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14 February, 2018

Mr. Ryan Woods, EIT
LOMC Clearinghouse
3601 Eisenhower Avenue
Alexandria, Va. 22304-6426

RE: CASE # 18-06-0370P. RESPONSE TO FEMA SUMMARY OF ADDITIONAL DATA REQUIRED TO SUPPORT A LETTER OF MAP REVISION, DATED 11/30/17.

Mr. Woods,

Weston received a *Summary of Additional Data Required to Support a Letter of Map Revision* in a letter from FEMA dated November 30, 2017. Our responses and the additional data that was requested and are provided below:

1. *Our review revealed that a hydrologic model was not submitted for the Cypress Drive Pond [Storm Drain]. Please send us the hydrologic model used to develop the discharges in the hydraulic model and all necessary backup information, including a copy of the drainage area map, certified by a Professional Engineer, used to delineate the subbasins of the watershed. Please include clearly labeled contours, and flow lines.*

RESPONSE TO COMMENT 1: The EPA SWMM hydrologic model ("Cypress Drive As-Built System_LOMR_7-7-2017") used to develop the discharges has been included in the CD accompanying this package, along with the digital copy of the drainage area map. The drainage area map includes the above-mentioned information and is certified by Weston's New Mexico Professional Engineer. Please see Attachment A on the CD.

The hard copy of the SWMM input and output files are attached to this letter along with the hard copy of the Drainage Area Map as Attachment A.

2. *The submitted application did not include an as-built/post-project conditions hydraulic model. The as-built/post-project conditions model should reflect any modifications that have occurred within the floodplain. Please submit an as-built/post-project conditions hydraulic model for Cypress Drive Pond [Storm Drain]. Please provide paper and digital copies of the input and output files for this model.*

RESPONSE TO COMMENT 2: The as-built/post project EPA SWMM hydrologic model ("Cypress Drive As-Built System_LOMR_7-7-2017") is included on the CD as Attachment A. The hard copies of the input and output files are provided as Attachment A to this letter.

3. *The submitted topographic work map entitled "Post-Project Conditions Work Map," prepared by Weston Solutions, Inc., dated February 28, 2017, does not provide essential information required to complete our review of this request. Please submit a revised topographic work map, certified by a registered Professional Engineer that shows all applicable items listed in Section C of Application/Certification Form 2, entitled "Riverine Hydrology & Hydraulics Form," including the following information:*
- a. *Boundary delineations of the post-project conditions 1-percent-annual-chance (base) floodplain;*
 - b. *Logical tie-ins between the revised and effective flood hazard boundary delineations; and*
 - c. *Topographic contour information used for the boundary delineations of the base floodplain and*
 - d. *0.2-percent-annual-chance floodplain.*

RESPONSE TO COMMENT 3: The *Post-Project Conditions Work Map* has been modified to provide the requested information. The revised work map, certified by Weston's New Mexico Professional Engineer, includes text explaining that Zone AH is removed because the storm drain conveys all of the 1-percent annual chance storm without overtopping the inlets, leaving no boundary delineations, no logical tie-ins, and no need for topography that supports the delineations. Please see Attachment B to this letter and on CD.

4. *The above-referenced topographic work map was submitted in hard copy format only. Please provide digital Computer-Aided Design (CAD) or Geographic Information System (GIS) data for the above-referenced topographic work map. Please ensure the digital data are spatially referenced and cite what projection (coordinate system, example: Universal Transverse Mercator [UTM]/State Plane) was used, so that the data may be used for accurate mapping.*

RESPONSE TO COMMENT 4: The LOMR Work Map, including the relevant information requested above, is attached to this letter as Attachment B and is included on the CD in Autodesk Civil 3D 2016 format as Attachment B.

Very truly yours,
Weston Solutions, Inc.



David "Sonny" Cooper, P.E.
Project Manager

ATTACHMENT A

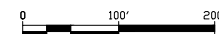
EPA SWMM MODEL FILES

&

DRAINAGE BASINS MAP

The bald earth data is derived from an aerial LIDAR survey conducted at 3m postings over the month of August, 1999.

BASIN	AREA
ID	ACRES
5	2.86
4	0.99
3	1.45
2	2.83
1B	2.08
1A	2.11



Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
County Project No. 20160006	City Project No. 601791	Zone Map No. K-11/12	Sheet BASINS	Of MAP 7

Cypress Drive As-Built System_LOMR_Hydrology_7-7-2017

Configuration File

[SWMM5]

Version=51011

[Map]

ShowGageIDs=1

ShowSubcatchIDs=1

ShowSubcatchValues=0

ShowSubcatchLinks=1

ShowNodeIDs=1

ShowNodeValues=0

ShowNodesBySize=0

ShowNodeBorder=1

ShowLinkIDs=1

ShowLinkValues=0

ShowLinksBySize=0

ShowLinkBorder=0

ShowGages=1

ShowSubcatchs=1

ShowNodes=1

ShowLinks=1

ShowNodeSymbols=1

ShowLinkSymbols=1

ShowLabels=1

LabelsTranspar=1

NotationTranspar=0

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SubcatchLineSize=1

SubcatchSnapTol=0

SubcatchSize=5

NodeSize=5

LinkSize=2

NotationSize=10

ArrowStyle=2

ArrowSize=10

ColorIndex=1

NotationZoom=100

LabelZoom=100

SymbolZoom=100

ArrowZoom=100

[Backdrop]

Visible=0

Watermark=0

[Legends]

NumIntervals=4

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MapSubcatchColor2=65280

MapSubcatchColor3=65535

MapSubcatchColor4=255

MapNodeColor0=16711680

MapNodeColor1=16776960

MapNodeColor2=65280

MapNodeColor3=65535

MapNodeColor4=255
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MapLinkColor1=16776960
MapLinkColor2=65280
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NodeLegend3=25,50,75,100,
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NodeLegend7=25,50,75,100,
NodeLegend8=25,50,75,100,
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Subcatchment=
Junction=Jun-
Outfall=Out-
Divider=
Storage Unit=
Conduit=
Pump=Pump-

Orifice=Orifice-
Weir=Orifice-
Outlet=Orifice-
Label=
Title / Notes_NextID=1
Option_NextID=1
Rain Gage_NextID=4
Subcatchment_NextID=9
Junction_NextID=1
Outfall_NextID=1
Divider_NextID=1
Storage_Unit_NextID=1
Conduit_NextID=1
Pump_NextID=1
Orifice_NextID=1
Weir_NextID=1
Outlet_NextID=1
Label_NextID=1
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Diversion_Curve_NextID=1
Pump_Curve_NextID=1
Rating_Curve_NextID=1
Shape_Curve_NextID=1
Storage_Curve_NextID=1
Tidal_Curve_NextID=1
Time_Series_NextID=1
Time_Pattern_NextID=1
Transect_NextID=1
Unit_Hydrograph_NextID=1
Pollutant_NextID=1
Land_Use_NextID=1
Aquifer_NextID=1
Control_Rule_NextID=1
Climatology_NextID=1
Snow_Pack_NextID=1
LID_Control_NextID=1
[Defaults]
SUBCATCH_AREA=5
SUBCATCH_WIDTH=500
SUBCATCH_SLOPE=0.5
SUBCATCH_IMPERV=25
SUBCATCH_IMPERV_N=0.015
SUBCATCH_PERV_N=0.1
SUBCATCH_IMPERV_DS=0.08
SUBCATCH_PERV_DS=0.20
SUBCATCH_PCTZERO=25
NODE_INVERT=0
NODE_DEPTH=6
PONDED_AREA=0
CONDUIT_LENGTH=400
CONDUIT_SHAPE=CIRCULAR
CONDUIT_GEOM1=1.5
CONDUIT_GEOM2=1
CONDUIT_GEOM3=1

CONDUIT_GEOM4=1
CONDUIT_ROUGHNESS=0.015
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ROUTING_MODEL=DYNWAVE
FORCE_MAIN_EQUATION=H-W
LINK_OFFSETS=DEPTH
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INFIL_PARAM2=0.5
INFIL_PARAM3=7
INFIL_PARAM4=7
INFIL_PARAM5=0
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BottomMargin=1
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File3=
File4=
File5=
File6=
File7=
File8=
File9=
File10=
File11=
File12=
[Graph]
DateTimeFormat=
[Results]
Saved=1
Current=1

Cypress Drive As-Built System_LOMR_Hydrology_7-7-2017;
Input File
;Project Title/Notes

[OPTIONS]

;;Option	Value
FLOW_UNITS	CFS
INFILTRATION	CURVE_NUMBER
FLOW_ROUTING	DYNWAVE
LINK_OFFSETS	DEPTH
MIN_SLOPE	0.2
ALLOW_PONDING	YES
SKIP_STEADY_STATE	NO

START_DATE	02/20/2017
START_TIME	00:00:00
REPORT_START_DATE	02/20/2017
REPORT_START_TIME	00:00:00
END_DATE	02/21/2017
END_TIME	00:00:00
SWEEP_START	01/01
SWEEP_END	12/31
DRY_DAYS	0
REPORT_STEP	00:06:00
WET_STEP	00:05:00
DRY_STEP	01:00:00
ROUTING_STEP	0:00:30

INERTIAL_DAMPING	PARTIAL
NORMAL_FLOW_LIMITED	BOTH
FORCE_MAIN_EQUATION	H-W
VARIABLE_STEP	0.75
LENGTHENING_STEP	0
MIN_SURFAREA	12.557
MAX_TRIALS	8
HEAD_TOLERANCE	0.005
SYS_FLOW_TOL	5
LAT_FLOW_TOL	5
MINIMUM_STEP	0.5
THREADS	1

[EVAPORATION]

;;Data Source	Parameters
CONSTANT	0.0
DRY_ONLY	NO

[RAINGAGES]

;;Name	Format	Interval	SCF	Source
Rain Gage-1	CUMULATIVE	0:01	1.0	TIMESERIES SCS_Type_II

[SUBCATCHMENTS]

;;Name Width	%Slope	Rain Gage CurbLen	Outlet SnowPack	Area	%Imperv	
Basin_5 0.5	0	Rain Gage-1	MH-A	2.86	0	500
Basin_4 0.5	0	Rain Gage-1	MH-B	0.99	0	500
Basin_3 0.5	0	Rain Gage-1	MH-C	1.45	0	500
Basin_2 0.5	0	Rain Gage-1	MH-D	2.83	0	500
Basin_1B 0.5	0	Rain Gage-1	MH-F	2.08	0	500
Basin_1A 0.5	0	Rain Gage-1	MH-G	2.11	0	500

[SUBAREAS]

;;Subcatchment RouteTo	N-Imperv PctRouted	N-Perv	S-Imperv	S-Perv	PctZero
Basin_5 OUTLET	0.015	0.02	0	0	0
Basin_4 OUTLET	0.015	0.02	0	0	0
Basin_3 OUTLET	0.015	0.02	0	0	0
Basin_2 OUTLET	0.015	0.02	0	0	0
Basin_1B OUTLET	0.015	0.02	0	0	0
Basin_1A OUTLET	0.015	0.02	0	0	0

[INFILTRATION]

;;Subcatchment	CurveNum		DryTime
Basin_5	90	0.15	7
Basin_4	80	0.15	7
Basin_3	80	0.15	7
Basin_2	80	0.15	7
Basin_1B	80	0.15	7
Basin_1A	80	0.15	7

[JUNCTIONS]

;;Name	Elevation	MaxDepth	InitDepth	SurDepth	Aponded
MH-A	4948.55	2.68	0	0	10
MH-B	4948.18	2.96	0	0	1980
MH-C	4947.63	3.47	0	0	10
MH-D	4946.60	4	0	0	10
MH-D2	4946.27	4.46	0	0	10
MH-E	4945.68	5.05	0	0	10

MH-F	4945.6	4.55	0	0	4000
MH-G	4945.25	4.88	0	0	10
MH-H	4944.25	5.88	0	0	10
MH-I	4943.77	7.02	0	0	10

[OUTFALLS]

;;Name	Elevation	Type	Stage Data	Gated	Route To
ISLETA_DRAIN	4943.43	FREE		NO	

[CONDUITS]

;;Name	From Node	To Node	Length	Roughness
InOffset	OutOffset	InitFlow	MaxFlow	
PIPE-0	MH-I	ISLETA_DRAIN	29.4	0.013
0	0	0	0	
PIPE-1	MH-H	MH-I	29.17	0.013
0	0	0	0	
PIPE-2	MH-G	MH-H	249.02	0.013
0	0	0	0	
PIPE-3	MH-F	MH-G	196.31	0.013
0	0	0	0	
PIPE-4	MH-E	MH-F	73.2	0.013
0	0	0	0	
PIPE-4.5	MH-D2	MH-E	57.0	0.013
0	0	0	0	
PIPE-5	MH-D	MH-D2	77.3	0.013
0	0	0	0	
PIPE-6	MH-C	MH-D	410.40	0.013
0	0	0	0	
PIPE-7	MH-B	MH-C	189.90	0.013
-0.01000000000000002	0	0	0	
PIPE-8	MH-A	MH-B	102.50	0.013
0	0.00999999999999979	0	0	

[XSECTIONS]

;;Link	Shape	Geom1	Geom2	Geom3
Geom4	Barrels	Culvert		
PIPE-0	HORIZ_ELLIPSE	2.417	3.750	6
1				0
PIPE-1	HORIZ_ELLIPSE	2.417	3.750	6
1				0
PIPE-2	HORIZ_ELLIPSE	2.417	3.750	6
1				0
PIPE-3	HORIZ_ELLIPSE	2.417	3.750	6
1				0
PIPE-4	HORIZ_ELLIPSE	2.417	3.750	6
1				0
PIPE-4.5	HORIZ_ELLIPSE	2.417	3.750	6
1				0

PIPE-5	HORIZ_ELLIPSE	2.417	3.750	6	0
1					
PIPE-6	HORIZ_ELLIPSE	2.000	3.167	4	0
1					
PIPE-7	HORIZ_ELLIPSE	2.000	3.167	4	0
1					
PIPE-8	HORIZ_ELLIPSE	1.583	2.500	2	0
1					

