CITY OF ALBUQUERQUE

Planning Department
Brennon Williams, Director

Mayor Timothy M. Keller

October 15, 2020

Donald Duneman
Wilson & Company Inc.
4401 Masthead St NE, Suite 150
Albuquerque, NM, 87109

RE: 4600 Edith Blvd NE – SWMD Admin. Office and Vehicle Maintenance
Interim Conditions Phase 1
Drainage Report (Engineer's Stamp 10/14/2020)
Hydrology File: G15D202

Based upon the information provided in your submittal received 10/14/2020, the Supplemental Drainage Report for Interim Conditions is approved for Building Permit and Work Order.

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Prior to Certificate of Occupancy

1. An engineer's Certification will be required for each building with site improvements complete according to the approved phasing plan.

If you have any questions, please contact me at 924-3986 or earmijo@cabq.gov.

Sincerely,

Ernest Armijo, P.E.
Principal Engineer, Planning Dept.
Development Review Services

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: SWMD Main. & Admin. Buildings Project Building Permit #: _____ Hydrology File #: G15D202

DRB#: 2019-002046 EPC#: 1010582, 1001515 Work Order#: _____

Legal Description: All or a portion of a northerly portion of Tract 107B1A1, Tract 107B1A1 excl portion to right-of-way & excl a northerly portion, Tract 107B1A2 excl portion to right-of-way, Tract in the SW corner-Tract 107B1B, Tract 108A3A1A, Tract 108A3A1B, and Tract 108A3B, Tracts 108A1A2B1B & 108A1A2B2, Tract 108A1A2B1A, Tract 107B2A2 excl portion to the right-of-way, Tract 107B2A1 excl portion to the right-of-way, MRGCD Map #33.

City Address: 4600 Edith Blvd. NE, Albuquerque, NM

Applicant: Wilson & Company, Inc. Contact: Donald Duneman

Address: 4401 Masthead Street NE, Suite 150, Albuquerque, NM 87109

Phone#: 505.948.5125; 505.238.0152 cell Fax#: _____ E-mail: dmduneman@wilsonco.com

Owner: City of Albuquerque, Solid Waste Management Department Contact: Jill Holbert

Address: 4600 Edith Blvd. NE, Albuquerque, NM

Phone#: 505.761.8342 Fax#: _____ E-mail: jholbert@cabq.gov

TYPE OF SUBMITTAL: _____ PLAT (___# OF LOTS) ____ RESIDENCE X DRB SITE ____ 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
____ GRADING PLAN
____ DRAINAGE MASTER PLAN
X 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: 10/5/20 By: Donald Duneman

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

October 2020

Drainage Analysis
For
SWMD Maintenance & Administration Building
Project Interim Conditions

A Supplement to the
SWMD Maintenance & Administration Building Project
COA Project Number 700693

City of Albuquerque, NM

WILSON & COMPANY

discipline | intensity | collaboration | shared ownership | solutions

Drainage Analysis
For

SWMD Maintenance & Administration & Building Project
Interim Conditions

A Supplement to the
SWMD Maintenance & Administration & Building Project
COA Project Number 700693

October 2020

Prepared by:

Wilson & Company, Inc.
4401 Masthead Street, NE, Suite 150
Albuquerque, New Mexico 87109
(505) 348-4000

WCI File No: 14-100-132-05

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DRAINAGE ANALYSIS

1. Introduction

The SWMD Maintenance & Administration Building Project site is located in northeast Albuquerque at 4600 Edith Blvd. The site is bounded by the Alameda Drain/Edith Blvd. to the west, Comanche Road to the north, Rankin Road to the south, and commercial businesses to the east of the site. See Figure 1, Vicinity Map. The approved "Drainage Analysis for SWMD Maintenance & Administration Building Project" COA Project Number 700693 dated June 2020 prepared by Wilson & Company, Inc analyzed the improvements for the overall project site. The construction of the project site has been divided into phases. This supplement to the approved report analyzes drainage improvements in the interim conditions for construction of Phase 1.

Figure 1 – Vicinity Map

2. Hydrology and Hydraulics

The interim conditions includes construction of Phase 1 of the site. See Appendix E for Phasing Plan. The basins in the improvements area drain into the proposed Pond B analyzed in the approved drainage report. The remainder of the site which will remain in the current conditions and the outflow from the proposed Pond B drain into the existing pond located south of intersection of Edith and Comanche Blvd. See Appendix E, Conceptual

Grading & Drainage Plan for existing and proposed basins data. Runoff from basins 201 to 205, 221, offsite basins 1 and 2 drain into Pond B. Existing basin K and portion of the existing basin J not draining into Pond B drain into the existing pond. See Table 1, Pond Data and Appendix A for AHYMO calculations.

Pond	Peak Flow (cfs)		Volume (ac-ft)		Elevation (ft)		
	In	Out	Prv'd	Req'd	Top	Bottom	WSEL
B	43.3	41.1	0.56	0.383	4999	4994	4997.93
Existing	84.0	43.4	0.961	0.916	4995	4988	4994.81

Table 1 – Pond Data

No existing report was available. The existing pond storage capacity was calculated using survey data. See Appendix C, Existing Pond Discharge Rating Table. The as-built drawings for the project area show the existing pond outlet is a riser structure with 6 rows of 23-4 inch high by 1 inch wide holes. See calculations in Appendix C and as-builts in Appendix D. The pond outlet is a 30 inch CMP which connects to a 30 inch RCP at a manhole downstream of the riser structure. The system ultimately connects to the existing storm system in Comanche Road.

The as-built drawings also indicate that 6 inch of freeboard was provided for the existing pond. Per latest survey, the top of the pond elevation adjacent to Edith Blvd is at elevation 4997.00 while the parking side is at 4995.00. The record drawings also show this difference in elevation of either sides of the pond. The low side of the pond can be raised to accommodate the 6 inch existing freeboard.

Since there will be no changes to the north half of the site, the existing storm drain from the area in Basin J will be connected to the main line from Pond B. AHYMO calculations showed that in the interim conditions, the existing storm drain pipe in basin J may convey approximately 10 cfs to the proposed line. Due to the invert elevation of the existing storm drain, the invert elevation of the 42 inch pipe from Pond B was lowered. The pipes' slope downstream of this connection point and laterals near it were also adjusted. See pipe profiles in Appendix B, StormCAD calculations for interim and ultimate conditions and Appendix E, Storm Drain Plan & profile sheets. Stub outs from proposed manholes will be installed to accommodate future construction of laterals.

3. Conclusions

The project site was analyzed for the interim conditions development. In the interim conditions, the proposed Pond B will be fully constructed and its outlet pipe will drain into the existing pond. All existing drainage structures in the north half of the site will remain as in the current conditions until the site is fully constructed. In the ultimate conditions, the existing pond will be removed and replaced with proposed Pond A, and the storm system will be extended to drain into the Pond A. Per the approved drainage report, the existing pond outfall connects to the existing storm system in Comanche Road. The outflow from the existing pond will be approximately 43.4 cfs which is less than the allowable discharge of 47.6 cfs. The low side of the pond can be raised approximately 4 inches to accommodate the 6 inch existing freeboard.

APPENDIX A

```
AHYMO PROGRAM SUMMARY TABLE (AHYMO-S4)                        - Ver. S4.01a, Rel: 01a      RUN DATE (MON/DAY/YR) =09/03/2020
INPUT FILE = 32-01\2_Disciplines\Drainage_or_Sitework\Calculations\AHYMO\SWMD_INTERIM.txt USER NO.= WilsonCoANMSiteA96476897

                              FROM  TO                    PEAK         RUNOFF              TIME TO    CFS      PAGE =   1
                  HYDROGRAPH   ID   ID         AREA     DISCHARGE      VOLUME      RUNOFF     PEAK     PER
COMMAND       IDENTIFICATION   NO.  NO.      (SQ MI)      (CFS)       (AC-FT)    (INCHES)  (HOURS)    ACRE     NOTATION

*S "INTERIM CONDITIONS" MODEL FOR SWMD Maintenance & Admin Project
START                                                                                                          TIME=      0.00
LOCATION                    ALBUQUERQUE
*S                  RAINFALL DATA FROM NOAA ATLAS 14
*S*************************************************************************
*S  100 YEAR 24HR STORM
RAINFALL  TYPE= 2 NOAA 14                                                                                      RAIN24=   2.600
COMPUTE NM HYD          OFF2   -     1       0.00167         4.44       0.197      2.21326    1.500    4.153 PER IMP=  90.00
COMPUTE NM HYD        201.00   -    97       0.00175         4.65       0.207      2.21326    1.500    4.152 PER IMP=  90.00
ADD HYD               201SUM  1&97  12       0.00342         9.09       0.404      2.21308    1.500    4.153
COMPUTE NM HYD        203.00   -     2       0.00160         4.32       0.195      2.27932    1.500    4.220 PER IMP=  95.00
ADD HYD               203SUM 12& 2  10       0.00502        13.41       0.598      2.23414    1.500    4.174
COMPUTE NM HYD          OFF1   -     1       0.00199         5.29       0.235      2.21326    1.500    4.151 PER IMP=  90.00
COMPUTE NM HYD        202.00   -    98       0.00281         7.46       0.332      2.21326    1.500    4.147 PER IMP=  90.00
ADD HYD               202SUM  1&98   3       0.00480        12.74       0.567      2.21314    1.500    4.149
COMPUTE NM HYD        204.00   -     2       0.00378        10.19       0.460      2.27931    1.500    4.211 PER IMP=  95.00
ADD HYD               204SUM  3& 2   1       0.00858        22.93       1.026      2.24226    1.500    4.176
COMPUTE NM HYD        221.00   -     2       0.00060         1.61       0.071      2.21326    1.500    4.181 PER IMP=  90.00
COMPUTE NM HYD        205.00   -     5       0.00197         5.32       0.239      2.27932    1.500    4.217 PER IMP=  95.00
ADD HYD               205SUM  2& 5   4       0.00257         6.92       0.310      2.26367    1.500    4.209
ADD HYD              205SUMA  1& 4   6       0.01115        29.85       1.336      2.24719    1.500    4.184
ADD HYD              205SUMB 10& 6   1       0.01617        43.27       1.934      2.24314    1.500    4.181
ROUTE RESERVOIR        PONDB    1   30       0.01617        41.09       1.858      2.15465    1.567    3.971 AC-FT=    0.383
*S ADD EXISTING BASINS DRAINING INTO THE EXISTING POND
*S
*S PORTION OF EXISTING BASIN J NOT INCLUDED IN THE BASINS DRAINAING INTO POND B
COMPUTE NM HYD             J   -     4       0.00380        10.24       0.462      2.27931    1.500    4.211 PER IMP=  95.00
COMPUTE NM HYD             K   -     5       0.01240        33.38       1.507      2.27932    1.500    4.206 PER IMP=  95.00
ADD HYD                10SUM  4& 5  10       0.01620        43.62       1.969      2.27928    1.500    4.207
ADD HYD              POND.IN 10&30   1       0.03237        83.97       3.827      2.21702    1.533    4.053
ROUTE RESERVOIR       EXPOND    1   96       0.03237        43.41       3.827      2.21697    1.700    2.095 AC-FT=    0.916
FINISH
```

```
*  SWMD Maintenance & Admin Project Proposed Basins
*  Drainage Basin Analysis
*S "INTERIM CONDITIONS" MODEL FOR SWMD Maintenance & Admin Project
*
START               TIME=0.0  PUNCH CODE=0 PRINT CODE=0
LOCATION            ALBUQUERQUE
*
* RAINFALL FROM NOAA COA DEVELOPMENT PROCESS MANUAL
*S      RAINFALL DATA FROM NOAA ATLAS 14
*S**************************************************************************
*S  100 YEAR 24HR STORM
RAINFALL                TYPE=2
                        QUARTER=0.00 IN
                        HOUR=   1.77 IN
                        SIX HR= 2.29 IN
                        DAY=    2.60 IN   DT=0.03333

*** Sub-BASIN OFF2 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=100 FT   SLOPE=0.010   K=0.7
                        LENGTH=200 FT   SLOPE=0.050   K=2.0
*
COMPUTE NM HYD          ID=1   HYD NO=OFF2   DA=0.00167 SQ MI
                        PER A=00 PER B=00 PER C=10 PER D=90
                        TP=0.0 hr   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*

*** Sub-BASIN 201 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=100 FT   SLOPE=0.050   K=0.7
                        LENGTH=185 FT   SLOPE=0.011   K=2.0
*
COMPUTE NM HYD          ID=97   HYD NO=201   DA=0.00175 SQ MI
                        PER A=00 PER B=00 PER C=10 PER D=90
                        TP=0.0 hr   MASSRAIN=-1
*
PRINT HYD               ID=97   CODE=1
*
*
* Total Flow from Basin (OFF2 + 201)
ADD HYD                 ID=12  HYD NO=201SUM ID I=1   ID II=97
PRINT HYD               ID=12  CODE=1
*
*
*** Sub-BASIN 203 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=100 FT   SLOPE=0.020   K=0.7
                        LENGTH=190 FT   SLOPE=0.020   K=2.0
*
COMPUTE NM HYD          ID=2   HYD NO=203   DA=0.0016 SQ MI
                        PER A=00 PER B=00 PER C=5 PER D=95
                        TP=0.0 hr   MASSRAIN=-1
*
PRINT HYD               ID=2   CODE=1
*
*
* Total Flow from Basin (OFF2+201+203)
ADD HYD                 ID=10  HYD NO=203SUM ID I=12   ID II=2
PRINT HYD               ID=10  CODE=1
*
*
**************************************************************************
*** Sub-BASIN OFF1 ****
*
```

```
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=100 FT   SLOPE=0.010   K=0.7
                        LENGTH=200 FT   SLOPE=0.050   K=2.0
*
COMPUTE NM HYD          ID=1   HYD NO=OFF1   DA=0.00199 SQ MI
                        PER A=00 PER B=00 PER C=10 PER D=90
                        TP=0.0 hr   MASSRAIN=-1
*
PRINT HYD               ID=1   CODE=1
*
*
*** Sub-BASIN 202 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=100 FT   SLOPE=0.048   K=0.7
                        LENGTH=240 FT   SLOPE=0.052   K=2.0
*
COMPUTE NM HYD          ID=98   HYD NO=202   DA=0.00281 SQ MI
                        PER A=00 PER B=00 PER C=10 PER D=90
                        TP=0.0 hr   MASSRAIN=-1
*
PRINT HYD               ID=98   CODE=1
*
*
* Total Flow from Basin (OFF1+202)
ADD HYD                 ID=3  HYD NO=202SUM ID I=1   ID II=98
PRINT HYD               ID=3  CODE=1
*
*
*** Sub-BASIN 204 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=90 FT   SLOPE=0.050   K=0.7
*
COMPUTE NM HYD          ID=2   HYD NO=204   DA=0.00378 SQ MI
                        PER A=00 PER B=00 PER C=5 PER D=95
                        TP=0.0 hr   MASSRAIN=-1
*
PRINT HYD               ID=2   CODE=1
*
*
* Total Flow from Basin (OFF1 +202 + 204)
ADD HYD                 ID=1  HYD NO=204SUM ID I=3   ID II=2
PRINT HYD               ID=1   CODE=1
*
*
*** Sub-BASIN 221 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=100 FT   SLOPE=0.045   K=0.7
                        LENGTH=200 FT   SLOPE=0.032   K=2.0
*
COMPUTE NM HYD          ID=2   HYD NO=221   DA=0.0006 SQ MI
                        PER A=00 PER B=00 PER C=10 PER D=90
                        TP=0.0 hr   MASSRAIN=-1
*
PRINT HYD               ID=2   CODE=1
*
*

*** Sub-BASIN 205 ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=100 FT   SLOPE=0.025   K=0.7
                        LENGTH=239 FT   SLOPE=0.014   K=2.0
*
COMPUTE NM HYD          ID=5   HYD NO=205   DA=0.00197 SQ MI
                        PER A=00 PER B=00 PER C=05 PER D=95
```

