STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1201-04-75		1

INDEX OF SHEETS

Sheet No. 1 Title
Sheet No. 2-2.32 Typical Sections and Details
Sheet No. 3-3.5 Estimate of Quantities
Sheet No. * Miscellaneous Quantities
Sheet No. 4-4.4 Right of Way Plat
Sheet No. 5-5.9 Plan and Profile
Sheet No. 6-6.39 Standard Detail Drawings
Sheet No. 7-7.10 Sign Plates
Sheet No. 8-8.34 Structure Plans
Sheet No. 9 Computer Earthwork Data
Sheet No. 9.1 - 9.52 Cross Sections
*3A-3G, 8.1 & 8.12

TOTAL SHEETS = 201

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

VERONA BYPASS

(LOCUST DRIVE - C.T.H. "M")

U.S.H. 18

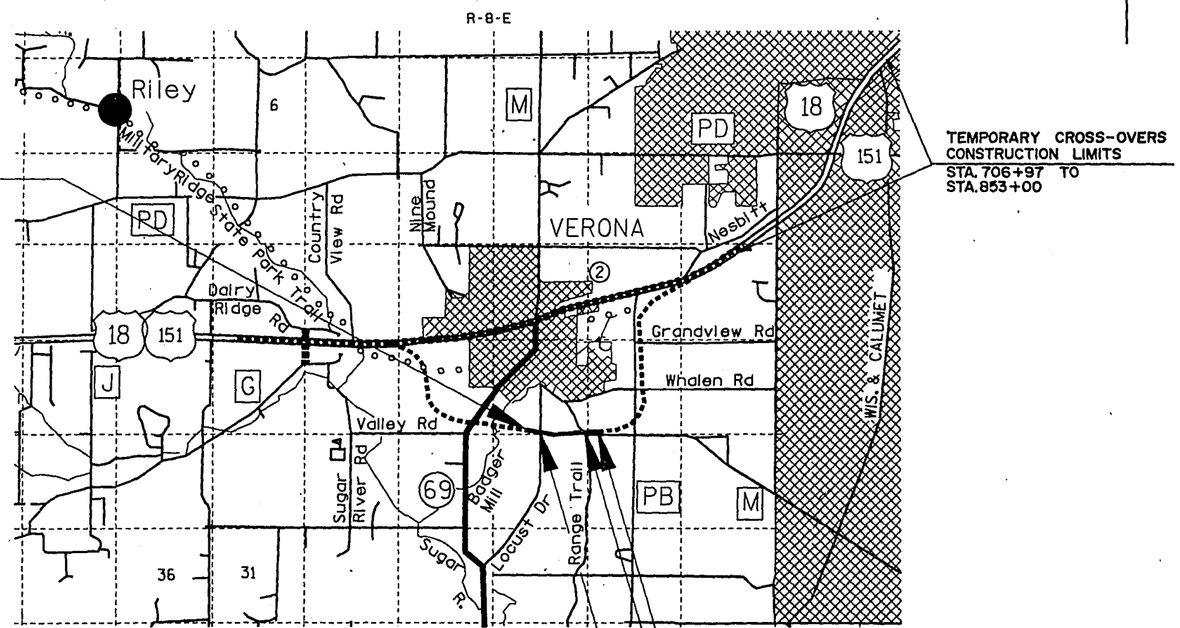
DANE COUNTY

STATE PROJECT NUMBER
1201-04-75

N

AS BUILT CONSTRUCTION PLAN

WORK TYPE GRADING, BASE, ASP. PAVT & STRUCTURES
CONTRACTOR JAMES PETERSON SONS, INC.
PROJECT MANAGER DAVE FIELD
WORK START-COMPLETED JULY 30 1993 - JULY 1, 1994



BEGIN PROJECT 1201-04-75
STA. 607+00.00
X= 2,123,656.90
Y= 355,223.02

TEMPORARY CROSS-OVERS
CONSTRUCTION LIMITS
STA. 706+97 TO
STA. 853+00

END PROJECT 1201-04-75
STA. 648+00.00

B-13-410

B-13-409

LAYOUT
SCALE 0 0.8 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.776 MI. RURAL

ALL COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COORDINATE GRID SYSTEM SOUTH ZONE.
GRID CONVERSION FACTOR = 0.99991

DESIGN DESIGNATION

		(EXISTING)	(BYPASS)
A.D.T.	1995	----	5,300
A.D.T.	2012	----	7,000
D.H.V.	2012	----	700
D.		----	60-40
T. (DHV)		----	4.9%
DESIGN SPEED		----	65 MPH
ESALS		----	1,058,500 CTH "M"

CONVENTIONAL SIGNS

COUNTY LINE		COMBUSTIBLE FLUIDS (UNDER PRESSURE)	
CORPORATE LIMITS		UNDERGROUND UTILITIES	
PROPERTY LINE		GAS	G
LOT LINE		ELECTRIC	E
LIMITED EASEMENT		TELEPHONE	T
EXISTING RIGHT OF WAY		SERVICE PEDESTAL	
NEW RIGHT OF WAY		CABLE MARKER	
REFERENCE LINE		POWER POLE	
SLOPE INTERCEPT		TELEPHONE POLE	
ORIGINAL GROUND		RAILROADS	
MARSH OR ROCK PROFILE		MARSH	
CULVERT IN PLACE		WOODED AREA	
CULVERT REQUIRED			
CULVERT REQUIRED (Profile)			
CULVERT IN PLACE (Profile)			

ORIGINAL PLANS PREPARED BY
CH2M HILL
MILWAUKEE, WISCONSIN

2-4-93 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor TLG
Designer JAR
District Examiner RGL/DAY
District Supervisor DJP
Proj. Dev. Engineer Richard R. Fibinger
C.O. Examiner NORBERT R. AFFELDT

APPROVED FOR DISTRICT OFFICE
DATE: 2-9-93 (Signature)

AUTHORIZED FOR CENTRAL OFFICE TRAFFIC
DATE: 2-25-93 (Signature)

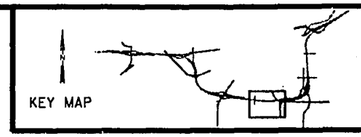
AUTHORIZED FOR CENTRAL OFFICE DESIGN
DATE: 3/11/93 (Signature)

DANE
1201-4-75
59 OF 202

PLOT NAME: TITLE PLOT SCALE=1"=20' REV. DATE: 01-03-93

FILE NAME: TITLE.DGN

WISDOT/CADDS SHEET 11



STATE PROJECT NUMBER
1201-04-75

SHEET NO.
2.0

GENERAL NOTES

USH 18 DANE COUNTY

GENERAL NOTES

1. NO TREES ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
2. SHRINKAGE VARIABLE,COMMON ESTIMATED AT 25 PERCENT. ROCK SWELL ESTIMATED AT 15 PERCENT.
3. EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION. THE LOCATION FOR EBS WILL BE DETERMINED BY THE ENGINEER.
4. THE 5-INCH ASPHALTIC CONCRETE PAVEMENT SHALL CONSIST OF A 1 1/2-INCH SURFACE COURSE AND TWO BINDER COURSES.
5. THE 3 1/2 INCH ASPHALTIC CONCRETE PAVEMENT SHALL CONSIST OF A 1 1/2-INCH SURFACE COURSE AND ONE BINDER COURSE.
6. ALL CONCRETE PIPE SHALL HAVE JOINT TIES INSTALLED ON THE LAST TWO PIPE JOINTS AND THE ENDWALL JOINT AT BOTH THE INLET AND DISCHARGE ENDS.
7. PRIOR TO PLACEMENT OF STEEL PLATE BEAM GUARD, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED.
8. EXPANSION JOINTS TO BE CONSTRUCTED AT ALL RADIUS POINTS IN CURB AND GUTTER.
9. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
10. THE EXISTING DRIVEWAYS AND FIELD ENTRANCES WILL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER IN THE FIELD AND AT THE LOCATION DETERMINED BY THE ENGINEER.
11. THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS SUPERELEVATION WHEN SUPERELEVATION IS GREATER THAN 0.04 FT./FT. IF SUPERELEVATION IS LESS THAN OR EQUAL TO 0.04 FT./FT., THEN LOW SIDE SHOULDER SLOPE IS 0.04 FT./FT. HIGH SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS SUPERELEVATION.
12. DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER.
13. THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
14. ALL RADII ARE MEASURED TO THE FLANGE OF CURB UNLESS OTHERWISE NOTED.
15. A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET THE EXISTING ASPHALTIC SURFACE.
16. ALL COORDINATES SHOWN ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (SOUTH ZONE). THE CONTROL SURVEY FOR THIS PROJECT WAS CONDUCTED AND MET SPECIFICATIONS FOR THIRD ORDER SURVEYS.
17. ALL OPENINGS OR HOLES BELOW SUBGRADE RESULTING FROM REMOVALS OR ABANDONMENTS, SHALL BE BACKFILLED WITH GRANULAR BACKFILL, THE COST OF WHICH WILL BE INCLUDED IN OTHER ITEMS.
18. AFTER PLACING CURB AND GUTTER, ANY EXCESS CONCRETE PROTRUDING BEYOND THE BACK OF CURB LINE SHALL BE REMOVED BY THE CONTRACTOR PRIOR TO BACKFILLING.
19. ALL CONCRETE CURB AND GUTTER IS LOW SIDE UNLESS OTHERWISE INDICATED ON THE PLAN.
20. SILT FENCE REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.
21. INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.
22. GRANULAR BACKFILL FOR DRAINAGE PIPES IS INCIDENTAL TO PIPE INSTALLATIONS.
23. ALL CURBS UNLESS OTHERWISE NOTED ON THE PLANS SHALL TAPER FROM 0 TO 6 INCHES IN HEIGHT IN 10-FEET.
24. THE 4-INCH ASPHALTIC CONCRETE PAVEMENT SHALL CONSIST OF A 2-INCH SURFACE COURSE AND ONE BINDER COURSE.
25. ASPHALTIC MATERIAL FOR TACK COAT SHALL BE APPLIED AT A MAXIMUM RATE OF 0.025 GAL./S.Y..

STANDARD DETAIL DRAWINGS

8D3-4	CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURES
8A5-9b,9c	INLET COVERS
8B8-3	MANHOLES, TYPES 5 AND 6
8C1-4	INLETS, TYPE 1,2 AND 3
8C5-1	INLETS, TYPES 8, 9, 10 AND 11
8D1-11	CONCRETE CURB, CONCRETE CURB AND GUTTER AND PAVEMENT TIES
8E4-2	SOD OR MASONRY AND SOD DITCH CHECKS
8E6-7	CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
8E7-1	EROSION MAT
8E8-1	TYPICAL INSTALLATION OF EROSION BALES
8E9-3	SILT FENCE
8F1-10a	APRON ENDWALLS FOR CULVERT PIPE
8F4-5	JOINT TIES FOR CONCRETE PIPE
8F7-2	STEEL APRON ENDWALLS, SLOPED SECTION, FOR CULVERT PIPE AND PIPE ARCHES.
8F8-1	SLOPED STEEL ENDWALLS FOR CULVERT PIPE AND PIPE ARCH CROSS DRAINS.
9A1-8a	AT-GRADE SIDE ROAD INTERSECTIONS, TYPES "B", "C" AND "D"
11A1-2	MAINTENANCE CROSSOVER FOR FREEWAYS
12A2-3	SLOPE PAVING-STRUCTURES (CRUSHED AGGREGATE)
12A3-4	NAME PLATE - STRUCTURES
13B2-3	CONCRETE PAVEMENT APPROACH SLAB
13C1-9	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND PAVEMENT TIES
13C 12-1	DOWELED NON-REINFORCED CONCRETE PAVEMENT, RADDOM SPACED JOINTS 17'- 20'- 18' - 19'
14B7-8a,b	TEMPORARY PRECAST CONCRETE BARRIER
14B15-1a	CLASS "A" STEEL PLATE BEAM GUARD, INSTALLATION & ELEMENTS
14B16-1a,1b	CLASS "A" STEEL PLATE BEAM GUARD END TREATMENT WITH ANCHORAGE TYPE 1 AND 2
14B18-1a	CLASS "A" STEEL PLATE BEAM GUARD (AT BRIDGES, OBSTACLES AND SIDEROADS / DRIVEWAYS)
14B18-1d	CLASS "A" STEEL PLATE BEAM GUARD, BULLNOSE INSTALLATION AT MEDIAN PIERS AND SIGN SUPPORTS
14B20-2a	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-2b	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARED END AND VERTICAL FACED PARAPETS
15B1-7a,7b	WOVEN WIRE FENCE
15C2-2	BARRICADES AND TRAFFIC CONTROL FOR ROAD CLOSURES
15C6-3	TRAFFIC CONTROL DEVICES FOR TWO LANE BRIDGES
15C7-2	PAVEMENT MARKING SYMBOLS
15C8-4a	PAVEMENT MARKING (MAINLINE & INTERSECTIONS)
15C12-1	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
16A1-5	LANDMARK REFERENCE MONUMENTS AND COVER

STANDARD ABBREVIATIONS

B/L	BASE LINE
C/L	CENTER LINE
T/L	TRANSIT LINE
R/L	REFERENCE LINE
MIN.	MINIMUM
MAX.	MAXIMUM
NOR.	NORMAL
TYP.	TYPICAL
VAR.	VARIABLE
F.E.	FIELD ENTRANCE
P.E.	PRIVATE ENTRANCE
DGBC	DENSE GRADED BASE COURSE
OGBC	OPEN GRADED BASE COURSE
SHLDR.	SHOULDER
SDD	STANDARD DETAIL DRAWINGS
S.E.	SUPERELEVATION
N.C.	NORMAL CROWN
R.C.	REVERSE CROWN
EBRL	EASTBOUND REFERENCE LINE
WBRL	WESTBOUND REFERENCE LINE
PUU	PIPE UNDERDRAIN UNPERFORATED
RCCP	REINFORCED CONCRETE CULVERT PIPE
CSCP	CORRUGATED STEEL CULVERT PIPE
CP	CULVERT PIPE

UTILITIES

TELEPHONE

WISCONSIN BELL, INC.
MS. PAM CLAPPER
319 WEST WASHINGTON AVENUE
P.O. BOX 791
MADISON, WI 53703
PHONE: 608/252-2750

MOUNT VERNON TELEPHONE COMPANY
MR. JACK NORTHRUP
113 NORTH MAIN STREET
VERONA, WI 53593
PHONE: 608/845-6445

ELECTRIC

WISCONSIN POWER AND LIGHT COMPANY
MR. JIM PALZKILL
222 WEST WASHINGTON AVENUE
P.O. BOX 192
MADISON, WI 53703
PHONE: 608/252-3456

WISCONSIN POWER AND LIGHT COMPANY
LOCAL CONTACT
MR. MIKE BURNS
P.O. BOX 4
OREGON, WI 53575
PHONE: 608/258-5143

WISCONSIN DEPARTMENT OF TRANSPORTATION
DISTRICT 1
MR. BRUCE BELSCAMPER
2101 WRIGHT STREET
MADISON, WI 53704-2583
PHONE: 608/246-3817

MADISON GAS AND ELECTRIC COMPANY
MR. JOHN YOGERST
133 SOUTH BLAIR STREET
P.O. BOX 1231
MADISON, WI 53703
PHONE: 608/252-7195

CABLE T.V.

CROWN CABLE
MR. JOHN HICKS
2984 TRIVERTEN PIKE DRIVE
P.O. BOX 9702
MADISON, WI 53715
PHONE: 800/242-3255

WATER

FITCHBURG UTILITY DISTRICT
MR. TOM SHACKLETON
6060 MCKEE ROAD
MADISON, WI 53719
PHONE: 608/271-4551

SEWERAGE

MADISON METROPOLITAN SEWERAGE DISTRICT
MR. GERRY SACHS
1610 MOORLAND ROAD
MADISON, WI 53713
PHONE: 608/222-1201

RECREATION TRAIL

ICE AGE PARK AND TRAIL FOUNDATION
MR. GARY WERNER
333 W. MIFFLIN ST.
MADISON, WI 53705

DIGGERS HOTLINE

DANE COUNTY
PHONE: 800/242-8511

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

WISCONSIN STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

KEY MAP

STATE PROJECT NUMBER
1201-04-75

SHEET NO.
2.1

PROJECT OVERVIEW AND BORING LOCATION

USH 18

DANE COUNTY

TO VERONA

N

BEGIN PROJECT
STA. 607+00.00

END PROJECT
STA. 648+00.00

LOCUST LINE

CTH "M" LINE

CTH "M"

LOCUST DRIVE

RANGE TRAIL ROAD

RANGE TRAIL LINE

C/L USH 18

B-13-409

B-13-410

RS606C
RB606.75
RB608.5
610
RB612.0
615
RS617L
RB616.85
RS617R
620
RS621L
RS621C
RB621.7
RS621R
RS623L
RS623C
RB626.7
RS623R
RS625L
RS625C
RS625R
RS627L
RS627C
RS627R
630
RB631.4
635
RB634.0
640
RB638.0
RS641L
RS641C
RS641R
RS643L
RS643R
645
RB645.44
RS647L
RS647C
RS647R

RC-7
SB7-1
SB7-2
SB7-3
RC-8
RC-9
RC-10
SB8-1
SB8-2
SB8-3
SB8-4
SB8-5

141
142
143
144
145

59.60
32
30
20
25
10
15
25
30
35

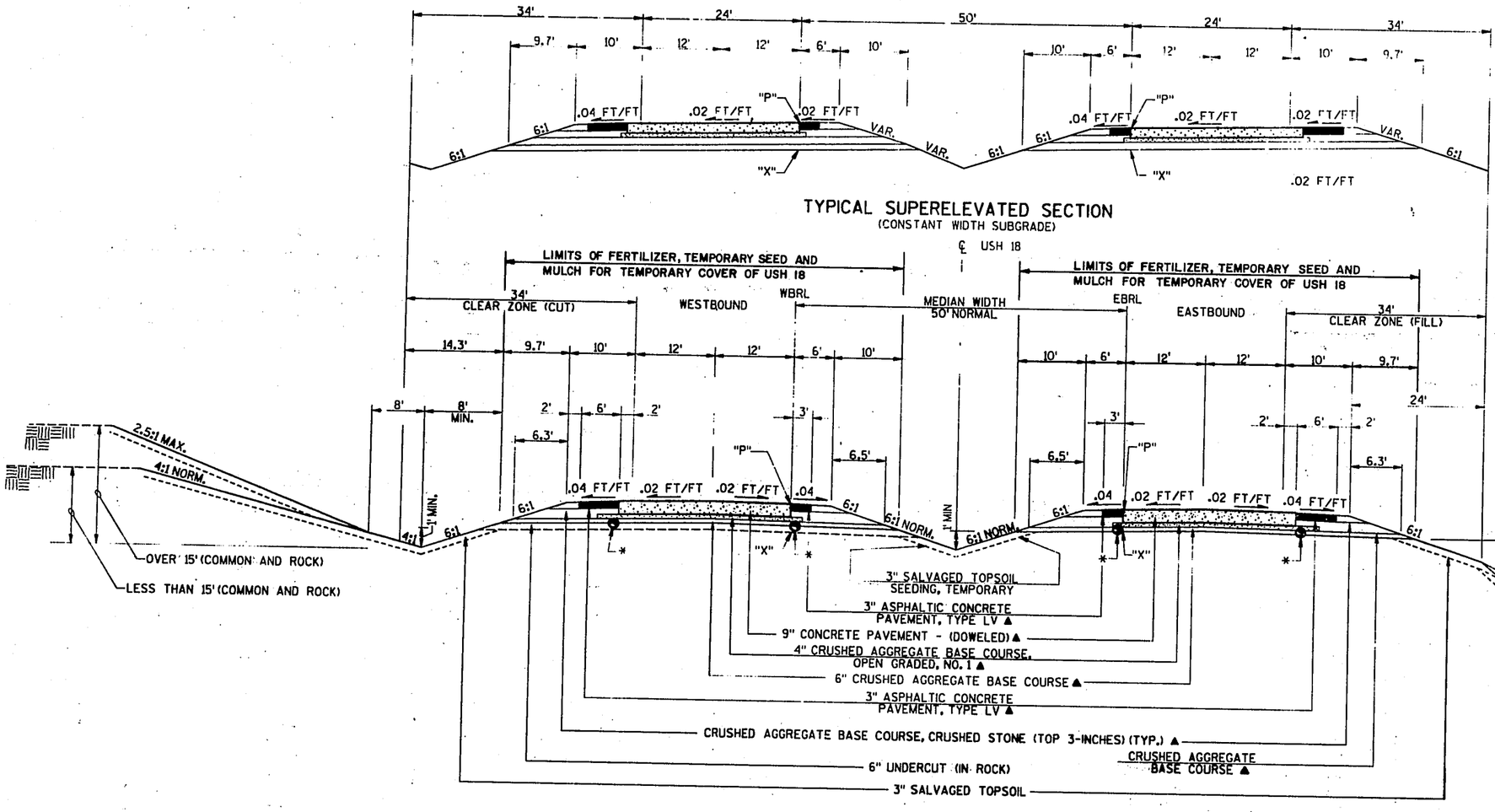
LEVELS ON -

FILE NAME: HDGN: 75200.DGN

WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.2

TYPICAL SECTION
MAINLINE



TYPICAL SUPERELEVATED SECTION
(CONSTANT WIDTH SUBGRADE)

TYPICAL FINISHED SECTION
USH 18 BYPASS MAINLINE
STA. 607+00.00 TO STA. 648+00.00

NOTES:

1. MAINLINE CONSTRUCTION UNDER THIS CONTRACT IS GRADING & BASE ONLY
2. NOT UNDER THIS CONTRACT (▲)
3. PROPOSED PIPE UNDERDRAIN (*) (NOT UNDER THIS CONTRACT)
4. "P" = POINT REFERRED TO ON PROFILE.
5. "X" = POINT REFERRED ON CROSS SECTION.

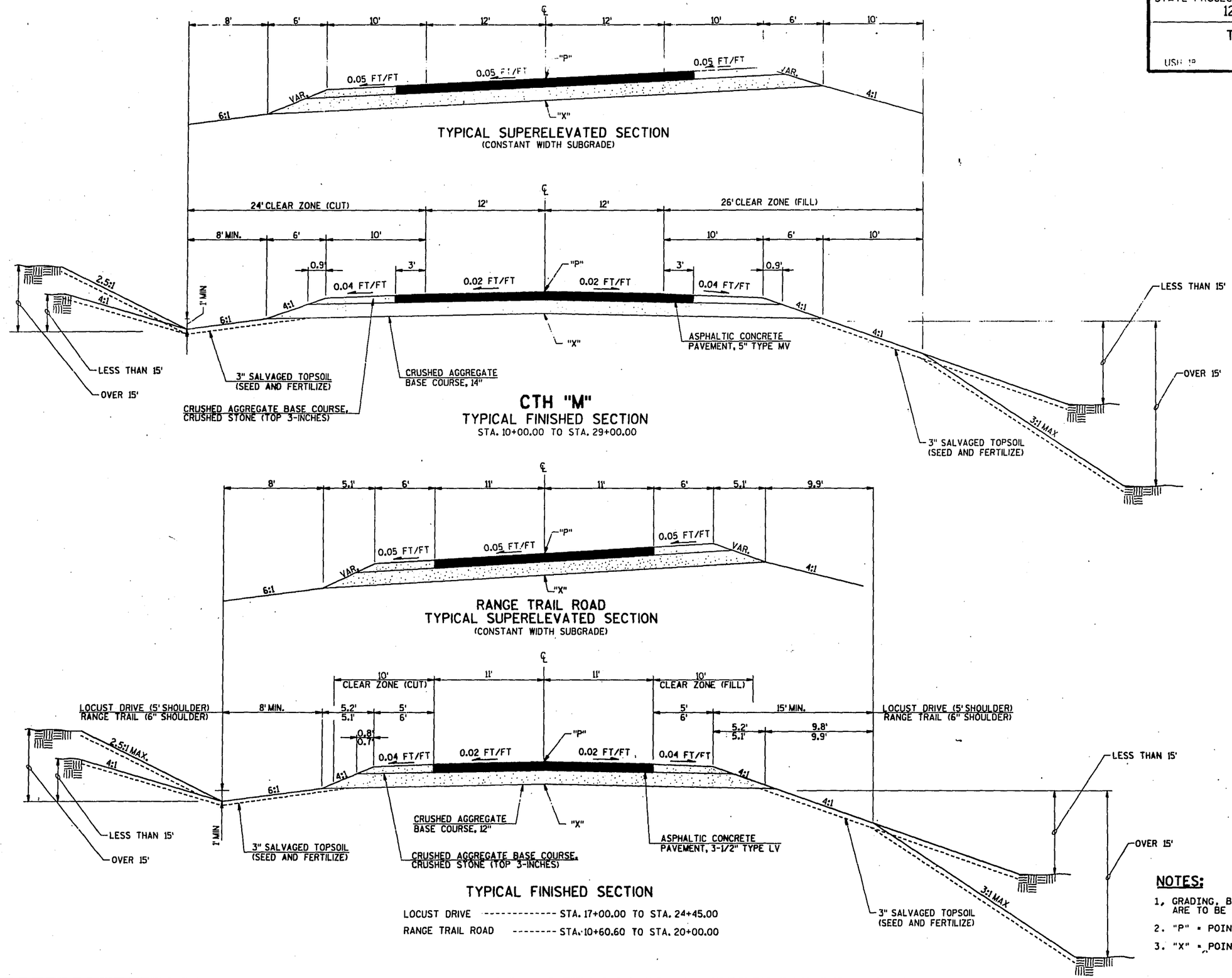
LEVELS ON =

FILE NAME: HDGN: 75202.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.3

TYPICAL SECTION
SIDEROADS

USH 12 — DANE COUNTY



TYPICAL SUPERELEVATED SECTION
(CONSTANT WIDTH SUBGRADE)

CTH "M"
TYPICAL FINISHED SECTION
STA. 10+00.00 TO STA. 29+00.00

RANGE TRAIL ROAD
TYPICAL SUPERELEVATED SECTION
(CONSTANT WIDTH SUBGRADE)

TYPICAL FINISHED SECTION

LOCUST DRIVE ---------- STA. 17+00.00 TO STA. 24+45.00

RANGE TRAIL ROAD -------- STA. 10+60.60 TO STA. 20+00.00

NOTES:

1. GRADING, BASE & PAVEMENT FOR SIDEROADS ARE TO BE CONSTRUCTED UNDER THIS CONTRACT.
2. "P" = POINT REFERRED TO ON PROFILE.
3. "X" = POINT REFERRED ON CROSS SECTION.

59.60.

51

LEVELS ON =L

FILE NAME: HDGN: 75203.DGN

WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER	SHEET NO.
1201 - 04 - 75	2.4

PROJECT OVERLOOK
FOR
U.S.H. 18 DANE COUNTY

CITY OF FITCHBURG

EQUATION

BEGIN CONSTRUCTION
STA. 706+97

700+00"WB"
700+00"EB"
720+00"WB"
720+00"EB"
740+00"WB"
740+00"EB"
760+00"WB"
760+00"EB"

NESBITT ROAD
5+00"N"
15+00"N"

25+86.04"N" =
21+00.00"PD"

EQUATION

28+62.24"PD" =
790+05.84"EB"

780+00"WB"
780+00"EB"
780+00"BT"

BIKE TRAIL

C.T.H. PD

800+00"WB"
800+00"EB"
800+00"BT"

CARRIAGE STREET
8+00"C"

11+12.00"C"
809+78.00

CHALET
810+00"CG"

820+00"WB"
820+00"EB"

WILLIAMSBURG WAY

11+38.97"WB" =
824+97.57"EB"

NICOLET DRIVEWAY

GARDENS
830+00"CG"

EQUATION

845+72.32"CG"

840+00"WB"
840+00"EB"

EQUATION

END CONSTRUCTION
STA. 853+00

858+97.27"WB"

858+16.32"EB"

CITY OF MADISON

CONSTRUCTION ZONE

DESIGN DONE BY DISTRICT 1

59
28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,
21,22,23,25,

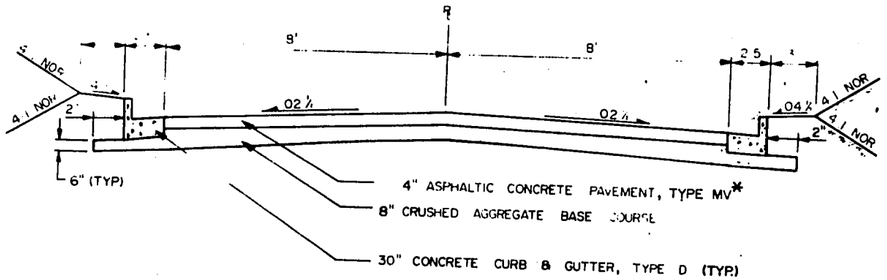
FILE NAME : S:\DESIGN\...
ORIGINATOR : DIST.#1 - DOTBBS
PLOT NAME : 1201220
PLOT SCALE : 1"=100'

WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.5

TYPICAL SECTIONS

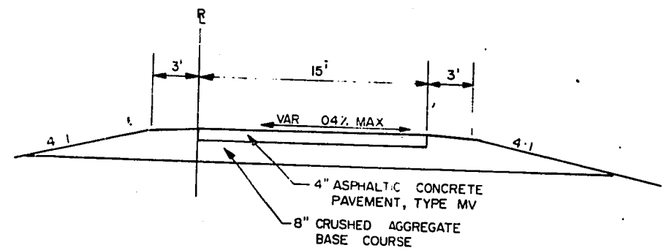
U.S.H. 18 TEMPORARY CROSS-OVERS DANE CO.



TYPICAL FINISHED SECTION

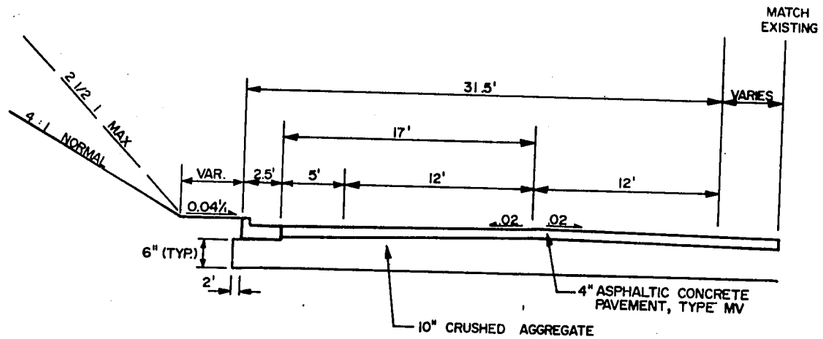
CHALET GARDEN PRIVATE ENTRANCE
STA. 20+00 – STA. 21+50

* 2" SURFACE COURSE TO BE DONE BY OTHERS



TYPICAL SECTION – MEDIAN CROSSOVER

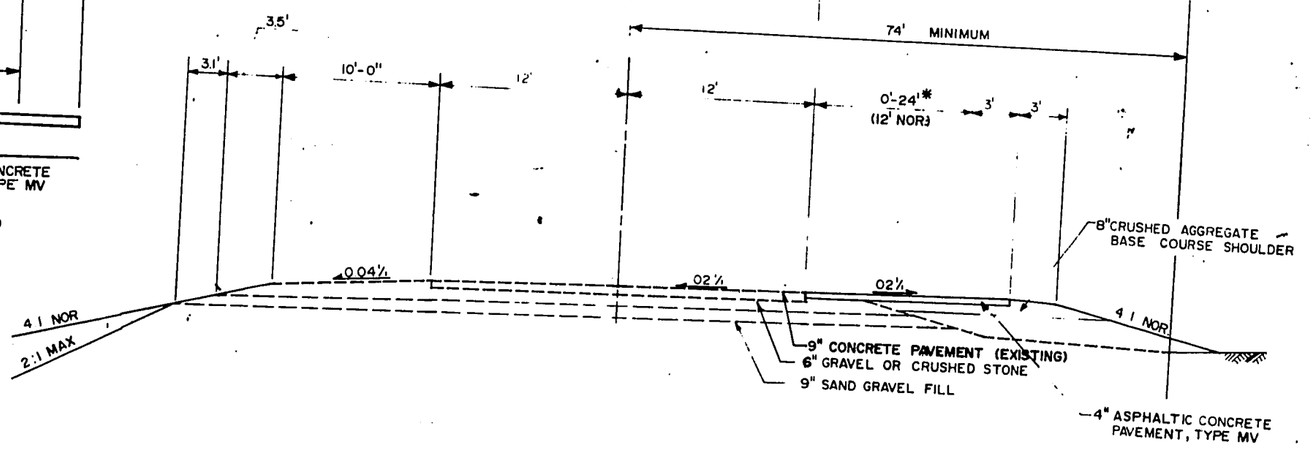
STA. 842+00 TO STA 853+00



TYPICAL FINISHED SECTION

CHALET GARDEN FRONTAGE ROAD
STA. 841+13 TO STA. 843+13

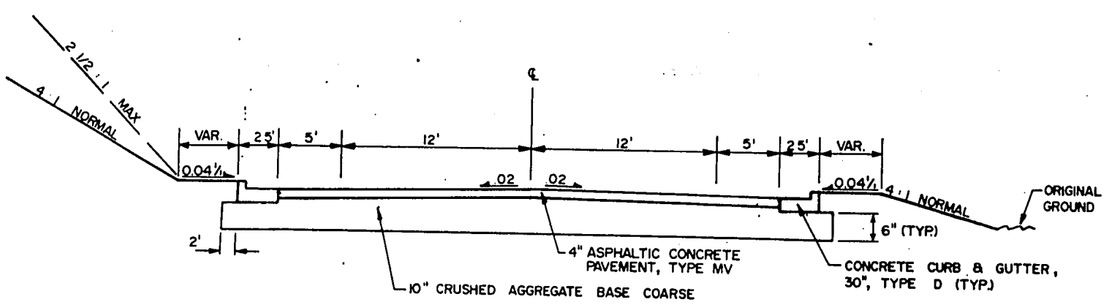
NOTE: MATCH EXISTING PARKING ON RIGHT



* 24' – STA. 786+95 TO STA. 789+60

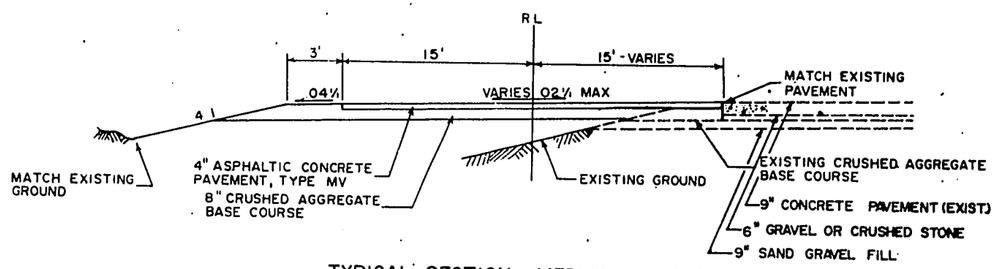
TYPICAL SECTION WITH TEMPORARY LANE

766+99.77 – 791+25
800+15 'WB' – 810+40 'WB'
815+00 'WB' – 826+95 'WB'



TYPICAL FINISHED SECTION

CHALET GARDEN FRONTAGE ROAD – URBAN
STA 837"CG"+00 TO STA. 841"CG"+13

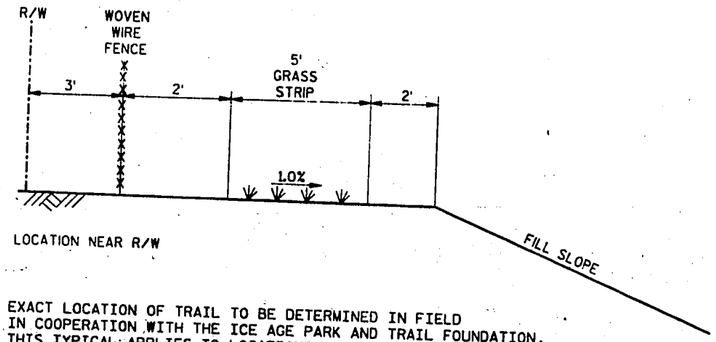


TYPICAL SECTION - MEDIAN CROSSOVER

706'WB + 97 TO 720'EB + 00

DESIGN DONE BY DISTRICT 1

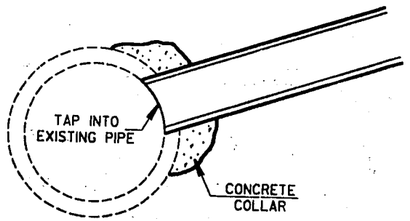
CONSTRUCTION DETAILS



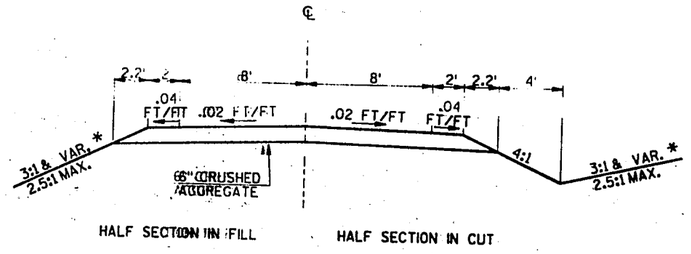
LOCATION NEAR R/W

NOTE:
1. EXACT LOCATION OF TRAIL TO BE DETERMINED IN FIELD IN COOPERATION WITH THE ICE AGE PARK AND TRAIL FOUNDATION.
2. THIS TYPICAL APPLIES TO LOCATIONS OTHER THAN THE LEFT SHOULDER OF CTH "M".

ICE AGE PARK AND TRAIL FOUNDATION TYPICAL SECTION

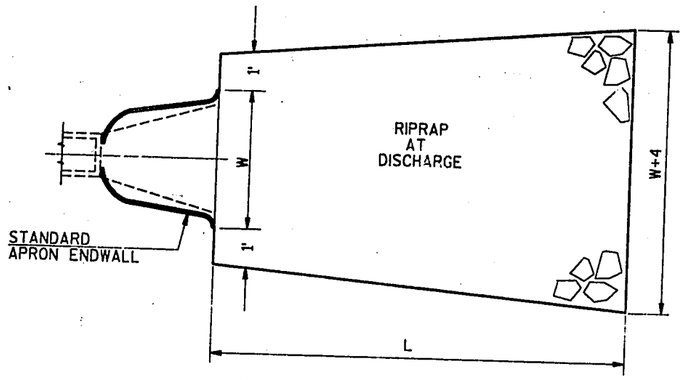


DETAIL FOR CONCRETE COLLAR



HALF SECTION IN FILL — HALF SECTION IN CUT

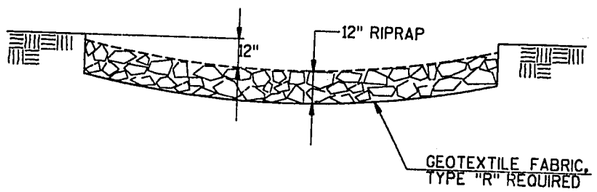
TYPICAL SECTION FOR PRIVATE ENTRANCES



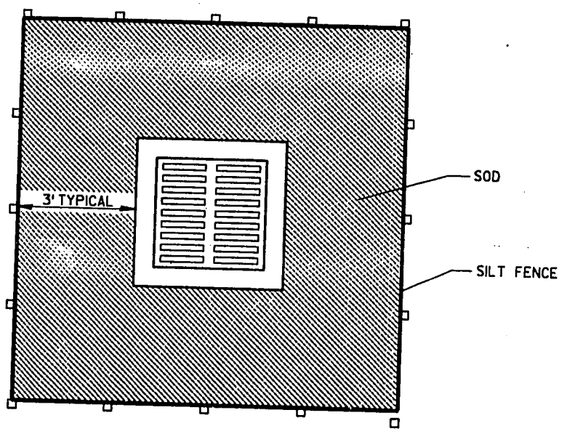
L= 3W OR 10' MIN. IF S < 3%
L= 3W + S%/2 OR 10' MIN. IF 3% < S < 10%
S= PIPE SLOPE

TYPICAL PLACEMENT OF RIPRAP ALONG ENDWALLS

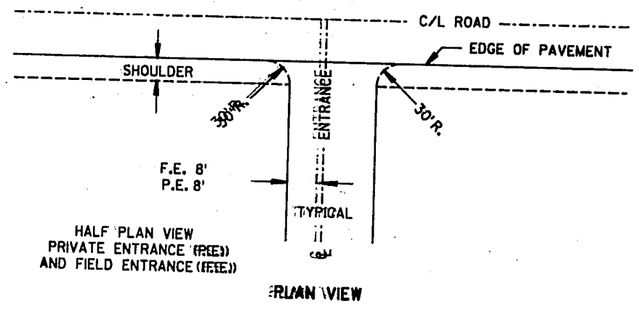
(REQUIRED AT ALL NEW CROSSDRAINS)



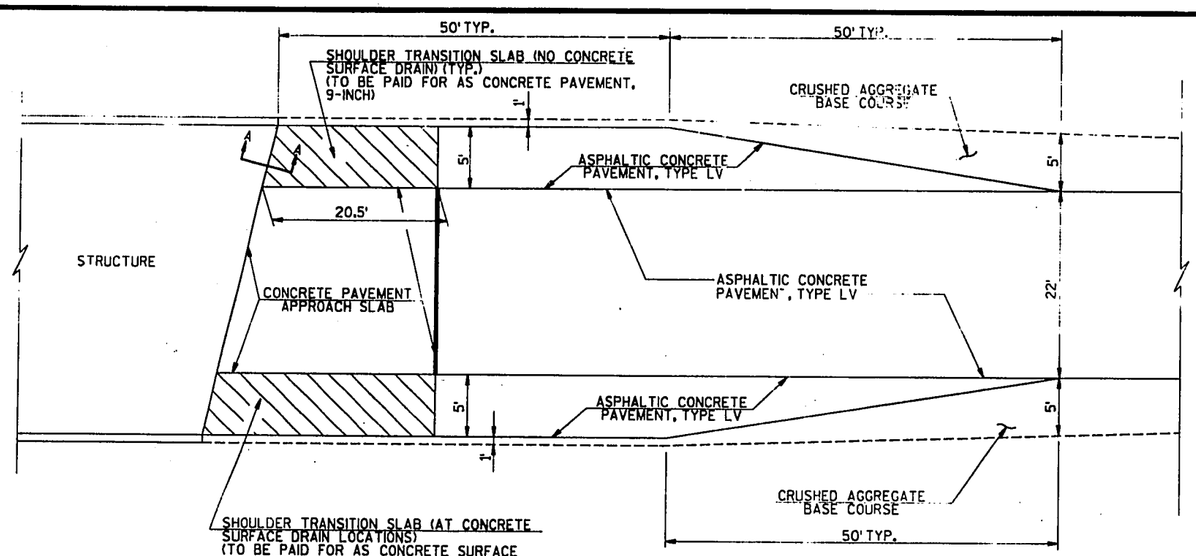
DETAIL FOR RIPRAP TREATMENT AT CULVERTS



SOD AT INLETS



RURAL DRIVEWAY DETAIL



PAVEMENT DETAIL AT BRIDGE APPROACHES (TYPICAL)
B-13-409 B-13-410 *

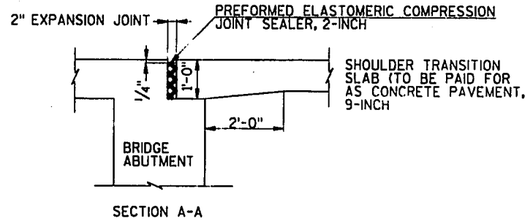
* NOTE:
SEE INTERSECTION DETAIL FOR CTH "M" AND RANGE TRAIL ROAD FOR ADDITIONAL APPROACH SLAB DETAILS FOR B-13-410

KEY MAP

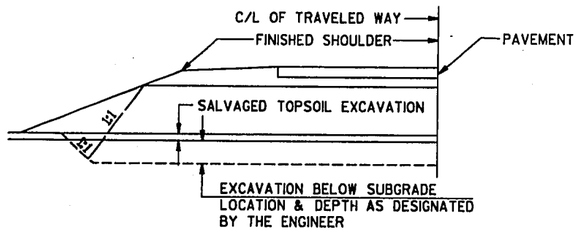
STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.7

CONSTRUCTION DETAILS

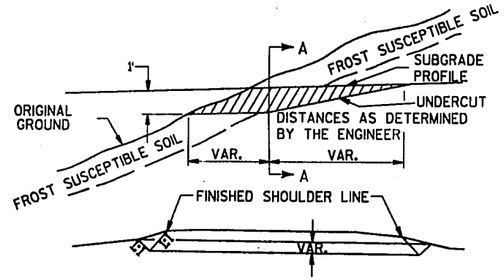
DANE COUNTY



SECTION A-A



DETAIL FOR EXCAVATION BELOW SUBGRADE



SECTION A-A
CROSS SECTION SHOWING UNDERCUT

DETAIL FOR EXCAVATION BELOW SUBGRADE AT CUTS

NOTE: EXACT LOCATIONS AND EXTENT OF E.B.S. SECTIONS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER

BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.

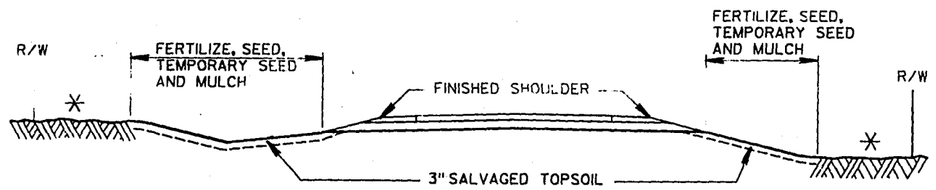
THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED.

59.61

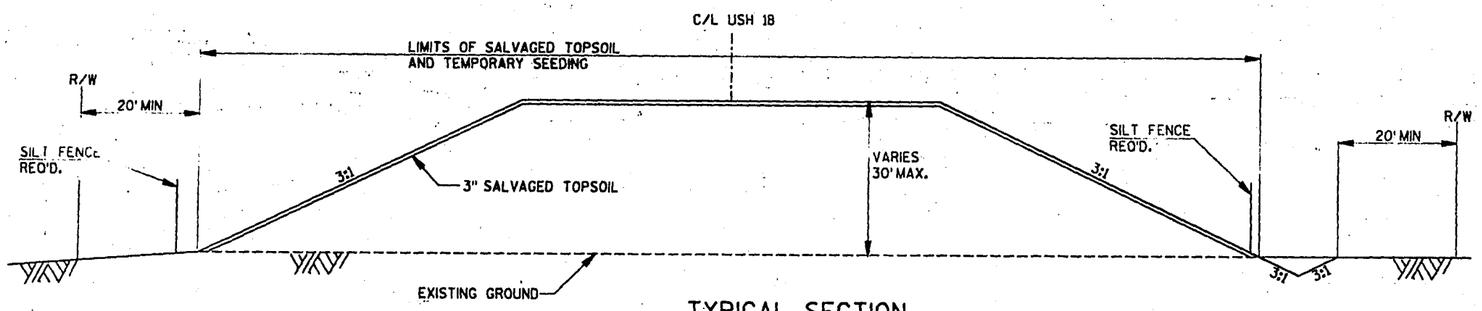
LEVELS ON

FILE NAME: HDGN: 75204A.DGN

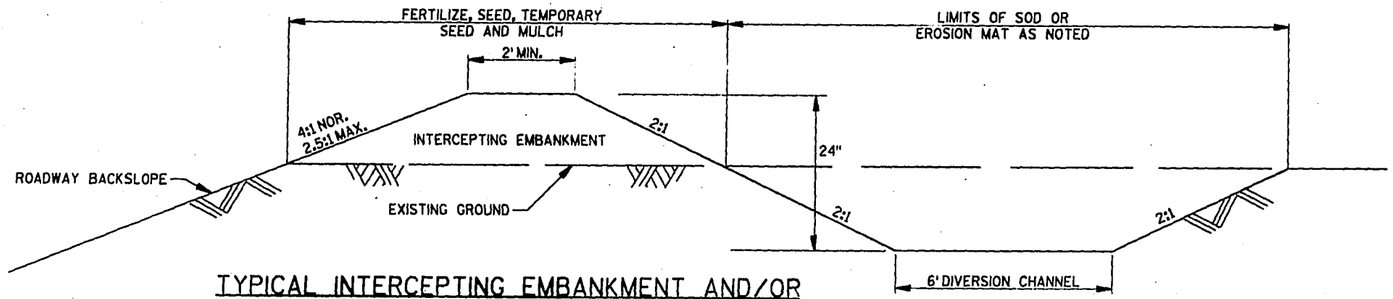
KEY MAP



DETAIL FOR FINISHING ITEMS

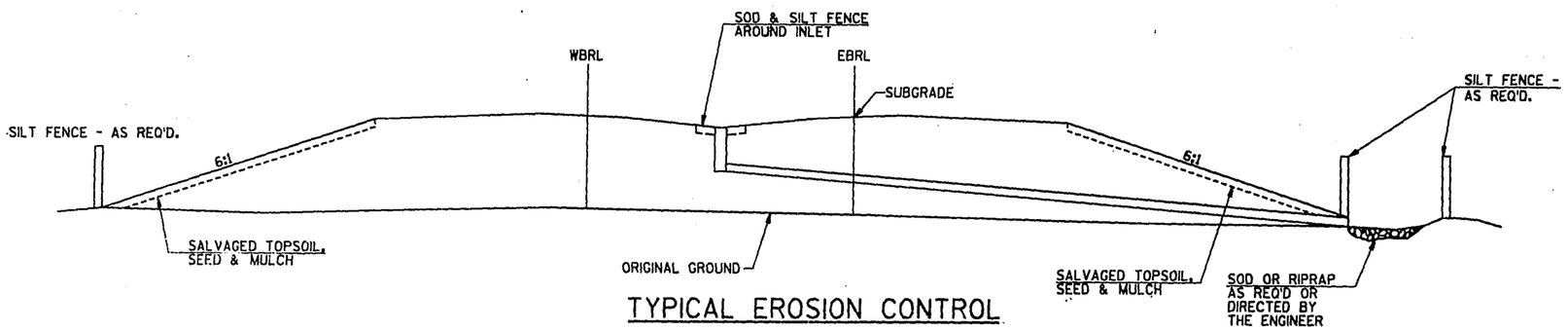


TYPICAL SECTION WASTE EXCAVATION STOCKPILE

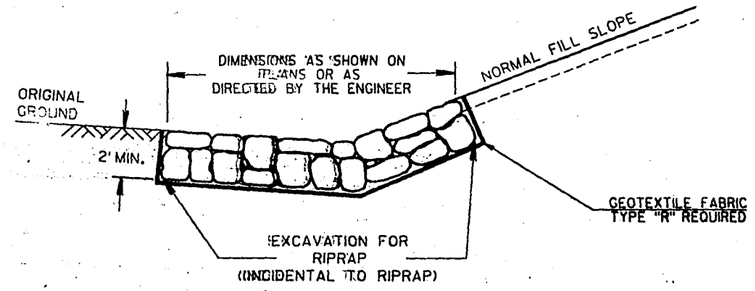


TYPICAL INTERCEPTING EMBANKMENT AND/OR DIVERSION CHANNEL DETAIL

NOTE:
SEE DRAINAGE AND EROSION CONTROL PLAN FOR LOCATION



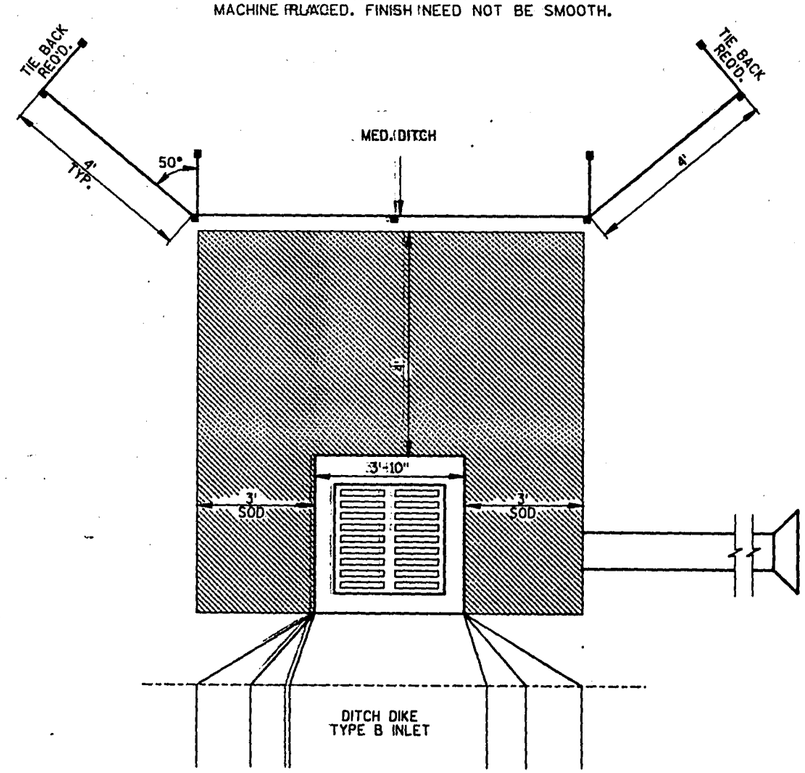
TYPICAL EROSION CONTROL



DETAIL FOR RIPRAP IN DITCHES

MINIMUM ROCK SIZE

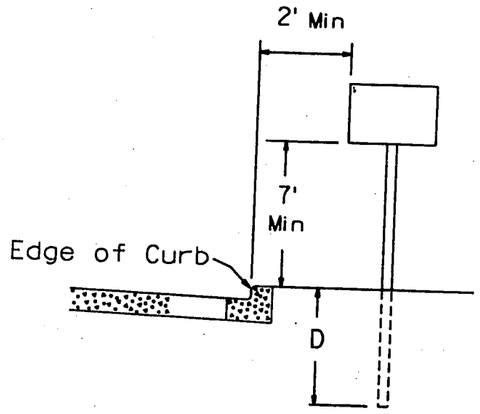
12" FOR SLOPES 7% OR LESS
18" FOR SLOPES OVER 7%, EXCEPT FOR MATERIALS TO FILL VOIDS.
ROCK CAN BE MACHINE SELECTED AND MACHINE PLACED. FINISH NEED NOT BE SMOOTH.



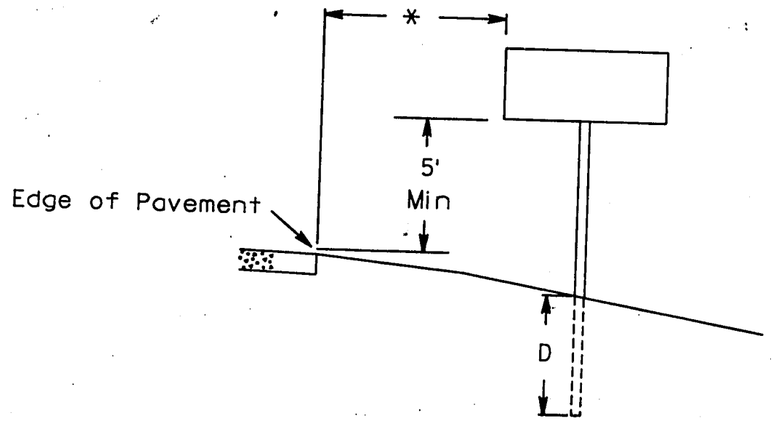
DETAILS FOR CONSTRUCTING SILT FENCE AROUND MEDIAN INLET OR AS DIRECTED BY THE ENGINEER

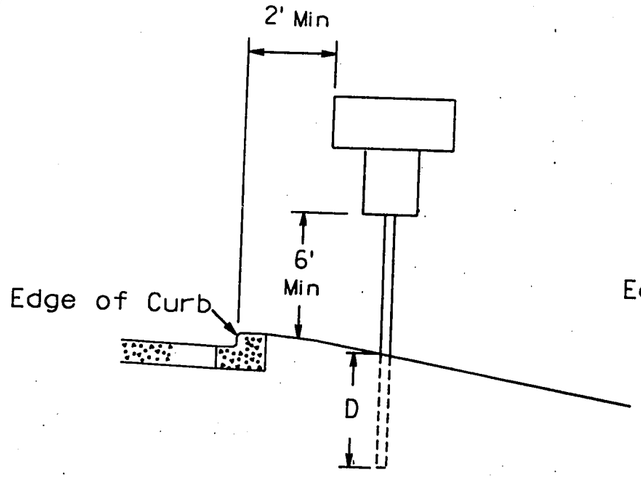
SILT FENCE AT INLET

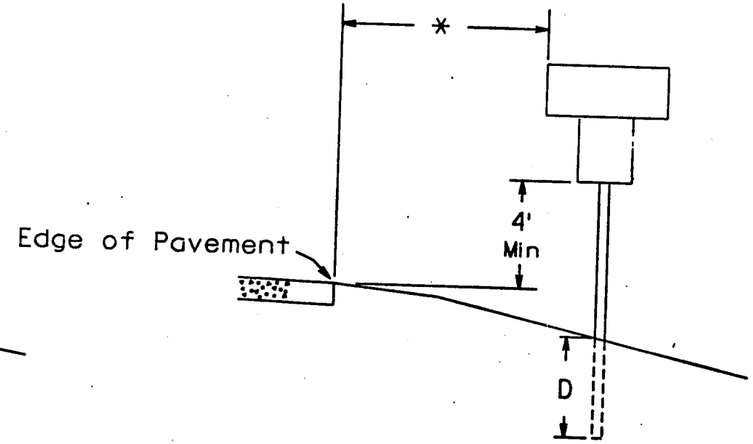
URBAN AREA



RURAL AREA







GENERAL NOTES

1. Sign assemblies wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. See plate A4-4 for typical installations.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

* 12 feet minimum from edge of pavement. Where there is a paved shoulder, 6' minimum from edge of paved shoulder, but at least 12 feet from edge of pavement.

DATE DRAWN 9-12-91 DATE REDRAWN
DATE REVISED 1-14-92

TYPICAL INSTALLATION OF TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

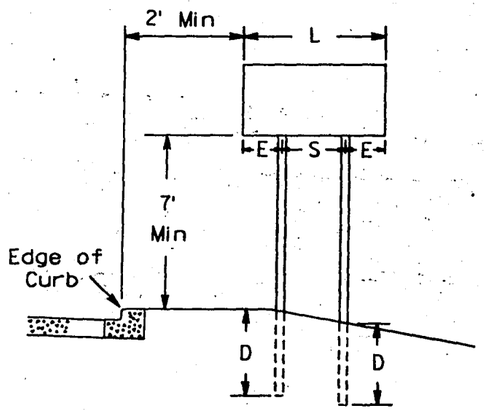
APPROVED Peter T. Rusch, State Traffic Engineer

DATE 1/21/92 PLATE NO. A4-3.8

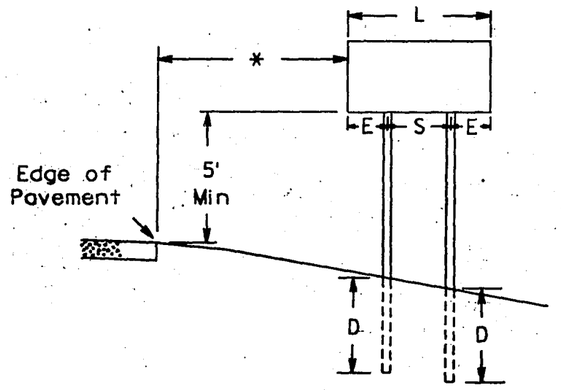
TR_STDPLATE A43.DGN

58.59.
LEVELS ON - 2.3. 10.

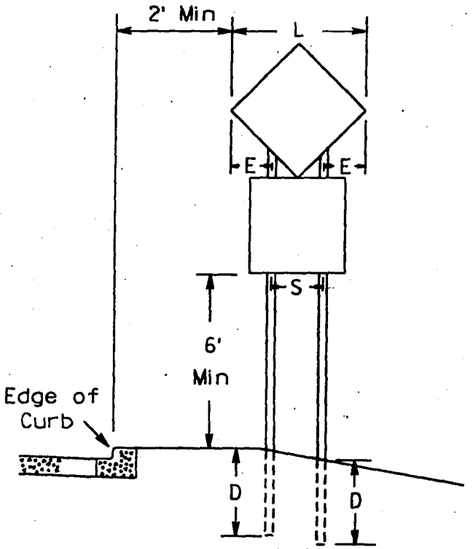
URBAN AREA

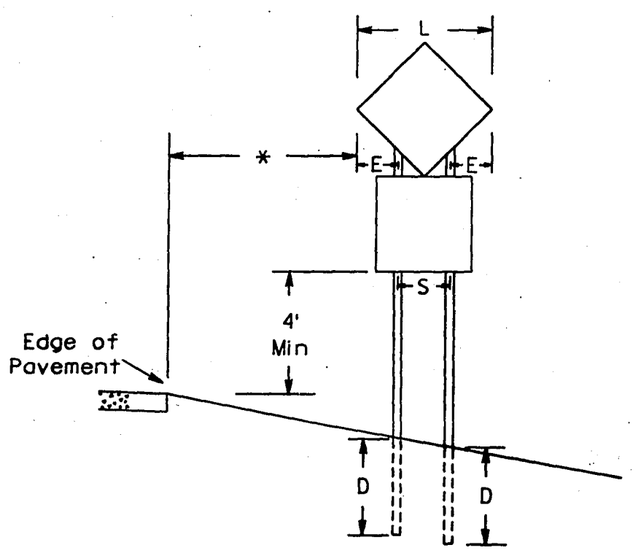


RURAL AREA



SIGN SHAPE OTHER THAN DIAMOND		
L	S	E
Less than 60"	L-24"	12"
60" or more	3 L/5	L/5





DIAMOND SHAPED SIGNS		
L	S	E
Less than 60"	20"	L/2 - 10
60"--72"	32"	L/2 - 16
Greater than 72"	3 L/5	L/5

GENERAL NOTES

1. For 3 post installations, post spacing is S/2 and S must be greater than 8'-6"
2. For 4 post installations, post spacing is S/3 and S must be greater than 12'-9"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

* 12 feet minimum from edge of pavement. Where there is a paved shoulder, 6' minimum from edge of paved shoulder, but at least 12 feet from edge of pavement.

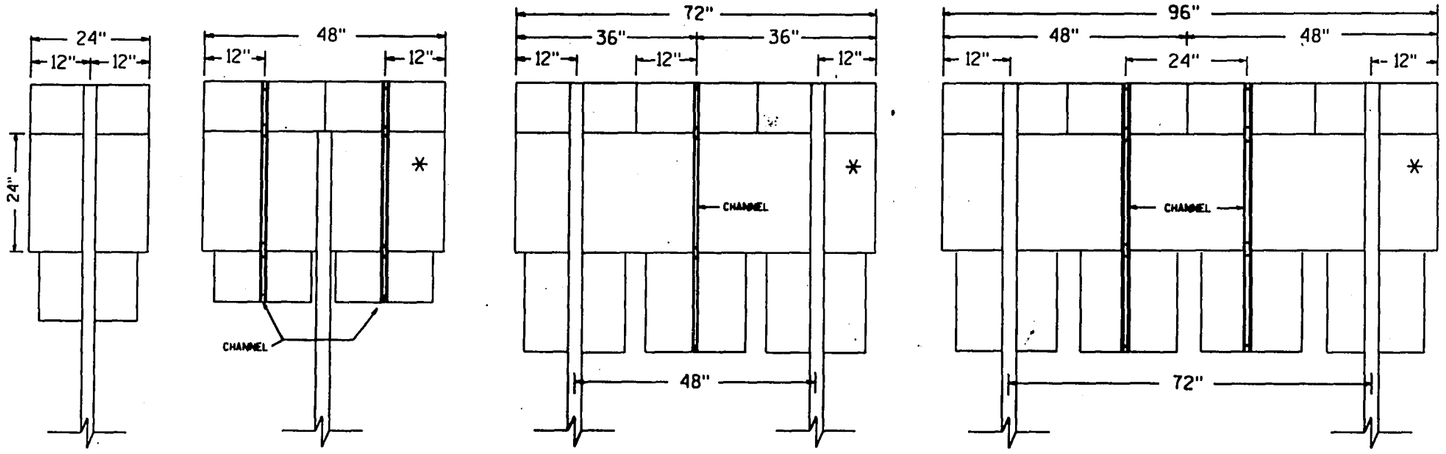
DATE DRAWN 6-3-87 DATE REDRAWN 10-1-91
DATE REVISED 1-14-92

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Peter F. Rusch
State Traffic Engineer

DATE 1/21/92 PLATE NO. A4-4.2



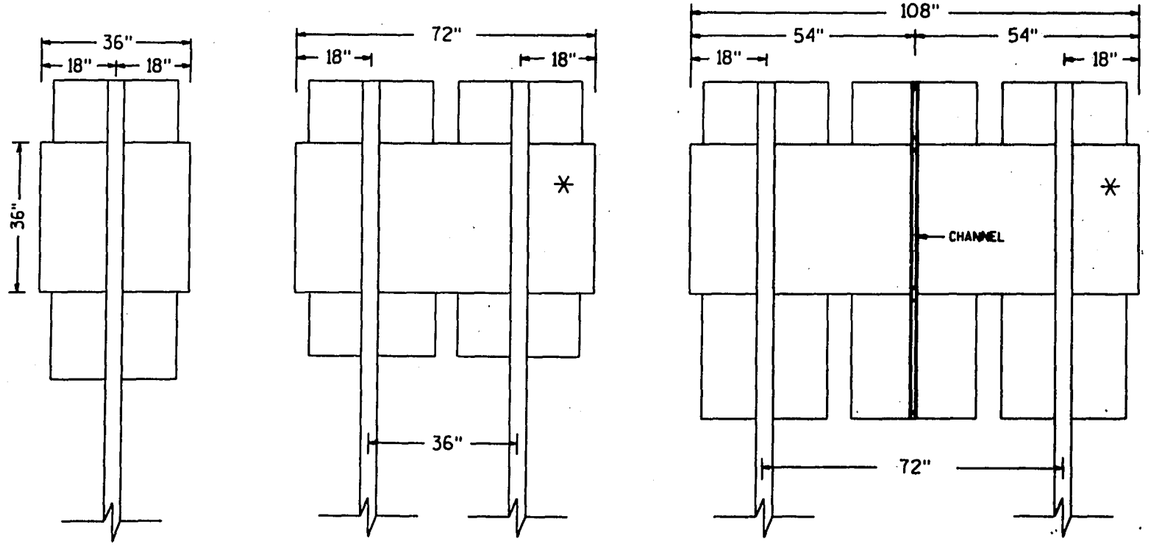
NOTES;

1. Post spacing shall be according to this detail but post embedment depth shall be in accordance with A4-4.
2. Channel material shall be as specified in Section 633 of Std. Specs. and weight shall be approx. 1.4 lbs/ft.
3. Base material for a multiple marker head panel (*) shall be one piece high density overlay plywood. All other materials within the assembly can be either plywood or aluminum.

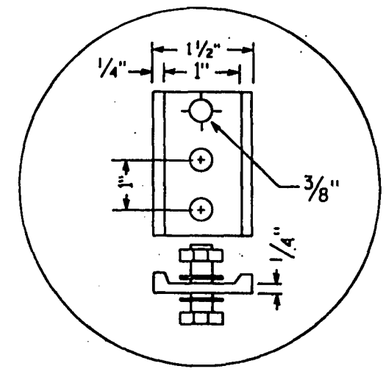
CHANNEL HARDWARE:

Aluminum Sign components: -1/4" x 3/4" bolt and 1/4" flat washers

Plywood Sign Components: -1/4" x 1 1/4" bolt and 1/4" flat washers



CHANNEL DETAIL



DATE DRAWN 6-3-87 DATE REDRAWN 10-3-91

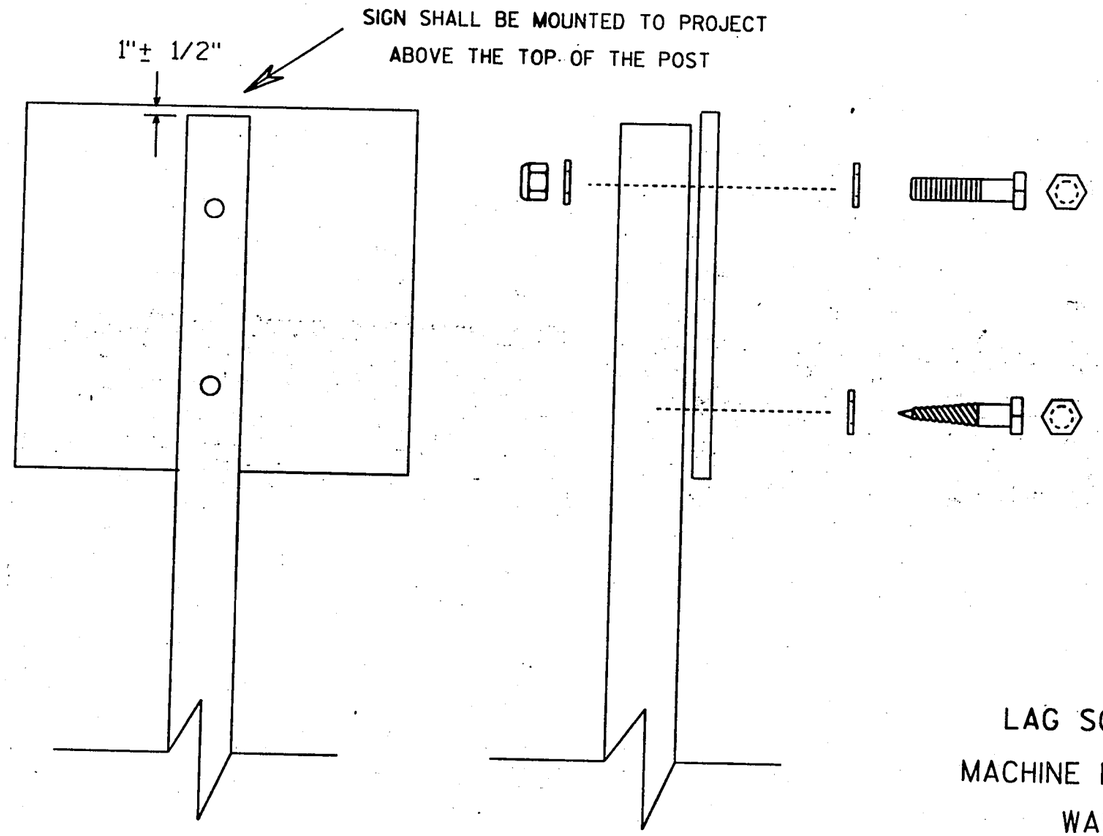
DATE REVISED

TYPICAL PANEL INSTALLATION FOR J TYPE ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED John F. Corwin
State Traffic Engineer

DATE 11/5/91 PLATE NO. A4-5.3



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

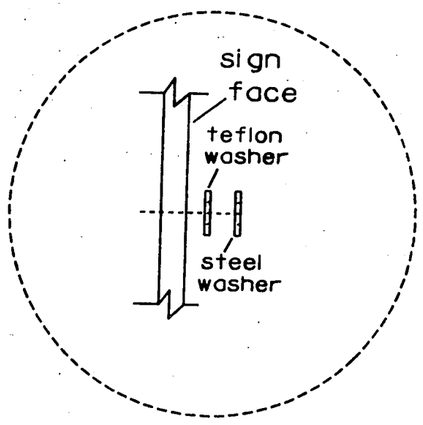
a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

WASHERS - 1" O.D. X 3/8" I.D. X 1/16" STEEL for signs 24x24 and smaller.
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL for signs 24x30 to 36x48.
1-1/2" O.D. X 7/16" I.D. X 1/16" STEEL for signs 48x48 and larger.
1-1/4" O.D. X 3/8" I.D. X .080 TEFLON for all Type H signs.



Washer Placement when Sign Has Type H Face

DATE DRAWN 1-29-92 DATE REDRAWN _____
DATE REVISED _____ _____

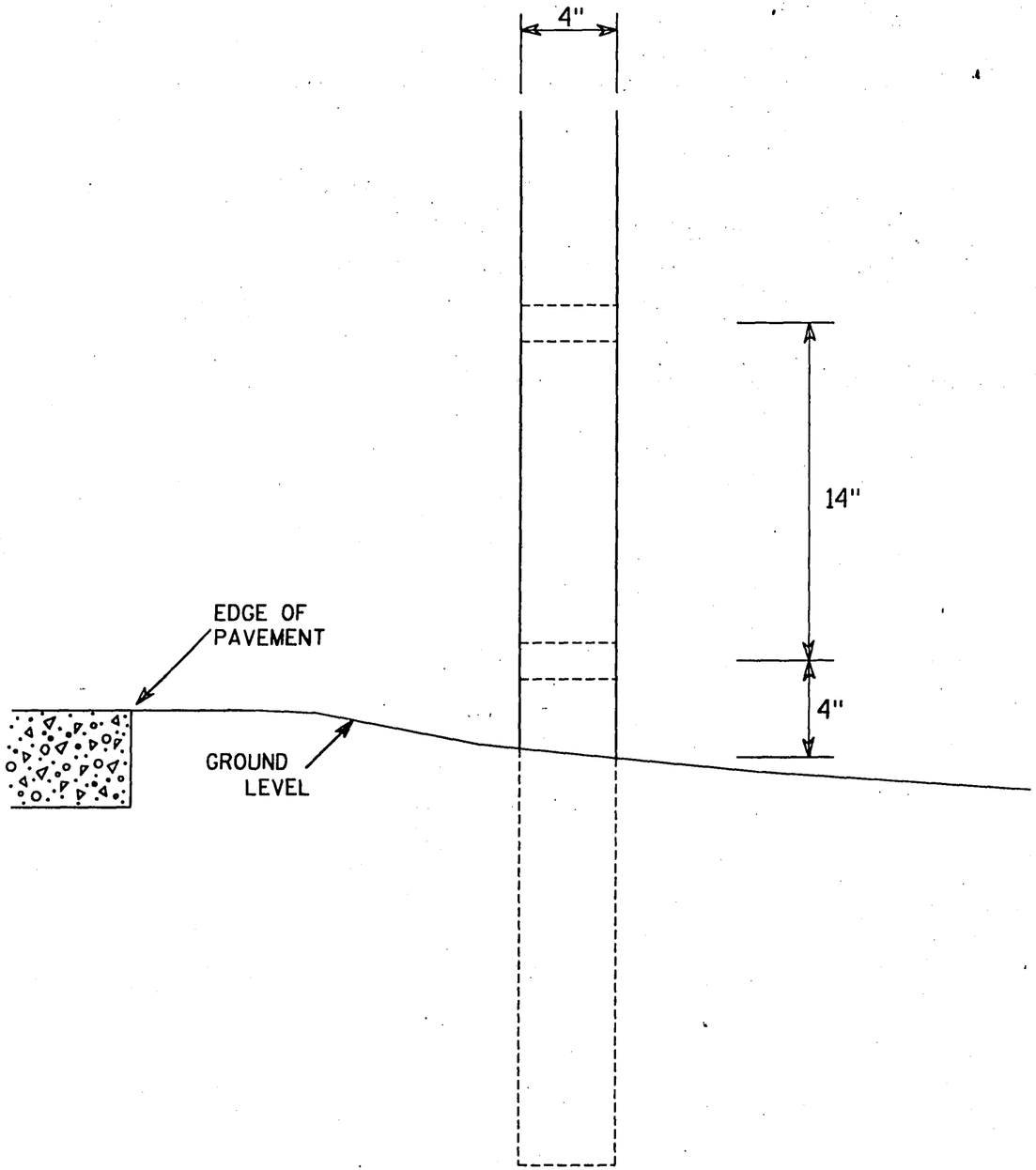
ATTACHMENT OF SIGNS TO WOOD POSTS

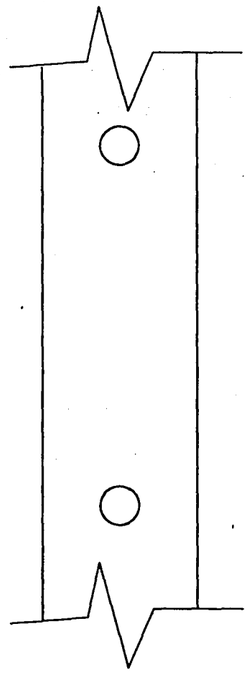
WISCONSIN DEPT OF TRANSPORTATION

APPROVED _____ State Traffic Engineer

DATE 2-1-92 PLATE NO. A4-8.2

58.59.





SIDE VIEW

GENERAL NOTES

1. All 4x6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

LEVELS ON • 1.2. 5. 10.

DATE DRAWN 11-1-91 DATE REDRAWN _____
DATE REVISED _____ _____

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED _____
State Traffic Engineer

DATE 11/5/91 PLATE NO. A4-11.1

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.14

INTERSECTION DETAIL
CTH "M" & RANGE TRAIL ROAD

USH 18 — DANE COUNTY

KEY MAP

USH 18 "WB"
USH 18 "EB"
C/L USH 18
MATCH LINE STA. 20+00.00
10' SIDE WALK
44' F-F
RAMP, TAPER 0" TO 7" HEIGHT IN 10 FEET (TO BE PAID FOR AS CONCRETE SIDEWALK, 5-INCH)
CONCRETE SIDEWALK, 5-INCH
CONCRETE CURB & GUTTER, 30-INCH, TYPE A
STA. 21+95.40 "M" END OF DECK
SLOPE PAVING, CRUSHED AGGREGATE
PREFORMED ELASTOMERIC COMPRESSION JOINT SEALER, 2-INCH
PAVING NOTCH
B-13-410
THRIE BEAM CONNECTION
CONCRETE PAVEMENT APPROACH SLAB
1" EXPANSION JOINTS WITH DOWEL BARS
CLASS "A" STEEL PLATE BEAM GUARD
CONCRETE PAVEMENT, 9-INCH
SHOULDER TRANSITION SLAB (TO BE PAID FOR AS CONCRETE PAVEMENT, 9-INCH)(SEE DETAIL)
CLASS "A" STEEL PLATE BEAM GUARD
CRUSHED AGGREGATE BASE COURSE
ICE AGE TRAIL AND PARK FOUNDATION LOCATION
ASPHALTIC CONCRETE PAVEMENT TYPE MV
STA. 24+00.00 C/L CTH "M"
STA. 10+48.56 C/L RANGE TRAIL ROAD
CTH "M"
C/L CTH "M"
95°00'00.0"
100'
24+43.72 CTH "M", 40'R 62'RT.
23+26.44 CTH "M", 60'R 82'RT.
CRUSHED AGGREGATE BASE COURSE

NOTE:
TYPE "C" INTERSECTION SEE S.D.D.

ICE AGE TRAIL AND PARK FOUNDATION
CRUSHED AGGREGATE BASE COURSE
ASPHALTIC CONCRETE PAVEMENT, TYPE MV
RAMP TAPER 0" TO 7" HEIGHT IN 10 FEET (TO BE PAID FOR AS CONCRETE SURFACE DRAIN)
THRIE BEAM CONNECTION
CONCRETE CURB & GUTTER, 30-INCH, TYPE A
CONCRETE SURFACE DRAIN
18+00 "M", 65'LT.
CONCRETE SURFACE DRAIN
18+50 "M", 60'LT.
CLASS "A" STEEL PLATE BEAM GUARD
MATCH LINE
STA. 20+00.00
PAVING NOTCH
PREFORMED ELASTOMERIC COMPRESSION JOINT SEALER, 2-INCH
THRIE BEAM CONNECTION
1" EXPANSION JOINTS WITH DOWEL BARS
CONCRETE PAVEMENT, 9-INCH
SHOULDER TRANSITION SLAB (TO BE PAID FOR AS CONCRETE PAVEMENT, 9-INCH)(SEE DETAIL)
CLASS "A" STEEL PLATE BEAM GUARD
CRUSHED AGGREGATE BASE COURSE
ASPHALTIC CONCRETE PAVEMENT, TYPE MV
CONCRETE PAVEMENT APPROACH SLAB
SLOPE PAVING, CRUSHED AGGREGATE
B-13-410
C/L USH 18
USH 18 "WB"
USH 18 "EB"

ASPHALTIC CONCRETE PAVEMENT TYPE MV
C/L RANGE TRAIL ROAD
RANGE TRAIL ROAD

N

0 20 40 60

NOTE:
SEE SDD CONCRETE PAVEMENT APPROACH SLAB

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.15

PAVEMENT DETAILS
FOR
U.S.H. 18 & 151 — DANE COUNTY

LEGEND

- (30A) CONCRETE CURB & GUTTER, 30-INCH, TYPE A
- (30D) CONCRETE CURB & GUTTER, 30-INCH, TYPE D
- (30G) CONCRETE CURB & GUTTER, 30-INCH, TYPE G
- (18A) CONCRETE CURB & GUTTER, 18-INCH, TYPE A-5
- REVERSE SLOPE GUTTER
- (1) SEE CONCRETE CORRUGATED MEDIAN DETAIL
- (2) CONCRETE SIDEWALK, 4-INCH
- (3) SOD MEDIAN ISLAND
- (A) CONCRETE CURB, TYPE A
- (D) CONCRETE CURB, TYPE D

FOR INFORMATION ONLY

STA. 836+13"WB"
BEGIN TAPER

840+00"WB"

STA. 842+71"WB"-12'RT.
END TAPER

840+00"EB"

STA. 838+73-26'RT.
BEGIN TAPER

STA. 840+23"EB"-36'RT.
END TAPER

840+00"CG"

CONSTRUCTION LIMITS, PROJECT 1201-04-75
(STA. 837"CG"+00 TO STA. 843"CG"+13)

STA. 844+19'EB"-19'LT.
6.5'RT.

END CONCRETE
BEGIN ASPHALT

STA. 843+83'EB"-76'RT.

STA. 843+83'EB"-8'RT.

STA. 843+13
CONST. LIMITS

STA. 838+57"CG"-42'RT.
25'R.

STA. 839+22"CG"-42'RT.
25'R.

STA. 841+13.5"CG"-42'RT.
25'R.

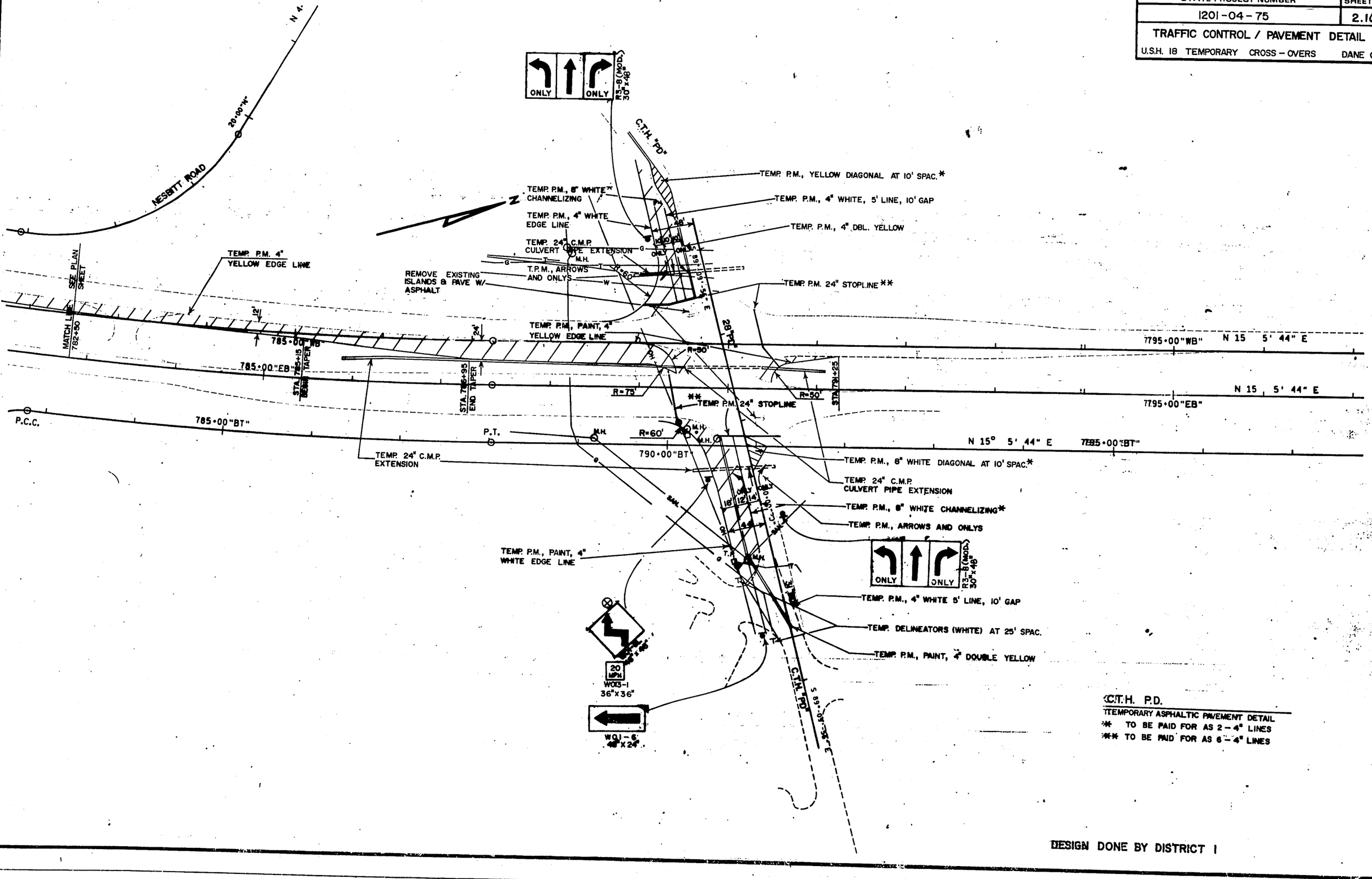
DESIGN DONE BY DISTRICT I

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 59

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.16**

TRAFFIC CONTROL / PAVEMENT DETAIL

U.S.H. 18 TEMPORARY CROSS-OVERS DANE CO.



C.T.H. P.D.

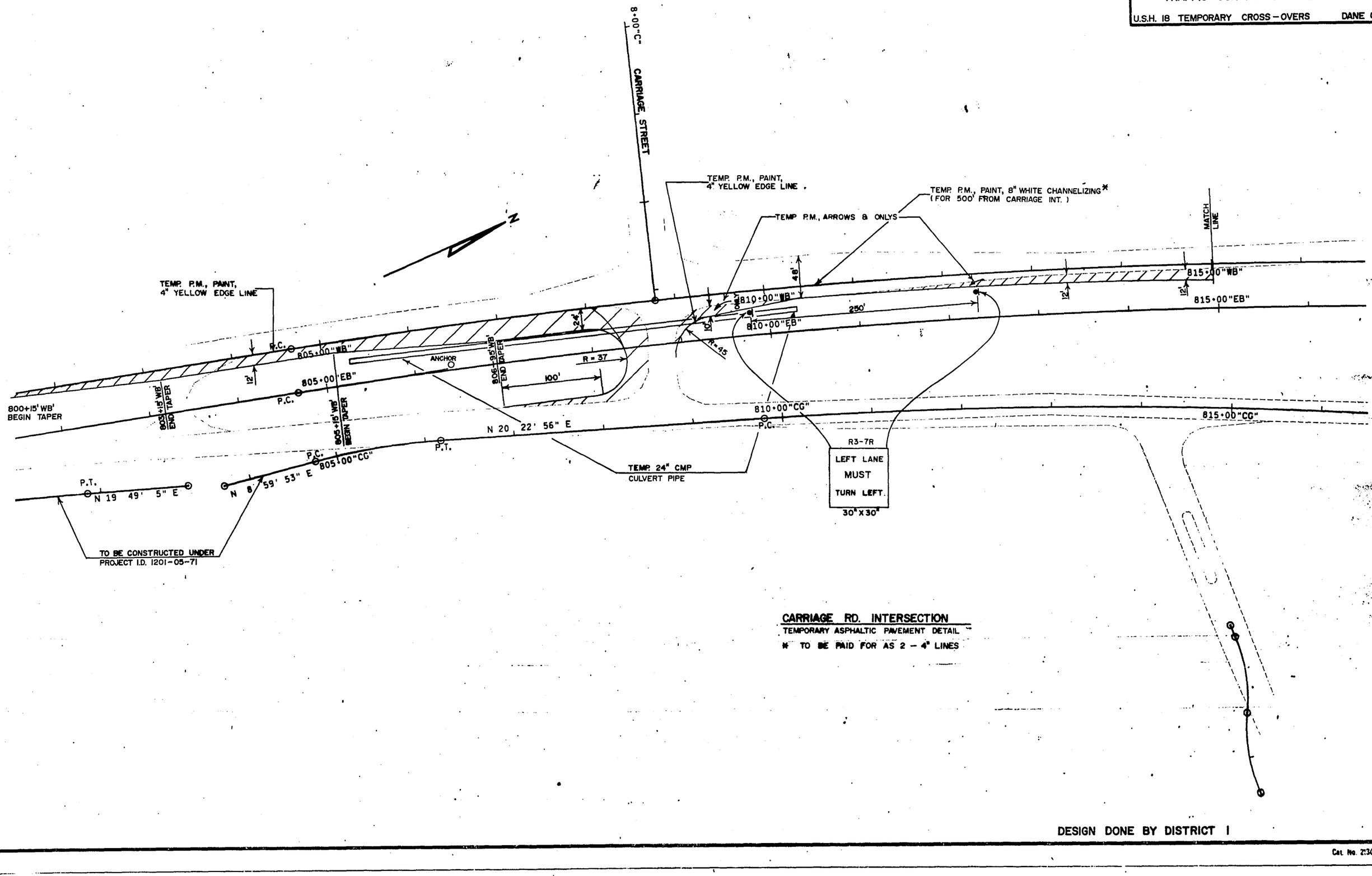
TEMPORARY ASPHALTIC PAVEMENT DETAIL

* TO BE PAID FOR AS 2-4" LINES

** TO BE PAID FOR AS 6-4" LINES

DESIGN DONE BY DISTRICT 1

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.17
TRAFFIC CONTROL/PAVEMENT DETAIL	
U.S.H. 18 TEMPORARY CROSS-OVERS	DANE CO.



CARRIAGE RD. INTERSECTION

TEMPORARY ASPHALTIC PAVEMENT DETAIL

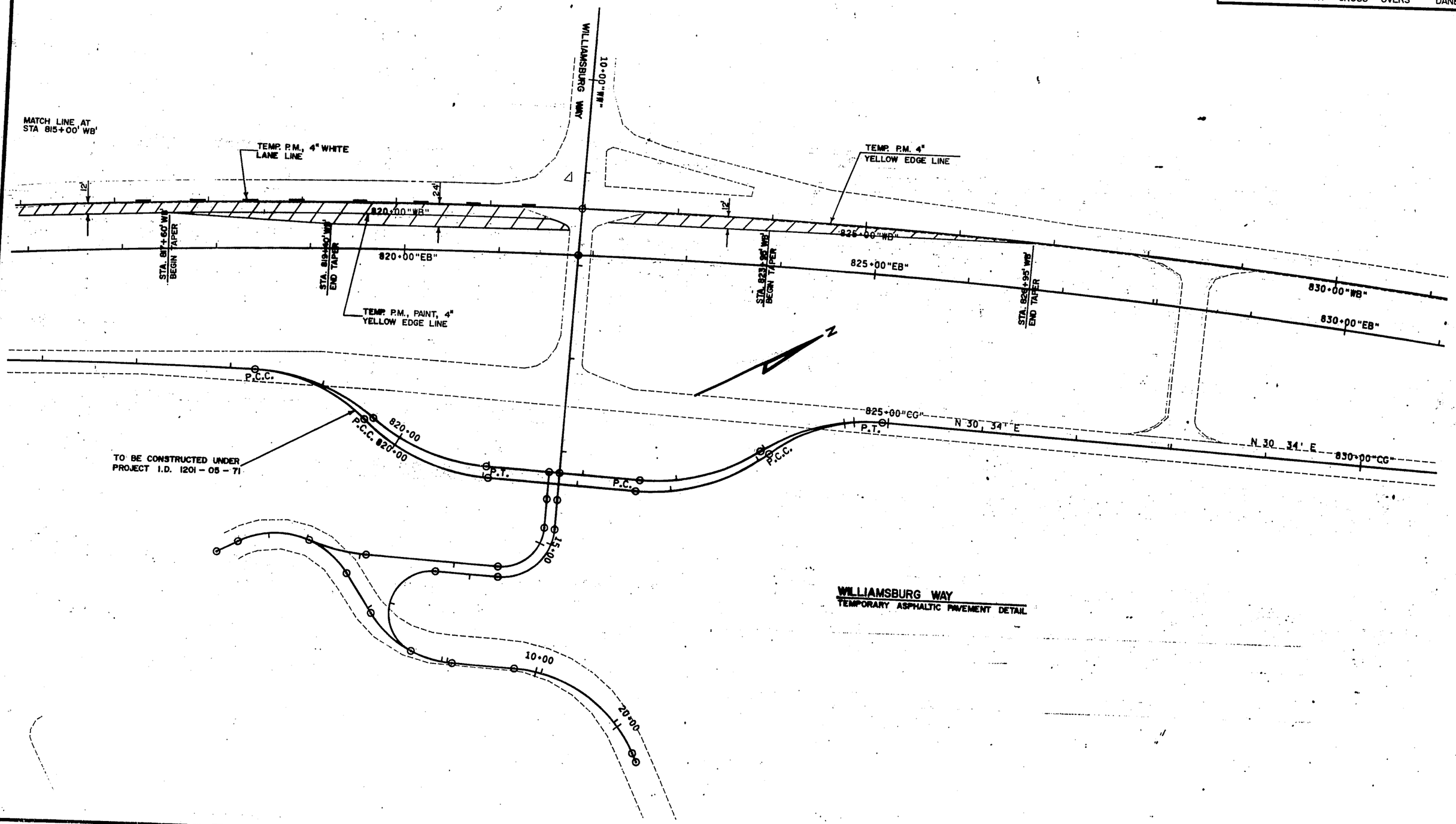
* TO BE PAID FOR AS 2 - 4" LINES

DESIGN DONE BY DISTRICT 1

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.18

TRAFFIC CONTROL / PAVEMENT DETAIL

U.S.H. 18 TEMPORARY CROSS-OVERS DANE CO.



WILLIAMSBURG WAY
TEMPORARY ASPHALTIC PAVEMENT DETAIL

DESIGN DONE BY DISTRICT 1

KEY MAP

STATE PROJECT NUMBER 1201-04-75 | SHEET NO. 2.19

DRAINAGE & EROSION CONTROL PLAN

USH 18 — DANE COUNTY

0 100 200 300

N

LEGEND

- EROSION BALES
- SILT FENCE
- EROSION MAT
- SOD
- REINFORCED SOD
- RIPRAP
- DIVERSION CHANNEL
- INTERCEPTING EMBANKMENT
- PROPOSED DITCH

BEGIN PROJECT 1201-04-75
STA. 601+00.00

BEGIN CONSTRUCTION
STA. 17+00.00

NOTE:
SOD DITCH CHECKS,
STA. 611+50 TO STA. 619+00, LT.
MEDIAN 50' INTERVALS
SEE SDD SOD OR
MASONRY AND
SOD DITCH CHECKS

STA. 606+00.00

200' TYP.

STOCKPILE AREA
SEE DETAIL

MATCHLINE

STA. 630+50.00

CONNECT PROPOSED DITCH WITH EROSION MAT
TO DIVERSION CHANNEL AT
STA. 606+75 ±

B-13-409

BEGIN CONSTRUCTION
STA. 24+45.00

59.6'
51'
29.30.31'
24.25'
20'
LEVELS ON

FILE NAME: HDGN: 75207.DGN

WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER 1201-04-75 | SHEET NO. 2.20

DRAINAGE & EROSION CONTROL PLAN

DANE COUNTY

KEY MAP

LEGEND

- EROSION BALES
- SILT FENCE
- EROSION MAT
- SOD
- REINFORCED SOD
- RIPRAP
- DIVERSION CHANNEL
- INTERCEPTING EMBANKMENT
- PROPOSED DITCH

N

0 100 200 300

BEGIN CONSTRUCTION
STA. 10+00.00

NOTE:
SOD DITCH CHECKS
STA. 641+00 TO 648+00,
MEDIAN, 50' INTERVALS
SEE SDD SOD OR MASONRY
AND SOD DITCH CHECKS.

RIPRAP FLUME
MATCH EXISTING SWALE
AND PROPOSED USH 18
W.B. DITCH LOCATIONS

END PROJECT
STA. 648+00.00

STA. 649+00.00

CONNECT DIVERSION CHANNEL WITH EROSION MAT
TO PROPOSED DITCH.
STA. 648+50 ± TO 649+00

RIPRAP FLUME
MATCH PROPOSED USH 18 EB
DITCH AND CTH "M" DITCH
LOCATIONS

DIVERSION CHANNEL
WITH SOD
30+00, 35' LT.
EL= 1023.70

28+00, 80' LT.
EL= 1021.00

STA. 630+50.00

MATCHLINE

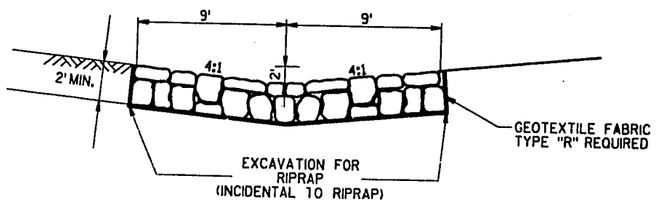
CONNECT RIPRAP LINED
DITCH TO EXISTING
SWALE STA. 20 'M' +50,
110' RT.
SEE DETAIL FOR RIPRAP
LINED DITCH.

B-13-410

RANGE TRAIL

GRADE TO DRAIN
TO EXISTING DITCH

END CONSTRUCTION
STA. 29+00.00



DETAIL FOR RIPRAP LINED DITCH

FILE NAME: HDGN:75208.DGN

WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER 1201-04-75 | SHEET NO. 2.21

STORM SEWER

U.S.H. 18 TEMPORARY CROSS-OVERS DANE CO.

835+00 "WB"
840+00 "WB"
845+00 "WB"
835+00 "EB"
840+00 "EB"
845+00 "EB"
835+00 "CG"
840+00 "CG"
845+00 "CG"
ANCHORS
ANCHOR
4" GAS MAIN
SAN.
M.H.
T.P.
TEMPORARY
DRIVEWAY
30' C.E.
SIGN
PT 843+58.47 "WB" BK=
843+45.77 "WB" FWD
PT 843+33.08 "EB" BK=
843+45.78 "EB" FWD
N 44 10' 59" E
N 44 10' 59" E

22.0 839"CG"+75-25'RT.
1"J" MANHOLE-3.18'D.

24.2 840+70
841"CG"+09-47'LT.
8"MS"INLET-3.2'D.

24.1 841"CG"+60-19'LT.
3"H" INLET-3.96'D.

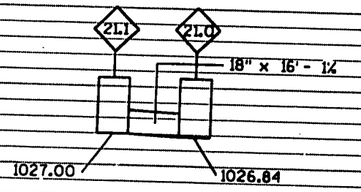
21.1 20"PE"+78-10'RT.
3"H"INLET-3.5'D.

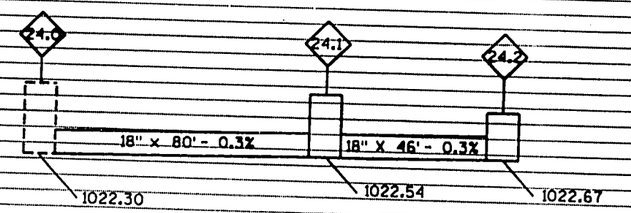
840"CG"+10
3"H"INLET 840"CG"+55
8"MS"INLET
841"CG"+34.5-30.5'RT.
3"H" INLET-4.03'D.

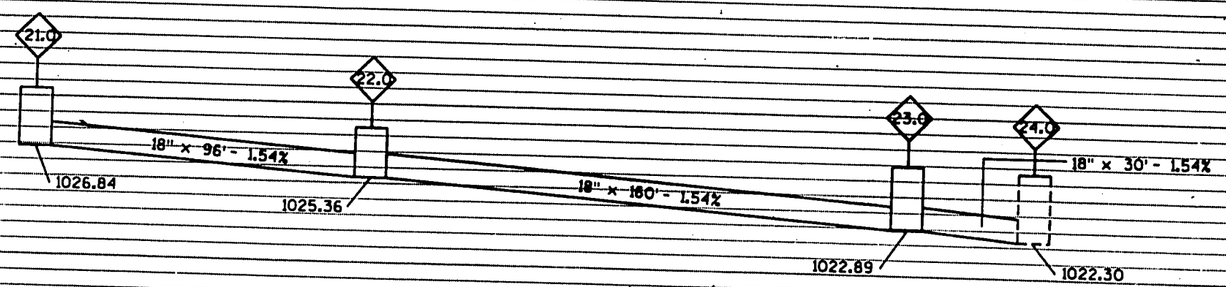
23.0

24.0 841"CG"+61-57'RT.
EXISTING MANHOLE

21.0 20"PE"+78-10'LT.
3"H"INLET-3.66'D.







59,60,
1,2,13,14,15,16,17,18,19,20,21,22,23,
25,
28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,
LEVELS ON •

FILE NAME : 1201303.dgn ORIGINATOR : PLOT NAME : PLOT SCALE :

DESIGN DONE BY DISTRICT 1

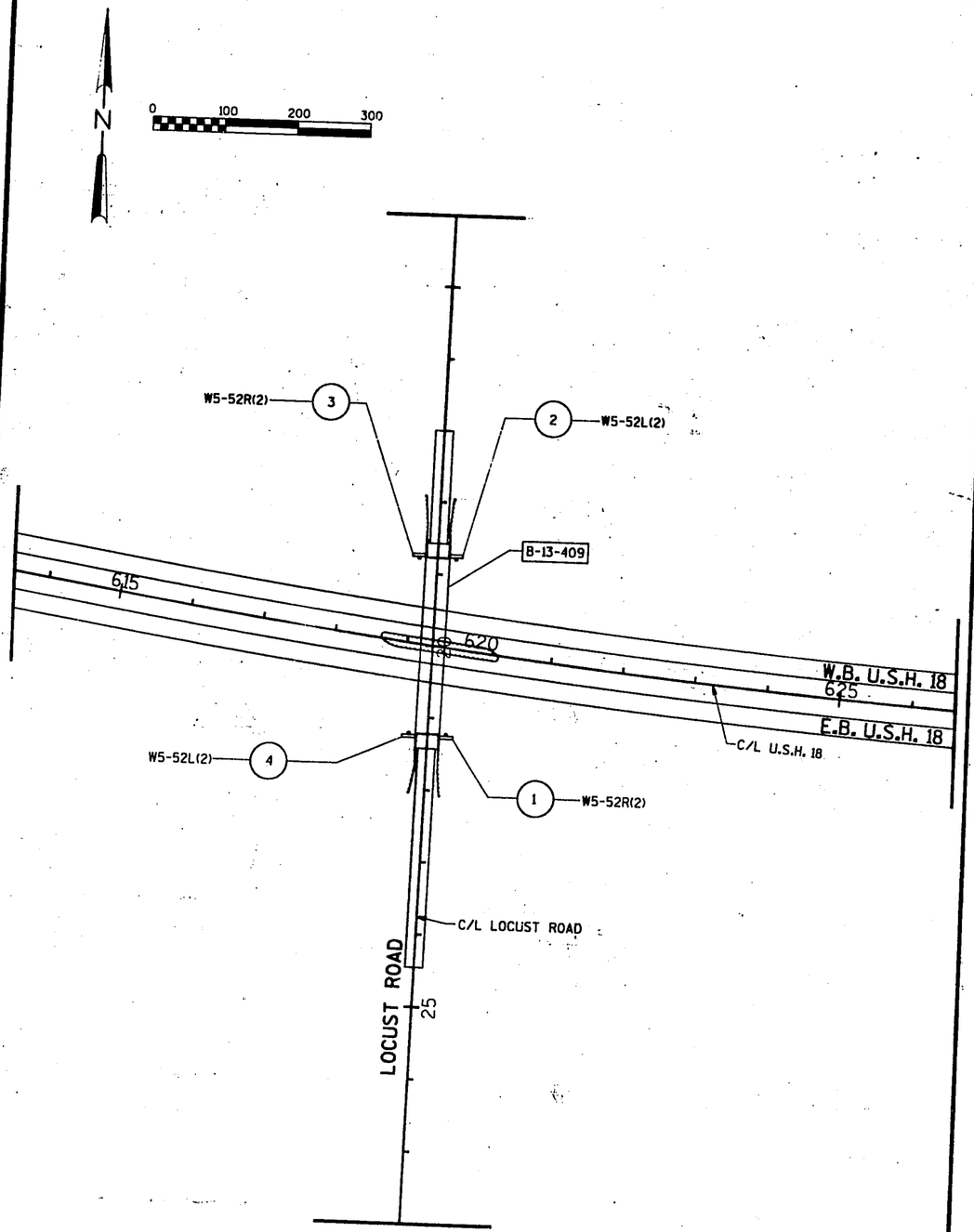
WISDOT/CADDS SHEET 40

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.22

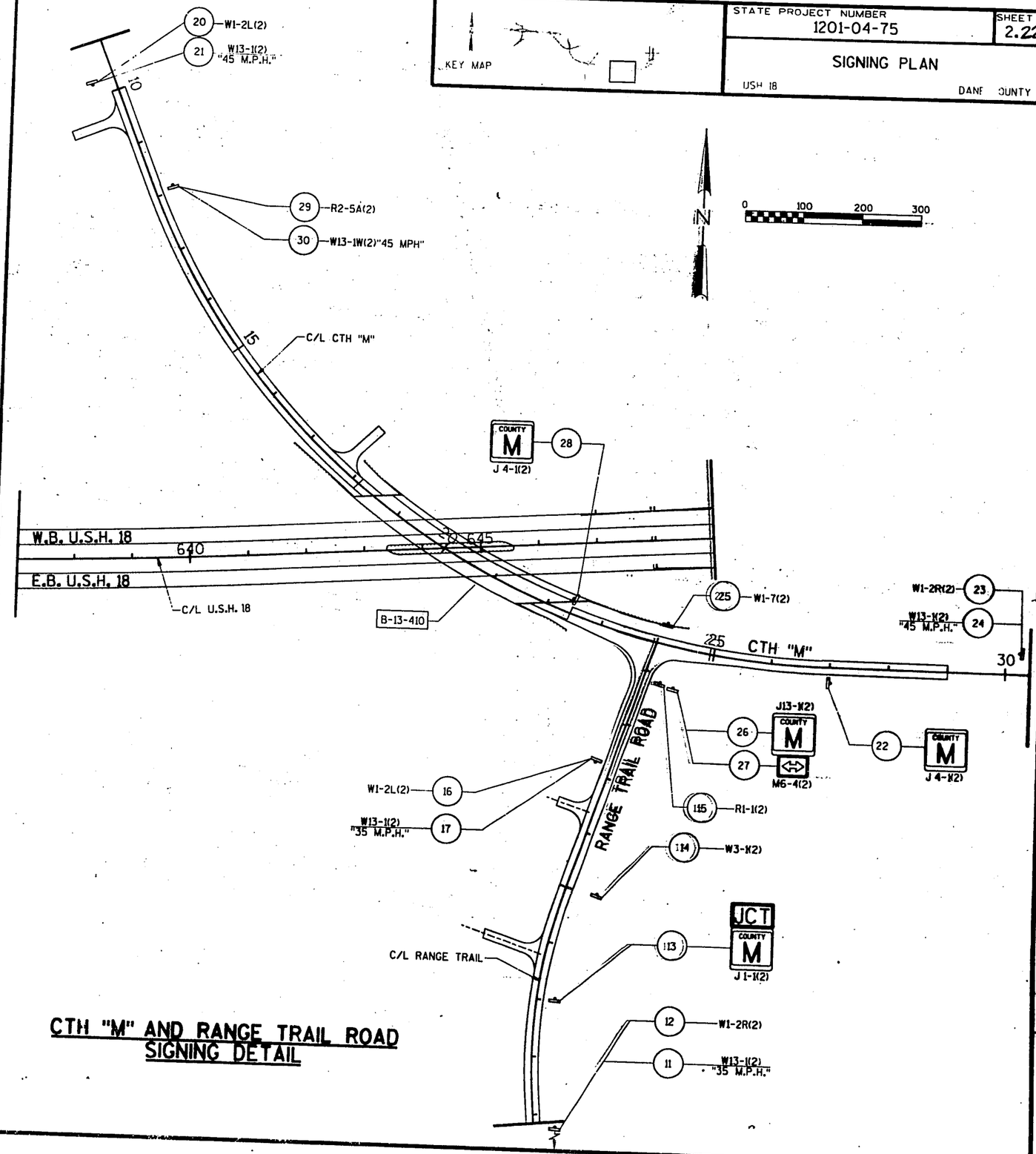
KEY MAP

SIGNING PLAN

USH 18 DANE COUNTY



LOCUST ROAD
SIGNING DETAIL



CTH "M" AND RANGE TRAIL ROAD
SIGNING DETAIL

FILE NAME: HDGN: 75210.DGN

WISDOT/CADDS SHEET 42

KEY MAP

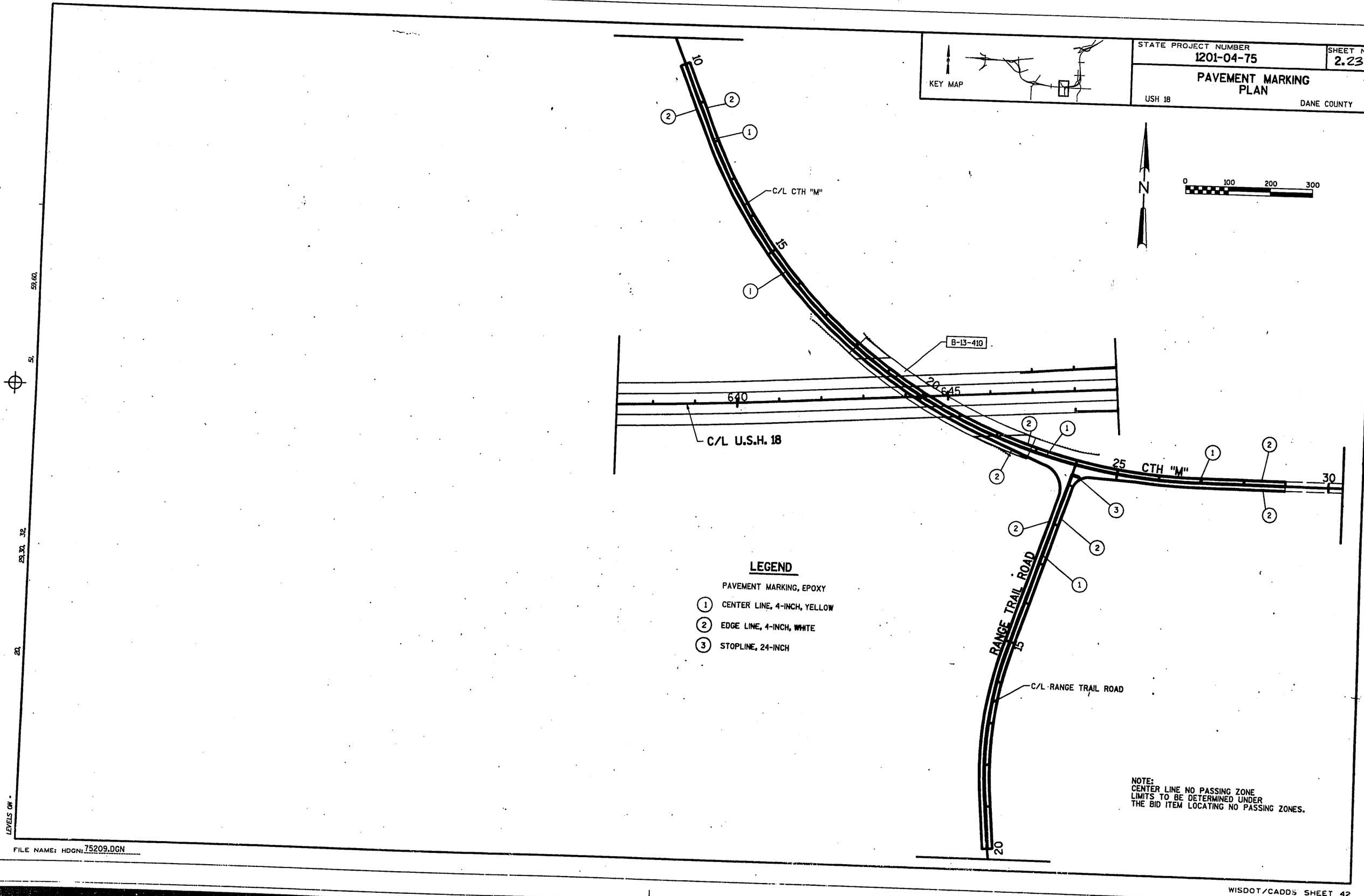
STATE PROJECT NUMBER
1201-04-75

SHEET NO.
2.23

PAVEMENT MARKING PLAN

USH 18

DANE COUNTY



LEGEND

PAVEMENT MARKING, EPOXY

(1) CENTER LINE, 4-INCH, YELLOW

(2) EDGE LINE, 4-INCH, WHITE

(3) STOPLINE, 24-INCH

NOTE:
CENTER LINE NO PASSING ZONE LIMITS TO BE DETERMINED UNDER THE BID ITEM LOCATING NO PASSING ZONES.

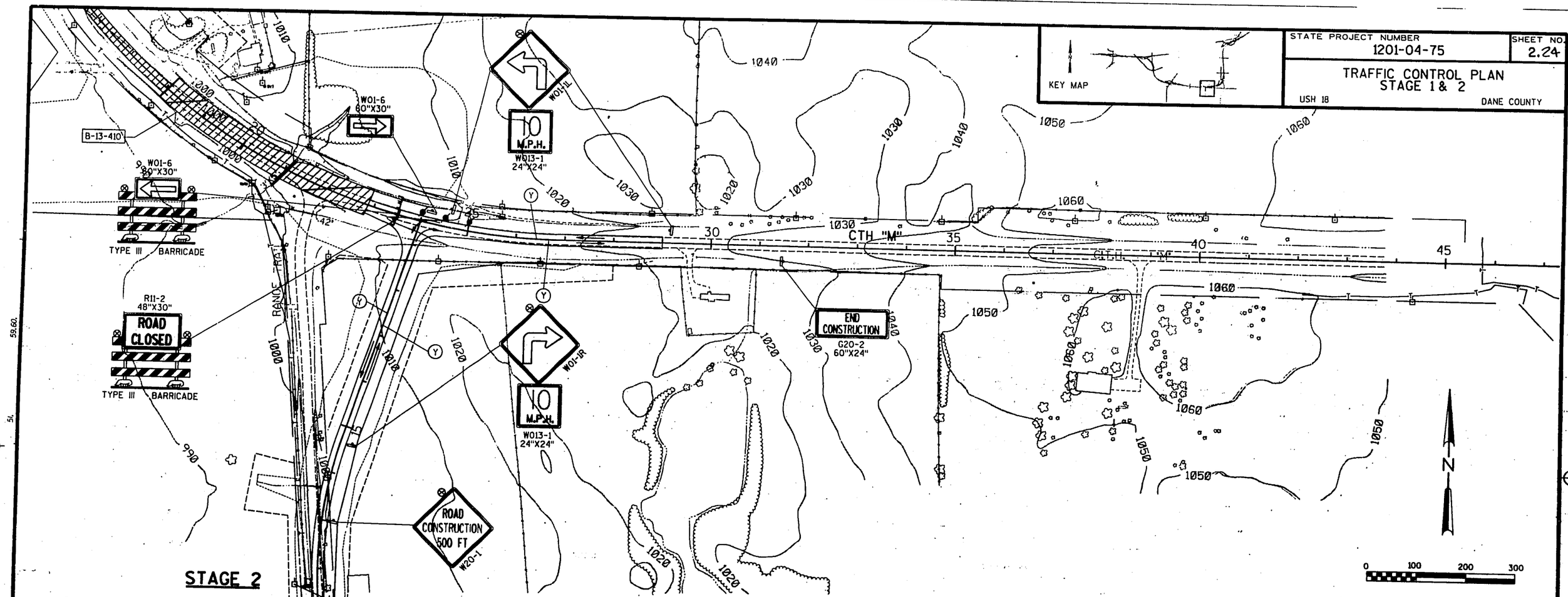
FILE NAME: HDGN: 75209.DGN

STATE PROJECT NUMBER 1201-04-75 | SHEET NO. 2.24

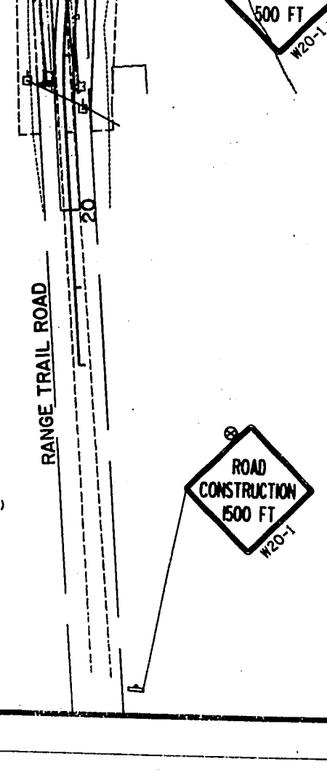
TRAFFIC CONTROL PLAN STAGE 1 & 2

USH 18 DANE COUNTY

KEY MAP



STAGE 2



LEGEND

- SIGN ON WOOD POST
- TYPE A FLASHING LIGHT
- TRAFFIC CONTROL DRUM WITH STEADY BURN (TYPE C) LIGHT (50'C-C)
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC
- CONSTRUCTION THIS STAGE
- (Y) TEMPORARY PAVEMENT MARKING (PAINT) AND REMOVING PAVEMENT MARKING DOUBLE 4-INCH YELLOW

STAGE CONSTRUCTION

STAGE 1

TRAFFIC

RANGE TRAIL ROAD CLOSED TO TRAFFIC FROM CTH "M" TO STA. 20+00.
CTH "M" CLOSED TO TRAFFIC 1/4 MILE WEST OF RANGE TRAIL ROAD, TO 600 FT. EAST OF RANGE TRAIL ROAD.
TRAFFIC TO FOLLOW CTH "M" DETOUR.
LOCUST DRIVE CLOSED TO TRAFFIC FROM STA. 13+00 TO STA. 28+00.

CONSTRUCT

CTH "M" FROM STA. 23+00 TO STA. 29+00.
STRUCTURE B-13-410 [CTH "M" OVER USH 18].
RANGE TRAIL ROAD STA. 10+48 TO STA. 20.00.
LOCUST DRIVE STRUCTURE B-13-409 [LOCUST DRIVE OVER OVER USH 18].

STAGE 2

TRAFFIC

USE EXISTING AND NEWLY CONSTRUCTED CTH "M" EAST OF RANGE TRAIL ROAD.
EXISTING CTH "M" CLOSED TO TRAFFIC WEST OF RANGE TRAIL ROAD.
USE NEWLY CONSTRUCTED RANGE TRAIL ROAD.
TRAFFIC TO FOLLOW CTH "M" DETOUR.

CONSTRUCT

STRUCTURE B-13-410 [CTH "M" OVER USH 18]
USH 18 FROM STA. 607+00 TO STA 653+00
CTH "M" FROM STA. 10+00 TO STA. 23+00.

TRAFFIC CONTROL / GENERAL NOTES

1. ALL SIGNS ARE 48" X 48" UNLESS NOTED.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
3. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. DRUMS PLACED ADJACENT TO WORK AREAS SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.
5. FOR NIGHTTIME OPERATION ALL ADVANCE SIGNS SHALL HAVE A TYPE "A" (LOW INTENSITY FLASHING) WARNING LIGHT.
6. DURING HOURS OF DARKNESS, TYPE "C" (STEADY BURN) WARNING LIGHTS SHALL BE PROVIDED ON ALL CHANNELIZING DEVICES IN TAPERS. BARRICADES SHIELDING AN ISOLATED HAZARD SHALL BE EQUIPPED WITH TYPE "A" (LOW INTENSITY FLASHING) WARNING LIGHTS.
7. PAVEMENT MARKINGS NOT APPROPRIATE TO THE TRAVEL PATH SHALL BE REMOVED.
8. ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS, OR AS DIRECTED BY THE ENGINEER.
9. SIGN AND BARRICADE LOCATIONS MAY BE ADJUSTED IN THE FIELD AS APPROVED BY THE ENGINEER. ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER. ALL "STOP" OR REGULATORY SIGNS ON THE SIDE ROADS SHALL NOT BE DISTURBED, EXCEPT AS NECESSARY TO COMPLETE THE WORK. THE SIGN MUST THEN BE IMMEDIATELY REESTABLISHED.