[TRANSECTS]

;;Transect Data in HEC-2 format

;

NC	0.013	0.013	0.013					
X1 XS-L-0		19	0.4	7.2	0.0	0.0	0	
0	0.0							
GR	0.7739999999999432	0.4	0.02480000000001412	0.4				
	0.04960000000002823	0.8	0.07440000000004235	1.2				
	0.09920000000005646	1.6						
GR	0.1240000000000706	2	0.1440000000001142	2.4				
	0.1640000000001579	2.8	0.1840000000002015	3.2	0.2040000000002452			
	3.6							
GR	0.2240000000002889	4	0.2440000000003325	4.4				
	0.2640000000003762	4.8	0.2840000000004198	5.2	0.3040000000004635			
	5.6							
GR	0.3240000000005071	6	0.3440000000005508	6.4				
	0.3640000000005944	6.8	0.3840000000006381	7.2				

;

NC	0.013	0.013	0.013					
X1 XS-L-1		19	0.4	7.2	0.0	0.0	0	
0	0.0							
GR	0.7739999999999432	0.4	0.02480000000001412	0.4				
	0.04960000000002823	0.8	0.07440000000004235	1.2				
	0.09920000000005646	1.6						
GR	0.1240000000000706	2	0.1440000000001142	2.4				
	0.1640000000001579	2.8	0.1840000000002015	3.2	0.2040000000002452			
	3.6							
GR	0.2240000000002889	4	0.2440000000003325	4.4				
	0.2640000000003762	4.8	0.2840000000004198	5.2	0.3040000000004635			
	5.6							
GR	0.3240000000005071	6	0.3440000000005508	6.4				
	0.3640000000005944	6.8	0.3840000000006381	7.2				

;

NC	0.013	0.013	0.013					
X1 XS-L-2		19	0.4	7.2	0.0	0.0	0	
0	0.0							
GR	0.7739999999999432	0.4	0.02480000000001412	0.4				
	0.04960000000002823	0.8	0.07440000000004235	1.2				
	0.09920000000005646	1.6						
GR	0.1240000000000706	2	0.1440000000001142	2.4				
	0.1640000000001579	2.8	0.1840000000002015	3.2	0.2040000000002452			
	3.6							
GR	0.2240000000002889	4	0.2440000000003325	4.4				
	0.2640000000003762	4.8	0.2840000000004198	5.2	0.3040000000004635			
	5.6							

