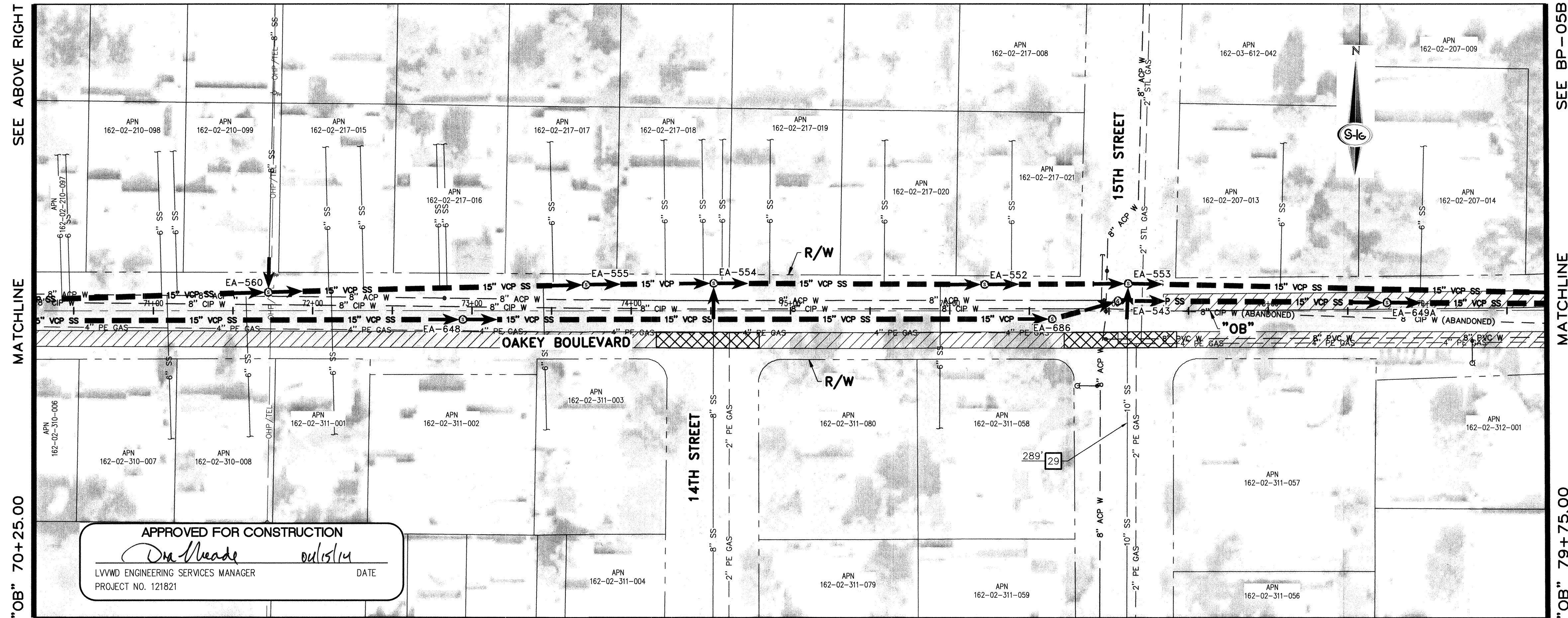
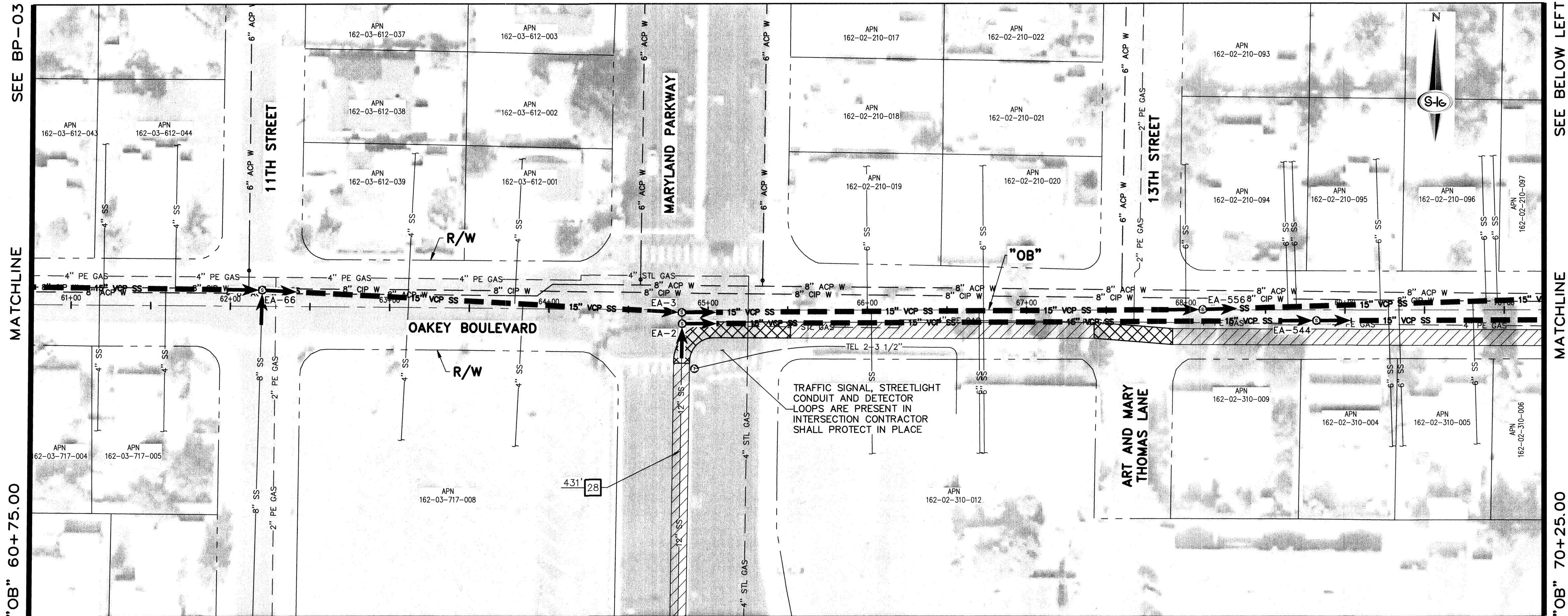