FILE NAME: HDGN:7521I.DGN

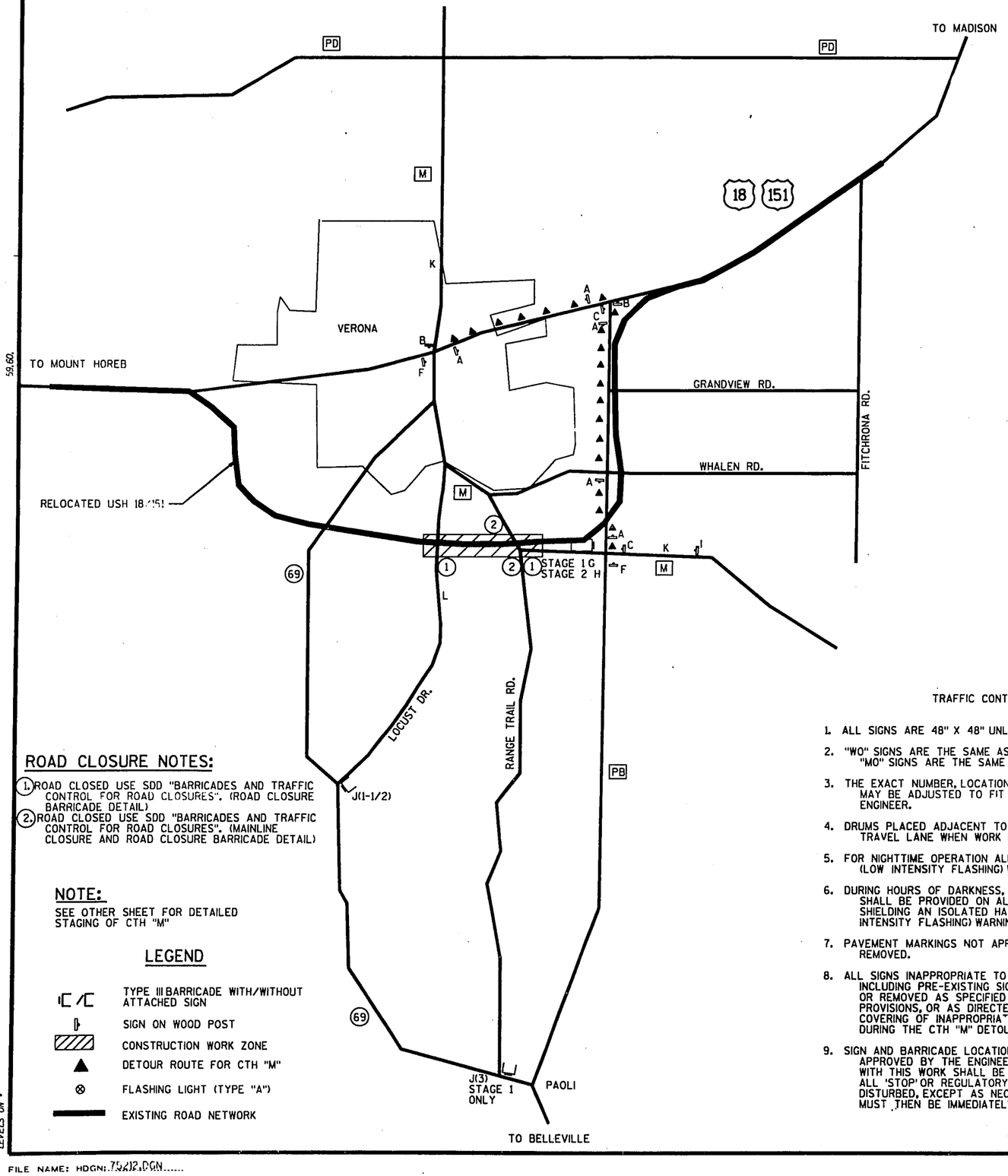
WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER 1201-04-75 | SHEET NO. 2.25

ADVANCE TRAFFIC CONTROL AND CTH "M" DETOUR PLAN

USH 18 DANE COUNTY

KEY MAP



ROAD CLOSURE NOTES:

1. ROAD CLOSED USE SDD "BARRICADES AND TRAFFIC CONTROL FOR ROAD CLOSURES". (ROAD CLOSURE BARRICADE DETAIL)
2. ROAD CLOSED USE SDD "BARRICADES AND TRAFFIC CONTROL FOR ROAD CLOSURES". (MAINLINE CLOSURE AND ROAD CLOSURE BARRICADE DETAIL)

NOTE:

SEE OTHER SHEET FOR DETAILED STAGING OF CTH "M"

LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- SIGN ON WOOD POST
- CONSTRUCTION WORK ZONE
- DETOUR ROUTE FOR CTH "M"
- FLASHING LIGHT (TYPE "A")
- EXISTING ROAD NETWORK

A= DETOUR (M4-8 24"X12") / COUNTY M (M1-5A 24"X24")

B= DETOUR (M4-8 24"X12") / COUNTY M (M1-5A 24"X24") / M06-1L 21"X21"

C= DETOUR (M4-8 24"X12") / COUNTY M (M1-5A 24"X24") / M06-1R 21"X21"

F= DETOUR (M4-8 24"X12") / COUNTY M (M1-5A 24"X24") / M06-1 (AHEAD) 21"X21"

J(X)= R11-3 60"X30" ROAD CLOSED X MILES AHEAD LOCAL TRAFFIC ONLY — TYPE III BARRICADE

K= DETOUR AHEAD W20-2; DETOUR 500 FT W20-2

L= ROAD CLOSED 1000 FT W20-3; ROAD CLOSED 500 FT W20-3

STAGE 1

G= R11-2 48"X30" ROAD CLOSED — TYPE III BARRICADE; M4-9R 30"X24" DETOUR — TYPE III BARRICADE

STAGE 2

H= R11-3 60"X30" ROAD CLOSED ½ MILE AHEAD LOCAL TRAFFIC ONLY — TYPE III BARRICADE; M4-9R 30"X24" DETOUR — TYPE III BARRICADE

I= ROAD CLOSED AHEAD W20-3

TRAFFIC CONTROL / GENERAL NOTES

1. ALL SIGNS ARE 48" X 48" UNLESS NOTED.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE. "MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
3. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. DRUMS PLACED ADJACENT TO WORK AREAS SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.
5. FOR NIGHTTIME OPERATION ALL ADVANCE SIGNS SHALL HAVE A TYPE "A" (LOW INTENSITY FLASHING) WARNING LIGHT.
6. DURING HOURS OF DARKNESS, TYPE "C" (STEADY BURN) WARNING LIGHTS SHALL BE PROVIDED ON ALL CHANNELIZING DEVICES IN TAPERS. BARRICADES SHIELDING AN ISOLATED HAZARD SHALL BE EQUIPPED WITH TYPE "A" (LOW INTENSITY FLASHING) WARNING LIGHTS.
7. PAVEMENT MARKINGS NOT APPROPRIATE TO THE TRAVEL PATH SHALL BE REMOVED.
8. ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS, OR AS DIRECTED BY THE ENGINEER. THIS INCLUDES THE COVERING OF INAPPROPRIATE CTH "M" ROUTE SIGNS AND/OR ARROWS DURING THE CTH "M" DETOURS.
9. SIGN AND BARRICADE LOCATIONS MAY BE ADJUSTED IN THE FIELD AS APPROVED BY THE ENGINEER. ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER. ALL 'STOP' OR REGULATORY SIGNS ON THE SIDE ROADS SHALL NOT BE DISTURBED, EXCEPT AS NECESSARY TO COMPLETE THE WORK. THE SIGN MUST THEN BE IMMEDIATELY REESTABLISHED.

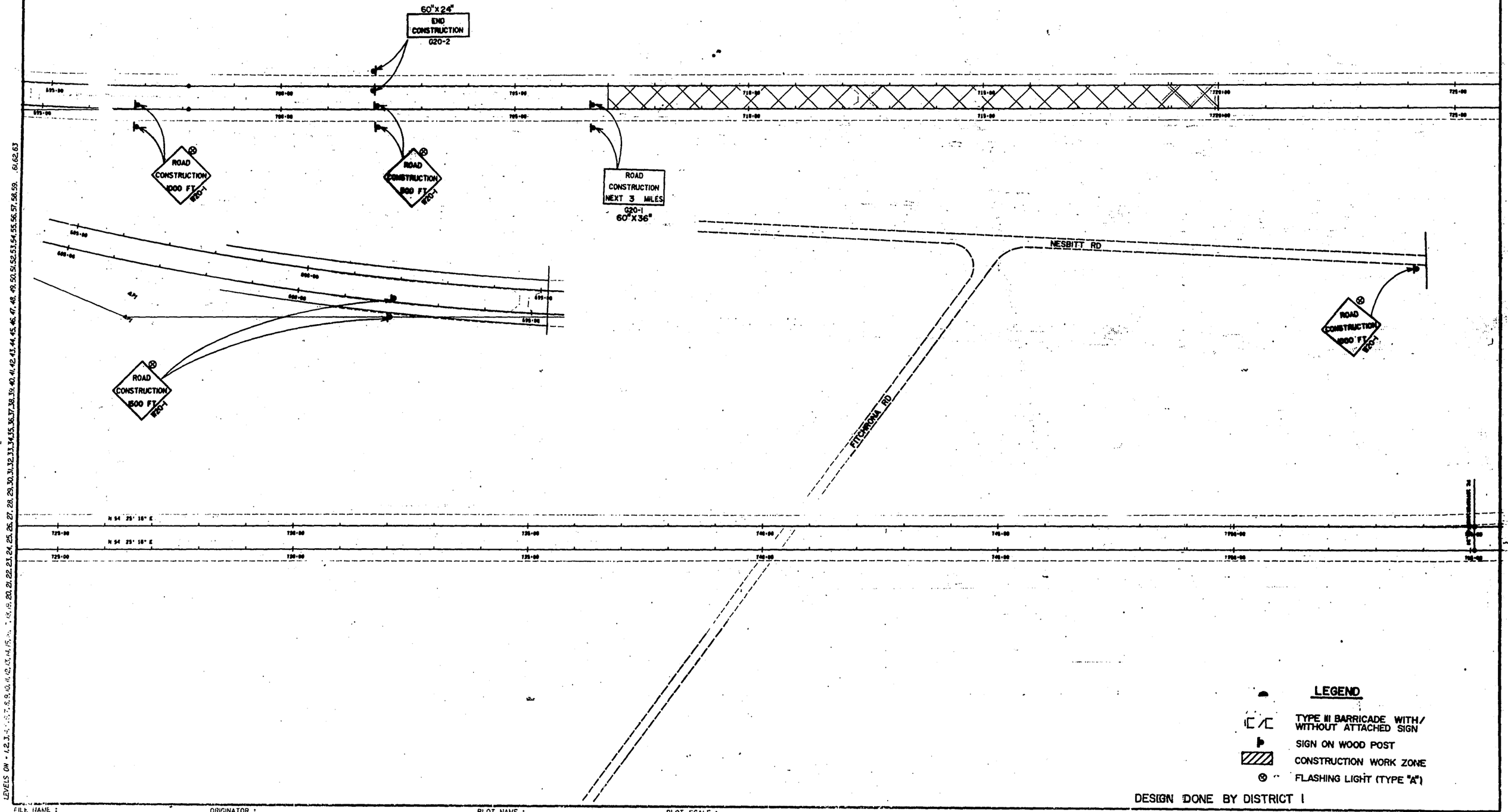
LEVELS ON

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.26

TRAFFIC CONTROL PLAN FOR

U.S.H. 18 TEMPORARY CROSS - OVERS DANE CO.

STAGE I



DESIGN DONE BY DISTRICT 1

LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

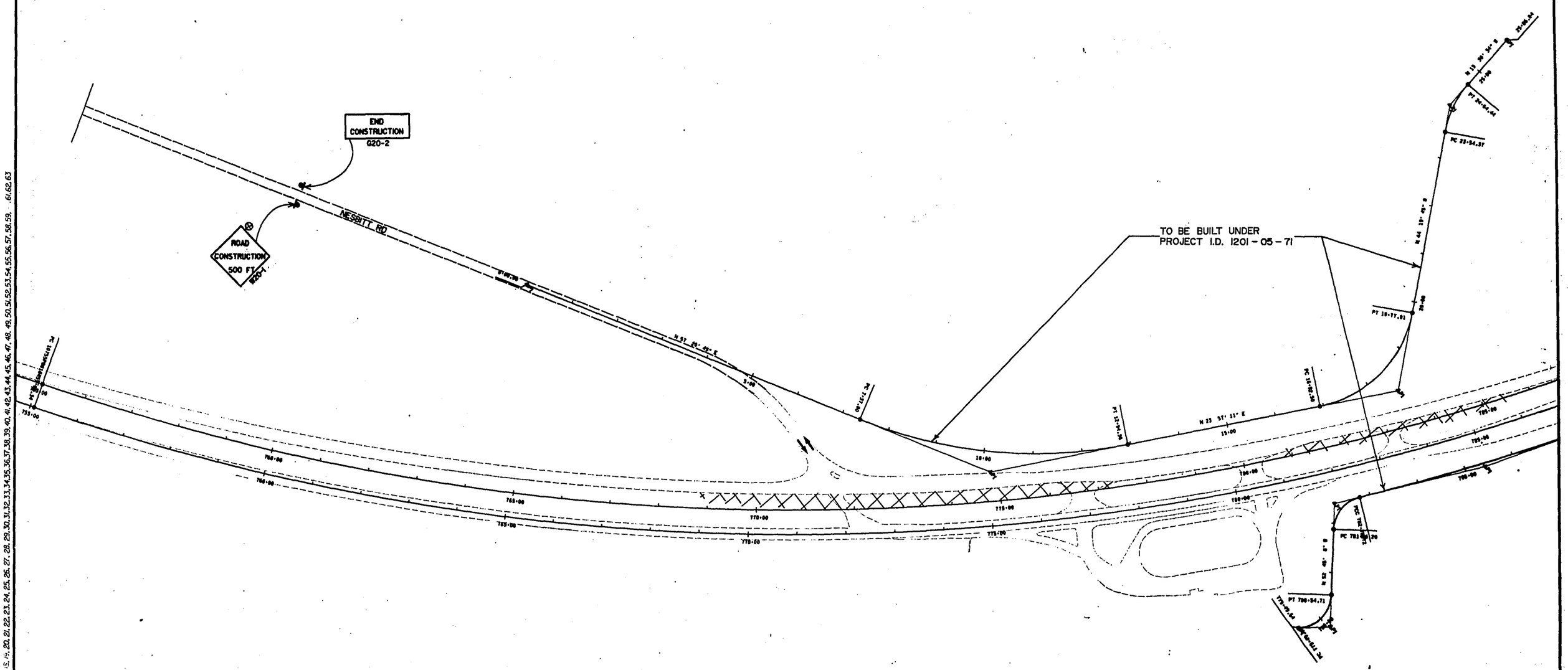
FILE NAME : ORIGINATOR : PLOT NAME : PLOT SCALE :

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.27

TRAFFIC CONTROL PLAN FOR

U.S.H. 18 TEMPORARY CROSS - OVERS DANE CO.

STAGE I



LEGEND

- TYPE III BARRICADE WITH/ WITHOUT ATTACHED SIGN
- SIGN ON WOOD POST
- CONSTRUCTION WORK ZONE
- FLASHING LIGHT (TYPE "A")

DESIGN DONE BY DISTRICT 1

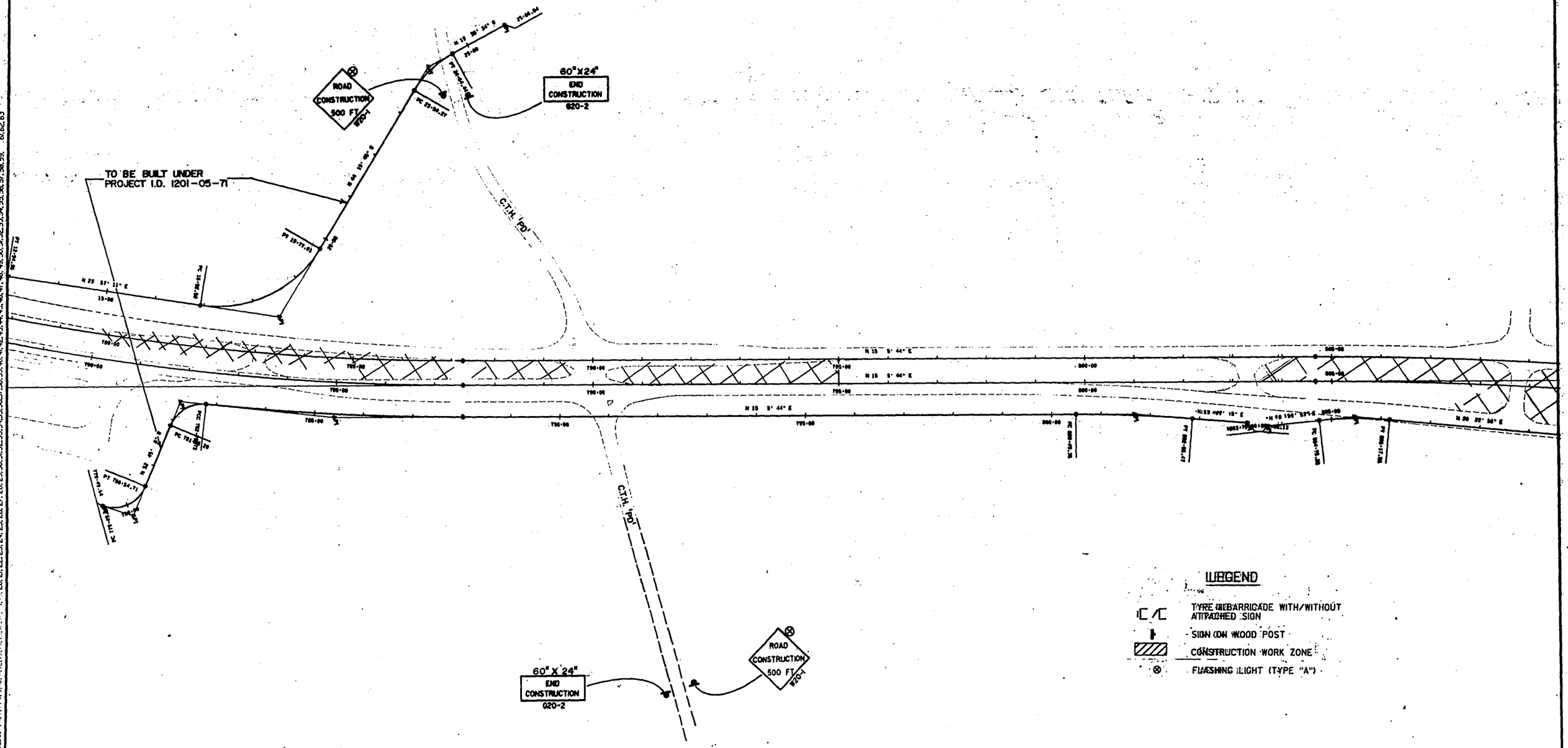
LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

FILE NAME : ORIGINATOR : PLOT NAME : PLOT SCALE :

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.28

TRAFFIC CONTROL PLAN
FOR
U.S.H. 18 TEMPORARY CROSS - OVERS DANE CO.

STAGE I



DESIGN DONE BY DISTRICT I

LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59, 60,62,63

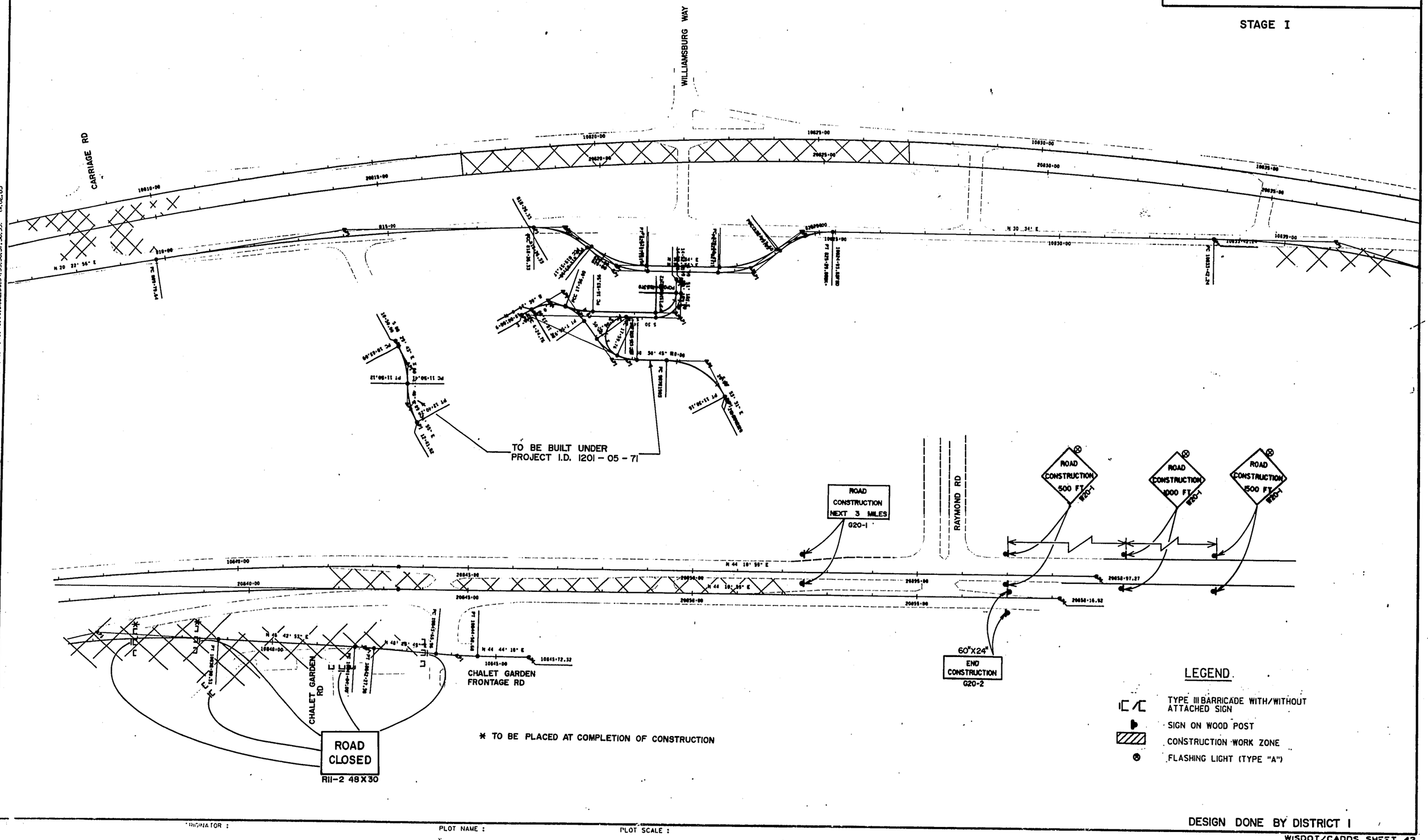
FILE NAME : ORIGINATOR : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	2.29

TRAFFIC CONTROL PLAN FOR U.S.H. 18 TEMPORARY CROSS – OVERS DANE CO.

STAGE I



* TO BE PLACED AT COMPLETION OF CONSTRUCTION

LEGEND

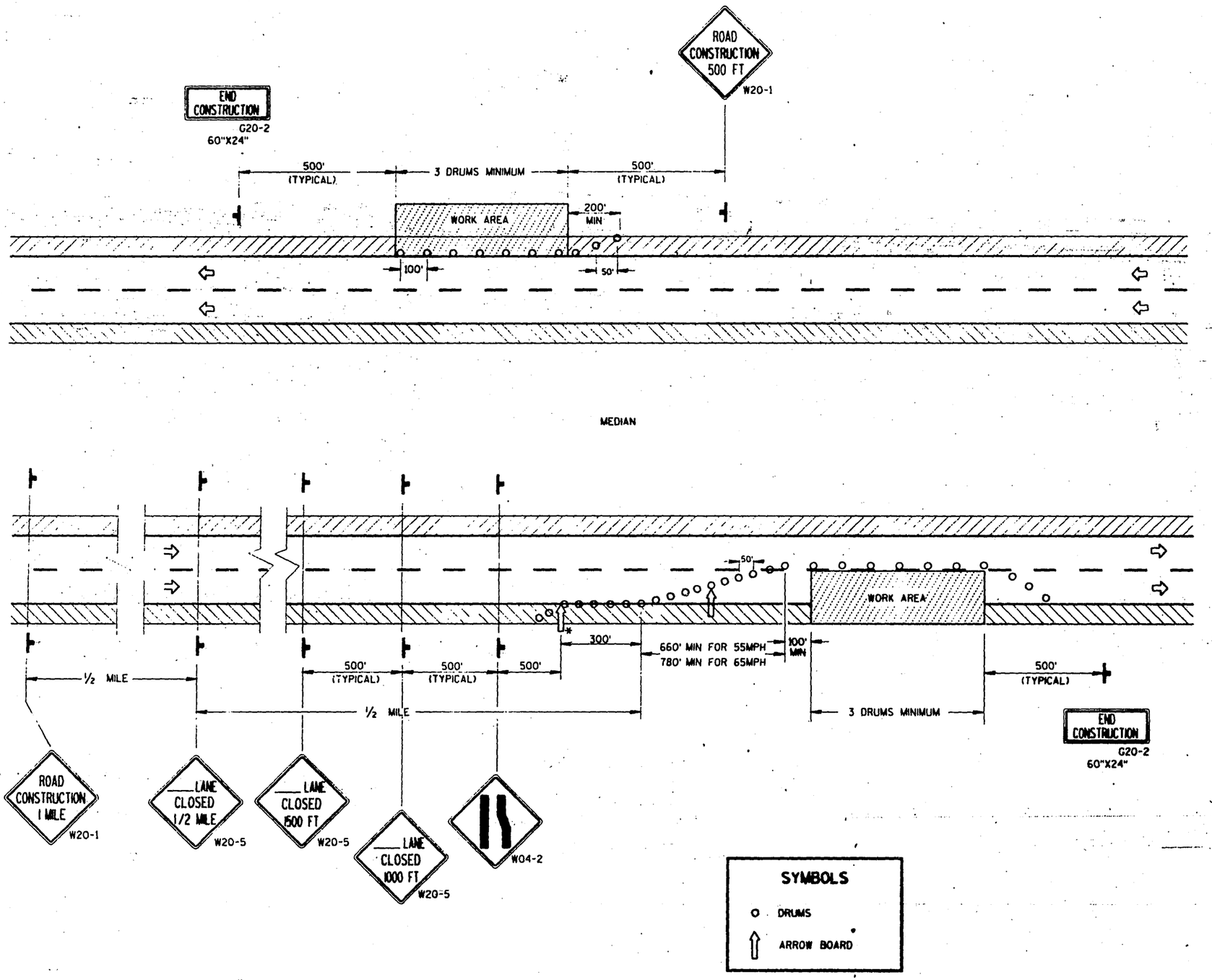
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- SIGN ON WOOD POST
- CONSTRUCTION WORK ZONE
- FLASHING LIGHT (TYPE "A")

DESIGN DONE BY DISTRICT 1

PROJECT NUMBER	SHEET NO.
1201 - 04 - 75	2.30

TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION

U.S.H. 18 TEMPORARY CROSS - OVERS — DANE CO.



SYMBOLS

- DRUMS
- ARROW BOARD

* ARROW BOARD LOCATION APPROX. 300' IN ADVANCE OF LANE TAPER OR POSITION FOR OPTIMUM VISIBILITY.

GENERAL NOTES

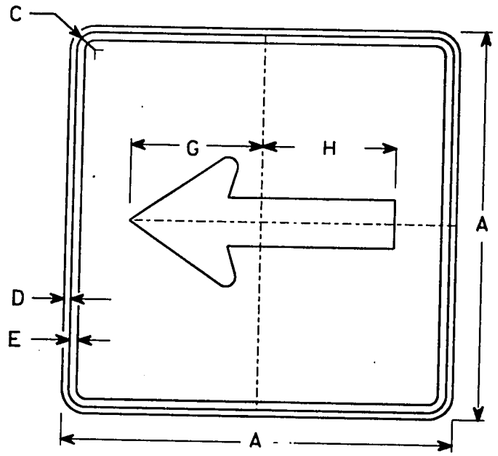
1. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
2. FOR NIGHTTIME OPERATION ALL ADVANCE SIGNS SHALL HAVE A TYPE "A" FLASHING LIGHT.
3. DURING NIGHTTIME OPERATIONS, TYPE "C" (STEADY BURN) LIGHTS SHALL BE PROVIDED ON DRUMS IN TAPERS AND ON ALL DRUMS IN AREAS WITH HIGH AMOUNTS OF AMBIENT LIGHTING OR AS DIRECTED BY THE ENGINEER.
4. WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.
5. ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTE
6. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROU IS ORANGE.
7. USE LEFT OR RIGHT MESSAGE AS REQUIRED.

SPECIAL APPLICATION NOTES

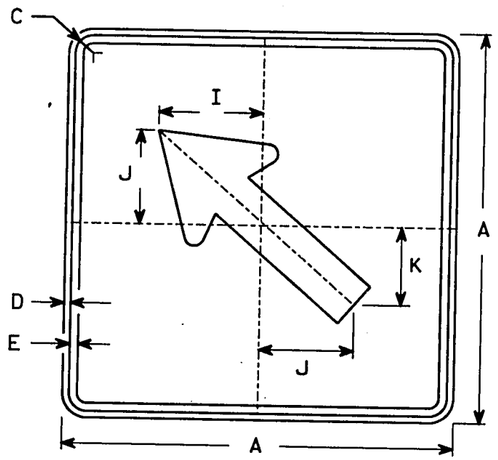
THE TAPER SHOULD EXTEND ACROSS THE SHOULDER, UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.

ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

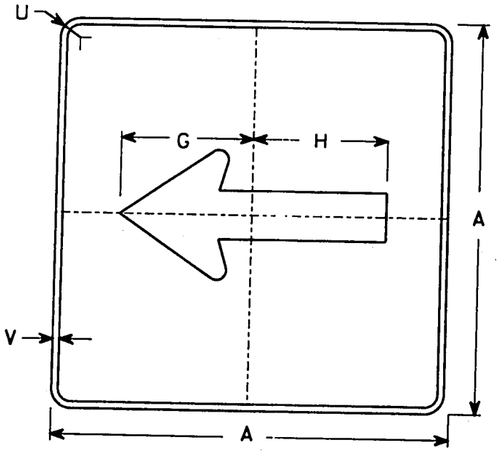
DESIGN DONE BY DISTRICT 1



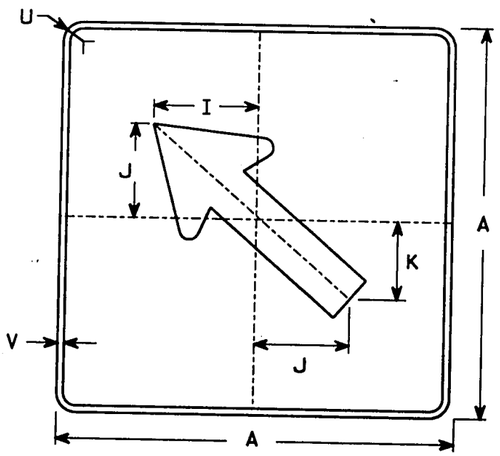
M6-1
MK6-1
MM6-1 (See Note 5)
MO6-1



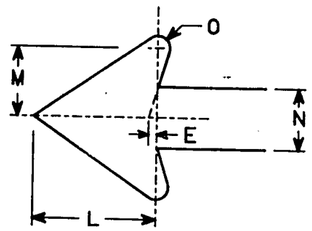
M6-2
MK6-2
MM6-2 (See Note 5)
MO6-2



MB6-1
MG6-1
MN6-1
MR6-1



MB6-2
MG6-2
MN6-2
MR6-2



NOTES

1. Signs are Type II - Reflective - reference WIS DOT Standard Specification for ROAD and BRIDGE CONSTRUCTION latest edition
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - Reflective white
   Message - Black
   MB6-1 and MB6-2 Background - Reflective blue
   Message - Reflective white
   MG6-1 and MG6-2 Background - Reflective green
   Message - Reflective white
   MK6-1 and MK6-2 Background - Non-Reflective green
   Message - Non-Reflective white
   MM6-1 and MM6-2 Background - Reflective white
   Message - Reflective green
   MN6-1 and MN6-2 Background - Reflective brown
   Message - Reflective white
   MO6-1 and MO6-2 Background - Reflective orange
   Message - Black
   MR6-1 and MR6-2 Background - Non-Reflective brown
   Message - Non-Reflective yellow
5. Border shall be omitted on MM series.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

DATE DRAWN 2-4-93 DATE REDRAWN
DATE REVISED

STANDARD SIGNS
M6-1 & M6-2
SERIES

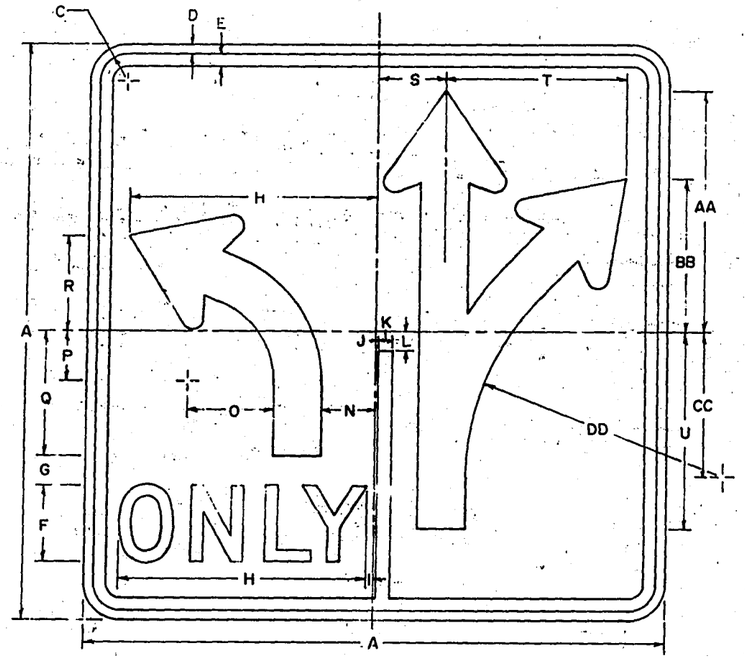
WISCONSIN DEPT OF TRANSPORTATION

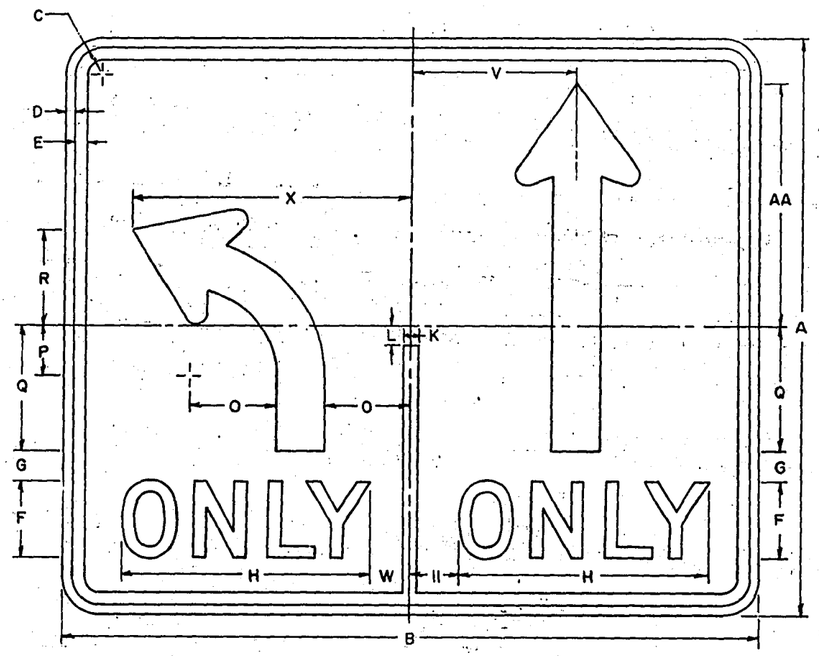
APPROVED Patrick T. Rusch
State Traffic Engineer
DATE 2/12/93 PLATE NO. M6-1.6

TR STDPLATE M61.DGN

LEVELS ON • 2.3. 5. 10.

1201-04-75 / 2.32



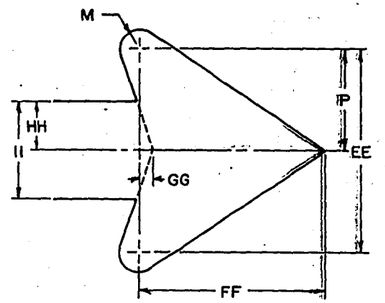


R3-8

NOTES

1. Sign is Type II - Reflective - reference WIS D.O.T. Standard Specification for ROAD and BRIDGE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series "D".
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	COOL SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	30 x 30 Bid Area Sq. Ft.	36 x 30 Bid Area Sq. Ft.
Minimum	1																												
Standard	2	30	36	1 3/8	1/2	5/8	4	1 1/2	12 7/8	3/8	1/8	3/4	1	1/2	2 3/4	4 1/2	2 5/8	6 1/2	5	3 1/2	9 3/8	10 1/4	8 1/2	2	14 1/2			6.25	7.5
Oversize	3																												
Exp way	4																												
Freeway	5																												
Bicycle	6																												
Snowmobile	7																												
		AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ		
Minimum	1	12 5/8	8	7 1/2	13 1/4	5 1/4	4 3/4	3/8	1 1/4	2 1/2																			
Standard	2																												
Oversize	3																												
Exp way	4																												
Freeway	5																												
Bicycle	6																												
Snowmobile	7																												



Date Drawn – Date Redrawn – 9-1-81 MM

Date Revised –

TYPICAL SIGNS
R3-8 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Chief Traffic Engineer

DATE 1-6-83 PLATE NO R3-8.3

DATE 03/31/93

ESTIMATE OF QUANTITIES

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1201-04-75 QUANTITY
20101	CLEARING	STA.	20.00	20.00
20102	CLEARING	I.D.	85.00	85.00
20104	GRUBBING	STA.	20.00	20.00
20105	GRUBBING	I.D.	85.00	85.00
20301	REMOVING OLD CULVERT, STATION 21'M'+00	L.S.	1.00	1.00
20330	REMOVING OLD CULVERTS	EACH	4.00	4.00
20405	REMOVING CURB AND GUTTER	L.F.	955.00	955.00
20412	REMOVING FENCE	L.F.	5,450.00	5,450.00
20501	COMMON EXCAVATION	C.Y.	239,612.00	239,612.00
20502	ROCK EXCAVATION	C.Y.	44,600.00	44,600.00
20610	EXCAVATION FOR STRUCTURES, BRIDGES B-13-409	L.S.	1.00	1.00
20611	EXCAVATION FOR STRUCTURES, BRIDGES B-13-410	L.S.	1.00	1.00
20801	BORROW EXCAVATION	C.Y.	2,025.00	2,025.00
21301	FINISHING ROADWAY	L.S.	1.00	1.00
21401	OBLITERATING OLD ROAD	STA.	7.00	7.00
30404	CRUSHED AGGREGATE BASE COURSE	TON	32,686.00	32,686.00
40204	ASPHALTIC MATERIAL FOR TACK COAT	GAL.	250.00	250.00
40501	ASPHALTIC MATERIAL FOR PLANT MIXES	TON	315.00	315.00
40713	ASPHALTIC CONCRETE PAVEMENT, TYPE MV	TON	4,248.00	4,248.00
40714	ASPHALTIC CONCRETE PAVEMENT, TYPE LV	TON	740.00	740.00
41509	CONCRETE PAVEMENT, 9-INCH	S.Y.	585.00	585.00
41534	CONCRETE SURFACE DRAINS	C.Y.	46.00	46.00
41535	CONCRETE PAVEMENT APPROACH SLAB	S.Y.	320.00	320.00
50201	CONCRETE MASONRY, BRIDGES	C.Y.	1,082.00	1,082.00
50220	PREFORMED ELASTOMERIC COMPRESSION JOINT SEALER, 2-INCH	L.F.	275.00	275.00
50230	PROTECTIVE SURFACE TREATMENT	GAL.	203.00	203.00
50232	EXPANSION DEVICE, STRUCTURE B-13-410	L.S.	1.00	1.00
20411	REMOVING GUARDRAIL	L.F.	270.00	270.00

Sheet 3

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1201-04-75 QUANTITY
50309	PRESTRESSED GIRDER, I TYPE, 70-INCH	L.F.	967.00	967.00
50409	CONCRETE MASONRY, ENDWALLS	C.Y.	34.00	34.00
50504	HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	38,040.00	38,040.00
50511	COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	228,950.00	228,950.00
50606	HIGH-STRENGTH STRUCTURAL STEEL	LB.	849,730.00	849,730.00
50626	NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	12.00	12.00
50630	WELDED STUD SHEAR CONNECTORS, 7/8X4-INCH	EACH	3,357.00	3,357.00
50650	FIXED BEARING ASSEMBLIES, STRUCTURE B-13-410	EACH	6.00	6.00
50660	EXPANSION BEARING ASSEMBLIES, STRUCTURE B-13-410	EACH	12.00	12.00
51121	STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	3,330.00	3,330.00
51130	PILE POINTS	EACH	117.00	117.00
51706	PAINTING, EPOXY SYSTEM, STRUCTURE B-13-410	L.S.	1.00	1.00
52003	CULVERT PIPE, CLASS III, 18-INCH	L.F.	54.00	54.00
52005	CULVERT PIPE, CLASS III, 24-INCH	L.F.	80.00	80.00
52007	CULVERT PIPE, CLASS III, 30-INCH	L.F.	88.00	88.00
52061	APRON ENDWALLS FOR CULVERT PIPE, 18-INCH	EACH	2.00	2.00
52063	APRON ENDWALLS FOR CULVERT PIPE, 24-INCH	EACH	4.00	4.00
52065	APRON ENDWALLS FOR CULVERT PIPE, 30-INCH	EACH	1.00	1.00
~~52084~~	~~TEMPORARY CULVERT PIPE, 24-INCH~~	~~L.F.~~	~~1,055.00~~	~~1,055.00~~
52145	STEEL APRON ENDWALLS FOR CULVERT PIPE, 12-INCH	EACH	3.00	3.00
52181	STEEL APRON ENDWALLS FOR CULVERT PIPE, SLOPED SECTION, 30-INCH	EACH	1.00	1.00
52205	REINFORCED CONCRETE CULVERT PIPE, CLASS III, 24-INCH	L.F.	382.00	382.00

Sheet 3.1

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1201-04-75 QUANTITY
52210	REINFORCED CONCRETE CULVERT PIPE, CLASS III, 42-INCH	L.F.	542.00	542.00
52211	REINFORCED CONCRETE CULVERT PIPE, CLASS III, 48-INCH	L.F.	1,118.00	1,118.00
52212	REINFORCED CONCRETE CULVERT PIPE, CLASS III, 54-INCH	L.F.	472.00	472.00
52264	REINFORCED CONCRETE APRON ENDWALLS FOR CULVERT PIPE, 24-INCH	EACH	3.00	3.00
52268	REINFORCED CONCRETE APRON ENDWALLS FOR CULVERT PIPE, 42-INCH	EACH	2.00	2.00
52270	REINFORCED CONCRETE APRON ENDWALLS FOR CULVERT PIPE, 54-INCH	EACH	2.00	2.00
60123	CONCRETE CURB AND GUTTER, 30-INCH, TYPE A	L.F.	66.00	66.00
60133	CONCRETE CURB AND GUTTER, 30-INCH, TYPE D	L.F.	1,496.00	1,496.00
60205	CONCRETE SIDEWALK, 5-INCH	S.F.	540.00	540.00
60306	TEMPORARY PRECAST CONCRETE BARRIER, STATE-OWNED	L.F.	160.00	160.00
60307	TEMPORARY PRECAST CONCRETE BARRIER, INSTALLED	L.F.	160.00	160.00
60405	SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	1,963.00	1,963.00
60601	RIPRAP	C.Y.	650.00	650.00
60827	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 18-INCH	L.F.	428.00	428.00
61110	MANHOLES, TYPE 1	EACH	1.00	1.00
61113	MANHOLES, TYPE 5	EACH	2.00	2.00
61121	INLETS, TYPE 1	EACH	3.00	3.00
61122	INLETS, TYPE 3	EACH	4.00	4.00
61123	INLETS, TYPE 8	EACH	3.00	3.00
61124	INLETS, TYPE 9	EACH	2.00	2.00
61125	INLETS, TYPE 10	EACH	1.00	1.00
61151	MANHOLE COVERS, TYPE J	EACH	1.00	1.00
61163	INLET COVERS, TYPE C	EACH	2.00	2.00
61167	INLET COVERS, TYPE H	EACH	4.00	4.00
61170	INLET COVERS, TYPE MS	EACH	10.00	10.00

Sheet 3.2

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1201-04-75 QUANTITY
61176	INLET COVERS, TYPE V	EACH	3.00	3.00
61201	PIPE UNDERDRAIN, 6-INCH	L.F.	180.00	180.00
61211	PIPE UNDERDRAIN, UNPERFORATED, 6-INCH	L.F.	40.00	40.00
61214	PIPE UNDERDRAIN, UNPERFORATED, 12-INCH	L.F.	186.00	186.00
61407	STEEL THRIE BEAM STRUCTURE APPROACH	L.F.	216.00	216.00
61408	STEEL PLATE BEAM GUARD, CLASS A	L.F.	1,130.00	1,130.00
61412	ANCHORAGES FOR STEEL PLATE BEAM GUARD, TYPE 1	EACH	8.00	8.00
61433	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	8.00	8.00
61601	WOVEN WIRE FENCE	L.F.	8,810.00	8,810.00
61614	CHAIN LINK FENCE, 8 FT.	L.F.	420.00	420.00
61801	MAINTENANCE AND REPAIR OF HAUL ROADS	L.S.	1.00	1.00
61910	MOBILIZATION	L.S.	1.00	1.00
62101	LANDMARK REFERENCE MONUMENTS	EACH	8.00	8.00
62111	LANDMARK REFERENCE MONUMENTS AND CAST IRON COVERS	EACH	2.00	2.00
62401	WATER	MGAL	100.00	100.00
62505	SALVAGED TOPSOIL	S.Y.	112,600.00	112,600.00
62703	MULCHING	TON	89.00	89.00
62803	EROSION MAT, DELIVERED	S.Y.	16,400.00	16,400.00
62804	EROSION MAT, INSTALLED	S.Y.	16,400.00	16,400.00
62811	EROSION BALES, DELIVERED	EACH	45.00	45.00
62812	EROSION BALES, INSTALLED	EACH	45.00	45.00
62815	SILT FENCE, DELIVERED	L.F.	16,500.00	16,500.00
62816	SILT FENCE, INSTALLED	L.F.	16,500.00	16,500.00
62817	SILT FENCE MAINTENANCE	L.F.	16,500.00	16,500.00
62819	MOBILIZATIONS, EROSION CONTROL	EACH	3.00	3.00
62905	FERTILIZER, TYPE B	CWT.	72.00	72.00
63002	SEEDING	LB.	2,700.00	2,700.00

Sheet 33

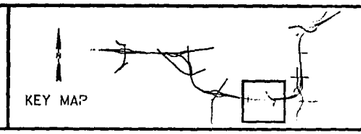
ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1201-04-75 QUANTITY
63003	SEEDING, TEMPORARY	LB.	2,750.00	2,750.00
63101	SODDING	S.Y.	3,000.00	3,000.00
63102	REINFORCED SODDING	S.Y.	1,020.00	1,020.00
63411	WOOD POSTS, 4X6-INCH X 14-FT.	EACH	1.00	1.00
63412	WOOD POSTS, 4X6-INCH X 16-FT.	EACH	14.00	14.00
63413	WOOD POSTS, 4X6-INCH X 18-FT.	EACH	1.00	1.00
63702	SIGNS, TYPE II, REFLECTIVE	S.F.	104.56	104.56
63827	REMOVING SIGNS, TYPE II	EACH	3.00	3.00
63830	REMOVING SMALL SIGN SUPPORTS	EACH	2.00	2.00
64202	FIELD OFFICE, TYPE B	L.S.	1.00	1.00
64210	FIELD LABORATORY	L.S.	1.00	1.00
64301	TRAFFIC CONTROL	L.S.	1.00	1.00
64313	TRAFFIC CONTROL, DRUMS	DAYS	140.00	140.00
64318	TRAFFIC CONTROL, BARRICADES, TYPE III	DAYS	5,581.00	5,581.00
64321	TRAFFIC CONTROL, WARNING LIGHTS, TYPE A	DAYS	9,985.00	9,985.00
64323	TRAFFIC CONTROL, WARNING LIGHTS, TYPE C	DAYS	140.00	140.00
64326	TRAFFIC CONTROL, SIGNS	DAYS	9,873.00	9,873.00
64406	PAVEMENT MARKING, EPOXY, 4-INCH	L.F.	8,850.00	8,850.00
64438	PAVEMENT MARKING, STOP LINE, EPOXY, 24-INCH	L.F.	20.00	20.00
64484	TEMPORARY PAVEMENT MARKING	L.F.	15,593.00	15,593.00
64487	REMOVING PAVEMENT MARKINGS	L.F.	4,925.00	4,925.00
64503	GEOTEXTILE FABRIC, TYPE DF	S.Y.	150.00	150.00
64505	GEOTEXTILE FABRIC, TYPE R	S.Y.	1,300.00	1,300.00
64601	SAWING EXISTING PAVEMENT	L.F.	220.00	220.00
90001	CONCRETE MASONRY, BRIDGES, TYPE K	C.Y.	676.00	676.00
90002	TEMPORARY PAVEMENT MARKING, ARROWS, TYPE 1	EACH	2.00	2.00
90003	TEMPORARY PAVEMENT MARKING, ARROWS, TYPE 2	EACH	6.00	6.00

Sheet 34

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1201-04-75 QUANTITY
90004	TEMPORARY PAVEMENT MARKING, WORDS	EACH	5.00	5.00
90005	TRAFFIC CONTROL, DETOUR	L.S.	1.00	1.00
90006	TRAFFIC CONTROL, DETOUR SIGNS	DAYS	5,360.00	5,360.00
90451	STEEL DIAPHRAGMS, STRUCTURE B-13-409	EACH	12.00	12.00
90545	CONCRETE COLLAR	EACH	2.00	2.00
90558	SLOPED STEEL ENDWALLS FOR CULVERT PIPE, CROSS DRAINS, 42-INCH	EACH	2.00	2.00
90559	SLOPED STEEL ENDWALLS FOR CULVERT PIPE, CROSS DRAINS, 48-INCH	EACH	1.00	1.00
90656	TEMPORARY DELINEATORS	EACH	2.00	2.00
90726	LOCATING NO PASSING ZONES	MI.	.43	.43
90007	EXCAVATE GROUNDWATER MONITORING TRENCH	L.S.	1.00	1.00
90008	SAFETY FENCE	L.F.	650.00	650.00
90009	PIER FOUNDATION STABILIZATION GRADE "A" CONCRETE	L.S.	1.00	1.00
90010	REPLACE SHEAR STUDS 5 & 6 INCH	L.S.	1.00	1.00
90011	TRANSPORT EXTRA CHAIRS & REBAR TO PROJECT	L.S.	1.00	1.00
90012	PAINT FACIA EXTERIOR GIRDERS, B-13-410	L.S.	1.00	1.00
90013	EXTRA WORK, RELOCATE PRIVATE ENTRANCE	L.S.	1.00	1.00

Sheet 3.5

ALL QUANTITIES FOR GROUP CODE 010



STATE PROJECT NUMBER 1201-04-75 | SHEET NO. 3A

MISCELLANEOUS QUANTITIES

USH 18 | DANE COUNTY

CLEARING & GRUBBING

STATION - STATION	LOCATION	CLEARING I.D.	CLEARING STA	GRUBBING I.D.	GRUBBING STA
620+00 - 621+00	USH 18 RT.		1		1
17'L'+00 - 18'L'+00	LOCUST DR. LT.		1		1
18'L'+00 - 19'L'+00	LOCUST DR. LT./RT.		1		1
19'L'+00 - 20'L'+00	LOCUST DR. LT./RT.		1		1
20'L'+00 - 21'L'+00	LOCUST DR. LT./RT.		1		1
21'L'+00 - 22'L'+00	LOCUST DR. LT./RT.		1		1
22'L'+00 - 23'L'+00	LOCUST DR. LT.		1		1
23'L'+00 - 24'L'+00	LOCUST DR. LT.		1		1
24'L'+00 - 24'L'+45	LOCUST DR. LT.		1		1
13'M'+00 - 14'M'+00	CTH M LT.	18		18	
17'M'+00 - 18'M'+00	CTH M LT.		1		1
18'M'+00 - 19'M'+00	CTH M LT.		1		1
20'M'+00 - 21'M'+00	CTH M LT.		1		1
21'M'+00 - 22'M'+00	CTH M LT.		1		1
15'RT'+00 - 16'RT'+00	RANGE TRAIL RD. RT.	30		30	
18'RT'+00 - 19'RT'+00	RANGE TRAIL RD. LT.	12		12	
18'RT'+00 - 19'RT'+00	RANGE TRAIL RD. RT.	25		25	

REMOVING OLD CULVERTS

STATION	LOCATION	EACH	L.S.	DESCRIPTION
20'L'+20	LOCUST DR.	1		18" X 46' CMCP
11'RT'+10	RANGE TRAIL RD. RT	1		42" X 62' CMCP
16'RT'+35	RANGE TRAIL RD. RT	1		18" X 32' CMCP
21'M'+00	CTH M		1	3' X 6' X 30' BOX CULVERT
21'M'+00	CTH M	1		4' X 6' X 30' CMPA

REMOVING FENCE

STATION - STATION	LOCATION	LENGTH L.F.
615+20	USH 18	320
615+40	USH 18	320
18'L'+10 - 20'L'+00	LOCUST DR. RT.	210
17'L'+80 - 21'L'+40	LOCUST DR. RT.	370
619+60 - 632+40	USH 18 RT.	1,280
632+40	USH 18 RT.	270
640+50 - 644+85	USH 18	680
18'M'+00 - 29'M'+00	CTH M LT.	1,100
645+75	USH 18 LT.	250
22'M'+50 - 29'M'+00	CTH M RT.	650

EARTHWORK SUMMARY

STATION - STATION	LOCATION	ROCK C.Y.	COMMON C.Y.	FILL C.Y.	(WASTE)* OR BORROW C.Y.
607+00 - 648+00	USH 18	44,600	220,000	128,200	(122,000)
10'M'+00 - 29'M'+00	CTH M	-----	4,500	20,700	21,300
17'L'+00 - 24'L'+00	LOCUST DRIVE	-----	1,500	4,200	3,700
11'RT'+25 - 20'RT'+00	RANGE TRAIL ROAD	-----	6,500	1,300	(5,000)
706+97 - 853+00	TEMPORARY CROSSOVER	-----	-----	-----	2,000
	TOTAL	44,600	232,500		(100,000)

* WASTE/BORROW = (FILL - EXPANDED ROCK)*1.25 - COMMON CUT

OBLITERATING OLD ROAD

STATION - STATION	LOCATION	STA.
10'RT'+00- 17'RT'+00	EXISTING RANGE TRAIL RD.	7

CRUSHED AGGREGATE BASE COURSE

STATION - STATION	LOCATION	BASE TON
10'M'+00 - 18'M'+47.1	CTH M	4,450
21'M'+95.4 - 29'M'+00	CTH M	13,000
17'L'+00 - 18'L'+77.5	LOCUST DR.	570
21'L'+22 - 24'L'+45	LOCUST DR.	980
10'RT'+60 - 20'RT'+00	RANGE TRAIL RD.	3,260
630+00 - ----	MEDIAN CROSSOVER	20
10'M'+50 - ----	CTH M RT. F.E.	100
17'M'+80 - ----	CTH M LT. P.E.	120
13'RT'+65 - ----	RANGE TRAIL RD. RT. F.E.	30
16'RT'+25 - ----	RANGE TRAIL RD. RT. F.E.	70

ASPHALTIC CONCRETE PAVEMENT

STATION - STATION	LOCATION	ASPHALTIC CONCRETE PAVEMENT TYPE MV TON	ASPHALTIC CONCRETE PAVEMENT TYPE LV TON	ASPHALTIC MATERIAL FOR PLANT MIX TON	ASPHALTIC MATERIAL FOR TACK COAT GAL.
10'M'+00 - 29'M'+00	CTH M	1,340		90.0	150
10'RT'+65 - 20'RT'+00	RANGE TRAIL RD.		535	35.0	70
17'L'+00 - 24'L'+00	LOCUST DR.		205	15.0	30

CONCRETE PAVEMENT, 9 INCH

STATION - STATION	LOCATION	S.Y.
21'L'+22 - 21'L'+44	LOCUST DR.	28
17'M'+86 - 18'M'+47	CTH M	182
21'M'+95 - 22'M'+98	CTH M	375

CONCRETE SURFACE DRAIN

STATION - STATION	LOCATION	C.Y.
18'M'+38 - 18'M'+77	CTH M, LT.	41
18'L'+55 - 18'L'+78	LOCUST DR., LT. & RT.	5

CONCRETE PAVEMENT APPROACH SLAB

STATION - STATION	LOCATION	S.Y.
18'M'+13 - 18'M'+47	CTH M	86
21'M'+95 - 22'M'+41	CTH M	120
18'L'+55 - 18'L'+78	LOCUST DR.	57
21'L'+22 - 21'L'+44	LOCUST DR.	57

PREFORMED ELASTOMERIC COMPRESSION JOINT SEALER, 2-INCH

STATION	LOCATION	L.F.
18'M'+47.1	CTH M	85
21'M'+95.4	CTH M	130
18'L'+77.5	LOCUST DR	30
21'L'+22	LOCUST DR	30

59,60.

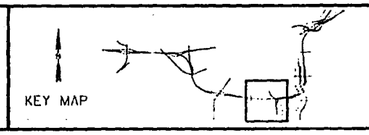
54

LEVELS ON .

FILE NAME: HDGN: 75300.DGN

ALL QUANTITIES FOR GROUP CODE 010

KEY MAP



STATE PROJECT NUMBER 1201-04-75

SHEET NO. 3B

MISCELLANEOUS QUANTITIES

USH 18 DANE COUNTY

CULVERT PIPE
INVERT OFFSETS AND ELEVATIONS

OUTLET STATION	-	INLET STATION	LOCATION	CLASS	18-INCH L.F.	24-INCH L.F.	30-INCH L.F.	THICKNESS (IN.) STEEL	THICKNESS (IN.) ALUMINUM	INLET OFFSET	INLET ELEV.	OUTLET OFFSET	OUTLET ELEV.	SLOPE (FT./FT.)	APRON ENDWALLS FOR CULVERT PIPE EACH INLET	APRON ENDWALLS FOR CULVERT PIPE EACH DISCHARGE	STEEL APRON ENDWALLS, SLOPED SECTION EACH INLET	STEEL APRON ENDWALLS, SLOPED SECTION EACH DISCHARGE
11'M'+60	-	----	CTH M	III		-	88	0.079	0.075	34' LT.	989.71	54' RT.	987.15	.029	-	1	1	-
24'M'+46 LT.	-	24'M'+66 LT.	CTH M	III		20		0.064	0.075	53' LT.	1009.00	53' LT.	1008.00	.050	1	1	-	-
16'RT'+52 RT.	-	15'RT'+98 RT.	RANGE TRAIL RD.	III	54			0.064	0.060	45' RT.	995.60	45' RT.	995.40	.003	1	1	-	-
16'RT'+70 RT.	-	----	RANGE TRAIL RD.	III		60	-	0.064	0.075	24' LT.	995.70	36' RT.	995.10	.010	1	1	-	-

REINFORCED CONCRETE CULVERT PIPE
PIPE INVERTS AND OFFSETS

INLET STATION	-	OUTLET STATION	CLASS	24-INCH L.F.	42-INCH L.F.	48-INCH L.F.	54-INCH L.F.	INLET OFFSET	INLET ELEV.	OUTLET OFFSET	OUTLET ELEV.	SLOPE (FT./FT.)	APRON ENDWALLS EACH INLET	APRON ENDWALLS EACH DISCHARGE	CONCRETE MASONRY ENDWALL INLET C.Y.	CONCRETE MASONRY ENDWALL OUTLET C.Y.	CONCRETE COLLAR EACH	JOINT TIES EACH	SLOPE STEEL ENDWALLS FOR CULVERT PIPE EACH INLET	SLOPE STEEL ENDWALLS FOR CULVERT PIPE EACH OUTLET
613+50 RT.		612+10	III	102				0' RT.	979.39	0' RT.	964.50	.150	-	-	-	-	1*	-	-	-
613+00 RT.		611+00 LT.	III				320	128' RT.	965.70	118' LT.	960.30	.017	1	1	-	-	1**	12	-	-
630+00 RT.		630+80 LT.	III		200			88' RT.	981.60	102' LT.	975.80	.029	1	1	-	-	-	12	-	-
630+00		630+40	III	40				0' RT.	982.15	0' RT.	980.00	.054	-	-	-	-	-	8	-	-
636+80 RT.		635+00 LT.	III			720		82' RT.	976.40	92' LT.	974.70	.007	-	-	9	9	-	-	-	-
637+40		----	III	86				0' LT.	977.10	88' LT.	975.82	.015	-	1	-	-	-	10	-	-
640+50 LT.		640+00 LT.	III	62				8' LT.	978.60	70' LT.	977.42	.019	-	1	-	-	-	10	-	-
642+56 LT.		642+00 LT.	III			57		74' LT.	978.42	83.5' LT.	978.00	.007	-	-	-	-	-	10	-	1
644+10 LT.		642+56 LT.	III			154		74' LT.	979.55	74' LT.	978.42	.007	-	-	-	-	-	-	-	-
645+94 LT.		644+10 LT.	III			187		110' LT.	980.93	74' LT.	979.55	.007	1	-	-	-	-	10	-	-
646+00 LT.		----	III	92				3' LT.	982.90	95' LT.	981.24	.179	-	1	-	-	-	10	-	-
648+25 RT.		644+82 RT.	III		342			85' RT.	990.04	82' RT.	982.44	.024	-	-	-	-	-	12	1	1
11'RT'+05		----	III				152	30' LT.	1007.90	46' RT.	1005.00	.038	-	-	8	8	-	-	-	-

* CONNECT TO 54-INCH RCCP
** CONNECT TO 42-INCH RCCP

CONCRETE SIDEWALK, 5 IN

STATION - STATION	LOCATION	S.F.
22'M'+57 - 23'M'+11	CTH M LT.	540

SLOPE PAVING, CRUSHED AGGREGATE

STATION - STATION	LOCATION	S.Y.
18'M'+22 - 18'M'+57	CTH M, RT.	33
22'M'+00 - 23'M'+94	CTH M, LT.	690

DRAINAGE STRUCTURES

STATION	LOCATION	INL./ M.H. TYPE	COVER TYPE	COVER EACH	TOP OF STRUCTURE (FLOW LINE AT STRUCTURE)	INVERT	DEPTH*
613+50	0' RT.	INL. 8	MS	1	982.89	979.39	3.50'
630+00	0' RT.	INL. 9	MS	2	985.80	982.15	3.65'
640+50	6' LT.	INL. 10	MS	3	987.75	978.83	0.00'
642+56	74' LT.	M.H. 5	C	1	938.00	978+42	9.58'
644+10	74' LT.	M.H. 5	C	1	990.00	979.55	10.45'
646+00	0' LT.	INL. 9	MS	2	986.57	982.90	3.67'
637+40	0' LT.	INL. 8	MS	1	980.43	977.10	3.33'
18'M'+40	CTH M 31' LT.	INL. 1	V	1	1007.85	1004.49	2.53'
18'L'+54.3	LOCUST DR. 14' LT.	INL. 1	V	1	1026.14	1021.14	4.17'
18'L'+56.4	LOCUST DR. 14' RT.	INL. 1	V	1	1026.16	1021.16	4.17'

NOTE:
* DEPTH REFERS TO STRUCTURE DEPTH AS SHOWN ON S.D.D.

PIPE UNDERDRAIN, UNPERFORATED, 12-INCH*

OUTLET STATION	INLET LOCATION	PIPE UNDERDRAIN UNPERFORATED 12-INCH L.F.	INLET OFFSET	INVERT ELEV.	OUTLET OFFSET	INVERT ELEV.	SLOPE (FT./ FT.)	STEEL APRON ENDWALLS EACH
18'M'+40 LT.	CTH M	20***	31' LT.	1004.49	54' LT.	1002.50	.087	1
618+50 LT.	LOCUST DR.	83***	14' LT.	1021.14	78' LT.	990.60	N.A.	1
620+10 RT.	LOCUST DR.	83***	14' RT.	1021.16	91' RT.	992.00	N.A.	1

NOTE:

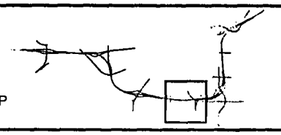
*** 2 ELBOWS REQUIRED
* TO BE USED WITH CONCRETE SURFACE DRAINS, DROP INLET TYPE AT STRUCTURES B-13-409 AND B-13-410

LEVELS ON

FILE NAME: HDGN: 75300.DGN

ALL QUANTITIES FOR GROUP CODE 010

KEY MAP



STATE PROJECT NUMBER 1201-04-75 | SHEET NO. 3C

MISCELLANEOUS QUANTITIES

USH 18 | DANE COUNTY

CONCRETE CURB & GUTTER, 30 INCH, TYPE A

STATION - STATION	LOCATION	L.F.
18'M'+60 - 18'M'+70	CTH M LT.	10
22'M'+42 - 22'M'+98	CTH M LT.	56

WOVEN WIRE FENCE

STATION - STATION	LOCATION	L.F.
607+00 - 18'L'+75	USH 18 LT.	1200
607+00 - 21'L'+25	USH 18 RT.	1230
18'L'+75 - 18'M'+10	USH 18 LT.	2450
21'L'+25 - 21'M'+75	USH 18 RT.	2720
18'M'+40 - 648+00	USH 18 LT.	590
22'M'+80 - '29'M'+00	USH 18 RT.	620

EROSION MAT

STATION - STATION	LOCATION	DELIVERED S.Y.	INSTALLED S.Y.
617+00 - 626+00	USH 18 LT.	6700	6700
617+00 - 626+00	USH 18 RT.	2800	2800
640+00 - 647+00	USH 18 LT.	3900	3900
642+00 - 25'M'+00	USH 18 RT.	2700	2700
606+75 - ----	USH 18	150	150
649+07 - ----	USH 18	150	150

RIPRAP

STATION	LOCATION	RIPRAP C.Y.
611+00	USH 18, 140' LT.	10
630+80	USH 18, 114' LT.	7
635+00	USH 18, 106' LT.	42
636+80	USH 18, 96' RT.	27
642+50	USH 18, 83' LT.	7
644+77	USH 18, 83' RT.	7
646+00	USH 18, 105' LT.	7
647+00	USH 18, LT.	40
648+25	USH 18, RT.	45
11'RT'+00	RANGE TRAIL RD. 99' LT.	19
11'RT'+10	RANGE TRAIL RD. 66' RT.	433
16'RT'+65	RANGE TRAIL RD. 60' RT.	3
18'L'+54	LOCUST DR. 87' LT.	1
18'L'+56	LOCUST DR. 77' RT.	1
18'M'+50	CTH M 64' LT.	1

LANDMARK REFERENCE MONUMENTS AND CAST IRON COVERS

APPROX. STATION	LOCATION	MONUMENT EACH	MONUMENT AND COVERS EACH
21'L'+71.77	LOCUST DR. 0.62' LT.	4	1
22'M'+00	CTH M 100' RT.	4	1

EROSION BALES

STATION	LOCATION	DELIVERED EACH	INSTALLED EACH
609+00	USH 18 RT.	4	4
615+00	USH 18 LT.	4	4
617+00	USH 18 RT.	4	4
627+00	USH 18 LT.	4	4
628+00	USH 18 RT.	4	4
631+00	USH 18 RT.	4	4
634+00	USH 18 RT.	4	4
636+00	USH 18 LT.	4	4
----	UNDISTRIBUTED	13	13

STEEL PLATE BEAM GUARD, CLASS A

STATION - STATION	LOCATION	STEEL PLATE BEAM GUARD CLASS A L.F.	STEEL THRIE-BEAM STRUCTURE APPROACH L.F.	ANCHORAGES FOR STEEL PLATE BEAM GUARD, TYPE 1 EACH
18'L'+62 - 18'L'+36	LOCUST DR. RT		27	
18'L'+36 - 18'L'+92	LOCUST DR. RT.	44		
17'L'+92 - ----	LOCUST DR. 19' RT.			1
18'L'+65 - 18'L'+38	LOCUST DR. LT.		27	
18'L'+38 - 17'L'+94	LOCUST DR. LT.	44		
17'L'+94 - ----	LOCUST DR. 19' LT.			1
21'L'+34 - 21'L'+61	LOCUST DR. LT.		27	
21'L'+61 - 22'L'+05	LOCUST DR. LT.	44		
22'L'+05 - ----	LOCUST DR. 19' LT.			1
21'L'+37 - 21'L'+64	LOCUST DR. RT		27	
21'L'+64 - 22'L'+08	LOCUST DR. RT.	44		
22'L'+08 - ----	LOCUST DR. 19' RT.			1
17'M'+95 - 17'M'+69	CTH M RT.		27	
17'M'+69 - 17'M'+25	CTH M RT.	44		
17'M'+25 - ----	CTH M 26' RT.			1
18'M'+63 - 18'M'+36	CTH M LT.		27	
18'M'+36 - 17'M'+91	CTH M LT.	44		
17'M'+91 - ----	CTH M 36' LT.			1
22'M'+75 - 23'M'+03	CTH M LT.		27	
23'M'+25 - 24'M'+49	CTH M LT.	124		
24'M'+47 - ----	CTH M 36' LT.			1
21'M'+79 - 22'M'+05	CTH M RT.		27	
22'M'+05 - 22'M'+49	CTH M RT.	44		
22'M'+49 - ----	CTH M 28' RT.			1
618+55 - 620+16	USH 18 MEDIAN	349*		
643+57 - 645+19	USH 18 MEDIAN	349*		

* BULL NOSE

SALVAGED TOPSOIL, MULCHING, FERTILIZER, SEEDING AND TEMPORARY SEEDING

STATION - STATION	LOCATION	SALVAGED TOPSOIL S.Y.	MULCHING (TEMPORARY*) TONS	MULCHING TONS	FERTILIZER TYPE B C.W.T.	SEEDING (NO. 20) LBS.	TEMPORARY SEEDING (NO.20) L.B.
607+00 - 619+35	USH 18 WB	10700	5	5	7	280	290
607+00 - 619+35	USH 18 EB	10200	4.7	4.7	7	280	280
619+35 - 630+00	USH 18 WB**	12400	5.6	5.8	8	340	340
619+35 - 630+00	USH 18 EB**	11400	5.3	5.3	7	290	300
630+00 - 18'M'+00	USH 18 WB	9350	4.3	4.3	6	250	250
630+00 - 11'RT'+00	USH 18 EB	7550	3.5	3.5	5	200	200
18'M'+00 - 648+00	USH 18 WB	4950	2.3	2.3	3	130	130
645+00 - 648+00	USH 18 EB	1250	0.5	0.5	1	30	30
11'RT'+00 - 20'RT'+00	RANGE TRAIL RD. NB	4900	-	2.3	3	130	-
11'RT'+00 - 20'RT'+00	RANGE TRAIL RD. SB	5350	-	2.5	3	140	-
10'M'+00 - 18'M'+00	CTH M NB	6650	3.1	3.1	4	180	180
10'M'+00 - 18'M'+00	CTH M SB	5350	2.5	2.5	3	140	140
24'M'+00 - 29'M'+00	CTH M NB	1350	0.6	0.6	1	40	40
24'M'+00 - 29'M'+00	CTH M SB	2650	0.8	0.8	2	70	70
607+00 - 648+00	USH 18 MEDIAN	8200	3.8	3.8	5	200	200
607+00 - 611+50	USH 18 STOCKPILE	10350	-	-	7	-	300

* FOR USE WITH TEMPORARY SEEDING AND PAID FOR AS MULCHING
**INCLUDES LOCUST DRIVE

59.60, 5L

LEVELS ON .

FILE NAME: HDGN: 75300.DGN

ALL QUANTITIES FOR GROUP CODE 010

KEY MAP

STATE PROJECT NUMBER 1201-04-75 | SHEET NO. 3D

MISCELLANEOUS QUANTITIES

USH 18 | DANE COUNTY

SILT FENCE (SILTY TYPE*)

STATION - STATION	LOCATION	DELIVERED L.F.	INSTALLED L.F.	MAINTENANCE L.F.
607+00 - --	USH 18 STOCKPILE	150	150	150
608+50 - --	USH 18 MEDIAN	18	18	18
610+50 - --	USH 18 MEDIAN	18	18	18
611+50 - --	USH 18 STOCKPILE	250	250	250
612+00 - --	USH 18 MEDIAN	39	39	39
614+50 - --	USH 18 MEDIAN	18	18	18
616+90 - --	USH 18 MEDIAN	18	18	18
618+90 - --	USH 18 MEDIAN	18	18	18
622+80 - --	USH 18 MEDIAN	18	18	18
624+80 - --	USH 18 MEDIAN	18	18	18
627+90 - --	USH 18 MEDIAN	18	18	18
630+00 - --	USH 18 MEDIAN	18	18	18
632+10 - --	USH 18 MEDIAN	39	39	39
634+10 - --	USH 18 MEDIAN	18	18	18
635+60 - --	USH 18 MEDIAN	18	18	18
636+30 - --	USH 18 MEDIAN	18	18	18
637+40 - --	USH 18 MEDIAN	18	18	18
638+30 - --	USH 18 MEDIAN	55	55	55
640+50 - --	USH 18 MEDIAN	18	18	18
642+40 - --	USH 18 MEDIAN	55	55	55
645+40 - --	USH 18 MEDIAN	18	18	18
646+00 - --	USH 18 MEDIAN	18	18	18
646+90 - --	USH 18 MEDIAN	55	55	55
607+00 - 619+00	USH 18 LT.	18	18	18
615+00 - 618+30	USH 18 LT.	1300	1300	1300
607+00 - 619+00	USH 18 LT.	330	330	330
617+00 - 619+00	USH 18 RT.	1500	1500	1500
619+70 - 630+00	USH 18 LT.	200	200	200
619+70 - 622+20	USH 18 LT.	1030	1030	1030
619+70 - 626+00	USH 18 LT.	250	250	250
619+70 - 630+00	USH 18 RT.	630	630	630
619+70 - 628+00	USH 18 RT.	1030	1030	1030
620+50 - 623+00	USH 18 RT.	830	830	830
630+00 - 642+50	USH 18 LT.	250	250	250
630+00 - 636+50	USH 18 RT.	1250	1250	1250
631+00 - 634+00	USH 18 RT.	650	650	650
640+00 - 644+00	USH 18 RT.	300	300	300
645+00 - 647+30	USH 18 LT.	400	400	400
646+00 - 647+30	USH 18 LT.	230	230	230
10'M'+00 - 17'M+30	CTH M LT.	130	130	130
15'M'+00 - 17'M+30	CTH M LT.	730	730	730
10'M+60 - 17'M'+30	CTH M RT.	230	230	230
25'M'+00 - 29'M'+00	CTH M LT.	670	670	670
25'M'+00 - 29'M'+00	CTH M RT.	400	400	400
10'RT'+50 - 19'RT'+00	RANGE TRAIL RD. LT.	400	400	400
10'RT'+50 - 19'RT'+00	RANGE TRAIL RD. RT.	900	900	900
607+00 - 648+00	UNDISTRIBUTED	1029	1029	1029

* NOTE: ASSUME SILTY SOILS

SODDING

STATION - STATION	LOCATION	SODDING S.Y.	REINFORCED SODDING S.Y.
611+50 - 619+00	USH 18 MEDIAN DITCH	200	---
613+00 - 619+00	USH 18 RT. DITCH	400	270
637+00 - 642+00	USH 18 LT. DITCH	610	---
637+00 - 644+77	USH 18 RT. DITCH	110	750
641+00 - 648+00	USH 18 MEDIAN DITCH	180	---
643+50 - 648+00	USH 18 LT. DITCH	500	---
----- - -----	UNDISTRIBUTED	400	---
24'M'+80 - 30'M'+00	CTH M	600	---

REMOVING SIGNS, TYPE II AND SMALL SIGN SUPPORTS

STATION	LOCATION	CODE	TYPE II EACH	SUPPORTS EACH	STAGE
11'M'+60	CTH M NB RT.	R2-5A	1		2
11'M'+60	CTH M NB RT.	R2-1	1		2
10'RT'+50	RANGE TRAIL RD. NB RT.	R1-1	1	1	1

TRAFFIC CONTROL, DRUMS

STATION - STATION	LOCATION	STAGE	DAYS
23'M'+50 - 25'M'+00	CTH M	1	140

SIGNING

SIGN NO.	CODE NO.	SIGN MESSAGE	SIZE INCHES	SIGNS, TYPE II REFLECTIVE S.F.	SAME POST AS SIGN NO.	WOOD POSTS 4 x 6 INCH 14' EACH	16' EACH	18' EACH	REMARKS
1	W5-52R (2)	CLEARANCE STRIPER DOWN LEFT	12 x 36	3.00			1		
2	W5-52L (2)	CLEARANCE STRIPER DOWN RIGHT	12 x 36	3.00			1		
3	W5-52R (2)	CLEARANCE STRIPER DOWN LEFT	12 x 36	3.00			1		
4	W5-52L (2)	CLEARANCE STRIPER DOWN RIGHT	12 x 36	3.00			1		
11	W13-1 (2)	35 MPH	18 x 18	2.25			1		
12	W1-2R (2)	RIGHT CURVE	30 x 30	6.25	12				
13	J1-1 (2)	JCT CTH M	24 x 39	6.50			1		
14	W3-1 (2)	STOP AHEAD	36 x 36	9.00			1		
15	R1-1 (2)	STOP	30 x 30	6.25			1		
16	W1-2L (2)	LEFT CURVE	30 x 30	6.25			1		
17	W13-1 (2)	35 MPH	18 x 18	2.25			1		
20	W1-2L (2)	LEFT CURVE	30 x 30	6.25	16				
21	W13-1 (2)	45 MPH	18 x 18	2.25			1		
22	J4-1 (2)	CTH M	24 x 36	6.00	20				
23	W1-2R (2)	RIGHT CURVE	30 x 30	6.25			1		
24	W13-1 (2)	45 MPH	18 x 18	2.25	23		1		
25	W1-7 (2)	NIGHT ARROW (DOUBLE)	48 x 24	8.00		1			
26	J13-1 (2)	CTH M	24 x 39	6.50					
27	M6-4 (2)	DIR ARROW LEFT - RIGHT	21 x 21	3.06	26		1		
28	J4-1 (2)	CTH M	24 x 36	6.00					
29	R2-5A(2)	REDUCED SPEED AHEAD	24 x 30	5.00			1		
30	W13-1W (2)	45 MPH	10 x 18	2.25	29			1	

TRAFFIC CONTROL, BARRICADES, TYPE III

LOCATION	STAGE	DAYS
LOCUST DR. AND STH 69	1	35
LOCUST DR	1	105
LOCUST DR. AND STH 69	2	155
LOCUST DR.	2	465
RANGE TRAIL RD. AND STH 69	1	70
RANGE TRAIL RD.	1	175
CTH M	1	490
CTH M	2	2170

TRAFFIC CONTROL, WARNING LIGHTS, TYPE A

LOCATION	STAGE	DAYS
LOCUST DR.	1	280
LOCUST DR.	2	1,240
RANGE TRAIL RD.	1	455
RANGE TRAIL RD.	2	1,240
CTH M	1	700
CTH M	2	3,100

TRAFFIC CONTROL, WARNING LIGHTS, TYPE C

STATION - STATION	LOCATION	STAGE	DAYS
23'M'+50 - 25'M'+00	CTH M	1	140

PAVEMENT MARKING, EPOXY

LOCATION	STATION - STATION	CENTER LINE 4-INCH L.F.	EDGE LINE 4-INCH WHITE L.F.	STOP LINE 24-INCH WHITE L.F.
CTH M	10+00 - 23+27 RT.		1,330	
	24+25 - 29+00 RT.		475	
	10+00 - 29+00 LT.		1,900	
	15+00 - 18+00 RT.	300**		
	22+00 - 25+00 LT.	300**		
	10+00 - 15+00 RT.	130		
	18+00 - 29+00 RT.	275		
	10+00 - 22+00 RT.	300		
	25+00 - 29+00 LT.	100		
RANGE TRAIL RD.	10+84 - 20+00 RT.	920**	950	
	10+84 - 20+00 LT.	920**	950	
	10+84 - ----			20

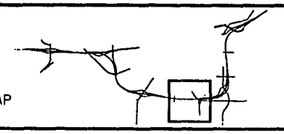
** NO PASSING (SOLID LINE)

FILE NAME: HDGN: 75300.DGN

LEVELS ON - 59.60, 51

ALL QUANTITIES FOR GROUP CODE 010

KEY MAP



STATE PROJECT NUMBER 1201-04-75

SHEET NO. 3E

MISCELLANEOUS QUANTITIES

USH 18 DANE COUNTY

TRAFFIC CONTROL, SIGNS

LOCATION	STAGE	21"x21" DAYS	24"x12" DAYS	24"x24" DAYS	30"x24" DAYS	48"x30" DAYS	48"x48" DAYS	60"x24" DAYS	60"x30" DAYS
LOCUST DR.	1					70	140		35
LOCUST DR. AND STH 69	1								35
LOCUST DR.	2					310	620		155
LOCUST DR. AND STH 69	2								155
RANGE TRAIL RD.	1					35	105		140
RANGE TRAIL RD. AND STH 69	1								
RANGE TRAIL RD.	2			155			465		620
CTH M	1	70	70	70	35	70	315		70
CTH M	2	310	310	310	155	465	1,240	155	620
DETOUR CTH M **	1	210	385	385					
DETOUR CTH M **	2	930	1725	1725					

** THESE SIGNS PAID FOR AS "TRAFFIC CONTROL, DETOUR, SIGNS"

TEMPORARY PAVEMENT MARKING

STATION - STATION	LOCATION	CENTERLINE DOUBLE 4-INCH YELLOW L.F.	STAGE
24'M'+50 - 29'M'+00	CTH M	1,000	1
11'RT'+00 - 20'RT'+00	RANGE TRAIL RD.	1,800	1

SAWING EXISTING PAVEMENT

STATION	LOCATION	LENGTH L.F.
17'L'+00	LOCUST DR.	22
24'L'+45	LOCUST DR.	22
10'M'+00	CTH M	24
29'M'+00	CTH M	24
10'RT.+60	RANGE TRAIL RD.	22
20'RT'+00	RANGE TRAIL RD.	22

REMOVING PAVEMENT MARKINGS

STATION - STATION	LOCATION	L.F.
24'M'+50 - 29'M'+00	CTH M C/L	1,000
11'RT'+00 - 20'RT'+00	RANGE TRAIL RD. C/L	1,800

LOCATING NO PASSING ZONES

STATION - STATION	LOCATION	MILE
10'M'+00 - 29'M'+00	CTH M	0.36
20'RT'+00 -24'RT'+00	RANGE TRAIL RD.	0.07

GEOTEXTILE FABRIC, TYPE R

STATION	LOCATION	S.Y.
611+00	USH 18 140' LT.	32
630+80	USH 18 114' LT.	20
635+00	USH 18 106' LT.	275
636+80	USH 18 96' RT.	80
642+50	USH 18 83' LT.	20
644+77	USH 18 83' RT.	20
647+00	USH 18 LT.	55
648+00	USH 18 RT.	65
11'RT'+00	RANGE TRAIL RD. 99' LT.	55
11'RT'+10	RANGE TRAIL RD. 66' RT.	660
16'RT'+65	RANGE TRAIL RD. 60' RT.	9
18'L'+54	LOCUST DR. 77' LT.	3
18'L'+56	LOCUST DR. 77'RT.	3
18'M'+50	CTH M 61' LT.	3

59.60.

51.

LEVELS ON -

FILE NAME: HDGN: 75300.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	3F

MISCELLANEOUS QUANTITIES

U.S.H. 18 TEMPORARY CROSS-OVERS DANE CO.

CLEARING & GRUBBING

GROUP CODE	STATION - STATION	LOC.	CLEARING NO.STA.	GRUBBING NO.STA.
020	836+00 - 843+00 "CG"	RT.	7	7

REMOVING CURB & GUTTER

GROUP CODE	STATION - STATION	LOCATION	L.F.
020	27+70 "PD"	RT	35
	839+00 - 843+50 "CG"	LT	920

EARTHWORK SUMMARY

GROUP CODE	STATION - STATION	COMMON C.Y.	FILL* C.Y.	BORROW** C.Y.	WASTE C.Y.
020	710+00 - 716+85 "EB"	0	450	450	0
	767+08 - 789+62 "WB"	575	1435	860	0
	800+15 - 808+07 "WB"	486	1074	588	0
	815+00 - 826+93 "WB"	854	571	0	283
	20+07 - 21+63 "PE"	140	70	0	70
	834+32 - 843+13 "CG"	5057	1758	0	3299
	846+85 - 849+85 "EB"	0	127	127	0
	TOTALS	7112	5485	2025**	3652

*EXPANDED

** THIS BORROW SHALL BE OBTAINED WITH THE STA. 607+00 - 648+00 USH 18 GRADING LIMITS AND WILL BE PAID FOR AS "BORROW EXCAVATION".

CRUSHED AGGREGATE BASE COURSE

GROUP CODE	STATION - STATION	LOCATION	BASE TON
020	706+97 - 720+00 "EB"	LT	1481
	767+88 - 782+50 "WB"	RT	991
	782+50 - 791+25 "WB"	RT	1716
	800+15 - 808+00 "WB"	RT	1234
	815+00 - 826+95 "WB"	RT	987
	842+00 - 853+00 "EB"	LT	814
	837+00 - 844+34 "CG"	---	2665
	20+00 - 21+50 "PE"	---	198

ASPHALTIC MATERIAL FOR PLANT MIXES

GROUP CODE	STATION - STATION	TON
020	706+97 - 720+00 "EB"	37
	766+88 - 782+50 "WB"	22
	782+50 - 791+25 "WB"	36
	800+15 - 808+00 "WB"	22
	815+00 - 826+95 "WB"	21
	842+00 - 853+00 "EB"	14
	**837+00 - 844+34 "CG"	21
	**20+00 - 21+50 "PE"	2

**QUANTITIES REFLECT 2" BINDER COURSE ONLY FOR "CG LINE" & "PE LINE"

ASPHALTIC CONCRETE PAVEMENT, TYPE MV

GROUP CODE	STATION - STATION	TON
020	706+97 - 720+00 "EB"	617
	766+88 - 782+50 "WB"	366
	782+50 - 791+25 "WB"	596
	800+15 - 808+00 "WB"	374
	815+00 - 826+95 "WB"	344
	842+00 - 853+00 "EB"	234
	**837+00 - 844+34 "CG"	347
	**20+00 - 21+50 "PE"	30

TEMPORARY CULVERT PIPE, 24 - INCH

GROUP CODE	STATION	LOCATION	LENGTH
020	27+25 "PD"	RT	70
	28+38 "PD"	LT	70
	28+38 "PD"	RT	385
	28+55 "PD"	RT	30
	808+40 "EB"	LT	500

CONCRETE CURB & GUTTER, TYPE D

GROUP CODE	STATION - STATION	LOCATION	30-INCH L.F.
020	837+00 - 844+35 "CG"	LT	729
	837+00 - 841+40 "CG"	RT	591
	20+62 - 21+50 "PE"	LT & RT	176

TEMPORARY CONCRETE BARRIER, STATE OWNED

GROUP CODE	STATION - STATION	LOCATION	L.F.
020	847+45 - 849+05 "EB"	LT	160

TEMPORARY CONCRETE BARRIER, INSTALLED

GROUP CODE	STATION - STATION	LOCATION	L.F.
020	847+45 - 849+05 "EB"	LT	160

REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER

GROUP CODE	STR NO.	STR NO.	DIAM. INCH	LENGTH LIN.FT.
020	21.0	22.0	18	96
	22.0	23.0	18	160
	23.0	24.0	18	30
	21.0	21.1	18	16
	24.0	24.1	18	80
	24.1	24.2	18	46

MANHOLES & MANHOLE COVERS

GROUP CODE	STATION	LOCATION	STR. NO.	TYPE	COVER TYPE
020	839+75 "CG"	RT	22.0	1	J

INLETS & INLET COVERS

GROUP CODE	STATION	LOCATION	STR. NO.	TYPE	COVER TYPE
020	841+09 "CG"	LT	24.2	8	MS
	841+34 "CG"	RT	23.0	3	H
	841+50 "CG"	LT	24.1	3	H
	20+78 "PE"	LT	21.0	3	H
	20+78 "PE"	RT	21.1	3	H

TRAFFIC CONTROL, BARRICADES, TYPE III

GROUP CODE	STATION	EACH	DAYS
020	21+75 "PE"	22	444
	CHAL. GARDEN RD	33	666
	837+00 "CG"	44	8848
	838+50 "CG"	44	8848
	844+25 "CG"	55	1110

TRAFFIC CONTROL, WARNING LIGHTS, TYPE A

GROUP CODE	STATION	LOCATION	EACH	DAYS
020	692+00 "EB"	LT & RT	22	44
	697+00 "EB"	LT & RT	22	44
	702+00 "EB"	LT & RT	22	44
	21+00 "PD"	RT	11	22
	29+60 "PD"	RT	11	212
	37+00 "PD"	LT	11	22
	NESBITT RD	RT	11	22
	NESBITT RD	RT	11	22
	857+00 "WB"	LT & RT	22	44
	862+00 "WB"	LT & RT	22	44
	867+00 "WB"	LT & RT	22	44
	837+00 "CG"	---	55	1060
	838+50 "CG"	---	55	1060
	844+25 "CG"	---	66	132
	21+75 "PE"	---	33	66
	CHAL GARDEN RD	---	44	88

REMOVING PAVEMENT MARKINGS

GROUP CODE	STATION - STATION	LOCATION	L.F.	REMARKS
020	789+03 - 789+60 "WB"	RT	90	EDGELINE, YELLOW
	790+25 - 791+25 "WB"	RT	130	EDGELINE, YELLOW
	25+90 - 27+53 "PD"	RT	163	EDGELINE, WHITE
	25+90 - 27+53 "PD"	MIDDLE	326	DOUBLE YELLOW
	29+18 - 31+60 "PD"	RT	242	EDGELINE, WHITE
	29+18 - 31+40 "PD"	RT	444	DOUBLE YELLOW
	814+20 - 815+00 "WB"	RT	80	EDGELINE, YELLOW
	815+00 - 821+50 "WB"	RT	650	EDGELINE, YELLOW

TRAFFIC CONTROL, SIGNS

GROUP CODE	STATION	LOCATION	TYPE	SIZE	DAYS
020	692+00 "EB"	LT & RT	W20-1	48"X 48"	44
	697+00 "EB"	LT & RT	W20-1	48"X 48"	44
	702+00 "EB"	LT & RT	W20-1	48"X 48"	44
	702+00 "WB"	LT & RT	G20-2	60"X 24"	44
	706+50 "EB"	RT	G20-1	60"X 36"	44
	809+85 "WB"	RT	R3-7R	30"X 30"	212
	812+36 "WB"	RT	R3-7R	30"X 30"	212
	NESBITT RD	RT	W20-1	48"X 48"	22
	NESBITT RD	RT	W20-1	48"X 48"	22
	NESBITT RD	LT	G20-2	60"X 24"	22
	21+00 "PD"	RT	W20-1	48"X 48"	22
	21+00 "PD"	LT	G20-2	60"X 24"	22
	26+75 "PD"	RT	R3-8	30"X 30"	212
	29+60 "PD"	RT	WO1-3L	48"X 48"	212
	29+60 "PD"	RT	WO13-1	36"X 36"	212
	30+15 "PD"	LT	R3-8	30"X 30"	212
	31+42 "PD"	RT	WO1-6	48"X 24"	212
	37+00 "PD"	LT	W20-1	48"X 48"	22
	37+00 "PD"	RT	G20-2	60"X 24"	22
	21+75 "PE"	---	R11-2	48'X 30'	22
	CHAL GARDEN RD	---	R11-2	48"X 30"	22
	837+00 "CG"	---	R11-2	48"X 30"	212
	838+50 "CG"	---	R11-2	48"X 30"	212
	844+25 "CG"	---	R11-2	48"X 30"	22
	852+50 "WB"	LT & RT	G20-1	60"X 36"	44
	857+00 "EB"	LT & RT	G20-2	60"X 24"	44
	857+00 "WB"	LT & RT	W20-1	48"X 48"	44
	862+00 "WB"	LT & RT	W20-1	48"X 48"	44
	867+00 "WB"	LT & RT	W20-1	48"X 48"	44

TEMPORARY PAVEMENT MARKING

GROUP CODE	STATION - STATION	LOCATION	COLOR	WIDTH	L.F.	REMARKS
020	706+97 - 715+00 "WB"	RT	YELLOW	4"	803	EDGELINE
	712+00 - 720+00 "EB"	LT	YELLOW	4"	800	EDGELINE
	767+00 - 771+60 "WB"	LT	YELLOW	4"	472	EDGELINE
	771+80 - 776+40 "WB"	LT	YELLOW	4"	485	EDGELINE
	777+10 - 779+78 "WB"	LT	YELLOW	4"	265	EDGELINE
	780+40 - 782+50 "WB"	LT	YELLOW	4"	215	EDGELINE
	782+50 - 789+40 "WB"	RT	YELLOW	4"	713	EDGELINE
**	789+35 "EB"	---	WHITE	24"	288	STOP LINE
**	790+37 "WB"	---	WHITE	24"	450	STOP LINE
	790+47 - 791+25 "WB"	RT	YELLOW	4"	87	EDGELINE
	25+85 - 27+74 "PD"	RT	WHITE	4"	220	EDGELINE
	25+90 - 27+53 "PD"	RT	YELLOW	4"	326	DBL YELLOW
*	25+90 - 26+70 "PD"	RT	YELLOW	8"	114	DIAGONAL
*	26+40 - 27+53 "PD"	RT	WHITE	8"	225	CHANNEL
	26+40 - 26+60 "PD"	RT	WHITE	4"	10	LANELINE
*	26+60 - 27+53 "PD"	RT	WHITE	8"	186	CHANNEL
**	27+53 "PD"	RT	WHITE	24"	360	STOP LINE
**	29+18 "PD"	---	WHITE	24"	420	STOP LINE
	29+18 - 31+40 "PD"	RT	YELLOW	4"	470	DBL YELLOW
	29+00 - 31+60 "PD"	RT	WHITE	4"	302	EDGELINE
*	29+18 - 30+50 "PD"	RT	WHITE	8"	270	CHANNEL
*	29+18 - 30+50 "PD"	MIDDLE	WHITE	8"	260	CHANNEL
*	29+18 - 29+59 "PD"	LT	WHITE	8"	246	ISLAND
	30+50 - 31+70 "PD"	LT	WHITE	4"	40	LANELINE
	800+15 - 808+35 "WB"	RT	YELLOW	4"	850	EDGELINE
	808+90 - 815+00 "WB"	RT	YELLOW	4"	632	EDGELINE
*	809+20 - 814+20 "WB"	RT	WHITE	8"	1000	CHANNEL
	815+00 - 821+85 "WB"	RT	YELLOW	4"	685	EDGELINE
	815+00 - 821+50 "WB"	RT	WHITE	4"	163	LANELINE
	822+30 - 826+95 "WB"	RT	YELLOW	4"	465	EDGELINE
	846+30 - 849+25 "WB"	RT	YELLOW	4"	310	EDGELINE
	848+00 - 849+25 "EB"	LT	YELLOW	4"	140	EDGELINE
	849+68 - 851+80 "EB"	LT	YELLOW	4"	240	EDGELINE
	849+68 - 852+24 "WB"	RT	YELLOW	4"	280	EDGELINE

* TO BE PAID FOR AS 2 - 4" LINES
** TO BE PAID FOR AS 6 - 4" LINES

SAWING EXISTING PAVEMENT

GROUP CODE	STATION	L.F.
020	844+34 "CG"	36
	21+50 "PD"	16
	CHAL GARDEN RD	32

TEMPORARY PAVEMENT MARKING, ARROWS, TYPE 1

GROUP CODE	STATION	LOCATION	EACH
020	27+15 "PD"	RT	1
	29+70 "PD"	RT	1

TEMPORARY PAVEMENT MARKING, ARROWS, TYPE 2

GROUP CODE	STATION	LOCATION	DIRECTION	EACH
020	27+15 "PD"	RT	RT	1
	27+15 "PD"	RT	LT	1
	29+70 "PD"	RT	LT	1
	29+70 "PD"	LT	RT	1
	809+55 "WB"	RT	LT	1
	812+40 "WB"	RT	LT	1

TEMPORARY PAVEMENT MARKING, WORDS ("ONLY")

GROUP CODE	STATION	LOCATION	EACH
020	26+98 "PD"	RT	2
	29+80 "PD"	RT & LT	2
	809+85 "WB"	RT	1

TEMPORARY DELINEATORS

GROUP CODE	STATION - STATION	LOCATION	EACH
020	30+60 - 31+60 "PD"	RT	2

DESIGN DONE BY DISTRICT 1

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
1201--04--21		
FEDERAL PROJECT NUMBER	4.0	26

PLAT OF RIGHT OF WAY REQUIRED FOR

VERONA BYPASS

(C.T.H. G – NESBITT ROAD)

U.S.H. 18 — DANE COUNTY

1201-4-75/4

OFFICIAL PLAT ON FILE WITH THE REGISTER OF DEEDS OFFICE

CONVENTIONAL SIGNS AND ABBREVIATIONS

STATE LINE
COUNTY LINE
TOWNSHIP AND RANGE LINES
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W LINE
PROPERTY LINE — P.L.
CORPORATE LIMITS — NAME
LOT, TIE AND OTHER MINOR LINES
SLOPE INTERCEPTS — SLOPE INTERCEPTS
UNDERGROUND FACILITY (GAS, TELEPHONE, ELECTRIC, ETC.) — G (TYPE)
FENCE
TEMPORARY LIMITED EASEMENT
PERMANENT LIMITED EASEMENT
BEAM GUARD
TRANSMISSION TOWER AND LINE
GAS MARKER OR TELEPHONE PEDESTAL — T.P. (TYPE)

SECTION CORNER
NOTATION FOR COMBUSTABLE FLUIDS — CAUTION
BRIDGE
STREAM OR RIVER — NAME
LAKE — NAME
CULVERT (BOX, PIPE OR CATTLE PASS) — (TYPE)
RAIL LINE — (SMALL SCALE) (LARGE SCALE)
SIGN — / SIGN

HYDRANT
FOUNDATION OR RUIN — FDN.
BUILDING — TYPE
CEMETERY
R/W MONUMENT
NON-MONUMENTED R/W POINT
IRON PIN — I.P.
VALVE — GAS (TYPE)
WINDMILL
SILO, MANHOLE, VENT, SEPTIC VENT, WELL, ETC. — M.H. (TYPE)
GAS PUMPS — G.P.
BUSHES
TREES (DECIDUOUS) (CONIFEROUS)
WOODS
ENCROACHING SIGN — E-1 SIGN

	COMPENSABLE	NON-COMPENSABLE
POWER POLE		
TELEPHONE POLE		

NO ACCESS (BY ACQUISITION)
NO ACCESS (BY STATUTORY AUTHORITY)
NO ACCESS (BY PREVIOUS PROJECT)

ACCESS RIGHTS	A.R.	GAS VALVE	GV
UNDER GROUND	UG	MOBILE HOME	M.H.
HOUSE TRAILER	H.T.	HANGAR	HA.
WATER VALVE	WV.	LIQUID PROPANE	L.P.
VOLUME	VOL	STATION	STA
RECORDED	REC'D	WATERS EDGE	W.E.
POINT OF BEGINNING	P.O.B	PERMANENT LIMITED EASEMENT	P.L.E.
ACCESS POINT	A.P.	LONG CHORD	L.C.
ACRES	AC.	LONG CHORD BEARING	L.C.B.
ALUMINUM	ALUM.	MANHOLE	M.H.
AND OTHERS	ET AL	MONUMENT	MON.
ASPHALTIC	ASP.	OUTLOT	O.L.
BACK	BK.	PAGE	P.
BARN	B.	PARKER-KALON FASTENER	P.K.
BUSINESS	BUS.	PROPERTY LINE	P.L.
CABLE MARKER	C.M.	RADIUS	R.
CABLE TELEVISION	CATV	RAILROAD	R.R.
CATCH BASIN	C.B.	REFERENCE LINE	R.L.
CERTIFIED SURVEY MAP	C.S.M.	RESTRICTED DEVELOPMENT EASEMENT	R.D.E.
CONCRETE	CONC.	RIGHT	RT.
CORNER	COR.	RIGHT OF WAY	R/W
CULVERT	CULV.	SANITARY SEWER	SAN.
DOING BUSINESS AS	d/b/a	SECTION	SEC.
ELECTRIC	ELEC.	SHED	S.
FORWARD	FWD.	TANGENT	TAN.
FOUNDATION	FDN.	TAVERN	TAV.
GARAGE	G.	TELEPHONE	T.
GAS MARKER	G.M.	TELEPHONE MANHOLE	T.M.H.
GAS PUMPS	G.P.	TELEPHONE PEDESTAL	T.P.
HANGAR	HA.	TELEVISION PEDESTAL	TV P.
HOUSE	H.	TEMPOTARY LIMITED EASEMENT	T.L.E.
IRON PIN	I.P.	WALL	W.
LEFT	LT.	GAS AS 'PAINTED' ON GROUND BY UTILITY	GPA
LENGTH	L.	STORM SEWER	SS
		CENTER OF SECTION	C.O.S.

NOTES

DIMENSIONING FOR THE NEW R/W IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

GOVERNMENTAL LAND LINE AND REFERENCE LINE ARE NOT COINCIDENTAL.

DISTANCES FROM REFERENCE LINE ARE ← XX' R →

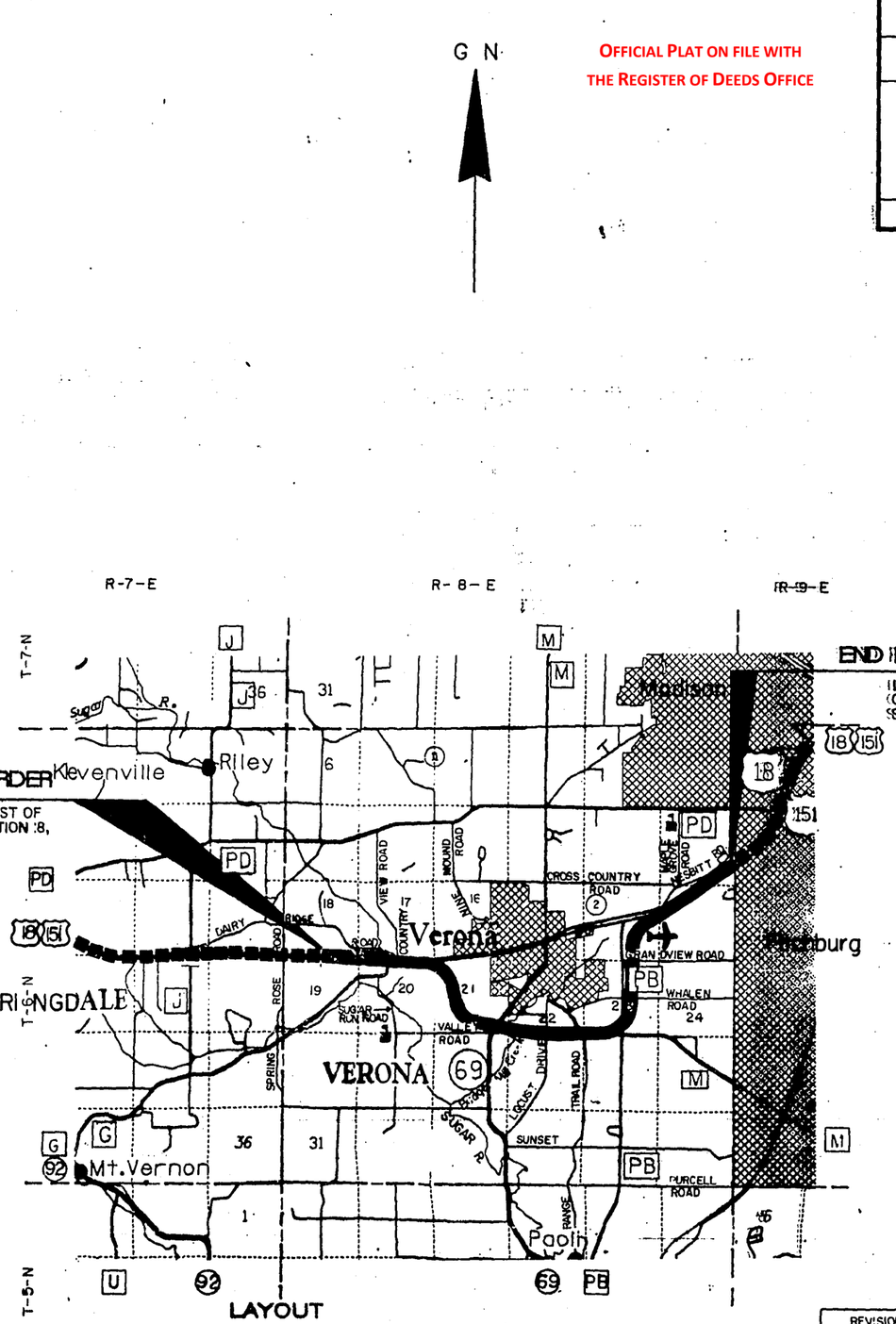
DISTANCES FROM GOVERNMENTAL LAND LINE ARE ← XX' O → OR XX' G

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE AS SPECIFIED ON EACH PLAT DETAIL SHEET: GOVERNMENT LAND LINES; PREVIOUS PROJECTS 1200-03-21, F 017-2(15), COUNTY PROJECT NO. 403, S02541(), S0257(4) & (5), SIR6(4), REFERENCE LINES; OR THE CENTERLINE OF EXISTING PAVEMENT AS NOTED.

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE. NAD 27 ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THE DETAIL SHEETS.

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND ARE PLACED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION (AS PER THE CONTRACT NEGOTIATED WITH CH2M HILL CENTRAL, INC., DATED AUGUST 26, 1990) PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.



TOTAL NET LENGTH OF CENTERLINE= 7.302 MILES RURAL

REVISION DATE
7-14-92
11-12-92
1-26-93 N.C.

PLAT PREPARED BY
BARRIENTOS & ASSOC., INC
ENGINEERS, ARCHITECTS & SURVEYORS
MADISON, WISCONSIN

WISCONSIN — TERRANCE L. GENRICH — S-1448 — MADISON, WIS. — LAND SURVEYOR

3-20-92
DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED:

DATE: 3-2-92 Timan Fuhrer
for DISTRICT DIRECTOR

SCHEDULE OF LANDS & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

REVISION DATE	ROUTE	COUNTY	DATE	R/W PROJECT NUMBER	SHEET NUMBER
7-14-92 11-12-92 1-26-93	U.S.H. 18	DANE	3-2-92	1201 - 04 - 21 FEDERAL PROJECT NUMBER 1201-4-75	4.1 4.1

PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL ACRES OR S.F.	R/W ACRES REQUIRED OR S.F. NEW	EXISTING	TOTAL	TOTAL ACRES REM.	T.L.E. ACRES	H.E. ACRES
1	4.3,4.5	CLIFFORD F. & JOYCE E. GUST	FEE,T.L.E., A.R.	385.19	10.05	2.18	12.23	372.96	0.48	——
2	4.3,4.4	SISK FARMS, INC.	FEE,T.L.E, A.R.	63.77	6.59	——	6.59	57.18	2.39	——
3	4.4	JULIAN O. & ANNA MAY RHINER	FEE, T.L.E.	178.6	4.53	2.91	7.44	171.16	0.54	——
4	4.4,4.5	THOMAS J. & MICHELE J. PELLITTERI	FEE, A.R.	82.34	5.52	0.53	6.05	76.29	——	——
5										
6	4.4	ARNOLD A. JENNERMAN & MARGARET M. STEUCK	FEE, T.L.E.	36.7	0.63	0.98	1.61	35.09	0.21	——
7										
8	4.5	ROYCE M. ESSIG	FEE	7.78	0.18	——	0.18	7.60	——	——
9	4.6–4.8,4.10	SYLVESTER F. & MARGIE M. ZIEGLER	FEE, T.L.E.	432.19	45.76	——	45.76	386.43	2.54	——
10										
11	4.7	RICHARD B. & RUTH L. STAMPFL	FEE	242.4	3.62	——	3.62	238.78	——	——
12	4.8	LESTER B. & SHIRLEY A. THOMPSON, 1/2 ALEXANDER R. & CAROL M. MILLER, 1/2	FEE	INDET.	0.20	——	0.20	INDET.	——	——
13	4.6, 4.10 4.18–4.20	STATE OF WISCONSIN, DEPARTMENT OF NATURAL RESOURCES	FEE, T.L.E., H.E.	INDET.	1.52	——	1.52	INDET.	2.21	0.88
14	4.8,4.10	MARVIN & DELORES THOMPSON	FEE,T.L.E.	72.00	9.20	——	9.20	62.80	3.63	——
15										
16	4.10	PALMER PETERS	FEE, T.L.E.	79.7	0.34	——	0.34	79.36	0.05	——
17										
18	4.11,4.12	ALEX BARTH, ETAL.	FEE, T.L.E., A.R.	174.00	26.23	3.00	29.23	144.77	1.14	——
19	4.13	DWAINE W. & DONNA J. DICKINSON	FEE, T.L.E., A.R.	40.00	2.74	1.20	3.94	36.06	0.59	——
20										
21	4.13	KIRK A. & JAN D. FELLER	FEE, A.R.	120.00	1.74	2.32	4.06	115.94	——	——
22	4.12	ELMER PALMER, VENDOR DUWAYNE J. & JUDITH A. HOFFMAN, VENDEE	FEE, T.L.E., A.R.	119.50	21.93	1.30	23.23	96.27	1.37	——
23	4.12	K. & M. ENTERPRISES	FEE, T.L.E.	0.96	0.17	——	0.17	0.79	0.18	——
24	4.12	MICHAEL D. WILLETT & KEVIN J. FOREYT	FEE, T.L.E.	1.19	0.08	——	0.08	1.11	0.10	——
25										
26	4.12	RJ & E ASSOCIATES	FEE, T.L.E.	1.99	0.09	——	0.09	1.90	0.11	——
27	4.12	JEROME D. KAVON	FEE, T.L.E.	2.25	0.08	——	0.08	2.17	0.09	——
28	4.12	TERRY A. & VICKIE L. HEILIGER	FEE, T.L.E.	0.34	0.01	0.06	0.07	0.27	0.02	——
29	4.12	WILLIAM M. & SHARON L. SULLIVAN	FEE, T.L.E.	0.89	0.01	0.13	0.14	0.75	0.02	——
30										
31	4.14	RANDALL J. ACKER	FEE ,T.L.E.,	120.00	9.88	0.48	10.36	109.64	0.05	——
32	4.14,4.15	DONALD G. GUST	FEE, T.L.E., A.R.	113.50	17.01	0.45	17.46	96.04	0.70	——
33	4.14,4.15	CLARENCE H. & VIRGINIA A. WITT	FEE ,T.L.E.,	136.00	2.10	0.22	2.32	133.68	0.07	——
34	4.15,4.18	IRVING WILD , VENDOR RICHARD M. & MARLY M. TOLLEFSON, VENDEE	FEE, A.R.	109.00	13.46	4.20	17.66	91.34	——	——
35										
36	4.15	RAYMOND W. & LOIS J. GUST	FEE ,T.L.E.,	72.40	0.84	0.25	1.09	71.31	1.48	——
37	4.16,4.18	IRVING WILD, VENDOR RUSSELL J. AND ROSE M. JOHNSON , VENDEE	FEE, A.R.	40.00	23.24	——	23.24	16.76	——	——
38	4.16,4.18	JAMES J. VAN DE GRIFT MARITAL TRUST, 1/2 ANN R. VAN DE GRIFT, 1/2	FEE ,T.L.E., A.R.	INDET.	26.64	5.75	32.39	INDET.	0.17	——
39	4.16,4.17	JOHN D. ADAMS	FEE ,T.L.E.	160.00	5.89	——	5.89	154.11	0.14	——
40										
41	4.17	MARK J. KOCH & CAROL A. DRESEN	FEE	5.13	0.05	0.10	0.15	4.98	——	——
42	4.17	BLACKHAWK BOW HUNTERS	FEE	11.31	0.08	0.06	0.14	11.17	——	——
43	4.17	ELWOOD C. & PHYLLIS ANDERSON	FEE	27.00	1.55	0.97	2.52	24.48	——	——
44	4.15,4.17	ICE AGE PARK & TRAIL FOUNDATION, INC.	T.L.E.	INDET.	——	——	——	INDET.	0.12	——
45										
46	4.17	JAMES & JUDY PAUTZKE	T.L.E.	2.00	——	——	——	2.00	0.16	——
47	4.18	JAMES J. VAN DE GRIFT TRUST	FEE, T.L.E., A.R.	INDET.	13.52	4.16	17.68	INDET.	0.99	——
48	4.19	RODNEY SLOTTEN	FEE ,T.L.E., A.R.	57.59	23.28	5.10	28.38	29.21	0.12	——
49	4.19	AIR PARK ASSOCIATES, INC.	FEE ,T.L.E., A.R.	17.33	0.62	0.15	0.77	16.56	0.20	——

PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL ACRES OR S.F.	R/W ACRES REQUIRED OR S.F. NEW	EXISTING	TOTAL	TOTAL ACRES REM.	T.L.E. ACRES	H.E. ACRES
51	4.20,4.21	DANE COUNTY	FEE	INDET.	46.96	1.76	48.72	INDET.	——	——
52	4.21–4.23	SHARON L. NESBITT, ETAL.	FEE ,T.L.E.,	128.50	68.99	0.07	69.06	59.44	1.03	——
53	4.23–4.25	REIN, SCHULTZ & DAHL, TRUST	FEE	82.21	81.62	0.59	82.21	——	——	——
54										
55										
56										
57										
58										
59										
60										
61	4.4,4.6,4.8,4.10 4.12,4.13,4.15,4.16, 4.18–4.21	MT. VERNON TELEPHONE COMPANY		RELEASE OF RIGHTS						
62	4.3,4.4,4.5,4.12–4.18,4.21 4.23–4.25	WISCONSIN POWER AND LIGHT COMPANY		RELEASE OF RIGHTS						
63	4.12	CITY OF VERONA		RELEASE OF RIGHTS						

Vehicle No 60

REVISION DATE	ROUTE	COUNTY	DATE	R/W PROJECT NUMBER	SHEET NUMBER
7-14-92 11-12-92 1-26-93 N.C.	U.S.H. 18	DANE	3-2-92	1201-04-21	
	NOT TO SCALE			FEDERAL PROJECT NUMBER	4.2
				1201-4-75	4.2

TOWN

BEGIN RELOCATION ORDER
STA. 437+00.00

END RELOCATION ORDER
STA. 822+54.76

OF

VERONA

CITY OF VERONA

TOWN OF VERONA

CITY OF FITCHBURG

T-6-N

R-6-E

G N

SEVEN SPRINGS ROAD

DAIRY RIDGE ROAD

MILITARY RIDGE RECREATION TRAIL

COUNTRY VIEW ROAD

"C-V" LINE

"G-1" LINE

"G-2" LINE

"G-3" LINE

"G-4" LINE

"G" LINE

450+00

800+00

"W-2" LINE

"W-1" LINE

"F" LINE

HALF MILE ROAD

CROSS COUNTRY ROAD

NESBITT ROAD

GOOSE POND

"NESBITT" LINE

"LOCAL" LINE

"E-2" LINE

"E-1" LINE

750+00

"BIKE" LINE

NESBITT POND

GRANDVIEW ROAD

"GRANDVIEW" LINE

BADGER MILL CREEK

CLEARY'S PIT (PRIVATE)

FIREMAN'S BEACH PIT

W. BIKE TRAIL

550+00

"69-1" LINE

"69-2" LINE

"69" LINE

"69-3" LINE

"69-4" LINE

600+00

VALLEY ROAD

"VALLEY" LINE

PINE ROW ROAD

"69" LINE

SUGAR RIVER ROAD

SUGAR RIVER

DRIVE

ST.

GRAVEL PIT ROAD (PRIVATE)

WHALEN ROAD

"PB-4" LINE

"PB-1" LINE

"M" LINE

650+00

"WHALEN" LINE

"RT" LINE

"PB" LINE

"LOCUST" LINE

LOCUST DRIVE

TRAIL ROAD

RANGE

700+00

18 151

12 13 14 15 16 17 18

19 20 21 22 23 24 25

28 27 26

REVISION DATE	ROUTE	COUNTY	DATE	R/W PROJECT NUMBER	SHEET NUMBER
7-14-92 11-12-92 1-26-93 N.C.	U.S.H. 18	DANE	3-2-92	1201 – 04 – 21	4.14
	SCALE, FT. 0 100 200	GRID FACTOR 0.99991		FEDERAL PROJECT NUMBER 1201-4-75	4.3

NOTE:
EXISTING HIGHWAY R/W ON LOCUST DRIVE IN SECTION 22 ESTABLISHED FROM GOVERNMENTAL LAND LINE.
EXISTING HIGHWAY R/W ON LOCUST DRIVE IN SECTION 27 ESTABLISHED FROM CENTERLINE OF EXISTING PAVEMENT.

