WKE

MAY 2018

PROJECT ID: 1030-31-72

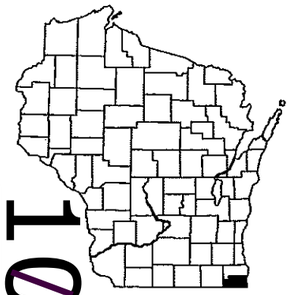
WITH: 3738-08-70

COUNTY: KENOSHA

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
~~Section No.~~	~~3~~	~~Miscellaneous Quantities~~
~~Section No.~~	~~4~~	~~Right of Way Plat~~
~~Section No.~~	~~5~~	~~Plan and Profile~~
~~Section No.~~	~~6~~	~~Standard Detail Drawings~~
~~Section No.~~	~~7~~	~~Sign Plates~~
~~Section No.~~	~~8~~	~~Structure Plans~~
~~Section No.~~	~~9~~	~~Computer Earthwork Data~~
~~Section No.~~	~~9~~	~~Cross Sections~~

TOTAL SHEETS = 24



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

NS FREEWAY, REST AREA 26

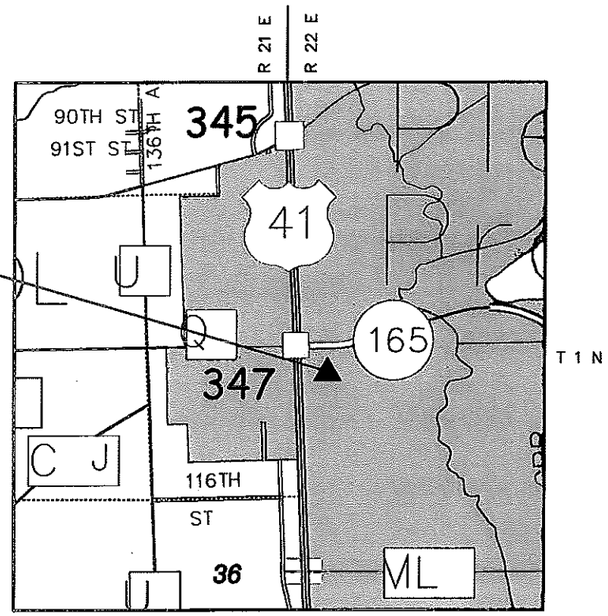
SAFETY REST AREA IMPROVEMENTS

NON HIGHWAY
KENOSHA COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1030-31-72		

STATE PROJECT NUMBER

1030-31-72



PROJECT LOCATION

DESIGN DESIGNATION

A.A.D.T.	=	N/A
A.A.D.T.	=	N/A
D.H.V.	=	N/A
D.D.	=	N/A
T.	=	N/A
DESIGN SPEED	=	N/A
ESALS	=	N/A

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB)
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI

ORIGINAL PLANS PREPARED BY

CBS SQUARED INC.

WISCONSIN PROFESSIONAL ENGINEER
BRIAN E. SMITS
E-27284
CHIPPEWA FALLS
WI

DATE: 12/26/17 Brian E. Smits
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	
Designer	BILL WONDRACHEK
Project Manager	BILL WONDRACHEK
Regional Examiner	
Regional Supervisor	

APPROVED FOR THE DEPARTMENT

DATE: 3/14/18 (Signature)

E

FILE NAME : P:\WIDOT\17024 - REST AREA #26\CAD\12-06-17\SHEETS\1030-31-72_TITLESHEET.DWG

PLOT DATE : 12/26/2017 11:05 AM

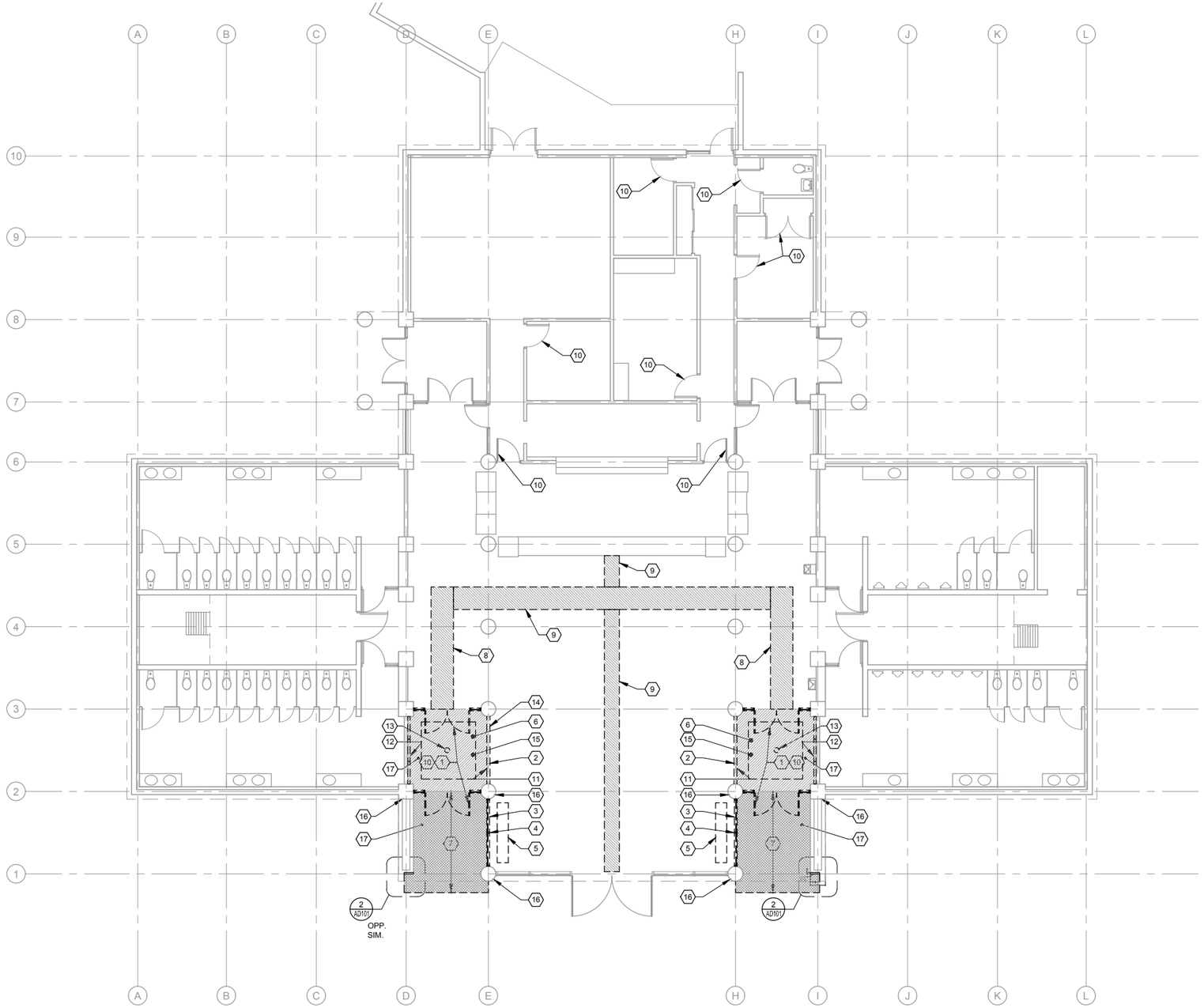
PLOT BY : DUSTIN SCHUH

PLOT NAME :

GENERAL NOTES

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com



PLAN NORTH

1 **DEMOLITION PLAN**

1/8" = 1'-0"

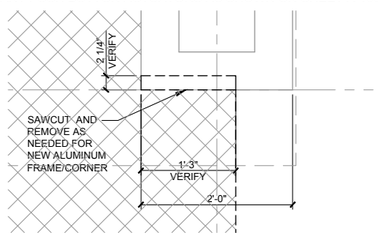
0 4' 8' 16'

DEMO PLAN GENERAL NOTES:

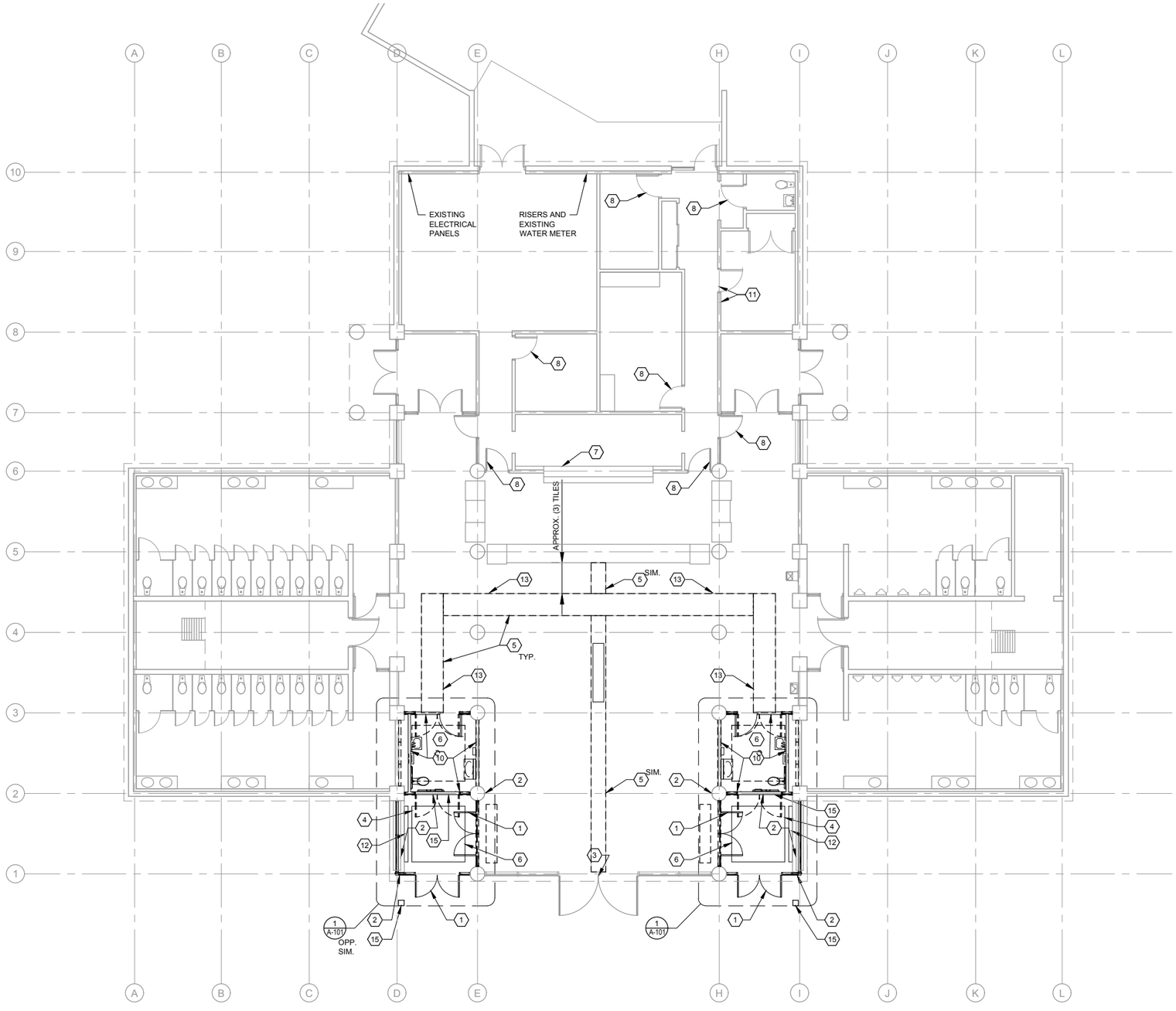
1. ALL WORK SHALL COMPLY WITH DIVISION 1 GENERAL REQUIREMENTS / SPECIAL PROVISIONS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. ALL WORK SHALL BE STAGED / SEQUENCED TO MAINTAIN ACCESS TO ONE FRONT ENTRY AND AT LEAST TWO EXISTING TOILET ROOMS AT ALL TIMES. PROVIDE TEMPORARY MEN/WOMEN SIGNAGE AS NEEDED, COORDINATE WITH WDOT STAFF.
4. REMOVE ALL WALL MOUNTED MAP CASES FROM WALLS TO BE REMODELED; TURN OVER TO OWNER FOR REUSE.
5. HAND REMOVE SALVAGE AND RESTORE ANY. ALL OTHER EXISTING CONSTRUCTION NECESSARY TO COMPLETE THE WORK TO MATCH ORIGINAL WORKMANSHIP.

DEMO PLAN KEYED NOTES:

1. REMOVE ALUMINUM ENTRANCE SYSTEM BELOW WOOD BEAM (SALVAGE FOR REUSE). HAND REMOVE BASE CURBS TO TOP OF BASE SLAB AT INTERIOR DOOR, AND TO BOTTOM OF BASE SLAB AT EXTERIOR DOOR. REMOVE DOOR HARDWARE AS REQUIRED. SALVAGE ALL MATERIALS AND REINSTALL IN NEW OPENINGS, AS INDICATED ON A-100. MATERIAL THAT CANT BE REPLACED HAVE TO BE REPLACED WITH NEW MATERIAL BY CONTRACTOR.
2. REMOVE WALL AND ALUMINUM WINDOWS BELOW WOOD BEAM. KEEP POWER TO REESTABLISH EXISTING OUTLETS IN NEW WALL.
3. REMOVE ALUMINUM WINDOW SYSTEM BELOW WOOD BEAM. SAW CUT AND HAND REMOVE PORTIONS OF CURBS AS NECESSARY FOR RELOCATED ALUMINUM ENTRANCE.
4. REMOVE ELECTRIC HEATER AND POWER SUPPLY.
5. REMOVE BENCH, TURN BENCHES OVER TO THE OWNER.
6. SAWCUT AND REMOVE CONCRETE FLOOR SLAB.
7. SAWCUT AND REMOVE SIDEWALK PANELS TO FIRST JOINT TO CONSTRUCT FROST WALL. REMOVE EXCESS SOIL TO ALLOW FOR NEW 4" RECESSED CONCRETE SLAB OVER 6 MIL POLY VAPOR BARRIER OVER 2" OF RIGID EXTRUDED INSULATION OVER RECOMPACTING SOILS. RECESS NEW FLOOR SLAB TO ACCOMODATE TILE FLOOR FINISH AND RECESS FLOOR MAT.
8. HAND REMOVE FLOOR TILE TO GROUT LINE PER NEW FLOOR PATTERN AND SELECTIVELY SAWCUT AND REMOVE FLOOR SLAB TO COMPLETE U.G. PLUMBING WORK. PROVIDE AND INSTALL NEW TILE. (THREE ROWS OF TILE)
9. HAND REMOVE 2 OR 3 ROWS OF FLOOR TILE TO CREATE SIMILAR FLOOR ACCESS FOR PLUMBING WASTE LINES AND NEW FLOOR PATTERN (USING NEW TILE).
10. REMOVE THE EXISTING SCHLAGE LOCKSET.
11. REMOVE ELECTRIC CABINET UNIT HEATER FOR RELOCATION TO NEW VESTIBULE.
12. REMOVE MAP DISPLAY CASES. REINSTALL IN LOCATION SHOWN ON SHEET A-100.
13. REMOVE PENDANT LIGHT FIXTURE ABOVE NEW TOILET ROOM. TURN OVER TO OWNER. PROVIDE BLANK PLATE (BLACK).
14. PROTECT OR REMOVE AND REINSTALL EXISTING VENDING MACHINE WATER SUPPLY.
15. REMOVE EXISTING FLOOR MAT, MAT FRAME AND FLOOR TILE. SALVAGE FLOOR MAT FOR RE-USE AND REINSTALL. PREP FLOOR TO RECEIVE NEW FLOOR TILE.
16. REMOVE ALL TILE FACING FROM COLUMN CAPS AFFECTED BY THIS WORK. INSTALL NEW BRONZE BREAK METAL FLASHING, TO MATCH EXISTING, AFTER COMPLETION OF THE WORK.
17. IN THE ROOM/OR/AREA REMOVE AND SALVAGE EXISTING ADA HANDICAP PUSH BUTTON ACTUATORS AND ASSOCIATED DOOR OPERATORS ON THE FRAMES. REINSTALL ON RELOCATED DOORS AND FRAMES. LOCATE, MAKE OPERABLE, AND COMPLIANT PUSH BUTTON ACTUATORS AS SHOWN ON SHEET A-100.



2 **DEMOLITION PLAN**



PLAN NORTH

1 OVERALL FLOOR PLAN

1/8" = 1'-0"

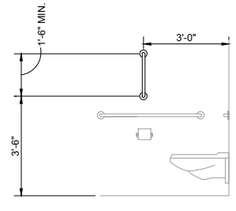
0 4' 8' 16'

FLOOR PLAN GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH DIVISION 1 GENERAL REQUIREMENTS / SPECIAL PROVISIONS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. ALL WORK SHALL BE STAGED / SEQUENCED TO MAINTAIN ACCESS TO ONE FRONT ENTRY AND AT LEAST TWO EXISTING TOILET ROOMS AT ALL TIMES. PROVIDE TEMPORARY MEN / WOMEN SIGNAGE AS NEEDED. COORDINATE WITH WDOT STAFF.
4. COORDINATE AND PROVIDE NEW CIRCUIT BREAKERS AND ELECTRIC FEEDERS FROM EXISTING PANELS AS NECESSARY FOR ALL NEW AND RELOCATED DEVICES REQUIRING ELECTRICAL POWER. ROUTE ALL POWER FEEDERS IN CONCEALED SPACES WHEREVER POSSIBLE AND CONSOLIDATE FEEDERS IN CONDUITS ALONG COMMON ROUTES APPROVED BY THE OWNER TO MINIMIZE NUMBER OF INDIVIDUAL EXPOSED CONDUITS WHERE UNAVOIDABLY EXPOSED TO PUBLIC VIEW. PAINT EXPOSED CONDUITS AND JUNCTION BOXES TO MATCH COLOR OF ADJACENT SURFACES. REUSE EXISTING CIRCUITS WHERE POSSIBLE AND ACCEPTABLE TO OWNER. DEACTIVATE ABANDONED ELECTRICAL SUPPLIES / DEVICES.
5. ALL WORK SHALL MEET THE APPROPRIATE COMMERCIAL BUILDING CODES.
6. ALL NEW COMPONENTS AND WORK SHALL BE COMMERCIAL GRADE.

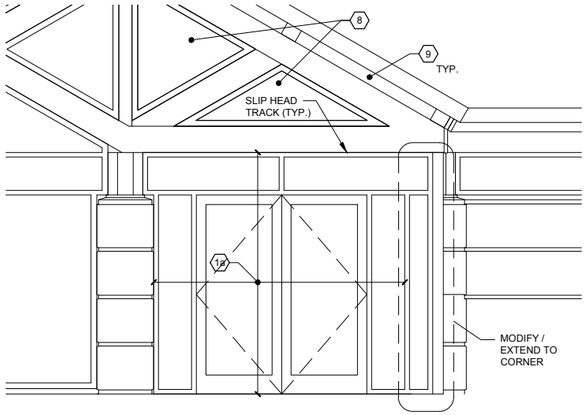
FLOOR PLAN KEYED NOTES:

1. INSTALL SLAVAGED ADA ACTUATORS, OPENERS, AND STORE FRONT FRAMING. ELECTRIC ADA DOOR OPERATORS AT THESE DOOR LEAFS.
2. REINSTALL SALVAGED EXISTING DOOR ACTUATOR WIRELESS DOOR ACTUATOR (SURFACE MOUNT) (2 PER OPERATOR) MATCH LOCATIONS WITH EXISTING WHERE POSSIBLE.
3. NEW MAGNETIC ASTRAGAL SET (FULL HEIGHT) ON INSIDE FACE OF EXISTING DOOR LEAVES. NEW STOP SEAL FULL WIDTH ON INSIDE FACE AT DOOR THRESHOLD. EXISTING JAMB / HEAD SEALS TO REMAIN. INSTALL FABRIC ASTRAGAL ON EXTERIOR FACE ON OPPOSITE LEAF.
4. PROVIDE NEW 4" REINFORCED CONCRETE FLOOR OVER 6 MIL POLY VAPOR BARRIER OVER 2" RIGID INSULATION OVER RECOMPACTED SOILS. REINFORCING SHALL BE 6"x6", 1.9x1.9 W.W.F. RECESS SLAB TO RECEIVE NEW FLOOR TILE FINISH AND RECESSED FLOOR MAT. NEW FLOOR ELEVATION SHALL MATCH EXISTING FLOOR FOR ELEVATION. REINSTALL ALUMINUM FRAMED MAT. CONTRACTOR TO PROVIDE NEW ALUMINUM FRAME.
5. NEW 12"x12" CERAMIC FLOOR TILE (3 ROWS) REPLACE ADJACENT EXISTING TILE IF DISTURBED OR DAMAGED.
6. INSTALL NEW FLOOR TILE TO MATCH EXISTING PATTERN
7. EXISTING CABINETS TO REMAIN.
8. INSTALL NEW SCHLAGE LEVER TYPE LOCKSET. MATCH TO EXISTING. SEE SPECIAL PROVISIONS FOR SPECIFICATIONS.
9. COORDINATE AND PROVIDE NEW KEYING. COORDINATE WITH ON-SITE STAFF: ISABEL O'ROURKE / 262.495-0010
10. INSTALL 18" LONG VERTICAL GRAB BAR. SEE ELEVATION ON THIS SHEET.
11. REPAIR SHEET ROCK CRACK. CUT IN EXPANSION JOINT.
12. REINSTALL SALVAGED ENCLOSED MAP CASES.
13. PATCH AND REPAIR CONCRETE FLOOR TO MATCH EXISTING AND ADJACENT CONDITIONS AND MAKE READY TO RECEIVE NEW TILE FLOOR FINISH.
14. REMOVE, TEMPORARILY RELOCATE, AND THEN REPLACE IN LOCATION SHOWN - BEFORE, DURING, AND AFTER WORK IS COMPLETED.
15. HANDICAP PUSH BUTTON LOCATION. INSTALL ON WALL OR STEEL POST. STEEL POST SHALL BE PRIMED, PAINTED (WITH EPOXY PAINT) AND BOLTED SECURELY TO THE CONCRETE.

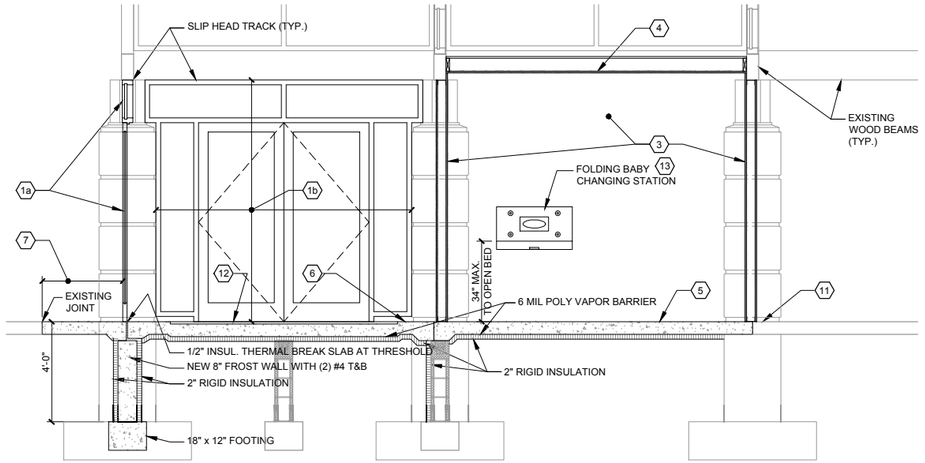


TYPICAL GRAB BAR (GB) ON FIXTURE SIDEWALL

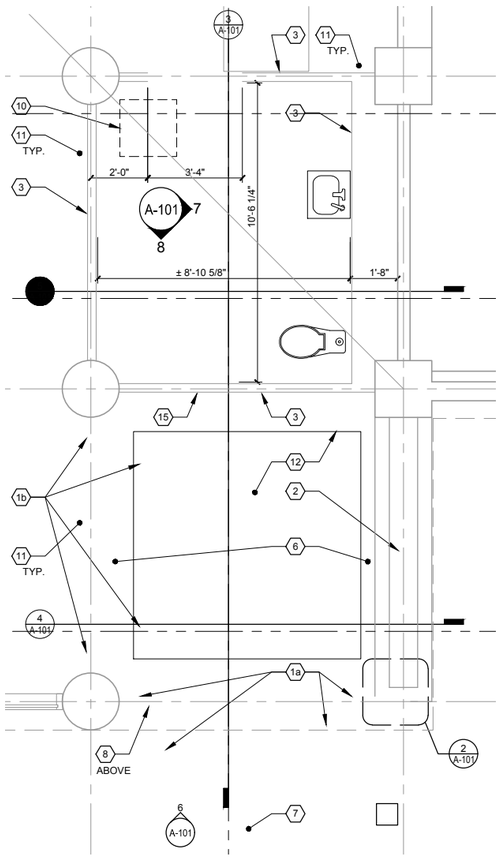
2 GRAB BAR ELEVATION



6 **EXTERIOR DOOR ELEVATION**
3/8" = 1'-0" (OPPOSITE SIDE SIMILAR)



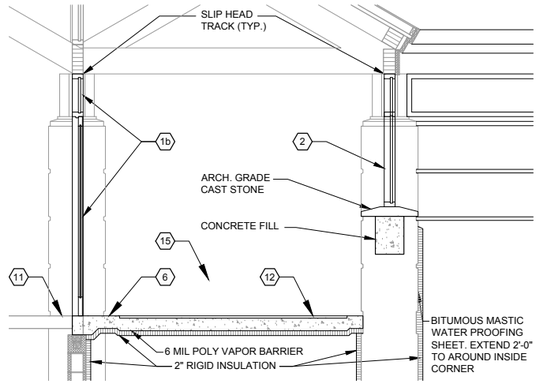
3 **SECTION**
3/8" = 1'-0" (OPPOSITE SIDE SIMILAR)



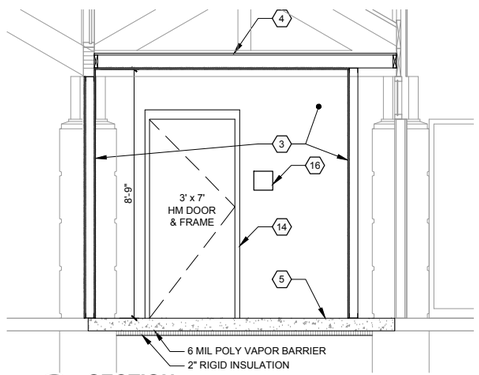
PLAN NORTH

1 **NEW UNISEX TOILET FLOOR PLAN** (OPPOSITE SIDE SIMILAR)
3/8" = 1'-0" (TYP. OF 2)

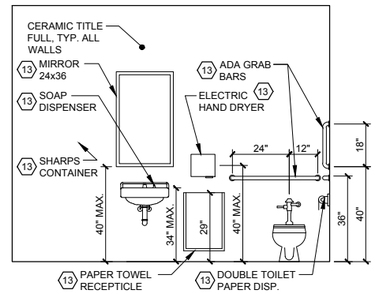
0 2" 4" 6"



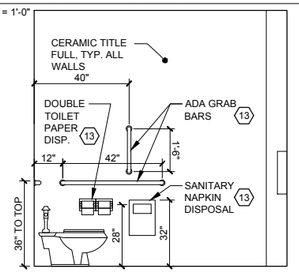
4 **SECTION**
3/8" = 1'-0"



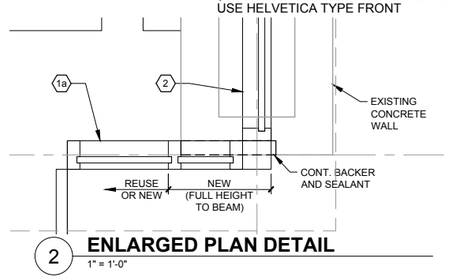
5 **SECTION**
3/8" = 1'-0"



7 **INTERIOR ELEVATION**
3/8" = 1'-0"



8 **INTERIOR ELEVATION**
3/8" = 1'-0"



2 **ENLARGED PLAN DETAIL**
1" = 1'-0"

FLOOR PLAN GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH DIVISION 1 GENERAL REQUIREMENTS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. ALL WORK SHALL BE STAGED / SEQUENCED TO MAINTAIN ACCESS TO ONE FRONT ENTRY AND AT LEAST TWO EXISTING TOILET ROOMS AT ALL TIMES. PROVIDE TEMPORARY MEN / WOMEN SIGNAGE AS NEEDED. COORDINATE WITH WDOT STAFF.
4. ALL DETAILS APPLY TO THE OPPOSITE SIDE OR THE WORK PARAMETERS AND ARE TO BE CONSIDERED THE SAME INTENT.

FLOOR PLAN KEYED NOTES:

1a — REWORK AND REINSTALL EXISTING OR PROVIDE NEW ALUMINUM ENTRANCE TO MATCH EXISTING. GLAZING TO BE CLEAR, CENTER FRAMES ON COLUMNS AND BEAMS ABOVE. U.N.O. PROVIDE SLIP HEAD TRACK FOR BEAM DEFLECTION. REPLACE ALL DOOR HARDWARE TO MATCH EXISTING. PROVIDE NEW ALUMINUM THRESHOLD.

1b — REWORK AND REINSTALL EXISTING OR PROVIDE NEW ALUMINUM ENTRANCE TO MATCH EXISTING. GLAZING TO BE TINTED, CENTER FRAMES ON COLUMNS AND BEAMS ABOVE. U.N.O. PROVIDE INSULATED SLIP HEAD TRACK FOR BEAM DEFLECTION. REPLACE ALL DOOR HARDWARE TO MATCH EXISTING. CONTRACTOR SHALL PROVIDE ANY NEW FRAMING REQ'D.

2 — NEW ALUMINUM FRAMED WINDOWS WITH MULLIONS AND INSULATING GLASS TO MATCH EXISTING ABOVE EXISTING WALL. PROVIDE SLIP HEAD TRACK FOR BEAM DEFLECTION.

3 — NEW PARTITION WALL TO UNDERSIDE OF WOOD BEAM (OR NEW CEILING 1 WALL). 3 5/8" MTL STUDS AT 16" O.C. WITH 5/8" IMPACT RESISTANT GWB LOBBY / VESTIBULE SIDE AND 1/2" TILE BACKER BD AND CERAMIC TILE FULL HEIGHT TOILET ROOM SIDE. REESTABLISH EXISTING VENDING OUTLETS. PROVIDE BATT. INSULATION AND VAPOR BARRIES IN NORTH WALL OF NEW VESTIBULES. PROVIDE ACOUSTICAL BATT INSULATION IN THE STUD CAVITY.

4 — NEW CEILING BETWEEN EXISTING BEAMS. 2x8 AT 24" WITH 3/4" T&G PLYWOOD TOP AND 5/8" GWB BOTTOM.

5 — NEW CONCRETE FLOOR. 4" THICK WITH #4 AT 18" E.W.; WITH THINSET CERAMIC TILE AND CERAMIC TILE BASE TO MATCH EXISTING. SLOPE TO FLOOR DRAIN. FINISH HEIGHT TO EXISTING FLOOR TO MATCH 4".

6 — NEW CONCRETE FLOOR. 4" THICK WITH #4 AT 18" E.W.; WITH THINSET CERAMIC TILE AND CERAMIC TILE BASE TO MATCH EXISTING AROUND RECESSED FLOOR GRATE. MATCH TO FINISH HEIGHT OF EXISTING FLOOR.

7 — NEW CONCRETE SIDEWALK PANEL 5" THICK WITH #4 AT 18" E.W., BROOM FINISH TO MATCH EXISTING. DOWEL TO FROST WALL AND EXISTING SIDEWALK WITH #4 AT 12" O.C.

8 — (2) NEW ALUMINUM FRAMED TRIANGULAR WINDOWS WITHIN THE TRUSS SYSTEM ABOVE TO MATCH EXISTING. GLAZING TO BE CLEAR, INSULATING.

9 — INFILL BETWEEN ROOF DECK AND TOP OF TRUSS OVER VESTIBULE TO MATCH EXISTING PER REFERENCE DRAWINGS DETAIL 6/A19. CONTINUOUS SEALANT ON PERIMETER BOTH SIDES.

10 — LOCKABLE METAL FLUSH CEILING HATCH, 2'x2', PAINT TO MATCH CEILING.

11 — CUT / RESET / REPLACE EXISTING TILE WITH FULL-PIECE SALVAGED TILES AND TILE BASE TO ADJOIN NEW WALL AND MEET NEW TILE UNDER DOOR.

12 — RELOCATED RECESSED FLOOR GRATE WITH CONTRACTOR PROVIDED ALUMINUM FRAME (NO DRAIN)

13 — COORDINATE EXACT LOCATIONS AND HEIGHTS OF TOILET ROOM ACCESSORIES TO MEET ADA REQUIREMENTS.

14 — 3' - 0" x 7' - 0" HOLLOW METAL DOOR AND FRAME WITH HARDWARE SET 7 (SECTION 087100)

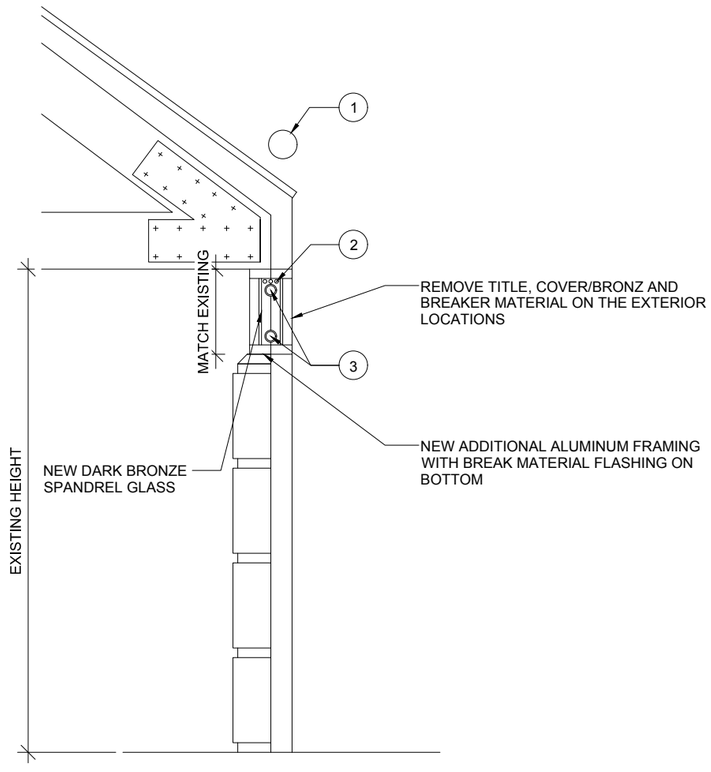
15 — INSTALL NEW EXISTING CABINET UNIT HEATER

16 — NEW FAMILY ASSISTED REST ROOM SIGNAGE BY CONTRACTOR, 8"x8" SIGN (INCLUDES PICTOGRAPHY AND BRAILLE STATING SIGN) MIN. SIZE SIGN 8" X 12". USE HELVETICA TYPE FRONT

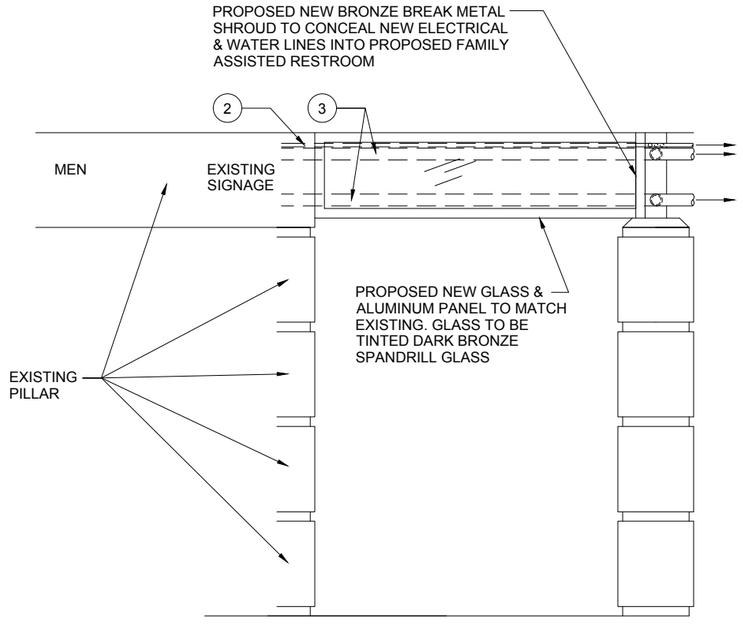
2

2

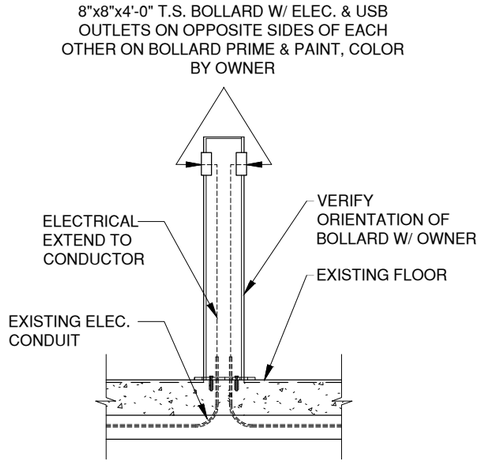
1. PROPOSED NEW 6" VENT PIPE IN ATTIC SPACE - SEE HVAC PLANS
2. PROPOSED NEW ELECTRICAL CONDUIT -- THREE NEEDED - SEE ELECTRICAL PLANS (INSULATE)
3. PROPOSED NEW WATER PIPE -- ONE HOT/ ONE COLD - SEE PLUMBING PLANS (INSULATE)



1 **SECTION VIEW**
1/16" = 1'-0"
0 4' 8' 16'



2 **ELEVATION VIEW**
1/16" = 1'-0"
0 4' 8' 16'



3 **ELECTRICAL/ USB BOLLARD**
NTS

NOT TO SCALE

A - 102

PROJECT NO: 1030-31-72	HWY: REST AREA 26	COUNTY: KENOSHA	SOFIT DETAILS AND BOLLARD	SHEET 6	E

FILE NAME : P:\WIDOT\17024 - REST AREA #26\CAD\12-06-17\SHEETS\1030-31-72 A102_SOFIT DETAIL.DWG
SHEET NAME: A-100 4/16/2012 3:32 PM JAY ENDVICK PLOT NAME : _____

PLUMBING EQUIPMENT AND FIXTURE SCHEDULE							
MARK	EQUIPMENT TYPE	MANUFACTURER, MODEL NUMBER	DESCRIPTION	ELECTRICAL			REMARKS
				VOLTS	PHASE	AMPS	
FD-1	FLOOR DRAIN (PUBLIC AND STAFF AREA'S)	WATTS, FD-100A	CAST IRON BODY, COMBINATION INVERTIBLE MEMBRANE CLAMP, ADJUSTIBLE COLLAR WITH HEEL PROOF POLISHED NICKLE BRONZE STRAINER AND TRAP PRIMER. PPP PRIME RITE TRAP PRIMER.	N/A	N/A	N/A	(7)
L-1 (ADA)	LAVATORY	KOHLER, KINGSTON WALL MOUNT SINK, MODEL - K-2005-L	PROVIDE AND INSTALL CHROME PLATE CAST BRASS "P" TRAP WITH OFFSET TAILPIPE AND GRID STRAINER, LOOSE KEY ANGLE STOPS, SUPPLIES, SOAP DISPENSER, AND ESCUTCHEON PLATES AROUND ALL PIPE PENETRATIONS. PROVIDE TRAP WRAP ON ALL EXPOSED SUPPLY & DRAIN PIPING BELOW SINK. MOUNT SINK TO COMPLY WITH ADA REQUIREMENT.	N/A	N/A	N/A	(3)(2)
	LAVATORY FAUCET	MOEN COMMERCIAL FAUCET - MODEL 8305	PROVIDE ALL COMPONENTS FOR COMPLETE AND PROPER OPERATION OF FIXTURE, INCLUDING BATTERIES, 4" DECK PLATE AND THERMOSTATIC MIXING VALVE EQUAL TO WATTS MODEL MMV).	N/A	N/A	N/A	(4)
WC-1 (ADA)	WATER CLOSET BOWL	KOHLER, KINGSTON K-96057-SSL	1.6 GPF, FLOOR MOUNTED, BOTTOM OUTLET, WHITE, ELONGATED. VITREOUS CHINA, SHIPHON JET, 1-1/2" TOP SPUD, 2-1/4" PASSAGE WAY. ALL TRIM TO BE VANDAL RESISTANT. PROVIDE ALL COMPONENTS AS REQUIRED FOR COMPLETE OPERATION . MOUNT TOP OF SEAT BETWEEN 17" AND 19"ABOVE FINISHED FLOOR TO COMPLY WITH ADA REQUIREMENTS.	N/A	N/A	N/A	(3)
	SEAT	KOHLER, K-4670-CA	ELONGATED OPEN FRONT SEAT WITH ANTI-MICROBIAL AGENT AND WITHOUT COVER.	N/A	N/A	N/A	(5)
	WATER CLOSET FLUSHOMETER	KOHLER, K-10957	1.6 GPF, TOUCHLESS DC FLUSHOMETER.	N/A	N/A	N/A	(6)

REMARKS:

(1) NOT USED.