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GR 0.324000000005071 6      0.344000000005508 6.4
0.364000000005944 6.8      0.384000000006381 7.2
;
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0      0.0
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0.0496000000002823 0.8      0.0744000000004235 1.2
0.0992000000005646 1.6
GR 0.124000000000706 2      0.1440000000001142 2.4
0.164000000001579 2.8      0.184000000002015 3.2      0.204000000002452
3.6
GR 0.224000000002889 4      0.244000000003325 4.4
0.264000000003762 4.8      0.284000000004198 5.2      0.304000000004635
5.6
GR 0.324000000005071 6      0.344000000005508 6.4
0.364000000005944 6.8      0.384000000006381 7.2
;
NC 0.013      0.013      0.013
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0      0.0
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0.0496000000002823 0.8      0.0744000000004235 1.2
0.0992000000005646 1.6
GR 0.124000000000706 2      0.1440000000001142 2.4
0.164000000001579 2.8      0.184000000002015 3.2      0.204000000002452
3.6
GR 0.224000000002889 4      0.244000000003325 4.4
0.264000000003762 4.8      0.284000000004198 5.2      0.304000000004635
5.6
GR 0.324000000005071 6      0.344000000005508 6.4
0.364000000005944 6.8      0.384000000006381 7.2
;
NC 0.013      0.013      0.013
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0      0.0
GR 0.773999999999432 0.4      0.0248000000001412 0.4
0.0496000000002823 0.8      0.0744000000004235 1.2
0.0992000000005646 1.6
GR 0.124000000000706 2      0.1440000000001142 2.4
0.164000000001579 2.8      0.184000000002015 3.2      0.204000000002452
3.6
GR 0.224000000002889 4      0.244000000003325 4.4
0.264000000003762 4.8      0.284000000004198 5.2      0.304000000004635
5.6
GR 0.324000000005071 6      0.344000000005508 6.4
0.364000000005944 6.8      0.384000000006381 7.2
;
NC 0.013      0.013      0.013
X1 XS-L-6      19      0.4      7.2      0.0      0.0      0
0      0.0
GR 0.773999999999432 0.4      0.0248000000001412 0.4
0.0496000000002823 0.8      0.0744000000004235 1.2
0.0992000000005646 1.6

```

GR 0.124000000000706 2	0.144000000001142 2.4	
0.164000000001579 2.8	0.184000000002015 3.2	0.204000000002452
3.6		
GR 0.224000000002889 4	0.244000000003325 4.4	
0.264000000003762 4.8	0.284000000004198 5.2	0.304000000004635
5.6		
GR 0.324000000005071 6	0.344000000005508 6.4	
0.364000000005944 6.8	0.384000000006381 7.2	
;		
NC 0.013 0.013 0.013		
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0 0.0		
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0.049600000002823 0.8	0.074400000004235 1.2	
0.099200000005646 1.6		
GR 0.124000000000706 2	0.144000000001142 2.4	
0.164000000001579 2.8	0.184000000002015 3.2	0.204000000002452
3.6		
GR 0.224000000002889 4	0.244000000003325 4.4	
0.264000000003762 4.8	0.284000000004198 5.2	0.304000000004635
5.6		
GR 0.324000000005071 6	0.344000000005508 6.4	
0.364000000005944 6.8	0.384000000006381 7.2	
;		
NC 0.013 0.013 0.013		
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0 0.0		
GR 0.77399999999432 0.4	0.024800000001412 0.4	
0.049600000002823 0.8	0.074400000004235 1.2	
0.099200000005646 1.6		
GR 0.124000000000706 2	0.144000000001142 2.4	
0.164000000001579 2.8	0.184000000002015 3.2	0.204000000002452
3.6		
GR 0.224000000002889 4	0.244000000003325 4.4	
0.264000000003762 4.8	0.284000000004198 5.2	0.304000000004635
5.6		
GR 0.324000000005071 6	0.344000000005508 6.4	
0.364000000005944 6.8	0.384000000006381 7.2	
;		
NC 0.013 0.013 0.013		
X1 XS-L-Pipe - (26) 19	0.4 7.2 0.0	0.0 0
0 0.0		
GR 0.77399999999432 0.4	0.024800000001412 0.4	
0.049600000002823 0.8	0.074400000004235 1.2	
0.099200000005646 1.6		
GR 0.124000000000706 2	0.144000000001142 2.4	
0.164000000001579 2.8	0.184000000002015 3.2	0.204000000002452
3.6		
GR 0.224000000002889 4	0.244000000003325 4.4	
0.264000000003762 4.8	0.284000000004198 5.2	0.304000000004635
5.6		
GR 0.324000000005071 6	0.344000000005508 6.4	
0.364000000005944 6.8	0.384000000006381 7.2	

[LOSSES]

;;Link	Kentry	Kexit	Kavg	Flap Gate	Seepage
;;-----	-----	-----	-----	-----	-----
PIPE-0	0.5	0.5	0	NO	0
PIPE-1	0.5	0.5	0	NO	0
PIPE-2	0.5	0.5	0	NO	0
PIPE-3	0.5	0.5	0	NO	0
PIPE-4	0.5	0.5	0	NO	0
PIPE-4.5	0.5	0.5	0	NO	0
PIPE-5	0.5	0.5	0	NO	0
PIPE-6	0.5	0.5	0	NO	0
PIPE-7	0.5	0.5	0	NO	0
PIPE-8	0.5	0.5	0	NO	0

[TIMESERIES]

;;Name	Date	Time	Value
;;-----	-----	-----	-----
SCS_Type_II	2/20/2017	0:00	0.000
SCS_Type_II	2/20/2017	0:06	0.003
SCS_Type_II	2/20/2017	0:12	0.005
SCS_Type_II	2/20/2017	0:18	0.008
SCS_Type_II	2/20/2017	0:24	0.010
SCS_Type_II	2/20/2017	0:30	0.013
SCS_Type_II	2/20/2017	0:36	0.015
SCS_Type_II	2/20/2017	0:42	0.018
SCS_Type_II	2/20/2017	0:48	0.021
SCS_Type_II	2/20/2017	0:54	0.023
SCS_Type_II	2/20/2017	1:00	0.026
SCS_Type_II	2/20/2017	1:06	0.029
SCS_Type_II	2/20/2017	1:12	0.032
SCS_Type_II	2/20/2017	1:18	0.034
SCS_Type_II	2/20/2017	1:24	0.037
SCS_Type_II	2/20/2017	1:30	0.040
SCS_Type_II	2/20/2017	1:36	0.043
SCS_Type_II	2/20/2017	1:42	0.046
SCS_Type_II	2/20/2017	1:48	0.049
SCS_Type_II	2/20/2017	1:54	0.052
SCS_Type_II	2/20/2017	2:00	0.055
SCS_Type_II	2/20/2017	2:06	0.058
SCS_Type_II	2/20/2017	2:12	0.061
SCS_Type_II	2/20/2017	2:18	0.064
SCS_Type_II	2/20/2017	2:24	0.067
SCS_Type_II	2/20/2017	2:30	0.070
SCS_Type_II	2/20/2017	2:36	0.073
SCS_Type_II	2/20/2017	2:42	0.076
SCS_Type_II	2/20/2017	2:48	0.079
SCS_Type_II	2/20/2017	2:54	0.082
SCS_Type_II	2/20/2017	3:00	0.086
SCS_Type_II	2/20/2017	3:06	0.089
SCS_Type_II	2/20/2017	3:12	0.092
SCS_Type_II	2/20/2017	3:18	0.095
SCS_Type_II	2/20/2017	3:24	0.099
SCS_Type_II	2/20/2017	3:30	0.102
SCS_Type_II	2/20/2017	3:36	0.105

SCS_Type_II	2/20/2017	3:42	0.109
SCS_Type_II	2/20/2017	3:48	0.112
SCS_Type_II	2/20/2017	3:54	0.116
SCS_Type_II	2/20/2017	4:00	0.119
SCS_Type_II	2/20/2017	4:06	0.123
SCS_Type_II	2/20/2017	4:12	0.126
SCS_Type_II	2/20/2017	4:18	0.130
SCS_Type_II	2/20/2017	4:24	0.133
SCS_Type_II	2/20/2017	4:30	0.137
SCS_Type_II	2/20/2017	4:36	0.141
SCS_Type_II	2/20/2017	4:42	0.145
SCS_Type_II	2/20/2017	4:48	0.148
SCS_Type_II	2/20/2017	4:54	0.152
SCS_Type_II	2/20/2017	5:00	0.156
SCS_Type_II	2/20/2017	5:06	0.160
SCS_Type_II	2/20/2017	5:12	0.164
SCS_Type_II	2/20/2017	5:18	0.168
SCS_Type_II	2/20/2017	5:24	0.173
SCS_Type_II	2/20/2017	5:30	0.177
SCS_Type_II	2/20/2017	5:36	0.181
SCS_Type_II	2/20/2017	5:42	0.185
SCS_Type_II	2/20/2017	5:48	0.190
SCS_Type_II	2/20/2017	5:54	0.194
SCS_Type_II	2/20/2017	6:00	0.198
SCS_Type_II	2/20/2017	6:06	0.203
SCS_Type_II	2/20/2017	6:12	0.207
SCS_Type_II	2/20/2017	6:18	0.212
SCS_Type_II	2/20/2017	6:24	0.217
SCS_Type_II	2/20/2017	6:30	0.221
SCS_Type_II	2/20/2017	6:36	0.226
SCS_Type_II	2/20/2017	6:42	0.231
SCS_Type_II	2/20/2017	6:48	0.236
SCS_Type_II	2/20/2017	6:54	0.241
SCS_Type_II	2/20/2017	7:00	0.246
SCS_Type_II	2/20/2017	7:06	0.251