G N

TOWN OF VERONA

T 6 N R 8 E — 22

ALUM. MON.
Y 357,493.805
X 2,124,876.898

PI STA 628+27.26
Y 354,881.11
X 2,125,756.31
DELTA= 13°15'00" Lt.
D= 0°30'00"
T=1,330.94'
L=2,650.00'
R=11,459.16'
PC STA 614+96.33
PT STA 641+46.33

SW – SW | SE – SW | SW – SE | SE – SE

NW – NW | NE – NW | NW – NE | NE – NE

31 RANDALL J. ACKER

32 DONALD G. GUST

33 CLARENCE H. & VIRGINIA A. WITT

62 WISCONSIN POWER & LIGHT COMPANY
EASEMENT RELEASE, PARCEL 27

62 WISCONSIN POWER & LIGHT COMPANY
POWER POLES

S80°-49'-23"E 1,196.32'
S79°-36'-15"E 684.15'
S81°-53'-45"E 1,312.30'
S85°-30'-49"E 602.08'
S80°-45'-00"E 4,294.51'
S80°-45'-00"E 400.00'
S89°-07'-36"E 2,595.50'
SE COR. SEC. 21 TO S.1/4 COR. SEC. 22
S81°-04'-21"E 259.98'
S81°-19'-42"E 307.90'
S89°-07'-36"E 0.62'
"LOCUST" TO S1/4 COR., SEC. 22
S00°-55'-26"W 157.93'
N88°-40'-37"E 210.46'
S72°-49'-59"E 149.70'
S80°-40'-16"E 216.21'
S85°-51'-43"E 691.63'
SLOPE INTERCEPT
N86°00'-00"E
N88°-24'-17"E 1,116.54'
SLOPE INTERCEPT
S88°58'13"E 2,641.78'
S. 1/4 COR. SEC. 22 TO SE COR. SEC. 22
N87°-21'-04"E 285.05'
N78°-19'-49"E 212.48'
S15°-59'-34"W 103.58'
N89°-04'-34"W 33.08'
S89°-04'-34"E 32.92'
S01°-04'-26"E 101.77'
N88°-43'-54"E 1,316.18'

PC 614+96.33
PI 628+27.26
PT 641+46.33
619+35.20 "LOCUST"
619+99.76 "LOCUST"
438.07' ALONG TAN.
892.87' ALONG TAN.
17+87.13 60' T.L.E.
22+99.73"LOCUST" 50'
22+99.77"LOCUST" 33.28'
24+00"LOCUST" 32.92'
24+00"LOCUST" T.L.E. 60'
24+00"LOCUST" 33.08'
T.L.E. SLOPES 0.05 AC.
T.L.E. SLOPES 0.20 AC.
T.L.E. SLOPES 0.07 AC.
15+00"LOCUST" T.L.E. 24.82'
15+00"LOCUST" T.L.E. 60'
17+57.93"LOCUST" T.L.E. 60'
18+00"LOCUST" T.L.E. 60'
20+00"LOCUST"
23+00 60'
LINE TO TAN ALONG ℄
S00°-02'-27"W 2469.40'
N00°-02'-27"E 163.82'
S 1/4 COR. TO TAN.
N00°-55'-26"E 100.00'
S00°-55'-32"W 105.00'
S71°-15'-41"W 21.20'
N71°-15'-41"E 121.57'
S89°-04'-34"E 55.18'
S88°-40'-37"W 52.76'
N00°-02'-27"E 160.02'
S89°-04'-34"E 26.92'
N74°-22'-41"E 35.96'
N74°-22'-41"E 34.27'

COURSE TABLE

COURSE	BEARING	DISTANCE
A	S00°-55'-26"W	112.13'
B	S89°-04'-34"E	19.98'
C	S00°-55'-32"W	105.00'
D	S71°-15'-41"W	21.20'
E	N71°-15'-41"E	121.57'
F	S89°-04'-34"E	55.18'
G	S88°-40'-37"W	52.76'
H	N00°-02'-27"E	160.02'
I	N00°-55'-26"E	100.00'
K	S89°-04'-34"E	26.92'
L	N74°-22'-41"E	35.96'
M	N74°-22'-41"E	34.27'

T 6 N R 8 E — 21 22 28 27 — ALUM. MON. Y 354,900.37 X 2,122,280.06

T 6 N R 8 E — 22 27 — ALUM. MON. Y 354,860.810 X 2,124,875.021

CORNER IS LOCATED AT STA. 21+71.77"LOCUST", 0.62 FEET LEFT

T 6 N R 8 E — 22 23 27 26 — ALUM. MON. Y 354,813.33 X 2,127,516.11

P.L. | O.H. | 69KV | FEEDER | SILO | B. | S. | W | D | G. | H. | FDN. | 80' W.P.& L. EASEMENT

SLOPE INTERCEPT | 15+00 | 16+00 | 17+00 | 18+00 | 19+00 | 20+00 | 21+00 | 22+00 | 23+00 | 24+00 | 600 | 610+00 | 615+00 | 619+00 | 620+00 | 621+50 | 622+00 | 623+00 | 625+00 | 625+00 | 630+00 | 632+00

LEVELS ON – 11,12,13,14,15, ,17,18,19, 21,22,23,24,25,26,27,28, 59.60

4.3

CADDS SHEET 75

1201-04-21 Dane 4.14

REVISION DATE
7-14-92
11-12-92
1-26-93

ROUTE	COUNTY	DATE
U.S.H. 18	DANE	3-2-92

SCALE, FT. 0 100 200 (GRID FACTOR - D:99991)

R/W PROJECT NUMBER	SHEET NUMBER
1201 - 04 - 21	4.15
FEDERAL PROJECT NUMBER	
1201-4-75	4.4

PI STA 20+34.60 "M"
DELTA= 67°38'11"
D= 4°29'37"
T=854.18'
L=1505.20'
R=1275.08'
PC STA 11+80.42 "M"
PT STA 26+85.62"M"

PI STA 628+27.26
Y 354,881.11
X 2,125,756.31
DELTA= 13°15'00" Lt.
D= 0°30'00"
T=1,330.94'
L=2,650.00'
R=11,459.16'
PC STA 614+96.33
PT STA 641+46.33

SW – SE | SE – SE | NW – NE | NE – NE | SW – SW | NW – NW | SE – SW | NE – NW

TOWN OF VERONA

ALUM. MON.
Y 357,453.48
X 2,127,495.15

NOTE:
EXISTING HIGHWAY R/W ESTABLISHED FROM CENTERLINE OF EXISTING PAVEMENT.

PI STA 678+00.24
Y 355,228.80
X 2,130,728.57
DELTA= 90°00'00" Lt.
D= 3°00'00"
T=1909.86'
L=3000.00'
R=1909.86'
PC STA 658+90.38
PT STA 688+90.38

PC 658+74.24 "PB-1"

ALUMINUM MONUMENT
Y 354,880.810
X 2,124,875.021

S.1/4 COR. SEC. 22 TO SE COR. SEC. 22 S88°-58'-13"E 2,641.76'

ALUM. MON.
Y 354,813.33
X 2,127,516.11

R/W CURVE 451
L.C. = 48.16'
L.C.B. = S50°43'52"E
R. = 1,172.50'
L = 48.16'

R/W CURVE 551
L.C. = 96.85'
L.C.B. = S51°55'17"E
R. = 1,172.50'
L = 96.88'

EX. R/W CURVE 184
L.C. = 84.94'
L.C.B. = S47°-24'-53"E
R. = 1137.50'
L = 84.98'

EX. R/W CURVE 52
L.C. = 544.18'
L.C.B. = S35°42'54"E
R. = 1137.50'
L = 549.51'

COURSE TABLE

COURSE	BEARING	DISTANCE
S	S89°-34'-56"E	109.97'
T	N81°-39'-18"E	175.80'
V	S52°-20'-41"E	18.52'
W	S00°-50'-04"W	209.42'

COURSE TABLE

COURSE	BEARING	DISTANCE
A	S00°-50'-04"W	13.32'
B	S70°-13'-19"E	110.65'
C	S89°-34'-56"E	43.63'
D	S04°-30'-44"E	178.29'
E	N04°-30'-42"W	30.22'
F	S00°-27'-17"E	384.66'
G	S70°-13'-19"E	75.44'
H	N38°-05'-38"E	80.70'
J	S40°-26'-44"W	35.00'
K	N88°-58'-13"W	24.53'
L	S04°-30'-44"E	69.79'
M	S02°-27'-51"E	140.28'
N	S04°-30'-44"E	110.67'
O	N70°-13'-19"E	38.66'
P	S04°-30'-44"E	138.72'
Q	S04°-30'-44"E	30.22'
R	S00°-50'-04"W	574.13'
S	S00°-27'-17"E	60.00'
T	S04°-30'-44"E	53.83'

PI STA 16+97.01 "RT"
DELTA= 22°45'52"Lt.
D= 6°30'00"
T=177.452'
L=350.223'
R=881.47'
PC STA 15+19.56 "RT"
PT STA 18+69.78 "RT"

ROAD TO BE DISCONTINUED BY TOWN BOARD ACTION 0.84 ACRES

DETAIL #1 (NOT TO SCALE)

T.L.E. DETAIL #2

RANGE TRAIL ROAD

POND

ICE AGE PARK & TRAIL FOUNDATION, INC.

RAYMOND W. & LOIS J. GUST

DONALD G. GUST

CLARENCE H. & VIRGINIA A. WITT

RICHARD M. & MARLY M. TOLLEFSON, VENDEE
IRVING WILD, VENDOR

WISCONSIN POWER & LIGHT COMPANY
EASEMENT RELEASE ONLY, PARCEL 34

WISCONSIN POWER & LIGHT COMPANY
POWER POLES

WISCONSIN POWER & LIGHT COMPANY
UNDERGROUND CABLE

MT. VERNON TELEPHONE COMPANY
BURIED CABLE

EXISTING W.P.& L. EASEMENT

EXISTING 1" IRON PIPE

1/2" IRON ROD FOUND (EXIST. P.I.)

1/2" IRON ROD FOUND (EXIST. P.I.)

SLOPE INTERCEPTS

T.L.E. SLOPES & DRAINAGE 0.32 AC.

T.L.E. SLOPES 0.04 AC.

T.L.E. SLOPES & DRIVEWAY 0.59 AC.

T.L.E. SLOPES 0.89 AC.

T.L.E. DRIVEWAYS & SLOPES 0.59 AC.

SEE DETAIL #1

SEE T.L.E. DETAIL #2

CADDS SHEET 4.4 75

12.01-04-21 Page 4.15

PROJECT NUMBER	SHEET NO.
1201-04-75	5.0

PLAN & PROFILE
U.S.H. 18 AND LOCUST DRIVE AND FENCING

18 DANE COUNTY

KEY MAP

NOTE:
1. STH 89 INTERCHANGE CONSTRUCTION NOT PART OF THIS CONTRACT.
2. APPROXIMATE STOCK PILE LIMITS STA. 607+00 TO STA. 612+00.

BEGIN PROJECT 1201-04-75
STA. 607+00.00

BEGIN WOVEN WIRE FENCE STA. 607+00, 157' LT.

STA. 606+00.0

RANDALL J. ACKER

END WOVEN WIRE FENCE STA. 18+75, 18' RT. LOCUST DRIVE

BEGIN CONSTRUCTION STA. 16+00.00 SAW CUT PAVEMENT

SLOPE INTERCEPTS

3' TYP.

C/L USH 18

S 80°45'00.0" E

B-13-409

STA. 17+63 27.28' LT., LOCUST DRIVE

STA. 623+00 237' LT.

STA. 621+50 267' LT.

STA. 18+75, 27' LT. LOCUST DRIVE

DONALD G. GUST

STA. 625+00 147' LT.

MATCH LINE

BEGIN WOVEN WIRE FENCE STA. 18+75, 18' LT. LOCUST DRIVE

96°07'54"

USH 18 WB

USH 18 EB

18" CLASS 'A' STEEL PLATE BEAM GUARD

BM BA14

BEGIN WOVEN WIRE FENCE STA. 21+25, 18' LT. LOCUST DRIVE

STA. 21+25 60' LT. LOCUST DRIVE

STA. 630+00.00

USH 18
C2
P.I. STA. 628+27.26
X 2,125,756.31
Y 354,881.11
Δ 13°15'00.0"
D 06°30'00.0"
T 1330.64
L 2650.00
R 11,459.15
S.E. = 0.020 FT/FT
R.O. = 190'

BEGIN WOVEN WIRE FENCE STA. 607+00, 188' RT.

STA. 610+00 157' RT.

SLOPE INTERCEPTS

STA. 618+00 157' RT.

STATION 619+35.20
STRUCTURE B-13-409
2 SPAN 70" PRESTRESSED CONCRETE GIRDER
40' CLEAR ROADWAY
SKEW 6° RHF
SEE STRUCTURE PLANS

END WOVEN WIRE FENCE STA. 21+25, 18' RT. LOCUST DRIVE

RANDALL J. ACKER

LOCUST DRIVE

C/L LOCUST DRIVE

STA. 20+20.00 "L" 1-18" X 46' CMCP TO BE REMOVED

STA. 623+00 247' RT.

STA. 625+00 187' RT.

STA. 619+35.20 C/L USH 18
STA. 19+99.78 C/L "LOCUST DR"

STA. 22+27 60' LT. LOCUST DRIVE

C/L LOCUST DRIVE

END CONSTRUCTION STA. 24+45.00 SAW CUT PAVEMENT

CLARENCE H. & VIRGINIA A. WITT

BENCH MARKS

NO.	STATION	LOCATION	DESCRIPTION	ELEV.
BM BA14	20+62.62	21.14' LT.	ON EAST SIDE OF LOCUST DRIVE RR SPK IN W SIDE DSL 16" & 12" POPLAR, +/- 100' NO. OF POWER LINES.	1016.41

LOCUST DRIVE PROFILE

FINISHED PROFILE

B-13-409

PVI 17+00 EL 1024.88

MATCH EXISTING

EXISTING GROUND LINE

PVI 24+15 EL 1032.35

MATCH EXISTING

USH 18

WB EB

PVI 6+00 EL 958.13

FINISHED MAINLINE PROFILE NOT PART OF THIS CONTRACT STA. 602+00 TO STA. 607+00

ESTIMATED SOIL/ROCK INTERFACE

+3.4255%

SPECIAL DITCH, RT.

PVC 6+07.50 EL 970.42

BEGIN PROJECT 1201-04-75
STA. 607+00.00

STA. 612+10.5
1-54" X 340 L.F. CLASS III RCCP REQ'D.
SKEW 54° RHF
2 APRON ENDWALLS REQ'D.

SPECIAL DITCH, LT.

EARTHWORK BALANCE NO. 1 STA. 607+00.00 TO STA. 621+70.00

PVC 6+16.50 EL 999.24

-0.7200%

EXISTING GROUND LINE

L= 1700.0'
K = 410

STA. 612+10 TO STA. 613+50
1-24" X 102 L.F. CLASS III RCCP REQ'D.
1 TYPE 8-MS INLET REQ'D.
1 CONCRETE COLLAR REQ'D.

ESTIMATED SOIL/ROCK INTERFACE

STA. 618+50
1-12" X 83 L.F. PUU REQ'D.
SKEW 0° RHF
1 APRON ENDWALL REQ'D.
1 TYPE 1-V INLET REQ'D.

STA. 620+10
1-12" X 83 L.F. PUU REQ'D.
SKEW 0° RHF
1 APRON ENDWALL REQ'D.
1 TYPE 1-V INLET REQ'D.

"WB" AND "EB" PROFILE

FINISHED MAINLINE PROFILE "EB" R/L & "WB" R/L

-0.7200%

PVI 624+50 EL 993.32

SPECIAL DITCH, RT.

SPECIAL DITCH, LT.

EARTHWORK BALANCE NO. 2 STA. 621+70.00 TO STA. 644+00.00

USH 18 AND LOCUST DRIVE EARTHWORK SUMMARY - BALANCE #1

	MAIN LINE	LOCUST
COMMON	92,000 C.Y.	1,500 C.Y.
FILL	85,600 C.Y.	4,200 C.Y.

| | | |

STATE PROJECT NUMBER
1201-04-75

SHEET NO.
5.1

PLAN & PROFILE
U.S.H. 18
AND FENCING

DANE COUNTY

KEY MAP

N

0 100 200 300

DONALD G. GUST

CONSTRUCT MAINTENANCE CROSSOVER
STA. 630+50.00, SEE SDD

STA. 630+00.00

STA. 632+00
127' LT.

3' TYP.

SLOPE INTERCEPTS

USH 18 WB

USH 18 EB

USH 18
C2

P.I. STA. 628+27.26
X 2,125,756.31
Y 354,881.14
Δ 13°15'00.0"
D 00°30'00.0"
T 330.94'
L 2650.00'
R 11,459.16'
S.E. = 0.020 FT/FT
R.O. = 190'

MATCH LINE

STA. 636+00
127' RT.

SLOPE INTERCEPTS

DONALD G. GUST

STA. 640+00
127' LT.

STA. 640+00
124' RT.

STA. 641+00
124' RT.

STATION 644+38.07
STRUCTURE B-13-410 REQUIRED
2 SPAN 84" STEEL PLATE GIRDER
44' CLEAR ROADWAY
SKEW 54°46'00" RHF
SEE STRUCTURE PLANS

STA. 644+38.07 C/L USH 18 =
STA. 20+00.00 C/L CTH "M"

B-13-410

OBLITERATE OLD ROADWAY

CLASS 'A' STEEL PLATE BEAM GUARD

C/L U.S.H. 18

STA. 644+00
110' RT.

PI 641+46.32

END WOVEN WIRE FENCE
STA. 18+10, 25' RT. CTH "M"

BEGIN WOVEN WIRE FENCE
STA. 18+40 42' LT. CTH "M"

STA. 18+73
57' LT. CTH "M"

STA. 19+92
276.40' LT. CTH "M"

STA. 19+92
201.80' LT CTH "M"

END WOVEN WIRE FENCE
STA. 21+75, 25' RT. CTH "M"

DONALD G. GUST

C/L CTH "M"

RANGE TRAIL

STA. 24+00.00 C/L CTH "M" =
STA. 10+48.56 C/L RANGE TRAIL
TYPE C INTERSECTION

C/L RANGE TRAIL RD

RAYMOND W. & LOIS GUST

END PROJECT 1201-04-75
STA. 648+00.0

3' TYP.

END WOVEN WIRE FENCE
STA. 646+00 18' LT.

RICHARD M. & MARILYN M. TOLLEFSON

N86°00'00.0"E

35°13'34.9"

BEGIN WOVEN WIRE FENCE
STA. 22+80, 42' LT. CTH "M"

STA. 23+40
57' LT. CTH "M"

PT 26+85.62

STA. 26+85.62
57' LT. CTH "M"

3' TYP.

END WOVEN WIRE FENCE
STA. 29+00, 57' LT. CTH "M"

95°00'00.0"

S 89°34'55.6" E

CTH "M"

SAW & MATCH
STA. 29+00

ICE AGE PARK &
TRAIL FOUNDATION, INC.

BENCH MARKS

NO.	STATION	LOCATION	DESCRIPTION	ELEV.
BM 317	21+58.39	23.30' LT.	CHISEL "+" ON NORTH END CMCP UNDER CTH "M"	1000.53

NOTES:

CTH PB INTERCHANGE CONSTRUCTION IS NOT PART OF THIS CONTRACT.

"WB" & "EB" PROFILE

EXISTING GROUND LINE

FINISHED MAINLINE PROFILE
NOT PART OF THIS CONTRACT
STA. 648+00 TO STA. 659+00

+2.2800%

L = 600.0
K = 199

℄ CTH "M"

B-13-410

FINISHED MAINLINE PROFILE
"EB" R/L "WB" R/L

-0.7200%

PVC 639+00
EL 982.68

PVI 644+00
EL 980.52

PVT 647+00
EL 987.36

STA. 637+40
1-24" X 86 L.F. RCCP CLASS III REQ'D.
SKEW 0° LHF
1-APRON ENDWALL REQ'D.
1-TYPE B-MS INLET REQ'D.

SPECIAL DITCH, RT.

SPECIAL DITCH, LT.

STA. 630+40.00
1-42"X200 L.F. RCCP CLASS III REQ'D.
SKEW 69° LHF
2-APRON ENDWALLS REQ'D.
STA. 630+00.00
1-24"X40 L.F. RCCP CLASS III REQ'D.
1-TYPE 9 MS INLET REQ'D.
1-CONCRETE COLLAR REQ'D.

STA. 635+95.14
3-48"X 280 L.F. RCCP CLASS III REQ'D.
SKEW 49° RHF
2-CONCRETE MASONRY APRON ENDWALLS REQ'D.

STA. 640+50.00
1-24"X 62 L.F. RCCP CLASS III REQ'D.
SKEW 15° RHF
1-APRON ENDWALL REQ'D.
1-TYPE 10 INLET REQ'D.

STA. 648+00.00
1-24"X 42 L.F. RCCP CLASS III REQ'D.
SKEW 0° RHF
1-TYPE B INLET REQ'D.
1-APRON ENDWALL REQ'D.

STA. 642+00.00, 83.5' LT. TO STA. 642+56.00, 74' LT.
STA. 642+56.00, 74' LT. TO STA. 644+10.00, 74' LT.
STA. 644+10.00, 74' LT. TO STA. 645+94, 10' LT.
1-48" X 67 L.F. RCCP CLASS III REQ'D.
1-48" X 154 L.F. RCCP CLASS III REQ'D.
1-48" X 187 L.F. RCCP CLASS III REQ'D.
2-TYPE B M.H. REQ'D.
2-APRON ENDWALLS REQ'D.

STA. 644+82.00, 82.07' TO STA. 645+25.00, 85.93' RT.
1-42"X 142 L.F. RCCP CLASS III REQ'D.
2-APRON ENDWALLS REQ'D.

END PROJECT 1201-04-75
STA. 648+00.00
ELEV. 994.20

USH 18
EARTHWORK SUMMARY BALANCE #2
MAINLINE

COMMON	128,000 C.Y.
FILL	85,600 C.Y.
ROCK	44,800 L.Y.

STA. 630+40.00 to STA. 648+00.00

EARTHWORK BALANCE NO. 2 STA. 621+70.00 TO STA. 648+00.00

1040 1030 1020 1010 1000 990 980 970 960

630 1 2 3 4 635 6 7 8 9 640 1 2 3 4 645 6 7 8 9 650 1 2 3 4 655 6 7 8 9

989.16 988.44 987.72 987.00 986.28 985.56 984.84 984.12 983.40 982.68 982.21 982.24 982.77 983.80 985.33 987.36 989.64 991.92 994.20 996.48 998.76 1001.04 1003.32 1005.60 1007.88 1010.16 1012.44 1014.72 1017.00 1019.28

LEVELS ON 59,62, 5, 41,42, 39, 36, 29,30,31,32, 24,25, 20,

FILE NAME: HDGN: 75501.DGN

WISDOT/CADDS SHEET 48

PLAN & PROFILE

C.T.H. "M"

[illegible] COUNTY

KEY MAP

ICE AGE PARK AND TRAIL

RICHARD M. & MARLY M. TOOLEFSON

BEGIN CONSTRUCTION
STA. 10+00.00
SAW CUT PAVEMENT

CTH M
C6
P.I. STA. 20+34.60
X 2,127,172.49
Y 354,815.84
Δ 67°38'11.0"
D 04°29'37.0"
T 854.18'
L 1505.20'
R 1275.08'
S.E. = 0.050 FT/FT
R.O. = 150.0'

STA. 20+00.00 "M"
1-3'X6' BOX CULVERT &
1-4'X6' CMPA
TO BE REMOVED

STA. 646+74.00 R/L RAMP "PB-1" =
STA. 646+74.00 C/L USH 18, 49.0' LT.

END PROJECT 1201-04-75
STA. 648+00.00

LEGEND
ICE AGE PARK AND TRAIL LOCATION
EXACT LOCATION TO BE DETERMINED DURING CONSTRUCTION.

DONALD G. GUST

STATION 644+38.07
STRUCTURE B-13-410 REQUIRED
2 SPAN 84" STEEL PLATE GIRDER
44' CLEAR ROADWAY
SKEW 54°56'00" RHF
SEE STRUCTURE SHEETS

SLOPE INTERCEPT

STA. 648+00.00 R/L RAMP "PB-2" =
STA. 648+00.00 C/L USH 18, 49.0' RT.

ICE AGE PARK AND TRAIL

BENCH MARKS

NO.	STATION	LOCATION	DESCRIPTION	ELEV.
BM [illegible]	[illegible]	[illegible]	CHISEL "+" ON NORTH END CMCP UNDER CTH "M"	1000.53

STA. 644+[illegible] C/L USH 18
STA. 20+00.00 C/L CTH "M"

SLOPE INTERCEPTS

S 89°13'34.9" E

CTH "M"

END CONSTRUCTION
STA. 29+00
SAW CUT PAVEMENT

ICE AGE PARK & TRAIL FOUNDATION, INC.

N 86°00'00.0" E

B-13-410

C/L U.S.H. 18

USH 18 WB

USH 18 EB

STA. 24+00.00 C/L CTH "M" =
STA. 10+48.56 C/L RANGE TRAIL
TYPE "C" INTERSECTION

95°00'00.0"

S 18°15'08.4" W

RAYMOND W. & LOIS J. GUST

OBLITERATE OLD ROADWAY

C/L RANGE TRAIL ROAD

S 89°34'55.6" E

300.0' VC
K = 141

150.0' VC
K = 132

100.0' VC
K = 164

FINISHED PROFILE ALONG C/L

EXISTING GROUND LINE

MATCH EXISTING

PVI 10+00 EL 994.29
PVI 13+00 EL 996.75
PVI 16+00 EL 1002.38
PVI 18+00 EL 1008.27
PVI 20+00 EL 1014.15
PVI 22+00 EL 1015.18
PVI 24+25 EL 1016.60
PVI 25+50 EL 1017.50
PVI 28+25 EL 1025.03
PVI 29+00 EL 1025.40

+0.8200%
+2.9400%
+0.5154%
+3.1600%

SPECIAL DITCH, RT.

STA. 11+60
1-30" X 88' L.F. CP REQ'D.
SKEW 0° RHF
1-APRON ENDWALL REQ'D.
1-STEEL APRON ENDWALL, SLOPED SECTION REQ'D.

SPECIAL DITCH, LT.

STA. 18+40, 54' RT.
-12" X 22' L.F. PIPE REQ'D.
SKEW 0° RHF
-APRON ENDWALL REQ'D.
-TYPE I-V INLET REQ'D.

STA. 24+46, 53' LT. TO STA. 24+66, 53' LT.
1-24" X 20' L.F. CP REQ'D.
SKEW 90° RHF
2- APRON ENDWALLS REQ'D.

CTH "M"
EARTHWORK SUMMARY
COMMON 4,300 C.Y.
FILL 20,700 C.Y.

LEVELS ON - 20, 24, 25, 29, 30, 31, 32, 39, 41

1050 1040 1030 1020 1010 1000 990 980 970

994.29 995.11 995.93 996.75 997.92 999.80 1002.39 1005.33 1008.27 1010.91 1012.94 1014.36 1015.18 1015.70 1016.21 1016.75 1017.83 1019.67 1022.26 1025.40

10 1 2 3 4 15 6 7 8 9 20 1 2 3 4 25 6 7 8 9 30 1 2

FILE NAME: [illegible]

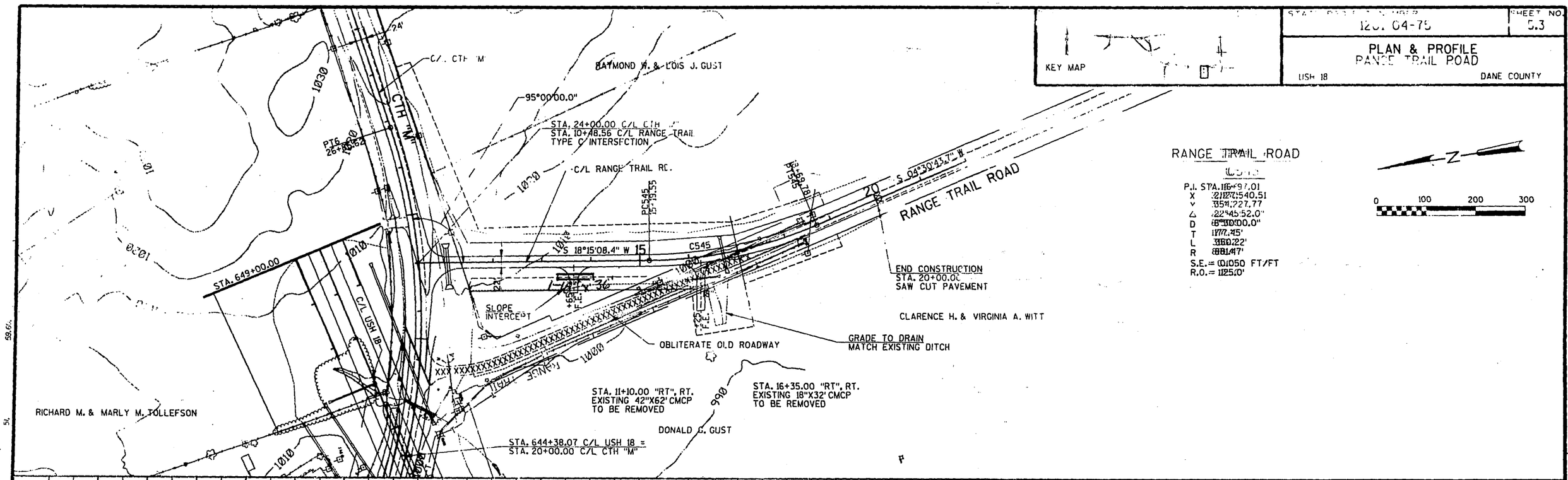
WISDOT/CADDS SHEET 42

KEY MAP

STATE PROJECT NUMBER 1207-04-75 | SHEET NO. 5.3

PLAN & PROFILE
RANGE TRAIL ROAD

USH 18 | DANE COUNTY



RANGE TRAIL ROAD
EARTHWORK SUMMARY

COMMON	6,500 C.Y.
FILL	1,300 C.Y.

FILE NAME: ROGNESON

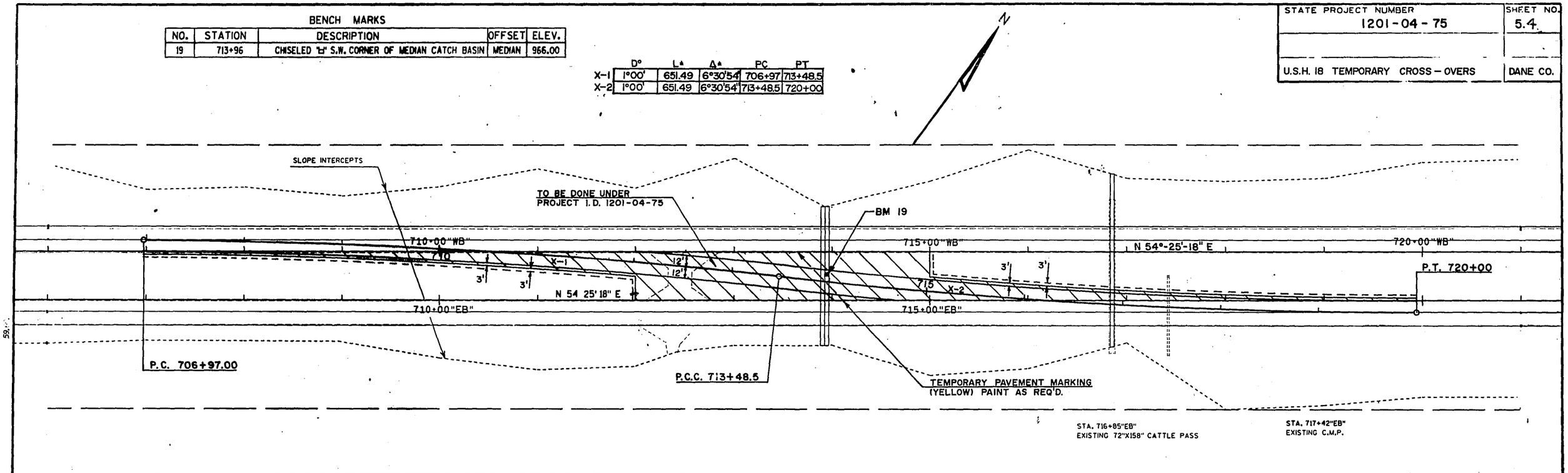
WISDOT/CADDS SHEET 42

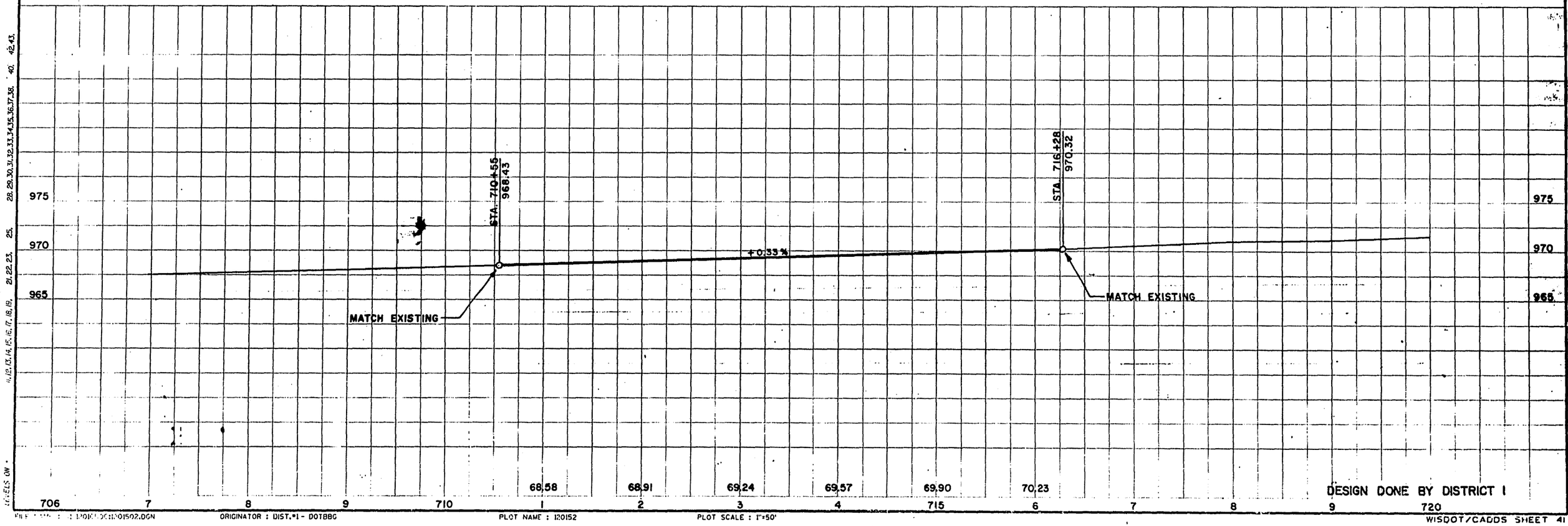
STATE PROJECT NUMBER	SHEET NO.
1201-04-75	5.4.
U.S.H. 18 TEMPORARY CROSS – OVERS	DANE CO.

BENCH MARKS

NO.	STATION	DESCRIPTION	OFFSET	ELEV.
19	713+96	CHISELED 'L' S.W. CORNER OF MEDIAN CATCH BASIN	MEDIAN	966.00

	D°	L▲	Δ▲	PC	PT
X-1	1°00'	651.49	6°30'54"	706+97	713+48.5
X-2	1°00'	651.49	6°30'54"	713+48.5	720+00





STATE PROJECT NUMBER	SHEET NO.
1201-04-75	5.5
U.S.H. 18 TEMPORARY CROSS - OVERS	DANE CO.

TERRY J. BUCHLI

THE CITY OF FITCHBURG

WINGRA STONE COMPANY INC.
A WISCONSIN CORPORATION

RUSSELL N. AND MARION FARR

MADISON METROPOLITAN SEWERAGE DISTRICT
8" SANITARY SEWER

MADISON GAS & ELECTRIC COMPANY
6" GAS MAIN

SLOPE INTERCEPTS

TO BE DONE UNDER
PROJECT I.D. 1201-04-75

P.C. 766+99.77

P.C.C. 767+87.60

P.T. 774+32.46

A-1

A-2

4" GAS MAIN

765+00 "WB"

770+00 "WB"

775+00 "WB"

765+00 "EB"

770+00 "EB"

775+00 "EB"

5+00 "S"

10+00 "S"

U.S.H. 18 & 151

TEMPORARY PAVEMENT MARKING
(YELLOW) PAINT AS REQ'D.

MADISON METROPOLITAN SEWERAGE DISTRICT
36" SANITARY SEWER FORCE MAIN

MATCH LINE

STA. 778+00

N 23°-57'-11" E

SIGN

SAN.

W.

G.

P.L.

	D°	L°	Δ°	PC	PT
A-1	1°30'	88.9	1°20'	766+99.77	767+87.60
A-2	1°30'	636.98	9°33'17"	767+87.60	774+32.46

SCALE

BLDG.

"WB" = WESTBOUND

"EB" = EASTBOUND

DESIGN DONE BY DISTRICT 1

TO BE BUILT UNDER
PROJECT I.D. 1201-05-71

0.5953 %

0.5801 %

STA = 762+56.00 (EB)
EL = 985.21
VC = 600.00
K = 0.26

986.07 986.67 987.26 987.86 988.45 989.05 989.64 990.24 990.84 991.43 992.03 992.62 993.22 993.81 994.41 995.00

995 990 985

986.11 986.63 987.21 987.79 988.37 988.95 989.53 990.11 990.69 991.27 991.85 992.43 993.01 993.59 994.17 994.75

980

4 765 6 7 8 9 770 1 2 3 4 775 6 7 8 9

LEVELS ON : 1,12,13,14,15,16,17,18,19,20,21,22,23,25,28,30,32,33,34,35,36,37,38,39,40,41,42,43,44,59

ORIGINATOR : DIST.#1 - DGTBRG

PLOT NAME : 120504

PLOT SCALE : 1"=50'

WISDOT/CADDS SHEET 41

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	5.6
PLAN / PAVEMENT DETAIL	
U.S.H. 18 TEMPORARY CROSS-OVERS	DANE CO.

STA. 778+00

LARRY J. FRANKLIN AND DEANN L. KING FRANKLIN

JOHN E. ELLIOTT AND LYNN MARIE

BERNARD AND THERESA S. WATERMOLEN

VIRGIL L. AND MAXINE B. RITCHIE

OFFICE

J. W. JUNG SEED COMPANY, A WISCONSIN CORPORATION

RUSSELL KAMMER

DARRELL AND MARY BURKELAND

RALPH M. BENJAMIN

EQUATION

STA. 26+72"PD"
MATCH PROJECT 5849-00-71
CITY OF FITCHBURG

PT 787+23.45"WB" BK =
PT 787+54.91"WB" FWD

UTILITY EASEMENT

SANITARY SEWER EASEMENT

8" SANITARY SEWER

FLOWER BEDS

TO BE DONE UNDER PROJECT I.D. 1201-04-75

6" GAS MAIN

CITY OF FITCHBURG 12" WATER MAIN

WISCONSIN BELL, INC. BURIED CABLE

MADISON GAS & ELECTRIC COMPANY 12" GAS MAIN

36" SANITARY SEWER

8" WATER MAIN

U.S.H. 18 & 151

MATCH LINE 782"WB"+50

780+00"WB"

785+00"WB"

780+00

780+00"EB"

785+00

785+00"EB"

790+00"BT"

785+00"BT"

TEMPORARY PAVEMENT MARKING (YELLOW) PAINT AS REQ'D.

MATCH LINE

SLOPE INTERCEPTS

P.C.C.

P.T.

PT 787+34.91"EB" FWD
PT 787+57.77"EB" BK =

EQUATION

UNDERGROUND STORAGE TANKS

MADISON METROPOLITAN SEWERAGE DISTRICT
36" SANITARY SEWER FORCE MAIN

TO BE BUILT UNDER PROJECT I.D. 1201-05-71

WEINSTEIN - MINKOFF INVESTMENT CO., A COPARTNERSHIP

WATER MAIN EASEMENT

ARBOR

WAREHOUSE

CERTCO INC.

4" GAS MAIN

UTILITY EASEMENT

WELL

STA. 30+01"PD"
MATCH PROJECT 5849-00-71
CITY OF FITCHBURG

N 52° 45' 8" W

P.C. 780+00

P.T. 2964+51.05

2965+00

2970+00

N 33° 44' 42" E

S 89°-09'-56" E

PI 2975+28.00

2975+00

* SEE TRAFFIC CONTROL/PAVEMENT DETAIL SHEET

DESIGN DONE BY DISTRICT 1

WISDOT/CADDS SHEET 41

ORIGINATOR : DIST.#1 - DOTBBF

PLOT NAME : 1201S04

PLOT SCALE : 1"=50'

STATE PROJECT NUMBER	SHEET NO.
1201 - 04 - 75	5.7
U.S.H. 18 TEMPORARY CROSS - OVERS	DANE CO.

MATCH LINE

HELEN L. WINEKE

MARIE F. HOLLFELDER

STA. 841+23 "EB"
EXISTING 38" X 17" C.M.P.
TO BE REMOVED

RICHARD T. AND CLAIRE J. MEYER

MADISON METROPOLITAN SEWERAGE DISTRICT

HAROLD F. AND RENE M. PEARNE

LIMITS

L.R.

P.L.

SAN.

T.P.

835+00 "WB"

840+00 "WB"

CONSTRUCTION LIMITS
(837"CG"+00 TO 843"CG"+13)

835+00 "EB"

840+00 "EB"

U.S.H. 18 & 151

STA. 835+00
EXISTING C.M.P.
TO BE REMOVED

PAVING LIMITS

BM 31

PT 843+33.08 "EB" BK
843+45.78 "EB" FWD

PT 843+58.47 "WB" BK
843+45.71 "WB" FWD

30' E.E.

SHAFER DRIVE

DRIVEWAY

TEMPORARY

8445+00 "WB"

N 44 10' 59" E

8445+00 "EB"

U.S.H. 18 & 151

N 44 10' 59" E

STA. 848+00

4" GAS MAIN

WISCONSIN BELL, INC.
BURIED CABLE

SLOPE INTERCEPTS

835+00 "CG"

P.C.

P.T.

T.P.

N 46 42' 53" E

840+00 "CG"

P.C.

P.T.

N 48 26' 49" E

P.C.

P.T. N 44 44' 18" E

8445+00 "CG"

MATCH LINE

STA. 833+50

MARTIN C. AND ALICE E. JULSETH

WATER MAIN EASEMENT

838+89.96 "CG"

20+00 "PE"

P.I.

CHALET GARDENS ROAD

CHALET GARDENS FRONTAGE ROAD

8445+72.32 "CG"

RICHARD R. AND TIMOTHY R. MCKENZIE

NATIONAL RETAIL ESTATE INVESTMENTS 79-II
A WISCONSIN LIMITED PARTNERSHIP

BENCH MARKS

NO.	STATION	DESCRIPTION	OFFSET	ELEV.
31	841+41	CHISELED "X" ON 36" C.M.C.P.	120'RT.	1028.49

P.I. = 20"PE"+83.98
X=2143218.14
Y=374878.74
Δ. =44°33'53"
D. =57°17'45"
T. =40.98'
L. =77.78'
R. =100.00'

P.I. = 836+13.17"CG"
Y 374,745.65
X 2,142,956.48
Δ. = 84°-08'-53"
D. = 3°-00'-00"
T. = 270.93'
L. = 538.27'
R. = 1,909.86'

"CG" = CHALET GARDENS

STA. = 837+40.00 (CG)
EL. = 1036.50
L. = 300.00
E. = -2.07

P.I. = 842+05.65"CG"
Y 375,154.29
X 2,143,390.35
Δ. = 14°-43'-56"
D. = 4°-00'-00"
T. = 21.66'
L. = 43.31'
R. = 1,432.39'

P.I. = 844+12.34"CG"
Y 375,291.38
X 2,145,345.02
Δ. = 14°-43'-56"
D. = 4°-00'-00"
T. = 46.38'
L. = 92.72'
R. = 1,432.39'

P.I. = 823+30.18"CG"
Y 375,583.25
X 2,142,367.31
Δ. = 37°-01'-13"
D. = 27°-30'-00"
T. = 69.75'
L. = 134.82'
R. = 208.35'

P.I. = [illegible]"CG"
Y 375,712.68
X 2,142,351.83
Δ. = 37°-01'-13"
D. = 27°-30'-00"
T. = [illegible]'
L. = [illegible]'
R. = 208.35'

VPI

2.70%

-2.80%

0.93%

VPI

VPI

STA. = 831+34.37 (CG)
EL. = 1020.15
L. = 500.00
E. = 4.11

STA. = 841+00.00 (CG)
EL. = 1026.45
L. = 200.00
E. = 0.93

STA. = 8445+00.00 (CG)
EL. = 1030.28.31
L. = .000

1035
1030
1025

1024.16 1025.09 1027.32 1030.02 1032.71 1034.31 1034.08 1032.03 1029.24 1027.38 1027.38 1028.31

2 3 4 835 6 7 8 9 840 1 2 3 4 845

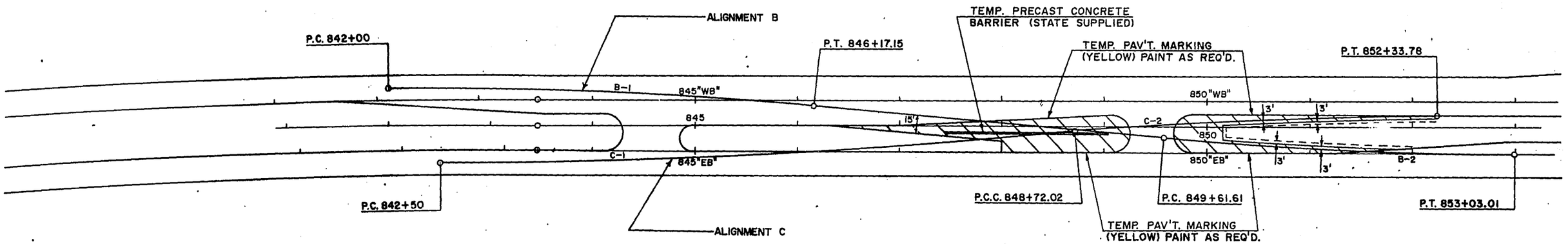
DESIGN DONE BY DISTRICT I

SEE TYPICALS SHEET 4.0

2.21.24 2.22.24

59. 62.63 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59.

STATE PROJECT NUMBER	SHEET NO
1201 - 04 - 75	5.8
U.S.H. 18 TEMPORARY CROSS - OVERS	DANE CO.



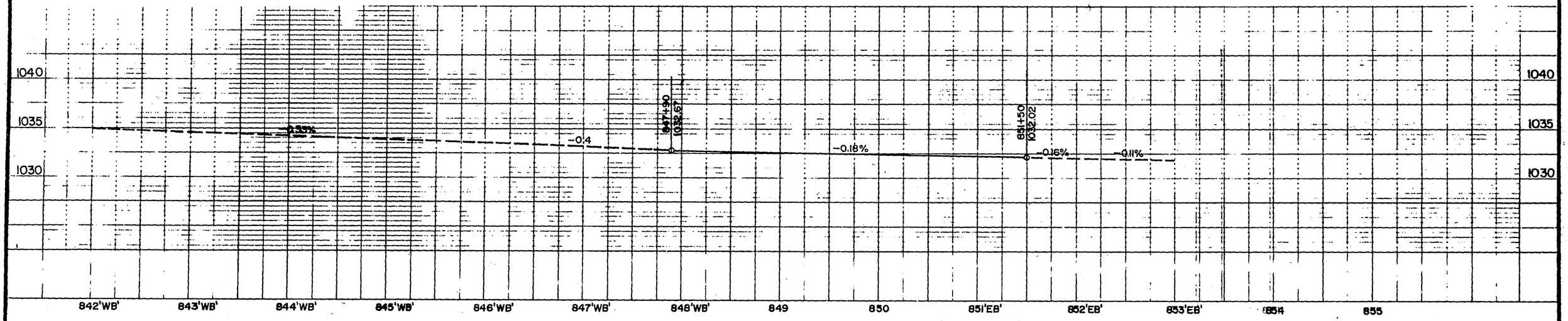
	D°	L▲	Δ▲	PC	PT
B-1	1°30'	417.15	6°15'26"	842+00	846+17.15
B-2	1°30'	341.40	5°07'18"	849+61.61	853+03.01
C-1	0°45'	622.02	4°39'35"	842+50	848+72.02
C-2	1°30'	361.76	5°25'35"	848+72.02	852+33.78

DESIGN DONE BY DISTRICT 1

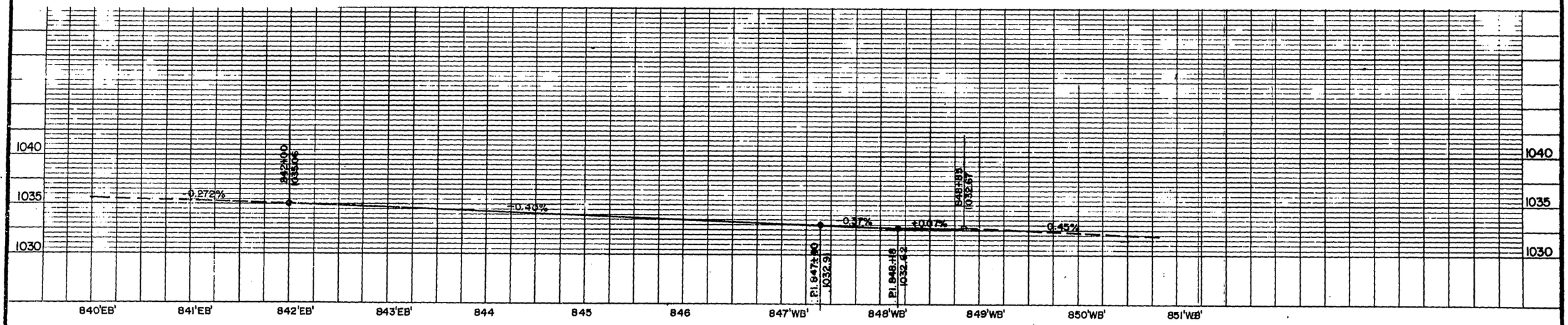
STATE PROJECT NUMBER	SHEET NO.
1201-04-75	5.9

U.S.H. 18 TEMPORARY CROSS-OVERS DANE CO.

ALIGNMENT B

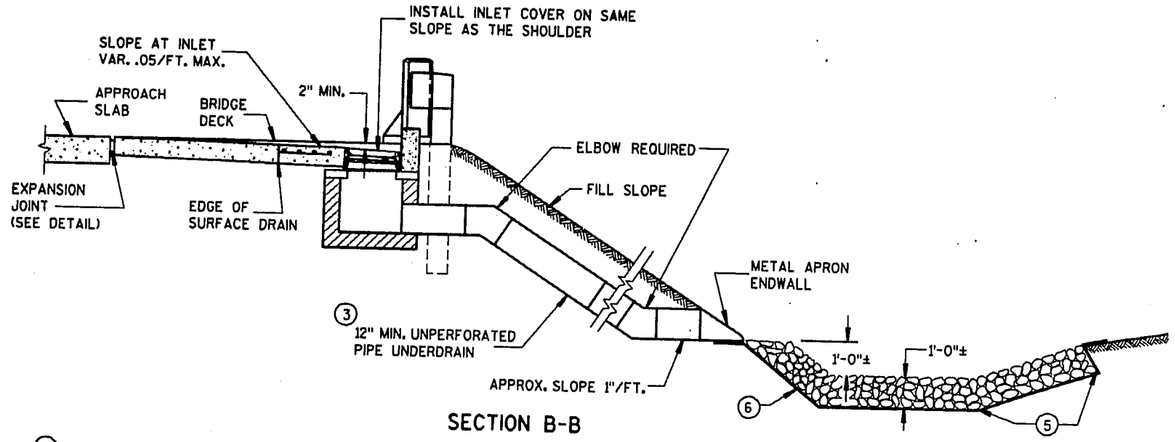


ALIGNMENT C

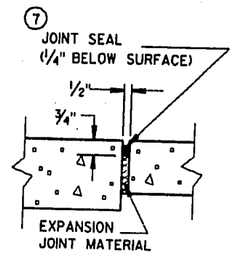


DESIGN DONE BY DISTRICT 1

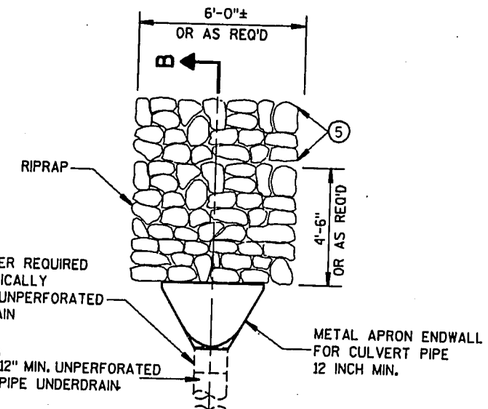
Doc No 2130 0142

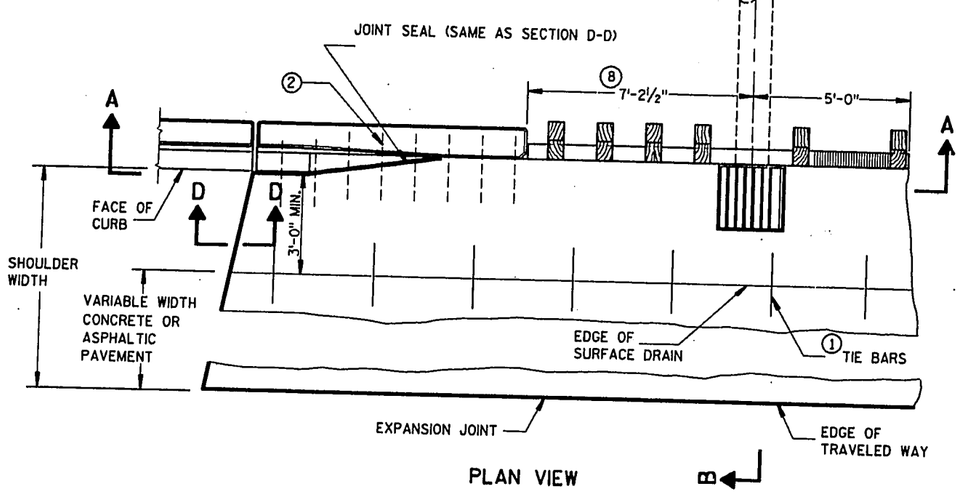


SECTION B-B

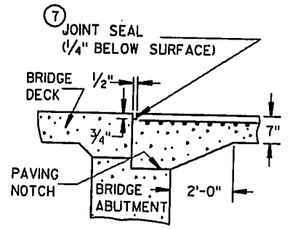


EXPANSION JOINT DETAIL

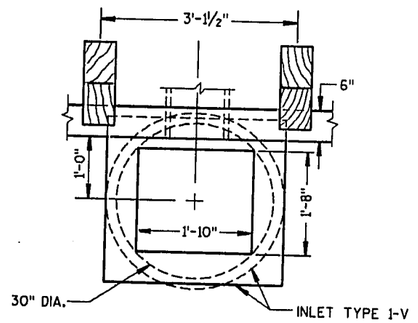




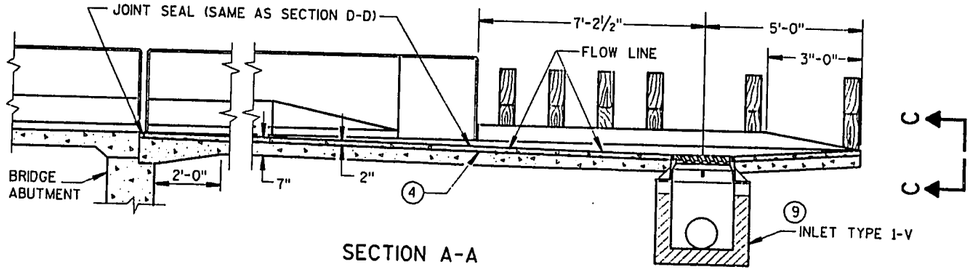
PLAN VIEW



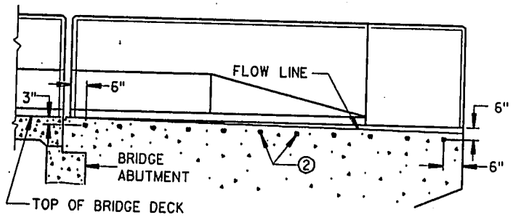
SECTION D-D



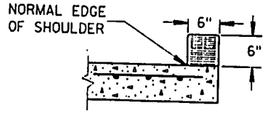
PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL



SECTION C-C

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISION.

1. NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.
2. NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR PAVEMENT TIES PLACED AS DIRECTED BY THE ENGINEER.
3. THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 (EXCEPT SECTION 612.2.3 DRAIN TILE).
4. MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
5. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
6. GEOTEXTILE FABRIC, TYPE 'R'
7. HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.
8. THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".
9. SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C1 FOR DETAILS.

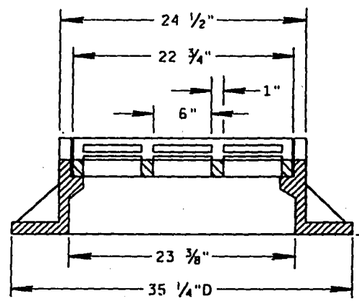
CONCRETE SURFACE DRAIN DROP INLET TYPE AT STRUCTURES

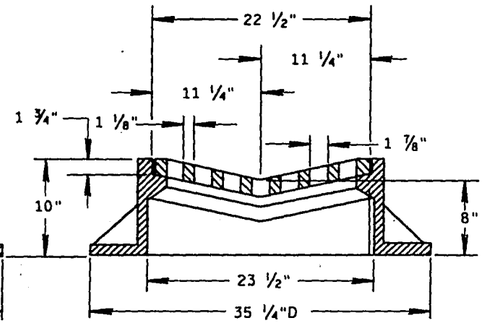
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 7/13/90 DATE
STATE DESIGN ENGINEER FOR HWYS
FHWA

S.D.D. 8 D 3-4

S.D.D. 8 D 3-4

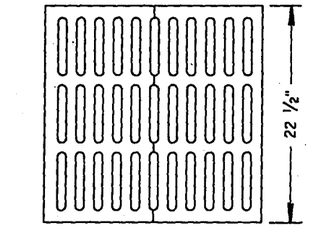


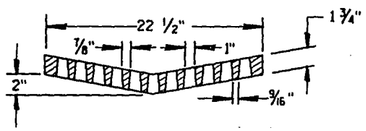


TYPE "B"

(APPROXIMATE WEIGHT 395 LBS.)

FRAME..... 285 LBS.
GRATE..... 110 LBS.



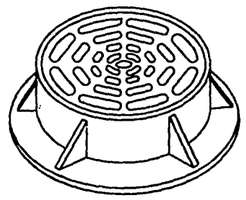


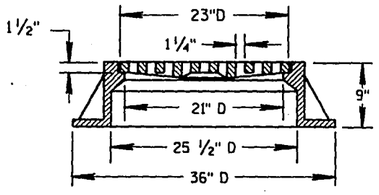
ALTERNATIVE GRATE FOR FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 125 LBS.)
GRATE..... 125 LBS.

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTE AS TYPE B-A ON THE DRAINAGE TABLE





TYPE "C"

(APPROXIMATE WEIGHT 340 LBS.)

FRAME..... 235 LBS.
GRATE..... 105 LBS.

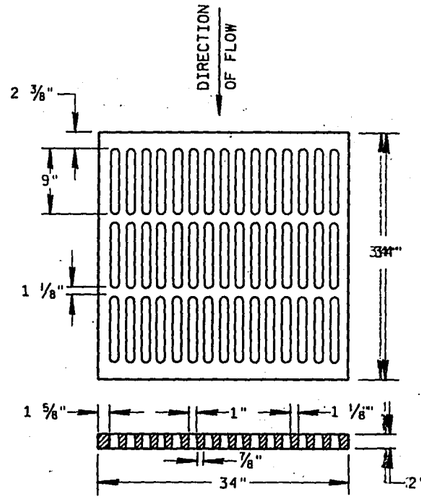
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

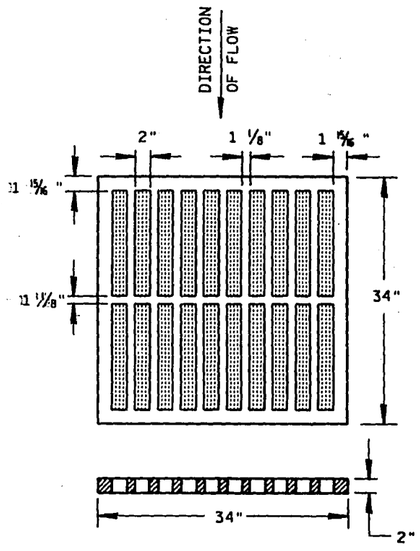


ALTERNATIVE TYPE "MS"

(APPROXIMATE GRATE WEIGHT 365 LBS.)
GRATE..... 365 LBS.

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

NOTE AS TYPE MS-A ON THE DRAINAGE TABLE

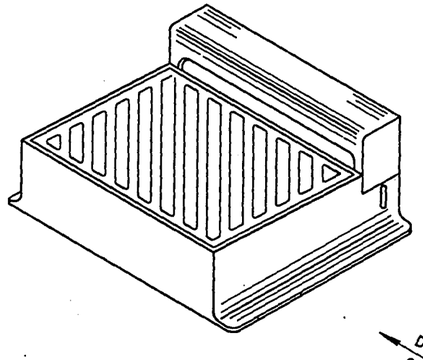


TYPE "MS"

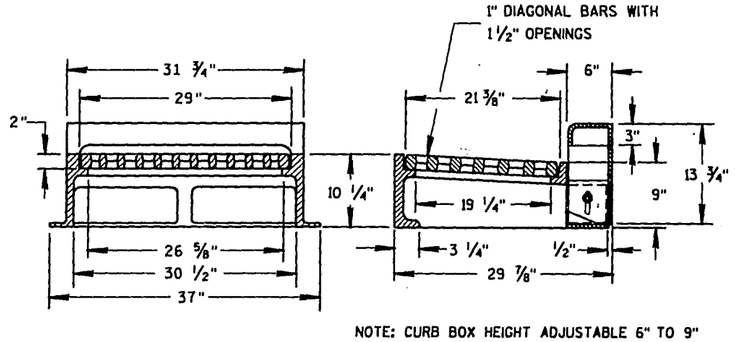
(APPROXIMATE GRATE WEIGHT 270 LBS.)
GRATE..... 270 LBS.

USE ON FREEWAYS AND EXPRESSWAYS

NOTE AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

(APPROXIMATE WEIGHT 670 LBS.)

FRAME..... 360 LBS.
GRATE..... 160 LBS.
CURB BOX..... 150 LBS.

INLET COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

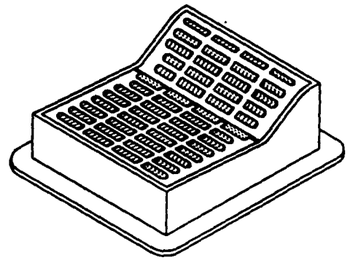
APPROVED
1/25/93
DATE

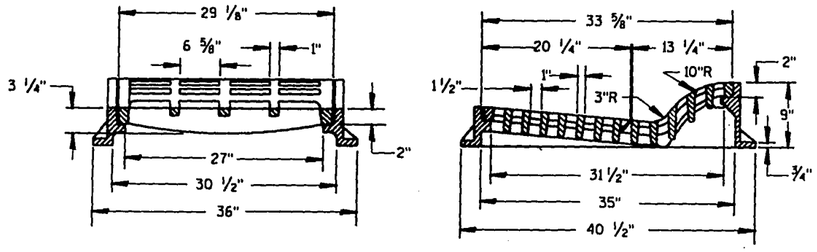
STATE DESIGN ENGINEER FOR HWYS

FHWA

S.D.D. 8 A 5-9b

S.D.D. 8 A 5-9b



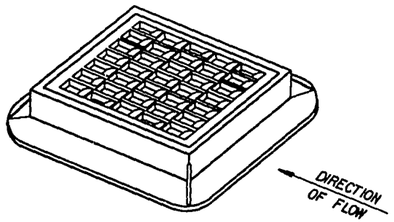


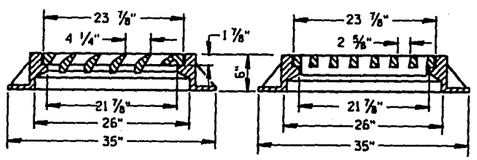
TYPE "F"

(APPROXIMATE WEIGHT 830 LBS.)

FRAME.....485 LBS.
GRATE.....165 LBS.
GRATE.....180 LBS.

USE WITH CONCRETE CURB & GUTTER, 36 INCH.

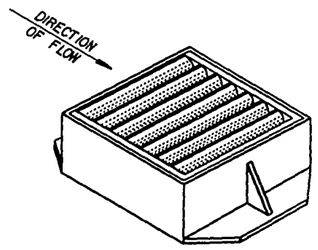


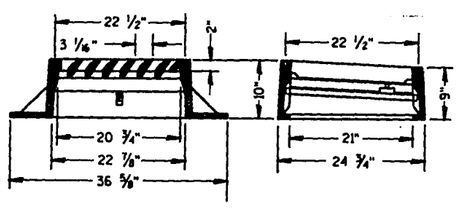


TYPE "S"

(APPROXIMATE WEIGHT 400 LBS.)

FRAME.....245 LBS.
GRATE.....155 LBS.

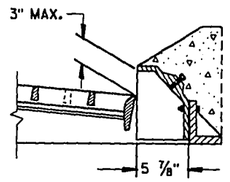




TYPE "V"

(APPROXIMATE WEIGHT 405 LBS.)

FRAME.....270 LBS.
GRATE.....130 LBS.
SAFETY BAR.....5 LBS.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

(APPROXIMATE WEIGHT 60 LBS.)

CURB BOX.....60 LBS.

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH

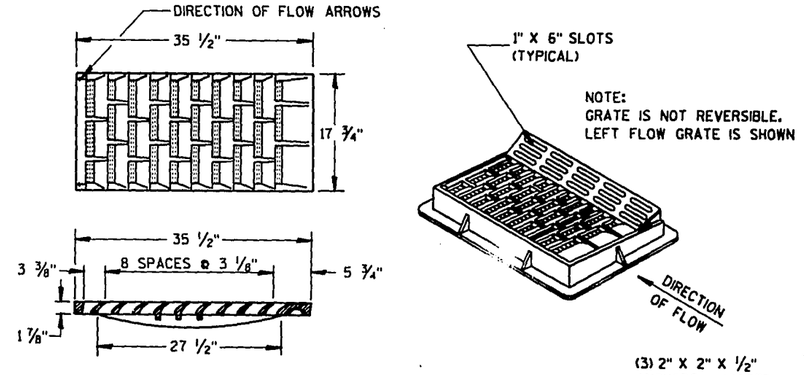
NOTE AS TYPE HM-GJ ON DRAINAGE TABLE

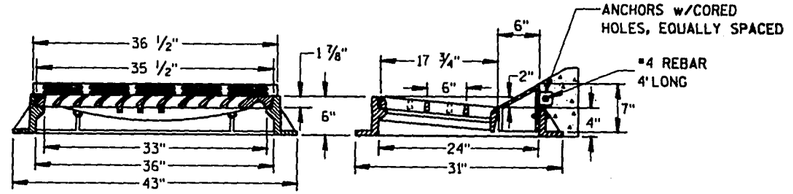
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.





TYPE "HM"

(APPROXIMATE WEIGHT 420 LBS.)

FRAME.....195 LBS.
GRATE.....135 LBS.
CURB BOX.....90 LBS.

USE WITH CONCRETE CURB & GUTTER, 36 INCH.

NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM" COVER
NOTE AS TYPE HM-S ON DRAINAGE TABLE

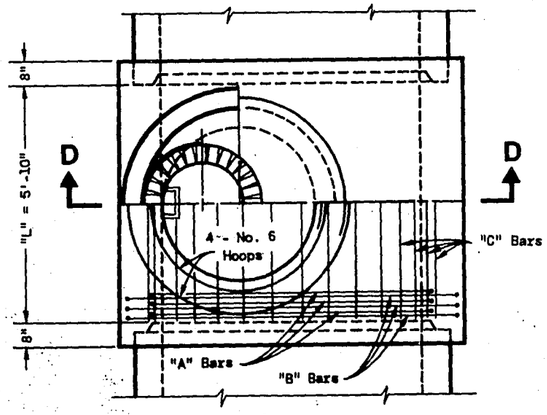
INLET COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

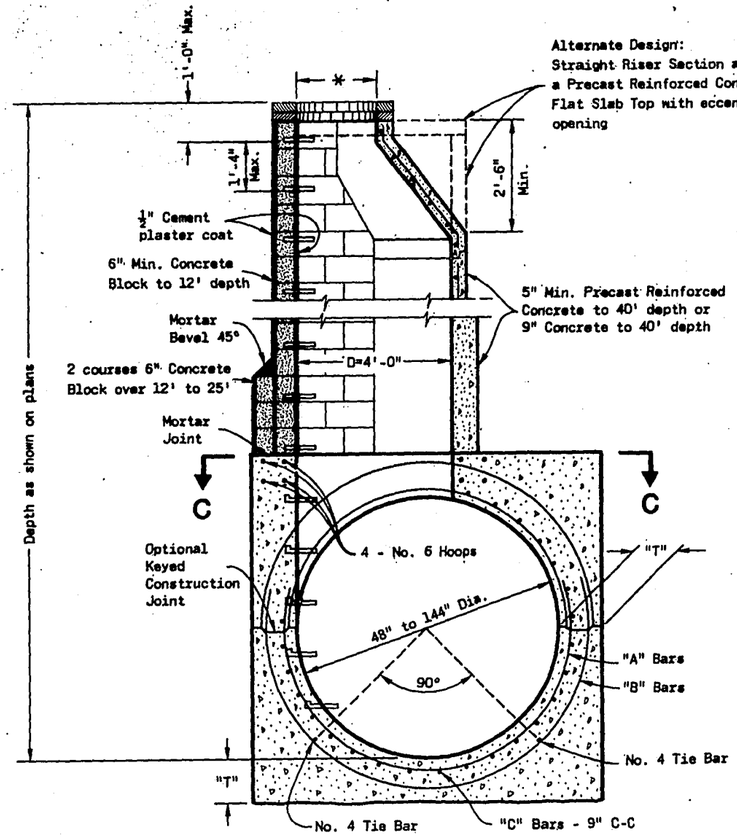
APPROVED 1/25/93 DATE
STATE DESIGN ENGINEER FOR HWYS
FHWA

S.D.D. 8 A 5-9c

S.D.D. 8 A 5-9c

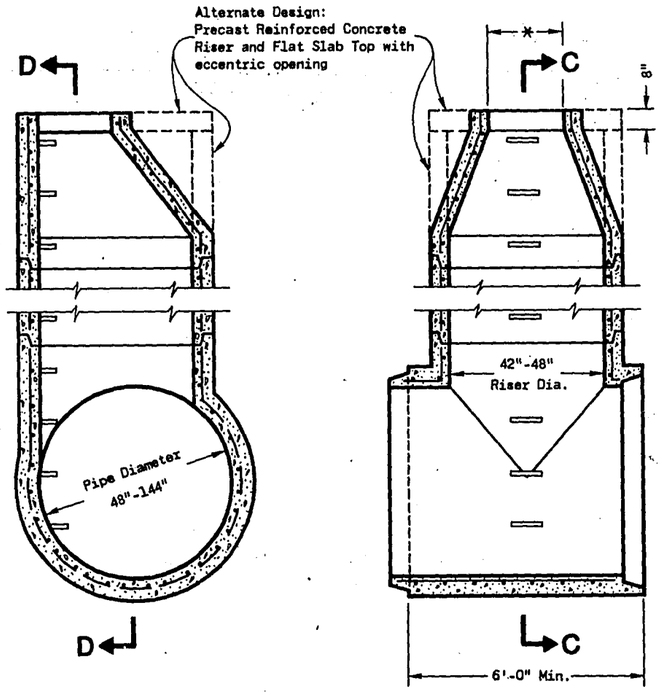


HALF SECTION C-C



SECTION D-D

MANHOLE TYPE 5



SECTION C-C

SECTION D-D

MANHOLE TYPE 6

PRECAST "T" SECTION

NOTE: All "A","B", and "C" Bar Steel Reinforcing is the same diameter which varies with depth.
No. 5 Bars to 20' depth
No. 6 Bars over 20' to 30' depth
No. 7 Bars over 30' to 40' depth

The "A" and "B" Bars may be placed in one or two segments, and shall lap 24 Bar Diameters.

"C" Bars shall have Standard Hooked Ends.

NOTE: "T" throughout length "L" shall be 13" for Pipe Diameter 48" to 84" and 15" for Pipe Diameter greater than 84".

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All drainage structures are designated on the plans as "Manholes 1-C", "Catch Basins 1-B", "Inlets 3-H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

Steps meeting the following requirements shall be installed in all structures over 5 feet in depth: 16 inch C-C maximum spacing; project a minimum clear distance of 4 inches from the wall at the point of embedment; minimum length of 10 inches; minimum wall embedment of 3 inches; and be capable of supporting a concentrated load of 300 lbs. Ferrous metal steps not painted or treated to resist corrosion shall have a minimum cross sectional dimension of 1 inch.

Solid Aluminum steps shall have a minimum cross sectional dimension of 0.75 inch. Aluminum surfaces to be embedded in concrete shall be given one coat of suitable quality paint, such as zinc chromate primer conforming to federal specification TT-P-645 or equivalent. Steps of approved Polypropylene plastic coated reinforcement bar are acceptable.

Precast Reinforced Concrete Risers and Eccentric Cones may be used on concrete or concrete block manholes.

Precast sections shall be installed on a bed of mortar.

Precast Reinforced Concrete Risers may be placed with tongue up or down.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

* Use 2'-0" diameter opening with type "C", "L" and "J" covers, or 3'-0" diameter with type "K" and "M" covers.

All Precast Inlet Units shall conform to the pertinent requirements of AASHTO Designation M 199.

MANHOLES TYPE 5 & 6

State of Wisconsin
Department of Transportation

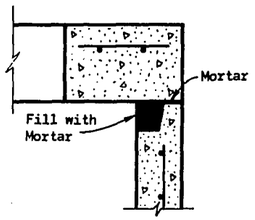
APPROVED
4-13-82
DATE

CHIEF DESIGN ENGINEER

FHWA

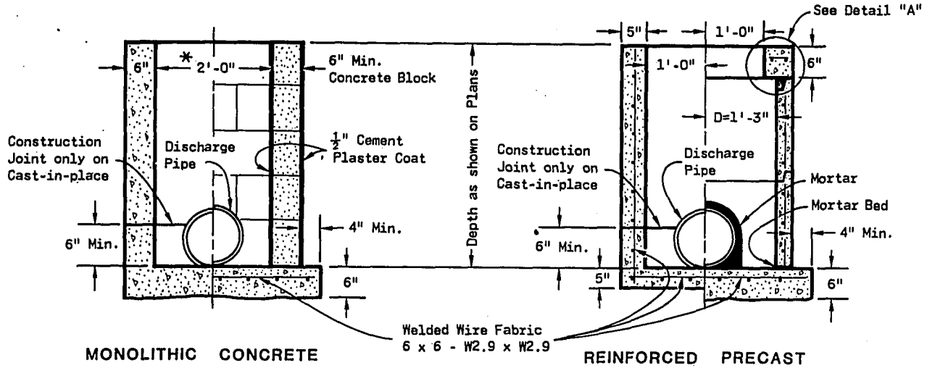
S.D.D. 8 B 8-3

S.D.D. 8 B 8-3



DETAIL "A"

*Selection of square or circular design will be based on the pipe sizes and the Inlet Cover being utilized.



MONOLITHIC CONCRETE CONCRETE BLOCK

REINFORCED CONCRETE PRECAST REINFORCED CONCRETE

INLETS TYPE 1

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All Precast Inlet units shall conform to the pertinent requirements of AASHTO Designation M 199.

All drainage structures are designated on the plans as "Manholes 1-C", "Catch Basins 1-B", "Inlets 3-H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

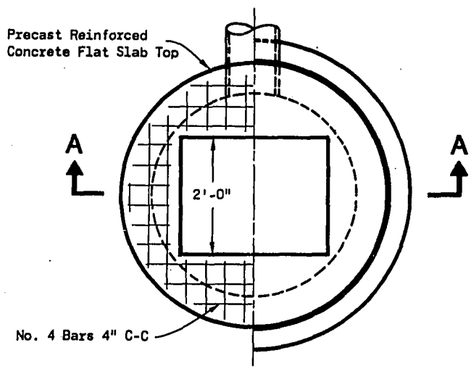
Precast Reinforced Bases shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Precast Reinforced Concrete Flat Slab Tops may be used on the structures. The Tops shall be installed on a bed of mortar.

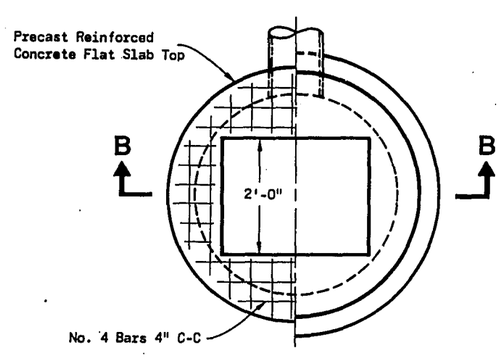
All Bar Steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers shall be placed with tongue down.

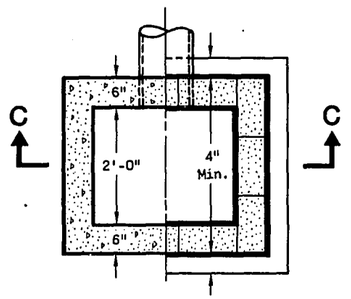
(1) Use 2'-6" opening for Type 2 Inlets and 3'-0" opening for Type 3 Inlets.



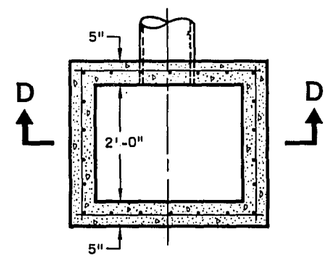
PLAN VIEW



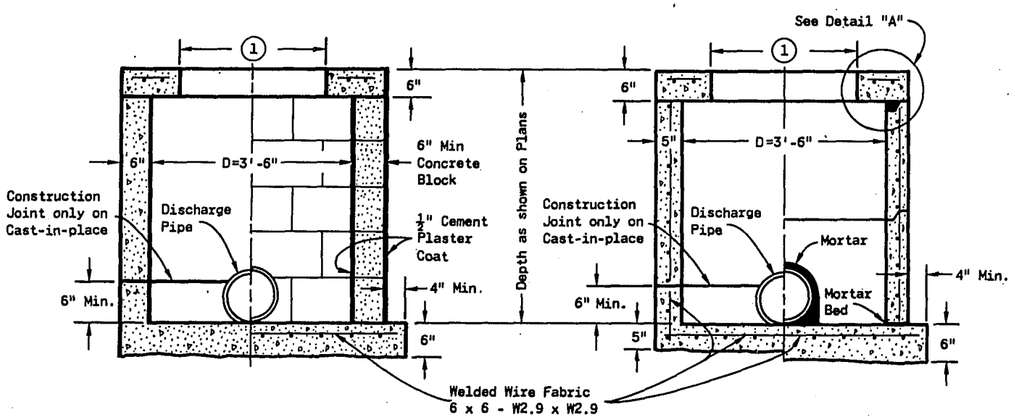
PLAN VIEW



PLAN VIEW



PLAN VIEW

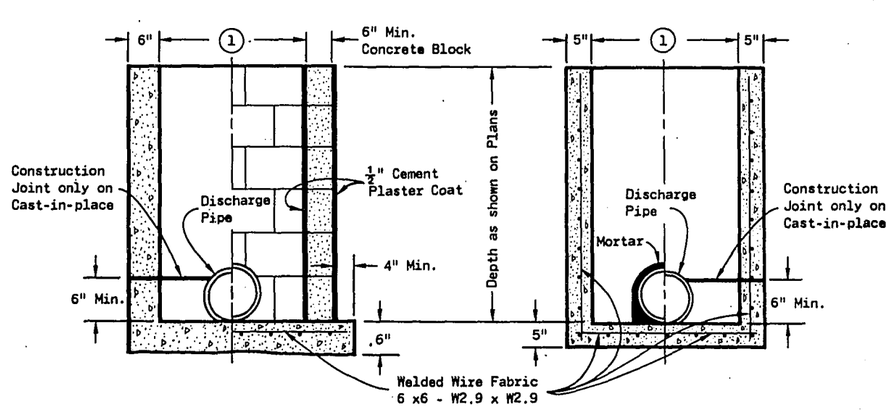


MONOLITHIC CONCRETE CONCRETE BLOCK

REINFORCED CONCRETE PRECAST REINFORCED CONCRETE

SECTION A-A

SECTION B-B



MONOLITHIC CONCRETE CONCRETE BLOCK

PRECAST REINFORCED CONCRETE REINFORCED CONCRETE

SECTION C-C

SECTION D-D

INLETS TYPE 2 & 3

INLETS TYPE 1, 2 & 3

State of Wisconsin
Department of Transportation

APPROVED 4-13-82 DATE

CHIEF DESIGN ENGINEER

FHWA

S.D.D. 8 C 1-4

S.D.D. 8 C 1-4

GENERAL NOTES

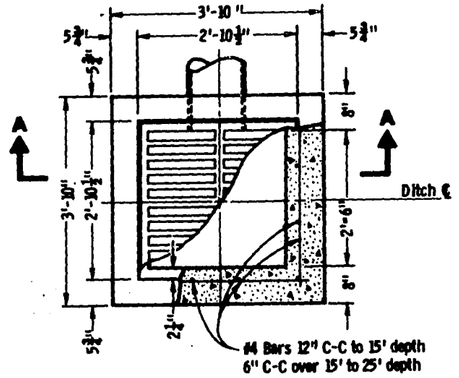
Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for Inlets which may include precast reinforced concrete inlets, shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

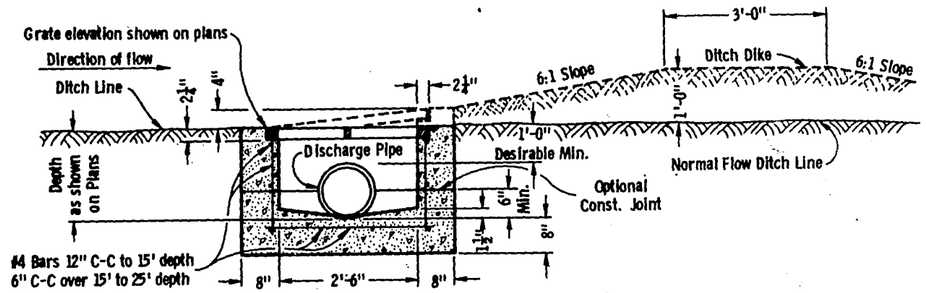
Precast reinforced concrete inlet units, if used, shall conform to the requirements of the Catch Basins, Manholes and Inlets Section of the Standard Specifications.

All Inlets are designated on the Plans as "Inlets, 8-MS", etc. This designation is interpreted to mean that the number, or first digit designates the masonry portion of the structure and the following letter designates the type of cover or iron casting to be used therewith to comprise the complete unit.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.



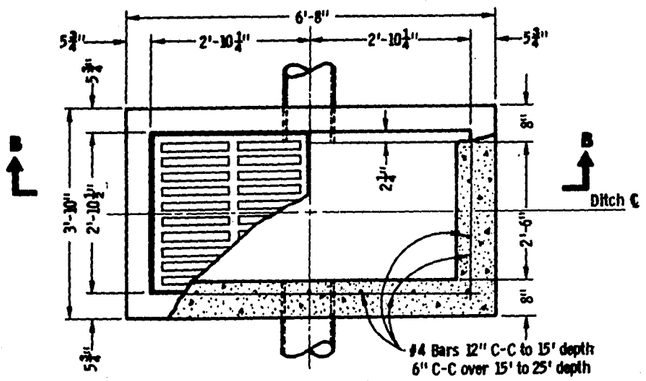
PLAN VIEW



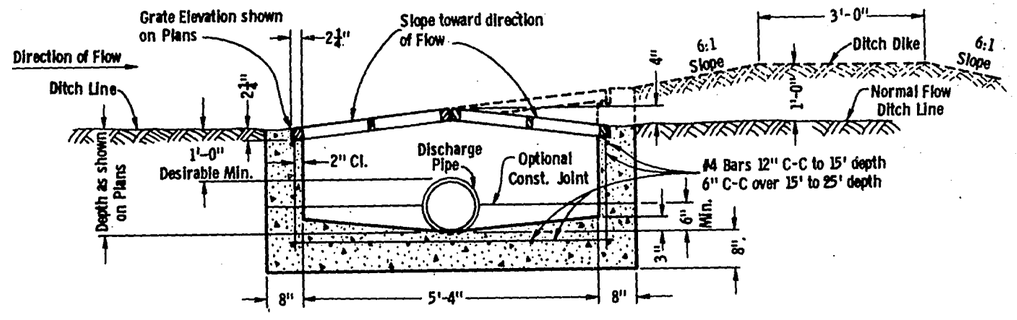
SECTION A-A

INLET TYPE 8

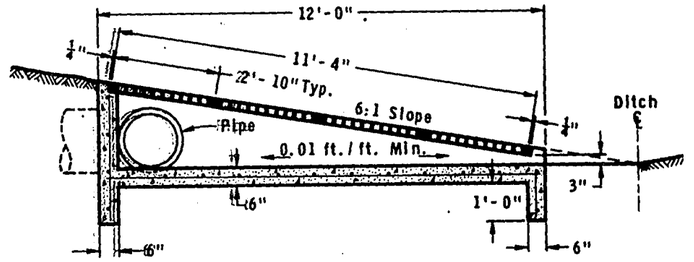
REINFORCED CONCRETE



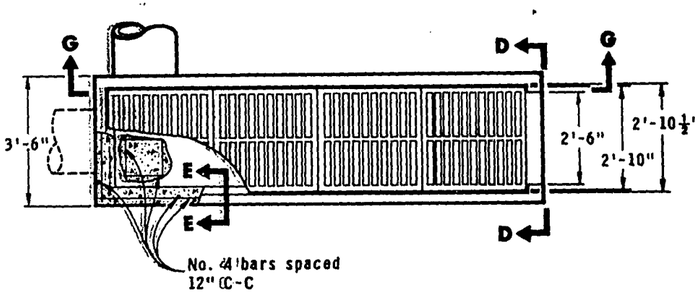
PLAN VIEW



SECTION B-B



SECTION G-G



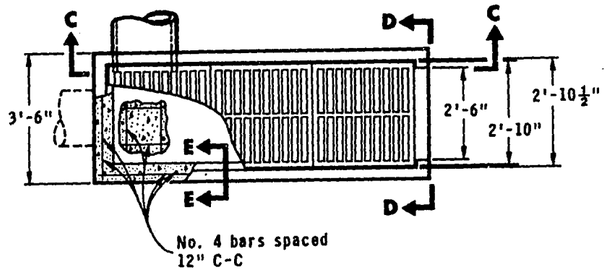
PLAN VIEW

INLET TYPE 11

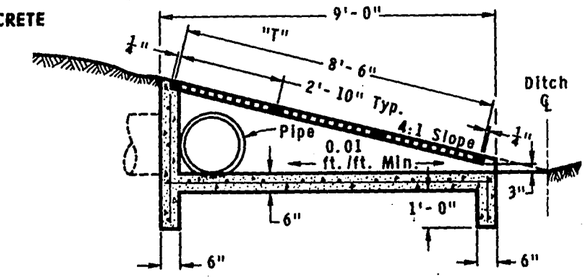
REINFORCED CONCRETE

INLET TYPE 9

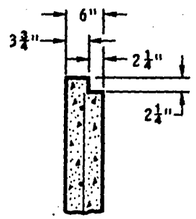
REINFORCED CONCRETE



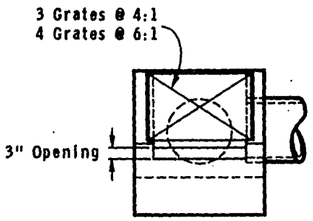
PLAN VIEW



SECTION C-C



SECTION E-E



VIEW D-D

INLET TYPE 10

REINFORCED CONCRETE

INLETS TYPE 8, 9, 10 and 11

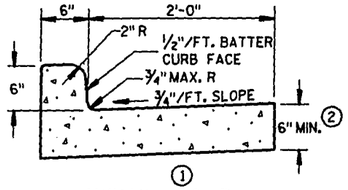
State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL:
4-30-74 (DATE) — CHIEF OF FACILITIES DEVELOPMENT

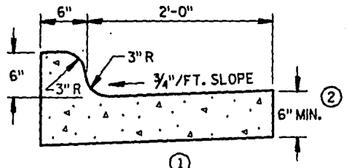
APPROVED
5-02-74 (DATE) — STATE HIGHWAY ENGINEER

S.D.D. 8C5-1

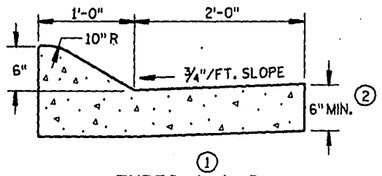
S.D.D. 8C5-1



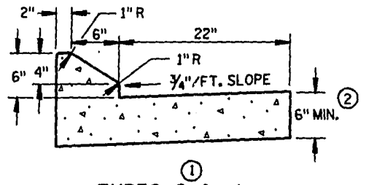
1
TYPES A & D



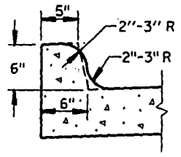
1
TYPES K & L



1
TYPES A & D
CONCRETE CURB & GUTTER 36"

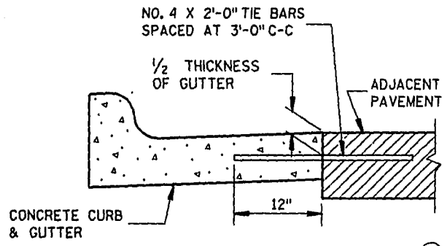


1
TYPES G & J



OPTIONAL CURB SHAPE FOR TYPES K & L (1)

CONCRETE CURB & GUTTER 30"



TYPICAL TIE BAR LOCATION (1)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEALANT IS NOT REQUIRED IN THE JOINTS OF CONCRETE CURB OR CONCRETE CURB & GUTTER EXCEPT AS REQUIRED FOR INTEGRAL GUTTER.

PAVEMENT TIES ARE REQUIRED, WHEN INCLUDED IN THE CONTRACT, WHERE CONCRETE CURB, CONCRETE CURB AND GUTTER OR CONCRETE PAVEMENT IS PLACED ADJACENT TO EXISTING CONCRETE.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. TIE BARS AND A LONGITUDINAL CONSTRUCTION JOINT ARE NOT REQUIRED WITH THIS ALTERNATE.

PAVEMENT JOINTS SHALL BE EXTENDED THROUGH INTEGRAL CURB & GUTTER. JOINTS IN INTEGRAL GUTTER SHALL HAVE THE SAME DIMENSIONS AS THE JOINTS IN THE ADJACENT PAVEMENT. JOINTS IN INTEGRAL CURB SHALL BE 1/8" WIDE.

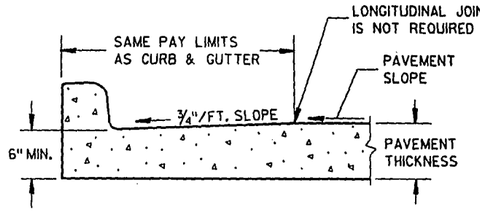
JOINTS IN INTEGRAL CURB & GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME SEALANT SPECIFIED FOR THE PAVEMENT JOINT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB & GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE TWO FEET BEHIND THE BACK OF CURBS.

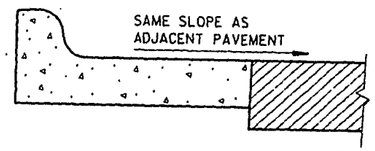
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G AND K.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

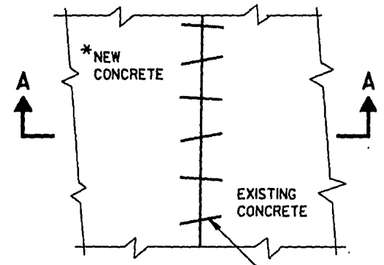
(3) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATIONS WILL BE SHOWN ELSEWHERE IN THE PLAN.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER

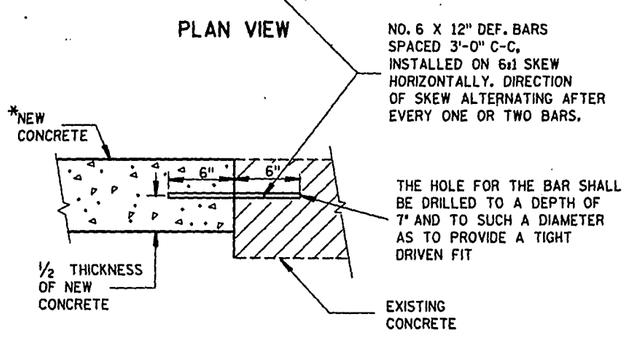


REVERSE SLOPE GUTTER (3)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

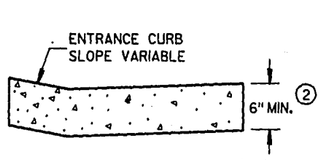


PLAN VIEW

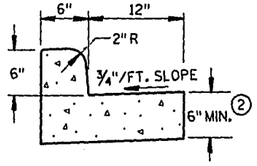
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.



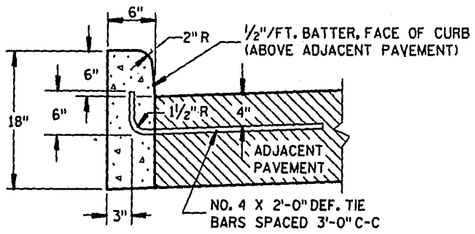
SECTION A-A
PAVEMENT TIES



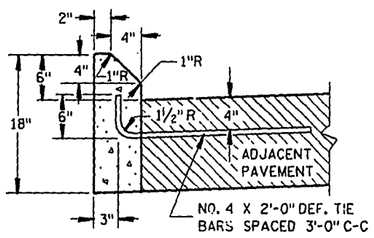
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



1
TYPES A & D
CONCRETE CURB & GUTTER 18"



1
TYPES A & D

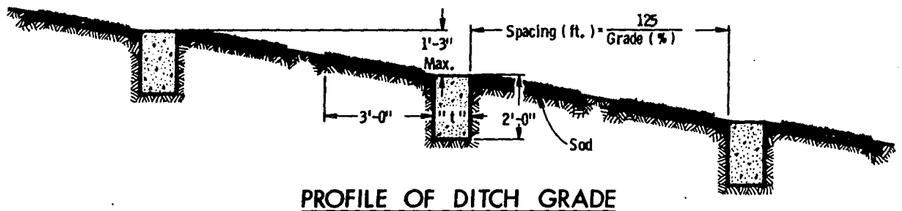


1
TYPES G & J

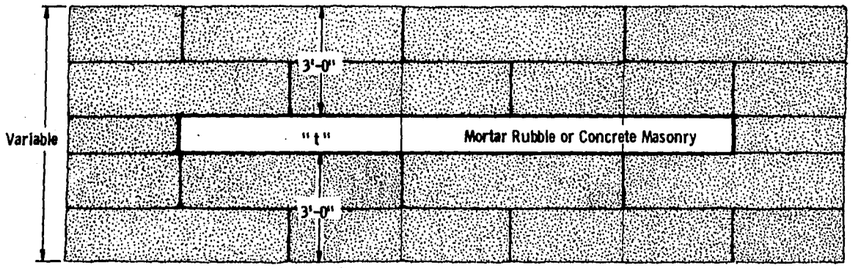
CONCRETE CURB

CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10-23-86 DATE	STATE DESIGN ENGINEER FOR HWYS
FHWA	

S.D.D. 8 D 1-11

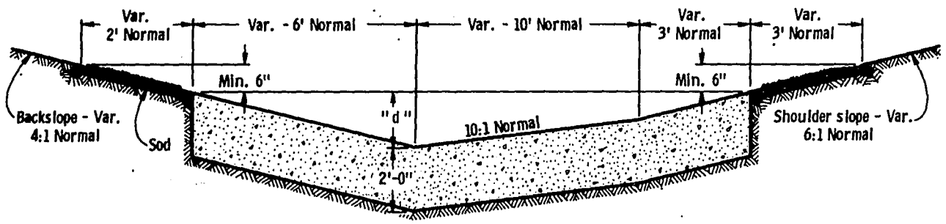


PROFILE OF DITCH GRADE

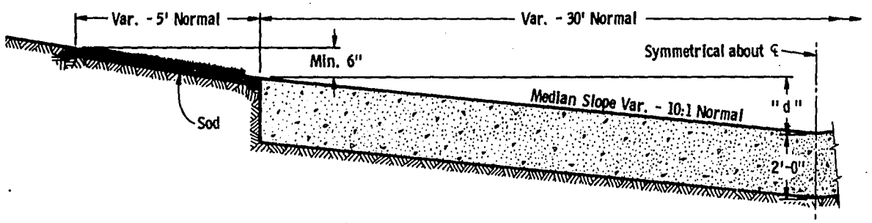


PLAN VIEW SHOWING MASONRY AND SOD

"t" - Masonry thickness shall be 0'-9" for concrete and 1'-0" for mortar rubble.



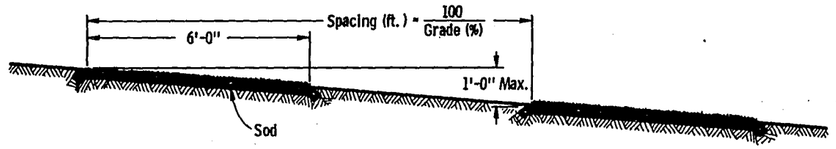
SIDE DITCH CROSS SECTION



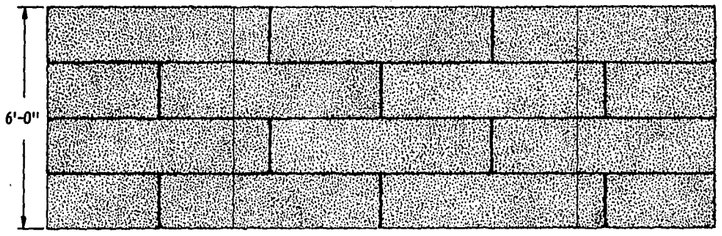
MEDIAN DITCH CROSS SECTION

"d" - The minimum depth of the masonry portion of the ditch checks shall be equal to the maximum depth of flow. The normal "d" will be 1'-6".

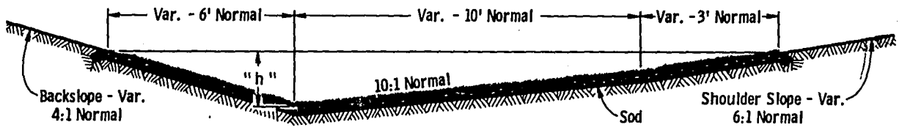
MASONRY AND SOD DITCH CHECKS



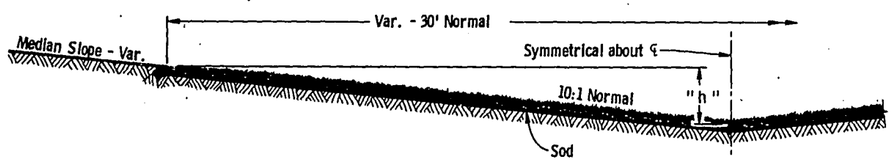
PROFILE OF DITCH GRADE



PLAN VIEW SHOWING SOD



SIDE DITCH CROSS SECTION



MEDIAN DITCH CROSS SECTION

"h" - The minimum height of ditch to be sodded shall be equal to the maximum depth of flow plus 6". The normal "h" will be 1'-6".

SOD DITCH CHECKS

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Alternate designs for ditch checks, of the material or combination of materials shown hereon, may be used upon written permission of the Engineer.

Sod strips for ditch checks may be placed either transversely or longitudinally to the direction of water flow.

SOD OR MASONRY AND SOD DITCH CHECKS

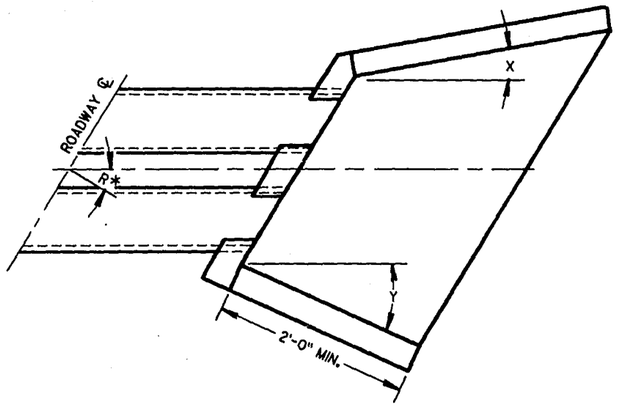
State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL
9/7/71 DATE
L. C. Harned
ACTING CHIEF DESIGN ENGINEER

APPROVED
9/7/71 DATE
STATE HIGHWAY ENGINEER

S.D.D. 8E4-2

S.D.D. 8E4-2



WINGWALL ANGLE DETAILS

INLET			OUTLET		
R*	X	Y	R*	X	Y
0 - 7°	30°	30°	0 - 15°	15°	15°
8 - 22°	25°	"	16 - 45°	10°	"
23 - 37°	20°	"	46 - 75°	5°	"
38 - 52°	15°	"	OVER 75°	0°	"
53 - 67°	10°	"			
68 - 82°	5°	"			
OVER 82°	0°	"			

*R = NUMBER OF DEGREES RIGHT OR LEFT HAND FORWARD

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

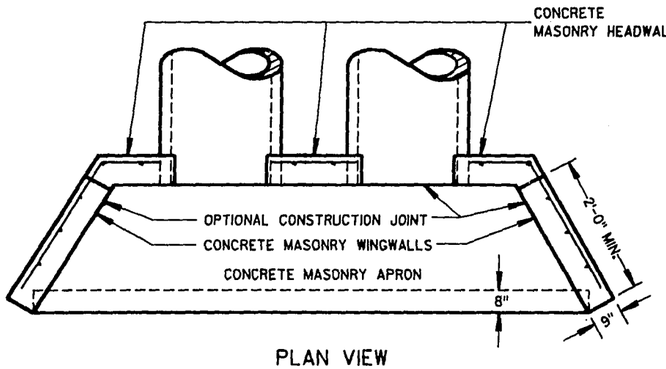
FILL SLOPES FLATTER THAN 2 ½:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE NOTED.

(1) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS SPACED 12" C-C IN BOTH DIRECTIONS.

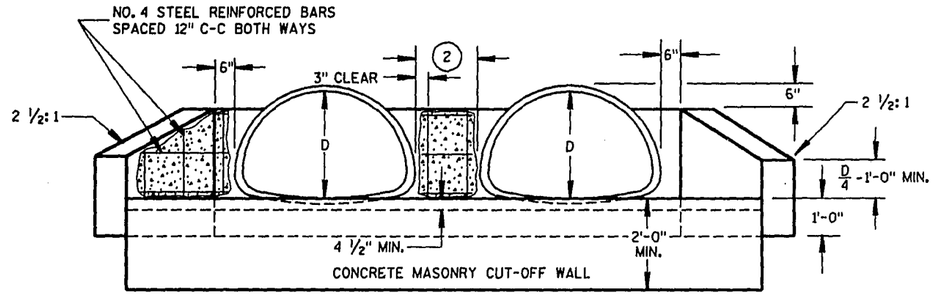
(2) THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

DIAMETER OR SPAN	SPACE
UP TO AND INCLUDING 48"	2'-0"
OVER 48" TO 72"	½ DIA. OR SPAN
OVER 72"	3'-0"



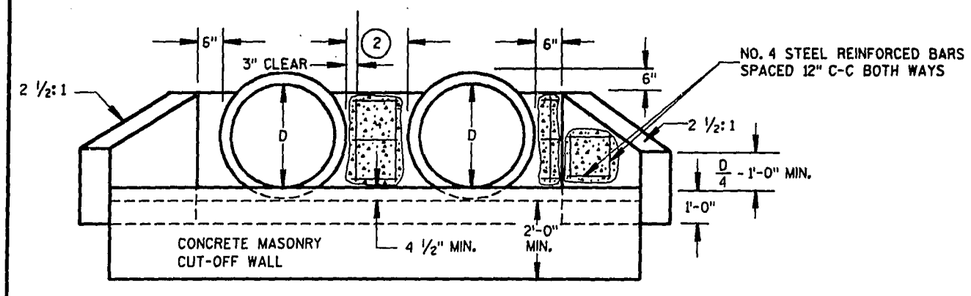
PLAN VIEW

CULVERT PIPE AND PIPE ARCH



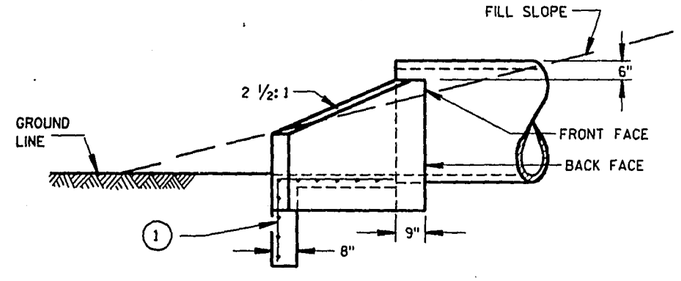
END ELEVATION

PIPE ARCH



END ELEVATION

CULVERT PIPE



SIDE ELEVATION

CULVERT PIPE AND PIPE ARCH

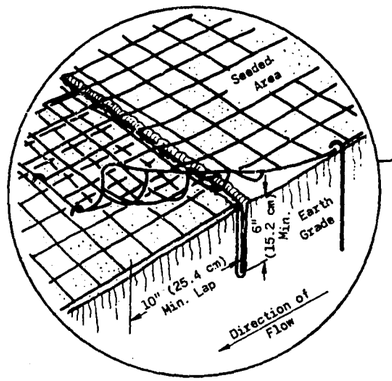
CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

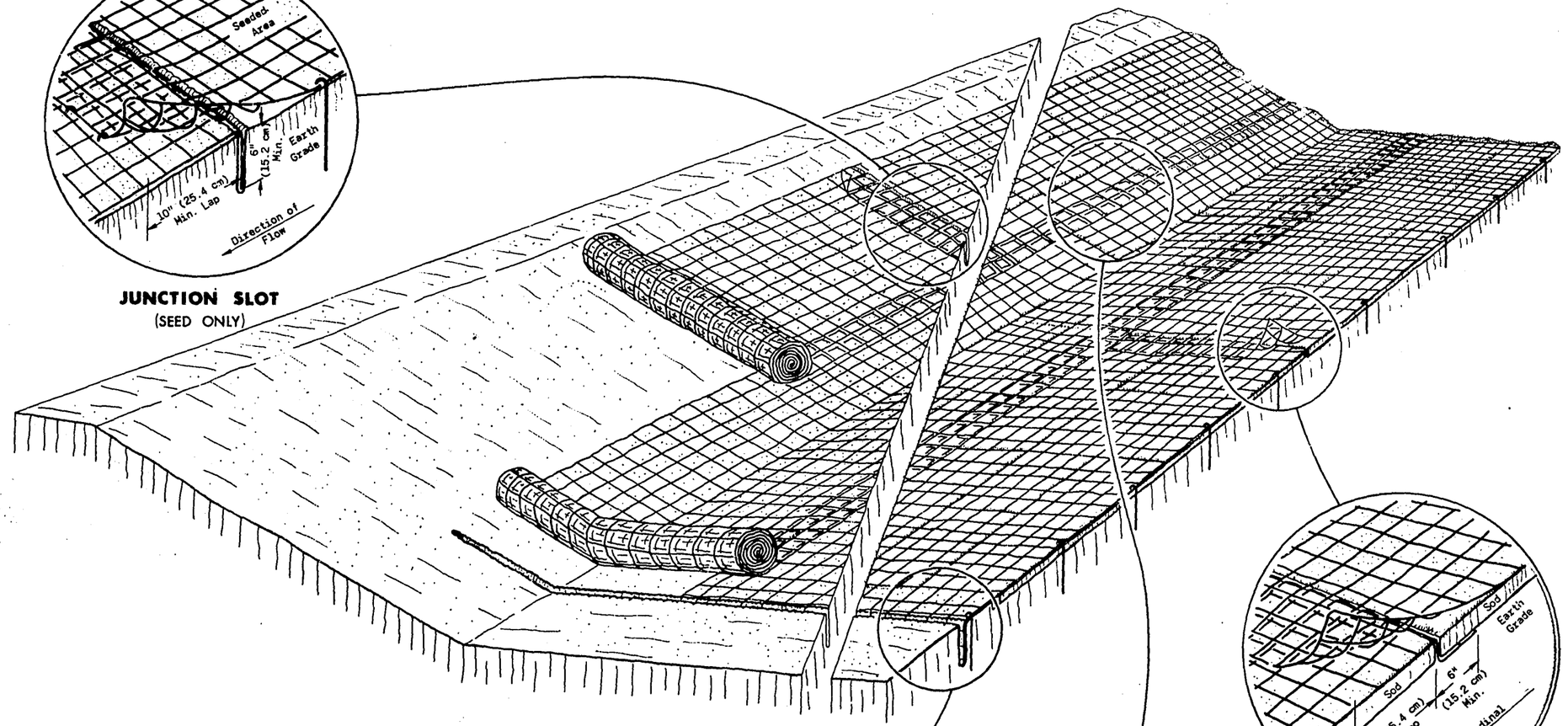
APPROVED
5/23/90
DATE
STATE DESIGN ENGINEER FOR HWYS
FHWA

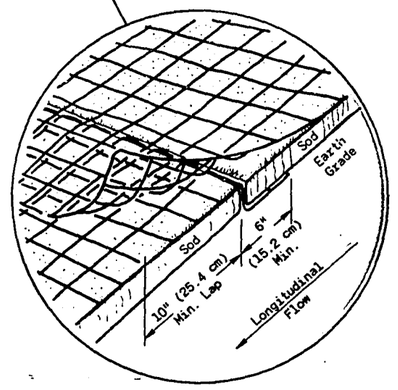
S.D.D. 8 E 6-7

S.D.D. 8 E 6-7

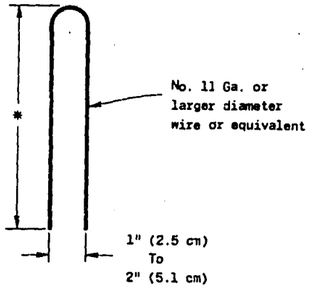


JUNCTION SLOT
(SEED ONLY)



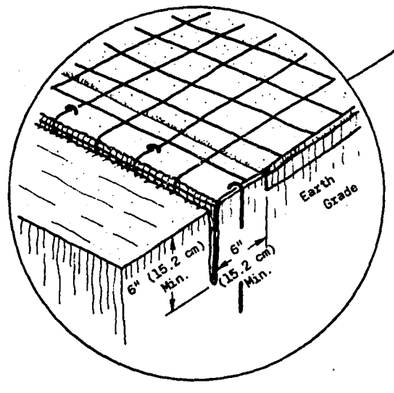


JUNCTION SLOT
(SOD ONLY)

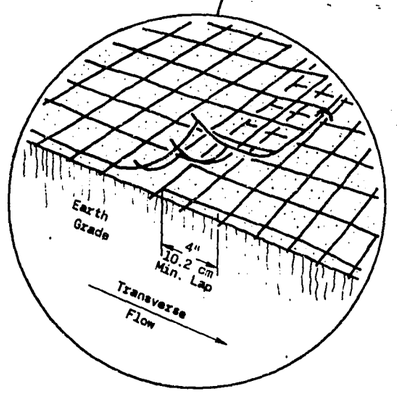


DETAIL OF TYPICAL STAPLE

*6" (15.2 cm) Min. for firm soils
12" (30.5 cm) Min. for loose soils
8" (20.3 cm) Min. where both sod and mats are being used.



ANCHOR SLOT
AT BEGINNING AND END OF EROSION MAT
(SEED AND SOD)



LAP JOINT
(SEED AND SOD)

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Variations in the dimensions or materials shown hereon shall be permitted if they provide equivalent protection and material strength and if prior approval of the Engineer is obtained.

Lap Joints shall not be placed in the bottom of V-shaped ditches.

Junction Slots on adjacent strips of Matting shall be staggered a minimum of 4 feet (1.219 m) apart.

Edges of the Erosion Mat shall be impressed in the soil.

Erosion Mat shall be measured and payed for in accordance with the Standard Specifications.

EROSION MAT OVER SOD

a. Only Jute Fabric will be permitted over sod.
b. Wood Stakes for Sod may be omitted by the Engineer if the existing slope and soil conditions so warrant.
c. The width of Erosion Mat shall always equal the Sod width.
d. Sod strips may be placed either longitudinally or transversely to the flow line of the Ditch.

EROSION MAT OVER SEEDING

Junction or Anchor Slots shall be at minimum intervals of 100 feet (30.48 m) on grades up to and including 3 percent, and 50 feet (15.24 m) on grades exceeding 3 percent.

METHOD OF DIMENSIONING
1'-0" (30.5 cm)
1'-0" (30.5 cm)
BASIS: 1 in. = EXACTLY 25.4 mm

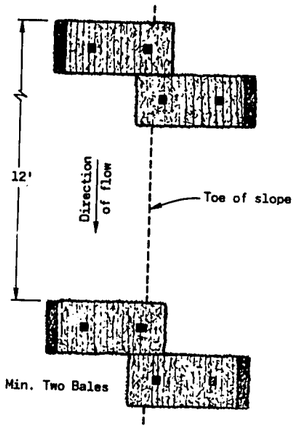
EROSION MAT

State of Wisconsin
Department of Transportation
Division of Highways

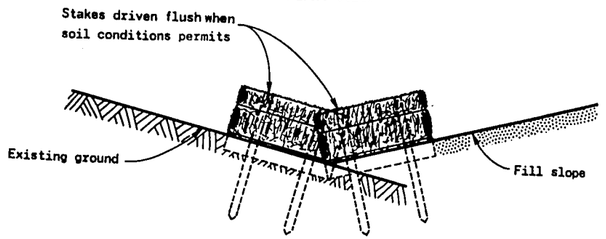
RECOMMENDED FOR APPROVAL
12-3-73 DATE — CHIEF OF FACILITIES DEVELOPMENT
APPROVED
1-15-74 DATE — STATE HIGHWAY ENGINEER

S.D.D. 8E7-1

S.D.D. 8E7-1

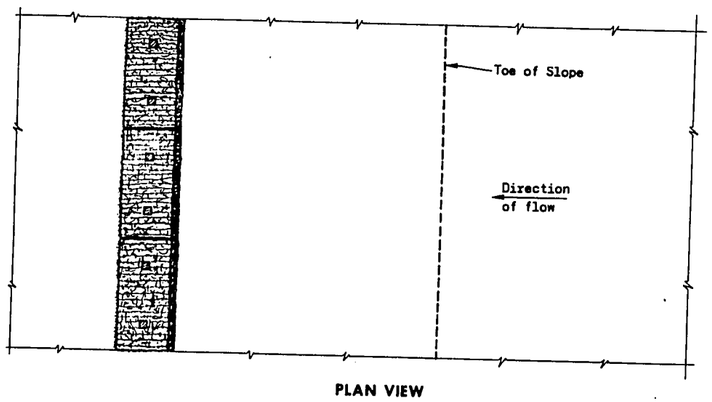


PLAN VIEW

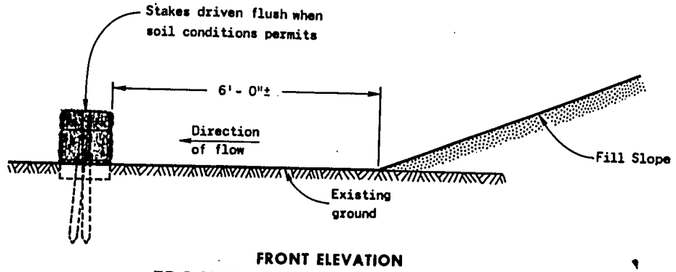


FRONT ELEVATION

WHEN EXISTING GROUND SLOPES TOWARD FILL SLOPE



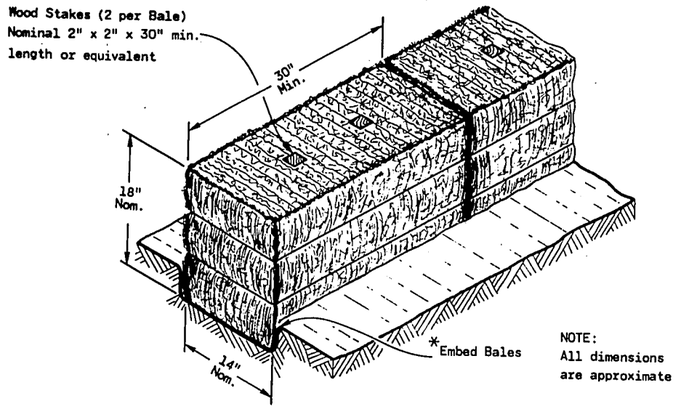
PLAN VIEW



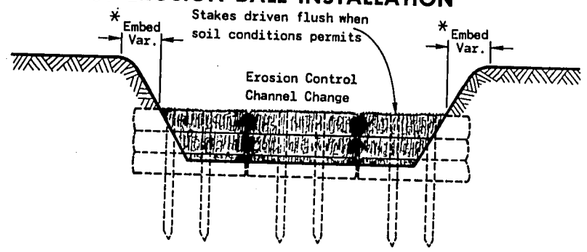
FRONT ELEVATION

EROSION BALES AT TOE OF SLOPE

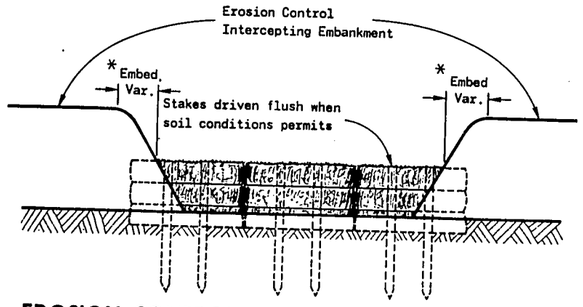
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE



DETAIL OF EROSION BALE INSTALLATION

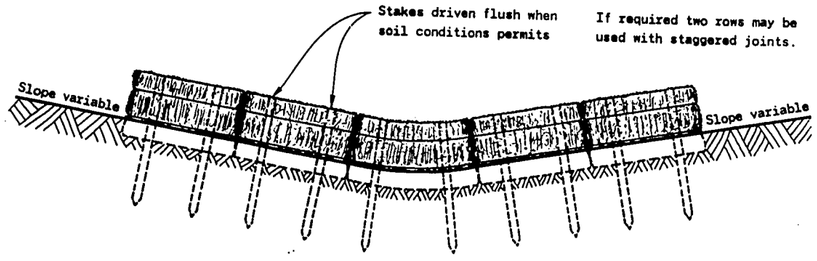


EROSION CONTROL CHANNEL CHANGE



EROSION CONTROL INTERCEPTING EMBANKMENT

PLAN VIEW



FRONT ELEVATION

EROSION BALES ACROSS DITCH BOTTOM

GENERAL NOTES

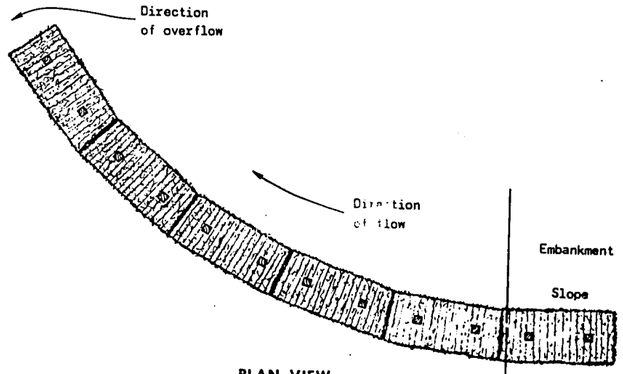
Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Bales shall be placed end to end or overlapping at right angles to the direction of flow and far enough up the sides of the ditch to prevent eroding around ends.

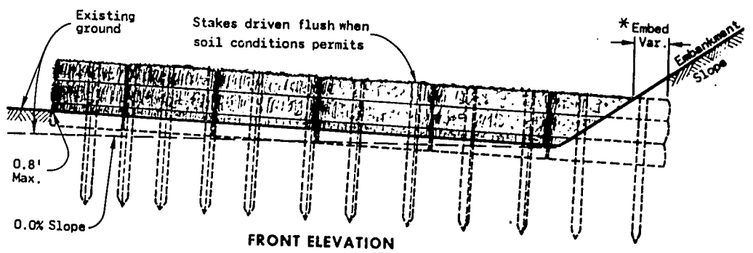
Bales shall be placed with twine or tie wires parallel to the ground.

Stakes to be battered in opposite directions.

* As determined by the Engineer.



PLAN VIEW



FRONT ELEVATION

EROSION BALES AT TOE OF SLOPE

TYPICAL INSTALLATIONS OF EROSION BALES

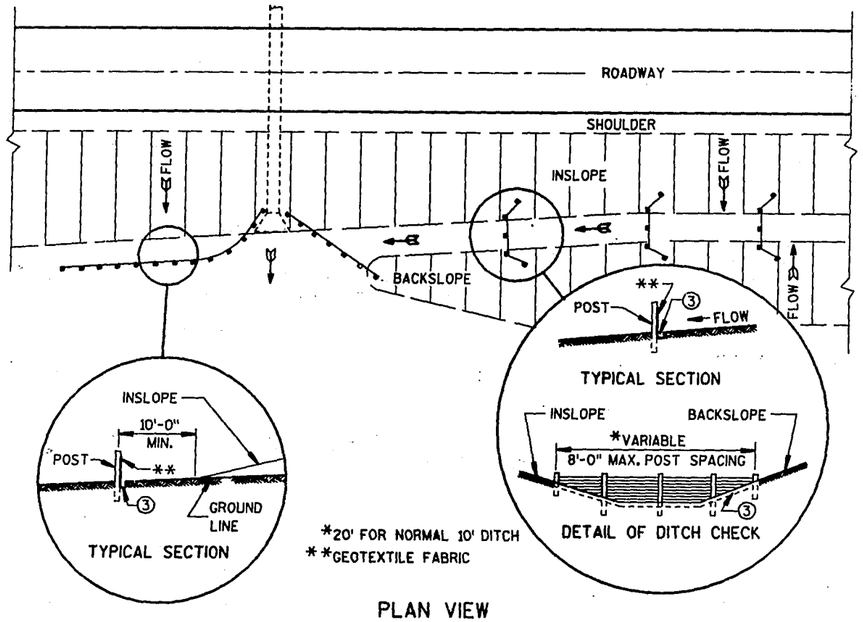
State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL
10/14/75 DATE — CHIEF of FACILITIES DEVELOPMENT

APPROVED
10/16/75 DATE — STATE HIGHWAY ENGINEER

S.D.D. 8E8-1

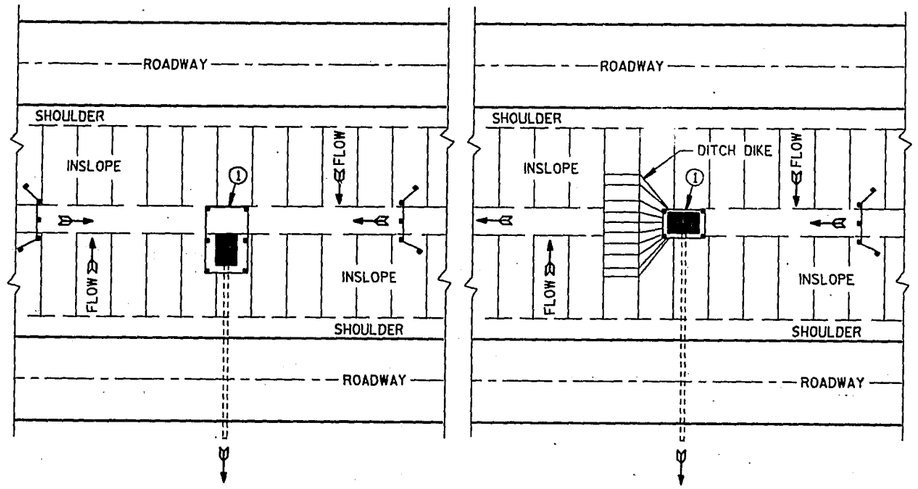
S.D.D. 8E8-1



*20' FOR NORMAL 10' DITCH
**GEOTEXTILE FABRIC

PLAN VIEW

TYPICAL APPLICATIONS OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

DETAIL OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

WHEN POSSIBLE THE SILT FENCE SHOULD BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE, WITH THE ENDS POINTING UPSLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.