(2) PROVIDE PUMPED SOAP DISPENSER. KOHLER MODEL K-7346 OR APPROVED EQUAL.

(3) OR EQUAL FROM AMERICAN STANDARD, SLOAN OR CRANE PLUMBING.

(4) OR EQUAL FROM CHICAGO FAUCET, OR MOEN COMMERCIAL.

(5) OR EQUAL FROM AMERICAN STANDARD OR CHURCH.

(6) OR EQUAL FROM KOHLER, AMERICAN STANDARD, DELANY, OR SLOAN.

(7) OR EQUAL FROM WADE, JR SMITH OR JOSAM.

PIPING AND FITTING SCHEDULE (1)				
PIPE (2) (3)	MATERIAL	DIMENSIONS	FITTINGS	JOINT
SANITARY AND VENT (UG & AG)	INTERIOR ABOVE GRADE: PVC, SOLID, ASTM D 2665, NSF 14. HUBLESS CI ASTM A 888 CISPI MARKED. INTERIOR BELOW GRADE: PVC-SCH. 40 SOLID, ASTM D 2665. CAST IRON-HUB & SPIGOT SERVICE WEIGHT ASTM A 74 WITH NEOPRENE COMPRESSION GASKETS ASTM C 564, CISPI 301 AND CISPIHSN85	ASTM D 2665, SCHED 40	PVC - ASTM D 3311, DWV PATTERN. CAST IRON - PIPE AND FITTING SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON PIPE INSTITUTE CAST IRO PIPING AND FITTING SHALL BE OF A B & I FOUNDRY.	SOCKET SOLVENT FUSION IAW ASTM D 2665 APPENDEX
WATER (4)	PIPE: COPPER TUBE, SEAMLESS, DRAWN, ASTM B 88 TYPE L FOR ABOVE GROUND PIPING. USE TYPE "K" FOR BELOW GROUND PIPING. SEE SPECIFICATIONS.		WROUGHT COPPER: ASME B16.22	SOCKET SOLDER IAW ASTM B 828
			CAST COPPER ALLOY: ASME B16.18	LEAD-FREE SOLDER, ASTM B 32
			FLANGES: ASME B16.24, CAST COPPER. USE EPDM GASKETS AND 304 SS FASTENERS.	WATER FLUSHABLE SOLDER FLUX, ASTM B 813
			CAST BRONZE: ASME B16.15	
TRANSITIONS BETWEEN DIFFERENT MATERIALS				
POLYPROPYLENE AND ANY	UP TO 8": SHIELDED TRANSITION COUPLNG, FLUOROELASTOMER SLEEVE, SS SHEAR RING, SS CLAMPS. MISSION SERIES P-FKM. OVER 8": ASTM C 1173 TRANSITION COUPLNG, ASTM D 5926 FLEXIBLE PVC SLEEVE, SS CLAMP. FERNCO SERIES 1056.			
CAST IRON AND ANY	ASTM C 1460 SHIELDED TRANSITION COUPLING, ASTM C 564 NEOPRENE SLEEVE, SS SHEAR RING, SS CLAMPS.			
COPPER AND STEEL	DIELECTRIC FLANGES			
REMARKS:				
(1) SEE GENERAL NOTES ON SHEET P-001.				
(2) UG = UNDERGROUND (BURIED PIPE), AG = ABOVEGROUND (ALL PIPE EXCEPT UNDERGROUND).				
(3) SEE PIPE IDENTIFICATION SCHEDULE.				
(4) INCLUDES DOMESTIC, NON-POTABLE, AND POTABLE.				

PIPE IDENTIFICATION TABLE (1)			
ABBREVIATION	SERVICE (2)	PIPE LABEL	
		TEXT	COLORS
CW	COLD DOMESTIC WATER	CW	(3)
HW	HOT DOMESTIC WATER	HW	(3)
V	VENT FOR SANITARY DRAIN	V	(4)
REMARKS:			
(1) SEE PLUMBING SCHEDULES GENERAL NOTES			
(2) NOT ALL SERVICES USED			
(3) GREEN BACKGROUND, WHITE TEXT			
(4) YELLOW BACKGROUND, BLACK TEXT			

GENERAL ABBREVIATIONS:

AFF	ABOVE FINISH FLOOR
AG	ABOVE GROUND
AST	ABOVE GROUND STORAGE TANK
BHP	BRAKE HORSE POWER
BJH	BETWEEN JOIST ABOVE
BOB	BOTTOM OF BEAM
BOJ	BOTTOM OF JOIST
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
CL	CENTERLINE
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CTB	CLOSE TO BEAM
CTC	CLOSE TO COLUMN
CTJ	CLOSE TO JOIST
CTW	CLOSE TO WALL
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
EL	ELEVATION
ETR	EXISTING TO REMAIN
FC	FLEXIBLE CONNECTION
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FLA	FULL LOAD AMPERES
FLR	FLOOR
FPS	FEET PER SECOND
FT	FEET
GAL	GALLON
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HD	HEAD (FEET)
HP	HORSEPOWER
IAW	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IN	INCH
INV	INVERT
IWS	IN WALL SPACE
KW	KILOWATT
LB	POUNDS
MFR	MANUFACTURER
MTD	MOUNTED
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PD	PRESSURE DROP
PH	PHASE
POC	POINT OF CONNECTION
PSI	POUNDS PER SQUARE IN..
PSIA	POUND PER SQUARE INCH-ABSOLUTE
PSID	POUNDS PER SQUARE INCH-DIFF..
PSIG	POUNDS PER SQUARE INCH-GAUGE
RPM	REVOLUTIONS PER MINUTE
SHT	SHEET
STD	STANDARD
STL	STEEL
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TJA	THRU JOISTS ABOVE
TOB	TOP OF BEAM
TOP	TOP OF PIPE
TOS	TOP OF STEEL
TYP	TYPICAL
V	VENT
VOL	VOLUME
VTR	VENT THRU ROOF
VTW	VENT THRU WALL
WG	WATER GAUGE
WTR	WATER

ABOVEGROUND PIPE INSULATION SCHEDULE							
SERVICE		PIPE SIZE	INSULATION MATERIAL				REMARKS
			TYPE	THICKNESS	JACKET - STRAIGHT PIPE	JACKET - FITTINGS	
COLD WATER	SUPPLY	2" AND SMALLER	MINERAL FIBER	1/2 INCH	ASJ	PVC	(1)(2)
		2 1/2" AND LARGER	MINERAL FIBER	1 INCH	ASJ	PVC	(1)(2)
HOT & TEMPERED WATER	SUPPLY	2" AND SMALLER	MINERAL FIBER	1 INCH	ASJ	PVC	(1)(2)
		2 1/2" AND LARGER	MINERAL FIBER	1 1/2" INCH	ASJ	PVC	(1)(2)

REMARKS:

(1) SEE PLUMBING SCHEDULES GENERAL NOTES.

(2) INSULATE ALL PIPE EXCEPT UNDERGROUND.

PIPE ROUTING SCHEDULE (1)			
LOCATION			
ORIENTATION	ROOMS	SERVICE	ROUTING
VERTICAL	ALL EXCEPT MECHANICAL	ALL	CONCEALED INSIDE WALL SPACE, UNLESS OTHER WISE INDICATED.
	MECHANICAL	ALL	EXPOSED CLOSE TO WALL, UNLESS OTHER WISE INDICATED.
HORIZONTAL	WITH CEILINGS	ALL	CONCEALED ABOVE SUSPENDED CEILING
	WITHOUT CEILINGS	ALL	EXPOSED CLOSE TO STRUCTURE/ABOVE 8 FEET.
DRAIN AND VENT PITCH			
SIZE	MINIMUM PITCH		
2" AND SMALLER	1/4" PER FOOT		
LARGER THAN 2"	1/8" PER FOOT		
REMARKS:			
(1) SEE PLUMBING SCHEDULES GENERAL NOTES			
(2) MECHANICAL SPACES INCLUDE MECHANICAL EQUIPMENT ROOMS, OUTER WALLS OF PROCESSING BAYS.			

PIPE SIZE SCHEDULE				
SUPPLY, DRAIN, AND VENT MIN. PIPE SIZES FOR SINGLE FIXTURES (1) (4)				
FIXTURE	CW	HW	DRAIN	VENT
WC	1.5	N/A	4	2
L	0.5	0.5	1.5 (2)	1.5
.				
MINIMUM PIPE SIZES FOR CIRCUITS				
SERVIOCE	MINIMUM PIPE SIZE			
SANITARY DRAIN	1.5 (2)			
VENT	1.5			
SUPPLY	0.5			
PIPE SIZE CHANGES				
PIPE SIZES ARE INDICATED ON THIS SCHEDULE AND ON DRAWINGS. FROM WHERE PIPE SIZE IS INDICATED:				
SUPPLY PIPE SIZE SHALL NEVER DIMINISH IN UPSTREAM DIRECTION.				
DRAIN PIPE SIZE SHALL NEVER DIMINISH IN DOWNSTREAM DIRECTION.				
VENT PIPE SIZE SHALL NEVER DIMINISH IN DIRECTION AWAY FROM DRAIN CONNECTION.				
REMARKS:				
(1) SEE PLUMBING SCHEDULES GENERAL NOTES				
(2) 2" UNDERGROUND				
(3) MATCH FIXTURE PIPE SIZE, (SEE FLOOR PLAN)				

GENERAL NOTES:

1. ABBREVIATIONS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL ABBREVIATIONS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.
2. THESE DRAWINGS ARE DESIGN DRAWINGS AND ARE DIAGRAMMATIC, THEY MAY NOT SHOW ALL PHYSICAL ARRANGEMENTS, OFFSETS, BENDS, OR ELBOWS WHICH MAY BE REQUIRED FOR INSTALLATION OF VARIOUS MATERIALS, EQUIPMENT, PIPING AND DUCTWORK SYSTEMS IN ALLOTTED SPACES. EXAMINE THESE AND OTHER AVAILABLE DRAWINGS TO DETERMINE SPACE LIMITATIONS AND INTERFERE. MAKE ANY MINOR CHANGES IN LOCATIONS OF EQUIPMENT, PIPING, AND DUCTWORK FROM THAT SHOWN ON DRAWINGS AND FOR ALL PHYSICAL DETAILS REQUIRED FOR INSTALLATION. COST FOR ADAPTING WORK TO JOB SITE CONDITIONS SHALL NOT BE CONSIDERED AS BASIS OF AN EXTRA COST TO CONTRACT.
3. ELEVATION OF PIPING AND DUCTWORK INDICATED ON THESE DRAWINGS ARE TO BE USED AS GUIDELINESTO ASSIST WITH INSTALLATIONS. MINOR CHANGES TO THESE ELEVATIONS MAY BE NECESSARY TO ELIMINATE UNFORESEEN INTERFERENCES. ANY CHANGE IN ELEVATION SHALL BE APPROVED PRIOR TO CHANGE.
4. ANY AND ALL INFORMATION SHOWN ON THESE DRAWINGS WITH RESPECT TO EXISTING STRUCTURES, UTILITIES, AND MECHANICAL SYSTEMS, IS AS EXACT AS COULD BE SECURED. THE INFORMATION IS NOT WARRANTED NOR GUARANTEED ACCURATE, FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK.
5. ACCURATE AND LEGIBLE RECORD (AS-BUILT) DRAWINGS SHALL BE MAINTAINED AT THE JOB SITE, AND BE SUBMITTED PRIOR TO FINAL PAYMENT.
6. SEE ARCHITECTURAL AND HVAC DRAWINGS FOR ADDITIONAL INFORMATION ON ROUTING OF PIPING.
7. ALL VALVES 2" AND SMALLER TO BE NIBCO, APOLLO, OR WATTS - 2 PIECE, FULL PORT BALL VALVES, BRASS BODY, SS BALL AND WITH EXTENDED HANDLE STEM TO ABOVE INSULATION.
8. VERIFY ALL EQUIPMENT LOCATIONS AND PIPE ROUTING WITH OWNER PRIOR TO INSTALLATION.
9. SEQUENCE OF WORK AND/OR PLACE OF COMMENCEMENT OF WORK SHALL BE APPROVED PRIOR TO WORK BEING STARTED. SCHEDULED SHUTDOWNS SHALL BE CLOSELY COORDINATED WITH EXISTING OPERATIONS.
10. ALL ELEVATIONS SHOWN ARE RELATIVE TO FIRST FLOOR SLAB ELEVATION OF 100'-0".
11. ANY CALL OUTS OF MAKE, MANUFACTURER OR MODEL ARE TO DEMONSTRATE GENERAL TYPE & STYLE. ALTERNATIVES WILL BE CONSIDERED AND MAY BE APPROVED BY THE ARCHITECT/ENGINEER.

PLUMBING SCHEDULES GENERAL NOTES:

1. SCHEDULES APPLY UNLESS OTHERWISE NOTED ON DRAWINGS.
2. SEE REMARKS FOR ITEMS SHOWN IN PARENTHESIS.

PIPING SUPPORT SCHEDULE:

Pipe Size	Max. Span (copper/steel)	Rod Diameter
1/2 inch	5ft/7ft	3/8 inch
3/4 and 1 inch	6ft/7ft	3/8 inch
1-1/4 inch	6ft/7ft	3/8 inch
1-1/2 inch	8ft/10ft	3/8 inch
2 inch	8ft/10ft	1/2 inch
3 inch	10ft/10ft	1/2 inch

SUPPORT PLASTIC AND PEX PIPING PER MANUFACTURES REQUIREMENTS

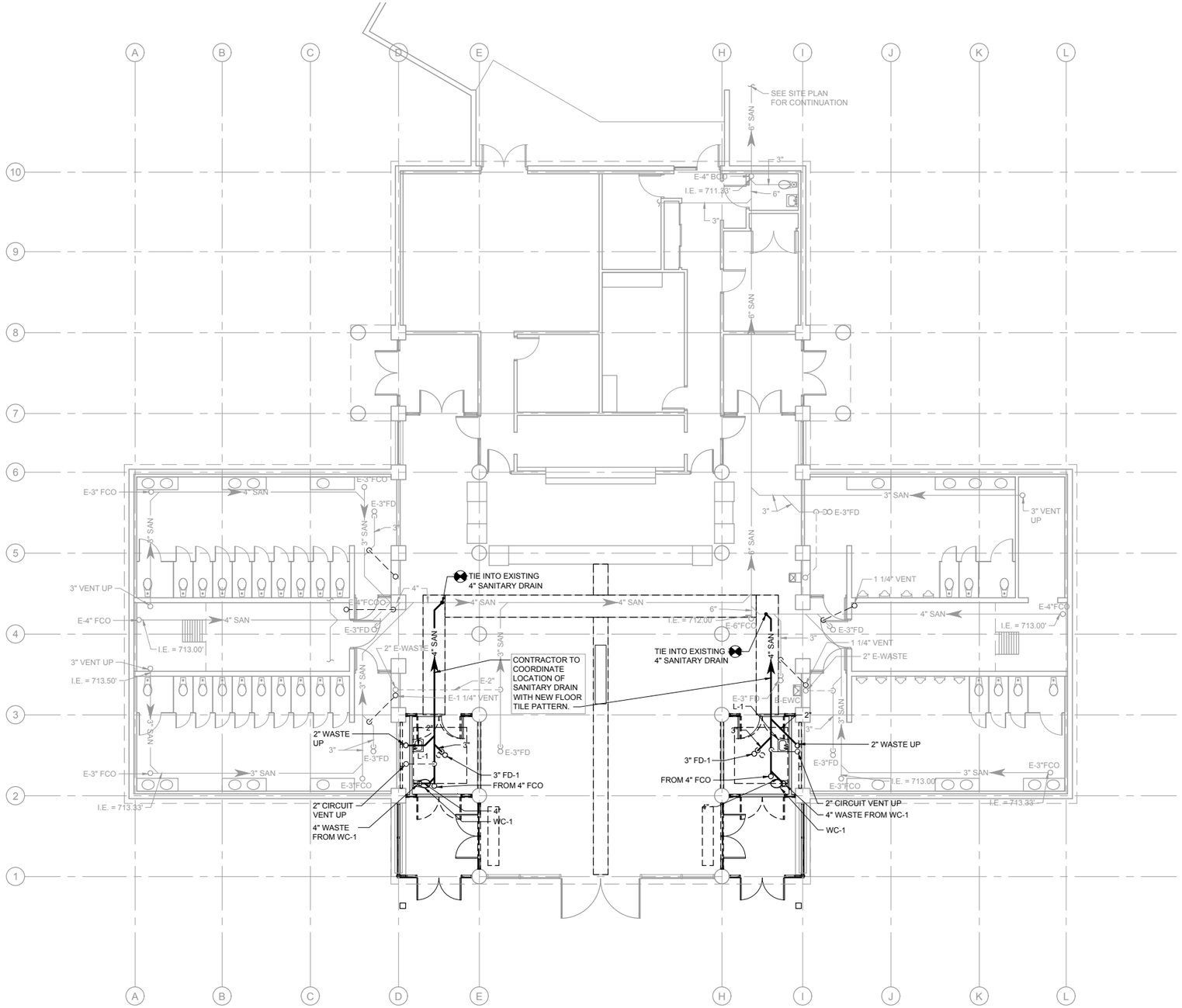
PLUMBING ABBREVIATIONS:

CI	CAST IRON
CO	CLEAN OUT
DFU	DRAINAGE FIXTURE UNIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
L	LAVATORY
PVC	POLYVINYL CHLORIDE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WHA	WATER HAMMER ARRESTOR
WHR	WATER HEATER

PLUMBING SYMBOLS:

- PIPE TURNED TOWARD
- PIPE TURNED AWAY
- P-TRAP
- BRANCH BOTTOM CONNECTION
- BRANCH TOP CONNECTION
- PIPE CAP
- WATER HAMMER ARRESTER
- FLUID FLOW DIRECTION
- SAN — NEW SANITARY SEWER PIPE
- SAN — EXISTING SANITARY SEWER PIPE
- DEMOLITION PIPE
- VENT PIPING
- CW — COLD WATER PIPE
- HW — HOT WATER PIPE
- HWR — HOT WATER RETURN PIPE
- CW — EXISTING COLD WATER PIPING
- HW — EXISTING HOT WATER PIPING
- HWR — EXISTING HOT WATER RETURN PIPING

2



NOTES:

1. PITCH ON HORIZONTAL PIPING.
   - A. 2" AND SMALLER, 1/4"/ft. MINIMUM
   - B. 2-1/2" AND LARGER, 1/8"/ft. MINIMUM
   - C. STORM WATER PIPING, 1/16"/ft. MINIMUM
   - D. CLEAR WATER PIPING.
     1) LESS THAN 3" = 1/8"/ft. MINIMUM
     2) 3" AND OVER = 1/16"/ft. MINIMUM

2. CLEANOUTS
   - A. WALL - 28"/60" ABOVE FINISH FLOOR
   - B. FLOOR - FLUSH WITH FINISH FLOOR
   - C. 2" WASTE - 1-1/2" OPENING MIN. FOR C.O.
   - D. INTERIOR C.O. - 75' INTERVALS
   - E. 2" WASTE B.F.G. C.O. - 40' INTERVALS - MAX.
   - F. GREASY WASTE C.O. - 40' INTERVALS - MAX.

3. FLOOR DRAINS
   - A. FLOOR DRAINS IN REMOTE AREAS TO BE PROTECTED FROM EVAPORATION.
     1) TRAP GUARD
     2) ADD 2 CUPS MINERAL OR VEGETABLE OIL TO TRAP AFTER USE.

4. RELIEF VALVE DISCHARGE TO FLOOR DRAIN 6" ABOVE FINISH FLOOR MAXIMUM.

- PLUMBING, MECHANICAL AND ELECTRICAL CONTRACTORS SHALL COORDINATE WITH ONE ANOTHER ALONG WITH OTHER TRADES BEFORE BEGINNING ANY INSTALLATION AND CONTINUING THROUGH OUT PROJECT.
- ALL FIRE RATED PENETRATIONS, ONLY USE U.L. LISTED, TESTED AND APPROVED MATERIALS AND METHODS THAT MEET DEPARTMENT OF COMMERCE APPROVAL. COORDINATE WITH ARCHITECTURAL PLANS AND GENERAL CONTRACTOR ON LOCATION AND RATING OF ALL FIRE RATED WALLS, CEILINGS, FLOORS, ETC.
- PROVIDE ACCESS PANELS FOR VALVES AS REQUIRED IN HARD CEILING AREA. COORDINATE WITH GENERAL CONTRACTOR.
- COORDINATE WITH MECHANICAL CONTRACTOR ON GAS CONNECTION SIZE, LOCATION, PRESSURE REQUIREMENTS FOR FURNACES.
- PLUMBING CONTRACTOR SHALL VERIFY ALL SANITARY AND WATER PIPING LOCATION, INVERTS, AND CONDITION BEFORE PERFORMING ANY WORK.

PLAN NORTH

1 UNDERGROUND DRAIN AND VENT PLUMBING PLAN

1/8" = 1'-0"

0 4' 8' 16'

- PLUMBING, MECHANICAL AND ELECTRICAL CONTRACTORS SHALL COORDINATE WITH ONE ANOTHER ALONG WITH OTHER TRADES BEFORE BEGINNING ANY INSTALLATION AND CONTINUING THROUGH OUT PROJECT.
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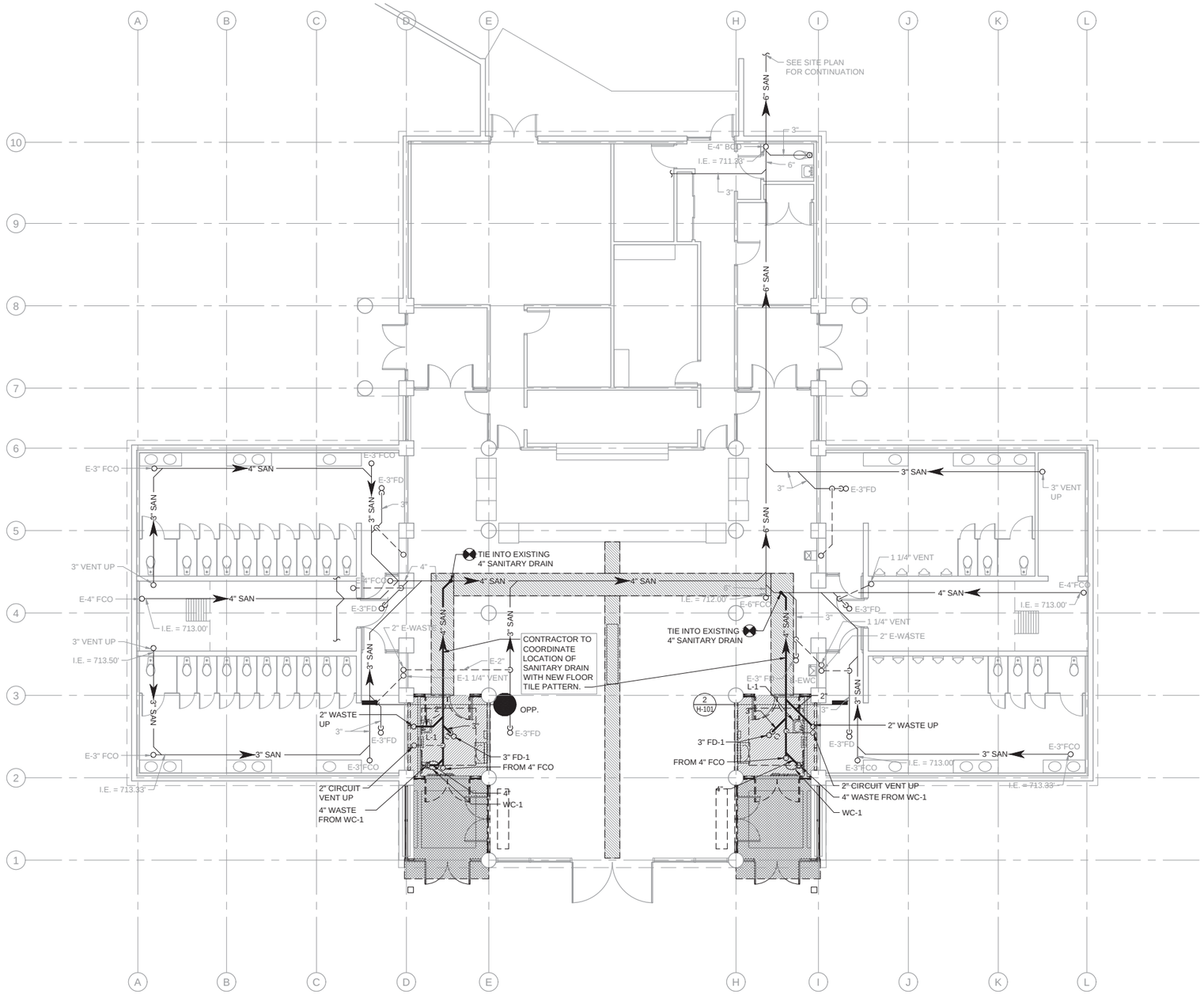


PLAN NORTH

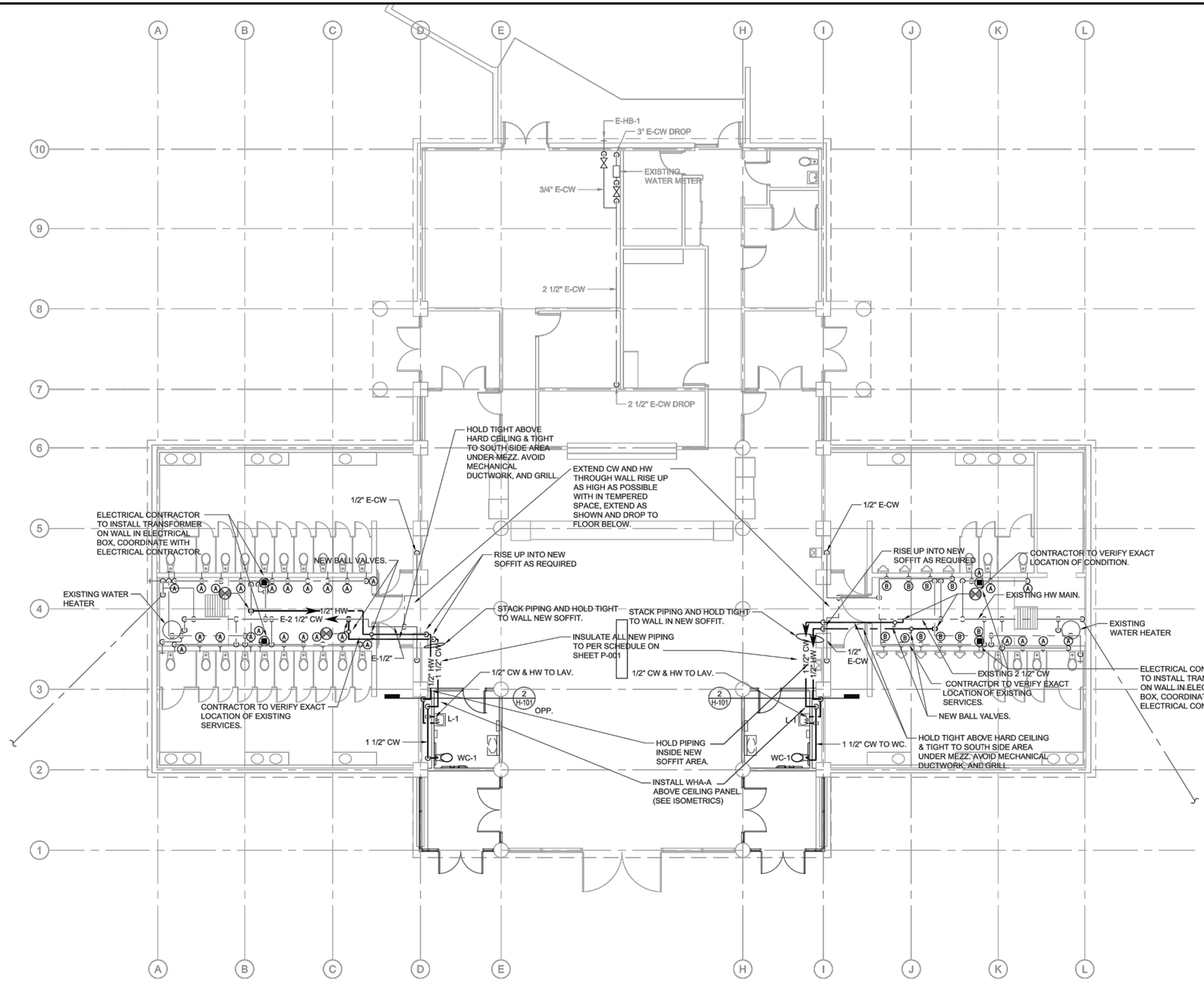
1 ABOVEGROUND DRAIN AND VENT PLUMBING PLAN

1/8" = 1'-0"

0 4' 8' 16'

P - 101

PROJECT NO:1030-31-72	HWY:REST AREA 26	COUNTY:KENOSHA	FLOOR PLAN ABOVEGROUND DRAIN & VENT	SHEET 9 E



PLAN NORTH

ABOVEGROUND SUPPLY PIPING FLOOR PLAN

1/8" = 1'-0"

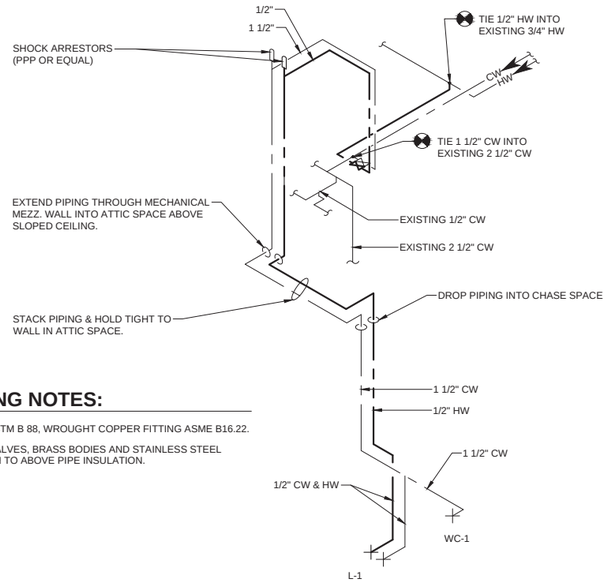
0 4' 8' 16'

PLUMBING NOTES:

(A) REMOVE EXISTING FLUSH VALVE AND REPLACE WITH NEW SLOAN# 152 ES-SERIES CONCEALED WITH SENSOR SERIES. AT EACH WATER CLOSET. PLUMBING CONTRACTOR TO SUPPLY A SINGLE TRANSFORMER HARD WIRE TYPE FOR EACH TOILET ROOM GROUPING. SLOAN # EL-154(120 VOLT INPUT 24 VAC OUTPUT 50/60 HZ, 50 VA.) POWER BY ELECTRICAL CONTRACTOR. CONTROL WIRING FROM TRANSFORMER TO FLUSH VALVES BY PLUMBING CONTRACTOR. FLUSH VALVE TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS AND HEIGHT REQUIREMENTS. PATCH OPENING IN WALL AS REQUIRED FROM REMOVAL OF OLD VALVE CONTROLS REUSE PIPING TO FIXTURE.

(B) REMOVE EXISTING FLUSH VALVE AND REPLACE WITH NEW SLOAN #195-ES-S CONSEALED WITH SENSOR SERIES AT EACH URINAL FIXTURE. PLUMBING CONTRACTOR TO WIRE CONTROL WIRING BACK TO (A) TRANSFORMER AS DESCRIBED ABOVE IN NOTE . FLUSH VALVE TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS AND HEIGHT REQUIREMENTS. PATCH OPENINGS IN WALL AS REQUIRED FROM REMOVAL OF OLD FLUSH VALVE CONTROLS. REUSE PIPING TO FIXTURE.

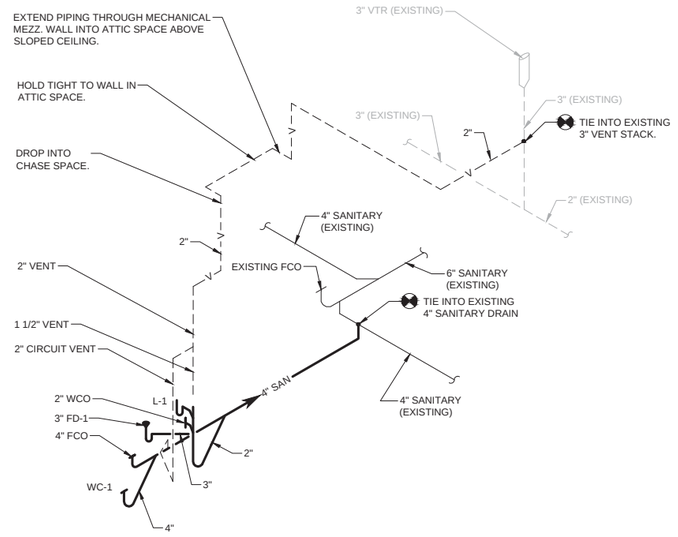
- PLUMBING, MECHANICAL AND ELECTRICAL CONTRACTORS SHALL COORDINATE WITH ONE ANOTHER ALONG WITH OTHER TRADES BEFORE BEGINNING ANY INSTALLATION AND CONTINUING THROUGH OUT PROJECT.
- ALL FIRE RATED PENETRATIONS, ONLY USE U.L. LISTED, TESTED AND APPROVED MATERIALS AND METHODS THAT MEET DEPARTMENT OF COMMERCE APPROVAL. COORDINATE WITH ARCHITECTURAL PLANS AND GENERAL CONTRACTOR ON LOCATION AND RATING OF ALL FIRE RATED WALLS, CEILINGS, FLOORS, ETC.
- PROVIDE ACCESS PANELS FOR VALVES AS REQUIRED IN HARD CEILING AREA. COORDINATE WITH GENERAL CONTRACTOR.
- COORDINATE WITH MECHANICAL CONTRACTOR ON GAS CONNECTION SIZE, LOCATION, PRESSURE REQUIREMENTS FOR FURNACES.
- PLUMBING CONTRACTOR SHALL VERIFY ALL SANITARY AND WATER PIPING LOCATION, INVERTS, AND CONDITION BEFORE PERFORMING ANY WORK.



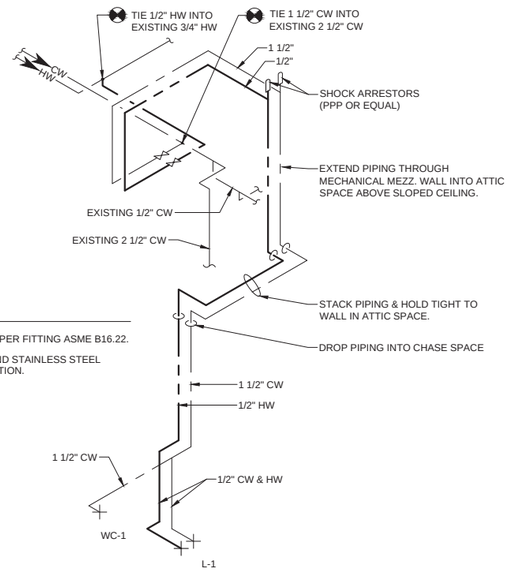
ISOMETRIC PIPING NOTES:

1. PIPING TYPE "L" COPPER ASTM B 88, WROUGHT COPPER FITTING ASME B16.22.
2. 2 PEICE FULL PORT BALL VALVES, BRASS BODIES AND STAINLESS STEEL BALL, WITH HANDLE EXTENSION TO ABOVE PIPE INSULATION.

3 PARTIAL SUPPLY WATER ISOMETRIC PIPING
NONE (EAST REST ROOM)



1 PARTIAL SANITARY & VENT ISOMETRIC PIPING
NONE (EAST REST ROOM)



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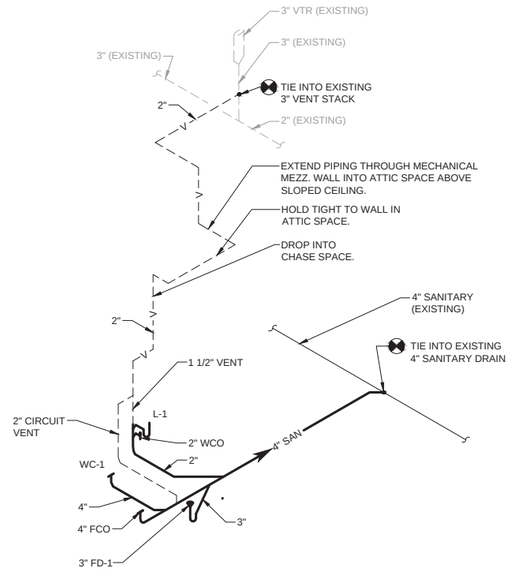
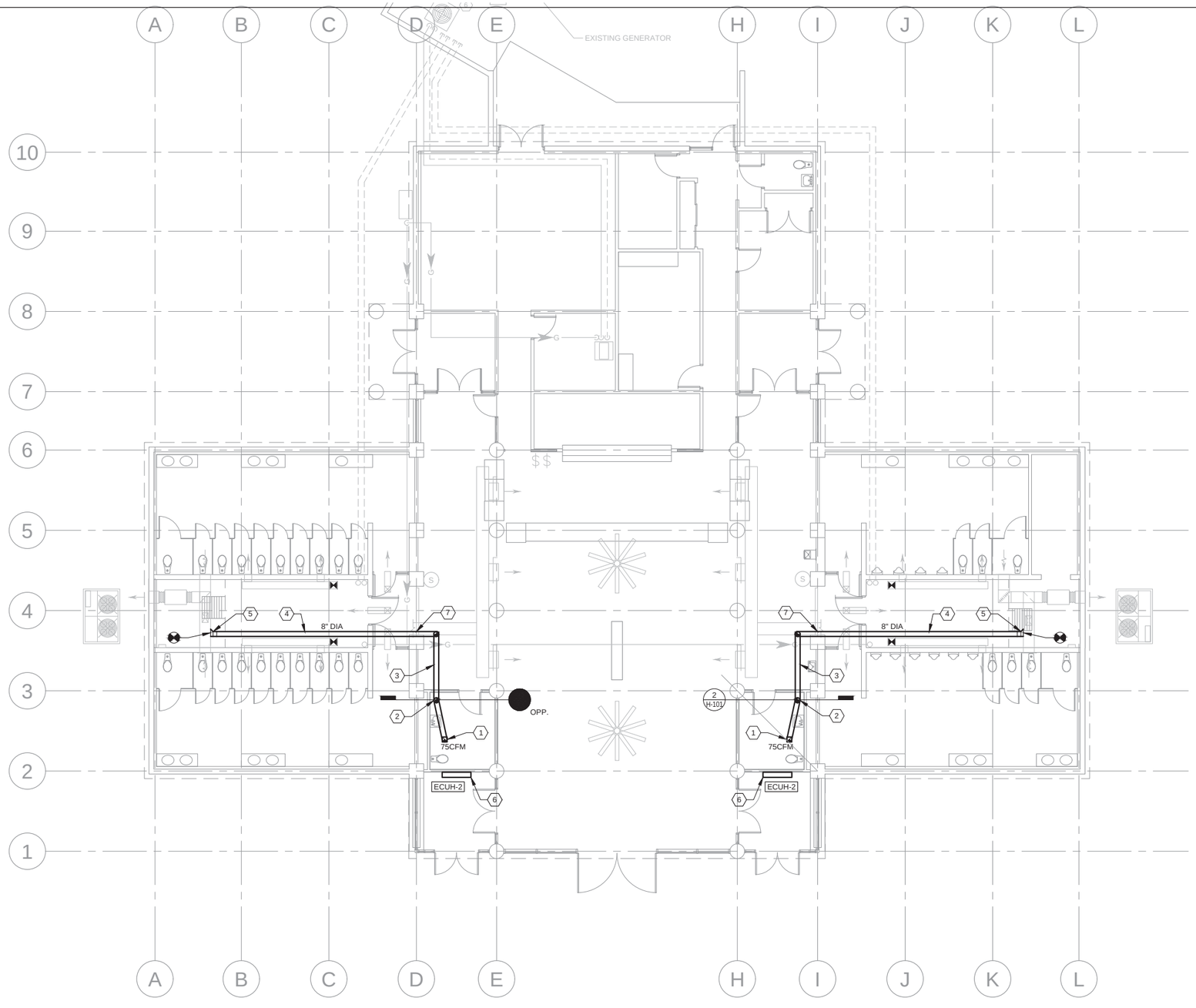
4 PARTIAL SUPPLY WATER ISOMETRIC PIPING
NONE (WEST REST ROOM)



2 PARTIAL SANITARY & VENT ISOMETRIC PIPING
NONE (WEST REST ROOM)



PLAN NORTH

1 **HVAC PLAN**

1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH DIVISION 1 GENERAL REQUIREMENTS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. ALL WORK SHALL BE STAGED / SEQUENCED TO MAINTAIN ACCESS TO ONE FRONT ENTRY AND AT LEAST TWO EXISTING TOILET ROOMS AT ALL TIMES. PROVIDE TEMPORARY MEN / WOMEN SIGNAGE AS NEEDED. COORDINATE WITH WDOT STAFF.
4. ALL WORK SHALL MEET THE APPROPRIATE COMMERCIAL BUILDING CODES.
5. ALL NEW COMPONENTS AND WORK SHALL BE COMMERCIAL GRADE.
6. DUCTWORK TO BE 20GAUGE GALVANIZED SHEET STEEL. COMPLY WITH SMACNA STANDARDS FOR BRANCH CONNECTIONS AND FOR SUPPORT OF HORIZONTAL DUCTWORK

KEYED NOTES:

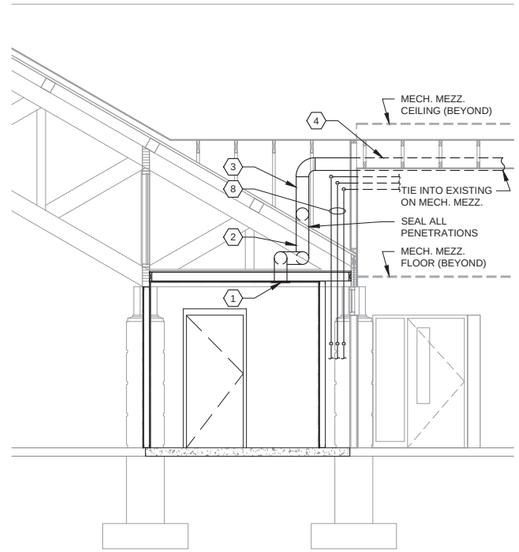
1. PROVIDE NEW 8"X8" CEILING MOUNTED EXHAUST GRILL EQUAL TO KRUEGER MODEL 480h WITH OPPOSED BLADE DAMPER. CONNECT DUCTWORK TO GRILL WITH TRACTION FITTING. PROVIDE ALL HARDWARE REQUIRED FOR COMPLETE CONNECTION TO DUCKWORK AND CEILING. KEEP DUCTWORK ABOVE NEW CEILING AS LOW AS POSSIBLE.
2. RISE INTO ATTIC SPACE ABOVE AS SOON AS POSSIBLE OVER NEW ROOM TO MINIMIZE DUCT VISIBLE FROM LOBBY. SEAL PENETRATIONS.
3. ROUTE DUCT THROUGH ATTIC SPACE AND INSULATE.
4. ROUTE DUCT THROUGH MECH. MEZZANINE TO MAXIMIZE CLEARANCE.
5. TIE NEW EXHAUST DUCTWORK INTO EXISTING ON MEZZANINE LEVEL.
6. REINSTALL EXISTING ELECTRIC CABINET UNIT HEATER IN NEW VESTIBULE.
7. PENETRATE MEZZANINE WALL
8. NEW PLUMBING SUPPLY AND VENT PIPING ROUTED THROUGH ATTIC SPACE PER P-101, P-131. COORD. EXACT LOCATIONS IN FIELD.

