CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

November 21, 2019

Holden Rennaker
Short Elliot Hendrickson Inc.
934 Main Avenue, Unit C
Durango, CO 81301

RE: **Monterey Place Apts**
2306-2320 Central SW
Grading Plan Stamp Date: 11/13/19
Drainage Report Stamp Date: 11/13/19
Hydrology File: J12D030

Dear Mr. Rennaker,

Based on the submittal received on 11/20/19 the above-referenced Grading Plan and Drainage Report are approved for Work Order and Building Permit.

Prior to Certificate of Occupancy (For Information):

1. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision* is required.
2. A Bernalillo County Recorded Private Facility Drainage Covenant is required for the storm water quality ponds. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee ($25, payable to Bernalillo County) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) regarding the routing and recording process for covenants. The routing and recording process for covenants can take a month or longer; Hydrology recommends beginning this process as soon as possible as to not delay approval for certificate of occupancy.
3. City acceptance and close-out of the public Work Order will be required, unless a financial guarantee has been posted.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana M. Peterson
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

TREASURY DIVISION DAILY DEPOSIT

Transmittals for:
PROJECTS Only

Payment In-Lieu for Storm Water Quality Volume Requirement

CASH COUNT	AMOUNT	ACCOUNT NUMBER	FUND NUMBER	BUSINESS UNIT	PROJECT ID	ACTIVITY ID	AMOUNT
TOTAL CHECKS	$ 5080.00	461615	305	PCDMD	24_MS4	7547210	$ 5080.00
TOTAL AMOUNT						TOTAL DEPOSIT	**$5080.00**

Hydrology#: J12D030 Name: Monterey Place Apts, 29310sf imp.
Payment In-Lieu For Storm Water Quality Volume Requirement

Address/Legal Description: 2306-2320 Central SW
Lots 2-6, Blk 6, Traction Park and City Electric Addn

DEPARTMENT NAME: Planning Department/Development Review Services, Hydrology

PREPARED BY Dana Peterson PHONE 924-3695

BUSINESS DATE 10/1/19

DUAL VERIFICATION OF DEPOSIT _____
EMPLOYEE SIGNATURE

AND BY _____
EMPLOYEE SIGNATURE

REMITTER: _____
AMOUNT: _____
BANK: _____
CHECK #: _____ DATE ON CHECK: _____

The Payment-in-Lieu can be paid at the Plaza del Sol Treasury, 600 2nd St. NW. **Bring three copies of this invoice to the Treasury** and provide a copy of the receipt to Hydrology, Suite 201, 600 2nd St. NW, or e-mail with the Hydrology submittal to PLNDRS@cabq.gov.

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: Monterey Place Apartments Building Permit #: _____ Hydrology File #: J12D030

DRB#: PR-2019-002331 EPC#: _____ Work Order#: _____

Legal Description: LOTS 2-6 BLOCK 6, TRACTION PARK AND CITY ELECTRIC ADDITION

City Address: 2306-2320 Central Avenue SW

Applicant: Short Elliott Hendrickson Inc. Contact: Holden Rennaker

Address: 934 Main Avenue, Unit C Durango, CO 81301

Phone#: 970-459-9012 Fax#: _____ E-mail: hrennaker@sehinc.com

Owner: Sundance Village Limited Partnership Contact: Chad Rennaker

Address: 412 NW 5th Avenue, Portland, OR 97209

Phone#: 503-288-6210 Fax#: _____ E-mail: crennaker@pacificap.com

TYPE OF SUBMITTAL: _____ PLAT (___# OF LOTS) ____ RESIDENCE ____ DRB SITE X ADMIN SITE

IS THIS A RESUBMITTAL?: X Yes _____ No

DEPARTMENT: _____ TRAFFIC/ TRANSPORTATION X HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
____ CONCEPTUAL G & D PLAN
X GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
____ ELEVATION CERTIFICATE
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ OTHER (SPECIFY) _____
____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

X BUILDING PERMIT APPROVAL
____ CERTIFICATE OF OCCUPANCY
____ PRELIMINARY PLAT APPROVAL
____ SITE PLAN FOR SUB'D APPROVAL
____ SITE PLAN FOR BLDG. PERMIT APPROVAL
____ FINAL PLAT APPROVAL
____ SIA/ RELEASE OF FINANCIAL GUARANTEE
____ FOUNDATION PERMIT APPROVAL
____ GRADING PERMIT APPROVAL
____ SO-19 APPROVAL
____ PAVING PERMIT APPROVAL
____ GRADING/ PAD CERTIFICATION
____ WORK ORDER APPROVAL
____ CLOMR/LOMR
____ FLOODPLAIN DEVELOPMENT PERMIT
____ OTHER (SPECIFY) _____

DATE SUBMITTED: 11/14/2019 By: HOLDEN RENNAKER

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

Building a Better World for All of Us®

November 14th, 2019

Dana Peterson, PE
Development Review Services – Hydrology Section
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

RE: Monterey Place Drainage Submittal for Building Permit (Hydrology File: J12D030)

Mr. Peterson,

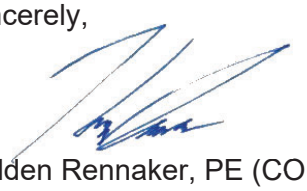
Thank you for the comments you provided on the Grading and Drainage Plan for the Monterey Place Apartments project (PR-2019-002331 and CPN 631982) on October 01, 2019. Below in blue are SEH's responses to Comments 1-4 for "Prior to Building Permit and Work Order."

1. Remove all "Conceptual/Not for Construction" markings and stamp, sign and date the plan.
   All markings were removed and the plan stamped and dated.
2. All drainage calculations and findings, to include those presented in the response letter, need to be provided in a bound report, stamped/signed by the engineer.
   The calculations and findings have been included in a bound report that is stamped/signed.
3. As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Doug Hughes, PE, jhughes@cabq.gov, 924-3420) 14 days prior to any earth disturbance.
   An Erosion and Sediment Plan and Notice of Intent will be submitted 14 days prior to earth disturbance.
4. Payment of the Fee in Lieu (Amount = 635CF x $8/CF = $5080, per sheet C-102) of onsite management of the SWQV must be made. Include a copy of the paid receipt when resubmitting.
   The fee was paid and a copy of the paid receipt was included with the resubmittal.

Additional comments 5-7 were provided “For Information” for Prior to Certificate of Occupancy. SEH appreciates these comments and will address when appropriate.

Please let me know if you have any questions or concerns.

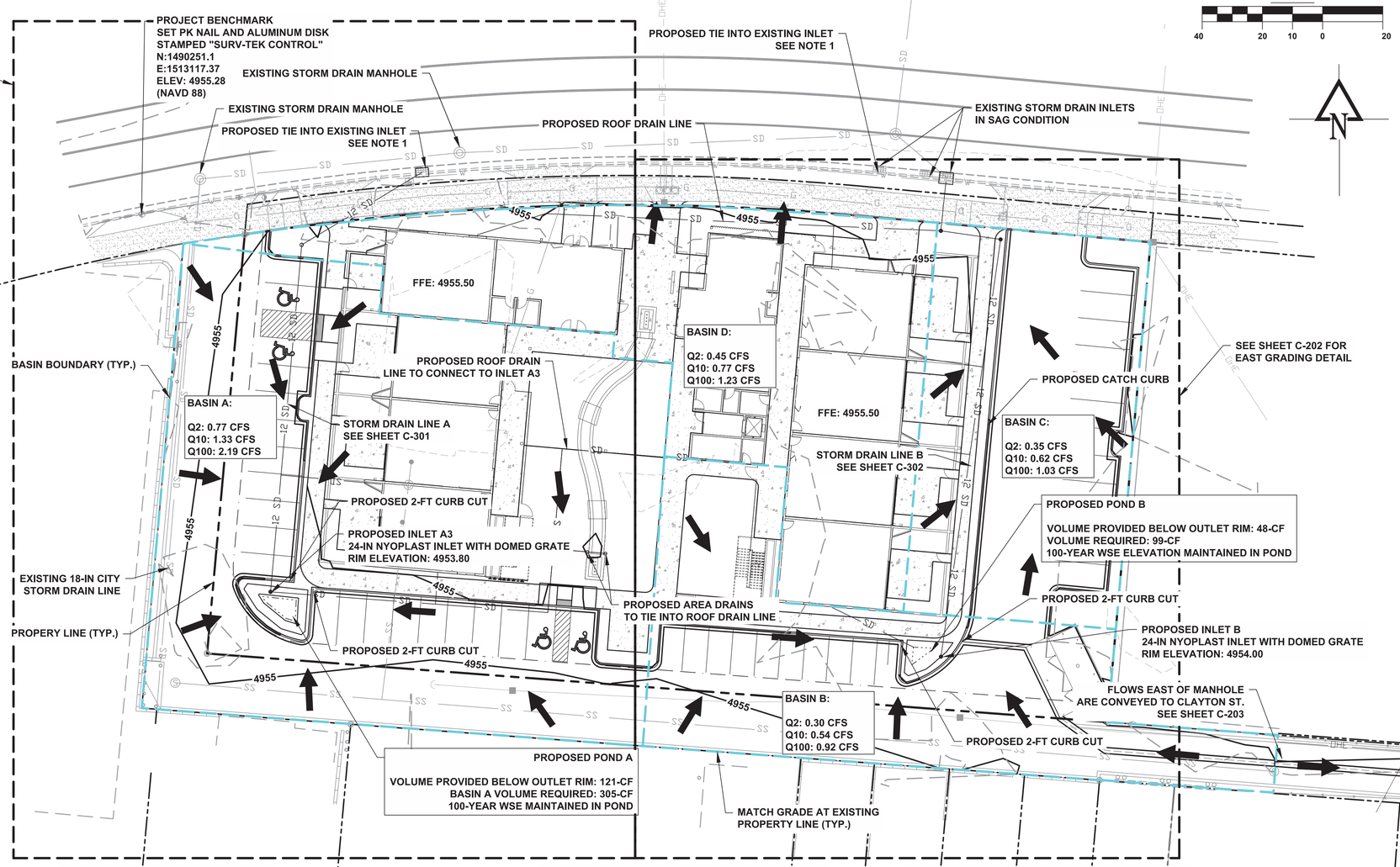
Sincerely,



Holden Rennaker, PE (CO, NM, OR)
Short Elliot Hendrickson Inc.
Email: hrennaker@sehinc.com
Phone: 970-459-9012

PLAN

40 20 10 0 20



NOTES:

1. NO WORK SHALL BE PERFORMED IN PUBLIC ROW WITHOUT AN APPROVED WORK ORDER OR EXCAVATION PERMIT

EXISTING CONDITIONS:

THE PROPOSED DEVELOPMENT SITE IS PRESENTLY DIVIDED INTO TWO SEPARATE SITES. THE WEST SITE HAS TWO BUILDINGS AND A LARGE ASPHALT LOT. HALF OF THE LOT DRAINS NORTH TO CENTRAL WHILE THE SOUTHERN PORTION DRAINS SOUTH ONTO NEIGHBORING PROPERTY.

