



CITY OF SANTA ROSA

IMPROVEMENT PLANS FOR

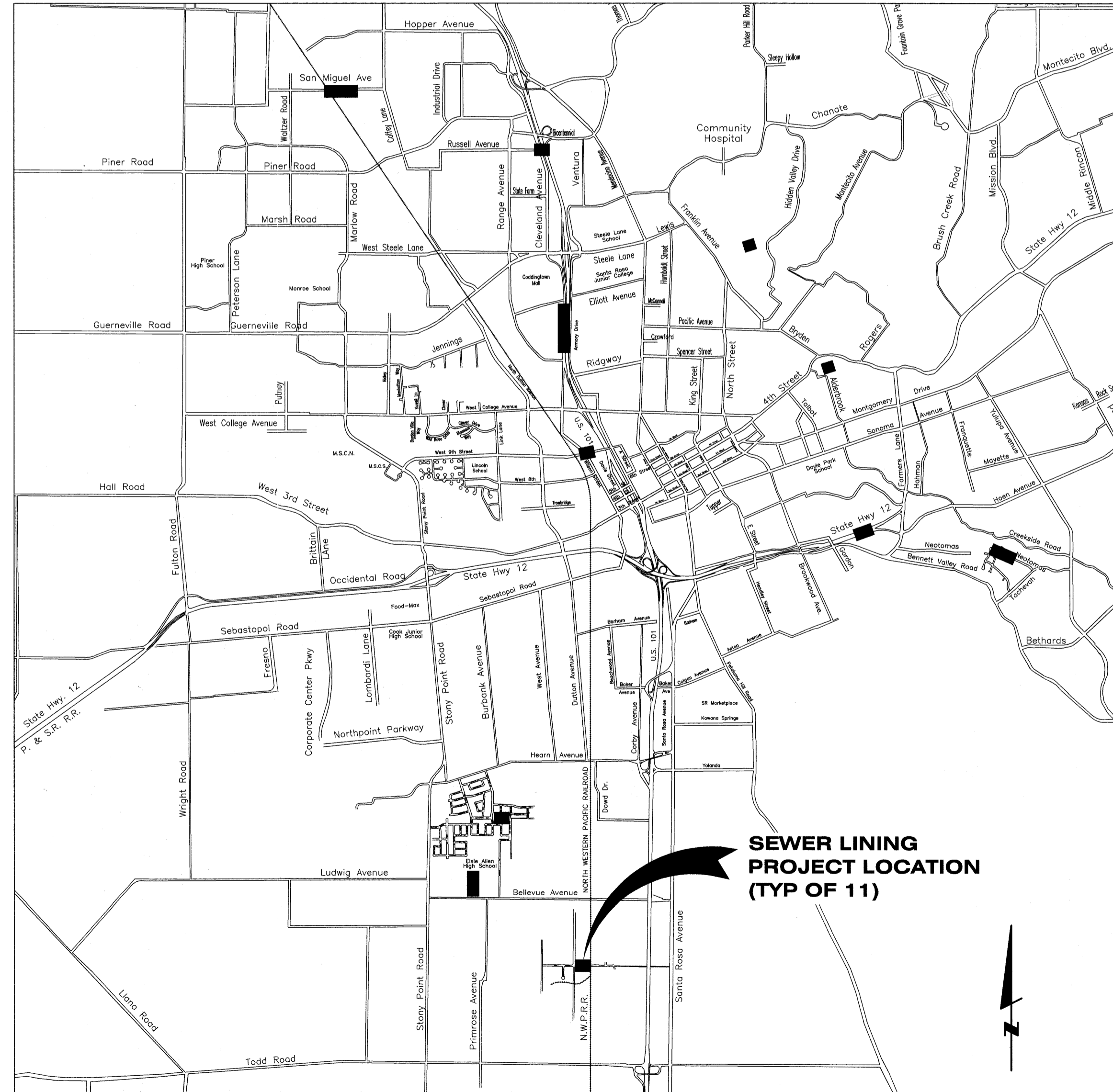
SEWER MAIN LINING, MANHOLE AND LATERAL REHAB

AT VARIOUS LOCATIONS 2016

CONTRACT No. C01944

GENERAL NOTES:

- ALL WORKMANSHIP, MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE CITY OF SANTA ROSA STANDARD PLANS, THE CONSTRUCTION SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, THE SPECIAL PROVISIONS FOR THIS PROJECT AND THE STATE STANDARD SPECIFICATIONS AND STANDARD PLANS. THE CONTRACTOR IS RESPONSIBLE FOR UNDERSTANDING ALL STANDARDS PERTAINING TO THIS PROJECT.
- THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT (USA) AT 1-800-227-2600 NO LESS THAN 2 WORKING DAYS PRIOR TO ANY EXCAVATION FOR MARK OUTS OF EXISTING UNDERGROUND FACILITIES IN ACCORDANCE WITH SECTION 8-1.10 OF THE SPECIAL PROVISIONS.
- THE LOCATIONS OF UNDERGROUND UTILITIES AND OTHER OBSTACLES SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL POTHOLE AND DETERMINE THE EXACT LOCATION OF ALL POTENTIAL CONFLICTS IN ACCORDANCE WITH U.S.A. LAWS AND THESE SPECIAL PROVISIONS AND THE STANDARD SPECIFICATIONS. IF ANY UNMARKED UTILITIES ARE ENCOUNTERED, OR IF UNABLE TO LOCATE A MARKED UTILITY AFTER POT HOLING, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OF THAT UTILITY AND THE ENGINEER.
- ALL SEWER MANHOLES, MAINLINE CLEANOUTS AND WATER VALVES THAT ARE ON ACTIVE SYSTEMS SHALL BE ACCESSIBLE TO CITY PERSONNEL AT ALL TIMES AND SHALL BE BROUGHT TO GRADE WITHIN 48 HOURS OF PAVING.
- THE CONTRACTOR SHALL PROTECT AND PRESERVE CITY MONUMENTS. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER 10 WORKING DAYS IN ADVANCE FOR REFERENCING OF EXISTING MONUMENTS TO BE DISTURBED. THE CONTRACTOR SHALL RECONSTRUCT DISTURBED MONUMENTS IN ACCORDANCE WITH CITY STANDARD 280.
- OVERHEAD UTILITY SERVICE DROPS ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL INVESTIGATE THE SITE AND BE AWARE OF LIMITED CLEARANCES UNDER OVERHEAD UTILITY LINES AND LOW HANGING TREE BRANCHES. THE CONTRACTOR'S TRUCKS AND EXCAVATION EQUIPMENT SHALL BE SIZED SO THAT OVERHEAD WIRES AND TREE BRANCHES ARE NOT DAMAGED.
- ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF AS GENERATED AND AT NO TIME SHALL THE CONTRACTOR PLACE EXCAVATED MATERIAL AT THE WORK SITE.
- THE CONTRACTOR SHALL ONLY REMOVE EXISTING TREES OR SHRUBS AS NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- FOR CLARITY OF EXISTING SUBSURFACE CONDITIONS, NOT ALL CROSSWALKS, STOP BARS, OR EXISTING PAVEMENT MARKINGS ARE SHOWN ON THE PLANS. TRAFFIC STRIPES, RAISED PAVEMENT MARKERS AND PAVEMENT MARKINGS DAMAGED DUE TO THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED PER CITY OF SANTA ROSA TRAFFIC STANDARDS PART III, TRAFFIC MARKINGS. PATCHING OF DAMAGED MARKINGS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL FROM ENGINEERING. ALL DAMAGED RAISED PAVEMENT (NON-REFLECTIVE) MARKERS MUST BE CERAMIC.



LOCATION MAP
NOT TO SCALE

INDEX TO SHEETS

Sheet No.	Title
1.	Cover Sheet
2.	Legend, Abbreviations, and Sheet Layout
3.	Sewer Lining Area 1 - San Miguel Avenue Sewer Lining Area 4 - Ninth Street and Wilson Street
4.	Sewer Lining Area 2 - Russell Avenue at Highway 101 Crossing
5.	Sewer Lining Area 3 - Cleveland Avenue, Edwards Ave to Foley St
6.	Sewer Lining Area 5 - Lone Star Court Sewer Lining Area 6 - Elsie Allen Easement
7.	Sewer Lining Area 7 - W. Robles Ave at Standish Ave
8.	Sewer Lining Area 8 - Alderbrook Drive Easement, Alderbrook Lane Easement, and Alderbrook Lane
9.	Sewer Lining Area 9 - Highway 12 Crossing West of Farmers Lane
10.	Sewer Lining Area 10 - Neotomas Avenue at Lornadell Creek and Lornadell Lane
11.	Sewer Lining Area 11 - Moss Rock Court
12.	Manhole Rehabilitation Area 1, Area 2, Area 4, and Area 6
13.	Manhole Rehabilitation Area 7, Area 10, Area 11, and Area 12
14.	Manhole Rehabilitation Area 13, Area 14, and Area 15
15.	Manhole Rehabilitation Area 3
16.	Details and Existing Manhole Tables

BEFORE EXCAVATING
CALL U.S.A.
UNDERGROUND SERVICE ALERT
800-642-2444
TWO WORKING DAYS BEFORE ALL
PLANNED WORK OPERATIONS



Date	Signature	Dept.	By	Revision	No.	Date
4/19/17	[Signature]					
4/20/17	[Signature]					
4/20/17	[Signature]					
4/21/17	[Signature]					
4/21/17	[Signature]					

SCALE: As Shown SD
DATE: APRIL 2017
DWN BY: PH
CHK BY: PH
APPROVED: Deputy Director - Engineering
By: [Signature] Date: 4/20/17
Colleen Ferguson

