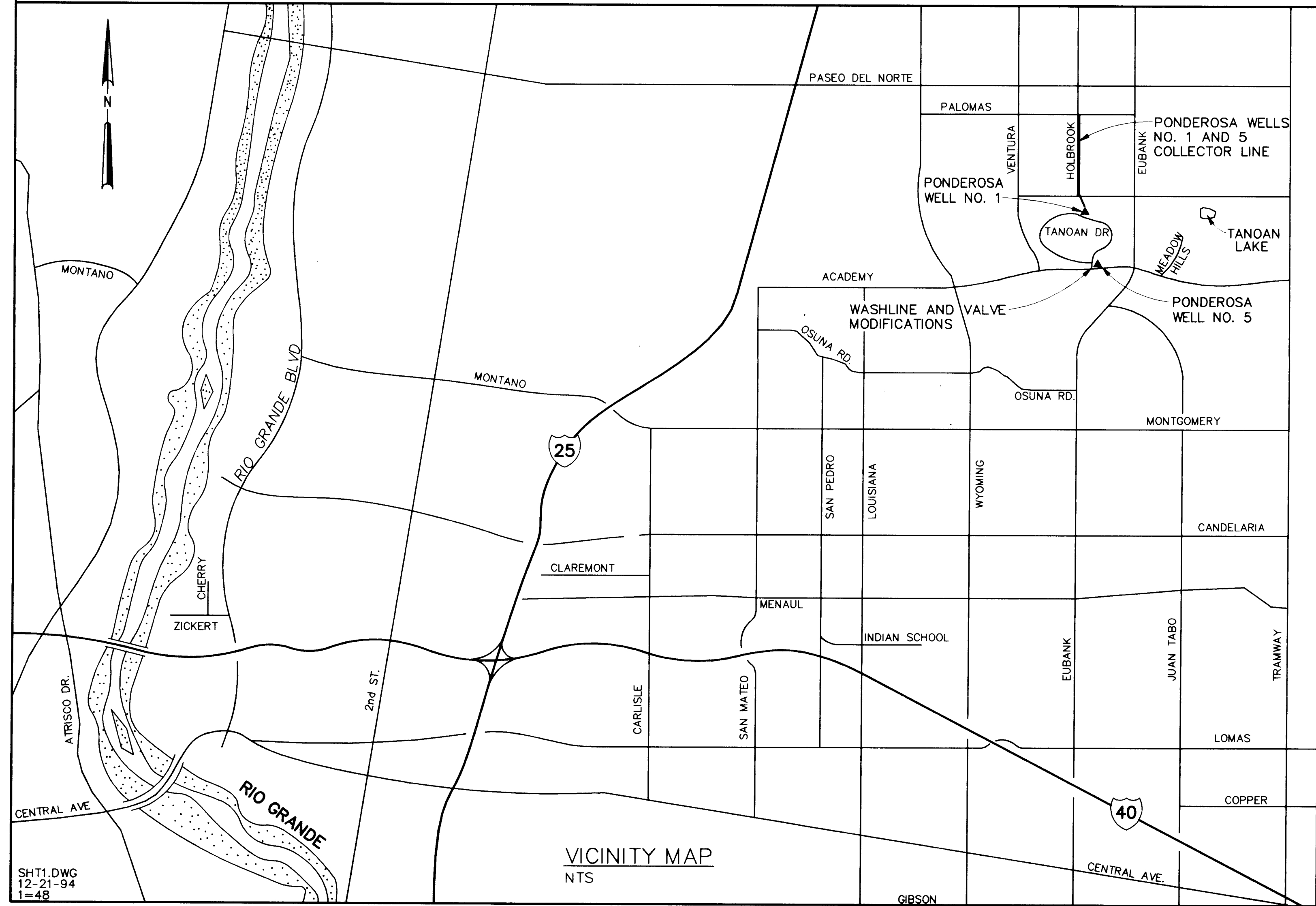


CITY OF ALBUQUERQUE

PONDEROSA WELLS NO. 1 AND 5

COLLECTOR LINE



SHT1.DWG
12-21-94
1=48

VICINITY MAP
NTS

INDEX TO SHEETS

SHT NO.	DWG NO.	TITLE
1	G-1	TITLE, VICINITY MAP AND INDEX
2	C-1	ABBREVIATIONS, LEGENDS AND SITE PLAN
3	C-2	STA. 0+85 TO STA. 14+25
4	C-3	STA. 14+25 TO STA. 28+25
5	C-4	STA. 28+25 TO STA. 42+25
6	C-5	STA. 42+25 TO E.O.L.
7	C-6	MISCELLANEOUS DETAILS
8	C-7	MISCELLANEOUS DETAILS
9	C-8	PIPE BONDING & MISCELLANEOUS DETAILS
10	C-9	TRENCH CROSS SECTIONS
11	C-10	TRAFFIC CONTROL PLAN
12	C-11	WASHLINE AND VALVE MODIFICATIONS
13	C-12	WASHLINE MODIFICATION DETAILS

APPROVAL OF AS BUILT DRAWINGS
CHIEF CONSTRUCTION ENGINEER
[Signature]
DATE 5-14-97

APPROVAL OF RECORD
DRAWINGS
PROJECT *[Signature]*
DATE 1/8/94

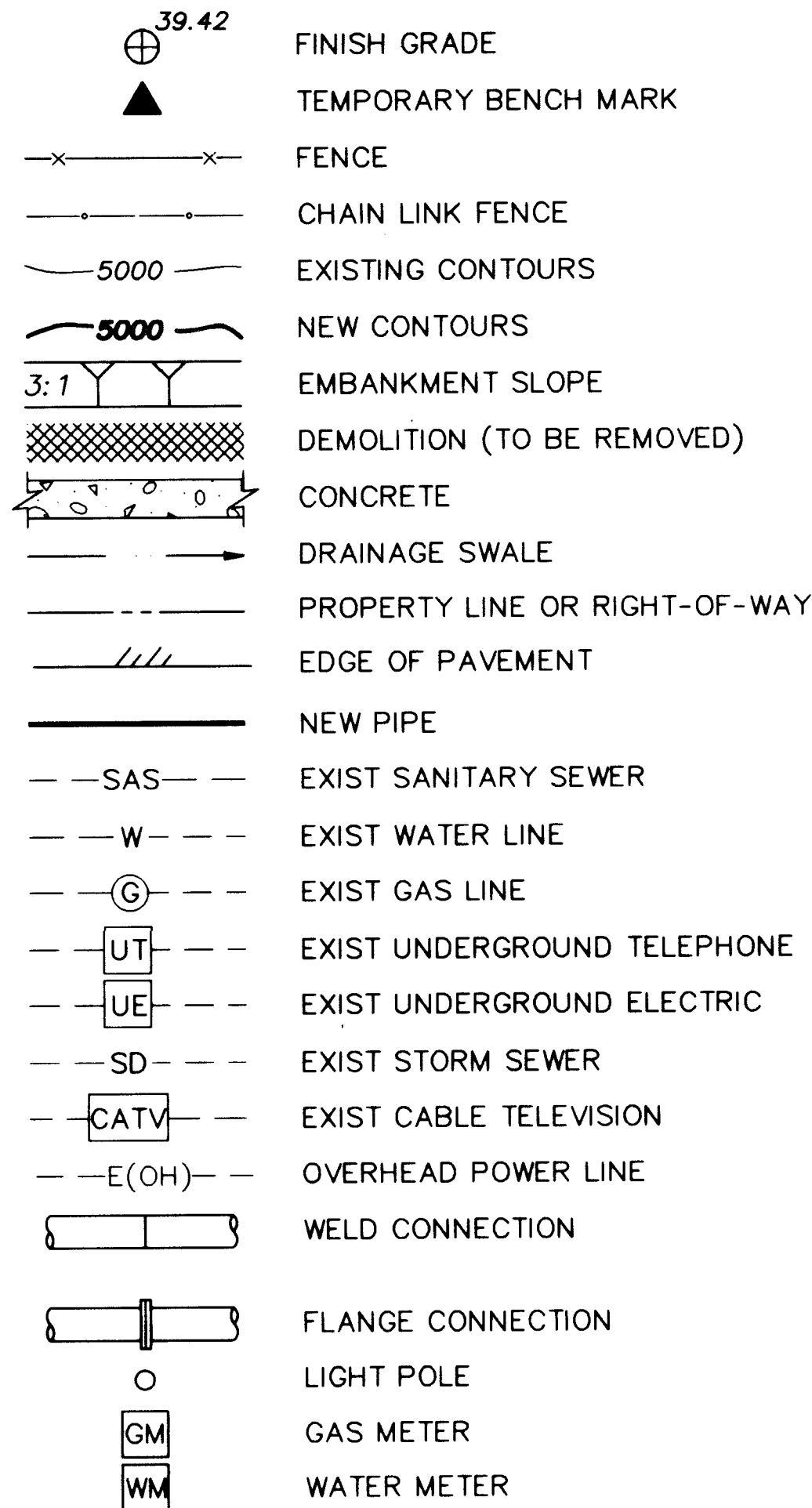
RECORD DRAWINGS
Revisions Drawn by *[Signature]* Date 1/4/96
THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

REV	SHEETS	CITY ENGINEER	DATE	USER DEPT	DATE	USER DEPT	DATE
APPROVAL OF REVISIONS							
		CH2M HILL 6001 Indian School Rd, NE Suite 350 Albuquerque, New Mexico 87110 (505) 884-5600		APPROVED FOR CONSTRUCTION <i>[Signature]</i> 2/24/95 CE			
		PROJECT NO. 4804.91		SHEET 1 OF 13			

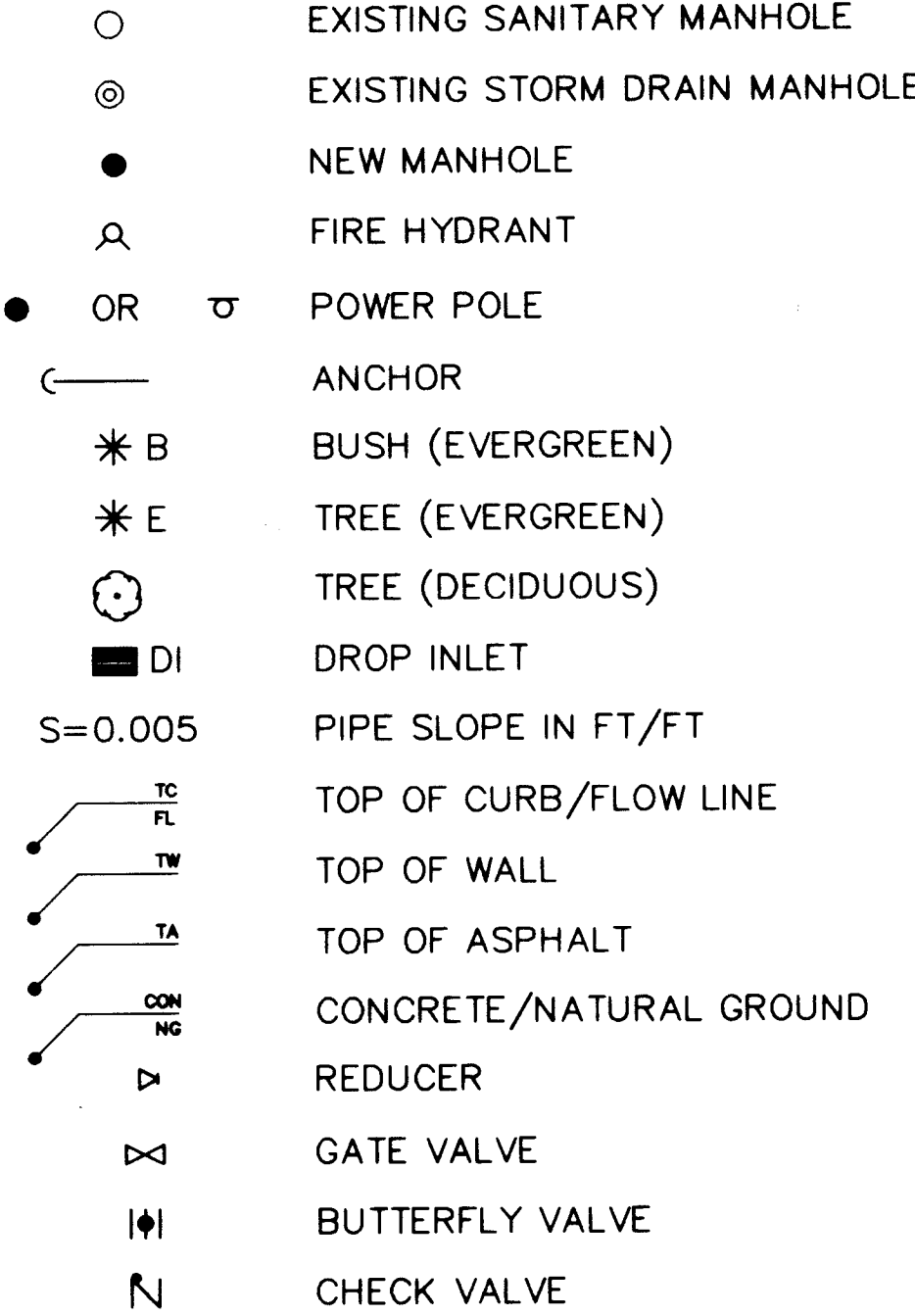
GENERAL NOTES:

- PIPE MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION UNLESS OTHERWISE SPECIFIED ON THE PLANS OR IN THE SUPPLEMENTAL TECHNICAL SPECIFICATIONS.
- LOCATION AND DIAMETER OF BURIED PIPING AND UTILITIES ARE APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR.
- CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR WATER TO BE DRAINED FROM EXISTING WATERLINES. CONTRACTOR SHALL PROVIDE SANITARY, TEMPORARY CAP ON EXISTING LINES UNTIL READY TO MAKE FINAL CONNECTION.
- CONTRACTOR SHALL IMMEDIATELY REPLACE ANY DAMAGED LANDSCAPING OR IRRIGATION SYSTEMS DISTURBED BY THIS CONSTRUCTION TO THEIR ORIGINAL CONDITION.
- CONTRACTOR SHALL GRADE AND SEED WITH NATIVE GRASSES ALL NATURAL GROUND AREAS DISTURBED BY THIS CONSTRUCTION. SEED MIX, SOIL PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH SECTION 1012- NATIVE GRASS SEEDING IN THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO THE PUBLIC RIGHT-OF-WAY OR INTO PRIVATE PROPERTY.
- THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED AWAY OR CREATE DUST.
- CONTRACTOR SHALL MAINTAIN DUST CONTROL AT ALL TIMES.
- CONTRACTOR SHALL VERIFY DEPTH, MATERIAL AND DIAMETER OF EXISTING PIPE.
- THREE (3) 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 BARRICADING PERMIT FROM THE CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADING ENGINEER (788-2551) PRIOR TO OCCUPYING AN INTERSECTION OR RIGHT-OF-WAY. SEE SECTION 19 OF THE GENERAL CONDITIONS.
- ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED BY THE CONTRACTOR TO SAME LOCATION AND IN KIND AS EXISTING.
- CONTRACTOR SHALL REPLACE AND/OR RESTORE ALL PAVEMENT, CURBS, SIDEWALK, ROCK SURFACING, AND OTHER SITE FIXTURES DAMAGED DIRECTLY OR INDIRECTLY BY THIS CONSTRUCTION TO SAME LOCATION AND IN KIND AS EXISTING.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL CONTACT THE LINE LOCATING SERVICE (260-1990) FOR EXISTING UTILITIES (NEW MEXICO ONE CALL SYSTEM).
- REFERENCES MADE TO CITY STD DWG REFER TO THE CURRENT STANDARD DETAIL DRAWINGS AS SHOWN IN THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, AS AMENDED THROUGH UPDATE NO. 5, DATED 6/94.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR OWNER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- FIVE (5) WORKING DAYS PRIOR TO ANY WORK ON EXISTING PUBLIC WATER UTILITIES, THE CONTRACTOR SHALL CONTACT THE WATER UTILITY DIVISION FOR THE VALVE SHUT OFF. SEE SECTION 18 OF THE STANDARD SPECIFICATIONS.
- ALL UTILITIES SHOWN AND ANY OTHER UTILITIES THAT ARE NOT SHOWN ON THE PLANS BUT ARE WITHIN THE CONSTRUCTION AREA SHALL BE LOCATED, IDENTIFIED, AND PROTECTED AT ALL TIMES DURING CONSTRUCTION BY THE CONTRACTOR. SERVICE LATERALS ARE NOT SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL LATERALS AND SHALL REINSTALL, REPAIR, OR REPLACE LATERALS AS NECESSARY FOR PIPELINE INSTALLATION.
- PAYMENT FOR REMOVAL AND REPLACEMENT OF PAVEMENT SHALL BE DETERMINED BY THE ACTUAL WIDTH AS MEASURED IN THE FIELD BY THE OWNER OR THEIR ENGINEER, BUT SHALL IN NO CASE EXCEED THE MAXIMUM PAVEMENT CUT WIDTH (MPCW) SHOWN ON THE DRAWINGS. ALL COSTS FOR PAVEMENT REMOVAL AND REPLACEMENT IN EXCESS OF THE MPCW SHOWN ON THE DRAWINGS SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MARKERS WITHOUT WRITTEN PERMISSION OF THE ENGINEER. ANY MARKERS DISTURBED DURING THE COURSE OF THE WORK SHALL BE REPLACED AT THE CONTRACTOR'S SOLE EXPENSE. THE REPLACEMENT OF PERMANENT SURVEY MARKERS SHALL BE DONE ONLY BY THE CITY SURVEY SECTION. WHEN A CHANGE IS MADE IN THE FINISH ELEVATION IN WHICH THE MARKER IS LOCATED, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING AND PROTECTING EXISTING UTILITIES ENCOUNTERED DURING THE PIPELINE CONSTRUCTION. MEANS AND METHODS OF SUPPORT AND/OR PROTECTION SHALL BE IN ACCORDANCE WITH AND APPROVED BY THE APPROPRIATE UTILITY OWNER. PRIOR TO BACKFILLING OR COVERING ANY EXPOSED UTILITY THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE OWNER FOR INSPECTION AND APPROVAL. UTILITY CONTACTS FOR THIS PROJECT ARE LISTED BELOW:

