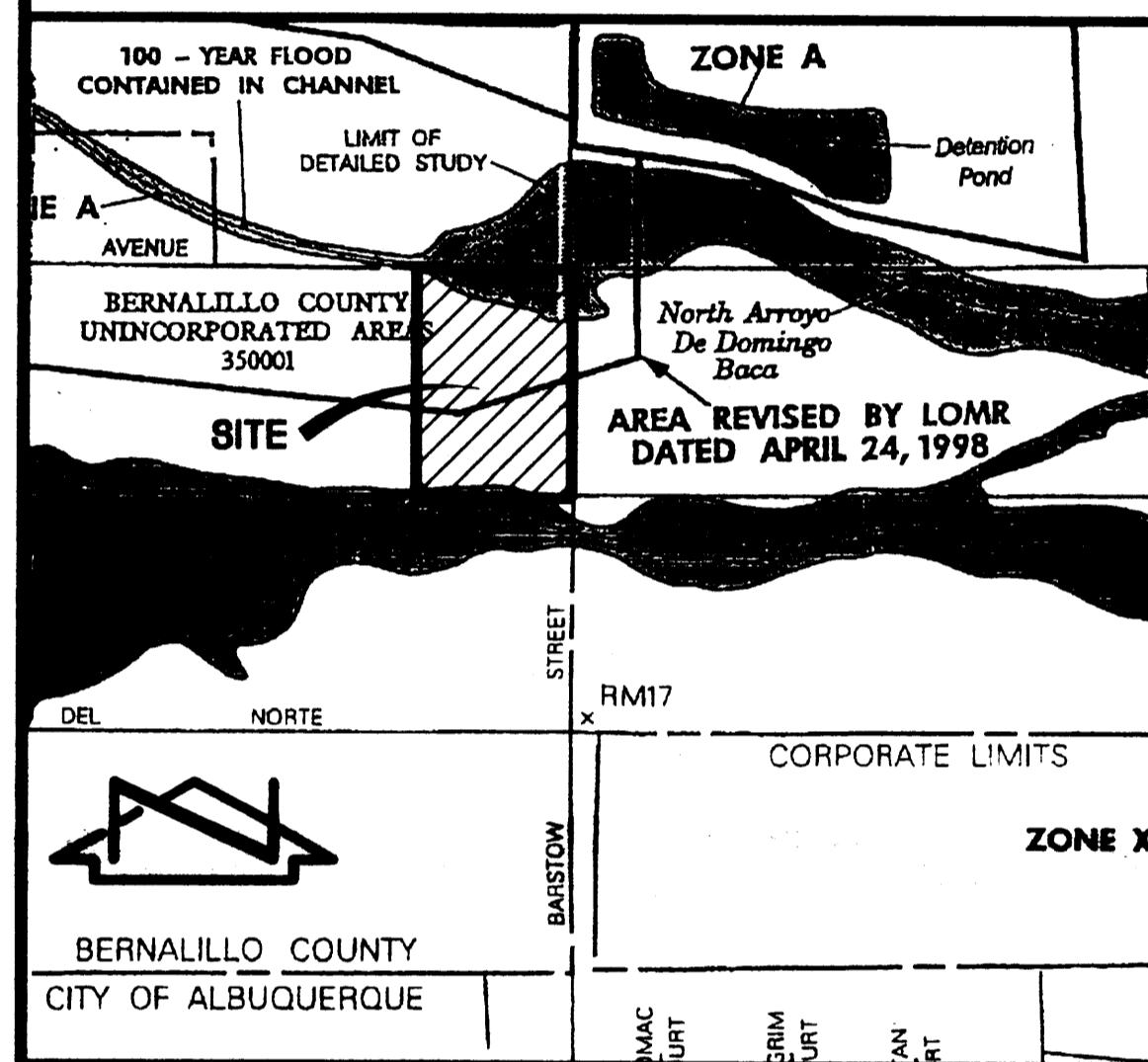
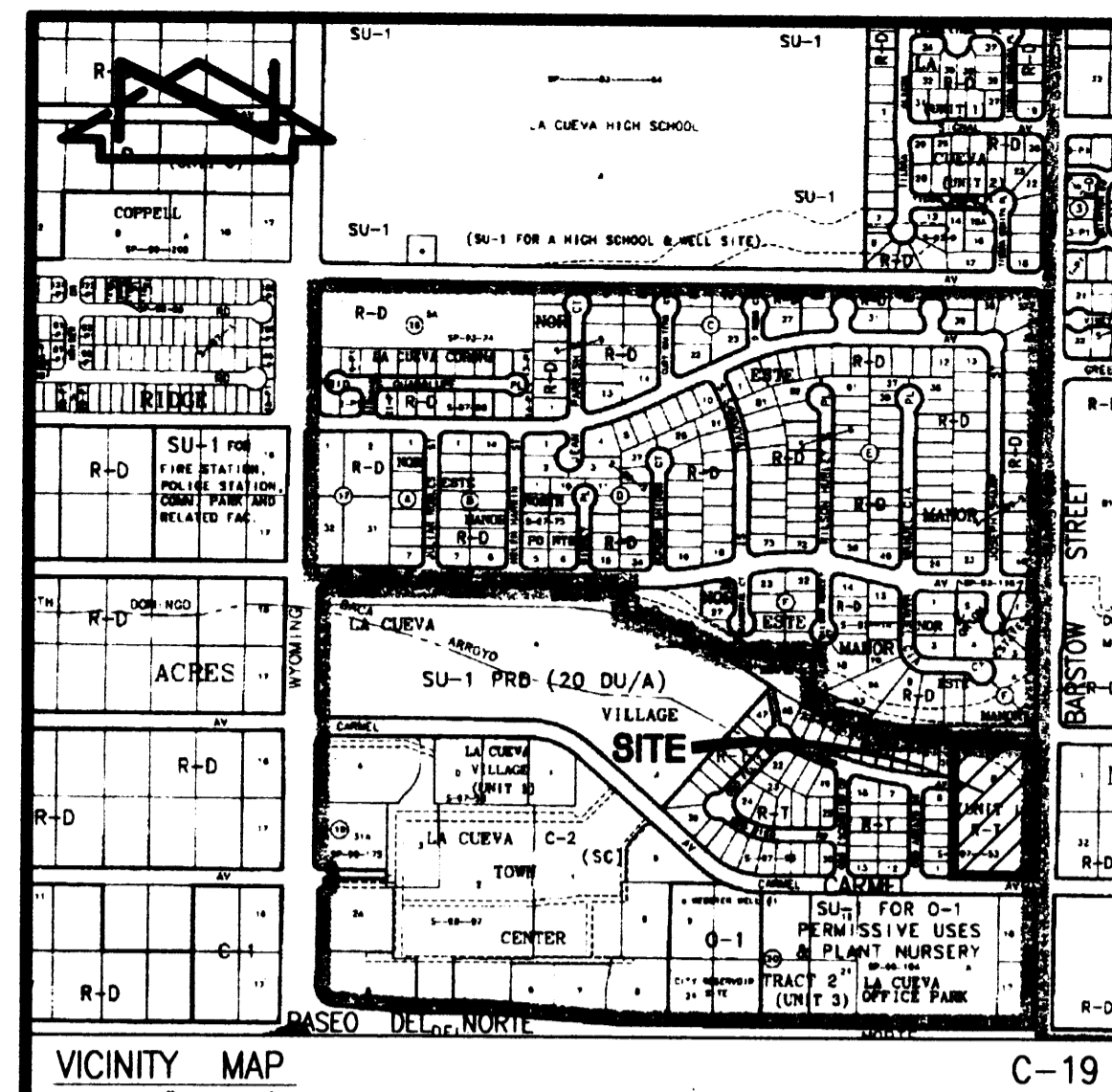