LEGEND:

NEW CONNECTION TO EXISTING

EXISTING DUCT

NEW DUCT



2 **SECTION**

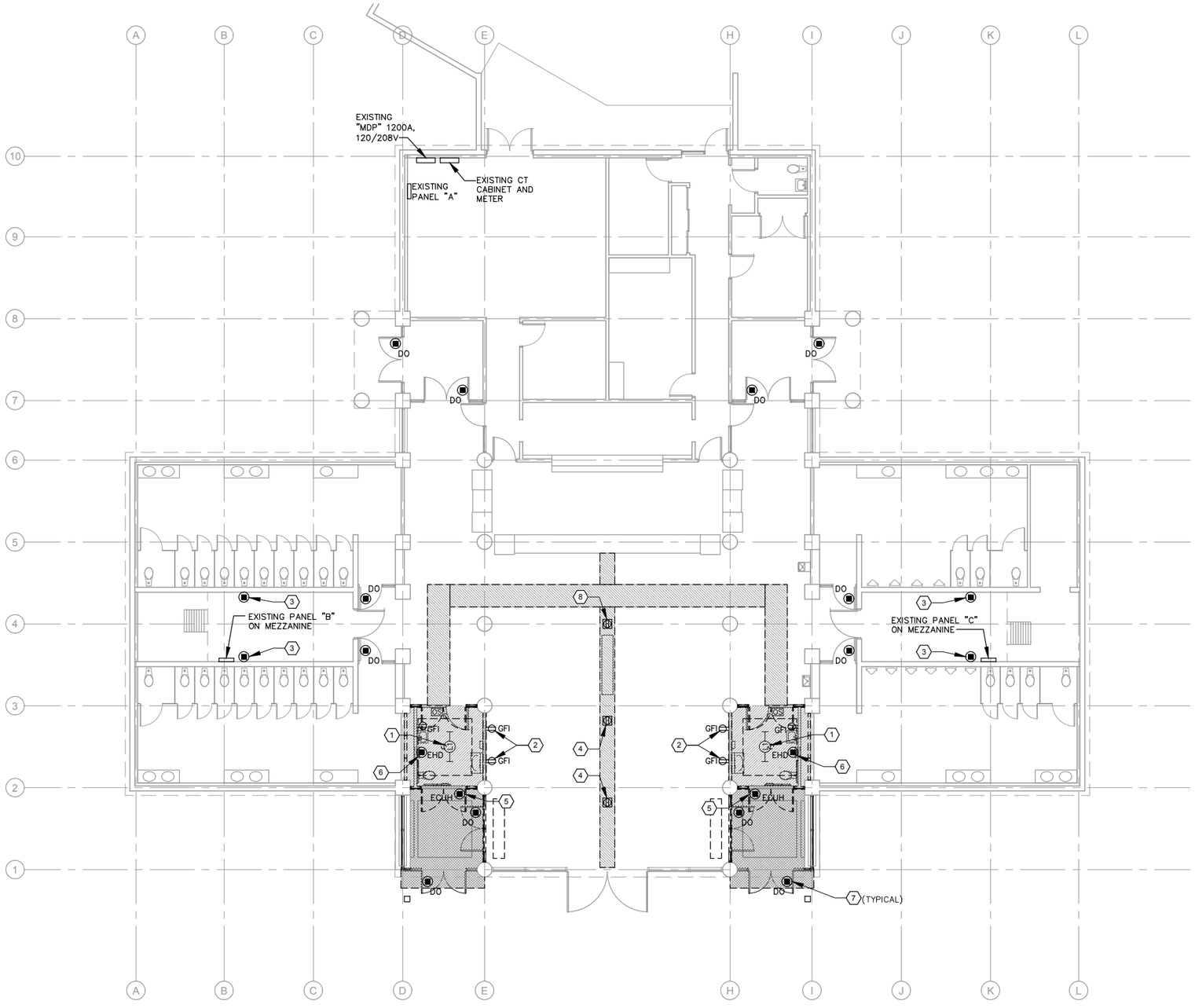
1/4" = 1'-0"

H - 101

PROJECT NO: 1030-31-72	HWY: REST AREA 26	COUNTY: KENOSHA	HVAC PLAN	SHEET 12	E

FILE NAME : P:\WIDOT\17024 – REST AREA #26\13008 – REST AREA 26\FROM WISDOT\1030-31-72\1030-31-72_H-101.DWG

SHEET NAME: H-101 4/16/2012 3:32 PM BEN MYERS PLOT NAME : _____



PLAN NORTH

1 **ELECTRICAL PLAN**

1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH DIVISION 1 GENERAL REQUIREMENTS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
3. ALL WORK SHALL BE STAGED / SEQUENCED TO MAINTAIN ACCESS TO ONE FRONT ENTRY AND AT LEAST TWO EXISTING TOILET ROOMS AT ALL TIMES. PROVIDE TEMPORARY MEN / WOMEN SIGNAGE AS NEEDED. COORDINATE WITH WDOT STAFF.
4. COORDINATE AND PROVIDE NEW SUBPANELS, CIRCUIT BREAKERS AND ELECTRIC FEEDERS FROM EXISTING PANELS AS NECESSARY FOR ALL NEW AND RELOCATED DEVICES REQUIRING ELECTRICAL POWER. ROUTE ALL POWER FEEDERS IN CONCEALED SPACES WHEREVER POSSIBLE AND CONSOLIDATE FEEDERS IN CONDUITS ALONG COMMON ROUTES APPROVED BY THE OWNER TO MINIMIZE NUMBER OF INDIVIDUAL EXPOSED CONDUITS WHERE UNAVOIDABLY EXPOSED TO PUBLIC VIEW. PAINT EXPOSED CONDUITS AND JUNCTION BOXES TO MATCH COLOR OF ADJACENT SURFACES. REUSE EXISTING CIRCUITS WHERE POSSIBLE AND ACCEPTABLE TO OWNER. DEACTIVATE ABANDONED ELECTRICAL SUPPLIES / DEVICES, AND REMOVE CONDUCTORS TO SOURCE. ROUTE NEW CIRCUITS FROM PANELS ON MEZZANINE SAME AS DUCTWORK PER H-101.
5. ALL WORK SHALL MEET THE APPROPRIATE COMMERCIAL BUILDING CODES.
6. ALL NEW COMPONENTS AND WORK SHALL BE COMMERCIAL GRADE.
7. AT EACH TOILET ROOM THE LIGHTS AND RECEPTACLES SHALL BE CIRCUITED TOGETHER.
8. NEW UNIT HEATERS AND HAND DRYERS SHALL BE ON SEPARATE DEDICATED CIRCUITS.

KEYED NOTES:

1. NEW LIGHT FIXTURE L1; MILLENIUM STRETCH MLHA12-48-R-MW-CP-3-32-IS-1-120-PEL
2. PROVIDE NEW GFCI PROTECTED RECEPTACLE TO SERVE VENDING MACHINES. EXTEND/REUSE EXISTING CIRCUIT AS REQUIRED.
3. PROVIDE J-BOX FOR AUTOMATIC FLUSH VALVE TRANSFORMER. COORDINATE WITH PLUMBING FOR EXACT REQUIREMENTS. CIRCUIT TO NEAREST 120V CIRCUIT IN THE AREA. VERIFY CIRCUIT HAS LESS THAN 16A CONNECTED TO A 20A CIRCUIT.
4. EXISTING FLOOR MOUNTED RECEPTACLE TO REMAIN. COORDINATE WITH TILE CONTRACTOR IF ANY MODIFICATIONS ARE REQUIRED. PROVIDE NEW COVER PLATE.
5. NEW ELECTRIC CABINET UNIT HEATER TO REPLACE EXISTING AT NEW LOCATION. EXTEND/REUSE EXISTING CIRCUIT TO NEW LOCATION. COORDINATE WITH MECHANICAL FOR EXACT REQUIREMENTS.
6. PROVIDE NEW 20A, 120V DEDICATED CIRCUIT FOR ELECTRIC HAND DRYER. COORDINATE WITH EQUIPMENT VENDOR FOR EXACT REQUIREMENTS. PROVIDE GFCI PROTECTED CIRCUIT BREAKER.
7. NEW ELECTRIC DOOR OPENER. CIRCUIT TO NEAREST 120V CIRCUIT IN THE AREA. VERIFY CIRCUIT HAS LESS THAN 16A CONNECTED TO A 20A CIRCUIT. (TYPICAL)
8. EXTEND EXISTING ELECTRICAL CONDUCTORS INTO PROPOSED TUBE STEEL ELECTRICAL BOLLARD. ELECTRICIAN SHALL PROVIDE (2) LEVITION T5632-W U (5 AMP RECEPTACLE) INCLUDING PLASTIC COVER . SEE ELECTRICAL BOLLARD DETAIL 3/A-102.

NOTE:
PLUMBING, MECHANICAL AND ELECTRICAL CONTRACTORS SHALL COORDINATE WITH ONE ANOTHER ALONG WITH OTHER TRADES BEFORE BEGINNING ANY INSTALLATION AND CONTINUING THROUGHOUT PROJECT.

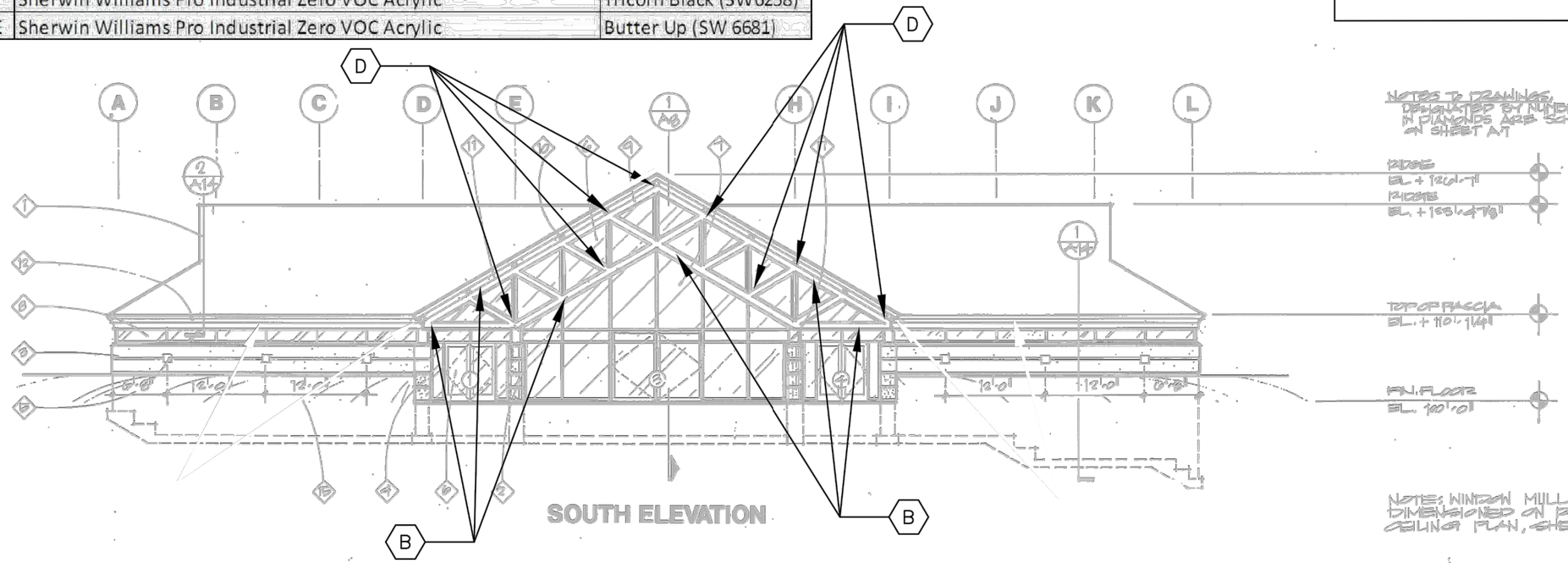
LEGEND:

- — EQUIPMENT CONNECTION
- — DUPLEX RECEPTACLE
- — OCCUPANCY SENSOR (CEILING MOUNTED)
- — LIGHT FIXTURE SURFACE MOUNTED FLUORESCENT

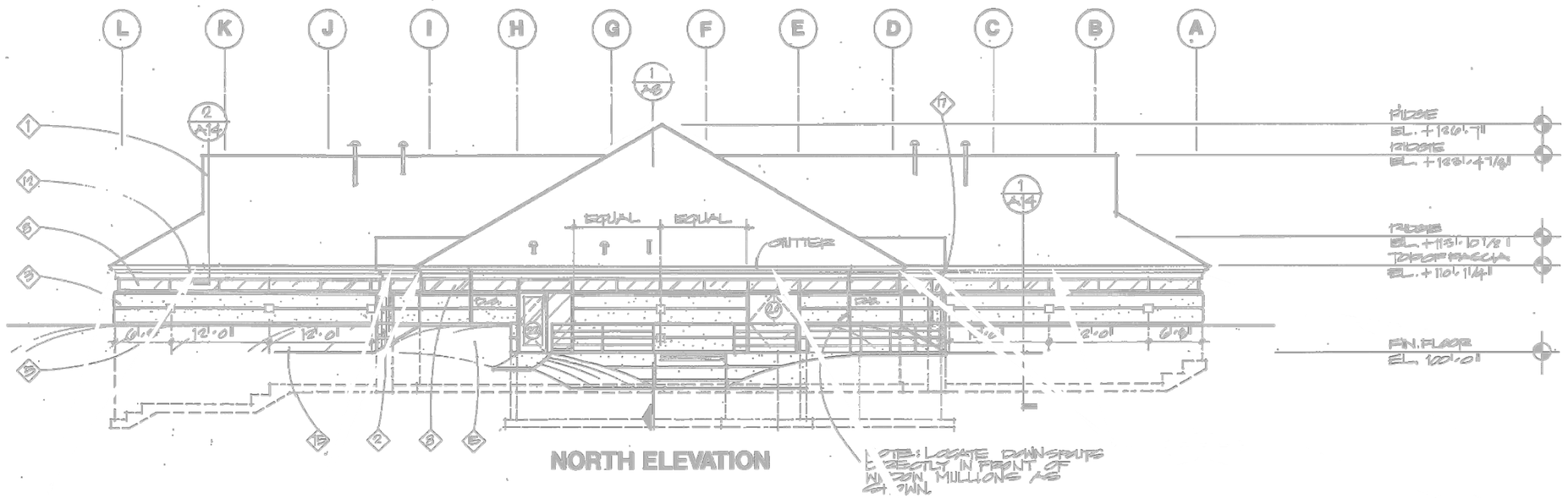
ABBREVIATIONS:

DO	— DOOR OPERATOR
ECUH	— ELECTRIC CABINET UNIT HEATER
EHD	— ELECTRIC HAND DRYER
GFI	— GROUND FAULT INTERRUPTER
TYP	— TYPICAL

PAINTING SCHEDULE			
LEGEND	DESCRIPTION	COATING SYSTEM	COLOR
B	STAIN WOOD SURFACE	Sherwin Williams Woodscapes Exterior Acrylic Solid Color Stain	Woodbriar (SW3035)
C	PAINT WOOD SURFACE	Sherwin Williams Pro Industrial Zero VOC Acrylic	Tricorn Black (SW6258)
D	PAINT METAL GUSSET PLATE	Sherwin Williams Pro Industrial Zero VOC Acrylic	Butter Up (SW 6681)



SOUTH ELEVATION

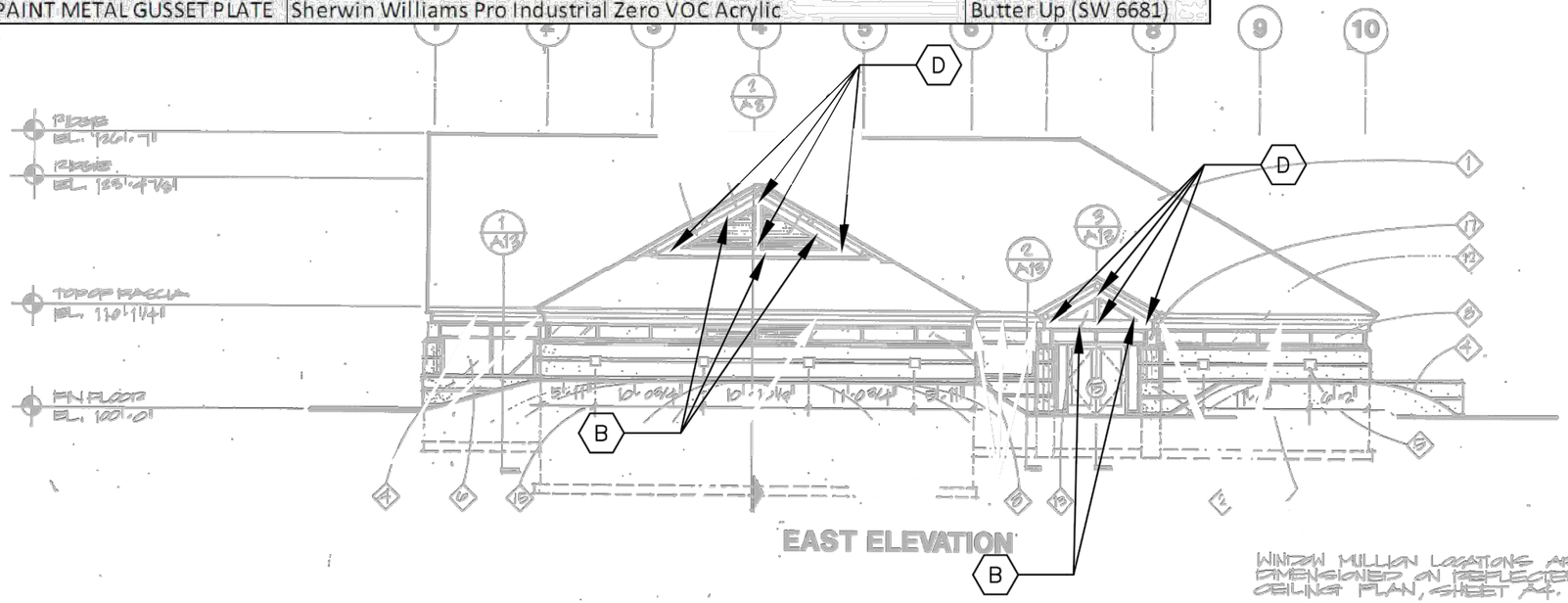


NORTH ELEVATION

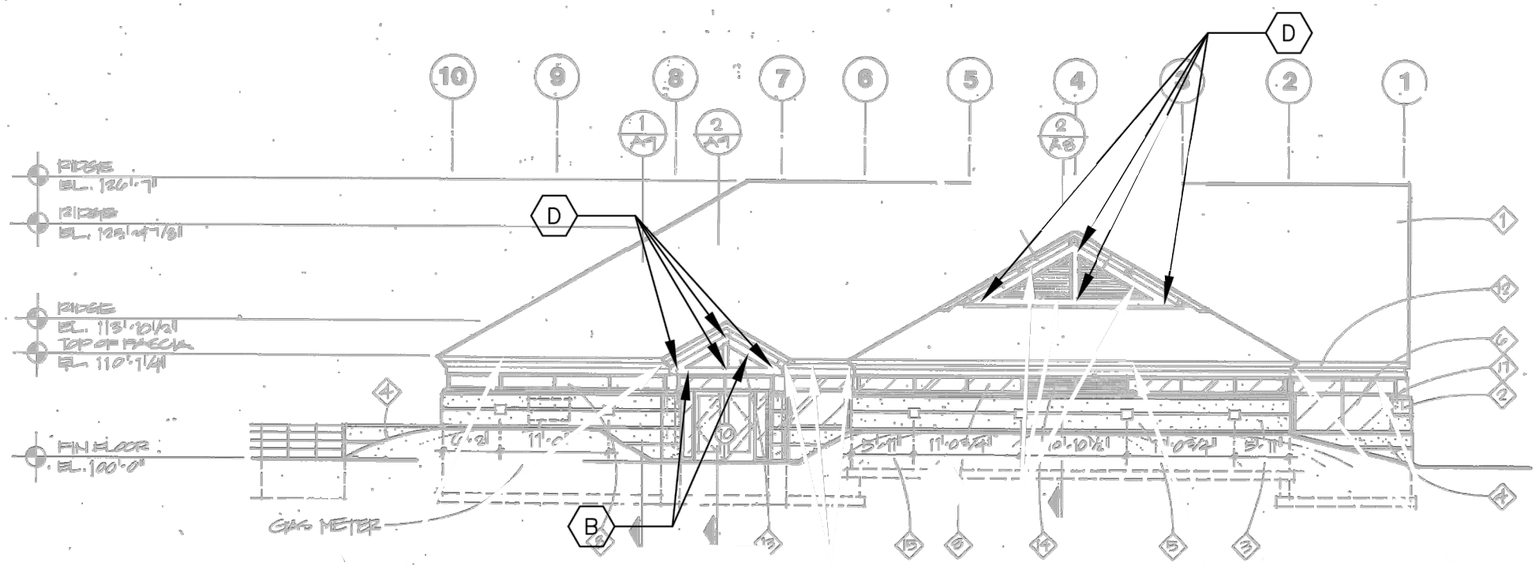
PROJECT NO: 1030-31-72	HWY: REST AREA 26	COUNTY: KENOSHA	EXTERIOR PAINTING PLAN	SHEET	A - 200 14	E

FILE NAME : P:\WIDOT\17024 – REST AREA #26\CAD\12-06-17\SHEETS\1030-31-72-200.DWG SHEET NAME: A-100 4/16/2012 3:32 PM BEN MYERS PLOT NAME : _____

PAINTING SCHEDULE			
LEGEND	DESCRIPTION	COATING SYSTEM	COLOR
B	STAIN WOOD SURFACE	Sherwin Williams Woodscapes Exterior Acrylic Solid Color Stain	Woodbriar (SW3035)
C	PAINT WOOD SURFACE	Sherwin Williams Pro Industrial Zero VOC Acrylic	Tricorn Black (SW6258)
D	PAINT METAL GUSSET PLATE	Sherwin Williams Pro Industrial Zero VOC Acrylic	Butter Up (SW 6681)



WINDOW MULLION LOCATIONS ARE DIMENSIONED ON REFLECTED CEILING PLAN, SHEET A4.



NOTES TO DRAWING

1. ASPHALT SHINGLE ROOFING.
2. CONCRETE COLUMNS WITH REVEALS.
3. CONCRETE WALL WITH REVEALS - SEE WALL SECTIONS.
4. CONCRETE RETAINING WALL WITH REVEALS. SEE SHEET A20.
5. DECORATIVE STONE TRIM INSERT - SEE DETAIL 5/A20.
6. 1" COATED INSULATING GLASS IN BLACK ANODIZED ALUMINUM FRAMES.
7. 1" COATED INSULATING GLASS IN BLACK ANODIZED ALUMINUM CURTAIN WALL FRAME.
8. 1" COATED OBSCURING INSULATING GLASS IN BLACK ANODIZED ALUMINUM FRAMES.
9. STRUCTURAL GLUED-LAMINATED TRUSS.
10. END OF EXPOSED GLUED-LAMINATED PURLIN.
11. INFILL CONDITION BETWEEN EACH PURLIN. SEE DETAIL 6/A19.
12. CEDAR FASCIAS AND FRIEZE BOARDS.
13. SOLID DECKING APPLIED HORIZONTALLY TO WALL.
14. PREFINISHED BLACK HVAC LOUVERS. (SEE DIVISION 15.)
15. EARTH BERM. (SEE SECTION 02200.)
16. SKYLIGHT. SEE DETAILS 8 & 9/A18 AND 7/A19.
17. TILE CLAD MASONRY COLUMN CAPITALS.

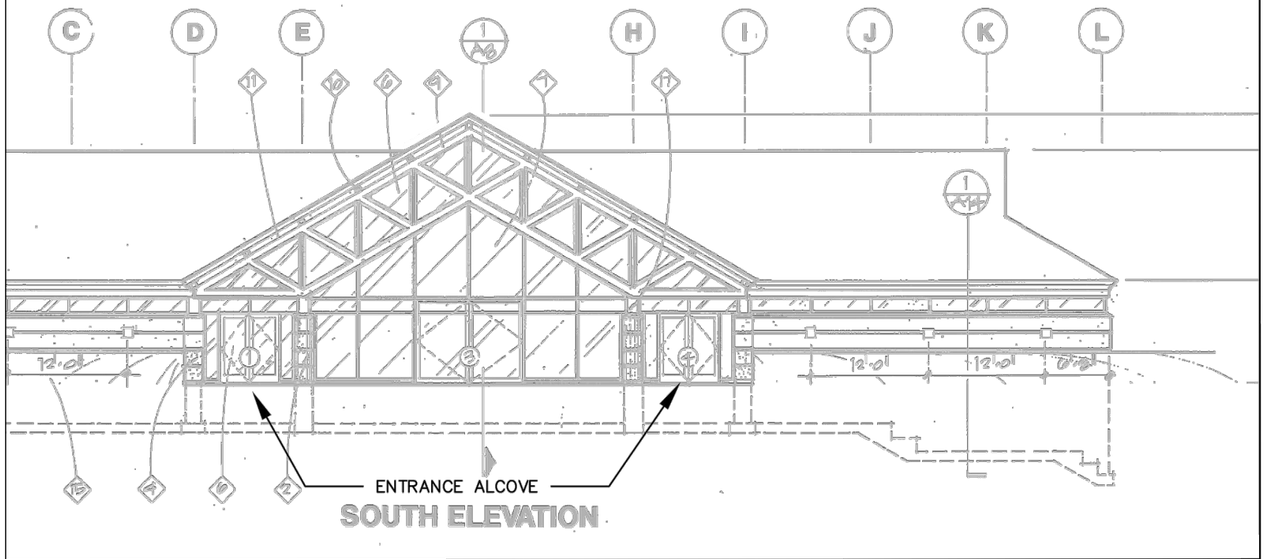
A - 201

PROJECT NO: 1030-31-72	HWY: REST AREA 26	COUNTY: KENOSHA	EXTERIOR PAINTING PLAN	SHEET 15	E

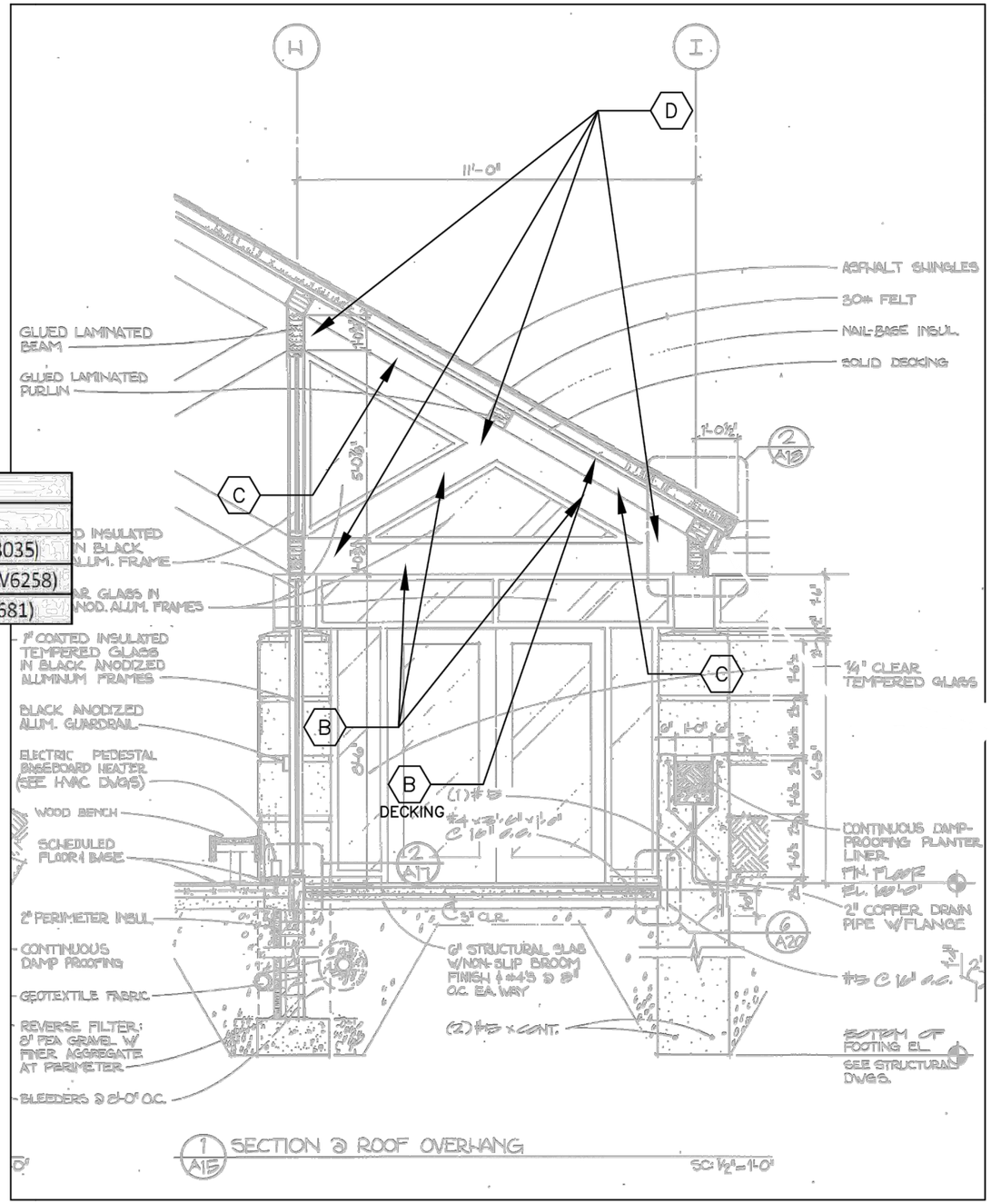
FILE NAME : P:\WIDOT\17024 - REST AREA #26\CAD\12-06-17\SHEETS\1030-31-72-200.DWG SHEET NAME: A-101 4/16/2012 3:32 PM BEN MYERS PLOT NAME : ----------

2

PAINTING SCHEDULE			
LEGEND	DESCRIPTION	COATING SYSTEM	COLOR
B	STAIN WOOD SURFACE	Sherwin Williams Woodscapes Exterior Acrylic Solid Color Stain	Woodbriar (SW3035)
C	PAINT WOOD SURFACE	Sherwin Williams Pro Industrial Zero VOC Acrylic	Tricorn Black (SW6258)
D	PAINT METAL GUSSET PLATE	Sherwin Williams Pro Industrial Zero VOC Acrylic	Butter Up (SW 6681)



SOUTH ELEVATION



SECTION @ ROOF OVERHANG

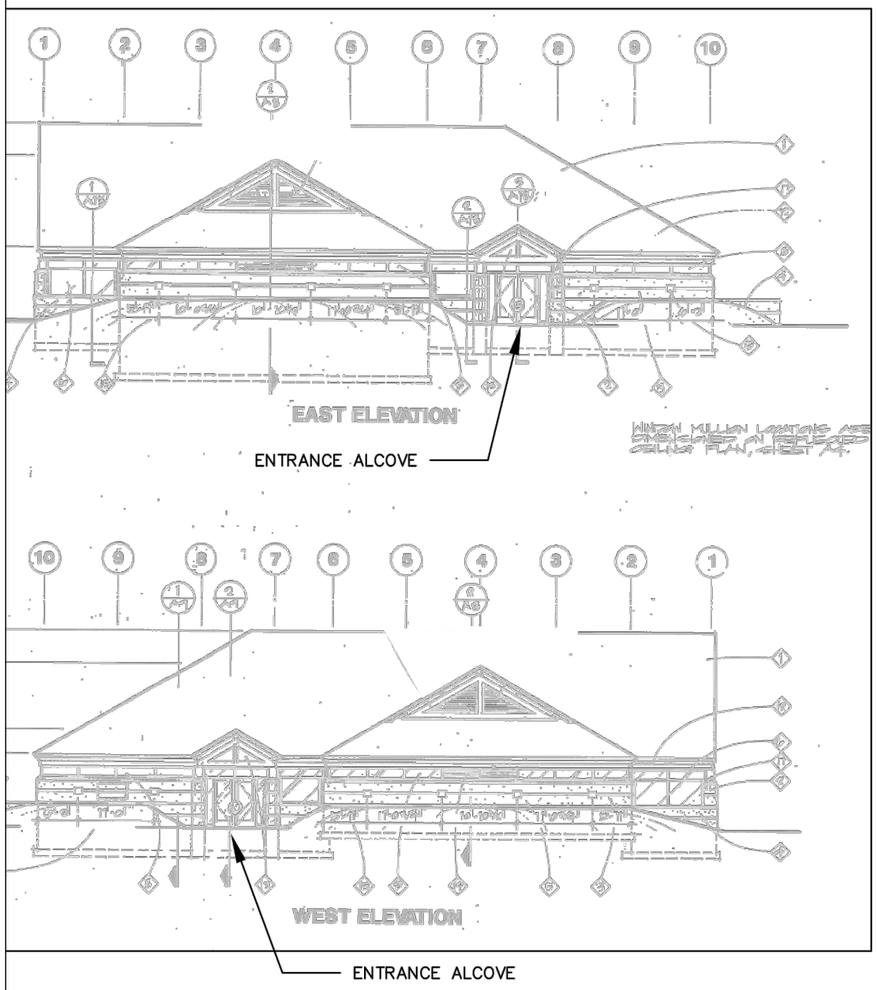
SC: ½"=1'-0"

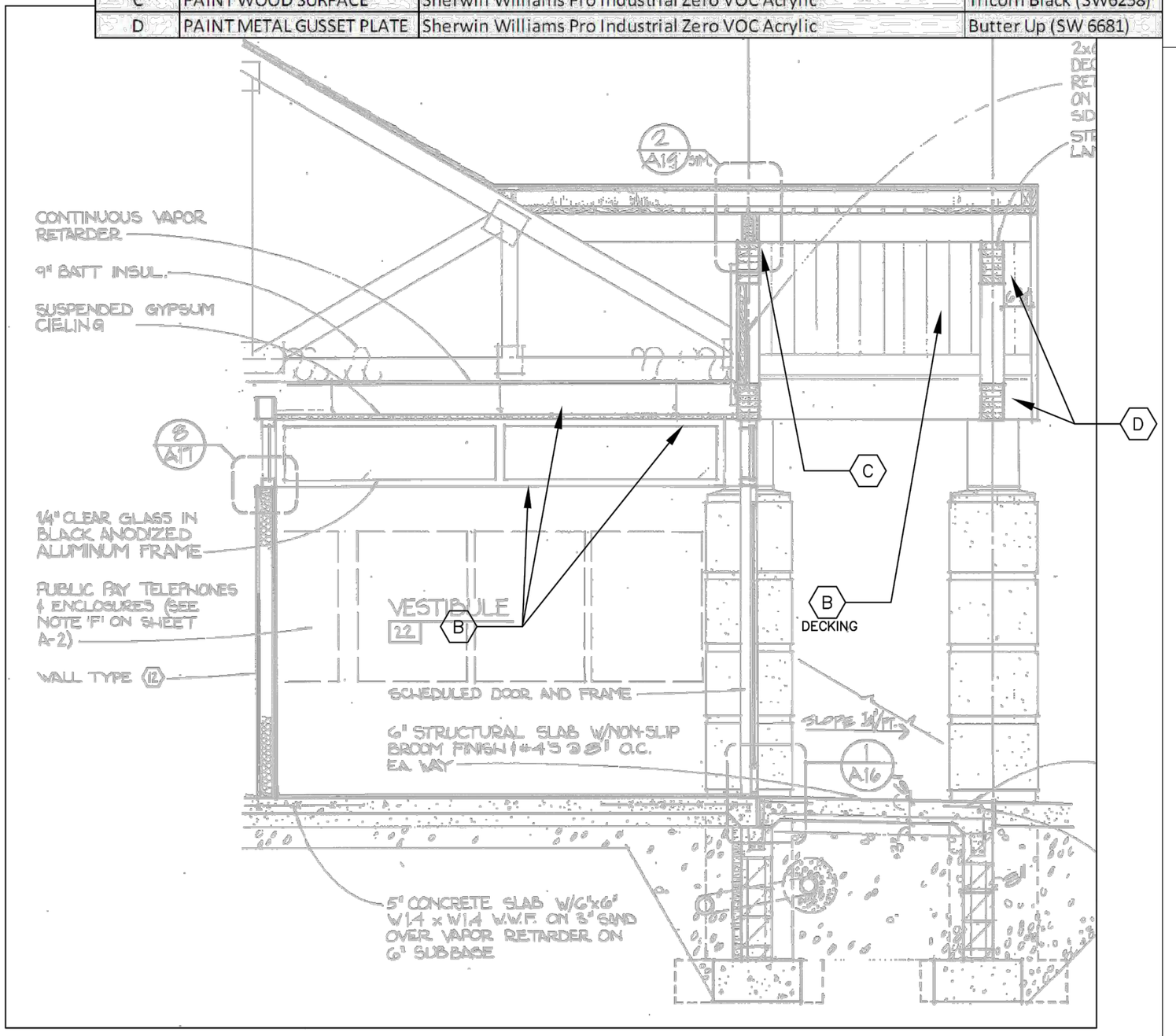
ENTRANCE ALCOVE
(TYPICAL RT & LT)

A - 202

PROJECT NO: 1030-31-72	HWY: REST AREA 26	COUNTY: KENOSHA	EXTERIOR PAINTING PLAN	SHEET 16	E

PAINTING SCHEDULE			
LEGEND	DESCRIPTION	COATING SYSTEM	COLOR
B	STAIN WOOD SURFACE	Sherwin Williams Woodscapes Exterior Acrylic Solid Color Stain	Woodbriar (SW3035)
C	PAINT WOOD SURFACE	Sherwin Williams Pro Industrial Zero VOC Acrylic	Tricorn Black (SW6258)
D	PAINT METAL GUSSET PLATE	Sherwin Williams Pro Industrial Zero VOC Acrylic	Butter Up (SW 6681)





PROJECT NO: 1030-31-72	HWY: REST AREA 26	COUNTY: KENOSHA	EXTERIOR PAINTING PLAN	SHEET 17	A - 203 E

FILE NAME : P:\WIDOT\17024 – REST AREA #26\CAD\12-06-17\SHEETS\1030-31-72-200.DWG SHEET NAME: A-103 4/16/2012 3:32 PM BEN MYERS PLOT NAME : ----------

TECHNOLOGY SYMBOL SCHEDULE

COMMUNICATION SYMBOLS

EQUIPMENT RACK

SECURITY SYSTEM SYMBOLS

C — FIXED VIDEO SURVEILLANCE CAMERA WITH (1) CAT6 CABLE

C — FIXED 180 DEGREE VIDEO SURVEILLANCE CAMERA WITH (1) CAT6 CABLE

GENERAL SYMBOLS

#/E-### — DETAIL NUMBER / SHEET NUMBER

9.### — KEYED NOTE, USED TO DESCRIBE ADDITIONAL INFORMATION OF WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL IT IS SHOWN WITH.