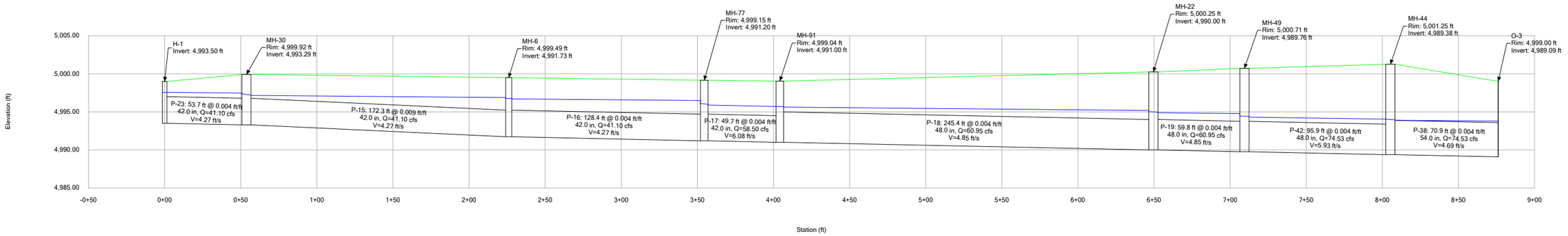
```
                        TP=0.0 hr   MASSRAIN=-1
*
PRINT HYD               ID=5   CODE=1
*
*
* Total Flows from Basin (205 + 221)
ADD HYD                 ID=4  HYD NO=205SUM ID I=2   ID II=5
PRINT HYD               ID=4  CODE=1
*
*

* Total Flows from Basin (OFF1 TO 205)
ADD HYD                 ID=6  HYD NO=205SUMA ID I=1   ID II=4
PRINT HYD               ID=6   CODE=1
*
*

* Total Flows TO POND B
ADD HYD                 ID=1  HYD NO=205SUMB ID I=10   ID II=6
PRINT HYD               ID=1   CODE=1
*
*
**********************************************************************
****Route HYD 205sum to Sub-Basin  Through a Pipe

****Route Hyd  through POND B
*
ROUTE RESERVOIR         ID=30  HYD NO=PONDB  INFLOW ID=1  CODE=1
                        OUTFLOW (CFS)     STORAGE (AC FT)       ELEV
                        0                       0.0             4994
                        0.01                    0.0626          4995
                        0.02                    0.1469          4996
                        0.03                    0.2561          4997
                        44.36                   0.3932          4998
                        72.44                   0.5613          4999

*
*PRINT HYD              ID=30   CODE=1
*
**********************************************************************
*S ADD EXISTING BASINS DRAINING INTO THE EXISTING POND
*S
**********************************************************************
*
*** Sub-BASIN J ****
*
*S PORTION OF EXISTING BASIN J NOT INCLUDED IN THE BASINS DRAINAING INTO POND B
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=100 FT   SLOPE=0.020   K=0.7
                        LENGTH=170 FT   SLOPE=0.020   K=2.0
*
COMPUTE NM HYD          ID=4   HYD NO=J   DA=0.0038 SQ MI
                        PER A=00 PER B=00 PER C=5 PER D=95
                        TP=0 hr   MASSRAIN=-1
*
PRINT HYD               ID=4   CODE=1
*
*
*** Sub-BASIN K ****
*
COMPUTE LT TP           LCODE=1   UPLAND/LAG TIME METHOD
                        NK=2   ISLOPE=1
                        LENGTH=100 FT   SLOPE=0.020   K=0.7
                        LENGTH=600 FT   SLOPE=0.020   K=2.0
*
COMPUTE NM HYD          ID=5   HYD NO=K   DA=0.0124 SQ MI
                        PER A=00 PER B=00 PER C=5 PER D=95
                        TP=0 hr   MASSRAIN=-1
*
PRINT HYD               ID=5   CODE=1
```

```
*
* Total Flows from Basins (J+K)
ADD HYD                 ID=10  HYD NO=10SUM ID I=4   ID II=5
PRINT HYD               ID=10  CODE=1
*
*
*
* ADD OUTFLOW FROM POND B TO EXISTING BASINS
ADD HYD                 ID=1  HYD NO=POND.IN ID I=10   ID II=30
PRINT HYD               ID=1   CODE=1
*
*****************************************************************
****Route Hyd  through EXISTING POND
*
ROUTE RESERVOIR         ID=96  HYD NO=EXPOND  INFLOW ID=1  CODE=1
                        OUTFLOW (CFS)     STORAGE (AC FT)       ELEV

                        0                       0.0             4988
                        3.89                    0.028           4989
                        11.43                   0.108           4990
                        21.30                   0.216           4991
                        29.15                   0.354           4992
                        34.97                   0.525           4993
                        39.89                   0.726           4994
                        44.25                   0.961           4995

*
*PRINT HYD              ID=96   CODE=1
*
*
FINISH
```

APPENDIX B

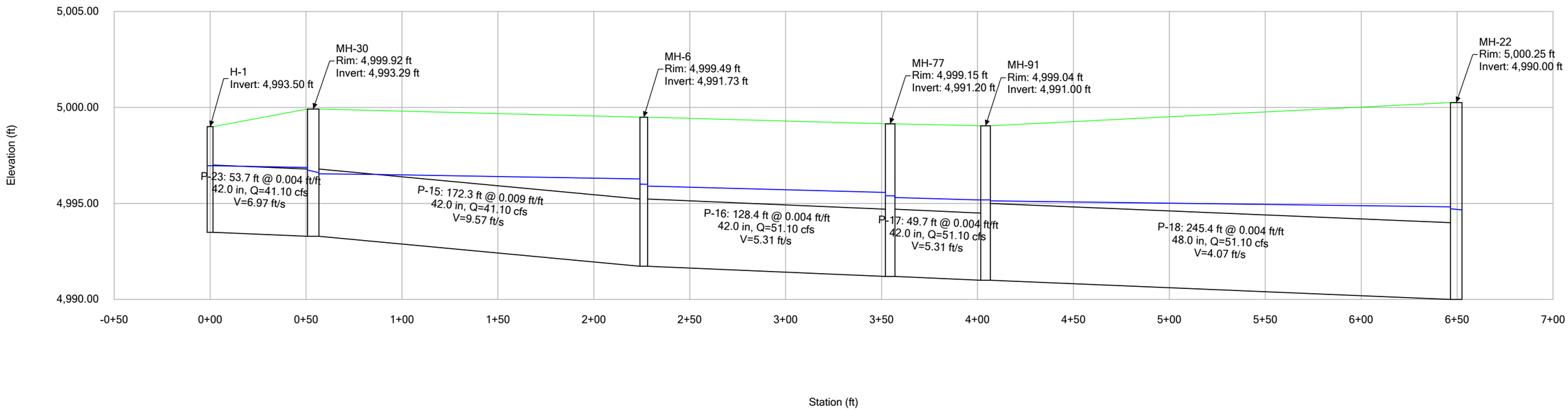
Profile Report

Engineering Profile - Profile - Pond B to Pond A (SWMD SD_Ultimate Conditions.stsw)



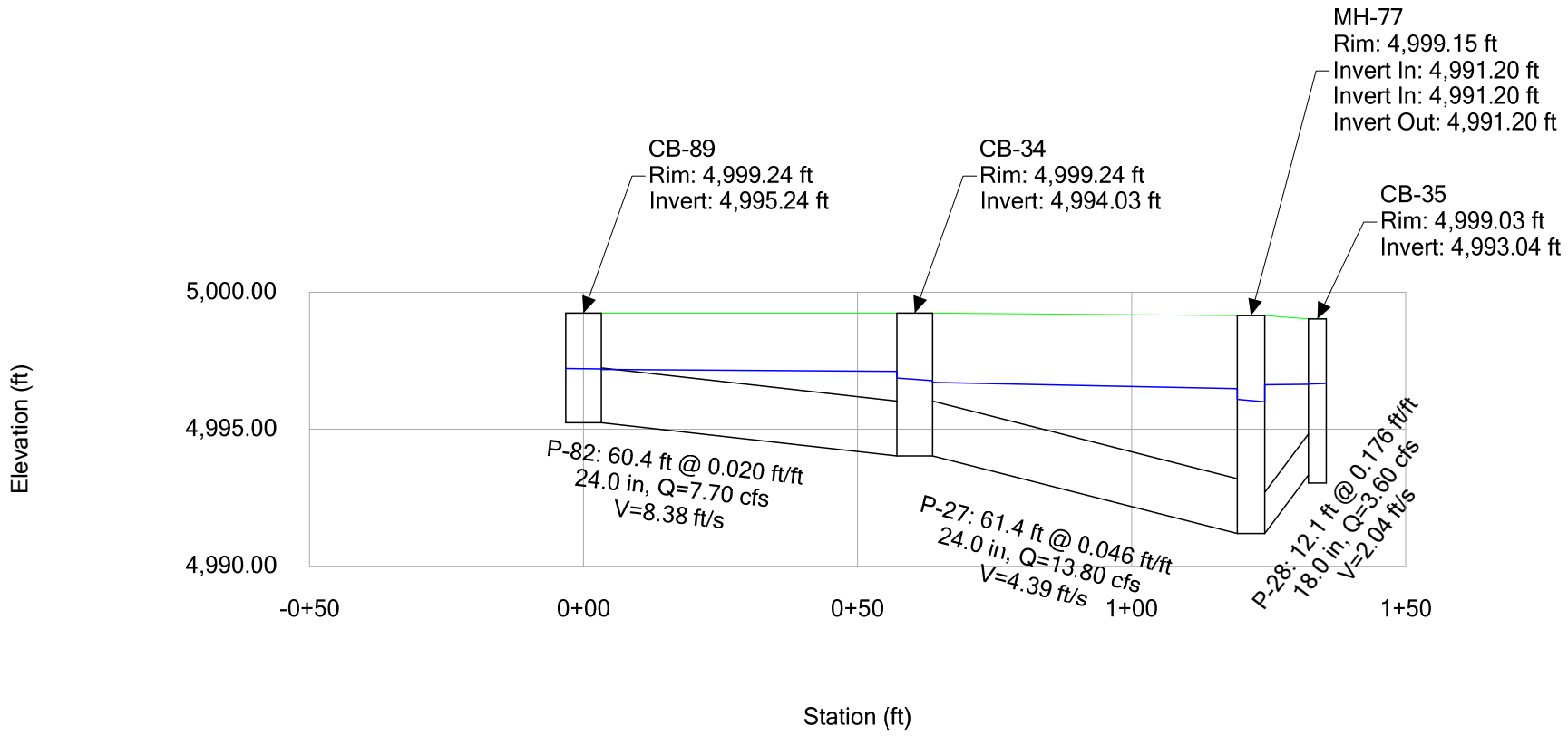
Profile Report

Engineering Profile - Profile - Pond B to Existing Pond (SWMD SD_Interim Conditions_ to Existing Pond.stsw)