THE EAST SITE, MOSTLY A GRAVEL LOT, CONTAINS ONE SMALL BUILDING AND AN ASPHALT PARKING AREA. THIS LOT GENERALLY DRAINS TOWARDS CENTRAL.

AN EXISTING CITY ALLEY BORDERS THE SITE ON THE WEST AND SOUTH PROPERTY LINES. THIS ALLEY IS CURRENTLY GRAVEL AND DRAINS TO NEIGHBORING PROPERTY TO THE SOUTH.

TOTAL RUNOFF FROM THE EXISTING SITE IS CALCULATED IN TABLE 1 OF THIS EXHIBIT.

ADJACENT PROPERTIES WERE NOT FOUND TO DISCHARGE ONTO THE PROJECT SITE. THE SITE IS DIRECTLY BORDERED BY TWO BUILDINGS - THE MONTEREY MOTEL TO THE WEST AND EL DON MOTEL TO THE EAST. THE EL DON MOTEL HAS A FLAT ROOF WHERE FLOWS ARE CONVEYED VIA A ROOF DRAIN SYSTEM. THE MONTEREY MOTEL ROOF FLOWS SHEET OFF THE ROOF BEHIND A CMU WALL WHICH KEEPS FLOWS ON THE MONTEREY MOTEL PROPERTY. SOME FLOWS FROM THE EXISTING SITE RUN ONTO NEIGHBORING PROPERTY TO THE SOUTH WHILE FLOWS FROM THE ALLEY EAST OF THE PROPERTY TRAVEL SOUTH AND DO NOT RUN ON TO THE PROJECT SITE.

PROPOSED CONDITIONS:

THE PROJECT WILL CONSIST OF A NEW 4-STORY, MIXED USE, MULTI-FAMILY BUILDING WITH A FOOTPRINT OF APPROXIMATELY 16,600-SF. THE EXISTING CITY ALLEY WILL ALSO BE WIDENED AND IMPROVED. THE PROPOSED GRADE WILL MATCH GRADE AT ADJACENT PROPERTY LINES AND SLOPE TOWARDS CATCH CURB ADJACENT TO THE BUILDING. PRESENT DRAINAGE ISSUES ON THE EXISTING SITE WILL BE MITIGATED WITH THE PROPOSED DESIGN AS FLOWS WILL NO LONGER BE CONVEYED TO SOUTHERN NEIGHBORING PROPERTIES.

THE EXISTING ALLEY EAST OF THE SITE WILL BE IMPROVED TO CLAYTON STREET. A SMALL PORTION OF THIS ALLEY WAS DESIGNED TO DRAIN TOWARDS POND B AND WAS INCLUDED IN THE BASIN B FLOW CALCULATIONS. THE PORTION EAST OF THE GRADE BREAK WAS DESIGNED TO SURFACE FLOW TO CLAYTON STREET.

THE SITE WILL BE DIVIDED INTO 4 SEPARATE BASINS, A-D. BASINS A-B WILL DRAIN TOWARDS WATER QUALITY FEATURES IN PARKING END ISLANDS - PONDS A AND B. FLOWS WERE THEN DESIGNED TO BE CONVEYED, VIA STORM DRAIN, TO TIE INTO THE BACK OF EXISTING INLETS IN CENTRAL AVENUE.

BASIN C WILL DRAIN TO THE ALLEY APRON ONTO CENTRAL AVENUE WHERE IT WILL BE CAPTURED BY THE EXISTING SAG INLETS. WATER QUALITY FOR THE IMPERVIOUS AREA OF THIS BASIN WAS NOT ABLE TO FEASIBLY BE PROVIDED AND THE DEVELOPER IS REQUESTING TO PAY A FEE IN-LIEU OF MANAGING ON-SITE.

BASIN D INCLUDES FLOWS FROM THE THE PROPOSED BUILDING ROOF DRAINS AND THE FRONT OF THE BUILDING. WATER QUALITY FOR THE FLOWS FROM THIS BASIN WAS NOT ABLE TO FEASIBLY BE PROVIDED DUE TO GEOTECHNICAL CONSIDERATIONS AND THE DEVELOPER IS REQUESTING TO PAY A FEE IN-LIEU OF MANAGING ON-SITE.

OVERALL, PONDING FEATURES ON THE SITE WILL PROVIDE WATER QUALITY TREATMENT FOR 7,800-SF OF IMPERVIOUS AREA. 29,310-SF OF IMPERVIOUS AREA WILL NOT BE TREATED ON-SITE AND THE DEVELOPER IS REQUESTING TO PAY A FEE IN-LIEU OF MANAGING ON SITE PER TABLE 6.17 OF THE DRAFT DPM.

STORM VOLUMES AND WATER QUALITY CALCULATIONS ARE SHOWN IN TABLES 3 AND 4. CALCULATED FLOWS ARE SHOWN IN THE EXHIBIT FOR EACH BASIN.

THE DEVELOPED OVERALL FLOWS WILL BE SLIGHTLY REDUCED FROM THE EXISTING CONDITIONS, AS SHOWN IN TABLE 2. THE RUNOFF PATTERN WAS ALTERED TO CONVEY FLOW TO CENTRAL AVENUE INSTEAD OF NEIGHBORING PROPERTIES TO THE SOUTH BASED ON DISCUSSIONS WITH THE CITY.

PROJECT BACKGROUND INFORMATION

PROJECT AREA: 1.46 ACRES
PRIVATE LOT: 1.08 ACRES
PUBLIC ALLEY IMPROVEMENTS (DRAIN TO SITE): 0.23 ACRES
PUBLIC ALLEY IMPROVEMENTS (DRAIN TO CLAYTON: 0.15 ACRES

ZONE: 2

FROM TABLE 6.7 FOR ZONE 2			
	EXCESS PRECIPITATION (INCHES)		
TREATMENT	2-YR	10-YR	100-YR
A	0	0.15	0.62
B	0.02	0.3	0.8
C	0.16	0.48	1.03
D	0.98	1.51	2.33

FROM TABLE 6.8 FOR ZONE 2			
	PEAK DISCHARGE (CFS/ACRE)		
TREATMENT	2-YR	10-YR	100-YR
A	0	0.41	1.71
B	0.08	0.95	2.36
C	0.61	1.59	3.05
D	1.66	2.71	4.34

TABLE 1 - EXISTING SITE OVERALL RUNOFF (PUBLIC ALLEY NOT CONSIDERED)

		PEAK (CFS)		
LAND TREATMENT	AREA (ACRES)	2-YR	10-YR	100-YR
B	0.02	0.00	0.02	0.05
C	0.31	0.19	0.49	0.95
D	0.75	1.25	2.03	3.26
TOTAL	1.08	1.44	2.54	4.25

TABLE 2 - DEVELOPED SITE OVERALL RUNOFF (PUBLIC ALLEY NOT CONSIDERED)

		PEAK (CFS)		
LAND TREATMENT	AREA (ACRES)	2-YR	10-YR	100-YR
B	0.23	0.02	0.22	0.54
C	0	0.00	0.00	0.00
D	0.85	1.41	2.30	3.69
TOTAL	1.08	1.43	2.52	4.23

TABLE 3 - DEVELOPED BASIN VOLUME TABLE

BASIN	TREATMENT B AREA (ACRES)	TREATMENT D AREA (ACRES)	TOTAL AREA (ACRES)	EXCESS PRECIPITATION (IN)	V100 - 360 (CF)	V100 - 1440 (CF)	V100 - 4 DAY (CF)	V100 - 10 DAY (CF)
A	0.08	0.46	0.54	2.103	4123	4907	5201	5397
B	0.06	0.18	0.24	1.948	1697	2045	2176	2263
C	0.07	0.14	0.21	2.036	1921	2299	2440	2535
D	0.07	0.25	0.32	2.133	2400	2850	3019	3131
OFFSITE TO CLAYTON	0.00	0.15	0.15	2.330	1269	1486	1568	1623

TABLE 4 - DEVELOPED WATER QUALITY TABLE

BASIN	PRIVATE IMPERVIOUS AREA (SF)	80TH PERCENTILE EVENT (IN)	VOLUME REQUIRED (CF)	VOLUME PROVIDED (CF)	FEE-IN LIEU OF VOLUME (CF)	FEE-IN LIEU OF AREA (SF)
A	14061	0.26	305	121	184	8476
B	4579	0.26	99	48	51	2364
C	6810	0.26	148	0	148	6810
D	11660	0.26	253	0	253	11660
TOTAL	37110	0.26	804	169	635	29310

PREPARED BY:

Short Elliott Hendrickson, Inc.