① CROSS BRACE WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS AS DIRECTED BY THE ENGINEER.

② MINIMUM 14 GAGE WIRE REQUIRED, FOLD FABRIC 3" OVER THE WIRE AND STAPLE OR PLACE WIRE RINGS ON 12" C-C.

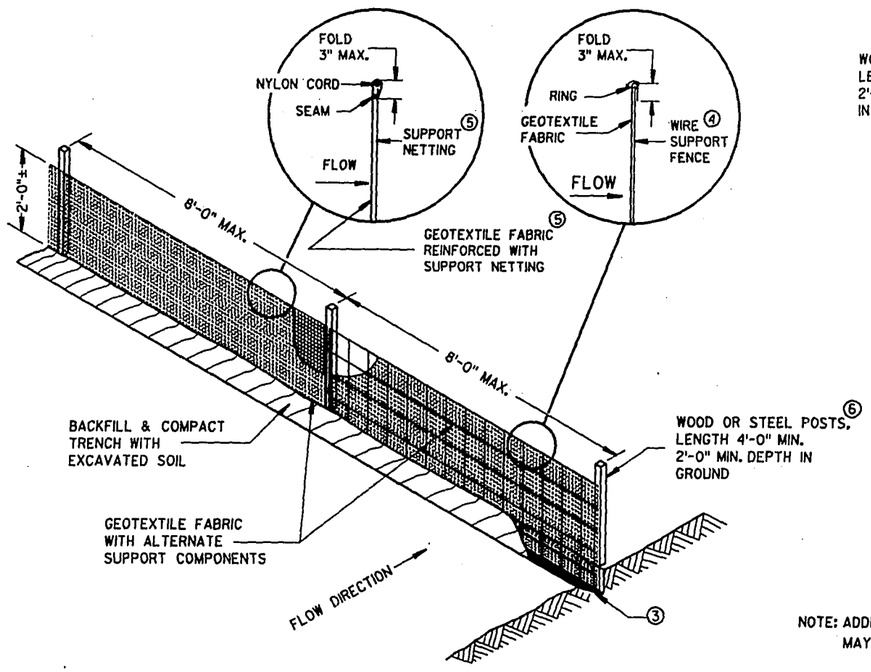
③ EXCAVATE A TRENCH A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENGH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

④ WIRE SUPPORT FENCE SHALL BE 14 GAGE MINIMUM WOVEN WIRE WITH A MAXIMUM MESH SPACING OF 6". SECURE TOP OF GEOTEXTILE FABRIC TO TOP OF FENCE WITH STAPLES OR WIRE RINGS AT 12" C-C.

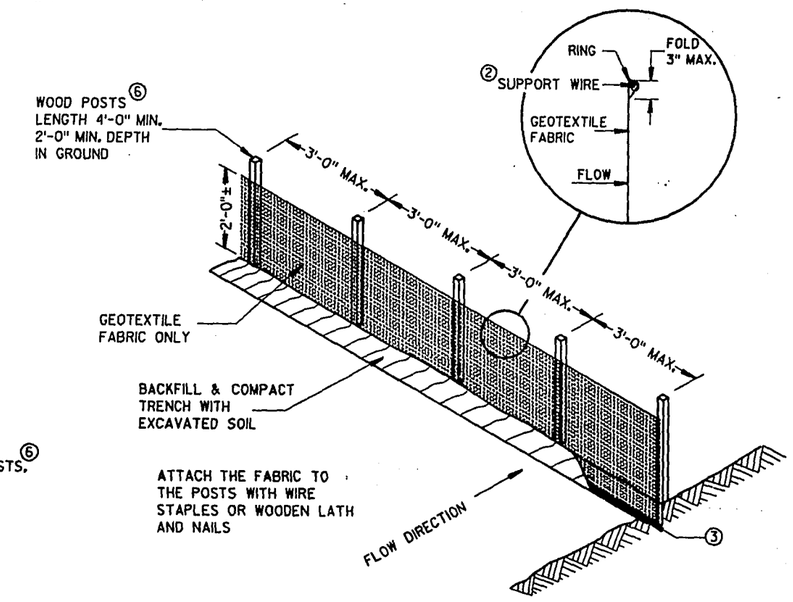
⑤ GEOTEXTILE FABRIC SHALL BE REINFORCED WITH AN INDUSTRIAL POLYPROPYLENE NETTING WITH A MAXIMUM MESH SPACING OF ¾" OR EQUAL. A HEAVY DUTY NYLON TOP SUPPORT CORD OR EQUIVALENT IS REQUIRED.

⑥ STEEL POSTS SHALL BE STUDDED "TEE" OR "U" TYPE WITH A MINIMUM WEIGHT OF 1.28 LBS/LINEAL FOOT (WITHOUT ANCHOR). FIN ANCHORS SUFFICIENT TO RESIST POST MOVEMENT ARE REQUIRED. WOOD POSTS SHALL BE A MINIMUM SIZE OF 4" DIA. OR 1½" X 3½" EXCEPT WOOD POSTS FOR GEOTEXTILE FABRIC REINFORCED WITH NETTING SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OAK OR HICKORY.

ALTERNATES A & B ARE EQUAL AND EITHER MAY BE USED.

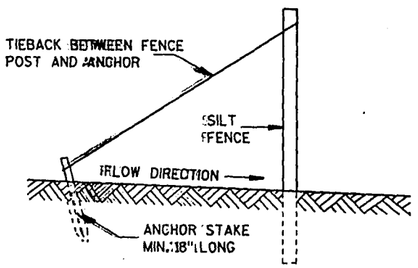


ALTERNATE "A"



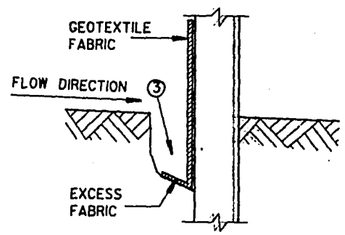
ALTERNATE "B"

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)



TRENCH DETAIL

SILT FENCE

S.D.D. 8 E 9-3

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8-31-88 DATE FHWA	STATE DESIGN ENGINEER FOR HWYS

S.D.D. 8 E 9-3

METAL APRON ENDWALLS

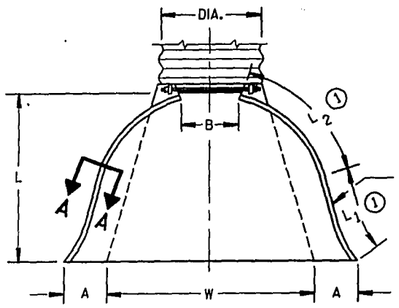
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L_1 ①	L_2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.079	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.109	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

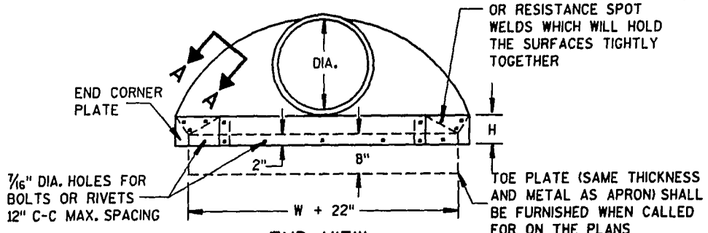
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 3/8	72 7/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 3/4 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

* MINIMUM
** MAXIMUM

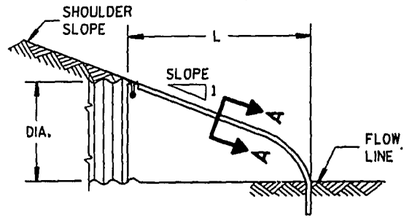


PLAN VIEW



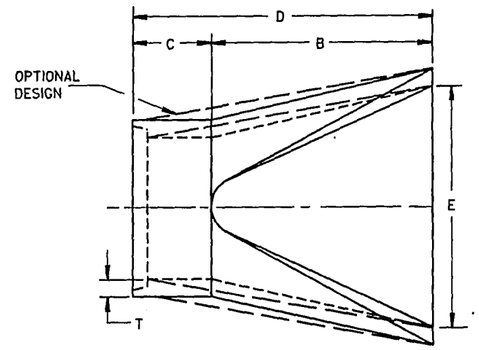
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW

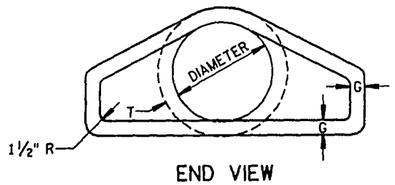


SIDE ELEVATION

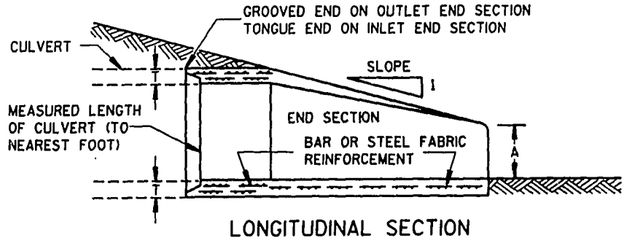
METAL ENDWALLS



PLAN

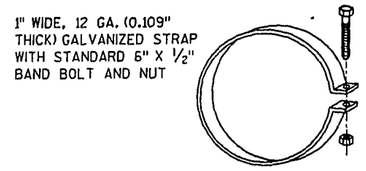


END VIEW



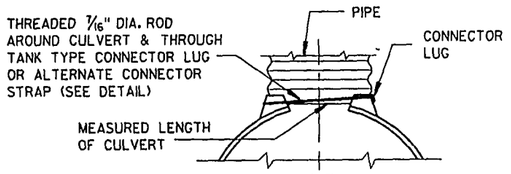
LONGITUDINAL SECTION

CONCRETE ENDWALLS

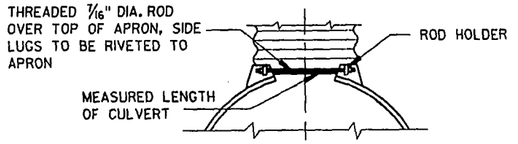


ALTERNATE FOR TYPE 1 CONNECTION

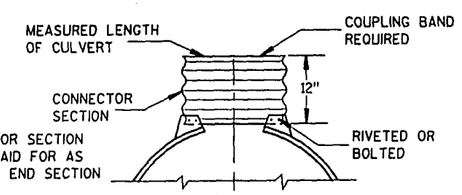
END SECTION CONNECTOR STRAP



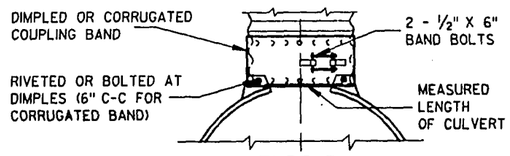
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

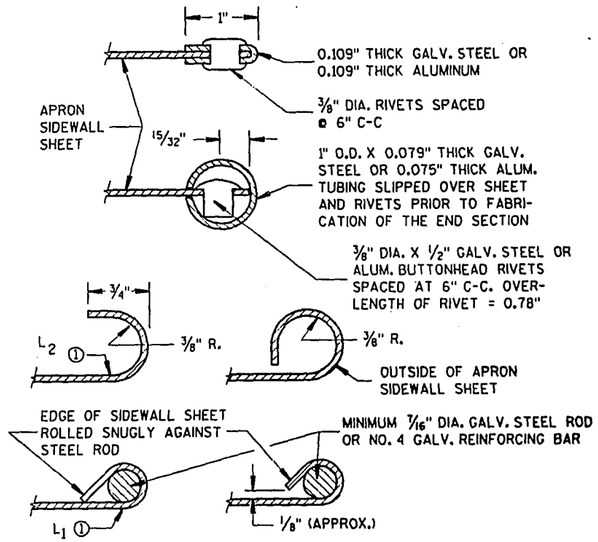
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

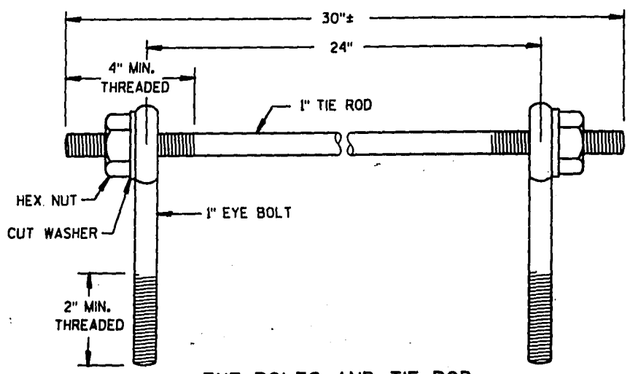
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 12/17/87 DATE
FHWA

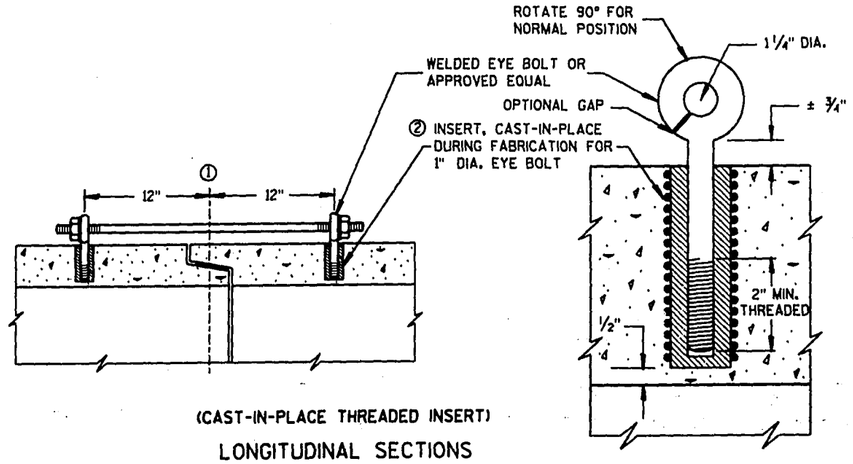
STATE DESIGN ENGINEER FOR HWYS

S.D.D. 8 F 1-10a

S.D.D. 8 F 1-10a



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

CONCRETE CULVERT PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED ON THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES. UNLESS OTHERWISE STATED IN THE CONTRACT THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE CULVERT PIPE AS INDICTED ON THE PLANS AND BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO CILVERT PIPE, REINFORCED CONCRETE CULVERT PIPE, OR REINFORCED CONCRETE PIPE CATTLE PASS.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

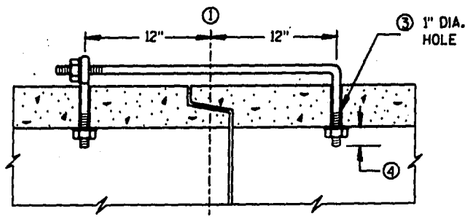
③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12" FROM ℄ OF TONGUE AND GROOVE.

④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2".

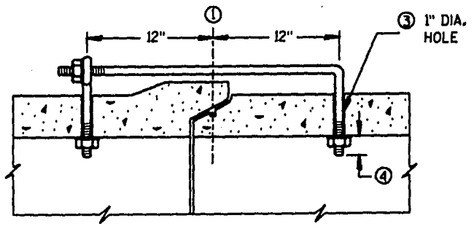
⑤ ROD DIAMETER + 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(TONGUE & GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

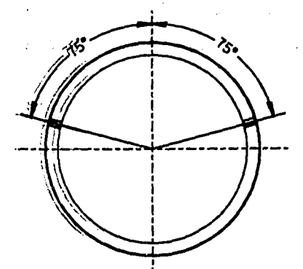
EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	

ADJUSTABLE TIE ROD TABLE

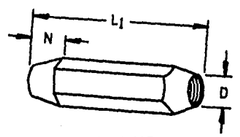
PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES

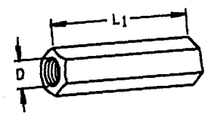


PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



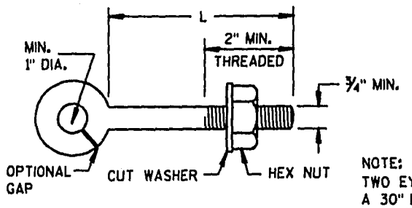
TAPERED



PLAIN

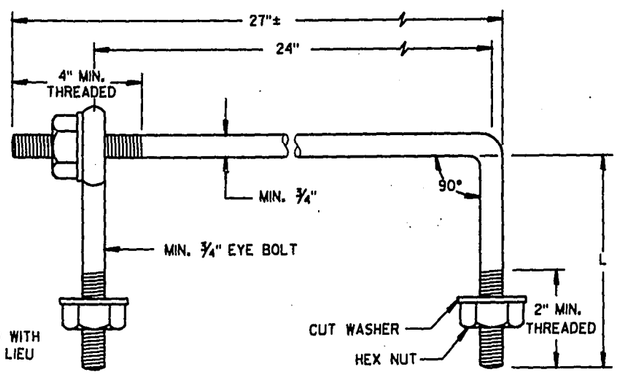
RIGHT AND LEFT THREADS

SLEEVE NUTS



EYE BOLT

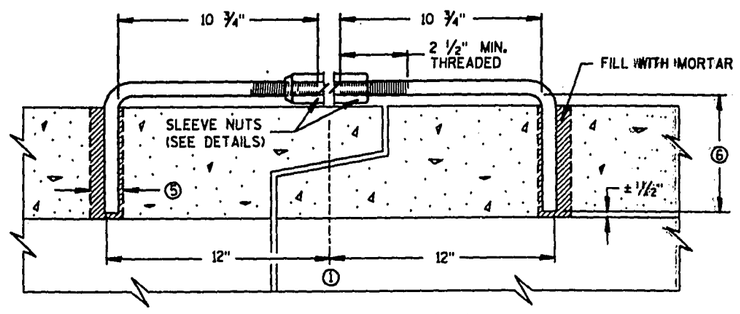
NOTE:
TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)



LONGITUDINAL SECTION

(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

JOINT TIES FOR CONCRETE PIPE

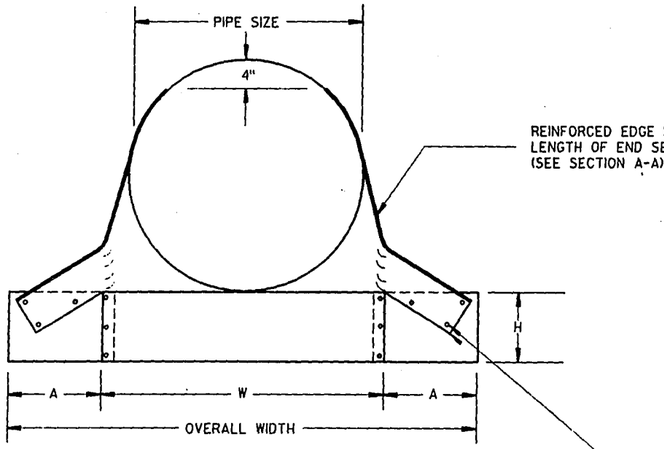
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 9/10/92 DATE — STATE DESIGN ENGINEER FOR HWY.

FHWA

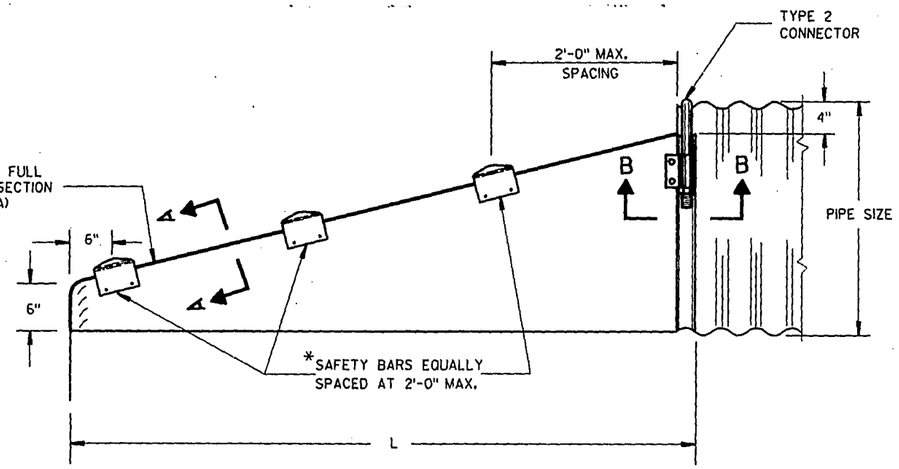
S.D.D. 8 F 4-5

S.D.D. 8 F 4-5



FRONT VIEW

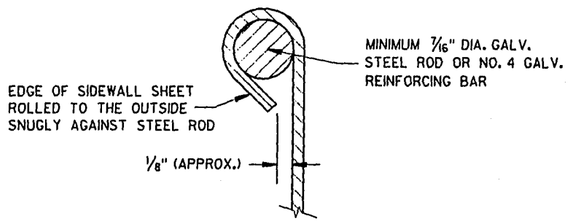
BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



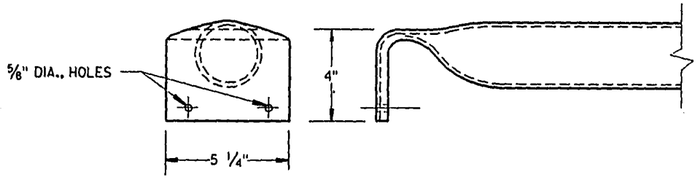
SIDE VIEW

*NOTE:
THREE SAFETY BARS ARE SHOWN. ACTUAL NUMBER OF BARS REQUIRED AT A 2'-0" C-C MAX. SPACING WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

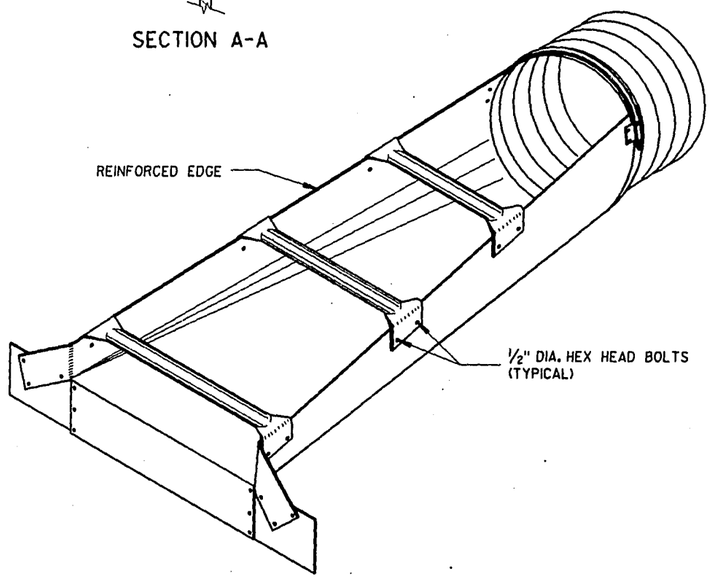
3" GALVANIZED PIPE. FLATTEN ENDS, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.



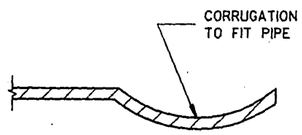
SECTION A-A



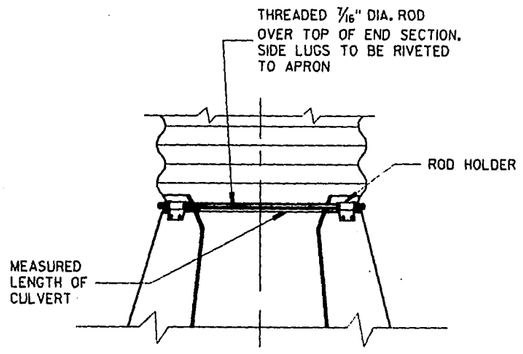
DETAIL OF SAFETY BAR



ISOMETRIC VIEW



SECTION B-B



TYPE 2
CONNECTION DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE

PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS	
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	6:1	30
18	.064	8	6	24	40	6:1	48
21	.064	8	6	27	43	6:1	66
24	.064	8	6	30	46	6:1	84
30	.109	12	9	36	60	6:1	120
36	.109	12	9	42	66	6:1	156
42	.109	16	12	48	80	5.63 TO 1	180
48	.109	16	12	54	86	4.74 TO 1	180
54	.109	16	12	60	92	—	—

STEEL APRON ENDWALLS FOR PIPE ARCH

EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS	
	SPAN	RISE		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES
15	17	13	.064	8	6	23	39	6:1	18
18	21	15	.064	8	6	27	43	6:1	30
21	24	18	.064	8	6	30	46	6:1	48
24	28	20	.064	8	6	34	50	6:1	60
30	35	24	.079	12	9	41	65	6:1	84
36	42	29	.109	12	9	48	72	6:1	114
42	49	33	.109	16	12	55	87	6:1	138
48	57	38	.109	16	12	63	95	6:1	168
54	64	43	.109	16	12	70	102	5.45 TO 1	180

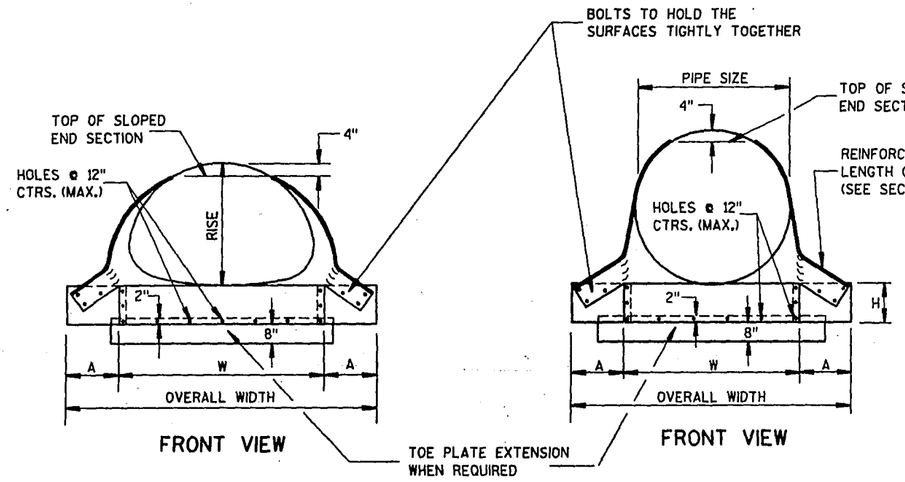
STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SECTION

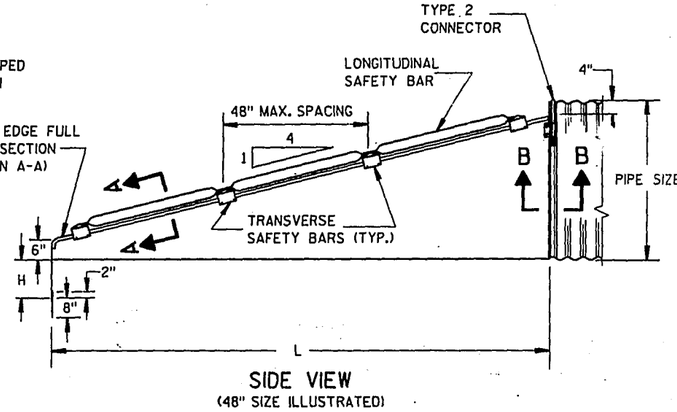
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/24/74
DATE
STATE DESIGN ENGINEER FOR HWYS
FHWA

S.D.D. 8 F 7-2

S.D.D. 8 F 7-2





GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SAFETY GRATES SHALL BE FABRICATED FROM 3-INCH DIAMETER GALVANIZED PIPE MEETING THE REQUIREMENTS OF ASTM A53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL. THE LONGITUDINAL BAR SHALL BE WELDED TO THE TRANSVERSE BARS WHERE THE BARS CROSS. THE NUMBER OF TRANSVERSE BARS REQUIRED WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

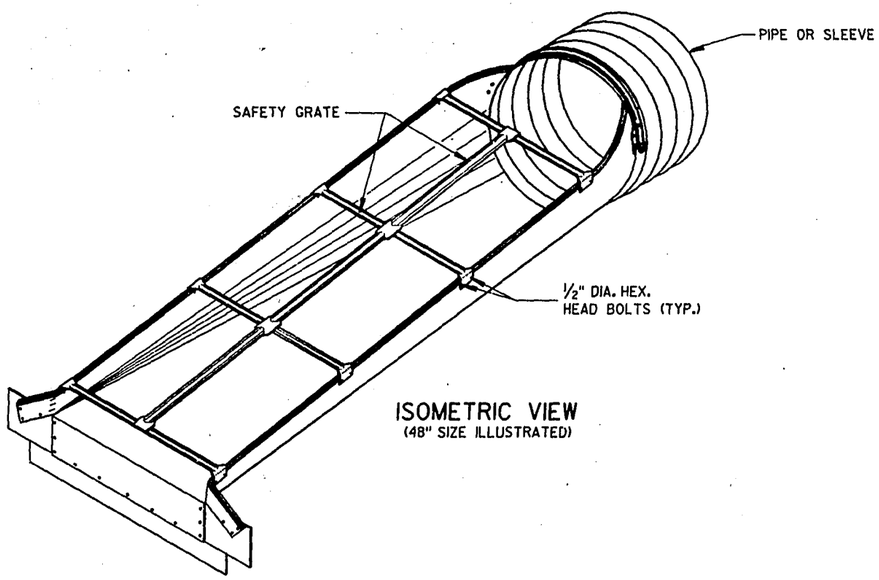
SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

SLOPED STEEL ENDWALLS FOR CULVERT PIPE CROSS DRAINS

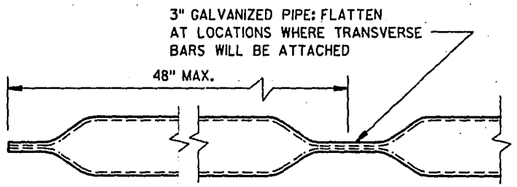
PIPE DIA. (IN.)	MIN. THICK. IN.	MIN. THICK. GAGE	DIMENSIONS (Inches) A	H	W	OVERALL WIDTH	L DIMENSIONS SLOPE	LENGTH INCHES
36	.109	12	12	9	42	66	4:1	104
42	.109	12	16	12	48	80	4:1	128
48	.109	12	16	12	54	86	4:1	152
54	.109	12	16	12	60	92	4:1	176
60	.109	12	16	12	66	98	4:1	200

SLOPED STEEL ENDWALLS FOR PIPE ARCH CROSS DRAINS

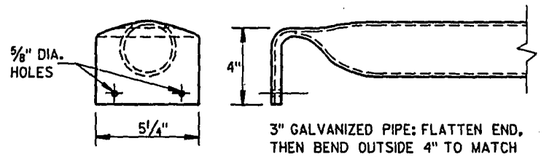
EQUIV. DIA. (IN.)	INCHES SPAN	INCHES RISE	MIN. THICK. IN.	MIN. THICK. GAGE	DIMENSIONS (Inches) A	H	W	OVERALL WIDTH	L DIMENSIONS SLOPE	LENGTH INCHES
36	42	29	.079	12	12	9	48	72	4:1	76
42	49	33	.109	12	16	12	55	87	4:1	92
48	57	38	.109	12	16	12	63	95	4:1	112
54	64	43	.109	12	16	12	70	102	4:1	132
60	71	47	.109	12	16	12	77	109	4:1	148



ISOMETRIC VIEW
(48" SIZE ILLUSTRATED)

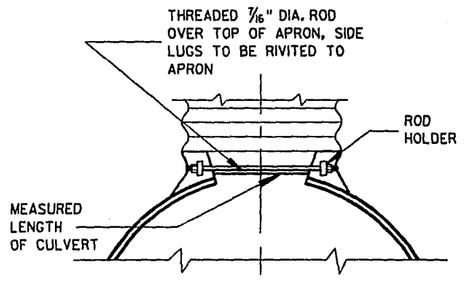


LONGITUDINAL SAFETY BAR

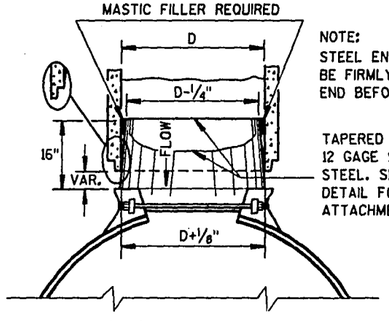


3" GALVANIZED PIPE: FLATTEN END, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.

TRANSVERSE SAFETY BAR



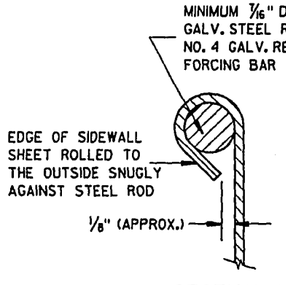
TYPE 2 CONNECTOR DETAIL



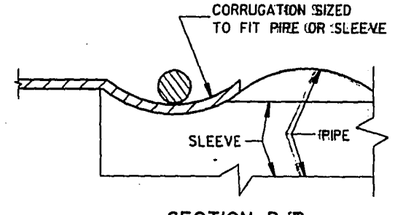
NOTE:
STEEL END SECTION SHALL BE FIRMLY WEDGED INTO PIPE END BEFORE BACKFILLING

TAPERED SLEEVE TO BE 12 GAGE SMOOTH GALVANIZED STEEL. SEE SECTION B-B DETAIL FOR END SECTION ATTACHMENT.

STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



SECTION A-A



SECTION B-B

SLOPED STEEL ENDWALLS FOR CULVERT PIPE AND PIPE ARCH CROSS DRAINS

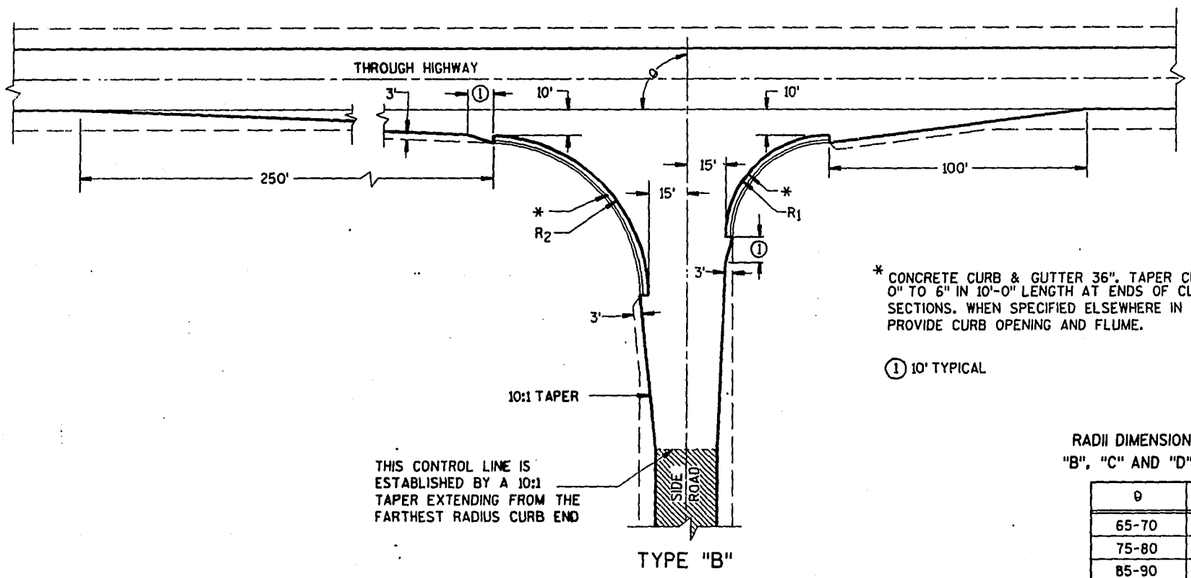
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 7/6/90 DATE — STATE DESIGN ENGINEER FOR HWYS

FHWA

S.D.D. 8 F 8-1

S.D.D. 8 F 8-1



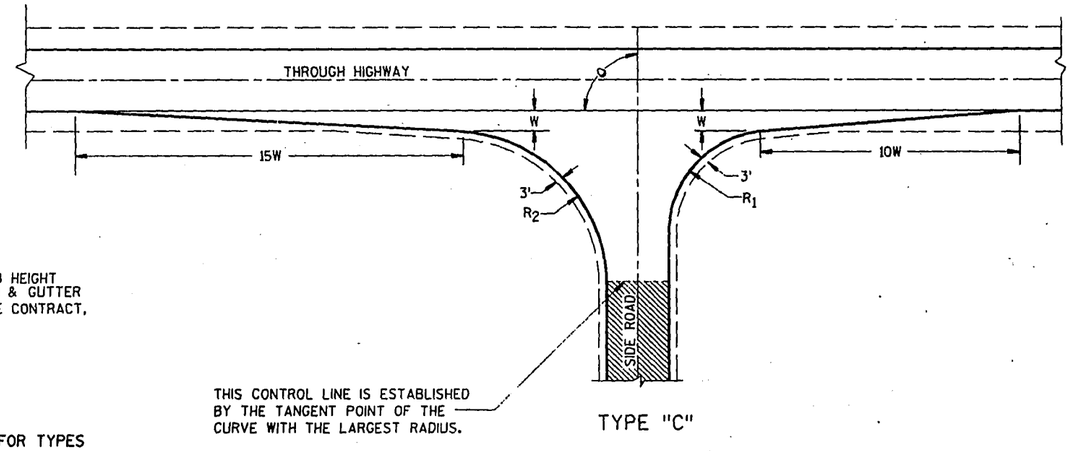
TYPE "B"

* CONCRETE CURB & GUTTER 36", TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

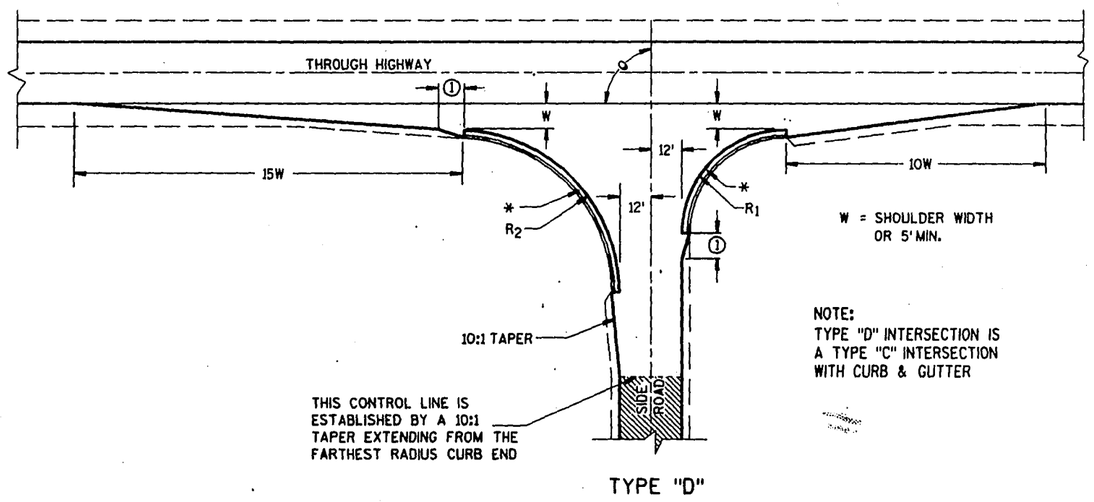
(1) 10' TYPICAL

RADII DIMENSIONS FOR TYPES "B", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65-70	35	70
75-80	40	70
85-90	40	60
100	50	55
105-110	60	45



TYPE "C"



W = SHOULDER WIDTH OR 5' MIN.

NOTE:
TYPE "D" INTERSECTION IS A TYPE "C" INTERSECTION WITH CURB & GUTTER

TYPE "D"

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING SURFACE

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B","C" AND "D"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

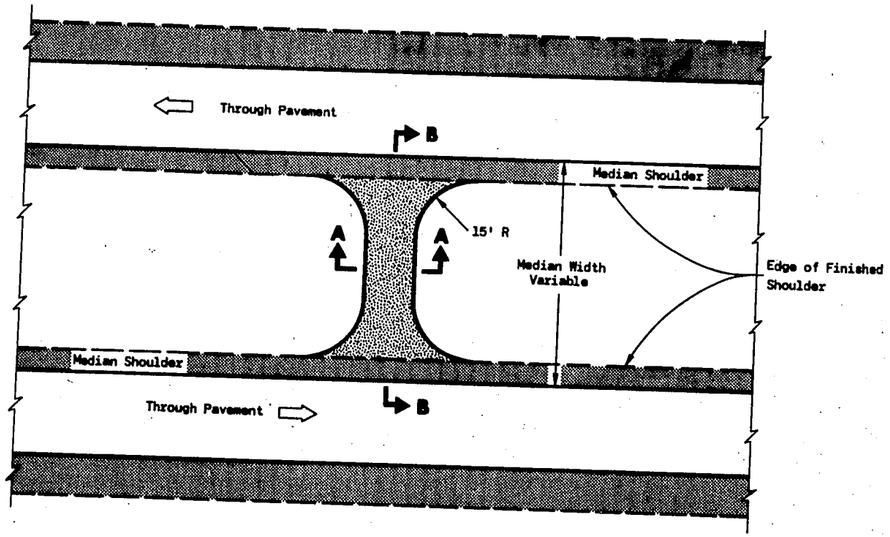
APPROVED 6/22/89
DATE

STATE DESIGN ENGINEER FOR HWYS

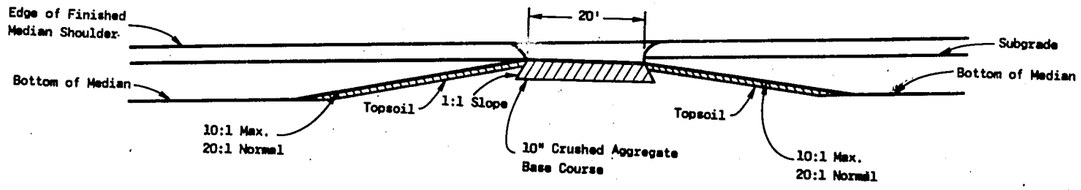
FHWA

S.D.D. 9 A 1-80

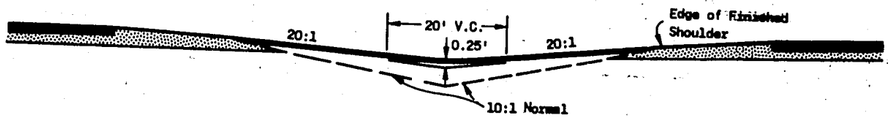
S.D.D. 9 A 1-80



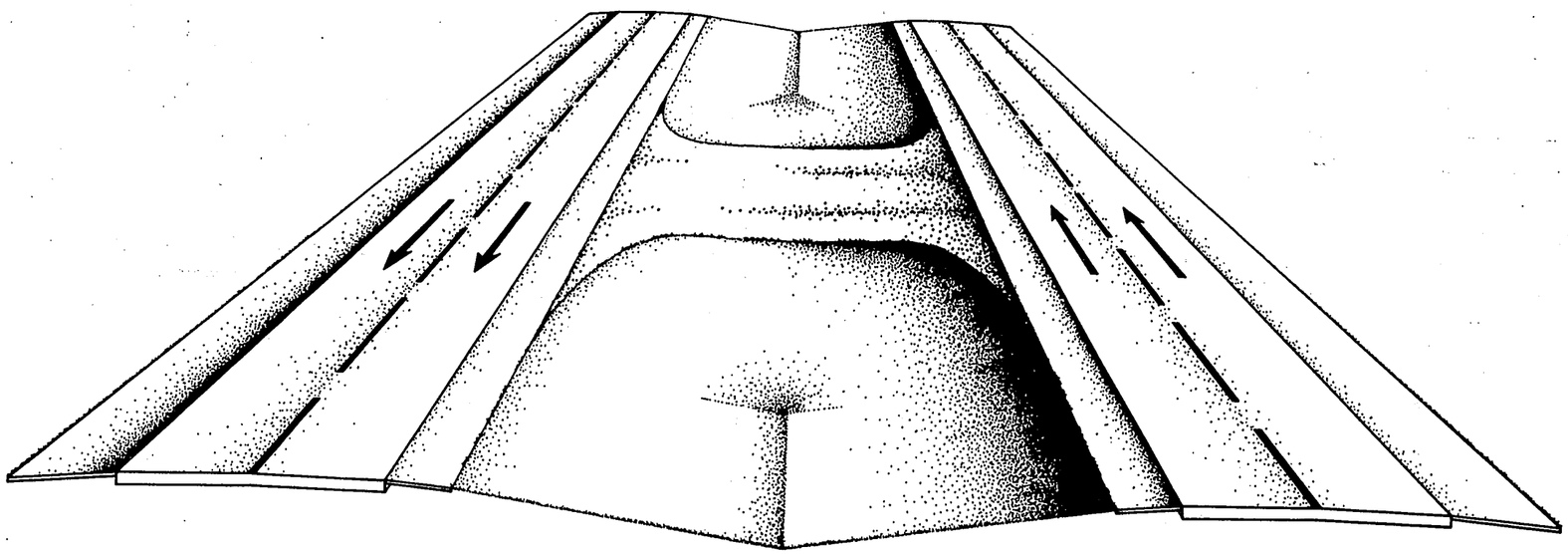
PLAN VIEW



SECTION A-A



SECTION B-B



GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

MAINTENANCE CROSSOVER FOR FREEWAYS

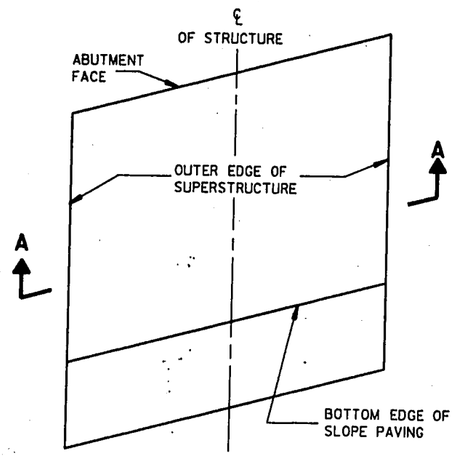
State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL:
5-16-73 DATE — CHIEF of FACILITIES DEVELOPMENT

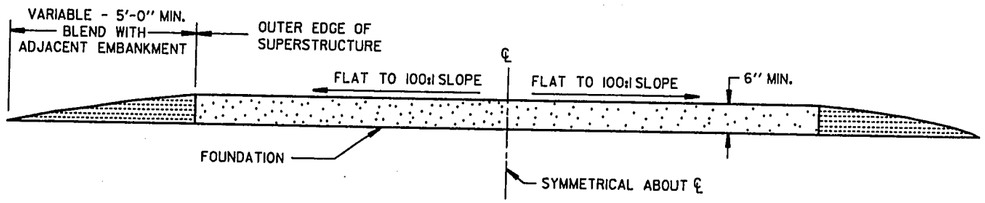
APPROVED
5-17-73 DATE — STATE HIGHWAY ENGINEER

S.D.D. 11A1-2

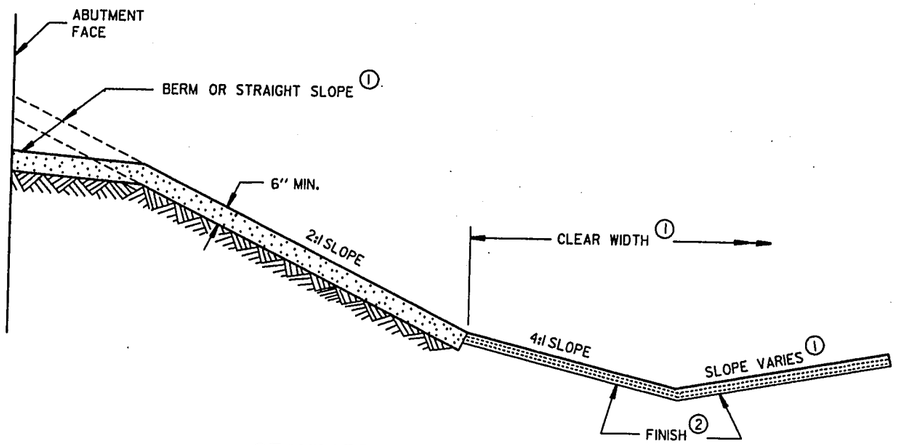
S.D.D. 11A1-2



PLAN VIEW



SECTION A-A



STANDARD CROSS SECTION

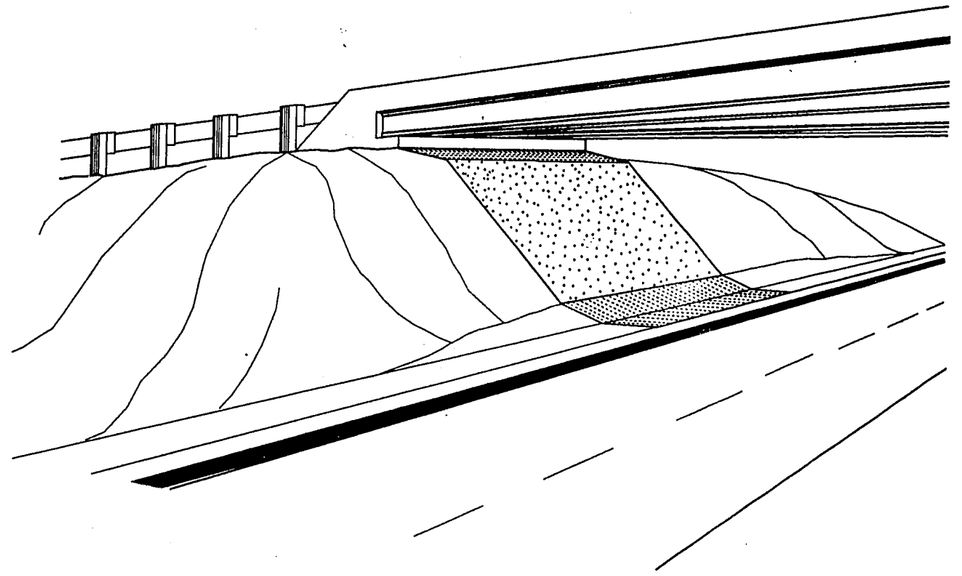
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

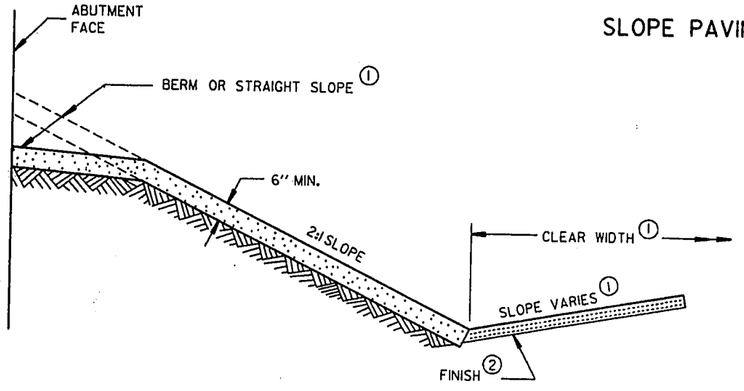
WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

① DIMENSIONS, SLOPES AND SLOPE LIMITS ARE DETAILED ON THE STRUCTURE PLANS.

② MATCH EXISTING FINISH OR FINISH AS SHOWN ELSEWHERE IN THE CONTRACT.



SLOPE PAVING UNDER STRUCTURES



ALTERNATE CROSS SECTION

SLOPE PAVING - STRUCTURES (CRUSHED AGGREGATE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

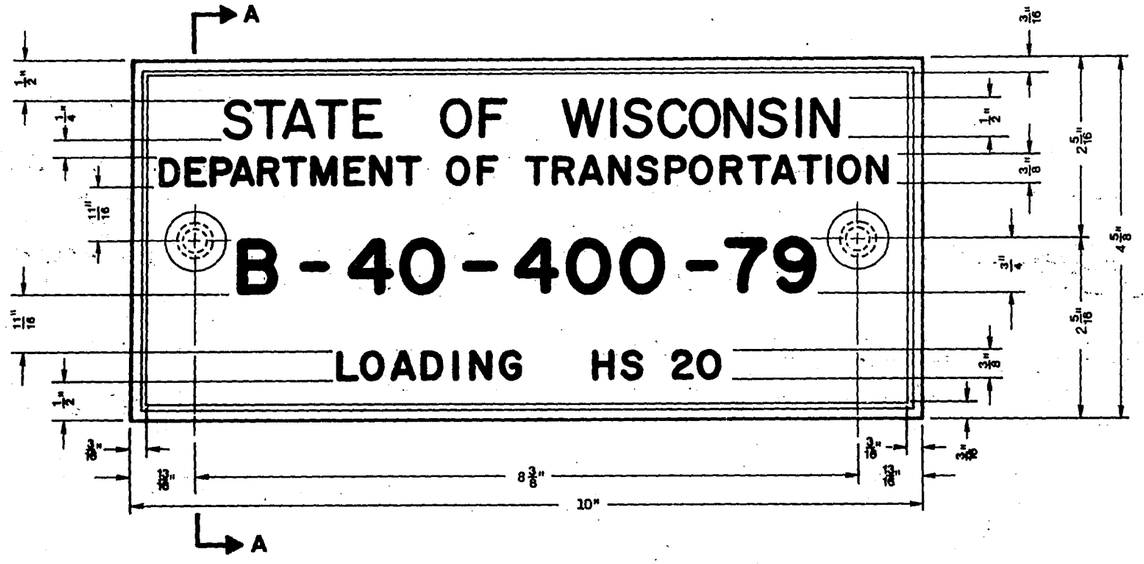
APPROVED 9-21-84 DATE

CHIEF DESIGN ENGINEER

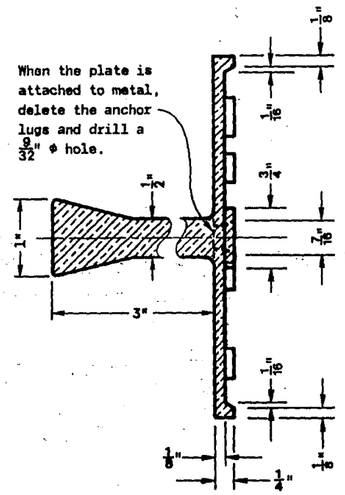
FHWA

S.D.D. 12 A 2-3

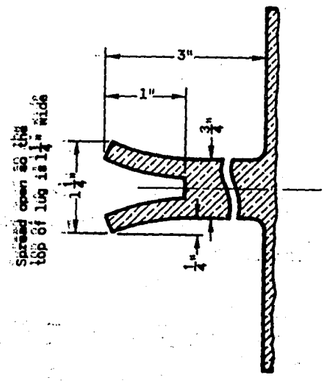
S.D.D. 12 A 2-3



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES LINES 4 AND 5 ABOVE SHALL READ:

B = Bridge
C = Culvert
RW = Retaining Wall

Year of Substantial Completion

County No.

Bridge No.

B-40-400-79

UNIT 1A HS 20M

Unit No. for Multiple Unit

Design Loading of Structure Indicated on the Plan

NUMBERING AND LOADING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

Name Plates to be installed on Bridges, Culverts, and Retaining Walls shall conform to the requirements of Section 506.2.4 of the Standard Specifications.

The Bridge Number and Design Loading shown on this drawing are examples only. See Construction Plans for individual numbering and design loading.

NAME PLATE (STRUCTURES)

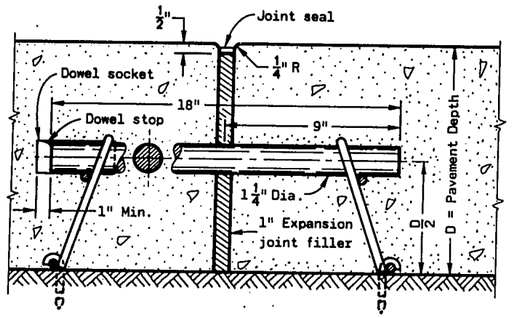
State of Wisconsin
Department of Transportation
Division of Transportation Facilities

APPROVED 9-27-79
DATE

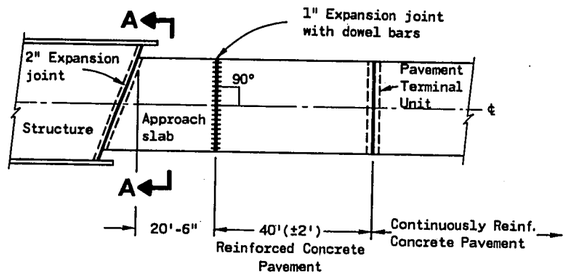
CHIEF DESIGN ENGINEER

FHWA

S.D.D. 12 A 3-4

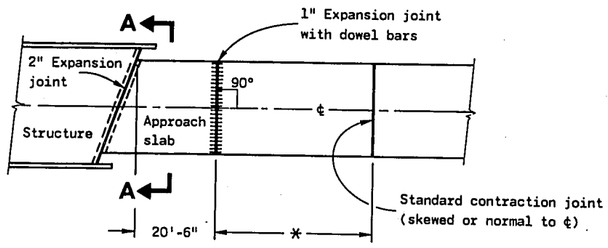


EXPANSION JOINT



APPROACH SLAB AND ADJACENT PAVEMENT

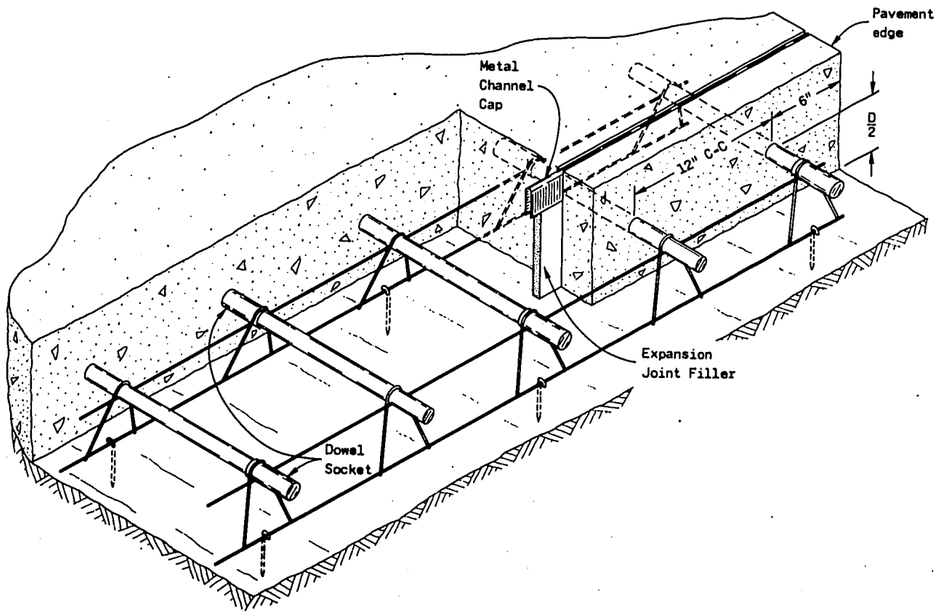
* 12' Min., 20' Max. for Non-reinforced Concrete Pavement.
40' ± 2' for Reinforced Concrete Pavement.



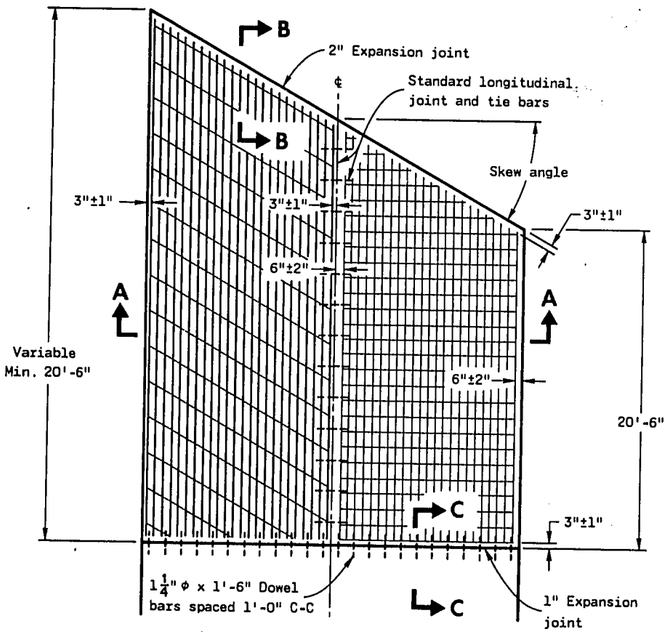
APPROACH SLAB AND ADJACENT PAVEMENT

BIDDING INFORMATION

Skew Angle	APPROACH SLAB QUANTITIES (One slab, 24' wide)					
	Concrete Pavement		Welded Wire Fabric 6" x 12" - W5.5 x W4 (55 lbs./100 sq. ft.)		Steel Reinforcement (Grade 60)	
					No. 8 Bars	No. 4 Bars
	Sq. Yds.	Cu. Yds.	Sq. Yds.	Pounds	Pounds	Pounds
0°	54.7	18.2	54.7	271	2681	173
15°	63.2	21.1	63.2	313	3091	196
30°	73.2	24.4	73.2	362	3572	228
45°	86.7	28.9	86.7	429	4219	267
60°	110.1	36.7	110.1	545	5347	338



INSTALLING DEVICE FOR DOWEL BARS AND EXPANSION JOINT ASSEMBLY



HALF SECTION BOTTOM REINFORCEMENT

HALF SECTION TOP REINFORCEMENT

APPROACH SLAB

GENERAL NOTES

Details of construction not shown on this drawing shall conform to the Standard Specifications and Special Provisions.

DOWEL BARS

Dowel bars across expansion joints shall be corrosion resistant coated conforming to the requirements of AASHTO Designation M 254.

The coating type shall be, Type B - Thermosetting Epoxy.

JOINT SEALING

Expansion joints shall be sealed as follows:

1. On pavements having transverse contraction joints sealed with a poured type sealer, expansion joints shall be sealed with the same type sealant, 1/4" below pavement surface.
2. On pavements with contraction joints, unsealed contraction or contraction joints sealed with compression type seals, expansion joints shall be sealed with a poured type sealer as specified in the plans or Special Provisions.

JOINT FILLER

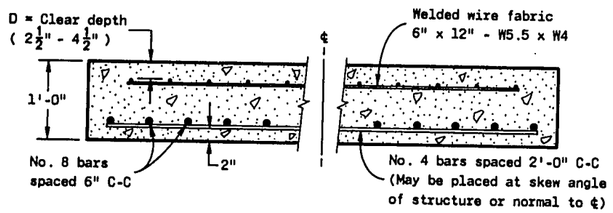
Expansion joint filler between structure and approach slab may consist of two, 1 inch thicknesses of material.

WELDED WIRE FABRIC

Sheet widths of 8 feet are permitted.

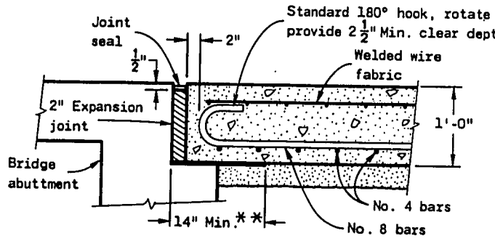
STEEL REINFORCEMENT

Splicing of No. 8 bars in the approach slab is permitted for skewed structures only. Splices shall be staggered, with a maximum of one splice per bar. Laps shall conform to the Standard Specifications.



SECTION A-A

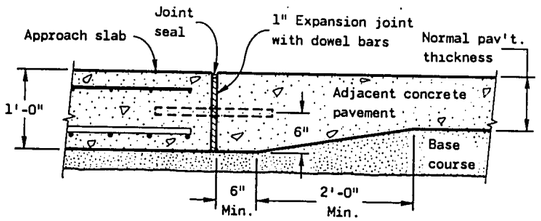
REINFORCEMENT POSITIONING DETAIL



SECTION B-B

BEND DETAIL
BOTTOM REINFORCEMENT

** Galvanized metal flashing (Place full width of pavement and secure by nailing to base).



SECTION C-C

TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

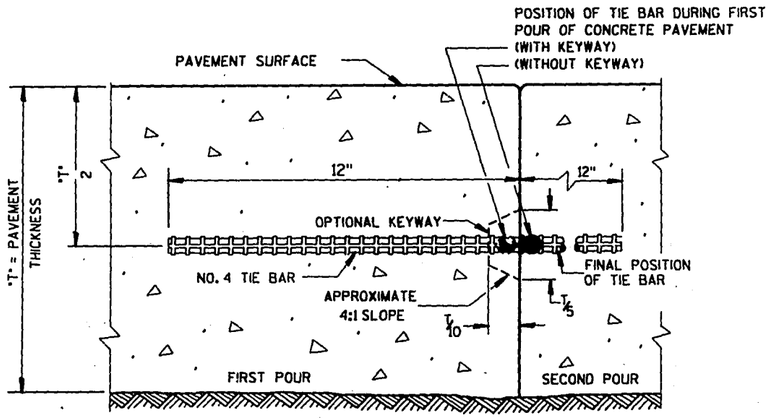
CONCRETE PAVEMENT APPROACH SLAB

State of Wisconsin
Department of Transportation

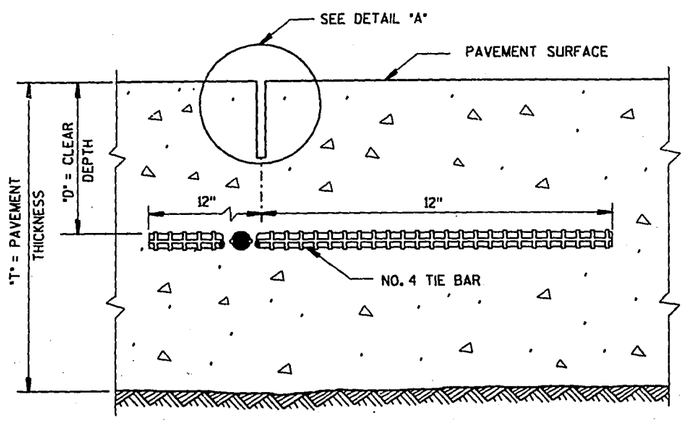
APPROVED 2/24/81
DATE
CHIEF DESIGN ENGINEER
FHWA

S.D.D. 13 B 2-3

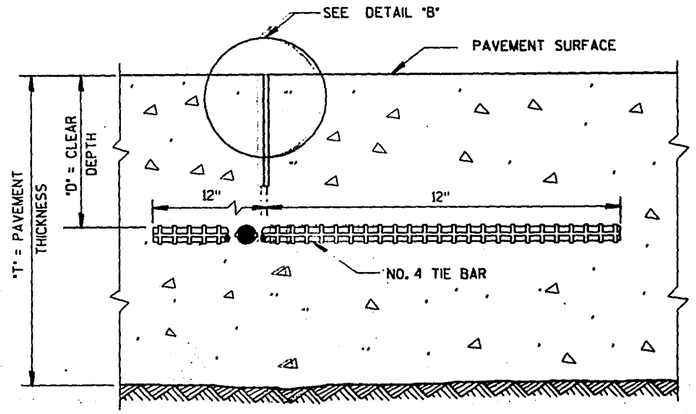
S.D.D. 13 B 2-3



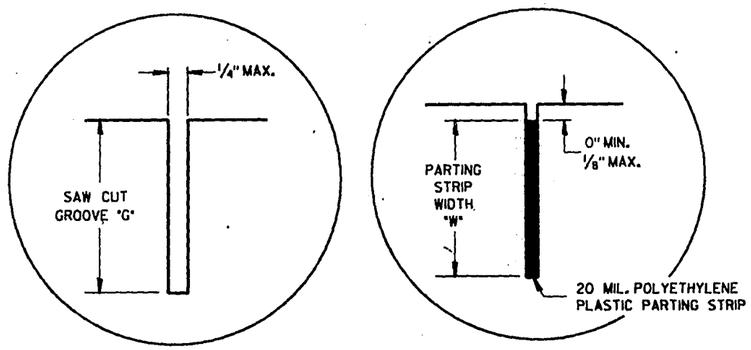
CONSTRUCTION JOINT



SAWED JOINT

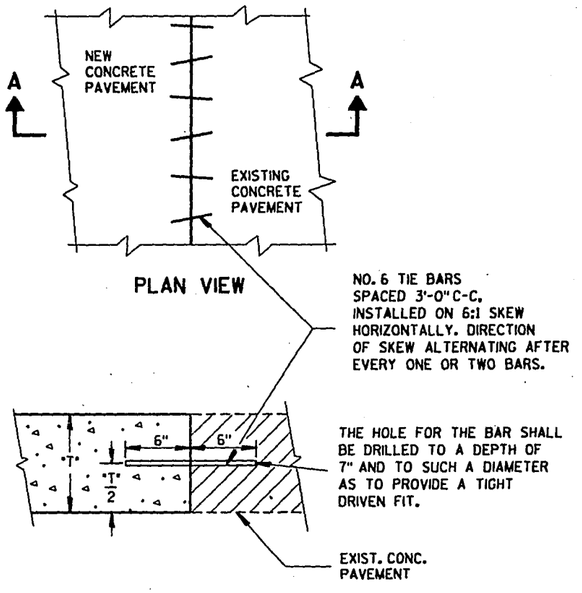


RIBBON JOINT



DETAIL "A"

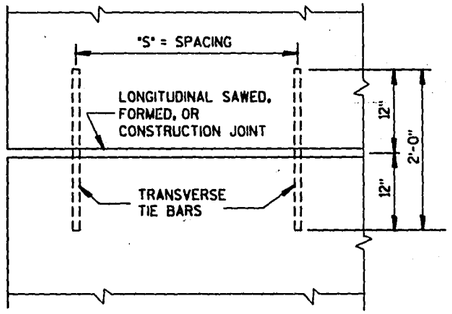
DETAIL "B"



PLAN VIEW

SECTION A-A
PAVEMENT TIES

PAVEMENT THICKNESS "T"	CLEAR DEPTH "D"	SAW CUT GROOVE "G"	MAXIMUM TIE BAR SPACING "S"		PARTING STRIP WIDTH "W"
			PAVEMENT WIDTH		
			24' OR 26'	30'	
6"	3"±1/2"	1 1/2"	48"	42"	2"
7"	3 1/4"±1"	1 3/4"	45"	36"	2 1/4"
8"	3 3/4"±1"	2"	39"	30"	2 1/2"
9"	4 1/4"±1"	2 1/4"	33"	27"	3"
10"	4 3/4"±1"	2 1/2"	30"	24"	3 1/4"
11"	5 1/4"±1"	2 3/4"	27"	21"	3 3/4"
12"	5 3/4"±1"	3"	24"	21"	4"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILS "A" AND "B" ARE EQUAL ALTERNATES UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.

LONGITUDINAL JOINTS SHALL NOT BE SEALED OR FILLED.

TIE BAR SPACINGS ARE VALID ONLY FOR PAVEMENT WIDTHS IN THE TABLE. FOR WIDER PAVEMENTS, TIED CONCRETE SHOULDERS OR RAMPS, THE TIE BAR SPACING SHALL BE AS SHOWN ON THE PLANS.

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND PAVEMENT TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

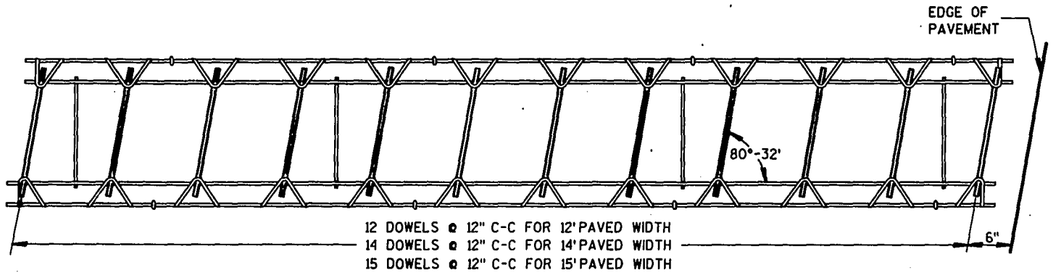
APPROVED 3/16/92 DATE

STATE DESIGN ENGINEER FOR HWYS

FHWA

S.D.D. 13 C 1-9

S.D.D. 13 C 1-9



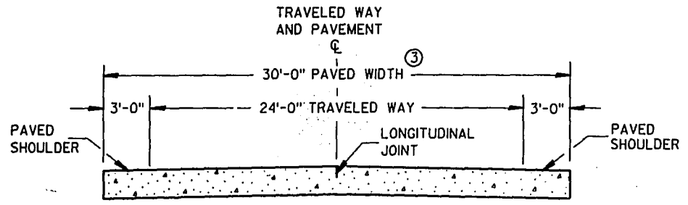
PLAN VIEW

SIDE VIEW

SKEWED CONTRACTION JOINT DOWEL ASSEMBLY ①

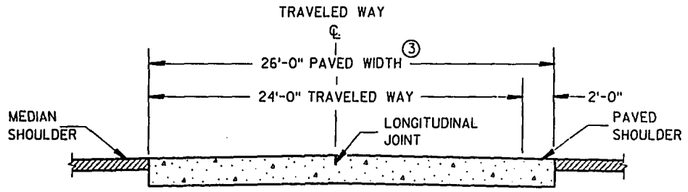
DOWEL BAR SIZE TABLE

PAVEMENT DEPTH	DOWEL BAR DIAMETER
9"	1 1/4"
MORE THAN 9"	1 1/2"



SECTION A-A

TWO-LANE TWO-WAY HIGHWAY ②



SECTION A-A

DIVIDED HIGHWAY ②

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

CONTRACTION JOINTS

CONTRACTION JOINTS SHALL BE RANDOM SPACED AND SKEWED RIGHT HAND FORWARD.

CONTRACTION JOINTS SHALL NOT BE SEALED OR FILLED.

DOWEL BARS SHALL BE PARALLEL TO THE CENTERLINE.

CONSTRUCTION JOINTS

CONSTRUCTION JOINTS SHALL BE A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGNED EITHER PARALLEL TO THE CONTRACTION JOINTS OR AT 90° TO THE CENTERLINE.

TIE BARS MAY BE INSERTED THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN POURED.

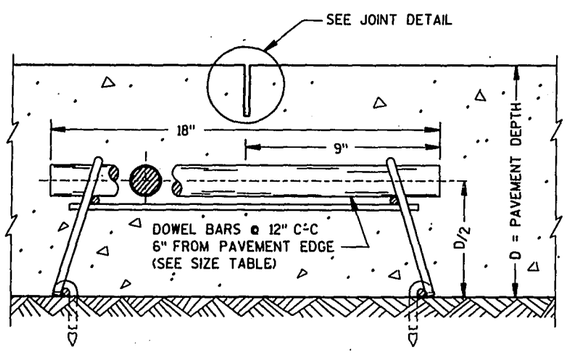
TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

① ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY MAY BE USED WHEN APPROVED BY THE ENGINEER. MECHANICAL DOWEL BAR IMPLANTERS MAY BE USED INSTEAD OF DOWEL ASSEMBLIES.

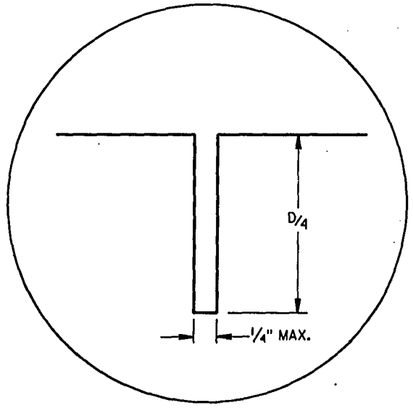
② REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

③ THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER WILL BE MEASURED AS CONCRETE PAVEMENT.

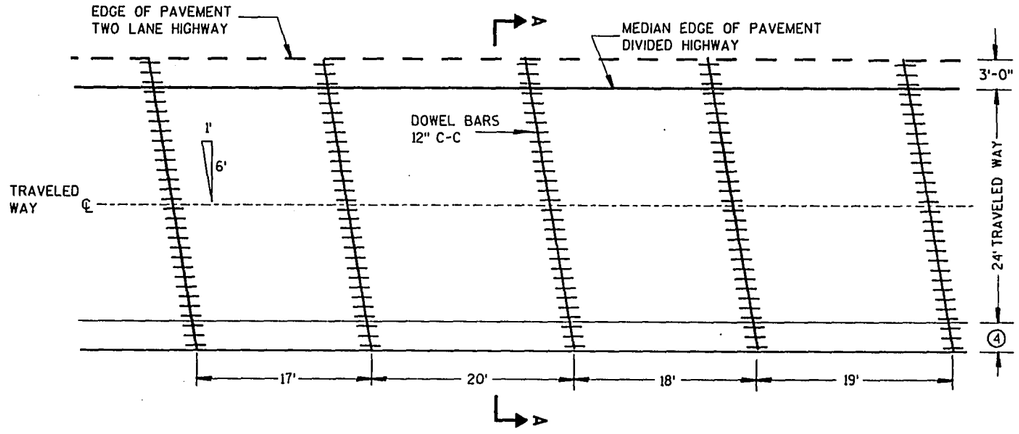
④ 2'-0" DIVIDED HIGHWAYS
3'-0" TWO-LANE TWO-WAY HIGHWAYS
SEE SECTION A-A



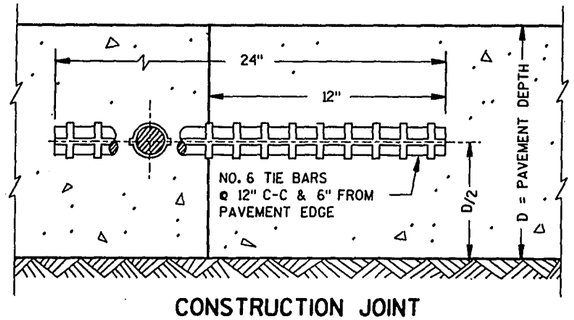
DOWELED CONTRACTION JOINT



JOINT DETAIL



CONTRACTION JOINT LOCATIONS



CONSTRUCTION JOINT

DOWELED NON-REINFORCED
CONCRETE PAVEMENT
RANDOM SPACED JOINTS 17'-20'-18'-19'

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 12/19/90 DATE

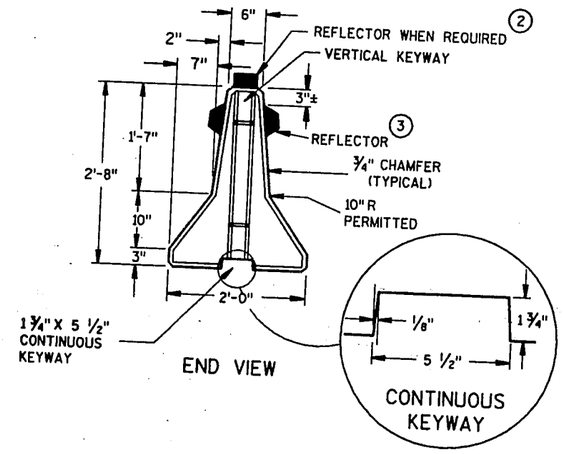
STATE DESIGN ENGINEER FOR HWYS

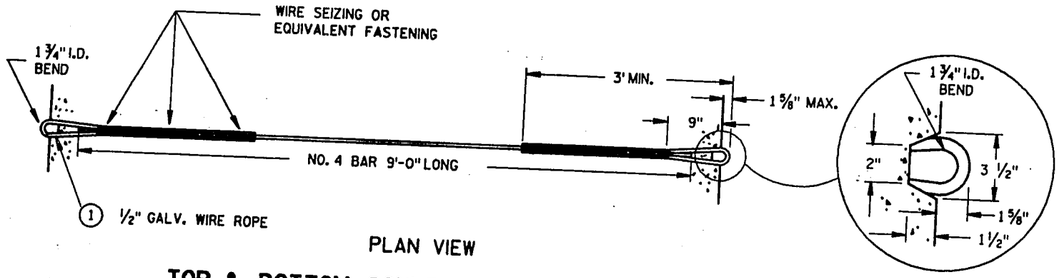
S.D.D. 13 C 12-1

S.D.D. 13 C 12-1

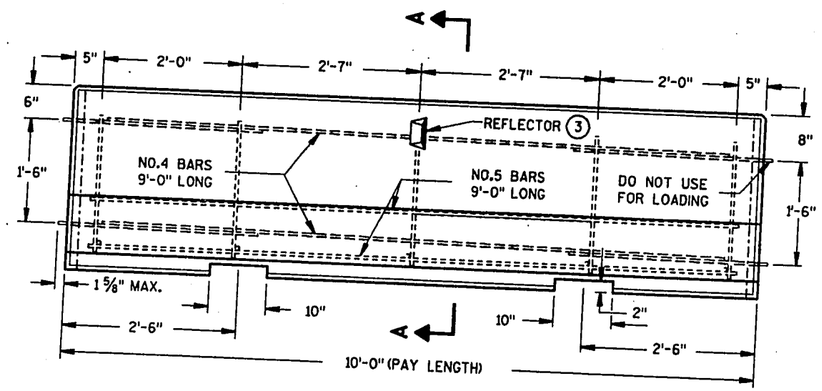
DESCRIPTION	SIZE	NO. REQ'D	LENGTH
TOP CONNECTOR WIRE ROPE (1)	½"	2	6'- 0"
BOTTOM CONN. WIRE ROPE (1)	½"	2	6'- 0"
TOP CONNECTOR STEEL BAR	NO. 4	1	9'- 0"
BOTTOM CONN. STEEL BAR	NO. 4	1	9'- 0"
STEEL CONNECTING PIN	1¼" DIA.	1	2'- 6"
BOTTOM TIE BARS	NO. 4	5	1'- 8"
VERTICAL STEEL BAR	NO. 4	10	2'- 1"
HORIZONTAL STEEL BAR	NO. 5	4	9'- 4"

BILL OF MATERIALS

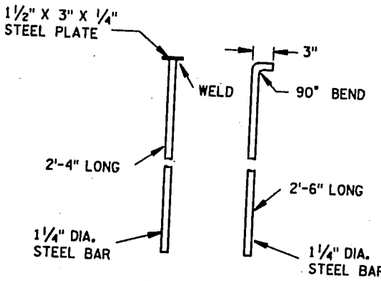




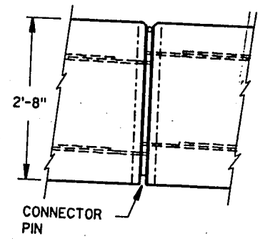
TOP & BOTTOM CONNECTOR ASSEMBLY (1)

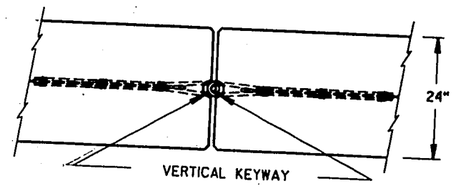


LOCATION OF REINFORCEMENT STEEL

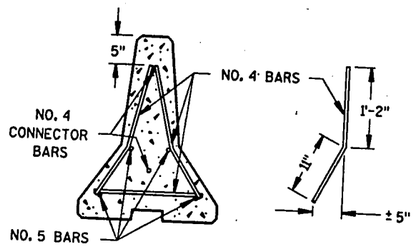


ALTERNATE CONNECTING PINS



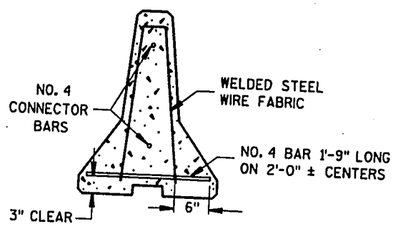


CONNECTION DETAILS



SECTION A-A

BAR STEEL REINFORCEMENT



SECTION A-A

WELDED STEEL WIRE FABRIC REINFORCEMENT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE MASONRY SHALL BE EITHER GRADE "A" OR THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

BARRIERS SHALL BE REINFORCED WITH EITHER BAR STEEL REINFORCEMENT OR WELDED STEEL WIRE FABRIC. WELDED STEEL WIRE FABRIC SHALL BE 6X6 - W4XW4, WEIGHING APPROXIMATELY 58 LBS. PER 100 SQ. FEET.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN.

BARRIER SHAPES OTHER THAN THAT SHOWN IN THE END VIEW WILL NOT BE PERMITTED. ALTERNATIVE EQUIVALENT DESIGNS FOR BARRIERS MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

GALVANIZED WIRE ROPE SHALL BE 6 X 19 CLASS 2 IWRC WITH A MINIMUM BREAKING STRENGTH OF 20,000 LBS., AND SHALL CONFORM TO FEDERAL SPECIFICATION RR-W-410. THE ZINC COATING SHALL CONFORM TO TABLE II OF THE FEDERAL SPECIFICATIONS.

REFLECTORS SHALL CONFORM TO SECTION 633 OF THE STANDARD SPECIFICATIONS EXCEPT THE SHAPE SHALL BE AS SHOWN ON THIS DRAWING. ALTERNATIVE SHAPES MAY BE USED WHEN APPROVED BY THE ENGINEER. CONCRETE SURFACE PREPARATION, ADHESIVE AND METHOD OF APPLICATION SHALL BE AS RECOMMENDED BY THE REFLECTOR MANUFACTURER. THE COLOR OF REFLECTORS SHALL BE YELLOW. MAXIMUM SPACING SHALL BE 20 FEET.

(1) CONNECTOR ASSEMBLIES MAY, AT THE CONTRACTORS OPTION, BE FORMED FROM A CONTINUOUS SECTION OF ½ INCH GALV. WIRE ROPE (16'-6" MIN. LENGTH). THE NO. 4 CONNECTOR STEEL BARS MAY THEN BE OMITTED.

(2) TOP MOUNTED REFLECTORS SHALL BE PROVIDED IN ADDITION TO THE SIDE MOUNTED REFLECTORS ON ALL BARRIER INSTALLATIONS LOCATED ON CURVED ALIGNMENT LONGER THAN 200 FEET.

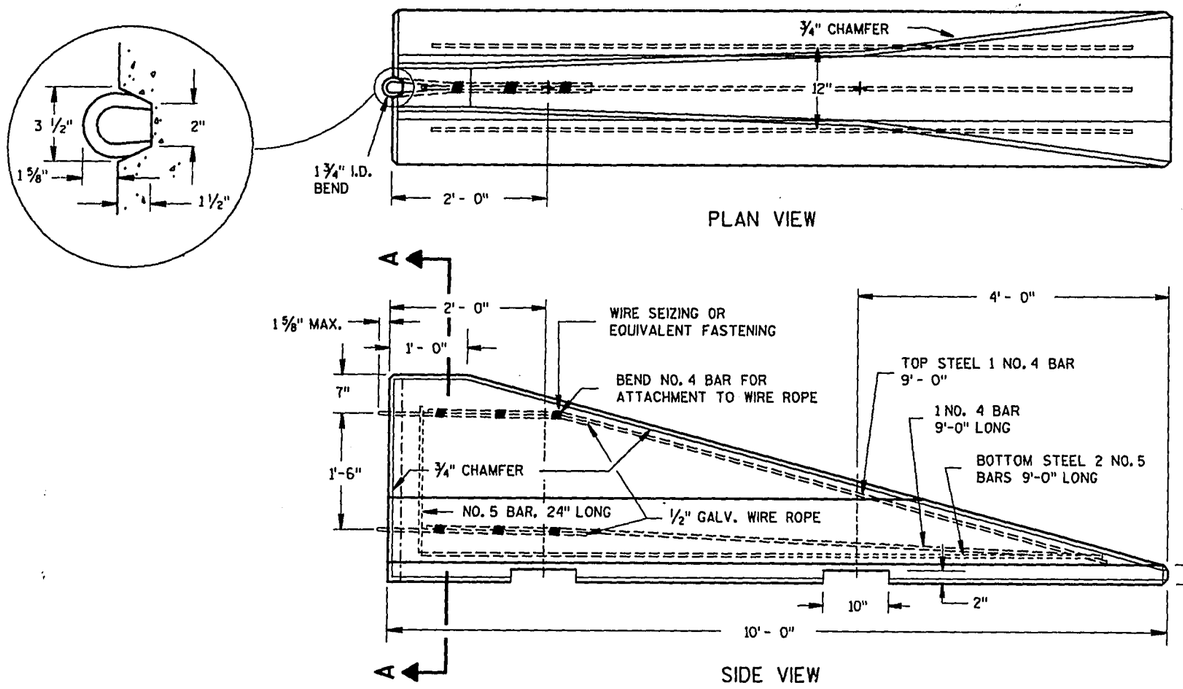
(3) BARRIERS USED TO SEPARATE OPPOSING TRAFFIC SHALL HAVE REFLECTORS ON BOTH SIDES. TOP MOUNTED REFLECTORS SHALL BE DOUBLE FACED FOR THIS CONDITION.

TEMPORARY PRECAST CONCRETE BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 14B 7-8a

S.D.D. 14B 7-8a



END SECTION FOR TEMPORARY PRECAST CONCRETE BARRIER

GENERAL NOTES

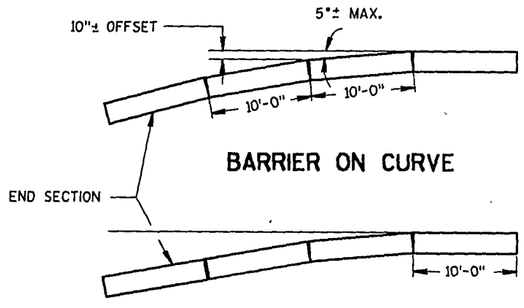
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

THE PORTABLE CRASH CUSHION SHALL BE THE G-R-E-A-T CZ IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC: ONE EAST WACKER DRIVE, CHICAGO, IL., 60601.

THE CRASH CUSHION SHALL BE MANUFACTURED, ASSEMBLED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS DETAILED ELSEWHERE IN THE PLANS OR AS SHOWN ON THE APPROVED SHOP DRAWINGS. THE CRASH CUSHION PLATFORM SHALL BE ANCHORED TO EITHER 6 INCH MINIMUM CONCRETE PAVEMENT OR 3 INCH MINIMUM ASPHALTIC SURFACES THAT HAVE A PREPARED COMPACTED SUBBASE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

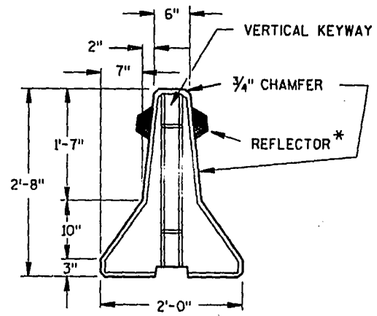
GALVANIZED WIRE ROPE SHALL BE 6 X 19 CLASS 2 IWRC WITH A MINIMUM BREAKING STRENGTH OF 20,000 LBS., AND SHALL CONFORM TO FEDERAL SPECIFICATION RR-W-410. THE ZINC COATING SHALL CONFORM TO TABLE II OF THE FEDERAL SPECIFICATIONS.

*WHEN BARRIERS ARE USED TO SEPARATE OPPOSING TRAFFIC, REFLECTORS ARE REQUIRED ON BOTH SIDES.

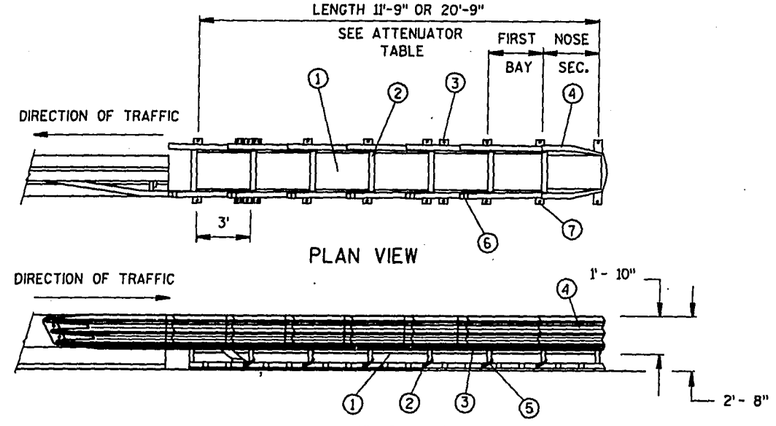


FLARE AT BARRIER END

OPERATING SPEED, MPH	FLARE RATE
40 OR LESS	10 : 1
50 OR MORE	15 : 1



END VIEW
SECTION A-A



NOTE: CROSS SLOPE OF UNIT NOT TO EXCEED 5%

① HEX-FOAM CARTRIDGE
② DIAPHRAGM
③ THRIE BEAM FENDER PANEL
④ NOSE COVER
⑤ STABILIZING CHAIN
⑥ DEFLECTOR PANEL
⑦ ANCHORAGE DEVICE (WHERE ONE-WAY TRAFFIC EXISTS)

CONSTRUCTION ZONE PORTABLE CRASH CUSHION

ATTENUATOR TABLE

ATTENUATOR LENGTH	NO. OF BAYS	DESIGN SPEED MPH
11'- 9"	3	40 OR LESS
20'- 9"	6	40 TO 55

NOTE:
THIS DRAWING CONSISTS OF TWO SHEETS. BOTH SHEETS ARE REQUIRED WHEN THIS DRAWING IS CALLED FOR IN THE PLANS.

PRECAST CONCRETE BARRIER
END SECTION AND
PORTABLE CRASH CUSHION

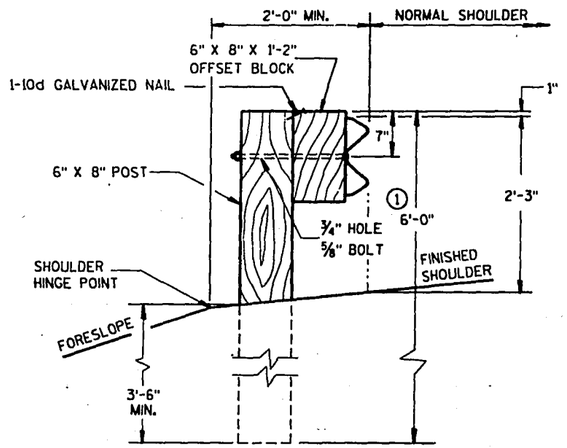
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-12-88
DATE
STATE DESIGN ENGINEER FOR HWYS

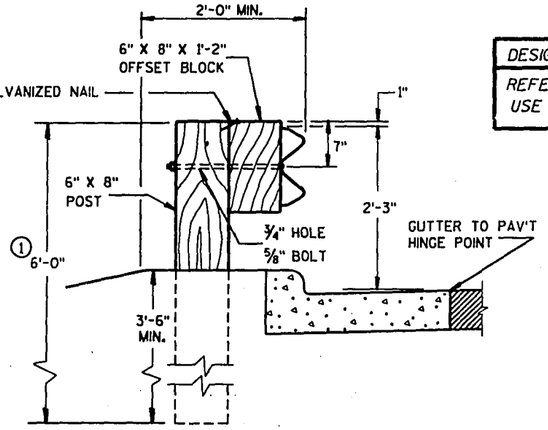
FHWA

S.D.D. 14B 7-8b

S.D.D. 14B 7-8b



END VIEW
LOCATED ALONG A ROADWAY SHOULDER



END VIEW
LOCATED ALONG A CURBED ROADWAY

DESIGN NOTE: (WILL NOT APPEAR ON CONTRACT PLANS)

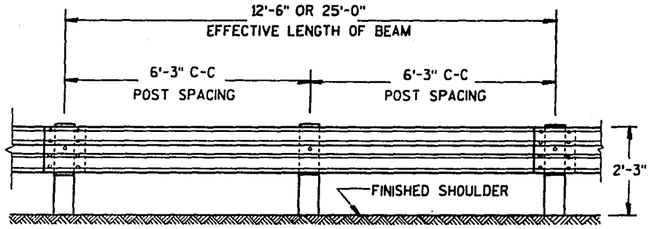
REFER TO PROCEDURE 11-45-1 FOR GUIDANCE ON THE USE OF BEAM GUARD ON CURBED ROADWAYS.

GENERAL NOTES

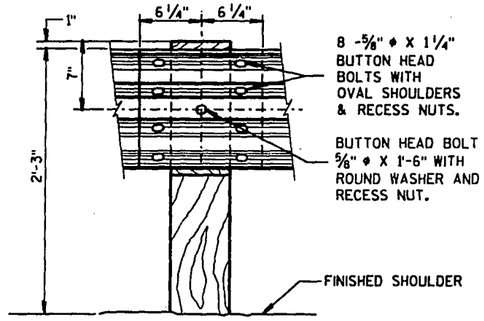
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, AND THE APPLICABLE SPECIAL PROVISIONS.

① POST LENGTH SHALL BE INCREASED TO PROVIDE A MINIMUM EMBEDMENT OF 3'-6" WHERE THE SHOULDER HINGE POINT IS LOCATED IN FRONT OF THE POST.

② PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.

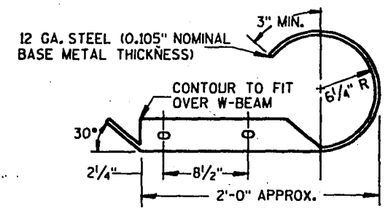


FRONT VIEW

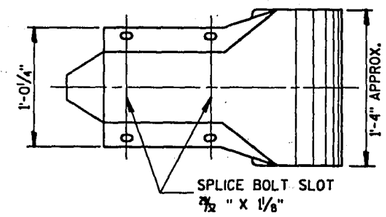


FRONT VIEW
BEAM SPLICING AND POST MOUNTING DETAIL

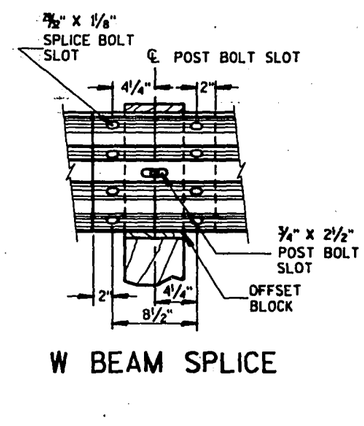
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD



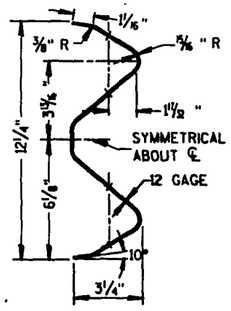
PLAN VIEW



FRONT VIEW
W BEAM END SECTION (ROUNDED)



W BEAM SPLICE



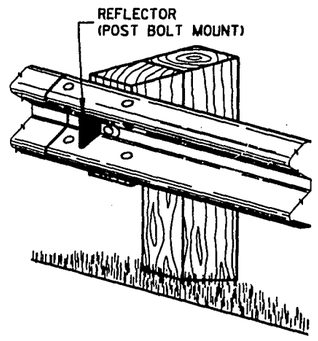
SECTION THRU W BEAM

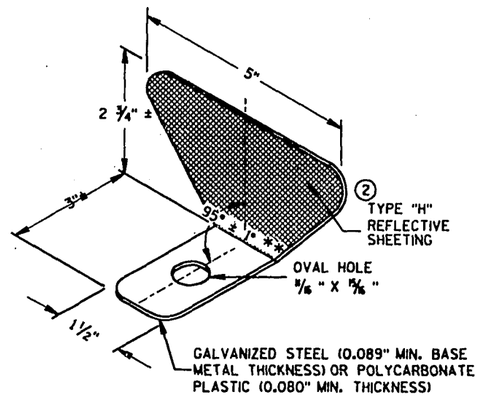
REFLECTOR SPACING

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50'C-C	1	3
	> 200'	100'C-C	1	
TWO WAY TRAFFIC	< 200' *	25'C-C	1 *	6
	> 200' *	50'C-C	1 *	
TWO WAY TRAFFIC	< 200'	50'C-C	2 **	3
	> 200'	100'C-C	2 **	

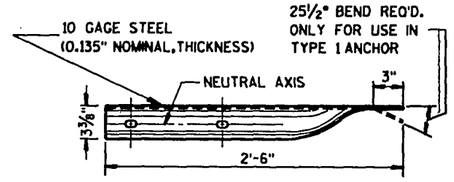
* EVERY OTHER REFLECTOR REVERSED FOR 2-WAY VISIBILITY. CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED RELECTORS.

** ANGLE OF BEND TO BE 90° ± 1° FOR TWO-SIDED REFLECTORS.

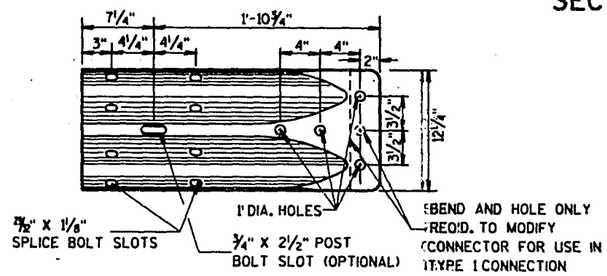




② REFLECTOR DETAIL AND TYPICAL INSTALLATION



PLAN VIEW



FRONT VIEW
W BEAM TERMINAL CONNECTOR

NOTE:
SHEETS 1b IS OPTIONAL FOR INCLUSION IN PLANS WHEN APPLICABLE.

CLASS "A" STEEL PLATE BEAM GUARD, INSTALLATION & ELEMENTS

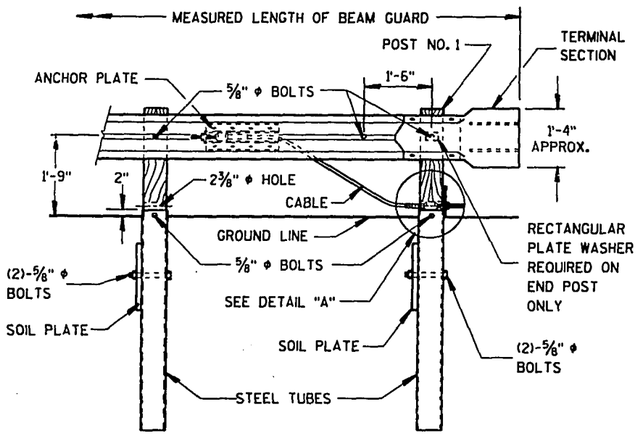
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 5/13/91 /DATE
STATE DESIGN ENGINEER FOR HWYS

FHWA

S.D.D. 14 B 15-1a

S.D.D. 14 B 15-1a



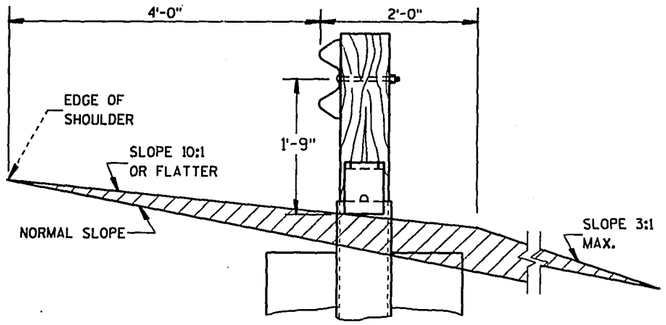
FRONT VIEW

① TYPE 1 ANCHORAGE

TANGENT OFFSET TABLE	
POST NO.	OFFSET (FEET)
1	4.00
2	2.78
3	1.78
4	1.00
5	0.44
6	0.11
7	0.00

**37'-6" INSTALLATION, 6 SPACES AT 6'-3"

TANGENT OFFSET TABLE



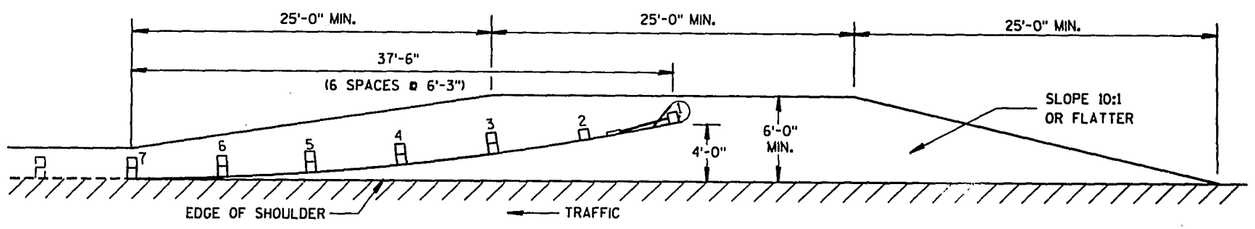
SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

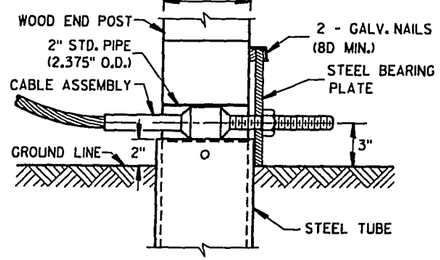
POSTS AT LOCATIONS 1 & 2 SHALL BE WOOD BREAKAWAY POSTS INSERTED AND BOLTED INTO STEEL TUBES.

① TYPE 1 AND TYPE 2 ANCHORAGES SHALL CONSIST OF STEEL TUBE(S), SOIL PLATE(S), WOOD BREAKAWAY POST(S), BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.



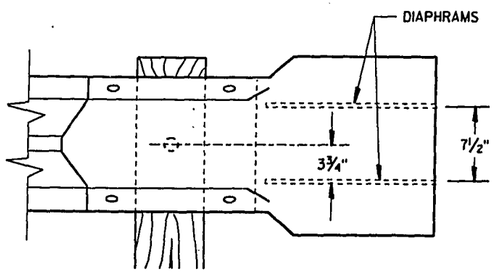
PLAN VIEW

ROADWAY WIDENING FOR TYPE 1 ANCHORAGE

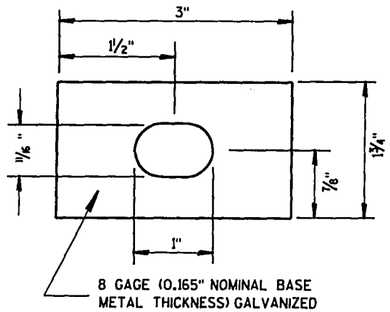


DETAIL "A"

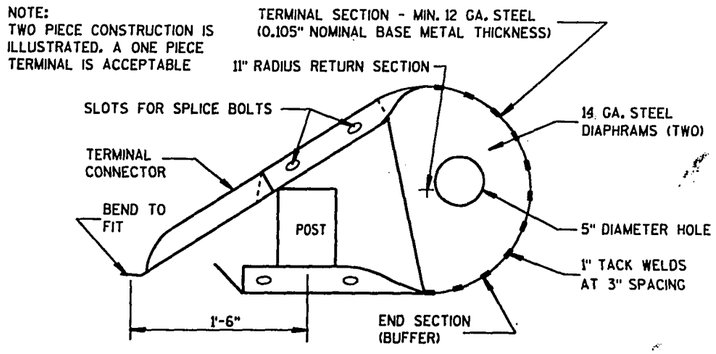
(POST NO. 1)



FRONT VIEW

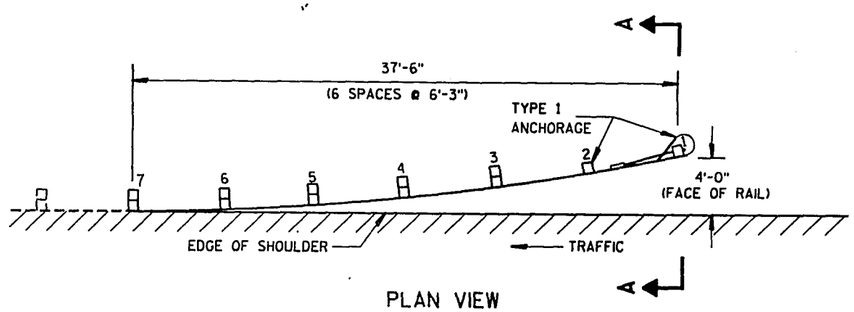


RECTANGULAR PLATE WASHER



PLAN VIEW

TERMINAL SECTION DETAIL



PLAN VIEW

END TREATMENT WITH ANCHORAGE TYPE 1

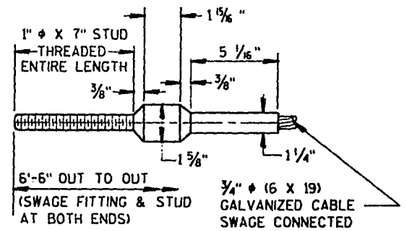
NOTE:
THIS DRAWING CONSISTS OF TWO SHEETS. BOTH SHEETS ARE REQUIRED WHEN THIS DRAWING IS CALLED FOR IN THE PLANS.

CLASS "A" STEEL PLATE BEAM GUARD END TREATMENT WITH ANCHORAGE, TYPE 1 & 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

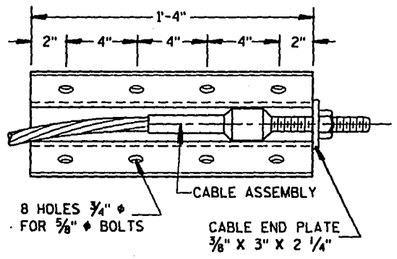
S.D.D. 14 B 16-1a

S.D.D. 14 B 16-1a

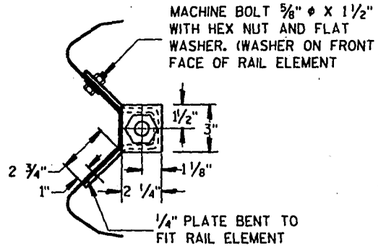


CABLE ASSEMBLY

CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP A MINIMUM BREAKING STRENGTH OF 40,000 LB
(TIGHTEN UNTIL TAUT)

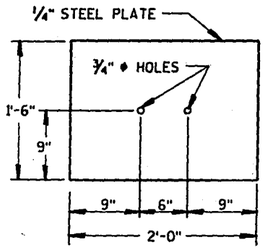


FRONT VIEW

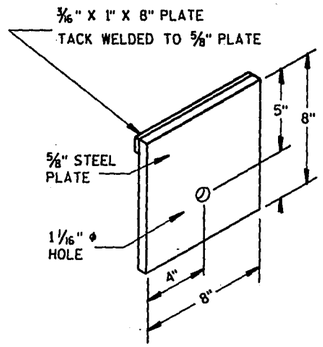


END VIEW

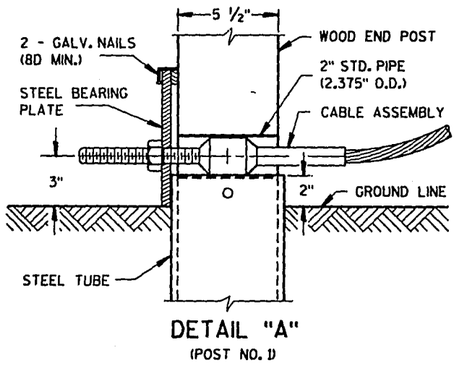
ANCHOR PLATE DETAIL



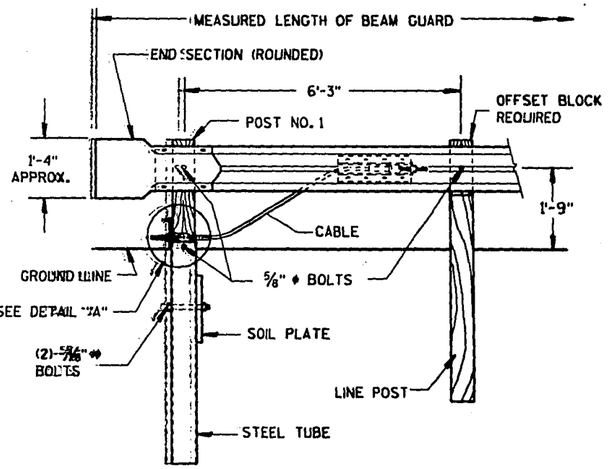
SOIL PLATE



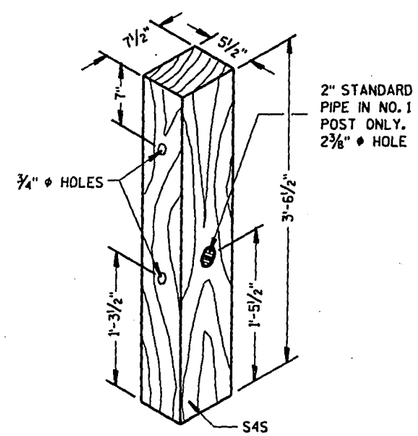
STEEL BEARING PLATE



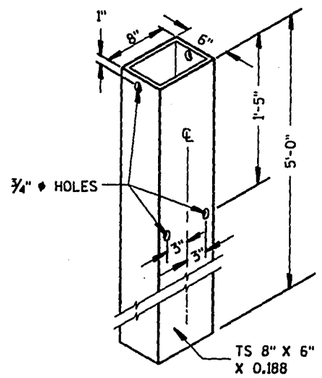
DETAIL "A"
(POST NO. 1)



FRONT VIEW
TYPE 2 ANCHORAGE



WOOD BREAKAWAY POST

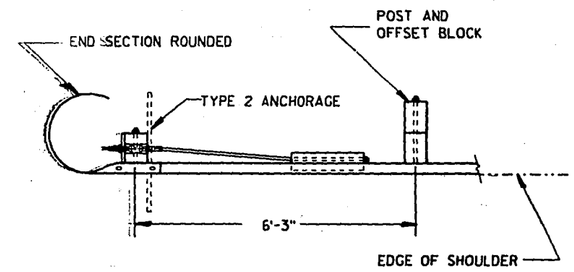


STEEL TUBE
THE STEEL TUBE SHALL CONFORM TO REQUIREMENTS OF ASTM A501

ANCHORAGE COMPONENTS
(COMMON TO BOTH TYPE 1& 2 ANCHORAGES)

NOTE:

STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.



PLAN VIEW

END TREATMENT WITH ANCHORAGE TYPE 2

(USE ON ONE-WAY ROADWAYS ONLY - DEPARTING END)

NOTE:
THIS DRAWING CONSISTS OF TWO SHEETS. BOTH SHEETS ARE REQUIRED WHEN THIS DRAWING IS CALLED FOR IN THE PLANS.

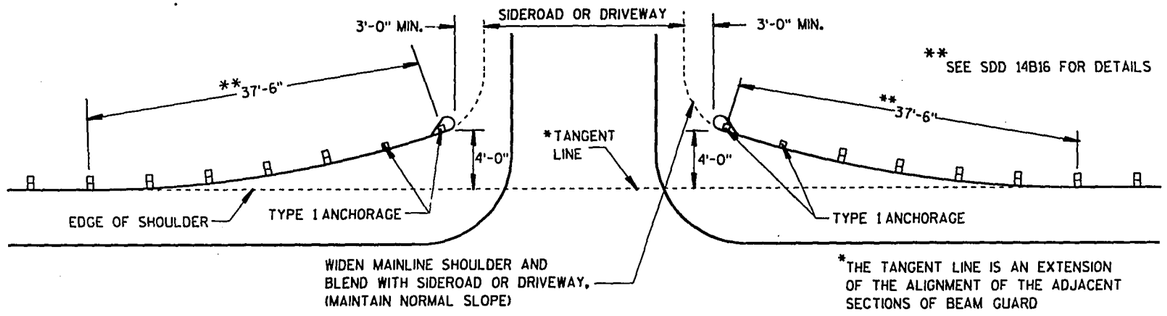
CLASS "A" STEEL PLATE BEAM GUARD END TREATMENT WITH ANCHORAGE, TYPE 1 & 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

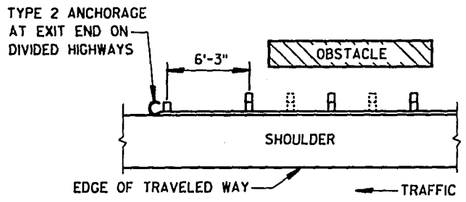
APPROVED 5/13/71 DATE
STATE DESIGN ENGINEER FOR HWYS
FHWA

S.D.D. 14 B 16-1b

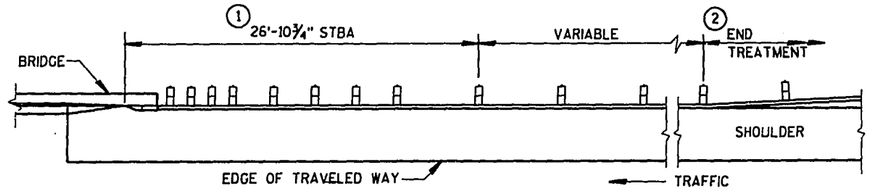
S.D.D. 14 B 16-1b



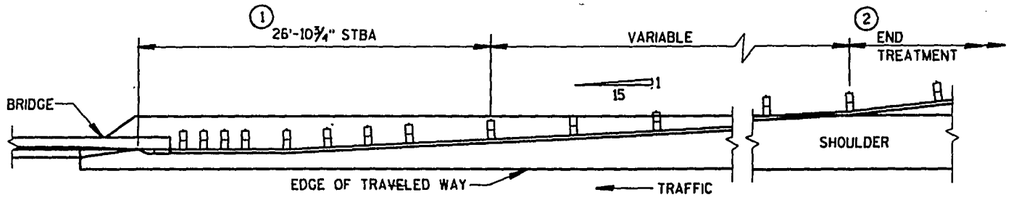
BEAM GUARD AT MINOR SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC



BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT NARROW BRIDGES

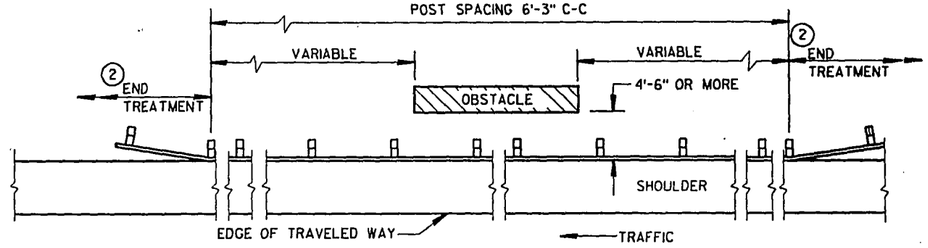
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

BEAM GUARD LOCATIONS AND LENGTHS ARE SHOWN ELSEWHERE IN THE PLAN.

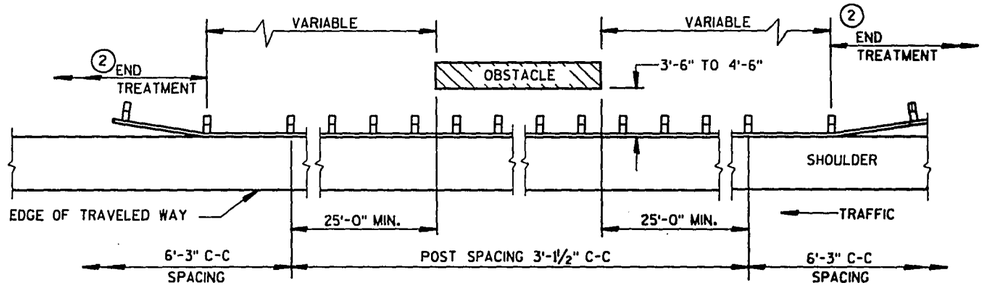
(1) STEEL THRIE BEAM STRUCTURE APPROACH.