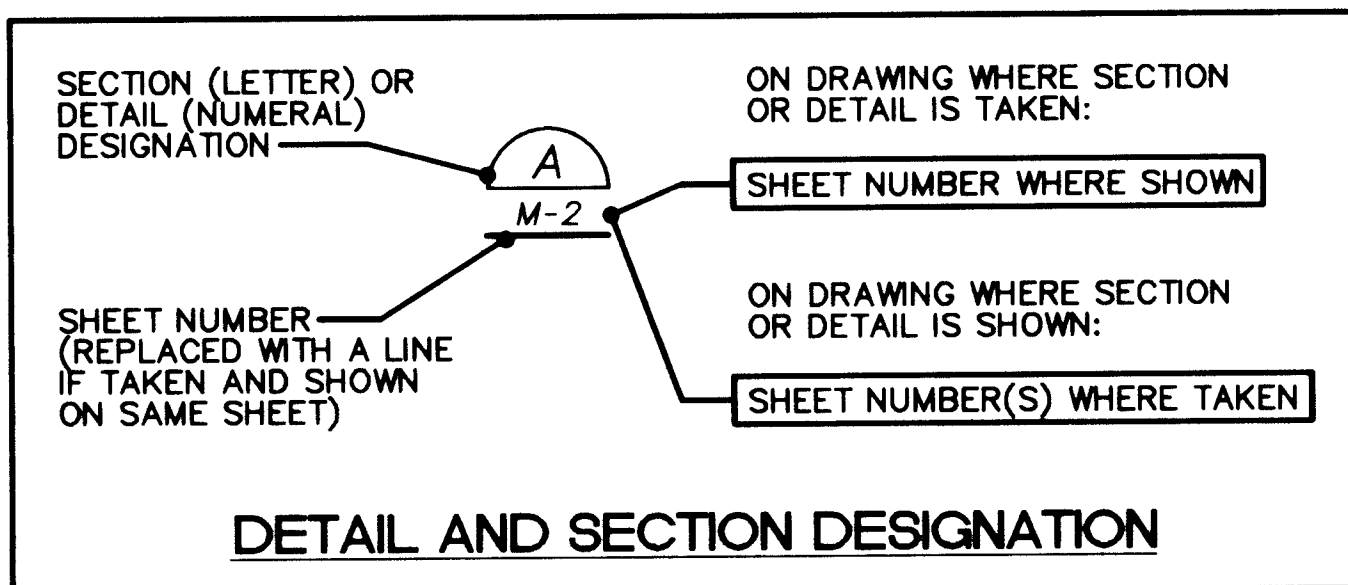
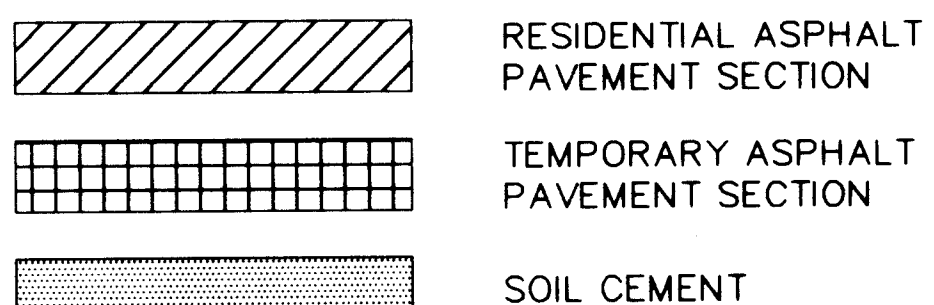
UTILITY OWNER	CONTACT PERSON	PHONE NUMBER
PUBLIC SERVICE CO. OF N.M.	MIKE DAVIS	241-3307
U.S. WEST	LYNN HAWKINS	245-8787
GAS CO. OF N.M.	LEO COWBOY	761-7782
JONES INTERCABLE, INC.	KAREN SHORE	761-6225



LEGEND



SURFACE REMOVAL AND REPLACEMENT LEGEND



ABBREVIATIONS

AC	ASBESTOS CEMENT PIPE	MJ	MECHANICAL JOINT
BFV	BUTTERFLY VALVE	MIN	MINIMUM
BM	BENCH MARK	MPCW	MAXIMUM PAVEMENT CUT WIDTH
BSW	BACK OF SIDEWALK	NIC	NOT IN CONTRACT
C-2	CIVIL DRAWING 2ND SHEET	NO	NUMBER
CCP	CONCRETE CYLINDER PIPE	NTS	NOT TO SCALE
CI	CAST IRON	OC	ON CENTER
CL	CENTER LINE	OC	PLAIN END
CPLG	COUPLING	OC	PUBLIC SERVICE CO. OF NEW MEXICO
DI OR DIP	DUCTILE IRON PIPE	PP	POWER POLE
DIA	DIAMETER	PRV	PRESSURE REDUCING VALVE
DWG	DRAWING	PVC	POLYVINYL CHLORIDE
EA	EACH	PVMT	PAVEMENT
EF	EACH FACE	RCP	REINFORCED CONCRETE PIPE
EL OR ELEV	ELEVATION	RDCR	REDUCER
EW	EACH WAY	REINF	REINFORCED
EWEF	EACH WAY	R.O.W.	RIGHT-OF-WAY
EXIST	EXISTING	SAS	SANITARY SEWER
FG	FINISHED GRADE	SHT	SHEET
FH	FIRE HYDRANT	SIM	SIMILAR
FL	FLOW LINE	SST	STAINLESS STEEL
FLEX	FLEXIBLE	STA.	STATION
FLG	FLANGE	STD	STANDARD
GI	GALVANIZED IRON	STL	STEEL
GS	GALVANIZED STEEL	TBM	TEMPORARY BENCH MARK
GV	GATE VALVE	T&B	TOP AND BOTTOM
GVL	GRAVEL	TC	TOP OF CURB/CONCRETE
LF	LINEAR FEET	TYP	TYPICAL
MAX	MAXIMUM	WM	WATER METER
MH	MANHOLE	WS	WELDED STEEL

GENERAL STRUCTURAL NOTES:

- MINIMUM CLEARANCE FOR REINFORCEMENT BARS, SHALL BE 3" WHEN PLACED ON GROUND, FOR SURFACES EXPOSED TO WATER OR WEATHER: 1 1/2" CLEARANCE FOR #5 BAR AND SMALLER AND 2" CLEARANCE FOR LARGER BARS. INTERIOR SLABS 3/4" CLEARANCE, INTERIOR BEAMS 1 1/2" CLEARANCE.
- ALL WALL REINFORCEMENT BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH COLUMNS OR PILASTERS. REINFORCEMENT BARS SHALL BE EXTENDED INTO CONNECTING WALLS. VERTICAL WALL BARS SHALL BE LAPPED WITH DOWELS FROM BASE SLABS.
- ALL REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE NOTED SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENT:

	BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
SPACING < 6"	TOP BAR	21	29	36	46	62	82	104	132	163
	OTHER BAR	15	20	26	33	45	59	74	95	116
SPACING > 6"	TOP BAR	17	23	29	37	50	66	83	106	130
	OTHER BAR	12	16	20	26	36	47	60	76	93

HOOKS SHALL SATISFY AC1 318 83

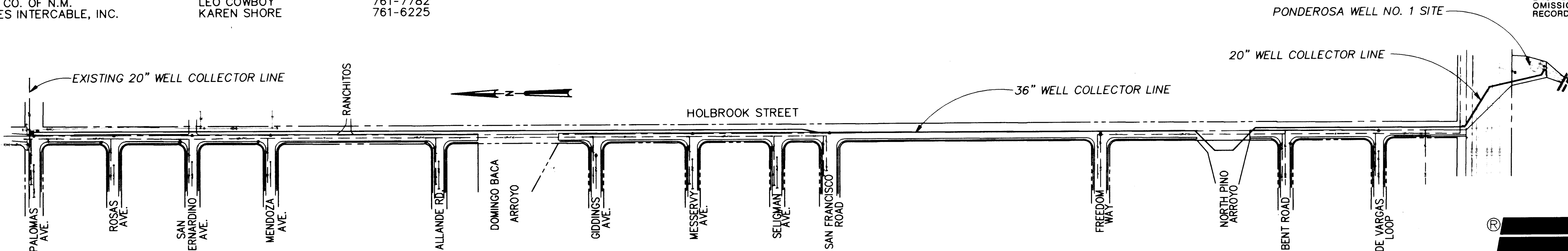
- PROVIDE AND INSTALL 6" THICK OF COMPACTED SUBGRADE MATERIAL (95% COMPACTION) UNDER ALL SLABS.
- ALL EMBEDDED PIPING, TUBING, ANCHOR BOLTS, AND OTHER EMBEDDED ITEMS SHALL BE SUPPORTED TO PROVIDE A MINIMUM OF 1" CLEARANCE FROM ALL REINFORCING.
- ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 4000 psi.
- REINFORCING STEEL SHALL HAVE A YIELD STRENGTH OF 60,000 psi.

RECORD DRAWINGS

Revisions Drawn by *M. Brown* Date *1/4/96*

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BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

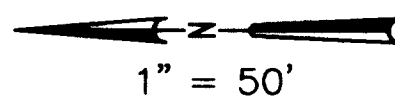


OVERALL WELL COLLECTOR LINE ROUTE ALONG HOLBROOK STREET

1" = 200'



CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION					
TITLE: PONDEROSA WELLS NO.1 AND 5 COLLECTOR LINE ABBREVIATIONS, LEGENDS AND SITE PLAN					
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair	<i>John J. Stuart</i>	2/17/95	Water		
Trans. Dev.	<i>M. Brown</i>	2/16/95	Waste Water	<i>John J. Stuart</i>	2/17/95
Hydrology	<i>John J. Stuart</i>	2/16/95			
DRAWING NO.	4804.91	MAP NO.	D-20	SHEET	2 OF 13



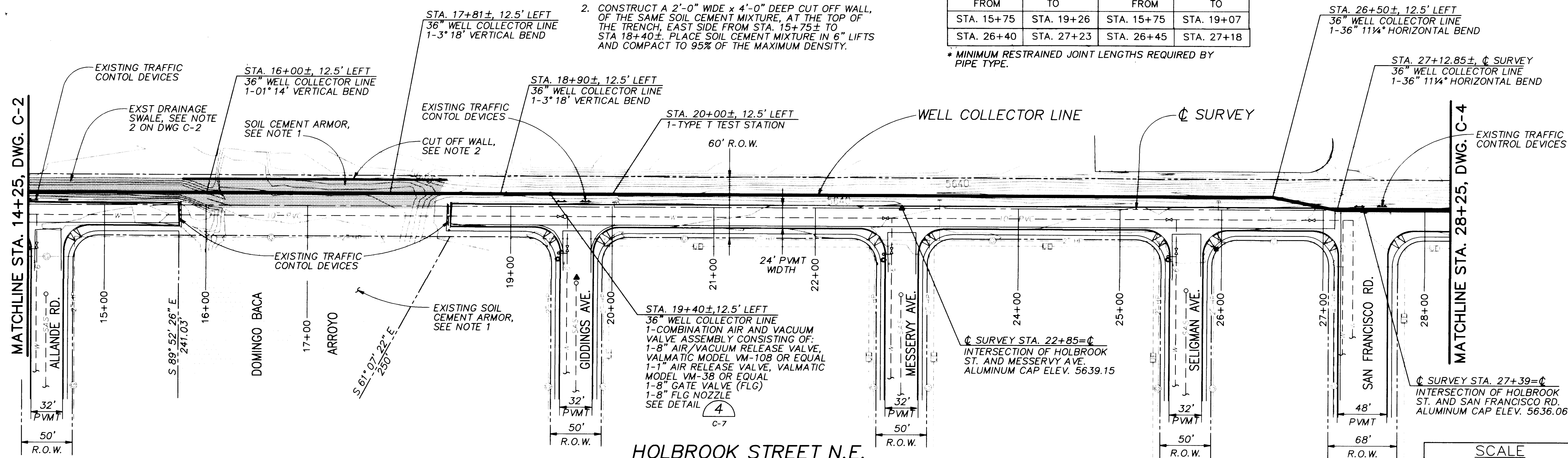
NOTES:

1. PLACE 12" THICK LAYER OF SOIL CEMENT FOR FULL WIDTH OF TRENCH, AND ANY AREA DISTURBED BY THIS CONSTRUCTION, THAT OCCURS WITHIN THE LIMITS OF THE EXISTING SOIL CEMENT ARMOR SHOWN.
2. CONSTRUCT A 2'-0" WIDE x 4'-0" DEEP CUT OFF WALL, OF THE SAME SOIL CEMENT MIXTURE, AT THE TOP OF THE TRENCH, EAST SIDE FROM STA. 18+75 TO STA. 18+40±. PLACE SOIL CEMENT MIXTURE IN 6" LIFTS AND COMPACT TO 95% OF THE MAXIMUM DENSITY.

PIPE RESTRAINT SCHEDULE *

DUCTILE IRON PIPE		CONCRETE CYLINDER PIPE	
FROM	TO	FROM	TO
STA. 15+75	STA. 19+26	STA. 15+75	STA. 19+07
STA. 26+40	STA. 27+23	STA. 26+45	STA. 27+18

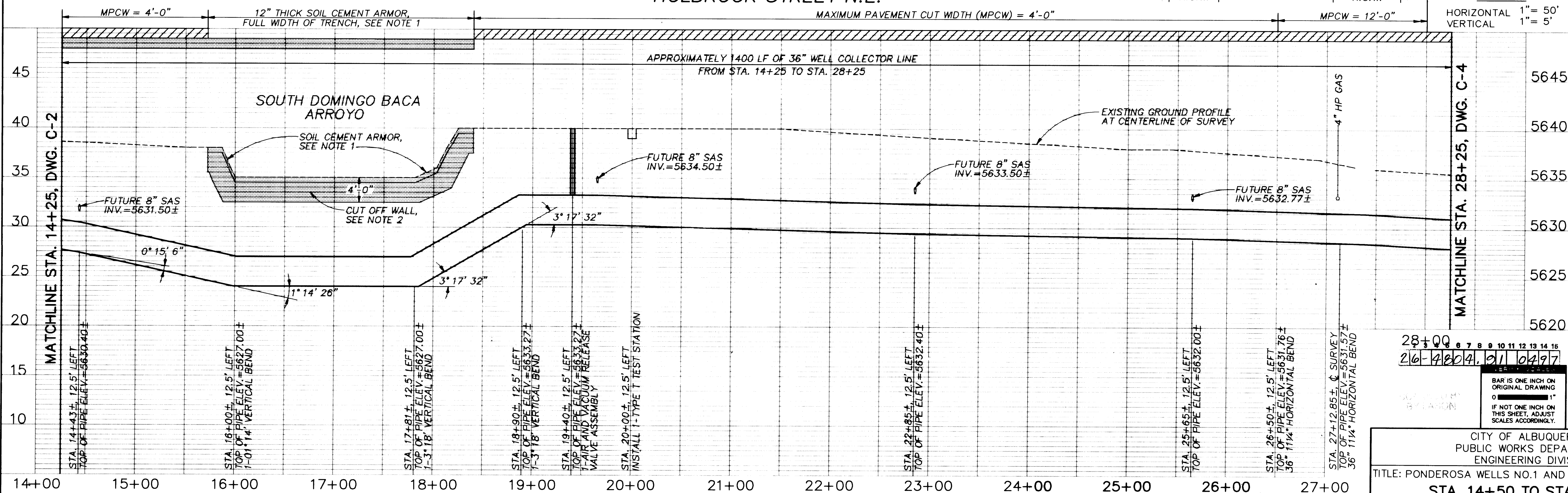
* MINIMUM RESTRAINED JOINT LENGTHS REQUIRED BY PIPE TYPE.



HOLBROOK STREET N.E.

SCALE

HORIZONTAL 1" = 50'
VERTICAL 1" = 5'



28+00
26-4804.31 0497

BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

TITLE: PONDEROSA WELLS NO.1 AND 5 COLLECTOR LINE
STA. 14+50 TO STA. 28+25

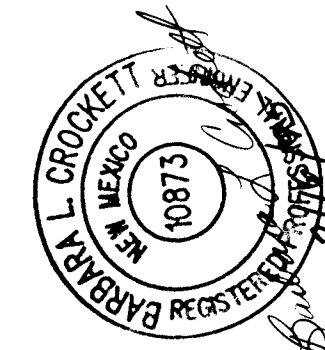
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair	<i>[Signature]</i>	2-17-95	Water		
Trans. Dev.	<i>[Signature]</i>	2-16-95	Waste Water	<i>[Signature]</i>	2/16/95
Hydrology	<i>[Signature]</i>	2/16/95			
DRAWING NO. 4804.91	MAP NO. D-20	SHEET 4	OF 13		

APPROVAL OF RECORD
DRAWINGS
PROJECT *[Signature]*
DATE 1/18/96

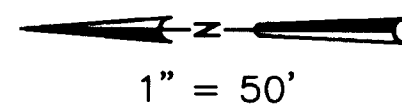
RECORD DRAWINGS

Revisions Drawn by *[Signature]* Date 1/1/96

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REVISIONS
DESIGN
DESIGNED BY M. BREWER
DATE 12-12-94
DRAWN BY M. BREWER
DATE 12-12-94
CHECKED BY B. CROCKETT
DATE 1-5-95



NOTES:

1. PLACE 12" THICK LAYER OF SOIL CEMENT ARMOR FOR FULL WIDTH OF TRENCH, AND ANY AREA DISTURBED BY THIS CONSTRUCTION, THAT OCCURS WITHIN THE LIMITS OF THE EXISTING SOIL CEMENT ARMOR SHOWN.
2. CONTRACTOR SHALL CONTACT MIKE DAVIS(241-3307) OF PNM, A MINIMUM OF 5 WORKING DAYS PRIOR TO EXCAVATION AROUND BURIED POWER CABLES AT STA. 39+90± AND STA. 41+06±. PNM WILL PROVIDE EQUIPMENT AND MATERIALS TO SUPPORT AND PROTECT THE POWER CABLES DURING TRENCHING AND BACKFILL OPERATIONS.