SITE SYMBOLS

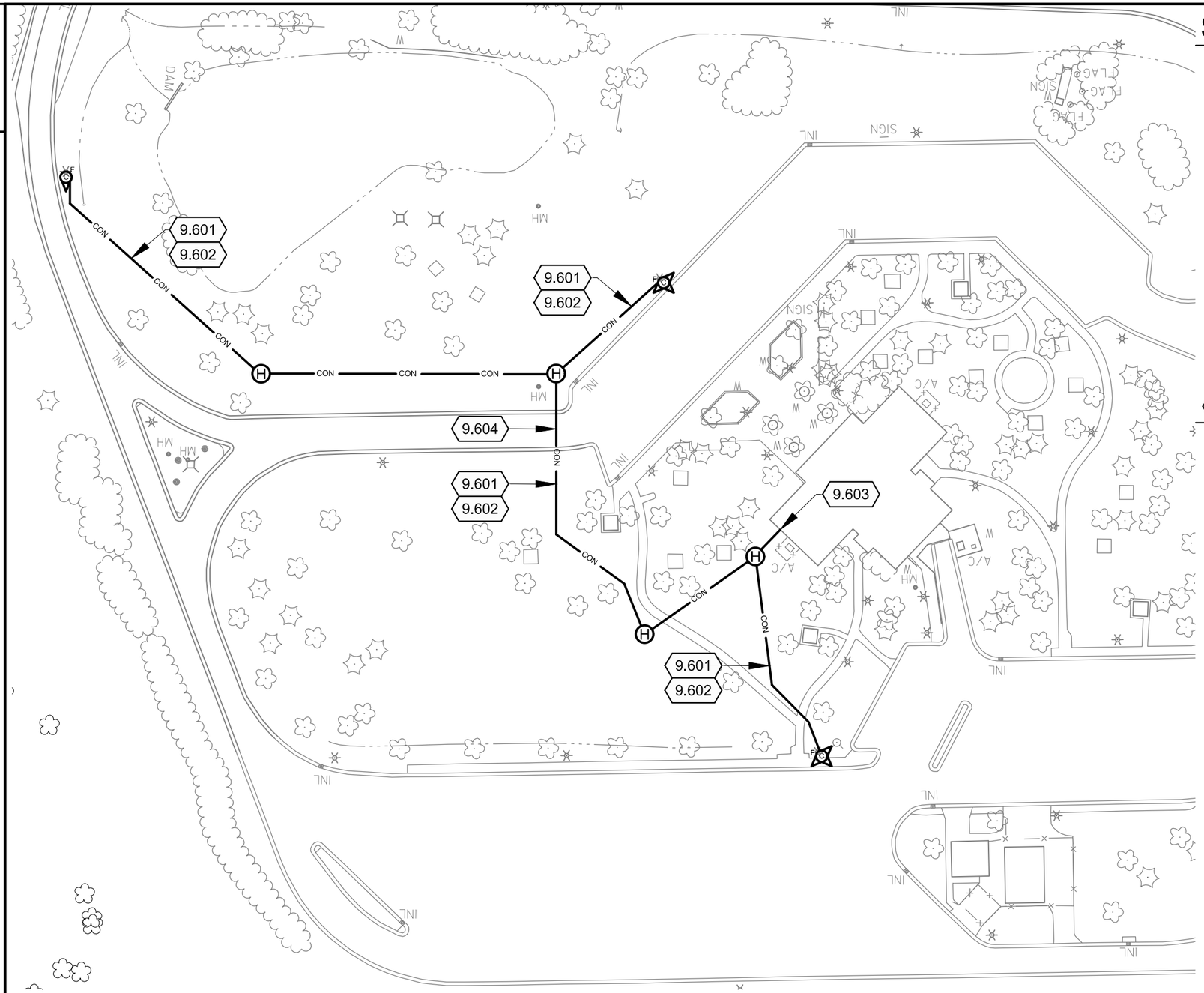
H — HANDHOLE, GENERIC

LINE TYPE KEY

- NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
- EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK DASHED LINE)
- EXISTING TO REMAIN WORK (THIN SOLID LINE)
- NEW WORK UNDER FLOOR BY THIS CONTRACTOR
- CON — SITE UNDERGROUND CONDUIT

ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT
A/E	ARCHITECT/ENGINEER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
C	CONDUIT
CF	CIRCULATION FAN
CHWP	CHILLED WATER PUMP
CP	CIRCULATION PUMP
CUH	CABINET UNIT HEATER
DH	DUCT HEATER
DO	DOOR OPERATOR
EF	EXHAUST FAN
EL	EMERGENCY LIGHT
EMT	ELECTRICAL METALLIC TUBING
ETR	EXISTING TO REMAIN
EWC	ELECTRICAL WATER COOLER
EWH	ELECTRICAL WATER HEATER
FA	FIRE ALARM
FAF	FORCED AIR FURNACE
GFI	GROUND FAULT INTERRUPTER
GRS	GALVANIZED RIGID STEEL
IMC	INTERMEDIATE METALLIC CONDUIT
IWH	INSTANTANEOUS WATER HEATER
MAU	MAKE-UP AIR UNIT
MM	MULTI-MODE FIBER OPTIC CABLE
MNS	MASS NOTIFICATION SYSTEM
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NL/EL	NIGHT LIGHT AND EMERGENCY LIGHT
NTS	NOT TO SCALE
PVC	POLYVINYL CHLORIDE
RCP	RADIATE CEILING PANEL
SM	SINGLE-MODE FIBER OPTIC CABLE
SPD	SURGE PROTECTION DEVICE
SS	STAINLESS STEEL
TBR	TO BE REMOVED
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
VSS	VIDEO SURVEILLANCE SYSTEM
WL	WET LOCATION LISTED
WP	WEATHERPROOF
3R	NEMA 3R RATING
4X	NEMA 4X RATING



SITE PLAN GENERAL NOTES:

1. REFER TO 2/T-501 FOR CAMERA INSTALLATION DETAIL.
2. UNDERGROUND CONDUIT ROUTES ARE DIAGRAMMATIC ONLY, BUT REPRESENT PREFERRED PATH. FIELD VERIFY BEST POSSIBLE ROUTE BASED ON SITE CONDITIONS, AND CONFIRM WITH OWNER PRIOR TO INSTALLATION..
3. REFER TO SECTION 652 OF WISDOT STANDARDS SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
4. ANY PAVEMENT THAT IS TO BE REMOVED SHALL BE SAWCUT. ALL PAVEMENT, CURB, CURB AND GUTTER, SIDEWALK AND THEIR SUBSTRUCTURE DISTURBED BY PROJECT ACTIVITIES SHALL BE RESTORED IN KIND.
5. REPAIR AND RENOVATE EXISTING LAWN TO ORIGINAL CONDITION IF DAMAGED BY CONTRACTORS OPERATIONS.

(X.XXX) SITE PLAN KEYED NOTES:

9.601 PROVIDE (1) UNDERGROUND 2" SCHEDULE 40 RIGID PVC CONDUIT FROM JUNCTION BOX ON OUTSIDE OF BUILDING TO LIGHT POLE. CONDUIT SHALL BE INSTALLED WITH MINIMUM PITCH OF 4 DEGREES TOWARDS HANDHOLE.

9.602 PROVIDE (1) HANDHOLE PER 200 FEET OF CONDUIT RUN. NOMINAL SIZE 13" X 24", DEPTH AS REQUIRED, TIER 22 LID RATING (22,500 LBS.) OR GREATER. QUAZITE PX SERIES OR SIMILAR. HANDHOLE LOCATIONS SHOWN FOR REFERENCE ONLY.

9.603 PROVIDE (1) HANDHOLE 5'-0" FROM BUILDING FOR TERMINATION OF (3) 2" CONDUITS. NOMINAL SIZE 13" X 24", DEPTH AS REQUIRED, TIER 22 LID RATING (22,500 LBS.) OR GREATER. QUAZITE PX SERIES OR SIMILAR. HANDHOLE LOCATIONS SHOWN FOR REFERENCE ONLY. PROVIDE (1) 2" CONDUIT FROM HANDHOLE TO ACCESSIBLE CEILING WITHIN BUILDING. COORDINATE CONDUIT ENTRANCE LOCATION WITH OWNER PRIOR TO INSTALLING.

9.604 CONTRACTOR SHALL DIRECTIONALLY BORE UNDER ROADWAY. INSTALL ADDITIONAL HANDHOLE OR PIT AS NECESSARY TO CONVERT FROM 2" SCHEDULE 40 RIGID PVC TO DIRECTIONALLY BORED 2" CONDUIT.

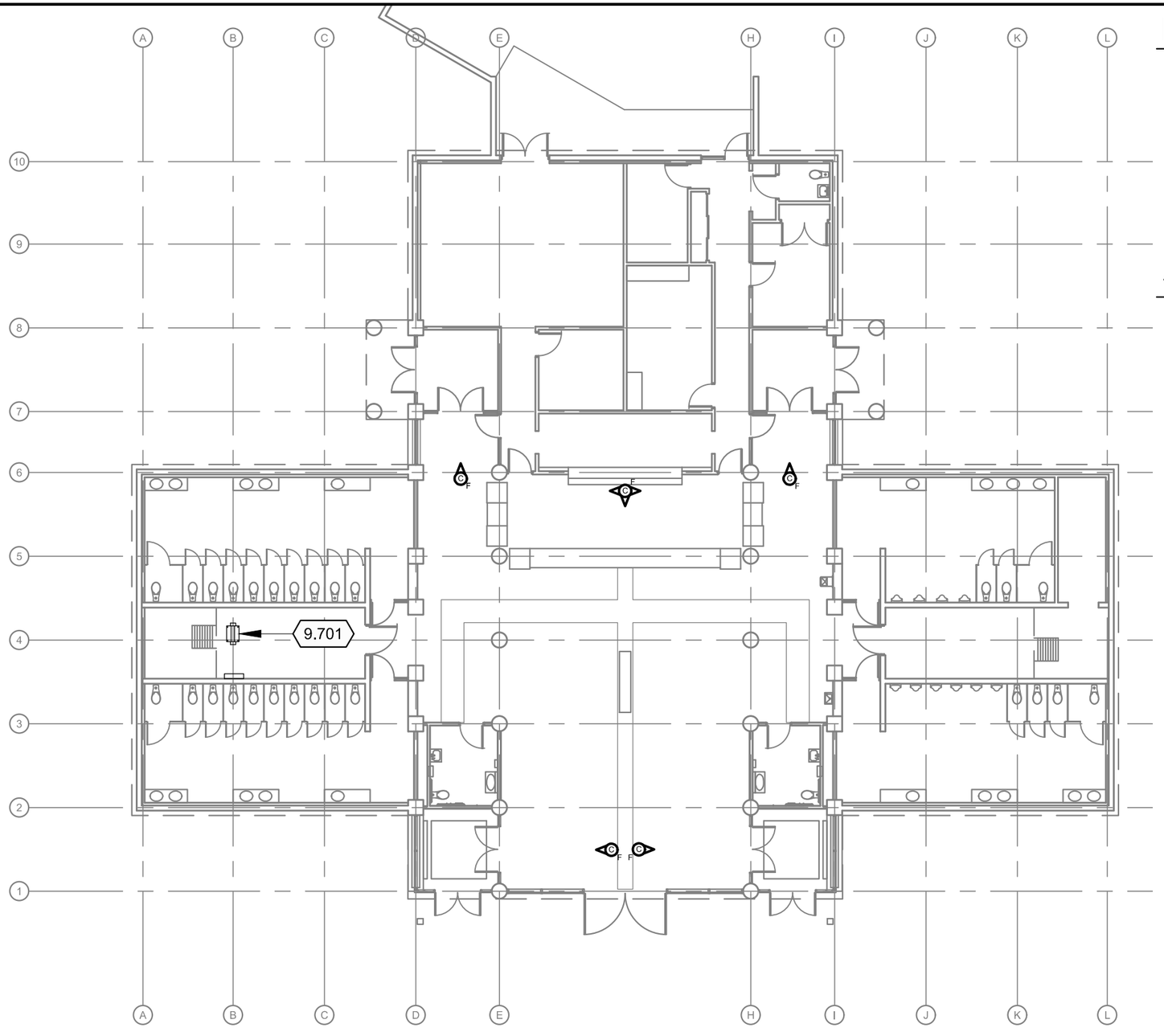
TRUE NORTH

N

1 **TECHNOLOGY SYSTEMS SITE PLAN**

1" = 80'-0"

SHEET T-011



FLOOR PLAN GENERAL NOTES:

1. REMOVE EXISTING CAMERAS AND EQUIPMENT AND RETURN TO OWNER. EXISTING CABLING TO REMAIN.
2. INSTALL (1) CATEGORY 6 PLENUM RATED CABLE TO EACH CAMERA LOCATION. ALL CABLES SHALL BE RUN TO EXISTING RACK IN MEZZANINE AREA.
3. REFER TO 2/T-502 FOR CAMERA INSTALLATION DETAIL.

X.XXX FLOOR PLAN KEYED NOTES:

9.701 EXISTING RACK LOCATED ON MEZZANINE TO REMAIN. REFER TO 1/T-501 FOR ELEVATION.

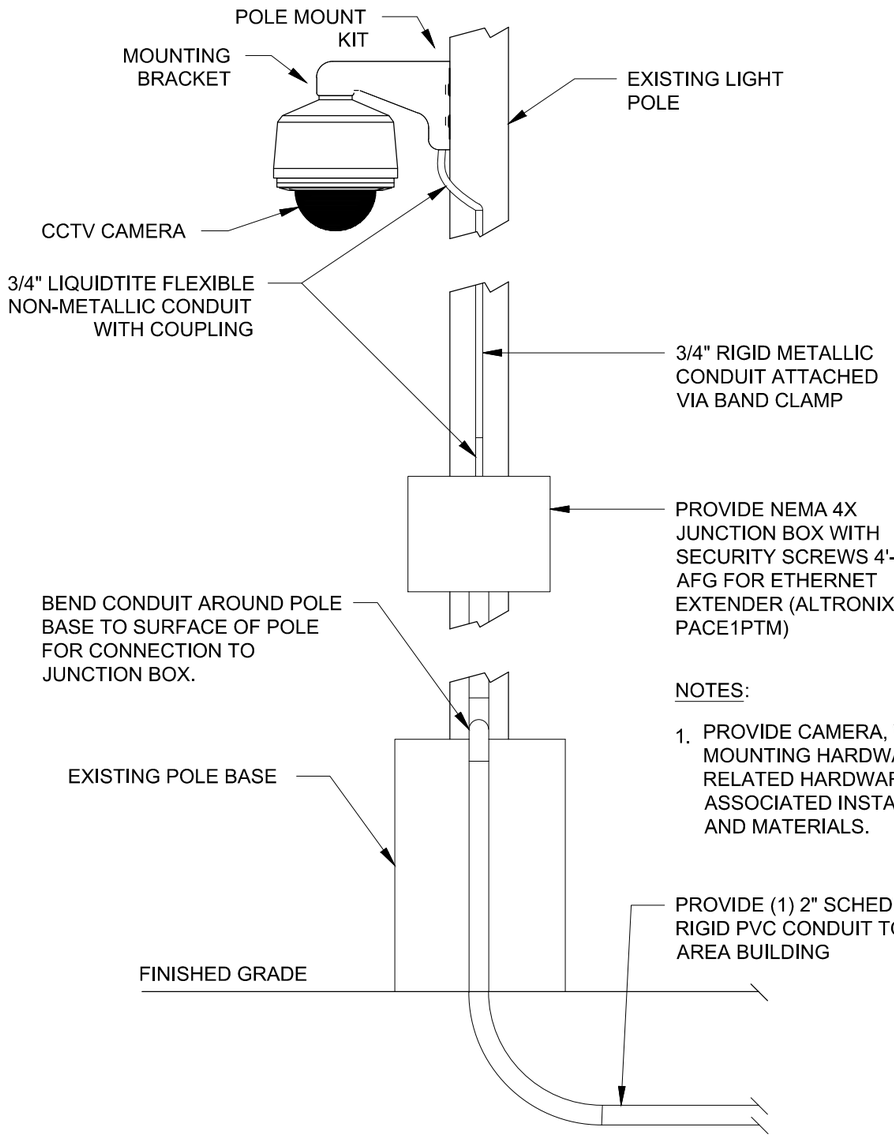
PLAN NORTH

N

1

TECHNOLOGY SYSTEMS FLOOR PLAN

1/16" = 1'-0"

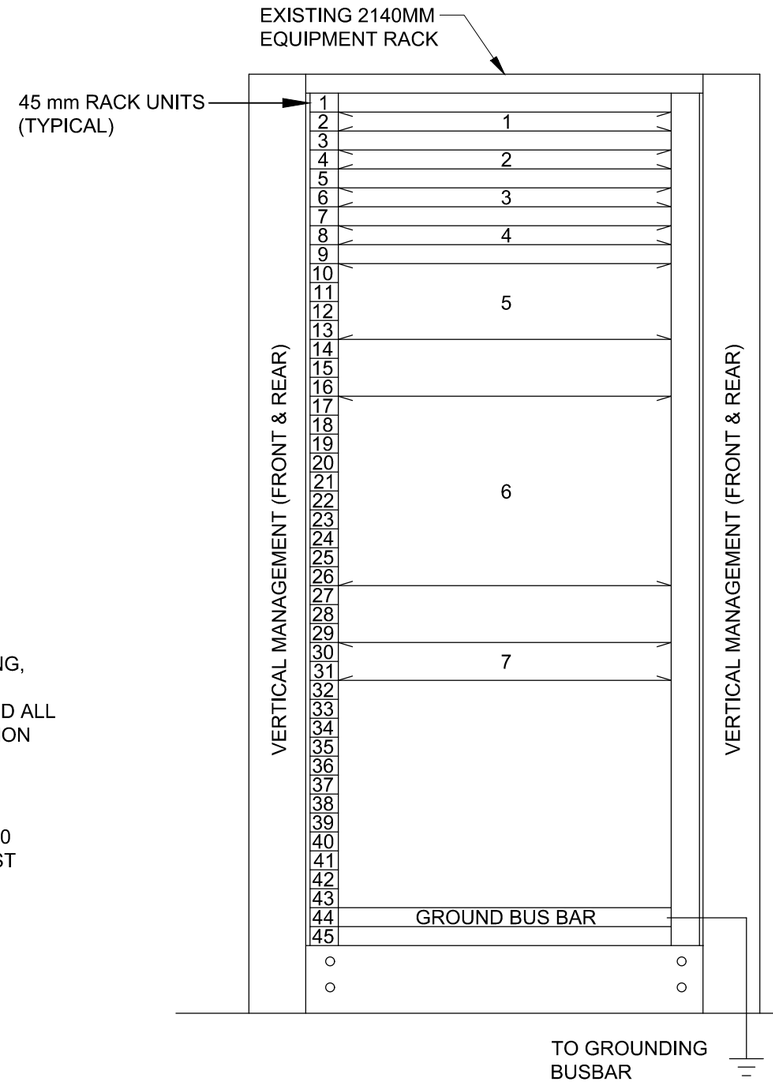


NOTES:

1. PROVIDE CAMERA, WIRING, MOUNTING HARDWARE, RELATED HARDWARE AND ALL ASSOCIATED INSTALLATION AND MATERIALS.

2 CAMERA - EXISTING LIGHT POLE

NO SCALE



#	EQUIPMENT SCHEDULE
1	EXISTING FIBER OPTIC ENCLOSURE
2	EXISTING 24 PORT PATCH PANEL
3	NEW 24 PORT CATEGORY 6 PATCH PANEL FOR VIDEO SURVEILLANCE
4	NEW 24 PORT PoE SWITCH
5	NEW VIDEO MANAGEMENT SERVER
6	SHELF WITH MONITOR AND KEYBOARD (EXISTING SHELF TO BE RE-USED)
7	NEW UPS

NOTES:

1. EQUIPMENT LOCATION IS SHOWN TO ILLUSTRATE INTENT, ACTUAL LOCATION WITHIN RACK SHALL BE DETERMINED BY CONTRACTOR, AND COORDINATED WITH GOVERNMENT.
2. VERIFY EXISTING RACK HAS A RACK GROUND BAR INSTALLED AND THAT IT IS CONNECTED TO A TELECOMMUNICATIONS GROUNDING BUSBAR (TGB). IF NO TGB EXISTS, COORDINATE WITH OWNER INSTALL AND CONNECT TO BUILDING GROUNDING SYSTEM.

1 RACK ELEVATION

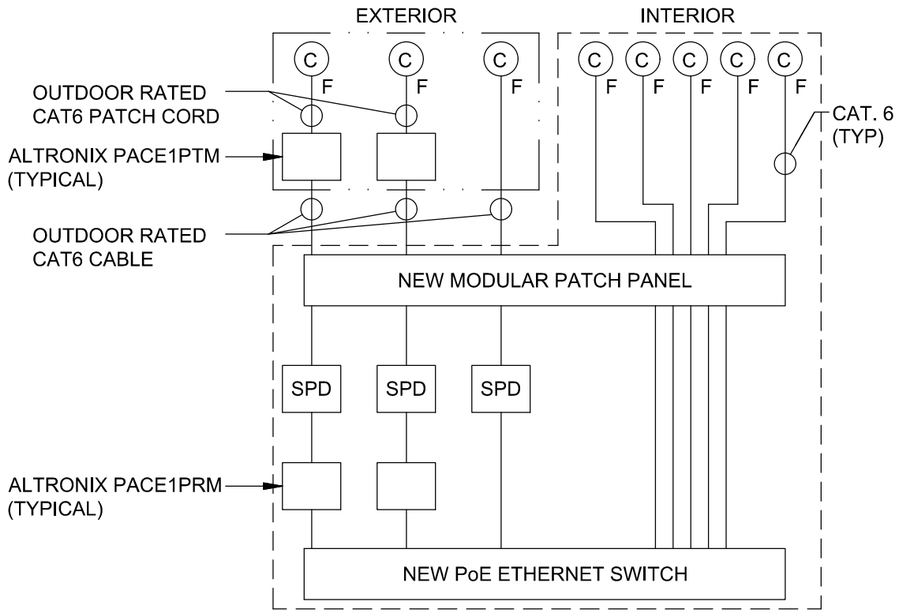
NO SCALE

SHEET T-501

PROJECT NO: 1030-31-00	HWY: REST AREA 26	COUNTY: KENOSHA		21	E

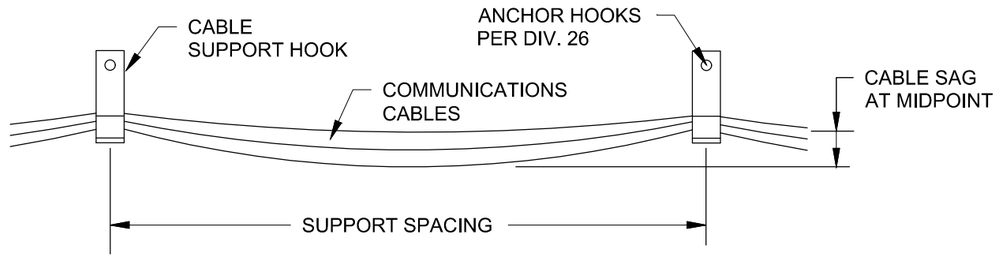
FILE NAME : X:\3230200\180536.01\TECH\CAD\T-501.DWG PLOT DATE : 2/15/2018 10:43 AM PLOT BY : DAVID YAHNKE PLOT NAME :

WISDOT/CADDS SHEET 42



3 VSS ONE-LINE DIAGRAM

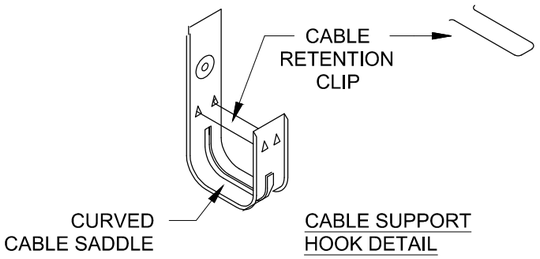
NO SCALE



DETAIL NOTES:
SUPPORT SPACING - 48" MAX.

CABLE SAG AT MIDPOINT - 6" MAX.

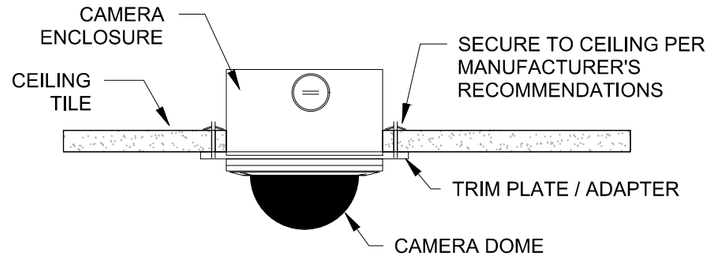
CABLE RETENTION CLIP SHOWN IS TYPICAL. OTHER DESIGNS ACCEPTABLE PER SPEC SECTION 26 05 29.



CABLE SUPPORT HOOK DETAIL

1 J-HOOK INSTALLATION

NO SCALE



2 CAMERA - INTERIOR CEILING

NO SCALE

1030-31-72

Line	Item	Item Description	Unit	Total	Qty
0290	SPV.0060	Special 01. Automatic Flush Valves, Urinal	EACH	10.000	10.000
0292	SPV.0060	Special 02. Automatic Flush Valves, Water Closet	EACH	27.000	27.000
0294	SPV.0060	Special 03. Family Assisted Restrooms	EACH	2.000	2.000
0296	SPV.0060	Special 04. Vestibules	EACH	2.000	2.000
0312	SPV.0105	Special 01. Video Surveillance Indoor	LS	1.000	1.000
0314	SPV.0105	Special 02. Video Surveillance Outdoor	LS	1.000	1.000
0316	SPV.0105	Special 03. Exterior Painting	LS	1.000	1.000

Wisconsin Department of Transportation

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WKE

MAY 2018

PROJECT ID: 3738-08-70

COUNTY: KENOSHA

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right of Way Plat~~
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
~~Section No.~~	~~8~~	~~Structure Plans~~
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 286

DESIGN DESIGNATION

A.A.D.T.	=	N/A
A.A.D.T.	=	N/A
D.H.V.	=	N/A
D.D.	=	N/A
T.	=	N/A
DESIGN SPEED	=	N/A
ESALS	=	N/A

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

104TH STREET, V. PLEASANT PRAIRIE

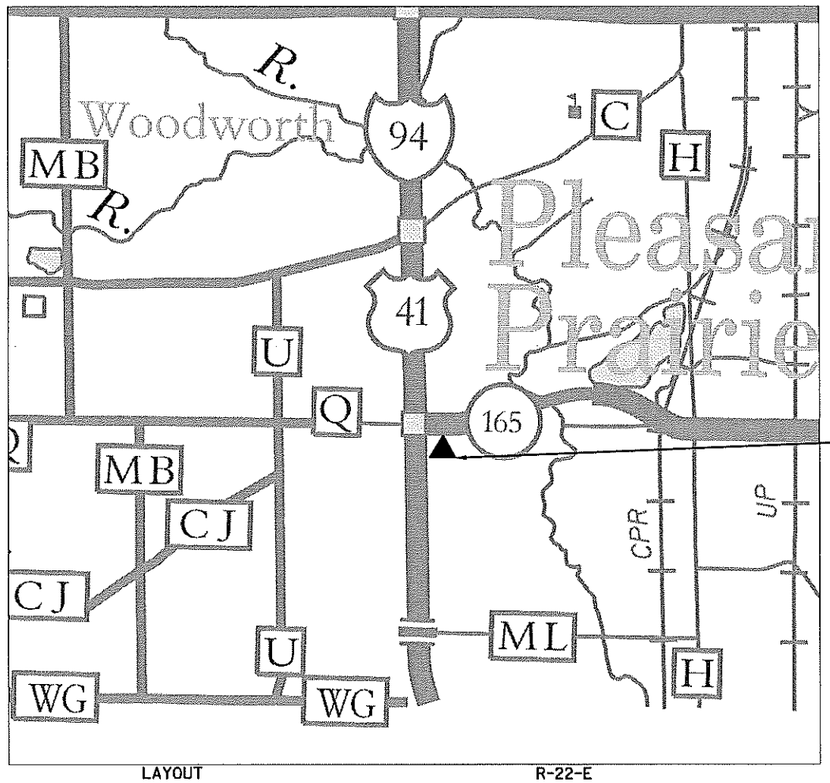
PLEASANT PRAIRIE WELCOME CENTER

STH 165

KENOSHA COUNTY

STATE PROJECT NUMBER
3738-08-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3738-08-70		



BEGIN PROJECT 3738-08-70
STA. 23+22
X=595,245.1426
Y=110,938.3727
END PROJECT 3738-08-70
STA. 28+18

LAYOUT

SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MILWAUKEE COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD 88 (2007).

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	
Designer	WISDOT
Project Manager	CHRISTOPHER HAGER, P.E.
Regional Examiner	
Regional Supervisor	WAFA ELOAQ, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 1/31/18 (Signature)

E

FILE NAME : N:\PDS\C3D\CAD\37380800\010101_TI.DWG
LAYOUT NAME - ****

PLOT DATE : 1/31/2018 2:53 PM

PLOT BY : SPAETH, MICHELE L PLOT NAME :

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BRISTOL, WI 53104-9772
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2

DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	GENERAL NOTES AND UTILITY CONTACTS	SHEET: 2	E

2

STANDARD ABBREVIATIONS

AEW	APRON ENDWALL
AGG	AGGREGATE
ASPH	ASPHALTIC
BAD	BASE AGGREGATE DENSE
BM	BENCHMARK
C&G	CURB AND GUTTER
CL OR $^{C}_{L}$	CENTER LINE OR CONSTRUCTION LINE
CMCP	CULVERT PIPE CORRUGATED METAL
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALTIC
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MAINLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON END WALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SLV	SALVAGED
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SI	SLOPE INTERCEPT
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT

ORDER OF SECTION 2 DETAIL SHEETS

UTILITY CONTACTS AND STANDARD ABBREVIATIONS
GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
PLAN DETAILS
PAVING GRADES
CROSS SECTION MATCHLINES
EROSION CONTROL
STORM SEWER
EXISTING UTILITY PLAN
PERMANENT SIGNING
LIGHTING PLANS
TRAFFIC SIGNALS
PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT INFORMATION & SURVEY CONTROL

DIGGERS HOTLINE
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www.DiggersHotline.com

2

GENERAL NOTES

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATION AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS MUST BE CONTACTED SEPARATELY.

WHEN THE QUANTITY OF HMA PAVEMENT OR BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH GRANULAR BACKFILL, UNLESS SPECIFICATIONS REQUIRE DIFFERENTLY. GRANULAR MATERIAL IS INCIDENTAL TO REMOVAL ITEM.

ALL INLETS IN DRIVING LANES DURING STAGED CONSTRUCTION MUST BE WELDED OR FASTENED AS APPROVED BY THE ENGINEER. SECURING AND REMOVAL OF INLET COVERS SHALL BE INCIDENTAL TO INSTALLATION OF THE INLETS.

REINFORCED CONCRETE APRON ENDWALLS AND ADJOINING TWO SECTIONS OF CONCRETE PIPE SHALL BE TIED TOGETHER AS SHOWN ON THE STANDARD DETAIL DRAWINGS AND AS LOCATED IN THE MISCELLANEOUS QUANTITIES. JOINT TIES SHALL BE INCIDENTAL ITEMS INCLUDED IN THE COST OF THE CONCRETE PIPE

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN AND PROVIDE DOCUMENTATION TO ENGINEER IN ACCORDANCE WITH THE SPECIFICATIONS.

FERTILIZER SHALL NOT BE USED NEAR NAVIGABLE WATERWAYS OR WETLANDS.

EXISTING PIPE CULVERT SIZES AND CONCRETE BOX CULVERT SIZES SHOWN ARE APPROXIMATE AND CONTRACTOR WILL BASE BID ON THE ACTUAL FIELD CONDITIONS.

ANY AREA OF PAVEMENT REMOVAL SHALL HAVE ALL ROADBED AGGREGATE MATERIAL REMOVED AND SHALL BE TOPSOILED, SEEDED AND MULCHED TO ESTABLISH VEGETATION.

THE QUANTITY OF SALVAGED TOPSOIL IS COMPUTED FROM MEASUREMENTS BETWEEN BACK OF CURB OR SUBGRADE SHOULDER POINTS AND THE SLOPE INTERCEPTS AS SHOWN THE CROSS SECTIONS PLUS 5 FEET FOR ROUNDING

EROSION CONTROL BMP'S ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THE THE BMP IS NO LONGER REQUIRED.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED AND MULCH.

INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE PLACED WITH 6-INCH TYPICAL DEPTH.

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. SEED, FERTILIZE, AND MULCH / EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL. IF GRADED AREAS ARE LEFT EXPOSED FOR MORE THAN FOURTEEN(14) CALENDAR DAYS. SEED THOSE AREAS WITH TEMPORARY SEED AND MULCH.

EXISTING DRIVEWAYS AND FIELD ENTRANCES SHALL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER IN THE FIELD AND AT THE LOCATION DETERMINED BY THE ENGINEER.

ALL TYPES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYERS AND GRADATIONS:

PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
ASPHALTIC SURFACE	1.5"	1.5"	25.0 MM	--

BROKEN CONCRETE CONTAINING RE-BAR SHALL NOT BE USED AS RIPRAP.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM TRAFFIC CONTROL COVERING SIGNS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

VERIFY EXISTING PAVEMENT ELEVATIONS AT ALL TIE-INS TO EXISTING PAVEMENT PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND BETWEEN PROPOSED PLAN ELEVATIONS AND THE EXISTING PAVEMENT ELEVATIONS , THE CONTRACTOR IS TO NOTIFY THE ENGINEER.

SAWCUT CONCRETE DRIVEWAYS AND/OR PARKING LOTS AT THE MATCHLINE AS SHOWN ON THE PAVING DETAILS OR AS DIRECTED BY THE ENGINEER.

A SAWED JOINT IS REQUIRED WHERE NEW HMA PAVEMENT MEETS EXISTING HMA PAVEMENT.

SQUEEGEE ALL SAWCUT SLURRY TO THE AGGREGATE SHOULDER AND/OR REMOVE INCIDENTAL TO THE SAWCUTTING.

THE CONTRACTOR SHALL PROVIDE A CONCRETE JOINT DETAIL 14 DAYS PRIOR TO PAVING FOR APPROVAL BY THE ENGINEER.

PROVIDE A TYPICAL SIDEWALK CROSS SLOPE OF 1.5% WITH A CONSTRUCTION TOLERANCE OF +/- 0.5%

CURB HEIGHTS AT THE END OF CURB AND GUTTER SHALL BE TAPERED FROM 0 TO 4 INCHES TO 0 TO 6 INCHES IN 6 FEET.

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE. CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE.

A CONVERSION FACTOR OF 2.0 TONS/CY WAS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE 1 1/4-INCH.

A CONVERSION FACTOR OF 112 LBS/SY/IN WAS USED TO ESTIMATE QUANTITIES FOR ASPHALTIC SURFACE.

2

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N

CONSTRUCTION LIMIT
STA. 406+00.00J

R/L J

104TH ST. (STH 165)

CONSTRUCTION LIMIT
STA. 411+79.33J

STH 165/104th ST

R/L E

CONSTRUCTION LIMIT
STA. 91+25.00D

CONSTRUCTION LIMIT
STA. 19+00.00C

RV EXPANSION

R/L C

CONSTRUCTION LIMIT
STA. 102+75.00E

CONSTRUCTION LIMIT
STA. 23+22.00C

E. FRONTAGE RD.

CONSTRUCTION LIMIT
STA. 96+00.00D

CAR PARKING

R/L B

CONSTRUCTION LIMIT
STA. 7+50.01B

120TH AVE.

