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	ICP	DATE	2018
APPROVED BY	ICP	DATE	2018

SCALES:	
PLAN & PROFILE	1" = 40'
HORIZONTAL	1" = 40'
VERTICAL	1" = 4'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS



SECONDARY ROAD

REVISION	DESCRIPTION	DATE

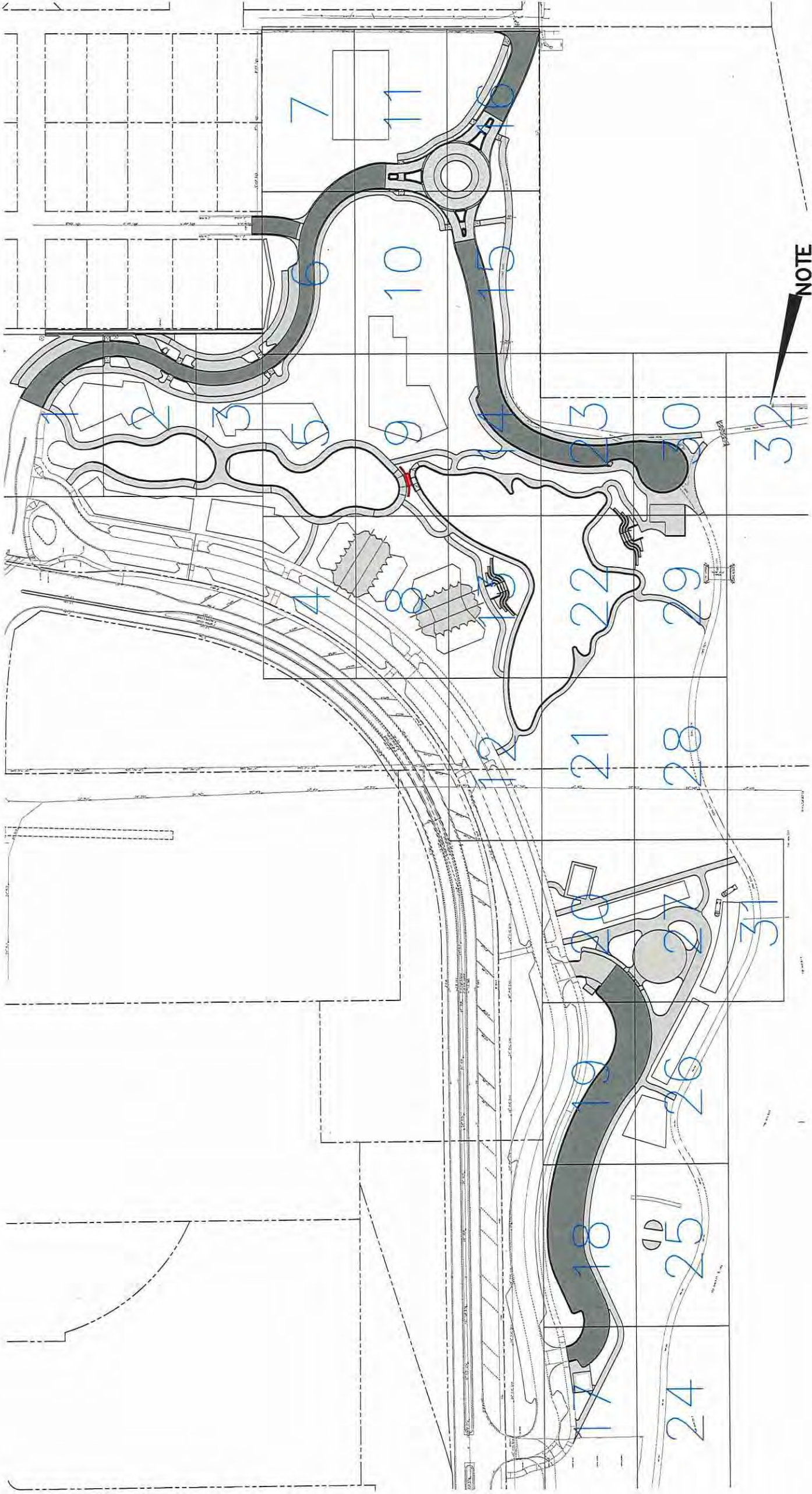
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DESIGNED BY	JCS	DATE	2018
CHECKED BY	ICP	DATE	2018
APPROVED BY	ICP	DATE	2018

SCALES:	PLAN & PROFILE



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
SITE CROSS SECTIONS

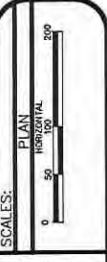


NOTE  
 BLUE NUMBERS INDICATE  
 THE SUBSET SHEET NUMBER  
 FOR THE 20TH SCALE CONTOUR  
 PLAN AND AS SUCH ARE  
 PREFACED WITH CP FOR CONTOUR  
 PLAN IE. CP01. THE SUBSET SHEET  
 NUMBER IS IN THE INDICATED LOCATION  
 ON ALL CONTOUR PLAN SHEETS

CP00

REVISION	DESCRIPTION	DATE
REVISION Δ		
REVISION Δ		
REVISION Δ		

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	ICP	DATE	2018

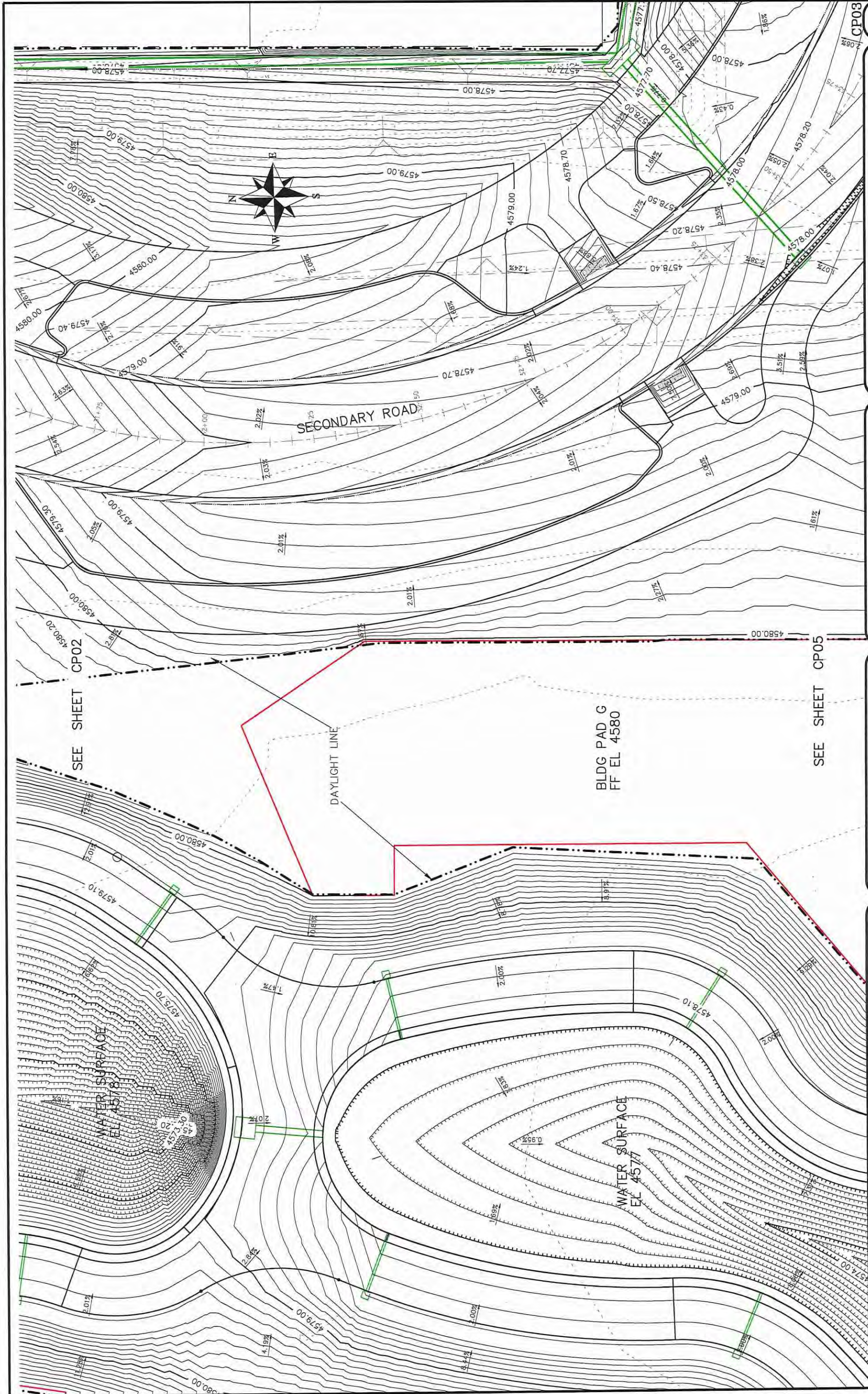


PUBLIC WORKS  
 ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
 TENTH FOOT CONTOUR PLAN SHEET KEY







SEE SHEET CP02

SEE SHEET CP05

SECONDARY ROAD

BLDG PAD G  
FF EL 4580

DAYLIGHT LINE

WATER SURFACE  
EL 4578.20

WATER SURFACE  
EL 4577

SCALES:

PLAN & PROFILE	DATE 2017
1" = 100'-0"	DATE 2017
1" = 100'-0"	DATE 2017
1" = 100'-0"	DATE 2017

DATE	DATE	DATE	DATE
REV1_DATE	REV2_DATE	REV3_DATE	REV4_DATE
DATE 2017	DATE 2017	DATE 2017	DATE 2017

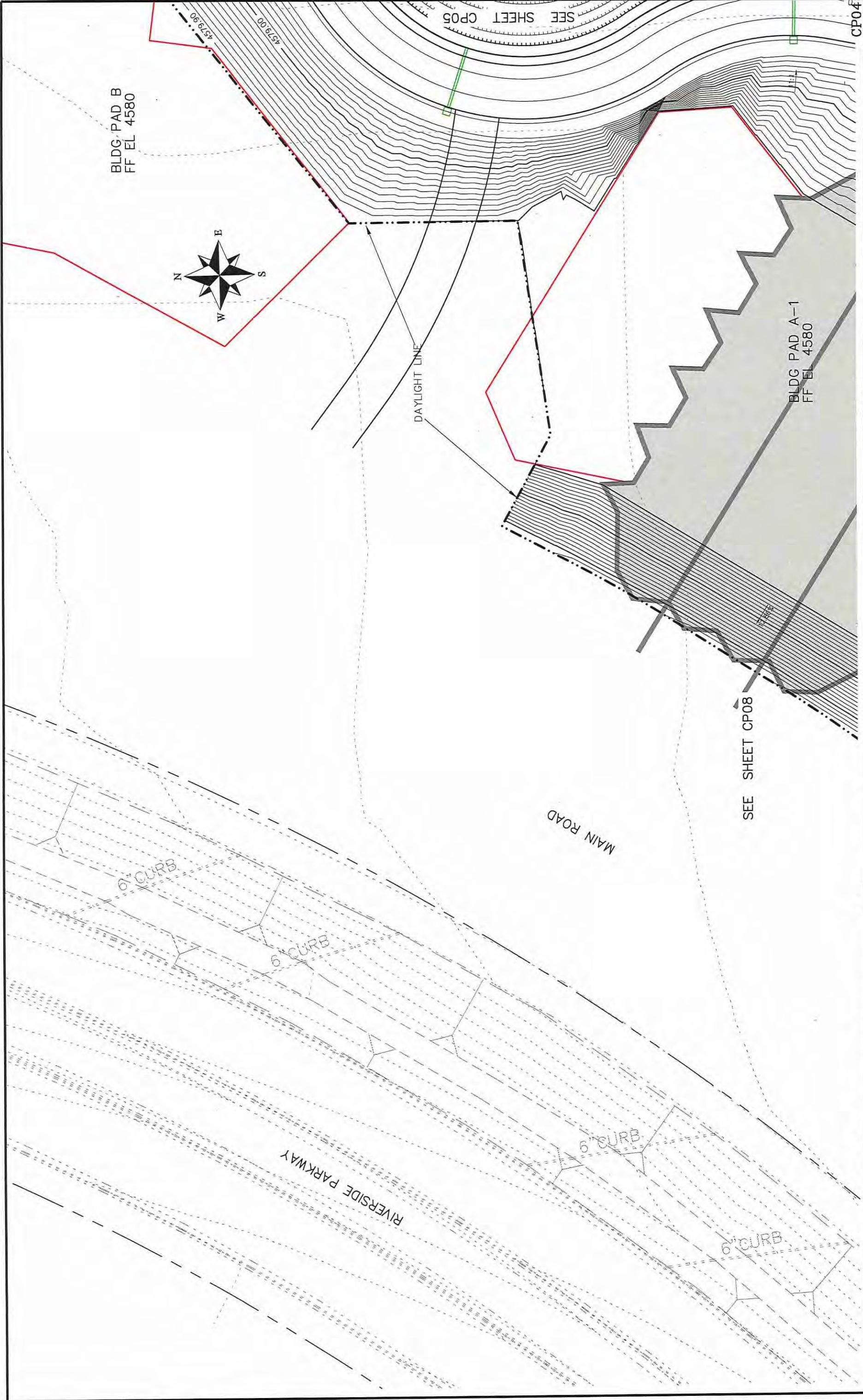
DESCRIPTION	DATE	DATE	DATE	DATE
REVISION A REV1_INT	DATE 2017	DATE 2017	DATE 2017	DATE 2017
REVISION B REV2_INT	DATE 2017	DATE 2017	DATE 2017	DATE 2017
REVISION C REV3_INT	DATE 2017	DATE 2017	DATE 2017	DATE 2017
REVISION D REV4_INT	DATE 2017	DATE 2017	DATE 2017	DATE 2017

DESIGNED BY	DATE 2017
CHECKED BY	DATE 2017
APPROVED BY	DATE 2017

CITY OF  
**Grand Junction**  
COLORADO

PUBLIC WORKS  
ENGINEERING DIVISION

Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan



REVISION	DATE	DESCRIPTION	DATE	DATE	DATE	DATE	DATE
REVISION A	REV1_DATE		DATE	DATE	DATE	DATE	DATE
REVISION B	REV2_DATE		DATE	DATE	DATE	DATE	DATE
REVISION C	REV3_DATE		DATE	DATE	DATE	DATE	DATE
REVISION D	REV4_DATE		DATE	DATE	DATE	DATE	DATE

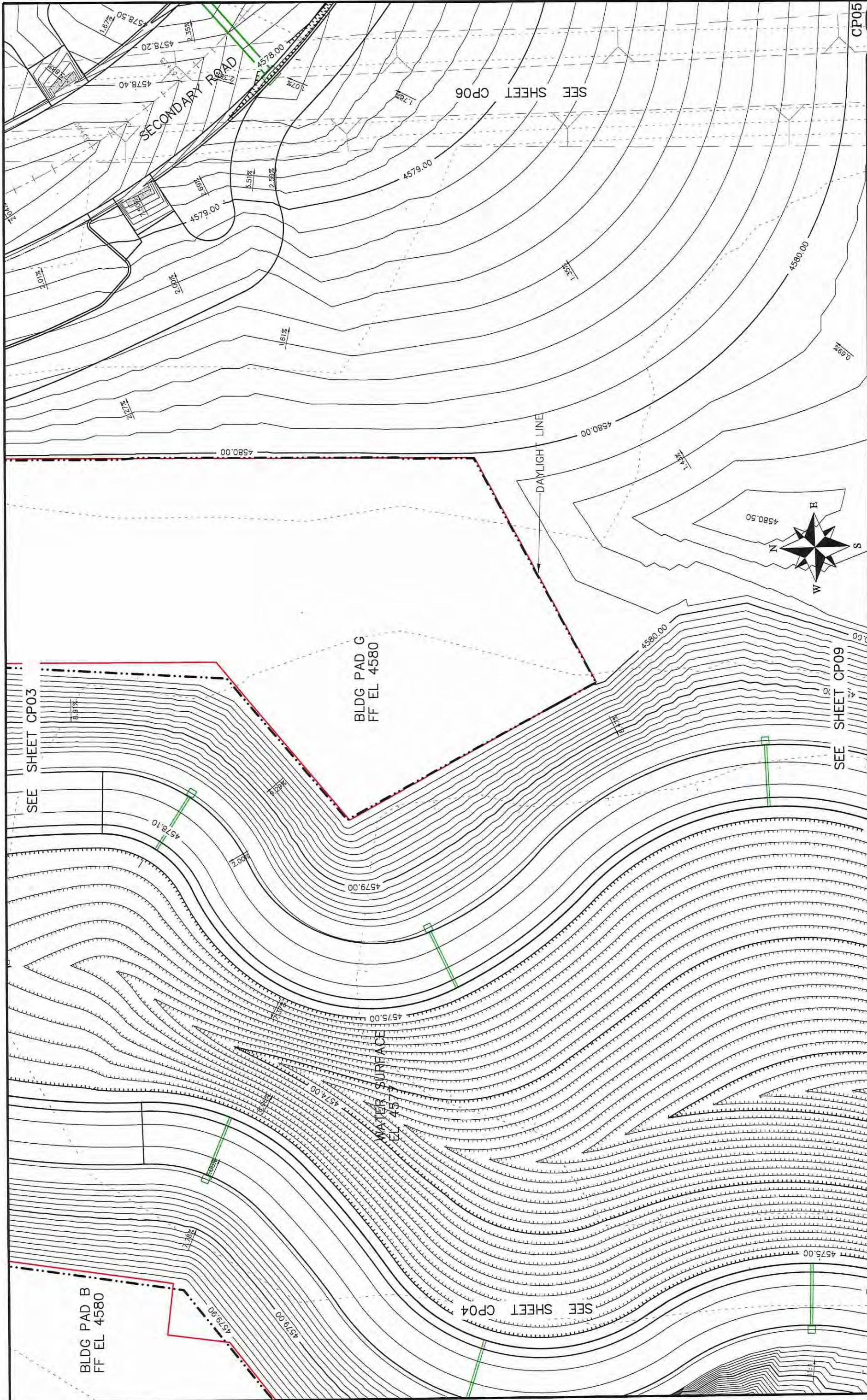
DRAWN BY: JCS  
 DESIGNED BY: JCS  
 CHECKED BY: TCP  
 APPROVED BY: ICP

PLAN & PROFILE  
 HORIZONTAL SCALE: 1" = 100'-0"  
 VERTICAL SCALE: 1" = 10'-0"



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**ENGINEERING DIVISION**

Las Colonias Business Park  
 20th Scale Tenth Foot Contour Plan



REVISION	DATE	DESCRIPTION
REVISION 1	REV1_DATE	REV1_DESCRIPTION
REVISION 2	REV2_DATE	REV2_DESCRIPTION
REVISION 3	REV3_DATE	REV3_DESCRIPTION
REVISION 4	REV4_DATE	REV4_DESCRIPTION

DATE	DATE	DATE	DATE
DATE	DATE	DATE	DATE

DATE	DATE	DATE	DATE
DATE	DATE	DATE	DATE

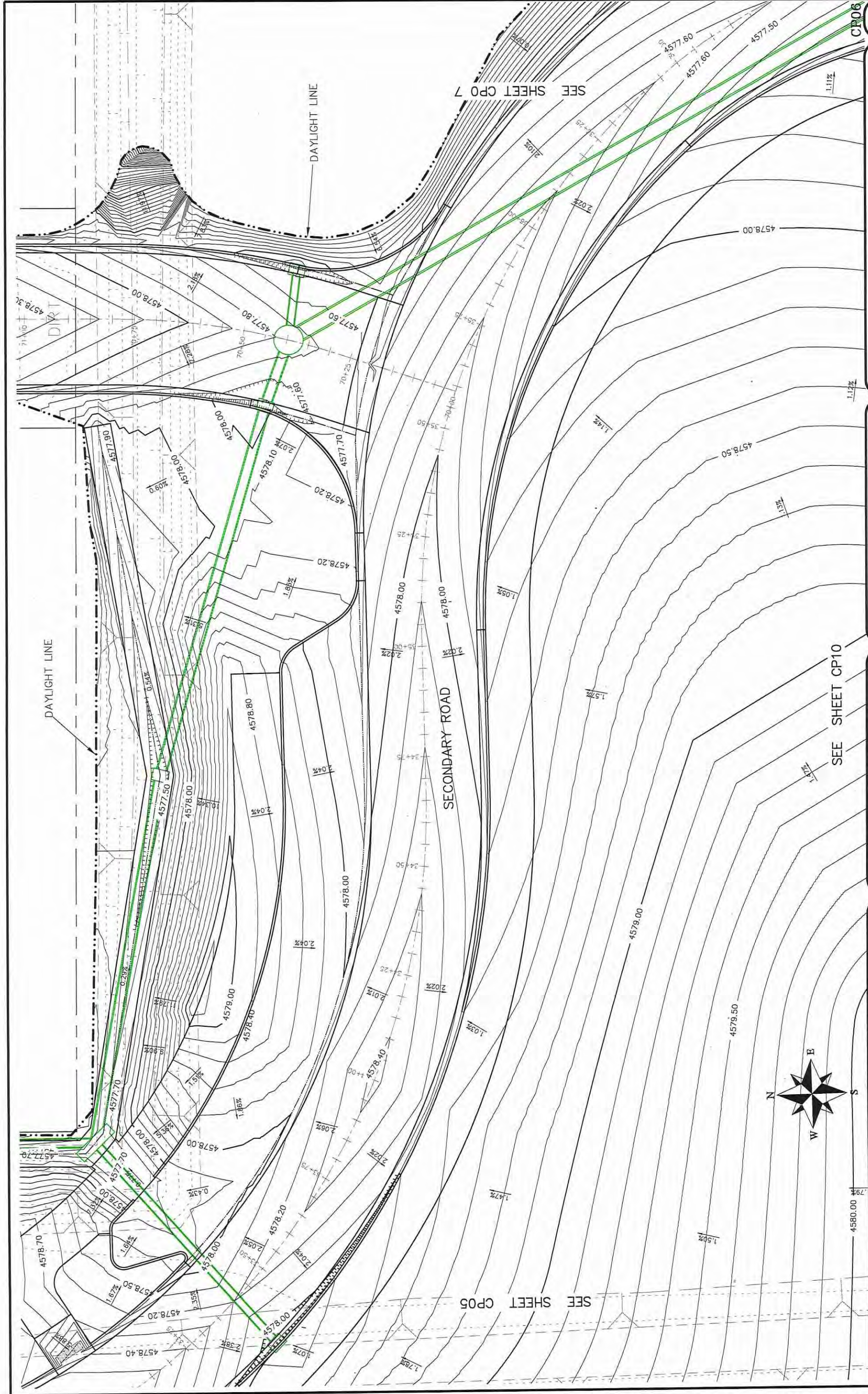
SCALE	SCALE
SCALE	SCALE

CITY OF  
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COLORADO

PUBLIC WORKS  
ENGINEERING DIVISION

Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan  
78





REVISION	DATE	DESCRIPTION
REVISION A	REVI_DATE	REVI_INT
REVISION B	REVI_DATE	REVI_INT
REVISION C	REVI_DATE	REVI_INT
REVISION D	REVI_DATE	REVI_INT

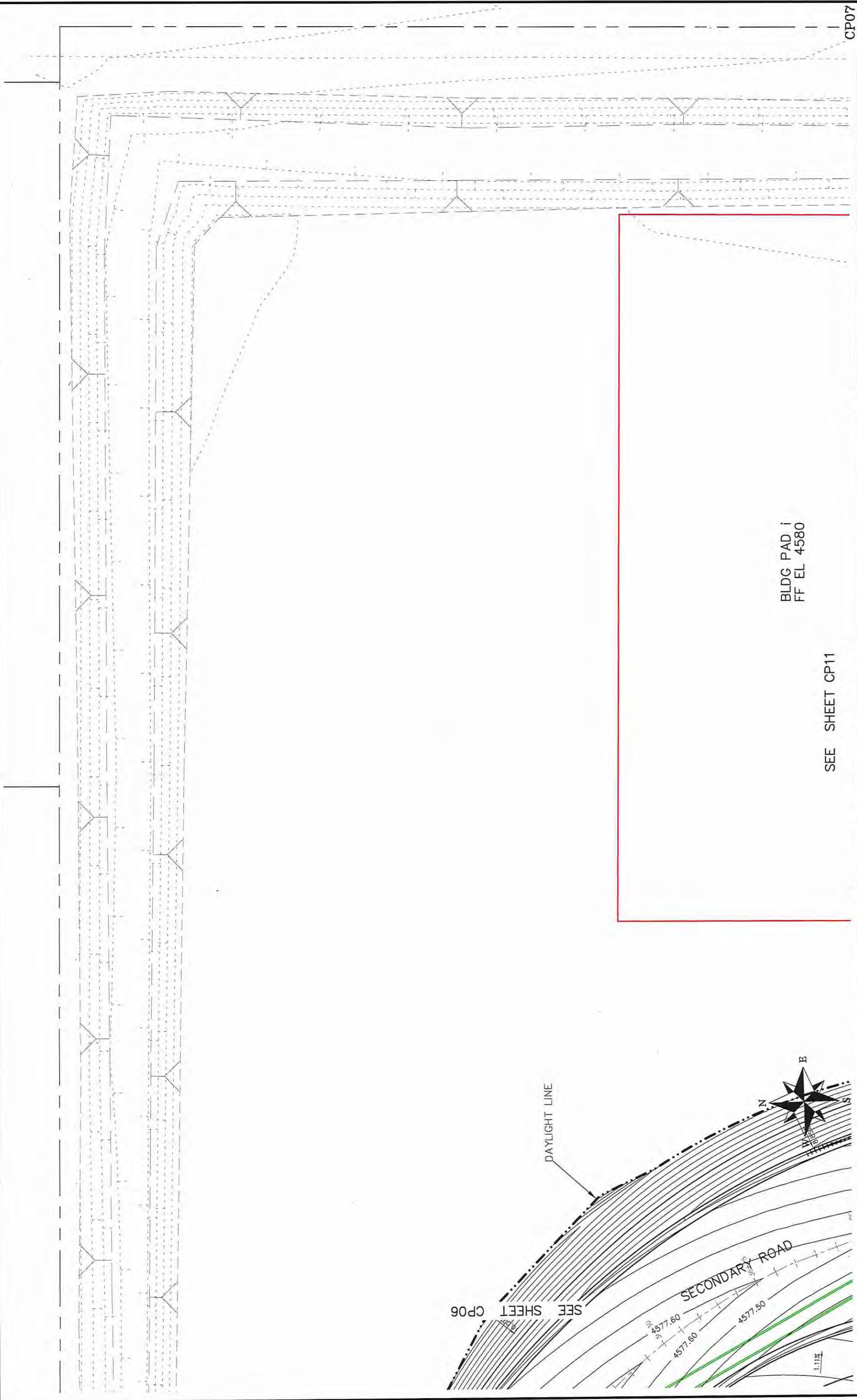
DATE	JCS	DATE	2017
DRAWN BY	JCS	DATE	2017
DESIGNED BY	JCS	DATE	2017
CHECKED BY	ICP	DATE	2017
APPROVED BY	ICP	DATE	2017

SCALES:  
 PLAN & PROFILE 1"=100'  
 HORIZONTAL 1"=40'  
 VERTICAL 1"=10'

CITY OF  
**Grand Junction**  
 COLORADO

PUBLIC WORKS  
 ENGINEERING DIVISION

Las Colonias Business Park  
 20th Scale Tenth Foot Contour Plan



BLDG PAD i  
FF EL 4580

SEE SHEET CP11

CP07

REVISION	DATE	DESCRIPTION	DATE	DATE	DATE	DATE	DATE
REVISION 1	REV1_DATE		DATE	DATE	DATE	DATE	DATE
REVISION 2	REV2_DATE		DATE	DATE	DATE	DATE	DATE
REVISION 3	REV3_DATE		DATE	DATE	DATE	DATE	DATE
REVISION 4	REV4_DATE		DATE	DATE	DATE	DATE	DATE

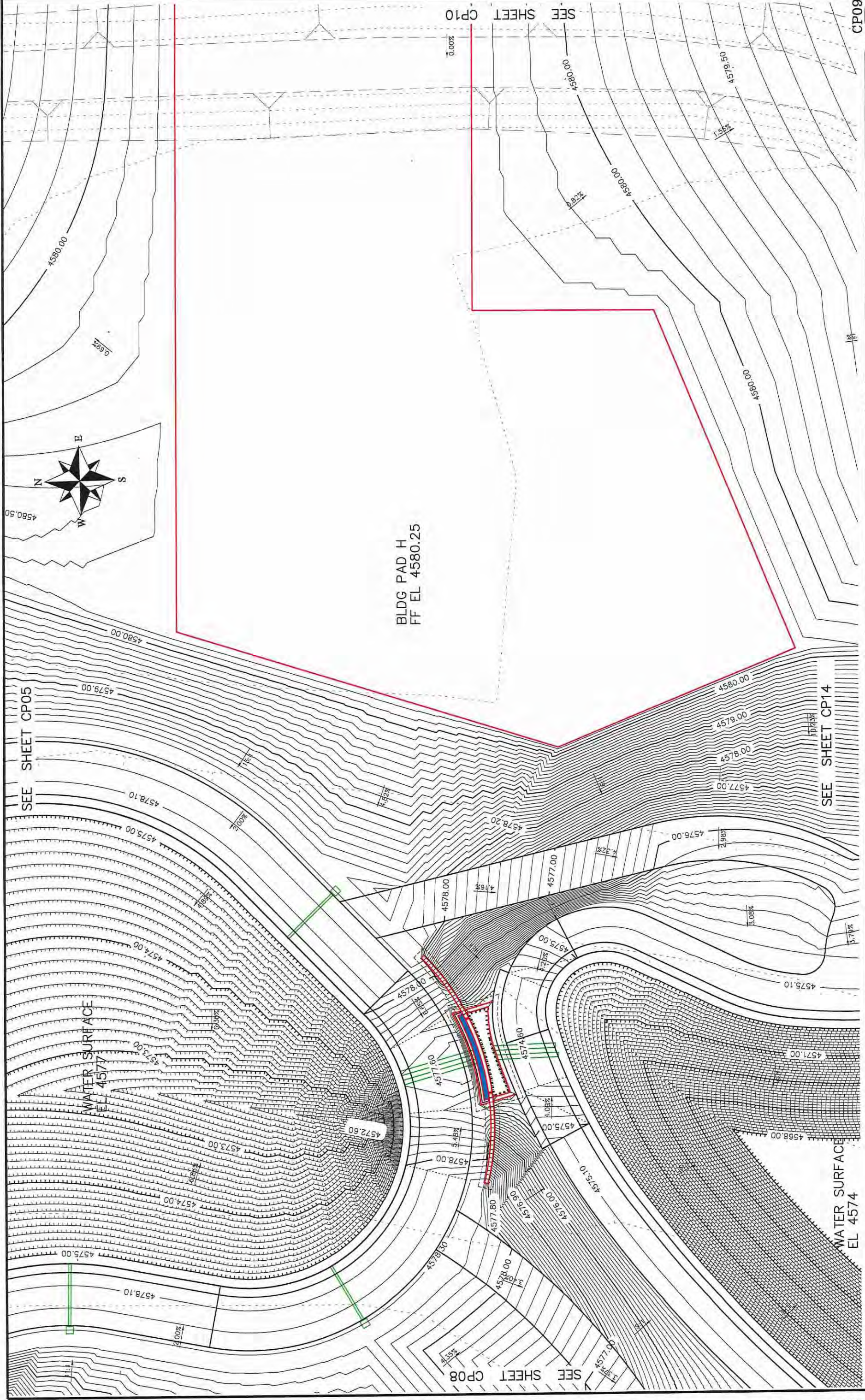
SCALE	DATE	DATE	DATE	DATE
PLAN & PROFILE	DATE	DATE	DATE	DATE
HORIZONTAL	DATE	DATE	DATE	DATE
VERTICAL	DATE	DATE	DATE	DATE



PUBLIC WORKS  
ENGINEERING DIVISION

Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan



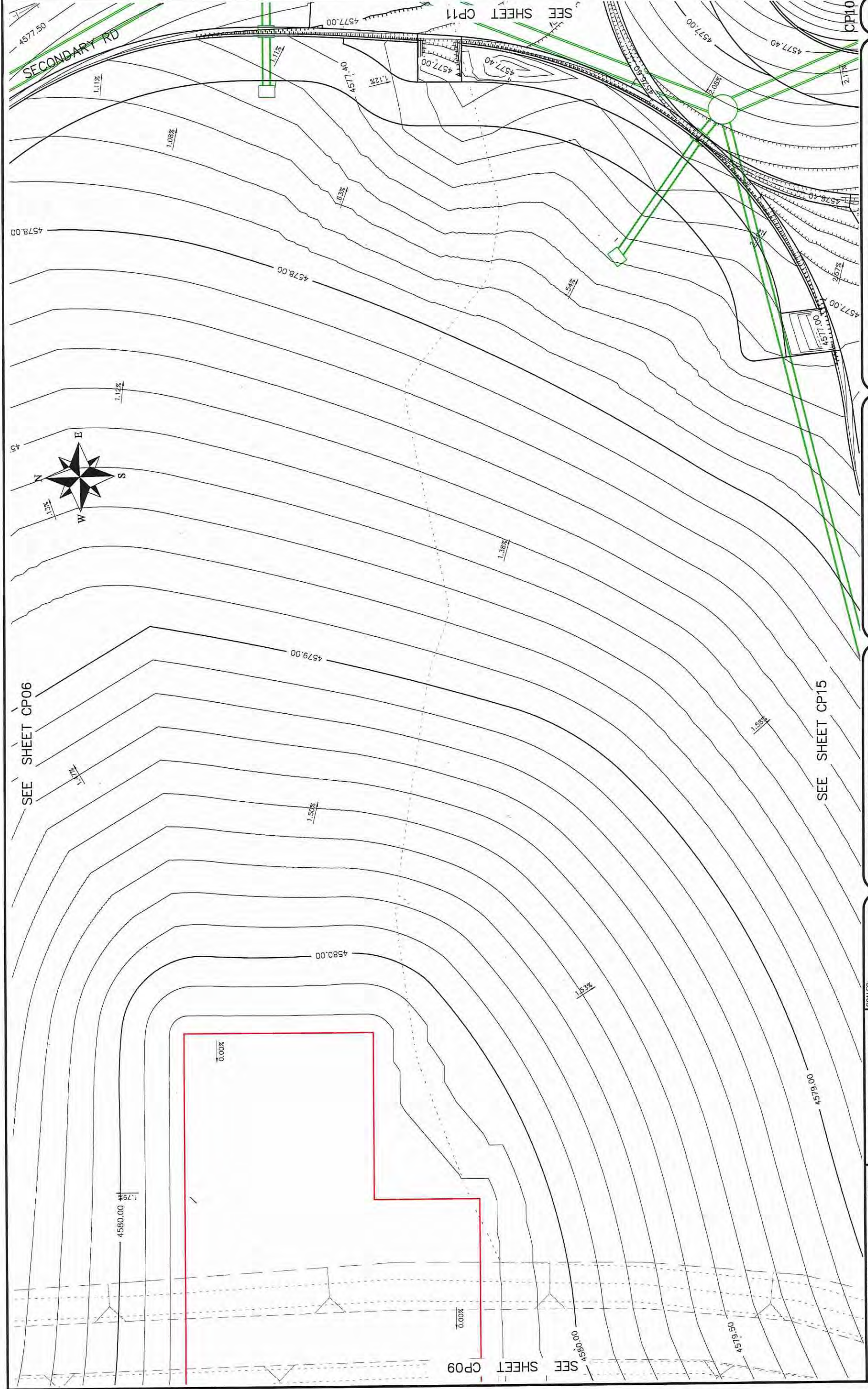


REVISION	DATE	DESCRIPTION	DATE	BY	DATE	DATE
REVISION 1	REV1_DATE	REV1_DESCRIPTION	REV1_DATE	JCS	2017	2017
REVISION 2	REV2_DATE	REV2_DESCRIPTION	REV2_DATE	JCS	2017	2017
REVISION 3	REV3_DATE	REV3_DESCRIPTION	REV3_DATE	ICP	2017	2017
REVISION 4	REV4_DATE	REV4_DESCRIPTION	REV4_DATE	ICP	2017	2017

SCALES:  
 PLAN & PROFILE  
 1" = 100'-0" HORIZONTAL  
 1" = 10'-0" VERTICAL

CITY OF  
**Grand Junction**  
 COLORADO

PUBLIC WORKS  
 ENGINEERING DIVISION

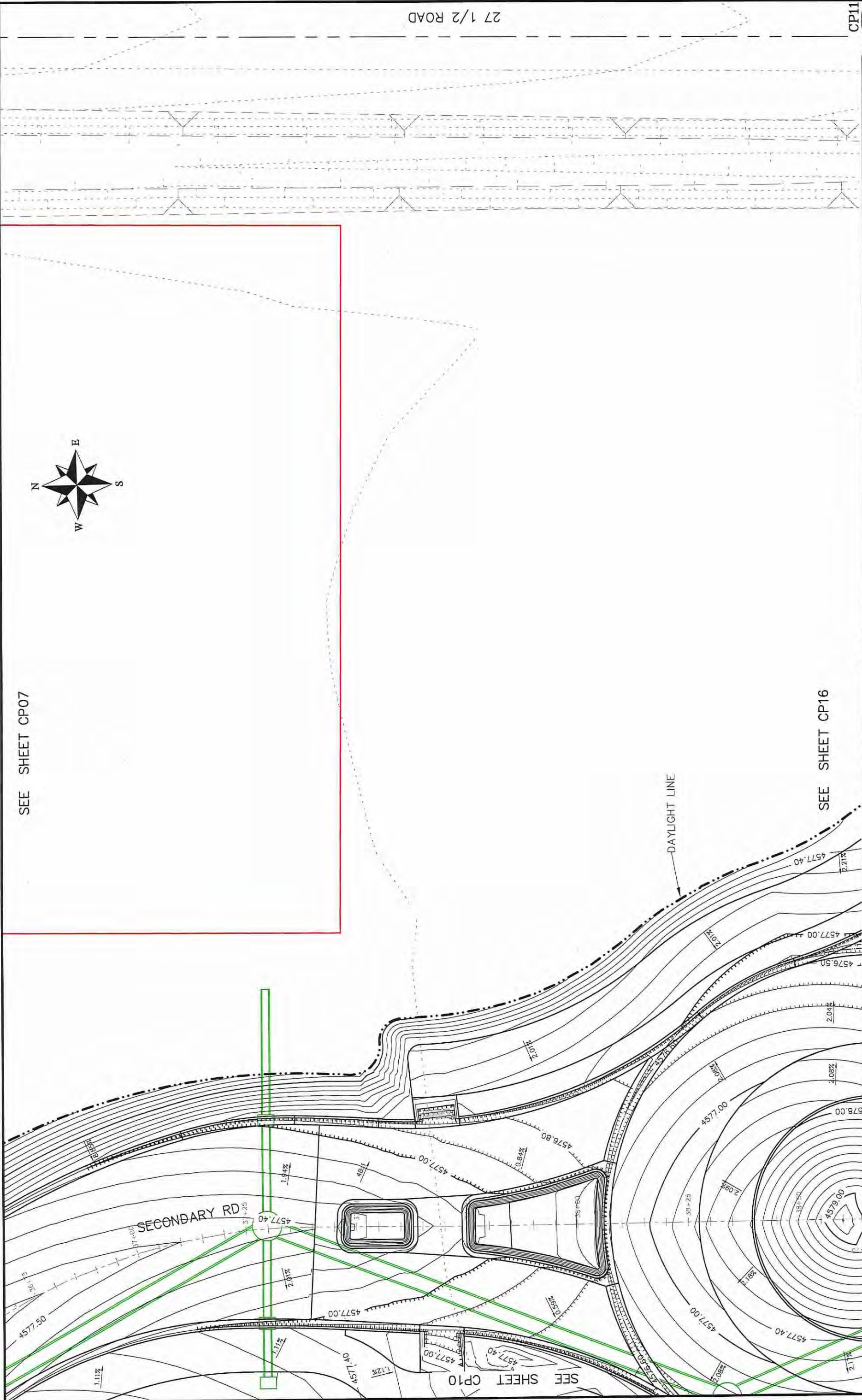


REVISION	DATE	DESCRIPTION	DATE	BY	DATE	DATE
REVISION 1	REV1_DATE	REVISION 1	DATE 2017	JCS	DATE 2017	DATE 2017
REVISION 2	REV2_DATE	REVISION 2	DATE 2017	JCS	DATE 2017	DATE 2017
REVISION 3	REV3_DATE	REVISION 3	DATE 2017	ICP	DATE 2017	DATE 2017
REVISION 4	REV4_DATE	REVISION 4	DATE 2017	ICP	DATE 2017	DATE 2017



PUBLIC WORKS  
ENGINEERING DIVISION

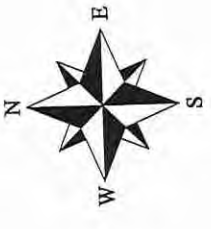
Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan



SEE SHEET CP07

SEE SHEET CP16

27 1/2 ROAD



REVISION	DATE	DESCRIPTION	DATE	DESIGNED BY	DATE	DRAWN BY	DATE
REVISION 1	REV1_DATE		2017	JCS	2017	JCS	2017
REVISION 2	REV2_DATE		2017	JCS	2017	JCS	2017
REVISION 3	REV3_DATE		2017	ICP	2017	ICP	2017
REVISION 4	REV4_DATE		2017	ICP	2017	ICP	2017

CITY OF  
**Grand Junction**  
COLORADO

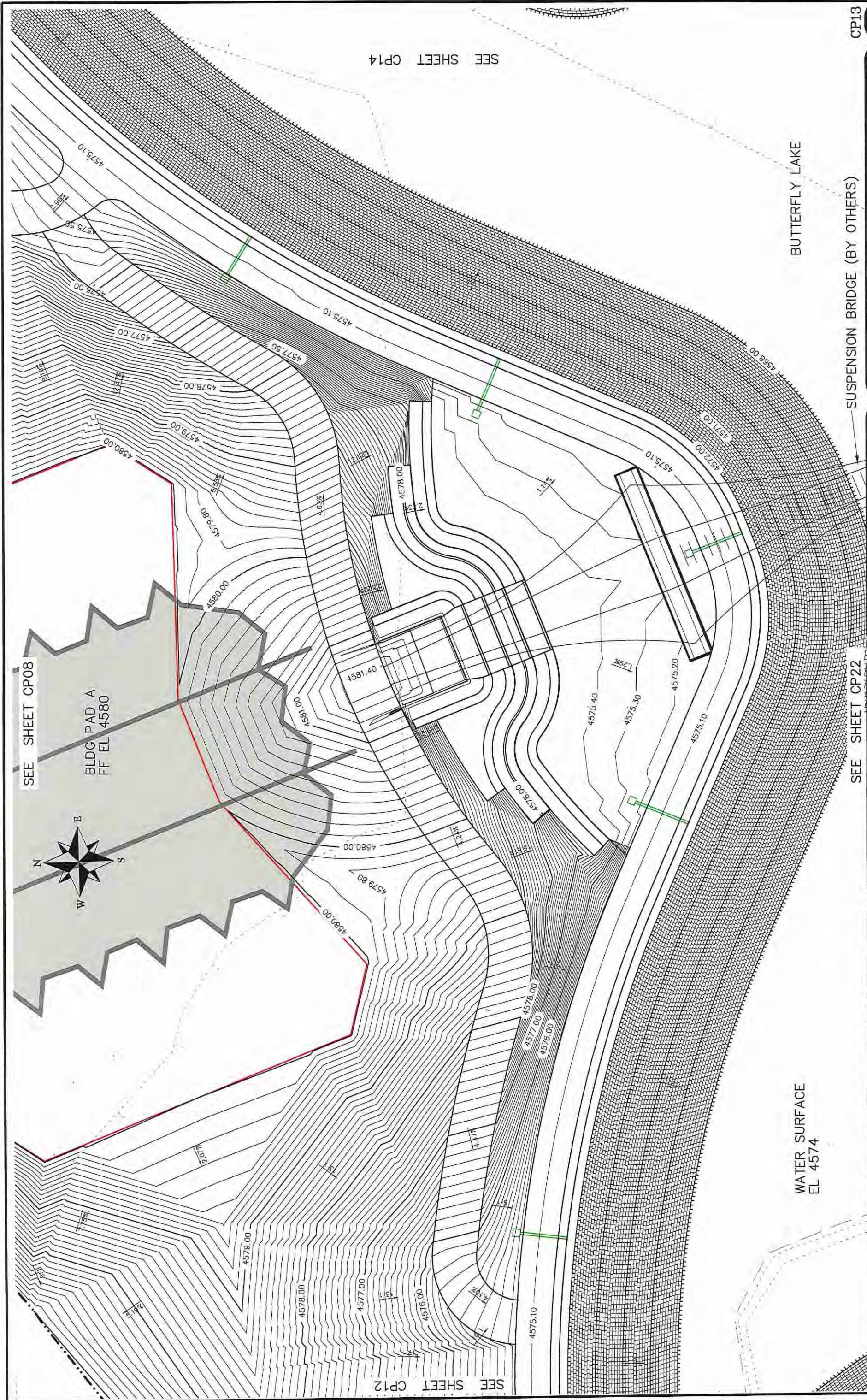
PUBLIC WORKS  
ENGINEERING DIVISION

Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan

CP11

84





REVISION	DATE	DESCRIPTION
REVISION 1	DATE 2017	DESCRIPTION
REVISION 2	DATE 2017	DESCRIPTION
REVISION 3	DATE 2017	DESCRIPTION
REVISION 4	DATE 2017	DESCRIPTION

DATE	DATE	DATE	DATE
DATE 2017	DATE 2017	DATE 2017	DATE 2017
DATE 2017	DATE 2017	DATE 2017	DATE 2017
DATE 2017	DATE 2017	DATE 2017	DATE 2017

SCALE	PLAN & PROFILE
SCALE	PLAN & PROFILE
SCALE	PLAN & PROFILE
SCALE	PLAN & PROFILE

**CITY OF**  
**Grand Junction**  
 COLORADO

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**ENGINEERING DIVISION**

Las Colonias Business Park  
 20th Scale Tenth Foot Contour Plan

SEE SHEET CP22

SEE SHEET CP14

SEE SHEET CP12

SEE SHEET CP08

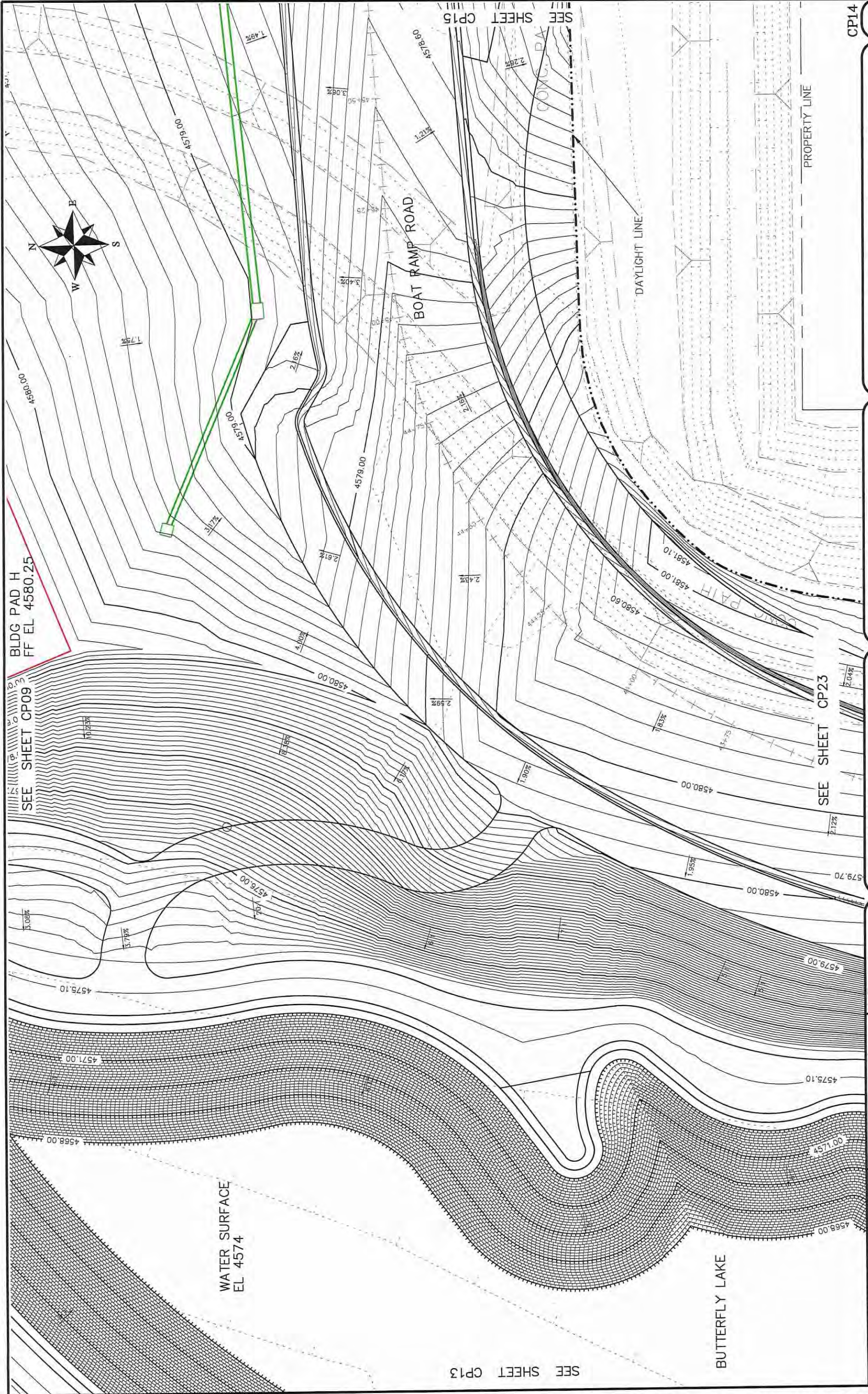
BUTTERFLY LAKE

WATER SURFACE  
 EL 4574

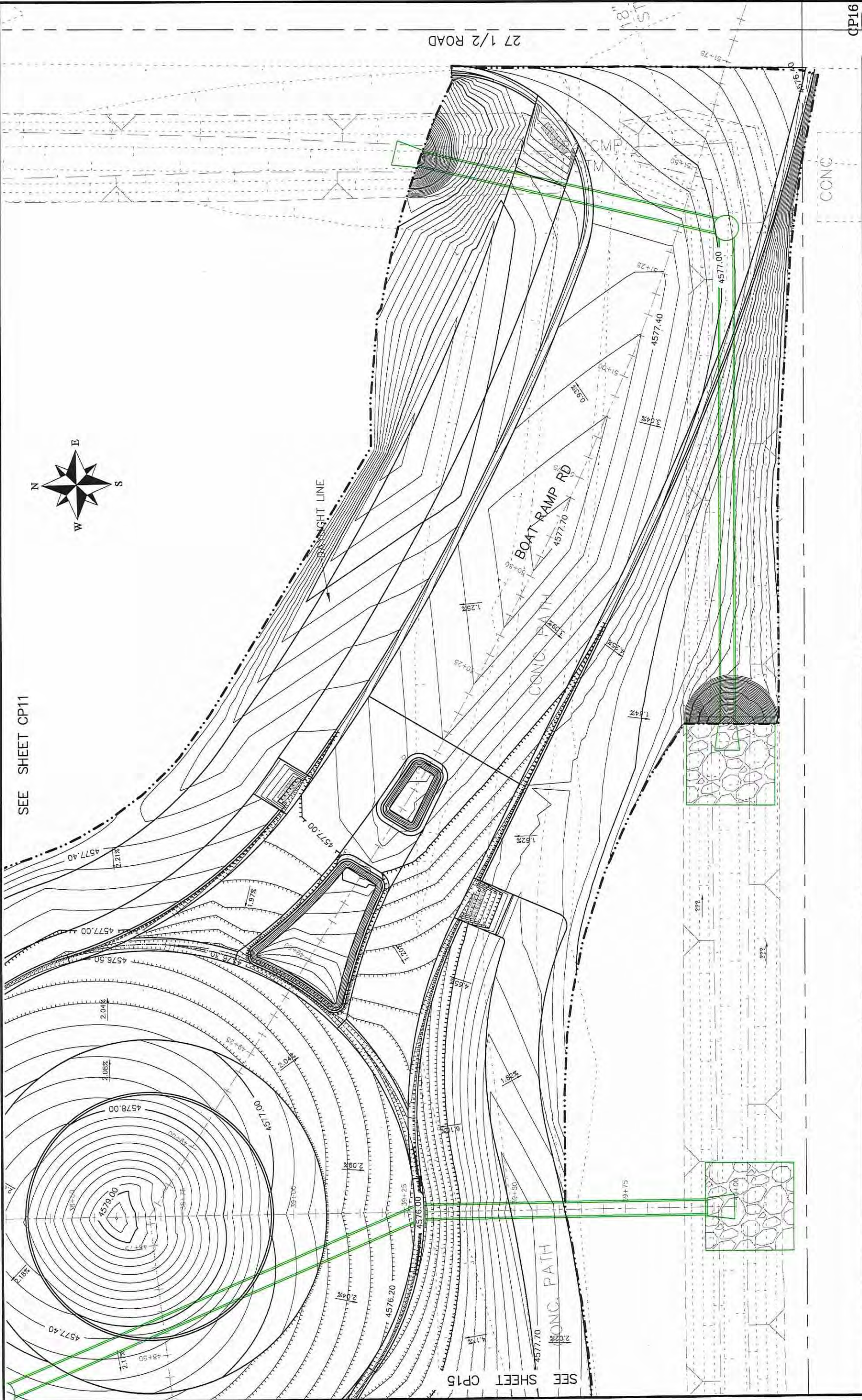
SUSPENSION BRIDGE (BY OTHERS)

CPI13









REVISION	DATE	DESCRIPTION
REVISION A	REV1 DATE	DATE
REVISION B	REV2 DATE	DATE
REVISION C	REV3 DATE	DATE
REVISION D	REV4 DATE	DATE

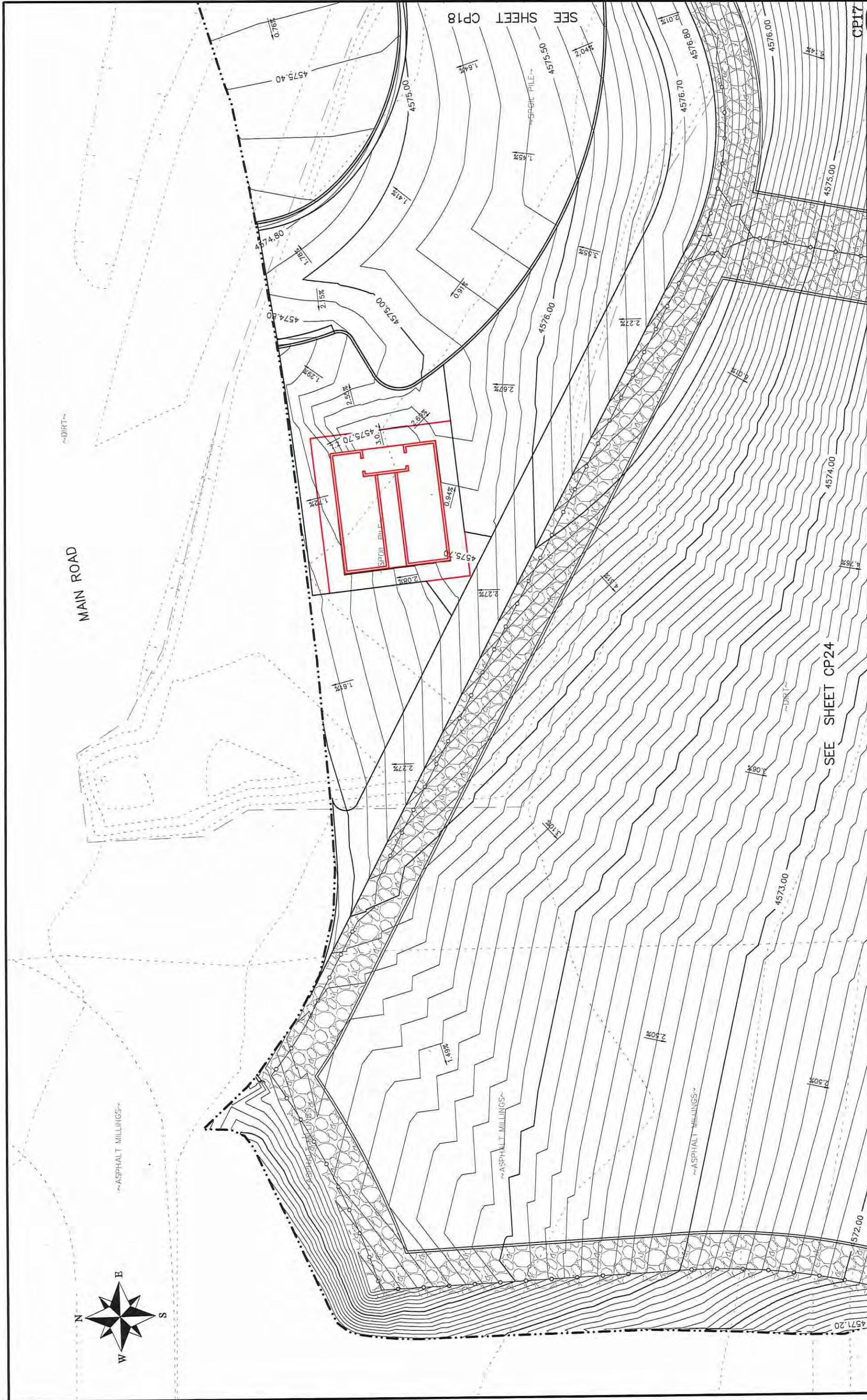
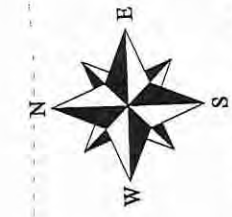
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PLAN & PROFILE
PLAN
PROFILE



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ENGINEERING DIVISION

Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan



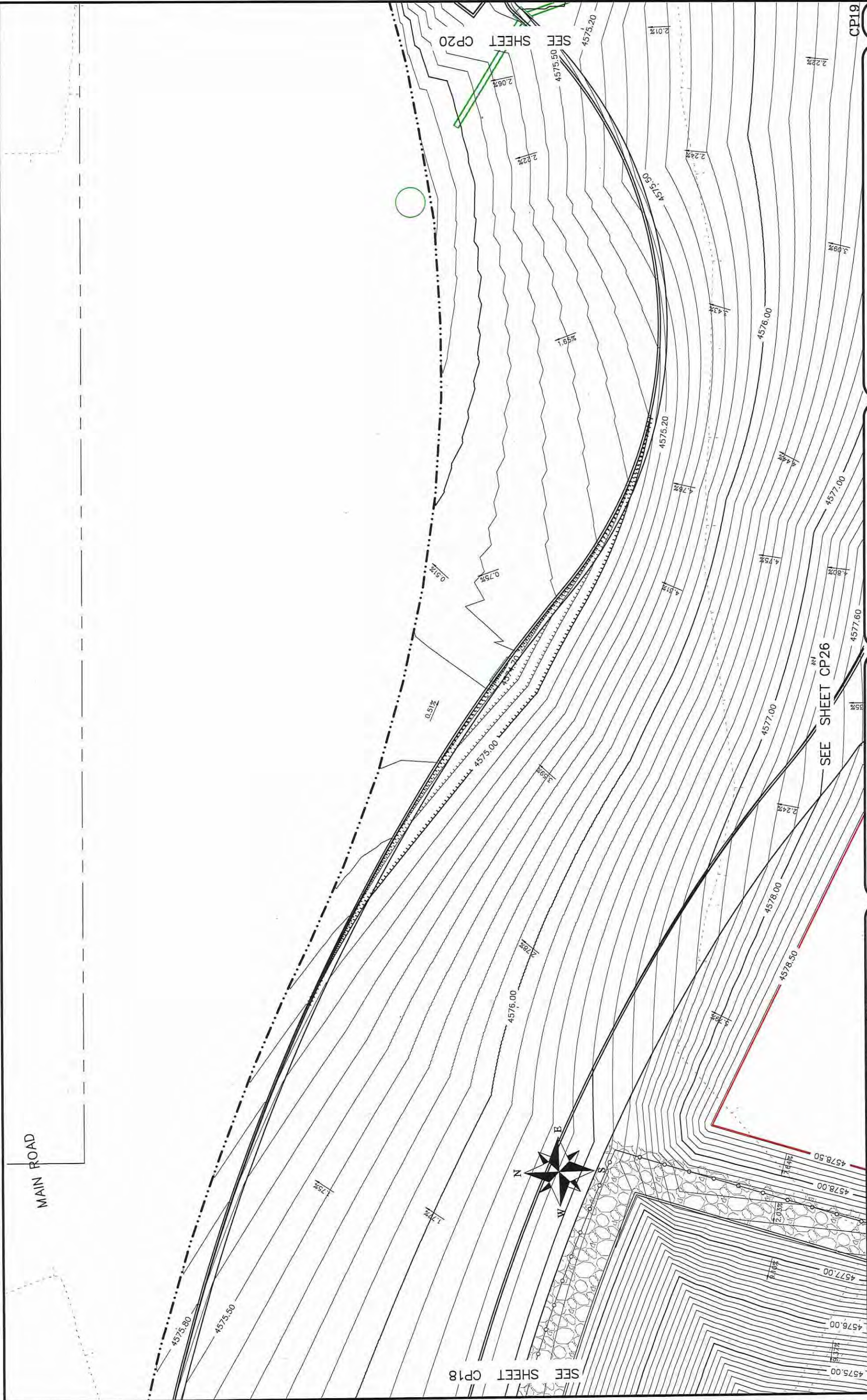
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REVISION D	REV4_DATE	REV4_INT	DATE 2017	ICP

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Las Colonias Business Park  
 20th Scale Tenth Foot Contour Plan





<p>REVISION <math>\Delta</math> REV1_INT</p> <p>REVISION <math>\Delta</math> REV2_INT</p> <p>REVISION <math>\Delta</math> REV3_INT</p> <p>REVISION <math>\Delta</math> REV4_INT</p>		<p>DATE</p> <p>DATE</p> <p>DATE</p> <p>DATE</p>	<p>DRAWN BY</p> <p>DESIGNED BY</p> <p>CHECKED BY</p> <p>APPROVED BY</p>	<p>DATE 2017</p> <p>DATE 2017</p> <p>DATE 2017</p> <p>DATE 2017</p>	<p>PLAN &amp; PROFILE</p> <p>PLAN</p> <p>PROFILE</p>
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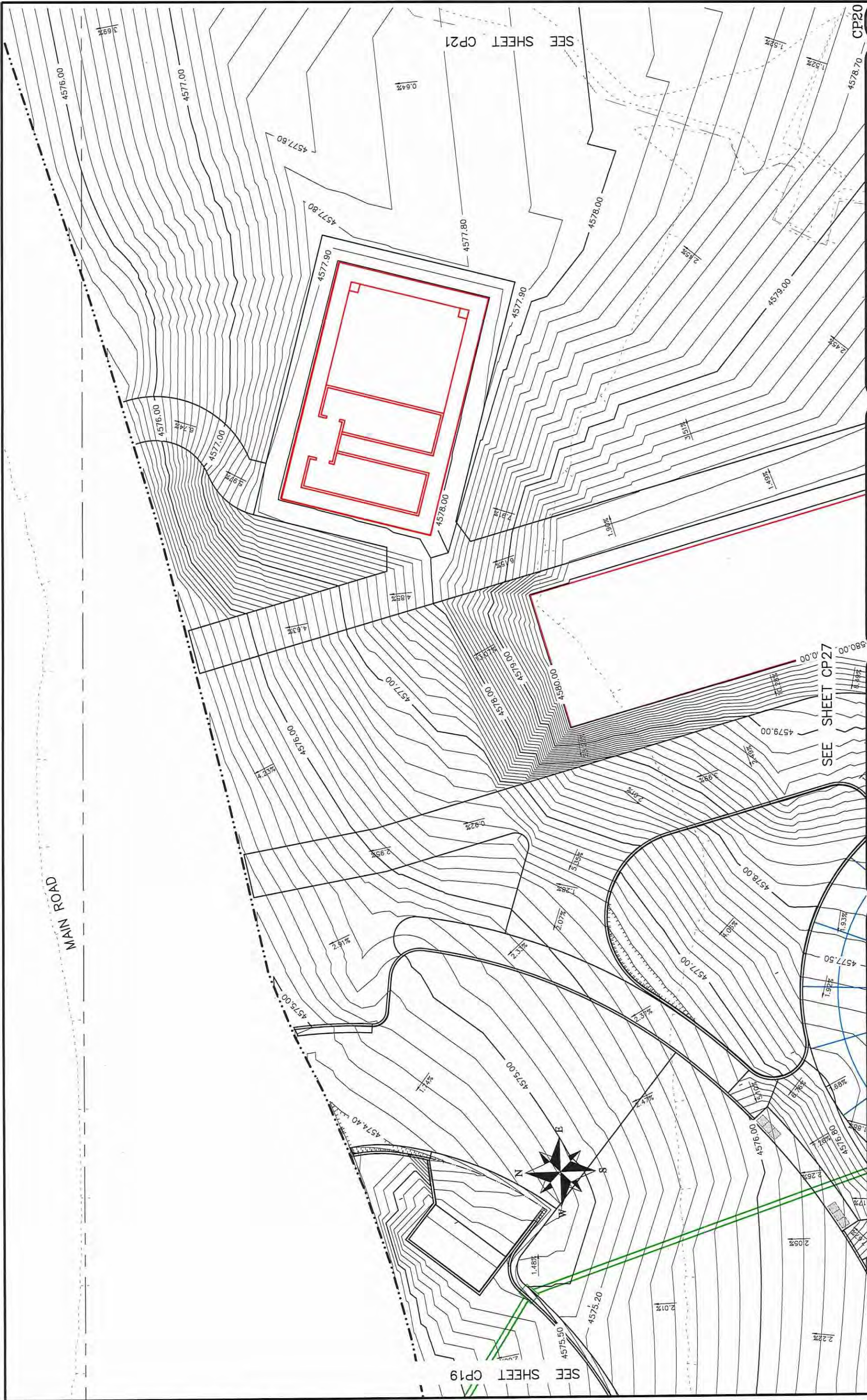
CITY OF **Grand Junction** COLORADO

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ENGINEERING DIVISION

Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan

CP19

92

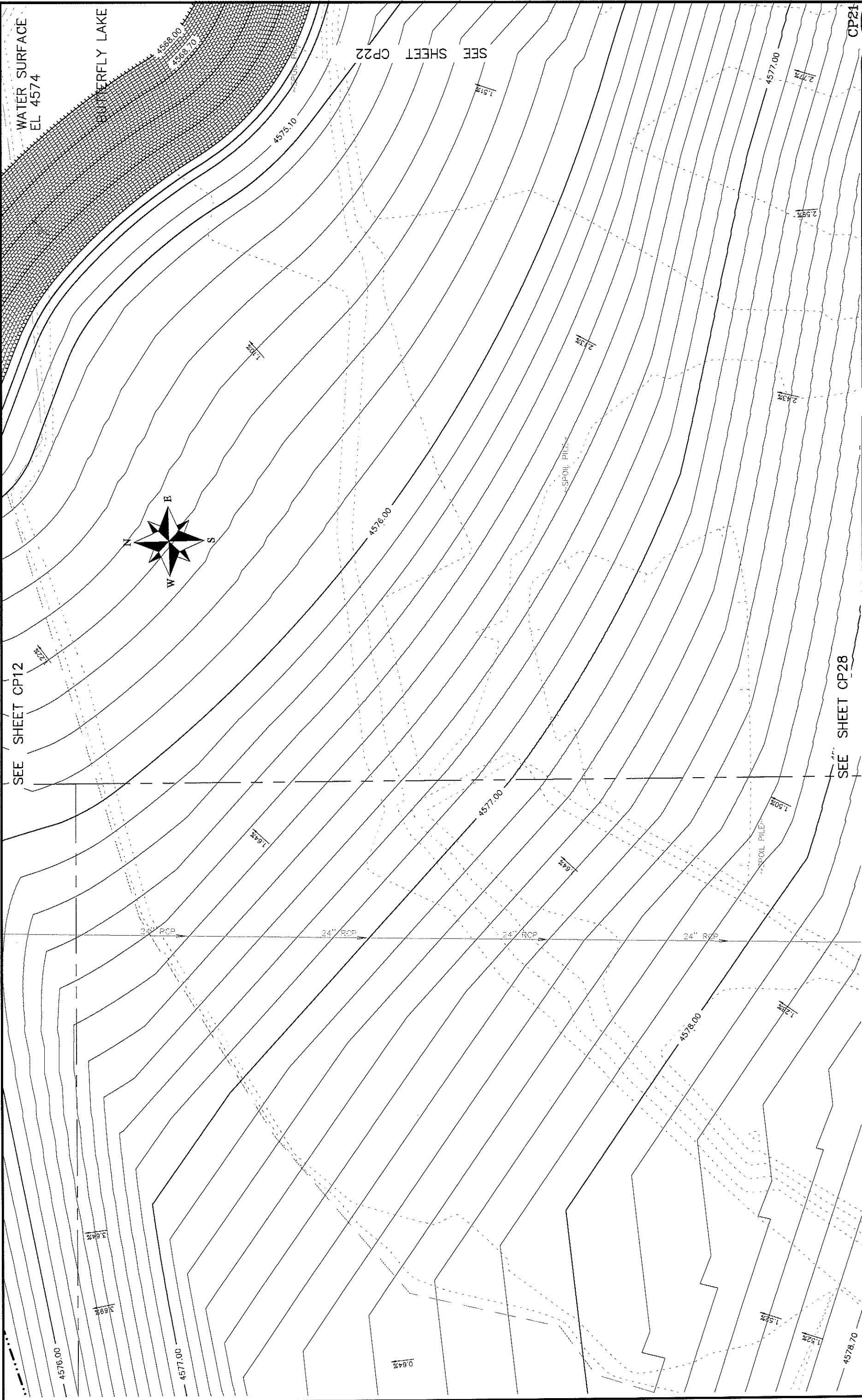


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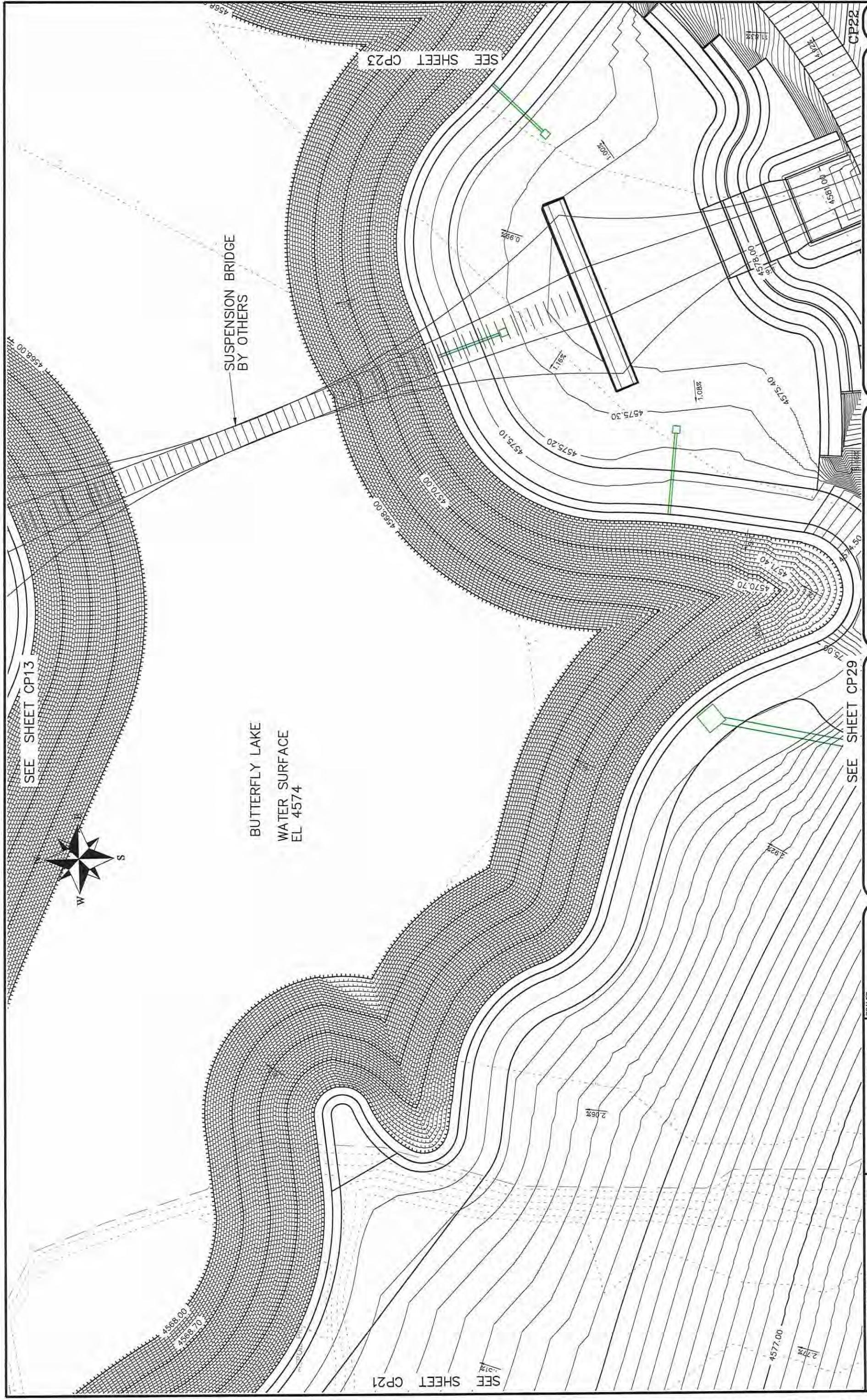
PUBLIC WORKS  
 ENGINEERING DIVISION

Las Colonias Business Park  
 20th Scale Tenth Foot Contour Plan



<b>Grand Junction</b> CITY OF COLORADO		<b>PUBLIC WORKS</b> <b>ENGINEERING DIVISION</b>		<b>Las Colonias Business Park</b> <b>20th Scale Tenth Foot Contour Plan</b>		94
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REVISION $\Delta$ REV1_INT REVISION $\Delta$ REV2_INT REVISION $\Delta$ REV3_INT REVISION $\Delta$ REV4_INT		DATE REV1_DATE REV2_DATE REV3_DATE REV4_DATE	DRAWN BY JCS DESIGNED BY JCS CHECKED BY JCS APPROVED BY JCS	DATE 2017 DATE 2017 DATE 2017 DATE 2017
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<b>CITY OF Grand Junction COLORADO</b>				
PUBLIC WORKS ENGINEERING DIVISION				
Las Colonias Business Park 20th Scale Tenth Foot Contour Plan				
95				





SEE SHEET CP34

SEE SHEET CP25

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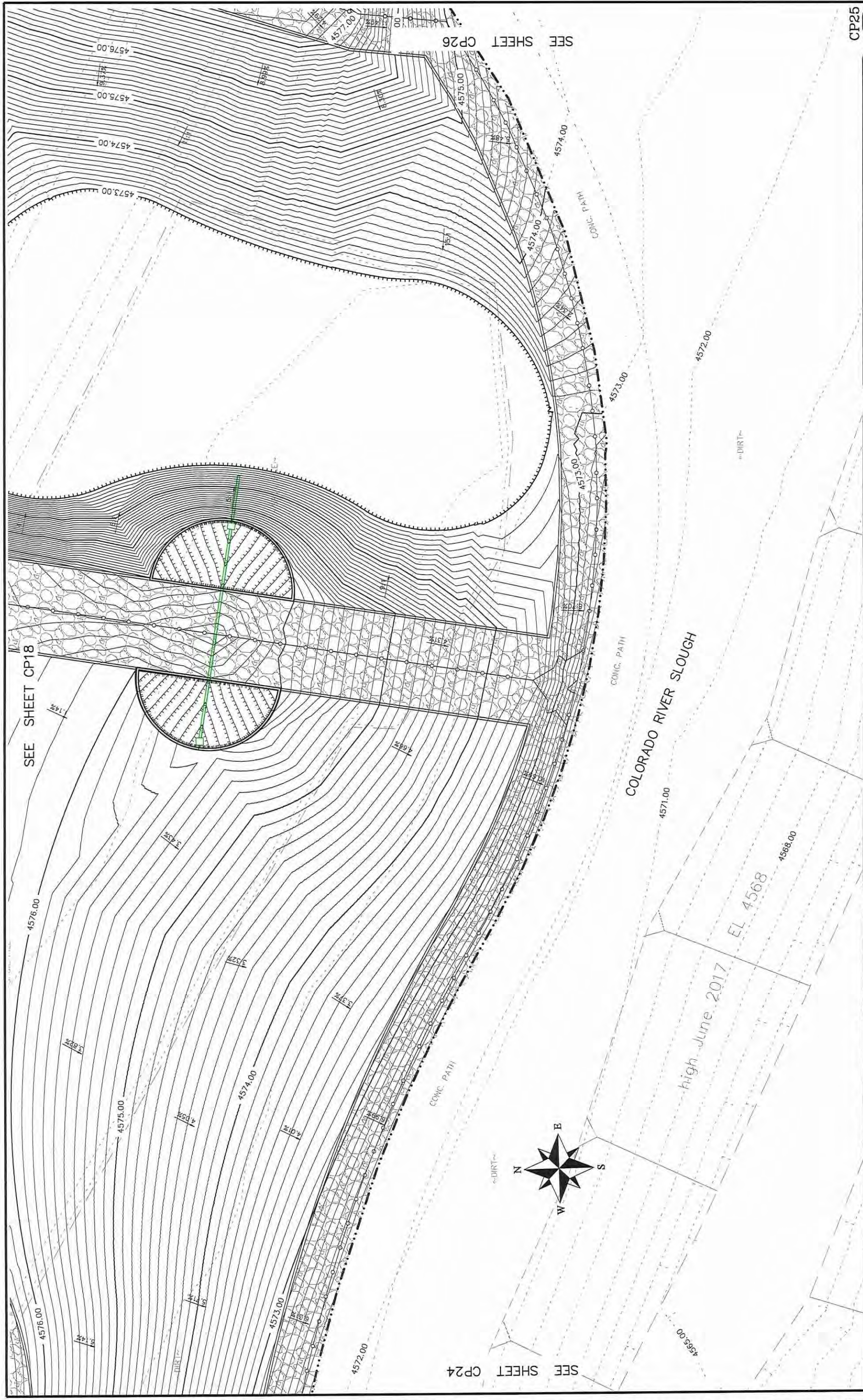
CITY OF  
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COLORADO

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ENGINEERING DIVISION

Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan

CP24

97



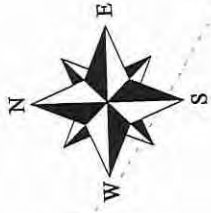
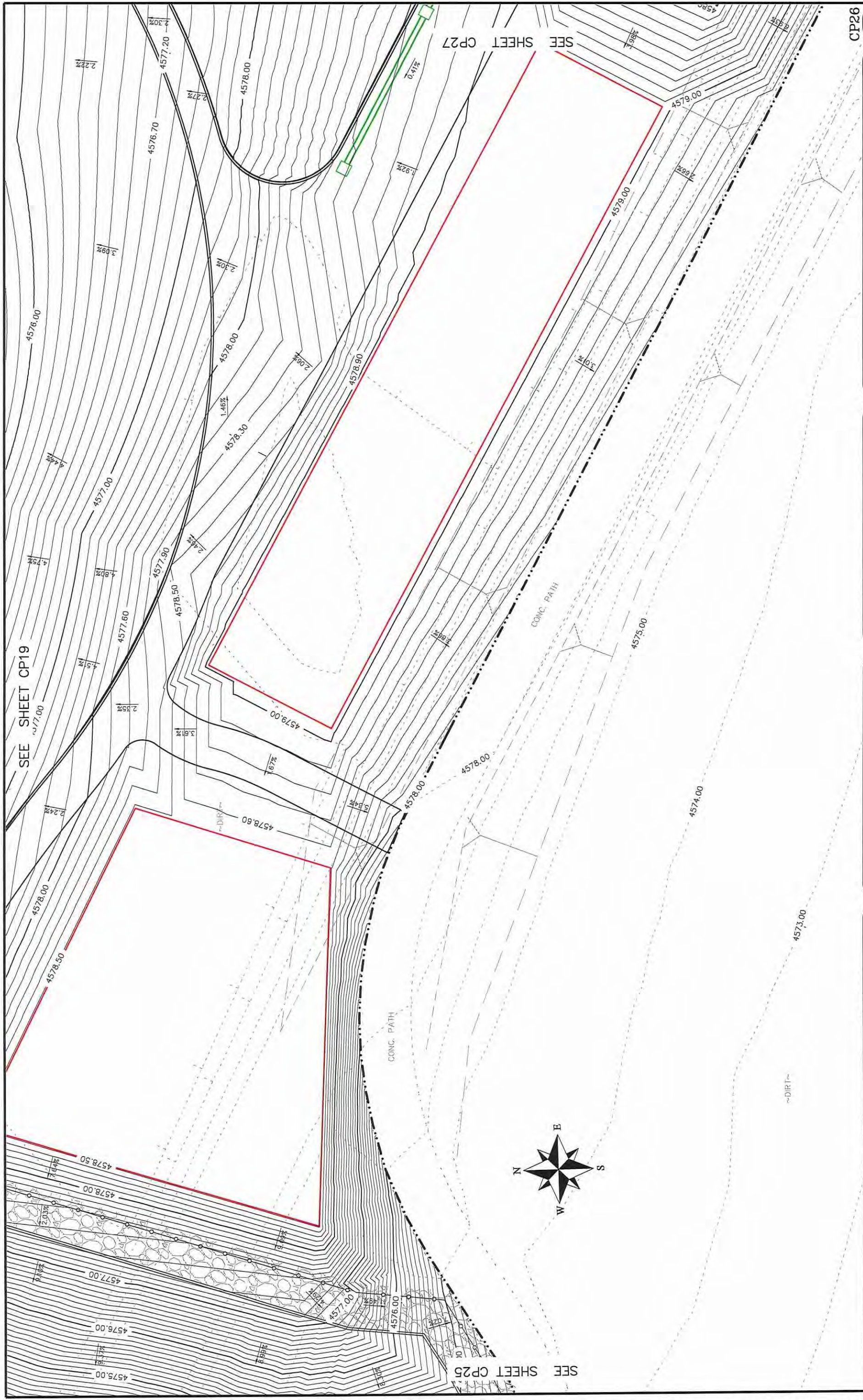
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SCALES: PLAN & PROFILE  
 1" = 100' HORIZONTAL  
 1" = 10' VERTICAL

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 ENGINEERING DIVISION

Las Colonias Business Park  
 20th Scale Tenth Foot Contour Plan  
 CP25

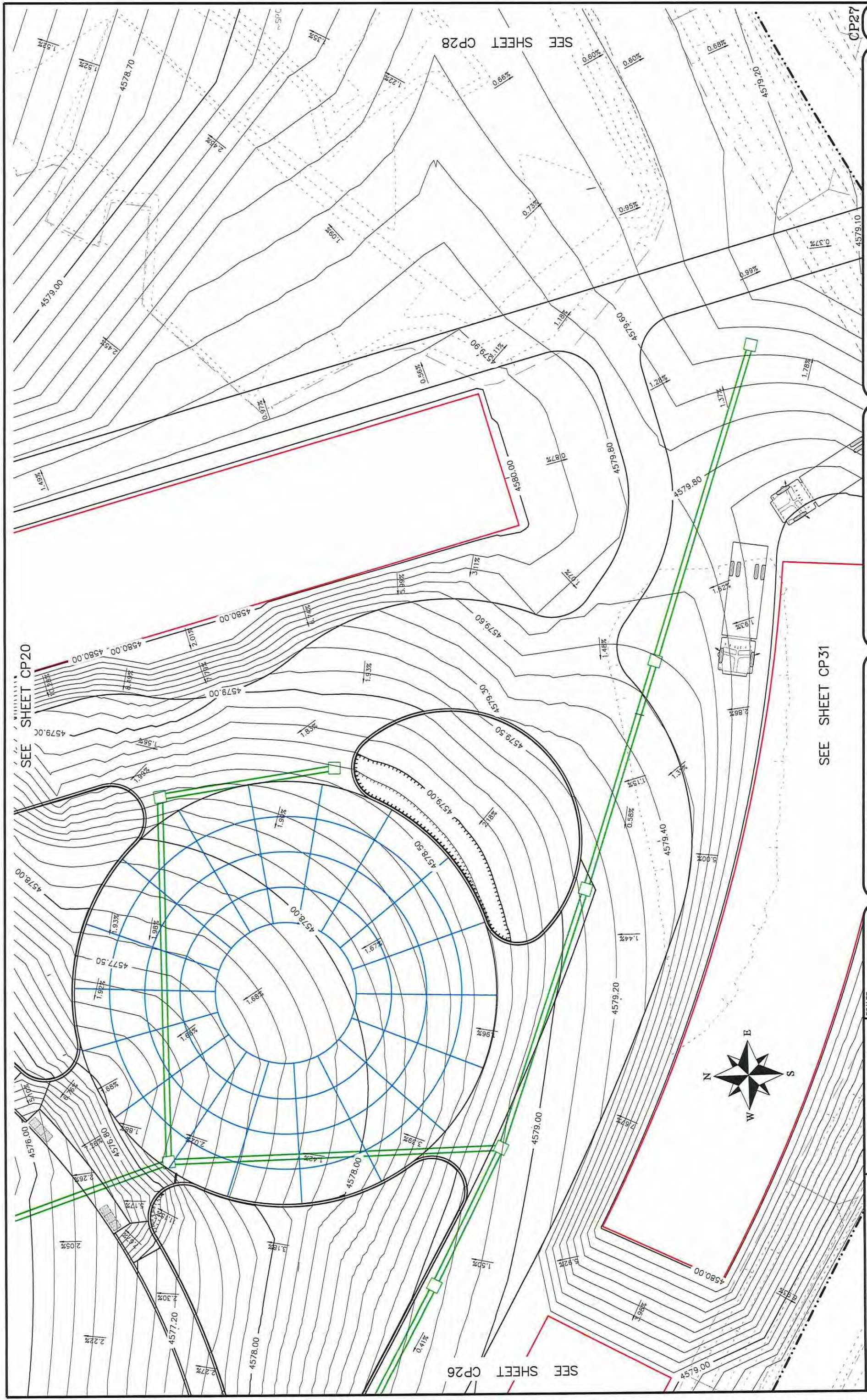


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REVISION Δ REV4_INT			JCP	2017	