PIPE RESTRAINT SCHEDULE *			
DUCTILE IRON PIPE		CONCRETE CYLINDER PIPE	
FROM	TO	FROM	TO
STA. 38+75	STA. 41+99	STA. 39+16	STA. 41+75

* MINIMUM RESTRAINED JOINT LENGTHS REQUIRED BY PIPE TYPE.

MATCHLINE STA. 28+25, SEE DWG. C-3

STA. 30+00±, ϕ SURVEY
1-TYPE T TEST STATION

60' R.O.W.

WELL COLLECTOR LINE

24' P.V.M.T.
WIDTH

ϕ SURVEY

STA. 36+39±, ϕ SURVEY
36" WELL COLLECTOR LINE
REMOVE AND DISPOSE OF
EXST SANITARY SEWER
MANHOLE. CONSTRUCT NEW
4" DIA. SANITARY SEWER
MANHOLE OVER EXST 12"
SAS AT STA. 36+39±, 6' RT.

EXISTING TRAFFIC
CONTROL DEVICES

STA. 39+53±, ϕ SURVEY
36" WELL COLLECTOR LINE
1-COMPOUND BEND
HORIZONTAL DEFLECTION=45°
VERTICAL DEFLECTION=6°26'

STA. 41+53±, 10' LEFT
36" WELL COLLECTOR LINE
1-COMPOUND BEND
HORIZONTAL DEFLECTION=45°
VERTICAL DEFLECTION=4°33'

STA. 40+18.30±, 65' RIGHT
36" WELL COLLECTOR LINE
1-COMPOUND BEND
HORIZONTAL DEFLECTION=45°
VERTICAL DEFLECTION=6°31'

EXISTING SOIL
CEMENT ARMOR,
SEE NOTE 1

EXISTING TRAFFIC
CONTROL DEVICES

STA. 40+78.30±, 65' RIGHT
36" WELL COLLECTOR LINE
1-COMPOUND BEND
HORIZONTAL DEFLECTION=45°
VERTICAL DEFLECTION=5°07'

MATCHLINE STA. 42+25, SEE DWG. C-5

HOLBROOK STREET N.E.

MPCW = 12'-0"

MAXIMUM PAVEMENT CUT WIDTH (MPCW) = 12'-0"
TEMPORARY ASPHALT PAVEMENT

MAXIMUM PAVEMENT CUT WIDTH (MPCW) = 14'-0", TEMPORARY ASPHALT PAVEMENT, SEE 3

12" THICK SOIL CEMENT ARMOR
SEE NOTE 1

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

APPROXIMATELY 1458 LF OF 36" WELL COLLECTOR LINE
FROM STA. 28+25 TO STA. 42+25

STA. 36+39±, 6' RIGHT
CONSTRUCT 4" DIA
TYPE C MANHOLE
INV. EL. WEST=5623.07±

FUTURE 8" SAS, EAST
INV.=5623.38±

EXISTING GROUND PROFILE
AT CENTERLINE OF SURVEY

EXISTING 10" W
2" HP GAS
BURIED CATV
SEE NOTE 2

NORTH PINO
ARROYO

BURIED ELECTRIC
SEE NOTE 2
BURIED CATV
2" HP GAS
EXISTING 10" W

SOIL CEMENT
ARMOR, SEE
NOTE 1

STA. 42+00±, 10' LEFT
INSTALL 1-TYPE T TEST STATION

STA. 41+53±, 10' LEFT
TOP OF PIPE EL.=5620.50±
1-COMPOUND BEND
45° HORIZONTAL
4°33' VERTICAL

STA. 40+18.30±, 65' RT.
TOP OF PIPE EL.=5611.00±
1-COMPOUND BEND
45° HORIZONTAL
6°31' VERTICAL

STA. 39+53±, ϕ SURVEY
TOP OF PIPE EL.=5621.50±
1-COMPOUND BEND
45° HORIZONTAL
6°26' VERTICAL

STA. 36+39±, ϕ SURVEY
TOP OF PIPE EL.=5621.90

STA. 33+89±, ϕ SURVEY
TOP OF PIPE EL.=5628.40±

STA. 30+00±, ϕ SURVEY
INSTALL 1-TYPE T TEST STATION

28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00

APPROVAL OF RECORD
DRAWINGS
PROJECT: *[Signature]*
DATE: 1/8/96

RECORD DRAWINGS
Revisions Drawn by *M. Brewer* Date 1/4/96

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OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE
RECORD DRAWINGS.



VERIFY: ☐ CORRECT
BAR IS ONE INCH ON
ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY.

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

TITLE: PONDEROSA WELLS NO.1 AND 5 COLLECTOR LINE
STA. 28+25 TO STA. 42+25

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair	<i>B.G. Bailey</i>	2-17-95	Water		
Trans. Dev.	<i>E. Bailey</i>	2-16-95	Waste Water	<i>Rogin Nee</i>	2/1/95
Hydrology	<i>Shirley Bailey</i>	2/16/95			

DRAWING NO. 4804.91 MAP NO. D-20 SHEET 5 OF 13

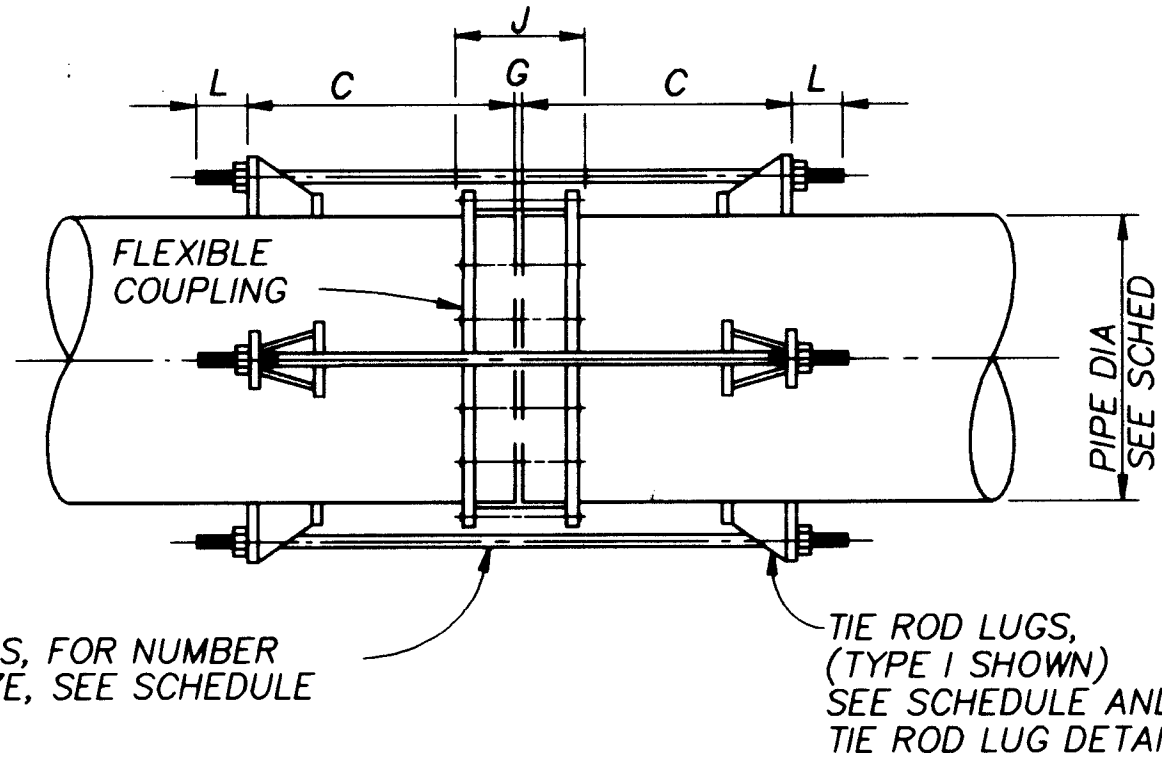
26-4804.91 6697

TIE ROD SCHEDULE
*SEE NOTES

PIPE DIA. (IN.)	MINIMUM PIPE WALL THICKNESS (IN.)*	TIE RODS	
		DIA. (IN.)	NO. REQ'D
6	3/16	5/8	2
8	3/16	5/8	2
10	3/16	5/8	2
16	3/16	7/8	2
18	1/4	7/8	4
24	1/4	1	4
30	1/4	1	6
36	1/4	1	8

NOTES:

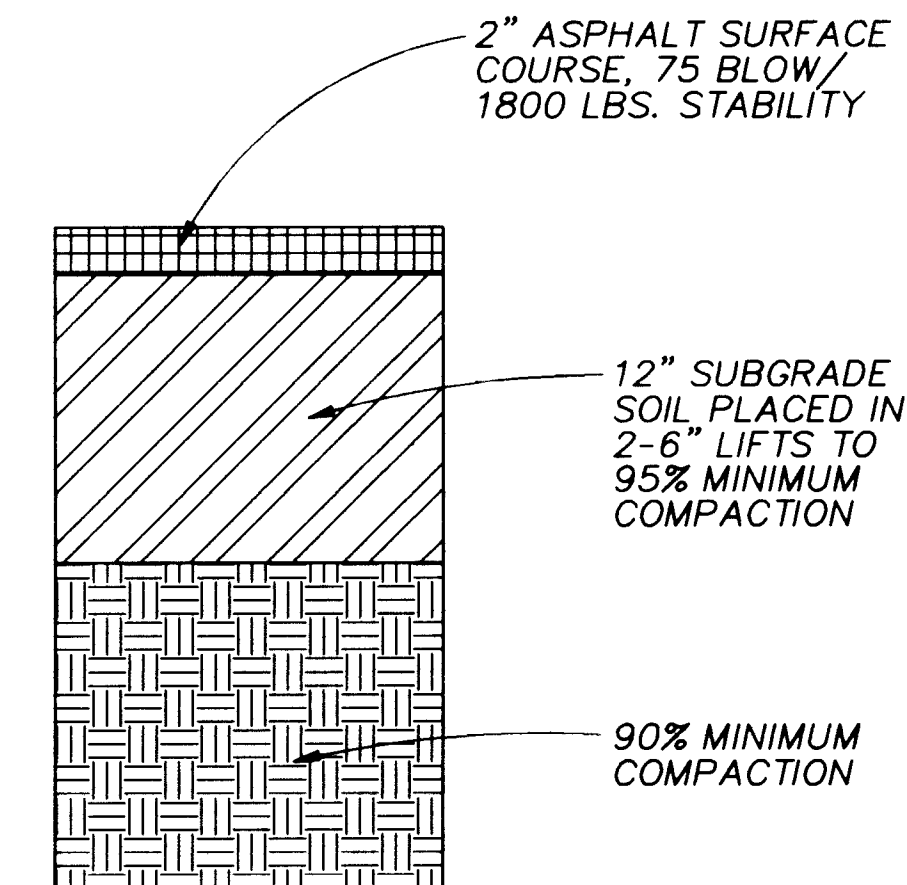
- LUG SCHEDULE DIMENSIONS IN INCHES.
- TIE RODS SHALL CONFORM TO ASTM A193 GRADE B7.
- NUTS SHALL CONFORM TO ASTM A194 GRADE 2H.
- PLATE SHALL CONFORM TO ASTM A283 GRADE D.
- TIE ROD NUTS SHALL BE TIGHTENED GRADUALLY AND EQUALLY IN STAGES TO PREVENT UNEVEN ALIGNMENT AND TO ALLOW EQUAL STRESS ON ALL TIE RODS UNDER PRESSURE. TIGHTEN UNTIL SNUG. THREADS SHALL PROTRUDE FROM NUTS. PEEN THREADS AFTER TIGHTENING NUTS.
- TIE ROD LUGS SHALL BE SPACED EQUALLY AROUND PIPE.
- FILLET WELDS SHALL MEET THE MINIMUM REQUIREMENTS OF THE AISC SPECIFICATION EXCEPT AS FOLLOWS: FILLET WELDS SHALL BE 1/4-INCH MINIMUM EXCEPT WHEN WELDING 3/16-INCH PLATE WHERE THEY SHALL BE 3/16-INCH.
- CATHODIC PROTECTION FOR FLEXIBLE COUPLINGS REQUIRED WHERE NOTED ON PLANS OR IN THE SPECIFICATIONS.
- CONTRACTOR SHALL USE DATA FOR ONLY THOSE PIPE SIZES AND TEST PRESSURES SPECIFIED IN THIS CONTRACT.
- LUG TYPE I IS AS SHOWN IN DETAIL. LUG TYPE II HAS A CONTINUOUS BACK PLATE AROUND PIPE. LUG TYPE III HAS CONTINUOUS FRONT AND BACK PLATES AROUND PIPE.
- TIE RODS SHALL NOT BE ATTACHED TO A PIPE WHEN THE WALL THICKNESS IS LESS THAN THE MINIMUM SHOWN ON THE TIE ROD SCHEDULE.
- THE MINIMUM PIPE WALL THICKNESSES SHOWN ARE TO ENSURE PROPER PERFORMANCE OF THE THRUST TIE LUG. PIPE WALL THICKNESSES GREATER THAN SHOWN IN THE TABLE MAY BE REQUIRED AND MAY BE SHOWN ELSEWHERE OR SPECIFIED ELSEWHERE TO RESIST INTERNAL PRESSURES.
- FOR ALL BURIED ASSEMBLIES, COAT ALL TIE RODS AND EXPOSED STEEL WITH 16 MILS OF BITUMASTIC.



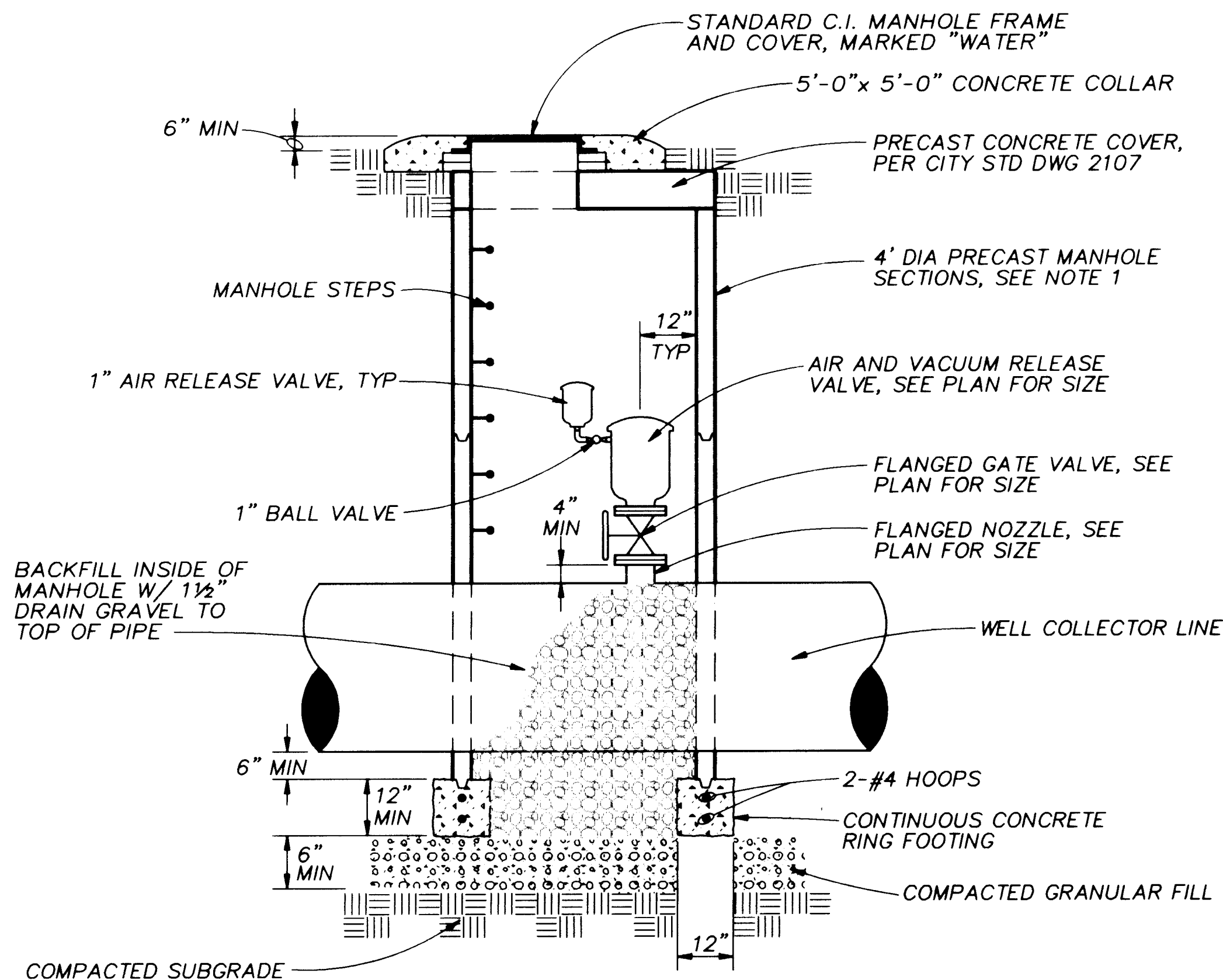
TYPICAL THRUST TIE DETAIL FOR STEEL PIPE (1)
NTS

NOTES:

- THE MIDDLE RING LENGTH OF THE FLEXIBLE COUPLING SHALL BE AS SPECIFIED.
- THE CONTRACTOR SHALL DETERMINE THE LENGTH "J" (COUPLING BOLT LENGTH) FROM MANUFACTURER'S CATALOGS USING THE SPECIFIED MIDDLE RING LENGTH.
- "G" = MANUFACTURER'S RECOMMENDED SPACE BETWEEN ENDS OF PIPE.
- "C" = J+Z+1 INCH, (ROUND THIS VALUE UP TO NEXT EVEN INCH), MINIMUM. (FOR Z DIMENSIONS, SEE LUG SCHEDULE.)
- TIE ROD LENGTH = 2L+2C+G.