SCS_Type_II	2/20/2017	7:12	0.256
SCS_Type_II	2/20/2017	7:18	0.261
SCS_Type_II	2/20/2017	7:24	0.266
SCS_Type_II	2/20/2017	7:30	0.271
SCS_Type_II	2/20/2017	7:36	0.276
SCS_Type_II	2/20/2017	7:42	0.281
SCS_Type_II	2/20/2017	7:48	0.287
SCS_Type_II	2/20/2017	7:54	0.292
SCS_Type_II	2/20/2017	8:00	0.298
SCS_Type_II	2/20/2017	8:06	0.303
SCS_Type_II	2/20/2017	8:12	0.309
SCS_Type_II	2/20/2017	8:18	0.315
SCS_Type_II	2/20/2017	8:24	0.321
SCS_Type_II	2/20/2017	8:30	0.328
SCS_Type_II	2/20/2017	8:36	0.335
SCS_Type_II	2/20/2017	8:42	0.342
SCS_Type_II	2/20/2017	8:48	0.349
SCS_Type_II	2/20/2017	8:54	0.357
SCS_Type_II	2/20/2017	9:00	0.365

SCS_Type_II	2/20/2017	9:06	0.372
SCS_Type_II	2/20/2017	9:12	0.380
SCS_Type_II	2/20/2017	9:18	0.388
SCS_Type_II	2/20/2017	9:24	0.396
SCS_Type_II	2/20/2017	9:30	0.404
SCS_Type_II	2/20/2017	9:36	0.412
SCS_Type_II	2/20/2017	9:42	0.421
SCS_Type_II	2/20/2017	9:48	0.430
SCS_Type_II	2/20/2017	9:54	0.439
SCS_Type_II	2/20/2017	10:00	0.449
SCS_Type_II	2/20/2017	10:06	0.459
SCS_Type_II	2/20/2017	10:12	0.470
SCS_Type_II	2/20/2017	10:18	0.481
SCS_Type_II	2/20/2017	10:24	0.493
SCS_Type_II	2/20/2017	10:30	0.506
SCS_Type_II	2/20/2017	10:36	0.519
SCS_Type_II	2/20/2017	10:42	0.534
SCS_Type_II	2/20/2017	10:48	0.549
SCS_Type_II	2/20/2017	10:54	0.565
SCS_Type_II	2/20/2017	11:00	0.583
SCS_Type_II	2/20/2017	11:06	0.602
SCS_Type_II	2/20/2017	11:12	0.623
SCS_Type_II	2/20/2017	11:18	0.647
SCS_Type_II	2/20/2017	11:24	0.673
SCS_Type_II	2/20/2017	11:30	0.702
SCS_Type_II	2/20/2017	11:36	0.761
SCS_Type_II	2/20/2017	11:42	0.879
SCS_Type_II	2/20/2017	11:48	1.068
SCS_Type_II	2/20/2017	11:54	1.408
SCS_Type_II	2/20/2017	12:00	1.644
SCS_Type_II	2/20/2017	12:06	1.691
SCS_Type_II	2/20/2017	12:12	1.733
SCS_Type_II	2/20/2017	12:18	1.768
SCS_Type_II	2/20/2017	12:24	1.798
SCS_Type_II	2/20/2017	12:30	1.823
SCS_Type_II	2/20/2017	12:36	1.844
SCS_Type_II	2/20/2017	12:42	1.863
SCS_Type_II	2/20/2017	12:48	1.882
SCS_Type_II	2/20/2017	12:54	1.899
SCS_Type_II	2/20/2017	13:00	1.915
SCS_Type_II	2/20/2017	13:06	1.929
SCS_Type_II	2/20/2017	13:12	1.943
SCS_Type_II	2/20/2017	13:18	1.957
SCS_Type_II	2/20/2017	13:24	1.970
SCS_Type_II	2/20/2017	13:30	1.982
SCS_Type_II	2/20/2017	13:36	1.993
SCS_Type_II	2/20/2017	13:42	2.004
SCS_Type_II	2/20/2017	13:48	2.014
SCS_Type_II	2/20/2017	13:54	2.024
SCS_Type_II	2/20/2017	14:00	2.034
SCS_Type_II	2/20/2017	14:06	2.043
SCS_Type_II	2/20/2017	14:12	2.052
SCS_Type_II	2/20/2017	14:18	2.060
SCS_Type_II	2/20/2017	14:24	2.069

SCS_Type_II	2/20/2017	14:30	2.077
SCS_Type_II	2/20/2017	14:36	2.086
SCS_Type_II	2/20/2017	14:42	2.094
SCS_Type_II	2/20/2017	14:48	2.101
SCS_Type_II	2/20/2017	14:54	2.109
SCS_Type_II	2/20/2017	15:00	2.117
SCS_Type_II	2/20/2017	15:06	2.124
SCS_Type_II	2/20/2017	15:12	2.131
SCS_Type_II	2/20/2017	15:18	2.138
SCS_Type_II	2/20/2017	15:24	2.145
SCS_Type_II	2/20/2017	15:30	2.152
SCS_Type_II	2/20/2017	15:36	2.158
SCS_Type_II	2/20/2017	15:42	2.165
SCS_Type_II	2/20/2017	15:48	2.171
SCS_Type_II	2/20/2017	15:54	2.177
SCS_Type_II	2/20/2017	16:00	2.182
SCS_Type_II	2/20/2017	16:06	2.188
SCS_Type_II	2/20/2017	16:12	2.194
SCS_Type_II	2/20/2017	16:18	2.199
SCS_Type_II	2/20/2017	16:24	2.205
SCS_Type_II	2/20/2017	16:30	2.210
SCS_Type_II	2/20/2017	16:36	2.216
SCS_Type_II	2/20/2017	16:42	2.221
SCS_Type_II	2/20/2017	16:48	2.226
SCS_Type_II	2/20/2017	16:54	2.231
SCS_Type_II	2/20/2017	17:00	2.236
SCS_Type_II	2/20/2017	17:06	2.241
SCS_Type_II	2/20/2017	17:12	2.246
SCS_Type_II	2/20/2017	17:18	2.251
SCS_Type_II	2/20/2017	17:24	2.256
SCS_Type_II	2/20/2017	17:30	2.261
SCS_Type_II	2/20/2017	17:36	2.266
SCS_Type_II	2/20/2017	17:42	2.270
SCS_Type_II	2/20/2017	17:48	2.275
SCS_Type_II	2/20/2017	17:54	2.280
SCS_Type_II	2/20/2017	18:00	2.284
SCS_Type_II	2/20/2017	18:06	2.289
SCS_Type_II	2/20/2017	18:12	2.293
SCS_Type_II	2/20/2017	18:18	2.297
SCS_Type_II	2/20/2017	18:24	2.301
SCS_Type_II	2/20/2017	18:30	2.306
SCS_Type_II	2/20/2017	18:36	2.310
SCS_Type_II	2/20/2017	18:42	2.314
SCS_Type_II	2/20/2017	18:48	2.318
SCS_Type_II	2/20/2017	18:54	2.322
SCS_Type_II	2/20/2017	19:00	2.326
SCS_Type_II	2/20/2017	19:06	2.329
SCS_Type_II	2/20/2017	19:12	2.333
SCS_Type_II	2/20/2017	19:18	2.337
SCS_Type_II	2/20/2017	19:24	2.341
SCS_Type_II	2/20/2017	19:30	2.344
SCS_Type_II	2/20/2017	19:36	2.348
SCS_Type_II	2/20/2017	19:42	2.351
SCS_Type_II	2/20/2017	19:48	2.354

SCS_Type_II	2/20/2017	19:54	2.358
SCS_Type_II	2/20/2017	20:00	2.361
SCS_Type_II	2/20/2017	20:06	2.364
SCS_Type_II	2/20/2017	20:12	2.367
SCS_Type_II	2/20/2017	20:18	2.371
SCS_Type_II	2/20/2017	20:24	2.374
SCS_Type_II	2/20/2017	20:30	2.377
SCS_Type_II	2/20/2017	20:36	2.380
SCS_Type_II	2/20/2017	20:42	2.383
SCS_Type_II	2/20/2017	20:48	2.386
SCS_Type_II	2/20/2017	20:54	2.389
SCS_Type_II	2/20/2017	21:00	2.393
SCS_Type_II	2/20/2017	21:06	2.396
SCS_Type_II	2/20/2017	21:12	2.399
SCS_Type_II	2/20/2017	21:18	2.402
SCS_Type_II	2/20/2017	21:24	2.405
SCS_Type_II	2/20/2017	21:30	2.408
SCS_Type_II	2/20/2017	21:36	2.411
SCS_Type_II	2/20/2017	21:42	2.414
SCS_Type_II	2/20/2017	21:48	2.417
SCS_Type_II	2/20/2017	21:54	2.420
SCS_Type_II	2/20/2017	22:00	2.423
SCS_Type_II	2/20/2017	22:06	2.426
SCS_Type_II	2/20/2017	22:12	2.429
SCS_Type_II	2/20/2017	22:18	2.432
SCS_Type_II	2/20/2017	22:24	2.435
SCS_Type_II	2/20/2017	22:30	2.438
SCS_Type_II	2/20/2017	22:36	2.441
SCS_Type_II	2/20/2017	22:42	2.443
SCS_Type_II	2/20/2017	22:48	2.446
SCS_Type_II	2/20/2017	22:54	2.449
SCS_Type_II	2/20/2017	23:00	2.452
SCS_Type_II	2/20/2017	23:06	2.455
SCS_Type_II	2/20/2017	23:12	2.458
SCS_Type_II	2/20/2017	23:18	2.461
SCS_Type_II	2/20/2017	23:24	2.463
SCS_Type_II	2/20/2017	23:30	2.466
SCS_Type_II	2/20/2017	23:36	2.469
SCS_Type_II	2/20/2017	23:42	2.472
SCS_Type_II	2/20/2017	23:48	2.475
SCS_Type_II	2/20/2017	23:54	2.477
SCS_Type_II	2/20/2017	24:00	2.480

[REPORT]

;;Reporting Options

INPUT YES

CONTROLS YES

SUBCATCHMENTS ALL

NODES ALL

LINKS ALL

[TAGS]

[MAP]

DIMENSIONS 1507827.599 1484972.669 1509305.089 1485978.420
Units Feet

[COORDINATES]

;;Node	X-Coord	Y-Coord
;;-----	-----	-----
MH-A	1508142.110	1485796.780
MH-B	1508224.170	1485739.510
MH-C	1508339.770	1485589.690
MH-D	1508593.940	1485267.680
MH-D2	1508642.380	1485209.410
MH-E	1508678.580	1485165.320
MH-F	1508753.010	1485160.540
MH-G	1508948.920	1485147.890
MH-H	1509197.530	1485133.810
MH-I	1509216.670	1485111.800
ISLETA_DRAIN	1509237.930	1485087.340

[VERTICES]

;;Link	X-Coord	Y-Coord
;;-----	-----	-----

[Polygons]

;;Subcatchment	X-Coord	Y-Coord
;;-----	-----	-----
Basin_5	1507987.771	1485730.866
Basin_5	1507894.758	1485862.014
Basin_5	1507982.190	1485852.713
Basin_5	1508025.906	1485894.569
Basin_5	1508010.094	1485915.032
Basin_5	1508033.347	1485932.704
Basin_5	1508047.299	1485913.171
Basin_5	1508224.954	1485913.171
Basin_5	1508233.326	1485876.896
Basin_5	1508093.806	1485661.106
