RIVERSIDE CITY OF RIVERSIDE CALIFORNIA

INCORPORATED 1883

PUBLIC WORKS DEPARTMENT

ARLINGTON AVENUE UNDERPASS
MAUDE STREET STORM DRAIN
BNSF/EASEMENT STORM DRAIN

GENERAL CONSTRUCTION NOTES:

1. EXISTING UTILITIES SHOWN ON THIS PLAN ARE PLOTTED FROM UTILITY RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO LOCATE AND PROTECT ALL UTILITIES WHETHER OR NOT SHOWN ON THIS PLAN. IF THE COVER OF A UTILITY IS KNOWN, IT IS SHOWN IN THE PROFILE. UTILITIES SHOWN IN THE PROFILE AS —?— INDICATES THAT THE COVER IS UNKNOWN, BUT THE UTILITY IS NOT EXPECTED TO CONFLICT WITH THE PROPOSED IMPROVEMENTS.
2. CONFLICTING UTILITIES IN THE CONSTRUCTION AREA SHALL BE RELOCATED OR ABANDONED. PIPE ABANDONMENT SHALL CONFORM TO STATE STANDARDS AND SPECIFICATIONS.
3. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RIVERSIDE STANDARD DRAWINGS AND STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1991 EDITION, INCLUDING 1992 SUPPLEMENT. REFERENCE TO STATE STD. REFERS TO STATE OF CALIFORNIA, BUSINESS AND TRANSPORTATION AGENCY, DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND SPECIFICATIONS, 1995 METRIC EDITION.
4. WHERE SURVEY MONUMENTS EXIST, SUCH MONUMENTS SHALL BE PROTECTED OR SHALL BE REFERENCED AND RESET PURSUANT TO BUSINESS AND PROFESSIONS CODE, SECTIONS 8700 TO 8805 (LAND SURVEYOR'S ACT).
5. ALL ELEVATIONS SHOWN ON THE PLANS SHALL BE STAKED IN THE FIELD.
6. PRIME CONTRACTORS BIDDING THIS WORK SHALL HAVE A CLASS "A", "C-34", OR "C-42" LICENSE.
7. THE CONTRACTOR SHALL ADEQUATELY EXPOSE REINFORCEMENT OF EXISTING STORMDRAINS TO CONNECT PROPOSED IMPROVEMENTS. ALL SPLICING OF REINFORCEMENT SHALL BE IN CONFORMANCE WITH SECTION 52-1.08A OF CALTRANS SPECIFICATIONS DATED JULY 1992.
8. ALL SIGNING, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE TRAFFIC MANUAL, PUBLISHED BY THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, AND THE SPECIAL PROVISIONS. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE NOTED ON THE PLANS. CONTRACTOR SHALL COORDINATE ALL LOCAL STREET CONSTRUCTION SIGNING WITH CONSTRUCTION SIGNING REQUIRED FOR RAMPS.
9. ALL VALUES SHOWN ON THE PLAN ARE FOR APPROPRIATE METRIC UNITS. ENGLISH UNITS ARE SHOWN IN PARENTHESES ( ) FOR CONVENIENCE.
10. "D" LOADING LIMIT FOR PIPE SHALL BE 84 (1750) FOR PIPE DIAMETERS GREATER THAN 600 mm (24") AND 96 (2000) FOR PIPE DIAMETERS LESS THAN OR EQUAL TO 600 mm (24").

SPECIFIC CONSTRUCTION NOTES:

NUMBERS ABOVE 100 IN A HEXAGON ON THE PLAN REFER TO THE RESPECTIVE STANDARD DRAWING AND SHALL BE CONSTRUCTED ACCORDINGLY, UNLESS MODIFICATIONS ARE NOTED ON THE PLAN OR COVER SHEET. ANY NUMBER SHOWN BELOW THE STANDARD DRAWING NUMBER INDICATES THE SPECIFIC ALTERNATE TO BE CONSTRUCTED.

MAUDE STREET STORM DRAIN – SHEETS 2-5

1. REMOVE EXISTING BULKHEAD. CONNECT PROPOSED 1500 mm (60") RCP STORM DRAIN TO EXISTING 1500 mm (60") STUB.
2. CONSTRUCT STD 432 JUNCTION STRUCTURE. A=60°, B=600 mm (24"), C'=1.70 m, D1=D2=1500 mm (60"), E'=1.40 m, L=1.71 m, ELEV. R=260.409, ELEV. S=260.353.
3. CONSTRUCT STD. 456 TIMBER BULKHEAD IN LATERAL STUBOUT.
4. CONSTRUCT STD 424 CONCRETE COLLAR, A=45°. ROTATE COLLAR 60° IN HORIZONTAL PLANE. SEE DETAIL "A", SHEET 4.
5. CONSTRUCT STD 432 JUNCTION STRUCTURE. A=90°, B=600 mm (24"), C'=1.50 m, D1=D2=1500 mm (60"), E'=1.00 m, L=1.80 m, ELEV. R=260.603, ELEV. S=260.8.
6. REMOVE EXISTING 600 mm (24") RCP STORM DRAIN PIPE TO NORTHERLY SIDE OF 450 mm (18") SEWER CONSTRUCTION TRENCH. REMAINDER TO BE REMOVED AT TIME OF STREET CONSTRUCTION.
7. CONSTRUCT STD 430 MANHOLE. L=1.65 m, H=2.3 m, T=254 mm. PRESSURE TYPE MANHOLE FRAME AND COVER.
8. REMOVE TREE. REMAINING TREES ALONG CALIFORNIA SCHOOL FOR THE DEAF TO BE REMOVED AT A LATER DATE BY OTHERS. SEE PLAN R-3425.
9. FUTURE IMPROVEMENTS. SEE PLANS R-3425 AND D-642.
10. CONSTRUCT STD 405 CATCH BASIN. W=3 m. V DEPTH AS SHOWN IN PROFILE.
11. CONSTRUCT STD 406 CATCH BASIN. W=3 m. 3 GRATINGS. V DEPTH AS SHOWN IN PROFILE.
12. CONSTRUCT STD 432 JUNCTION STRUCTURE. A=64°, B=600 mm (24"), C'=1.40 m, D1=1050 mm (42"), D2=1200 mm (48"), E'=1.17 m, L=1.47 m, ELEV. R=264.007 m, ELEV. S= 264.000 m.
13. CONSTRUCT STD 325 SIDEWALK BEHIND CURB. T=90 mm, W=1.83 m.
14. CONSTRUCT STD 432 JUNCTION STRUCTURE. A=70°, B=600 mm (24"), C'=1.22 m, D1=900 mm (36"), D2=1050 mm (42"), E'=1.04 m, L=1.34 m, ELEV. R=270.623 m, ELEV. S= 270.500 m.
15. CONSTRUCT STD 405 CATCH BASIN. W=4.9 m. V DEPTH AS SHOWN IN PROFILE.
16. RELOCATE FIRE HYDRANT AND LATERAL BY CITY FORCES.
17. ADJUST WATER SERVICE LATERAL BY CITY FORCES.
18. CONSTRUCT STD 431 MANHOLE. L=1.65 m, H=1.75 m, T=254 mm.
19. CONSTRUCT STD 200 CURB AND GUTTER AS PART OF RESTORATION OF EXISTING STREET IMPROVEMENTS. MATCH EXISTING CURB FACE.
20. RELOCATE WATER MAIN BY CITY FORCES IF NECESSARY.
21. RELOCATE TELEPHONE CONDUIT BY OTHERS.
22. PROTECT IN PLACE BURIED TELEPHONE CABLE.
23. ADJUST TO GRADE WATER ELECTROLYSIS TESTING STATION.
24. REMOVE EXISTING MOW CURB. GRADE SLOPE AS SHOWN IN TYPICAL SECTION. ~~SLOPE PLANTING TO BE REPLACED BY OTHERS.~~ ⚠1 PROTECT OLEANDER IN PLACE. SEE SPECIAL PROVISIONS.
25. EXISTING IRRIGATION VALVES. CLEAR IRRIGATION SYSTEM FROM WORK AREA AS DESCRIBED IN SPECIAL PROVISIONS. IRRIGATION SYSTEM TO BE REPLACED ~~BY OTHERS.~~ ⚠1

BN&SF/EASEMENT STORM DRAIN – SHEETS 6-8

1. RECONSTRUCT WATER CANAL AND REPLACE WOOD PLANK COVER. SEE DETAIL, SHEET 8.
2. PRECAST 22.5° ELBOW FOR 736.6x1143 mm (29"x45") ELLIPTICAL PIPE. ELBOW LENGTH=2.438 m (8').
3. TRANSITION STRUCTURE. SEE DETAIL, SHEET 8.
4. RELOCATE LIGHT POLE. SEE DETAIL, SHEET 8.
5. RELOCATE PHONE BOOTH ~~BY OTHERS~~. ⚠1
6. PROTECT IN PLACE LIGHT POLE AND WIRING.
7. CONSTRUCT STD. 432 JUNCTION STRUCTURE WITH TWO (2) MATCHING LATERAL STUB OUTS. A=50°, B=D1=D2=900 mm (36"), C'=E'=1.62 m, L=1.80 m, ELEV. R=261.512, ELEV. S=261.486
8. SEE SHEET 7.
9. REMODEL SEWER LATERAL PER STD. 554, CASE "C", IF REQUIRED.
10. WATER SERVICE. ADJUST TAIL PIPE IF REQUIRED.
11. FUTURE IMPROVEMENTS. SEE PLAN R-3425.
12. ADJUST STREET LIGHT CONDUIT TO GRADE, IF REQUIRED.
13. REGRADE EXISTING DRAINAGE DITCH INTO CSP INLET.
14. DRAINAGE DITCH TO BE CONSTRUCTED AT TIME OF TRACK RELOCATION. SLOPE = RUN:RISE
15. STATE STD D93C TYPE A PIPE RISER WITH DEBRIS RACK CAGE. INTERCEPT EXISTING 375 mm (15") DRAIN FROM PICADILLY STREET. V=1.88 m.
16. CSP TO BE INSTALLED BY BN&SF FORCES PRIOR TO INSTALLATION OF RCP.
17. FIBER OPTIC TELEPHONE LINE TO BE REMOVED BY OTHERS PRIOR TO TRACK CONSTRUCTION AND REPLACED LATER.
18. CONSTRUCT STD 424 CONCRETE COLLAR. A=45°.
19. CONSTRUCT STD 424 CONCRETE COLLAR. A=46.5°.
20. STATE STD D93C TYPE B RISER WITH DEBIS RACK CAGE. V=1.265 m.
21. STD 432 MANHOLE. A=90°, B=900 mm (36"), C'=1.05 m, D1=D2=900 mm (36"), E'=1.05 m, L=2.10 m, ELEVATION R AND ELEVATION S AS SHOWN ON PLAN. COVER TO BE BOLTED.

