

PUBLIC IMPROVEMENT PLANS FOR MOJAVE TOWNHOMES ALBUQUERQUE, NEW MEXICO

SEPTEMBER 2001

PREPARED FOR:
MR. JAMES CRABTREE
925 GEORGIA S.E.
ABQ, NM 87108

PREPARED BY:
ISAACSON & ARFMAN, P.A.
128 MONROE ST. NE
ALBUQUERQUE, NM 87108

INDEX TO DRAWINGS

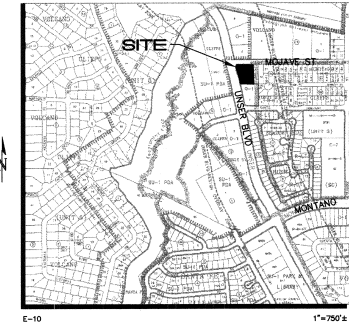
SHEET NO.	TITLE
1	COVER SHEET
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APPROVAL OF RECORD DRAWINGS
CHIEF CONSTRUCTION ENGINEER
[Signature]
DATE 4/3/02

SURVEYOR'S CERTIFICATION:
I, JORDAN ARZUELLER, JR., A DULY CERTIFIED REGISTERED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THE "AS-BUILT" INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM FIELD OBSERVATION AND "AS-BUILT" SURVEYS PREPARED BY ME OR UNDER MY SUPERVISION, THAT THE "AS-BUILT" INFORMATION SHOWN ON THESE DRAWINGS WAS ADDED BY ME OR UNDER MY SUPERVISION AND THAT THIS "AS-BUILT" INFORMATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ALSO STATE THAT I AM NOT RESPONSIBLE FOR ANY OF THE DESIGN CONCEPTS, CALCULATIONS, ENGINEERING, OR INTENT OF THE RECORD DRAWINGS.

JORDAN ARZUELLER, JR. 1-2502 PLS 7472 CDS

DRB NO.
1000983
ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street, N.E.
Albuquerque, New Mexico
1/20/01

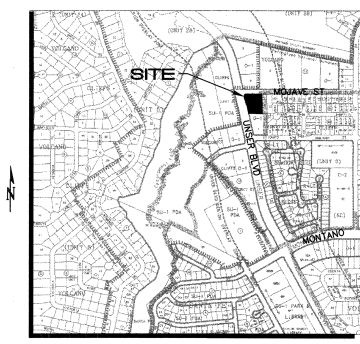
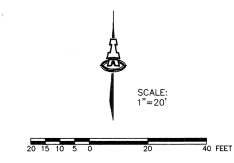
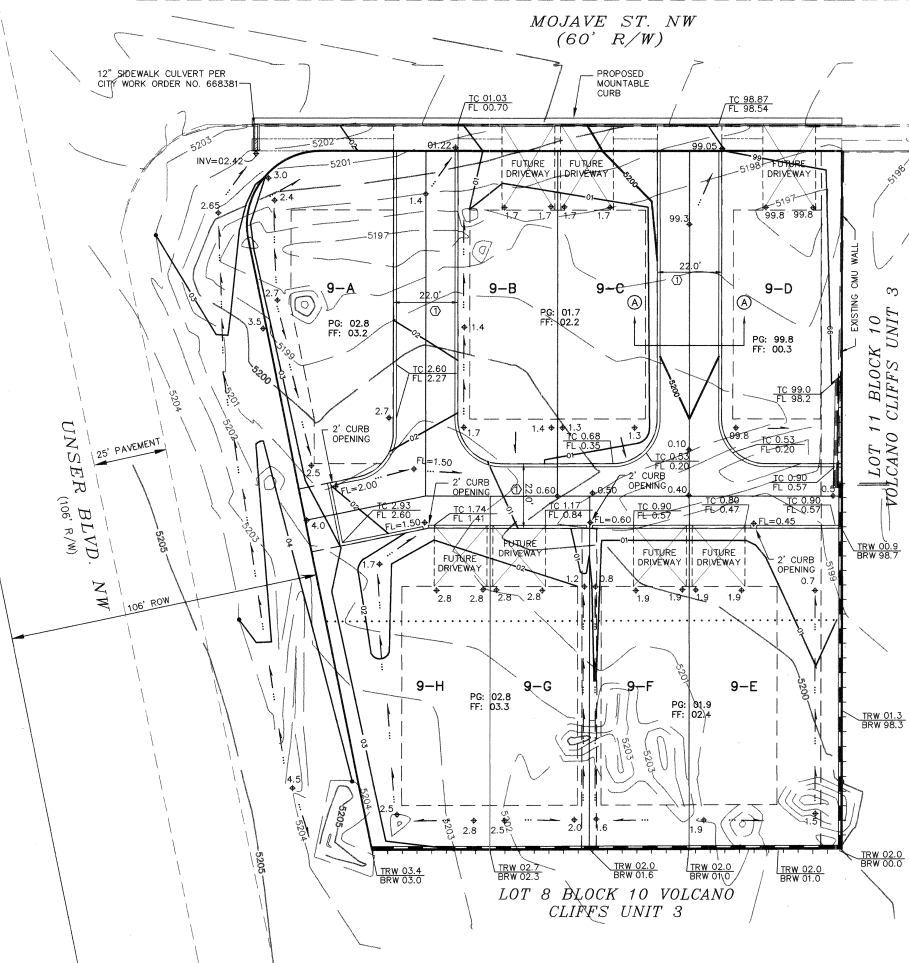