WETLANDS

BEGIN CONSTRUCTION
STA. 21+16.11A

CONSTRUCTION LIMIT
STA. 100+00.00E

TRUCK PARKING

R/L D

EXISTING
POND

R/L A

UNNAMED TRIBUTARY
NO. 2 TO DES PLAINES RIVER

REPAIR
DAM

WELCOME CENTER EXIT

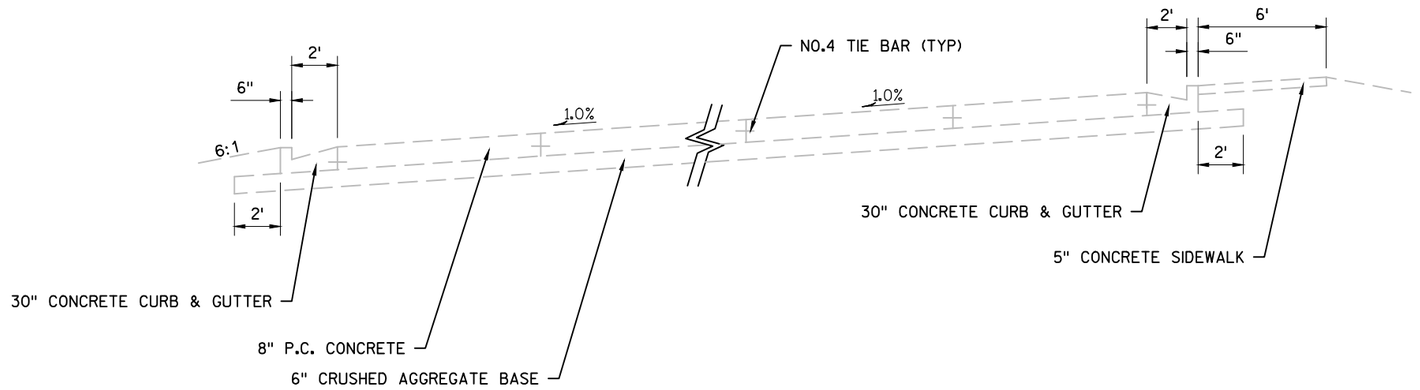
END CONSTRUCTION
STA. 28+18.12A

I 94/IH 41

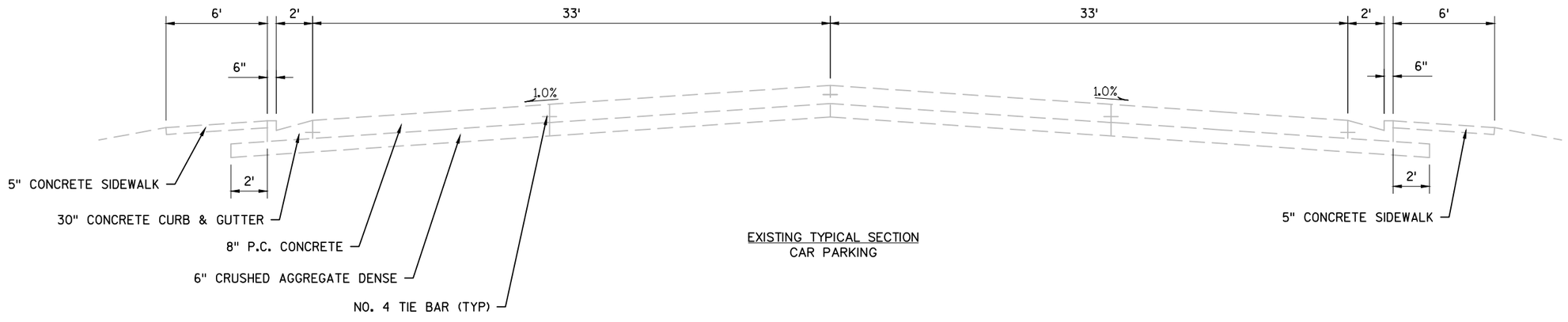
IH 94/USH 41

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PROJECT OVERVIEW	SHEET 5	E

2



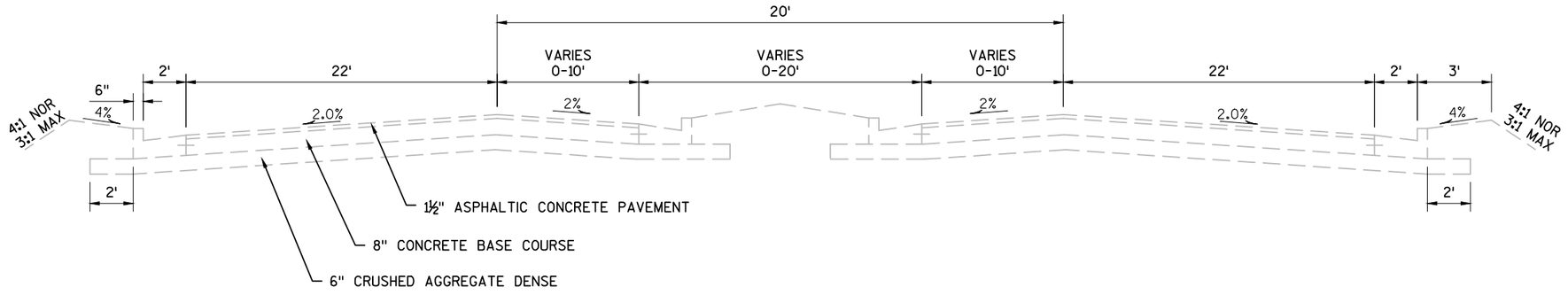
EXISTING TYPICAL SECTION
TRUCK PARKING



EXISTING TYPICAL SECTION
CAR PARKING

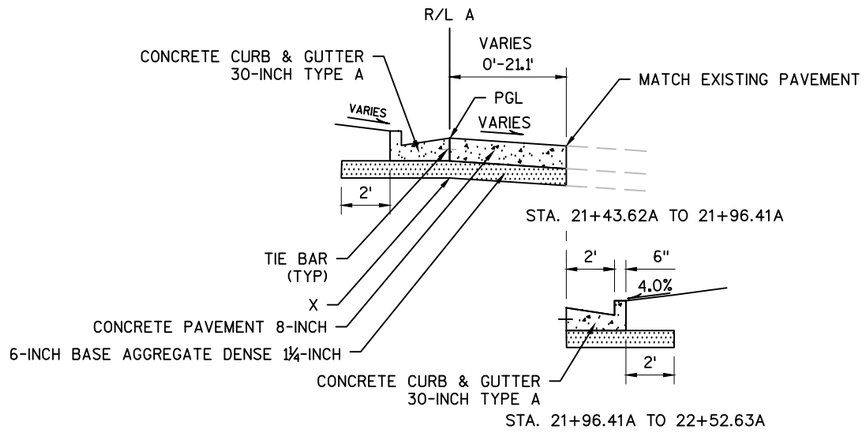
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: TYPICAL SECTIONS	SHEET 6	E

2

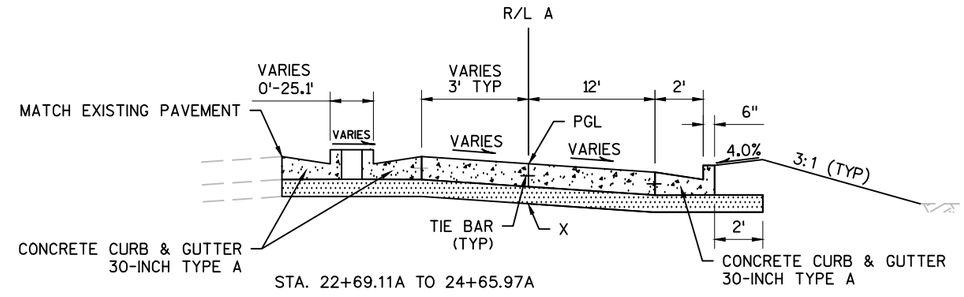


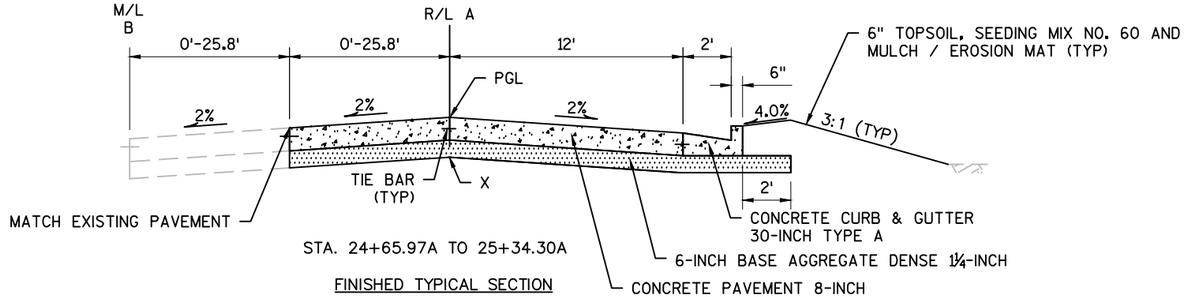
EXISTING TYPICAL SECTION
STH 120 AVE.

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: TYPICAL SECTIONS	SHEET 7	E



FINISHED TYPICAL SECTION
WELCOME CENTER EXIT
STA. 21+43.62A TO STA. 22+52.63A



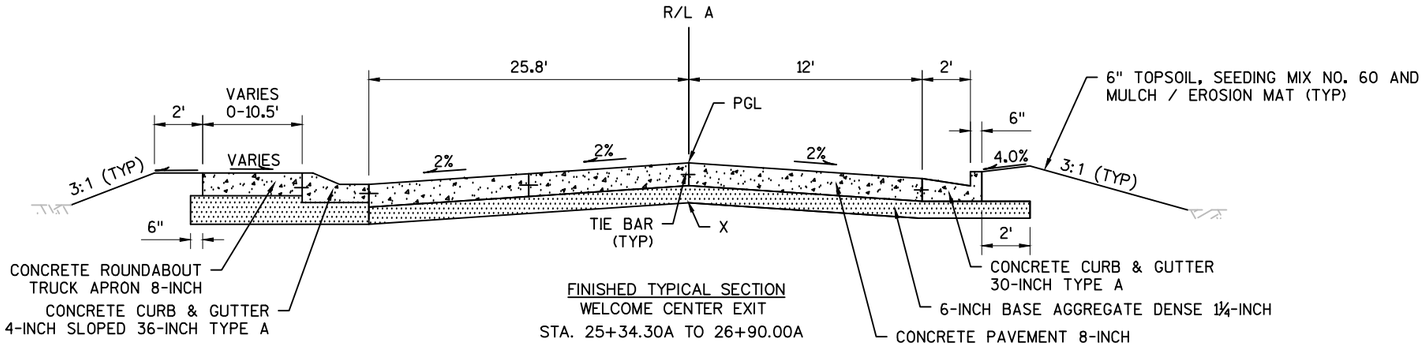


FINISHED TYPICAL SECTION
WELCOME CENTER EXIT
STA. 22+69.11A TO STA. 25+34.30A

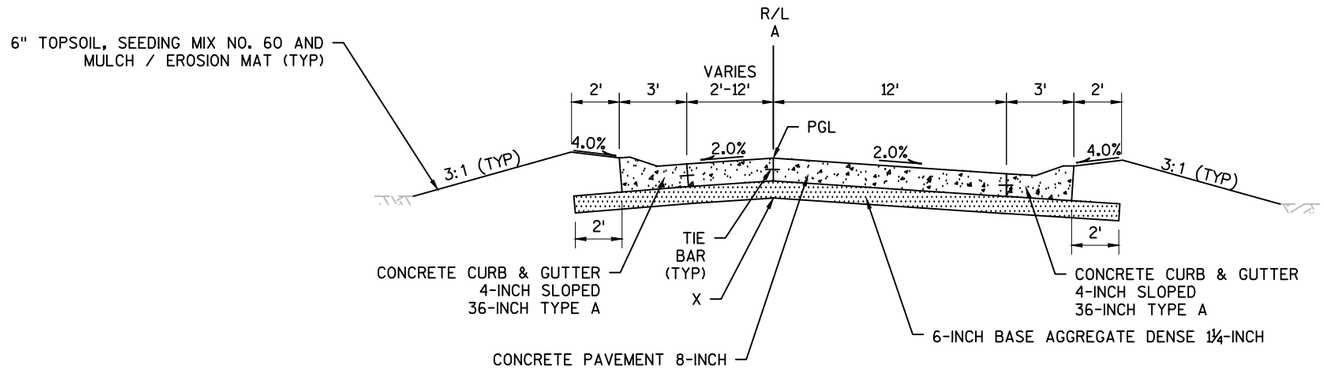
NOTE:
X = POINT REFERRED TO ON CROSS-SECTION
PGL = POINT REFERRED TO ON PROFILE

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: TYPICAL SECTIONS	SHEET 8	E

2



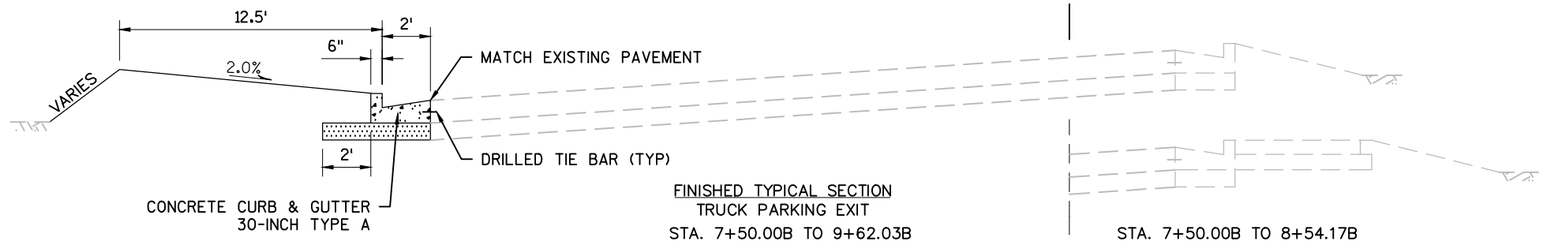
FINISHED TYPICAL SECTION
WELCOME CENTER EXIT
STA. 25+34.30A TO 26+90.00A



FINISHED TYPICAL SECTION
WELCOME CENTER EXIT
STA. 27+67.15A TO STA. 28+18.12A

NOTE:
X = POINT REFERRED TO ON CROSS-SECTION
PGL = POINT REFERRED TO ON PROFILE

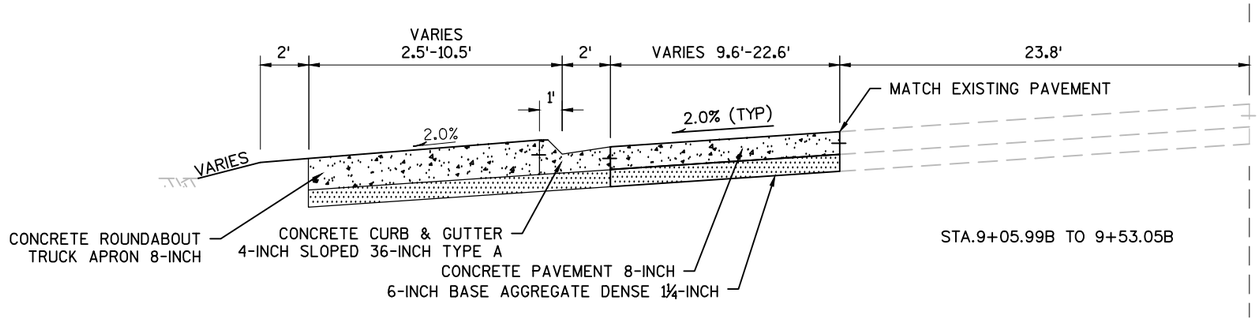
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: TYPICAL SECTIONS	SHEET 9	E



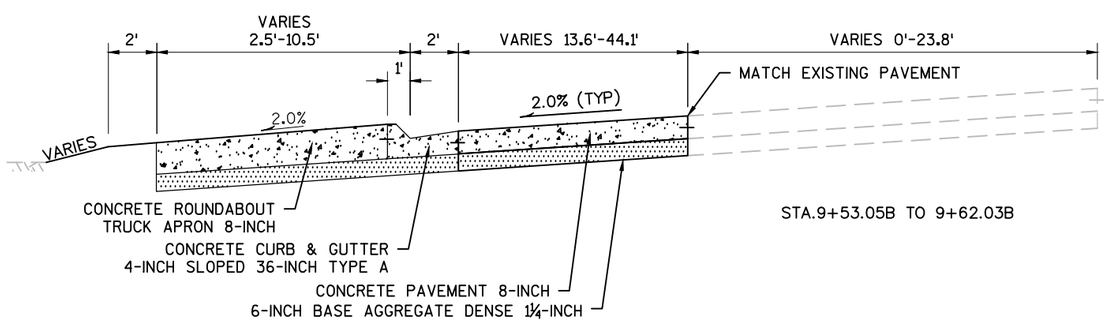
FINISHED TYPICAL SECTION
TRUCK PARKING EXIT
STA. 7+50.00B TO 9+62.03B

R/L B

STA. 7+50.00B TO 8+54.17B

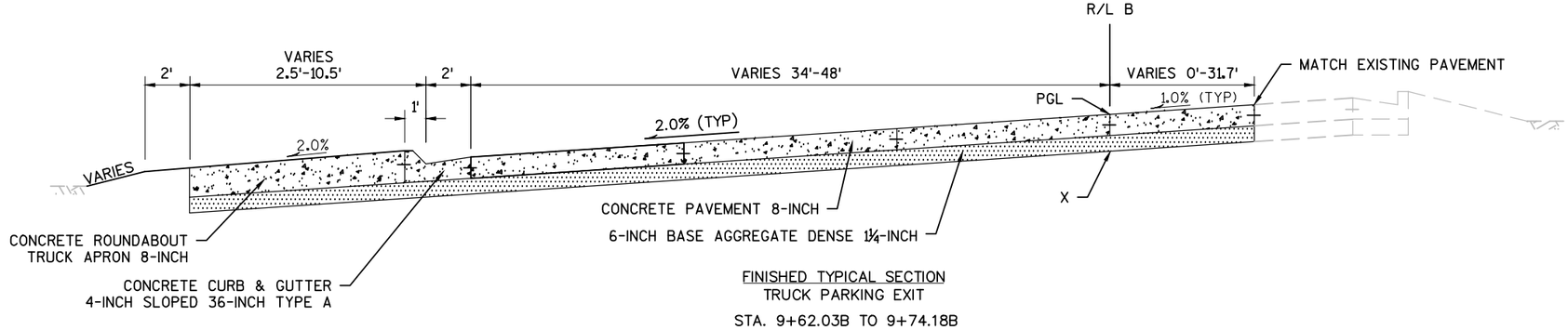


STA.9+05.99B TO 9+53.05B



STA.9+53.05B TO 9+62.03B

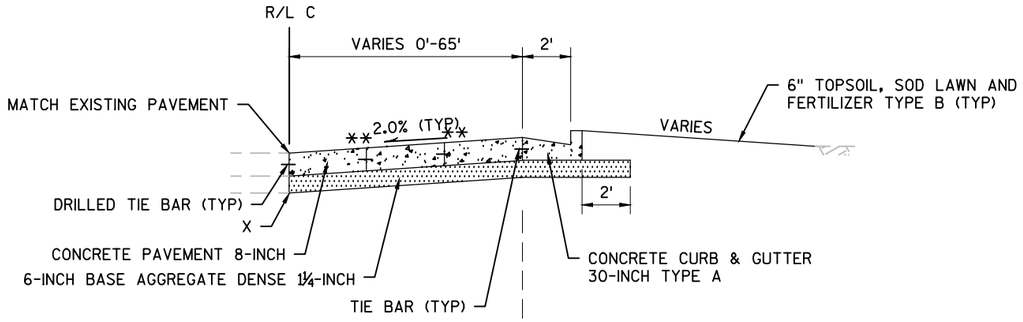
R/L B

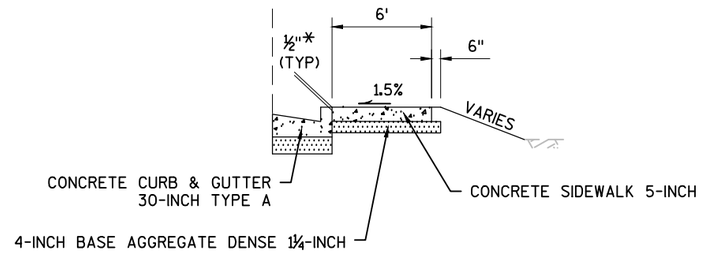


FINISHED TYPICAL SECTION
TRUCK PARKING EXIT
STA. 9+62.03B TO 9+74.18B

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: TYPICAL SECTIONS	SHEET 10	E

2





STA. 20+51.70C TO 22+78.83C

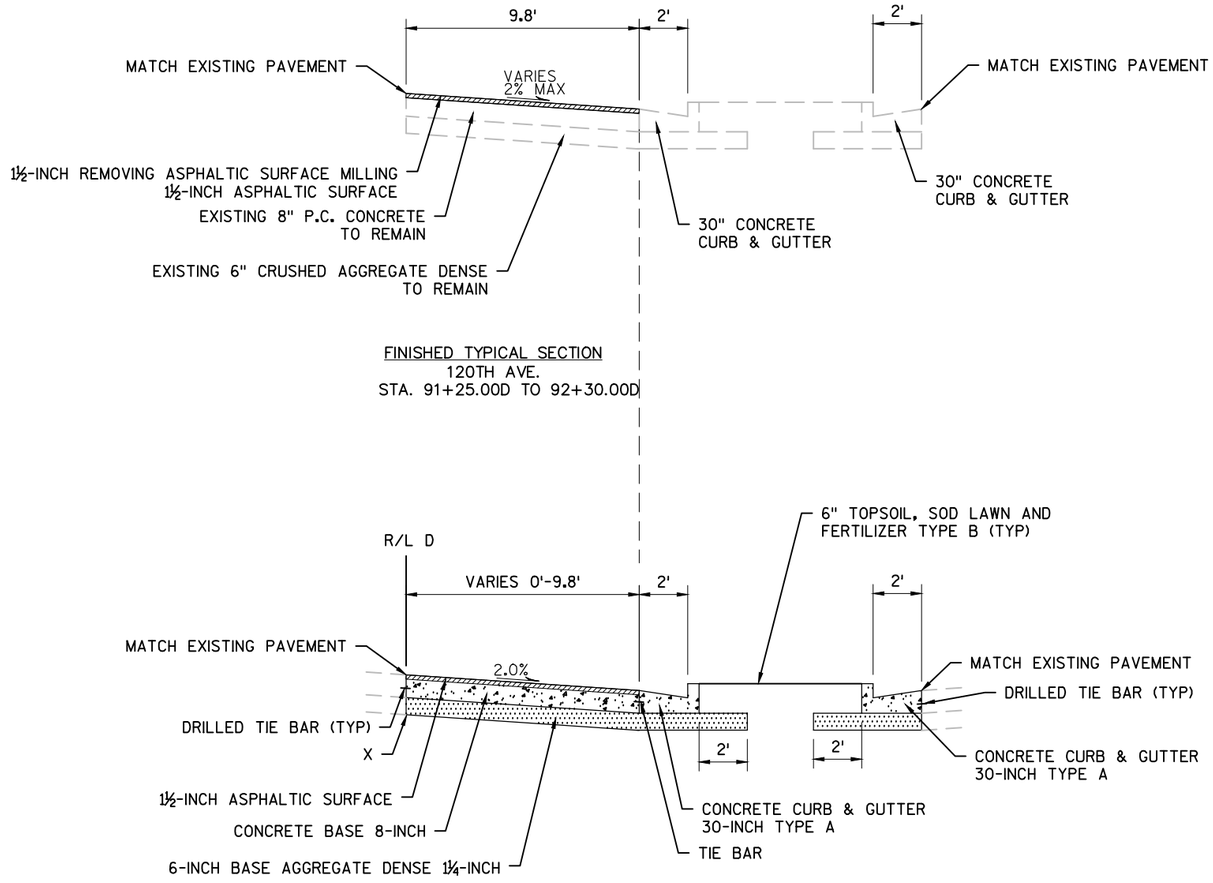
FINISHED TYPICAL SECTION
RV EXPANSION
STA. 19+00.00C TO 23+22.00C

NOTE:
X = POINT REFERRED TO ON CROSS-SECTION.

* FINISH CONCRETE SIDEWALK ½" HIGHER THAN TOP-OF-CURB.
PLACE ½" EXPANSION JOINT FILLER ALONG BACK OF CURB.

** 15' MAXIMUM SPACING FOR LONGITUDINAL JOINTS.
15' MAXIMUM SPACING FOR TRANSVERSE JOINTS.

2



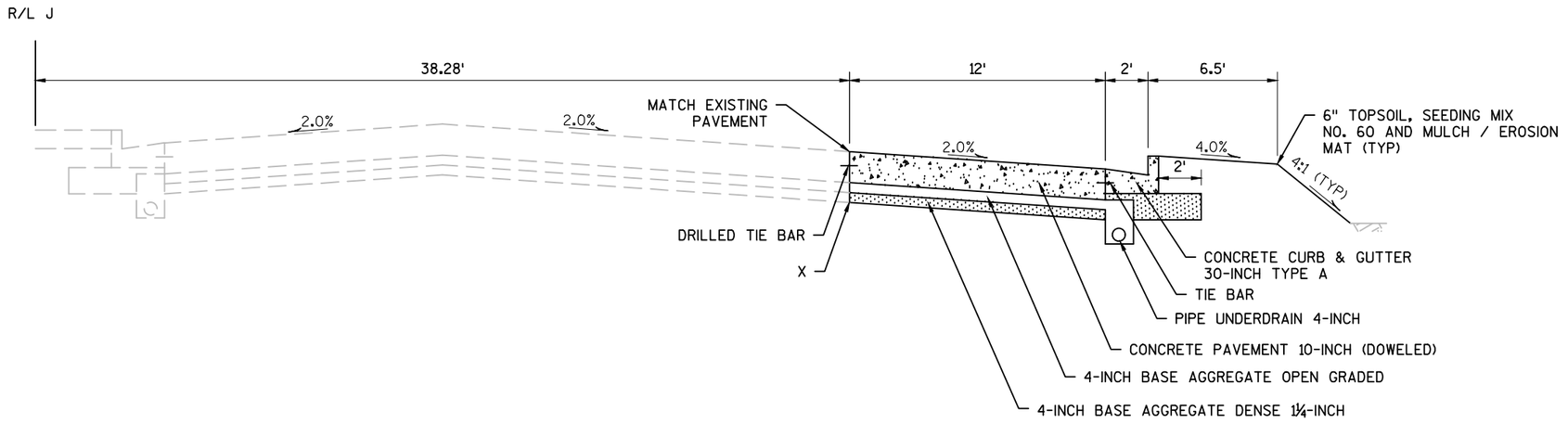
FINISHED TYPICAL SECTION
120TH AVE.
STA. 91+25.00D TO 92+30.00D

FINISHED TYPICAL SECTION
120TH AVE.
STA. 92+30.00D TO 96+00.00D

NOTE:
X = POINT REFERRED TO ON CROSS-SECTION

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: TYPICAL SECTIONS	SHEET 12	E

2

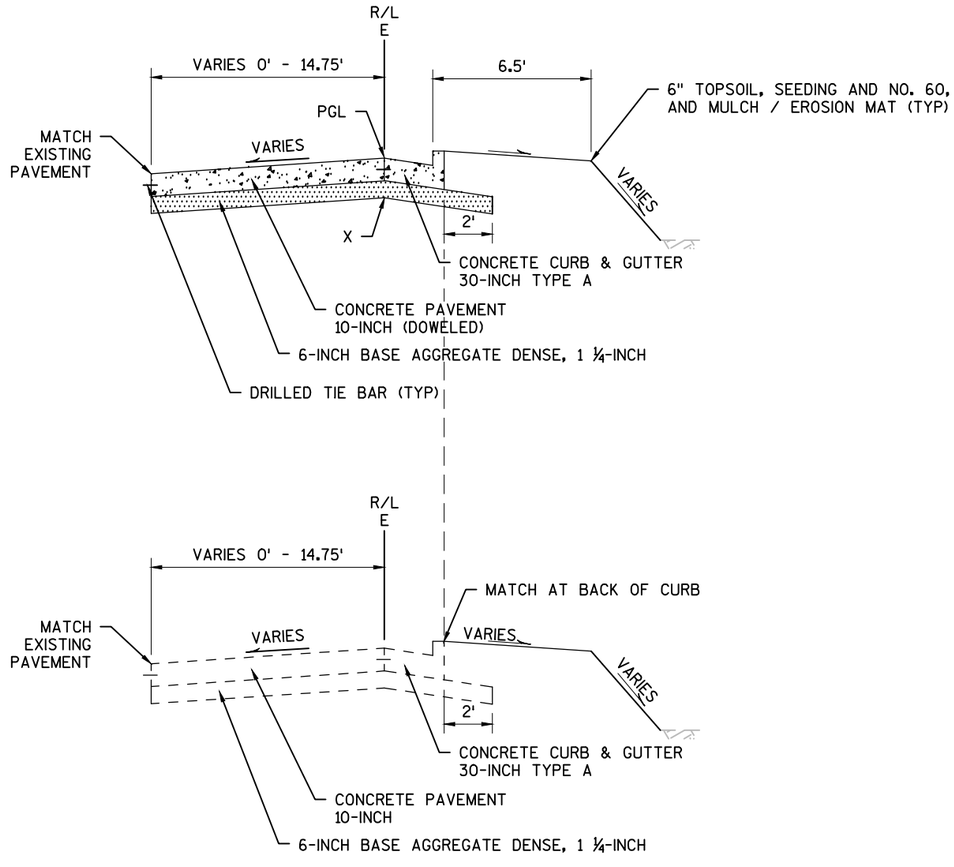


FINISHED TYPICAL SECTION
STH 165
STA. 406+00.00J TO 411+79.33J

NOTE:
X = POINT REFERRED TO ON CROSS-SECTION

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: TYPICAL SECTIONS	SHEET 13	E

2

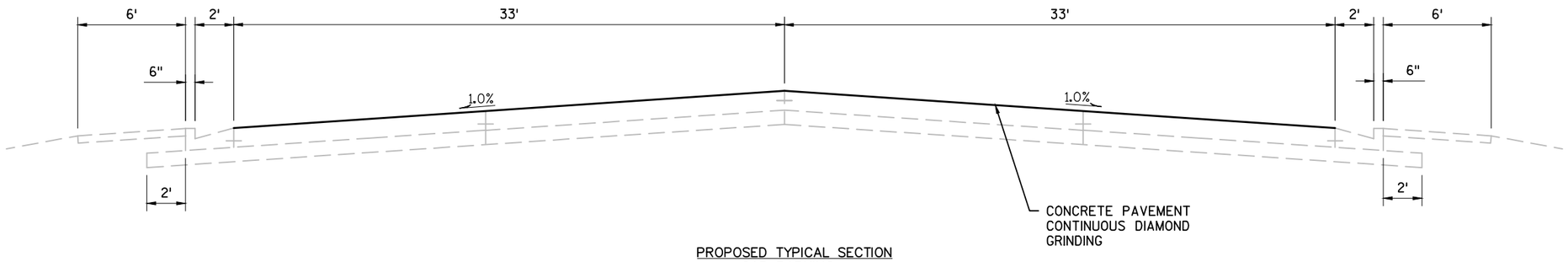


STA. 102+75.00E TO 105+50.00E

FINISHED TYPICAL SECTION
RAMP EDGE
STA. 100+00.00E TO 105+50.00E

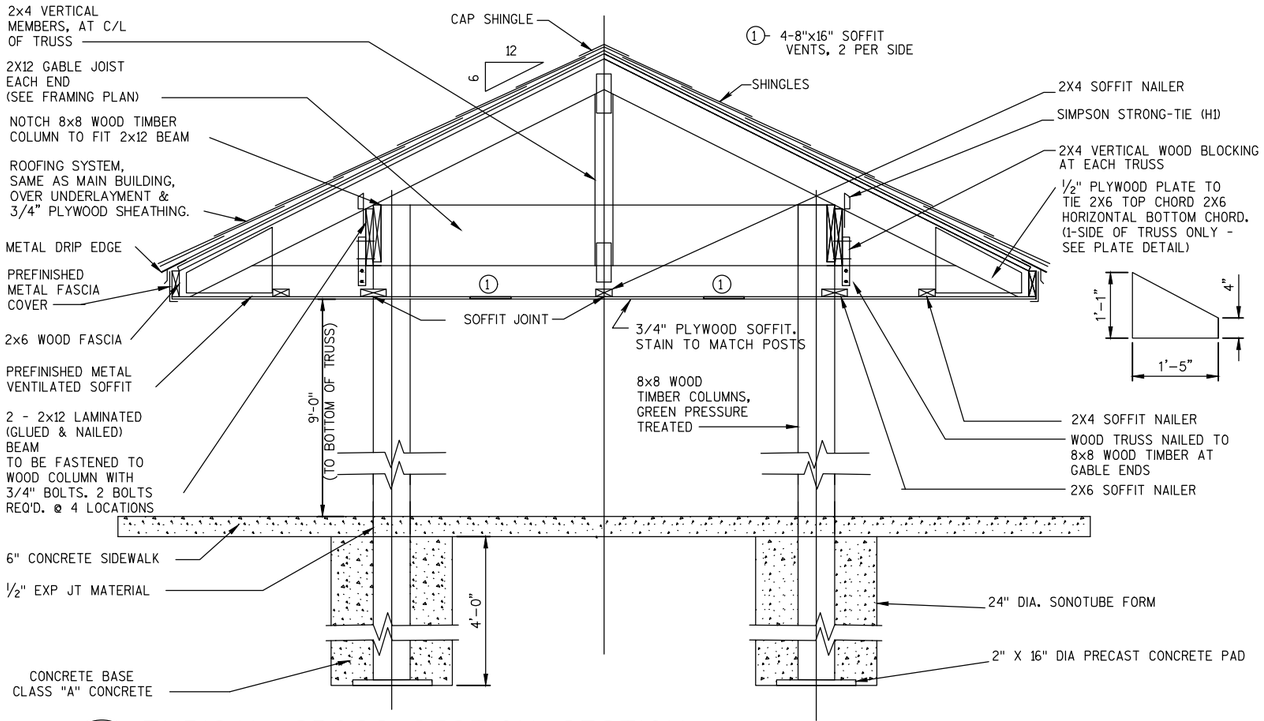
NOTE:
X = POINT REFERRED TO ON CROSS-SECTION
PGL = POINT REFERRED TO ON PROFILE

2

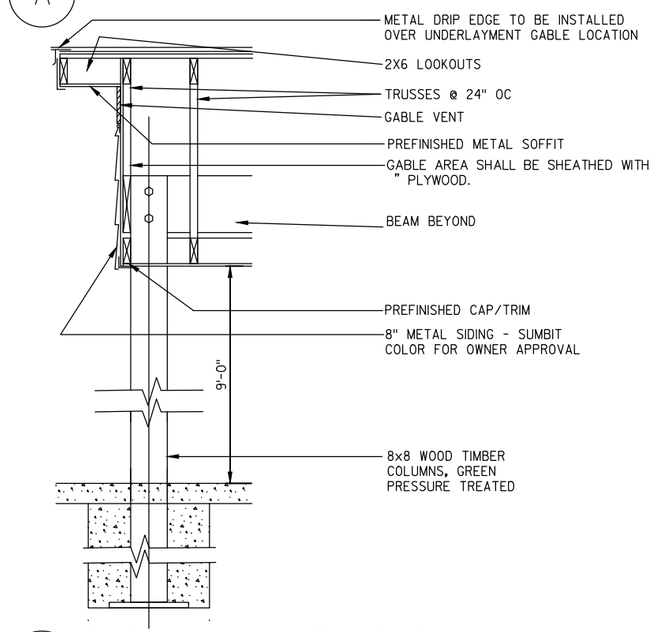


PROPOSED TYPICAL SECTION
CAR PARKING

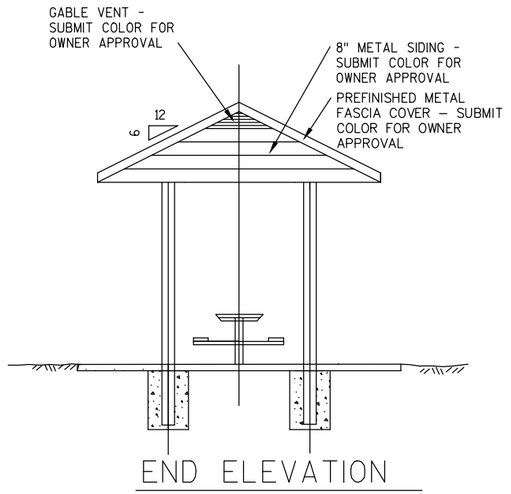
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: TYPICAL SECTIONS	SHEET 15	E



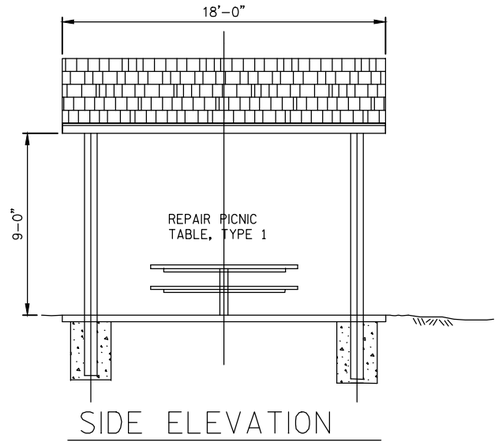
A TYPICAL CROSS-SECTION SECTION



B TYPICAL GABLE SECTION



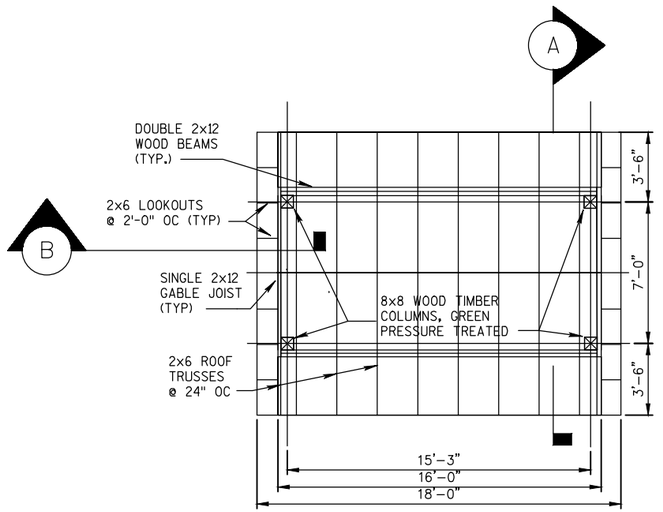
END ELEVATION



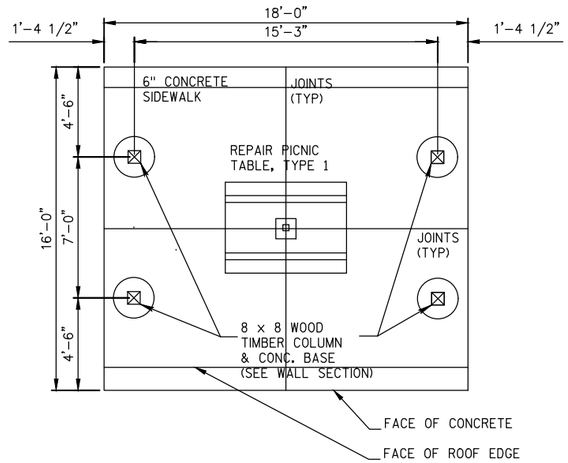
SIDE ELEVATION

NOTES:
A. ROOF RAFTER SHALL BE FASTENED TO THE DOUBLE 2X12 BEAM WITH APPROVED TRUSS TIES.

B. ALL EXPOSED WOOD SHALL BE STAINED BROWN.

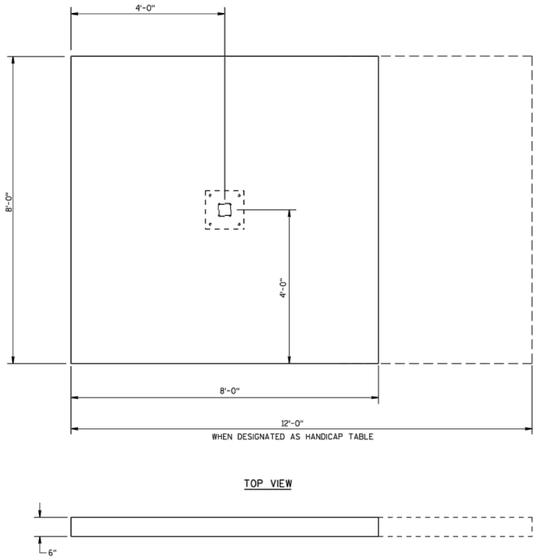


ROOF FRAMING PLAN



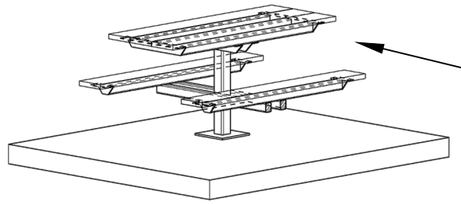
FOUNDATION/FLOOR PLAN

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CONSTRUCTION DETAILS	SHEET 16	E



TOP VIEW

SLAB ELEVATION

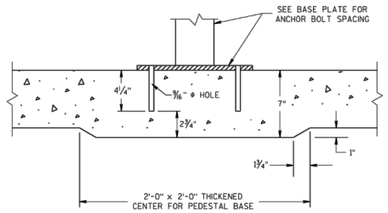


PERSPECTIVE VIEW

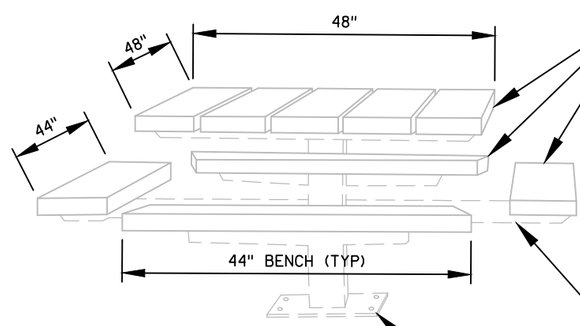
GRAPHIC FOR LAYOUT ONLY
REUSE EXISTING TABLE FRAME

NOTES:

PICNIC TABLE PAD SHALL BE PAID FOR AS CONCRETE SIDEWALK 6-INCH.
PICNIC TABLE PAD SHALL BE LEVEL.
HANDICAP TABLES MUST HAVE SIDEWALK EXTENSION FOR ACCESSABILITY.