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**ENGINEERING DIVISION**

Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan  
CP26  
99



SEE SHEET CP20

SEE SHEET CP26

SEE SHEET CP28

SEE SHEET CP31



REVISION	DATE	DESCRIPTION
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Δ	2017	REV2
Δ	2017	REV3
Δ	2017	REV4

DATE	DATE	DATE	DATE
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DESIGNED BY	CHECKED BY	APPROVED BY
JCS	JCS	TCP

SCALE	PLAN	PROFILE
1" = 40'	1" = 40'	1" = 40'



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Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan





SEE SHEET CP22

SEE SHEET CP30

REVISION	DATE	DESCRIPTION
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Δ	2017	REV2
Δ	2017	REV3
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PLAN & PROFILE
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0 5 10



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**ENGINEERING DIVISION**

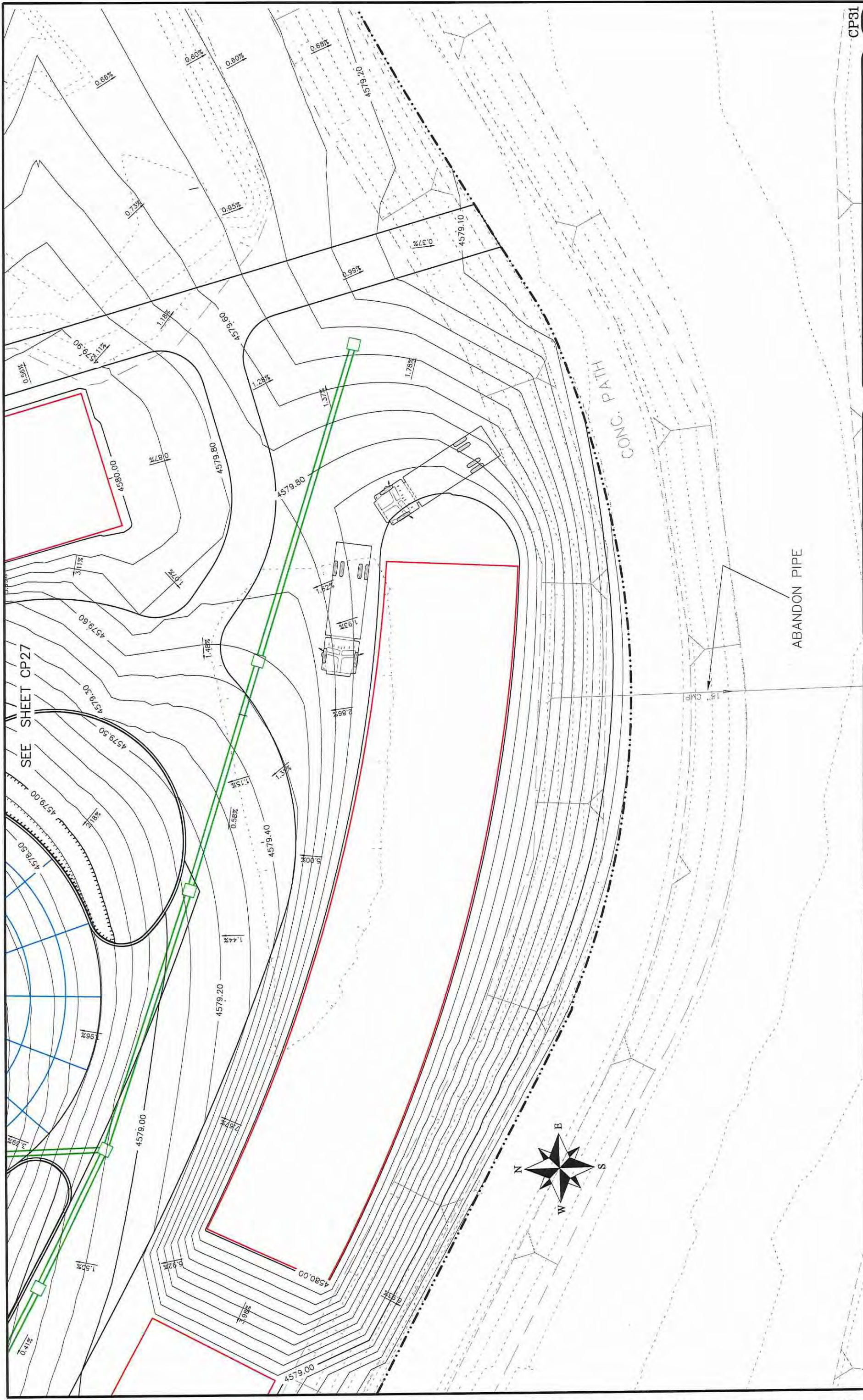
Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan

CP29

102







CP81

104

Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan

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ENGINEERING DIVISION



SCALES:

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VERTICAL	DATE 2017

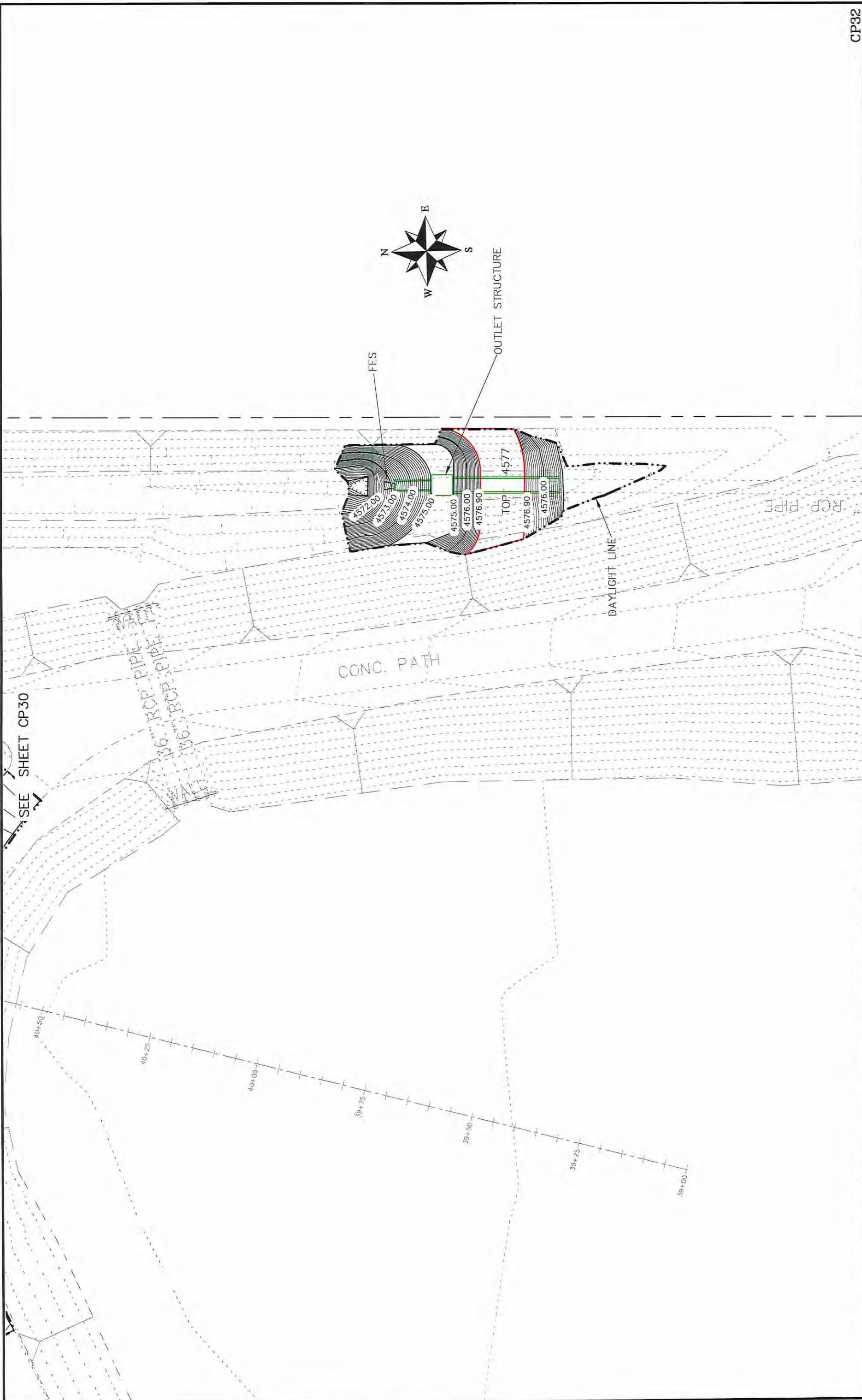
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DATE	DATE 2017
REV1 DATE	DATE 2017
REV2 DATE	DATE 2017
REV3 DATE	DATE 2017
REV4 DATE	DATE 2017

SEE SHEET CP27

ABANDON PIPE

CONC. PATH



CP32

105

Las Colonias Business Park  
20th Scale Tenth Foot Contour Plan

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ENGINEERING DIVISION

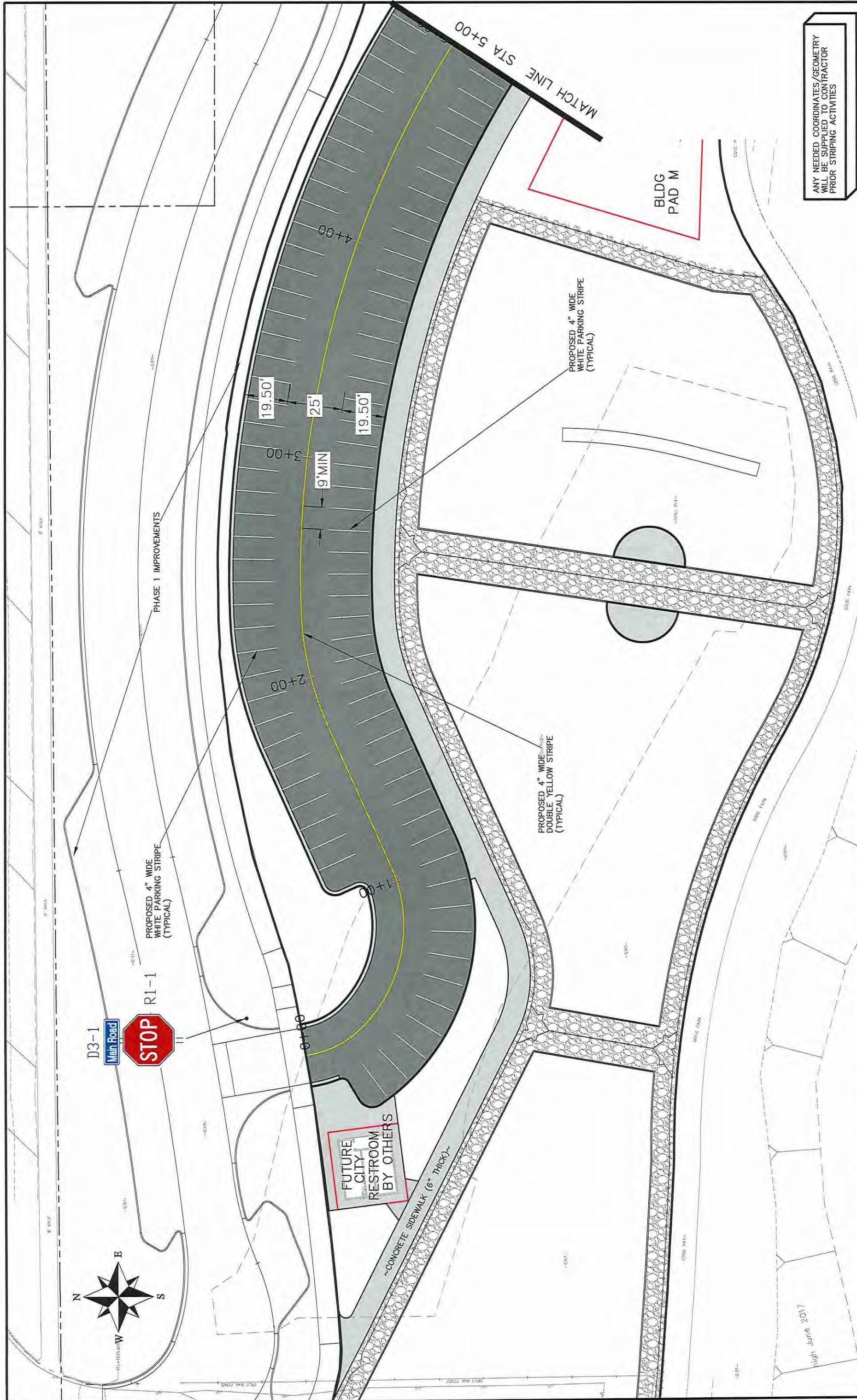
CITY OF  
**Grand Junction**  
COLORADO

SCALES:

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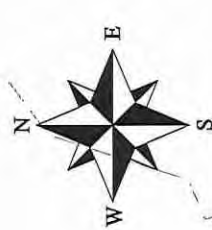
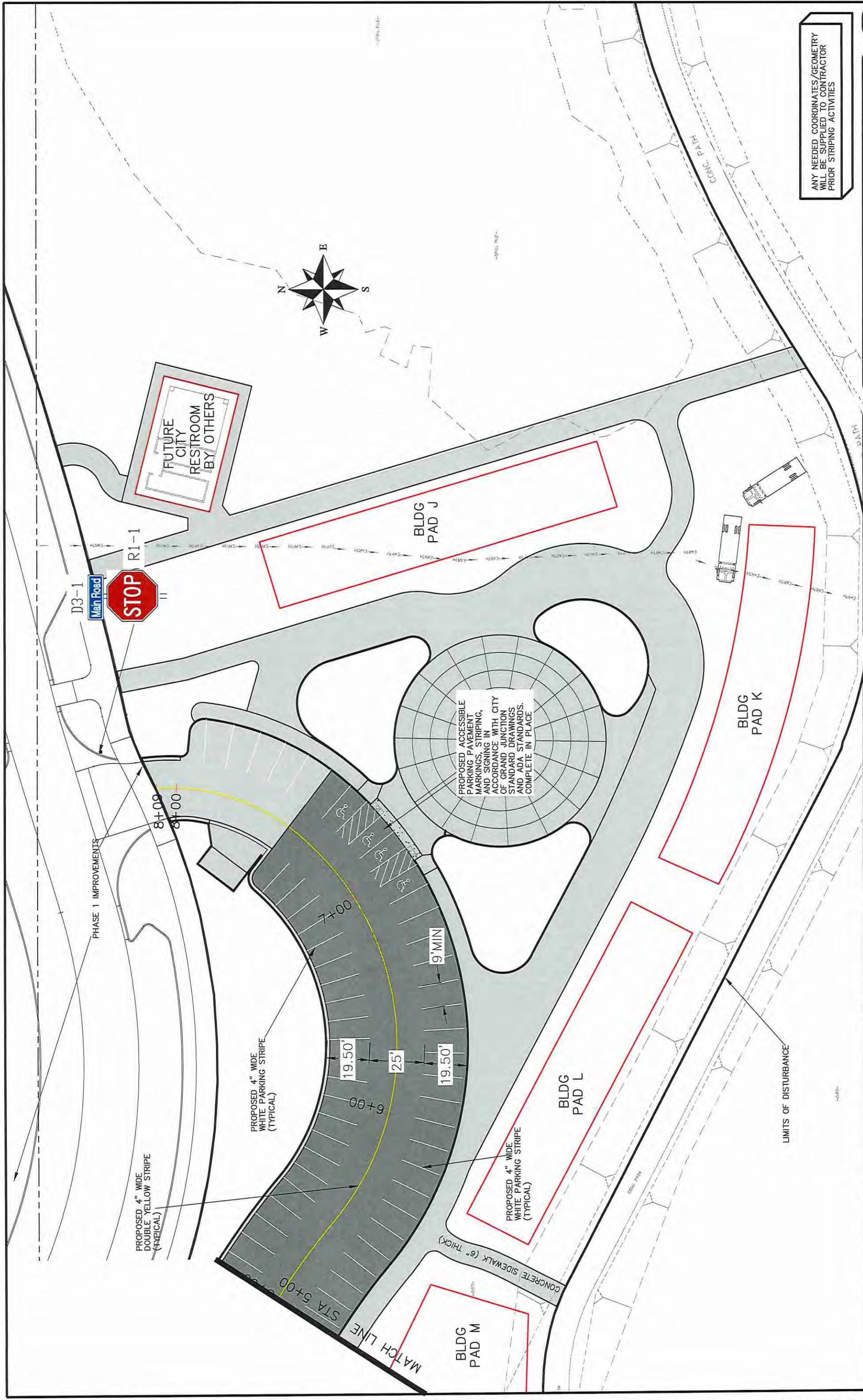
ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

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3		2017	JCS	2017
4		2017	JCS	2017

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ENGINEERING DIVISION

Las Colonias Business Park Phase 2  
Signing and Striping Plan



ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES



PROPOSED ACCESSIBLE PARKING PAVEMENT MARKINGS, STRIPING, AND SIGNING IN ACCORDANCE WITH CITY OF GRAND JUNCTION STANDARD DRAWINGS AND ADA STANDARDS. COMPLETE IN PLACE.

REVISION	DATE	DESCRIPTION

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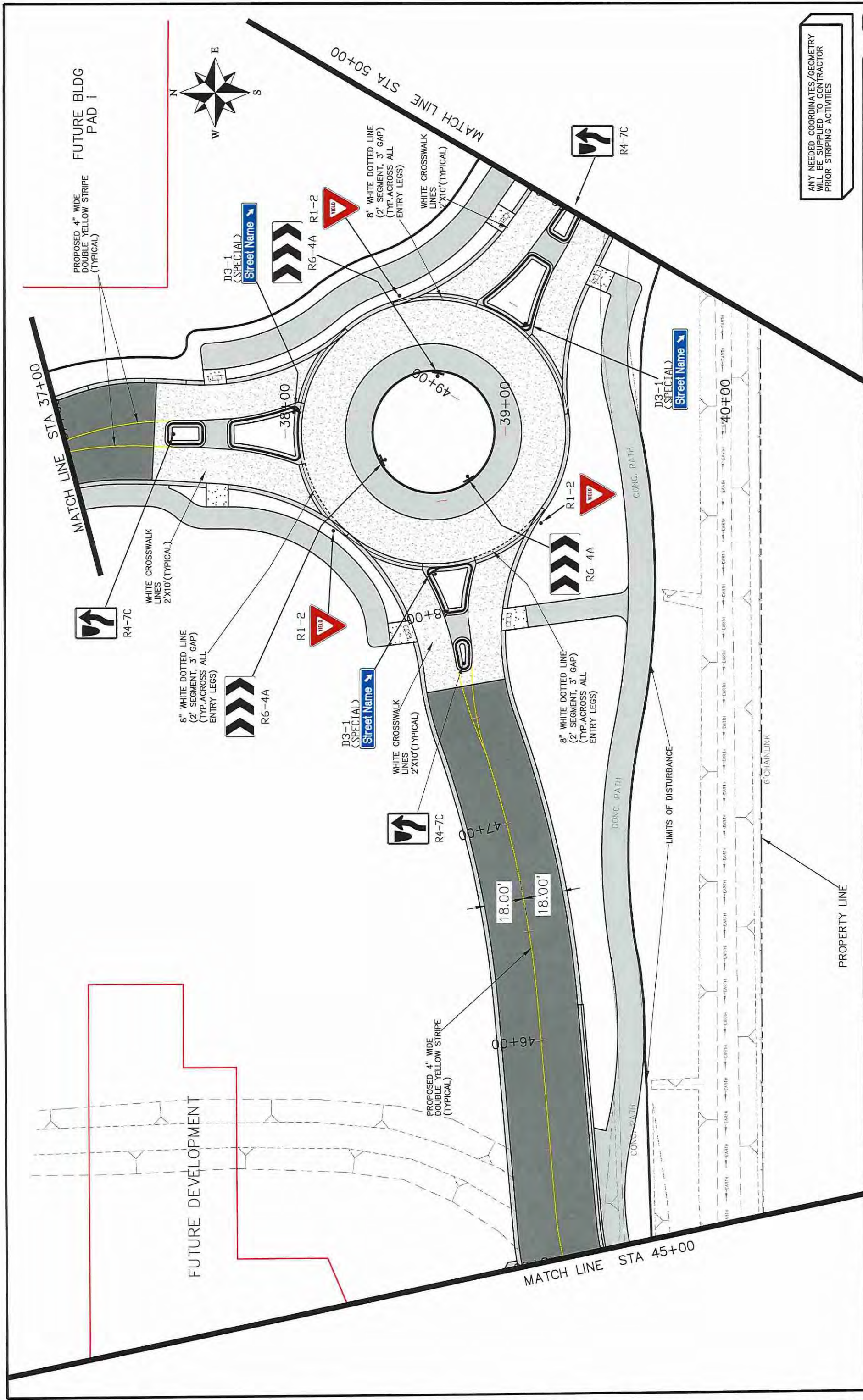
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0	1" = 50'	1" = 10'
0	1" = 25'	1" = 5'



PUBLIC WORKS ENGINEERING DIVISION

Las Colonias Business Park Phase 2  
Signing and Striping Plan





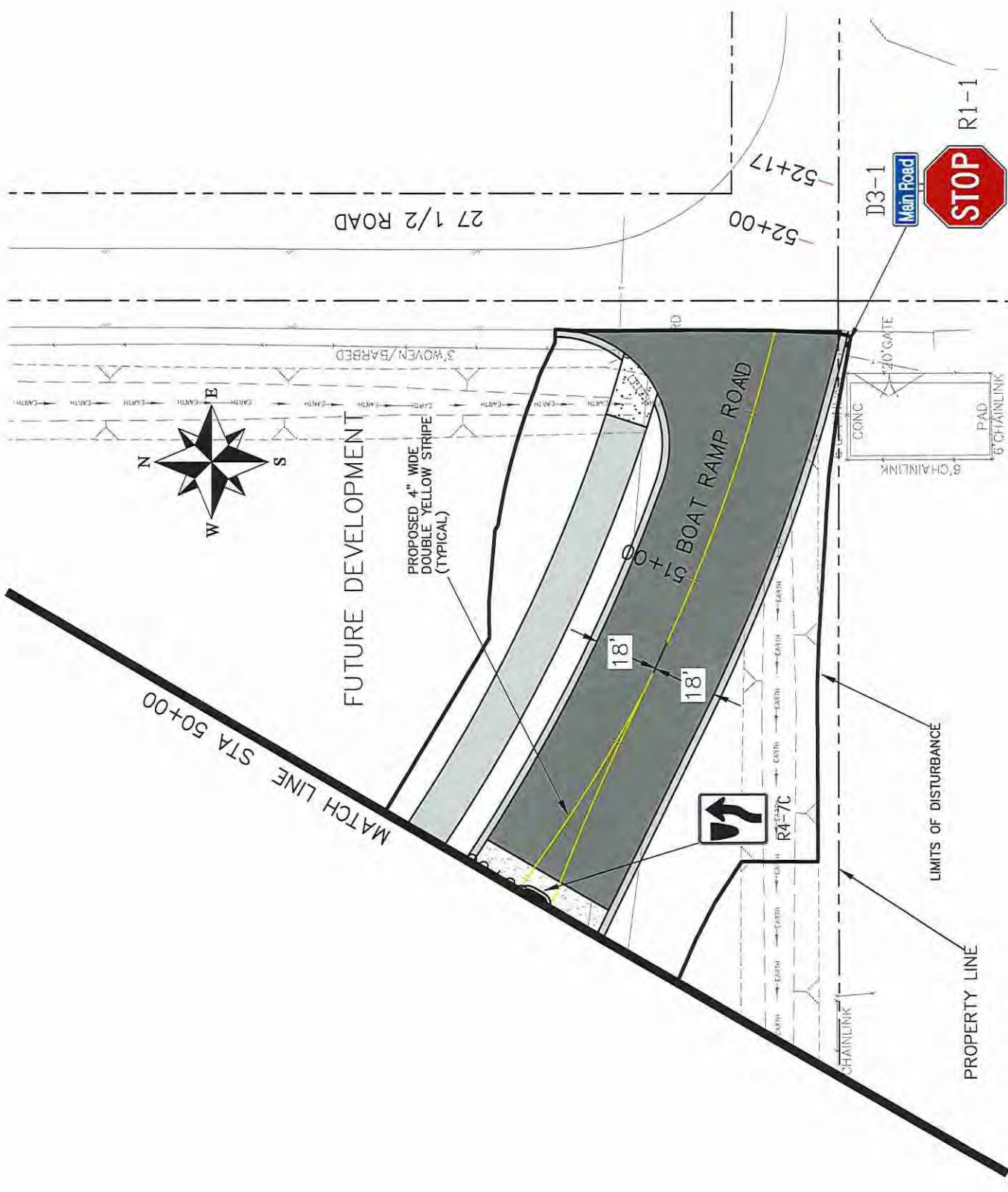
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DRAWN BY: JCS  
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SCALES: PLAN & PROFILE 1"=30'  
 1"=10'  
 1"=5'  
 1"=2'

CITY OF **Grand Junction** COLORADO  
 PUBLIC WORKS ENGINEERING DIVISION  
 Las Colonias Business Park Phase 2 Signing and Striping Plan  
 109



ANY NEEDED COORDINATES/GEOMETRY  
WILL BE SUPPLIED TO CONTRACTOR  
PRIOR STRIPING ACTIVITIES

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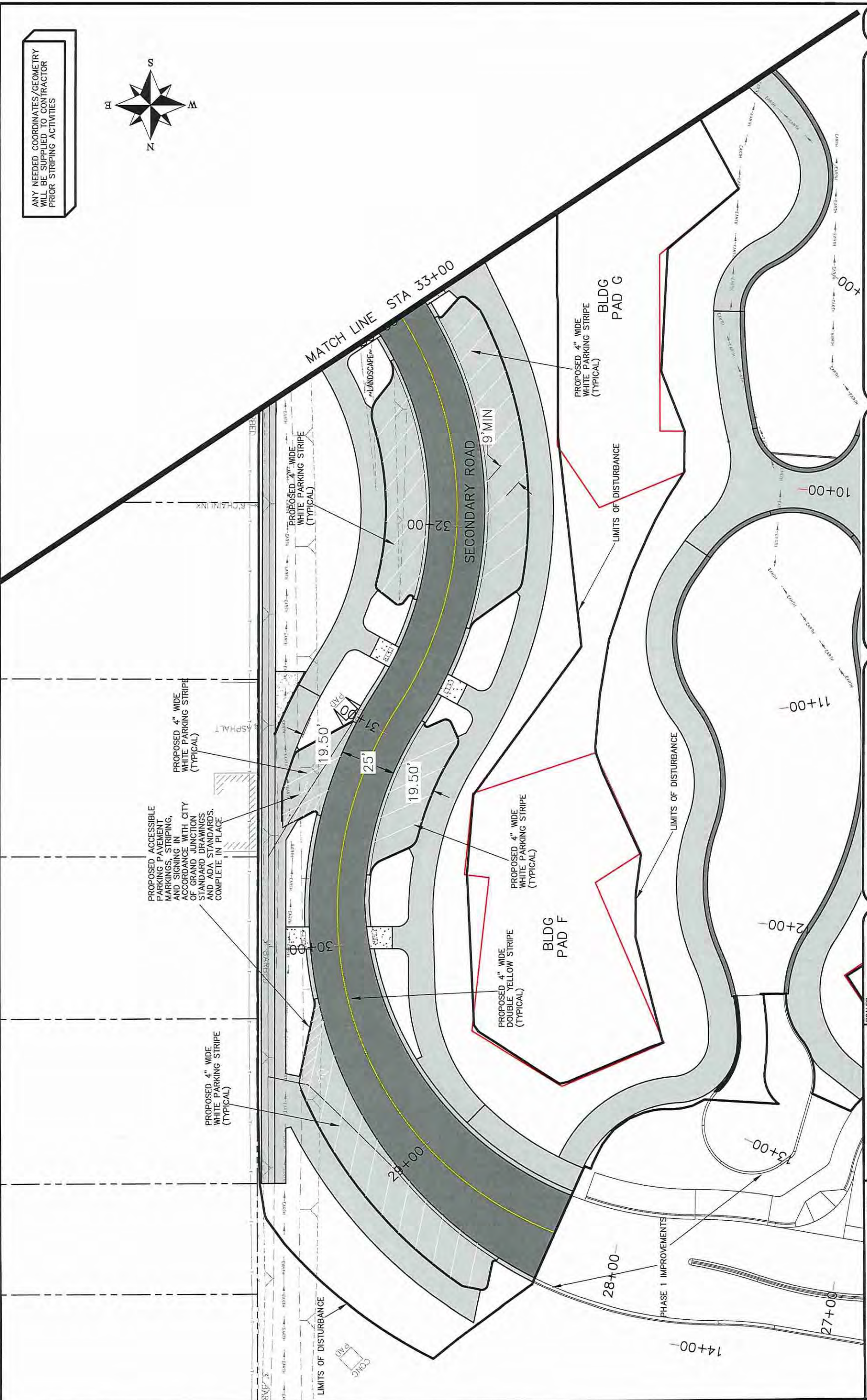


PUBLIC WORKS  
ENGINEERING DIVISION

Las Colonias Business Park Phase 2  
Signing and Striping Plan



ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES



REVISION	DATE	DESCRIPTION
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DATE	DATE	DATE	DATE
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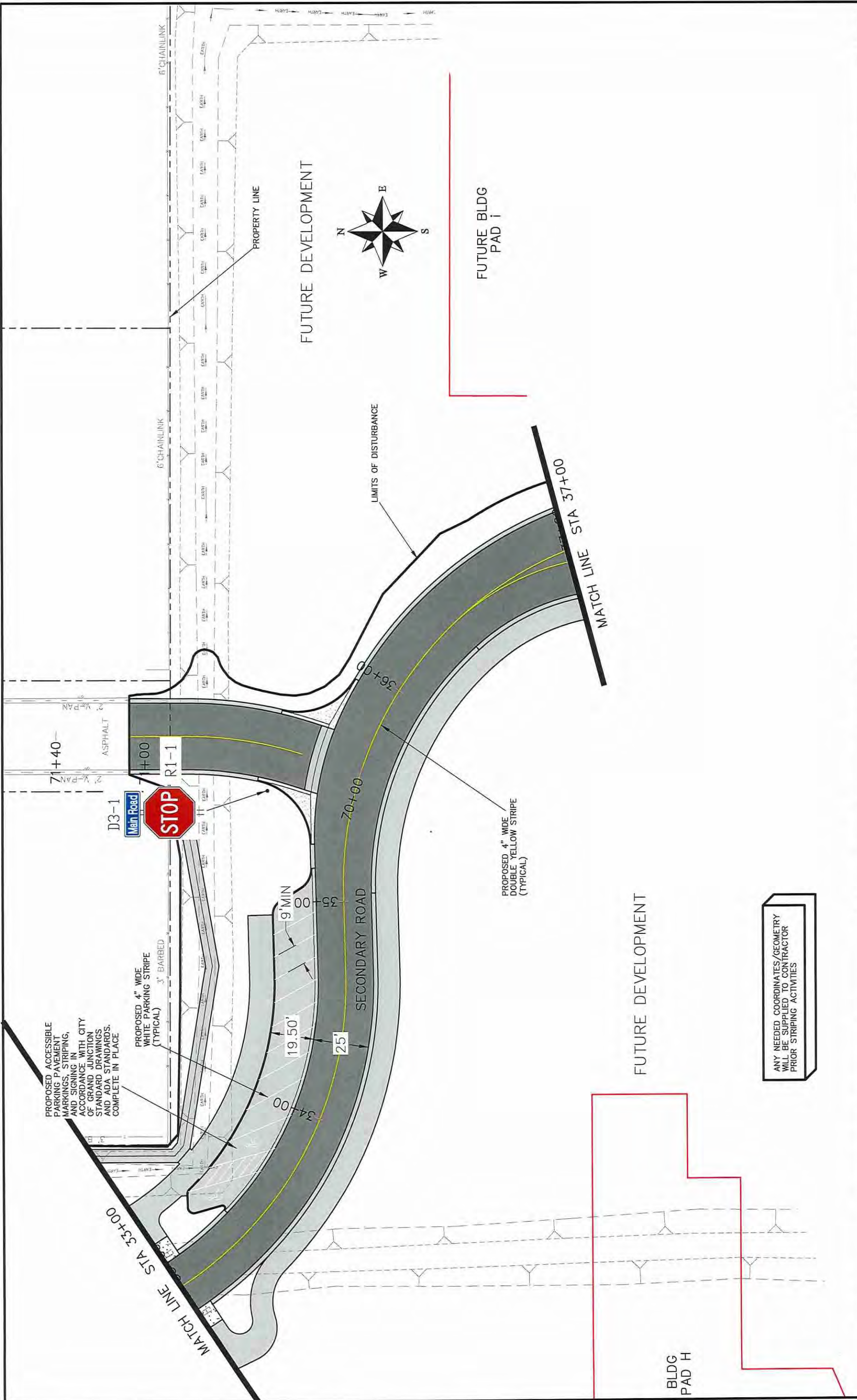
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DATE: 2017



PUBLIC WORKS ENGINEERING DIVISION

Las Colonias Business Park Phase 2  
Signing and Striping Plan



ANY NEEDED COORDINATES/GEOMETRY WILL BE SUPPLIED TO CONTRACTOR PRIOR STRIPING ACTIVITIES

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REVISION			APPROVED BY	TCF	DATE	2017



PUBLIC WORKS ENGINEERING DIVISION

Las Colonias Business Park Phase 2  
Signing and Striping Plan  
112

#### EROSION CONTROL MEASURES

Contractor to update the SWMP according to specific construction phasing and stormwater management practices for current construction activity when warranted.

#### Site Description

1. The site has a total disturbance area of 23.02 acres with the majority of disturbance being caused by the development of Phase 2 of the Las Colonias Business Park.
2. Stormwater leaves the site through double 3' x 6' Reinforced Concrete Box Culverts, a 24" RCP built from the Water Quality Pond during Phase 1, two 36" RCP's crossing the riverfront path just ahead of the pedestrian bridge and another 36" RCP in the same area where they all drain directly to the Colorado River.
3. Proposed utilities for this project include: storm drain, sanitary sewer, potable water, gas, electricity, telephone, cable television, and broadband infrastructure.

#### EROSION CONTROL MEASURES

##### Performance Standards

The general requirements for erosion control work shall be as follows:

1. Any grading shall be conducted in such a manner so as to effectively reduce accelerated soil erosion and resulting sedimentation.
2. All grading shall be designed, constructed and completed in such a manner so that exposed area of any disturbed land shall be limited to the shortest time period.
3. Sediment caused by accelerated soil erosion shall be removed from runoff water before leaving the site.
4. The contractor shall try to minimize the amount of disturbance necessary for the construction project by preserving established vegetation to act as a BMP.

##### During Construction (Temporary Measures)

1. Anchored Straw Bales (ASB): The use of hay bales is proposed as a culvert outlet trap at the junction of the outlet of the tripple 3x7 and double 3x6 RCBC's to stop any sediment produced from stormwater runoff from continuing to the new temporary drain channel as shown on the construction drawings. Hay bales will also be used further as a sediment trap where the new temporary channel ties to the existing channel downstream of the culvert outlet trap.
2. Erosion Logs: The use of erosion logs is proposed at the toe of cut and fill slopes and other areas where sediment from upstream flows may spill to existing drainage ways. Other locations are shown on the plan. Installation shall be in accordance with the detail as shown on the plans.
3. Inlet Protection: The use of inlet protection is proposed at all inlets to trap sediment before entering the storm drain system.

##### After Construction (Permanent Measures)

1. Rip-Rap: The use of rip-rap per construction drawings is proposed for around the outlet of several pipes as noted and shown.
1. Reseeding: the majority of the site will be seeded with grass or other plantings as shown in the landscape plans. All disturbed areas will be seeded if otherwise not proposed to be paved.

#### Maintenance

1. The contractor or his designated representative shall make routine checks on all erosion control measures to determine if repairs or sediment removal is necessary.
2. After each rainfall or moderate snow melt, erosion control measures are to be checked. If repairs are needed, they shall be completed immediately.
3. Silt and sediment shall be removed when they reach a height of one-half of the barrier (erosion log or anchored straw bale).
4. When temporary measures are to be removed, any silt and sediment deposits shall be removed and spread evenly in fill areas.

#### General Notes

1. The SWMP establishes the minimum acceptable requirements for stormwater pollution prevention on site. The Contractor may supplement these requirements as appropriate for specific construction activities. Any changes to the practices shown on this plan must be reviewed by Project Inspector/Engineer prior to implementation.
2. At all times during construction, erosion and sediment control shall be maintained by the contractor or his designated representative.
3. Erosion control systems shall be installed as grading progresses.
4. The Contractor shall provide and maintain a portable concrete washout facility.
5. Details shown are schematic only. Adjust as necessary to fit field conditions.
6. Erosion bales shall be placed to avoid runoff flowing between, around or under bales. Bales shall be anchored with 2" x 2" x 4' wooden stakes or #4 reinforcing bars, two per bale (see details for further instructions).
7. Negative impacts to downstream areas (or receiving waters) caused by the slope grading to be monitored and corrected by the contractor.
8. Construction traffic entrances shall be cleaned on a continual basis during slope grading.
9. A copy of the SWMP and construction plans shall be maintained on site at all times.

REVISION	DESCRIPTION	DATE

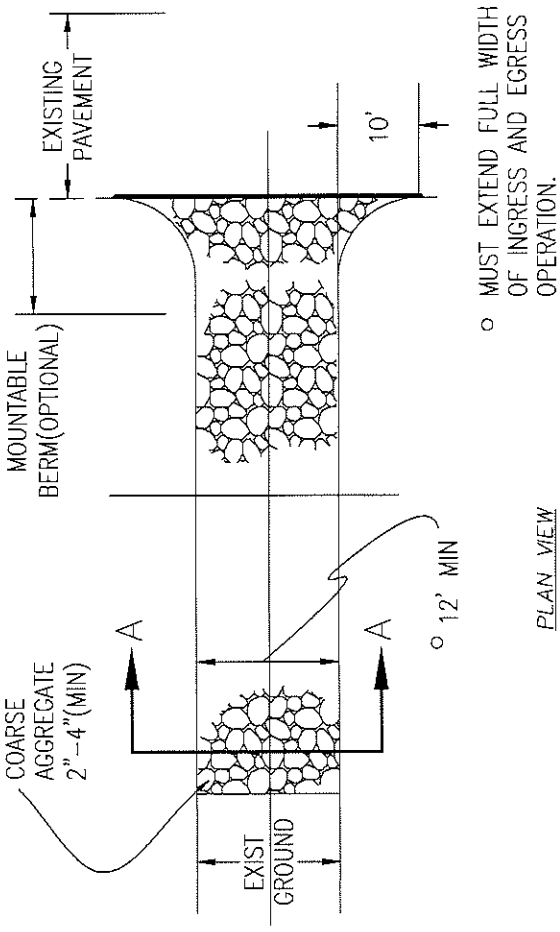
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APPROVED BY	DATE
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SCALE:
PLAN
1" = 50'
SECTIONAL
1" = 10'



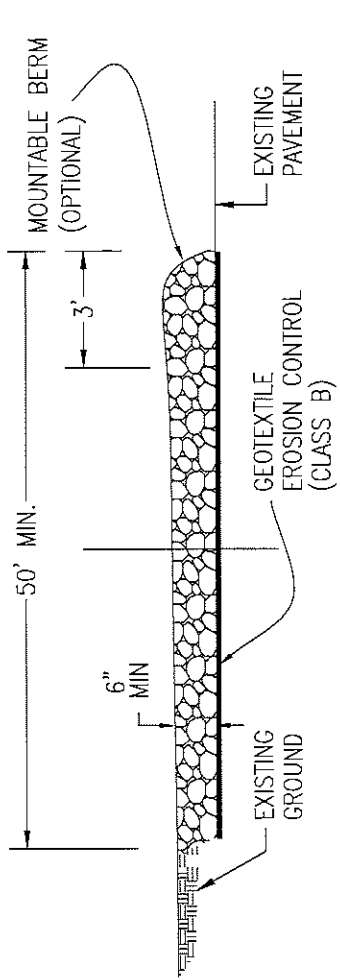
PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
STORM WATER MANAGEMENT NOTES

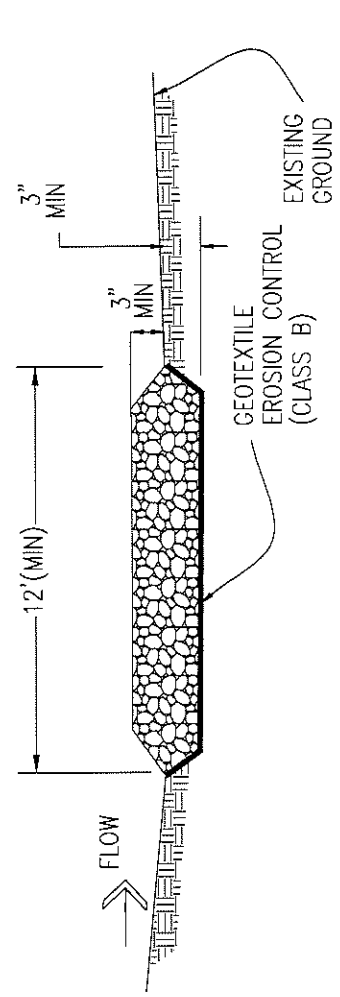


○ MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION.

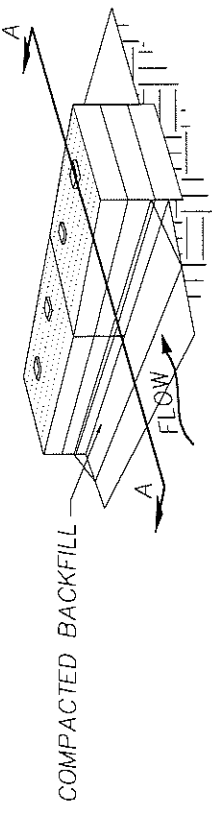
PLAN VIEW



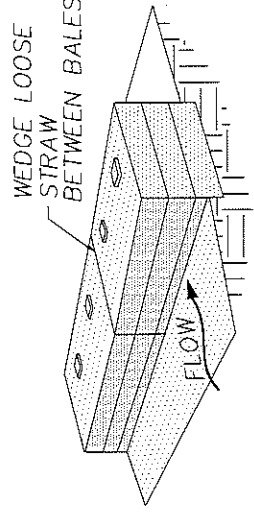
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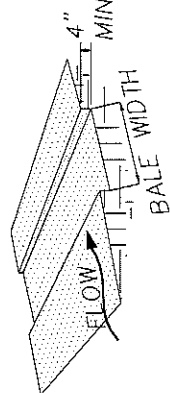
SECTION A-A



STEP 3. PLACE COMPACTED BACKFILL AGAINST THE UPSTREAM FACE.

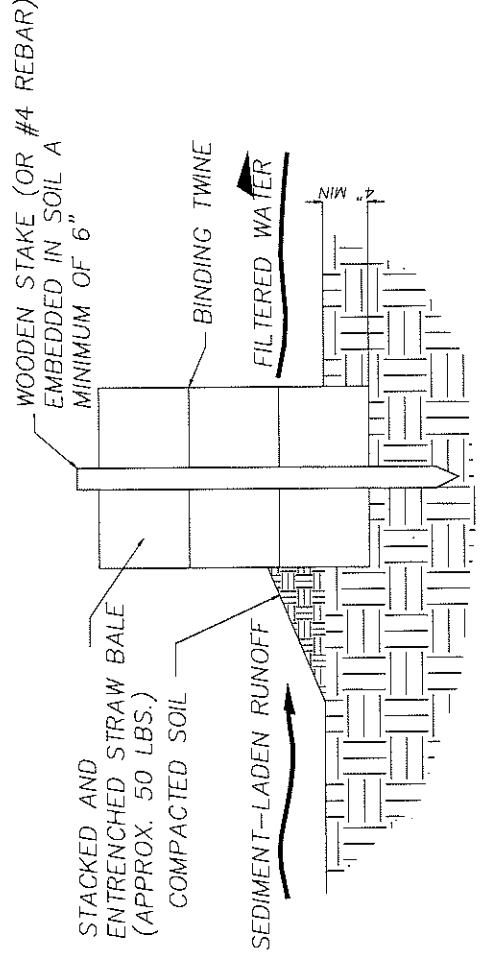


STEP 2. PLACE BALE IN TRENCH, STAKE IN PLACE

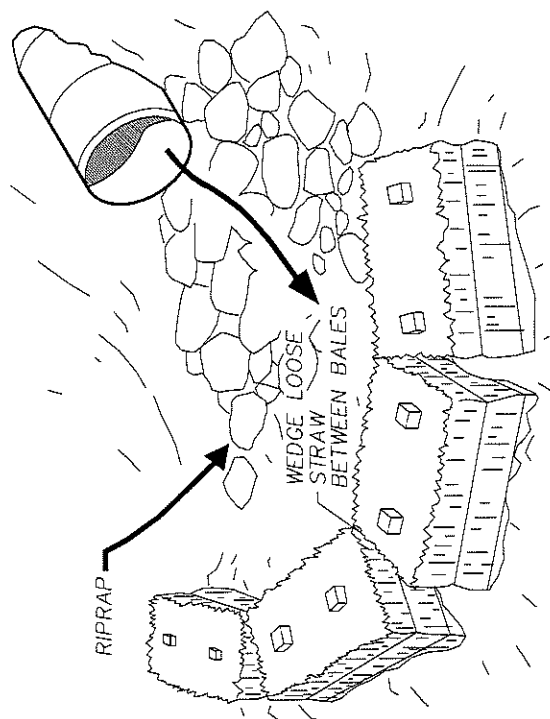


STEP 1. EXCAVATE TRENCH FOR BALES

BALE INSTALLATION PROCEDURE



SECTION A-A



CULVERT OUTLET TRAP  
N.T.S.  
ANCHORED STRAW BALE (A.S.B.)

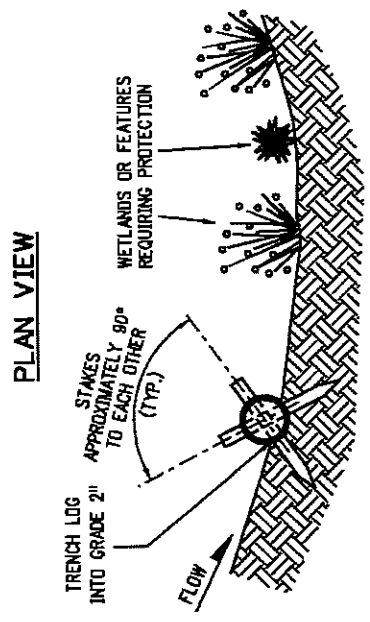
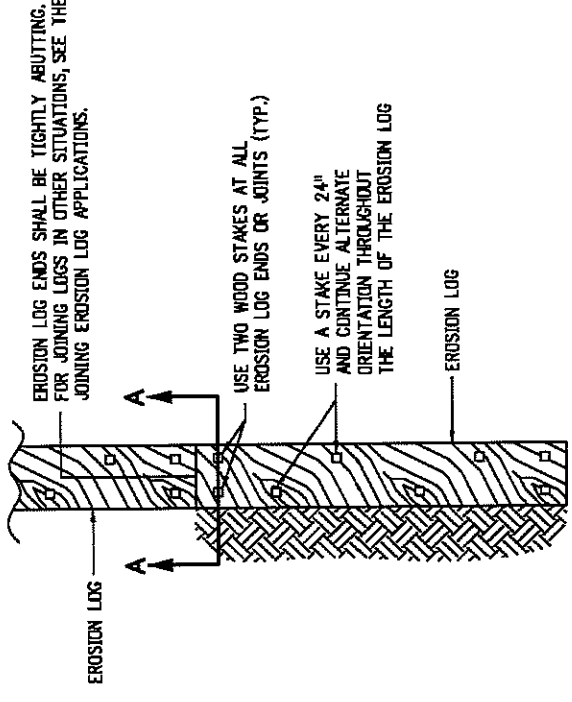
STABILIZED CONSTRUCTION ENTRANCE

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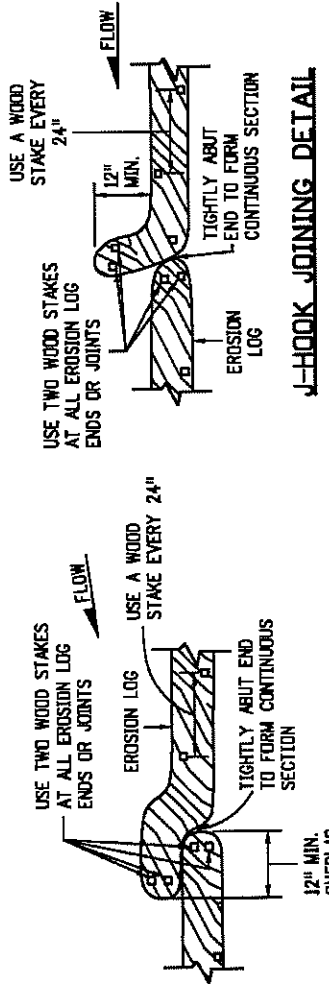


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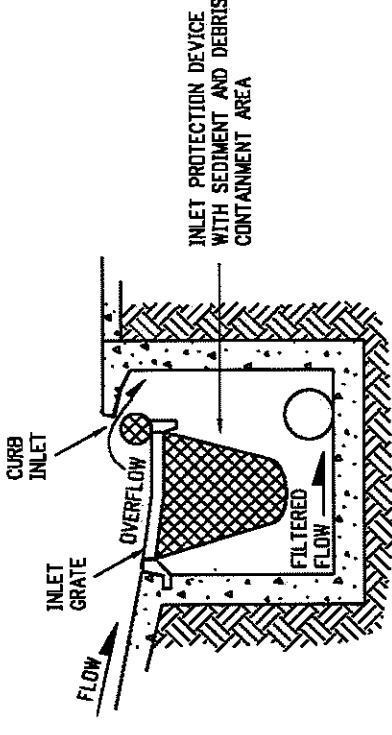
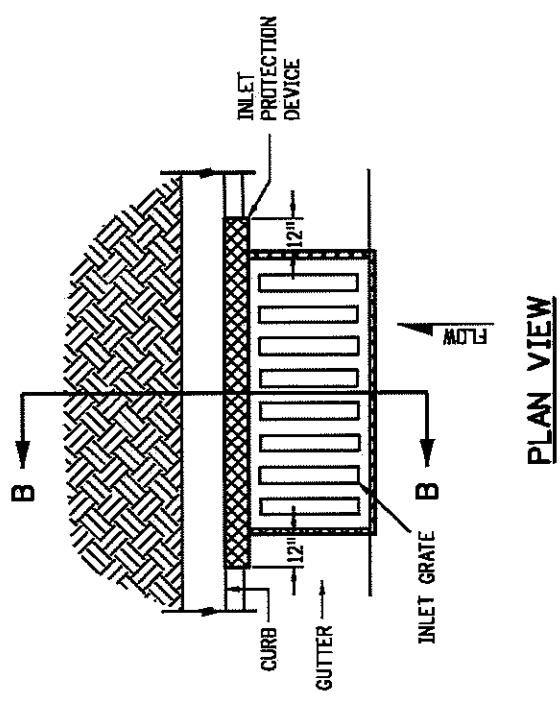
LAS COLONIAS BUSINESS PARK PHASE 2  
STORM WATER MANAGEMENT DETAILS



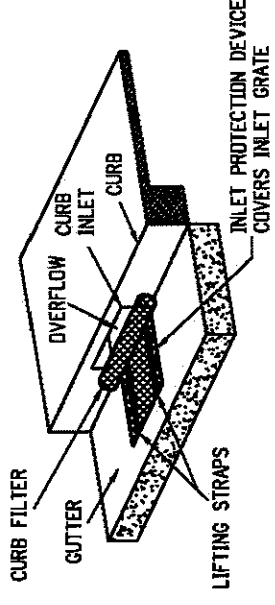
**TYPICAL STAKE INSTALLATION**



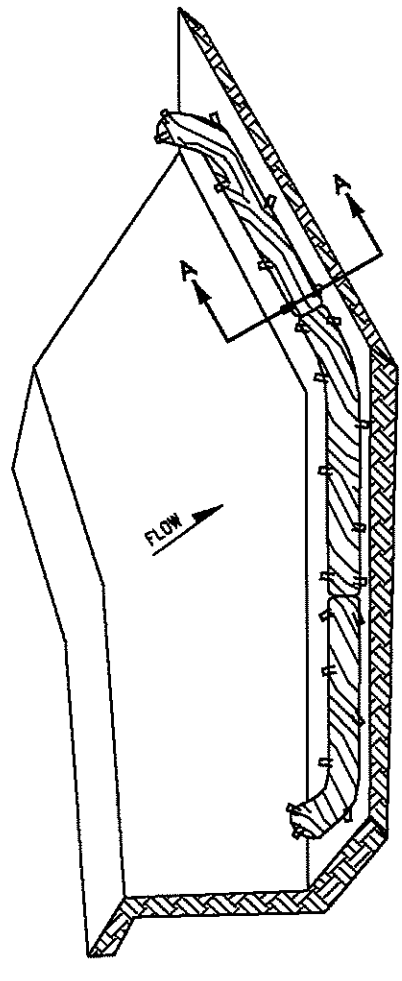
**JOINING EROSION LOG APPLICATIONS**



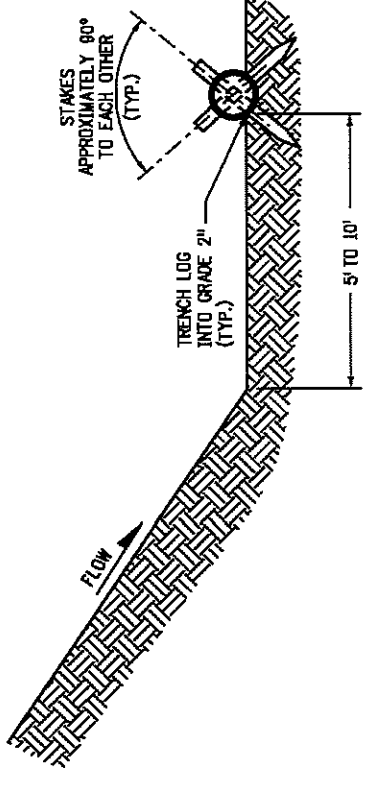
**STORM DRAIN INLET PROTECTION (TYPE II)**



**STORM DRAIN INLET PROTECTION (TYPE II)**



**ISOMETRIC VIEW**



**SECTION A-A**

- NOTES:**
1. EROSION LOGS USED AT TOE OF SLOPE SHALL BE PLACED 5 TO 10 FEET BEYOND TOE OF SLOPE TO PROVIDE STORAGE CAPACITY.
  2. EROSION LOGS SHALL BE PLACED ON THE CONTOUR WITH ENDS FLARED UP SLOPE.
  3. SEE SHEET 2 OF 11 FOR JOINING LOGS DETAIL.

**EROSION LOG TOE OF SLOPE PROTECTION**

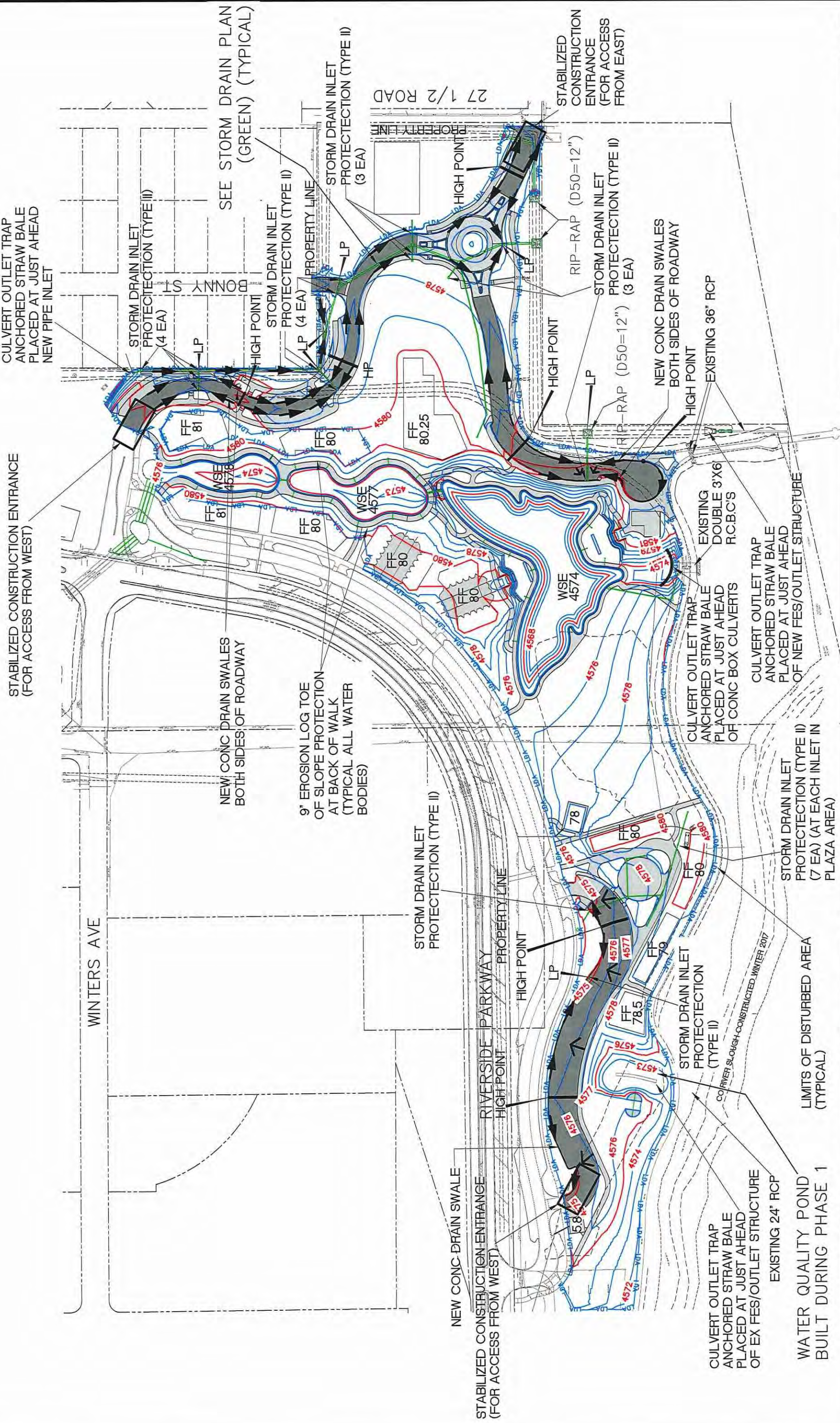
REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018	DESIGNED BY	JCS	DATE	2018	CHECKED BY	ICP	DATE	2018	APPROVED BY	ICP	DATE	2018	

SCALES: PLAN 1"=10' (VERTICAL) 3/8"=1'

CITY OF  
**Grand Junction**  
COLORADO

PUBLIC WORKS  
ENGINEERING DIVISION

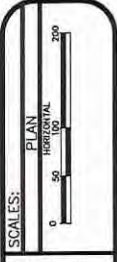
LAS COLONIAS BUSINESS PARK PHASE 2  
STORM WATER MANAGEMENT DETAILS



REVISION	△	DATE	2018
REVISION	△	DATE	2018
REVISION	△	DATE	2018
REVISION	△	DATE	2018

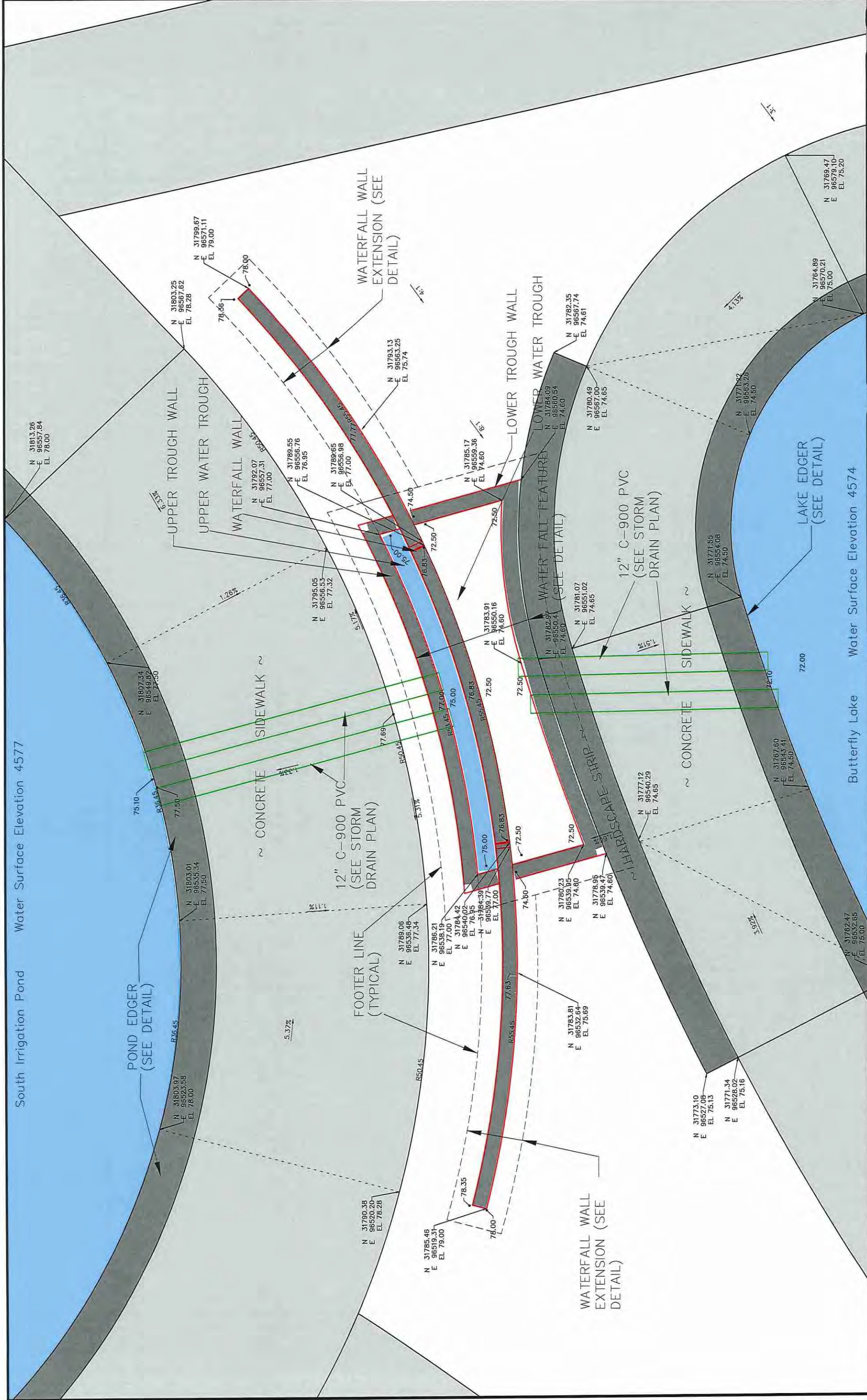
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DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
STORM WATER MANAGEMENT SITE MAP



REVISION	DATE	BY	DESCRIPTION

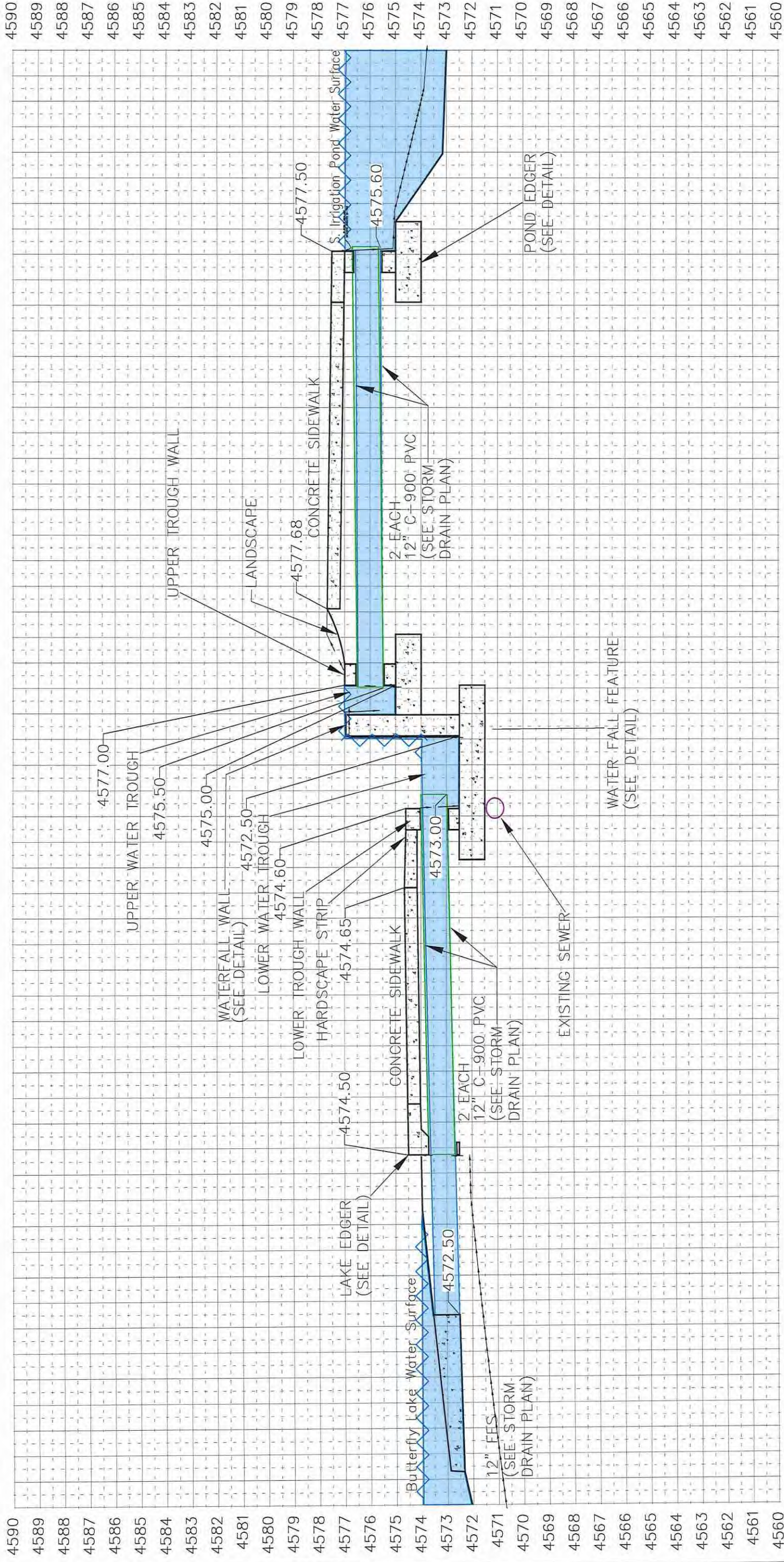
DATE	DATE	DATE	DATE	DATE

SCALE	PLAN	PROFILE



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ENGINEERING DIVISION

**LAS COLONIAS BUSINESS PARK PHASE 2**  
OUTLET WORKS DETAILS



SOUTH IRRIGATION POND OUTFALL

REVISION	DATE	BY

DESIGNER	DATE
JCS	2018
DESIGNED BY	DATE
JCS	2018
CHECKED BY	DATE
TCP	2018
APPROVED BY	DATE
ICP	2018

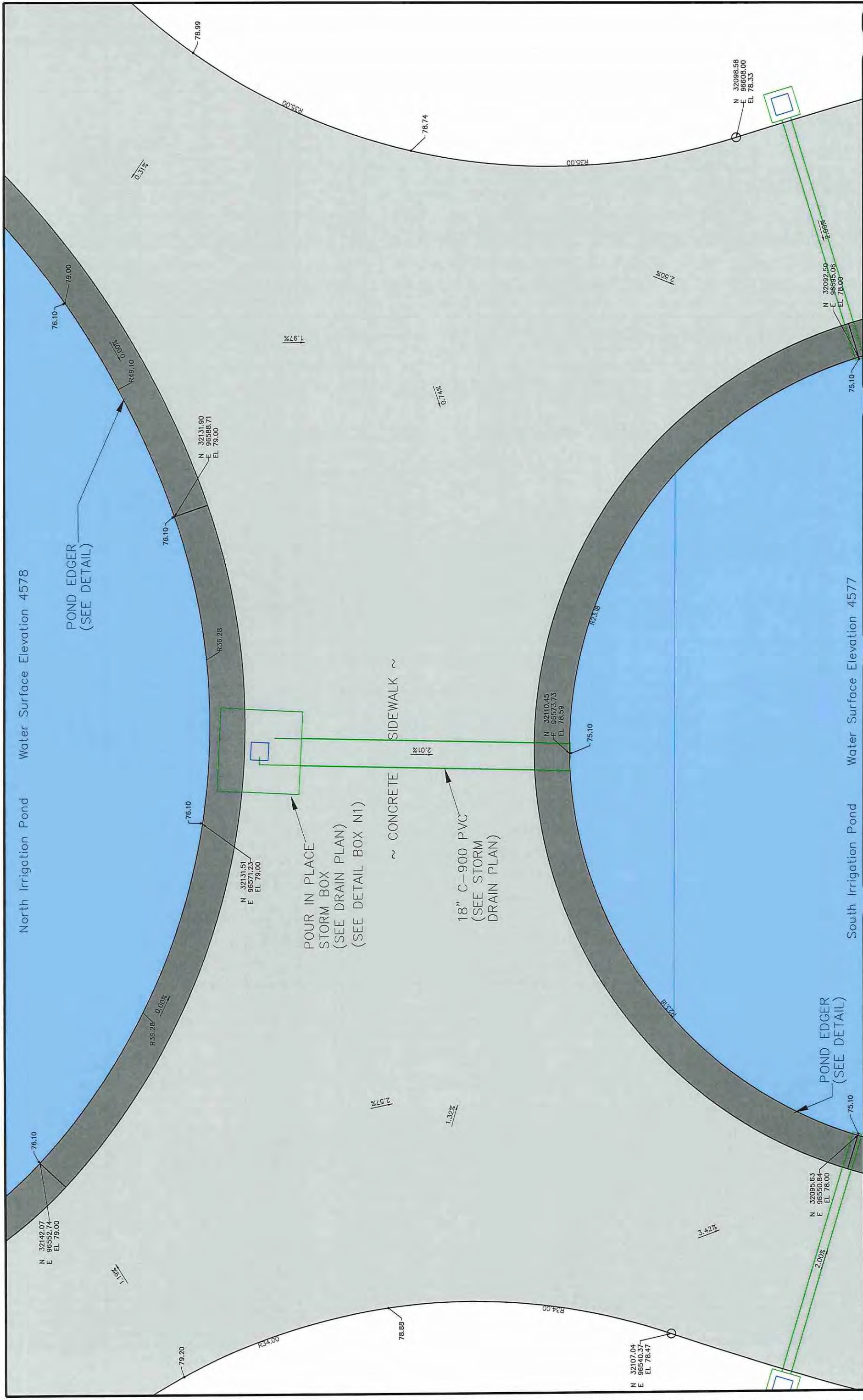
SCALE:	PLAN & PROFILE
	HORIZONTAL
	VERTICAL



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
OUTLET WORKS DETAILS





REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
REVISION			JCS	2018	JCS	2018	TCP	2018	TCP	2018
REVISION										
REVISION										
REVISION										

SCALES: PLAN 1"=20', PROFILE 1"=4'

CITY OF **Grand Junction** COLORADO

PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2 OUTLET WORKS DETAILS

119

NOTE  
 DOG PARK WATER FEATURE BY CITY.  
 BLOCK OUT IN CONCRETE SLAB AND  
 SWEEP FOR WATER SOURCE BY  
 CONTRACTOR. CONTRACTOR TO  
 COORDINATE THOSE EFFORTS WITH  
 PROJECT ENGINEER. (NO SEPARATE PAY)

CONCRETE CURB (6" WIDE, 6" HIGH) AROUND PERIMETER FOR BORDER AND PEA GRAVEL ENCLOSURE

CONCRETE CURB (6" WIDE, 6" HIGH) AROUND PERIMETER FOR BORDER AND PEA GRAVEL ENCLOSURE

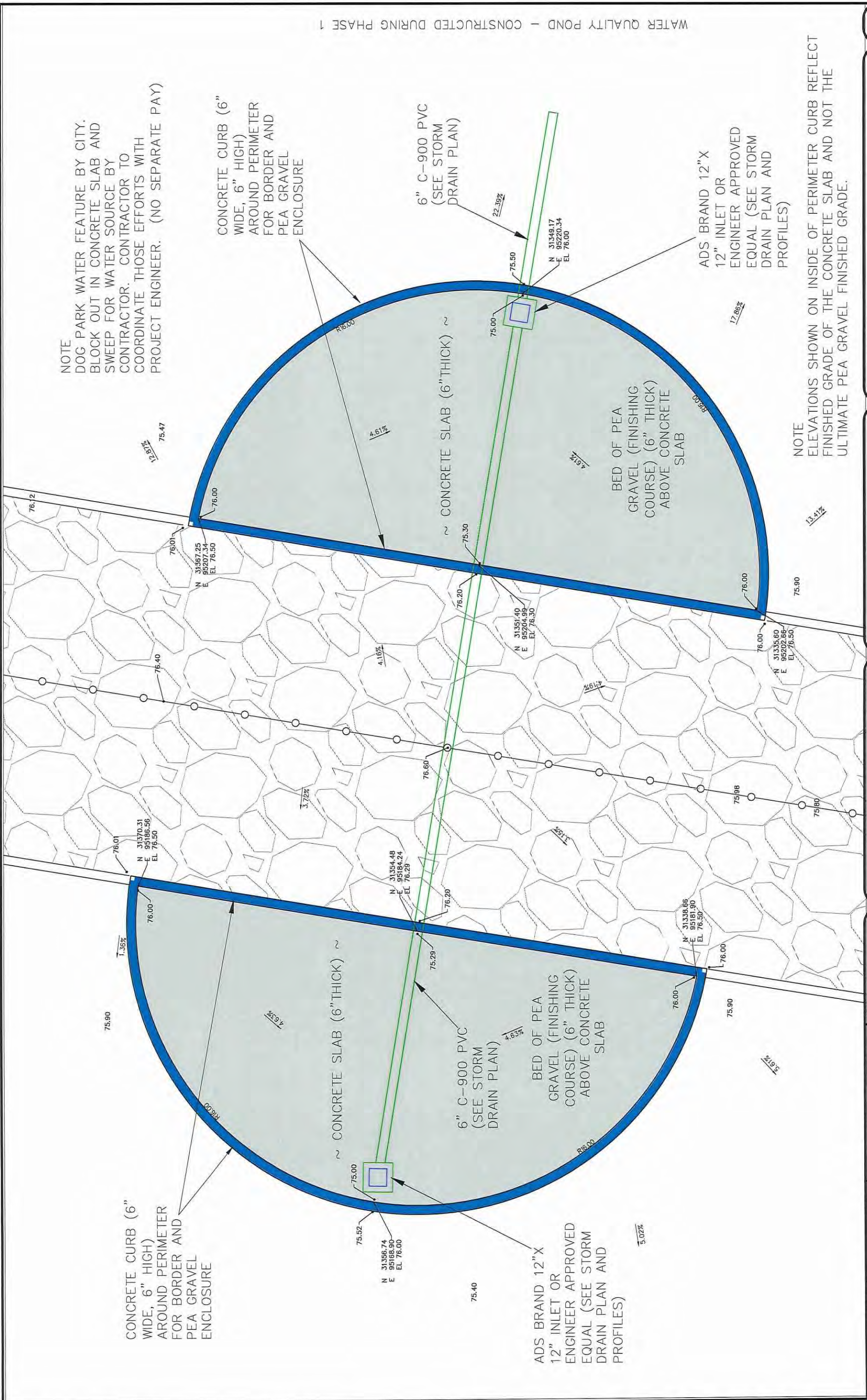
CONCRETE SLAB (6" THICK)

6" C-900 PVC (SEE STORM DRAIN PLAN)

ADS BRAND 12" X 12" INLET OR ENGINEER APPROVED EQUAL (SEE STORM DRAIN PLAN AND PROFILES)

ADS BRAND 12" X 12" INLET OR ENGINEER APPROVED EQUAL (SEE STORM DRAIN PLAN AND PROFILES)

NOTE  
 ELEVATIONS SHOWN ON INSIDE OF PERIMETER CURB REFLECT FINISHED GRADE OF THE CONCRETE SLAB AND NOT THE ULTIMATE PEA GRAVEL FINISHED GRADE.



WATER QUALITY POND - CONSTRUCTED DURING PHASE 1

REVISION	DATE	DRAWN BY	DATE
REVISION 1	2018	JCS	2018
REVISION 2	2018	JCS	2018
REVISION 3	2018	TOP	2018
REVISION 4	2018	TOP	2018

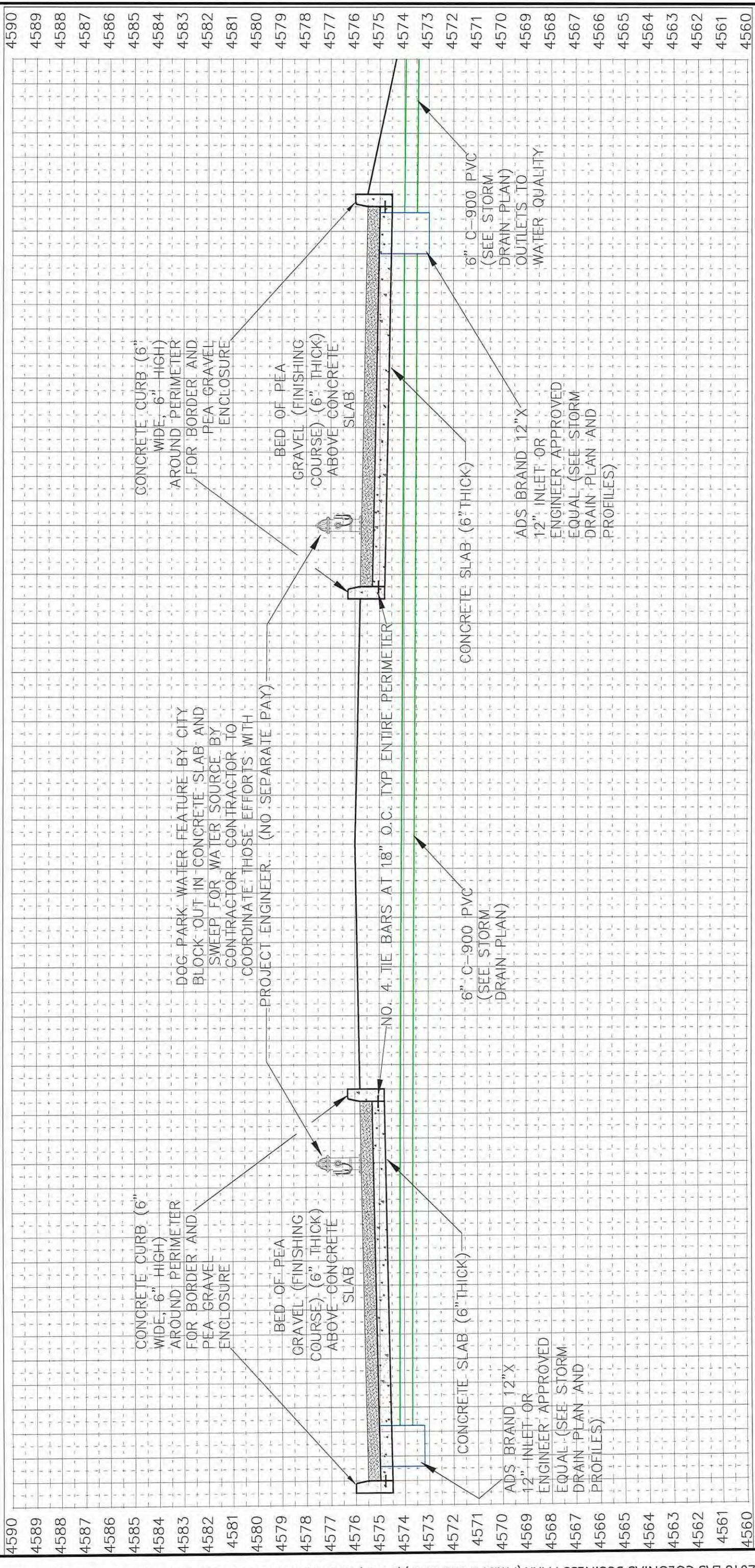
DESCRIPTION	DATE

SCALES:  
 PLAN: 1" = 30'  
 PROFILE: 1" = 10'

CITY OF  
**Grand Junction**  
 COLORADO

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 ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
 DOG PARK WATER FEATURE



4590  
4589  
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4560

CONCRETE CURB (6" WIDE, 6" HIGH) AROUND PERIMETER FOR BORDER AND PEA GRAVEL ENCLOSURE  
 BED OF PEA GRAVEL (FINISHING COURSE) (6" THICK) ABOVE CONCRETE SLAB  
 CONCRETE SLAB (6" THICK)  
 ADS BRAND 12" X 12" INLET OR ENGINEER APPROVED EQUAL (SEE STORM DRAIN PLAN AND PROFILES)

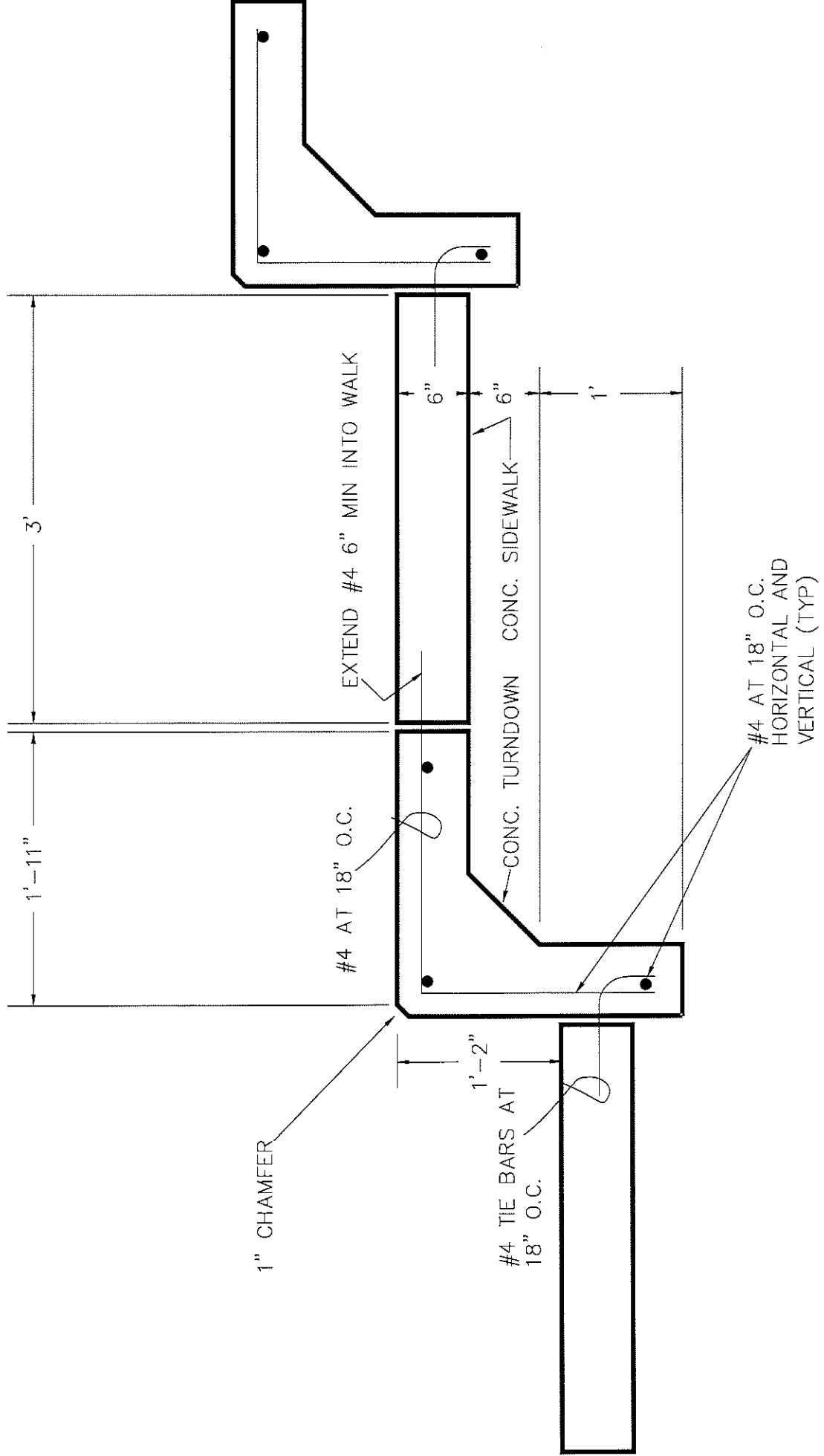
CONCRETE CURB (6" WIDE, 6" HIGH) AROUND PERIMETER FOR BORDER AND PEA GRAVEL ENCLOSURE  
 BED OF PEA GRAVEL (FINISHING COURSE) (6" THICK) ABOVE CONCRETE SLAB  
 CONCRETE SLAB (6" THICK)  
 ADS BRAND 12" X 12" INLET OR ENGINEER APPROVED EQUAL (SEE STORM DRAIN PLAN AND PROFILES)

REVISION $\Delta$	DATE	BY	DATE	2018
REVISION $\Delta$	DATE	JCS	DATE	2018
REVISION $\Delta$	DATE	JCS	DATE	2018
REVISION $\Delta$	DATE	TOP	DATE	2018
REVISION $\Delta$	DATE	TOP	DATE	2018

DRAWN BY: JCS  
 DESIGNED BY: JCS  
 CHECKED BY: TOP  
 APPROVED BY: TOP

SCALE: PLAN & PROFILE: 1" = 12'-0"  
 HORIZONTAL: 1" = 12'-0"  
 VERTICAL: 1" = 12'-0"

CITY OF **Grand Junction** COLORADO  
 PUBLIC WORKS ENGINEERING DIVISION  
 LAS COLONIAS BUSINESS PARK PHASE 2 DOG PARK WATER FEATURE  
 121



REVISION	DESCRIPTION	DATE
REVISION $\Delta$		
REVISION $\Delta$		
REVISION $\Delta$		
REVISION $\Delta$		

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	ICP	DATE	2018
APPROVED BY	ICP	DATE	2018

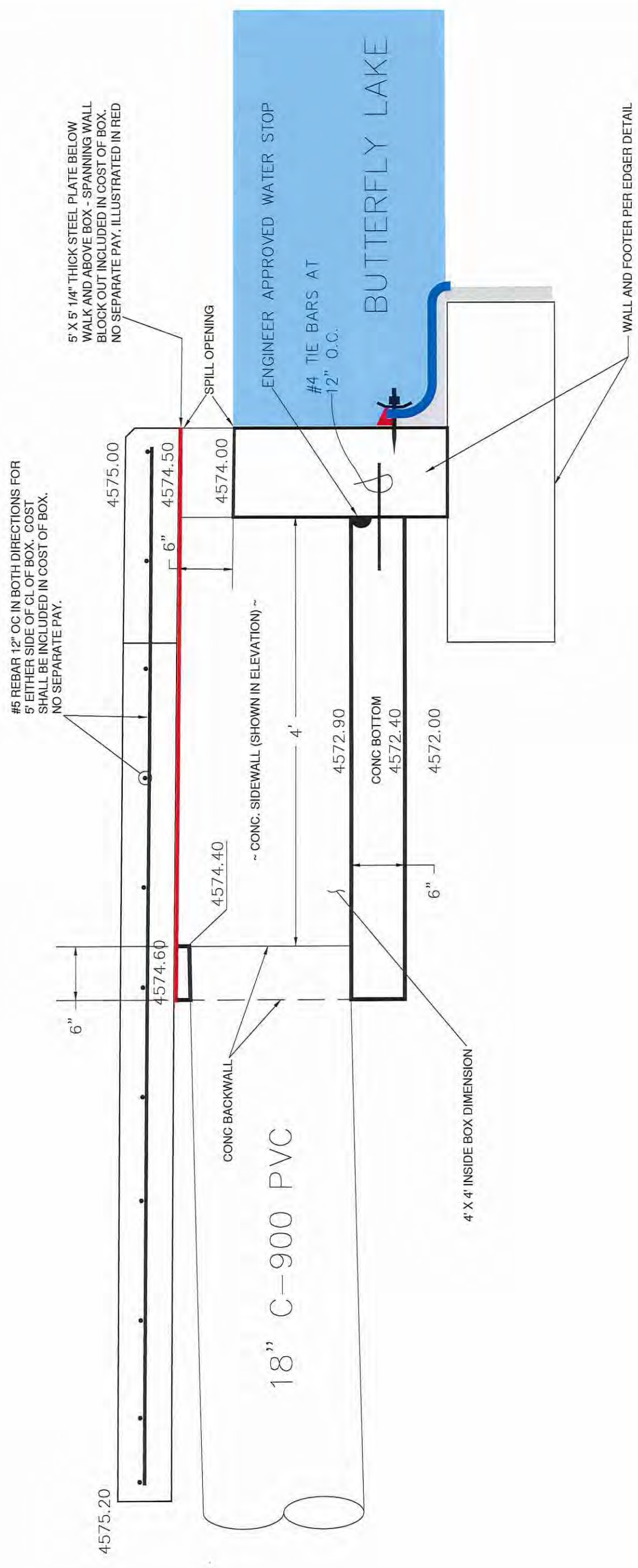
SCALES:	PLAN
0	1" = 5'
1	1" = 5'
2	1" = 5'
3	1" = 5'
4	1" = 5'
5	1" = 5'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
TERRACING DETAIL





#5 REBAR 12" OC IN BOTH DIRECTIONS FOR 5' EITHER SIDE OF CL OF BOX. COST SHALL BE INCLUDED IN COST OF BOX. NO SEPARATE PAY.