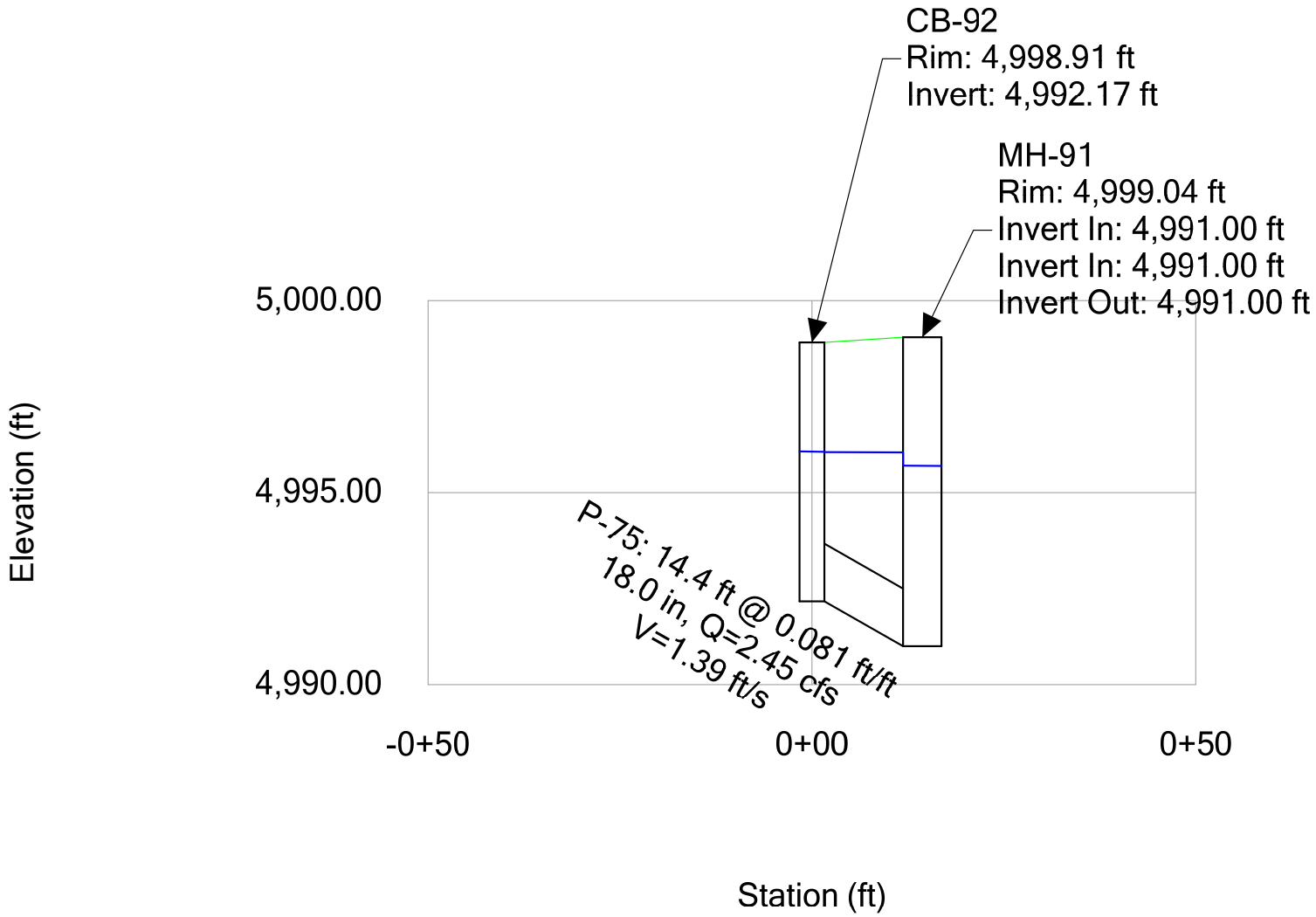
Profile Report

Engineering Profile - Profile - Basins 211 to 212 (SWMD SD_Ultimate Conditions.stsw)



Profile Report

Engineering Profile - Profile - Basin 207 (SWMD SD_Ultimate Conditions.stsw)



APPENDIX C

Existing Pond Discharge Rating Table

Elev	Contour Area (sf)	Vol (cf)	Vol (ac-ft)	Pipe Outflow (cfs)
4988	116	0	0	0
4989	2,956	1220	0.028	3.9
4990	4,050	4708	0.108	11.4
4991	5,378	9407	0.216	21.3
4992	6,711	15439	0.354	29.2
4993	8,082	22858	0.525	35.0
4994	9,510	31612	0.726	39.9
4995	10,999	41858	0.961	44.3

Pond Data							
Pond	Peak Flow (cfs)		Volume (ac-ft)		Elevation (ft)		
	In	Out	Prv'd	Req'd	Top	Bottom	WSEL
B	43.3	41.1	0.56	0.383	4999	4994	4997.93
Existing	84.0	43.4	0.961	0.916	4995	4988	4994.81

SWMD Maintenance & Admin Buildings Project
Interim Conditions

EXISTING RISER

INVERT OF PERFORATION(S)	86.167	Total Outflow (Allowable) =	47.6 cfs
HT OF PERFORATION(S) (in)	4	Total Outflow (Provided) =	43.4
WDTH OF PERFORATION(S) (in)	1		

# PERFORATIONS			1	23
ELEVATION	A (sf)	h (ft)	Q (cfs)	Q (cfs)
87	0.028	0.67	0.11	2.59
88	0.028	1.67	0.18	4.10
89	0.028	2.67	0.23	5.19
90	0.028	3.67	0.26	6.09
91	0.028	4.67	0.30	6.87
92	0.028	5.67	0.33	7.57
93	0.028	6.67	0.36	8.21

Row	Inv Elev
1	86.167
2	86.667
3	87.167
4	87.667
5	88.167
6	88.667

2nd row of holes

INVERT OF PERFORATION(S) 86.667

# PERFORATIONS			1	23
ELEVATION	A (sf)	h (ft)	Q (cfs)	Q (cfs)
87	0.028	0.17	0.06	1.30
88	0.028	1.17	0.15	3.43
89	0.028	2.17	0.20	4.68
90	0.028	3.17	0.25	5.66
91	0.028	4.17	0.28	6.49
92	0.028	5.17	0.31	7.23
93	0.028	6.17	0.34	7.89

old datum	new datum	Q (cfs)
86	88	0.00
87	89	3.89
88	90	11.43
89	91	21.30
90	92	29.15
91	93	34.97
92	94	39.89
93	95	44.25

3rd row of holes

INVERT OF PERFORATION(S) 87.167

# PERFORATIONS			1	23
ELEVATION	A (sf)	h (ft)	Q (cfs)	Q (cfs)
88	0.028	0.67	0.11	2.59
89	0.028	1.67	0.18	4.10
90	0.028	2.67	0.23	5.19
91	0.028	3.67	0.26	6.09
92	0.028	4.67	0.30	6.87
93	0.028	5.67	0.33	7.57

4th row of holes

INVERT OF PERFORATION(S) 87.667

# PERFORATIONS			1	23
ELEVATION	A (sf)	h (ft)	Q (cfs)	Q (cfs)
88	0.028	0.17	0.06	1.30
89	0.028	1.17	0.15	3.43
90	0.028	2.17	0.20	4.68
91	0.028	3.17	0.25	5.66
92	0.028	4.17	0.28	6.49
93	0.028	5.17	0.31	7.23

Riser at Existing Pond A

SWMD Maintenance & Admin Buildings Project
Interim Conditions

5th row of holes

INVERT OF PERFORATION(S) 88.167

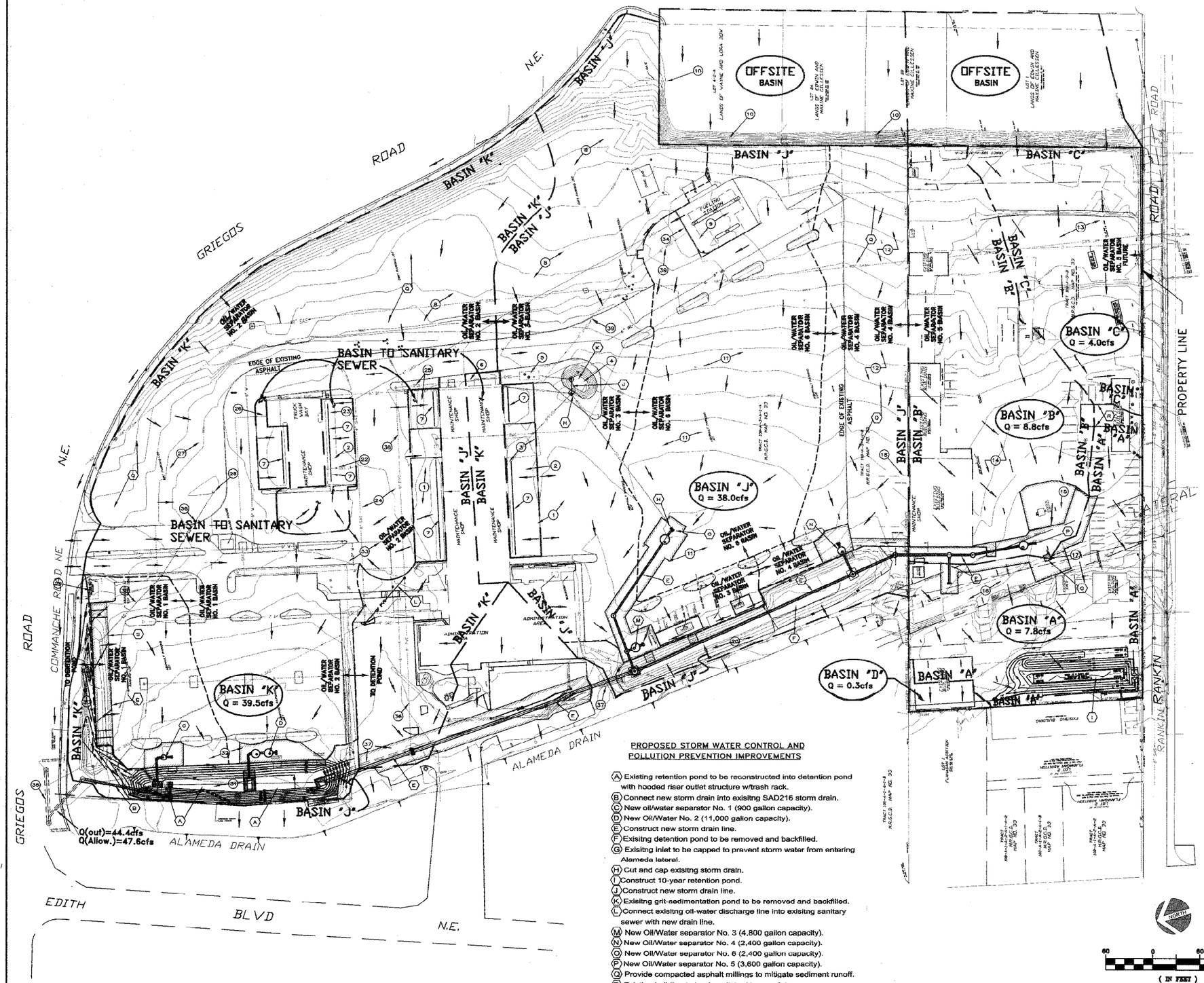
# PERFORATIONS			1	23
ELEVATION	A (sf)	h (ft)	Q (cfs)	Q (cfs)
89	0.028	0.67	0.11	2.59
90	0.028	1.67	0.18	4.10
91	0.028	2.67	0.23	5.19
92	0.028	3.67	0.26	6.09
93	0.028	4.67	0.30	6.87

6th row of holes

INVERT OF PERFORATION(S) 88.667

# PERFORATIONS			1	23
ELEVATION	A (sf)	h (ft)	Q (cfs)	Q (cfs)
89	0.028	0.17	0.06	1.30
90	0.028	1.17	0.15	3.43
91	0.028	2.17	0.20	4.68
92	0.028	3.17	0.25	5.66
93	0.028	4.17	0.28	6.49

