

RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/NORTHPARK DRIVE INTERSECTION

CITY OF RIDGELAND, MISSISSIPPI

CITY OFFICIALS:

MAYOR

GENE F. McGEE

BOARD OF ALDERMEN

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- CHUCK GAUTIER, WARD 2
- CAROLE A. DAVIS, WARD 3
- LARRY ROBERTS, WARD 4
- SCOTT JONES, WARD 5
- LINDA DAVIS TRUNZLER, WARD 6
- GERALD STEEN, AT-LARGE

CITY ATTORNEY

JAMES GABRIEL

DIRECTOR OF PUBLIC WORKS

SAM C. VINSON, P.E.

ASST. DIRECTOR OF PUBLIC WORKS

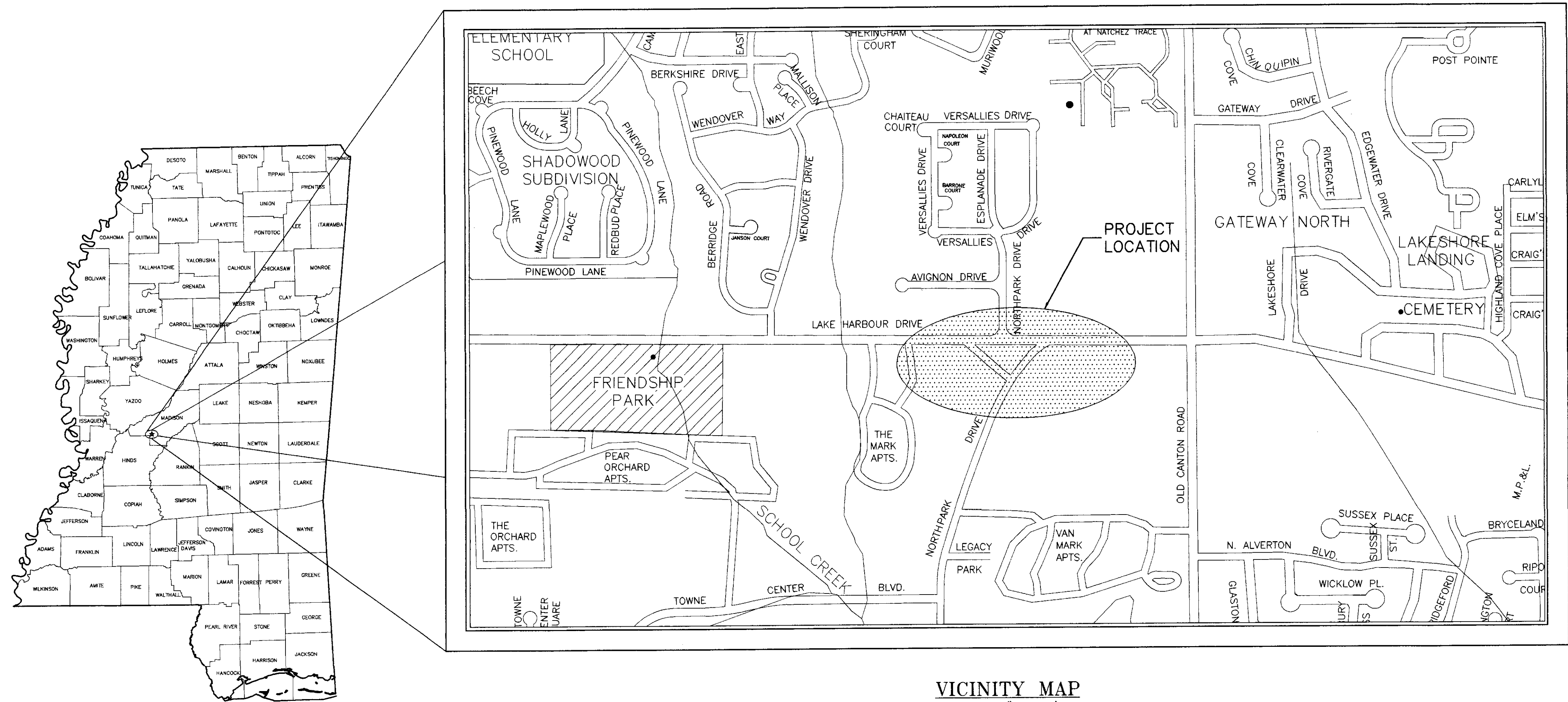
SID HAWTHORNE

ASST. CITY ENGINEER

DAVID E. WILLIAMS, P.E.

CITY DRAINAGE ENGINEER

JILL HARTFORD, P.E.



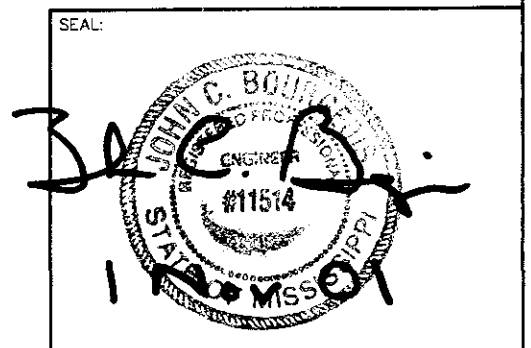
VICINITY MAP

SCALE: 1" = 500'

NOVEMBER, 2001
WEI #T96-078A

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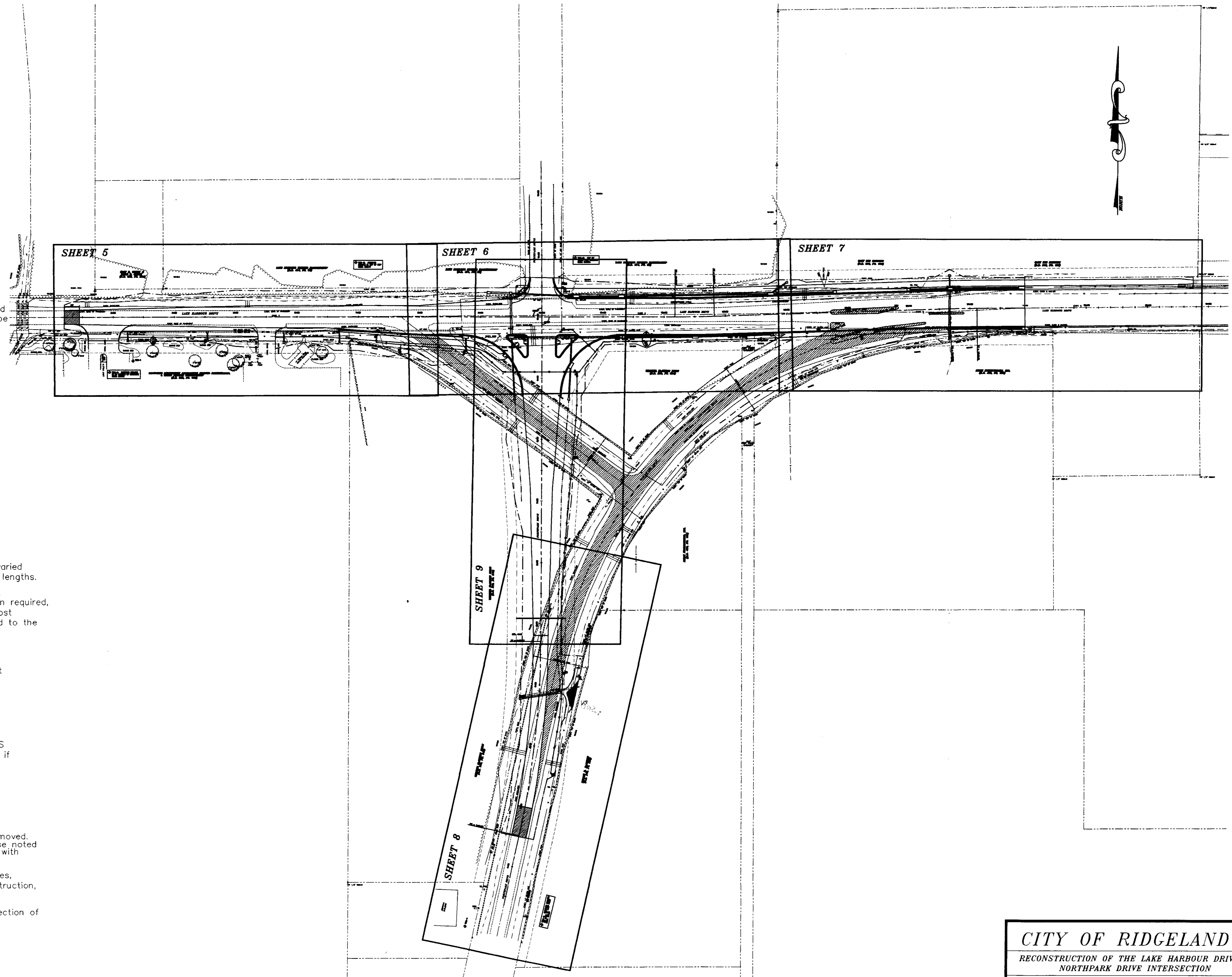
WEI #96-078A



PWP-01213

GENERAL CONSTRUCTION NOTES

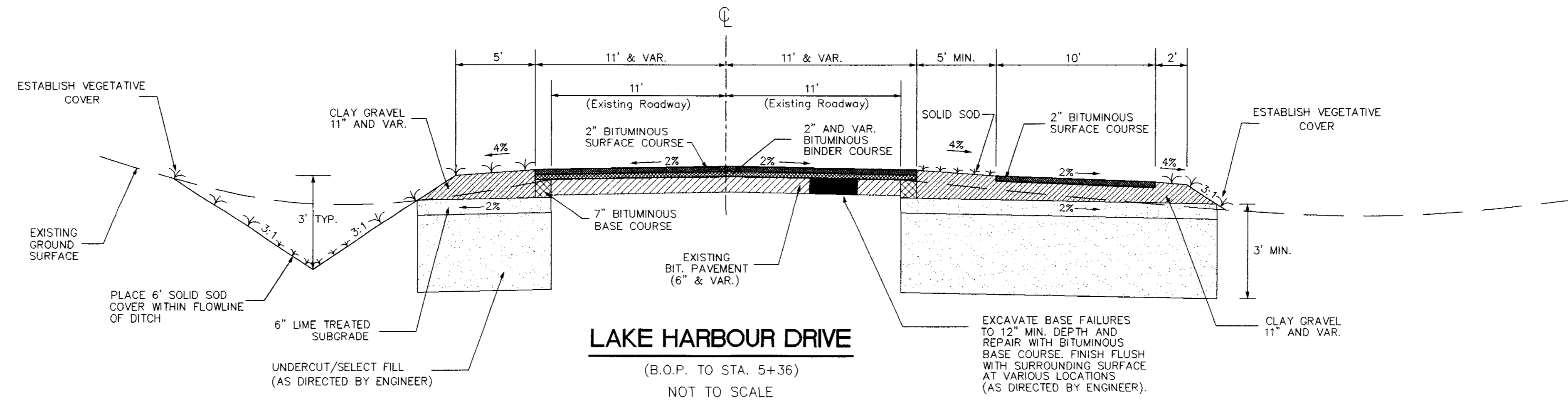
1. The existing utility locations shown on the Drawings are approximate only. The Contractor shall coordinate the location (horizontal and vertical) of existing utilities (power, telephone, gas, water, sewer, etc.) with the appropriate utility company before construction begins.
2. Utility lines or service lines encountered during construction, whether shown on the Drawings or not, shall be protected by the Contractor and repairs necessary due to damage to same by the Contractor shall be at no additional cost to the Owner.
3. The Contractor shall be responsible for verifying horizontal and vertical clearance requirements for utility services before installation.
4. The Contractor shall establish a vegetative cover on all areas where the existing vegetation was removed or disturbed during construction, unless solid sod is required. Solid sod is required in the specific areas shown on the typical sections, and may be required in other areas as directed by the engineer.
5. Unsuitable bedding, backfill or site subgrade material which may be encountered shall be excavated to the limits required and backfilled with acceptable material to the lines and grades shown on the Drawings.
6. TBM's which are or may be in conflict with construction activities shall be relocated by the contractor prior to commencement of construction in the immediate area.
7. The Engineer will stake the base line and control points necessary for the required construction staking of the project, one time only. Detailed construction staking will be by Contractor and shall be an absorbed cost item.
8. The Contractor shall be responsible for completing all sampling and testing of materials incorporated into the project and for submission of same to Engineer for review. Prior use test results, manufacturer's certificates, or proposed mix designs shall be submitted to the Engineer for review before incorporation into project. This shall include backfill, concrete, asphalt, steel, striping material, piping, materials, aggregates, seed and other items as specified by the Engineer. All testing shall be an absorbed cost item.
9. Storm sewer, sanitary sewer, and water main lengths may be varied during construction of project to conform to normal pipe joint lengths.
10. Existing sanitary sewer manhole tops, water valves, valve boxes, meters, storm sewer or other related appurtenances shall, when required, be adjusted to finished grade by Contractor as an absorbed cost of the work. Castings required to be removed shall be salvaged to the Owner by the Contractor.
11. Testing certifications shall state that the subject material meets the specified quality, grade, purity, class or weight, or that the subject material meets or exceeds the requirement of the applicable ASTM, AASHTO, MDOT or other standards. Certifications shall be submitted to the Engineer prior to incorporation of the subject material into the project.
12. Traffic signs or delineators required under this Contract shall be constructed and installed in accordance with the Project Drawings and the MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, MDOT, 1990 EDITION as if said standards were written out herein in full. Measurement and Payment for traffic signs and delineators shall be as specified on the Bid Form.
13. Contractor shall remove and relocate existing mailboxes and signs as directed by the engineer.
14. Water lines encountered during undercut excavation shall be removed. Water lines below the limits of undercut excavation, or otherwise noted as abandoned, shall be abandoned in place, plugged, and filled with flowable fill, and shall be cost absorbed.
15. Contractor shall salvage to the City all traffic signs, water valves, fire hydrants, and drainage pipes that are removed during construction, unless otherwise refused by the City.
16. Contractor shall remove only the asphalt pavement from the section of roadway that is to be abandoned/removed.



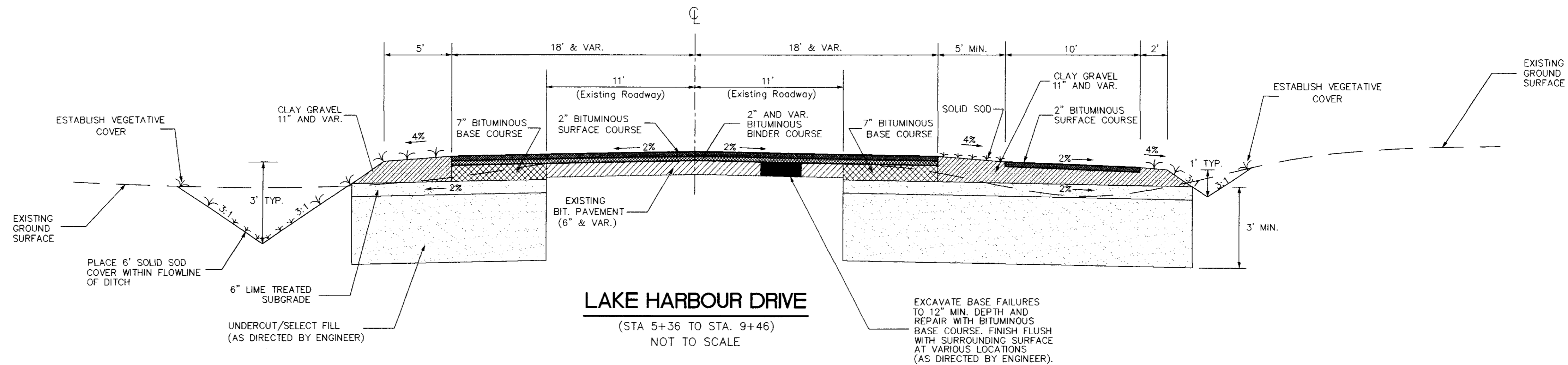
CITY OF RIDGELAND		
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/ NORTH PARK DRIVE INTERSECTION		
LAYOUT PLAN		
WAGGONER ENGINEERING, INC. Consulting Engineers - Jackson, Mississippi		
DRAWN BY: B.F.	DATE: 10-25-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: 1"=80'	2 OF

NOTES:

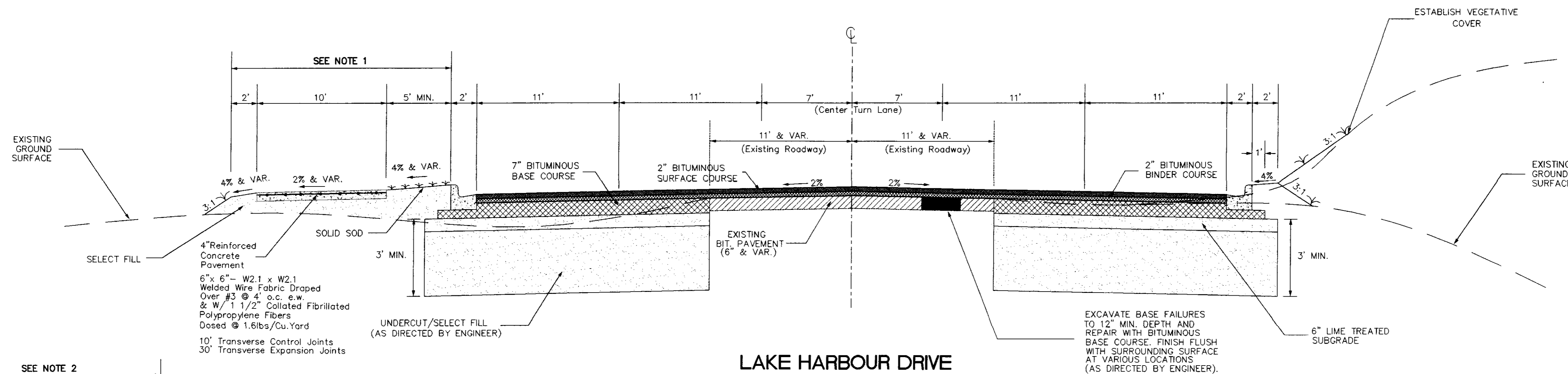
1. Maintain Slopes Away From Lake Harbour Drive From Sta. 10+00 To Sta. 12+25.
2. Transition Slope From Sta. 12+25 To Sta. 12+75
3. Maintain Slopes Toward Lake Harbour Drive From Sta. 12+75 To E.O.P. (As Shown In DETAIL-A).



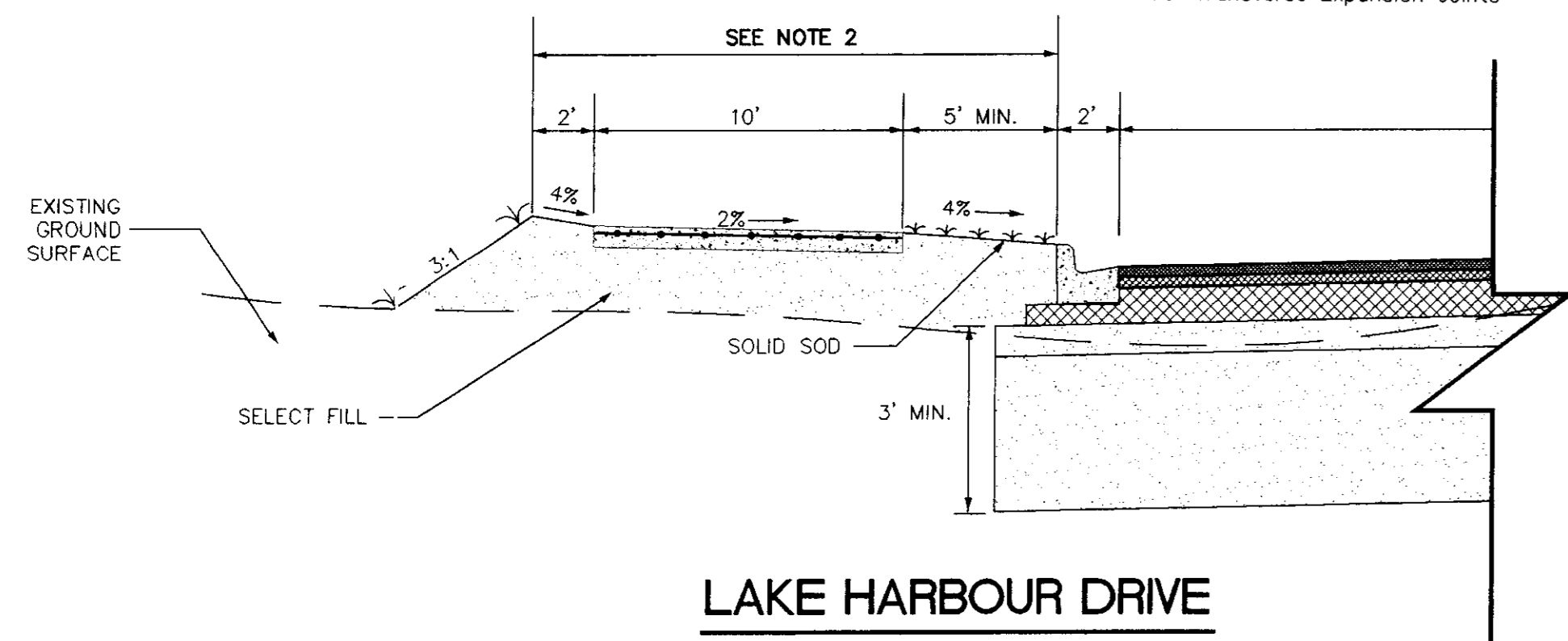
LAKE HARBOUR DRIVE
(B.O.P. TO STA. 5+36)
NOT TO SCALE



LAKE HARBOUR DRIVE
(STA 5+36 TO STA. 9+46)
NOT TO SCALE

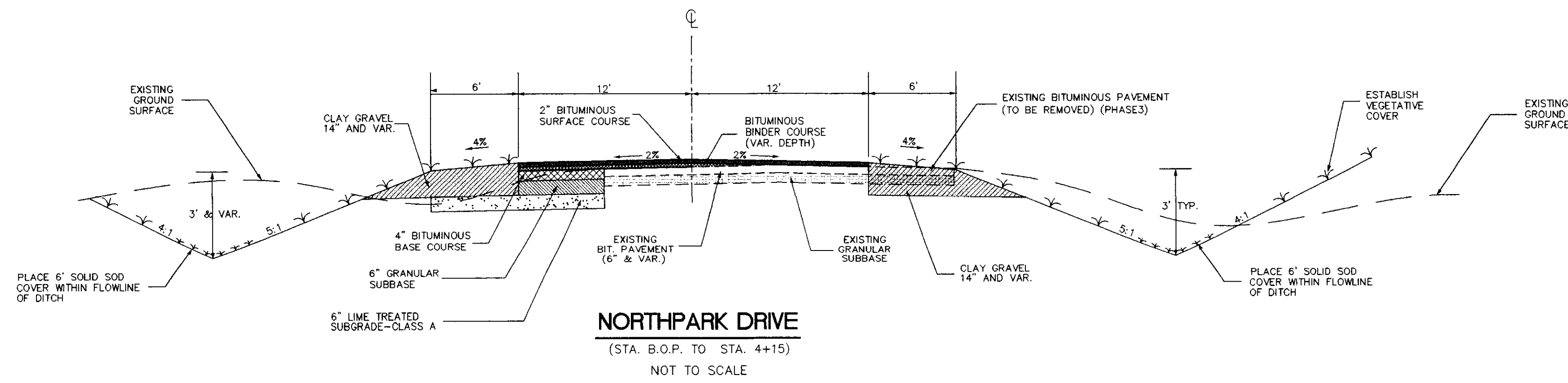


LAKE HARBOUR DRIVE
(STA. 9+46 TO E.O.P.)
REFER TO NOTES 1-3
NOT TO SCALE

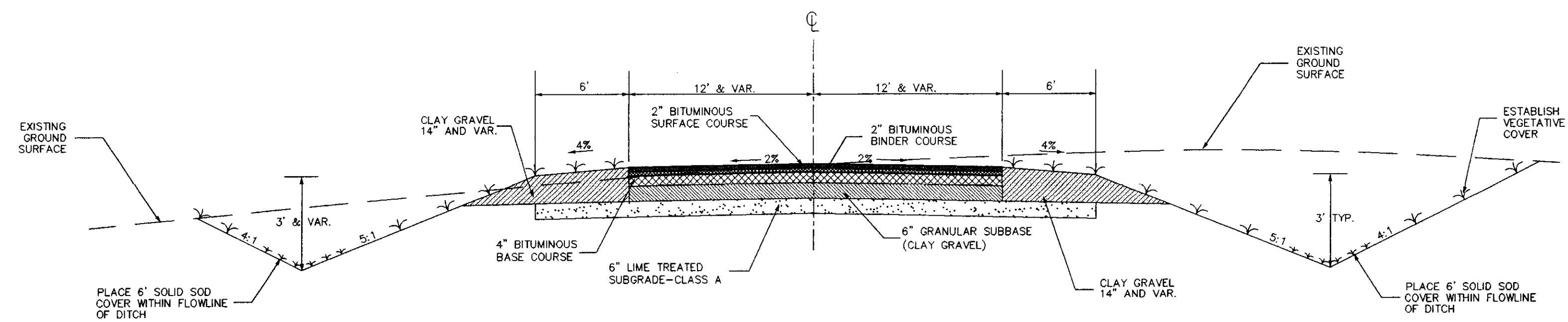


LAKE HARBOUR DRIVE
DETAIL-A
N.T.S.

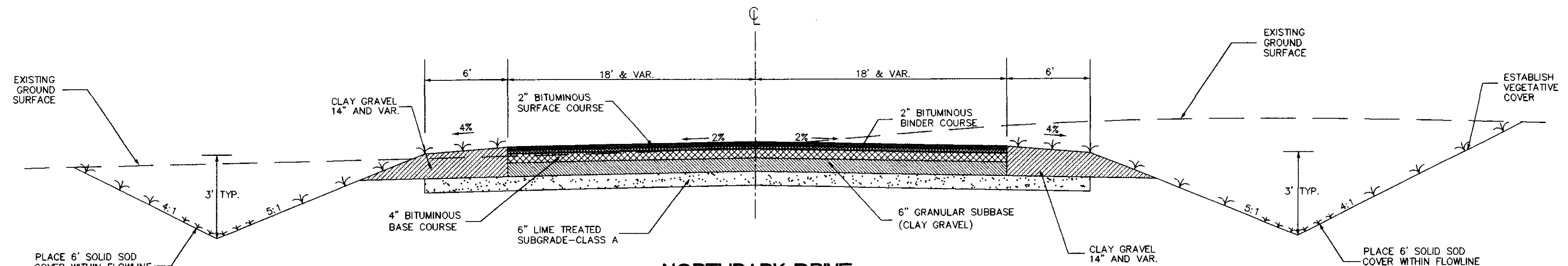
CITY OF RIDGELAND		
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/NORTH PARK DRIVE INTERSECTION		
TYPICAL SECTIONS		
WAGGONER ENGINEERING, INC. Consulting Engineers - Jackson, Mississippi		
DRAWN BY: D.D.	DATE: 08-09-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: N.T.S.	3 OF



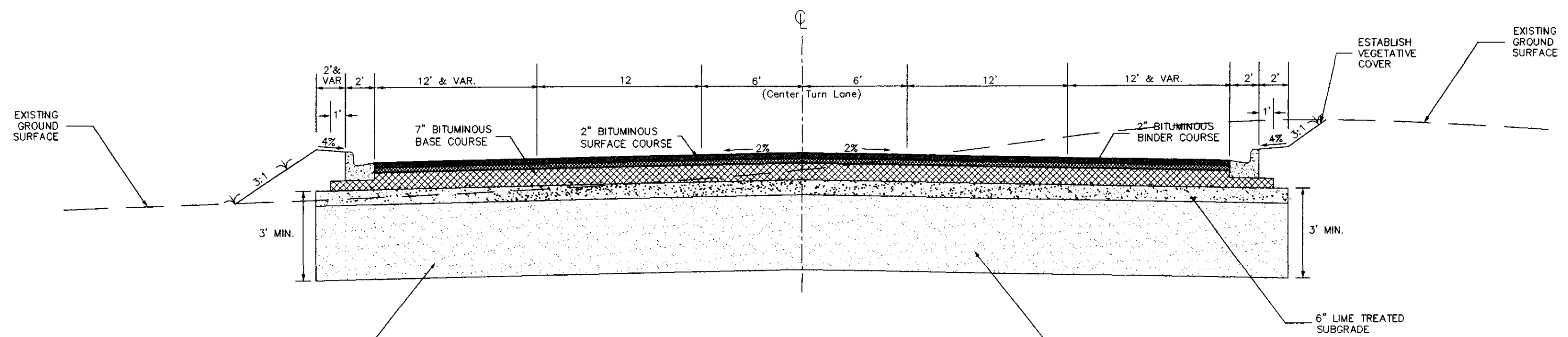
NORTH PARK DRIVE
(STA. B.O.P. TO STA. 4+15)
NOT TO SCALE



NORTH PARK DRIVE
(STA. 4+15 TO STA. 7+21)
NOT TO SCALE

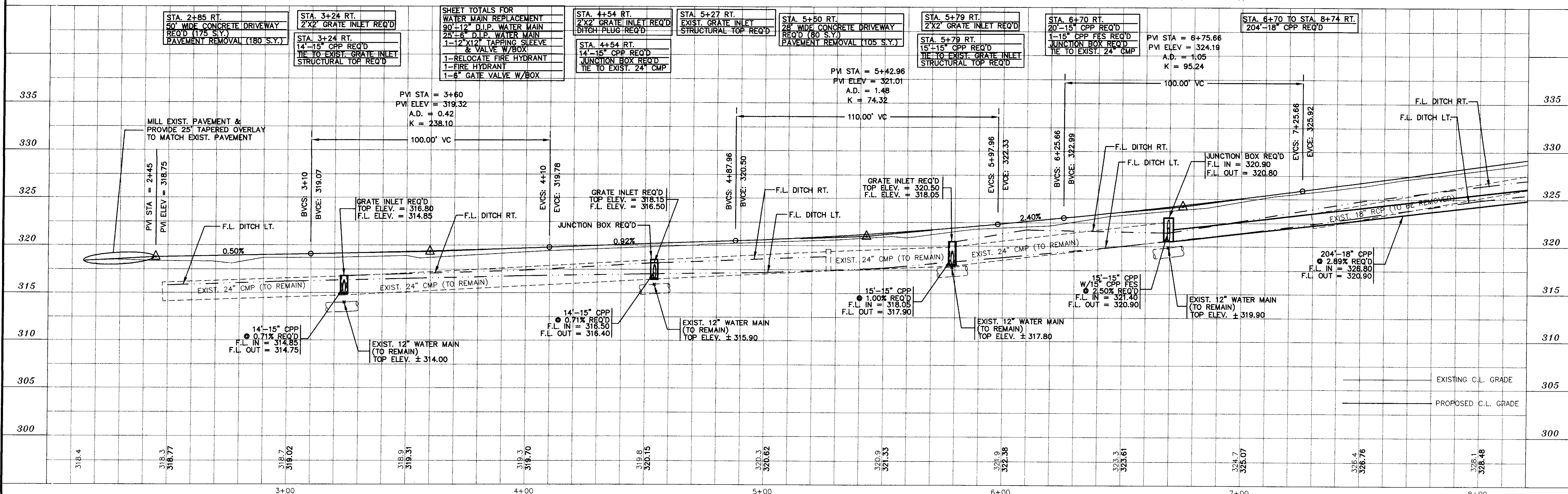
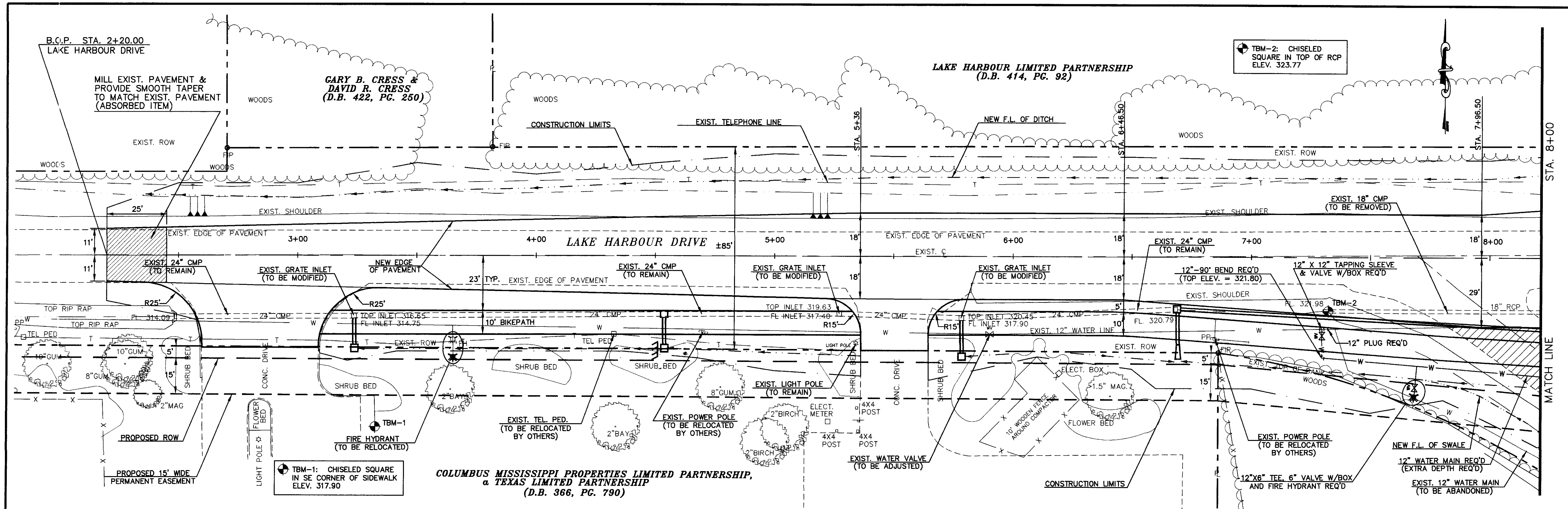


NORTH PARK DRIVE
(STA. 7+21 TO STA. 8+71)
NOT TO SCALE



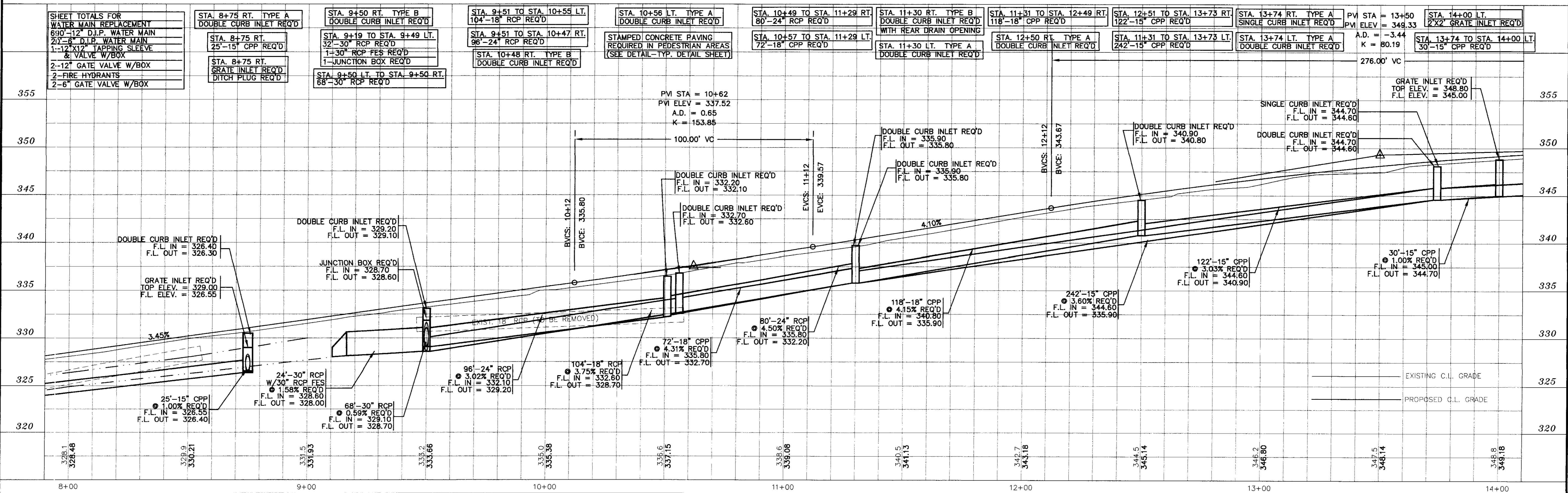
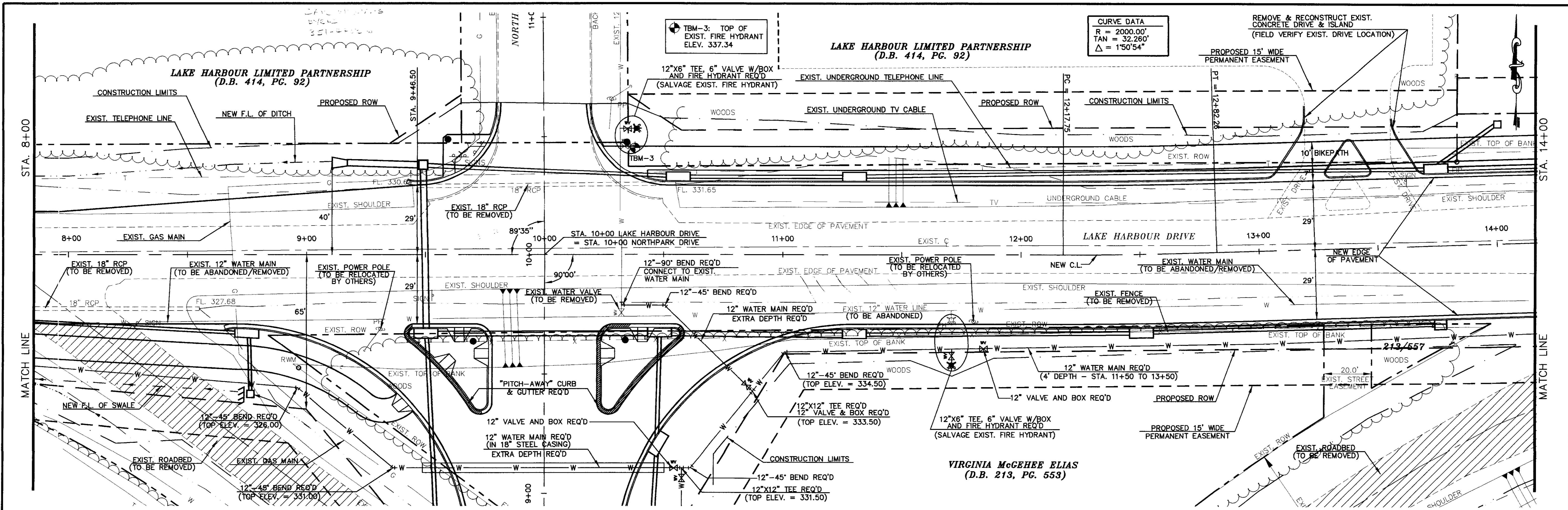
NORTH PARK DRIVE
(STA. 8+71 TO STA. 10+00)
NOT TO SCALE

CITY OF RIDGELAND		
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/NORTH PARK DRIVE INTERSECTION		
TYPICAL SECTIONS		
WAGGONER ENGINEERING, INC. Consulting Engineers - Jackson, Mississippi		
DRAWN BY: D.D.	DATE: 08-09-00	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: N.T.S.	4 OF



STA. 2+85 RT. 30' WIDE CONCRETE DRIVEWAY REQ'D (175 S.Y.) PAVEMENT REMOVAL (180 S.Y.)	STA. 3+24 RT. 2'X2' GRATE INLET REQ'D	SHEET TOTALS FOR WATER MAIN REPLACEMENT 90'-12" D.I.P. WATER MAIN 25'-6" D.I.P. WATER MAIN 1-12"X12" TAPPING SLEEVE & VALVE W/BOX 1-RELOCATE FIRE HYDRANT 1-FIRE HYDRANT 1-6" GATE VALVE W/BOX	STA. 4+54 RT. 2'X2' GRATE INLET REQ'D DITCH PLUG REQ'D	STA. 5+27 RT. EXIST. GRATE INLET STRUCTURAL TOP REQ'D	STA. 5+50 RT. 28' WIDE CONCRETE DRIVEWAY REQ'D (80 S.Y.) PAVEMENT REMOVAL (105 S.Y.)	STA. 5+79 RT. 2'X2' GRATE INLET REQ'D	STA. 6+70 RT. 20'-15" CPP REQ'D	STA. 6+70 TO STA. 8+74 RT. 204'-18" CPP REQ'D
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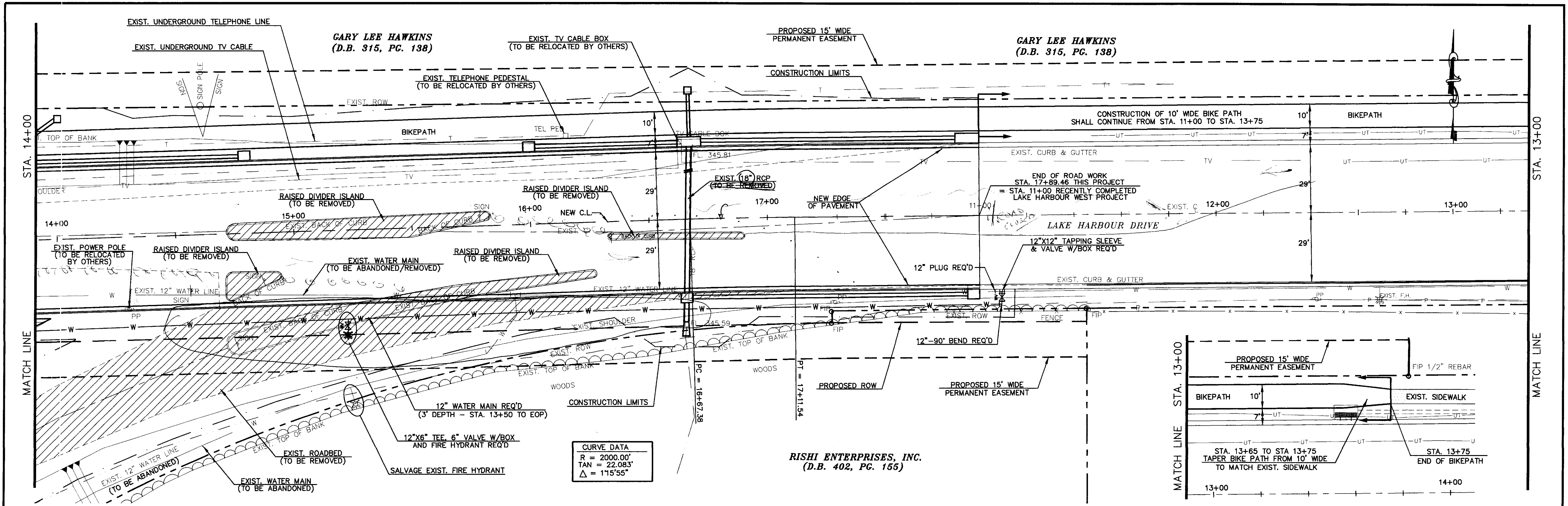


NO.	DATE	REVISIONS	DESIGNED	DATE	SCALE
			B.F.	10-25-99	1"=20' HORIZ. 1"=5' VERT.
			DRAWN		
			B.F.		

WAGGONER ENGINEERING INC. CONSULTING ENGINEERS
JACKSON, MISSISSIPPI

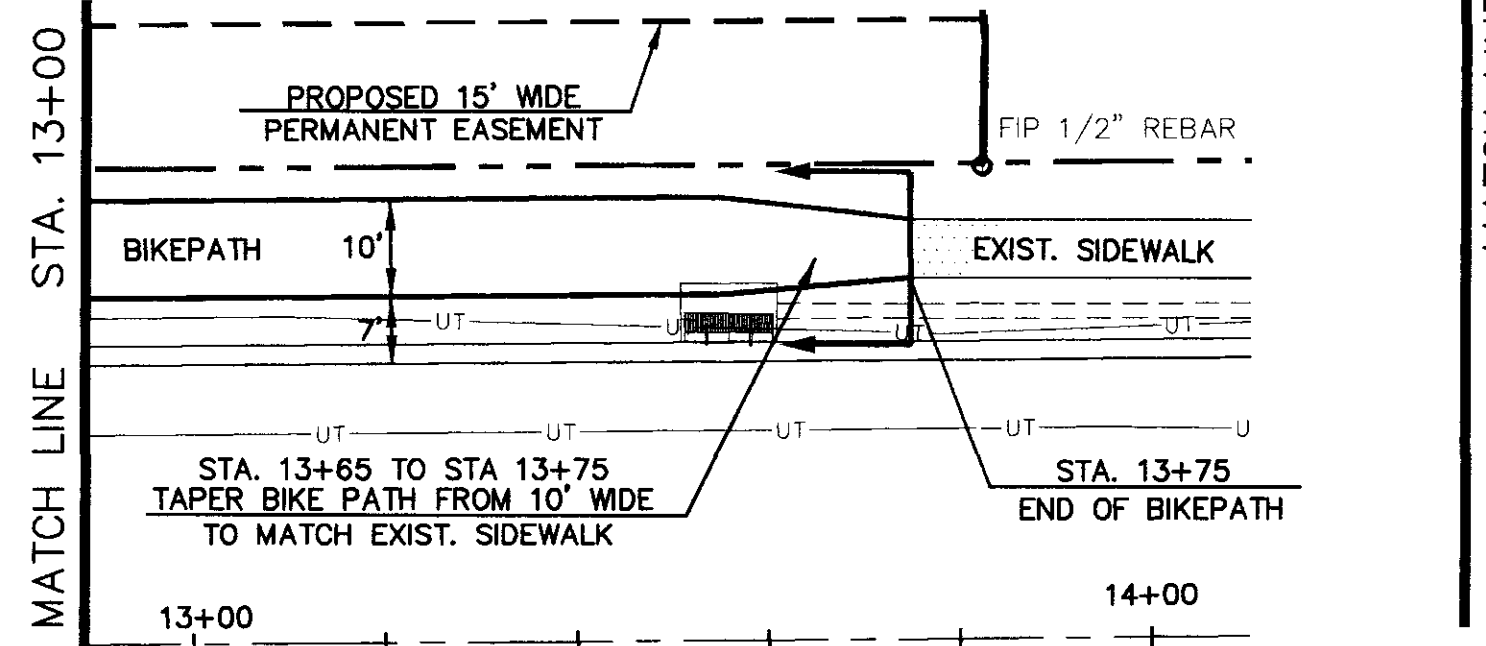
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
NORTH PARK DRIVE INTERSECTION

ACAD PATH ROUTE
P:\196078A\FLYING_Y.DWG
W.E.I. JOB NO. 196078A SHEET NO. 6 OF



CURVE DATA
 R = 2000.00'
 TAN = 22.083°
 Δ = 115°55'

RISHI ENTERPRISES, INC.
 (D.B. 402, PG. 155)



SHEET TOTALS FOR WATER MAIN REPLACEMENT

420'-12" D.I.P. WATER MAIN
10'-6" D.I.P. WATER MAIN
1-12"X12" TAPPING SLEEVE & VALVE W/BOX
1-FIRE HYDRANT
1-6" GATE VALVE W/BOX

STA. 13+75 TO STA. 14+79 LT.

104'-15" CPP REQ'D
STA. 14+80 LT. TYPE A SINGLE CURB INLET REQ'D

VERTICAL CURVE DATA

HIGH POINT ELEV = 350.46
HIGH POINT STA = 15+54.03
PVI STA = 15+43
PVI ELEV = 350.60
A.D. = -1.10
K = 100.31

STA. 16+00 LT. TYPE A SINGLE CURB INLET REQ'D

STA. 16+01 TO STA. 16+65 LT. 64'-15" CPP REQ'D
--

STA. 16+66 LT. TYPE B DOUBLE CURB INLET REQ'D

STA. 16+66 LT. TYPE B DOUBLE CURB INLET REQ'D

STA. 16+66 RT. TYPE B SINGLE CURB INLET REQ'D

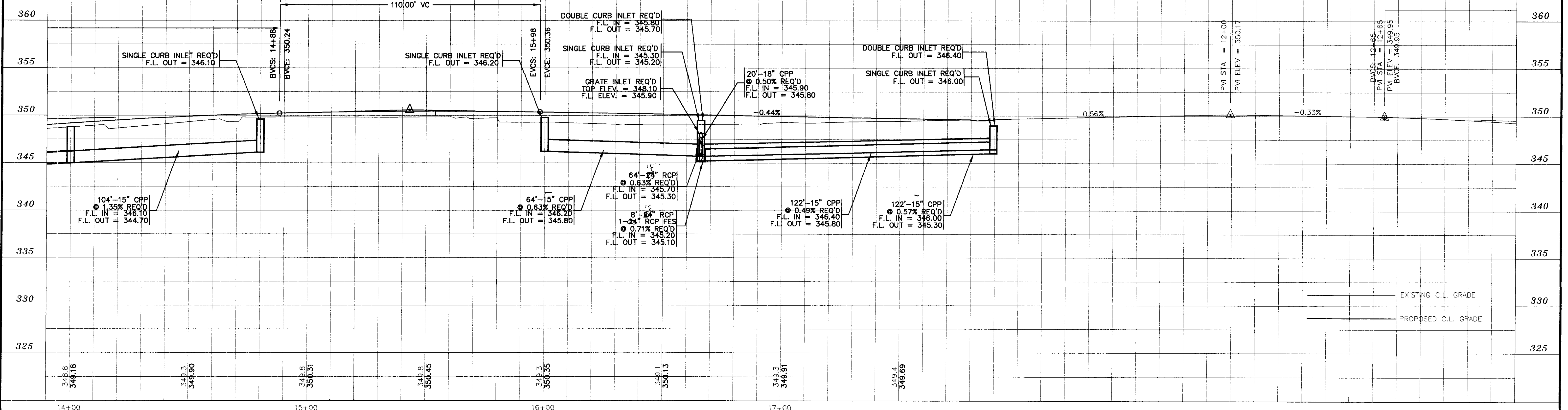
STA. 16+66 RT. TYPE B SINGLE CURB INLET REQ'D

STA. 16+67 TO STA. 17+89 LT. 122'-15" CPP REQ'D

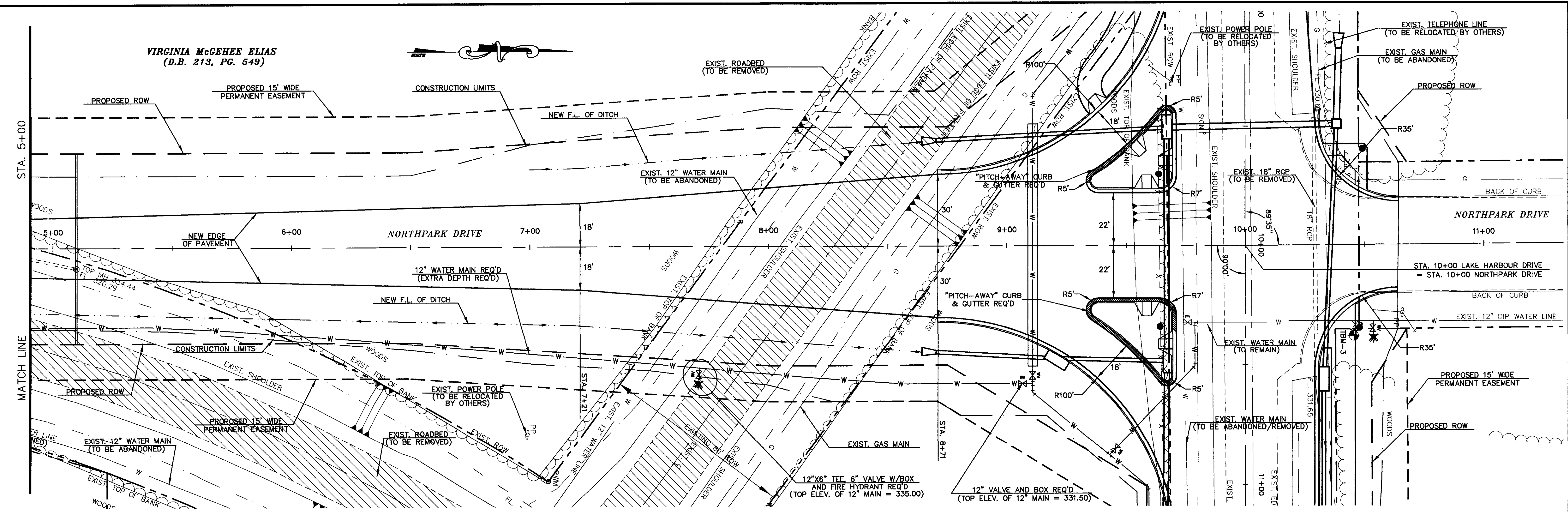
STA. 16+67 TO STA. 17+89 LT. 122'-15" CPP REQ'D

STA. 17+90 RT. TYPE A SINGLE CURB INLET REQ'D

STA. 17+90 RT. TYPE A SINGLE CURB INLET REQ'D



VIRGINIA McGEHEE ELIAS
(D.B. 213, PG. 549)



SHEET TOTALS FOR	
WATER MAIN REPLACEMENT	
420'-12" D.I.P. WATER MAIN	
10'-6" D.I.B. WATER MAIN	
1-FIRE HYDRANT	
1-6" GATE VALVE W/BOX	
1-12" GATE VALVE W/BOX	

HIGH POINT ELEV = 339.36
HIGH POINT STA = 7+16.25
PVI STA = 7+25
PVI ELEV = 341.85
A.D. = -5.71
K = 61.25
350.00' VC

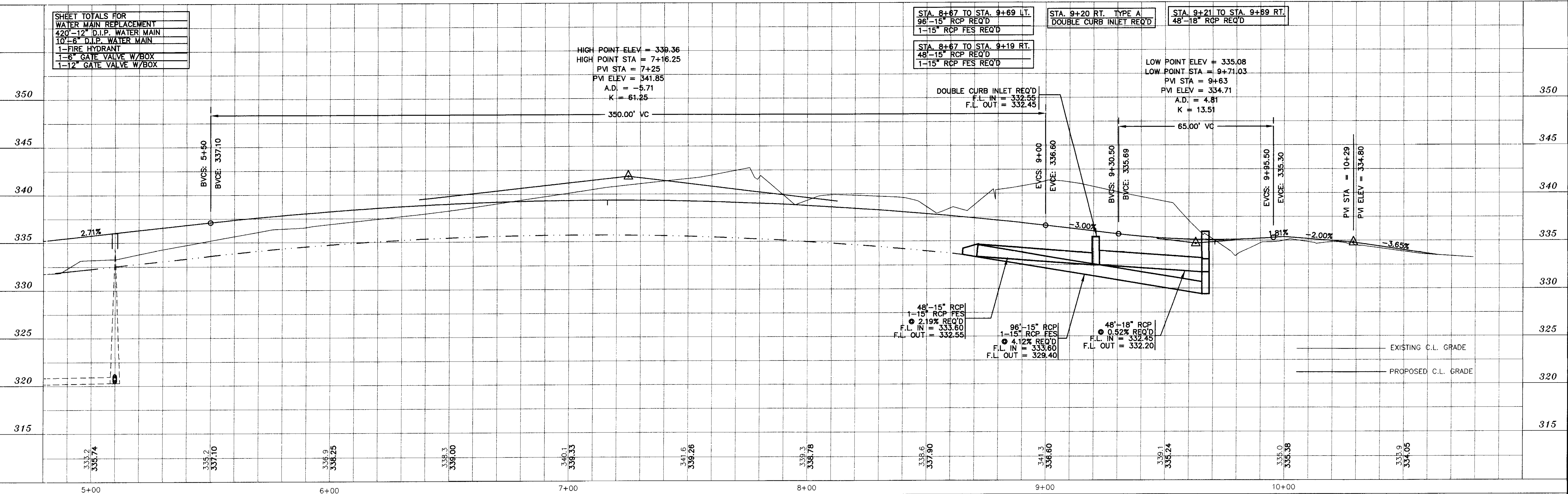
STA. 8+67 TO STA. 9+69 LT.
96'-15" RCP REQ'D
1-15" RCP FES REQ'D

STA. 8+67 TO STA. 9+19 RT.
48'-15" RCP REQ'D
1-15" RCP FES REQ'D

STA. 9+20 RT. TYPE A
DOUBLE CURB INLET REQ'D

STA. 9+21 TO STA. 9+69 RT.
48'-18" RCP REQ'D

LOW POINT ELEV = 335.08
LOW POINT STA = 9+71.03
PVI STA = 9+63
PVI ELEV = 334.71
A.D. = 4.81
K = 13.51



NO.	DATE	REVISIONS	BY

DESIGNED	DATE
B.F.	10-25-99
DRAWN	SCALE
B.F.	1"=20' HORT. 1"=5' VERT.

WAGGONER ENGINEERING INC. CONSULTING ENGINEERS
JACKSON, MISSISSIPPI

RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
NORTH PARK DRIVE INTERSECTION

ACAD PATH ROUTE	
P:\196078A\FLYING_Y.DWG	
W.E.I. JOB NO.	SHEET NO.
196078A	9 OF

P:\196078A\FLYING_Y.DWG Mod Aug 15 13:27:27 2001

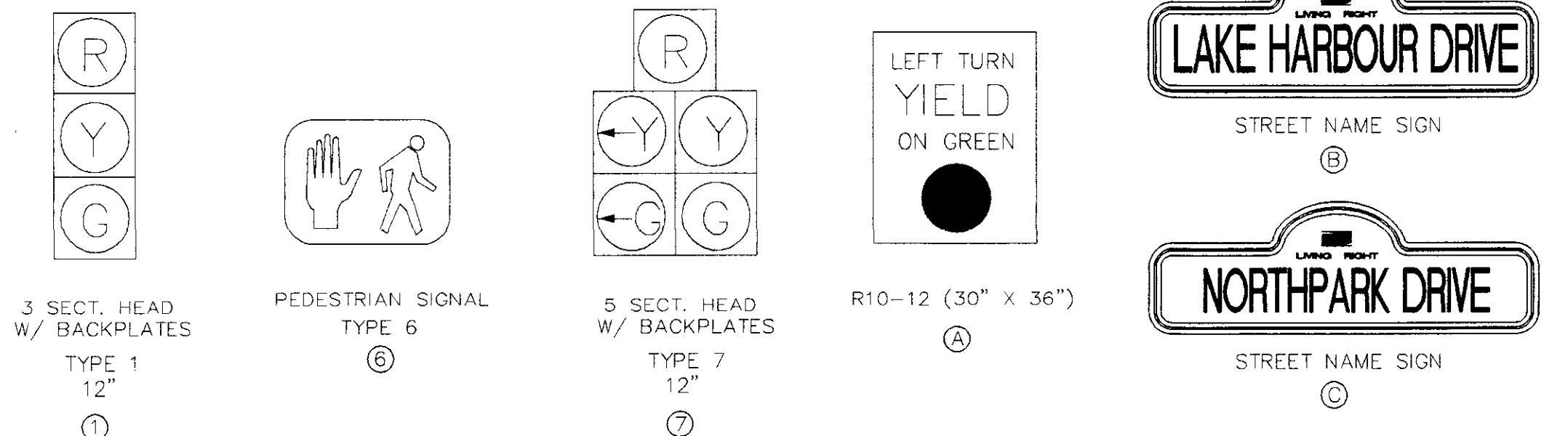
LEGEND

- CONTROLLER AND CABINET
- TYPE 1 PULLBOX
- NEW MAST ARM POLE
- CONDUIT RUN (JACKED)
- EXISTING UTILITY POLE
- TRAFFIC SIGNAL HEAD w/BACKPLATE
- EMERGENCY VEHICLE DETECTOR
- R10-12 STREET NAME SIGN
- LUMINAIRE
- VEHICLE LOOP DETECTOR
- 5/c 5 CONDUCTOR SIGNAL CABLE
- 7/c 7 CONDUCTOR SIGNAL CABLE
- S.C. SHIELDED CABLE (2 CONDUCTOR)
- POW POWER CABLE
- LUM STREET LIGHT CABLE
- E.C. EMERGENCY VEHICLE CABLE

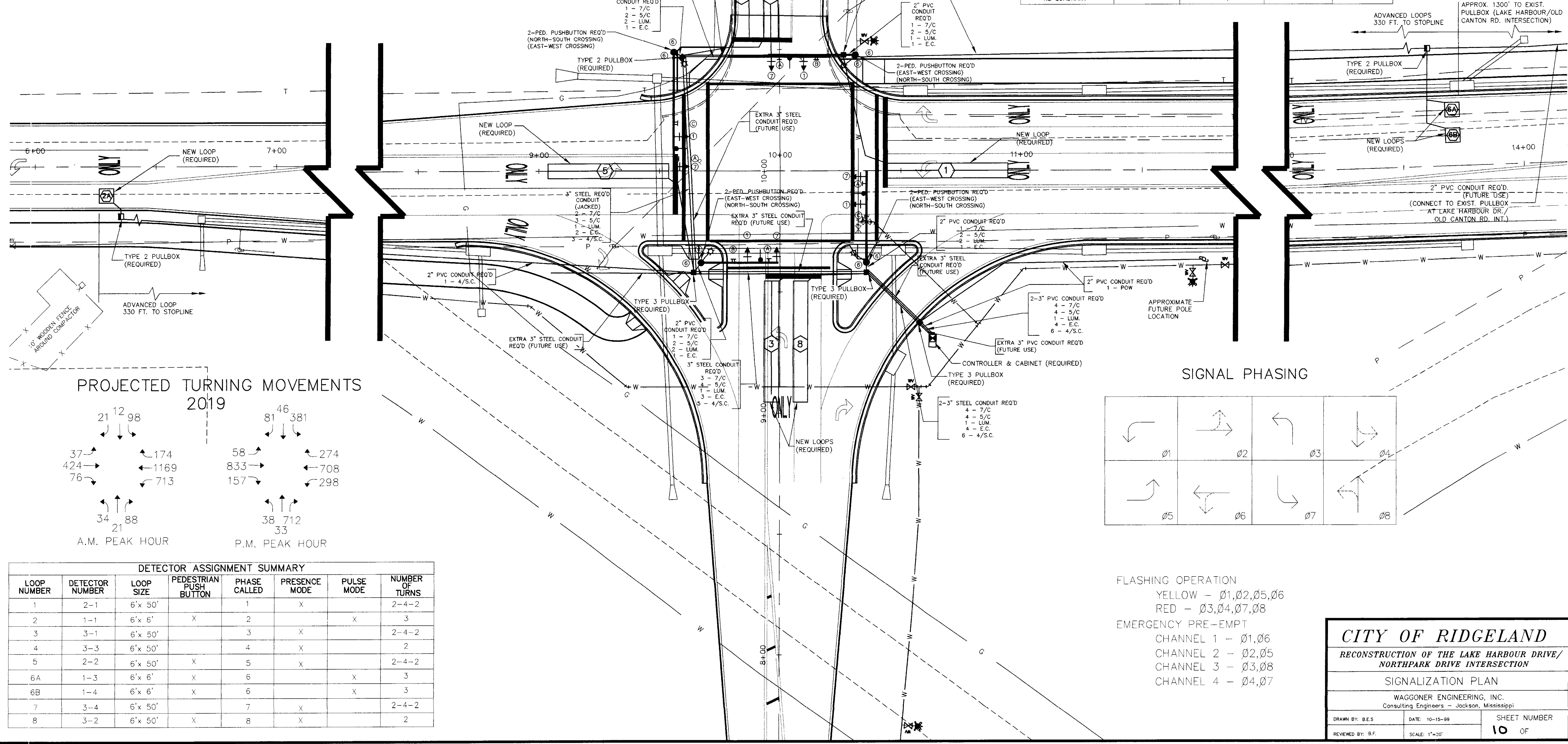
NOTE:

TRAFFIC SIGNAL CONDUIT ROLL PIPE, IN CONFORMANCE WITH TECHNICAL SPECIFICATION SECTION 02623, MAY BE USED IN THE PLACE OF RIGID CONDUIT (TYPE 1) INDICATED ON THE DESIGN DRAWINGS.

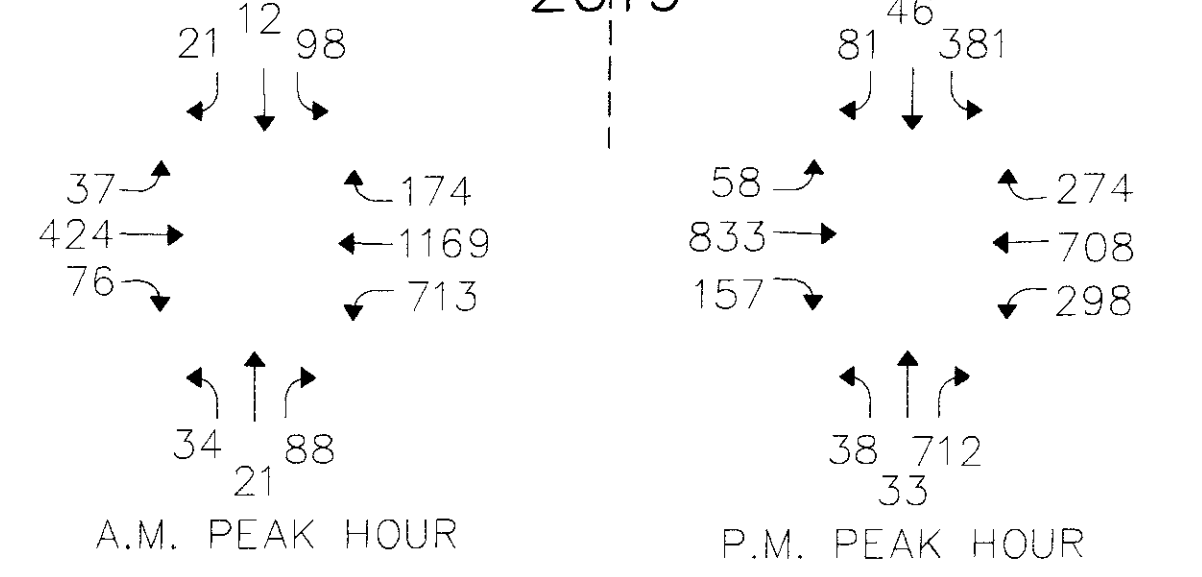
SIGNAL HEADS & SIGNS



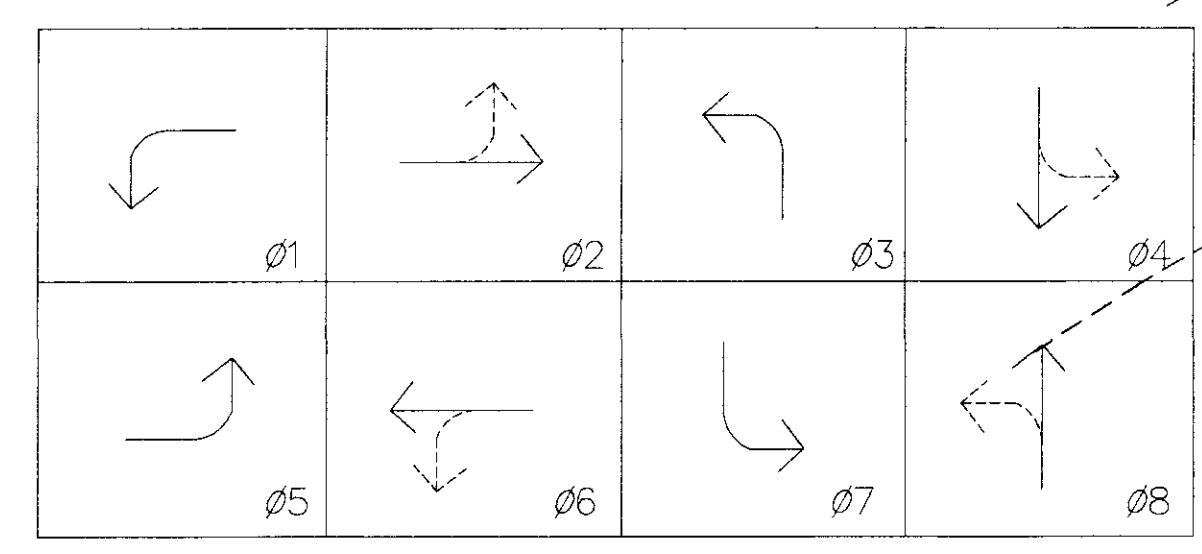
SIGNAL POLE CHART		LOCATION (FROM POLE - FT.)		
LOCATION	MAST ARM LENGTH	SIGNAL HEADS	EMERGENCY VEHICLE DETECTOR	SIGNS
SW QUADRANT	32'	17',29'	22.5'	12',26.5'
NW QUADRANT	49'	30.5',42.5'	30.5'	25',40'
SE QUADRANT	38'	19',31'	24'	14',28.5'
NE QUADRANT	36'	22.5',35'	27.5'	17',32.5'



PROJECTED TURNING MOVEMENTS 2019



SIGNAL PHASING



FLASHING OPERATION
 YELLOW - Ø1,Ø2,Ø5,Ø6
 RED - Ø3,Ø4,Ø7,Ø8

EMERGENCY PRE-EMPT
 CHANNEL 1 - Ø1,Ø6
 CHANNEL 2 - Ø2,Ø5
 CHANNEL 3 - Ø3,Ø8
 CHANNEL 4 - Ø4,Ø7

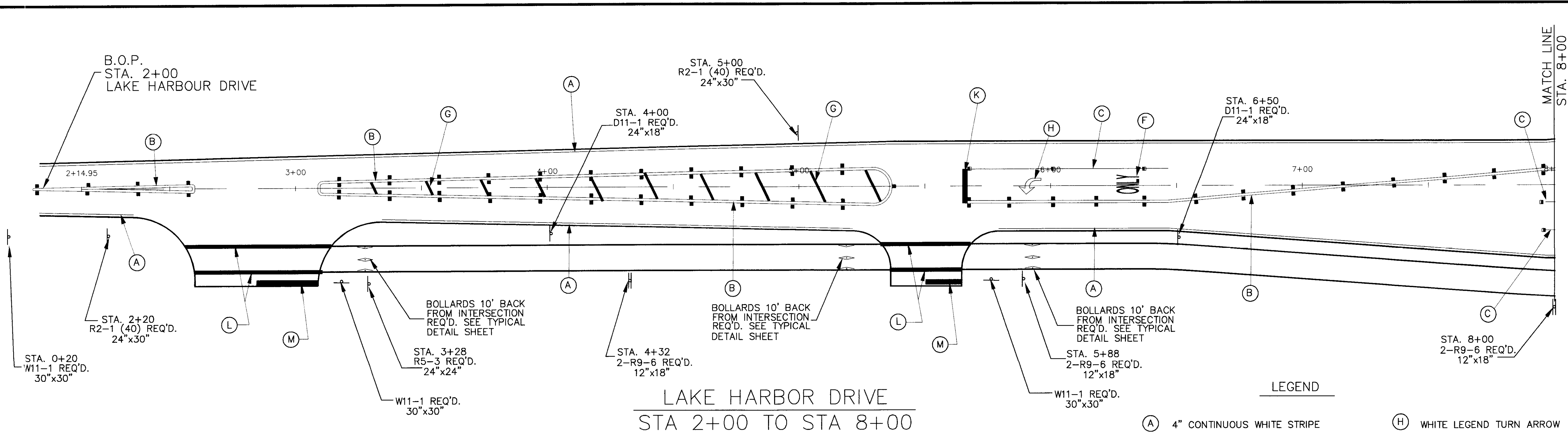
DETECTOR ASSIGNMENT SUMMARY							
LOOP NUMBER	DETECTOR NUMBER	LOOP SIZE	PEDESTRIAN PUSH BUTTON	PHASE CALLED	PRESENCE MODE	PULSE MODE	NUMBER OF TURNS
1	2-1	6' x 50'		1	X		2-4-2
2	1-1	6' x 6'	X	2		X	3
3	3-1	6' x 50'		3	X		2-4-2
4	3-3	6' x 50'		4	X		2
5	2-2	6' x 50'	X	5	X		2-4-2
6A	1-3	6' x 6'	X	6		X	3
6B	1-4	6' x 6'	X	6		X	3
7	3-4	6' x 50'		7	X		2-4-2
8	3-2	6' x 50'	X	8	X		2

CITY OF RIDGELAND
 RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
 NORTH PARK DRIVE INTERSECTION

SIGNALIZATION PLAN

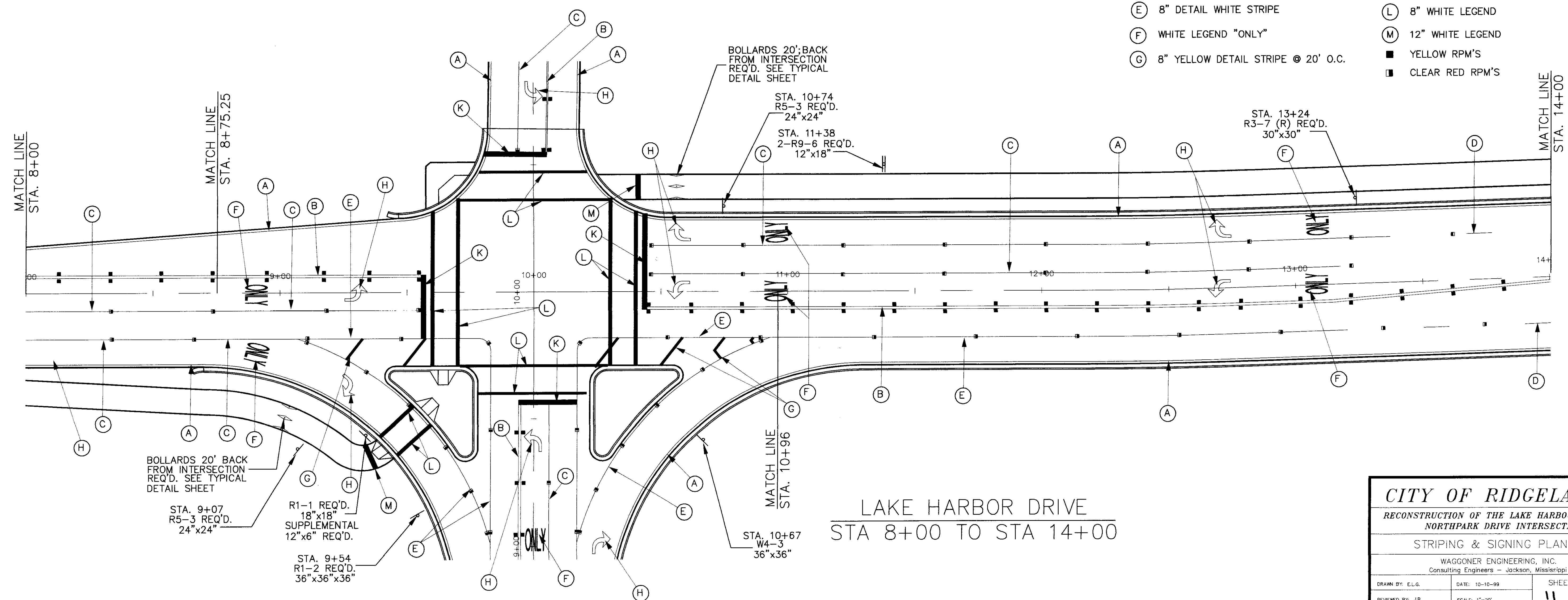
WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi

DRAWN BY: B.E.S. DATE: 10-15-99 SHEET NUMBER
 REVIEWED BY: B.F. SCALE: 1"=20' 10 OF



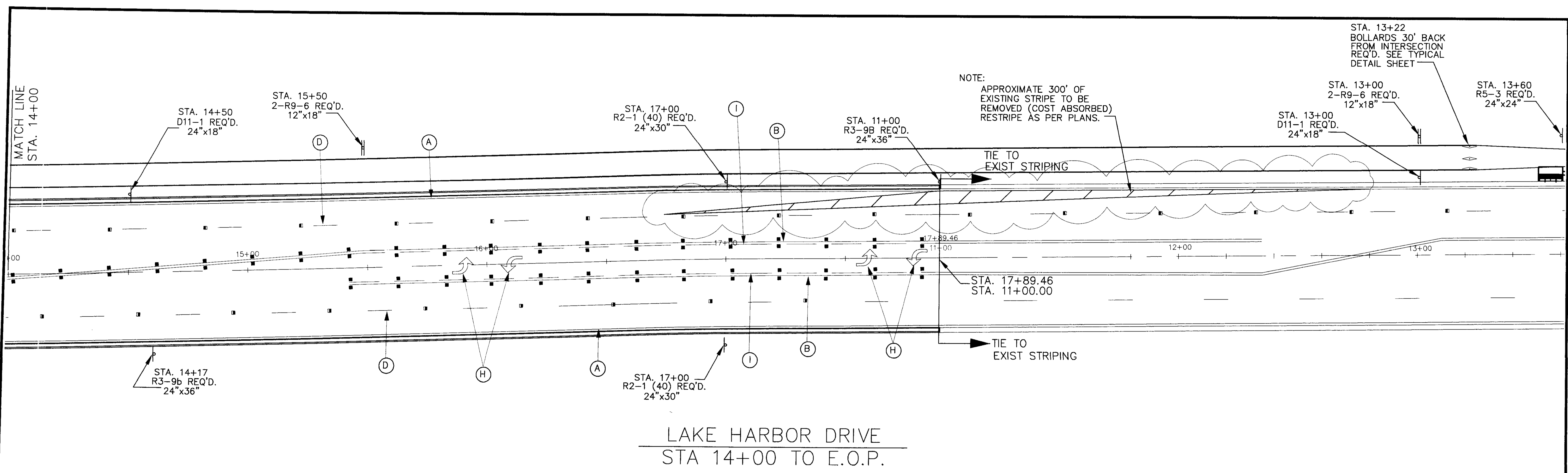
LAKE HARBOR DRIVE
STA 2+00 TO STA 8+00

- LEGEND**
- (A) 4" CONTINUOUS WHITE STRIPE
 - (B) DOUBLE 4" CONTINUOUS YELLOW STRIPE
 - (C) 4" DETAIL WHITE STRIPE
 - (D) 4" SKIP WHITE
 - (E) 8" DETAIL WHITE STRIPE
 - (F) WHITE LEGEND "ONLY"
 - (G) 8" YELLOW DETAIL STRIPE @ 20' O.C.
 - (H) WHITE LEGEND TURN ARROW
 - (I) 4" SKIP YELLOW
 - (J) 4" DETAIL YELLOW
 - (K) 24" WHITE LEGEND STOP BAR
 - (L) 8" WHITE LEGEND
 - (M) 12" WHITE LEGEND
 - YELLOW RPM'S
 - CLEAR RED RPM'S



LAKE HARBOR DRIVE
STA 8+00 TO STA 14+00

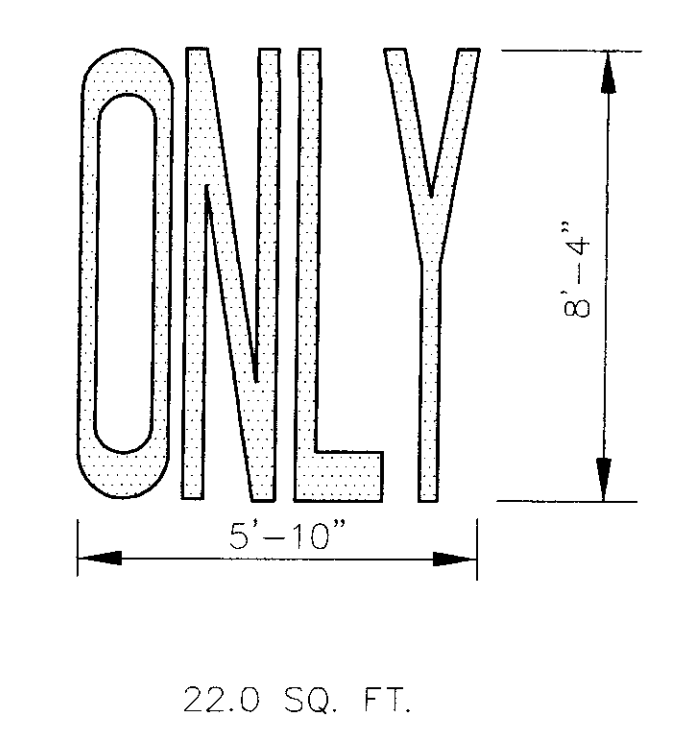
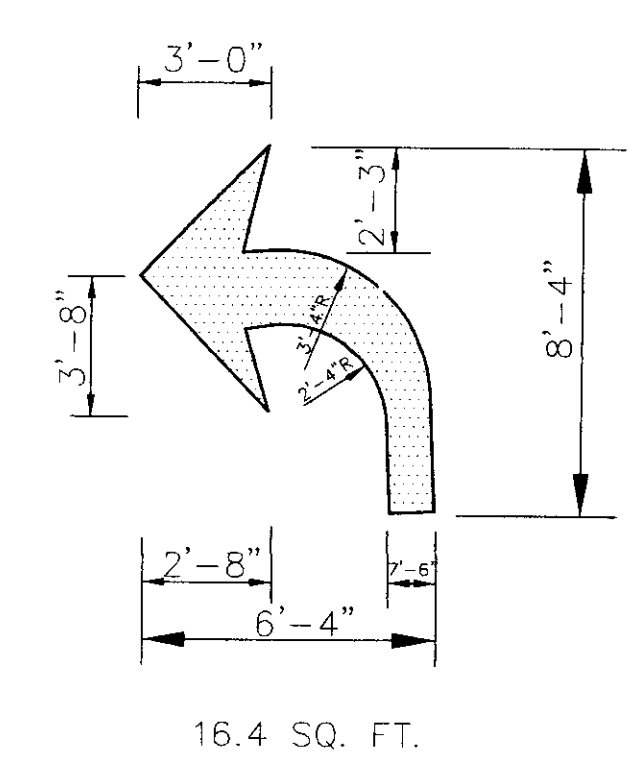
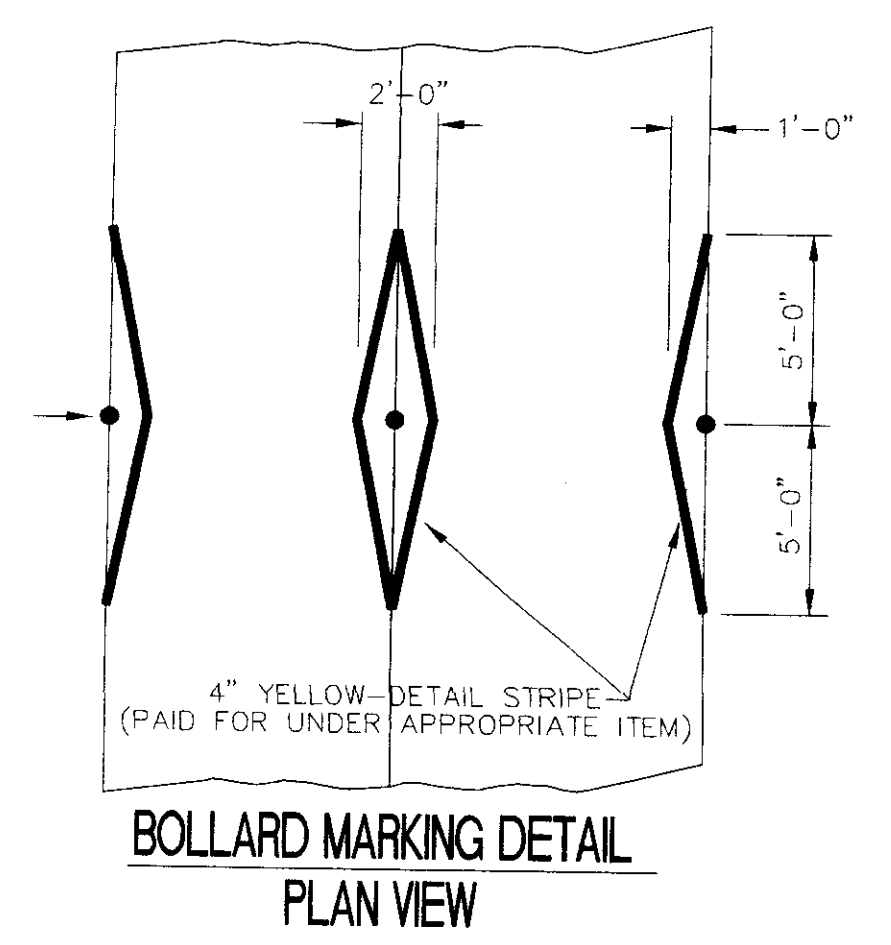
CITY OF RIDGELAND		
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/ NORTH PARK DRIVE INTERSECTION		
STRIPING & SIGNING PLAN		
WAGGONER ENGINEERING, INC. Consulting Engineers - Jackson, Mississippi		
DRAWN BY: E.L.G.	DATE: 10-10-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: 1"=20'	11 OF



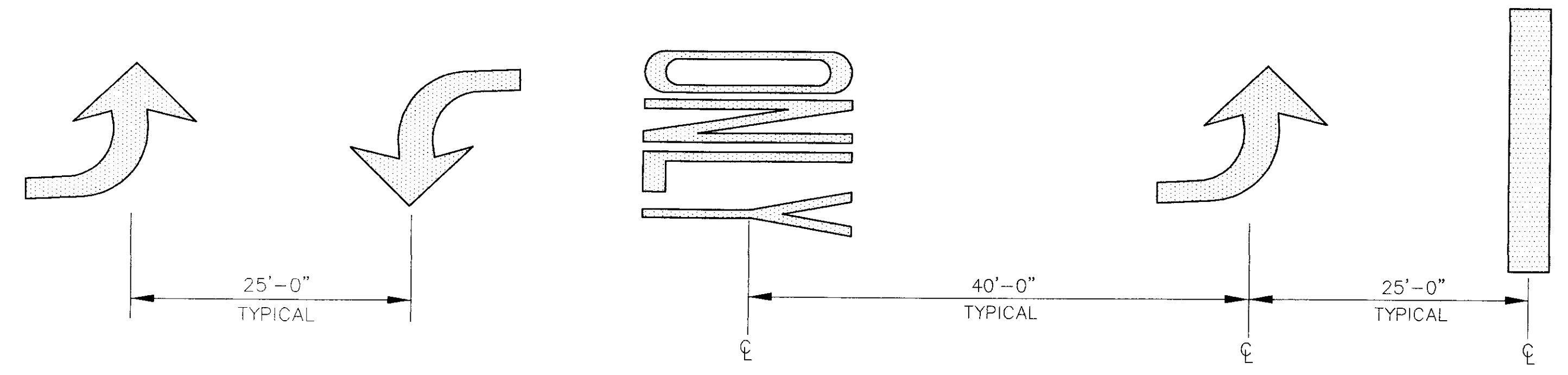
LAKE HARBOR DRIVE
STA 14+00 TO E.O.P.