GENERAL NOTES

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1986 EDITION AS AMENDED WITH UPDATE NO. 6.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE & VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM DELAY.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NM ONE-CALL SYSTEM @ 260-1990 FOR LOCATION OF EXISTING UTILITIES.
- CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER WHICH WILL MINIMIZE INTERFERENCE WITH LOCAL TRAFFIC. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY, AND TO PROTECT THEM FROM DAMAGE, INJURY, OR LOSS. CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS, THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADHERE TO SECTION 19 OF THE GENERAL CONDITIONS OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, AS AMENDED WITH UPDATE NO. 6.
- THE CONTRACTOR AGREES THAT HE SHALL ASSUME THE SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE OWNER, ENGINEER FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
- TRAFFIC CONTROL: FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A BARRICADE PERMIT FROM THE CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (768-2551) PRIOR TO OCCUPANCY AN INTERSECTION. SEE SECTION 19 OF THE SPECIFICATIONS. ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH PLASTIC REFLECTORIZED PAVEMENT MARKINGS BY CONTRACTOR TO LOCATION AS EXISTING OR AS SHOWN IN THIS PLAN SET.
- WHEN ABUTTING EXISTING PAVEMENT TO NEW, SAWCUT EXISTING PAVEMENT TO A STRAIGHT EDGE AND AT A RIGHT ANGLE, OR AS APPROVED BY THE FIELD ENGINEER. REMOVAL OF BROKEN OR CRACKED PAVEMENT WILL ALSO BE REQUIRED.
- EXISTING CURB AND GUTTER NOT TO BE REMOVED UNDER THE CONTRACT WHICH IS DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- ALL FINAL BACKFILL FOR TRENCHES SHALL BE COMPACTED TO A MINIMUM 90% MAXIMUM DENSITY PER ASTM D-1557 AND AS DIRECTED BY SECTION 701.14.2 AND STANDARD DRAWING NUMBER 2315.
- THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY OR PRIVATE ROADWAY EASEMENTS SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED DOWN THE STREET OR INTO ANY PUBLIC DRAINAGE FACILITY.
- PROPOSED WATERLINE MATERIALS SHALL BE EITHER PVC PIPE MEETING AWWA C900 REQUIREMENTS (6-12") OR DUCTILE IRON PIPE, THICKNESS CLASS 50 (6-16").
- ALL SANITARY SEWER LINE STATIONING REFERS TO SANITARY SEWER CENTERLINE STATIONING.
- ALL FITTINGS ON WATERLINES SHALL HAVE RESTRAINED JOINTS AS NOTED ON THE PLANS.
- CONTRACTOR SHALL SUPPORT ALL EXISTING UNDERGROUND UTILITY LINES WHICH BECOME EXPOSED DURING CONSTRUCTION. PAYMENT FOR SUPPORTING WORK SHALL BE INCIDENTAL TO WATER-LINE AND/OR SEWERLINE COSTS.
- CONTRACTOR SHALL ASSIST THE ENGINEER/INSPECTOR IN THE RECORDING OF DATA ON ALL UTILITY LINES AND ACCESSORIES AS REQUIRED BY THE CITY OF ALBUQUERQUE FOR THE PREPARATION OF RECORD DRAWINGS. CONTRACTOR SHALL NOT COVER UTILITY LINES AND ACCESSORIES UNTIL ALL DATA HAS BEEN RECORDED.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATIONS OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.
- PNM WILL PROVIDE AT NO COST TO THE CITY OR THE CONTRACTOR THE REQUIRED PERSONNEL FOR INSPECTION OR OBSERVATION DEEMED NECESSARY BY PNM WHILE THE CONTRACTOR IS EXPOSING PNM'S CABLES. HOWEVER, THE CONTRACTOR SHALL BE CHARGED THE TOTAL COST ASSOCIATED WITH REPAIRS TO ANY DAMAGED CABLES OR FOR ANY COST ASSOCIATED WITH SUPPORTING OR RELOCATING THE POLES AND CABLES DURING CONSTRUCTION.
- WARNING--EXISTING UTILITY LINE LOCATIONS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. THE LOCATION OF ANY SUCH EXISTING LINES IS BASED UPON INFORMATION PROVIDED BY THE UTILITY COMPANY, THE OWNER, OR BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY, AND PRESERVE ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES, IN PLANNING AND CONDUCTING EXCAVATION, WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "BLUE STAKES" PROCEDURES, OR OTHERWISE.
- ANY WORK OCCURRING WITHIN AN ARTERIAL ROADWAY REQUIRES 24 HR. CONSTRUCTION.
- ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES MUST BE ACCOMPLISHED IN ACCORDANCE WITH OSHA 29047 1926.650 SUBPART P.
- CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY AND ALL GRAFFITI FROM EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.

REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE
ENGINEERS STAMP & SIGNATURE		APPROVALS	ENGINEER	DATE	*****		
		DRG. Chairman	<i>[Signature]</i>	8-7-01	APPROVED FOR CONSTRUCTION		
		Transportation	<i>[Signature]</i>	9/18/01			
		Water/Wastewater	<i>[Signature]</i>	9/18/01			
		Hydrology	<i>[Signature]</i>	9-18-01			
		Constr. Mgmt.	<i>[Signature]</i>	9-18-01	City Engineer <i>[Signature]</i> Date		
		Constr. Coord.	<i>[Signature]</i>	9-18-01			
City Project No.				668381	Sheet		1 of 8

1)
NW



LEGAL DESCRIPTION: LOTS 9 & 10, UNIT 3, VOLCANO CLIFFS SUBDIVISION.

AREA: 1.02 ACRES

BENCHMARK: ACS BM "3-E10" LOCATED WEST OF THE INTERSECTION OF UNSER BLVD. AND SANTO DOMINGO NW. ELEV. = 5318.12

FLOOD ZONE DESIGNATION: PANEL 112 OF THE FEMA FLOODPLAIN MAP INDICATES THIS SITE IS WITHIN ZONE X, WHICH IS DETERMINED TO BE OUTSIDE THE 500-YR FLOODPLAIN.

SITE SOILS: THE SCS SOIL SURVEY OF BERNALILLO COUNTY CLASSIFIES THIS SITE AS BLUEPOINT-KOKAN ASSOCIATION WHICH IS A LOAMY FINE SAND IN HYDROLOGIC SOIL GROUP 'A'.

EXISTING CONDITIONS: THE SITE IS UNDEVELOPED AND SLOPES TO THE NORTHEAST AT 3 PERCENT. RUNOFF ENTERS MOJAVE ST. AT THE NORTHEAST CORNER AND IS CARRIED EAST TO TESQUE DRIVE. SURFACE FLOW IS THEN CARRIED NORTH TO INLETS WHICH ROUTE STORM DRAIN FLOW TO THE BOCA NEGRA ARROYO.

EXISTING HYDROLOGY:
PRECIPITATION ZONE: 1
LAND TREATMENT: 100% A
 $Q_{100} = (1.29 \text{ CFS/AC})(1.02 \text{ AC}) = 1.3 \text{ CFS}$

PROPOSED CONDITIONS: EIGHT TOWNHOMES ARE PROPOSED WITH TWO DETACHED AND THREE DUPLEX UNITS. AN IMPERVIOUS SURFACE IS PROPOSED FOR THE INTERNAL PRIVATE ACCESS EASEMENTS EXTENDING TO THE SOUTHERLY UNITS. RUNOFF WILL BE CARRIED WITHIN THESE PRIVATE CURBED DRIVEWAYS AND WILL DISCHARGE TO MOJAVE STREET.