APPROVED FOR CONSTRUCTION

Don Heade *oulstrm*

LVMWD ENGINEERING SERVICES MANAGER DATE

PROJECT NO. 121821

- CONSTRUCTION BYPASS NOTES:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SEWER BYPASS DESIGN FOR DE-WATERING OF THE PIPE DURING REHABILITATION. THIS INCLUDES ALL PUMPING EQUIPMENT, PIPING AND FITTINGS, POWER, COLLECTION AND DISTRIBUTION ELEMENTS TO ACHIEVE THE BYPASSING OF THE EXISTING SEWAGE FROM INTAKE POINT TO DISCHARGE POINT.
 - CONTRACTOR SHALL PROVIDE NOTIFICATION TO ALL BUSINESSES AND RESIDENTS IMPACTED BY THE SEWER REHABILITATION PROJECT (SEE SPECIFICATION SECTION 107.07).
 - CONTRACTOR SHALL PREPARE AND SUBMIT A TEMPORARY BYPASS PLAN (TBP) FOR THE BYPASS OPERATION (SEE SPECIFICATION SECTION 695).
 - CONTRACTOR SHALL HAVE AN APPROVED TBP PRIOR TO PIPE LINING. CONTRACTOR SHALL BYPASS ALL MAINLINE AND LATERAL FLOWS. QUANTITY OF SEWAGE TO BE BYPASSED IS THE SUM OF ALL FLOWS ENTERING THE PIPELINE BEFORE POINT OF DISCHARGE.
 - SEE SPECIFICATION SECTION 659 FOR ODOOR CONTROL REQUIREMENTS.
 - CONTRACTOR SHALL PREPARE AND SUBMIT A TRAFFIC CONTROL PLAN (TCP) TO THE AUTHORITY HAVING JURISDICTION OF THE LOCATION OF THE WORK (SEE SPECIFICATION SECTION 624).
 - CONTRACTOR BYPASS PLANS MUST CONSIDER THE EXISTING SPEED LIMITS AND ALLOWABLE REDUCTIONS IN DETERMINING THE LOCATION OF PIPING AND THE REQUIRED TCP ELEMENTS. CONTRACTOR SHALL BE ALLOWED TO REDUCE SPEED AT EACH LOCATION WHERE THE PIPING CROSSES PERPENDICULAR TO A LANE OF TRAFFIC BY 10 MPH. THE LOCATION AND CONSTRUCTION OF THE BYPASS PIPING SHALL CONFORM TO DETAIL 3 SHOWN ON DRAWING DT-01. CONTRACTOR MAY REQUEST A VARIANCE TO THESE DETAILS BY SHOWING ALTERNATIVES THAT WILL ACHIEVE THE REQUIRED SPEED LIMITS, PROVIDE SAFETY TO VEHICLES AND PEDESTRIANS, AND DESIRED RESULTS FOR THE BYPASSING OF SEWAGE.
 - IF REQUIRED, REMOVE AND REINSTALL MANHOLE FRAME, COVER, GRADE RINGS, AND CONE PER SD-4 OF THE DCSWOS.
 - CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS TO ALL ADJOINING PROPERTIES ACCESSIBLE TO THE PUBLIC AND EMERGENCY VEHICLES. DESIGNS FOR ACCESS WILL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE CONTROLLING AGENCY FOR REVIEW AND APPROVAL.
 - CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS THROUGH RAMPS AT CROSSWALKS. CONTRACTOR TO REPLACE ALL REMOVED OR DAMAGED TRAFFIC PAVEMENT STRIPING AND MARKINGS.
 - ALL BYPASS OPERATIONS ARE TO OCCUR WITHIN THE BYPASS CORRIDOR SHOWN ON THE BYPASS DRAWINGS. IF THE CONTRACTOR REQUIRES AN ADDITIONAL CLOSURE AREA, THEY MUST OBTAIN APPROVAL FROM THE AUTHORITY HAVING JURISDICTION OF THE LOCATION OF THE WORK.
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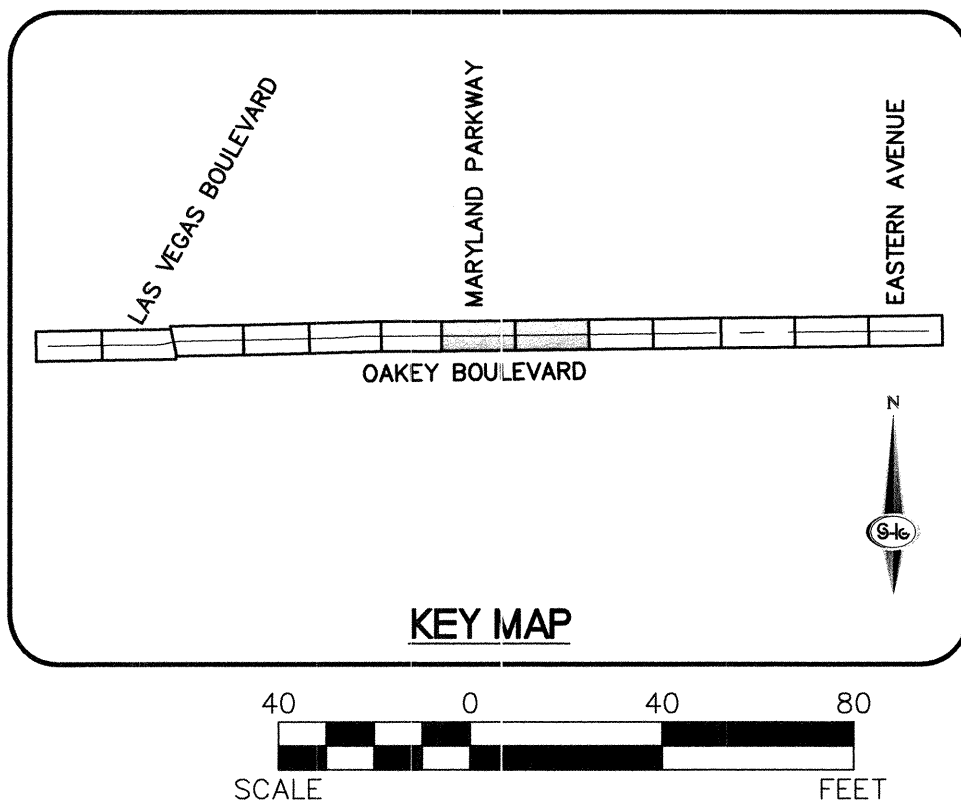
LEGEND

	BYPASS PIPING, MAINTAIN PEDESTRIAN AND DRIVEWAY/ALLEY ACCESS AT ALL TIMES
	FLOW BYPASS ACCESS DETAIL SEE DETAIL 3 ON SHEET DT-01
	FLOW NUMBER, SEE ESTIMATED FLOW TABLE BELOW

***ESTIMATED SANITARY SEWER FLOWS**

FLOW NO.	PIPE DIA	ADWF (MGD)	PEAK (MGD)	DESCRIPTION
28	12"	0.02	0.04	OBTAINED BY FLOW MONITORING
29	10"	1.61	4.83	ESTIMATED FLOW

* FLOWS SHOWN ARE ESTIMATES PROVIDED FOR BIDDING PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING FLOWS PRIOR TO DESIGN OF BYPASS PLAN.