TEMPORARY ASPHALT PAVEMENT DETAIL (3)
NTS

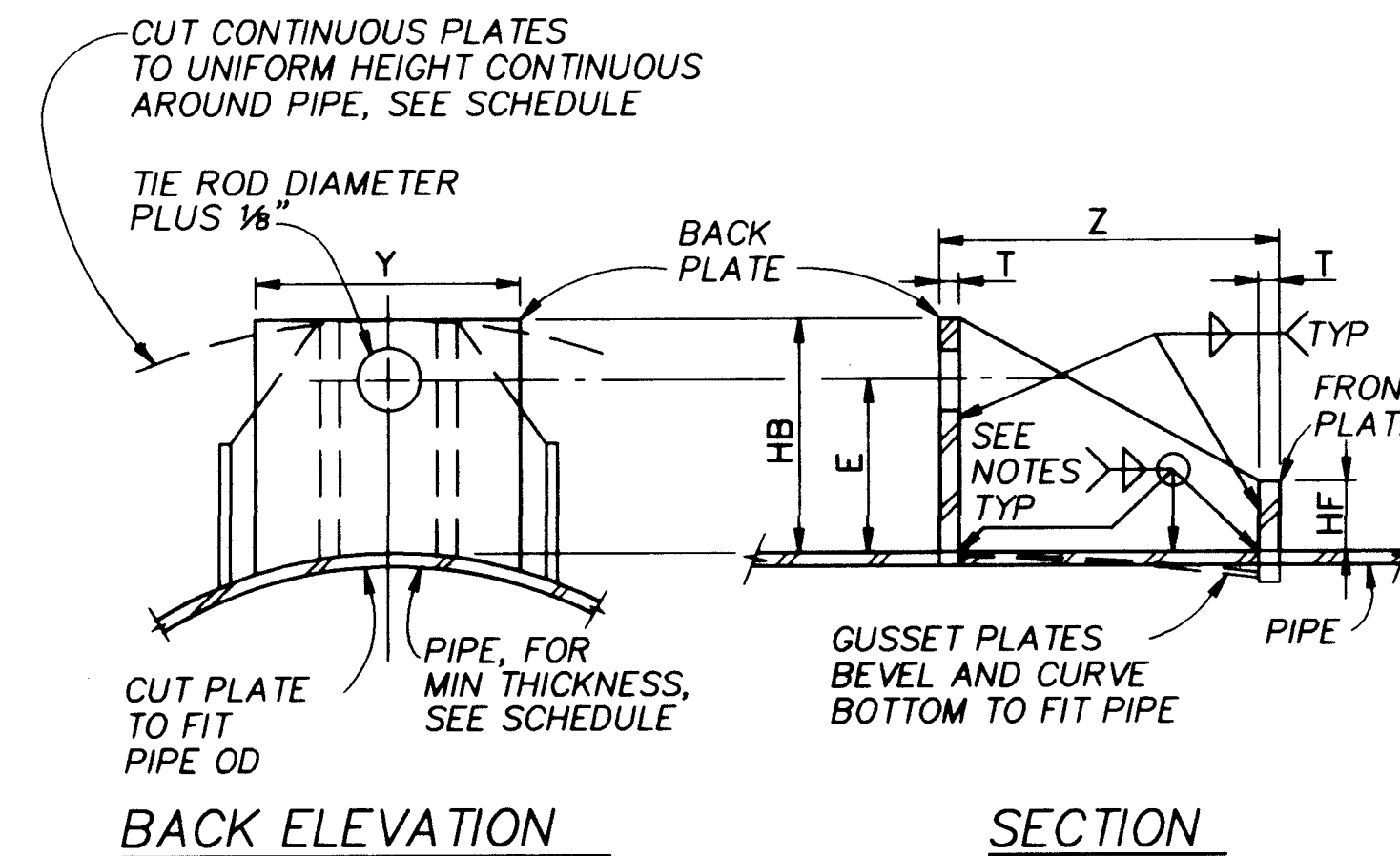


NOTES:

- MANHOLE MAY BE CONSTRUCTED OF CONCRETE BLOCK, POURED CONCRETE OR PRECAST REINFORCED CONCRETE. IF BLOCK IS USED PLASTER THE INSIDE AND OUTSIDE WITH 1/2" MORTAR.

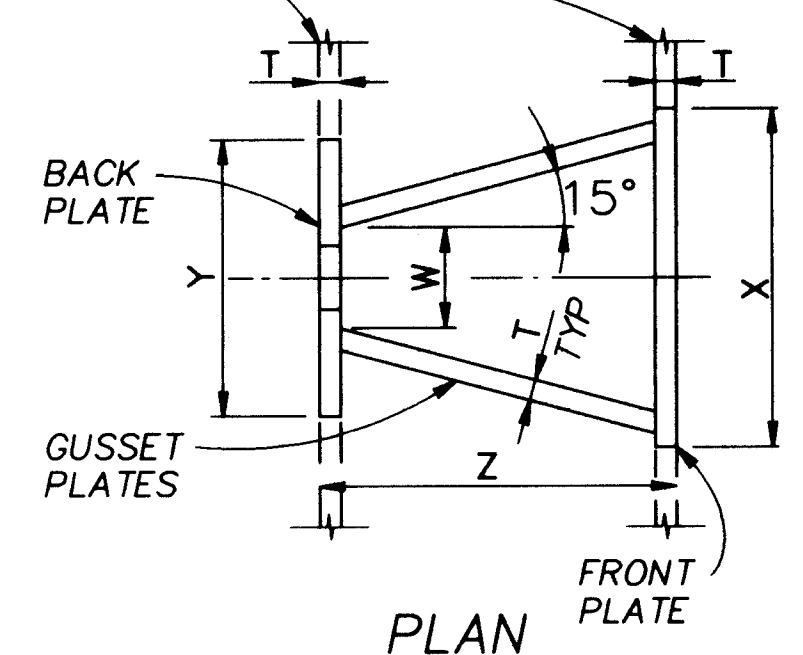
COMBINATION AIR AND VACUUM RELEASE VALVE ASSEMBLY (4)
NTS

LUG SCHEDULE										
TIE ROD DIAMETER	LUG TYPE	T	W	X	Y	Z	HB	E	HF	L
5/8	I	3/8	1-3/8	4-1/16	4-1/2	3-3/8	3-7/8	3	1-3/4	3
3/4	I	3/8	1-1/2	5	4-1/2	5	4-1/8	3-1/8	1-3/4	3
7/8	I	1/2	1-5/8	5-1/2	4-1/2	5-1/8	4-1/4	3-1/8	1-3/4	4
1	II	1/2	1-3/4	5-3/4	Cont	6	4-1/2	3-1/4	2	4

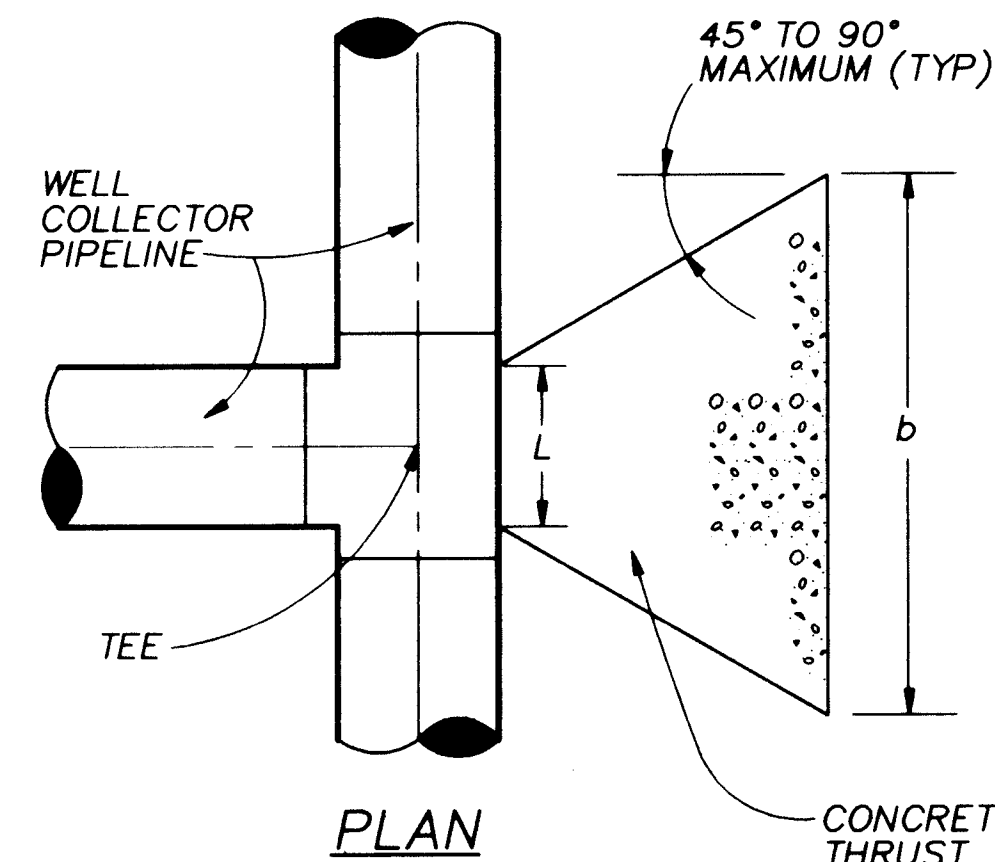
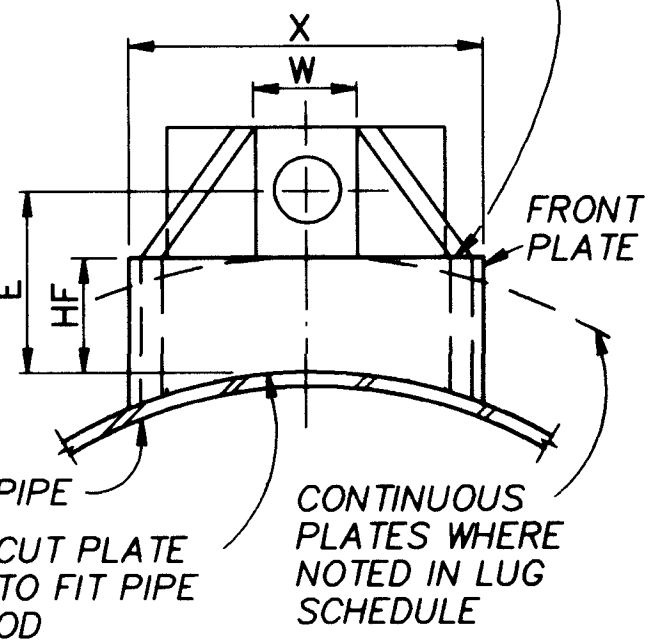


TIE ROD LUG (2)
NTS

CUT CONTINUOUS PLATES TO UNIFORM HEIGHT CONTINUOUS AROUND PIPE, SEE SCHEDULE



MATCH TOP OF GUSSET PLATE AND FRONT PLATE



NOTES:

- L=FITTING LENGTH MINUS CLEARANCE FOR FLANGES WHERE REQUIRED
- $h < b < 2h$
- H=DEPTH FROM GROUND LEVEL TO THE BOTTOM OF THE BLOCK
- h=HEIGHT OF BLOCK. SHALL BE GREATER THAN THE DIAMETER OF THE PIPE
- MINIMUM BEARING BLOCK AREA ($b \times h$) SHALL BE:
100 FT² AT STA. 0+85
32 FT² AT STA. 51+79
- KEEP CONCRETE CLEAR OF PIPE JOINTS AND JOINT ACCESSORIES
- CONCRETE THRUST BLOCKING SHALL BE PLACED AGAINST UNDISTURBED EARTH
- SEE SPECIFICATIONS FOR ADDITIONAL THRUST RESTRAINT REQUIREMENTS