(2) UNLESS OTHERWISE INDICATED, THE FLARED END TREATMENT WITH A TYPE 1 ANCHORAGE SHALL BE USED TO TERMINATE BEAM GUARD ON THE TRAFFIC APPROACH SIDE OF BRIDGES/OBSTACLES. TYPE 2 ANCHORAGE SHALL BE USED ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 4'-6" OR MORE)



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")

CLASS "A" STEEL PLATE BEAM GUARD (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

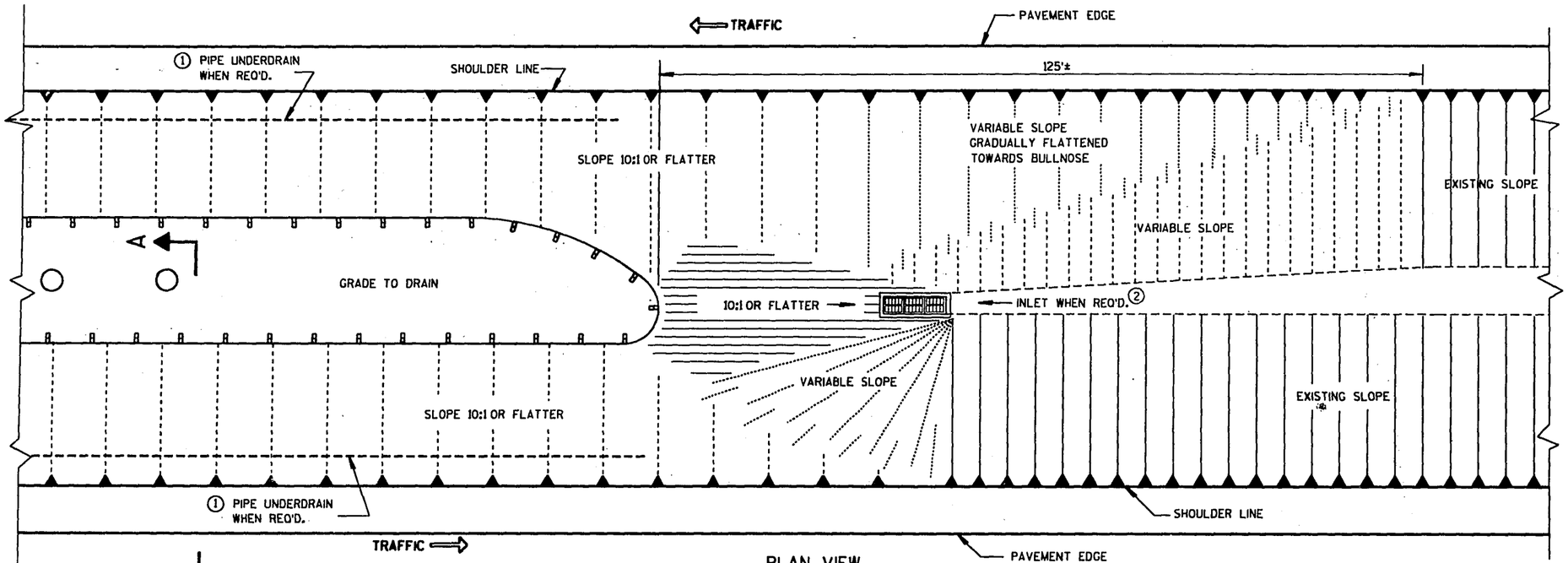
APPROVED
5/13/91
DATE
STATE DESIGN ENGINEER FOR HWYS
FHWA

S.D.D. 14 B 18-1a

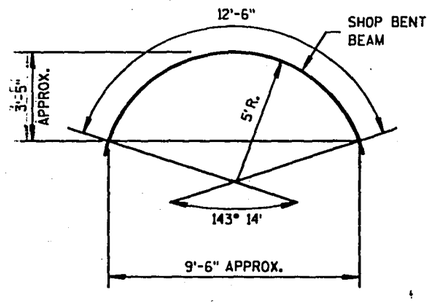
S.D.D. 14 B 18-1a

NOTES

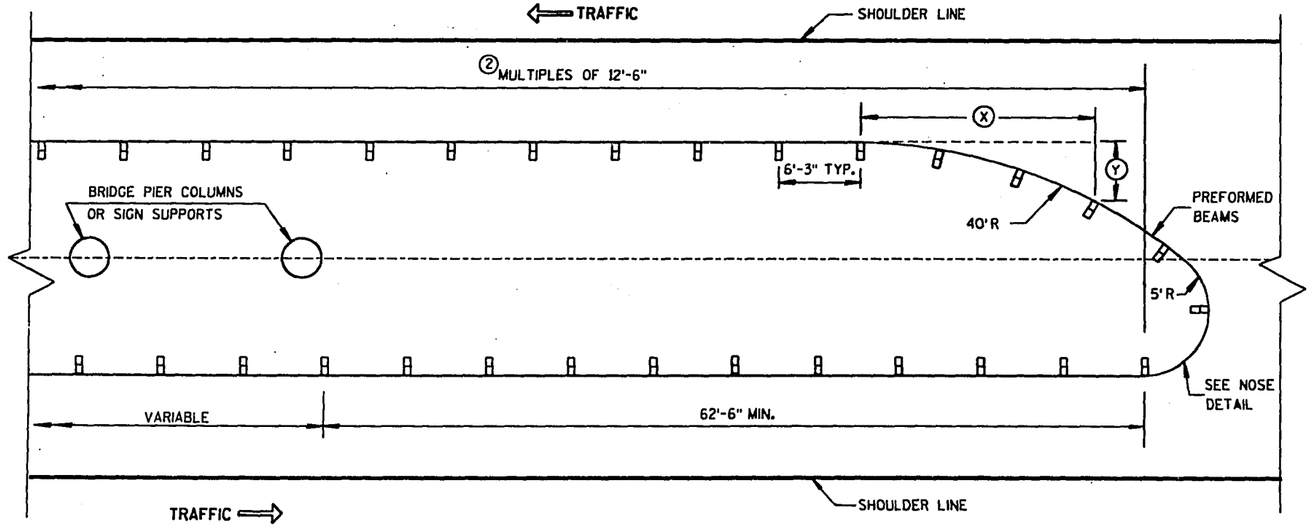
1. PROJECT SPECIFIC DRAINAGE DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.
2. THE BULLNOSE INSTALLATION WILL BE MEASURED IN PLACE BY THE LINEAR FOOT ALONG EACH SIDE AND AROUND THE NOSE SECTIONS AS STEEL PLATE BEAM GUARD, CLASS "A".



PLAN VIEW
SLOPE DETAIL



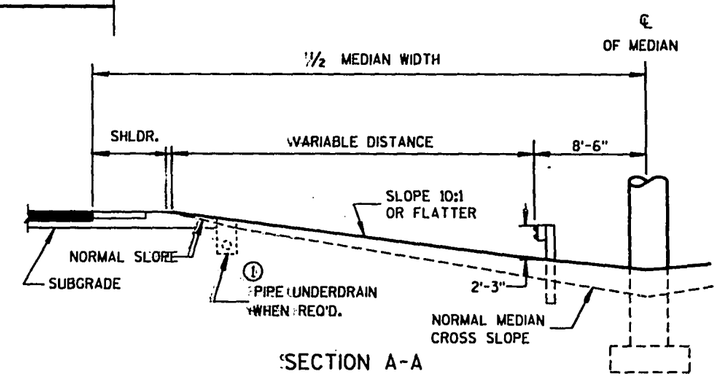
NOSE DETAIL



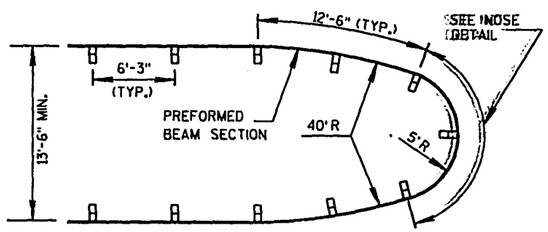
PLAN VIEW
TYPICAL LAYOUT AT PIERS AND SIGN SUPPORTS

TABLE OF COORDINATES TO LAYOUT 40'R CURVE (DIMENSIONS IN FEET)

DISTANCE ALONG CURVE	Ⓧ	Ⓨ
6.25	6.22	0.49
12.50	12.30	1.94
18.75	18.07	4.31
25.00	23.40	7.56



SECTION A-A
DETAIL OF MEDIAN SLOPES



ALTERNATE INSTALLATION
FOR USE WHERE NARROW MEDIAN PROHIBITS USE OF CONVENTIONAL TREATMENT

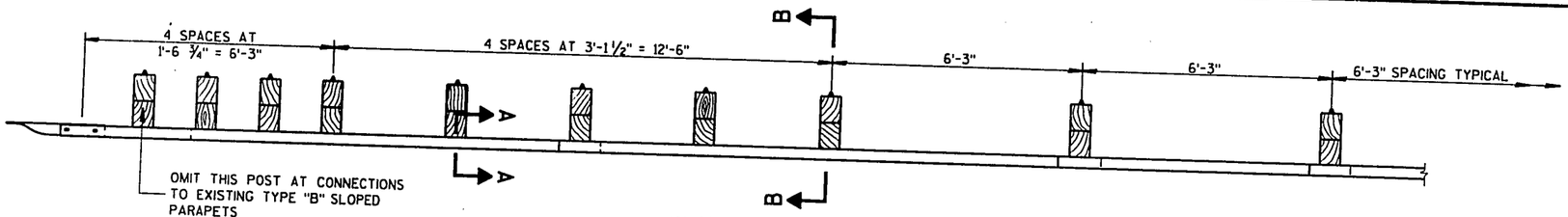
CLASS "A" STEEL PLATE BEAM GUARD, BULLNOSE INSTALLATION AT MEDIAN PIERS AND SIGN SUPPORTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

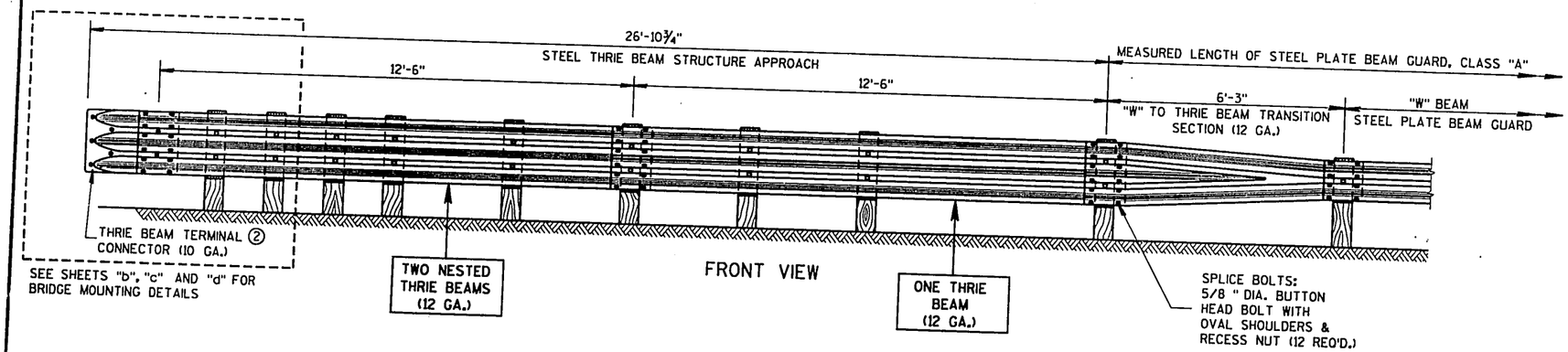
APPROVED
5/15/91
DATE
STATE DESIGN ENGINEER FOR HWYS
FHWA

S.D.D. 14 B 18-1d

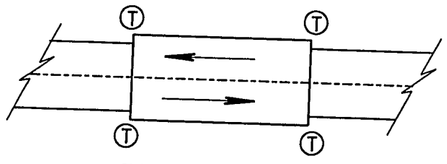
S.D.D. 14 B 18-1d



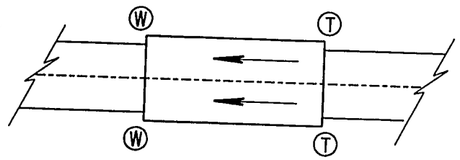
PLAN VIEW



FRONT VIEW



TWO WAY TRAFFIC

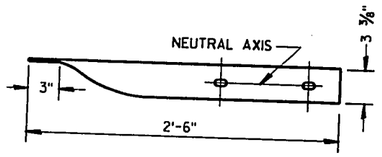


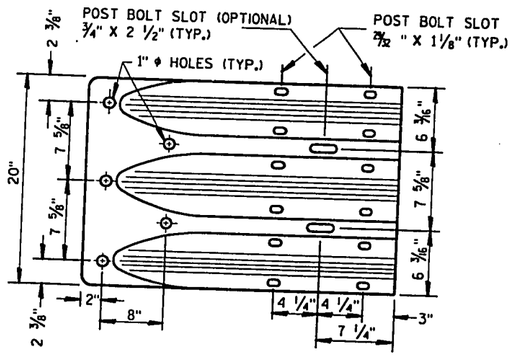
ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

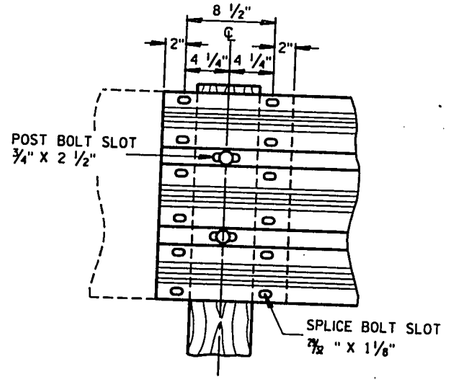
Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

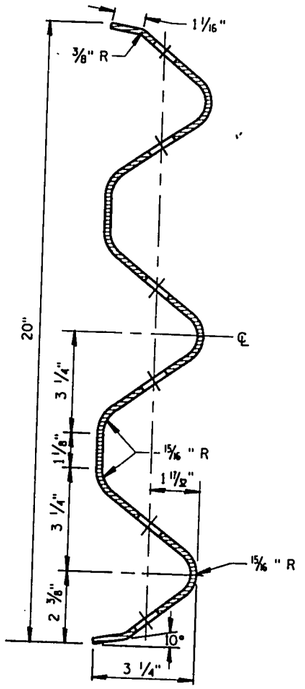




THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE



SECTION THRU THRIE BEAM RAIL ELEMENT

GENERAL NOTES

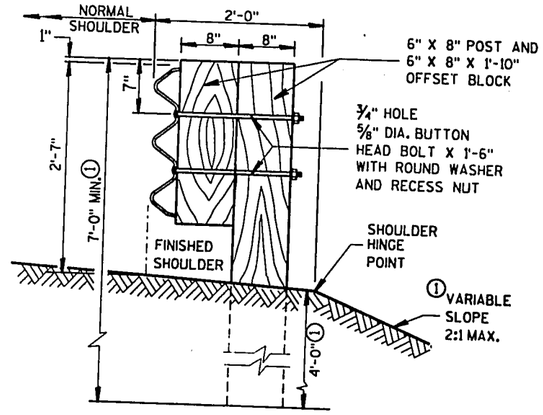
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

THRIE BEAM STRUCTURE APPROACH SHALL BE FURNISHED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 614 OF THE STANDARD SPECIFICATIONS. THRIE BEAM SECTIONS SHALL CONFORM TO THE REQUIREMENTS FOR CLASS "A", TYPE 2, BEAM AS SPECIFIED IN AASHTO DESIGNATION M180.

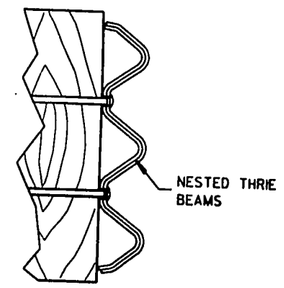
THRIE BEAM SHALL BE BOLTED TO ALL POSTS AND OFFSET BLOCKS. FIELD DRILLING/PUNCHING OF BOLT HOLES IN THE BEAM IS PERMITTED WHERE POST SPACING IS LESS THAN 6'-3".

① POST LENGTH SHALL BE INCREASED TO PROVIDE A MINIMUM EMBEDMENT OF 4'-0" WHERE THE SHOULDER HINGE POINT IS LOCATED IN FRONT OF THE POST.

② A TERMINAL CONNECTOR IS NOT REQUIRED AT CONNECTIONS TO BRIDGE RAILING TYPE "W".



SECTION B-B



PARTIAL SECTION A-A

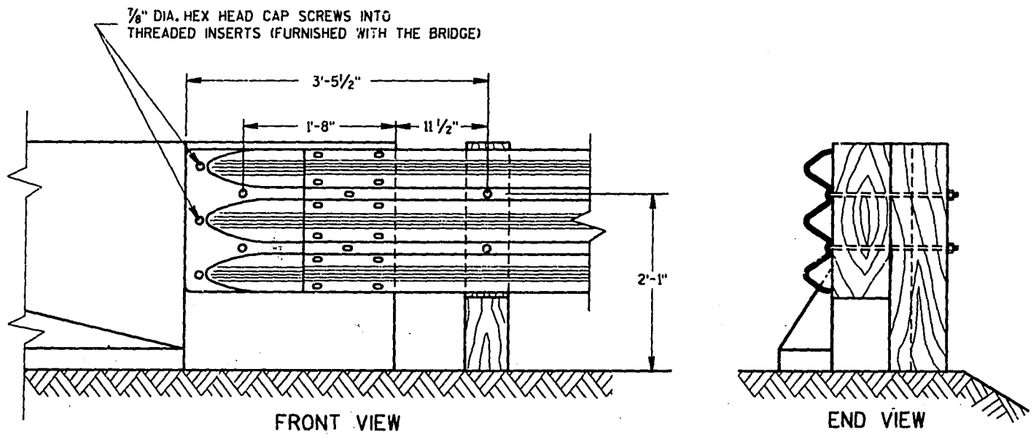
NOTE:
THIS DRAWING CONSISTS OF FOUR SHEETS. SHEET 2a MUST BE SUPPLEMENTED WITH AT LEAST ONE ADDITIONAL SHEET. 2b, 2c OR 2d WHEN THIS DRAWING IS CALLED FOR IN PLANS.

STEEL THRIE BEAM STRUCTURE APPROACH

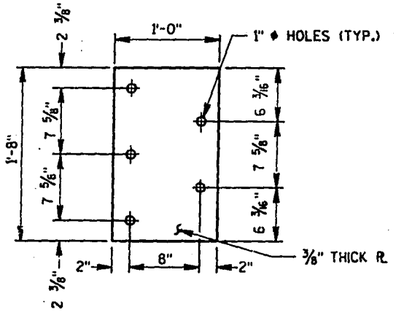
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 14 B 20-2a

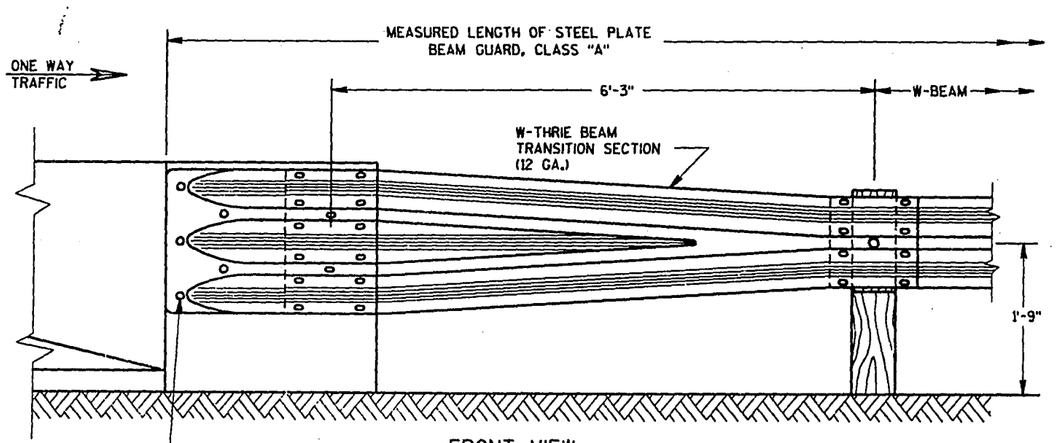
S.D.D. 14 B 20-2a



THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARED ENDS



② BACKUP PLATE DETAIL



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARED ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

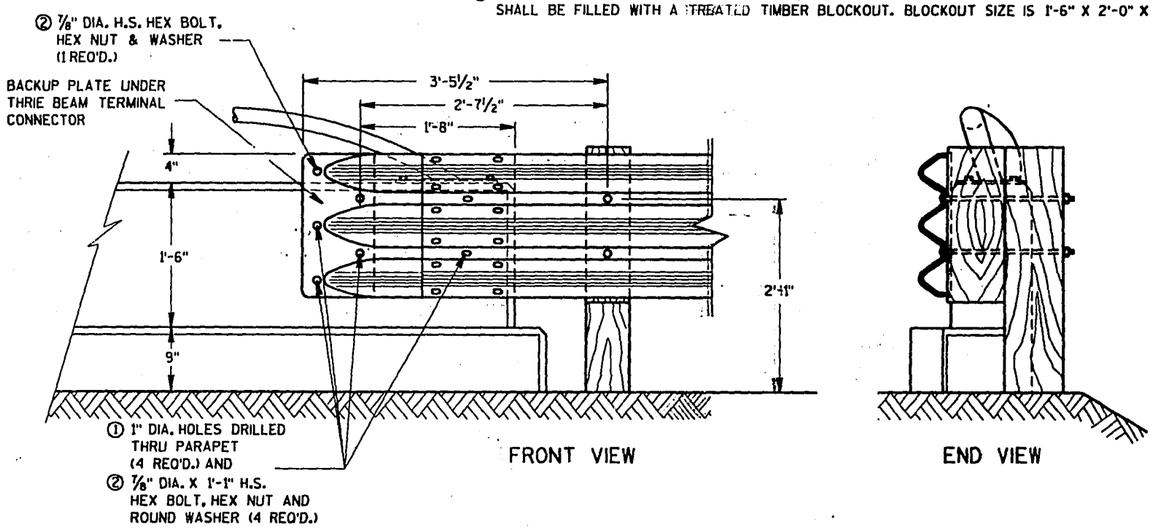
THE CONNECTION DETAILS SHOWN ARE TYPICAL. THE POSITION OF CONNECTIONS TO EXISTING BRIDGES SHALL BE ADJUSTED WHERE NECESSARY TO FIT ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325, AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

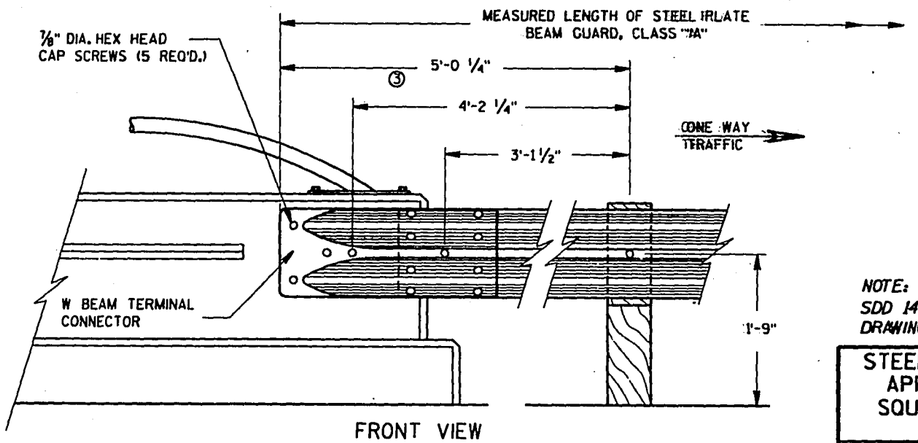
① PAYMENT FOR DRILLING BOLT HOLES THRU THE PARAPET, BACKUP PLATE AND ALL BOLTS, NUTS AND WASHERS REQUIRED SHALL BE INCLUDED IN ITEM STEEL THRIE BEAM STRUCTURE APPROACH.

② 2 ¼" O.D. X ⅝ " THICK ROUND WASHER REQUIRED WITH EACH BOLT AT THE BACKFACE OF PARAPET.

③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".



THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

NOTE:
SDD 14 B 20-2a IS REQUIRED WHEN THIS DRAWING IS CALLED FOR IN PLANS.

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARED END AND VERTICAL FACED PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

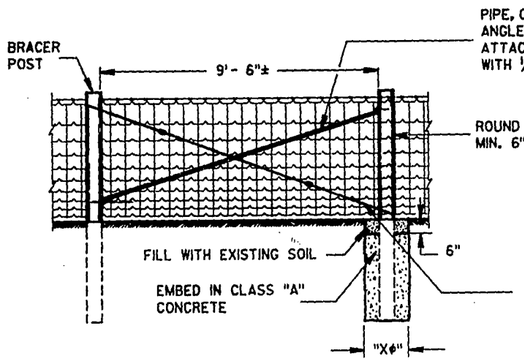
APPROVED
5/6/91
DATE
STATE DESIGN ENGINEER FOR HWYS
FHWA

S.D.D. 14 B 20-2b

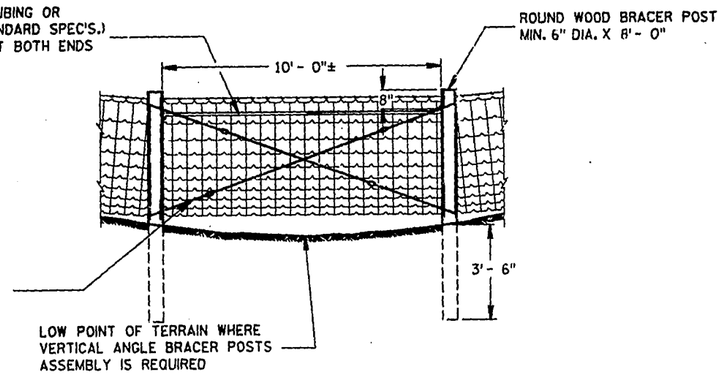
S.D.D. 14 B 20-2b

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

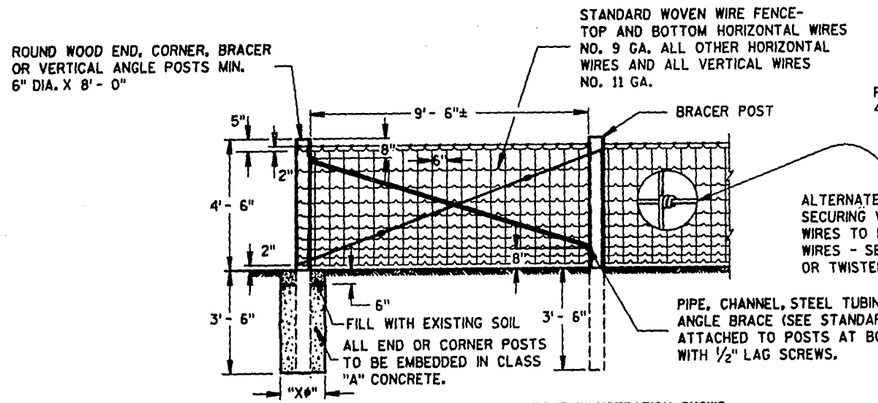
ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY

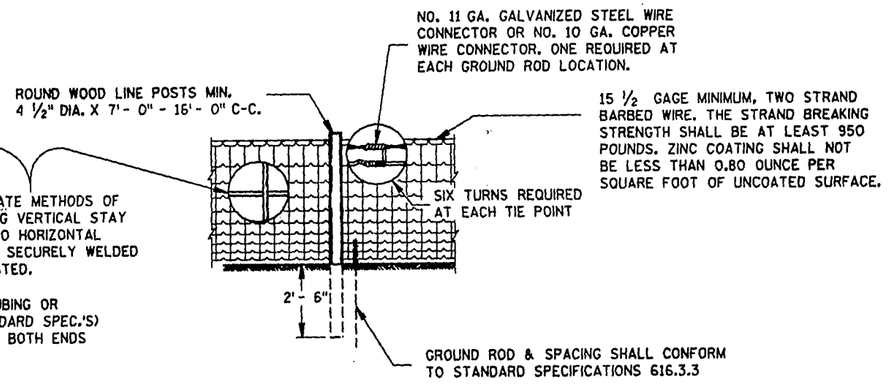


VERTICAL ANGLE BRACER POSTS ASSEMBLY



NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY



LINE FENCE CONSTRUCTION

GENERAL NOTES

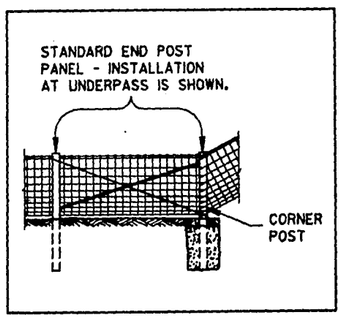
DETAILS OF CONSTRUCTION NOT SHOWN HEREON SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

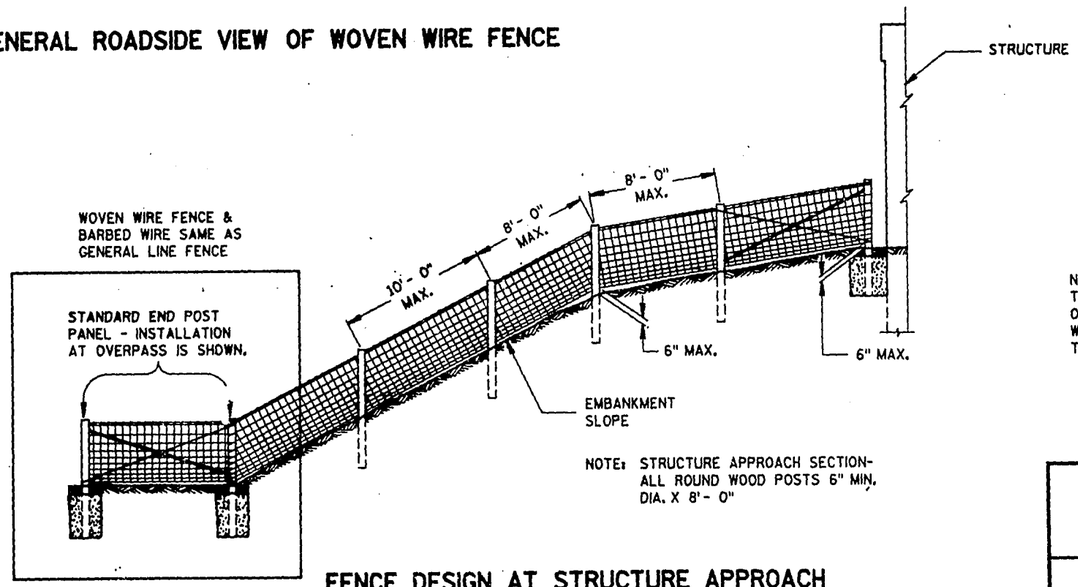
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



ALTERNATE FENCE DESIGN AT STRUCTURE

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8'- 0"

FENCE DESIGN AT STRUCTURE APPROACH

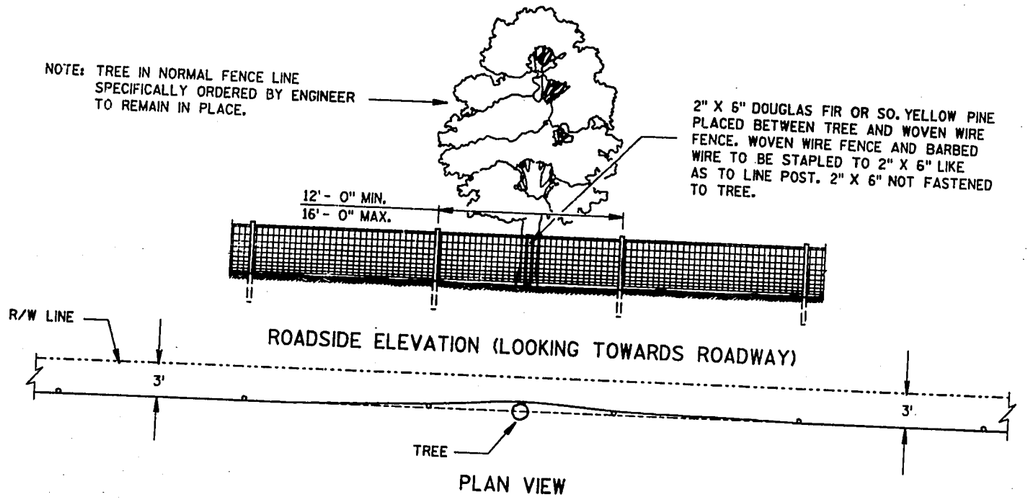
NOTE:
THIS STANDARD DETAIL DRAWING CONSISTS OF TWO PLATES AND BOTH ARE REQUIRED WHEN THIS STANDARD IS CALLED FOR IN THE PLANS.

WOVEN WIRE FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D.15 B 1-7a

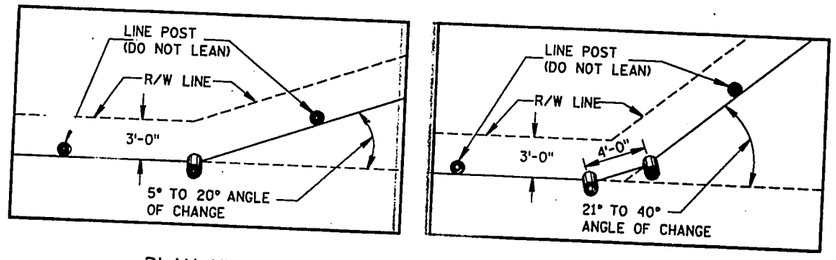
S.D.D.15 B 1-7a



ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



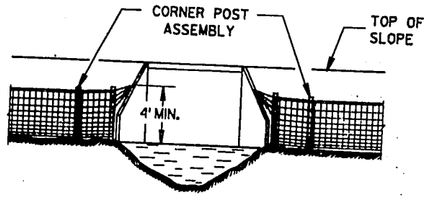
PLAN VIEW
SINGLE POST CORNER

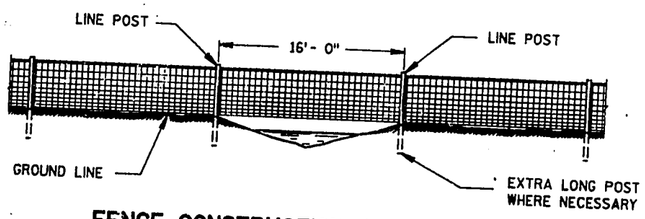
PLAN VIEW
DOUBLE POST CORNER

RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

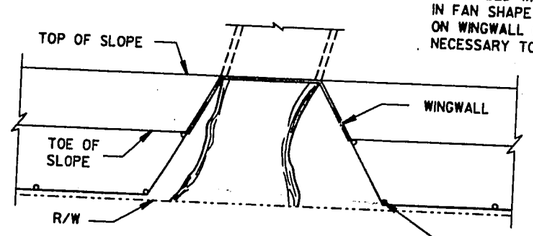
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



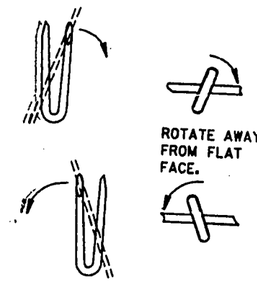


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH

NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



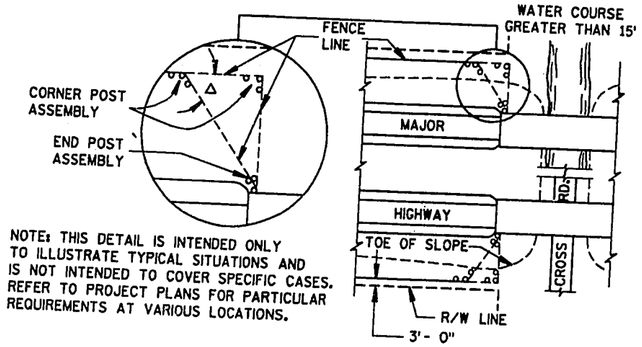
FENCE INSTALLATION TO WINGWALLS



LINE POST

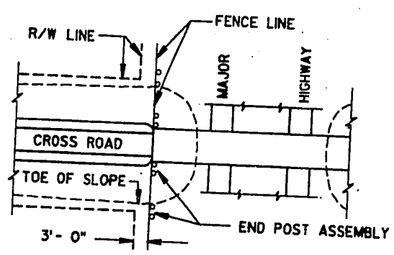
NOTE:
THIS STANDARD DETAIL DRAWING CONSISTS OF TWO PLATES AND BOTH ARE REQUIRED WHEN THIS STANDARD IS CALLED FOR IN THE PLANS.

NOTE: △ NOT LESS THAN 45°



NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

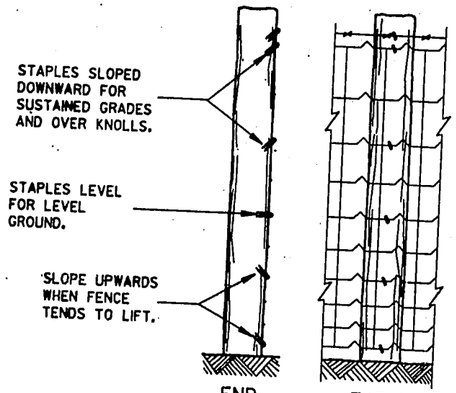
PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

FENCE LOCATION AT STRUCTURES

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION

FARM SIDE ELEVATION

FENCE MOUNTING DETAIL

WOVEN WIRE FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12-26-85
DATE

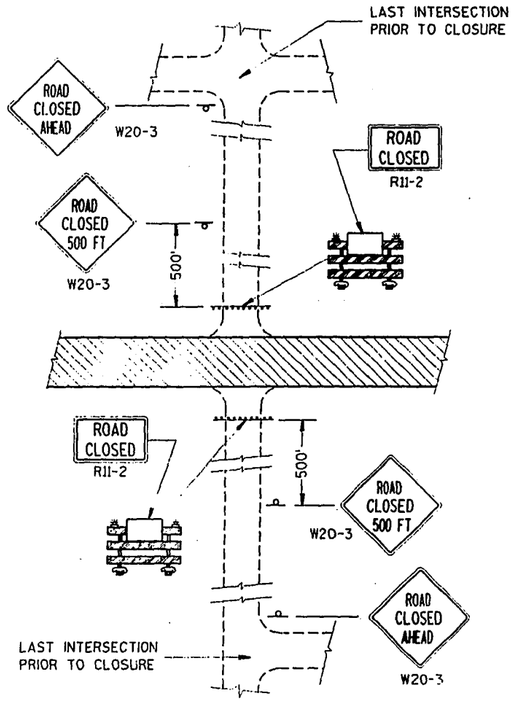
STATE DESIGN ENGINEER FOR HWYS

FHWA

S.D.D.15 B 1-7b

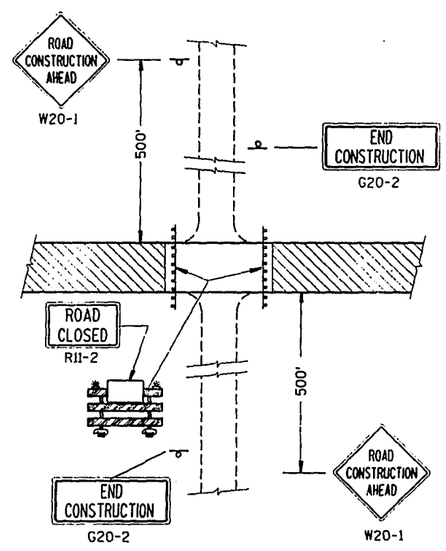
S.D.D.15 B 1-7b

SIDEROAD CLOSURES



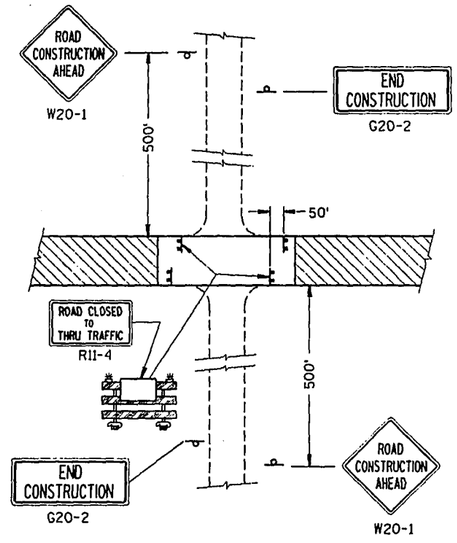
DETAIL 1

(NO ACCESS TO PROJECT)



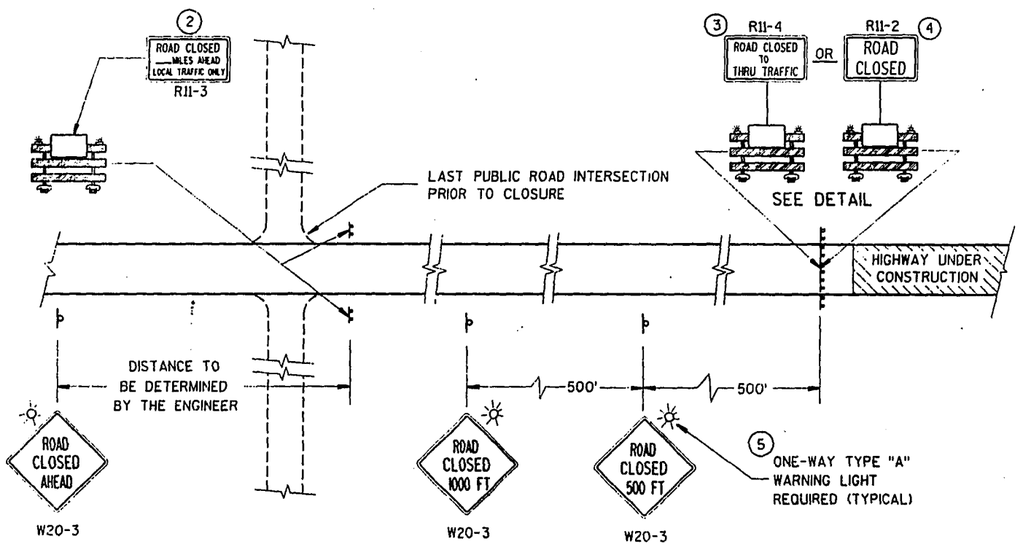
DETAIL 2

(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).



DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS).



MAINLINE CLOSURE

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND THEIR LOCATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISCONSIN MANUAL OF TRAFFIC CONTROL DEVICES, THE PLANS, SPECIFICATIONS AND CONTRACT.

SIGN AND BARRICADE LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER. ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER. ALL "STOP" OR OTHER REGULATORY SIGNS ON THE SIDE ROADS SHALL NOT BE DISTURBED, EXCEPT WHEN NECESSARY TO COMPLETE THE WORK. THE SIGNS MUST THEN BE IMMEDIATELY REESTABLISHED.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL FOR FULL ROAD CLOSURES. TYPE "A" LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE ROAD CLOSED SIGN (R11-2), ROAD CLOSED ___ MILES AHEAD SIGN (R11-3) AND THE ROAD CLOSED TO THRU TRAFFIC SIGN (R11-4) SHALL BE ATTACHED ONLY TO THE TOP RAIL OF THE TYPE III BARRICADE. THE SIGNS SHALL NOT COVER MIDDLE RAIL.

TYPE "H" REFLECTIVE SHEETING SHALL BE USED ON ALL BARRICADES, TYPE I, II AND III, AND ON ALL R11-2, R11-3 AND R11-4 SIGNS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2, "ROAD CLOSED" SIGNS SHALL BE 48" X 30".
R11-3, AND R11-4 SIGNS SHALL BE 60" X 30".
G20-2 SIGNS SHALL BE 60" X 24".

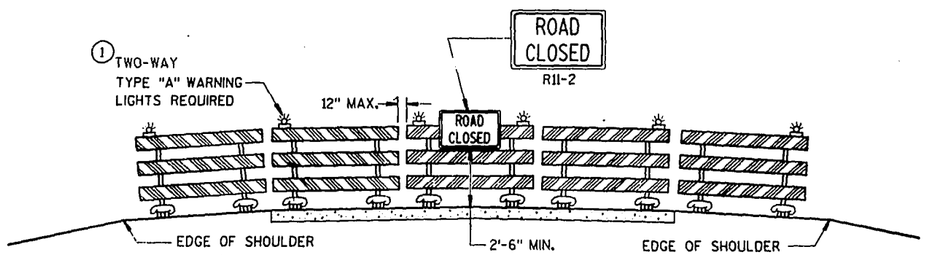
(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND AT LEAST ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED OAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT. SEE LANE CLOSURE BARRICADE DETAIL.

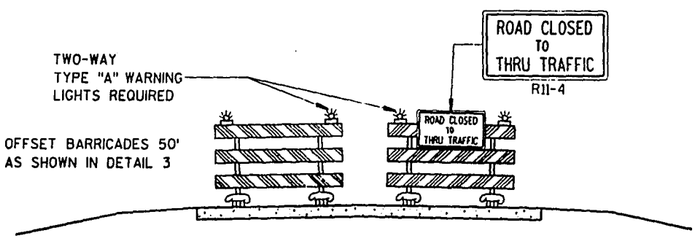
(4) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT. SEE ROAD CLOSURE BARRICADE DETAIL.

(5) ONE-WAY LIGHTS SHALL BE PROVIDED ON ALL ADVANCE WARNING SIGNS. THE UNIT SHALL BE POSITIONED SUCH THAT THE LIGHT SOURCE IS OUTSIDE THE SIGN FACE AND AT THE TOP OF THE SIGN.



APPROACH VIEW

ROAD CLOSURE BARRICADE DETAIL



APPROACH VIEW

LANE CLOSURE BARRICADE DETAIL

LEGEND

- POST MOUNTED WARNING SIGN
- TYPE III BARRICADES WITH TYPE "H" REFLECTIVE SHEETING
- TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK AREA

BARRICADES AND TRAFFIC CONTROL FOR ROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

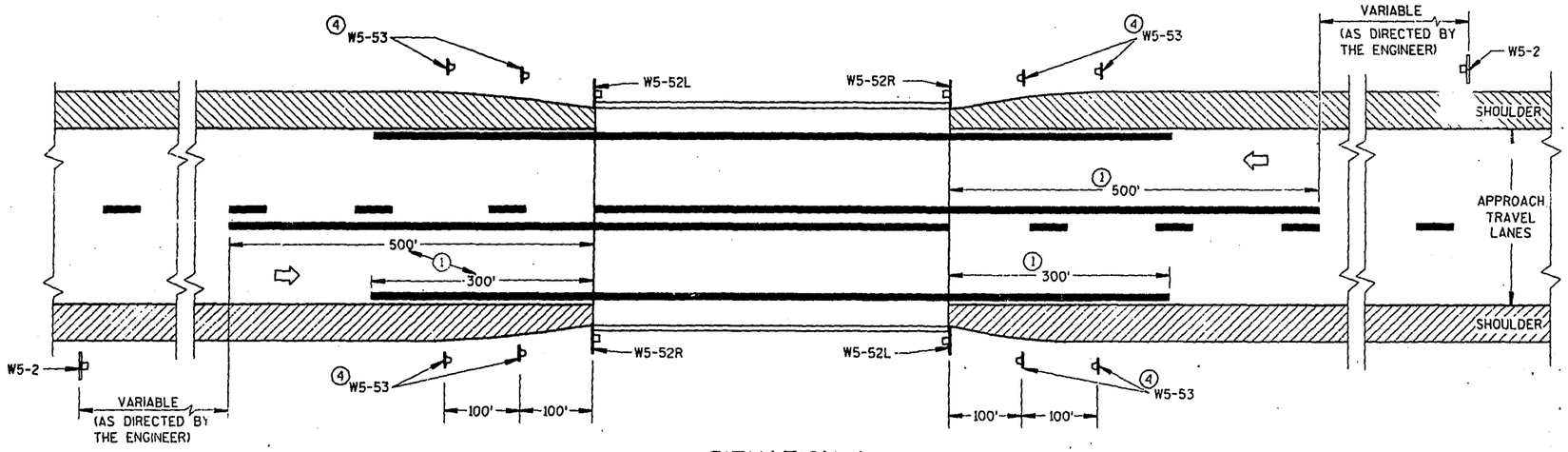
APPROVED 10-31-83 DATE

STATE TRAFFIC ENGINEER FOR HWYS

FHWA

S.D.D. 15 C 2-2

S.D.D. 15 C 2-2



SITUATION 1

WARRANTING CRITERION:

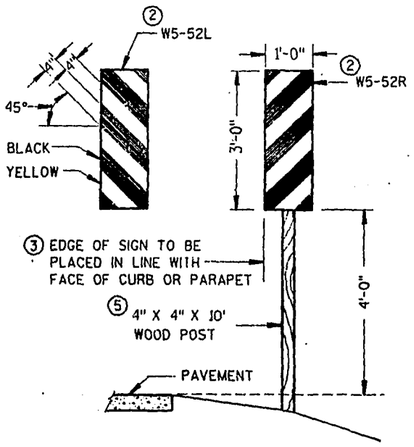
BRIDGE WIDTH IS AT LEAST 18 FEET BUT LESS THAN 24 FEET

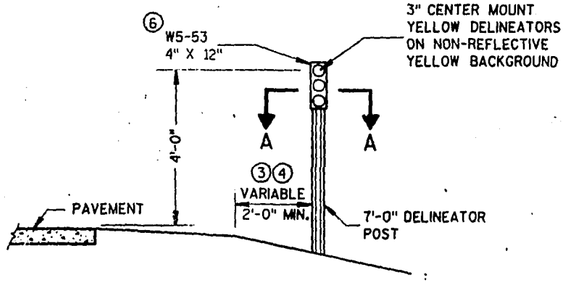
*OMIT ON ONE-WAY TRAVELLED WAYS

SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE IS LESS THAN 6 FEET WIDER (ON EACH SIDE) THAN APPROACH TRAVEL LANES.





OBJECT MARKER PLACEMENT

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

① MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.

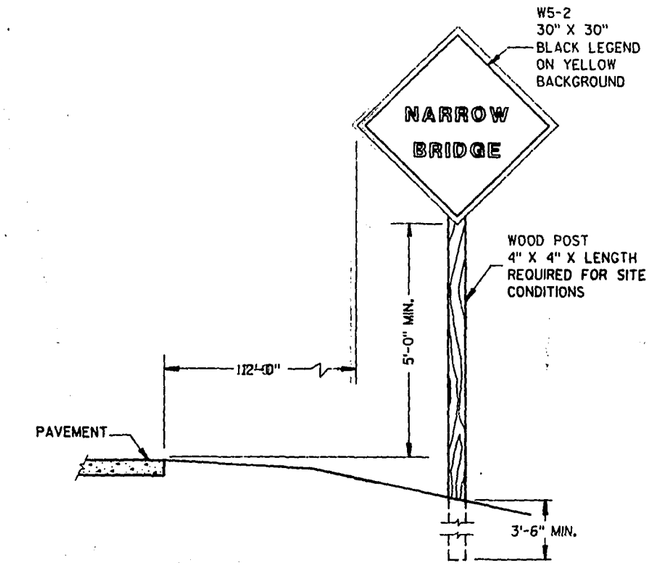
② FACE OF OBJECT MARKER W5-52R AND W5-52L SHALL BE COVERED WITH TYPE H REFLECTIVE SHEETING.

③ LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.

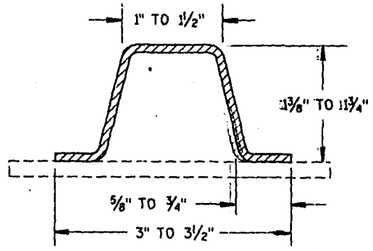
④ OBJECT MARKERS (W5-53) SHALL BE LOCATED ALONG A LINE FLARED AWAY FROM THE BRIDGE CORNER TO DELINEATE THE NARROWING OF THE SHOULDER OR BERM.

⑤ A 10 FOOT DELINEATOR POST MAY BE USED INSTEAD OF A WOOD POST.

⑥ NON-BID ITEM. INCIDENTAL TO OTHER ITEMS.



SIGN PLACEMENT



SECTION A-A
(MINIMUM WEIGHT 1.9 LBS. PER FT. AFTER GALVANIZING)

TRAFFIC CONTROL DEVICES FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

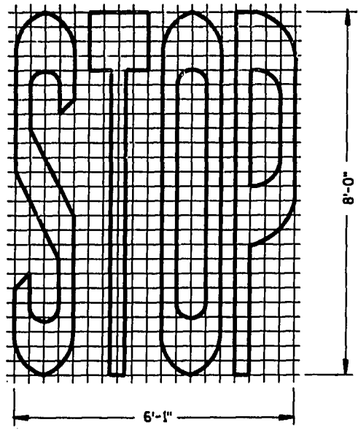
APPROVED 8-10-90
DATE

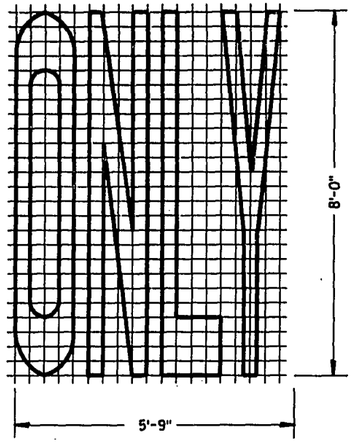
STATE TRAFFIC ENGINEER FOR HWYS

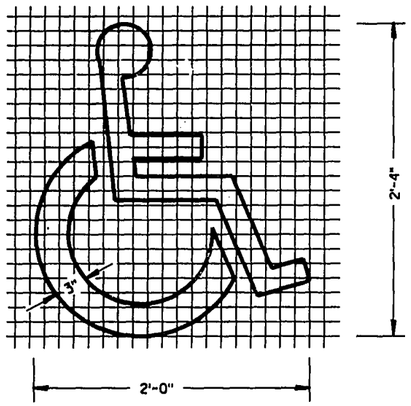
FHWA

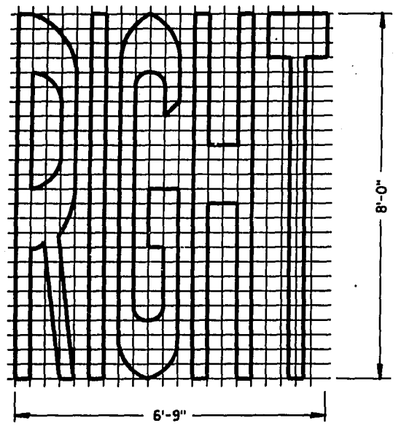
S.D.D. 15 C 6-3

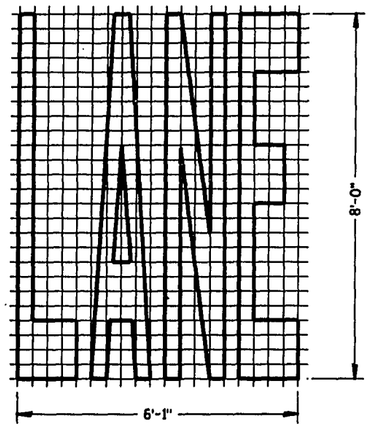
S.D.D. 15 C 6-3

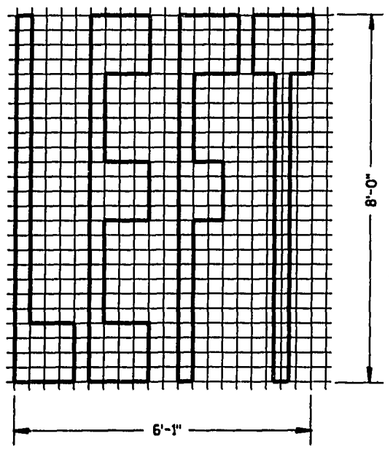


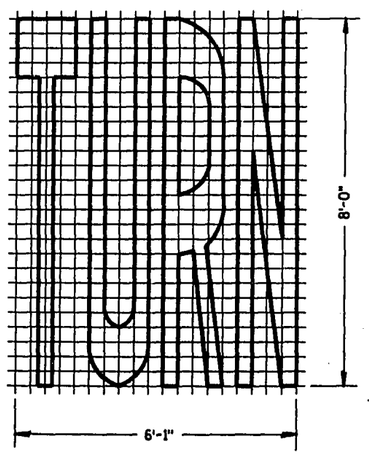


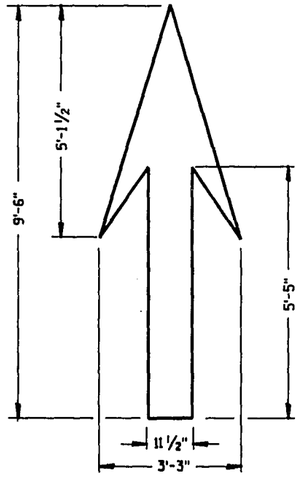




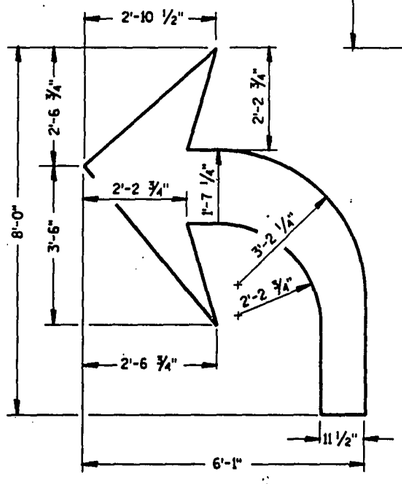




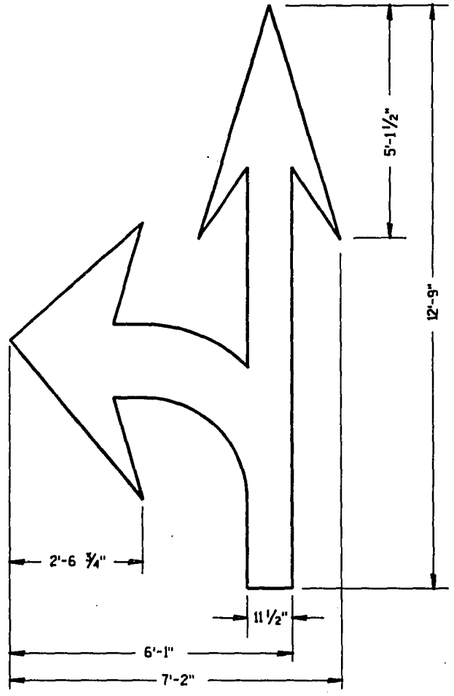




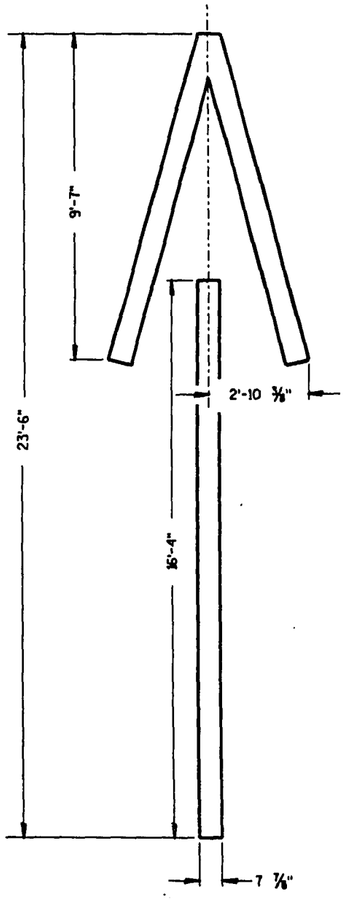
TYPE 1



TYPE 2



TYPE 3



TYPE 4

GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED.

A DETAILED DRAWING OF THE HANDICAPPED PARKING SYMBOL IS ILLUSTRATED IN THE "STANDARD HIGHWAY SIGNS MANUAL" BY THE FEDERAL HIGHWAY ADMINISTRATION.

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

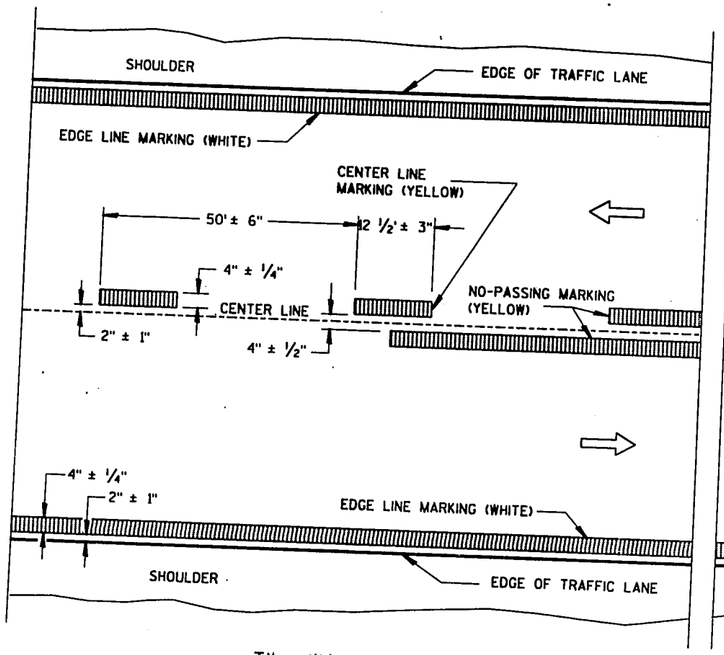
APPROVED
12/29/92
DATE

STATE TRAFFIC ENGINEER FOR HWYS

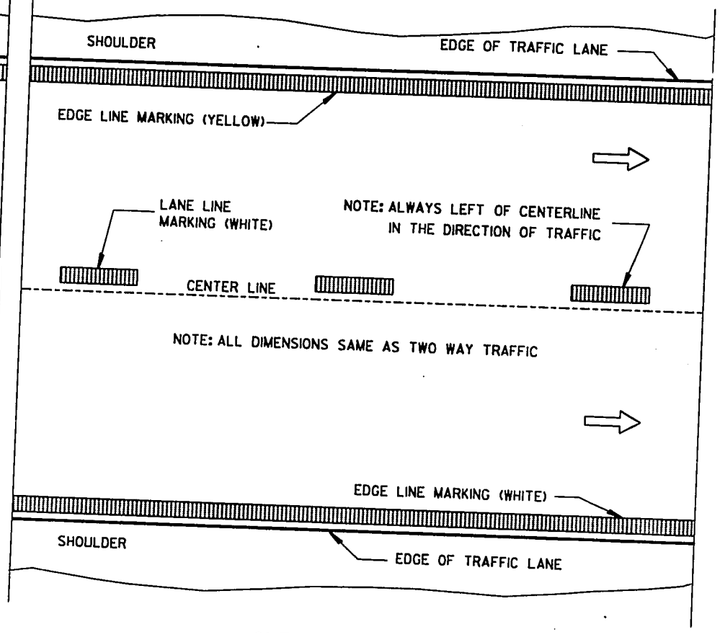
FHWA

S.D.D. 15 C 7-2

S.D.D. 15 C 7-2

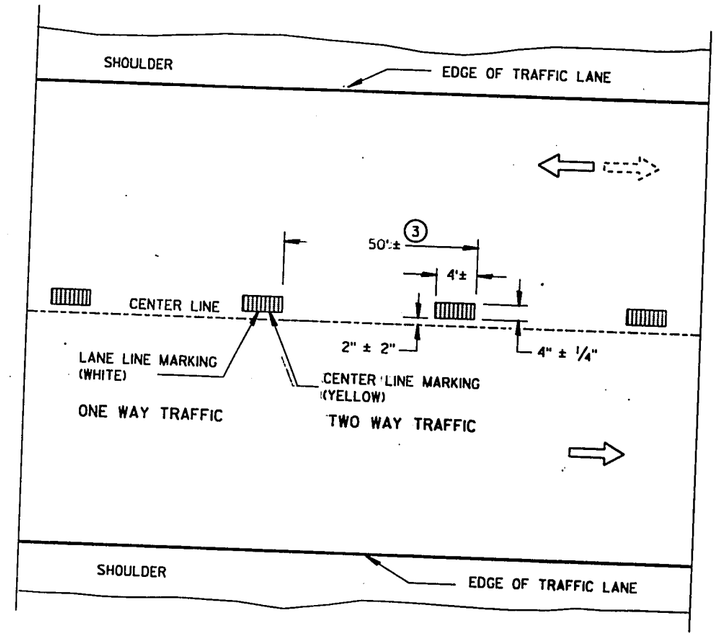


TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TEMPORARY PAVEMENT MARKING

GENERAL NOTES

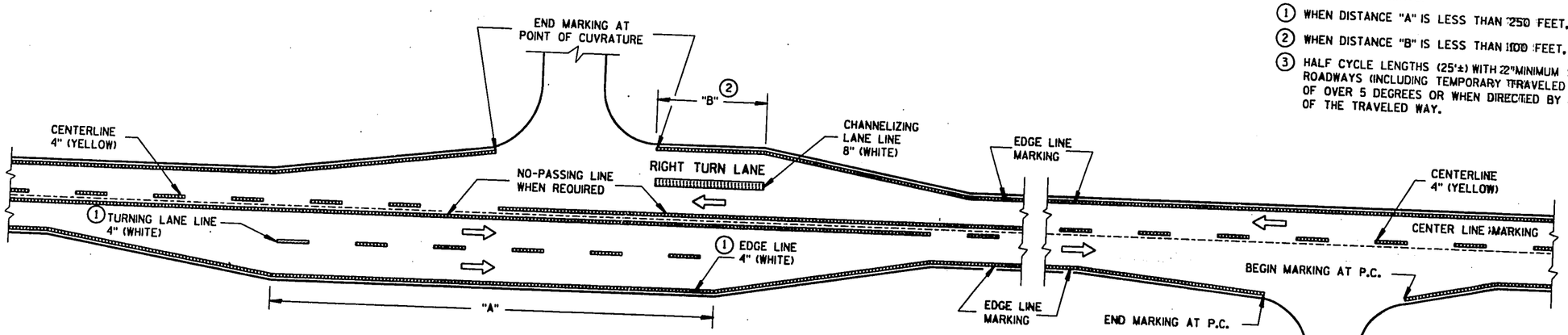
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT TURNING LANE MARKING.

② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

③ HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.



MAJOR INTERSECTION

MINOR INTERSECTION

TYPICAL PAVEMENT MARKING FOR RURAL INTERSECTIONS

NOTE: WHEN APPLICABLE, INCLUDE SDD 15C8-4b WITH THIS DRAWING IN PLANS.

PAVEMENT MARKING (MAINLINE & INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 3/17/92 DATE
STATE TRAFFIC ENGINEER FOR HWYS
FHWA

S.D.D. 15 C 8-4a

S.D.D. 15 C 8-4a

TWO-LANE ROADWAY

SYMBOLS

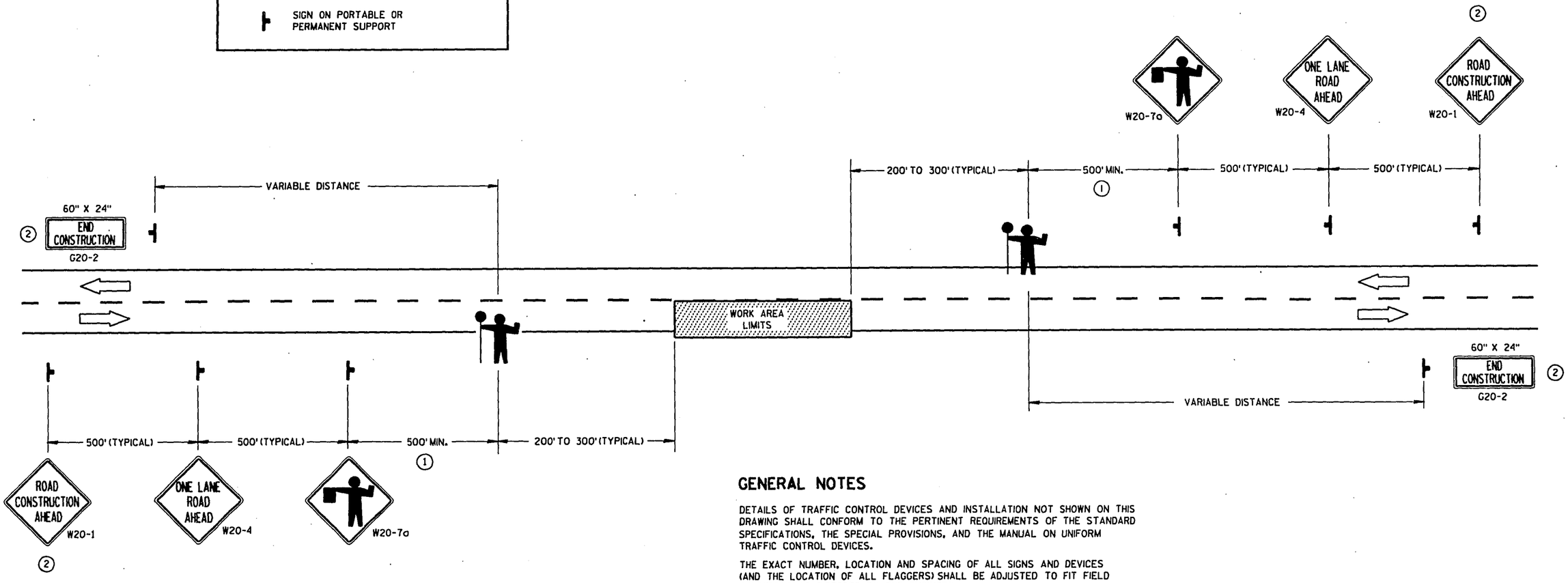
WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN ON PORTABLE OR PERMANENT SUPPORT

BE PREPARED TO STOP

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS DIRECTED BY THE ENGINEER.

② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD CONSTRUCTION WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE LOCATION OF ALL FLAGGERS) SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE "FLAGGER AHEAD", THE "ROAD CONSTRUCTION AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

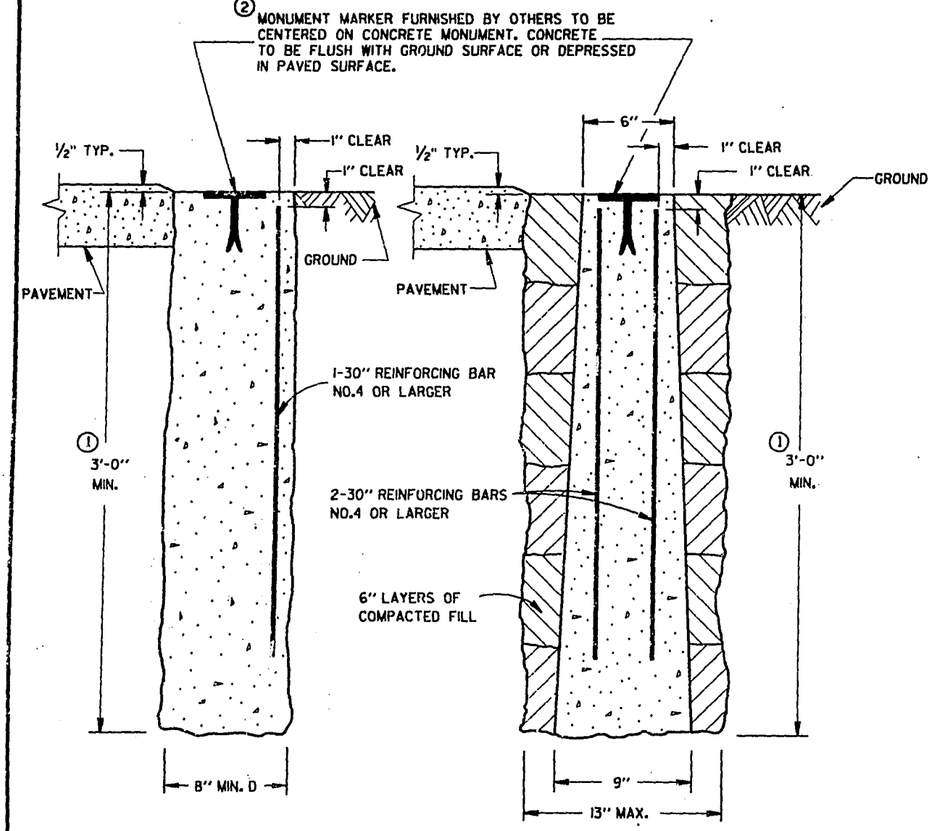
TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2-12-91
DATE
STATE TRAFFIC ENGINEER FOR HWYS
FHWA

S.D.D. 15 C 12-1

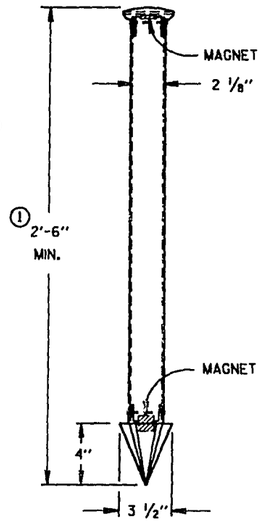
S.D.D. 15 C 12-1



CAST-IN-PLACE PRECAST

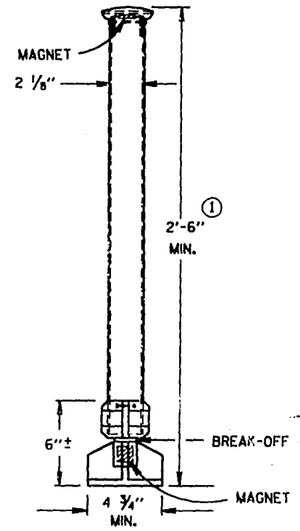
CONCRETE MONUMENTS

TYPE A



TYPE C

DRIVE-IN MONUMENT



TYPE D

BREAK-OFF MONUMENT

ALUMINUM MONUMENTS

(INCLUDES MARKER)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED TO THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

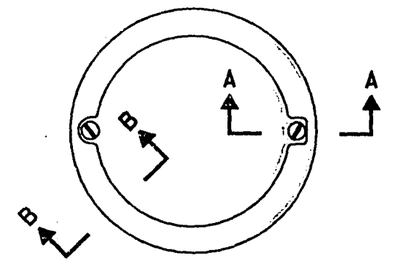
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

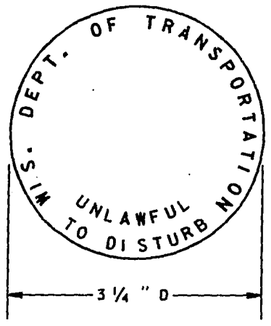
MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.

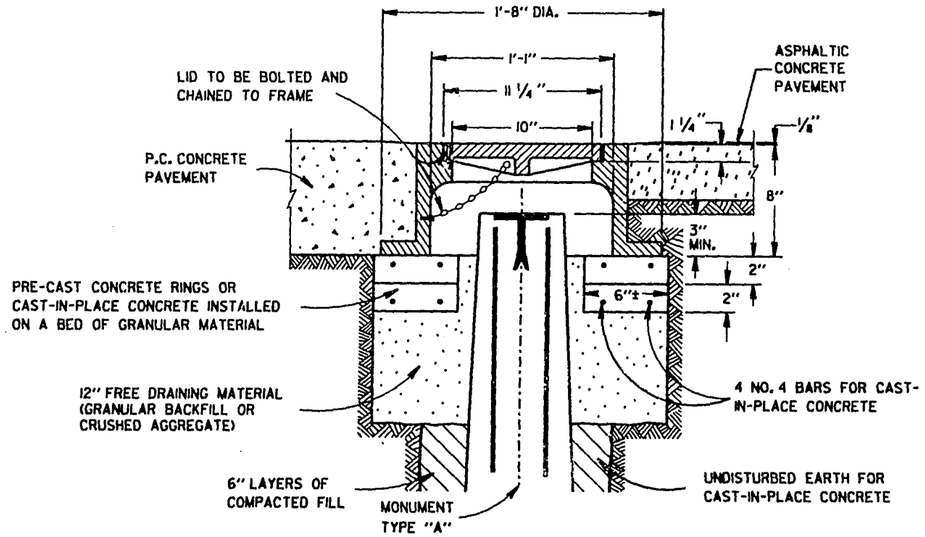


TOP VIEW



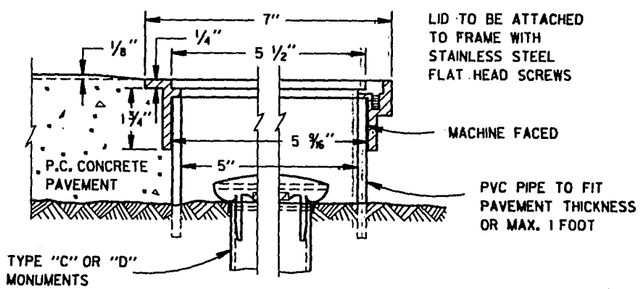
② WIS DOT MONUMENT MARKER LOGO

FOR TYPES "A", "C" & "D"



CAST IRON MONUMENT COVER

(APPROXIMATE WEIGHT - 95 LBS.)



SECTION B-B SECTION A-A

ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 21 LBS)

(FOR CONCRETE PAVEMENT ONLY)

LANDMARK REFERENCE MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 3/31/92 DATE — STATE DESIGN ENGINEER FOR HWYS

FHWA

S.D.D. 16 A 1-5

S.D.D. 16 A 1-5

COLOR CODE

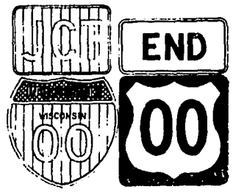
BLACK

Reflectorized WHITE

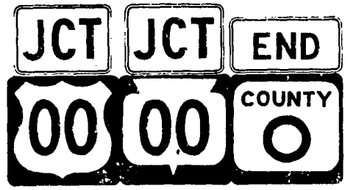
Reflectorized RED

Reflectorized BLUE

J1-1

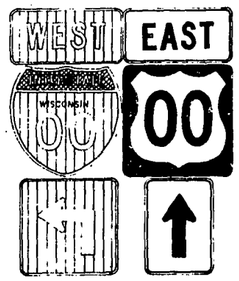


J1-2

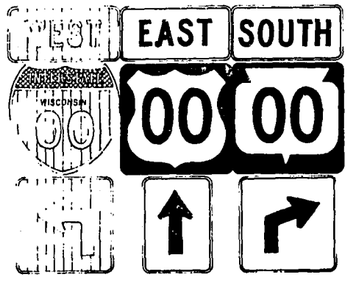


J1-3

J2-1

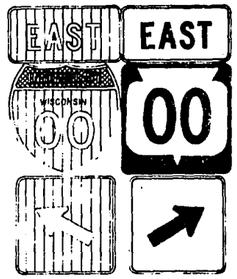


J2-2

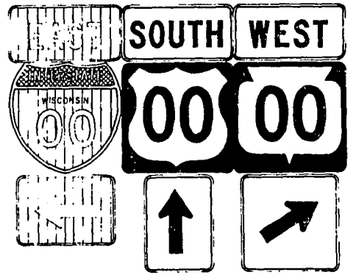


J2-3

J3-1

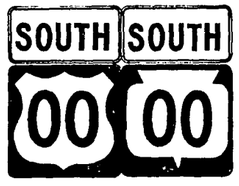


J3-2

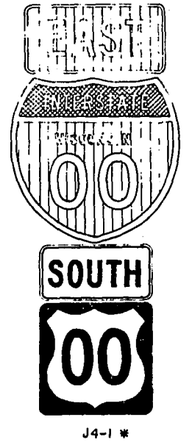


J3-3

J4-1



J4-2



J4-1 *

J13-1

J12-1

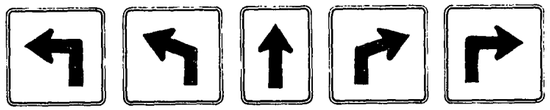
* For Interstate Use Only

COMPONENTS OF J1- ASSEMBLIES

M2-1 M4-6

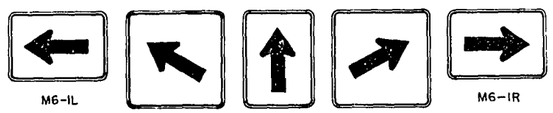
COMPONENTS OF J2-, J12-, J22-, J32- ASSEMBLIES

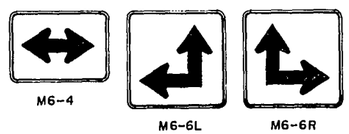
M3-1 M3-2 M3-3 M3-4 M4-5 M4-3


M5-1L M5-2L M5-1 (AHEAD) M5-2R M5-1R

COMPONENTS OF J3-, J13-, J23-, J33- ASSEMBLIES

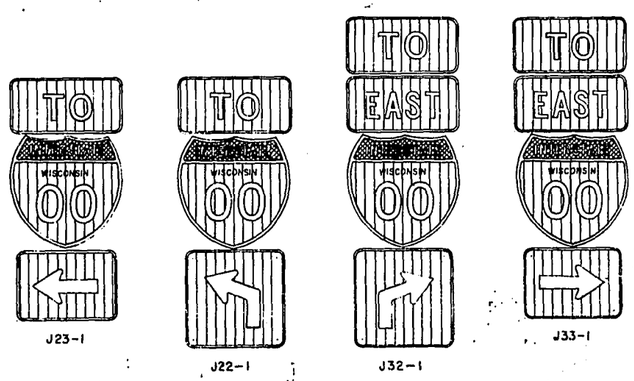
M3-1 M3-2 M3-3 M3-4 M4-5 M4-3


M6-1L M6-2L M6-1 (AHEAD) M6-2R M6-1R


M6-4 M6-6L M6-6R

COMPONENTS OF J4- ASSEMBLIES

M3-1 M3-2 M3-3 M3-4 M4-3



J23-1 J22-1 J32-1 J33-1

COMPONENTS OF ALL ASSEMBLIES

M1-1 M1-4 M1-6

M1-5A M1-95

GENERAL NOTES

Cardinal Direction Sign having other than a black message and a reflectorized white background, shall be identified by the second letter of the Code ; as example
MB – Reflectorized P[illegible]ackground with reflective White message.
For further Color combin[illegible]ns see applicable Standard Plates.

All components of any individual assembly shall be the same size as identified on the individual plates for each component. Minimum size auxiliary signs shall be used with minimum size route markers, standard size auxiliary signs with standard size route markers, etc.

Route Marker Code Size follows the sign code in parenthesis, with each sketch. For detail of required route markers reference is made to Standard Plates. The No. of Route Marker in each Assembly is indicated by the no. following the hyphen in the "J" code, not to exceed 4.

Two or more U.S. Highway, State Trunk Highway, County Trunk Highway or Local road route markers may be placed on a single panel in horizontal array. Such a panel is coded "M50-X", in which "X" indicates the number of route markers on the panel.

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
PROJECT DESIGNATION		

Date Drawn – Date Redrawn – 10-18-72

Date Revised – 10-14-63
10-9-72

ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

Old Code: A2-1 & A2-2

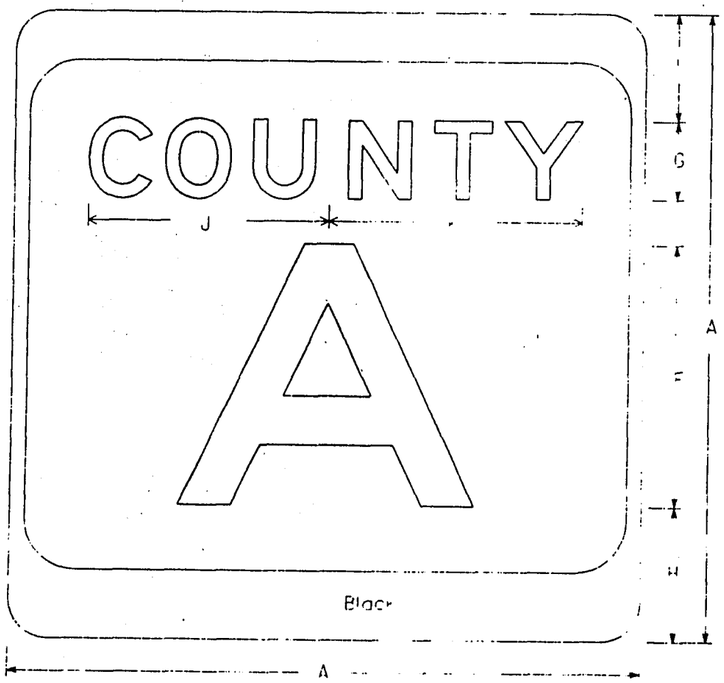
WISCONSIN DIVISION OF HIGHWAYS

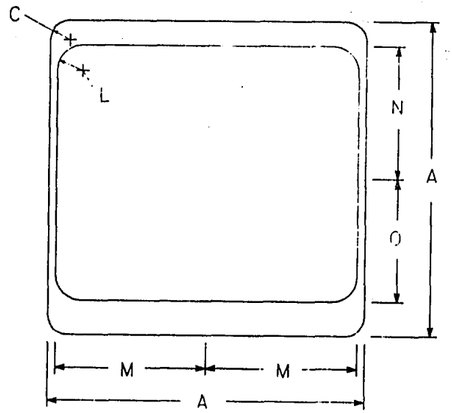
APPROVED [signature]
STATE HIGHWAY ENGINEER

DATE 10/26/72 PLATE NO. A2-1

Replaces Old Plates: A2-1.2 & A2-2.2

STATE PROJECT NUMBER	SHEET NO.





NOTES

1. Sign is Type III - Reflective - reference WIS DOT Standard Specification for ROAD and BRIDGE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. The word COUNTY is series "E".
5. Routes having one letter - Series "F"
   two letters - Series "D"
   three letters - Series Varies to fit sign
6. Substitute appropriate letters & adjust spacing to achieve proper balance.

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	2	24		1 1/2			10	3	5 1/8	4 1/8	9 3/16	9 5/8	1 15/16	11 7/16	10 1/8	9 3/8												.4
	3																											
	4	36		2 1/4			16	4	7 11/16	5 11/16	12 1/4	12 13/16	2 15/16	17 1/8	15 3/16	14 1/16												.9
	5	36		2 1/4			16	4	7 11/16	5 11/16	12 1/4	12 13/16	2 15/16	17 1/8	15 3/16	14 1/16												.9

DATE DRAWN 9-1-88 DATE REDRAWN

DATE REVISED

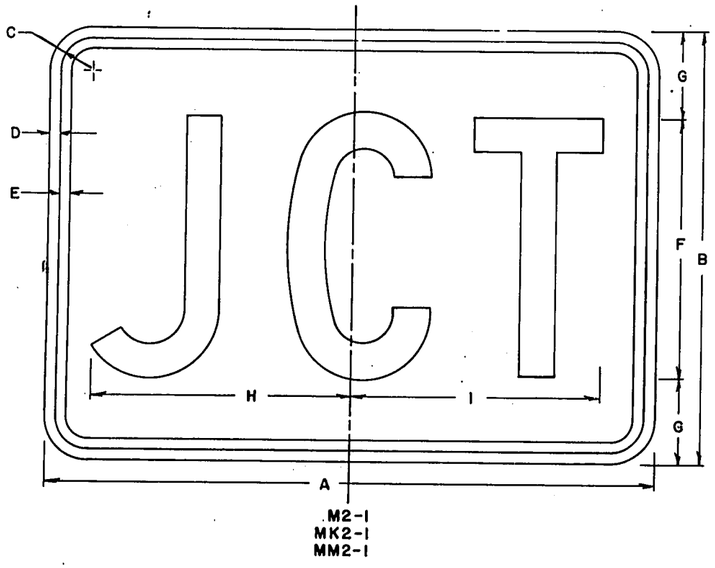
COUNTY ROUTE MARKER
MI - 5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

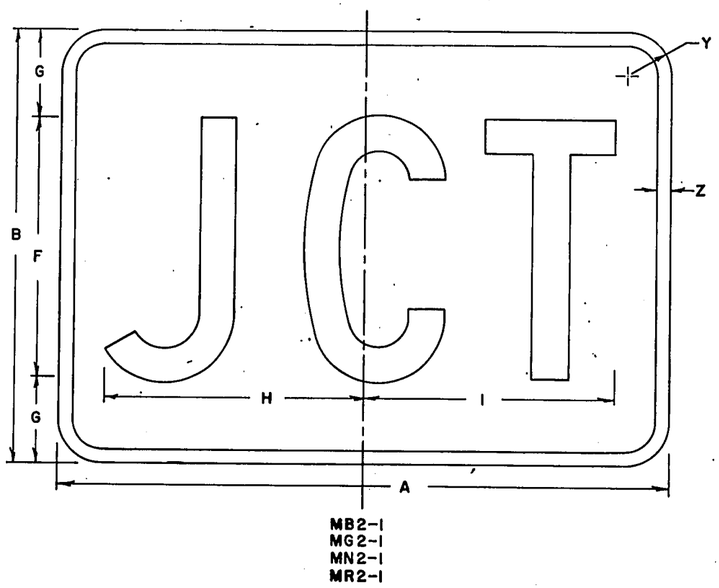
APPROVED

State Traffic Engineer

DATE 12-3-88 PLATE NO. MI-5A.3



M2-1
MK2-1
MM2-1



MB2-1
MG2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - See note 5 - reference WIS DOT Standard Specification for ROAD and BRIDGE CONSTRUCTION latest edition.
2. Color:
   Background - } See Note 5
   Message - }
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal the corners and borders shall be rounded.
5. M2-1: Background - Reflectorized White
   Message - Black
   MB2-1: Background - Reflective Blue
   Message - Reflectorized White
   MG2-1: Background - Reflective Green
   Message - Reflectorized White
   MK2-1: Background - Non-reflective Green
   Message - Non-reflective White
   MM2-1: Background - Reflectorized White
   Message - Reflective Green
   MN2-1: Background - Reflective Brown
   Message - Reflectorized White
   MR2-1: Background - Non-reflective Brown
   Message - Non-reflective Yellow
6. Border shall be omited on MM2-1.
7. Drawing may be scaled for standard size only.

SIZE	CODE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Bid Area Sq. Ft.
Minimum	1																											
Standard	2	21	15	$1\frac{1}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	9	3	$8\frac{15}{16}$	$8\frac{5}{8}$																$1\frac{1}{2}$	$\frac{1}{2}$	2.187
Oversize	3																											
Exp-way	4	30	21	$1\frac{1}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	13	4	$12\frac{7}{8}$	$12\frac{7}{16}$																$1\frac{1}{2}$	$\frac{1}{2}$	4.375
Freeway	5	30	21	$1\frac{1}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	13	4	$12\frac{7}{8}$	$12\frac{7}{16}$																$1\frac{1}{2}$	$\frac{1}{2}$	4.375
Bicycle	6																											
Snowmobile	7																											

		AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ	
Minimum	1																											
Standard	2																											
Oversize	3																											
Exp-way	4																											
Freeway	5																											
Bicycle	6																											
Snowmobile	7																											

RA	RA

Date Drawn – Date Redrawn – 11-23-81

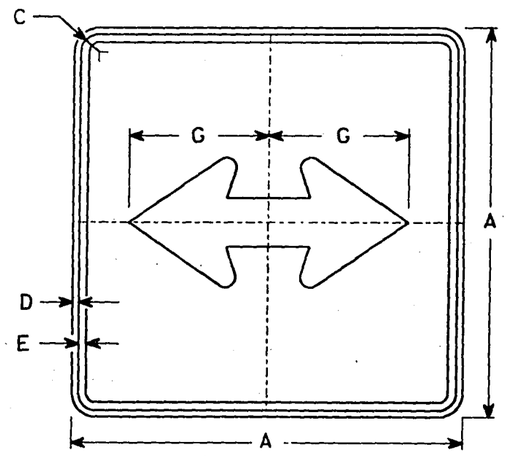
Date Revised – 11-23-81 ~~4-7-82~~

STANDARD SIGN
M2-1

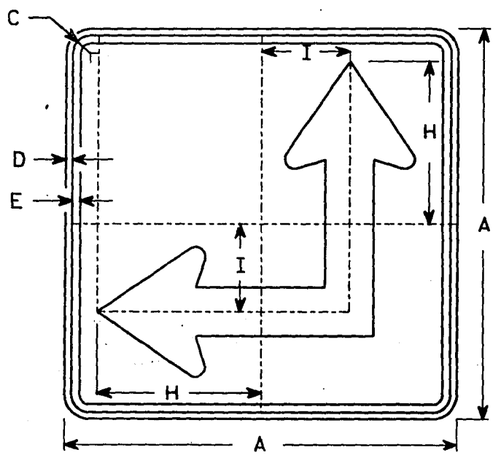
WISCONSIN DEPT OF TRANSPORTATION

APPROVED _____ Chief Traffic Engineer

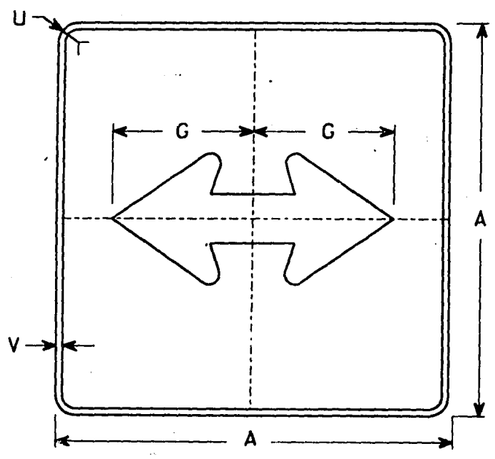
DATE 4-7-82 PLATE NO M2-1.4



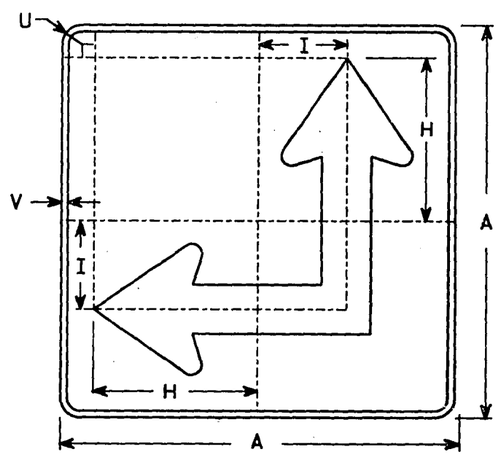
M6-4
MK6-4
MM6-4 (See Note 6)
MO6-4



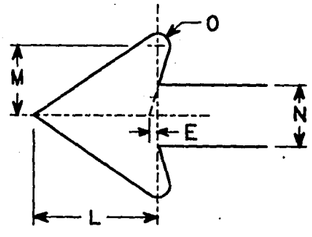
M6-6L
MK6-6L
MM6-6L (See Note 6)
MO6-6L



MB6-4
MG6-4
MN6-4
MR6-4



MB6-6L
MG6-6L
MN6-6L
MR6-6L



NOTES

1. Signs are Type II - Reflective - reference WIS DOT Standard Specification for ROAD and BRIDGE CONSTRUCTION latest edition
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - Reflective white
   Message - Black
   MB6-4 and MB6-6 Background - Reflective blue
   Message - Reflective white
   MG6-4 and MG6-6 Background - Reflective green
   Message - Reflective white
   MK6-4 and MK6-6 Background - Non-Reflective green
   Message - Non-Reflective white
   MM6-4 and MM6-6 Background - Reflective white
   Message - Reflective green
   MN6-4 and MN6-6 Background - Reflective brown
   Message - Reflective white
   MO6-4 and MO6-6 Background - Reflective orange
   Message - Black
   MR6-4 and MR6-6 Background - Non-Reflective brown
   Message - Non-Reflective yellow
5. M6-6R same as M6-6L except arrow points ahead and right.
6. Border shall be omitted on MM series.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

DATE DRAWN 2-4-93 / DATE REDRAWN
DATE REVISED

STANDARD SIGNS M6-4 & M6-6 SERIES

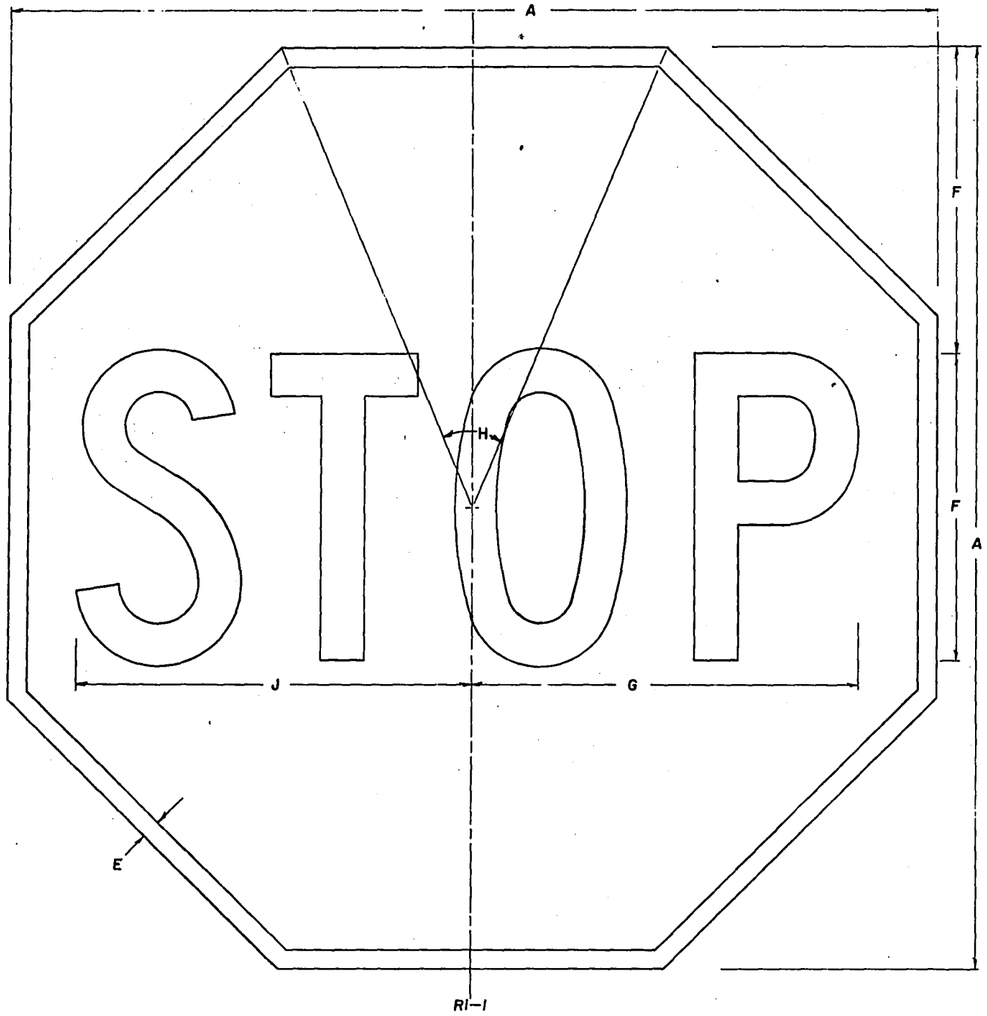
WISCONSIN DEPT OF TRANSPORTATION

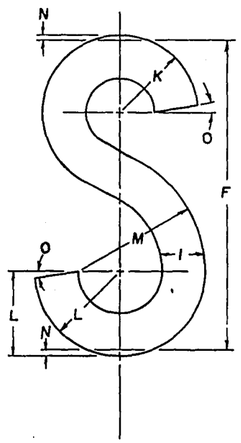
APPROVED
State Traffic Engineer
DATE 2/12/93 PLATE NO. M6-4.2

TR STDPLATE M64.DGN

LEVELS ON - 2.3. 5. 10.

WISDOT/CADDS SHEET





NOTES

1. Sign is Type II
2. Color:
   Background – Reflective Red
   Message – Reflective White
3. Face Material – Type H, Reflective Sheeting
4. Letters- Series C, with "S" modified
5. This drawing may be scaled for Freeway size only.

SIZE	CODE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Brd Area Sq Ft
Minimum	1	24				3/8	8	10	45°	1 1/8	10 1/4	2	2 3/16	3 1/4	1/8	10°												3.31
Standard	2	30				5/8	10	12 1/2	45°	1 13/32	12 13/16	2 1/2	2 23/32	4 1/16	5/32	10°												5.18
Oversize	3	36				3/4	12	15	45°	1 11/16	15 3/8	3	3 9/32	4 7/8	3/16	10°												7.46
Exp way	4	48				1	16	20	45°	2 1/4	20 1/2	4	4 3/8	6 1/2	1/4	10°												13.25
Freeway	5	48				1	16	20	45°	2 1/4	20 1/2	4	4 3/8	6 1/2	1/4	10°												13.25
Bicycle	6																											
Snowmobile	7																											

		AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ	
Minimum	1																											
Standard	2																											
Oversize	3																											
Exp way	4																											
Freeway	5																											
Bicycle	6																											
Snowmobile	7																											

RA	RA

Date Drawn – Date Redrawn – 10-3-79

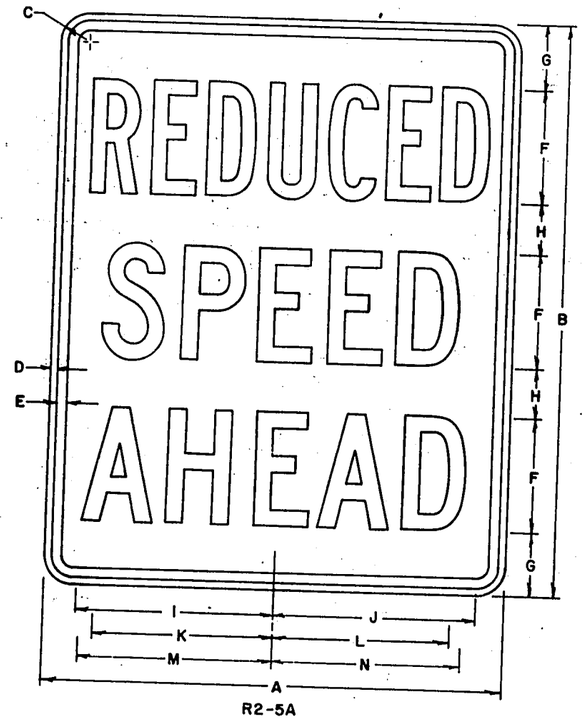
Date Revised – 10-3-79

STANDARD SIGN
RI-1

WISCONSIN DEPT. OF TRANSPORTATION

APPROVED
Chief Traffic Engineer

DATE 5-1-81 PLATE NO RI-1.7



R2-5A

NOTES

1. Sign is Type II-Reflective - reference WMS DOT Standard Specification for ROAD and BRIDGE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Line one is "B", Lines 2&3 are "C".
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. This drawing may be scaled for standard size only.

SIZE	CODE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Bid Area Sq Ft
Minimum	1	18	24	1 1/2	3/8	1/2	4	3 1/2	2 1/2	6 7/8	7	6 1/4	6 3/16	6 3/4	6 1/2													3.0
Standard	2	24	30	1 1/2	3/8	1/2	6	3 3/8	2 5/8	10 1/4	10 1/2	9 3/8	9 1/4	10 1/8	9 3/4													5.0
Oversize	3	36	48	1 7/8	1/2	5/8	8	7 1/4	4 3/4	14 3/16	14 3/4	12 5/16	10 9/16	12 9/16	12 3/16													12.0
Expressway	4	36	48	1 7/8	1/2	5/8	8	7 1/4	4 3/4	14 3/16	14 3/4	12 5/16	10 9/16	12 9/16	12 3/16													12.0
Freeway	5	48	60	3	3/4	1	10	8 1/2	6 1/2	17 3/4	18 7/16	15 3/8	13 3/16	15 11/16	15 1/4													20.0
Bicycle	6																											
Snowmobile	7																											

		AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ	
Minimum	1																											
Standard	2																											
Oversize	3																											
Expressway	4																											
Freeway	5																											
Bicycle	6																											

RA	RA

Date Drawn - 4-10-72 Date Redrawn - 8-20-84

Date Revised - 8-20-84

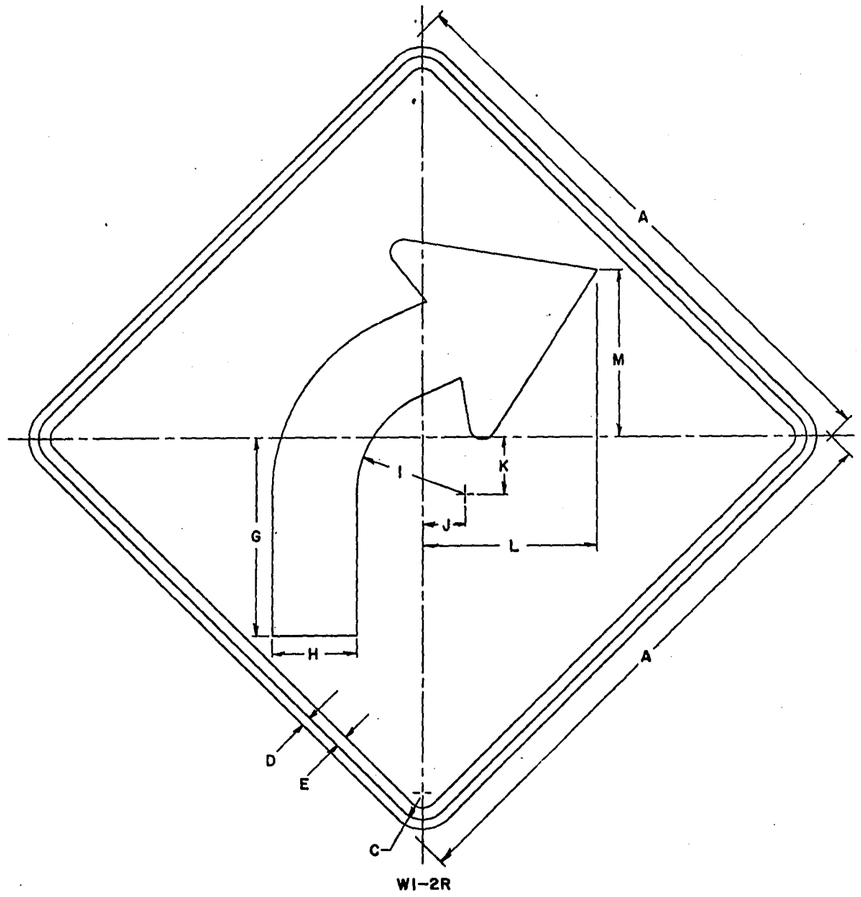
STANDARD SIGN
R2-5A

WISCONSIN DEPT OF TRANSPORTATION

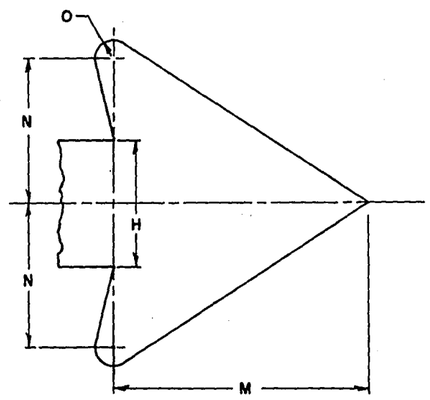
APPROVED

Chief Traffic Engineer

DATE 9-25-84 PLATE NO R2-5A.2



W1-2R



NOTES

1. Sign is Type II - Reflective - reference WIS DOT Standard Specification for ROAD and BRIDGE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series —
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. WI-2L is the same as WI-2R except the arrow is reversed along the vertical centerline.
6. This drawing may be scaled for standard size only.

SIZE	CODE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Bid Area Sq. Ft.
Minimum	1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 5/16	7 1/4	7	4	1/2												4.0
Standard	2	30		1 3/8	1/2	5/8		10 5/16	4 3/8	5 5/8	2 3/16	2 15/16	9 1/16	8 3/4	5	5/8												6.25
Oversize	3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
Exp way	4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
Freeway	5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0
Bicycle	6																											
Snowmobile	7																											

		AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ	
Minimum	1																											
Standard	2																											
Oversize	3																											
Exp way	4																											
Freeway	5																											
Bicycle	6																											
Snowmobile	7																											

RA	RA

Date Drawn — Date Redrawn - 1-25-83

Date Revised —

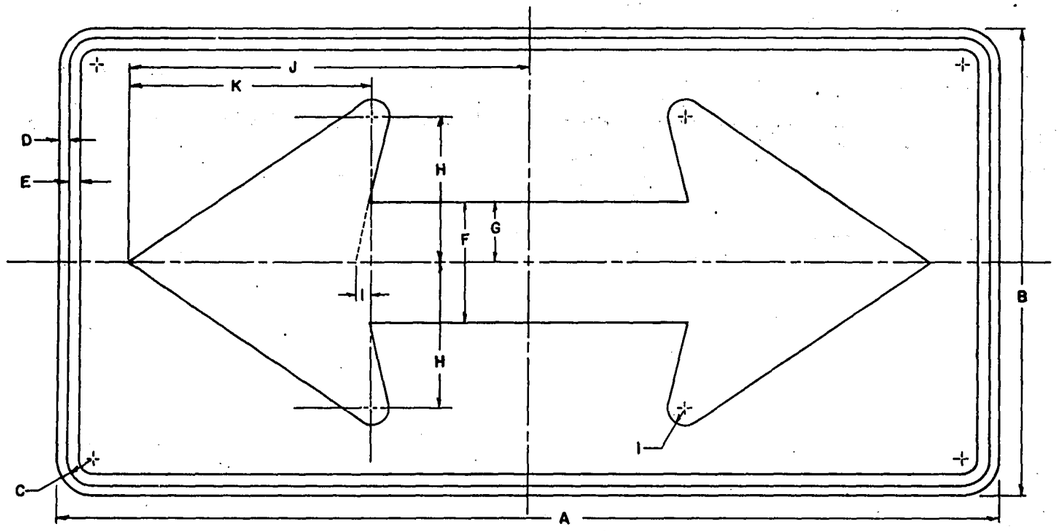
STANDARD SIGN
WI-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chief Traffic Engineer

DATE 5-5-83 PLATE NO WI-2.5



WI-7

NOTES :

1. Sign is Type II - Type H reflective – reference WIS D.O.T. Standard Specification for ROAD and BRIDGE CONSTRUCTION latest edition.
2. Color:
   Background – Yellow
   Message – Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	CODE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Bid Area Sq. Ft.
Minimum	1	36	18	1 1/8	3/8	1/2	4 11/16	2 11/32	5 5/8	21/32	15 5/8	9 3/8																4.5
Standard	2	48	24	1 3/8	1/2	5/8	6 1/4	3 1/8	7 1/2	7/8	20 1/2	12 1/2																8.0
Oversize	3	60	30	1 3/8	1/2	5/8	7 13/16	3 29/32	9 3/8	1 3/32	25 5/8	15 5/8																12.5
Exp-way	4	60	30	1 3/8	1/2	5/8	7 13/16	3 29/32	9 3/8	1 3/32	25 5/8	15 5/8																12.5
Freeway	5	96	48	2 1/4	3/4	1	12 1/2	6 1/4	15	1 3/4	41	25																32.0
Bicycle	6																											
Snowmobile	7																											

		AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ	
Minimum	1																											
Standard	2																											
Oversize	3																											
Exp-way	4																											
Freeway	5																											
Bicycle	6																											
Snowmobile	7																											

RA	RA

Date Drawn – Date Redrawn – 10-18-80

Date Revised – 7-12-62
5-6-85

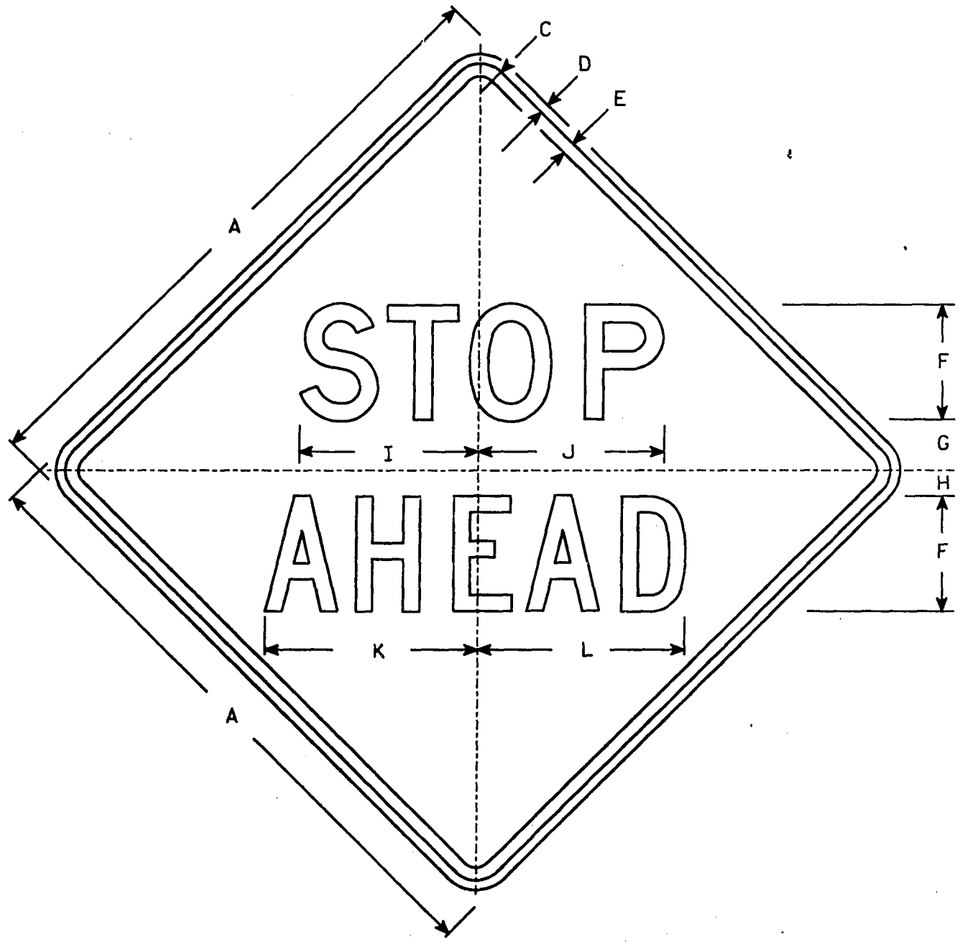
STANDARD SIGN
WI-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Chief Traffic Engineer

DATE 5-31-85 PLATE NO WI-7.4

STATE PROJECT NUMBER	SHEET NO.



NOTES

1. Sign is Type II - Reflective - reference WIS DOT Standard Specification for ROAD and BRIDGE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. STOP is Series D and AHEAD is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
BIKE	18		1 1/8	3/8	3/8	3	1 3/4	3/4	4 3/4	5 1/4	5 3/8	5 3/8															2.25
1	30		1 3/8	1/2	5/8	6	2 1/2	1 1/4	9 3/8	9 1/2	10 5/8	10 1/4															6.25
2	36		1 5/8	5/8	3/4	7	3 1/2	1	11 1/8	11 1/4	13 3/8	13 1/4															9.0
3	36		1 5/8	5/8	3/4	7	3 1/2	1	11 1/8	11 1/4	13 3/8	13 1/4															9.0
4	48		2 1/4	3/4	1	9	4	2	13 7/8	14 3/8	16 1/2	16															16.0
5	48		2 1/4	3/4	1	9	4	2	13 7/8	14 3/8	16 1/2	16															16.0

DATE DRAWN 8-13-92 DATE REDRAWN _____
DATE REVISED _____ _____

STANDARD SIGN
W3 - 1

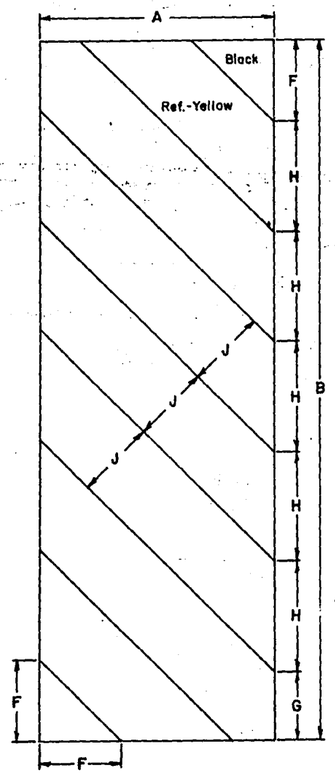
WISCONSIN DEPT OF TRANSPORTATION

APPROVED _____
State Traffic Engineer

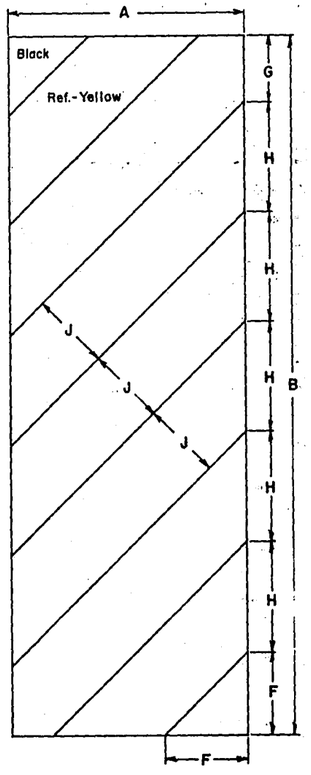
DATE 5/21/92 PLATE NO. W3-1.7

LEVELS ON - 1, 2, 3, 5, 10.

STATE PROJECT NUMBER	SHEET NO.



W5-52L



W5-52R

NOTES

1. Sign is Type II – Type H Reflective – reference WIS D.O.T. Standard Specification for ROAD and BRIDGE CONSTRUCTION latest edition.
2. Color:
   Background – Yellow
   Message – Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	CODE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Bid Area Sq. Ft.
Minimum	1																											
Standard	2	12	36				$4\frac{3}{8}$	$3\frac{1}{2}$	$5\frac{5}{8}$	45°	4																	3.0
Oversize	3	18	54				$6\frac{9}{16}$	$5\frac{1}{4}$	$8\frac{7}{16}$	45°	6																	6.75
Exp-way	4																											
Interstate	5																											

		AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ	
Minimum	1																											
Standard	2																											
Oversize	3																											
Exp-way	4																											
Interstate	5																											

A	RA

Date Drawn -10-19-78 Date Redrawn -

Date Revised - 9-5-84

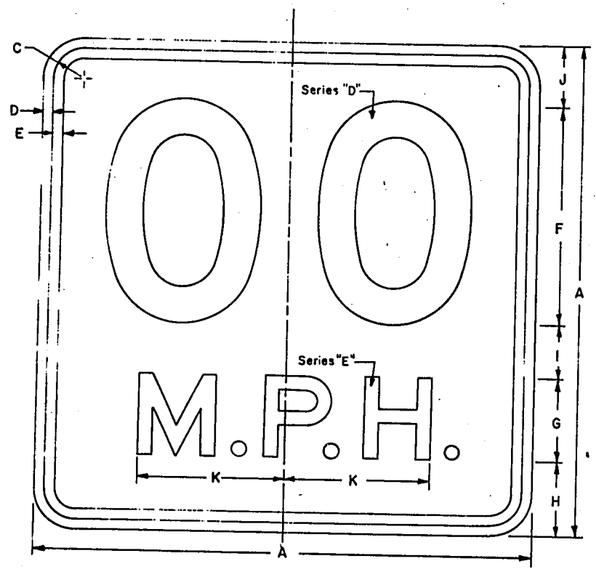
STANDARD SIGNS
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
CHIEF TRAFFIC ENGINEER

DATE 9-24-84 PLATE NO. W5-52.5

PROJECT I.D.	SHEET NUMBER	TOTAL SHEETS
PROJECT DESIGNATION		



W13-1

NOTES:

1. Sign is Type II
2. Color:

   Background — Reflectorized Yellow

   Message — Black
3. Face Material — Reflective Sheeting
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. This drawing may be scaled for Standard Size only.
6. Substitute appropriate numerals & adjust spacing to achieve proper balance.
7. This sign shall not be used alone. It shall be subordinate to another Warning Sign. Use combination of sign sizes as follows:

Primary Sign	Corresponding W13-1
24 x 24 24 x 30 30 x 30	18 x 18
36 x 36 36 x 48	24 x 24
48 x 48 48 x 60	36 x 36

8. When required the W13-1 may be ordered with a white reflective background by using the code W13-1W and using the above table for determining the proper size.