LEGEND

- (A) 4" CONTINUOUS WHITE STRIPE
- (B) DOUBLE 4" CONTINUOUS YELLOW STRIPE
- (C) 4" DETAIL WHITE STRIPE
- (D) 4" SKIP WHITE
- (E) 8" DETAIL WHITE STRIPE
- (F) WHITE LEGEND "ONLY"
- (G) 8" YELLOW DETAIL STRIPE @ 20' O.C.
- (H) WHITE LEGEND TURN ARROW
- (I) 4' SKIP YELLOW
- (J) 4' DETAIL YELLOW
- (K) 24" WHITE LEGEND STOP BAR
- (L) 8" WHITE LEGEND
- (M) 12" WHITE LEGEND
- YELLOW RPM'S
- CLEAR RED RPM'S



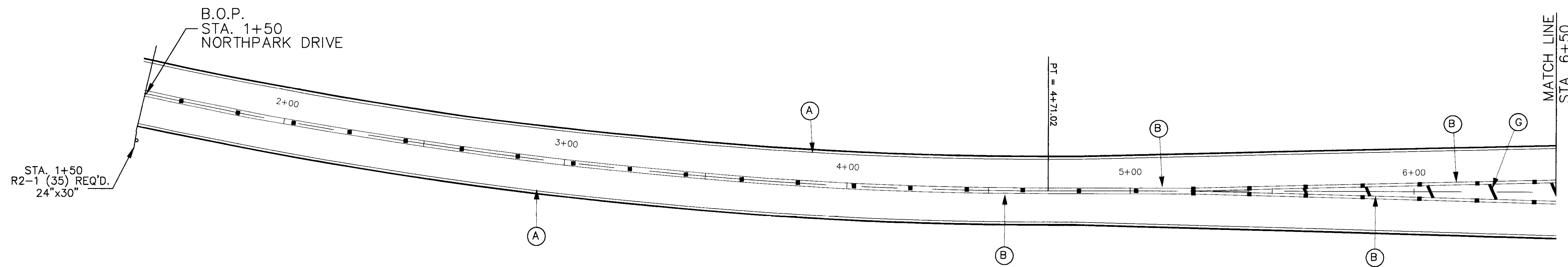
LEGEND DETAILS



NOTES

1. ALL PERMANENT STRIPING TO BE THERMOPLASTIC MEETING THE MINIMUM REQUIREMENTS AS SPECIFIED IN THE MISS. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1990 EDITION.
2. ALL TRAFFIC CONTROL REGULATORY AND WARNING SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MOST RECENTLY PUBLISHED MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. ALL REGULATORY AND WARNING SIGNS ARE TO HAVE ENCAPSULATED LENS (HIGH INTENSITY) SHEETING AS SPECIFIED IN THE MISS. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. ALL EXISTING ROADWAY SIGNS ARE TO BE REMOVED BY THE CONTRACTOR AND SALVAGED TO THE CITY.

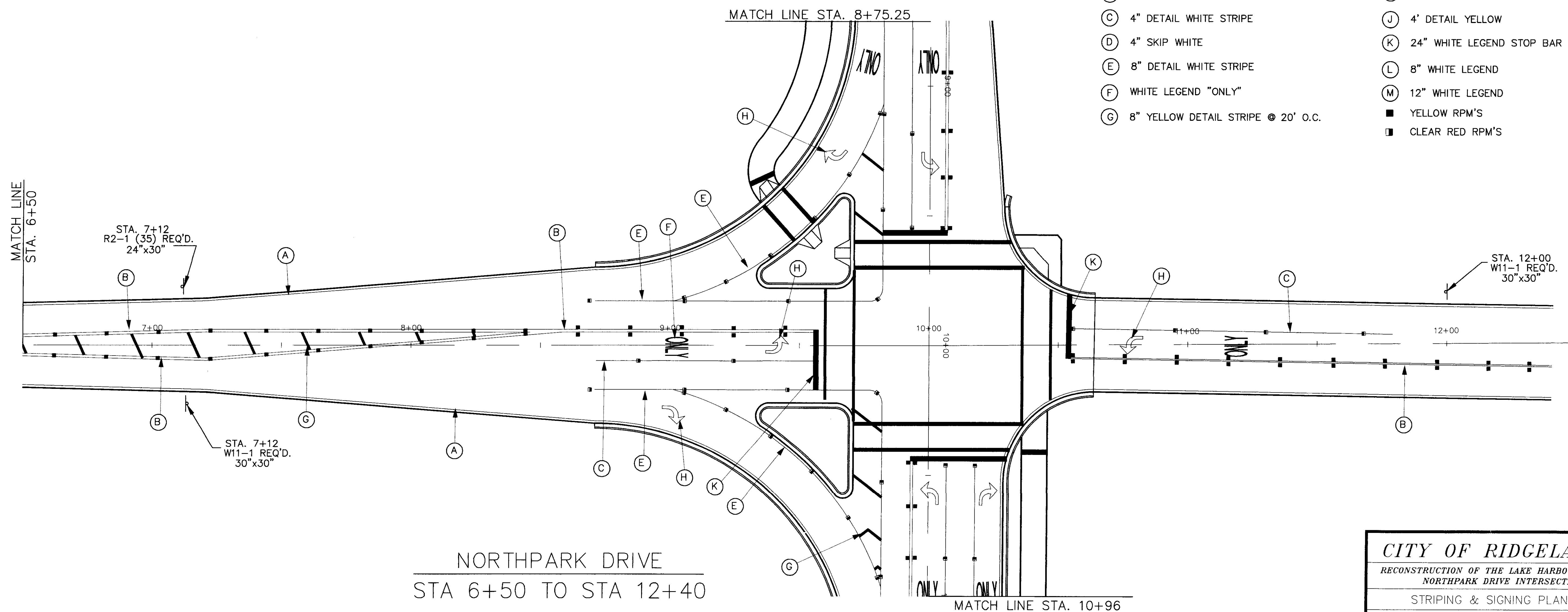
CITY OF RIDGELAND
 RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
 NORTHPARK DRIVE INTERSECTION
 STRIPING & SIGNING PLAN
 WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi
 DRAWN BY: E.L.G. DATE: 10-10-99 SHEET NUMBER
 REVIEWED BY: J.B. SCALE: 1"=20' 12 OF



NORTH PARK DRIVE
STA 1+50 TO STA 6+50

LEGEND

- | | |
|--|-------------------------------|
| (A) 4" CONTINUOUS WHITE STRIPE | (H) WHITE LEGEND TURN ARROW |
| (B) DOUBLE 4" CONTINUOUS YELLOW STRIPE | (I) 4' SKIP YELLOW |
| (C) 4" DETAIL WHITE STRIPE | (J) 4' DETAIL YELLOW |
| (D) 4" SKIP WHITE | (K) 24" WHITE LEGEND STOP BAR |
| (E) 8" DETAIL WHITE STRIPE | (L) 8" WHITE LEGEND |
| (F) WHITE LEGEND "ONLY" | (M) 12" WHITE LEGEND |
| (G) 8" YELLOW DETAIL STRIPE @ 20' O.C. | ■ YELLOW RPM'S |
| | ■ CLEAR RED RPM'S |

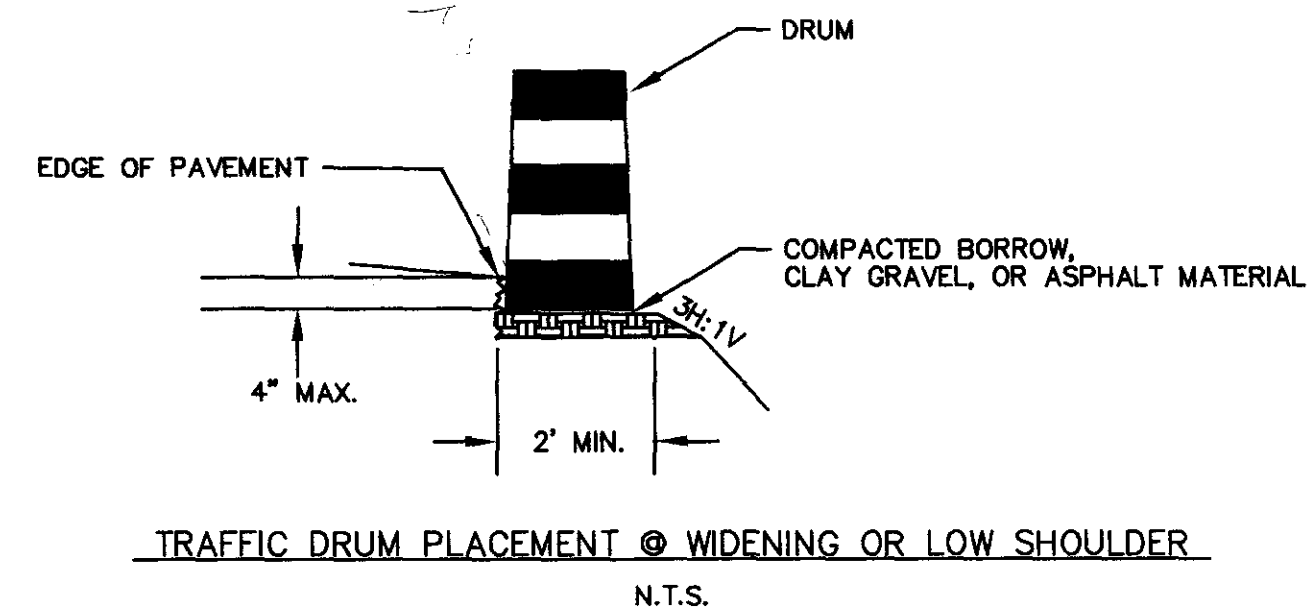


NORTH PARK DRIVE
STA 6+50 TO STA 12+40

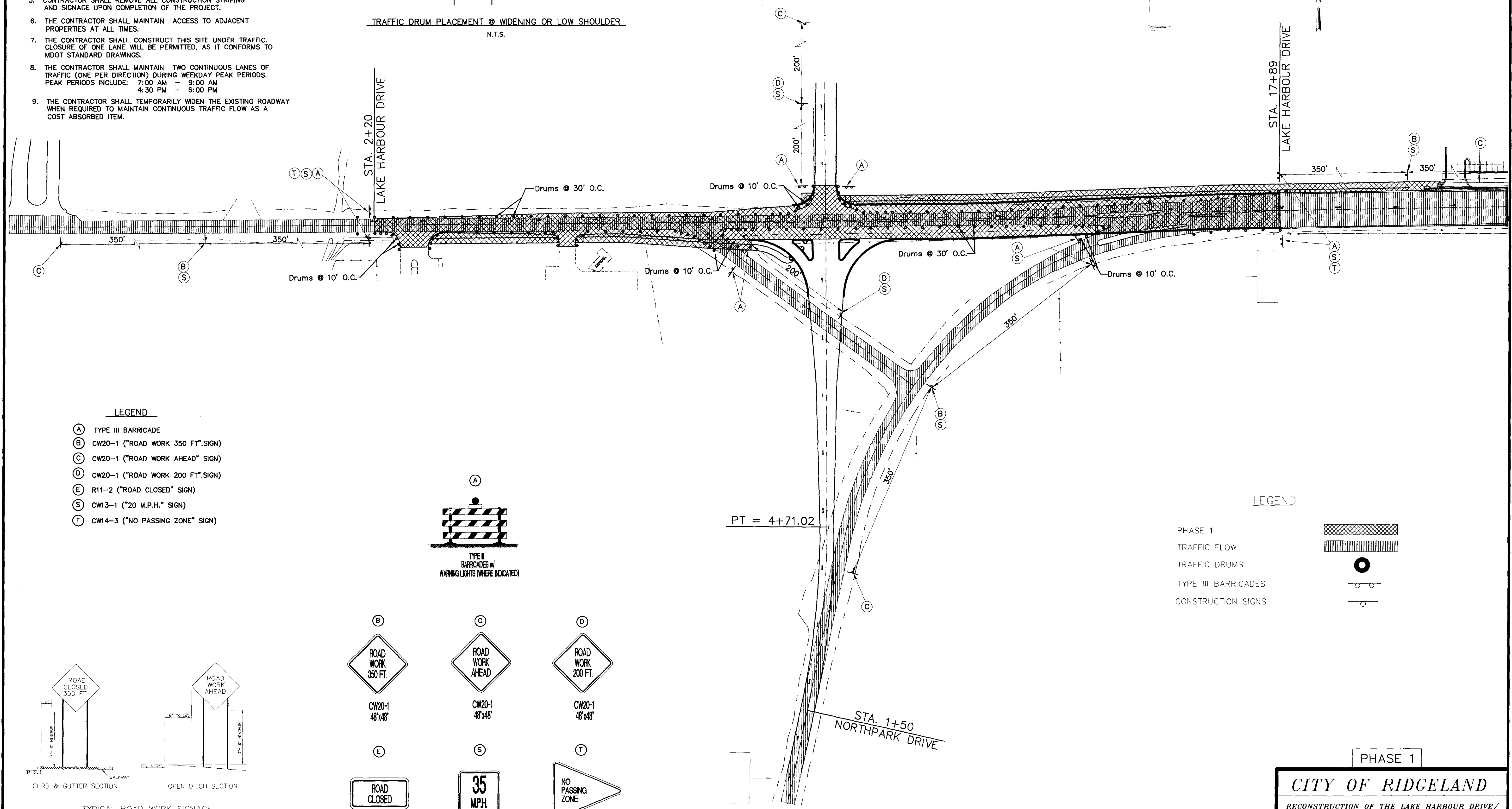
CITY OF RIDGELAND	
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/ NORTH PARK DRIVE INTERSECTION	
STRIPING & SIGNING PLAN	
WAGGONER ENGINEERING, INC. Consulting Engineers - Jackson, Mississippi	
DRAWN BY: B.F./E.L.G.	DATE: 08-06-99
REVIEWED BY: J.B.	SCALE: 1"=20'
SHEET NUMBER 13 OF	

NOTES:

1. ALL SIGNS SHALL HAVE HIGH INTENSITY SHEETING, AND SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING THAT ALL CONSTRUCTION WORK ZONES ARE IN COMPLIANCE WITH THE LATEST EDITION OF THE MUTCD.
3. IN ADDITION TO THE SIGNAGE SHOWN, THE CONTRACTOR SHALL USE ALL NECESSARY DEVICES FOR UTILIZING STANDARD CONSTRUCTION WORK ZONES.
4. TEMPORARY STRIPING SHALL BE USED WHERE NECESSARY TO AVOID DRIVER CONFUSION, AND PROVIDE SAFETY THROUGHOUT THE WORK ZONES.
5. CONTRACTOR SHALL REMOVE ALL CONSTRUCTION STRIPING AND SIGNAGE UPON COMPLETION OF THE PROJECT.
6. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES.
7. THE CONTRACTOR SHALL CONSTRUCT THIS SITE UNDER TRAFFIC. CLOSURE OF ONE LANE WILL BE PERMITTED, AS IT CONFORMS TO MDOT STANDARD DRAWINGS.
8. THE CONTRACTOR SHALL MAINTAIN TWO CONTINUOUS LANES OF TRAFFIC (ONE PER DIRECTION) DURING WEEKDAY PEAK PERIODS. PEAK PERIODS INCLUDE: 7:00 AM - 9:00 AM
4:30 PM - 6:00 PM
9. THE CONTRACTOR SHALL TEMPORARILY WIDEN THE EXISTING ROADWAY WHEN REQUIRED TO MAINTAIN CONTINUOUS TRAFFIC FLOW AS A COST ABSORBED ITEM.

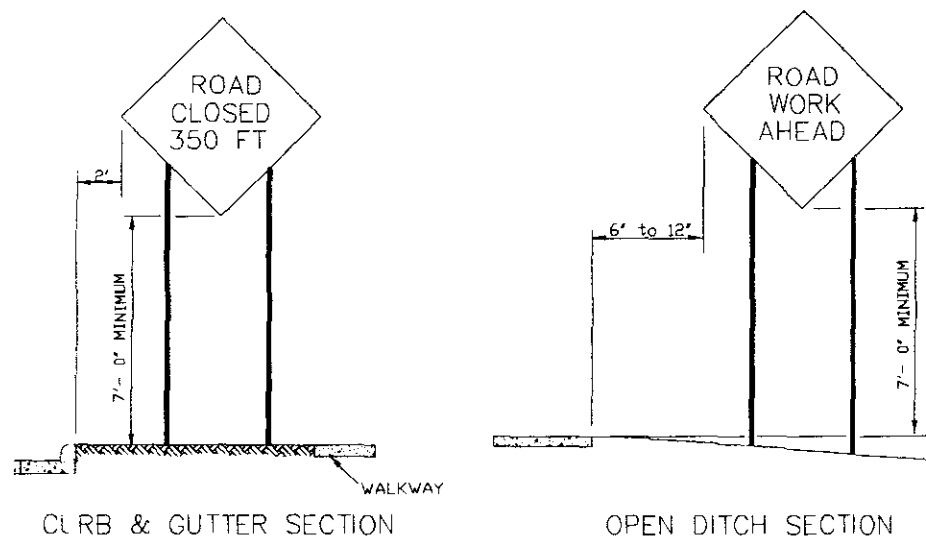
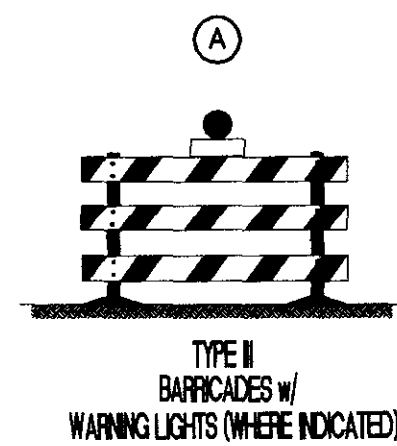


NOTE: IN AREAS OF WIDENING OR LOW SHOULDERS, THE CONTRACTOR SHALL PLACE PLASTIC DRUMS ADJACENT TO THE ROADWAY WHERE THE DROP-OFF EXCEEDS TWO INCHES AND WHEN WORK IS SUSPENDED OR FOR NIGHT OPERATION. (COST ABSORBED.) DRUMS ARE ALSO REQUIRED WHERE THE WORK ZONE INCLUDES UNDERCUTTING THE SHOULDER. (COST ABSORBED.)

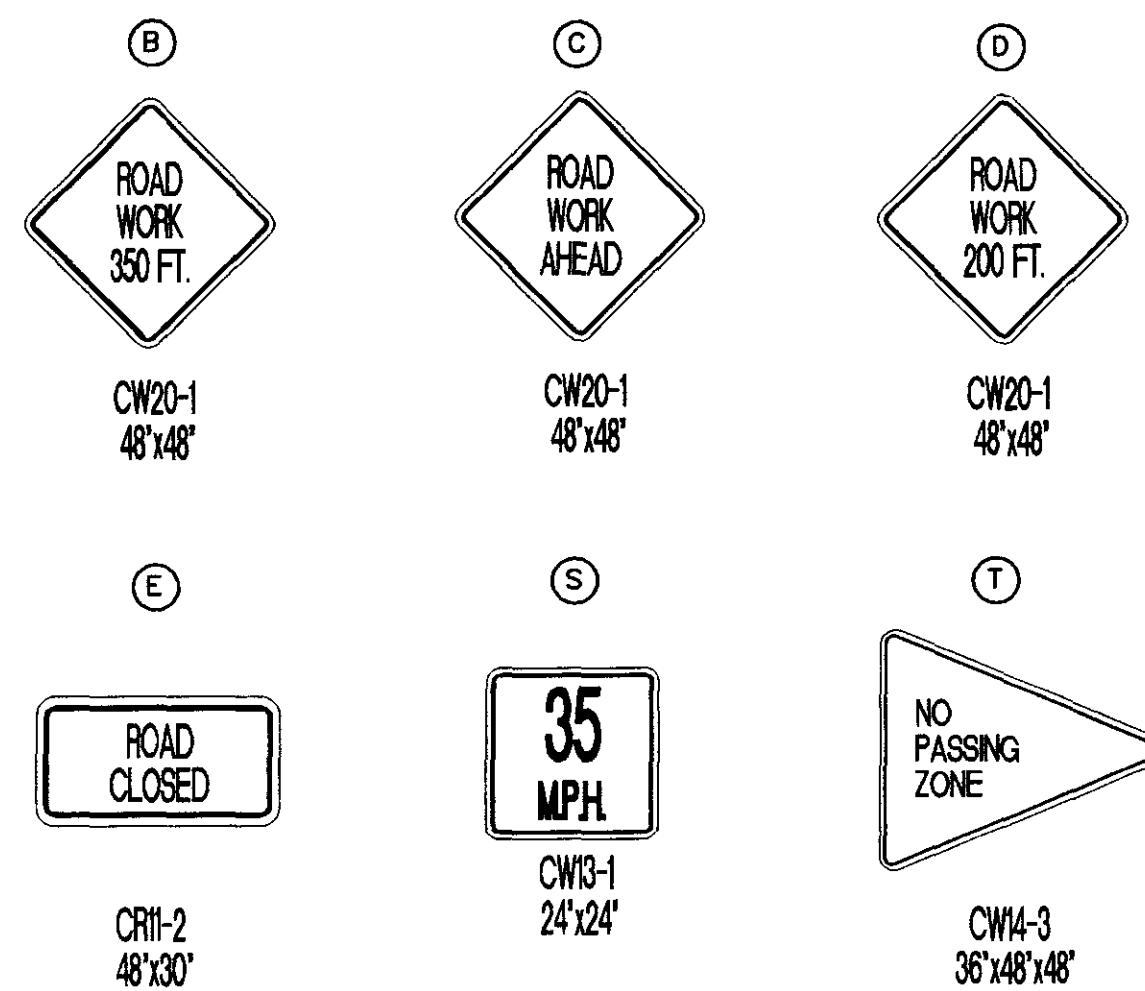


LEGEND

- (A) TYPE III BARRICADE
- (B) CW20-1 ("ROAD WORK 350 FT." SIGN)
- (C) CW20-1 ("ROAD WORK AHEAD" SIGN)
- (D) CW20-1 ("ROAD WORK 200 FT." SIGN)
- (E) R11-2 ("ROAD CLOSED" SIGN)
- (S) CW13-1 ("20 M.P.H." SIGN)
- (T) CW14-3 ("NO PASSING ZONE" SIGN)



TYPICAL ROAD WORK SIGNAGE
N.T.S.



LEGEND

- PHASE 1
- TRAFFIC FLOW
- TRAFFIC DRUMS
- TYPE III BARRICADES
- CONSTRUCTION SIGNS

PHASE 1

CITY OF RIDGELAND

RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
NORTH PARK DRIVE INTERSECTION

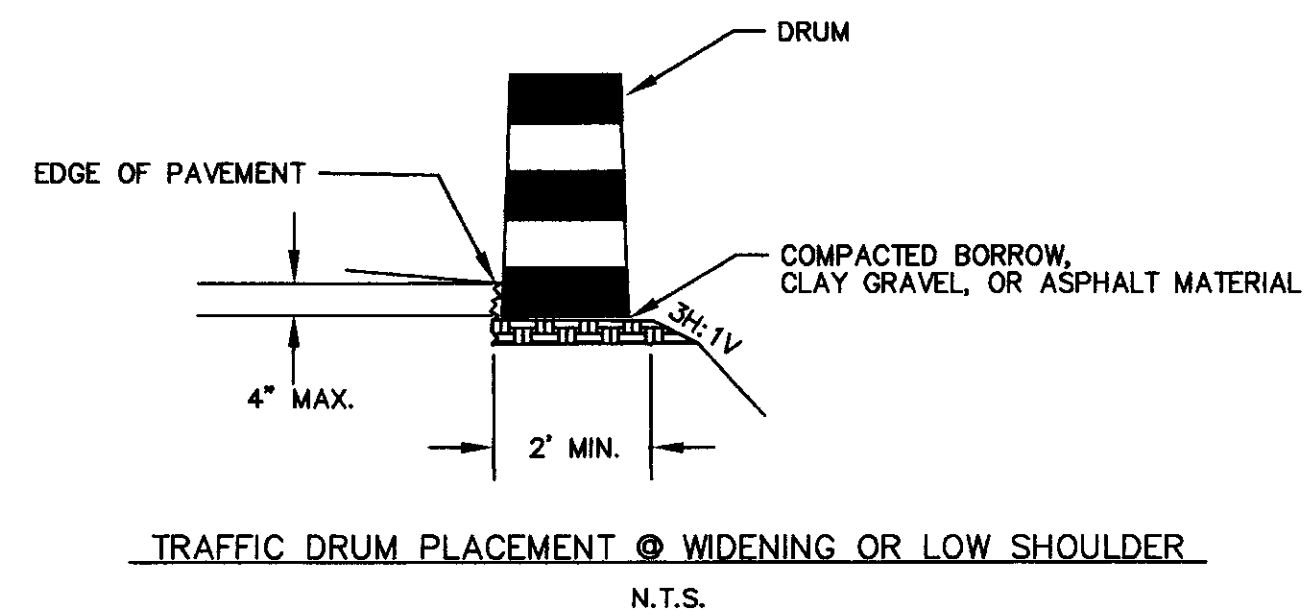
TRAFFIC CONTROL PLAN-PHASE 1

WAGGONER ENGINEERING, INC.
Consulting Engineers - Jackson, Mississippi

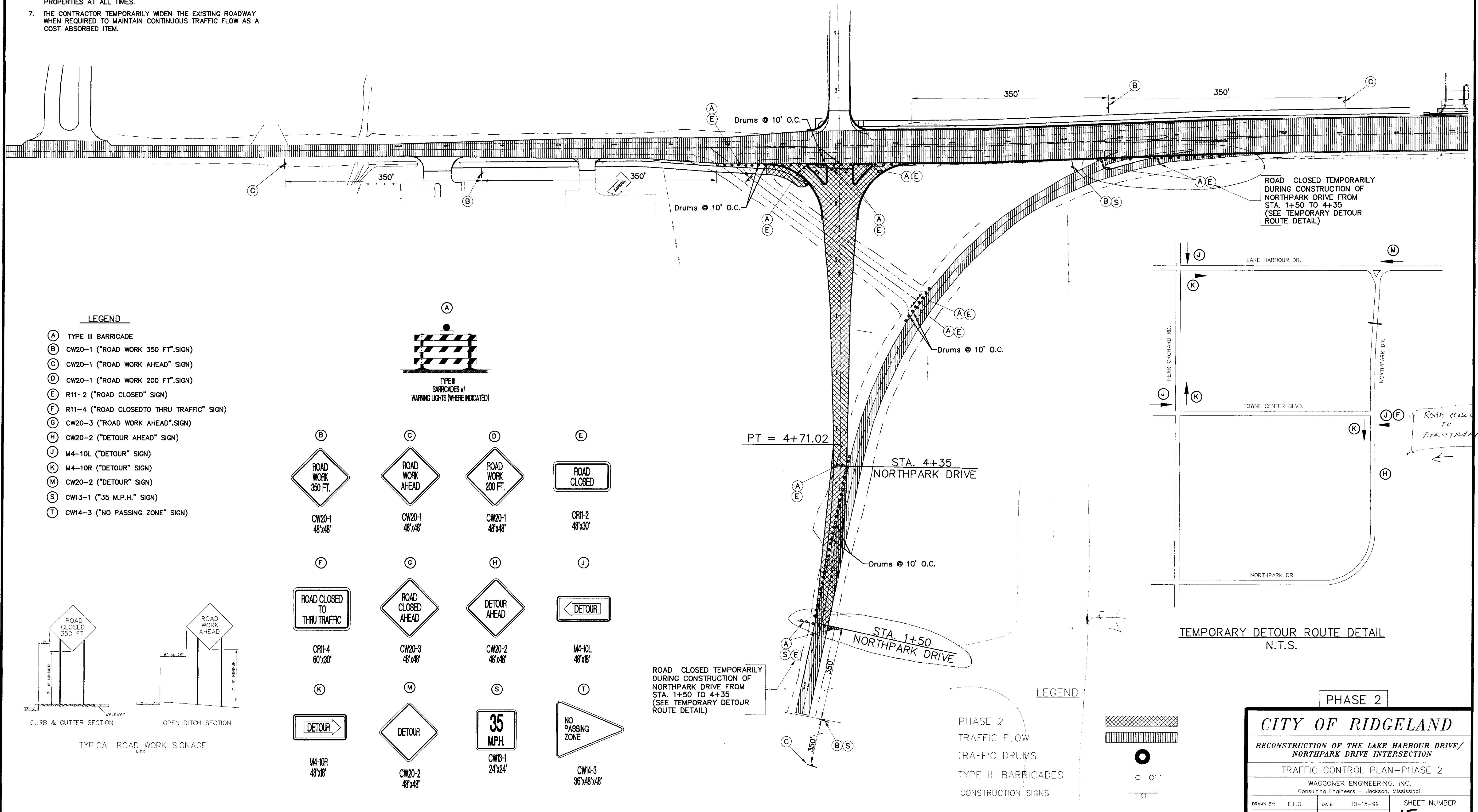
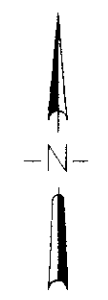
DRAWN BY: E.L.G.	DATE: 10-15-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: 1" = 80'	14 OF

NOTES:

1. ALL SIGNS SHALL HAVE HIGH INTENSITY SHEETING, AND SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING THAT ALL CONSTRUCTION WORK ZONES ARE IN COMPLIANCE WITH THE LATEST EDITION OF THE MUTCD.
3. IN ADDITION TO THE SIGNAGE SHOWN, THE CONTRACTOR SHALL USE ALL NECESSARY DEVICES FOR UTILIZING STANDARD CONSTRUCTION WORK ZONES.
4. TEMPORARY STRIPING SHALL BE USED WHERE NECESSARY TO AVOID DRIVER CONFUSION, AND PROVIDE SAFETY THROUGHOUT THE WORK ZONES.
5. CONTRACTOR SHALL REMOVE ALL CONSTRUCTION STRIPING AND SIGNAGE UPON COMPLETION OF THE PROJECT.
6. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES.
7. THE CONTRACTOR TEMPORARILY WIDEN THE EXISTING ROADWAY WHEN REQUIRED TO MAINTAIN CONTINUOUS TRAFFIC FLOW AS A COST ABSORBED ITEM.

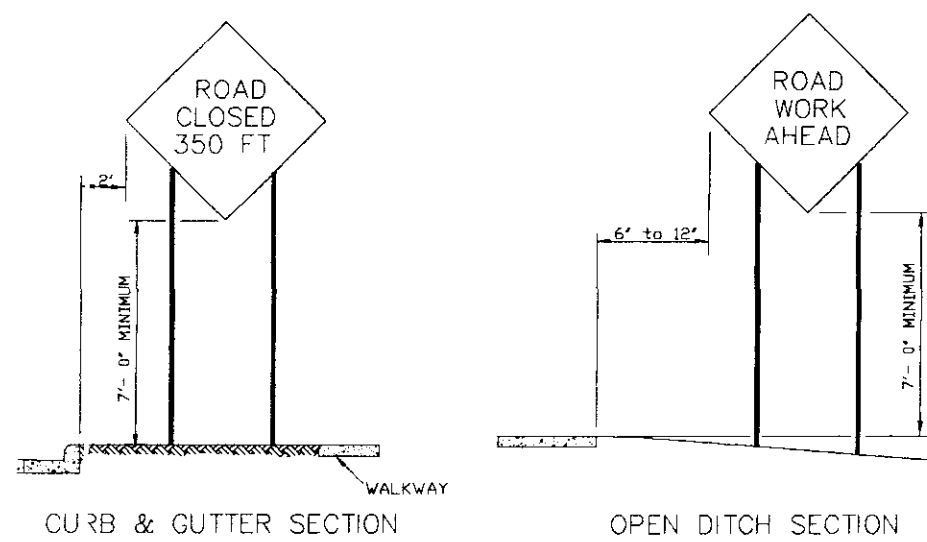
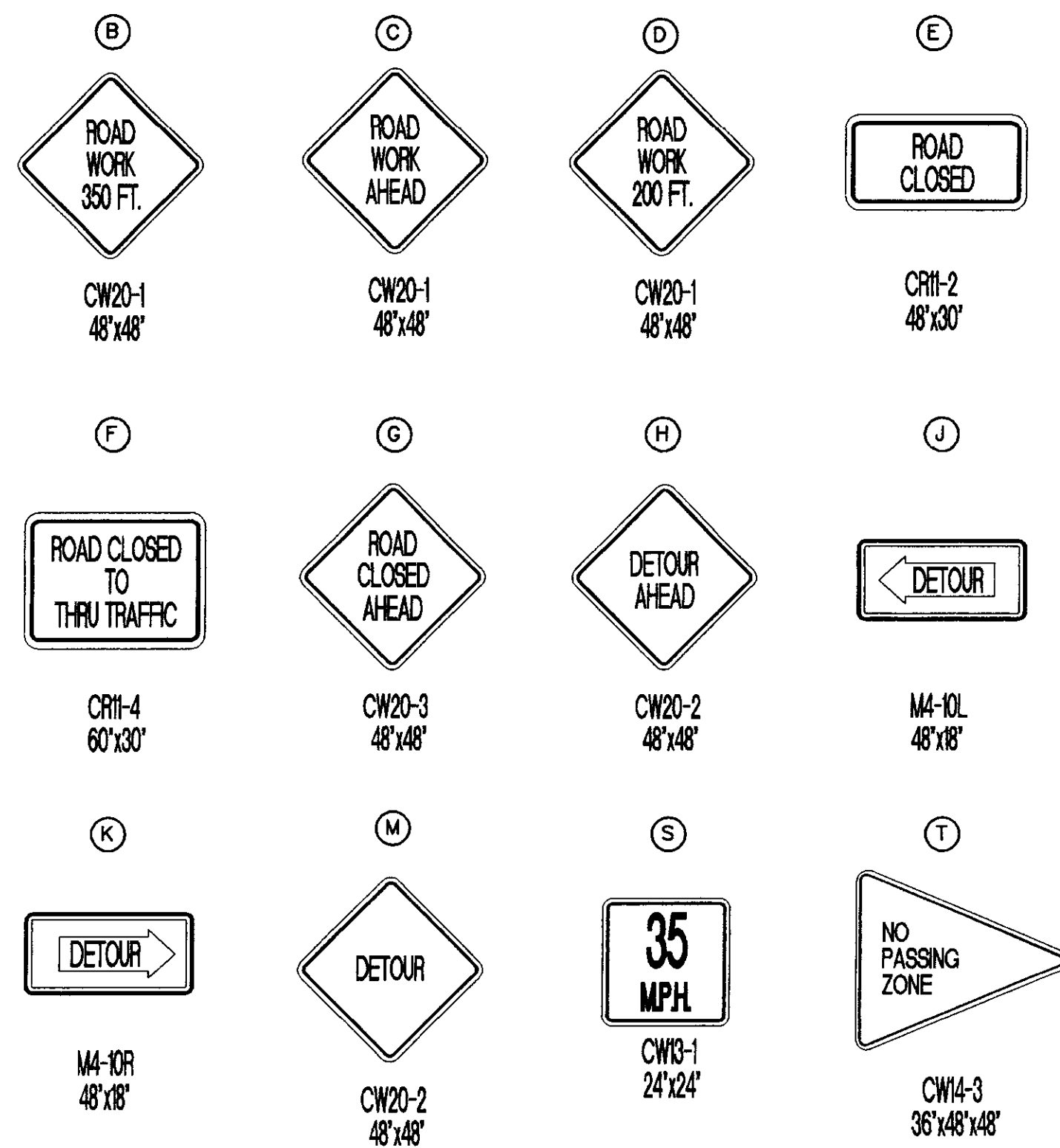
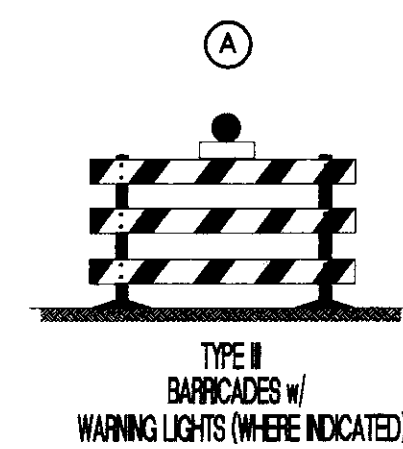


NOTE: IN AREAS OF WIDENING OR LOW SHOULDERS, THE CONTRACTOR SHALL PLACE PLASTIC DRUMS ADJACENT TO THE ROADWAY WHERE THE DROP-OFF EXCEEDS TWO INCHES AND WHEN WORK IS SUSPENDED OR FOR NIGHT OPERATION. (COST ABSORBED.) DRUMS ARE ALSO REQUIRED WHERE THE WORK ZONE INCLUDES UNDERCUTTING THE SHOULDER. (COST ABSORBED.)



LEGEND

- (A) TYPE III BARRICADE
- (B) CW20-1 ("ROAD WORK 350 FT." SIGN)
- (C) CW20-1 ("ROAD WORK AHEAD" SIGN)
- (D) CW20-1 ("ROAD WORK 200 FT." SIGN)
- (E) R11-2 ("ROAD CLOSED" SIGN)
- (F) R11-4 ("ROAD CLOSED TO THRU TRAFFIC" SIGN)
- (G) CW20-3 ("ROAD WORK AHEAD" SIGN)
- (H) CW20-2 ("DETOUR AHEAD" SIGN)
- (J) M4-10L ("DETOUR" SIGN)
- (K) M4-10R ("DETOUR" SIGN)
- (M) CW20-2 ("DETOUR" SIGN)
- (S) CW13-1 ("35 M.P.H." SIGN)
- (T) CW14-3 ("NO PASSING ZONE" SIGN)

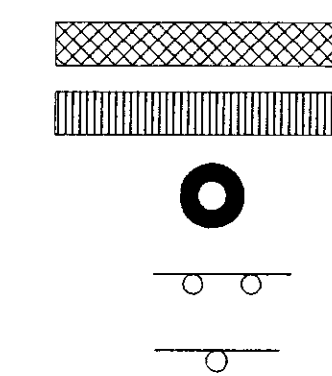


TYPICAL ROAD WORK SIGNAGE
N.T.S.

ROAD CLOSED TEMPORARILY DURING CONSTRUCTION OF NORTH PARK DRIVE FROM STA. 1+50 TO 4+35 (SEE TEMPORARY DETOUR ROUTE DETAIL)

LEGEND

- PHASE 2 TRAFFIC FLOW
- PHASE 2 TRAFFIC DRUMS
- PHASE 2 TYPE III BARRICADES
- PHASE 2 CONSTRUCTION SIGNS



TEMPORARY DETOUR ROUTE DETAIL
N.T.S.

PHASE 2

CITY OF RIDGELAND
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
NORTH PARK DRIVE INTERSECTION

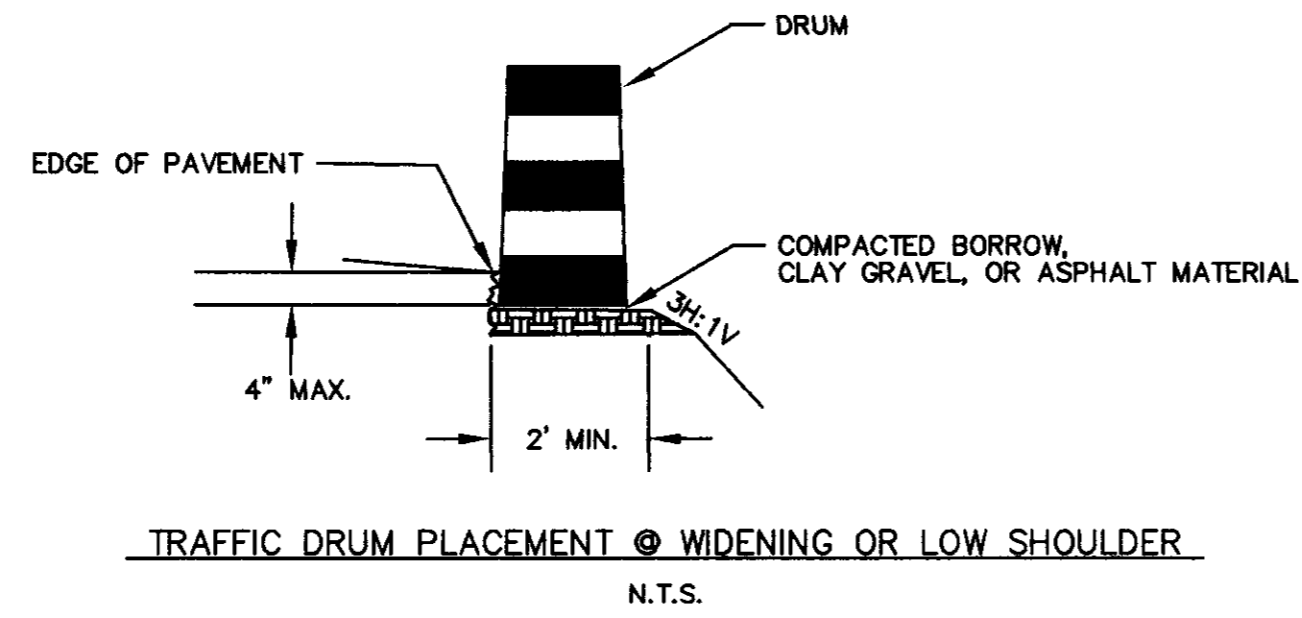
TRAFFIC CONTROL PLAN—PHASE 2

WAGGONER ENGINEERING, INC.
Consulting Engineers — Jackson, Mississippi

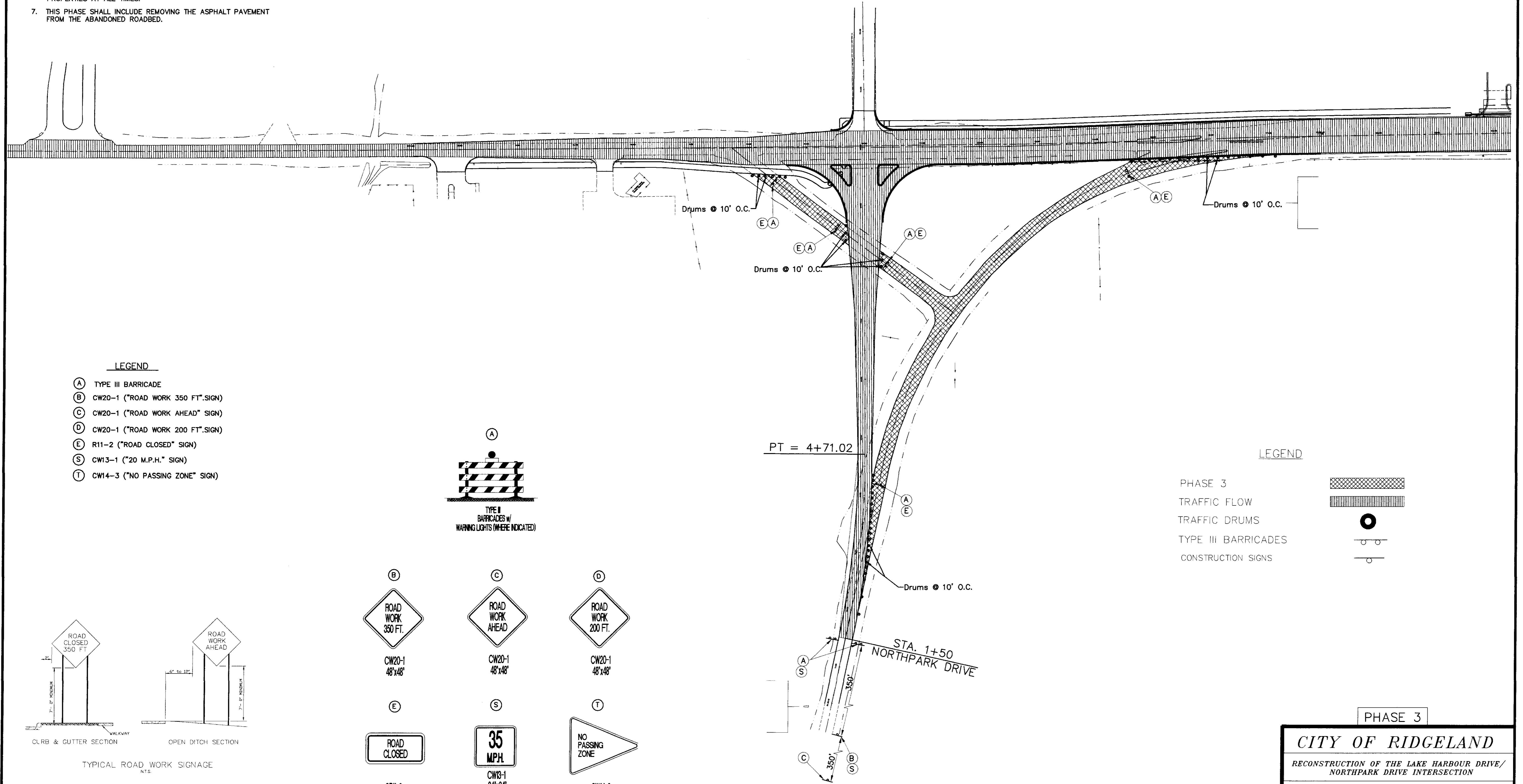
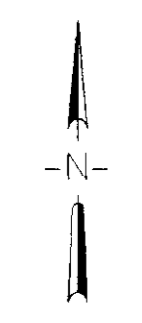
DRAWN BY: E.L.G.	DATE: 10-15-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: 1" = 80'	15 OF

NOTES:

1. ALL SIGNS SHALL HAVE HIGH INTENSITY SHEETING, AND SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING THAT ALL CONSTRUCTION WORK ZONES ARE IN COMPLIANCE WITH THE LATEST EDITION OF THE MUTCD.
3. IN ADDITION TO THE SIGNAGE SHOWN, THE CONTRACTOR SHALL USE ALL NECESSARY DEVICES FOR UTILIZING STANDARD CONSTRUCTION WORK ZONES.
4. TEMPORARY STRIPING SHALL BE USED WHERE NECESSARY TO AVOID DRIVER CONFUSION, AND PROVIDE SAFETY THROUGHOUT THE WORK ZONES.
5. CONTRACTOR SHALL REMOVE ALL CONSTRUCTION STRIPING AND SIGNAGE UPON COMPLETION OF THE PROJECT.
6. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES.
7. THIS PHASE SHALL INCLUDE REMOVING THE ASPHALT PAVEMENT FROM THE ABANDONED ROADBED.

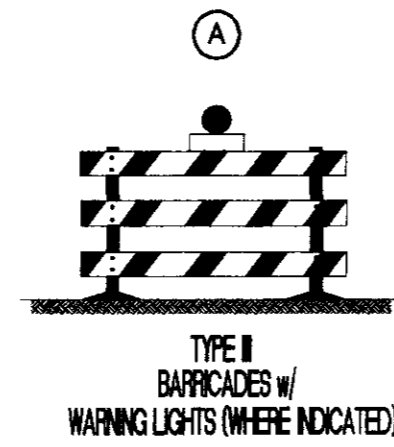


NOTE: IN AREAS OF WIDENING OR LOW SHOULDERS, THE CONTRACTOR SHALL PLACE PLASTIC DRUMS ADJACENT TO THE ROADWAY WHERE THE DROP-OFF EXCEEDS TWO INCHES AND WHEN WORK IS SUSPENDED OR FOR NIGHT OPERATION. (COST ABSORBED.) DRUMS ARE ALSO REQUIRED WHERE THE WORK ZONE INCLUDES UNDERCUTTING THE SHOULDER. (COST ABSORBED.)



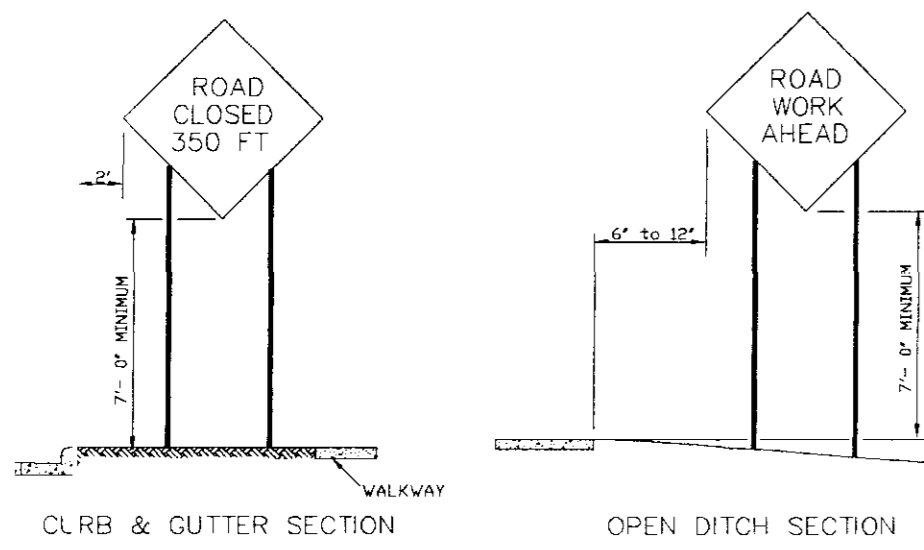
LEGEND

- (A) TYPE III BARRICADE
- (B) CW20-1 ("ROAD WORK 350 FT." SIGN)
- (C) CW20-1 ("ROAD WORK AHEAD" SIGN)
- (D) CW20-1 ("ROAD WORK 200 FT." SIGN)
- (E) R11-2 ("ROAD CLOSED" SIGN)
- (S) CW13-1 ("20 M.P.H." SIGN)
- (T) CW14-3 ("NO PASSING ZONE" SIGN)

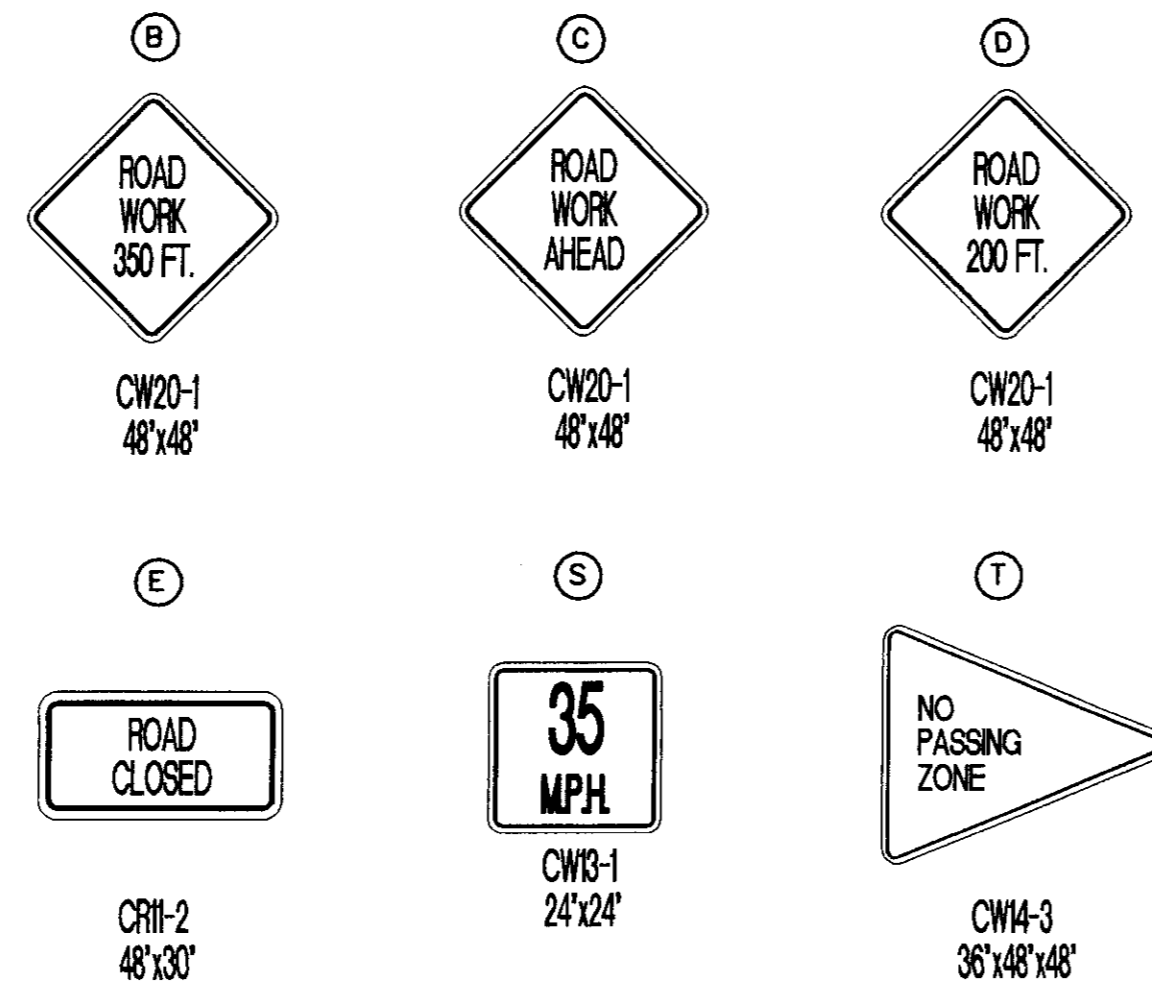


LEGEND

- PHASE 3
- TRAFFIC FLOW
- TRAFFIC DRUMS
- TYPE III BARRICADES
- CONSTRUCTION SIGNS

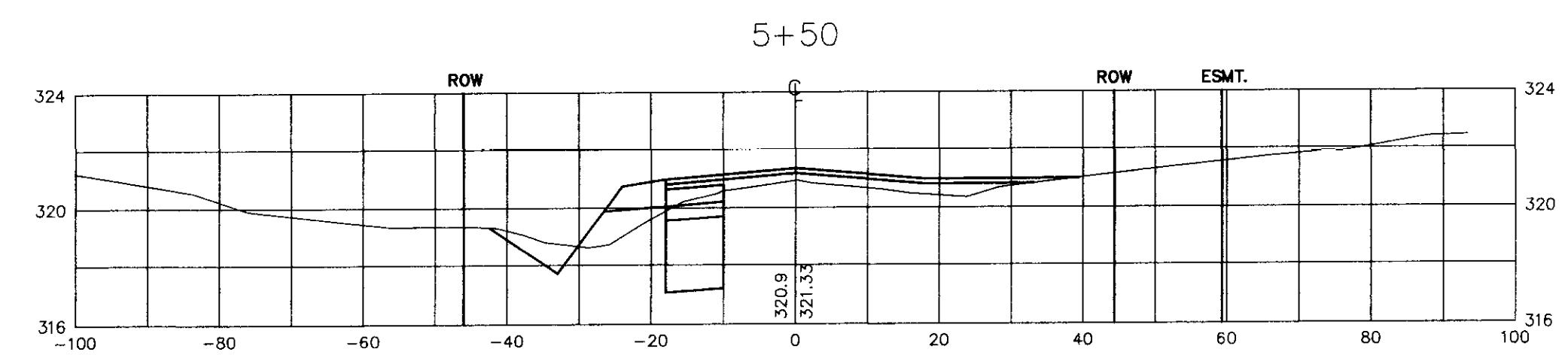
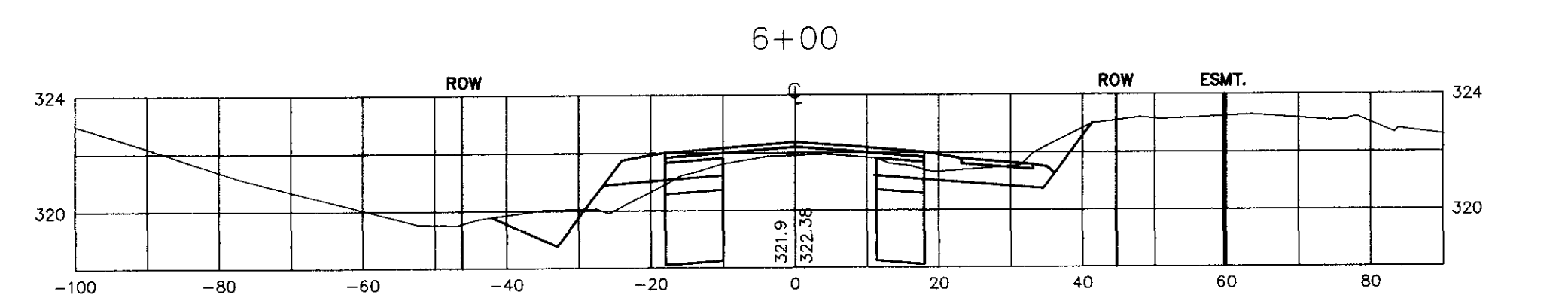
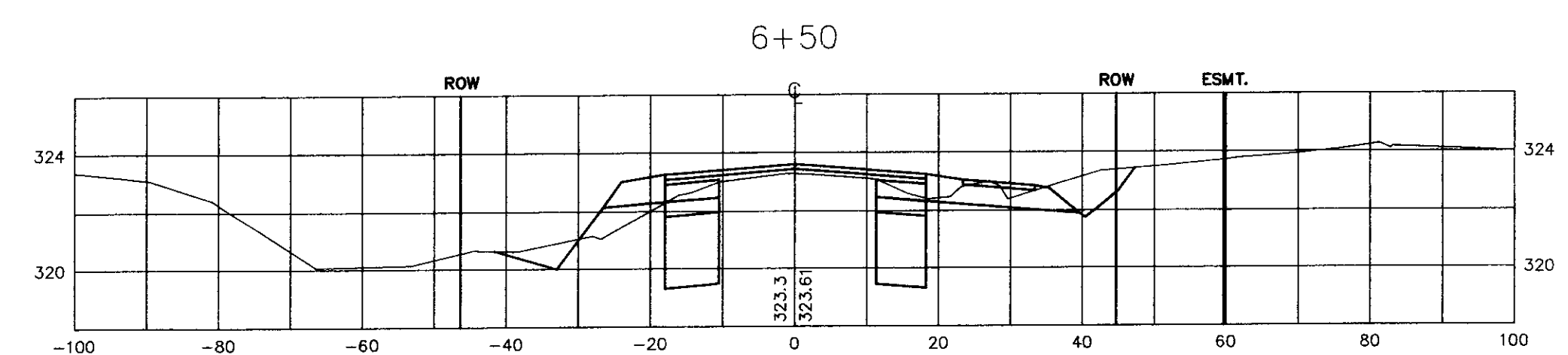
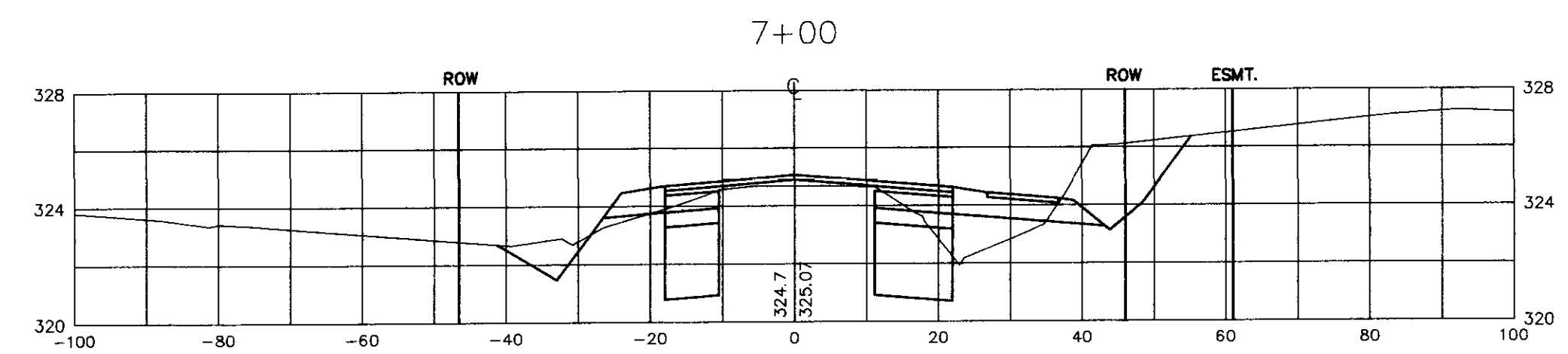
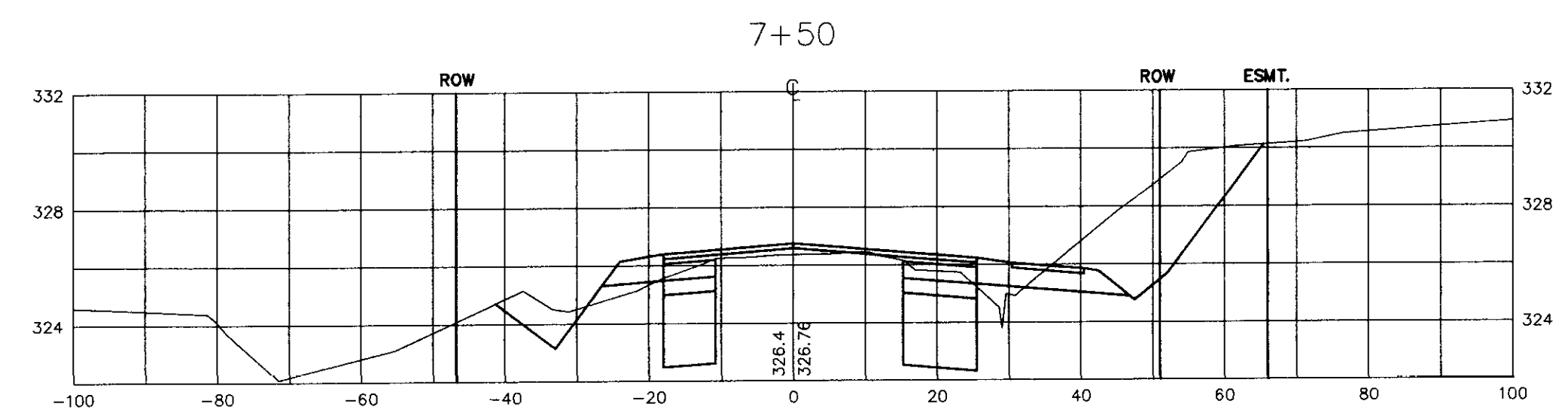
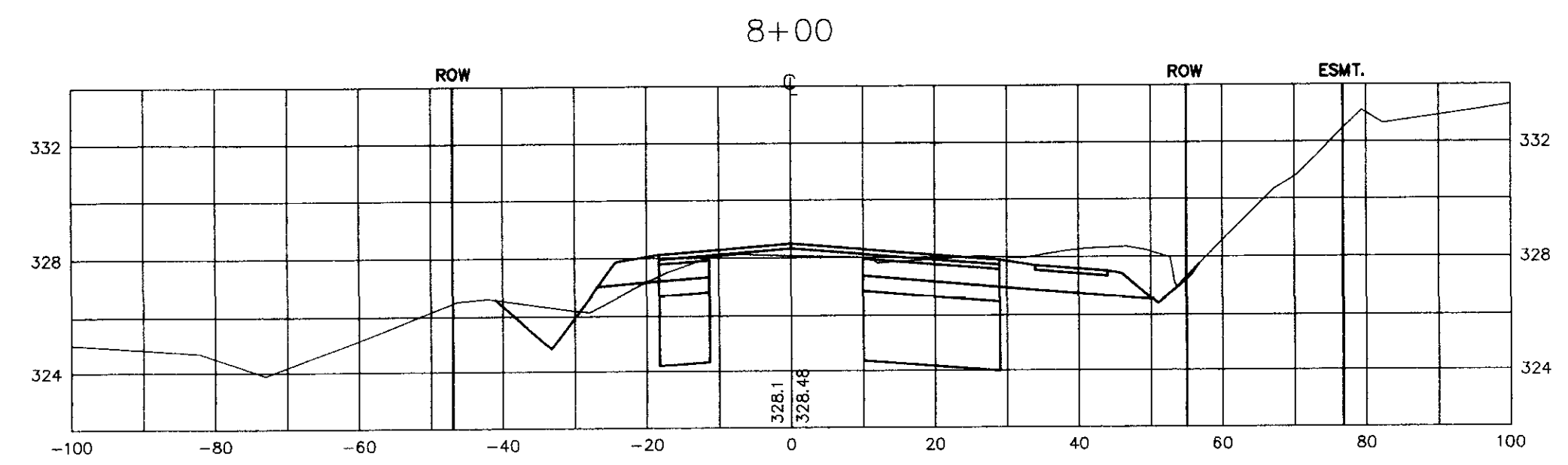
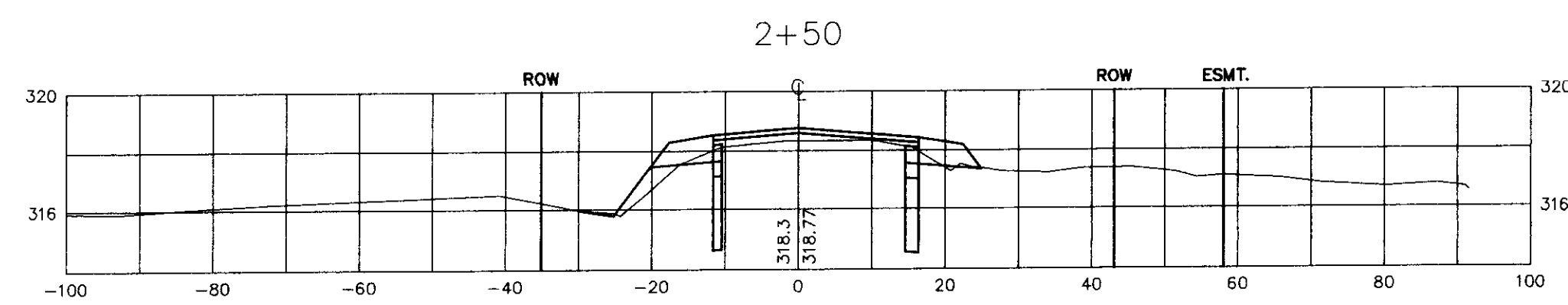
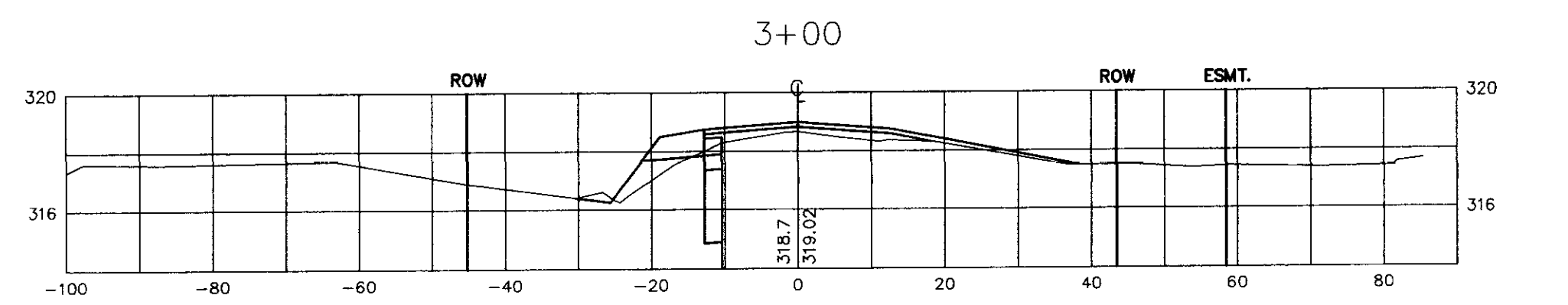
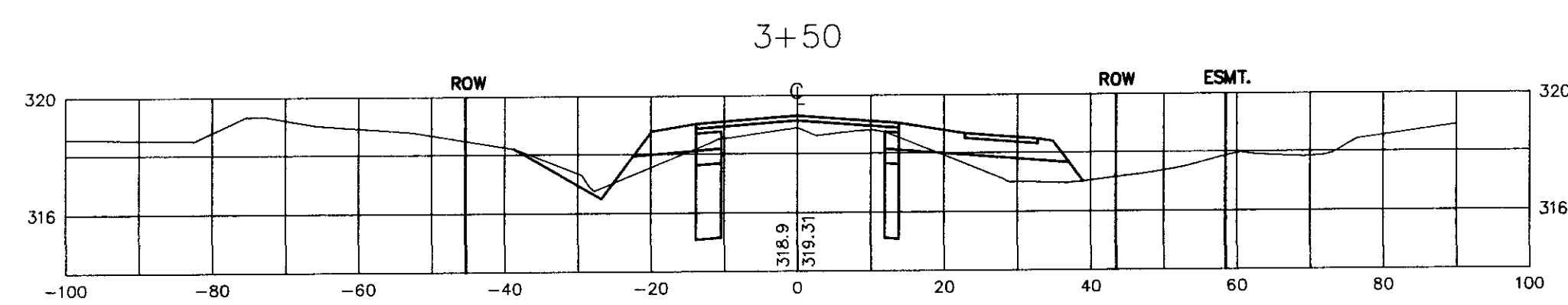
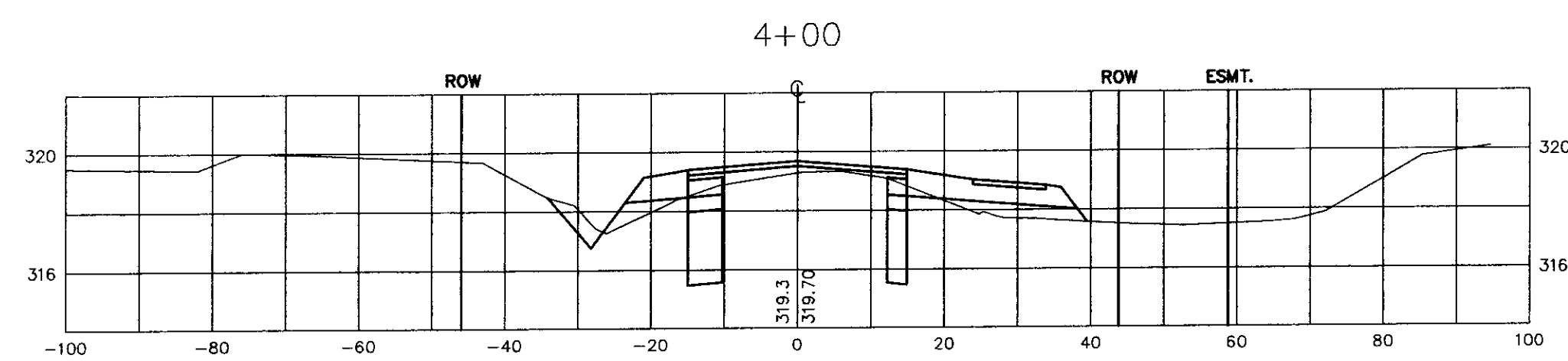
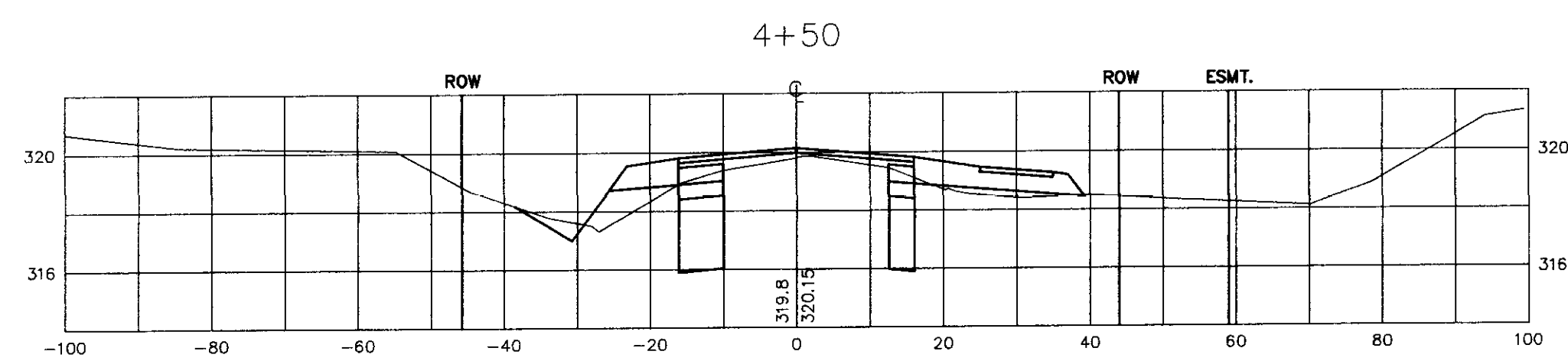
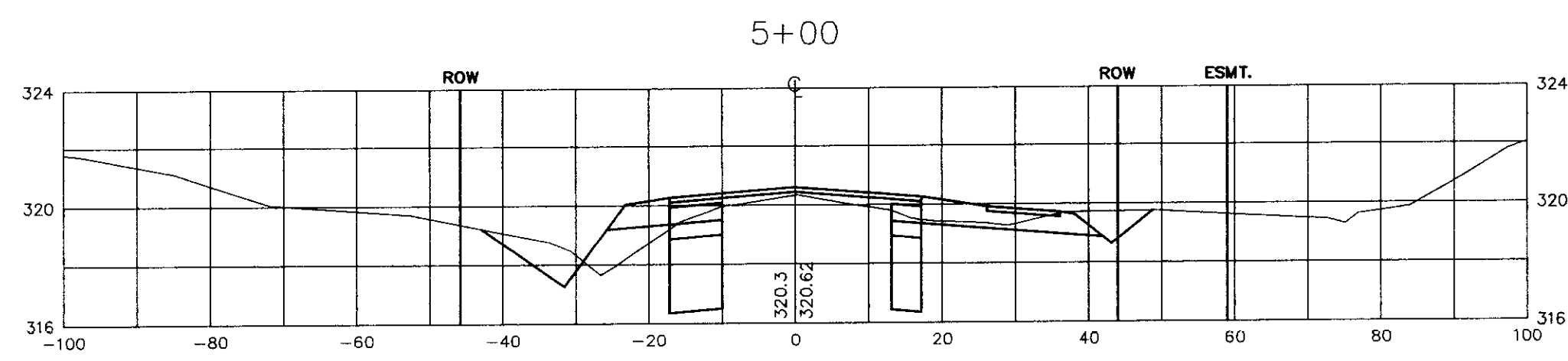