FAST

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1-702-227-2929

Call before you Dig

Avoid cutting underground lines. IT'S COSTLY. 811

1-800-227-2600

REVISIONS

NO.	DATE	DESCRIPTION	APP'D

DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT MANAGEMENT

CITY ENGINEER: DAVID BOWERS, PE, PTOE
PROGRAM MANAGER: JEREMY LEAVITT, P.E.
DESIGNED BY: JSR
DRAWN BY: JAS
CHECKED BY: RWC
DATE: 4/1/14

SANITARY SEWER REHABILITATION GROUP B

Oakey Boulevard

"OB" 60+75.00 TO "OB" 79+75.00

BP-04B

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DRAWING NO. 307V1063

Sheet

SEAL

RANDY W. CARROLL
Exp. 12/31/2014
CIVIL
Professional Engineer No. 16131

Sheet

BP-04B

39 of 59

DRAWING NO. 307V1063

HANSEN NO. 46802

BID NO. 14-46802

SANITARY SEWER REHABILITATION GROUP B

SEE BP-05

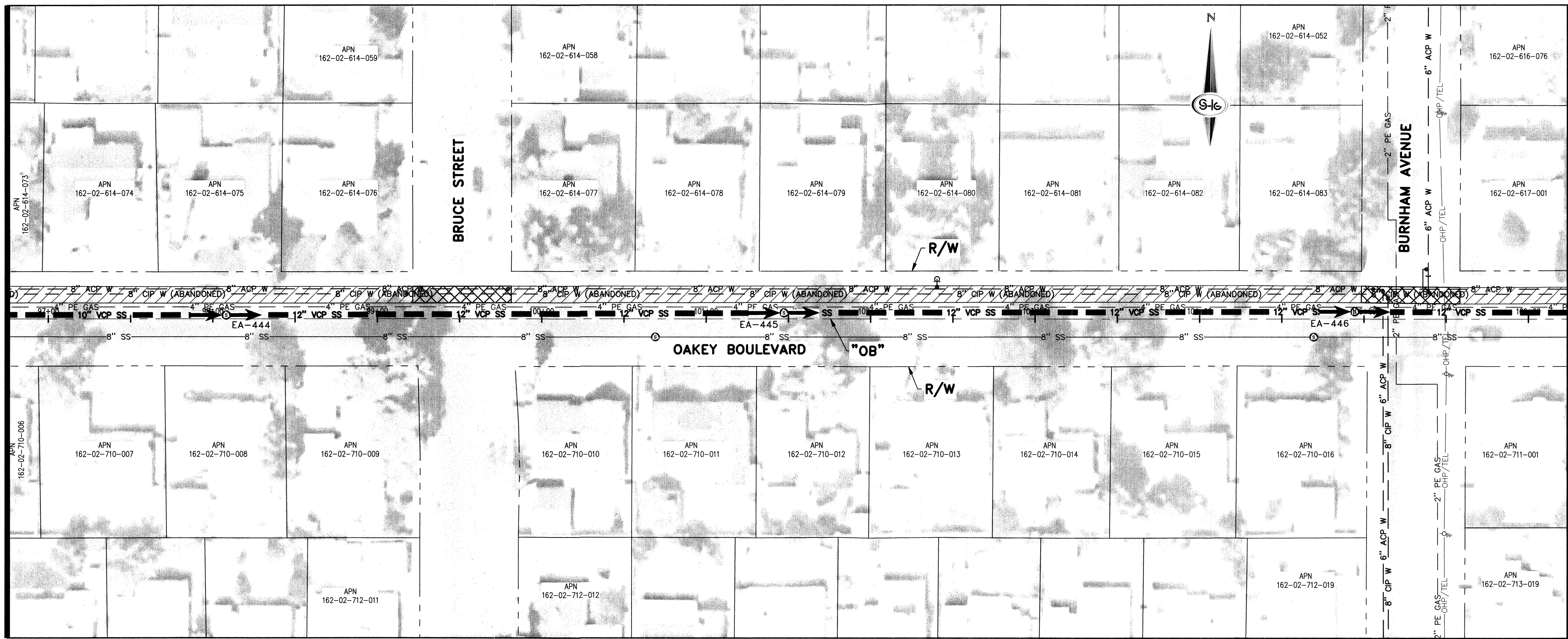
MATCHLINE

"OB" 96+75.00

SEE ABOVE RIGHT

MATCHLINE

"OB" 106+25.00



SEE BELOW LEFT

MATCHLINE

"OB" 106+25.00

- CONSTRUCTION BYPASS NOTES:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SEWER BYPASS DESIGN FOR DE-WATERING OF THE PIPE DURING REHABILITATION. THIS INCLUDES ALL PUMPING EQUIPMENT, PIPING AND FITTINGS, POWER, COLLECTION AND DISTRIBUTION ELEMENTS TO ACHIEVE THE BYPASSING OF THE EXISTING SEWAGE FROM INTAKE POINT TO DISCHARGE POINT.
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LEGEND