EXISTING UNDERGROUND UTILITIES:

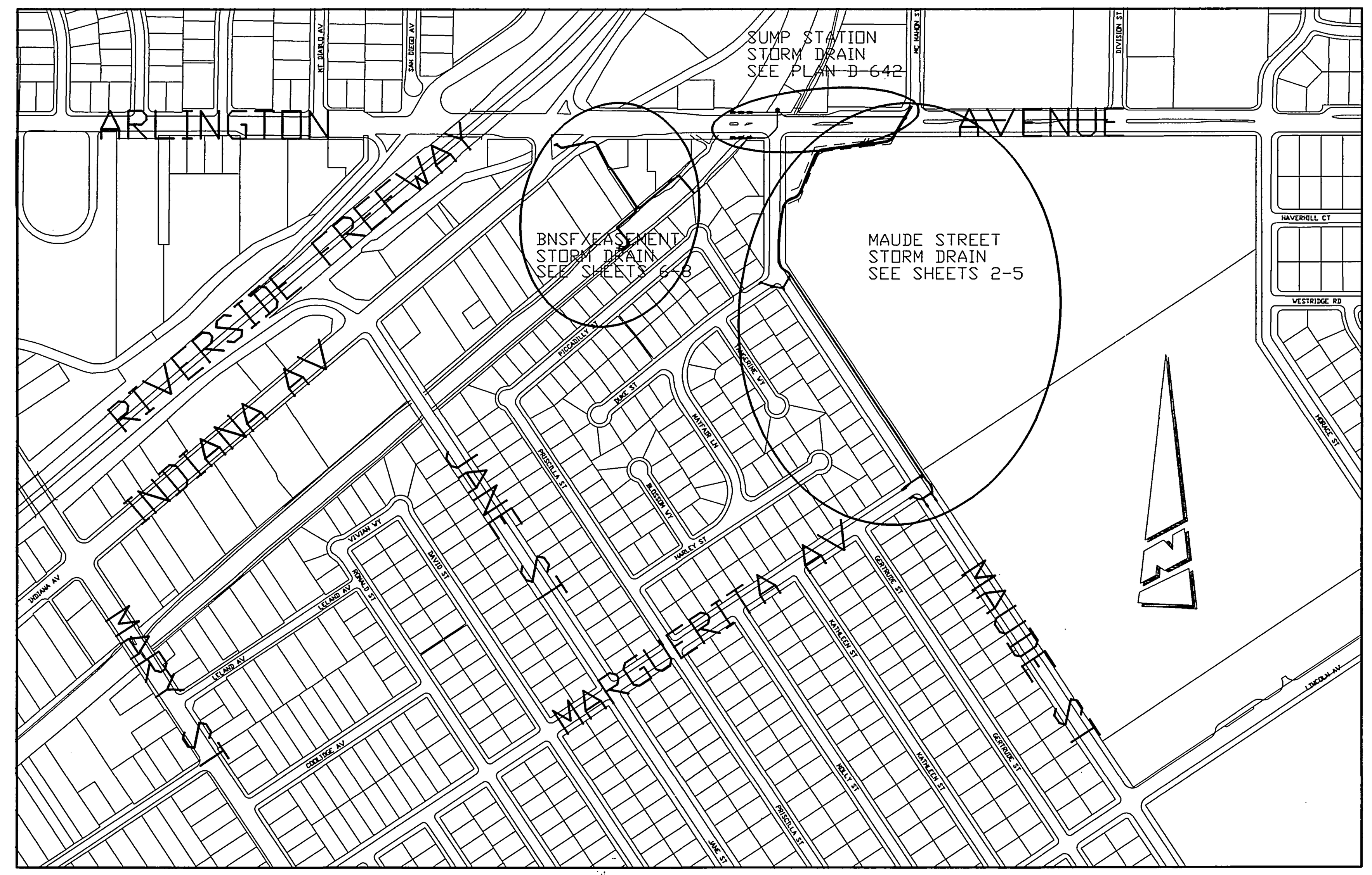
SANITARY SEWER	8"S	TELEPHONE CONDUIT	T
WATER LINE	6"W	ELECTRICAL CONDUIT	E
STORM DRAIN	24"SD	ELECTROLIER LIGHTING CONDUIT	ELC
GAS LINE	3"G	TRAFFIC SIGNAL	SIG
ABANDONED UTILITY	6"G(ABAN'D.)	FIRE ALARM	F

EXISTING TOPOGRAPHY:

BLOCK WALL
BOARD FENCE
WIRE FENCE
CHAIN LINK FENCE

TOP OF SLOPE / TOE OF SLOPE — SLOPE RATIO EXPRESSED AS RISE:RUN
DIRECTION OF FLOW

SANITARY SEWER M.H.	POLE & GUY ANCHOR	PEDESTRIAN PUSH BUTTON
SANITARY SEWER CLEANOUT	POWER POLE	RAILROAD TRACKS
STORM DRAIN M.H.	TELEPHONE POLE	RAILROAD SIGN
IRRIGATION WEIR	TELEPHONE RISER	RAILROAD SIGNAL
WATER M.H.	JOINT USE POLE	TRAFFIC SIGNAL
GAS M.H.	PULL BOX	TRAFFIC SIGNAL ON MAST ARM
ELECTRIC M.H.	TRAFFIC SIGN	TRAFFIC SIGNAL CONTROLLER
TELEPHONE M.H.	PARKING METER	TRAFFIC SIGNAL PRESSURE DETECTOR
WATER METER	FIRE ALARM BOX	TRAFFIC SIGNAL LOOP DETECTOR
FIRE HYDRANT	STREET NAME SIGN	STREET LIGHT & TRAFFIC SIGNAL ON MAST ARM
SPRINKLER HEAD	GAS METER	STREET LIGHT (UPRIGHT)
VALVE	MAIL BOX	STREET LIGHT ON MAST ARM
AIR VALVE	FAUCET	STEEL POST
AIR VENT	WALK-DON'T WALK PEDESTRIAN SIGNAL	WOOD POST
BUS STOP SIGN	ELECTROLYSIS TEST STATION	
BLOW-OFF VALVE	WHEEL STOP	
IRRIGATION STAND PIPE	A.C. BERM	
CONCRETE	CALTRANS ACCESS CONTROL	
ASPHALT		
BUILDING		
EDGE OF PAVEMENT		



PROJECT LOCATION PLAN

50 m 100 m 200 m 300 m 400 m 500 m 600 m

SCALE - 1:5000

SHEET #	DESCRIPTION
1	COVER SHEET
2	MAUDE STREET STORM DRAIN PLAN AND PROFILE – MCMAHON TO DUKE
3	MAUDE STREET STORM DRAIN PLAN AND PROFILE – DUKE TO MARGUERITA
4	MAUDE STREET STORM DRAIN LATERAL PLAN DETAILS
5	MAUDE STREET STORM DRAIN LATERAL PROFILES
6	BN&SF/EASEMENT STORM DRAIN PLAN AND PROFILE – INDIANA TO BN&SF ROW
7	BN&SF/EASEMENT STORM DRAIN PLAN AND PROFILE – WITHIN BN&SF ROW
8	BN&SF/EASEMENT STORM DRAIN MISC. DETAILS

CSP CROSSOVERS SHOWN ON SHEET 7 TO BE COMPLETED BY BN&SF FORCES AND ARE NOT PART OF THIS CONTRACT.

IMPORTANT NOTICE
Section 4216/4217 of the Government Code requires a Dig Alert Identification Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert I.D. Number call
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-422-4133

BENCHMARK
N&T SE CURB RETURN ARLINGTON AVENUE AND MAUDE STREET PER LL 41/92.
ELEVATION: 264.789 m

ENGINEER IN RESPONSIBLE CHARGE
Richard D. McGrath (signature)
RICHARD D. McGRATH
R.C.E. No. 31952 expires 12/31/00
DATE 12-31-97

REGISTERED PROFESSIONAL ENGINEER — RICHARD D. McGRATH — No. 31952 — Exp. 12-31-00 — CIVIL — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
⚠1	MODIFIED CONSTRUCTION NOTE		

DESIGNED BY DPY DRAWN BY δπψ CHECKED BY

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
DEPUTY P.W. DIRECTOR	RMc	12/31/97
PRINCIPAL ENGINEER		11/24/97
CHIEF P.W. INSPECTOR	—	—
TRAFFIC DIVISION	—	—
SURVEYOR		11-1997
STREET DIVISION		11-24-97
PARKS DEPARTMENT	—	—