TYPICAL ROAD WORK SIGNAGE



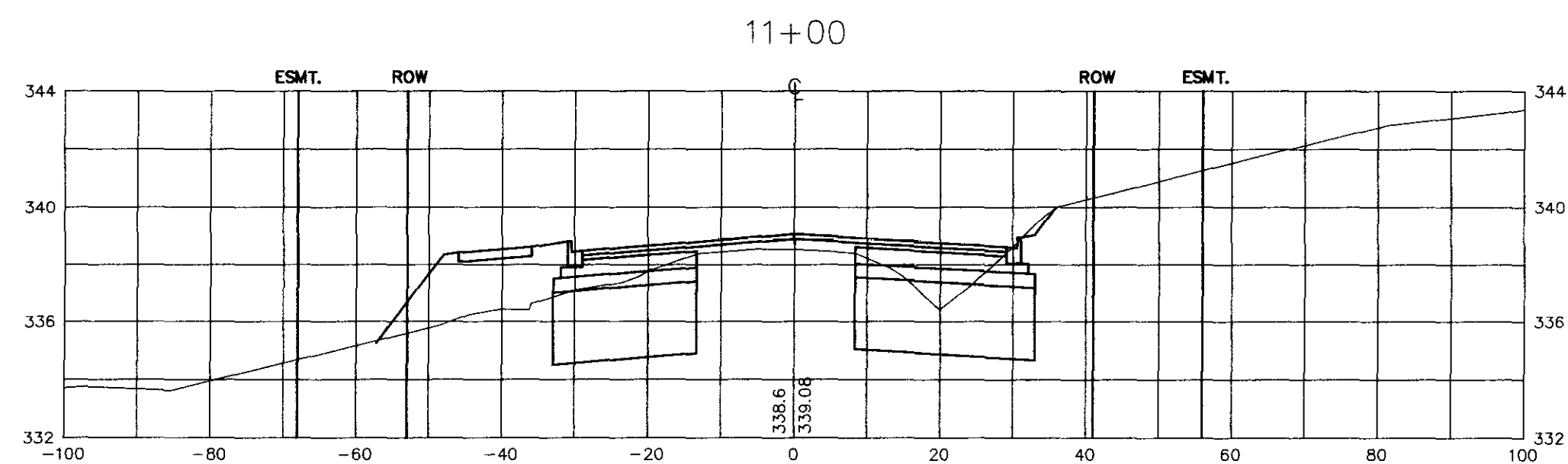
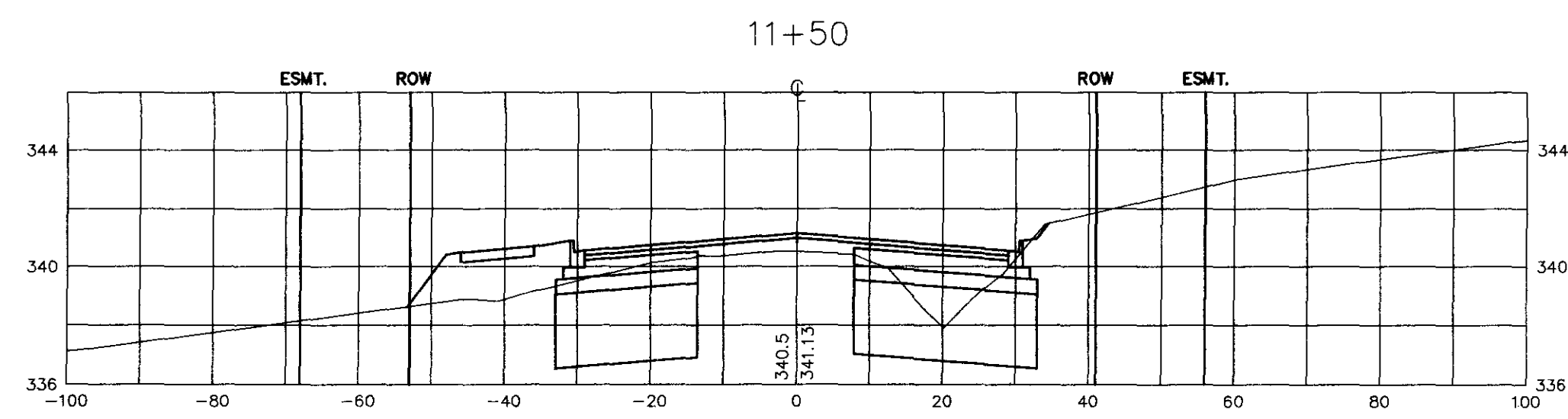
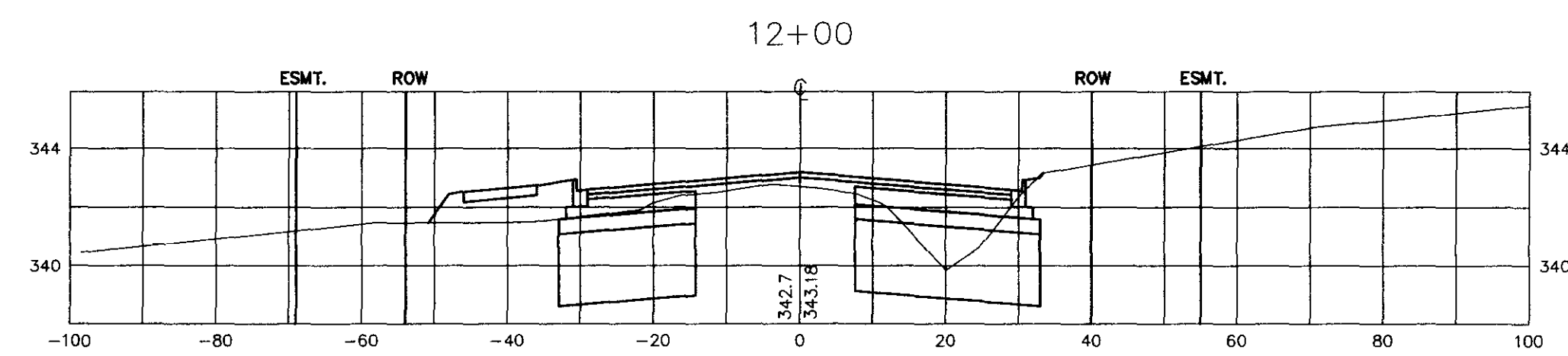
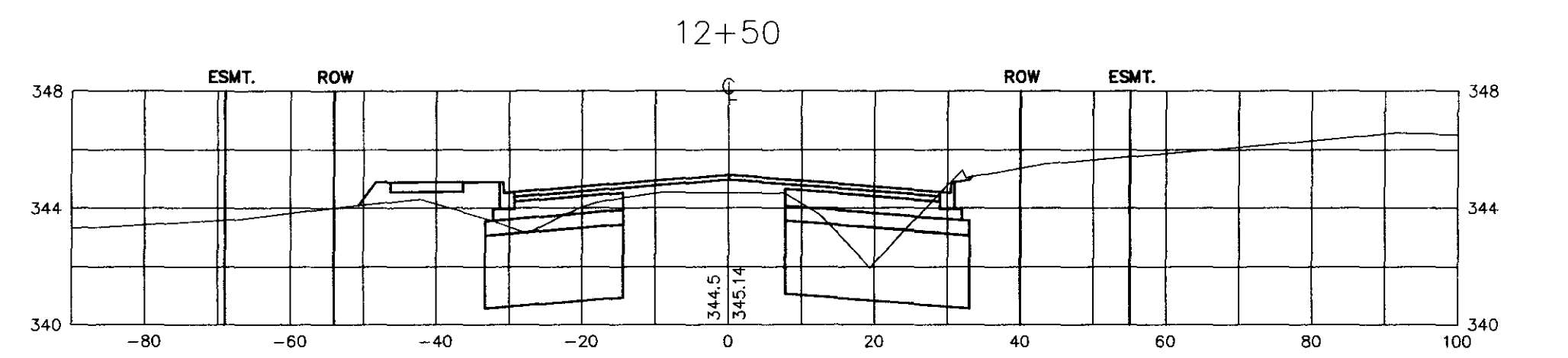
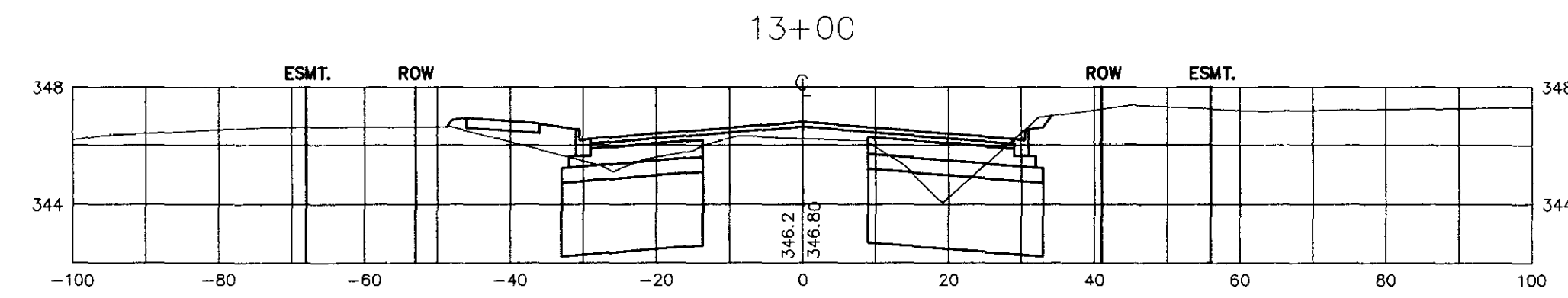
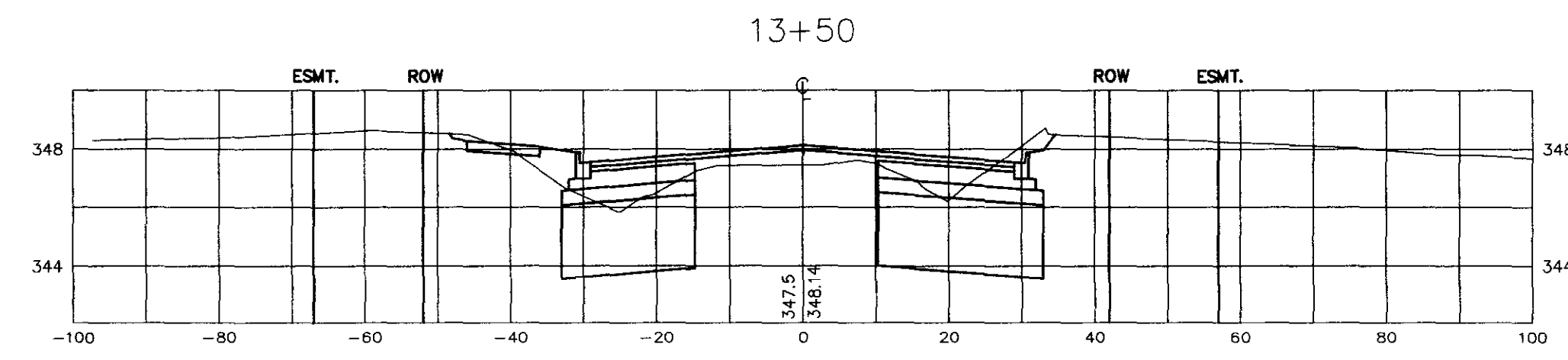
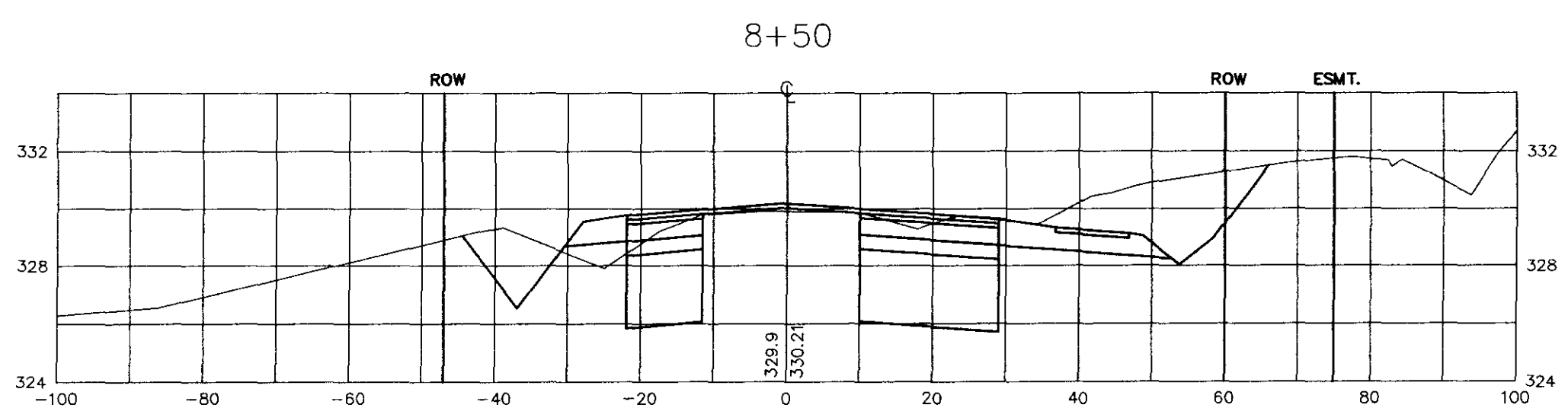
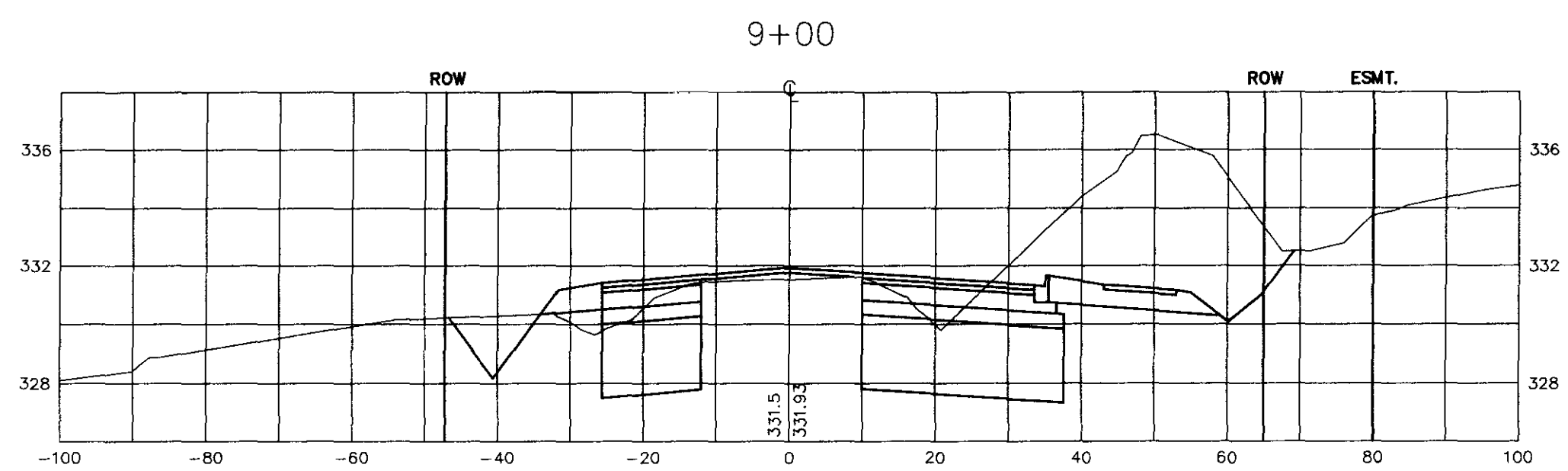
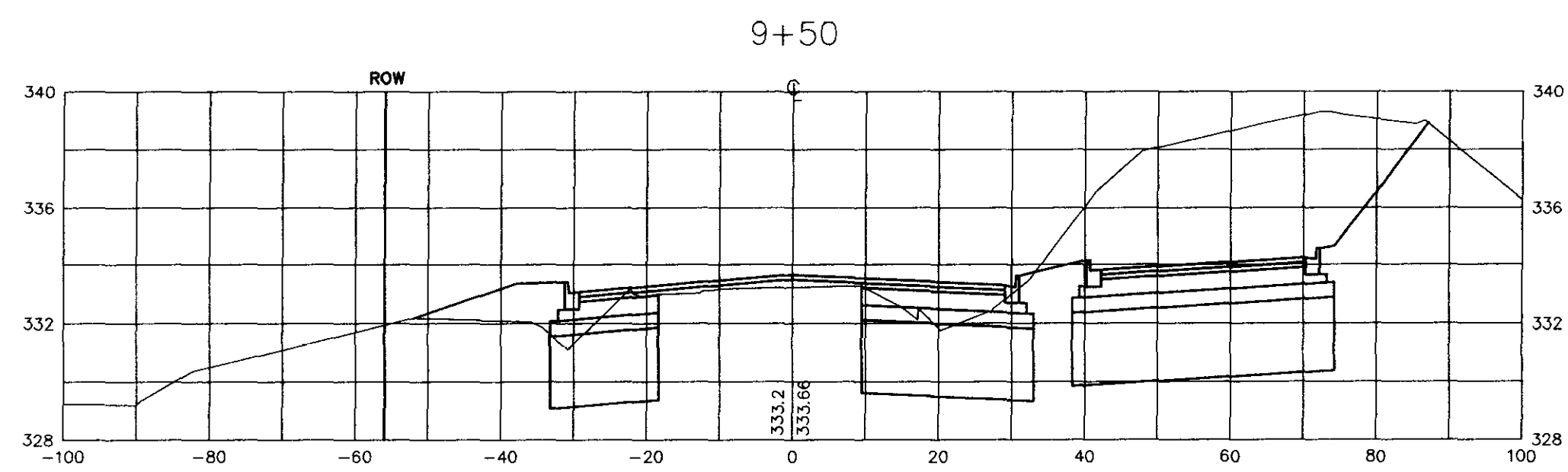
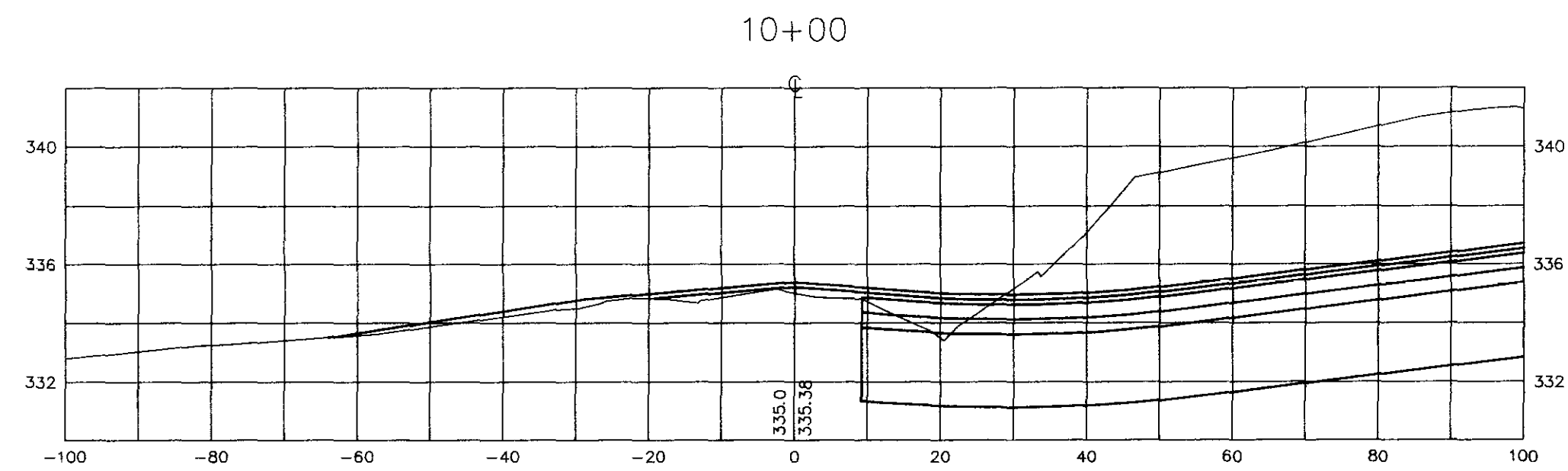
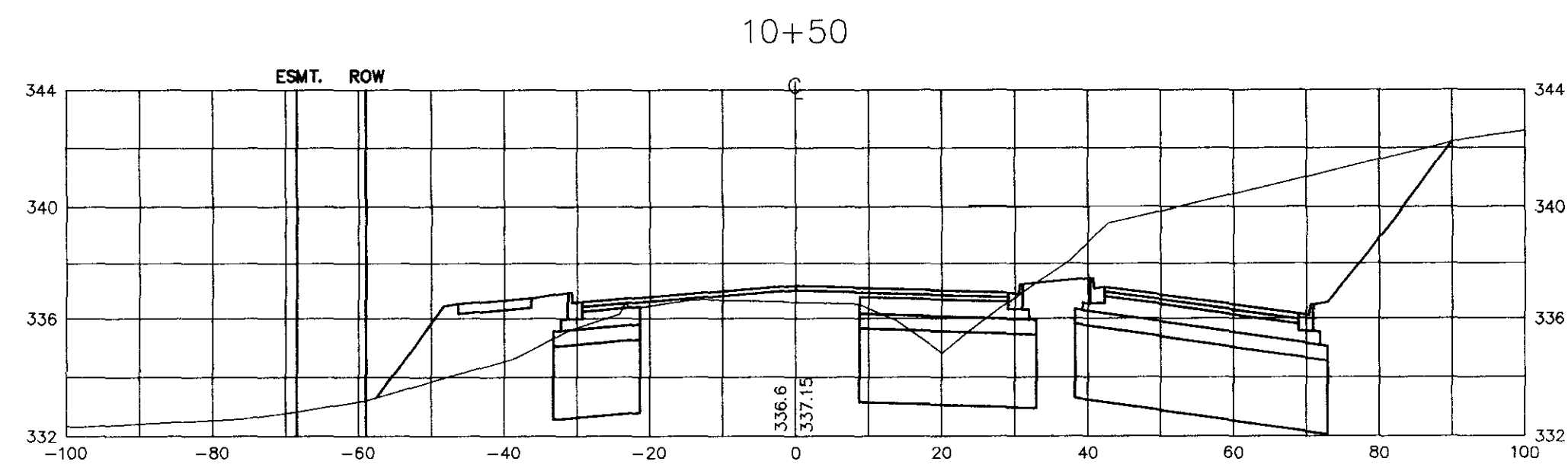
PHASE 3

CITY OF RIDGELAND
 RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
 NORTH PARK DRIVE INTERSECTION
 TRAFFIC CONTROL PLAN—PHASE 3
 WAGGONER ENGINEERING, INC.
 Consulting Engineers — Jackson, Mississippi
 DRAWN BY: E.L.G. DATE: 10-15-99 SHEET NUMBER
 REVIEWED BY: J.B. SCALE: 1" = 80' 16 OF



CITY OF RIDGELAND
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE / NORTH PARK DRIVE INTERSECTION
CROSS SECTIONS - LAKE HARBOUR
 WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi
 DRAWN BY: B.F. DATE: 10-04-99 SHEET NUMBER
 REVIEWED BY: J.B. SCALE: 1"=20' H 1"=5' V 17 OF

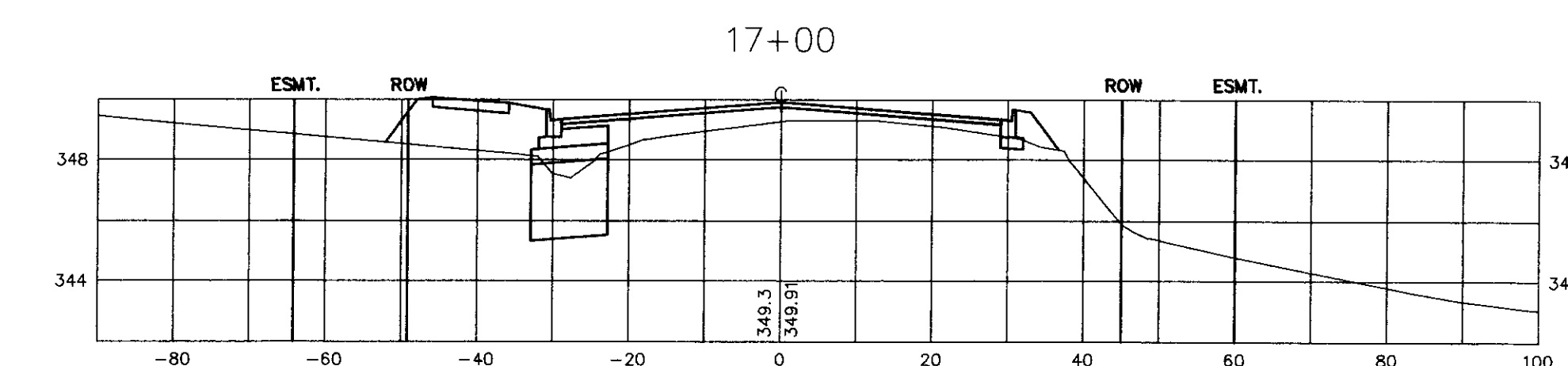
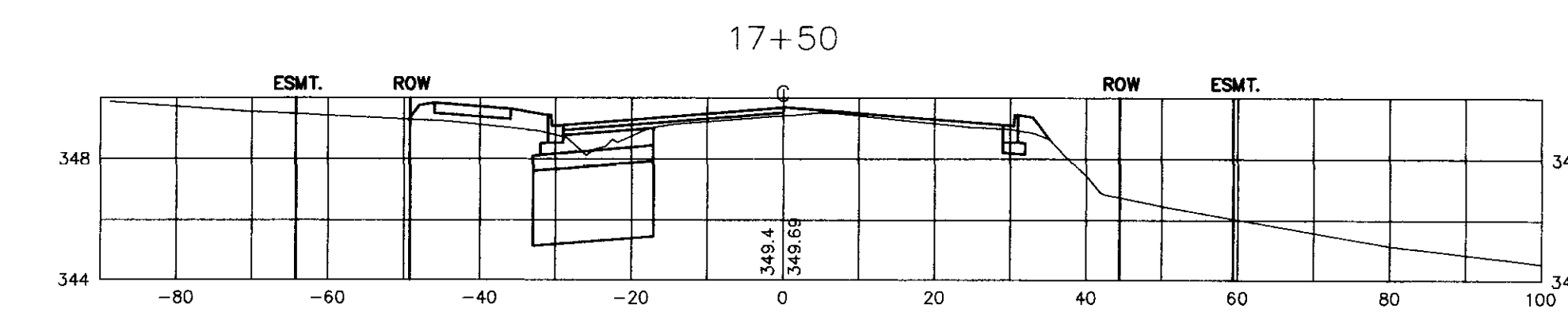
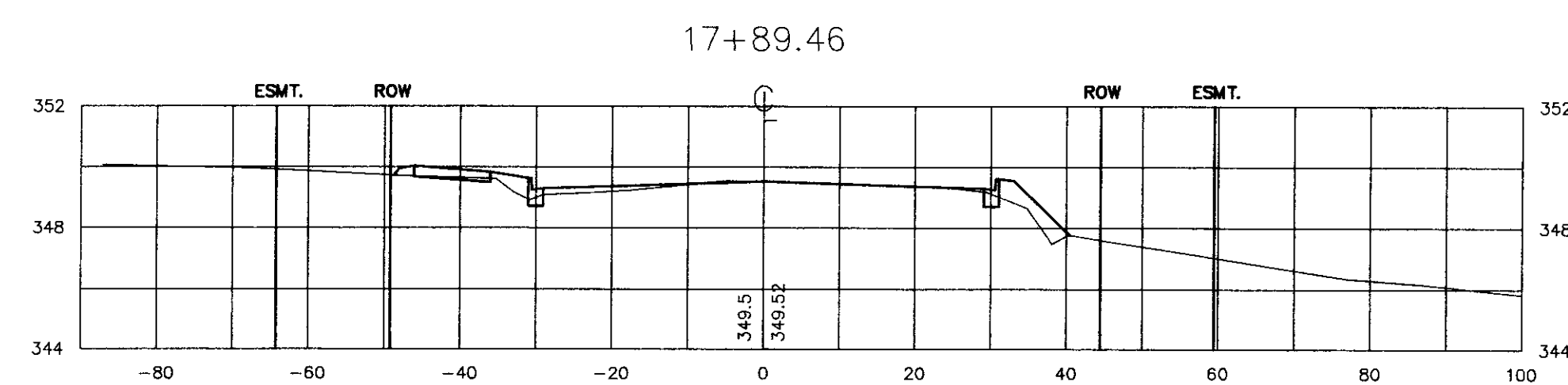
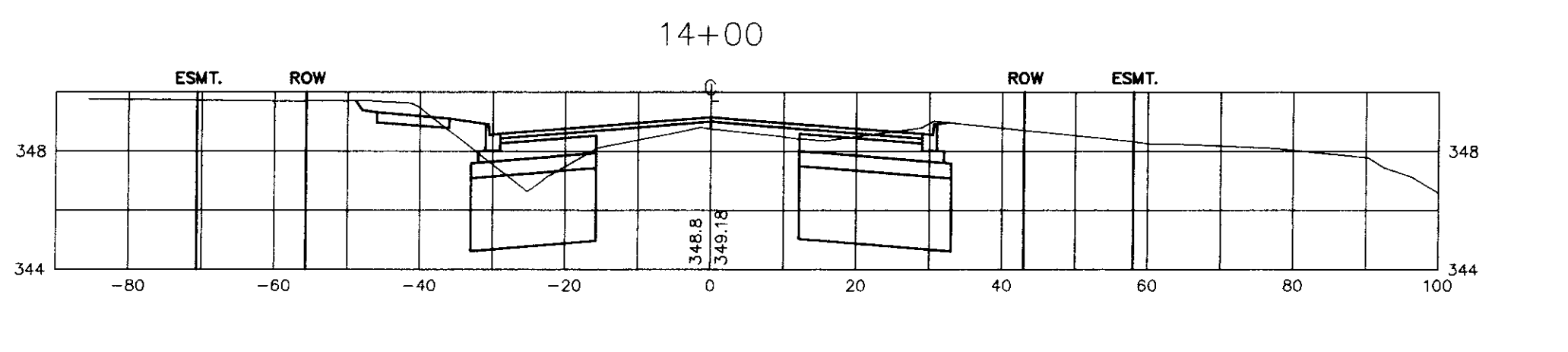
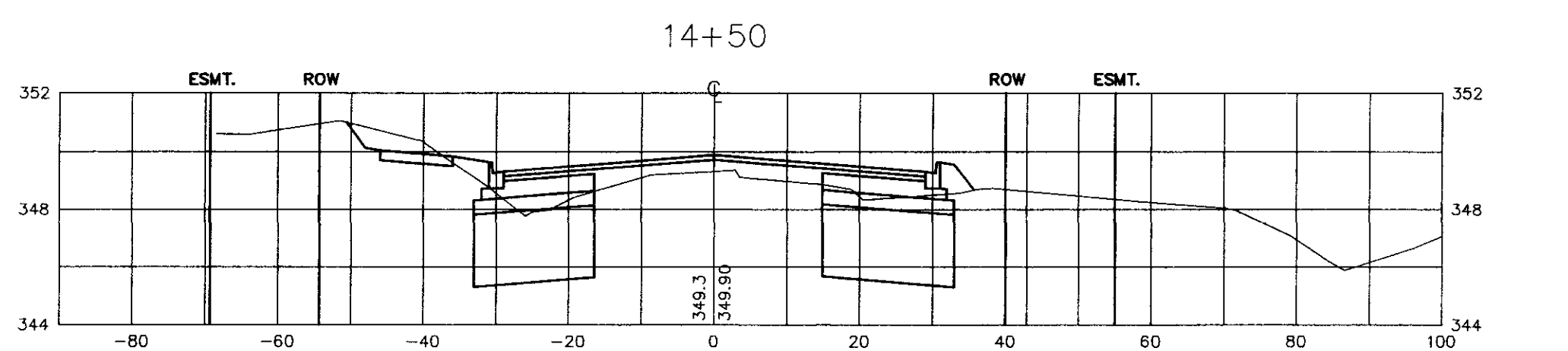
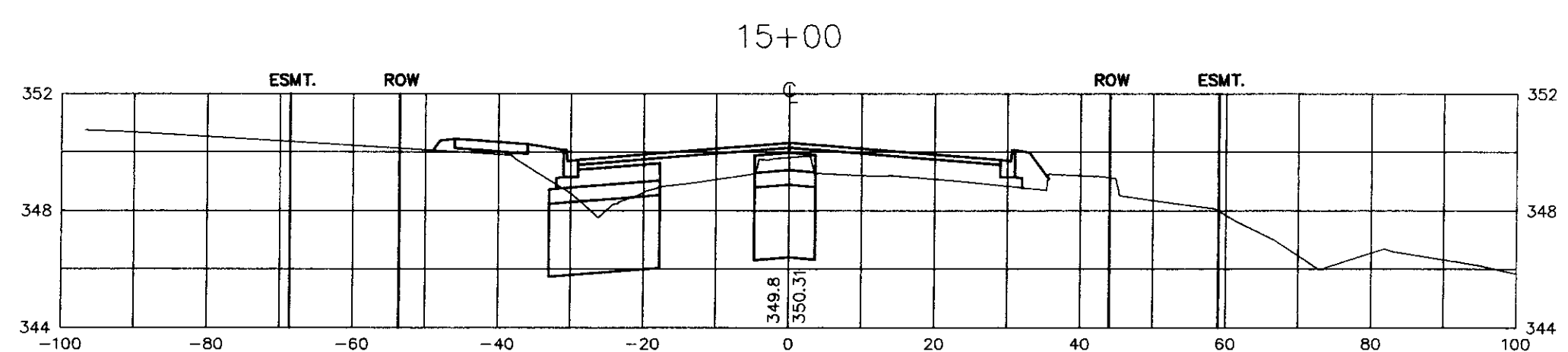
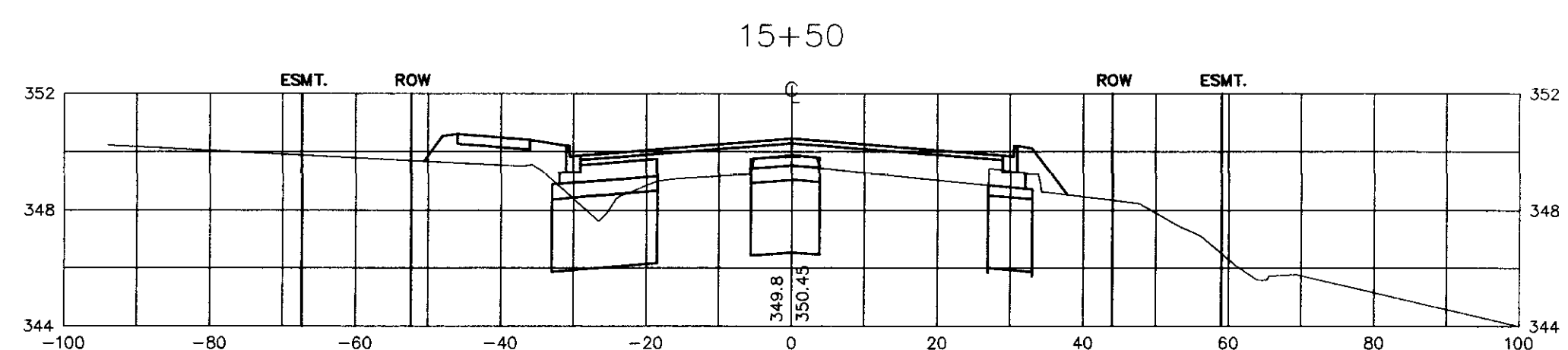
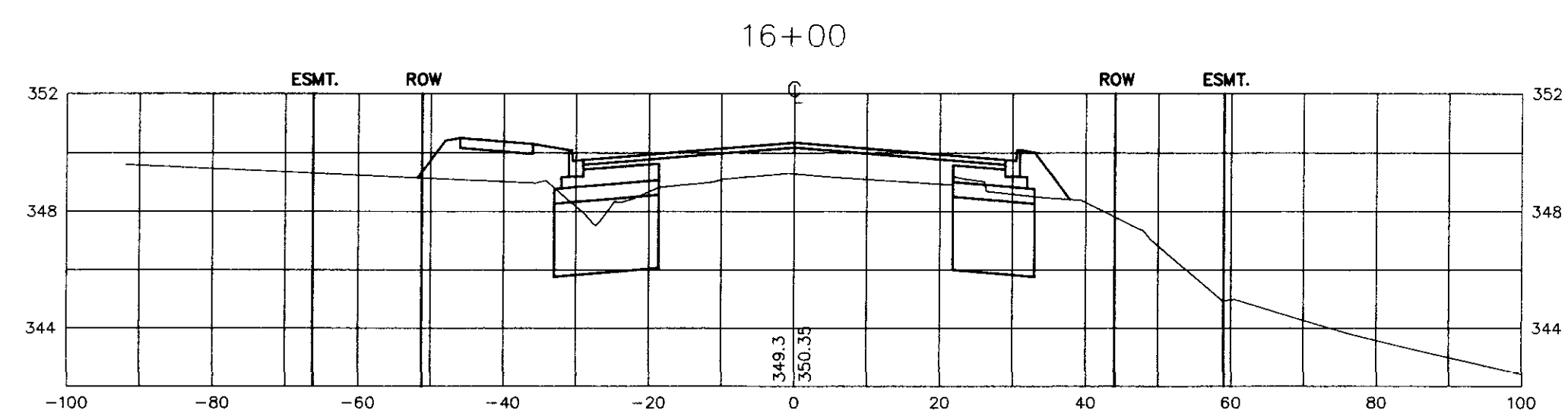
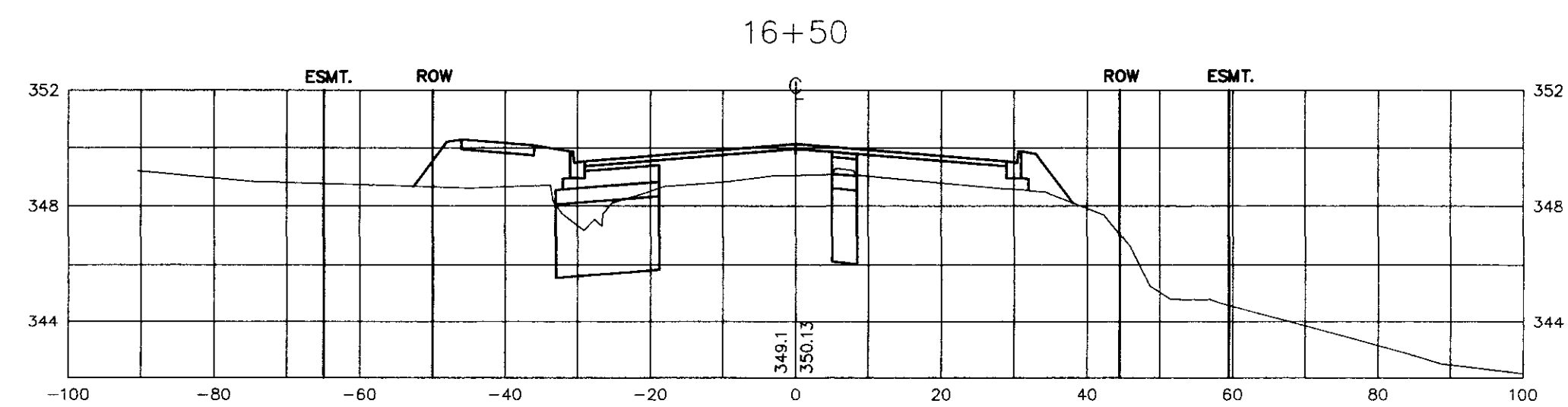
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CITY OF RIDGELAND
 RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
 NORTHPARK DRIVE INTERSECTION
 CROSS SECTIONS - LAKE HARBOUR

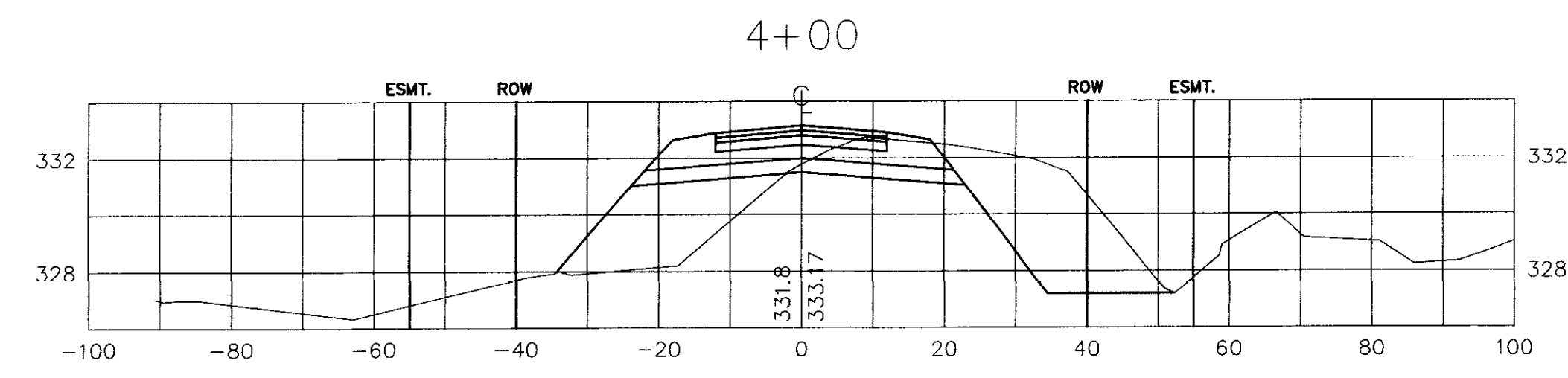
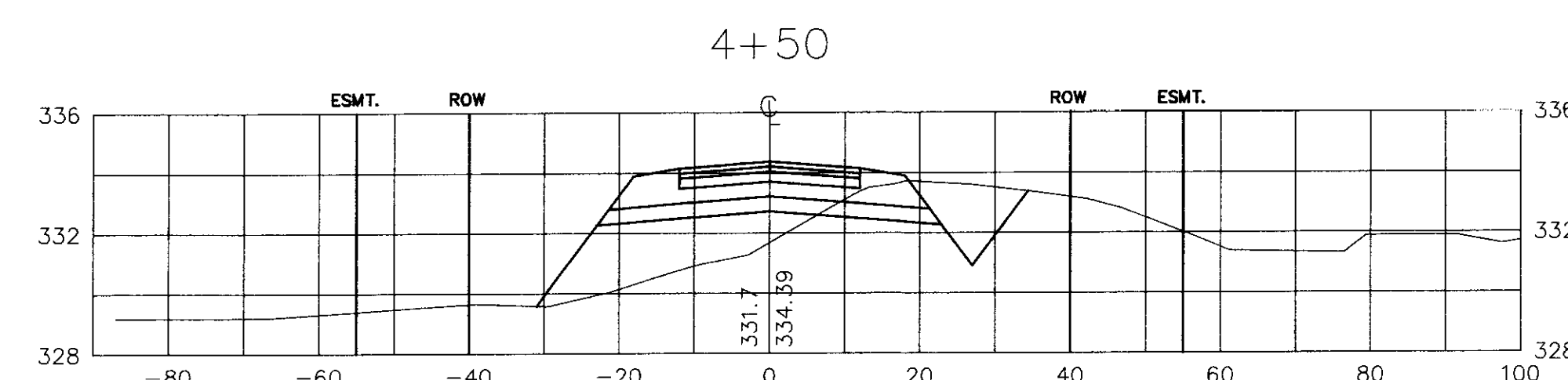
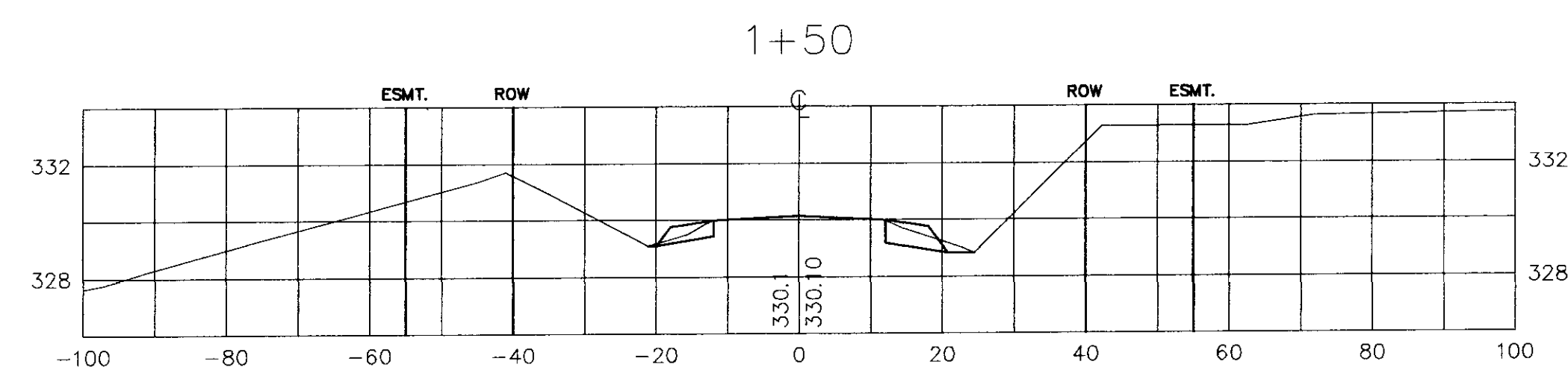
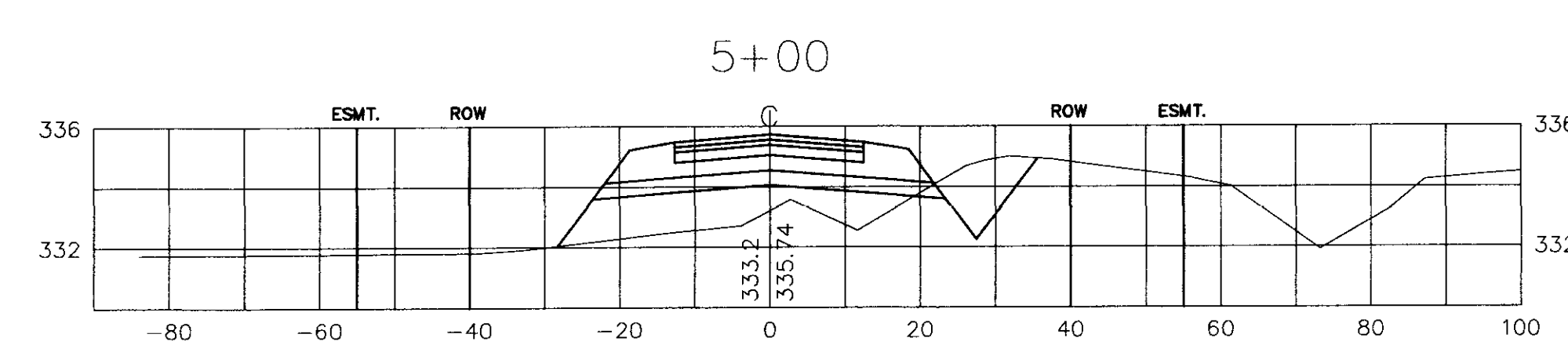
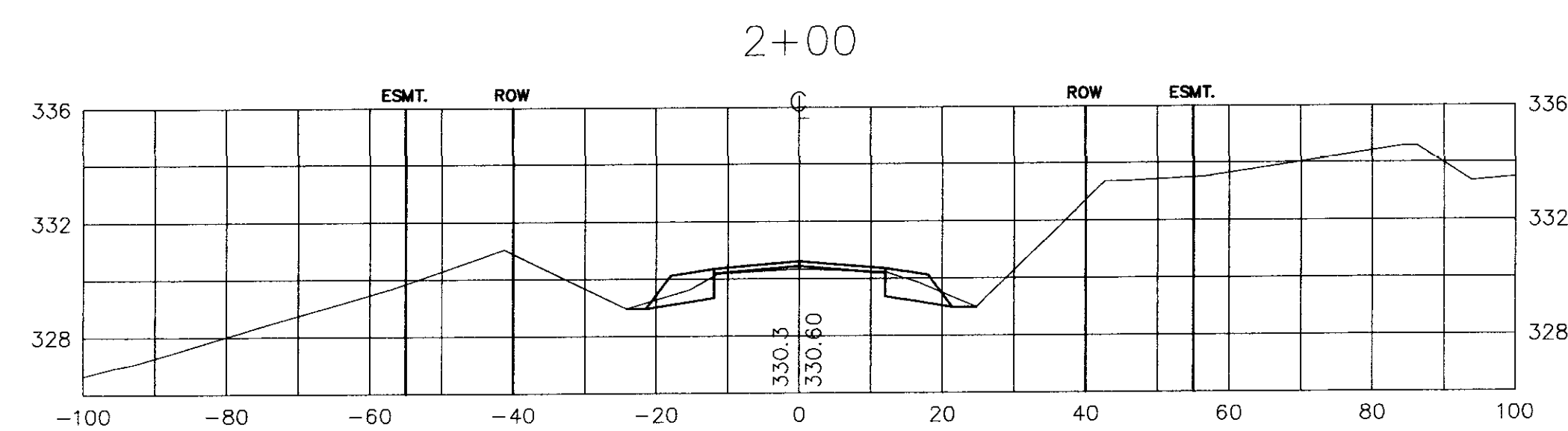
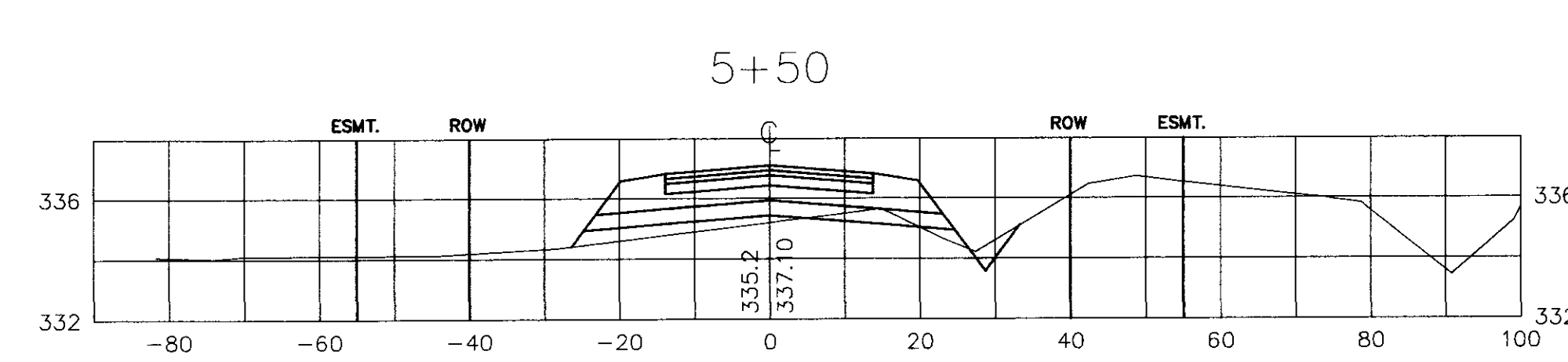
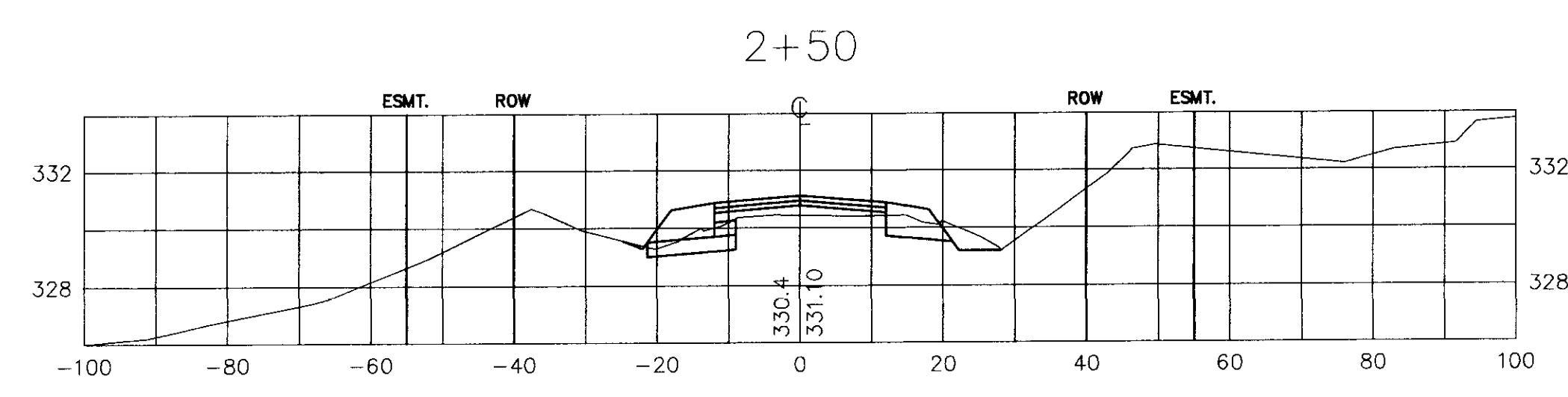
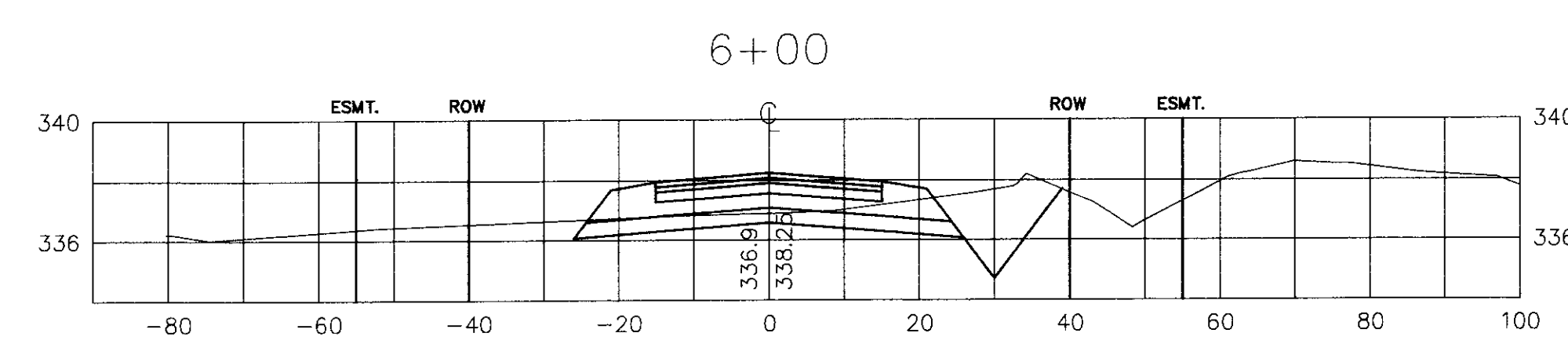
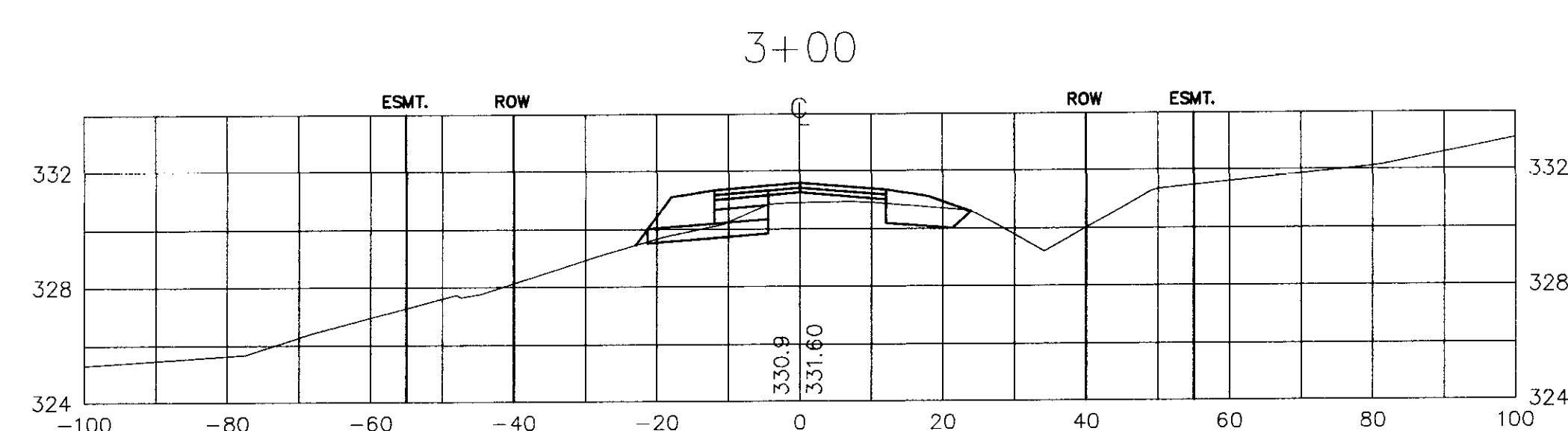
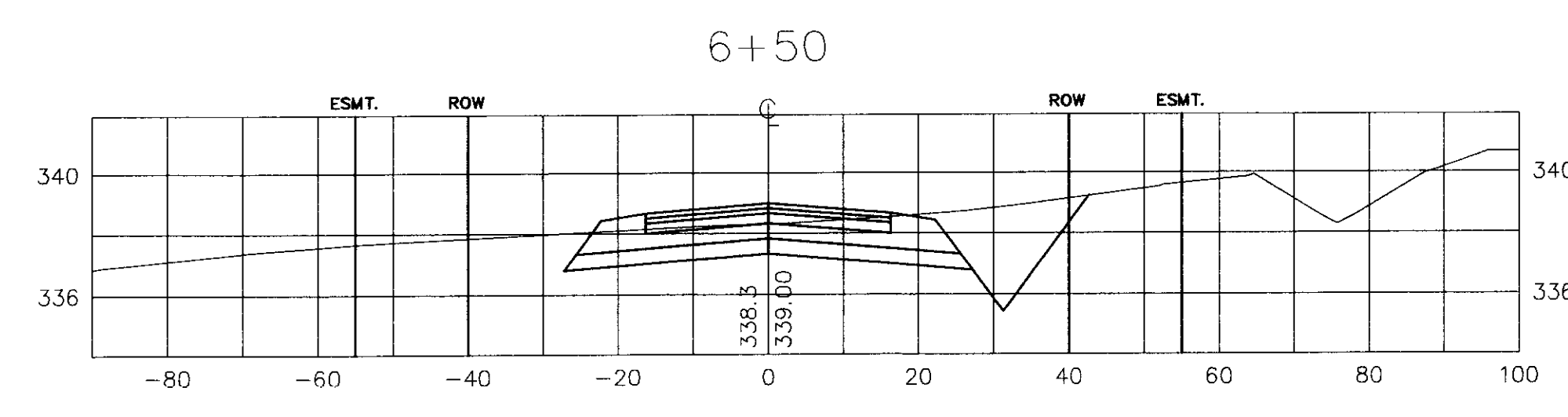
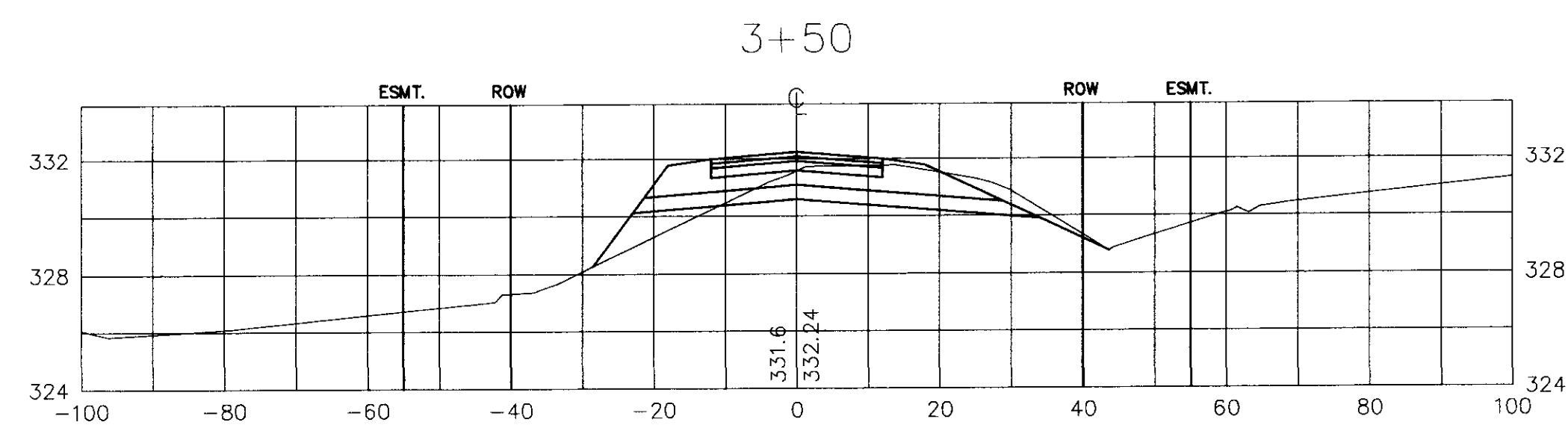
WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi

DRAWN BY: B.F.	DATE: 10-04-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: 1"=20' H 1"=5' V	18 OF

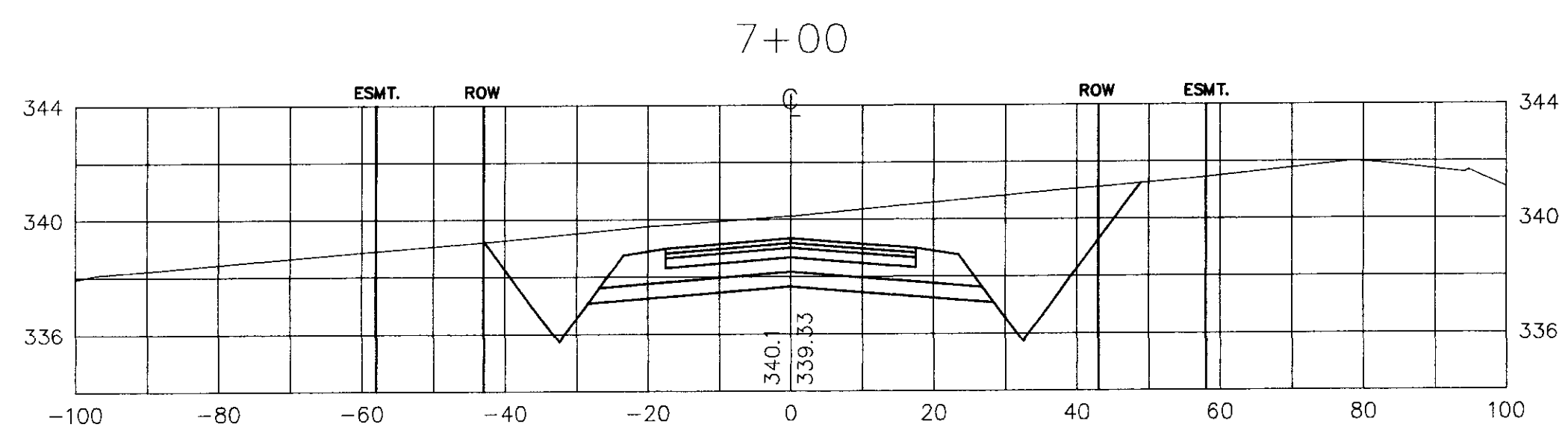
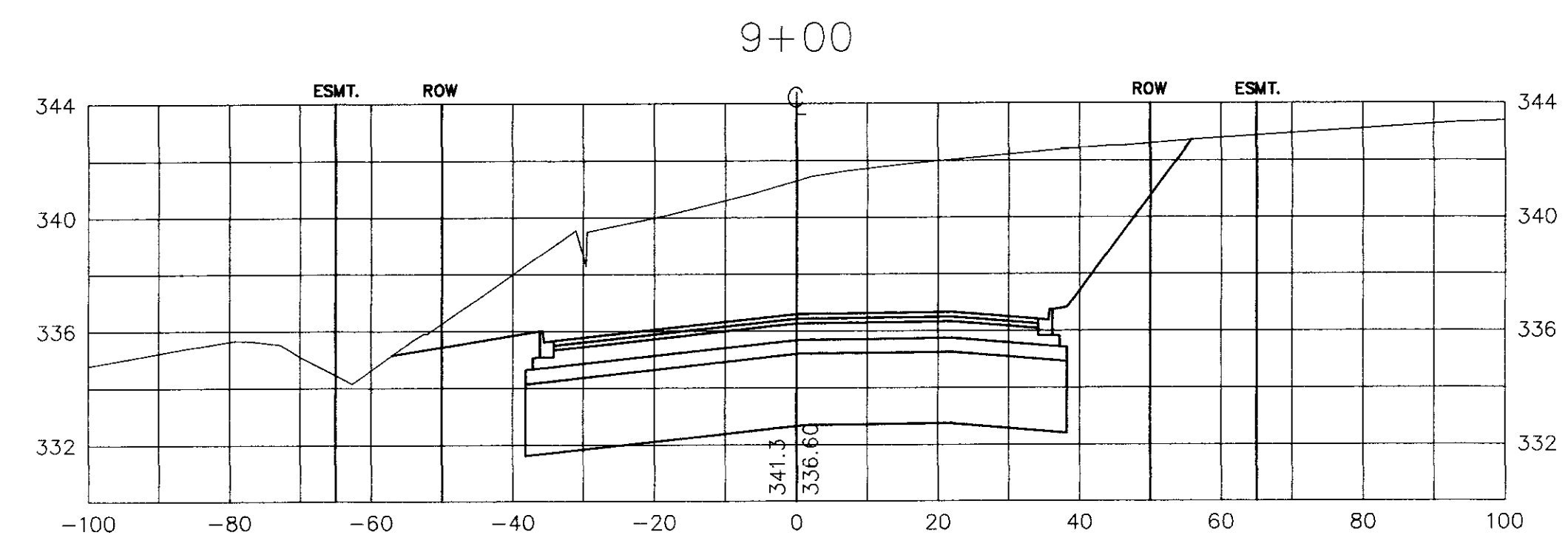
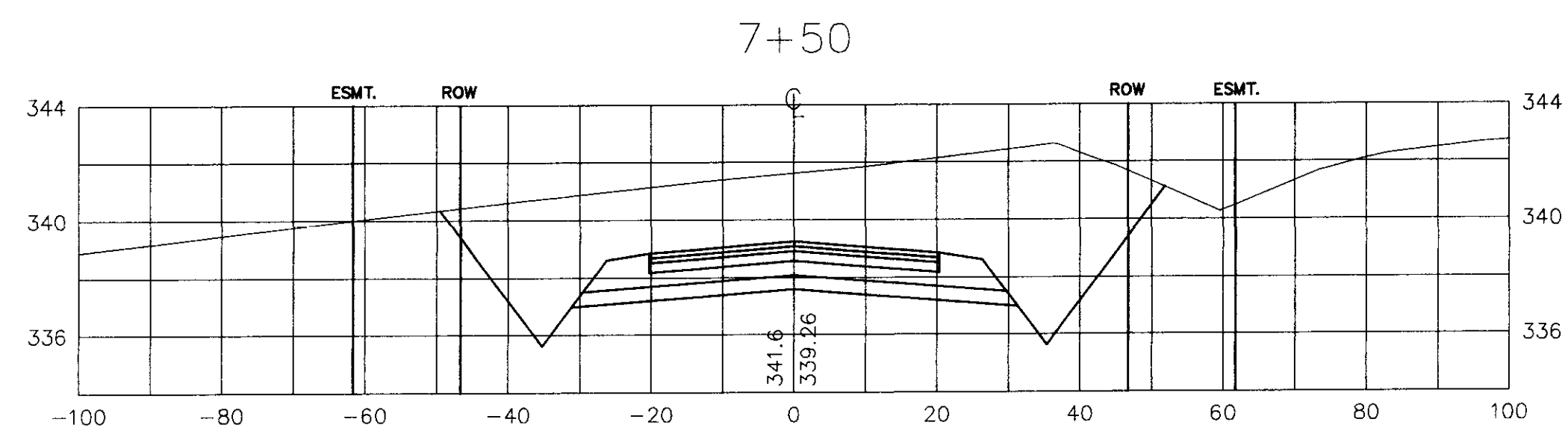
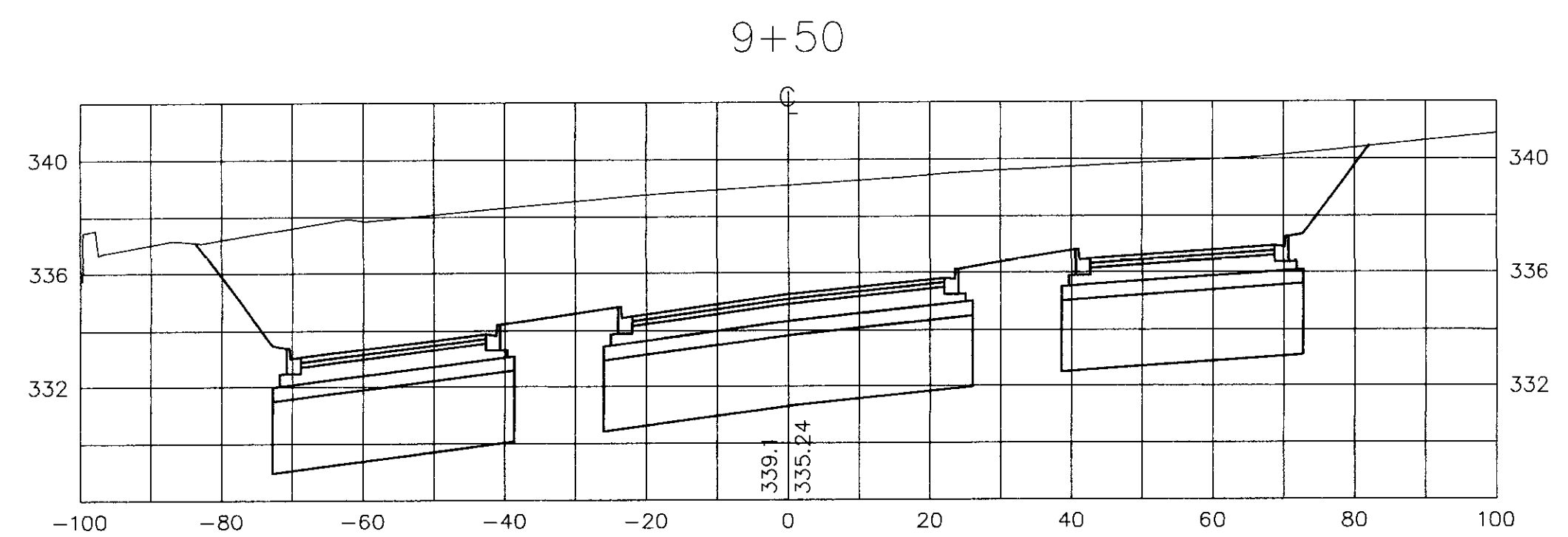
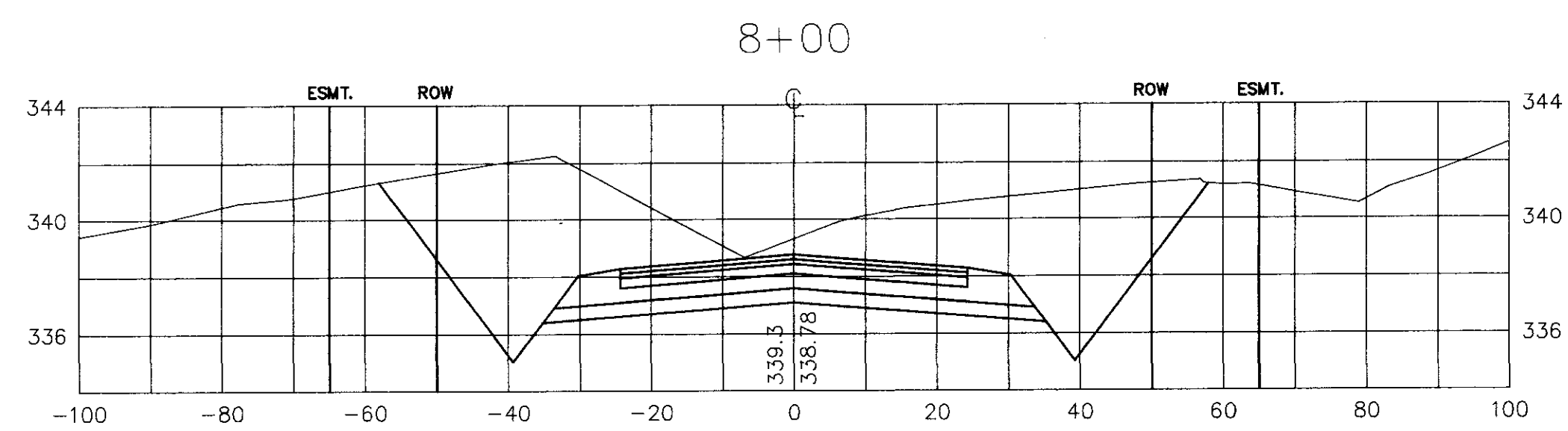
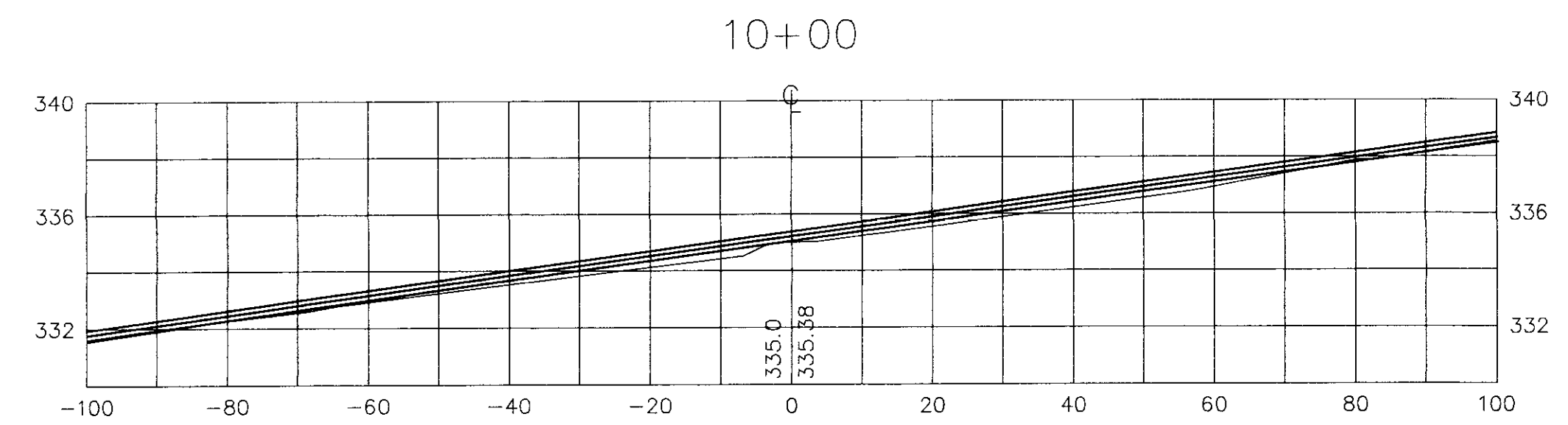
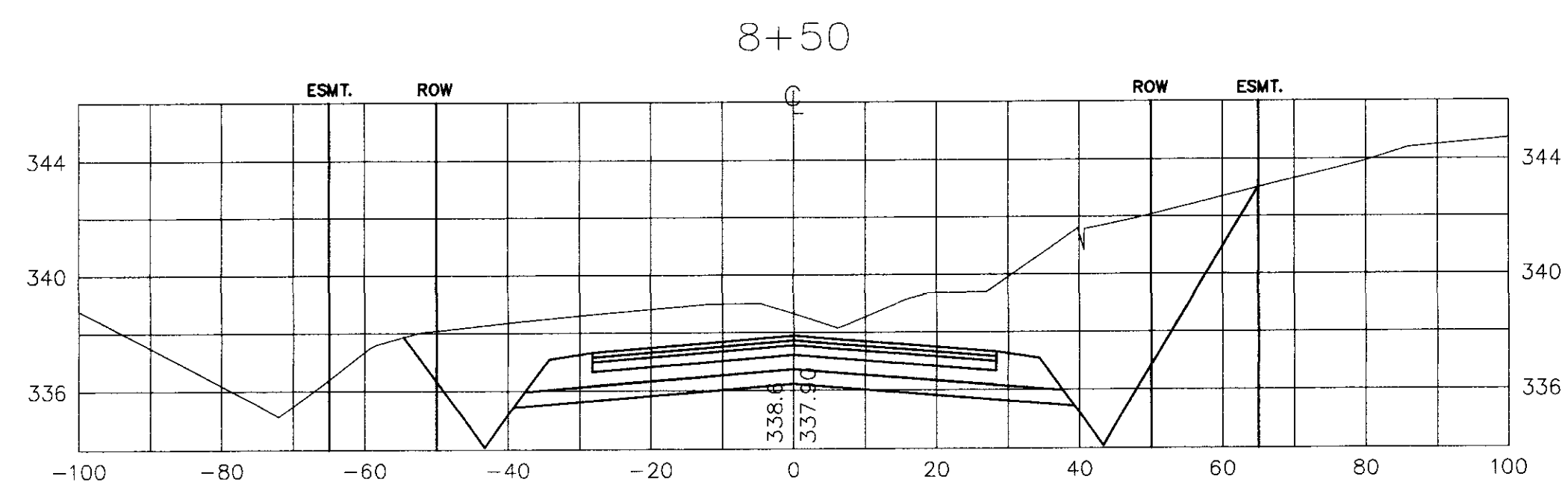


CITY OF RIDGELAND
**RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
 NORTH PARK DRIVE INTERSECTION**
CROSS SECTIONS - LAKE HARBOUR
 WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi

DRAWN BY: B.F.	DATE: 10-04-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: 1"=20' H 1"=5' V	19 OF



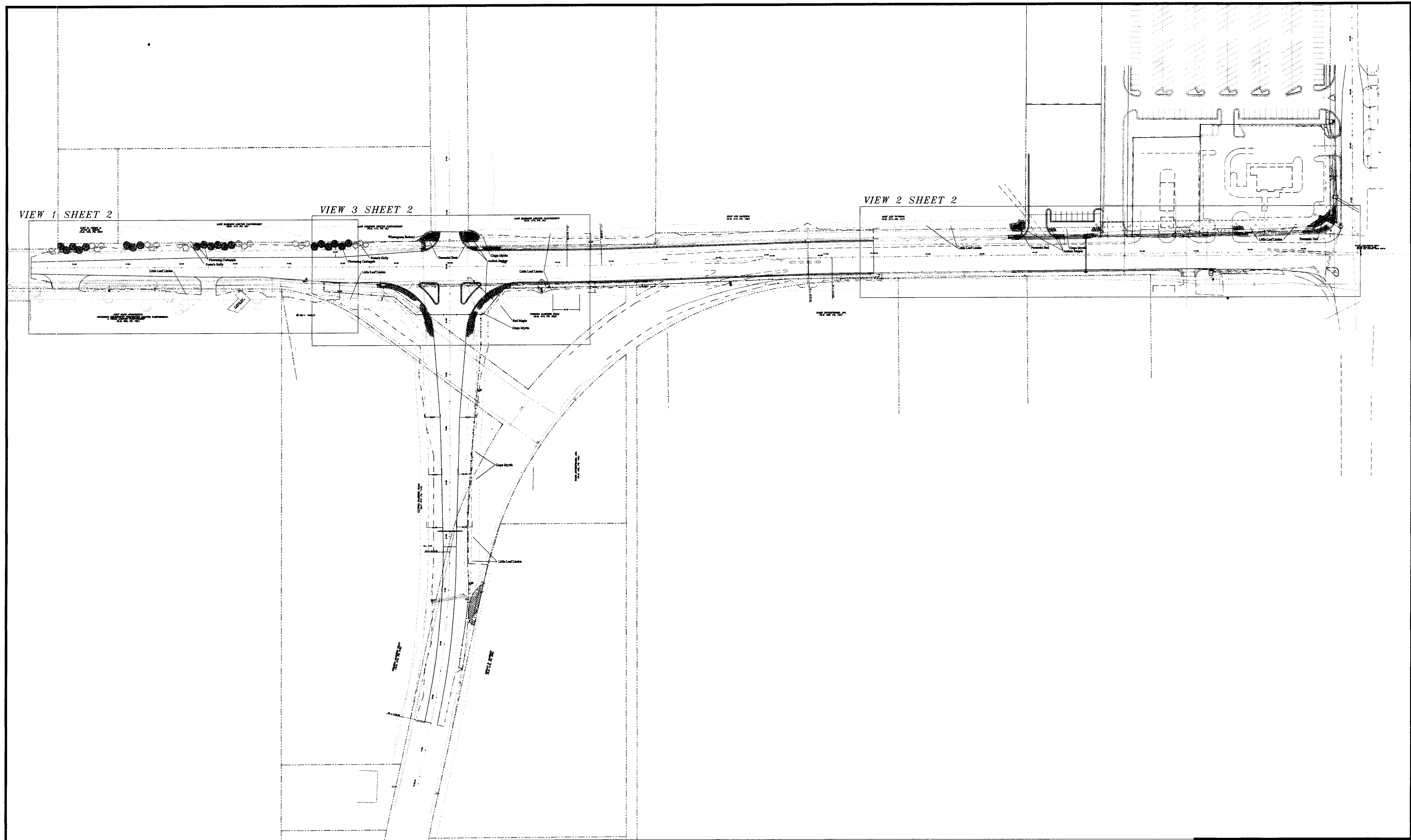
CITY OF RIDGELAND
 RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
 NORTH PARK DRIVE INTERSECTION
 CROSS SECTIONS - NORTH PARK
 WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi
 DRAWN BY: B.F. DATE: 10-04-99 SHEET NUMBER
 REVIEWED BY: J.B. SCALE: 1"=20' H 1"=50' V 20 OF



CITY OF RIDGELAND
 RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
 NORTH PARK DRIVE INTERSECTION
 CROSS SECTIONS - NORTH PARK
 WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi

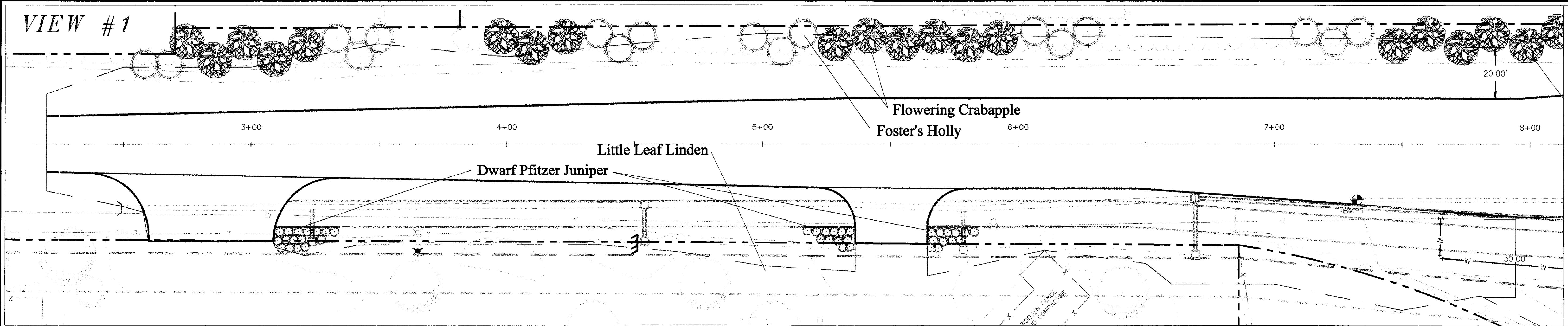
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REVIEWED BY: J.B.	SCALE: 1"=20' H 1"=5' V	21 OF

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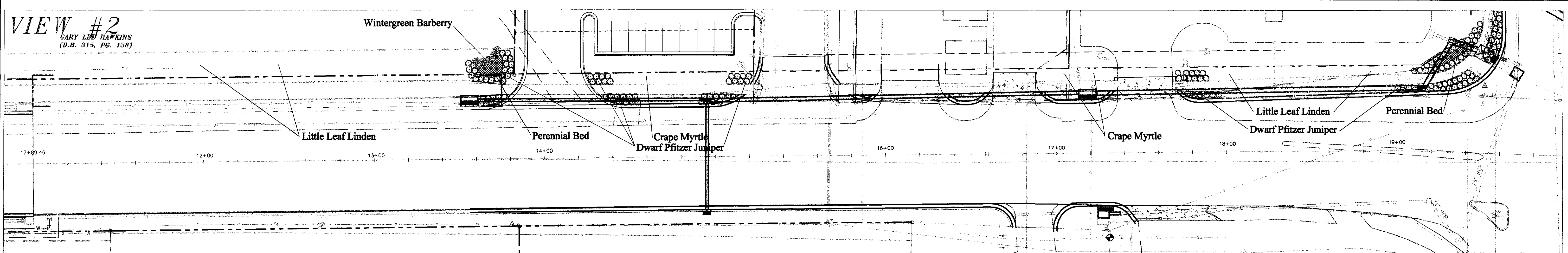
CITY OF RIDGELAND		
RECONSTRUCTION OF THE NORTHPARK DRIVE/ LAKE HARBOUR DRIVE INTERSECTION		
LANDSCAPE PLAN		
WAGGONER ENGINEERING, INC. Consulting Engineers - Jackson, Mississippi		
DRAWN BY: KMD	DATE: 10-20-99	SHEET NUMBER
REVIEWED BY:	SCALE: 1"=80'	22 OF