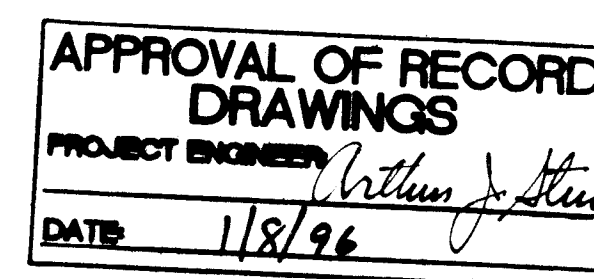
RECORD DRAWINGS

Revisions Drawn by *M. Brewer* Date *1/4/96*

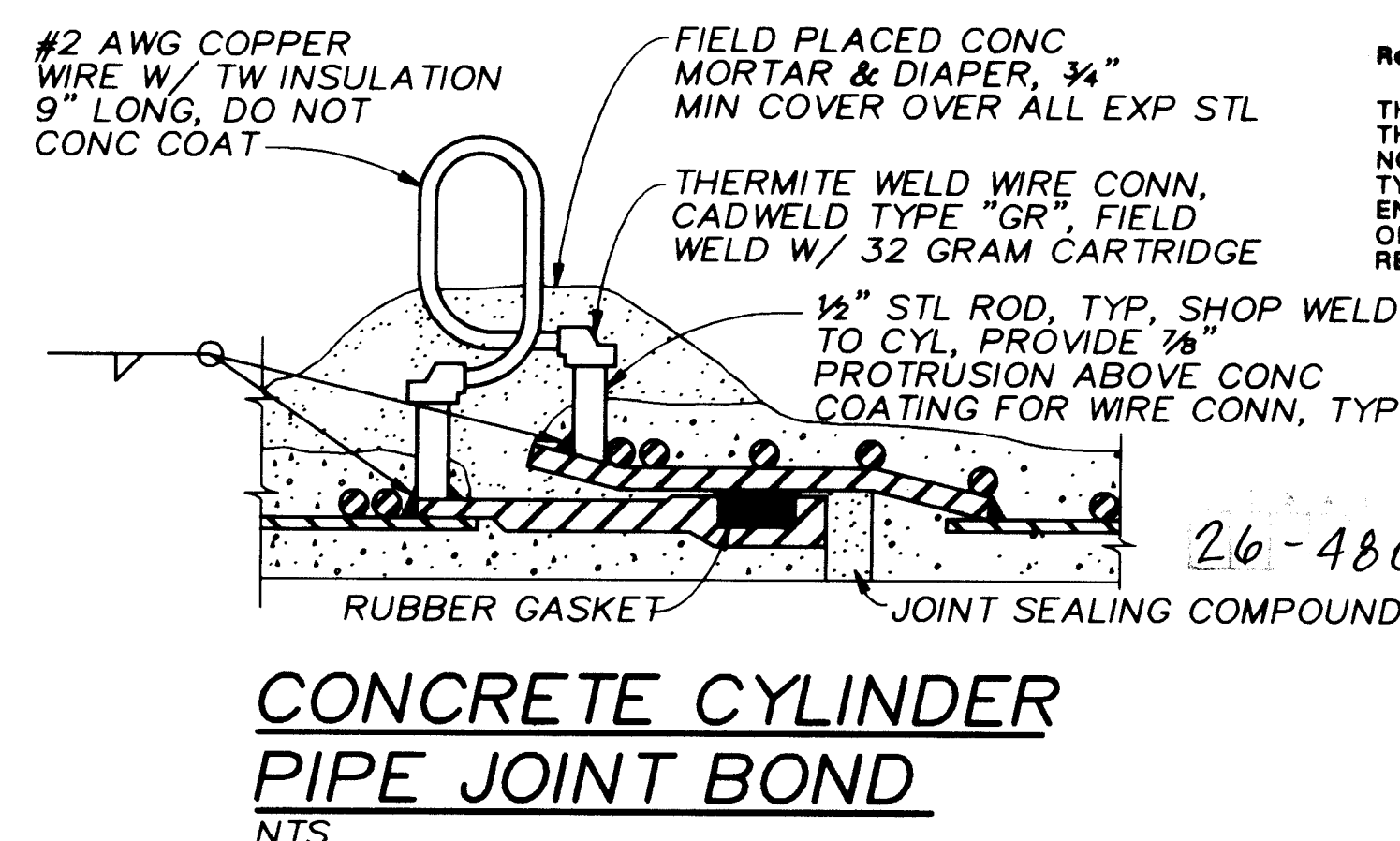
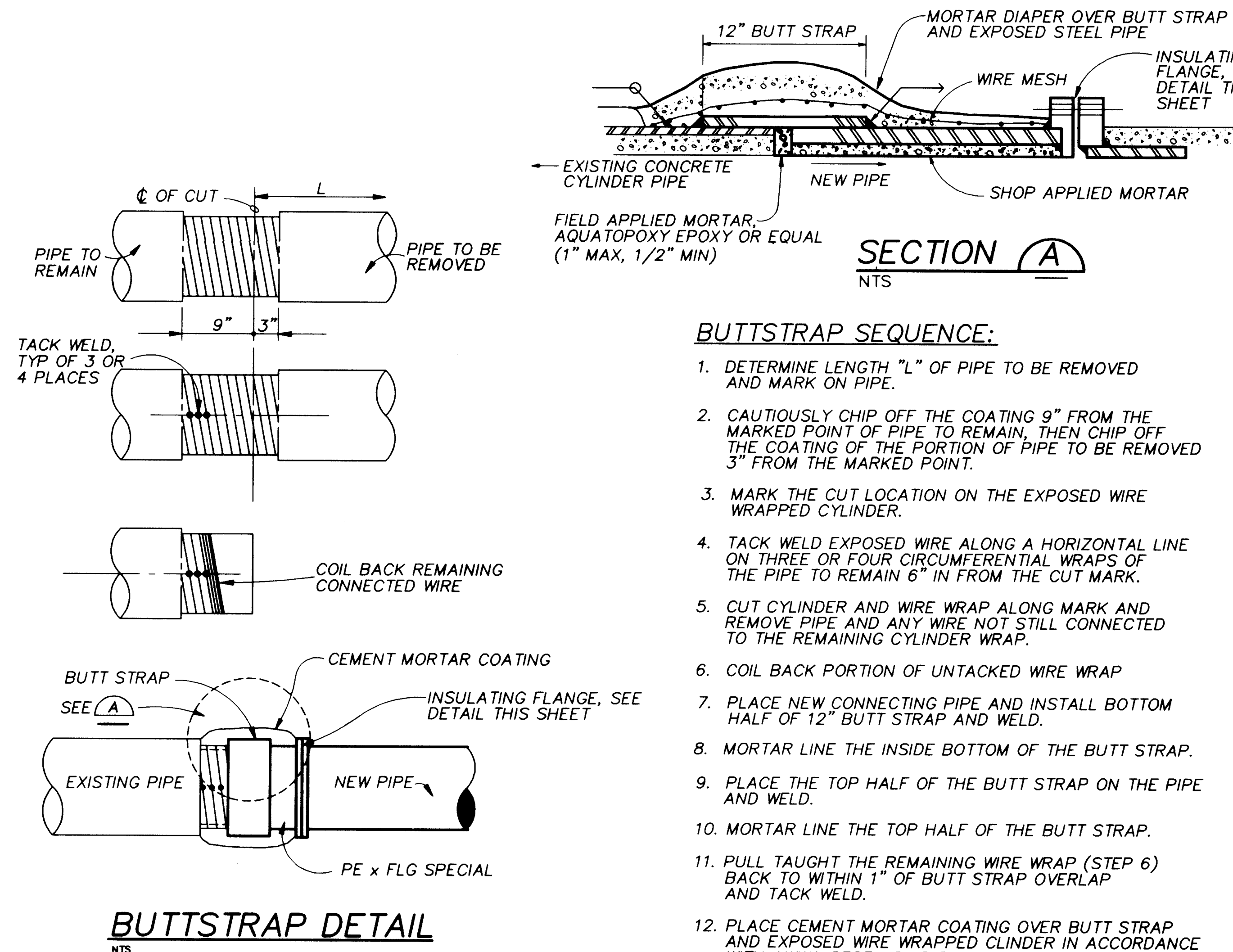
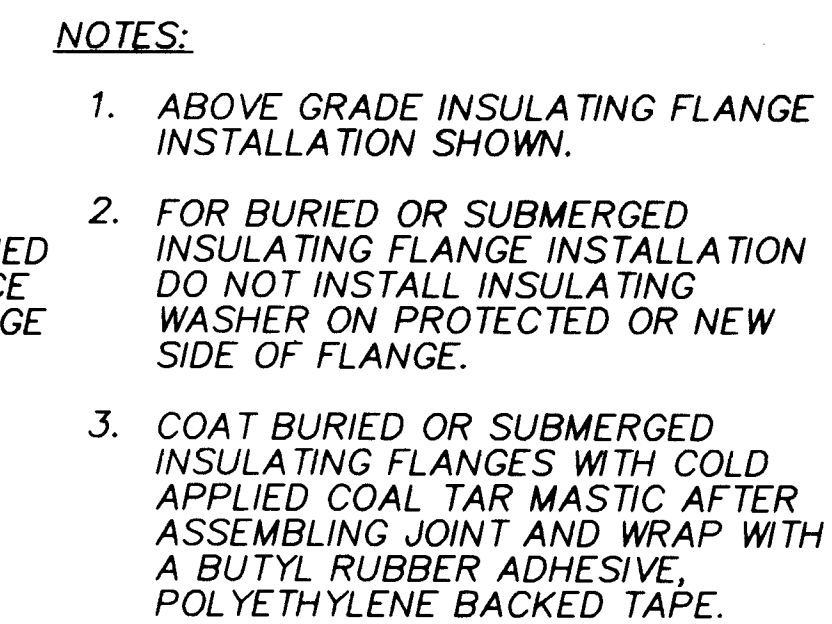
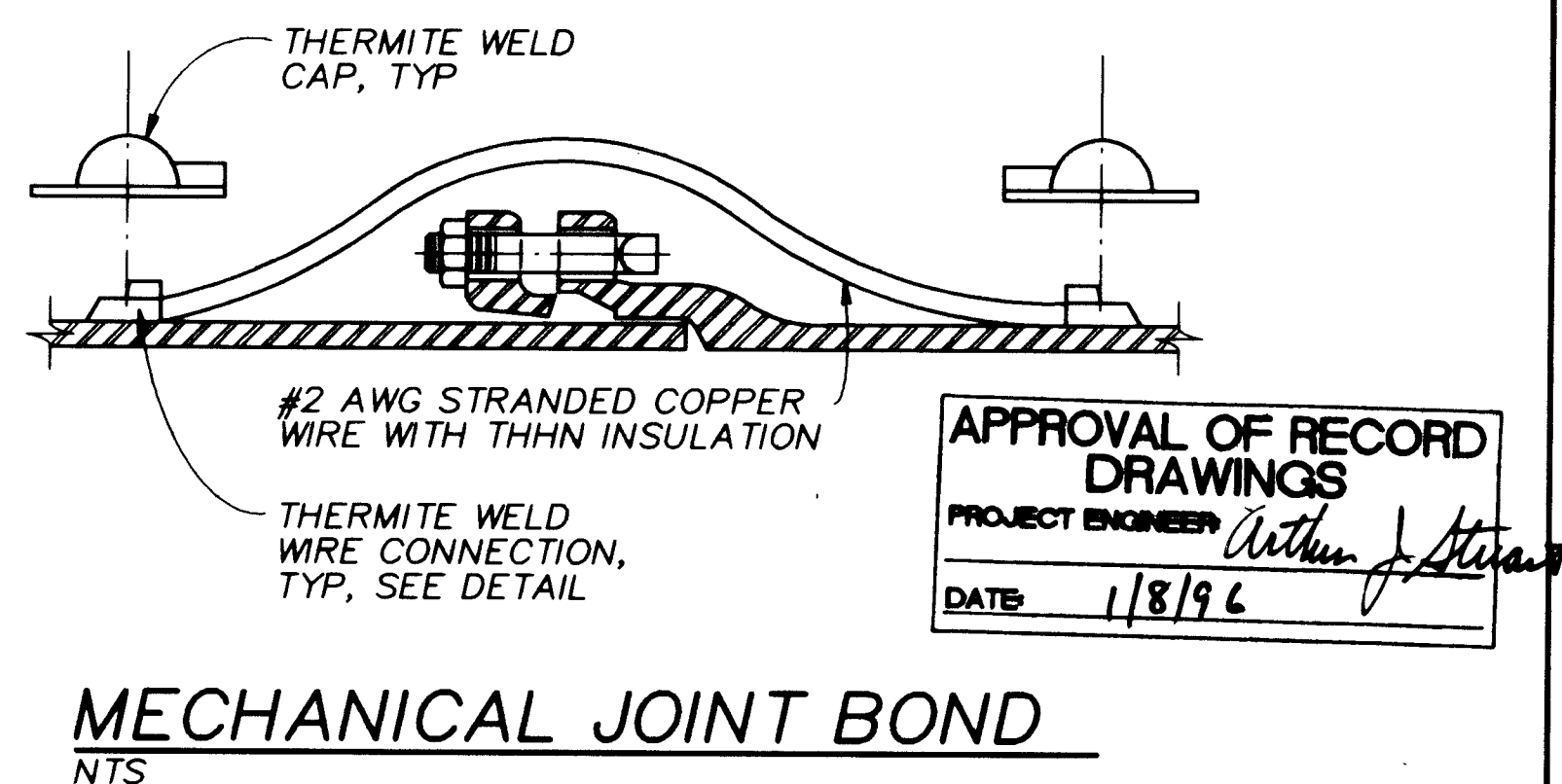
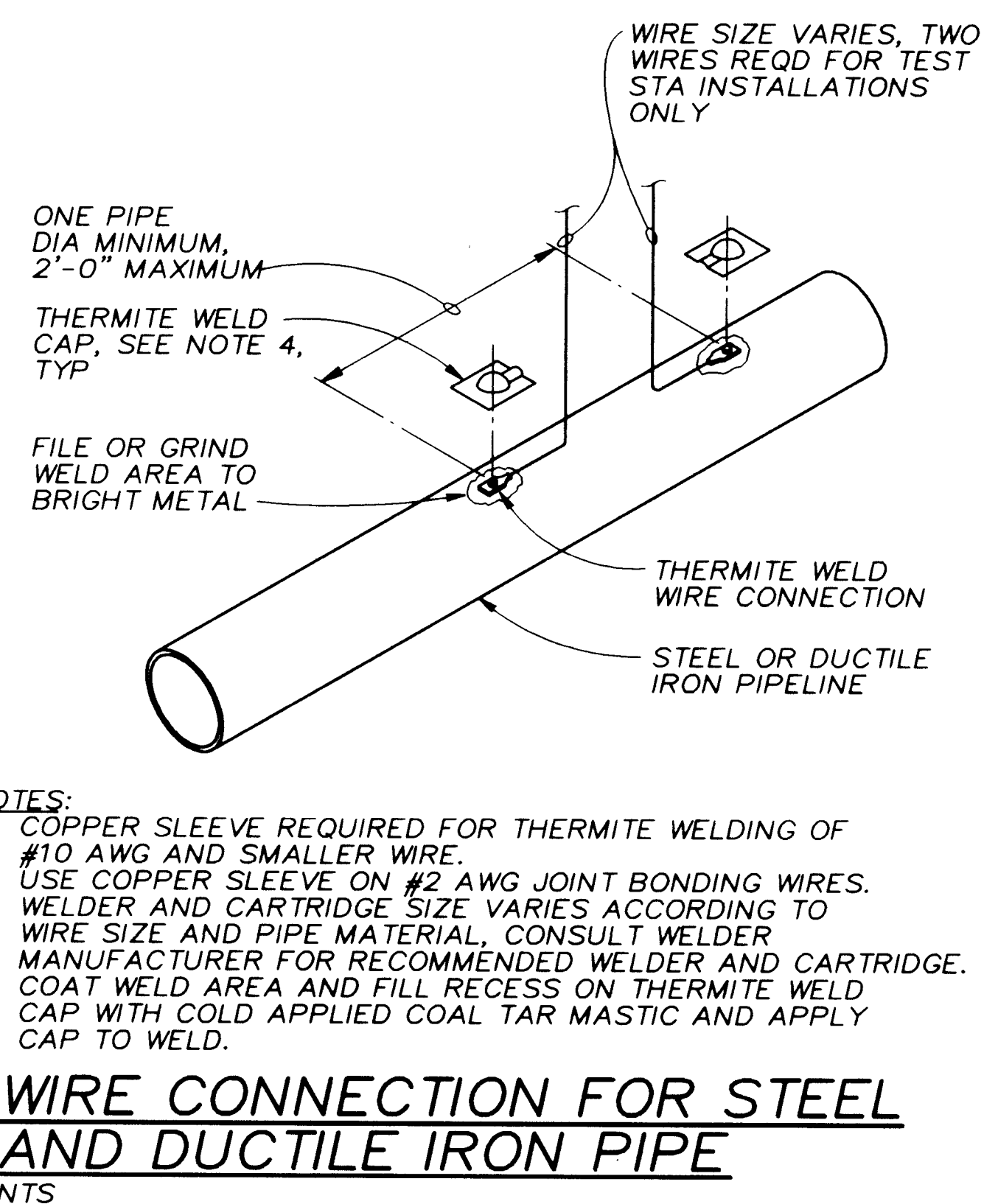
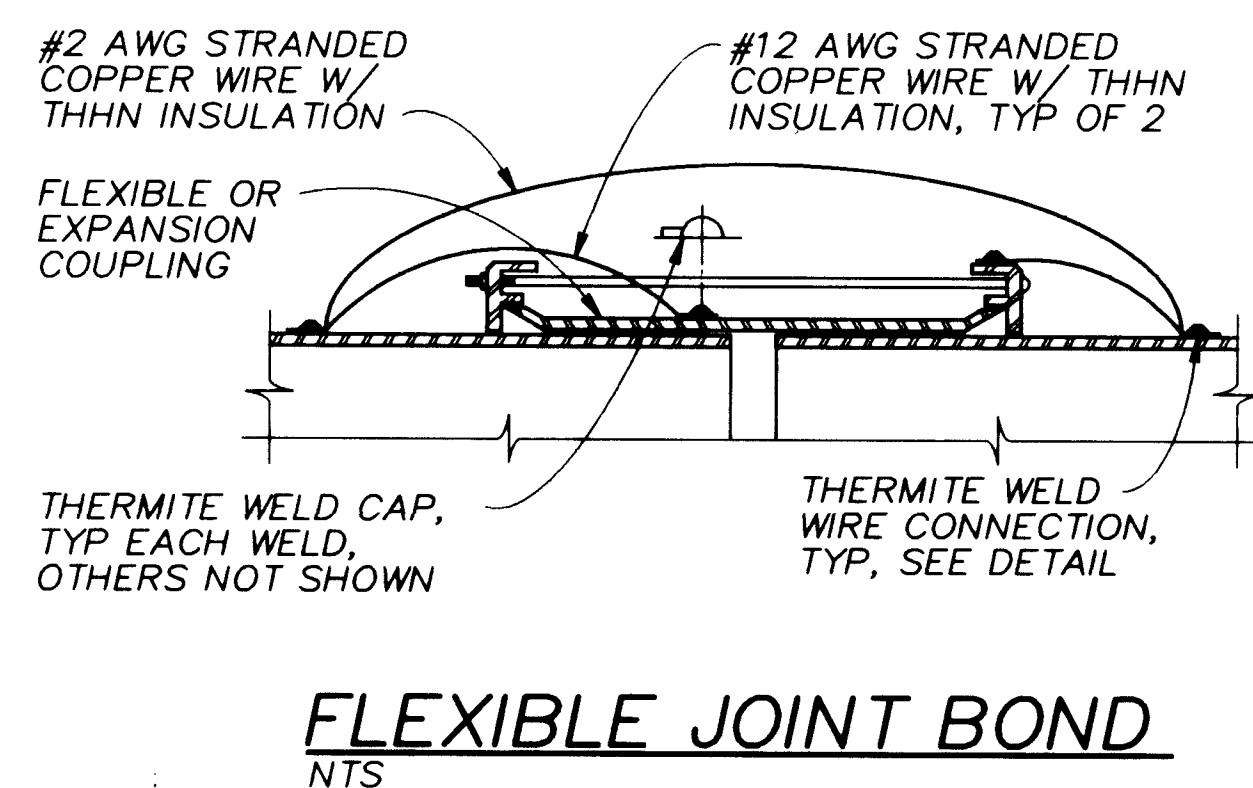
THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

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CONCRETE THRUST BLOCK DETAIL (5)
NTS




CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION					
TITLE: PONDEROSA WELLS NO.1 AND 5 COLLECTOR LINE MISCELLANEOUS DETAILS					
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair	<i>B.G. Andrus</i>	2-17-95	Water		
Trans. Dev.	<i>W.K. Rupp</i>	2-16-95	Waste Water	<i>Robert</i>	2/1/95
Hydrology	<i>Steve Bohay</i>	2-16-95			
DRAWING NO. 480491		MAP NO. D-20		SHEET 8 OF 13	