Basin_4	1508102.177	1485657.385
Basin_4	1508180.308	1485609.019
Basin_4	1508344.941	1485811.787
Basin_4	1508322.618	1485831.320
Basin_4	1508298.435	1485798.765
Basin_4	1508246.347	1485830.390
Basin_4	1508264.020	1485858.294
Basin_4	1508238.906	1485875.966
Basin_3	1508193.330	1485605.298
Basin_3	1508238.906	1485568.093
Basin_3	1508322.618	1485455.547
Basin_3	1508498.413	1485625.761
Basin_3	1508496.553	1485696.451
Basin_3	1508472.369	1485676.918
Basin_3	1508350.522	1485807.136
Basin_2	1508331.920	1485445.315
Basin_2	1508606.308	1485039.778
Basin_2	1508727.225	1485430.433
Basin_2	1508504.924	1485433.224

Basin_2	1508500.273	1485617.390
Basin_1B	1508850.003	1485417.412
Basin_1B	1508839.771	1485025.826
Basin_1B	1508611.889	1485036.058
Basin_1B	1508735.596	1485427.643
Basin_1A	1509052.771	1485401.599
Basin_1A	1509052.771	1485018.385
Basin_1A	1508848.142	1485026.756
Basin_1A	1508859.304	1485414.621

[SYMBOLS]

;;Gage	X-Coord	Y-Coord
;;-----	-----	-----
Rain Gage-1	1508647.550	1485562.391

[PROFILES]

;;Name	Links
;;-----	-----
"Profile 1	" PIPE-8 PIPE-7 PIPE-6 PIPE-5 PIPE-4.5
"Profile 1	" PIPE-4 PIPE-3 PIPE-2 PIPE-1 PIPE-0

Cypress Drive As-Built System_LOMR_Hydrology_7-7-2017

Output Report

EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.012)

WARNING 09: time series interval greater than recording interval for
Rain Gage Rain Gage-1

WARNING 01: wet weather time step reduced to recording interval for
Rain Gage Rain Gage-1

WARNING 05: minimum slope used for Conduit PIPE-3

WARNING 05: minimum slope used for Conduit PIPE-4

WARNING 03: negative offset ignored for Link PIPE-7

Element Count

Number of rain gages 1

Number of subcatchments ... 6

Number of nodes 11

Number of links 10

Number of pollutants 0

Number of land uses 0

Raingage Summary

Recording	Data
Name	Type Interval
Rain Gage-1	SCS_Type_II CUMULATIVE 1 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage
Basin_5	2.86	500.00	0.00	0.5000	
Rain Gage-1	MH-A				
Basin_4	0.99	500.00	0.00	0.5000	
Rain Gage-1	MH-B				
Basin_3	1.45	500.00	0.00	0.5000	
Rain Gage-1	MH-C				
Basin_2	2.83	500.00	0.00	0.5000	
Rain Gage-1	MH-D				
Basin_1B	2.08	500.00	0.00	0.5000	
Rain Gage-1	MH-F				
Basin_1A	2.11	500.00	0.00	0.5000	
Rain Gage-1	MH-G				

Node Summary

External Name Inflow	Type	Invert Elev.	Max. Depth	Ponded Area

MH-A	JUNCTION	4948.55	2.68	10.0
MH-B	JUNCTION	4948.18	2.96	1980.0
MH-C	JUNCTION	4947.63	3.47	10.0
MH-D	JUNCTION	4946.60	4.00	10.0
MH-D2	JUNCTION	4946.27	4.46	10.0
MH-E	JUNCTION	4945.68	5.05	10.0
MH-F	JUNCTION	4945.60	4.55	4000.0
MH-G	JUNCTION	4945.25	4.88	10.0
MH-H	JUNCTION	4944.25	5.88	10.0
MH-I	JUNCTION	4943.77	7.02	10.0
ISLETA_DRAIN	OUTFALL	4943.43	2.42	0.0

Link Summary

Name Length	%Slope	From Node Roughness	To Node	Type

PIPE-0		MH-I	ISLETA_DRAIN	CONDUIT
29.4	1.1565	0.0130		
PIPE-1		MH-H	MH-I	CONDUIT
29.2	1.6457	0.0130		
PIPE-2		MH-G	MH-H	CONDUIT
249.0	0.4016	0.0130		
PIPE-3		MH-F	MH-G	CONDUIT
196.3	0.2000	0.0130		
PIPE-4		MH-E	MH-F	CONDUIT
73.2	0.2000	0.0130		
PIPE-4.5		MH-D2	MH-E	CONDUIT
57.0	1.0351	0.0130		
PIPE-5		MH-D	MH-D2	CONDUIT
77.3	0.4269	0.0130		
PIPE-6		MH-C	MH-D	CONDUIT
410.4	0.2510	0.0130		
PIPE-7		MH-B	MH-C	CONDUIT
189.9	0.2896	0.0130		
PIPE-8		MH-A	MH-B	CONDUIT
102.5	0.3512	0.0130		

Cross Section Summary

No. of Conduit Barrels	Full Flow	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width

1	PIPE-0 74.15	HORIZ_ELLIPSE	2.42	7.40	0.74	3.75
1	PIPE-1 88.46	HORIZ_ELLIPSE	2.42	7.40	0.74	3.75
1	PIPE-2 43.70	HORIZ_ELLIPSE	2.42	7.40	0.74	3.75
1	PIPE-3 30.84	HORIZ_ELLIPSE	2.42	7.40	0.74	3.75
1	PIPE-4 30.84	HORIZ_ELLIPSE	2.42	7.40	0.74	3.75
1	PIPE-4.5 70.16	HORIZ_ELLIPSE	2.42	7.40	0.74	3.75
1	PIPE-5 45.05	HORIZ_ELLIPSE	2.42	7.40	0.74	3.75
1	PIPE-6 21.08	HORIZ_ELLIPSE	2.00	5.10	0.61	3.17
1	PIPE-7 22.64	HORIZ_ELLIPSE	2.00	5.10	0.61	3.17
1	PIPE-8 13.89	HORIZ_ELLIPSE	1.58	3.30	0.49	2.50

Transect Summary

Transect XS-L-0
Area:

0.0005	0.0019	0.0043	0.0076	0.0118
0.0170	0.0232	0.0305	0.0390	0.0487
0.0595	0.0715	0.0847	0.0990	0.1145
0.1312	0.1491	0.1682	0.1884	0.2098
0.2323	0.2561	0.2810	0.3071	0.3338
0.3604	0.3871	0.4137	0.4404	0.4670
0.4937	0.5203	0.5470	0.5736	0.6003
0.6269	0.6536	0.6802	0.7069	0.7335
0.7602	0.7868	0.8135	0.8401	0.8668
0.8934	0.9201	0.9467	0.9734	1.0000

Hrad:

0.0139	0.0278	0.0418	0.0557	0.0696
0.0835	0.0963	0.1080	0.1202	0.1329
0.1459	0.1591	0.1724	0.1858	0.1994
0.2130	0.2267	0.2404	0.2542	0.2680
0.2818	0.2957	0.3095	0.3238	0.3512
0.3784	0.4055	0.4326	0.4595	0.4863

	0.5130	0.5396	0.5660	0.5924	0.6187
	0.6448	0.6708	0.6968	0.7226	0.7483
	0.7740	0.7995	0.8249	0.8502	0.8754
	0.9005	0.9256	0.9505	0.9753	1.0000
Width:					
	0.0355	0.0711	0.1066	0.1422	0.1777
	0.2132	0.2520	0.2961	0.3402	0.3842
	0.4283	0.4724	0.5164	0.5605	0.6046
	0.6487	0.6927	0.7368	0.7809	0.8249
	0.8690	0.9131	0.9572	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000

Transect XS-L-1

Area:

	0.0005	0.0019	0.0043	0.0076	0.0118
	0.0170	0.0232	0.0305	0.0390	0.0487
	0.0595	0.0715	0.0847	0.0990	0.1145
	0.1312	0.1491	0.1682	0.1884	0.2098
	0.2323	0.2561	0.2810	0.3071	0.3338
	0.3604	0.3871	0.4137	0.4404	0.4670
	0.4937	0.5203	0.5470	0.5736	0.6003
	0.6269	0.6536	0.6802	0.7069	0.7335
	0.7602	0.7868	0.8135	0.8401	0.8668
	0.8934	0.9201	0.9467	0.9734	1.0000

Hrad:

	0.0139	0.0278	0.0418	0.0557	0.0696
	0.0835	0.0963	0.1080	0.1202	0.1329
	0.1459	0.1591	0.1724	0.1858	0.1994
	0.2130	0.2267	0.2404	0.2542	0.2680
	0.2818	0.2957	0.3095	0.3238	0.3512
	0.3784	0.4055	0.4326	0.4595	0.4863
	0.5130	0.5396	0.5660	0.5924	0.6187
	0.6448	0.6708	0.6968	0.7226	0.7483
	0.7740	0.7995	0.8249	0.8502	0.8754
	0.9005	0.9256	0.9505	0.9753	1.0000

Width:

	0.0355	0.0711	0.1066	0.1422	0.1777
	0.2132	0.2520	0.2961	0.3402	0.3842
	0.4283	0.4724	0.5164	0.5605	0.6046
	0.6487	0.6927	0.7368	0.7809	0.8249
	0.8690	0.9131	0.9572	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000

Transect XS-L-2

Area:

	0.0005	0.0019	0.0043	0.0076	0.0118
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Hrad:	0.0170	0.0232	0.0305	0.0390	0.0487
	0.0595	0.0715	0.0847	0.0990	0.1145
	0.1312	0.1491	0.1682	0.1884	0.2098
	0.2323	0.2561	0.2810	0.3071	0.3338
	0.3604	0.3871	0.4137	0.4404	0.4670
	0.4937	0.5203	0.5470	0.5736	0.6003
	0.6269	0.6536	0.6802	0.7069	0.7335
	0.7602	0.7868	0.8135	0.8401	0.8668
	0.8934	0.9201	0.9467	0.9734	1.0000
	0.0139	0.0278	0.0418	0.0557	0.0696
Width:	0.0835	0.0963	0.1080	0.1202	0.1329
	0.1459	0.1591	0.1724	0.1858	0.1994
	0.2130	0.2267	0.2404	0.2542	0.2680
	0.2818	0.2957	0.3095	0.3238	0.3512
	0.3784	0.4055	0.4326	0.4595	0.4863
	0.5130	0.5396	0.5660	0.5924	0.6187
	0.6448	0.6708	0.6968	0.7226	0.7483
	0.7740	0.7995	0.8249	0.8502	0.8754
	0.9005	0.9256	0.9505	0.9753	1.0000
	0.0355	0.0711	0.1066	0.1422	0.1777
Transect XS-L-3 Area:	0.2132	0.2520	0.2961	0.3402	0.3842