VIEW #1



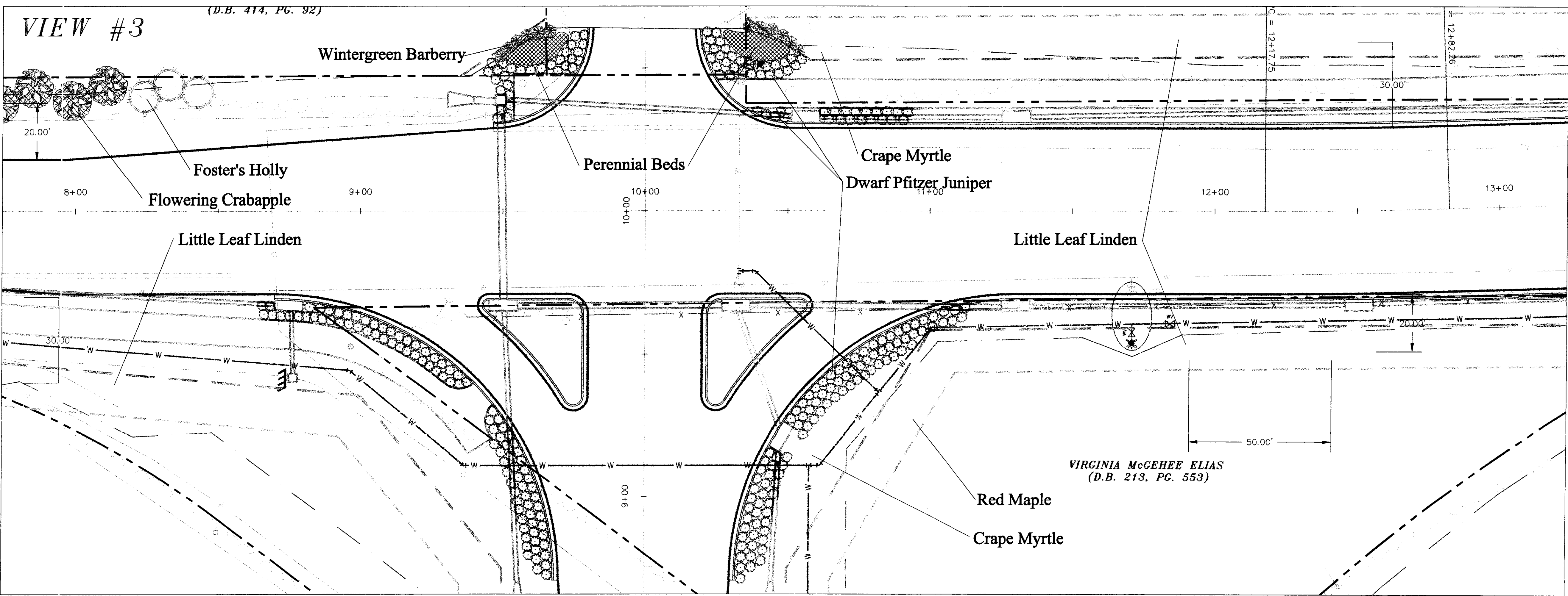
VIEW 1 SCALE 1"=20'

VIEW #2
CARY LEB HAWKINS
(D.B. 315, PG. 158)



VIEW 2 SCALE 1"=30'

VIEW #3
(D.B. 414, PG. 92)



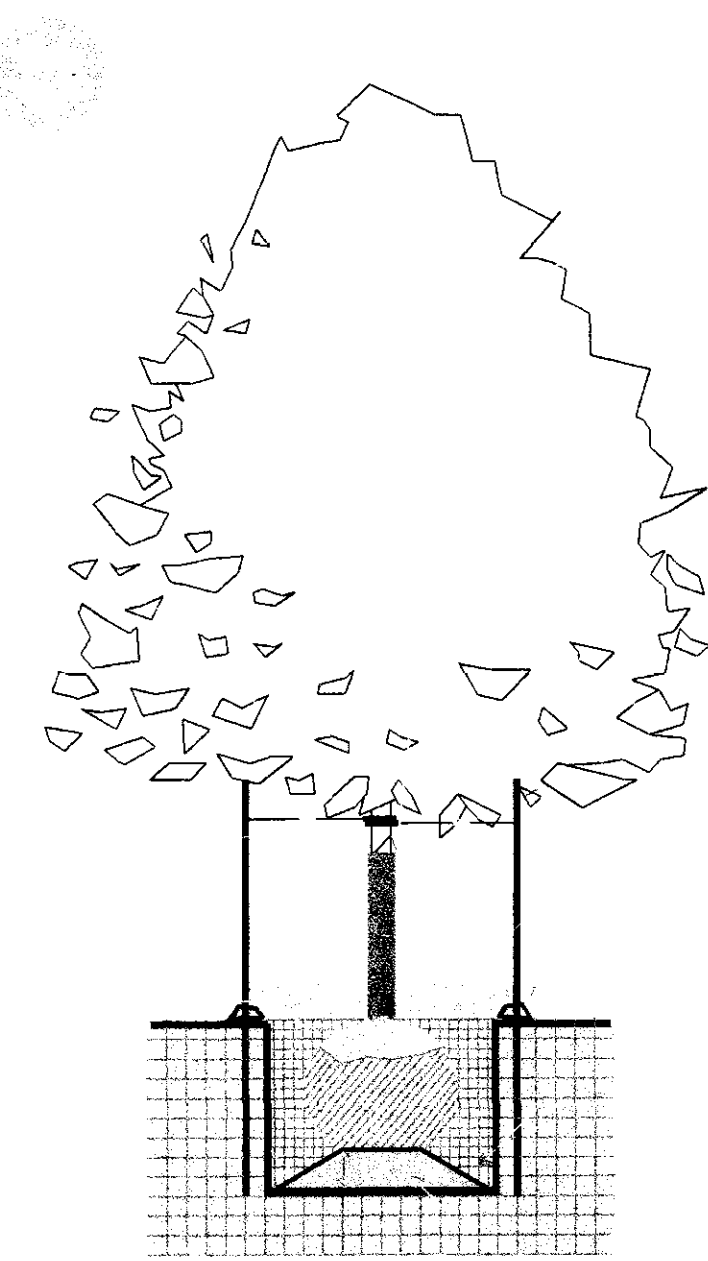
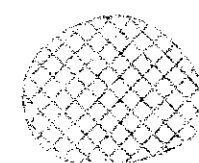
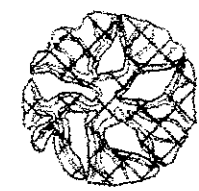
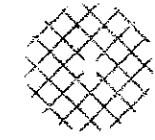
VIEW 3 SCALE 1"=20'

VIRGINIA MCGEHEE ELIAS
(D.B. 213, PG. 553)

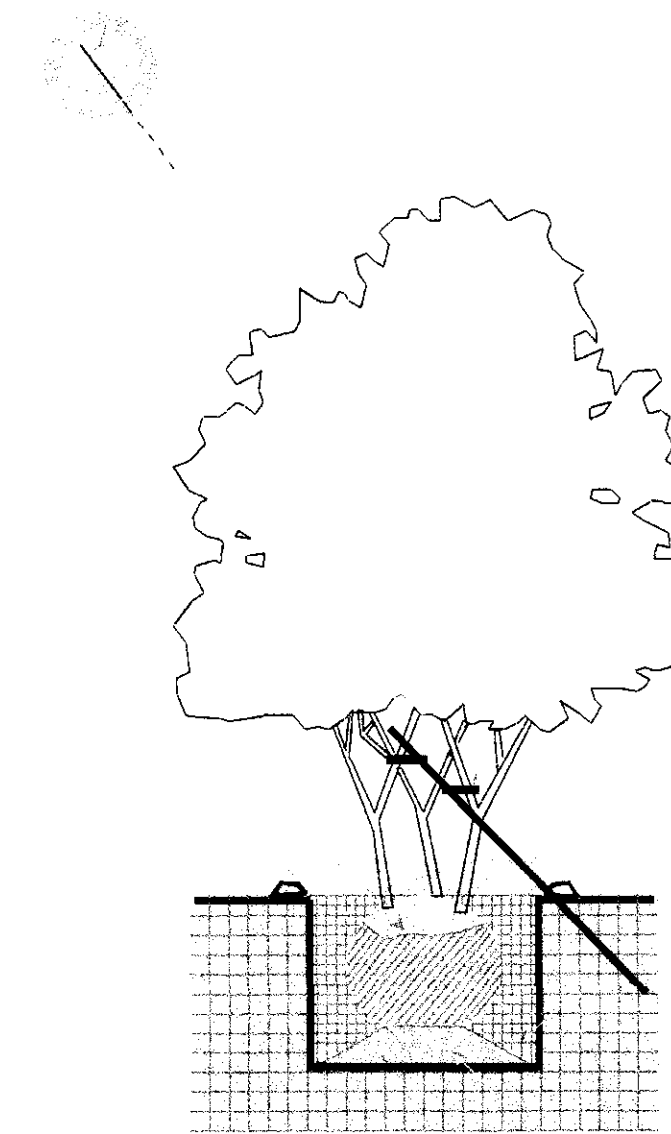
CITY OF RIDGELAND
 RECONSTRUCTION OF THE NORTHPARK DRIVE/
 LAKE HARBOUR DRIVE INTERSECTION
 LANDSCAPE PLAN
 WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi
 DRAWN BY: KMD DATE: 10-20-99 SHEET NUMBER
 REVIEWED BY: SCALE: N.T.S. **23** OF

PLANT MATERIALS LIST

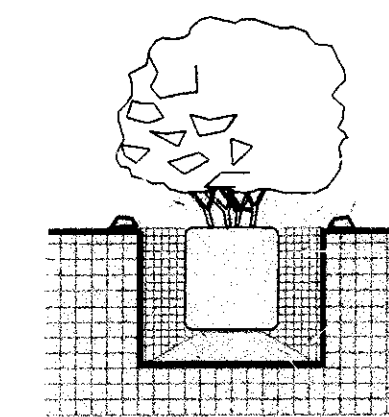
#	SYMBOL	COMMON NAME	SCIENTIFIC NAME	PLANTING METHODS	SIZE / HABIT	COMMENTS
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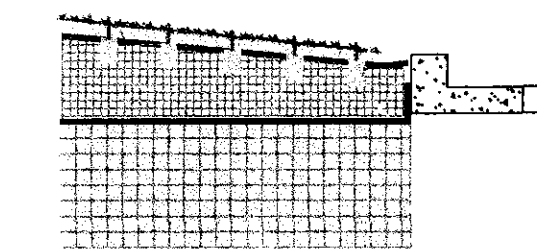
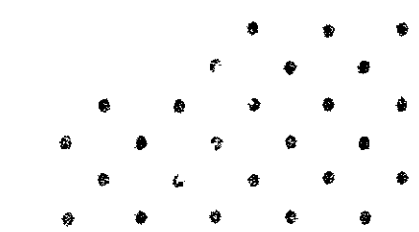
ELEVATION VIEW - PLANTING METHOD "A"



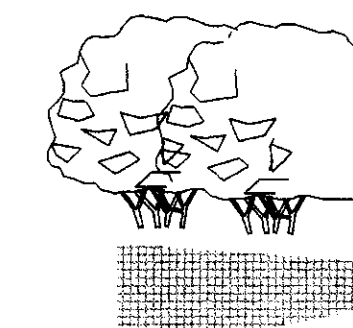
ELEVATION VIEW - PLANTING METHOD "B"



ELEVATION VIEW - PLANTING METHOD "C"



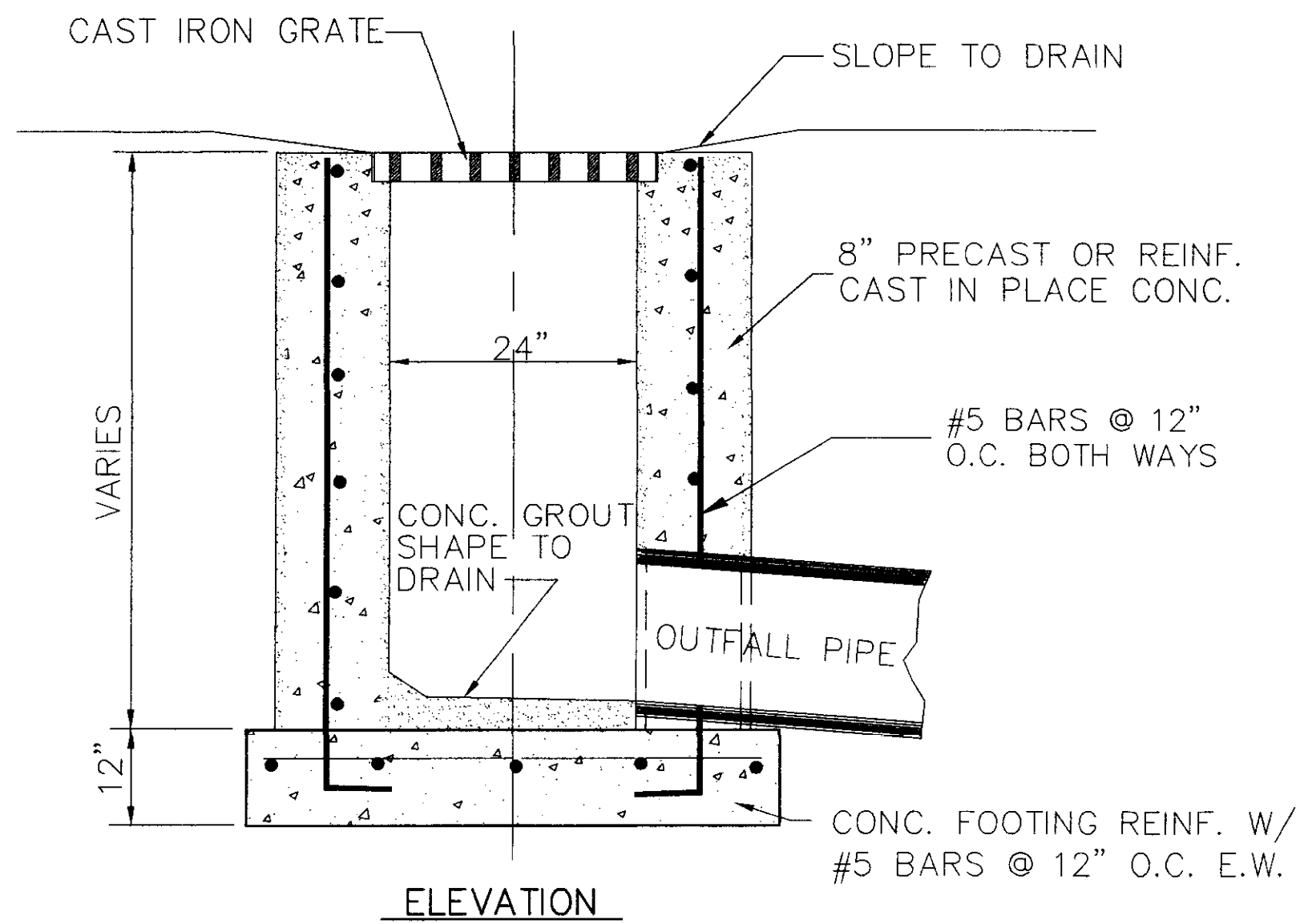
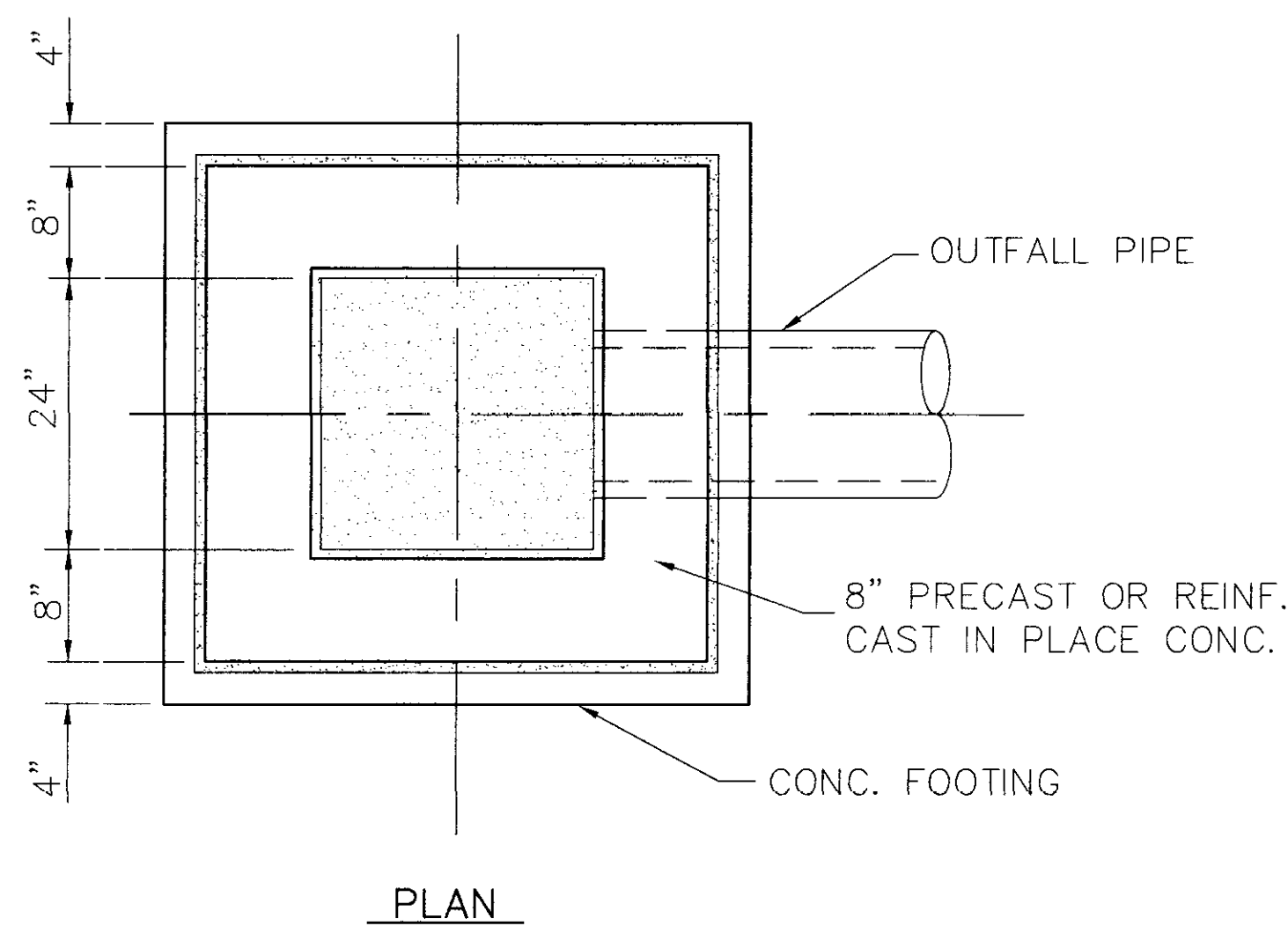
SECTION VIEW - PLANTING METHOD "D"



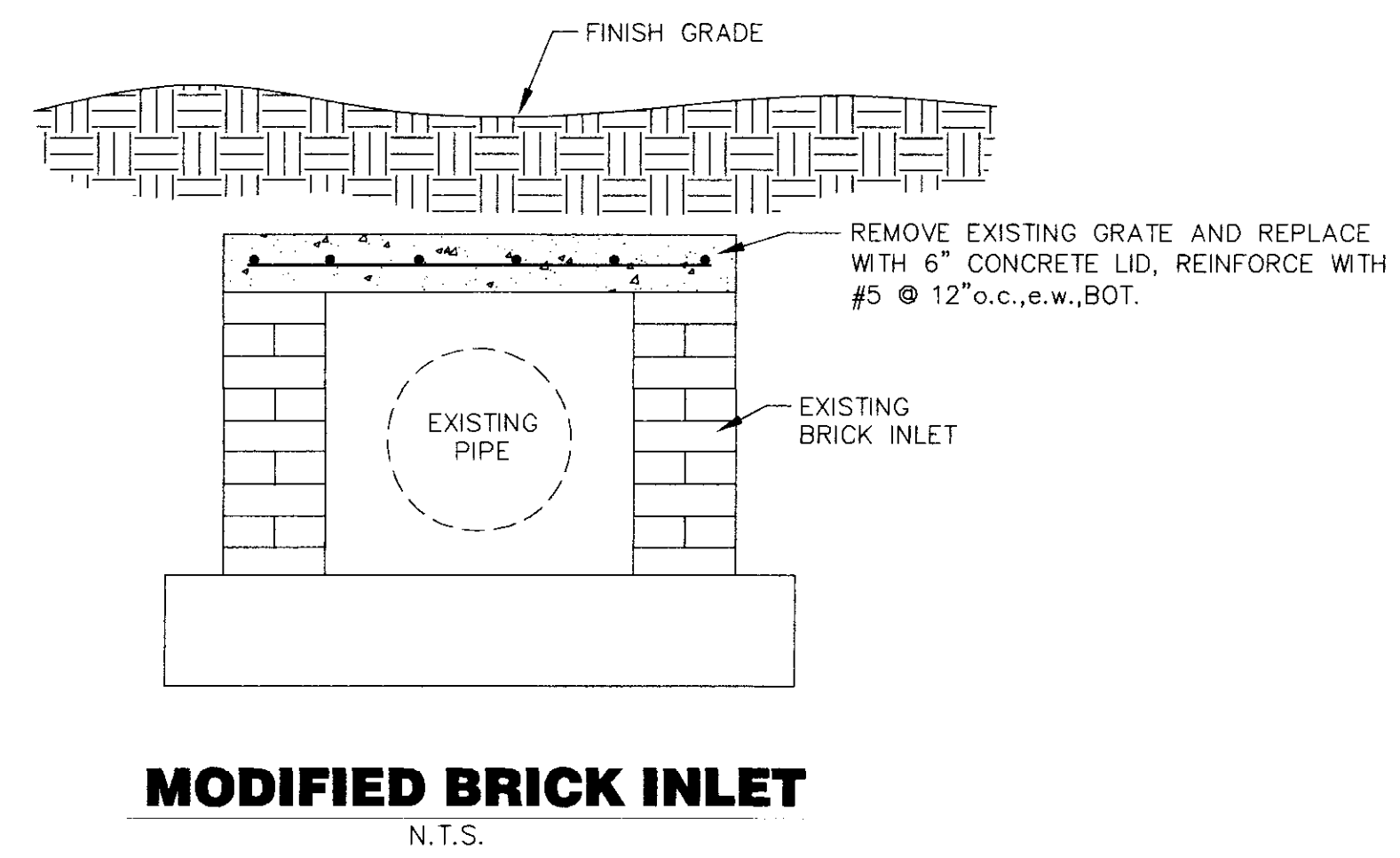
SECTION VIEW - STONE GROUNDCOVER "E"



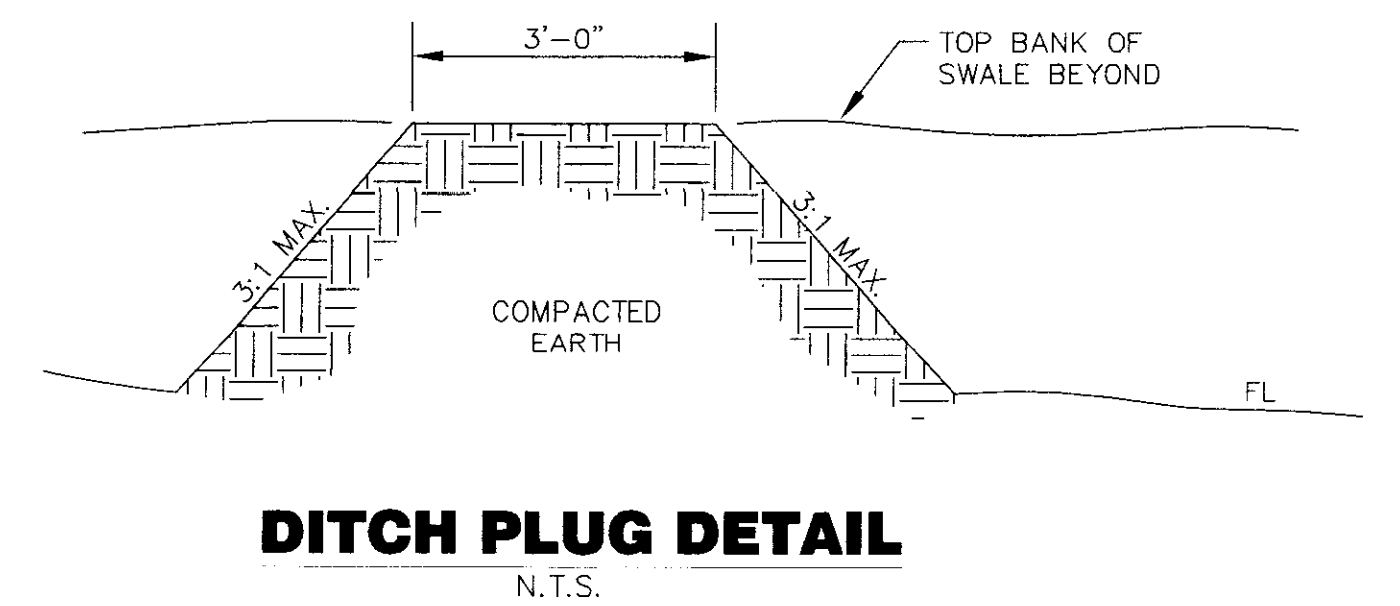
CITY OF RIDGELAND, MISSISSIPPI		
RECONSTRUCTION OF THE NORTHPARK DRIVE LAKE HARBOUR DRIVE INTERSECTION		
LANDSCAPE DETAILS		
		24 •



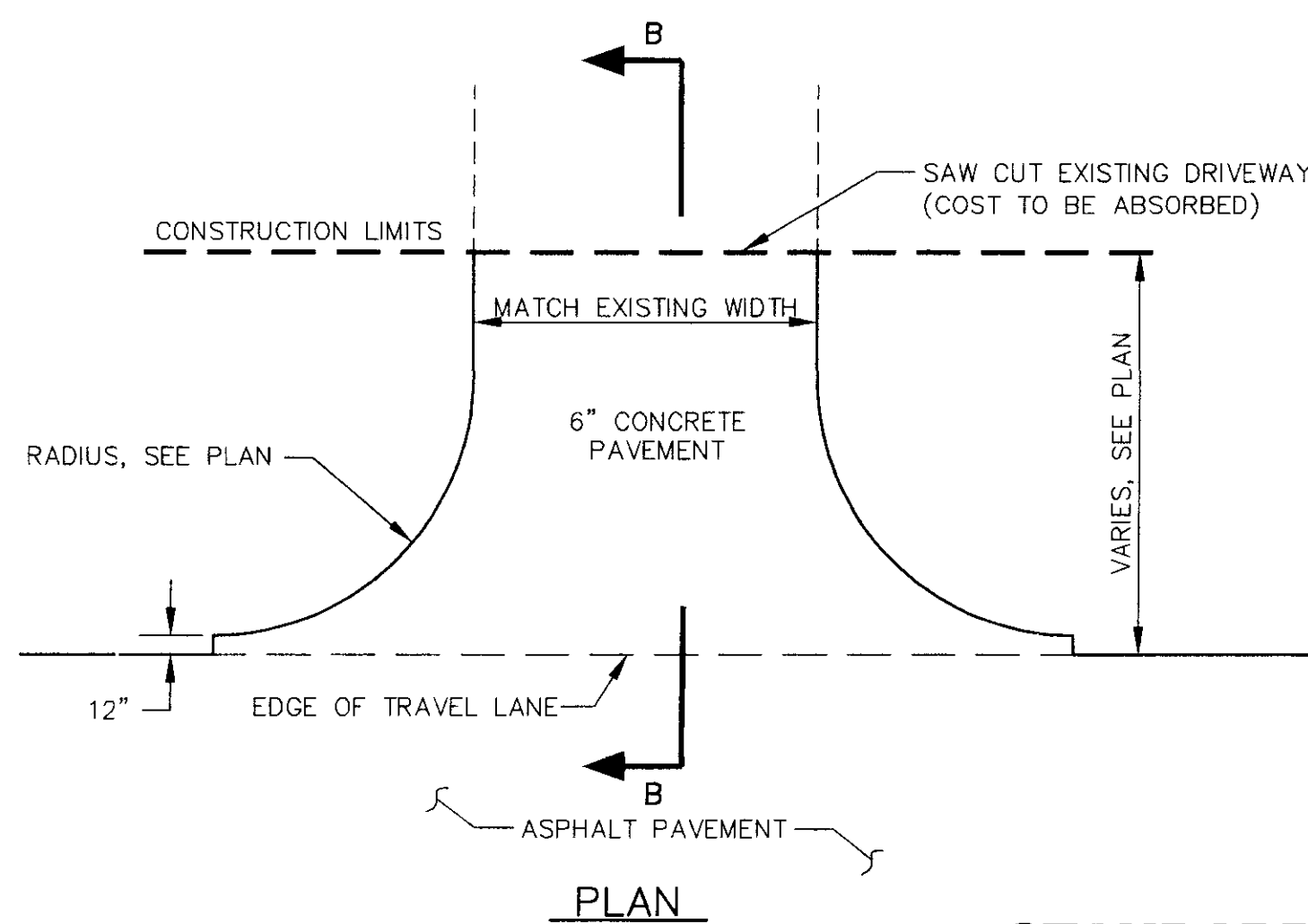
GRATE INLET DETAIL
N.T.S.



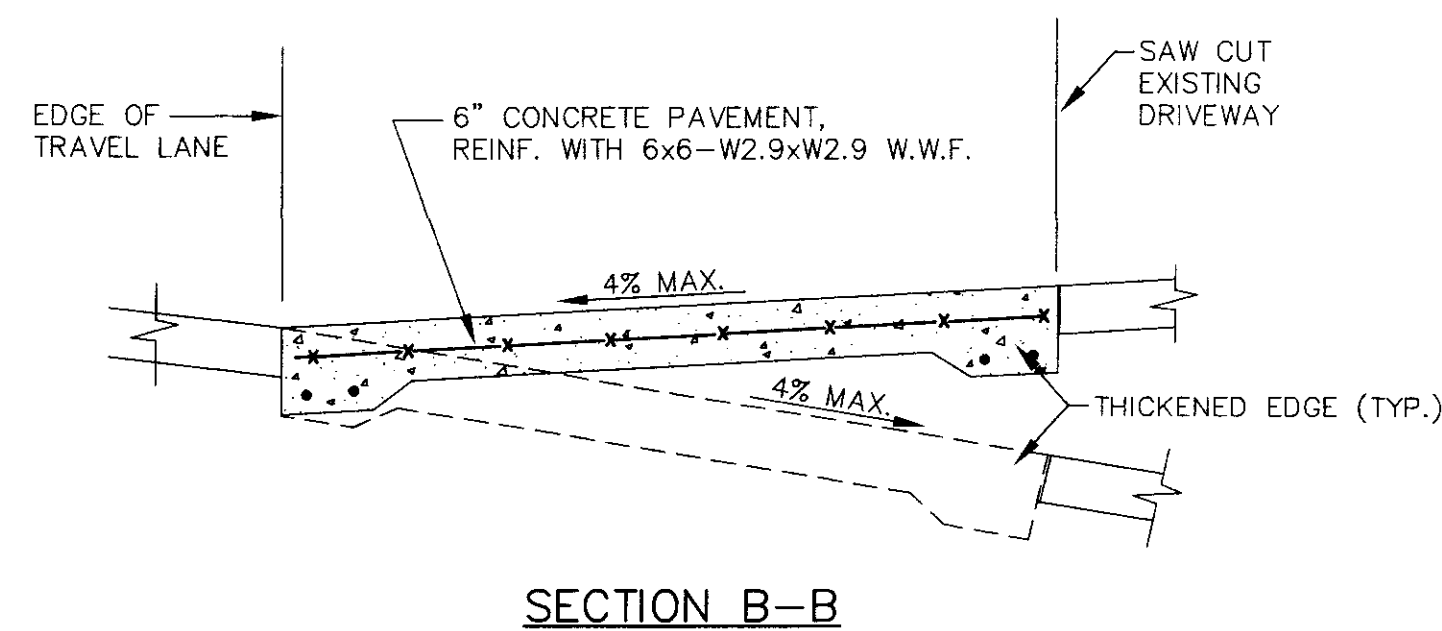
MODIFIED BRICK INLET
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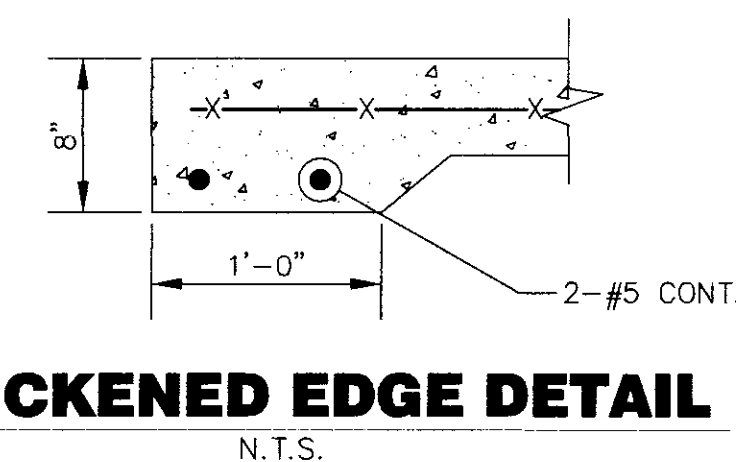
DITCH PLUG DETAIL
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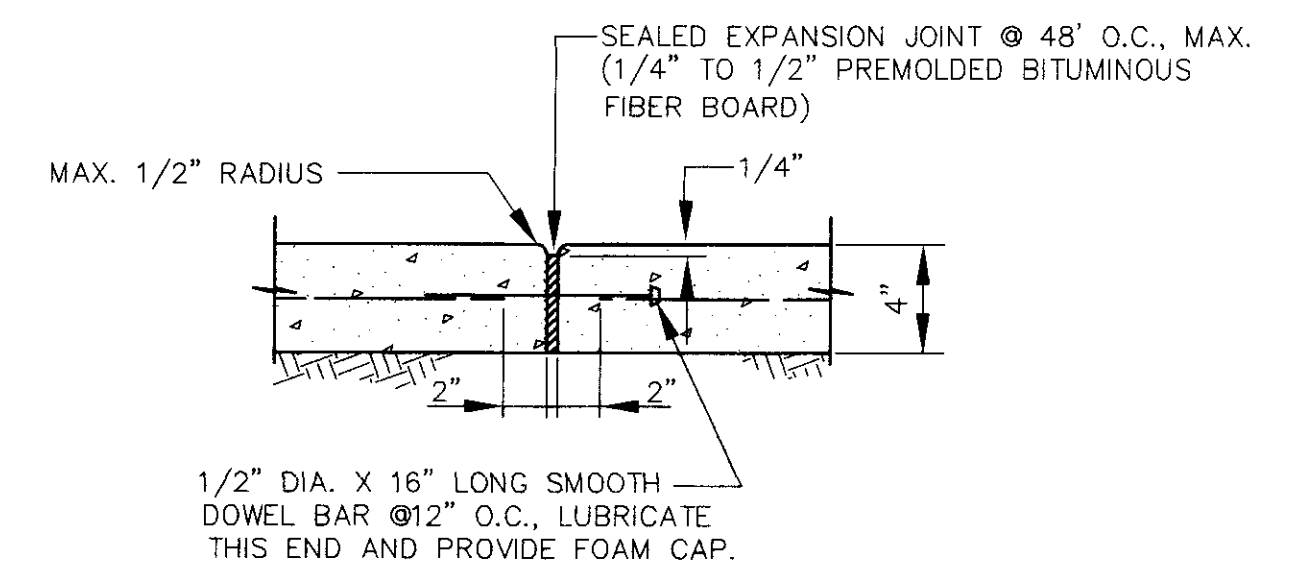
STANDARD DRIVEWAY DETAIL
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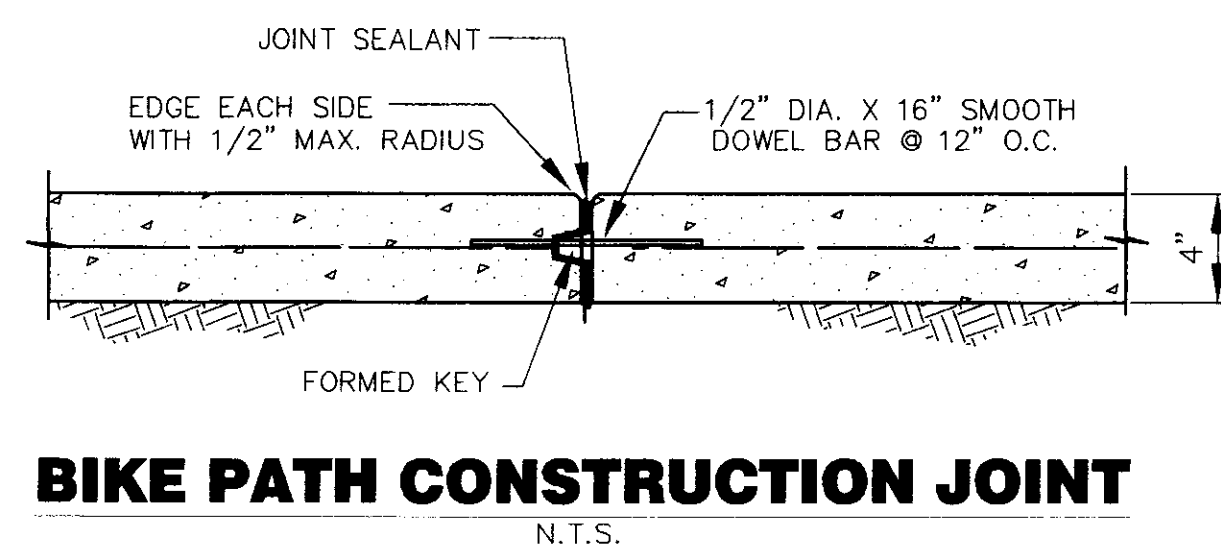
SECTION B-B



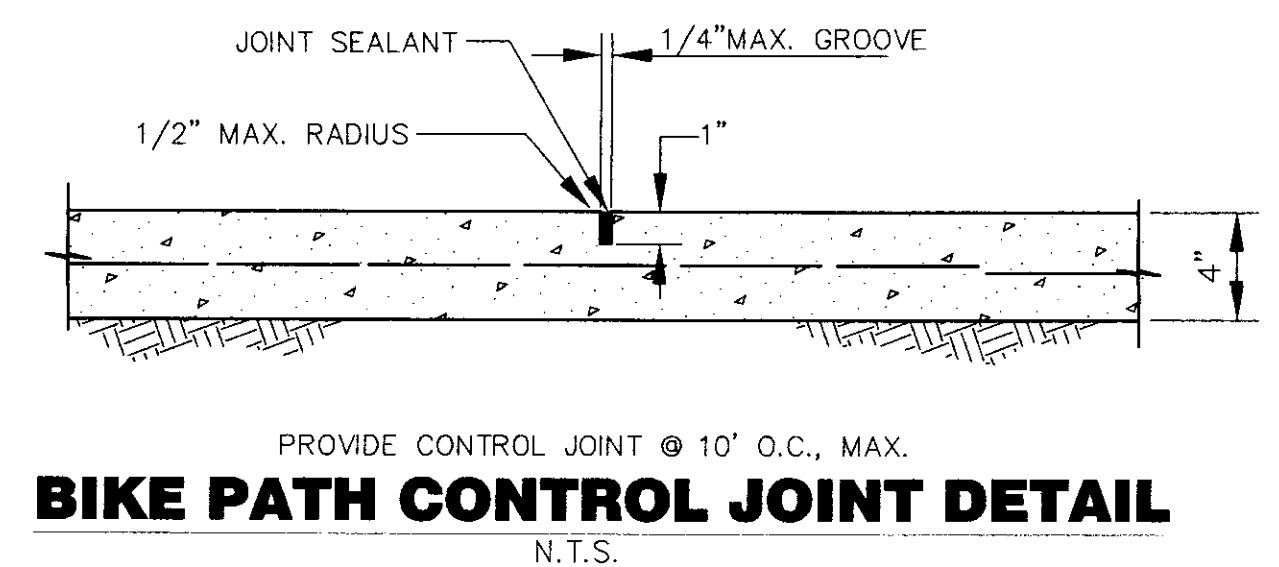
THICKENED EDGE DETAIL
N.T.S.



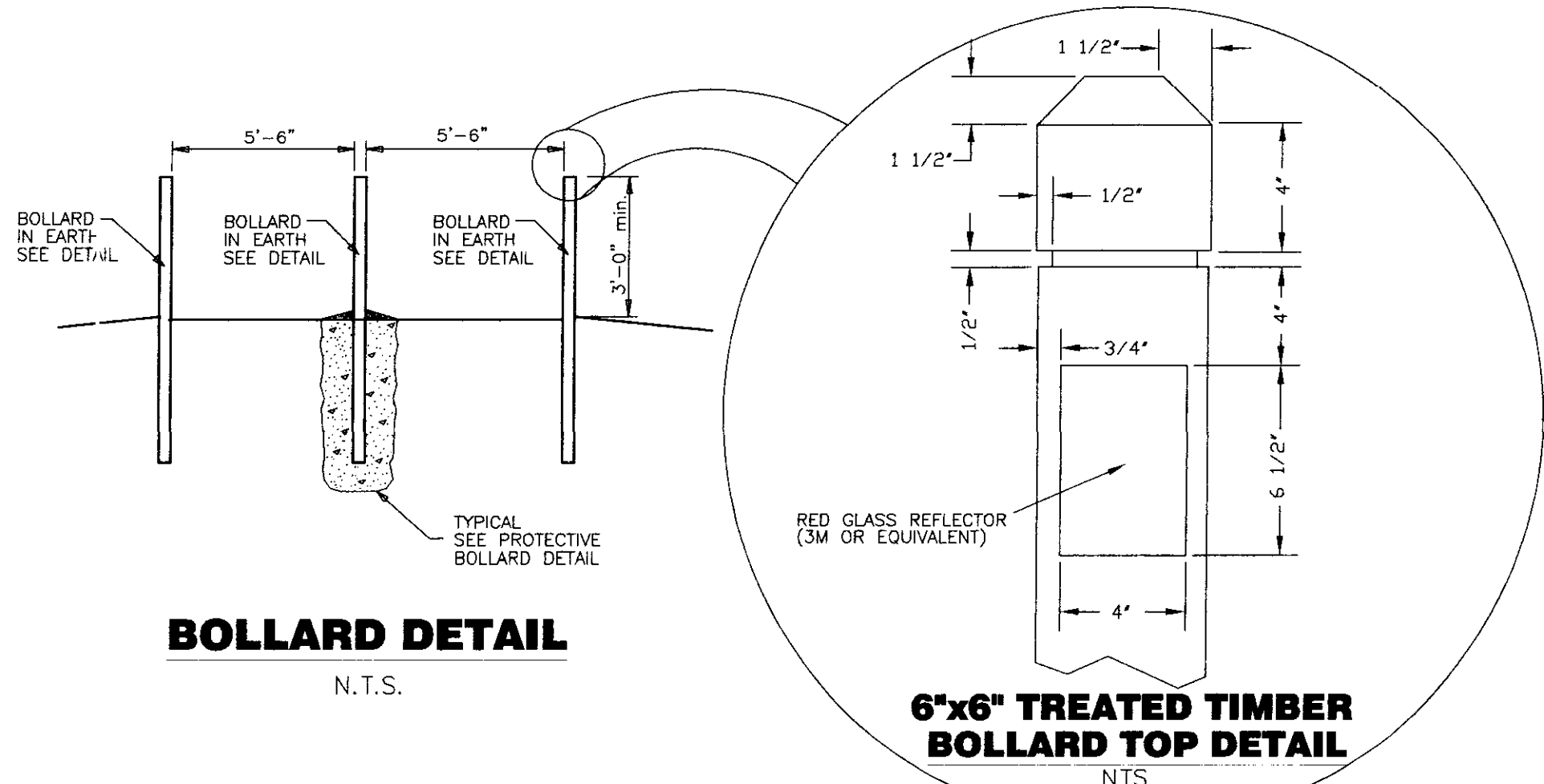
BIKE PATH EXPANSION JOINT DETAIL
N.T.S.



BIKE PATH CONSTRUCTION JOINT
N.T.S.

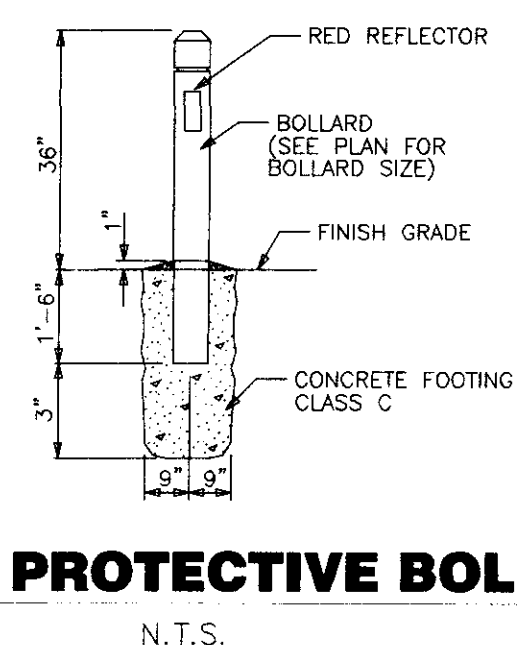


BIKE PATH CONTROL JOINT DETAIL
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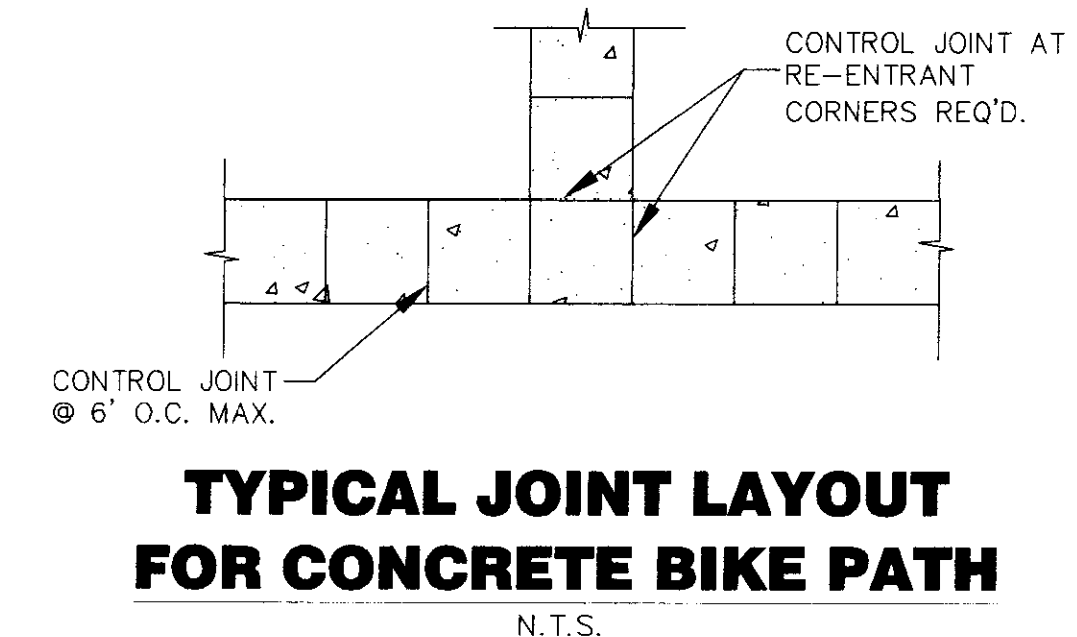


BOLLARD DETAIL
N.T.S.

6"x6" TREATED TIMBER BOLLARD TOP DETAIL
N.T.S.

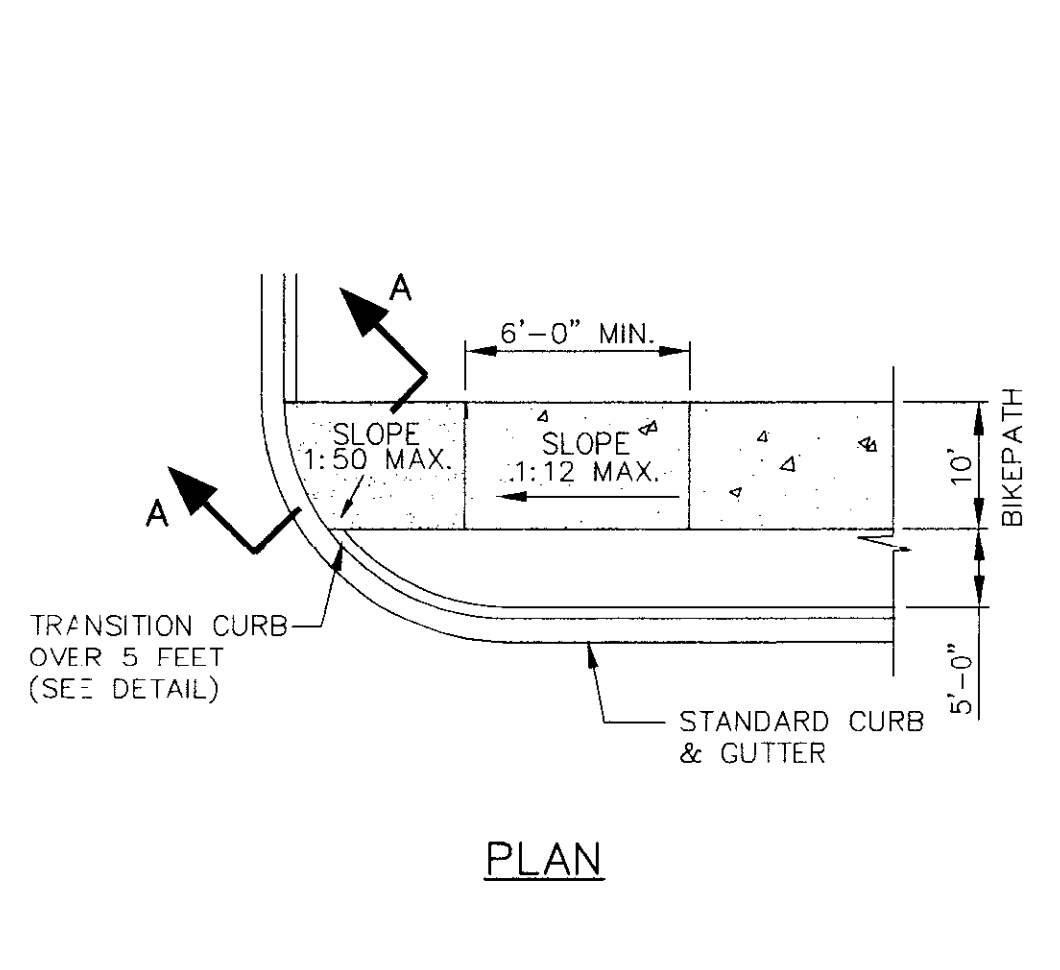


TYPICAL PROTECTIVE BOLLARD
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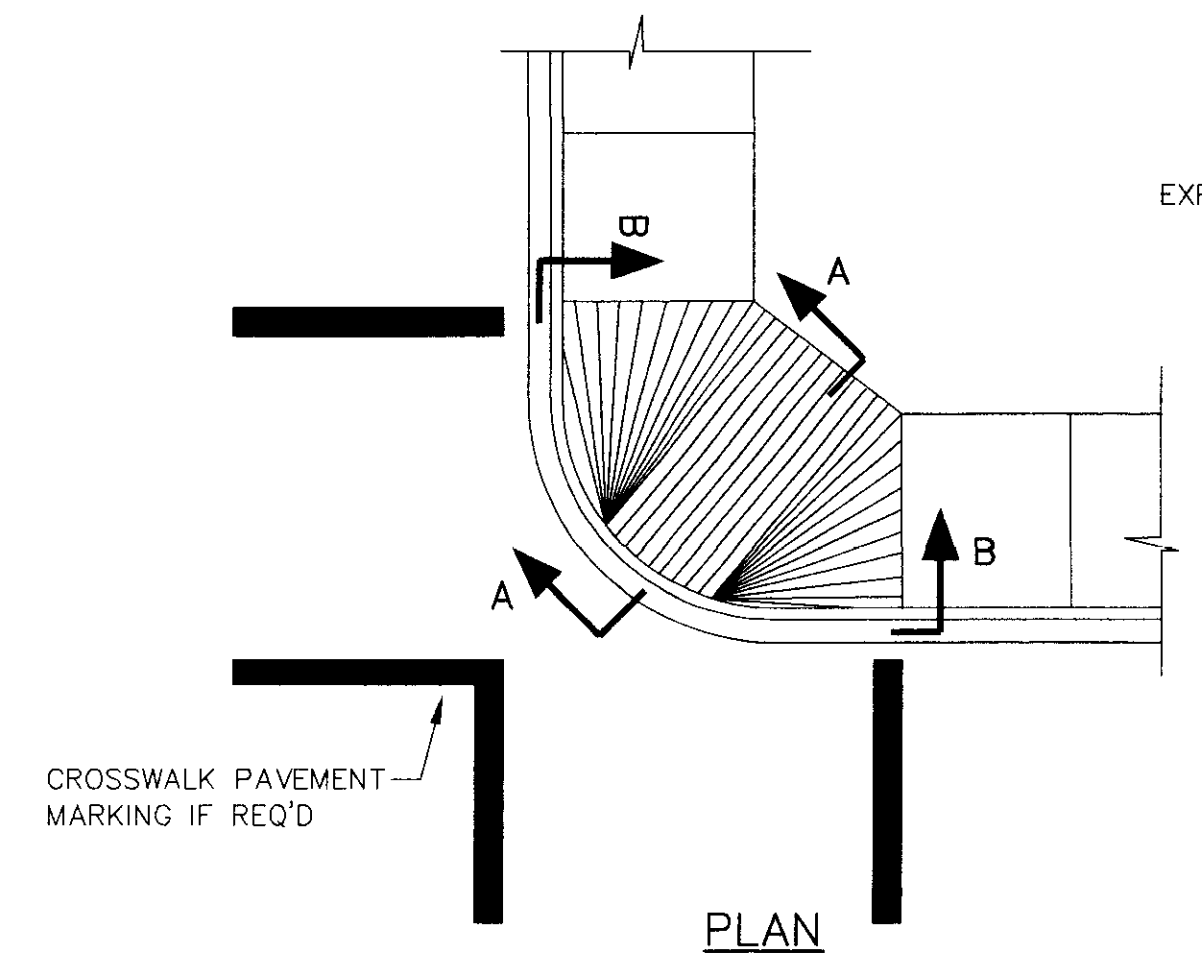


TYPICAL JOINT LAYOUT FOR CONCRETE BIKE PATH
N.T.S.

CITY OF RIDGELAND		
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/ NORTH PARK DRIVE INTERSECTION		
TYPICAL DETAILS		
WAGGONER ENGINEERING, INC. Consulting Engineers - Jackson, Mississippi		
DRAWN BY: B.E.S.	DATE: 11-01-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: N.T.S.	25 OF



PLAN

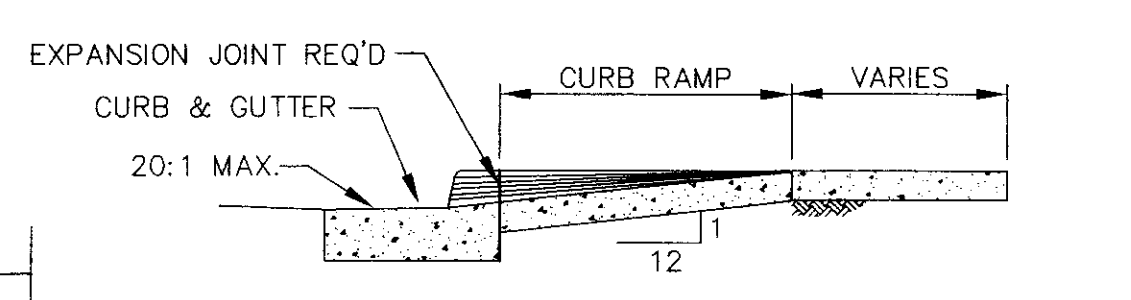


PLAN

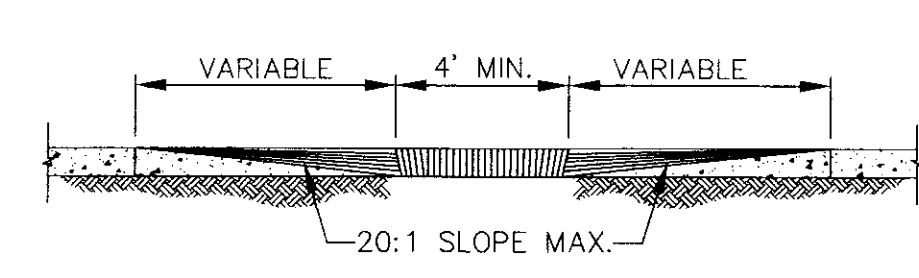
HANDICAP RAMP DETAILS

N.T.S.

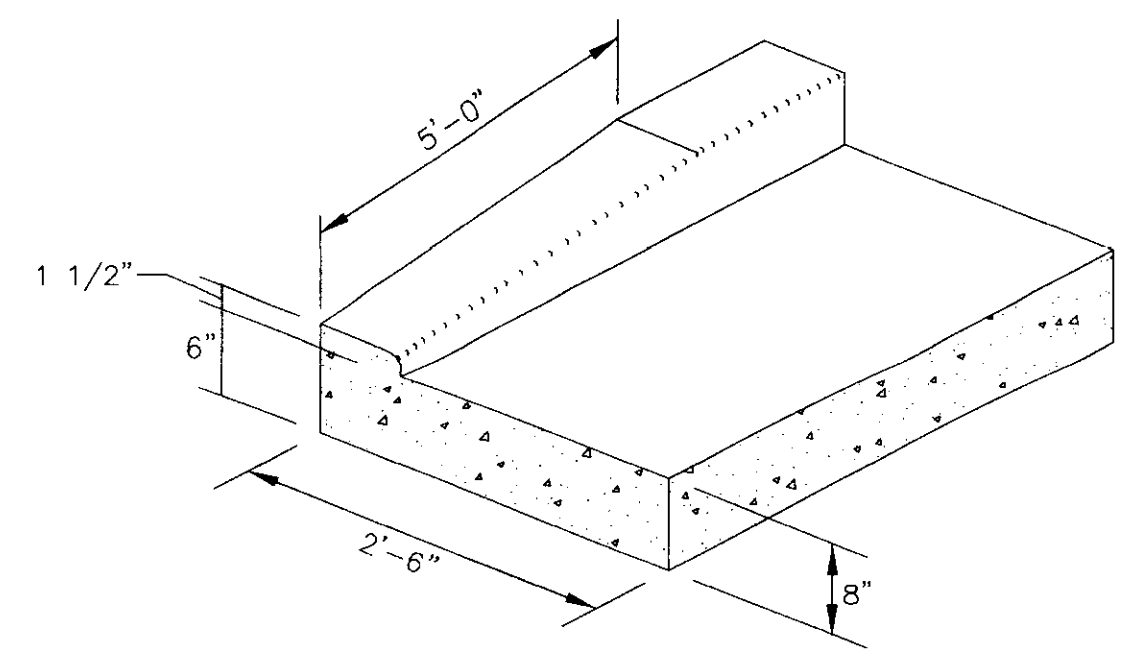
- NOTES:
1. LOCATION AND TYPE OF CURB SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED.
 2. THE CURB RAMP SHALL BE PAID FOR AS SIDEWALK.
 3. THE THICKNESS OF THE CURB RAMP SHALL BE A MINIMUM OF 4 INCHES
 4. ALL RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.



SECTION A-A

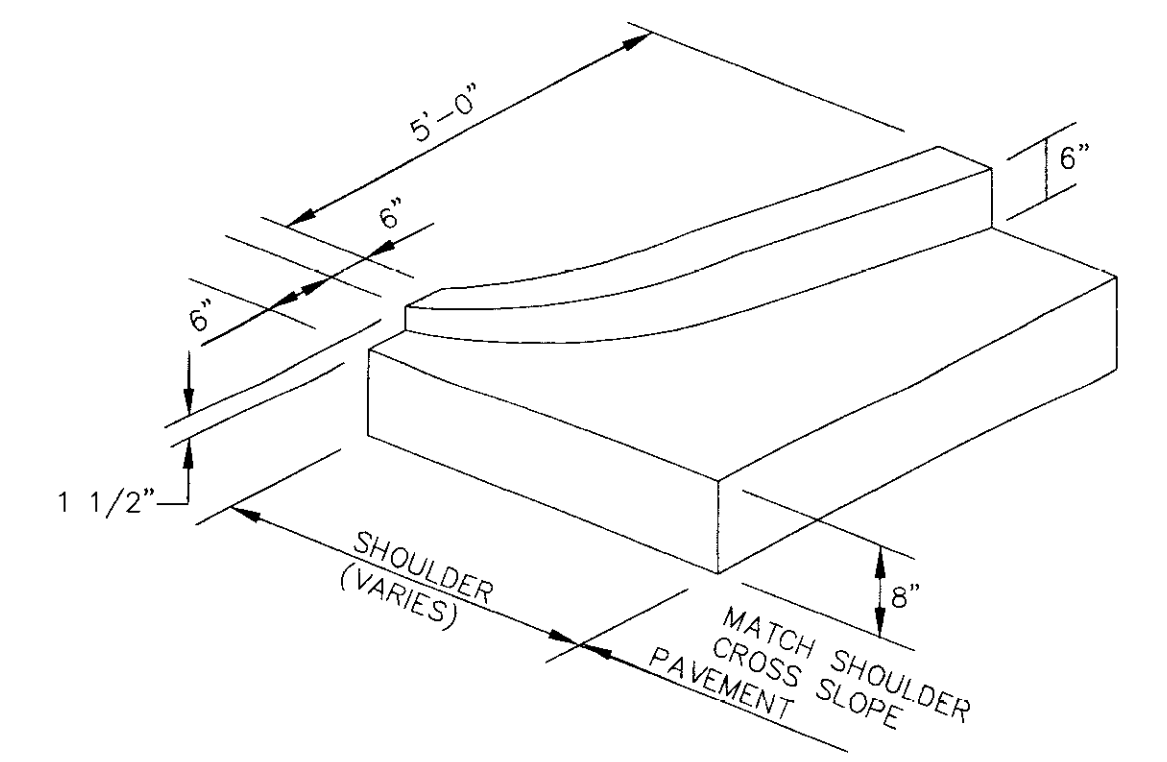


SECTION B-B



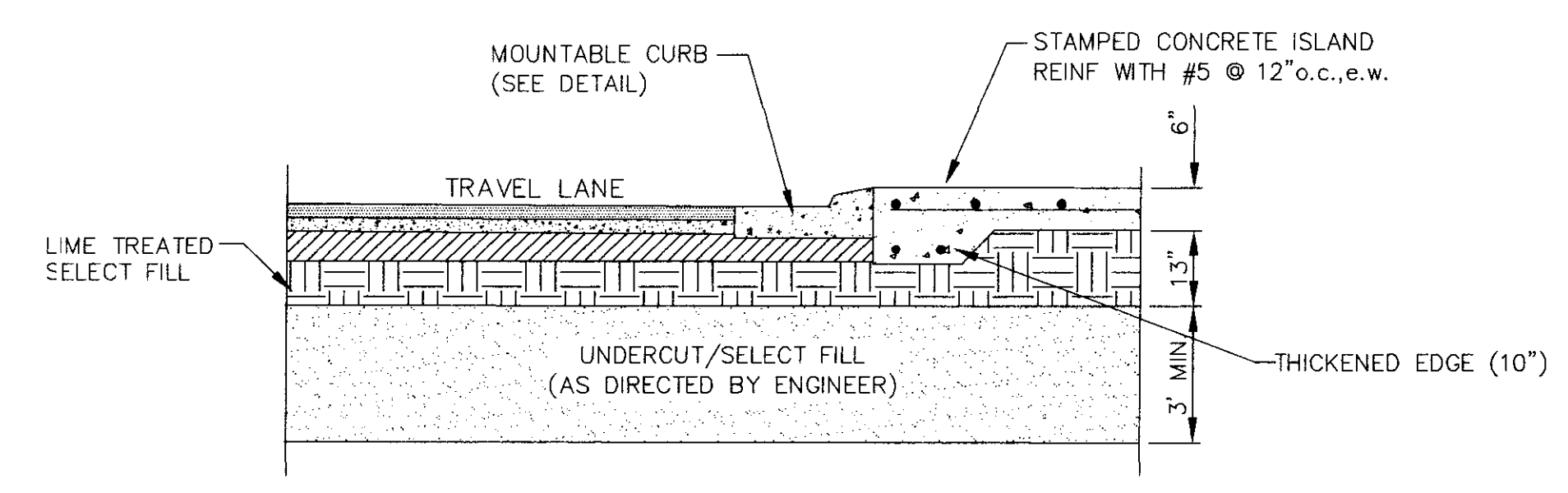
CURB END TRANSITION IN TANGENT SECTION

N.T.S.



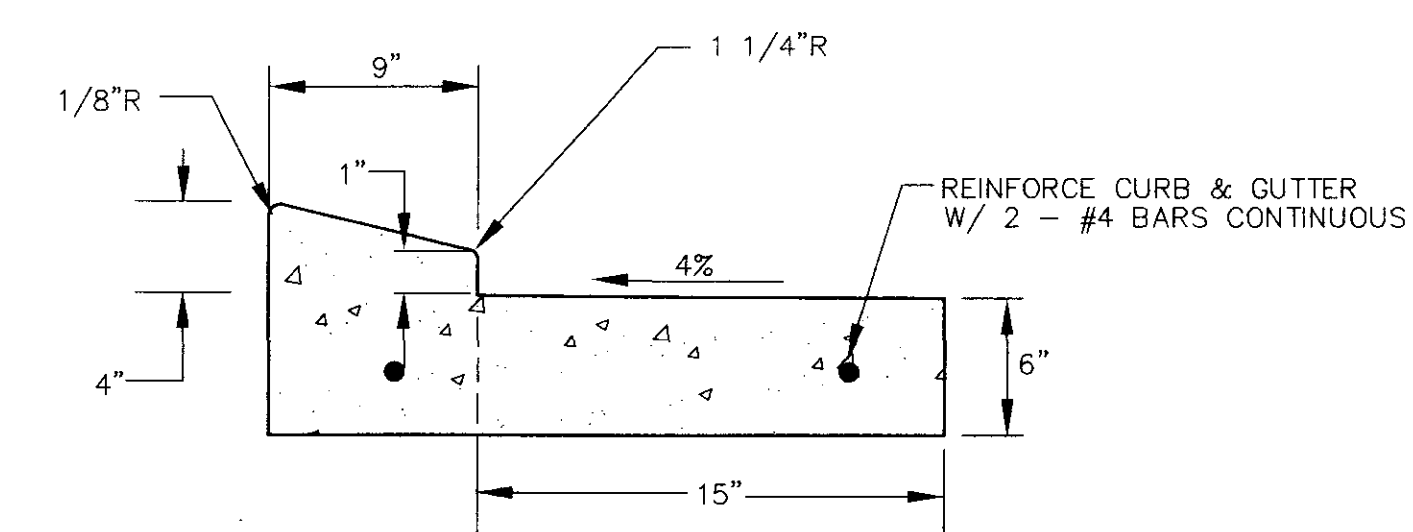
CURB END TRANSITION IN RADIUS SECTION

N.T.S.



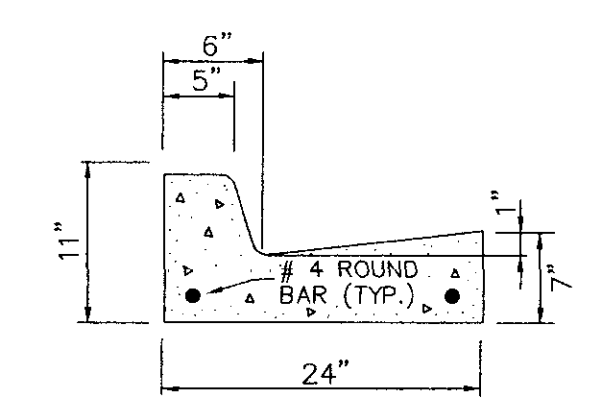
TYPICAL ISLAND SECTION

N.T.S.

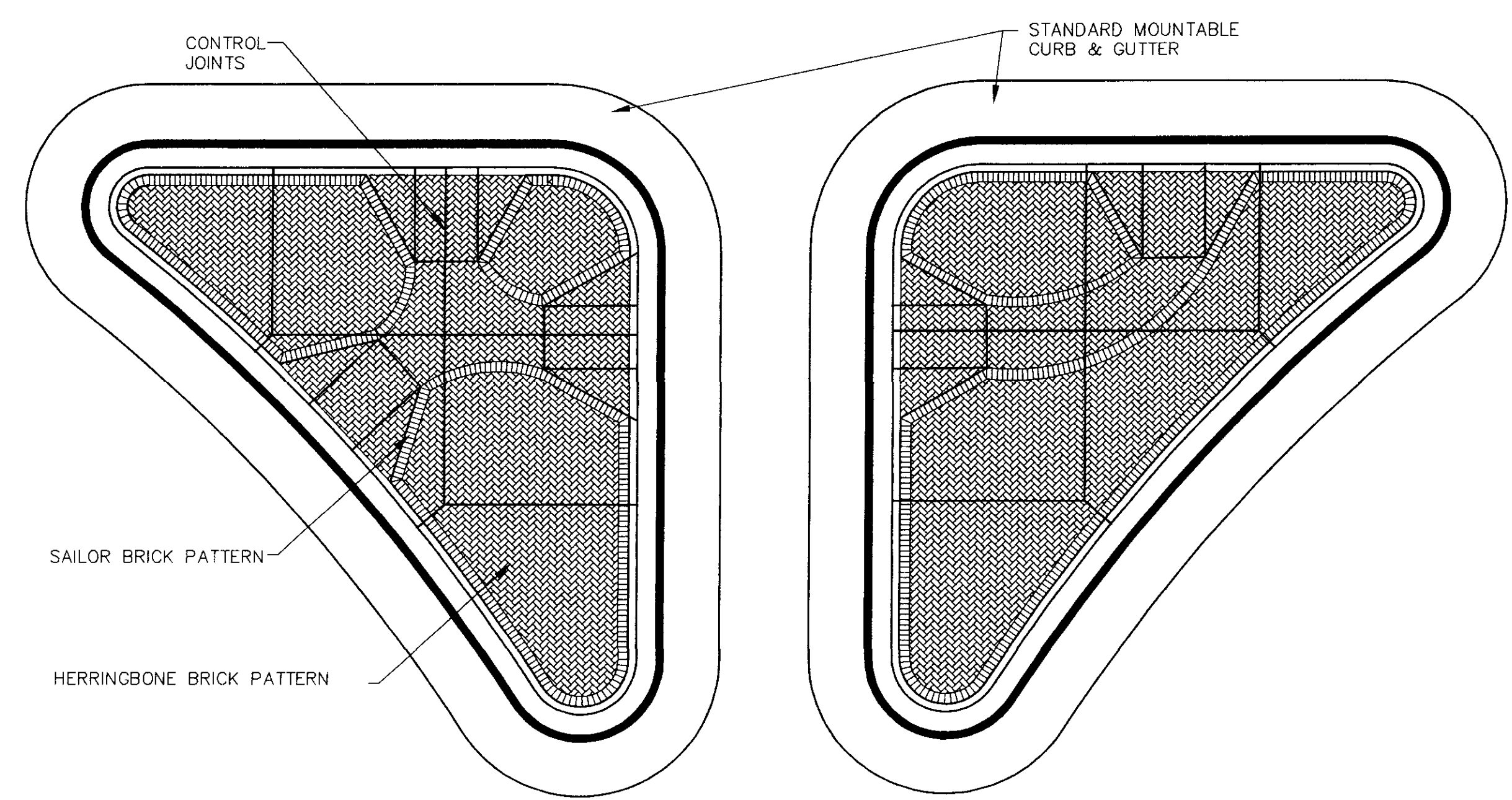


STANDARD MOUNTABLE CONCRETE CURB AND GUTTER DETAIL

N.T.S.

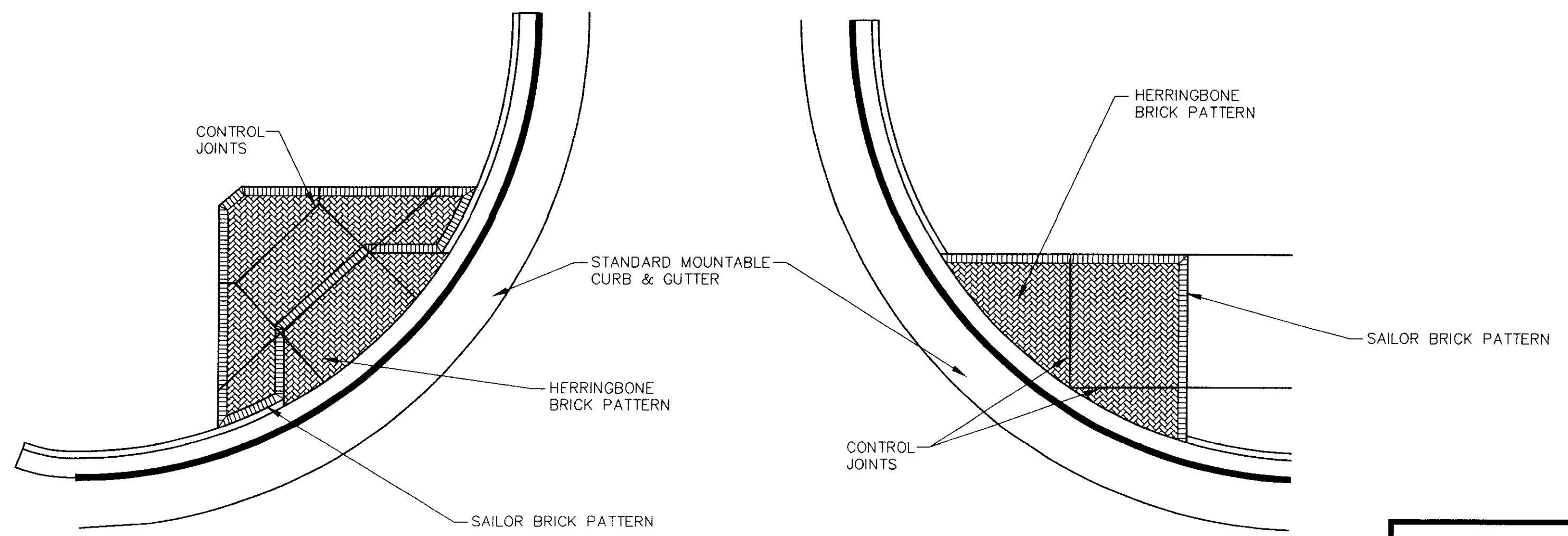


STANDARD CURB & GUTTER DETAIL

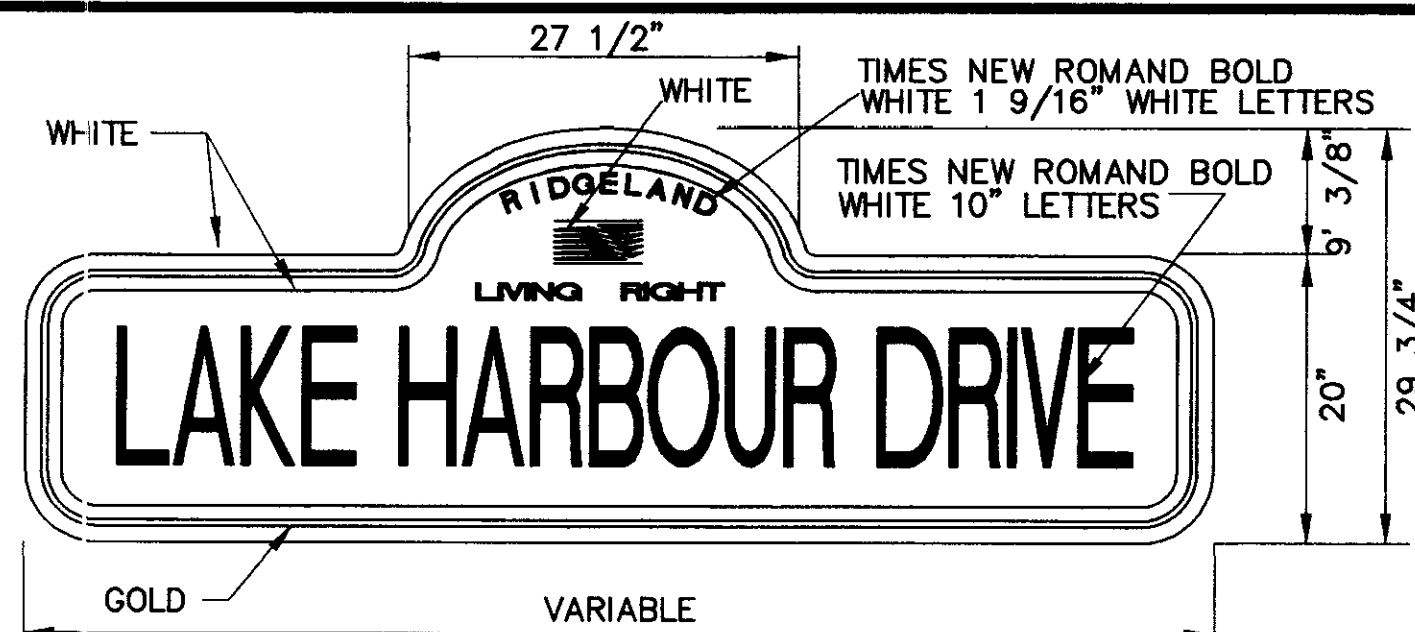


TYPICAL STAMPED CONCRETE DETAIL

N.T.S.
ALL STAMPED PIGMENTED CONCRETE SHALL BE BOMINITE OR APPROVED EQUAL AND SHALL BE 6" THICK REINF. W/#5 @12" o.c.