CITY OF SANTA ROSA
SEWER MAIN LINING, MANHOLE AND LATERAL
REHAB AT VARIOUS LOCATIONS 2016
COVER SHEET

CONTRACT NO.
C01944
SHEET 1 OF 16
FILE NO. 2017-0002

ABBREVIATIONS

@	AT	MTL	MATERIAL
ACP	ASBESTOS CEMENT PIPE	MAX	MAXIMUM
APN	ASSESSORS PARCEL NUMBER	MH	MANHOLE
AVE	AVENUE	MIN	MINIMUM
		MISC	MISCELLANEOUS
BGS	BELOW GROUND SURFACE	MON	MONUMENT
BLDG	BUILDING		
BP	BYPASS	(N)	NEW
BM	BENCH MARK	N	NORTH
		N/A	NOT ACTIVE
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CCC	CONCENTRIC CONE	NO	NUMBER
CCS	CONCENTRIC SLAB	NTS	NOT TO SCALE
CDF	CONTROLLED DENSITY FILL	NWPRR	NORTHWESTERN PACIFIC RAILROAD NETWORK
CF	CITY FILE		
CIP	CAST IRON PIPE		
CIPML	CURED-IN-PLACE MANHOLE LINING	OC	ON CENTER
CIPP	CURED-IN-PLACE PIPE	OD	OUTSIDE DIAMETER
CLR	CLEAR	OHE	OVERHEAD ELECTRIC
CL	CENTERLINE		
CMP	CORRUGATED METAL PIPE	PCC	PORTLAND CEMENT CONCRETE
CO	CLEANOUT	PL	PROPERTY LINE
CONC	CONCRETE	PROP	PROPERTY
CTR	CENTER	PVC	POLYVINYL CHLORIDE PLASTIC
CULV	CULVERT		
		R, RAD	RADIUS
DEPT	DEPARTMENT	RC	RELATIVE COMPACTION
DET	DETAIL	RCF	REINFORCED CONCRETE PIPE
DI	DROP INLET	RD	ROAD
DIA	DIAMETER	ROW, R/W	RIGHT-OF-WAY
DIP	DUCTILE IRON PIPE	RR	RAILROAD
DOJ	DEPARTMENT OF JUSTICE		
DR	DRIVE	S	SOUTH
DWG	DRAWING	SCH	SCHEDULE
		SCWA	SONOMA COUNTY WATER AGENCY
(E)	EXISTING	SD	STORM DRAIN
E	EAST	SECT	SECTION
EA	EACH	SERV	SERVICE
ECC	ECCENTRIC CONE	SHT	SHEET
ECS	ECCENTRIC SLAB	SIG	SIGNAL
EL	ELEVATION	SLS	SEWER LIFT STATION
EP	EDGE OF PAVEMENT	SMART	SONOMA MARIN AREA RAIL TRANSIT
ESMT	EASEMENT	SPEC	SPECIFICATIONS
EX	EXISTING	SQ	SQUARE
		SS	SANITARY SEWER
FH	FIRE HYDRANT	SSFM	SANITARY SEWER FORCE MAIN
FL	FLOWLINE	SSMH	SANITARY SEWER MANHOLE
FS	FIRE SERVICE	ST	STREET
FT	FEET OR FOOT	STA	STATION
		STD	STANDARD
G	GAS	TC	TOP OF CURB
GS	GROUND SURFACE	T, TEL	TELEPHONE
		TG, T/G	TOP OF GRATE
H, HORIZ	HORIZONTAL	TS	TRAFFIC SIGNAL/SERVICE
HWY	HIGHWAY	TYP	TYPICAL
		UNK	UNKNOWN
IN	INCH	V, VERT	VERTICAL
INV	INVERT	VCP	VITRIFIED CLAY PIPE
		W	WATER, WEST
J/T	JOINT TRENCH	W	WITH
		WM	WATER METER
LAT	LATERAL	WTR	WATER
LF	LINEAR FEET		
LN	LANE		
LONG	LONGITUDINAL		

LEGEND OF SYMBOLS

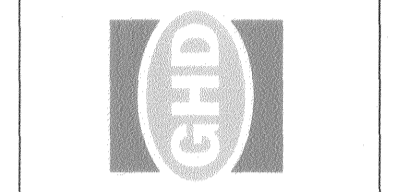
	SEWER REHABILITATION CIPP MH TO MH
	SEWER MANHOLE REHABILITATION
	(E) SANITARY SEWER LINE
	(E) SANITARY SEWER FORCE MAIN
	(E) PRIVATE SEWER
	(E) WATER LINE
	(E) STORM DRAIN
	(E) SANITARY SEWER MANHOLE
	(E) CLEANOUT
	(E) 4" SANITARY SEWER LATERAL
	T-LINER AT WYE
	CUT-IN CLEANOUT; T-LINE TO CLEANOUT
	(E) STORM DRAIN MANHOLE
	(E) FIRE HYDRANT
	(E) WATER VALVE
	(E) JOINT POLE
	PROPERTY LINES (APPROXIMATE)
	CALTRANS OR SMART RIGHT-OF-WAY
	BYPASS MANHOLE LOCATION
	SUGGESTED ABOVE GRADE BYPASS ROUTE
	SUGGESTED BELOW GRADE BYPASS ROUTE

SHEET LAYOUT

NOT TO SCALE



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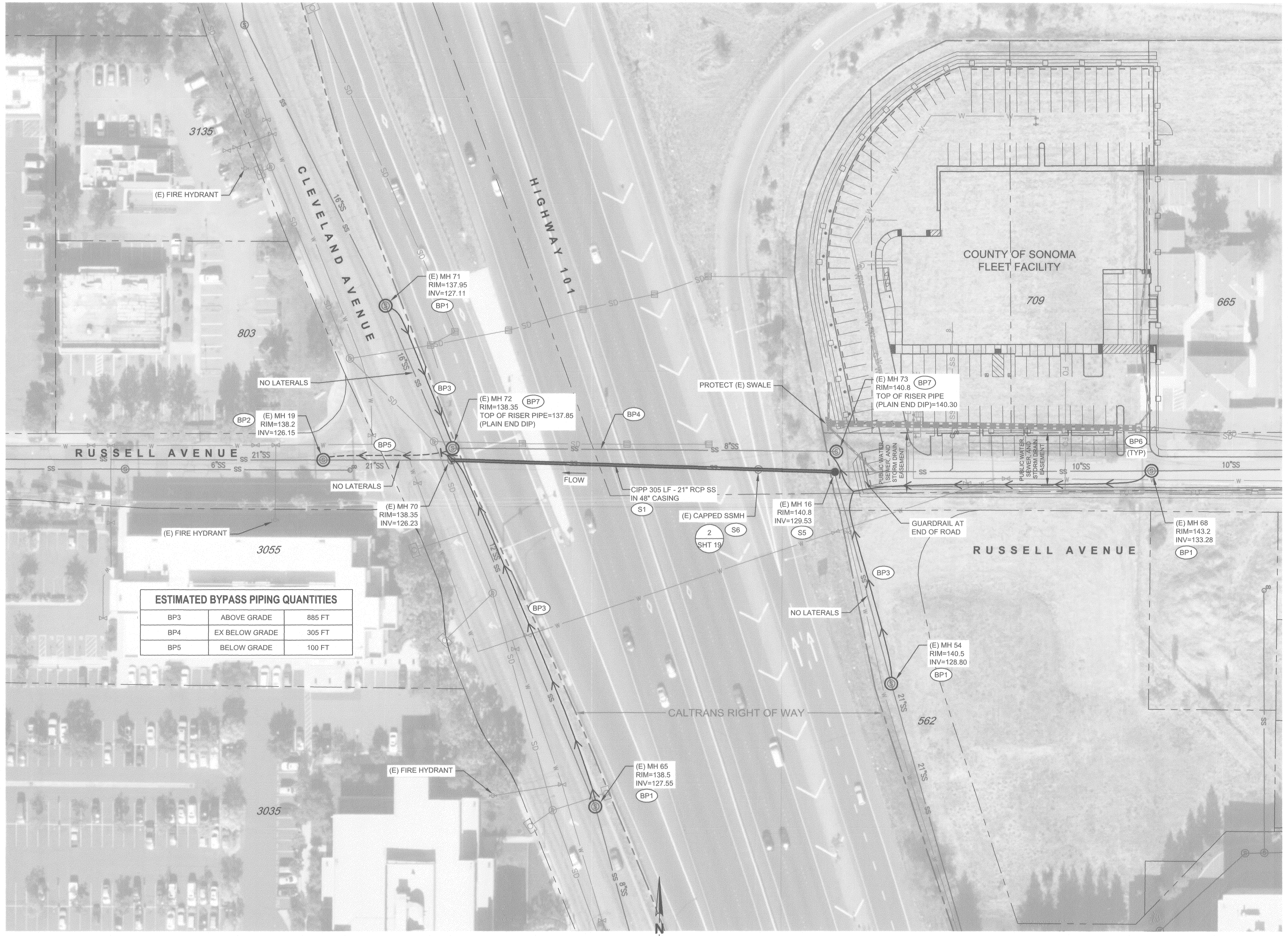
APPROVED: Deputy Director - Engineering
Date: 4/20/2017
By: *[Signature]*
Collector Ferguson

CITY OF SANTA ROSA
SEWER MAIN LINING, MANHOLE AND LATERAL
REHAB AT VARIOUS LOCATIONS 2016
**LEGEND, ABBREVIATIONS
AND SHEET LAYOUT**

CONTRACT NO.
C01944
SHEET 2 OF 16
FILE NO. 2017-0002

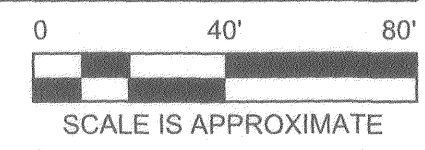
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 Plot Date: 19 April 2017 - 8:12 AM

Plot Date: 19 April 2017 - 8:16 AM
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 Plotted By: Susan Dove



ESTIMATED BYPASS PIPING QUANTITIES		
BP3	ABOVE GRADE	885 FT
BP4	EX BELOW GRADE	305 FT
BP5	BELOW GRADE	100 FT

**SEWER LINING AREA 2
RUSSELL AVENUE AT HIGHWAY 101 CROSSING**



GENERAL SHEET NOTES

- COORDINATE WITH COUNTY OF SONOMA FLEET FACILITY FOR BLOCKING THE LEFT ENTRANCE TO THE PARKING LOT.
- REFER TO SPECIFICATION SECTION A FOR CALTRANS ENCROACHMENT PERMIT NO. 0416-NUS1780.
- UTILIZE EXISTING MH 70 AS THE EXISTING ACCESS POINT FOR CIPP INSTALLATION.

BYPASS NOTES

- BP1 BYPASS SUCTION LOCATION
- BP2 BYPASS DISCHARGE LOCATION
- BP3 SUGGESTED ABOVE GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02
- BP4 UTILIZE THE BURIED (E) 8" DIP TO BYPASS THE FLOW. EXISTING PIPELINE TO BE PRESSURE TESTED BEFORE USE
- BP5 SUGGESTED BELOW GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02
- BP6 PROVIDE 12' MINIMUM DRIVEWAY ACCESS. SEE SPECIFICATION SECTION 71-02
- BP7 TRANSITION BYPASS TO/FROM EXISTING 8" SS

REHABILITATION NOTES

- S1 INSTALL CIPP LINING. SEE SPECIFICATION SECTION 71-01. REFER TO NOTE S6.
- S5 REHABILITATE (E) MH WITH MORTAR LINING. PRIOR TO REHABILITATION: GROUT GRADE RINGS AND BARREL JOINTS AND GROOVE BULGING RAMNECK JOINT FILLER. REFER TO MH SCHEDULE ON SHEET 19 AND SPECIFICATION SECTION 44-04.
- S6 THERE IS AN APPROXIMATE 8-INCH OFFSET FROM INLET INVERT TO OUTLET INVERT. THE FLAT PLATE CAP IS APPROXIMATELY 2 INCHES ABOVE THE RCP INLET PIPE; I.E. ABOUT 10 INCHES ABOVE THE OUTLET PIPE. REFER TO CF 2009-007-003 RECORD DRAWINGS IN THE SPECIFICATION. PRIOR TO NOTE S1, INSTALL 10' SECTIONAL CIPP TO COVER THE CHANNEL OF THE EXISTING CAPPED MANHOLE SECTION.