PROPOSED HYDROLOGY:
LAND TREATMENT: 10% B, 25% C, 65% D
 $Q_{100} = (0.10)(2.03) + (0.25)(2.87) + (0.65)(4.37) = 3.8 \text{ CFS}$

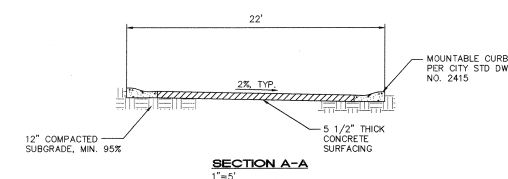
STREET CAPACITY: MOJAVE STREET WAS CONSTRUCTED BY SAD 219. USING A 42'-FT WIDTH AND A 0.8% SLOPE, DPM PLATE 22.3 D-2 GIVES A HALF-STREET CAPACITY OF 23 CFS FOR 0.6 FT DEPTH. THE CONTRIBUTING AREA, FROM UNSER BLVD. EAST TO TESQUE DRIVE, ON THE SOUTH SIDE OF MOJAVE IS ONLY 3.5 ACRES. AT AN ESTIMATED RESIDENTIAL UNIT RUNOFF RATE OF 3.6 CFS/ACRE, THE MAXIMUM FLOW RATE IN THE SOUTH GUTTER OF MOJAVE IS 12.6 CFS.

CONCLUSION: THIS SITE DEVELOPMENT WILL NOT ADVERSELY IMPACT ANY DOWNSTREAM FACILITIES AND SHOULD BE ALLOWED TO DISCHARGE FREELY TO MOJAVE STREET.

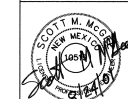
- LEGEND**
- 5200 --- EXISTING CONTOUR
 - 52 --- PROPOSED CONTOUR
 - ◆ 78.3 PROPOSED SPOT ELEVATION
 - FLOW ARROW
 - PG=01.2 PAD GRADE ELEVATION
 - FF=01.7 FINISH FLOOR ELEVATION
 - 18" SIDEWALK CULVERT
 - TC= TOP OF CURB ELEVATION
 - FL= FLOWLINE
 - INV=72.5 INVERT ELEVATION
 - PROPOSED RETAINING WALL
 - TRW= TOP OF RETAINING WALL
 - BRW= BOTTOM OF RETAINING WALL

EASEMENT NOTE

1. PROPOSED 22' PRIVATE ACCESS, DRAINAGE, WATER & SEWER AND PUBLIC UTILITY AND COMMUNICATION EASEMENT GRANTED BY PLAT.



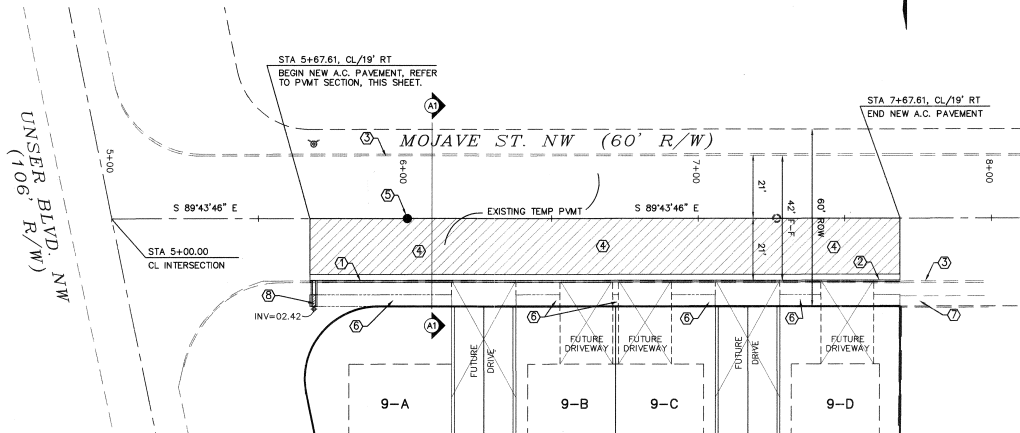
MOJAVE TOWNHOMES
GRADING & DRAINAGE PLAN



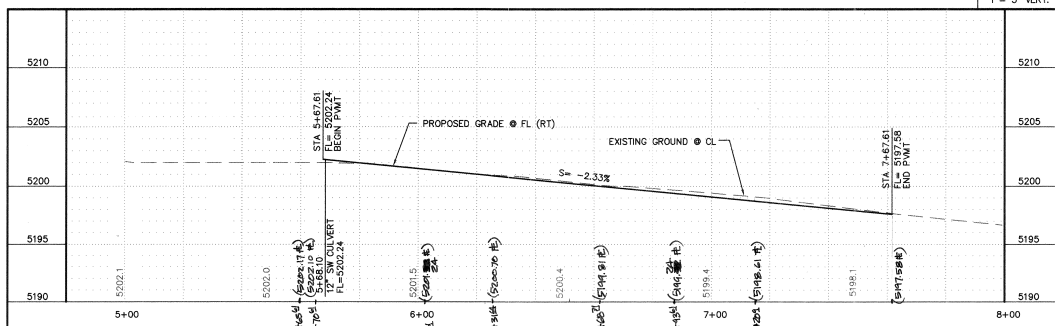
ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
28 Monroe Street N.E.
Albuquerque, New Mexico

17669D.DWG-01 09/19/01
SHEET 3 OF 8

CITY PROJECT NO. 668381

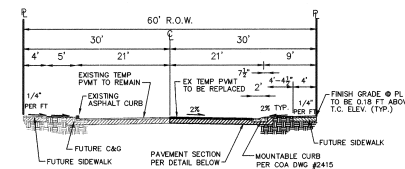


PAVING PLAN

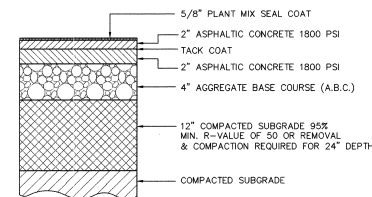


SCALES:
1"=20' HORIZ.
1"=5' VERT.

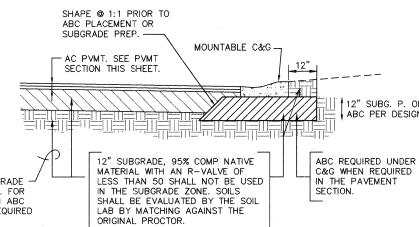
AS-BUILT DEVIATIONS
1-18-02
JAMES AGUIRRE, JR. NMPL 5-7472
JAMES AGUIRRE, JR. LAND SURVEYING
2412 SAN MANUEL RD. SW
ALBUQUERQUE, NM 87121
(505) 915-0993



SECTION A1-A1
MOJAVE STREET SECTION
1"=10'



PAVEMENT SECTION
NTS



SUBGRADE MODULING DETAIL FOR
PAVEMENT SECTION
NTS

PAVING KEYED NOTES: ()