APPROVED BY R. McGrath (signature)
PUBLIC WORKS DIRECTOR
DATE 12/31/97

✱ AS-BUILT 9-7-2000 LH

ARLINGTON AVENUE UNDERPASS STORM DRAINS

SCALE – HORIZONTAL ----, VERTICAL ----

ACCOUNT NUMBER 432-541500-440302-30268

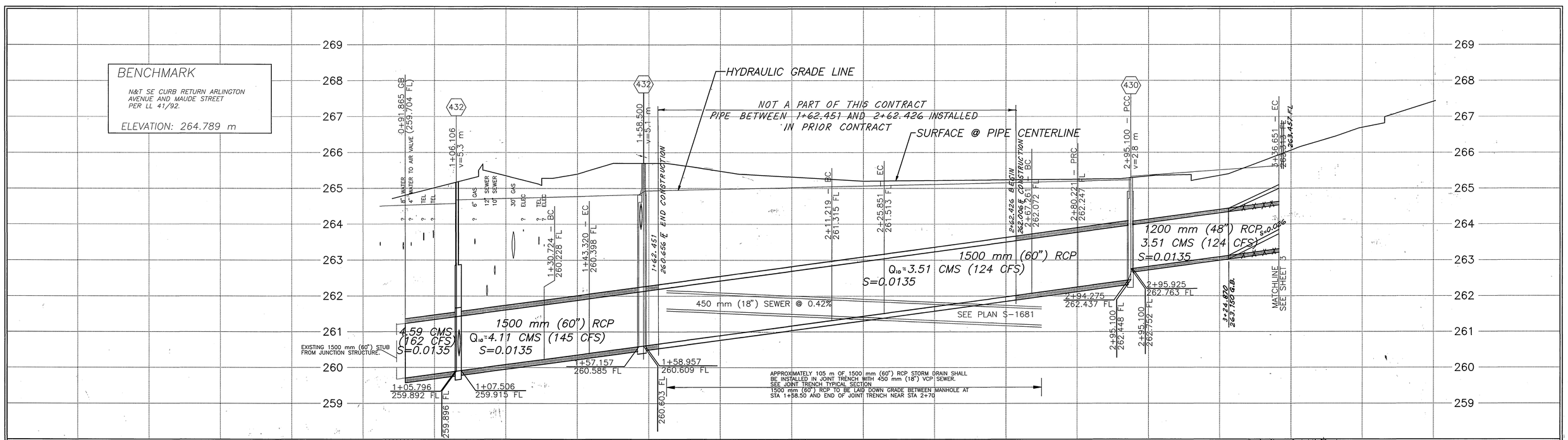
D-651

SHEET 1 OF 8

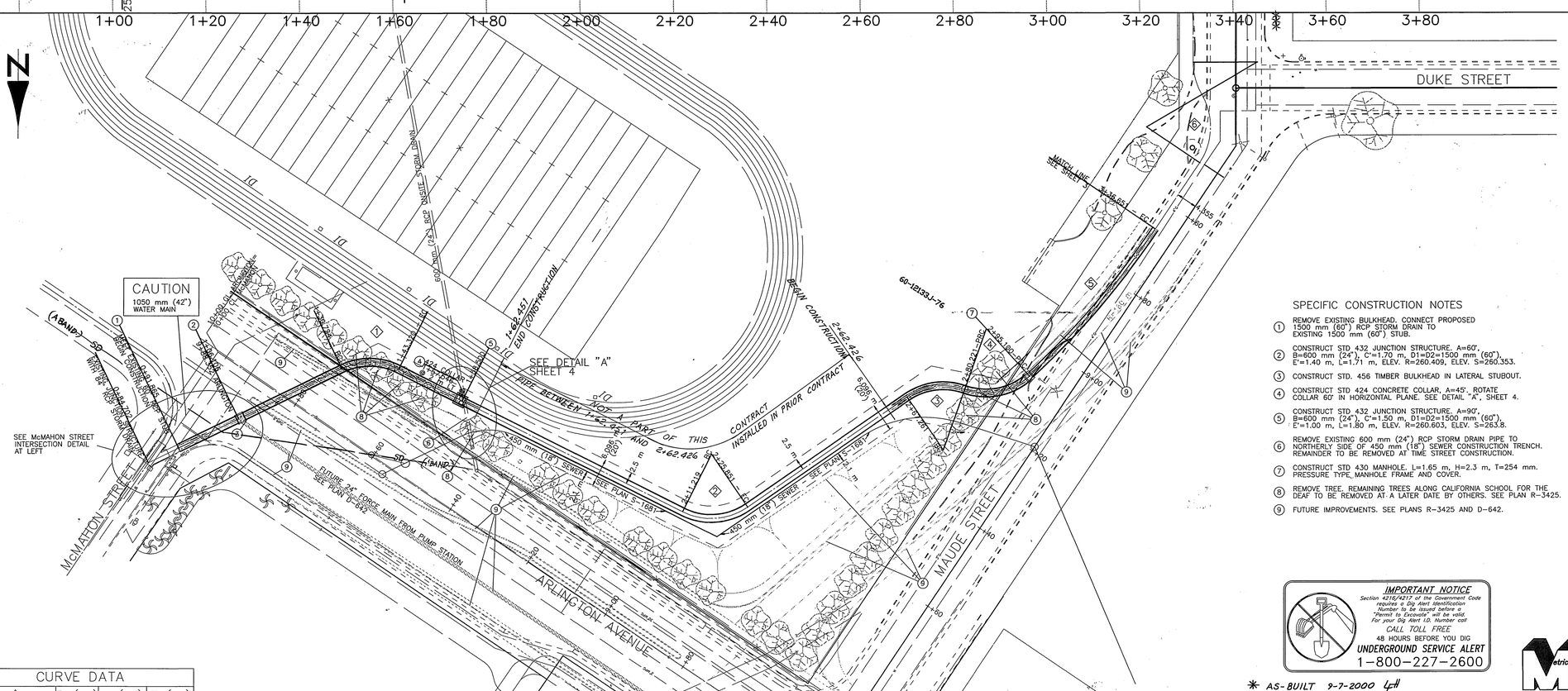
FEDERAL AID PROJECT FILE NO. CML-5OE (041)

Metric

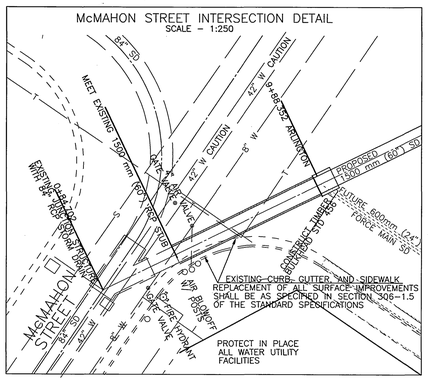
INDEXED 9-7-2000 LH



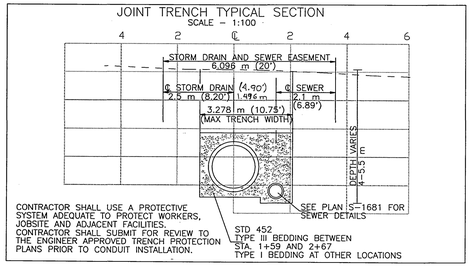
STATION EQUIVALENCY TABLE			
STORM DRAIN STATION	STREET STATION	AND OFFSET	STREET NAME
1+06.106	9+88.352	9.359 RT	ARLINGTON
1+30.724	9+76.075	11.906 RT	ARLINGTON
1+43.320	9+65.959	18.650 RT	ARLINGTON
1+58.500	9+50.905	20.601 RT	ARLINGTON
2+11.219	8+98.623	27.376 RT	ARLINGTON
2+25.851	8+87.624	35.953 RT	ARLINGTON
2+67.261	9+25.980	28.627 RT	MAUDE
2+80.221	9+17.231	19.260 RT	MAUDE
2+95.100	9+07.151	9.313 RT	MAUDE
3+36.651	8+65.948	4.420 RT	MAUDE



McMAHON STREET INTERSECTION DETAIL
SCALE – 1:250



JOINT TRENCH TYPICAL SECTION
SCALE – 1:100



CONTRACTOR SHALL USE A PROTECTIVE SYSTEM ADEQUATE TO PROTECT WORKERS, JOBSITE AND ADJACENT FACILITIES. CONTRACTOR SHALL SUBMIT FOR REVIEW TO THE ENGINEER APPROVED TRENCH PROTECTION PLANS PRIOR TO CONDUIT INSTALLATION.

STD 452
TYPE III BEDDING BETWEEN STA. 1+59 AND 2+67
TYPE I BEDDING AT OTHER LOCATIONS

CURVE DATA				
◇	△	R (m)	L (m)	T (m)
1	52° 36' 57"	13.716	12.596	6.781
2	61° 07' 21"	13.716	14.632	8.099
3	54° 07' 47"	13.716	12.958	7.008
4	62° 09' 37"	13.716	14.881	8.268
5	13° 33' 15"	175.645	41.551	20.873

SPECIFIC CONSTRUCTION NOTES

1. REMOVE EXISTING BULKHEAD. CONNECT PROPOSED 1500 mm (60") RCP STORM DRAIN TO EXISTING 1500 mm (60") STUB.
2. CONSTRUCT STD 432 JUNCTION STRUCTURE. A=60', B=600 mm (24"), C'=1.70 m, D1=D2=1500 mm (60"), E'=1.40 m, L=1.71 m, ELEV. R=260.409, ELEV. S=260.353.
3. CONSTRUCT STD. 456 TIMBER BULKHEAD IN LATERAL STUBOUT.
4. CONSTRUCT STD 424 CONCRETE COLLAR, A=45°. ROTATE COLLAR 60° IN HORIZONTAL PLANE. SEE DETAIL "A", SHEET 4.
5. CONSTRUCT STD 432 JUNCTION STRUCTURE. A=90°, B=600 mm (24"), C'=1.50 m, D1=D2=1500 mm (60"), E'=1.00 m, L=1.80 m, ELEV. R=260.603, ELEV. S=263.8.
6. REMOVE EXISTING 600 mm (24") RCP STORM DRAIN PIPE TO NORTHERLY SIDE OF 450 mm (18") SEWER CONSTRUCTION TRENCH. REMAINDER TO BE REMOVED AT TIME STREET CONSTRUCTION.
7. CONSTRUCT STD 430 MANHOLE. L=1.65 m, H=2.3 m, T=254 mm. PRESSURE TYPE, MANHOLE FRAME AND COVER.
8. REMOVE TREE. REMAINING TREES ALONG CALIFORNIA SCHOOL FOR THE DEAF TO BE REMOVED AT A LATER DATE BY OTHERS. SEE PLAN R-3425.
9. FUTURE IMPROVEMENTS. SEE PLANS R-3425 AND D-642.