934 Main Avenue, Unit C
Durango, Colorado 81301
Phone: (970) 385-4546
Fax: (970) 385-4502

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2415 PRINCETON DR. NE, SUITE E
ALBUQUERQUE, NM 87107
505.843.7587
www.designplusabq.com

HOLDEN DANE RENNAKER
NEW MEXICO
25618
11/13/2019
PROFESSIONAL ENGINEER

MONTEREY PLACE APARTMENTS
2306-2320 CENTRAL AVE SW

DATE: 10/02/2019

REVISIONS

4/16	SKETCH PLAT
5/21	MINOR DRB
7/15	DRB RESUBMIT
10/02	FIRST DRC
11/14	G+D RESUB

DRAWN BY: HR

CHECKED BY: PR

SHEET TITLE

GRADING AND DRAINAGE PLAN

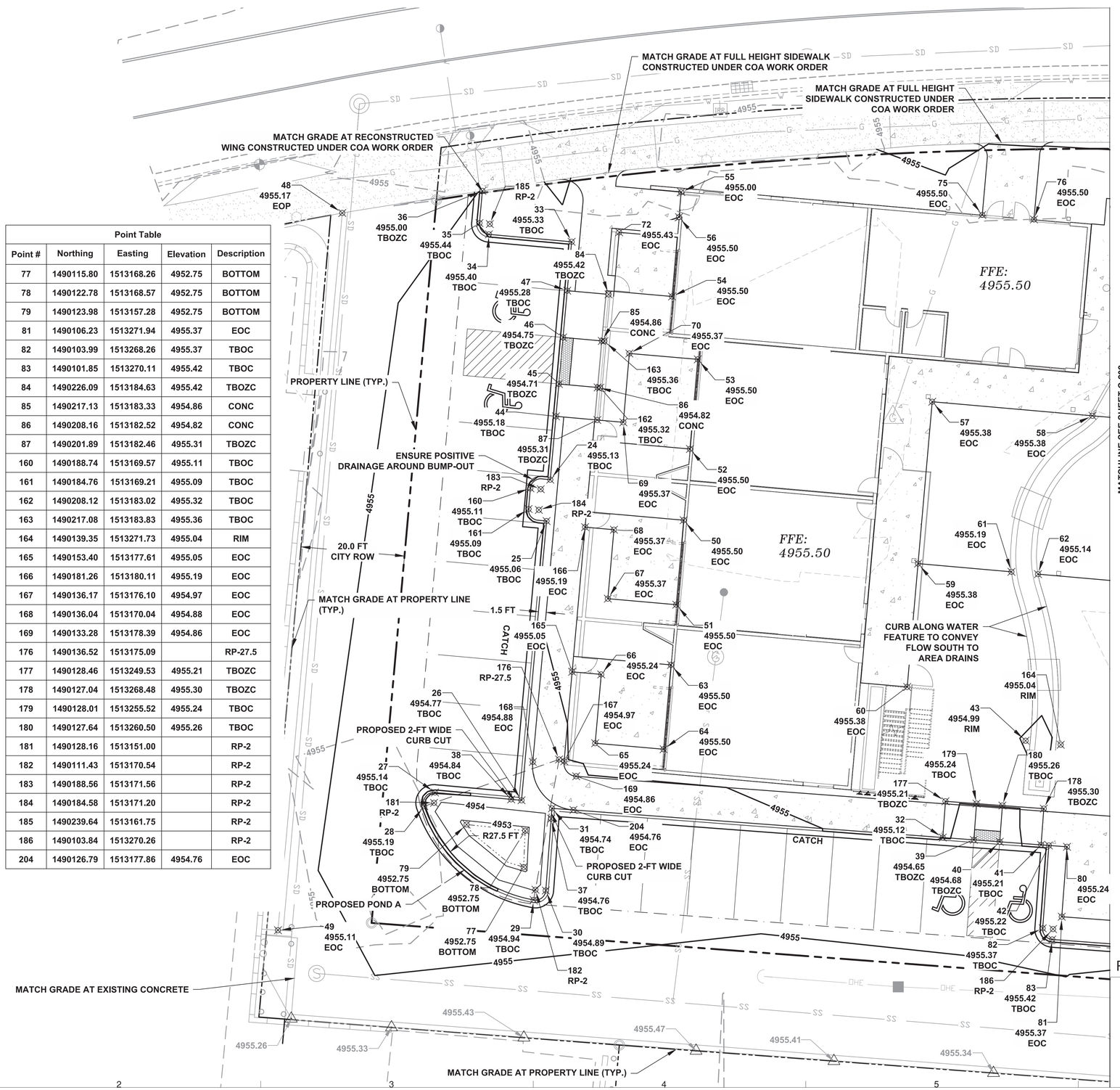
C-102

Point Table				
Point #	Northing	Easting	Elevation	Description
24	1490190.41	1513173.40	4955.13	TBOC
25	1490182.44	1513172.69	4955.06	TBOC
26	1490128.65	1513167.86	4954.77	TBOC
27	1490130.15	1513151.18	4955.14	TBOC
28	1490127.50	1513149.11	4955.19	TBOC
29	1490109.46	1513170.18	4954.94	TBOC
30	1490111.28	1513172.54	4954.89	TBOC
31	1490127.10	1513173.72	4954.74	TBOC
32	1490121.48	1513249.01	4955.12	TBOC
33	1490236.22	1513177.51	4955.33	TBOC
34	1490237.65	1513161.57	4955.40	TBOC
35	1490239.82	1513159.76	4955.44	TBOC
36	1490246.02	1513160.32	4955.00	TBOZC
37	1490125.11	1513173.57	4954.76	TBOC
38	1490128.83	1513165.87	4954.84	TBOC
39	1490121.03	1513254.99	4954.65	TBOZC
40	1490120.66	1513259.98	4954.68	TBOZC
41	1490120.06	1513267.96	4955.21	TBOC
42	1490119.95	1513269.45	4955.22	TBOC
43	1490140.12	1513264.96	4954.99	RIM
44	1490202.61	1513174.49	4955.18	TBOC
45	1490208.83	1513175.05	4954.71	TBOZC
46	1490217.80	1513175.86	4954.75	TBOZC
47	1490226.81	1513176.67	4955.28	TBOC
48	1490241.77	1513133.33	4955.17	EOP
49	1490103.63	1513120.94	4955.11	EOC
50	1490182.60	1513199.10	4955.50	EOC
51	1490166.33	1513197.67	4955.50	EOC
52	1490196.31	1513200.30	4955.50	EOC
53	1490213.58	1513201.82	4955.50	EOC
54	1490225.69	1513196.86	4955.50	EOC
55	1490245.79	1513198.62	4955.00	EOC
56	1490240.97	1513198.20	4955.50	EOC
57	1490205.41	1513246.98	4955.38	EOC
58	1490202.70	1513277.85	4955.38	EOC
59	1490174.24	1513244.25	4955.38	EOC
60	1490150.48	1513242.16	4955.38	EOC
61	1490172.66	1513262.24	4955.19	EOC
62	1490172.21	1513267.36	4955.14	EOC
63	1490154.73	1513196.66	4955.50	EOC
64	1490138.49	1513195.23	4955.50	EOC
65	1490139.64	1513182.05	4955.24	EOC
66	1490152.90	1513183.21	4955.24	EOC
67	1490167.48	1513184.49	4955.37	EOC
68	1490180.76	1513185.66	4955.37	EOC
69	1490201.45	1513187.47	4955.37	EOC
70	1490214.71	1513188.63	4955.37	EOC
72	1490238.04	1513186.67	4955.43	EOC
75	1490241.39	1513256.62	4955.50	EOC
76	1490240.52	1513266.58	4955.50	EOC

Point Table				
Point #	Northing	Easting	Elevation	Description
77	1490115.80	1513168.26	4952.75	BOTTOM
78	1490122.78	1513168.57	4952.75	BOTTOM
79	1490123.98	1513157.28	4952.75	BOTTOM
81	1490106.23	1513271.94	4955.37	EOC
82	1490103.99	1513268.26	4955.37	TBOC
83	1490101.85	1513270.11	4955.42	TBOC
84	1490226.09	1513184.63	4955.42	TBOZC
85	1490217.13	1513183.33	4954.86	CONC
86	1490208.16	1513182.52	4954.82	CONC
87	1490201.89	1513182.46	4955.31	TBOZC
160	1490188.74	1513169.57	4955.11	TBOC
161	1490184.76	1513169.21	4955.09	TBOC
162	1490208.12	1513183.02	4955.32	TBOC
163	1490217.08	1513183.83	4955.36	TBOC
164	1490139.35	1513271.73	4955.04	RIM
165	1490153.40	1513177.61	4955.05	EOC
166	1490181.26	1513180.11	4955.19	EOC
167	1490136.17	1513176.10	4954.97	EOC
168	1490136.04	1513170.04	4954.88	EOC
169	1490133.28	1513178.39	4954.86	EOC
176	1490136.52	1513175.09		RP-27.5
177	1490128.46	1513249.53	4955.21	TBOZC
178	1490127.04	1513268.48	4955.30	TBOZC
179	1490128.01	1513255.52	4955.24	TBOC
180	1490127.64	1513260.50	4955.26	TBOC
181	1490128.16	1513151.00		RP-2
182	1490111.43	1513170.54		RP-2
183	1490188.56	1513171.56		RP-2
184	1490184.58	1513171.20		RP-2
185	1490239.64	1513161.75		RP-2
186	1490103.84	1513270.26		RP-2
204	1490126.79	1513177.86	4954.76	EOC

LEGEND

TBOC - TOP BACK OF CURB
TBOZC - TOP BACK OF ZERO HEIGHT CURB
EOP - EDGE OF PAVEMENT
EOC - EDGE OF CONCRETE
FFE - FINISH FLOOR ELECVATION
BOTTOM - BOTTOM OF POND
RP-X - RADIUS POINT - RADIUS (X-FT)



NOTE: NO WORK SHALL BE PERFORMED IN THE PUBLIC ROW WITHOUT AN APPROVED WORK ORDER OR EXCAVATION PERMIT

PLAN
20 10 5 0 10

N

PREPARED BY:

Short Elliott Hendrickson, Inc.