5' X 5' 1/4" THICK STEEL PLATE BELOW WALK AND ABOVE BOX - SPANNING WALL BLOCK OUT INCLUDED IN COST OF BOX. NO SEPARATE PAY. ILLUSTRATED IN RED

18" C-900 PVC

ENGINEER APPROVED WATER STOP

#4 TIE BARS AT 12" O.C.

BUTTERFLY LAKE

WALL AND FOOTER PER EDGER DETAIL

REVISION	DATE	DESCRIPTION
REVISION Δ		
REVISION Δ		
REVISION Δ		
REVISION Δ		

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALE:	PLAN
	HORIZONTAL
	1" = 35'



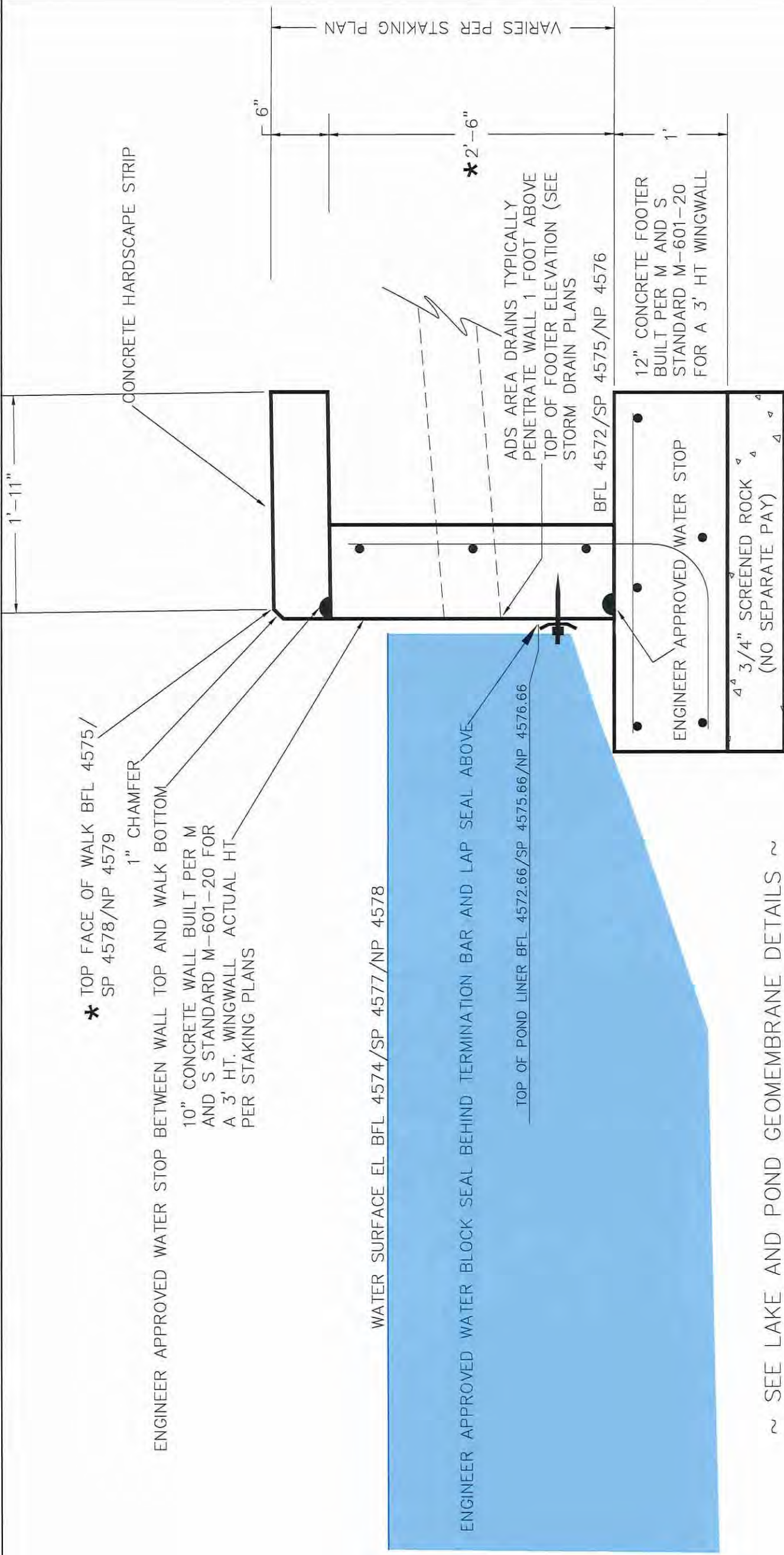
PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
POUR IN PLACE BOX - L2

\* TOP FACE OF WALK BFL 4575/  
SP 4578/NP 4579  
1" CHAMFER

ENGINEER APPROVED WATER STOP BETWEEN WALL TOP AND WALK BOTTOM  
10" CONCRETE WALL BUILT PER M  
AND S STANDARD M-601-20 FOR  
A 3' HT. WINGWALL ACTUAL HT  
PER STAKING PLANS

CONCRETE HARDSCAPE STRIP



WATER SURFACE EL BFL 4574/SP 4577/NP 4578

ENGINEER APPROVED WATER BLOCK SEAL BEHIND TERMINATION BAR AND LAP SEAL ABOVE

TOP OF POND LINER BFL 4572.66/SP 4575.66/NP 4576.66

BFL 4572/SP 4575/NP 4576

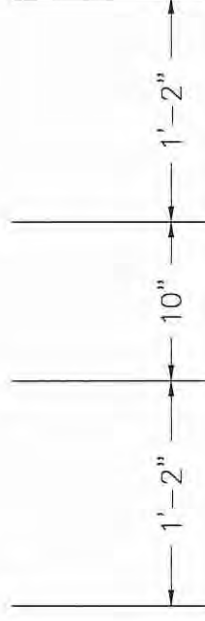
12" CONCRETE FOOTER  
BUILT PER M AND S  
STANDARD M-601-20  
FOR A 3' HT WINGWALL

ENGINEER APPROVED WATER STOP

3/4" SCREENED ROCK  
(NO SEPARATE PAY)

~ SEE LAKE AND POND GEOMEMBRANE DETAILS ~

\* FACE OF WALK  
ELEVATIONS VARY AT THE  
NORTH AND SOUTH ENDS  
OF BOTH PONDS AND LAKE  
PER PLANS SO AS TO  
PROVIDE SPILLWAYS FOR  
WATER BODIES



REVISION	DATE
REVISION Δ	
REVISION Δ	
REVISION Δ	
REVISION Δ	

DESCRIPTION	DATE

DRAWN BY	DATE
JCS	2018
DESIGNED BY	DATE
TCP	2018
CHECKED BY	DATE
TCP	2018
APPROVED BY	DATE
TCP	2018

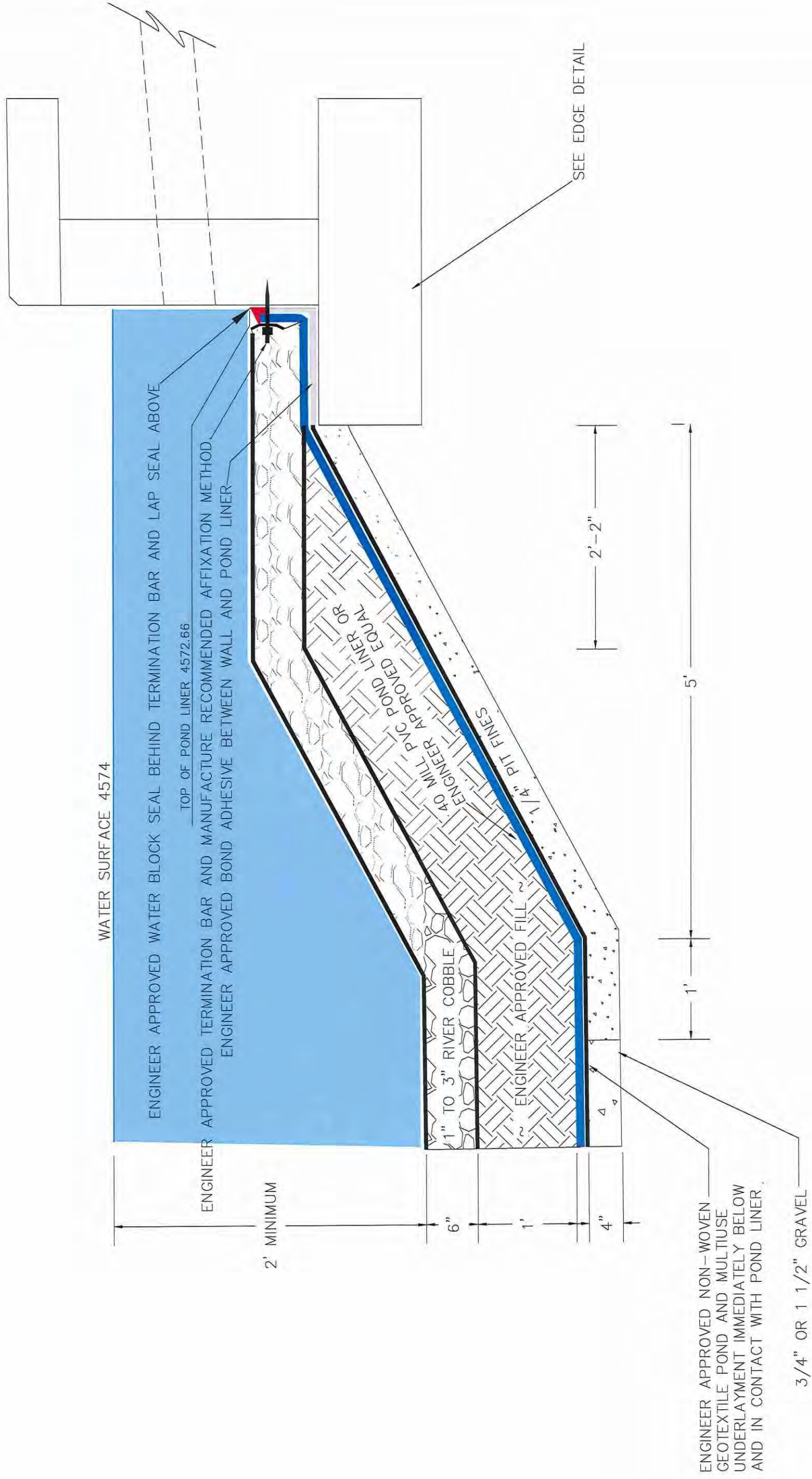
SCALES:

PLAN	1" = 35'
SECTION	1" = 35'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
LAKE AND POND EDGE DETAIL



ENGINEER APPROVED NON-WOVEN  
 GEOTEXTILE POND AND MULTITUSE  
 UNDERLAYMENT IMMEDIATELY BELOW  
 AND IN CONTACT WITH POND LINER.

3/4" OR 1 1/2" GRAVEL

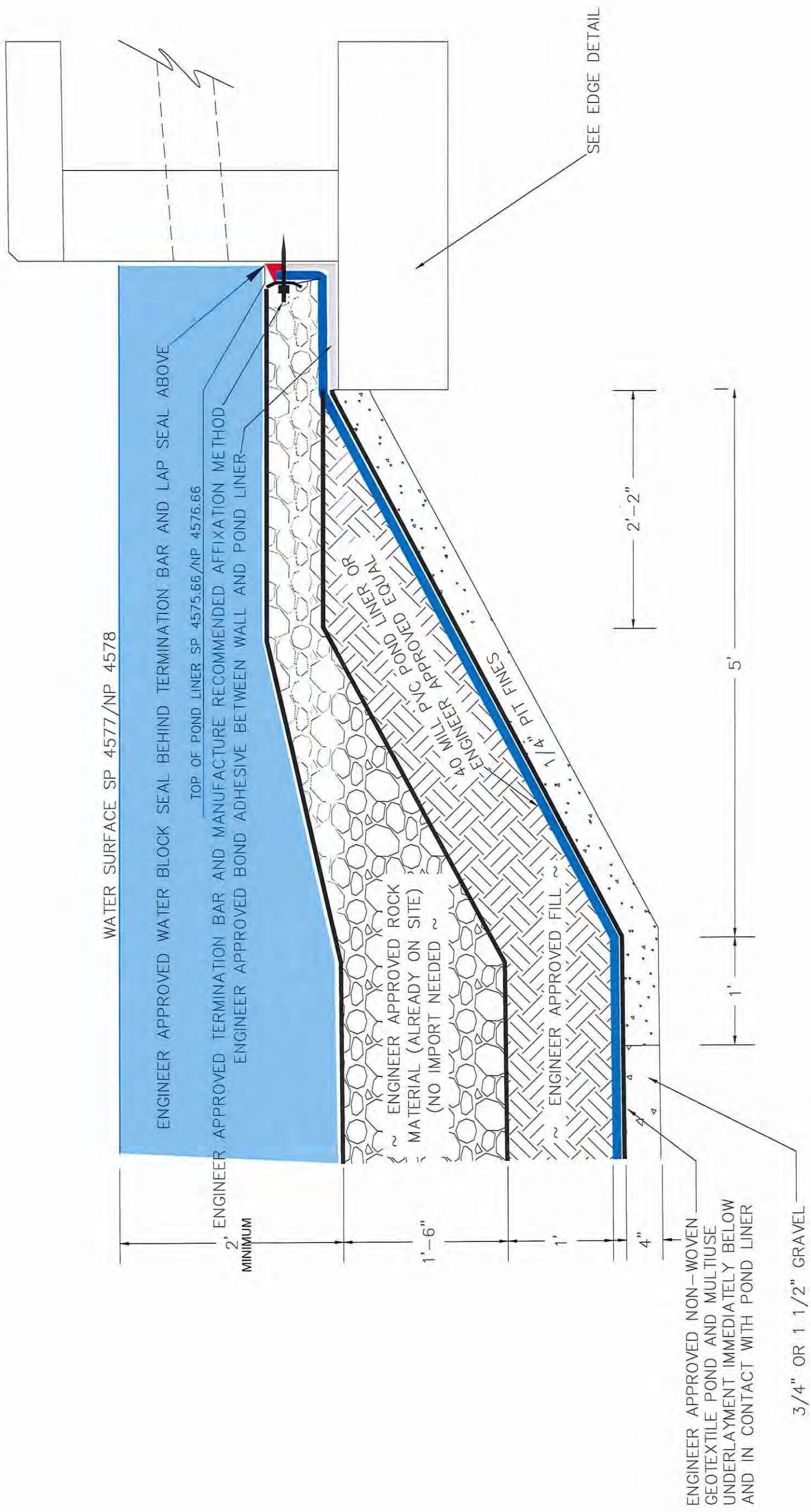
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REVISION Δ			JCS	2018
REVISION Δ			JCS	2018
REVISION Δ			TOP	2018
REVISION Δ			TOP	2018



PUBLIC WORKS  
 ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
 LAKE GEOMEMBRANE DETAIL





ENGINEER APPROVED NON-WOVEN GEOTEXTILE POND AND MULTIUSE UNDERLAYMENT IMMEDIATELY BELOW AND IN CONTACT WITH POND LINER

3/4" OR 1 1/2" GRAVEL

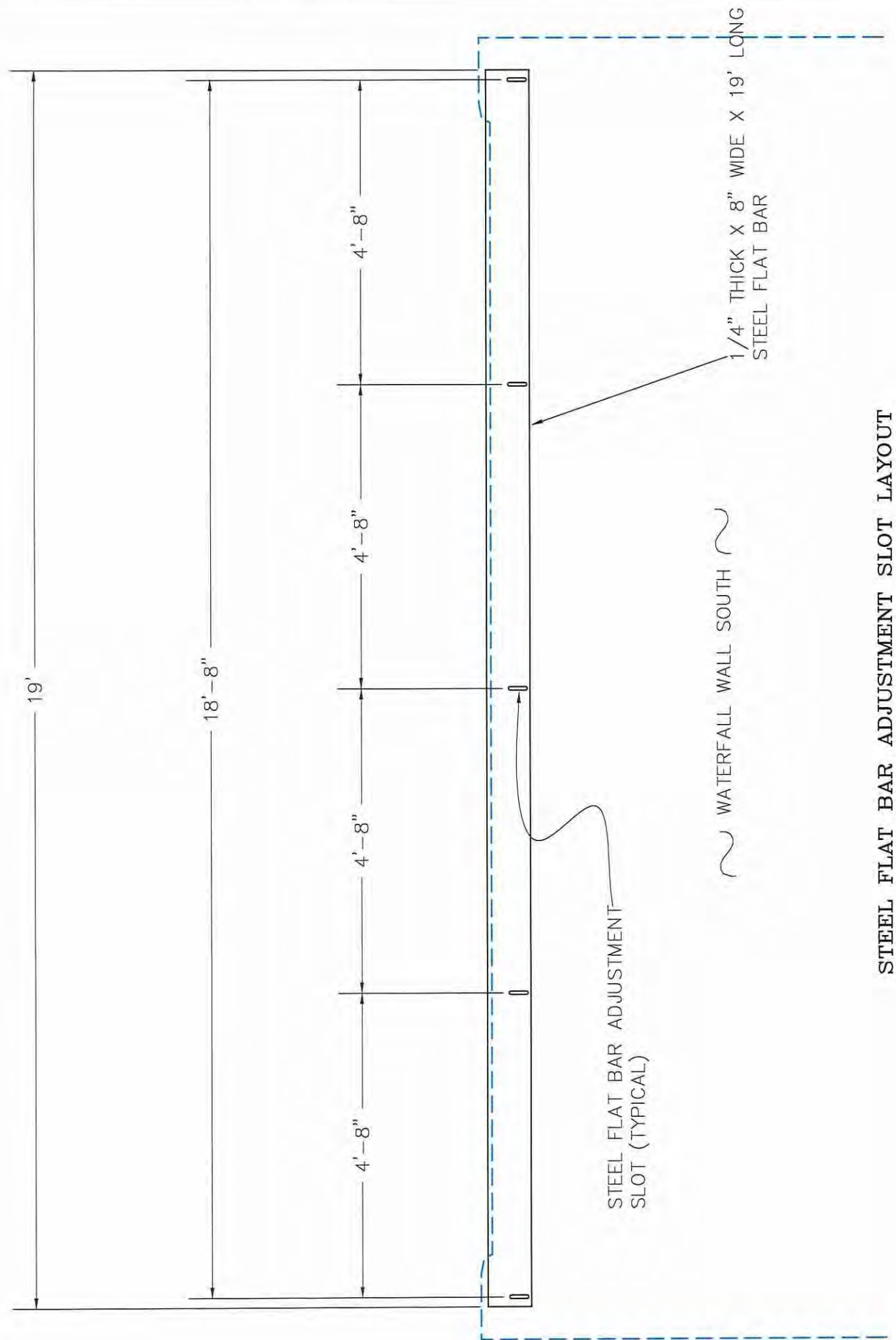
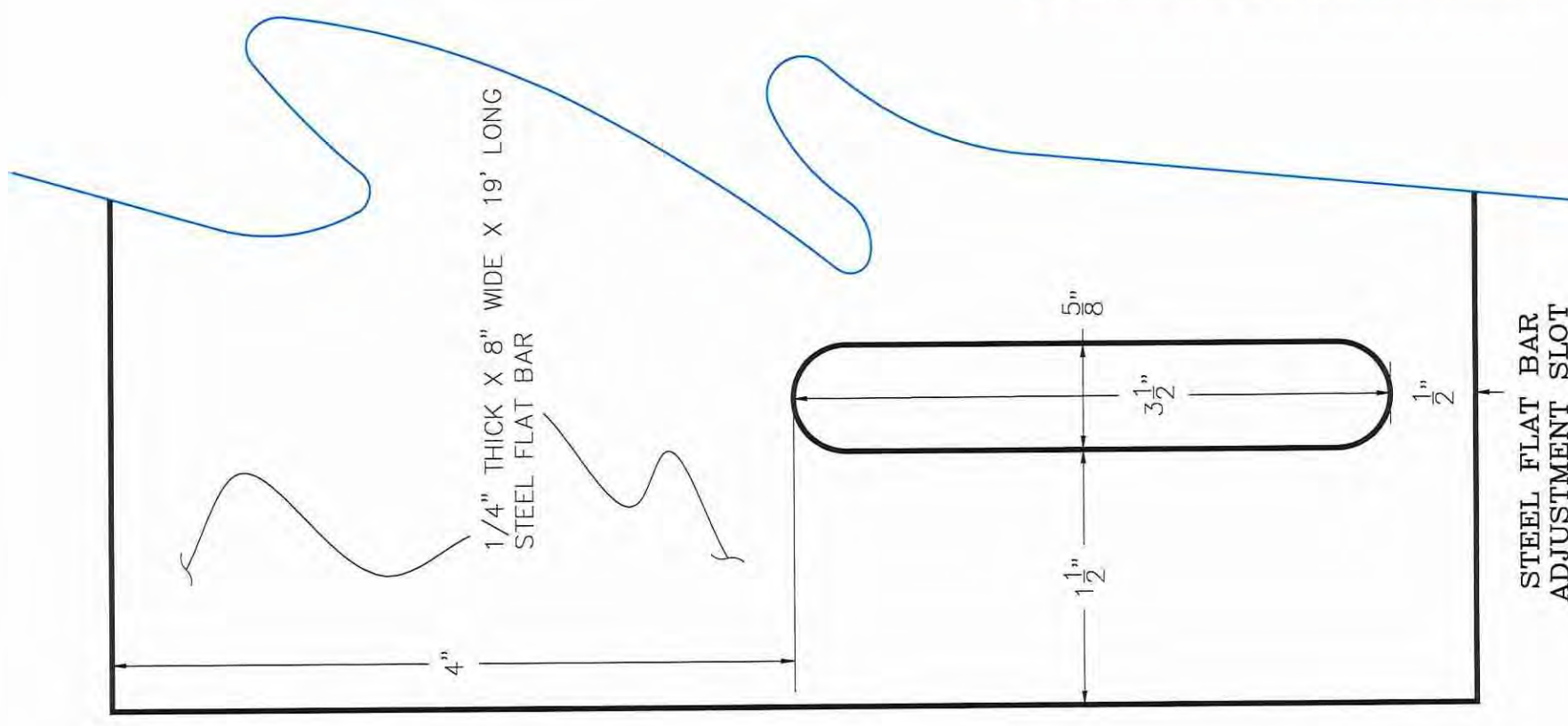
REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	DATE	DATE	DATE
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REVISION Δ			JCS	2018	2018	2018	2018
REVISION Δ			TCP	2018	2018	2018	2018
REVISION Δ			TCP	2018	2018	2018	2018



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
POND GEOMEMBRANE DETAIL





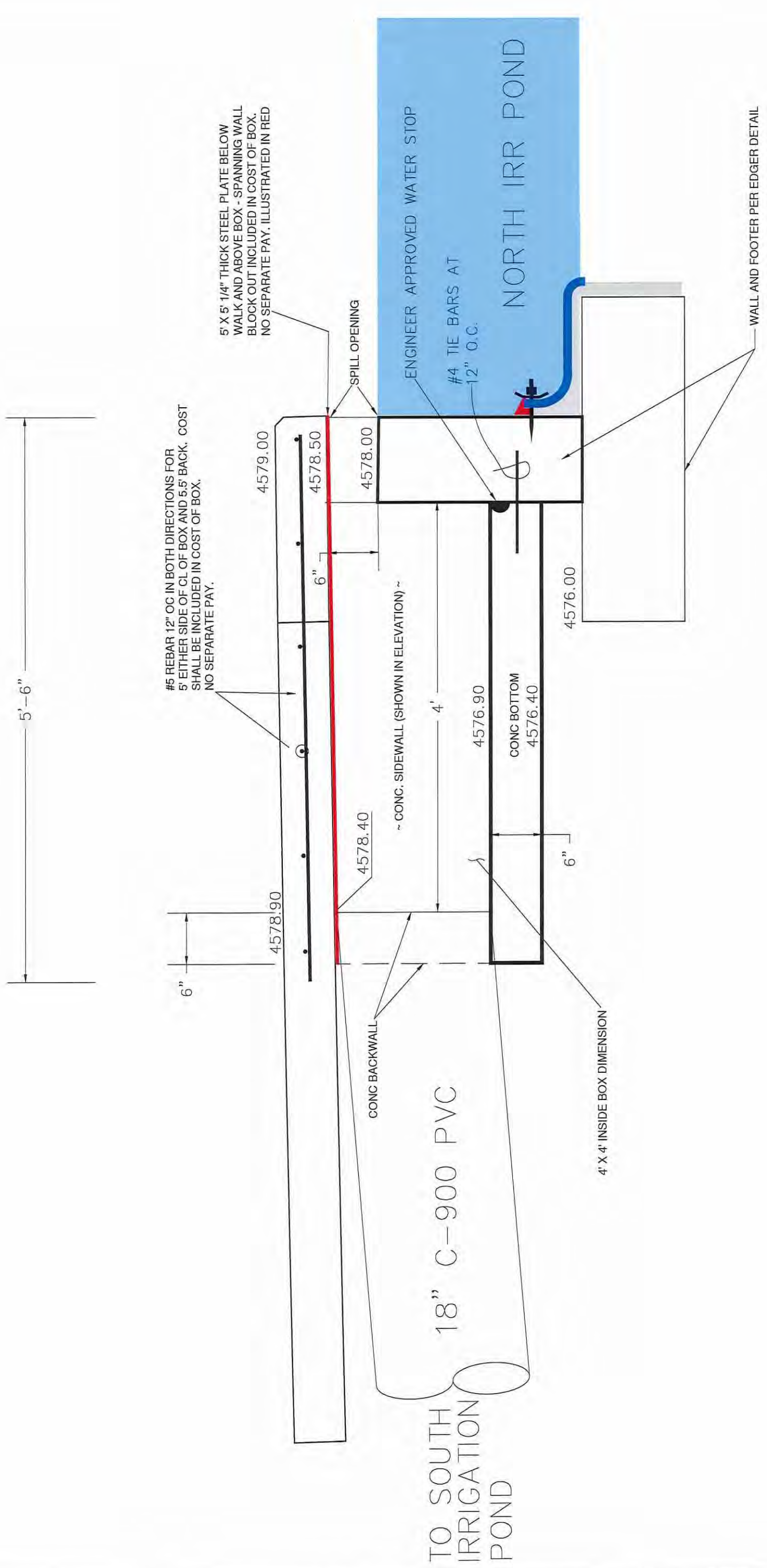
STEEL FLAT BAR ADJUSTMENT SLOT LAYOUT

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
			JCS	2018	JCS	2018	TCP	2018	TCP	2018



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
WATER SPILL ADJUSTMENT



REVISION	DESCRIPTION	DATE

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

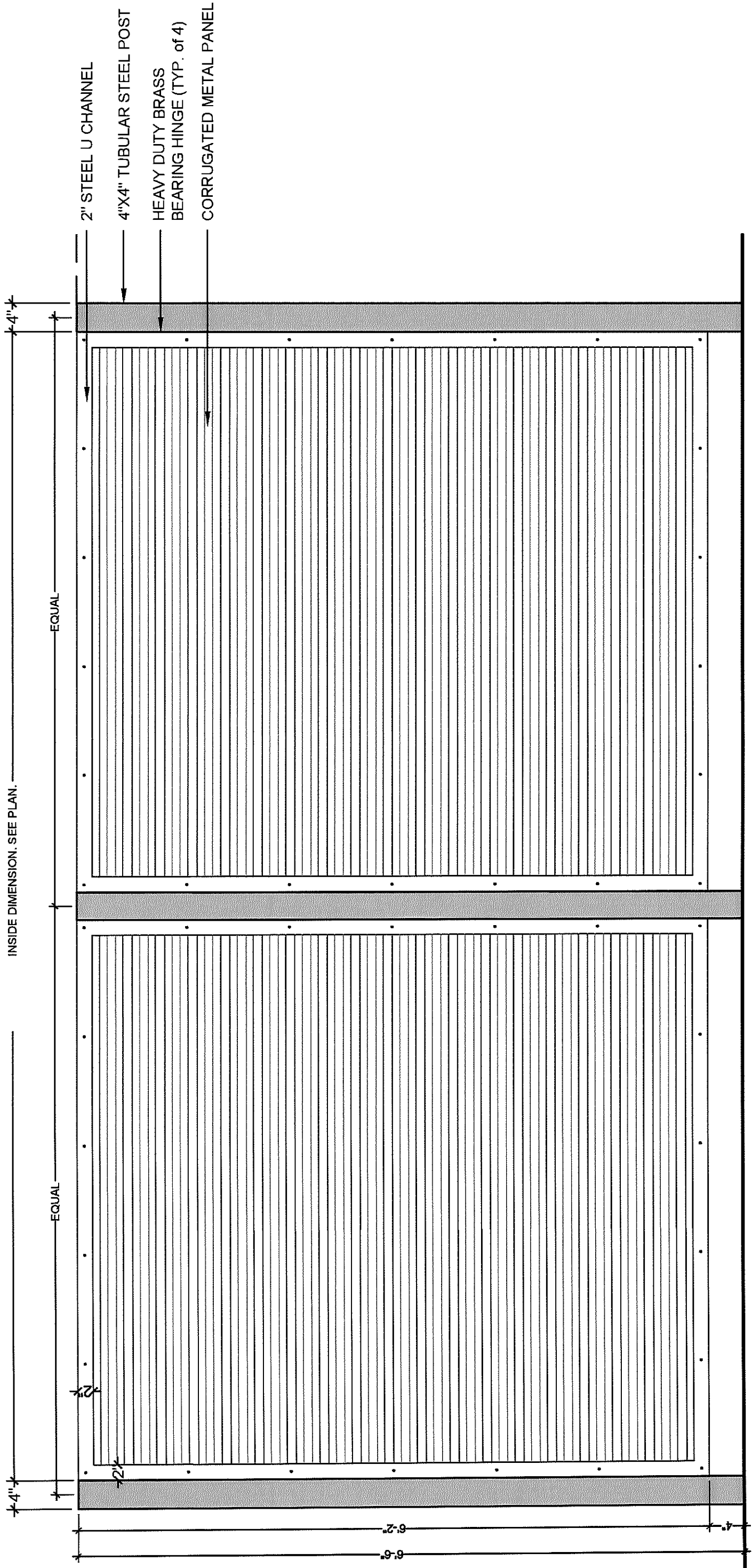
SCALES:

PLAN	1" = 10'
SECTION	1" = 4'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
POUR IN PLACE BOX - N1



NOTE  
 CONTRACTOR SHALL SUPPLY SHOP  
 DRAWINGS FOR FINAL DIMENSIONS

**ELEVATION**

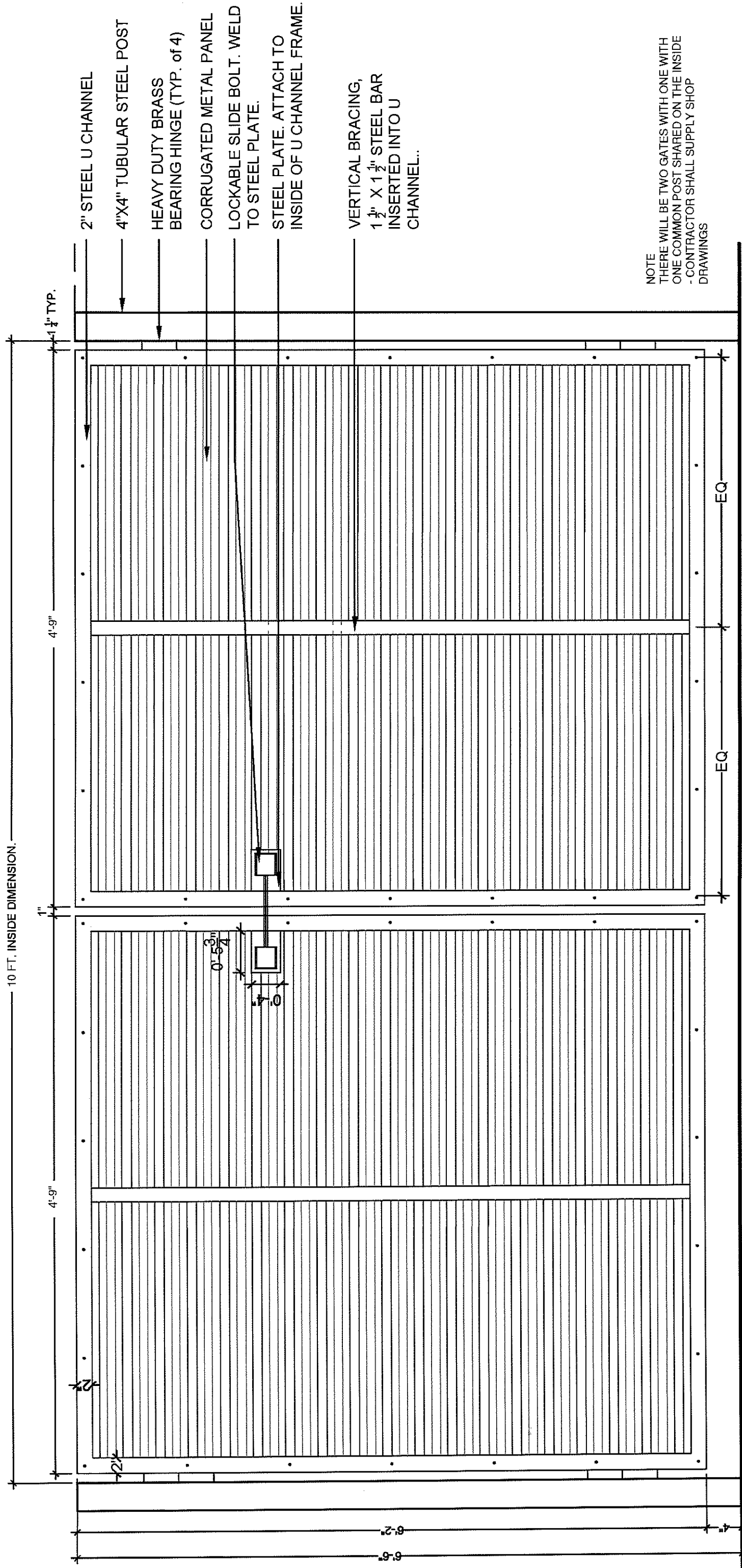
- NOTE:
1. INCLUDE ONE CROSS BRACE ON INSIDE FACE OF EACH FENCE PANEL. 2" WIDE X 1/4" THICK METAL BAR. WELD TO STEEL U CHANNEL..
  2. CONTRACTOR TO PROVIDE SHOP DRAWINGS.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	SCALE
REVISION Δ			JCS	2018	PLAN
REVISION Δ			JCS	2018	ISOMETRIC
REVISION Δ			TCP	2018	
REVISION Δ			ICP	2018	



PUBLIC WORKS  
 ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
 DUMPSTER ENCLOSURE



**ELEVATION**

- NOTE:**
1. INCLUDE ONE CROSS BRACE ON INSIDE FACE OF EACH GATE DOOR. 2" WIDE X 1/4" THICK METAL BAR. WELD TO STEEL U CHANNEL..
  2. CONTRACTOR TO PROVIDE SHOP DRAWINGS.

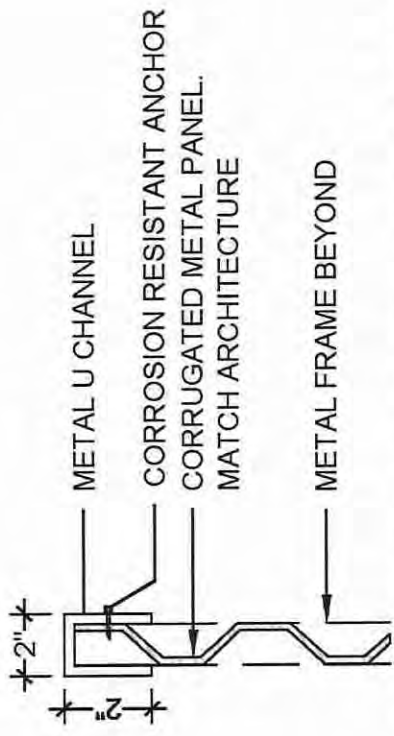
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REVISION $\Delta$			TCP	2018	
REVISION $\Delta$			TCP	2018	



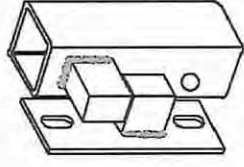
**PUBLIC WORKS  
ENGINEERING DIVISION**

**LAS COLONIAS BUSINESS PARK PHASE 2  
DUMPSTER ENCLOSURE - GATE**

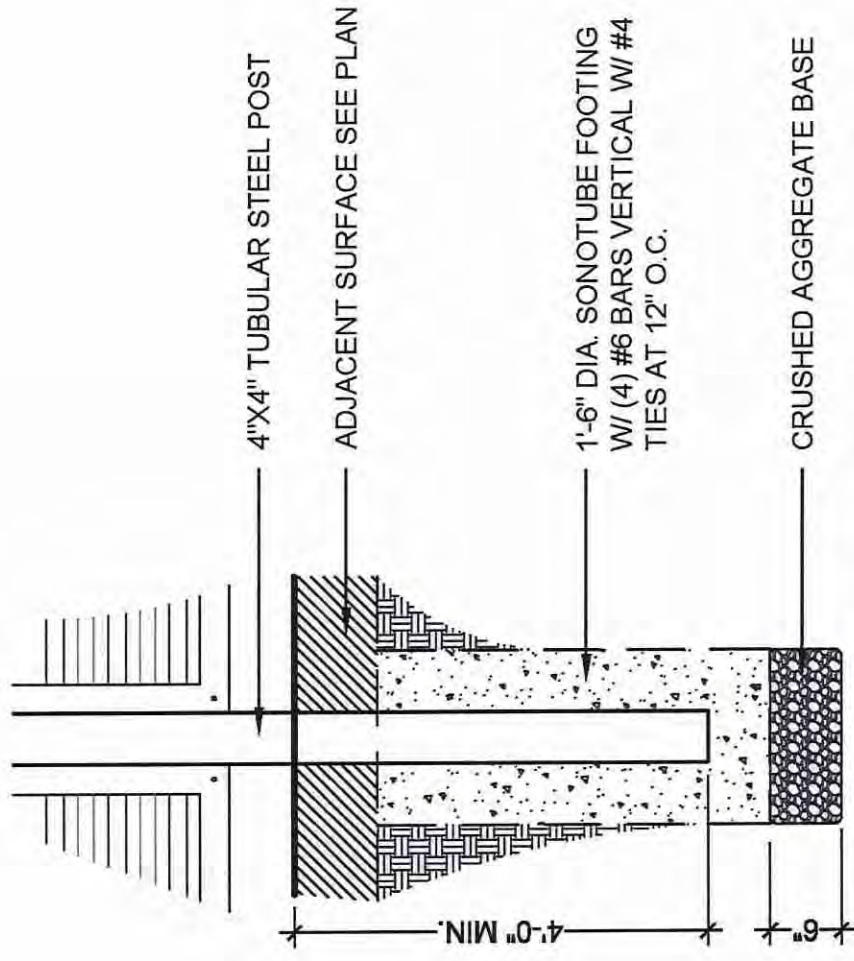
N:\landproj\2018 LAS COLONIAS BUSINESS PARK (Phase II and Later)\DWG\Phase 2\PROJECT DETAILS.dwg, Model, 7/3/2018 8:09:02 AM



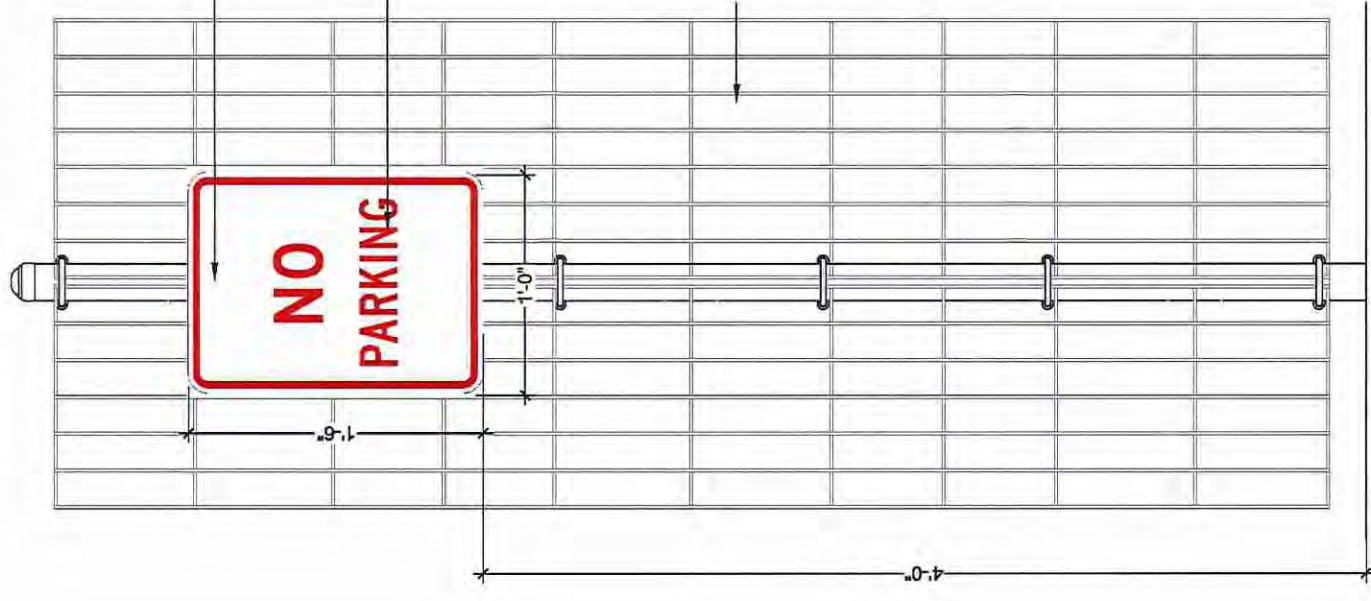
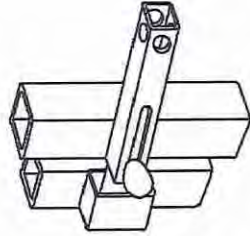
CROSS SECTION FRAME ENLARGEMENT



HINGE ENLARGEMENT



SLIDE BOLT TYPICAL POST FOOTING DETAIL



SIGN- NO PARKING

NTS

REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

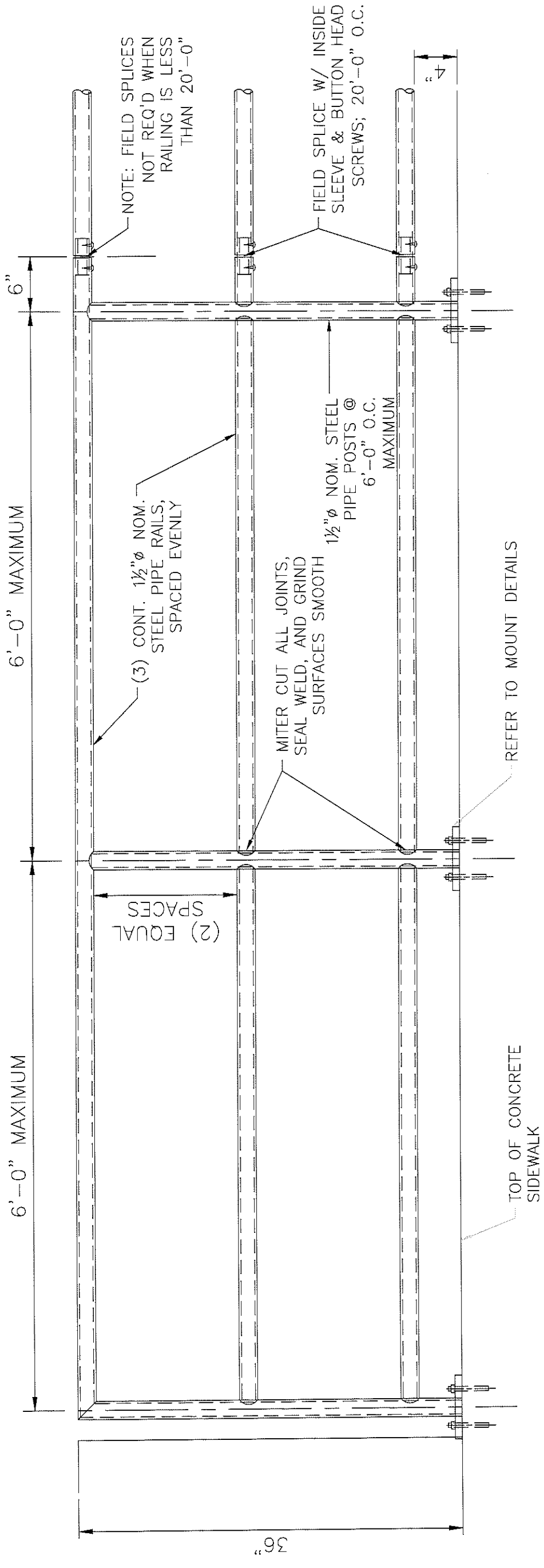
DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TOP	DATE	2018
APPROVED BY	TOP	DATE	2018

SCALES:	PLAN
0	1" = 3'
1	1" = 6'
2	1" = 12'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
DUMPSTER ENCLOSURE



NOTE:  
 RAILING SHALL BE HOT-DIPPED GALVANIZED PER SUBSECTION 509.22 OF THE CDOT STANDARD SPECIFICATIONS

REVISION	DATE	DESCRIPTION	DRAWN BY	DATE	DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
REVISION $\Delta$			JCS	2018	JCS	2018	JCS	2018		2018
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REVISION $\Delta$										
REVISION $\Delta$										



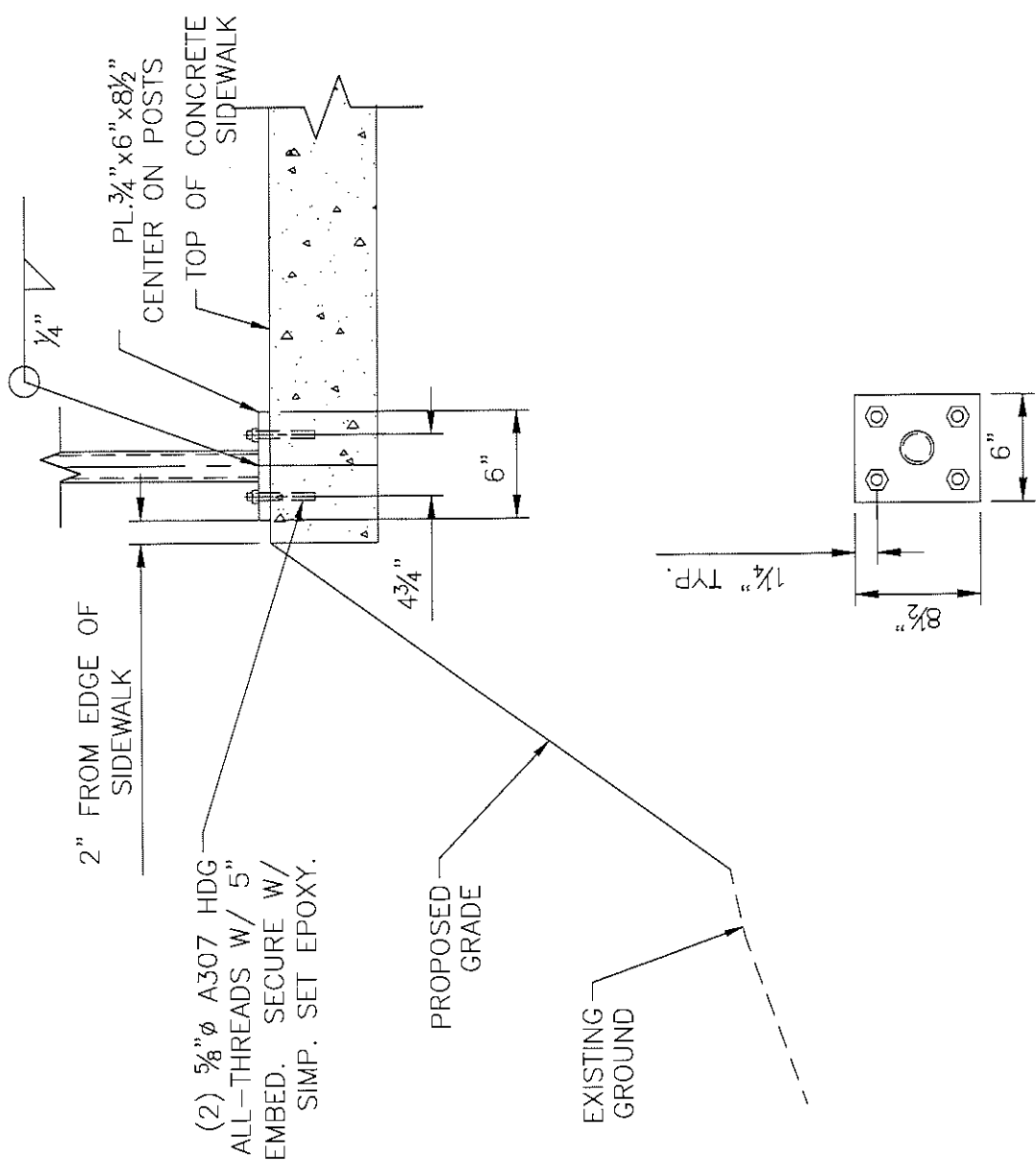
PUBLIC WORKS  
 ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
 HAND RAILING NEAR HVOHP POLE



NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE CDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.
2. STEEL PIPE TO BE ASTM A53 GRADE B; WITH  $F_y = 35$  KSI.
3. STEEL PLATES, CHANNELS & ANGLES TO BE ASTM A36; WITH  $F_y = 36$  KSI.
4. ALL WELDING TO CONFORM TO CURRENT AWS D1.1 REQUIREMENTS.
5. COMPLETE ASSEMBLY OR SUB-ASSEMBLIES, BRACKETS, RAILINGS, MESH, AND MISCELLANEOUS STEEL PIECES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
6. STRUCTURAL BOLTS, NUTS & WASHERS SHALL BE HOT-DIP GALVANIZED.
7. EXPANSION ANCHORS TO BE HILTI KWIK-BOLT II OR APPROVED EQUAL. INSTALL EXPANSION ANCHORS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
8. EXPANSION ANCHOR BOLTS, NUTS & WASHERS SHALL BE STAINLESS STEEL.
9. GALVANIZED AREAS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH A APPROVED COLD-GALVANIZING COMPOUND AT NO ADDITIONAL COST.
10. EPOXY SET ANCHORS SHALL UTILIZE HILTI HIT HY 150 CONSTRUCTION ADHESIVE AND HAVE GALVANIZED OR STAINLESS STEEL THREADED RODS.
11. FIELD SPLICES SHALL BE MADE UTILIZING GALVANIZED STEEL PIPE SLEEVE INSERTS AND HOT-DIP GALVANIZED STEEL BOLTS, NUTS, AND WASHERS.
12. CROSS REFERENCE ASSOCIATED STANDARD DETAILS AS NECESSARY FOR STEEL FABRICATIONS.

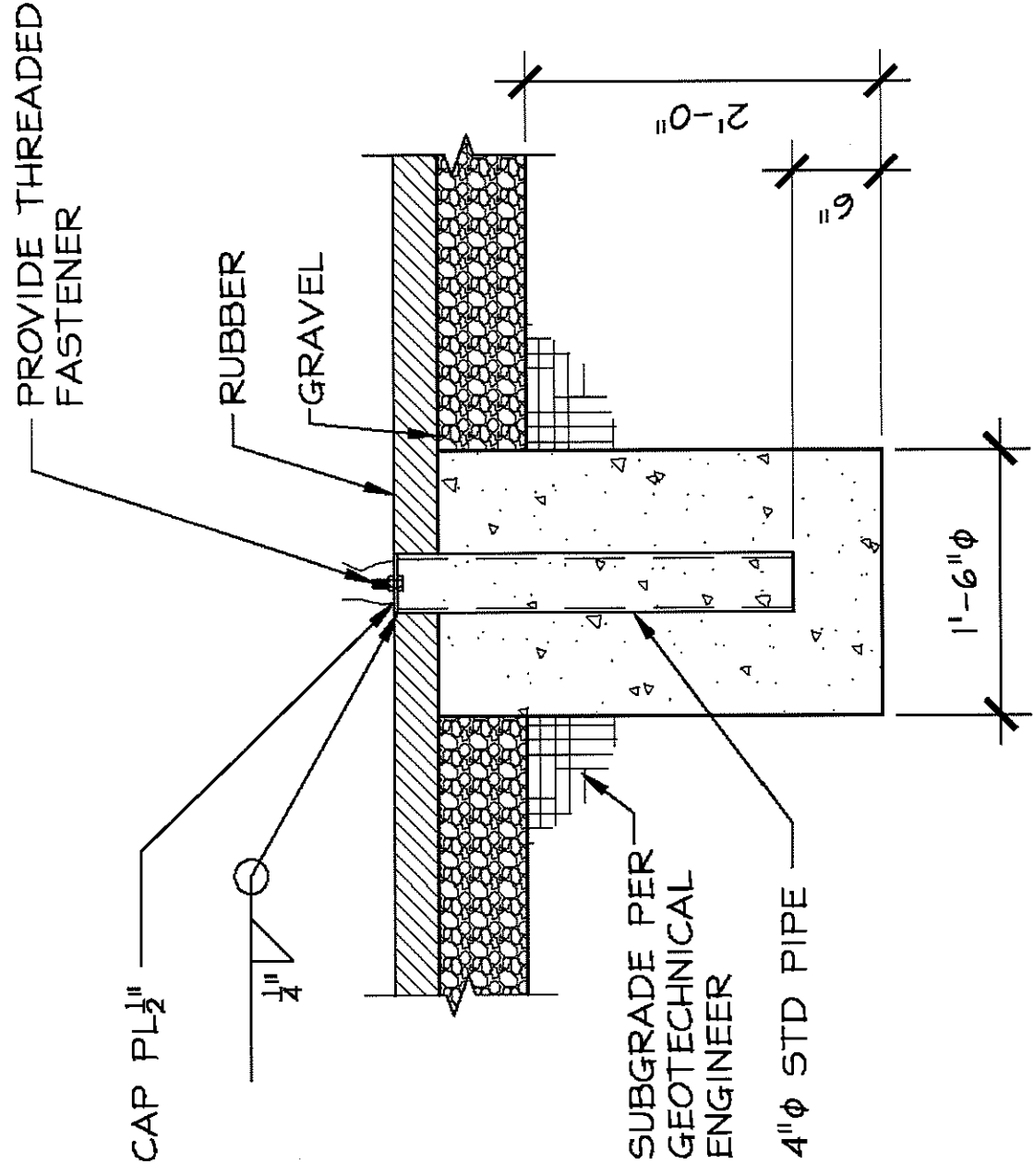


REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018	2018	2018	2018	2018
REVISION $\Delta$			DESIGNED BY	JCS	DATE	2018	2018	2018	2018	2018
REVISION $\Delta$			CHECKED BY	TCP	DATE	2018	2018	2018	2018	2018
REVISION $\Delta$			APPROVED BY	ICP	DATE	2018	2018	2018	2018	2018



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
HAND RAILING NEAR HVOHP POLE



REVISION	DESCRIPTION	DATE
REVISION $\Delta$		
REVISION $\Delta$		
REVISION $\Delta$		

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

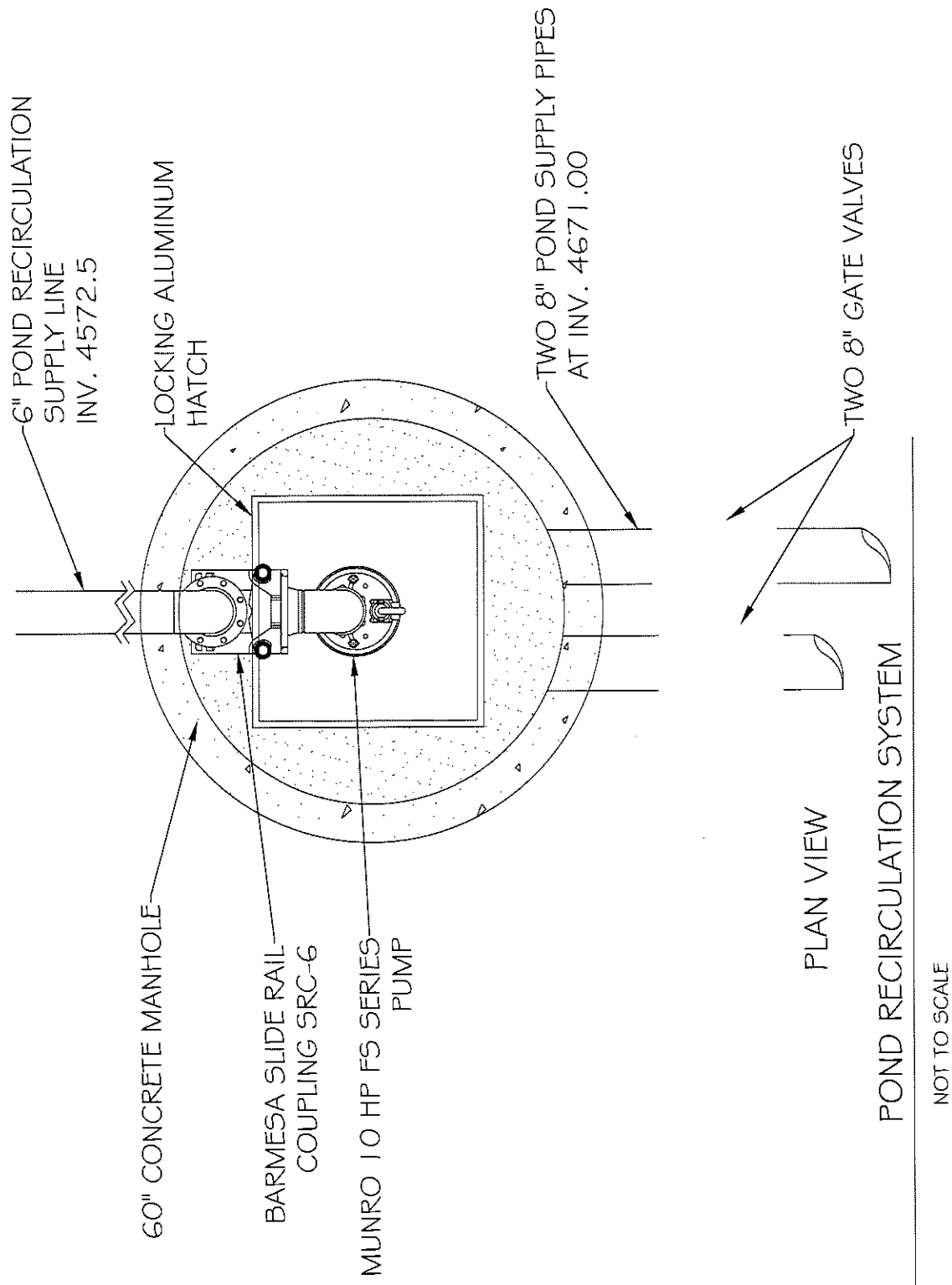
SCALES:

PLAN	1" = 30'
SECTION	1" = 12"



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
ART BASES BUTTERFLY PLAZAS

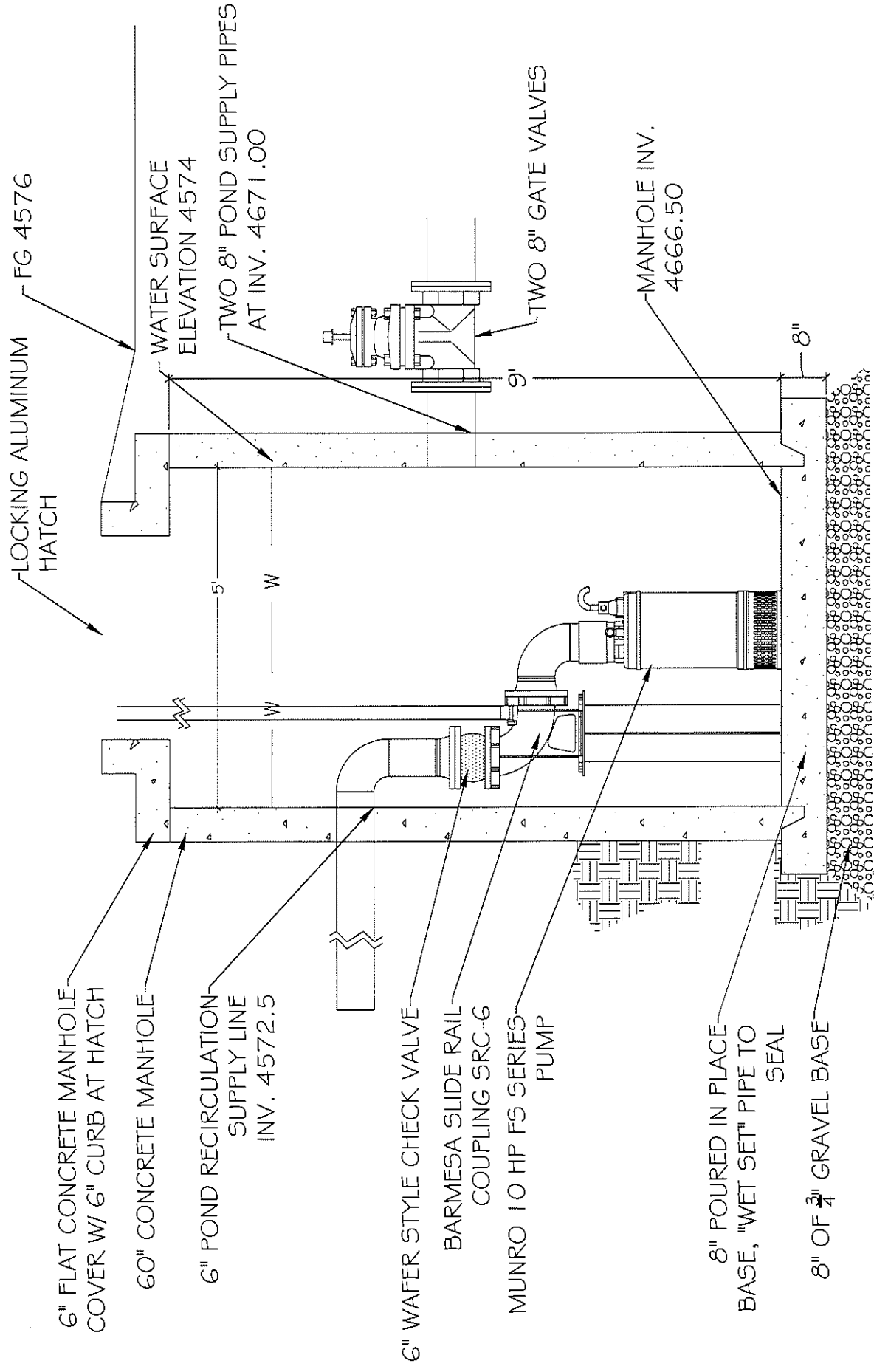


REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2018	2018	2018	2018
REVISION Δ									
REVISION Δ									
REVISION Δ									
REVISION Δ									



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
POND RECIRCULATION SYSTEM



ELEVATION

REVISION	DESCRIPTION	DATE
REVISION Δ		
REVISION Δ		
REVISION Δ		

DRAWN BY	JCS	DATE	2018
DESIGNED BY	JCS	DATE	2018
CHECKED BY	TCP	DATE	2018
APPROVED BY	TCP	DATE	2018

SCALE:	PLAN
	1" = 25'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
POND RECIRCULATION SYSTEM





LAS COLONIAS PARK  
 SHORELINE AMENITIES PROJECT OF  
 EROSION CONTROL AND CARE OF  
 WATER PLAN

No.	REVISION/UPDATE	Date

**Grand Junction**  
 COLLECTIVE  
 City of Grand Junction  
 Parks and Recreation  
 250 North 5th Street  
 Grand Junction, CO 81501  
 970.245.3866

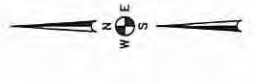
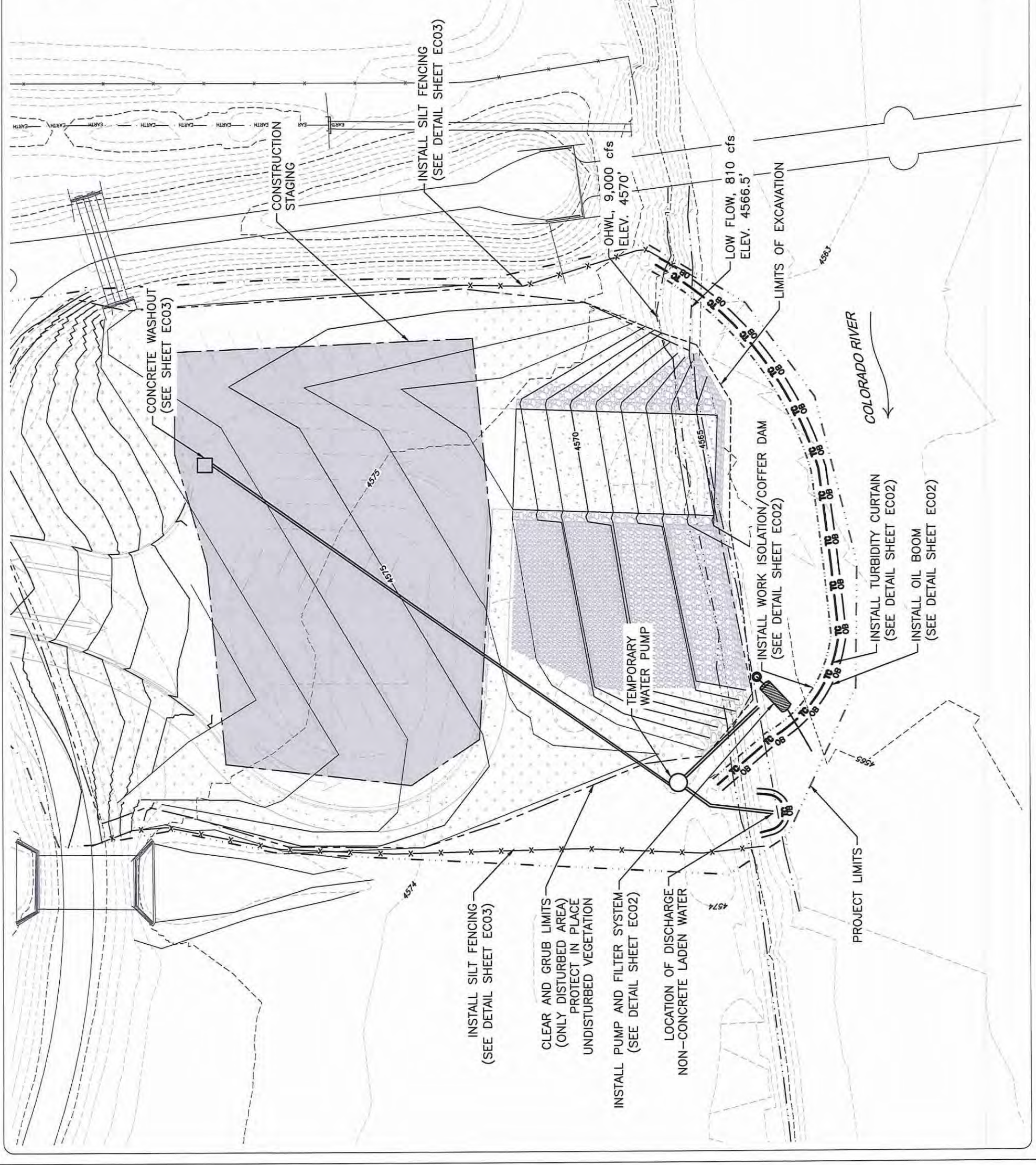
**RIVER**  
 RiverRestoration  
 P.O. Box 248  
 Carbonate, CO 81623  
 www.RiverRestoration.org

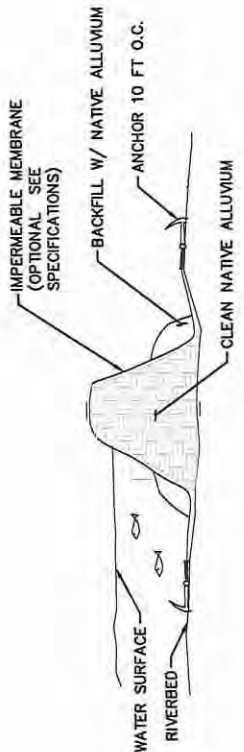
PROJECT NAME AND ADDRESS  
 Las Colonias Park Slough  
 Restoration Project  
 Las Colonias Park  
 Grand Junction, CO 81501

Project	11.CO24.003	Sheet	ECO1
Date	JULY 2018		
Scale			140

CONSTRUCTION NOTES:

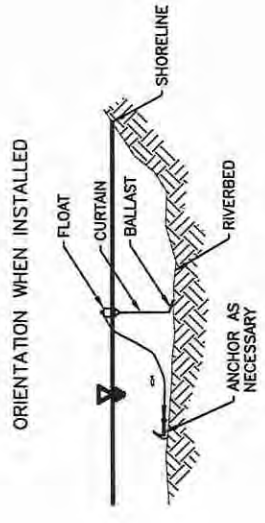
- ALL CONCRETE LADEN WATER MUST BE CONTAINED OR EVAPORATED ONSITE AND NOT RETURNED TO THE COLORADO RIVER OR CONNECTING DRAINAGES
- CONTRACTOR SHALL UPDATE CARE OF WATER PLANS PER ACTUAL IMPLEMENTATION
- CONFORM TO ALL SPECIAL CONDITIONS AND ENCLOSURES OF PERMIT NUMBER SPK 2017-01049 PER LETTER DATED 6/27/2018
- ALL STRUCTURAL COMPONENTS OF DESIGN TO BE REVIEWED AND STAMPED BY STRUCTURAL ENGINEER, WHICH INCLUDE:
  - DIMENSIONS AND SPECIFICATIONS OF SUBGRADE
  - DIMENSIONS AND SPECIFICATIONS OF CONCRETE AND REBAR
 THESE DESIGN DETAILS AND QUANTITIES SUBJECT TO CHANGE THROUGH ISSUED ADDENDA



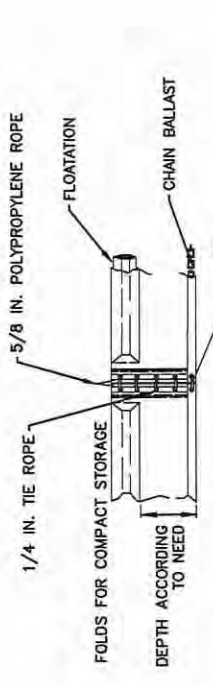


**ALLUVIAL COFFER (TYP.)**  
SECTION VIEW-NTS

1  
EC02



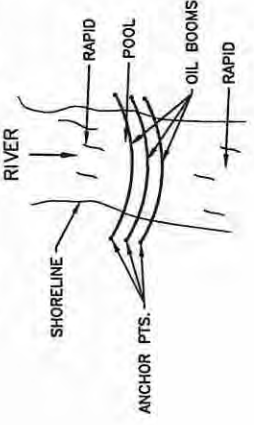
**TURBIDITY CURTAIN (TYP.)**  
SECTION VIEW-NTS



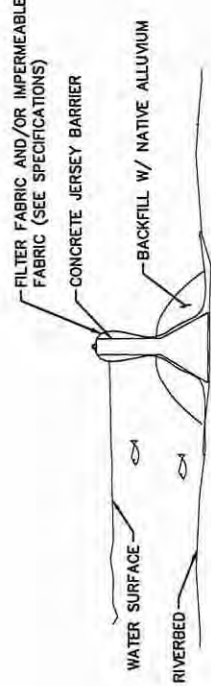
**TURBIDITY CURTAIN (TYP.)**  
PROFILE VIEW-NTS

2  
EC02

**PLAN VIEW**  
TYPICAL LAYOUT FOR STREAMS AND RIVERS  
TO BE PLACED DOWNSTREAM OF  
ANY EQUIPMENT WORKING IN THE WET

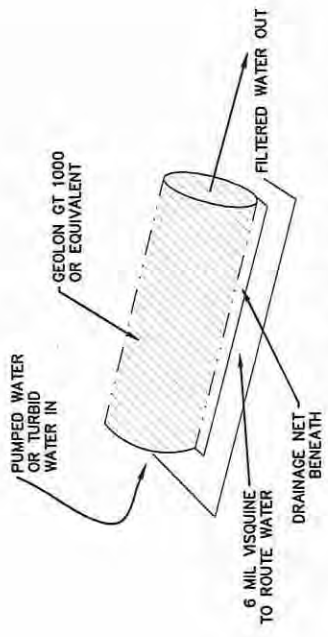


**OIL BOOM (TYP.)**  
PLAN VIEW-NTS



**CONCRETE BARRIER COFFER DAM (TYP.)**  
SECTION VIEW-NTS

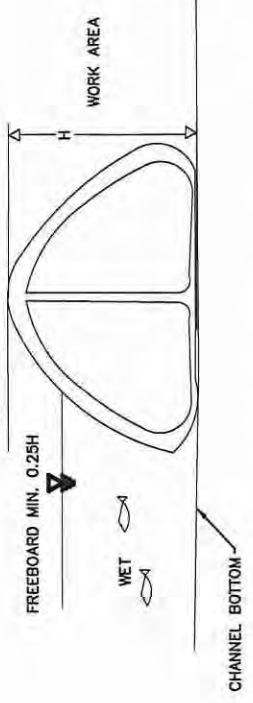
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EC02



**GEO-TUBEFILTER (TYPICAL)**  
NTS

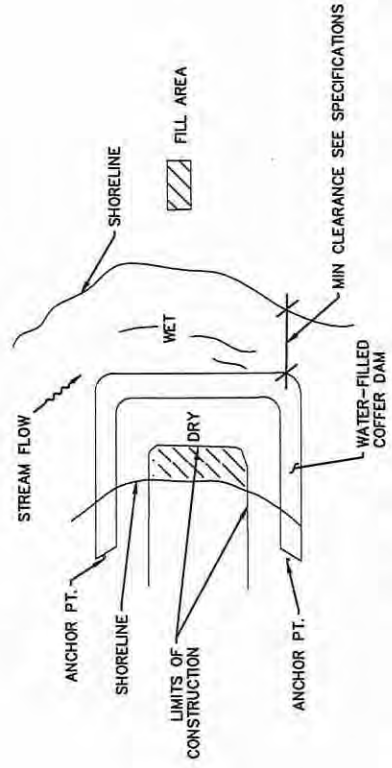
5  
EC02

TO BE USED TO FILTER ALL PUMPED WATER



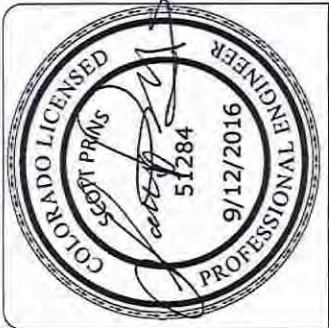
**WATER FILLED COFFER DAM (TYP.)**  
SECTION VIEW-NTS

TYPICAL LAYOUTS  
STREAMS AND RIVERS



**WATER FILLED COFFER DAM (TYP.)**  
PLAN VIEW-NTS

4  
EC02



LAS COLONIAS PARK  
SHORELINE AMENITIES PROJECT  
EROSION CONTROL AND  
CARE OF WATER DETAILS

No.	REVISION/UPDATE	Date

**Grand Junction**  
City of Grand Junction  
Parks and Recreation  
250 North 5th Street  
Grand Junction, CO 81501  
970.245.3866

**RIVER**  
RiverRestoration  
P.O. Box 248  
Carbondale, CO 81623  
www.RiverRestoration.org

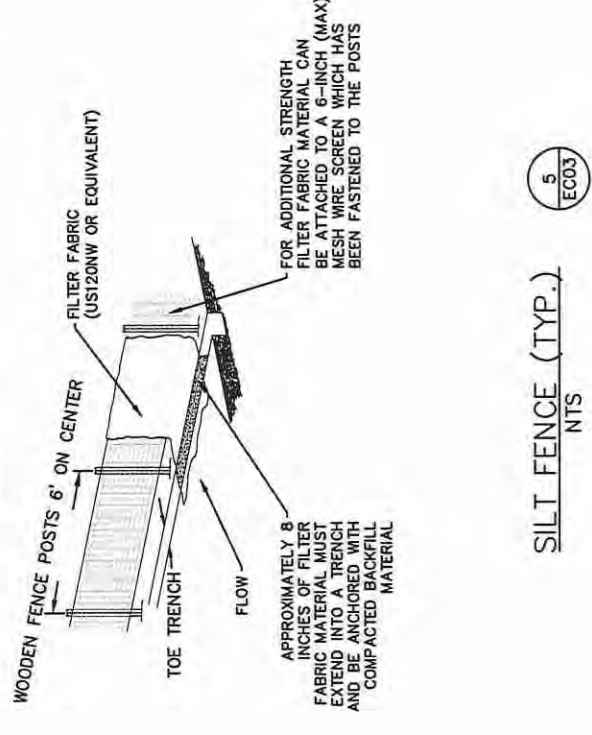
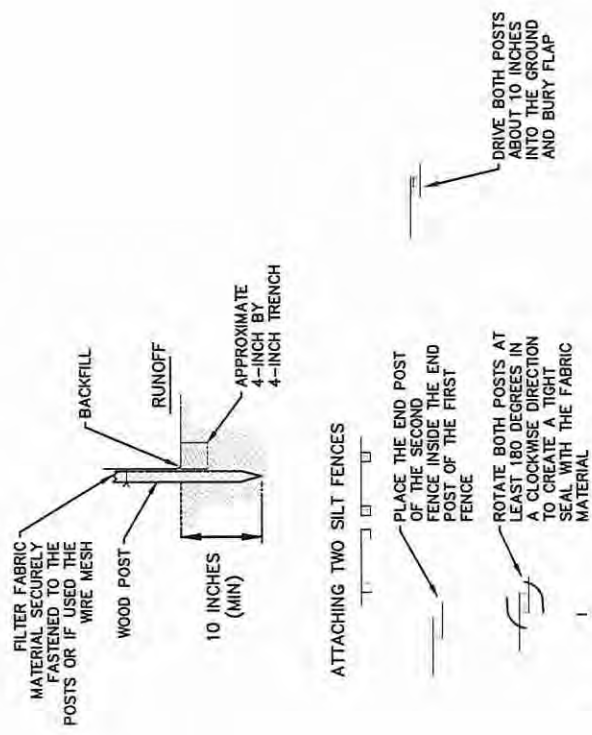
PROJECT NAME AND ADDRESS  
Las Colonias Park Slough  
Restoration Project  
Las Colonias Park  
Grand Junction, CO 81501

Project	11.CO24.003	Sheet	ECO2
Date	JULY 2018		
Scale			141

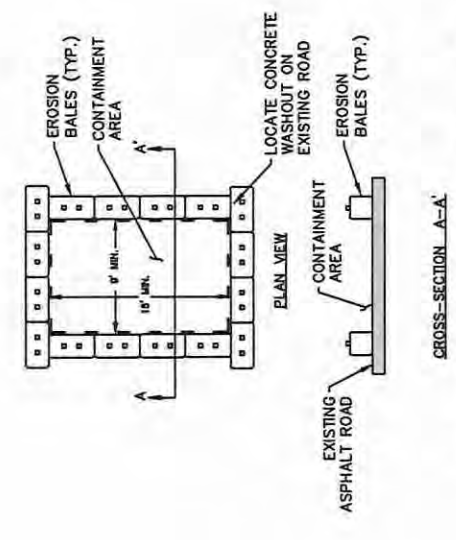


LAS COLONIAS PARK  
SHORELINE AMENITIES PROJECT  
EROSION CONTROL AND  
CARE OF WATER DETAILS

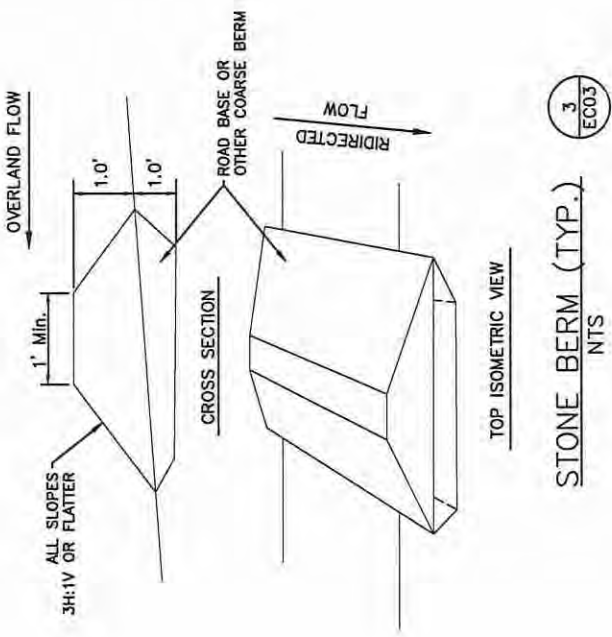
No.	REVISION/UPDATE	Date
CLIENT NAME AND ADDRESS		
<b>Grand Junction</b> City of Grand Junction Parks and Recreation 250 North 5th Street Grand Junction, CO 81501 970.245.3866		
DESIGN FIRM NAME AND ADDRESS		
<b>RIVER</b> River Restoration P.O. Box 248 Carbonate, CO 81623 www.RiverRestoration.org		
PROJECT NAME AND ADDRESS		
Las Colonias Park Slough Restoration Project Las Colonias Park Grand Junction, CO 81501		
Project	11_CO24_003	Sheet
Date	JULY 2018	ECO3
Scale		142