ENGINEER'S DRAINAGE CERTIFICATION

for

LOTS 1-17, LA CUEVA VILLAGE UNIT 2

ALBUQUERQUE, NEW MEXICO
OCTOBER, 2001



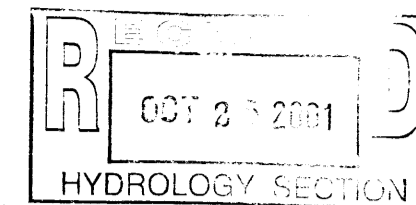
F.I.R.M.
SCALE: 1" = 500'
PANEL 141 OF 825
(REVISED TO REFLECT MAP
REVISIONS DATED 4/24/98
AND 4/26/99)

LEGAL DESCRIPTION:
EXISTING: TRACT B, LA CUEVA VILLAGE, UNIT 1 (DRB #96-546)
PROPOSED: LOTS 1-17, LA CUEVA VILLAGE, UNIT 2

PROJECT BENCHMARK
AN ALUMINUM CAP LOCATED AT THE SW CORNER OF VENTURA AND
SIGNAL AND STAMPED "3-C20"
(NOTE: ELEVATION NOT PUBLISHED. DATA FROM CITY SURVEY
DEPARTMENT.)
ELEVATION = 5569.89 FEET (M.S.L.D.)

T.B.M.
T.B.M. #1
A CHISELED "I" LOCATED IN THE TOP OF THE SOUTH CURB
OF CARMEL AVENUE, APPROXIMATELY 170' WEST OF THE
BARSTOW STREET CENTERLINE.
ELEVATION = 5466.19 FEET (M.S.L.D.)
T.B.M. #2
A #5 REBAR WITH CAP "ILLEGIBLE" AND LOCATED ON THE EAST RIGHT-OF-WAY
LINE OF BARSTOW STREET N.E. AT THE SW CORNER OF TRACT B-1-A,
VINEYARD ESTATES (DESERT RIDGE MIDDLE SCHOOL).
ELEVATION = 5467.52 FEET (M.S.L.D.)

Jma
JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS & SURVEYORS (505) 345-4250



ENGINEER'S DRAINAGE CERTIFICATION

A. EXECUTIVE SUMMARY

THE FOLLOWING ITEMS ARE REQUIRED FOR FINANCIAL GUARANTY RELEASE FOR THIS PROJECT:

- 1) ENGINEER'S DRAINAGE CERTIFICATION OF THE DRB APPROVED GRADING AND DRAINAGE PLAN FOR LA CUEVA VILLAGE, UNIT 2.
- 2) CITY ACCEPTANCE OF OFFSITE DRAINAGE IMPROVEMENTS CONSTRUCTED BY AMAFCA UNDER CITY PROJECT # 660281.
- 3) LETTER OF MAP REVISION (LOMR).

THIS SUBMITTAL ADDRESSES ITEM #1 ONLY. IT IS UNDERSTOOD THAT FINANCIAL GUARANTY RELEASE WILL NOT BE APPROVED FOR THIS PROJECT UNTIL ALL OUTSTANDING ITEMS ARE ADDRESSED. THE CURRENT STATUS OF THE OUTSTANDING ITEMS IS AS FOLLOWS:

OFFSITE DRAINAGE IMPROVEMENTS (ITEM #2) - AMAFCA HAS RECENTLY COMPLETED CONSTRUCTION OF THE OFFSITE PUBLIC DRAINAGE IMPROVEMENTS IDENTIFIED ON THE DRB APPROVED INFRASTRUCTURE LIST. THESE IMPROVEMENTS WERE CONSTRUCTED BY CITY PROJECT # 660281 WHICH HAS NOT YET BEEN ACCEPTED BY THE CITY OF ALBUQUERQUE. THIS PROJECT MUST BE ACCEPTED PRIOR RELEASE OF FINANCIAL GUARANTEES FOR LA CUEVA VILLAGE, UNIT 2.

LOMR (ITEM #3) - A POST-CONSTRUCTION LOMR IS REQUIRED TO REVISE THE FLOOD INSURANCE RATE MAPS TO REFLECT THE RECENTLY CONSTRUCTED AMAFCA DRAINAGE IMPROVEMENTS. THE LOMR SUBMITTAL WILL BE PREPARED AND SUBMITTED BY THIS OFFICE UPON VERIFICATION OF PROJECT COMPLETION IN SUBSTANTIAL COMPLIANCE AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE FEMA APPROVED PLAN. THIS LOMR MUST BE ISSUED PRIOR TO RELEASE OF FINANCIAL GUARANTEES FOR LA CUEVA VILLAGE, UNIT 2.

B. CERTIFICATION

I, JEFFREY G. MORTENSEN, NMPE 8547, OF THE FIRM JEFF MORTENSEN AND ASSOCIATES, INC., HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND DRAINED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE DRB APPROVED PLAN DATED 03/15/2001 AND APPROVED BY THE DRB ON 4/25/2001. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR FINANCIAL GUARANTY RELEASE.