APPENDIX D



DESCRIPTION OF POTENTIAL POLLUTANT SOURCES EXPOSED TO PRECIPITATION AND EXISITNG STORM WATER SYSTEMS

1. Occasional maintenance of trucks performed outside of garage area, evidence of oil stains on asphalt.
2. Open metal containment for waste oil with minimal covered awning, evidence of recent oil spills outside of container.
3. Miscellaneous truck parts and scrap material, evidence of oil stains on asphalt.
4. Existing grit/sedimentation pond, evidence of recent oil spills.
5. Existing oil/water separator.
6. Enclosed metal containers for new oils under covered awning, includes concrete containment walls for possible oil spills.
7. Slotted drains in a sump condition adjacent to maintenance activities, evidence of oil entering drains.
8. Miscellaneous scrap materials and truck parts within unpaved/sediment area, evidence of oils spills mixed with sediment. This area has steep slopes and is susceptible to soil erosion/runoff.
9. Primary truck fueling area, fuel spills drain into slotted drain.
10. Sediment and garbage entering Solid Waste Facility Site from offsite private carwash property.
11. Truck parking area, evidence of severe hydraulic fluids and oil spills within paved areas.
12. Metal dumpster containers storage area in unpaved/sediment area.
13. New truck dumpster containers in unpaved/sediment area.
14. Occasional maintenance of trucks performed outside of garaged area, evidence of oil stains on asphalt and puddles of standing green water nearby.
15. Three existing abandoned underground fuel storage tanks.
16. Miscellaneous scrap metals within unpaved area.
17. Existing inlet that currently drains surface water from paved/sediment areas into Alameda Lateral Drain.
18. Open metal containment and open barrels for waste oil with minimal covered awning.
19. Secondary truck fueling area.
20. Existing pond, outflow controlled with flap gate, bottom of pond contains oil saturated sediment.
21. Hydraulic lines stored in open racks, a 6" deep metal containment for oil spills sits under the rack. Evidence of recent hydraulic oil spills on asphalt.
22. Existing oil/water separator for hydraulic fluid leaving maintenance shop.
23. Truck wash bay, evidence of trucks washed outside of covered bay.
24. Puddles of standing green water ponding within paved area.
25. Stored tires and wheels.
26. Large puddle of standing green water outside of covered truck wash bay area.
27. Trucks requiring maintenance are parked within unlined sediment pond, evidence of large oil spills within the sediment area.
28. Puddles of oily water at upstream side of existing storm drain headwall.
29. Existing City of Albuquerque Public Works ferrous chloride containment facility, evidence of recent chloride spills into unpaved/sediment area.
30. Existing sediment pond.
31. Existing retention pond contains standing water that has evidence of significant oil contamination.
32. Evidence of recent surface oil/water runoff within paved vehicular parking area.
33. Evidence of recent oil/water surface runoff within vehicular parking area.
34. Slotted drain in a sump condition adjacent to truck fueling area.
35. Existing strom drain SAD BC-83-1 & SAD 216.
36. Existing 8" PVC oil/water discharge line.
37. Existing 18" RCP storm drain.
38. Abandoned 24" RCP storm drain.
39. Existing 6" PVC drain line for fuel spills from fuel island.

PROPOSED STORM WATER CONTROL AND POLLUTION PREVENTION IMPROVEMENTS

- (A) Existing retention pond to be reconstructed into detention pond with hooded riser outlet structure w/trash rack.
- (B) Connect new storm drain into exisitng SAD216 storm drain.
- (C) New oil/water separator No. 1 (900 gallon capacity).
- (D) New Oil/Water No. 2 (11,000 gallon capacity).
- (E) Construct new storm drain line.
- (F) Exisitng detention pond to be removed and backfilled.
- (G) Exisitng inlet to be capped to prevent storm water from entering Alameda lateral.
- (H) Cut and cap exisitng storm drain.
- (I) Construct 10-year retention pond.
- (J) Construct new storm drain line.
- (K) Exisitng grit-sedimentation pond to be removed and backfilled.
- (L) Connect exisitng oil-water discharge line into exisitng sanitary sewer with new drain line.
- (M) New Oil/Water separator No. 3 (4,800 gallon capacity).
- (N) New Oil/Water separator No. 4 (2,400 gallon capacity).
- (O) New Oil/Water separator No. 6 (2,400 gallon capacity).
- (P) New Oil/Water separator No. 5 (3,600 gallon capacity).
- (Q) Provide compacted asphalt millings to mitigate sediment runoff.
- (R) Existing building to be demolished in near future.
- (S) New expansion of employee parking lot.

AS BUILT INFORMATION

CONTRACTOR — DATE
WORK STAKED BY — DATE
WORK INSPECTED & ACCEPTANCE BY — DATE
FIELD VERIFICATION BY — DATE
DRAWING CORRECTED BY — DATE

BENCH MARKS

Station is located 3 miles north of downtown Albuquerque, at the intersection of Second Street and Menaul Blvd. N.W. To reach the station from the intersection of Central Ave., and Second Street, go north on Second St. 2.8 miles to the station in the center of the median strip of Second St. Station mark is stamped NMSHC brass tablet, stamped "STA.NM47-10", set in top of concrete post projecting 0.1 ft above the ground. ELEV.=4987.496

MICRO-FILM INFORMATION

RECORDED BY — DATE
NO.

SURVEY INFORMATION

FIELD NOTES — NO. — BY — DATE

ENGINEER'S SEAL

REMARKS

REVISIONS

NO. — DATE — BY

DESIGNED BY AES — DATE
DRAWN BY PRECISION GRAPHICS — DATE
CHECKED BY AES — DATE

APPLIED ENGINEERING AND SURVEYING, INC.
ENGINEERS AND PLANNERS
4600 Rose Drive NE, Albuquerque, New Mexico 87110
Office: (505) 237-1456 Facsimile: (505) 237-1458

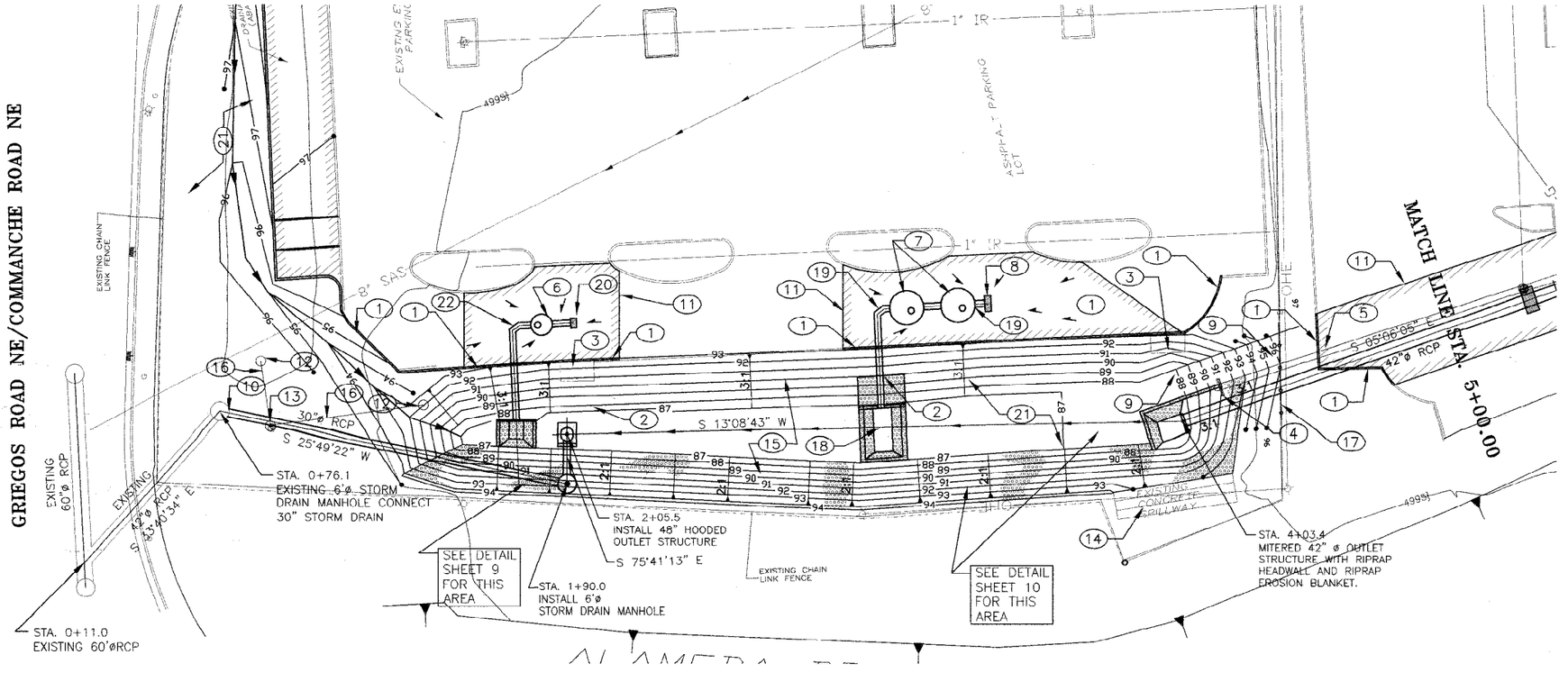
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

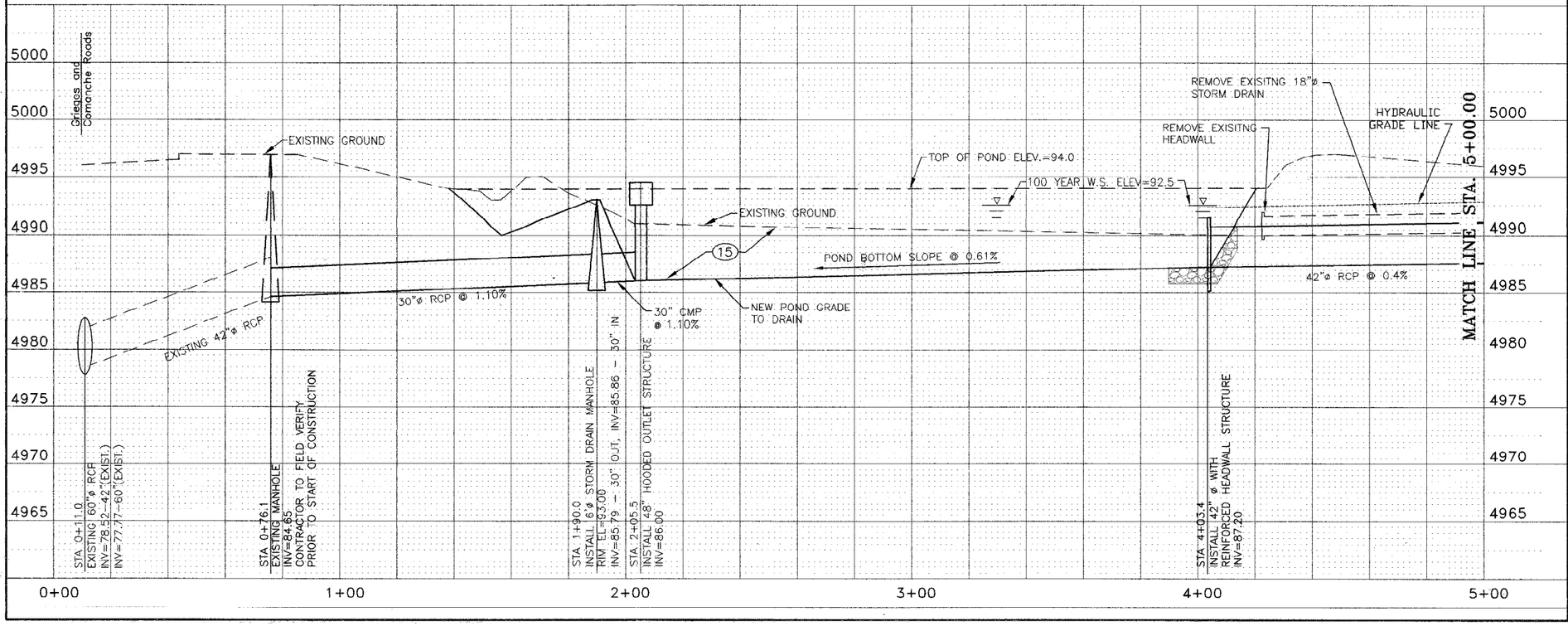
TITLE: STORM WATER/POLLUTION PREVENTION MAP
EXHIBIT "D"

Design Review Committee — City Engineer Approval — Last Design Update — mo./day/yr. — mo./day/yr.

City Project No. 700691 — Zone Map No. G-15 — Sheet 2 Of 17

D-1





CONSTRUCTION NOTES

1. REMOVE AND REPLACE EXISTING CURB.
2. REMOVE EXISTING CONCRETE RUNDOWN
3. REMOVE EXISTING CONCRETE RUNDOWN.
4. EXCAVATE AND REMOVE EXISITNG 18" STORM DRAIN,CONCRETE HEADWALL, AND EXISTING RIPRAP.
5. EXCAVATE AND REMOVE EXISITNG 18" STORM DRAIN.
6. 900 GALLON OIL/WATER SEPARATOR, No. 1.
7. 11,000 GALLON OIL/WATER SEPARATOR, No. 2.
8. TYPE DOUBLE "D" DRAIN INLET IN SUMP CONDITION.
9. NEW SERVICE ROAD.
10. CORE EXISTING MANHOLE TO SET 30" RCP PIPE.
11. APPROXIMATE LIMITS OF ASPHALT REMOVAL AND REPLACEMENT.
12. REMOVE EXISTING 12" STANDPIPE AND EXISTING STORM DRAIN.
13. REMOVE EXISITNG STORM DRAIN MANHOLE AND EXISTING 18" STORM DRAIN LINES.
14. EXISTING CONCRETE SPILLWAY.
15. REMOVE ALL BLACK SEDIMENT EXPOSED TO OIL UNTIL VIRGIN GRADE, AS DETERMINED BY ENVIRONMENTAL ENGINEER. HAUL ALL SPOILS TO APPROVED LANDFILL AS DETERMINED BY ENVIRONMENTAL ENGINEER. EXCAVATE TO NEW GRADE SHOWN.
16. REMOVE EXISTING STORM DRAIN.
17. REMOVE AND REINSTALL 30LF OF CHAIN LINK FENCE.
18. CONSTRUCT WIRE ENCLOSED RUNDOWN.
19. NEW 30" RCP STORM DRAIN.
20. NEW TYPE SINGLE "D" DRAIN INLET IN SUMP CONDITION.
21. SEED ALL DISTURBED AREAS WITH CLASS "A" SEEDING.
22. NEW 18" RCP STORM DRAIN.