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CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

* AS-BUILT 9-7-2000 GH

ENGINEER IN RESPONSIBLE CHARGE
Richard D. McGrath
RICHARD D. McGRATH
R.C.E. No. 31952 expires 12/31/00
DATE 12-31-97

REGISTERED PROFESSIONAL ENGINEER RICHARD D. McGRATH No. 31952 Exp. 12-31-00 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY DPY DRAWN BY DMY CHECKED BY

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
DEPUTY P.W. DIRECTOR		
PRINCIPAL ENGINEER		11/29/97
CHIEF P.W. INSPECTOR		
TRAFFIC DIVISION		
SURVEYOR		11-19-97
STREET DIVISION		11-19-97
PARKS DEPARTMENT		

APPROVED BY R. McGrath
PUBLIC WORKS DIRECTOR
DATE 12/31/97

ARLINGTON AVENUE UNDERPASS STORM DRAINS

SCALE – HORIZONTAL 1:500, VERTICAL 1:50

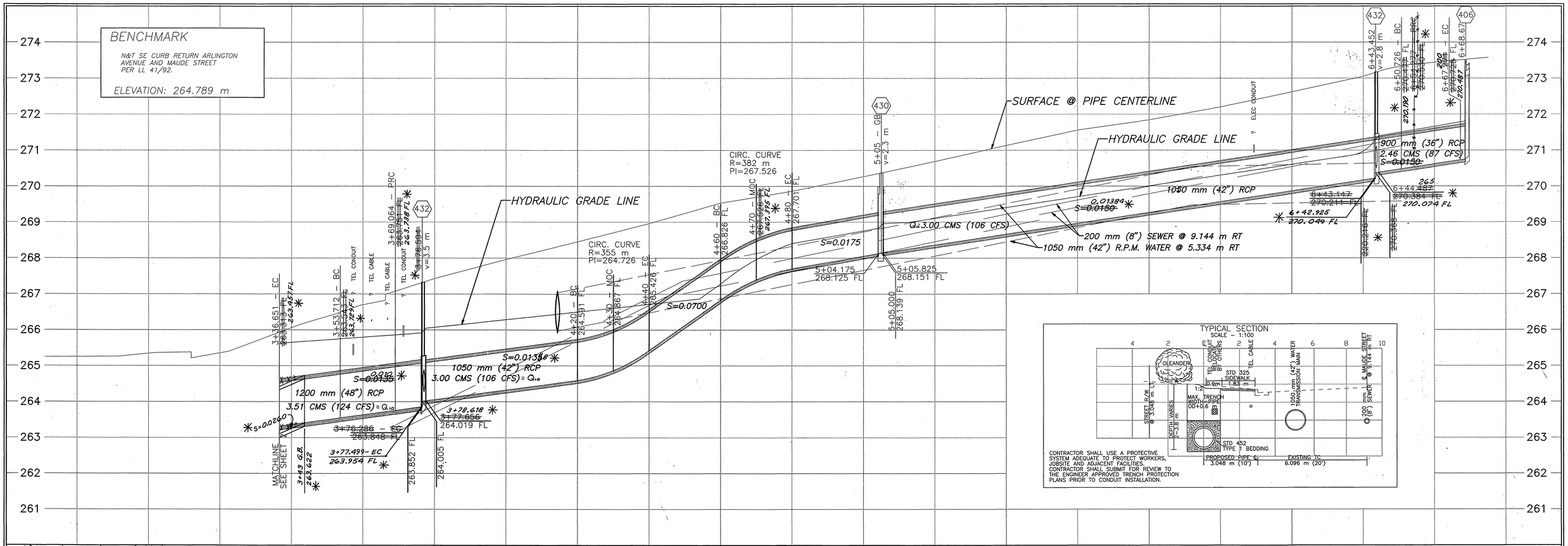
ACCOUNT NUMBER 432-541500-440302-30268

D-651

SHEET 2 OF 8

FEDERAL AID PROJECT FILE NO. CML-5058(04)

INDEXED 9-7-2000 GH



STATION EQUIVALENCY TABLE

STORM DRAIN STATION	STREET STATION	AND OFFSET	STREET NAME
3+36.651	8+65.948	4.420 RT	MAUDE
3+53.712	8+48.887	4.420 RT	MAUDE
3+69.064	8+30.607	7.286 RT	MAUDE
3+76.266	8+23.734	9.144 RT	MAUDE
3+76.594	8+23.406	9.144 RT	MAUDE
5+05.000	6+95.000	9.144 RT	MAUDE
6+43.452	5+56.548	9.144 RT	MAUDE
6+50.726	5+49.274	9.144 RT	MAUDE
6+54.277	5+45.762	9.601 RT	MAUDE
6+67.271	5+33.536	6.934 RT	MAUDE

STORM DRAIN STATIONING VS STREET STATIONING CONVERSION EQUATION
MAUDE STREET STATION = 12+00 – STORM DRAIN STATION
BETWEEN STORM DRAIN STATION 3+76.286 AND 6+50.726

SPECIFIC CONSTRUCTION NOTES

(9) FUTURE IMPROVEMENTS. SEE PLANS R-3425 AND D-642.

(10) CONSTRUCT STD 405 CATCH BASIN. W=3 m. V DEPTH AS SHOWN IN PROFILE.

(11) CONSTRUCT STD 406 CATCH BASIN. W=3 m. 3 GRATINGS. V DEPTH AS SHOWN IN PROFILE.

(12) CONSTRUCT STD 432 JUNCTION STRUCTURE. A=64", B=600 mm (24"), C'=1.40 m, D1=1050 mm (42"), D2=1200 mm (48"), E'=1.17 m, L=1.47 m, ELEV. R=264.007 m, ELEV. S= 264.000 m.

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(14) CONSTRUCT STD 432 JUNCTION STRUCTURE. A=70", B=600 mm (24"), C'=1.22 m, D1=900 mm (36"), D2=1050 mm (42"), E'=1.04 m, L=1.34 m, ELEV. R=270.623 m, ELEV. S= 270.500 m.

(15) CONSTRUCT STD 405 CATCH BASIN. W=4.9 m. V DEPTH AS SHOWN IN PROFILE.

(16) RELOCATE FIRE HYDRANT AND LATERAL BY CITY FORCES.

(17) ADJUST WATER SERVICE LATERAL BY CITY FORCES.

(18) CONSTRUCT STD 430 MANHOLE. L=1.65 m, H=1.75 m, T=254 mm.

(19) CONSTRUCT STD 200 CURB AND GUTTER AS PART OF RESTORATION OF EXISTING STREET IMPROVEMENTS. MATCH EXISTING CURB FACE.

(20) RELOCATE WATER MAIN BY CITY FORCES IF NECESSARY.

(21) RELOCATE TELEPHONE CONDUIT ~~BY OTHERS.~~ △1

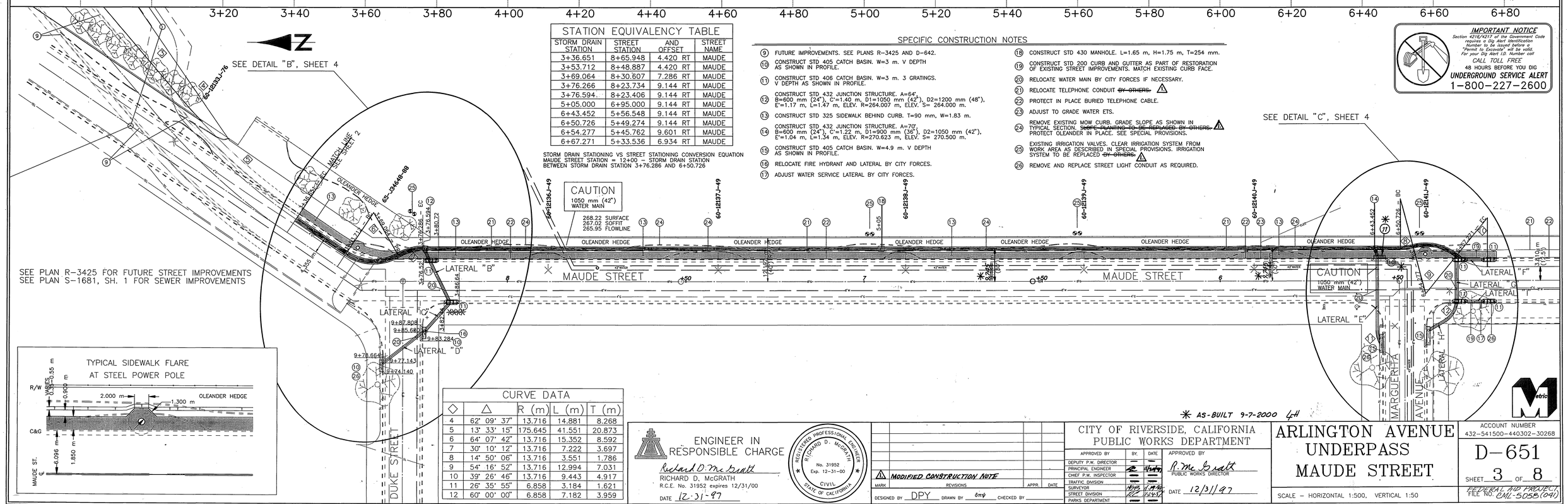
(22) PROTECT IN PLACE BURIED TELEPHONE CABLE.

(23) ADJUST TO GRADE WATER ETS.

(24) REMOVE EXISTING MOW CURB. GRADE SLOPE AS SHOWN IN TYPICAL SECTION. ~~SLOPE PLANTING TO BE REPLACED BY OTHERS.~~ △1 PROTECT OLEANDER IN PLACE. SEE SPECIAL PROVISIONS.

(25) EXISTING IRRIGATION VALVES. CLEAR IRRIGATION SYSTEM FROM WORK AREA AS DESCRIBED IN SPECIAL PROVISIONS. IRRIGATION SYSTEM TO BE REPLACED ~~BY OTHERS.~~ △1

(26) REMOVE AND REPLACE STREET LIGHT CONDUIT AS REQUIRED.