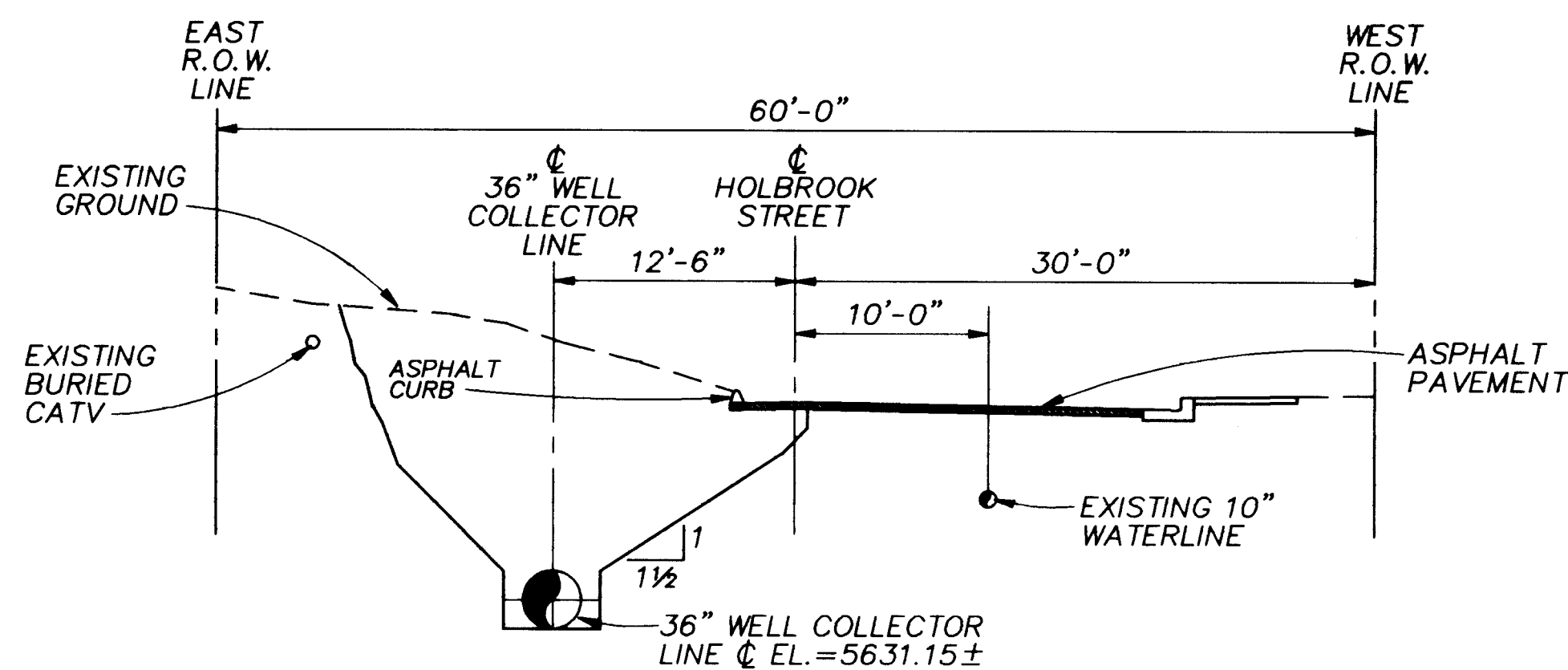
RECORD DRAWINGS

Revisions Drawn by M. Brewer Date 1/4/96

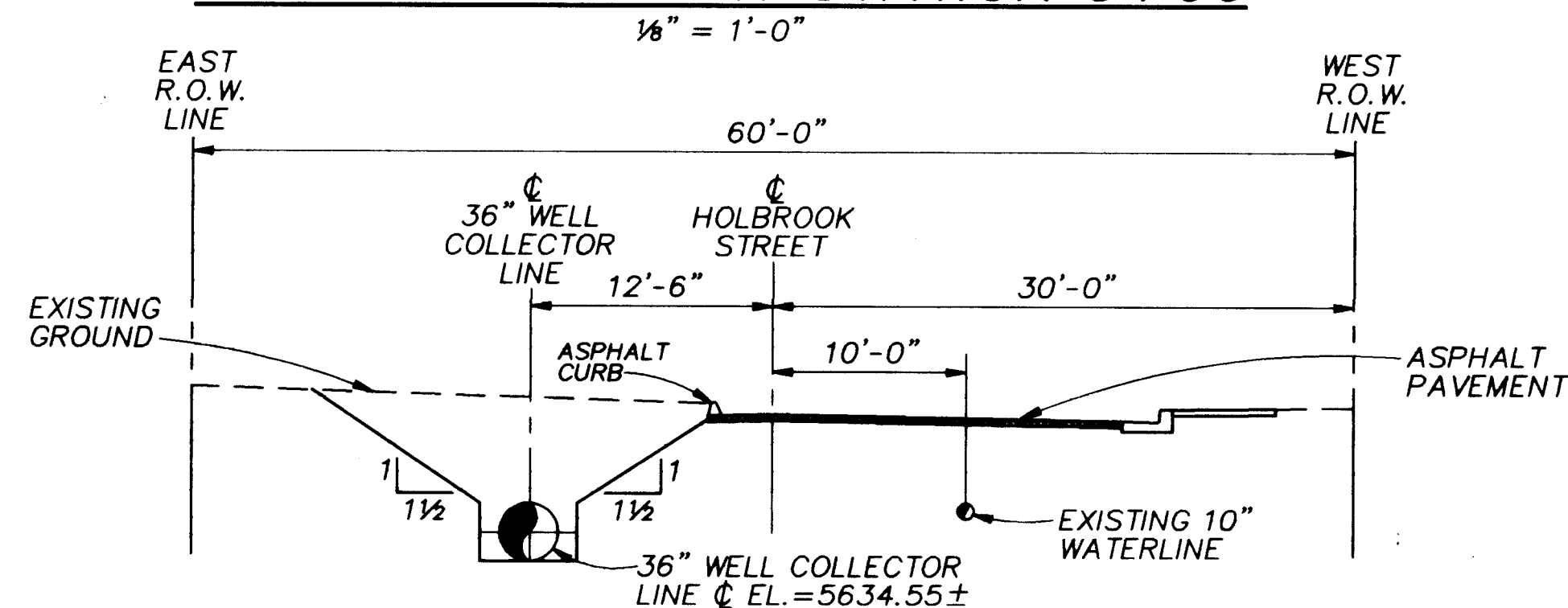
THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

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ORIGINAL DRAWING
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IF NOT ONE INCH C
THIS SHEET, ADJUST
SCALES ACCORDING

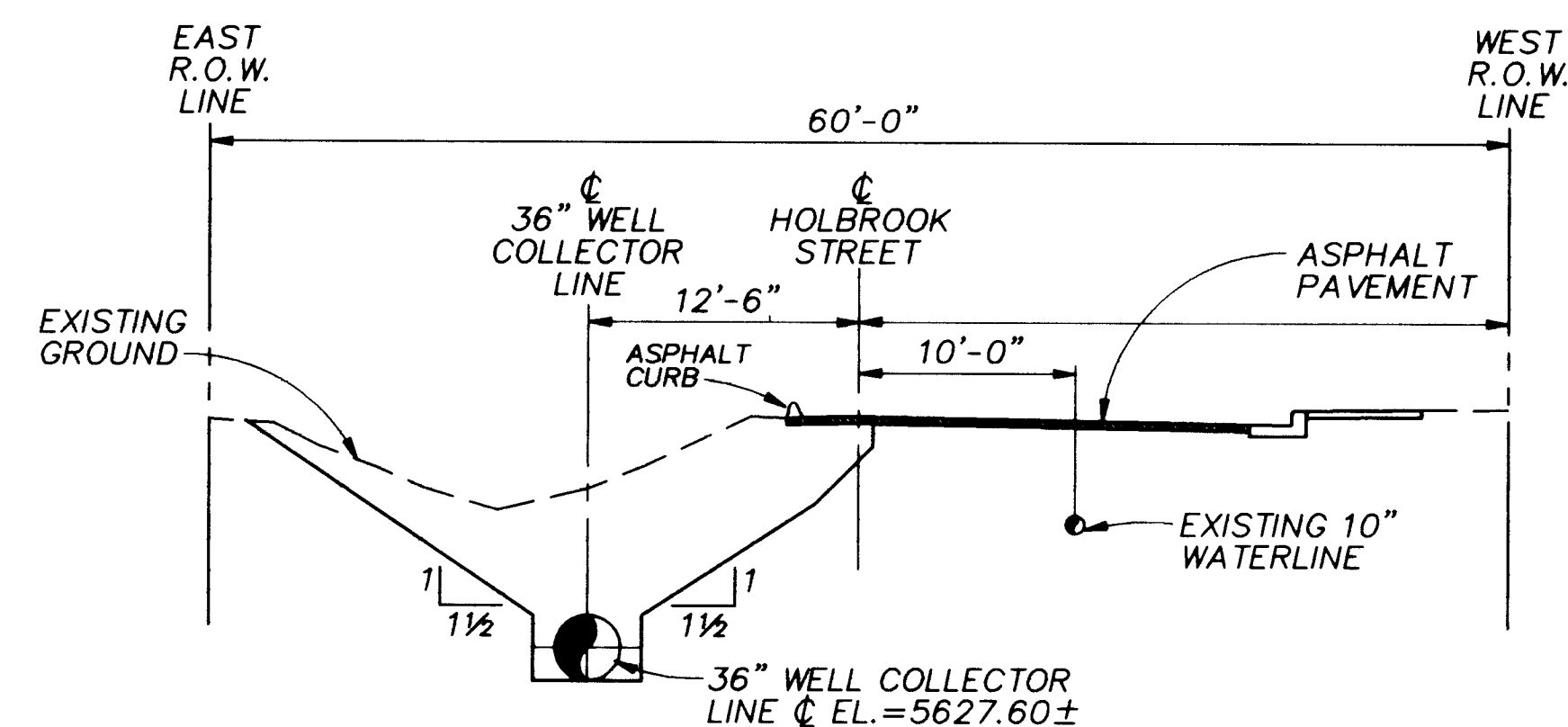
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION					
TITLE: PONDEROSA WELLS NO.1 AND 5 COLLECTOR LINE					
PIPE BONDING & MISCELLANEOUS DETAILS					
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair	<i>[Signature]</i>	2-17-95	Water		
Trans. Dev.	<i>[Signature]</i>	2-16-95	Waste Water	<i>[Signature]</i>	2/17/95
Hydrology	<i>[Signature]</i>	2-16-95			
DRAWING NO.		MAP NO.	SHEET OF		
4804.91		D-20	9 13		