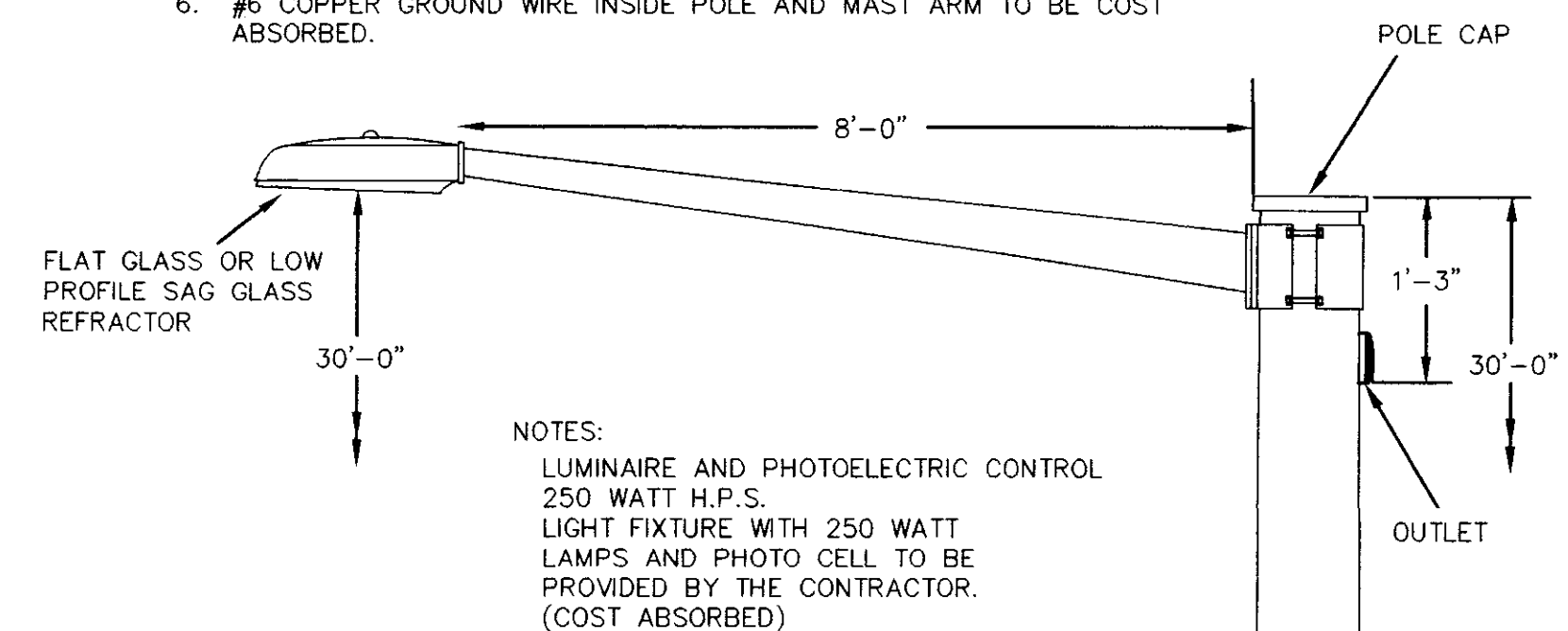
CITY OF RIDGELAND		
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/ NORTH PARK DRIVE INTERSECTION		
TYPICAL DETAILS		
WAGGONER ENGINEERING, INC. Consulting Engineers - Jackson, Mississippi		
DRAWN BY: B.E.S.	DATE: 11-01-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: N.T.S.	26 OF



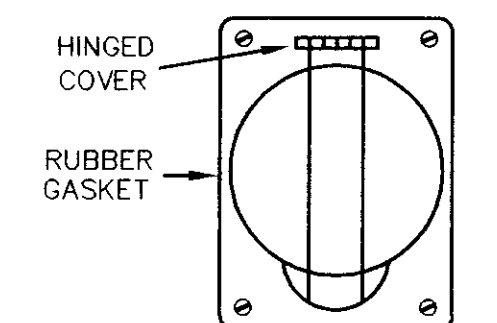
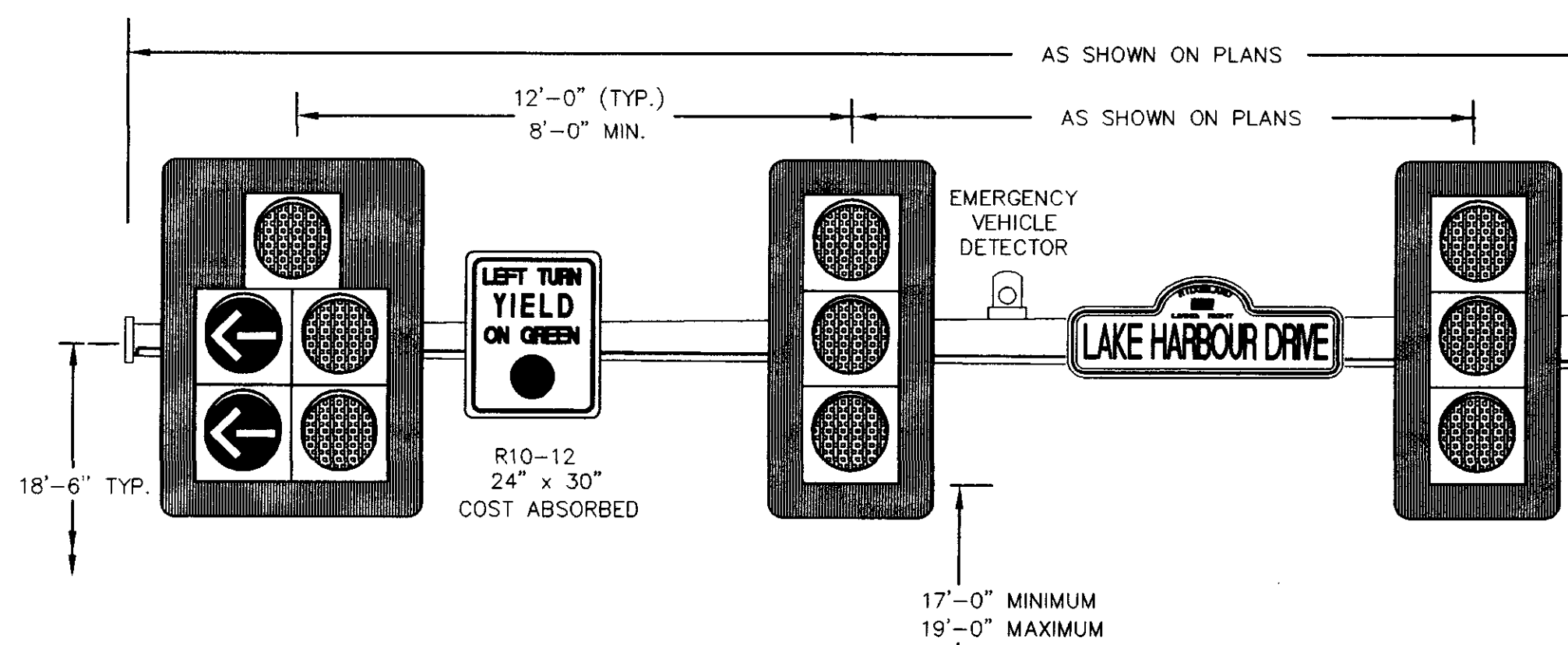
STREET NAME SIGNS (TYPICAL)

THE SIGN BLANK SHALL BE SINGLE PIECE OF SMOOTH CUT ALUMINUM FROM ASTM B-209 ALLOY 5052-H36, 5052-H38, 5154-H38 OR 6061-T6 SHEETS IN 0.125 INCH THICKNESS. THE ALUMINUM SHALL BE DEGREASED AND LIGHTLY ACID ETCHED BEFORE THE SIGN SHEETING IS APPLIED. THE SIGN SHEETING SHALL BE APPLIED TO THE PANELS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE RETROREFLECTIVE SHEETING MANUFACTURER. THE DECORATIVE STREET NAME SIGNS SHALL BE FINISHED ON BOTH SIDES. THE SIGN SHEETING MATERIAL SHALL BE REFLECTIVE ENCLOSED LINES (ENGINEER GRADE) CONFORMING TO FEDERAL SPECIFICATIONS FP92. THE COLORS OF THE DECORATIVE STREET NAME SIGNS SHALL MATCH THE EXISTING DECORATIVE STREET NAME SIGNS.

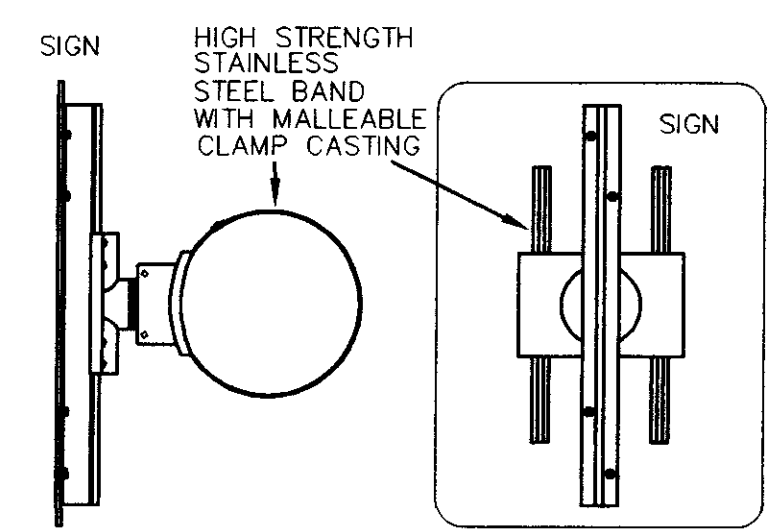
- NOTES:**
1. WIRE ENTRANCE TO MAST ARM WILL BE FIELD DRILLED TO CORRESPOND TO THE LOCATION OF THE SIGNAL HEADS WHEN ALIGNED IN THE FIELD.
 2. ALL SIGNAL HEADS TO BE BLACK IN COLOR.
 3. RED SECTION INDICATIONS TO BE APPROXIMATELY SAME HEIGHT.
 4. EXACT DIMENSIONS AND LOCATIONS OF ANCHOR BOLTS TO BE SUPPLIED BY THE POLE MANUFACTURER.
 5. DESIGN WIND LOAD FOR POLES AND MAST ARMS IS 70 MPH.
 6. #6 COPPER GROUND WIRE INSIDE POLE AND MAST ARM TO BE COST ABSORBED.



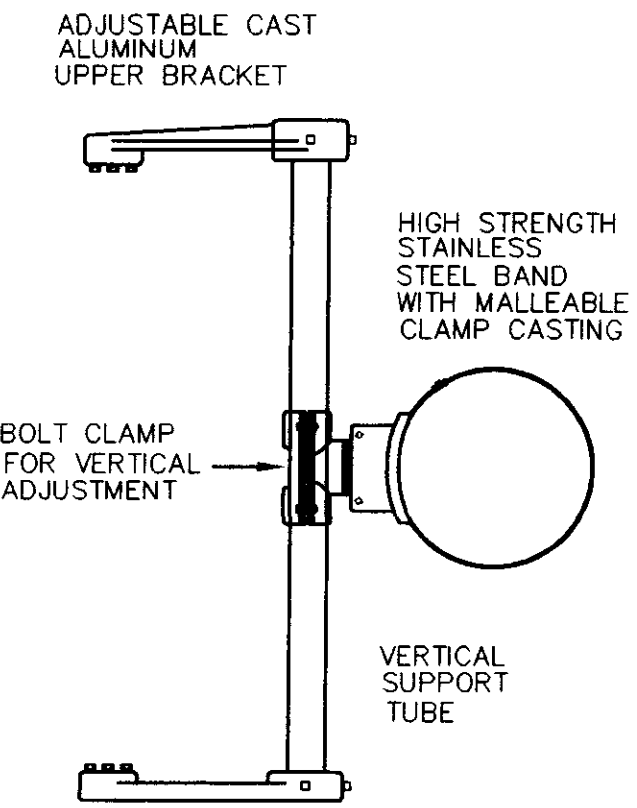
- NOTES:**
- LUMINAIRE AND PHOTOELECTRIC CONTROL 250 WATT H.P.S.
 - LIGHT FIXTURE WITH 250 WATT LAMPS AND PHOTO CELL TO BE PROVIDED BY THE CONTRACTOR. (COST ABSORBED)



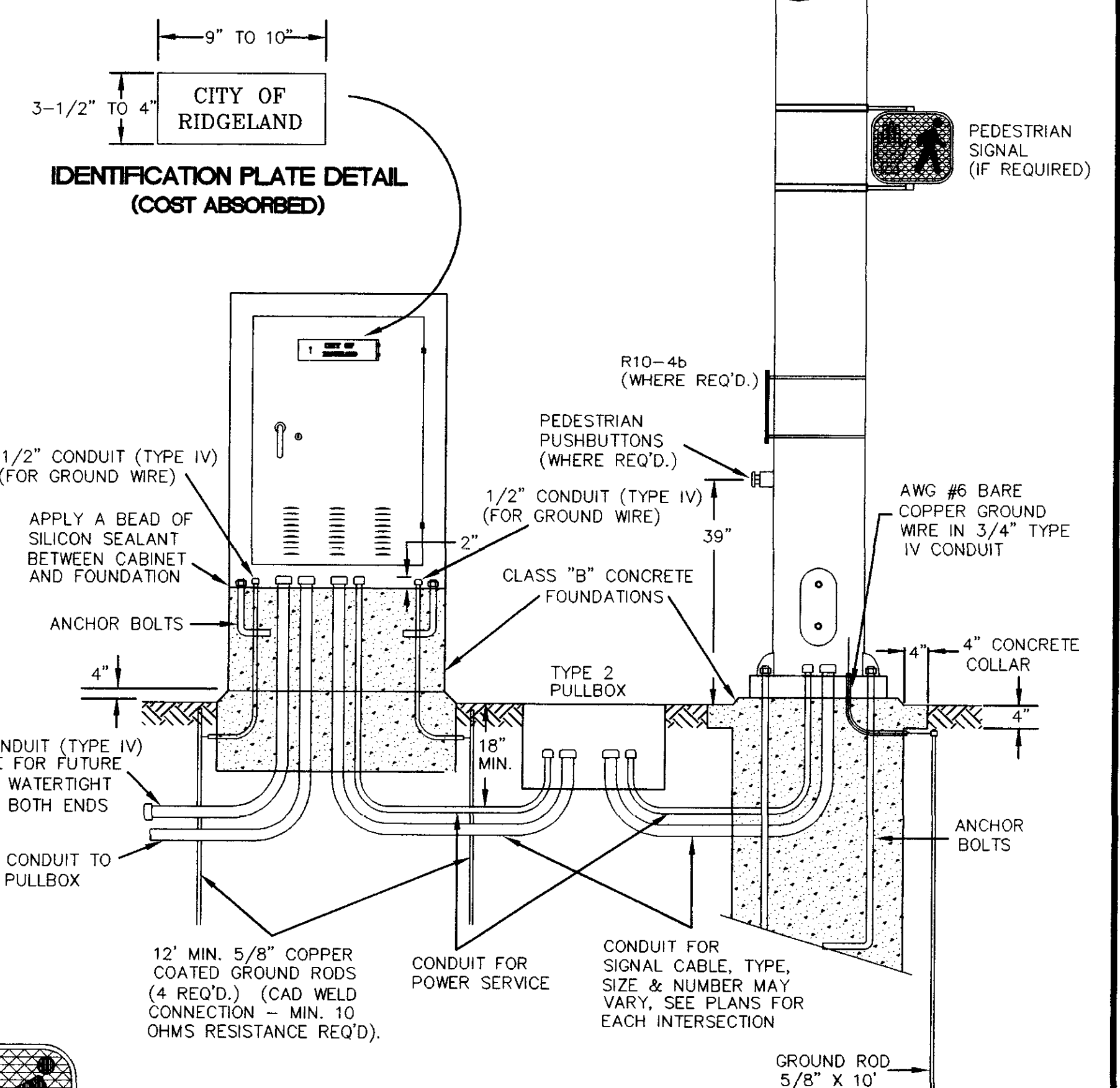
OUTLET



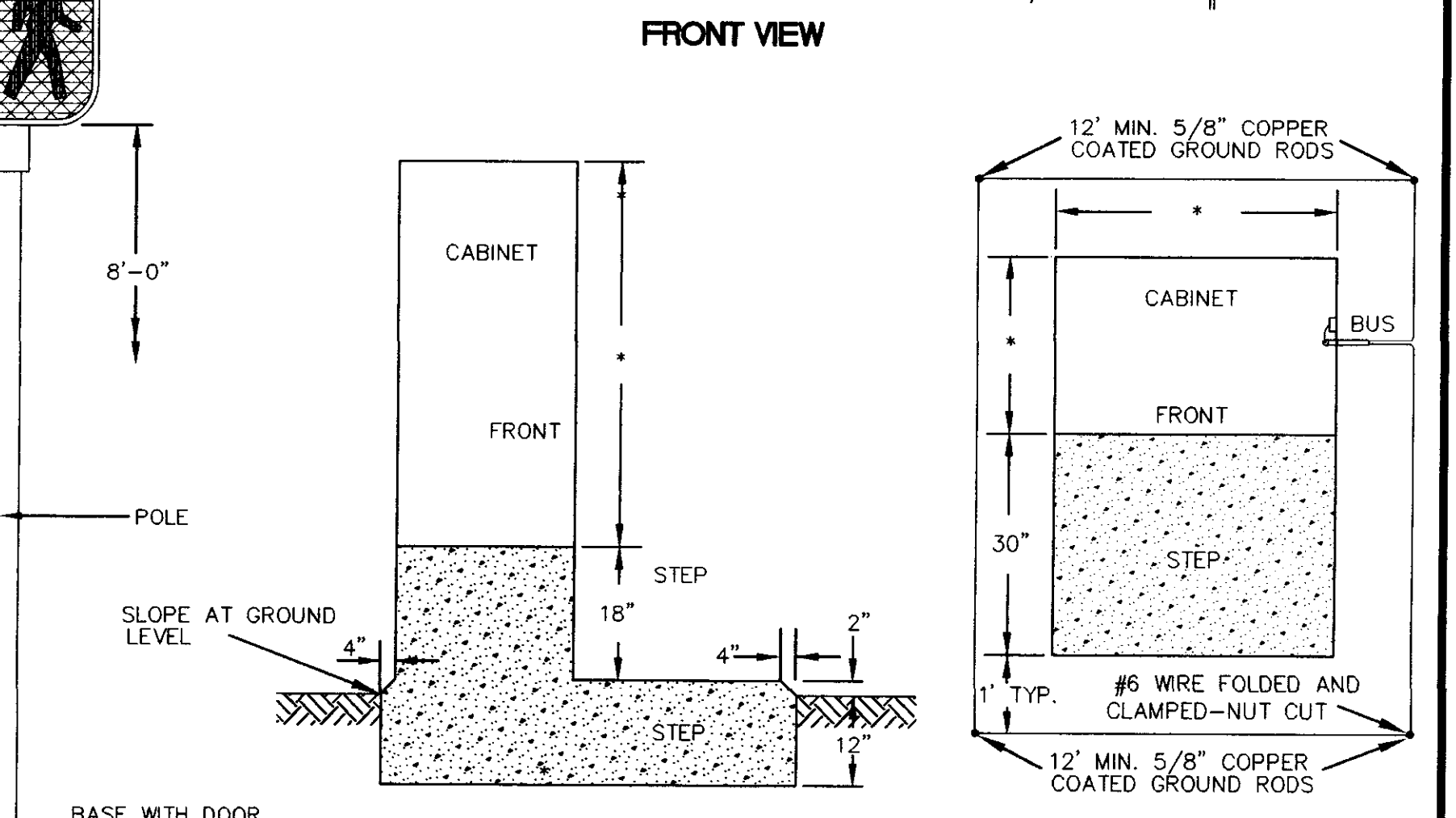
MAST ARM SIGN BRACKET (TYPICAL)



SIGNAL MOUNTING BRACKET (TYPICAL)



PEDESTAL POLE DETAIL

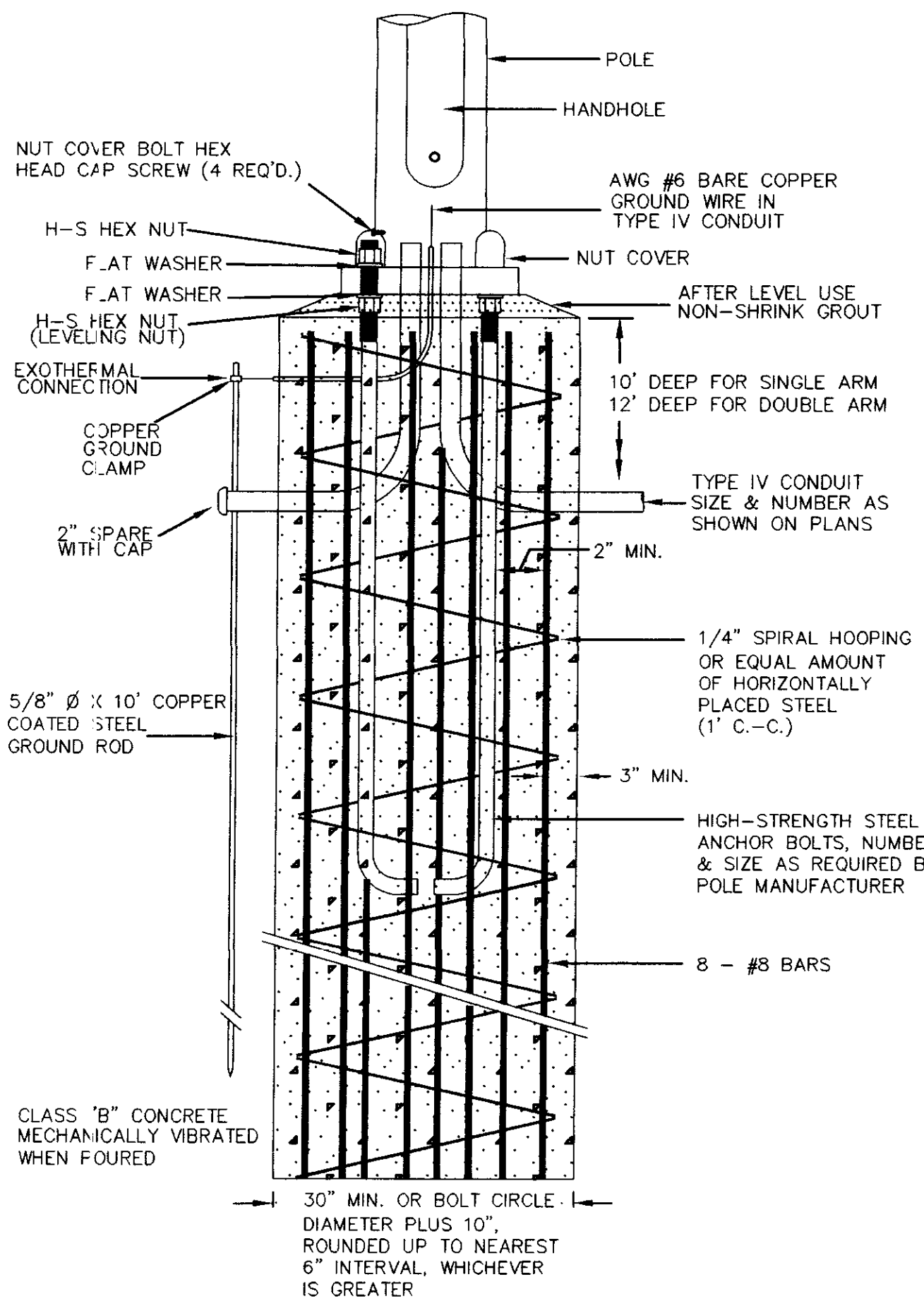


CONTROLLER BASE DETAIL

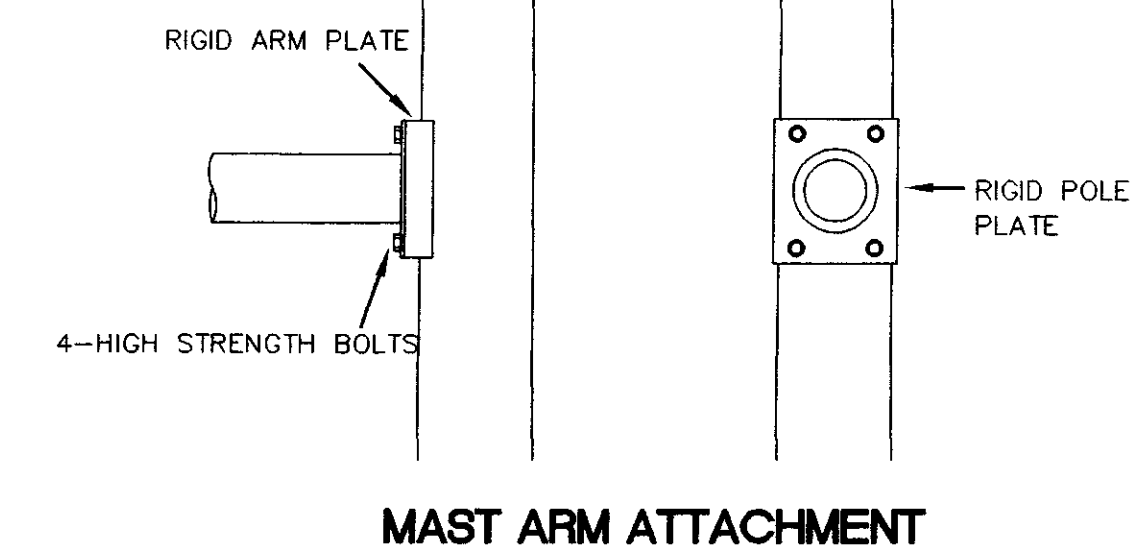
CABINET DIMENSIONS TO MEET SIGNAL CABINET MANUFACTURER'S SPECIFICATIONS.
 NOMINAL DIMENSIONS: 8-PHASE - D=26", W=44", H=55"
 4-PHASE - D=17", W=30", H=52"

GENERAL FOUNDATION NOTES

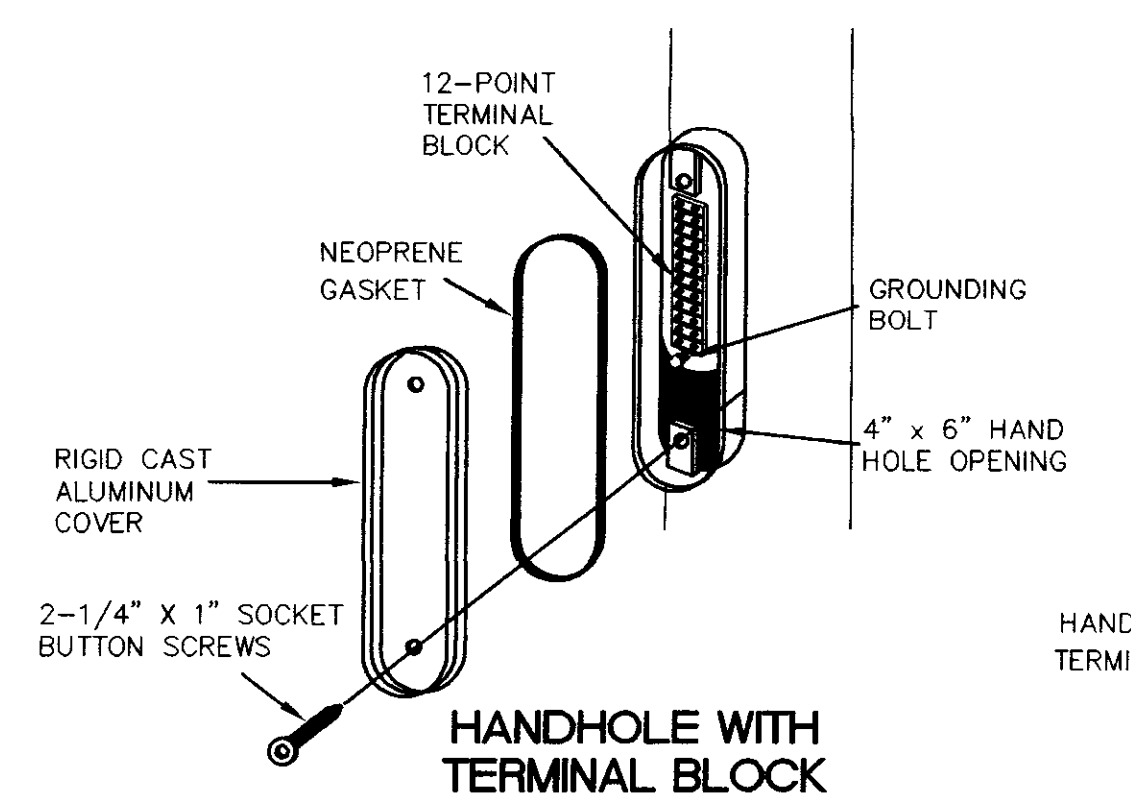
1. EXACT DIMENSIONS AND LOCATIONS OF ANCHOR BOLTS TO BE SUPPLIED BY THE MANUFACTURER. ANY FOUNDATION FAILING TO MEET THESE DIMENSIONS WILL BE REJECTED.
2. TYPE IV CONDUIT TO BE RUN INTERNALLY FOR CONCRETE AND STEEL POLES; TYPE I CONDUIT RISERS REQUIRED FOR WOOD POLES.
3. DESIGN WIND LOAD FOR POLES SHALL BE 70 MPH.
4. FOUNDATIONS TO BE CLASS "B" CONCRETE, MECHANICALLY VIBRATED WHEN POURING.
5. MINIMUM STEEL POLE FOUNDATION SHALL BE 30" DIA. X 10' DEEP.
6. #6 COPPER GROUND WIRE AND 5/8" DIA. COPPER GROUND ROD REQ'D. FOR ALL POLE FOUNDATIONS. (COST ABSORBED).



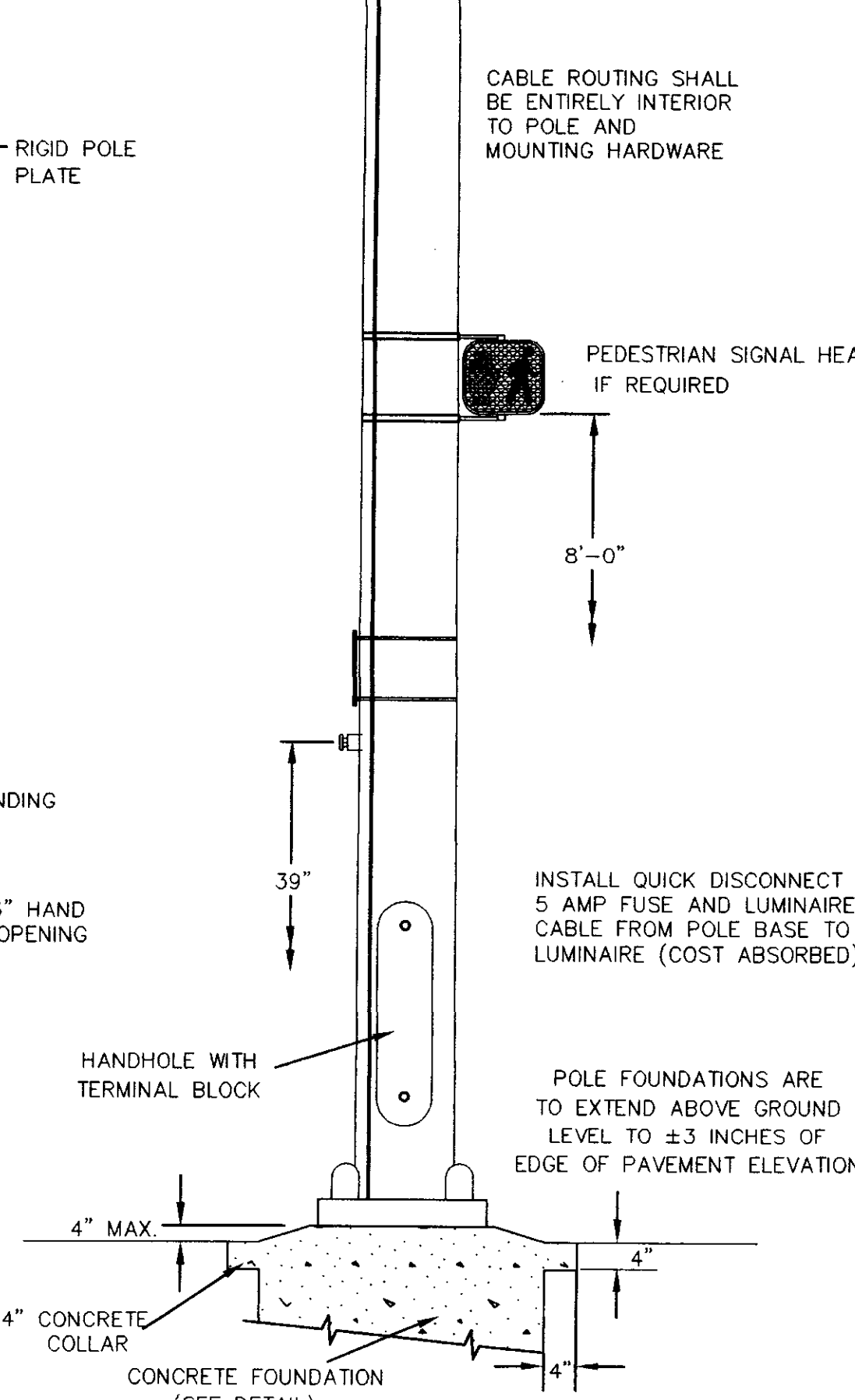
STEEL MAST ARM POLE FOUNDATION DETAIL



MAST ARM ATTACHMENT



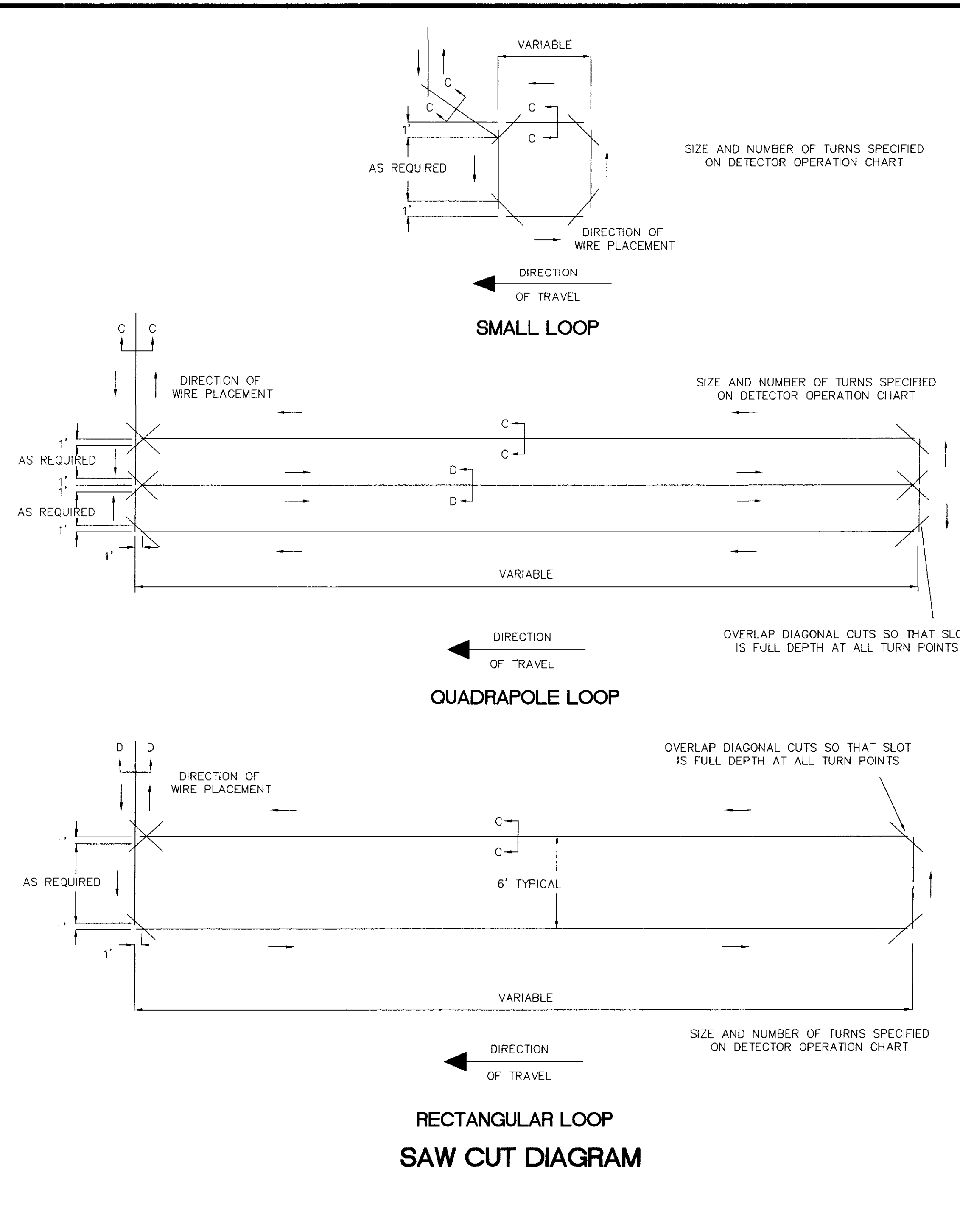
HANDHOLE WITH TERMINAL BLOCK



STEEL MAST ARM POLE DETAIL

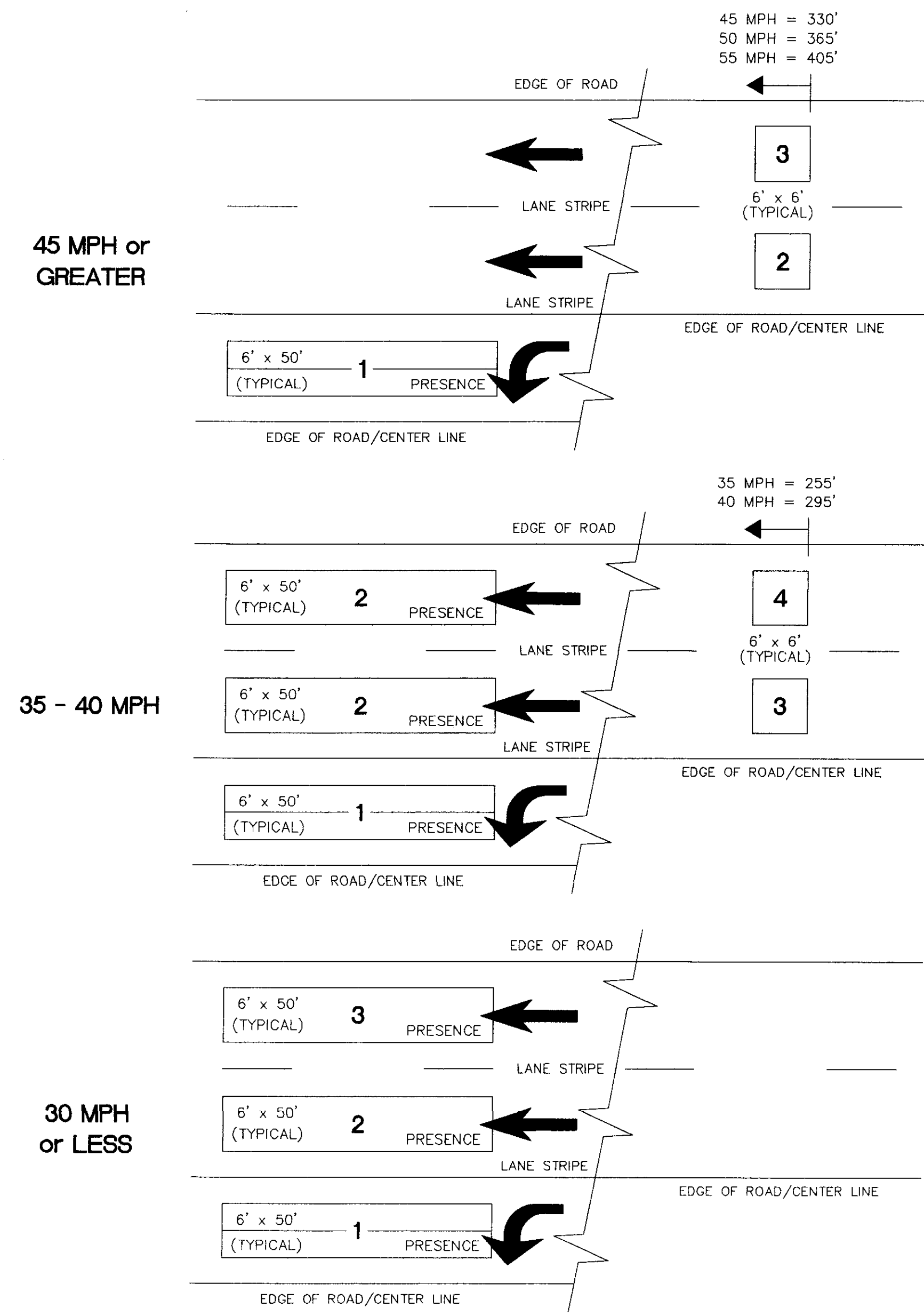
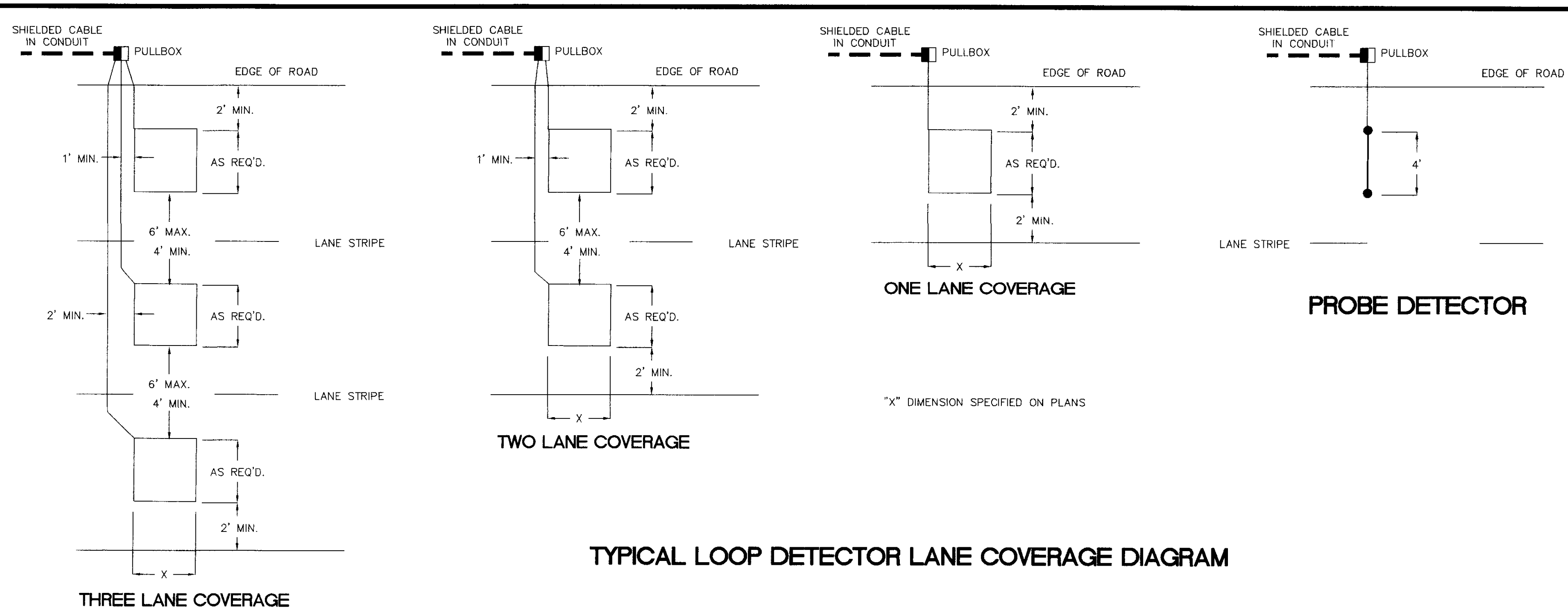
CITY OF RIDGELAND
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE / NORTH PARK DRIVE INTERSECTION
SIGNAL POLES AND CONTROLLER CABINET STANDARD SIGNAL DETAIL
 WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi

DRAWN BY: E.L.G.	DATE: 10-6-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: N.T.S.	27 OF

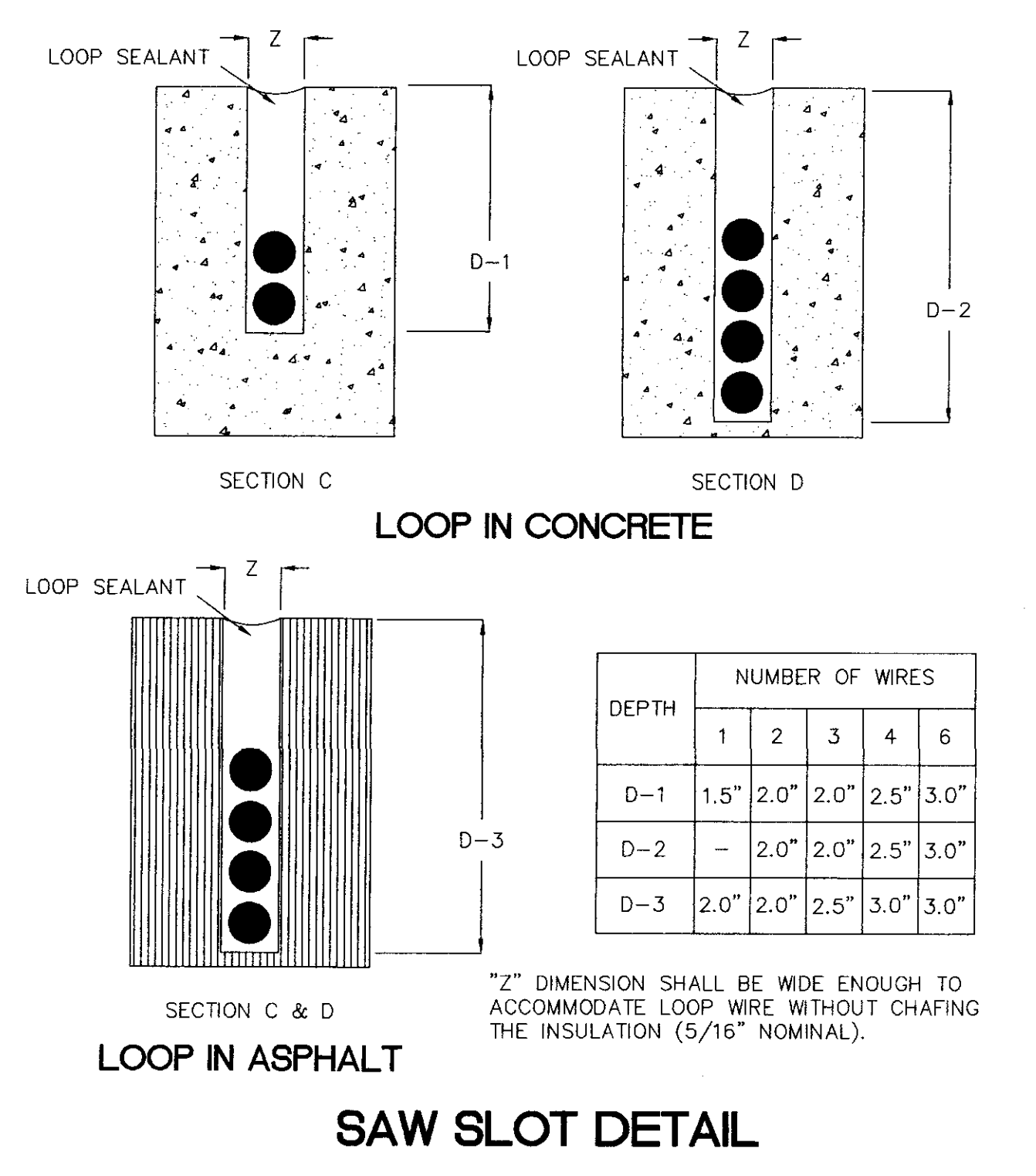


SAW SLOT AND LOOP WIRE INSTALLATION PROCEDURES

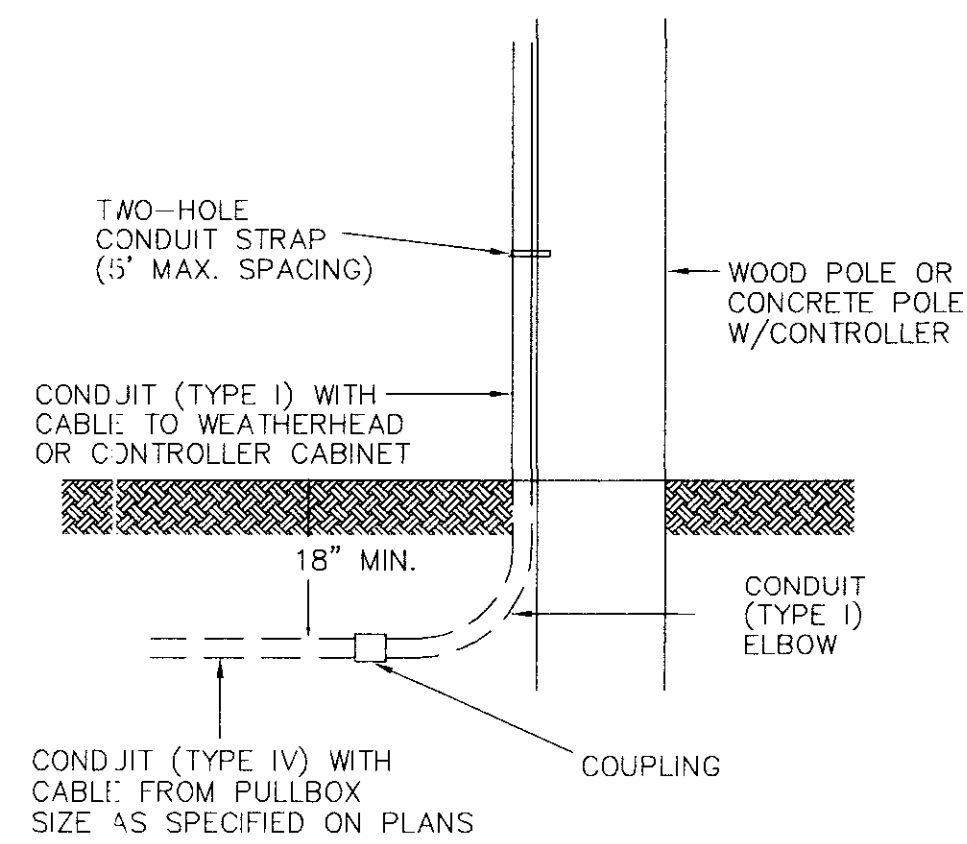
- CONCRETE PAVEMENT JOINTS SHALL NOT BE USED FOR EITHER LOOP OR FEEDER WIRE. NO LOOPS ARE TO BE INSTALLED THROUGH, OVER, OR UNDER TRANSVERSE CONCRETE JOINTS IN CONCRETE PAVEMENT. NO MANHOLES, INLETS, VALVES, ETC. MAY BE LOCATED WITHIN A LOOP. IF JOINTS OR MANHOLES ARE ENCOUNTERED, THE LOCATION OF THE LOOP MAY BE VARIED SLIGHTLY AS DIRECTED BY THE ENGINEER. IF THE JOINTS OR MANHOLES ARE UNAVOIDABLE, SMALLER LOOPS, THE SIZE TO BE DETERMINED BY THE ENGINEER, MAY BE USED INSTEAD OF ONE LARGER LOOP AND SHALL PROVIDE THE SAME AREA OF COVERAGE AS THE LARGE LOOP. THE SMALLER LOOPS USED TO REPLACE THE ONE LARGE LOOP MAY BE CONNECTED TO ONE DETECTOR AMPLIFIER.
- WHEN A BEND OR CORNER IS REQUIRED THE SLOTS PRODUCING THE "WOULD-BE" RIGHT ANGLE SHALL NOT OVERLAP.
- WHEN A BEND OR CORNER IS REQUIRED THE SLOTS PRODUCING THE ANGLES APPROXIMATELY 45° SHALL OVERLAP THE SLOTS IT CONNECTS. THIS IS TO INSURE FULL DEPTH OF SLOTS AT BENDS OR CORNERS.
- ALL CORNERS OF THE LOOP SHALL BE CUT AT A 45° ANGLE AND HAVE A MINIMUM DIAGONAL LENGTH OF 16".
- SAW CUTS IN THE PAVEMENT SHALL BE FLUSHED WITH CLEAN WATER UNDER SUFFICIENT PRESSURE TO REMOVE MUD AND SMALL DEBRIS. SAW CUTS SHALL THEN BE DRIED AND CLEANED OF ALL DEBRIS BEFORE INSTALLING THE LOOP WIRE.
- ONE CONTINUOUS, UNBROKEN LENGTH OF WIRE SHALL BE USED TO FORM A LOOP OF THE NUMBER OF TURNS AS SPECIFIED IN THE PLANS. THE CONTINUOUS RUN SHALL BE FROM THE PULLBOX/CONDULET INCLUDING THE LOOP AND RETURN.
- ALL WIRE SHALL BE PUSHED INTO THE SAW CUT WITH WOOD STICKS TO INSURE THE INSULATION IS NOT DAMAGED. THE USE OF METAL TOOLS IS NOT PERMITTED.
- SPLICE BETWEEN LEAD-IN AND SHIELDED CABLE REQUIRED IN PULLBOX OR CONDUIT. ALL SPLICES IN THE LEAD-IN WIRE SHALL BE MADE ONLY IN THE PULLBOX OR CONDUIT. ALL SPLICES MUST BE CAREFULLY MADE TO INSURE CONSTANT LOW RESISTANCE AND MUST BE INSULATED IN SUCH A MANNER THAT UNDER THE LOCAL PREVAILING CONDITIONS THE INSTALLATION MAINTAINS A RESISTANCE TO GROUND OF NOT LESS THAN 5 MEGOHMS. TO INSURE CONSISTENT LOW RESISTANCE CONNECTIONS, THE SPLICES SHALL BE SOLDERED WITH RESIN FILLED SOLDER AND WATERPROOFED BY SHRINK WRAP OR BY OTHER METHOD APPROVED BY THE ENGINEER. OPEN FLAME SOLDER SHALL NOT BE PERMITTED.
- WHERE THE WIRES LEAVE THE LOOP, EACH PAIR OF LEAD-IN WIRES MUST BE TWISTED TOGETHER WITH A MINIMUM OF THREE TWISTS PER FOOT.
- IF THE LEAD-IN IS TAKEN OVERHEAD THE WIRE MUST BE PROTECTED BY CONDUIT (TYPE I) FROM UNDERGROUND TO SPAN.
- WHEN A PULLBOX IS NOT USED IN THE LEAD-IN (THE WIRE WHICH CONNECTS THE SENSING LOOP TO THE DETECTOR AMPLIFIER), THE LOOP WIRE SHALL BE TWISTED A MINIMUM OF THREE TURNS PER FOOT FROM THE LOOP TO THE DETECTOR AMPLIFIER.



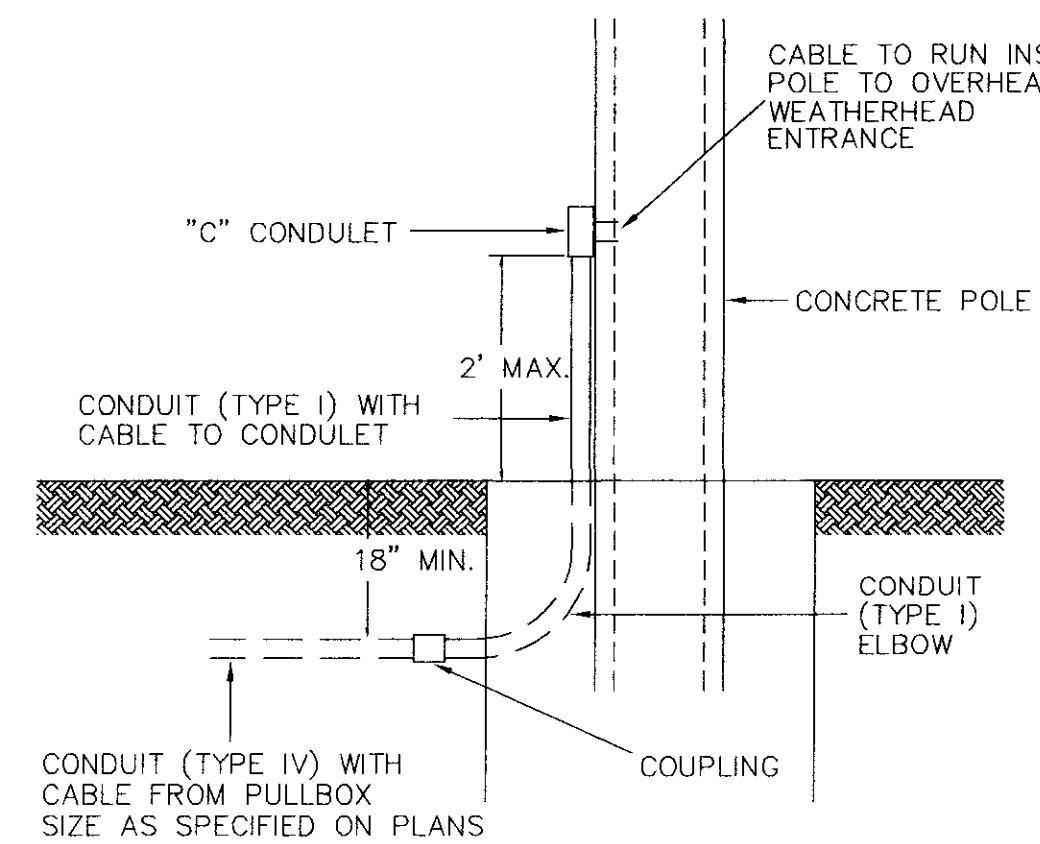
3 = CHANNEL NUMBER
 MPH IS BASED ON SPEED LIMIT
 ALL DISTANCES FROM STOPLINE
 AMP 1-02, AMP 2-04, AMP 3-06, AMP 4-08



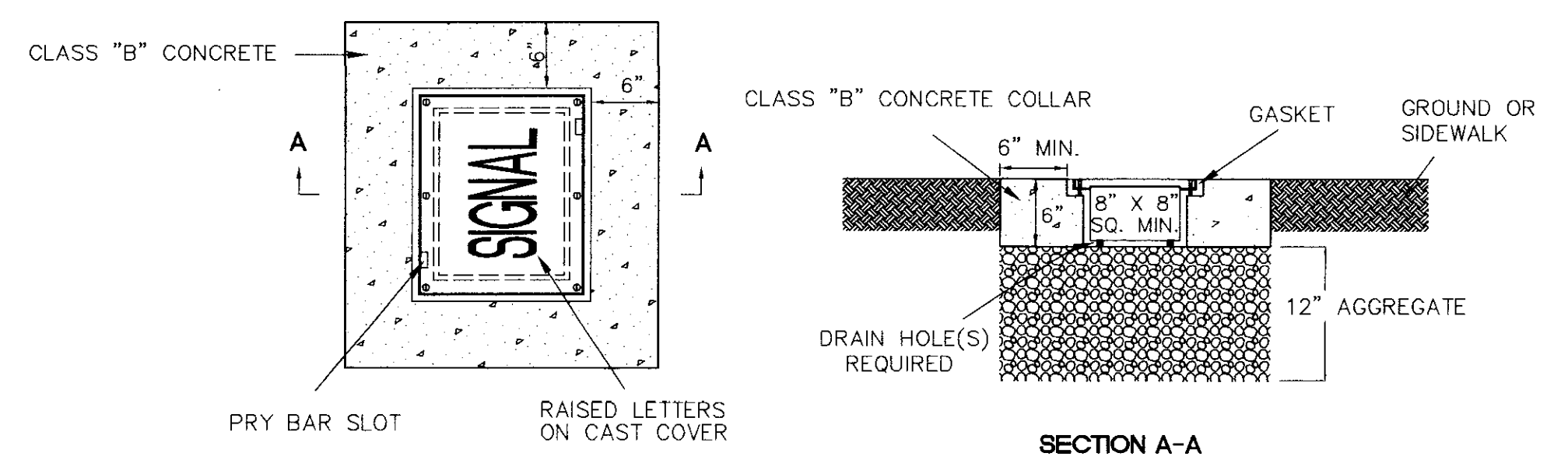
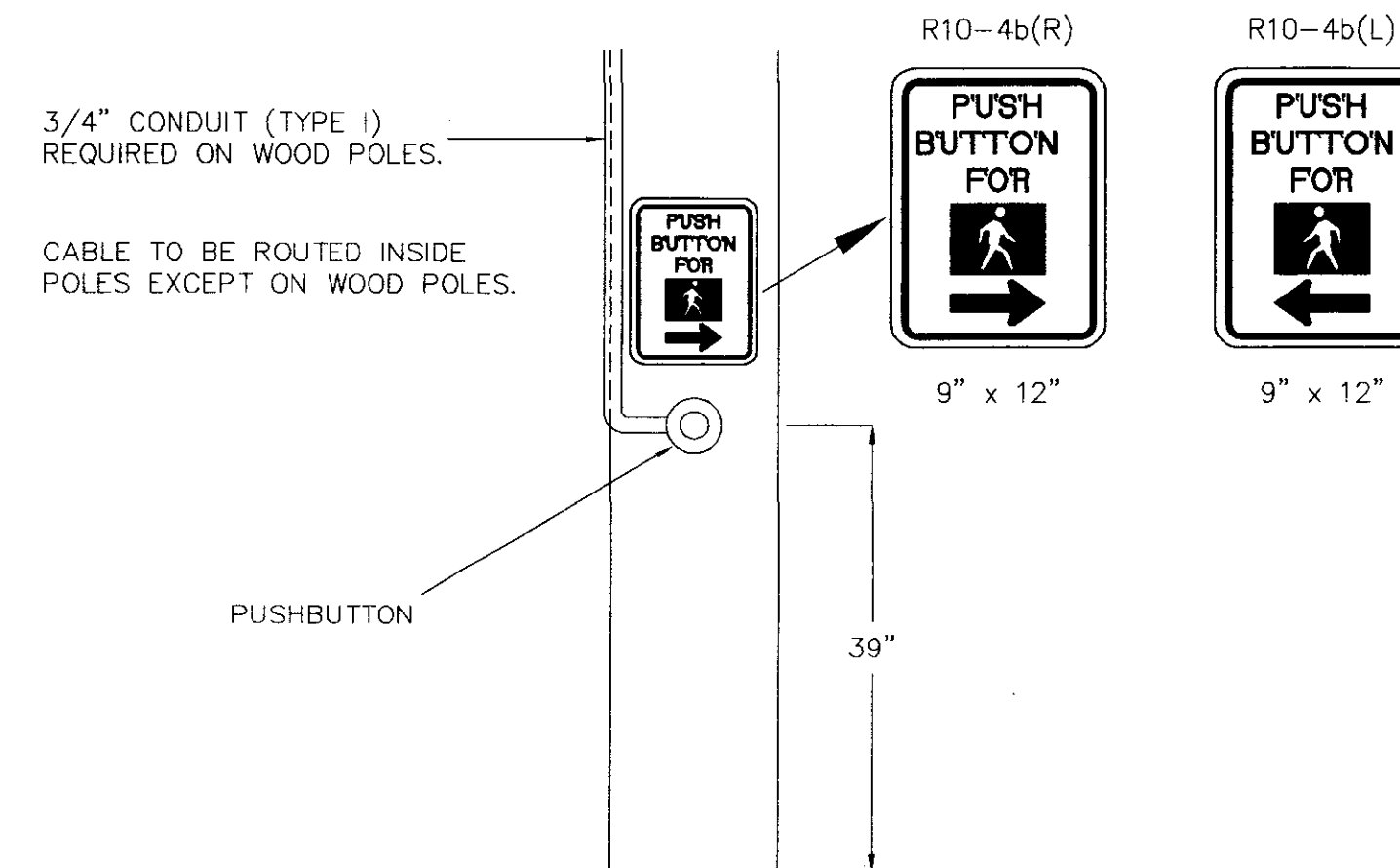
CITY OF RIDGELAND
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/NORTH PARK DRIVE INTERSECTION
VEHICLE LOOP - DETECTOR ASSEMBLY
 WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi
 DRAWN BY: B.F. DATE: 08-23-99 SHEET NUMBER
 REVIEWED BY: J.B. SCALE: 1"=20' 28 OF



CONDUIT DETAIL AT POLES

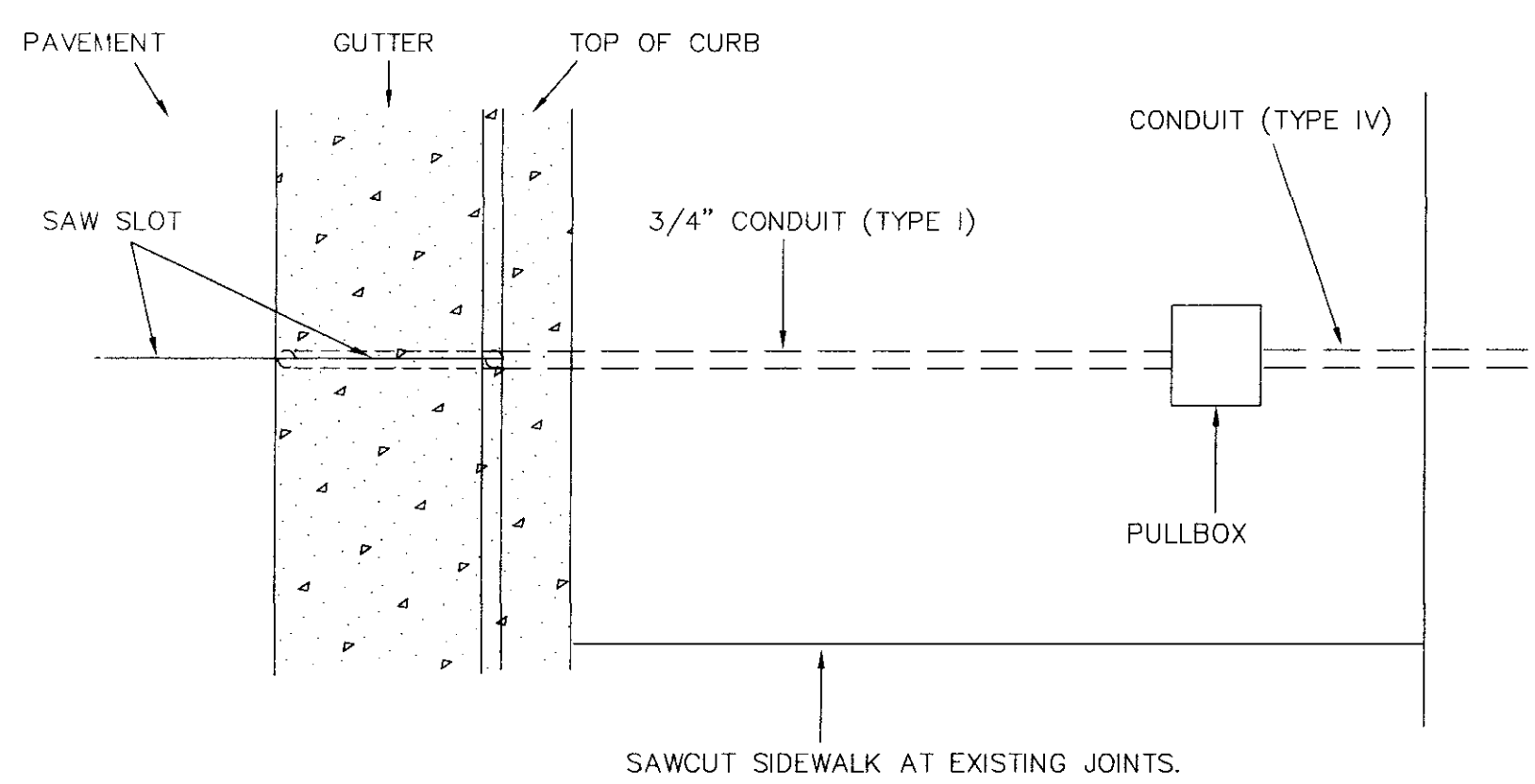


PEDESTRIAN PUSH BUTTON AND SIGN INSTALLATION DETAIL

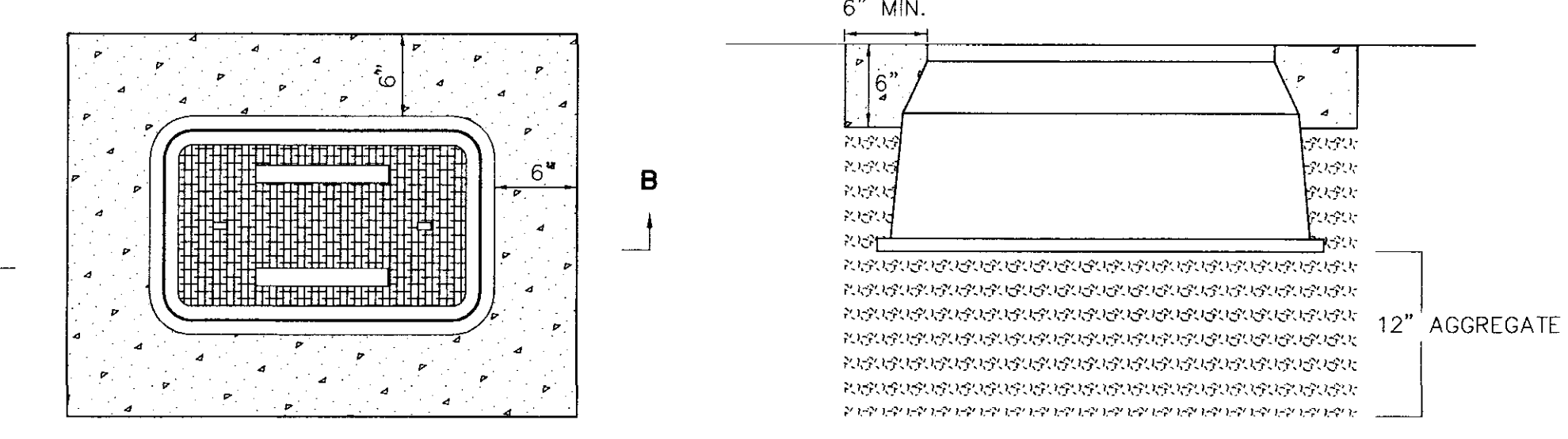
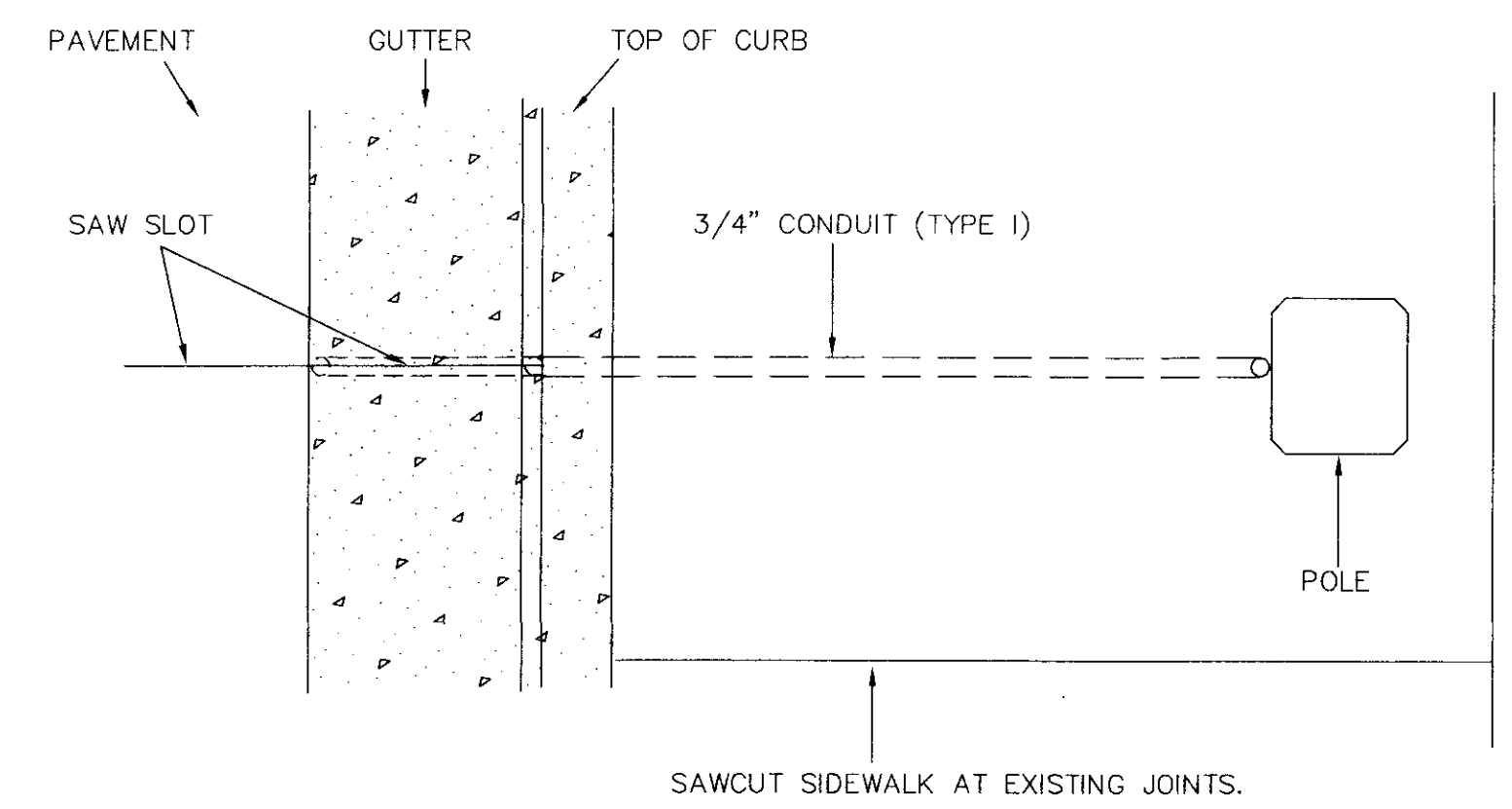


TWO-PIECE PULLBOX (TYPE 1)

CAST IRON, CAST ALUMINUM, WELDED ALUMINUM, OR APPROVED EQUAL

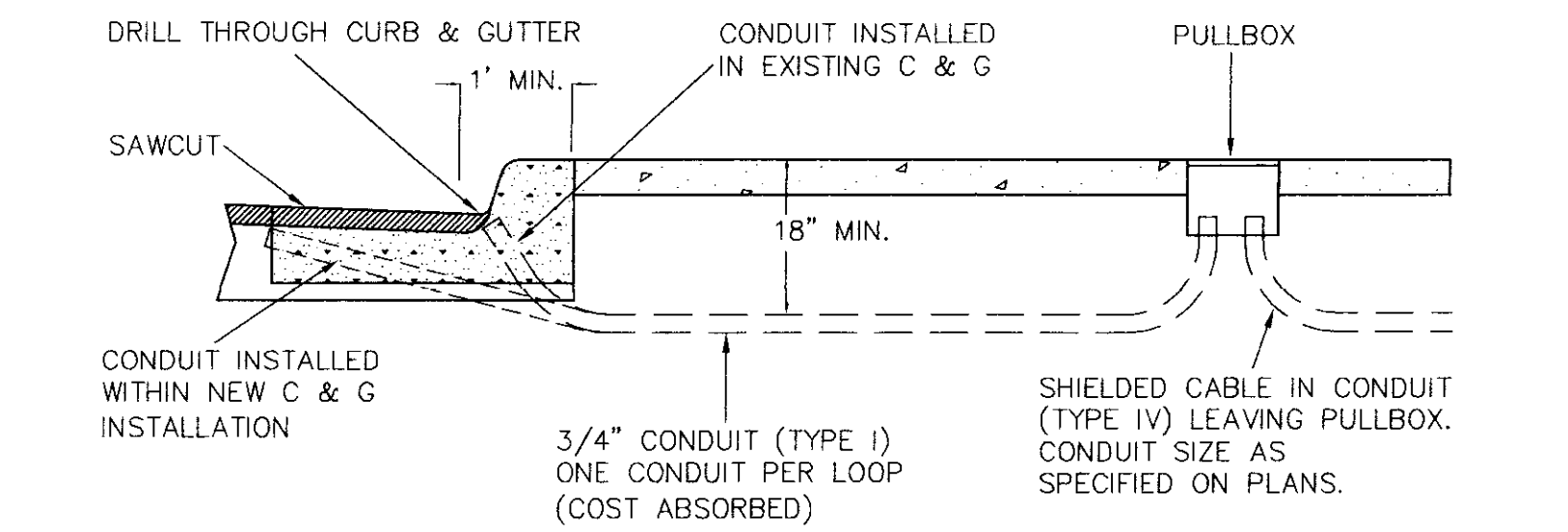


PLAN VIEW - LOOP LEAD-IN CONDUIT

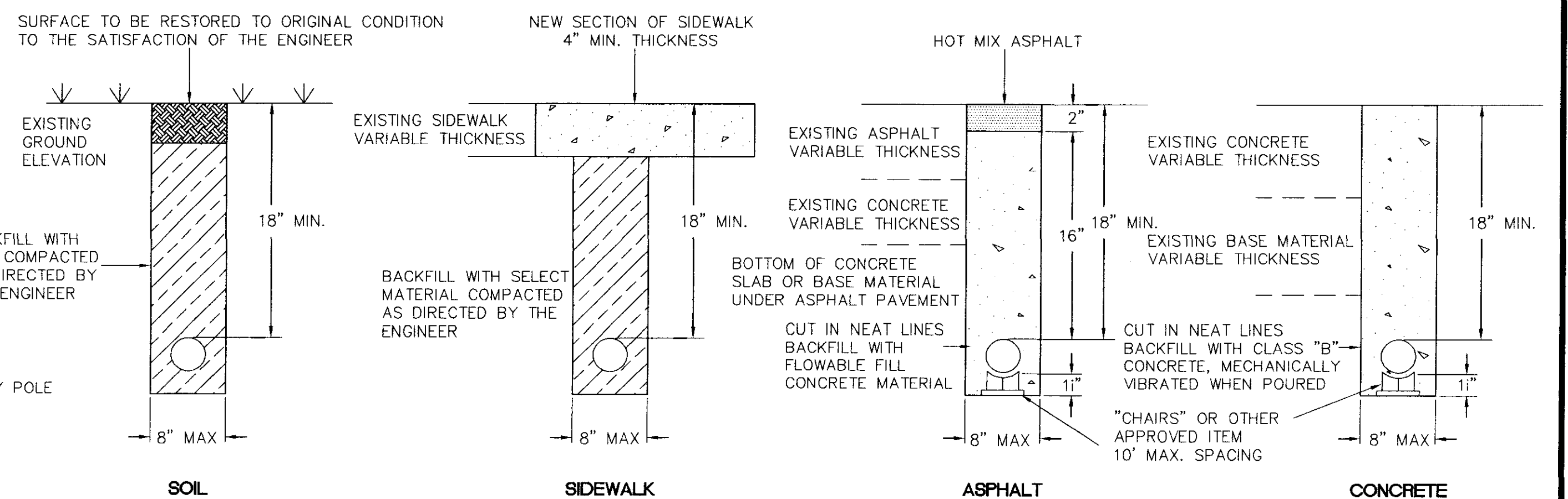
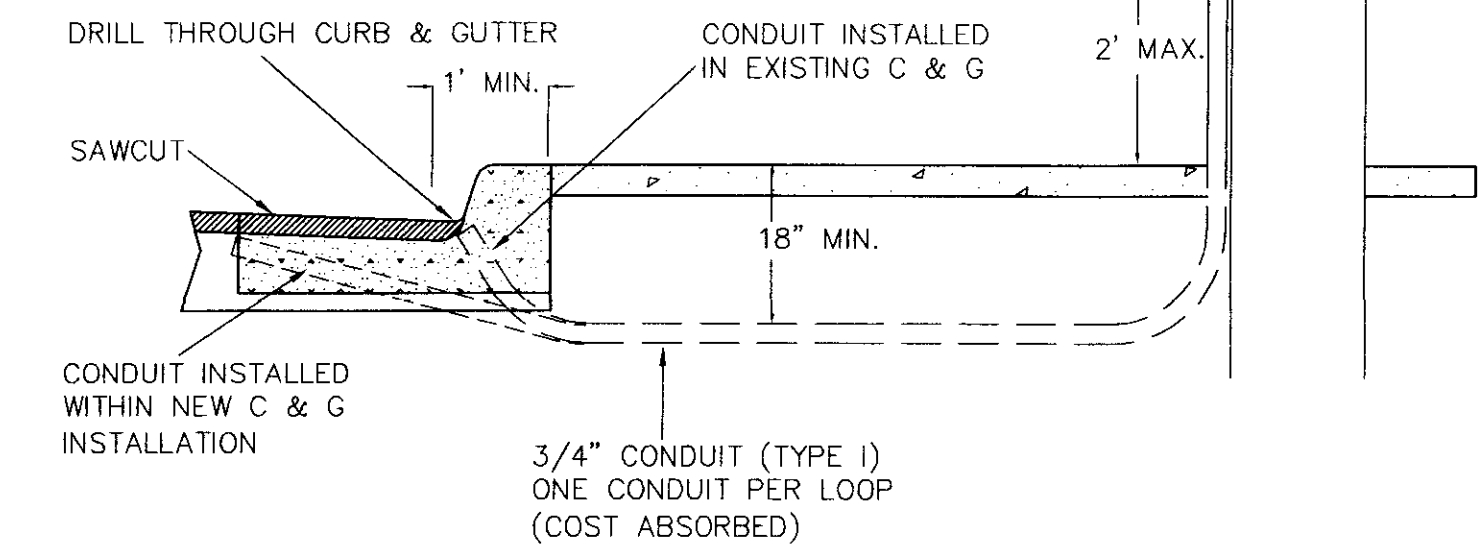


TWO-PIECE PULLBOX (TYPE 2)

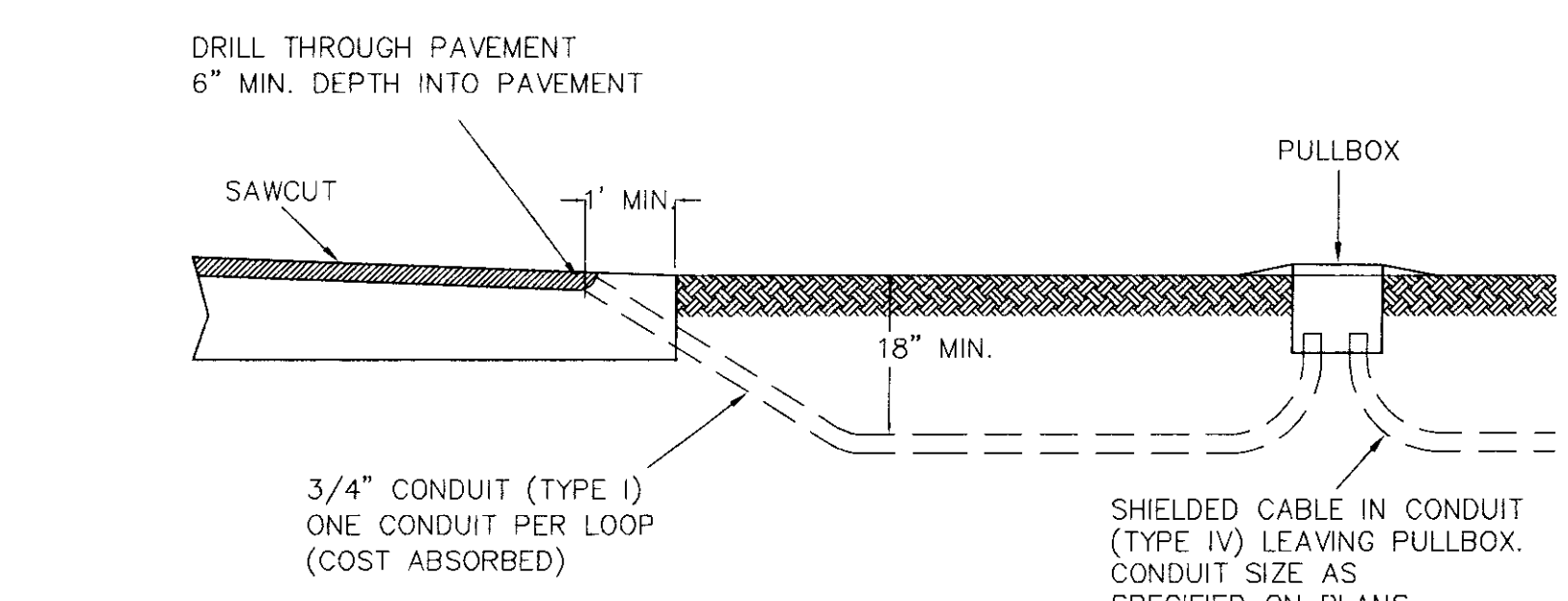
PRECAST CLASS "B" CONCRETE, HIGH DENSITY POLYETHYLENE, COMPOSITE, OR APPROVED EQUAL



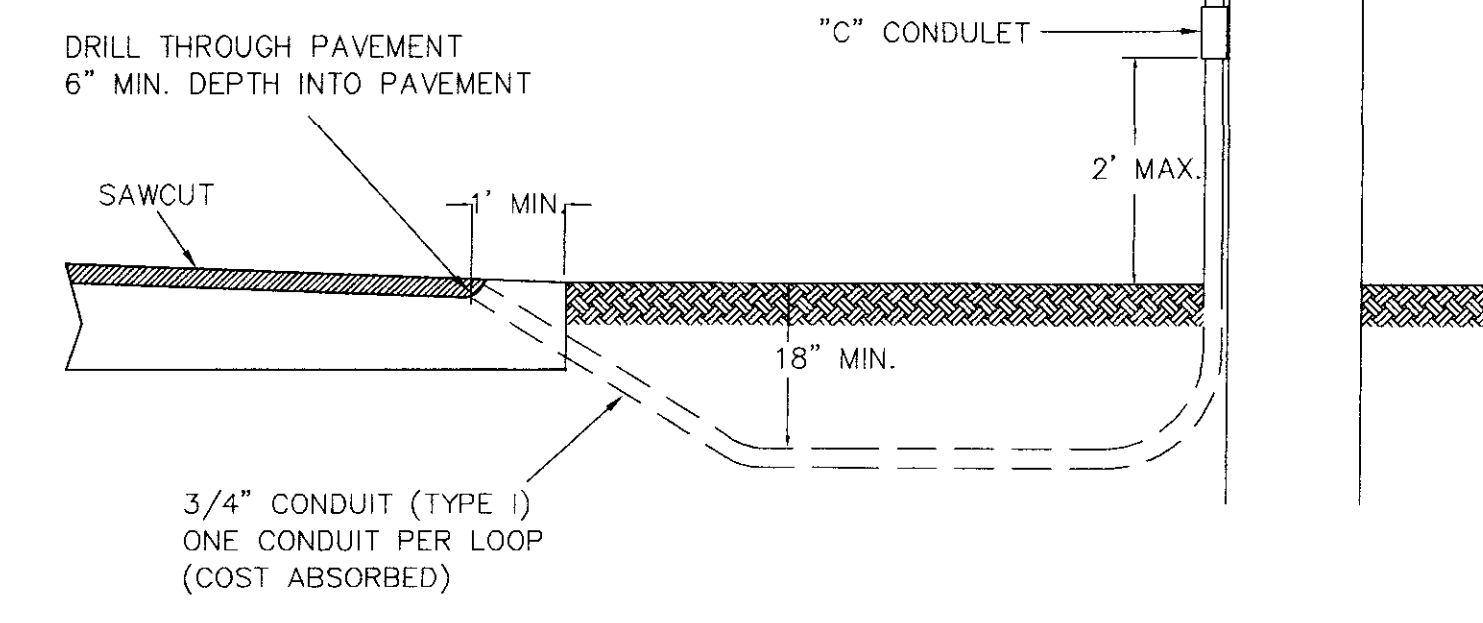
TYPICAL SECTION IN GUTTER AND SIDEWALK



CONDUIT TRENCHING DETAIL



TYPICAL SECTION IN EARTH



NOTES :

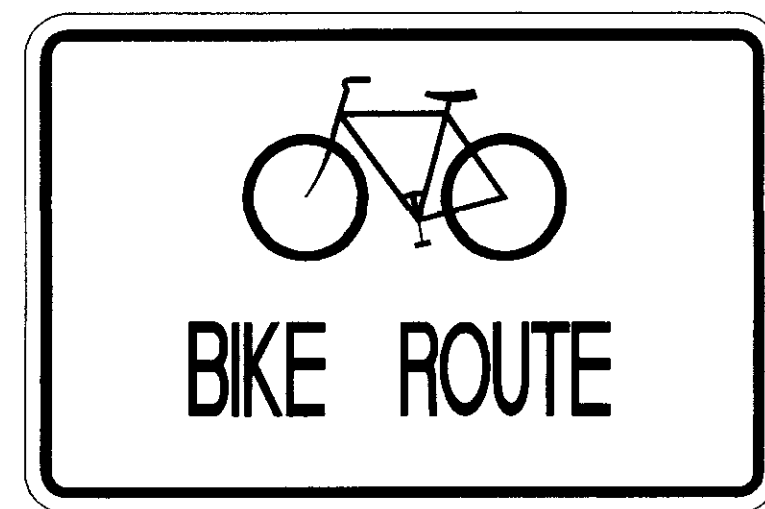
- CONDUIT TO BE SEALED WITH DUCT SEALER ONCE CABLE IS INSTALLED.
- SAWCUT SIDEWALK AT EXISTING JOINTS AND REPLACE ENTIRE SECTION TO MATCH EXISTING MATERIAL. WHEN NEW SIDEWALK IS BEING CONSTRUCTED, CONDUIT, PULLBOX, AND POLE ARE TO BE INSTALLED BEFORE SIDEWALK IS POURED.
- TYPE I CONDUIT IS RIGID STEEL; TYPE IV CONDUIT IS PVC.
- CONDUIT MAY BE TRENCHED OR JACKED. ELECTRICAL SUBCONTRACTOR SHALL COORDINATE CONDUIT INSTALLATION WORK UNDER ROADWAY WITH ROADWAY CONSTRUCTION PHASING IN ORDER TO MINIMIZE JACKING.