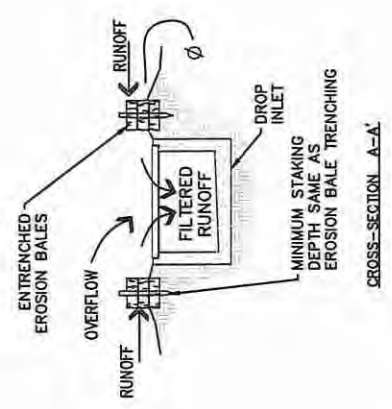
SILT FENCE (TYP.)  
NTS



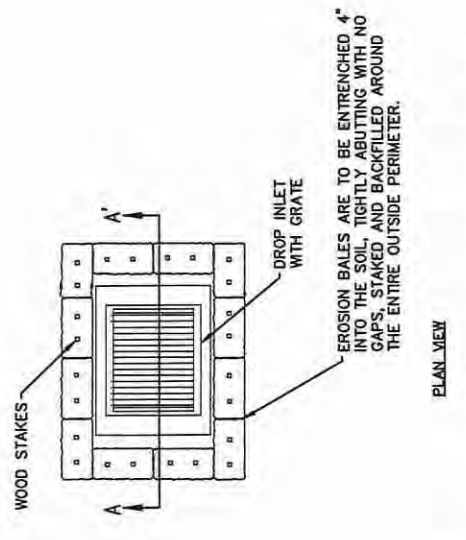
CONCRETE WASHOUT (TYP.)  
NTS



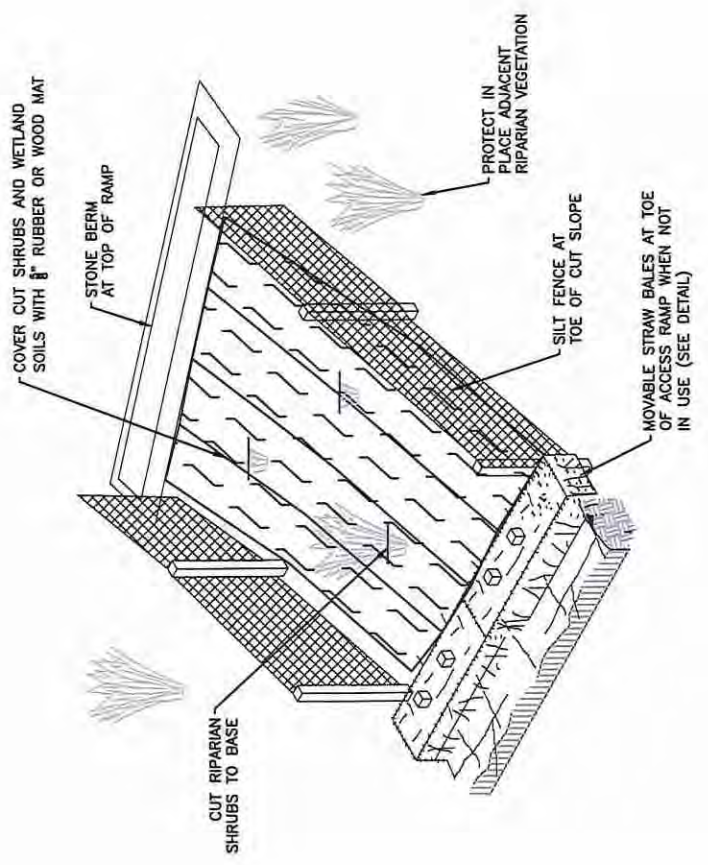
STONE BERM (TYP.)  
NTS



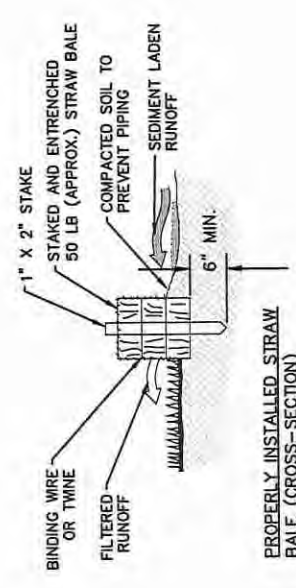
DROP INLET EROSION BALE FILTER  
CROSS SECTION VIEW-NTS



DROP INLET EROSION BALE FILTER  
PLAN VIEW-NTS

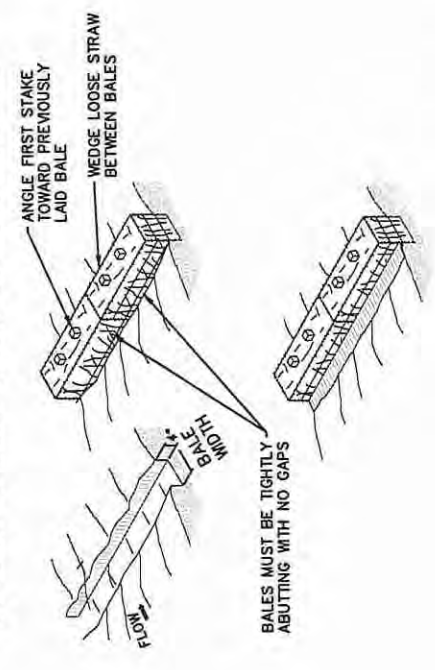


TEMPORARY EQUIPMENT ACCESS (TYP.)  
NTS



PROPERLY INSTALLED STRAW BALE (CROSS-SECTION)

INSTALLATION STEPS:  
1. EXCAVATE THE TRENCH 2. PLACE AND STAKE STRAW BALES



STRAW BALE (TYP.)  
NTS





LAS COLONIAS PARK  
SHORELINE AMENITIES PROJECT  
CONSTRUCTION SITE PLAN

No.	REVISION/UPDATE	Date

**CITY OF Grand Junction COLORADO**  
City of Grand Junction  
Parks and Recreation  
250 North 5th Street  
Grand Junction, CO 81501  
970.245.3866

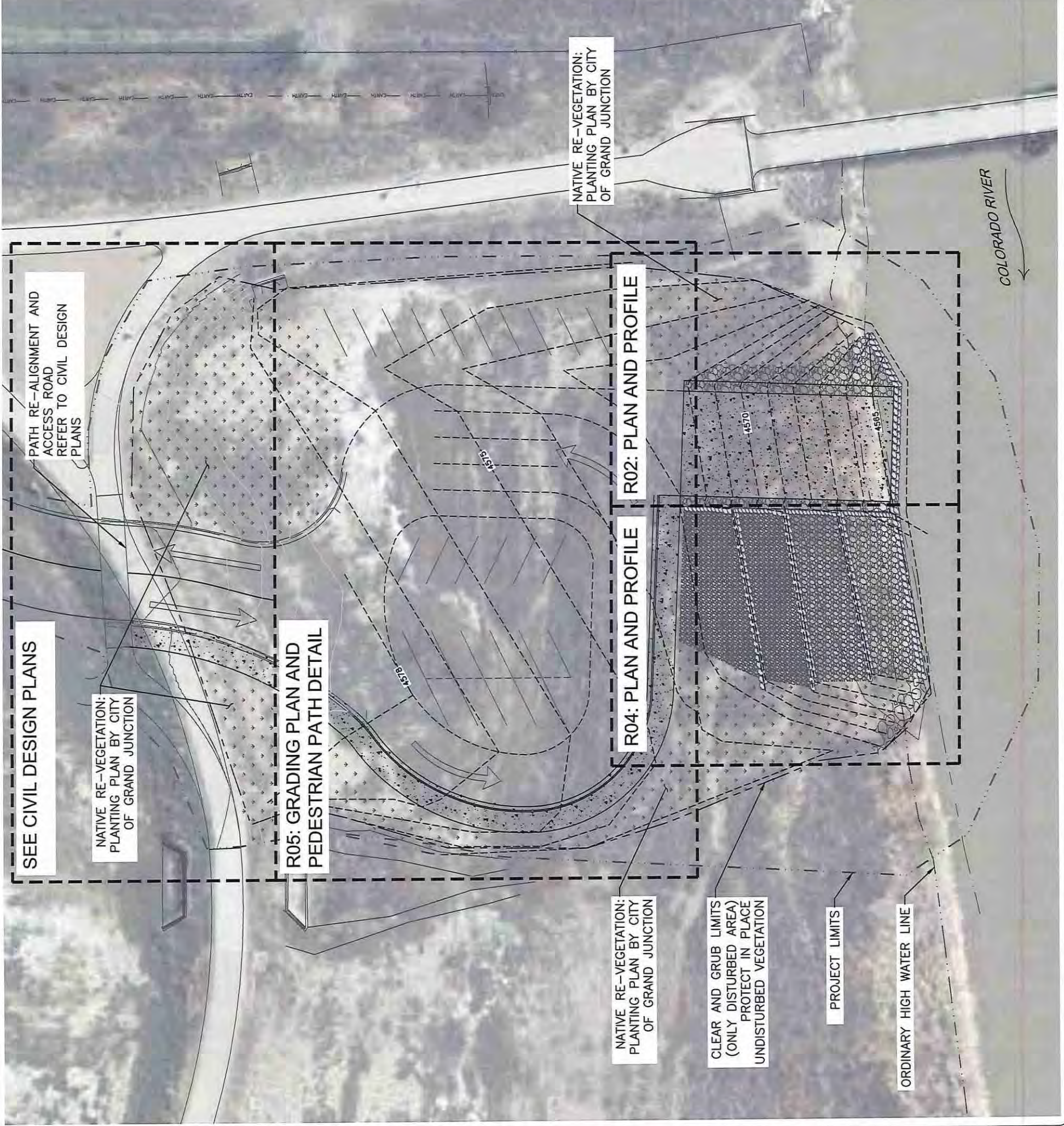
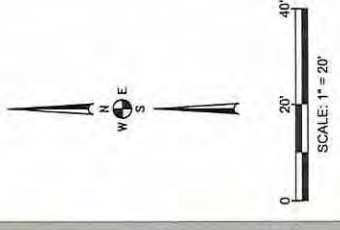
**DESIGN FIRM NAME AND ADDRESS**  
**RIVER**  
RiverRestoration  
P.O. Box 248  
Carbondale, CO 81623  
www.RiverRestoration.org

**PROJECT NAME AND ADDRESS**  
Las Colonias Park Slough  
Restoration Project  
Las Colonias Park  
Grand Junction, CO 81501

Project	11.CO24.003	Sheet	ROI
Date	JULY 2018	Scale	143

**CONSTRUCTION NOTES:**

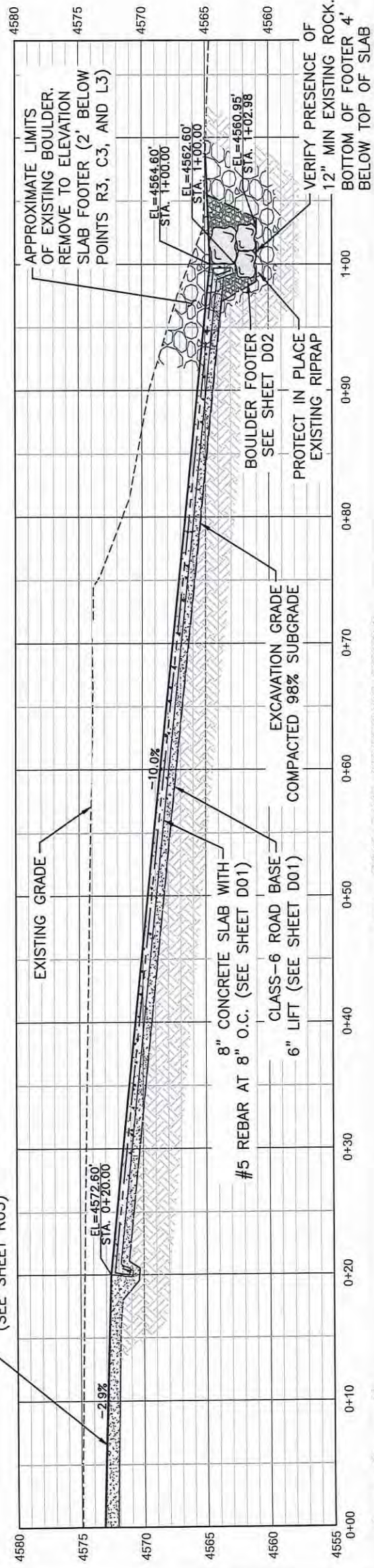
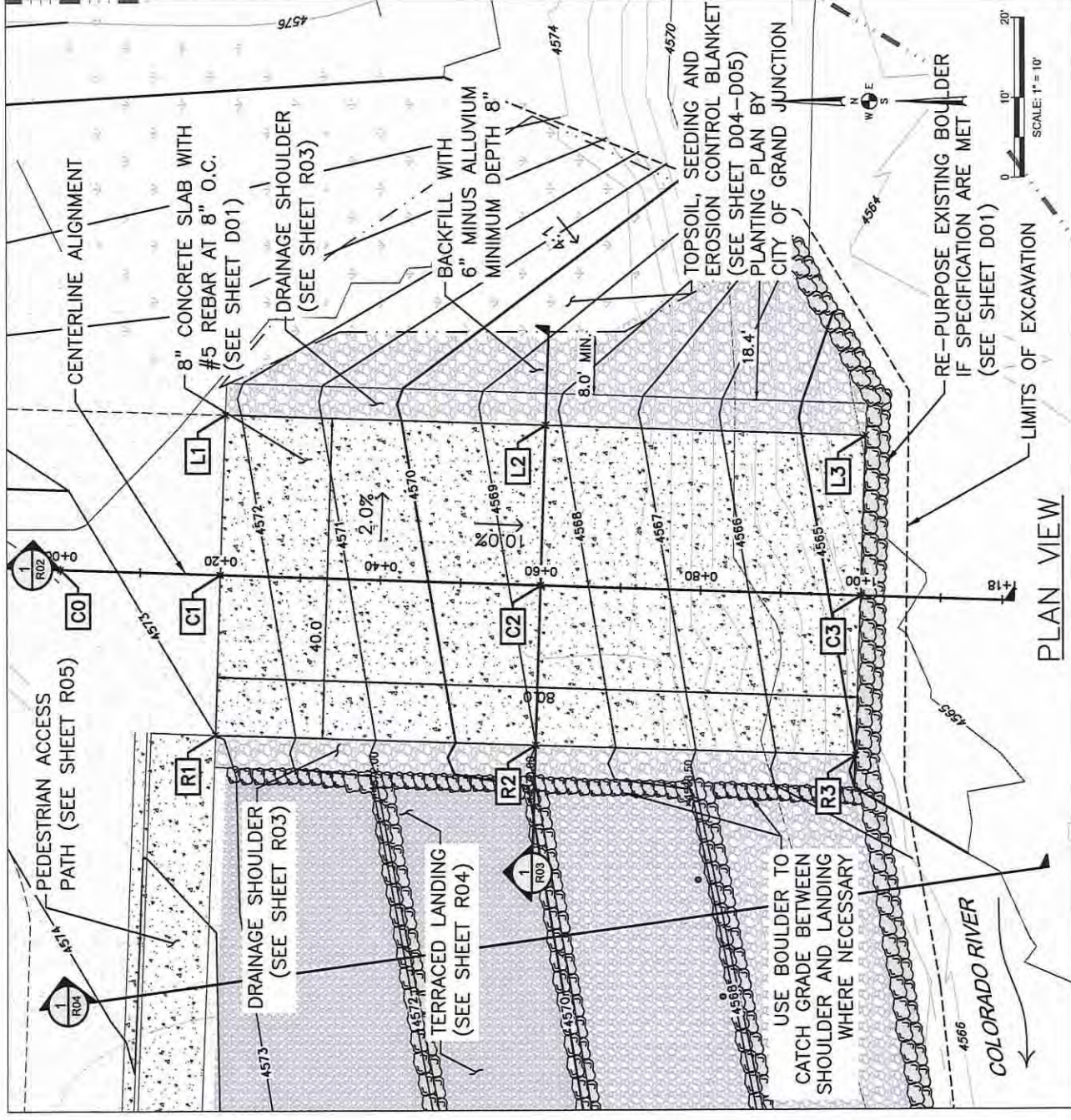
- CONTRACTOR IS REQUIRED TO PROVIDE CAPABILITY OF STAKING STATIONS AND OFFSETS OF THE BOAT RAMP ALIGNMENT REAL TIME DURING CONSTRUCTION WITH TOTAL STATION OR SURVEY GRADE GPS. SEE SPECS, SECTION 2 FOR MORE DETAILS.
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**CONSTRUCTION NOTES:**

- SCALE OF PLAN IS 1"=10'; SCALE OF PROFILE IS 1" = 5'
- CONTRACTOR IS REQUIRED TO PROVIDE CAPABILITY OF STAKING STATIONS AND OFFSETS OF THE BOAT RAMP ALIGNMENT REAL TIME DURING CONSTRUCTION WITH TOTAL STATION OR SURVEY GRADE GPS. SEE SPECS, SECTION 2 FOR MORE DETAILS.
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POINT	STATION OFFSET	FINISHED GRADE ELEVATION	LOCATION
C0	STA. 0+00.00 (0.00', )	4573.20	N=31,078.99 E=96,546.76
C1	STA. 0+20.00 (0.00', )	4572.60	N=31,059.01 E=96,546.10
C2	STA. 0+60.00 (0.00', )	4568.60	N=31,019.04 E=96,544.77
C3	STA. 1+00.00 (0.00', )	4564.60	N=30,978.06 E=96,543.44
R1	STA. 0+20.00 (20.00', R)	4573.00	N=31,059.68 E=96,538.11
R2	STA. 0+60.00 (20.00', R)	4569.00	N=31,019.70 E=96,524.78
R3	STA. 1+00.00 (20.00', R)	4565.00	N=30,978.72 E=96,523.45
L1	STA. 0+20.00 (20.00', L)	4572.20	N=31,068.35 E=96,560.09
L2	STA. 0+60.00 (20.00', L)	4568.20	N=31,018.37 E=96,547.76
L3	STA. 1+00.00 (20.00', L)	4564.20	N=30,978.39 E=96,543.43



BOAT RAMP CENTERLINE PROFILE

SCALE: 1" = 5'

**LAS COLONIAS PARK SHORELINE AMENITIES PROJECT BOAT RAMP PLAN AND PROFILE**

PROFESSIONAL ENGINEER STAMP	REVISION/UPDATE	Date
PENDING STRUCTURAL REVIEW		

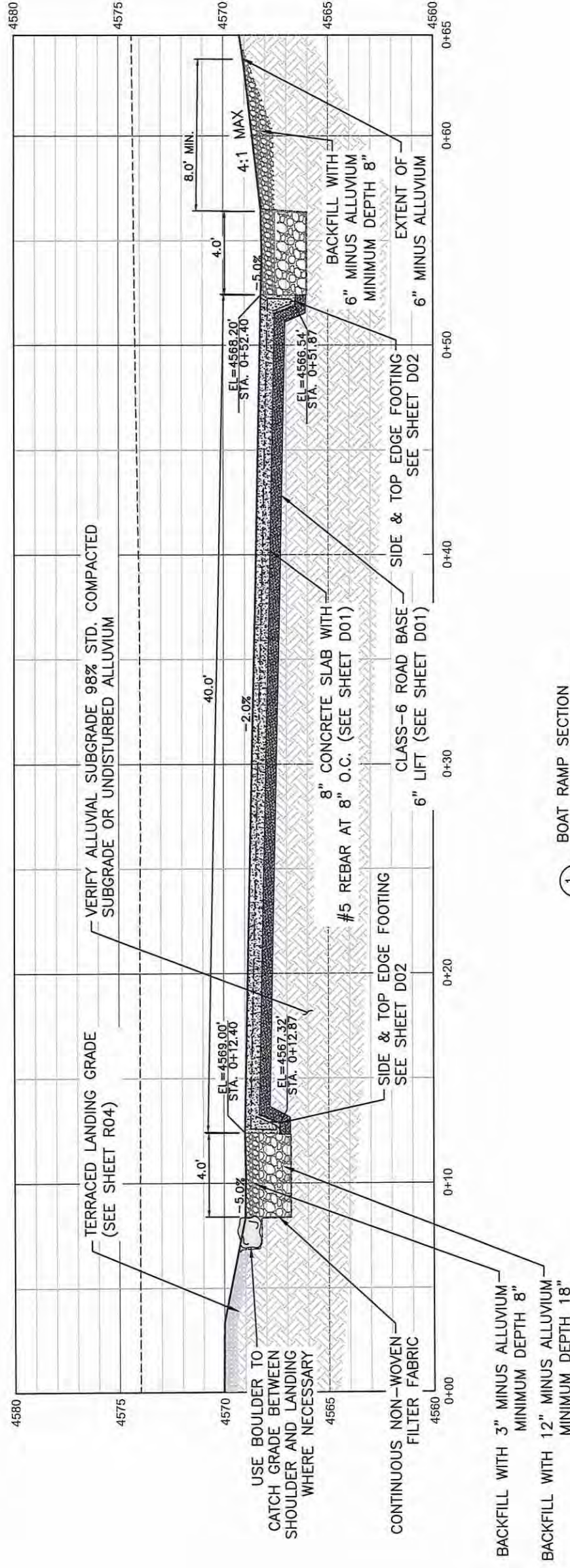
  

<b>City of Grand Junction</b> Parks and Recreation 250 North 5th Street Grand Junction, CO 81501 970.245.3866	<b>DESIGN FIRM NAME AND ADDRESS</b> <b>RIVER</b> RiverRestoration P.O. Box 248 Carbondale, CO 81623 www.RiverRestoration.org
<b>PROJECT NAME AND ADDRESS</b> Las Colonias Park Slough Restoration Project Las Colonias Park Grand Junction, CO 81501	<b>PROJECT NO.</b> 11..CO24.003
<b>DATE</b> JULY 2018	<b>SHEET</b> R02
<b>SCALE</b> VARIES	<b>144</b>

NOT FOR CONSTRUCTION

**CONSTRUCTION NOTES:**

1. CONTRACTOR IS REQUIRED TO PROVIDE CAPABILITY OF STAKING STATIONS AND OFFSETS OF THE BOAT RAMP ALIGNMENT REAL TIME DURING CONSTRUCTION WITH TOTAL STATION OR SURVEY GRADE GPS. SEE SPECS, SECTION 2 FOR MORE DETAILS.
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1 BOAT RAMP SECTION



NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER STAMP

PENDING STRUCTURAL REVIEW

LAS COLONIAS PARK  
SHORELINE AMENITIES PROJECT  
BOAT RAMP DESIGN SECTION

No.	REVISION/UPDATE	Date



City of Grand Junction  
Parks and Recreation  
250 North 5th Street  
Grand Junction, CO 81501  
970.245.3666

DESIGN FIRM NAME AND ADDRESS



RiverRestoration  
P.O. Box 248  
Carbondale, CO 81623  
www.RiverRestoration.org

PROJECT NAME AND ADDRESS

Las Colonias Park Slough  
Restoration Project  
Las Colonias Park  
Grand Junction, CO 81501

Project	Sheet
11.CO24.003	R03
Date	Scale
JULY 2018	1" = 3' (FULL SIZE)



LAS COLONIAS PARK  
 SHORELINE AMENITIES PROJECT  
 TERRACED LANDING  
 PLAN AND PROFILE

No.	REVISION/UPDATE	Date



City of Grand Junction  
 Parks and Recreation  
 250 North 5th Street  
 Grand Junction, CO 81501  
 970.245.3866

DESIGN FIRM NAME AND ADDRESS



RIVER  
 Restoration  
 P.O. Box 248  
 Carbondale, CO 81623  
 www.RiverRestoration.org

PROJECT NAME AND ADDRESS  
 Las Colonias Park Slough  
 Restoration Project  
 Las Colonias Park  
 Grand Junction, CO 81501

Project 11.CO24.003  
 Sheet

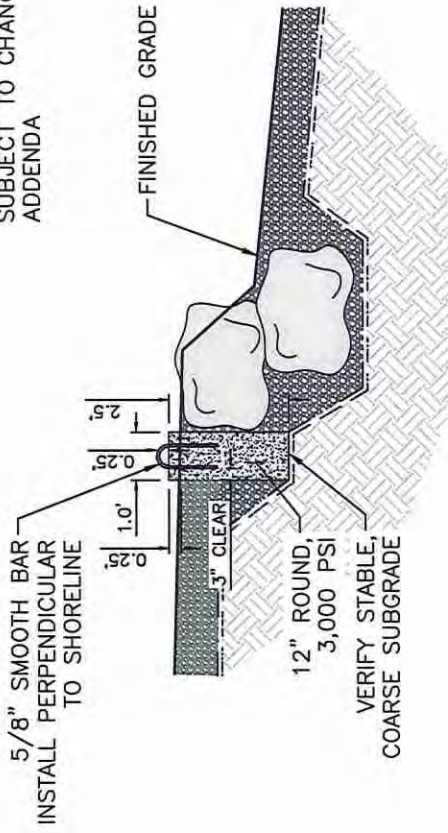
Date JULY 2018

Scale VARIES

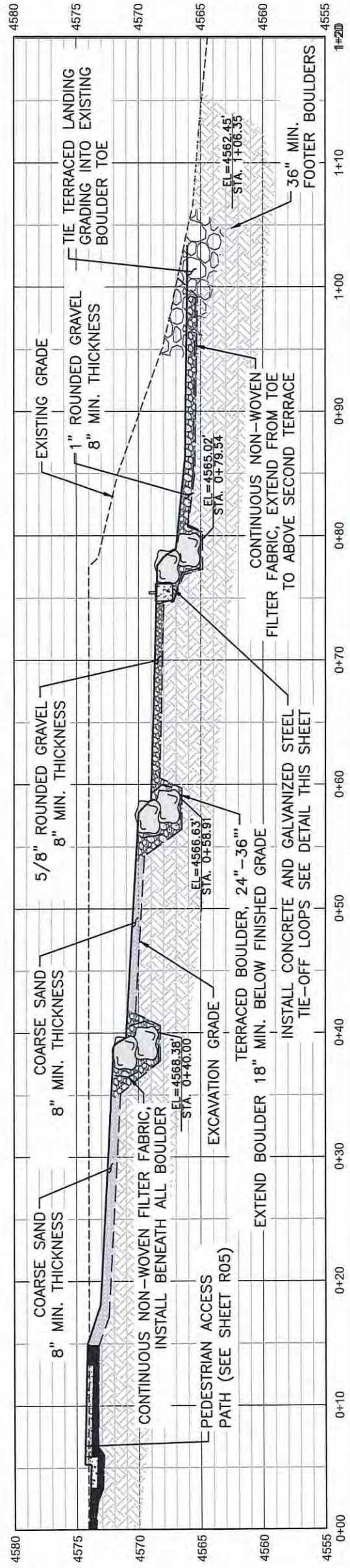
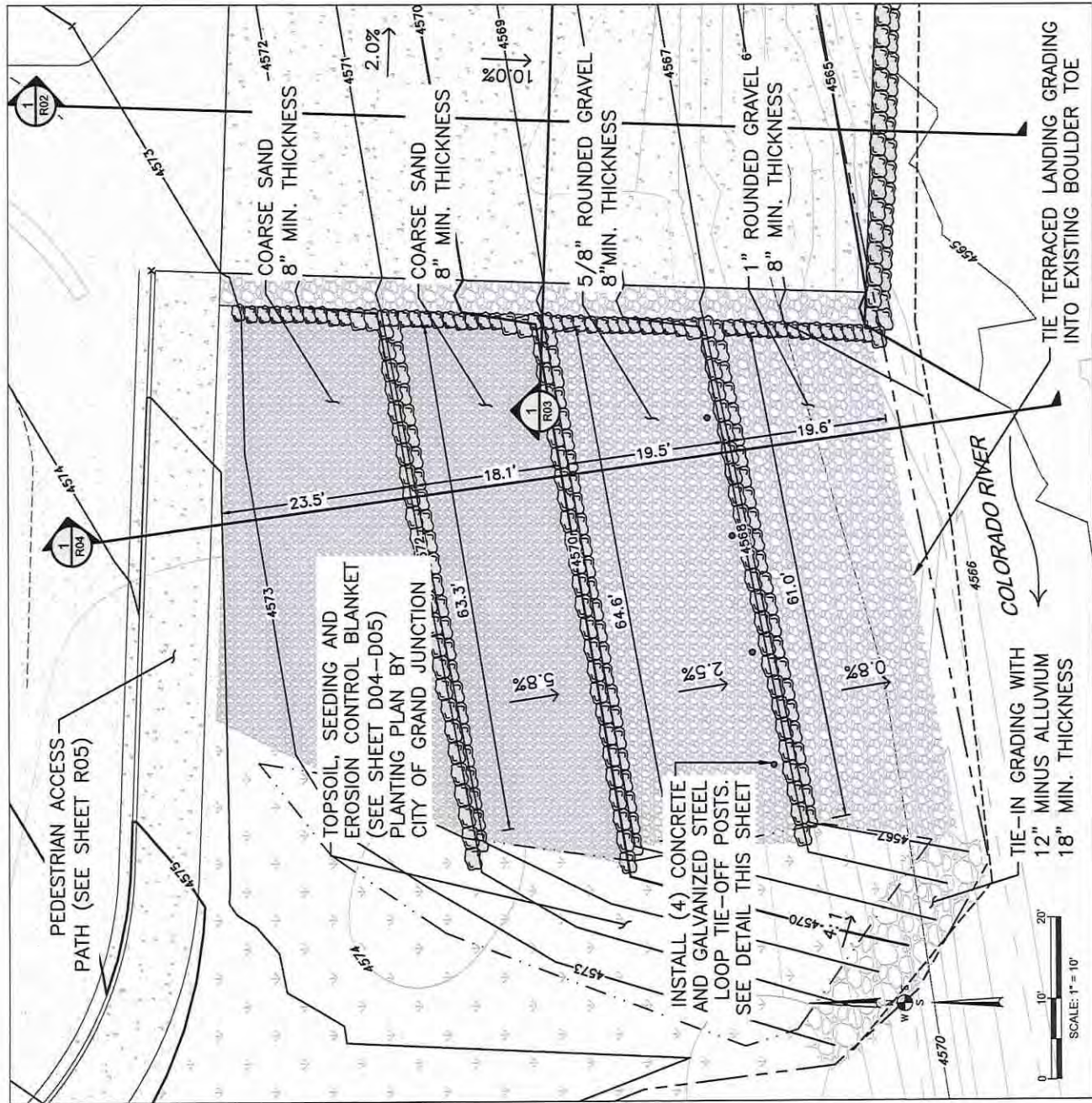
146

**CONSTRUCTION NOTES:**

- SCALE OF PLAN IS 1"=10'; SCALE OF PROFILE IS 1" = 5'
- CONTRACTOR IS REQUIRED TO PROVIDE CAPABILITY OF STAKING STATIONS AND OFFSETS OF THE BOAT RAMP ALIGNMENT REAL TIME DURING CONSTRUCTION WITH TOTAL STATION OR SURVEY GRADE GPS. SEE SPECS, SECTION 2 FOR MORE DETAILS.
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2 TIE-OFF LOOP DETAIL, TYPICAL  
 NTS



1 TERRACED LANDING PROFILE  
 R04

SCALE: 1" = 5'



LAS COLONIAS PARK  
 SHORELINE AMENITIES PROJECT  
 PARKING LOT AND TURNAROUND  
 PLAN AND PROFILE

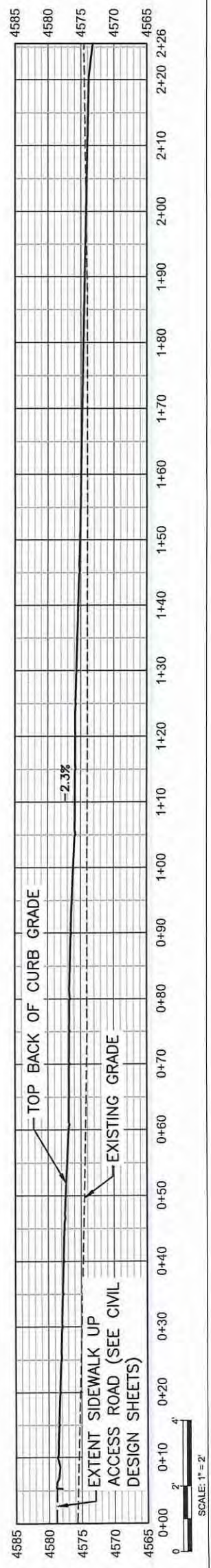
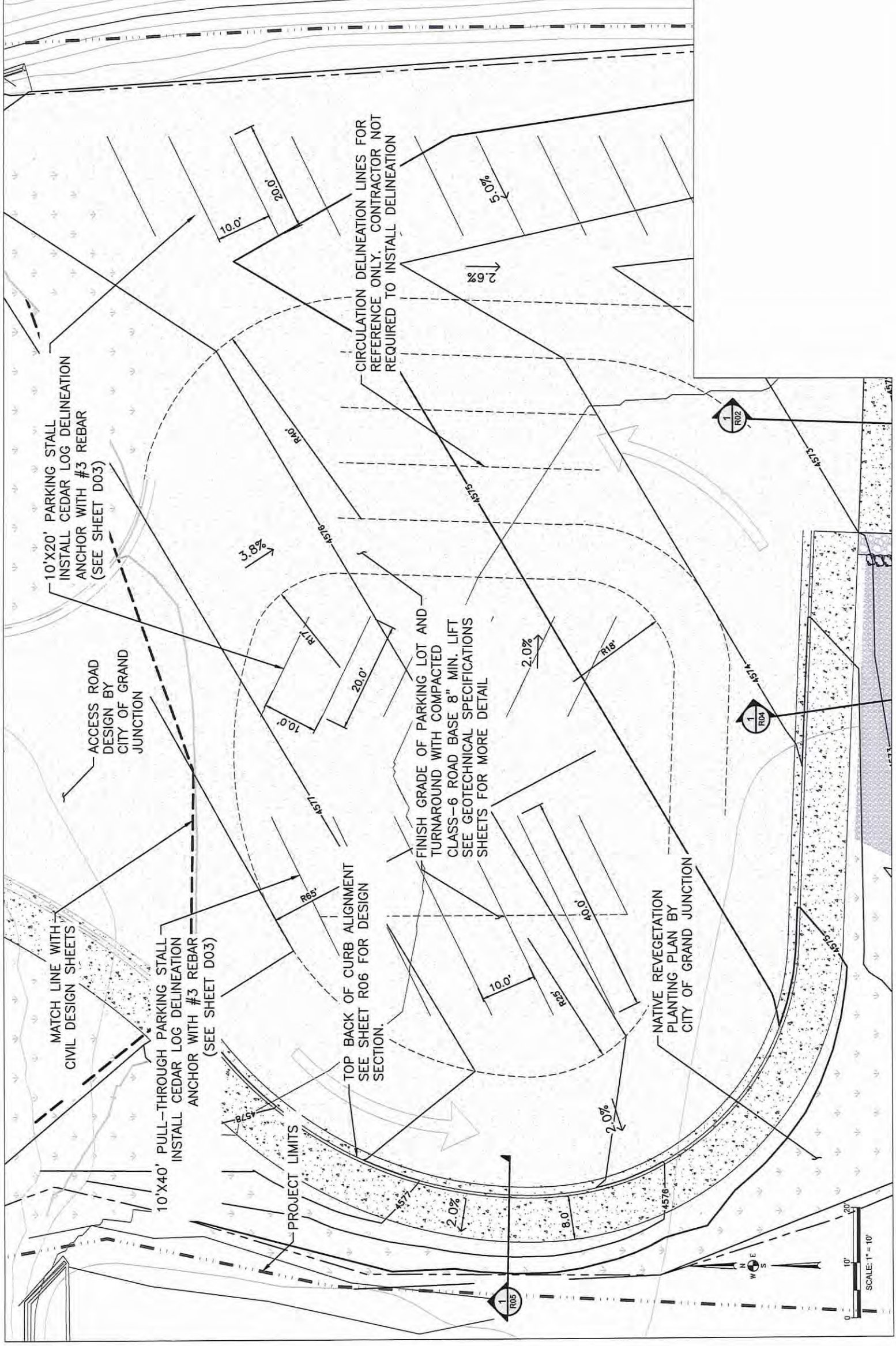
**City of Grand Junction**  
 Parks and Recreation  
 250 North 5th Street  
 Grand Junction, CO 81501  
 970.245.3666

**DESIGN FIRM NAME AND ADDRESS**  
  
 RiverRestoration  
 P.O. Box 248  
 Carbonate, CO 81623  
 www.RiverRestoration.org

**PROJECT NAME AND ADDRESS**  
 Las Colonias Park Slough  
 Restoration Project  
 Las Colonias Park  
 Grand Junction, CO 81501

Project: 11.CO24.003  
 Sheet: R05  
 Date: JULY 2018  
 Scale: 1" = 10' (FULL SIZE)

- CONSTRUCTION NOTES:**
- SEE SHEET R06 FOR STAKING ALIGNMENTS FOR SIDEWALK AND GRADE BREAKS AND PARKING STALL DELINEATION
  - CONTRACTOR IS REQUIRED TO PROVIDE CAPABILITY OF STAKING STATIONS AND OFFSETS OF THE BOAT RAMP ALIGNMENT REAL TIME DURING CONSTRUCTION WITH TOTAL STATION OR SURVEY GRADE GPS. SEE SPECS, SECTION 2 FOR MORE DETAILS.
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  - SPECIFIC DIMENSIONS AND MATERIAL SPECIFICATION OF ROAD BASE TO BE DETERMINED BY OWNER. UPDATES TO DETAILS AND QUANTITIES MAY BE ISSUED VIA ADDENDA IF DETERMINED NECESSARY BASED ON PENDING GEOTECH BORING INFORMATION.
  - REFER TO STANDARD CITY DETAIL AND SPECIFICATIONS FOR CURB AND GUTTER CONSTRUCTION



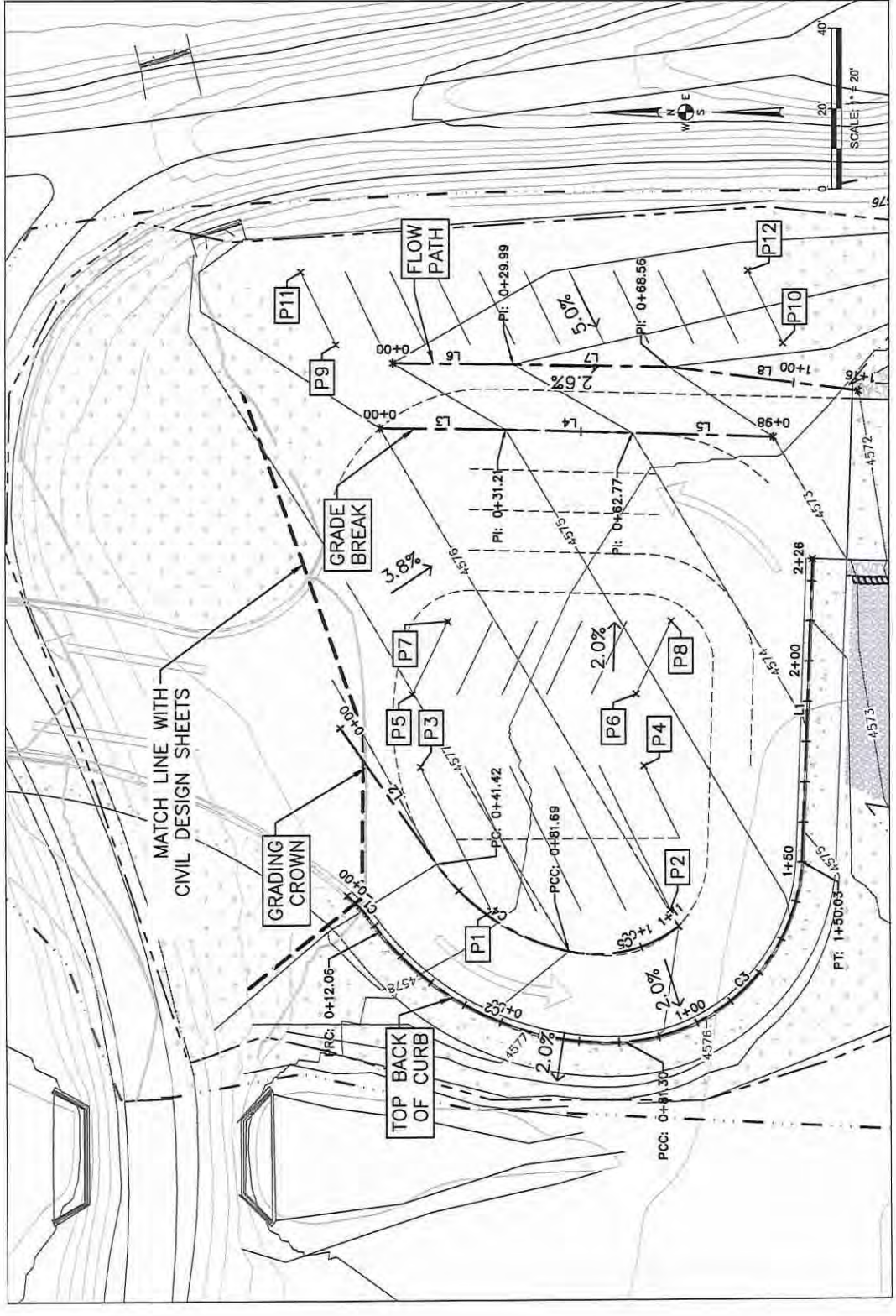
SCALE: 1" = 2'



LAS COLONIAS PARK  
 SHORELINE AMENITIES PROJECT  
 PARKING LOT AND TURNAROUND  
 GRADING PLAN

**CONSTRUCTION NOTES:**

- CONTRACTOR IS REQUIRED TO PROVIDE CAPABILITY OF STAKING STATIONS AND OFFSETS OF THE BOAT RAMP ALIGNMENT REAL TIME DURING CONSTRUCTION WITH TOTAL STATION OR SURVEY GRADE GPS. SEE SPECS, SECTION 2 FOR MORE DETAILS.
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TOP BACK OF CURB				
Number	Length	Radius	Line/Chord Direction	A Value
C1	12.061	49.5	S48° 36' 50.84"W	
C2	69.239	72.5	S24° 20' 49.81"W	
C3	68.733	47.1	S45° 01' 59.18"E	
L1	75.5		S87° 52' 47.62"E	

START OF ALIGNMENT COORDINATES: N=31,184.07 E=97,443.05  
 END OF ALIGNMENT COORDINATES: N=31,068.24 E=96,526.43

GRADING CROWN				
Number	Length	Radius	Line/Chord Direction	A Value
L2	41.4		S54° 52' 14.08"W	
C4	40.266	54.5	S33° 42' 40.28"W	
C5	28.928	32.9	S12° 39' 12.28"E	

START OF ALIGNMENT COORDINATES: N=31,185.69 E=96,494.71  
 END OF ALIGNMENT COORDINATES: N=31,101.79 E=96,433.12

GRADE BREAK				
Number	Length	Radius	Line/Chord Direction	A Value
L3	31.2		S00° 41' 20.72"W	
L4	31.6		S01° 41' 27.18"W	
L5	35.1		S01° 44' 18.44"W	

START OF ALIGNMENT COORDINATES: N=31,175.79 E=96,559.03  
 END OF ALIGNMENT COORDINATES: N=31,077.98 E=96,568.08

FLOW PATH				
Number	Length	Radius	Line/Chord Direction	A Value
L6	30.0		S00° 42' 34.07"W	
L7	38.6		S01° 00' 50.34"W	
L8	47.6		S07° 17' 12.45"W	

START OF ALIGNMENT COORDINATES: N=31,172.61 E=96,575.17  
 END OF ALIGNMENT COORDINATES: N=31,058.84 E=96,568.08

PARKING STALL DELINEATION	
POINT	LOCATION
P1	N=31,146.30 E=96,439.05
P2	N=31,103.87 E=96,438.13
P3	N=31,165.80 E=96,475.01
P4	N=31,110.25 E=96,476.12
P5	N=31,167.77 E=96,493.09
P6	N=31,112.22 E=96,492.99
P7	N=31,159.02 E=96,511.07
P8	N=31,103.47 E=96,510.97
P9	N=31,166.71 E=96,519.79
P10	N=31,075.60 E=96,568.02
P11	N=31,155.46 E=96,597.78
P12	N=31,084.35 E=96,597.89

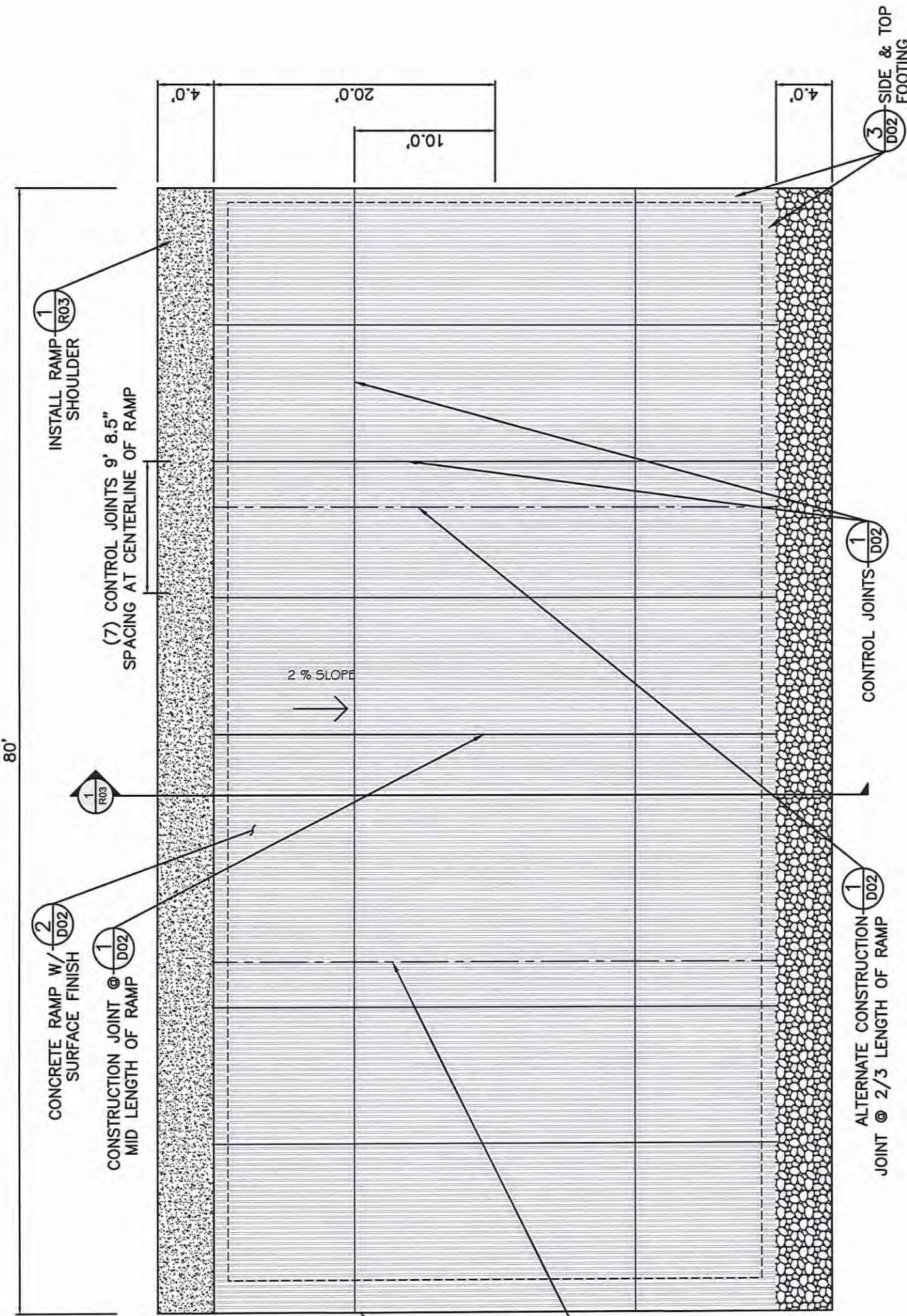


City of Grand Junction  
 Parks and Recreation  
 250 North 5th Street  
 Grand Junction, CO 81501  
 970.245.3266



River Restoration  
 P.O. Box 248  
 Carbonade, CO 81623  
 www.RiverRestoration.org

PROJECT NAME AND ADDRESS  
 Las Colonias Park Slough  
 Restoration Project  
 Las Colonias Park  
 Grand Junction, CO 81501



1 D01 BOAT RAMP SECTION

**CONSTRUCTION NOTES:**

- CONTRACTOR IS REQUIRED TO PROVIDE CAPABILITY OF STAKING STATIONS AND OFFSETS OF THE BOAT RAMP ALIGNMENT **REAL TIME** DURING CONSTRUCTION WITH TOTAL STATION OR SURVEY GRADE GPS. SEE SPECS, SECTION 2 FOR MORE DETAILS.
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NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER STAMP  
PENDING STRUCTURAL REVIEW

LAS COLONIAS PARK  
SHORELINE AMENITIES PROJECT  
BOAT RAMP DETAILS 1

No.	REVISION/UPDATE	Date

CLIENT NAME AND ADDRESS  
**City of Grand Junction**  
Parks and Recreation  
250 North 5th Street  
Grand Junction, CO 81501  
970.245.3866

DESIGN FIRM NAME AND ADDRESS  
**RIVER**  
RiverRestoration  
P.O. Box 248  
Carbondale, CO 81623  
www.RiverRestoration.org

PROJECT NAME AND ADDRESS  
Las Colonias Park Slough  
Restoration Project  
Las Colonias Park  
Grand Junction, CO 81501

Project	11.CO24.003
Date	JULY 2018
Scale	
Sheet	149

DOI

PENDING STRUCTURAL REVIEW

LAS COLONIAS PARK  
SHORELINE AMENITIES PROJECT  
BOAT RAMP DETAILS 2

PROFESSIONAL ENGINEER STAMP

No.	REVISION/UPDATE	Date

CLIENT NAME AND ADDRESS



City of Grand Junction  
Parks and Recreation  
250 North 5th Street  
Grand Junction, CO 81501  
970.245.3666

DESIGN FIRM NAME AND ADDRESS



RiverRestoration  
P.O. Box 248  
Carbondale, CO 81623  
www.RiverRestoration.org

PROJECT NAME AND ADDRESS

Las Colonias Park Slough  
Restoration Project  
Las Colonias Park  
Grand Junction, CO 81501

Project 11.CO24.003  
Sheet

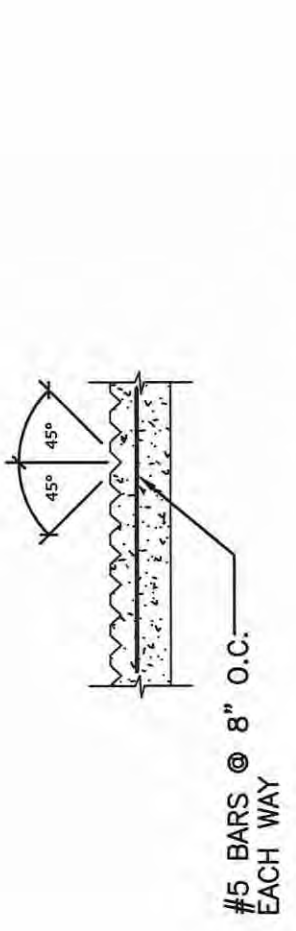
Date JULY 2018

Scale

D02

150

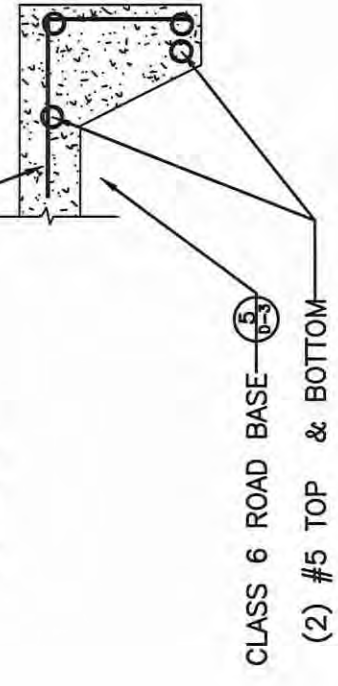
NOT FOR CONSTRUCTION



#5 BARS @ 8" O.C.  
EACH WAY

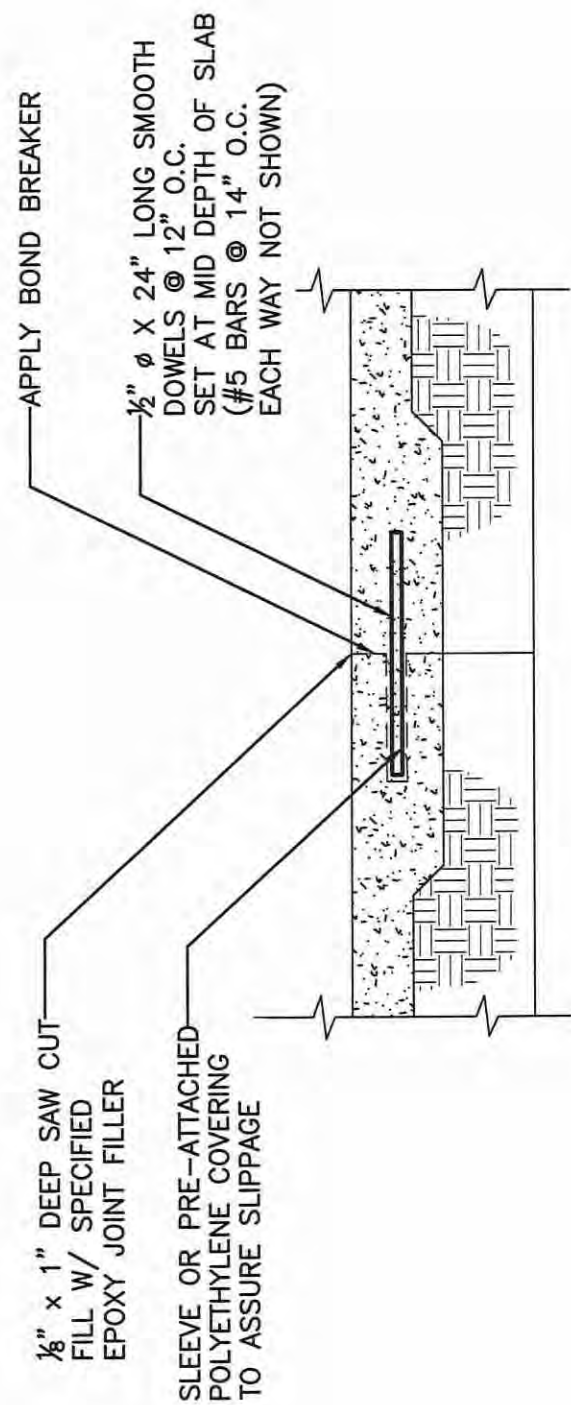
2 CONCRETE RAMP SURFACE FINISH  
D02 SECTION

#5 BARS @ 8" O.C.  
EACH WAY



CLASS 6 ROAD BASE  
(2) #5 TOP & BOTTOM

3 SIDE & TOP EDGE FOOTING  
D02 SECTION



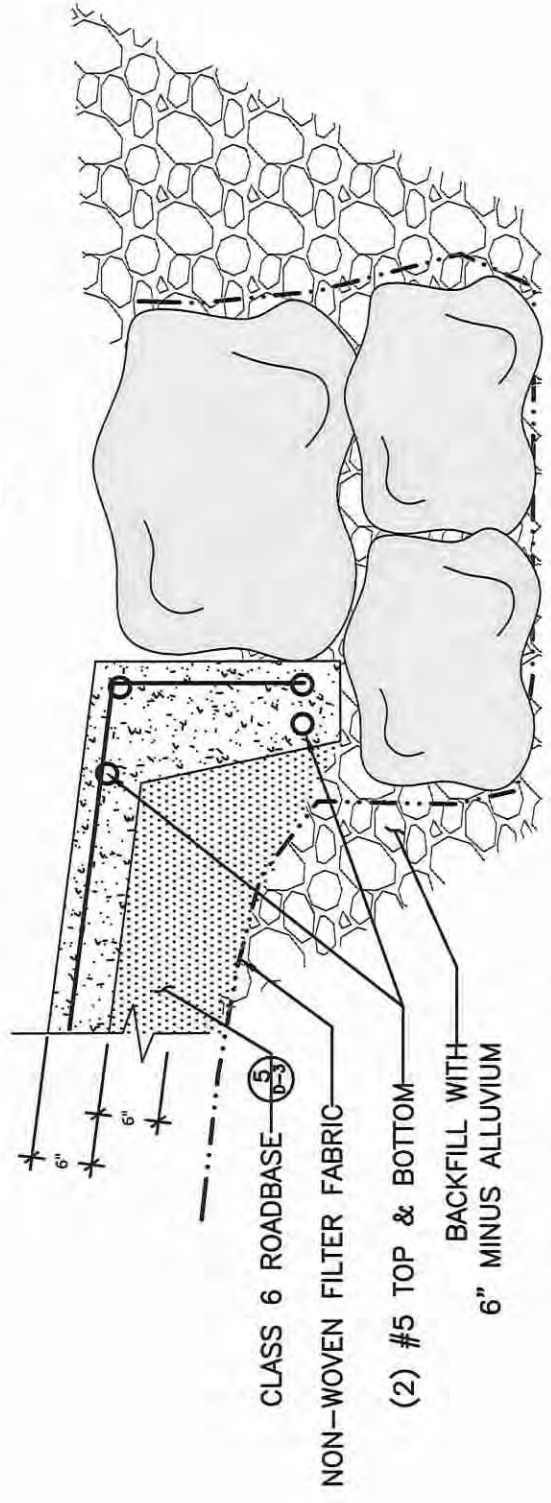
APPLY BOND BREAKER

1/8" x 1" DEEP SAW CUT  
FILL W/ SPECIFIED  
EPOXY JOINT FILLER

1/2"  $\phi$  X 24" LONG SMOOTH  
DOWELS @ 12" O.C.  
SET AT MID DEPTH OF SLAB  
(#5 BARS @ 14" O.C.  
EACH WAY NOT SHOWN)

SLEEVE OR PRE-ATTACHED  
POLYETHYLENE COVERING  
TO ASSURE SLIPPAGE

1 CONSTRUCTION JOINT  
D02 SECTION



CLASS 6 ROADBASE

NON-WOVEN FILTER FABRIC

(2) #5 TOP & BOTTOM

BACKFILL WITH  
6" MINUS ALLUVIUM

4 BOAT RAMP END  
D02 SECTION

CONSTRUCTION NOTES:

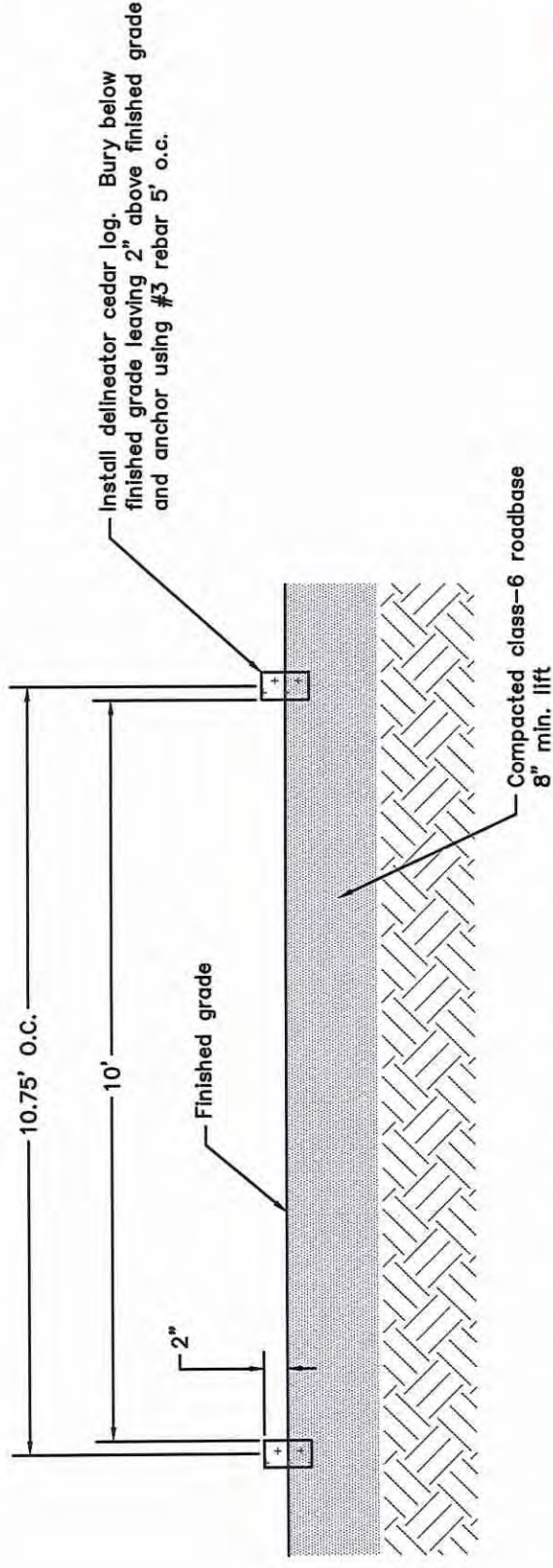
- CONTRACTOR IS REQUIRED TO PROVIDE CAPABILITY OF STAKING STATIONS AND OFFSETS OF THE BOAT RAMP ALIGNMENT REAL TIME DURING CONSTRUCTION WITH TOTAL STATION OR SURVEY GRADE GPS. SEE SPECS, SECTION 2 FOR MORE DETAILS.
- ALL STRUCTURAL COMPONENTS OF DESIGN TO BE REVIEWED AND STAMPED BY STRUCTURAL ENGINEER, WHICH INCLUDE:
  - DIMENSIONS AND SPECIFICATIONS OF SUBGRADE
  - DIMENSIONS AND SPECIFICATIONS OF CONCRETE AND REBAR
 THESE DESIGN DETAILS AND QUANTITIES SUBJECT TO CHANGE THROUGH ISSUED ADDENDA

NOTE:  
ONLY REMOVE EXISTING BOULDER TOE TO ELEVATION OF BOTTOM OF CONCRETE FOOTER RE-PURPOSE BOULDER IF SPECIFICATION ARE MET (SEE TECHNICAL SPECIFICATION FOR MORE INFORMATION)

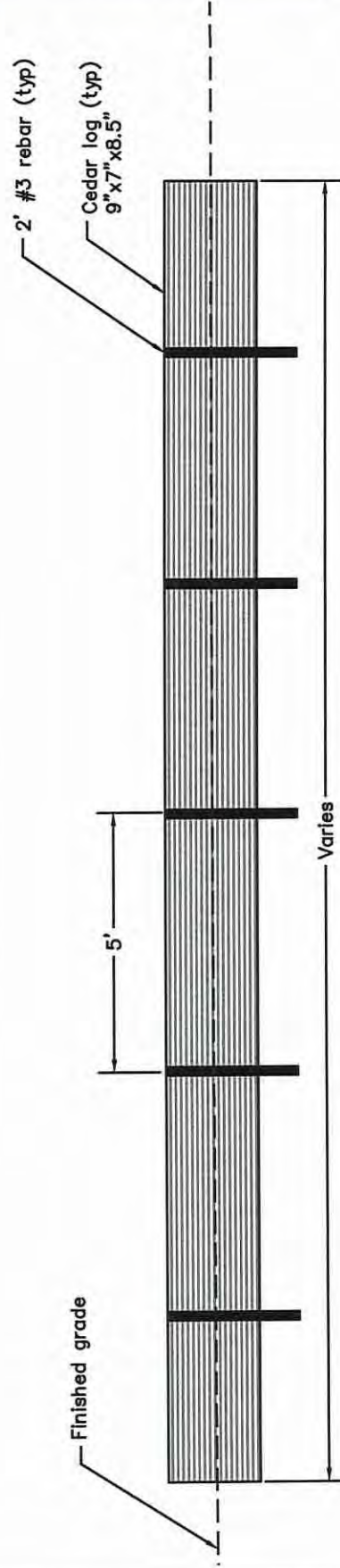


**Note:**

1. Install 2' #3 rebar evenly spaced through cedar log to fasten to ground 5' o.c.
2. Set top of rebar even with top of wood



Parking Stall Cross-Section



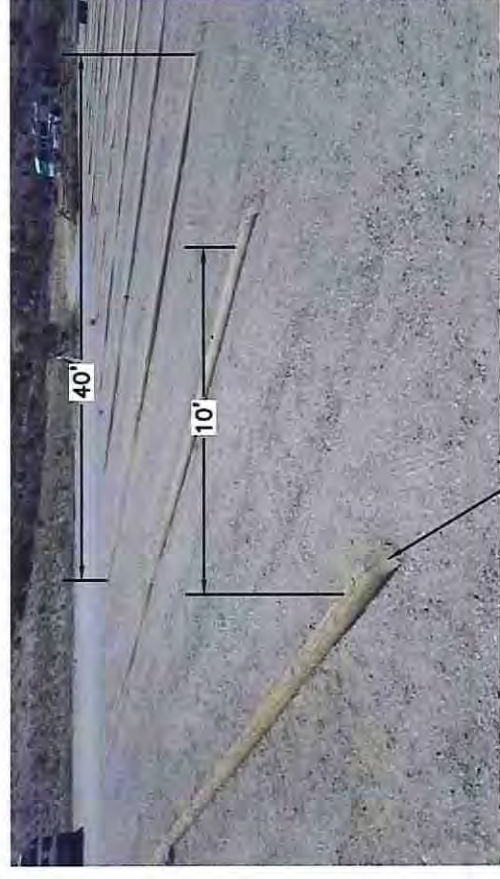
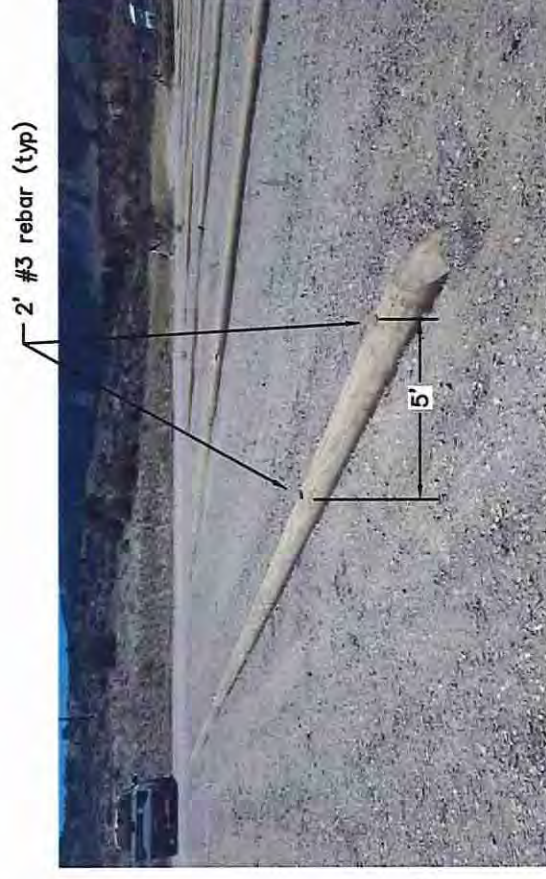
Cedar Log Cross-Section

1  
D03

PARKING STALL DETAIL

CONSTRUCTION NOTES:

1. CONTRACTOR IS REQUIRED TO PROVIDE CAPABILITY OF STAKING STATIONS AND OFFSETS OF THE BOAT RAMP ALIGNMENT REAL TIME DURING CONSTRUCTION WITH TOTAL STATION OR SURVEY GRADE GPS. SEE SPECS, SECTION 2 FOR MORE DETAILS.
2. ALL STRUCTURAL COMPONENTS OF DESIGN TO BE REVIEWED AND STAMPED BY STRUCTURAL ENGINEER, WHICH INCLUDE:
  - DIMENSIONS AND SPECIFICATIONS OF SUBGRADE
  - DIMENSIONS AND SPECIFICATIONS OF CONCRETE AND REBAR
 THESE DESIGN DETAILS AND QUANTITIES SUBJECT TO CHANGE THROUGH ISSUED ADDENDA



LAS COLONIAS PARK  
SHORELINE AMENITIES PROJECT  
PARKING STALL DETAIL



No.	REVISION/UPDATE	Date



City of Grand Junction  
Parks and Recreation  
250 North 5th Street  
Grand Junction, CO 81501  
970.245.3666

DESIGN FIRM NAME AND ADDRESS



RiverRestoration  
P.O. Box 2418  
Carbondale, CO 81623  
www.RiverRestoration.org

PROJECT NAME AND ADDRESS

Las Colonias Park Slough  
Restoration Project  
Las Colonias Park  
Grand Junction, CO 81501

Project 11.CO24.003

Date JULY 2018

Scale

Sheet D03

151



**Notes:**

1. Erosion Control Material Must Be Placed Loosely Over Ground Surface. Do Not Stretch.
2. Excavate A 6" Wide By 6" Deep Trench Along The Top Of The Slope. The Trench Shall Run Along The Length Of The Installation. Staple Blanket Along Bottom Of Trench. Fill With Compacted Soil, Overlap Blanket Towards Toe Of Slope, And Secure With Staples Every 2'.
3. Upstream and downstream extents of erosion control blankets shall be finished with a 6" wide by 6" deep trench running down bank at extents of limits shown in plan.

**MATERIAL SPECIFICATION**

EROSION CONTROL BLANKETS SHALL BE EROSION CONTROL BLANKET C32 BD OR APPROVED EQUIVALENT.

THE APPROVED EQUIVALENT SHALL BE ALL NATURAL, DOUBLE NETTED, 100% BIODEGRADABLE BLANKET OF COCONUT (COIR) FIBER.

IT SHALL HAVE A FUNCTION LONGEVITY OF UP TO 36 MONTHS. MINIMUM TENSILE STRENGTH SHALL BE 19.9 LBS/IN AND 11.9 LBS/IN (ASTM D6818) IN THE MACHINE AND TRANSVERSE DIRECTION, RESPECTIVELY.

THE MATTING SHOULD BE CAPABLE OF WITHSTANDING SHEAR STRESS OF AT LEAST 2.90 LBS/SQFT AND FLOW VELOCITY AT LEAST OF 10 FT/SEC.

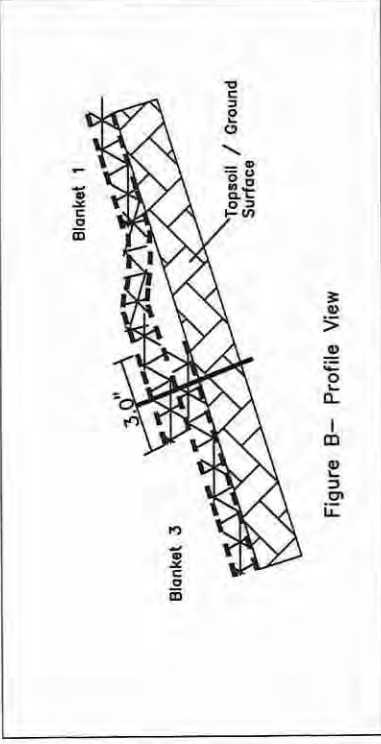
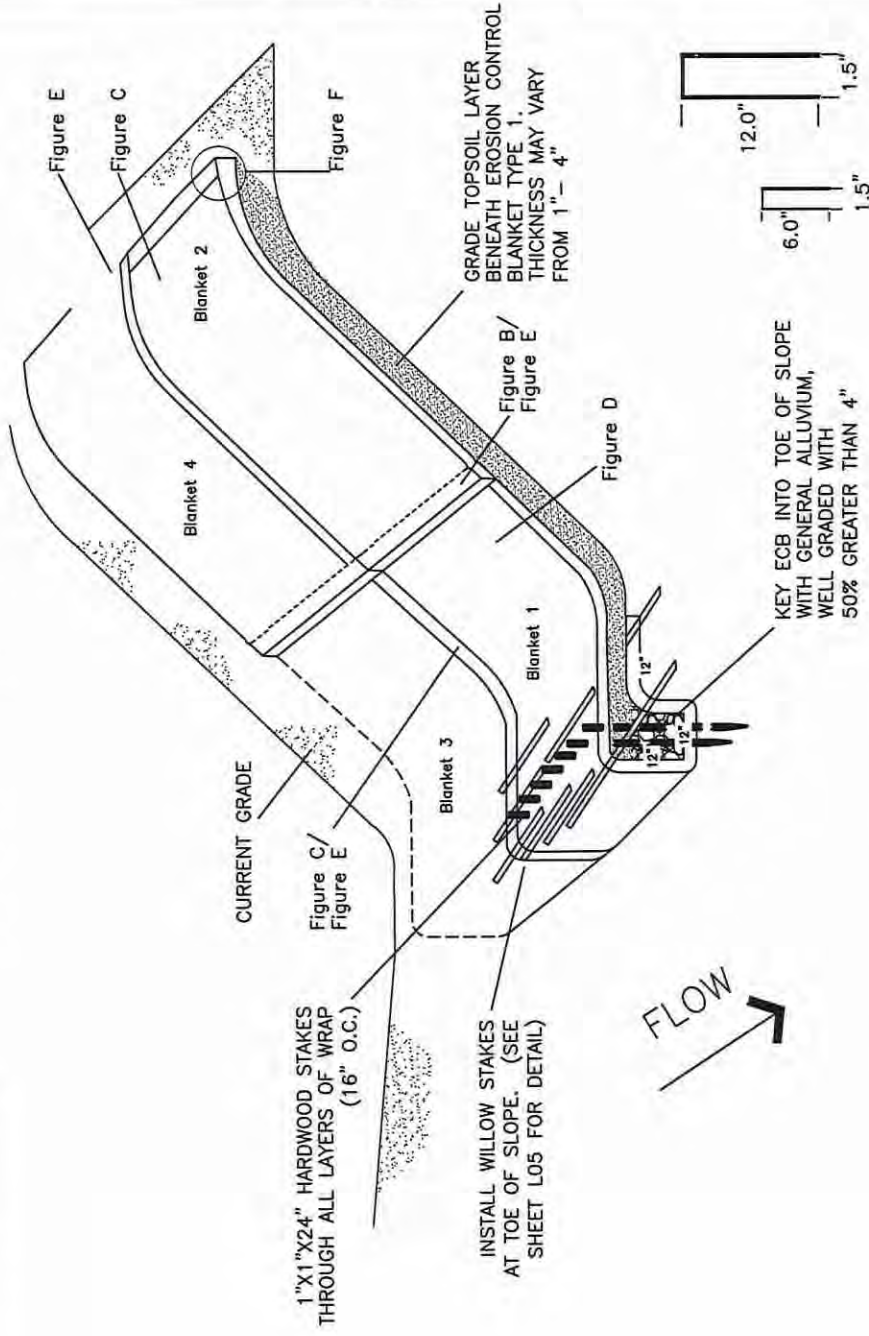


Figure B- Profile View

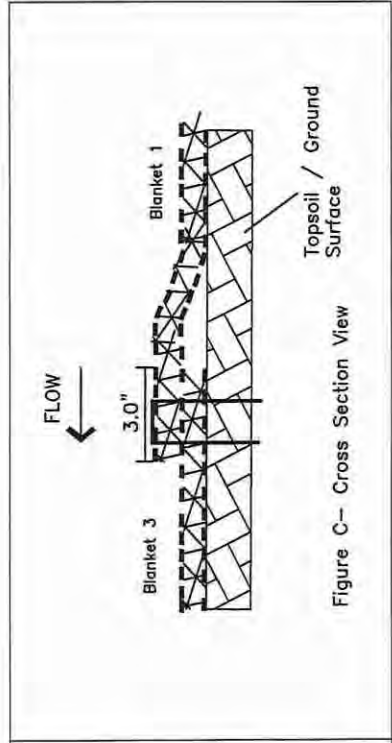
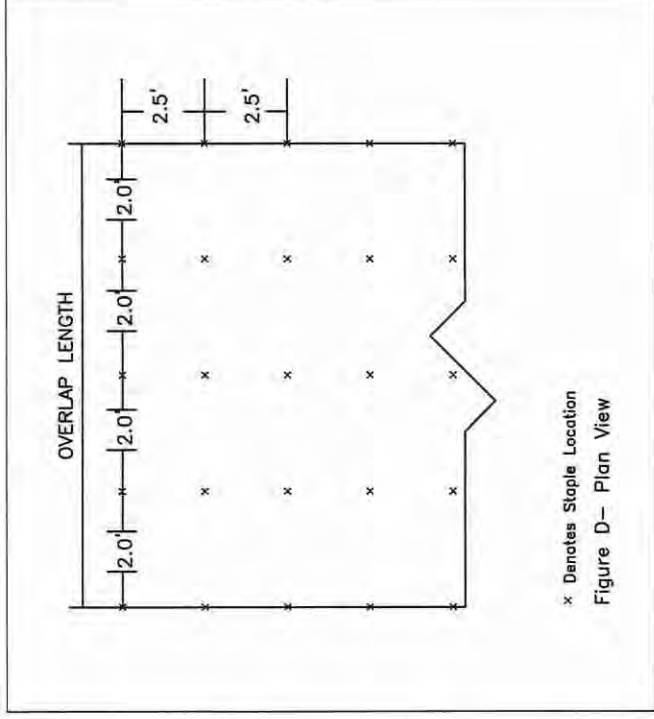
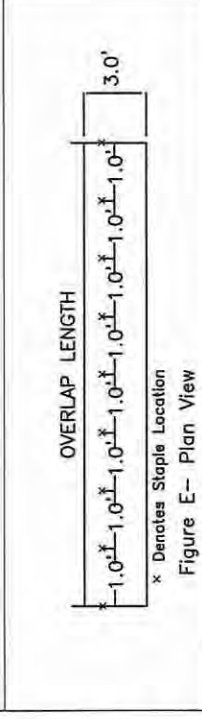


Figure C- Cross Section View



x Denotes Staple Location  
Figure D- Plan View



x Denotes Staple Location  
Figure E- Plan View

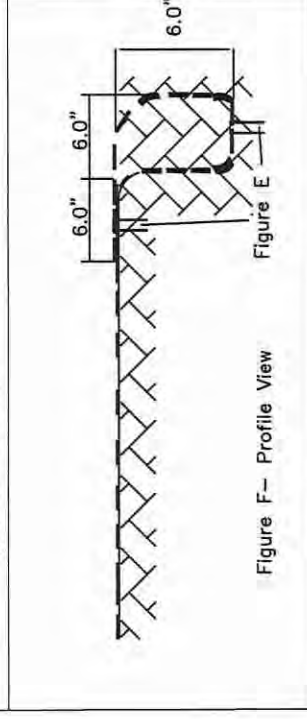


Figure F- Profile View

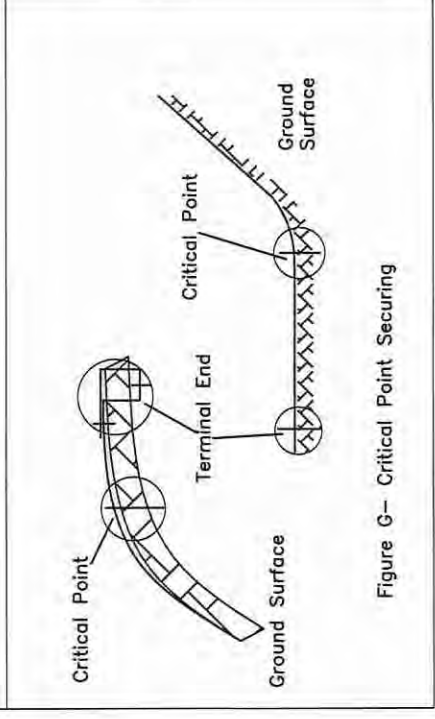


Figure G- Critical Point Securing

LAS COLONIAS PARK  
SHORELINE AMENITIES PROJECT  
EROSION CONTROL BLANKET  
INSTALLATION DETAIL II

No.	REVISION/UPDATE	Date

CLEAR NAME AND ADDRESS



City of Grand Junction  
Parks and Recreation  
250 North 5th Street  
Grand Junction, CO 81501  
970.245.3666

DESIGN FIRM NAME AND ADDRESS



RiverRestoration  
P.O. Box 248  
Carondele, CO 81623  
www.RiverRestoration.org

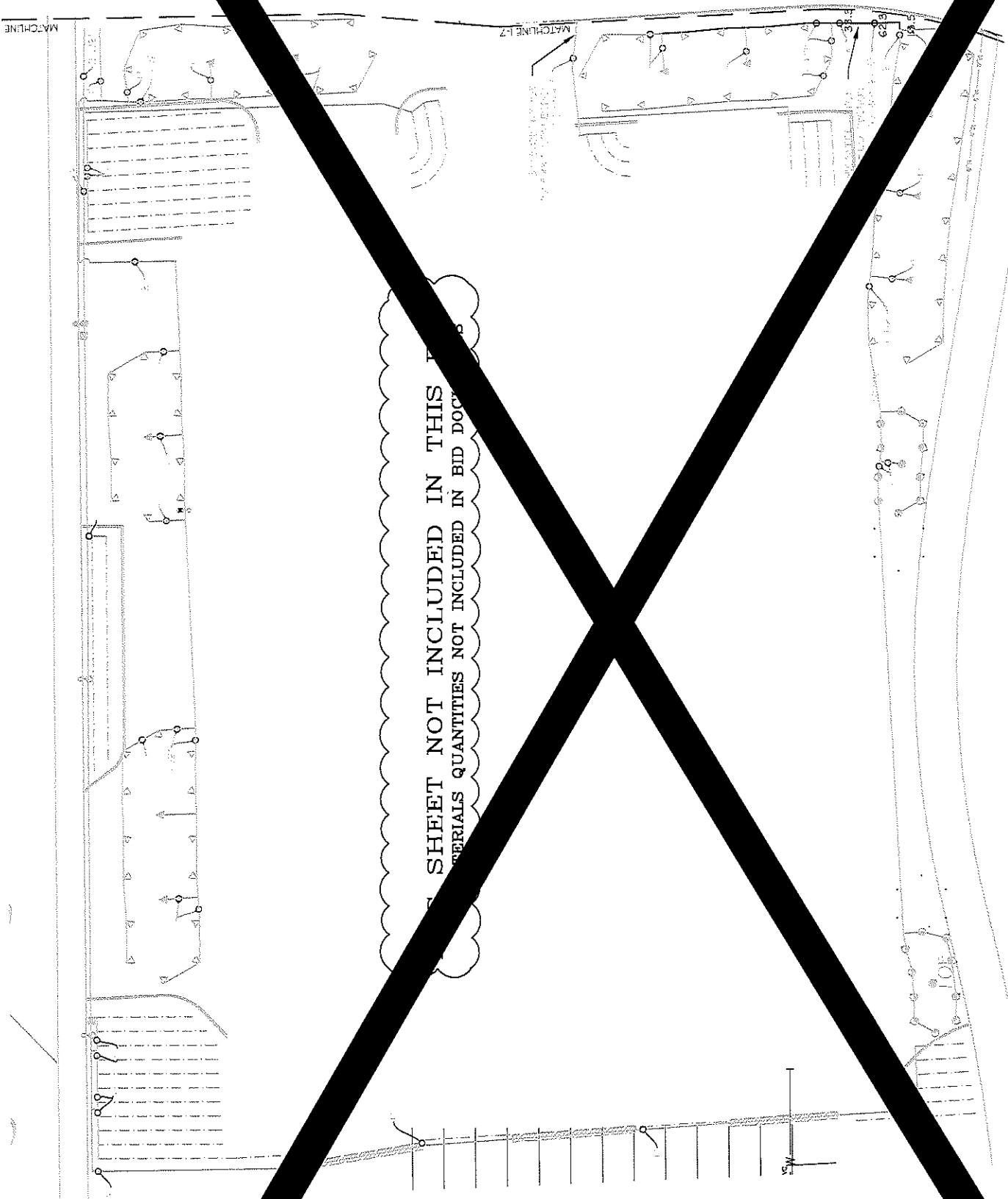
PROJECT NAME AND ADDRESS

Las Colonias Park Slough  
Restoration Project  
Las Colonias Park  
Grand Junction, CO 81501

Project	Sheet
111-CO24-003	D05
Date	Scale
JULY 2018	153

EROSION CONTROL BLANKET (ECB) INSTALLATION ALONG BANK

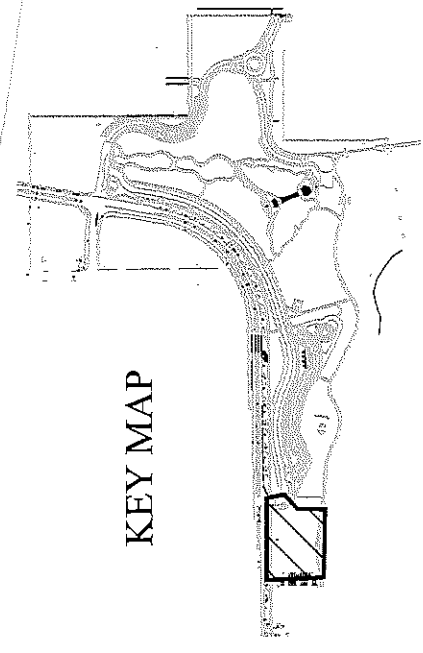
NTS



IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	BUBBLERS	PRECIP RATE
#1		FUTURE			
#2		FUTURE			
#3	1-1/2"	1401 BUBBLERS	42.5	170	1.5 in/hr
#4	1-1/2"	R-VAN5000 MFR	33.7		0.61 in/hr
#5	2"	1401 BUBBLERS	57.5	230	1.5 in/hr
#6	1-1/2"	TREE SPRAY	33.3		1.6 in/hr
#7	1-1/2"	1401 BUBBLERS	23.25	93	1.5 in/hr
#8	1-1/2"	TREE SPRAY	33.3		1.6 in/hr
#9	2"	R-VAN5000 MFR	74.51		0.61 in/hr
#10	1-1/2"	TREE SPRAY	33.3		1.6 in/hr
#11	1-1/2"	1401 BUBBLERS	24.5	96	1.5 in/hr
#12	2"	R-VAN5000 MFR	51.56		0.61 in/hr
#13	2"	TREE SPRAY	55.15		1.6 in/hr
#14	2"	1401 BUBBLERS	92	328	1.5 in/hr
#15	2"	1401 BUBBLERS	69.5	278	1.5 in/hr
#16	1-1/2"	1401 BUBBLERS	47.75	191	1.5 in/hr
#17	1-1/2"	1401 BUBBLERS	42.5	170	1.5 in/hr
#18	1-1/2"	R-VAN5000 MFR	40.50		0.61 in/hr
#19		FUTURE			
#20	1-1/2"	R-VAN5000 MFR	36.80		0.61 in/hr
#21	1-1/2"	1401 BUBBLERS	27.75	111	1.5 in/hr
#22		FUTURE			
#23		FUTURE			
#24		FUTURE			
#25		FUTURE			

- LEGEND**
- 3" DR 1.6 PVC MAIN (EXISTING)
  - 6" DR 1.6 PVC MAIN THIS CONTRACT
  - LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
  - POLY PIPE FOR BUBBLERS; 1" UNLESS NOTED OTHERWISE DETAIL BM-6
  - PIPE SIZING
  - IRRIGATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
  - IRRIGATION SLEEVE, 4" UNLESS NOTED, PREVIOUSLY INSTALLED
  - ISOLATION VALVE DETAIL AI-14
  - MANUAL DRAIN VALVE DETAIL AI-13
  - RAINBIRD FIB ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL AI-2
  - QUICK COUPLER VALVE DETAIL CI-6
  - RAINBIRD LDI (LARGE DECODER INTERFACE)
  - LSP-1 M1006 LINE SURGE PROTECTION WITH GROUND ROD
  - RAINBIRD 1004 SERIES SPRAY HEADS, DETAIL BM-2
  - WITH RAINBIRD SPRAY NOZZLE
  - ▲ 15 SERIES VAN SPRAY NOZZLE SET TO 360 DEG
  - ▲ 15 SERIES VAN SPRAY NOZZLE SET TO 120 DEG
  - ▲ 10 SERIES VAN SPRAY NOZZLE SET TO 360 DEG
  - ▲ 10 SERIES VAN SPRAY NOZZLE SET TO 120 DEG