1. INSTALL MOUNTABLE CURB & GUTTER PER COA STD DWG #2415.
2. STA 7+64.61 TO STA 7+67.61 TRANSITION FROM MOUNTABLE TO STANDARD CURB PER COA STD DWG #2415.
3. EXISTING ASPHALT CURB.
4. REMOVE EXISTING ASPHALT CURB (SOUTH) & TEMPORARY PAVT. INSTALL NEW PAVEMENT PER PAVT SECTION, THIS SHEET.
5. PROPOSED SANITARY SEWER MANHOLE RIM, SEE SHEET 5.
6. FUTURE 4' SIDEWALK.
7. EXISTING SIDEWALK.
8. STA. 5+68.10 BUILD 12" SIDEWALK CULVERT PER COA STD DWG #2236. TRANSITION FROM STANDARD CURB TO MOUNTABLE CURB FROM STA 5+70.00 TO STA 5+73.00



CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: **MOJAVE TOWNHOMES
MOJAVE STREET IMPROVEMENTS
PAVING PLAN & PROFILE**

Design Review Committee City Engineer Approval

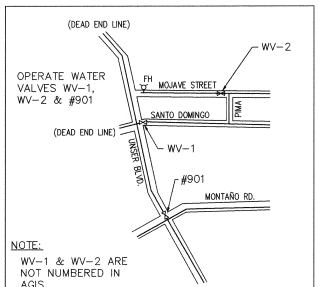
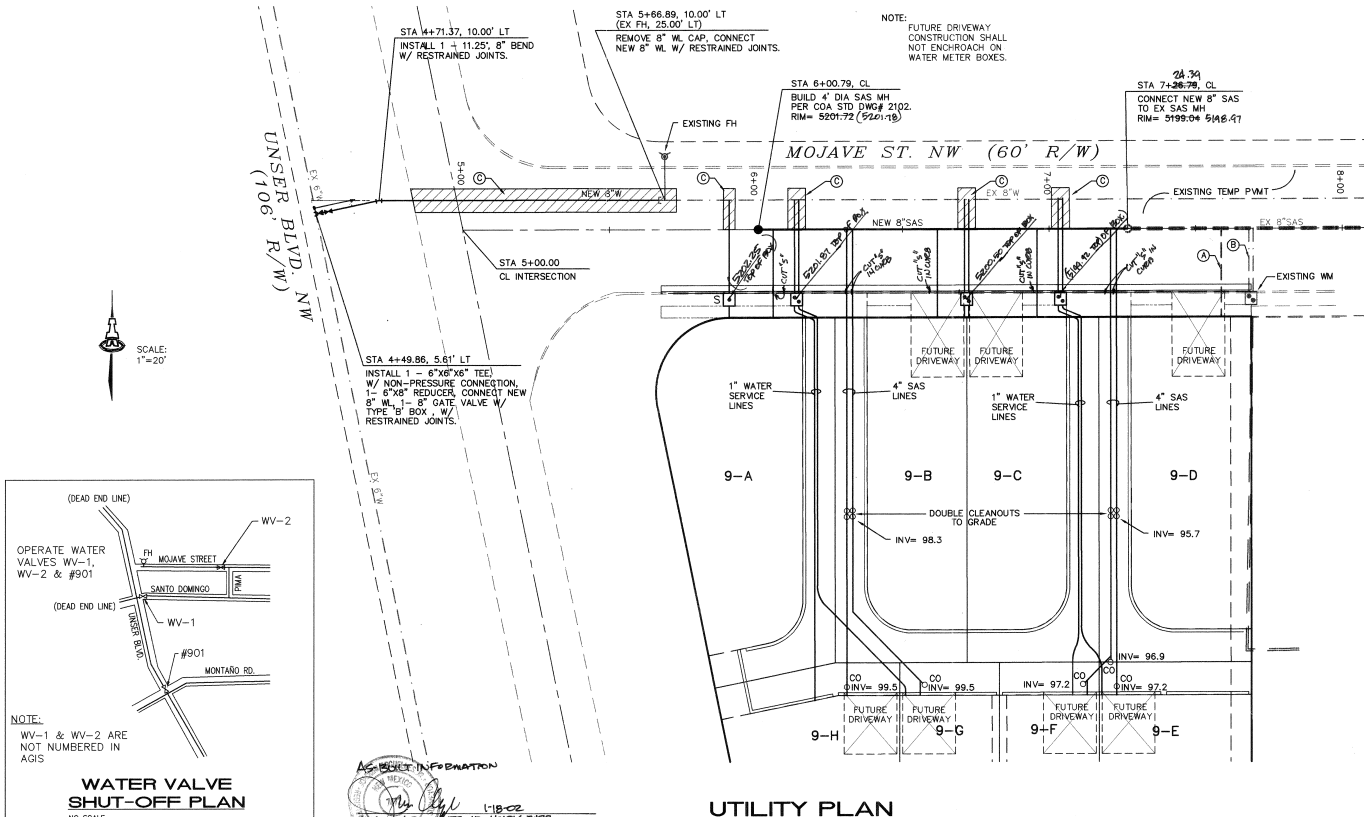
SEP 21 2001

City Project No. 668381

Zone Map No. E-10

Sheet 4 Of 8

AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS		DESIGN		DATE		DATE	
CONTRACT NO.	668381	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT NAME	MOJAVE TOWNHOMES	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT LOCATION	MOJAVE STREET	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT DESCRIPTION	PAVING PLAN & PROFILE	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT OWNER	CITY OF ALBUQUERQUE	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT MANAGER	JAMES AGUIRRE, JR.	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT ENGINEER	JAMES AGUIRRE, JR.	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT CHECKER	JAMES AGUIRRE, JR.	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT APPROVER	JAMES AGUIRRE, JR.	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT REVIEWER	JAMES AGUIRRE, JR.	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT APPROVED	JAMES AGUIRRE, JR.	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT REVISIONS	JAMES AGUIRRE, JR.	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE
PROJECT COMMENTS	JAMES AGUIRRE, JR.	MARK	1	DATE	09/01	DATE	09/01	NO.	DATE	BY	DATE	DATE	DATE	DATE	DATE



AS-BUILT INFORMATION
 JORDAN ARRIETA JR. NMLS 7472
 JORDAN ARRIETA JR. - LAND SUBDIVISION
 2016 SAN DOMINGO RD SW
 ALBUQUERQUE, NM 87112
 (505) 975-0998

UTILITY PLAN

- UTILITY KEYED NOTES:**
- EXISTING 4" SAS SERVICE TO LOT 9-D.
 - EXISTING WATER SERVICE TO LOT 9-D.
 - REMOVE & REPLACE ASPHALT PAVING PER COA STD DWG# 2465.

- PRIVATE UTILITY NOTES**
- UTILITY SERVICE LINES SHOWN ON PRIVATE PROPERTY ARE FOR INFORMATION ONLY AND ARE NOT PART OF THIS WORK ORDER.
 - SAS SERVICE CLEANOUTS SHALL BE INSTALLED PER CURRENT UCP.