SIZE	CODE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Bid Area Sq. Ft.
Minimum	1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 5/16																2.25
Standard	2	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 5/16																2.25
Oversize	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
Exp-way	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
Freeway	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
		AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ	
Minimum	1																											
Standard	2																											
Oversize	3																											
Exp-way	4																											
Freeway	5																											

Date Drawn — Date Redrawn — 2-19-73 WLB

Date Revised — 7-12-63, 2-19-73 WCR, 2-7-75 JW, 12-7-77 DP

STANDARD SIGN
W13-1

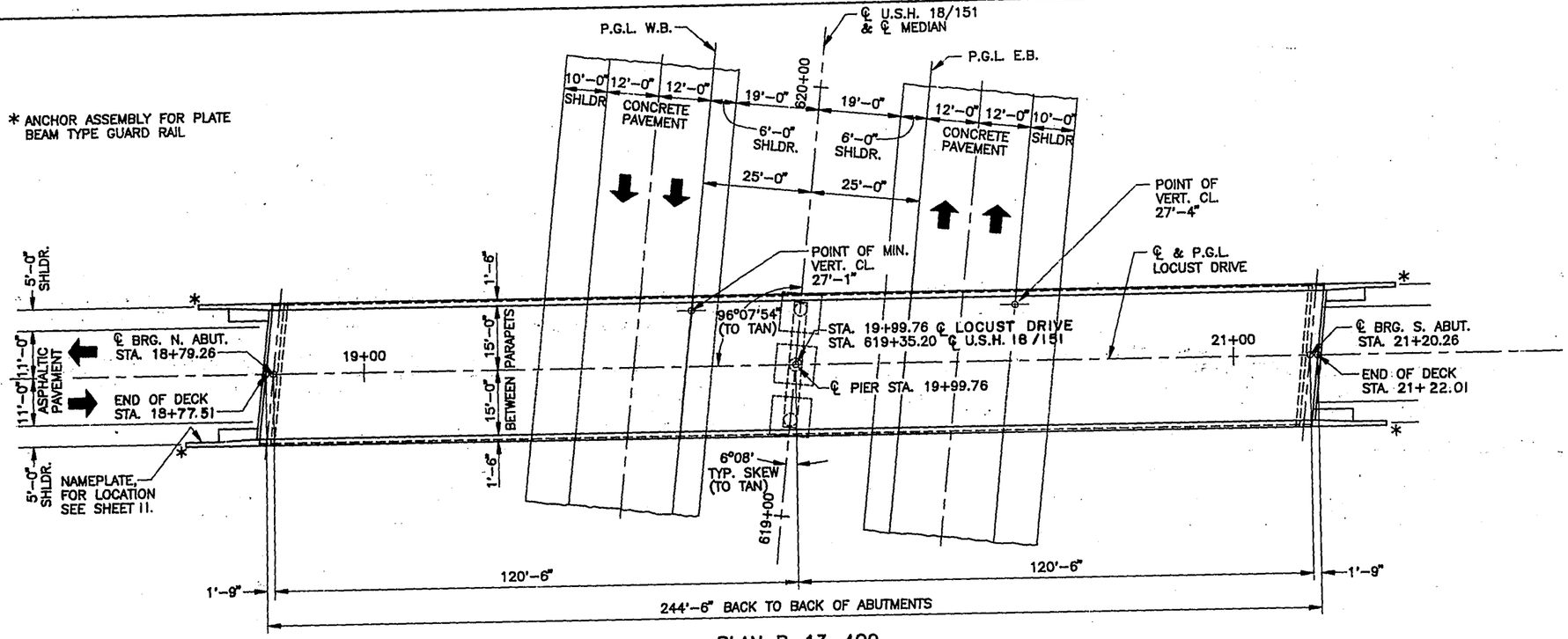
WISCONSIN DIVISION OF HIGHWAYS

APPROVED

CHIEF TRAFFIC ENGINEER

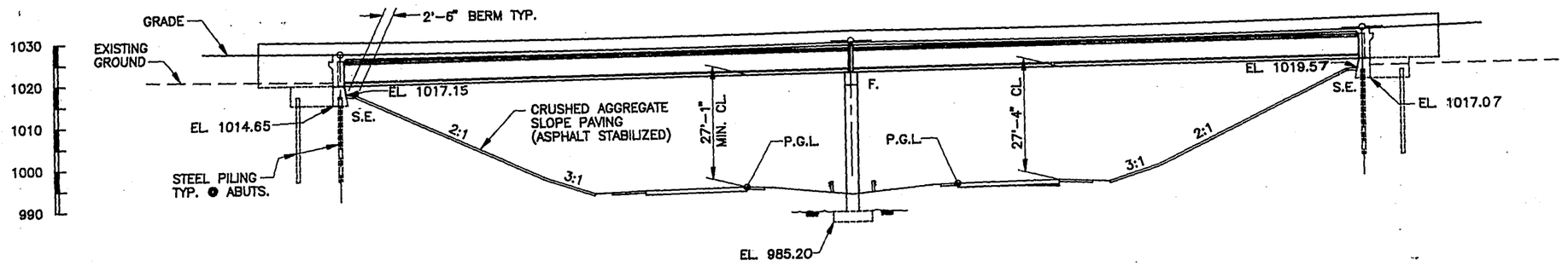
DATE 12/14/77 PLATE NO. W13-1

STATE PROJECT NUMBER	SHEET NO
1201-04-75	8.0



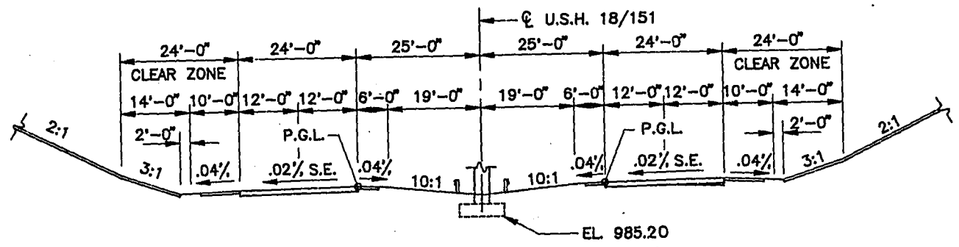
PLAN B-13-409

2 SPAN 70" PRESTRESSED CONC. GIRDER



ELEVATION

NORMAL TO ℄ U.S.H. 18/151



TYPICAL SECTION THRU U.S.H. 18/151

(LOOKING EAST)

CURVE DATA – ℄ U.S.H. 18/151

P.I. STA. 628+27.26
Δ = 113°15'00"
D = 00°30'00"
R = 11,459.16'
L = 22,650.00
T = 11,330.94
S.E. = .02 ft./ft.
P.C. = STA. 614+96.32
P.T. = STA. 641+46.32

LIST OF DRAWINGS

1. GENERAL PLAN
2. TOTAL ESTIMATED QUANTITIES
3. SUBSURFACE EXPLORATION
4. ABUTMENTS
5. ABUTMENT DETAILS
6. PIER
7. SUPERSTRUCTURE
8. SUPERSTRUCTURE DETAILS
9. 70" PRESTRESTED GIRDER DETAILS
10. STEEL DIAPHRAGM
11. SLOPED FACE PARAPET "B"

BRIDGE OFFICE CONTACT: (608)266-8488, R. REESE

No.	Date.	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-409

LOCUST DRIVE OVER USH 18/151

County DANE		Town VERONA	
Design Spec. AASHTO '91		Load HS-20	Const. Spec. WIS '89
Designed By C.M.H	Design Ck'd. D.J.K	Drawn by TL/ZIEK	Plans Checked FWG
Approved Stanley W. Schrade State Bridge Engineer			2-17-93 Date

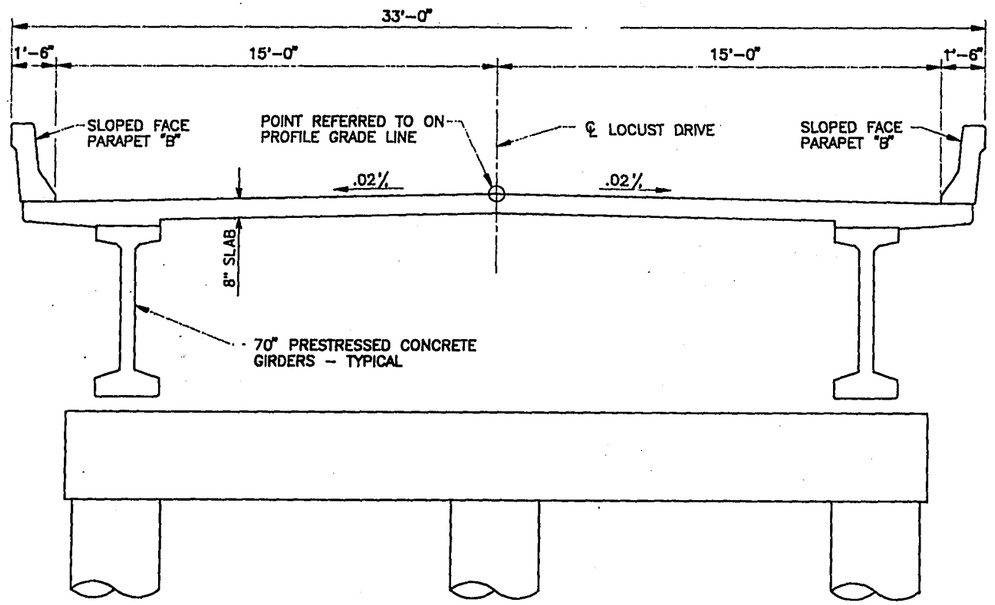
GENERAL PLAN

SHEET 1 OF 11

X84076

9912788R

STATE PROJECT NUMBER	SHEET NO
1201-04-75	8.1



CROSS SECTION THRU ROADWAY
(LOOKING SOUTH)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED

THE UPPER LIMITS OF 'EXCAVATION FOR STRUCTURES' SHALL BE THE EXISTING GROUNDLINE AT THE PIER

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED W/ CRUSHED AGGREGATE SLOPE PAVING (ASPHALT STABILIZED) TO THE EXTENT SHOWN ON SHEET 1 & ON ABUTMENT DETAIL SHEET.
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

DESIGN DATA

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 P.S.F.

RATINGS:

DESIGN RATING ——— HS 20
INVENTORY RATING ——— HS 23
OPERATING RATING ——— HS 52
MAX. STD. PERMIT VEHICLE LOAD — 250 KIPS

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY SLAB ——— f'c = 4,000 P.S.I.
OTHER ——— f'c = 3,500 P.S.I.

HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy = 60,000 P.S.I.

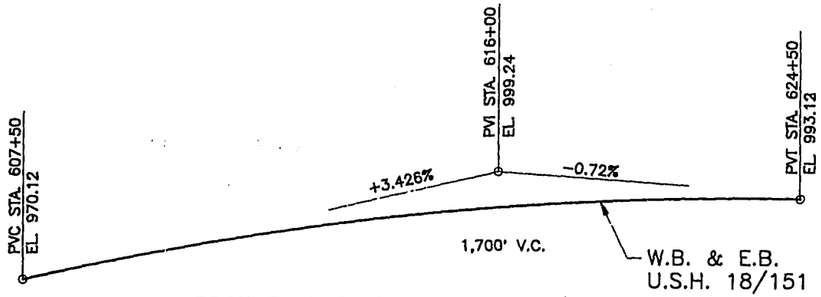
70" PRESTRESSED GIRDERS
CONCRETE MASONRY ——— f'c = 6,000 P.S.I.
PRESTRESSING STRANDS ½" ø
ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA:

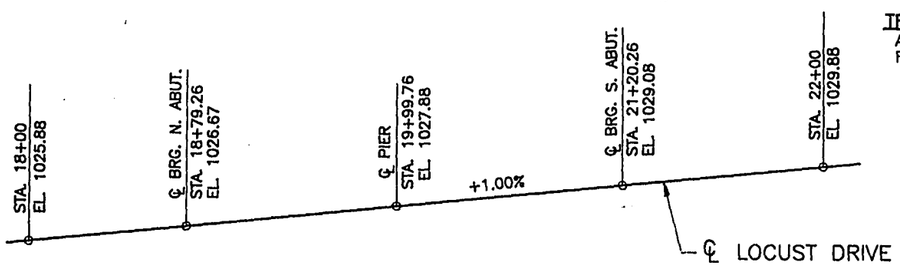
NORTH & SOUTH ABUTMENT TO BE SUPPORTED ON STEEL "H" PILES
PIER TO BE FOUNDED ON BEDROCK.

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	NORTH ABUT.	SOUTH ABUT.	PIER	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES, B-13-409	L.S.	—	—	—	—	1
CONCRETE MASONRY, BRIDGES	C.Y.	282	40	40	54	416
PROTECTIVE SURFACE TREATMENT	GAL.	60	—	—	—	60
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	—	3060	3060	1,150	7,270
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	61,510	630	590	7,670	70,400
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	12	—	—	—	12
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	—	135	270	—	405
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	—	240	240	—	480
STEEL DIAPHRAGM	EACH	12	—	—	—	12
PRESTRESSED GIRDER, I TYPE, 70-INCH	L.F.	967	—	—	—	967
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	—	—	—	4
		—	—	—	—	
		—	—	—	—	
		—	—	—	—	
		—	—	—	—	
		—	—	—	—	
		—	—	—	—	
		—	—	—	—	
		—	—	—	—	
NON-BID ITEMS						
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	44	44	—	88
FILLER	SIZE	—	—	—	—	½" & ¾"
		—	—	—	—	



PROFILE GRADE LINE – USH 18/151



PROFILE GRADE LINE – LOCUST DRIVE

TRAFFIC DATA:

	LOCUST	USH 18/151
A.D.T. (2012)	350	7,000
R.D.S.	40 M.P.H.	65 M.P.H.

No.	Date.	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-409

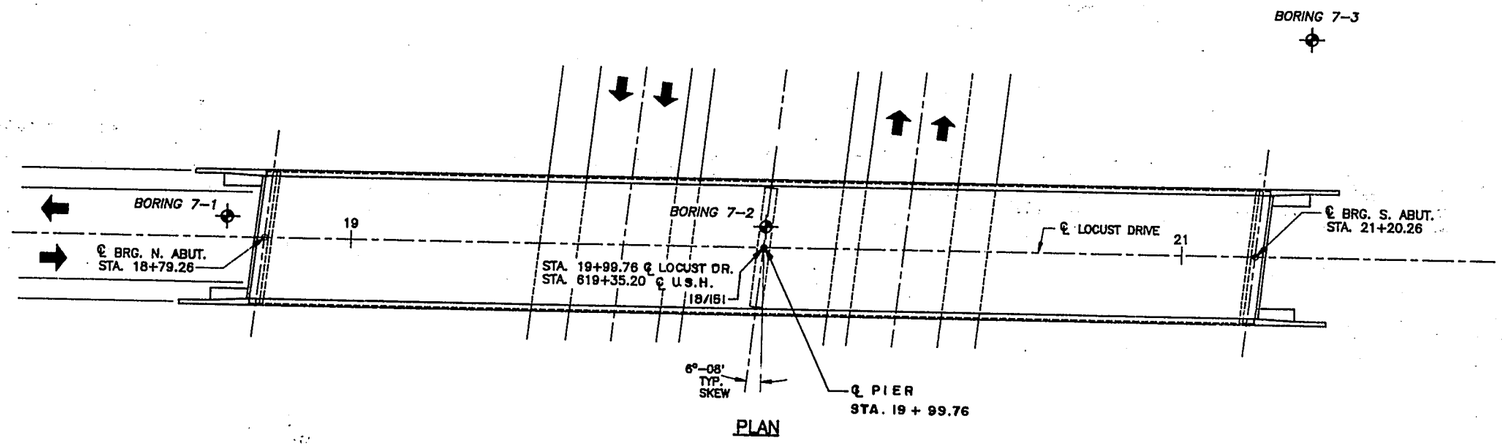
Const. Spec.	WIS. '89	Drawn By	ZIRK	Plans Checked	FWG

TOTAL ESTIMATED QUANTITIES

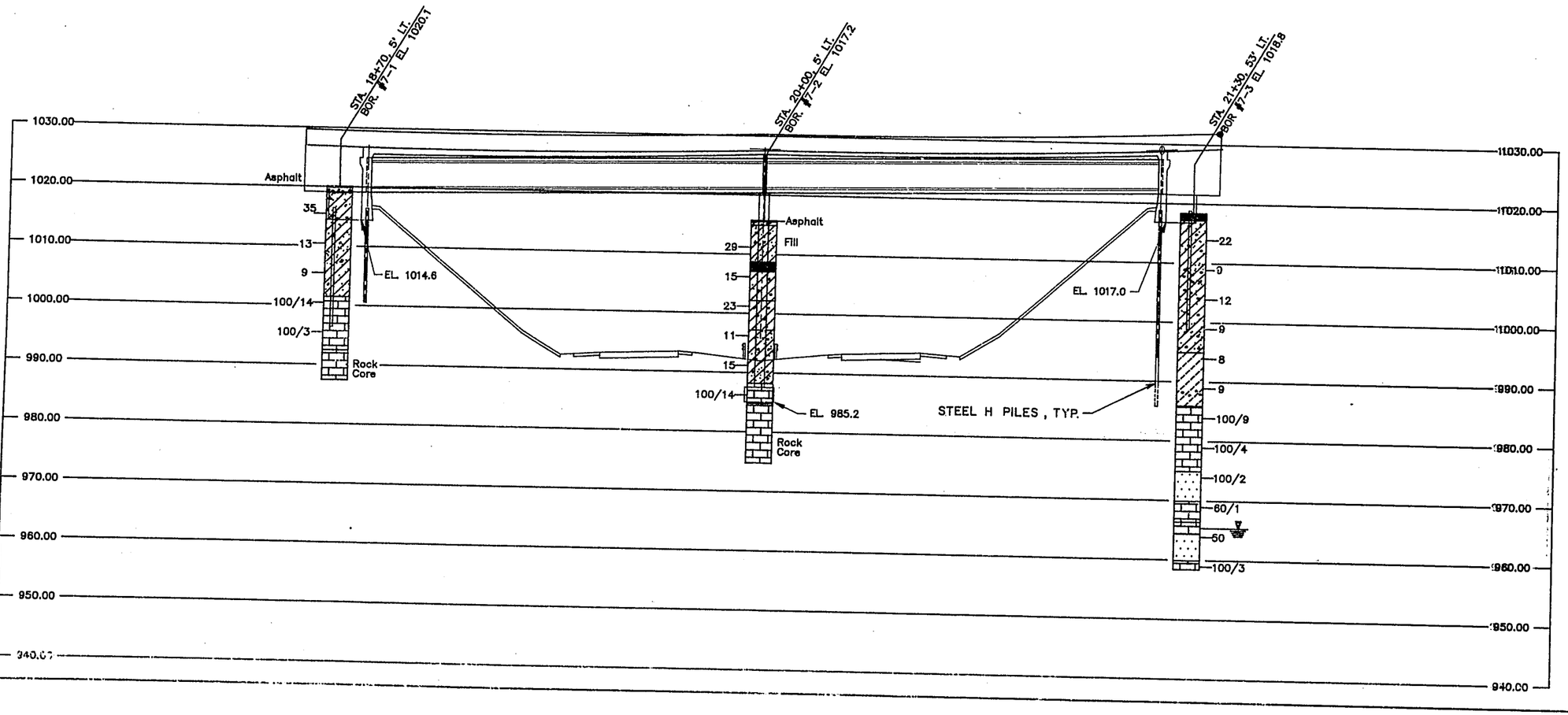
SHEET 2

X84076

99127BR2



PLAN



STATE PROJECT NUMBER	SHEET NO.
1201-04-75	8.2

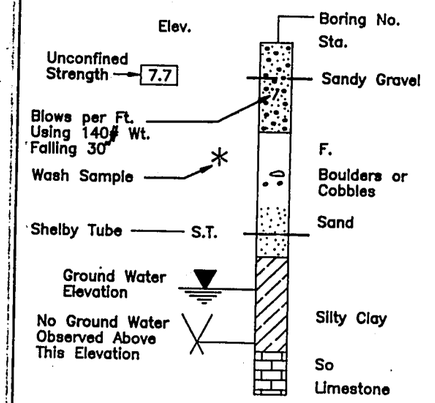
ABBREVIATIONS

F ___ FINE M ___ MEDIUM C ___ COARSE
WS ___ WEATHERED SO ___ SOUND

MATERIAL SYMBOLS

TOPSOIL · SILT · SHALE
SAND · CLAY · LIMESTONE/DOLOMITE
GRAVEL · BOULDERS/COBBLES · SANDSTONE

LEGEND OF BORING



Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D. X 1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

No.	Date.	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-409

Const. Spec. WIS. 89	Drawn By TL/ZIEK	Plans Checked FWG

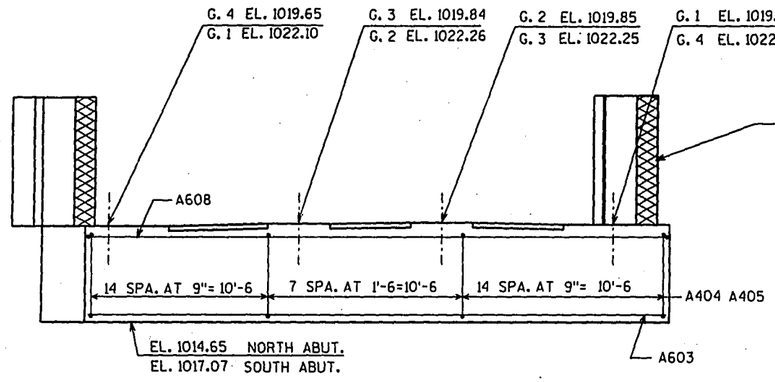
SUBSURFACE EXPLORATION

SHEET 3

X84076

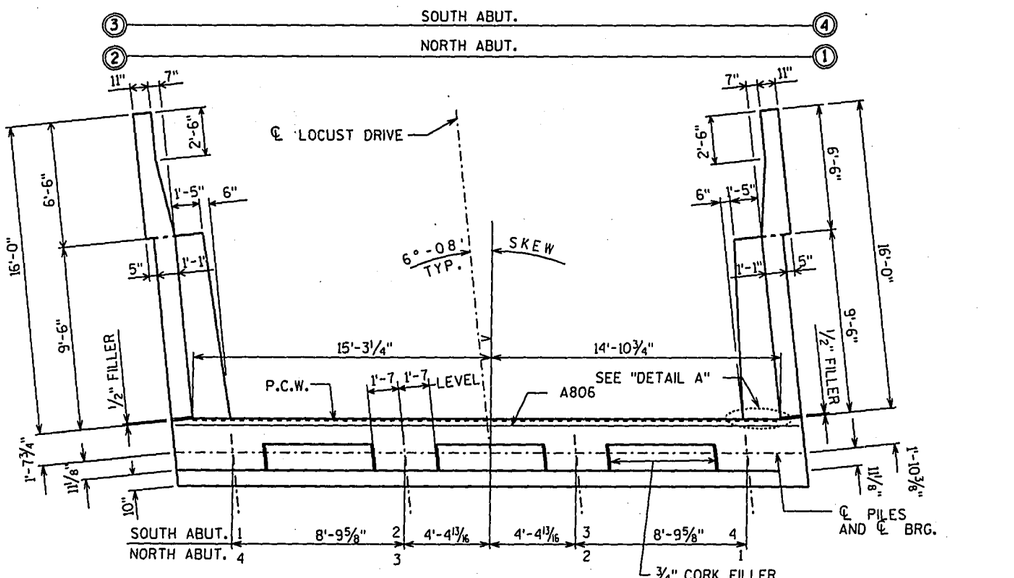
9917V7

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.3

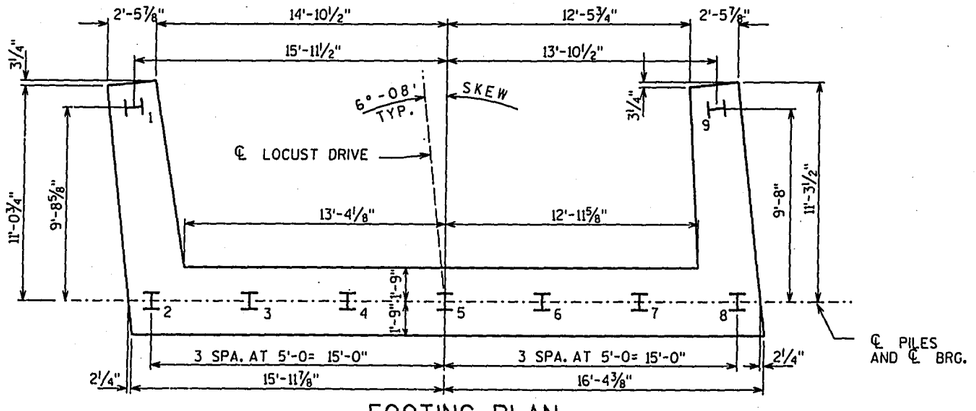


ELEVATION

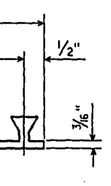
NORTH ABUT. LOOKING NORTH
SOUTH ABUT. LOOKING SOUTH



PLAN



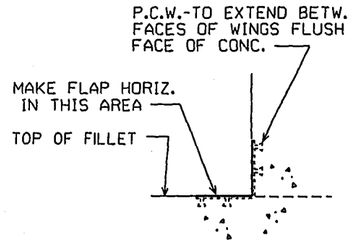
FOOTING PLAN



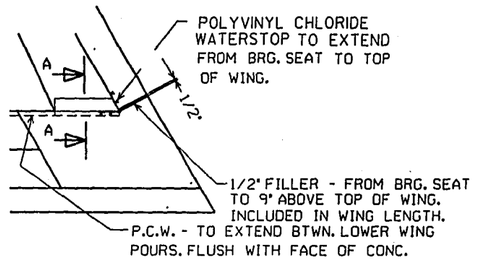
P.C.W.

(POLYVINYL CHLORIDE WATERSTOP)

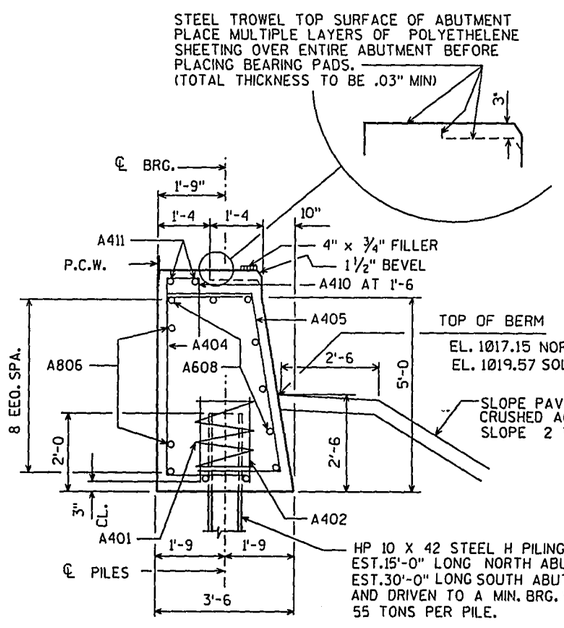
P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERT. ENDS OF P.C.W. WITH NON-STAINING NON-BITUMINOUS JOINT SEALER.



SECTION A



DETAIL A



SECTION THRU BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE A603 BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-409

CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

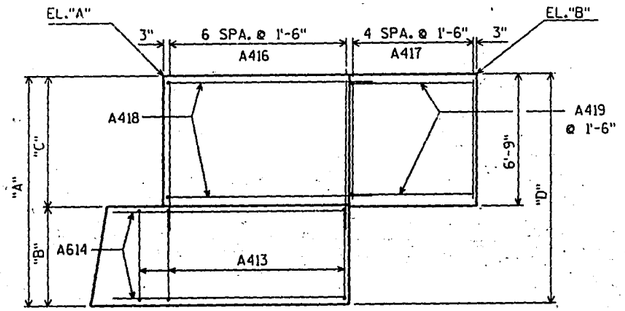
ABUTMENTS

SHEET 4

X84076

BR. [13409:409ABUTS

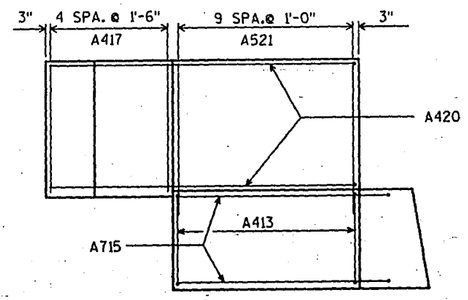
STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.4



WING ELEVATION

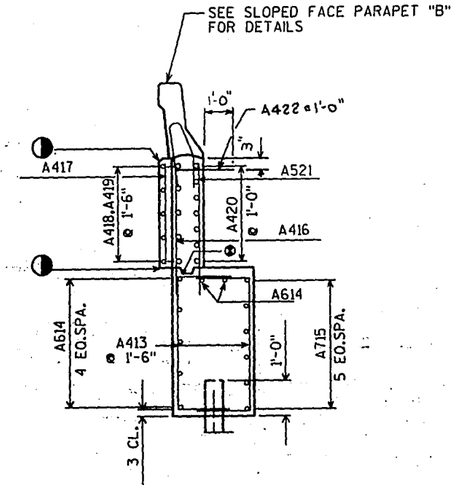
SHOWING F.F.BAR STEEL REINF.

		EL."A"	EL."B"	"D"	"C"	"B"	"A"
NO. ABUT	WING 1	1026.37	1026.21	11'-6 3/4	6'-8 3/8	5'-0 1/4	11'-8 5/8
	WING 2	1026.34	1026.18	11'-6 5/8	6'-8 1/4	5'-0	11'-8 1/4
SO ABUT.	WING 3	1028.82	1028.98	11'-10 1/8	6'-8 5/8	5-0 3/8	11'-9
	WING 4	1028.79	1028.95	11'-10 1/2	6'-8 5/8	5'-0	11'-8 5/8



WING ELEVATION

SHOWING B.F. BAR STEEL REINF.



SECTION THRU WING

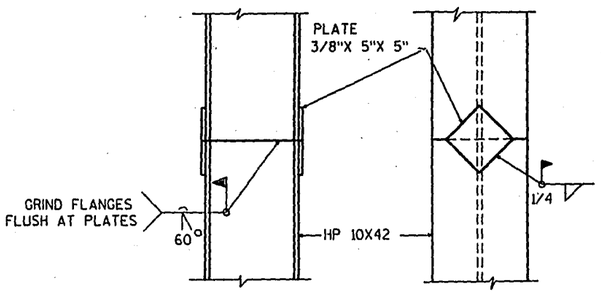
⊗ OPT. CONST. JOINT - FORMED BY SURFACED BEVELED 2" X 6" KEYWAY.

◑ 3/4" 'V' GROOVE AT FRONT FACE. 'V' GROOVE NOT REQUIRE IF JOINT IS NOT USED.

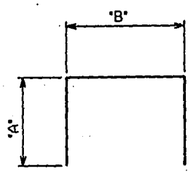
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A401		114	28-0	X			BODY ONE PER PILE
A402		28	2-3				" TWO PER PILE
A603		8	32-0				" BOTT. HOR.
A404		72	8-9	X			" STIRRUP B.F.
A405		72	8-1	X			" STRRIUP F.F.
A806		14	32-0				" B.F. HOR.
A608		112	33-10	X			" HOR.
A410		44	3-8	X			" STIRRUP TOP
A411		4	32-0				" HOR. TOP
A413		60	8-9	X			WING STIRRUP
A614		28	11-8				" HOR.
A715		24	11-9	X			" HOR.B.F.
A416		28	7-10				" VERT. F.F.
A417		40	6-4				" VERT.
A418		20	11-6	X			" HOR. F.F.
A419		20	7-3	X			" HOR. F.F.
A420		28	16-3	X			WING HOR. B.F.
A521		40	7-10				WING VERT. B.F.
A422	XX	32	11-4 KD				FOR SURFACE DRAINS @ WINGS 1 & 2

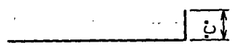


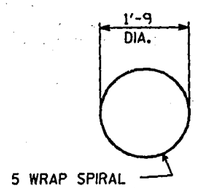
PILE SPLICE DETAIL



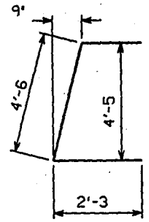
MARK	"A"	"B"
A608	1-0	32-0
A410	1-5	1-0
A413	2-2	4-7

MARK	"C"
A418	9"
A419	1-2
A715	1-2

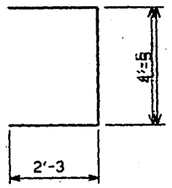




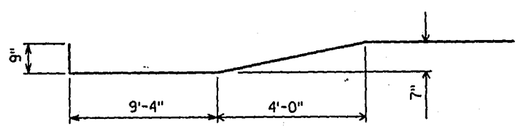
A401



A405



A404



A420

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-409

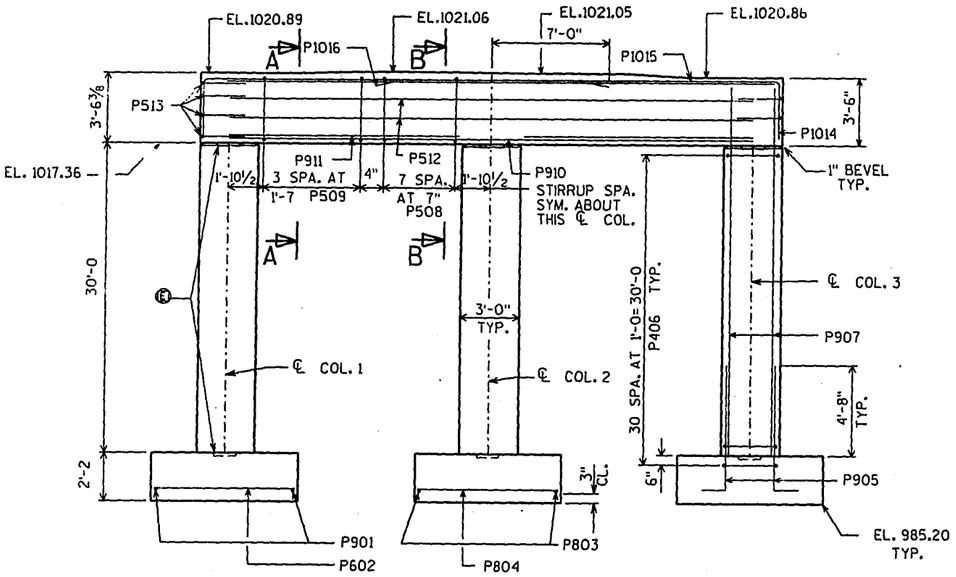
CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

ABUTMENT DETAILS

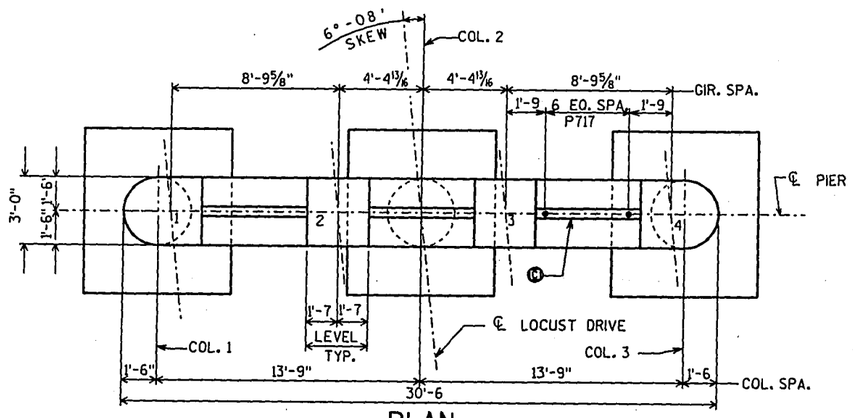
SHEET 5

X84076

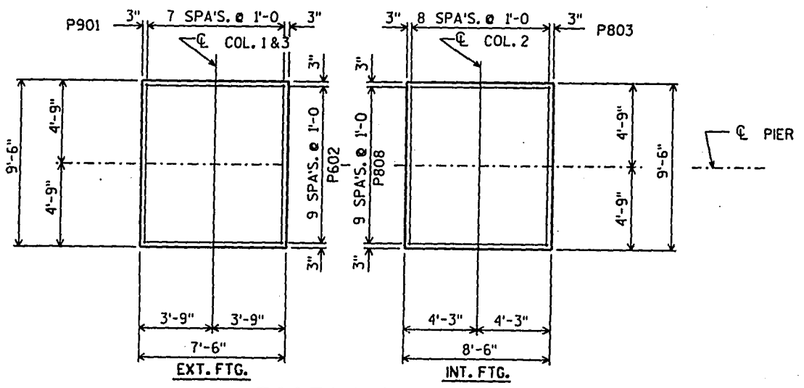
STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.5



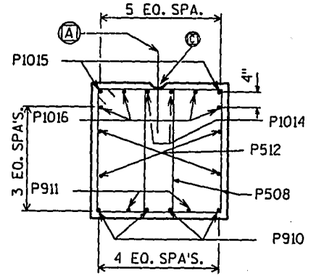
ELEVATION
LOOKING SOUTH



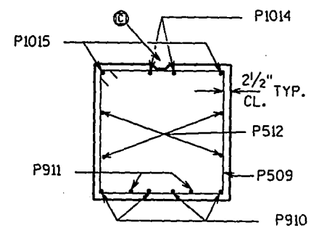
PLAN



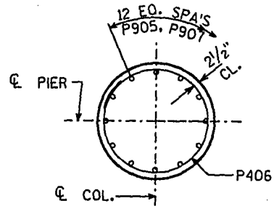
FOOTING PLAN
MINIMUM SOIL BRG. PRESSURE = 5 TONS PER SQ. FT.



SECTION B



SECTION A



SECTION THRU COLUMN

Ⓐ P517 AT 1'-0 EMBED 1'-7. PLACE BARS BEFORE CONCRETE HAS TAKEN INITIAL SET.

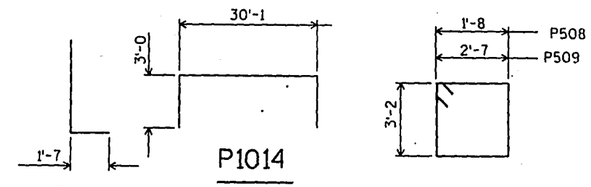
Ⓒ 2" X 6" KEYWAY BETWEEN GIRDER SEAT.

Ⓔ 1'-3 X 1'-3 CONST. JOINT FORMED BY SURFACED BEVELED KEYWAY. TYP. AT ALL COL.

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

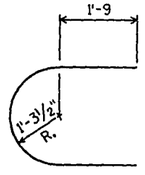
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUNDLE	LOCATION
P901		16	9-2				EXTERIOR FOOTING
P602		20	7-2				EXTERIOR FOOTING
P803		9	9-2				INTERIOR FOOTING
P804		10	8-2				INTERIOR FOOTING
P905	X	36	7-10	X			FOOTING AND COL. DOWELS
P406	X	93	9-2	X			FOOTING AND COL. HOOPS
P907	X	36	33-2				COL. VERT.
P508	X	32	10-3	X			CAP STIRRUPS -SINGLE
P509	X	8	12-1	X			CAP STIRRUPS -DOUBLE
P910	X	4	27-6				CAP HORIZ. BOT
P911	X	4	12-1				CAP HORIZ. BOT
P512	X	4	27-6				CAP HORIZ. SIDES
P513	X	8	7-6	X			CAP HORIZ. ENDS
P1014	X	2	35-8	X			CAP HORIZ. TOP
P1015	X	2	27-6				CAP HORIZ. TOP
P1016	X	4	14-0				CAP HORIZ. TOP
P717	X	21	3-2				CAP DOWELS



P905

P1014

P406



P513

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-409

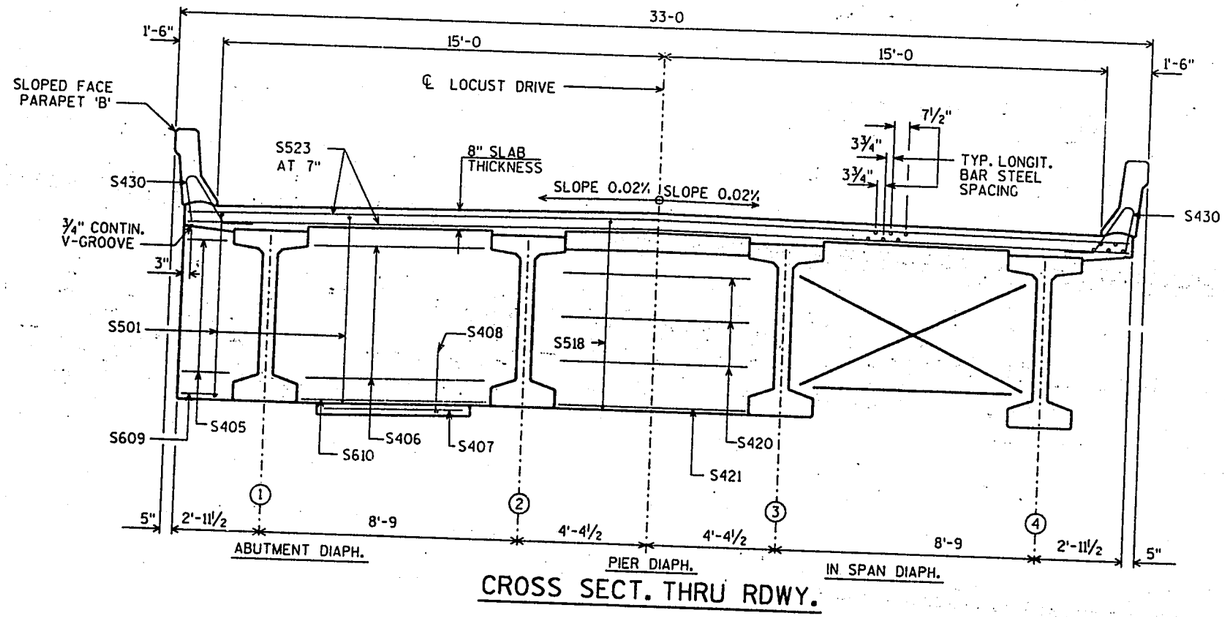
CONST. SPEC.	1989	DRAWN BY	Zirk	PLANS CK'D.	FWG

PIER

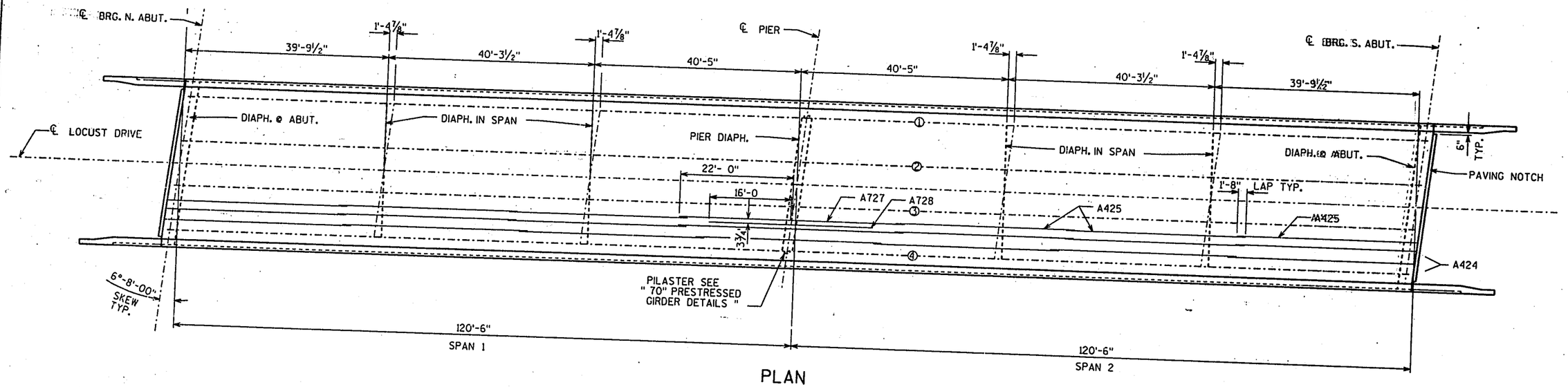
SHEET 6

X84076

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.6



CROSS SECT. THRU RDWY.



PLAN

NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-409

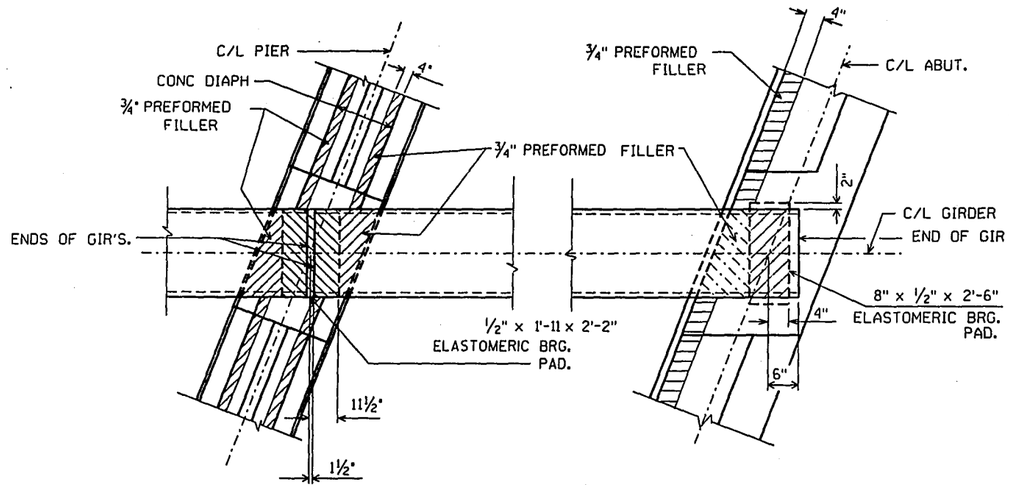
CONST. SPEC.	DRAWN BY	PLANS CK'D.
1989	ZIRK	FWG

SUPERSTRUCTURE

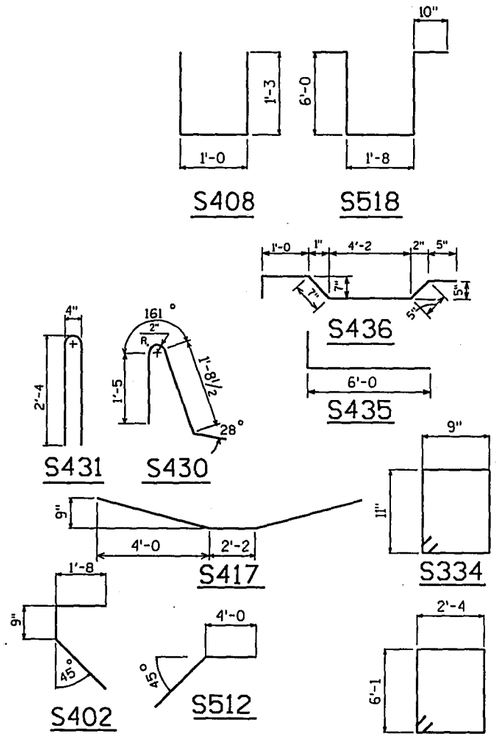
SHEET 7

X84076

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.7



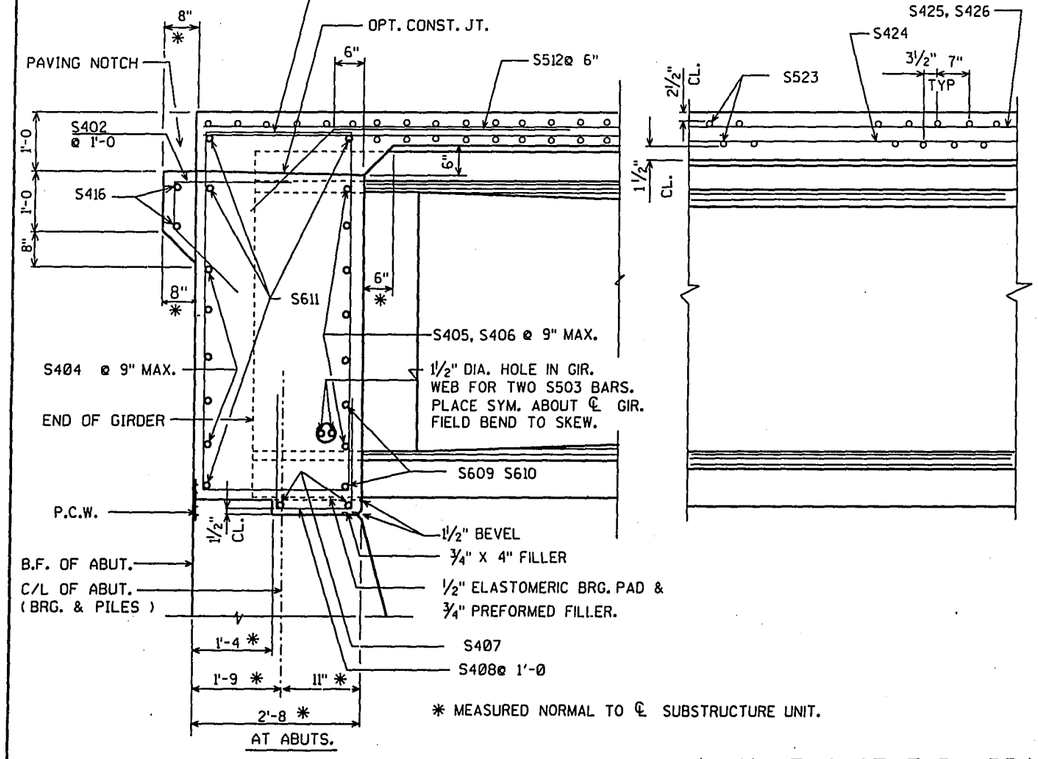
BEARING PAD DETAIL



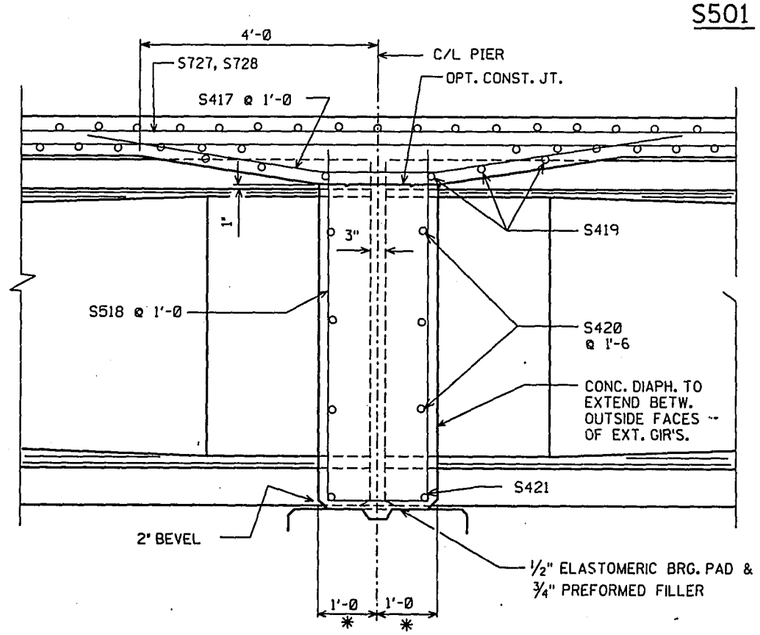
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
S501	X	50	17-4	X			DIAPH AT ABUTMENTS STIRRUPS
S402	x	42	4-8	X			DIAPH AT ABUTMENTS & CORBEL
S503	x	16	6-0				GIRDERS AT ABUTMENTS
S404	x	10	32-0				DIAPH AT ABUTMENTS
S405	x	24	2-3				DIAPH AT ABUTMENTS
S406	x	36	7-0				DIAPH AT ABUTMENTS
S407	x	12	5-3				DIAPH AT ABUTMENTS
S408	x	36	3-4	X			DIAPH AT ABUTMENTS
S609	x	8	1-7				DIAPH AT ABUTMENTS
S610	x	12	6-3				DIAPH AT ABUTMENTS
S611	X	8	32-0				DIAPH AT ABUTMENTS
S512	X	84	6-10	X			DIAPH AT ABUTMENTS
S416	x	4	28-10				CORBEL AT ABUT'S.
S417	x	18	10-1	X			DIAPH. AT PIER
S518	x	18	15-0	X			DIAPH. AT PIER
S419	x	18	5-10				DIAPH. AT PIER
S420	x	18	7-5				DIAPH. AT PIER
S421	x	6	6-2				DIAPH. AT PIER
S523	X	825	32-0				SLAB TRANS. TOP & BOTT.
S424	X	364	36-4				SLAB LONGIT. BOTT.
S425	X	306	35-1				SLAB LONGIT. TOP
S727	X	51	44-0				SLAB LONGIT. TOP -AT PIER
S728	X	50	32-0				SLAB LONGIT. TOP -AT PIER
S430	X	650	4-3	X			SLAB & PARAPET
S431	X	650	4-10	X			PARAPET
S532	X	70	36-5				PARAPET LONGIT.
S334	X	14	3-10	X			PILASTER AT PIER
S435	x	4	6-7	X			PILASTER AT PIER
S436	x	4	7-0	X			PILASTER AT PIER



LONGIT. SECT. THRU RDWY.



AT PIER DIAPH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-409

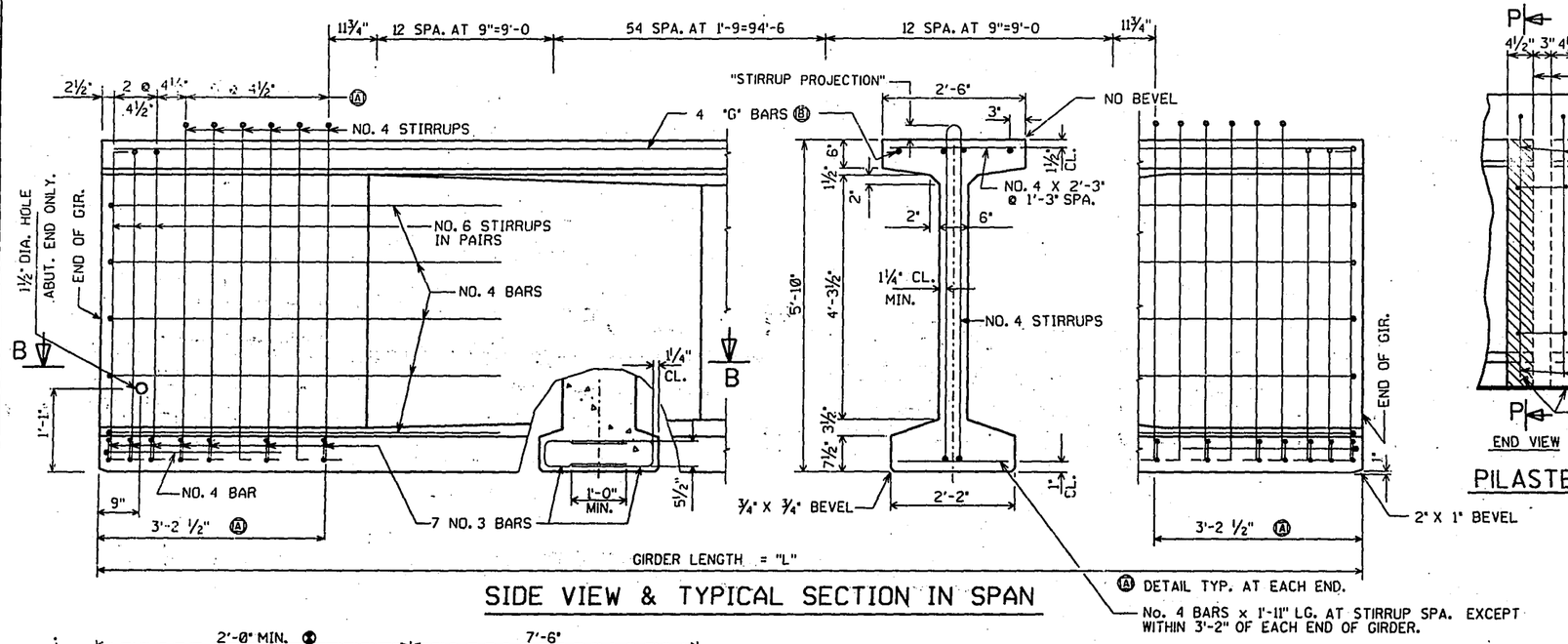
CONST. SPEC. 1989	DRAWN BY Zirk	PLANS CKD. FWG

SUPERSTRUCTURE DETAILS

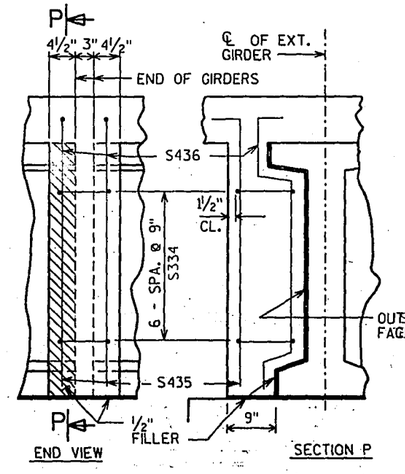
SHEET 8

X84076

STATE PROJECT NUMBER	SHEET
1201-4-75	8.8



SIDE VIEW & TYPICAL SECTION IN SPAN



PILASTER DETAILS AT PIERS

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

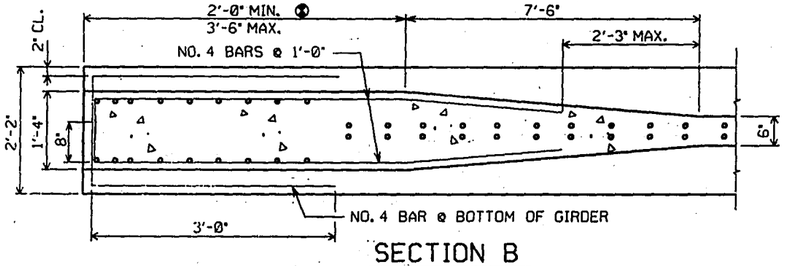
PRESTRESSING STRANDS SHALL BE ½"ϕ - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

BEND EACH END OF No. 4 STIRRUPS 4½" AND No. 6 STIRRUPS 6½".

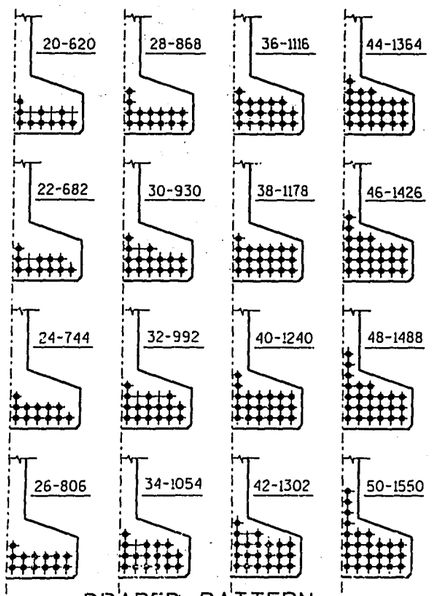
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

Ⓧ ON MULTIPLE SPAN STRUCTURES, SET THE END BLOCK LENGTHS OF GIRDERS RESTING ON THE SAME PIER TO ± 2". ON SIMPLE SPANS, SET THE END BLOCK LENGTH ON BOTH GIRDER ENDS TO ± 2".

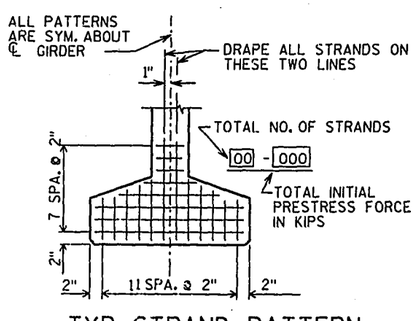
IF CONTRACTOR USES BOTTOM FLANGE TO SUPPORT CONSTRUCTION FORMS, THE CONTRACTOR SHALL SUBMIT FALSEWORK PLANS FOR APPROVAL OF THE ENGINEER.



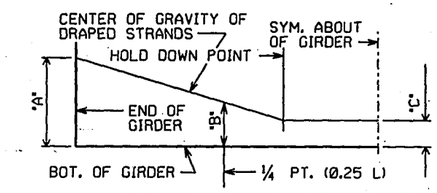
SECTION B



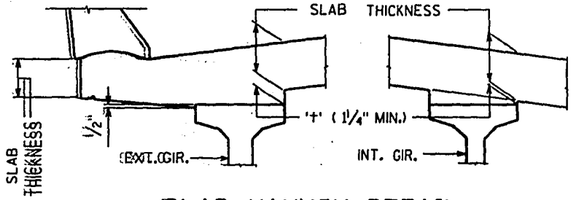
DRAPED PATTERN



TYP STRAND PATTERN



DRAPED STRAND PROFILE

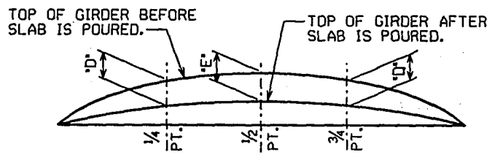


SLAB HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT 't' CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. MAXIMUM HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3 INCHES.

TO DETERMINE 'H', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT ¼ POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
-TOP OF GIRDER ELEVATION
+ DEADLOAD DEFLECTION
-SLAB THICKNESS
=HAUNCH HEIGHT 't'



DEAD LOAD DEFLECTION DIAGRAM

GIRDER DATA

SPAN	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) "D"	DEAD LOAD DEFL. (IN.) "E"	CONC. STRGTH. f'c (p.s.i.)	"STIRRUP PROJECTION"	DRAPED PATTERN: TOTAL NO. OF STRANDS	DRAPED PATTERN: f'ci (p.s.i.) *	DRAPED PATTERN (INCHES): "A"	"B" MIN.	"B" MAX.	"C"
1 & 2	120'-10½"	1¾	1¼	6,000	5"	42	4,800	63	20.25	23.25	6

Ⓑ No. 4 "G" BARS, MAY BE SPLICED AT THE 1/3 POINTS. USE 1'-11 MIN. LAP.

✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-409

CONST. SPEC.	DRAWN BY	PLANS CHD.
1989	Zirk	TWG

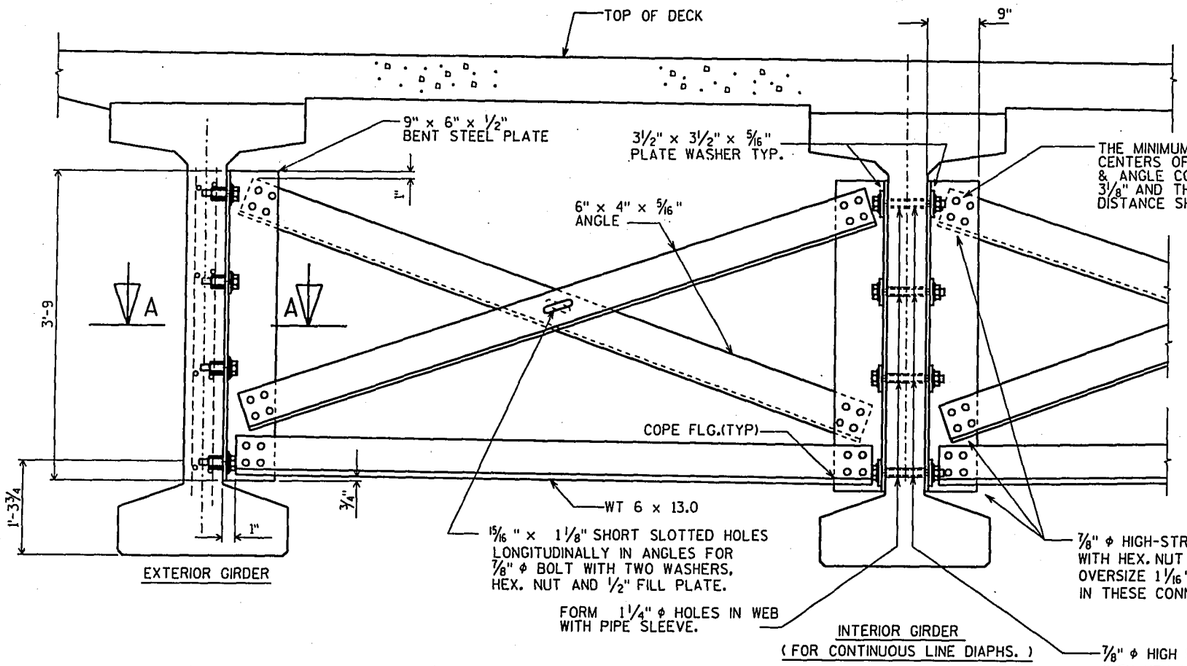
70" PRESTRESSED GIRDER DETAILS

SHEET 9

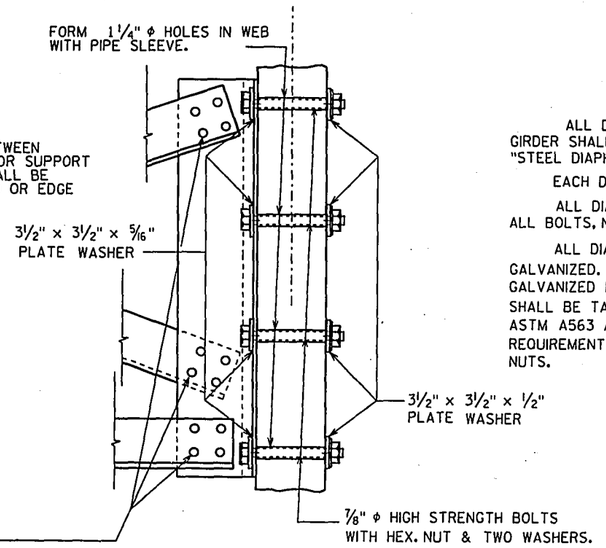
X84076

FIXED = LV
SEMI. EXP. = LV
EXP. = LV
PILASTER = LV

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.9



PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION AT INTERIOR GIRDERS (FOR STAGGERED DIAPHRAGMS)

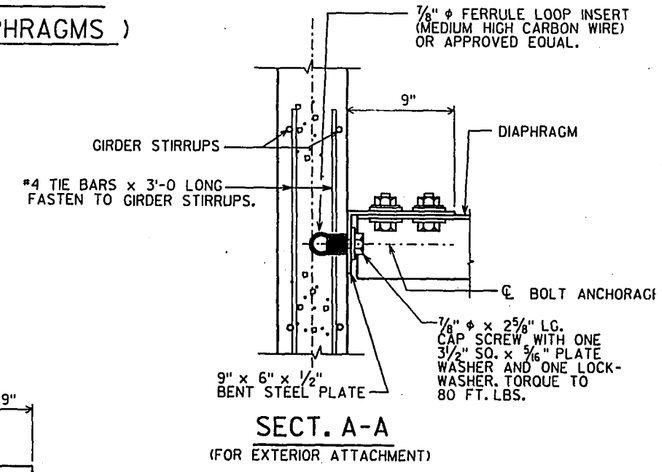
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGM".

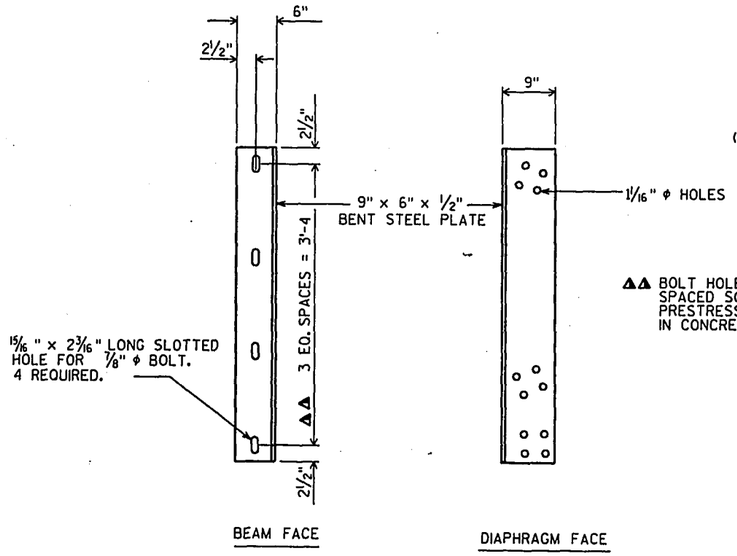
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.



SECT. A-A
(FOR EXTERIOR ATTACHMENT)



▲▲ BOLT HOLES SHALL BE SPACED SO AS TO MISS PRESTRESSED STRANDS IN CONCRETE BEAMS.

DIAPHRAGM SUPPORT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-409

CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

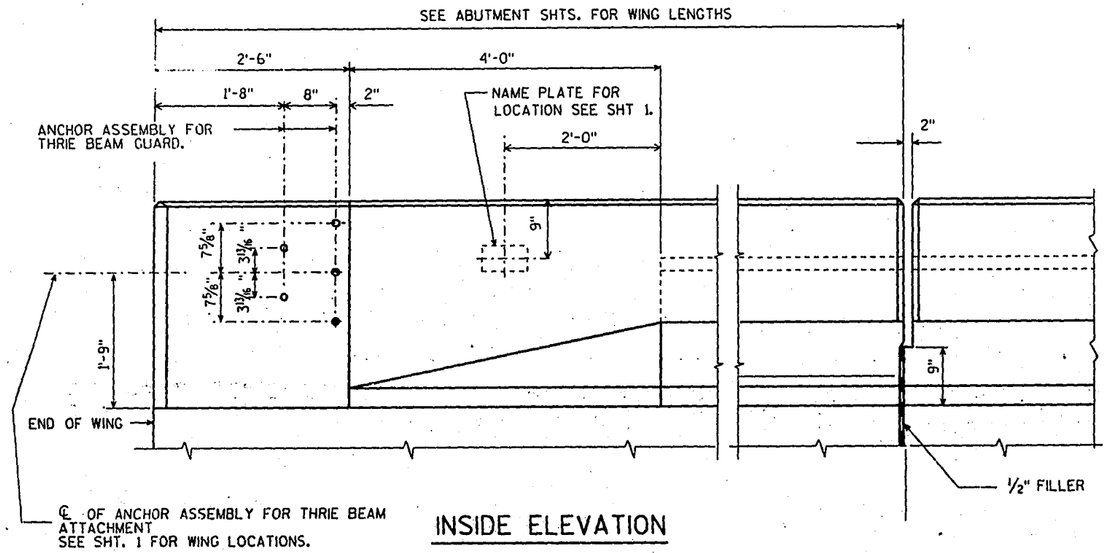
STEEL DIAPHRAGM

SHEET 10

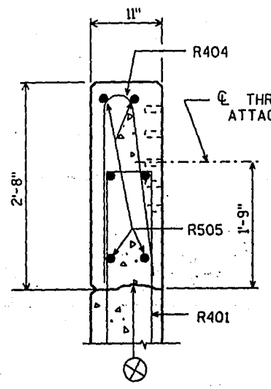
X84076

4/87

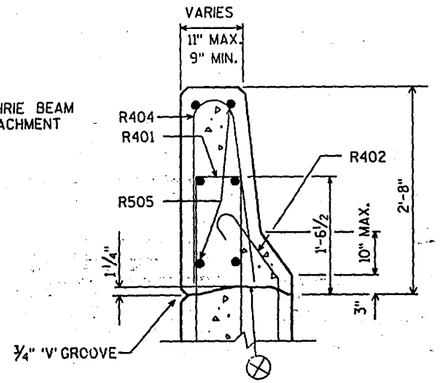
STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.10



INSIDE ELEVATION



SECTION A



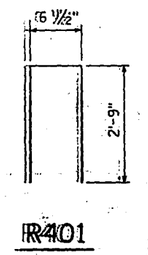
SECTION B

BILL OF BARS

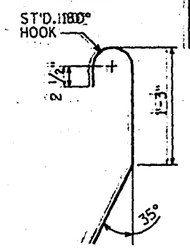
FOR ABUTMENT PARAPETS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SET.
EPOXY COAT ALL PARAPET REINF.

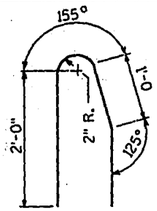
BAR MARK	NO. REQ'D. NORTH ABUT.	NO. REQ'D. SOUTH ABUT.	LENGTH	BENT	LOCATION
R401	30	30	5-10	X	WINGS STIRRUP
R402	8	8	3-1	X	WINGS
R403	26	26	4-7	X	WINGS STIRRUP
R404	30	30	4-9	X	WINGS
R505	12	12	6-2		WINGS
R406	26	26	4-10	X	WINGS
R507	10	10	12-0		WINGS



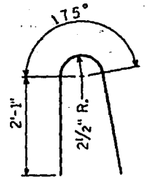
R401



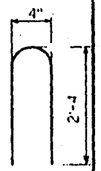
R402



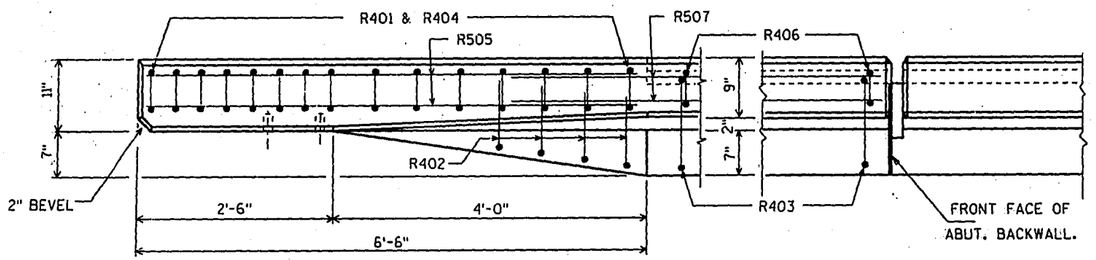
R403



R404

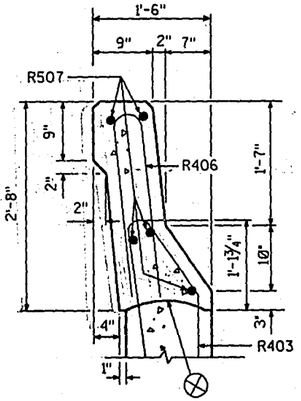


R406

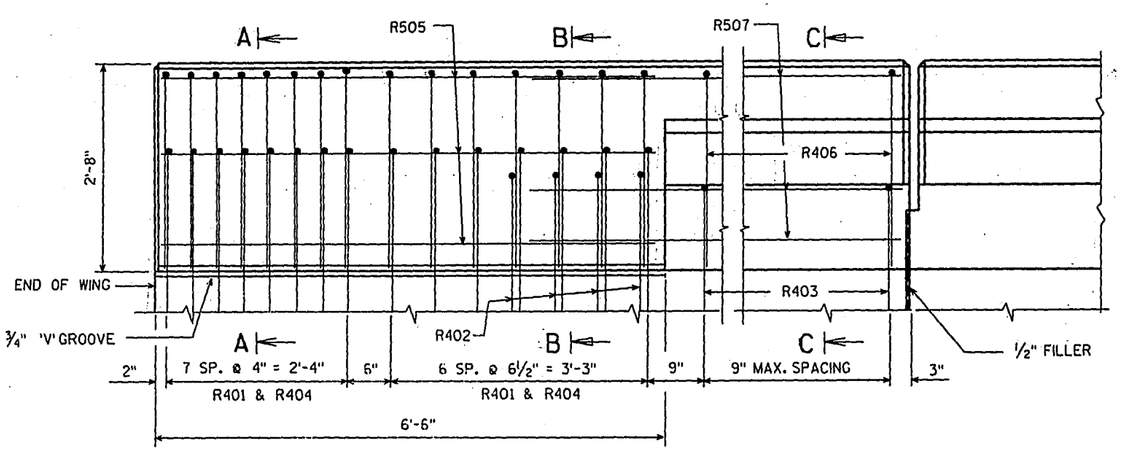


PLAN

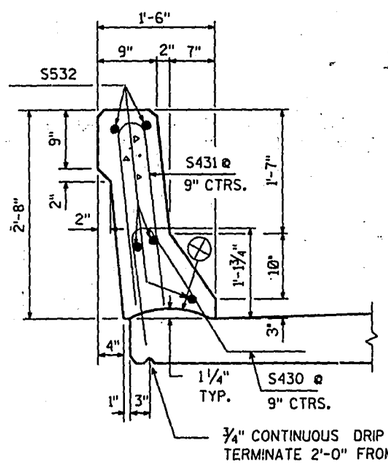
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 1" 'V' GROOVE.



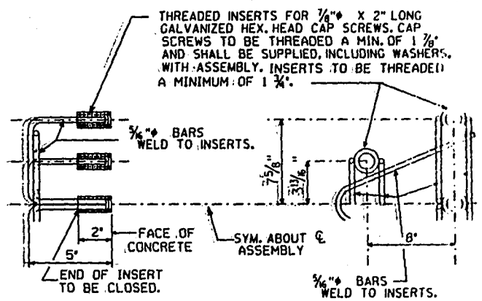
SECTION C



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

*NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

SEE SHEET 1 FOR LOCATION.

⊗ CONST. JOINT - STRIKE OFF AS SHOWN & FINISH WITH A WOODEN TROWEL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-409

CONST. SPEC. 1989	DRAWN BY Zirk	PLANS CHD. FWG

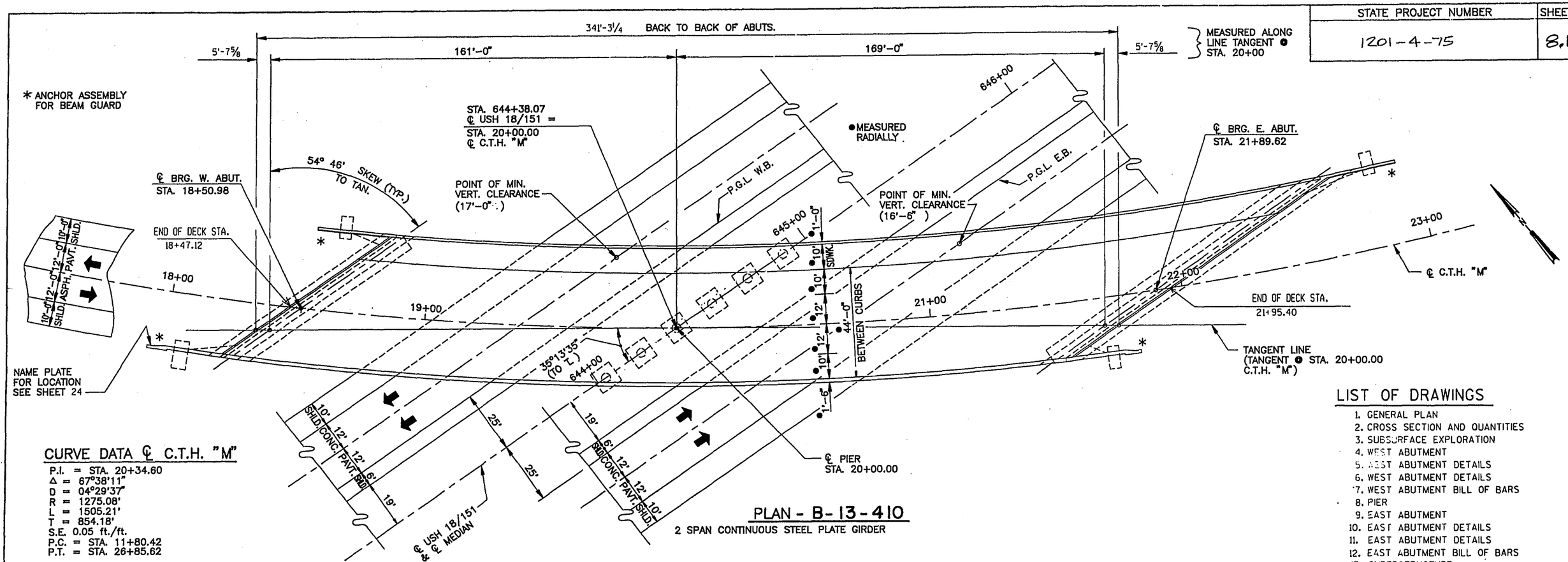
SLOPED FACE PARAPET "B"

SHEET 11

X84076

I:\PLOTS\X84076SPARAPET.DGN

STATE PROJECT NUMBER	SHEET NO
1201-4-75	8.11

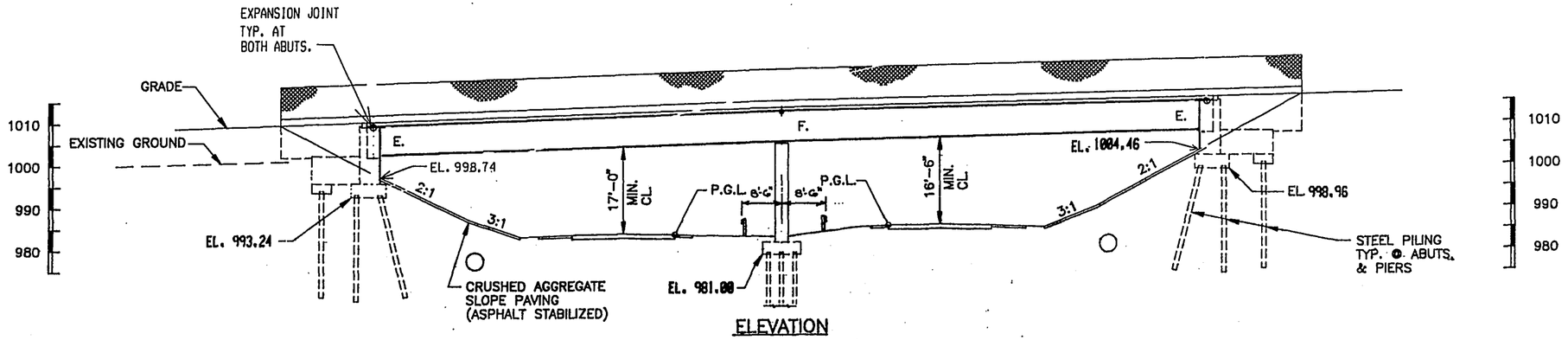


CURVE DATA ℄ C.T.H. "M"

P.I. = STA. 20+34.60
Δ = 67°38'11"
D = 04°29'37"
R = 1275.08'
L = 1505.21'
T = 854.18'
S.E. 0.05 ft./ft.
P.C. = STA. 11+80.42
P.T. = STA. 26+85.62

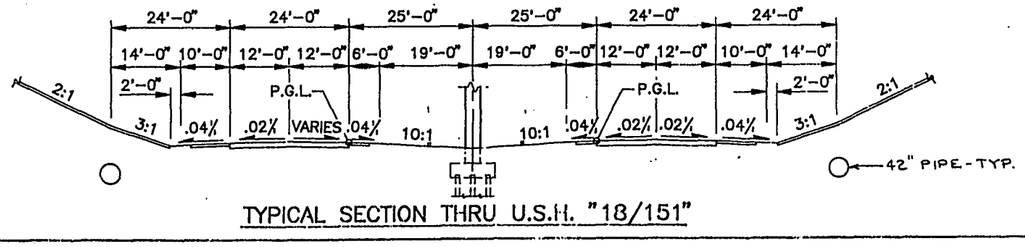
PLAN - B-13-410

2 SPAN CONTINUOUS STEEL PLATE GIRDER



ELEVATION

NORMAL TO ℄ U.S.H. 18/151



TYPICAL SECTION THRU U.S.H. "18/151"

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION AND QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. WEST ABUTMENT DETAILS
7. WEST ABUTMENT BILL OF BARS
8. PIER
9. EAST ABUTMENT
10. EAST ABUTMENT DETAILS
11. EAST ABUTMENT DETAILS
12. EAST ABUTMENT BILL OF BARS
13. SUPERSTRUCTURE
14. FRAMING PLAN
15. SUPERSTRUCTURE DETAILS
16. GIRDER DETAILS
17. GIRDER DETAILS
18. LOWER LATERAL DETAILS
19. EXPANSION DEVICE
20. EXPANSION DEVICE
21. BEARING DETAILS
22. FENCING DETAILS
23. VERTICAL FACE PARAPET "A"
24. SLOPED FACE PARAPET "B"

BRIDGE OFFICE CONTACT - R.L. REESE (608)266-8488
BRIDGE OFFICE CONTACT - F.K. HUBBARD (608)266-8489

No.	Date.	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

C.T.H. "M" OVER USH 18/151

STRUCTURE B-13-410

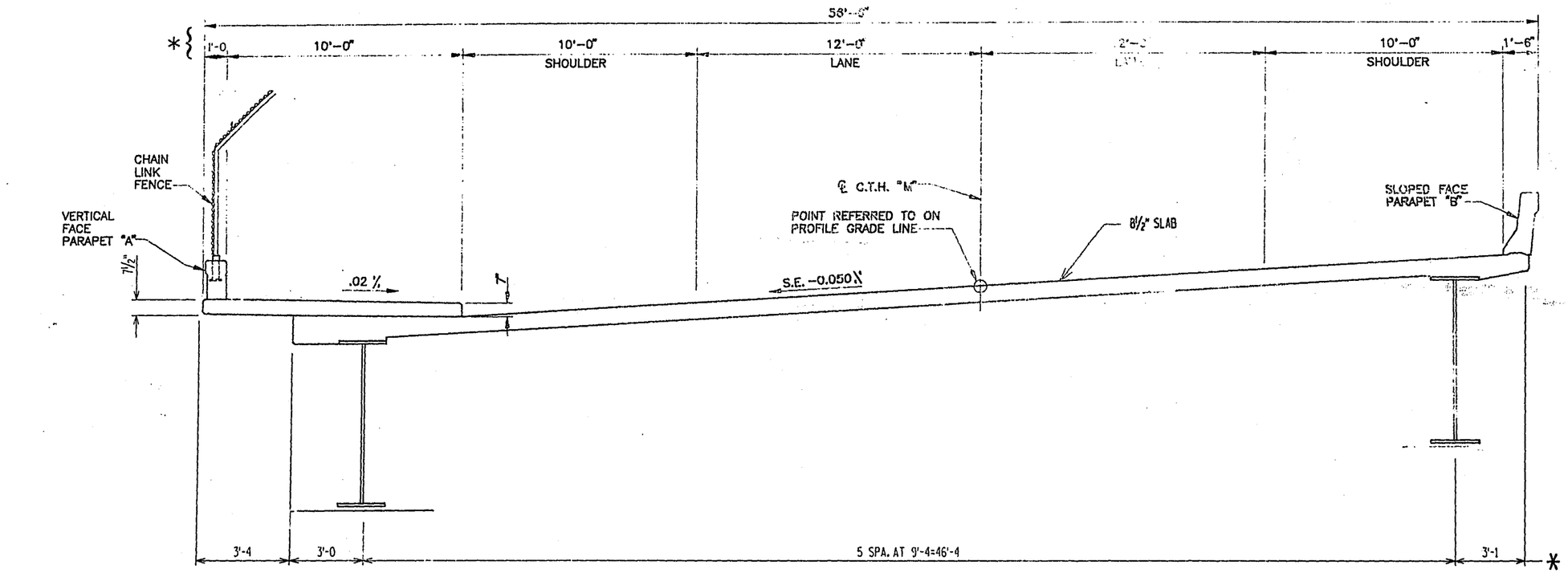
County DANE		Town VERONA	
Design Spec. AASHTO 92		Load HS-20	Const. Spec. WIS '89
Designed By D.K.	Design Ck'd. M.W.	Drawn By ZIRK	Plans Checked FWG

Approved Stanley W. Woods, State Bridge Engineer — Date 2-17-93

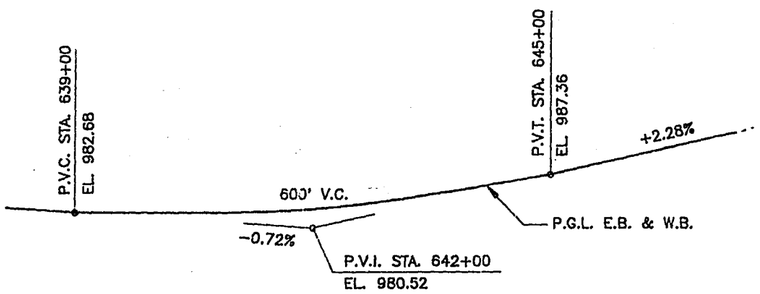
GENERAL PLAN

SHEET 1 OF 24

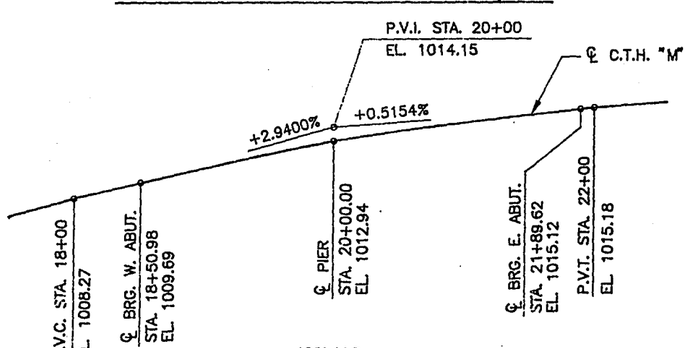
STATE PROJECT NUMBER	SHEET NO
1201-4-75	8.12



MEASURED RADIALLY * CROSS SECTION THRU ROADWAY
LOOKING EAST



PROFILE GRADE LINE -- U.S.H. 18/151



PROFILE GRADE LINE – C.T.H. "M"

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	W. ABUT.	E. ABUT.	PIER	TOTALS
PAINTING, EPOXY SYSTEM, STRUCTURE B-13-410	L.S.	——	——	——	——	1
EXCAVATION FOR STRUCTURES, BRIDGES, B-13-410	L.S.	——	——	——	——	1
CONCRETE MASONRY, BRIDGES	C.Y.	——	236	317	113	666
CONCRETE MASONRY, BRIDGES, TYPE K	C.Y.	676	——	——	——	676
PROTECTIVE SURFACE TREATMENT	GAL.	143	——	——	——	143
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	——	13,530	16,300	940	30,770
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	140,320	4,130	6,040	8,060	158,550
PILE POINTS	EACH	——	28	41	48	117
CHAIN LINK FENCE, 8 FT.	L.F.	420	——	——	——	420
EXPANSION DEVICE, STRUCTURE B-13-410	L.S.	——	——	——	——	1
HIGH-STRENGTH STRUCTURAL STEEL	LB.	849,730	——	——	——	849,730
WELDED STUD SHEAR CONNECTORS, 7/8 X 4-INCH	EACH	3357	——	——	——	3357
FIXED BEARING ASSEMBLIES, STRUCTURE B-13-410	EACH	6	——	——	——	6
EXPANSION BEARING ASSEMBLIES, STRUCTURE B-13-410	EACH	12	——	——	——	12
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	——	700	1025	1200	2925
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	——	320	440	——	760
PIPE UNDERDRAIN, 6-INCH	L.F.	——	70	110	——	180
PIPE UNDERDRAIN, UNPERFORATED, 6-INCH	L.F.	——	20	20	——	40
GEOTEXTILE FABRIC, TYPE DF	S.Y.	——	58	92	——	150
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	——	——	——	——	4
NON-BID ITEMS						
POLYVINYL CHLORIDE WATERSTOP	L.F.	——	95	137	——	232

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED

THE UPPER LIMITS OF 'EXCAVATION FOR STRUCTURES' SHALL BE THE EXISTING GROUNDLINE AT THE PIER.

THE COLOR OF THE FINISH TOP COAT SHALL BE BLUE (FEDERAL STD. COLOR NO. 25240) OR SIMILAR APPROVED BY THE ENGINEER.

ALL FIELD CONNECTIONS TO BE MADE W/ ¾"ø FRICTION TYPE HIGH TENSILE STRENGTH BOLTS.

DESIGN DATA

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 P.S.F.

RATINGS:
DESIGN RATING —— HS 20
INVENTORY RATING —— HS 31
OPERATING RATING —— HS 51

ALLOWABLE DESIGN STRESSES
CONCRETE MASONRY SLAB —— f'c = 4,000 P.S.I.
OTHER —— f'c = 3,500 P.S.I.

HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 —— fy = 60,000 P.S.I.
HIGH STRENGTH STRUCTURAL STEEL ASTM A 709 -GRADE 50 SUPPLIMENTAL REQUIREMENT S83. INCLUDING 4" THICK —— Fy= 50,000 P.S.I.
STRUCTURAL CARBON STEEL ASTM A709 - GRADE 36 —— Fy= 36,000 P.S.I.

FOUNDATION DATA:
ABUTMENTS TO BE SUPPORTED ON STEEL PILING

PIER TO BE SUPPORTED ON STEEL PILING

TRAFFIC DATA:	C.T.H. "M"	U.S.H. 18/151
A.D.T. (2014)	5,100	7,000
R.D.S.	45 M.P.H.	65 M.P.H.

No.	Date.	Revision	By

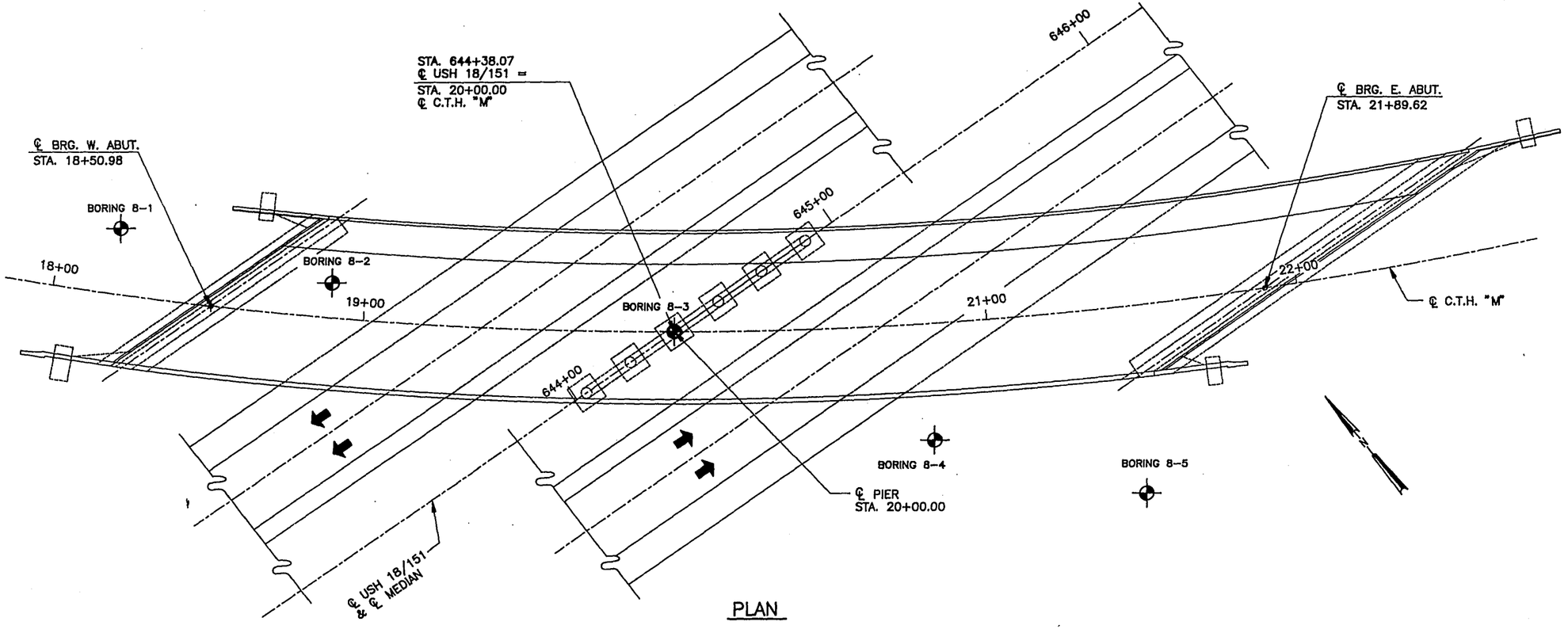
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

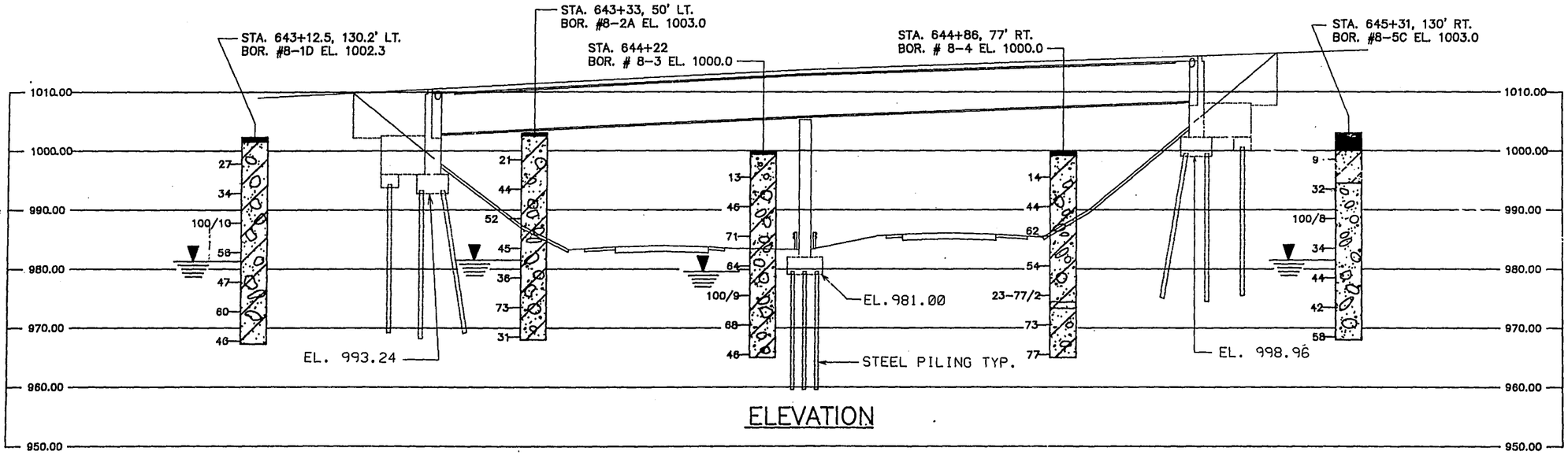
Const. Spec. W.S. '89 | Drawn By ZIRK | Plans Checked FWG

GENERAL PLAN

SHEET 2



PLAN



ELEVATION

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	8.13

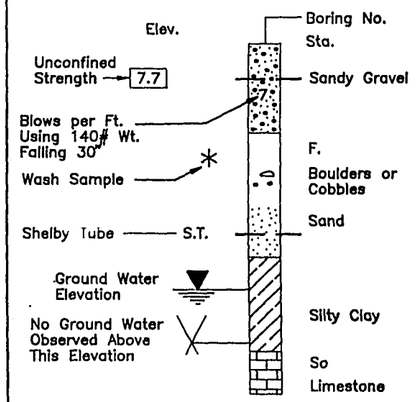
ABBREVIATIONS

F.___ FINE M.___ MEDIUM C.___ COARSE
WS.___ WEATHERED SO.___ SOUND

MATERIAL SYMBOLS

TOPSOIL | SILT | SHALE
SAND | CLAY | LIMESTONE/ DOLOMITE
GRAVEL | BOULDERS/ COBBLES | SANDSTONE

LEGEND OF BORING



Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D. X 1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrent conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.

No.	Date.	Revision	By

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

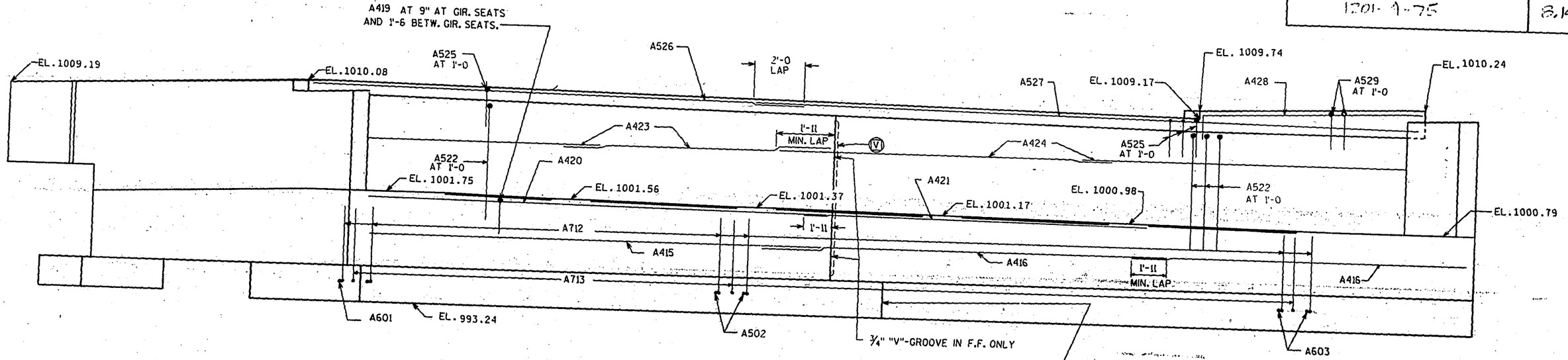
STRUCTURE B-13-410

Const. Spec.	Drawn By	Plans Checked
WIS. 89	ZIRK	FWG

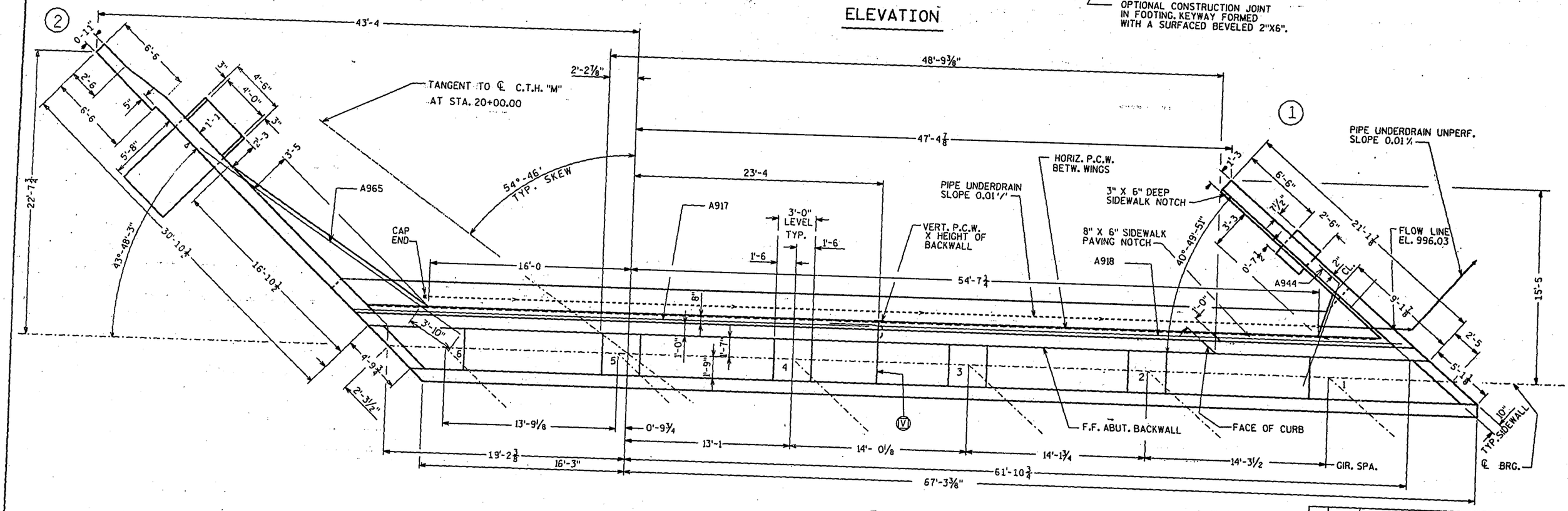
SUBSURFACE EXPLORATION

SHEET 3

STATE PROJECT NUMBER	SHEET NO.
1201-1-75	8.14



ELEVATION



PLAN

(V) VERT. CONST. JOINT FORMED BY A SURFACED BEVELED 2" X 8".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

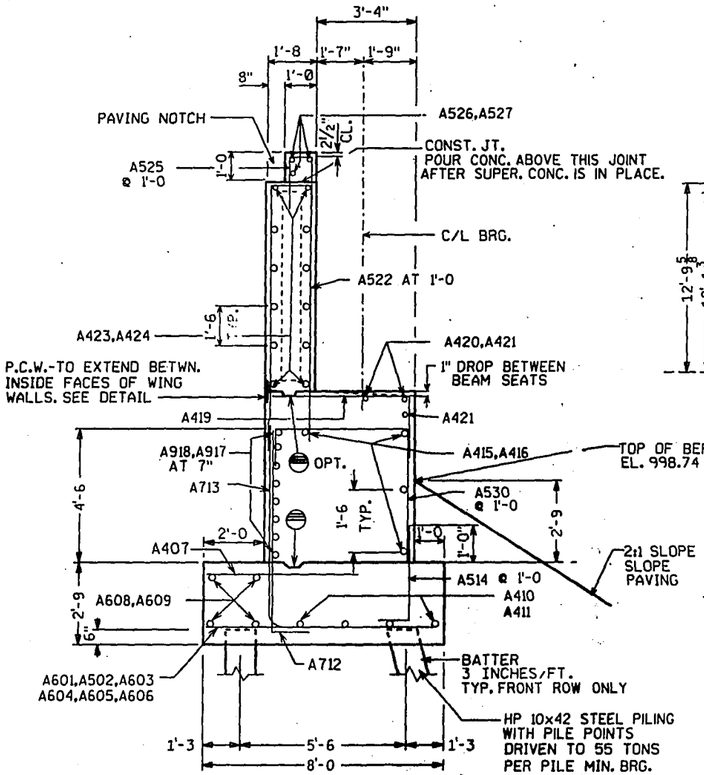
CONST. SPEC.	DRAWN BY	PLANS CK'D.
1989	ZIRK	FWG

WEST ABUTMENT

SHEET 4

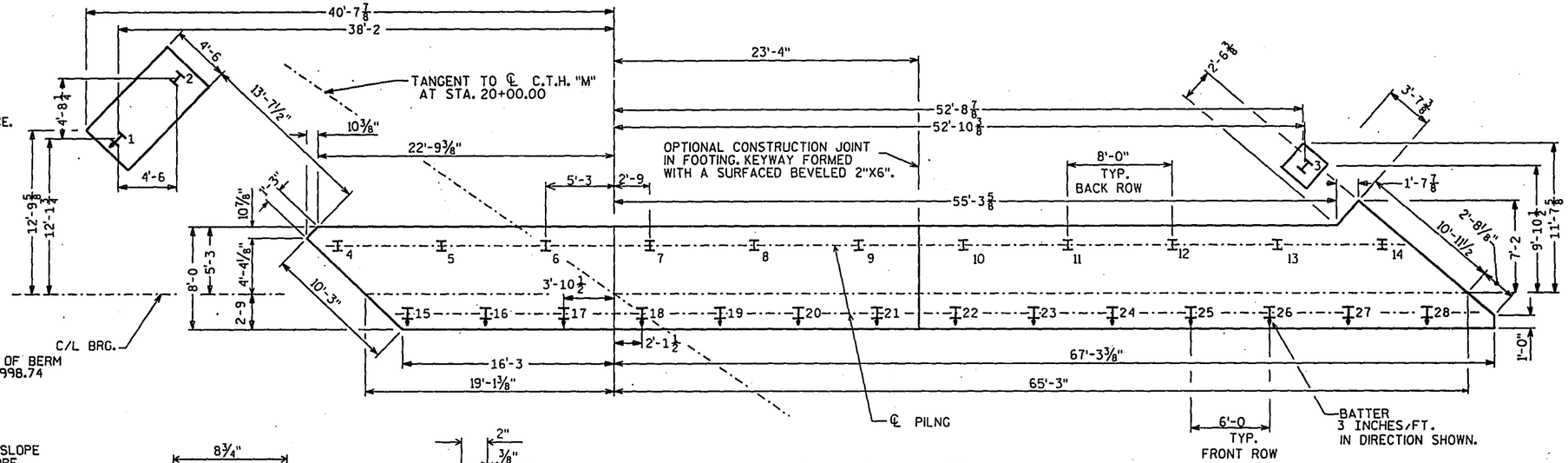
BR B13410-410ABUT.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.15

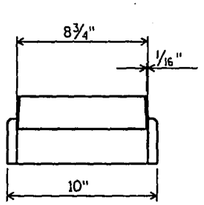


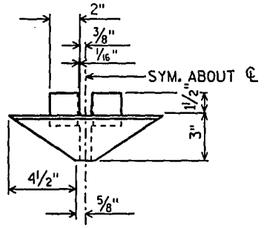
BODY SECTION

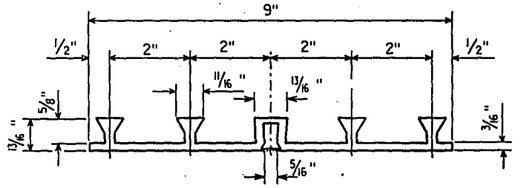
CONST. JOINT KEYWAY FORMED WITH A SURFACED, BEVELED 2" x 6".



FOOTING PLAN



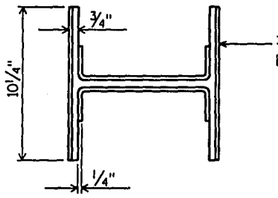




P.C.W.

(POLYVINYL CHLORIDE WATERSTOP)

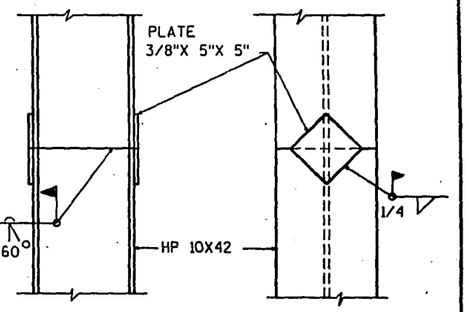
P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERT. ENDS OF P.C.W. WITH NON-STAINING NON-BITUMINOUS JOINT SEALER. P.C.W. SHALL BE FASTENED TO THE FORMS BY NAILING OUTSIDE OF THE OUTSIDE TAB.



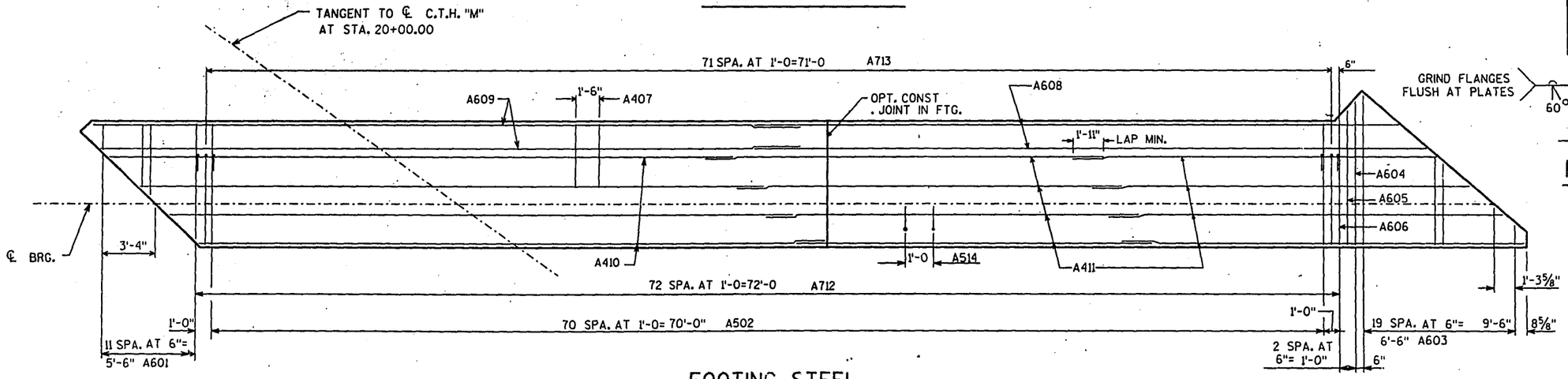
POINT NOTES

1. MATERIAL = CAST STEEL (ASTM A-27-84-65-35)
2. ALL FILLETS = ⅜"
3. ALL WELDS BETW. PILE & POINT TO BE IN ACCORDANCE WITH AWS SPEC'S. WELD FLANGES TO FITTING ON OUTSIDE FACES.
4. CONTRACTOR MAY USE AN ALTERNATE DESIGN UPON APPROVAL OF THE ENGINEER.

PILE POINT DETAIL



PILE SPLICE DETAIL



FOOTING STEEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

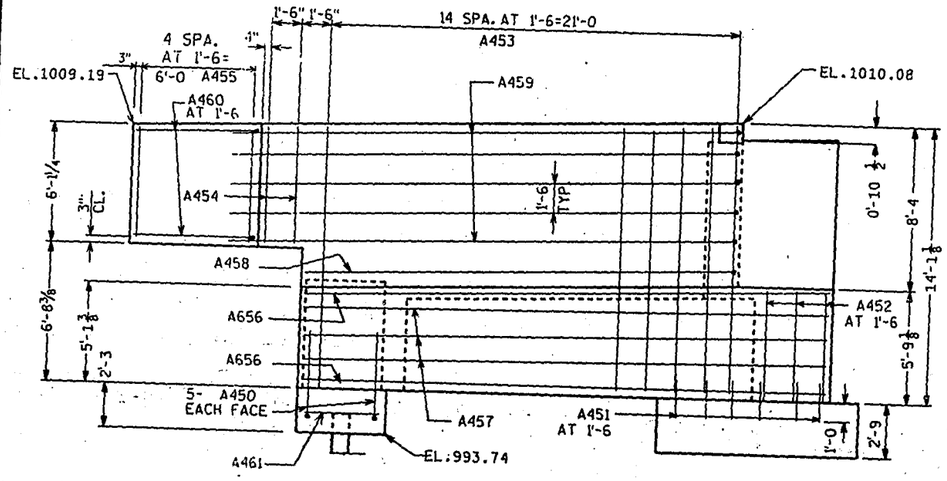
CONST. SPEC.	1989	DRAWN BY	ZIRK	PLANS CK'D.	FWG

WEST ABUTMENT DETAILS

SHEET 5

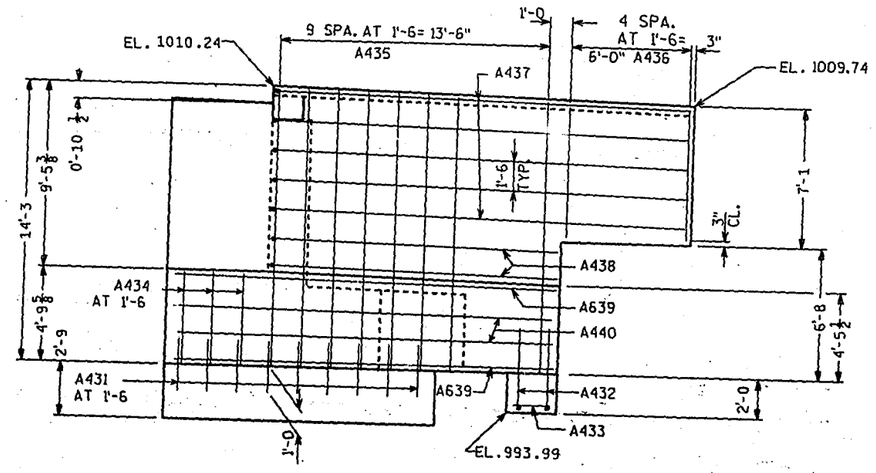
.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.16



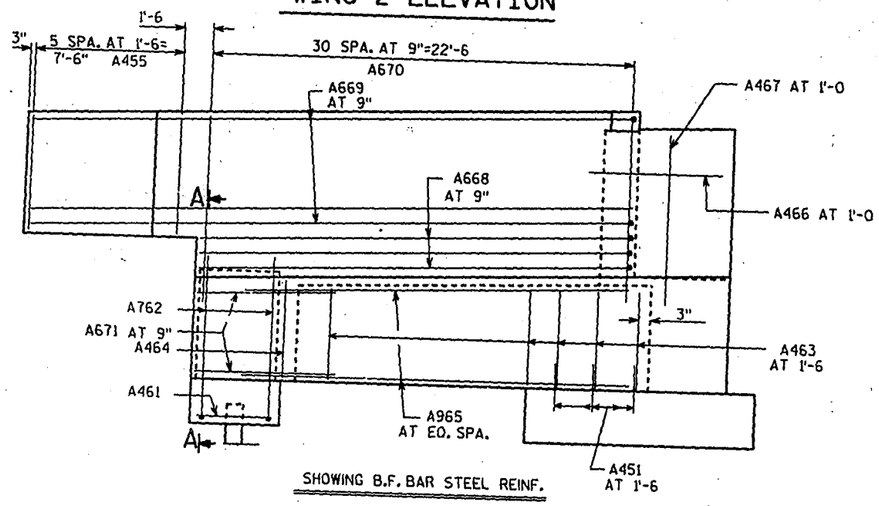
SHOWING F.F. BAR STEEL REINF.

WING 2 ELEVATION



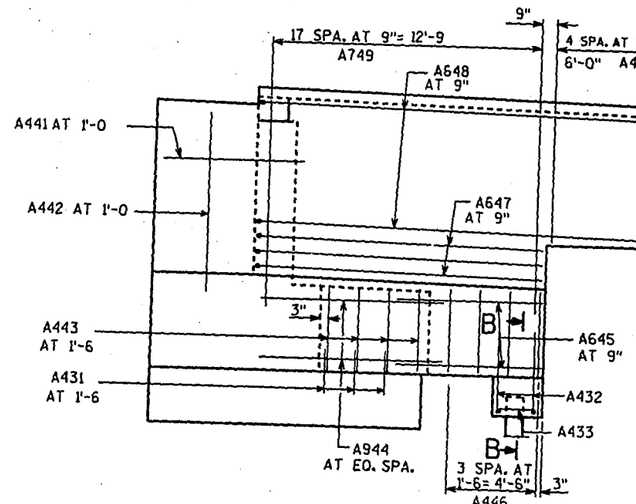
SHOWING F.F. BAR STEEL REINF.

WING 1 ELEVATION



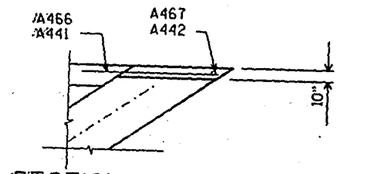
SHOWING B.F. BAR STEEL REINF.

WING 2 ELEVATION



SHOWING B.F. BAR STEEL REINF.

WING 1 ELEVATION



SECTION THRU SIDEWALL

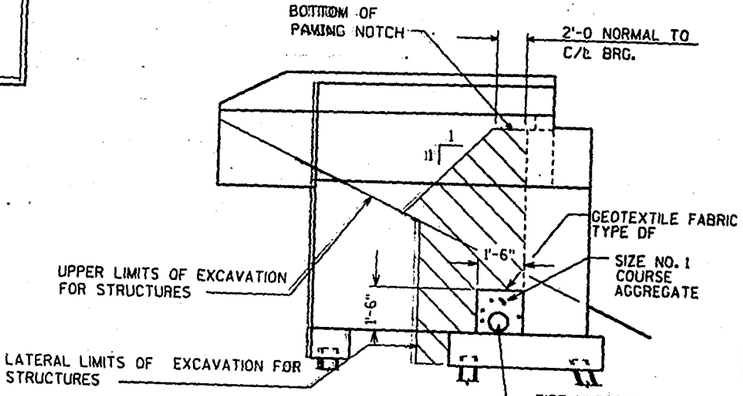
(ALL BARS SPA.@ 1'-0)

GRANULAR BACKFILL BETWEEN INSIDE FACE OF WING WALLS.

GRANULAR BACKFILL SHALL BE GRADE 1 OR MATERIAL MEETING THE REQUIREMENTS OF FINE AGGREGATE FOR CONCRETE MASONRY.

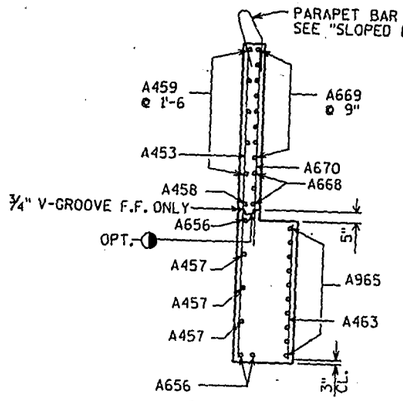
GRANULAR BACKFILL SHALL BE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES".

SIZE NO. 1 COURSE AGGREGATE INCIDENTAL TO BID ITEM "PIPE UNDERDRAIN, 6 INCH.

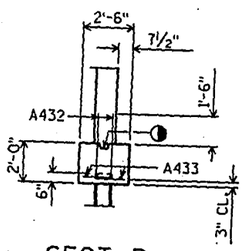


PAY LIMITS FOR EXCAVATION FOR STRUCTURES & GRANULAR BACKFILL

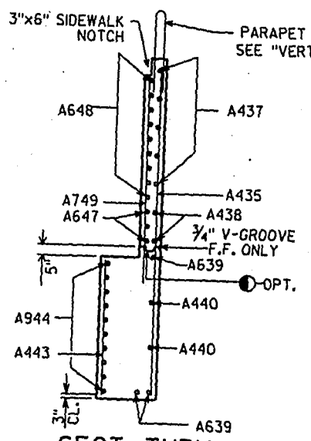
NOTE: GRANULAR BACKFILL SHALL BE PLACED BEFORE SUPERSTRUCTURE CONCRETE IS POURED.