ANCHOR BOLT HOLE DETAIL



REMOVE EXISTING LUMBER
REPLACE WITH 2X10 COMPOSITE
(TYP)

SHOP SANDBLAST AND
REPAINT ALL METAL SURFACES

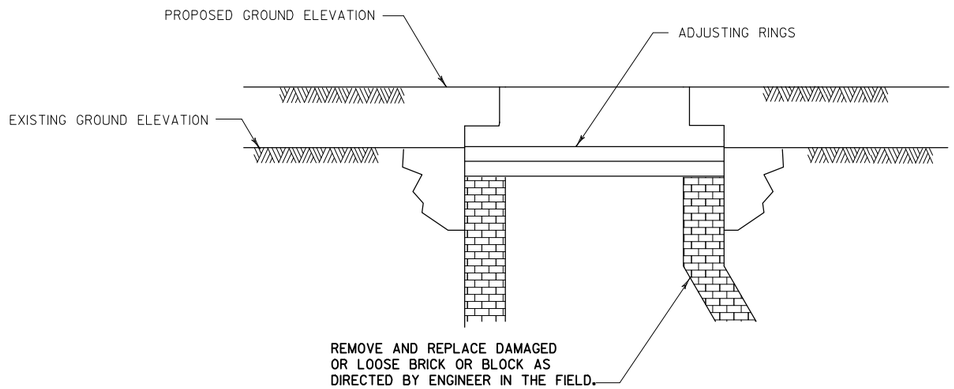
REMOVE TABLE FROM PAD
INSTALL NEW ANCHOR BOLTS
IN NEW CONCRETE PAD

REPAIR PICNIC TABLE, TYPE 1

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PICNIC TABLE REPAIR DETAIL	SHEET	E

FILE NAME : W:\03 PAVTROAD\RDSD\CAD TEMPLATES\PICNIC TABLE REPAIR.DWG
PLOT DATE : 4/24/2013 10:58 AM
PLOT BY : SCHMALE, RICHARD J PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

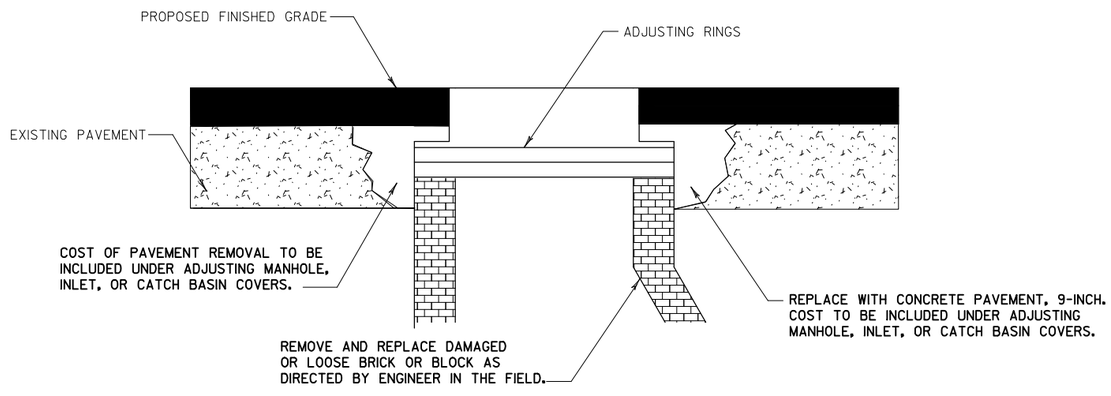
2



NON-PAVED AREA

NOTE:

ADJUST CHIMNEY WITH PROPER SIZE CONCRETE ADJUSTING RINGS (SIZE OF OPENING OF CONCRETE ADJUSTING RING TO BE DETERMINED BY SIZE OF OPENING IN FRAME) AND REINSTALL EXISTING FRAME AND LID TO FINISHED GRADE. (BACKFILL AND OTHER WORK TO BE DONE IN ACCORDANCE WITH ITEM ADJUSTING INLET COVER.)

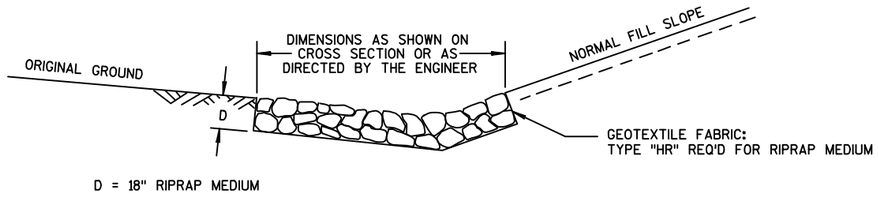


PAVED AREA

ADJUSTING MANHOLE OR INLET COVERS

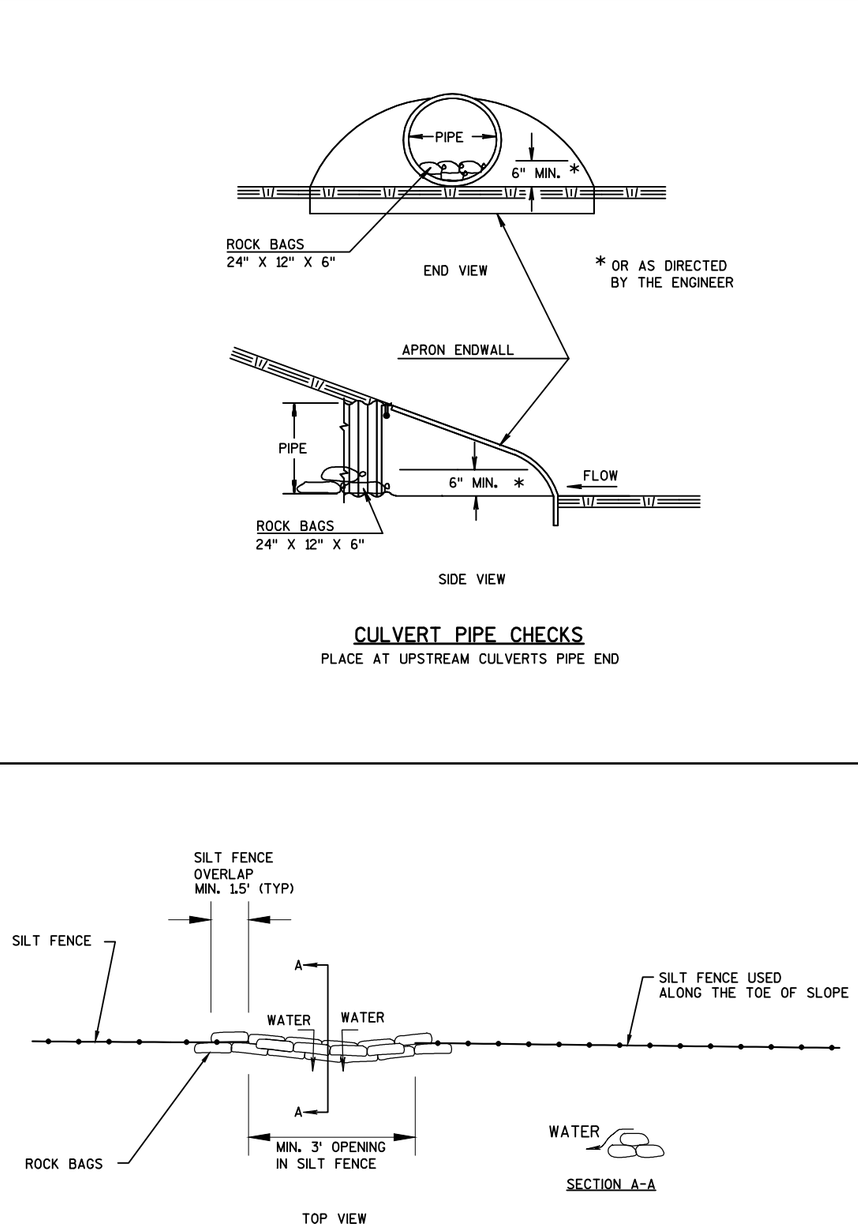
CULVERT PIPE CHECKS

PLACE AT UPSTREAM CULVERTS PIPE END



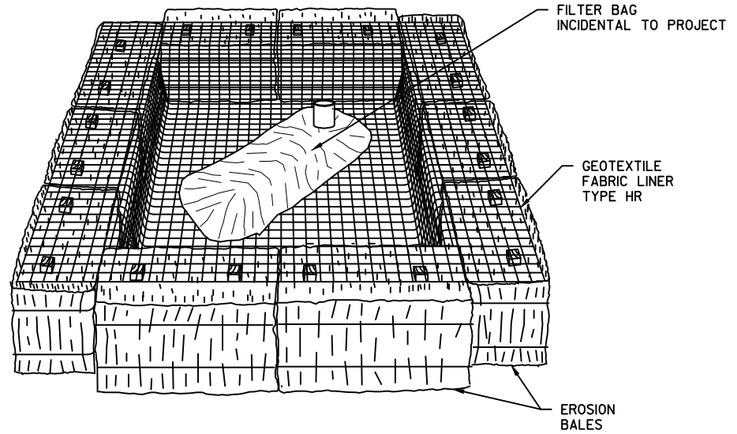
DETAIL FOR RIPRAP IN DITCHES

SEE EROSION CONTROL
PLAN FOR LOCATIONS



ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

SEE EROSION CONTROL PLAN FOR LOCATIONS



NOTE:

GEOTEXILE FABRIC AND EROSION BALES WILL BE PAID UNDER THE ITEMS "GEOTEXTILE TYPE HR" AND "EROSION BALES"

TEMPORARY SETTLING BASIN

(SIZE TO BE DETERMINED IN FIELD AS INDICATED BELOW:)

STORAGE VOLUME (C.F.) = 16 X GPM (PUMP RATE)

EXAMPLE:

CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.

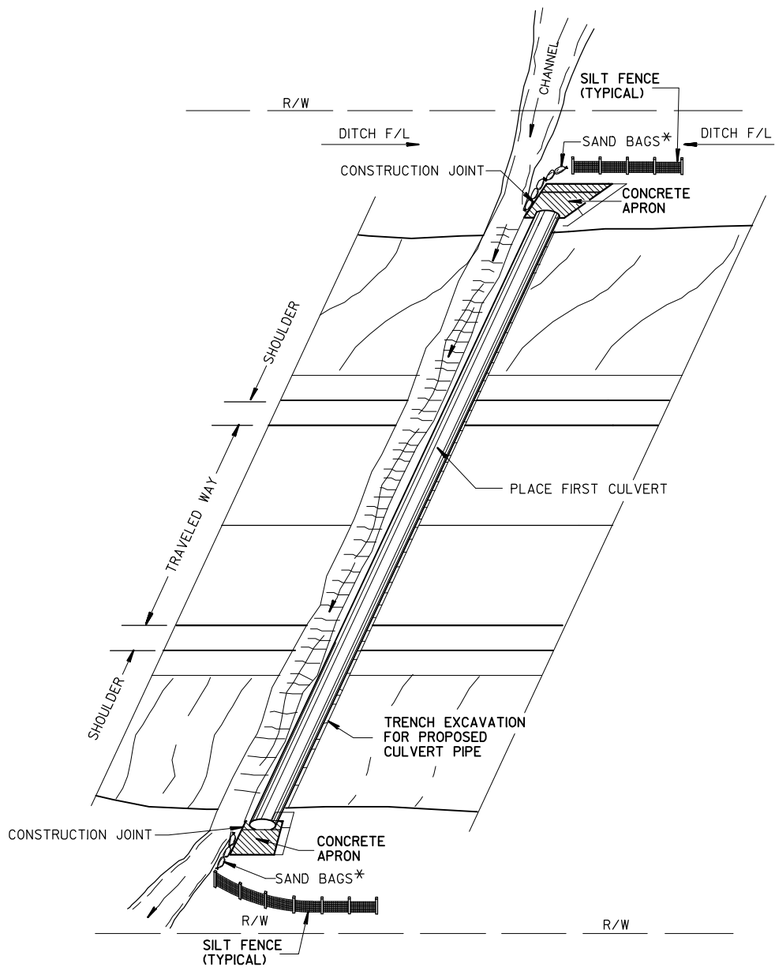
SOLUTION:
SV (C.F.) = 16 X 50

SV = 800 C.F.

$\frac{800 \text{ C.F.}}{1.5 \text{ FT.}}$ = 533 S.F.

USE A 20 FT. X 27 FT. BASIN

STAGE CONSTRUCTION DETAILS FOR CULVERT INSTALLATION IN CHANNEL



STAGE 1

NO EXISTING CULVERT JUST CHANNEL

REPOSITION SAND BAGS AND SILT FENCE.

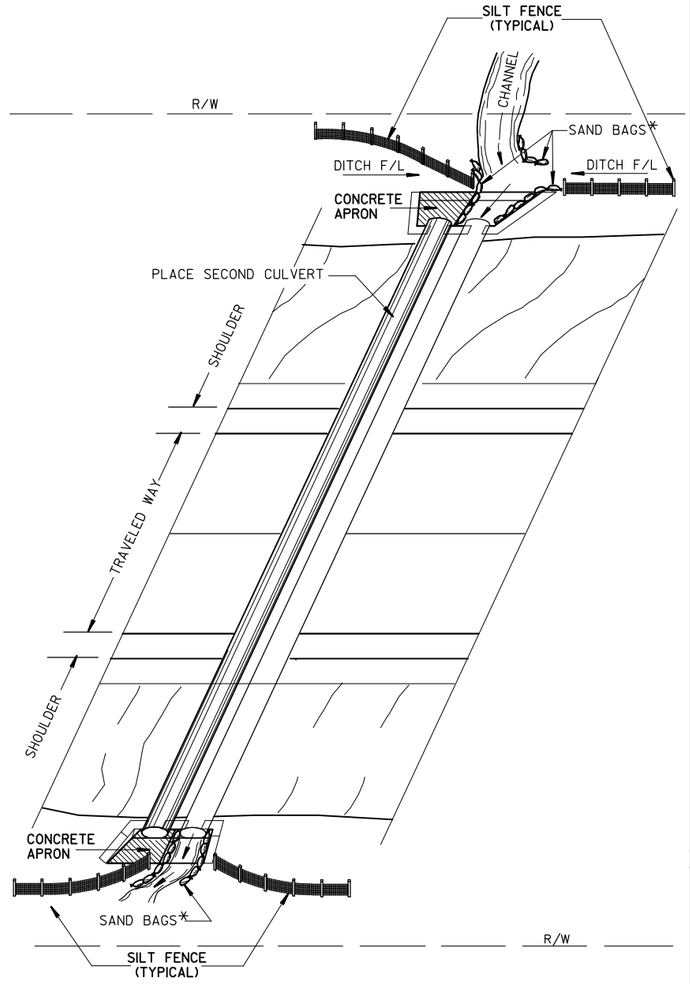
EXCAVATE TRENCH FOR CULVERT PIPE.

CONSTRUCT ONE - HALF OF EACH CONCRETE APRON.

PLACE CULVERT PIPE AND BACKFILL

NOTE: **ALL WORK SHALL BE WITHIN EXISTING R/W. EROSION CONTROL DEVICES TO BE LOCATED AS SHOWN AND AS DIRECTED BY THE ENGINEER.**

*** SANDBAGS ARE INCIDENTAL TO THE INSTALLATION OF THE CULVERT PIPE**



STAGE 2

REPOSITION SAND BAGS AND SILT FENCE.

DIVERT CHANNEL THOROUGH NEW CULVERT PIPE.

CONSTRUCT REMAINING HALF OF EACH CONCRETE APRON.

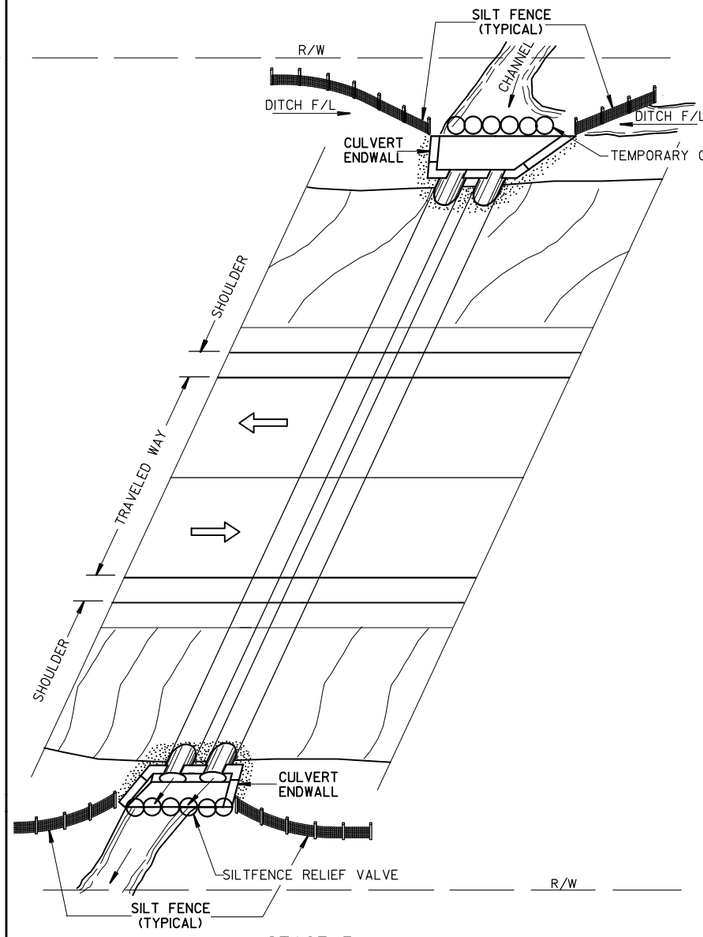
PLACE CULVERT PIPE AND BACKFILL

CONSTRUCT PAVEMENT STRUCTURE OVER NEW CULVERT PIPE.

TOPSOIL, SEED, AND EROSION MAT DISTURBED AREAS.

NOTE: **AREAS REQUIRING DE-WATERING DURING ANY CONSTRUCTION STAGE, SHALL FOLLOW PROCEDURES DETAILED ELSEWHERE IN THE PLANS OR SPECIFICATIONS.**

*** SANDBAGS ARE INCIDENTAL TO THE INSTALLATION OF THE CULVERT PIPE**



STAGE 3

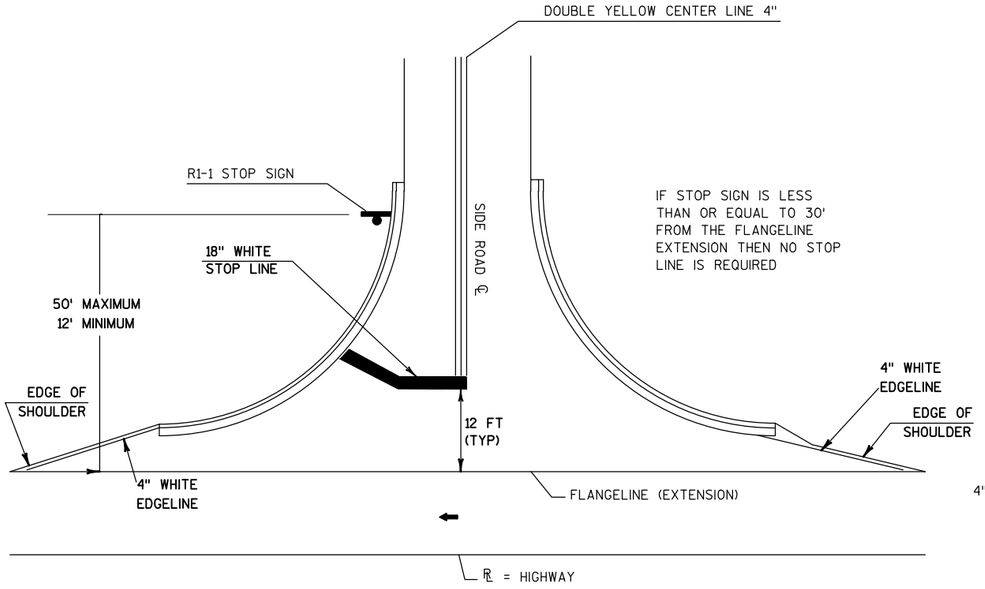
OPEN BOTH CULVERT PIPES TO CHANNEL.

REPOSITION SILT FENCE AS REQUIRED.

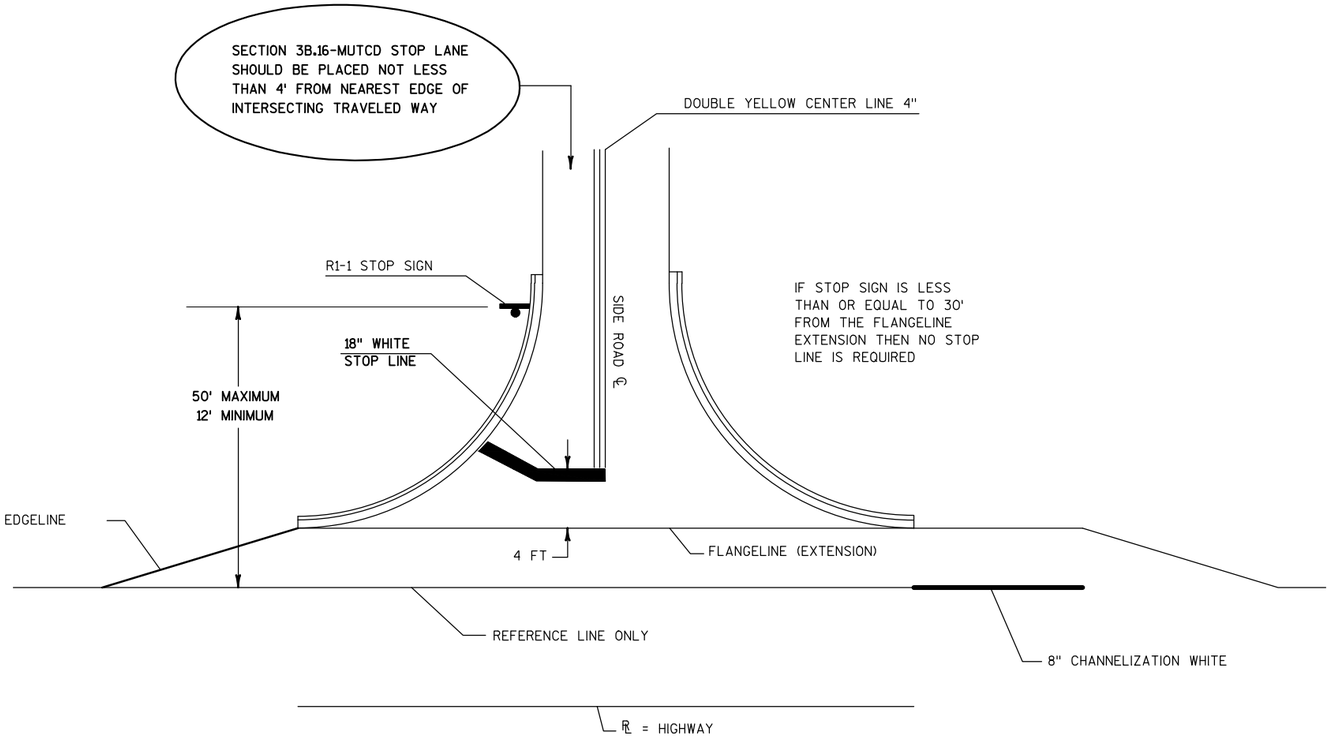
CONSTRUCT CULVERT ENDWALLS.

PLACE SILT FENCE RELIEF VALVE AT DISCHARGE END.

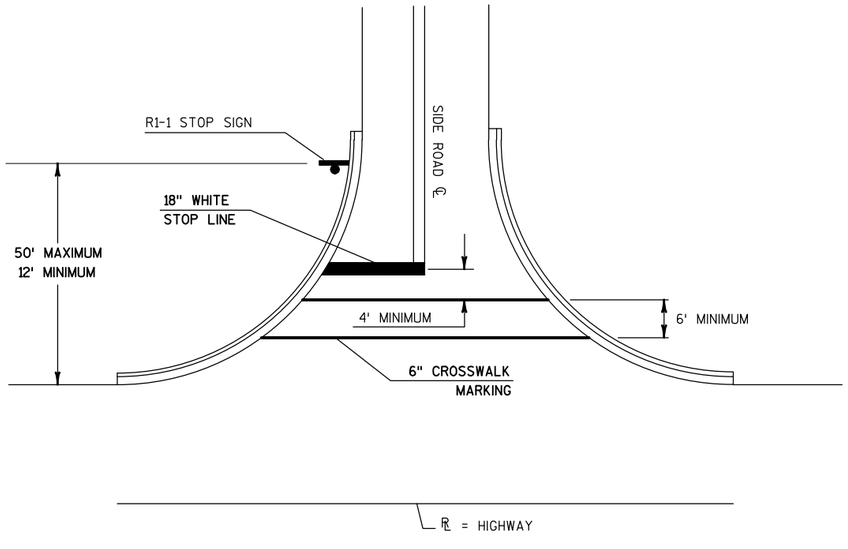
COMPLETE TOPSOILING, SEEDING, AND EROSION MAT OF REMAINING DISTURBED AREAS.



TYPICAL PAVEMENT MARKING FOR SIDEROADS



TYPICAL PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

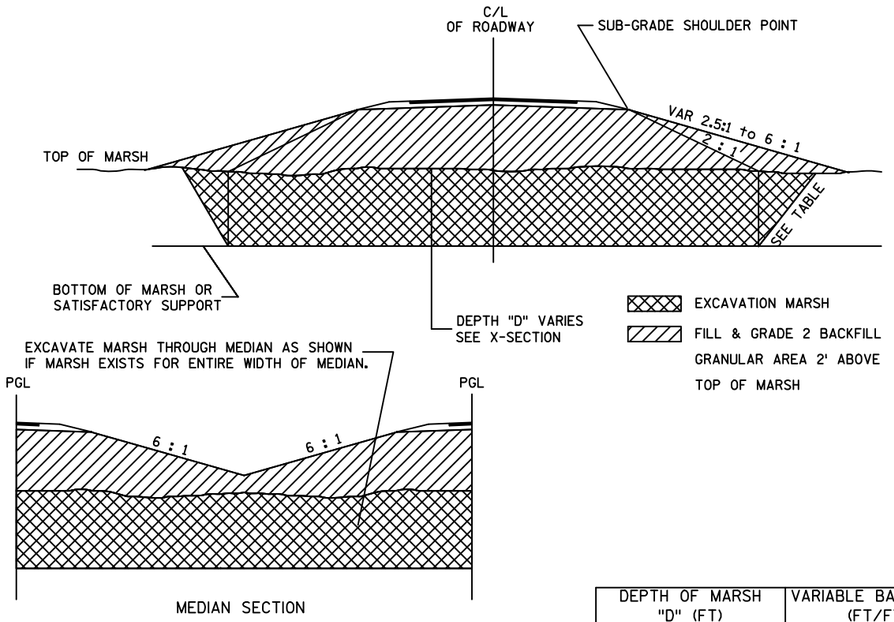
NOTES:

18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.

STOP LINES REQUIRED WHERE:

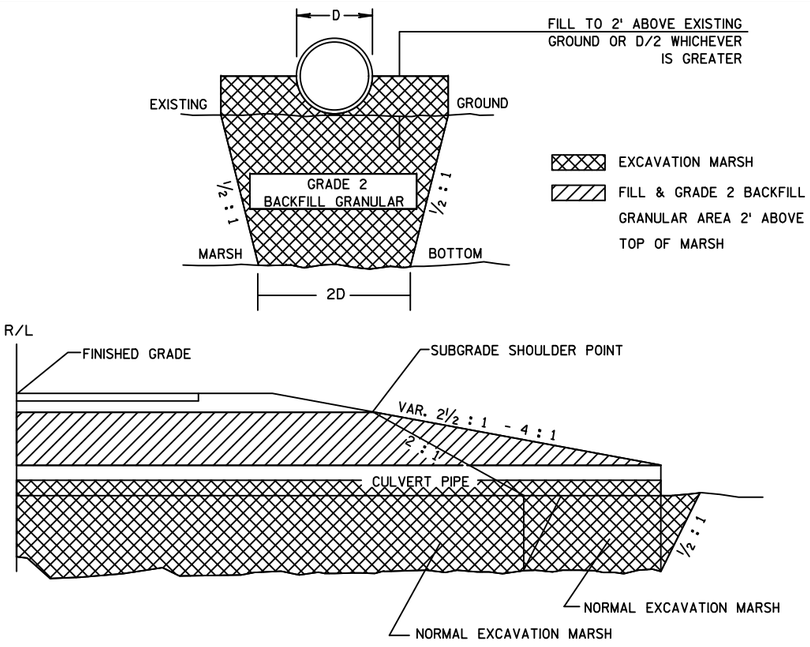
- CROSSWALK MARKINGS EXIST OR BEING PROVIDED
- LARGE RADII
- OFFSET LEFT TURNS WHERE STOP BAR FOR LEFT TURN IS SET BACK FROM THRU MOVEMENT.

2



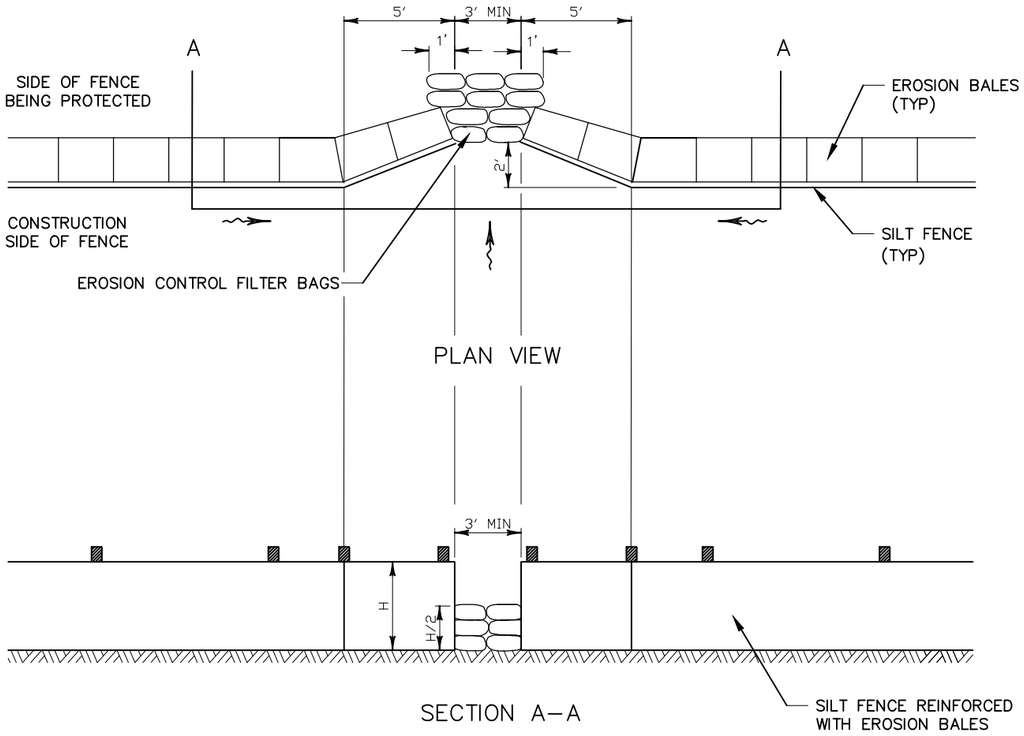
DEPTH OF MARSH "D" (FT)	VARIABLE BACKSLOPE (FT/FT)
0 TO 8	1 : 1
8 TO 12	1.5 : 1
12 +	2 : 1

EXCAVATION MARSH TYPICAL SECTION



EXCAVATION MARSH AT CULVERTS

2



NOTE: DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

SILT FENCE DRAINAGE OUTLET, EROSION CONTROL FILTER BAGS

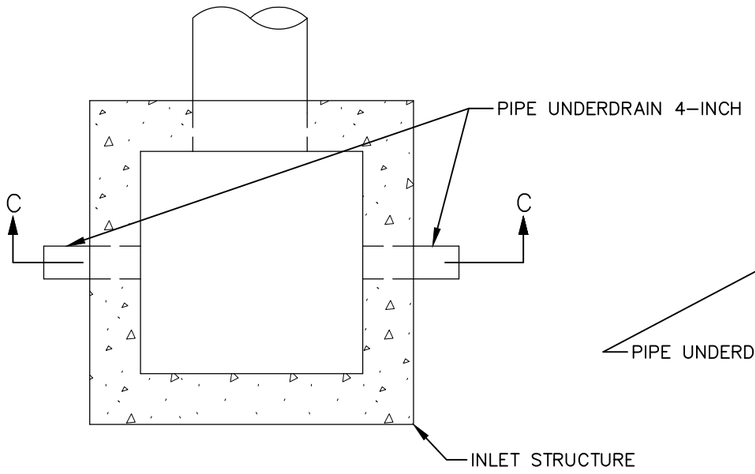
(FOR USE IN ENVIRONMENTALLY SENSITIVE AREAS)

2

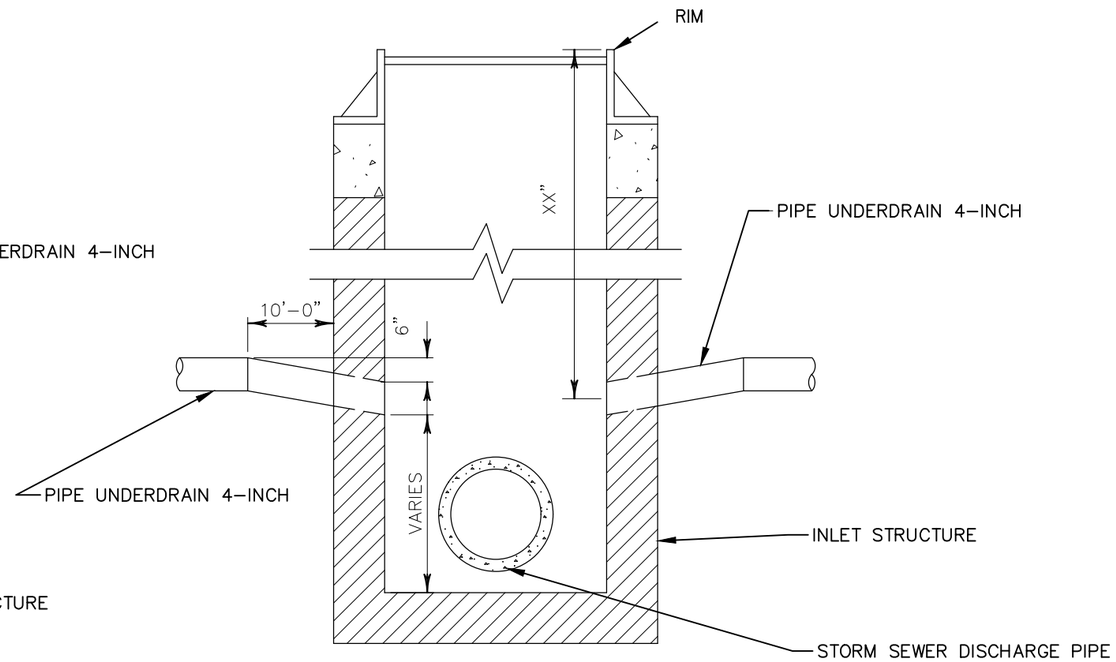
NOTES

1. PROVIDE 4" DIA. OPENINGS FOR UNDERDRAIN PIPE AS NECESSARY.

2. SEE TYPICAL SECTIONS AND MISCELLANEOUS QUANTITIES FOR PIPE UNDERDRAIN LOCATIONS.



PLAN VIEW



SECTION C–C

UNDERDRAIN OUTFALL AT INLET

LEGEND

XX REPAIR AREA
SEE MISCELLANEOUS QUANTITIES

NOTES

LOCATIONS OF PAVEMENT REPAIR AREAS
WILL BE DETERMINED BY THE ENGINEER

INSTALL PICNIC TABLE
CONCRETE SIDEWALK
SEE DETAILS

WELCOME SIGN

GRASS

PI 696'D'+21.67

PI 694'D'+21.67

PC 896'E'+77.5

898"E"

PI 898'E'+88.78

PC 693'D'+12.94

PC 692'D'+87.98

899"E"

PI 899'E'+84.08

BOULDERS

INSTALL PICNIC TABLE
CONCRETE SIDEWALK
SEE DETAILS

INSTALL BICYCLE RACK
CONCRETE SIDEWALK
SEE DETAIL

CAR PARKING

REPLACE
SIDEWALK

CURB
RAMP

CONC

HISTORICAL
MARKER

WATER FTN

PB

PLANTER

CONC

697"D"

696"D"

695"D"

694"D"

693"D"

692"D"

691"D"

REST AREA SIGN
& TIMBER EDGING
SEE DETAIL

698"D"

PLAZA

ISLAND

PI 988'D'+35.49

PC 988'D'+76.61

PI 691'D'+66.96

PC 691'D'+30.51

REMOVE
TREE

PLAY AREA
& EQUIPMENT
SEE DETAIL

989"D"

REST AREA BUILDING

PI 697'D'+90.00

PT 989'D'+45.23

88'

89"M"

PC 88'M'+23.25

PT 89'M'+33.61

DOCK

SAN

REMOVE & REPLACE
CONC. PAV'T 8-INCH
& CONC. SIDEWALK

PI 990'D'+30.66

PROJECT NO:3738-08-70	HWY:IH 94	COUNTY:KENOSHA	PARKING LOT JOINT REPAIRS	SHEET	E

FILE NAME : W:\03 PAVTROAD\RA-PROJECTS\KENOSHA-RA 26\RA 26 ACCESS REV\CAD\DESIGN\RA26_JT-REPAIRS.DWG
LAYOUT NAME - ****
PLOT DATE : 7/16/2015 3:00 PM PLOT BY : SCHMALE, RICHARD J PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

LEGEND

XX REPAIR AREA
SEE MISCELLANEOUS QUANTITIES

NOTES

LOCATIONS OF PAVEMENT REPAIR AREAS
WILL BE DETERMINED BY THE ENGINEER

INSTALL CONCRETE SIDEWALK, 5-INCH

REMOVE & REPLACE CONC. PAV'T 8-INCH & CONC. SIDEWALK

CURB RAMP

REDUCER & VALVE

CONCRETE PAVEMENT REPAIR SHES

MAINTENANCE BUILDING SEE DETAILS

ADJUST INLET COVER

SUGGESTED NATURAL GAS PLACEMENT

TRUCK PARKING

GRASS

CONC

BLDG

ENCL

PT 989'0'+46.23

PT 89'M'+33.61

PC 88'M'