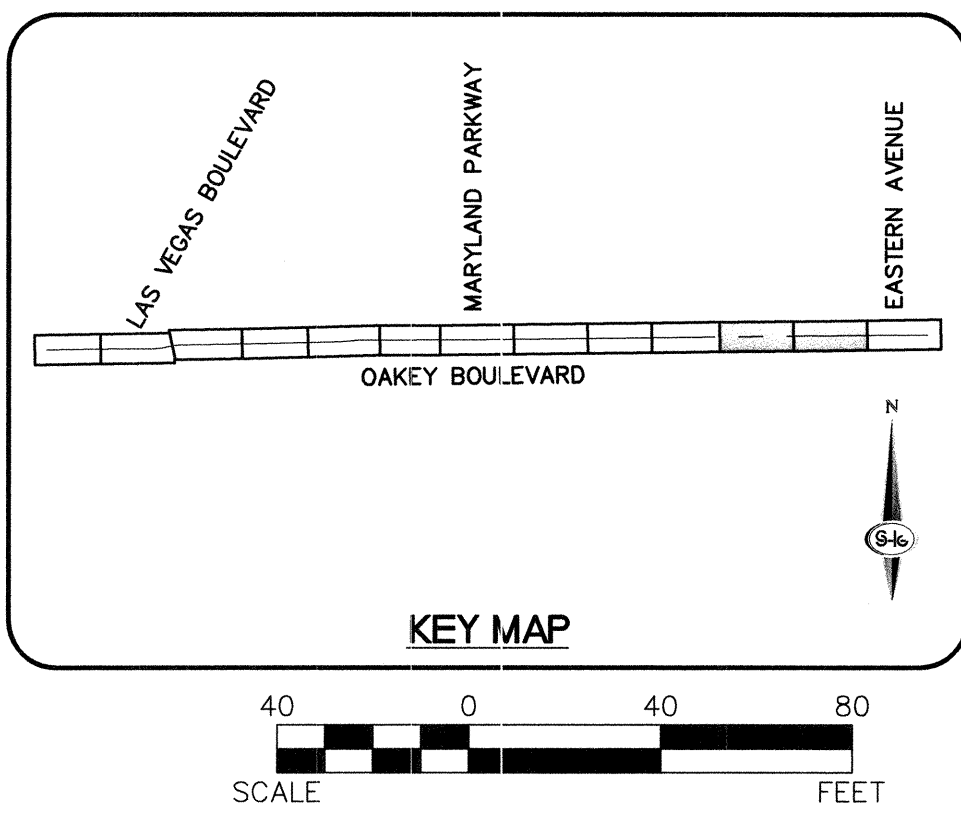
	BYPASS PIPING, MAINTAIN PEDESTRIAN AND DRIVEWAY/ALLEY ACCESS AT ALL TIMES
	FLOW BYPASS ACCESS DETAIL SEE DETAIL 3 ON SHEET DT-01
	FLOW NUMBER, SEE ESTIMATED FLOW TABLE BELOW