CURVE DATA

◇	△	R (m)	L (m)	T (m)
4	62° 09' 37"	13.716	14.881	8.268
5	13° 33' 15"	175.645	41.551	20.873
6	64° 07' 42"	13.716	15.352	8.592
7	30° 10' 12"	13.716	7.222	3.697
8	14° 50' 06"	13.716	3.551	1.786
9	54° 16' 52"	13.716	12.994	7.031
10	39° 26' 46"	13.716	9.443	4.917
11	26° 35' 55"	6.858	3.184	1.621
12	60° 00' 00"	6.858	7.182	3.959

ENGINEER IN RESPONSIBLE CHARGE
Richard D. McGrath
RICHARD D. McGRATH
R.C.E. No. 31952 expires 12/31/00
DATE 12-31-97

REGISTERED PROFESSIONAL ENGINEER RICHARD D. McGRATH No. 31952 Exp. 12-31-00 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
△1	MODIFIED CONSTRUCTION NOTE		

DESIGNED BY DPY DRAWN BY ~~DPY~~ CHECKED BY

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY.	DATE
DEPUTY P.W. DIRECTOR	—	—
PRINCIPAL ENGINEER	[illegible]	11/14/97
CHIEF P.W. INSPECTOR	—	—
TRAFFIC DIVISION	—	—
SURVEYOR	[illegible]	11/14/97
STREET DIVISION	[illegible]	11/21/97
PARKS DEPARTMENT	—	—

APPROVED BY R. McGrath PUBLIC WORKS DIRECTOR DATE 12/31/97

ARLINGTON AVENUE UNDERPASS MAUDE STREET

SCALE – HORIZONTAL 1:500, VERTICAL 1:50

ACCOUNT NUMBER 432-541500-440302-30268

D-651

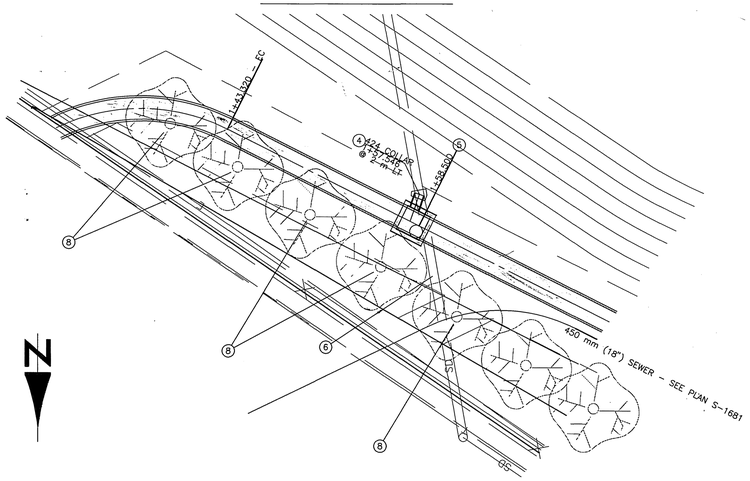
SHEET 3 OF 8

FEDERAL AID PROJECT, FILE NO. CML-5058(041)

✳ AS-BUILT 9-7-2000 LH

INDEXED 9-7-2000 LH

DETAIL "A"



SPECIFIC CONSTRUCTION NOTES

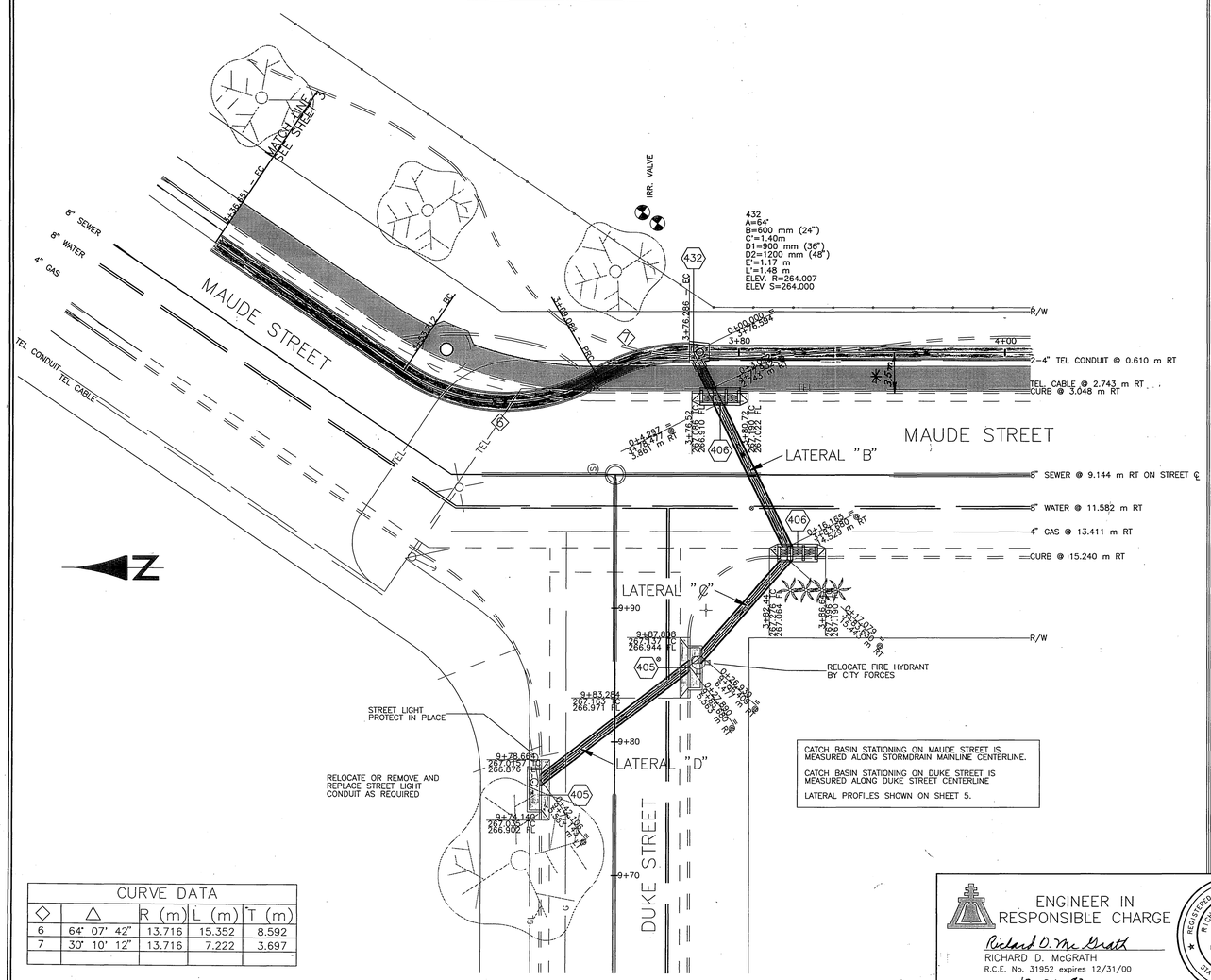
(4) CONSTRUCT STD 424 CONCRETE COLLAR, A=45°. ROTATE COLLAR 60° IN HORIZONTAL PLANE. SEE DETAIL "A", SHEET 4.

(5) CONSTRUCT STD 432 JUNCTION STRUCTURE. A=90°, B=600 mm (24"), C'=1.50 m, D1=D2=1500 mm (60"), E'=1.00 m, L=1.80 m, ELEV. R=260.603, ELEV. S=260.8.

(6) REMOVE EXISTING 600 mm (24") RCP STORM DRAIN PIPE TO NORTHERLY SIDE OF 450 mm (18") SEWER CONSTRUCTION TRENCH. REMAINDER TO BE REMOVED AT TIME OF STREET CONSTRUCTION.

(8) REMOVE TREE. REMAINING TREES ALONG CALIFORNIA SCHOOL FOR THE DEAF TO BE REMOVED AT A LATER DATE BY OTHERS. SEE PLAN R-3425.

DETAIL "B"



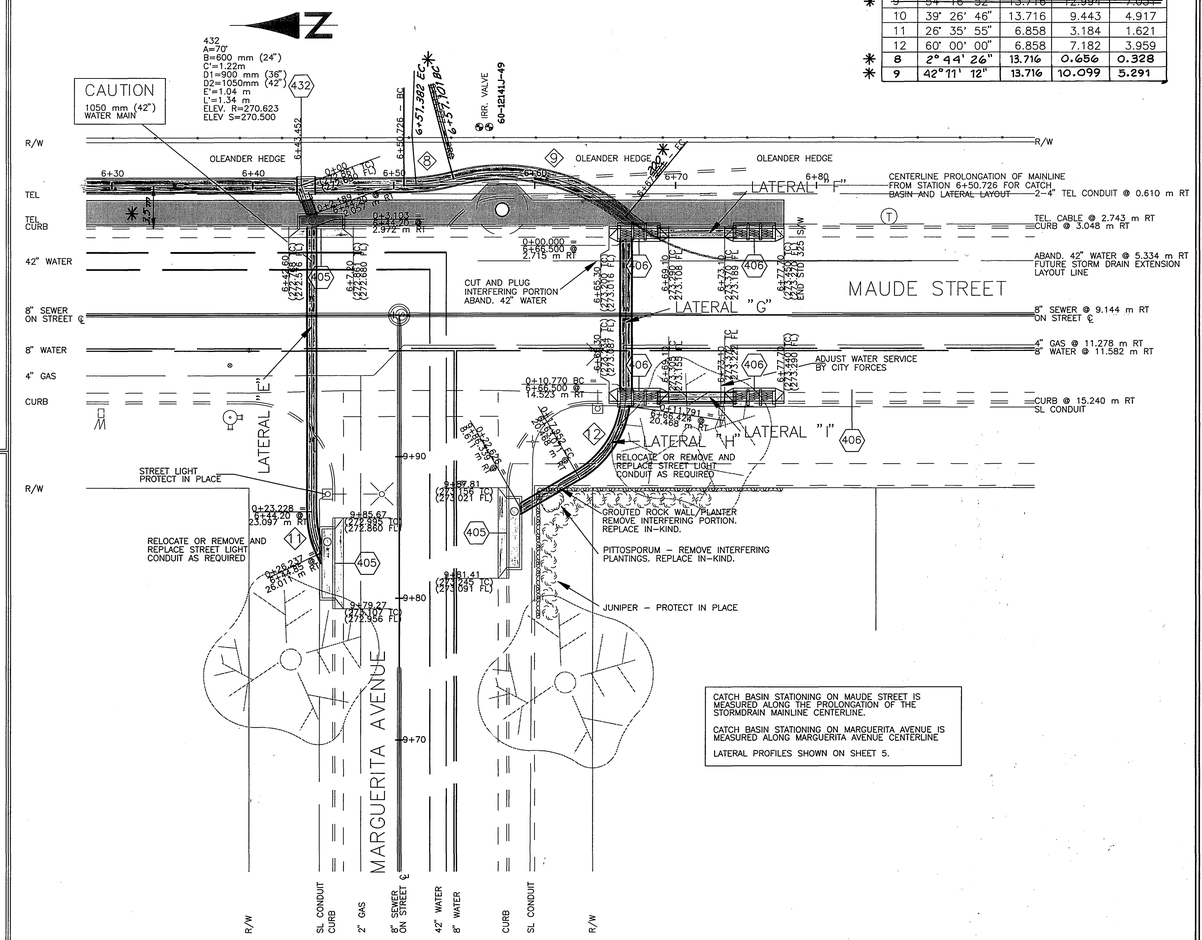
CATCH BASIN STATIONING ON MAUDE STREET IS MEASURED ALONG STORMDRAIN MAINLINE CENTERLINE.