UTILITY SERVICE TABLE			
LOT NO.	STATION	SAS LENGTH	SAS INV @ R/W
9A	5+90.90, 33' (S)	6+05.90, 30'	97.0
9B	6+71.90, 33' *	6+81.90, 30'	95.5
9C	6+71.90, 33' *	6+81.90, 30'	95.0
9D	EXISTING	6+85.90, 30'	94.5
9E	EXISTING	7+20.90, 30'	94.0
9F	7+03.90, 33' *	7+20.90, 30'	94.0
9G	6+81.90, 30'	6+81.90, 30'	97.0
9H	6+13.90, 33' *	6+20.90, 30'	97.0

ALL WATER SERVICES ARE DOUBLE EXCEPT WHERE NOTED AS (S) SINGLE.
 * ALL WATER SERVICE REQUIRED TO BE HEAVYWEIGHT METER BOX COVER AND LID PER COA STD. DWG. NO 2369.

RESTRAINED JOINT LENGTHS, L _r , FOR REDUCERS, (FT.)		
SIZE	LARGE SIDE	SMALL SIDE
8x6	25	33

RESTRAINED JOINT LENGTHS, L _r , FOR TEES, (FT.)		
ALL JOINTS AT THE TEE MUST BE RESTRAINED.		
SIZE	RUN	BRANCH
8x6	2	17
8x8	2	15
8x10	2	15
8x12	2	20

RESTRAINED JOINT LENGTHS, L _r , FOR HORIZONTAL BENDS, VALVES, AND DEAD ENDS, (FT.)			
SIZE	90°	45°	VALVES & DEAD ENDS
8	22	9	4

TABLES ARE BASED UPON THE FOLLOWING CRITERIA:
 DEPTH OF BURY 3.0 FT. MINIMUM
 FACTOR OF SAFETY 1.25
 MATERIAL PVC PIPE
 SLOPE 0.01/SM - SILTY GRAVELS AND SILTY SANDS, GRAVEL-SAND-SILT MIXTURES.
 TEST PRESSURE 150 PSI
 TRENCH TYPE 4: PIPE BEDDED IN SAND, GRAVEL, OR CRUSHED STONE TO DEPTH OF 1/8 PIPE DIAMETER, 4 INCH MINIMUM; BACKFILL COMPACTED TO TOP OF PIPE.
 DIFFERENT CRITERIA, E.G., DUCTILE IRON PIPE, GREATER DEPTH OF BURY, ETC., WILL REQUIRE DIFFERENT RESTRAINED LENGTHS. THESE MUST BE CALCULATED BY A QUALIFIED PROFESSIONAL ENGINEER AND APPROVED BY THE PUBLIC WORKS DEPARTMENT.

RESTRAINED JOINT LENGTHS FOR WATERLINE FITTINGS



CITY OF ALBUQUERQUE
 PUBLIC WORKS DEPARTMENT
 ENGINEERING GROUP

TITLE: **MOJAVE TOWNHOMES
 MOJAVE STREET IMPROVEMENTS
 WATER / SEWER PLAN & PROFILE**

Design Review Committee _____ City Engineer Approval _____
 Last Design Update _____

City Project No. **668381** Zone Map No. **E-10** Sheet **5** of **8**

AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS		DESIGN	
A.C.S. Brass Cap stamped "3-10 1989" Set in concrete post, 0.30 feet above ground, 1400 feet West of Unser Blvd. and Santa Domingo St. Intersection (near Mariposa Dr. & Rimrock Dr. Intersection).		1		JAKE ARRIETA JR.				BY		DATE	
Central Zone (NAD27) NM State Plane Coordinates Y=1512505.54 X=558813.84 Datum Alpha = -207197 Elevation = 5316.12 (WOOD 1928)								REVISIONS		DATE	
								NO.		DATE	
								DESIGNED BY		DATE	
								DRAWN BY		DATE	
								CHECKED BY		DATE	

1. CONTRACTOR MUST OBTAIN FROM CONSTRUCTION COORDINATION AN EXCAVATION/BARRICADING PERMIT BEFORE ENGAGING IN ANY CONSTRUCTION, MAINTENANCE OR REPAIR WORK IN ANY OF THE CITY OF ALBUQUERQUE'S RIGHTS-OF-WAY. EMERGENCY WORK THAT WOULD PRESERVE LIFE OR PROPERTY IS EXCLUDED WITH THE UNDERSTANDING, THAT A PERMIT SHALL BE OBTAINED WITHIN 24 TO 48 HOURS.

2. CONTRACTOR SHALL AT THE TIME OF PERMIT REQUEST, SUBMIT FOR APPROVAL BY CONSTRUCTION COORDINATION, A TRAFFIC CONTROL PLAN DETAILING ALL EXISTING TOPOGRAPHY SUCH AS LANE WIDTHS, DRIVEWAYS, AND BUSINESS/RESIDENTIAL ACCESSES. THE TRAFFIC CONTROL PLAN SHALL INCLUDE ALL PHASES OF WORK AND SCHEDULES INVOLVED IN THE CONSTRUCTION PROJECT. ANY SEPARATE PHASES OF A CONSTRUCTION PROJECT SHALL BE GIVEN AN INDIVIDUAL PERMIT EACH. BLANKET PERMITS WILL NOT BE ISSUED.

3. THESE TYPICAL TRAFFIC CONTROL PLANS DO NOT REFLECT THE EXISTING TOPOGRAPHY SUCH AS DRIVEWAYS, LANE WIDTHS, AND BUSINESS/RESIDENTIAL ACCESSES. EVERY LOCATION THAT REQUIRES CONSTRUCTION TRAFFIC CONTROL SHALL HAVE A DETAILED TRAFFIC CONTROL PLAN SHOWING ALL EXISTING TOPOGRAPHY.

4. CONSTRUCTION SHALL NOT BEGIN UNLESS A TRAFFIC CONTROL PLAN HAS BEEN APPROVED AND VERIFIED BY CONSTRUCTION COORDINATION.

5. CONSTRUCTION COORDINATION SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY TRAFFIC CONTROL CHANGES NEEDED BY CONTRACTOR, THAT WERE NOT PREVIOUSLY APPROVED. THESE TRAFFIC CONTROL CHANGES SHALL BE REQUESTED IN WRITING ACCOMPANIED WITH A TRAFFIC CONTROL PLAN REFLECTING SUCH CHANGES.

6. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL COMPLY TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL, SERVICE AND MAINTAIN ALL TRAFFIC CONTROL DEVICES. TRAFFIC CONTROL DEVICES SHALL NOT BE REMOVED OR ALTERED IN ANY WAY WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION, PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.

7. THE CONSTRUCTION TRAFFIC CONTROL INITIAL SET-UP SHALL BE BY AN AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED WORKSITE TRAFFIC SUPERVISOR. THE MAINTENANCE AND SERVICING SHALL ALSO BE DONE BY AN ATSSA CERTIFIED WORKSITE TRAFFIC SUPERVISOR OR EQUIVALENT.