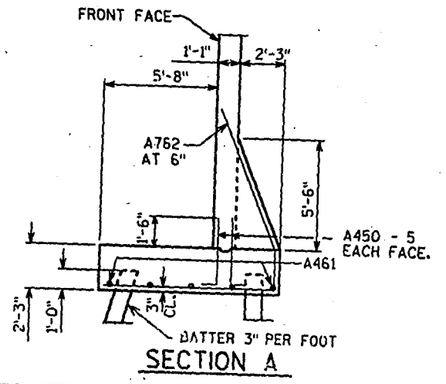
SECT. THRU WING 2



SECT. B



SECT. THRU WING 1



SECTION A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

WEST ABUTMENT DETAILS

SHEET 6

BR B13410-410ABUTS.DGN

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

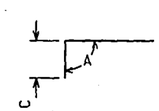
STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.17

BILL OF BARS

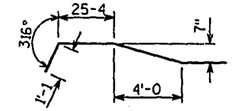
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUNDLE	LOCATION
A601		6	8-5		X		FOOTING
A502		71	7-8				FOOTING
A603		10	10-8		X		FOOTING
A604		1	9-1				FOOTING
A605		1	8-6				FOOTING
A606		1	7-11				FOOTING
A407		57	4-0				FOOTING
A608		4	41-8				FOOTING
A609		4	45-4				FOOTING
A410		4	39-1				FOOTING
A411		8	24-11				FOOTING
A712		73	7-11	X			FOOTING DOWEL
A713		72	12-4	X			FOOTING DOWEL
A514		85	4-0	X			FOOTING DOWEL
A415		5	39-1				BODY HORIZ.
A416		10	24-11				BODY HORIZ.
A917		8	45-5				BODY HORIZ. B.F.
A918		8	45-1				BODY HORIZ. B.F.
A419		50	6-5				BODY TOP
A420		2	38-9				BODY TOP
A421		2	24-9				BODY TOP
A522	X	85	19-9	X			BODY AND BACKWALL
A423	X	24	21-8				BACKWALL HORIZ
A424	X	24	23-3				BACKWALL HORIZ
A525	X	69	5-11	X			BACKWALL AND PAV.BLOCK STIRRUPS
A526	X	3	43-2				PAVING BLOCK
A527	X	3	43-2				PAVING BLOCK
A428	X	2	18-0	X			BACKWALL AT SDWK.
A529	X	16	5-8	X			BACKWALL AT SDWK. STIRRUPS
A530		85	9-10	X			BODY STIRRUPS
A431		11	2-7				WING 1 DOWELS F.F. AND B.F.
A432		4	4-7	X			WING 1 FOOTING
A433		2	2-2				WING 1 FOOTING
A434		3	4-7				WING 1 VERT. F.F.
A435		10	13-6				WING 1 VERT. F.F.
A436		10	6-9				WING 1 VERT. F.F. AND B.F.
A437		5	21-10	X			WING 1 HORIZ. F.F.
A438		2	15-4	X			WING 1 HORIZ. F.F.
A639		3	19-1				WING 1 HORIZ. F.F.
A440		2	19-1				WING 1 HORIZ. F.F.
A441		8	6-0				WING 1 HORIZ. SIDEWALL
A442		5	9-9				WING 1 VERT. SIDEWALL
A443		3	4-0				WING 1 VERT. FILLET
A944		10	11-0	X			WING 1 HORIZ. FILLET
A645		6	7-1				WING 1 HORIZ. FILLET B.F.
A446		4	4-2				WING 1 VERT. B.F.
A647		3	14-3	X			WING 1 HORIZ. B.F.
A648		9	20-9	X			WING 1 HORIZ. B.F.
A749		18	10-2				WING 1 VERT. B.F.
A450		10	4-1	X			WING 2 FOOTING DOWELS
A451		9	3-0				WING 2 DOWELS F.F. & B.F.
A452		3	5-7				WING 2 VERT. F.F.
A453		15	13-10				WING 2 VERT. F.F.
A454		2	6-3				WING 2 VERT. F.F.
A455		10	6-1				WING 2 VERT. F.F. & B.F.
A656		3	26-7				WING 2 HORIZ. F.F.
A457		3	26-7				WING 2 HORIZ. F.F.
A458		1	22-9	X			WING 2 HORIZ. F.F.
A459		5	27-6	X			WING 2 HORIZ. F.F.
A460		5	7-3	X			WING 2 HORIZ. F.F.
A461		5	4-2				WING 2 FOOTING
A762		9	17-10	X			WING 2 FOOTING
A463		13	4-3				WING 2 VERT. FILLET
A464		1	4-5				WING 2 VERT. B.F.
A965		10	25-11				WING 2 HORIZ. FILLET

BILL OF BARS

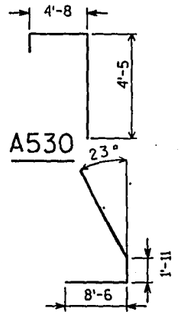
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUNDLE	LOCATION
A466		8	5-9				WING 2 HORIZ. SIDEWALL
A467		5	9-0				WING 2 VERT. SIDEWALL
A668		3	23-10	X			WING 2 HORIZ. B.F.
A669		8	32-7	X			WING 2 HORIZ. B.F.
A670		31	9-5				WING 2 VERT. B.F.
A671		6	6-10				WING 2 HORIZ. B.F.



MARK	C	A
A712	1-2	90°
A613	5-7	90°
A514	0-10	90°
A419	1-10	90°
A428	1-7	90°
A432	1-5	90°
A437	1-4	40°
A438	1-4	40°
A647	1-4	131°
A648	1-4	131°
A450	0-10	90°
A458	1-1	136°
A459	1-1	136°
A460	1-2	90°
A668	1-1	44°

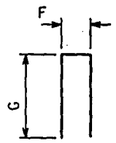


A669

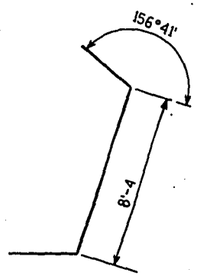


A530

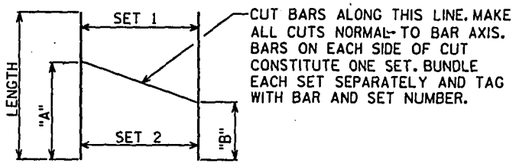
A762



MARK	F	G
A522	1-4	9-4
A525	0-8	2-9
A529	0-8	2-7



A944



CUTTING DIAGRAM

MARK	"A"	"B"	NO. OF BARS/SET	NO. OF EACH SET
A601	4-0	1-7	6	1
A603	5-1	1-3	10	1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

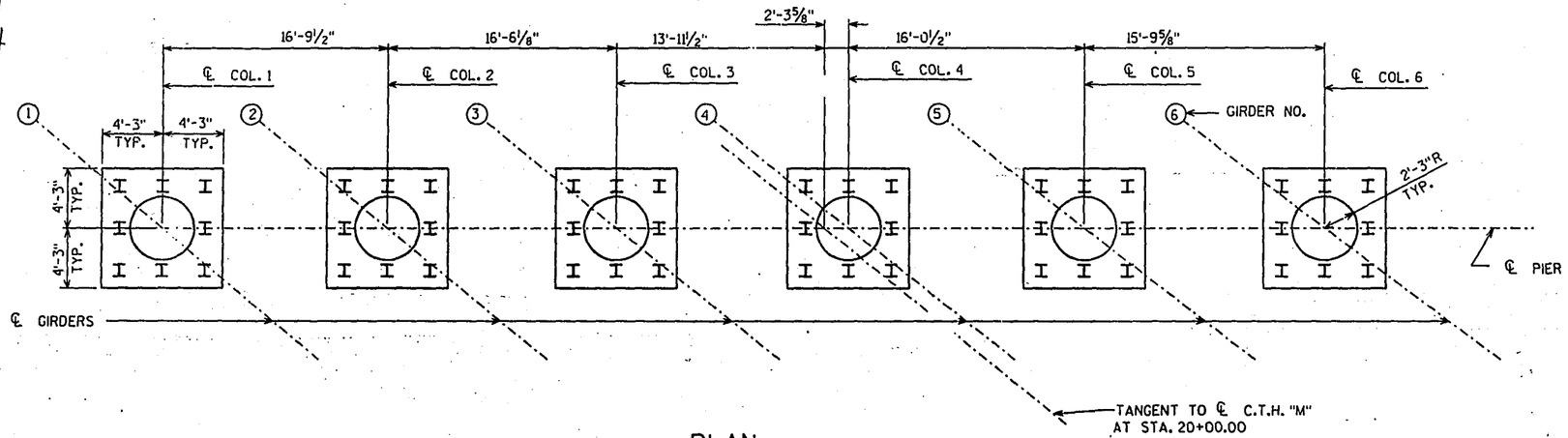
CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

WEST ABUTMENT BILL OF BARS

SHEET 7

.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.18

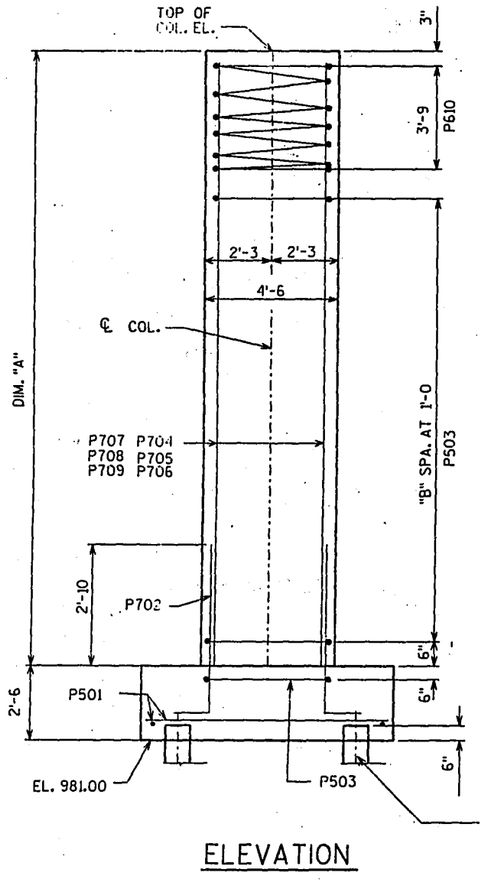


PLAN

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. / DIAG.	BUN-DLE	LOCATION
P501		108	8-4				FOOTINGS
P702	X	96	5-9	X			FOOTING AND COLUMN DOWELS
P503	X	105	14-8	X			FOOTING AND COLUMN HOOPS
P704	X	16	20-0				COL. 1 VERT.
P705	X	16	20-2				COL. 2 VERT.
P706	X	16	20-5				COL. 3 VERT.
P707	X	16	20-8				COL. 4 VERT.
P708	X	16	20-11				COL. 5 VERT.
P709	X	16	21-2				COL. 6 VERT.
P610	X	6	143-9	X			COL. SPIRAL TOP

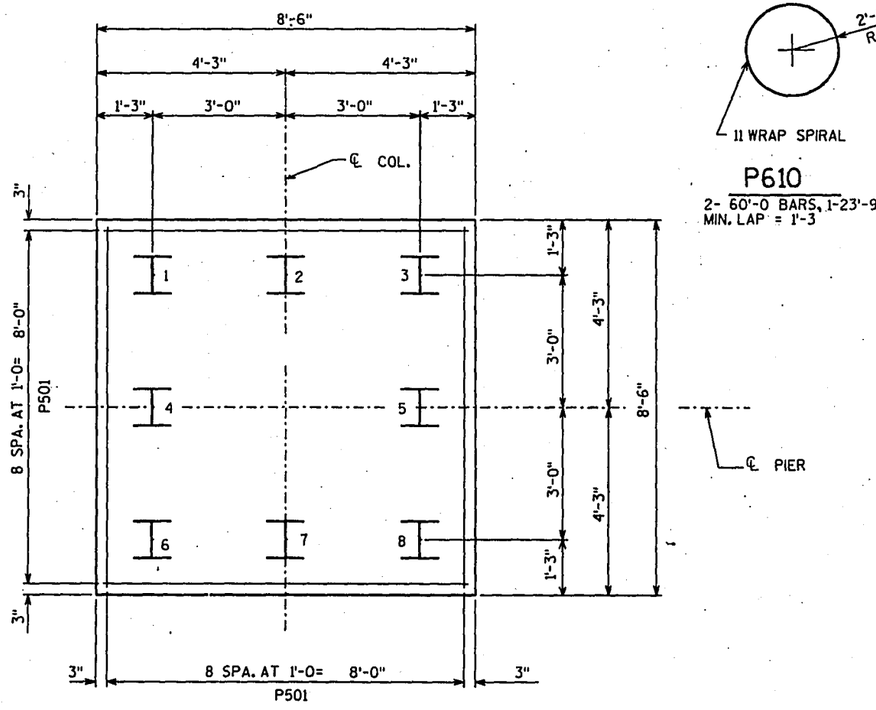


ELEVATION

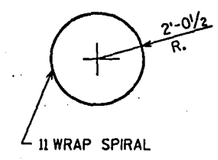
HP 10 X 42 STEEL PILING WITH PILE POINTS. EST. 25'-0 LONG AND DRIVEN TO A MIN. BRG. VALUE OF 55 TONS/PILE.

TABLE OF VARIABLES

COL. NO. & GIR. NO.	TOP OF COL. EL.	DIM. "A"	"B" SPA.
1	1003.68	20'-2⅛	15
2	1003.88	20'-4½	15
3	1004.12	20'-7½	15
4	1004.37	20'-10½	16
5	1004.60	21'-1¼	16
6	1004.86	21'-4⅜	16

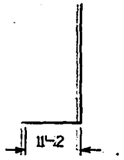


FOOTING PLAN

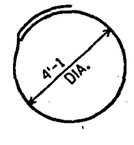


P610

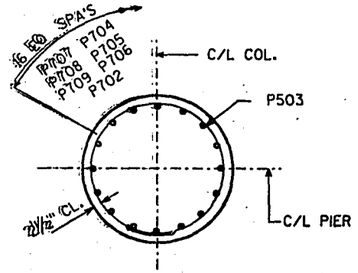
2- 60'-0 BARS, 1-23'-9 BAR
MIN. LAP = 1'-3



P702



P503



SECT. THRU COL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN - DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

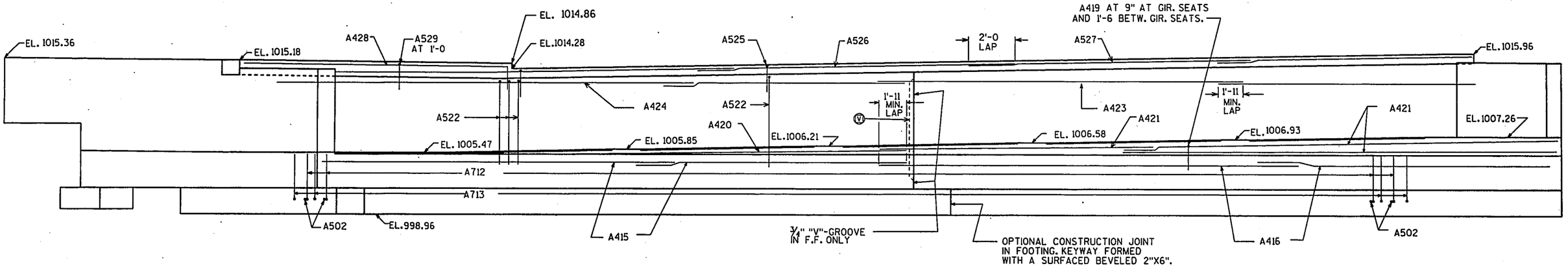
CONST. SPEC.	DRAWN BY	PLANS CK'D.
1989	ZIRK	FWG

PIER

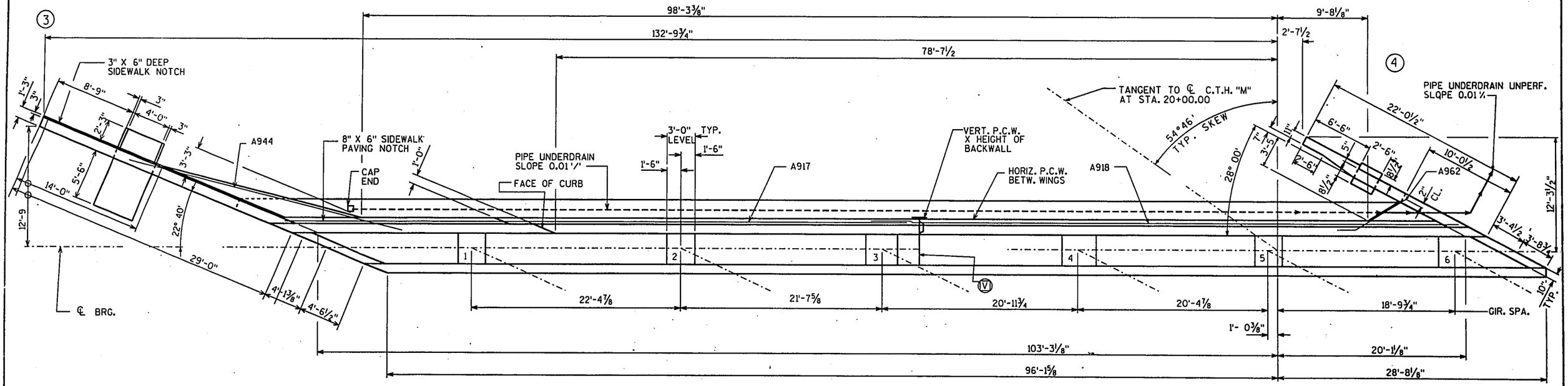
SHEET 8

BR B413410:410PIER.DGN.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.19



ELEVATION



PLAN

Ⓥ VERT. CONST. JOINT FORMED BY A SURFACED BEVELED 2" X 8".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

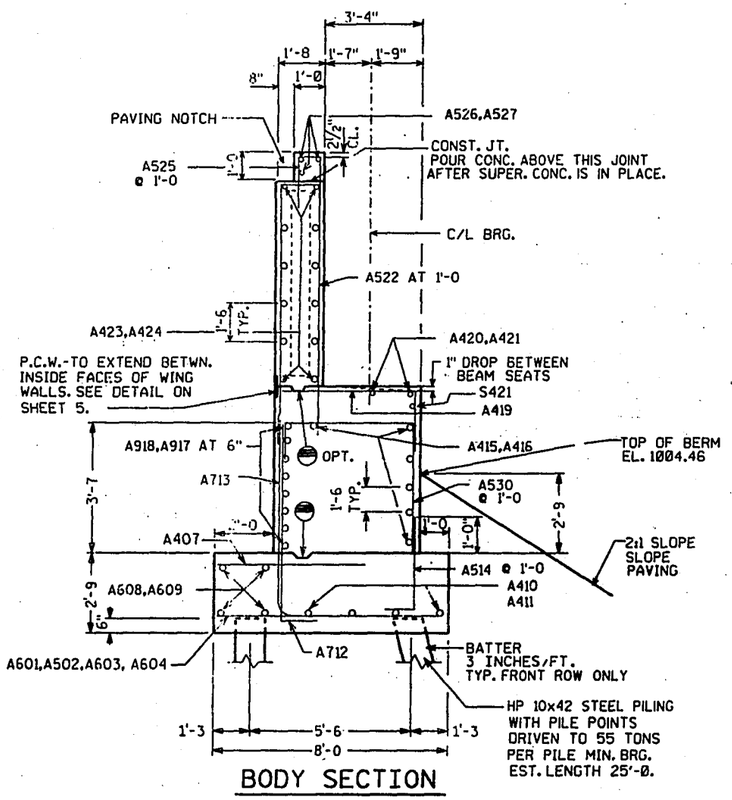
CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

EAST ABUTMENT

SHEET 9

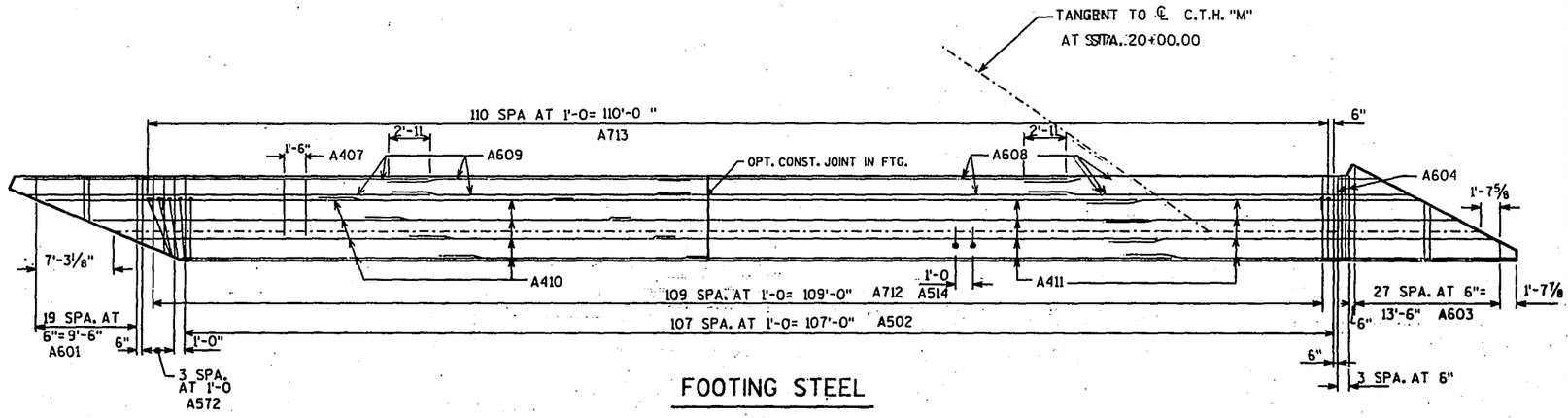
.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.20

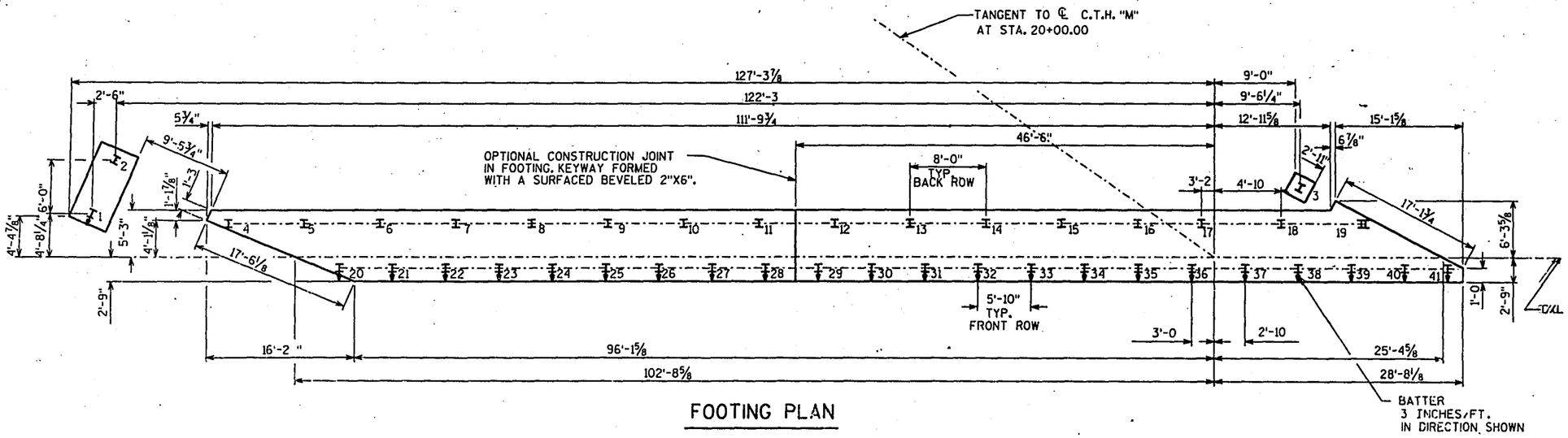


BODY SECTION

CONST. JOINT KEYWAY FORMED WITH A SURFACED, BEVELED 2" x 6".



FOOTING STEEL



FOOTING PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

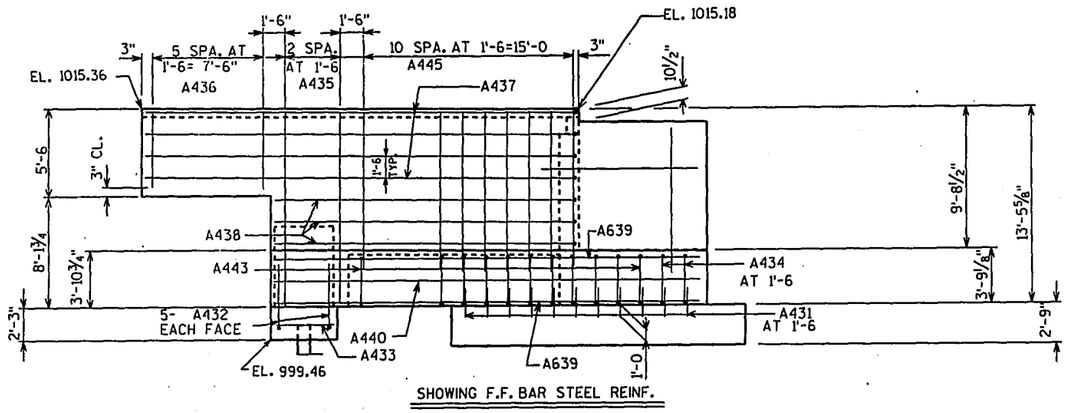
STRUCTURE B-13-410

CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

EAST ABUTMENT DETAILS

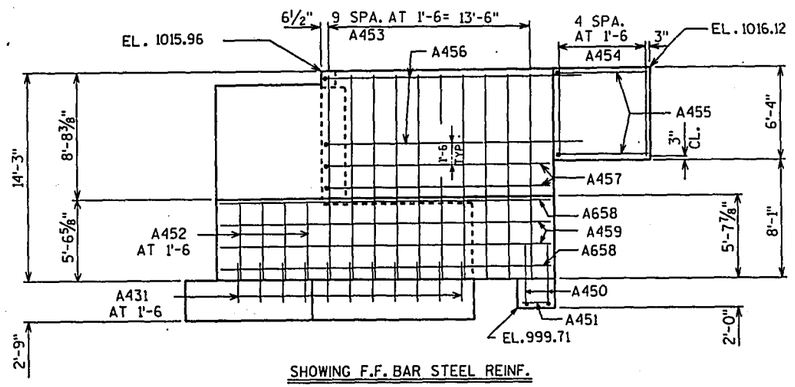
SHEET 10

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.21



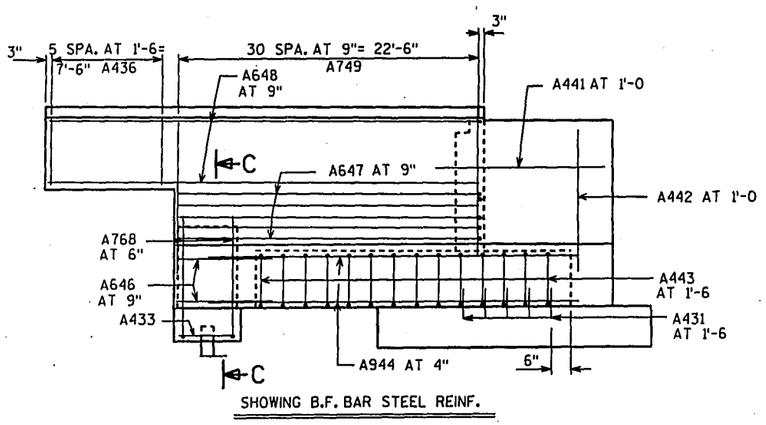
SHOWING F.F. BAR STEEL REINF.

WING 3 ELEVATION



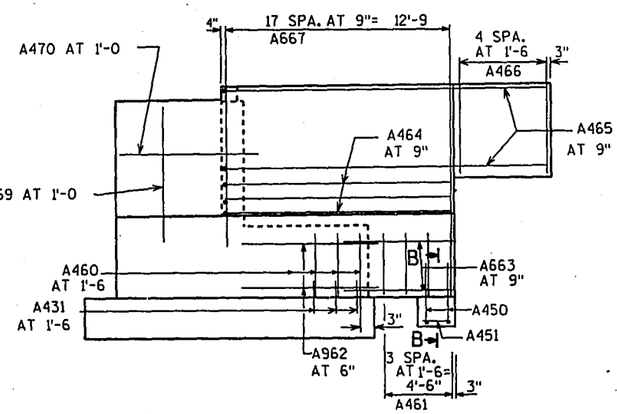
SHOWING F.F. BAR STEEL REINF.

WING 4 ELEVATION



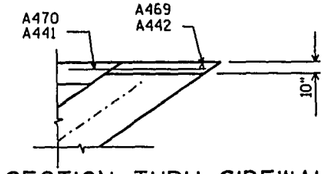
SHOWING B.F. BAR STEEL REINF.

WING 3 ELEVATION



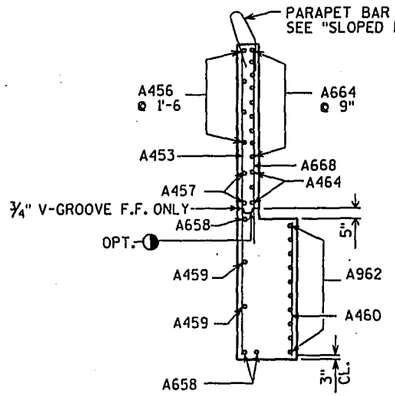
SHOWING B.F. BAR STEEL REINF.

WING 4 ELEVATION



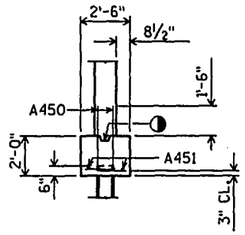
SECTION THRU SIDEWALL

(ALL BARS SPA.@ 1'-0)

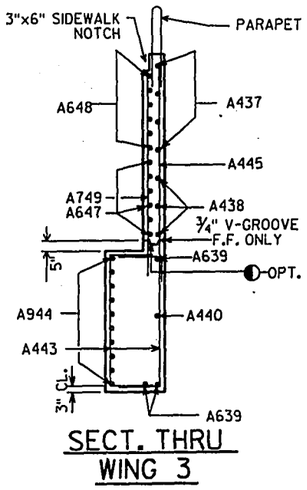


SECT. THRU WING 4

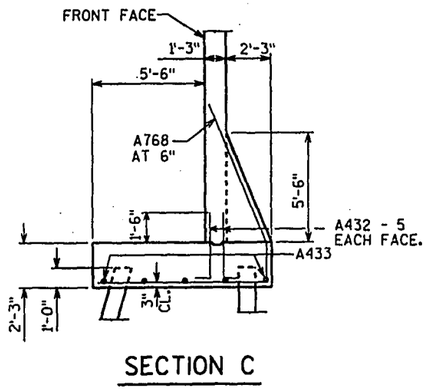
CONST. JOINT KEYWAY FORMED WITH A SURFACED BEVELED 2x6



SECT. B



SECT. THRU WING 3



SECTION C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

EAST ABUTMENT DETAILS

SHEET 11

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.22

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A601		10	7-6		X		FOOTING
A502		108	7-8				FOOTING
A603		14	9-11		X		FOOTING
A604		4	7-8				FOOTING
A407		92	4-0				FOOTING
A608		8	35-7				FOOTING
A609		8	35-7				FOOTING
A410		8	26-0				FOOTING
A411		8	39-6				FOOTING
A712		110	7-0	X			FOOTING DOWEL
A713		111	11-6	X			FOOTING DOWEL
A514		128	4-0	X			FOOTING
A415		8	29-0				BODY HORIZ.
A416		8	37-6				BODY HORIZ.
A917		8	39-0				BODY HORIZ. B.F.
A918		8	35-6				BODY HORIZ. B.F.
A419		95	7-5	X			BODY TOP
A420		2	40-0				BODY TOP
A421		5	35-6				BODY TOP
A522	X	128	22-4	X			BODY AND BACKWALL
A423	X	24	32-8				BACKWALL HORIZ
A424	X	24	34-6				BACKWALL HORIZ
A525	X	99	4-5	X			BACKWALL AND PAVING BLOCK
A526	X	6	44-2				PAVING BLOCK
A527	X	6	44-2				PAVING BLOCK
A428	X	2	30-1	X			BACKWALL AT SDWK.
A529	X	29	5-5	X			BACKWALL AT SDWK.
A530		128	8-6	X			BODY STIRRUPS
A431		30	2-0				WING 3 & 4 DOWELS F.F. AND B.F.
A432		10	4-1	X			WING 3 FOOTING DOWELS
A433		5	4-2				WING 3 FOOTING
A434		2	3-7				WING 3 VERT. F.F.
A435		14	13-3				WING 3 VERT. F.F.
A436		12	5-1				WING 3 VERT. F.F. AND B.F.
A437		4	30-8	X			WING 3 HORIZ.

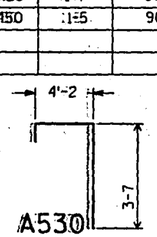
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS

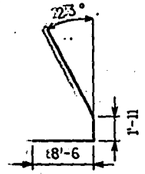
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A438		3	21-11	X			WING HORIZ. F.F.
A639		3	26-6				WING HORIZ. F.F.
A440		1	26-6				WING HORIZ. F.F.
A441		9	9-10				WING 3 HORIZ. SIDEWALLS
A442		9	9-10				WING 3 VERT. SIDEWALLS
A443		14	13-10	X	X		WING 3 VERT. FILLET STIRRUPS
A944		10	25-6				WING 3 HORIZ. FILLET
A445		11	11-0				WING 3 VERT.
A646		4	7-0				WING 3 HORIZ. B.F.
A647		6	25-1	X			WING 3 HORIZ. B.F.
A648		6	33-10	X			WING 3 HORIZ. B.F.
A749		31	10-10				WING 3 VERT. B.F.
A450		4	4-7	X			WING 4 FOOTING
A451		2	2-2				WING 4 FOOTING
A452		4	5-2				WING 4 VERT. F.F.
A453		10	14-1				WING 4 VERT. F.F.
A454		5	5-11				WING 4 VERT. F.F.
A455		5	7-3	X			WING 4 HORIZ. F.F.
A456		4	18-2	X			WING 4 HORIZ. F.F.
A457		2	16-3	X			WING 4 HORIZ. F.F.
A658		3	22-3				WING 4 HORIZ. F.F.
A459		2	22-3				WING 4 HORIZ. F.F.
A460		3	5-0				WING 4 FILLET
A461		4	5-0				WING 4 VERT. B.F.
A962		10	13-0				WING 4 FILLET HORZ.
A663		7	7-3				WING 4 HORIZ. B.F.
A464		3	14-9	X			WING 4 HORIZ. B.F.
A465		9	21-3	X			WING 4 HORIZ. B.F.
A466		5	5-11				WING 4 VERT. B.F.
A667		18	9-10				WING 4 VERT. B.F.
A768		9	17-10	X			WING 3 FOOTING
A469		7	8-10				WING 4 SIDEWALL
A470		8	8-2				WING 4 SIDEWALL

A465

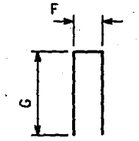
MARK	C	A
A464	1-7	162°
A455	1-2	90°
A456	1-7	28°
A457	1-7	28°
A432	0-10	90°
A647	2-4	33°
A437	2-4	157°
A438	2-4	157°
A648	2-4	33°
A712	1-2	90°
A713	5-8	90°
A514	0-10	90°
A419	4-8	90°
A428	1-7	90°
A450	1-5	90°



A530

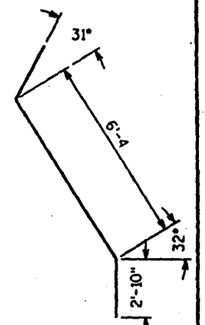


A768

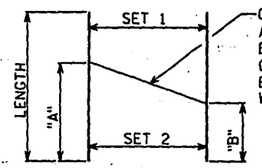


MARK	F	G
A522	1-4	9-6
A443	2-11	Ⓧ
A525	0-8	2-0
A529	0-8	2-6

Ⓧ VARIES FROM 1'-0 TO 3'-2 IN 2" INCREMENTS



A962



CUT BARS ALONG THIS LINE. MAKE ALL CUTS NORMAL TO BAR AXIS. BARS ON EACH SIDE OF CUT CONSTITUTE ONE SET. BUNDLE EACH SET SEPARATELY AND TAG WITH BAR AND SET NUMBER.

BENT BARS IF USED IN CUTTING DIAGRAM SHALL BE BENT AFTER CUTTING.

CUTTING DIAGRAM

MARK	"A"	"B"	NO. OF BARS/SET	NO. OF EACH SET
A601	3-8	1-10	10	1
A603	4-10	1-5	14	1
A443	4-9	9-1	14	1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

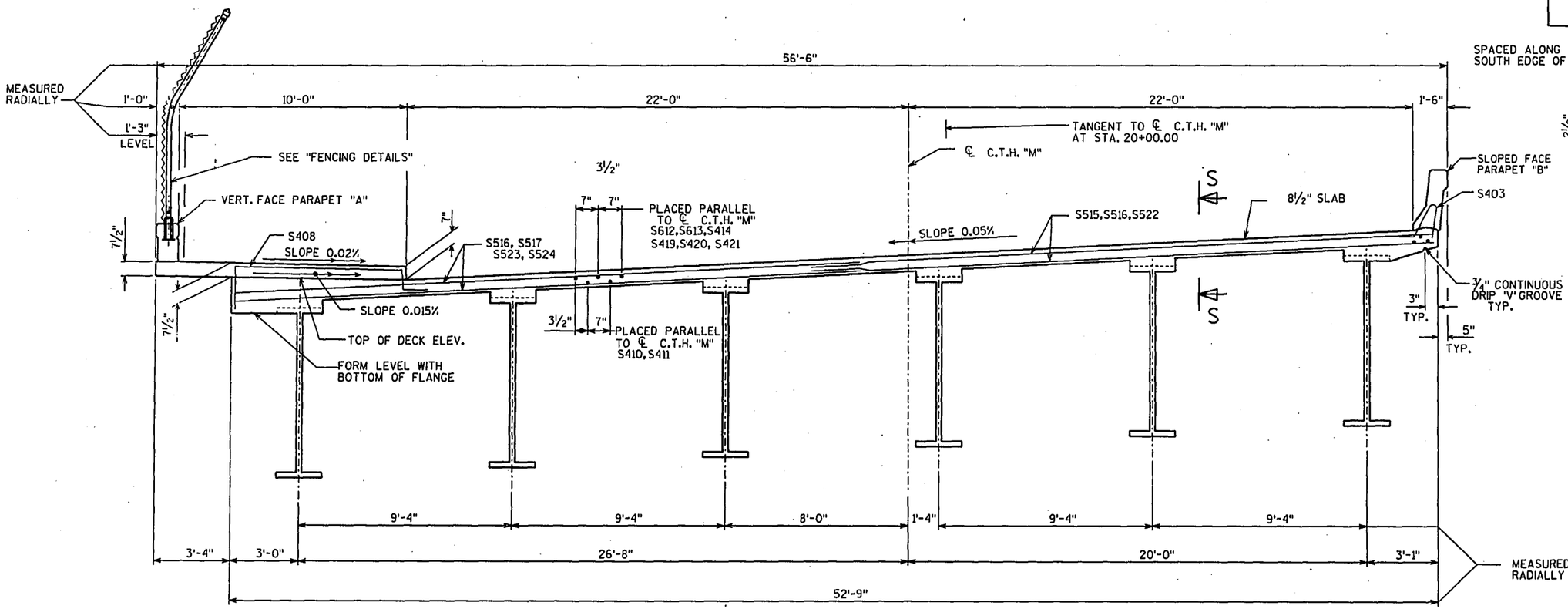
CONST. SPEC.	DRAWN BY	PLANS CK'D.
1989	ZIRK	FWG

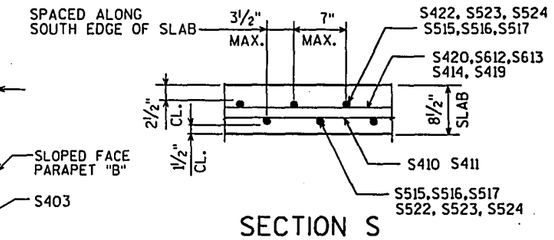
EAST ABUTMENT BILL OF BARS

SHEET 12

.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.23





SECTION S

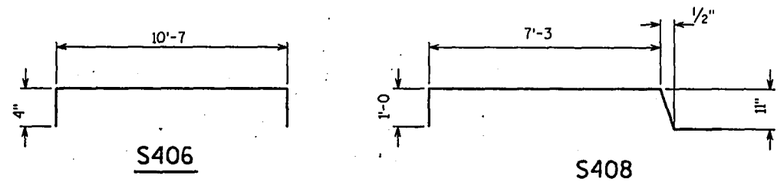
BILL OF BARS

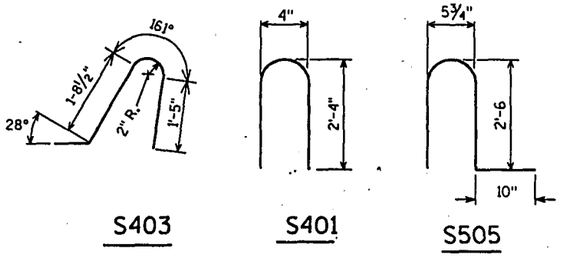
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

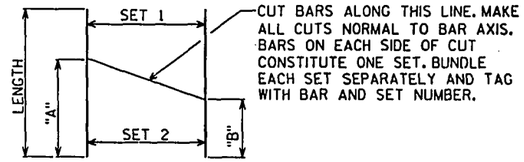
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUNDLE	LOCATION
S401	X	442	4-10	X			PARAPET "B" VERT.
S502	X	45	38-4				PARAPET "B" HORIZ.
S403	X	442	4-3	X			PARAPET "B" & SLAB VERT.
S404	X	40	38-5				PARAPET "A" HORIZ.
S505	X	369	6-0	X			PARAPET "A" VERT.
S406	X	762	11-2	X			SIDEWALK TRANS.
S407	X	130	38-5				SIDEWALK LONGIT.
S408	X	762	9-9	X			SIDEWALK & SLAB TRANS.
S609	X	18	10-0				SLAB S.W. & N.E. CORNERS
S410	X	728	40-0				SLAB LONGIT. BOT.
S411	X	91	42-2		X		SLAB LONGIT. BOT.
A612	X	90	40-0				SLAB LONGIT. TOP AT PIER
A613	X	90	43-2				SLAB LONGIT. TOP AT PIER
A414	X	270	35-0				SLAB LONGIT. TOP SPAN 1
A515	X	65	37-5		X		SLAB TRANS. TOP & BOT. SPAN 1
A516	X	1922	27-7				SLAB TRANS. TOP AND BOTTOM
A517	X	34	38-1		X		SLAB TRANS. TOP & BOT. SPAN 1
S418	X	254	4-4				SIDEWALK HORIZ.
S419	X	45	18-3		X		SLAB LONGIT. SPAN 1
S420	X	450	30-0				SLAB LONGIT. SPAN 2
S421	X	45	38-6		X		SLAB LONGIT. SPAN 2
S522	X	66	38-8		X		SLAB TRANS. TOP AND BOT. SPAN 2
S523	X	172	20-0				SLAB TRANS. TOP AND BOT. SPAN 2
S524	X	70	21-8		X		SLAB TRANS. TOP AND BOT. SPAN 2
S425	X	10	12-0				SLAB AT EXPANSION DEVICE W. ABUT.
S426	X	10	19-0				SLAB AT EXPANSION DEVICE W. ABUT.

CROSS SECTION THRU RDWY.

LOOKING EAST







CUT BARS ALONG THIS LINE. MAKE ALL CUTS NORMAL TO BAR AXIS. BARS ON EACH SIDE OF CUT CONSTITUTE ONE SET. BUNDLE EACH SET SEPARATELY AND TAG WITH BAR AND SET NUMBER.

CUTTING DIAGRAM

MARK	"A"	"B"	NO. OF BARS/SET	NO. OF EACH SET
S515	18-7	2'-2	65	1
S517	18-11	10-9	34	1
S411	29-6	12-8	91	1
S419	14-7	9-2	45	1
S421	31-1	19-5	45	1
S522	19-1	3-5	66	1
S523	10-9	1-4	70	1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

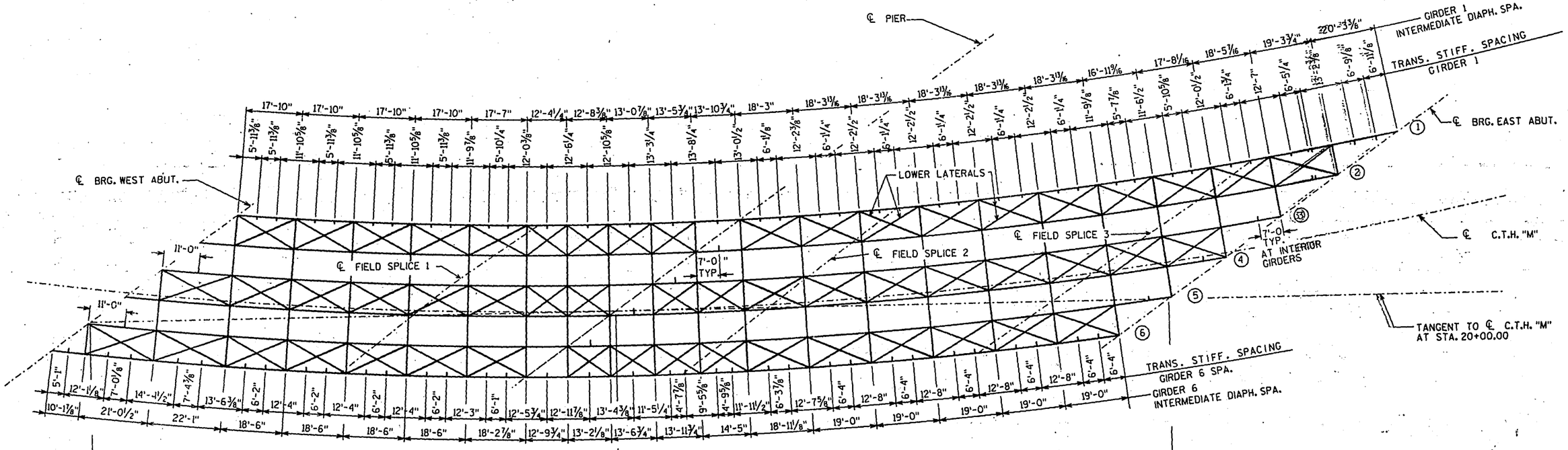
CONST. SPEC.	1989	DRAWN BY	ZIRK	PLANS CK'D.	FWG

SUPERSTRUCTURE

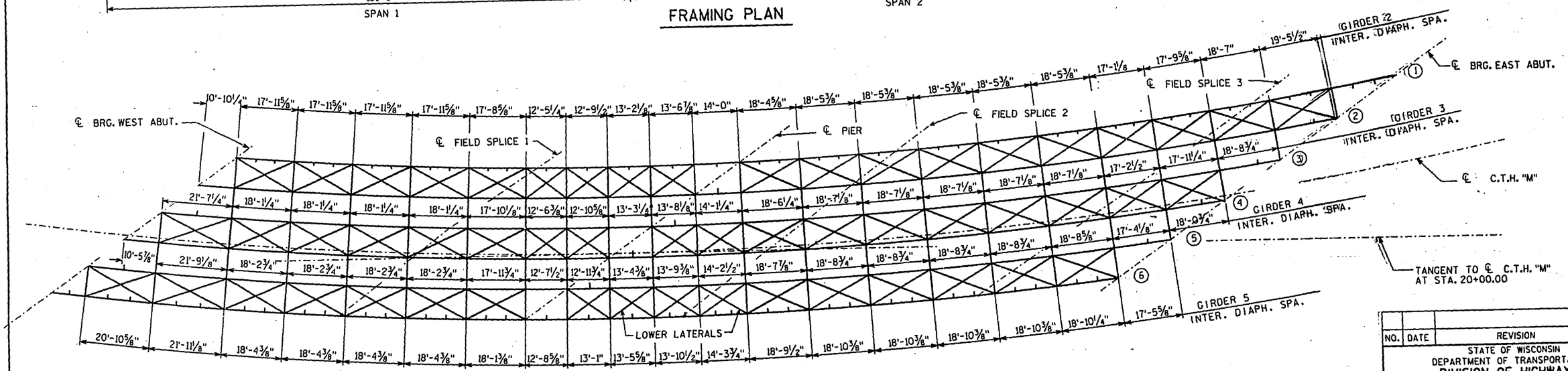
SHEET 13

BR

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.24



FRAMING PLAN



FRAMING PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

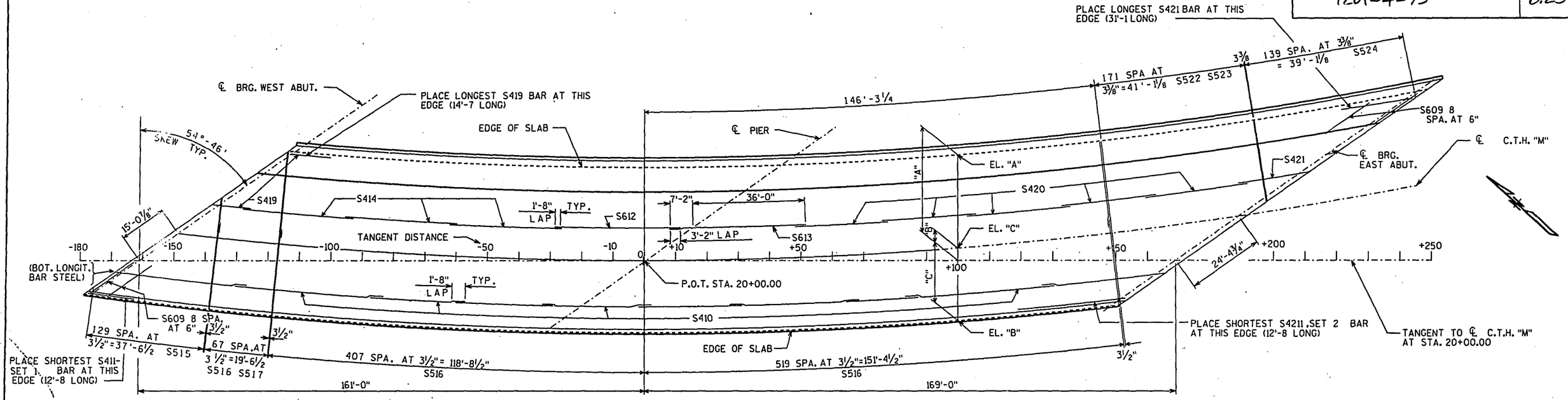
CONST. SPEC.	DRAWN BY	PLANS CK'D.
1989	ZIRK	FWG

FRAMING PLAN

SHEET 14

BR_B13410:410SUPER

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.25



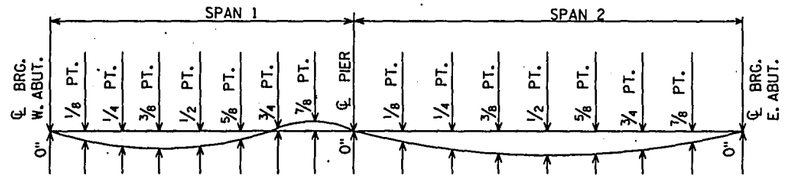
PLAN

TABLE OF TANGENT OFFSETS AND ELEVATIONS

	-180	-170	-160	-150	-140	-130	-120	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	P.O.T.
DIM. "A"	42'-9	41'-4	39'-11⅞	38'-8⅞	37'-6⅝	36'-5⅝	35'-5⅝	34'-6½	33'-8¼	32'-11⅛	32'-2⅞	31'-7½	31'-1⅜	30'-8⅛	30'-3¾	30'-0⅜	29'-10	29'-8½	29'-8
DIM. "B"	12'-9¼	11'-4⅝	10'-1	8'-10¼	7'-8½	6'-7¾	5'-7⅞	4'-9	3'-11⅛	3'-2⅛	2'-6⅛	1'-11⅛	1'-5	0'-11¾	0'-7½	0'-4¼	0'-1⅛	0'-0½	0'-0
DIM. "C"	10'-6½	11'-11¾	13'-2¼	14'-4⅝	15'-6⅛	16'-6⅝	17'-6¼	18'-4⅞	19'-2⅝	19'-11½	20'-7⅜	21'-2¼	21'-8¼	22'-1⅜	22'-5½	22'-8¾	22'-11⅛	23'-0½	23'-1
EL. "A"	1007.72	1008.01	1008.30	1008.58	1008.85	1009.11	1009.37	1009.62	1009.86	1010.10	1010.33	1010.56	1010.78	1010.99	1011.20	1011.39	1011.59	1011.77	1011.95
EL. "B"	1008.83	1009.11	1009.39	1009.65	1009.92	1010.17	1010.42	1010.67	1010.90	1011.14	1011.36	1011.58	1011.79	1012.00	1012.20	1012.39	1012.58	1012.76	1012.94
EL. "C"	1010.07	1010.35	1010.62	1010.88	1011.14	1011.39	1011.63	1011.87	1012.10	1012.33	1012.55	1012.76	1012.97	1013.17	1013.37	1013.56	1013.74	1013.92	1014.09

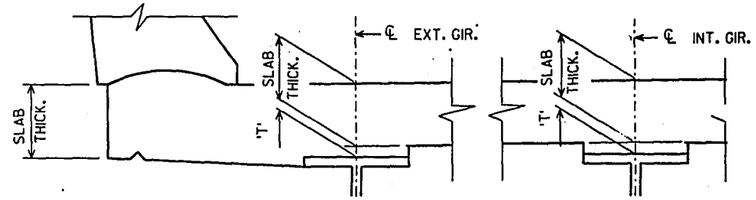
	P.O.T.	+10	+20	+30	+40	+50	+60	+70	+80	+90	+100	+110	+120	+130	+140	+150	+160	+170	+180	+190	+200	+210	+220	+230	+240	+250
DIM. "A"	29'-8	29'-8½	29'-10	30'-0⅜	30'-3¾	30'-8⅛	31'-1⅜	31'-7½	32'-2⅞	32'-11⅛	33'-8¼	34'-6½	35'-5⅝	36'-5⅝	37'-6⅝	38'-8⅞	39'-11⅞	41'-4	42'-9	44'-3	45'-10	47'-6	49'-3⅛	51'-1⅛	53'-0⅛	55'-0¼
DIM. "B"	0'-0	0'-0½	0'-1⅞	0'-4¼	0'-7½	0'-11¾	1'-5	1'-11⅛	2'-6⅛	3'-2⅛	3'-11⅛	4'-9	5'-7⅞	6'-7¾	7'-8½	8'-10¼	10'-1	11'-4⅝	12'-9¼	14'-2⅞	15'-9⅜	17'-5	19'-1½	20'-11	22'-9½	24'-9
DIM. "C"	23'-1	23'-0½	22'-11⅛	22'-8¾	22'-5½	22'-1⅜	21'-8¼	21'-2¼	20'-7⅜	19'-11½	19'-2⅝	18'-4⅞	17'-6¼	16'-6⅝	15'-6⅛	14'-4⅝	13'-2¼	11'-11¾	10'-6½	9'-1¼	7'-7	5'-11¾	4'-3⅝	2'-6½	0'-8⅜	
EL. "A"	1011.95	1012.13	1012.29	1012.46	1012.61	1012.76	1012.90	1013.04	1013.17	1013.29	1013.41	1013.52	1013.62	1013.72	1013.81	1013.90	1013.97	1014.05	1014.11	1014.17	1014.23	1014.28	1014.33	1014.39	1014.44	1014.49
EL. "B"	1012.94	1013.11	1013.27	1013.43	1013.58	1013.73	1013.87	1014.00	1014.13	1014.25	1014.36	1014.47	1014.58	1014.67	1014.76	1014.85	1014.93	1015.00	1015.07	1015.13	1015.18	1015.24	1015.29	1015.34	1015.39	1015.45
EL. "C"	1014.09	1014.26	1014.42	1014.57	1014.72	1014.87	1015.00	1015.14	1015.26	1015.38	1015.50	1015.61	1015.71	1015.81	1015.90	1015.98	1016.06	1016.13	1016.20	1016.26	1016.32	1016.37	1016.42	1016.47	1016.53	——

DEAD LOAD DEFLECTION



		⅛ PT.	¼ PT.	⅜ PT.	½ PT.	⅝ PT.	¾ PT.	⅞ PT.	⅛ PT.	¼ PT.	⅜ PT.	½ PT.	⅝ PT.	¾ PT.	⅞ PT.
GIRDER 1	TOTAL	⅞"	1¼"	1⅜"	⅞"	¼"	-¼"	-⅜"	1⅝"	4"	6⅛"	7⅝"	7⅝"	6⅛"	3⅜"
	CONC.	¾"	1"	1⅛"	¾"	¼"	-¼"	-¼"	1¼"	3"	4¾"	5⅝"	5⅝"	4¾"	2½"
GIRDER 2	TOTAL	¾"	1"	1"	⅝"	⅛"	-¼"	-⅜"	1½"	3¾"	5¾"	6¾"	6¾"	5½"	3⅛"
	CONC.	⅝"	¾"	¾"	½"	⅛"	-¼"	-¼"	1⅛"	2¾"	4⅛"	4⅞"	4⅞"	4'	2¼"
GIRDER 3	TOTAL	½"	1"	1"	⅝"	⅛"	-¼"	-⅜"	1⅜"	3⅜"	5"	6⅛"	6⅛"	5⅛"	2⅞"
	CONC.	⅜"	¾"	¾"	½"	⅛"	-¼"	-¼"	1"	2⅝"	3⅝"	4⅜"	4⅜"	3⅝"	2⅛"
GIRDER 4	TOTAL	½"	1"	1"	⅝"	⅛"	-¼"	-⅜"	1⅜"	3¼"	4⅞"	5¾"	5¾"	4¾"	2⅞"
	CONC.	⅜"	¾"	¾"	½"	⅛"	-¼"	-¼"	1"	2½"	3⅝"	4⅛"	4⅛"	3⅜"	2"
GIRDER 5	TOTAL	½"	1"	1"	⅝"	⅛"	-¼"	-⅜"	1⅜"	3⅛"	4¾"	5⅜"	5⅜"	4½"	2½"
	CONC.	⅜"	¾"	¾"	½"	⅛"	-¼"	-¼"	1"	2⅜"	3½"	3⅞"	3⅞"	3⅛"	1¾"
GIRDER 6	TOTAL	½"	1"	1"	¾"	¼"	-⅛"	-¼"	1⅜"	3"	4⅝"	5⅜"	5⅜"	4½"	2½"
	CONC.	⅜"	¾"	¾"	⅝"	¼"	-⅛"	-⅛"	1"	2¼"	3¼"	3⅞"	3⅞"	3⅛"	1¾"

- INDICATES UPWARD DEFLECTION



TO DETERMINE 'T' ELEVATIONS OF THE TOP FLANGES, TOP OF SPLICE PLATES, OR TOP OF COVER PLATES, WHICHEVER APPLIES, SHALL BE TAKEN AT C/L OF BRGS. AND AT EIGHTH POINTS OF EACH SPAN. THEN FOLLOW THIS PROCESS :

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF STEEL ELEV.
+ DEFLECTION (CONCRETE ONLY)
- SLAB THICKNESS (8½")

= CONCRETE HAUNCH THICKNESS "T"

CONCRETE HAUNCH DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

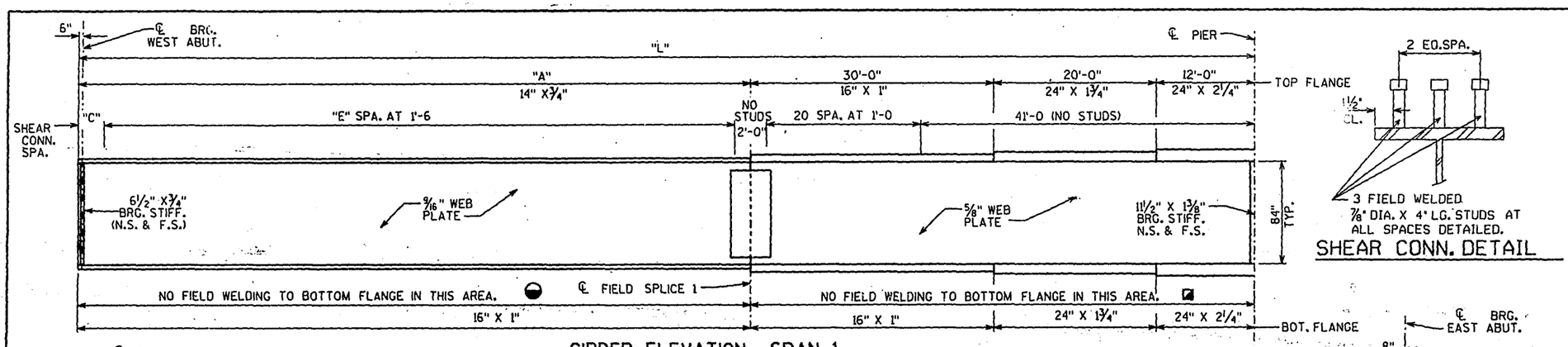
CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

SUPERSTRUCTURE DETAILS

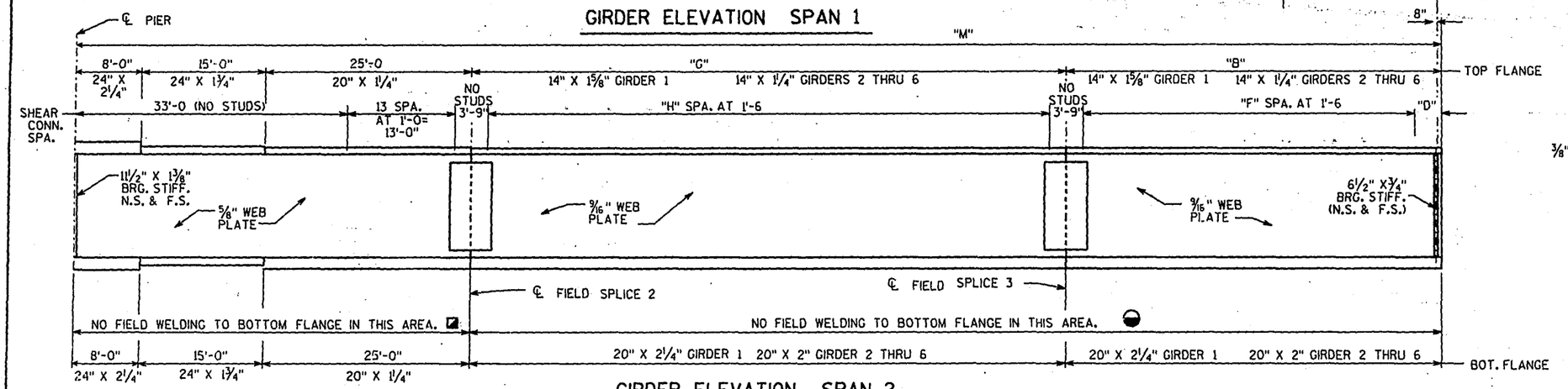
SHEET 15

BR_B13410-410SUPER

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.26

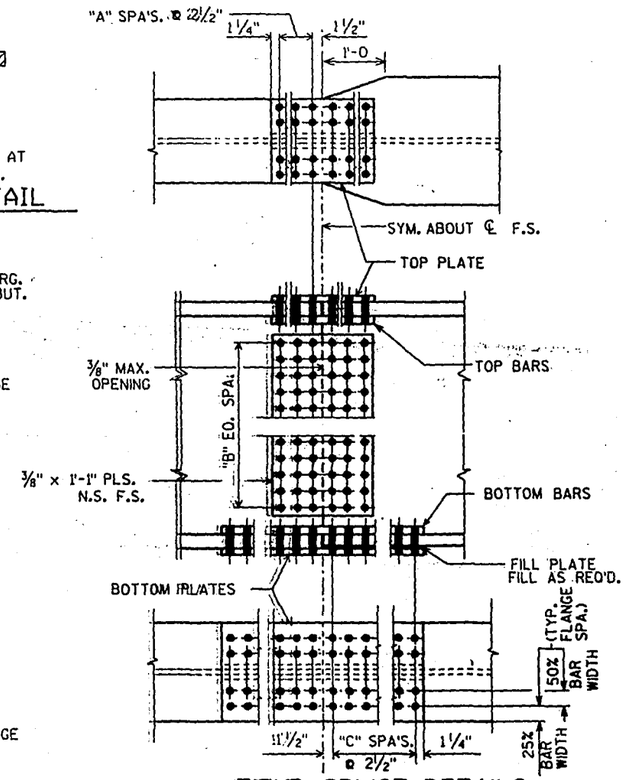


GIRDER ELEVATION SPAN 1



GIRDER ELEVATION SPAN 2

SHEAR CONN. DETAIL



FIELD SPLICE DETAILS

A709 GRADE 50

TABLE OF GIRDER VARIABLES

(ALL LENGTHS ARE MEASURED ALONG CURVE OF GIRDER AT ℄ OF GIRDER.)

GIRDER NO.	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"	"E" SPA.	"F" SPA.	"H" SPA.	DIM. "G"	DIM. "L"	DIM. "M"	Ⓡ
1	92'-11	45'-2	1'-11	1'-2	60	28	71	110'-0	154'-11	203'-2	1248.41
2	90'-11	43'-3 1/8	1'-5	2'-3 1/8	59	26	69	107'-0	152'-11	198'-3 1/8	1257.75
3	89'-0 1/2	32'-9 5/8	1'-0 1/2	2'-3 5/8	58	19	73	113'-0	151'-0 1/2	193'-9 5/8	1267.08
4	87'-3 1/4	31'-8 3/4	0'-9 1/4	1'-2 3/4	57	19	71	110'-0	149'-3 1/4	189'-8 3/4	1276.41
5	85'-7 1/4	27'-11 7/8	2'-1 1/2	1'-11 7/8	55	16	71	110'-0	147'-7 1/4	185'-11 7/8	1285.75
6	84'-0 1/4	24'-6 3/8	2'-0 1/4	1'-6 5/8	54	14	71	110'-0	146'-0 1/4	182'-6 5/8	1295.08

Ⓡ HORIZ. RADIUS OF WEB CURVATURE

NOTES

A FLANGE OF THE LARGER SIZE MAY BE FURNISHED FULL LENGTH BUT PAY WEIGHT SHALL BE BASED ON SECTIONS AS DETAILED.

OPT. WELDED SHOP BUTT SPLICES MAY BE USED IN ALL FLANGE & WEB PLATES OVER 60'-0" LONG. IF USED, THE LOCATION SHALL BE SHOWN ON THE SHOP DRAWINGS & WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

ALL STEEL INCLUDING STIFFENERS, CONN. PLATES AND DIAPHRAMS ARE A709-GRADE 50

ALL LENGTHS ARE MEASURED ALONG ℄ GIRDER.

◪ IN THESE AREAS WELD DIAPH. CONN. PLATES AND INTER. STIFF. PLATES TO BOTTOM (COMPRESSION) FLANGE. FOR CONN. DETAILS AT TOP (TENSION) FLANGE SEE SHT. 17.

◒ IN THESE AREAS WELD DIAPH. CONN. PLATES AND INTER. STIFF. PLATES TO TOP (COMPRESSION) FLANGE. FOR CONN. DETAILS AT BOTTOM (TENSION) FLANGE SEE SHT. 17.

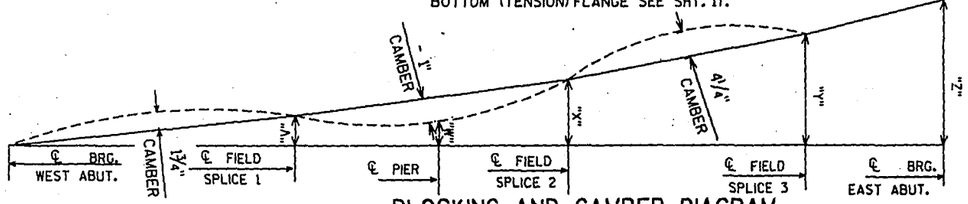
FIELD SPLICE TABLE OF VARIABLES

FIELD SPLICE 1	TOP PLATE	14" x 3/8" x 1'-3 1/2"	BOT. PLATE	116" x 1/2" x 2'-1 1/2"
	TOP BARS	2 pl's. 6" x 1/2" x 1'-3 1/2"	BOT. BARS	2 pl's. 7" x 5/8" x 2'-1 1/2"
FIELD SPLICE 2	TOP PLATE	14" x 3/4" x 2'-11 1/2"	BOT. PLATE	20" x 5/8" x 3'-4 1/2"
	TOP BARS	2 pl's. 6" x 1" x 2'-11 1/2"	BOT. BARS	2 pl's. 9" x 3/4" x 3'-4 1/2"
FIELD SPLICE 3	TOP PLATE	14" x 1" x 3'-4 1/2"	BOT. PLATE	20" x 1 1/4" x 7'-1 1/2"
	TOP BARS	2 pl's. 6" x 1 1/4" x 3'-4 1/2"	BOT. BARS	2 pl's. 9" x 1 1/2" x 7'-1 1/2"

TOP OF STEEL ELEV.

GIR. NO.	℄ BRG. W. ABUT.	℄ F.S. 1	℄ PIER 1	℄ F.S. 2	℄ F.S. 3	℄ BRG. E. ABUT.
1	1008.33	1010.45	1011.59	1012.48	1013.57	1013.35
2	1008.50	1010.64	1011.79	1012.68	1013.81	1013.68
3	1008.71	1010.83	1012.03	1012.94	1014.14	1014.04
4	1008.91	1011.04	1012.27	1013.22	1014.47	1014.41
5	1009.10	1011.24	1012.51	1013.48	1014.79	1014.76
6	1009.29	1011.46	1012.77	1013.76	1015.13	1015.09

TOP OF STEEL ELEVATIONS ARE GIVEN TO TOP OF STEEL. (SPLICE AND COVER PLATE THICKNESS, IF APPLICABLE ARE ACCOUNTED FOR) AND THEY ARE FOR THE MATERIAL AS ERECTED. THE ELEVATION OF TOP OF STEEL AT THE FIELD SPLICE POINTS SHALL BE CHECKED, AND CORRECTED, IF POSSIBLE AFTER ERECTION AND BEFORE PERMANETLY CONNECTING THE DIAPHRAGMS IN PLACE.



BLOCKING AND CAMBER DIAGRAM

BLOCKING TABLE

GIRDER NO.	DIM. "V"	DIM. "W"	DIM. "X"	DIM. "Y"	DIM. "Z"
1	2'-1	3'-1 5/8	4'-1 1/4	5'-2 1/2	4'-11 3/8
2	2'-1 1/8	3'-2	4'-1 3/4	5'-3 1/2	5'-1 5/8
3	2'-0 7/8	3'-2 1/4	4'-2 3/8	5'-4 3/4	5'-3 1/2
4	2'-1	3'-2 7/8	4'-3 1/4	5'-6 1/8	5'-5 1/2
5	2'-1 1/8	3'-3 5/8	4'-4 1/8	5'-7 5/8	5'-7 3/8
6	2'-1 5/8	3'-4 1/4	4'-5 1/4	5'-9 3/	5'-9 1/8

	"A" SPA.	"B" SPA.	"C" SPA.
FIELD SPLICE 1	2	22	4
FIELD SPLICE 2	6	22	7
FIELD SPLICE 3	7	24	16

TOP OF DECK ELEVATIONS

	℄ BRG. W. ABUT.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	F.S. 1	5/8 PT.	3/4 PT.	7/8 PT.	℄ PIER	1/8 PT.	F.S. 2	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	F.S. 3	7/8 PT.	℄ BRG. E. ABUT.
GIR. 1	1009.14	1009.61	1010.05	1010.48	1010.88	1011.18	1011.25	1011.60	1011.93	1012.24	1012.60	1012.90	1012.93	1013.21	1013.45	1013.66	1013.82	1013.86	1013.95	1014.09
GIR. 2	1009.33	1009.81	1010.26	1010.68	1011.09	1011.38	1011.47	1011.83	1012.17	1012.49	1012.86	1013.18	1013.20	1013.50	1013.76	1013.98	1014.17	1014.23	1014.32	1014.45
GIR. 3	1009.52	1010.00	1010.46	1010.89	1011.30	1011.59	1011.69	1012.06	1012.41	1012.73	1013.12	1013.47	1013.47	1013.78	1014.06	1014.30	1014.51	1014.61	1014.68	1014.81
GIR. 4	1009.72	1010.20	1010.66	1011.10	1011.51	1011.78	1011.91	1012.28	1012.64	1012.97	1013.37	1013.74	1013.73	1014.05	1014.34	1014.60	1014.83	1014.95	1015.02	1015.18
GIR. 5	1009.91	1010.39	1010.86	1011.30	1011.72	1011.98	1012.12	1012.50	1012.87	1013.21	1013.61	1014.01	1013.98	1014.32	1014.62	1014.90	1015.14	1015.31	1015.35	1015.53
GIR. 6	1010.10	1010.59	1011.06	1011.50	1011.93	1012.18	1012.34	1012.72	1013.09	1013.44	1013.85	1014.28	1014.23	1014.58	1014.89	1015.18	1015.44	1015.67	1015.66	1015.86

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

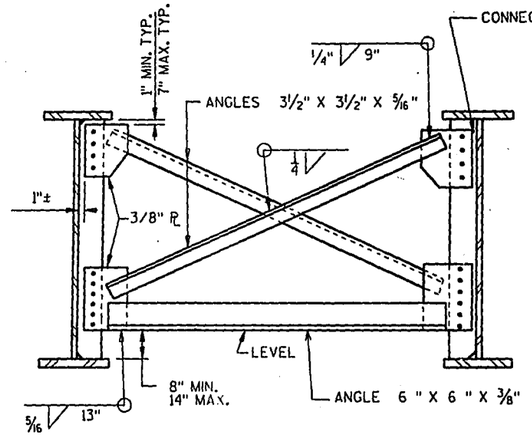
CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

GIRDER DETAILS

SHEET 16

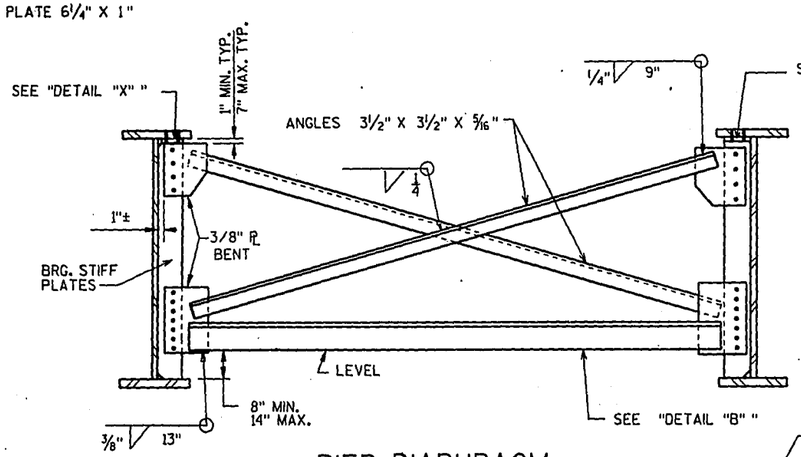
BR_B13410-410SUPER

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.27

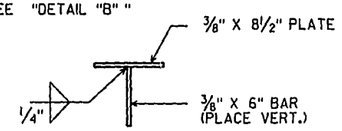


IN SPAN DIAPHRAGM

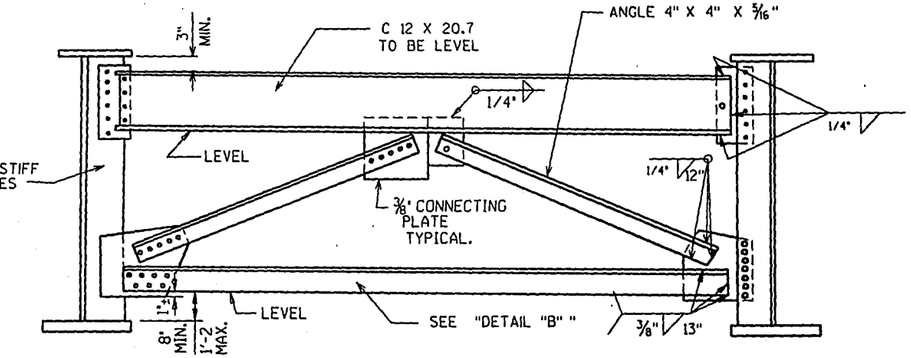
SEE "DIAPH. CONN. PLATES AT LOWER LATERALS" FOR DETAILS AT LOWER LATERALS.



PIER DIAPHRAGM



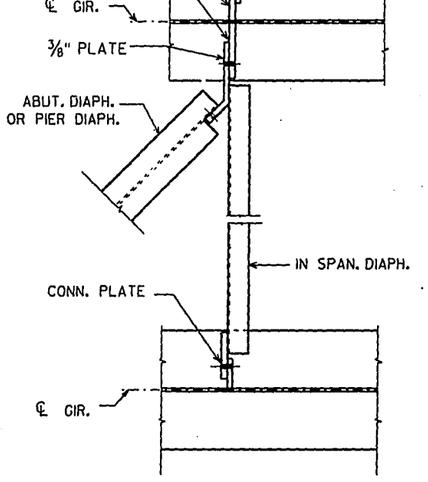
DETAIL "B"



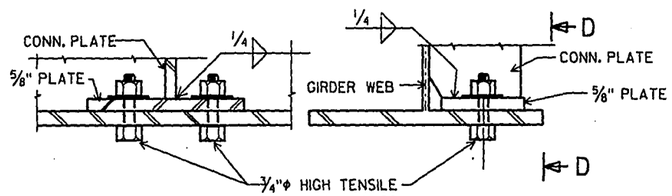
BOLTED ALTERNATE

WELDED ALTERNATE

DIAPHRAGM AT ABUTMENTS



DIAPH. CONN. DETAILS



SECTION "D"

DETAIL "A"

TABLE OF FILLET WELD SIZES

MAT'L. THICK. OF THICKER PART JOINED	* MIN. SIZE OF FILLET WELD
TO ½" INCLUSIVE	3/16"
OVER ½" TO ¾"	1/4"
OVER ¾" TO 1½"	5/16"
OVER 1½" TO 2¼"	3/8"

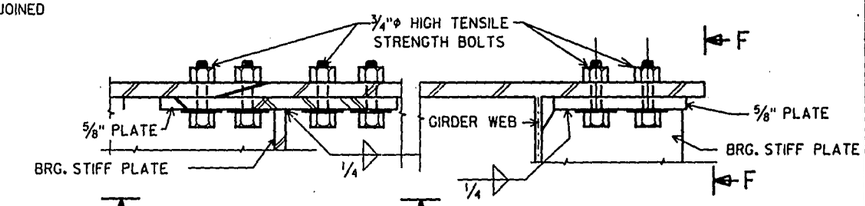
* EXCEPT THAT THE WELD SIZE SHALL NOT EXCEED THICKNESS OF THINNER PART JOINED

NOTES

AT EXTERIOR GIRDERS PLACE INTERMEDIATE STIFFENERS ON INTERIOR FACE OF GIRDER.

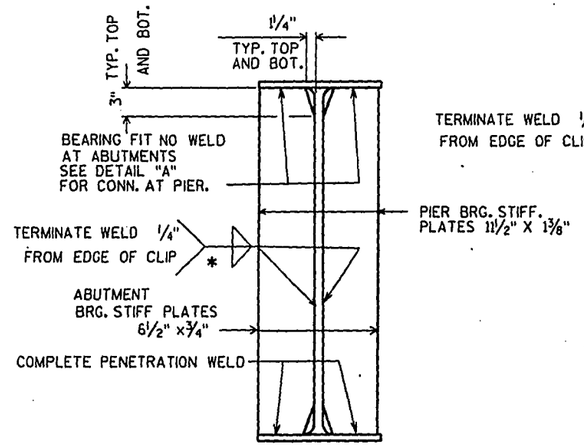
AT INTERIOR GIRDERS PLACE INTERMEDIATE STIFFENERS ON ONE SIDE OF GIRDER.

FOR LOCATION OF DIAPH. CONN.PL'S & INTERM. STIFF'S. SEE "FRAMING PLAN".

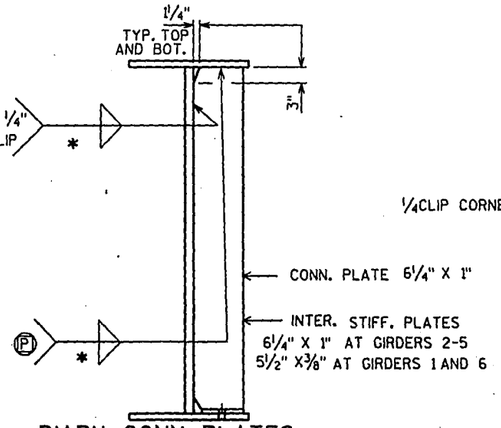


SECTION "F"

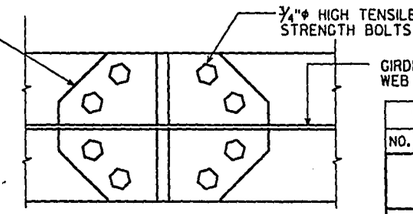
DETAIL "X"



BEARING STIFF. PLATES



DIAPH. CONN. PLATES & INTER. STIFF. PLATES



SECTION "Y"

(P) FILLET WELD TO COMPRESSION FLANGE. NO WELD AT TENSION FLANGE. USE DETAIL "A" @ TENSION FLANGE @ DIAPH. CONN. PL'S. USE TIGHT FIT @ TENSION FLG. @ INTERM. STIFF. PL'S. SEE SHT. 16 FOR LOCATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

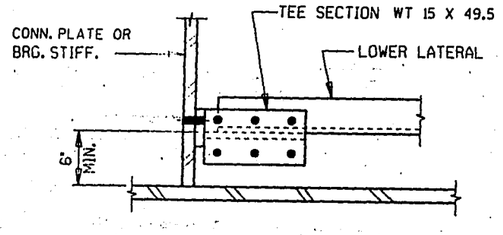
CONST. SPEC.	1989	DRAWN BY	Zirk	PLANS CK'D.	FWG

GIRDER DETAILS

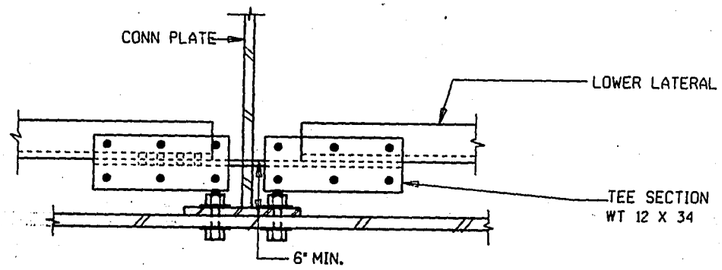
SHEET 17

BR_B4244-44SUPER.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.28



SECTION B



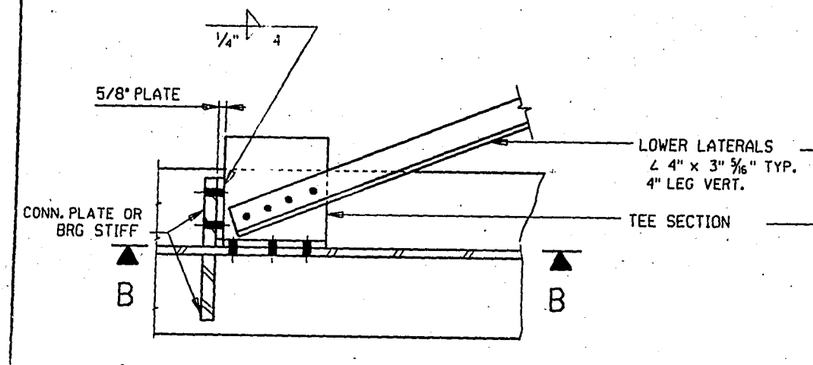
SECTION C

NOTES

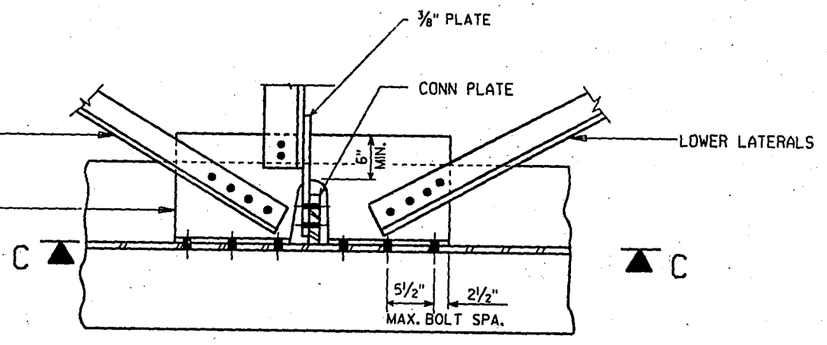
PLACE EACH PANEL OF LOWER LATERALS IN ONE PLANE. PANELS MUST BE HORIZONTAL IN THE TRANSVERSE DIRECTION ONLY.

"TEE SECTION" TO BE CUT FROM WT 15 X 49.5 OR FABRICATE WITH EQUIVALENT PLATES.

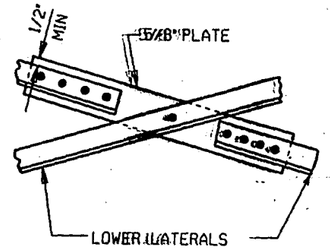
ALL BOLTED CONNECTIONS SHALL BE FRICTION TYPE USING 3/4" Ø HIGH STRENGTH BOLTS (ASTM A325) WITH DOUBLE WASHERS. USE OVERSIZED HOLES 15/16" Ø IN LOWER LATERAL BRACING COMPONENTS.



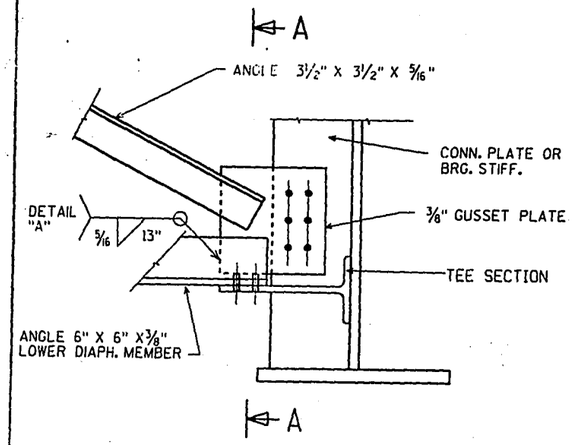
NEAR AT ABUTMENTS AND PIER
(AT ALL TERMINATIONS)



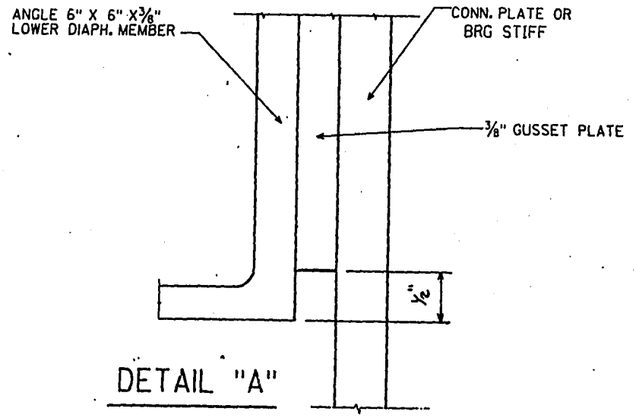
IN SPAN



LOWER LATERAL CROSS CONNECTION DETAIL



DIAPH. CONN. AT LOWER LATERALS



DETAIL "A"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

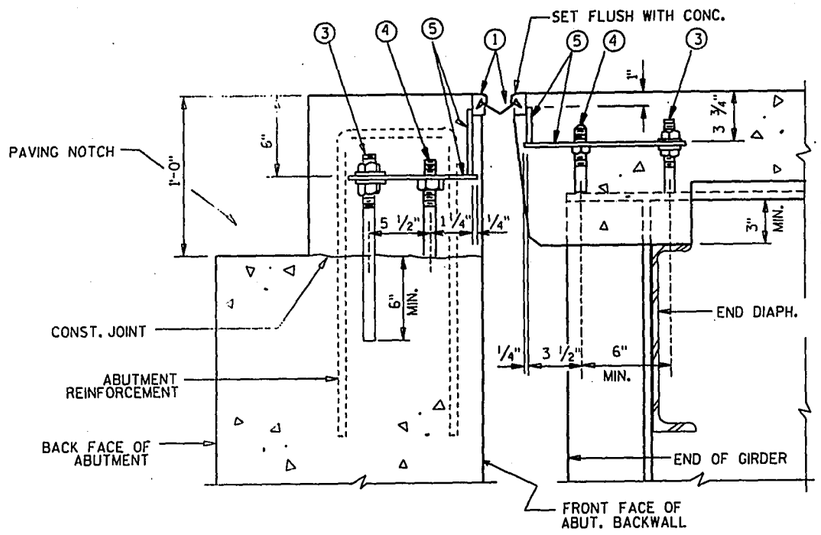
CONST. SPEC. 1989	DRAWN BY Zirk	PLANS CK'D. FWG

LOWER LATERAL DETAILS

SHEET 18

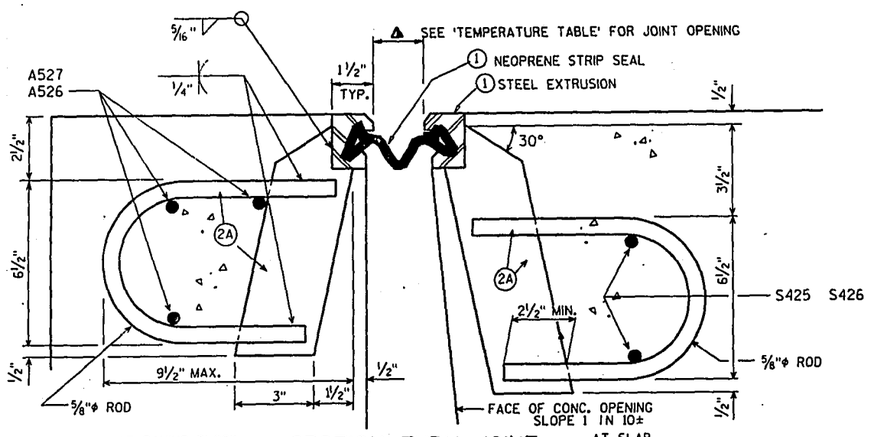
BR_B4243:43SUPER

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.29



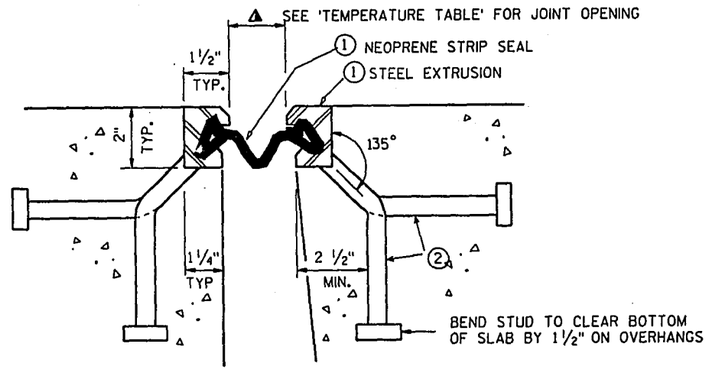
SECTION THRU JOINT AT ABUT.

NORMAL TO ℄ SUBSTRUCTURE



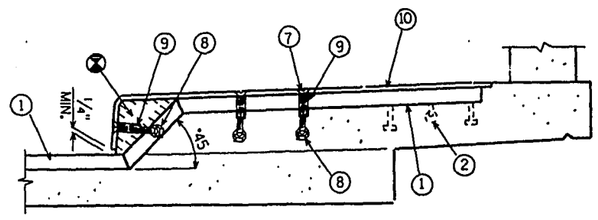
SECTION THRU JOINT

ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.



SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF SLAB & AT SIDEWALKS



SECTION AT SIDEWALK

NOTE: COVER PLATE REQ'D FOR ALL SDWKS

LEGEND

1. NEOPRENE STRIP SEAL & STEEL EXTRUSIONS D.S. BROWN SSA2-400A2, LEWIS ENGINEERING W-400L, STRUCTURAL ACCESSORIES SA2-40SS OR WATSON BOWMAN A3-400SE EXTRUSIONS TO BE A.S.T.M. A36 STEEL.
2. STUDS ⅝" ϕ X 6⅜" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
2A. 3" X ½" ANCHOR PLATE WITH ⅝"ϕ ROD. WELD ROD TO ANCHOR PLATE. WELD ANCHOR PL. TO #1 AT 1'-6" CTRS. BETWEEN GIRDERS.
3. ¾" ϕ THREADED ROD WITH 2 NUTS AND WASHERS. FOR PRESTRESSED GIRDERS FIELD SET ON ℄ OF GIRDER A MINIMUM OF 4" FROM END OF GIRDER. FOR STEEL GIRDERS WELD THREADED ROD TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. ¾"ϕ THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X ½" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. WELD TO NO. 1. PROVIDE 1½" ϕ HOLE FOR NO. 3 & 1" ϕ HOLE FOR NO. 4.
6. PLATE ⅜" X 1'-2" X (2'-0" LONG FOR SKEWS ≤ 10° TO 45°) & 3'-0" LONG FOR SKEWS > 45°) WITH HOLES FOR #7 & #11. BEND AS SHOWN (A36)
7. ¾" X 1½" STAINLESS STEEL FLAT HEAD MACHINE SCREWS. RECESS 1/16" BELOW PLATE SURFACE.
8. ¾" X 4" GALV. HEX HEAD BOLT. BENT 45°.
9. ¾" X 2 ¼" GALV. THREADED COUPLING.
10. SDWK. PLATE ⅜" X (2'-0" WIDE FOR SKEWS TO 45° & 3'-0" WIDE FOR SKEWS 45°) X LIMITS SHOWN. BEND DOWN FACE OF SDWK. WITH HOLES FOR #7. (A36)
11. 1" X DIMENSION "S" SLOTTED CSK. HOLE FOR #7. SLOT PARALLEL TO DIRECTION OF MOVEMENT.

NOTES

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

SAND BLAST CLEAN STEEL EXTRUSIONS PRIOR TO COATING WITH LUBRICANT ADHESIVE FOR NEOPRENE SEAL.

ANCHOR SYSTEM #8 & #9 SHALL CONFORM TO ASTM A307 & SHALL BE GALV. IN ACCORDANCE WITH ASTM A153 CLASS C & D, 1.24 MILS. MIN.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE"

SAND BLAST PLATES #6 AND #11 TO SSPC #6 PRIOR TO HOT DIP GALV.

TEMPERATURE TABLE

	WEST ABUT.	EAST ABUT
90	2"	-
80	- -	2"
70	2⅛"	-
60	-	-
50	2¼"	2¼"
40	-	-
30	2⅜"	-

△ (IN.) MEASURED NORMAL TO JOINT OPENING

SHADED UNDERSIDE DECK TEMPERATURE (° F)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

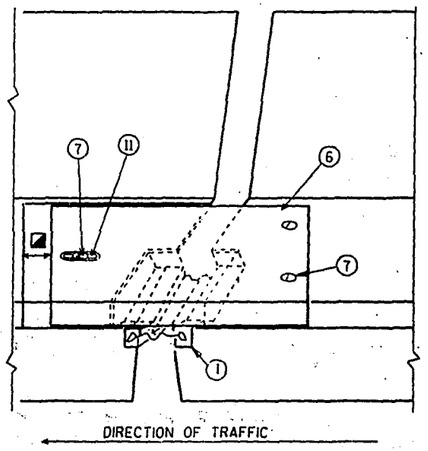
CONST. SPEC.	1989	DRAWN BY	ZIRK	PLANS CK'D.	FWG

EXPANSION DEVICE

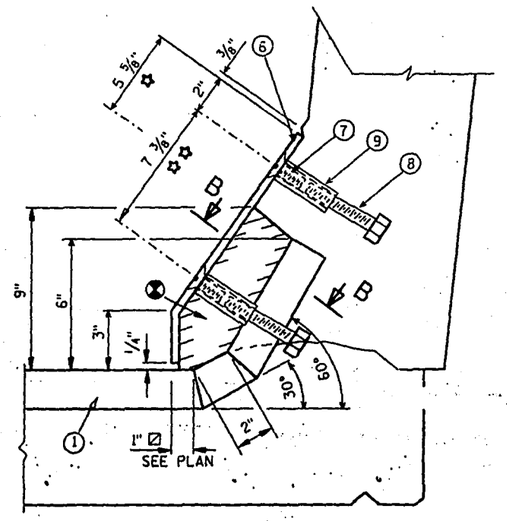
SHEET 19

SCALE = 1:1 BR B2934:34JT.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.30



VIEW OF PARAPET PLATES FROM ROADWAY

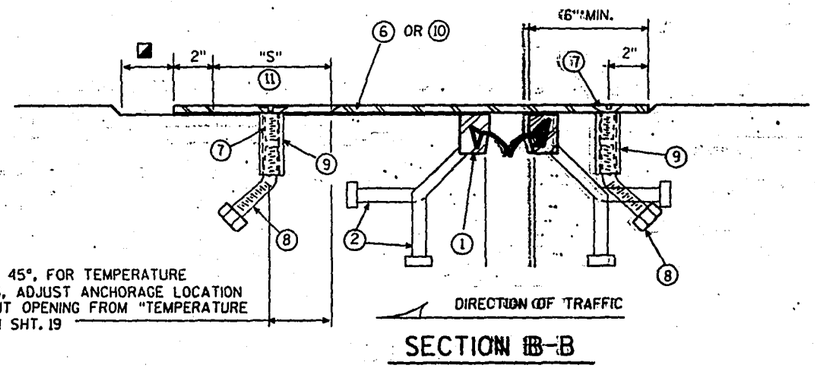


SECTION A-A

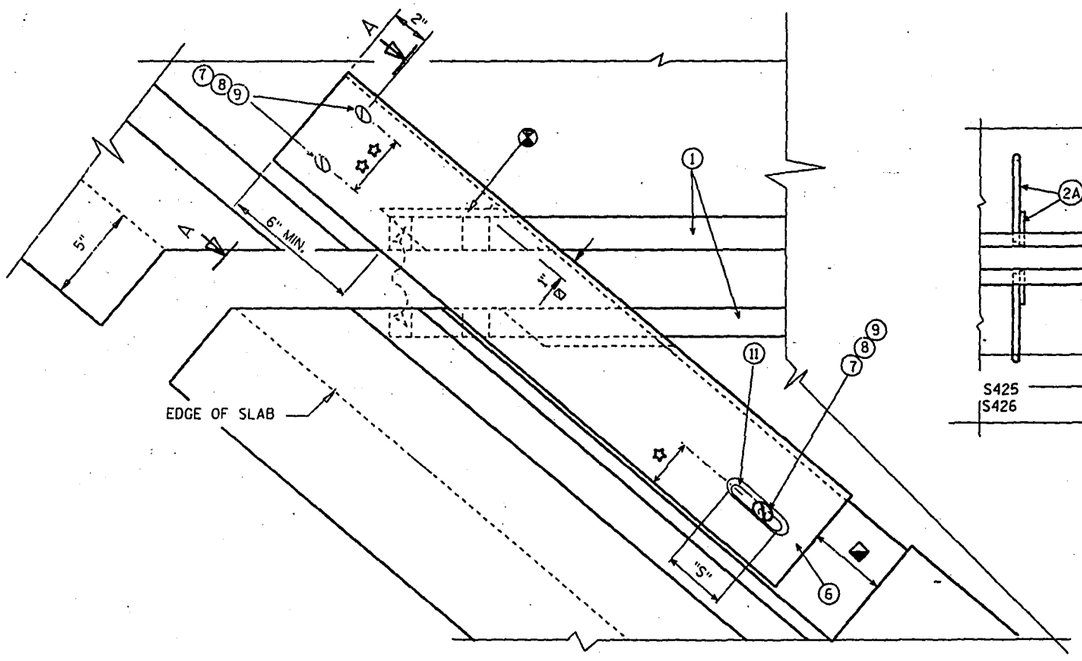
⊗ BLOCK OUT CONCRETE 2" EACH SIDE FOR JOINT OPENING

◪ JOINT OPENING DIM. ALONG SKEW PLUS 1/2"

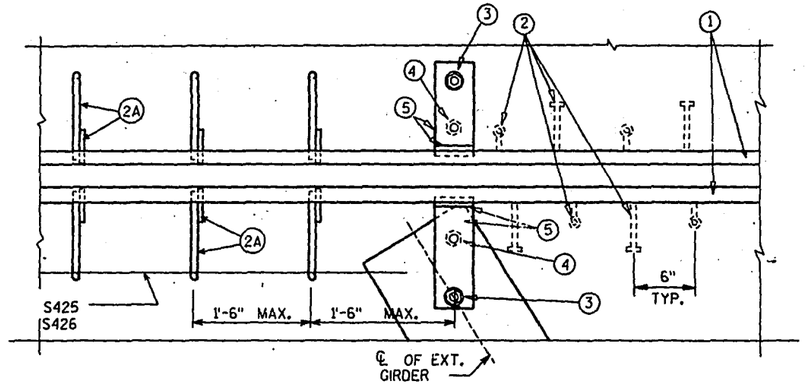
"S" 5" (10° TO ≤ 45°)
6" (> 45°)



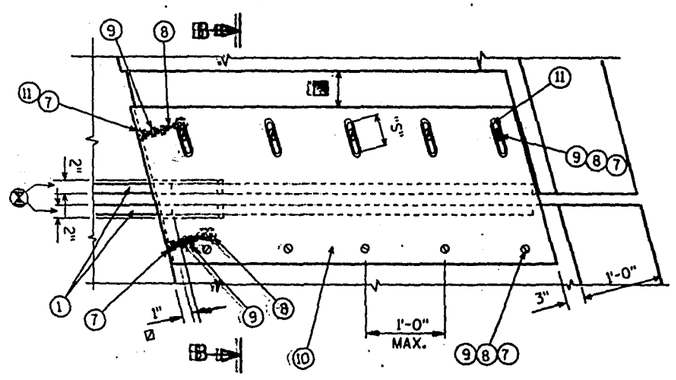
SECTION B-B



AT SLOPED FACE PARAPET "B"



PART PLAN



AT SIDEWALK

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS Ck'D. FWG

EXPANSION DEVICE

SHEET 20

SCALE = 1:1 BR B2934:34JT.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.31

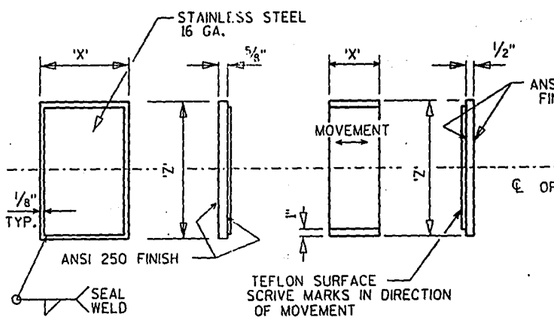


PLATE "A"

PLATE "B"

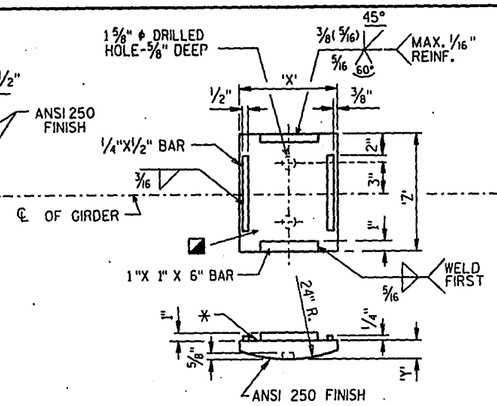
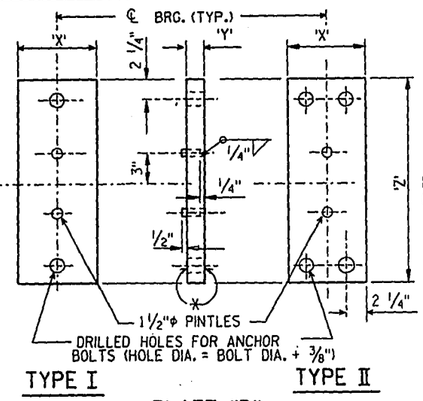
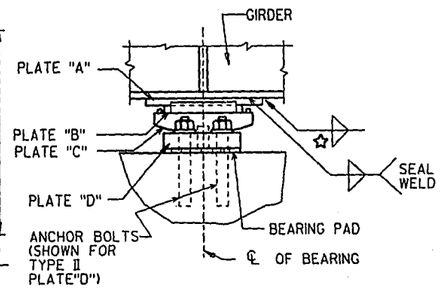


PLATE "C"



TYPE I PLATE "D" TYPE II



EXPANSION BEARING ASSEMBLY

BEARING NOTES

ALL BEARINGS ARE SYMMETRICAL ABOUT ℄ OF GIRDER AND ℄ OF BEARING.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING. ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. BOLT LENGTH TO BE 1'-5 FOR 1 1/4" ϕ AND 1'-10 FOR 1 1/2" ϕ BOLTS. PROJECT ANCHOR BOLTS "D"PLATE THICKNESS +2 1/4" ABOVE TOP OF CONCRETE.

CHAMFER TOP OF PINTLES 1/8". DRILL HOLES FOR PINTLES IN ALL "D" PLATES FOR DRIVING FIT.

ALL MATERIAL INCLUDING SHIMS BUT EXCLUDING ANCHOR BOLTS, STAINLESS STEEL, TEFLON SURFACE , PINTLES, NUTS AND WASHERS SHALL BE MADE OF ASTM A709 GRADE 50W. STEEL PINTLES SHALL BE MADE OF ASTM A449 STEEL OR MATERIAL OF EQUAL YIELD STRENGTH & ELONGATION. ANCHOR BOLTS, NUTS & WASHERS SHALL CONFORM TO ASTM A709 GRADE 36.

PROVIDE 1/8" THICK BEARING PAD SAME SIZE AS PLATE "D" FOR EACH BEARING.

ALL MATERIAL IN BEARINGS, INCLUDING BEARING PADS & SHIM PLATES SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "EXPANSION BEARING ASSEMBLIES" OR "FIXED BEARING ASSEMBLIES", RESPECTIVELY.

EXPANSION BEARING

	PLATE "A"		PLATE "B"		PLATE "C"			PLATE "D"			PLATE "D" TYPE	ANCHOR BOLT SIZE	NO. OF BRG'S REQ'D.	LOCATION
	'X'	'Z'	'X'	'Z'	'X'	'Y'	'Z'	'X'	'Y'	'Z'				
EXPANSION BEARING	11"	1'-4	7"	1'-4	9"	1 13/16 "	1'-6 1/4	8"	1 1/2"	2'-2	II	1 1/2"ϕ	6	WEST ABUT.
	1'-3	1'-8	11"	1'-8	1'-1	2 5/8"	1'-10 1/4	11"	2 5/8"	2'-7	II	1 1/2"ϕ	6	EAST ABUT.
FIXED BEARING					2 3/8"	2'-0		1'-11	3 7/8"	2'-10	II	1 1/2"ϕ	6	PIER

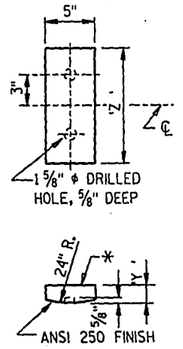
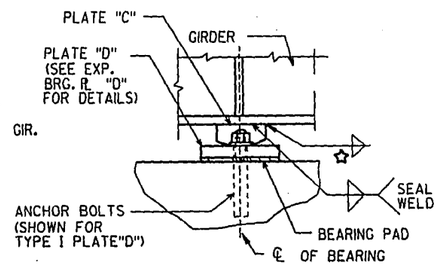


PLATE "C"

FIXED BEARING



FIXED BEARING ASSEMBLY

* FINISH THESE SURFACES ANSI 250 FINISH IF 'Y' DIM. IS GREATER THAN 2".

◪ PROVIDE A METHOD FOR HANDLING PLATE "C" DURING GALVANIZING.

☆ TABLE OF FILLET WELD SIZES

THICKNESS OF THICKER PART JOINED	∓ MIN. SIZE OF FILLET WELD
TO 1/2" INCLUSIVE	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO. 1 1/2	5/16"
OVER 1 1/2" TO 2 1/4"	3/8"
OVER 2 1/4" TO 6"	1/2"

∓ EXCEPT THAT WELD SIZE SHALL NOT EXCEED THICKNESS OF THINNER PART JOINED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

BEARING DETAILS

SHEET 21

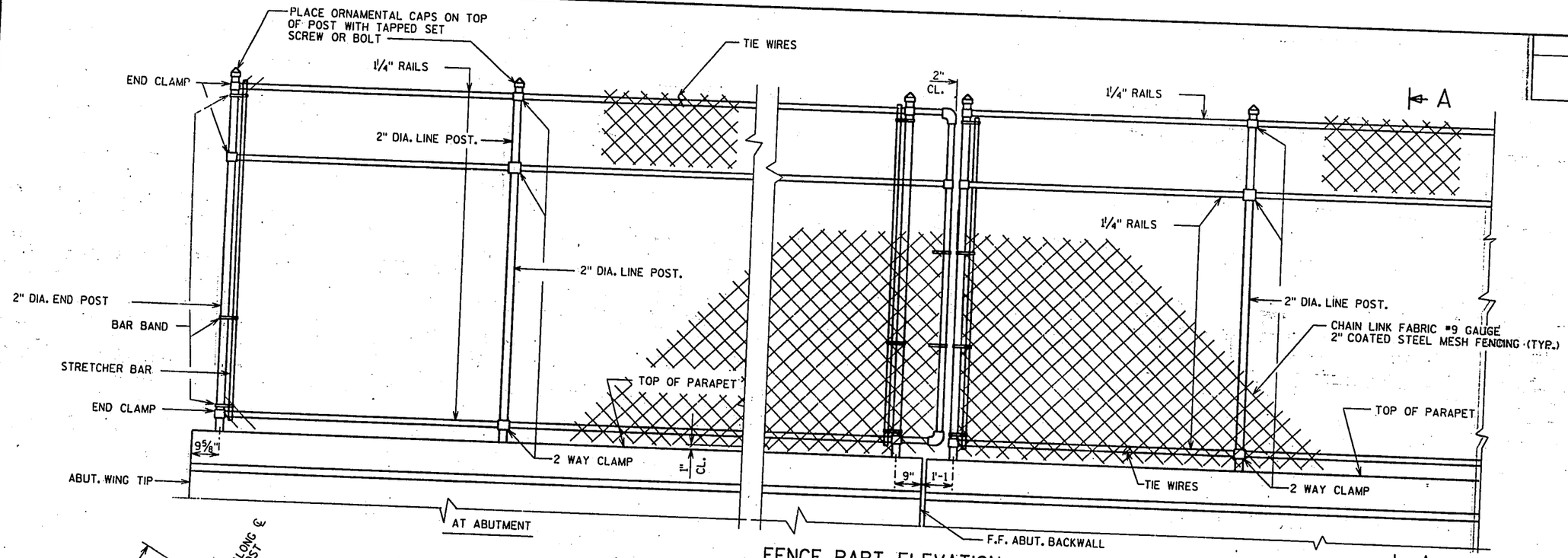
TEMP HOLD DOWN = LV 3
SHIM PLS = LV 4
BEVELED ROCKER = LV 5
BRG REP = LV 5

REVISED 4-92
FT 55

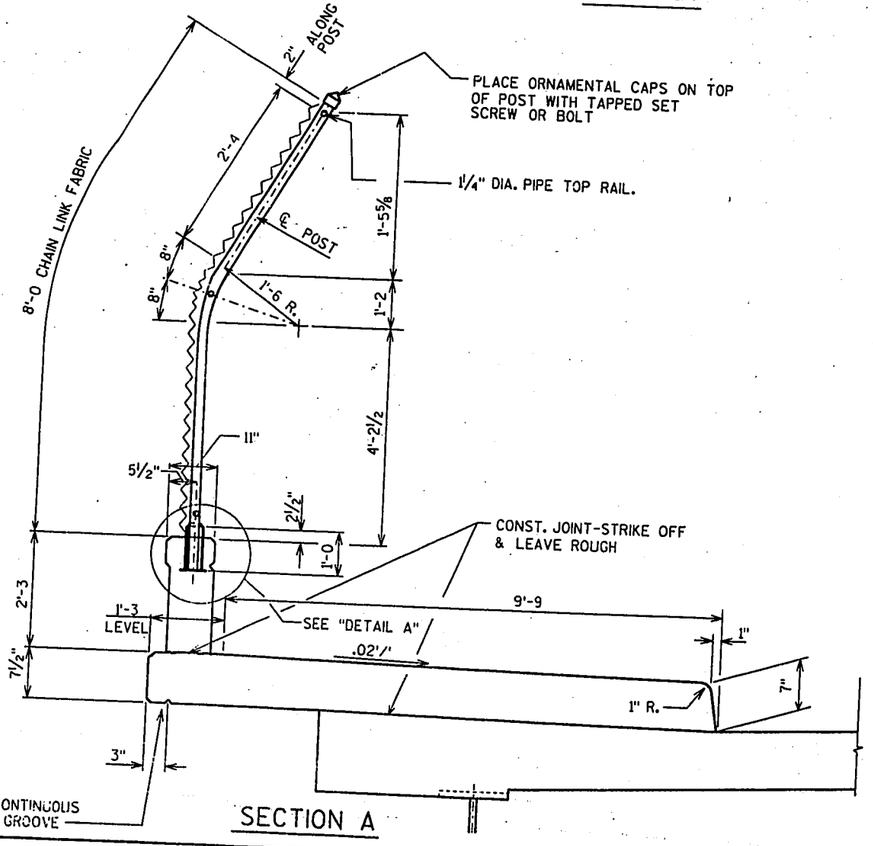
LEVELS 12

BR_STD:BRTFLON.DGN SCALE .08333

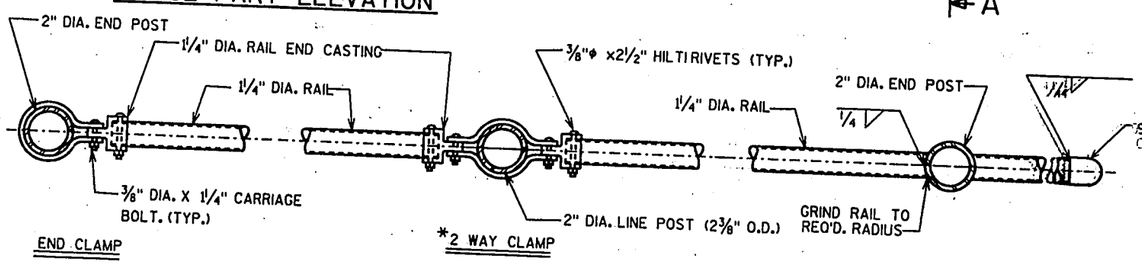
STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.32



FENCE PART ELEVATION



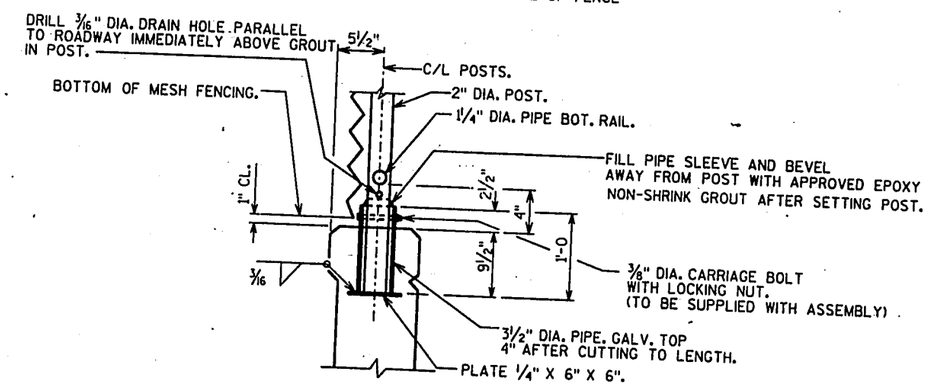
SECTION A



PLAN OF RAILING

*ALTERNATE BOULEVARD 2-WAY CLAMP MAY BE USED.

NOTE: PLACE ALL NUTS ON OUTSIDE OF FENCE



DETAIL A

FENCING NOTES

ALL RAILS, POSTS, AND SLEEVES ARE STANDARD GALVANIZED STEEL PIPE.

ALL POSTS SHALL BE SET VERTICAL.

KNUCKLE TOP AND BOTTOM OF 2" MESH CHAIN LINK FENCING.

ALL FENCING BAR BANDS, STRETCHER BARS, & CLAMPS ARE TO BE GALVANIZED STEEL.

SEE "FENCE POST SPA." ON "VERT. FACE PARAPET A" SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

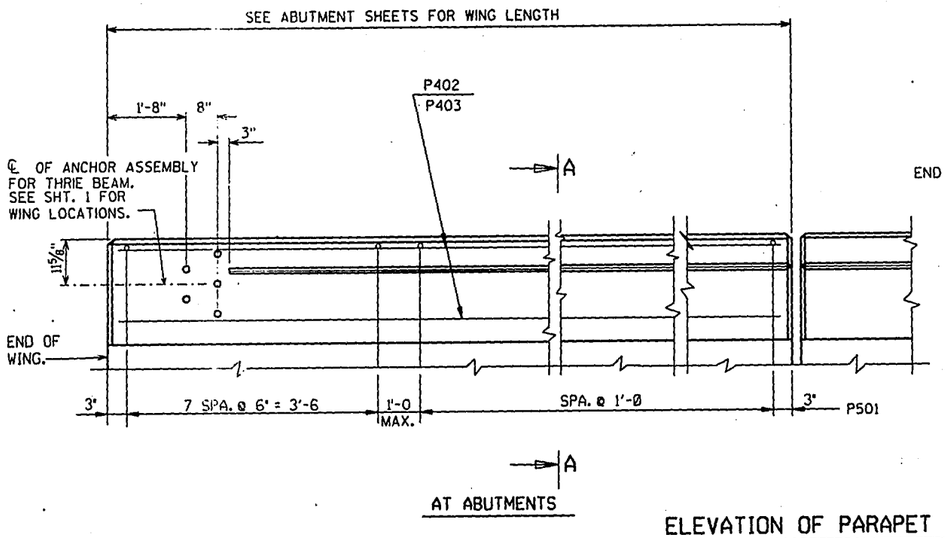
CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

FENCING DETAILS

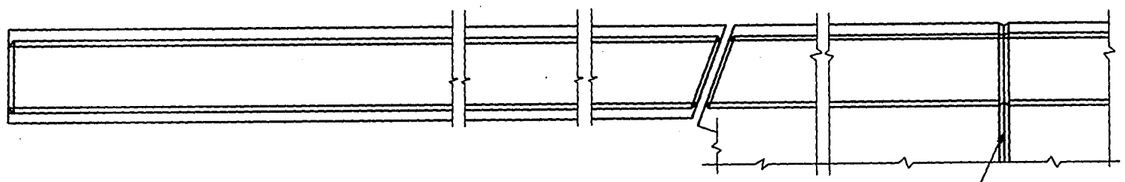
SHEET 22

(31,31)CHAIN.DGN AS=5.33333

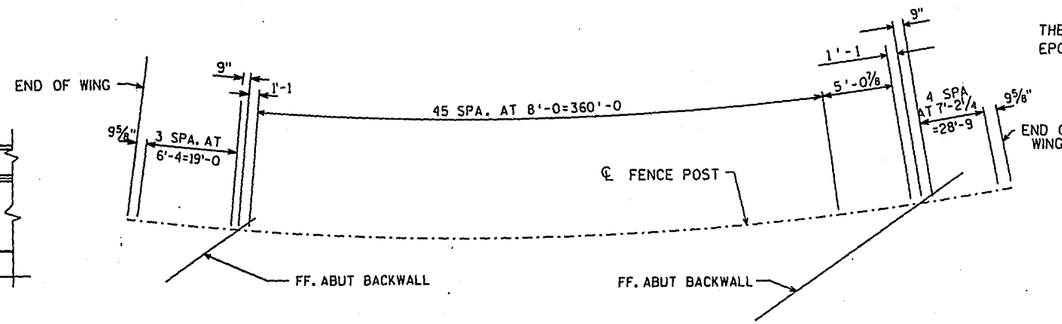
STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.33



ELEVATION OF PARAPET



PLAN OF PARAPET



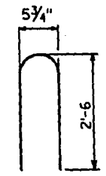
FENCE POST SPACING

BILL OF BARS

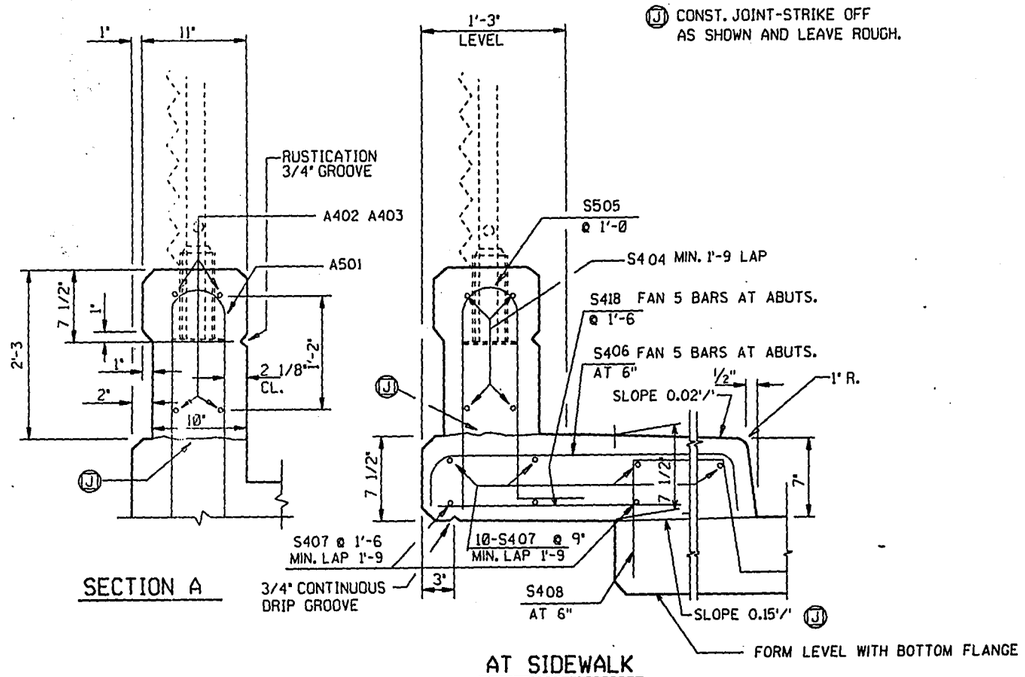
FOR ABUTMENT PARAPETS WINGS 1 AND 3

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
EPOXY COAT ALL PARAPET REINF.