THE FOLLOWING IS A BRIEF DESCRIPTION OF THE VARIOUS PROJECT ELEMENTS:

- 1) HOUSE PADS
HOUSE PAD ELEVATIONS WERE VERIFIED ON JULY 13, 2001 PRIOR TO THE COMMENCEMENT OF HOME CONSTRUCTION. ALL HOUSE PAD GRADES WERE FOUND TO BE WITHIN 0.1 FEET OF THE APPROVED PLAN ELEVATION.
- 2) CURB AND GUTTER
THE ONSITE CURB AND GUTTER ELEVATIONS WERE VERIFIED ON SEPTEMBER 20, 2001. THE GREATEST DIFFERENCE IN ELEVATION FROM THE APPROVED PLAN IS 0.15 FEET. THE CURB AND GUTTER HAS BEEN GRADED AND DRAINED IN A MANNER CONSISTENT WITH THE DRB APPROVED PLAN, AND IN SUBSTANTIAL COMPLIANCE WITH THE WORK ORDER PLANS (CITY PROJECT # 572985).
- 3) RETAINING WALL
A RETAINING WALL WAS REQUIRED ON THE DRB APPROVED PLAN TO FACILITATE SITE GRADING. THE RETAINING WALL WAS DESIGNED BY THE WALL CONTRACTOR AND CONSTRUCTED UNDER SEPARATE PERMIT. THE RETAINING WALL WAS FOUND TO BE OF SUFFICIENT HEIGHT TO ACCOMMODATE THE DRB APPROVED DESIGN GRADES. THE LIMITS OF RETAINING WALL CONSTRUCTION AS-CONSTRUCTED ARE DEPICTED ON THE GRADING PLAN (SHEET 2).
- 4) LOT GRADES
ROUGH GRADES WERE VERIFIED ON SEPTEMBER 22, 2001 AND OCTOBER 19, 2001, AND FOUND TO BE IN SUBSTANTIAL COMPLIANCE AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN. THE GREATEST DIFFERENCE IN ELEVATION FROM THE APPROVED PLAN IS 1.3 FEET. FINISHED GRADING FOR ALL LOTS SHALL BE COMPLETED UPON DEVELOPMENT OF EACH LOT BY THEIR RESPECTIVE BUILDERS. THE FINISHED LOT ELEVATIONS AND SLOPES MUST CONFORM WITH TO THE APPROVED PLAN.
- 5) LOT DEVELOPMENT
THIS PLAN ALSO IDENTIFIES THE LOTS UPON WHICH HOUSES HAVE BEEN COMPLETED OR ARE UNDER CONSTRUCTION AT THE TIME OF THIS CERTIFICATION. THE LOTS ARE SHOWN BY A CIRCLED "H".

THIS CERTIFICATION EVALUATES GRADING AND DRAINAGE ISSUES ONLY AND DOES NOT ADDRESS COMPLIANCE WITH A.D.A. GUIDELINES. THE RECORD INFORMATION IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF GRADING AND DRAINAGE ASPECTS OF THIS PLAN. THOSE RELYING ON THIS PLAN ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

JEFFREY G. MORTENSEN, NMPE 8547



WORK ORDER NO. 572985
DRB NO. 1001160
HYDROLOGY FILE NO. C19/D11B

DESIGNED BY	DATE	BY	REVISIONS	JOB NO.
M.D.S.	10/01	MDS	ENGINEER'S DRAINAGE CERTIFICATION	2000.093.6
DRAWN BY	DATE	BY	REVISIONS	JOB NO.
S.G.H.				10-2001
APPROVED BY	DATE	BY	REVISIONS	JOB NO.
J.G.M.				1 OF 3



JEFF MORTENSEN & ASSOCIATES, INC.
6100-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, N.M. 87109
ENGINEERS (S) SURVEYORS (S) 345-4250
FAX: 345-4254 E-MAIL: jma@jma-inc.com

APPROVED FOR ROUGH GRADING
ORIGINAL MYLAR NOT SIGNED
HYDROLOGY APPROVAL LETTER
HAS WRITTEN 04/05/2001
CITY HYDROLOGY DATE

GRADING PLAN AND GENERAL NOTES,
GRADING AND DRAINAGE REPORT
LOTS 1-17, LA CUEVA VILLAGE, UNIT 2

DESIGNED BY	DATE	BY	REVISIONS	JOB NO.
G.M.	03/01	G.M.	REVISE OFFSITE IMPROVEMENTS BY A.M.A.F.C.A. TO MATCH CURRENT	2000.093.6
J.Y.R.			PLANS, REVISE REAR YARD GRADES LOTS 4, 5, 7, 8 AND 9, AND	10-2001
J.G.M.			RETAINING WALL LIMITS ON LOT 8, ADD SECTION E-E, REMOVE	SHEET 2 OF 3
			FLOODPLAIN REMOVED BY LOWR	
			ENGINEER'S DRAINAGE CERTIFICATION	

KEYED EASEMENT AND BOUNDARY NOTES

- 10' PUBLIC UTILITY EASEMENT GRANTED BY PLAT 97C-282
- A.M.A.F.C.A. DRAINAGE EASEMENT GRANTED BY PLAT 97C-282, (TO BE VACATED)
- 10' PUBLIC UTILITY EASEMENT GRANTED BY PLAT 96C-491
- PORTION OF 10' PUBLIC UTILITY EASEMENT GRANTED BY PLAT 96C-491, (TO BE VACATED)
- 44' PUBLIC STORM DRAINAGE RIGHT-OF-WAY TO BE DEDICATED BY SEPARATE PLATTING ACTION
- PROPOSED 10' PUBLIC UTILITY EASEMENT
- 100-YEAR FLOOD PLAIN DEDICATION PER PLAT C38-184, (TO BE VACATED)
- FLOOD PLAIN EASEMENT GRANTED BY DOCUMENT FILED 12-11-1989, BOOK MS817A, PAGE 265, DOC. #89104916
- A.M.A.F.C.A. DRAINAGE EASEMENT GRANTED BY PLAT 93C-131
- PUBLIC STORM DRAINAGE EASEMENT TO BE GRANTED BY SEPARATE PLATTING ACTION
- 35'x28' PUBLIC WATER METER EASEMENT GRANTED BY PLAT 99C-299
- 60' RIGHT-OF-WAY OF CARMEL AVENUE N.E. (TO BE VACATED)

BOUNDARY TABLES

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA
C1	30.00'	47.22'	N 45°15'03" E	42.50'	90°11'34"
C2	1238.00'	19.31'	S 89°12'22" E	19.31'	00°53'38"

THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS SHOWN FOR INFORMATIONAL PURPOSES ONLY. TOPOGRAPHIC INFORMATION SHOWN HEREON IS FROM A TOPOGRAPHIC SURVEY PERFORMED BY JEFF MORTENSEN AND ASSOC. DATED 11/03/2000.