PC 91'M'+17.03

PT 993'0'+24.16

PT 92'M'+97.27

PROJECT NO:3738-08-70	HWY:IH 94	COUNTY:KENOSHA	PARKING LOT JOINT REPAIRS	SHEET 26	E

FILE NAME : W:\03 PAVTROAD\RA-PROJECTS\KENOSHA-RA 26\RA 26 ACCESS REV\CAD\DESIGN\RA26_JT-REPAIRS.DWG
LAYOUT NAME - ****

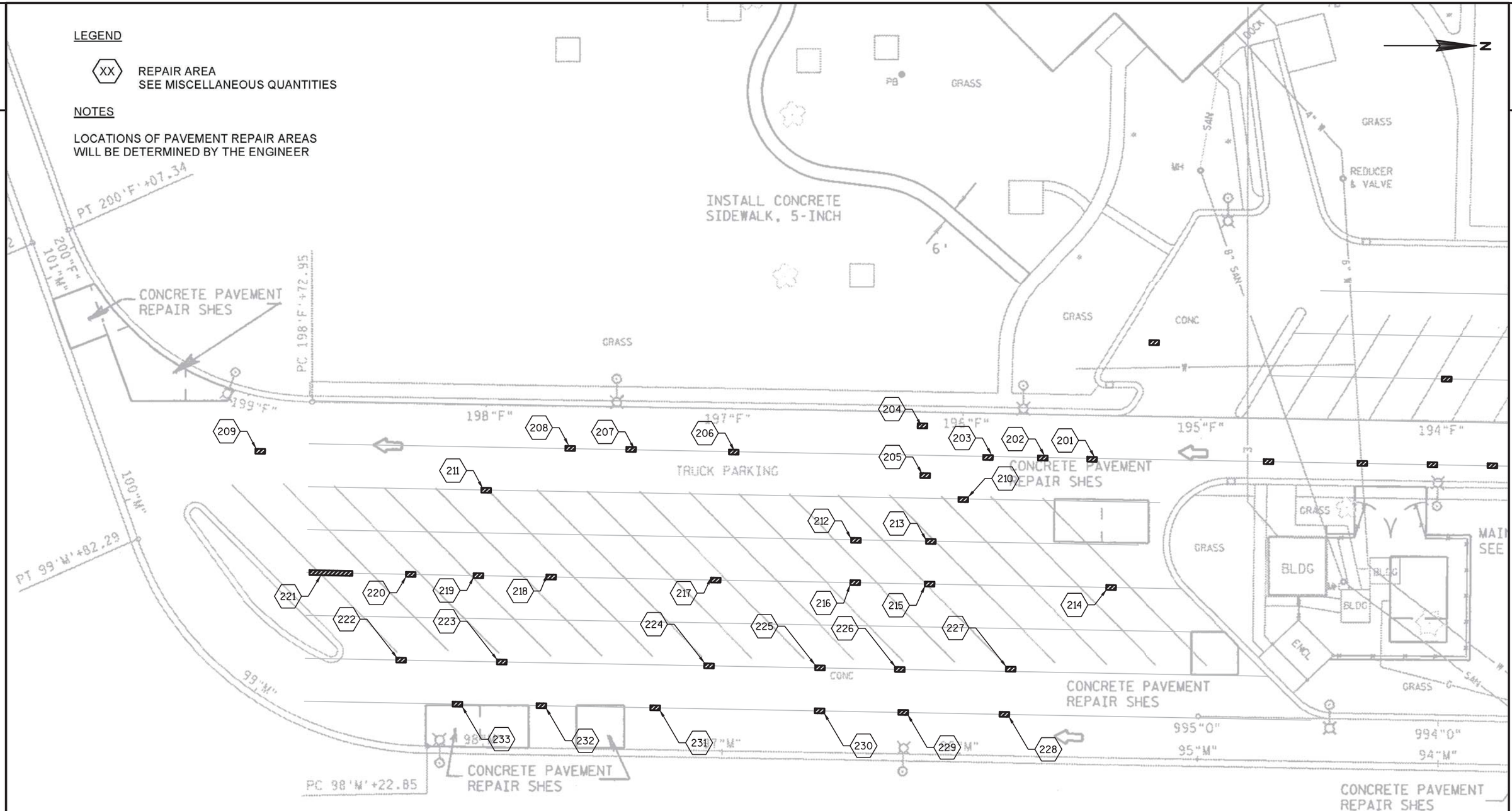
PLOT DATE : 7/16/2015 3:03 PM PLOT BY : SCHMALE, RICHARD J PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

(XX) REPAIR AREA
SEE MISCELLANEOUS QUANTITIES

NOTES

LOCATIONS OF PAVEMENT REPAIR AREAS
WILL BE DETERMINED BY THE ENGINEER



HWY: IH 94 | COUNTY: KENOSHA | KENOSHA TRAVEL INFO. CENTER

PLOT DATE : 21-MAY-2004 08:52 | PLOT BY : DOTRES | PLOT NAME : PLAN.dgn | ORG DATE : 2-24-2004 | Originator : BHO -

PROJECT NO:3738-08-70	HWY:IH 94	COUNTY:KENOSHA	PARKING LOT JOINT REPAIRS	SHEET 27	E

FILE NAME : W:\03 PAVTROAD\RA-PROJECTS\KENOSHA-RA 26\RA 26 ACCESS REV\CAD\DESIGN\RA26_JT-REPAIRS.DWG
LAYOUT NAME - ****

PLOT DATE : 7/16/2015 3:03 PM PLOT BY : SCHMALE, RICHARD J PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

NOTES:

EXACT LOCATION OF PULL BOXES, LOOP DETECTORS AND TRAFFIC COUNTER EQUIPMENT/PLATFORM SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

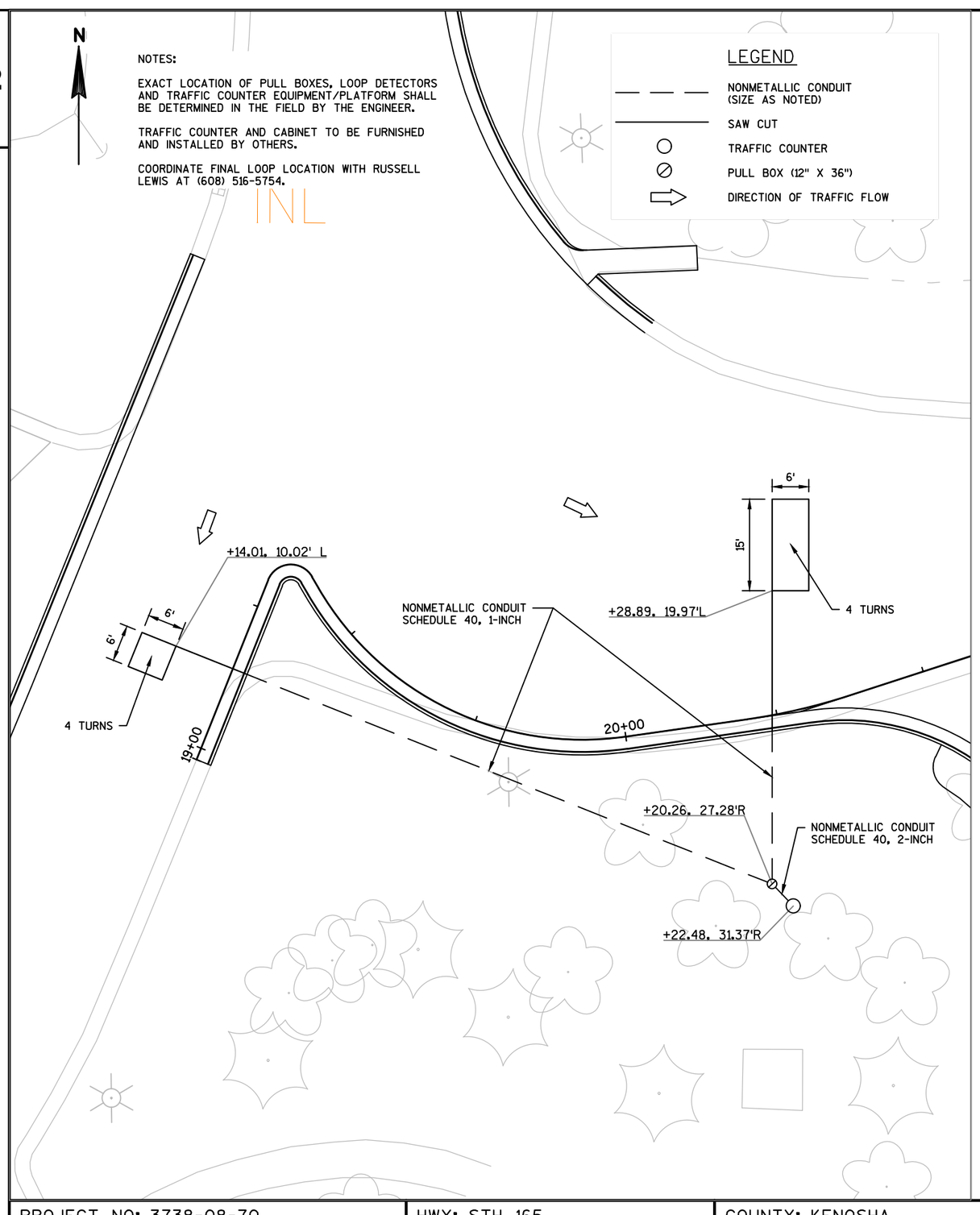
TRAFFIC COUNTER AND CABINET TO BE FURNISHED AND INSTALLED BY OTHERS.

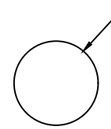
COORDINATE FINAL LOOP LOCATION WITH RUSSELL LEWIS AT (608) 516-5754.

INL

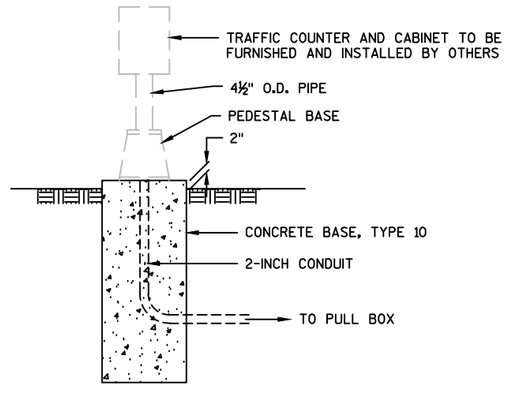
LEGEND

- NONMETALLIC CONDUIT (SIZE AS NOTED)
- SAW CUT
- TRAFFIC COUNTER
- PULL BOX (12" X 36")
- DIRECTION OF TRAFFIC FLOW





PLAN VIEW



TRAFFIC COUNTER DETAIL

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CONSTRUCTION DETAILS - TRAFFIC COUNTER & LOOP DETECTOR	SHEET 28	E

NOTE: SAW CUTTING TO BE DONE TO NEAREST JOINT FOLLOWING THE EXISTING JOINT PATTERN. EXACT LOCATION TO BE DETERMINED IN THE FIELD.

LEGEND
- TREE REMOVAL
- REMOVAL AREA
- XXXX SAWCUT

N

R/L E

104E

REMOVING INLETS STA. 102+32E, 5' RT

REMOVING INLETS STA. 102+30E, 5' LT

102E

REMOVING STORM SEWER (12-INCH) STA 102+30E, 3.90' LT TO STA 102+29E, 50.13' RT

ADJUSTING INLET COVERS 50.13' RT

REMOVING CONCRETE SIDEWALK

20C

23C

R/L C

REMOVING CONCRETE SIDEWALK REPAIR PICNIC TABLE, TYPE 1

REMOVING CONCRETE SIDEWALK

6B

92D

94D

96D

E FRONTAGE RD

E FRONTAGE RD

REMOVING CURB & GUTTER STA. 94+51D TO STA. 96+00D

REMOVING CURB & GUTTER STA. 94+50D TO STA. 96+00D

REMOVING CURB & GUTTER STA. 7+50B TO STA. 7+86B

ADJUSTING INLET COVERS

20A

R/L B

8B

ADJUSTING INLET COVERS STA. 8+59B, 94.98' LT

SALVAGE AND REINSTALL RAMP GATE ASSEMBLY & REMOVING CONCRETE BASES STA. 22+39A, 13.4' RT

22A

24A

REMOVING CONCRETE BASES STA. 22+25A, 18.5' RT

REMOVING CURB & GUTTER STA. 99+49D TO STA. 101+53D

26A

R/L A

28A

100D

R/L D

120TH AVE.

IH 94/USH 41

IH 94/USH 41

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	REMOVALS	SHEET 29	E

FILE NAME : N:\PDS\C3D\CAD\37380800\021101_RM.DWG
LAYOUT NAME - 021101_RM

PLOT DATE : 1/30/2018 9:18 AM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:100 FT

NOTE: SAW CUTTING TO BE DONE TO NEAREST JOINT FOLLOWING THE EXISTING JOINT PATTERN. EXACT LOCATION TO BE DETERMINED IN THE FIELD.

LEGEND

- TREE REMOVAL
- REMOVAL AREA
- XXXX SAWCUT

N

CONCRETE PAVEMENT REPLACEMENT SHES STA. 408+97J TO STA. 409+57J

REMOVING PAVEMENT STA. 405+98J TO STA. 411+77J

ADJUSTING INLET COVERS, STA. 91+30D, 11.14' RT

REMOVING ASPHALTIC SURFACE MILLING STA. 91+25D TO STA. 92+30D

REMOVING STORM SEWER (12-INCH) STA. 411+01J, 38.28' RT

REMOVING INLETS STA. 411+01J, 50.22' RT

REMOVING SURFACE DRAINS STA. 406+23.68J, 168.30' RT

ADJUSTING INLET COVERS STA. 91+74D, 43.51' RT

REMOVING INLETS STA. 105+19E, 135.56' RT

REMOVING PAVEMENT STA. 101+00E - STA. 405+52J

REMOVING SMALL PIPE CULVERTS STA. 404+26J

REMOVING PAVEMENT

REMOVING CURB & GUTTER STA. 19+00C TO STA. 23+22C

REMOVING PICNIC SHELTER REPAIR PICNIC TABLE, TYPE 1 STA. 22+05C, 35' RT

REMOVING INLETS STA. 23+02C, 0.50' RT

REMOVING CURB & GUTTER STA. 408+07J TO STA. 408+56J, 425' RT

REMOVING CONCRETE SIDEWALK STA. 408+09J TO STA. 408+54J, 425' RT

RECONSTRUCTING MANHOLES STA. 93+55D, 5.34' RT

REMOVING CURB & GUTTER STA. 93+32D TO STA. 93+75D

REMOVING STORM SEWER (12-INCH) STA. 94+54D, 17.86' RT TO STA. 94+54D, 1.01' RT

ADJUSTING INLET COVERS STA. 94+54D, 17.86' RT

REMOVING INLETS STA. 94+54D, 1' RT

STH 165

165/104th ST

STH 165/104th ST

E FRONTAGE RD

IH 94/USH 41

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	REMOVALS	SHEET 30 E

2

LEGEND

- (CP29) CONCRETE PAVEMENT 8-INCH
- (CP30) CONCRETE PAVEMENT 10-INCH (DOWELED)
- (CP31) CONCRETE ROUNDABOUT TRUCK APRON 8-INCH
- (PV03) ASPHALTIC SURFACE TEMPORARY, 5-INCH
- (PV11) CONCRETE SURFACE DRAINS
- (PV26) ASPHALTIC SURFACE, 1 1/2-INCH
- (PV27) CONCRETE PAVEMENT CONTINUOUS DIAMOND GRINDING
- (CG01) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE A
- (CG04) CURB RAMP TYPE 3
- (CG06) CONCRETE CURB AND GUTTER 30-INCH TYPE A
- (CG30) CURB RAMP TYPE 7A
- (CM05) CONCRETE SIDEWALK 5-INCH
- (CM08) CONCRETE SIDEWALK 6-INCH
- (LS01) SOD LAWN
- (SW02) SAWING CONCRETE
- ● PROPOSED MANHOLE
- ■ PROPOSED INLET
- ◄—— PROPOSED STORM SEWER PIPE
- ▷—— PROPOSED STORM SEWER OUTFALL

NOTE:
RADII AND OFFSETS MEASURED TO THE CURB AND GUTTER FLANGE, UNLESS OTHERWISE NOTED.

Radius Table							
Point	Station	Offset	Radius	PC		PT	
				Station	Offset	Station	Offset
1	22+00.41A	18.94' RT	4.00'	21+97.77A	21.94' RT	22+00.32A	14.94' RT
2	27+21.32A	280.13' LT	560.00'	22+03.27A	14.87' RT	22+44.16A	14.85' RT
3	22+44.09A	18.85' RT	4.00'	22+44.19A	14.85' RT	22+47.76A	19.79' RT
4	22+49.49A	4.00' LT	4.00'	22+49.49A	0.00' LT	22+53.37A	3.05' LT
5	22+65.46A	19.42' RT	4.00'	22+63.14A	18.07' RT	22+65.45A	15.42' RT
6	22+64.89A	24.51' LT	40.00'	22+65.46A	15.42' RT	22+96.85A	12.31' RT
7	24+34.99A	116.98' RT	105.00'	23+94.12A	12.00' RT	24+35.00A	11.98' RT
8	22+89.42A	9.93' LT	4.00'	22+86.67A	13.57' LT	22+88.59A	5.98' LT
9	23+08.68A	37.00' LT	34.00'	22+88.86A	5.95' LT	23+08.68A	3.00' LT
10	24+34.11A	111.98' RT	115.00'	23+95.00A	3.00' LT	24+34.12A	3.02' LT
11	24+50.42A	28.16 LT	4.00'	24+54.25A	29.29' LT	25+48.99A	31.89' LT
12	25+02.34A	43.01' LT	50.00'	24+63.23A	11.86' LT	24+54.39A	28.83' LT
13	24+61.97A	7.02' LT	4.00'	24+61.97A	3.02' LT	24+65.10A	9.51' LT
14	7+77.74B	47.54' LT	90.00'	7+77.58B	137.54' LT	8+41.11B	111.45' LT
15	9+33.13B	73.86' LT	28.65'	9+23.19B	46.99' LT	9+54.94B	55.29' LT
16	25+59.68A	91.40' LT	60.00'	25+21.49A	45.13' LT	25+51.48A	31.95' LT
17	9+35.59B	74.10' LT	40.00'	9+07.43B	45.69' LT	25+34.30A	25.83' LT

N

STA. 21+16.11A, 0.00' LT

STA. 21+98.13A, 22.26' RT

STA. 22+47.76A, 19.79' RT

STA. 22+63.14A, 18.07' RT

STA. 23+59.28A, 32.19' LT

STA. 9+05.99B, 24.54' LT

STA. 9+09.54B, 52.04' LT

STA. 9+53.05B, 24.55' LT

STA. 7+50.01B 137.49' LT

STA. 26+49.68A, 11.98' LT

STA. 26+88.56A, 16.99' LT

R/L A

R/L B

8B TRUCK PARKING

20A

21A

22A

23A

24A

25A

26A

27A

WELCOME CENTER EXIT

EXISTING INLET TO RAMAIN

REINSTALL SALVAGED RAMP GATE ASSEMBLY STA. 24+39.90A, 17.2' LT

WETLAND BOUNDARY

SW02 CG06 CG01 CP29 CP31 PV11 SI MH INL SS

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN DETAIL	SHEET 32	E

FILE NAME : N:\PDS\C3D\CAD\37380800\021201_PD.DWG
LAYOUT NAME - 021201_PD

PLOT DATE : 1/30/2018 7:34 AM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

Radius Table							
Point	Station	Offset	Radius	PC		PT	
				Station	Offset	Station	Offset
18	27+77.13A	52.00' LT	40.00'	27+77.13A	12.00' LT	99+46.80D	21.98' RT
19	27+67.15A	55.00' RT	40.00'	27+67.15A	15.00' RT	100+53.62D	34.06' RT

N

CANOPY

SIGN

CANOPY

R/L D

120TH AVE.

96D 97D 98D 99D 100D 101D

INL

STA. 99+46.80D, 21.98' RT

CG01

SW02

CG01

SW02

STA. 101+53.61D, 22.09' RT

28A

CP29

EXISTING 60-INCH CULVERT PIPE & 2-45-INCH CULVERT PIPES TO REMAIN

18

PV11

PV11

19

STA. 27+70.50A, 12.00' LT

STA. 27+71.28A, 15.21' RT

R/L A

12' 12'

SI

SI

CG01

27A

CG06

WELCOME CENTER EXIT

WETLAND BOUNDARY

SI

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN DETAIL	SHEET 33	E

2

N

IH94 EXIT RAMP

STA. 101+00.00E,
14.74' LT

STA. 100+00.00E,
00.00' RT

STA. 102+15.90E,
8.77' LT

STA. 102+73.22E,
0.00' RT

STA. 102+75.00E,
0.00' RT

R/L E

RAMP EDGE

100E

101E

102E

103E

104E

105E

CP30

SW02

CG06

SI

WETLAND
BOUNDARY

CAR PARKING

PLEASANT PRAIRIE
WELCOME CENTER

STA. 104+09.17E,
225.96' RT

STA. 104+23.20E,
232.61' RT

STA. 104+69.43E,
244.75' RT

STA. 105+78.37E,
261.36' RT

19C

MH

INL

SIGN

W

FLAG

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN DETAIL	SHEET 34	E

Radius Table							
Point	Station	Offset	Radius	PC		PT	
				Station	Offset	Station	Offset
20	406+78.98J	115.41' RT	80.00'	406+32.90J	180.80' RT	405+99.01J	117.57' RT
21	406+07.47J	60.28' RT	10.00'	405+97.47J	60.55' RT	406+07.47J	50.28' RT
22	19+29.65C	4.00' RT	4.00'	19+29.65C	0.00' RT	19+38.58C	0.00' RT
23	20+00.00C	50.00' LT	50.00'	19+40.75C	0.00' RT	20+00.00C	0.00' RT
24	20+32.37C	40.03' RT	40.00'	20+33.53C	0.07' RT	20+65.19C	50.27' RT
25	22+50.45C	23.42' RT	40.00'	22+51.33C	63.41' RT	22+85.54C	42.61' RT
26	23+11.75C	15.52' RT	10.00'	23+02.98C	10.73' RT	23+20.89C	11.47' RT

2

2

N

409J
SW02
12'
CONCRETE PAVEMENT REPLACEMENT SHES
SIGN
STA. 408+97.34J, 26.28' RT
CG06
R/L J
408J
CP30
SI
STH 165
407J
MH
MH
406J
INL
12'
SW02
PV11
SW02
STA. 20+11.47C, 66.04' LT
CG06
21
SW02
STA. 406+00.00J, 38.28' RT
20
+28.89C, 20' LT
SEE SDD 'LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT'
23
+00.00C
50' LT
50' R
+29.65C
4' RT
4' R
SI
22
SW02
STA. 105+78.37E, 261.36' RT
SIGN
MH
SW02
CG06
STA. 18+97.98C, 0.00' LT
+14.01C, 10' LT
SEE SDD 'LOOP DETECTOR INSTALLED IN EXISTING CONCRETE PAVEMENT'
SW02
R/L C
22C
RV EXPANSION
23C
INL
CP29
CG06
+53.71C
16.24' RT
4' R
24
+20.27C, 27' RT
SEE SDD 'CONCRETE CONTROL CABINET BASES'
25
+75.12C,
60.46' RT
4' R
CG30
CM05
LS01
6.5
12.5'
+50.46C,
77.93' RT
6' R
CM08
+24.46C, 76.05' RT
SEE REPAIR PICNIC TABLE, TYPE 1
26
SW02
STA. 23+25.99C, 21.28' RT
SI
LS01
5.5'
STA. 22+74.64C, 72.26' RT
6' R
SW02
STA. 22+68.59C, 81.76' RT
STA. 22+56.46C, 87.29' RT
INL
SS
SS
SS
CP29
SW02
R/L B
6B
TRUCK PARKING
CM08
STA. 6+15B, 35' RT
INSTALL 'REST AREA PICNIC SHELTERS'
MH
W
A/C
W
A/C
W
W
W
W
A/C

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN DETAIL	SHEET 35	E

Radius Table							
Point	Station	Offset	Radius	PC		PT	
				Station	Offset	Station	Offset
27	411+10.38J	120.28' RT	70.00'	411+10.38J	50.28' RT	91+71.82D	41.66' RT

120TH AVE.

STH 165

91D 92D 93D 94D 95D 96D

412J 411J 410J 409J

R/L D

R/L J

RECONSTRUCTING MANHOLES

9.8'

STA. 91+25.00D, 9.61' RT

STA. 92+30.00D, 9.81' RT

STA. 92+29.99D, 20.25' RT

STA. 92+35.30D, 41.81' RT

STA. 90+77.32J, 38.28' RT

STA. 94+98.78D, 9.42' RT

STA. 95+98.65D, 0.04' LT

STA. 96+00.00D, 0.04' LT

STA. 96+00.11C, 12.75' RT

STA. 94+51.47D, 19.40' RT

STA. 409+56.81J, 26.28' RT

CONNECT PIPE UNDERDRAIN 4-INCH TO EXISTING INLET

CONNECT PIPE UNDERDRAIN 4-INCH TO PROPOSED INLET

27

SI

12'

PV26 SW02 LS01 CG06 CP30

INL MH SIGN SS

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN DETAIL	SHEET 36	E

2

2

CP29

CG30

CG06

LS01

CM05

LS01

SW02

SW02

R/L C

20C

SW02

STA. 19+11.48C,
66.04' LT

SW02

CG06

CG06

20C

STA. 104+69.43E,
244.75' RT

SW02

STA. 104+23.20E,
232.61' RT

STA. 104+09.17E,
225.96' RT

PV27

PV27

PV27

CG04

SW02

R/L A

20A

CAR PARKING

A/C

A/C

A/C

MH

MH

MH

W

W

W

W

W

W

INL

INL

INL

INL

SIGN

SIGN

SIGN

FLAG

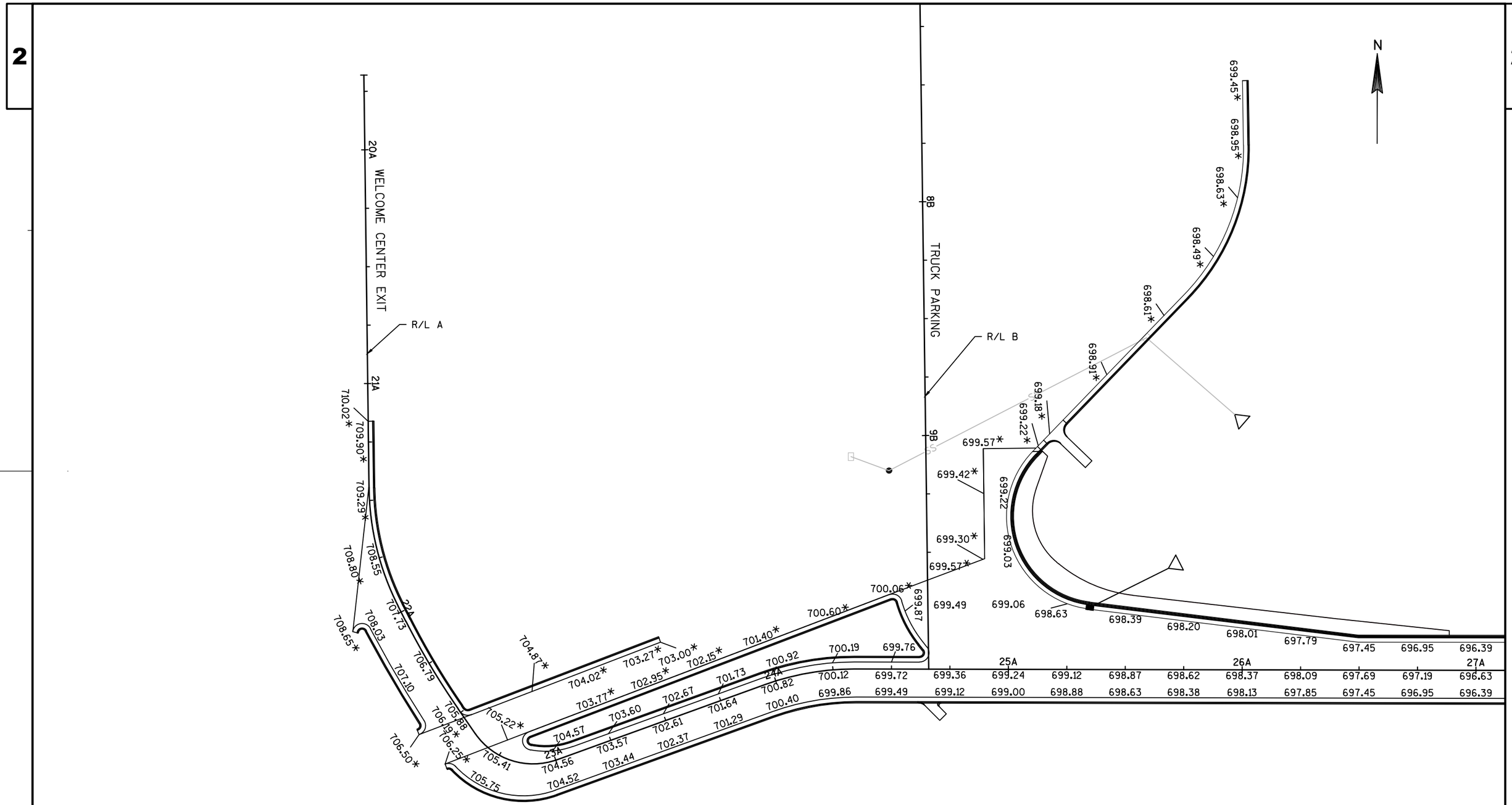
FLAG

N

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN DETAIL	SHEET 37	E

FILE NAME : N:\PDS\C3D\CAD\37380800\021201_PD.DWG
LAYOUT NAME - 021208_PD

PLOT DATE : 1/30/2018 7:38 AM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:40 FT



NOTE:
* - MATCH EXISTING GRADE

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PAVING GRADES	SHEET 38	E

2

N

8B

9B

98D

99D

100D

TRUCK PARKING

120TH AVE.

R/L B

R/L D

R/L A

WELCOME CENTER EXIT

698.63*
698.49*
698.61*
698.91*
699.18*
699.22*
699.57*
699.42*
699.22
699.30*
699.57*
699.03
700.06*
699.87
699.49
699.06
698.63
698.39
698.20
698.01
697.79
697.45
696.95
696.39
695.82
695.26
694.70
693.44
693.42*
693.79
700.19
699.76

25A	26A	27A	28A	28B
699.72	699.36	699.24	699.12	698.87	698.62	698.37	698.09	697.69	697.19	696.63	696.06	695.50	694.94	694.37	693.97*
699.49	699.12	699.00	698.88	698.63	698.38	698.13	697.85	697.45	696.95	696.39	695.82	695.55	695.23	694.81	694.83	694.95	695.03	695.08*	696.69	698.45	698.58*

NOTE:
* - MATCH EXISTING GRADE

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PAVING GRADES	SHEET 39	E

2

N

699.45* 698.95* 698.63* 698.49*

SS

R/L B

TRUCK PARKING

5B 6B 7B 8B

708.81* 708.70*

709.55* 709.37*

R/L C

RV EXPANSION

22C 23C

709.69* 709.71*

715.02* 714.32* 713.37* 712.42* 711.47* 710.62* 709.81*

715.88* 716.68* 717.32* 717.75* 718.10* 718.14* 718.45*

710.15 709.80

21C 20C

715.74 714.58 713.65 712.73 711.74 717.02

717.79*

20A

NOTE:
* - MATCH EXISTING GRADE

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PAVING GRADES	SHEET 40	E

2

N

120TH AVE.

R/L D

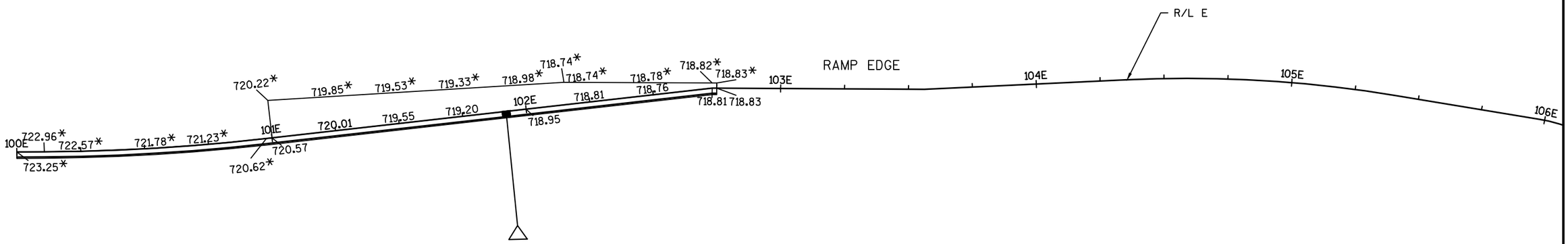
92D	93D	94D	95D	96D	97D	98D
697.68*	698.27*	698.83*	699.19*	698.79*		
697.79*	698.41*	699.09*	699.01*			
697.92*	698.53*	699.13*				
697.47	698.15*	698.56*	699.31*	698.92	698.75	698.49*
697.58	697.89	698.36	698.98	699.04		
697.72	698.07	698.64				
	698.21	698.89				
	698.33	698.94				
697.67*	698.07*	698.79*	699.17*	699.13*	699.00*	698.79*
697.77*	698.28*	699.00*				698.49*
697.90*	698.45*	699.13*				
	698.53*					
	698.54*					

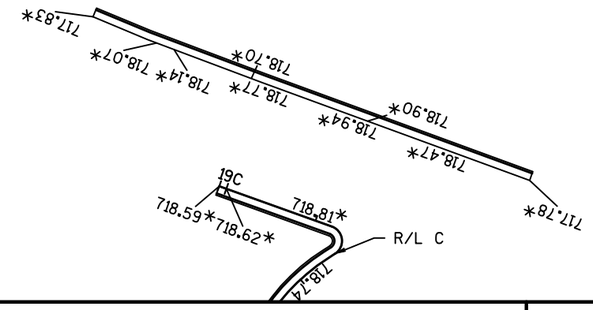
697.01 697.25 697.31*

NOTE:
* - MATCH EXISTING GRADE

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PAVING GRADES	SHEET 41	E

2





NOTE:
* - MATCH EXISTING GRADE

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PAVING GRADES	SHEET 42	E

2

N

STH 165

406J 407J 408J 409J 410J 411J

R/L J

709.59* 707.15*

721.61* 720.93* 720.15* 719.31* 718.28* 717.28* 716.21* 715.11* 714.00* 712.90* 711.81* 710.67* 709.52* 708.38* 707.24* 706.16* 705.01* 703.86* 702.78* 701.72* 700.75* 699.81* 698.96* 698.18*

720.60 720.32 719.73 719.07 718.04 717.04 715.97 714.87 713.76 712.66 711.57 710.43 709.28 708.14 707.00 705.92 704.77 703.62 702.54 701.48 700.51

720.58* 720.53* 720.06* 719.38* 719.36* 718.50* 718.02* 717.79*

700.11 699.58 698.60 698.18 697.20 696.69 696.75 697.01 697.25 697.31*

718.81* 718.14* 718.59* 718.62* 718.59* 718.45* 20C 718.14* 718.10* 717.75* 717.32* 21C 716.89* 715.88* R/L C 715.02* 714.32*

RV EXPANSION

717.02 715.74

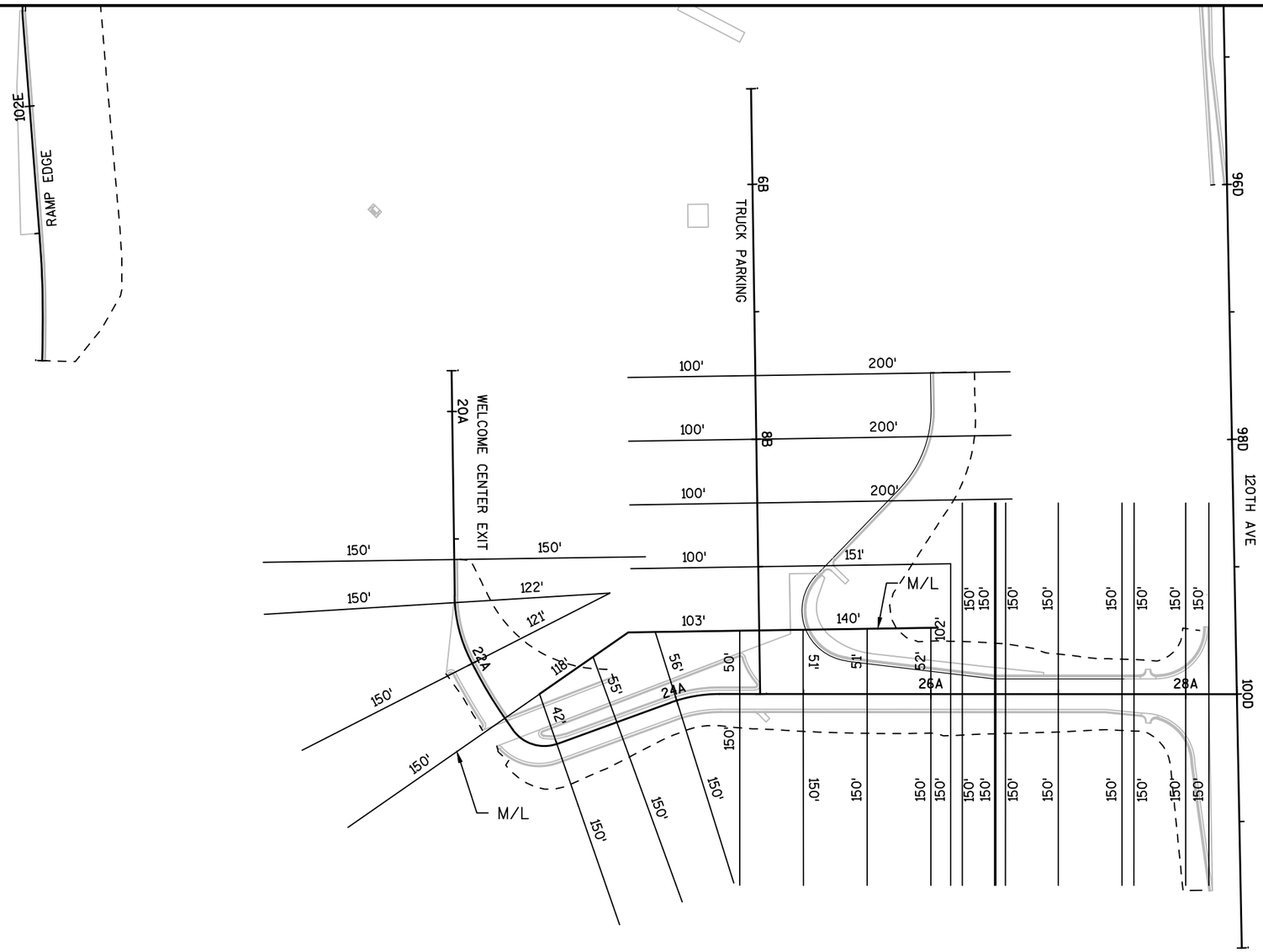
NOTE:
* - MATCH EXISTING GRADE

PROJECT NO:3738-08-70	HWY: STH 165	COUNTY:KENOSHA	PAVING GRADES	SHEET 43	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\021201_PD.DWG
LAYOUT NAME - 021206

PLOT DATE : 2/1/2018 10:24 AM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:40 FT

2



N

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS-SECTION MATCHLINES	SHEET 44	E

2

2

N

400J 402J 404J 406J STH 165 408J 410J 412J 414J

108E

106E

104E

102E

RAMP EDGE

M/L

10'
6'
22'
13'
18'
15'
20C
13'
18'
21C
32'
32'
M/L
150'
35'
37'
41'
48'
62'
122'
22C
150'
150'
150'
150'
150'
23C
RV EXPANSION

6B
TRUCK PARKING

92D

120TH AVE

94D

96D

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS-SECTION MATCHLINES	SHEET 45	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\021701_XM.DWG
LAYOUT NAME - 021701_XM - PLAN 1 IN 100 FT (2)

PLOT DATE : 1/18/2018 12:43 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

EROSION LEGEND

- C — TYPE C INLET PROTECTION
- D — TYPE D INLET PROTECTION
- CULVERT PIPE CHECKS
- SILT FENCE DRAINAGE OUTLET
- TEMPORARY DITCH CHECKS
- SILT FENCE
- SEED & MULCH
- SOD
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP MEDIUM
- FLOW ARROW

N

INL

MH

20A

21A

22A

23A

24A

25A

26A

7B

8B

9B

R/L A

R/L B

SLOPE INTERCEPT

SLOPE INTERCEPT

SLOPE INTERCEPT

SLOPE INTERCEPT

TRUCK PARKING

WELCOME CENTER EXIT

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	EROSION CONTROL	SHEET 46	E

FILE NAME : N:\PDS\C3D\CAD\37380800\022001_EC.DWG
LAYOUT NAME - 022001_EC

PLOT DATE : 1/11/2018 1:11 PM PLOT BY : REIMBOLD, CASANDRA JPLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

CANOPY

CANOPY

R/L D

97D

98D

99D

100D

101D

120TH AVE.