	0.4283	0.4724	0.5164	0.5605	0.6046
	0.6487	0.6927	0.7368	0.7809	0.8249
	0.8690	0.9131	0.9572	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
Hrad:	0.0005	0.0019	0.0043	0.0076	0.0118
	0.0170	0.0232	0.0305	0.0390	0.0487
	0.0595	0.0715	0.0847	0.0990	0.1145
	0.1312	0.1491	0.1682	0.1884	0.2098
	0.2323	0.2561	0.2810	0.3071	0.3338
	0.3604	0.3871	0.4137	0.4404	0.4670
	0.4937	0.5203	0.5470	0.5736	0.6003
	0.6269	0.6536	0.6802	0.7069	0.7335
	0.7602	0.7868	0.8135	0.8401	0.8668
	0.8934	0.9201	0.9467	0.9734	1.0000
Hrad:	0.0139	0.0278	0.0418	0.0557	0.0696
	0.0835	0.0963	0.1080	0.1202	0.1329
	0.1459	0.1591	0.1724	0.1858	0.1994
	0.2130	0.2267	0.2404	0.2542	0.2680
	0.2818	0.2957	0.3095	0.3238	0.3512
	0.3784	0.4055	0.4326	0.4595	0.4863
	0.5130	0.5396	0.5660	0.5924	0.6187
	0.6448	0.6708	0.6968	0.7226	0.7483
	0.7740	0.7995	0.8249	0.8502	0.8754

	0.9005	0.9256	0.9505	0.9753	1.0000
Width:	0.0355	0.0711	0.1066	0.1422	0.1777
	0.2132	0.2520	0.2961	0.3402	0.3842
	0.4283	0.4724	0.5164	0.5605	0.6046
	0.6487	0.6927	0.7368	0.7809	0.8249
	0.8690	0.9131	0.9572	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000

Transect XS-L-4

Area:	0.0005	0.0019	0.0043	0.0076	0.0118
	0.0170	0.0232	0.0305	0.0390	0.0487
	0.0595	0.0715	0.0847	0.0990	0.1145
	0.1312	0.1491	0.1682	0.1884	0.2098
	0.2323	0.2561	0.2810	0.3071	0.3338
	0.3604	0.3871	0.4137	0.4404	0.4670
	0.4937	0.5203	0.5470	0.5736	0.6003
	0.6269	0.6536	0.6802	0.7069	0.7335
	0.7602	0.7868	0.8135	0.8401	0.8668
	0.8934	0.9201	0.9467	0.9734	1.0000

Hrad:	0.0139	0.0278	0.0418	0.0557	0.0696
	0.0835	0.0963	0.1080	0.1202	0.1329
	0.1459	0.1591	0.1724	0.1858	0.1994
	0.2130	0.2267	0.2404	0.2542	0.2680
	0.2818	0.2957	0.3095	0.3238	0.3512
	0.3784	0.4055	0.4326	0.4595	0.4863
	0.5130	0.5396	0.5660	0.5924	0.6187
	0.6448	0.6708	0.6968	0.7226	0.7483
	0.7740	0.7995	0.8249	0.8502	0.8754
	0.9005	0.9256	0.9505	0.9753	1.0000

Width:	0.0355	0.0711	0.1066	0.1422	0.1777
	0.2132	0.2520	0.2961	0.3402	0.3842
	0.4283	0.4724	0.5164	0.5605	0.6046
	0.6487	0.6927	0.7368	0.7809	0.8249
	0.8690	0.9131	0.9572	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000

Transect XS-L-5

Area:	0.0005	0.0019	0.0043	0.0076	0.0118
	0.0170	0.0232	0.0305	0.0390	0.0487
	0.0595	0.0715	0.0847	0.0990	0.1145
	0.1312	0.1491	0.1682	0.1884	0.2098

	0.2323	0.2561	0.2810	0.3071	0.3338
	0.3604	0.3871	0.4137	0.4404	0.4670
	0.4937	0.5203	0.5470	0.5736	0.6003
	0.6269	0.6536	0.6802	0.7069	0.7335
	0.7602	0.7868	0.8135	0.8401	0.8668
	0.8934	0.9201	0.9467	0.9734	1.0000
Hrad:					
	0.0139	0.0278	0.0418	0.0557	0.0696
	0.0835	0.0963	0.1080	0.1202	0.1329
	0.1459	0.1591	0.1724	0.1858	0.1994
	0.2130	0.2267	0.2404	0.2542	0.2680
	0.2818	0.2957	0.3095	0.3238	0.3512
	0.3784	0.4055	0.4326	0.4595	0.4863
	0.5130	0.5396	0.5660	0.5924	0.6187
	0.6448	0.6708	0.6968	0.7226	0.7483
	0.7740	0.7995	0.8249	0.8502	0.8754
	0.9005	0.9256	0.9505	0.9753	1.0000
Width:					
	0.0355	0.0711	0.1066	0.1422	0.1777
	0.2132	0.2520	0.2961	0.3402	0.3842
	0.4283	0.4724	0.5164	0.5605	0.6046
	0.6487	0.6927	0.7368	0.7809	0.8249
	0.8690	0.9131	0.9572	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000

Transect XS-L-6

Area:					
	0.0005	0.0019	0.0043	0.0076	0.0118
	0.0170	0.0232	0.0305	0.0390	0.0487
	0.0595	0.0715	0.0847	0.0990	0.1145
	0.1312	0.1491	0.1682	0.1884	0.2098
	0.2323	0.2561	0.2810	0.3071	0.3338
	0.3604	0.3871	0.4137	0.4404	0.4670
	0.4937	0.5203	0.5470	0.5736	0.6003
	0.6269	0.6536	0.6802	0.7069	0.7335
	0.7602	0.7868	0.8135	0.8401	0.8668
	0.8934	0.9201	0.9467	0.9734	1.0000
Hrad:					
	0.0139	0.0278	0.0418	0.0557	0.0696
	0.0835	0.0963	0.1080	0.1202	0.1329
	0.1459	0.1591	0.1724	0.1858	0.1994
	0.2130	0.2267	0.2404	0.2542	0.2680
	0.2818	0.2957	0.3095	0.3238	0.3512
	0.3784	0.4055	0.4326	0.4595	0.4863
	0.5130	0.5396	0.5660	0.5924	0.6187
	0.6448	0.6708	0.6968	0.7226	0.7483
	0.7740	0.7995	0.8249	0.8502	0.8754
	0.9005	0.9256	0.9505	0.9753	1.0000
Width:					
	0.0355	0.0711	0.1066	0.1422	0.1777

0.2132	0.2520	0.2961	0.3402	0.3842
0.4283	0.4724	0.5164	0.5605	0.6046
0.6487	0.6927	0.7368	0.7809	0.8249
0.8690	0.9131	0.9572	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000

Transect XS-L-7

Area:

0.0005	0.0019	0.0043	0.0076	0.0118
0.0170	0.0232	0.0305	0.0390	0.0487
0.0595	0.0715	0.0847	0.0990	0.1145
0.1312	0.1491	0.1682	0.1884	0.2098
0.2323	0.2561	0.2810	0.3071	0.3338
0.3604	0.3871	0.4137	0.4404	0.4670
0.4937	0.5203	0.5470	0.5736	0.6003
0.6269	0.6536	0.6802	0.7069	0.7335
0.7602	0.7868	0.8135	0.8401	0.8668
0.8934	0.9201	0.9467	0.9734	1.0000

Hrad:

0.0139	0.0278	0.0418	0.0557	0.0696
0.0835	0.0963	0.1080	0.1202	0.1329
0.1459	0.1591	0.1724	0.1858	0.1994
0.2130	0.2267	0.2404	0.2542	0.2680
0.2818	0.2957	0.3095	0.3238	0.3512
0.3784	0.4055	0.4326	0.4595	0.4863
0.5130	0.5396	0.5660	0.5924	0.6187
0.6448	0.6708	0.6968	0.7226	0.7483
0.7740	0.7995	0.8249	0.8502	0.8754
0.9005	0.9256	0.9505	0.9753	1.0000

Width:

0.0355	0.0711	0.1066	0.1422	0.1777
0.2132	0.2520	0.2961	0.3402	0.3842
0.4283	0.4724	0.5164	0.5605	0.6046
0.6487	0.6927	0.7368	0.7809	0.8249
0.8690	0.9131	0.9572	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000

Transect XS-L-8

Area:

0.0005	0.0019	0.0043	0.0076	0.0118
0.0170	0.0232	0.0305	0.0390	0.0487
0.0595	0.0715	0.0847	0.0990	0.1145
0.1312	0.1491	0.1682	0.1884	0.2098
0.2323	0.2561	0.2810	0.3071	0.3338
0.3604	0.3871	0.4137	0.4404	0.4670
0.4937	0.5203	0.5470	0.5736	0.6003

	0.6269	0.6536	0.6802	0.7069	0.7335
	0.7602	0.7868	0.8135	0.8401	0.8668
	0.8934	0.9201	0.9467	0.9734	1.0000
Hrad:					
	0.0139	0.0278	0.0418	0.0557	0.0696
	0.0835	0.0963	0.1080	0.1202	0.1329
	0.1459	0.1591	0.1724	0.1858	0.1994
	0.2130	0.2267	0.2404	0.2542	0.2680
	0.2818	0.2957	0.3095	0.3238	0.3512
	0.3784	0.4055	0.4326	0.4595	0.4863
	0.5130	0.5396	0.5660	0.5924	0.6187
	0.6448	0.6708	0.6968	0.7226	0.7483
	0.7740	0.7995	0.8249	0.8502	0.8754
	0.9005	0.9256	0.9505	0.9753	1.0000
Width:					
	0.0355	0.0711	0.1066	0.1422	0.1777
	0.2132	0.2520	0.2961	0.3402	0.3842
	0.4283	0.4724	0.5164	0.5605	0.6046
	0.6487	0.6927	0.7368	0.7809	0.8249
	0.8690	0.9131	0.9572	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000
	1.0000	1.0000	1.0000	1.0000	1.0000

Transect XS-L-Pipe - (26)

Area:	0.0005	0.0019	0.0043	0.0076	0.0118
	0.0170	0.0232	0.0305	0.0390	0.0487
	0.0595	0.0715	0.0847	0.0990	0.1145
	0.1312	0.1491	0.1682	0.1884	0.2098
	0.2323	0.2561	0.2810	0.3071	0.3338
	0.3604	0.3871	0.4137	0.4404	0.4670
	0.4937	0.5203	0.5470	0.5736	0.6003
	0.6269	0.6536	0.6802	0.7069	0.7335
	0.7602	0.7868	0.8135	0.8401	0.8668
	0.8934	0.9201	0.9467	0.9734	1.0000
Hrad:					
	0.0139	0.0278	0.0418	0.0557	0.0696
	0.0835	0.0963	0.1080	0.1202	0.1329
	0.1459	0.1591	0.1724	0.1858	0.1994
	0.2130	0.2267	0.2404	0.2542	0.2680
	0.2818	0.2957	0.3095	0.3238	0.3512
	0.3784	0.4055	0.4326	0.4595	0.4863
	0.5130	0.5396	0.5660	0.5924	0.6187
	0.6448	0.6708	0.6968	0.7226	0.7483