NORTH
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

AS BUILT INFORMATION
CONTRACTOR DATE
STAKED BY DATE
INSPECTOR'S FIELD STAKE BY DATE
VERIFICATION BY DATE
DRAWING CORRECTED BY DATE

BENCH MARKS
Station is located 3 miles north of downtown Albuquerque, at the intersection of Second Street and Mascalero Road, N.W. To reach the station from the intersection of Central Ave., and Second Street, go north on Second St., 2.6 miles to the station in the center of the median strip of Second St. Station mark is stamped NMSHC brass tablet, stamped "STA.NM47-10", set in top of concrete post projecting 0.1 ft above the ground. ELEV.=4967.406

MICRO-FILM INFORMATION
RECORDED BY DATE
NO

SURVEY INFORMATION
FIELD NOTES BY DATE
NO.

ENGINEER'S SEAL

REVISIONS
NO. DATE BY REMARKS
DESIGNED BY DATE
DRAWN BY DATE
CHECKED BY DATE

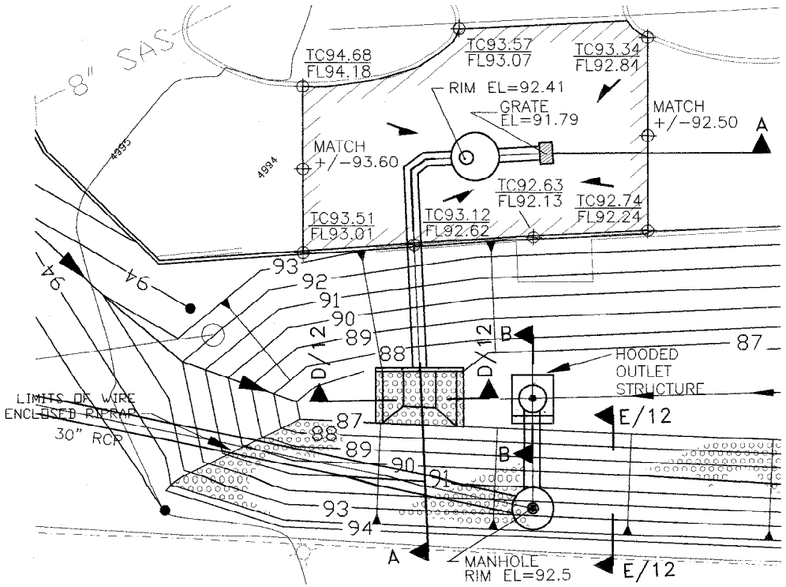
APPLIED ENGINEERING AND SURVEYING, INC.
ENGINEERS AND PLANNERS
1800 Blue Vista NE, Office (505) 237-1456
Albuquerque, New Mexico 87112, Facsimile (505) 237-1456

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: MAIN DETENTION POND AND OUTLET STRUCTURE

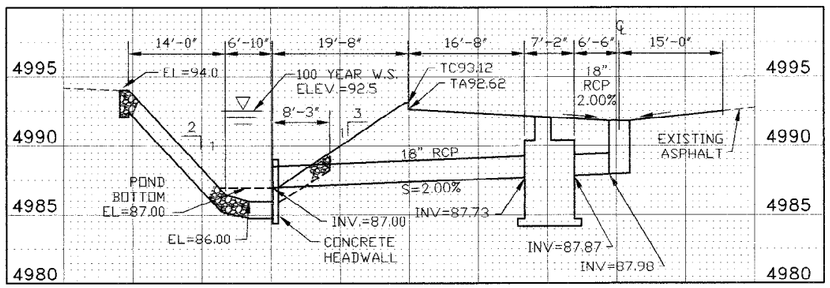
Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.

City Project No.	Zone Map No.	Sheet	Of
700691	G-15	3	17



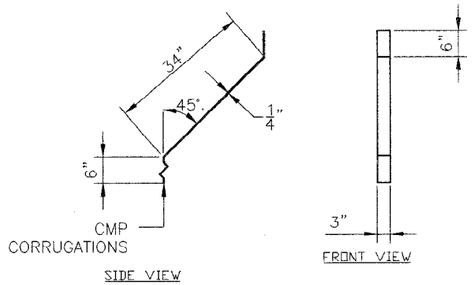
DENTENTION POND – NORTH END

SCALE: 1" = 10'



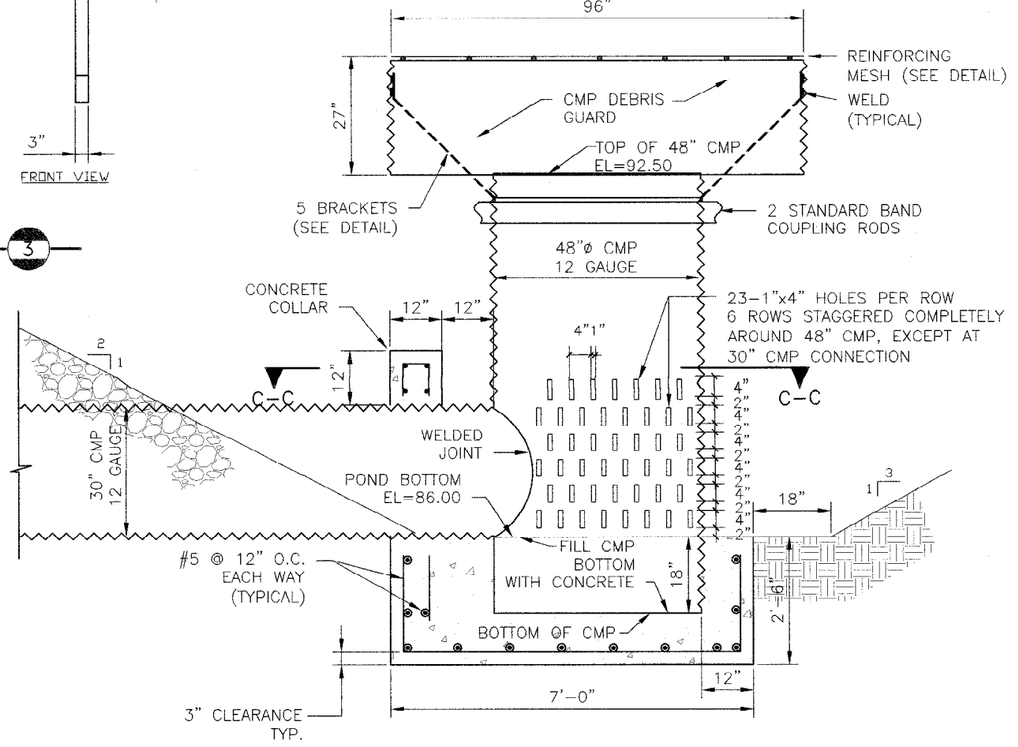
SECTION A–A
DENTENTION POND – OIL/WATER SEPARATOR No. 1

SCALE: 1" = 5' VERT.
1" = 10' HORIZ.



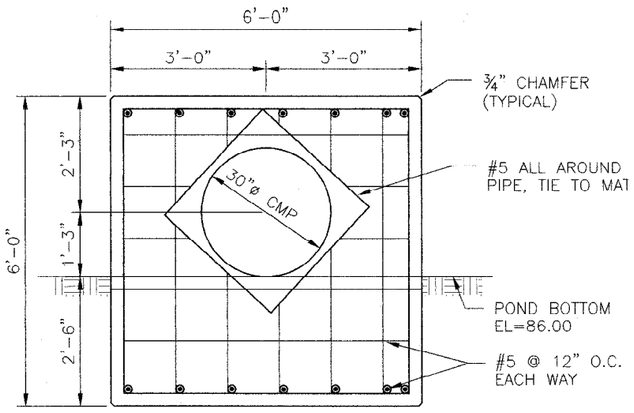
BRACKET DETAIL 3

SCALE: 3/4" = 1'-0'



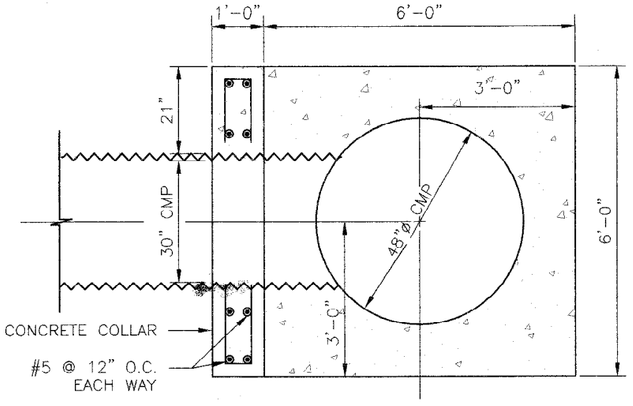
SECTION B–B
HOODED OUTLET STRUCTURE

SCALE: 3/4" = 1'-0'



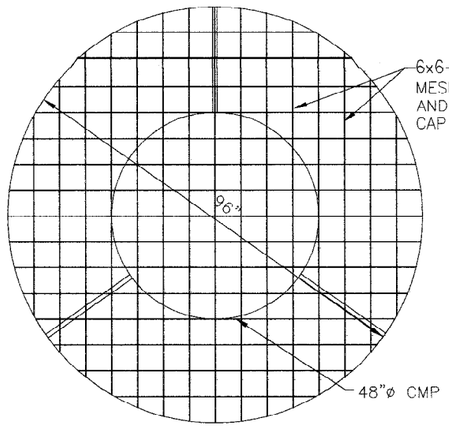
CONCRETE HEADWALL/COLLAR SECTION 1

SCALE: 3/4" = 1'-0'



SECTION C–C
HOODED OUTLET STRUCTURE

SCALE: 3/4" = 1'-0'



REINFORCING MESH
DETAIL ABOVE DEBRIS GUARD 2

SCALE: 3/4" = 1'-0'

AS BUILT INFORMATION

CONTRACTOR DATE
WORK CHANGES BY DATE
RECORD DRAWINGS ACCEPTANCE BY DATE
VERIFICATION BY DATE
DRAWINGS CORRECTED BY DATE
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS

Station is located 3 miles north of downtown Albuquerque, at the intersection of Second Street and Mesaviero Road, N.W. To reach the station from the intersection of Central Ave., and Second Street, go north on Second St., 2.8 miles to the station in the center of the median strip of Second St. Station mark is stamped NMSHC brass tablet, stamped ST.A.NM47-10', set in top of concrete post projecting 0.1 Ft above the ground. ELEV.=4967.496

SURVEY INFORMATION
FIELD NOTES

NO. BY DATE

ENGINEER'S SEAL

REMARKS
REVISIONS
NO. BY DATE
DESIGN DATE
DESIGNED BY DATE
DRAWN BY DATE
CHECKED BY DATE

APPLIED ENGINEERING AND SURVEYING, INC.
ENGINEERS AND PLANNERS
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Office: (505) 3527-1486 Facsimile: (505) 327-1488

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: OIL WATER SEPARATOR No. 1 AND DETENTION POND (NORTH END) AND OUTLET STRUCTURE DETAILS

Design Review Committee	City Engineer Approval	Last Design Update: Mo./Day/Yr.	Mo./Day/Yr.