934 Main Avenue, Unit C
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Phone: (970) 385-4546
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MONTEREY PLACE APARTMENTS
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DATE: 10/02/2019

REVISIONS	
4/16	SKETCH PLAT
5/21	MINOR DRB
7/15	DRB RESUBMIT
10/02	FIRST DRC
11/14	G+D RESUB

DRAWN BY: HR

CHECKED BY: PR

SHEET TITLE

DETAILED GRADING PLAN

C-201

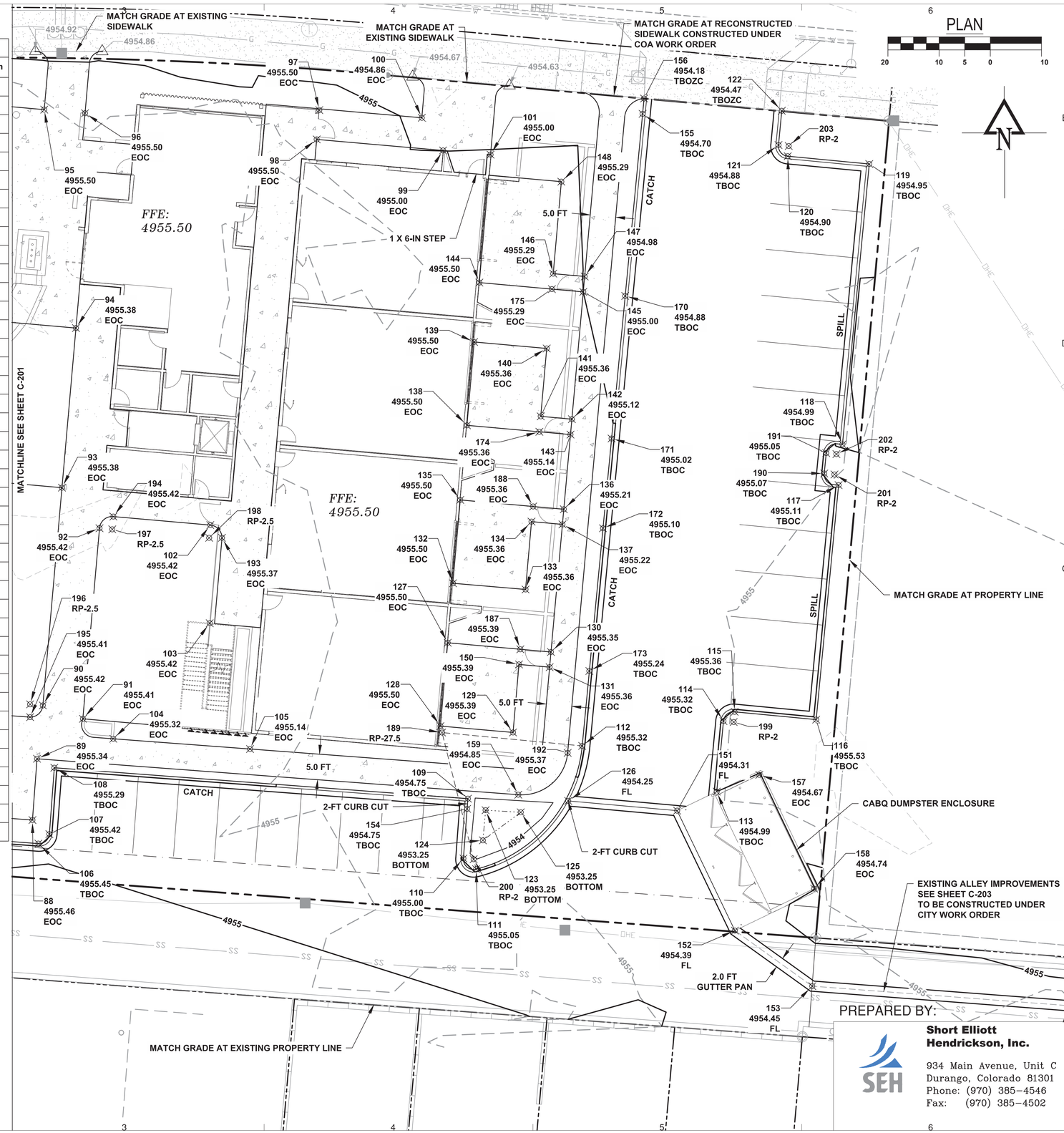
Point Table				
Point #	Northing	Easting	Elevation	Description
88	1490105.24	1513285.10	4955.46	EOC
89	1490117.21	1513286.00	4955.34	EOC
90	1490127.62	1513287.13	4955.42	EOC
91	1490125.01	1513294.97	4955.41	EOC
92	1490162.23	1513298.20	4955.42	EOC
93	1490170.15	1513290.86	4955.38	EOC
94	1490201.32	1513293.60	4955.38	EOC
95	1490243.98	1513287.40	4955.50	EOC
96	1490243.28	1513295.37	4955.50	EOC
97	1490243.89	1513341.12	4955.50	EOC
98	1490238.16	1513340.62	4955.50	EOC
99	1490236.00	1513365.29	4955.00	EOC
100	1490242.39	1513361.15	4954.86	EOC
101	1490235.19	1513374.57	4955.00	EOC
102	1490162.85	1513319.84	4955.42	EOC
103	1490143.68	1513319.72	4955.42	EOC
104	1490121.11	1513300.89	4955.32	EOC
105	1490119.11	1513327.60	4955.14	EOC
106	1490100.64	1513286.26	4955.45	TBOC
107	1490102.49	1513288.41	4955.42	TBOC
108	1490115.45	1513289.37	4955.29	TBOC
109	1490109.42	1513370.15	4954.75	TBOC
110	1490097.74	1513369.28	4955.00	TBOC
111	1490095.65	1513371.75	4955.05	TBOC
112	1490119.71	1513392.47	4955.32	TBOC
113	1490110.80	1513418.74	4954.99	TBOC
114	1490124.57	1513420.06	4955.32	TBOC
115	1490126.38	1513422.24	4955.36	TBOC
116	1490124.85	1513438.17	4955.53	TBOC
117	1490170.64	1513442.54	4955.11	TBOC
118	1490178.61	1513443.31	4954.99	TBOC
119	1490233.36	1513448.54	4954.95	TBOC
120	1490234.88	1513432.61	4954.90	TBOC
121	1490237.06	1513430.81	4954.88	TBOC
122	1490243.75	1513431.45	4954.47	TBOZC
123	1490107.16	1513373.61	4953.25	BOTTOM
124	1490101.28	1513373.08	4953.25	BOTTOM
125	1490106.75	1513380.47	4953.25	BOTTOM
126	1490108.98	1513389.74	4954.25	FL
127	1490139.86	1513366.21	4955.50	EOC
128	1490123.59	1513364.78	4955.50	EOC
129	1490122.35	1513378.96	4955.39	EOC
130	1490138.05	1513386.37	4955.35	EOC
131	1490135.09	1513386.11	4955.36	EOC
132	1490151.48	1513367.23	4955.50	EOC
133	1490150.27	1513381.41	4955.36	EOC
134	1490163.52	1513382.57	4955.36	EOC
135	1490167.75	1513368.66	4955.50	EOC
136	1490165.94	1513388.88	4955.21	EOC
137	1490162.98	1513388.61	4955.22	EOC

Point Table				
Point #	Northing	Easting	Elevation	Description
138	1490182.33	1513369.96	4955.50	EOC
139	1490198.60	1513371.36	4955.50	EOC
140	1490197.33	1513385.54	4955.36	EOC
141	1490184.08	1513384.37	4955.36	EOC
142	1490183.53	1513390.45	4955.12	EOC
143	1490180.52	1513390.18	4955.14	EOC
144	1490210.20	1513372.38	4955.50	EOC
145	1490208.38	1513392.68	4955.00	EOC
146	1490211.95	1513386.82	4955.29	EOC
147	1490211.40	1513392.95	4954.98	EOC
148	1490229.91	1513388.39	4955.29	EOC
150	1490135.63	1513380.12	4955.39	EOC
151	1490107.07	1513411.01	4954.31	FL
152	1490083.65	1513422.30	4954.39	FL
153	1490072.80	1513437.40	4954.45	FL
154	1490107.42	1513370.00	4954.75	TBOC
155	1490243.16	1513404.27	4954.70	TBOC
156	1490246.14	1513404.55	4954.18	TBOZC
157	1490114.07	1513427.06	4954.67	EOC
158	1490091.85	1513437.77	4954.74	EOC
159	1490110.19	1513379.99	4954.85	EOC
170	1490207.60	1513400.87	4954.88	TBOC
171	1490179.75	1513398.21	4955.02	TBOC
172	1490162.22	1513396.54	4955.10	TBOC
173	1490134.35	1513393.87	4955.24	TBOC
174	1490181.06	1513384.10	4955.36	EOC
175	1490208.93	1513386.55	4955.29	EOC
187	1490138.59	1513380.39	4955.39	EOC
188	1490166.48	1513382.89	4955.36	EOC
189	1490122.33	1513365.10		RP-27.5
190	1490172.92	1513439.75	4955.07	TBOC
191	1490176.90	1513440.13	4955.05	TBOC
192	1490118.36	1513389.63	4955.37	EOC
193	1490160.35	1513322.12	4955.37	EOC
194	1490164.51	1513300.91	4955.42	EOC
195	1490125.34	1513284.64	4955.41	EOC
196	1490127.84	1513284.64		RP-2.5
197	1490162.01	1513300.69		RP-2.5
198	1490160.35	1513319.62		RP-2.5
199	1490124.38	1513422.05		RP-2
200	1490097.59	1513371.27		RP-2

LEGEND

TBOC - TOP BACK OF CURB
TBOZC - TOP BACK OF ZERO HEIGHT CURB
EOP - EDGE OF PAVEMENT
EOC - EDGE OF CONCRETE
FFE - FINISH FLOOR ELECVATION
BOTTOM - BOTTOM OF POND
RP-X - RADIUS POINT - RADIUS (X-FT)

NOTE: NO WORK SHALL BE PERFORMED IN THE PUBLIC ROW WITHOUT AN APPROVED WORK ORDER OR EXCAVATION PERMIT



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HOLDEN DANE RENHAKER NEW MEXICO 25618 11/13/2019 PROFESSIONAL ENGINEER