APPROVED FOR CONSTRUCTION

David Bowers 04/13/14 DATE

LVWMD ENGINEERING SERVICES MANAGER

PROJECT NO. 121821



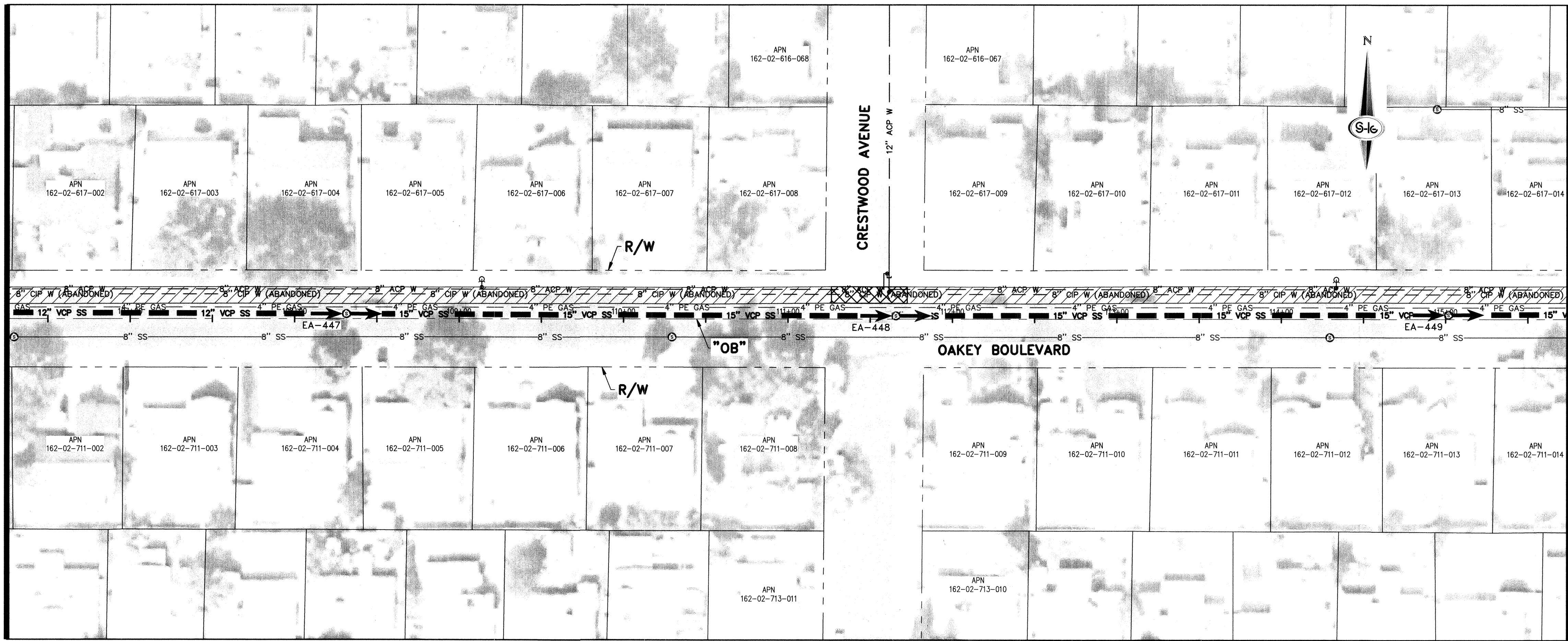
Call before you UnderGround.
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Call before you Dig
1-800-227-2929

SEE BP-07

MATCHLINE

"OB" 115+75.00



REVISIONS

NO.	DATE	DESCRIPTION	APP'D

DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT MANAGEMENT

CITY ENGINEER: DAVID BOWERS, PE, PTOE
PROGRAM MANAGER: JEREMY LEAVITT, P.E.
DESIGNED BY: JSR
DRAWN BY: JAS
CHECKED BY: RWC
DATE: 4/1/14