RECORD DRAWING

LEGEND

- CURB AND GUTTER
- CORRUGATED METAL PIPE
- CONDUIT
- CABLE TELEVISION PAINT MARK
- CABLE TELEVISION CABINET
- EDGE OF ASPHALT
- ELECTRIC CABINET
- ELECTRIC METER
- ELECTRIC PULLBOX
- FLOWLINE
- FIBER OPTIC
- INVERT
- METAL GUARD POST
- MANHOLE
- METAL HANDRAIL
- METAL LIGHT POLE
- METAL SIGN (GENERAL)
- NATURAL GRADE
- OVERHEAD ELECTRIC (NO. OF LINES)
- OVERHEAD TELEPHONE (NO. OF LINES)
- PAINT MARK
- REINFORCED CONCRETE PIPE
- SANITARY SEWER
- STORM DRAIN
- STORM DRAIN MANHOLE
- STANDARD CURB AND GUTTER
- TOP OF ASPHALT
- TOP OF CURB
- TOP OF CONCRETE
- TELEPHONE
- TELEPHONE CABINET
- TOP OF GRATE
- TRAFFIC PULLBOX
- TELEPHONE RISER
- TRAFFIC SIGN
- TOP OF WALL
- TYPICAL UNDERGROUND
- UNDERGROUND TELEPHONE
- UNDERGROUND CABLE TELEVISION
- WHEELCHAIR RAMP
- WATER METER
- WOOD POWER POLE
- WATER VALVE BOX
- CROSSING
- EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- EXISTING FLOWLINE
- PROPOSED SPOT ELEVATION
- PROPOSED CONTOUR
- EXISTING RETAINING WALL
- PROPOSED RETAINING WALL
- DIRECTION OF FLOW
- EXISTING FLOODPLAIN
- PROPOSED STORM INLET
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED STANDARD CURB AND GUTTER
- PROPOSED MOUNTABLE CURB AND GUTTER (ROLL TYPE)
- PROPOSED PERIMETER CMU WALL (CAN RETAIN 18' MAX.)
- HIGH POINT
- DRAINAGE SUB-BASIN
- RECORD ELEVATION
- RECORD INFORMATION-AS DESIGNED
- RECORD ELEVATION
- RECORD PERIMETER WALL
- HOME UNDER CONSTRUCTION AT TIME OF CERTIFICATION

DRAINAGE CERTIFICATION

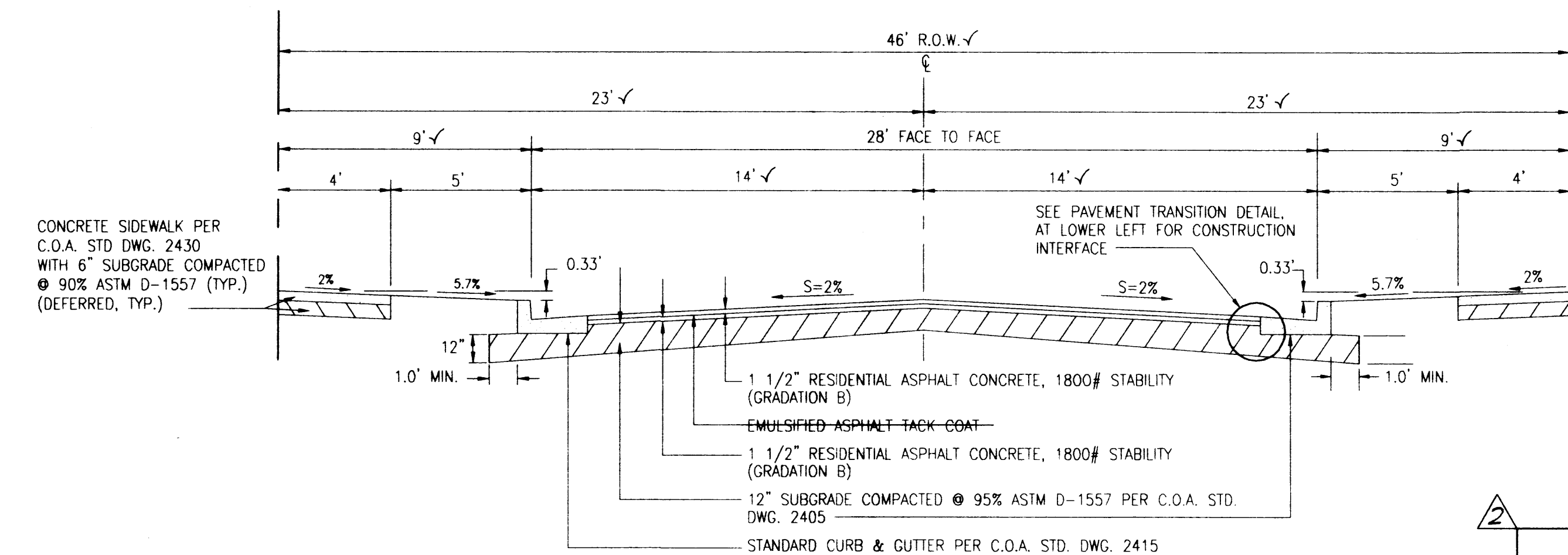
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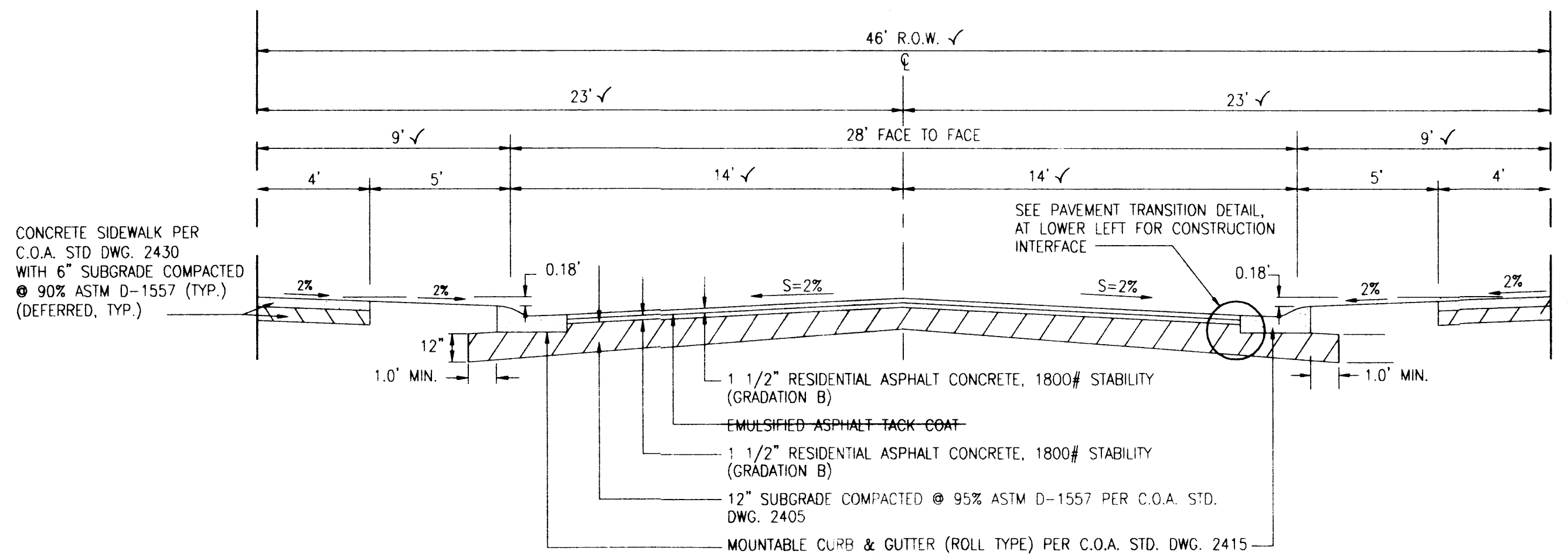
JEFFREY G. MORTENSEN, N.M.P.E. 8547