City Project No. 700691 | Zone Map No. C–15 | Sheet 9 Of 17

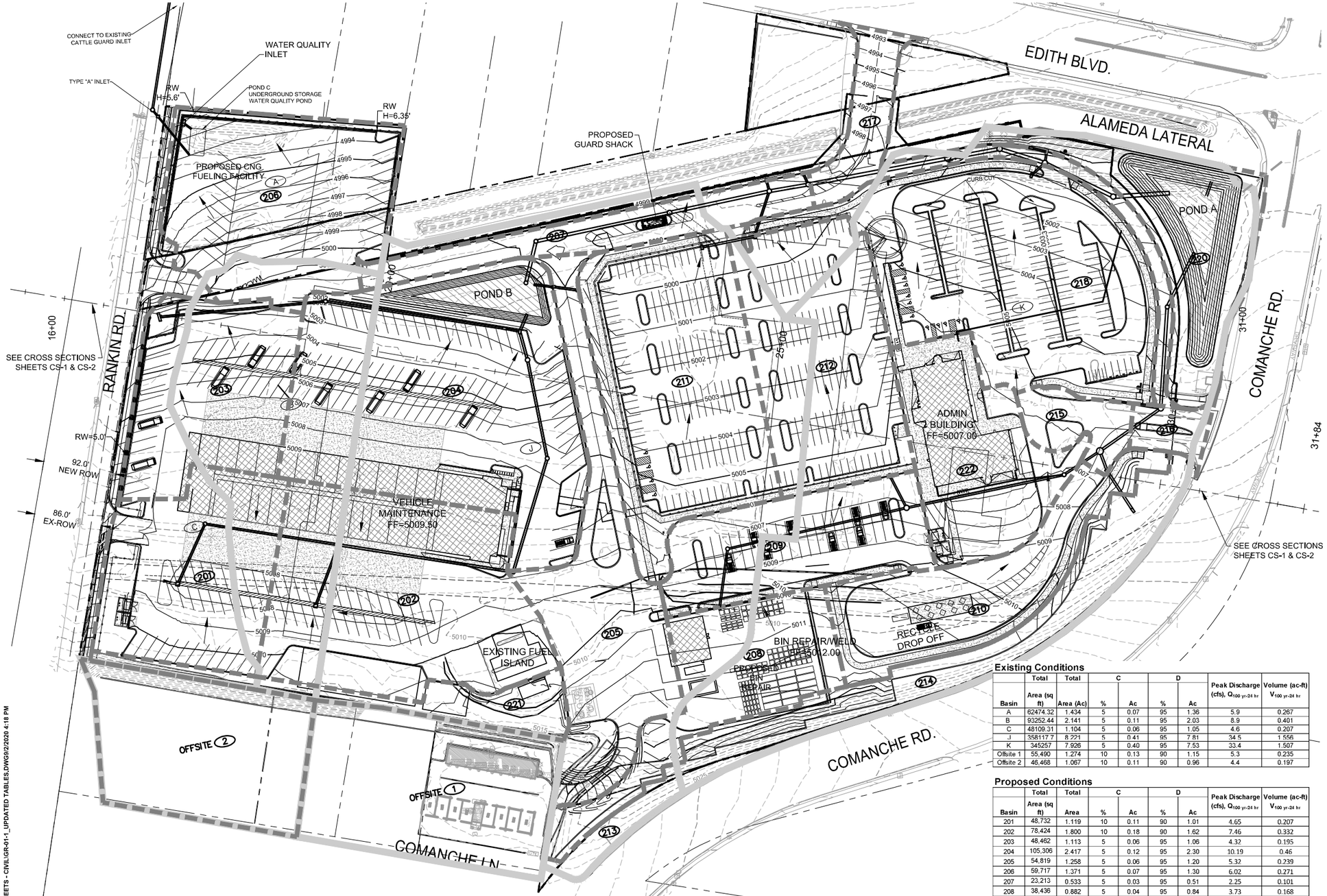
D-3

APPENDIX E

Selected Pages from Construction

SWMD Maintenance & Administration Buildings Project

City of Albuquerque
Department of Municipal Development
Solid Waste Management Department



DRAINAGE ANALYSIS

INTRODUCTION

THE PROJECT SITE IS LOCATED IN NORTHEAST ALBUQUERQUE AT 4600 EDITH BLVD. THE SITE IS BOUNDED BY THE ALAMEDA DRAIN/EDITH BLVD. TO THE WEST, COMANCHE RD TO THE NORTH, RANKIN RD TO THE SOUTH, AND COMMERCIAL BUSINESSES TO THE EAST OF THE SITE. THE SITE IS NOT LOCATED WITHIN A DESIGNATED FEMA FLOOD PLAIN MAP, SEE FIRM MAPS 35001C0119G AND 35001C0332G. THE DRAINAGE REPORT HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST REVISION TO VOLUME 2 SECTION 22.2 OF THE CITY OF ALBUQUERQUE PROCESS MANUAL.

EXISTING CONDITIONS

THE SITE IS 23.8 AC AND MAJORITY OF THE SITE IS IMPERVIOUS. THE EXISTING SITE TOPOGRAPHY GENERALLY SLOPES FROM EAST TO WEST. THE EXISTING DRAINAGE INFRASTRUCTURE DIVERTS ALL THE SITES FLOWS THROUGH A SERIES OF WATER/OIL SEPARATORS AND INLETS INTO TWO PONDS LOCATED ON THE NORTH AND SOUTH OF THE SITE. THE LARGER DETENTION POND TO THE NORTH HAS AN OUTLET STRUCTURE THAT DISCHARGES THROUGH A 30 INCH CORRUGATED METAL PIPE (CMP) INTO A DRAINAGE SYSTEM IN COMANCHE RD. THE CONSTRUCTION PLANS FOR STORM WATER CONTROL IMPROVEMENTS FOR SOLID WASTE MANAGEMENT FACILITY COA PROJECT NUMBER 700691 PREPARED BY APPLIED ENGINEERING AND SURVEYING, INC. DATED 07/22/03 SHEET 2 OF 17 SHOWS AN OUTLET FROM THE POND WITH PEAK FLOW OF 44.3 CFS AND AN ALLOWABLE DISCHARGE OF 47.6 CFS FROM THE SITE. THE NORTHERN THREE QUARTERS OF THE SITE DRAINS INTO THIS POND. THE REMAINDER OF THE SITE DRAINS INTO THE SMALLER RETENTION POND TO THE SOUTHWEST CORNER OF THE SITE.

THE COMMERCIAL BUSINESSES TO THE EAST OF THE SITE ALSO DRAIN FROM THE EAST TO WEST. THE BUILDINGS ON THESE COMMERCIAL SITES ARE APPROXIMATELY 10-15 FT HIGHER THAN THE SITES EXISTING GRADE. THE OFFSITE FLOWS WILL FLOW DIRECTLY TO THE EAST AND THE NORTHERN HALF WILL EVENTUALLY DRAIN INTO THE NORTH POND AND THE SOUTH HALF FLOWS INTO THE SOUTH RETENTION POND. THE POND IS A SHALLOW POND WITH ROCK RIPRAP SPILLWAY DRAINING INTO RANKIN RD. THE AREA TO THE NORTH OF THE SITE IS COMANCHE RD WHICH HAS DRAINAGE INFRASTRUCTURE IN PLACE TO PREVENT FLOWS FROM BEING DISCHARGED TO THE PROJECT SITE. RANKIN RD TO THE SOUTH DRAINS EAST TO WEST AND THE FLOWS DO NOT ENTER THE PROPERTY. THE AREA TO THE WEST DRAINS EAST TO WEST AND THOSE FLOWS WILL ENTER THE ALAMEDA DRAIN.

PROPOSED CONDITIONS

THE PROPOSED SITE WILL MAINTAIN THE GENERAL FLOW DIRECTION OF EAST TO WEST AND SOUTH TO NORTH. ALL THE BASINS EXCEPT BASIN 206 WILL ULTIMATELY DRAIN INTO THE NEW POND LOCATED IN BASIN 220. BASINS 201-204 AND OFFSITE BASINS 1 AND 2 WILL CAPTURE THE DRAINAGE FROM THE MAINTENANCE AREA AND COMMERCIAL VEHICLE PARKING LOT AND BE ROUTED THROUGH A NEW POND IN BASIN 204. THIS POND WILL BE LINED AND WILL HAVE A WATER QUALITY OUTLET TO REMOVE THE TRASH AND OIL CAPTURED FROM THE SITE RUNOFF. THE NEW POND IN BASIN 220 WILL BE CONNECTED TO THE EXISTING POND DRAINAGE INFRASTRUCTURE THAT DISCHARGES TO THE STORM DRAIN SYSTEM IN COMANCHE RD. THIS POND WILL HAVE A WATER QUALITY RISER TO HELP REMOVE TRASH AND SEDIMENT FROM THE RUNOFF. THE POND DISCHARGE WILL BE 44.3 CFS WHICH WILL LESS THAN THE ALLOWABLE SITE DISCHARGE OF 47.6 CFS. THE EXISTING 60 INCH DRAINAGE SYSTEM IN COMANCHE RD IS ABOUT 19 FT DEEP. NO DATA RELATED TO HYDRAULIC GRADE LINE OF THIS SYSTEM WAS FOUND. THE POND OUTFALL WILL TIE TO THE EXISTING 30 INCH PIPE UPSTREAM OF THE EXISTING SYSTEM IN COMANCHE RD. THE EXISTING RETENTION POND IN BASIN 206 LOCATED ON THE SOUTHWEST CORNER WILL BE REMOVED. RUNOFF FROM THIS BASIN SHEET FLOWS TO AN INLET WHICH WILL ULTIMATELY DRAIN INTO THE EXISTING CATTLE GUARD INLET AT THE INTERSECTION OF EDITH BLVD AND RANKIN RD. THE COA STORMWATER QUALITY VOLUME FOR THE 80th PERCENTILE EVENT WAS CALCULATED USING 0.26 INCH OF RAINFALL DEPTH. THIS VOLUME WAS CALCULATED TO BE 0.47 AC-FT FOR THE 21.48 AC OF THE SITE IMPERVIOUS AREAS. THIS RETENTION VOLUME WILL BE ACCOMMODATED IN POND A.

CALCULATIONS

THE 100-YR, 24-HR STORM EVENT USING AHYMO S-4 WERE USED TO CALCULATE PEAK FLOWS AND RUNOFF VOLUME FOR THE PROPOSED DEVELOPMENT WHICH ARE SUMMARIZED HERE. BENTLEY FLOWMASTER V8I WERE UTILIZED TO DETERMINE PROPOSED INLET CAPACITIES. BENTLEY CULVERTMASTER V3.3 WAS USED TO DESIGN PONDS OUTFALL PIPES. PEAK FLOWS FROM THE MODEL WERE ENTERED INTO THE STORMCAD V10.1 SOFTWARE TO ANALYZE AND DESIGN THE STORM SYSTEMS. BOTH PONDS INCLUDE ONE FOOT OF FREEBOARD AND SIDE SLOPES OF 3H: 1V.

Existing Conditions

Basin	Total Area (sq ft)	Total Area (Ac)	C %	C Ac	D %	D Ac	Peak Discharge (cfs), $Q_{100\ yr\text{-}24\ hr}$	Volume (ac-ft) $V_{100\ yr\text{-}24\ hr}$
A	62474.32	1.434	5	0.07	95	1.36	5.9	0.267
B	93252.44	2.141	5	0.11	95	2.03	8.9	0.401
C	48109.31	1.104	5	0.06	95	1.05	4.6	0.207
J	358117.7	8.221	5	0.41	95	7.81	34.5	1.556
K	345257	7.926	5	0.40	95	7.53	33.4	1.507
Offsite 1	55,490	1.274	10	0.13	90	1.15	5.3	0.235
Offsite 2	46,468	1.067	10	0.11	90	0.96	4.4	0.197

Proposed Conditions

Basin	Total Area (sq ft)	Total Area	C %	C Ac	D %	D Ac	Peak Discharge (cfs), $Q_{100\ yr\text{-}24\ hr}$	Volume (ac-ft) $V_{100\ yr\text{-}24\ hr}$
201	48,732	1.119	10	0.11	90	1.01	4.65	0.207
202	78,424	1.800	10	0.18	90	1.62	7.46	0.332
203	48,462	1.113	5	0.06	95	1.06	4.32	0.195
204	105,306	2.417	5	0.12	95	2.30	10.19	0.46
205	54,819	1.258	5	0.06	95	1.20	5.32	0.239
206	59,717	1.371	5	0.07	95	1.30	6.02	0.271
207	23,213	0.533	5	0.03	95	0.51	2.25	0.101
208	38,436	0.882	5	0.04	95	0.84	3.73	0.168
209	39,485	0.906	2	0.02	98	0.89	3.87	0.176
210	40,798	0.937	2	0.02	98	0.92	3.98	0.181
211	71,721	1.646	5	0.08	95	1.56	6.93	0.312
212	56,736	1.302	5	0.07	95	1.24	5.51	0.248
213	6,289	0.144	75	0.11	25	0.04	0.6	0.025
214	38,158	0.876	75	0.66	25	0.22	3.48	0.147
215	10,070	0.231	10	0.02	90	0.21	0.97	0.042
216	5,758	0.132	5	0.01	95	0.13	0.58	0.026
217	12,735	0.292	20	0.06	80	0.23	1.2	0.051
218	90,301	2.073	10	0.21	90	1.87	8.6	0.382
219	10,416	0.239	5	0.01	95	0.23	1.01	0.045
220	38,671	0.888	15	0.13	85	0.75	3.64	0.159
221	16,629	0.382	10	0.04	90	0.34	1.61	0.071
222	41,098	0.943	2	0.02	98	0.92	4.01	0.182
Offsite 1	55,490	1.274	10	0.13	90	1.15	5.29	0.235
Offsite 2	46,468	1.067	10	0.11	90	0.96	4.44	0.197

LEGEND

- XX — EXISTING CONTOURS
- XX — PROPOSED CONTOURS
- FF — FINISHED FLOOR
- X% — SLOPE ARROW
- PROPOSED RETAINING WALL
- EXISTING BASIN BOUNDARY
- PROPOSED BASIN BOUNDARY

GRADING & DRAINAGE PLAN

0 60' 120'
1"=60'-0"

Pond Calculations							
Pond	Peak Flow (cfs)		Volume (ac-ft)		Elevation (ft)		
	In	Out	Prv'd	Req'd	Top	Bottom	WSEL
A	90	44.8	1.95	1.24	4997	4989	4995.4
B	43	41.1	0.56	0.38	4999	4994	4997.9
C	6	2.7	0.13	0.10	4986.5	4985	4986.0