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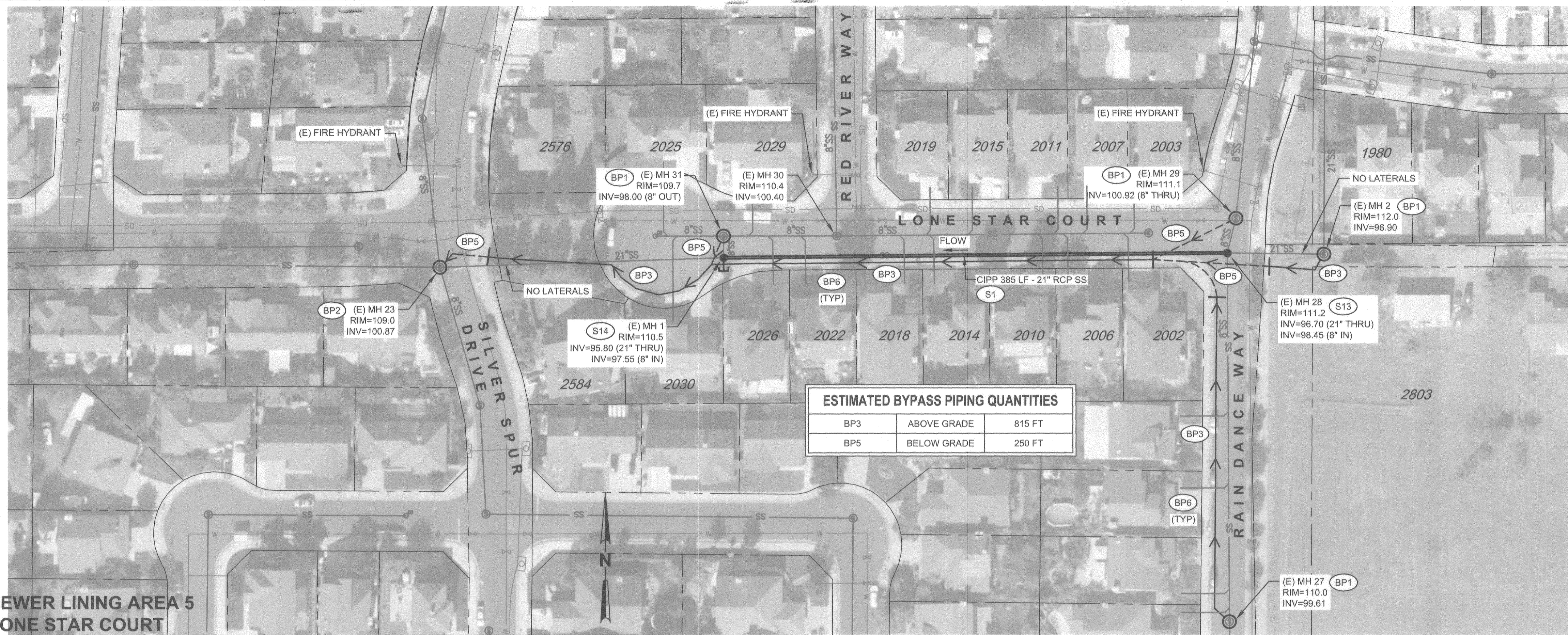
NO.	DATE	REVISION	BY

SCALE: SHOWN SD
 DATE: APRIL 2017
 DWN BY: SD
 CHK BY: PH
 APPROVED: Deputy Director - Engineering
 By: *Abdullah Ferguson* Date: 4/19/17
 Colleen Ferguson

CITY OF SANTA ROSA
SEWER MAIN LINING, MANHOLE AND LATERAL
REHAB AT VARIOUS LOCATIONS 2016
SEWER LINING AREA 2 - RUSSELL
AVE AT HWY 101 CROSSING

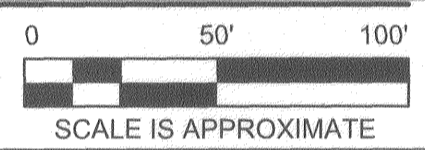
CONTRACT NO. C01944			
SHEET 4 OF 16			
FILE NO. 2017-0002			

DIST	COUNTY	ROUTE	POST MILE
4	SON	101	22.404



ESTIMATED BYPASS PIPING QUANTITIES		
BP3	ABOVE GRADE	815 FT
BP5	BELOW GRADE	250 FT

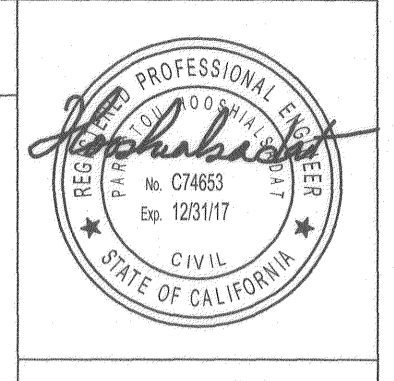
SEWER LINING AREA 5
LONE STAR COURT



- GENERAL SHEET NOTES**
- COORDINATE WITH ELSIE ALLEN HIGH SCHOOL FOR HOURS OF OPERATION AND ACCESS TO THE SITE.
 - PROVIDE DOJ FINGERPRINTING FOR PERSONNEL AT SITE IF THERE ARE ANY SCHOOL ACTIVITIES WHEN STUDENTS ARE PRESENT TAKING PLACE DURING CONSTRUCTION. SEE SPECIFICATION 8-1.05(A).

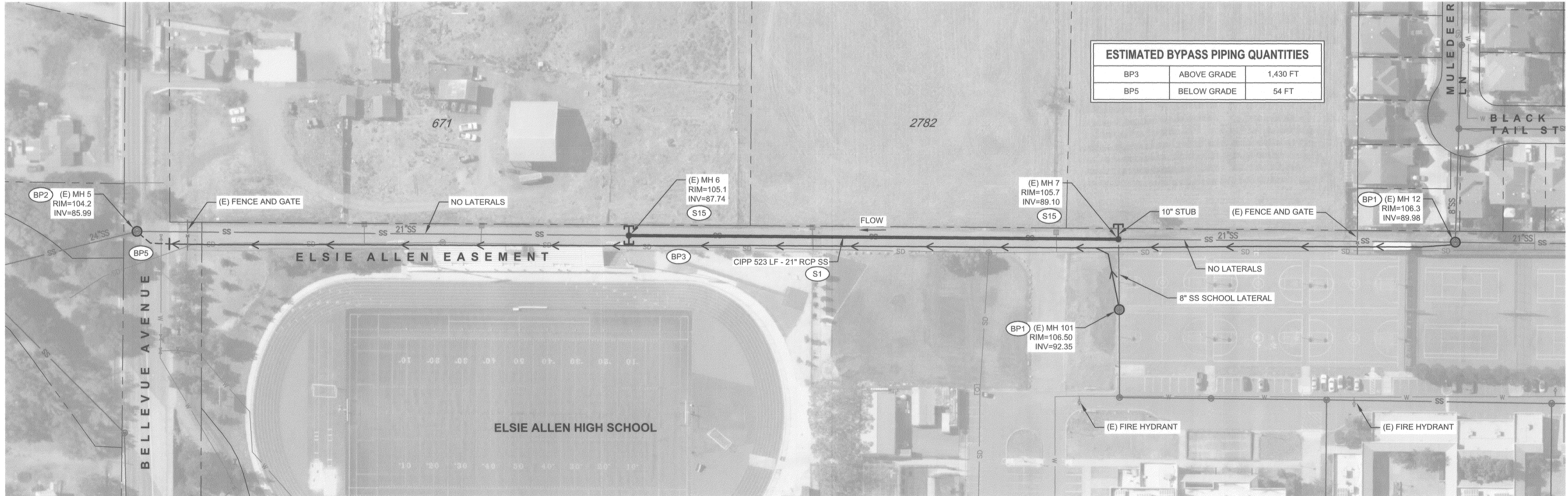
- BYPASS NOTES**
- BP1 BYPASS SUCTION LOCATION
 - BP2 BYPASS DISCHARGE LOCATION
 - BP3 SUGGESTED ABOVE GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02
 - BP5 SUGGESTED BELOW GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02
 - BP6 PROVIDE 12' MINIMUM DRIVEWAY ACCESS. SEE SPECIFICATION SECTION 71-02

- REHABILITATION NOTES**
- S1 INSTALL CIPP LINING. SEE SPECIFICATION SECTION 71-01.
 - S13 REHABILITATE (E) MH WITH MORTAR LINING. PRIOR TO REHABILITATION: GROUT BARREL JOINTS. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-04.
 - S14 REHABILITATE (E) MH WITH MORTAR LINING. PRIOR TO REHABILITATION: GROUT GRADE RINGS AND BARREL JOINTS AND REMOVE BULGING RAMNECK JOINT FILLER. PLUG 10" VCP SOUTH INLET STUB WITH CONCRETE AND CONCRETE CHANNELS TO SHELF LEVELS. REMOVE PIPE FROM CHANNEL BEFORE APPLYING CONCRETE. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-04.
 - S15 REHABILITATE (E) MH WITH MORTAR LINING. PRIOR TO REHABILITATION: PLUG 10" VCP EAST INLET STUB WITH CONCRETE AND CONCRETE CHANNELS TO SHELF LEVELS AT MH 6. REMOVE PIPE FROM CHANNEL BEFORE APPLYING CONCRETE. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-04.