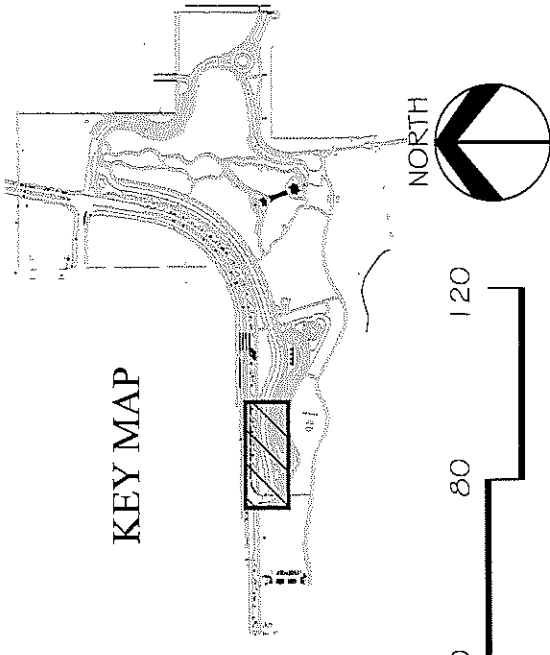
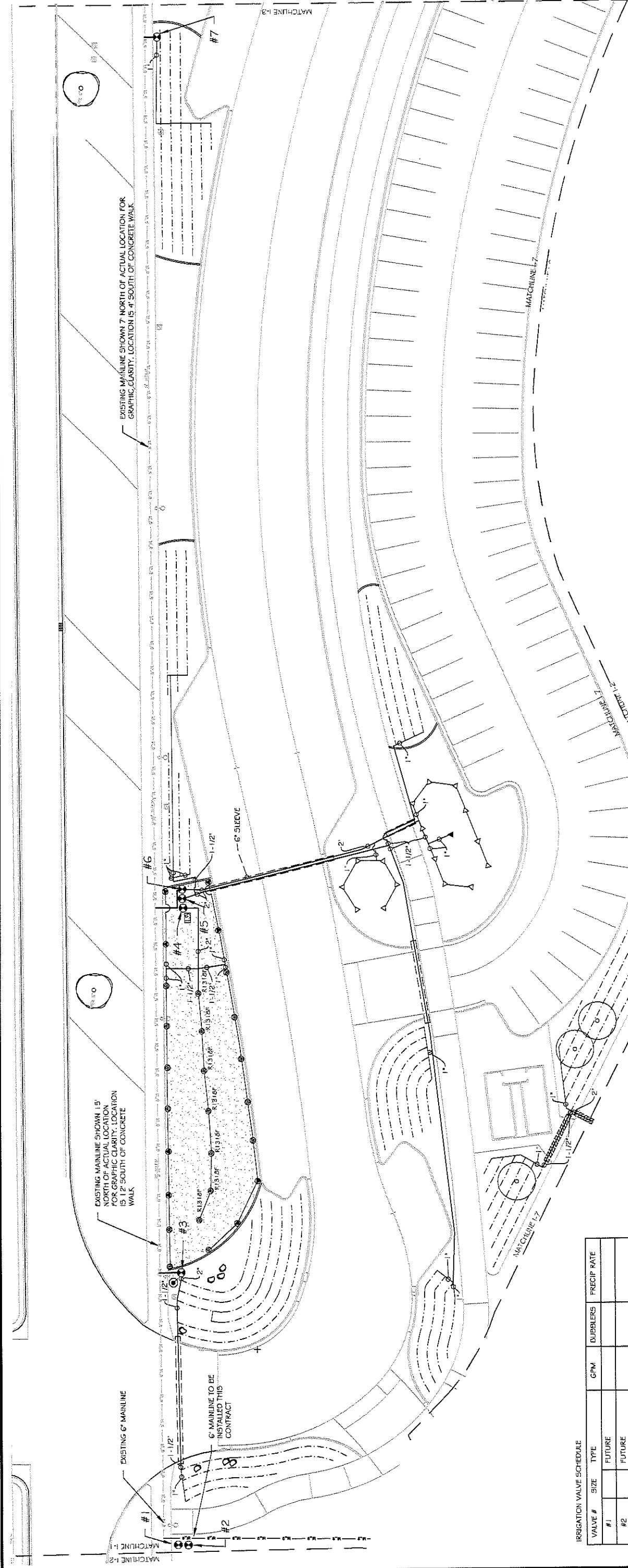


KEY MAP

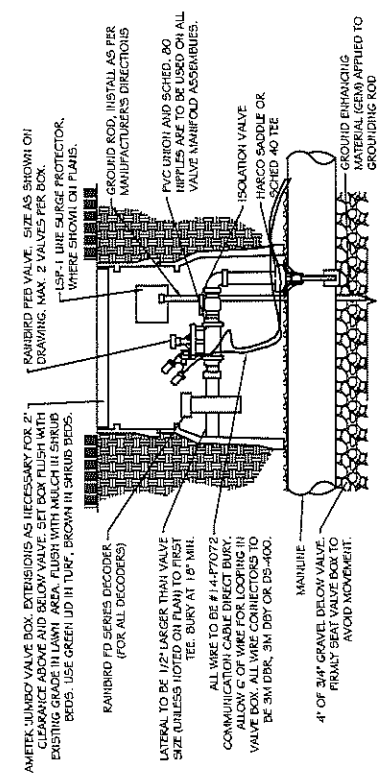


CLAYTON, ROBERTS & ASSOCIATES, INC.  
LANDSCAPE ARCHITECTURE

REVISION <input type="checkbox"/> REVISION <input type="checkbox"/> REVISION <input type="checkbox"/> REVISION <input type="checkbox"/>	DESCRIPTION _____ DATE _____ DRAWN BY CR _____ DATE 2018 _____ DESIGNED BY CR _____ DATE 2018 _____ CHECKED BY MH _____ DATE 2018 _____ APPROVED BY ZZ _____ DATE 2018 _____	SCALES: PLAN _____ 1" = 30' 1" = 20' 1" = 10'	CITY OF <b>Grand Junction</b> COLORADO	PUBLIC WORKS ENGINEERING DIVISION	LAS COLONIAS BUSINESS PARK LANDSCAPE IRRIGATION PLAN	I-1 154
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- LEGEND**
- CS90 DR 18 PVC MAIN (EXISTING)
  - CS90 DR 18 PVC MAIN THIS CONTRACT
  - LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
  - POLY PIPE FOR BUBBLERS; 1" UNLESS NOTED OTHERWISE DETAIL BM-6
  - PIPE SIZING
  - IRIGATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
  - IRIGATION SLEEVE, 4" UNLESS NOTED, PREVIOUSLY INSTALLED
  - ISOLATION VALVE DETAIL A1-14
  - MANUAL DRAIN VALVE DETAIL A1-13
  - RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL A1-2
  - QUICK COUPLER VALVE DETAIL C1-6
  - RAINBIRD LD1 (LARGE DECODER INTERFACE)
  - LSP-1 M1000B LINE SURGE PROTECTION WITH GROUND ROD
  - RAINBIRD 1004 SERIES SPRAY HEADS, DETAIL BM-2
  - WITH RAINBIRD SPRAY NOZZLE
  - 15 SERIES VAN SPRAY NOZZLE SET TO 360 DEG
  - 10 SERIES VAN SPRAY NOZZLE SET TO 120 DEG
  - 10 SERIES VAN SPRAY NOZZLE SET TO 360 DEG
  - WITH RAINBIRD R-VAN ROTARY NOZZLE
  - R-VAN 14
  - R-VAN 16
  - R-VAN 13-18 FULL CIRCLE
  - R-VAN 1724
  - R-VAN 17-24 FULL CIRCLE



IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	DUBBLERS	PRECIP RATE
#1		FUTURE			
#2		FUTURE			
#3	1-1/2"	1401 BUBBLERS	42.5	170	1.5 in/hr
#4	1-1/2"	R-VAN5000 MPR	33.7		0.61 in/hr
#5	2"	1401 BUBBLERS	57.5	230	1.5 in/hr
#6	1-1/2"	TREE SPRAY	33.3		1.6 in/hr
#7	1-1/2"	1401 BUBBLERS	23.25	93	1.5 in/hr
#8	1-1/2"	TREE SPRAY	33.3		1.6 in/hr
#9	2"	R-VAN5000 MPR	74.51		0.61 in/hr
#10	1-1/2"	TREE SPRAY	33.3		1.6 in/hr
#11	1-1/2"	1401 BUBBLERS	24.5	98	1.5 in/hr
#12	2"	R-VAN5000 MPR	51.59		0.61 in/hr
#13	2"	TREE SPRAY	55.15		1.6 in/hr
#14	2"	1401 BUBBLERS	82	328	1.5 in/hr
#15	2"	1401 BUBBLERS	69.5	278	1.5 in/hr
#16	1-1/2"	1401 BUBBLERS	47.75	191	1.5 in/hr
#17	1-1/2"	1401 BUBBLERS	42.5	170	1.5 in/hr
#18	1-1/2"	R-VAN5000 MPR	40.50		0.61 in/hr
#19		FUTURE			
#20	1-1/2"	R-VAN5000 MPR	36.00		0.61 in/hr
#21	1-1/2"	1401 BUBBLERS	27.75	111	1.5 in/hr
#22		FUTURE			
#23		FUTURE			
#24		FUTURE			
#25		FUTURE			

REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

DESIGNATION \_\_\_\_\_ DATE \_\_\_\_\_

DRAWN BY CR \_\_\_\_\_ DATE \_\_\_\_\_

DESIGNED BY CR \_\_\_\_\_ DATE \_\_\_\_\_

CHECKED BY MH \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY ZZ \_\_\_\_\_ DATE \_\_\_\_\_

SCALES: PLAN 1" = 40'

SECTIONAL 1" = 20'

A RAINBIRD PEB VALVE W/ 2 WIRE CONTROL

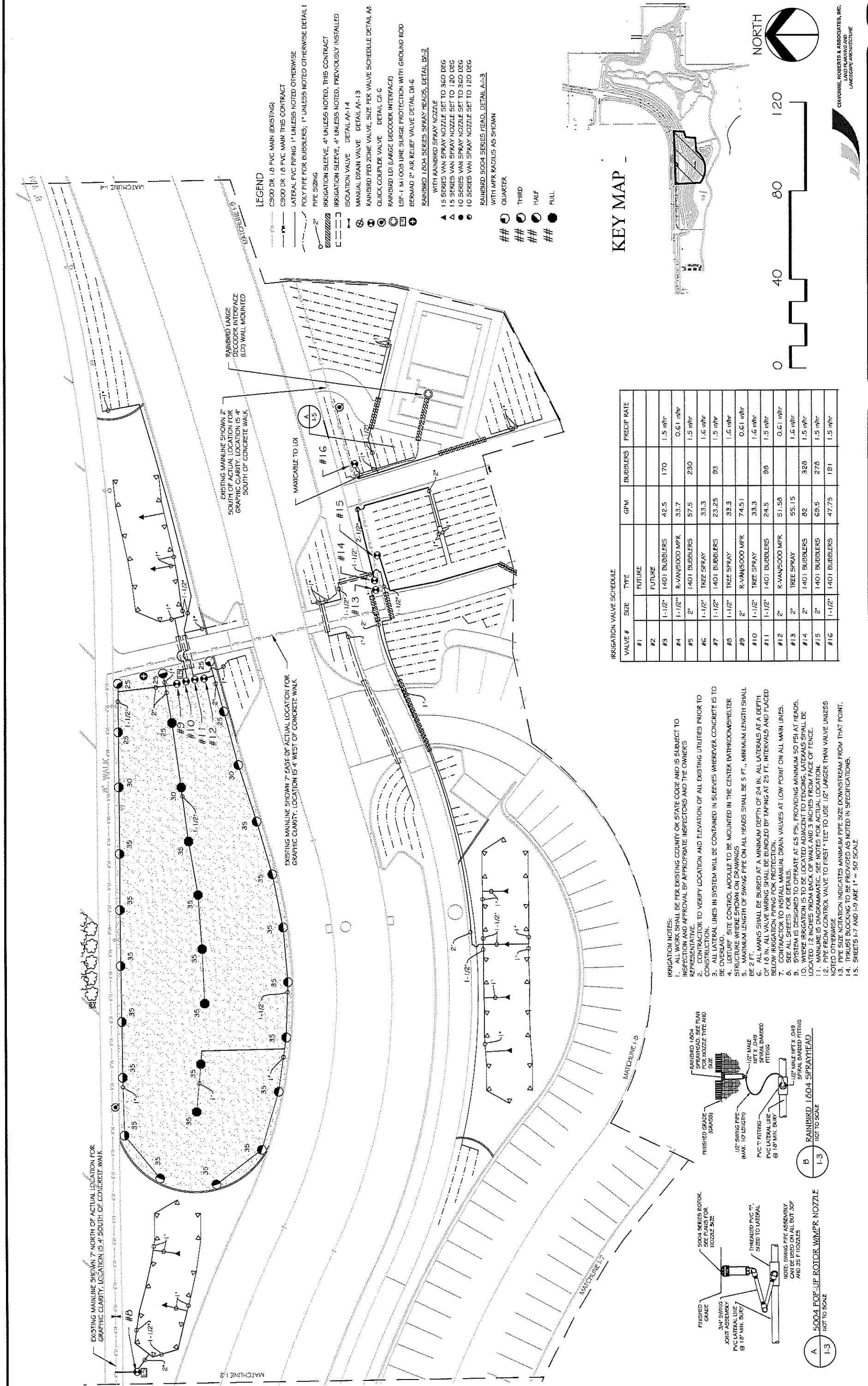
1-2 NOT TO SCALE

PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK IRRIGATION PLAN

GIAMORRE, ROBERTS & ASSOCIATES, INC.  
LANDSCAPE ARCHITECTURE

I-2  
155



EXISTING MAINLINE SHOWN 7' NORTH OF ACTUAL LOCATION FOR GRAPHIC CLARITY. LOCATION IS 4' SOUTH OF CONCRETE WALK

EXISTING MAINLINE SHOWN 7' EAST OF ACTUAL LOCATION FOR GRAPHIC CLARITY. LOCATION IS 4' WEST OF CONCRETE WALK

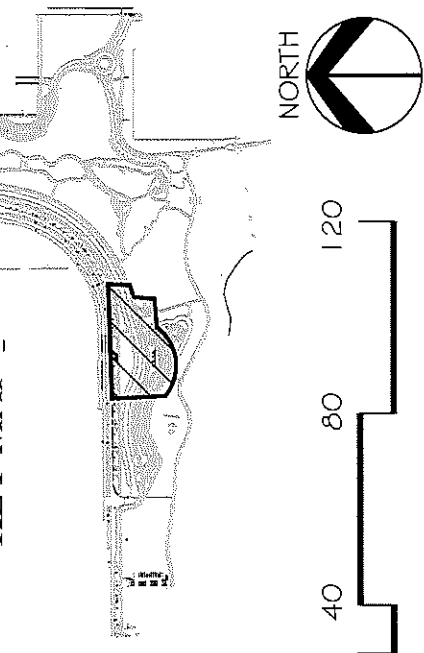
EXISTING MAINLINE SHOWN 2' SOUTH OF ACTUAL LOCATION FOR GRAPHIC CLARITY. LOCATION IS 4' SOUTH OF CONCRETE WALK

RAINBIRD LARGE DECODER INTERFACE (LDI) WALL MOUNTED

**LEGEND**

- CS900 DR 1.8 PVC MAIN (EXISTING)
- CS900 DR 1.8 PVC MAIN THIS CONTRACT
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- POLY PIPE FOR BUBBLERS; 1" UNLESS NOTED OTHERWISE
- PIPE SIZING
- IRRI GATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
- IRRI GATION SLEEVE, 4" UNLESS NOTED, PREVIOUSLY INSTALLED
- ISOLATION VALVE DETAIL AP-14
- MANUAL DRAIN VALVE DETAIL AP-13
- RAINBIRD FED ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL AP-1
- QUICK COUPLER VALVE DETAIL CA-6
- RAINBIRD LDI (LARGE DECODER INTERFACE)
- LSP-1 M1008 LINE SURGE PROTECTION WITH GROUND ROD
- BERMAD 2" AIR RELIEF VALVE DETAIL DM-6
- RAINBIRD 18004 SERIES SPRAY HEADS, DETAIL BA-2 WITH RAINBIRD SPRAY NOZZLE
- 15 SERIES VAN SPRAY NOZZLE SET TO 360 DEG
- 15 SERIES VAN SPRAY NOZZLE SET TO 120 DEG
- 10 SERIES VAN SPRAY NOZZLE SET TO 360 DEG
- 10 SERIES VAN SPRAY NOZZLE SET TO 120 DEG
- RAINBIRD 5004 SERIES HEAD, DETAIL A-3 WITH MPR RADIUS AS SHOWN
- QUARTER
- THIRD
- HALF
- FULL

**KEY MAP**

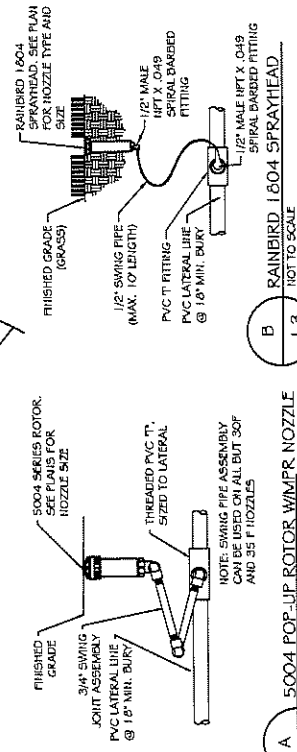


IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	BUBBLERS	GPM	PRECIP RATE
#1		FUTURE			
#2		FUTURE			
#3	1-1/2"	1401 BUBBLERS	42.5	170	1.5 in/hr
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#6	1-1/2"	TREE SPRAY	33.3		1.6 in/hr
#7	1-1/2"	1401 BUBBLERS	23.25	93	1.5 in/hr
#8	1-1/2"	TREE SPRAY	33.3		1.6 in/hr
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#10	1-1/2"	TREE SPRAY	33.3		1.6 in/hr
#11	1-1/2"	1401 BUBBLERS	24.5	98	1.5 in/hr
#12	2"	R-VAN5000 MPR	51.59		0.61 in/hr
#13	2"	TREE SPRAY	55.15		1.6 in/hr
#14	2"	1401 BUBBLERS	82	320	1.5 in/hr
#15	2"	1401 BUBBLERS	69.5	278	1.5 in/hr
#16	1-1/2"	1401 BUBBLERS	47.75	191	1.5 in/hr

**IRRIGATION NOTES:**

1. ALL WORK SHALL BE PER EXISTING COUNTY OR STATE CODE AND IS SUBJECT TO INSPECTION AND APPROVAL BY APPROPRIATE INSPECTORS AND THE OWNER'S REPRESENTATIVE.
2. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. ALL LATERAL LINES IN SYSTEM WILL BE CONTAINED IN SLEEVES WHEREVER CONCRETE IS TO BE OVERLAD.
4. LOT/URF SITE CONTROL MODULE TO BE MOUNTED IN THE CENTER BATHROOM/SHOWER STRUCTURE WHERE SHOWN ON DRAWINGS
5. MAXIMUM LENGTH OF SWING PIPE ON ALL HEADS SHALL BE 5 FT., MINIMUM LENGTH SHALL BE 2 FT.
6. ALL MAINS SHALL BE BURIED AT A MINIMUM DEPTH OF 24 IN. ALL LATERALS AT A DEPTH OF 18 IN. VALVE MANIFOLD SHALL BE BUNDLED BY TYPING AT 23 FT. INTERVALS AND PLACED BELOW IRRIGATION PIPING FOR PROTECTION.
7. CONTRACTOR TO INSTALL MANUAL DRAIN VALVES AT LOW POINT ON ALL MAIN LINES.
8. SEE ALL SHEETS FOR DETAILS.
9. SYSTEM IS DESIGNED TO OPERATE AT 65 PSI, PROVIDING MINIMUM 50 PSI AT HEADS.
10. WHERE IRRIGATION IS TO BE LOCATED ADJACENT TO FENCING, LATERALS SHALL BE LOCATED 12 INCHES FROM BACK OF WALK AND 3 INCHES FROM FACE OF FENCE.
11. MAINLINE IS DIAGRAMMATIC. SEE NOTES FOR ACTUAL LOCATION.
12. PIPE FROM CONTROL VALVE TO FIRST TEE TO USE 1/2" LARGER THAN VALVE UNLESS NOTED OTHERWISE
13. PIPE SIZE NOTATION INDICATES MINIMUM PIPE SIZE DOWNSTREAM FROM THAT POINT.
14. THURST BLOCKING TO BE PROVIDED AS NOTED IN SPECIFICATIONS.
15. SHEETS 1-7 AND 1-9 ARE 1" = 50' SCALE



REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

DESCRIPTION \_\_\_\_\_

DATE \_\_\_\_\_

DRAWN BY CR DATE 7/7/2018

DESIGNED BY CR DATE 7/7/2018

CHECKED BY MH DATE 7/7/2018

APPROVED BY ZZ DATE 2018

SCALE: PLAN 1" = 50'

CITY OF **Grand Junction** COLORADO

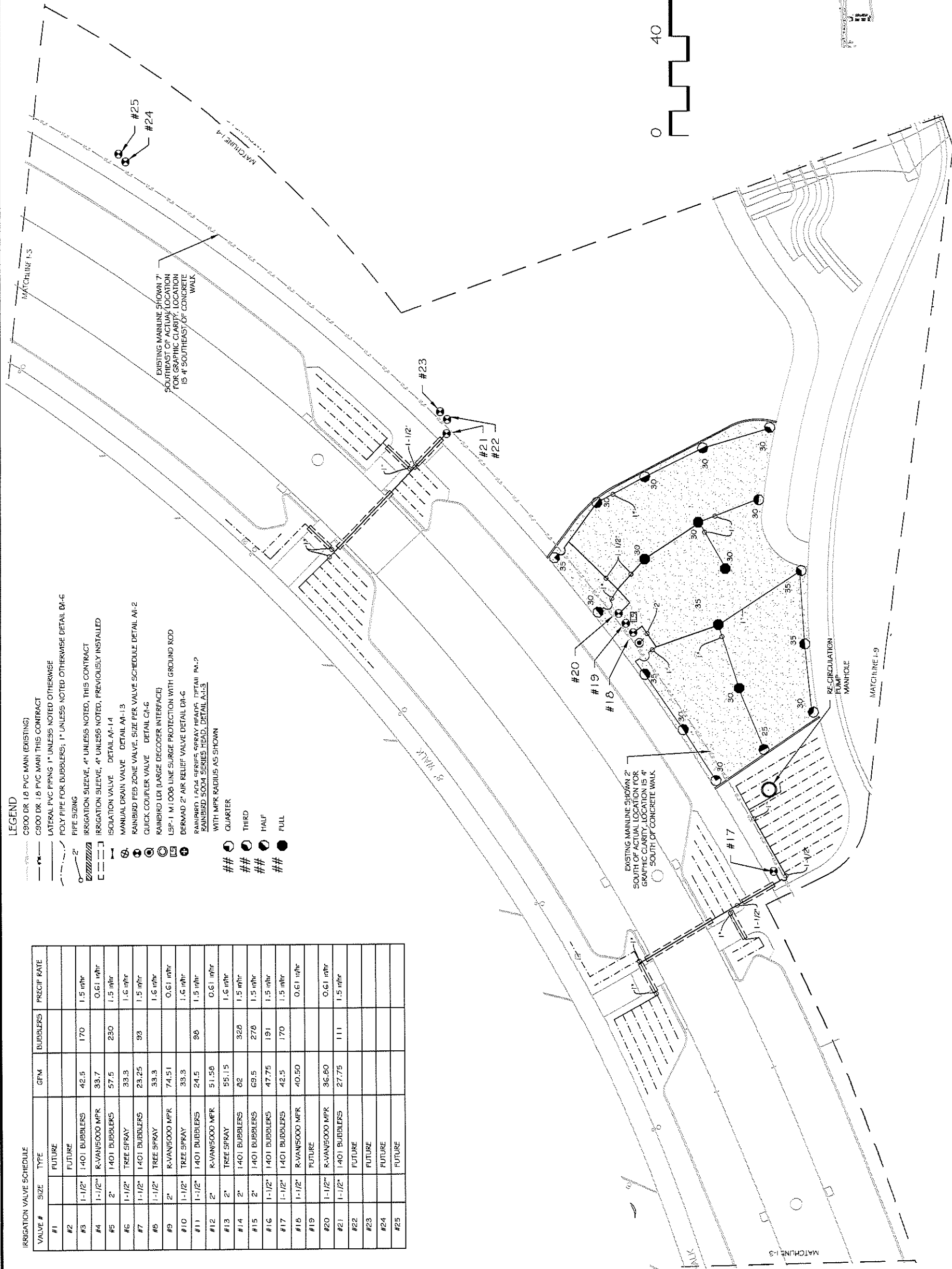
PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK IRRIGATION PLAN

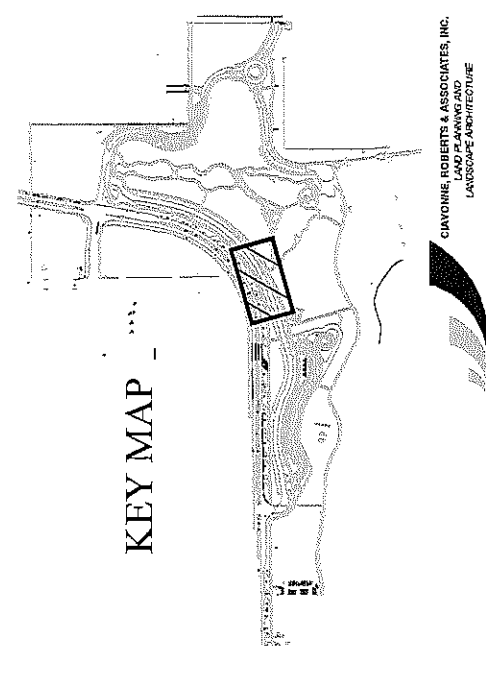
I-3 156

VALVE #	SIZE	TYPE	GPM	BUBBLERS	PRECIP RATE
#1		FUTURE			
#2		FUTURE			
#3	1-1/2"	1401 BUBBLERS	42.5	170	1.5 in/hr
#4	1-1/2"	R-VAN5000 MPR	33.7		0.61 in/hr
#5	2"	1401 BUBBLERS	57.5	230	1.5 in/hr
#6	1-1/2"	TREE SPRAY	33.3		1.6 in/hr
#7	1-1/2"	1401 BUBBLERS	23.25	93	1.5 in/hr
#8	1-1/2"	TREE SPRAY	33.3		1.6 in/hr
#9	2"	R-VAN5000 MPR	74.51		0.61 in/hr
#10	1-1/2"	TREE SPRAY	33.3		1.5 in/hr
#11	1-1/2"	1401 BUBBLERS	24.5	96	1.5 in/hr
#12	2"	R-VAN5000 MPR	51.56		0.61 in/hr
#13	2"	TREE SPRAY	55.15		1.6 in/hr
#14	2"	1401 BUBBLERS	82	328	1.5 in/hr
#15	2"	1401 BUBBLERS	69.5	278	1.5 in/hr
#16	1-1/2"	1401 BUBBLERS	47.75	191	1.5 in/hr
#17	1-1/2"	1401 BUBBLERS	42.5	170	1.5 in/hr
#18	1-1/2"	R-VAN5000 MPR	40.50		0.61 in/hr
#19		FUTURE			
#20	1-1/2"	R-VAN5000 MPR	36.80		0.61 in/hr
#21	1-1/2"	1401 BUBBLERS	27.75	111	1.5 in/hr
#22		FUTURE			
#23		FUTURE			
#24		FUTURE			
#25		FUTURE			

- LEGEND**
- C900 DR 18 PVC MAIN (EXISTING)
  - C900 DR 18 PVC MAIN (THIS CONTRACT)
  - LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
  - POLY PIPE FOR BUBBLERS; 1" UNLESS NOTED OTHERWISE DETAIL DI-6
  - PIPE SIZING
  - IRRIGATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
  - IRRIGATION SLEEVE, 4" UNLESS NOTED, PREVIOUSLY INSTALLED
  - ISOLATION VALVE DETAIL AI-14
  - MANUAL DRAIN VALVE DETAIL AI-13
  - RAINBIRD FEED ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL AI-2
  - QUICK COUPLER VALVE DETAIL CH-6
  - RAINBIRD UBI (LARGE DECODER INTERFACE)
  - LSP-1 M1008 LINE SURGE PROTECTION WITH GROUND ROD
  - DERMAD 2" AIR RELIEF VALVE DETAIL DI-6
  - RAINBIRD FACI SERIES SPRAY HEADS DETAIL RA-2
  - RAINBIRD SOCH SERIES HEAD, DETAIL AS-5
  - WITH MPR RADIUS AS SHOWN
  - QUARTER
  - THIRD
  - HALF
  - FULL



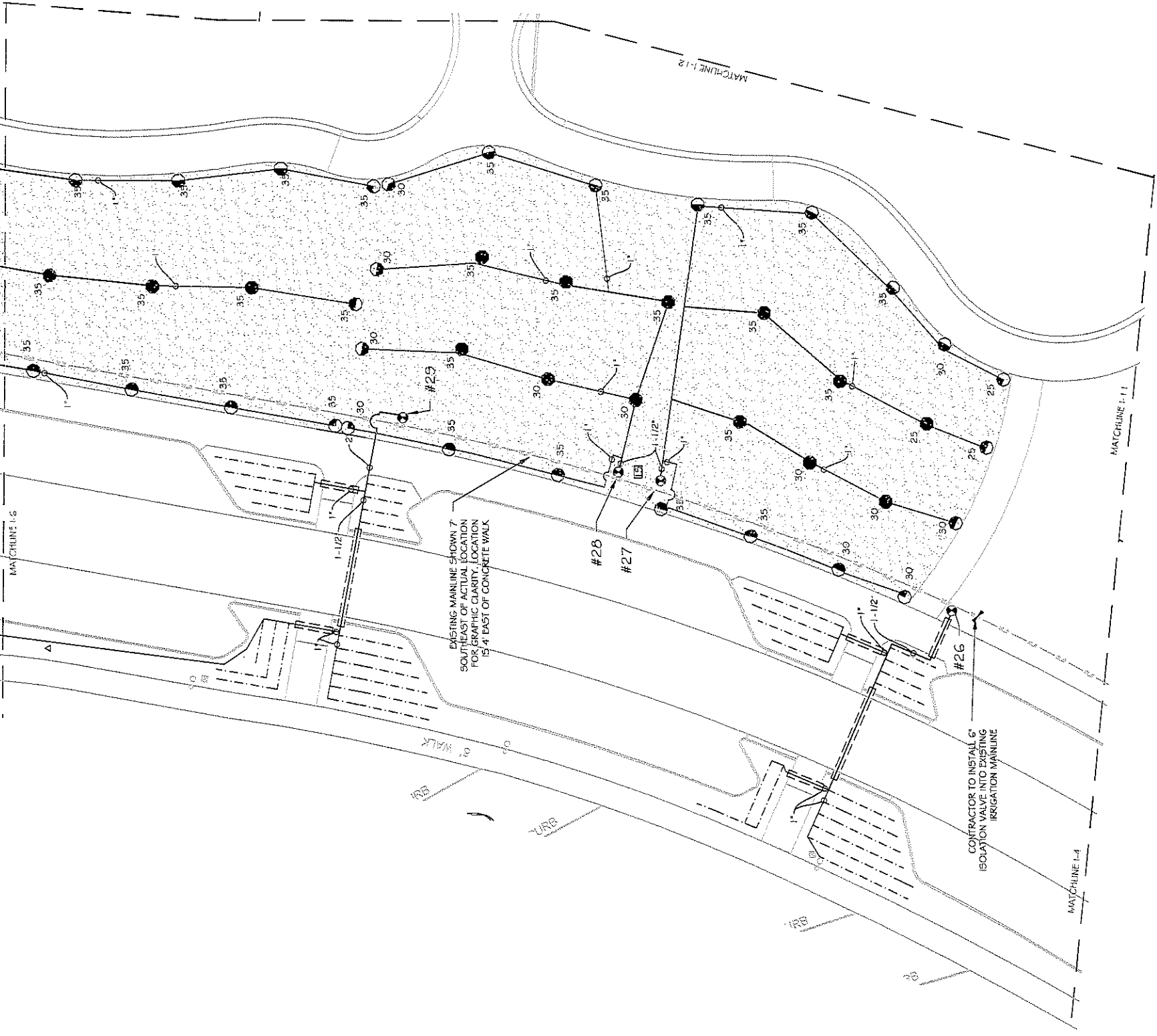
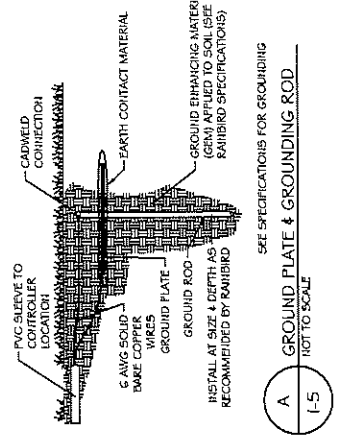
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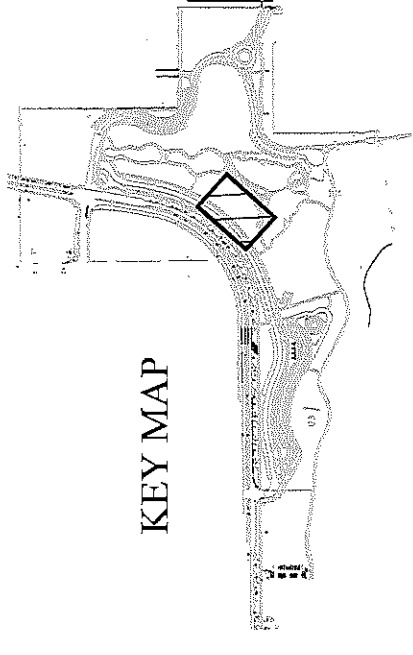
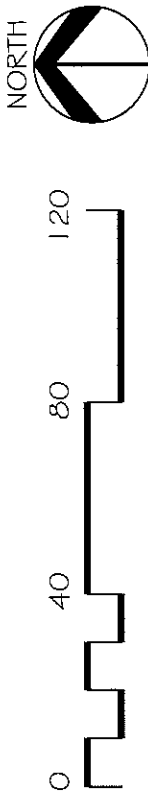
CLAYTON, ROBERTS & ASSOCIATES, INC.  
LAND PLANNING AND  
LANDSCAPE ARCHITECTURE

REVISION $\Delta$ REVISION $\Delta$ REVISION $\Delta$ REVISION $\Delta$	DESCRIPTION    	DATE    	DRAWN BY CR DESIGNED BY CR CHECKED BY MH APPROVED BY ZL	DATE 7/7/2018 DATE 7/7/2018 DATE 7/7/2018 DATE 2018	SCALES: PLAN 1"=30' 	CITY OF <b>Grand Junction</b> COLORADO	PUBLIC WORKS ENGINEERING DIVISION	LAS COLONIAS BUSINESS PARK IRRIGATION PLAN	I-4 157
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VALVE #	SIZE	TYPE	GPM	BUBBLERS	PRECIP RATE
#26	1-1/2"	1401 BUBBLERS	20	112	1.5 in/hr
#27	2"	R-VAN5000 MPR	68.0		0.61 in/hr
#28	2"	R-VAN5000 MPR	62.3		0.61 in/hr
#29	1-1/2"	1401 BUBBLERS	42.5	170	1.5 in/hr
#30	2"	R-VAN5000 MPR	62.7		0.61 in/hr
#31	1-1/2"	R-VAN5000 MPR	44.3		0.61 in/hr
#32	2"	1401 BUBBLERS	64.25	257	1.5 in/hr
#33	1-1/2"	TREE SPRAY	22.2		1.5 in/hr
#34	2"	FOND SUPPLY	100		
#35	1-1/2"	1401 BUBBLERS	33.25	133	1.5 in/hr
#36	1-1/2"	1401 BUBBLERS	36.25	153	1.5 in/hr
#37	1-1/2"	1401 BUBBLERS	49.75	199	1.5 in/hr
#38	2"	R-VAN5000 MPR	73.0		0.61 in/hr
#39	2"	R-VAN5000 MPR	60.2		0.61 in/hr
#40		FUTURE			
#41	2"	R-VAN5000 MPR	70.9		0.61 in/hr
#42	2"	R-VAN5000 MPR	74.5		0.61 in/hr
#43	2"	R-VAN5000 MPR	74.7		0.61 in/hr
#44	2"	R-VAN5000 MPR	70.0		0.61 in/hr
#45	2"	R-VAN5000 MPR	61.4		0.61 in/hr
#46	2"	R-VAN5000 MPR	70.14		0.61 in/hr
#47		FUTURE			
#48		FUTURE			
#49	1-1/2"	1401 BUBBLERS	45.5	102	1.5 in/hr
#50	2"	G504 FALCON ROTOR	76.6		1.05 in/hr



- LEGEND**
- CS900 DR 1.0 PVC MAIN (EXISTING)
  - CS900 DR 1.0 PVC MAIN THIS CONTRACT
  - LATERAL PVC PIPING, 1" UNLESS NOTED OTHERWISE
  - POLY PIPE FOR BUBBLERS; 1" UNLESS NOTED OTHERWISE DETAIL BA-6
  - PIPE SIZING
  - IRRIGATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
  - IRRIGATION SLEEVE, 4" UNLESS NOTED, PREVIOUSLY INSTALLED
  - ISOLATION VALVE DETAIL AM-14
  - MANUAL DRAIN VALVE DETAIL AM-13
  - RAIBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL AM-2
  - QUICK COUPLER VALVE DETAIL CI-6
  - RAIBIRD LD (LARGE DECODER INTERFACE)
  - LSP-1 M1.000 LINE SURGE PROTECTION WITH GROUND ROD
  - BERMAD 2" AIR RELIEF VALVE DETAIL DI-6
  - RAIBIRD 15004 SERIES SPRAY HEADS, DETAIL BA-2
  - WITH RAIBIRD SPRAY NOZZLE
  - 15 SERIES VAN SPRAY NOZZLE SET TO 360 DEG
  - 15 SERIES VAN SPRAY NOZZLE SET TO 120 DEG
  - 10 SERIES VAN SPRAY NOZZLE SET TO 360 DEG
  - 10 SERIES VAN SPRAY NOZZLE SET TO 120 DEG
  - RAIBIRD 50004 SERIES HEAD, DETAIL A-I-3
  - WITH MPR RADIUS AS SHOWN
  - WITH MPR RADIUS AS SHOWN
  - QUARTER
  - THIRD
  - HALF
  - FULL



REVISION	DATE	DESCRIPTION
Δ		
Δ		
Δ		
Δ		

SCALE:	PLAN	1" = 30'
	SECTION	1" = 10'

DRAWN BY	CR	DATE	7/7/2018
DESIGNED BY	CR	DATE	7/7/2018
CHECKED BY	MH	DATE	7/7/2018
APPROVED BY	ZZ	DATE	2018

CITY OF  
**Grand Junction**  
COLORADO

PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
IRRIGATION PLAN

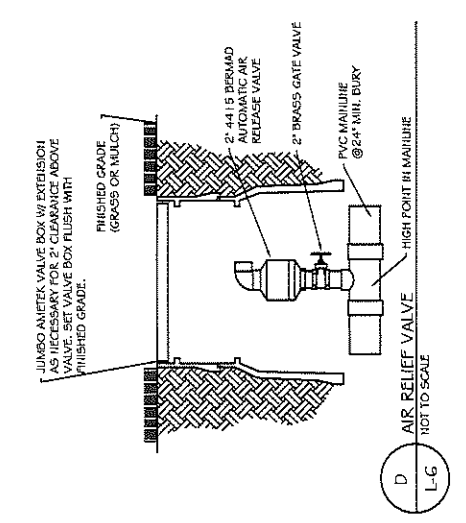
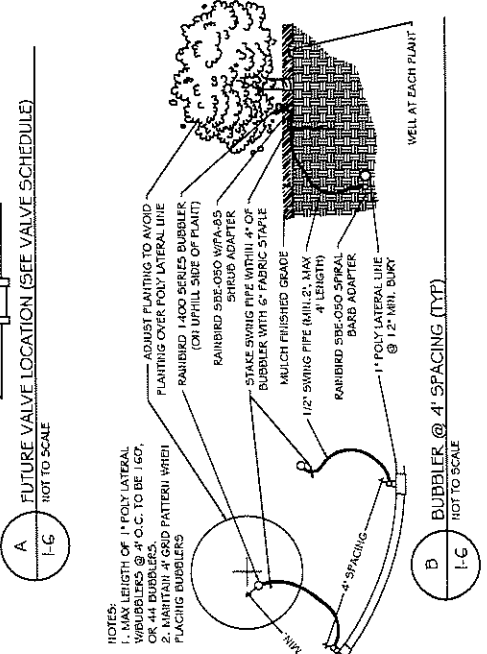
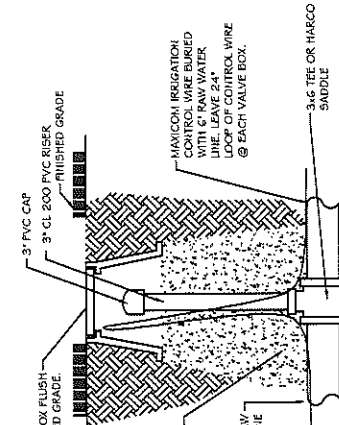
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158

CLAYTON, ROBERTS & ASSOCIATES, INC.  
LAND PLANNING AND  
LANDSCAPE ARCHITECTURE

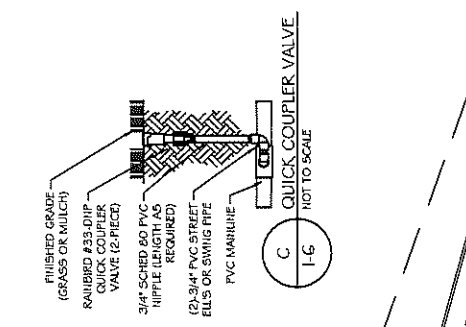


IRRIGATION VALVE SCHEDULE

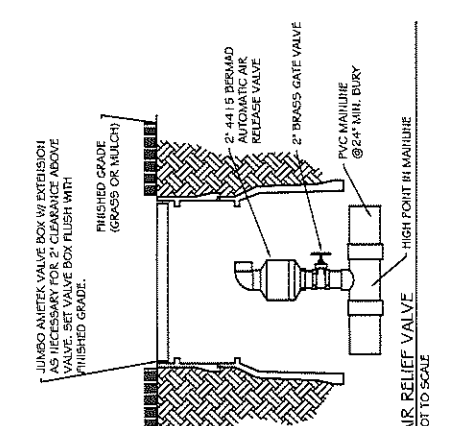
VALVE #	SIZE	TYPE	GPM	BUBBLERS	PRECIP RATE
#26	1-1/2"	1401 BUBBLERS	20	112	1.5 in/hr
#27	2"	R-VAN5000 MPR	65.0	0.61	in/hr
#28	2"	R-VAN5000 MPR	62.3	0.61	in/hr
#29	1-1/2"	1401 BUBBLERS	42.5	170	1.5 in/hr
#30	2"	R-VAN5000 MPR	62.7	0.61	in/hr
#31	1-1/2"	R-VAN5000 MPR	44.3	0.61	in/hr
#32	2"	1401 BUBBLERS	64.25	257	1.5 in/hr
#33	1-1/2"	TREE SPRAY	22.2		1.6 in/hr
#34	2"	POND SUPPLY	100		
#35	1-1/2"	1401 BUBBLERS	33.25	133	1.5 in/hr
#36	1-1/2"	1401 BUBBLERS	38.25	153	1.5 in/hr
#37	1-1/2"	1401 BUBBLERS	49.75	199	1.5 in/hr
#38	2"	R-VAN5000 MPR	73.0	0.61	in/hr
#39	2"	R-VAN5000 MPR	80.2	0.61	in/hr
#40		FUTURE			
#41	2"	R-VAN5000 MPR	70.9	0.61	in/hr
#42	2"	R-VAN5000 MPR	74.5	0.61	in/hr
#43	2"	R-VAN5000 MPR	74.7	0.61	in/hr
#44	2"	R-VAN5000 MPR	70.0	0.61	in/hr
#45	2"	R-VAN5000 MPR	61.4	0.61	in/hr
#46	2"	R-VAN5000 MPR	70.14	0.61	in/hr
#47		FUTURE			
#48		FUTURE			
#49	1-1/2"	1401 BUBBLERS	45.5	182	1.5 in/hr
#50	2"	CSG4 FALCON ROTOR	76.6		1.05 in/hr



C QUICK COUPLER VALVE  
NOT TO SCALE

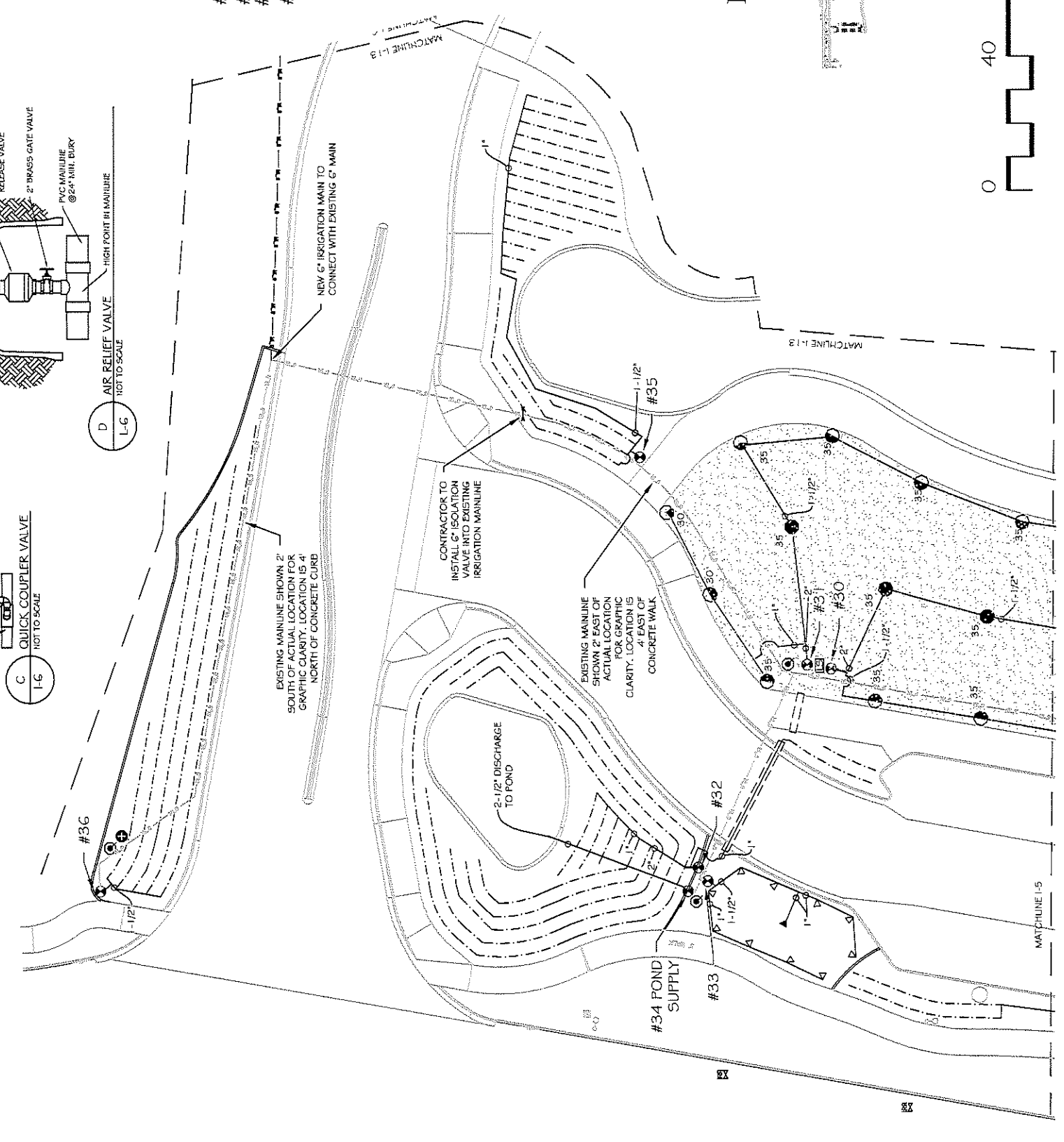


D AIR RELIEF VALVE  
NOT TO SCALE

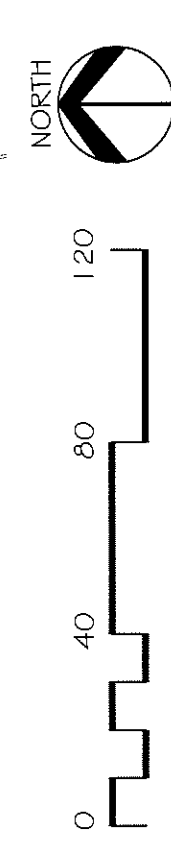
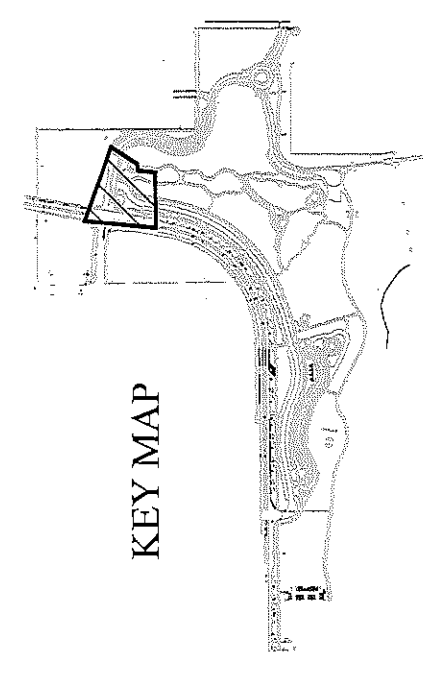


E JUMBO AIRTEX VALVE BOX WITH EXHAUSTION AS NECESSARY FOR 2\"/>

- LEGEND**
- CS900 DR 10 PVC MAIN (EXISTING)
  - CS900 DR 10 PVC MAIN THIS CONTRACT
  - LATERAL PVC PIPING 1\"/>
  - POLY PIPE FOR BUBBLERS; 1\"/>
  - PIPE SIZING
  - IRRIGATION SLEEVE, 4\"/>
  - IRRIGATION SLEEVE, 4\"/>
  - ISOLATION VALVE DETAIL AI-14
  - MANUAL DRAIN VALVE DETAIL AI-13
  - RAINBIRD FIB ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL AI-2
  - QUICK COUPLER VALVE DETAIL CI-6
  - RAINBIRD LD1 (LARGE DECODER INTERFACE)
  - LSP-1 M1000 LINE SURGE PROTECTION WITH GROUND ROD
  - BERMAD 2\"/>
  - RAINBIRD 1504 SERIES SPRAY HEADS, DETAIL BI-2
  - WITH RAINBIRD SPRAY NOZZLE
  - 1.5 SERIES VAN SPRAY NOZZLE SET TO 360 DEG
  - 1.5 SERIES VAN SPRAY NOZZLE SET TO 120 DEG
  - RAINBIRD 5004 SERIES HEAD, DETAIL AI-3
  - WITH MPR RADIUS AS SHOWN
  - QUARTER
  - THIRD
  - HALF
  - FULL



KEY MAP



REVISION	DESCRIPTION	DATE	DRAWN BY	CR	DATE

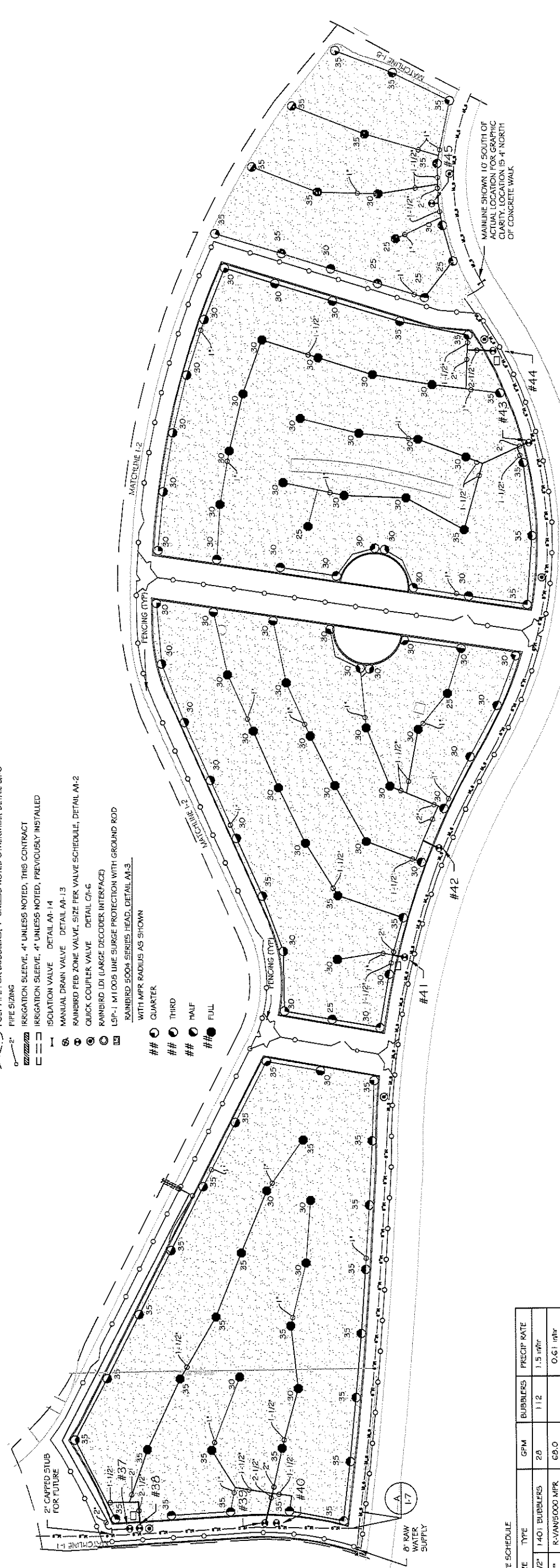
CITY OF  
**Grand Junction**  
COLORADO

PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
IRRIGATION PLAN

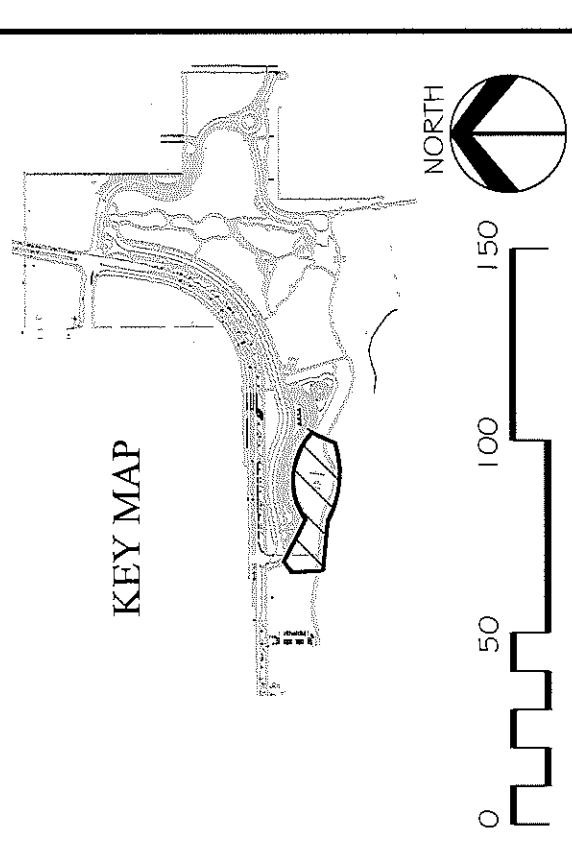
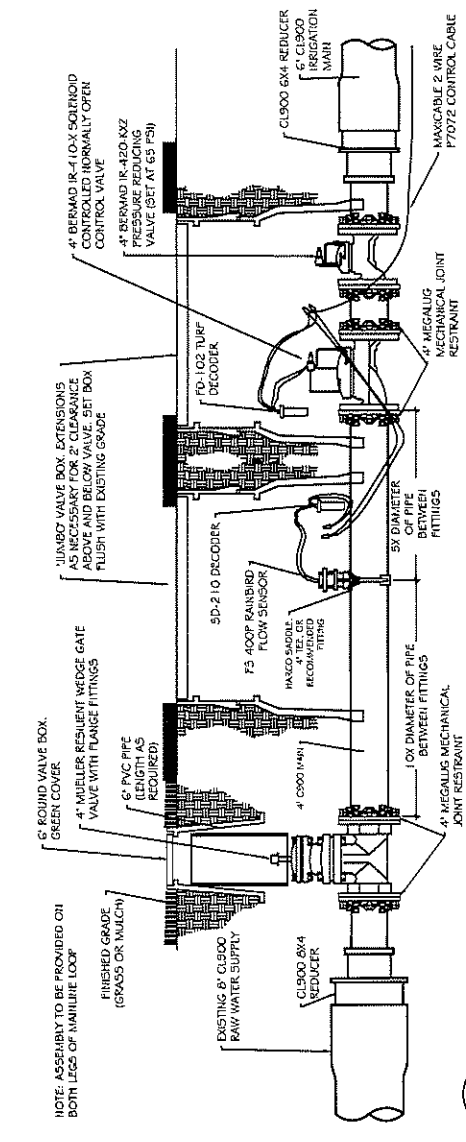
CAYANNE, ROBERTS & ASSOCIATES, INC.  
LAND PLANNING AND  
LANDSCAPE ARCHITECTURE

- LEGEND**
- 6" DR 1.8 PVC MAIN (EXISTING)
  - 6" DR 1.8 PVC MAIN THIS CONTRACT
  - LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
  - FOLY PIPE FOR BUBBLERS; 1" UNLESS NOTED OTHERWISE, DETAIL BR-6
  - PIPE SIZING
  - IRRIGATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
  - IRRIGATION SLEEVE, 4" UNLESS NOTED, PREVIOUSLY INSTALLED
  - ISOLATION VALVE DETAIL AM-14
  - MANUAL DRAIN VALVE DETAIL AM-13
  - RAINBIRD FIBER ZONE VALVE, SIZE PER VALVE SCHEDULE, DETAIL AM-2
  - QUICK COUPLER VALVE DETAIL CH-6
  - RAINBIRD LDI (LARGE DECODED INTERFACE)
  - LSP-1, M1006 WIRE SURGE PROTECTION WITH GROUND ROD WITH MPR RADIUS AS SHOWN
  - RAINBIRD 5004 SERIES HEAD, DETAIL AM-3
  - QUARTER
  - THIRD
  - HALF
  - FULL



IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	BUBBLERS	PRECIP RATE
#26	1-1/2"	1401 BUBBLERS	28	112	1.5 in/hr
#27	2"	R-VAN5000 MPR	68.0		0.61 in/hr
#28	2"	R-VAN5000 MPR	62.3		0.61 in/hr
#29	1-1/2"	1401 BUBBLERS	42.5	170	1.5 in/hr
#30	2"	R-VAN5000 MPR	62.7		0.61 in/hr
#31	1-1/2"	R-VAN5000 MPR	44.3		0.61 in/hr
#32	2"	1401 BUBBLERS	64.25	257	1.5 in/hr
#33	1-1/2"	TREE SPRAY	22.2		1.5 in/hr
#34	2"	POND SUPPLY	100		
#35	1-1/2"	1401 BUBBLERS	33.25	133	1.5 in/hr
#36	1-1/2"	1401 BUBBLERS	38.25	153	1.5 in/hr
#37	1-1/2"	1401 BUBBLERS	49.75	189	1.5 in/hr
#38	2"	R-VAN5000 MPR	73.0		0.61 in/hr
#39	2"	R-VAN5000 MPR	80.2		0.61 in/hr
#40		FUTURE			
#41	2"	R-VAN5000 MPR	70.9		0.61 in/hr
#42	2"	R-VAN5000 MPR	74.5		0.61 in/hr
#43	2"	R-VAN5000 MPR	74.7		0.61 in/hr
#44	2"	R-VAN5000 MPR	70.0		0.61 in/hr
#45	2"	R-VAN5000 MPR	61.4		0.61 in/hr
#46	2"	R-VAN5000 MPR	70.14		0.61 in/hr
#47		FUTURE			
#48		FUTURE			
#49	1-1/2"	1401 BUBBLERS	45.5	182	1.5 in/hr
#50	2"	6504 FALCON ROTOR	76.6		1.05 in/hr



CANDORNE ROBERTS & ASSOCIATES, INC.  
LANDSCAPE ARCHITECTURE

**PUBLIC WORKS  
ENGINEERING DIVISION**

**Las Colonias Business Park  
IRRIGATION PLAN**

I-7  
160

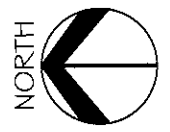
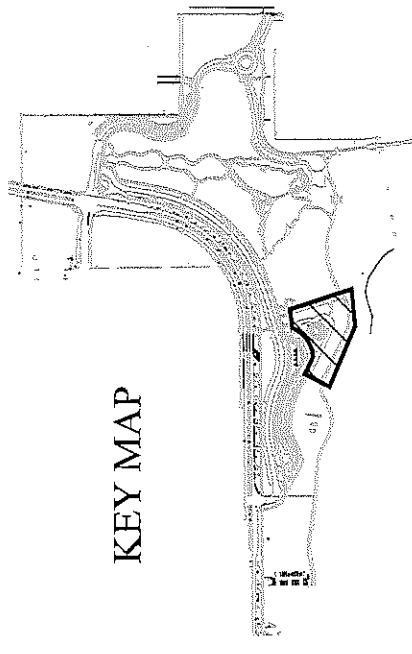
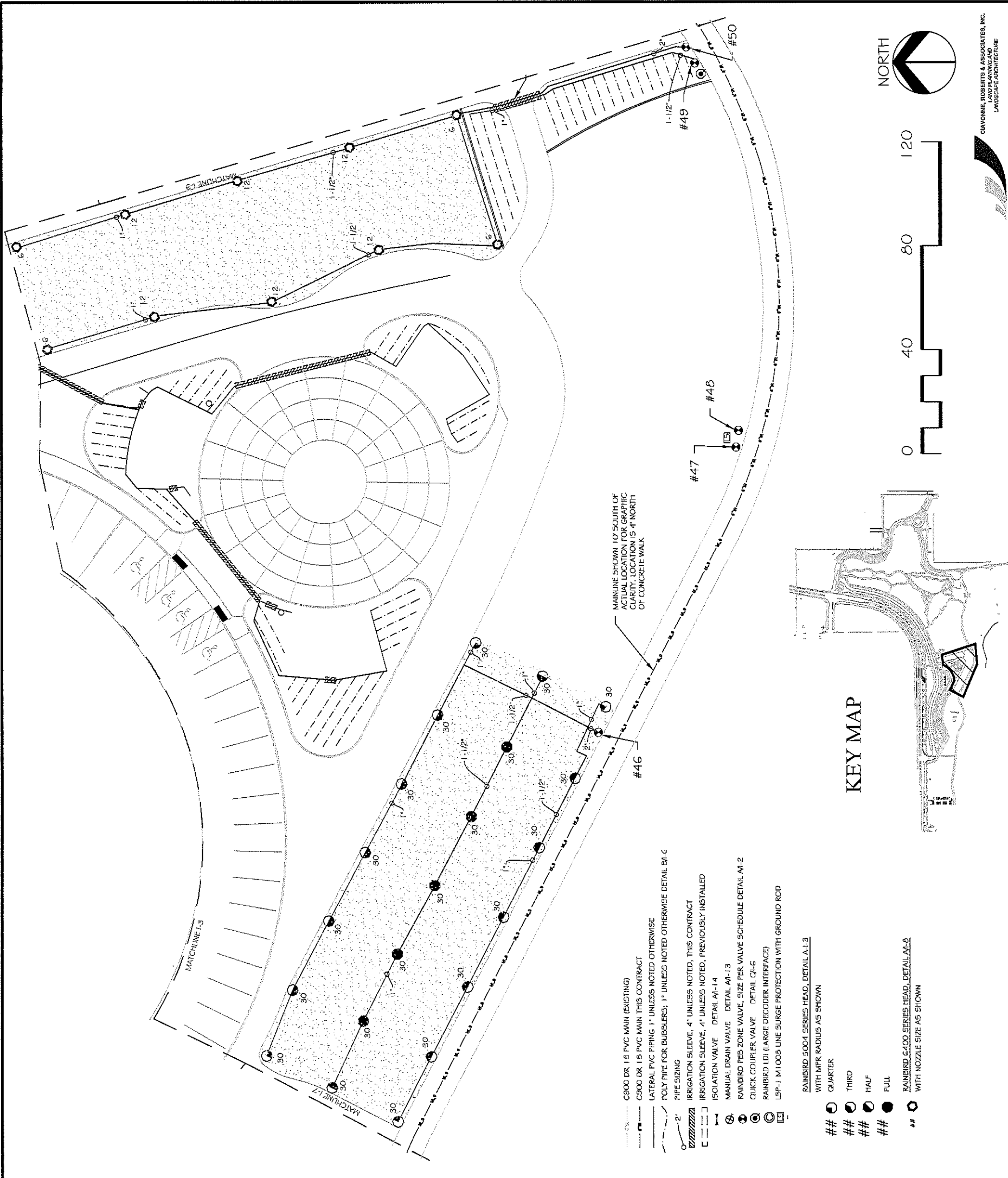
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DESCRIPTION \_\_\_\_\_ DATE \_\_\_\_\_

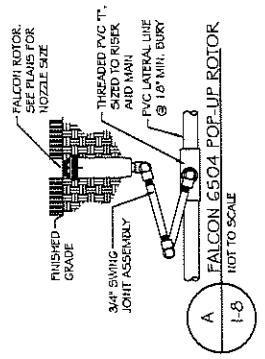
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DESIGNED BY: XX DATE: 7/17/2018  
CHECKED BY: YJ DATE: 7/17/2018  
APPROVED BY: ZZ DATE: 2018

SCALE: PLAN & PROFILE 1"=40'  
NOT TO SCALE



IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	BUBBLERS	PRECIP RATE
#26	1-1/2"	1401 BUBBLERS	28	112	1.5 in/hr
#27	2"	R-VAN5000 MPR	69.0		0.61 in/hr
#28	2"	R-VAN5000 MPR	62.3		0.61 in/hr
#29	1-1/2"	1401 BUBBLERS	42.5	170	1.5 in/hr
#30	2"	R-VAN5000 MPR	62.7		0.61 in/hr
#31	1-1/2"	R-VAN5000 MPR	44.3		0.61 in/hr
#32	2"	1401 BUBBLERS	64.25	257	1.5 in/hr
#33	1-1/2"	TREE SPRAY	22.2		1.6 in/hr
#34	2"	POND SUPPLY	100		
#35	1-1/2"	1401 BUBBLERS	33.25	133	1.5 in/hr
#36	1-1/2"	1401 BUBBLERS	38.25	153	1.5 in/hr
#37	1-1/2"	1401 BUBBLERS	49.75	199	1.5 in/hr
#38	2"	R-VAN5000 MPR	73.0		0.61 in/hr
#39	2"	R-VAN5000 MPR	80.2		0.61 in/hr
#40		FUTURE			
#41	2"	R-VAN5000 MPR	70.9		0.61 in/hr
#42	2"	R-VAN5000 MPR	74.5		0.61 in/hr
#43	2"	R-VAN5000 MPR	74.7		0.61 in/hr
#44	2"	R-VAN5000 MPR	70.0		0.61 in/hr
#45	2"	R-VAN5000 MPR	61.4		0.61 in/hr
#46	2"	R-VAN5000 MPR	70.14		0.61 in/hr
#47		FUTURE			
#48		FUTURE			
#49	1-1/2"	1401 BUBBLERS	45.5	182	1.5 in/hr
#50	2"	G504 FALCON ROTOR	76.6		1.05 in/hr



- C900 DR 1.5 PVC MAIN (EXISTING)
- C900 DR 1.5 PVC MAIN (THIS CONTRACT)
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- POLY PIPE FOR BUBBLERS; 1" UNLESS NOTED OTHERWISE DETAIL B1-6
- PIPE SIZING
- IRRIGATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
- IRRIGATION SLEEVE, 4" UNLESS NOTED, PREVIOUSLY INSTALLED
- ISOLATION VALVE DETAIL A1-14
- MANUAL DRAIN VALVE DETAIL A1-13
- RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL A1-2
- QUICK COUPLER VALVE DETAIL C1-6
- RAINBIRD IRI (LARGE DECODER INTERFACE)
- LSP-1 M1005 LINE SURGE PROTECTION WITH GROUND ROD
- RAINBIRD 5004 SERIES HEAD, DETAIL A1-3 WITH MPR RADIUS AS SHOWN
- RAINBIRD G4100 SERIES HEAD, DETAIL A1-2 WITH NOZZLE SIZE AS SHOWN

- ## QUARTER
- ## THIRD
- ## HALF
- ## FULL
- ## RAINBIRD G4100 SERIES HEAD, DETAIL A1-2 WITH NOZZLE SIZE AS SHOWN

I-B  
161

LAS COLONIAS BUSINESS PARK  
IRRIGATION PLAN

PUBLIC WORKS  
ENGINEERING DIVISION

**Grand Junction**  
CITY OF  
COLORADO

REVISION  DATE \_\_\_\_\_  
 REVISION  DATE \_\_\_\_\_  
 REVISION  DATE \_\_\_\_\_

SCALE: PLAN & PROFILE 1" = 40'  
 0 40 80 120

DESIGN BY: \_\_\_\_\_ DATE: 7/7/2018  
 CHECKED BY: \_\_\_\_\_ DATE: 7/7/2018  
 APPROVED BY: \_\_\_\_\_ DATE: 2018

DRAWN BY: \_\_\_\_\_ DATE: 7/7/2018  
 DESIGNED BY: \_\_\_\_\_ DATE: 7/7/2018  
 CHECKED BY: \_\_\_\_\_ DATE: 7/7/2018  
 APPROVED BY: \_\_\_\_\_ DATE: 2018

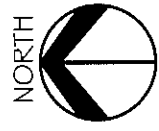
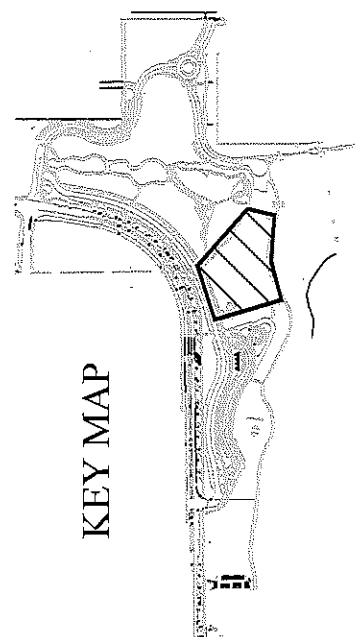
CIVONNE ROBERTS & ASSOCIATES, INC.  
LAND PLANNING AND  
LANDSCAPE ARCHITECTURE

IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	BUBBLERS	PRECIP RATE
#51	2"	6504 FALCON ROTOR	81.5		.35 in/hr
#52	2"	6504 FALCON ROTOR	71.5		.70 in/hr
#53	2"	6504 FALCON ROTOR	51.4		.70 in/hr
#54	2"	6504 FALCON ROTOR	79.5		.35 in/hr
#55	2"	TREE SPRAY	66.6		1.6 in/hr
#56	2"	6504 FALCON ROTOR	60.5		.70 in/hr
#57	2"	6504 FALCON ROTOR	76.4		1.0 in/hr
#58	2"	6504 FALCON ROTOR	81.4		.35 in/hr
#59	2"	6504 FALCON ROTOR	81.4		.35 in/hr
#60	2"	6504 FALCON ROTOR	78.7		.70 in/hr
#61	2"	TREE SPRAY	55.5		1.6 in/hr
#62	2"	R-VAN5000 MPR	59.3		0.61 in/hr
#63	1-1/2"	R-VAN5000 MPR	42.8		0.61 in/hr
#64	1-1/2"	TREE SPRAY	22.2		1.6 in/hr
#65	2"	1401 BUBBLERS	73.75	295	1.5 in/hr
#66	2"	6504 FALCON ROTOR	91.0		.70 in/hr
#67	2"	6504 FALCON ROTOR	91.0		.70 in/hr

LEGEND

- CS90 DR 10 PVC MAIN (EXISTING)
- CS90 DR 10 PVC MAIN THIS CONTRACT
- LATERAL PVC PIPING, 1" UNLESS NOTED OTHERWISE
- POLY PIPE FOR BUBBLERS; 1" UNLESS NOTED OTHERWISE, DETAIL BM-6
- PIPE SIZING
- IRRIGATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
- ISOLATION VALVE DETAIL AV-14
- MANUAL DRAIN VALVE DETAIL M-13
- RAINBIRD PEB ZONE VALVE, SIZE PER VALVE SCHEDULE, DETAIL AV-2
- QUICK COUPLER VALVE DETAIL CV-6
- RAINBIRD LDI (LARGE DECODER INTERFACE)
- LSP-1 M1008 LINE SURGE PROTECTION WITH GROUND ROD
- RAINBIRD L204 SERIES SPRAY HEADS, DETAIL BH-2 WITH RAINBIRD SPRAY NOZZLE
- ▲ 15 SERIES VAN SPRAY NOZZLE SET TO 90 DEG
- ▲ 15 SERIES VAN SPRAY NOZZLE SET TO 120 DEG
- RAINBIRD 6400 SERIES HEAD
- WITH NOZZLE SIZE AS SHOWN

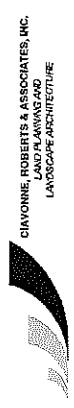


REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
△				7-7-2018		7-7-2018		7-7-2018		2018
△				7-7-2018		7-7-2018		7-7-2018		
△				7-7-2018		7-7-2018		7-7-2018		
△				7-7-2018		7-7-2018		7-7-2018		



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
IRRIGATION PLAN  
I-9  
162



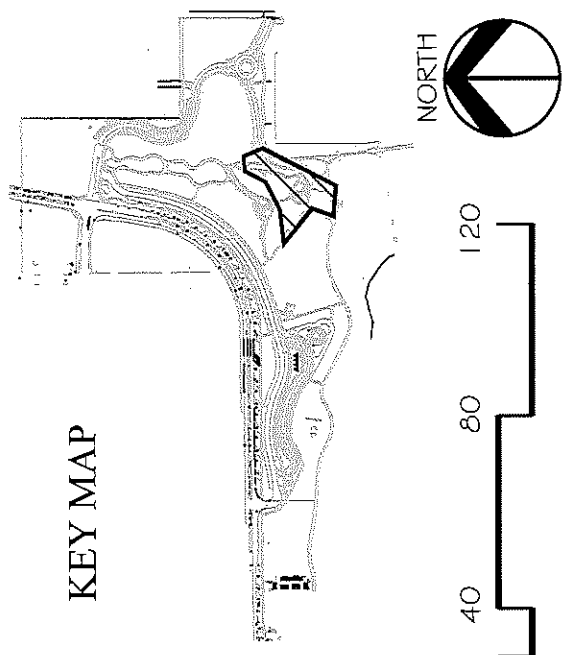
DIANNE, ROBERTS & ASSOCIATES, INC.  
LAND PLANNING AND  
LANDSCAPE ARCHITECTURE



IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	BUBBLERS	PRECIP RATE
#51	2"	6504 FALCON ROTOR	81.5		.35 in/hr
#52	2"	6504 FALCON ROTOR	71.5		.70 in/hr
#53	2"	6504 FALCON ROTOR	51.4		.70 in/hr
#54	2"	6504 FALCON ROTOR	79.5		.35 in/hr
#55	2"	TREE SPRAY	56.6		1.6 in/hr
#56	2"	6504 FALCON ROTOR	60.5		.70 in/hr
#57	2"	6504 FALCON ROTOR	76.4		1.0 in/hr
#58	2"	6504 FALCON ROTOR	81.4		.35 in/hr
#59	2"	6504 FALCON ROTOR	81.4		.35 in/hr
#60	2"	6504 FALCON ROTOR	78.7		.70 in/hr
#61	2"	TREE SPRAY	55.5		1.6 in/hr
#62	2"	R-VAN/5000 MFR	59.3		0.61 in/hr
#63	1-1/2"	R-VAN/5000 MFR	42.8		0.61 in/hr
#64	1-1/2"	TREE SPRAY	22.2		1.6 in/hr
#65	2"	1-401 BUBBLERS	73.75	295	1.5 in/hr
#66	2"	6504 FALCON ROTOR	91.0		.70 in/hr
#67	2"	6504 FALCON ROTOR	91.0		.70 in/hr

- LEGEND**
- 6500 DR 1.5 PVC MAIN (EXISTING)
  - 6500 DR 1.5 PVC MAIN THIS CONTRACT
  - - - LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
  - - - POLY PIPE FOR BUBBLERS; 1" UNLESS NOTED OTHERWISE DETAIL DA-6
  - 2" PIPE SIZING
  - IRRIGATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
  - IRRIGATION SLEEVE, 4" UNLESS NOTED, PREVIOUSLY INSTALLED
  - ISOLATION VALVE DETAIL AA-14
  - MANUAL DRAIN VALVE DETAIL AA-13
  - RAINBIRD FEB ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL AA-2
  - QUICK COUPLER VALVE DETAIL CI-6
  - RAINBIRD LDI (LARGE DECODER INTERFACE)
  - LSP-1 M1008 LINE SURGE PROTECTION WITH GROUND ROD
  - BERMAID 2" AIR RELIEF VALVE DETAIL DI-6
  - RAINBIRD 5004 SERIES HEAD, DETAIL AA-3 WITH MFR RADIUS AS SHOWN
  - QUARTER
  - THIRD
  - HALF
  - FULL
  - RAINBIRD 6400 SERIES HEAD, DETAIL AA-8 WITH NOZZLE SIZE AS SHOWN



CHAVONNE ROBERTS & ASSOCIATES, INC.  
LAND PLANNING AND  
LANDSCAPE ARCHITECTURE

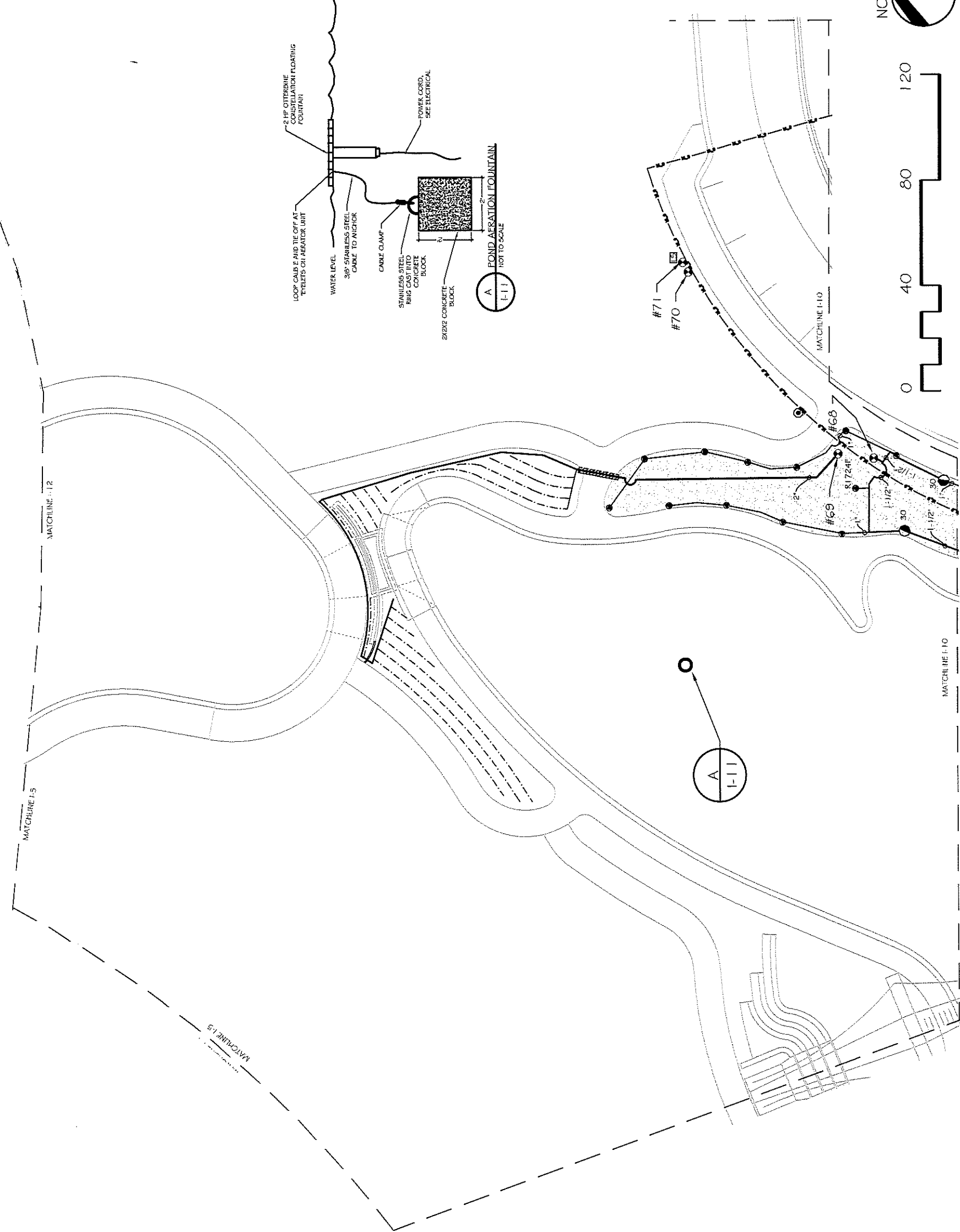
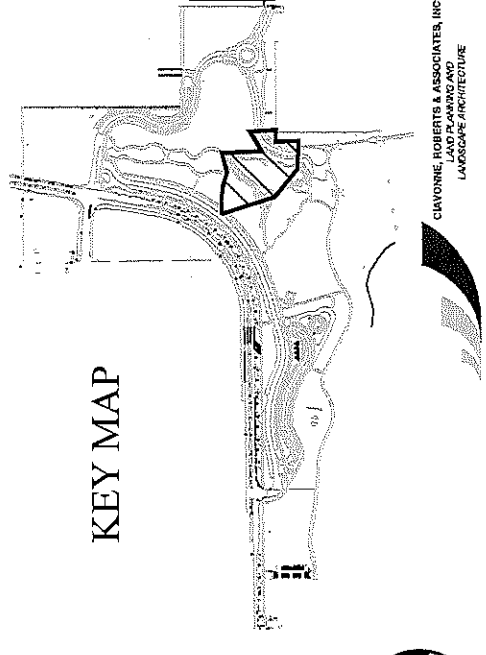
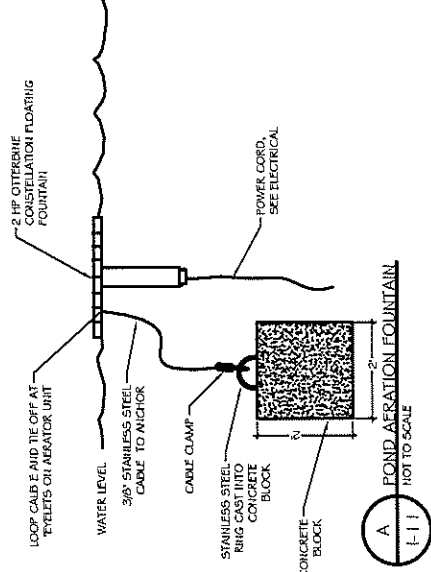
REVISION $\Delta$ REVISION $\Delta$ REVISION $\Delta$	DATE	DESCRIPTION
DRAWN BY MH DESIGNED BY XX CHECKED BY YY APPROVED BY ZZ	DATE 7-7-2018 DATE 7-7-2018 DATE 7-7-2018 DATE 2018	SCALES: PLAN & PROFILE 1" = 40' HORIZONTAL 1" = 40' VERTICAL 1" = 10'
<b>CITY OF Grand Junction COLORADO</b>		
<b>PUBLIC WORKS ENGINEERING DIVISION</b>		
<b>LAS COLONIAS BUSINESS PARK IRRIGATION PLAN</b>		
<b>I-10 163</b>		

IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	BUBBLERS	PRECIP RATE
#68	2"	R-VAN/5000 MPR	51.2		0.61 in/hr
#69	1-1/2"	1401 BUBBLERS	33.75	135	1.5 in/hr
#70		FUTURE			
#71		FUTURE			
#72	1-1/2"	6504 FALCON ROTOR	49.7		.31 in/hr
#73	2"	6504 FALCON ROTOR	96.3		.58 in/hr
#74	1-1/2"	6504 FALCON ROTOR	34.9		.33 in/hr
#75	2"	6504 FALCON ROTOR	75.3		.55 in/hr
#76	1-1/2"	1401 BUBBLERS	42.0	168	1.5 in/hr
#77	1-1/2"	1401 BUBBLERS	49.75	199	1.5 in/hr
#78	2"	TREE SPRAY	65.6		1.6 in/hr
#79	2"	TREE SPRAY	55.5		1.6 in/hr
#80	1-1/2"	R-VAN/5000 MPR	25.4		0.61 in/hr
#81	2"	6504 FALCON ROTOR	96.5		.70 in/hr
#82	2"	1401 BUBBLERS	60.75	243	1.5 in/hr
#83	2"	1401 BUBBLERS	66.0	264	1.5 in/hr

LEGEND

- CS900 DR 1.0 PVC MAIN (EXISTING)
- CS900 DR 1.0 PVC MAIN THIS CONTRACT
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- POLY PIPE FOR BUBBLERS; 1" UNLESS NOTED OTHERWISE DETAIL BM-G
- PIPE SIZING
- IRRIGATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
- IRRIGATION SLEEVE, 4" UNLESS NOTED, PREVIOUSLY INSTALLED
- ISOLATION VALVE DETAIL M-14
- MANUAL DRAIN VALVE DETAIL M-13
- RAINBIRD FIB ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL M-2
- CHUCK COUPLER VALVE DETAIL CF-6
- RAINBIRD LD (LARGE DECODER INTERFACE)
- ISP-1 M1008 LINE SURGE PROTECTION WITH GROUND ROD
- BERMAD 2" AIR RELIEF VALVE DETAIL DR-G
- WITH RAINBIRD R-VAN ROTARY NOZZLE
- R-VAN 14
- R-VAN 10
- R-VAN 13-18 FULL CIRCLE
- R-VAN 1724
- R-VAN 17-24 FULL CIRCLE
- R1724F
- RAINBIRD 5004 SERIES HEAD, DETAIL A-13
- WITH MPR RADIUS AS SHOWN
- ## QUARTER
- ## THIRD
- ## HALF
- ## FULL



REVISION	DATE	DESCRIPTION

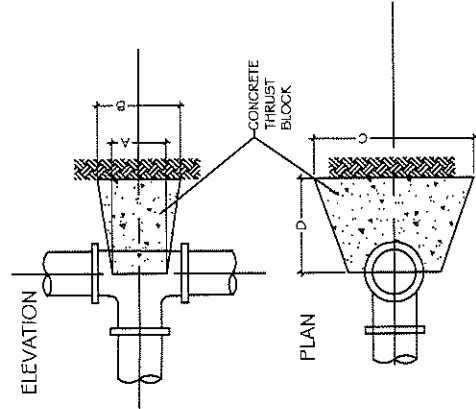
SCALE:	DATE	DATE	DATE	DATE
PLAN & PROFILE	7/7/2018	7/7/2018	7/7/2018	7/7/2018

SCALE:	DATE	DATE	DATE	DATE

- DO NOT POUR CONCRETE THRUST BLOCK OVER PIPE, ONLY OVER FITTINGS
- BEARING SURFACE OF THRUST BLOCKS TO BE ON UNFINISHED SURFACE OF EXCAVATION. OVER EXCAVATION WILL REQUIRE LARGER THRUST BLOCKS.
- THRUST BLOCKS SHOWN ARE MINIMUM SIZES.