8. CONTRACTOR IS RESPONSIBLE TO MAINTAIN AND SERVICE ALL TRAFFIC CONTROL DEVICES 24 HOURS A DAY, 7 DAYS A WEEK THROUGHOUT LENGTH OF PROJECT. CONTRACTOR IS RESPONSIBLE THAT ALL TRAFFIC CONTROL DEVICES COMPLY WITH THE MUTCD, LATEST EDITION.

9. ALL ADVANCE WARNING SIGNS SHALL BE DOUBLE INDICATED WHENEVER THERE ARE MULTI-LANE TRAFFIC IN ANY ONE GIVEN DIRECTION AND THERE IS SUFFICIENT MEDIAN SPACE.

10. ALL BARRICADES IN ALL TAPERS AND TANGENTS SHALL BE PLACED APART, A DISTANCE MEASURED IN FEET, EQUAL TO THAT OF THE POSTED SPEED LIMIT. NO EXCEPTIONS UNLESS APPROVED BY CONSTRUCTION COORDINATION PER MUTCD SECTION 6A-4.

11. ALL WORK IN ARTERIAL ROADWAYS SHALL BE ON A CONTINUOUS 24 HOUR PER DAY BASIS UNTIL COMPLETED.

12. CONTRACTOR IS RESPONSIBLE TO PROVIDE CONSTRUCTION COORDINATION, A WEEKLY LOG OF DAILY INSPECTIONS OF BARRICADE AND MAINTENANCE SCHEDULES ON PROJECTS THAT ARE OVER ONE WEEK DURATION.

13. EQUIPMENT OR MATERIALS SHALL NOT BE STORED WITHIN 15 FEET OF A TRAVELED TRAFFIC LANE DURING NON-WORKING HOURS WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.

14. CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND ADEQUATE MEANS OF CHANNELIZING PEDESTRIAN TRAFFIC AROUND AND THROUGH THE CONSTRUCTION AREA.

15. CONTRACTOR IS RESPONSIBLE FOR OBLITERATION OF ANY CONFLICTING STRIPING AND RESPONSIBLE FOR ALL TEMPORARY STRIPING.

16. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FACILITIES, BUSINESSES AND/OR RESIDENTS AT ALL TIMES.

17. CONTRACTOR SHALL PROVIDE ACCESS SIGNS FOR BUSINESSES LOCATED WITHIN THE CONSTRUCTION AREA UNDER THE SUPERVISION OF CONSTRUCTION COORDINATION. EACH ACCESS SIGN SHALL HAVE 5 INCH, WHITE OPAQUE LETTERING ON BLUE REFLECTORIZED BACKGROUND. ACCESS SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE BID AND NOT PART OF THE CONTRACT UNLESS OTHERWISE STATED. NO MORE THAN 3 BUSINESSES SHALL BE LISTED ON A ACCESS SIGN. SHOPPING CENTERS AND MALLS SHALL BE LISTED AS SUCH.

18. ALL ADVANCE WARNING SIGNS SHALL MEET THE MINIMUM REFLECTIVE INTENSITY REQUIREMENTS SET FORTH BY THE CITY OF ALBUQUERQUE. CONSTRUCTION COORDINATION SHALL DETERMINE ALL REQUIREMENTS AND APPROVE OR DISAPPROVE ANY ADVANCE WARNING SIGN PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.

19. 48 HOURS PRIOR TO OCCUPYING OR CLOSING OF A RIGHT-OF-WAY, CONTRACTOR SHALL NOTIFY: POLICE, FIRE DEPARTMENT, SCHOOLS, HOSPITALS, TRANSIT AUTHORITY, BUSINESSES AND/OR RESIDENTS THAT WILL BE AFFECTED BY THE CONSTRUCTION.

20. ANY FIELD ADJUSTMENTS SHALL BE APPROVED BY CONSTRUCTION COORDINATION.

21. EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11 FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION. CONTRACTOR IS RESPONSIBLE FOR ANY WORK INVOLVED IN SATISFYING THESE REQUIREMENTS.

22. CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE FOLLOWING:

1. STANDARDS AND REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
2. THE CITY OF ALBUQUERQUE TRAFFIC CODE, LATEST EDITION.
3. SECTION 19 OF THE CITY OF ALBUQUERQUE'S STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION, AS WELL AS OTHER SECTIONS.

23. FAILURE TO COMPLY WITH ANY OF THE ABOVE MENTIONED, WILL BE ADEQUATE CAUSE TO CEASE ALL WORK ON ANY CONSTRUCTION PROJECT. WORK WILL NOT RESUME UNTIL ALL REQUIREMENTS ARE ADDRESSED AND APPROVED BY CONSTRUCTION COORDINATION.

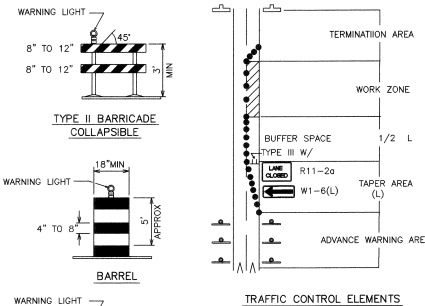
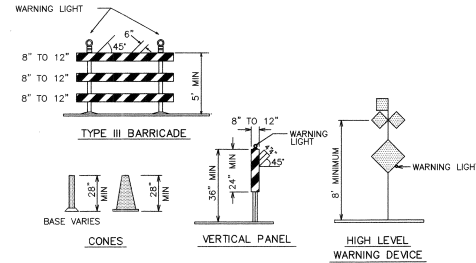
24. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN NEW-CLEAN CONDITION. WASHING OF EQUIPMENT IS INCIDENTAL TO IT'S PLACEMENT AND MAINTENANCE.

25. TRAFFIC CONTROL STANDARDS APPLY ONLY WHERE THE CONSTRUCTION TRAFFIC CONTROL PLANS ARE NOT SPECIFIC.

26. ADVANCE WARNING SIGNS SHALL BE 36"x36" MIN. WITH SUPER ENGINEERING GRADE SHEETING OR BETTER. MOUNTING HEIGHT AT TOP OF SIGN SHALL BE THE SAME AS

27. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORKSITE. ALL GRAFFITI SHALL BE PROMPTLY REMOVED FROM ALL EQUIPMENT, BOTH PERMANENT AND TEMPORARY.

1. TWO-WAY TRAFFIC MUST BE MAINTAINED ON ATRISCO DRIVE (UNSER BLVD.) AT ALL TIMES. FLAGGING OPERATIONS WILL BE ALLOWED; BUT ONE LANE IN EACH DIRECTION MUST BE PAVED AND OPEN TO TRAFFIC AT THE CONCLUSION OF EACH WORK SHIFT.
2. ARTERIAL / COLLECTOR ROAD USAGE FEES OF \$0.01 PER SQUARE FOOT OF BARRICADED AREA PER DAY WILL BE ASSESSED FOR LANE AND ROAD CLOSURES ON BOTH MOJAVE STREET AND ATRISCO DRIVE.