CATCH BASIN STATIONING ON DUKE STREET IS MEASURED ALONG DUKE STREET CENTERLINE

LATERAL PROFILES SHOWN ON SHEET 5.

CURVE DATA				
◇	△	R (m)	L (m)	T (m)
6	64° 07' 42"	13.716	15.352	8.592
7	30° 10' 12"	13.716	7.222	3.697

DETAIL "C"



CATCH BASIN STATIONING ON MAUDE STREET IS MEASURED ALONG THE PROLONGATION OF THE STORMDRAIN MAINLINE CENTERLINE.

CATCH BASIN STATIONING ON MARGUERITA AVENUE IS MEASURED ALONG MARGUERITA AVENUE CENTERLINE

LATERAL PROFILES SHOWN ON SHEET 5.

CURVE DATA				
◇	△	R (m)	L (m)	T (m)
~~8~~	~~14° 50' 06"~~	~~13.716~~	~~3.551~~	~~1.786~~
~~9~~	~~54° 16' 52"~~	~~13.716~~	~~12.994~~	~~7.034~~
10	39° 26' 46"	13.716	9.443	4.917
11	26° 35' 55"	6.858	3.184	1.621
12	60° 00' 00"	6.858	7.182	3.959
* 8	2° 44' 26"	13.716	0.656	0.328
* 9	42° 11' 12"	13.716	10.099	5.291

IMPORTANT NOTICE
Section 4216/4217 of the Government Code requires a Dig Alert Identification Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert I.D. Number call
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

ENGINEER IN RESPONSIBLE CHARGE
Richard D. McGrath
RICHARD D. McGRATH
R.C.E. No. 31952 expires 12/31/00
DATE 12-31-97

REGISTERED PROFESSIONAL ENGINEER RICHARD D. McGRATH No. 31952 Exp. 12-31-00 CIVIL STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE

DESIGNED BY DPY DRAWN BY BMP CHECKED BY

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
DEPUTY P.W. DIRECTOR		
PRINCIPAL ENGINEER		
CHIEF P.W. INSPECTOR		
TRAFFIC DIVISION		
SURVEYOR		
STREET DIVISION		
PARKS DEPARTMENT		

APPROVED BY R. McGrath
PUBLIC WORKS DIRECTOR
DATE 12/31/97

ARLINGTON AVENUE UNDERPASS MAUDE STREET

SCALE – HORIZONTAL 1:200

ACCOUNT NUMBER 432-541500-440302-30268

D-651

SHEET 4 OF 8

FEDERAL AID PROJECT FILE NO. CML 5058(041)

* AS-BUILT 9-7-2000 LH

INDEXED 9-7-2000 LH

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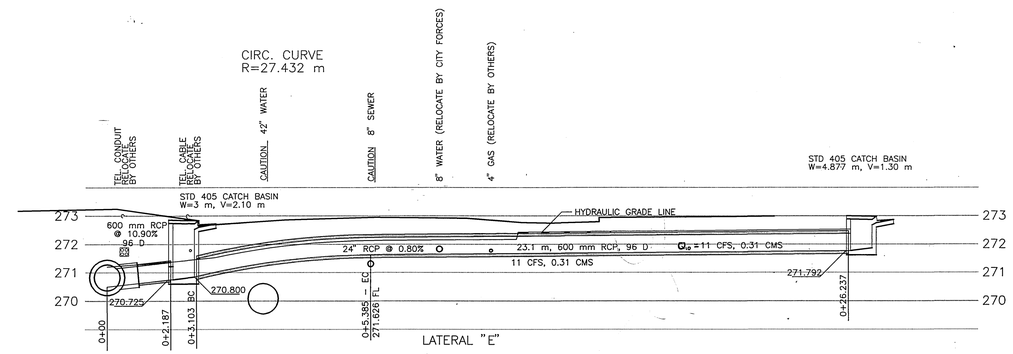
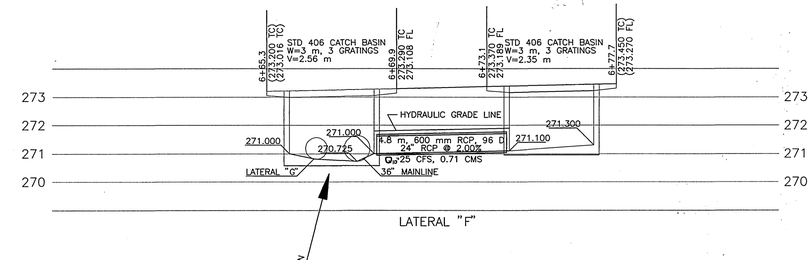
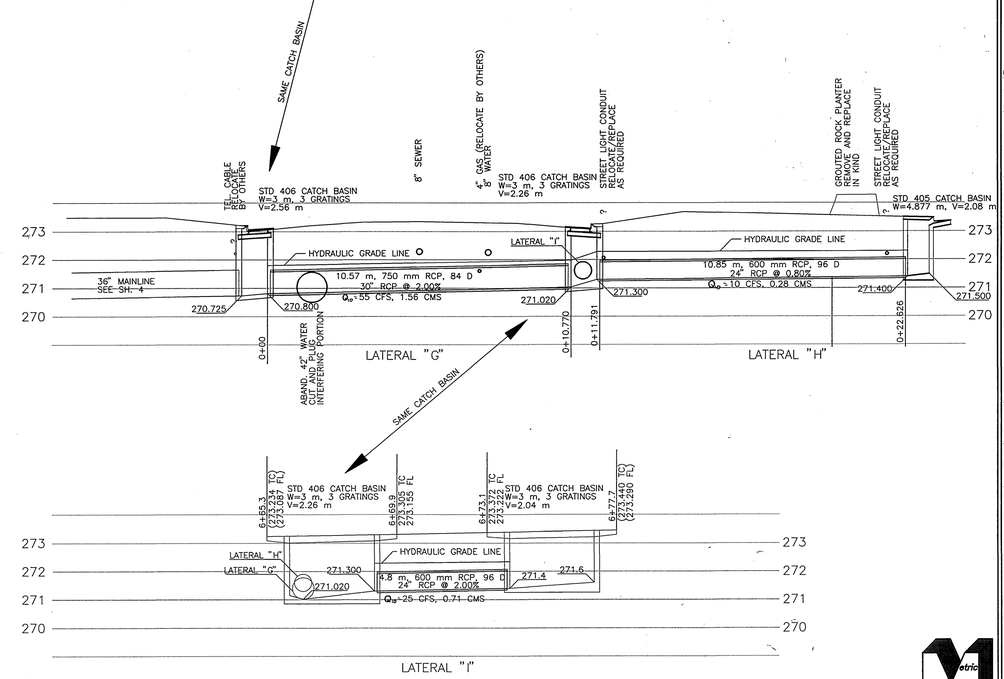
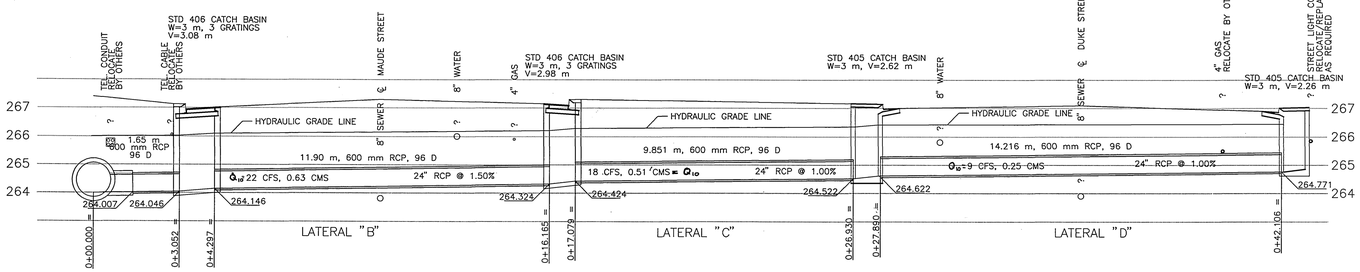
LATERALS AT MARGUERITA AVENUE







LATERALS AT DUKE STREET



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DESIGNED BY DPY DRAWN BY GMW CHECKED BY

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
DEPUTY P.W. DIRECTOR		
PRINCIPAL ENGINEER		11/17/97
CHIEF P.W. INSPECTOR		
TRAFFIC DIVISION		
SURVEYOR		11-19-97
STREET DIVISION		
PARKS DEPARTMENT		