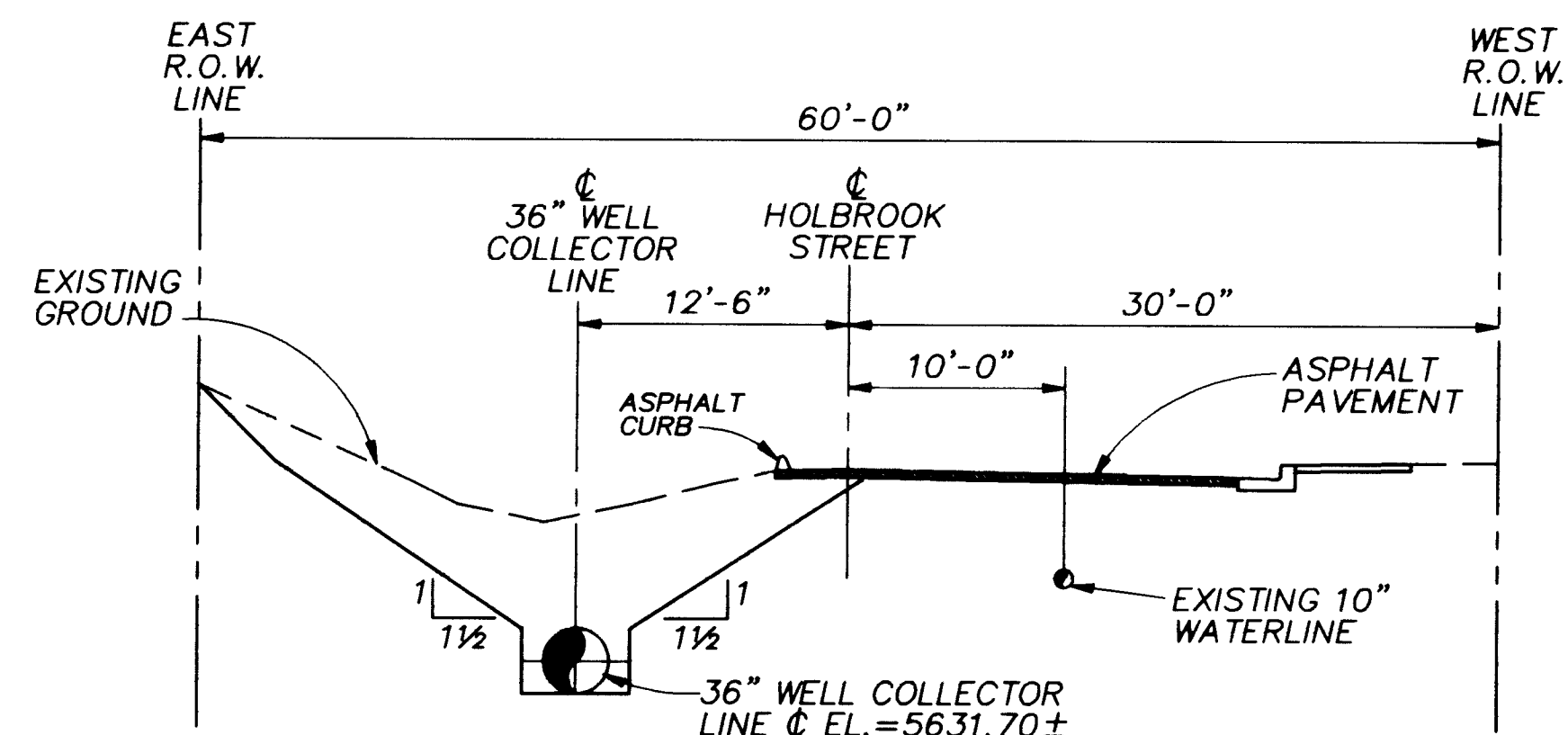
CROSS SECTION AT STATION 5+00



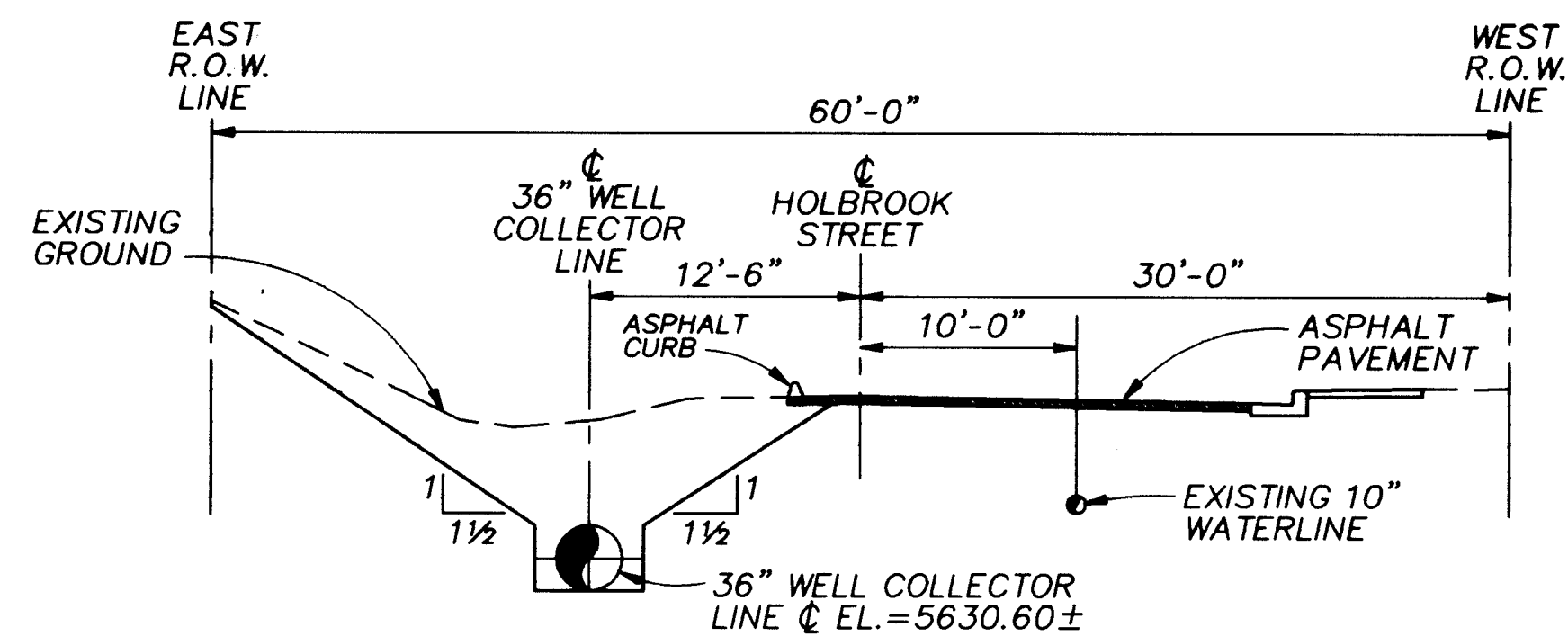
CROSS SECTION AT STATION 10+00



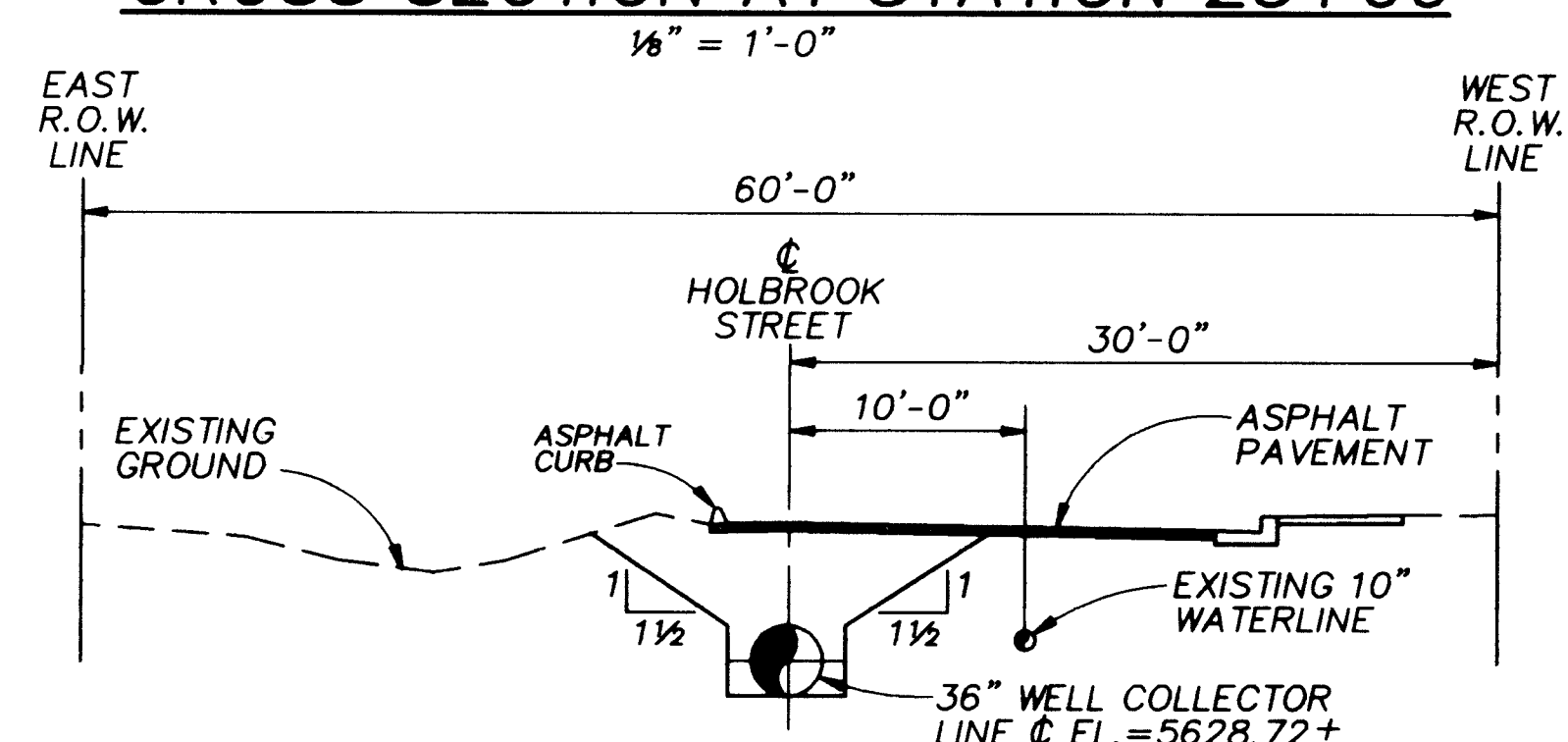
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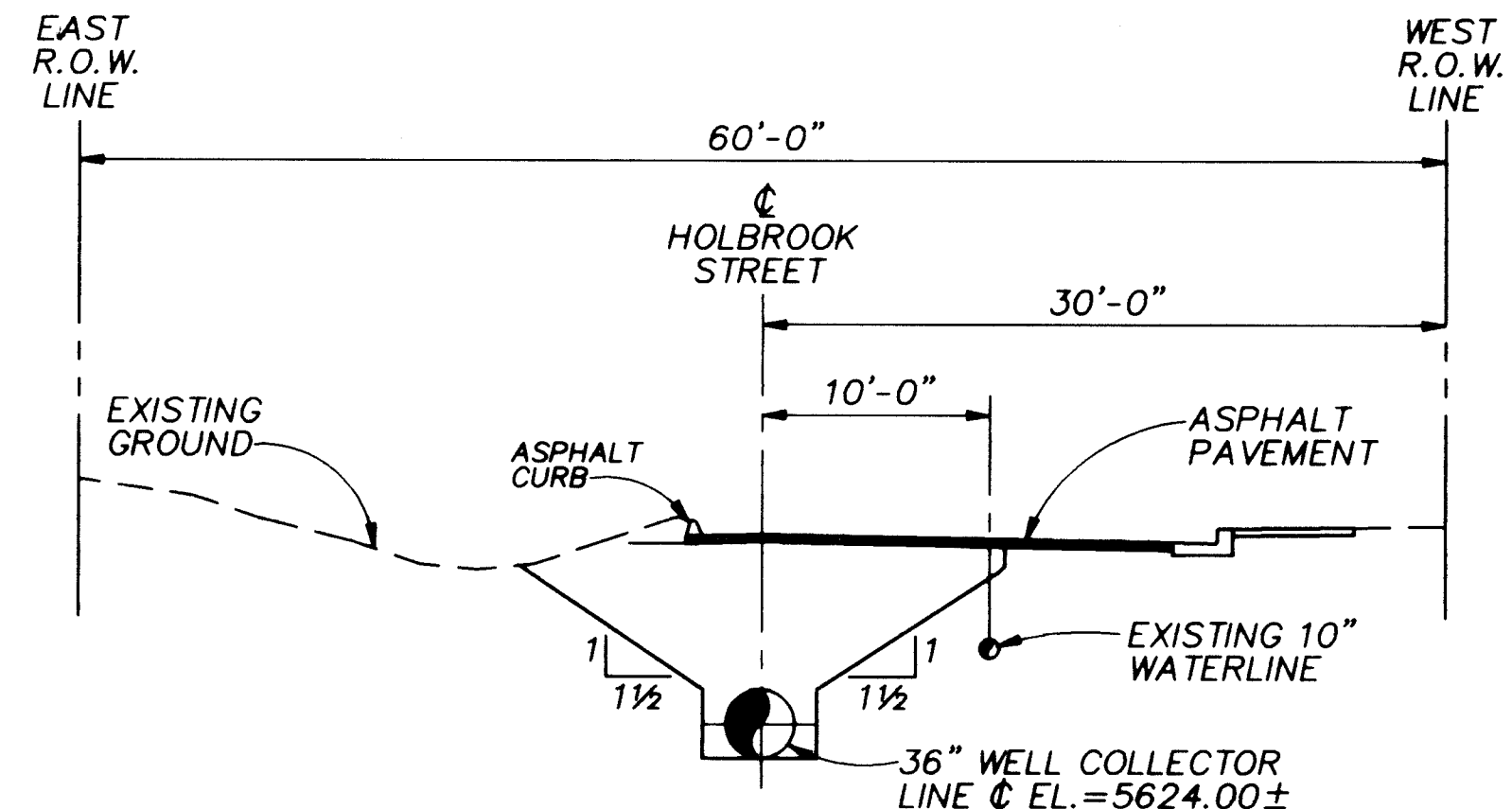
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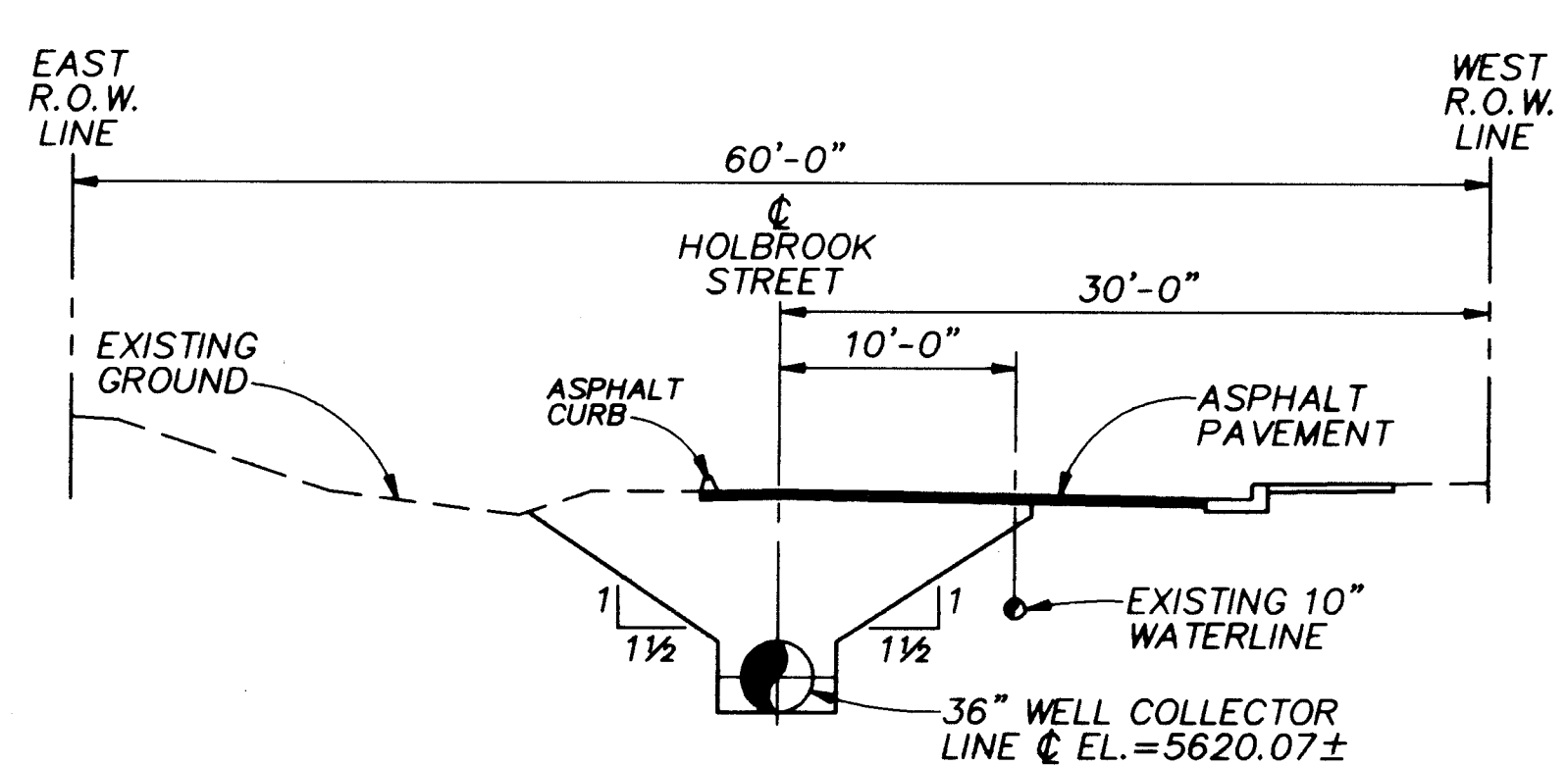
CROSS SECTION AT STATION 25+00



CROSS SECTION AT STATION 30+00



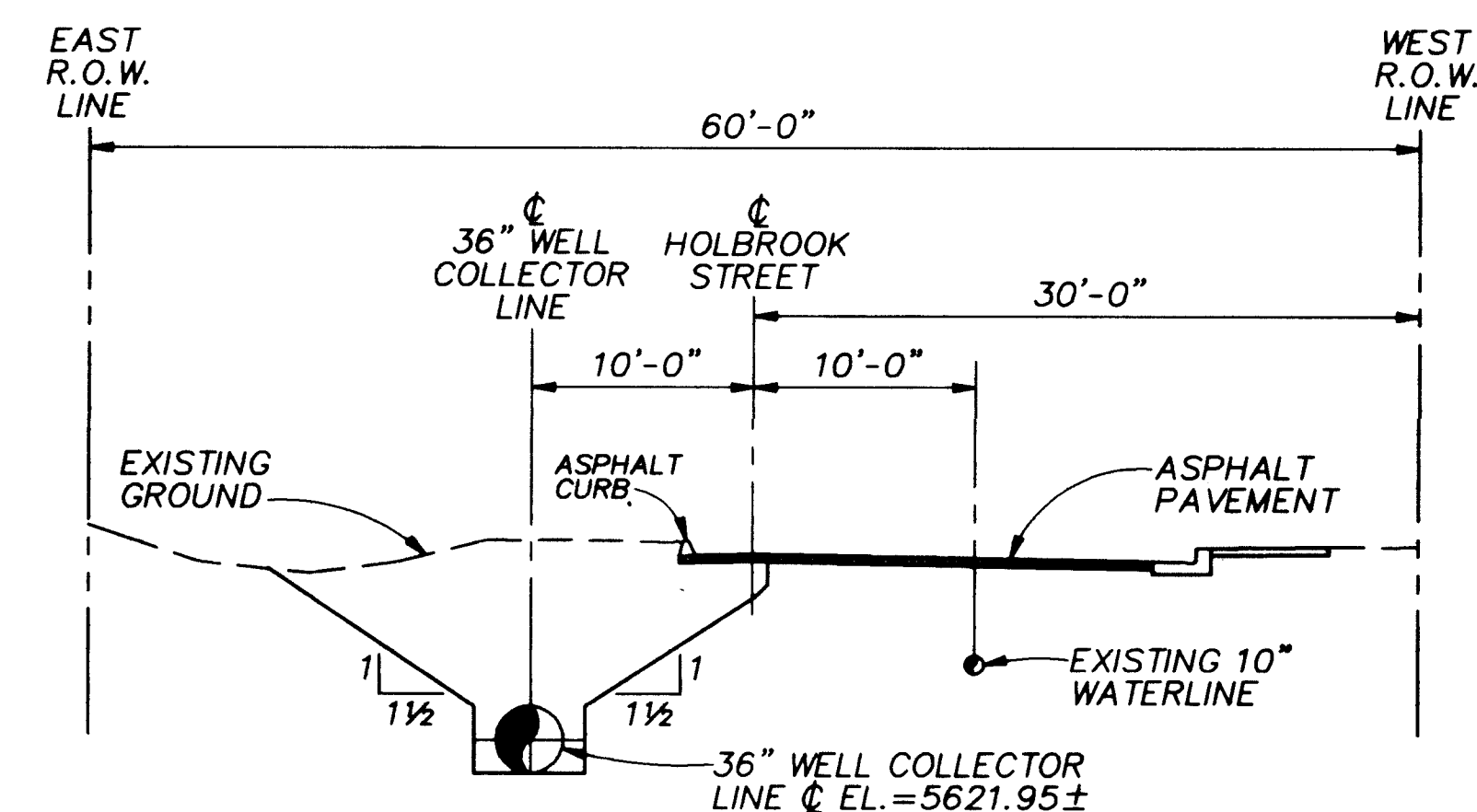
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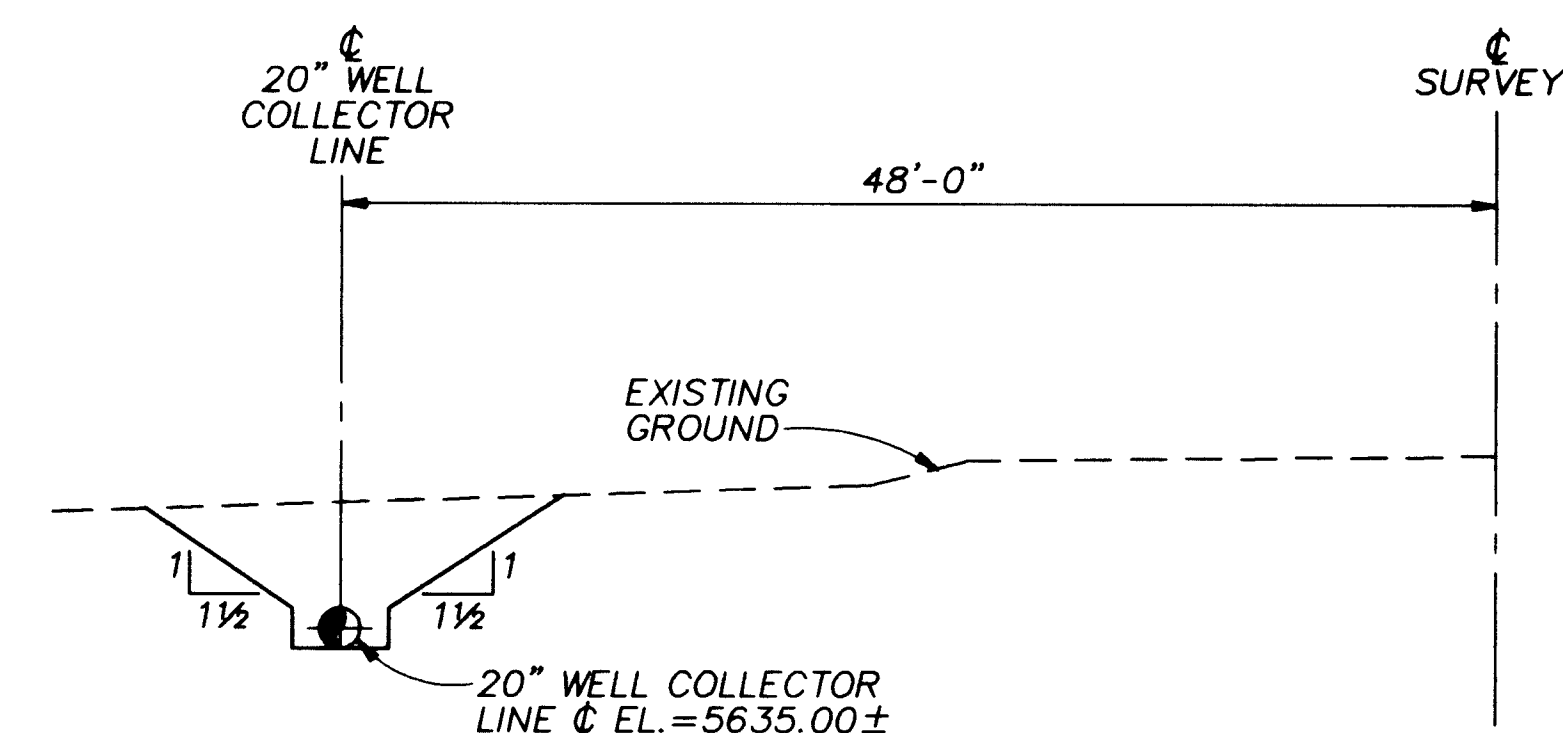
CROSS SECTION AT STATION 39+00

NOTES:

1. TRENCH CROSS SECTIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY. THE ACTUAL TRENCH WIDTH SHALL BE DETERMINED BY THE CONTRACTOR AND SHALL COMPLY WITH ALL OSHA AND OTHER GOVERNMENTAL REGULATIONS AND AGENCIES.
2. CONTRACTOR SHALL INSTALL AND MAINTAIN SHORING, SHEETING, BRACING, AND SLOPING NECESSARY TO SUPPORT THE SIDES OF THE EXCAVATION TO KEEP AND TO PREVENT ANY MOVEMENT THAT MAY DAMAGE ADJACENT PAVEMENTS, UTILITIES, OR STRUCTURES, DAMAGE OR DELAY THE WORK, OR ENDANGER LIFE AND HEALTH.
3. ALL TRENCH EXCAVATIONS, STOCKPILING OF EXCAVATED MATERIALS AND CONSTRUCTION ACTIVITIES SHALL BE CONFINED WITHIN THE AVAILABLE RIGHT-OF-WAY. CONTRACTOR SHALL NOT USE OR CONDUCT HIS OPERATIONS ON THE ADJACENT PROPERTIES OUTSIDE THE RIGHT-OF-WAY WITHOUT OBTAINING PRIOR CONSENT AND APPROVAL OF THE PROPERTY OWNER.