CITY OF RIDGELAND
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/ NORTH PARK DRIVE INTERSECTION
 CONDUIT, PULLBOX AND PEDESTRIAN PUSHBUTTON

WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi

DRAWN BY: E.L.G.	DATE: 10-6-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: 1"=20'	29 OF

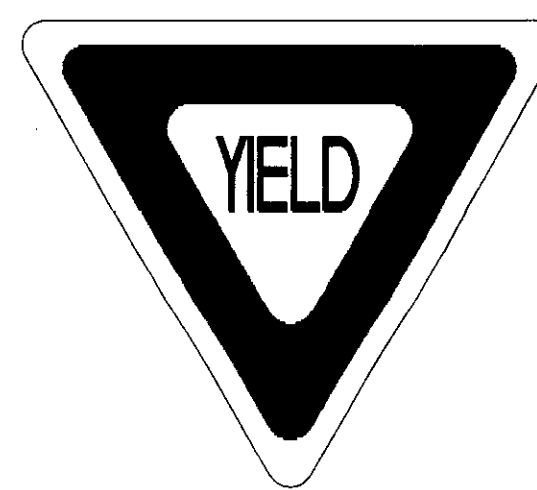
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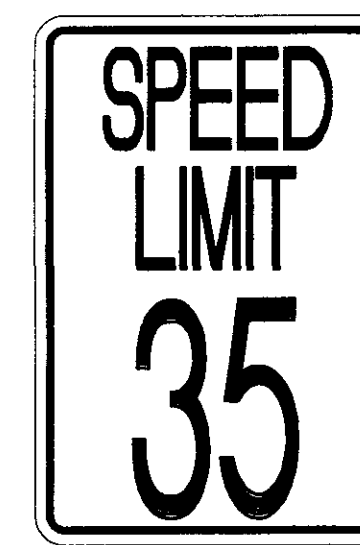
D11-1
24"x18"



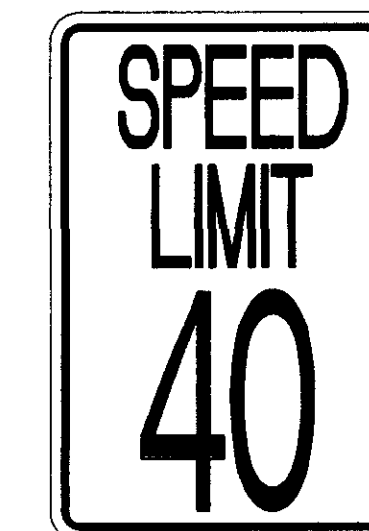
R1-1
30"x30"



R1-2
30"x30"x30"



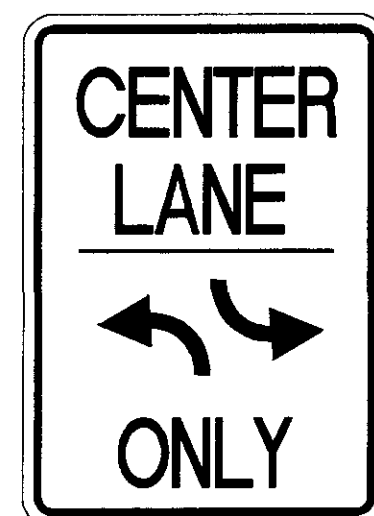
R2-1 (35)
18"x24"



R2-1 (40)
18"x24"



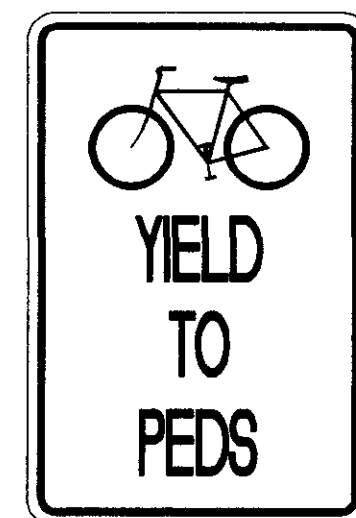
R3-7
24"x18"



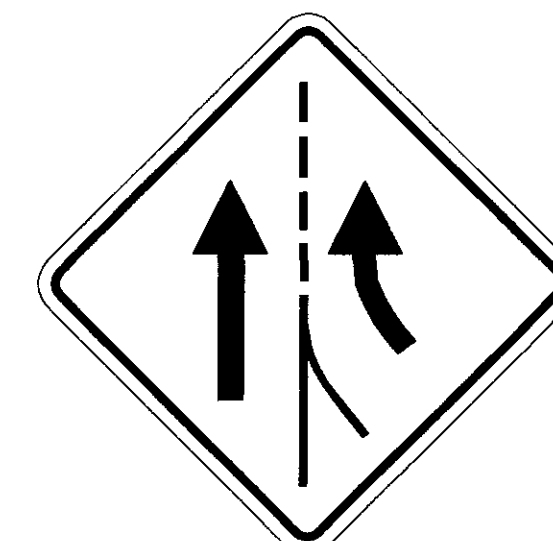
R3-9b
24"x36"



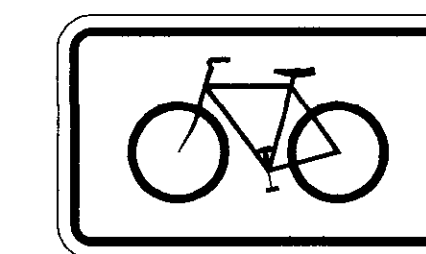
R5-3
24"x24"



R9-6
12"x18"



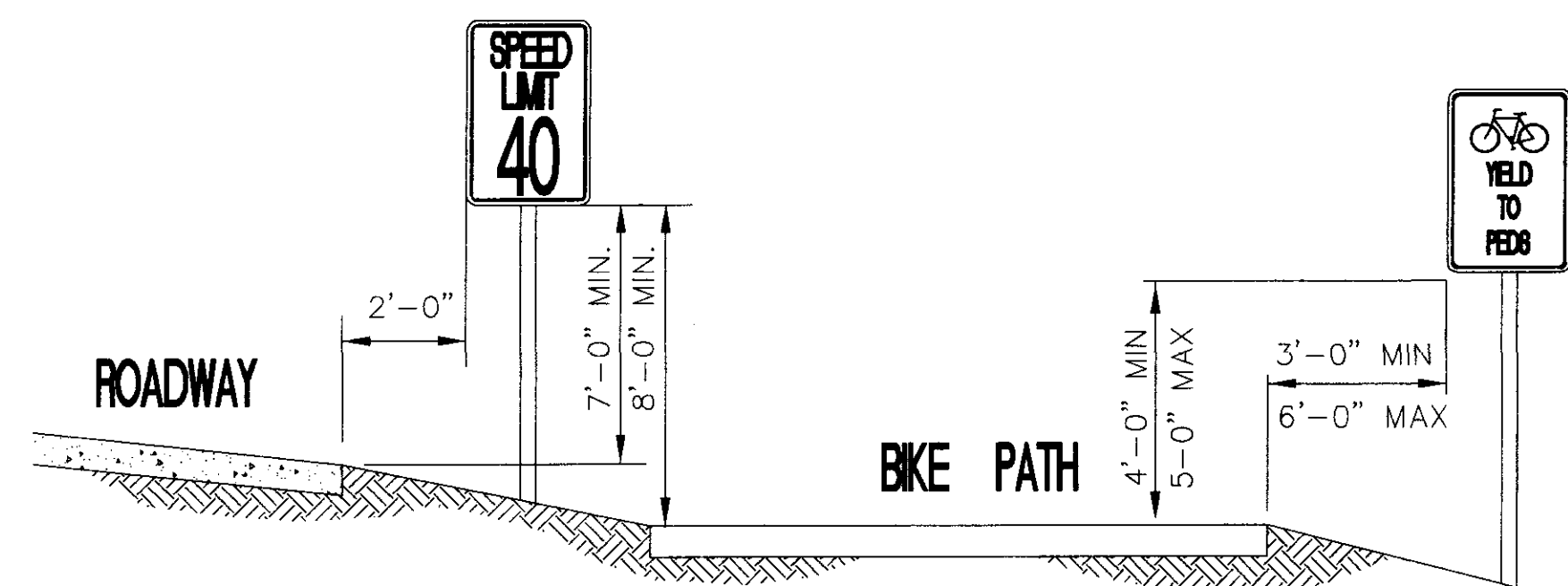
W4-3
36"x36"



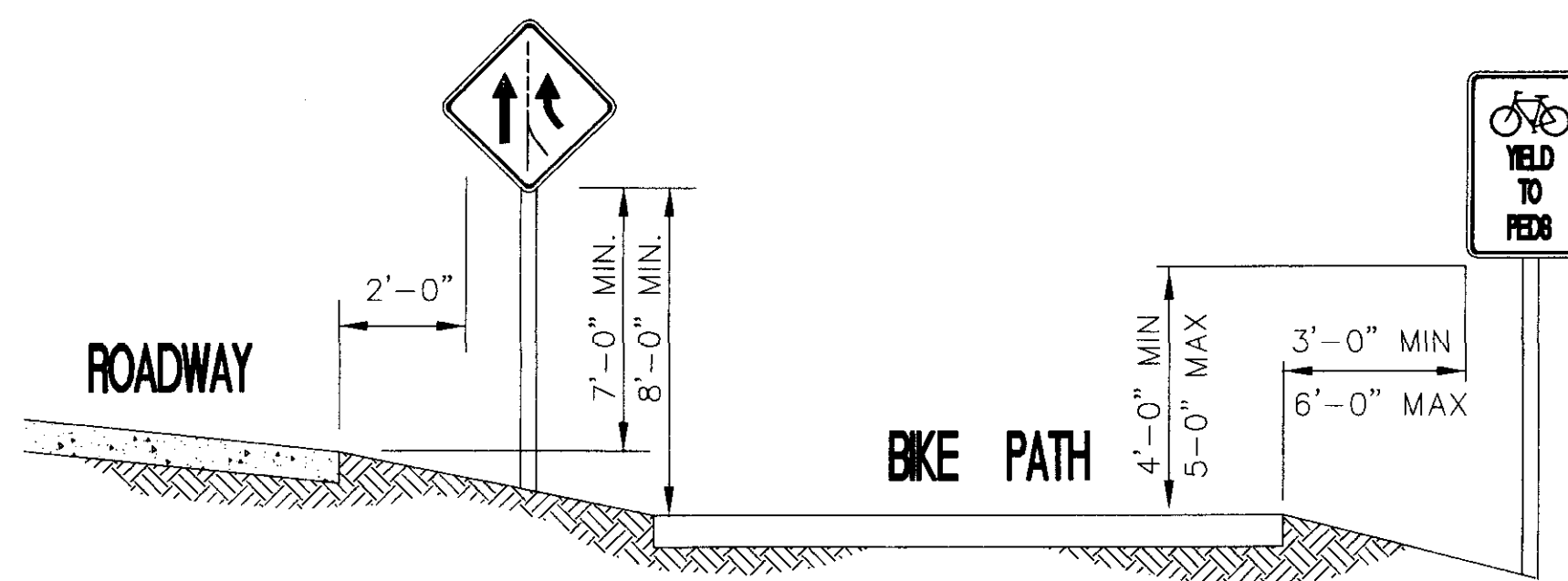
SUPPLEMENTAL
SIGN
12"x6"



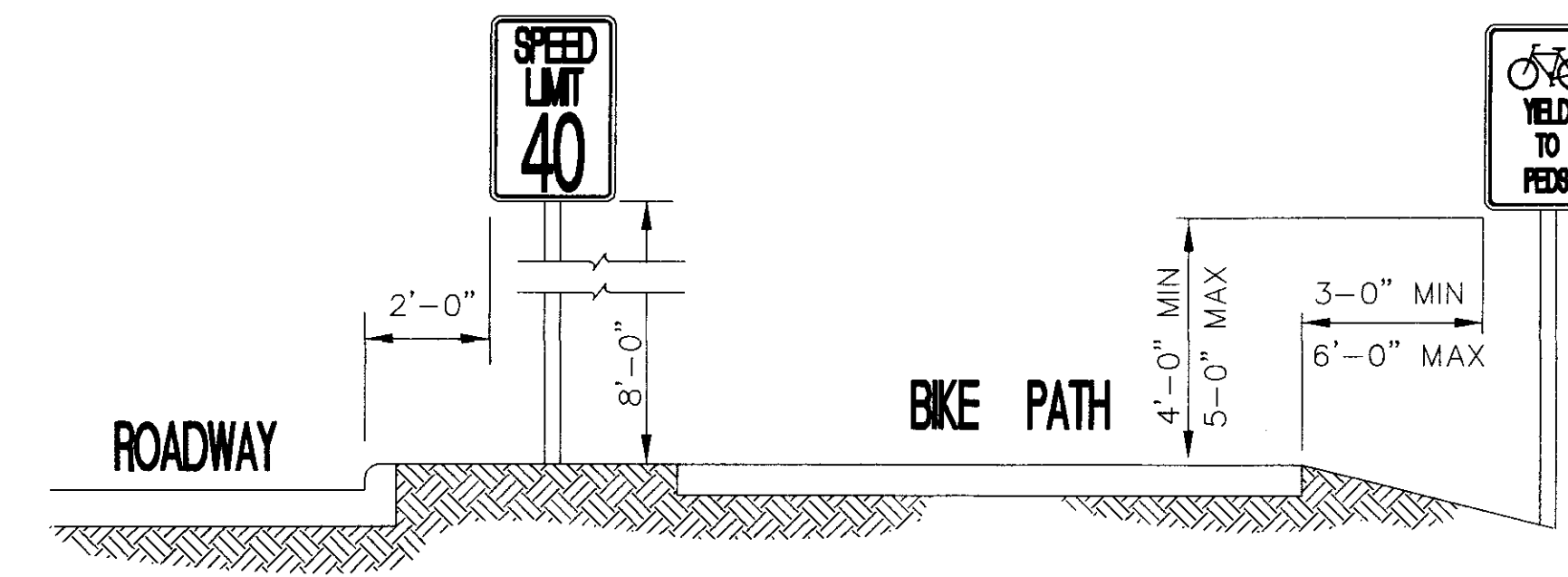
W11-1
30"x30"



ROADSIDE SIGN

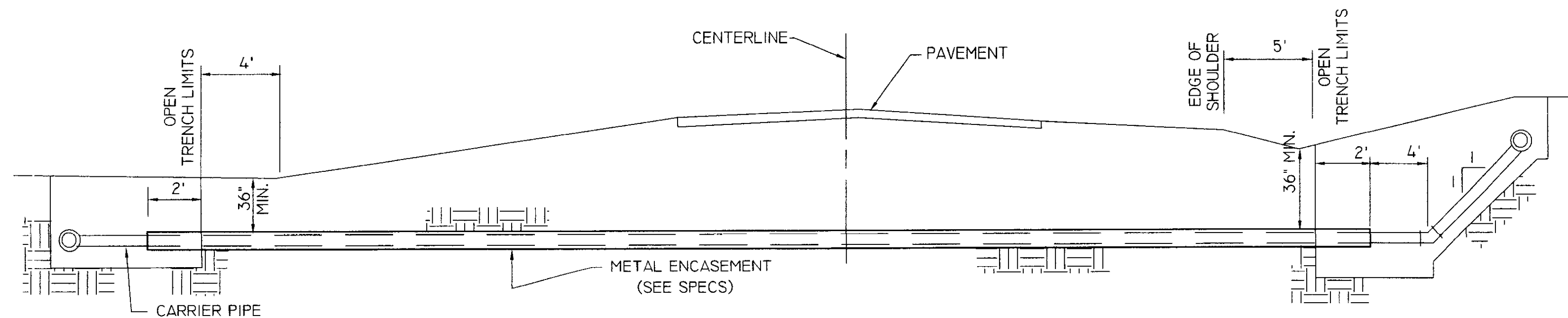


WARNING SIGN



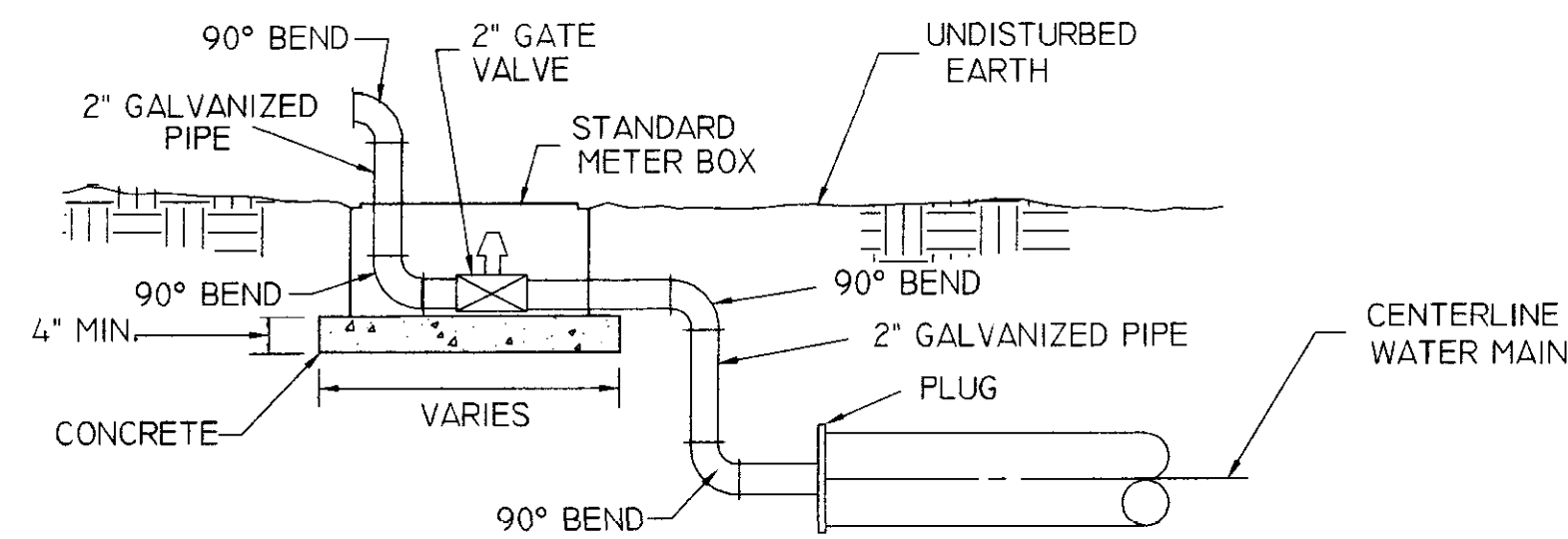
ROADSIDE SIGN

CITY OF RIDGELAND		
RECONSTRUCTION OF THE NORTHPARK DRIVE/ LAKE HARBOUR DRIVE INTERSECTION		
STANDARD SIGN DETAILS		
WAGGONER ENGINEERING, INC. Consulting Engineers - Jackson, Mississippi		
DRAWN BY: E.L.G.	DATE: 10-15-99	SHEET NUMBER
REVIEWED BY: J.B.	SCALE: 1"= N.T.S.	30 OF

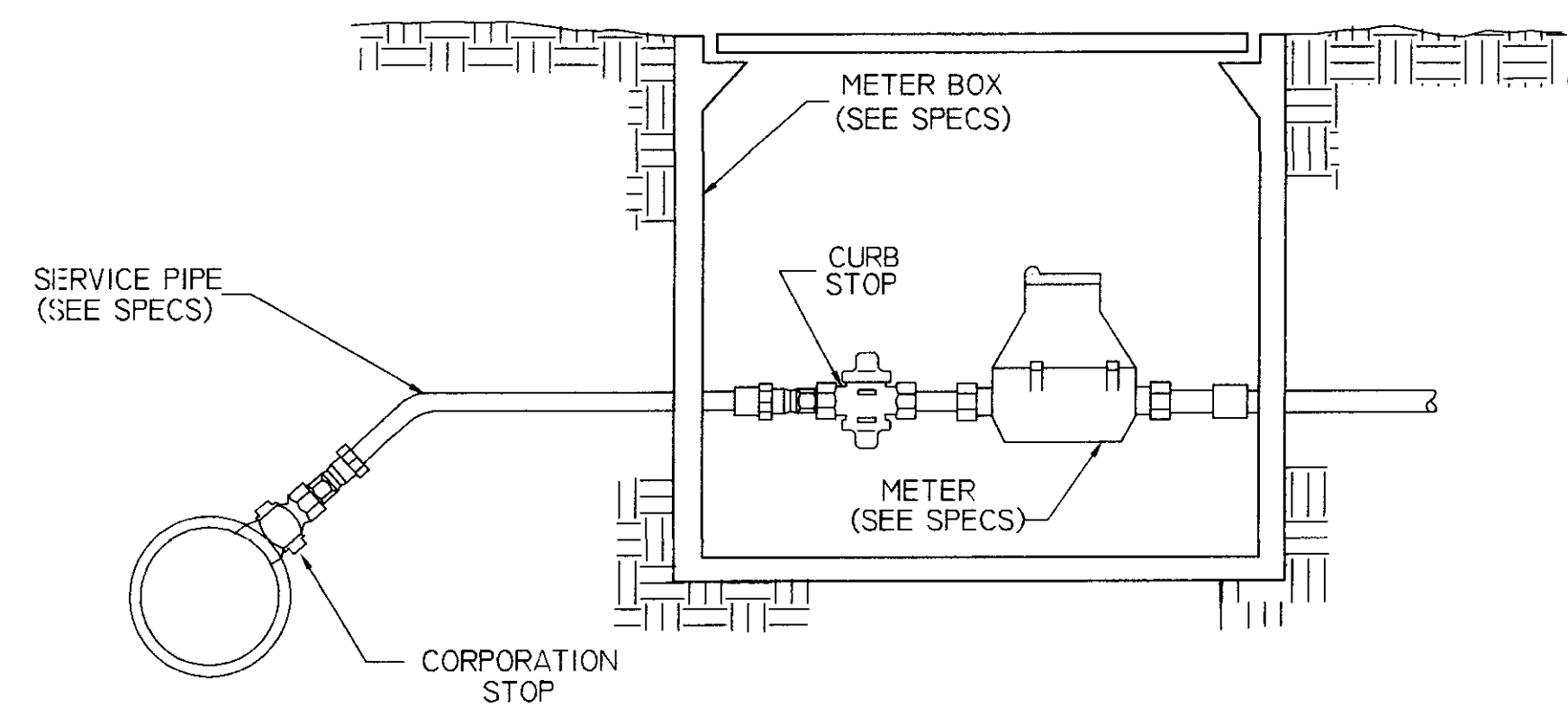


TYPICAL CASSED CROSSING

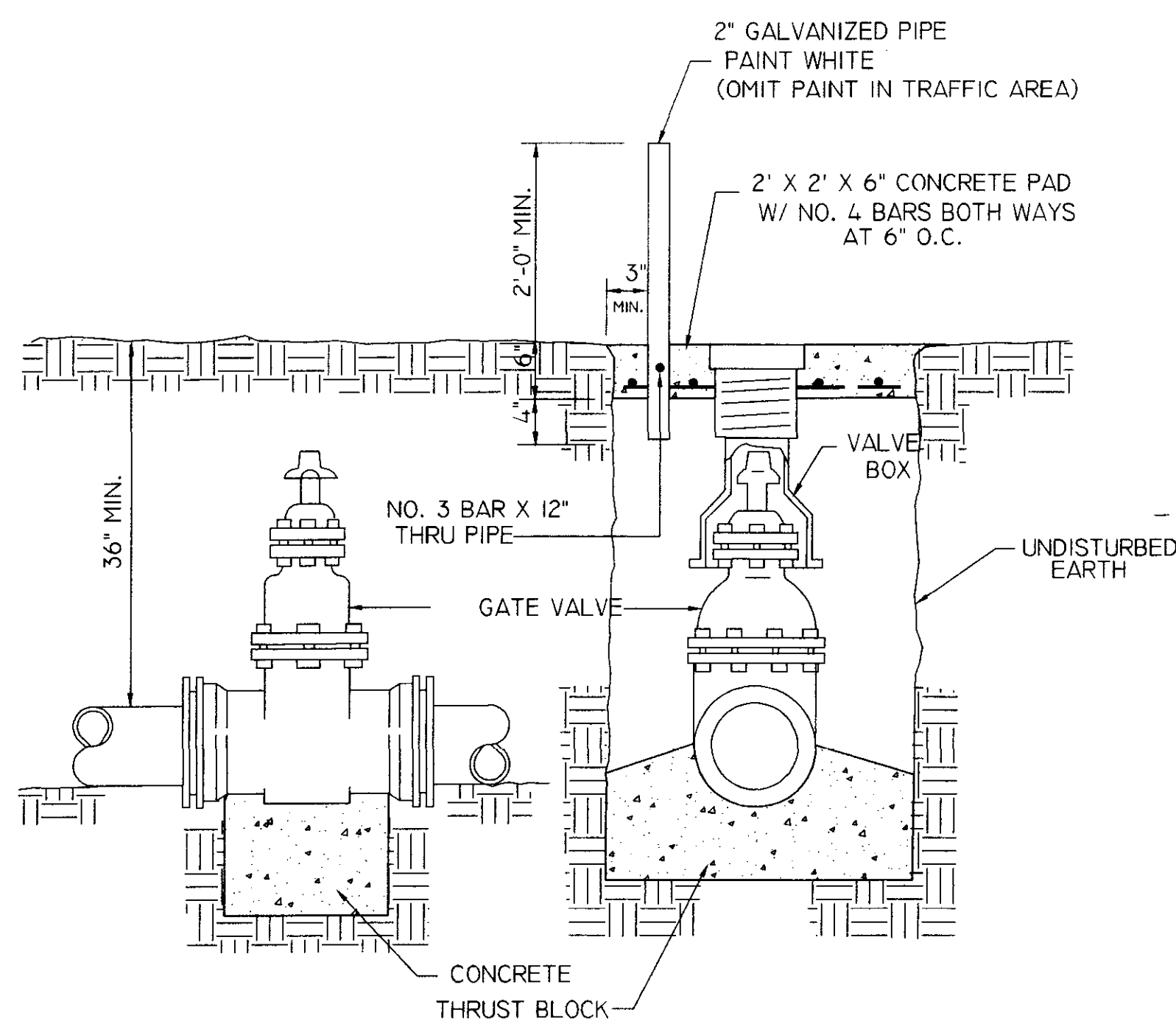
NOTE: COMPENSATION FOR CONCRETE THRUST BLOCKS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR VALVES, FIRE HYDRANTS AND FITTINGS.



TYPICAL 2" BLOW-OFF DETAIL

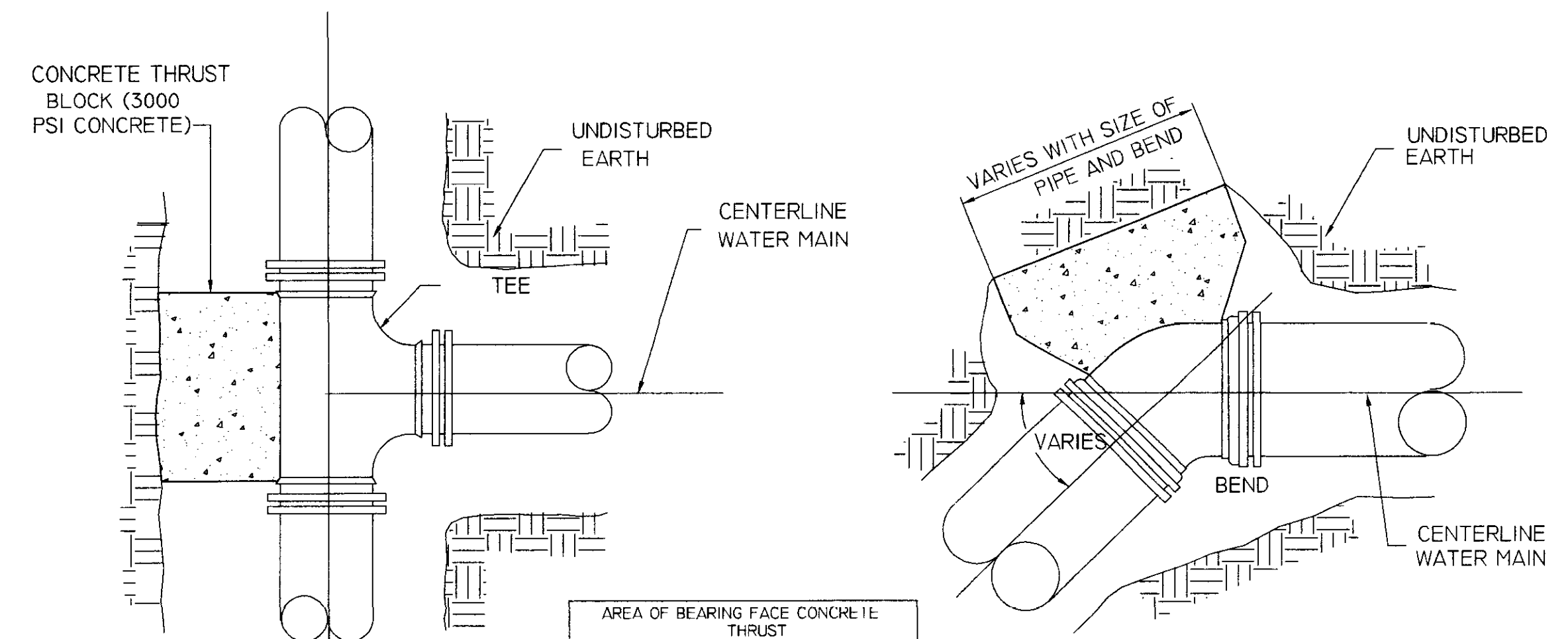


TYPICAL SERVICE ASSEMBLY



ELEVATION SECTION

TYPICAL VALVE & BOX

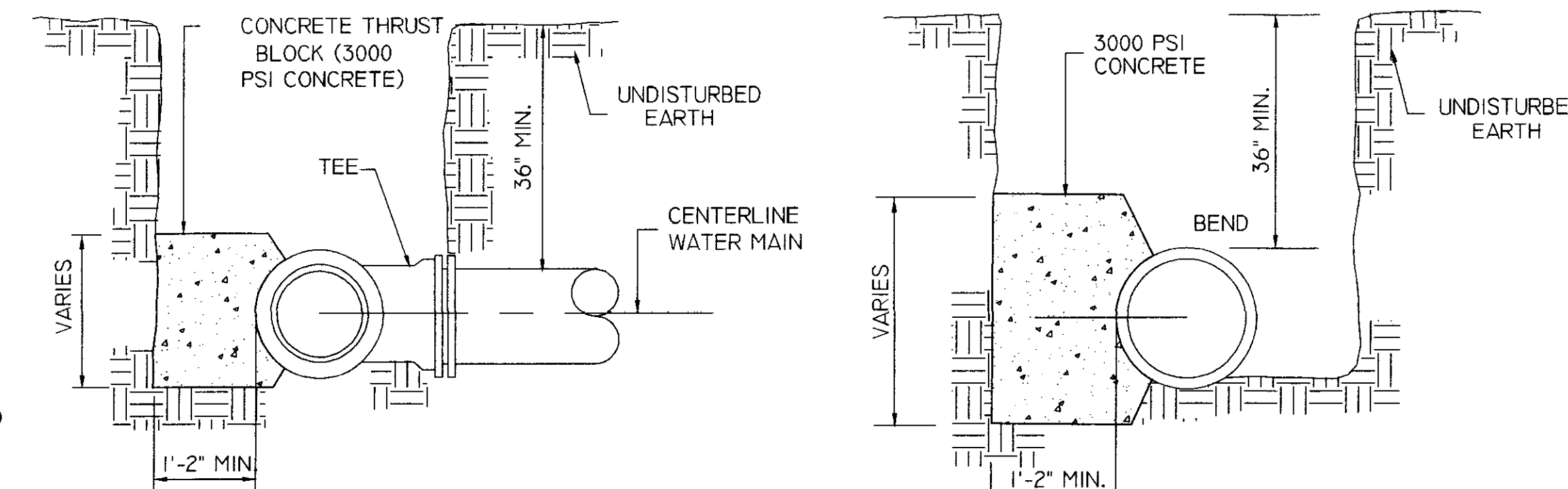


PLAN

PLAN

PIPE SIZE	AREA OF BEARING FACE CONCRETE THRUST		
	45° BEND	22 1/2° BEND	PLUGS & TEES
4-6	3	3	3
8	3	3	3
10	4	3	3
12	6	3	4
16	11	4	7

NOTE: AREA OF BEARING FACE IN SQUARE FEET

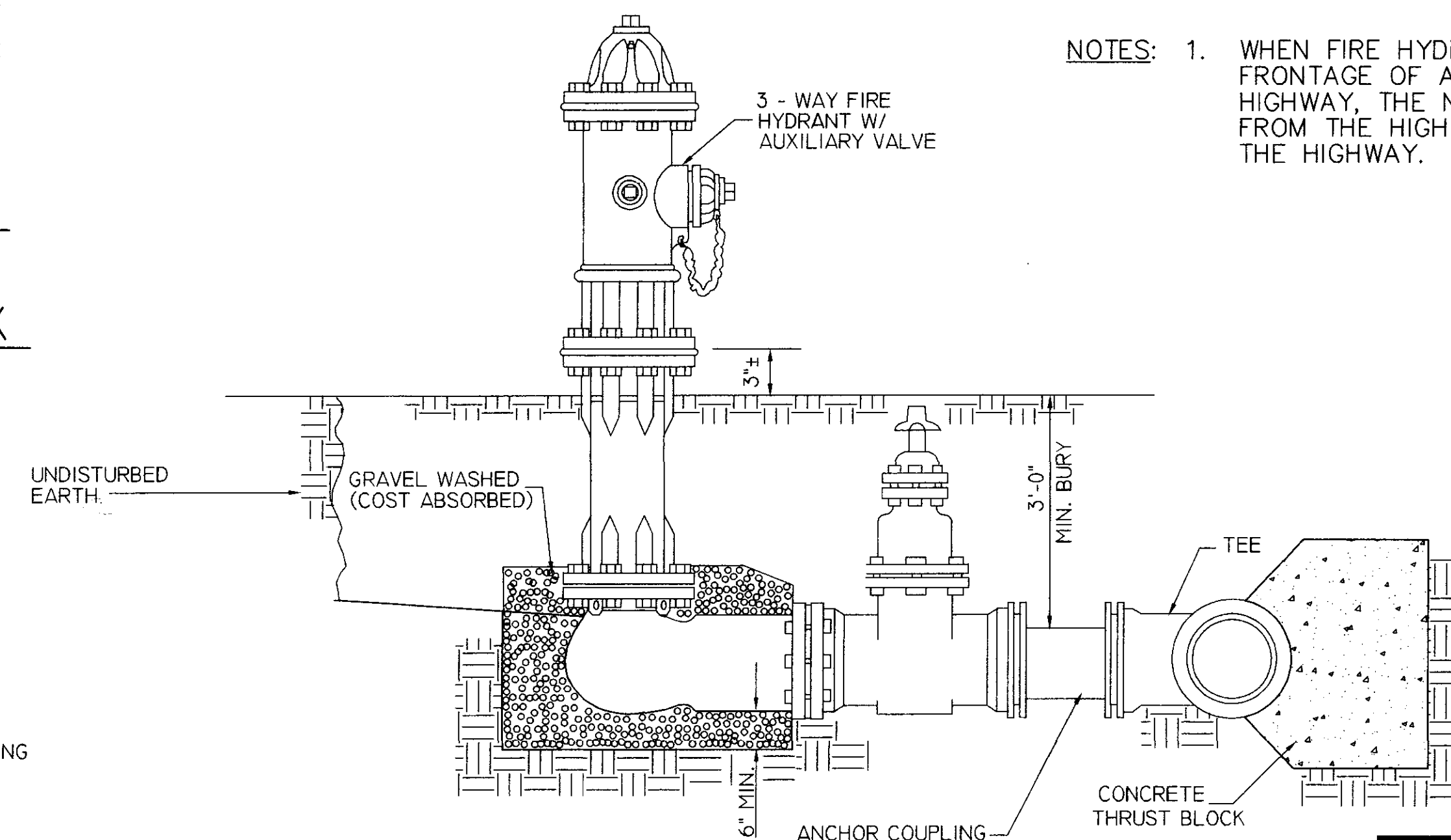


SECTION

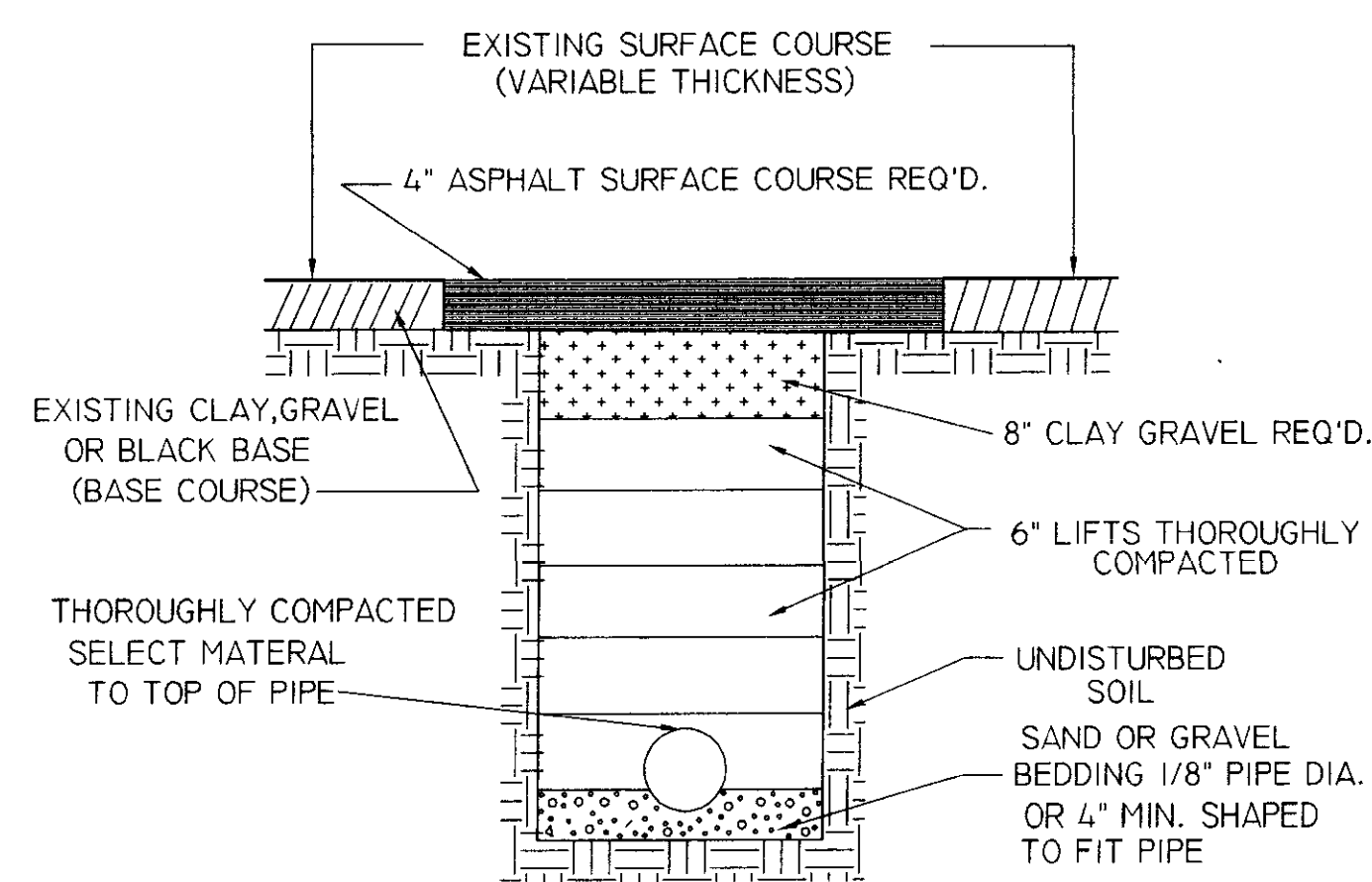
SECTION

BLOCKING DETAILS FOR TEES & BENDS

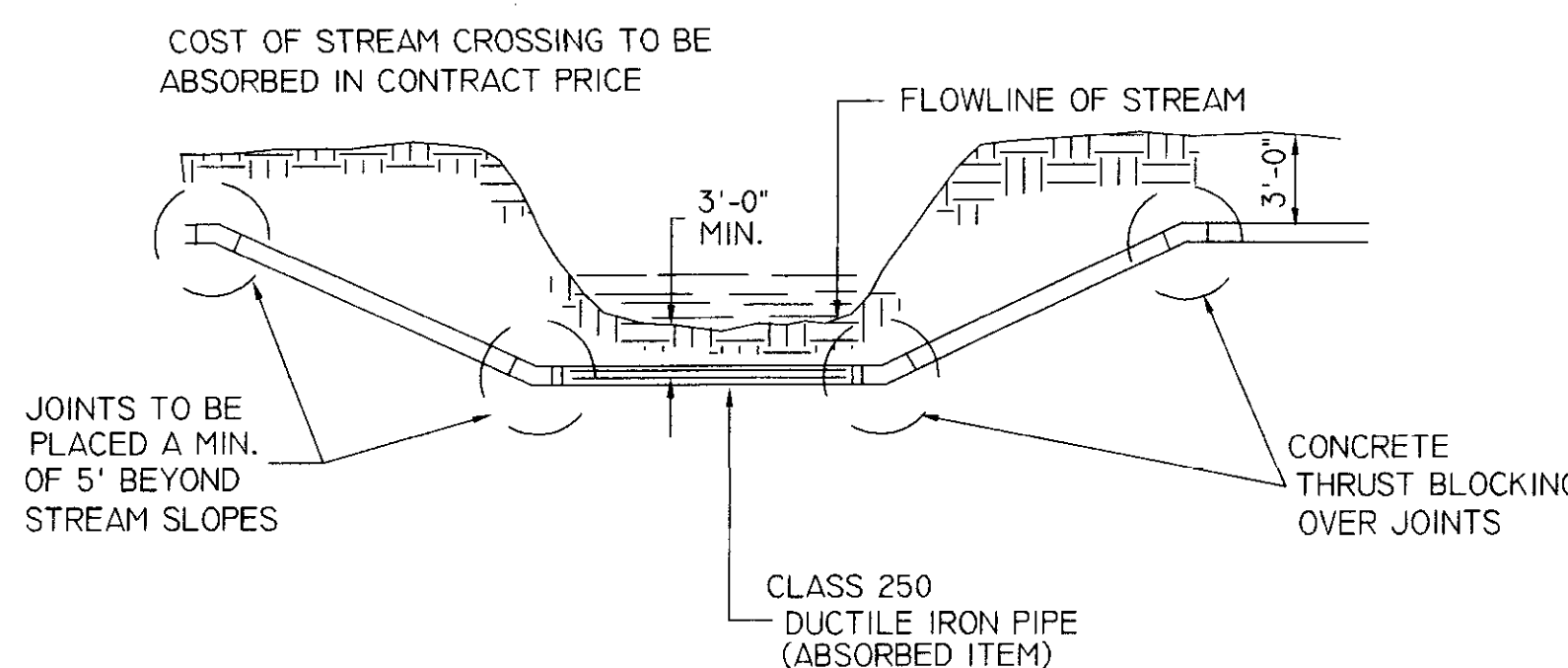
NOTES: 1. WHEN FIRE HYDRANTS ARE PLACED ON THE FRONTAGE OF A DIVIDED OR MULTI-LANE HIGHWAY, THE NOZZLES SHALL FACE AWAY FROM THE HIGHWAY RATHER THAN TOWARD THE HIGHWAY.



TYPICAL FIRE HYDRANT

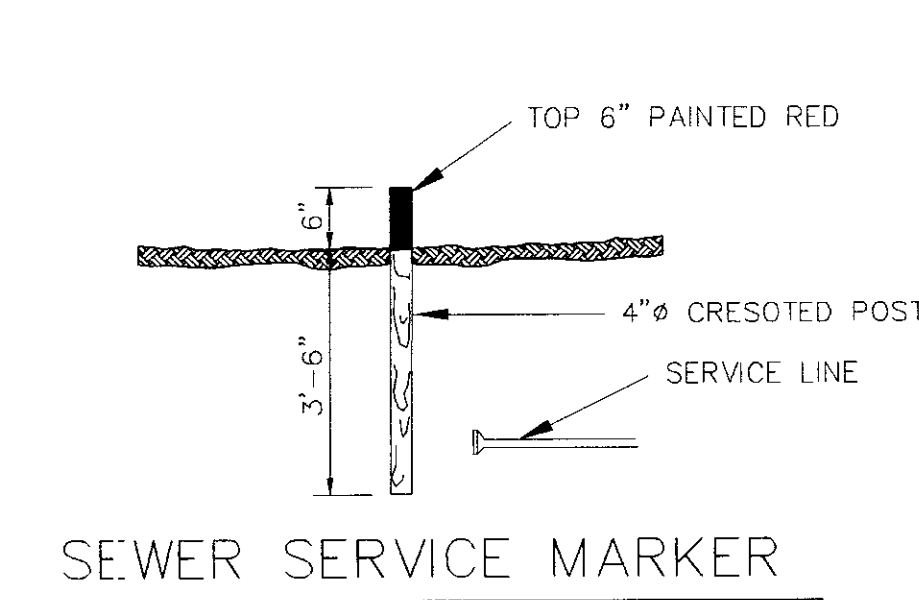


TRENCH DETAIL



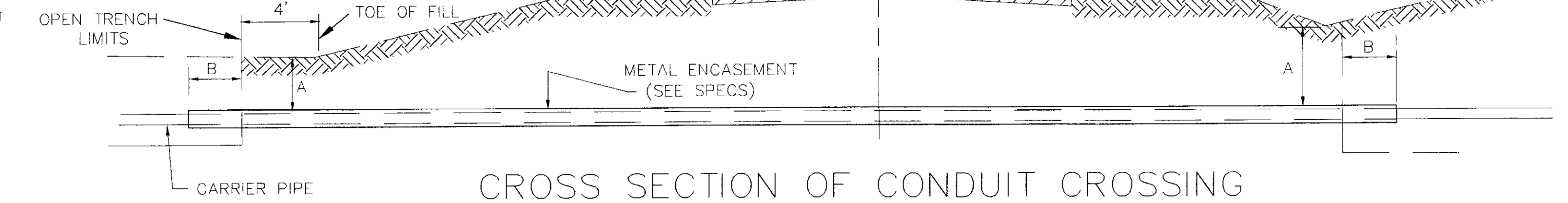
TYPICAL STREAM CROSSING

CITY OF RIDGELAND
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/ NORTH PARK DRIVE INTERSECTION
 WATER DETAIL
 WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi
 DRAWN BY: E.L.G. DATE: 08-23-99 SHEET NUMBER
 REVIEWED BY: J.B. SCALE: N.T.S. **31** OF

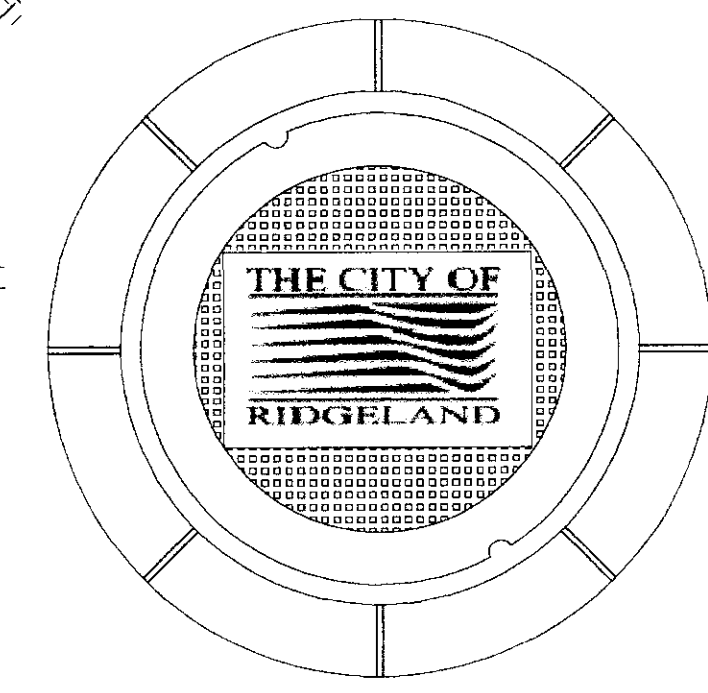


SEWER SERVICE MARKER

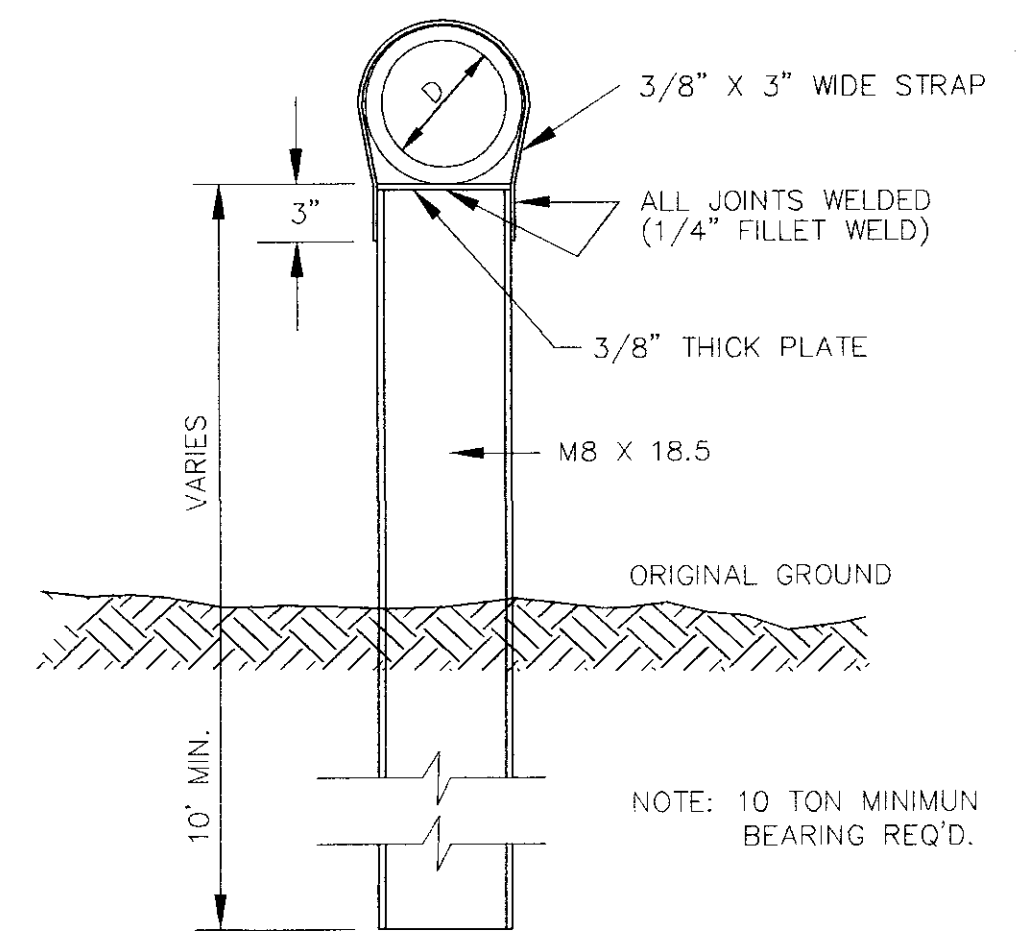
NOTES: DIMENSION "A" TO BE 3' MIN. FOR ALL CASINGS.
DIMENSIONS "B" TO BE 2" MIN. FOR LINES 3" DIA. AND UNDER, AND 4" MIN. FOR LINES OVER 3". ENCASEMENTS TO BE INSTALLED UNDER THE ROAD BY MEANS OF JACKING THROUGH, OR BY DRY BORING A HOLE THAT WILL RECEIVE THE CASING WITH A SNUG FIT.



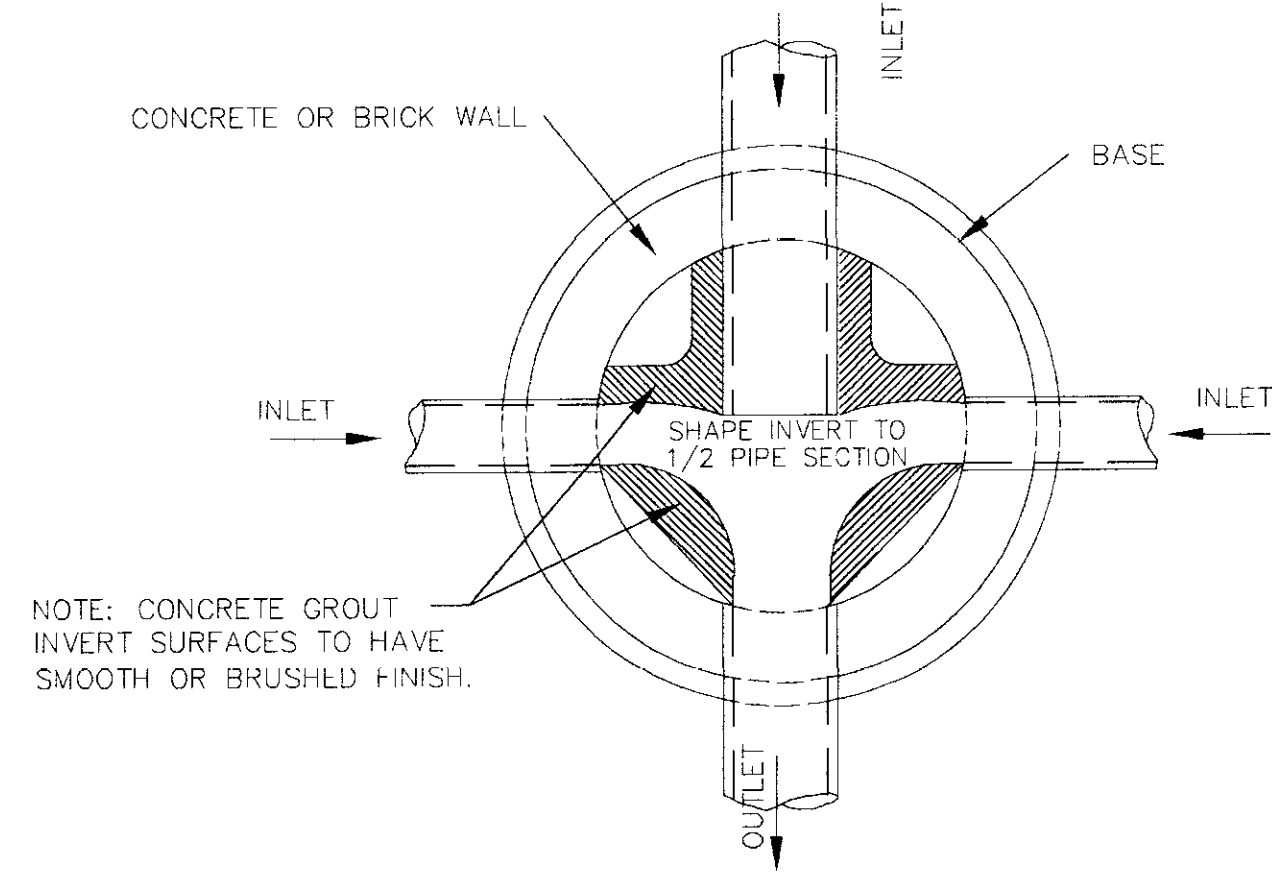
CROSS SECTION OF CONDUIT CROSSING



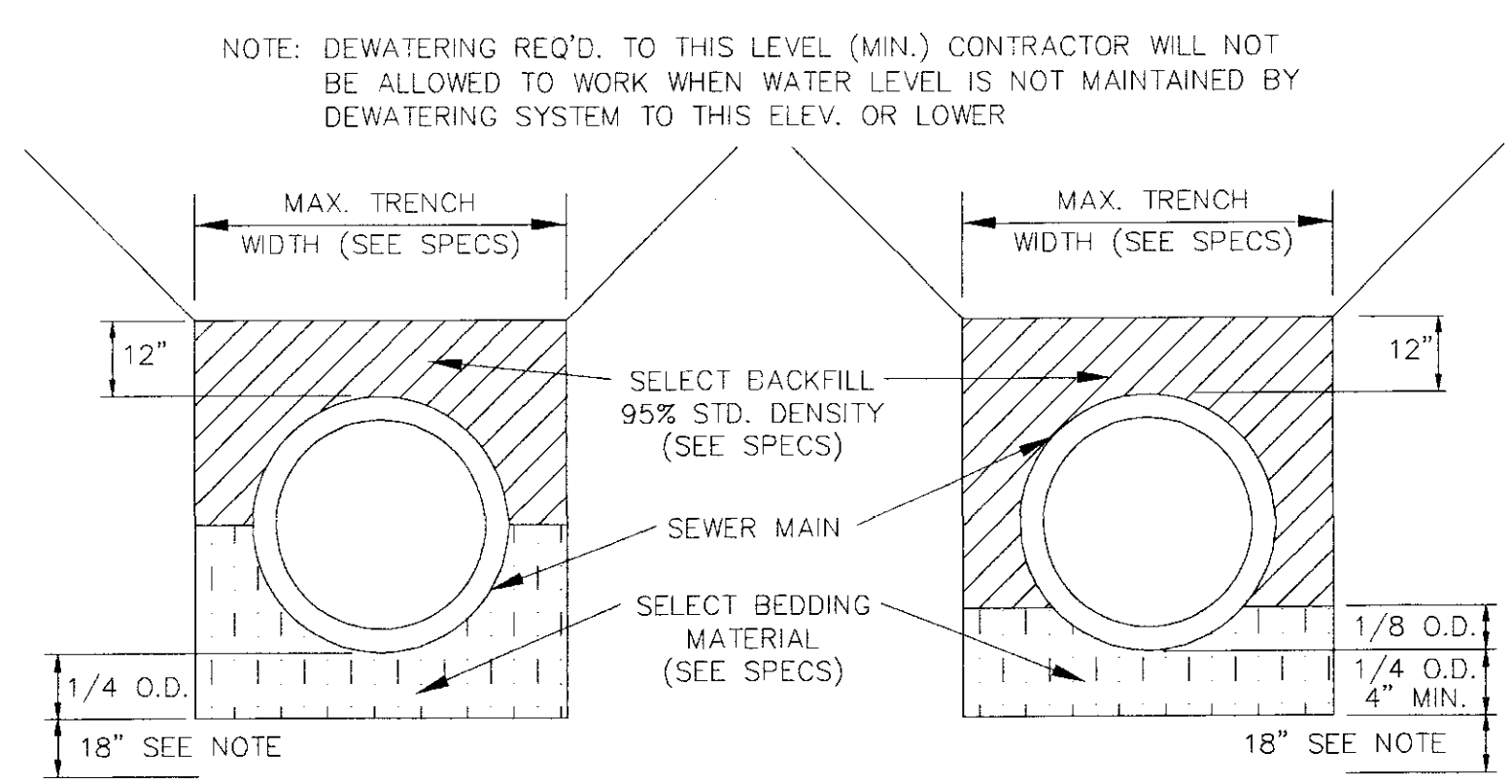
PLAN MANHOLE CASTING



DETAIL TYPE "A" PIER

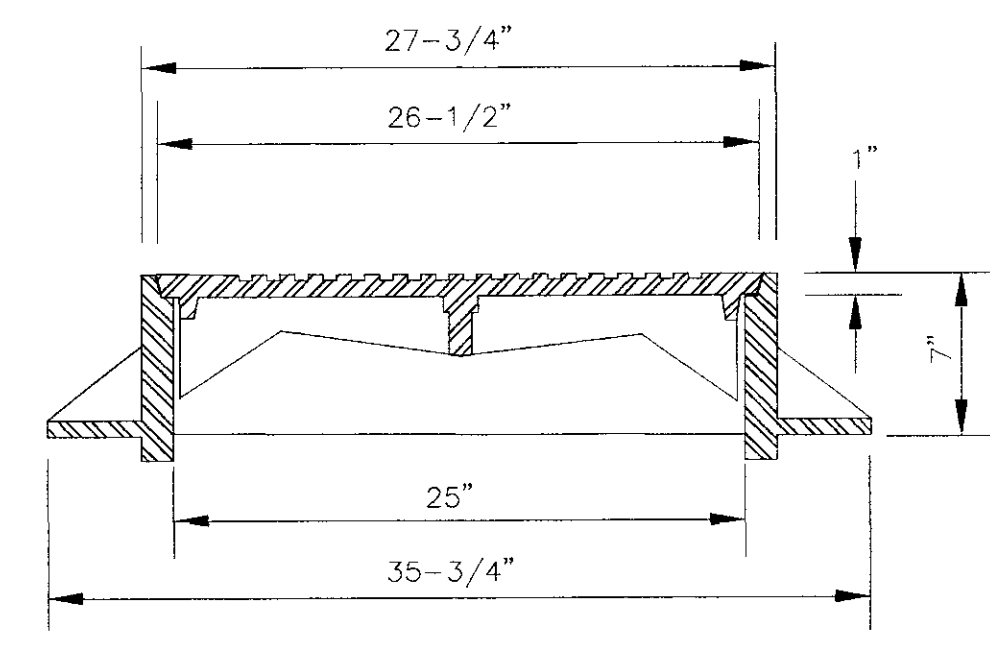


PLAN OF MANHOLE FLOW CHANNELS



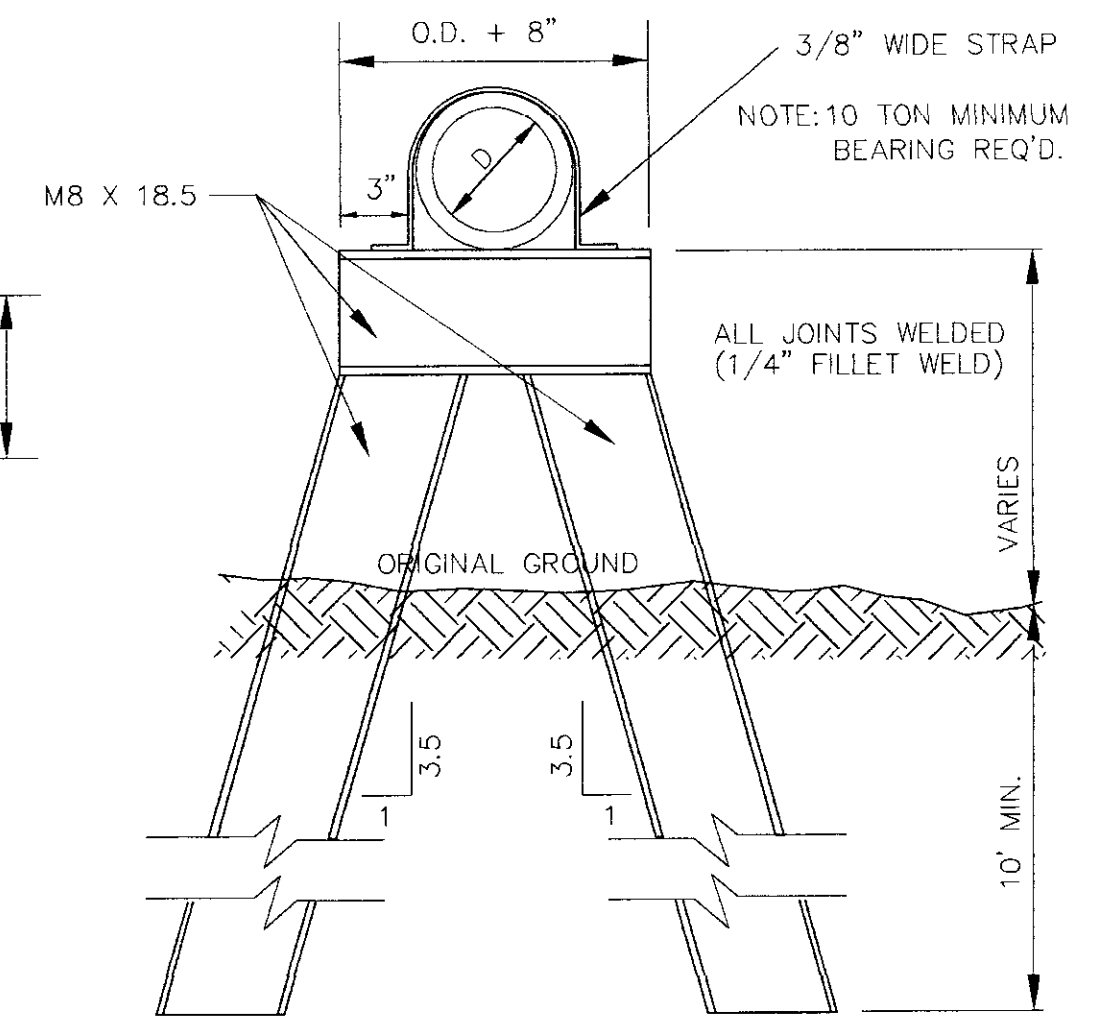
TYPICAL SECTION CLASS "B" BEDDING

TYPICAL SECTION CLASS "C" BEDDING

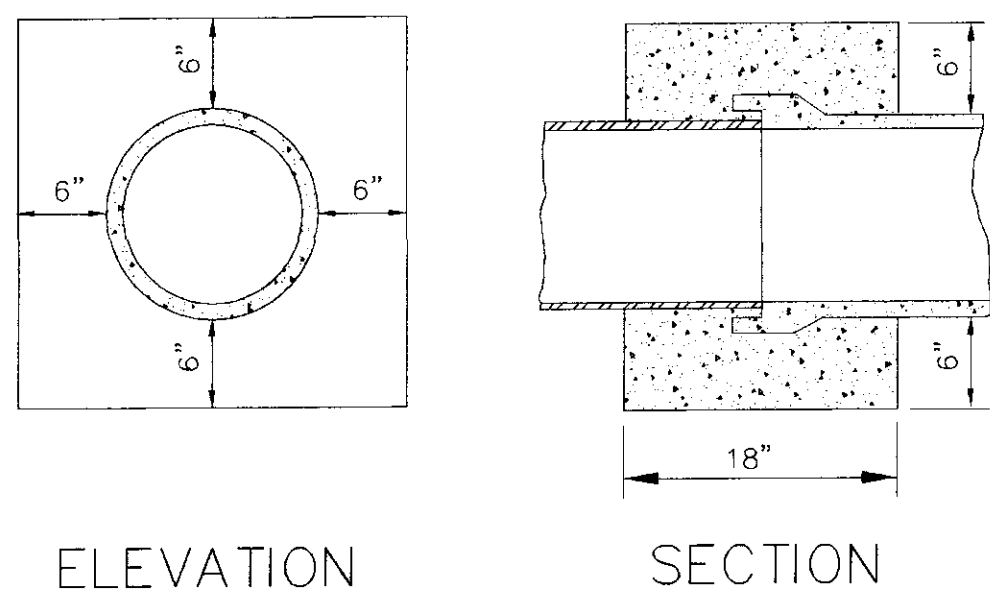
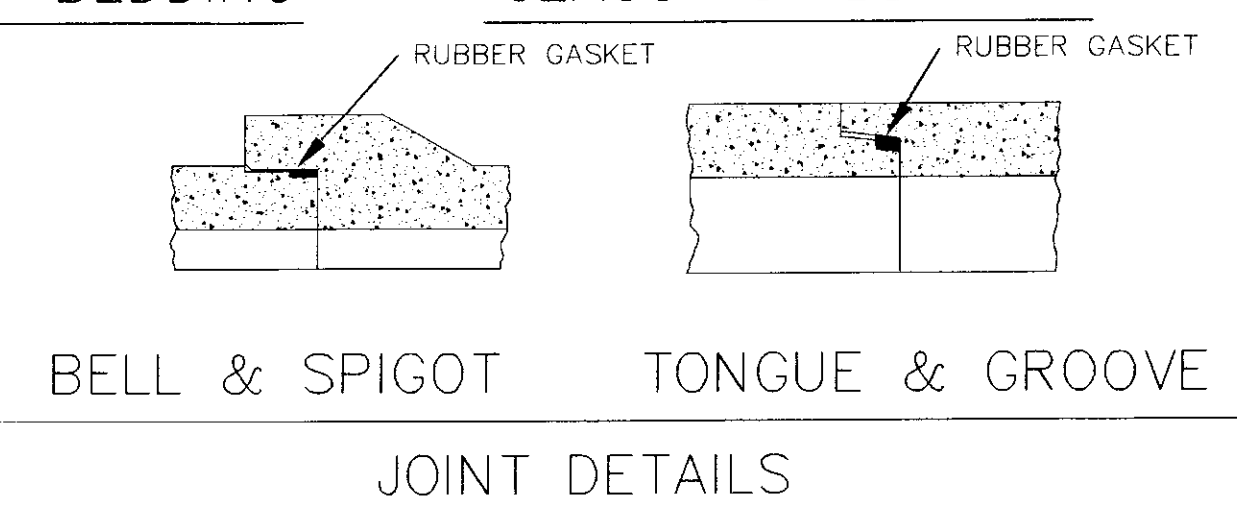


SECTION TYPE "A" MANHOLE CASTING

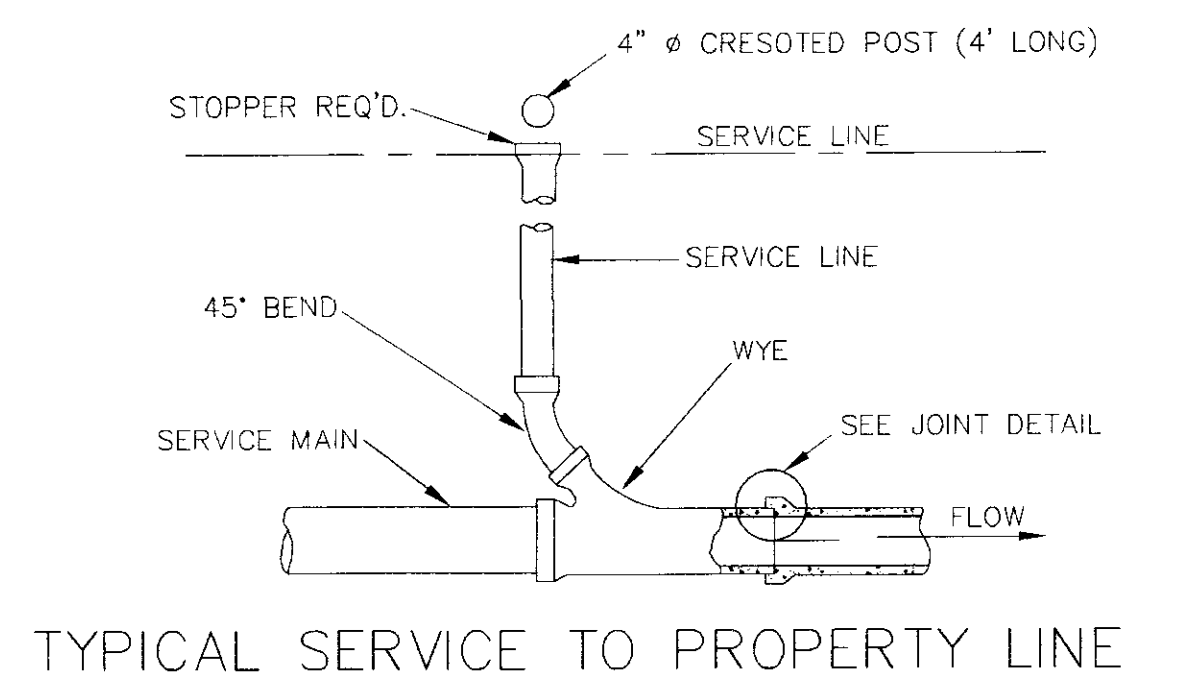
NOTE: 1. USE TYPE "A" MANHOLE CASTING IN STREET R.O.W.
2. USE VULCAN NO. VM-8, (440 LBS.)