MONTEREY PLACE APARTMENTS
2306-2320 CENTRAL AVE SW

DATE: 10/02/2019

REVISIONS

4/16	SKETCH PLAT
5/21	MINOR DRB
7/15	DRB RESUBMIT
10/02	FIRST DRC
11/14	G+D RESUB

DRAWN BY: HR

CHECKED BY: PR

SHEET TITLE

DETAILED GRADING PLAN

C-202

PREPARED BY:

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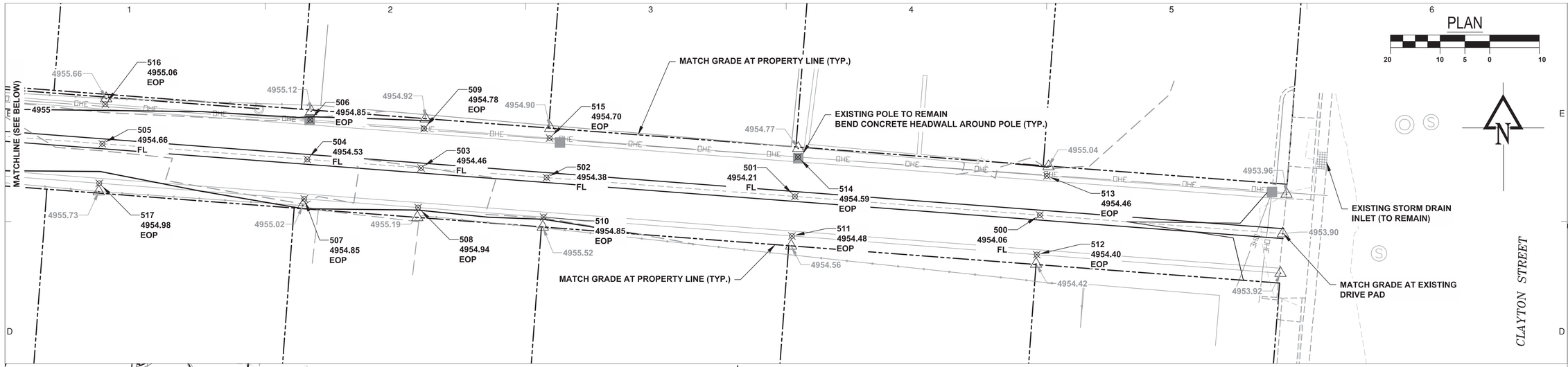

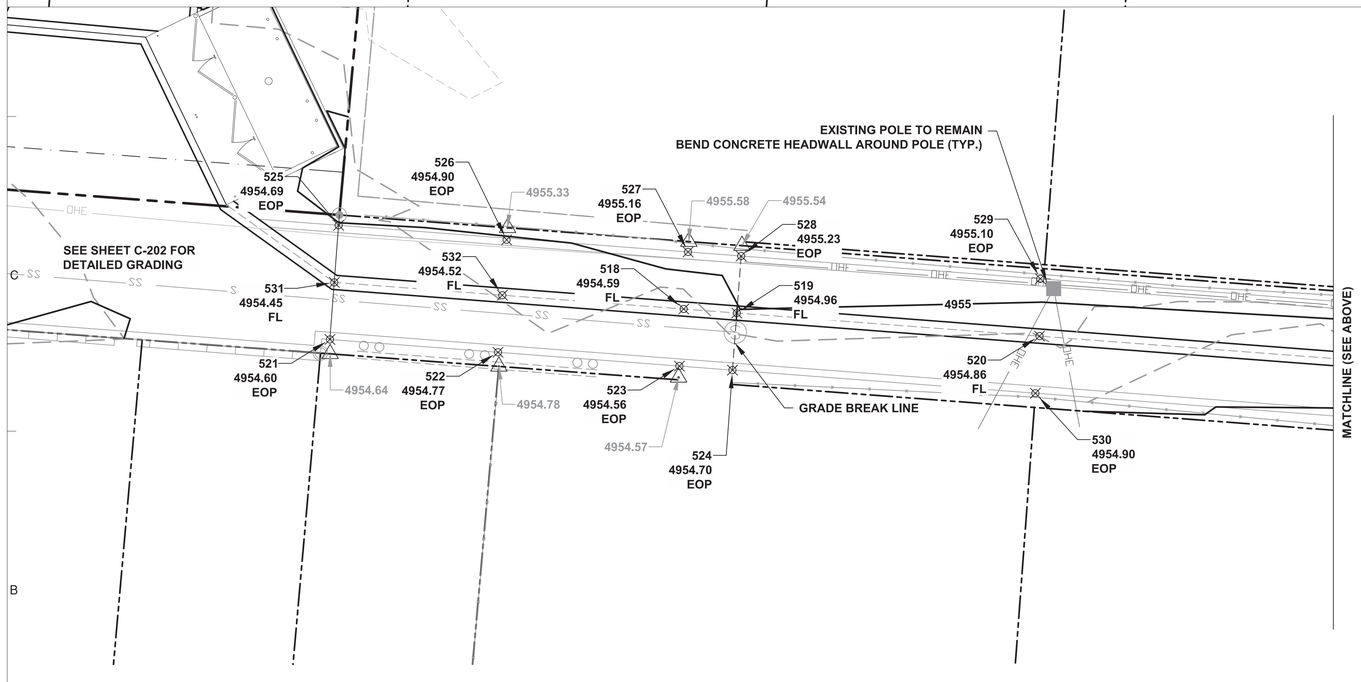

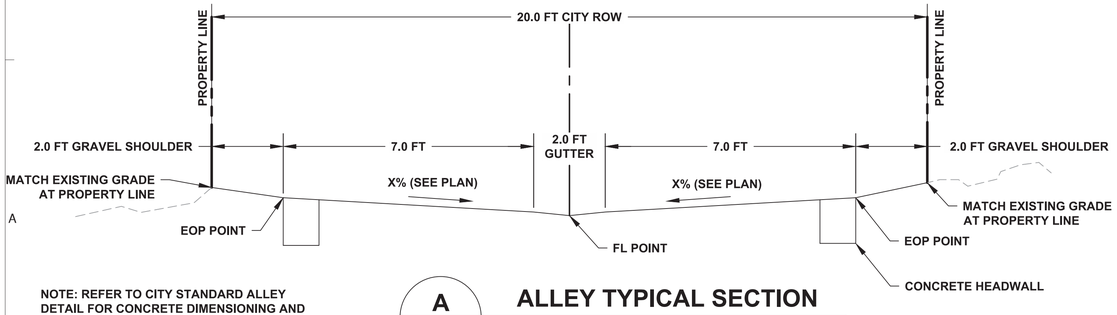

NOTE: REFER TO CITY STANDARD ALLEY DETAIL FOR CONCRETE DIMENSIONING AND ALLEY SPECIFICATIONS

A
C-203

ALLEY TYPICAL SECTION

Point Table				
Point #	Northing	Easting	Elevation	Description
500	1490046.29	1513785.25	4954.06	FL
501	1490050.06	1513735.88	4954.21	FL
502	1490053.87	1513685.82	4954.38	FL
503	1490055.80	1513660.53	4954.46	FL
504	1490057.55	1513637.58	4954.53	FL
505	1490060.70	1513596.25	4954.66	FL
506	1490065.53	1513638.19	4954.85	EOP
507	1490049.57	1513636.97	4954.85	EOP
508	1490047.82	1513659.92	4954.94	EOP
509	1490063.78	1513661.14	4954.78	EOP
510	1490045.91	1513685.21	4954.85	EOP
511	1490042.08	1513735.28	4954.48	EOP
512	1490038.32	1513784.65	4954.40	EOP
513	1490054.21	1513786.68	4954.46	EOP
514	1490058.02	1513736.49	4954.59	EOP
515	1490061.84	1513686.42	4954.70	EOP
516	1490068.68	1513596.86	4955.06	EOP

Point Table				
Point #	Northing	Easting	Elevation	Description
517	1490052.72	1513595.64	4954.98	EOP
518	1490069.08	1513486.22	4954.59	FL
519	1490068.52	1513493.63	4954.96	FL
520	1490065.29	1513535.94	4954.86	FL
521	1490064.83	1513436.78	4954.60	EOP
522	1490063.04	1513460.26	4954.77	EOP
523	1490061.11	1513485.61	4954.56	EOP
524	1490060.54	1513493.03	4954.70	EOP
525	1490080.78	1513438.00	4954.69	EOP
526	1490078.75	1513461.46	4954.90	EOP
527	1490077.06	1513486.83	4955.16	EOP
528	1490076.50	1513494.24	4955.23	EOP
529	1490073.31	1513536.06	4955.10	EOP
530	1490057.32	1513535.36	4954.90	EOP
531	1490072.80	1513437.39	4954.45	FL
532	1490071.02	1513460.87	4954.52	FL

LEGEND:
EOP = EDGE OF PAVEMENT
FL = FLOWLINE

EXISTING ELEVATIONS ON PROPERTY LINES ARE SHOWN IN GREY

NOTE: NO WORK SHALL BE PERFORMED IN THE PUBLIC ROW WITHOUT AN APPROVED WORK ORDER OR EXCAVATION PERMIT

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11/13/2019
PROFESSIONAL ENGINEER