APPROVED BY R. McGrath
PUBLIC WORKS DIRECTOR
DATE 12/31/97

ARLINGTON AVENUE UNDERPASS
MAUDE STREET

SCALE – HORIZONTAL 1:100, VERTICAL 1:100

ACCOUNT NUMBER 432-541500-440302-30268

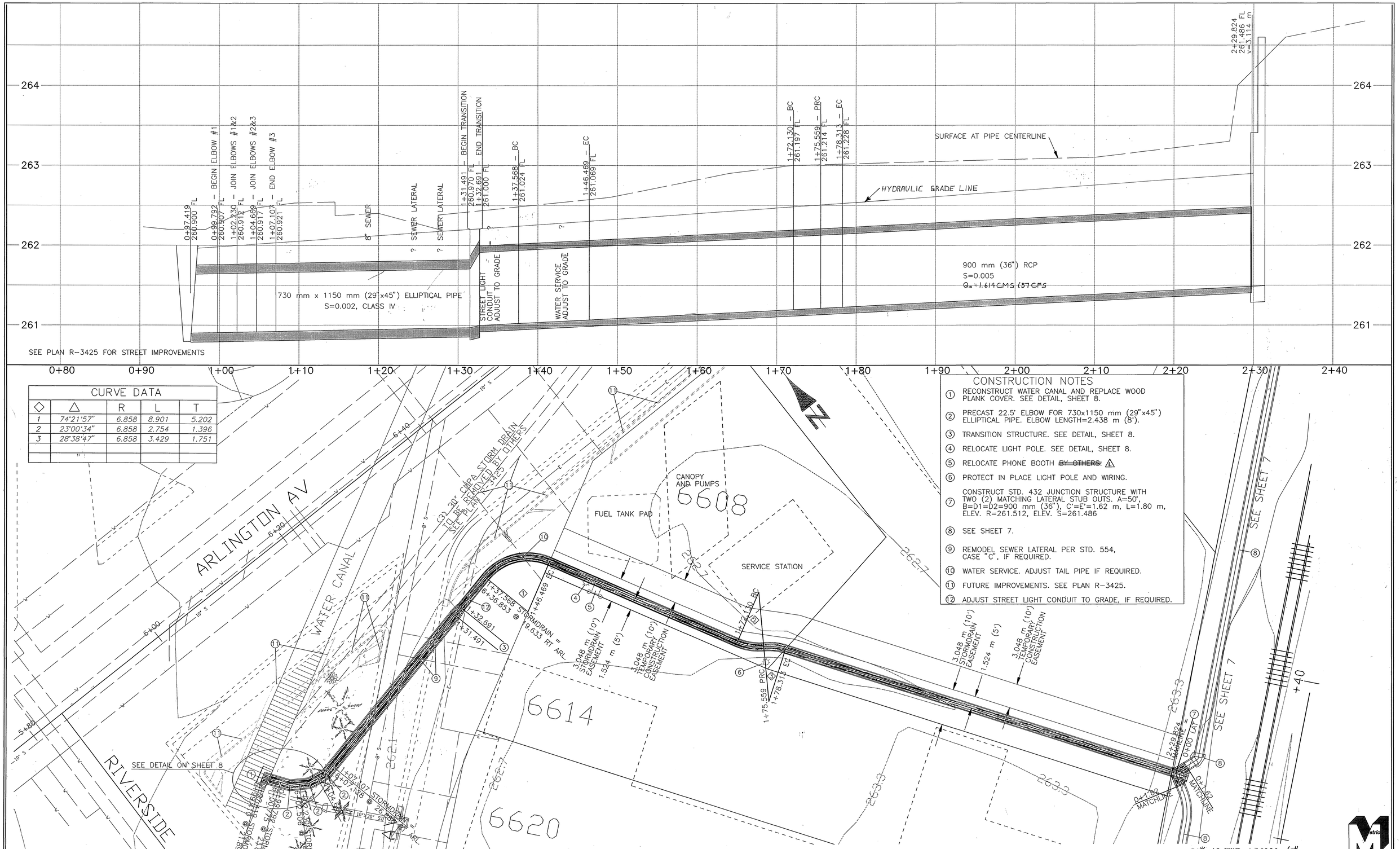
D-651

SHEET 5 OF 8

FEDERAL AID PROJECT
FILE NO. - BML 5058(041)

* AS-BUILT 9-7-2000 LH

INDEXED 9-7-2000 LH



CURVE DATA

◇	△	R	L	T
1	74°21'57"	6.858	8.901	5.202
2	23°00'34"	6.858	2.754	1.396
3	28°38'47"	6.858	3.429	1.751

ENGINEER IN RESPONSIBLE CHARGE

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MARK	REVISIONS	APPR.	DATE
1	MODIFIED CONSTRUCTION NOTE		

DESIGNED BY DPY DRAWN BY GMW CHECKED BY

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
DEPUTY P.W. DIRECTOR		
PRINCIPAL ENGINEER		
CHIEF P.W. INSPECTOR		
TRAFFIC DIVISION		
SURVEYOR		
STREET DIVISION		
PARKS DEPARTMENT		

APPROVED BY R. McGrath
PUBLIC WORKS DIRECTOR
DATE 12/31/97

ARLINGTON AVENUE UNDERPASS BNSF TO INDIANA

SCALE – HORIZONTAL 1:200, VERTICAL 1:20

ACCOUNT NUMBER 432-541500-440302-30268

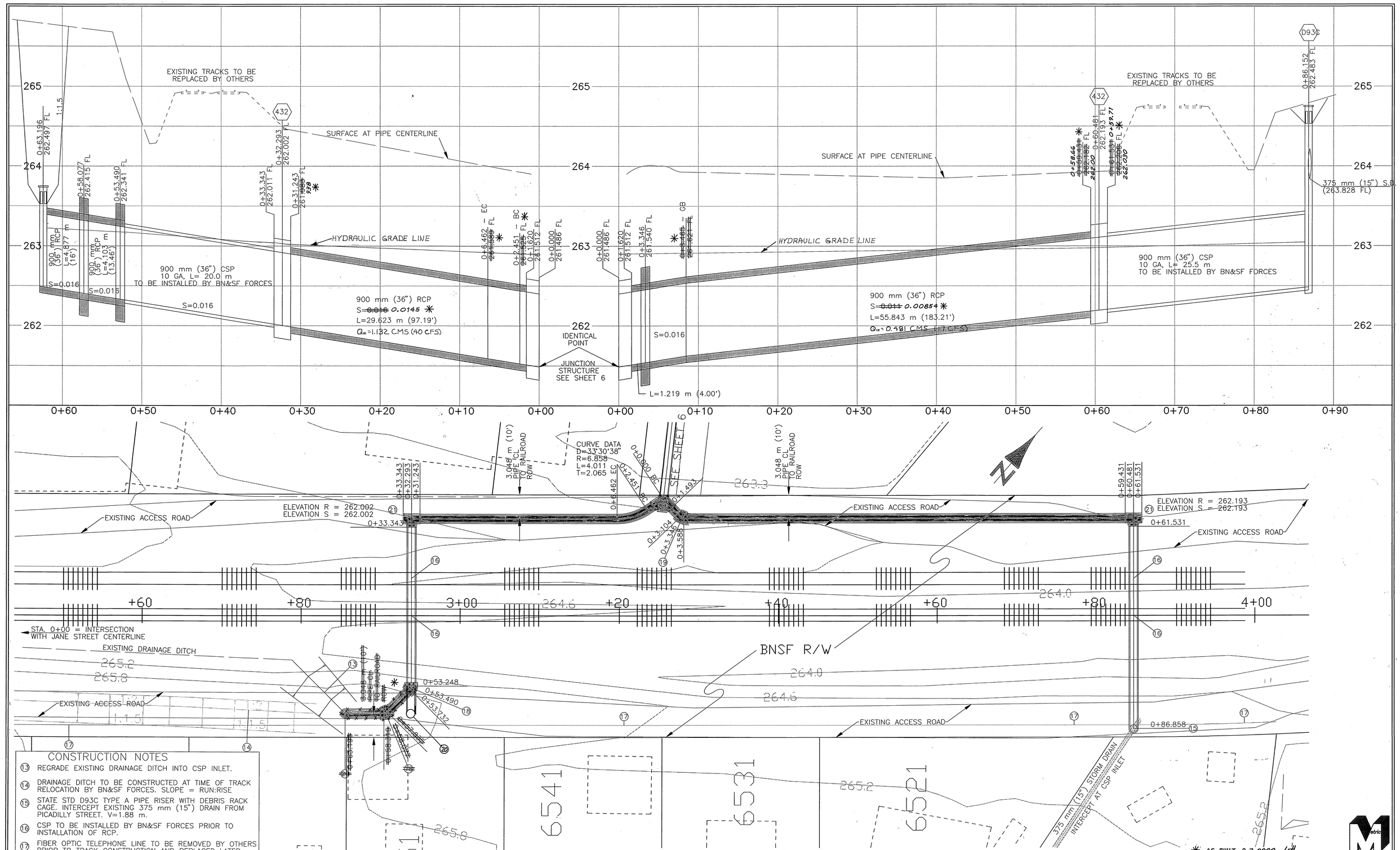
D-651

SHEET 6 OF 8

FEDERAL AID PROJECT FILE NO. CML 5088(041)

AS-BUILT 9-7-2000 4H

INDEXED 9-7-2000 4H



CONSTRUCTION NOTES

13. REGRADE EXISTING DRAINAGE DITCH INTO CSP INLET.
14. DRAINAGE DITCH TO BE CONSTRUCTED AT TIME OF TRACK RELOCATION BY BN&SF FORCES. SLOPE = RUN:RISE
15. STATE STD D93C TYPE A PIPE RISER WITH DEBRIS RACK CAGE. INTERCEPT EXISTING 375 mm (15") DRAIN FROM PICADILLY STREET. V=1.88 m.
16. CSP TO BE INSTALLED BY BN&SF FORCES PRIOR TO INSTALLATION OF RCP.
17. FIBER OPTIC TELEPHONE LINE TO BE REMOVED BY OTHERS PRIOR TO TRACK CONSTRUCTION AND REPLACED LATER.
18. CONSTRUCT STD 424 CONCRETE COLLAR. A=45°.
19. CONSTRUCT STD 424 CONCRETE COLLAR. A=46.5°.
20. STATE STD D93C TYPE B PIPE RISER WITH DEBRIS RACK CAGE. V=1.265 m.
21. STD 432 MANHOLE. A=90°, B=900 mm (36"), C'=1.05 m, D1=D2=900 mm (36"), E'=1.05 m, L=2.10 m, ELEVATION R AND ELEVATION S AS SHOWN ON PLAN. COVER TO BE BOLTED.