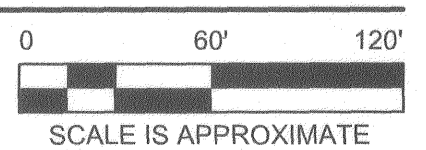
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NO.	DATE	REVISION	BY



ESTIMATED BYPASS PIPING QUANTITIES		
BP3	ABOVE GRADE	1,430 FT
BP5	BELOW GRADE	54 FT

SEWER LINING AREA 6
ELSIE ALLEN EASEMENT



SCALE: SHOWN SD DATE: APRIL 2017
DWN BY: SD CHK BY: PH
APPROVED: Deputy Director - Engineering
By: *A. Belen Ferguson* Date: 4/26/2017
Colleen Ferguson

CITY OF SANTA ROSA
SEWER MAIN LINING, MANHOLE AND LATERAL
REHAB AT VARIOUS LOCATIONS 2016
AREA 5 - LONE STAR COURT
AREA 6 - ELSIE ALLEN EASEMENT

CONTRACT NO.
C01944

SHEET 6 OF 16

FILE NO. 2017-0002

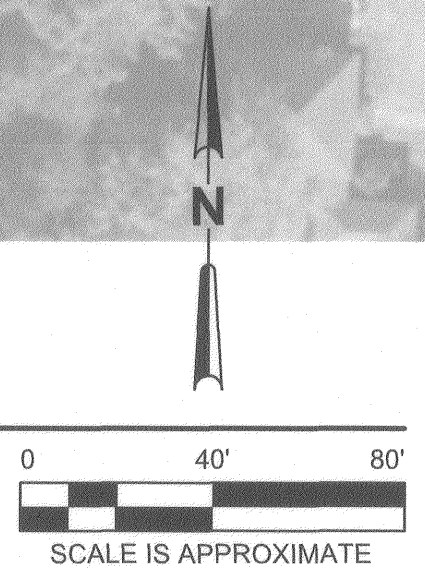
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ESTIMATED BYPASS PIPING QUANTITIES		
BP3	ABOVE GRADE	278 FT
BP5	BELOW GRADE	15 FT



ALDERBROOK LIFT STATION
COORDINATE WITH THE CITY FOR
DISCHARGE FLOW FROM LIFT STATION

SEWER LINING AREA 8
ALDERBROOK DRIVE EASEMENT
ALDERBROOK LANE EASEMENT
ALDERBROOK LANE



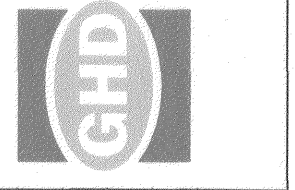
BYPASS NOTES			
BP1	BYPASS SUCTION LOCATION		
BP2	BYPASS DISCHARGE LOCATION		
BP3	SUGGESTED ABOVE GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02		
BP5	SUGGESTED BELOW GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02		
BP6	PROVIDE 12' MINIMUM DRIVEWAY ACCESS. SEE SPECIFICATION SECTION 71-02		
REHABILITATION NOTES			
S1	INSTALL CIPP LINING. SEE SPECIFICATION SECTION 71-01.		
S18	NOTE NOT USED.		
S19	REHABILITATE (E) MH WITH CEMENTITIOUS COATING. PRIOR TO REHABILITATION: REMOVE AND REPLACE MANHOLE FRAME AND COVER AND CONCRETE COLLAR PER CITY STD 500. REFER TO MH SCHEDULE ON SHEET 19 AND SPECIFICATION SECTION 44-01.		
S20	REHABILITATE (E) MH WITH MORTAR LINING. PRIOR TO REHABILITATION: REMOVE AND REPLACE MANHOLE FRAME AND COVER. PLUG 4" ACP EAST INLET STUB WITH CONCRETE AND CONCRETE CHANNELS TO SHELF LEVELS. REMOVE PIPE FROM CHANNEL BEFORE APPLYING CONCRETE. REFINISH MANHOLE CHANNEL TO CREATE A SMOOTH FLOW PASSAGE ALL PER CITY STD 500. REFER TO MH SCHEDULE ON SHEET 19 AND SPECIFICATION SECTION 44-04.		
L1	REINSTATE (E) LATERAL CONNECTIONS AFTER CIPP INSTALLATION. SEE SPECIFICATION SECTION 71-01.		
L2	CUT-IN NEW LATERAL CLEANOUT AS SHOWN OFF MAIN PER CITY STD 513A AND INSTALL T-LINER TO CLEANOUT PER SPECIFICATION SECTION 71-01.		

APRIL 2017		DATE:	PH
SD	CHK BY:	PH	
APPROVED: Deputy Director - Engineering			
By <i>Colleen Ferguson</i>		Date <i>4/10/17</i>	
NO.	DATE	REVISION	BY

CITY OF SANTA ROSA	
SEWER MAIN LINING, MANHOLE AND LATERAL REHAB AT VARIOUS LOCATIONS 2016	
SEWER LINING AREA 8 - ALDERBROOK DRIVE EASEMENT, ALDERBROOK LANE EASEMENT, AND ALDERBROOK LANE	
CONTRACT NO.	C01944
SHEET	8 OF 16
FILE NO.	2017-0002

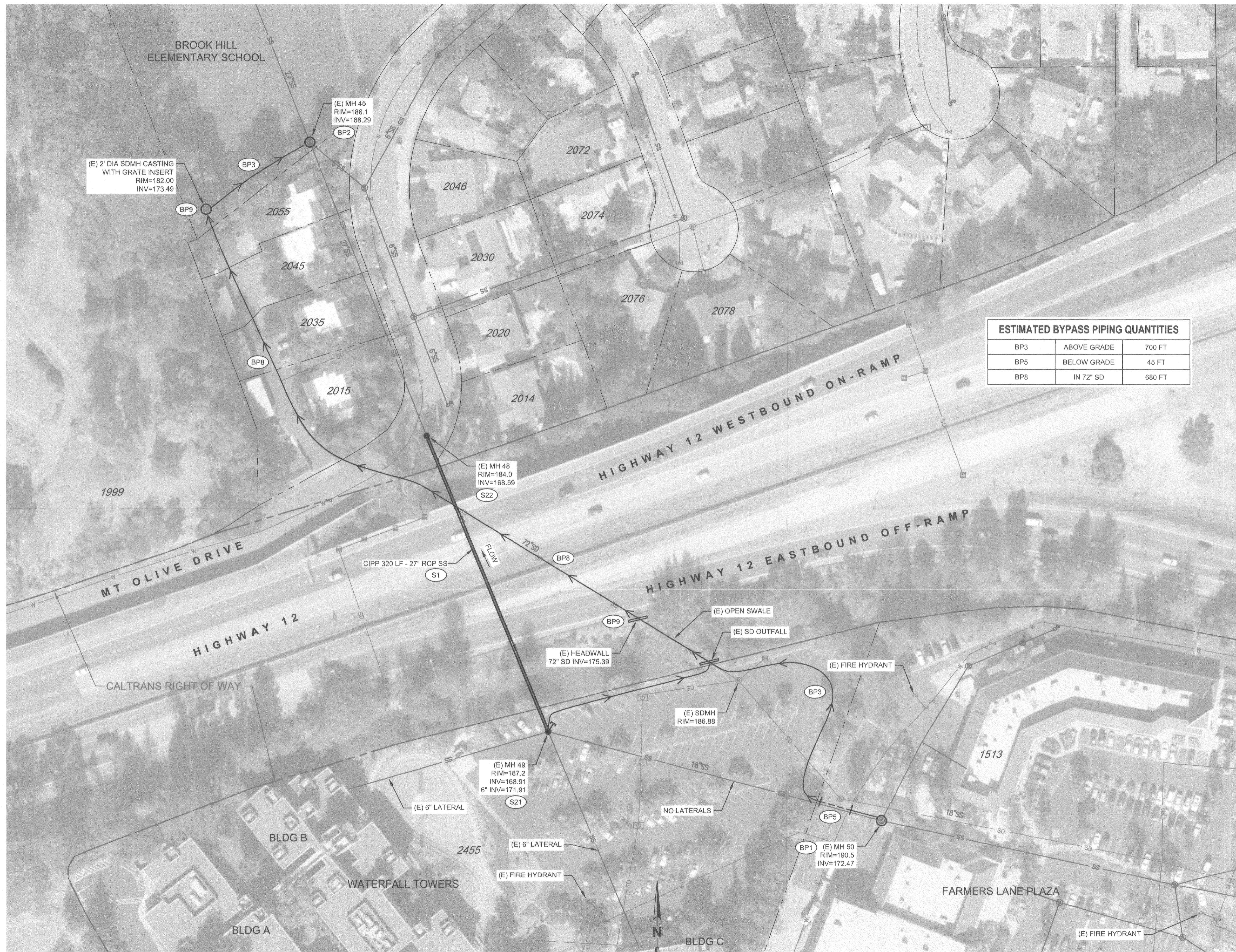


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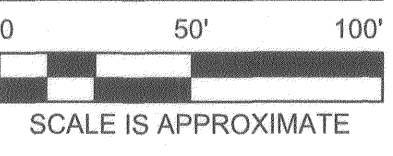
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 Plot Date: 19 April 2017 - 8:23 AM

File Name: N:\US Santa Rosa\Road\Projects\111111001\SANTA ROSA SEWER MAIN LINING\DWG\CAD\Sheet\11110705Sheet 09 - Hwy 12 Hwy and Farmers Lane
 Plotted By: Susan Dine
 Plot Date: 13 April 2017 - 8:35 AM



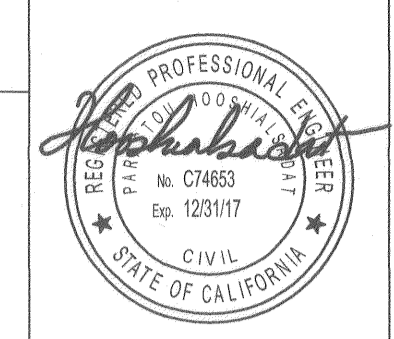
	ABOVE GRADE	BELOW GRADE
BP3	700 FT	
BP5		45 FT
BP8		680 FT

**SEWER LINING AREA 9
HIGHWAY 12 CROSSING WEST OF FARMERS LANE**



GENERAL SHEET NOTES

- REFER TO SPECIFICATION SECTION A FOR CALTRANS ENCROACHMENT PERMIT NO. 0416-NUS1756.
- COORDINATE WITH BROOK HILL ELEMENTARY SCHOOL FOR HOURS OF OPERATION.
- COORDINATE WITH WATERFALL TOWERS COMPLEX AND FARMERS LANE PLAZA FOR HOURS OF OPERATION IN THE PARKING LOTS.
- PROVIDE DOJ FINGERPRINTING FOR PERSONNEL ON SITE IF THERE ARE ANY SCHOOL ACTIVITIES WHEN STUDENTS ARE PRESENT TAKING PLACE DURING CONSTRUCTION. SEE SPECIFICATION SECTION 8-1.05(A).



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BYPASS NOTES

- BP1 BYPASS SUCTION LOCATION
- BP2 BYPASS DISCHARGE LOCATION
- BP3 SUGGESTED ABOVE GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02
- BP5 SUGGESTED BELOW GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02
- BP8 INSTALL TEMPORARY BYPASS PIPING INSIDE EXISTING 72-INCH STORM DRAIN CULVERT
- BP9 TRANSITION BYPASS TO/FROM 72-INCH STORM DRAIN CULVERT FROM/OVERLAND LAYOUT AT (E) STORM DRAIN STRUCTURE

REHABILITATION NOTES

- S1 INSTALL CIPP LINING. SEE SPECIFICATION SECTION 71-01.
- S21 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: GROUT BARREL JOINTS AND REMOVE BULGING RAMNECK JOINT FILLER. PLUG 8" NORTHEAST INLET STUB WITH CONCRETE AND CONCRETE CHANNELS TO SHELF LEVELS. REMOVE PIPE FROM CHANNEL BEFORE APPLYING CONCRETE. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.
- S22 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: PLUG 8" NORTHEAST INLET STUB WITH CONCRETE AND CONCRETE CHANNELS TO SHELF LEVELS. REMOVE PIPE FROM CHANNEL BEFORE APPLYING CONCRETE. REMOVE EXISTING FLOW METER MOUNT AND RETURN TO CITY. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.