MONTEREY PLACE APARTMENTS
2306-2320 CENTRAL AVE SW

DATE: 10/02/2019

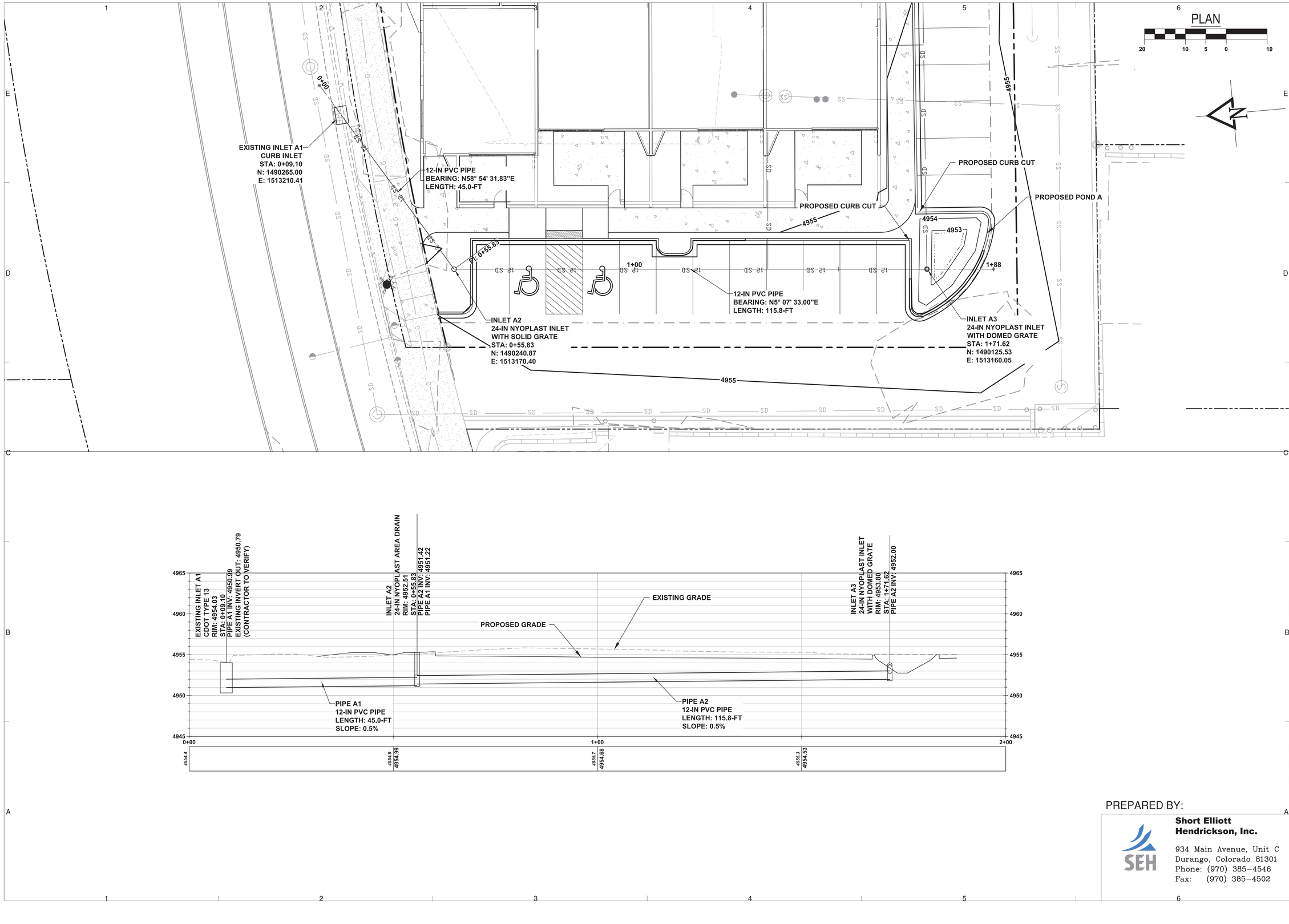
REVISIONS	
4/16	SKETCH PLAT
5/21	MINOR DRB
7/15	DRB RESUBMIT
10/02	FIRST DRC
11/14	G+D RESUB

DRAWN BY: HR

CHECKED BY: PR

SHEET TITLE
DETAILED ALLEY GRADING PLAN

C-203



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11/14	G+D RESUB

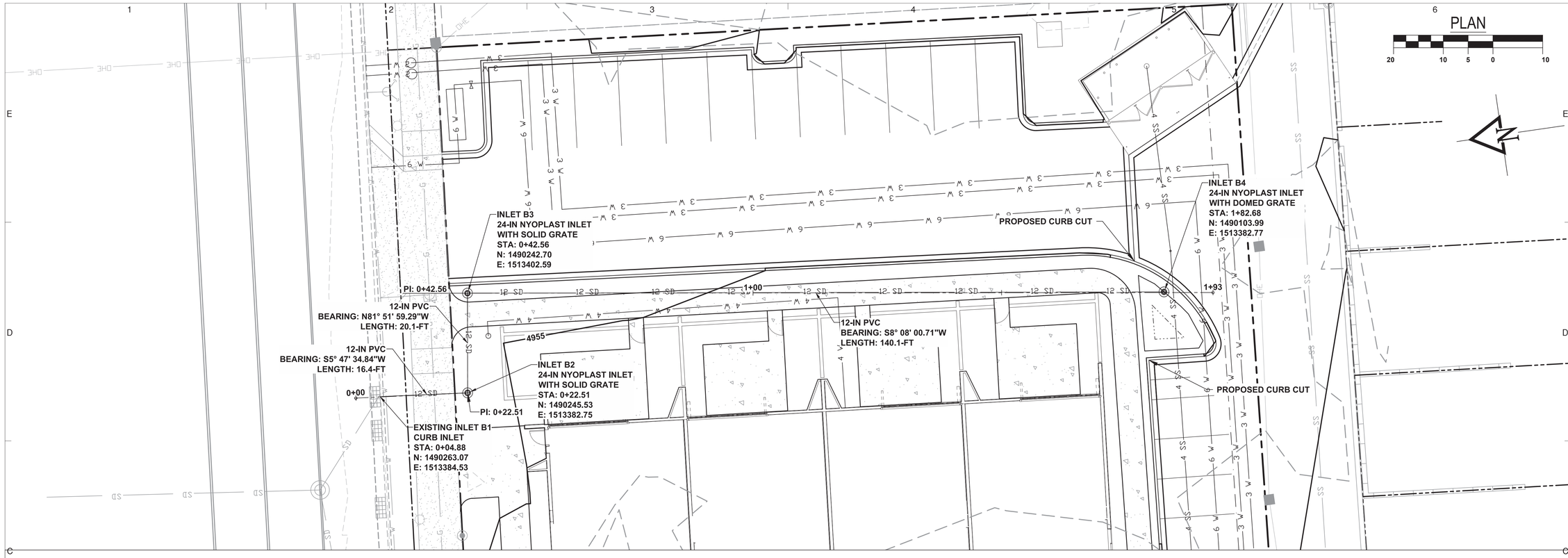
DRAWN BY: HR

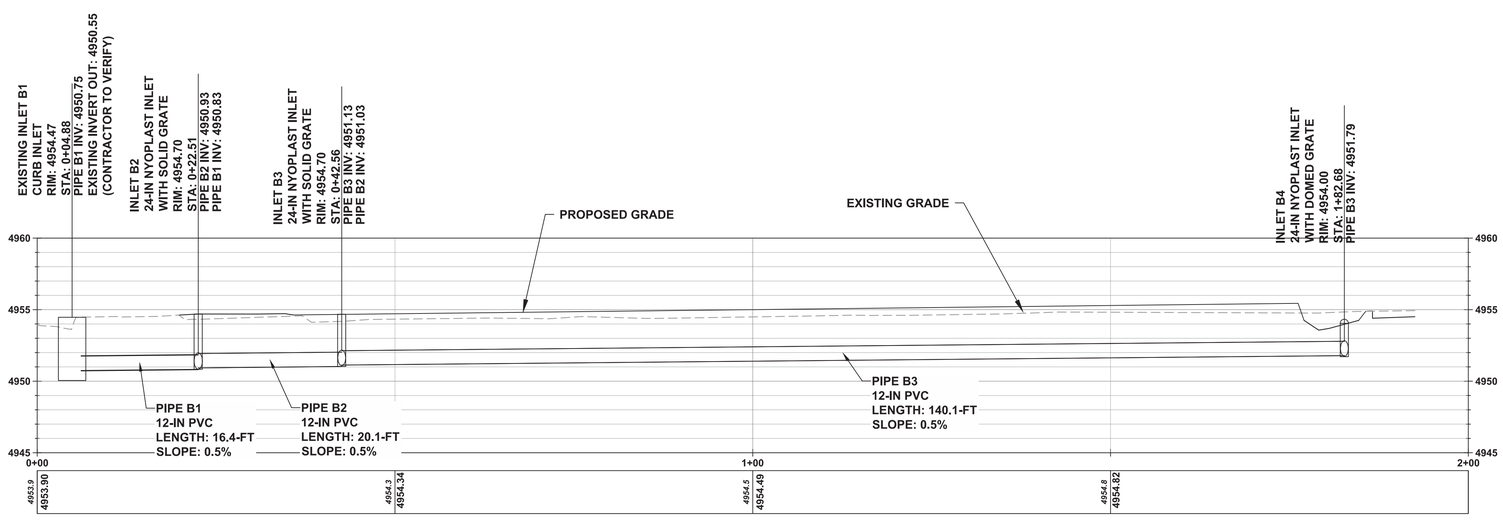
CHECKED BY: PR

SHEET TITLE

STORM A
P-PRO

C-301





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CHECKED BY: PR

SHEET TITLE

STORM B
P-PRO

C-302

MONTEREY PLACE APARTMENTS

GRADING AND DRAINAGE PLAN SUPPLEMENTAL CALCULATIONS AND FINDINGS

ALBUQUERQUE, NM

November 13, 2019

Prepared by:
Short, Elliott, Hendrickson, Inc.
934 Main Ave., Unit C
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INTRODUCTION

The Monterey Place Apartments project (Hydrology File J12D030) is a proposed mixed use apartment building located at 2306-2320 Central Avenue SW, Albuquerque, NM 87104. The project includes a 4-story building with a footprint of approximately 16,600-sf. The project also includes improvements in the City Right-of-Way. A Conceptual Grading and Drainage Plan was approved on May 22, 2019 by the Hydrology Section of the Planning Department.

The following report summarizes calculations and findings supplemental to the submitted Grading and Drainage Plan. The Grading and Drainage Plan highlights both the existing and proposed conditions and flow calculations for each basin. The following sections provide more detail into certain design elements of the drainage scheme.