SANITARY SEWER REHABILITATION GROUP B

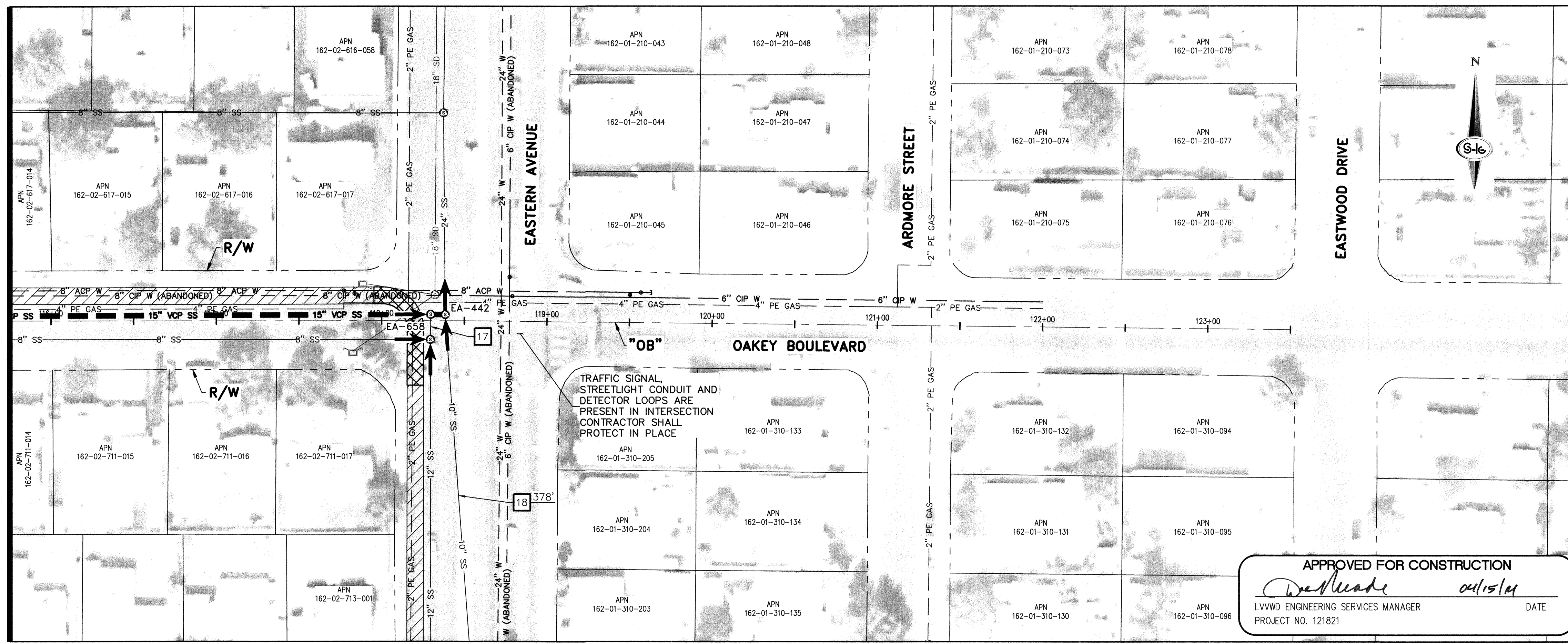
OAKLEY BOULEVARD

"OB" 96+75.00 TO "OB" 115+75.00

Sheet **BP-06**
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DRAWING NO. 307V1063

PROFESSIONAL ENGINEER
RANDY W. CARROLL
Exp. 12/31/2014
CIVIL
No. 16131

Sheet **BP-06**
42 of 59
DRAWING NO. 307V1063



APPROVED FOR CONSTRUCTION

W. Meade 04/15/21

LVVWD ENGINEERING SERVICES MANAGER DATE

PROJECT NO. 121821

CONSTRUCTION BYPASS NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SEWER BYPASS DESIGN FOR DE-WATERING OF THE PIPE DURING REHABILITATION. THIS INCLUDES ALL PUMPING EQUIPMENT, PIPING AND FITTINGS, POWER, COLLECTION AND DISCHARGE ELEVATION, AND THE DESIGN OF THE EXISTING SEWAGE FROM INTAKE POINT TO DISCHARGE POINT.
2. CONTRACTOR SHALL PROVIDE NOTIFICATION TO ALL BUSINESSES AND RESIDENTS IMPACTED BY THE SEWER REHABILITATION PROJECT (SEE SPECIFICATION SECTION 107.07).
3. CONTRACTOR SHALL PREPARE AND SUBMIT A TEMPORARY BYPASS PLAN (TBP) FOR THE BYPASS OPERATION (SEE SPECIFICATION SECTION 695).
4. CONTRACTOR SHALL SUBMIT THE TBP TO THE AGENCY FOR REVIEW. CONTRACTOR SHALL BYPASS ALL MAINLINE AND LATERAL FLOWS. QUANTITY OF SEWAGE TO BE BYPASSED IS THE SUM OF ALL FLOWS FROM THE PIPE TO BE REHABILITATED.