W1-1(R) 30 MPH or LESS	W1-1(L) 30 MPH or LESS	W1-2(R) 30 MPH or GREATER	W1-2(L) 30 MPH or GREATER	W1-3(R) 30 MPH or LESS	W1-3(L) 30 MPH or LESS	W1-4(R) 30 MPH or GREATER	W1-4(L) 30 MPH or GREATER	W1-6(R)	W1-6(L)	W3-1
W4-2(R) 30 MPH or GREATER	W4-2(L) 30 MPH or GREATER	W6-3	W8-1	W8-3	W8-3A	W8-7	W13-1	W12-1	W8-9a	W14-2
W20-1	W20-2	W20-3	W20-4	W20-5(R) 24"	W20-5(L) 24"	W20-5S(2R) 24"	W20-5S(2L) 24"	W20-5(C) 24"	W20-7	W20-7a
W1-4bR	W1-4bL	W1-4bR	W1-4bL	W1-4bR	W1-4bL	W1-4bR	W1-4bL	W1-4bR	W1-4bL	W1-4bR
R1-1	R1-2	R2-1	R2-2	R2-3	R3-1	R3-2	R3-3	R3-7(R) 24"	R3-7(L) 24"	R4-7b
R5-1	R5-1a	R6-1(L) 12"	R6-1(R) 12"	R7-1	R11-2	R11-2a	R11-4	R11-4a	R4-8a	R4-9(R) 24"
				ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON A ORANGE BACKGROUND.						
SPECIAL SIGN	SPECIAL SIGN	SPECIAL SIGN	SPECIAL SIGN	ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON A ORANGE BACKGROUND.				M4-10(R) 48"	M4-10(L) 48"	G20-2

ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON A ORANGE BACKGROUND.

 WORK AREA
 BARRICADE – TYPE I, TYPE II, OR BARREL
 BARRICADE – TYPE III
 VERTICAL PANEL
 WARNING SIGN
 DISTANCE BETWEEN SIGNS – A DISTANCE MEASURED IN FEET EQUAL TO A VALUE OF TEN TIMES THE SPEED LIMIT OF THE STREET
 FLAGMAN POSITION
 SPACING BETWEEN BARRICADES – A DISTANCE MEASURED IN FEET EQUAL TO THE SPEED LIMIT OF THE STREET
 TAPER LENGTH – SEE CHART BELOW
 THE TAPER LENGTH IS EQUAL TO THE TAPER LENGTH FOR A GIVEN STREET.

SPEED LIMIT (MPH)	TAPER LENGTH(L) (FEET)		MINIMUM NUMBER OF DOCS FOR TAPER	MAXIMUM SPACING IN FEET		
	10' LANE	11' LANE		ALONG TAPER	AFTER TAPER	
20	70	75	80	5	20	20
25	105	115	125	6	25	25
30	150	165	180	7	30	30
35	205	225	245	8	35	35
40	270	295	320	9	40	40
45	450	495	540	13	45	45
50	500	550	600	13	50	50
55	550	605	660	13	55	55

SPEED MILES PER HOUR	MINIMUM BETWEEN SIGNS	DISTANCE IN FEET FROM LAST SIGN TO TAPE
0-20	10 X SPEED LIMIT	10 X SPEED LIMIT
25-30	10 X SPEED LIMIT	10 X SPEED LIMIT
30-35	10 X SPEED LIMIT	10 X SPEED LIMIT
40-45	10 X SPEED LIMIT	10 X SPEED LIMIT
50-60	10 X SPEED LIMIT	10 X SPEED LIMIT

TYPE OF TAPER	TAPER LENGTH
UPSTREAM TAPER:	
MERGING TAPER	L MINIMUM
SHIFTING TAPER	1/2 L MINIMUM
SHOULDER TAPER	1/2 L MINIMUM
TWO-WAY TRAFFIC TAPER	100 FEET MAXIMUM
DOWNSTREAM TAPERS	100 FEET PER LANE

SPEED LIMIT

40 MPH OR LESS	$L = \frac{WS^2}{60}$
40 MPH OR GREATER	$L = W \times S$

L = TAPER LENGTH
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED OR OFF-PEAK
85-PERCENTILE SPEED IN MPH

 **ISAACSON & ARFMAN, P.A.**
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque New Mexico
176TRF1.DWGrlh 09/19/01

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

Design Review Committee		City Engineer Approval	
City Project No.		Zone Map No.	

Project Name: _____

Sheet **6** Of **8**

AS-BUILT INFORMATION		MICRO-FILM INFORMATION	
CONTRACTOR	DATE	RECORDED BY	DATE
WORK			
STARTED BY	DATE		
INSPECTOR'S	DATE		
FIELD	DATE		
VERIFICATION BY	DATE		
DRAWINGS	DATE		
CORRECTED BY	DATE		

S
10 1969" Set in concrete
400 feet West of Unser Blvd.
tion (near Marigold Dr. &
Plane Coordinates
5644

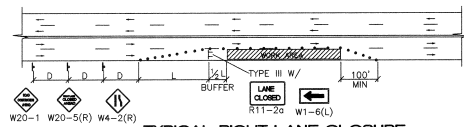
BENCH MARK	
A.C.S. Brass Cap stamped "3-1984"	
post, 0.30 feet above ground, on Santo Domingo St. intersection and Santo Domingo St. intersection.	
Rimrock Dr. intersection.	
Central Zone (NA027) NM Station	
Y=1512565.54 X=359813.84	
Delta Alpha = -0076.19"	
Delta to Grid Elevation = 0.98	

SURVEY INFORMATION		
FIELD NOTES		
1	JAKE ARGUELLES	3/01

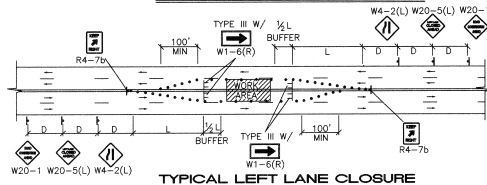
ENGINEER'S SEAL

CITY
STANDARD
DRAWING

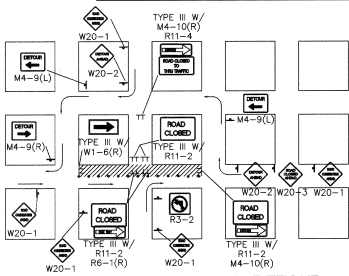
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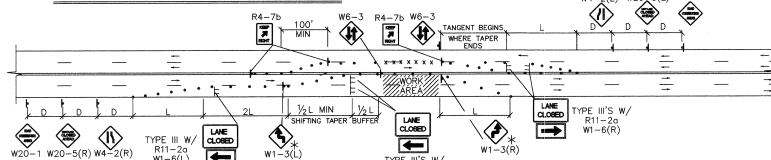
TYPICAL RIGHT LANE CLOSURE