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PRINCIPAL ENGINEER		
CHIEF P.W. INSPECTOR		
TRAFFIC DIVISION		
SURVEYOR		11-19-97
STREET DIVISION		12-19-97
PARKS DEPARTMENT		

APPROVED BY
R. McGrath
PUBLIC WORKS DIRECTOR
DATE 12/31/97

ARLINGTON AVENUE UNDERPASS BNSF TO INDIANA

SCALE – HORIZONTAL 1:200, VERTICAL 1:20

ACCOUNT NUMBER 432-541500-440302-30268

D-651

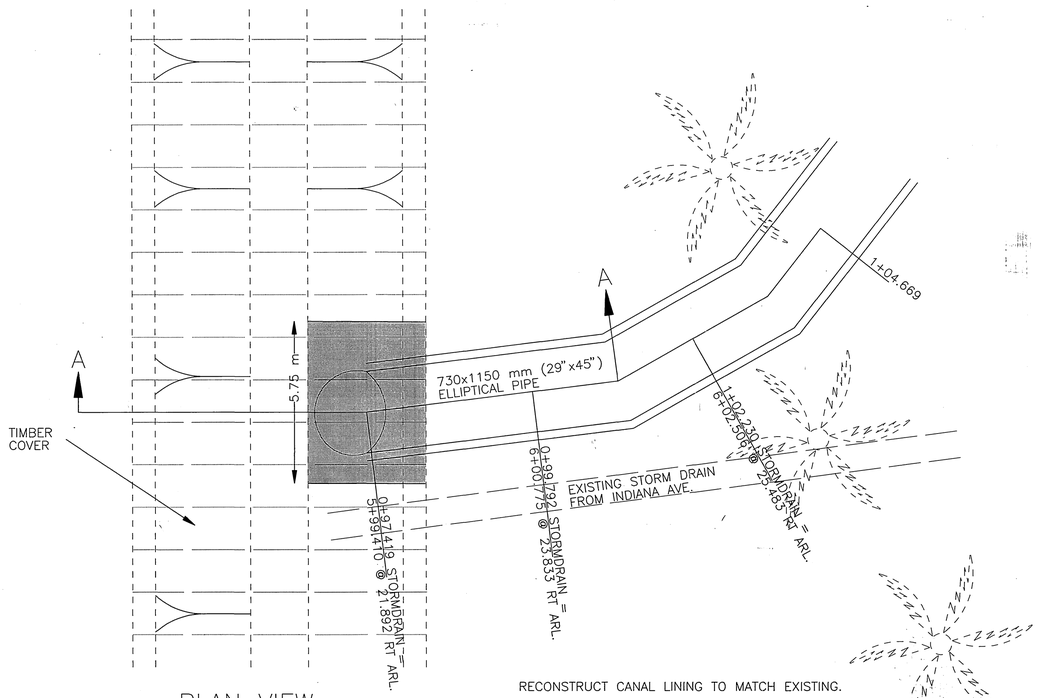
SHEET 7 OF 8

FEDERAL AID PROJECT FILE NO. CML-5058 (041)

INDEXED 9-7-2000 LH

CANAL WALL RECONSTRUCTION AT INTERSECTION WITH ELLIPTICAL PIPE

NOT TO SCALE



PLAN VIEW

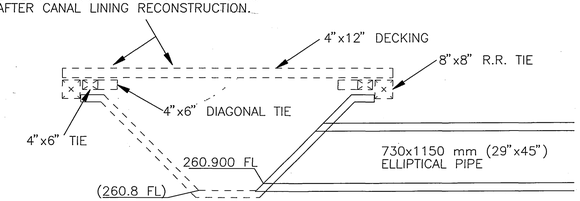
RECONSTRUCT CANAL LINING TO MATCH EXISTING.

OVERLAP EXISTING CANAL REINFORCING STEEL WITH NEW CANAL STEEL REINFORCEMENT 0.45 m MIN. BEND ELLIPTICAL STEEL REINFORCEMENT INTO CANAL WALL 0.45 m MIN.

RECONSTRUCTION LENGTH MAY BE INCREASED AT THE OPTION OF THE CONTRACTOR.

REINSTALL EXISTING TIMBER CANAL COVER. SEE BELOW.

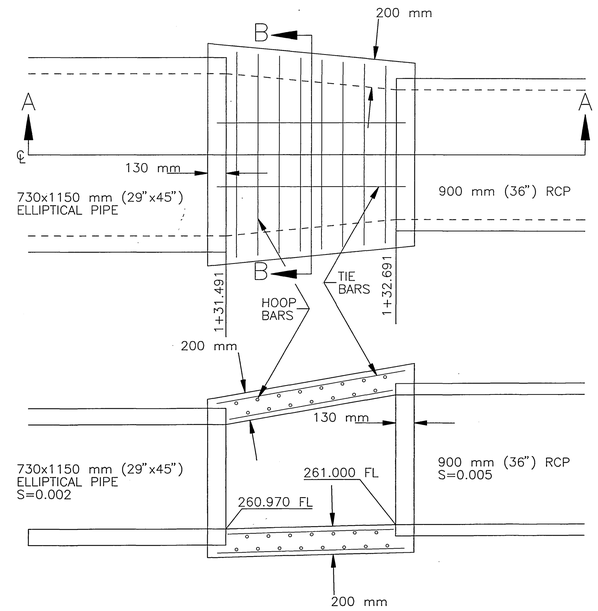
REMOVE EXISTING TIMBER CANAL COVER IN AREA OF CANAL RECONSTRUCTION. REINSTALL EXISTING CANAL COVER AFTER CANAL LINING RECONSTRUCTION.



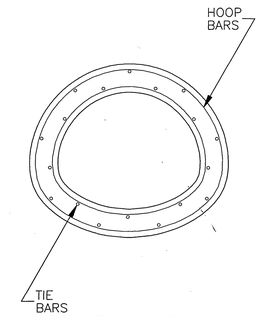
SECTION A–A

TRANSITION STRUCTURE ~~ELLIPTICAL TO CIRCULAR PIPE~~

SCALE 1:20



SECTION A–A



SECTION B–B

THE INTERIOR SURFACE SHALL BE SMOOTH AND VARY UNIFORMLY BETWEEN THE TWO ADJOINING SECTIONS.

PIPE EMBEDMENT SHALL BE 130 mm.

CONCRETE SHALL BE CLASS 330–C–23.

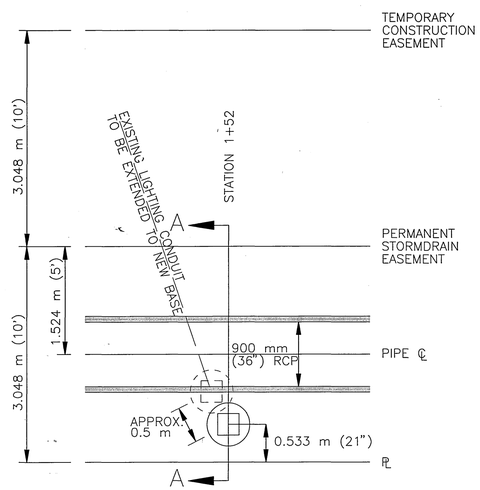
REINFORCING STEEL CLEAR COVER SHALL BE 40 mm.
TIE BARS SHALL BE NO. 10 AND SPACED 450 mm C/C.
HOOP BARS SHALL BE NO. 10 AND SPACED 150 mm C/C.

PIPE JOINTS SHALL MATCH ADJOINING PIPE.

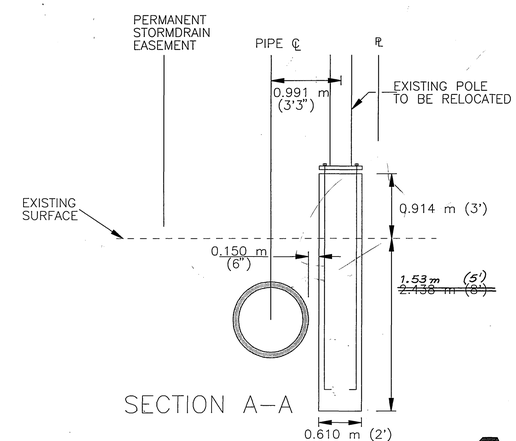
WALL, TOP, AND BOTTOM THICKNESS SHALL BE 200 mm.
REINFORCING STEEL CLEAR COVER SHALL BE 40 mm ON INSIDE.
STRUCTURE LENGTH MAY BE INCREASED AT THE OPTION OF THE CONTRACTOR, AND WITH ENGINEER'S PERMISSION, TO MEET PIPE ENDS.

LIGHTING POLE AND FOUNDATION IN EASEMENT AT PIPE STATION 1+52

SCALE 1:40



RELOCATE LIGHTPOST TO NEW 0.610 m (24") DIA FOUNDATION. ANCHOR BOLT PATTERN AND DIA. TO MATCH EXISTING. MIN. BOLT LENGTH = 3.0 m. EXTEND CONDUIT AND WIRING.



SECTION A–A

✱ AS-BUILT 9-7-2000 LFH

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DESIGNED BY DPY DRAWN BY DMW CHECKED BY

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
DEPUTY P.W. DIRECTOR	—	—
PRINCIPAL ENGINEER	[illegible]	12/31/97
CHIEF P.W. INSPECTOR	—	—
TRAFFIC DIVISION	—	—
SURVEYOR	[illegible]	12/31/97
STREET DIVISION	[illegible]	12/31/97
PARKS DEPARTMENT	—	—

APPROVED BY R. McGrath PUBLIC WORKS DIRECTOR

DATE 12/31/97

ARLINGTON AVENUE UNDERPASS BNSF TO INDIANA

SCALE – AS INDICATED

ACCOUNT NUMBER 432-541500-440302-30268

D–651

SHEET 8 OF 8

FEDERAL AID PROJECT FILE NO. (CML-5058(011))

INDEXED 9-7-2000 LFH