5. SEE SPECIFICATION SECTION 659 FOR ODOR CONTROL REQUIREMENTS.
6. CONTRACTOR SHALL PREPARE AND SUBMIT A TRAFFIC CONTROL PLAN TO THE AGENCY FOR REVIEW. THE TRAFFIC CONTROL PLAN SHALL INCLUDE THE AUTOMATIC DETECTION OF THE LOCATION OF THE WORK (SEE SPECIFICATION SECTION 624).
7. CONTRACTOR BYPASS PLANS MUST CONSIDER THE EXISTING SPEED LIMITS AND UNDESIRABLE LOCATIONS FOR TRAFFIC CONCENTRATION, TRUCKS AND THE REQUIRED TOP ELEMENTS. CONTRACTOR SHALL BE ALLOWED TO REDUCE SPEED AT EACH LOCATION WHERE THE PIPING CROSSES PERPENDICULAR TO A LANE(S) OF TRAFFIC BY 10 MPH. THE LOCATION OF THE OBSTRUCTION OF THE BYPASS PIPIING SHALL CONFORM TO DETAIL 3 SHOWN ON DRAWING DT-01. CONTRACTOR MAY REQUEST A VARIANCE TO THESE DETAILS BY SHOWING ALTERNATIVES THAT WILL ACHIEVE THE SAME SPEED LIMIT AND MAINTAIN THE REQUIRED TOP ELEMENTS FOR PEDESTRIANS, AND DESIRED RESULTS FOR THE BYPASSING OF SEWAGE. IF REQUIRED, REMOVE AND REINSTALL MANHOLE FRAME, COVER, GRADE AND SIDEWALK AND CURB AND GUTTER.
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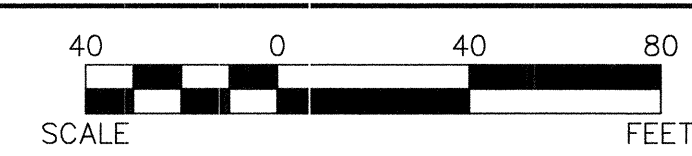
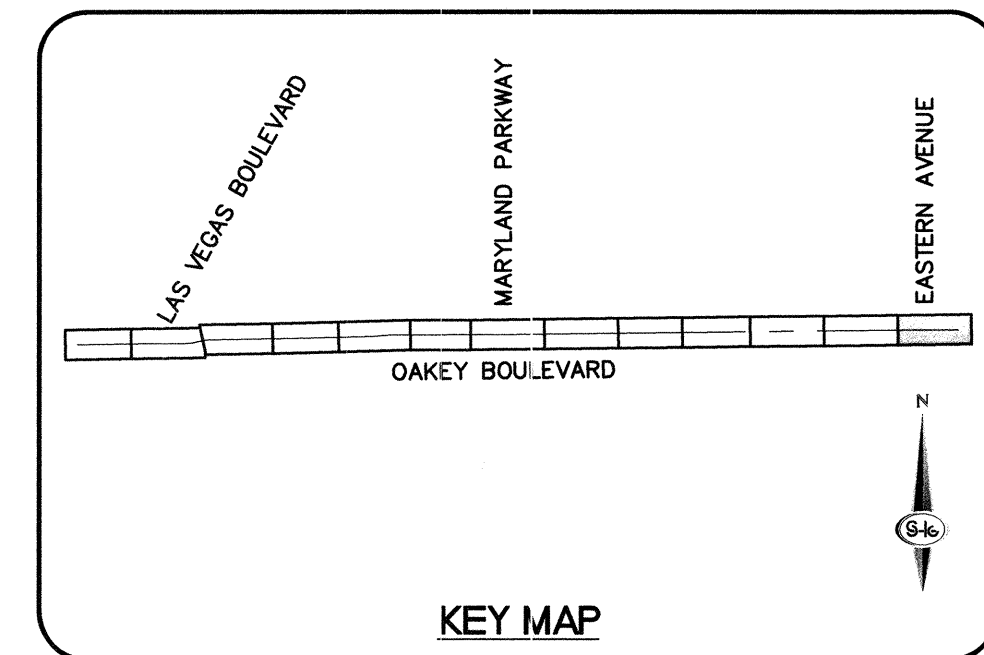
LEGEND