CONCEPTUAL GRADING & DRAINAGE PLAN

JR MILLER & ASSOCIATES
2700 SATURN STREET
BREA, CA 92821
714-524-1870

WILSON & COMPANY, INC.
4401 MASTHEAD ST NE
ALBUQUERQUE, NM 87109
505-348-4000

MARYAM D. GHAHI — NEW MEXICO — 17623 — PROFESSIONAL ENGINEER — 12/10/19

NOT FOR CONSTRUCTION

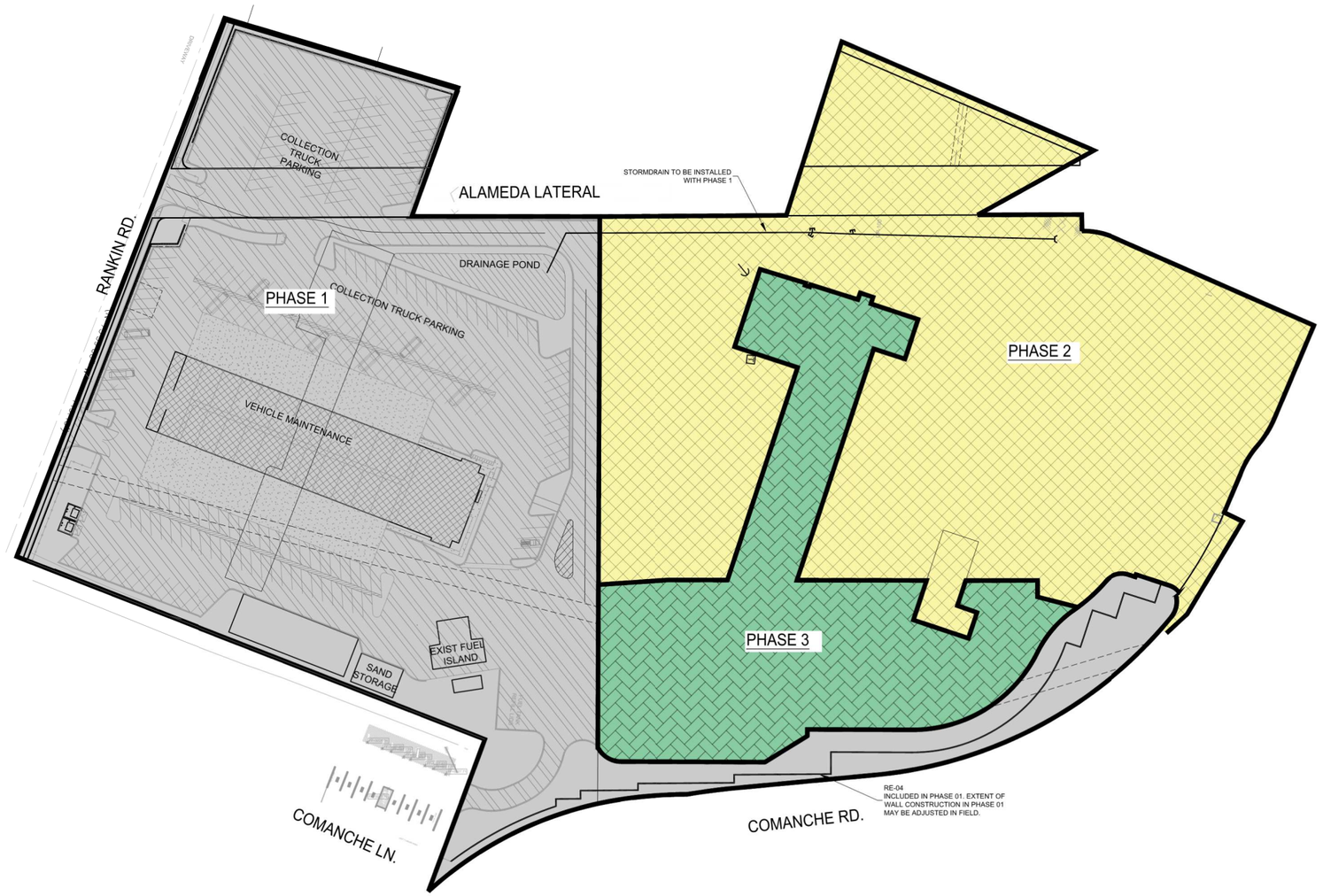
DECEMBER 10, 2019

SHEET No. GR-1

COA PROJECT No. 7006.92 JRMA No. 4907

E-1

M:\TRN\14-100-132-012_DISC\PLINES_SHEETS\2_SHEETS - CIVIL\GR-01-1_UPDATED TABLES.DWG9/2/2020 4:19 PM



OVERALL DEMOLITION PLAN & PHASING

0 60' 120'
1"=60'-0"

GENERAL NOTES

1. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. IF THIS SHEET IS NOT 30"x42", THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
3. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY AND SHALL BE FIELD LOCATED PRIOR TO CONSTRUCTION.
4. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

PHASE 1

DEMOLITION OF EXISTING STORAGE BUILDINGS

PERFORM EARTHWORK AND RE-GRADING OF SITE INCLUDING RETAINING WALLS

CONSTRUCT RANKIN ROAD WIDENING

CONSTRUCT VEHICLE MAINTENANCE BUILDING

INSTALL UTILITIES (WATER, SAS, GAS, ELECTRIC, STORM DRAIN)

INSTALL NEW PAVEMENT (ASPHALT AND PCC)

Project Revision

0	BID SET	XX.XX.XXXX

JRMA ARCHITECTS ENGINEERS

WILSON & COMPANY

MRWM LANDSCAPE ARCHITECTS mrwmla.com 505 268 2266

CITY OF ALBUQUERQUE
PROJECT NO. 700693

MAINTENANCE & ADMINISTRATION BUILDING PROJECT
4600 EDITH BLVD NE
ALBUQUERQUE, NM 87107

ONE ALBUQUERQUE

RONALD M. DUNEMAN NEW MEXICO 17706 REGISTERED PROFESSIONAL ENGINEER 5/12/22

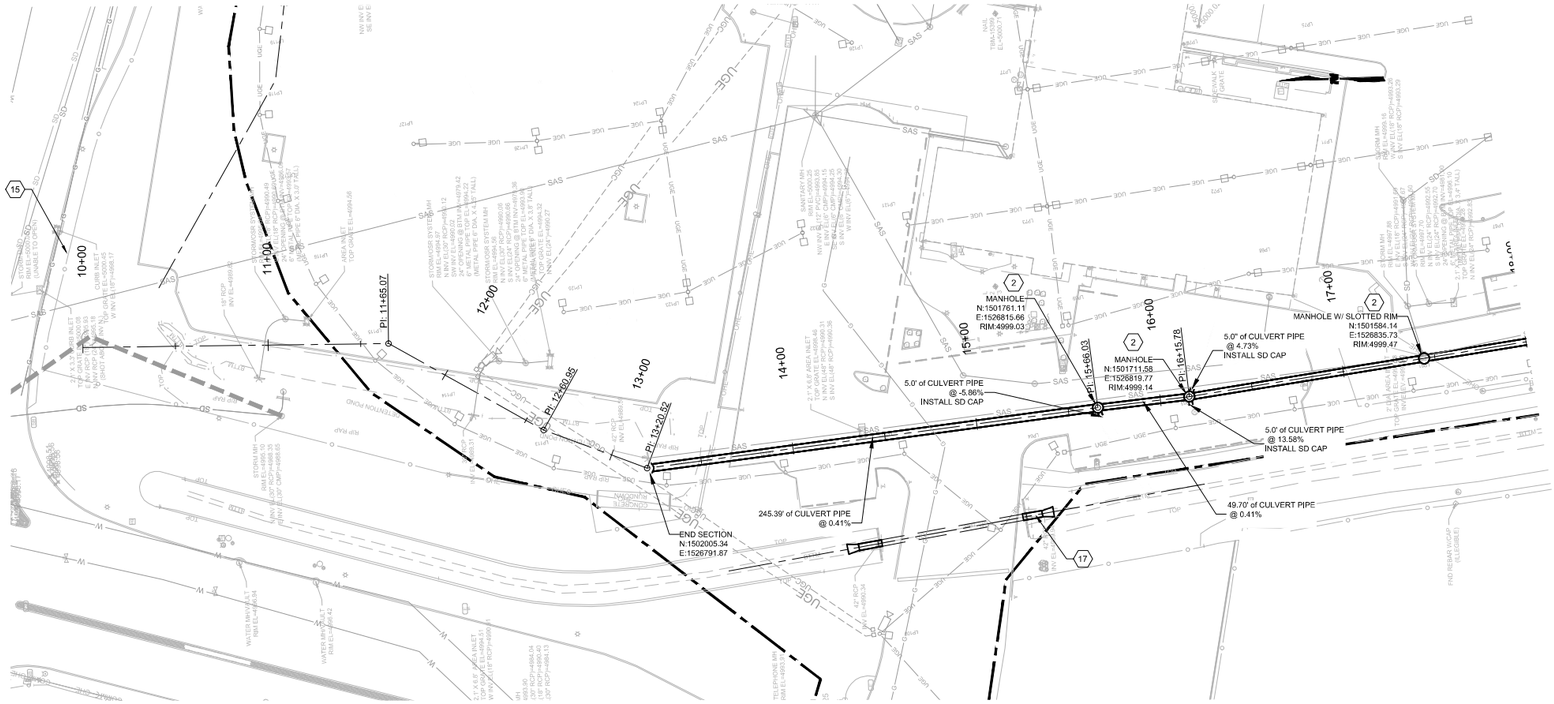
OVERALL DEMOLITION PLAN & PHASING

AS NOTED	AS NOTED
DATE	SCALE
DAP	SGG
DWN	CHK

JRMA Project No. 4907-B
W&C - 14-100-132-05

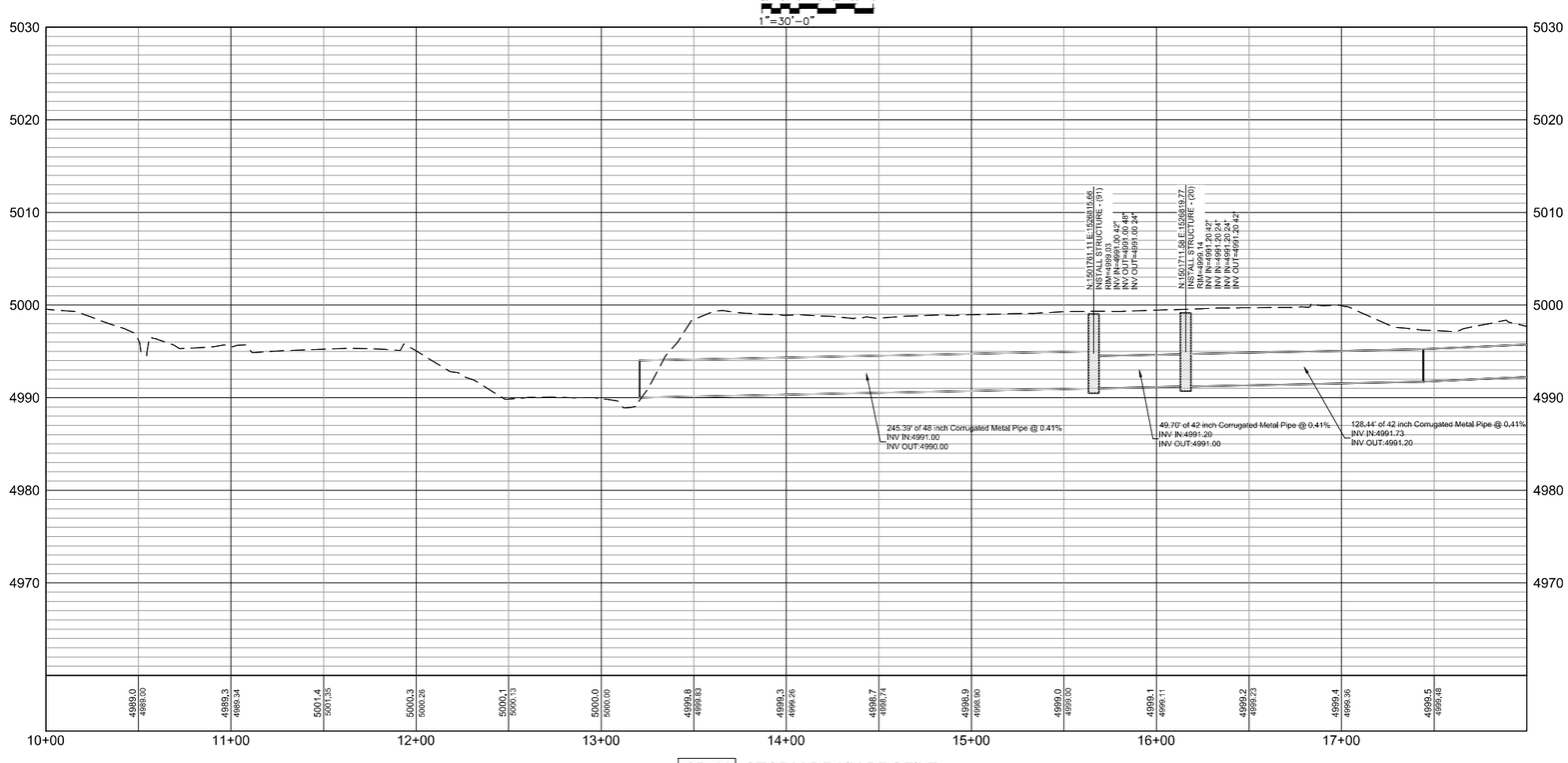
E-2

C-101



SD-03 STORM DRAIN PLAN

20' 10' 0 10' 20' 30' 40'
1"=30'-0"