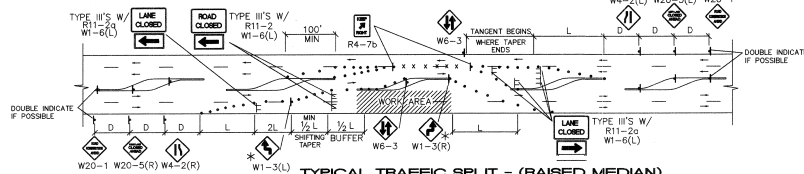
TYPICAL LEFT LANE CLOSURE



TYPICAL ONE DIRECTION DETOUR

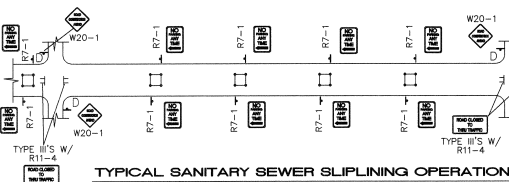


TYPICAL TRAFFIC SPLIT (PAINTED MEDIAN)



TYPICAL TRAFFIC SPLIT - (RAISED MEDIAN)

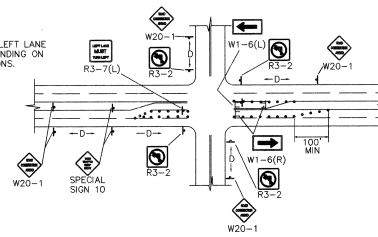
- TRAFFIC SPLIT NOTES:
1. THE OFFSET DISTANCE MUST BE CALCULATED IN ALL SHIFTING TAPERS. THE OFFSET DISTANCE SHALL INCLUDE LANE WIDTHS PLUS MEDIAN WIDTHS.
 2. 1/2 L IS THE MINIMUM DISTANCE FOR SHIFTING TAPERS.
 3. REVERSE CURVES MAY BE IMPLEMENTED. ALL CURVE DATA SHALL BE CALCULATED.
 4. MEDIAN REMOVAL SHALL BE REQUIRED IF 1/2 L OR REVERSE CURVE IS NOT SUFFICIENT. MEDIAN REMOVAL SHALL TAKE PLACE BEFORE SPLITS.
 5. REDUCED SPEED MAY BE CONSIDERED.
 6. * USE W1-3 FOR 30 MPH OR LESS, W1-4 FOR SPEED 35 MPH OR GREATER.



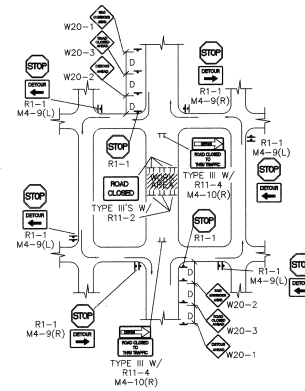
TYPICAL SANITARY SEWER SLIPLINING OPERATION

- ALL PITS TO HAVE TYPE-A FLASHING LIGHTS
- ALL PITS TO HAVE FLAGLINE

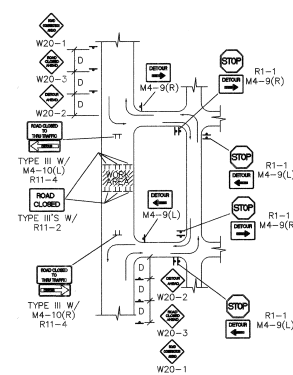
NOTE:
MAY REQUIRE LEFT LANE CLOSURE DEPENDING ON FIELD CONDITIONS.



TYPICAL LANE CLOSURE AT INTERSECTION
NOTE: DEPENDING ON WORK ZONE LOCATION.

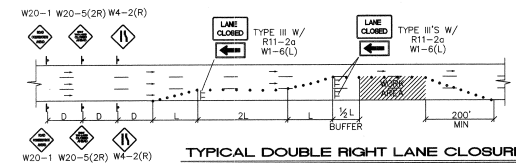


TYPICAL MID-BLOCK CLOSURE
NOTE: (R1-1) BASED ON FIELD CONDITIONS.

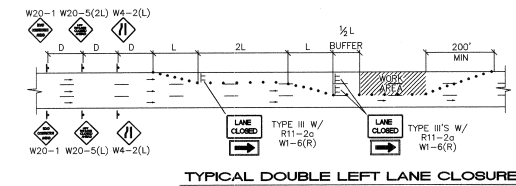


TYPICAL STREET CLOSURE

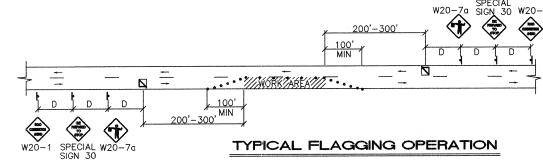
NOTE: (R1-1) BASED ON FIELD CONDITIONS.



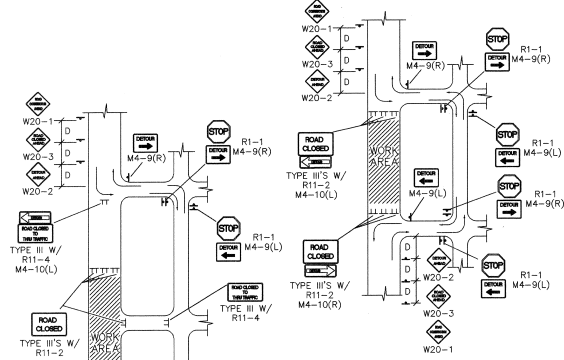
TYPICAL DOUBLE RIGHT LANE CLOSURE



TYPICAL DOUBLE LEFT LANE CLOSURE



TYPICAL FLAGGING OPERATION



TYPICAL STREET CLOSURE
NOTE: (R1-1) BASED ON FIELD CONDITIONS.



CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: **MOJAVE TOWNHOMES**
TRAFFIC CONTROL
TRAFFIC CONTROL & SIGNING EXAMPLES

Design Review Committee	City Engineer Approval	NO. DATE	REVISIONS

City Project No. **668381** Zone Map No. **E-10** Sheet **7** Of **8**

AS-BUILT INFORMATION			
CONTRACTOR	DATE	REVISIONS	DATE
BY	DATE	BY	DATE
REVISIONS	DATE	REVISIONS	DATE
NO. DATE	REVISIONS	NO. DATE	REVISIONS
DESIGNED BY	DATE	DESIGNED BY	DATE
DRAWN BY	DATE	DRAWN BY	DATE
CHECKED BY	DATE	CHECKED BY	DATE