WATER QUALITY

Water Quality was designed to be provided on-site to the maximum extent possible but was constrained by the density of the development as well as geotechnical considerations. The geotechnical report prohibits ponding adjacent to the building and the bioswale shown on the Conceptual Grading and Drainage Plan as providing 233-cf of water quality volume had to be removed from the plan.

As the design advanced on Ponds A and B, the amount of water quality provided by each was reduced from what was shown on the Conceptual Plan in order to provide adequate conveyance.

The developer paid a fee in lieu of providing water quality as calculated by the Hydrology Section.

The following tables for Ponds A and B describe the volume calculations between the pond bottom and outlet structure rim elevation – representing the water quality volume provided by each pond. Volumes were calculated using the conical method for contour areas.

Pond A:

Stage (ft)	Contour Area (sq. ft)	Incremental Volume (cf)	Cumulative Volume (cf)
0.00	50	0	0
0.25	77	16	16
0.75	145	54	70
1.05	196	51	**121**

Pond B:

Stage (ft)	Contour Area (sq. ft)	Incremental Volume (cf)	Cumulative Volume (cf)
0.00	20	0	0
0.25	46	8	8
0.75	119	40	**48**

STORMWATER CONVEYANCE

The development was designed to utilize a series of curb cuts, inlets and storm drain to convey flow from the site to existing inlets in Central Ave. The following sub-sections detail the sizing calculations of each component.

Curb Cuts

The *Hydraflow Express Extension for AutoCad Civil3D* 2018 was used to model the proposed curb cuts to determine their capacity. The curbs were modelled as a 2-ft wide rectangular channel with a 0.5% slope, the minimum slope into the ponds. *Express* output is attached and shows that the capacity of these curb cuts is 3.9 cfs – larger than the 100-year of any single basin on the project.

Nyoplast Inlets

Each pond will have a 24-in diameter Nyoplast inlet with a Dome Grate. The Nyoplast 24" Dome Grate Inlet Capacity Chart was used to determine the head on the 100-year storm. To model 50% clogging, the Capacity modelled was twice the flow from the 100-year storm as calculated on the Drainage Plan.

The rims of each inlet were set to contain the 100-year water surface elevation to not extend outside of the proposed limits of Ponds A and B.

Storm Drain Lines A and B

Two separate 12-in PVC storm drain lines were designed to convey flow from Ponds A and B to the existing inlets in Central Avenue. The *Hydraflow Storm Sewer Extension for AutoCad Civil3D 2018* was used to model each of the proposed storm drain lines and calculate the Hydraulic Grade Line of each system during the 100-year storm.

Storm Sewer output is attached and demonstrates the HGL remains in the pipe during the 100-year storm.

PROPOSED ALLEY EXTENSION IMPROVEMENTS

A condition of project approval in DRB was the requirement to pave the existing dirt alley from the project's eastern boundary to Clayton St. Several residents in the area have expressed drainage concerns in this alley as the alley is very flat and generally flows towards the property owners to the south.

Based on discussions with the City Hydrology Department the alley was graded to hold grade at all property lines and drain to a gutter pan at the center of the alley. The majority of the alley will slope east towards Clayton St. while a western portion will be conveyed to Pond B.

It should be noted that although this alley was designed to help alleviate several drainage problems in this area, there will be no grading on the lots of adjacent homeowners. If low points exist on neighboring properties, they will continue to exist. Flows from the alley will be conveyed to a center gutter pan instead of to the properties on the south which is largely the case presently.

A detailed alley grading plan is included in this submittal.

ATTACHMENTS

- Output from Hydraflow Express Extension for Civil 3D (Curb Cut Capacity)
- Nyoplast 24” Dome Grate Inlet Capacity Charts
- Output from Hydraflow Storm Sewer Extension for Civil 3D (Storm Drain Lines A-B)

Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Tuesday, Sep 24 2019

Monterey Place Curb Cut

Rectangular

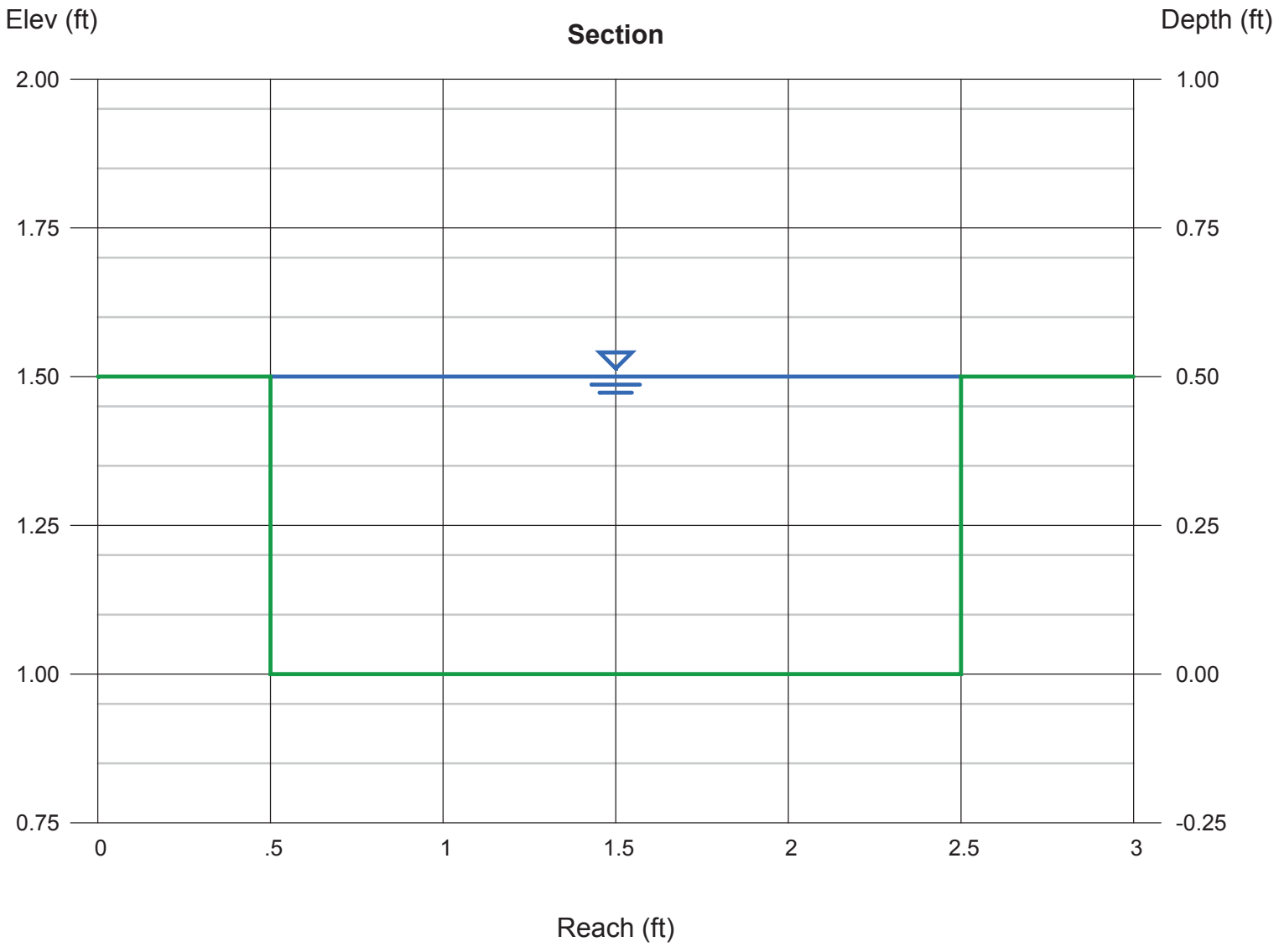
Bottom Width (ft)	= 2.00
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 1.00
Slope (%)	= 0.50
N-Value	= 0.013