	0.7740	0.7995	0.8249	0.8502	0.8754
	0.9005	0.9256	0.9505	0.9753	1.0000
Width:					
	0.0355	0.0711	0.1066	0.1422	0.1777
	0.2132	0.2520	0.2961	0.3402	0.3842
	0.4283	0.4724	0.5164	0.5605	0.6046
	0.6487	0.6927	0.7368	0.7809	0.8249

0.8690	0.9131	0.9572	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000

 NOTE: The summary statistics displayed in this report are
 based on results found at every computational time step,
 not just on results from each reporting time step.

Analysis Options

Flow Units CFS

Process Models:

Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES
 Ponding Allowed YES
 Water Quality NO
 Infiltration Method CURVE_NUMBER
 Flow Routing Method DYNWAVE
 Starting Date 02/20/2017 00:00:00
 Ending Date 02/21/2017 00:00:00
 Antecedent Dry Days 0.0
 Report Time Step 00:06:00
 Wet Time Step 00:01:00
 Dry Time Step 01:00:00
 Routing Time Step 30.00 sec
 Variable Time Step YES
 Maximum Trials 8
 Number of Threads 1
 Head Tolerance 0.005000 ft

Control Actions Taken

*****	Volume	Depth
Runoff Quantity Continuity	acre-feet	inches
*****	-----	-----
Total Precipitation	2.543	2.477
Evaporation Loss	0.000	0.000
Infiltration Loss	1.178	1.147
Surface Runoff	1.360	1.325
Final Storage	0.017	0.017

Continuity Error (%) -0.478

*****	Volume	Volume
Flow Routing Continuity	acre-feet	10^6 gal
*****	-----	-----
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	1.353	0.441
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	1.350	0.440
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.005	0.002
Continuity Error (%)	-0.175	

Time-Step Critical Elements

Link PIPE-0 (29.08%)
Link PIPE-4 (3.53%)

Highest Flow Instability Indexes

Link PIPE-8 (9)
Link PIPE-7 (8)
Link PIPE-0 (4)
Link PIPE-4.5 (4)
Link PIPE-1 (4)

Routing Time Step Summary

Minimum Time Step : 1.98 sec
Average Time Step : 21.17 sec
Maximum Time Step : 30.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.03
Percent Not Converging : 0.05

Subcatchment Runoff Summary

Total Runoff in	Total Runoff Subcatchment 10^6 gal	Peak Runoff CFS	Total Runoff Precip Coeff in	Total Runon in	Total Evap in	Total Infil in
Basin_5			2.48	0.00	0.00	0.83
1.64	0.13	9.73	0.660			
Basin_4			2.48	0.00	0.00	1.24
1.25	0.03	4.65	0.504			
Basin_3			2.48	0.00	0.00	1.24
1.24	0.05	5.26	0.499			
Basin_2			2.48	0.00	0.00	1.24
1.22	0.09	6.99	0.494			
Basin_1B			2.48	0.00	0.00	1.24
1.23	0.07	6.00	0.496			
Basin_1A			2.48	0.00	0.00	1.24
1.23	0.07	6.02	0.496			

Node Depth Summary

Reported Max Depth Node Feet	Type	Average Depth Feet	Maximum Depth Feet	Maximum HGL Feet	Time of Max Occurrence days hr:min
MH-A	JUNCTION	0.22	1.16	4949.71	0 11:55
0.56					
MH-B	JUNCTION	0.23	1.25	4949.43	0 11:55
0.62					
MH-C	JUNCTION	0.27	1.21	4948.84	0 11:56
0.77					
MH-D	JUNCTION	0.30	1.28	4947.88	0 11:57
0.90					
MH-D2	JUNCTION	0.24	1.16	4947.43	0 11:57
0.80					
MH-E	JUNCTION	0.42	1.63	4947.31	0 11:57
1.33					
MH-F	JUNCTION	0.40	1.48	4947.08	0 11:57
1.25					
MH-G	JUNCTION	0.36	1.22	4946.47	0 12:04
1.12					
MH-H	JUNCTION	0.30	1.16	4945.41	0 12:04
1.11					

MH-I	JUNCTION	0.32	1.16	4944.93	0	12:04
1.12						
ISLETA_DRAIN	OUTFALL	0.26	0.86	4944.29	0	12:04
0.83						

Node Inflow Summary

Lateral	Total	Flow	Maximum	Maximum		
Inflow	Inflow	Balance	Lateral	Total	Time of Max	
Volume	Volume	Error	Inflow	Inflow	Occurrence	
Node	Node	Type	CFS	CFS	days hr:min	10^6
gal	10^6 gal	Percent				
MH-A		JUNCTION	9.73	9.73	0 11:55	
0.127	0.126	0.303				
MH-B		JUNCTION	4.65	13.58	0 11:55	
0.0334	0.159	-0.484				
MH-C		JUNCTION	5.26	15.89	0 11:55	
0.0486	0.209	0.136				
MH-D		JUNCTION	6.99	17.24	0 11:56	
0.0938	0.302	0.088				
MH-D2		JUNCTION	0.00	15.92	0 11:57	
0	0.302	0.014				
MH-E		JUNCTION	0.00	15.62	0 11:57	
0	0.302	0.045				
MH-F		JUNCTION	6.00	16.88	0 11:57	
0.0693	0.37	0.057				
MH-G		JUNCTION	6.02	18.09	0 11:57	
0.0703	0.44	0.061				
MH-H		JUNCTION	0.00	17.96	0 12:04	
0	0.44	0.037				
MH-I		JUNCTION	0.00	17.90	0 12:04	
0	0.44	0.003				
ISLETA_DRAIN		OUTFALL	0.00	17.90	0 12:04	
0	0.44	0.000				

Node Surge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow CFS	Max Flow CFS	Total Volume 10^6 gal
ISLETA_DRAIN	92.77	3.20	17.90	0.440
System	92.77	3.20	17.90	0.440

Link Flow Summary

Max/ Full Link Depth	Type	Maximum Flow CFS	Time of Max Occurrence days hr:min	Maximum Veloc ft/sec	Max/ Full Flow
PIPE-0 0.42	CONDUIT	17.90	0 12:04	6.38	0.24
PIPE-1 0.48	CONDUIT	17.90	0 12:04	5.05	0.20
PIPE-2 0.49	CONDUIT	17.96	0 12:04	4.93	0.41
PIPE-3 0.56	CONDUIT	16.90	0 11:57	3.93	0.55
PIPE-4 0.65	CONDUIT	15.50	0 11:57	2.97	0.50
PIPE-4.5 0.58	CONDUIT	15.62	0 11:57	3.56	0.22
PIPE-5 0.50	CONDUIT	15.92	0 11:57	4.47	0.35
PIPE-6 0.61	CONDUIT	12.81	0 11:56	3.85	0.61
PIPE-7 0.58	CONDUIT	12.56	0 11:55	4.06	0.55
PIPE-8 0.73	CONDUIT	9.47	0 11:55	3.61	0.68

Flow Classification Summary

-----			----- Fraction of Time in Flow						
-----			Adjusted						
Class -----			/Actual	Up	Down	Sub	Sup	Up	Down
Norm	Inlet								
Conduit			Length	Dry	Dry	Dry	Crit	Crit	Crit
Ltd	Ctrl								
-----			-----						
PIPE-0			1.00	0.02	0.04	0.00	0.06	0.88	0.00
0.00	0.00								
PIPE-1			1.00	0.02	0.00	0.00	0.22	0.76	0.00
0.18	0.00								
PIPE-2			1.00	0.02	0.00	0.00	0.59	0.39	0.00
0.00	0.00								
PIPE-3			1.00	0.02	0.00	0.00	0.98	0.00	0.00
0.19	0.00								
PIPE-4			1.00	0.02	0.00	0.00	0.98	0.00	0.00
0.00	0.00								
PIPE-4.5			1.00	0.02	0.00	0.00	0.98	0.00	0.00
0.95	0.00								
PIPE-5			1.00	0.02	0.00	0.00	0.66	0.32	0.00
0.00	0.00								
PIPE-6			1.00	0.02	0.00	0.00	0.98	0.00	0.00
0.80	0.00								
PIPE-7			1.00	0.01	0.00	0.00	0.98	0.00	0.00
0.95	0.00								
PIPE-8			1.00	0.01	0.00	0.00	0.93	0.00	0.06
0.00	0.00								

Conduit Surcharge Summary

No conduits were surcharged.

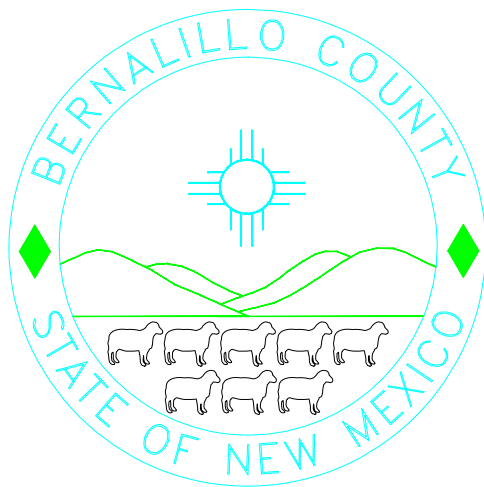
Analysis begun on: Tue Feb 13 11:44:00 2018
Analysis ended on: Tue Feb 13 11:44:00 2018
Total elapsed time: < 1 sec

ATTACHMENT B

POST-PROJECT CONDITIONS WORK MAP

CYPRESS DRIVE STORM DRAIN

POST-PROJECT CONDITIONS WORK MAP



I, DAVID J. COOPER, A LICENSED PROFESSIONAL ENGINEER, DO
HEREBY CERTIFY THAT THESE DRAWINGS WERE DEVELOPED BY ME OR
UNDER MY DIRECT SUPERVISION AND THAT THEY ARE ACCURATE AND
CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

David Cooper

February 13, 2018

SIGNATURE

DATE



LEGEND

EXISTING LEGEND	
	= OVERHEAD UTILITY LINE
	= SEWER MANHOLE
	= WATER METER
	= WATER VALVE
	= SEWER CLEANOUT
	= ELECTRIC RISER
	= DRAINAGE MANHOLE
	= TELEPHONE RISER
	= POWER POLE
	= FIRE HYDRANT
	SANITARY MANHOLE & LINE
	FENCE
	UNDERGROUND TELEPHONE LINE
	CABLE TELEVISION
	FIBER OPTIC LINE
	WATER LINE
	GAS LINE

PROPOSED LEGEND	
	RIGHT OF WAY
	MOUNTABLE CURB & GUTTER
	STORM DRAIN MANHOLE & LINE
	DOUBLE D INLET
	SINGLE D INLET
	WATER LINE
	FENCE
	PROPOSED STORM DRAIN PIPE
	EXISTING STORM DRAIN PIPE

SHEET INDEX