NO.	DATE	REVISION	BY

SCALE: SHOWN SD
 DWN BY: SD
 DATE: APRIL 2017
 CHK BY: PH
 APPROVED: Deputy Director - Engineering
 By: *Johnnie Ferguson* College Ferguson Date: *4/12/2017*

CITY OF SANTA ROSA
 SEWER MAIN LINING, MANHOLE AND LATERAL
 REHAB AT VARIOUS LOCATIONS 2016
 SEWER LINING AREA 9 -
 HIGHWAY 12 CROSSING
 WEST OF FARMERS LANE

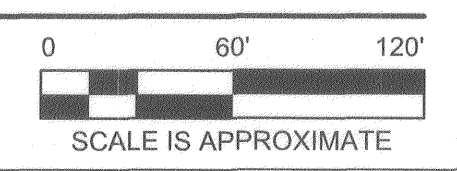
CONTRACT NO. C01944			
SHEET 9 OF 16			
FILE NO. 2017-0002			

DIST	COUNTY	ROUTE	POST MILE
4	SON	12	T 17.400

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 Plot Date: 19 April 2017 - 8:28 AM
 Plotted By: Susan Dove



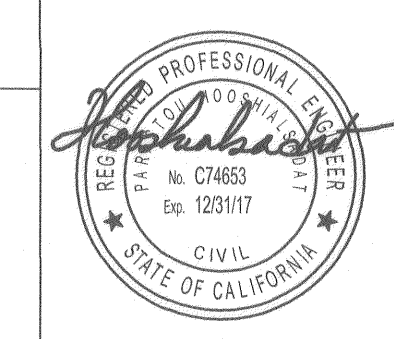
ESTIMATED BYPASS PIPING QUANTITIES		
BP3	ABOVE GRADE	1,890 FT
BP5	BELOW GRADE	250 FT



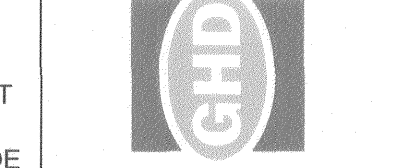
**SEWER LINING AREA 10
NEOTOMAS AVENUE AT LORNADELL CREEK AND LORNADELL LANE**

- BYPASS NOTES**
- BP1 BYPASS SUCTION LOCATION
 - BP2 BYPASS DISCHARGE LOCATION
 - BP3 SUGGESTED ABOVE GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02
 - BP5 SUGGESTED BELOW GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02
 - BP6 PROVIDE 12' MINIMUM DRIVEWAY ACCESS. SEE SPECIFICATION SECTION 71-02
 - BP10 SECURE BYPASS PIPELINE ON TOP OF THE EXISTING SEWER PIPE ACROSS THE CREEK. REFER TO RECORD DRAWING SPECIFICATION APPENDIX B, SEWER LINING AREA 10 CREEK CROSSING DETAIL FOR EXISTING INSTALLATION

- REHABILITATION NOTES**
- S1 INSTALL CIPP LINING. SEE SPECIFICATION SECTION 71-01.
 - S23 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: REMOVE EXISTING GRIPPER PLUG. PLUG 8" WEST INLET STUB WITH CONCRETE AND MAKE THE SIDE WALL UNIFORM. REMOVE 6 IRON LADDER RUNGS. REMOVE AND REPLACE MH GRADE RING AND CASTING PER CITY STD 500. REMOVE AND REPLACE THE CONCRETE PLANTER STRIP AND ADJACENT SIDEWALK (APPROXIMATELY 64 SQ FT) PER CITY STD 237. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.
 - S24 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: REMOVE EXISTING SOUTH GRIPPER PLUG. PLUG 8" SOUTH INLET STUB WITH CONCRETE AND MAKE THE SIDE WALL UNIFORM. PLUG 8" NORTH INLET STUB WITH CONCRETE AND CONCRETE CHANNELS TO SHELF LEVELS. REMOVE PIPES FROM CHANNEL BEFORE APPLYING CONCRETE. REMOVE 5 IRON LADDER RUNGS. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.
 - S25 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: ABANDON 8" NORTH VCP OUTSIDE DROP AND FILL THE VOID WITH CONCRETE TO CREATE A SMOOTH SURFACE. REMOVE 5 IRON LADDER RUNGS. REMOVE AND REPLACE MH GRADE RING AND CONCRETE COLLAR PER CITY STD 500. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.
 - S26 REHABILITATE (E) MH WITH CEMENTITIOUS LINING. PRIOR TO REHABILITATION: GROUT GRADE RING AND BARREL SEAMS AS NEEDED. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-01.
 - S27 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: ABANDON TWO 8" NORTH AND WEST VCP OUTSIDE DROPS AND FILL THE VOIDS WITH CONCRETE TO CREATE A SMOOTH SURFACE. REMOVE 24 IRON LADDER RUNGS. REMOVE AND REPLACE MH GRADE RING, FRAME, COVER AND CONCRETE COLLAR PER CITY STD 500. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.
 - S28 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: ABANDON TWO 8" SOUTH AND EAST VCP OUTSIDE DROPS AND FILL THE VOIDS WITH CONCRETE TO CREATE A SMOOTH SURFACE. THE SOUTH DROP HAS A 4" LATERAL INSTALLED IN THE UPPER INLET INTO THE BARREL OF THE MANHOLE WHICH SHOULD BE MODIFIED TO INCLUDE A 4" INSIDE DROP PER CITY STD 503. REMOVE 24 IRON LADDER RUNGS. REMOVE AND REPLACE MH GRADE RING, FRAME, COVER AND CONCRETE COLLAR PER CITY STD 500. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.



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NO.	DATE	REVISION	BY

SCALE: SHOWN SD
 DATE: APRIL 2017
 DWN BY: PH
 CHK BY: PH
 APPROVED: Deputy Director - Engineering
 By: *Colleen Ferguson* Date: 4/19/2017
 Colleen Ferguson

CITY OF SANTA ROSA
 SEWER MAIN LINING, MANHOLE AND LATERAL
 REHAB AT VARIOUS LOCATIONS 2016
**SEWER LINING AREA 10 - NEOTOMAS
 AVENUE AT LORNADELL CREEK
 AND LORNADELL LANE**
 CONTRACT NO.
 C01944
 SHEET 10 OF 16
 FILE NO. 2017-0002

Filename: N:\US Santa Rosa\Projects\1111110011\11110011 SANTA ROSA SEWER MAIN LHMING-6-CAD\Sheet 11 - Moss Rock Court.dwg

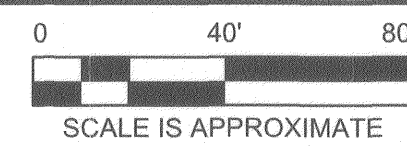
Plotted By: Susan Dove

Plot Date: 19 April 2017 - 8:27 AM



ESTIMATED BYPASS PIPING QUANTITIES		
BP3	ABOVE GRADE	255 FT
BP5	BELOW GRADE	25 FT

**SEWER LINING AREA 11
MOSS ROCK COURT**



GENERAL SHEET NOTES

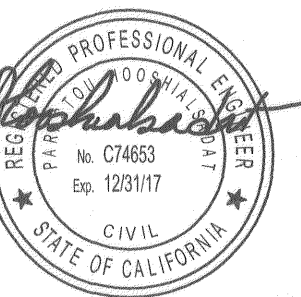
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BYPASS NOTES

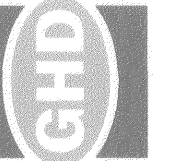
- BP1 BYPASS SUCTION LOCATION
- BP2 BYPASS DISCHARGE LOCATION
- BP3 SUGGESTED ABOVE GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02
- BP5 SUGGESTED BELOW GRADE BYPASS PIPELINE ROUTE. BYPASS PIPELINE SHALL BE PRESSURE TESTED PRIOR TO PUTTING INTO USE. SEE SPECIFICATION SECTION 71-02

REHABILITATION NOTES

- S1 INSTALL CIPP LINING. SEE SPECIFICATION SECTION 71-01.
- S29 REHABILITATE (E) MH WITH CEMENTITIOUS COATING. PRIOR TO REHABILITATION: REMOVE EXISTING 8" TALL MANHOLE CASTING AND LID INCLUDING CONCRETE COLLAR AND REPLACE WITH 4.5" TALL CASTING WITH LID AND 3" GRADE RING AND POUR NEW CONCRETE COLLAR PER CITY STD 500. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-01.
- S30 REHABILITATE (E) MH WITH CEMENTITIOUS COATING. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-01.
- L1 REINSTATE (E) LATERAL CONNECTIONS AFTER CIPP INSTALLATION. SEE SPECIFICATION SECTION 71-01.
- L3 INSTALL T-LINER TO THE EXISTING CLEANOUT, SEE SPECIFICATION SECTION 71-01.
- L4 CUT-IN NEW LATERAL CLEANOUT 6" OFF MAIN PER CITY STD 513A AND INSTALL T-LINER TO CLEANOUT PER SPECIFICATION SECTION 71-01. REMOVE AND REPLACE 36 SQ FT OF PRIVATE SIDEWALK PER CITY STD 237.