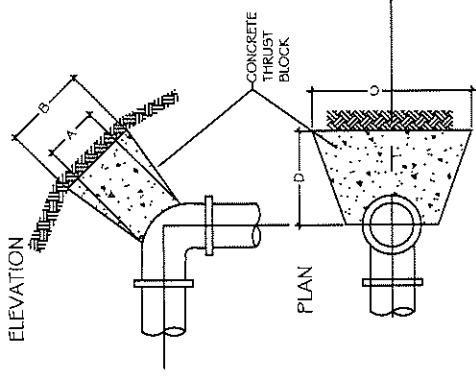
MINIMUM THRUST BLOCK AREA

SIZE	TEE CAP	60°
2"	1.5"	0.5 5/8"
3"	1.5"	0.5 5/8"
4"	1.5 5/8"	1.5"
5" ±	2.5"	1.5 5/8"



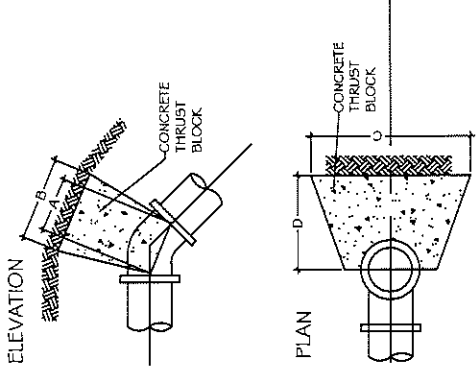
SIZE	2"	3-4"	6"	B'
A	5"	7.5"	12"	12"
B	20"	20"	20"	33"
C	20"	20"	20"	33"
D	13"	13"	13"	21"

**A** THRUST BLOCK, PVC TEE  
1-12 NOT TO SCALE



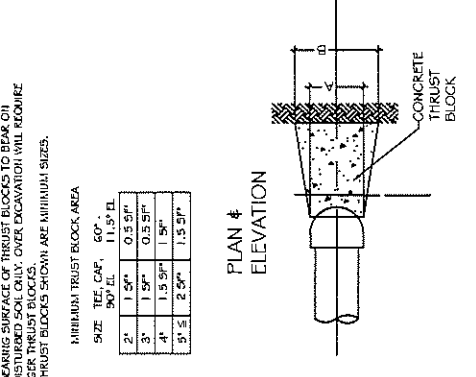
SIZE	2"	3-4"	6"	B'
A	5"	6"	12"	12"
B	9"	10"	24"	33"
C	20"	20"	20"	33"
D	13"	13"	13"	21"

**B** THRUST BLOCK, PVC 90° ELBOW  
1-12 NOT TO SCALE



SIZE	2"	3-4"	6"	B'
A	5"	6"	12"	12"
B	9"	10"	24"	33"
C	20"	20"	20"	33"
D	13"	13"	13"	21"

**C** THRUST BLOCK, PVC 1.5°-60° ELBOW  
1-12 NOT TO SCALE



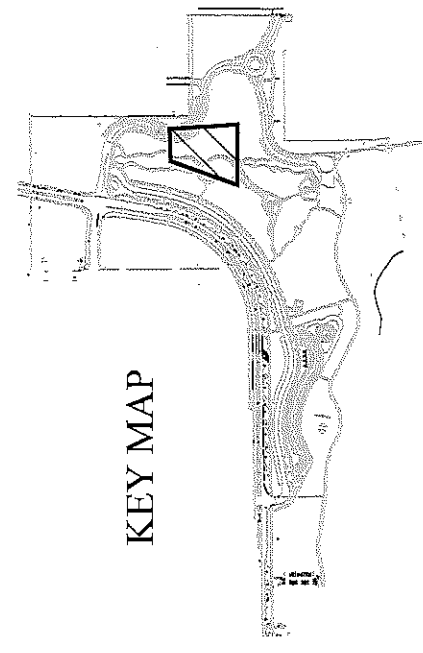
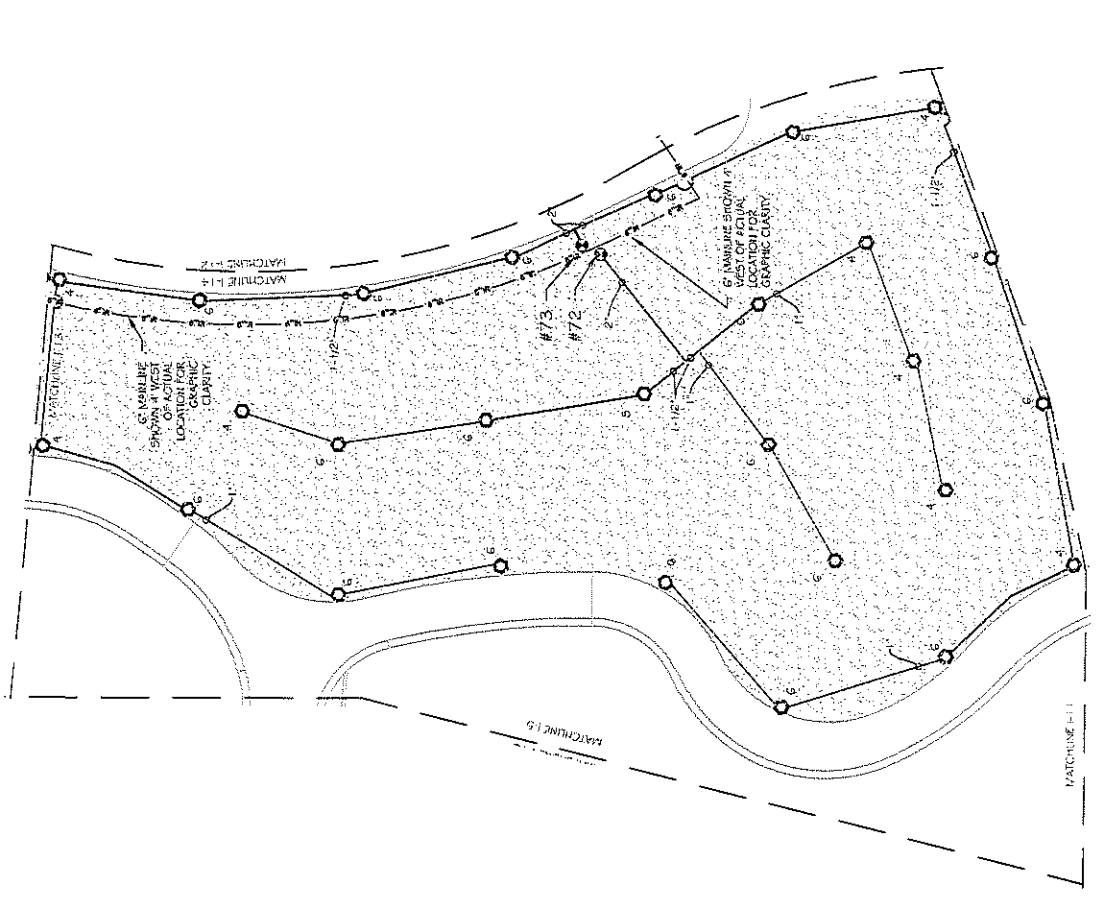
SIZE	2"	3-4"	6"	B'
A	12"	12"	12"	12"
B	17"	14"	20"	27"
C	20"	20"	20"	33"
D	13"	13"	13"	21"

**D** THRUST BLOCK, PVC CAP  
1-12 NOT TO SCALE

IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	BUBBLERS	PRECIP RATE
#68	2"	R-VAN/5000 MFR	51.2		0.61 in/hr
#69	1-1/2"	1401 BUBBLERS	33.75	135	1.5 in/hr
#70		FUTURE			
#71		FUTURE			
#72	1-1/2"	6504 FALCON ROTOR	49.7		.31 in/hr
#73	2"	6504 FALCON ROTOR	86.3		.56 in/hr
#74	1-1/2"	6504 FALCON ROTOR	34.9		.33 in/hr
#75	2"	6504 FALCON ROTOR	75.3		.56 in/hr
#76	1-1/2"	1401 BUBBLERS	42.0	168	1.5 in/hr
#77	1-1/2"	1401 BUBBLERS	49.75	199	1.5 in/hr
#78	2"	TREE SPRAY	65.6		1.6 in/hr
#79	2"	TREE SPRAY	55.5		1.6 in/hr
#80	1-1/2"	R-VAN/5000 MFR	25.4		0.61 in/hr
#81	2"	6504 FALCON ROTOR	96.5		.70 in/hr
#82	2"	1401 BUBBLERS	60.75	243	1.5 in/hr
#83	2"	1401 BUBBLERS	66.0	264	1.5 in/hr

- C900 DR 1/8 PVC MAIN (EXISTING)
- C900 DR 1/8 PVC MAIN THIS CONTRACT
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- POLY PIPE FOR BUBBLERS, 1" UNLESS NOTED OTHERWISE DETAIL BA-6
- PIPE SIZING
- IRRIGATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
- ISOLATION VALVE DETAIL A1-14
- MANUAL DRAIN VALVE DETAIL A1-13
- RAINBIRD FEED ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL A1-2
- QUICK COUPLER VALVE DETAIL CA-6
- RAINBIRD LD1 (LARGE DECODER INTERFACE)
- LSP-1 M1008 LINE SURGE PROTECTION WITH GROUND ROD
- BERMAD 2" AIR RELIEF VALVE DETAIL DA-6
- RAINBIRD 5004 SERIES HEAD, DETAIL A1-3
- WITH MPR RADIUS AS SHOWN
- QUARTER
- THIRD
- HALF
- FULL
- RAINBIRD 6400 SERIES HEAD, DETAIL A1-8
- WITH NOZZLE SIZE AS SHOWN



KEY MAP

REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

DRAWN BY \_\_\_\_\_ DATE 7/11/2018

DESIGNED BY XX DATE 7/11/2018

CHECKED BY YY DATE 7/11/2018

APPROVED BY ZZ DATE 7/11/2018

SCALE: \_\_\_\_\_

PLAN & PROFILE

NO. \_\_\_\_\_

HORIZONTAL

CITY OF

# Grand Junction

Colorado

PUBLIC WORKS

ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK

IRRIGATION PLAN

CLAYTON ROBERTS & ASSOCIATES, INC.

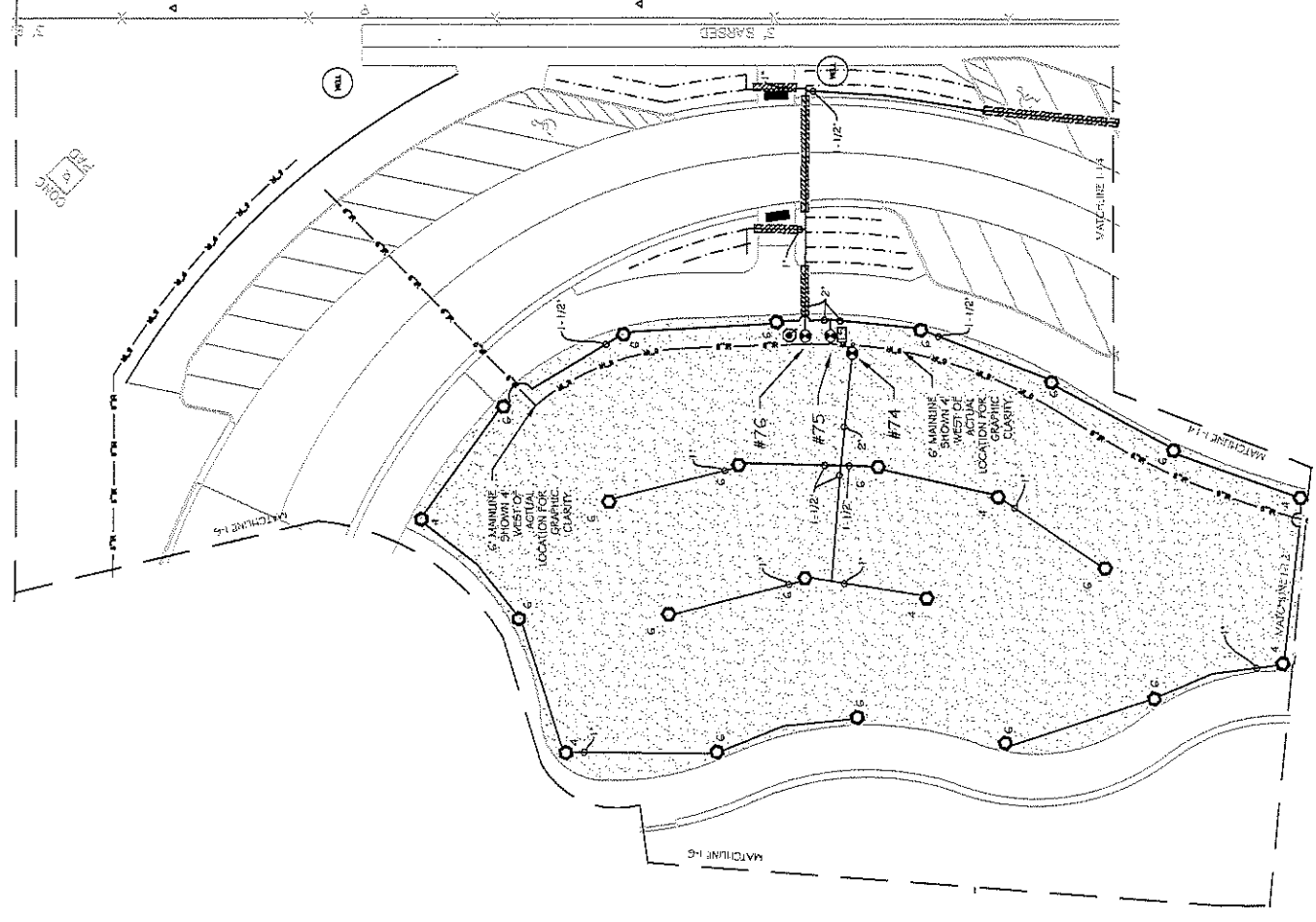
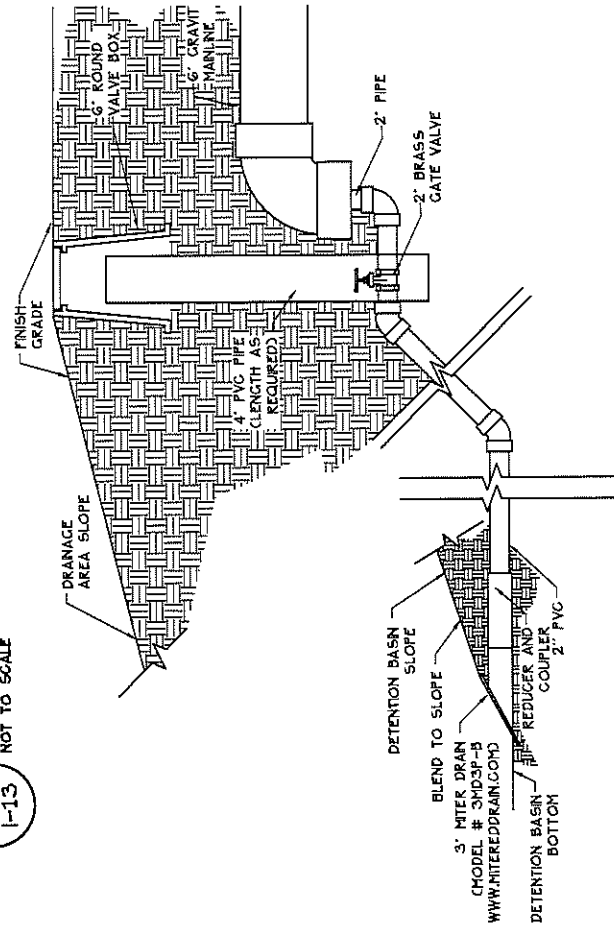
LAND PLANNING AND

LANDSCAPE ARCHITECTURE

I-12

165

**A**  
GRAVITY MAINLINE DRAIN  
I-13  
NOT TO SCALE

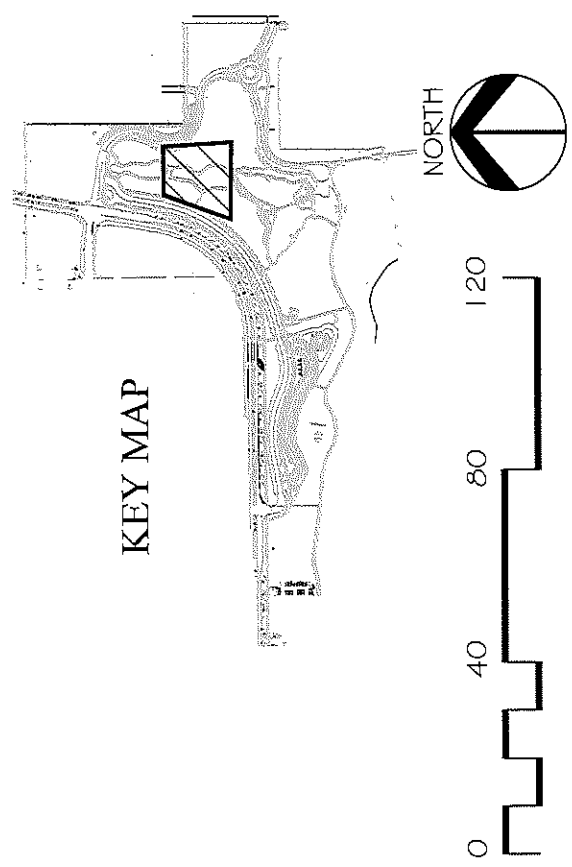


IRRIGATION VALVE SCHEDULE

VALVE #	SIZE	TYPE	GPM	BUBBLERS	PRECIP RATE
#69	2"	R-VAN5000 MPR	51.2		0.61 in/hr
#69	1-1/2"	1401 BUBBLERS	33.75	135	1.5 in/hr
#70		FUTURE			
#71		FUTURE			
#72	1-1/2"	G504 FALCON ROTOR	49.7		.31 in/hr
#73	2"	G504 FALCON ROTOK	86.3		.59 in/hr
#74	1-1/2"	G504 FALCON ROTOK	34.9		.33 in/hr
#75	2"	G504 FALCON ROTOK	75.3		.58 in/hr
#76	1-1/2"	1401 BUBBLERS	42.0	168	1.5 in/hr
#77	1-1/2"	1401 BUBBLERS	49.75	199	1.5 in/hr
#78	2"	TREE SPRAY	65.6		1.6 in/hr
#79	2"	TREE SPRAY	55.5		1.6 in/hr
#80	1-1/2"	R-VAN5000 MPR	25.4		0.61 in/hr
#81	2"	G504 FALCON ROTOK	96.5		.70 in/hr
#82	2"	1401 BUBBLERS	60.75	243	1.5 in/hr
#83	2"	1401 BUBBLERS	66.0	264	1.5 in/hr

**LEGEND**

- C900 DR 18 PVC MAIN (EXISTING)
- C900 DR 18 PVC MAIN THIS CONTRACT
- LATERAL PVC PIPING 1" UNLESS NOTED OTHERWISE
- POLY PIPE FOR BUBBLERS; 1" UNLESS NOTED OTHERWISE DETAIL DR-6
- PIPE SIZING
- IRRIGATION SLEEVE, 4" UNLESS NOTED, THIS CONTRACT
- IRRIGATION SLEEVE, 4" UNLESS NOTED, PREVIOUSLY INSTALLED
- ISOLATION VALVE DETAIL AA-14
- MANUAL DRAIN VALVE DETAIL AA-13
- RAINBIRD FED ZONE VALVE, SIZE PER VALVE SCHEDULE DETAIL AA-2
- QUICK COUPLER VALVE DETAIL CH-6
- RAINBIRD LDI (LARGE DECODER INTERFACE)
- LSP-1 M1000 LINE SURGE PROTECTION WITH GROUND ROD
- BESHAD 2" AIR RELIEF VALVE DETAIL DA-6
- RAINBIRD G400 SERIES HEAD, DETAIL AA-8
- WITH NOZZLE SIZE AS SHOWN



CAYDINE ROBERTS & ASSOCIATES, INC.  
LANDSCAPE ARCHITECTURE

REVISION	DESCRIPTION	DATE

DRAWN BY	MH	DATE	7/7/2018
DESIGNED BY	XX	DATE	7/7/2018
CHECKED BY	YY	DATE	7/7/2018
APPROVED BY	ZZ	DATE	2018

SCALES:	PLAN & PROFILE
	VERTICAL

CITY OF  
**Grand Junction**  
COLORADO

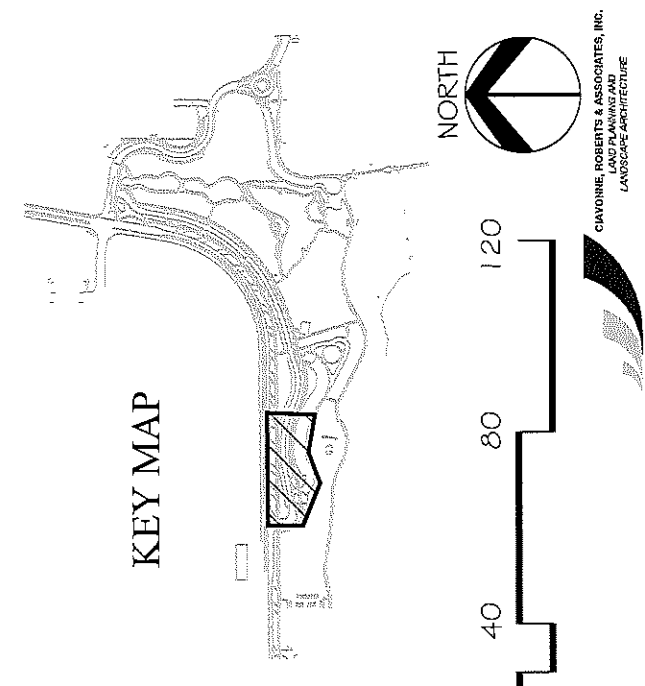
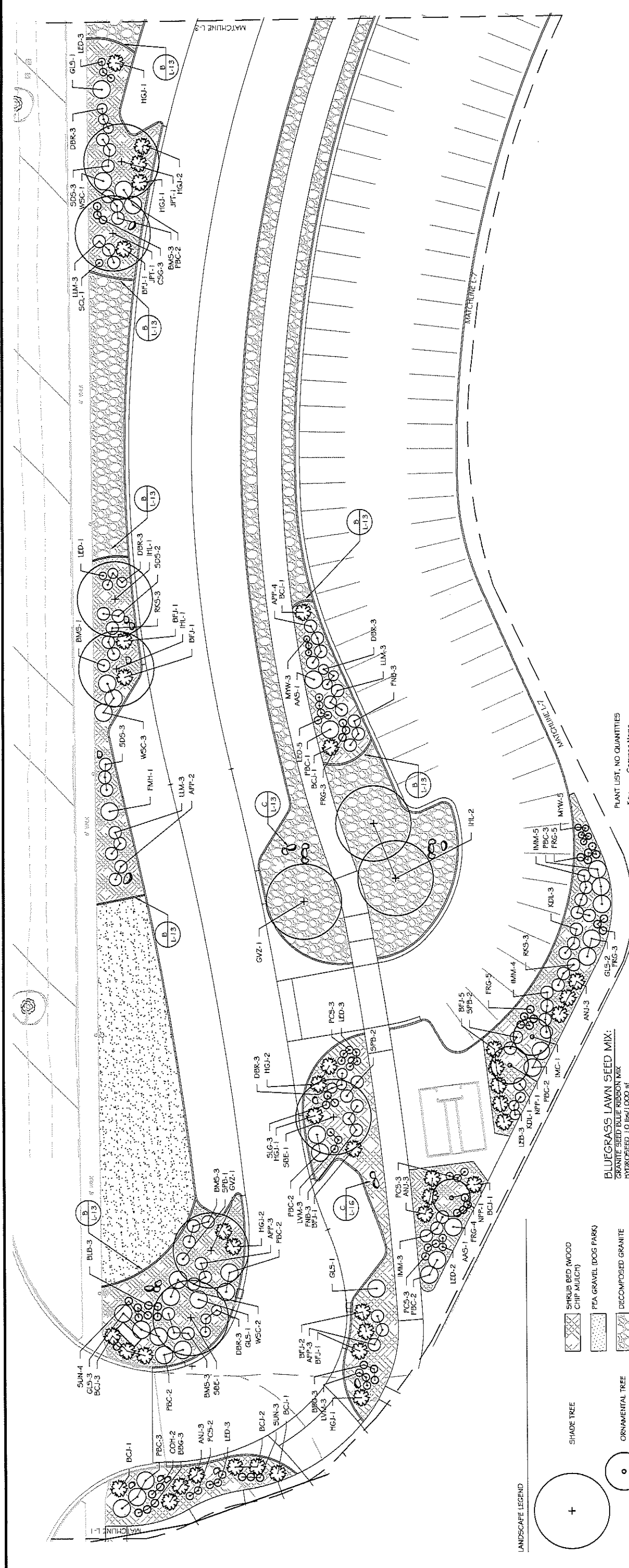
PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
IRRIGATION PLAN





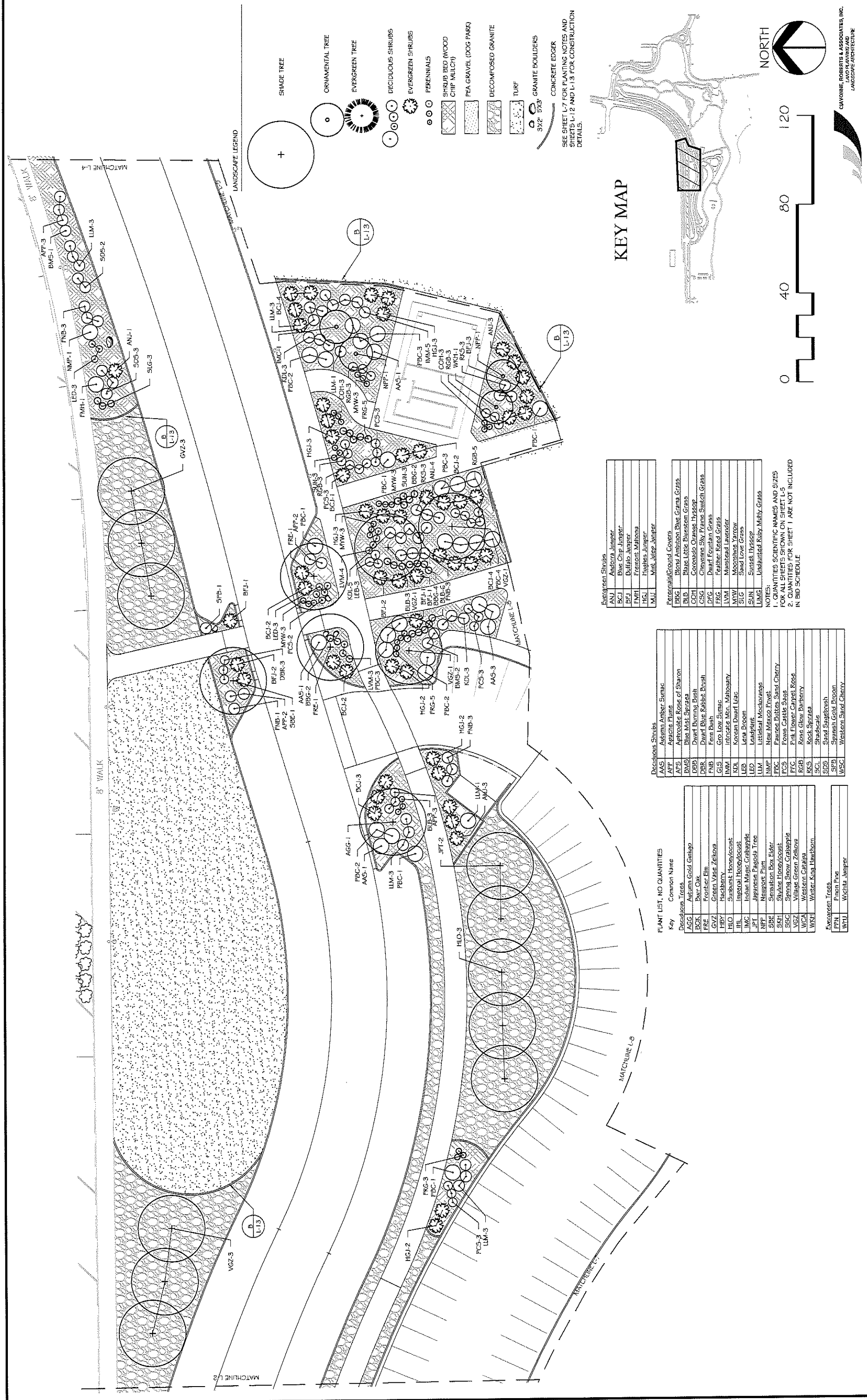




**PLANT LIST, NO QUANTITIES**

Key Common Name

AGG	Autumn Gold Ginkgo
BOK	Burr Oak
FRE	Frontier Elm
GVZ	Green Vase Zelkova
HIBY	Hackberry
HLO	Sunburst Honeylocust
IHL	Imperial Honeylocust
IMC	Indian Magic Crabapple
JPT	Japanese Pagoda Tree
NPP	Newport Plum
SBE	Sequoia Box Elder
SKH	Skyline Honeylocust
SSE	Spring Snow Crabapple
WYZ	Winged Green Zelkova
WCA	Western Catalpa
WRH	Winter Kirta Thymus
ANJ	Andorra Juniper
BCJ	Blue Chip Juniper
BFI	Buffalo Juniper
FMH	Frontier Mahonia
HGI	Hughes Juniper
MAJ	Mint Julep Juniper
NMP	New Mexico Pruet
PBC	Pawnee Brites Sand Cherry
PCS	Powis Castle Sage
PFC	Pink Flower Carpet Rose
RGB	Rose Glow Barberry
RKS	Rock Spirea
SCL	Shadescale
SDS	Sand Sagebrush
SPB	Spanish Gold Bloom
WSC	Western Sand Cherry
WVC	Western White Birch
ANU	Autumn Amber Sumac
APF	Apache Plum
APS	Aprochite Rose of Sharon
BMS	Blue Mist Spirea
DBB	Dwarf Burma Bush
DBR	Dwarf Blue Babbar Bush
FNB	Fern Bush
GLS	Grass Low Swain
IMM	Intricate Mtn. Mahogany
KDL	Korean Dwarf Lilac
LED	Leila Droop
LEP	Leopold
LUM	Littleleaf Mistletoe
PER	Perennial
SHR	Shrub
TURF	Turf
GRN	Grass
CON	Concrete
GRA	Gravel
DEG	Decomposed Granite
W	Water
P	Path
W	Wall
S	Structure
M	Mulch
F	Fabric
R	Rock
T	Tree
S	Shrub
P	Perennial
GR	Grass
W	Water
P	Path
W	Wall
S	Structure
M	Mulch
F	Fabric
R	Rock
T	Tree
S	Shrub
P	Perennial
GR	Grass
W	Water
P	Path
W	Wall
S	Structure
M	Mulch
F	Fabric
R	Rock
T	Tree
S	Shrub
P	Perennial
GR	Grass
W	Water
P	Path
W	Wall
S	Structure
M	Mulch
F	Fabric
R	Rock
T	Tree
S	Shrub
P	Perennial
GR	Grass
W	Water
P	Path
W	Wall
S	Structure
M	Mulch
F	Fabric
R	Rock
T	Tree
S	Shrub
P	Perennial
GR	Grass
W	Water
P	Path
W	Wall
S	Structure
M	Mulch
F	Fabric
R	Rock
T	Tree
S	Shrub
P	Perennial
GR	Grass
W	Water
P	Path
W	Wall
S	Structure
M	Mulch
F	Fabric
R	Rock
T	Tree
S	Shrub
P	Perennial
GR	Grass
W	Water
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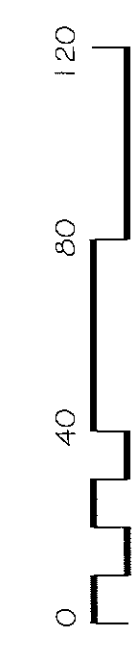
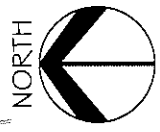
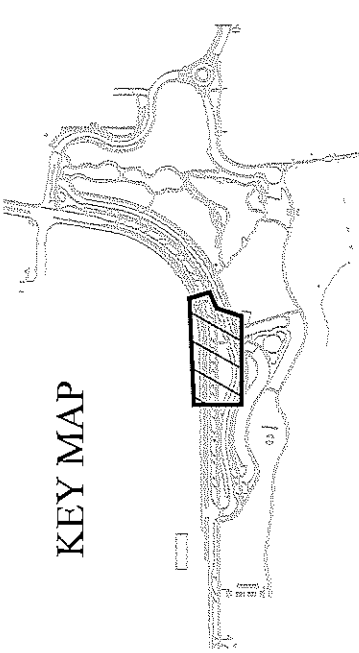


LANDSCAPE LEGEND

- SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- PERENNIALS
- SHRUB BED (WOOD CHIP MULCH)
- PEA GRAVEL (DOG PARK)
- DECOMPOSED GRANITE
- TURF
- 3X2' 5X3' GRANITE BOULDERS
- CONCRETE EDGER

SEE SHEET L-7 FOR PLANTING NOTES AND SHEETS L-12 AND L-13 FOR CONSTRUCTION DETAILS.

### KEY MAP



GAYNOR, ROBERTS & ASSOCIATES, INC.  
LANDSCAPE ARCHITECTURE

Evergreen Shrubs	
ANJ	Andorra Juniper
BCJ	Blue Chip Juniper
BFJ	Duffalo Juniper
FMH	Fremont Mahonia
HGJ	Heales Juniper
MJJ	Mini Jilder Juniper

Perennials/Ground Covers	
DMG	Blond Ambition Blue Grama Grass
BLB	Blaze Little Bluestem Grass
CDH	Colorado Orange Lysoop
CSG	Cheyenne Sky Prairie Switch Grass
DFG	Dwarf Fountain Grass
FRG	Feather Reed Grass
LVM	Moontide Yarrow
MWV	Moonshine Yarrow
SLG	Sand Love Grass
SUN	Sunset Thyssop
UMG	Undaunted Ruby Maltby Grass

NOTES:  
1. QUANTITIES SCIENTIFIC NAMES AND SIZES FOR ALL SHEETS SHOWN ON SHEET L-5  
2. QUANTITIES FOR SHEET 1 ARE NOT INCLUDED IN BID SCHEDULE

Deciduous Shrubs	Common Name
AAS	Avalon Amber Sumac
APP	Apricot Plum
APF	Apricot Rose of Sharon
BMS	Blue Mist Spiraea
DBB	Dwarf Burning Bush
DBR	Dwarf Blue Rabbit Brush
FNB	Fern Bush
GLS	Green Vase Zelkova
HBV	Hackberry
HLO	Japanese Holly
IHL	Imperial Honeylocust
IMC	Indian Medic Crabapple
JFT	Japanese Flowering Tree
NPT	Norway Spruce
SBE	Sensation Box Elder
SNT	Shayne Honeylocust
SSC	Spinning Snow Crabapple
VGZ	Village Green Zelkova
WCA	Western Catalpa
WNI	Winter King Hawthorn

Evergreen Trees	Common Name
FPN	Pinon Pine
SPB	Spanish Gold Droom
WTL	Wichita Juniper

REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

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REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

REVISION  $\Delta$  \_\_\_\_\_ DATE \_\_\_\_\_

DRAWN BY MH DATE 7/7/2018

DESIGNED BY MH DATE 7/7/2018

CHECKED BY CR DATE 7/7/2018

APPROVED BY ZZ DATE 7/7/2018

SCALES: PLAN & PROFILE 1" = 30'

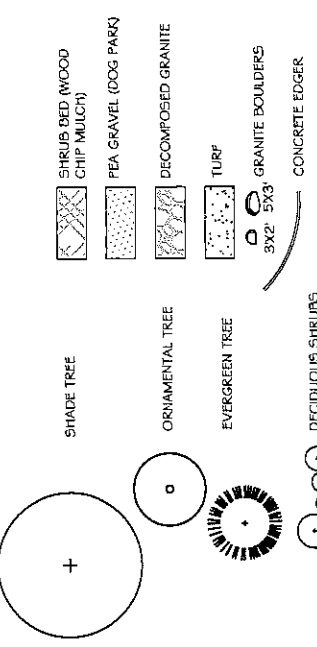
CITY OF **Grand Junction** COLORADO

PUBLIC WORKS ENGINEERING DIVISION

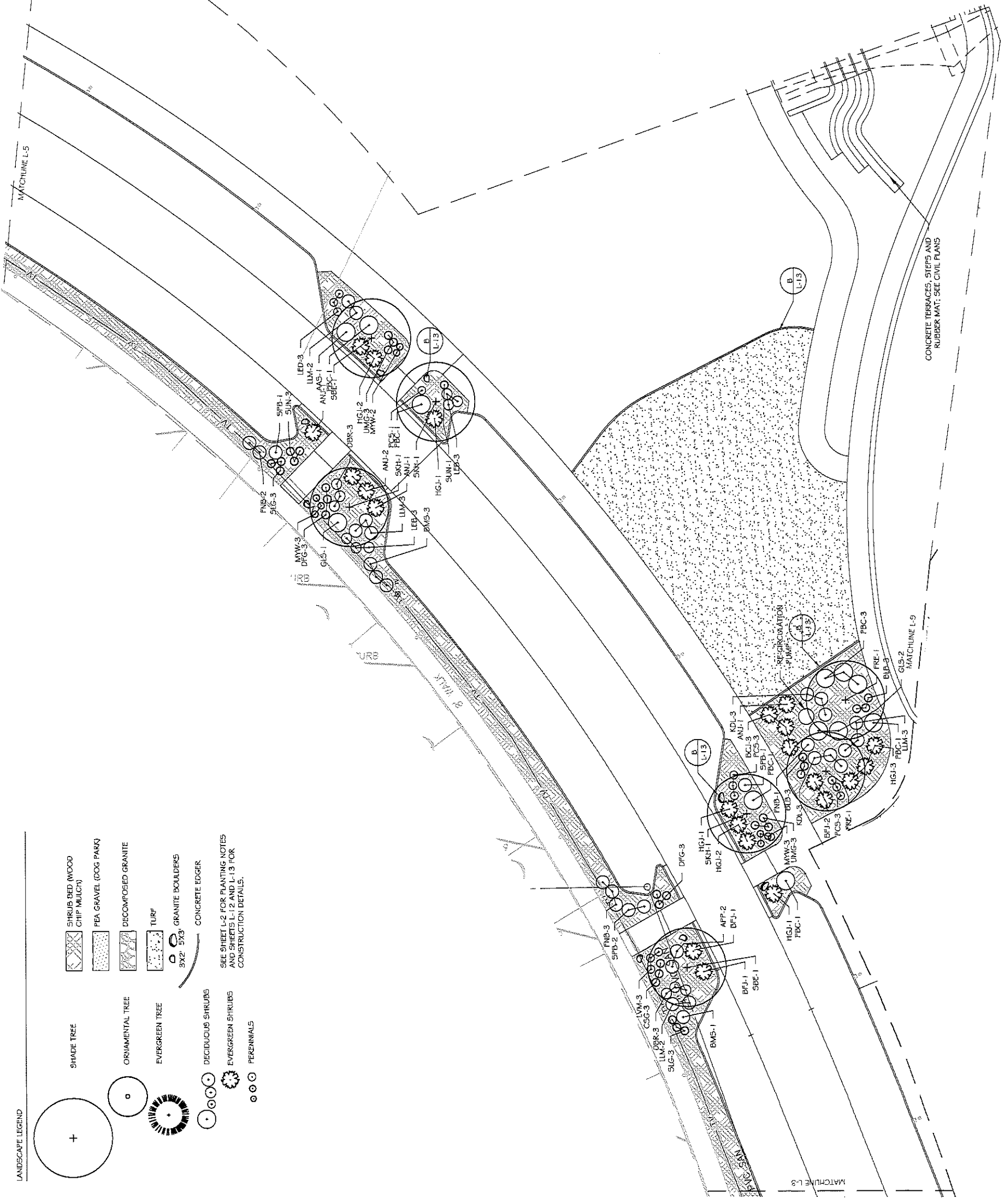
LAS COLONIAS BUSINESS PARK LANDSCAPE PLAN

L-3 170

LANDSCAPE LEGEND



SEE SHEET L-2 FOR PLANTING NOTES AND SHEETS L-2 AND L-13 FOR CONSTRUCTION DETAILS.

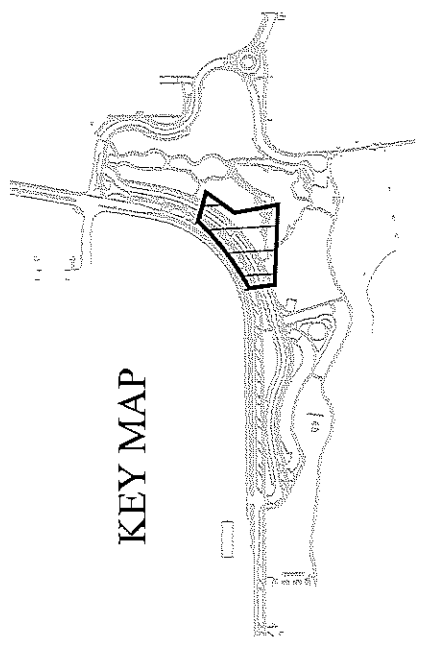


PLANT LIST, NO QUANTITIES

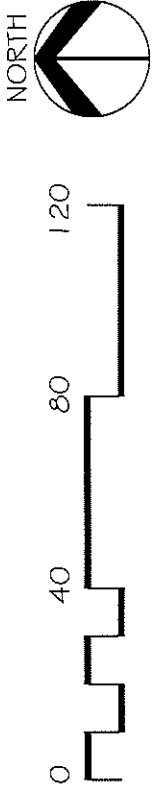
Key Common Name

Code	Common Name
LUM	Littledale Madroaena
ANP	New Mexico Pinet
PBC	Pawnee Burles Spanish Cherry
PCS	Powis Castle Sage
PFC	Pink Flower Carpet Rose
RGB	Rose Glow Barberry
RSS	Rock Spirea
SCL	Shadescale
SDS	Sand Sagebrush
SPB	Spanish Gold Broom
WSC	Western Sand Cherry
Evergreen Shrubs	
ANU	Andorra Juniper
BCJ	Blue Chip Juniper
BFJ	Buffalo Juniper
FMH	Fremont Malina
HGJ	Hughes Juniper
MAJ	Montezuma Juniper
Perennials/Grass	
BBG	Blood Ambrosia Blue Grama Grass
BLB	Blaze Little Bluestem Grass
COH	Cornelia Orange Top
CSG	Chevyenne Sky Training Switch Grass
DTG	Dwarf Fountain Grass
FRG	Feather Reed Grass
LVM	Lutescent Lavender
MYW	Moonshine Yarrow
SIG	Sand Love Grass
SUN	Sunset Invasor
LUMG	Undaunted Ruby Mully Grass
Deciduous Trees	
AGG	Autumn Gold Ginkgo
BOK	Burr Oak
FRE	Frontier Elm
GVZ	Green Vase Zelkova
HBY	Hackberry
HLO	Honeylocust
IMC	Indian Maac Crabapple
JPT	Japanese Pagoda Tree
NPP	Newport Plum
SBE	Sensation Box Elder
SKH	Shiloh Honeylocust
SGC	Spring Green Crabapple
VGZ	Village Green Zelkova
WCA	Western Catalpa
WRH	Winter King Hawthorn
Evergreen Trees	
FPN	Pinon Pine
WTH	Wichita Juniper
Deciduous Shrubs	
AAS	Autumn Amber Sumac
APP	Apache Plum
APS	Aptrodille Rose of Sharon
BMS	Blue Mist Spirea
DBB	Dwarf Burinca Bush
DPK	Dwarf Blue Rabbit Eugh
FNB	Fern Bush
GLS	Go Low Sumac
IMM	Intrepid Mt. Mahogany
KDL	Korean Dwarf Lilac
LED	Lena Droop
LEP	Leopland

NOTES:  
1. QUANTITIES SCIENTIFIC NAMES AND SIZES FOR ALL SHEETS SHOWN ON SHEET L-5  
2. QUANTITIES FOR SHEET 1 ARE NOT INCLUDED IN BID SCHEDULE



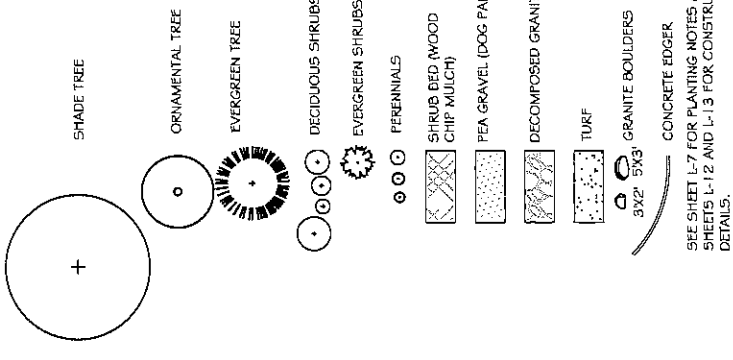
KEY MAP



CAVONNE, ROBERTS & ASSOCIATES, INC.  
LANDSCAPE ARCHITECTURE

<p>REVISION <math>\Delta</math> _____ DATE _____</p> <p>REVISION <math>\Delta</math> _____ DATE _____</p> <p>REVISION <math>\Delta</math> _____ DATE _____</p> <p>REVISION <math>\Delta</math> _____ DATE _____</p>	<p>DESCRIPTION _____</p> <p>DATE _____</p>	<p>DRAWN BY _____ DATE 7/7/2018</p> <p>DESIGNED BY _____ DATE 7/7/2018</p> <p>CHECKED BY _____ DATE 7/7/2018</p> <p>APPROVED BY _____ DATE 7/7/2018</p>	<p>SCALE: PLAN &amp; PROFILE 1" = 30'</p> <p>SCALE: HORIZONTAL 1" = 30'</p>	<p>CLIENT OF <b>Grand Junction</b> COLORADO</p>	<p>PUBLIC WORKS ENGINEERING DIVISION</p>	<p>LAS COLONIAS BUSINESS PARK LANDSCAPE PLAN</p>	<p>L-4 171</p>
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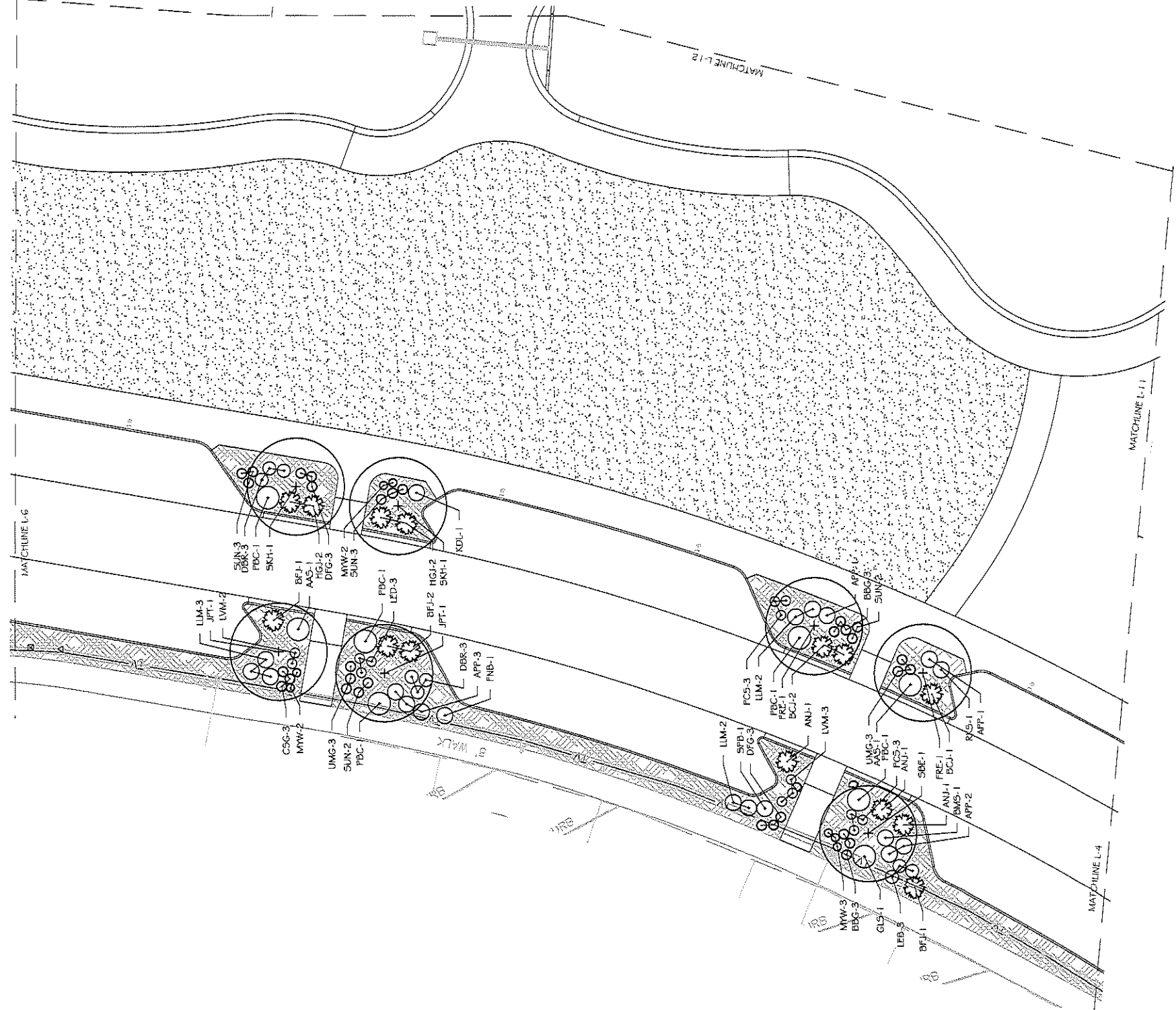
LANDSCAPE LEGEND



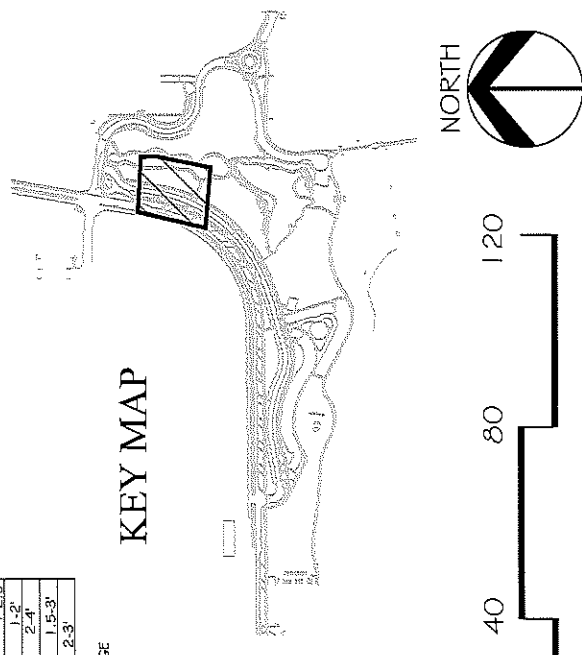
SEE SHEET L-7 FOR PLANTING NOTES AND SHEETS L-12 AND L-13 FOR CONSTRUCTION DETAILS.

Qty	Key	Common Name	Scientific Name	Size	Mature Height
<b>Deciduous Trees</b>					
1	AGG	Autum Amber Sumac	<i>Rhus typhina</i>	2'	40-50'
2	BOK	Burr Oak	<i>Quercus macrocarpa</i>	2'	50-60'
7	FRE	Frontier Elm	<i>Ulmus x Frontier</i>	2'	25-35'
10	GVZ	Green Vase Zelkova	<i>Zelkova serrata 'Green Vase'</i>	2'	40-60'
3	HBY	Hackberry	<i>Celtis occidentalis</i>	2'	35-60'
4	HLO	Honeylocust	<i>Gleditsia triacanthos 'Sunburst'</i>	2'	45-70'
4	IMC	Indian Magic Crabapple	<i>Malus sp. 'Indian Magic'</i>	2'	30-40'
3	JPT	Japanese Flowering Quince	<i>Euscalyptus japonica</i>	1-1/2'	12-17'
9	NIP	Norfolk Island Pine	<i>Protea neriifolia</i>	2'	50-75'
15	SDE	Sequoia Elm	<i>Acer negundo 'Sequoia'</i>	1-1/2'	15-20'
3	SKH	Shiny Hornbeam	<i>Cornus alternifolia var. 'serotina Skyline'</i>	2'	25-40'
3	SSC	Spring Snow Crabapple	<i>Malus 'Spring Snow'</i>	1-1/2'	15-20'
7	VGZ	Village Green Zelkova	<i>Zelkova serrata 'Village Green'</i>	2'	40-50'
1	WCA	Western Catalpa	<i>Catalpa speciosa</i>	2'	45-55'
2	WSH	Winter King Hawthorn	<i>Crataegus wrightii 'Winter King'</i>	1-1/2'	15-20'
<b>Evergreen Trees</b>					
15	PPN	Pinon Pine	<i>Pinus edulis</i>	6'	10-15'
3	WTH	Wichita Juniper	<i>Juniperus sabina 'Wichita'</i>	6'	10-15'
<b>Deciduous Shrubs</b>					
20	AAS	Autum Amber Sumac	<i>Rhus typhina</i>	5 gal	1-2'
54	APP	Arizona Poplar	<i>Fallugia paradoxa</i>	5 gal	3-6'
5	APF	Aphelandra Rose of Sharon	<i>Hibiscus syriacus 'Aphelandra'</i>	5 gal	6-12'
44	BMS	Blue Mist Spruce	<i>Caragana incana</i>	5 gal	4-6'
6	DBB	Dwarf Burning Bush	<i>Eurotia alata 'Compass'</i>	5 gal	3-5'
57	DBK	Dwarf Blue Bellied Bush	<i>Chamaecrista nictitans</i>	5 gal	2-5'
7	FNB	Fern Bush	<i>Chamaecrista nictitans</i>	5 gal	4-7'
37	GLS	Green Low Spirea	<i>Rosa arvensis 'Green Low'</i>	5 gal	1.5-3'
43	JMK	Judith Mariposa	<i>Cercocarpus integrifolius</i>	2 gal	3-5'
66	KDL	Korean Dwarf Lilac	<i>Syringa meyeri 'Pallid'</i>	2 gal	3-4'
32	LED	Leadplant	<i>Cytisus x 'Lead'</i>	5 gal	3-4'
67	LED	Leadplant	<i>Cytisus x 'Lead'</i>	5 gal	2-3'
59	ILM	Italian Lilac	<i>Syringa italica</i>	5 gal	4-5'
10	NMP	New Mexico Nectar	<i>Philadelphus microphyllus</i>	5 gal	5-7'
121	PBC	Palmer Buttercup Sand Cherry	<i>Prunus besseyi 'Palmer Buttercup'</i>	5 gal	1-2'
112	FCS	Fern Crataegus	<i>Artemisia 'Fern Crataegus'</i>	1 gal	2-3'
6	PPC	Pink Flower Carpet Rose	<i>Rosa x Flower Carpet 'Nostradamus'</i>	5 gal	1-2'
20	RGB	Rose Glow Barberry	<i>Berberis thunbergii 'Rose Glow'</i>	5 gal	3-5'
30	RNS	Rock Spirea	<i>Holidodiscus dimorphus</i>	5 gal	3-4'
11	SCL	Shadescale	<i>Atriplex confertifolia</i>	5 gal	1-2'
17	SDS	Sand Scaevola	<i>Artemisia filifolia</i>	5 gal	2-3'
16	SPB	Spanish Gold Bloom	<i>Cytisus purpureus 'Spanish Gold'</i>	5 gal	3-4'
12	WSC	Western Sand Cherry	<i>Prunus besseyi</i>	5 gal	3-5'
<b>Evergreen Shrubs</b>					
48	ANJ	Andorra Juniper	<i>Juniperus horizontalis 'Andorra'</i>	5 gal	1-1.5'
83	BCJ	Blue Chip Juniper	<i>Juniperus horizontalis 'Blue Chip'</i>	5 gal	5-11'
49	DFJ	Dwarf Juniper	<i>Juniperus sp. 'Dwarf Juniper'</i>	2 gal	2-2'
3	FMH	Fremont Mahonia	<i>Mahonia fremontii</i>	2 gal	3-6'
62	FISJ	Fragaria Juniper	<i>Juniperus horizontalis 'Fragaria'</i>	5 gal	5-11'
3	MJL	Mint Julep Juniper	<i>Juniperus chinensis 'Mint Julep'</i>	5 gal	5-11'
<b>Perennials/Grass</b>					
69	BBG	Blood Amaranth Blue Grama Grass	<i>Bouteloua gracilis 'Blood Amaranth'</i>	1 gal	2-3'
47	BLB	Blaze Little Bluestem Grass	<i>Schizanthus scoparium 'Blaze'</i>	1 gal	1-2.5'
36	COH	Colorado Orange Hyssop	<i>Agastache aurantiaca</i>	1 gal	2-3'
35	CSS	Cheyenne Sky Frame Switch Grass	<i>Panicum virgatum 'Cheyenne Sky'</i>	1 gal	2-3'
43	DFG	Dwarf Fountain Grass	<i>Pennisetum alopecuroides 'Flamelet'</i>	1 gal	1.5-3'
54	FRG	Feather Reed Grass	<i>Calamagrostis x acutiflora 'Karl Foerster'</i>	1 gal	2-4'
61	LVM	Moonside Yarrow	<i>Achillea millefolium 'Moonside'</i>	1 gal	1-2.5'
31	SLG	Sand Love Grass	<i>Eragrostis trichodes</i>	1 gal	2-4'
69	SUN	Sunset Shrub	<i>Asarotus cuneatus</i>	1 gal	1.5-3'
85	UNG	Undersize Blue Mink Grass	<i>Monardella racemosa 'Undersize'</i>	1 gal	2-3'

NOTES:  
 1. PLANT GROWTH CHARACTERISTICS VARY DUE TO ENVIRONMENTAL CONDITIONS. THEREFORE A RANGE OF AVERAGE NATURAL HEIGHTS ARE LISTED TO BE WATERED WITH AN UNDERGROUND PRESSURIZED IRRIGATION SYSTEM.  
 2. QUANTITIES ARE INCLUSIVE OF ALL LANDSCAPE SHEETS, BUT NOT INCLUDING L-1.  
 3. QUANTITIES ARE INCLUSIVE OF ALL LANDSCAPE SHEETS, BUT NOT INCLUDING L-1.



KEY MAP



GAYNOR, ROBERTS & ASSOCIATES, INC.  
 LANDSCAPE ARCHITECTS



PUBLIC WORKS  
 ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
 LANDSCAPE PLAN

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	DATE	DATE

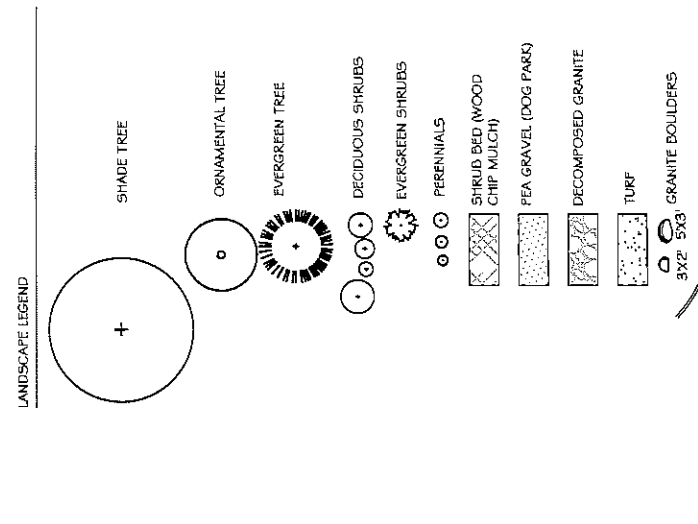
SCALES:  
 PLAN & PROFILE 1"=30'  
 HORIZONTAL 1"=30'

DATE 7/7/2018  
 DATE 7/7/2018  
 DATE 7/7/2018  
 DATE 7/7/2018

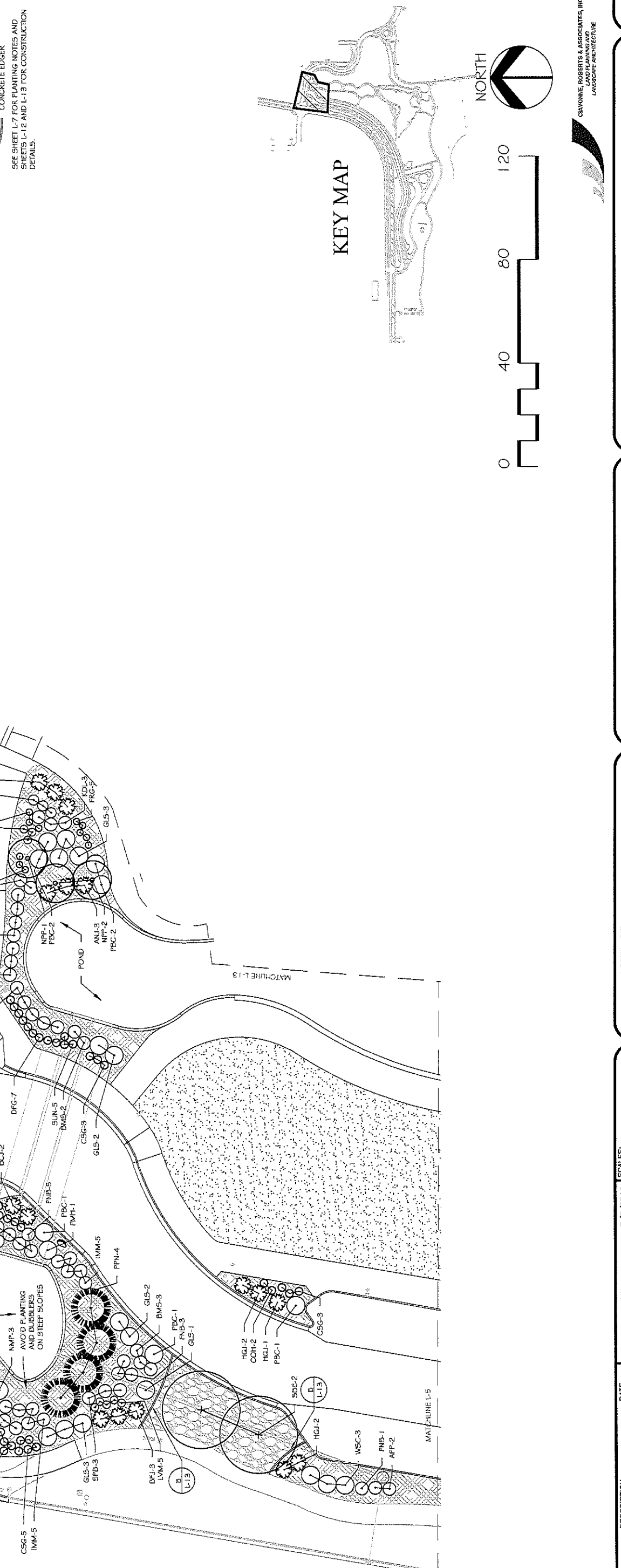
DESIGNED BY MH  
 CHECKED BY CR  
 APPROVED BY ZZ

**PLANT LIST, NO QUANTITIES**

Key	Common Name
<b>Deciduous Trees</b>	
AGG	Autumn Gold Ginkgo
BXK	Burr Oak
FRE	Frontier Elm
GVZ	Green Yucca Zella
HBY	Hackberry
HILO	Suburban Honeylocust
IHL	Impenal Honeylocust
IMC	Indian Magic Crabapple
JPT	Japanese Pagoda Tree
NFP	Newport Plum
SBE	Sensation Box Elder
SKH	Skyline Honeylocust
SSC	Spina Snow Crabapple
VZG	Village Green Zelkova
WCA	Western Catalpa
WKT	Winter King Hawthorn
<b>Evergreen Trees</b>	
FRN	Fraser Fir
WTL	Witchita Juniper
<b>Deciduous Shrubs</b>	
AAS	Autumn Amber Sumac
APP	Apache Plum
APS	Appaloosa Rose of Sharon
BWS	Blue Mist Spruce
DBB	Dwarf Burning Bush
FNB	Fern Bush
GLS	Green Low Sumac
IMM	Intricate Min. Mahogany
KDL	Korean Dwarf Lilac
LEB	Lena Bloom
LED	Leadplant
<b>Perennials/Ground Covers</b>	
BBG	Blood Ambition Blue Grama Grass
BLB	Blaze Little Bluestem Grass
COH	Colorado Orange Ivyleaf
CSC	Cheyenne Sky Prairie Switch Grass
DFG	Dwarf Fountain Grass
FRG	Feather Reed Grass
LVM	Manstead Lavender
MW	Moonshine Yarrow
SLG	Sand Love Grass
SUN	Sweet Hyssop
UMG	Undaunted Ruby Mully Grass



Key	Common Name
<b>Deciduous Trees</b>	
AGG	Autumn Gold Ginkgo
BXK	Burr Oak
FRE	Frontier Elm
GVZ	Green Yucca Zella
HBY	Hackberry
HILO	Suburban Honeylocust
IHL	Impenal Honeylocust
IMC	Indian Magic Crabapple
JPT	Japanese Pagoda Tree
NFP	Newport Plum
SBE	Sensation Box Elder
SKH	Skyline Honeylocust
SSC	Spina Snow Crabapple
VZG	Village Green Zelkova
WCA	Western Catalpa
WKT	Winter King Hawthorn
<b>Evergreen Trees</b>	
FRN	Fraser Fir
WTL	Witchita Juniper
<b>Deciduous Shrubs</b>	
AAS	Autumn Amber Sumac
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APS	Appaloosa Rose of Sharon
BWS	Blue Mist Spruce
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BBG	Blood Ambition Blue Grama Grass
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SLG	Sand Love Grass
SUN	Sweet Hyssop
UMG	Undaunted Ruby Mully Grass



GAYNOR, ROBERTS & ASSOCIATES, INC.  
LANDSCAPE ARCHITECTURE

REVISION $\Delta$	DESCRIPTION	DATE	DRAWN BY	MH	DATE	7/17/2018	SCALES:	PLAN & PROFILE	1" = 30'
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REVISION $\Delta$			CHECKED BY	CR	DATE	7/17/2018			
REVISION $\Delta$			APPROVED BY	ZZ	DATE	7/17/2018			

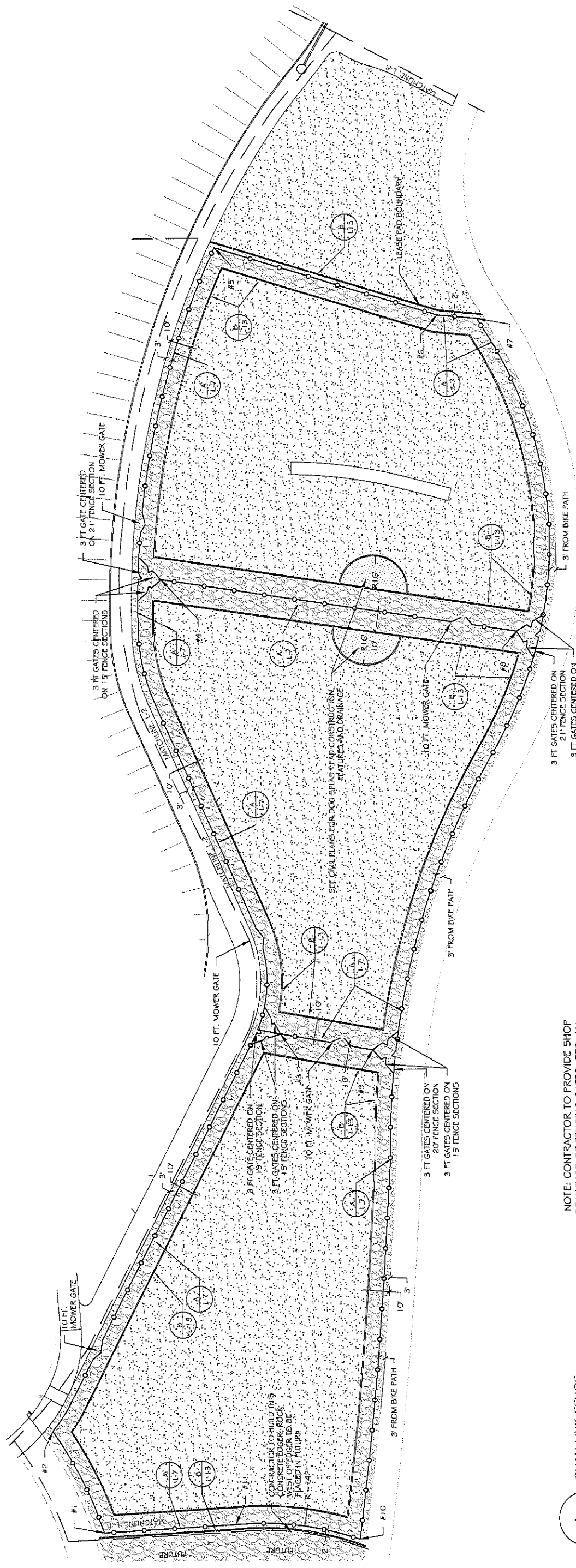
CHIEF OF

**Grand Junction**  
COLORADO

PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
LANDSCAPE PLAN

L-6  
173

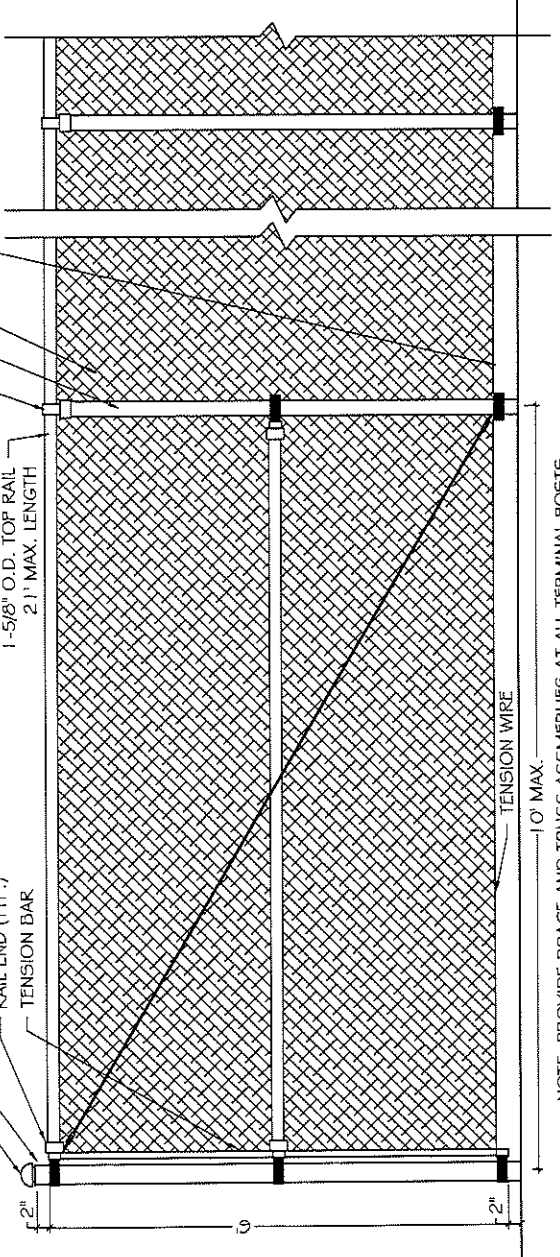
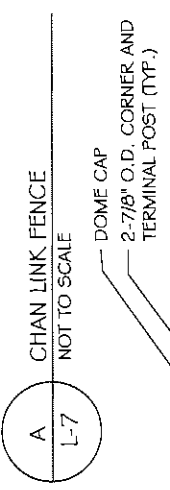


FENCE CORNERS POINT TABLE

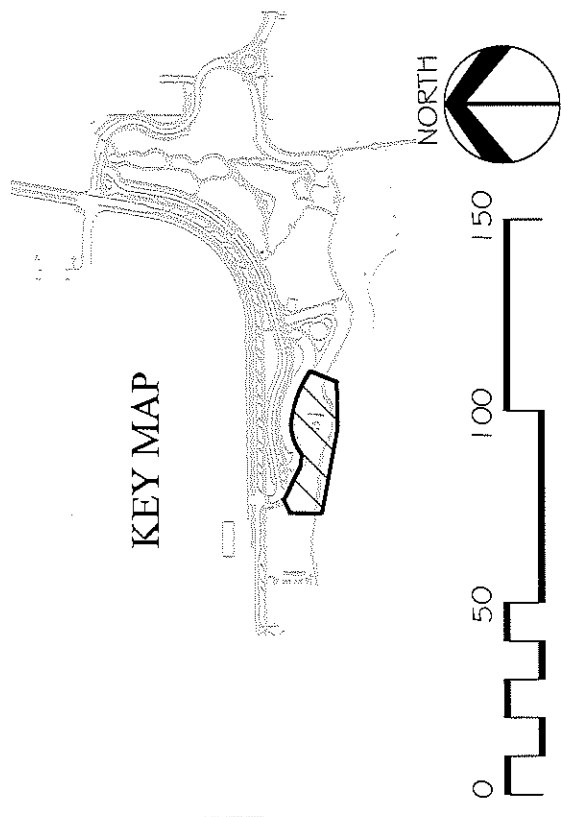
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2	31505.3	94803.6
3	31395.9	94992.6
4	31452.6	95209.3
5	31426.9	95367.7
6	31320.7	95335.4
7	31301.6	95333.7
8	31263.0	95104.3
9	31352.0	94984.5
10	31359.0	94751.1
11	31418.3	94758.4

- LANDSCAPE LEGEND
- PEA GRAVEL (DOG PARK) ; FULL DEPTH @ TOP OF EDGER TO FILL BASIN
  - DECOMPOSED GRANITE
  - TURF
  - CONCRETE EDGER
  - BLACK VINYL-COATED FENCING, SEE DETAIL, THIS SHEET
- CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR FENCING, 3' GATES AND MOWER GATE DETAILS. SEE SHEET L-13 FOR MORE CONSTRUCTION DETAILS.

NOTE: CONTRACTOR TO PROVIDE SHOP DRAWINGS OF FENCING GATES, ETC. ALL COMPONENTS TO BE BLACK VINYL COATED



NOTE: PROVIDE BRACE AND TRUSS ASSEMBLIES AT ALL TERMINAL POSTS



A CHAN LINK FENCE  
L-7  
NOT TO SCALE

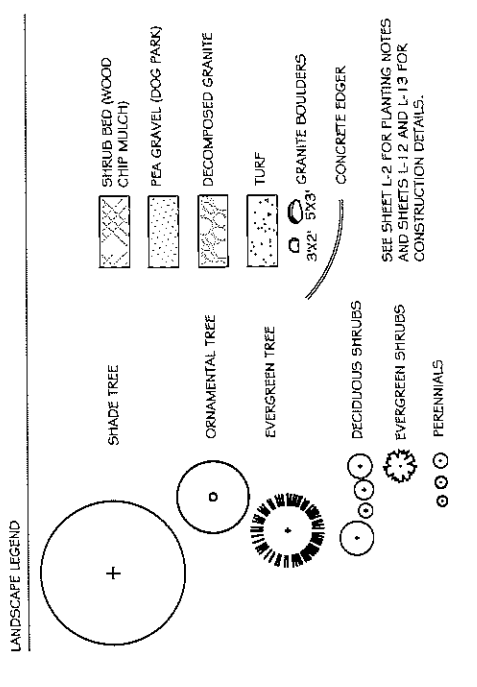
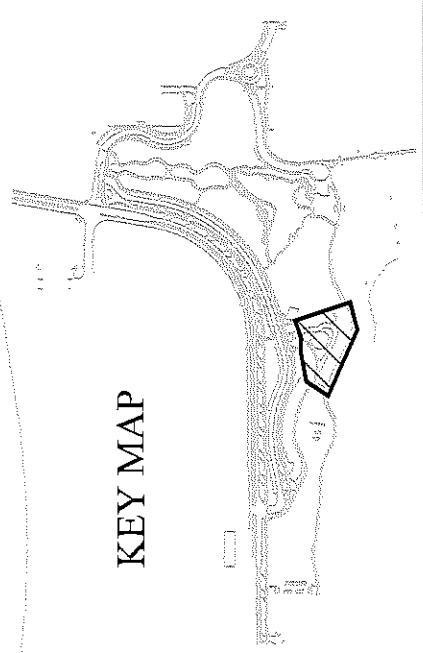
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L-7 174							



PLANT LIST, NO QUANTITIES

Key	Common Name
<b>Deciduous Trees</b>	
AGG	Autumn Gold Ginkgo
BOX	Byrt Oak
FRE	Frontier Elm
GVZ	Green Vase Zelkova
HBV	Hackberry
HCO	Honeylocust
IMC	Indian Magic Crabapple
JPT	Japanese Pagoda Tree
NPT	Newport Palm
SEB	Sensation Box Elder
SKH	Skyline Honeylocust
SSC	Spring Snow Crabapple
VGZ	Village Green Zelkova
WCA	Western Catalpa
WKS	Winter King Hawthorn
<b>Evergreen Trees</b>	
PPN	Pinon Pine
WHTJ	Wichita Juniper
<b>Deciduous Shrubs</b>	
AAS	Autumn Amber Sumac
AFP	Apache Plume
AFS	Aphrodite Rose of Sharon
BM5	Blue Mist Spiraea
DBB	Dwarf Bursera Bush
DBR	Dwarf Blue Rabbit Bush
FNB	Fern Bush
GLS	Go Low Spirea
IMM	Inkberry Mtn. Mallogany
KDL	Korean Dwarf Lilac
LEB	Levee Broom
LED	Leafplant
LLM	Littleleaf Mockorange
NMP	New Mexico Finet
PKC	Pawnee Bittersand Cherry
FCS	Powis Castle Sage
PFC	Pink Flower Carpet Rose
RGB	Rosa Glow Barberry
RSS	Rock Spiraea
SCL	Shadecore
SDS	Sand Scaebush
SPB	Spanish Gold Broom
WSC	Western Sand Cherry
<b>Evergreen Shrubs</b>	
ANJ	Arizona Juniper
BCI	Blue Chip Juniper
BFJ	Buffalo Juniper
FMH	Franciscan Mahonia
HGL	Hueless Juniper
WJL	Walt Juniper
<b>Perennial/Grass/Conifers</b>	
BBG	Blood Ambition Blue Grama Grass
BUB	Blaze Little Bluestem Grass
COH	Coronado Orange Hyssop
CSG	Cleveland Sky Prairie Switch Grass
DFG	Dwarf Fountain Grass
FRG	Feather Reed Grass
LVM	Muskeget Lavender
MWV	Moonshine Yarrow
SLG	Sand Love Grass
SUN	Sunset Hyssop
UMG	Undaunted Ruby Mink Grass

NOTES:  
 1. QUANTITIES SCIENTIFIC NAMES AND SIZES FOR ALL SHEETS SHOWN ON SHEET L-5  
 2. QUANTITIES FOR SHEET L-1 ARE NOT INCLUDED IN BID SCHEDULE



REVISION	DATE	DESCRIPTION

SCALE:	PLAN & PROFILE
0 40 80 120	0 10 20 30

DRAWN BY	DATE	DATE	DATE
MH	7/7/2018	7/7/2018	7/7/2018
DESIGNED BY	MH	DATE	7/7/2018
CHECKED BY	CR	DATE	7/7/2018
APPROVED BY	ZZ	DATE	7/7/2018

CITY OF  
**Grand Junction**  
 COLORADO

**PUBLIC WORKS**  
 ENGINEERING DIVISION

**LAS COLONIAS BUSINESS PARK**  
 LANDSCAPE PLAN

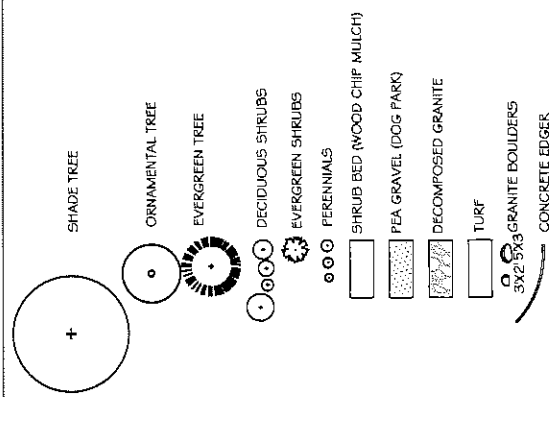
L-8  
 L-175

CLAYTON, ROBERTS & ASSOCIATES, INC.  
 LANDSCAPE ARCHITECTURE

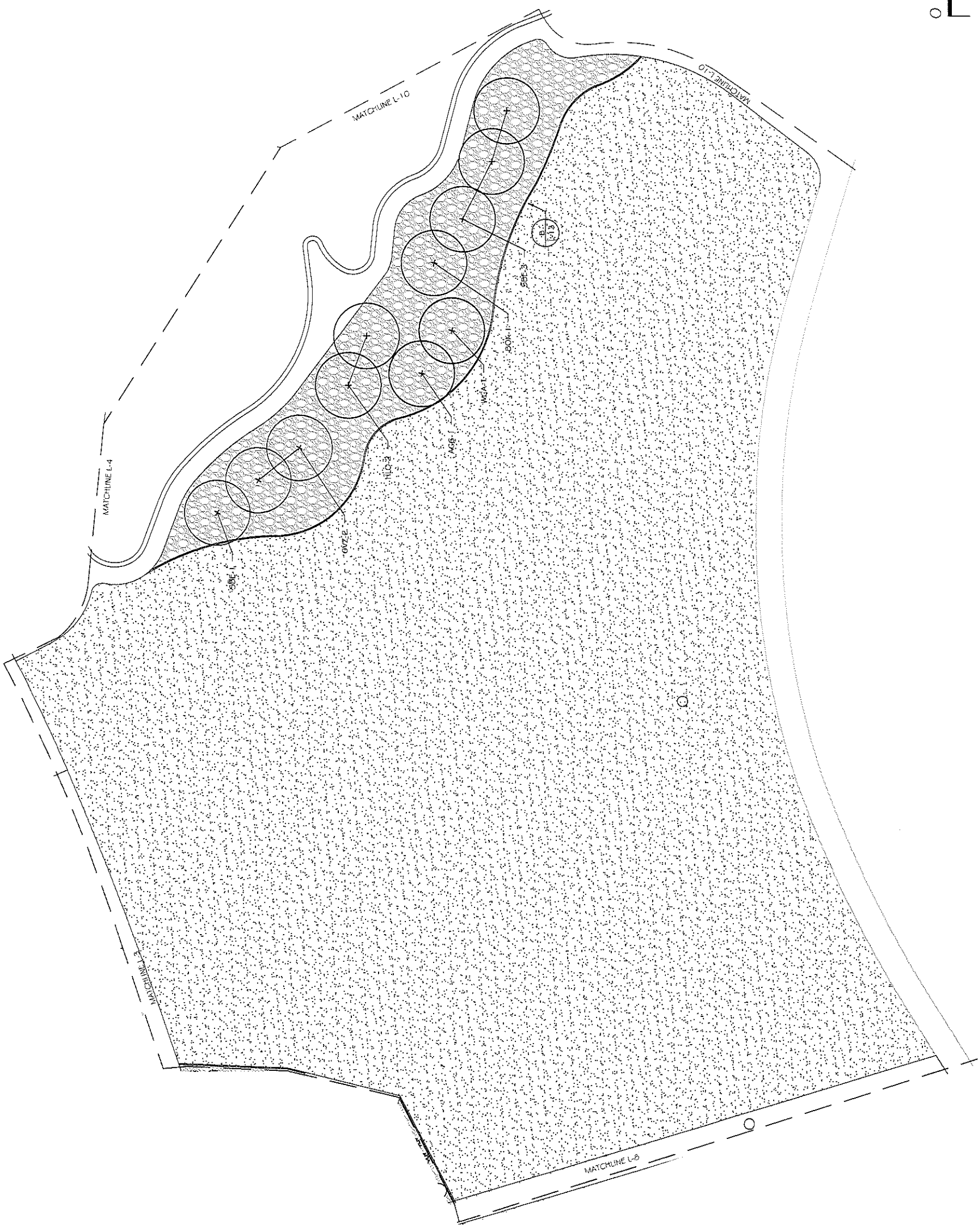
PLANT LIST, NO QUANTITIES

Key	Common Name
Deciduous Trees	
AGG	Autumn Gold Ginkgo
BOK	Burr Oak
FRE	Frosted Elm
GVZ	Green Vase Zelkova
FIBY	Fiberberry
HLD	Humboldt Honeylocust
IMC	Imperial Magnolia
JPT	Japanese Pagoda Tree
NFP	Newport Plum
SBE	Sensation Box Elder
SNH	Skyline Honeylocust
SSC	Spring Snow Crabapple
VGZ	Village Green Zelkova
WCA	Western Catalpa
WTH	Winter King Hawthorn

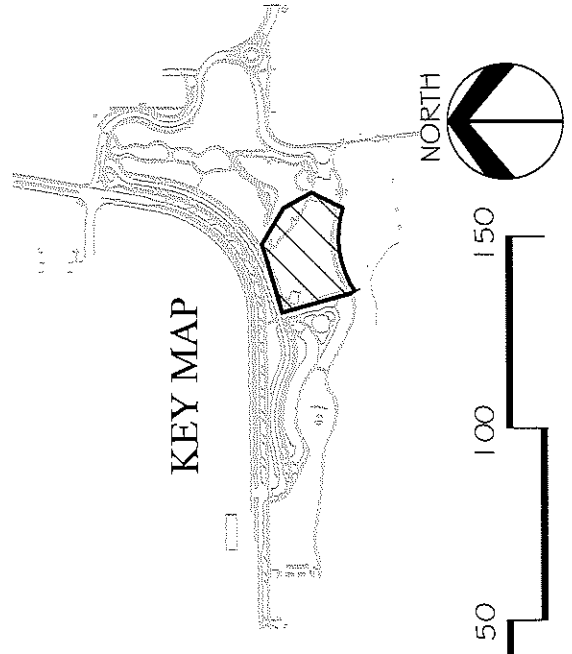
LANDSCAPE LEGEND



SEE SHEET L-7 FOR PLANTING NOTES AND SHEETS L-12 AND L-13 FOR CONSTRUCTION DETAILS.