Number	Title
1	COVER
2	SPECIAL FLOOD HAZARD AREA MAP
3	PLAN & PROFILE STA. 50+20 TO 54+10
4	PLAN & PROFILE STA. 54+10 TO 58+00
5	PLAN & PROFILE STA. 58+00 TO 61+90
6	PLAN & PROFILE STA. 61+90 TO 65+80
7	PLAN & PROFILE STA. 65+80 TO 69+75



I:\Projects\Bernalillo Count\Cypress Drive Ph II\17.0 LOMR\Response to Comments\11131713 Work Map\CypressDriveWorkMap.3A.dwg waters Plotted: February 13, 2018 - 2:44pm Layout: 2 SFHA MAP

LEGEND

- 4950----- MAJOR CONTOUR
-----4949----- MINOR CONTOUR
-  SFHA ZONE X
-  SFHA ZONE AH

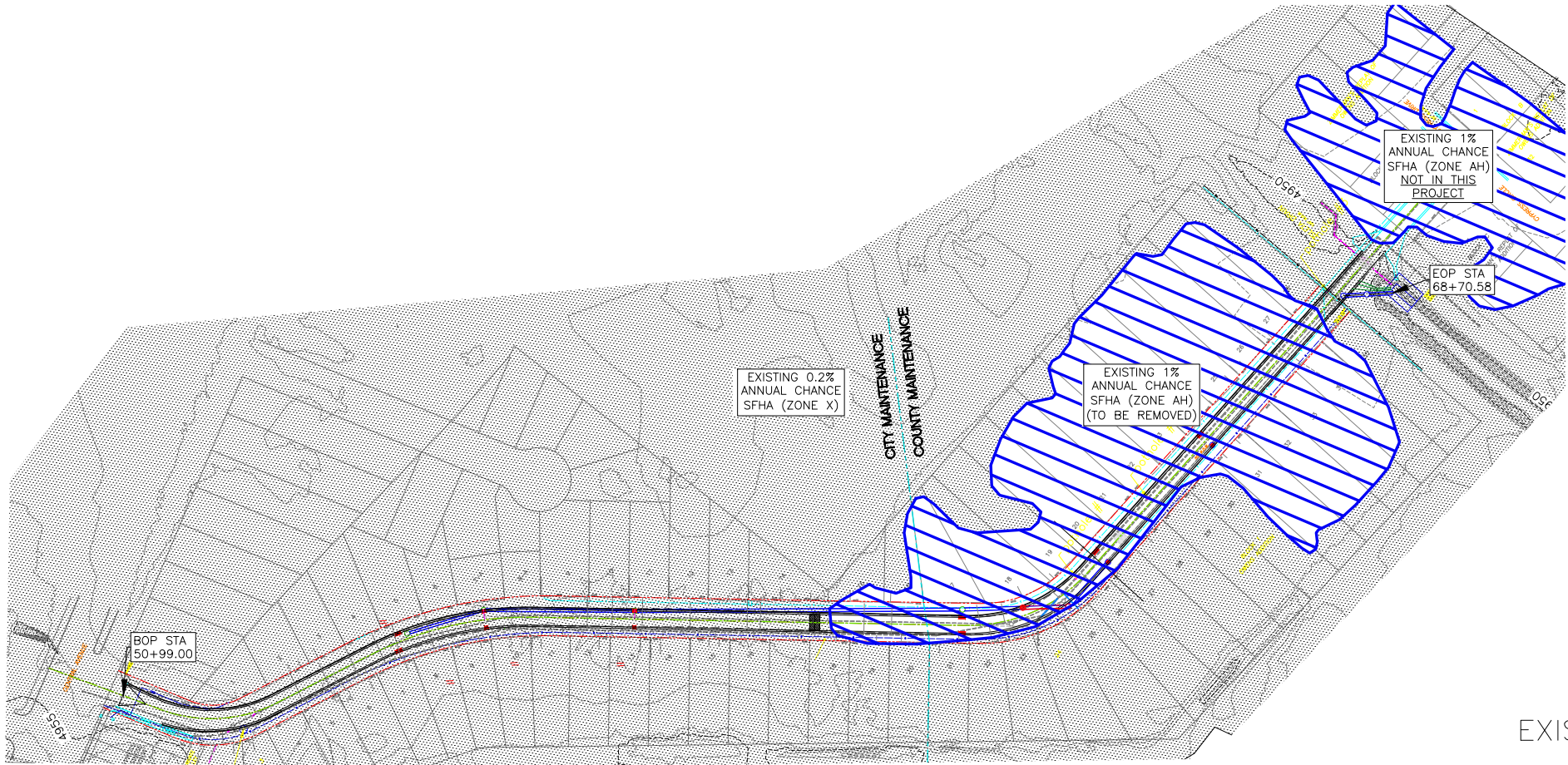
TOPOGRAPHY ORIGINATOR: USACE, ALBUQUERQUE DISTRICT
TITLE: DIGITAL MAPPING - BERNALILLO COUNTY, NEW MEXICO

PUBLICATION INFORMATION:
PUBLICATION PLACE: BOHANNAN HUSTON, INC., ALBUQUERQUE, NM
PUBLISHER: USACE, ALBUQUERQUE DISTRICT

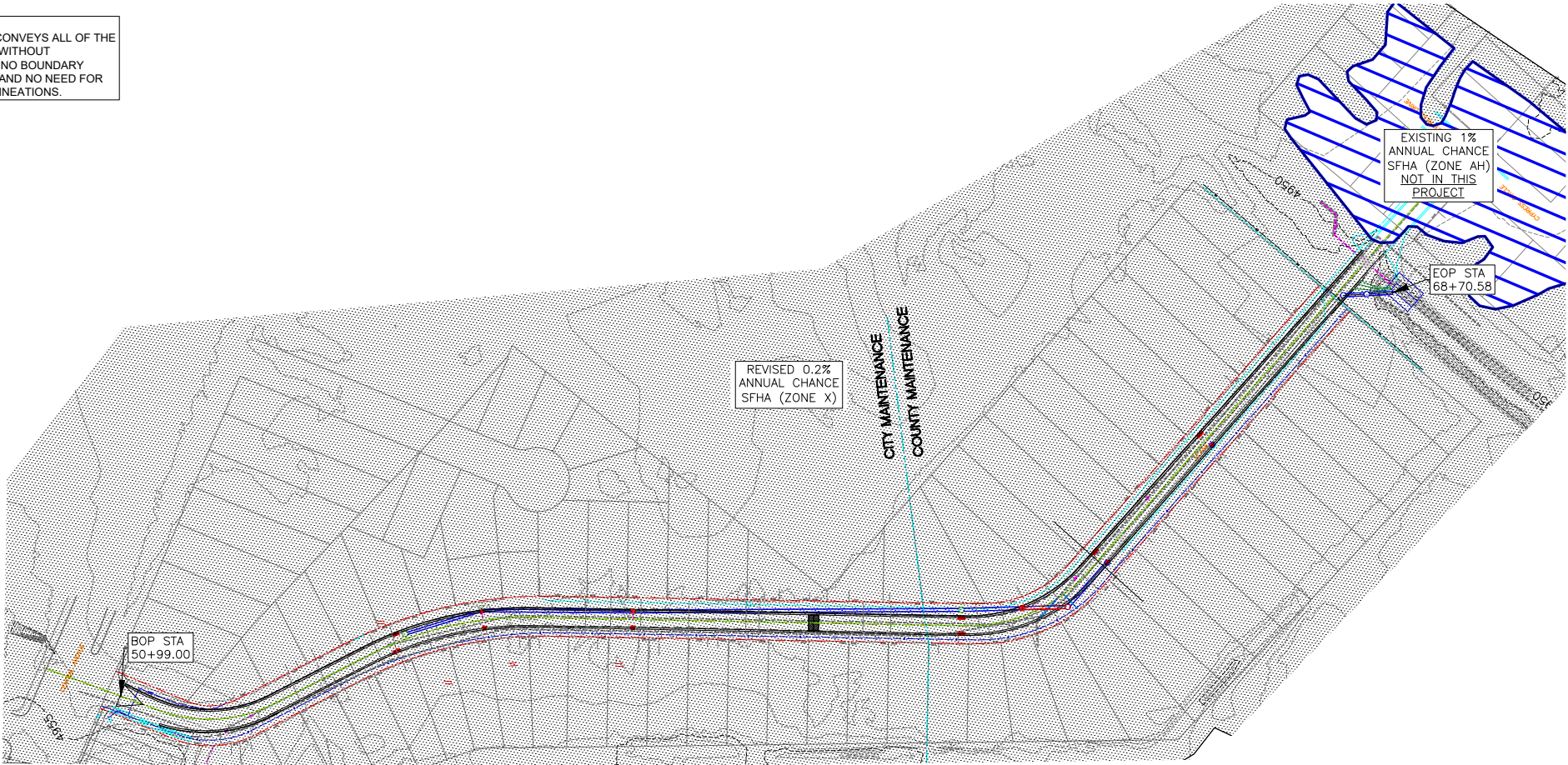
ALL DATA ARE GEO-REFERENCED TO THE NEW MEXICO STATE PLANE
COORDINATE GRID SYSTEM, CENTRAL ZONE, NAD83, NAVD88.

THE BALD EARTH DATA IS DERIVED FROM AN AERIAL LIDAR SURVEY
CONDUCTED AT 3M POSTINGS OVER THE MONTH OF AUGUST, 1999.

NOTE:
THE CYPRESS DRIVE STORM DRAIN CONVEYS ALL OF THE
1-PERCENT ANNUAL CHANCE EVENT WITHOUT
OVERTOPPING THE INLETS, LEAVING NO BOUNDARY
DELINEATIONS, NO LOGICAL TIE-INS, AND NO NEED FOR
TOPOGRAPHY TO SUPPORT THE DELINEATIONS.



EXISTING CONDITIONS



POST-PROJECT CONDITIONS



BERNALILLO COUNTY

CYPRESS DRIVE STORM DRAIN LOMR
SPECIAL FLOOD HAZARD AREA MAP

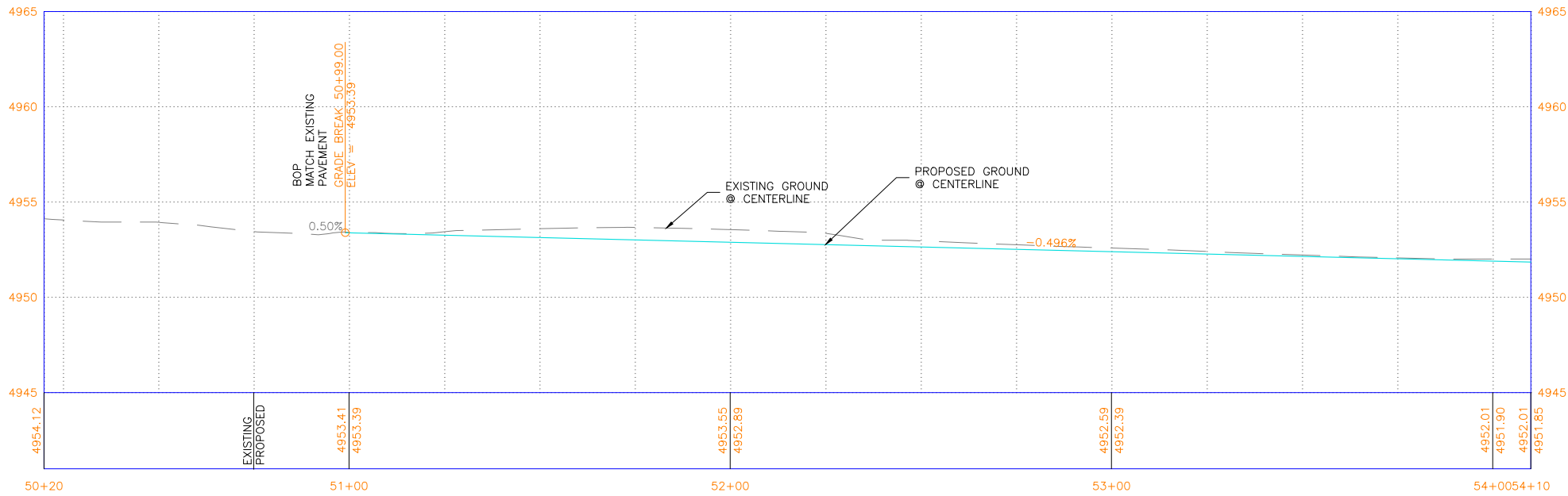
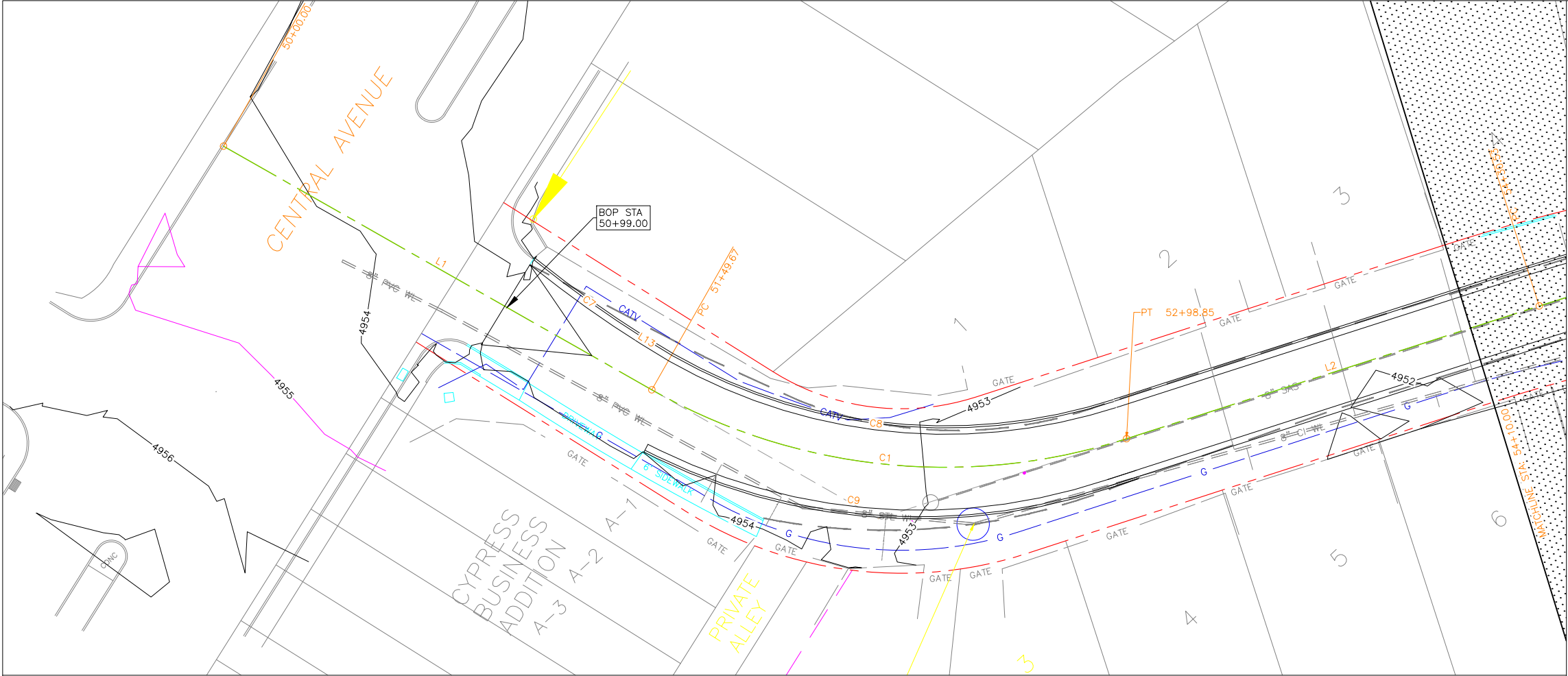
Design Review Committee		City Engineer Approval		Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
County Project No. 20160006	City Project No. 601791	Zone Map No. K-11/12		Sheet 2	Of 7	

SURVEY INFORMATION		BENCH MARKS		AS-BUILT INFORMATION	
NO.	FIELD NOTES	NO.	DATE	CONTRACTOR	DATE
	BY			STARTED BY	DATE
				INSPECTOR'S	DATE
				ACCEPTANCE BY	DATE
				VERIFICATION BY	DATE
				DRAWINGS	DATE
				CORRECTED BY	DATE
MICRO-FILM INFORMATION		RECORDED BY		NO.	



ENGINEER'S SEAL		REVISIONS		REMARKS	
NO.	DATE	By	DESIGN	DATE: FEB 2018	DATE: FEB 2018
				Designed By: MDS	Checked By: SC
				Drawn By: CP, RW	

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NOTES ON PROJECT TOPOGRAPHY
THE CYPRESS DRIVE STORM DRAIN PROJECT WAS DESIGNED USING CURB-TO-CURB TOPOGRAPHY SUPPLIED BY ALPHA PRO SURVEYING. BEARINGS ARE BASED ON GEODETIC NORTH FROM GPS OBSERVATIONS. DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN US FEET. ELEVATIONS ARE BASED ON A.G.R.S. STATION "15-J12". ELEVATION OF STATION = 4965.627 (NAVD 1988 DATUM).

GENERAL NOTES

KEYED NOTES

ENGINEER'S SEAL

REVISIONS

No.	Date	By

REMARKS

DESIGN

DESIGNED BY: MDS

DRAWN BY: CP, RW

CHECKED BY: SC

DATE: FEB 2018

DATE: FEB 2018

DATE: FEB 2018

WESTON SOLUTIONS

BERNALILLO COUNTY

CYPRESS DRIVE STORM DRAIN LOMR
PLAN & PROFILE STA 50+20 TO 54+10

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

County Project No.	City Project No.	Zone Map No.	Sheet	Of
20160006	601791	K-11/12	3	7

AS-BUILT INFORMATION

CONTRACTOR	DATE	SLS	DATE	10-16

BENCH MARKS

DATE	BEARINGS ARE BASED ON GEODETIC NORTH FROM GPS OBSERVATIONS. DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN US FEET. ELEVATIONS ARE BASED ON A.G.R.S. STATION "15-J12". ELEVATION OF STATION = 4965.627 (NAVD 1988 DATUM).

SURVEY INFORMATION

FIELD NOTES	NO.	BY

AS-BUILT INFORMATION

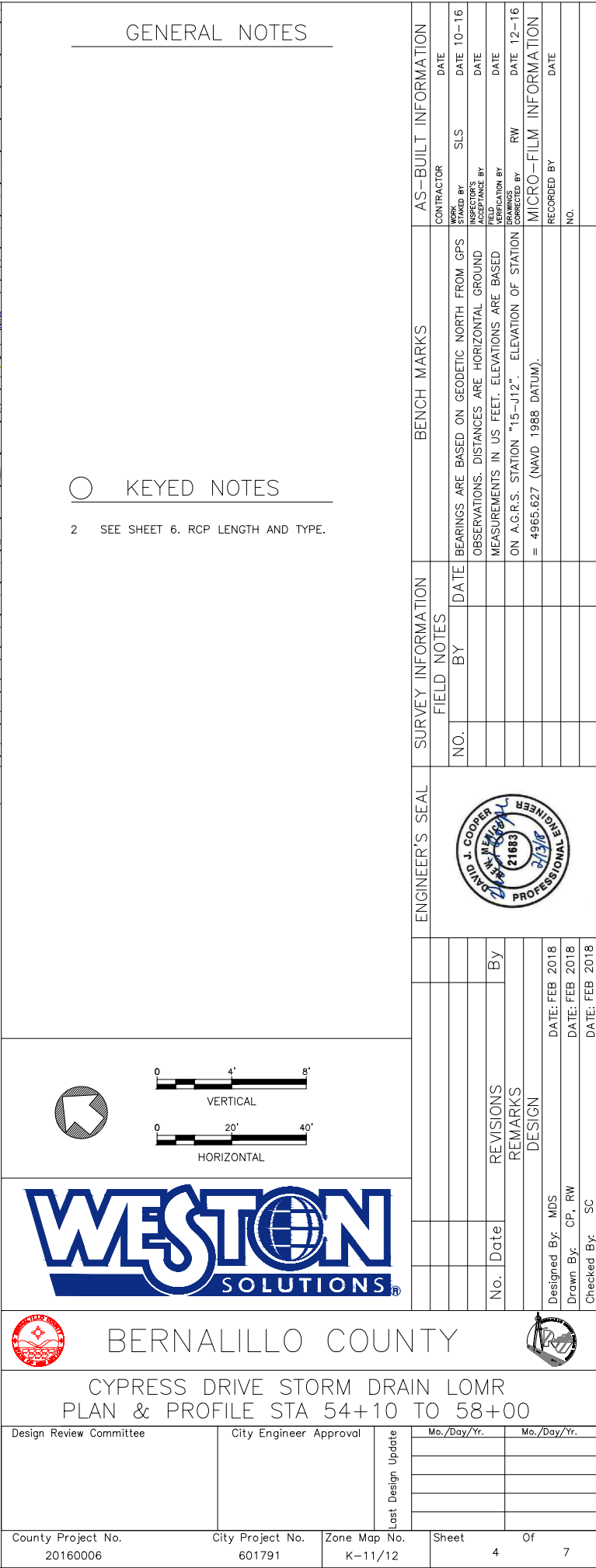
CONTRACTOR	DATE	SLS	DATE	10-16

BENCH MARKS

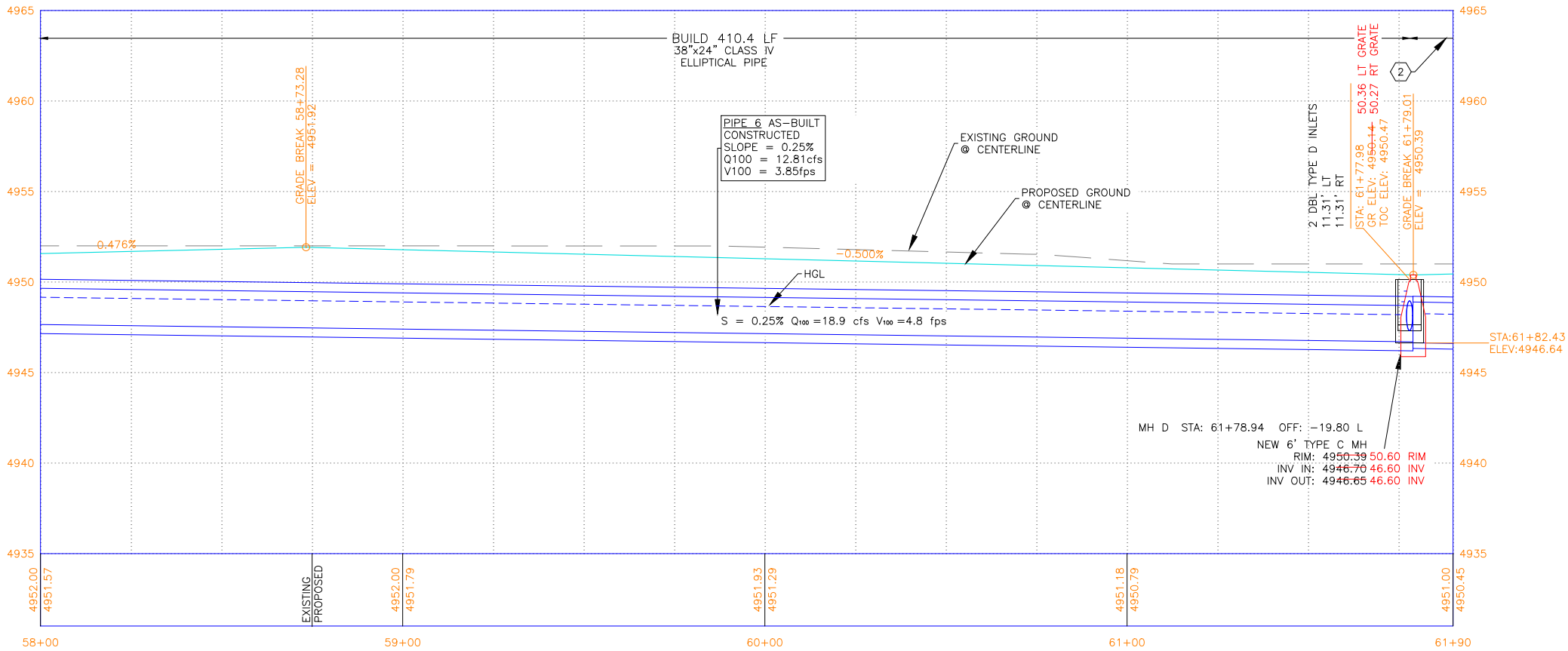
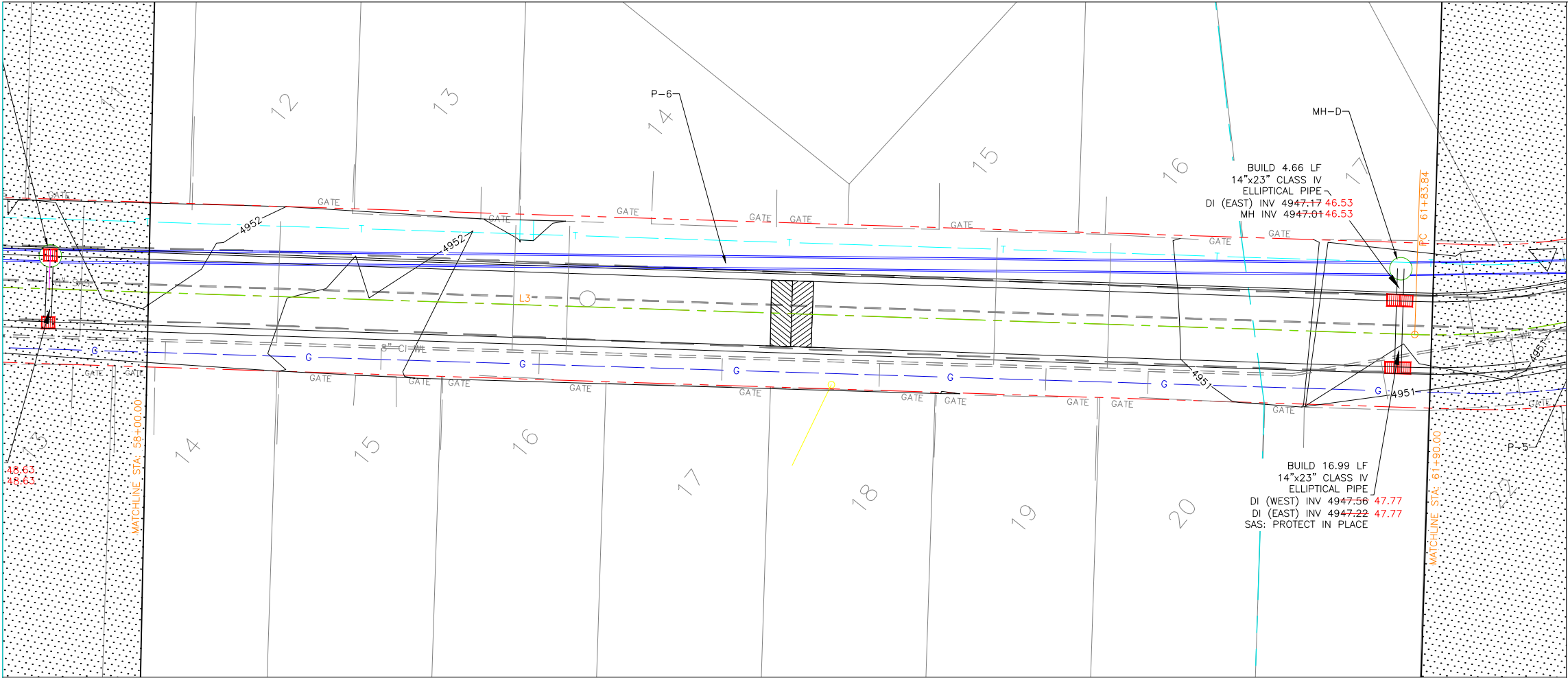
DATE	BEARINGS ARE BASED ON GEODETIC NORTH FROM GPS OBSERVATIONS. DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN US FEET. ELEVATIONS ARE BASED ON A.G.R.S. STATION "15-J12". ELEVATION OF STATION = 4965.627 (NAVD 1988 DATUM).

SURVEY INFORMATION

FIELD NOTES	NO.	BY



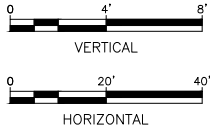
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GENERAL NOTES

KEYED NOTES

2 SEE SHEET 7. FOR RCP LENGTH AND TYPE.



BERNALILLO COUNTY

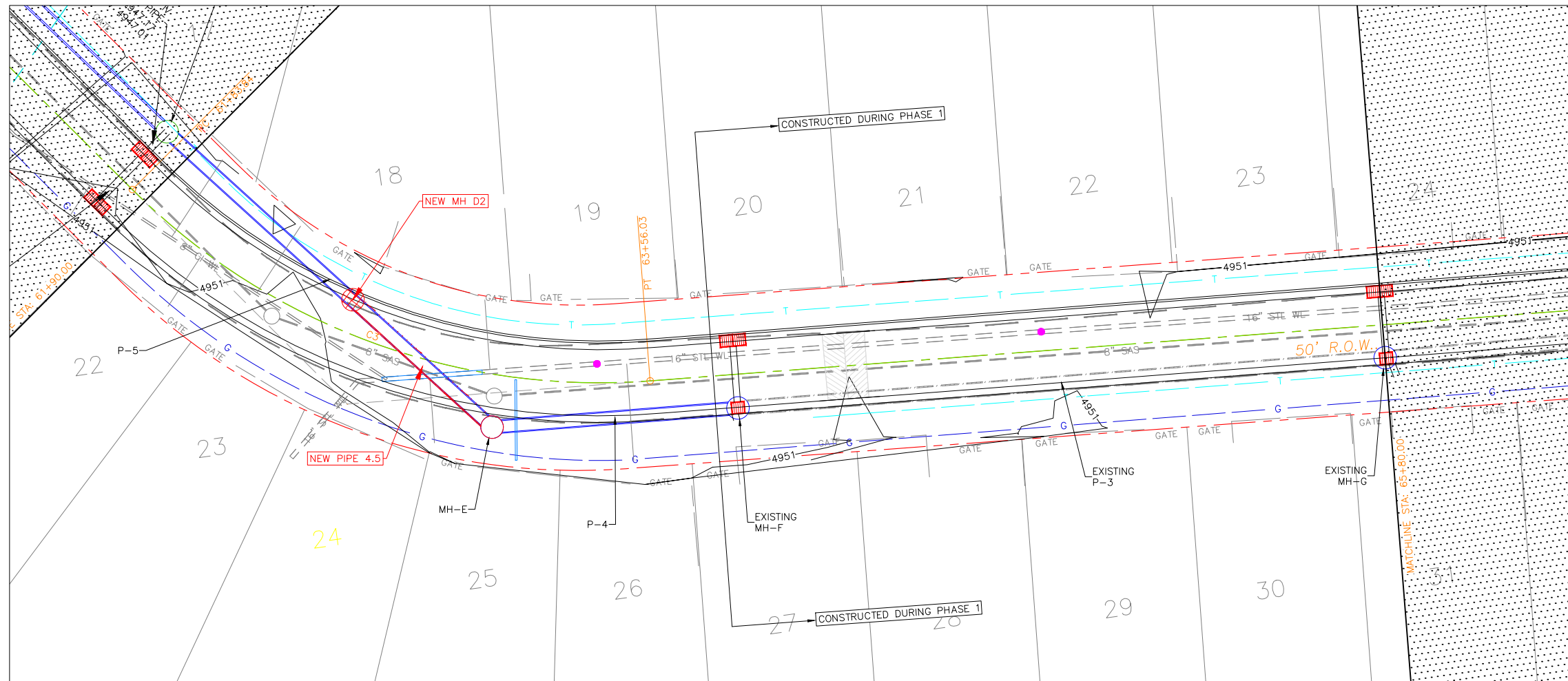
CYPRESS DRIVE STORM DRAIN LOMR PLAN & PROFILE STA 58+00 TO 61+90

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
County Project No. 20160006	City Project No. 601791	Zone Map No. K-11/12	Sheet	Of
			5	7

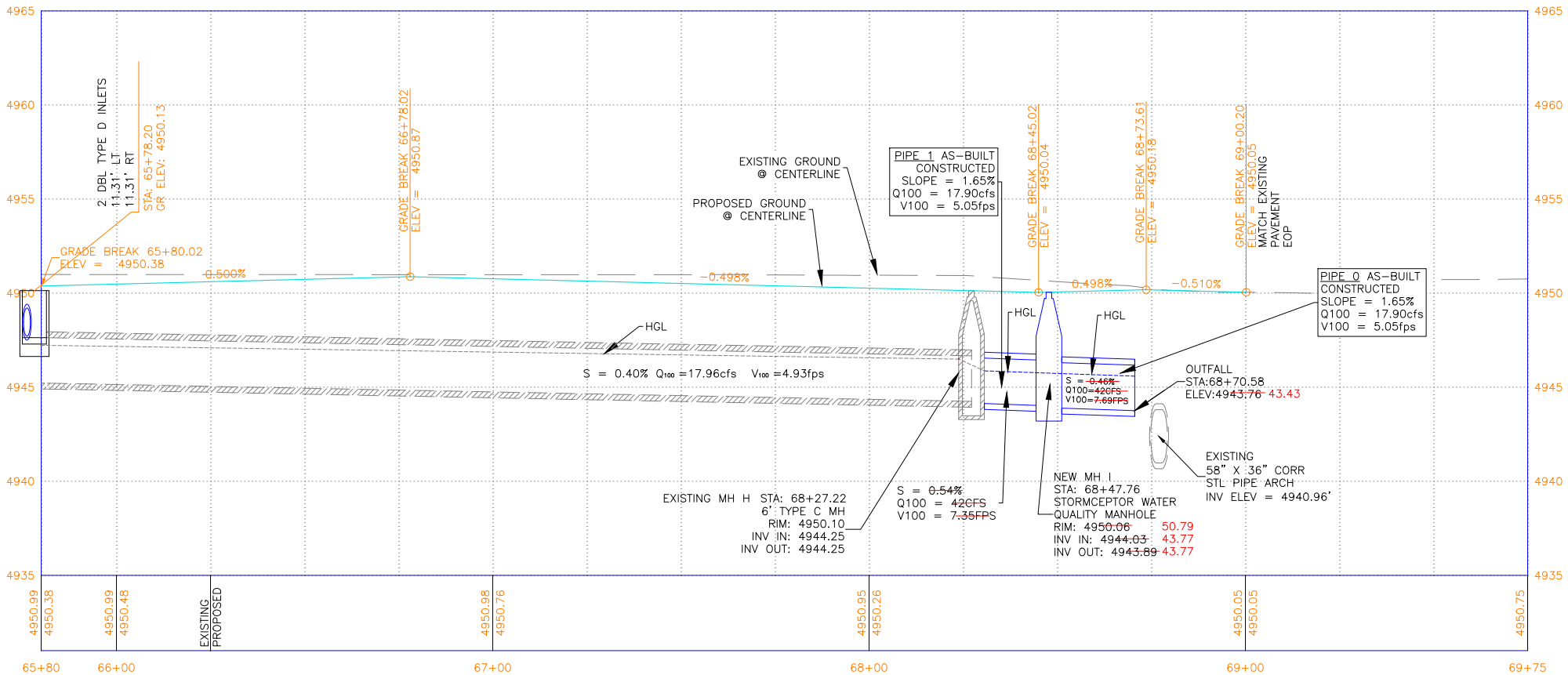
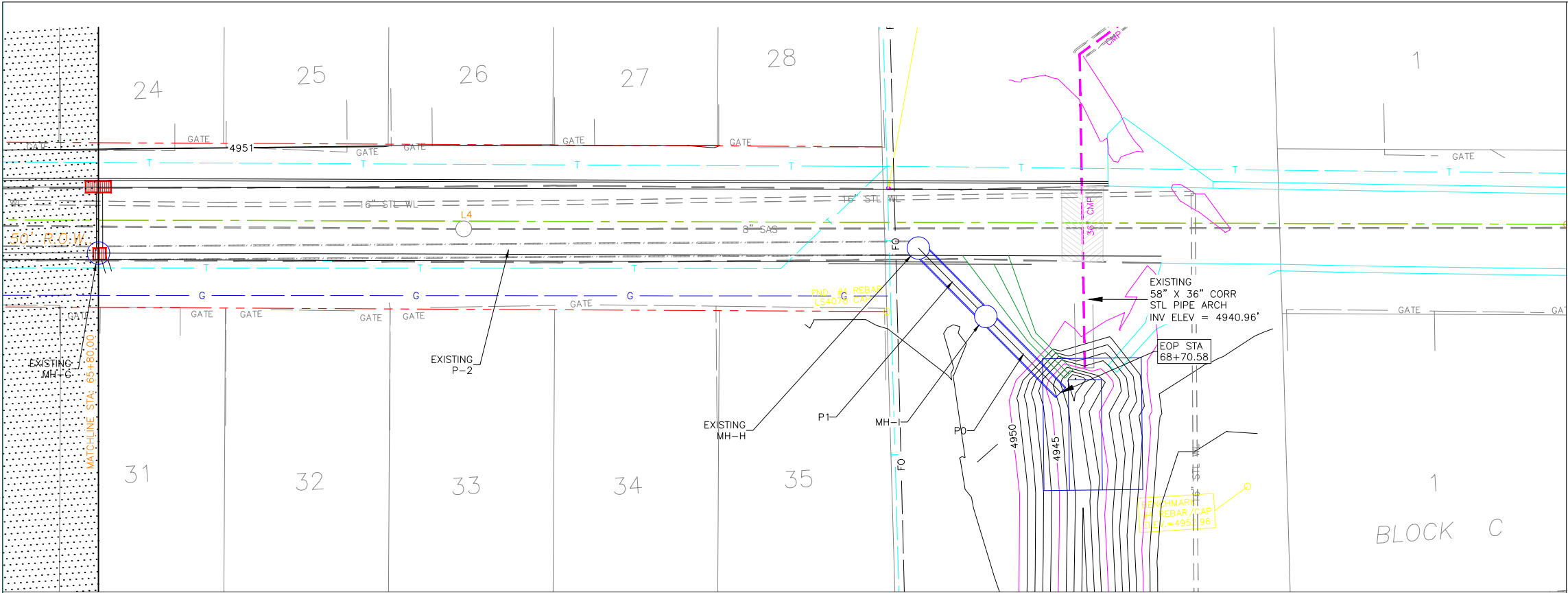
SURVEY INFORMATION		BENCH MARKS		AS-BUILT INFORMATION	
NO.	BY	DATE	GPS	CONTRACTOR	DATE
				INSPECTOR'S	DATE
				ACCEPTANCE BY	DATE
				VERIFICATION BY	DATE
				ON A.G.R.S. STATION "15-J12"	DATE
				ELEVATION OF STATION	DATE
				= 4965.627 (NAVD 1988 DATUM).	DATE
				RECORDED BY	DATE
				NO.	DATE



No.	Date	REVISIONS	By
		REMARKS	
		DESIGN	
		Designed By: MDS	DATE: FEB 2018
		Drawn By: CP, RW	DATE: FEB 2018
		Checked By: SC	DATE: FEB 2018



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GENERAL NOTES

KEYED NOTES

AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		CURRENT CONDITIONS		REVISIONS		REMARKS		DESIGN	
CONTRACTOR	DATE	SLS	DATE	DATE	BY	NO.	SC	1	11/15	No.	Date	By	DATE: FEB 2018	DATE: FEB 2018	DATE: FEB 2018
OBSERVATIONS: DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN US FEET. ELEVATIONS ARE BASED ON A.G.R.S. STATION "15-J12". ELEVATION OF STATION = 4965.627 (NAVD 1988 DATUM).		OBSERVATIONS: DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN US FEET. ELEVATIONS ARE BASED ON A.G.R.S. STATION "15-J12". ELEVATION OF STATION = 4965.627 (NAVD 1988 DATUM).		OBSERVATIONS: DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN US FEET. ELEVATIONS ARE BASED ON A.G.R.S. STATION "15-J12". ELEVATION OF STATION = 4965.627 (NAVD 1988 DATUM).		OBSERVATIONS: DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN US FEET. ELEVATIONS ARE BASED ON A.G.R.S. STATION "15-J12". ELEVATION OF STATION = 4965.627 (NAVD 1988 DATUM).		OBSERVATIONS: DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN US FEET. ELEVATIONS ARE BASED ON A.G.R.S. STATION "15-J12". ELEVATION OF STATION = 4965.627 (NAVD 1988 DATUM).		OBSERVATIONS: DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN US FEET. ELEVATIONS ARE BASED ON A.G.R.S. STATION "15-J12". ELEVATION OF STATION = 4965.627 (NAVD 1988 DATUM).		OBSERVATIONS: DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN US FEET. ELEVATIONS ARE BASED ON A.G.R.S. STATION "15-J12". ELEVATION OF STATION = 4965.627 (NAVD 1988 DATUM).		OBSERVATIONS: DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN US FEET. ELEVATIONS ARE BASED ON A.G.R.S. STATION "15-J12". ELEVATION OF STATION = 4965.627 (NAVD 1988 DATUM).	

WESTON SOLUTIONS

BERNALILLO COUNTY

CYPRESS DRIVE STORM DRAIN LOMR
PLAN & PROFILE STA 65+80 TO 69+75

Design Review Committee

City Engineer Approval

County Project No. 20160006

City Project No. 601791

Zone Map No. K-11/12

Sheet 7

Of 7