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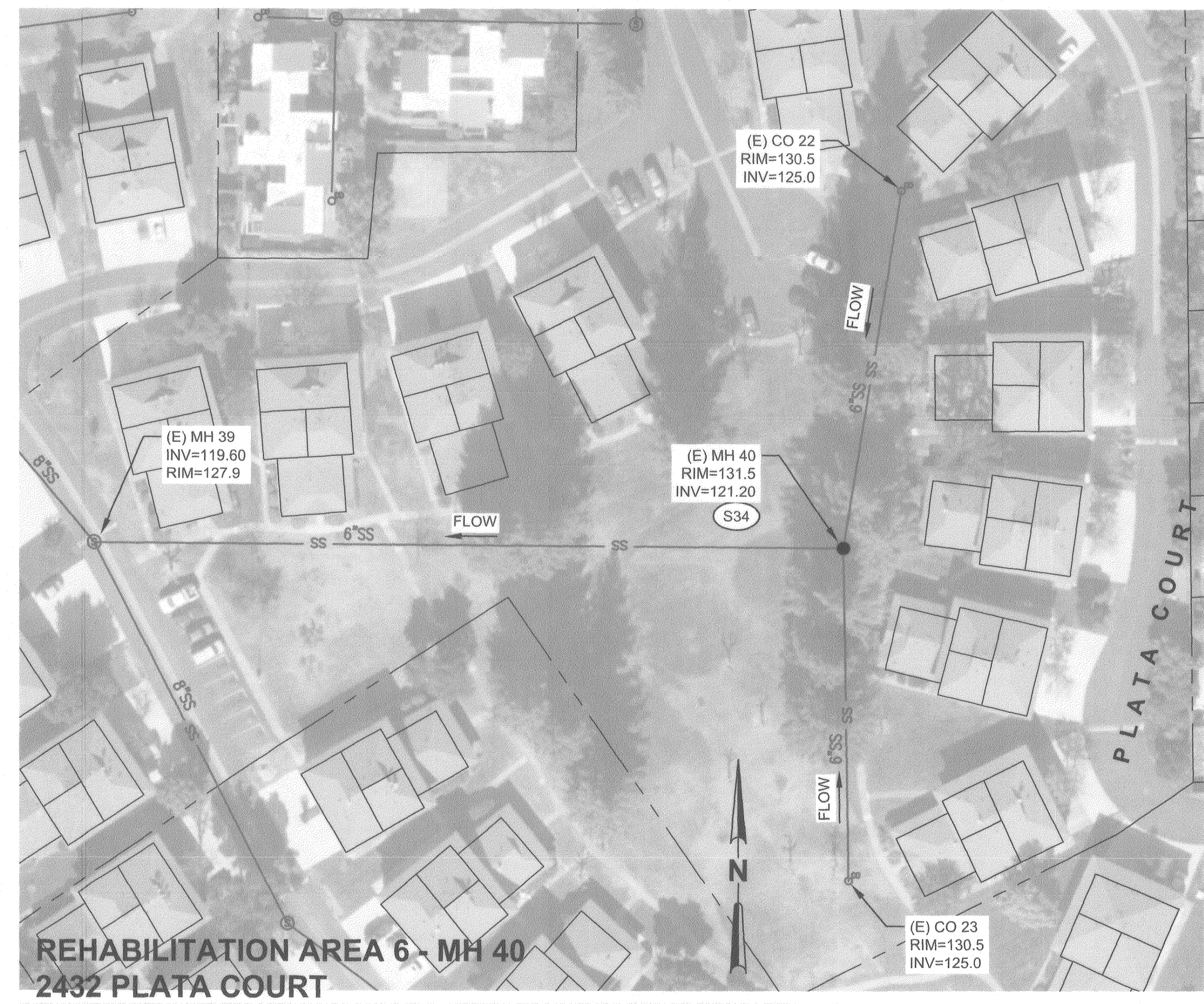
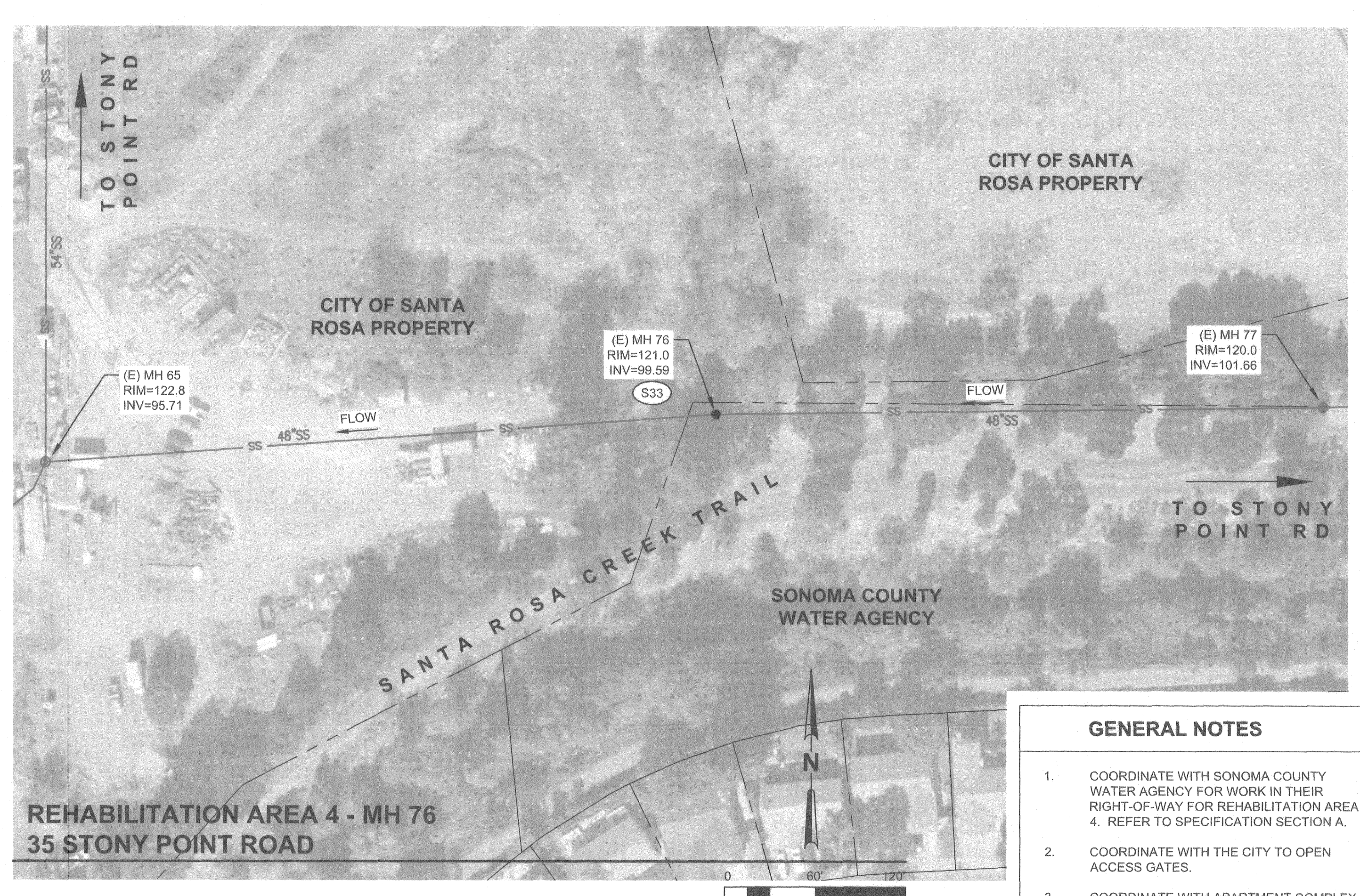


NO.	DATE	REVISION	BY

SCALE: SHOWN DATE: APRIL 2017
DWN BY: SD CHK BY: PH
APPROVED: Deputy Director - Engineering
By: *J. Colleen Ferguson* Date: 4/10/2017
Colleen Ferguson

CITY OF SANTA ROSA
SEWER MAIN LINING, MANHOLE AND LATERAL
REHAB AT VARIOUS LOCATIONS 2016
SEWER LINING AREA 11 -
MOSS ROCK COURT

CONTRACT NO.
C01944
SHEET 11 OF 16
FILE NO. 2017-0002



GENERAL NOTES

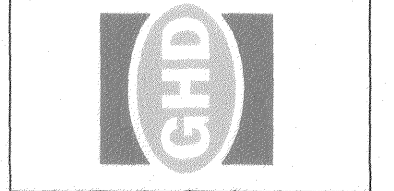
- COORDINATE WITH SONOMA COUNTY WATER AGENCY FOR WORK IN THEIR RIGHT-OF-WAY FOR REHABILITATION AREA 4. REFER TO SPECIFICATION SECTION A.
- COORDINATE WITH THE CITY TO OPEN ACCESS GATES.
- COORDINATE WITH APARTMENT COMPLEX MANAGER FOR SPECIAL HOURS OF OPERATION.

REHABILITATION NOTES

- S31 REHABILITATE (E) MH WITH CURED-IN-PLACE LINING SYSTEM. PRIOR TO REHABILITATION: REMOVE EXISTING EPOXY COATING. REMOVE 60"X24"X1' TALL REDUCER SLAB AND CASTING. REPLACE 60"X3' TALL OF BARREL SECTION BY 60"X18" TALL OF BARREL SECTION. RESET REDUCER SLAB AND CASTING PER CITY STD 500. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-03.
- S32 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: REMOVE EXISTING 4.5" TALL AND 8" TALL CASTING AND REPLACE WITH 6" TALL AND 3" TALL GRADE RINGS. SET NEW 4.5" TALL CASTING WITH BOLT DOWN LID AND POUR CONCRETE COLLAR PER CITY STD 500. PLUG TWO 2" LONG 10" DIAMETER STUBS AND CONCRETE CHANNELS TO SHELF LEVELS. REMOVE PIPES FROM CHANNEL BEFORE APPLYING CONCRETE. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.
- S33 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: REMOVE TWO EXISTING CASTINGS AND 1" OF GRADE RINGS. INSTALL NEW 4.5" TALL CASTING WITH BOLT DOWN LID AND POUR CONCRETE COLLAR PER CITY STD 500. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.
- S34 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: REMOVE EXISTING CONCRETE COLLAR TO TOP OF CONE, THE TWO CASTINGS AND THE EXISTING GRADE RINGS. INSTALL 18" OF GRADE RINGS AND THE EXISTING CASTING. POUR NEW CONCRETE COLLAR PER CITY STD 500. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.



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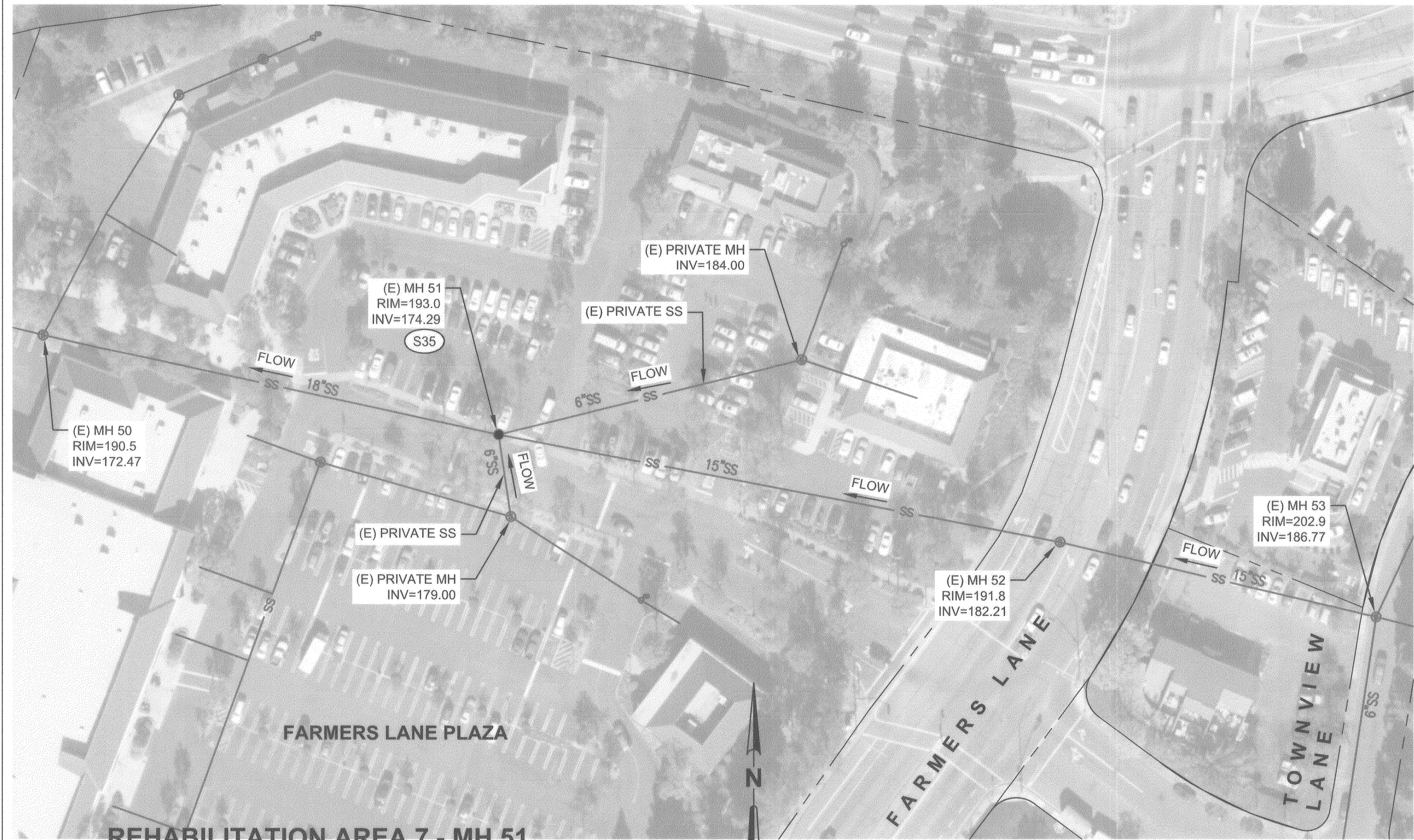
APPROVED: Deputy Director - Engineering
By: *A. Ferguson*
Colleen Ferguson