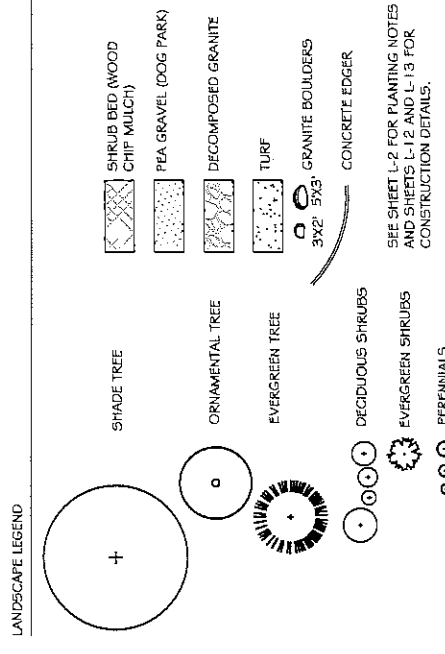
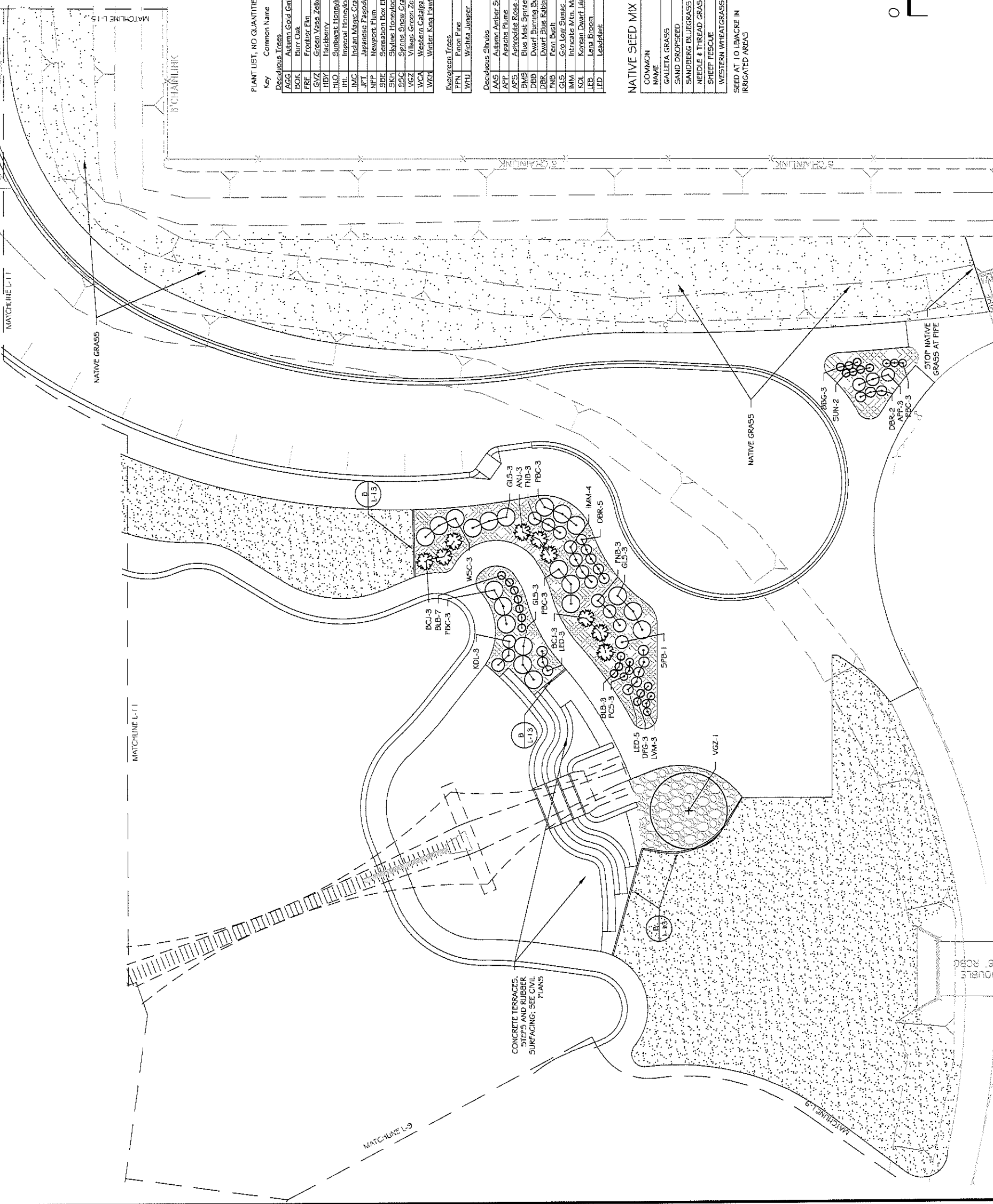


KEY MAP



CIVIL ENGINEERS & ARCHITECTS  
LANDSCAPE ARCHITECTURE

REVISION <input type="checkbox"/> DATE _____ REVISION <input type="checkbox"/> DATE _____ REVISION <input type="checkbox"/> DATE _____ REVISION <input type="checkbox"/> DATE _____	DESCRIPTION _____ DATE _____	DRAWN BY: MH _____ DATE: 7/7/2018 DESIGNED BY: MH _____ DATE: 7/7/2018 CHECKED BY: CR _____ DATE: 7/7/2018 APPROVED BY: ZZ _____ DATE: 7/7/2018	SCALES: PLAN & PROFILE: 1" = 50' 		PUBLIC WORKS ENGINEERING DIVISION	LAS COLONIAS BUSINESS PARK LANDSCAPE PLAN	L-9 176
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PLANT LIST, NO QUANTITIES

Key Common Name

AGG	Autumn Gold Ginkgo
BOK	Burr Oak
FRE	Fraxino Elm
GVZ	Green Vase Zelkova
HBB	Highberry
HLI	Starburst Tronolobus
IMC	Imperial Honeysuckle
JPT	Japanese Pagoda Tree
NFP	Newport Elm
SBE	Sensation Box Elder
SKH	Skyline Honeylocust
SSC	Spring Snow Crabapple
VGZ	Village Green Zelkova
WCA	Western Catalpa
WTH	Winter King Hawthorn
FPN	Prairie Pine
WHT	Wichita Juniper
AAS	Autumn Amber Sumac
ATF	Azalea Flame
ARZ	Apricot Rose of Sharon
BMS	Blue Mist Spruce
DBR	Dwarf Burning Bush
FNB	Fern Bush
GL5	Grass Low Sunag
IMM	Intricate Min. Mahogany
KDI	Korean Dwarf Lilac
LEB	Lena Broom
LED	Leadplant
PER	Perennial Ground Covers
BLB	Blaze Little Bluestem Grass
CDI	Colorado Orange Tyssop
CSG	Cheyenne Sky Frame Switch Grass
DFG	Dwarf Fountain Grass
FRG	Feather Reed Grass
LVM	Minstead Lavender
MNV	Moonshine Yarrow
SLG	Sand Love Grass
SUN	Sunset Tyssop
UMG	Undaunted Ruy, Milky Grass

LUM	Liteland Mockorange
NMF	New Mexico Fir
PBC	Fanned Batten Sand Cherry
PCS	Powis Crabapple
PFC	Pink Flower Carpet Rose
RGB	Rose Glow Barberry
RYS	Rock Spruce
SCL	Shadblow
SDS	Sand Sagebrush
SFB	Spanish Gold Broom
WSC	Western Sand Cherry
ANJ	Andorra Juniper
BCJ	Blue Chip Juniper
BFJ	Buffalo Juniper
FMH	Fremont Mahonia
HGL	Hughes Juniper
MJJ	Mint Juniper
PER	Perennial Ground Covers
BLB	Blaze Little Bluestem Grass
CDI	Colorado Orange Tyssop
CSG	Cheyenne Sky Frame Switch Grass
DFG	Dwarf Fountain Grass
FRG	Feather Reed Grass
LVM	Minstead Lavender
MNV	Moonshine Yarrow
SLG	Sand Love Grass
SUN	Sunset Tyssop
UMG	Undaunted Ruy, Milky Grass

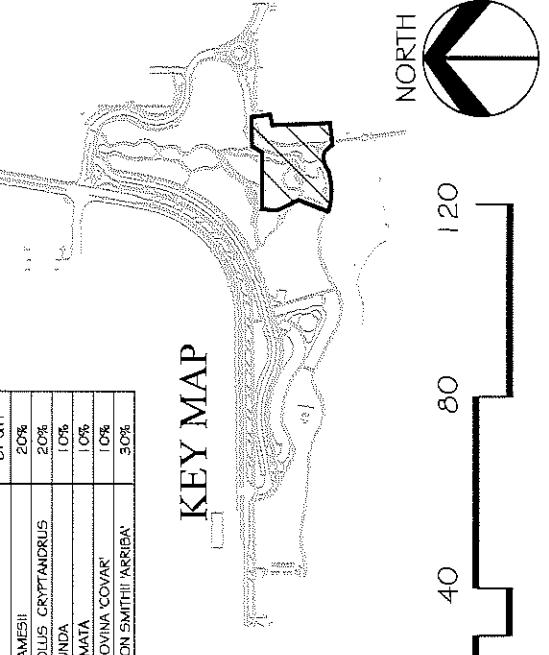
NOTES:  
 1. QUANTITIES SCIENTIFIC NAMES AND SIZES FOR ALL SHEETS SHOWN ON SHEET L-5  
 2. QUANTITIES FOR SHEET 1 ARE NOT INCLUDED IN BID SCHEDULE

NATIVE SEED MIX

COMMON NAME	SCIENTIFIC NAME	% OF MIX BY CITY
GALLET GRASS	MILARIA JAMESII	20%
SAND DROPS	SPOROBOLUS CRYPTANDRUS	20%
SANDBERG BLUEGRASS	POA SECUNDA	10%
NEEDLE & THREAD GRASS	STIPA COMATA	10%
SHEEP FESCUE	FESTUCA OVINA 'COVAR'	10%
WESTERN WHEATGRASS	AGROPERON SMITHII 'ARRIBA'	30%

SEED AT 1.0 LB/AC IN IRRIGATED AREAS

KEY MAP



REVISION	DATE	DESCRIPTION

DRAWN BY	MH	DATE	7/7/2018
DESIGNED BY	MH	DATE	7/7/2018
CHECKED BY	CR	DATE	7/7/2018
APPROVED BY	ZZ	DATE	7/7/2018

SCALES: PLAN & PROFILE 1" = 100'-0"

CITY OF Grand Junction COLORADO

PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK LANDSCAPE PLAN

L-10 177

GAYNOR, ROBERTS & ASSOCIATES, INC. LANDSCAPE ARCHITECTURE

Key	Common Name
LIM	Littellat Mockorange
NMP	New Mexico Prick
PBC	Pawnee Buttes Sand Cherry
FCS	Pinks Castle Sage
PFC	Pink Flower Carpet Rose
RGB	Rose Glow Barberry
RKS	Rock Spiraea
SCL	Shadscale
SDS	Sand Spargelush
SPB	Spruce Gold Ploom
WSC	Western Sand Cherry

Key	Common Name
AGG	Autumn Gold Ginkgo
BOX	Box Oak
FRF	Frontier Elm
GSZ	Green Spire Zelkova
TBT	Taxus
PHO	Shrub Honeylocust
IMC	Imperial Honeylocust
JPT	Japanese Pagoda Tree
NFP	Newport Plum
SBE	Sensation Box Elder
SKH	Skyline Honeylocust
SSC	Spring Snow Crabapple
VGZ	Village Green Zelkova
WCA	Western Catalpa
WKN	Winter King Hawthorn

Key	Common Name
ANL	Andorra Juniper
KCJ	Blue Chip Juniper
BEJ	Belted Juniper
FMH	French Mophead
TGU	Turkey Juniper
MAJ	Mini Miller Juniper

Key	Common Name
BBG	Blond Ambition Blue Grama Grass
BLB	Blaze Little Bluestem Grass
COH	Colorado Orange Hyssop
CSG	Cheyenne Sky Prairie Switch Grass
DFG	Dwarf Fountain Grass
FRG	Feather Reed Grass
LVM	Munstead Lavender
MWV	Moonshine Yarrow
SLG	Sand Love Grass
SUN	Sunset Hyssop
UMG	Undaunted Ruby Maibly Grass

NOTES:  
 1. QUANTITIES SCIENTIFIC NAMES AND SIZES FOR ALL SHEETS SHOWN ON SHEET L-5  
 2. QUANTITIES FOR SHEET L-1 ARE NOT INCLUDED IN BID SCHEDULE

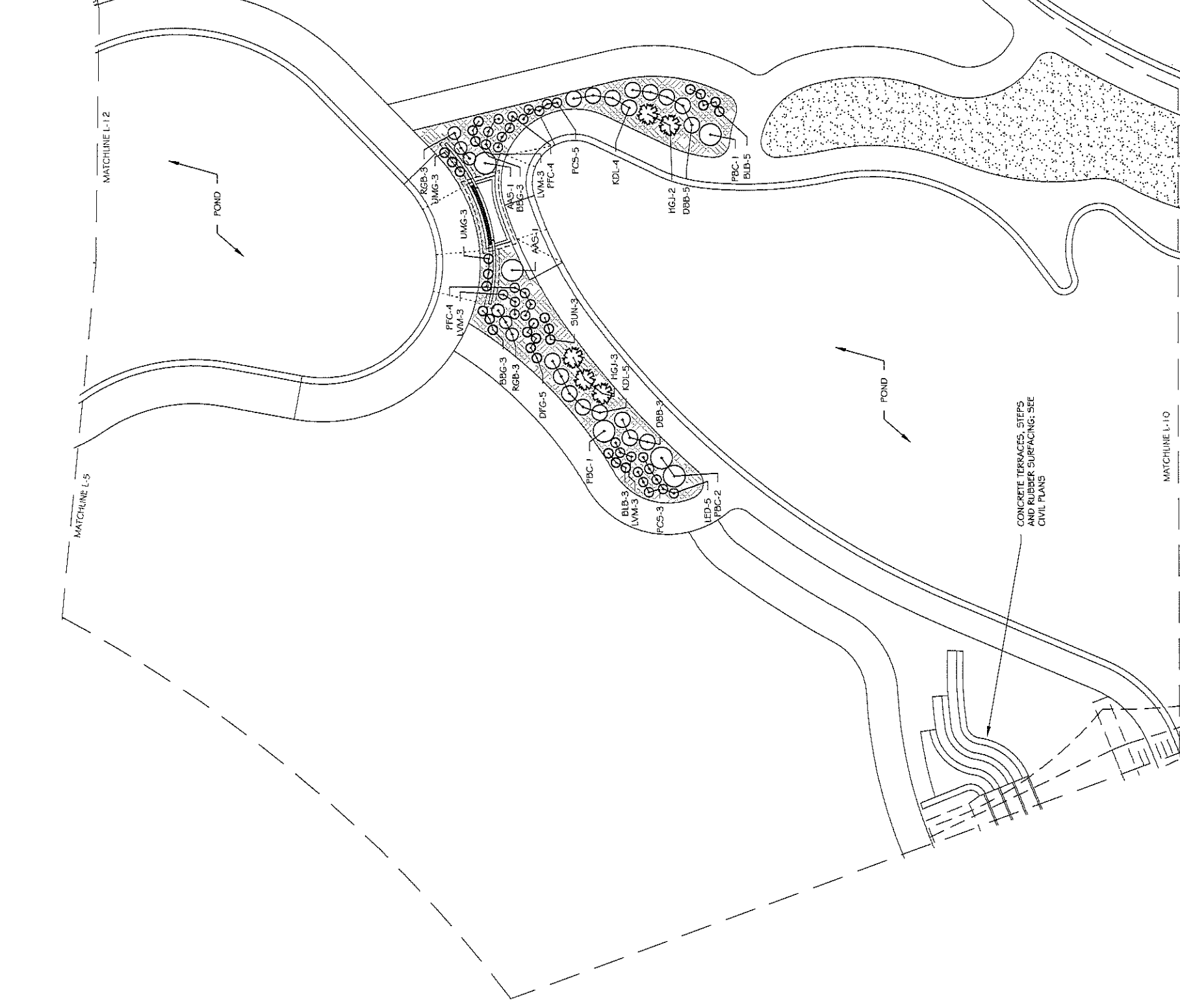
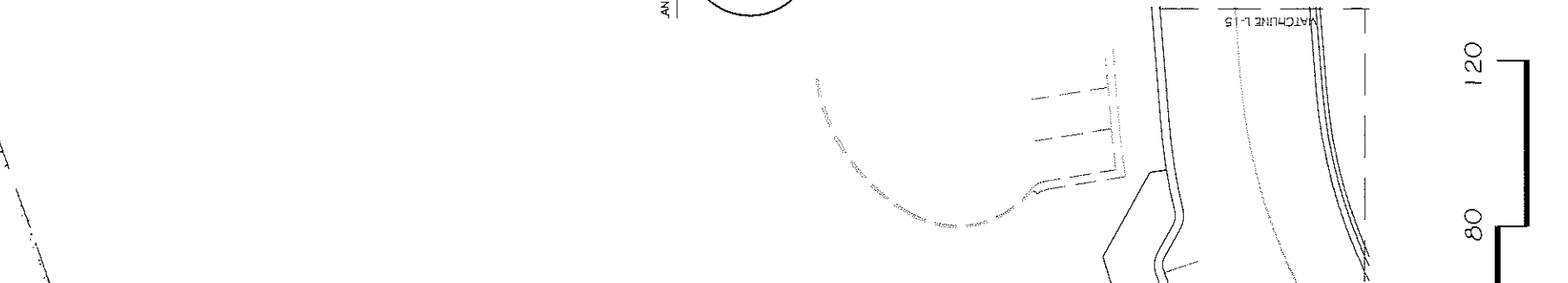
Key	Common Name
ASG	Autumn Amber Sycamore
APF	Apache Flame
AFS	Apricot Rose of Sharon
BMG	Blue Mist Spruce
DBB	Dwarf Burning Bush
FNB	Fern Bush
GLS	Gre Low Sumac
IMM	Intricate Min. Mahogany
KDL	Korean Dwarf Lilac
LEB	Lena Broom
LED	Leadplant

Key	Common Name
SHRUB BED (WOOD CHIP MULCH)	
PEA GRAVEL (DOG PARK)	
DECOMPOSED GRANITE	
TURF	
3X2' 5X3' GRANITE BOULDERS	
CONCRETE EDGER	

Key	Common Name
SHADE TREE	
ORNAMENTAL TREE	
EVERGREEN TREE	
DECIDUOUS SHRUBS	
EVERGREEN SHRUBS	
PERENNIALS	

Key	Common Name
PPN	Pinnon Pine
WHU	Wichita Juniper

Key	Common Name
SHRUB BED (WOOD CHIP MULCH)	
PEA GRAVEL (DOG PARK)	
DECOMPOSED GRANITE	
TURF	
3X2' 5X3' GRANITE BOULDERS	
CONCRETE EDGER	



REVISION	DATE	DESCRIPTION

SCALE:	PLAN & PROFILE

DATE	DATE	DATE	DATE

DATE	DATE	DATE	DATE

PLANT LIST, NO QUANTITIES

Key	Common Name
AGG	Aulani Gold Ginkgo
BOK	Burr Oak
FRF	Frontier Elm
GLZ	Green Vase Yellow
HYB	Hackberry
HLU	Sumatran Honeylocust
HLI	Imperial Linden
IMC	Indian Winged Crabapple
JPT	Japanese Pagoda Tree
NPP	Newport Plum
SBE	Sensation Box Elder
SKH	Skyline Honeylocust
SSC	Spring Snow Crabapple
VGZ	Village Green Zellaeva
WCA	Western Catalpa
WCH	Winter King Hawthorn
Evergreen Trees	
PPN	Pinon Pine
WJU	Wichita Juniper

Deciduous Shrubs	
AAS	Ashurst Amber Sumac
APF	Azalea Floribunda
APR	Azalea Rose of Sharon
BMS	Blue Mist Spiraea
DBB	Dwarf Burning Bush
DBR	Dwarf Blue Rabbit Bush
FNB	Fern Bush
GLS	Gre Low Sumac
HMV	Infirmitate Mtn. Mallogany
KOL	Korean Dwarf Lilac
LEB	Lena Bloom
LFD	Leadplant
LUM	Littleleaf Mockorange
NMP	New Mexico Yucca
PBC	Payson Buttes Sand Cherry
PCS	Powis Castle Spirea
PFC	Pink Flower Caragana Rosea
RGB	Rock Glow Barberry
RKS	Rock Spirea
SCL	Spirea
SDB	Sand Sedgebush
SFB	Spanish Gold Bloom
WSC	Western Sand Cherry

Evergreen Shrubs	
AMJ	Austrian Juniper
BCJ	Blue Chip Juniper
BFJ	Blue Foliage Juniper
FMH	Fremont Mahonia
HGJ	Hughes Juniper
MJJ	Mittl. Juniper

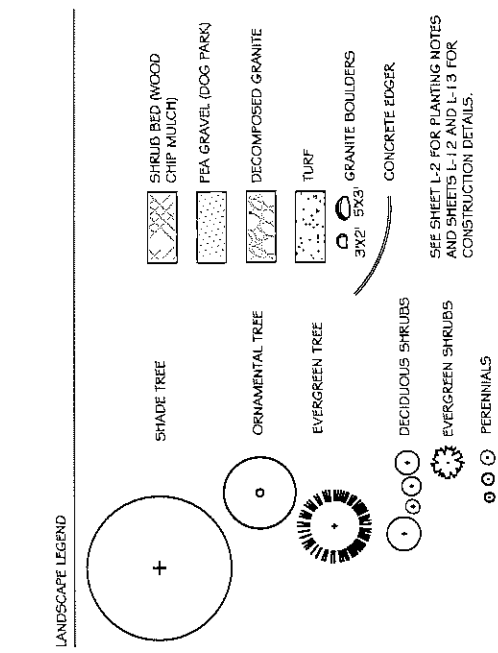
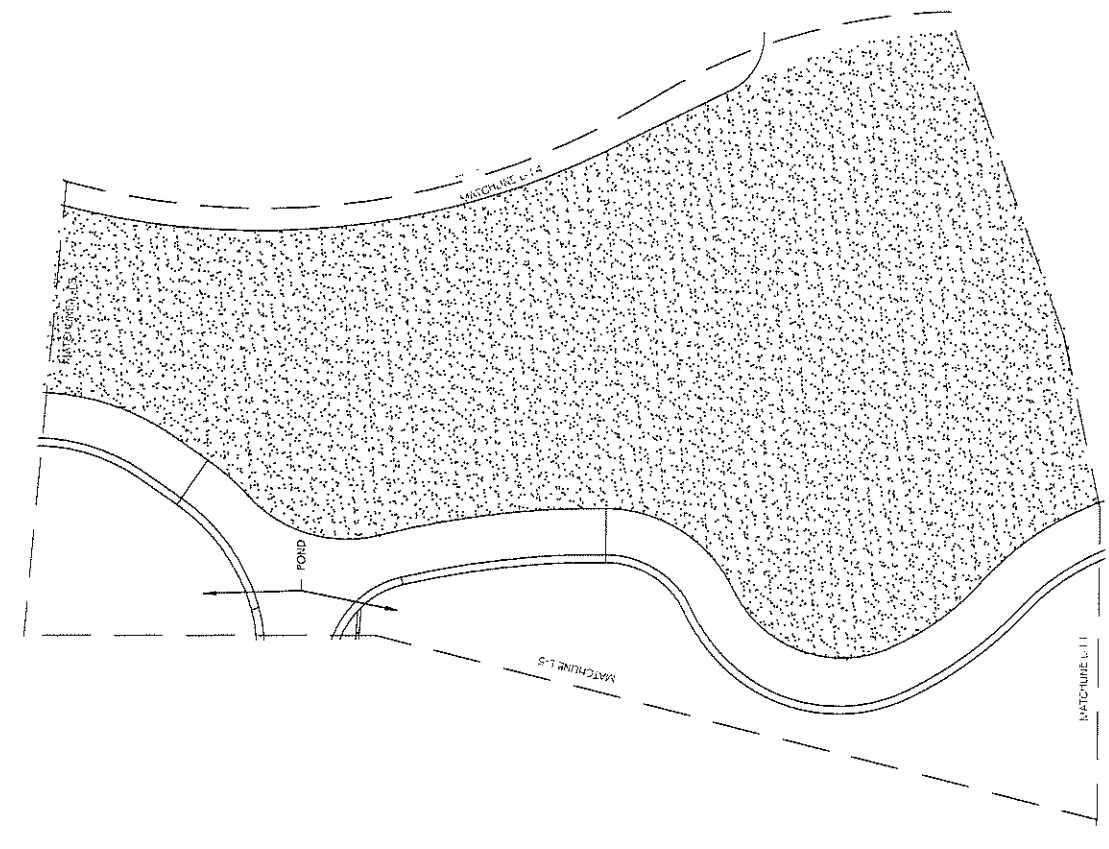
Perennials/Ground Covers	
BDG	Blond Ambition Blue Grama Grass
BLB	Blaze Little Bluestem Grass
COH	Colorado Orange Hyssop
CSS	Chrysanthe Sky Prairie Switch Grass
DFG	Dwarf Fountain Grass
FRG	Feather Reed Grass
LVM	Munstead Lavender
MYW	Moonehna Yarrow
SIG	Sand Love Grass
SUN	Sunset Hyssop
UMG	Undeveloped Ruby Mully Grass

Landscape Legend	
+	SHADE TREE
○	ORNAMENTAL TREE
●	EVERGREEN TREE
○	DECIDUOUS SHRUBS
○	EVERGREEN SHRUBS
○	PERENNIALS
▨	SHRUB BED (WOOD CHIP MULCH)
▨	PEA GRAVEL (DOG PARK)
▨	DECOMPOSED GRANITE
▨	TURF
○	GRANITE BOULDERS
—	CONCRETE EDGER

Notes	
1.	QUANTITIES SCIENTIFIC NAMES AND SIZES FOR ALL SHEETS SHOWN ON SHEET L-5
2.	QUANTITIES FOR SHEET 1 ARE NOT INCLUDED IN BID SCHEDULE

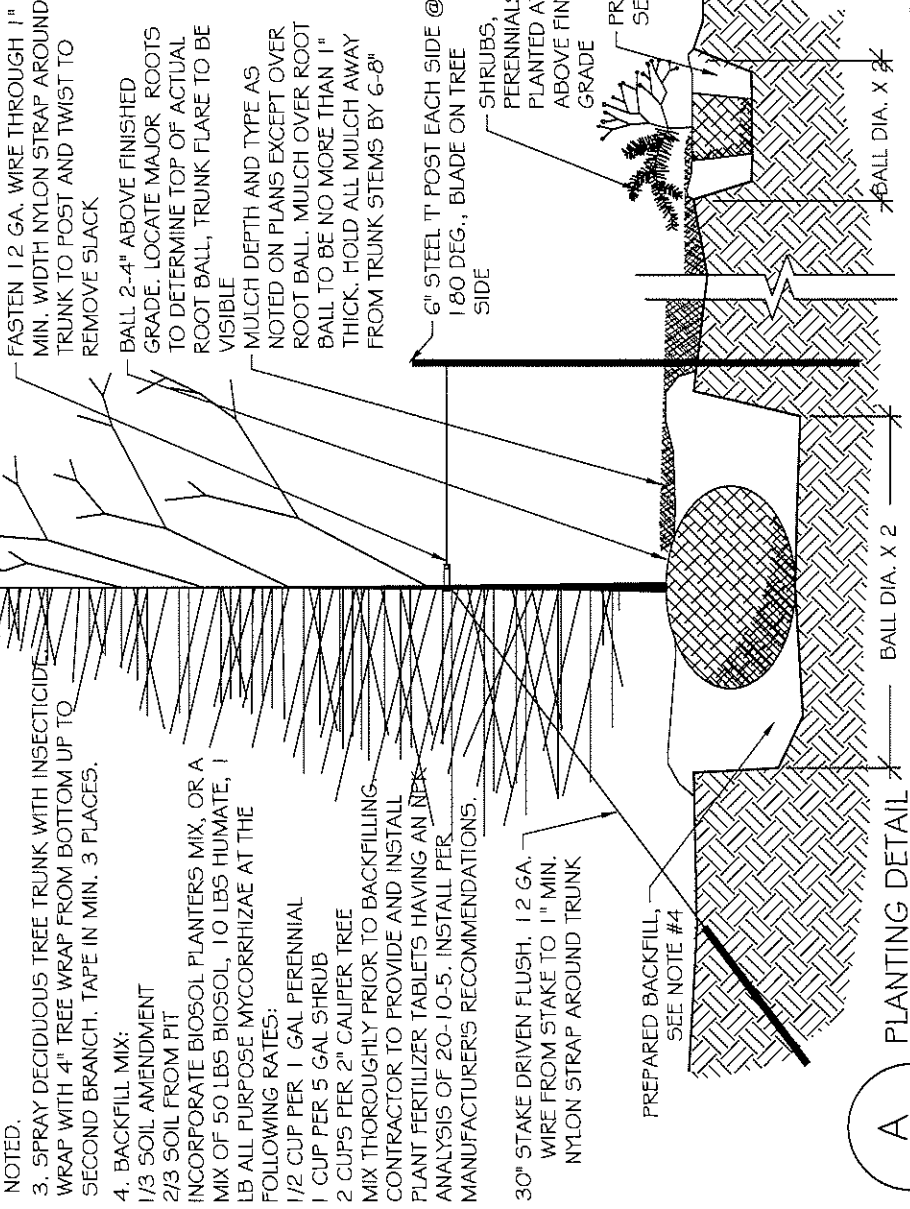
Landscape Legend	
+	SHADE TREE
○	ORNAMENTAL TREE
●	EVERGREEN TREE
○	DECIDUOUS SHRUBS
○	EVERGREEN SHRUBS
○	PERENNIALS
▨	SHRUB BED (WOOD CHIP MULCH)
▨	PEA GRAVEL (DOG PARK)
▨	DECOMPOSED GRANITE
▨	TURF
○	GRANITE BOULDERS
—	CONCRETE EDGER

NOTES:  
 1. QUANTITIES SCIENTIFIC NAMES AND SIZES FOR ALL SHEETS SHOWN ON SHEET L-5  
 2. QUANTITIES FOR SHEET 1 ARE NOT INCLUDED IN BID SCHEDULE

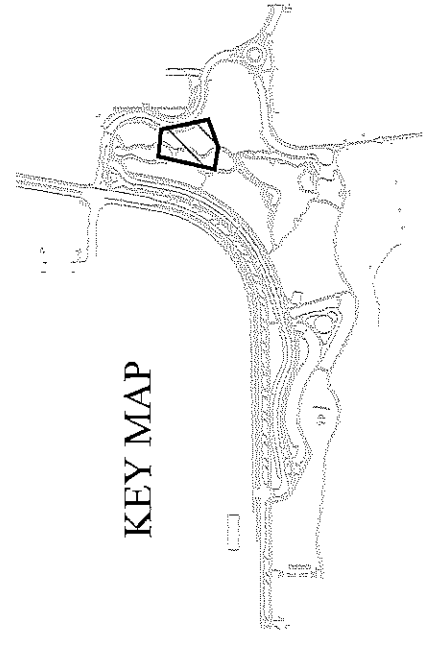


EVERGREEN (OPPOSITE SIDE SAME)      DECIDUOUS (OPPOSITE SIDE SAME)

NOTES:  
 1. ALL BEDS SHALL BE PITCHED TO DRAIN AT 3% MIN.  
 2. ALL BEDS TO RECEIVE WEED CONTROL FABRIC ON FINISHED GRADE UNDER MULCH UNLESS OTHERWISE NOTED.  
 3. SPRAY DECIDUOUS TREE TRUNK WITH INSECTICIDE WRAP WITH 4" TREE WRAP FROM BOTTOM UP TO SECOND BRANCH. TAPE IN MIN. 3 PLACES.  
 4. BACKFILL MIX:  
 1/3 SOIL AMENDMENT  
 2/3 SOIL FROM PIT  
 INCORPORATE BIOSOL PLANTERS MIX, OR A MIX OF 50 LBS BIOSOL, 10 LBS HUMATE, 1 LB ALL PURPOSE MYCORRHIZAE AT THE FOLLOWING RATES:  
 1/2 CUP PER 1 GAL PERENNIAL  
 1 CUP PER 5 GAL SHRUB  
 2 CUPS PER 2" CALIPER TREE  
 MIX THOROUGHLY PRIOR TO BACKFILLING. CONTRACTOR TO PROVIDE AND INSTALL PLANT FERTILIZER TABLETS HAVING AN ANALYSIS OF 20-10-5. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.  
 30" STAKE DRIVEN FLUSH. 12 GA. WIRE FROM STAKE TO 1" MIN. NYLON STRAP AROUND TRUNK



A  
L-12  
NOT TO SCALE



KEY MAP



CHAYNOR ROBERTS & ASSOCIATES, INC.  
 LAND PLANNING AND  
 LANDSCAPE ARCHITECTURE

REVISION	DESCRIPTION	DATE

DRAWN BY	DATE

SCALE:	PLAN & PROFILE

SEE SHEET L-2 FOR PLANTING NOTES AND SHEETS L-12 AND L-13 FOR CONSTRUCTION DETAILS.

PUBLIC WORKS  
 ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK  
 LANDSCAPE PLAN

L-12  
 179

PLANT LIST, NO QUANTITIES

Key	Common Name
AGG	Autumn Gold Ginkgo
BOK	Burr Oak
FRE	Frontier Elm
GVZ	Green Vein Zelkova
INDY	Indigo Berry
ITLO	Iturbide Honeylocust
IMC	Imperial Honeylocust
JPT	Japanese Pagoda Tree
NFP	Newport Plum
SKH	Sensation Box Elder
SSC	Snow Snow Crabapple
VGZ	Village Green Zelkova
WCA	Western Catalpa
WKH	Winter King Hawthorn

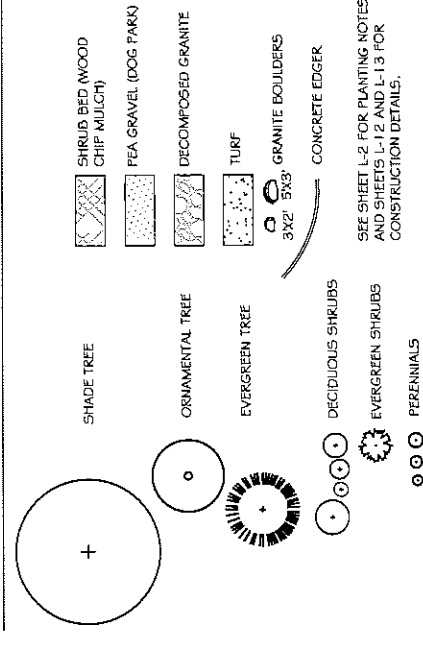
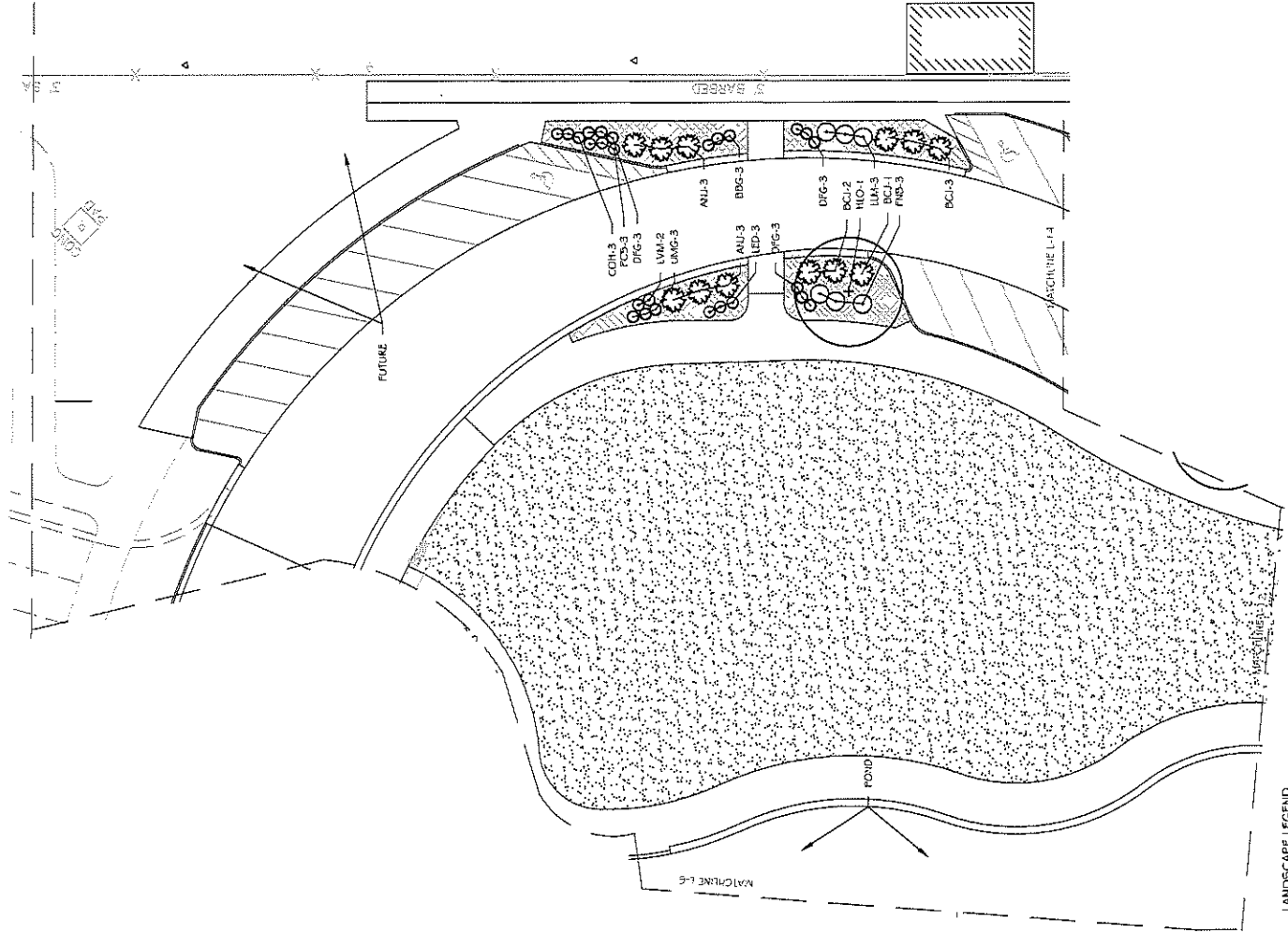
Evergreen Shrubs	
EPN	Pinyon Pine
WHU	Wichita Juniper

Deciduous Shrubs	
AAS	Autumn Amber Sumac
APF	Apatite Filice
AFS	Aphrodisiac Rose of Sharon
BMS	Blue Mist Spirea
DBB	Dwarf Burmuda Bush
DBR	Dwarf Blue Rabbit Brush
FNB	Fern Bush
GLS	Gre Low Sumac
IMM	Intricate Mtn. Malvogeny
KOL	Korean Dwarf Lilac
LEB	Lena Broom
LEP	Leadplant
LLM	Littleleaf Mockorange
NMP	New Mexico Fovet
PBC	Pawnee Bulbes Sand Cherry
PCF	Powis Castle Sage
PFC	Pink Flower Carpet Rose
RCB	Rose Snow Raspberry
RSS	Rock Spirea
SCL	Shadbush
SDB	Sand Shagbush
SPB	Spanish Gold Bloom
WSC	Western Sand Cherry

Evergreen Shrubs	
AVJ	Avonra Juniper
BCJ	Blue Chip Juniper
BJJ	Buffalo Juniper
FMH	Fremont Mahonia
HGJ	Hopless Juniper
MJJ	Mint Julep Juniper

Perennials/Ground Covers	
BBC	Blond Ambition Blue Grama Grass
BUB	Blaze Little Bluestem Grass
COH	Colorado Orange Hyssop
CSG	Cheyenne Sky Frame Switch Grass
DFG	Dwarf Fountain Grass
FRG	Feather Reed Grass
LVM	Mineshead Lavender
MYW	Moonshine Yarrow
SIG	Sand Love Grass
SUN	Sunset Hyssop
UMG	Unidentified Ruby Mouth Grass

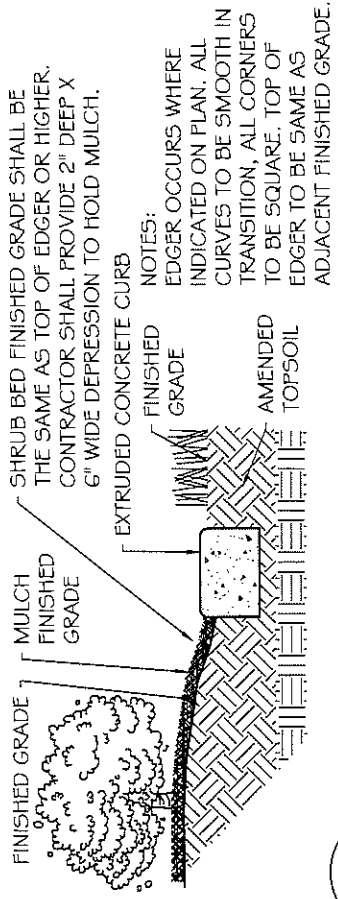
NOTES:  
 1. QUANTITIES SCIENTIFIC NAMES AND SIZES FOR ALL SHEETS SHOWN ON SHEET L-5.  
 2. QUANTITIES FOR SHEET 1 ARE NOT INCLUDED IN BID SCHEDULE



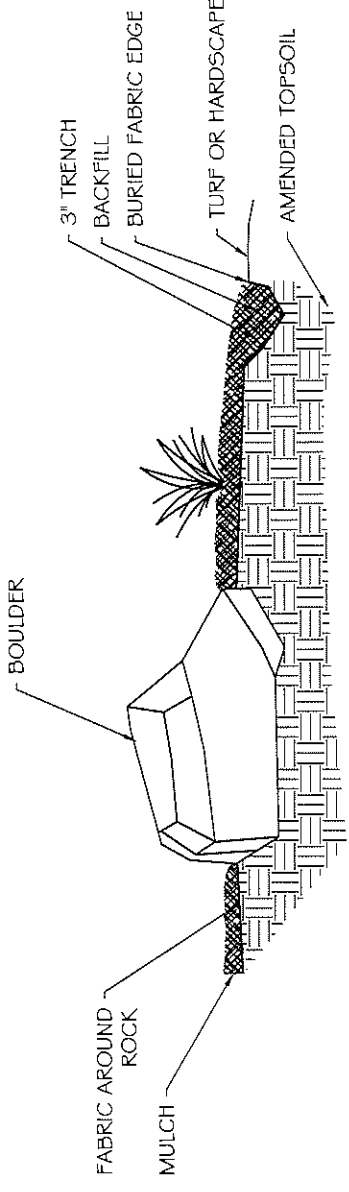
SEE SHEET L-2 FOR PLANTING NOTES AND SHEETS L-12 AND L-13 FOR CONSTRUCTION DETAILS.

DRAWN BY	DATE
MH	7/17/2018
DESIGNED BY	DATE
CR	7/17/2018
CHECKED BY	DATE
ZZ	7/17/2018
APPROVED BY	DATE
ZZ	7/17/2018

REVISION	DESCRIPTION	DATE
1		
2		
3		
4		

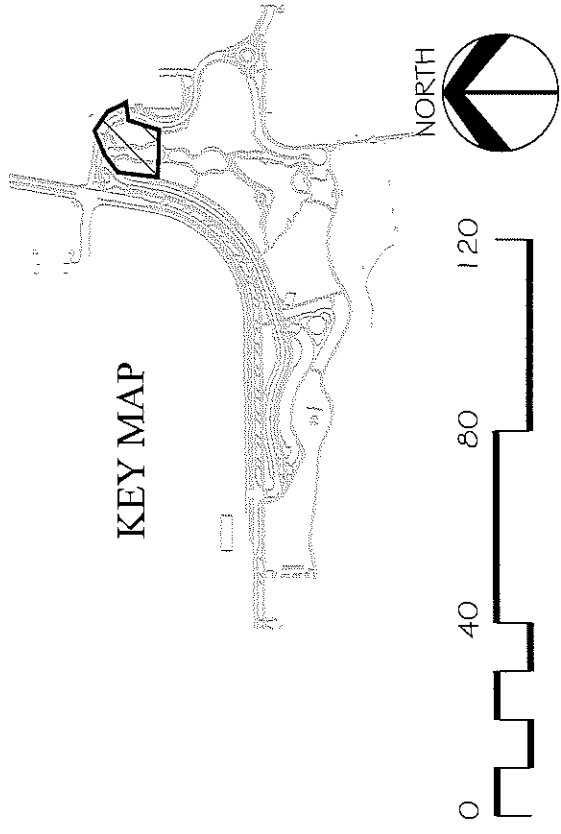


**B**  
 L-13  
 CONCRETE MOWSTRIP  
 NOT TO SCALE



**C**  
 L-13  
 DECORATIVE BOULDER PLACEMENT  
 NOT TO SCALE

KEY MAP



CANTONINE ROBERTS & ASSOCIATES, INC.  
 LAND PLANNING AND  
 LANDSCAPE ARCHITECTURE

PUBLIC WORKS  
 ENGINEERING DIVISION

**Grand Junction**  
 CITY OF GRAND JUNCTION

LAS COLONIAS BUSINESS PARK  
 LANDSCAPE PLAN

PLANT LIST, NO QUANTITIES

Key	Common Name
<b>Deciduous Trees</b>	
AGG	Autumn Gold Ginkgo
BOK	Burr Oak
FRE	Frontier Elm
GVZ	Green Vase Zelkova
HEB	Hackberry
HLO	Honeylocust
HLI	Imperial Honeylocust
IMC	Indian Magic Crabapple
JPT	Japanese Pagoda Tree
NPP	Newport Plum
SBE	Sensation Box Elder
SKH	Skyline Honeylocust
SSC	Spring Snow Crabapple
VGZ	Village Green Zelkova
WCA	Western Catalpa
WHL	Winter King Hawthorn
<b>Evergreen Trees</b>	
PTN	Pine Tree
WTL	Witchita Juniper
<b>Deciduous Shrubs</b>	
AA5	Auburn Amber Sumac
AFP	Azalea Flame
AF5	Aphrodite Rose of Sharon
BM5	Blue Mist Spireea
DBB	Dwarf Burning Bush
DBR	Dwarf Blue Rabbit Bush
FNB	Fern Bush
GL5	Gro Low Sumac
IMM	Intricate Mtn. Mahogany
KDL	Korean Dwarf Lilac
LEB	Lea Bloom
LED	Leadplant
<b>Perennials/Grass Covers</b>	
BBG	Blond Ambition Blue Grama Grass
BLB	Blaze Little Bluestem Grass
COH	Colorado Orange Hyssop
C5G	Cheyenne Sky Prairie Switch Grass
DFG	Dwarf Fountain Grass
FRG	Feather Reed Grass
LVM	Muskeget Lavender
MYW	Moonslime Yarrow
SIG	Sailed Love Grass
SUN	Sunset Hyssop
UMG	Undaunted Ebony Malt Grass

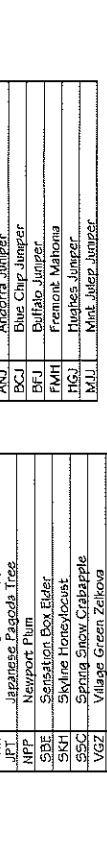
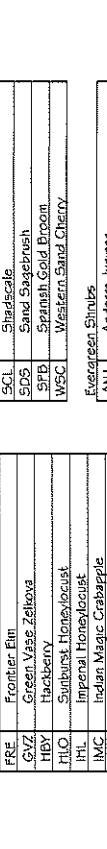
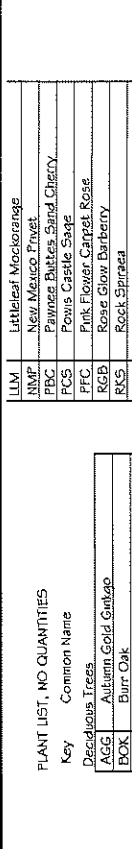
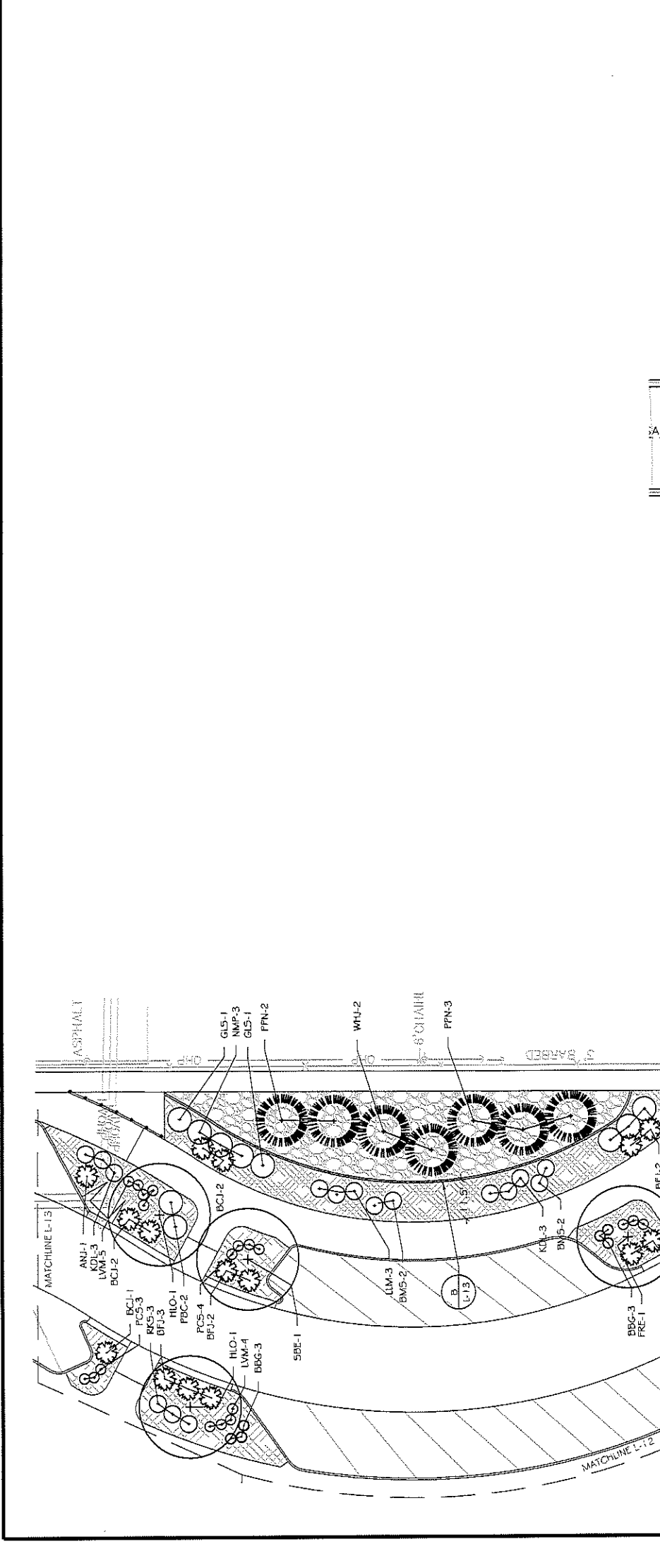
LLM	Littleleaf Mockingbird
NMP	New Mexico Flyet
PBC	Pawnee Ballets Sand Cherry
PCS	Powis Castle Sage
PFC	Pink Flower Carpet Rose
RGB	Rose Glow Barbary
RAS	Rock Sarsaparilla
SCS	Shadesale
SDS	Sand Sanderling
SFB	Spanish Gold Bloom
WSC	Western Sand Cherry
<b>Evergreen Shrubs</b>	
ANJ	Anerca Juniper
BCJ	Blue Chip Juniper
DFJ	Duffalo Juniper
FMH	Freemont Mahonia
HJG	Hickies Juniper
MJJ	Mid Jeter Juniper

SHRUB BED (WOOD CHIP MULCH)
PEA GRAVEL (DOG PARK)
DECOMPOSED GRANITE
TURF
3X2' 5X3' GRANITE BOULDERS
CONCRETE EDGER

NOTES:

- QUANTITIES SCIENTIFIC NAMES AND SIZES FOR ALL SHEETS SHOWN ON SHEET L-5
- QUANTITIES FOR SHEET L-1 ARE NOT INCLUDED IN BID SCHEDULE

LANDSCAPE LEGEND



**Grand Junction**  
CITY OF GRAND JUNCTION

**PUBLIC WORKS ENGINEERING DIVISION**

**LAS COLONIAS BUSINESS PARK LANDSCAPE PLAN**

181

REVISION

NO.	DESCRIPTION	DATE

SCALES:

PLAN & PROFILE	DATE
PLAN	7/7/2018
PROFILE	7/7/2018

DATE

DATE	DATE	DATE	DATE

DESIGNED BY

DESIGNED BY	DATE

CHECKED BY

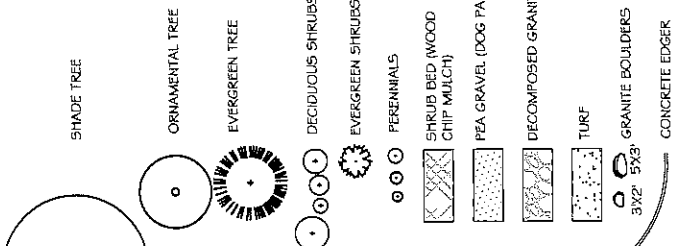
CHECKED BY	DATE

APPROVED BY

APPROVED BY	DATE

CHAYNOR, ROBERTS & ASSOCIATES, INC.  
LAND PLANNING AND  
LANDSCAPE ARCHITECTURE

LANDSCAPE LEGEND



SEE SHEET L-7 FOR PLANTING NOTES AND SHEETS L-1, 2 AND L-13 FOR CONSTRUCTION DETAILS.

NATIVE SEED MIX

COMMON NAME	SCIENTIFIC NAME	% OF MIX BY QTY
GALLETIA GRASS	HILARIA JAMESII	20%
SAND DROPSIED	SPOROBOLUS CRYPTANDRUS	20%
SANDBERG BLUEGRASS	POA SECUNDA	10%
NEEDLE & THREAD GRASS	STIPA COMATA	10%
SHEEP FESCUE	FESTUCA OVINA COVAR'	10%
WESTERN WHEATGRASS	AGROPYRON SMITHII 'ARSIBIA'	30%

SEED AT 10 LB/ACRE IN IRRIGATED AREAS

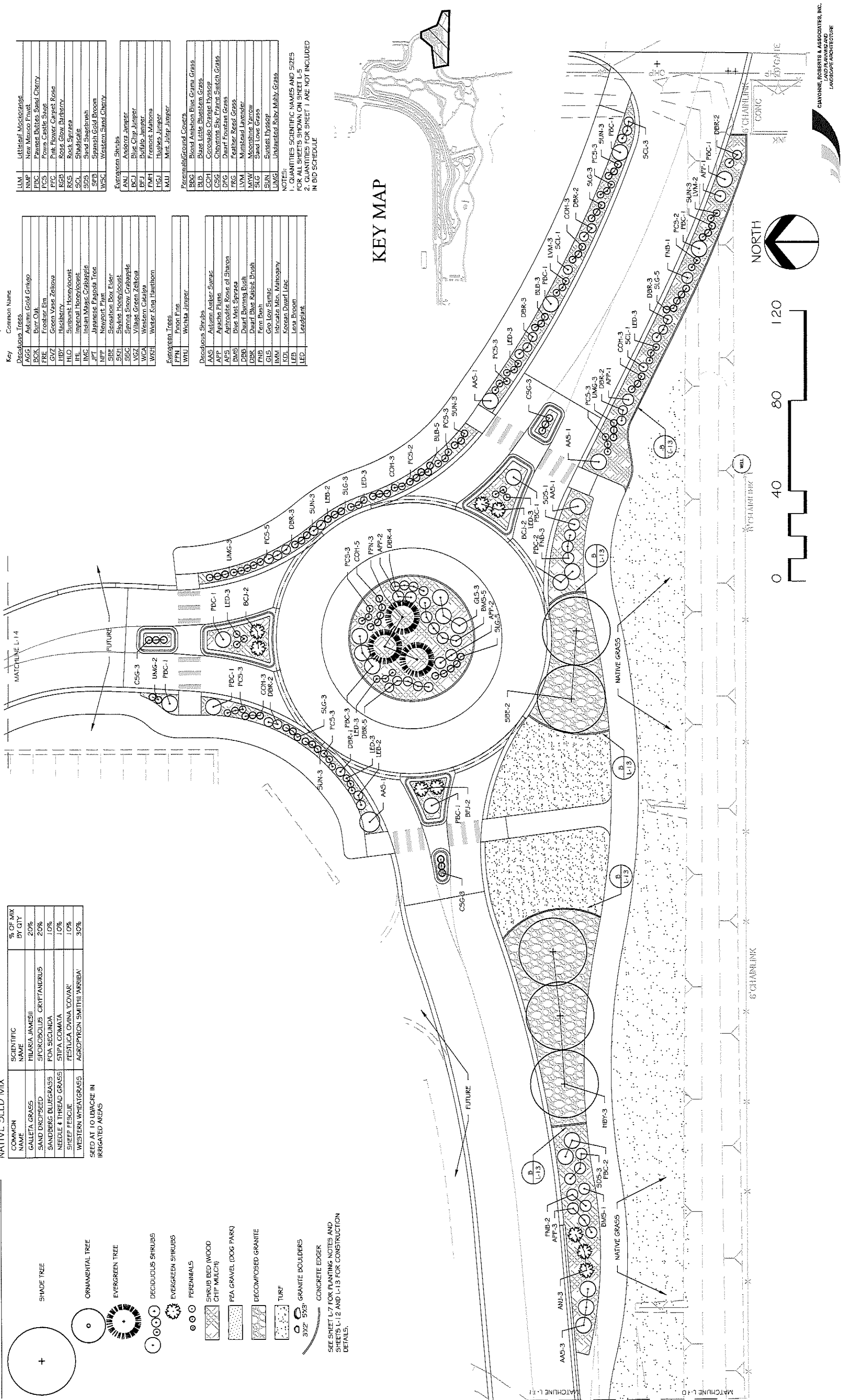
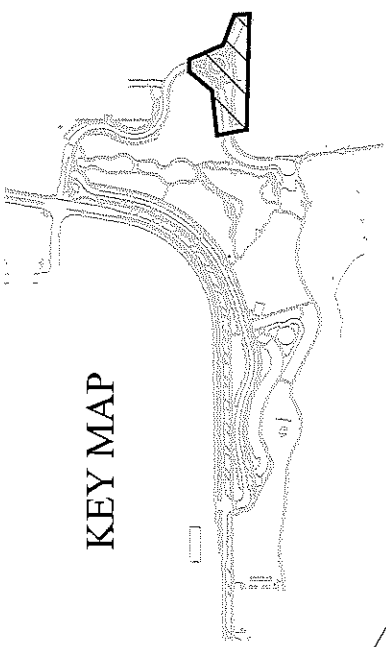
NATIVE SEED MIX

PLANT LIST, NO QUANTITIES

Key	Common Name
LLM	Littleleaf Mockorange
NMP	New Mexico Flynt
PDC	Pavane Bitters Sand Cherry
FCS	Powis Castle Sage
PFC	Pink Flower Carpet Rose
RGS	Rosa Glow Barbary
RKS	Rock Spruce
SCL	Shadecale
SDB	Sand Scaebush
SFB	Spanish Gold Bloom
WSC	Western Sand Cherry
Evergreen Shrubs	
ANJ	Andorra Juniper
BCJ	Blue Chip Juniper
BEJ	Buffalo Juniper
FMH	Fremont Halimolobos
UGJ	Ugosa Juniper
MUJ	Mini Juniper Juniper
Perennials/Grass	
BBG	Blood Anibition Blue Grama Grass
BLB	Blaze Little Blueslem Grass
COH	Colorado Orange Hyssop
C5G	Cheyenne Sky Frame Switch Grass
DFG	Dwarf Fountain Grass
FRG	Feather Reed Grass
LVM	Munstead Lavender
MYW	Moonshine Yarrow
SLG	Sand Love Grass
SUN	Sunset Hyssop
UMG	Undaunted Ruby Maltby Grass
Deciduous Shrubs	
AAS	Autumn Amber Symplocos
APP	Apache Plume
APS	Aphrodite Rose of Sharon
BMS	Blue Mist Spruce
DBB	Dwarf Buxoma Bush
DRK	Dwarf River Rabbit Brush
FNB	Fern Bush
GLS	Grey Low Spurge
IKW	Incarville Mtn. Malinesomy
KDL	Korean Dwarf Uble
LEB	Lea Bloom
LED	Leadplant

NOTES:  
1. QUANTITIES SCIENTIFIC NAMES AND SIZES FOR ALL SHEETS SHOWN ON SHEET L-5  
2. QUANTITIES FOR SHEET 1 ARE NOT INCLUDED IN BID SCHEDULE

KEY MAP



REVISION	DESCRIPTION	DATE

DRAWN BY	DATE	DATE	DATE
MH	7/17/2018	MH	7/17/2018
CR	7/17/2018	CR	7/17/2018
CR	7/17/2018	CR	7/17/2018

PLAN & PROFILE	SCALE
PLAN & PROFILE	1" = 40'

City of Grand Junction  
Public Works Engineering Division

PUBLIC WORKS ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK LANDSCAPE PLAN

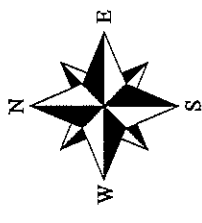
GAYNOR ROBERTS & ASSOCIATES, INC.  
LANDSCAPE ARCHITECTURE



STREET LIGHTING GENERAL NOTES:

1. THIS PROJECT WILL BE BID FOR THE INSTALLATION OF THE PEDESTRIAN, AND STREET LIGHTING. BASE PROJECT: COMPLETE THE MAIN PATH PEDESTRIAN LIGHTING ALONG RIVERSIDE PARKWAY.
2. THIS PROJECT CONSISTS OF WORK TO INSTALL ALL WIRING, CONDUIT, PULL BOXES, AND POWER PANEL. REFERENCE SCHEDULE OF LIGHTING DEVICES AND SUMMARY OF QUANTITIES DRAWING E2.
3. TYPES "SAPH2" & "SBP2" LIGHT STANDARD & LUMINARIES (PEDESTRIAN AND STREET LIGHT), SHALL INCLUDE THE FOLLOWING ITEMS FROM VISUAL INTEREST LIGHTING LOCATED AT 3444 BRIGHTON BLVD, DENVER, CO 80216, 303.861.8448.
4. TYPE "SCPH2" TO BE ORDERED FROM M&H LIGHTING LOCATED AT 1044 SPEER BLVD, DENVER COLORADO, 303-573-0222. THE ITEMS NUMBERS ARE AS FOLLOWS.
5. TYPE "SAPH2" PHILLIP GARDCO GLI 3-1-2-701A-6345-NW-UNV-BLP-LF, PROVIDE COLLISION BREAK AWAY CONNECTORS. FIXTURE TO BE 15' ABOVE FINISHED GRADE TO BOTTOM OF LIGHT. POLE #FRS-15-4-D1-BLP
6. TYPE "SBPH2" PHILLIP GARDCO GLI 8-1-2-2230LA-9600-NW-UNV-LF-PC-RFA2, PROVIDE COLLISION BREAK AWAY CONNECTORS. FIXTURE TO BE 27' ABOVE FINISHED GRADE TO BOTTOM OF LIGHT. POLE #FRS-27-5-D1-BLP
7. TYPE "SCPH2" LUMASCAPE LS333ANS-2LED-6W-RGB-WD-07, FIXTURE TO BE DYNAMIC COLOR. FIXTURE TO BE INSET IN BEVEL STEM WALL DOWN STREAM FROM WATER FALL. COORDINATE INSTALLATION WITH PROVIDER AND CIVIL ENGINEER, PRIOR TO ROUGH-IN.
8. PROVIDE 3 TOTAL NEW MILL BANK PANELS (PF5, PF4, PF3), 208V, 3PH, 4W 200A, #CF3B5251XB22C55L1 LOCATED AS SHOWN IN DRAWINGS.
9. ALL PEDESTRIAN LIGHTING FIXTURES (TYPE "SAPH2") INSTALLED ON THE PROJECT WILL BE CONTROLLED WITH A ELECTRICAL CONTRACTOR SUPPLIED PHOTO CELL TO BE LOCATED IN EACH NEW MILBANK POWER PEDESTALS IN SWITCHED SECTION OF PANEL. ORIENT PANEL SO THAT PHOTOCELL WILL BE ORIENTED NORTH, TYPICAL.
10. ALL STREET LIGHTING FIXTURES (TYPE "SBPH2") WILL EACH BE ORDERED WITH THEIR OWN PHOTOCELL INSTALLED IN THE FIXTURE, AND POWERED WITH NEW 208 VOLT 3PHASE MILBANK POWER PEDESTAL ON UN-SWITCHED SECTION.
11. PROVIDE 2-2" PVC SCHEDULE 80 CONDUIT WITH PULL STRING FROM PP5 TO FUTURE SOUTH PARKING LOT AS SHOWN IN DRAWINGS.
12. PROVIDE 2-2" PVC SCHEDULE 80 CONDUIT WITH PULL STRING TO FUTURE EAST PARKING LOT FROM PANEL PF5 AS SHOWN IN DRAWINGS.
13. ELEVATIONS SHOWN IN THE SCHEDULE OF LIGHTING DEVICES ON THE PLANS SHEETS REPRESENT THE DESIGN FINISHED GRADE OR THE EXISTING GROUND FINISHED GRADE. THESE ELEVATIONS DO NOT INDICATE THE TOP ELEVATION OF THE LUMINARIES (PEDESTRIAN) FOUNDATION. PEDESTRIAN LIGHTING FOUNDATIONS SHALL BE CONSTRUCTED PER THE MANUFACTURERS RECOMMENDATIONS.
14. PULL BOXES FOR LIGHT STANDARD (PEDESTRIAN AND STREET) WILL BE TYPE 1 DOT PULL BOXES 1'X1'8"X12".
15. PULL BOXES WILL BE INSTALLED IN GRADES WITHOUT CONCRETE WHERE POSSIBLE.
16. ALL ELECTRICAL CONDUIT SHALL BE SCHEDULE 80 PVC UNLESS NOTED OTHERWISE, TYPICAL.
17. UNLESS OTHERWISE NOTED, THE WORK DESCRIBED ON THE PLANS SHALL INCLUDE PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. FURNISH ALL REQUIRED ITEMS WHETHER SUCH ARE SPECIFICALLY SHOWN OR NOT.
18. INFORMATION SHOWN ON DRAWINGS IS DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. OBTAIN VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, POTENTIAL CONFLICTS AMONG TRADES AND FOR ADJUSTING THE WORK REQUIRED BY THE ACTUAL CONDITIONS OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDER GROUND OBSTRUCTIONS AND MAKING ALLOWANCES FOR FIELD ADJUSTMENT OF LOCATION OF LUMINARIES TO AVOID SHUT DOWN OF ANY SERVICES OR SYSTEMS THAT ARE TO REMAIN.
19. BEFORE SUBMITTING THE BID ELECTRICAL CONTRACTOR SHALL VISIT AND EXAMINE THE PREMISES AND/OR JOB SITE SO AS TO ASCERTAIN THE EXISTING CONDITIONS IN WHICH THE CONTRACTOR WILL BE OBLIGED TO OPERATE IN PERFORMING HIS PART OF THE CONTRACT TO ANTICIPATE ANY POSSIBLE SPACE RESTRICTIONS OR CONSTRAINTS THAT COULD AFFECT THE TIMELY COMPLETION OF THE ELECTRICAL WORK IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL REPORT TO THE PROJECT ENGINEER OR GENERAL CONTRACTOR ANY CONDITIONS THAT MIGHT PREVENT THE SPECIFIED ELECTRICAL WORK FROM BEING PERFORMED IN THE MANNER INTENDED. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED TO THE ELECTRICAL CONTRACTOR FOR FAILURE TO VISIT THE PROJECT SITE, OR FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED OR WORK TO BE DONE..
20. THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES WHOSE WORK RELATES TO OR IS DEPENDENT ON ELECTRICAL WORK TO BECOME FULLY INFORMED OF THE EXTENT AND CHARACTER OF THEIR SPECIFIED WORK AND BE ABLE TO COORDINATE WITH OTHER TRADES WHILE AVOIDING POSSIBLE INTERFERENCE WITH THE ELECTRICAL WORK.
21. THE CONTRACTOR SHALL USE CONDUIT PLUGS AND SEALING PLUGS FOR SEALING ALL EMPTY CONDUITS AND CONDUITS OCCUPIED WITH CABLING, RESPECTIVELY, INSTALLED UNDER THIS CONTRACT. CONDUIT PLUGS SHALL BE MANUFACTURED FROM HIGH-IMPACT PLASTIC COMPONENTS, COMBINED WITH DURABLE ELASTIC GASKETS. THEY SHALL BE CORROSION PROOF AND APPROPRIATE FOR USE AS EITHER A LONG-TERM OR TEMPORARY SEAL. CONDUIT PLUGS SHALL BE REMOVABLE AND REUSABLE. THEY SHALL BE BOTH WATERTIGHT AND AIRTIGHT TO PREVENT THE FLOW OF WATER AND BUILDUP OF SEDIMENTATION WITHIN THE CONDUIT. EACH CONDUIT PLUG SHALL BE EQUIPPED WITH A ROPE TIE DEVICE TO ALLOW THE SECURING OF PULL ROPE TO THE PLUG'S BACK COMPRESSION PLATE. THE CONTRACTOR SHALL ATTACH THE PULL ROPE TO THE BACK COMPRESSION PLATE OF THE PLUG AND STORE EXCESS SLACK PULL ROPE BEHIND THE PLUG WITHIN THE CONDUIT FOR FUTURE USE.

- PF1-X ELECTRICAL CIRCUIT NUMBER (REFER TO PANEL SCHEDULES)
- HEAVY DUTY, TRAFFIC RATED, FLUSH-TO-GRADE POLYMER CONCRETE SPURCE BOX WITH HEAVY DUTY, TRAFFIC RATED, BOLTED COVER, 1'X1'8"X12" TYPE 1.
  - UNDER GROUND BURIED RACEWAY (2#6 THWN CU AND 1 #8 GND) IN 2" PVC CONDUIT (UNLESS NOTED OTHERWISE ON PLANS) IN 24" DEEP TRENCH, BURY AND COMPACTED BACKFILL TO PRE CONSTRUCTION CONDITION.
  - ▲ INSTALL SINGLE ARM PEDESTRIAN STANDARD OR STREET STANDARD AS SPECIFIED.



Know what's below.  
Call before you dig.



**ACM CONSULTING**  
ELECTRICAL DESIGN, CONSULTING  
ENGINEERS; PH: 870-246-7292  
PO 3211 GRAND JCT., CO 81502  
EMAIL: joelm@acmengineering.com

REVISION	DESCRIPTION	DATE

DRAWN BY	AJM	DATE	7-12-18
DESIGNED BY	AJM	DATE	7-12-18
CHECKED BY	AJM	DATE	7-12-18
APPROVED BY	JT	DATE	7-12-18

SCALES:	PLAN & PROFILE
1" = 10'	1" = 10'
1" = 20'	1" = 20'
1" = 40'	1" = 40'



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
COMPOSITE UTILITY PLAN

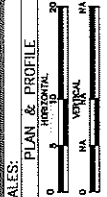
E1 of 18  
183

Schedule of Lighting Devices										
DESCRIPTION	LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SAPH2 EACH			FOUNDATION SPECIAL EACH			LUMINAIRE LED STREET (250 WATT) TYPE SBPH2 EACH			NOTES
	SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	PLAN	PLAN	
E4	SAPH2-1	31373.77	94497.97	1	1	1				1
E4	SAPH2-2	31381.08	94598.16	1	1	1				1
E4	SAPH2-3	31365.74	94694.93	1	1	1				1
E4	SAPH2-4	31352.68	94791.93	1	1	1				1
E4	SAPH2-5	31344.75	94886.72	1	1	1				1
E4	SAPH2-6	31340.66	94970.37	1	1	1				1
E4	SAPH2-7	31477.18	94888.36	1	1	1				1
E4	SAPH2-8	31449.97	94942.07	1	1	1				1
E4	SAPH2-9	31417.73	95011.72	1	1	1				1
E4	SAPH2-10	31428.17	95084.59	1	1	1				1
E4	SAPH2-11	31463.22	95168.14	1	1	1				1
E5	SAPH2-12	31460.34	95263.44	1	1	1				1
E5	SAPH2-13	31435.08	95352.21	1	1	1				1
E5	SAPH2-14	31388.88	95434.83	1	1	1				1
E5	SAPH2-15	31341.19	95447.66	1	1	1				1
E4	SAPH2-16	31320.17	95067.74	1	1	1				1
E4	SAPH2-17	31280.06	95151.27	1	1	1				1
E5	SAPH2-18	31265.96	95240.43	1	1	1				1
E5	SAPH2-19	31294.47	95325.71	1	1	1				1
E5	SAPH2-20	31318	95426.34	1	1	1				1
E5	SAPH2-21	31280.44	95503.78	1	1	1				1
E5	SAPH2-22	31236.03	95589.81	1	1	1				1
E5	SAPH2-23	31191.35	95676.5	1	1	1				1
E5	SAPH2-24	31171.1	95763.31	1	1	1				1
E5	SAPH2-25	31192.55	95848.72	1	1	1				1
E5	SAPH2-26	31247.91	95810.26	1	1	1				1
E5	SAPH2-27	31242.39	95933.22	1	1	1				1
E6	SAPH2-28	31277.94	96025.69	1	1	1				1
E6	SAPH2-29	31287.9	96126.93	1	1	1				1
E6	SAPH2-30	31271.9	96225.3	1	1	1				1
E6	SAPH2-31	31294.11	96308.67	1	1	1				1
E6	SAPH2-32	31245.41	96319.25	1	1	1				1
E6	SAPH2-33	31244.13	96409.93	1	1	1				1
E6	SAPH2-34	31268.98	96481.47	1	1	1				1
E6	SAPH2-35	31399.53	96390.98	1	1	1				1
E6	SAPH2-36	31437.25	96480.36	1	1	1				1
E6	SAPH2-37	31455.2	96533.99	1	1	1				1
E6	SAPH2-38	31530.74	96547.36	1	1	1				1
E6	SAPH2-39	31608.72	96560.04	1	1	1				1
E8	SAPH2-40	31694	96568.05	1	1	1				1
E8	SAPH2-41	31761.54	96599.21	1	1	1				1
E8	SAPH2-42	31828.56	96596.4	1	1	1				1
E8	SAPH2-43	31907.03	96618.98	1	1	1				1
E8	SAPH2-44	31972.69	96577.92	1	1	1				1
E9	SAPH2-45	32053.03	96616.48	1	1	1				1
E9	SAPH2-46	32132.87	96621.4	1	1	1				1
TABLE TOTALS				46	46	46				0

SCHEDULE OF LIGHTING DEVICES NOTES:  
 1. FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK  
 2. FOUNDATION TOP HEIGHT AT 26" AS SHOWN IN DETAIL.

REVISION	DATE	DESCRIPTION

DRAWN BY	DATE
DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE



PUBLIC WORKS  
ENGINEERING DIVISION

Schedule of Lighting Devices										
DESCRIPTION	LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SA EACH			FOUNDATION SPECIAL EACH			LUMINAIRE LED STREET (250 WATT) TYPE SB EACH			NOTES
	SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	PLAN	PLAN	
E9	SAPH2-47	32206.62	96644.76	1	1	1				1
E9	SAPH2-48	32278.27	96630.88	1	1	1				1
E9	SAPH2-49	32357.48	96619.46	1	1	1				1
E9	SAPH2-50	32405.23	96650.36	1	1	1				1
E9	SAPH2-51	32343.42	96664.31	1	1	1				1
E9	SAPH2-52	32257.49	96533.18	1	1	1				1
E9	SAPH2-53	32161.75	96530.93	1	1	1				1
E8	SAPH2-54	32075.92	96528.21	1	1	1				1
E8	SAPH2-55	32004.09	96511.79	1	1	1				1
E8	SAPH2-56	31939.43	96467.36	1	1	1				1
E8	SAPH2-57	31850.24	96481.08	1	1	1				1
E8	SAPH2-58	31775.82	96484.52	1	1	1				1
E8	SAPH2-59	31706.53	96451.54	1	1	1				1
E6	SAPH2-60	31627.66	96407.64	1	1	1				1
E6	SAPH2-61	31590.08	96310.59	1	1	1				1
E6	SAPH2-62	31615.83	96223.82	1	1	1				1
E6	SAPH2-63	31611.34	96123.25	1	1	1				1
E6	SAPH2-64	31591.69	96077.96	1	1	1				1
E6	SAPH2-65	31390.84	96628.58	1	1	1				1
E6	SAPH2-66	31481.14	96625.14	1	1	1				1
E7	SAPH2-67	31558.53	96651.07	1	1	1				1
E7	SAPH2-68	31606.27	96715.29	1	1	1				1
E7	SAPH2-69	31601.11	96810.71	1	1	1				1
E7	SAPH2-70	31607.84	96906.48	1	1	1				1
E7	SAPH2-71	31596.13	97005.84	1	1	1				1
E7	SAPH2-72	31604.34	97102.71	1	1	1				1
E7	SAPH2-73	31657.36	97239.43	1	1	1				1
E7	SAPH2-74	31710.78	97174.63	1	1	1				1
E6	SAPH2-75	31379.17	96331.83	1	1	1				1
E6	SAPH2-76	31421.42	96280.47	1	1	1				1
E6	SAPH2-77	31476.22	96200.89	1	1	1				1
E6	SAPH2-78	31545.73	96130.04	1	1	1				1
E6	SAPH2-79	31361.22	96517.37	1	1	1				1
E8	SAPH2-80	32080.02	96696.74	1	1	1				1
E9	SAPH2-81	32151.15	96686.25	1	1	1				1
E9	SAPH2-82	32241.08	96717.95	1	1	1				1
E9	SAPH2-83	32329.57	96739	1	1	1				1
E9	SAPH2-84	32399.79	96713.63	1	1	1				1
E6	SAPH2-85	31373.83	96489.32	1	1	1				1
E6	SAPH2-86	31559.13	96575.45	1	1	1				1
E6	SAPH2-87	31649.7	96601.86	1	1	1				1
E5	SAPH2-88	31501.29	95785.26	1	1	1				1
E5	SAPH2-89	31236.15	96848.63	1	1	1				1
E7	SAPH2-90	31615.67	97331.97	1	1	1				1
E6	SBPH2-1	31283.29	96604.75	1	1	1				2
E6	SBPH2-2	31459.48	96556.78	1	1	1				2
TABLE TOTALS				44	46	46				2

SCHEDULE OF LIGHTING DEVICES NOTES:  
 1. FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK  
 2. FOUNDATION TOP HEIGHT AT 26" AS SHOWN IN DETAIL.

STREET LIGHTING GENERAL NOTES:  
 1. EACH LIGHT TO HAVE A FULL BOX, REFERENCE ELECTRICAL SHEETS.

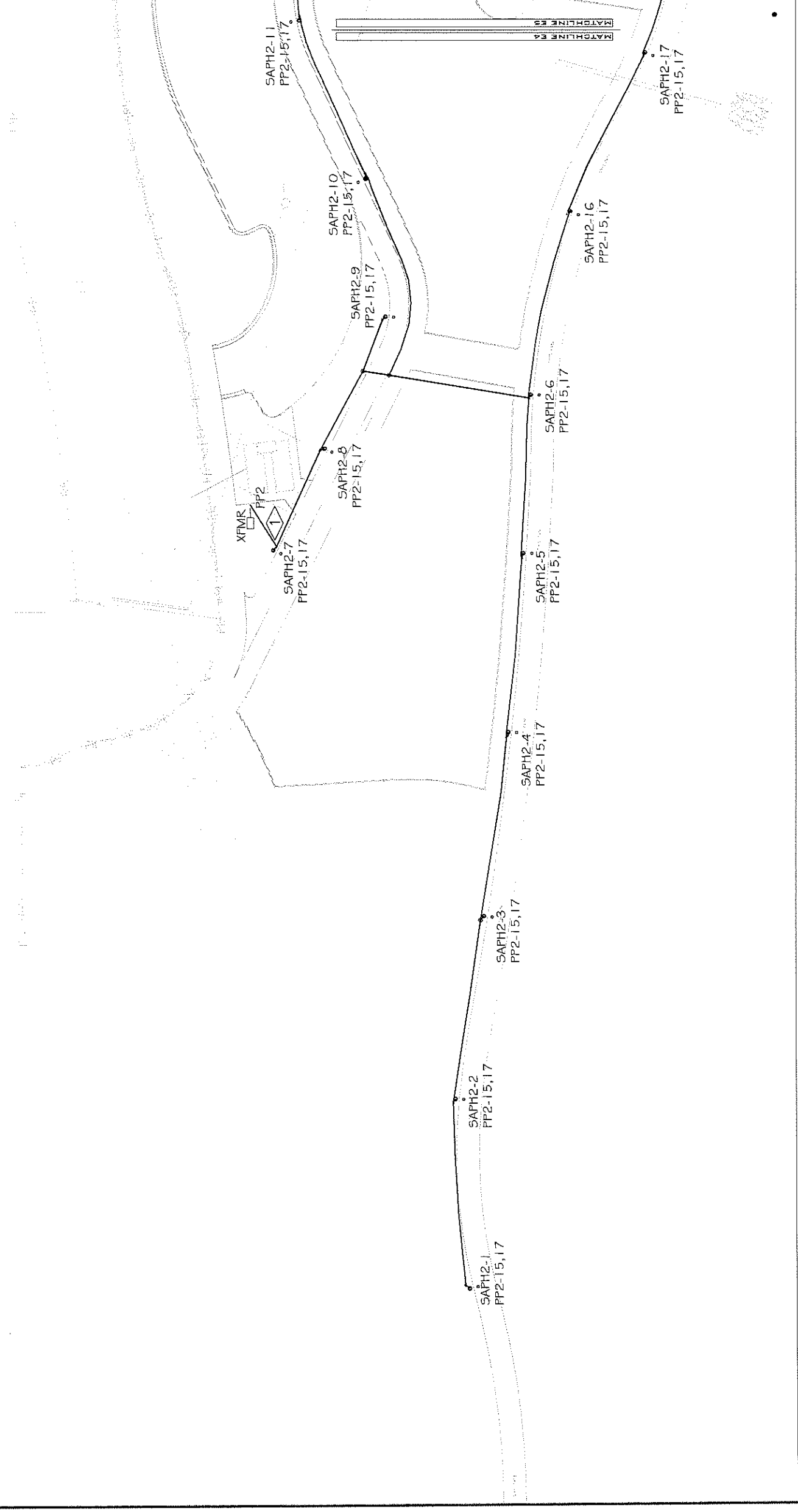


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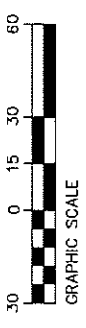


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**LIGHTING/ELECTRICAL PLAN**  
SCALE: 1"=30'



**FLAG NOTES:**

1. EXISTING POWER PANEL, PROVIDE CONDUIT AND FEED TO NEW LIGHTING.

**GENERAL NOTES:**

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO SIDEWALK AND SHINE ON SIDEWALK, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.
4. COORDINATE LOCATION OF LIGHTS, PULL BOXES AND WIRE WITH DOG FENCE LOCATION, PRIOR TO ROUGH-IN.