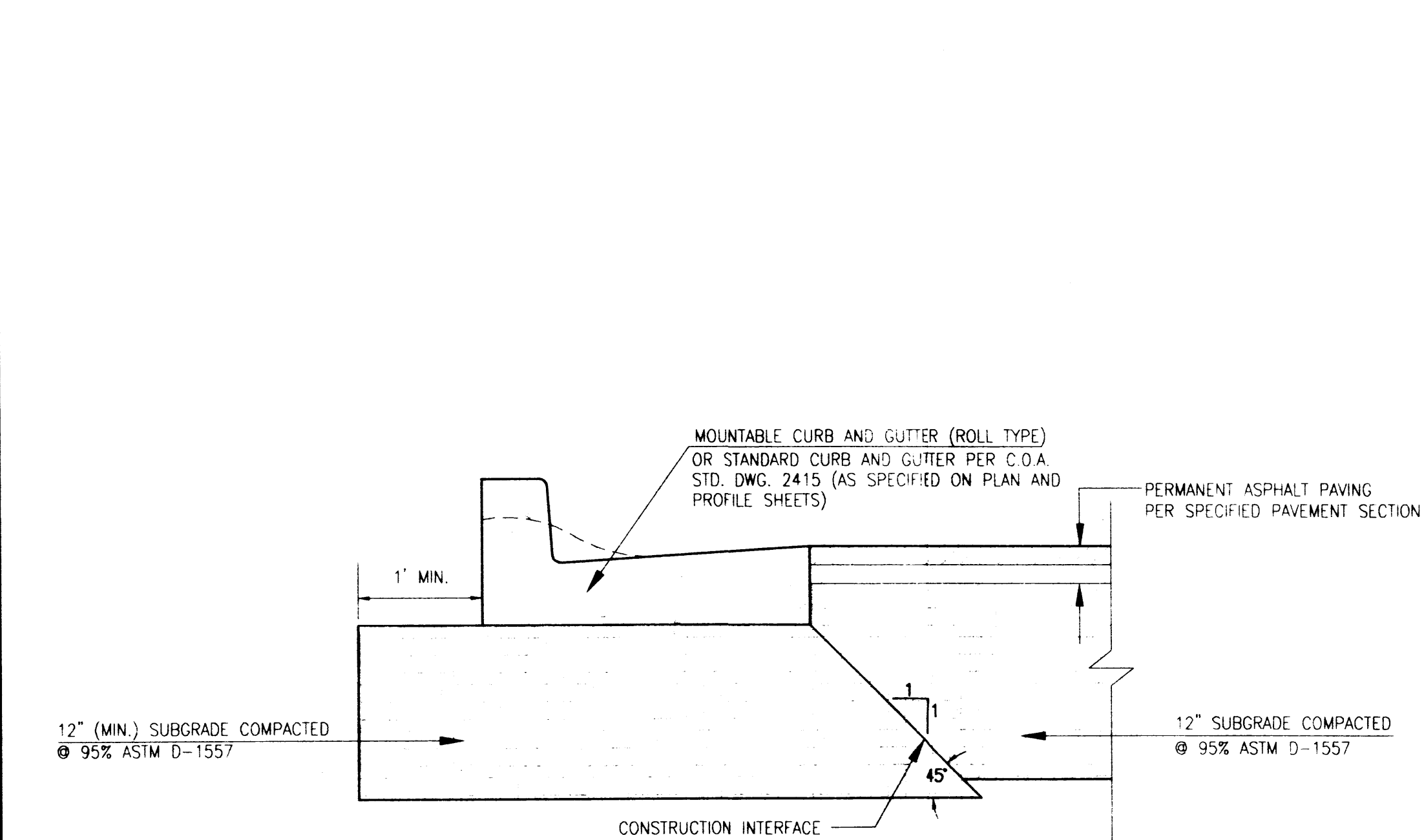
12-18-2000
03-15-2001



SECTION A-A
SCALE: 1" = 4'