DATE: APRIL 2017
CHK BY: PH
SCALE: SHOWN
DWN BY: SD

CITY OF SANTA ROSA
SEWER MAIN LINING, MANHOLE AND LATERAL REHAB AT VARIOUS LOCATIONS 2016
MANHOLE REHABILITATION AREA 1, AREA 2, AREA 4, AND AREA 6

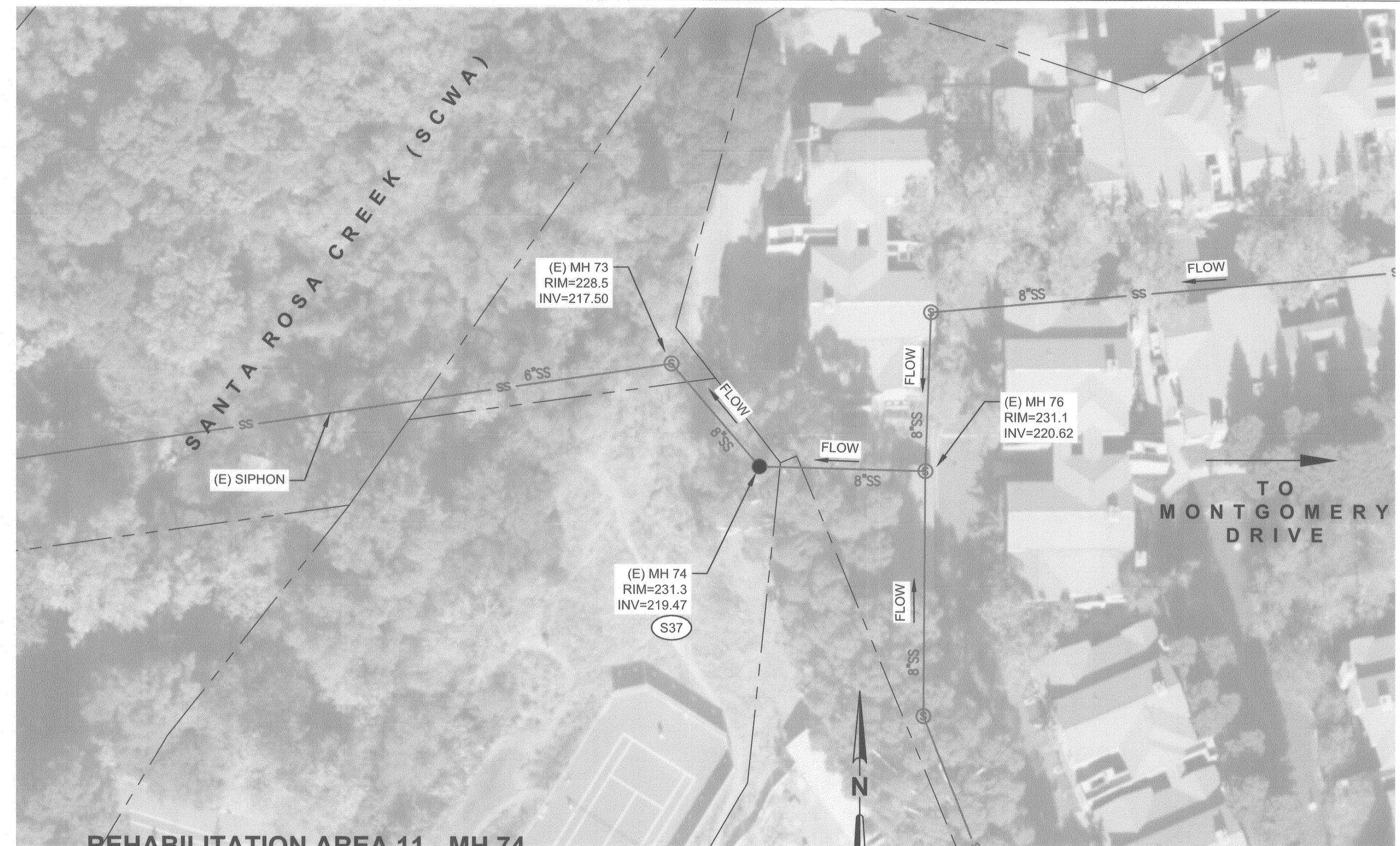
CONTRACT NO. C01944
SHEET 12 OF 16
FILE NO. 2017-0002

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 Plot Date: 19 April 2017 - 8:59 AM
 Plotter: B7 - Susan Dove



**REHABILITATION AREA 7 - MH 51
1501 FARMERS LANE**

0 60' 120'
SCALE IS APPROXIMATE



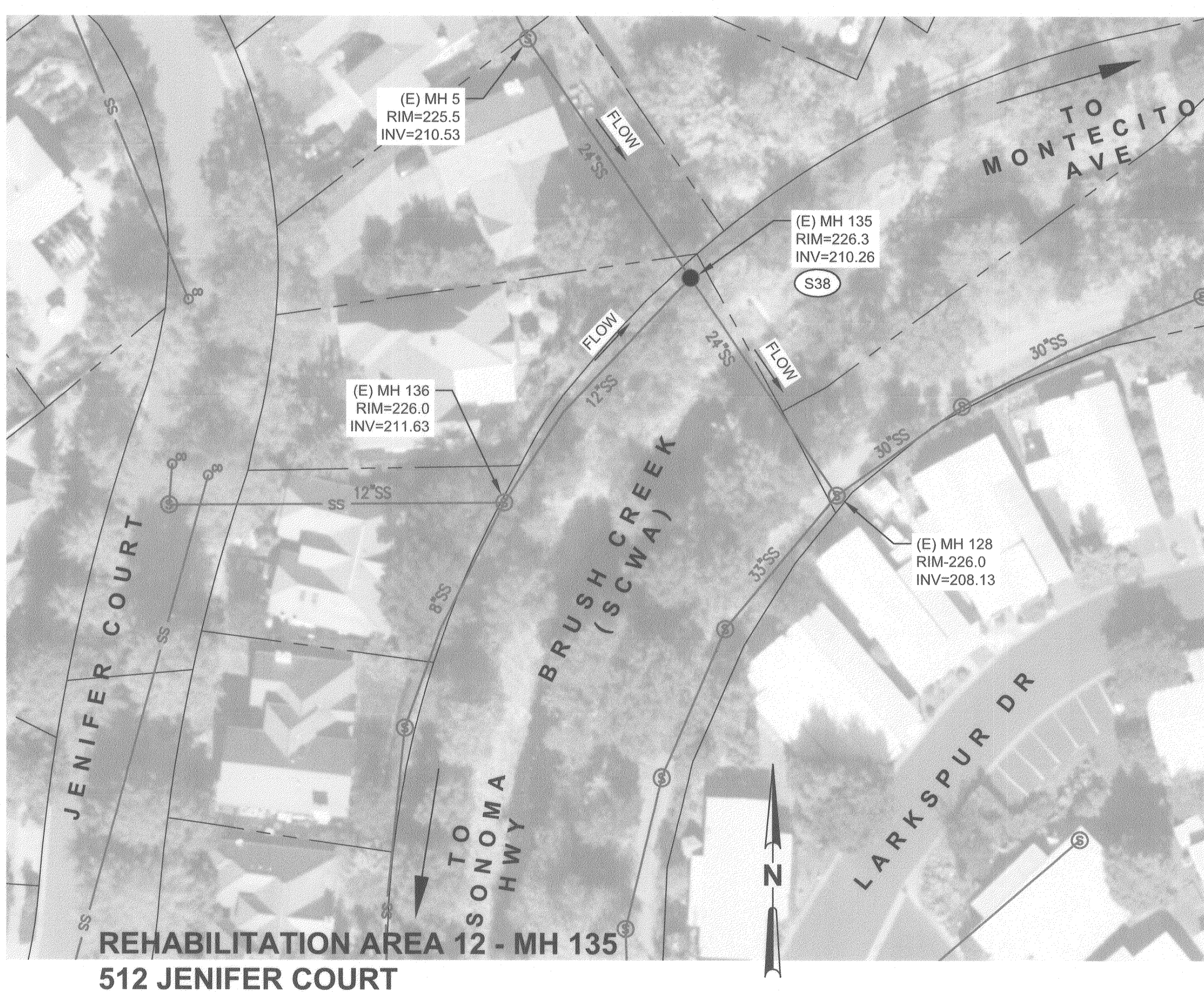
**REHABILITATION AREA 11 - MH 74
711 SHADOW LANE AND 4023 MONTGOMERY DR**

0 40' 80'
SCALE IS APPROXIMATE



**REHABILITATION AREA 10 - MH 121
3831 HIGHWAY 12**

0 40' 80'
SCALE IS APPROXIMATE

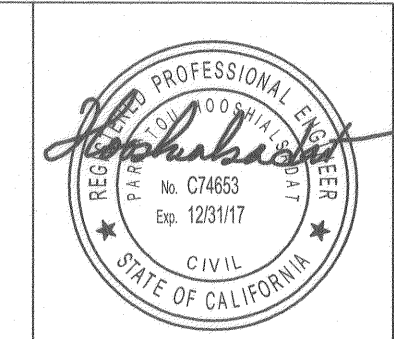


**REHABILITATION AREA 12 - MH 135
512 JENIFER COURT**

0 40' 80'
SCALE IS APPROXIMATE

- GENERAL NOTES**
- COORDINATE WITH SONOMA COUNTY WATER AGENCY FOR WORK IN THEIR RIGHT-OF-WAY. REFER TO SPECIFICATIONS SECTION A.
 - COORDINATE WITH FARMERS LANE PLAZA MANAGEMENT FOR SPECIAL HOURS OF OPERATION IN THE PARKING LOT.
 - COORDINATE WITH SHADOW CREEK APARTMENT COMPLEX MANAGER FOR HOURS OF OPERATION.