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	7-12-18

SCALES:	PLAN & PROFILE
0 30 60	HORIZONTAL
0 15 30	VERTICAL



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ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
COMPOSITE UTILITY PLAN

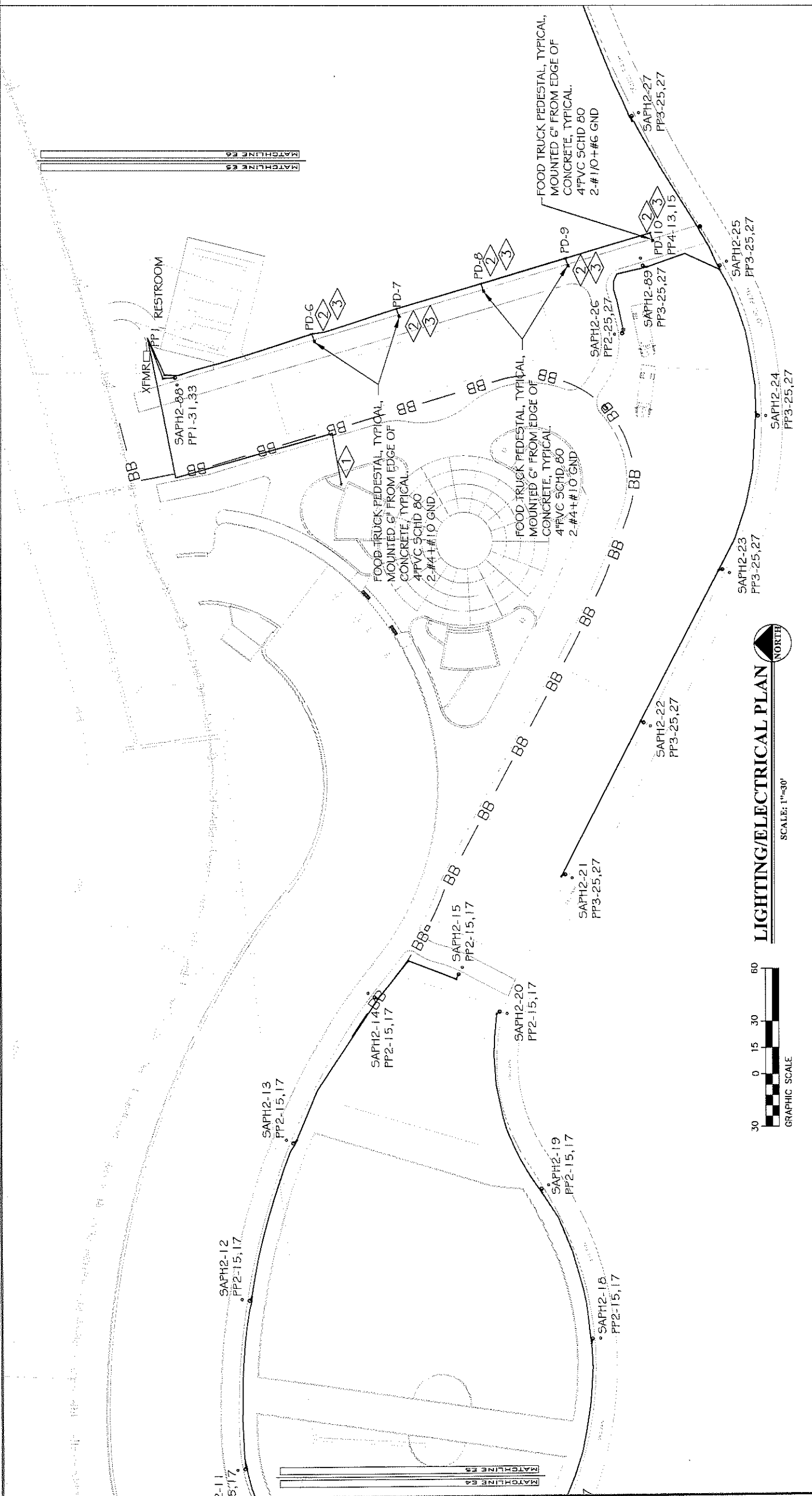
E4  
of 186



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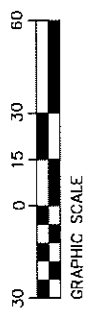
**GENERAL NOTES:**

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO SIDEWALK AND SHINE ON SIDEWALK, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

**FLAG NOTES:**

1. PROVIDE 2-2" SCHEDULE 80 PVC CONDUIT TERMINATED IN JBOX WITH FULL STRING FOR FUTURE.
2. PEDESTAL TO BE MOUNTED 6" FROM EAST EDGE OF CONCRETE. COORDINATE MOUNTING WITH PROVIDER PRIOR TO ROUGH-IN.
3. PROVIDE POWER TO FOOD TRUCK PEDESTALS FROM EXISTING PANEL PP1.

**LIGHTING/ELECTRICAL PLAN**  
SCALE: 1"=30'



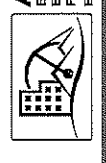
REVISION	DESCRIPTION	DATE

DRAWN BY	DATE	7-12-18
DESIGNED BY	DATE	7-12-18
CHECKED BY	DATE	7-12-18
APPROVED BY	DATE	7-12-18

SCALES:	PLAN & PROFILE



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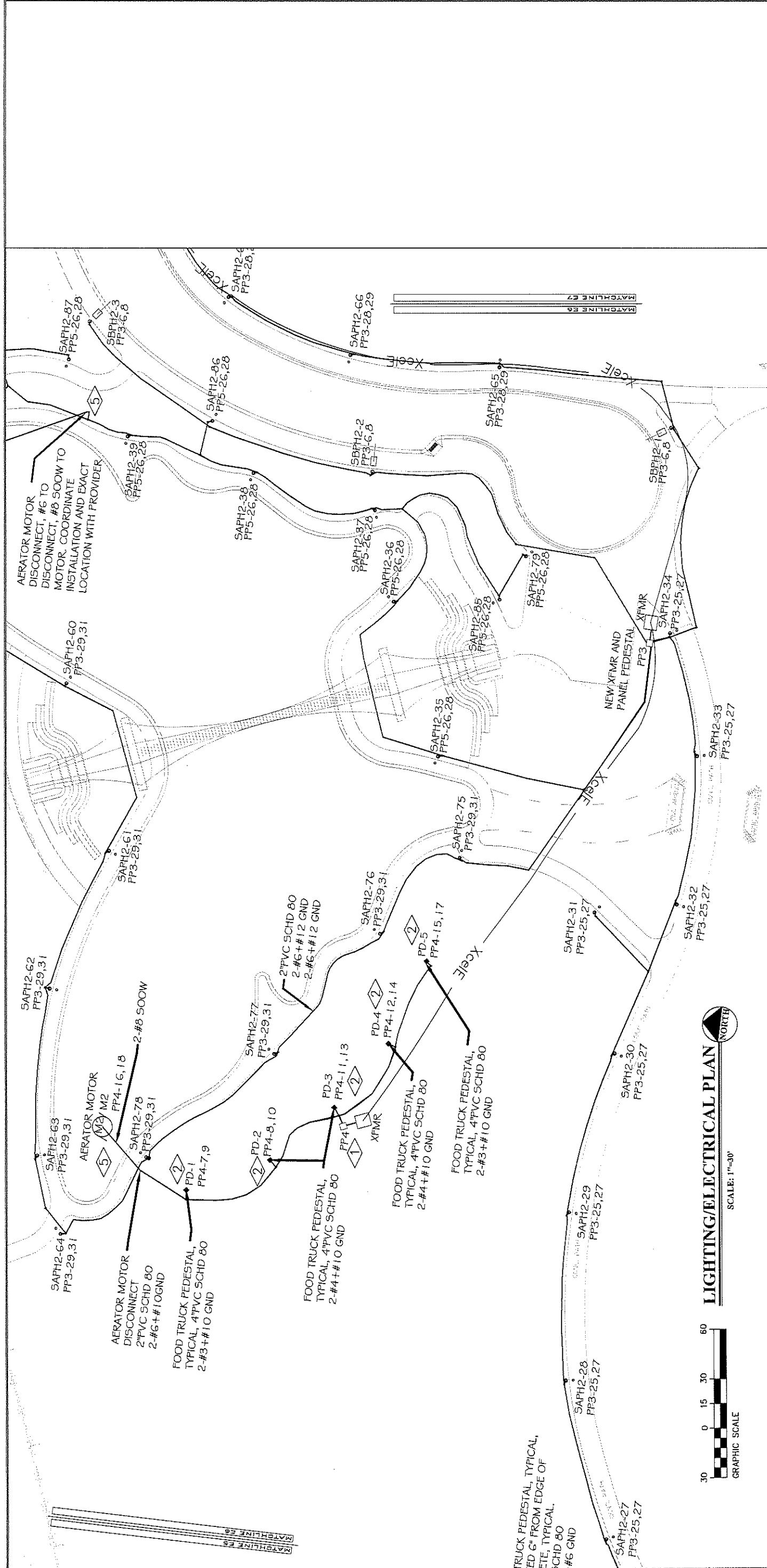


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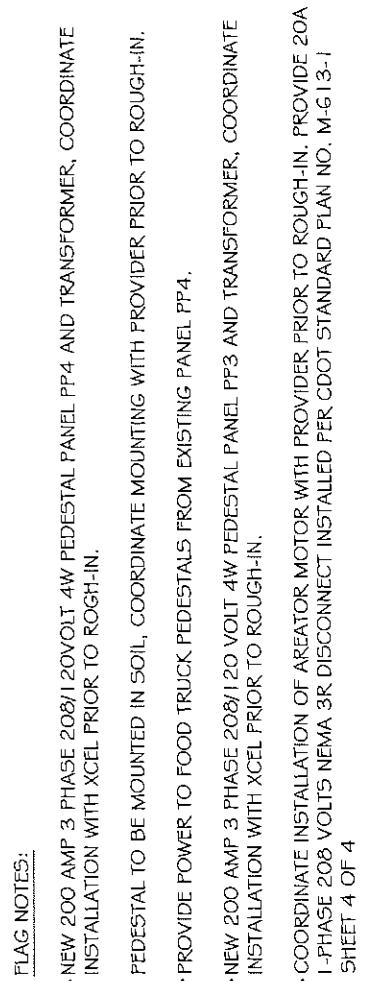
**PUBLIC WORKS**  
**ENGINEERING DIVISION**

**LAS COLONIAS BUSINESS PARK PHASE 2**  
**COMPOSITE UTILITY PLAN**



**GENERAL NOTES:**

- POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO SIDEWALK AND SHINE ON SIDEWALK, TYPICAL.
- PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.
- NEW 200 AMP 3 PHASE 208/120VOLT 4W PEDESTAL PANEL PP4 AND TRANSFORMER, COORDINATE INSTALLATION WITH XCEL PRIOR TO ROUGH-IN.
- PEDESTAL TO BE MOUNTED IN SOIL, COORDINATE MOUNTING WITH PROVIDER PRIOR TO ROUGH-IN.
- PROVIDE POWER TO FOOD TRUCK PEDESTALS FROM EXISTING PANEL PP4.
- NEW 200 AMP 3 PHASE 208/120 VOLT 4W PEDESTAL PANEL PP3 AND TRANSFORMER, COORDINATE INSTALLATION WITH XCEL PRIOR TO ROUGH-IN.
- COORDINATE INSTALLATION OF AERATOR MOTOR WITH PROVIDER PRIOR TO ROUGH-IN. PROVIDE 20A 1-PHASE 208 VOLTS NEMA 3R DISCONNECT INSTALLED PER CDOT STANDARD PLAN NO. M-G 13-1 SHEET 4 OF 4



**GRAPHIC SCALE**  
 0 15 30 60  
 SCALE: 1"=30'

**LIGHTING/ELECTRICAL PLAN**  
 NORTH

**REVISION TABLE:**

REVISION	DESCRIPTION	DATE	BY
1		7-12-18	JM
2		7-12-18	JM
3		7-12-18	JM
4		7-12-18	JM

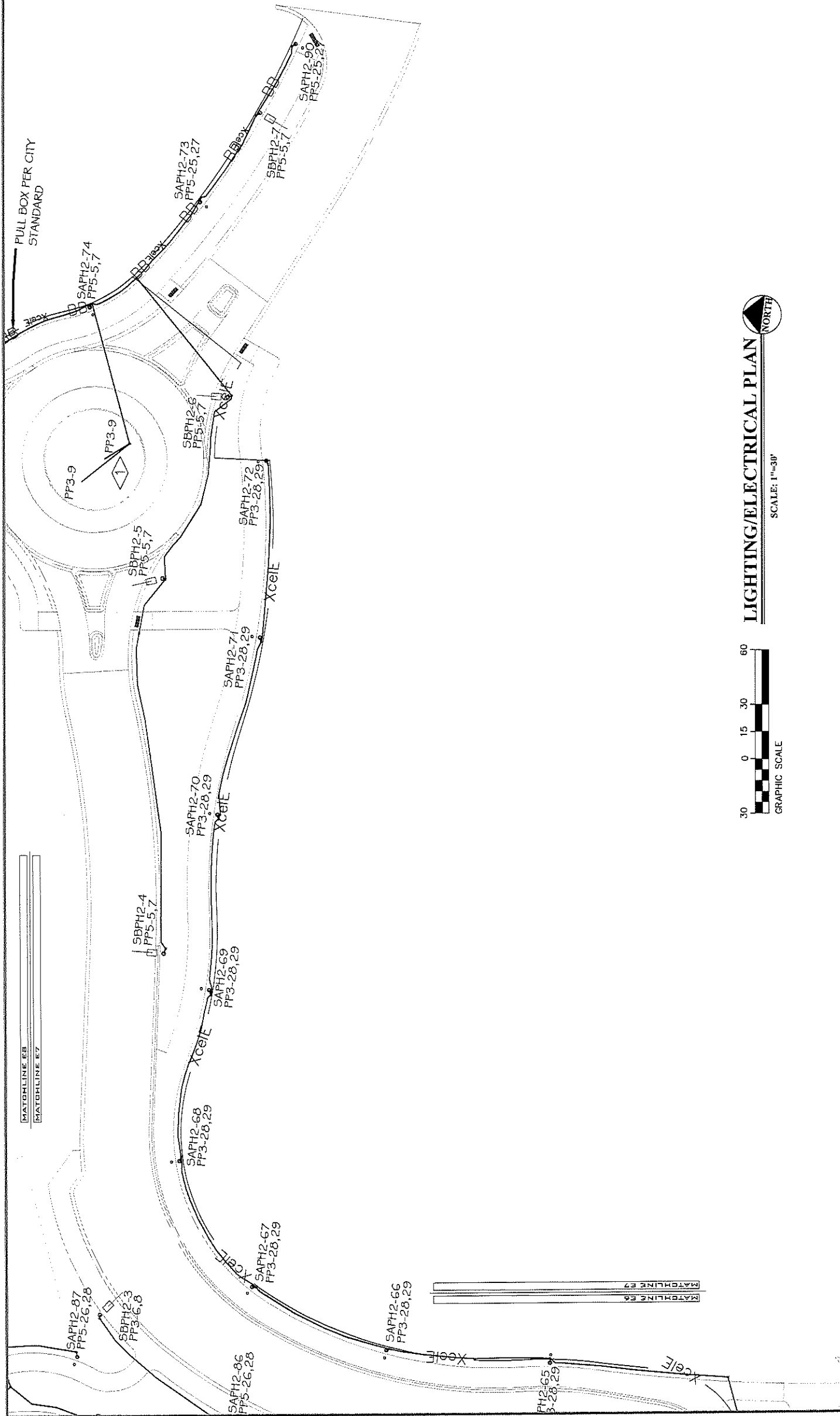
**SCALE:** PLAN & PROFILE: 1"=30', INTERIOR: 1"=10', VERTICAL: 1"=5'

**DATE:** 7-12-18

**DESIGNED BY:** JM

**CHECKED BY:** JM

**APPROVED BY:** JM



**GENERAL NOTES:**

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO SIDEWALK AND SHINE ON SIDEWALK, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

**FLAG NOTES:**

- ① FIELD VERIFY EXACT LOCATION OF NEW DUPLEX RECEPTACLES WITH OWNER PRIOR TO ROUGH-IN.



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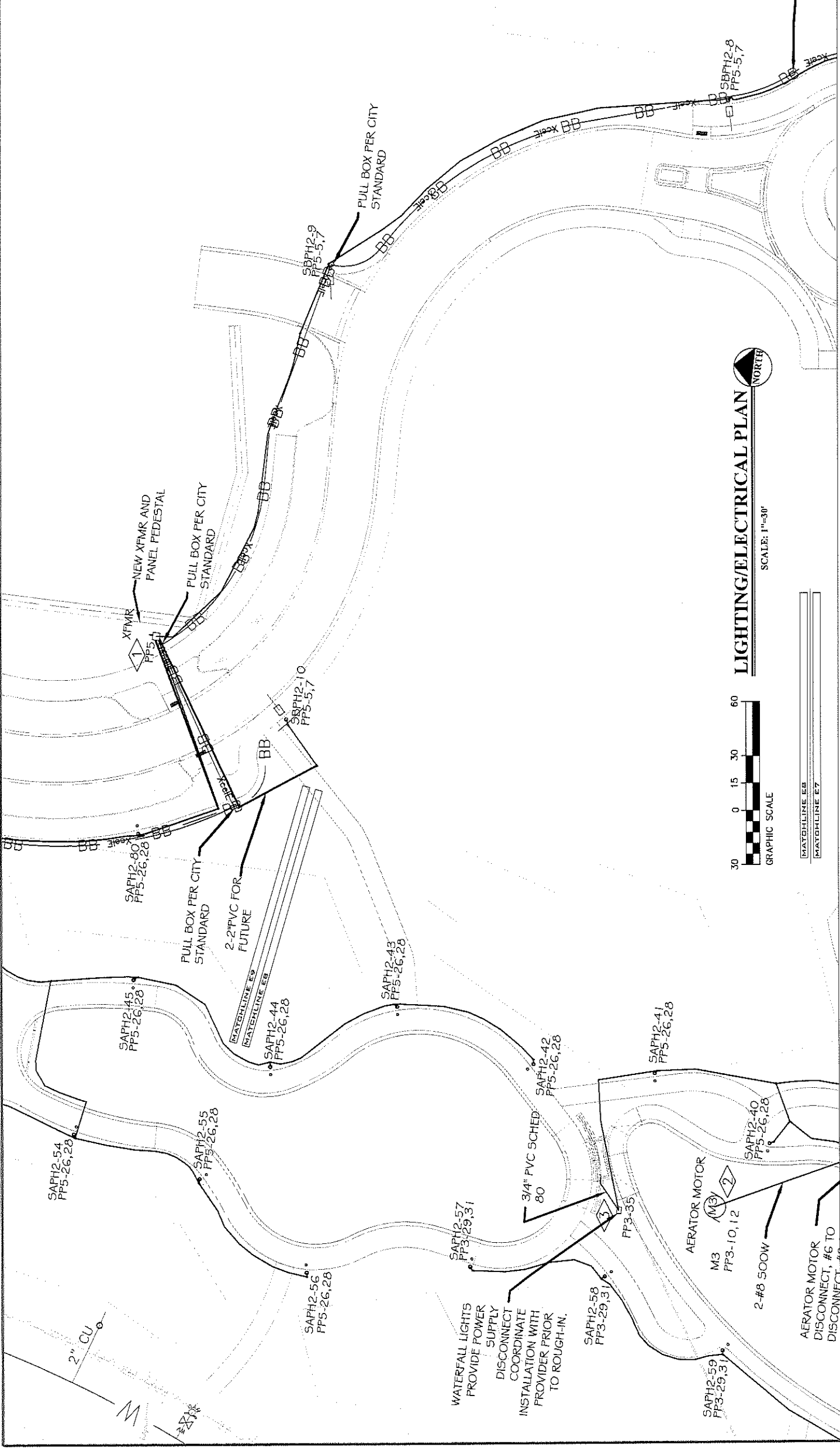
REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

SCALES:	
PLAN & PROFILE	DATE 7-12-18
HORIZONTAL	DATE 7-12-18
VERTICAL	DATE 7-12-18

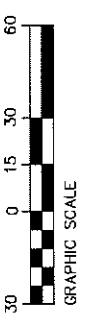


PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
COMPOSITE UTILITY PLAN



**LIGHTING/ELECTRICAL PLAN**  
SCALE: 1"=30'



**GENERAL NOTES:**

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO SIDEWALK AND SHINE ON SIDEWALK, TYPICAL.
3. PROVIDE 2-#6 THIN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

**FLAG NOTES:**

- ① COORDINATE INSTALLATION OF NEW 208/120 VOLT 3 PHASE 4W POWER PEDESTAL PP5 WITH PROVIDER AND XCEL ENERGY PRIOR TO ROUGH-IN.
- ② COORDINATE INSTALLATION OF AERATOR MOTOR WITH PROVIDER PRIOR TO ROUGH-IN. PROVIDE 20A 1-PHASE 208 VOLTS NEMA 3R DISCONNECT INSTALLED PER CDOT STANDARD PLAN NO. M-G 13-1 SHEET 4 OF 4.
- ③ COORDINATE INSTALLATION OF WATER FALL LIGHTS WITH PROVIDER PRIOR TO ROUGH-IN. PROVIDE 20A 1-PHASE 120 VOLTS NEMA 3R DISCONNECT AND NEMA 3R ENCLOSURE FOR POWER SUPPLY AND CONTROLLER. INSTALLED PER CDOT STANDARD PLAN NO. M-G 13-1 SHEET 4 OF 4

REVISION	DESCRIPTION	DATE

SCALE:	PLAN & PROFILE	DATE
0	HORIZONTAL	7-12-18
0	VERTICAL	7-12-18
0	AS SHOWN	7-12-18

DRAWN BY	DATE	DATE
		7-12-18
DESIGNED BY		7-12-18
CHECKED BY		7-12-18
APPROVED BY		7-12-18



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
COMPOSITE UTILITY PLAN

E8  
of 18  
190

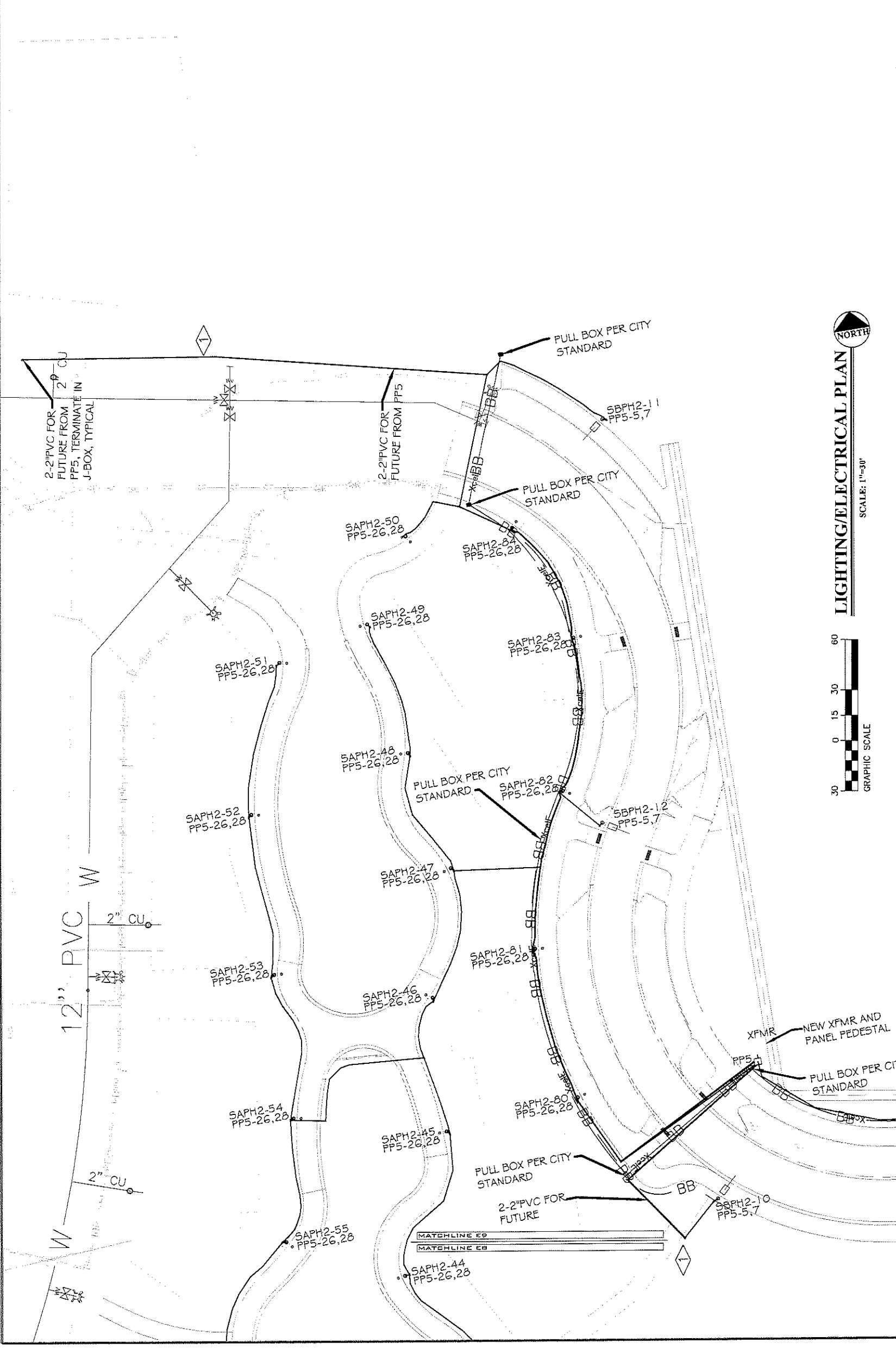


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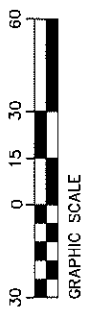


REVISION	DESCRIPTION	DATE

SCALE	DATE	BY
PLAN & PROFILE	7-12-18	AJM
HORIZONTAL	7-12-18	AJM
VERTICAL	7-12-18	AJM
	7-12-18	JT

REVISION	DESCRIPTION	DATE

**LIGHTING/ELECTRICAL PLAN**  
SCALE: 1"=30'



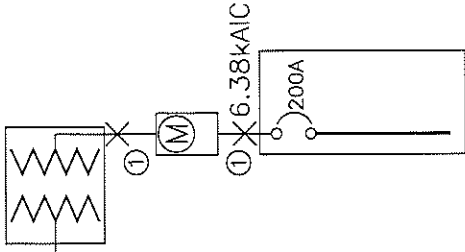
FLAG NOTES:

- 1. PROVIDE 2" PVC SCHEDULED 80 CONDUIT WITH PULL STRING FOR FUTURE FROM PANEL PP5, TERMINATE IN JBOX

GENERAL NOTES:

- 1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
- 2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO SIDEWALK AND SHINE ON SIDEWALK, TYPICAL.
- 3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

NEW PAD MOUNTED  
TRANSFORMER 75KVA  
208/120 VOLT, 3PH 4W  
BY XCEL



PP3 200A MCB MILBANK PEDESTAL  
CP3B5251XB22CSSL1, 24  
UNSWITCHED/12 SWITCHED CKTS  
208/120V 3PH, 4W  
22 kAIC

- ① 1 SET(S) [2.5" PVC  
SCHED. 80  
(4#3/0(CU,THWN)+1#4(CU)GND]

A

## ONE-LINE DIAGRAM

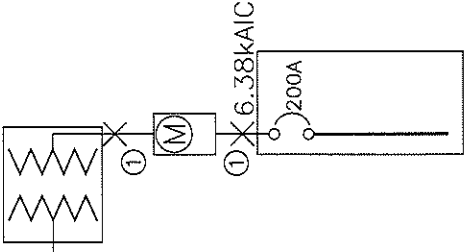
NOT TO SCALE

A  
1

## ONE-LINE DIAGRAM

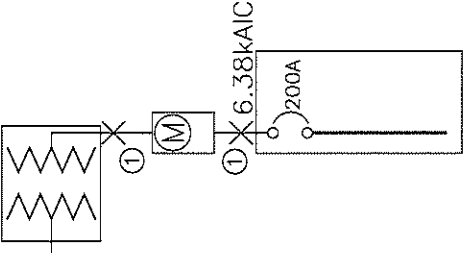
NOT TO SCALE

NEW PAD MOUNTED  
TRANSFORMER 75KVA  
208/120 VOLT, 3PH  
BY XCEL



PP4 200A MCB MILBANK PEDESTAL  
CP3B5251XB22CSSL1, 24  
UNSWITCHED/12 SWITCHED CKTS  
208/120 3PH, 4W  
22 kAIC

NEW PAD MOUNTED  
TRANSFORMER 75KVA  
208/120 VOLT, 3PH  
BY XCEL



PP5 200A MCB MILBANK PEDESTAL  
CP3B5251XB22CSSL1, 24  
UNSWITCHED/12 SWITCHED CKTS  
208/120 3PH, 4W  
22 kAIC

## ONE-LINE DIAGRAM

NOT TO SCALE

### GENERAL NOTES:

1. IN AS MUCH AS DESIGN REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS CANNOT BE VERIFIED. FIELD COORDINATION DURING CONSTRUCTION SERVICES IS IMPERATIVE. CONTRACTOR'S BIDDING THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN CONTINGENCIES.
2. THE SERVING ELECTRICAL ASSOCIATION SHALL ADVISE THE OWNER/ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.
3. REFERENCE CIVIL, LANDSCAPE AND IRRIGATION DRAWING PLANS FOR COORDINATION AND LOCATION OF ALL UNDER GROUND SYSTEMS.
4. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES AS REQUIRED: REFERENCE CIVIL LANDSCAPE AND IRRIGATION DRAWINGS.
5. ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWINGS, FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN.
6. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES.
7. ALL WIRE TO BE #6 UNLESS NOTED OTHERWISE.
8. CONDUCTOR COUNT IS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL ENSURE THAT ANY AND ALL DEVICES AND EQUIPMENT ARE CIRCUITED PROPERLY. CONTRACTOR SHALL ENSURE THAT NO EQUIPMENT OR DEVICES ARE COMBINED OTHER THAN WHAT IS DEPICTED.
9. FIELD VERIFY ALL DIMENSIONS, DO NOT SCALE DRAWINGS.
10. COORDINATE INSTALLATION OF METER AND ELECTRICAL REQUIREMENTS WITH XCEL ENERGY.
11. PEDESTAL MUST MEET ALL XCEL ENERGY REQUIREMENTS I.E. COLD SEQUENCE PADLOCK SLIP LATCH ON METER COVER, HOLD OPEN BAR ON METER HOOD.



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REVISION	DESCRIPTION	DATE	DRAWN BY	DATE

SCALE	DATE
PLAN & PROFILE	7-12-18
HORIZONTAL	7-12-18
VERTICAL	7-12-18

DESIGNED BY	DATE
	7-12-18
CHECKED BY	DATE
	7-12-18
APPROVED BY	DATE
	7-12-18



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
ONE-LINE DIAGRAMS

PANEL: SCH-PP1		DC DEVICE TYPE: Breaker		ENCLOSURE: NEMA 3R		MAINS(A): BKR		CONTINUOUS(A): 320				
LOCATION: BUS-0170		DEVICE FAMILY: Bolt On		MOUNTING: Flush		WIRING: 3-Phase 3-Wire		BUS SC RATING(A): 35000				
INCIDENT ENERGY: 0.00 Cal/cm2 @18.00kV		VOLTAGE: 208		BOUNDARY: 0.00kV				FAULT CURRENT(A): 9043				
CKT	DESCRIPTION	NOTES	DEMAND CODE	VA	DC AMPS P	PHASE	DC AMPS P	VA	DEMAND CODE	NOTES	DESCRIPTION	CKT
1												
3	STREET LTS EAST	STREET LIGHT E	NONE	375	20 2	A	20 1	180	LIGHTING		CONTROL PWR	2
5	REPT E. XMAS LTS		NONE	375	60 3	B	60 3	100	GENERAL LOAD		SW CNTRL PWR	4
7	PEDESTAL 10		NONE	1000	100 3	C	100 3	100	NONE		RECIRCULATION PUMP	6
9	PEDESTAL 6		NONE	4804	50 2	A	50 2	3342	NONE			8
11	PEDESTAL 7		NONE	4804	50 2	B	50 2	3342	NONE			10
13			NONE	4804	50 2	C	50 2	3342	NONE			12
15			NONE	4804	50 2	A	50 2	3342	NONE			14
17			NONE	4804	50 2	B	50 2	3342	NONE			16
19			NONE	4804	50 2	C	50 2	3342	NONE			18
21			NONE	4804	50 2	A	50 2	3342	NONE			20
23			NONE	4804	50 2	B	50 2	3342	NONE			22
25			NONE	4804	50 2	C	50 2	3342	NONE			24
27			NONE	4804	50 2	A	50 2	3342	NONE			26
29			NONE	4804	50 2	B	50 2	3342	NONE			28
31			NONE	4804	50 2	C	50 2	3342	NONE			30
33			NONE	4804	50 2	A	50 2	3342	NONE			32
35			NONE	4804	50 2	B	50 2	3342	NONE			34
37			NONE	4804	50 2	C	50 2	3342	NONE			36
39			NONE	4804	50 2	A	50 2	3342	NONE			38
41			NONE	4804	50 2	B	50 2	3342	NONE			40
42			NONE	4804	50 2	C	50 2	3342	NONE			42
ALL CONNECTED		KVA		872	20 2		20 2	25724.7	BUS TOTALS			
TOTAL CONNECTED		72.30		872	20 2		20 2	25724.7	CONNECTED	72.30	DATE: Jul 11, 2018	
TOTAL DEMAND		72.30		872	20 2		20 2	25724.7	DEMAND	72.30	TIME: 22:46:10	
TOTAL DESIGN		75.31		872	20 2		20 2	25724.7	DESIGN	75.31		

PANEL: SCH-PP2		DC DEVICE TYPE: Breaker		ENCLOSURE: NEMA 3R		MAINS(A): BKR		CONTINUOUS(A): 320				
LOCATION: BUS-0162		DEVICE FAMILY: Bolt On		MOUNTING: Flush		WIRING: 3-Phase 4-Wire		BUS SC RATING(A): 22000				
INCIDENT ENERGY: 0.00 Cal/cm2 @ 0.00kV		VOLTAGE: 208/120		BOUNDARY: 0.00kV				FAULT CURRENT(A): 3400				
CKT	DESCRIPTION	NOTES	DEMAND CODE	VA	DC AMPS P	PHASE	DC AMPS P	VA	DEMAND CODE	NOTES	DESCRIPTION	CKT
1												
3	WEST STREET LTS		NONE	500	20 2	A	20 1	180	LIGHTING		CONTROL PWR	2
5	RCPT-WEST XMAS LTS		NONE	500	60 3	B	60 3	0	GENERAL LOAD		SW CNTRL PWR	4
7	FUTURE West Parking		NONE	1125	20 2	C	20 2	0	NONE			6
9	DOG PATH LTS		NONE	1125	60 3	A	60 3	3395	NONE			8
11			NONE	700	20 2	B	20 2	3235	NONE			10
13			NONE	700	20 2	C	20 2	2700	NONE			12
15			NONE	490	20 2	A	20 2	250	NONE			14
17			NONE	490	20 2	B	20 2	250	NONE			16
19			NONE	490	20 2	C	20 2	250	NONE			18
21			NONE	490	20 2	A	20 2	250	NONE			20
23			NONE	490	20 2	B	20 2	250	NONE			22
25			NONE	490	20 2	C	20 2	250	NONE			24
27			NONE	490	20 2	A	20 2	250	NONE			26
29			NONE	490	20 2	B	20 2	250	NONE			28
31			NONE	490	20 2	C	20 2	250	NONE			30
33			NONE	490	20 2	A	20 2	250	NONE			32
35			NONE	490	20 2	B	20 2	250	NONE			34
37			NONE	490	20 2	C	20 2	250	NONE			36
39			NONE	490	20 2	A	20 2	250	NONE			38
41			NONE	490	20 2	B	20 2	250	NONE			40
42			NONE	490	20 2	C	20 2	250	NONE			42
ALL CONNECTED		KVA		490	20 2		20 2	5913.7	BUS TOTALS			
TOTAL CONNECTED		16.07		490	20 2		20 2	5913.7	CONNECTED	16.07	DATE: Jul 11, 2018	
TOTAL DEMAND		16.07		490	20 2		20 2	5913.7	DEMAND	16.07	TIME: 22:46:10	
TOTAL DESIGN		16.57		490	20 2		20 2	5913.7	DESIGN	16.57		

FLAG NOTES:

- ① PROVIDE 50A 1-PHASE 208 BREAKER IN EXISTING PANEL FOR NEW FOOD TRUCK PEDESTALS.
- ② PROVIDE 20A 1-PHASE 208 BREAKER IN EXISTING PANEL FOR DOG PATH LTS.
- ③ CIRCUITS 31 TO 42 ARE SWITCHED CIRCUITS, TYPICAL



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PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
PANEL SCHEDULES

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	SCALE	PLAN & PROFILE
REVISION			DATE 7-12-18			
REVISION			DESIGNED BY AJM	DATE 7-12-18		
REVISION			CHECKED BY AJM	DATE 7-12-18		
REVISION			APPROVED BY JT	DATE 7-12-18		

PANEL: SCH-PP3		DC DEVICE TYPE: Breaker		ENCLOSURE: NEMA 3R		MAINS(A): BKR		CONTINUOUS(A): 200				
LOCATION: BUS-0164		MOUNTING: Bolt On		Free Standing		WIRING: 3-Phase 4-Wire		BUS SC RATING(A): 22000				
FED FROM: INCIDENT ENERGY: 0.00 Cal/cm2 @ 0.00k(in)		VOLTAGE: 208/120		BOUNDARY: 0.00k(in)				FAULT CURRENT(A): 6068				
CKT	DESCRIPTION	NOTES	DEMAND CODE	VA	DC AMPS P	PHASE	DC AMPS P	VA	DEMAND CODE	NOTES	DESCRIPTION	CKT
1					20 1	A	20 1	180	GENERAL LOAD		CONTROL PWR	2
3					20 2	B	20 2	285	NONE		E. ST LTS	4
5	FUTURE RR3		NONE	3395	60 3	C	60 3	1003	NONE		M3_R3	6
7				2700	20 2	A	20 2	1003	NONE			8
9				0	20 1	B	20 1					10
11	SPARE		SPARE	0	20 1	C	20 1					12
13	SPARE		SPARE	0	20 1	A	20 1					14
15	SPARE		SPARE	0	20 1	B	20 1					16
17	SPARE		SPARE	0	20 1	C	20 1					18
19					60 3	A	60 3	100	GENERAL LOAD		SW CNTRL PWR	20
21					100	B	100	100				22
23					100	C	100	385	NONE			24
25	PED WEST		NONE	525	20 2	A	20 2	385	NONE		PED LTS E. BUTTERFLY	26
27				525	20 2	B	20 2	385	NONE			28
29	PED LTS NW. BUTTERFL		NONE	420	20 2	C	20 2	280	NONE		S. PED LTS	30
31				420	20 2	A	20 2	280	NONE			32
33					20 1	B	20 1					34
35	WATERFALL LTS		NONE	267	20 1	C	20 1					36
ALL CONNECTED		KVA		PHASE TOTALS	VA		VA	AMPS	BUS TOTALS	KVA		DATE: Jul 11, 2018
TOTAL CONNECTED		15.82		* A-N	5546.9		5546.9	45.2	CONNECTED	15.82		TIME: 22:46:10
TOTAL DEMAND		15.82		* B-N	5233.8		5233.8	43.6	DEMAND	15.82		
TOTAL DESIGN		16.77		* C-N	5036.9		5036.9	41.9	DESIGN	16.77		

PANEL: SCH-PP4		DC DEVICE TYPE: Breaker		ENCLOSURE: NEMA 3R		MAINS(A): BKR		CONTINUOUS(A): 200				
LOCATION: BUS-0166		MOUNTING: Bolt On		Free Standing		WIRING: 3-Phase 4-Wire		BUS SC RATING(A): 22000				
FED FROM: INCIDENT ENERGY: 0.00 Cal/cm2 @ 0.00k(in)		VOLTAGE: 208/120		BOUNDARY: 0.00k(in)				FAULT CURRENT(A): 6067				
CKT	DESCRIPTION	NOTES	DEMAND CODE	VA	DC AMPS P	PHASE	DC AMPS P	VA	DEMAND CODE	NOTES	DESCRIPTION	CKT
1	SPARE		SPARE	0	20 1	A	20 1	180	GENERAL LOAD		CONTROL PWR	2
3	SPARE		SPARE	0	20 1	B	20 1					4
5	SPARE		SPARE	0	20 1	C	20 1					6
7	PEDESTAL 1		NONE	4160	50 2	A	50 2	4804	NONE		PEDESTAL 2	8
9				4160	50 2	B	50 2	4804	NONE		PEDESTAL 4	10
11	PEDESTAL 3		NONE	4804	50 2	C	50 2	4804	NONE		AERATOR M2	12
13				4804	50 2	A	50 2	1003	NONE			14
15	PEDESTAL 5		NONE	4804	50 2	B	50 2	1003	NONE		SW CNTRL PWR	16
17				4804	50 2	C	50 2	100	GENERAL LOAD			18
19					60 3	A	60 3	100				20
21					100	B	100	100				22
23					100	C	100					24
25					18850.7	A	18850.7	157.0	BUS TOTALS	KVA		DATE: Jul 11, 2018
27					14869.8	B	14869.8	123.8	CONNECTED	49.23		TIME: 22:46:10
29					15513.4	C	15513.4	129.2	DEMAND	49.23		
31						A			DESIGN	49.74		
33						B						
35						C						
ALL CONNECTED		KVA		PHASE TOTALS	VA		VA	AMPS	BUS TOTALS	KVA		DATE: Jul 11, 2018
TOTAL CONNECTED		49.23		* A-N	18850.7		18850.7	157.0	CONNECTED	49.23		TIME: 22:46:10
TOTAL DEMAND		49.23		* B-N	14869.8		14869.8	123.8	DEMAND	49.23		
TOTAL DESIGN		49.74		* C-N	15513.4		15513.4	129.2	DESIGN	49.74		

FLAG NOTES:

① CIRCUITS 25 TO 36 ARE SWITCHED CIRCUITS, TYPICAL



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REVISION Δ	DESCRIPTION	DATE	DRAWN BY AJM	DATE 7-12-18	SCALES: PLAN & PROFILE	
REVISION Δ			DESIGNED BY AJM	DATE 7-12-18		
REVISION Δ			CHECKED BY AJM	DATE 7-12-18		
REVISION Δ			APPROVED BY JT	DATE 7-12-18		

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LAS COLONIAS BUSINESS PARK PHASE 2  
PANEL SCHEDULES

E12  
of 18  
194

PANEL: SCH-PP5		DC DEVICE TYPE: Breaker		ENCLOSURE: NEMA 3R		MAINS(A): BKR		CONTINUOUS(A): 200			
LOCATION: BUS-XF2-PP5		DEVICE FAMILY: Bolt Dn		MOUNTING: Free Standing		WIRING: 3-Phase 4-Wire		BUS SC RATING(A): 22000			
FED FROM: 0.00 Cal/cm2 @ 0.00(1r)		VOLTAGE: 208/120		BOUNDARY: 0.00(1r)				FAULT CURRENT(A): 6038			
CKT DESCRIPTION	NOTES	DEMAND CODE	VA	DC AMPS P	PHASE	DC AMPS P	VA	DEMAND CODE	NOTES	DESCRIPTION	CKT
1				20 1	A	20 1	180	GENERAL LOAD		CONTROL PWR	2
3					B						4
5	S. ST LTS	NONE	1125	20 2	C						6
7			1125		A	20 1	0	SPARE		SPARE	8
9	RECT ROUNDABOUT	NONE	1000	20 1	B	20 1	0	SPARE		SPARE	10
11					C						12
13					A						14
15					B						16
17					C						18
19					A	60 3	100	GENERAL LOAD		SV CNTRL PWR	20
21					B		100				22
23					C		100				24
25					A						26
27					B						28
29					C						30
31	S. PED LTS.	NONE	105	20 2	A	20 2	700	NONE		N. PED LTS	32
33			105		B						34
35					C						36
ALL CONNECTED			KVA	MAX PH AMPS	* PHASE TOTALS	VA	AMPS	BUS TOTALS	KVA	DATE: Jul 11, 2018	
TOTAL CONNECTED			5.33	18.4	* A-N	2205.5	18.4	CONNECTED	5.33	TIME: 22:46:10	
TOTAL DEMAND			5.33	18.4	* B-N	1903.2	15.8	DEMAND	5.33		
TOTAL DESIGN			5.33	18.4	* C-N	1223.3	10.2	DESIGN	5.33		



FLAG NOTES:  
 1 CIRCUITS 25 TO 36 ARE SWITCHED CIRCUITS, TYPICAL



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REVISION Δ	DATE	DESCRIPTION
REVISION Δ		
REVISION Δ		
REVISION Δ		

DRAWN BY	AIM	DATE	7-12-18
DESIGNED BY	AIM	DATE	7-12-18
CHECKED BY	AIM	DATE	7-12-18
APPROVED BY	JH	DATE	7-12-18

SCALES: PLAN & PROFILE: 1"=100'  
 HORIZONTAL: 1"=100'  
 VERTICAL: 1"=10'

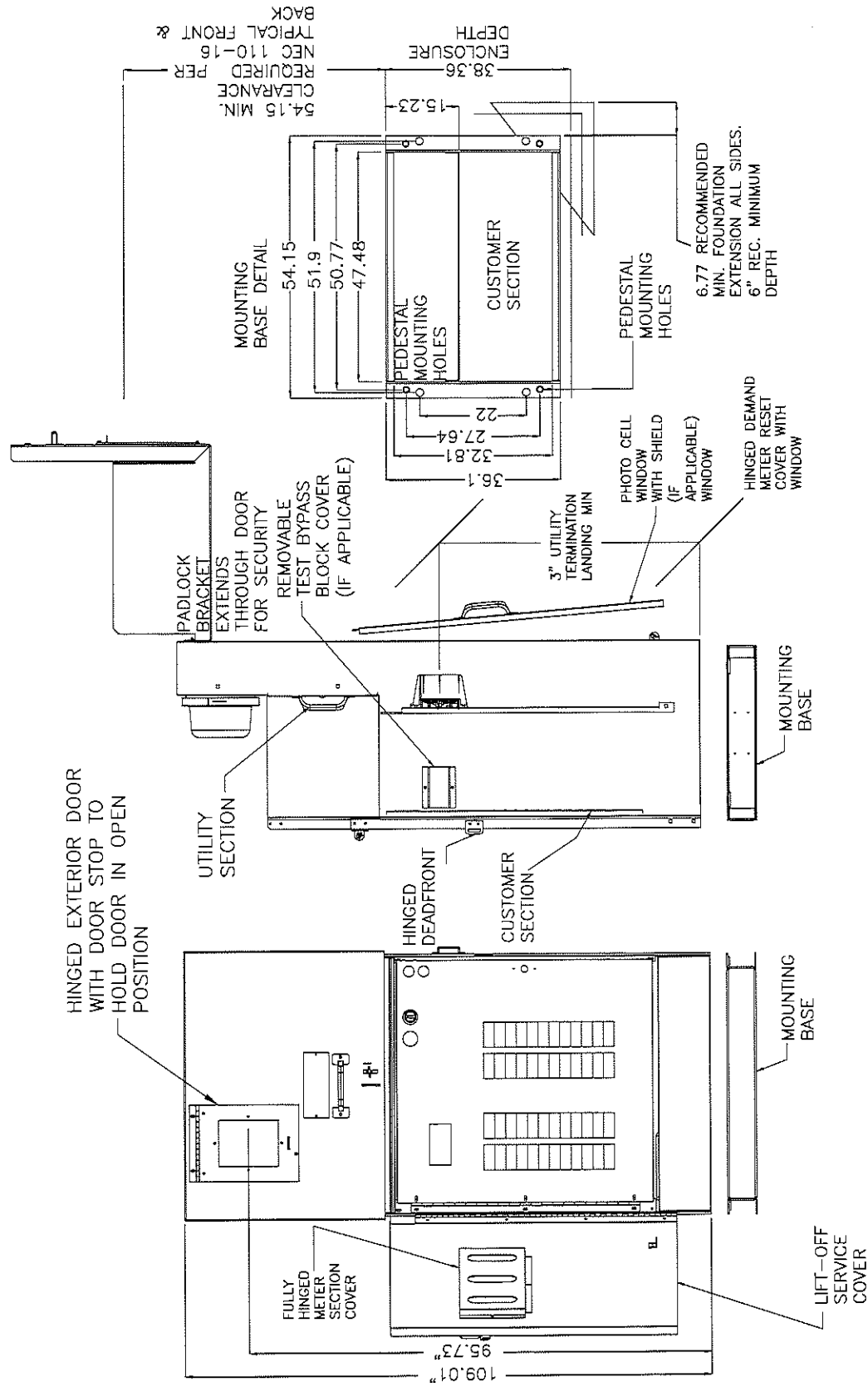
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 ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
 PANEL SCHEDULES

E13  
 of 18  
 195

**24" COMMERCIAL PEDESTAL**



**B TYPICAL 3-PHASE POWER PEDESTAL/LIGHTING CONTROL CENTER PLAN**

1 NOT TO SCALE

**NOTES**

1. COORDINATE EXACT INSTALLATION REQUIREMENTS WITH PROVIDER PRIOR TO ROUGH-IN OR TRENCHING. CONTROL CABINET SHALL BE U/L LISTED "INDUSTRIAL CONTROL PANEL" PER UL 508.
2. CONSTRUCTION SHALL BE NEMA 3R, 12 GA. A60 STEEL POWDER COATED MINT GREEN WITH PHOTO ELECTRIC CELL IN SERVICE CABINET. ELECTRICAL CONTRACTOR TO PROVIDE PHOTOCELL.
3. VOLTAGE RATINGS OF SERVICE EQUIPMENT SHALL CONFORM TO THE SERVICE VOLTAGES INDICATED ON THE PLANS.
4. SERVICE EQUIPMENT ENCLOSURE AND METERING EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE SERVING UTILITY. WHEN THE SERVING UTILITY PROVIDES BOTH METERED AND UNMETERED CIRCUITS, A SEPARATE BUS SHALL BE PROVIDED FOR EACH CIRCUIT. THE METER AREA SHALL HAVE A SEALING, LOCKABLE, RAIN TIGHT COVER THAT CAN BE REMOVED WITHOUT THE USE OF TOOLS.
5. SERVICE EQUIPMENT SHALL BE FACTORY WIRED AND CONFORM TO NEMA STANDARDS.
6. THE EXTERIOR DOOR SHALL HAVE PROVISIONS FOR PADLOCKING. THE PADLOCK HOLE SHALL BE A MINIMUM DIAMETER OF 11mm.
7. ALL TERMINALS FOR INCOMING SERVICE CONDUCTORS SHALL BE COMPATIBLE WITH EITHER COPPER OR ALUMINUM CONDUCTORS SIZED TO SUIT THE CONDUCTORS SHOWN ON THE PLAN. TERMINAL LUGS SHALL BE COPPER OR TIN-PLATED ALUMINUM. SOLID NEUTRAL TERMINAL STRIP SHALL BE RATED 125A UNLESS OTHERWISE SPECIFIED AND FOR USE WITH COPPER OR ALUMINUM CONDUCTORS. THE TERMINAL SHOULD INCLUDE BUT NOT BE LIMITED TO:
  - A) INCOMING TERMINALS (LANDING LUGS)
  - B) NEUTRAL LUGS
  - C) SOLID NEUTRAL TERMINAL STRIP.
  - D) TERMINAL STRIPS FOR CONDUCTORS WITHIN THE ENCLOSURE.
8. CIRCUIT BREAKER SPACES (20mm NOMINAL) SHALL BE PROVIDED FOR BRANCH CIRCUITS. CIRCUIT BREAKER INTERIORS SHALL BE COPPER. INTERIORS SHALL ACCEPT PLUG-IN OR CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS.
9. PLUG-IN CIRCUIT BREAKERS MAY BE MOUNTED IN THE VERTICAL OR HORIZONTAL POSITION. CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS SHALL BE MOUNTED IN THE VERTICAL POSITION.
10. FASTENERS ON THE EXTERIOR OF THE ENCLOSURE SHALL BE VANDAL RESISTANT AND SHALL NOT BE REMOVABLE FROM THE EXTERIOR. ALL NUTS, BOLTS, SCREWS, WASHERS, AND HINGES SHALL BE STAINLESS STEEL.
11. PHENOLIC NAME PLATES SHALL BE PROVIDED AS REQUIRED.
12. A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
13. FOUNDATION SHALL EXTEND 50mm MINIMUM BEYOND EDGE OF ENCLOSURE.
14. PANEL WILL ADHERE TO XCEL ENERGY REQUIREMENT FOR COLD SEQUENCE DISCONNECTION.



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REVISION	DESCRIPTION	DATE
REVISION A		
REVISION B		
REVISION C		
REVISION D		

DRAWN BY	AJM	DATE	7-12-18
DESIGNED BY	AJM	DATE	7-12-18
CHECKED BY	AJM	DATE	7-12-18
APPROVED BY	JT	DATE	7-12-18

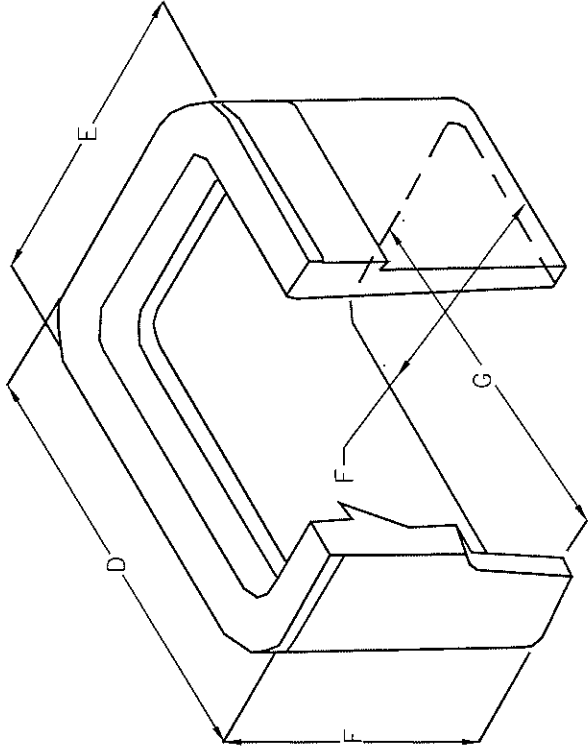
SCALES:	PLAN & PROFILE
0	HORIZONTAL
0	VERTICAL



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**LAS COLONIAS BUSINESS PARK PHASE 2**  
**PEDESTAL DETAILS**

E14 of 18  
196

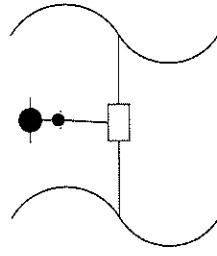


- A 18-1/8"
- B 11-1/4"
- C 1-1/4"
- D 20-1/2"
- E 13-3/8"
- F 12"
- G 15-3/4"
- H 8-7/8"

1. PULL BOXES, PULL BOX COVERS AND EXTENSIONS SHALL BE MADE OF FIBERGLASS REINFORCED POLYMER CONCRETE. PULL BOXES SHALL BE VERIFIED BY A 3RD PARTY NATIONALLY RECOGNIZED INDEPENDENT TESTING LABORATORY AS MEETING ALL TEST PROVISIONS OF THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING. CERTIFICATION DOCUMENTS SHALL BE SUBMITTED WITH MATERIALS SUBMITTALS. THE PULL BOX SHALL HAVE A DETACHABLE COVER WITH A SKID RESISTANT SURFACE AND HAVE THE WORDS ELECTRICAL CAST INTO THE SURFACE. PAINTING THE WORDS SHALL NOT BE ACCEPTED. MARKINGS SHOWING THE TIER 22 RATING MUST BE LABELED OR STENCILED ON THE INSIDE AND OUTSIDE OF THE BOX AND THE ON THE UNDER SIDE OF THE COVER. THE COVER SHALL BE ATTACHED TO THE PULL BOX BODY BY MEANS OF A MINIMUM 3/8" - 7 UNIFIED NATIONAL COURSE (UNC) STAINLESS STEEL PENTA HEAD BOLTS AND SHALL HAVE TWO LIFT SLOTS TO AID IN THE REMOVAL OF THE LID.
2. PULL SLOTS SHALL BE RATED FOR A MINIMUM PULL OUT OF 3,000 POUNDS. MAGNESIUM CHLORIDE TESTS SHOULD BE PERFORMED IN ACCORDANCE WITH THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING.
3. PROVIDE AT LEAST 6 INCHES OF PEA GRAVEL MEASURED FROM BOTTOM OF PULL BOX FOR DRAINAGE. PEA GRAVEL IS INCLUDED IN PULL BOX PAY ITEM.
4. REFERENCE CDOT STANDARD PLAN NO. M-613-1, SHEET NO. 4 OF 4

**C** TYPICAL UTILITY BOX CONNECTION DETAIL

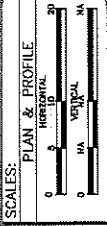
1 NOT TO SCALE



**C** UTILITY BOX CONNECTION DETAIL

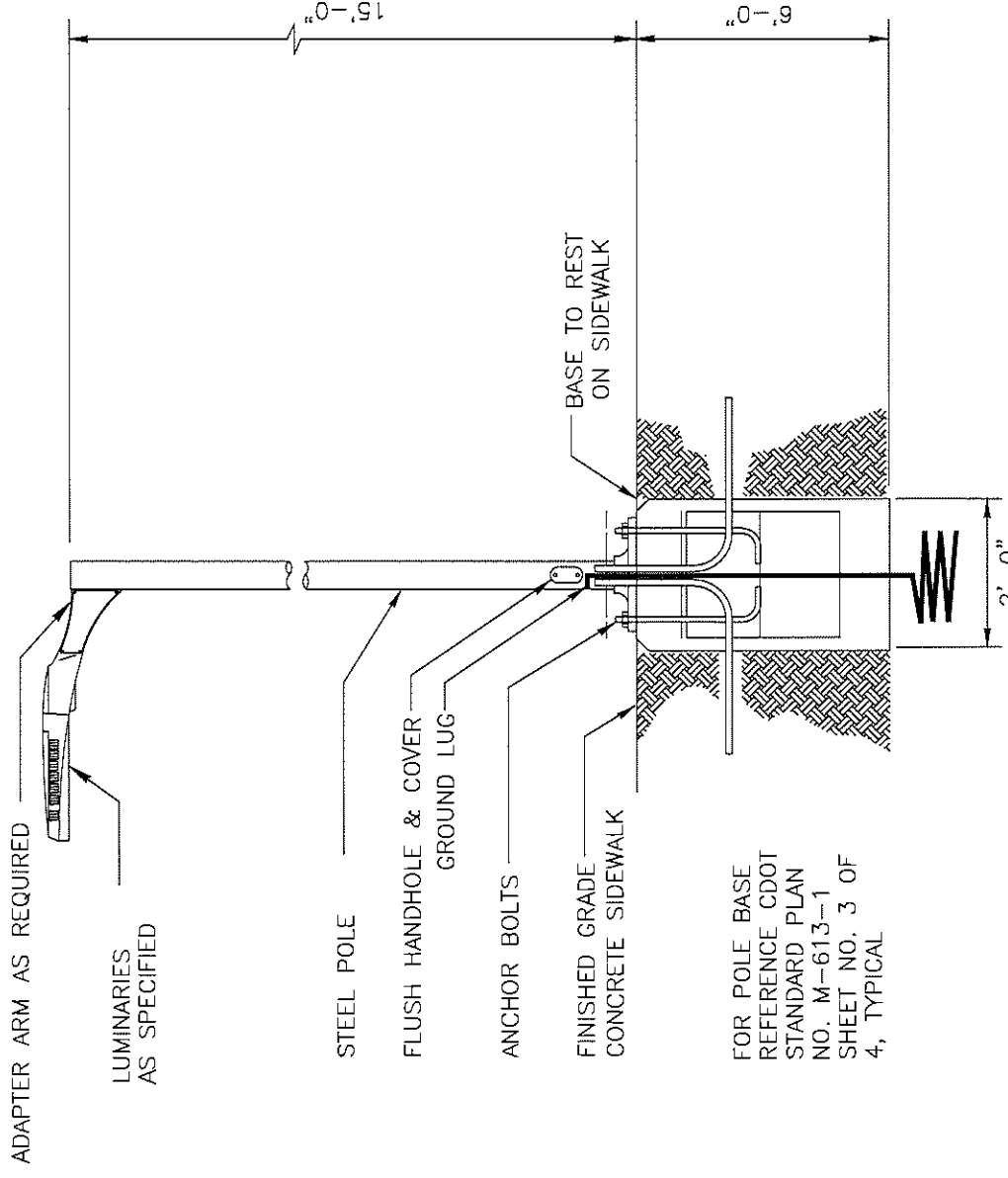
2 NOT TO SCALE

REVISION	DATE	DESCRIPTION	DATE	DATE	DATE
REVISION A				7-12-18	7-12-18
REVISION B				7-12-18	7-12-18
REVISION C				7-12-18	7-12-18
REVISION D				7-12-18	7-12-18



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ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
LIGHTING DETAILS



**TYPICAL SBPH2 LIGHT DETAIL**

NOT TO SCALE

GENERAL NOTES:

1. ELECTRICAL CONTRACTOR TO ORDER ALL REQUIRED HARDWARE FOR MOUNTING OF EACH LUMINARIES.
2. VERIFY THE BURY DEPTH AND DIAMETER OF THE SONOTUBE FOR POLE LUMINARIES WITH THE CIVIL ENGINEER PRIOR TO PURCHASING THE EQUIPMENT. DEPTH WILL DEPEND ON SOIL CONDITIONS. TYPICAL CONCRETE DEPTH IS 5 FT. VERIFY WITH CIVIL ENGINEER.
3. ELECTRICAL CONTRACTOR TO VERIFY THAT ALL FIXTURES TO COMPLY WITH LIGHT TRESPASS AND AND DARK SKY CODES.
4. NOTIFY ENGINEER OF ANY OBSTRUCTIONS TO POLE PLACEMENT IMMEDIATELY BEFORE PROCEEDING.
5. VERIFY REQUIRED VOLTAGE OF FOR EACH LUMINARIES WITH AVAILABLE VOLTAGES PRIOR TO ORDERING.
6. REFERENCE CDOT STANDARD PLAN NO. M-613-1 SHEET NO. 3 OF 4, TYPICAL

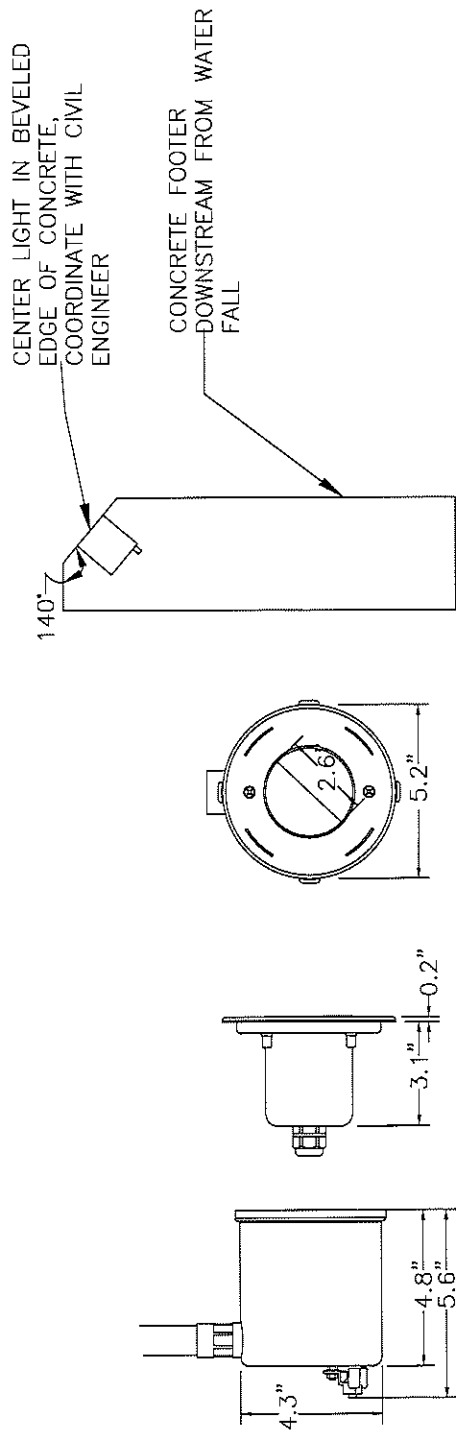
TYPE	MANUFACTURER MODEL NUMBER	APPROVAL	VOLTAGE MOUNTING # OF LAMPS	LUMINAIRE SCHEDULE BALLAST LAMP TYPE	DESCRIPTION
SAPH2	PHILIPS GARDCO GL13-1-2-70LA-6435-NW-UNV-BLP-LF	OWNER REQUESTED	208 POLE	ELECTRONIC LED	PEDESTRIAN LUMINAIRE, ARM MOUNTED, LED, CUTOFF, ORDER ROUND STEEL POLE SO THAT LAMP HEIGHT IS 15' AFG MEASURED AT BOTTOM OF LUMINAIRE. COLOR OF POLE AND ARM TO MATCH, BOTH BLACK. POLE#FRS-15-4-D1-BLP
SBPH2	PHILIPS GARDCO GL18-4-2-230LA-8880A-NW-UNV-BLP-LF	OWNER REQUESTED	208 POLE	ELECTRONIC LED	STREET SIDE LUMINAIRE, ARM MOUNTED, LED, CUTOFF, ROUND STEEL POLE TO BE 27' SO THAT TOTAL HEIGHT AFG TO BOTTOM OF FIXTURE IS 27'. COLOR OF POLE AND ARM TO MATCH, BOTH BLACK. POLE # FRS-27-5-D1-BLP
SCPH2	LUMASCAPE LS333ANS-2LED-6W-RGB-WD-07	OWNER REQUESTED	24 CONCRETE	ELECTRONIC LED	WATER FALL ILLUMINATION, MOUNTED IN 40 DEGREE ANGLE IN CONCRETE STEM WALL LOCATED DOWN STREAM FROM FRONT OF WATER FALL.



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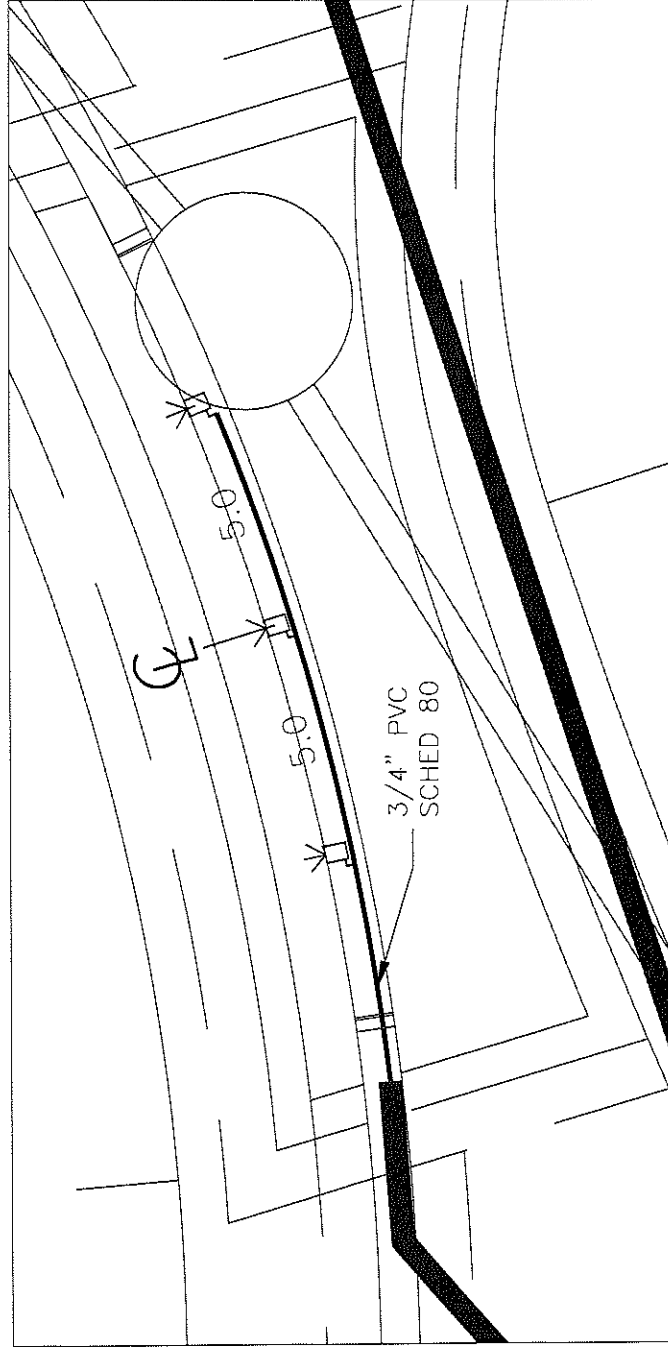


### TYPICAL SCPH2 LIGHT ARRANGEMENT DETAIL

NOT TO SCALE

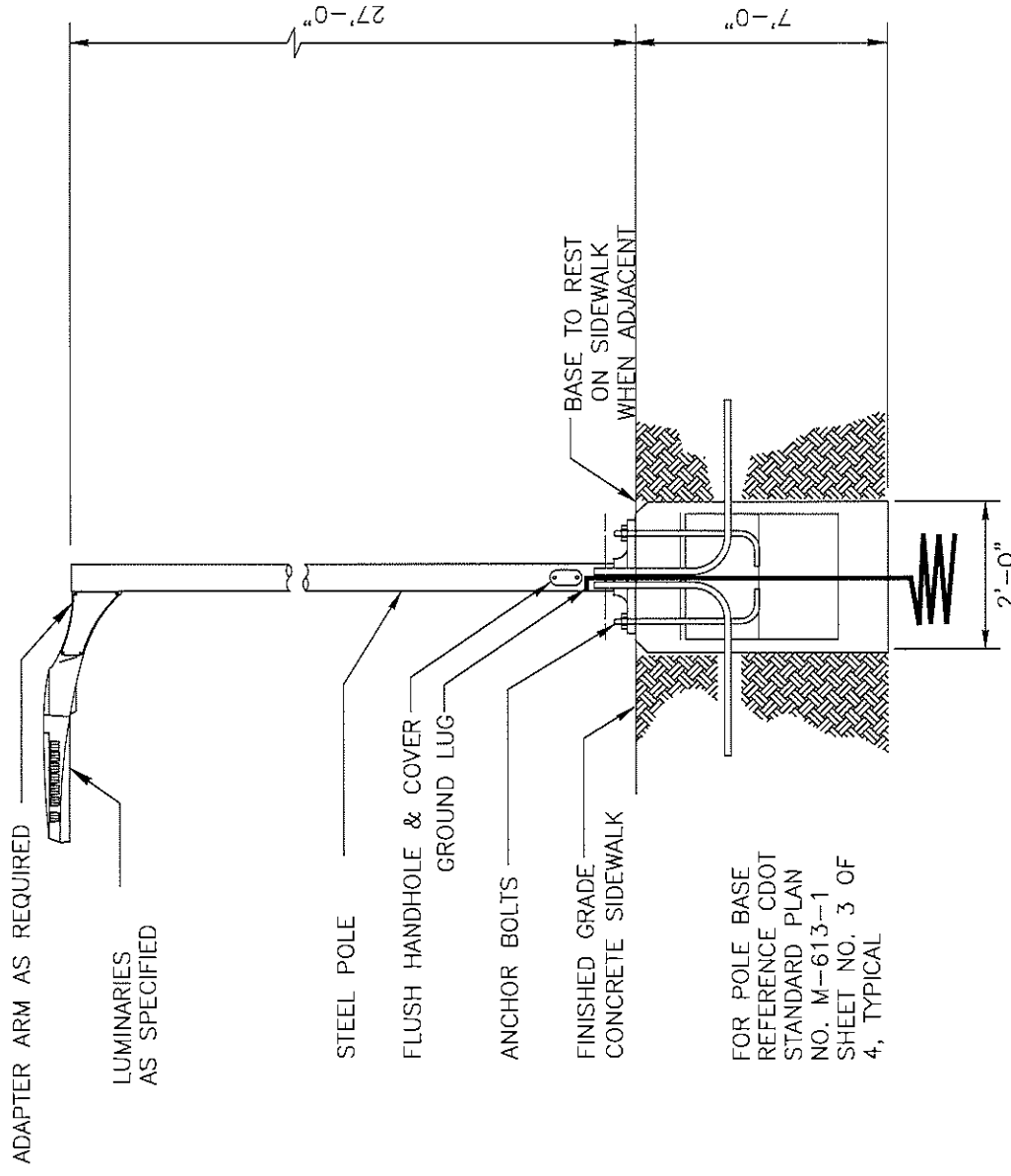
GENERAL NOTES:

1. ELECTRICAL CONTRACTOR TO ORDER ALL REQUIRED HARDWARE FOR MOUNTING OF EACH LUMINARIES.
2. VERIFY THE MOUNTING LOCATION WITH CIVIL ENGINEER.
3. PROVIDE 3/4" PVC FOR POWER CONNECTIONS. FIELD VERIFY EXACT CONNECTIONS WITH MANUFACTURER PRIOR TO ROUGH-IN.
4. PROVIDE LS6510 CONTROL SIGNAL FOR DYNAMIC COLOR FUNCTION. INSTALL IN NEMA 3R ENCLOSURE.
5. COORDINATE INSTALLATION IN BEVEL WITH CIVIL AND LIGHT PROVIDER PRIOR TO ROUGH-IN.



### TYPICAL SCPH2 LIGHT ARRANGEMENT DETAIL

1"=2'-0"



### TYPICAL SBPH2 LIGHT DETAIL

NOT TO SCALE

GENERAL NOTES:

1. ELECTRICAL CONTRACTOR TO ORDER ALL REQUIRED HARDWARE FOR MOUNTING OF EACH LUMINARIES.
2. VERIFY THE BURY DEPTH AND DIAMETER OF THE SONOTUBE FOR POLE LUMINARIES WITH THE CIVIL ENGINEER PRIOR TO PURCHASING THE EQUIPMENT. DEPTH WILL DEPEND ON SOIL CONDITIONS. TYPICAL CONCRETE DEPTH IS 5 FT. VERIFY WITH CIVIL ENGINEER.
3. ELECTRICAL CONTRACTOR TO VERIFY THAT ALL FIXTURES TO COMPLY WITH LIGHT TRESPASS AND AND DARK SKY CODES.
4. NOTIFY ENGINEER OF ANY OBSTRUCTIONS TO POLE PLACEMENT IMMEDIATELY BEFORE PROCEEDING.
5. VERIFY REQUIRED VOLTAGE OF FOR EACH LUMINARIES WITH AVAILABLE VOLTAGES PRIOR TO ORDERING.
6. REFERENCE CDOT STANDARD PLAN NO. M-613-1 SHEET NO. 3 OF 4, TYPICAL



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REVISION	DESCRIPTION	DATE
REVISION Δ		
REVISION Δ		
REVISION Δ		

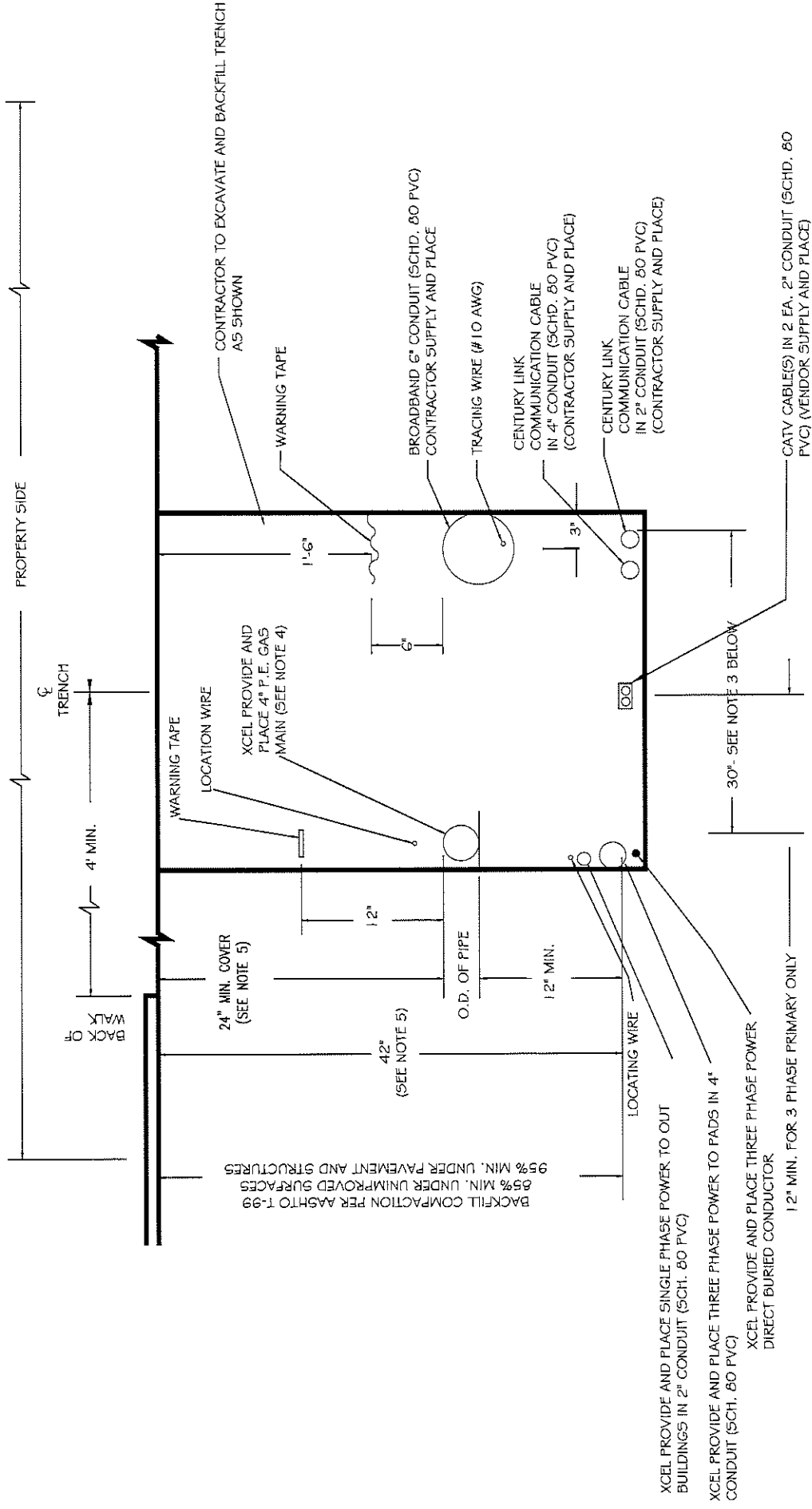
DRAWN BY	DATE	SCALE
AJM	7-12-18	1"=2'-0"
DESIGNED BY	DATE	
CHECKED BY	DATE	
APPROVED BY	DATE	



PUBLIC WORKS  
ENGINEERING DIVISION

LAS COLONIAS BUSINESS PARK PHASE 2  
LIGHTING DETAILS





**GENERAL NOTES:**

1. FOR EASE OF CONSTRUCTION AND MAINTENANCE, PRIMARY CABLE SHOULD BE 12" TO 24" FROM COMMUNICATION CABLES. HOWEVER NESC REQUIREMENTS PERMIT "SUPPLY AND COMMUNICATION CABLES TO BE BURIED TOGETHER AT THE SAME DEPTH WIN NO DELIBERATE SEPARATIONS BETWEEN FACILITIES PROVIDED ALL PARTIES ARE IN AGREEMENT."
2. ONLY SINGLE PHASE SUPPLY CABLES CAN BE BURIED AT THE SAME DEPTH WITH NO DELIBERATE SEPARATION WITH COMMUNICATION CABLES. THREE PHASE CABLES MUST BE SEPARATED BY A MINIMUM OF 1 FOOT (REFERENCE NESC 354.D.3A).
3. 30" TRENCH WIDTH SHOULD BE USED WHEN ALL FOUR UTILITIES ARE INCLUDED.
4. STEEL GAS PIPE OR STEEL DUCT IS NOT ALLOWED FOR JOINT TRENCH CONSTRUCTION.
5. WHERE UNDERGROUND UTILITIES CROSS OR ENCOACH INTO CITY STREETS THEY SHALL BE INSTALLED TO A DEPTH PROVIDING 3' MINIMUM COVER BELOW FINISHED GRADE.

**TYPICAL COMMON TRENCH DETAIL PROPERTY SIDE**

NOT TO SCALE



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EMAIL: joel@acmengr.com

REVISION	DATE	DESCRIPTION

SCALE	DATE	BY
PLAN & PROFILE	7-12-18	AJM
HORIZONTAL	7-12-18	AJM
VERTICAL	7-12-18	AJM

DATE	BY
7-12-18	AJM
7-12-18	AJM
7-12-18	AJM



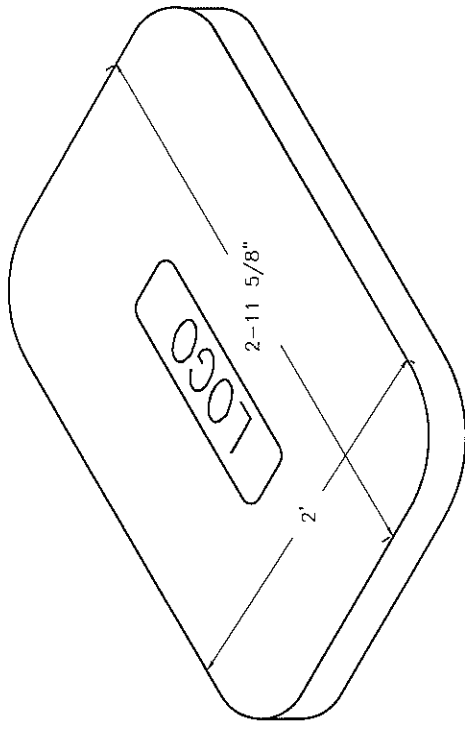
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LAS COLONIAS BUSINESS PARK PHASE 2  
UTILITY DETAILS

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199

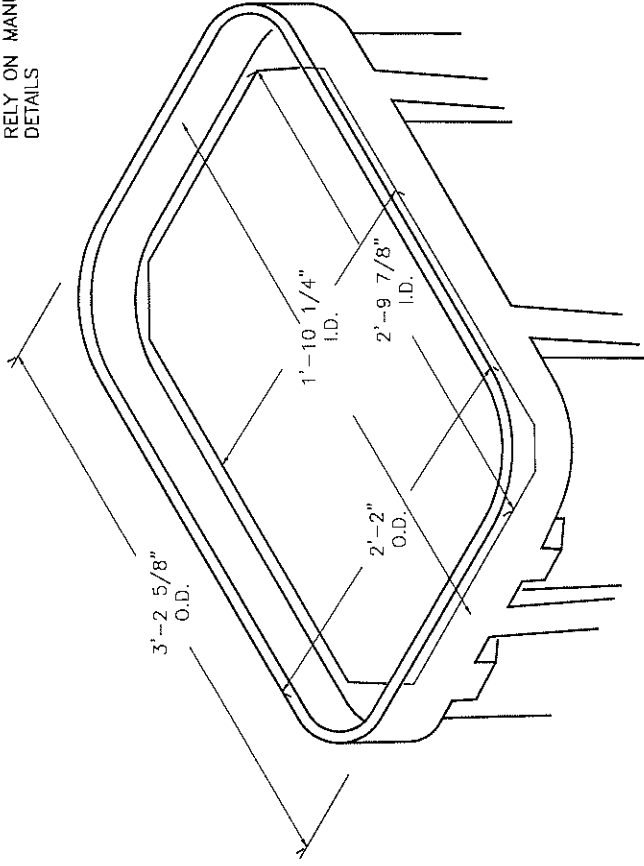
**GENERAL NOTES:**

1. PULL BOXES, PULL BOX COVERS AND EXTENSIONS SHALL BE MADE OF FIBERGLASS REINFORCED POLYMER CONCRETE. PULL BOXES SHALL BE VERIFIED BY 3RD PARTY NATIONALLY RECOGNIZED INDEPENDENT TESTING LABORATORY AS MEETING ALL TEST PROVISIONS OF THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING. CERTIFICATION DOCUMENTS SHALL BE SUBMITTED WITH MATERIALS SUBMITTALS. THE PULL BOX SHALL HAVE A DETACHABLE COVER WITH A SKID RESISTANT SURFACE AND HAVE THE WORDS "ELECTRICAL CAST INTO THE SURFACE. FAINTING THE WORDS SHALL NOT BE ACCEPTED. MARKINGS SHOWING THE TIER 22 RATING MUST BE LABELED OR STENCILED ON THE INSIDE AND OUTSIDE OF THE BOX AND THE ON UNDER SIDE OF THE COVER. THE COVER SHALL BE ATTACHED TO THE PULL BOX BODY BY MEANS OF A MINIMUM 3/8-7 UNIFIED NATIONAL COURSE (UNC) STAINLESS STEEL PENTA HEAD BOLTS SHALL HAVE TWO LIFT SLOTS TO AIDE IN THE REMOVAL OF THE LID.
2. PULL SLOTS SHALL BE RATED FOR A MINIMUM PULL OUT OF 3,000 POUNDS. MAGNESIUM CHLORIDE TESTS SHOULD BE PERFORMED IN ACCORDANCE WITH THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING.



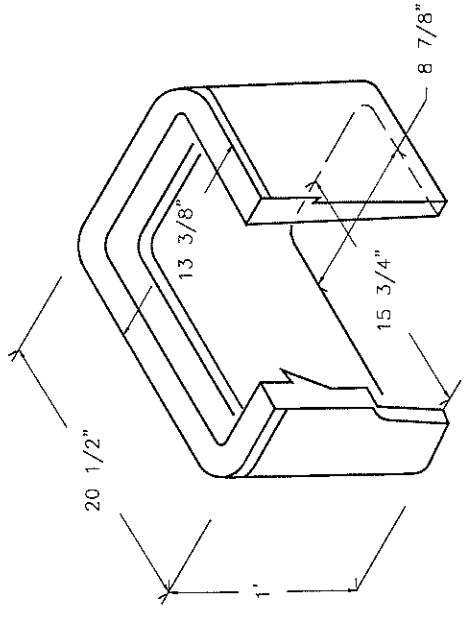
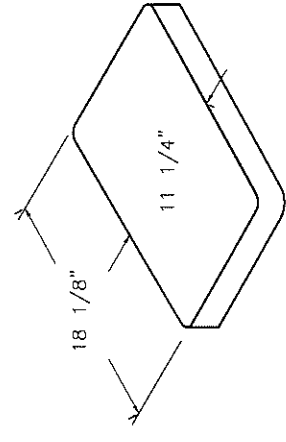
BROADBAND PULL BOX (HUBBEL QUARTZITE BOX) (BOX PART NO PG2436BA30) COVER PART NO PG2436HA00) OR ENGINEER APPROVED EQUAL DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS

COVER



BOX

BROADBAND PULL BOX  
DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS



STREET LIGHT AND PEDESTRIAN LIGHT PULL BOX

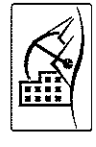
DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS

**TYPICAL PULLBOX DETAIL**

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