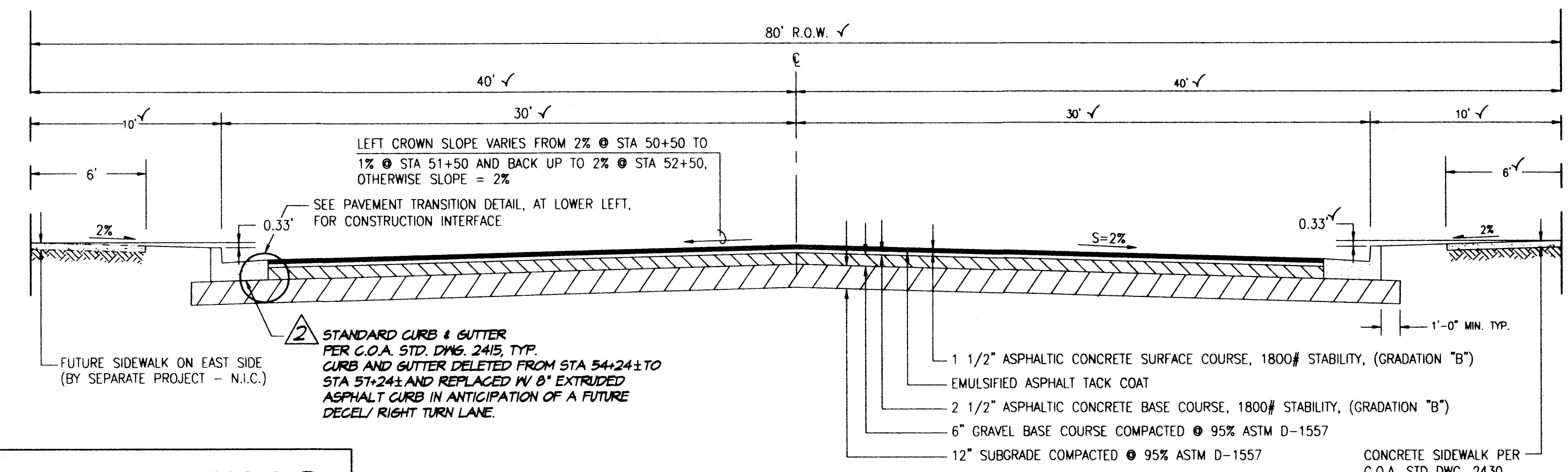


SECTION B-B
SCALE: 1" = 4'

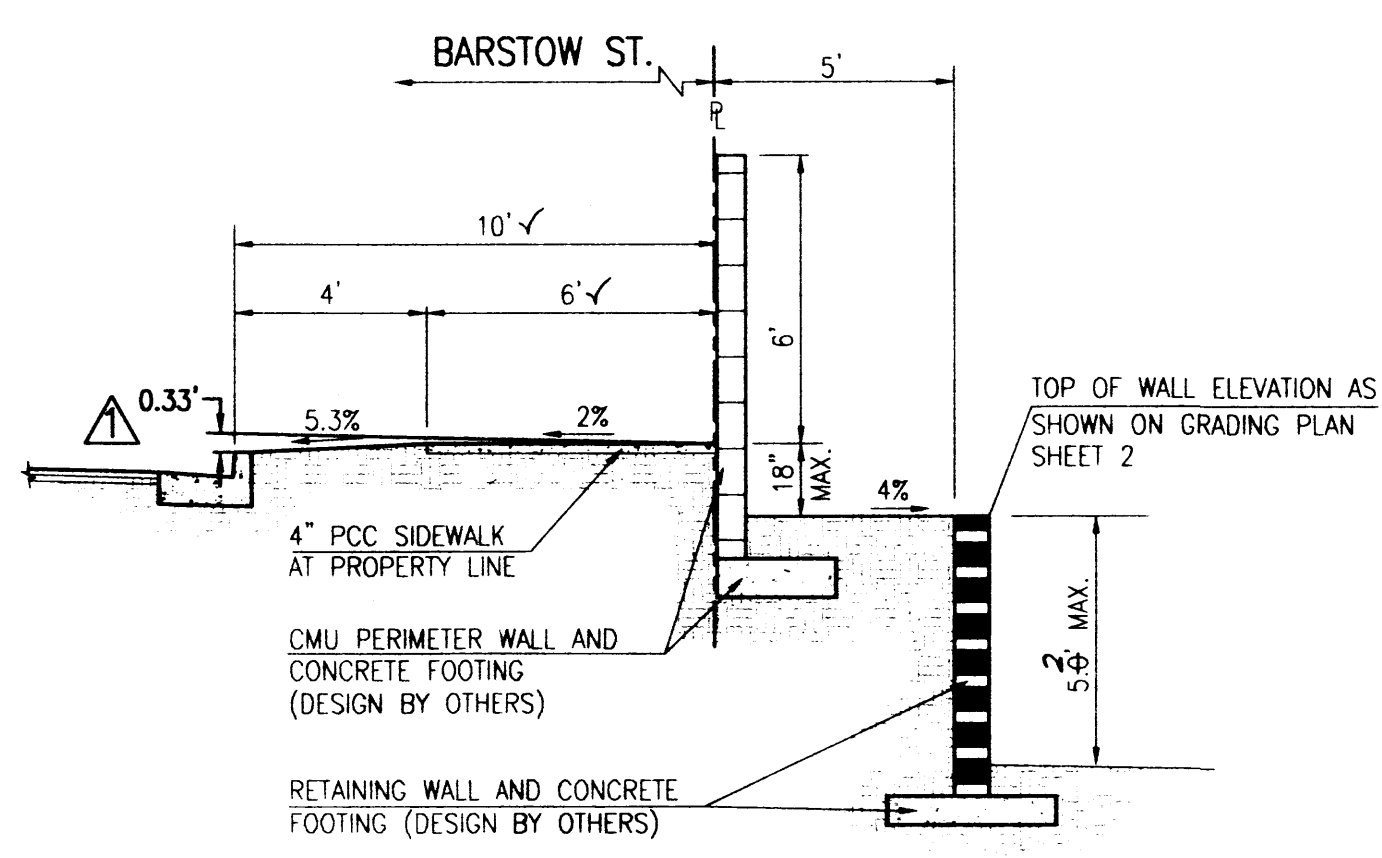


PAVEMENT TRANSITION DETAIL @ CURB & GUTTER
SCALE: 1" = 1'-0"