-  BYPASS PIPING, MAINTAIN PEDESTRIAN AND DRIVEWAY/ALLEY ACCESS AT ALL TIMES
-  FLOW BYPASS ACCESS DETAIL
SEE DETAIL 3 ON SHEET DT-01
-  1 FLOW NUMBER, SEE ESTIMATED FLOW TABLE BELOW

*ESTIMATED SANITARY SEWER FLOWS

*ESTIMATED SANITARY SEWER FLOWS				
FLOW NO.	PIPE DIA	ADWF (MGD)	PEAK (MGD)	DESCRIPTION
17	12"	0.10	0.18	OBTAINED BY FLOW MONITORING
18	10"	1.06	3.18	ESTIMATED FLOW

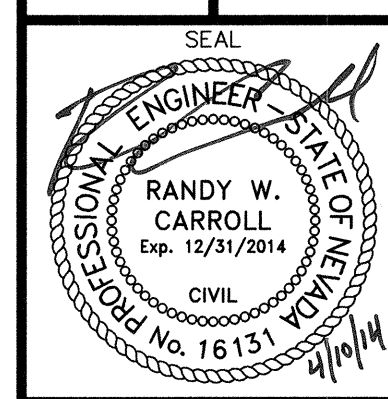
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DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT MANAGEMENT

E: SANITARY SEWER REHABILITATION GROUP B

OAKEY BOULEVARD
"OB" 115+75.00 TO "OB" 123+50.00



Sheet
BP-07
43 of 59
DRAWING NO.
307V1063

	"OB" 115+75.00 TO "OB" 123+50.00	DATE: 4/1/14 UNDRAWN BY: JAS CHECKED BY: RWC	NO. [] DATE: [] DESCRIPTION: [] NO. [] DATE: [] DESCRIPTION: [] NO. [] DATE: [] DESCRIPTION: []
SANITARY SEWER REHABILITATION GROUP B			