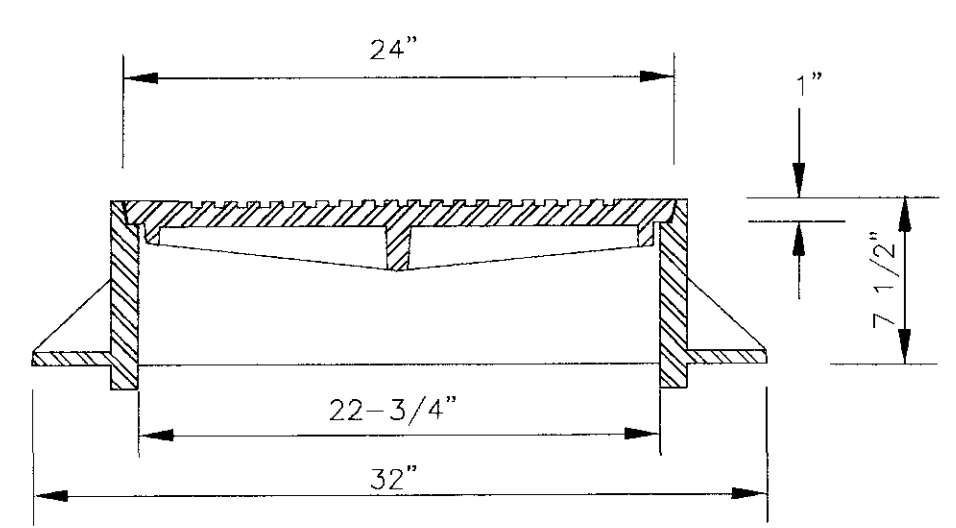
DETAIL TYPE "B" PIER



CONCRETE COLLAR DETAILS

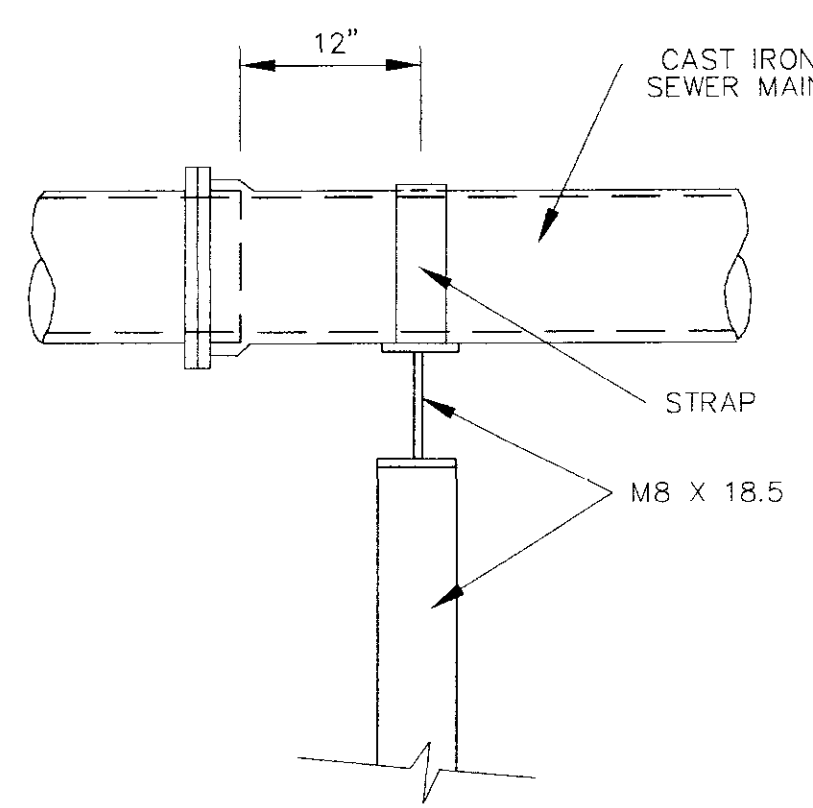


TYPICAL SERVICE TO PROPERTY LINE WITH WYE JOINT

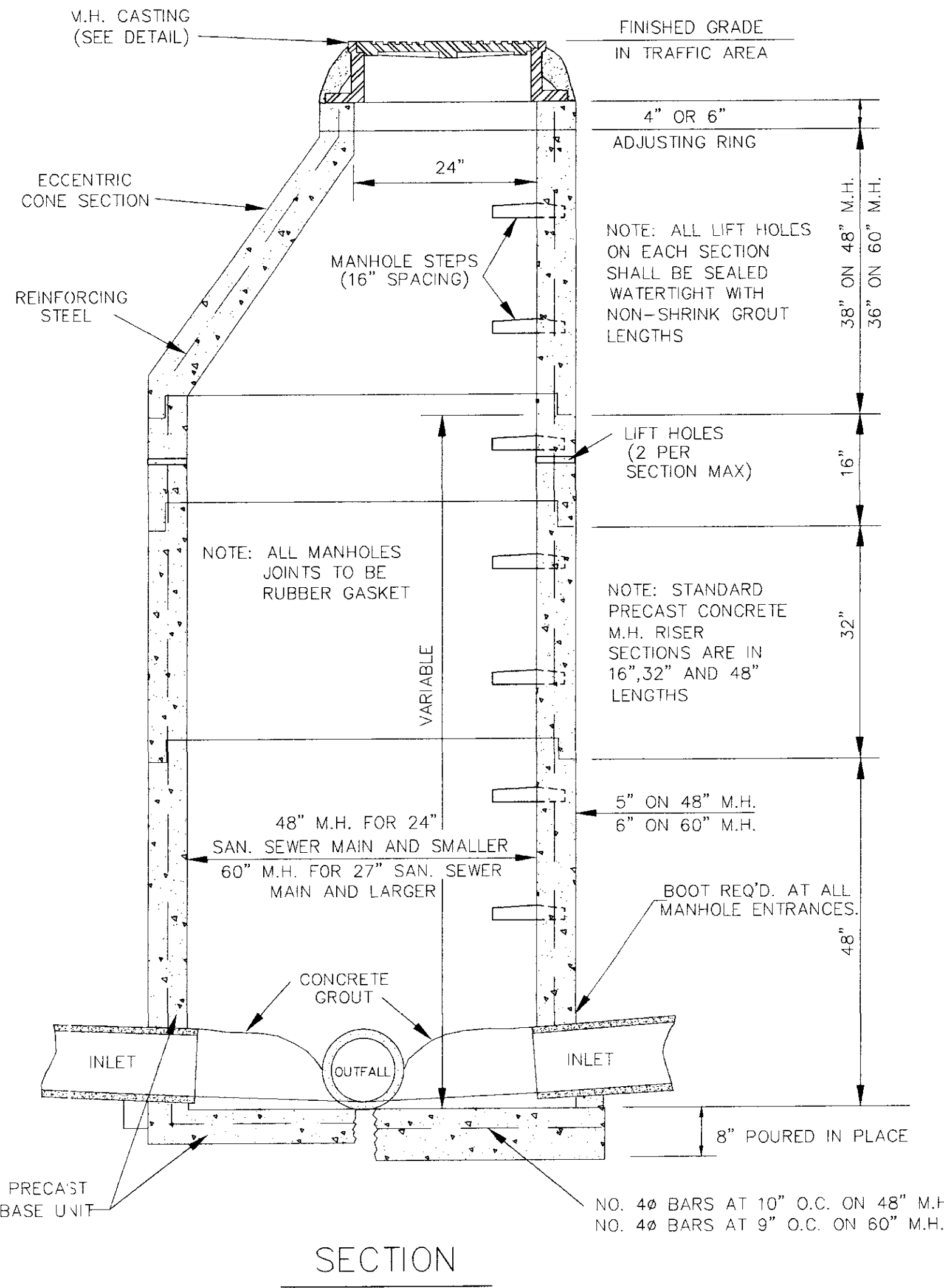


SECTION TYPE "B" MANHOLE CASTING

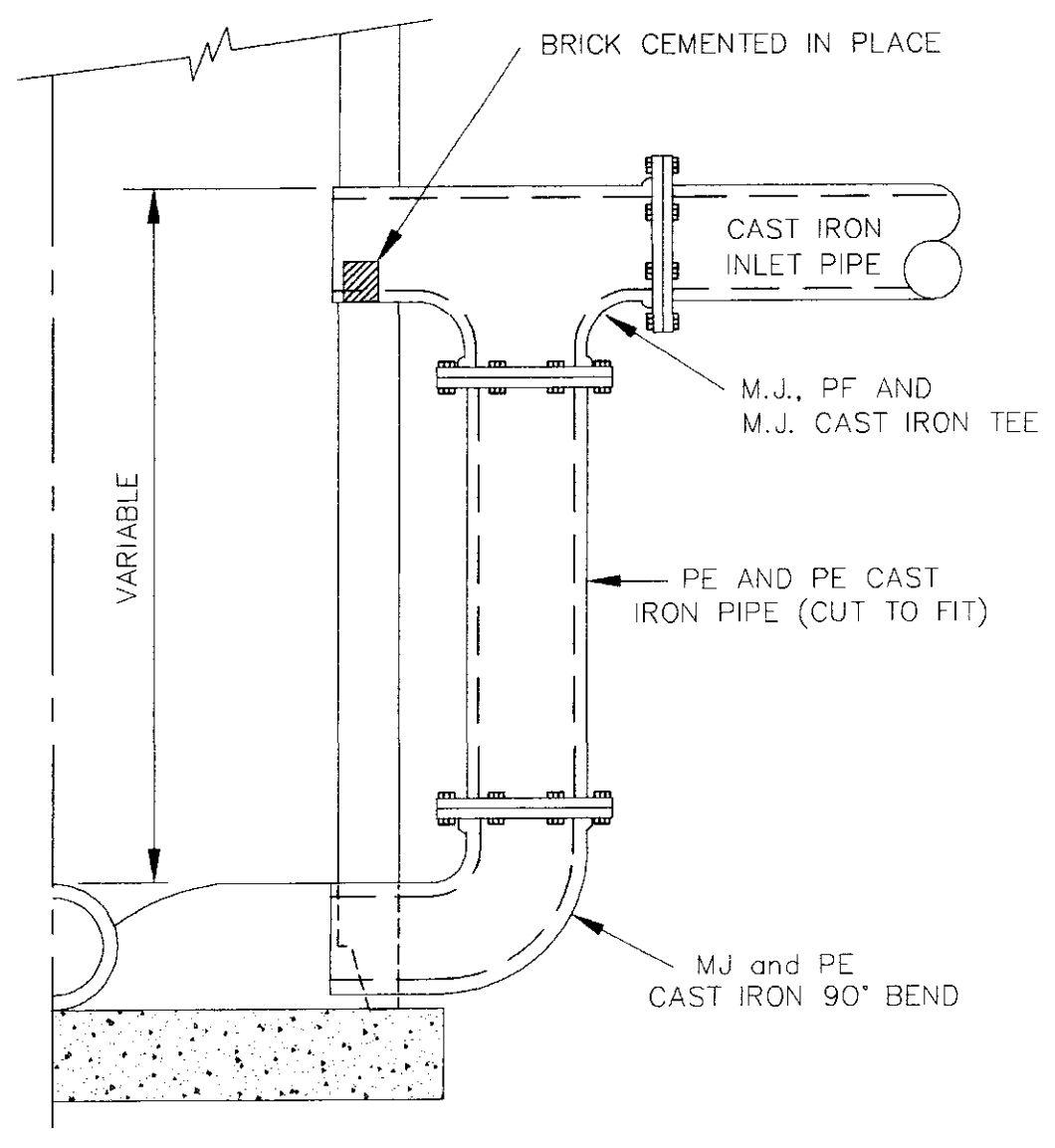
NOTE: 1. USE TYPE "B" MANHOLE CASTING FOR ANY MANHOLE NOT IN A STREET R.O.W.
2. VULCAN NO. VM-7 (300 LBS.) OR NEENAH NO. R-1779 (300 LBS.)



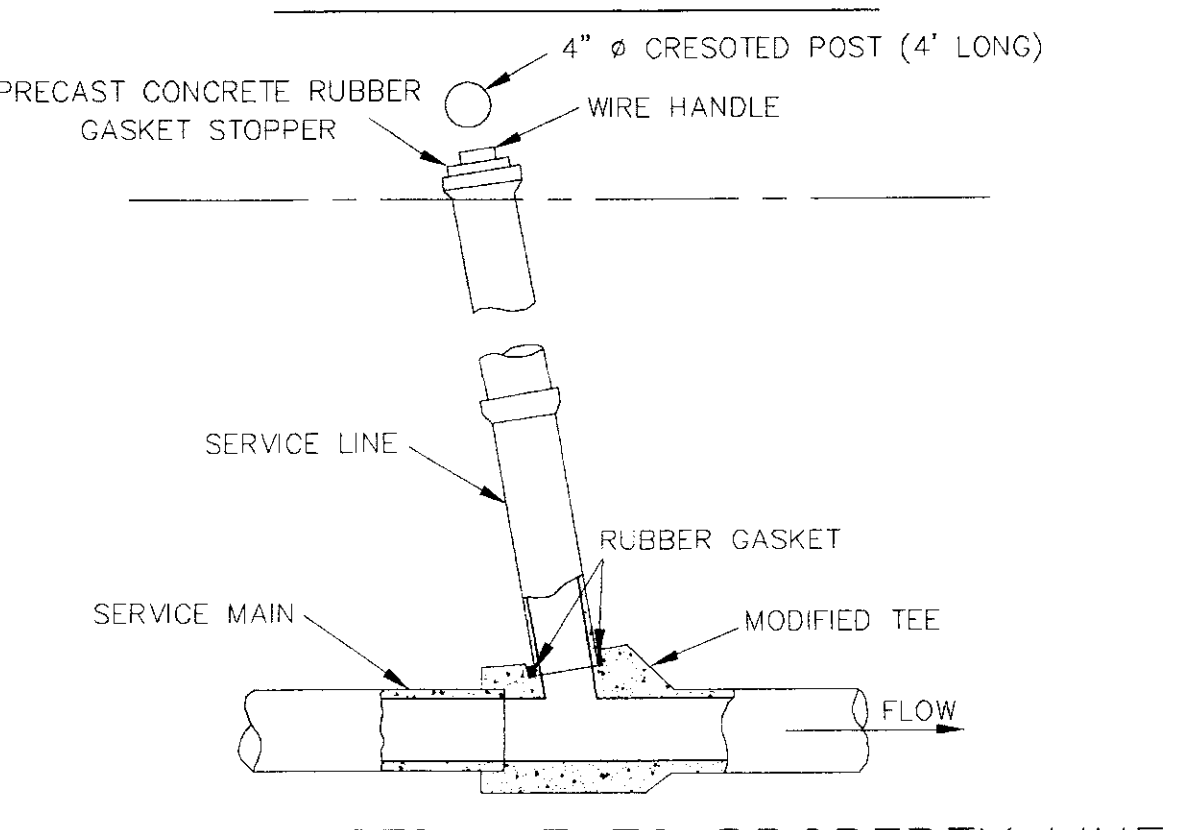
SIDE ELEVATION TYPE "B" PIER



SECTION PRECAST CONCRETE MANHOLE

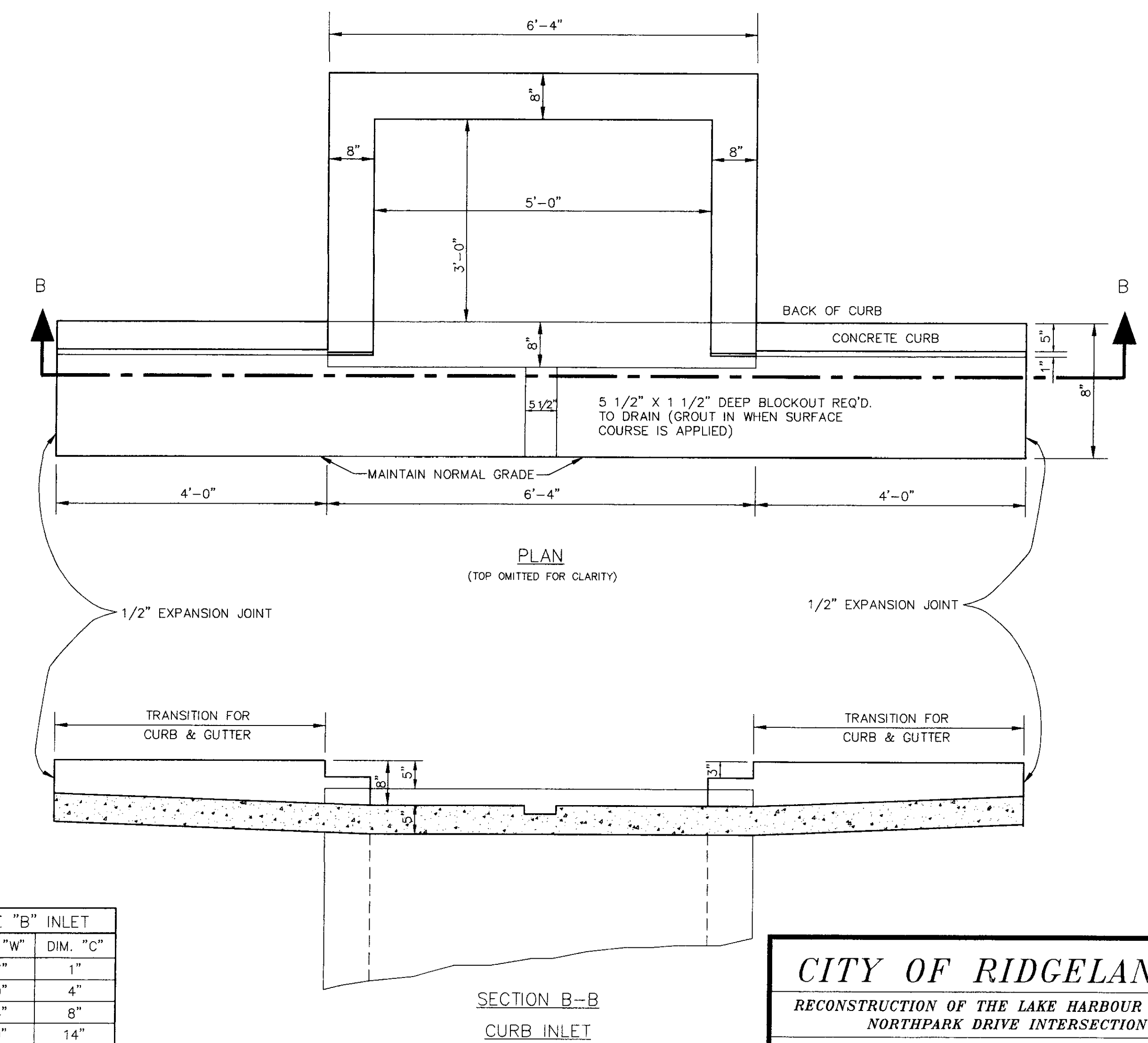
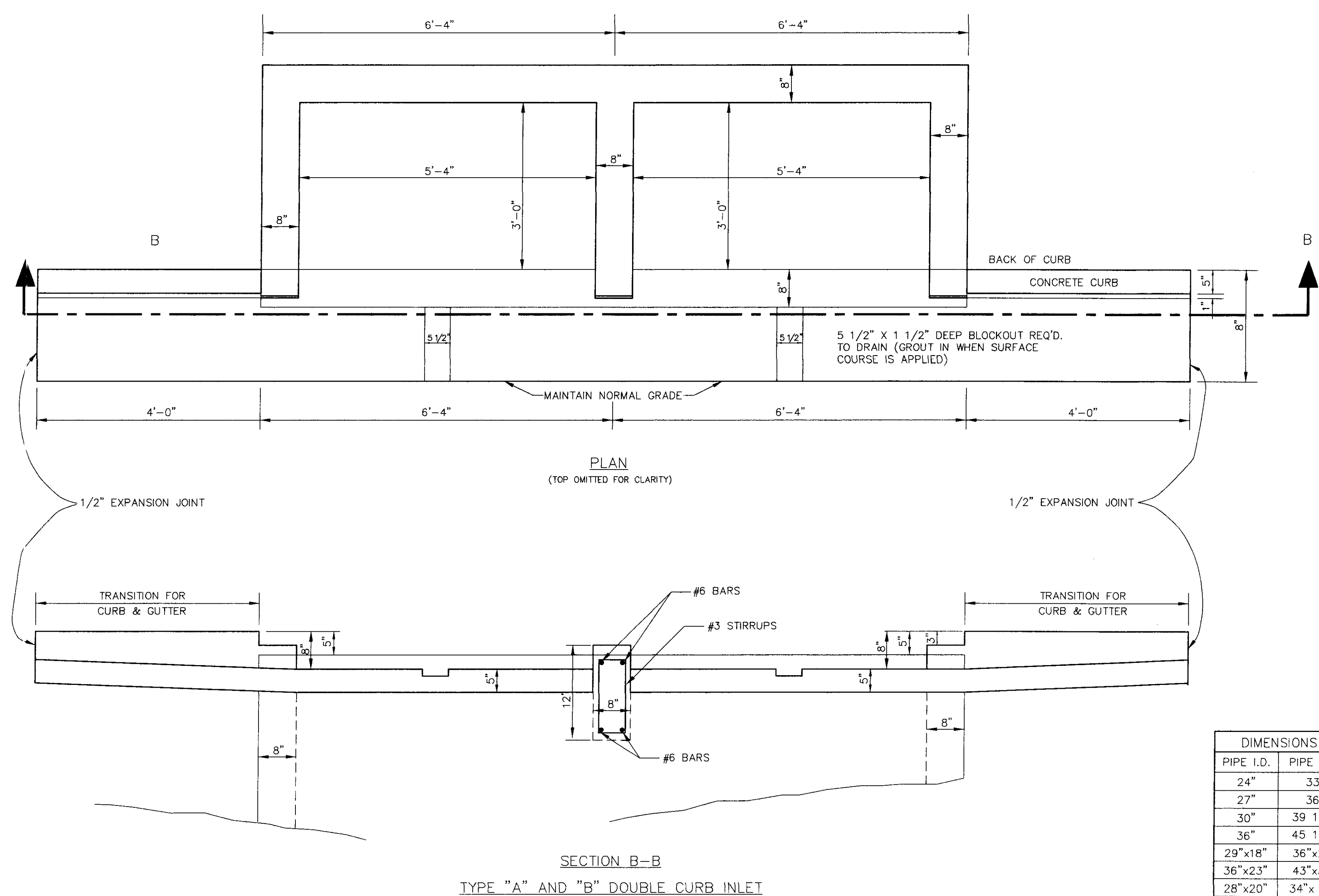
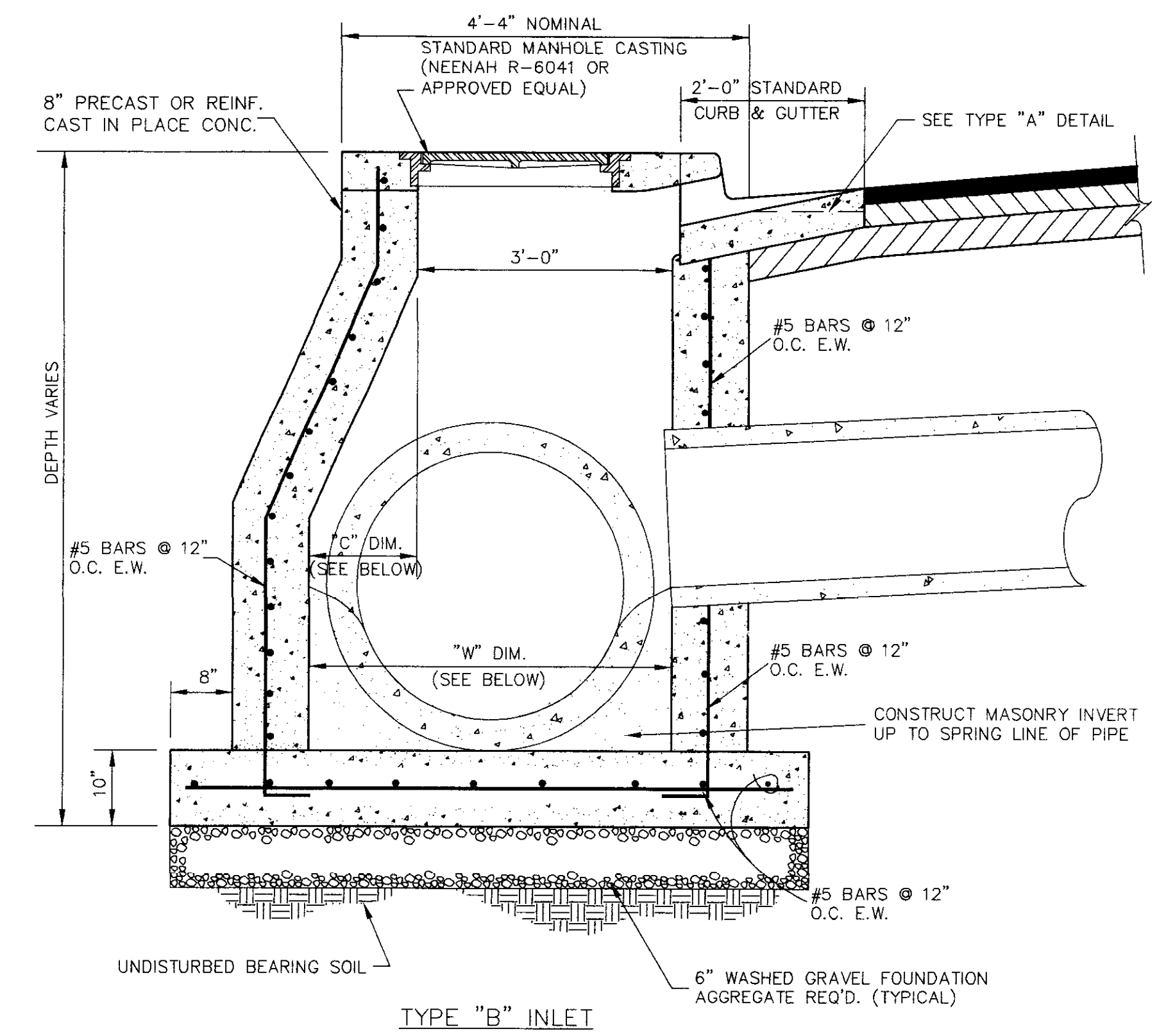
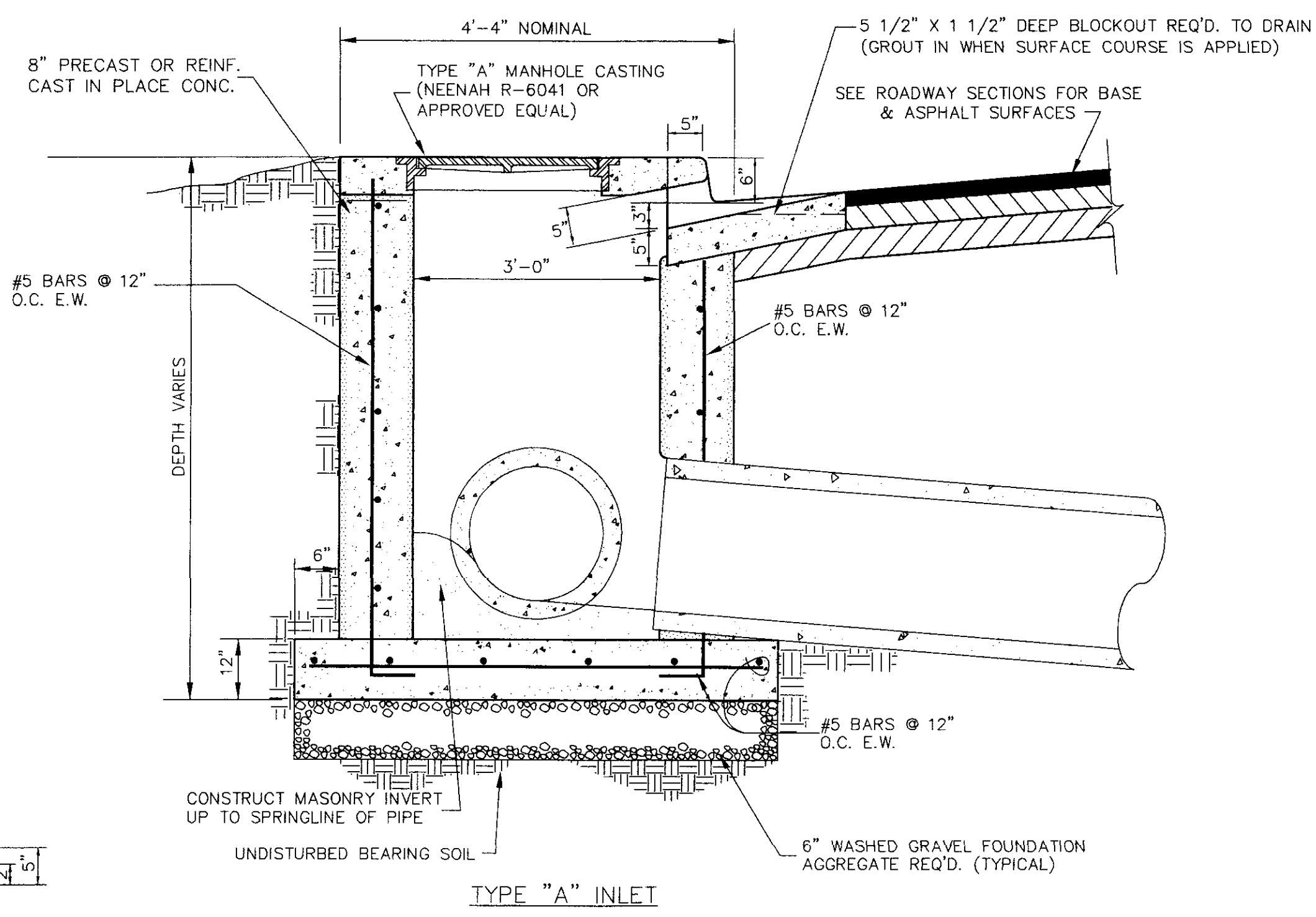
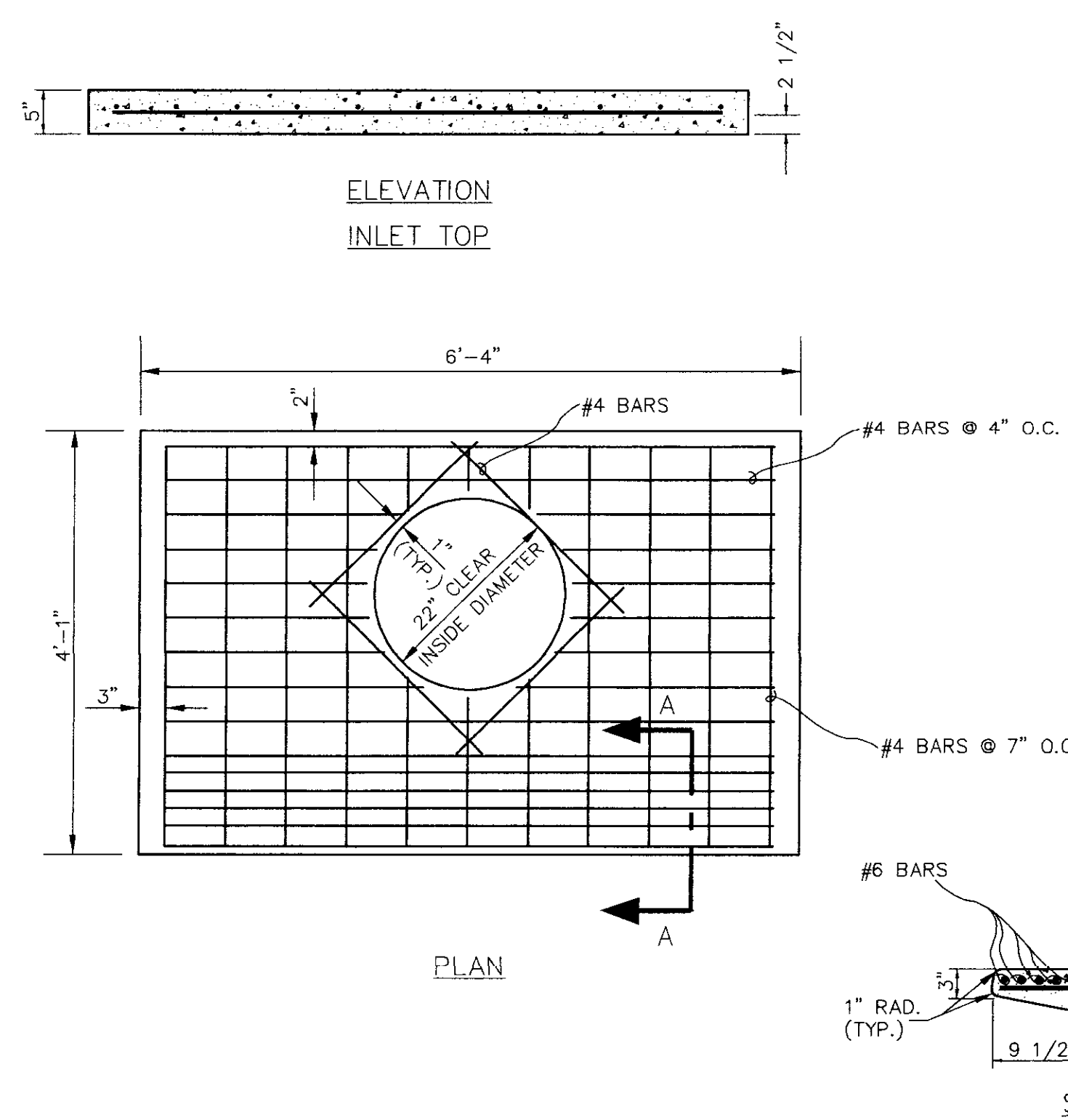


HALF SECTION MANHOLE WITH DROP SECTION



TYPICAL SERVICE TO PROPERTY LINE WITH MODIFIED TEE JOINT

CITY OF RIDGELAND
RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
NORTH PARK DRIVE INTERSECTION
STANDARD SEWER DRAWINGS
WAGGONER ENGINEERING, INC.
Consulting Engineers - Jackson, Mississippi
DRAWN BY: E.L.G. DATE: 08-23-99 SHEET NUMBER
REVIEWED BY: J.B. SCALE: N.T.S. **32** OF



DIMENSIONS FOR TYPE "B" INLET			
PIPE I.D.	PIPE O.D.	DIM. "W"	DIM. "C"
24"	33"	37"	1"
27"	36"	40"	4"
30"	39 1/2"	44"	8"
36"	45 1/2"	50"	14"
29"x18"	36"x25"	40"	4"
36"x23"	43"x30"	47"	11"
28"x20"	34"x 26"	38"	2"

CITY OF RIDGELAND
 RECONSTRUCTION OF THE LAKE HARBOUR DRIVE/
 NORTHPARK DRIVE INTERSECTION

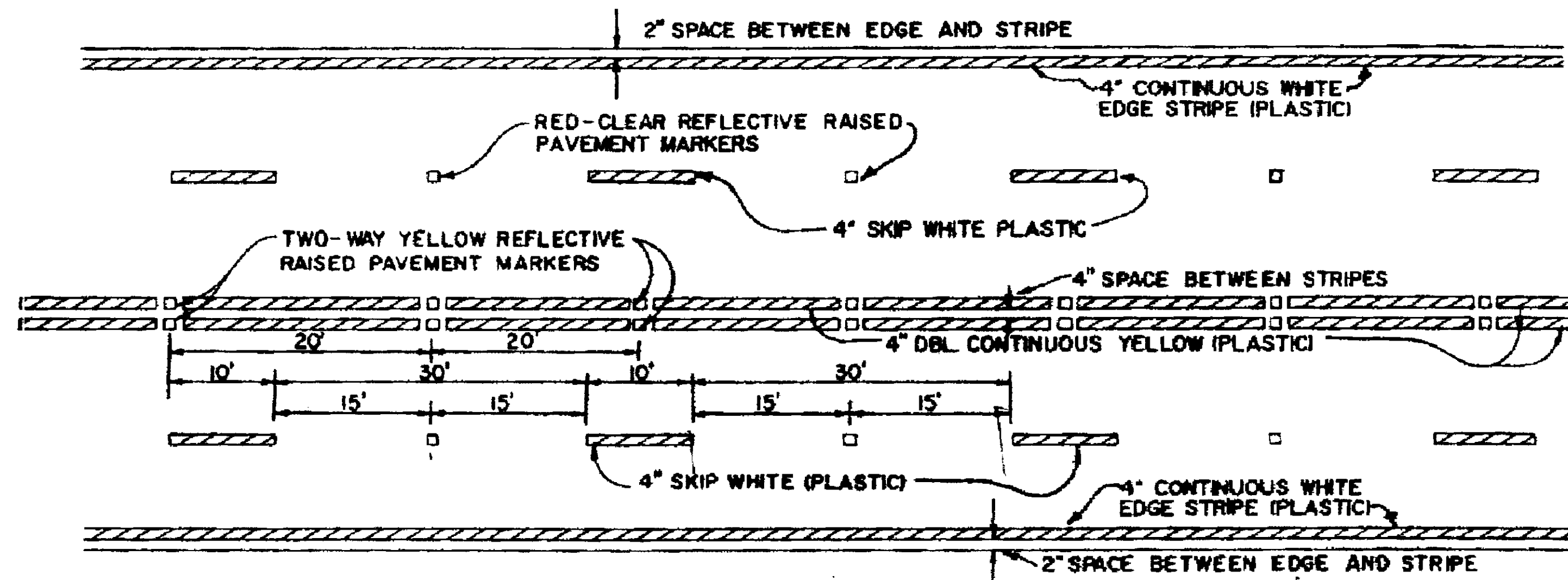
SINGLE/DOUBLE INLET DETAILS

WAGGONER ENGINEERING, INC.
 Consulting Engineers - Jackson, Mississippi

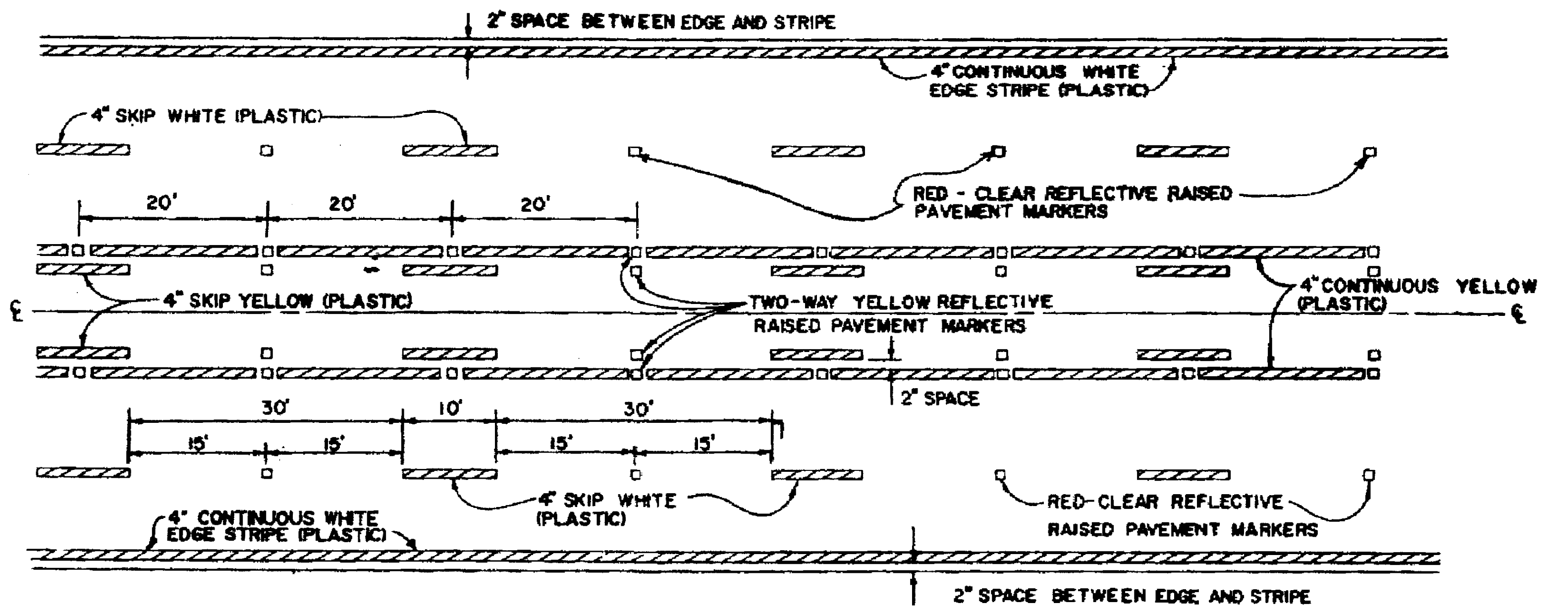
DRAWN BY: E.L.G. DATE: 08-23-99 SHEET NUMBER
 REVIEWED BY: J.B. SCALE: N.T.S. 33 OF

P:\196078A\31_8-8-01\15-d_inlet_8-8-01.dwg Wed Aug 15 14:28:07 2001

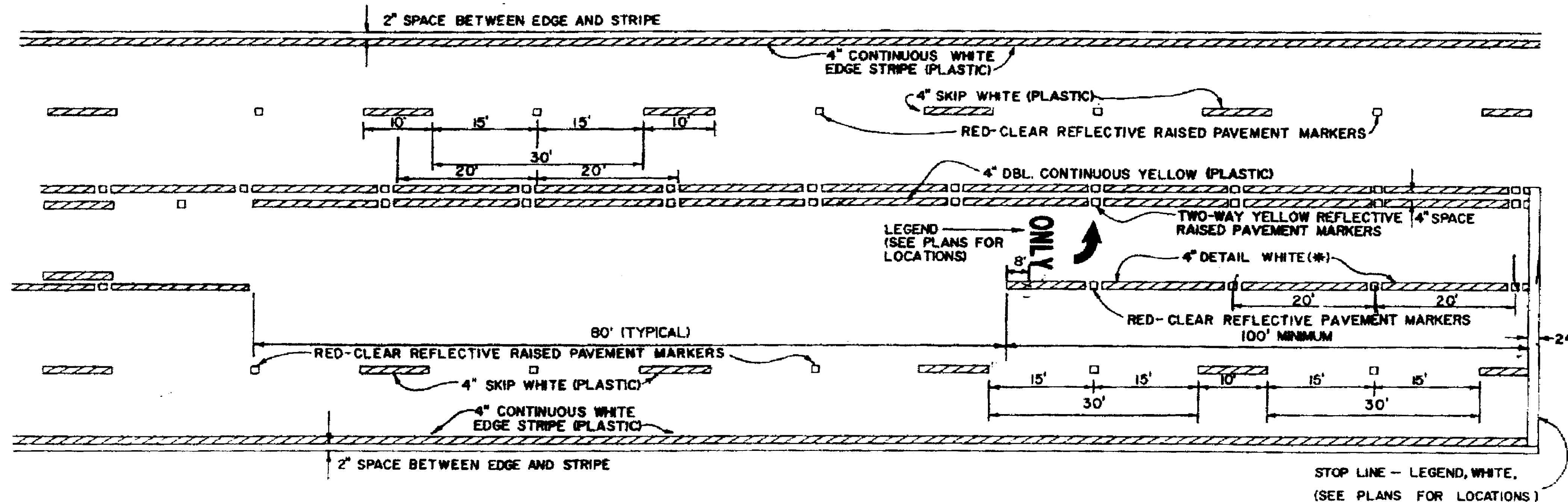
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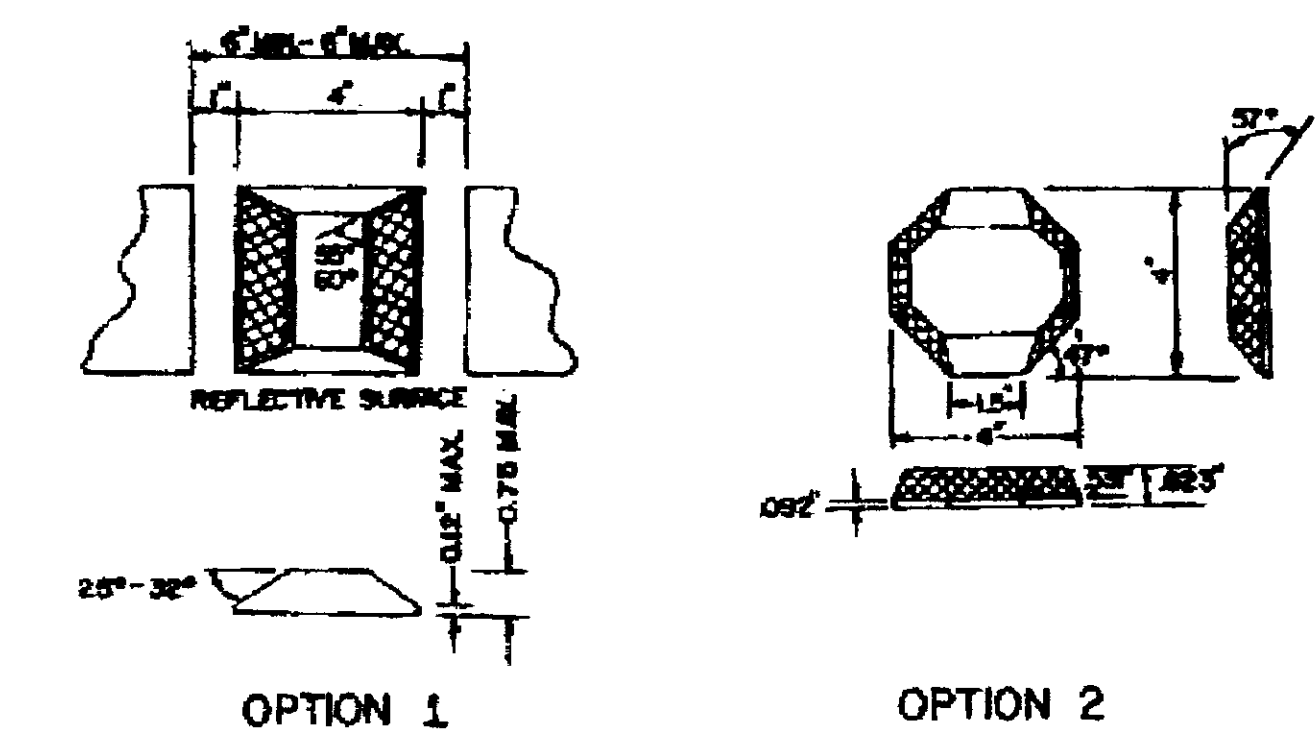
TYPICAL DETAIL FOR STRIPING AND RAISED PAVEMENT MARKERS-4 LANE SECTION



TYPICAL DETAIL FOR STRIPING AND RAISED PAVEMENT MARKERS - 5 LANE SECTION

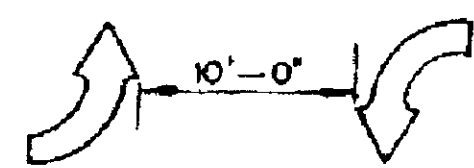


TYPICAL DETAIL FOR STRIPING AND RAISED PAVEMENT MARKERS AT LEFT TURN LANES



DETAIL OF REFLECTIVE MARKERS

NOTE: THE REFLECTIVE SURFACE MAY CONTAIN ONE (1) OR TWO (2) REFLECTOR LENSES. THE MIN. AREA IN EACH REFLECTIVE SURFACE IS THREE SQ. IN.



TYPICAL TWO-WAY TURN ARROW INSTALLATION

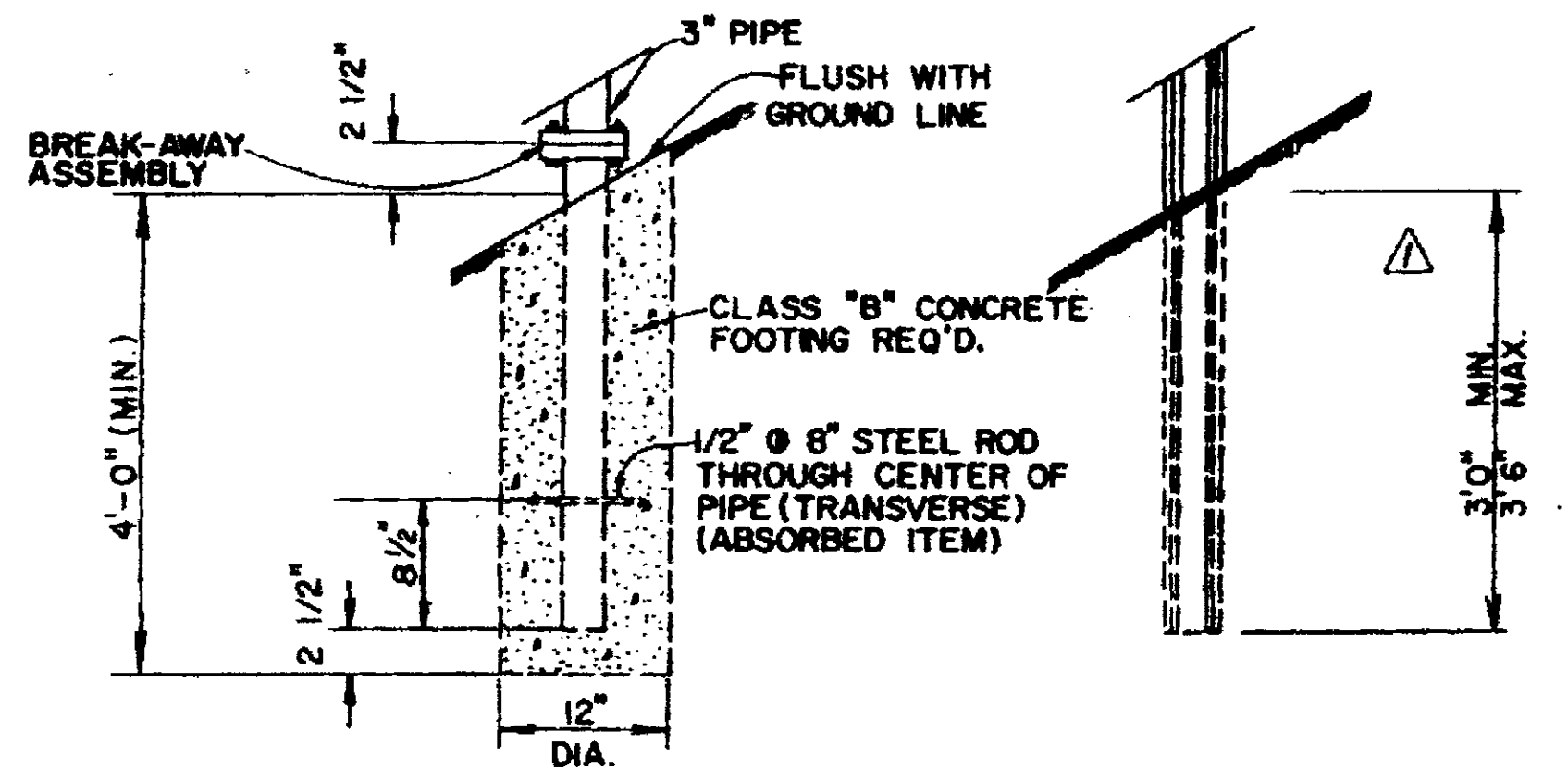
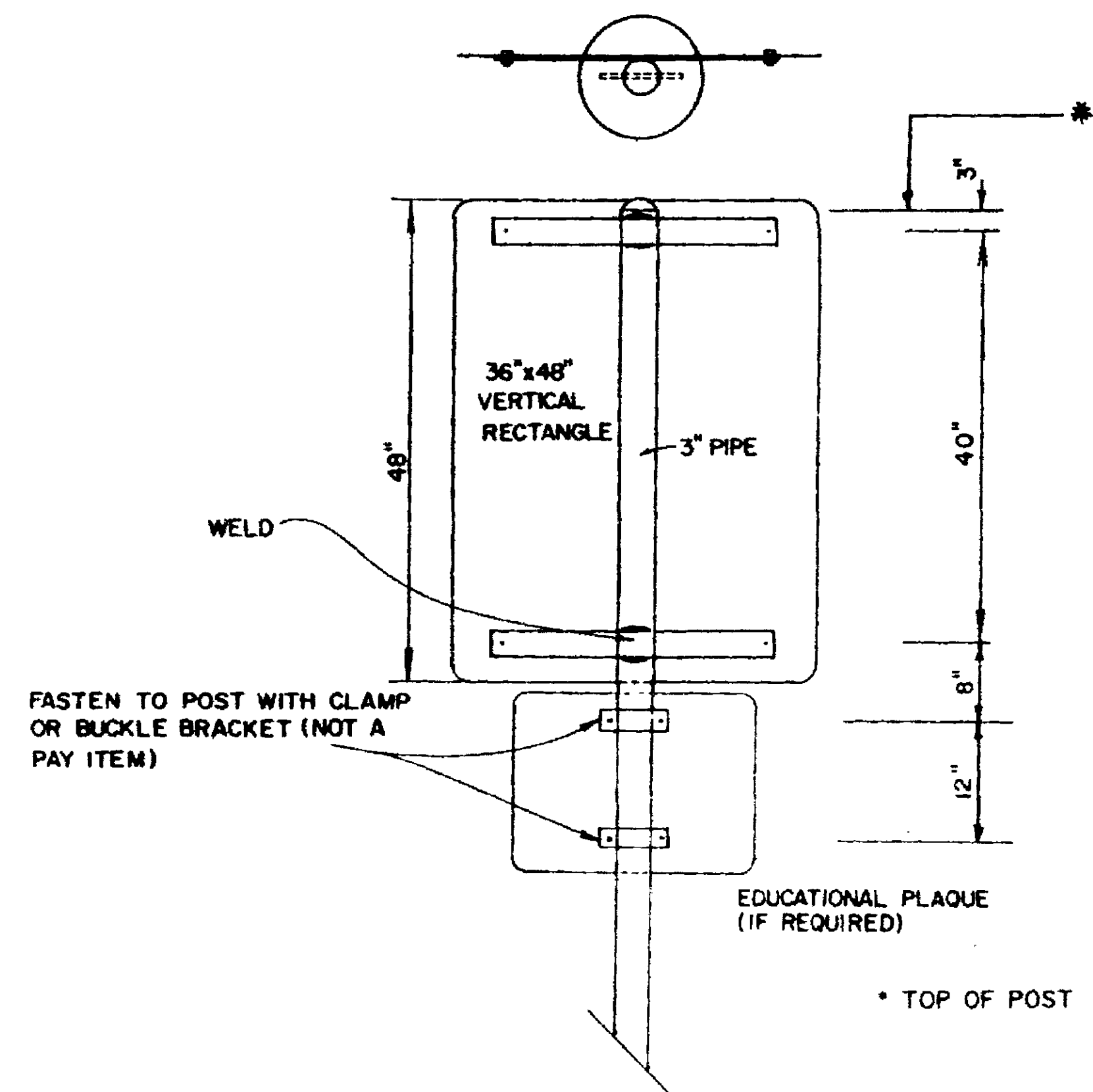
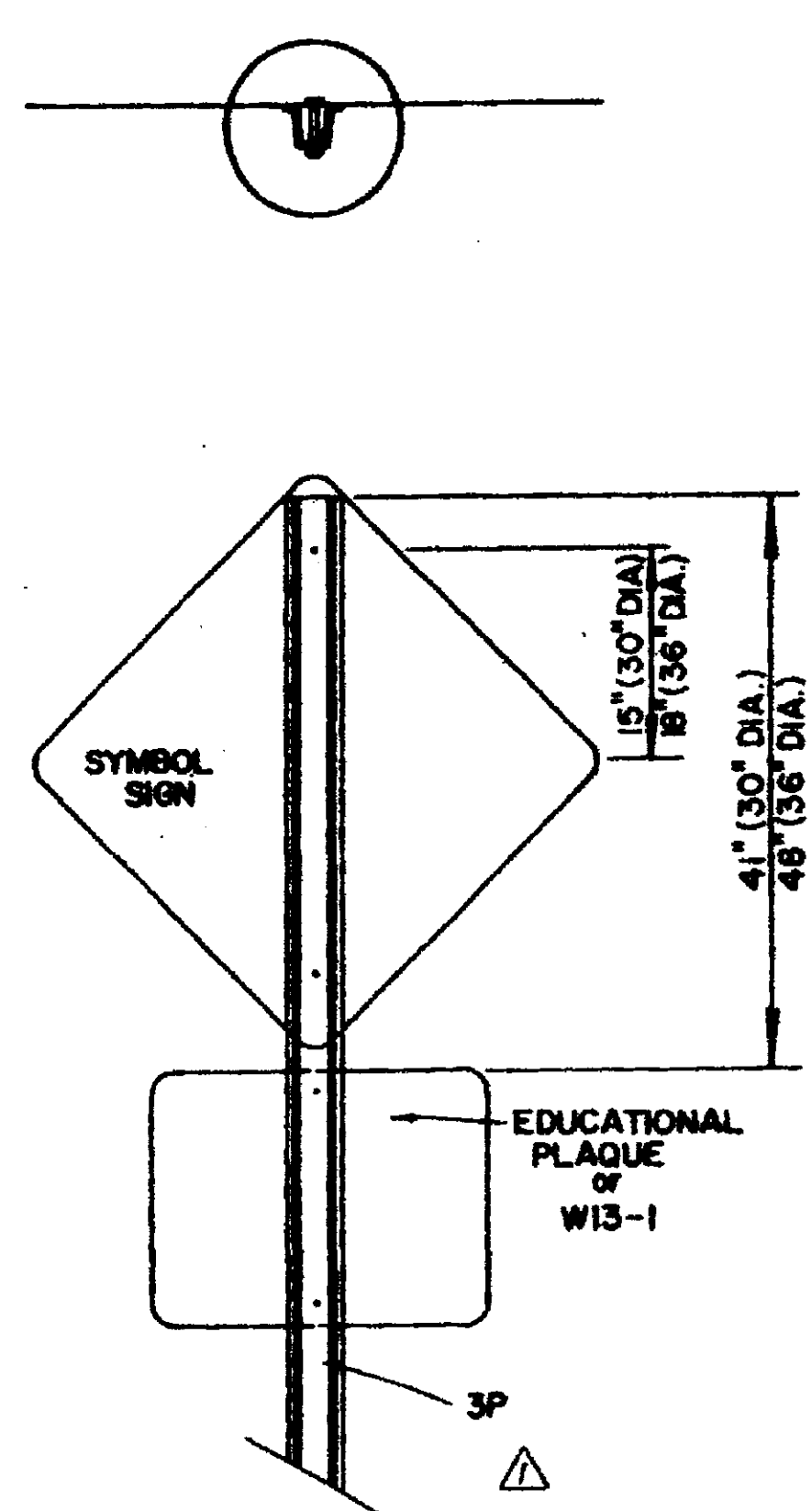
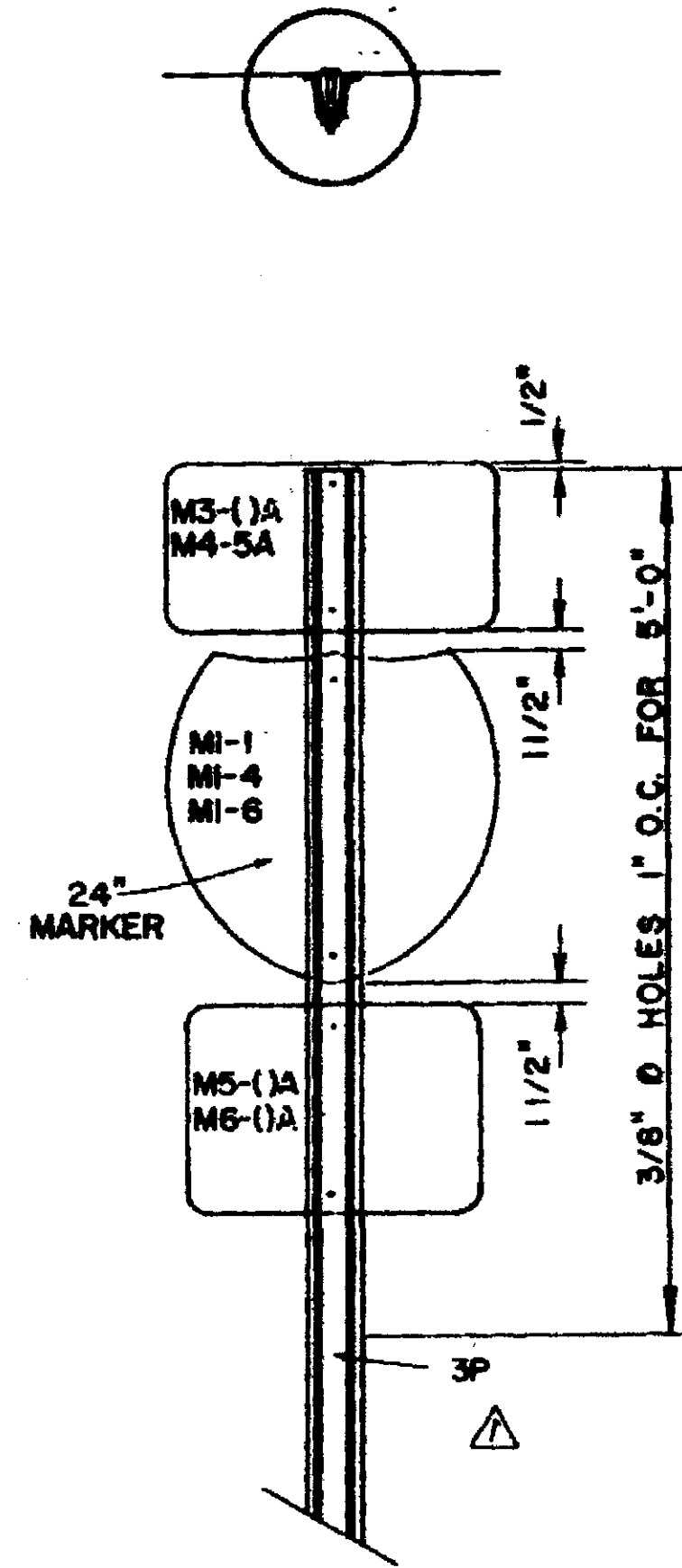
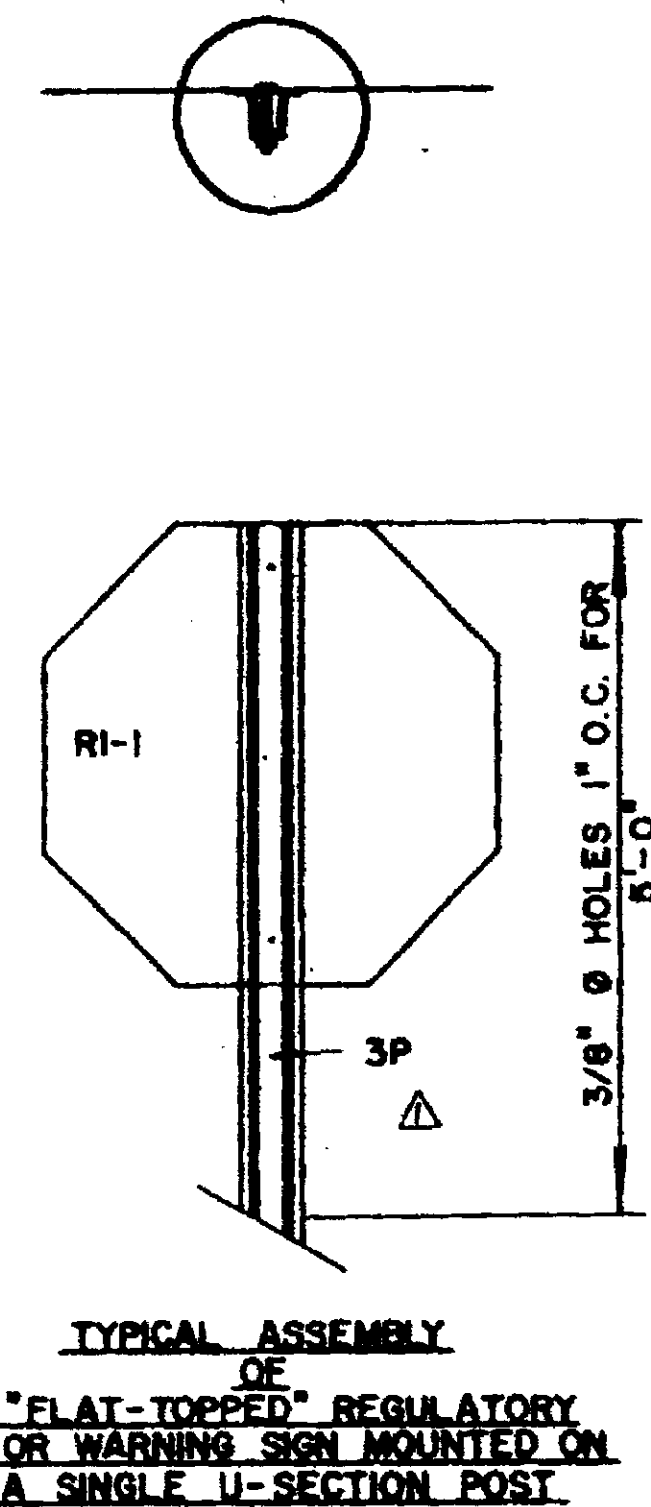
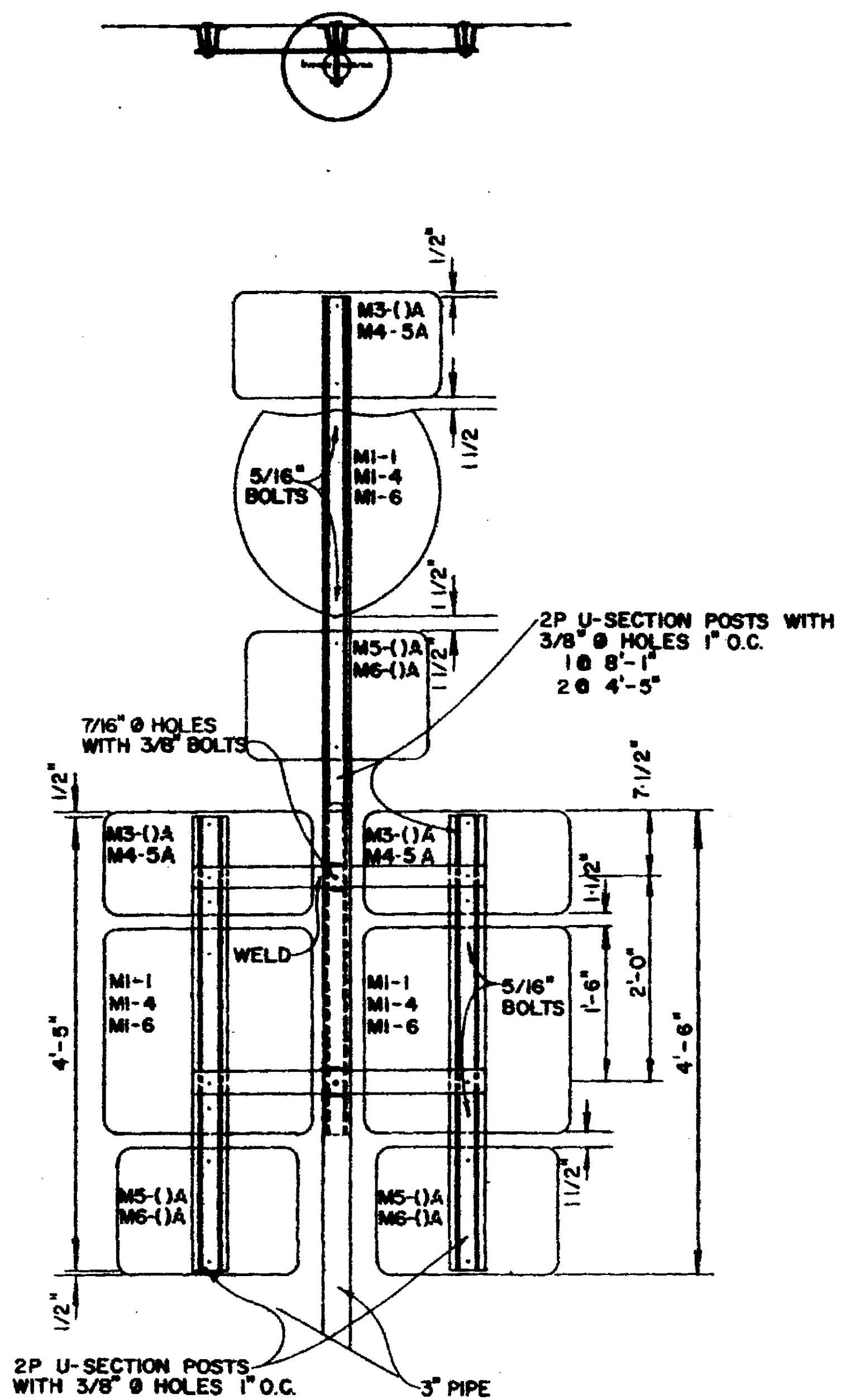
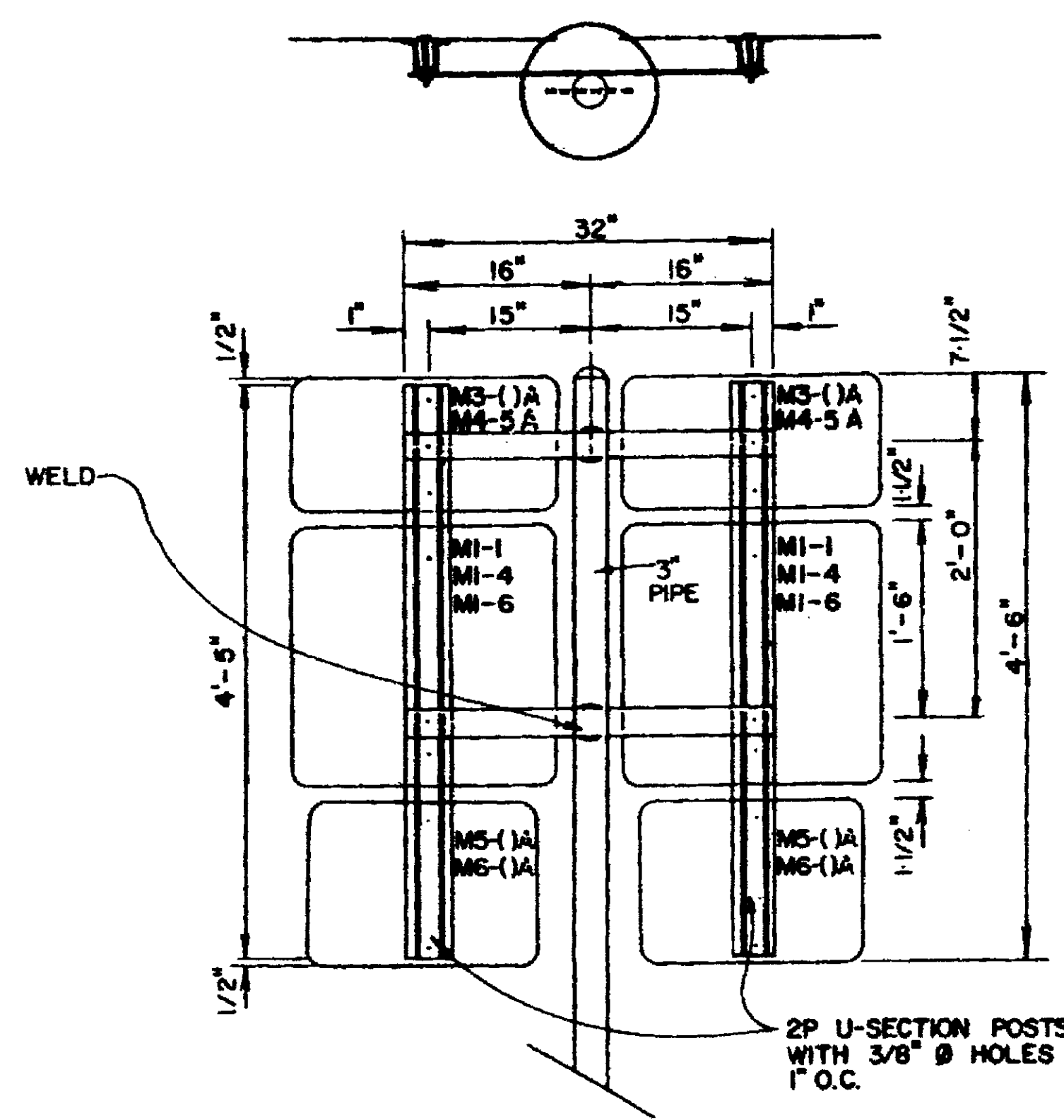
NOTES:

1. CONSIDER EACH SEGMENT OF CONTINUOUS TWO-WAY LEFT TURN LANE SEPARATELY.
2. IF SEGMENT IS LESS THAN 350', PLACE ONE SET OF ARROWS IN CENTER OF SEGMENT.
3. IF SEGMENT IS GREATER THAN 350', PLACE FIRST SET OF ARROWS 50'-100' FROM BEGINNING AND/OR END OF SEGMENT AND SPACE ADDITIONAL SETS OF ARROWS @ 250' O.C.

* DETAIL IF $\leq 150'$
CONTINUOUS IF $> 150'$

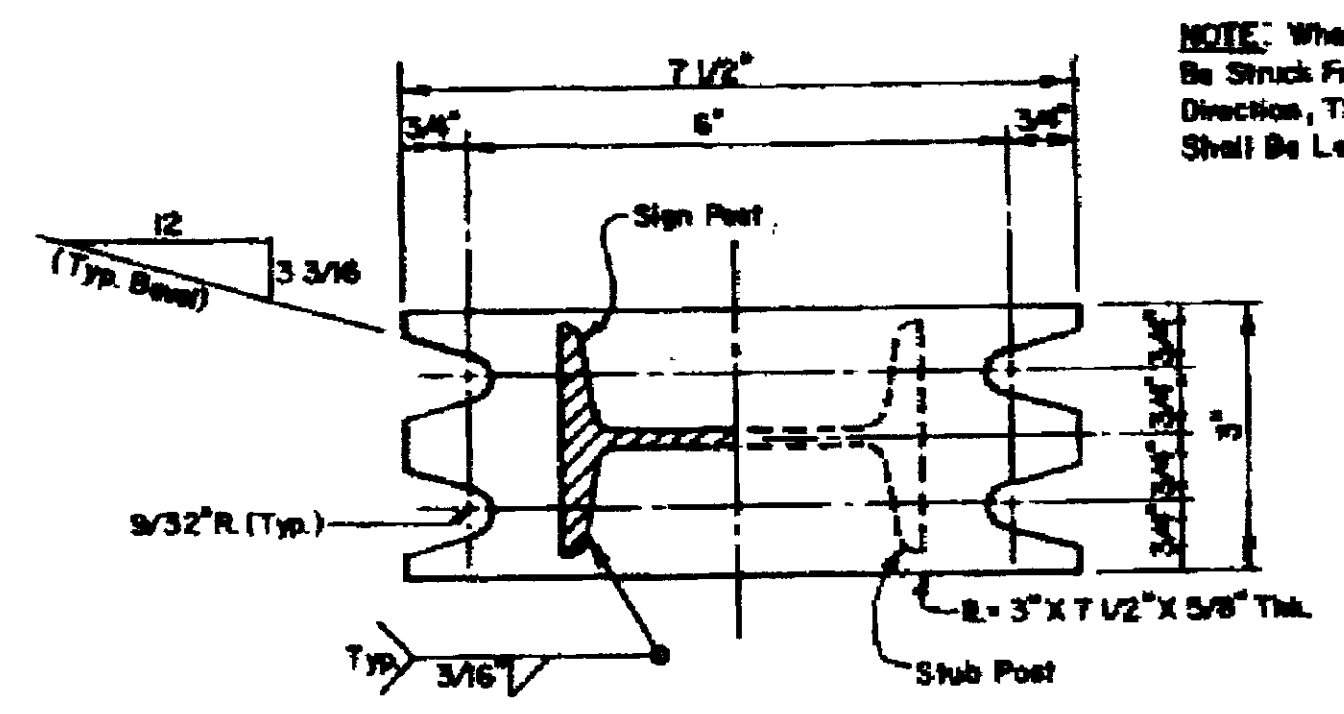
STOP LINE - LEGEND, WHITE.
(SEE PLANS FOR LOCATIONS)

MISSISSIPPI STATE HIGHWAY DEPARTMENT PAVEMENT MARKING DETAILS FOR 4 AND 5 LANE UNDIVIDED ROADWAYS	WORKING NUMBER PM-2
	SHEET NUMBER 113
DESIGNED: _____ CHECKED: _____ DATE: _____	DETAILED: _____ TRACED: _____ ISSUED: O.B.J. DATE 11-1-79



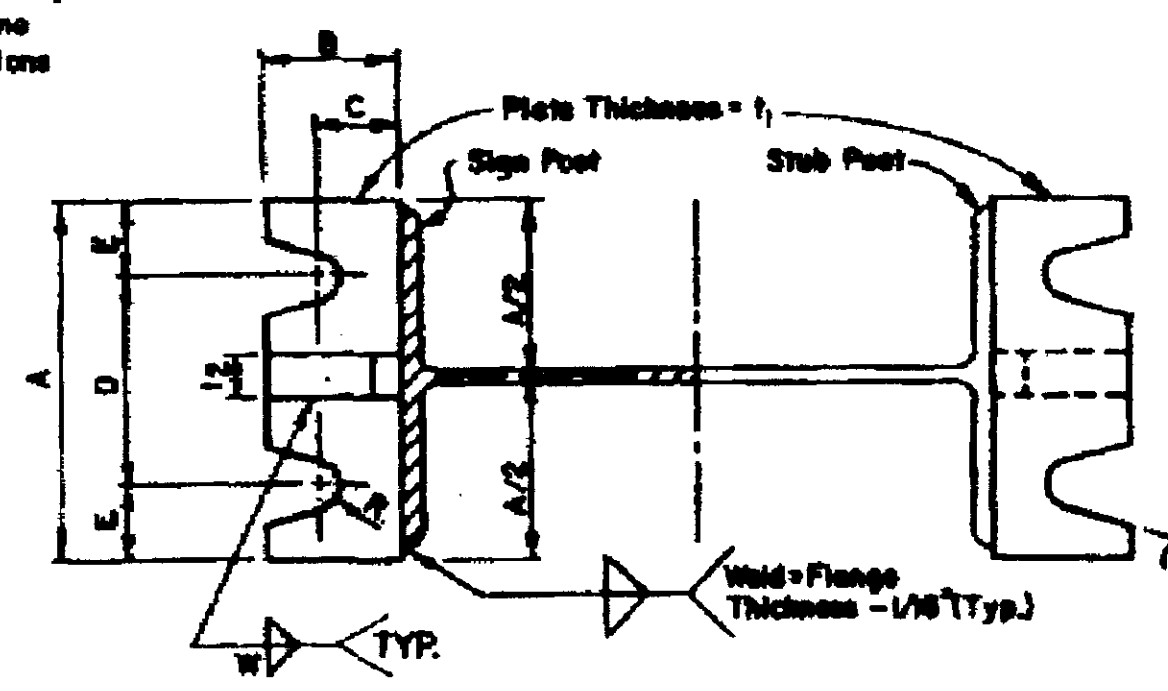
NOTES:
 UNLESS OTHERWISE SPECIFIED, HORIZONTAL BRACES ARE 7/16"x 2 1/2"x VARIABLE LENGTH FLAT STEEL BARS. BARS ARE WELDED TO PIPE AS SHOWN. WHEN FABRICATION IS COMPLETE, POST SHALL BE GALVANIZED AS PER SECTION 630 OF THE STANDARD SPECIFICATION.
 HOLES IN FLAT BARS ARE 3/8" DIAMETER.
 SIGNS ARE FASTENED TO FLAT BARS AND U-SECTION POST WITH 5/16" BOLTS, WITH FLAT WASHER AND LOCK-NUTS.
 GROUND PLATE NOT REQUIRED ON U-SECTION POST.

MISSISSIPPI STATE HIGHWAY DEPARTMENT			
STD. ROADSIDE SIGN ASSEMBLY AND INSTALLATION			
DESIGNED	DATE	DATE	DATE
AWK	7-7-80		
BY	DATE	DATE	DATE
AWK	7-7-80		
REVISIONS	DATE	BY	DESCRIPTION
1			
WORKING NUMBER			SN-4A
SHEET NUMBER			183.1

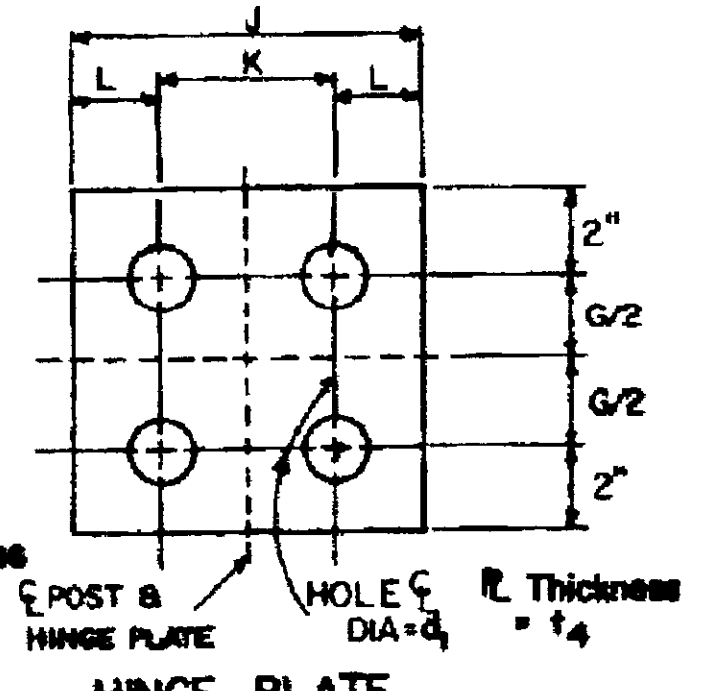


SECTION C-C SECTION D-D
 Sections Shown Are for Installations on Right Shoulder and in Gore. Plate Slot Bevels Are Opposite Hand From That Shown for Installations on Left Shoulder.

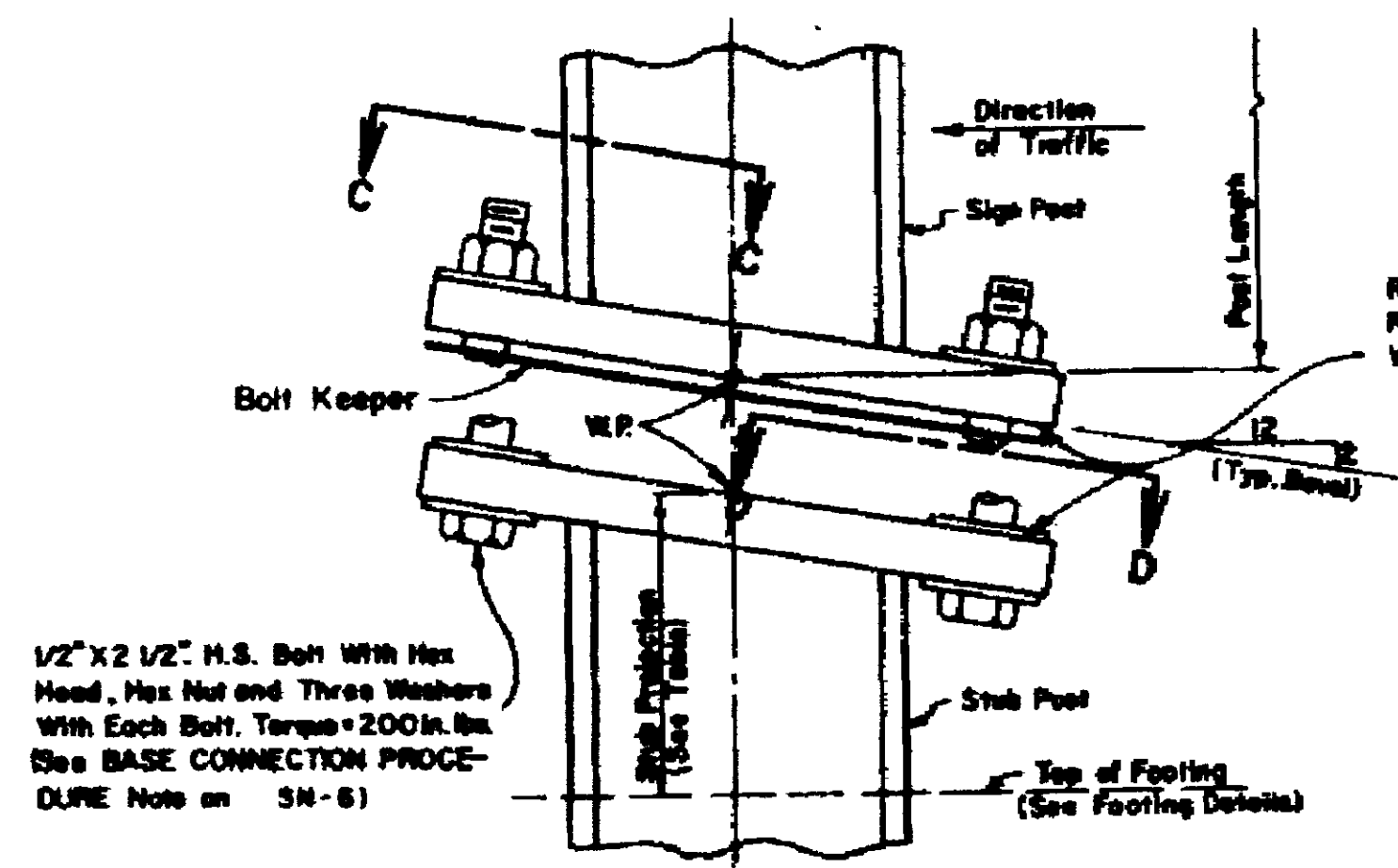
NOTE: Where Sign Supports May Be Struck From More Than One Direction, The Base Connections Shall Be Level.



SECTION E-E SECTION F-F
 (See Table for Dimensions)
 Sections Shown Are for Installations on Right Shoulder and in Gore. Plate Slot Bevels Are Opposite Hand From That Shown for Installations on Left Shoulder.