CROSS SECTION AT STATION 45+00



CROSS SECTION AT STATION 50+00

RECORD DRAWINGS

Revisions Drawn by *M. Brewer* Date *1/4/96*

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APPROVAL OF RECORD DRAWINGS
PROJECT ENGINEER *Arthur J. Hunt*
DATE *1/8/96*

SCANNED BY *BYLASON*

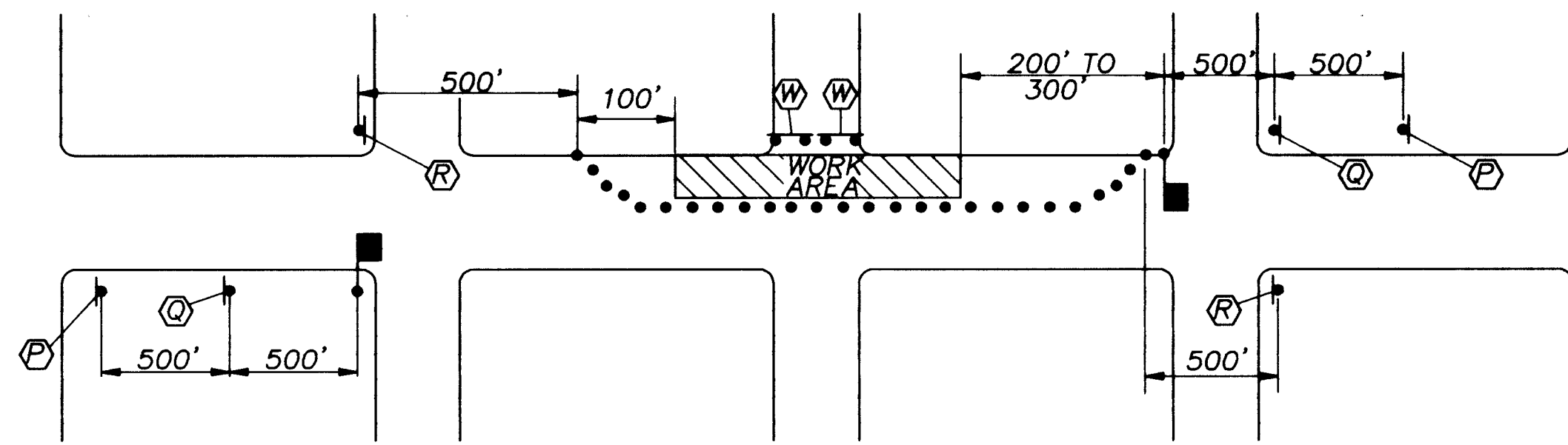


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26-4804.91 1097

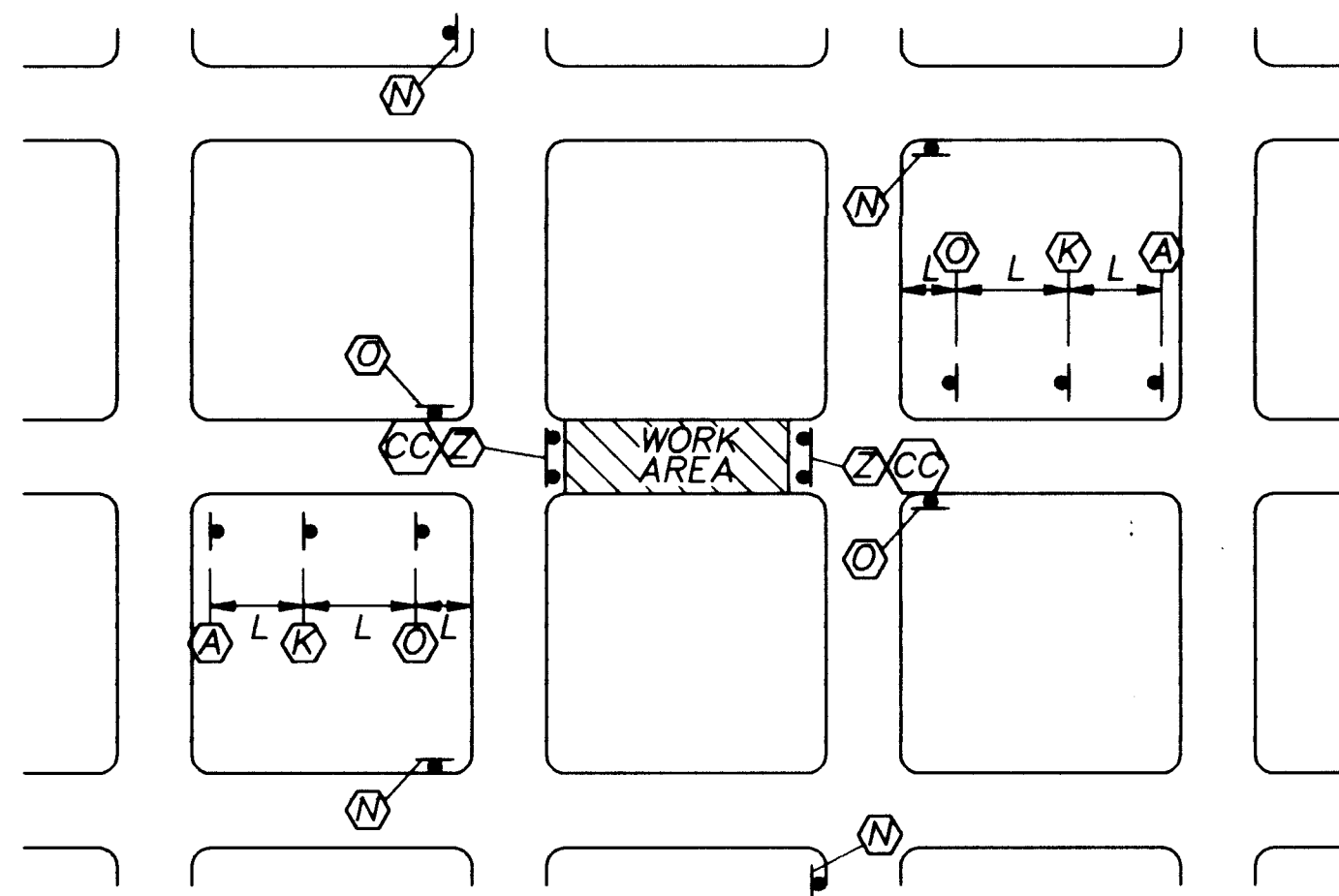
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
TITLE: PONDEROSA WELLS NO.1 AND 5 COLLECTOR LINE
TRENCH CROSS SECTIONS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair	<i>John Smith</i>	<i>2-17-95</i>	Water		
Trans. Dev.	<i>John Smith</i>	<i>2-16-95</i>	Waste Water	<i>John Smith</i>	<i>2/16/95</i>
Hydrology	<i>John Smith</i>	<i>2-16-95</i>			

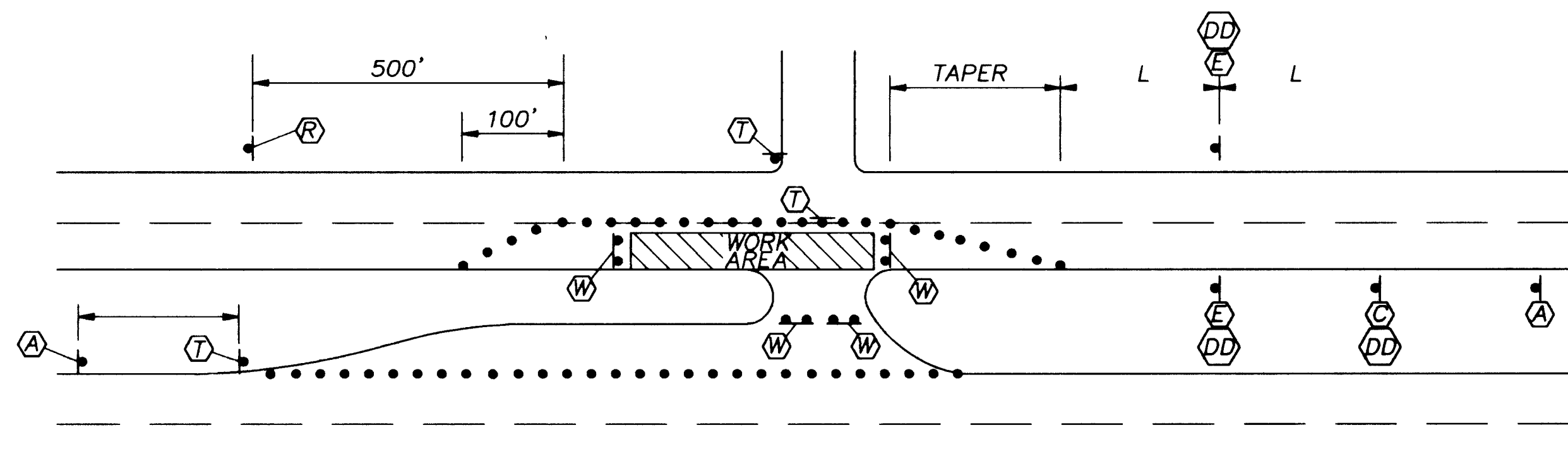
DRAWING NO. *4804.91* MAP NO. *D-20* SHEET *10* OF *13*



TYPICAL TRAFFIC SPLIT - TWO-LANE UNDIVIDED ROADWAY
NTS

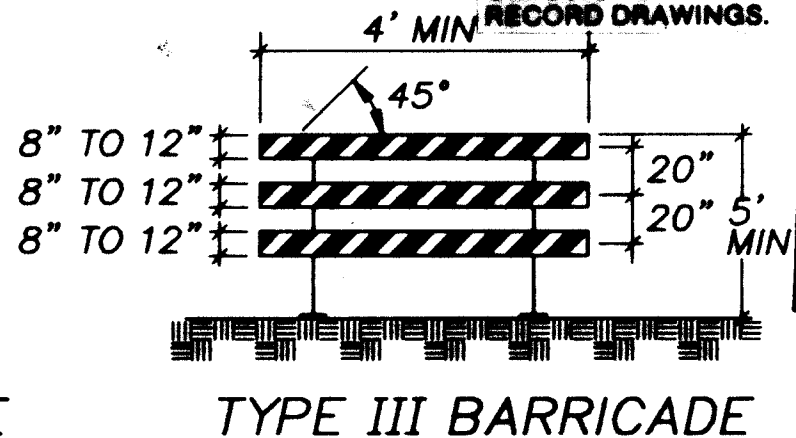
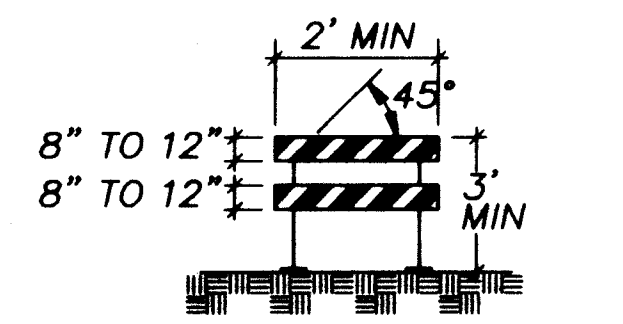
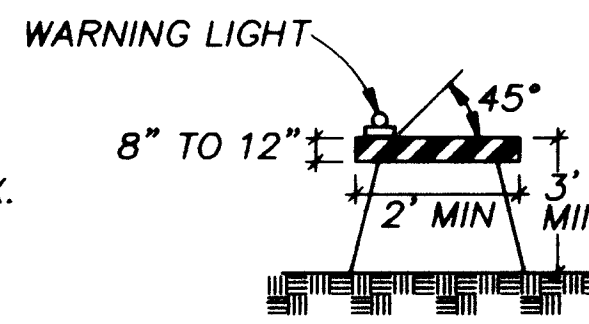
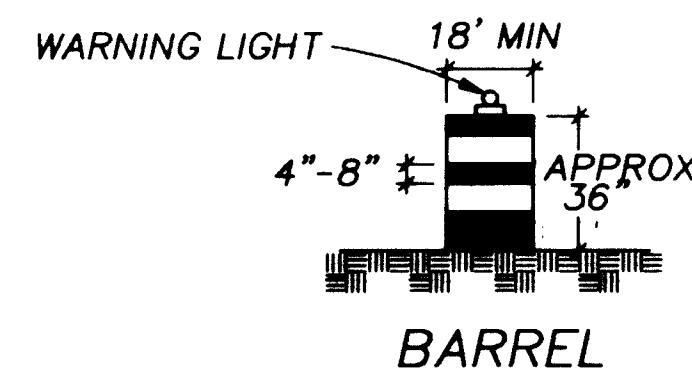


TYPICAL STREET CLOSURE - MINOR STREET ONLY
NTS



TYPICAL TRAFFIC SPLIT - MULTILANE DIVIDED ROADWAY
NTS

SPEED LIMIT	TAPER LENGTH (feet)		MAXIMUM DISTANCE BETWEEN BARRICADING DEVICES (feet)	MINIMUM NUMBER OF DEVICES REQUIRED
	11 ft LANE	12 ft LANE		
25	115	125	25	6
30	165	180	30	7
35	225	245	35	8
40	293	320	40	9
45	495	540	45	13
50	550	600	50	13



TRAFFIC SIGNS
NTS

 W20-1 48" x 48" A	 W20-5R 48" x 48" B	 W20-5L 48" x 48" C	 W4-2R 36" x 36" D
 W4-2L 36" x 36" E	 W6-3 48" x 48" F	 W1-4L 30" x 30" G	 W1-4R 30" x 30" H
 W12-1 24" x 24" I	 W20-2 48" x 48" K	 M4-10L 48" x 18" L	 M4-10R 48" x 18" M
 M4-9L 30" x 24" N	 M4-9R 30" x 24" O	 W20-4 48" x 18" P	 W20-7A 36" x 36" Q
 G20-2 60" x 24" R	 R4-7a 24" x 30" S	 R3-2 24" x 24" T	 W20-7A 36" x 36" Q
 R3-7 30" x 30" V	 R11-2 48" x 30" W	 R11-4 60" x 30" X	 W13-1 18" x 18" DD
 W1-6L 48" x 24" AA	 W1-6R 48" x 24" BB	 W1-7 48" x 24" CC	

LEGEND

- BARRICADE-BARREL
- ▲ SIGN
- VERTICAL PANEL
- BARRICADE-TYPE III
- L DISTANCE BETWEEN ADVANCE SIGNS- A distance measured in feet equal to ten times the speed limit.
- S SPACING BETWEEN BARRICADES- Maximum spacing to be a value measured in feet equal to the speed limit.
- FLAGGER

GENERAL NOTES

- ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH CHAPTER VI OF THE LATEST EDITION OF "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
- THREE (3) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION CO-ORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONSTRUCTION CO-ORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (768-2551) PRIOR TO OCCUPYING AN INTERSECTION. SEE SECTION 19 OF THE CITY STANDARD SPECIFICATIONS.
- ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED IN KIND BY CONTRACTOR TO LOCATION AND IN KIND AS EXISTING OR AS INDICATED BY THIS PLAN SET.
- SIGN HEIGHTS SHALL BE 7 FEET ABOVE THE SIDEWALK LEVEL TO THE BOTTOM OF THE SIGN.
- ALL SIGNS, BARRICADES AND BARRELS SHALL BE REFLECTORIZED. ALL BARRELS MAY HAVE SAND OR WATER BALLAST LIMITED TO 100 LBS. NO ROCKS OR OTHER WEIGHTING IS PERMITTED.
- ALL SIGN LOCATIONS SHALL BE SELECTED IN THE FIELD AND APPROVED BY THE CITY. DISTANCES MAY BE ADJUSTED FOR LOCAL CONDITIONS WITH THE APPROVAL OF THE CONSTRUCTION COORDINATOR OF THE PUBLIC WORKS DEPARTMENT.
- ALL APPLICABLE SIGNS SHALL BE MOVED AS THE CONSTRUCTION PROGRESSES.
- ALL EXISTING REGULATORY SIGNS THAT NEED TO BE REMOVED, RELOCATED OR REINSTALLED SHALL BE DONE BY THE CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT CONSTRUCTION COORDINATOR. THE CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION COORDINATOR THREE (3) WORKING DAYS IN ADVANCE OF ANY REQUIRED WORK.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND ADEQUATE MEANS OF CHANNELING PEDESTRIAN TRAFFIC AROUND ALL WORK AREAS DURING THE CONSTRUCTION PERIOD. ALL SUCH CHANNELIZATION SHALL BE ARRANGED TO PREVENT PEDESTRIAN TRAFFIC FROM HAVING TO ENTER THE ROADWAY IN ORDER TO PASS AROUND THE WORK AREA.
- ALL CONSTRUCTION SIGNING SHALL BE BLACK ON A REFLECTORIZED ORANGE FIELD UNLESS OTHERWISE SPECIFIED. ALL CONSTRUCTION BARRICADES AND CHANNELIZATION DEVICES SHALL BE ORANGE ON A REFLECTORIZED WHITE FIELD UNLESS OTHERWISE SPECIFIED.
- ALL ADVANCE WARNING SIGNS NOT DIRECTLY APPLICABLE SHALL BE REMOVED, COVERED OR TURNED AWAY FROM ONCOMING TRAFFIC.
- BARRICADES AND BARRELS SHALL BE OF THE SAME TYPE AND NOT INTERMIXED IN THE SAME SERIES OF CHANNELIZATION.
- A MINIMUM WIDTH OF 11 FEET FOR ONE LANE TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
- THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF CONSTRUCTION TO THE CITY CONSTRUCTION COORDINATOR FOR APPROVAL PRIOR TO STARTING ANY WORK THAT WILL IMPACT TRAFFIC FLOW.
- ALL EXCAVATIONS MUST BE PATCHED PRIOR TO OPENING THE ROADWAY TO TRAFFIC.
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL RESIDENCES AND BUSINESSES AT ALL TIMES. PROVIDE ACCESS SIGNAGE AS DIRECTED BY ENGINEER.

* DETERMINE ADVISORY SPEED FOR EACH SITE

RECORD DRAWINGS

Revisions Drawn by *M. B. Crockett* Date *1/4/96*
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APPROVAL OF RECORD DRAWINGS
PROJECT ENGINEER *John J. J. J.*
DATE *1/1/96*



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0" = 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

TITLE: PONDEROSA WELLS NO.1 AND 5 COLLECTOR LINE
TRAFFIC CONTROL PLAN

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair	<i>B. G. Bailey</i>	<i>2/17/95</i>	Water		
Trans. Dev.	<i>W. L. Bailey</i>	<i>2/16/95</i>	Waste Water	<i>W. L. Bailey</i>	<i>2/16/95</i>
Hydrology	<i>W. L. Bailey</i>	<i>2/16/95</i>			

DESIGNED BY M. BREWER DATE 11-1-94
DRAWN BY M. BREWER DATE 11-1-94
CHECKED BY B. CROCKETT DATE 1-5-95

DRAWING NO. *4804.91* MAP NO. *D-20* SHEET *11* OF *13*