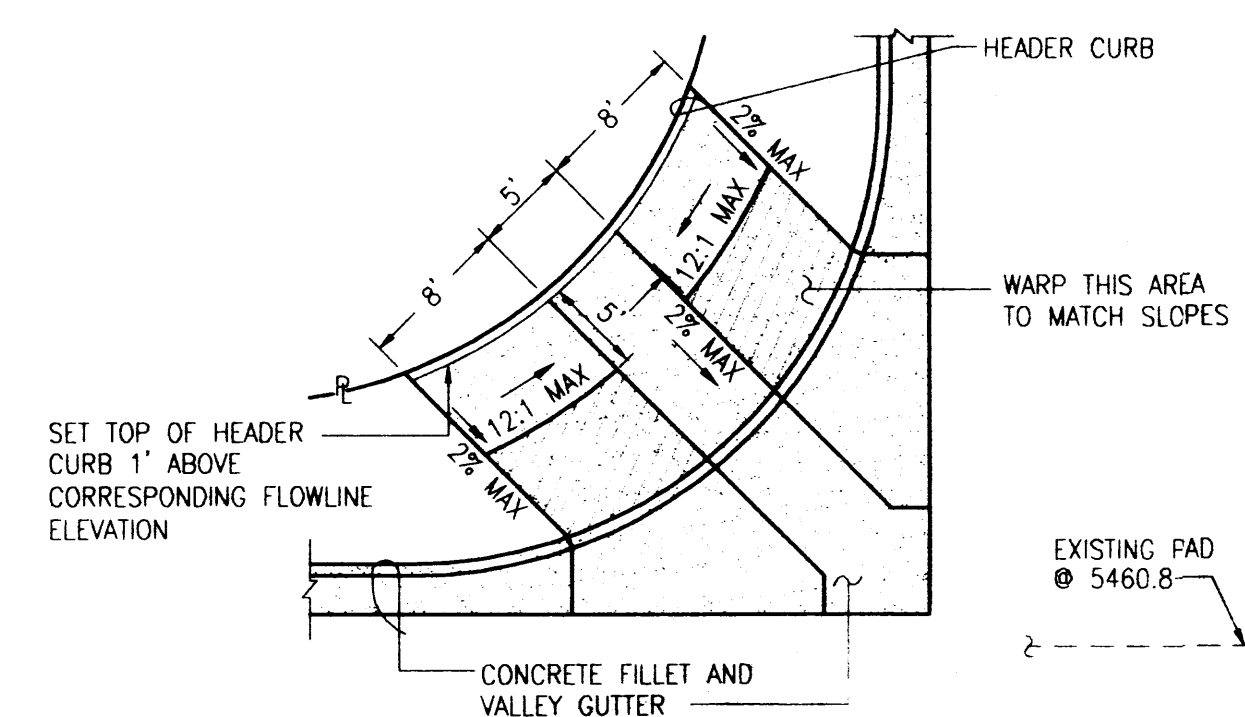
RECORD DRAWING



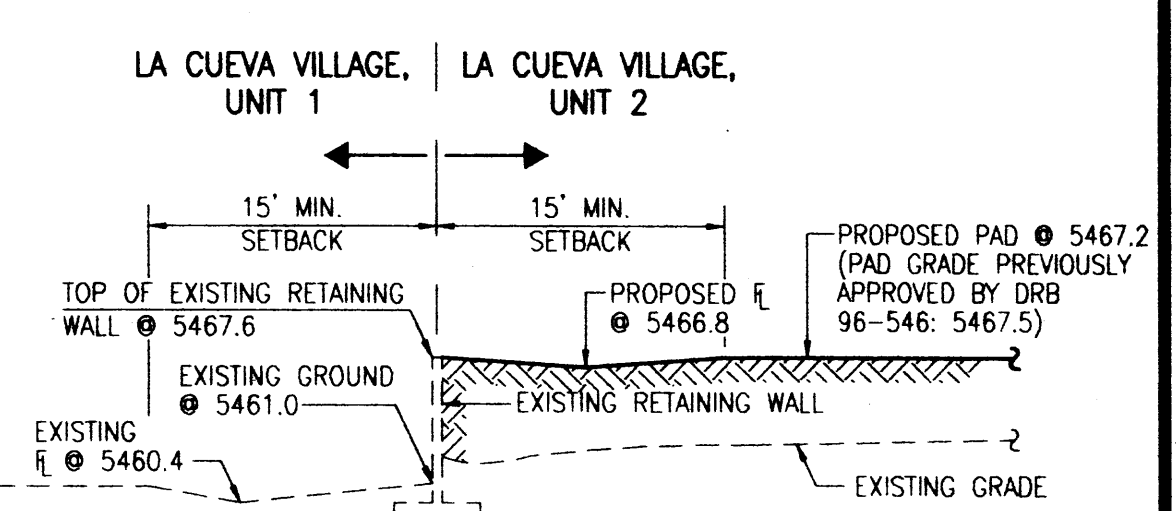
SECTION C-C (BARSTOW ST.)
SCALE: 1" = 5'
PAVEMENT SECTION IS CONSISTENT WITH BARSTOW STREET SECTIONS FROM PROJECT NUMBERS 4368 AND 3391



SECTION D-D
SCALE: 1" = 4'