SD-03 STORM DRAIN PROFILE

20' 10' 0 10' 20' 30' 40'
1"=30'-0"

GENERAL NOTES

1. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY AND SHALL BE FIELD LOCATED PRIOR TO CONSTRUCTION.
3. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

KEYED NOTES

1. BUILD 4' DIA. MANHOLE TYPE "C" PER COA STD DWG 2208
2. BUILD 6' DIA. MANHOLE TYPE "C" PER COA STD DWG 2208
* 3. BUILD 8' DIA. MANHOLE TYPE "C" PER COA STD DWG 2208
4. BUILD STORM DRAIN INLET, TYPE "C" PER COA STD DWG 2205
5. BUILD STORM DRAIN INLET, TYPE "A" PER COA STD DWG 2201
6. BUILD STORM DRAIN INLET, SINGLE, TYPE "D" PER COA STD DWG 2206
7. BUILD STORM DRAIN INLET, DOUBLE, TYPE "C" PER COA STD DWG 2205
* 8. DRAINAGE POND - SEE GRADING PLAN AND SHEET C-508 FOR DETAILS
* 9. EXISTING STORM DRAIN INLET TO REMAIN IN PLACE
* 10. EXISTING STORM DRAIN MANHOLE TO REMAIN IN PLACE
* 11. ADJUST EXISTING MANHOLE TO GRADE
* 12. BUILD SIDEWALK CULVERT WITH STEEL GRATE PER COA STD DWG 2236
* 13. PROPOSED SAS LINE. SEE SHEETS C-400 FOR PLAN & PROFILE AND ADDITIONAL DETAILS.
* 14. PROPOSED WATER LINE. SEE SHEETS C-401 & C-401B FOR PLAN & PROFILES AND ADDITIONAL DETAILS.
15. PROPERTY LINE
* 16. 6" ROOF DRAIN PIPE
17. EXTEND EXISTING 42" CULVERT

* NOT USED ON THIS SHEET

Project Revision

1	BID SET	XX.XX.XXXX

JRMA ARCHITECTS ENGINEERS
WILSON & COMPANY
MRWM LANDSCAPE ARCHITECTS mrwma.com 505 268 2286

CITY OF ALBUQUERQUE
PROJECT NO. 700693

MAINTENANCE & ADMINISTRATION BUILDING PROJECT
4600 EDITH BLVD NE
ALBUQUERQUE, NM 87107

ONE ALBUQUERQUE

RONALD M. DUNEMAN NEW MEXICO 17202 PROFESSIONAL ENGINEER
5/12/22

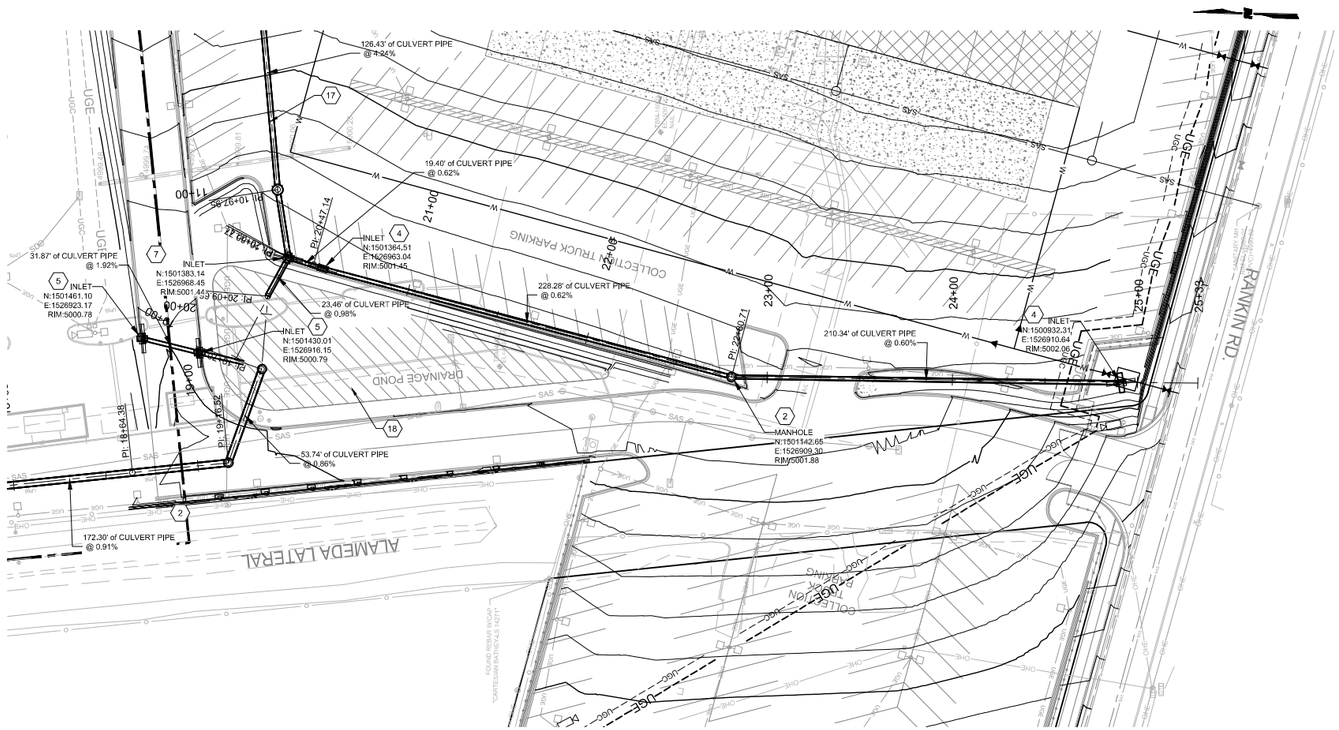
STORM DRAIN PLAN & PROFILE SD-03 (1 OF 2)

AS NOTED	AS NOTED
DATE	SCALE
DWN	CHK

JRMA Project No. 4907-B
W&C - 14-100-132-05

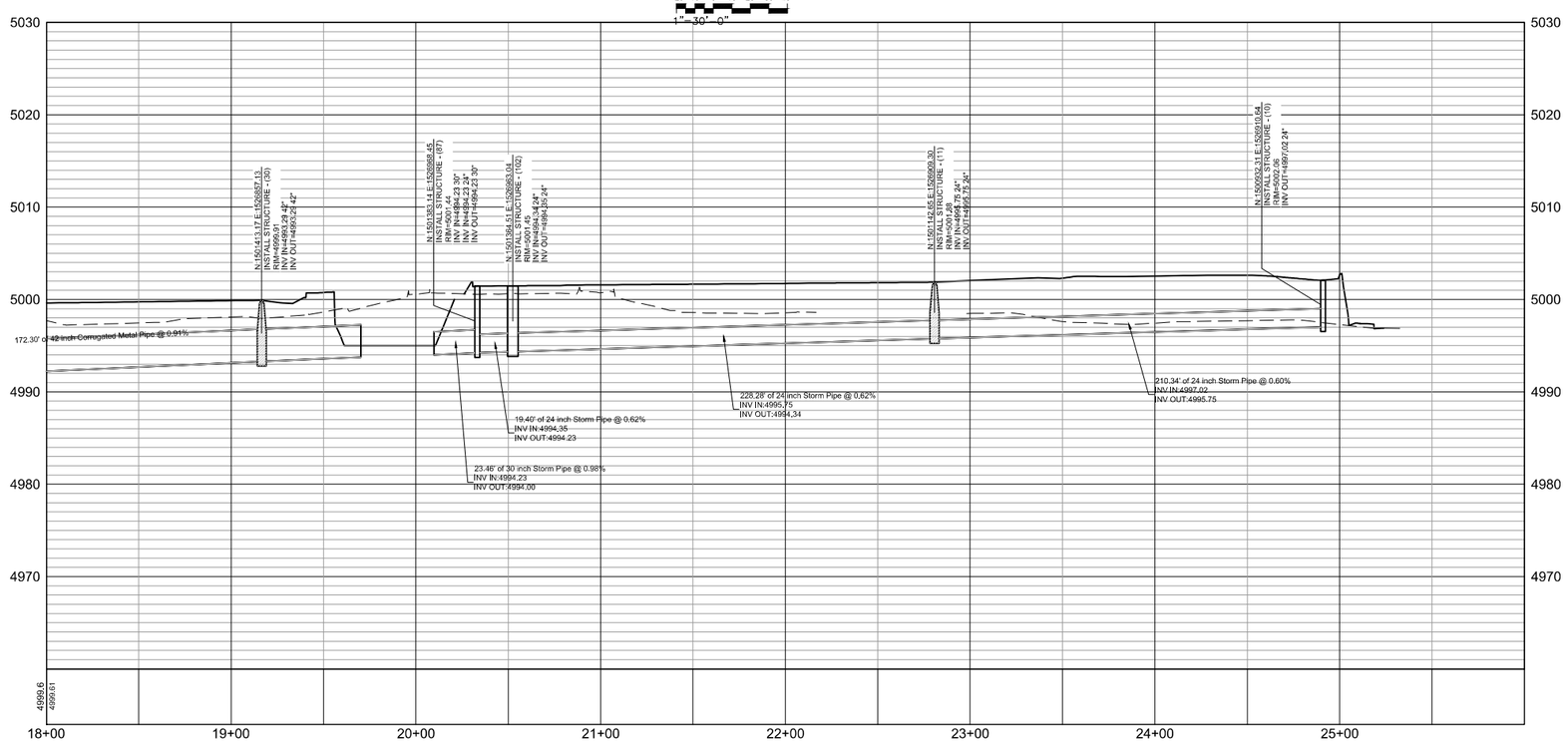
E-3

C-403



SD-03 STORM DRAIN PLAN

20' 10' 0 10' 20' 30' 40'
1" = 30' - 0"



SD-03 STORM DRAIN PROFILE

20' 10' 0 10' 20' 30' 40'
1"=30'-0"

GENERAL NOTES

1. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY AND SHALL BE FIELD LOCATED PRIOR TO CONSTRUCTION.
3. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

KEYED NOTES

1. BUILD 4' DIA. MANHOLE TYPE "C" PER COA STD DWG 2208
2. BUILD 6' DIA. MANHOLE TYPE "C" PER COA STD DWG 2208
* 3. BUILD 8' DIA. MANHOLE TYPE "C" PER COA STD DWG 2208
4. BUILD STORM DRAIN INLET, TYPE "C" PER COA STD DWG 2205
5. BUILD STORM DRAIN INLET, TYPE "A" PER COA STD DWG 2201
* 6. BUILD STORM DRAIN INLET, SINGLE, TYPE "D" PER COA STD DWG 2206
7. BUILD STORM DRAIN INLET, DOUBLE, TYPE "C" PER COA STD DWG 2205
* 8. DRAINAGE POND - SEE GRADING PLAN AND SHEET C-508 FOR DETAILS
* 9. EXISTING STORM DRAIN INLET TO REMAIN IN PLACE
* 10. EXISTING STORM DRAIN MANHOLE TO REMAIN IN PLACE
* 11. ADJUST EXISTING MANHOLE TO GRADE
* 12. BUILD SIDEWALK CULVERT WITH STEEL GRATE PER COA STD DWG 2236
* 13. PROPOSED SAS LINE. SEE SHEETS C-400 FOR PLAN & PROFILE AND ADDITIONAL DETAILS.
* 14. PROPOSED WATER LINE. SEE SHEETS C-401 & C-401B FOR PLAN & PROFILE AND ADDITIONAL DETAILS.
* 15. PROPERTY LINE
* 16. 6" ROOF DRAIN PIPE
17. SEE SHEET C-405 FOR INFORMATION
18. BUILD PRINCIPAL SPILLWAY STRUCTURE PER SHEET C-502

* NOT USED ON THIS SHEET

Project Revision

1	BID SET	XX.XX.XXXX

JRMA ARCHITECTS ENGINEERS
WILSON & COMPANY
MRWM LANDSCAPE ARCHITECTS mrwmla.com 505 268 2286

CITY OF ALBUQUERQUE
PROJECT NO. 700693

MAINTENANCE & ADMINISTRATION BUILDING PROJECT
4600 EDITH BLVD NE
ALBUQUERQUE, NM 87107

ONE ALBUQUERQUE

RONALD M. DUNEMAN NEW MEXICO 15122 PROFESSIONAL ENGINEER

STORM DRAIN PLAN & PROFILE SD-03 (2 OF 2)

AS NOTED	AS NOTED
DATE	SCALE
DWN	CHK

JRMA Project No. 4907-B
W&C - 14-100-132-05

C-404