BAR MARK	NO. REQ'D. WEST ABUT.	NO. REQ'D. EAST ABUT.	LENGTH	BENT	LOCATION
P501	25	36	5-3	X	WINGS VERT.
P402	8	——	11-4		WING 1 HORIZ.
P403	——	8	16-9		WING 3 HORIZ.



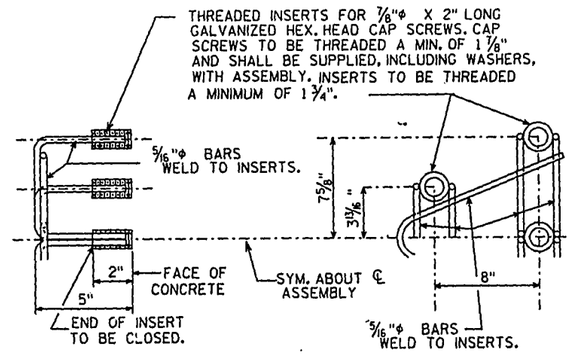
P501



SECTION A

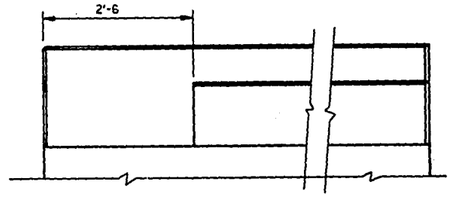
AT SIDEWALK

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 1" 'V' GROOVE.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.



FRONT FACE OF PARAPET

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

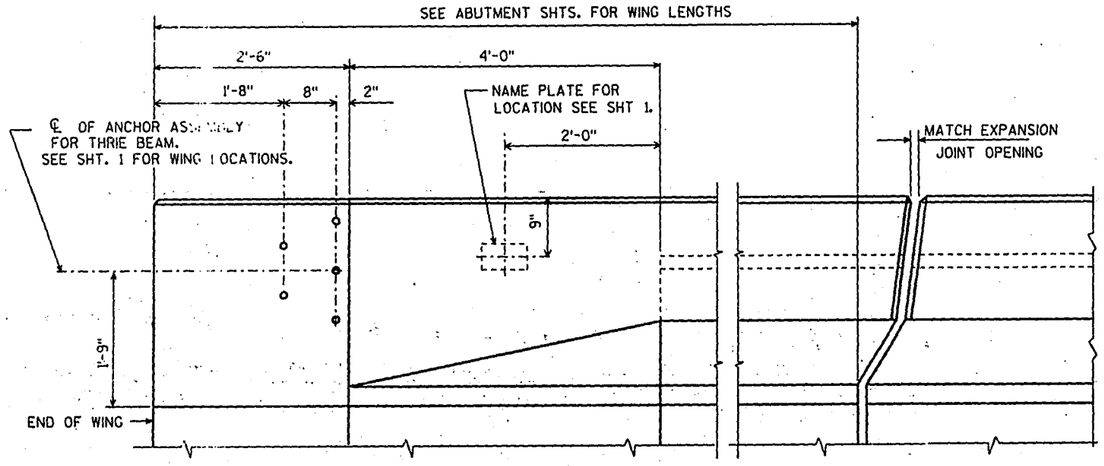
VERTICAL FACE PARAPET 'A'

SHEET 23

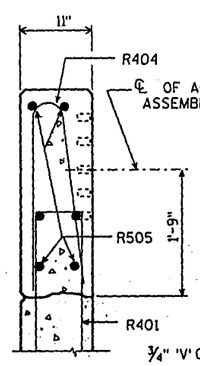
12/86

PRF * WVFPA SCALE :1

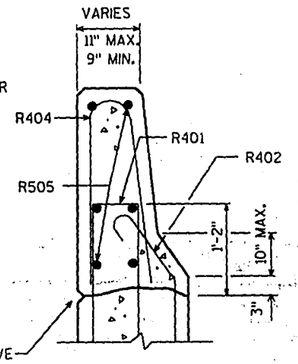
STATE PROJECT NUMBER	SHEET NO.
1201-4-75	8.34



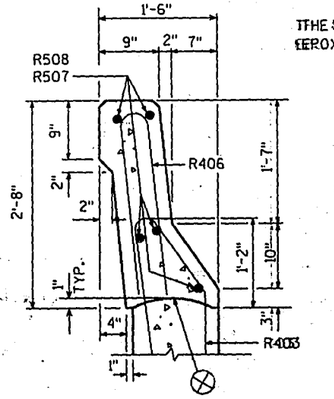
INSIDE ELEVATION



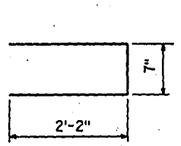
SECTION A



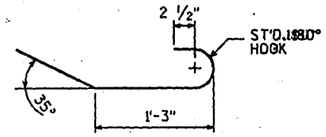
SECTION B



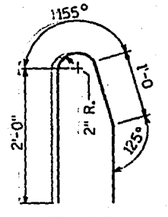
SECTION C



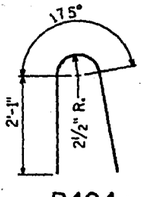
R401



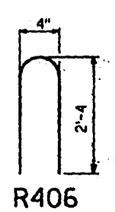
R402



R403



R404



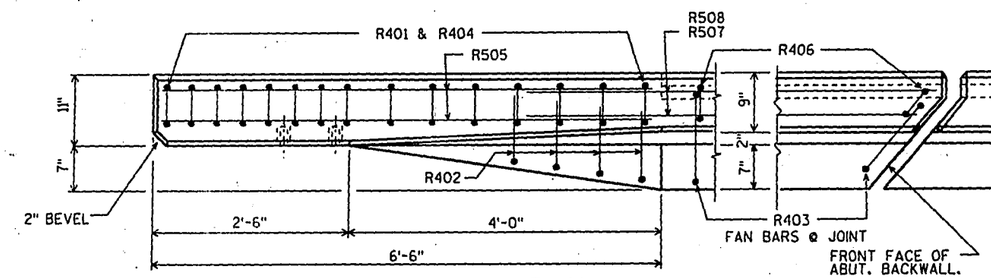
R406

BILL OF BARS

FOR ABUTMENT PARAPETS WINGS 2 AND 4

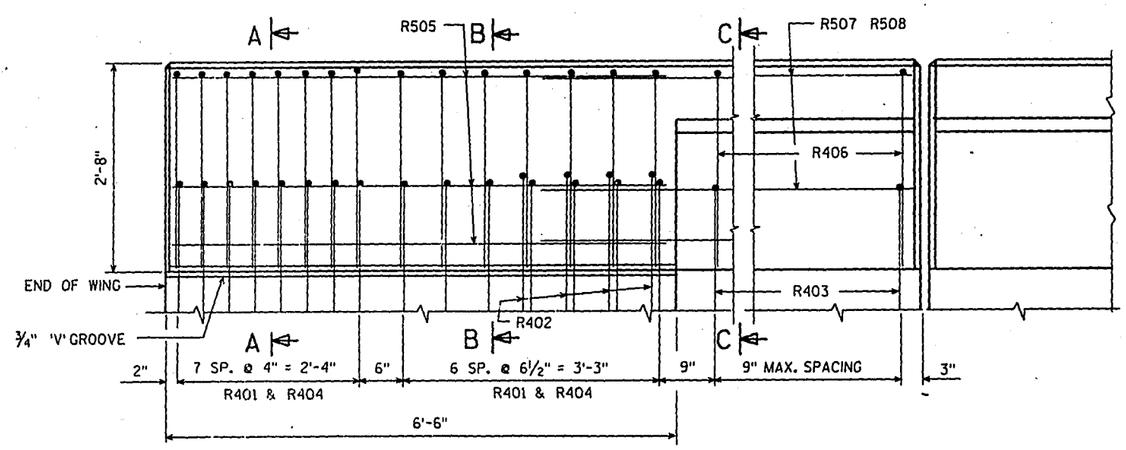
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
EPOXY COAT ALL PARAPET REINF.

BAR MARK	NO. REQ'D. WEST ABUT.	NO. REQ'D. EAST ABUT.	LENGTH	BENT	LOCATION
R401	30	30	4-9	X	WINGS STIRRUPS
R402	8	8	3-1	X	WINGS
R403	34	18	4-9	X	WINGS STIRRUPS
R404	30	30	4-9	X	WINGS
R505	12	12	6-2		WINGS
R406	34	18	4-10	X	WINGS
R507	5	—	28-0		WING 2
R508	—	5	15-0		WING 4

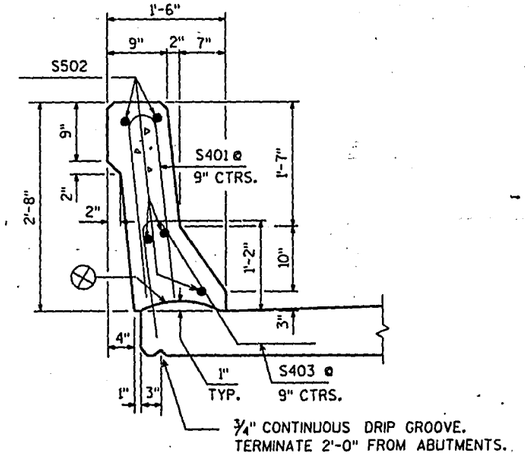


PLAN

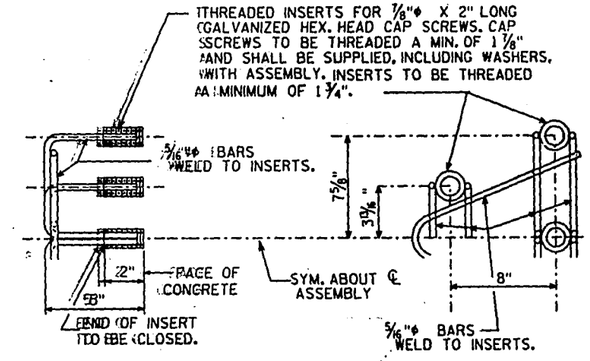
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 1" 'V' GROOVE.



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

⊗ CONST. JOINT -- STRIKE OFF AS SHOWN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-410

CONST. SPEC. 1989	DRAWN BY ZIRK	PLANS CK'D. FWG

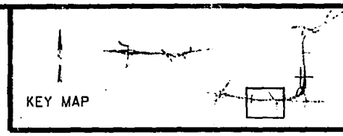
SLOPED FACE PARAPET "B"

SHEET 24

PPTB.DGN SCALE

LEVEL 3 SQUARE
LEVEL 4 15° RHF LEVEL 6 40° RHF
LEVEL 5 15° LHF LEVEL 7 40° LHF

5-92
FT 55



STATE PROJECT NUMBER
1201-04-75

SHEET NO.
9.0

COMPUTER EARTHWORK DATA

USH 18 DANE COUNTY

****
* VOLUMES *
****

MODEL USH18.END

STATION	END-AREA CUT	END-AREA FILL	Incremental VOLUME CUT	Incremental VOLUME FILL	Cumulative VOLUME CUT	Cumulative VOLUME FILL	MASS HAUL
607+00	760.3	4.2					
608+00	25.9	590.3	1455.8	1100.9	1455.8	1100.9	354.9
609+00	0.0	1708.8	47.9	4257.4	1503.6	5358.3	-3854.6
610+00	0.3	2255.9	0.5	7342.0	1504.1	12700.3	-11196.1
611+00	6.2	2828.7	12.0	9416.0	1516.1	22116.3	-20600.2
612+00	5.5	3849.8	21.7	12367.6	1537.8	34483.9	-32946.1
613+00	0.0	4084.7	10.2	14693.4	1548.1	49177.4	-47629.3
614+00	7.0	3415.6	13.1	13889.4	1561.1	63066.8	-61505.6
615+00	15.3	2551.5	41.3	11050.2	1602.4	74117.0	-72514.6
615+20	38.5	2119.4	19.9	1730.0	1622.3	75847.0	-74224.7
616+00	17.2	1465.1	82.4	5310.4	1704.7	81157.4	-79452.7
617+00	73.4	467.8	167.8	3579.4	1872.5	84736.8	-82864.3
618+00	1071.6	0.0	2120.4	866.2	3993.0	85603.0	-81610.1
619+00	3194.0	0.0	7899.3	0.0	11892.3	85603.0	-73710.8
619+27	5615.5	0.0	4404.8	0.0	16297.0	85603.0	-69306.0
619+50	5956.8	0.0	4928.9	0.0	21226.0	85603.0	-64377.1
619+60	5634.7	0.0	2146.6	0.0	23372.5	85603.0	-62230.5
620+00	6908.4	0.0	9291.2	0.0	32663.7	85603.0	-52939.3
621+00	10162.8	0.0	31613.3	0.0	64277.0	85603.0	-21326.0
621+70	11218.8	0.0	27716.9	0.0	91993.9	85603.0	6390.9
622+00	10993.5	0.0	12340.2	0.0	104334.1	85603.0	18731.1
623+00	8205.9	0.0	35554.3	0.0	139888.4	85603.0	54285.4
624+00	4481.8	0.0	23495.6	0.0	163384.0	85603.0	77781.0
625+00	2075.5	0.0	12143.0	0.0	175527.0	85603.0	89924.0
626+00	686.2	1.6	5114.2	3.0	180641.3	85606.0	95035.2
627+00	71.5	509.3	1403.3	946.1	182044.5	86552.1	95492.4
628+00	5.6	1279.3	142.9	3312.2	182187.5	89864.3	92323.1
628+60	0.7	1564.1	7.1	3159.4	182194.5	93023.7	89170.8
629+00	13.4	1592.7	10.4	2338.4	182204.9	95362.2	86842.8
630+00	9.0	1610.7	41.4	5932.2	182246.3	101294.4	80952.0
631+00	0.0	1292.3	16.7	5375.9	182263.0	106670.2	75592.8
632+00	163.9	274.9	303.4	2902.2	182566.5	109572.4	72994.0
632+50	448.8	139.6	567.3	383.7	183133.7	109956.1	73177.6
633+00	255.5	248.8	652.1	359.6	183785.8	110315.8	73470.0
634+00	0.2	916.8	473.4	2158.6	184259.2	112474.4	71784.8
635+00	0.3	1233.0	0.8	3981.3	184260.0	116455.7	67804.3
636+00	0.9	1216.3	2.2	4535.8	184262.2	120991.5	63270.7
637+00	19.7	849.3	38.2	3825.1	184300.4	124816.6	59483.8
638+00	109.1	408.4	238.5	2329.1	184538.9	127145.7	57393.1
639+00	324.7	78.4	803.3	901.6	185342.1	128047.4	57294.8
640+00	649.0	0.0	1803.2	145.3	187145.4	128192.6	58952.7
641+00	1298.9	0.0	3607.2	0.0	190752.6	128192.6	62559.9
642+00	2063.6	0.0	6226.7	0.0	196979.3	128192.6	68786.7
643+00	2926.7	0.0	9241.2	0.0	206220.5	128192.6	78027.9
643+70	3109.1	0.0	7824.1	0.0	214044.6	128192.6	85852.0
644+00	3536.8	0.0	3692.1	0.0	217736.7	128192.6	89544.1
644+10	3648.7	0.0	1330.6	0.0	219067.4	128192.6	90874.7
644+75	3846.2	0.0	9021.6	0.0	228088.9	128192.6	99896.3
645+00	4066.2	0.0	3663.1	0.0	231752.1	128192.6	103559.4
645+35	3876.9	0.0	5148.3	0.0	236900.4	128192.6	108707.7
645+70	3460.1	0.0	4755.5	0.0	241655.8	128192.6	113463.2
646+00	3366.7	0.0	3792.6	0.0	245448.5	128192.6	117255.8
646+65	2699.3	0.0	7301.6	0.0	252750.1	128192.6	124557.4
647+00	2481.5	0.0	3357.9	0.0	256108.0	128192.6	127915.3
647+50	2371.4	0.0	4493.4	0.0	260601.4	128192.6	132408.7
648+00	1986.6	0.0	4035.2	0.0	264636.6	128192.6	136443.9

NOTE: TOTAL CUMULATIVE CUT VOLUME INCLUDES 44,600 C.Y. OF ROCK EXCAVATION

****
* VOLUMES *
****

MODEL: LOCUST.END

STATION	END-AREA CUT	END-AREA FILL	Incremental VOLUME CUT	Incremental VOLUME FILL	Cumulative VOLUME CUT	Cumulative VOLUME FILL	MASS HAUL
17+00	468.6	0.0					
17+70	165.0	27.6	821.3	35.8	821.3	35.8	785.5
18+00	57.6	102.5	123.7	72.3	945.0	108.1	836.8
18+50	0.0	447.3	53.4	509.1	998.3	617.3	381.0
19+00	0.0	857.5	0.0	0.0	998.3	617.3	381.0
19+40	0.0	1247.6	0.0	0.0	998.3	617.3	381.0
20+00	0.0	1854.9	0.0	0.0	998.3	617.3	381.0
20+07	0.0	1822.3	0.0	0.0	998.3	617.3	381.0
21+00	0.0	1165.2	0.0	0.0	998.3	617.3	381.0
21+80	0.0	478.1	0.0	2434.4	998.3	3051.7	-2053.4
22+00	0.0	335.7	0.0	301.4	998.3	3353.1	-2354.8
23+00	58.0	42.6	107.4	700.7	1105.7	4053.7	-2948.0
24+00	140.7	11.0	367.9	99.3	1473.7	4153.1	-2679.4

****
* VOLUMES *
****

MODEL: CTHM.END

STATION	END-AREA CUT	END-AREA FILL	Incremental VOLUME CUT	Incremental VOLUME FILL	Cumulative VOLUME CUT	Cumulative VOLUME FILL	MASS HAUL
10+00	321.1	12.3					
11+00	183.0	54.9	933.5	124.6	933.5	124.6	808.9
11+67	68.1	146.6	311.5	250.1	1245.0	374.6	870.4
12+00	21.8	95.8	55.0	148.1	1300.0	522.8	777.2
13+00	39.2	85.1	113.0	335.0	1413.0	857.8	555.2
14+00	26.4	152.6	121.5	440.3	1534.4	1298.0	236.4
15+00	125.9	237.3	282.1	722.0	1816.5	2020.0	-203.5
16+00	146.2	399.6	503.9	1179.4	2320.4	3199.4	-878.9
17+00	131.4	615.7	514.1	1880.2	2834.5	5079.6	-2245.1
17+35	0.9	793.5	85.8	913.4	2920.3	5993.0	-3072.7
18+00	0.0	906.0	1.1	2045.6	2921.4	8038.6	-5117.1
19+00	0.0	1117.0	0.0	0.0	2921.4	8038.6	-5117.1
20+00	0.0	1201.3	0.0	0.0	2921.4	8038.6	-5117.1
20+90	0.0	1382.5	0.0	0.0	2921.4	8038.6	-5117.1
21+00	0.0	1380.9	0.0	0.0	2921.4	8038.6	-5117.1
21+15	0.0	1436.6	0.0	0.0	2921.4	8038.6	-5117.1
21+40	0.0	1348.9	0.0	0.0	2921.4	8038.6	-5117.1
21+85	0.0	1072.8	0.0	2018.0	2921.4	10056.6	-7135.2
22+00	50.0	1151.0	13.9	617.7	2935.3	10674.3	-7739.0
23+00	93.4	890.2	265.6	3779.8	3200.9	14454.2	-11253.3
24+00	113.0	575.3	382.4	2713.9	3583.2	17168.1	-13584.8
24+50	170.4	451.2	262.5	950.5	3845.7	18118.6	-14272.8
25+00	80.7	335.9	232.6	728.8	4078.3	18847.3	-14769.1
26+00	0.0	191.3	149.5	976.2	4227.8	19[illegible].6	-15595.8
27+00	4.8	80.1	8.9	502.5	4236.6	20[illegible].1	-16089.5
28+00	36.3	56.1	76.0	252.2	4312.6	20578.3	-16265.7
28+35	48.3	47.9	54.8	67.4	4367.5	20645.8	-16278.3
29+00	103.8	12.5	183.1	72.8	4550.6	20718.5	-16167.9

****
* VOLUMES *
****

MODEL:RANGE TRAIL ROAD.END

STATION	END-AREA CUT	END-AREA FILL	Incremental VOLUME CUT	Incremental VOLUME FILL	Cumulative VOLUME CUT	Cumulative VOLUME FILL	MASS HAUL
10+65	0.0	276.2					
10+90	0.0	581.3	0.0	397.0	0.0	397.0	-397.0
11+00	106.8	488.4	19.8	198.1	19.8	595.1	-575.3
11+25	290.2	67.9	183.8	257.6	203.6	852.6	-649.1
12+00	130.9	59.2	584.8	176.5	788.4	1029.2	-240.8
13+00	158.7	26.0	536.3	157.7	1324.7	1186.8	137.9
13+65	200.6	0.0	432.6	31.2	1757.3	1218.1	539.2
14+00	329.8	0.0	343.8	0.0	2101.1	1218.1	883.0
14+50	450.7	0.0	722.7	0.0	2823.8	1218.1	1605.7
15+00	263.9	0.0	661.7	0.0	3485.5	1218.1	2267.4
15+25	237.3	0.1	232.0	0.0	3717.5	1218.1	2499.4
16+00	199.6	15.4	606.8	21.4	4324.3	1239.5	3084.7
17+00	158.5	0.3	663.0	29.0	4987.3	1268.5	3718.7
17+25	143.3	3.4	139.7	1.7	5126.9	1270.3	3856.7
17+60	156.3	6.6	194.2	6.5	5321.1	1276.8	4044.3
18+00	166.4	11.7	239.0	13.5	5560.1	1290.3	4269.8
19+00	153.0	4.7	591.3	30.4	6151.5	1320.7	4830.8
20+00	125.0	2.4	514.7	13.2	6666.2	1333.8	5332.3

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.1

WB R/L

25'

25'

EB R/L

C/L USH 18

980

970

960

950

940

980

970

960

950

940

980

970

960

950

940

606+00

605+00

1+5+93

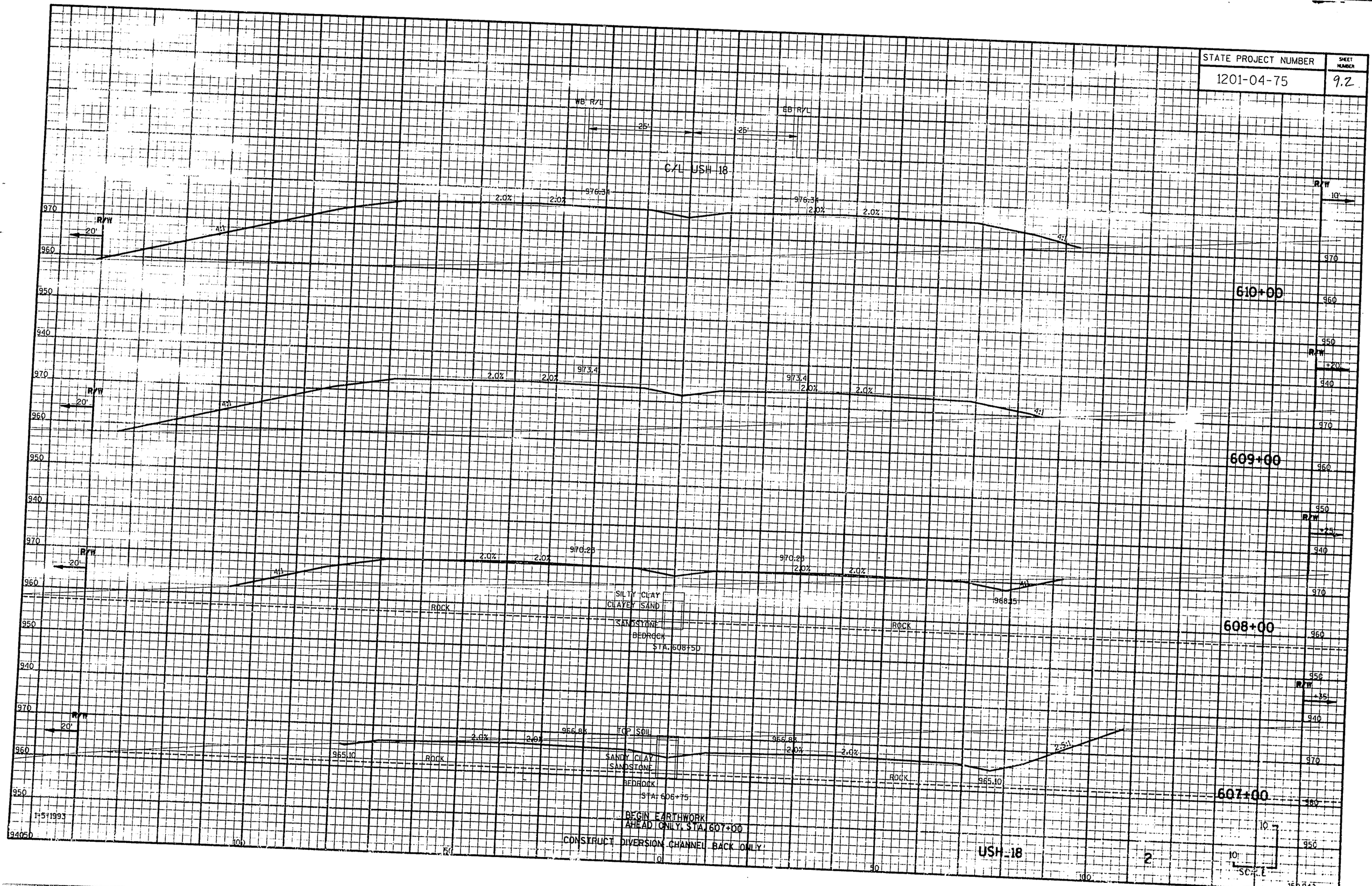
USH_18

50 0 50 100 150

SCALE

10 10

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.2



STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.3

C/L USH 18

WB R/L

EB R/L

25'

25'

985.66

985.66

2.0%

0.1%

2.0%

0.1%

4:1

4:1

969.50

614+00

1-102 L.F. X 24" RCCP REQ'D.
STA. 614+10.6' LT. TO STA. 613+50.6' LT.
TYPE B-MS INLET REQ'D.
CONCRETE COLLAR REQ'D.

R/W 20'

R/W 10'

983.70

983.70

2.0%

0.9%

2.0%

0.9%

4:1

4:1

964.60

966.00

613+00

1-320 L.F. X 54" RCCP REQ'D
STA. 611+00 LT TO 613+00 RT.
SKEW 51° RHF
INVERT 965.70

R/W 20'

R/W 10'

981.49

981.49

2.0%

2.0%

2.0%

2.0%

4:1

4:1

967.50

612+00

R/W 20'

R/W 10'

979.04

979.04

2.0%

2.0%

2.0%

2.0%

3:1

4:1

970.50

611+00

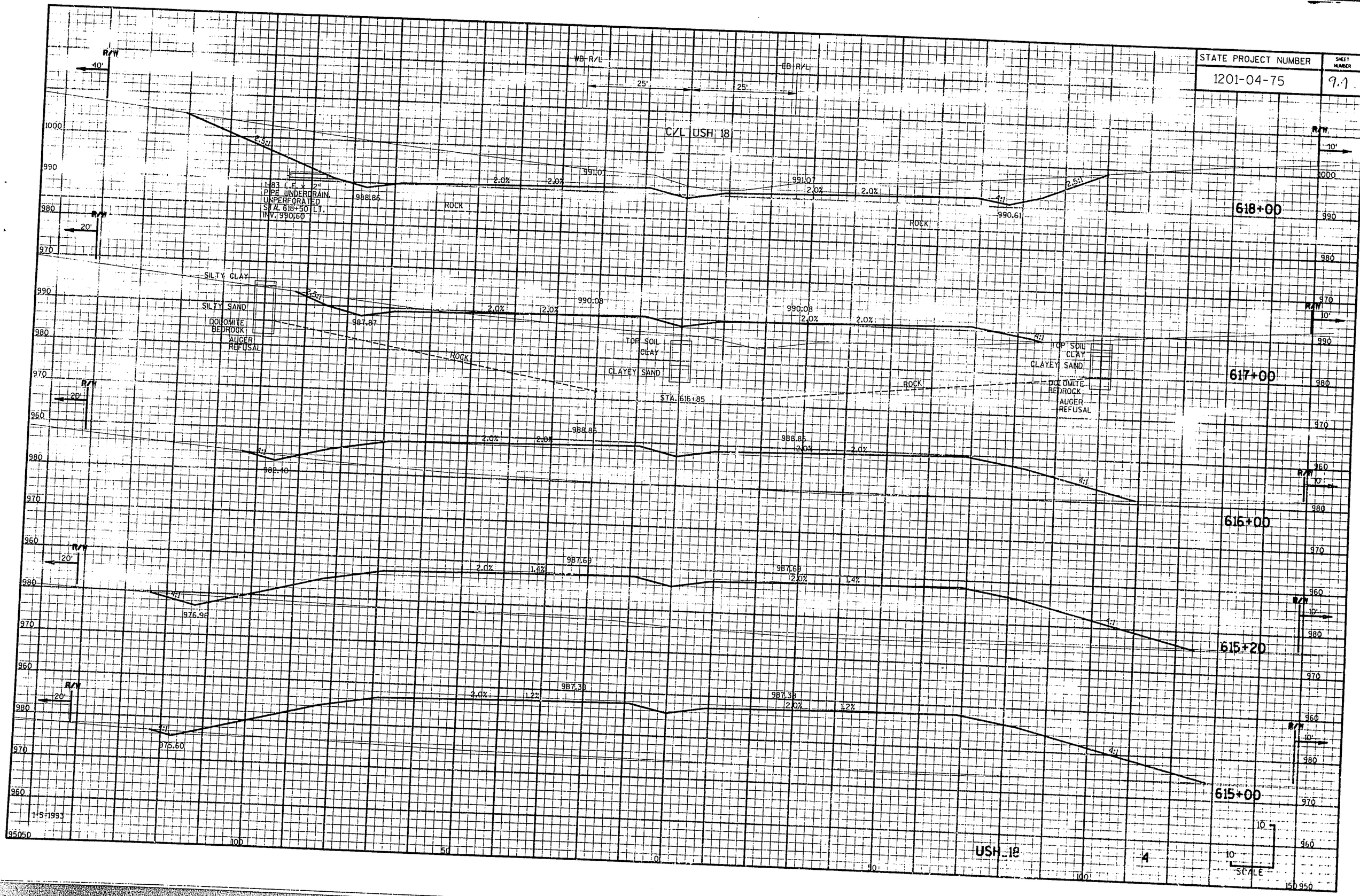
1-320 L.F. X 54" RCCP REQ'D
STA. 611+00. LT TO 613+00. RT
SKEW 51° RHF
INVERT 960.30

USH 18

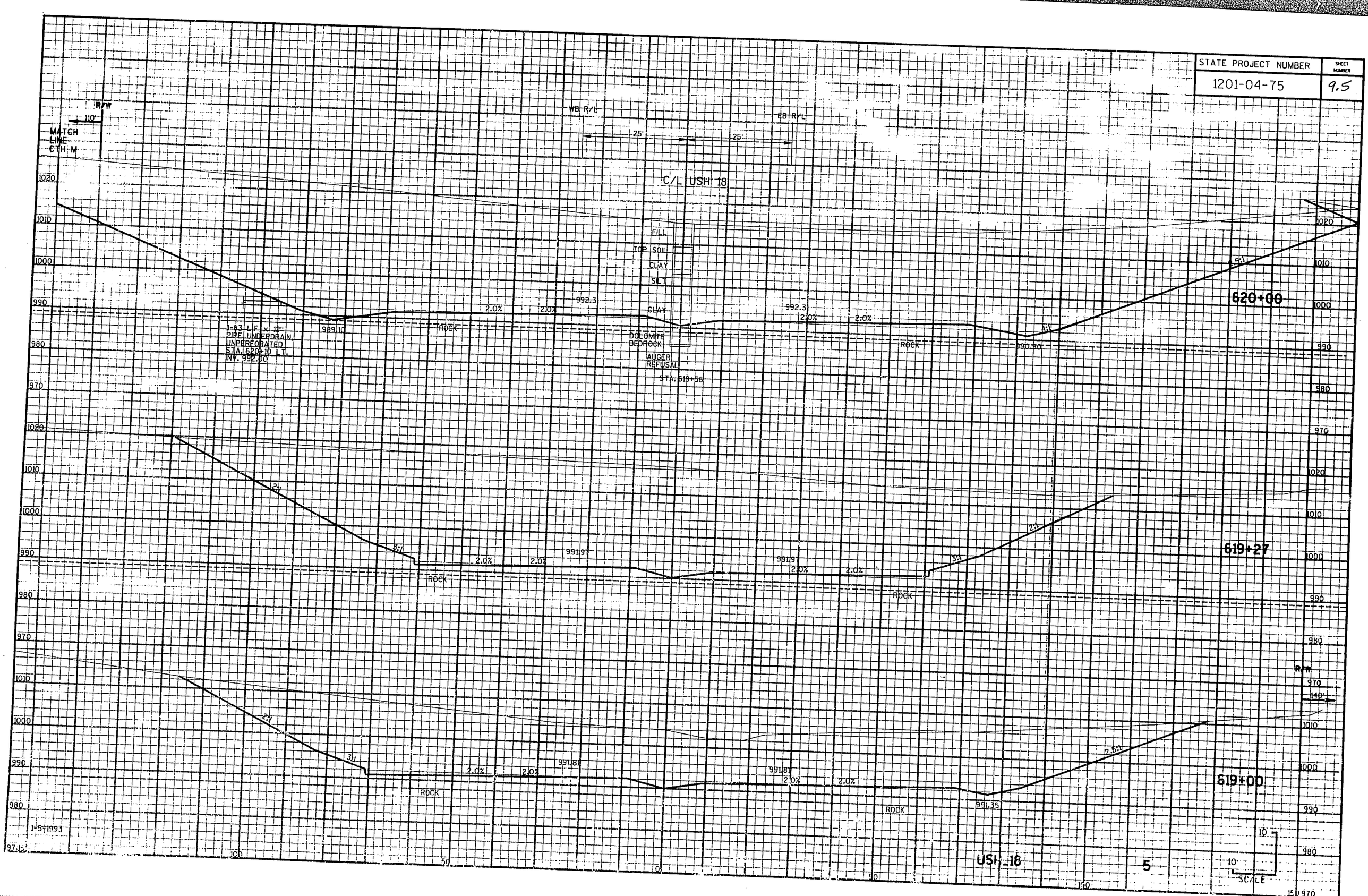
3

SCALE

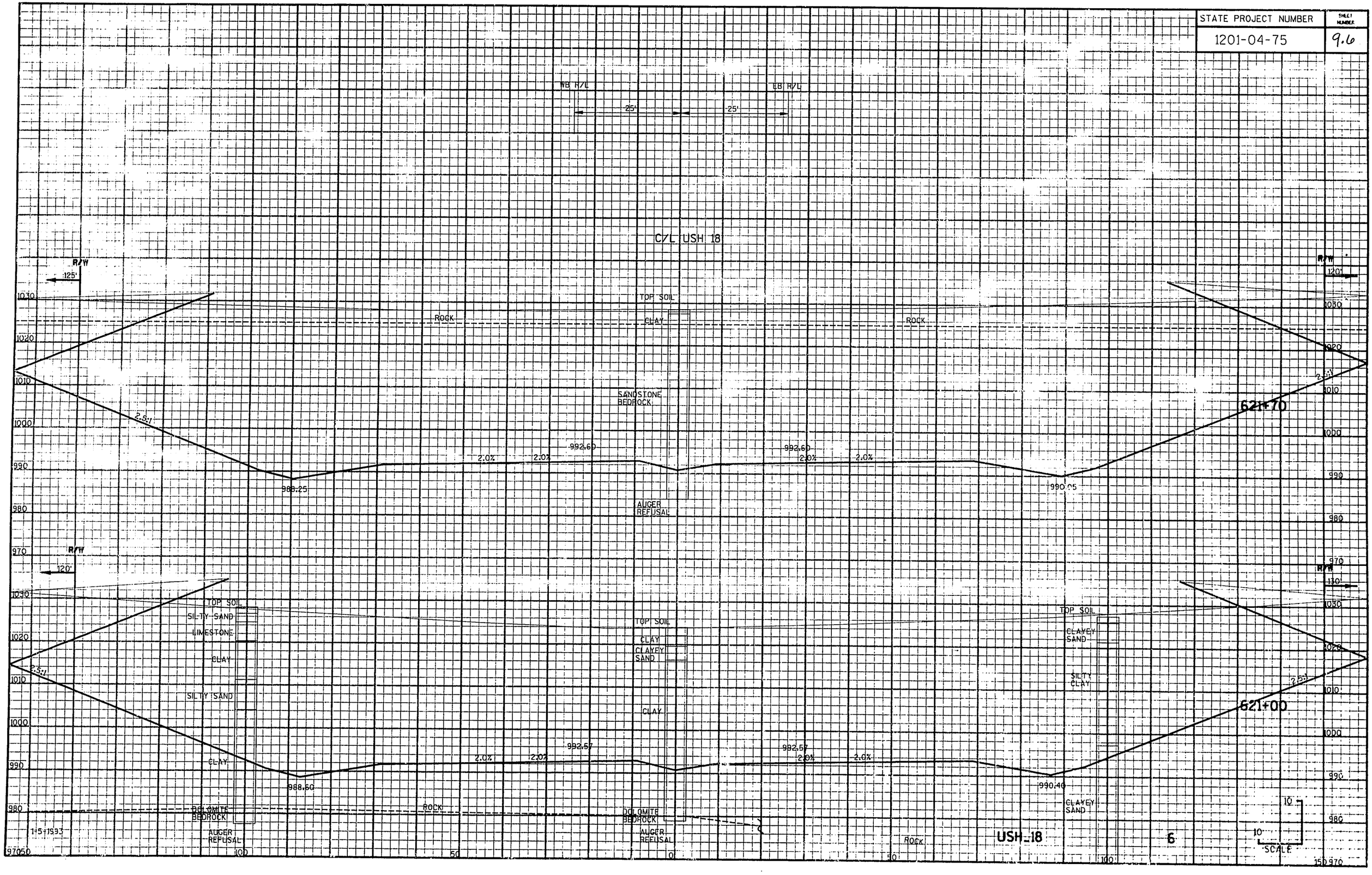
STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.1



STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.5



STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.6



STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.7

C/L USH 18

NB R/L

EB R/L

25'

25'

R/W 60'

R/W 70'

624+00

2.5:1

ROCK

991.8

2.0%

2.0%

987.10

988.90

TOP SOIL

CLAY

CLAYEY SAND

DOLOMITE BEDROCK

AUGER REFUSAL

992.36

987.60

989.40

R/W 100'

623+00

R/W 120'

R/W 115'

622+00

992.58

986.10

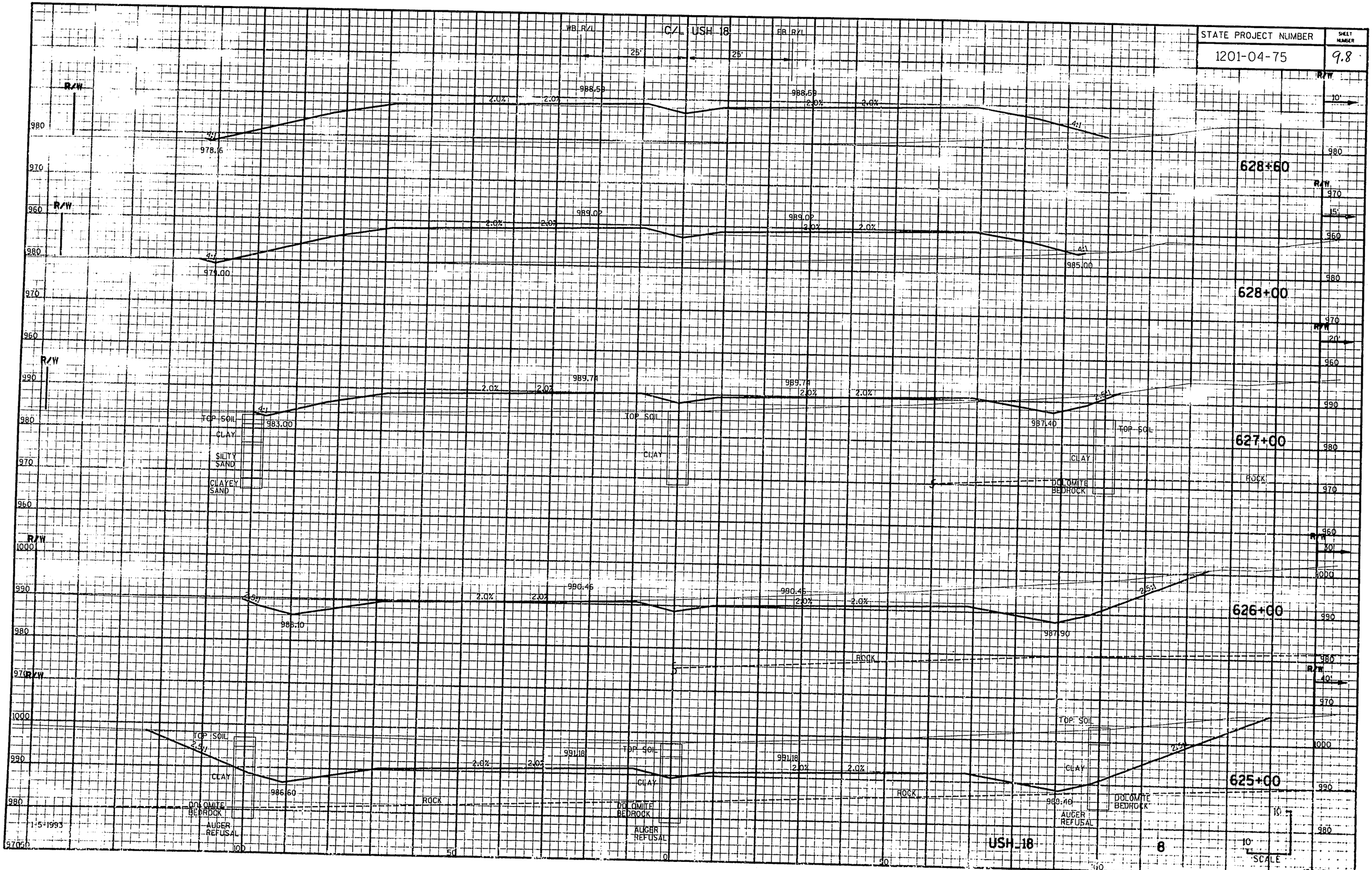
986.90

USH 18

7

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.8



STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.9

WB R/L

EB R/L

25'

25'

C/L USH 18

R/W

990

980

970

960

4:1

978.05

2.0%

2.0%

985.78

985.78

2.0%

2.0%

4:1

985.22

632+50

R/W

990

980

970

960

4:1

978.70

2.0%

2.0%

986.14

986.14

2.0%

2.0%

4:1

985.68

632+00

R/W

990

980

970

960

976.20

2.0%

2.0%

986.86

986.86

2.0%

2.0%

4:1

631+00

R/W

990

980

970

960

4:1

2.0%

2.0%

987.58

987.58

2.0%

2.0%

4:1

630+00

R/W

990

980

970

960

977.60

2.0%

2.0%

988.30

988.30

2.0%

2.0%

4:1

629+00

1-200 L.F.X 42" RCCP REQ'D
STA. 630+80 LT. TO 630+00 RT.
SKEW 69° LHF
INV. 975.80

I-TYPE 9 INLET
STA. 630+00
INV. 982.15

1-200 L.F.X42" RCCP REQ'D
STA. 630+80 LT. TO 630+00 RT.
SKEW 69° LHF
INV. 981.60

1-6-1993

USH 18

9

SCALE

10

10

0

50

100

150

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.10

C/L USH 18

WB R/L — 25' — EB R/L — 25'

R/W

11-86' L.F. X24" RCCP REQ'D
STA. 637+40 LT.
INVERT 975.82'

975.50

982.51 — 2.0% — 2.0% — 982.51 — 2.0% — 2.0%

4:1

1-TYPE B INLET
STA. 637+40
INVERT 977.07

3-240' L.F. x 48" RCCP REQ'D
STA. 635+00, LT. TO 636+80, RT.
SKEW 49° RHF
INVERT 976.40

977.00

637+00

R/W

975.00

983.26 — 2.0% — 2.0% — 983.26 — 2.0% — 2.0%

636+00

R/W

974.50

3-240' L.F. x 48" RCCP REQ'D
STA. 635+00, LT. TO 636+80, RT.
SKEW 49° RHF
INVER 974.70

983.98 — 2.0% — 2.0% — 983.98 — 2.0% — 2.0%

635+00

R/W

975.60

984.70 — 2.0% — 2.0% — 984.70 — 2.0% — 2.0%

634+00

R/W

977.40

985.42 — 2.0% — 2.0% — 985.42 — 2.0% — 2.0%

984.75

633+00

R/W

1-5-1993

USH 18

10

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.11

WB R/L

EB R/L

25'

25'

C/L USH 18

MATCH LINE C1TH M

R/W

642+00

641+00

640+00

639+00

638+00

978.00

981.19

2.0%

0.7%

981.19

2.0%

0.7%

979.50

7.5%

2.5:1

2%

2%

2:1

2'

6'

1 - 57 L.F. X 48" RCCP REQ'D.
STA. 642+56, LT TO STA. 642+00 LT.
INV. 978.00

977.50

980.65

2.0%

1.7%

980.65

2.0%

4.7%

979.00

3.5%

2.5:1

2%

2%

2'

6'

977.00

980.63

2.0%

2.0%

980.63

2.0%

4.0%

978.56

4%

4%

2%

2:1

2'

1 - 62 L.F. x 24" RCCP REQ'D
STA. 640+00
SKEW 13° RHF
INV. 977.62

STA. 640+50
TYPE 10 INLET REQ'D
INV. 978.60

976.50

981.10

2.0%

2.0%

981.10

2.0%

2.0%

978.00

4%

4%

2.5:1

2.5:1

2'

976.00

981.82

2.0%

2.0%

981.82

2.0%

2.0%

977.50

2.5:1

2'

R/W

1+5+199.3

USH 18

11

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.12

WB R/L — 25' — EB R/L — 25'

C/L USH 18

644+00

CONNECT RIPRAP LINED DITCH TO EXISTING SWALE

L-154 L.F. 48" RCCP REQ'D
STA. 642+56, LT. TO STA. 644+10 LT.
INV. 979.55

983.75 — 2.0% — 1.5% — 983.75 — 2.0% — 1.5% — 982.19

643+70

L-154 L.F. 42" RCCP REQ'D
STA. 642+56, L.T. TO STA. 644+10 LT.
INV. 978.42
— TYPE 5 M.H.
STA. 642+56, LT.
INV. 978.42

983.21 — 2.0% — 1.1% — 983.21 — 2.0% — 1.1% — 981.78

643+00

982.22 — 2.0% — 0.4% — 982.22 — 2.0% — 0.4% — 980.00

USH 18

12

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.13

WB R/L

EB R/L

25'

25'

C/L USH 18

R/W 94'

R/W 92'

R/W 90'

R/W

3:1

2:1

2.0%

2.0%

987.38

984.00

GRADE SWALE DITCH EAST TO INLET OF PIPE

985.78

983.95

982.34

1-154 L.F. x 44" RCCP REQ'D
STA. 642+56, LT. TO STA. 644+10 LT.
INV. 979.55
1-TYPE 5 M.H.
STA. 644+10 LT.
INV. 979.55

1-187 L.F. x 48" RCCP REQ'D
STA. 644+10 LT. TO STA. 645+94 LT.
INV. 980.93

1-342 L.F. x 42" RCCP REQ'D
STA. 644+82 RT. TO STA. 648+26 RT.
INV. 982.44

645+70

645+00

644+10

1+5+1993

USH 18

13

SEE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.14

WB R/L — 25' — EB R/L — 25'

C/L USH 18

MATCH LINE CTH M

R/W 97'

2.5:1 — 984.95 — 2.0% — 2.0% — 990.34 — 990.34 — 2.0% — 2.0% — 3:1 — 2:1

647+00

R/W 94'

2.5:1 — 983.55 — 2.0% — 2.0% — 989.54 — 989.54 — 2.0% — 2.0% — 3:1 — 2:1

646+65

R/W 94'

2.5:1 — 980.93 — 2.0% — 2.0% — 988.06 — 988.06 — 2.0% — 2.0% — 3:1 — 2:1

646+00

1-187 L.F. x 48"RCCP REQ'D
STA. 644+10, L.T. TO STA. 645+94 L.T.
INV. 980.93

1-92 L.F. x 24" RCCP REQ'D
STA. 646+00
SKEW 0° RHF
INV. 981.24

1-TYPE 9 MS INLET REQ'D
STA. 646+00
INV. 982.90

1"=5'-1993

USH 18 — 14

SCALE 10 10

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.15

WB R/L

EB R/L

25'

25'

CONSTRUCT DIVERSION CHANNEL
BEYOND 3:1 SLOPE INTERCEPT
STA. 649+00 ±

END EARTHWORK
BACK ONLY STA. 648+00
C/L USH 18

C/L USH 18

NOTE:
EXTEND RIGHT OUTSIDE
DITCH TO STA. 648+50

R/W
100'

R/W
98'

2.5%

2.5%

2.6%

2.0%

2.0%

2.0%

2.6%

2.0%

2.0%

2.0

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-74	9.16

WB R/L

EB R/L

25'

25'

C/L USH 18

650+00

649+70

649+00

1020

1010

1000

990

1020

1010

1000

990

1020

1010

1000

990

1010

1000

1-5-93

USH 18

16

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-74	9.17

C/L CTH "M"

9+00

8+96

1030
1020
1010
1000
990
980
970
960
1030
1020
1010
1000
990
980
970

1-5-1995

96050

100 50 0 50 100 110

CTH_M

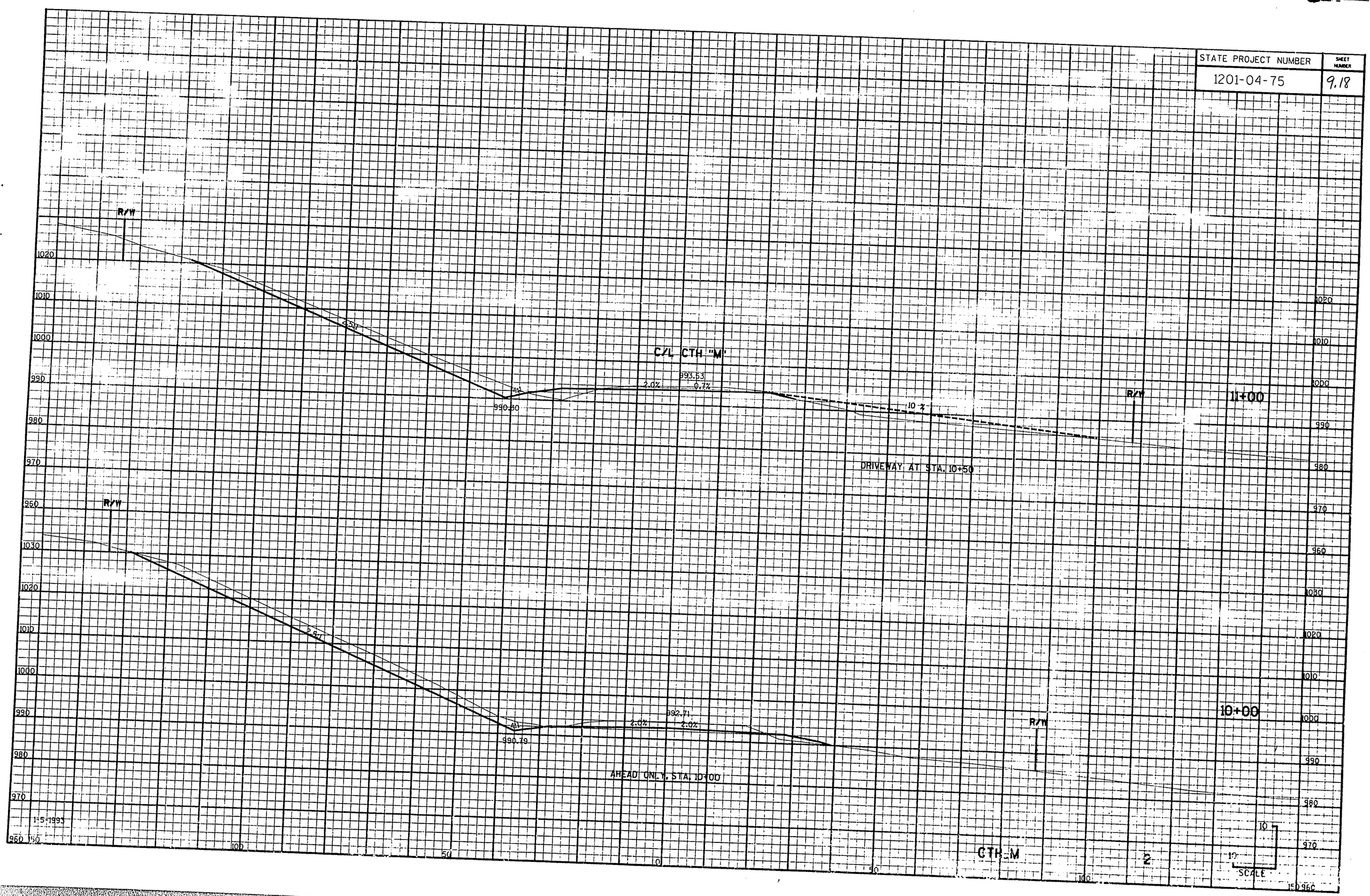
1

10 5 0 10

SCALE

150 150

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.18



STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9,19

C/L CTH "M"

R/W

995.17

5.0%

5.0%

4:1

4:1

991.00

4:1

4:1

987.00

13+00

R/W

R/W

994.35

4.0%

4.0%

2.5:1

4:1

990.30

4:1

4:1

986.50

12+00

R/W

R/W

994.08

2.9%

2.9%

4:1

990.00

INV. 989.71

4:1

INV. 987.15

11+67

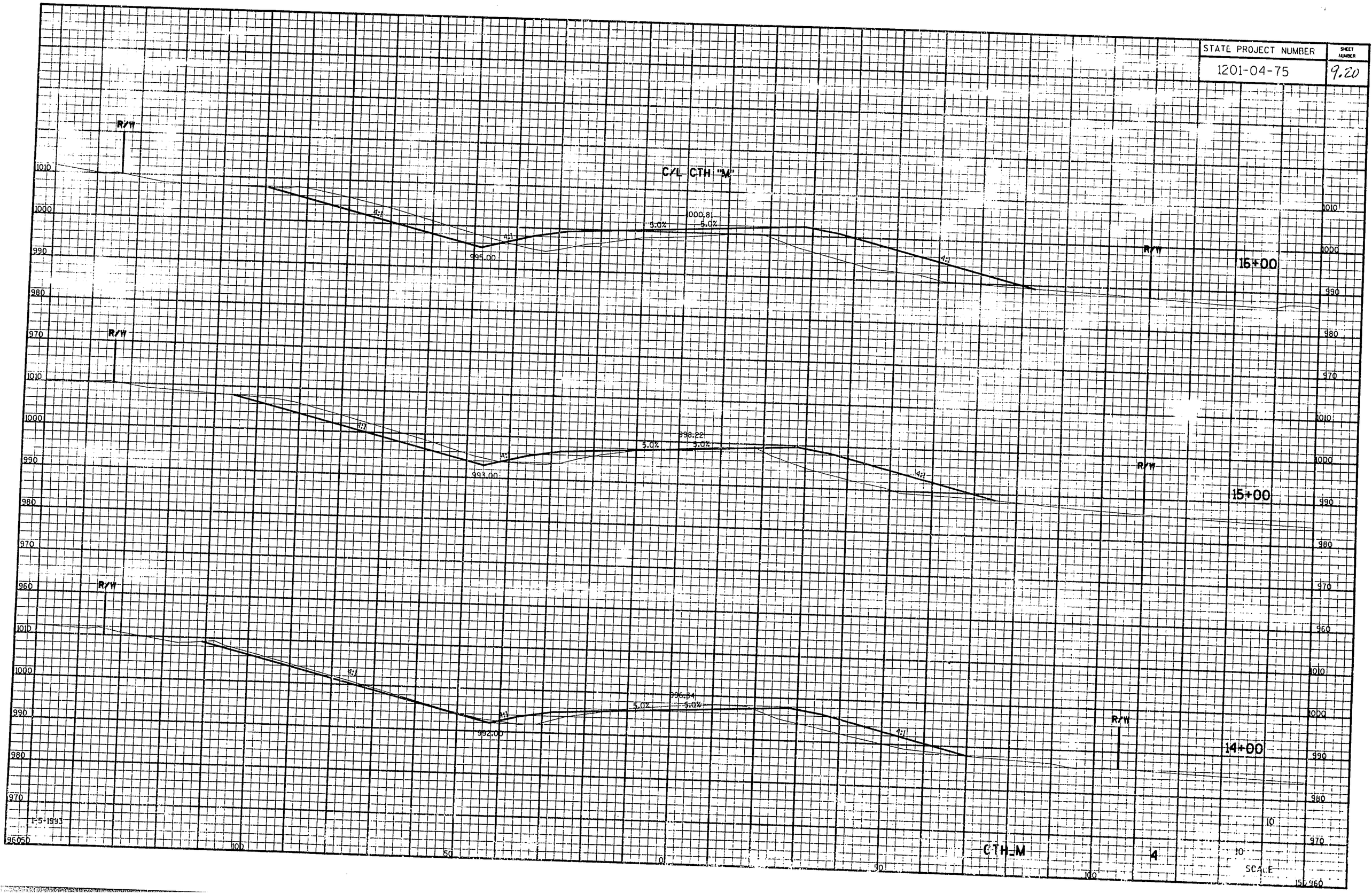
1-18" x 30" C.P. RED'D
STA 1+60
SKEW 0° RHF

CTH_M

3

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.20



STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.21

R/W

C/L CTH "M"

MATCH EXISTING DRIVEWAY AT STA. 17+80

20'

7%

1003.0

1006.69

5.0%

5.0%

WINGWALL B-13-410

MATCH LINE USH 18

18+00

1010

1000

990

980

970

960

R/W

1004.78

5.0%

5.0%

4:1

998.00

4:1

4:1

990.00

17+35

R/W

1003.75

5.0%

5.0%

4:1

997.00

4:1

4:1

989.00

17+00

1-5-1993

100

50

30

100

CTH_M

5

10

10

SCALE

150

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.22

R/W

MATCH LINE
USH 18

2.5:1

2.5:1

DITCH INVERT
STA. 648+25
USH 18

C/L CTH "M"

1014.63

5.0%

5.0%

MATCH LINE
RANGE TRAIL RD

2-76 L.F. X54" RCCP REQ'D
SEE RANGE TRAIL ROAD CROSS SECTIONS

24+00

R/W

MATCH LINE
USH 18

2:1

1014.11

5.0%

5.0%

4:1

4:1

1003.50

23+00

R/W

1013.60

5.0%

5.0%

WINGWALL
B-13-410

4:1

START EARTHWORK ABRUPTLY
END BRIDGE B-13-410
STA 21+95.40

1001.00

22+00

END EARTHWORK ABRUPTLY
BEGIN BRIDGE B-13-410
STA 18+47.12

GRADE DITCH BACK
TO EXISTING SWALE
STA. 21+00
SEE PLANS

R/W

3.5:1

4:1

1009.32

5.0%

5.0%

1-INLET TYPE 1-V
STA. 18+40
INV. 1004.49

WINGWALL
B-13-410

1-22 L.F. x 12" PIPE UNDERDRAIN UNPERFORATED
STA. 18+40
SKEW 0° RHF
INV. 1002.50

18+50

1-5-1993

CTH M

6

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.23

C/L CTH "M"

R/W

TLE

4:1

2.0%

1020.68

0.5%

28+00

2.8%

1018.09

2.8%

3.6%

1012.00

27+00

5.0%

1016.25

5.0%

1010.6

26+00

5.0%

1015.17

5.0%

1009.13

1009.2

25+00

EXTEND GRADING LEFT FOR ICE AGE PARK AND RECREATION TRAIL

-8%

5.0%

1014.89

5.0%

1009.50

MATCH LINE RANGE TRAIL RD

SEE RANGE TRAIL ROAD CROSS SECTIONS

24+50

1-20"X24" CP RCOD
STA 24+76, INV. 1005.00
STA 24+68, INV. 1006.00
SKEW 30° RHF

1-5-1993

CTH_M

7

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.24

C/L CTH "M"

R/W

R/W

R/W

R/W

31+00

30+00

BACK ONLY STA 29+00
MATCH EXISTING

R/W

R/W

R/W

R/W

1021.90

2.0%

023.82

2.0%

1021.90

29+00

1019.85

2.0%

1021.76

1.7%

28+35

1030
1020
1010
1000

1-5-1995

CTH_M

B

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-74	9.25

T.E

C/L LOCUST

BEGIN GRADING LEFT AHEAD ONLY

3.5%

1030
1020
1010
1000
990

16+00

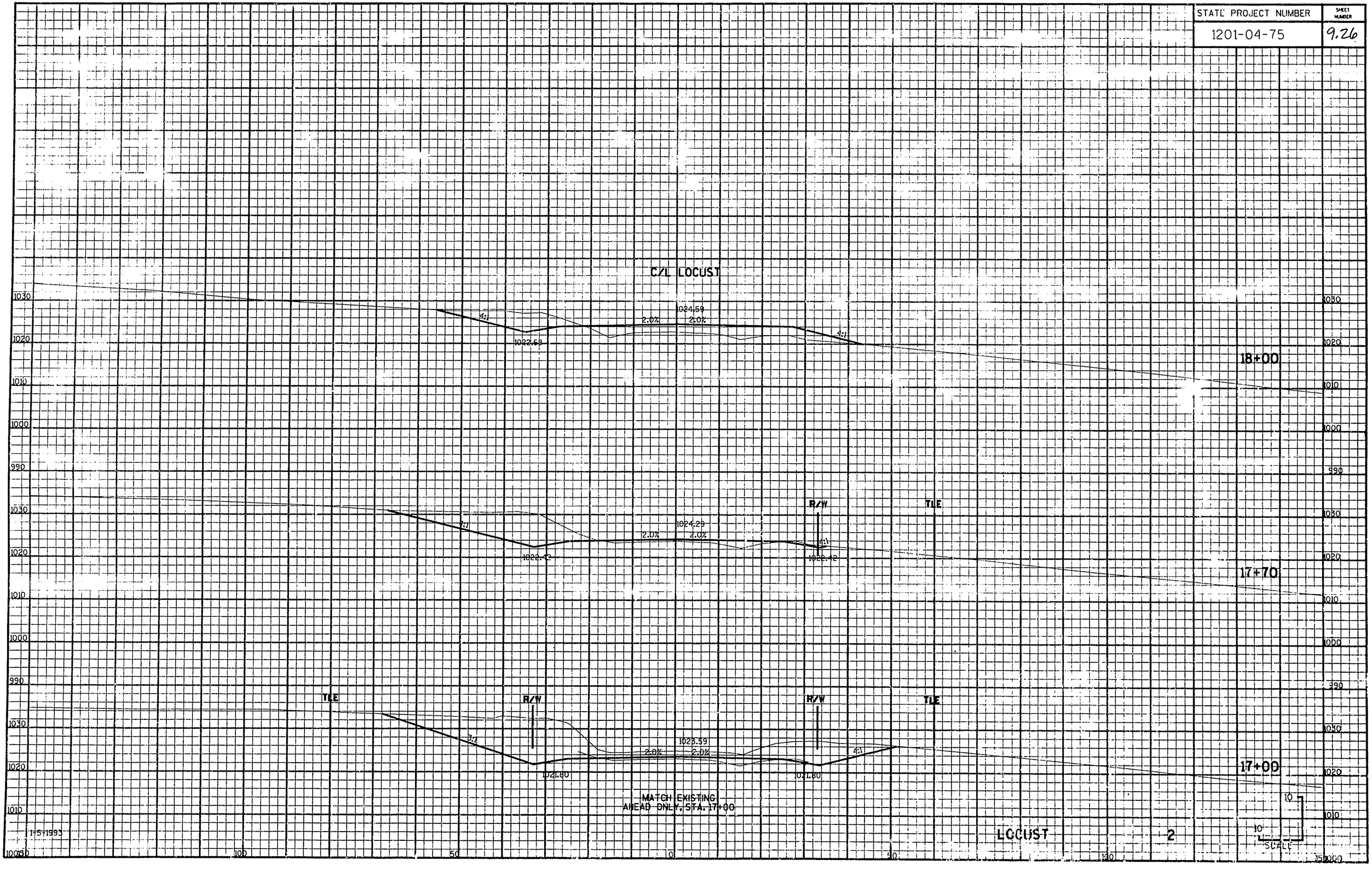
15+00

1-5-1993

LOCUST

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.26



STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.27

C/L LOCUST

1030
1020
1010
1000
990

1028.59
2.0%
2.0%
4:1
4:1

R/W

22+00

1030
1020
1010
1000
990

1028.89
2.0%
2.0%
4:1
4:1

R/W

21+80

START EARTHWORK ABRUPTLY
END BRIDGE B-13-409
STA. 21+20.26

END EARTHWORK ABRUPTLY
BEGIN BRIDGE B-13-409
STA. 18+79.26

MATCH LINE
USH 18

1030
1020
1010
1000
990

1025.09
2.0%
2.0%
4:1
4:1

1-INLET TYPE I-Y
1- 83'x 12" PIPE UNDERDRAIN UNPERFORATED
STA. 18+54
INVERT 1021.14

1-INLET TYPE I-Y
1- 83'x 12" PIPE UNDERDRAIN UNPERFORATED
STA. 18+58
INVERT 1021.16

18+50

1030
1020
1010
1000
990

1" = 1993'

100 50 0 50 100

LOCUST

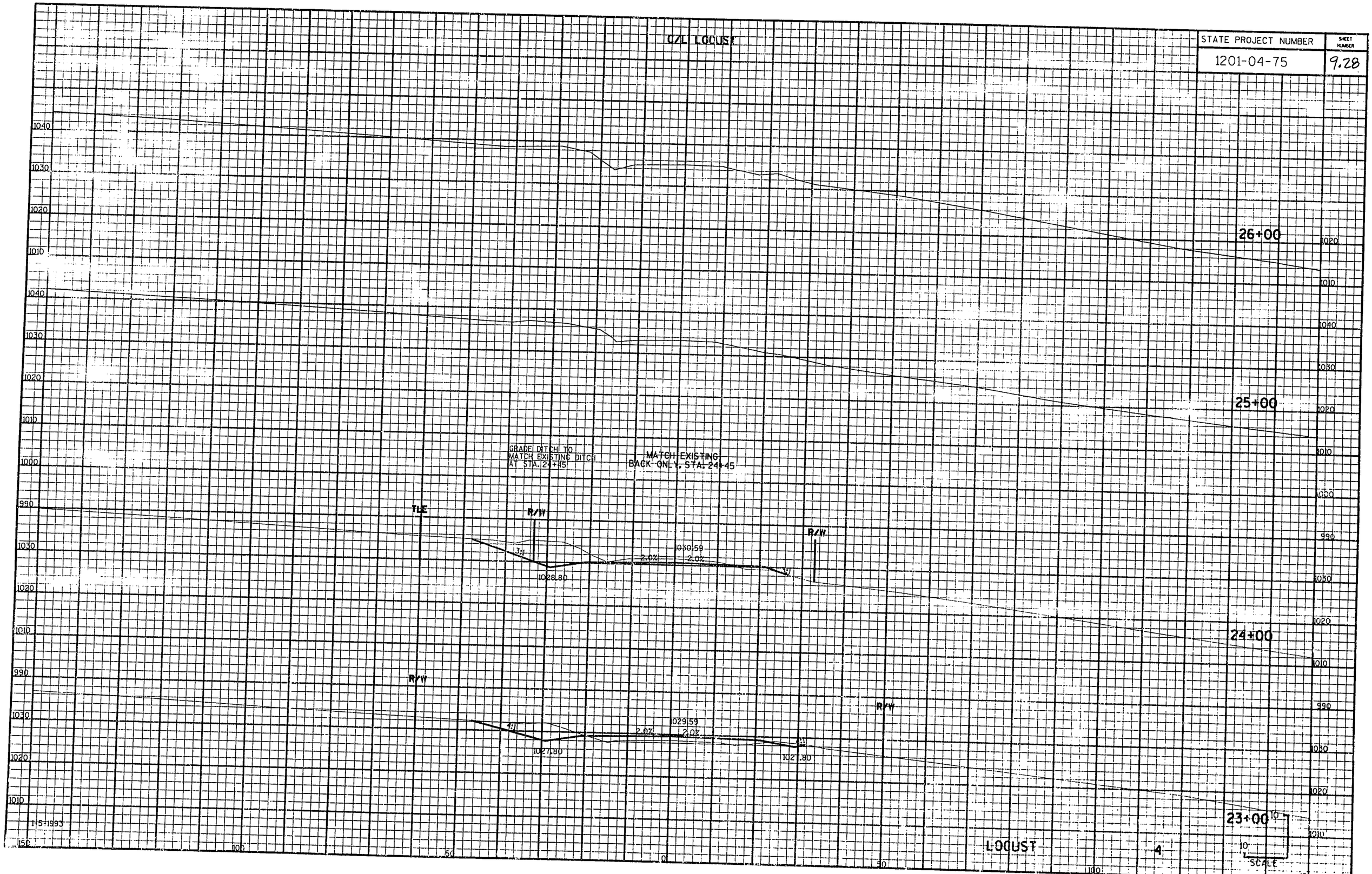
3

10 10

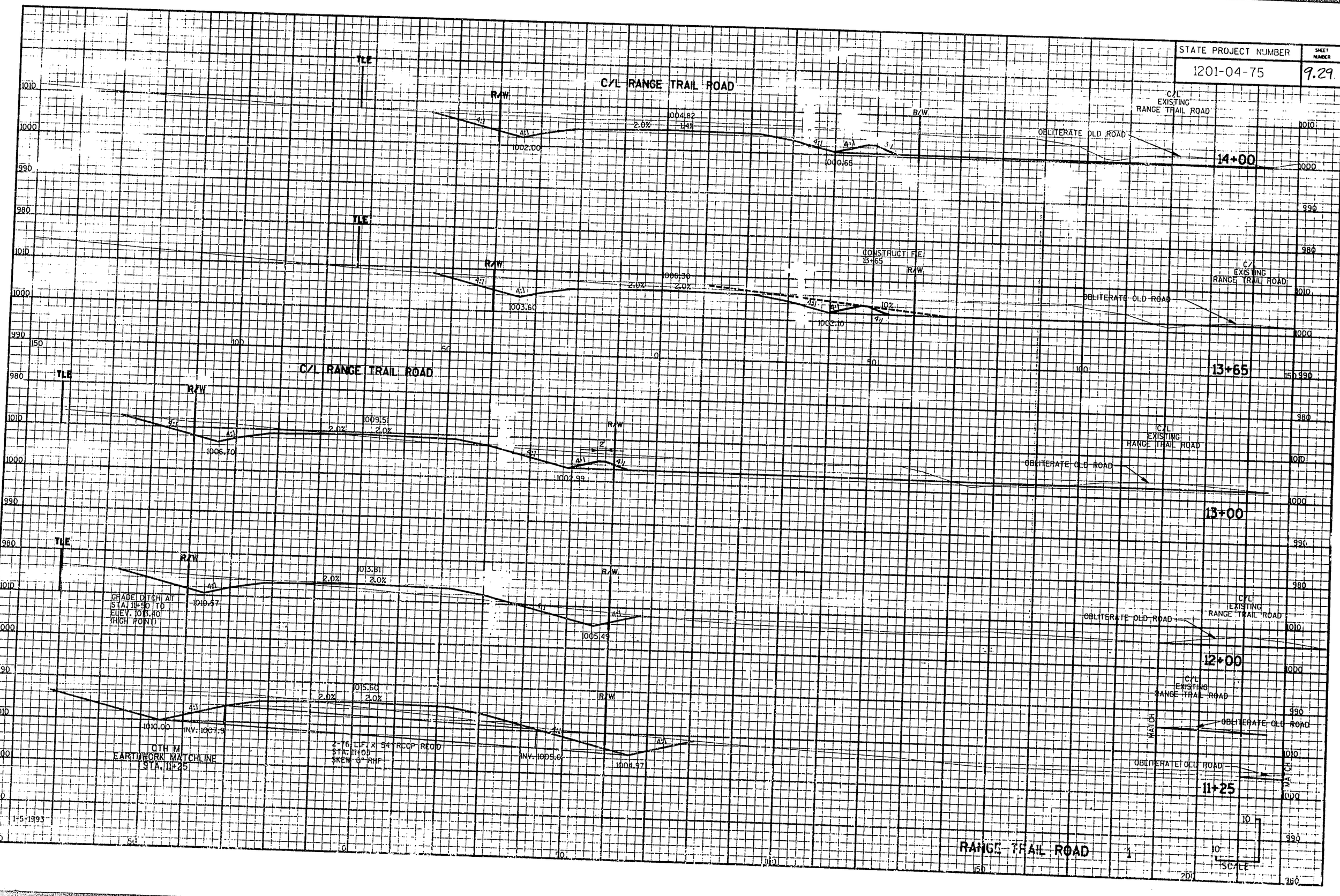
SCALE

150 100

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.28



STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.29



STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.30

C/L RANGE TRAIL ROAD

TLE R/W R/W TLE

999.25 5.0% 5.0%

995.90 INV. 995.7 INV. 995.10 995.05

1-60 L.F.X24"CP RECD
STA 16+80.1 L STA 16+85 RT
SKEW 0° RHF

17+00

60' V.C.

TLE R/W R/W

999.69 5.0% 2% 10%

996.50 995.60

1-54 L.F.X18" CP RECD
STA. 15+98 INV. 995.60
STA. 16+52 INV. 995.40
SKEW 90° RHF

16+00

STA. 16+50
GRADE BACK TO
EXISTING DITCH
ELEV. 994.0

TLE R/W R/W

1000.95 3.6% 3.6%

997.50 996.00

C/L EXISTING RANGE TRAIL ROAD

OBLITERATE OLD ROAD

15+25

TLE R/W R/W

1001.55 2.6% 2.6%

999.00 997.00

C/L EXISTING RANGE TRAIL ROAD

OBLITERATE OLD ROAD

15+00

TLE R/W R/W

1003.01 2.0% 0.6%

1000.20 998.00

C/L EXISTING RANGE TRAIL ROAD

OBLITERATE OLD ROAD

14+50

1-5-1993

RANGE TRAIL ROAD 2

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.31

MATCH EXISTING
BACK ONLY STA. 20+00

C/L RANGE TRAIL ROAD

20+00

R/W 998.00 — 1000.06 — 2.0% 2.0% — R/W 998.00

19+00

TLE R/W 997.50 — 999.79 — 2.1% 2.1% — R/W 997.50 TLE

18+00

TLE R/W 997.00 — 999.52 — 5.0% 5.0% — R/W 997.00 TLE

17+60

TLE R/W 996.50 — 999.12 — 5.0% 5.0% — R/W 996.50 TLE

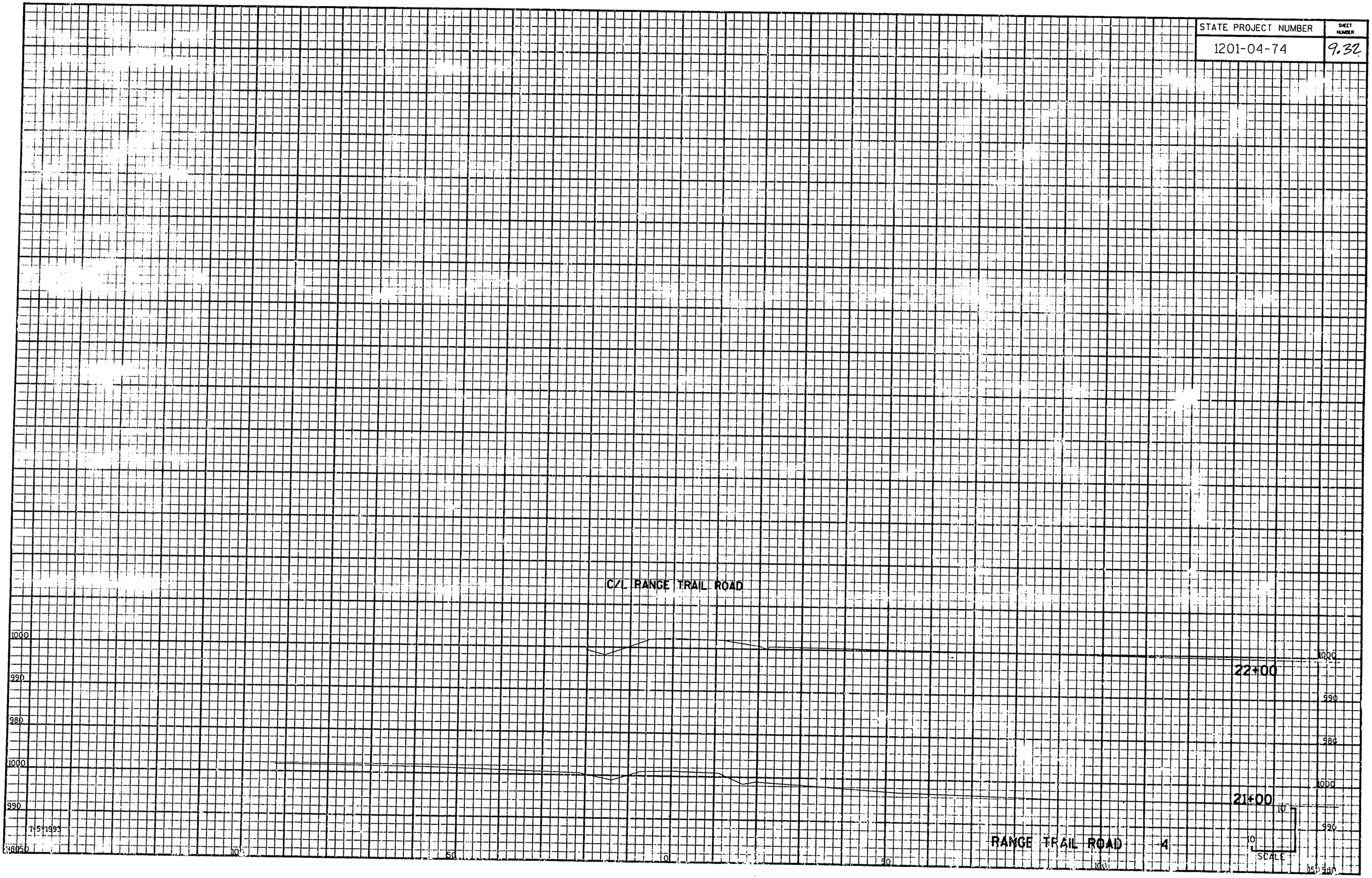
17+25

TLE R/W 996.20 — 999.32 — 5.0% 5.0% — R/W 996.00 TLE

RANGE TRAIL ROAD 3

SCALE

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-74	9.32



STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	983

WBRL

EBRL

967.40

5.0
965.5

712+00
970

EBRL

967.11

5.0
965.5

711+00
970

WBRL

5.0
965.2

967.11

711+00
970

EBRL

966.81

5.0
965.2

710+00
970

WBRL

966.81

710+00
970

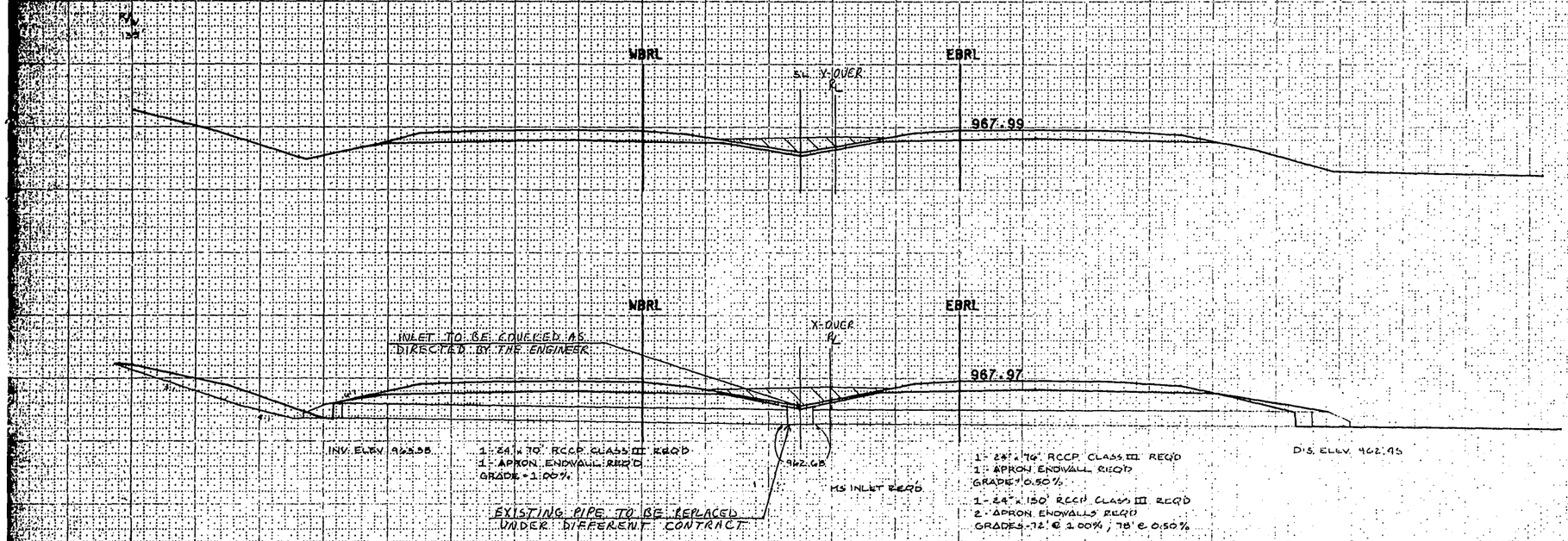
GRADING LIMITED TO CROSS-HATCHED SECTIONS

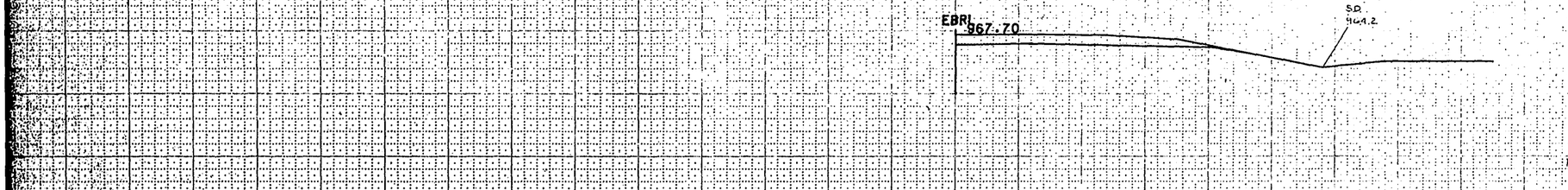
TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

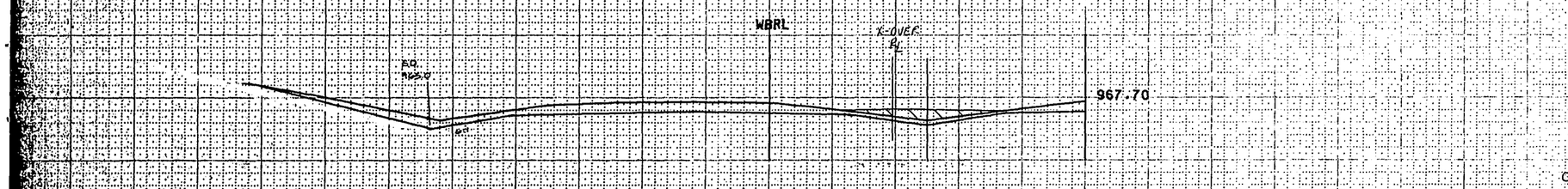
SCALE: FEET
20 0 0 1

SHEET NO 3 1 1201050018

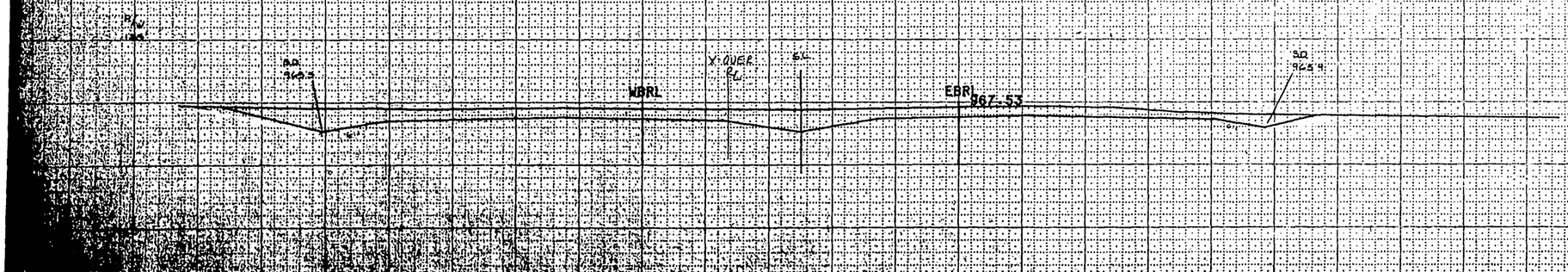
STATE PROJECT NUMBER	SHEET NO.
1201-04-75	9 34







GRADING LIMITED TO CROSS-HATCHED SECTIONS

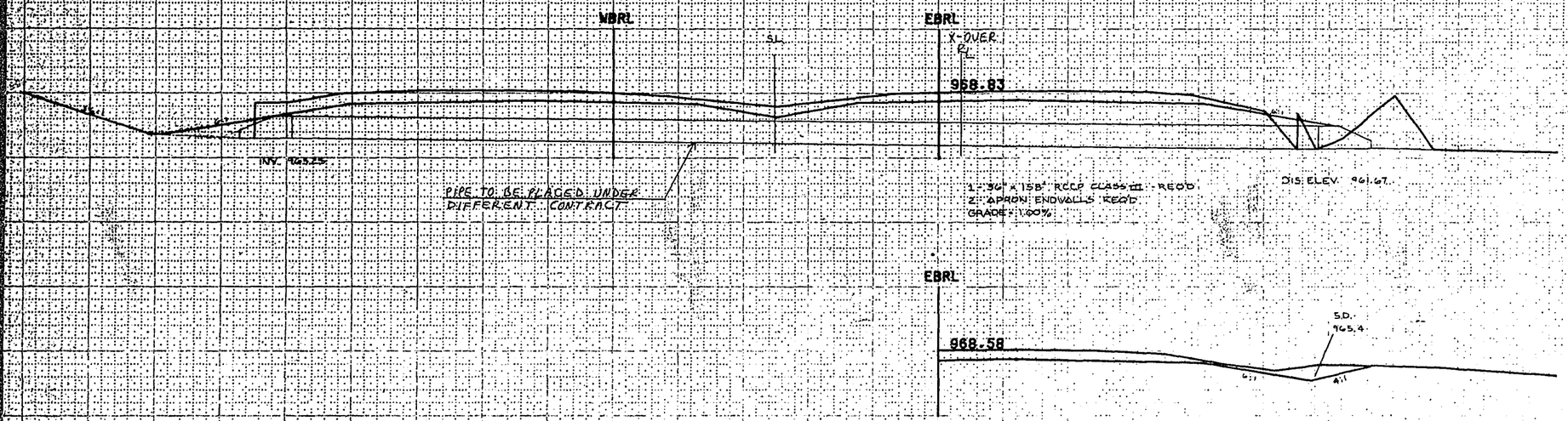


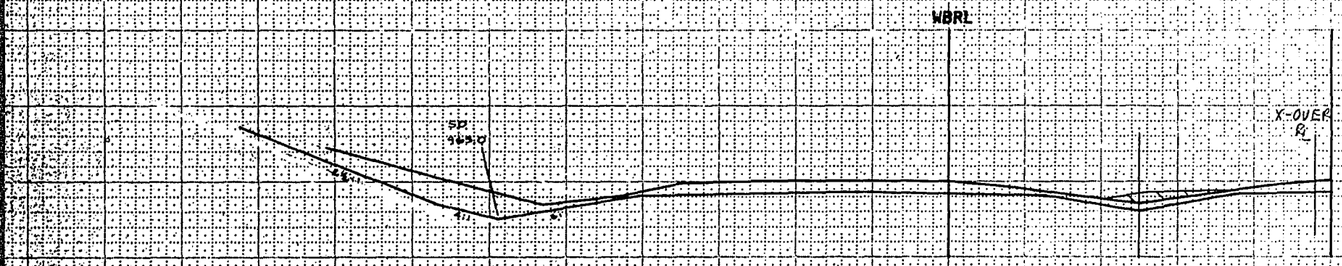
TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

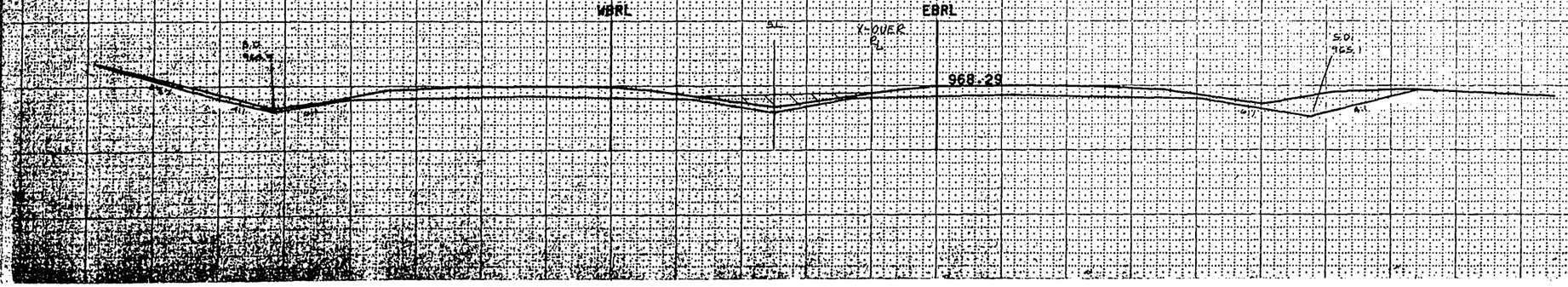
SCALE: FEET
20 0 0

SHEET NO 4 1 1201-04-75

STATE PROJECT NUMBER	
1201-04-75	135







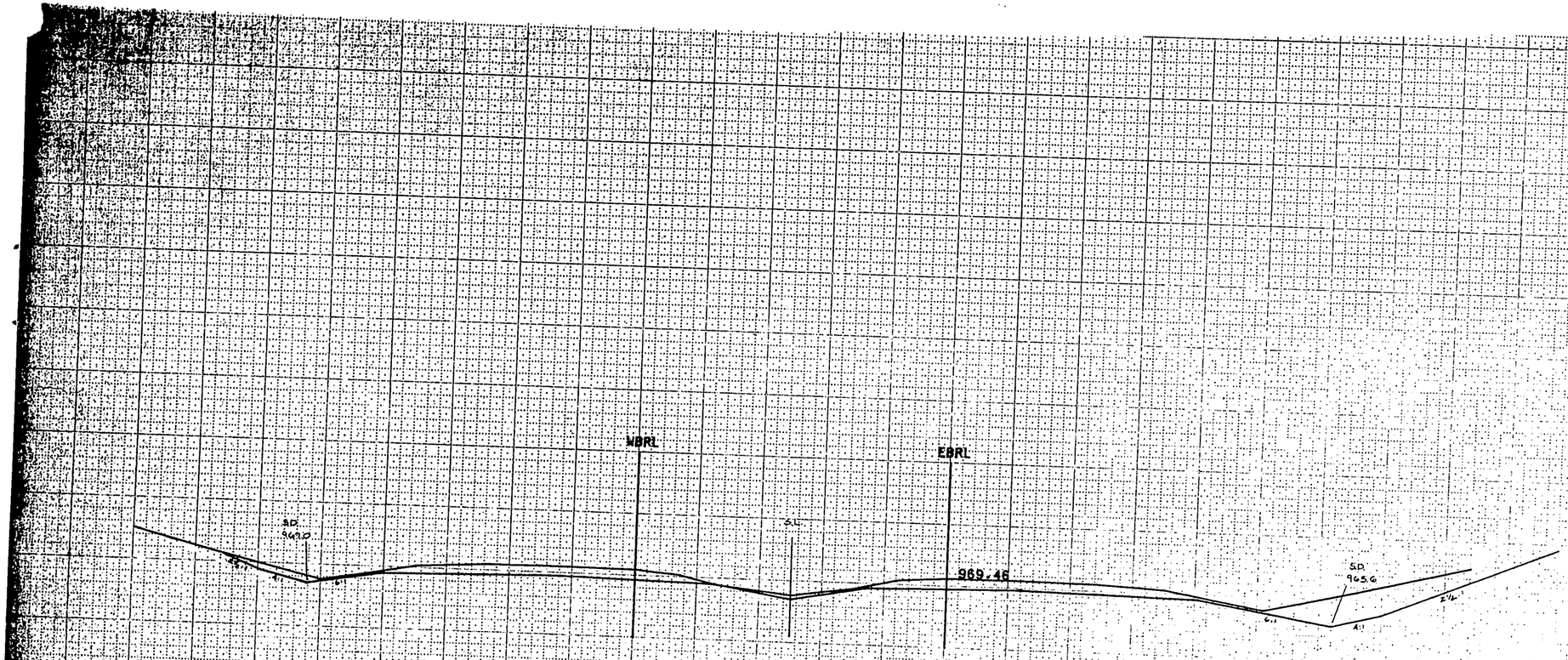
GRADING LIMITED TO CROSS-HATCHED SECTIONS

TEMPLATE 'S SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET
20 10 0 20

SHEET NO 5 1 126

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	9.30



719+00
970

718+00
970

717+00
970

GRADING LIMITED TO CROSS-HATCHED SECTIONS

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET
20 0 20

SHEET NO. 6

STATE PROJECT NUMBER
1201-07-75

770+11
990

WBRL
EBRL 987.92
MED RL
INLET TO BE KEPT OPEN

769+10
990

EP
WBRL
EBRL 987.33

768+09
990

EP
WBRL
EBRL 986.75

767+08
990

WBRL
EBRL 986.16

766+07
990

WBRL
MED RL
EBRL 985.58

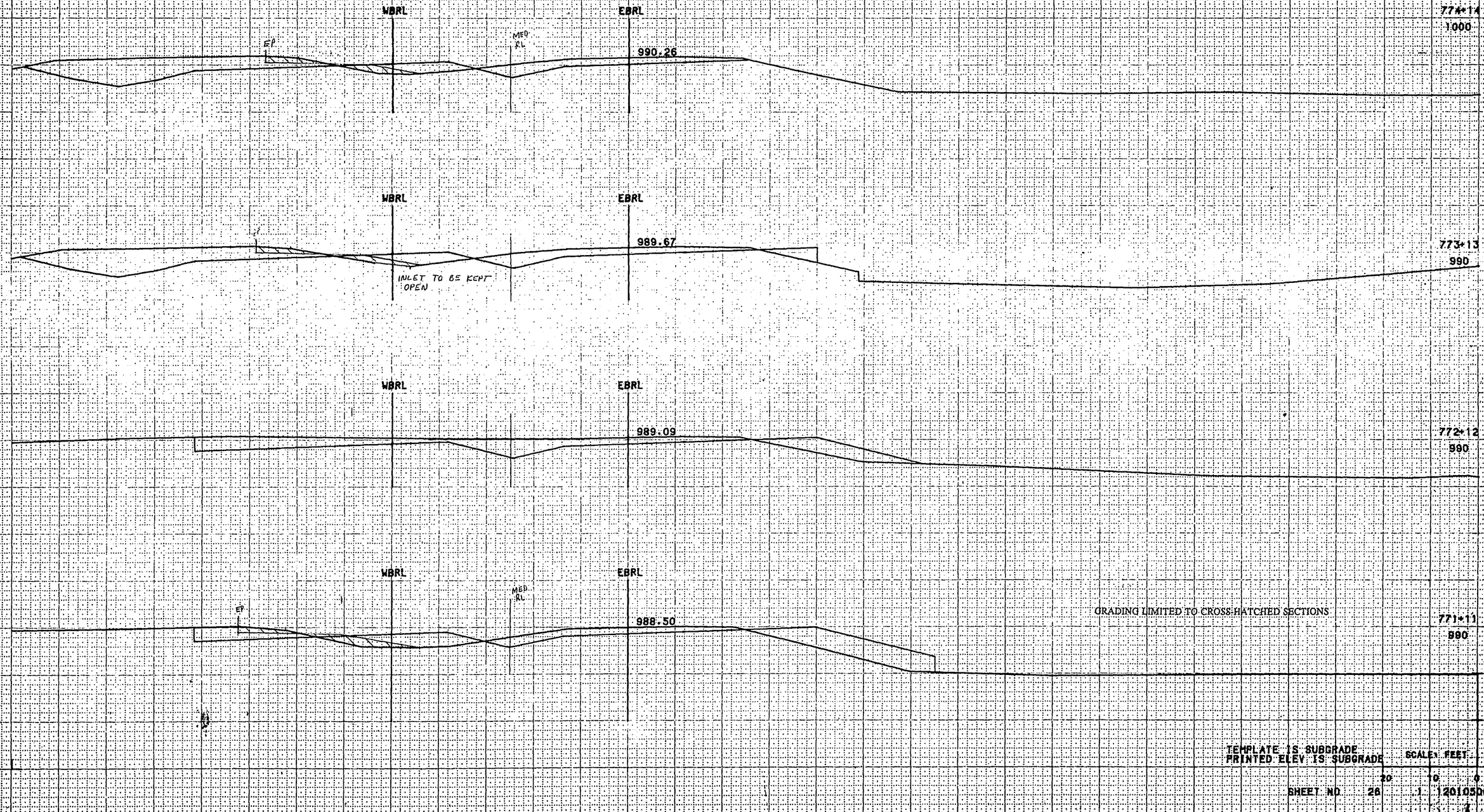
GRADING LIMITED TO CROSS-HATCHED SECTIONS

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET
20 0 0

SHEET NO 25 1 1201 080019

STATE PROJECT NUMBER
1201-04-25 (28)



GRADING LIMITED TO CROSS-HATCHED SECTIONS

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET

SHEET NO. 26 | 20105001

STATE PROJECT NUMBER
12.01-04-75

WBRL
MED RL
EBRL
993.17
778+17
1000

WBRL
EBRL
992.59
778+17
1000

WBRL
EBRL
992.01
777+16
1000

WBRL
EBRL
991.42
776+15
1000

WBRL
MED RL
EBRL
990.84
775+14
1000

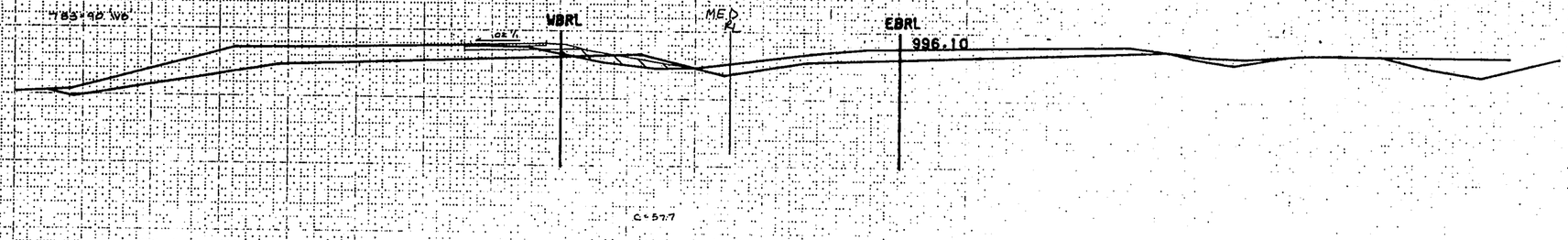
GRADING LIMITED TO CROSS-HATCHED SECTIONS

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

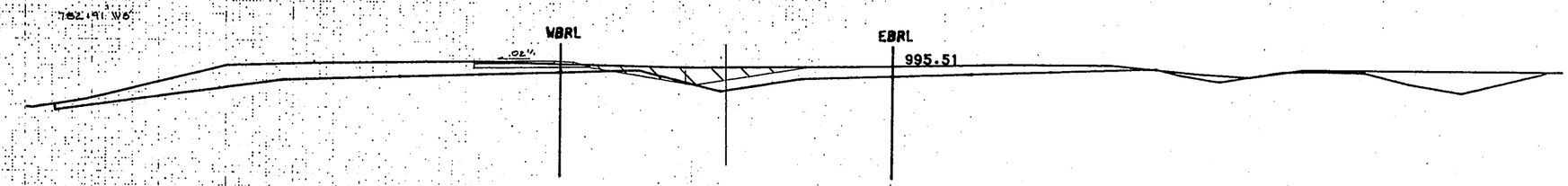
SCALE: FEET
20 0 10 20

SHEET NO. 27 1 120105001A

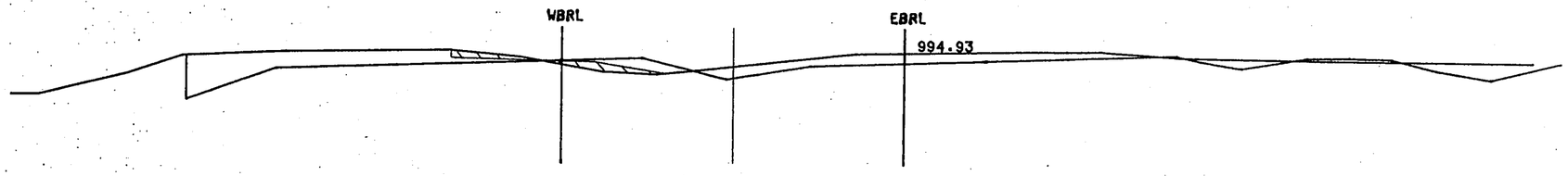
STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9140



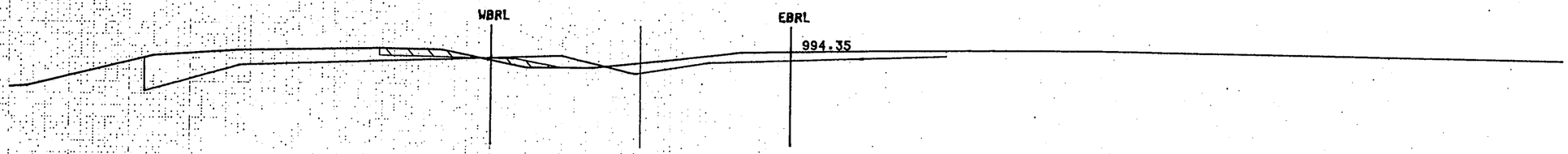
784+21
1000



783+20
1000

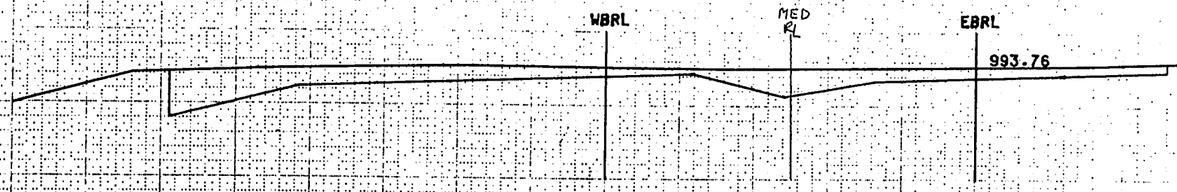


782+19
1000



781+19
1000

GRADING LIMITED TO CROSS-HATCHED SECTIONS



780+18
1000

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET
20 10 0 0 10 20

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	941

EBRL

999.01

789+00
1000

C = 4.0 F = 15.3

WBRL

791+00 WB'

.02"/'

4:1 4:1

999.01

789+00
1000

C = 6.0 F = 35.5

WBRL EBRL

786+00 WB'

.02"/'

998.43

788+00
1000

C = 3.0 F = 43.0

786+69 WB'

WBRL .02"/' MED RL EBRL 997.84

787+22
1000

C = 16.5 F = 30.0

GRADING LIMITED TO CROSS-HATCHED SECTIONS

784+90 WB'

WBRL MED RL EBRL 996.68

785+21
1000

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET
20 10 0 10 20

SHEET NO 29 1 1201050019

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	942

795+00
1010

WBRL EBRL
1002.49

794+00
1010

WBRL EBRL
1001.91

793+00
1010

WBRL EBRL
1001.33

792+00
1010

WBRL EBRL
1000.75

791+00
1010

WBRL EBRL
1000.17

GRADING LIMITED TO CROSS-HATCHED SECTIONS

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET
20 0 0

SHEET NO 30 1 1201050019

STATE PROJECT NUMBER
1201-04-75

800+85 WB

WBRL
EBRL
1006.00
800+85
1010

WBRL
EBRL
1005.39
800+00
1010

WBRL
EBRL
1004.81
799+00
1010

WBRL
EBRL
1004.23
798+00
1010

WBRL
EBRL
1003.65
797+00
1010

WBRL
EBRL
1003.07
796+00
1010

GRADING LIMITED TO CROSS-HATCHED SECTIONS

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET

20 10 0

SHEET NO. 31 1 1201050019

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	944

805+85 VB

C=2.0 F=27.5

WBRL

EBRL

1014.68

805+85
1010

804+85 VB

C=5.0 F=20.0

WBRL

EBRL

1012.26

804+85
1010

803+85 VB

C=5.0 F=14.5

WBRL

EBRL

1010.18

803+85
1010

802+85 VB

C=5.0 F=13.7

WBRL

EBRL

1008.44

802+85
1000

GRADING LIMITED TO CROSS-HATCHED SECTIONS

801+85 VB

C=7.5 F=2.

WBRL

EBRL

1007.05

801+85
1010

20

10

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET

20 10 0

SHEET NO 32 1 1201050013

STATE PROJECT NUMBER	SHEET NUMBER
1201-04-75	9.45

811+67 WB

WBRL

EBRL

1029.32

810+83
1020

809+67 WB

C=10.0

WBRL

EBRL
1026.37

809+83
1020

808+85 WB

WBRL

EBRL

1023.41

808+84
1030

C=17 F=45.0

807+85 WB

WBRL

EBRL

C=18.5 F=0

1020.41

807+84
1020

C=6.0 F=45.0

806+85 WB

WBRL

EBRL
1017.43

C=9 F=0

GRADING LIMITED TO CROSSHATCHED SECTIONS

806+84
1010

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET

20 10 0

SHEET NO 33 1 1201050019

STATE PROJECT NUMBER | SHEET NO. 946

1201-04-75

815+81 WB

WBRL

EBRL

1038.62

815+81
1040

814+86 WB

C=4.7 F=12.4

WBRL

EBRL

1037.53

814+82
1040

813+92 WB

C=7.7 F=4.7

WBRL

EBRL

1036.21

813+92
1040

812+88 WB

C=11.0 F=0

WBRL

EBRL

1034.17

812+82
1040

811+87 WB

C=7.1 F=12.5

WBRL

EBRL

1031.95

GRADING LIMITED TO CROSS-HATCHED SECTIONS

811+83
1040

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET
20 10 0

SHEET NO 34 1 1201050019

STATE PROJECT NUMBER	SHEET NO.
1201-04-75	947

819+80 WB

C=21.1 E=10.8

WBRL

EBRL

.02

1039.42

819+80
1040

818+80 WB

WBRL C=25.1 E=11.6

EBRL

.02

1039.68

818+80
1040

817+81 WB

WBRL C=17.8 E=7.7

EBRL

.02

1039.71

817+81
1040

816+81 WB

WBRL C=33.5 E=16.4

EBRL

.02

1039.36

816+81
1040

GRADING LIMITED TO CROSS-HATCHED SECTIONS

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET
20 10 0

SHEET NO. 35 1 1201052019

STATE PROJECT NUMBER
1201-04-15

WBRL
EBRL
824+92 WB
C=0.2 F=10.8
.02
1038.96
824+79
1040

WBRL C=0.2 F=13.4
EBRL
823+91 WB
.02
1038.33
823+79
1040

WBRL C=0.2 F=13.9
EBRL
822+91 WB
.02
1038.60
822+79
1040

EBRL
1039.15
820+80
1040

C=13.9 F=10.8
820+90 WB
WBRL
.02
1039.15
820+80
1040

GRADING LIMITED TO CROSS-HATCHED SECTIONS

TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET
20 0 0

SHEET NO 36 1 1201050019

STATE PROJECT NUMBER
1201-09-75 (7)

828+93 WB

WBRL

EBRL
1036.97

828+77
1030

827+92 WB

WBRL

EBRL
1037.25

827+77
1030

826+92 WB

WBRL

EBRL
1037.51

826+78
1030

GRADING LIMITED TO CROSS-HATCHED SECTIONS

C.L.E. F.I.S.

825+92 WB

WBRL

EBRL
1037.79

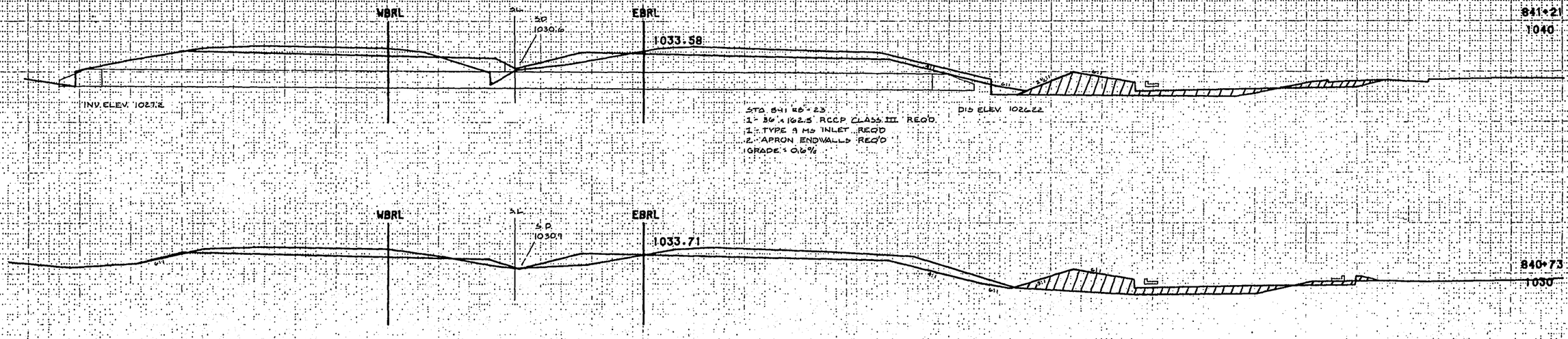
825+78
1030

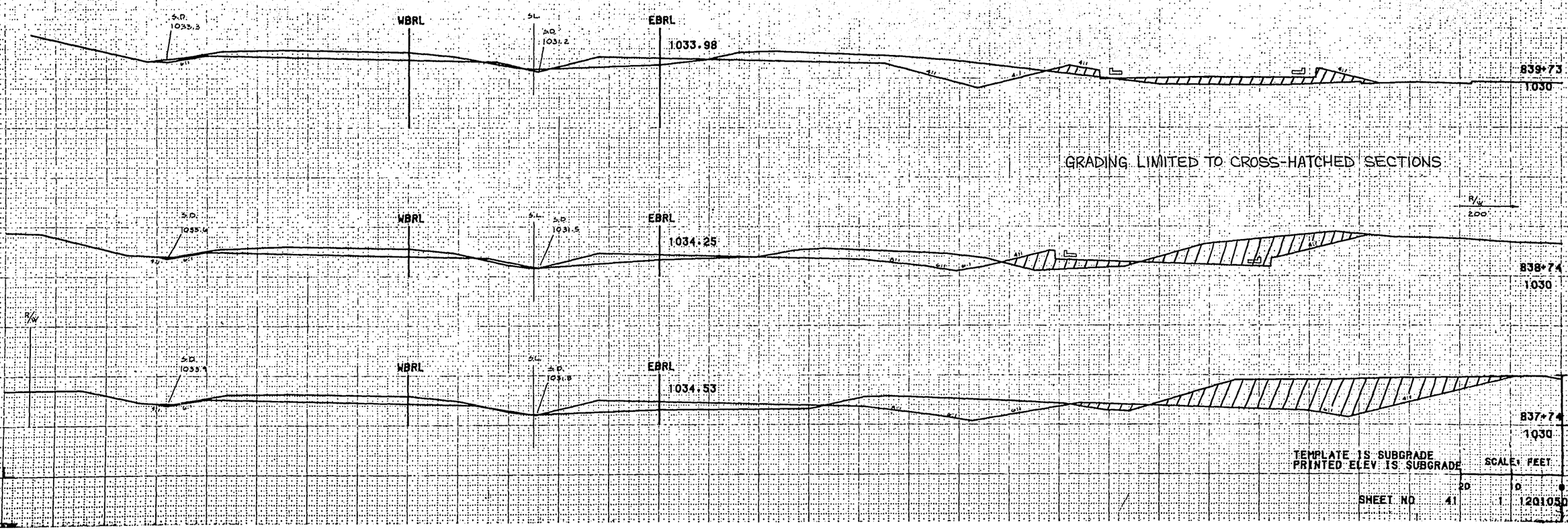
TEMPLATE IS SUBGRADE
PRINTED ELEV IS SUBGRADE

SCALE: FEET
20 0 0

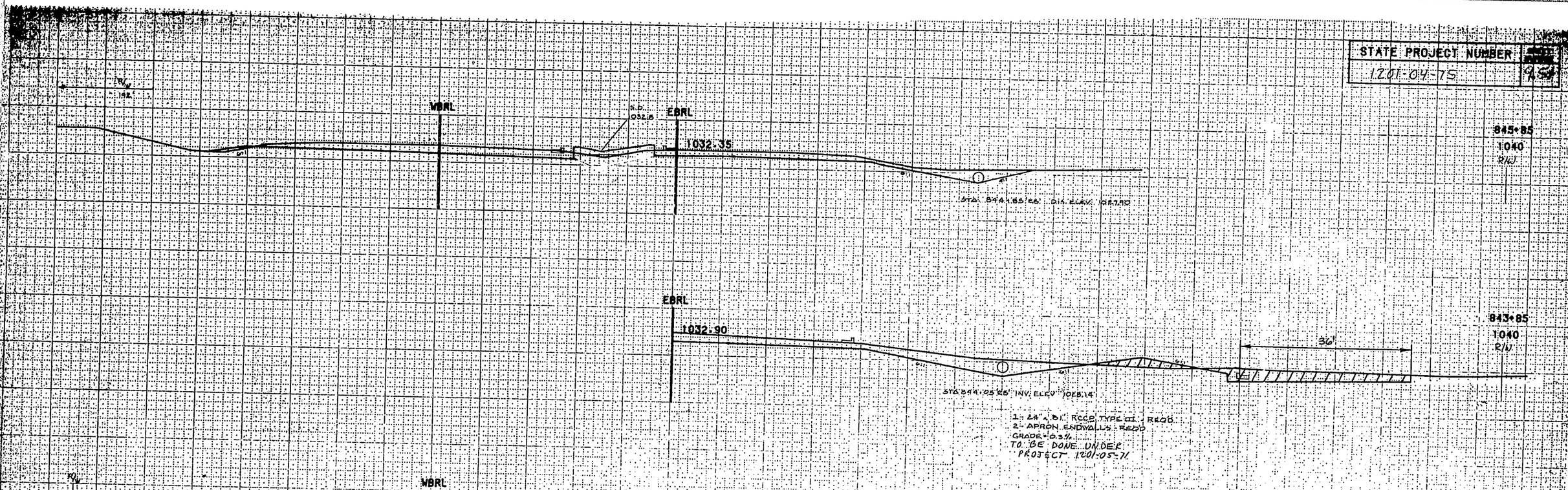
SHEET NO 37 1 1201050013

STATE PROJECT NUMBER	SHEET NO.
1201-05-75	9.50



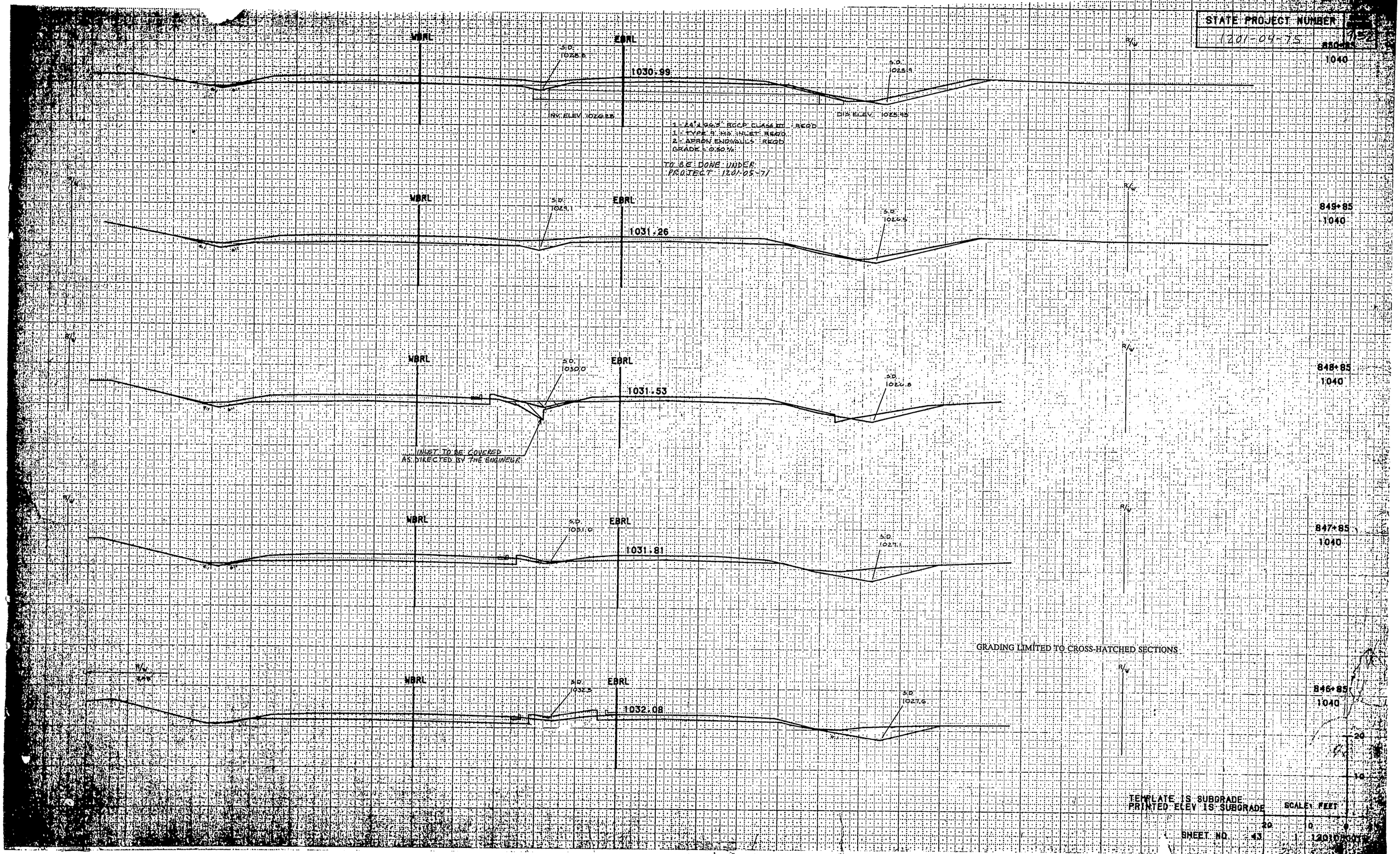


STATE PROJECT NUMBER	SHEET NO.
1201-04-75	95



SHEET NO. 43 OF 70 SHEETS

STATE PROJECT NUMBER
1201-04-75



SHEET NO. 43

1201R0071