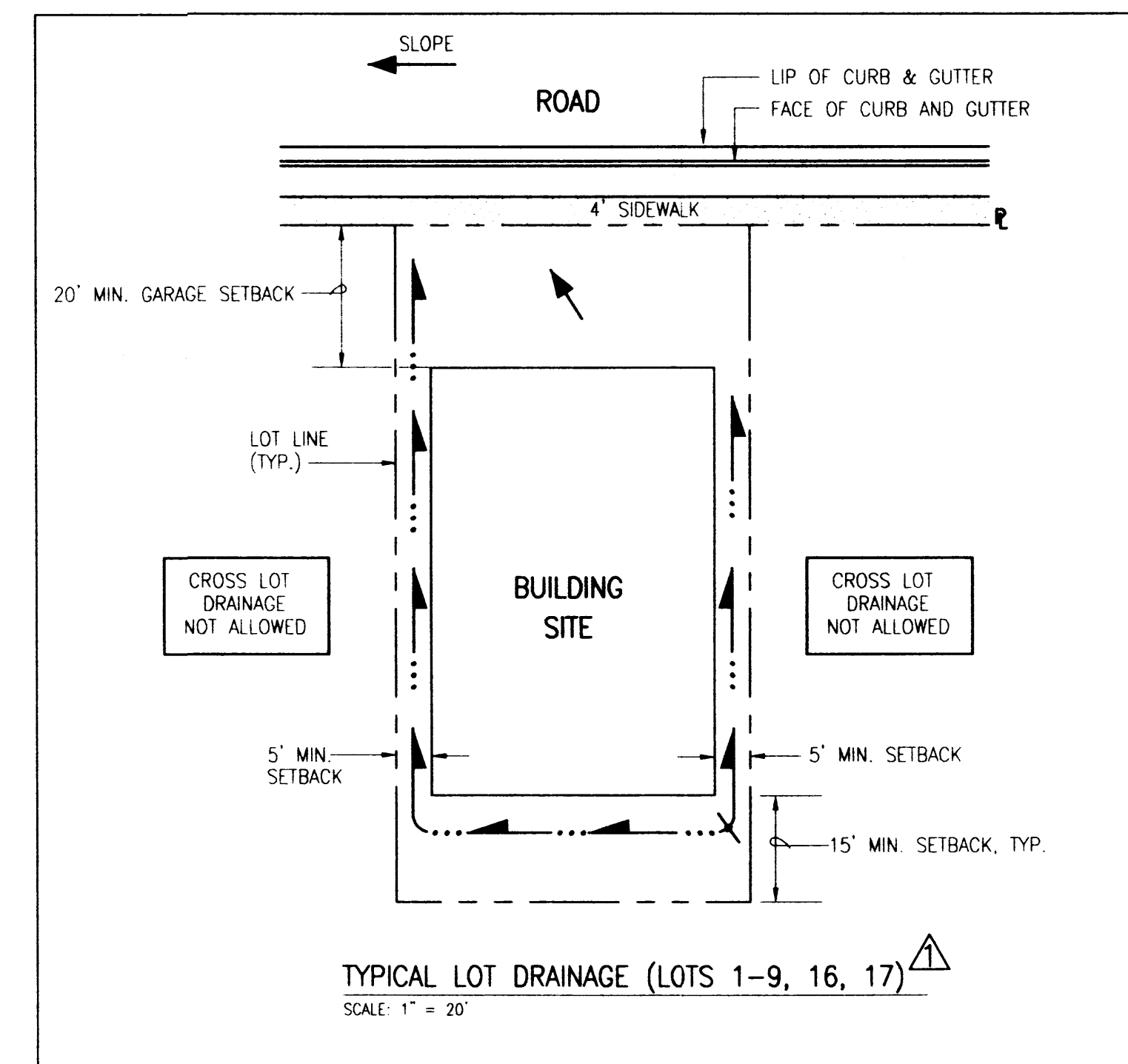


TYPICAL WHEELCHAIR RAMP DETAIL
SCALE: 1" = 10'

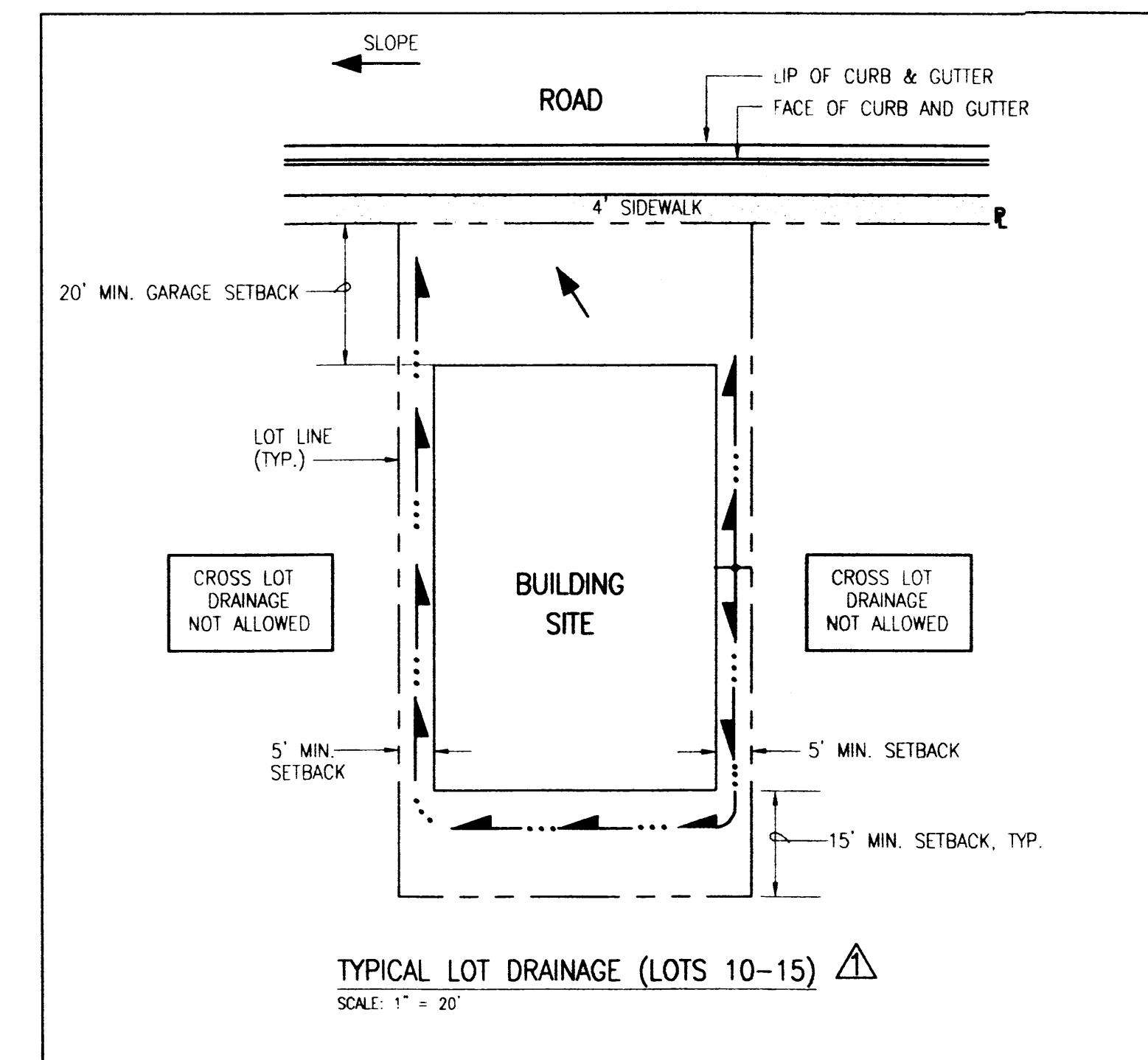


SECTION E-E
(LOCATION OF GREATEST GRADE CHANGE)
SCALE: 1" = 10'

NOTE:
ALL FILL WITHIN EXISTING FLOODPLAIN SHALL BE
COMPACTED TO A MINIMUM OF 95% OF A.S.T.M.
D-1557



TYPICAL LOT DRAINAGE (LOTS 1-9, 16, 17)
SCALE: 1" = 20'



TYPICAL LOT DRAINAGE (LOTS 10-15)
SCALE: 1" = 20'

ENGINEER'S DRAINAGE CERTIFICATION

AS INDICATED BY THE RECORD INFORMATION SHOWN
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JEFFREY G. MORTENSEN, N.M.P.E. 8547
12-18-2000
03-15-2001

RECEIVED
12-18-2000
03-15-2001



JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. NE
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS SURVEYORS (505) 345-4250

SECTIONS AND DETAILS GRADING AND DRAINAGE REPORT LOTS 1-17, LA CUEVA VILLAGE, UNIT 2

DESIGNED BY	DATE	BY	REVISIONS	JOB NO.
G.M.	03/01	G.M.	REVISE SECTION D-D, ADD SECTION E-E, REVISE TYPICAL	2000.093.6
DRAWN BY	DATE	BY	REVISIONS	DATE
S.G.H./J.Y.R.	10/02	MDS	DRAINAGE LOT #S.	12-2000
			ENGINEER'S DRAINAGE CERTIFICATION	
APPROVED BY	DATE	BY	REVISIONS	SHEET
J.G.M.				3 OF 3