Calculations

Compute by:	Known Depth
Known Depth (ft)	= 0.50

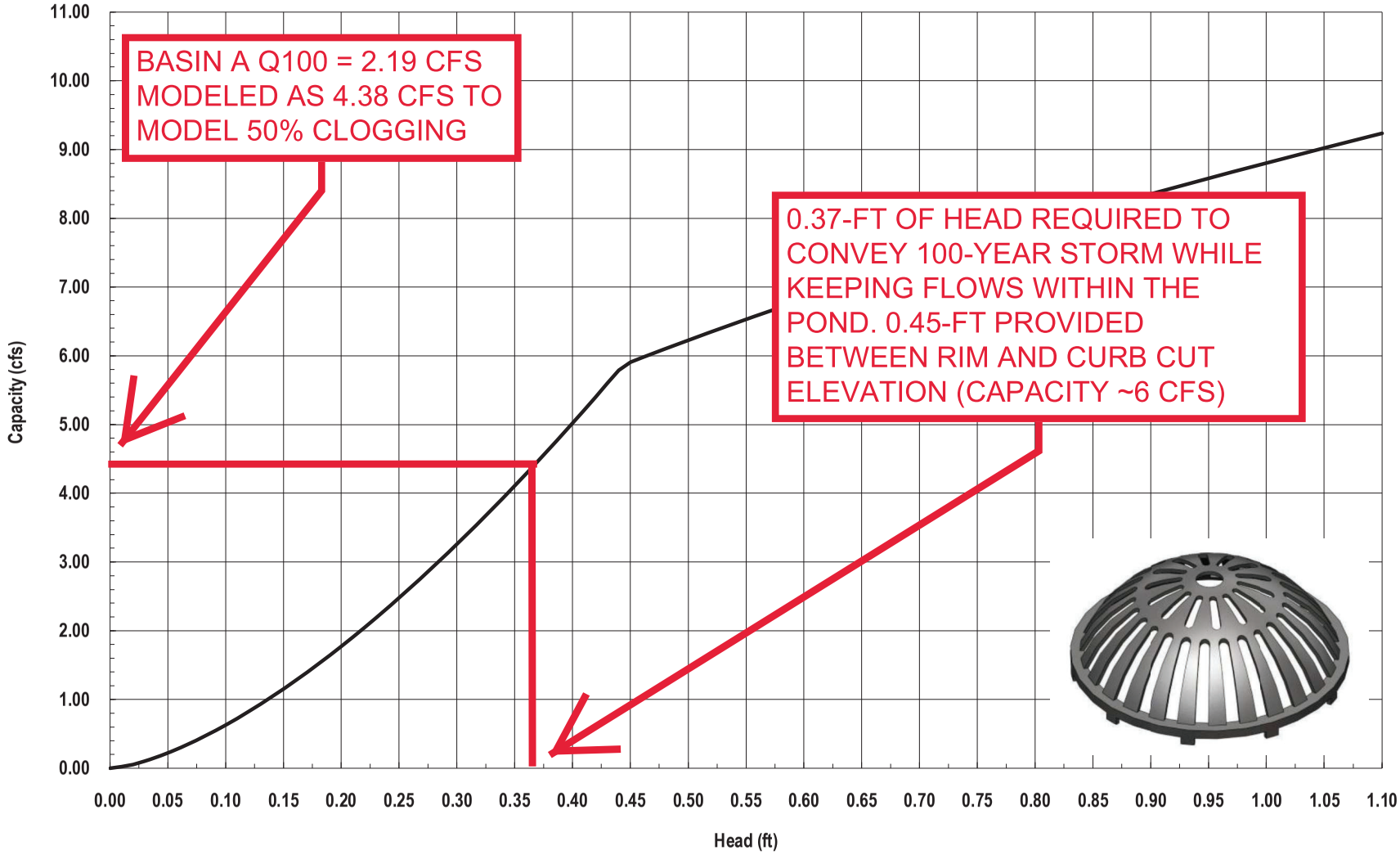
Highlighted

Depth (ft)	= 0.50
Q (cfs)	= 3.884
Area (sqft)	= 1.00
Velocity (ft/s)	= 3.88
Wetted Perim (ft)	= 3.00
Crit Depth, Yc (ft)	= 0.49
Top Width (ft)	= 2.00
EGL (ft)	= 0.73



MONTEREY PLACE INLET A3

Nyloplast 24" Dome Grate Inlet Capacity Chart



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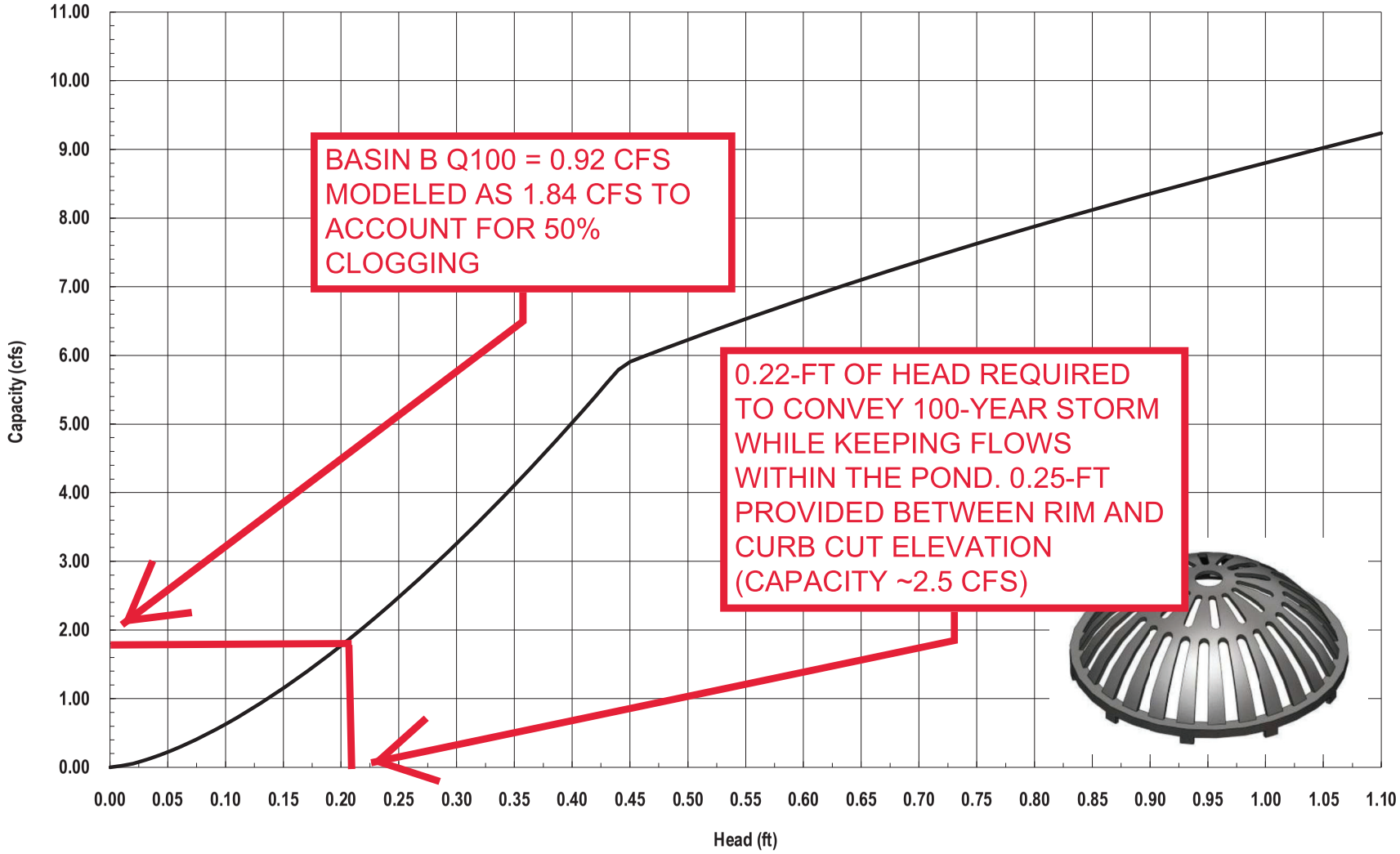
MONTEREY PLACE
INLET B3

Nyloplast 24" Dome Grate Inlet Capacity Chart



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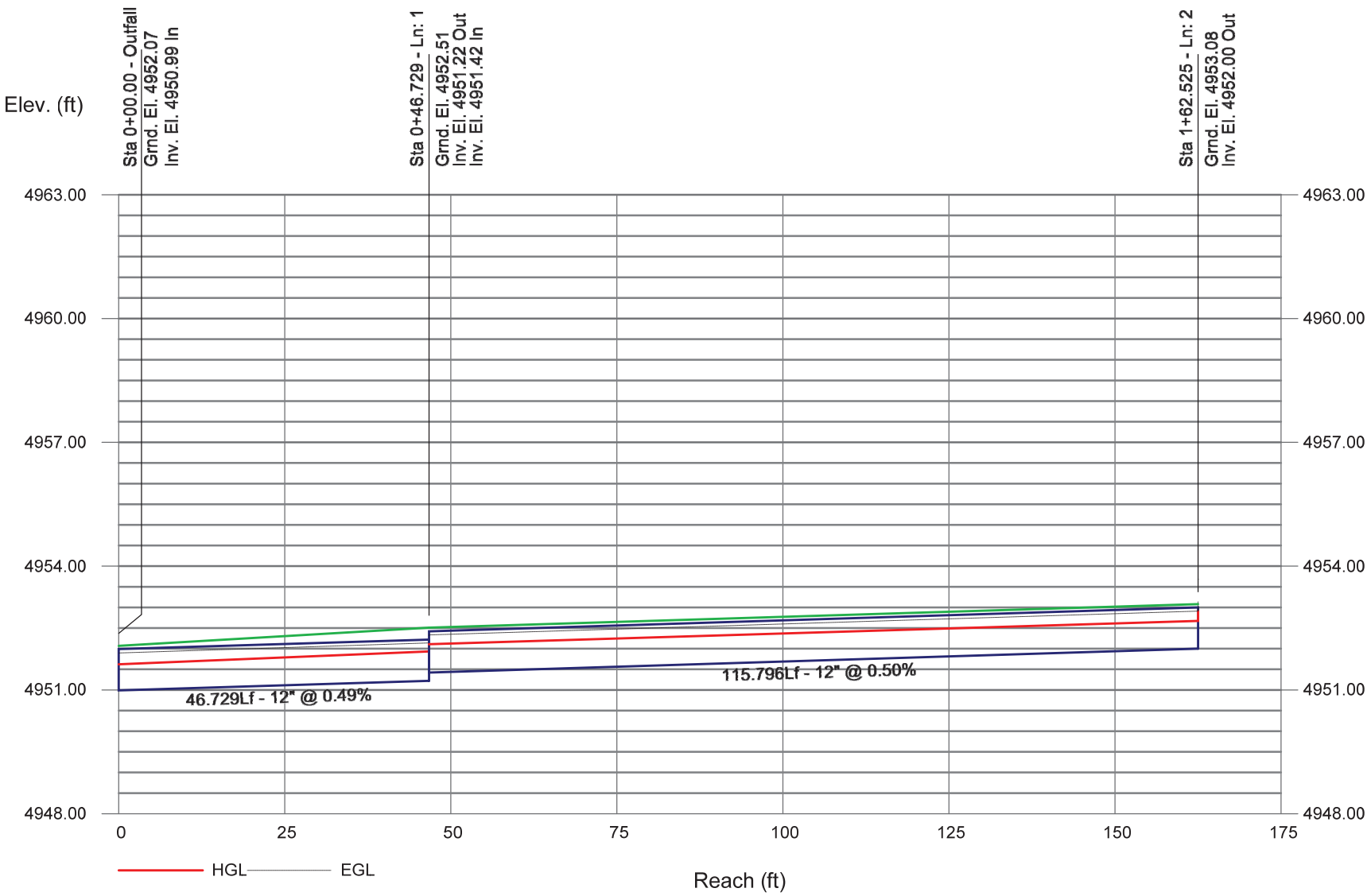
Storm Sewer Profile

Proj. file: STORM A.stm



Storm Sewer Profile

Proj. file: STORM B_REVISED.stm