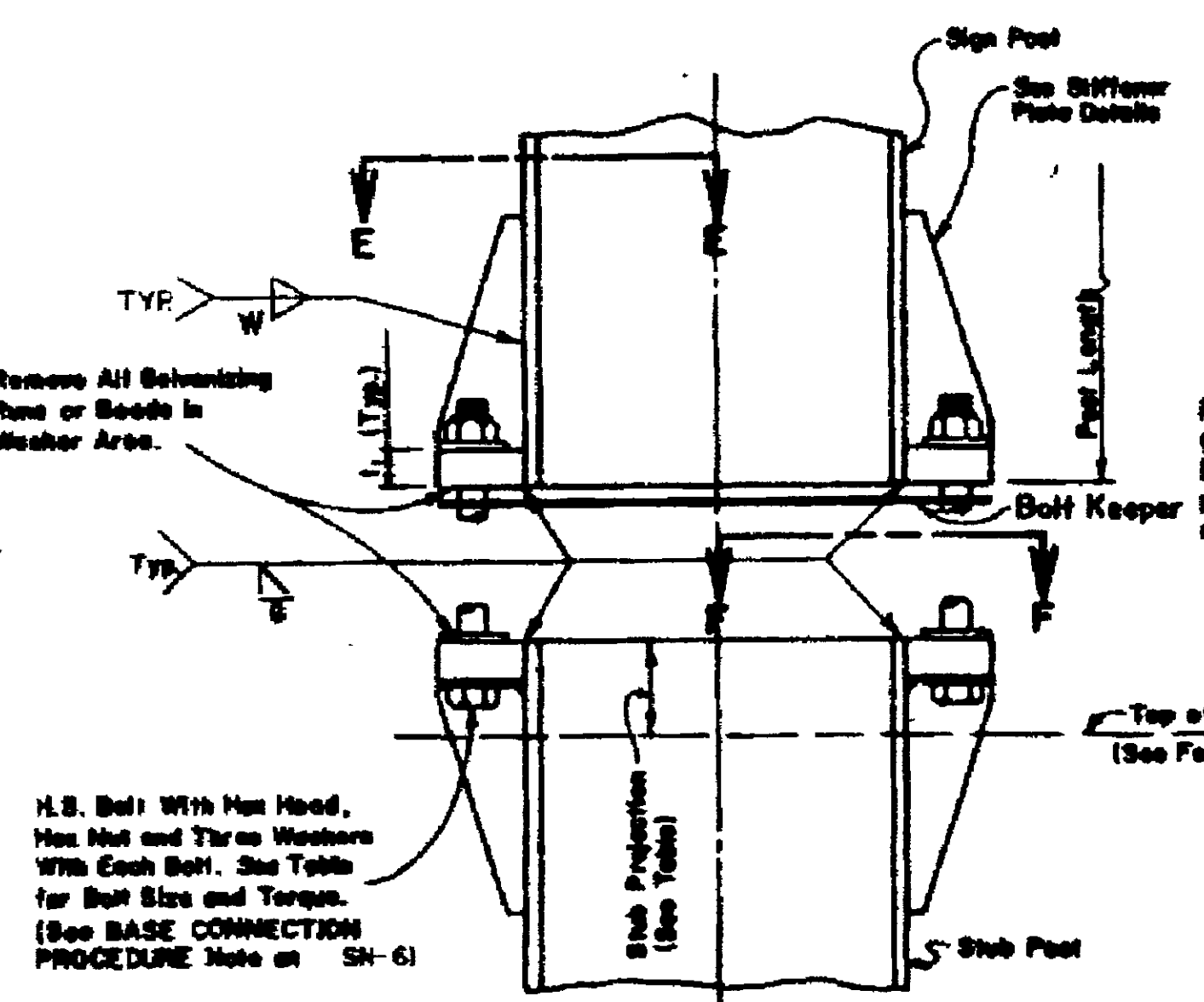


HINGE PLATE
 INSTALLATION SIMILAR TO DETAIL "A", FUSE



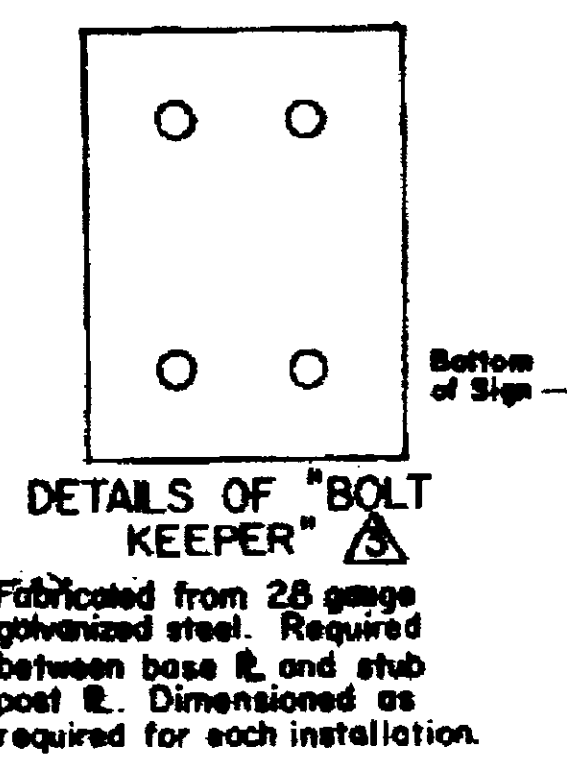
BASE CONNECTION DETAILS FOR S3 x 5.7 AND S4 x 7.7 SHAPED POSTS

1/2" x 2 1/2" H.S. Bolt With Max Head, Max Nut and Three Washers With Each Bolt. Torque = 200 In. Lb. See BASE CONNECTION PROCEDURE Note on SN-6

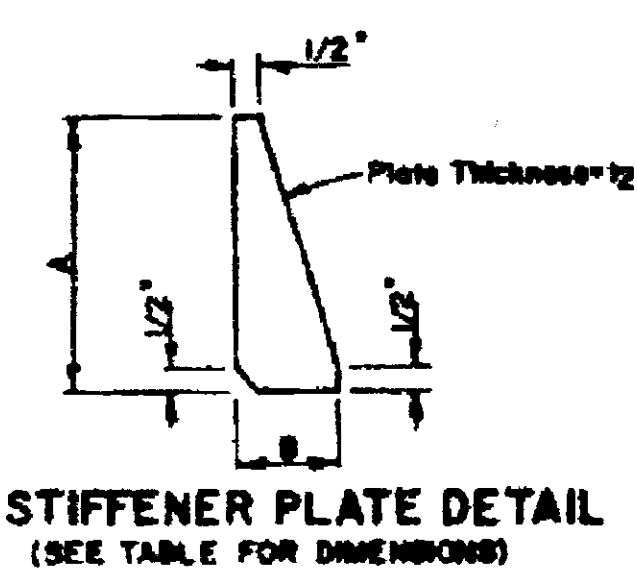


BASE CONNECTION DETAILS FOR W SHAPED POSTS

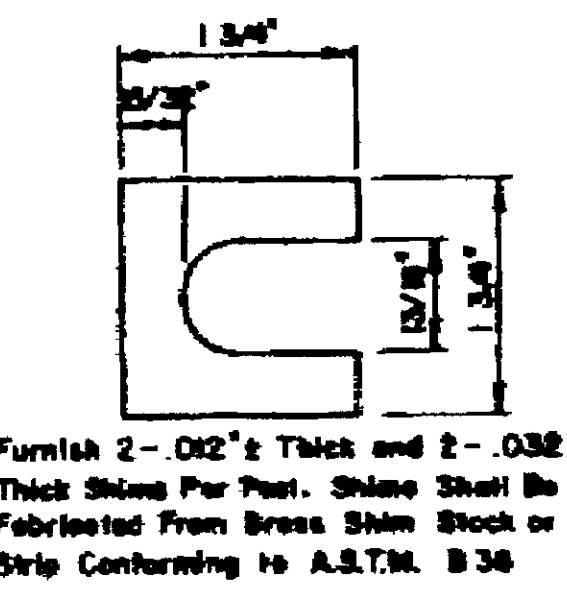
N.S. Bolt With Max Head, Max Nut and Three Washers With Each Bolt. See Table for Bolt Size and Torque. (See BASE CONNECTION PROCEDURE Note on SN-6)



DETAILS OF "BOLT KEEPER"
 Fabricated from 26 gauge galvanized steel. Required between base E and stub post E. Dimensioned as required for each installation.

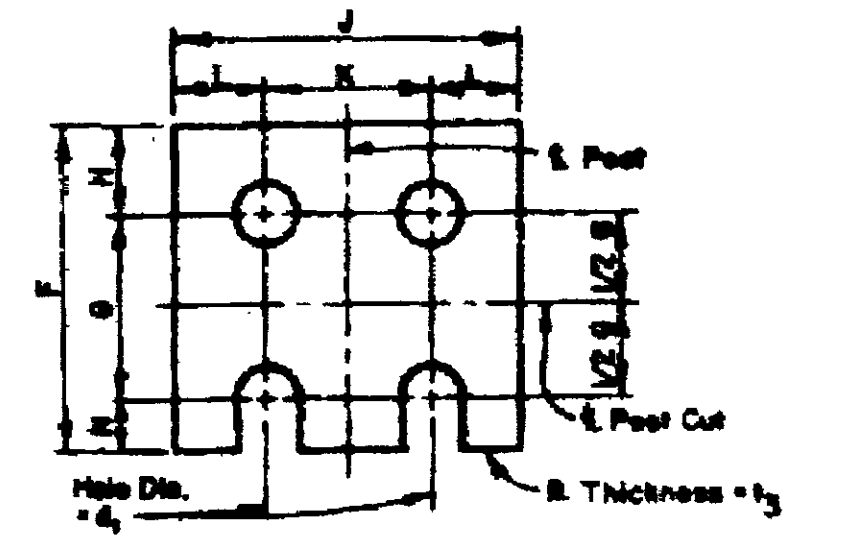


STIFFENER PLATE DETAIL
 (SEE TABLE FOR DIMENSIONS)

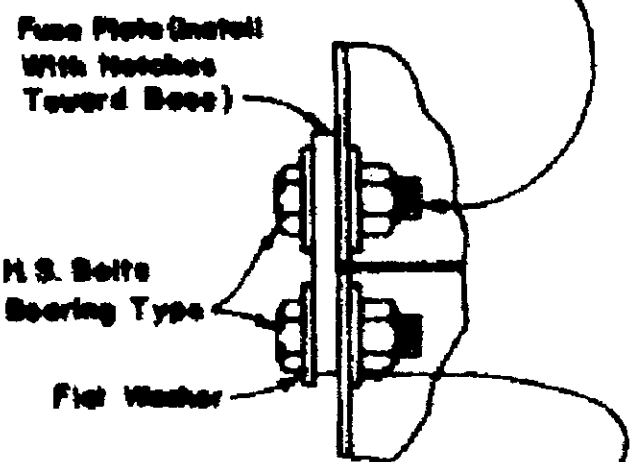


SHIM DETAIL

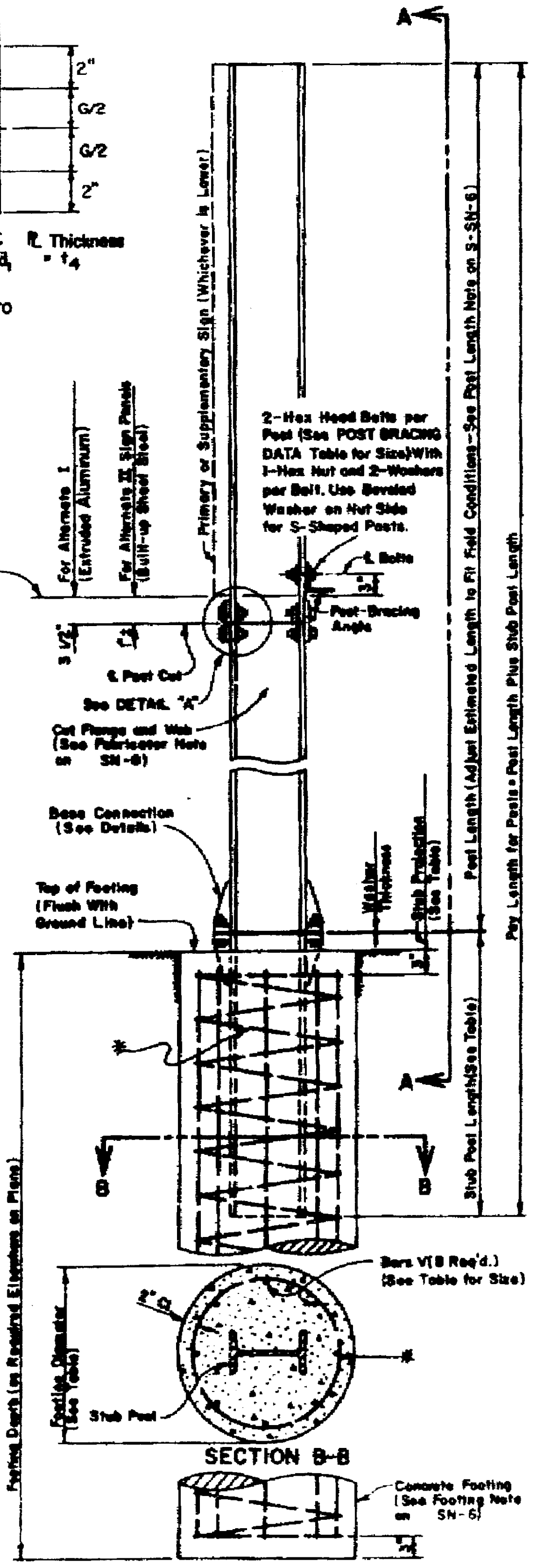
Furnish 2 - .012" ± Thick and 2 - .032" ± Thick Shims Per Post. Shims Shall Be Fabricated From Brass Shim Stock or Strip Conforming to A.S.T.M. B 36



FUSE PLATE DETAIL
 (See Table for Dimensions and Weight)

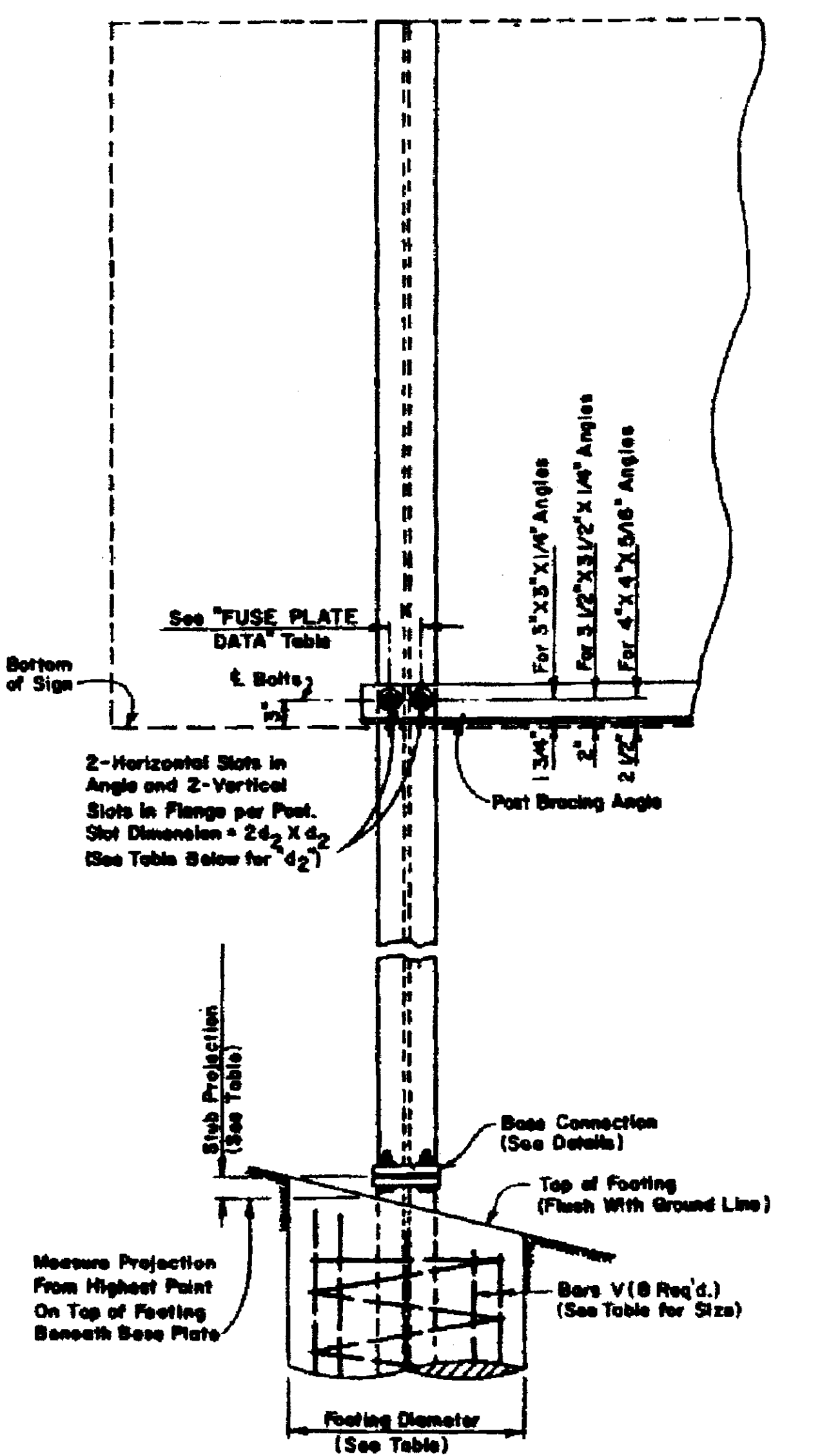


DETAIL "A", FUSE
 (See Fabricator Note on SN-6)



END ELEVATION OF POST AND FOOTING

#2 REINFORCING BAR OR #4 U.S. GAUGE WIRE - SPIRAL WITH 6" PITCH. PROVIDE THREE FLAT TURNS AT TOP AND ONE FLAT TURN AT BOTTOM.



SECTION A-A

POST BRACING DATA

Post Size	W12 x 26 W10 x 26 W8 x 22	W8 x 21 W6 x 16 W6 x 15	"S" SHAPES W6 x 9 W6 x 12
Bolt Size	7/8" x 2 1/4"	3/4" x 2"	1/2" x 1 3/4"
d2	1 5/16"	1 3/16"	5/16"
Angle Length	L' + 9"	L' + 6"	L' + 6"
Post Size for Spacing of	4" x 4" x 5/16"	3 1/2" x 3 1/2" x 1/4"	3" x 3" x 1/4"
9" - 11"	4" x 4" x 5/16"	3 1/2" x 3 1/2" x 1/4"	3 1/2" x 3 1/2" x 1/4"
11" - 18"	4" x 4" x 5/16"	4" x 4" x 5/16"	4" x 4" x 5/16"

*L = Distance Between 1/3 of Exterior Posts.

Dimension Post Size	BASE CONNECTION DATA										FUSE PLATE DATA										FOOTING DATA							
	Bolt Size & Torque	A	B	C	D	E	t1	t2	W	R	F	G	H	J	K	L	N	d1	t3	Bolt Size Dia. x Length	Min. Bolt Tension	t4	Shub Length	Shub Projection	Footing Diameter	Bars V	Dimension Post Spc	
S3 x 5.7		SEE DETAIL										3 1/8"	1 1/2"	1 1/8"	2 5/8"	1 1/2"	5/8"	1/2"	3/8"	1/4"	1/2" x 1 3/4"	12,000	1/4"	1'-6"	3 1/2"	1'-6"	4	S3 x 5.7
S4 x 7.7		SEE DETAIL										3 1/8"	1 1/2"	1 1/8"	2 5/8"	1 1/2"	5/8"	1/2"	3/8"	1/4"	1/2" x 1 3/4"	12,000	1/4"	1'-6"	3 1/2"	1'-6"	4	S4 x 7.7
W6 x 9	5/8" x 2 3/4"	5"	2"	1 1/4"	2 3/4"	1 1/8"	3/4"	1/2"	1 1/4"	1 1/2"	3 1/8"	1 1/2"	1 1/8"	2 1/4"	1 1/2"	5/8"	1/2"	3/8"	1/4"	1/2" x 1 1/2"	18,000	1/4"	2'-0"	3"	2'-0"	4	W6 x 9	
W6 x 12	Torque = 450 In. Lb.																			1 1/2" x 1 1/2"	18,000	3/8"	2'-0"	3"	2'-0"	4	W6 x 12	
W6 x 15																				1 1/2" x 1 1/2"	28,000	3/8"	2'-8"	3"	2'-0"	4	W6 x 15	
W8 x 18																				1 1/2" x 1 1/2"	28,000	1/2"	2'-8"	3"	2'-0"	7	W8 x 18	
W8 x 21	3/4" x 3 1/2"	6"	2 1/4"	1 3/8"	3 1/2"	1 1/4"	1"	3/4"	5/8"	1 1/2"	3 1/8"	1 1/2"	1 1/8"	2 1/4"	1 1/2"	5/8"	1/2"	3/8"	1/4"	1/2" x 1 1/2"	39,250	3/8"	3'-0"	2 1/2"	2'-0"	9	W8 x 21	
W10 x 22	Torque = 750 In. Lb.																			1 1/2" x 1 1/2"	39,250	3/8"	3'-0"	2 1/2"	2'-0"	9	W10 x 22	
W10 x 26																				1 1/2" x 1 1/2"	39,250	7/16"	3'-0"	2 1/2"	2'-0"	10	W10 x 26	
W12 x 26																				1 1/2" x 1 1/2"	39,250	3/8"	3'-0"	2 1/2"	2'-0"	11	W12 x 26	

MISSISSIPPI STATE HIGHWAY DEPARTMENT

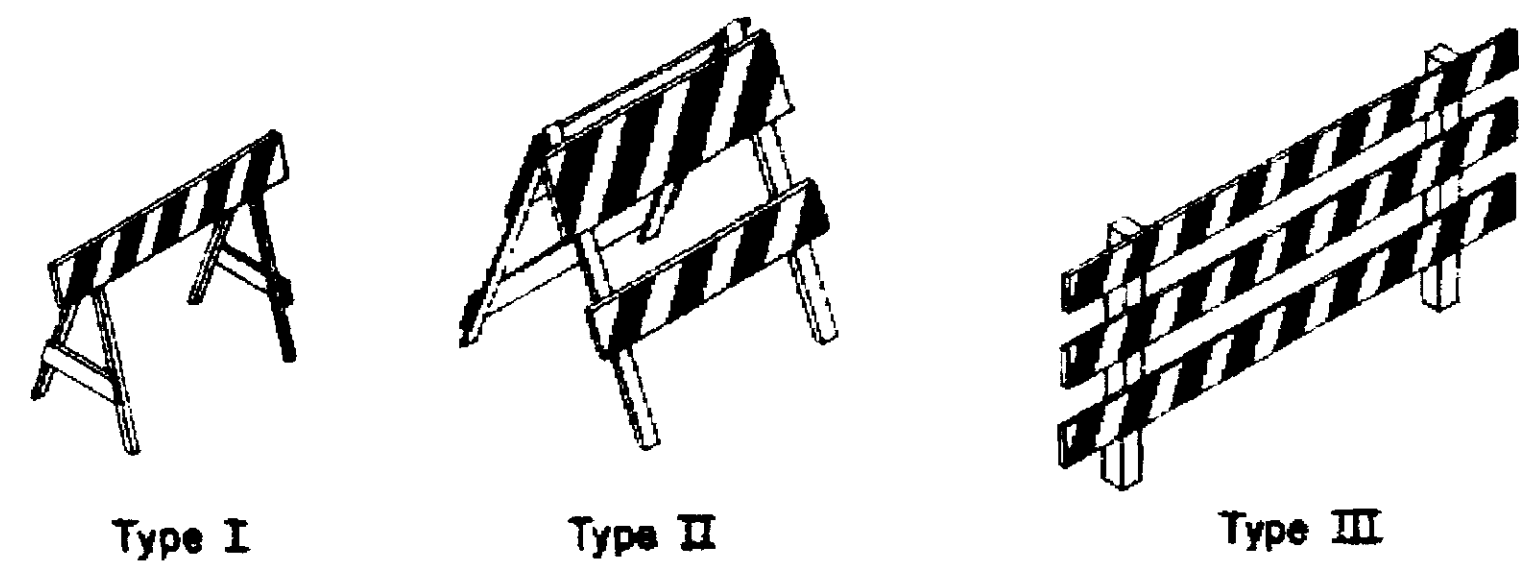
BREAK-AWAY SIGN SUPPORTS

WORKING NUMBER SN-6A

SHEET NUMBER 185.1

DESIGNED: _____ DETAILED: _____ TRACED: _____

CHECKED: _____ ISSUED: _____ DATE: _____



Standard Barricades

A Type I Barricade consists of one(1) horizontal rail supported by a demountable frame or a light "A" frame.

A Type II Barricade consists of two(2) horizontal rails on a light "A" frame.

A Type III Barricade consists of three (3) horizontal rails supported by fixed posts, a rigid skid, a heavy demountable frame or a heavy, hinged, "A" frame.

Type I and Type II Barricades are intended for use where the hazard is relatively small as, for example, on city streets, or for the more or less continuous delimiting of a restricted roadway, or for temporary daytime use.

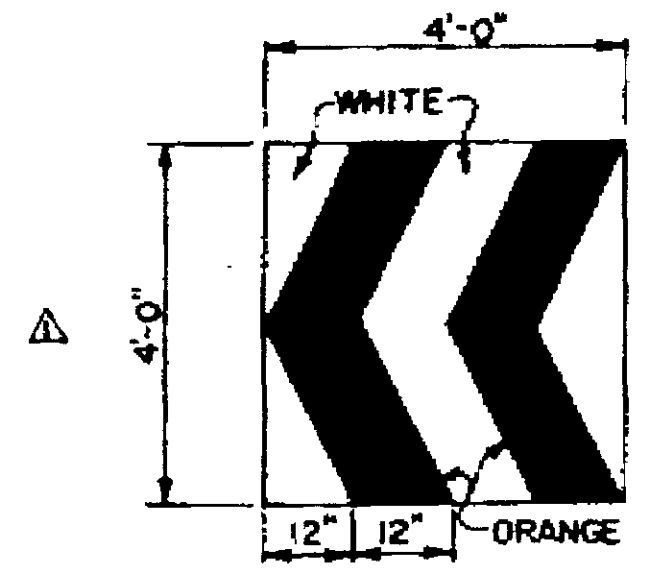
NOTE: Do not place sandbags or other weightable devices on the bottom rail that will block view of rail face.

Type III Barricades are intended for use on construction and maintenance projects as wing barricades and at road closures, where they must remain in place for extended periods.

The marking for barricade rails shall be orange and white (sloping downward at an angle of 45 degrees in the direction traffic is to pass).

FOR ADDITIONAL INFORMATION OR DETAILS SEE MUTCD SECTION 6-C.

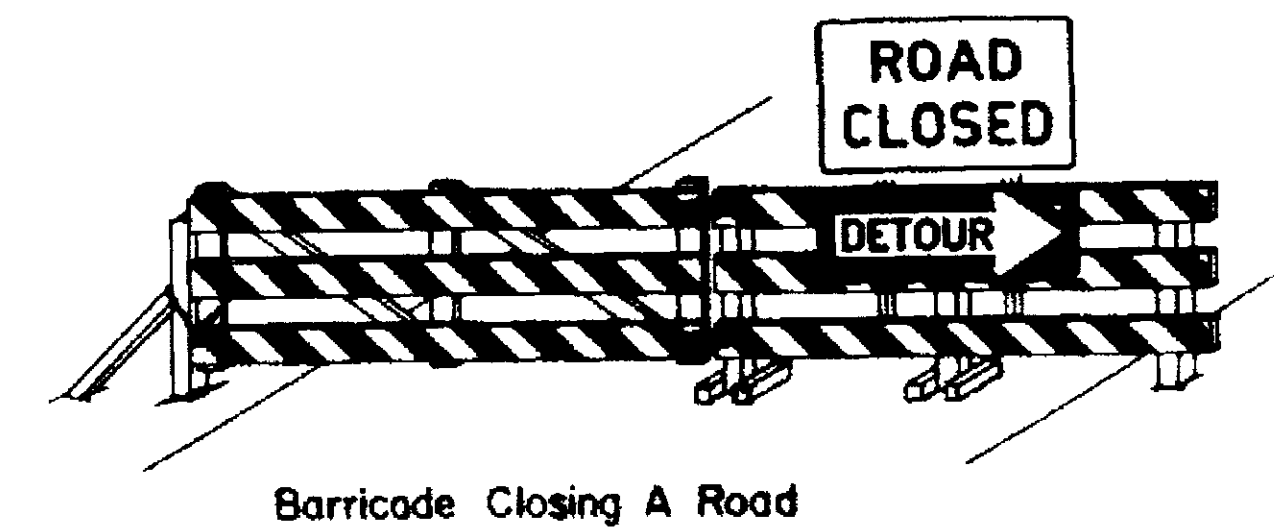
CHEVRON PANEL DETAIL



A Chevron Panel consists of chevron type markings of alternate orange and white and shall point in the direction of traffic flow.

The complete Chevron Panel shall be mounted on fixed post or rigid skid.

Chevron Panels may be used to supplement other standard devices when closing one or more lanes for construction or maintenance. They shall be placed approximately 2 feet behind lane transition strips.



Barricade Closing A Road

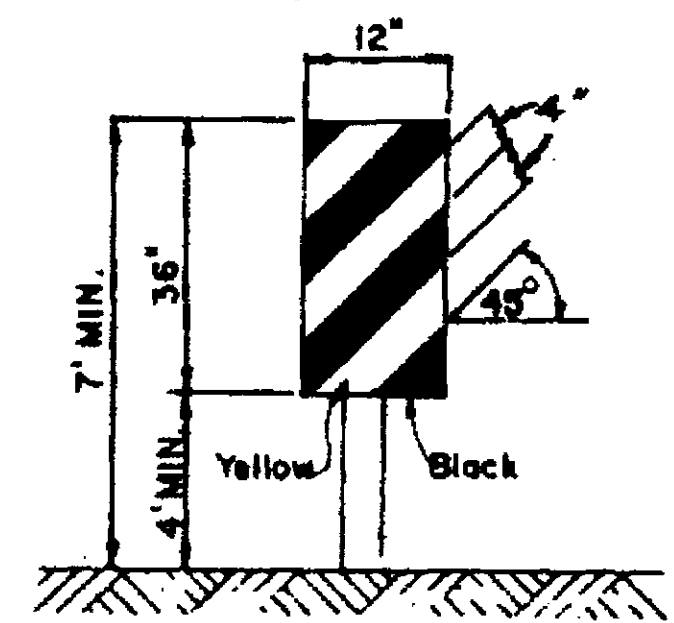
Barricade Characteristics

	I	II	III
Width of rail ***	8" min. - 12" max.	8" min. - 12" max.	8" min - 12" max.
Length of rail ***	2' min	2' min. \triangle	4' min
Width of stripe	6" ***	6" ***	6"
Height	3' min	3' min	5' min
Number of reflectorized rail faces	2 (one each direction)	4 (two each direction) \triangle	3 if facing traffic in one direction 6 if facing traffic in two directions
Type of frame	light	light "A" frame	post or skid

** For rails less than 3 feet long, 4 inch wide stripes shall be used.

\triangle *** Barricades intended for use on expressway, freeways and other high speed roadways, shall have a minimum of 270 square inches of reflective area facing traffic.

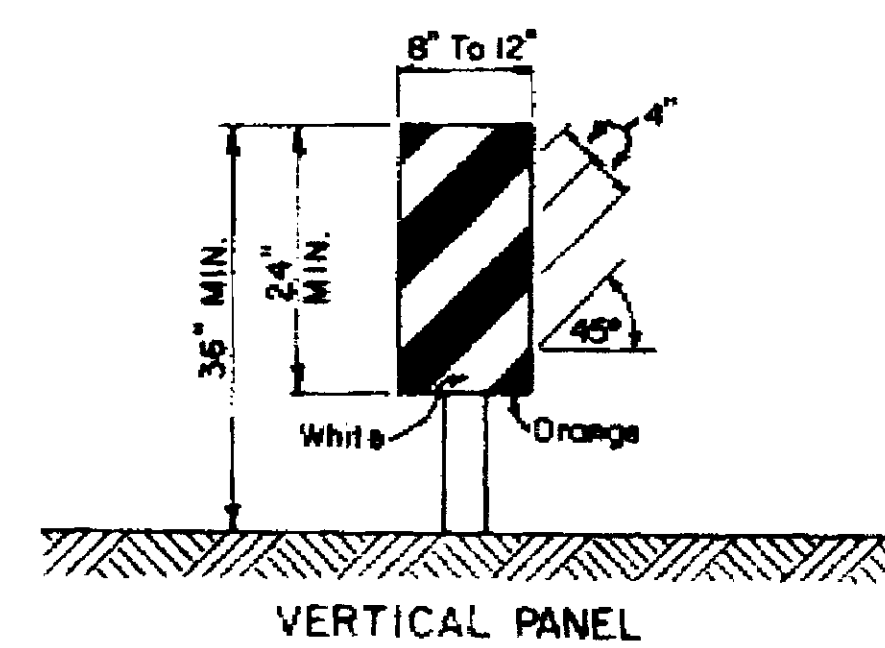
TYPE 3 OBJECT MARKER (OM-3R)



Type 3 Object Markers shall be used at all exposed bridge abutments and at other locations as deemed necessary by the engineer.

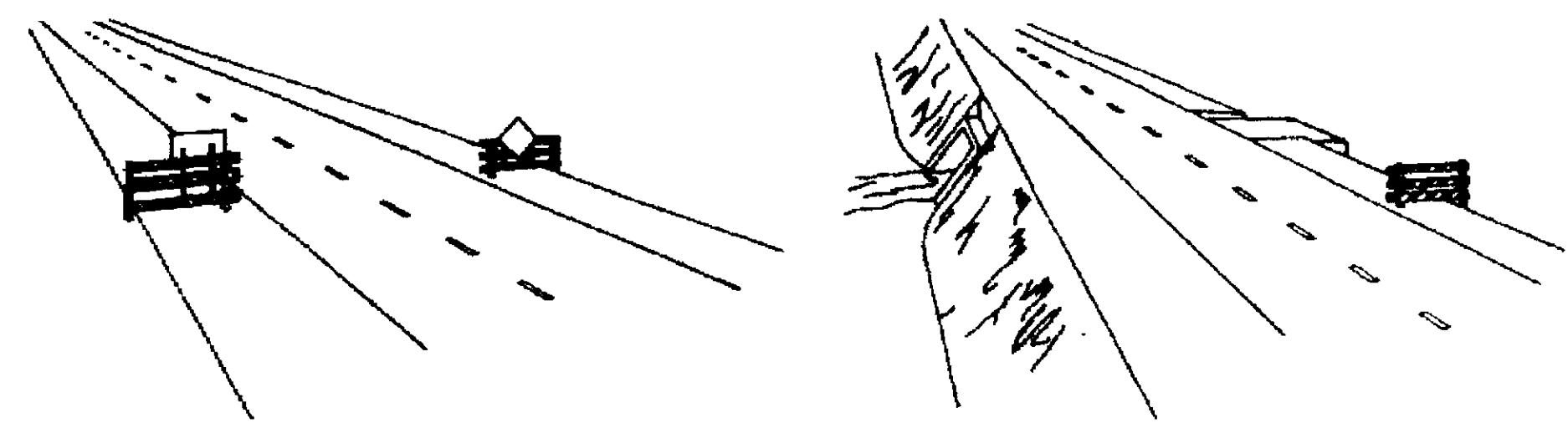
The OM-3R is shown. The OM-3L is similar except the stripes slope downward from the upper left side to the lower right side and shall be placed on the left side of the object.

The inside edge of the marker shall be in line with the inner edge of the obstruction.



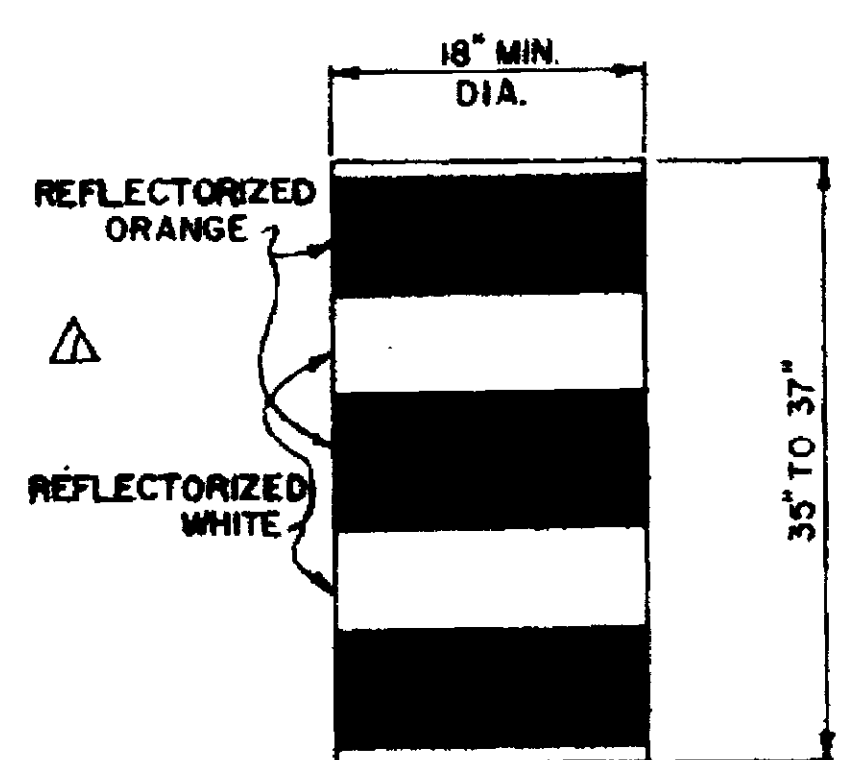
Vertical panels consist of at least one panel 8" to 12" in width and a minimum of 24" in height. The diagonal stripes shall slope downward in the direction that traffic is to pass the panel. The panels shall be mounted with the top a minimum of 36" above the roadway on a single lightweight post.

NOTE: \triangle Markings on all devices shown on this sheet shall be high intensity reflective sheeting. The Traffic Control Plan will list the various Traffic Control Devices required for each project.



Wing Barricades \triangle

- Wing barricades are Type III barricades erected on the shoulder on one or both sides of the pavement to give the sensation of a narrowing or restricted roadway. Wing barricades may be used as a mounting for the advance warning signs or flashers.
- Wing barricades should be used:
 - in advance of a construction project even when no part of the roadway is actually closed.
 - in advance of all bridge or culvert widening operations.

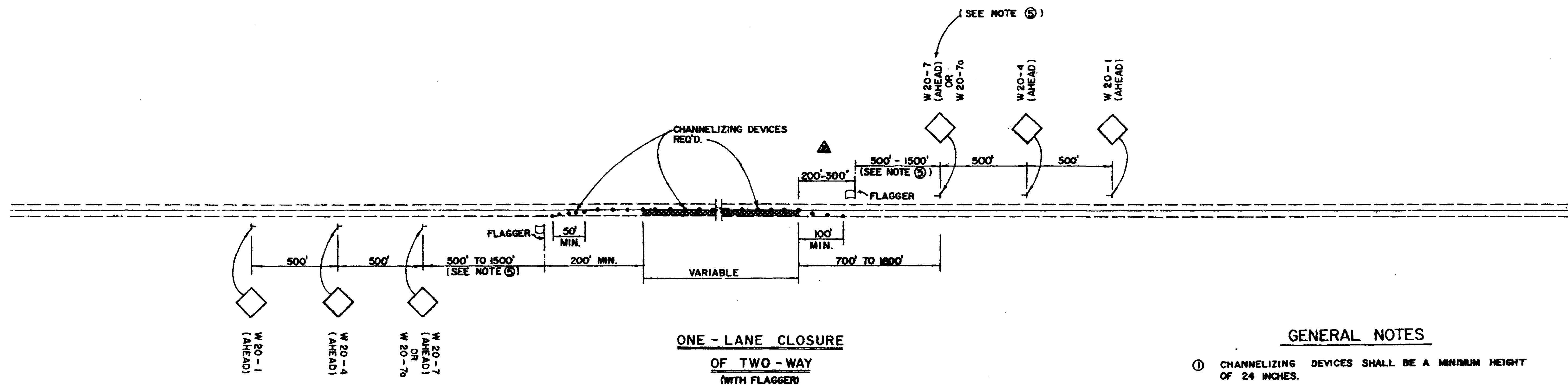


PLASTIC DRUM STRIPING DETAIL

\triangle Plastic drums shall be on end and used as an expedient method for traffic channelization. The color and marking of drums shall be consistent with marking standards for barricade. The predominant color on drums shall be orange with four (4) reflectorized, horizontal, circumferential stripes (2 orange & 2 white) 6" wide.

\triangle Drums should never be placed in the roadway without warning signs. Where practical plastic drums shall be placed no closer than three (3) feet from the edge of traveled lane.

MISSISSIPPI STATE HIGHWAY DEPARTMENT				
HIGHWAY SIGN AND BARRICADE DETAILS FOR CONSTRUCTION PROJECT				
DESIGNED	DATE	Detailed	DATE	Traced
CHECKED	DATE	ISSUED	DATE	DATE
				WORKING NUMBER SN-10
				SHEET NUMBER 189



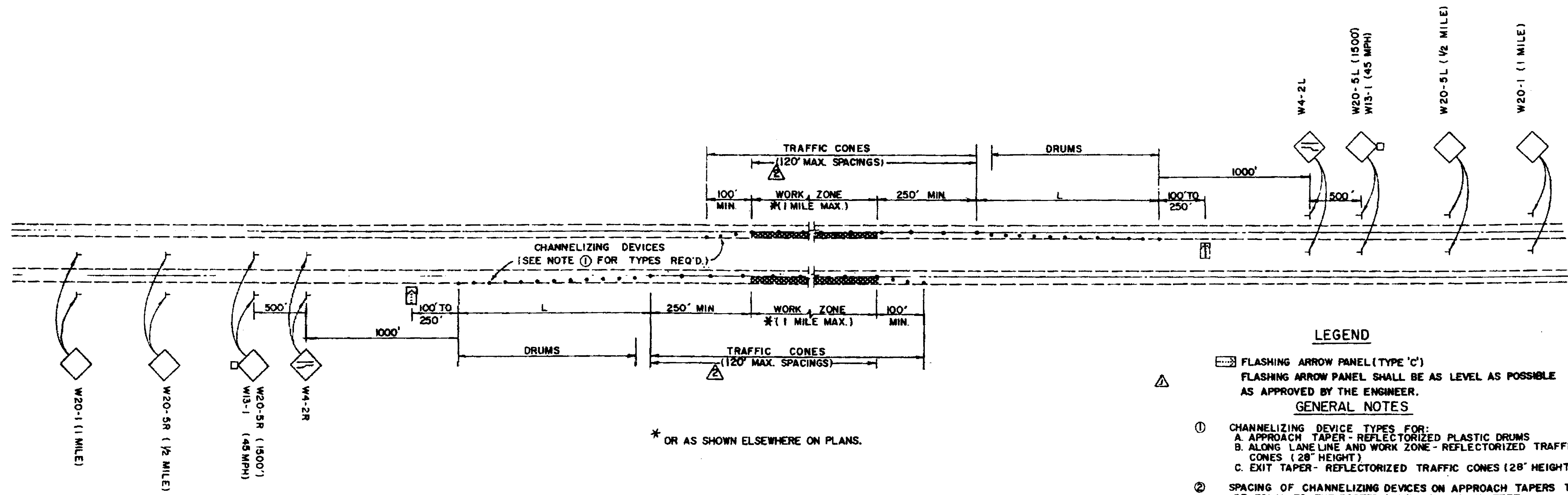
**ONE - LANE CLOSURE
OF TWO - WAY
(WITH FLAGGER)**

GENERAL NOTES

- ① CHANNELIZING DEVICES SHALL BE A MINIMUM HEIGHT OF 24 INCHES.
- ② DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHALL BE A MINIMUM OF 48" x 48".
- ③ SPACING OF CHANNELIZING DEVICES ALONG LANE LINE AND WORK ZONE TO BE EQUAL TO THE POSTED SPEED (M.P.H.) IN FEET.
- ④ WHEN THERE IS NO EXISTING HAZARD OR AT THE END OF THE WORK DAY, ALL SIGNS SHALL BE COVERED OR REMOVED AND ALL CHANNELIZING DEVICES SHALL BE MOVED TO THE SHOULDER EDGE.
- ⑤ WHEN THE WORK ZONE IS STATIONARY, THE W20-7 OR W20-7a SIGN SHOULD BE PLACED 500' IN ADVANCE OF THE FLAGGER AND SHOULD INDICATE (500') AS THE DISTANCE.
- ⑥ ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.

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MISSISSIPPI STATE HIGHWAY DEPARTMENT			
TRAFFIC CONTROL PLAN			
(ONE-LANE CLOSURE OF TWO-WAY TRAFFIC)			
DESIGNED	DATE	Detailed	DATE
TRACED	DATE	Checked	DATE
WORKING NUMBER TCP-1		SHEET NUMBER 190	



* OR AS SHOWN ELSEWHERE ON PLANS.

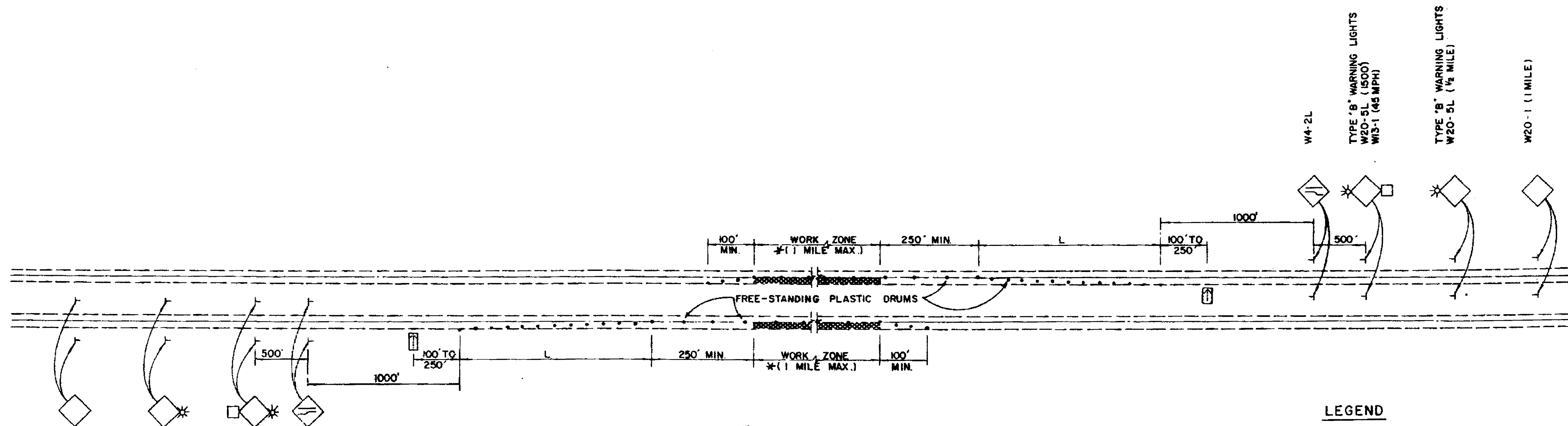
LEGEND

FLASHING ARROW PANEL (TYPE 'C')
 FLASHING ARROW PANEL SHALL BE AS LEVEL AS POSSIBLE AS APPROVED BY THE ENGINEER.

GENERAL NOTES

- ① CHANNELIZING DEVICE TYPES FOR:
 A. APPROACH TAPER - REFLECTORIZED PLASTIC DRUMS
 B. ALONG LANE LINE AND WORK ZONE - REFLECTORIZED TRAFFIC CONES (28" HEIGHT)
 C. EXIT TAPER - REFLECTORIZED TRAFFIC CONES (28" HEIGHT)
- ② SPACING OF CHANNELIZING DEVICES ON APPROACH TAPERS TO BE EQUAL TO THE POSTED SPEED (M.P.H.) IN FEET.
- ③ WHEN THERE IS NO EXISTING HAZARD, THE LANE CLOSURE (W20-5), LANE TRANSITION (W4-2), AND NO PASSING (R4-1) SIGNS ARE TO BE COVERED OR REMOVED AND THE DRUMS SHALL BE MOVED TO THE SHOULDER EDGE AT THE END OF THE WORK DAY.
- ④ $L = W \times S$ FOR SPEEDS OF 45 M.P.H. OR GREATER
 $L = \frac{W \times S^2}{60}$ FOR SPEEDS OF 40 M.P.H. OR LESS
 WHERE: L = MIN. LENGTH OF TAPER
 W = WIDTH OF OFFSET (NORMALLY LANE WIDTH)
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85th PERCENTILE SPEED.
- ⑤ FOR MOVING OPERATIONS (PAVING), THE CONTRACTOR SHALL HAVE TWO (2) SETS OF ADVANCE WARNING SIGNS, PLASTIC DRUMS, AND ARROW BOARDS. WHEN THE CONSTRUCTION ZONE IS MOVED AHEAD, ALL SIGNS, PLASTIC DRUMS, AND ARROW BOARD SHALL BE IN PLACE ON THE SECOND ZONE BEFORE REMOVING ANY SIGNS, PLASTIC DRUMS, AND ARROW BOARD ON THE FIRST ZONE.
- ⑥ ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.
- ⑦ DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHALL BE A MINIMUM OF 48" x 48". SPEED PLATES SHALL BE 24" x 24".

MISS DATE 2-7-80 2-3-86		MISS DATE 2-7-80 2-3-86		MISS DATE 2-7-80 2-3-86	
		DESIGNED	DETAILED	TRACED	CHECKED
MISSISSIPPI STATE HIGHWAY DEPARTMENT TRAFFIC CONTROL PLAN (4-LANE: MEDIAN LANE OR OUTSIDE LANE CLOSURE) (WORK DAY ONLY)					
WORKING NUMBER TCP-2					SHEET NUMBER 191



* OR AS SHOWN ELSEWHERE ON PLANS.

LEGEND

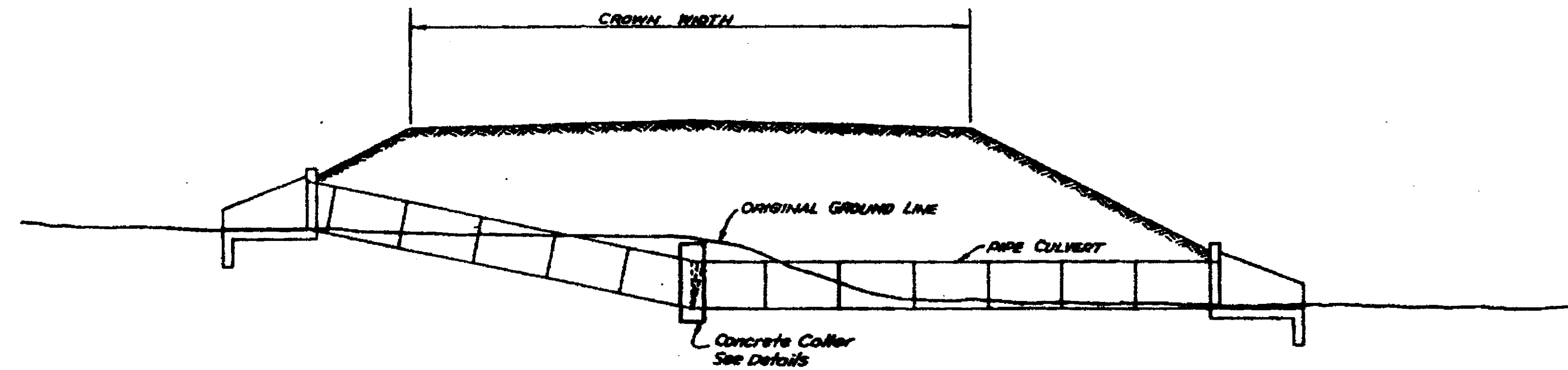
Ⓜ FLASHING ARROW PANEL (TYPE 'C')
FLASHING ARROW PANEL SHALL BE AS LEVEL AS POSSIBLE AS APPROVED BY THE ENGINEER.

GENERAL NOTES

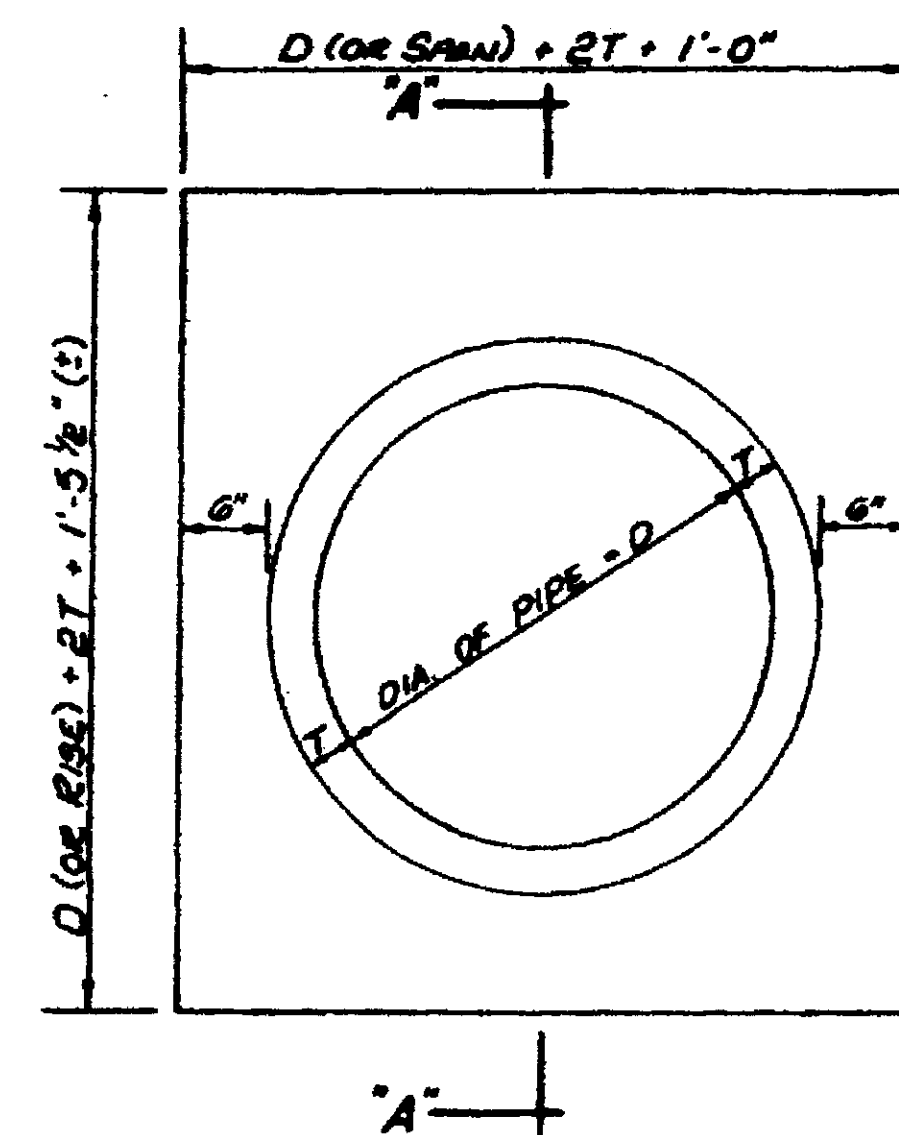
- ① ALL CHANNELIZING DEVICES SHALL BE REFLECTORIZED FREE-STANDING PLASTIC DRUMS.
- ② MAXIMUM SPACING OF CHANNELIZING DEVICES SHALL BE:
 - A. TAPERS - EQUAL TO THE POSTED SPEED (M.P.H.) IN FEET.
 - B. ALONG LANE LINE AND WORK ZONE - 160'.
- ③ $L = W \times S$ FOR SPEEDS OF 45 M.P.H. OR GREATER
 $L = \frac{W \times S^2}{60}$ FOR SPEEDS OF 40 M.P.H. OR LESS
 WHERE: L = MIN. LENGTH OF TAPER
 W = WIDTH OF OFFSET (USUALLY LANE WIDTH)
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85th PERCENTILE SPEED.
- ④ ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET WILL NOT BE MEASURED FOR SEPARATE PAYMENT. THIS WORK IS TO BE INCLUDED IN THE PRICE BID FOR MAINTENANCE OF TRAFFIC.
- ⑤ DIAMOND SHAPED TRAFFIC CONTROL SIGNS SHALL BE A MINIMUM OF 48" x 48". SPEED PLATES SHALL BE 24" x 24".

W20-1 (1 MILE)
 TYPE 'B' WARNING LIGHTS
 W20-5R (1/2 MILE)
 TYPE 'B' WARNING LIGHTS
 W20-5L (1500')
 W13-1 (45 MPH)
 TYPE 'B' WARNING LIGHTS
 W4-2R

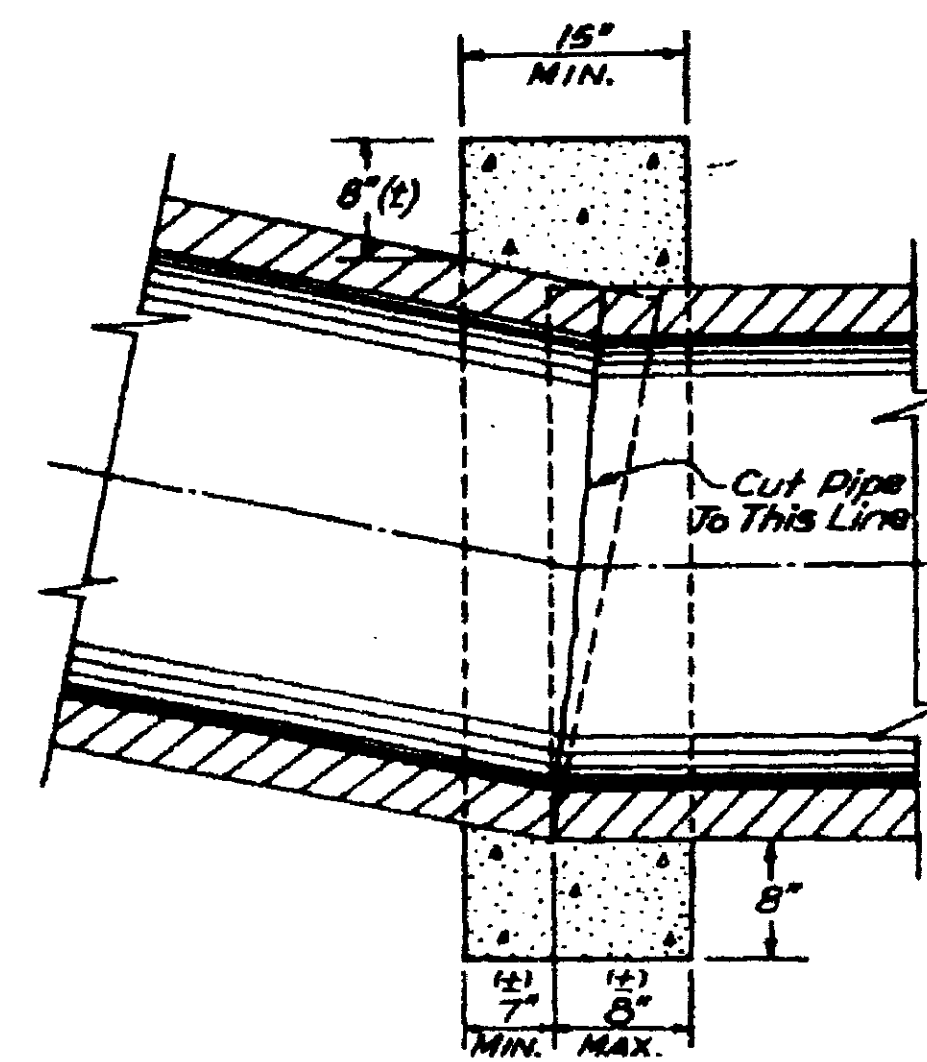
MISSISSIPPI STATE HIGHWAY DEPARTMENT TRAFFIC CONTROL PLAN (4-LANE MEDIAN LANE OR OUTSIDE LANE CLOSURE) (EXTENDED PERIOD)		WORKING NUMBER TCP-3
DESIGNED: _____ CHECKED: _____	DETAILED: _____ ISSUED: _____	TRACED: _____ DATE: 6-18-86
SHEET NUMBER 192		WORKING NUMBER TCP-3



TYPICAL INSTALLATION FOR PIPE CULVERT WITH BROKEN FLOW LINE



ELEVATION OF CONCRETE COLLAR
 (CIRCULAR PIPE SHOWN, ARCH PIPE SIMILAR)

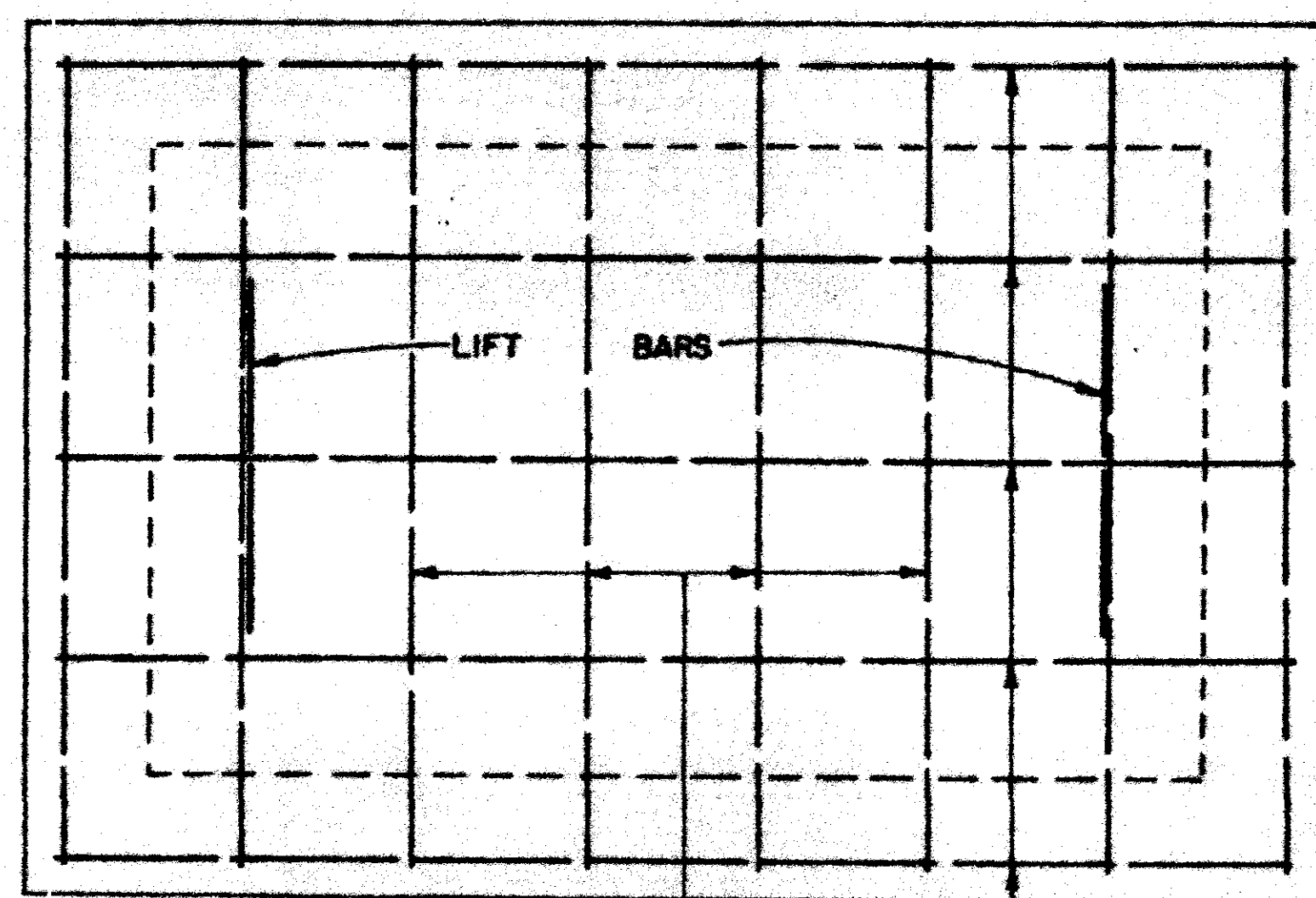


SECTION "A-A"

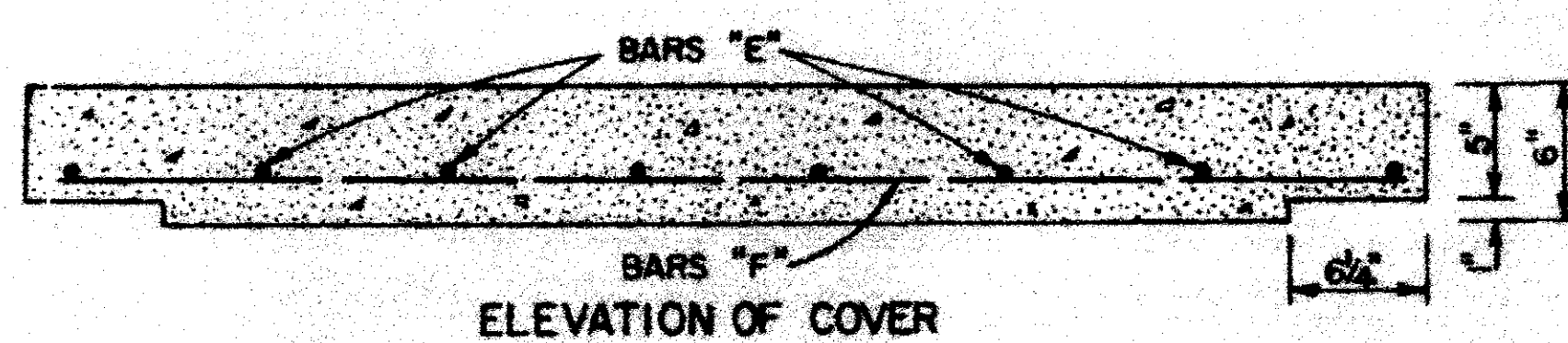
QUANTITIES FOR CONCRETE COLLAR FOR PIPE CULVERTS			
CIRCULAR PIPE		ARCH PIPE	
DIA. OF PIPE	CU YDS. OF CONCRETE COLLAR	SIZE OF PIPE	CU YDS. OF CONCRETE COLLAR
12"	0.26	18 x 11	0.28
15"	0.30	22 x 13	0.31
18"	0.35	26 x 15	0.34
24"	0.41	36 x 23	0.45
30"	0.51	44 x 27	0.60
36"	0.62	51 x 31	0.69
42"	0.73	58 x 36	0.85
48"	0.85	63 x 40	0.98
54"	0.98	73 x 45	1.07
60"	1.11		

GENERAL NOTES
 QUANTITIES SHOWN SHALL BE THE BASIS FOR PAYMENT
 UNLESS AUTHORIZED MODIFICATIONS ARE MADE.

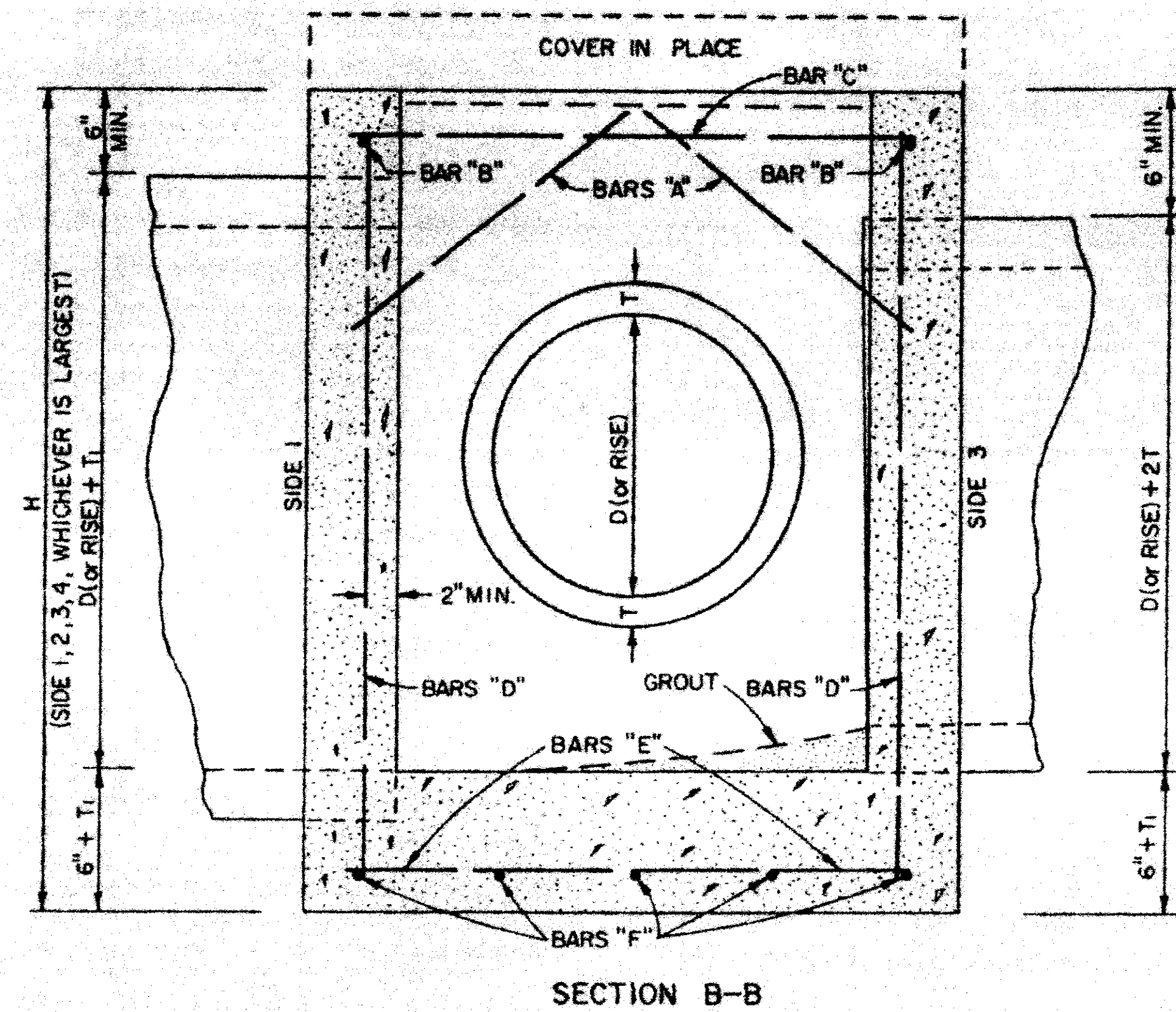
MISSISSIPPI STATE HIGHWAY DEPARTMENT	
PIPE COLLAR, CONCRETE	
DESIGNED	TRACED
CHECKED	DATE 11-1-72
WORKING NUMBER PC-1	
SHEET NUMBER 226	



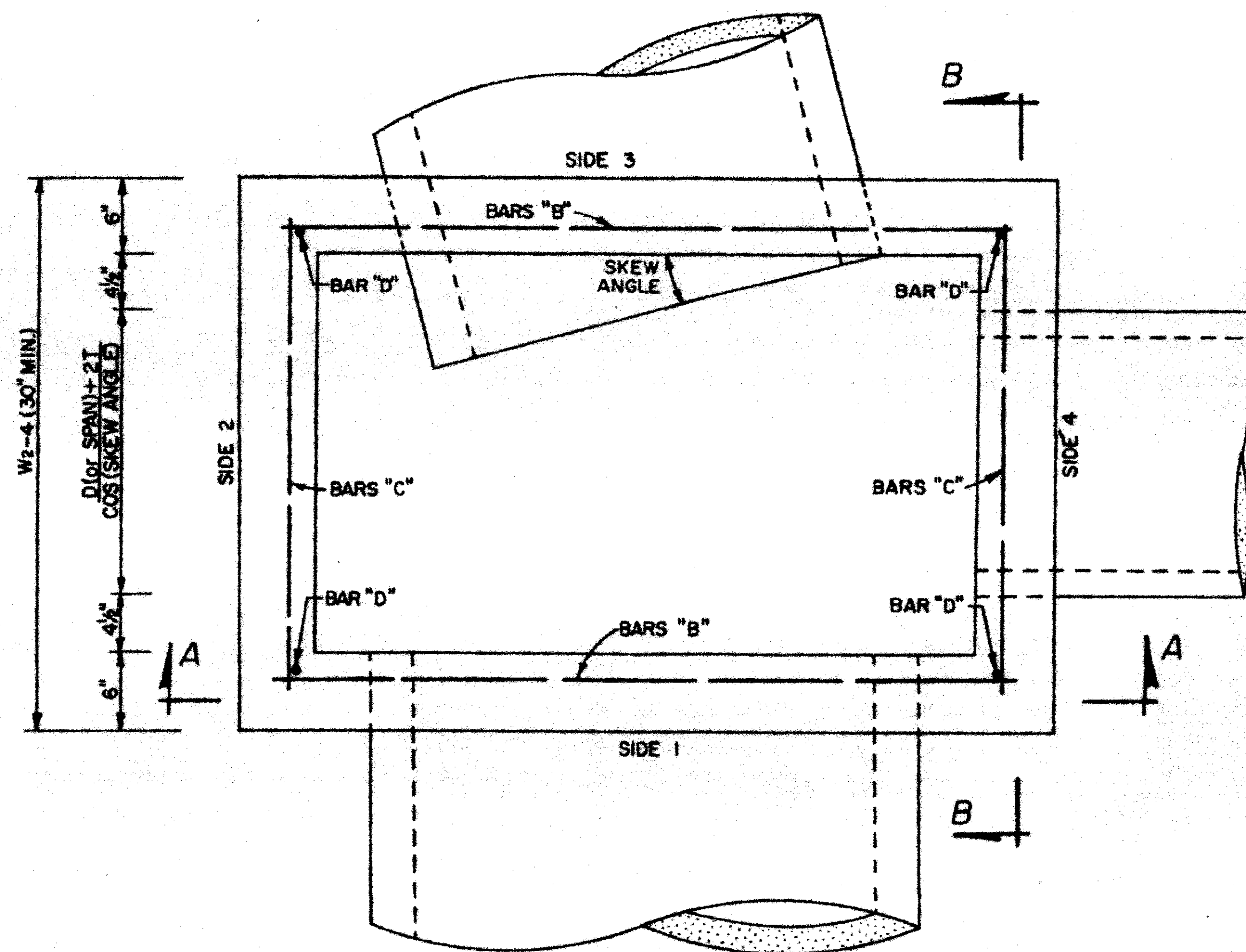
PLAN OF COVER



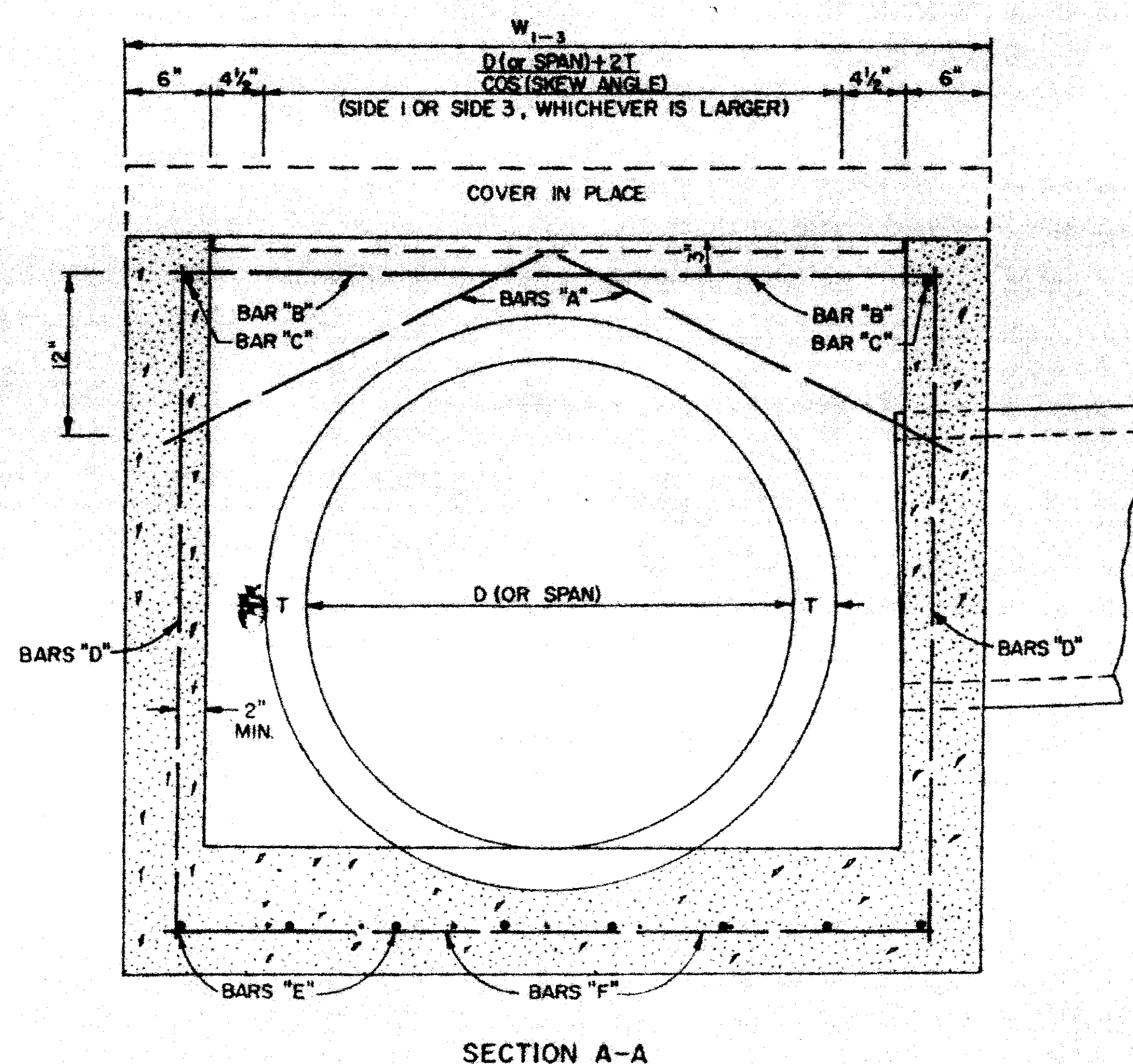
ELEVATION OF COVER



SECTION B-B



PLAN



SECTION A-A

BAR LIST		
BAR	NUMBER REQUIRED	LENGTH (INCHES)
A	2 PER PIPE OPENING	$\sqrt{196 + \left(\frac{W_2}{2} + 2\right)^2}$
B	2	$W_{1-3} - 6$
C	2	$W_{2-4} - 6$
D	4	$H - 6$
E	$2 \left[\frac{W_1 - 3}{9} \right] \ast \ast + 1$	$W_{2-4} - 4$
F	$2 \left[\frac{W_2 - 4}{9} \right] \ast \ast + 1$	$W_{1-3} - 4$

WHERE: D (or SPAN) = PIPE DIAMETER (or SPAN) (INCHES)
 W_{1-3} = WIDTH OF SIDE 1 & SIDE 3 (INCHES)
 W_{2-4} = WIDTH OF SIDE 2 & SIDE 4 (INCHES)
 W_1 = W_{1-3} OR W_{2-4} (DE OF ENTERING PIPE)
 $\ast \ast$ ROUND TO NEAREST WHOLE NUMBER

$$CL. "B" CONC. (CY) = \frac{5W_1 - 3W_2 - 4}{12} + \frac{[(W_1 - 3) - 12.5(W_2 - 4) - 1.5]}{12} + \frac{[(H - 6) + 3W_1 - 3W_2 - 4] + 12}{12} \frac{[(H - 6) + 3W_1 - 3W_2 - 4]}{12} + 12 \frac{[(H - 6) + 3W_1 - 3W_2 - 4]}{12} + 12 \frac{[(H - 6) + 3W_1 - 3W_2 - 4]}{12}$$

46.656

(MINUS) DEDUCTIONS FOR PIPE OPENINGS (CY)

REINFORCING STEEL QUANTITIES TO BE COMPUTED FROM BAR LIST AND SHOWN ELSEWHERE ON THE PLANS.

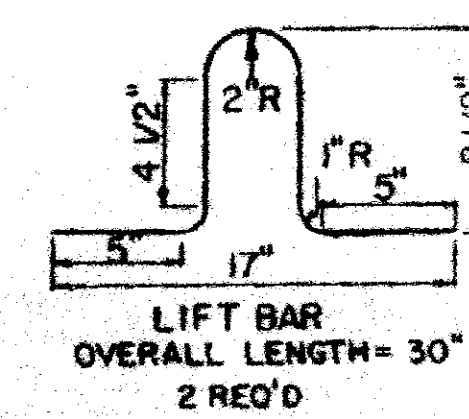
REINFORCING STEEL FOR 2 LIFT BARS = 4 LBS.

COMMON PIPE SIZE

CIRCULAR PIPE			ARCH PIPE		
PIPE SIZE	T" THICKNESS INCHES	PIE OPENING DEDUCTION (C)	PIPE SIZE	T" THICKNESS INCHES	PIPE OPENING DEDUCTION (CY)
18"	2 1/2	0.05	22" x 13"	2 1/2	0.053
24"	3	0.05	29" x 19"	3	0.087
30"	3 1/2	0.13	36" x 23"	3 1/2	0.129
36"	4	0.19	44" x 27"	4	0.185
42"	4 1/2	0.21	51" x 31"	4 1/2	0.245
48"	5	0.3	58" x 36"	5	0.318
54"	5 1/2	0.4	65" x 40"	5 1/2	0.394
60"	6	0.5	73" x 45"	6	0.489
66"	6 1/2	0.6			
72"	7	0.7			

GENERAL NOTES

1. QUANTITIES FOR JUNCTION BOXES SHOWN ON THE PLANS WILL BE THE BASIS FOR PAYMENT UNLESS AUTHORITY MODIFICATIONS ARE MADE.
2. CONCRETE SHALL BE CLASS AND REINFORCING STEEL SHALL BE DEFORMED BARS, SIZE #4.
3. SIDE 1 OF THE JUNCTION BOX WILL ALWAYS BE THE OUTFLOW SIDE.
4. IF PIPES ARE SKEWED MORE THAN 15° OR IF SKEWED PIPES PRODUCE CONFLICTS WITH ANOTHER OPENING, PIPE SHALL BE BROKEN BACK TO THE WALL OF THE JUNCTION BOX.



MISSISSIPPI STATE HIGHWAY DEPARTMENT

JUNCTION BOX FOR PIPE CULVERTS

WORKING NUMBER JB-1

SHEET NUMBER 227

SIGNED: _____ DETAILED: _____ TRACED: _____

ISSUED: D.B.J. DATE 11-1-79