- REHABILITATION NOTES**
- S35 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: REPLACE EXISTING 6" VCP DROP INLET WITH NEW 6" INSIDE DROP INLET PER CITY STD 503. MANHOLE WALL TO BE CHIPPED OUT FOR TRANSITION COUPLING. REMOVE 10 IRON LADDER RUNGS. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02. REPLACE 5 LINEAR FEET OF CURB AND GUTTER AND 75 SQUARE FEET OF SIDEWALK TO THE NEAREST SCORE LINE PER CITY STD 237.
 - S36 REHABILITATE (E) MH WITH EPOXY LINING. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.
 - S37 REHABILITATE (E) MH WITH EPOXY LINING. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02. REPLACE 10'X5' SQUARE FEET OF SIDEWALK TO THE NEAREST SCORE LINE PER CITY STD 237. POUR NEW CONCRETE COLLAR PER CITY STD 500.
 - S38 REHABILITATE (E) MH WITH EPOXY LINING. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.



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SCALE: SHOWN SD
DWN BY: SD
DATE: APRIL 2017
CHK BY: PH
APPROVED: Deputy Director - Engineering
By *Colleen Ferguson* Date *4/20/2017*

CITY OF SANTA ROSA
SEWER MAIN LINING, MANHOLE AND LATERAL REHAB AT VARIOUS LOCATIONS 2016
MANHOLE REHABILITATION AREA 7, AREA 10, AREA 11, AND AREA 12
CONTRACT NO. C01944
SHEET 13 OF 16
FILE NO. 2017-0002

File Name: N:\USStateRosa\Projects\1111110074-SANTA ROSA-SEWER MAIN LINING\06-CAD\Sheet\1110074-Sheet 12 of 15 - MH Rehab.dwg
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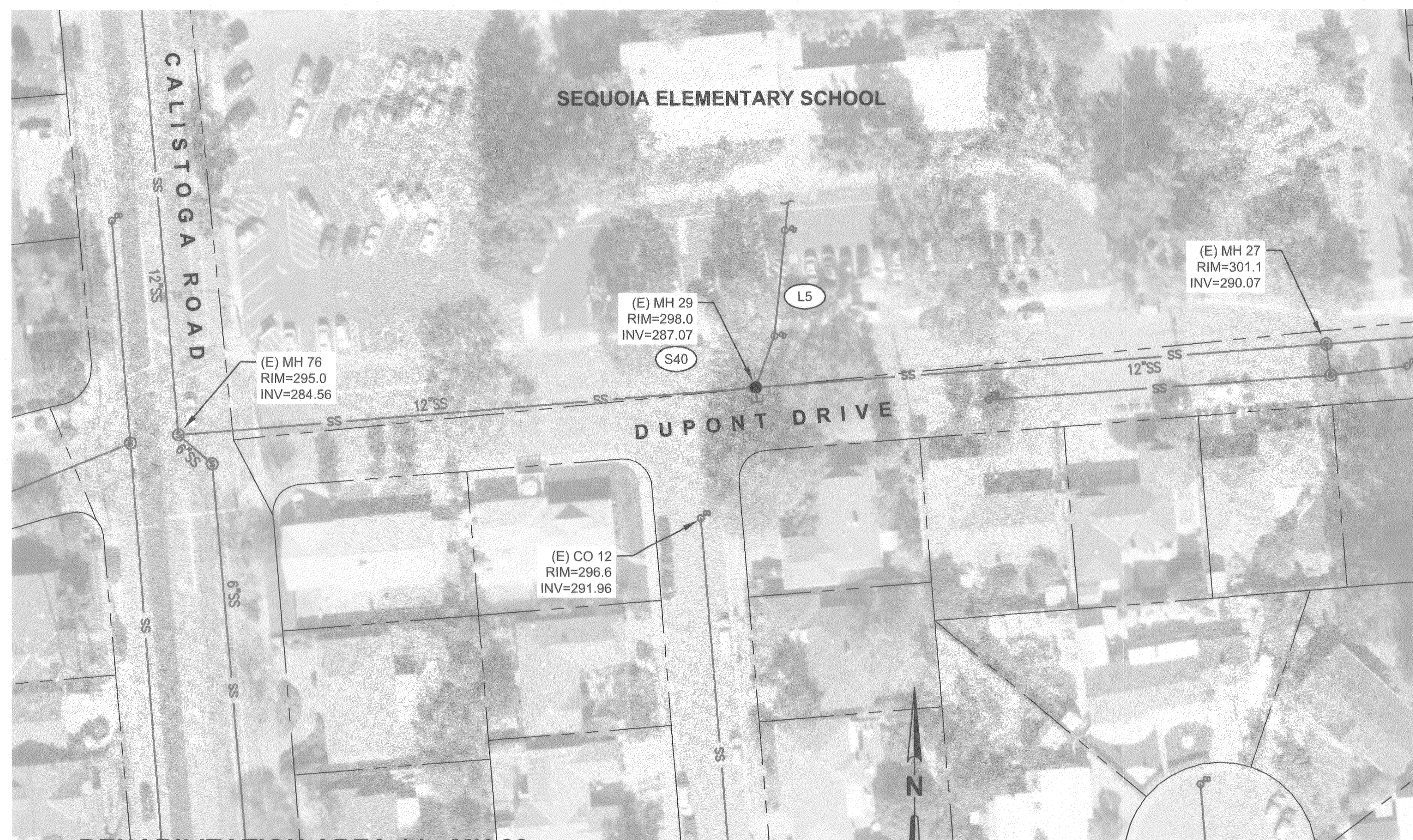
REHABILITATION AREA 13 - MH 80
577 MISSION BOULEVARD

0 40' 80'
SCALE IS APPROXIMATE



REHABILITATION AREA 15 - MH 26
5877 MELITA ROAD

0 50' 100'
SCALE IS APPROXIMATE



REHABILITATION AREA 14 - MH 29
5305 DUPONT DRIVE

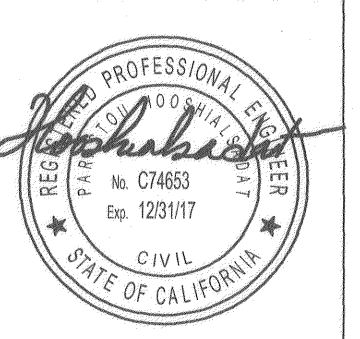
0 50' 100'
SCALE IS APPROXIMATE

GENERAL NOTES

- COORDINATE WITH RESIDENTS TO ACCESS REHAB AREA 13.
- COORDINATE WITH SEQUOIA ELEMENTARY SCHOOL FOR HOURS OF OPERATION.

REHABILITATION NOTES

- S39 REHABILITATE (E) MH WITH EPOXY LINING. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02. POUR NEW CONCRETE COLLAR PER CITY STD 500.
- S40 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: ABANDON TWO 8" STUBS AND FILL THE VOIDS WITH CONCRETE TO CREATE A SMOOTH SURFACE. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02. REPLACE 34 SQUARE FEET OF CONCRETE TO THE NEAREST SCORE LINE PER CITY STD 237.
- S41 REHABILITATE (E) MH WITH EPOXY LINING. PRIOR TO REHABILITATION: INSTALL ADDITIONAL 3" GRADE RING. POUR CONCRETE COLLAR PER CITY STD 500. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02.
- L5 EXISTING 4" ACP LATERAL IS TIED INTO EXISTING 8" VCP STUB AT THE MANHOLE. INSERT NEW 4" PIPE UP TO THE CONNECTION POINT OF THE EXISTING 4" PIPE TO EXISTING 8" STUB. GROUT ANNULAR SPACE BETWEEN THE TWO PIPES. REMOVE THE UPPER 1' PORTION (3" DIAMETER) OF THE EXISTING CLEANOUT RISER PIPE AND REPLACE WITH A 4" DIAMETER PIPE. REPLACE 20 SQ FEET OF CONCRETE SIDEWALK PER CITY STD 237. INSTALL 34 LF CIPP LINING IN SS LATERAL BETWEEN MH AND CLEANOUT, REFER TO SPECIFICATION SECTION 71-01.



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NO.	DATE	REVISION	BY

DATE: APRIL 2017
CHK BY: PH
APPROVED: Deputy Director - Engineering
By: *Colleen Ferguson* Date: 4/20/17
Colleen Ferguson

CITY OF SANTA ROSA
SEWER MAIN LINING, MANHOLE AND LATERAL REHAB AT VARIOUS LOCATIONS 2016
MANHOLE REHABILITATION AREA 13, AREA 14, AND AREA 15

CONTRACT NO. C01944
SHEET 14 OF 16
FILE NO. 2017-0002

File Name: N:\US\Santa Rosa\Projects\11111111074 SANTA ROSA SEWER MAIN LINING\GIS\CADD\Sheets\1111074\Sheet 12 to 15 - MH Rehab.dwg
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 Plot Date: 19 April 2017 - 8:55 AM

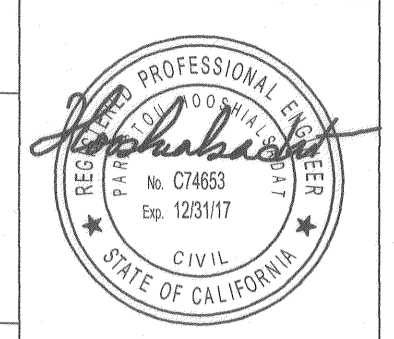
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 PLOTTED BY: Susan Dove



**REHABILITATION AREA 3 - MH 17
310 BUCKINGHAM DRIVE**

GENERAL NOTES

- REFER TO SPECIFICATION SECTION A FOR CALTRANS ENCROACHMENT PERMIT NO. 0416-NUS1760.



REHABILITATION NOTES

- S42 REHABILITATE (E) MH WITH EPOXY LINING. REFER TO MH SCHEDULE ON SHEET 19, RECORD DRAWINGS, AND SPECIFICATION SECTION 44-02. INSTALL NEW CASTING WITH BOLT DOWN LID AND POUR CONCRETE COLLAR PER CITY STD 500.

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NO.	DATE	REVISION	BY

SCALE: SHOWN DATE: APRIL 2017
 DWN BY: SD CHK BY: PH
 APPROVED: Deputy Director - Engineering
 By *Colleen Ferguson* Date 4/20/2017
 Colleen Ferguson

**CITY OF SANTA ROSA
 SEWER MAIN LINING, MANHOLE AND LATERAL
 REHAB AT VARIOUS LOCATIONS 2016
 MANHOLE REHABILITATION
 AREA 3**

DIST	COUNTY	ROUTE	POST MILE
4	SON	101	19.939

CONTRACT NO. C01944
 SHEET 15 OF 16
 FILE NO. 2017-0002