28A

WELCOME CENTER EXIT

27A

R/L A

SLOPE INTERCEPT

SLOPE INTERCEPT

SLOPE INTERCEPT

INL

INI

EROSION LEGEND

- C — TYPE C INLET PROTECTION
- D — TYPE D INLET PROTECTION
- CULVERT PIPE CHECKS
- SILT FENCE DRAINAGE OUTLET
- TEMPORARY DITCH CHECKS
- SILT FENCE
- SEED & MULCH
- SOD
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP MEDIUM
- FLOW ARROW

PROJECT NO:3738-08-70	HWY:IH 94	COUNTY:KENOSHA	EROSION CONTROL	SHEET 47	E

FILE NAME : N:\PDS\C3D\CAD\37380800\022001_EC.DWG
LAYOUT NAME - 022002_EC

PLOT DATE : 1/11/2018 1:12 PM PLOT BY : REIMBOLD, CASANDRA JPLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

EROSION LEGEND

- TYPE C INLET PROTECTION
- TYPE D INLET PROTECTION
- CULVERT PIPE CHECKS
- SILT FENCE DRAINAGE OUTLET
- TEMPORARY DITCH CHECKS
- SILT FENCE
- SEED & MULCH
- SOD
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP MEDIUM
- FLOW ARROW

IH 94 ENTRANCE RAMP

IH94 EXIT RAMP

DAM

R/L E

RAMP EDGE

101E

102E

SLOPE INTERCEPT

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	EROSION CONTROL	SHEET 48 E

FILE NAME : N:\PDS\C3D\CAD\37380800\022001_EC.DWG
LAYOUT NAME - 022002A_EC

PLOT DATE : 1/11/2018 1:13 PM PLOT BY : REIMBOLD, CASANDRA JPLOT NAME : PLOT SCALE : 1 IN:40 FT

EROSION LEGEND

- TYPE C INLET PROTECTION
- TYPE D INLET PROTECTION
- CULVERT PIPE CHECKS
- SILT FENCE DRAINAGE OUTLET
- TEMPORARY DITCH CHECKS
- SILT FENCE
- SEED & MULCH
- SOD
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP MEDIUM
- FLOW ARROW

N

IH94 EXIT RAMP

R/L E

101E 102E 103E 104E RAMP EDGE 105E 106E

SLOPE INTERCEPT

SLOPE INTERCEPT

CAR PARKING

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	EROSION CONTROL	SHEET 49	E

FILE NAME : N:\PDS\C3D\CAD\37380800\022001_EC.DWG
LAYOUT NAME - 022003_EC

PLOT DATE : 1/11/2018 1:14 PM PLOT BY : REIMBOLD, CASANDRA JPLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

409J

408J

407J

406J

MH

SIGN

INL

C

R/L J

R/L B

6B

R/L C

22C

RV EXPANSION

23C

21C

20C

STH 165

SLOPE INTERCEPT

A/C

W

SS

EROSION LEGEND

- TYPE C INLET PROTECTION
- TYPE D INLET PROTECTION
- CULVERT PIPE CHECKS
- SILT FENCE DRAINAGE OUTLET
- TEMPORARY DITCH CHECKS
- SILT FENCE
- SEED & MULCH
- SOD
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP MEDIUM
- FLOW ARROW

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	EROSION CONTROL	SHEET 50	E

FILE NAME : N:\PDS\C3D\CAD\37380800\022001_EC.DWG
LAYOUT NAME - 022004_EC

PLOT DATE : 1/11/2018 1:15 PM PLOT BY : REIMBOLD, CASANDRA JPLOT NAME :

PLOT SCALE : 1 IN:40 FT

2

R/L D

120TH AVE.

91D 92D 93D 94D 95D 96D

412J 411J 410J

STH 165

SLOPE INTERCEPT

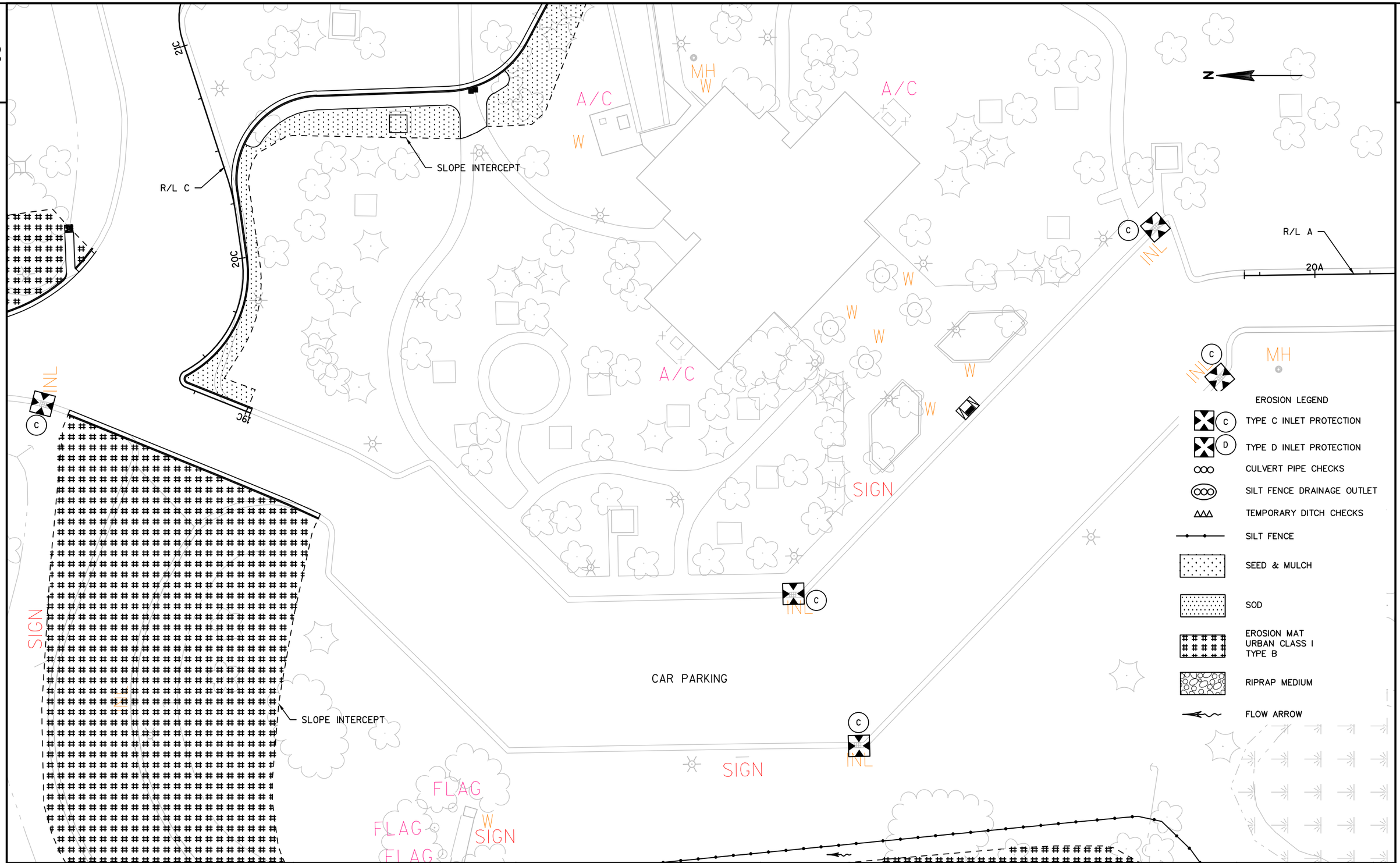
MH INL SIGN C

EROSION LEGEND

- TYPE C INLET PROTECTION
- TYPE D INLET PROTECTION
- CULVERT PIPE CHECKS
- SILT FENCE DRAINAGE OUTLET
- TEMPORARY DITCH CHECKS
- SILT FENCE
- SEED & MULCH
- SOD
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP MEDIUM
- FLOW ARROW

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	EROSION CONTROL	SHEET 51	E

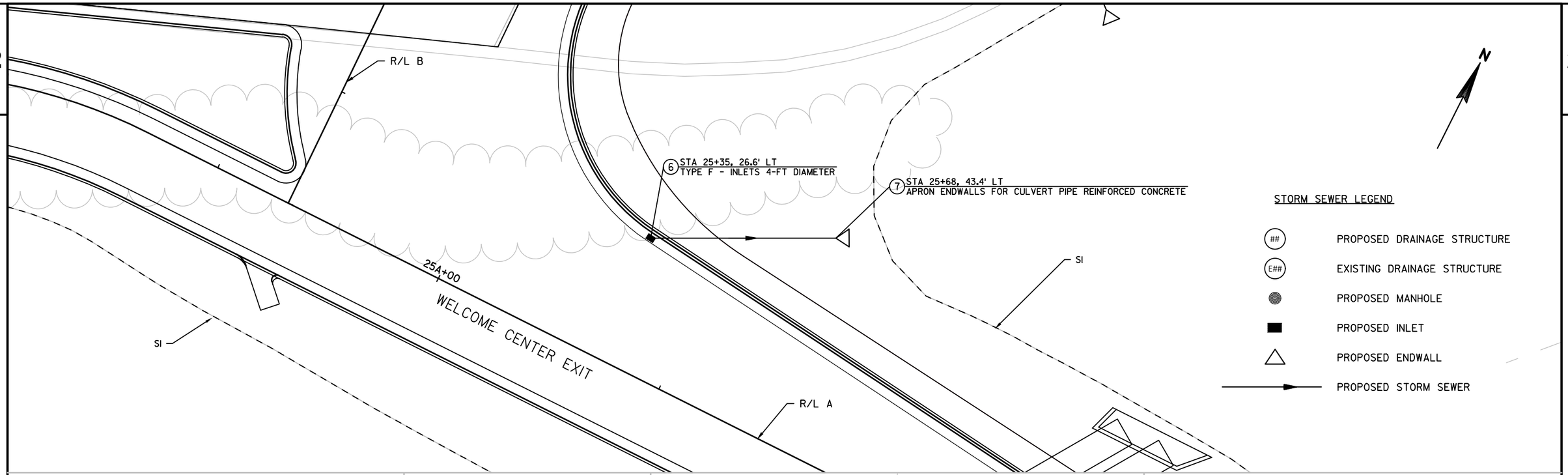
2

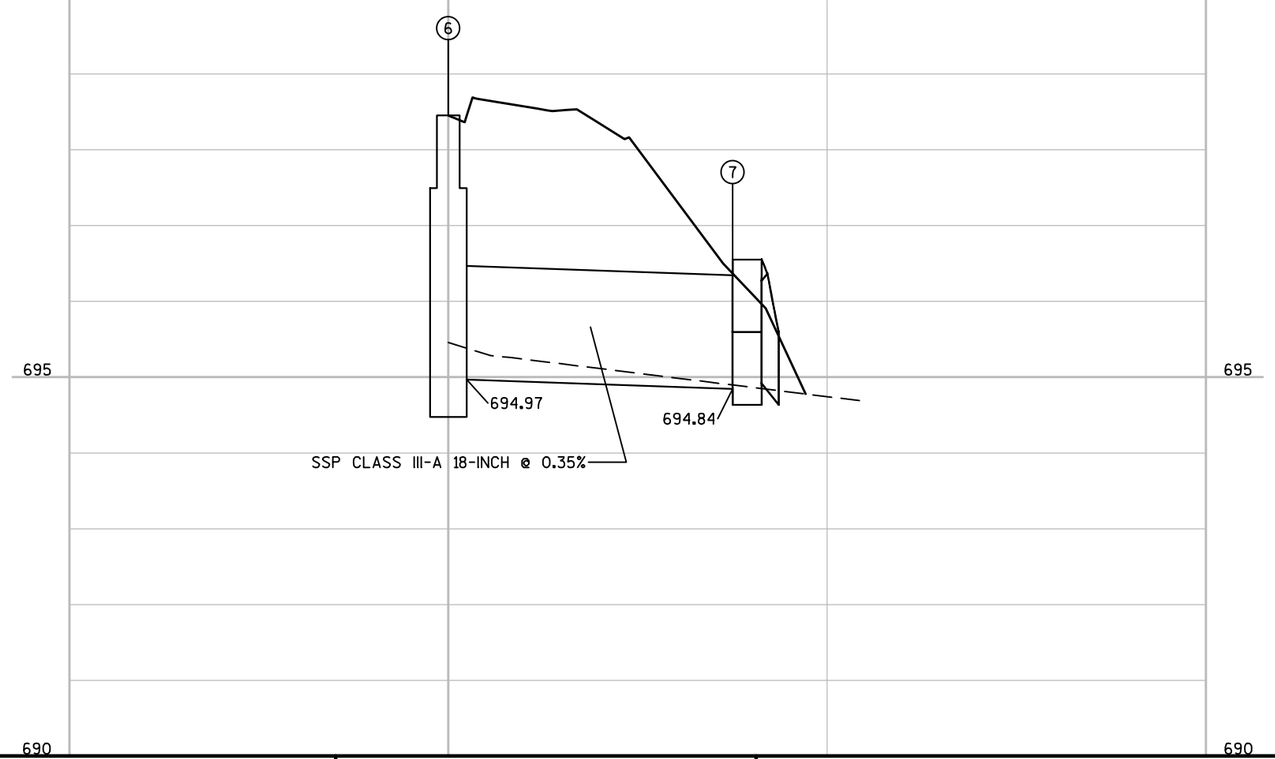


PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	EROSION CONTROL	SHEET 52	E

FILE NAME : N:\PDS\C3D\CAD\37380800\022001_EC.DWG
LAYOUT NAME - 022006_EC
PLOT DATE : 1/11/2018 1:16 PM
PLOT BY : REIMBOLD, CASANDRA JPLOT NAME :
PLOT SCALE : 1 IN:40 FT

2





PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	STORM SEWER	SHEET 53	E

2

RV EXPANSION

R/L C

SI

23+00

10 STA 23+02, 17.0' RT
TYPE H - INLETS 4-FT DIAMETER

11 STA 23+03, 1.4' RT
TYPE C - MANHOLES 4-FT DIAMETER

124°54'12"

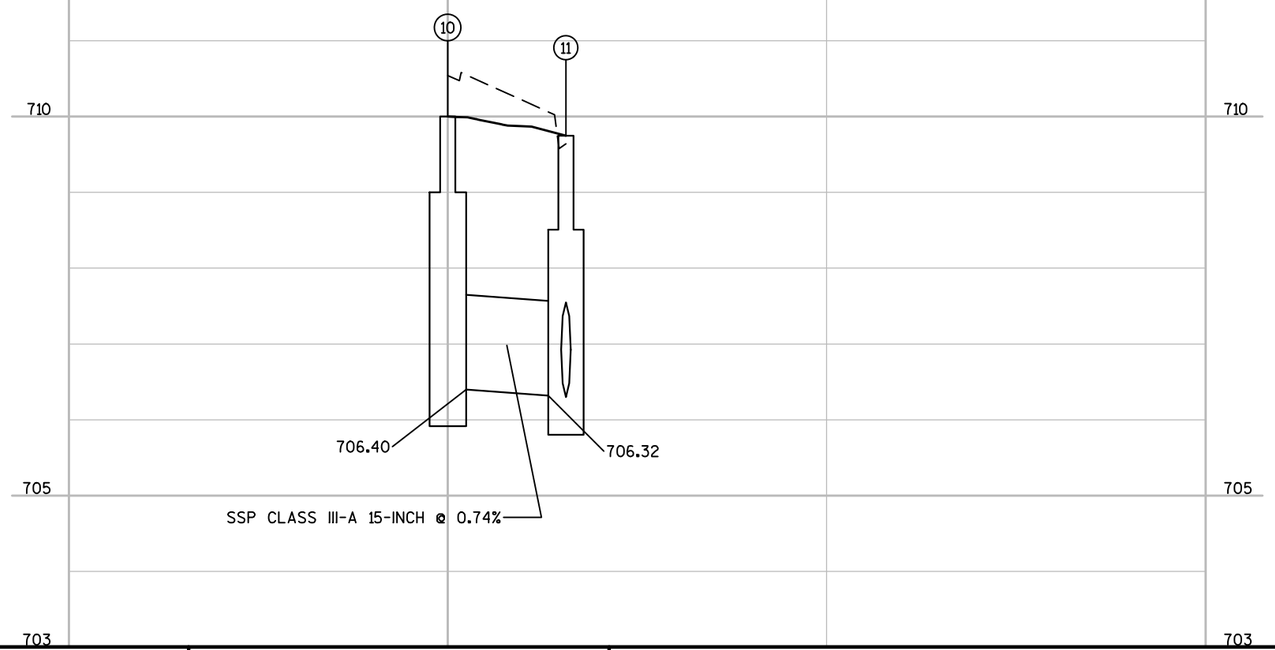
W

A/C

N

STORM SEWER LEGEND

##	PROPOSED DRAINAGE STRUCTURE
E##	EXISTING DRAINAGE STRUCTURE
	PROPOSED MANHOLE
	PROPOSED INLET
	PROPOSED ENDWALL
	PROPOSED STORM SEWER



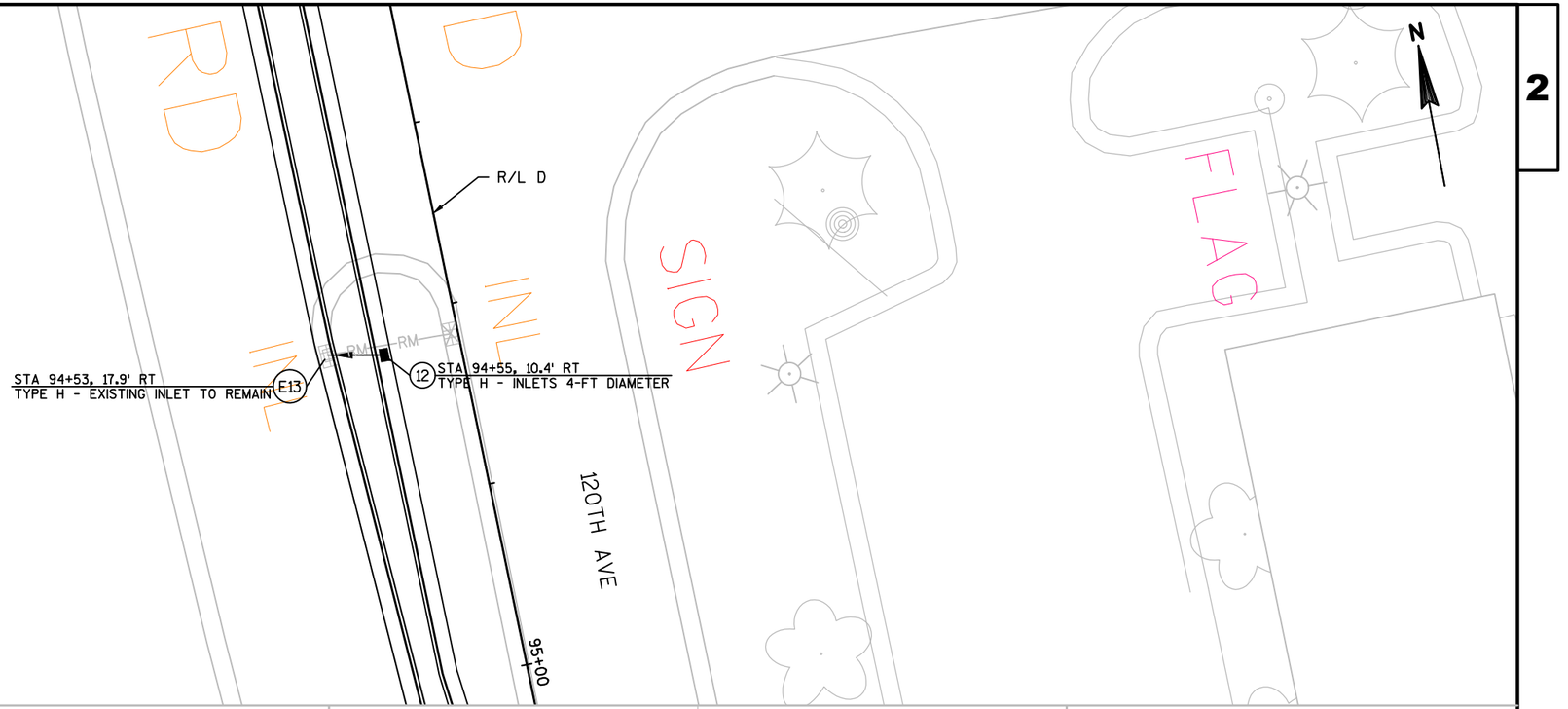
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	STORM SEWER	SHEET 54	E

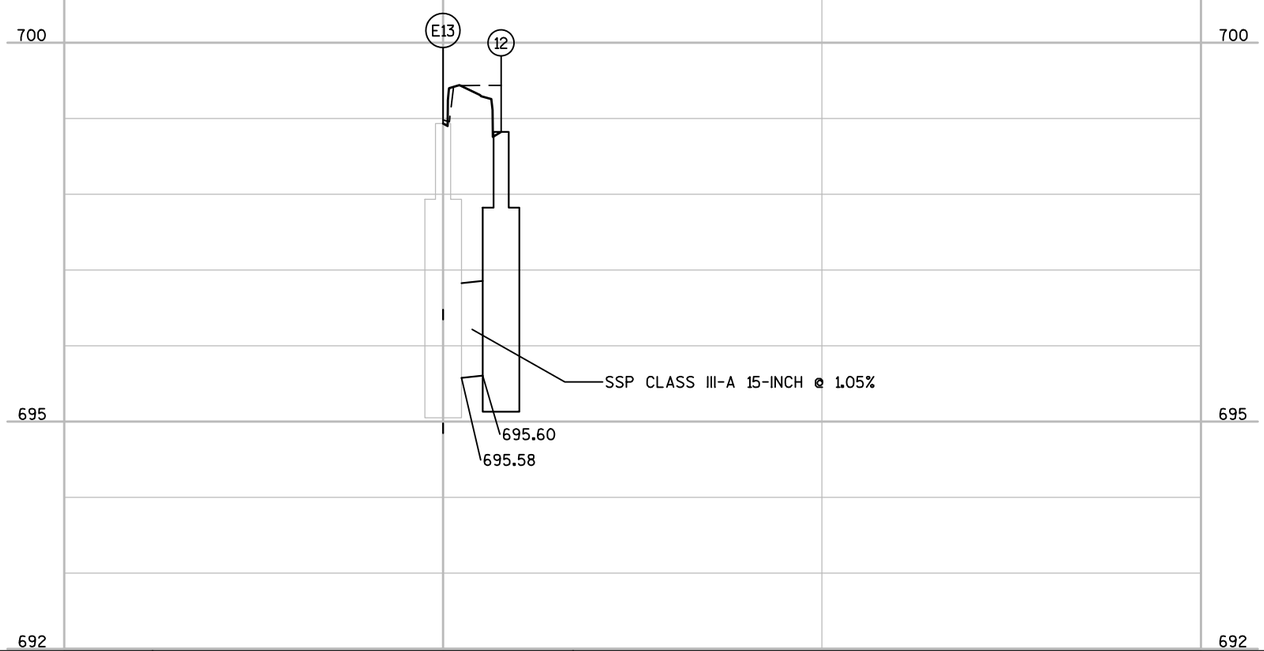
2

2

STORM SEWER LEGEND

- ## — PROPOSED DRAINAGE STRUCTURE
- E## — EXISTING DRAINAGE STRUCTURE
- PROPOSED MANHOLE
- PROPOSED INLET
- PROPOSED ENDWALL
- PROPOSED STORM SEWER





PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	STORM SEWER	SHEET 55 E

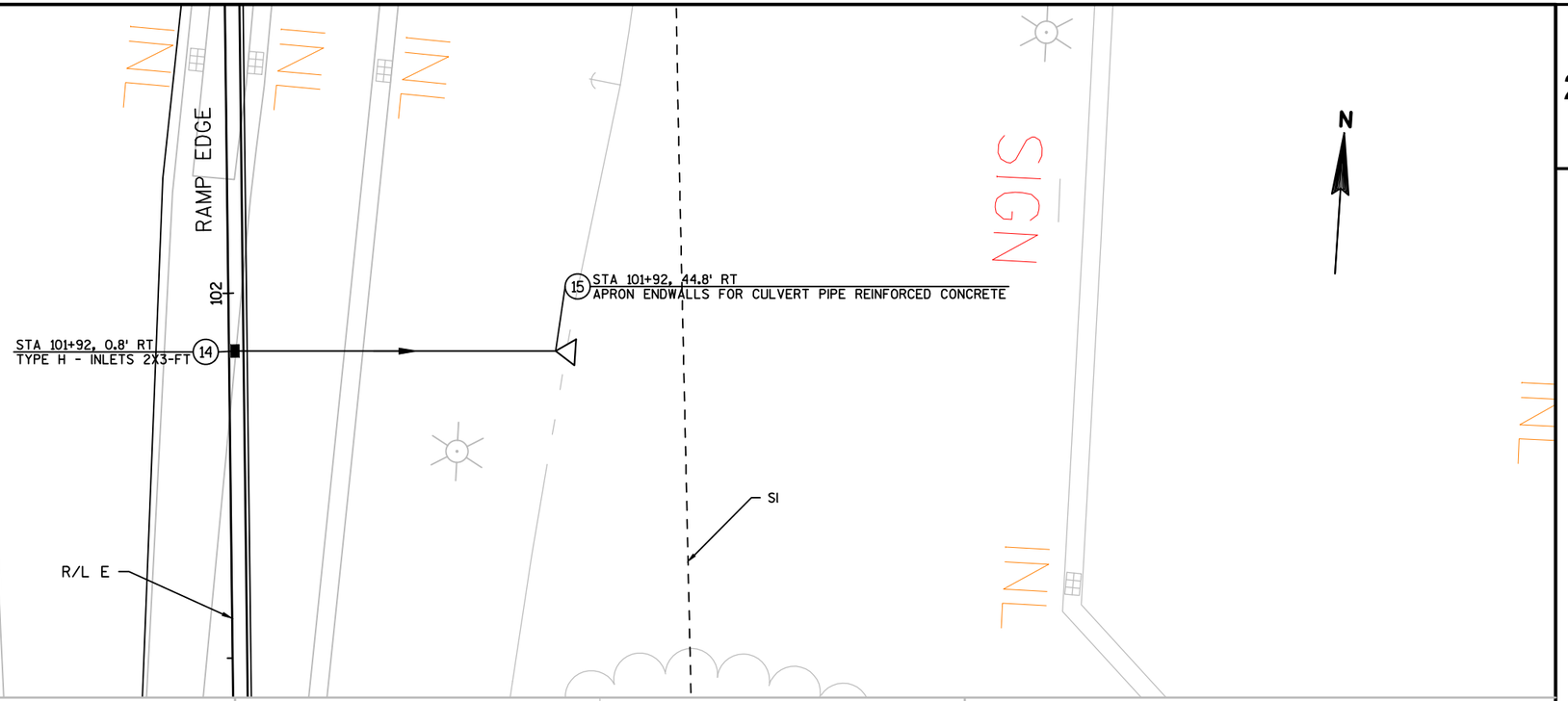
FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\022501_SS.DWG
LAYOUT NAME - 022504

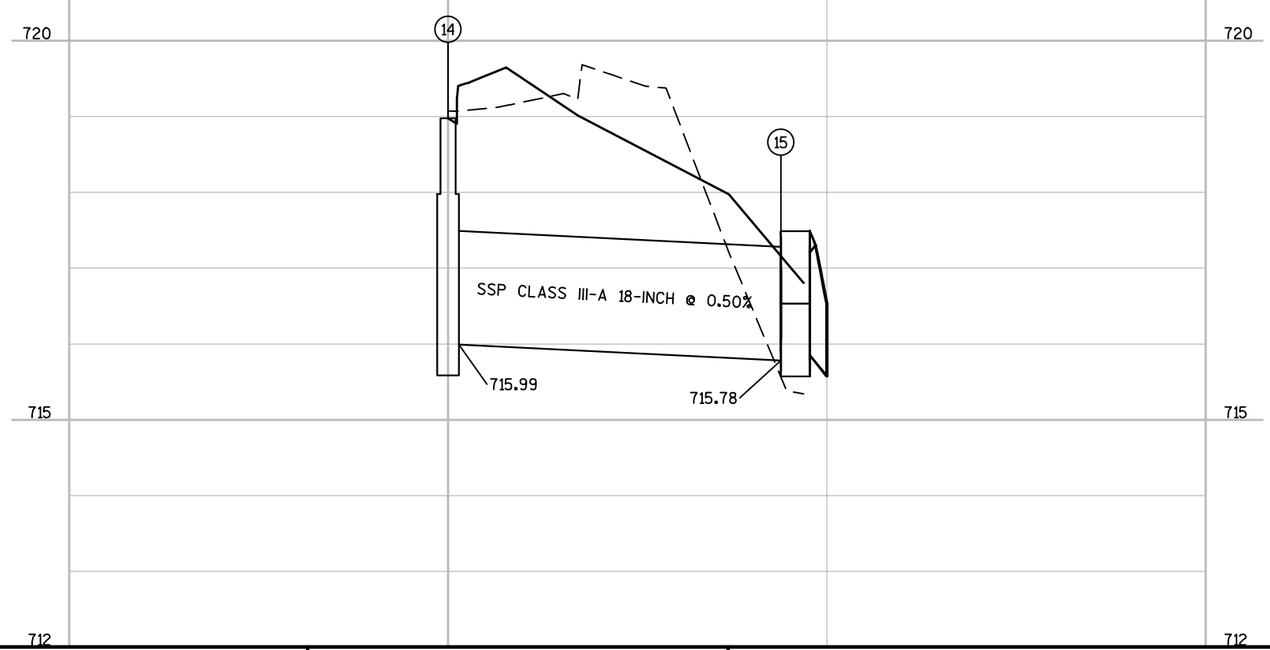
PLOT DATE : 3/12/2018 10:26 AM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 41

STORM SEWER LEGEND

- ## — PROPOSED DRAINAGE STRUCTURE
- E## — EXISTING DRAINAGE STRUCTURE
- PROPOSED MANHOLE
- PROPOSED INLET
- PROPOSED ENDWALL
- PROPOSED STORM SEWER





PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	STORM SEWER	SHEET 56	E

2

STORM SEWER LEGEND

- ## — PROPOSED DRAINAGE STRUCTURE
- E## — EXISTING DRAINAGE STRUCTURE
- PROPOSED MANHOLE
- PROPOSED INLET
- PROPOSED ENDWALL
- PROPOSED STORM SEWER

SI

STA 411+01, 51.2' RT
TYPE H (- INLETS 2X3-FT 16

SS

411+00

R/L J

STH 165

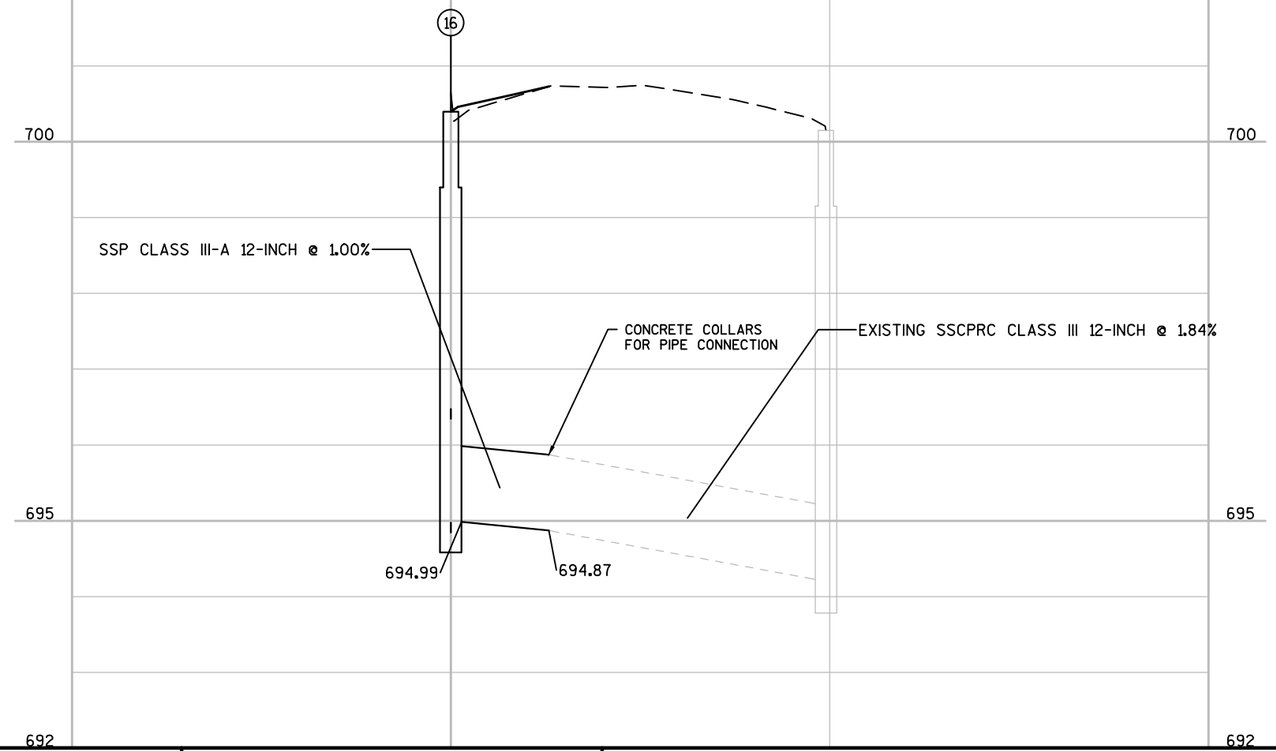
ST

MH

INL

N

2



PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	STORM SEWER	SHEET 57 E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\022501_SS.DWG
LAYOUT NAME - 022505

PLOT DATE : 3/12/2018 10:30 AM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

N

E FRONTAGE RD

120TH AVE

R/L D

R/L B

TRUCK PARKING

R/L A

R/L J

R/L C

RV EXPANSION

R/L E

STH 165/104th ST

WELCOME CENTER EXIT

CANOPY

FILLER CAPS

FLAG

SIGN

92 94 96 98 100

412 410 408 406 404

6 8

22 20

28A 26A 24A 22A 20A

108

NOTE:
THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN, INCLUDING BUILDING SERVICES AND LATERALS.

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	EXISTING UTILITY PLANS	SHEET 58	E

FILE NAME : N:\PDS\C3D\CAD\37380800\023001_UP.DWG
LAYOUT NAME - 023001_UP

PLOT DATE : 12/5/2017 3:14 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

N

165/104th ST

STH 165

R/L J

STH 165/104th ST

400 402 404 406 408 410 412 414

108 106 104 92 94

R/L E

R/L C

R/L D

20 22

RAMP EDGE

RV EXPANSION 2

120TH AVE E FRONTAGE RD

E FRONTAGE RD

IH 94/USH

CANOPY

FILLER CAPS

RIPRAP

POST

SIGN

FLAG

MH

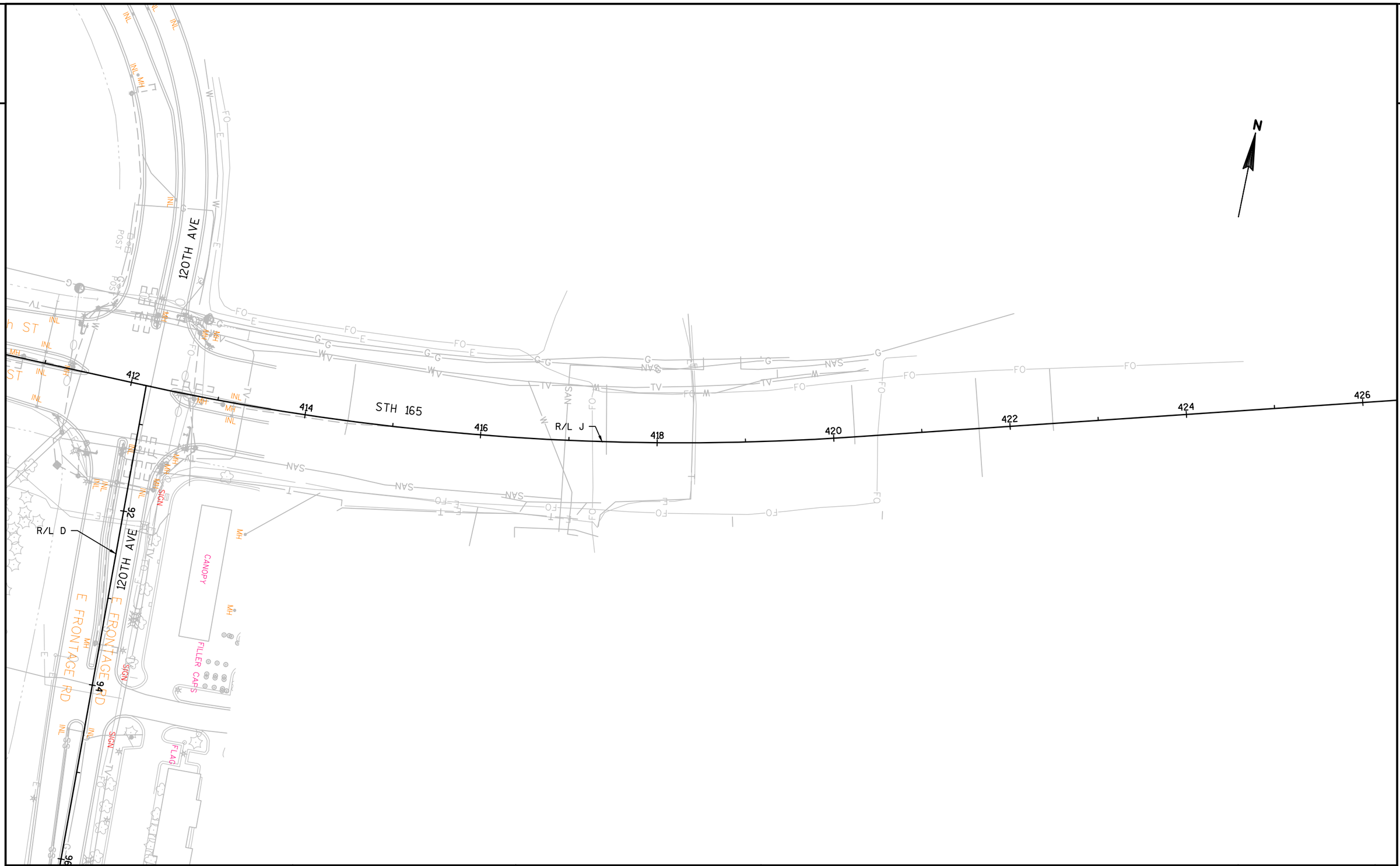
INL

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	EXISTING UTILITY PLANS	SHEET 59	E

FILE NAME : N:\PDS\C3D\CAD\37380800\023001_UP.DWG
LAYOUT NAME - 023002_UP

PLOT DATE : 12/5/2017 3:15 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:100 FT

2



PROJECT NO:3738-08-70	HWY: STH 165	COUNTY:KENOSHA	EXISTING UTILITY PLANS	SHEET 60	E

FILE NAME : N:\PDS\C3D\CAD\37380800\023001_UP.DWG
LAYOUT NAME - 023003_UP

PLOT DATE : 12/5/2017 3:15 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

IH 94/USH 41

IH 94/USH 41

IH 94/IH 41

STH 165/104th ST

STH 165/104th ST

STH 165

RAMP EDGE

WELCOME CENTER EXIT

RV EXPANSION

R/L A

R/L C

R/L E

R/L J

398

400

402

404

406

102

104

106

108

20

20A

22A

24

NOTE:
THE LOCATION OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN, INCLUDING BUILDING SERVICES AND LATERALS.

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	EXISTING UTILITY PLANS	SHEET 61	E

FILE NAME : N:\PDS\C3D\CAD\37380800\023001_UP.DWG
LAYOUT NAME - 023004_UP

PLOT DATE : 12/5/2017 3:16 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:100 FT

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- (XXXX) DENOTES SIGN NUMBER
- TRAFFIC FLOW ARROW

STH 165 VISITOR CENTER
KENOSHA CO.

TRUCK PARKING LOT

OBLITERATED ROAD

S-30-256

S-30-248
EXISTING OVERHEAD SIGN SUPPORT TO REMAIN

S-30-12
EXISTING OVERHEAD SIGN SUPPORT

S-30-231
EXISTING OVERHEAD SIGN SUPPORT

80 R3-5R 42" X 48" ON OVERHEAD SIGN SUPPORT

82 TO SOUTH INTERSTATE 41 EAST 165 EAST INTERSTATE 94 — J4-2 MOVE

83 ABOVE + BEYOND SPONSOR — MOVE

40 41 DO NOT ENTER — R5-1 MOVE

EXIT ESTR

43 TO 165 EAST TO SOUTH INTERSTATE 94 41 — REMOVE

102 TO SOUTH INTERSTATE 41 TO NORTH INTERSTATE 41 EAST INTERSTATE 94 WEST INTERSTATE 94 — J3-2(2S)

76 TO WEST INTERSTATE 94 NORTH INTERSTATE 41 — J3-1 REMOVE

103 STOP R1-1(2S)

20 21 DO NOT ENTER — R5-1(2S)

18 ONE WAY — R6-2L(2S)

57 R3-1(2S)

TO SOUTH INTERSTATE 41 EAST INTERSTATE 94 — J3-1(2S)

TO WEST INTERSTATE 94 NORTH INTERSTATE 41 — J3-1 REMOVE

16 TO WEST INTERSTATE 94 NORTH INTERSTATE 41 — J3-1 REMOVE

19 TRUCKS — REMOVE 17

56 STOP R1-1(2S)

EXIT ESTR

22 ONE WAY — R6-2R REMOVE

23 R5-2 REMOVE

101 DO NOT ENTER — R5-1 (2S)

99 100 STOP R1-1(2S)

98 R4-7(2S)

49 RIGHT TURN ONLY — R3-53R REMOVE

48 STOP R1-1 REMOVE

46 DO NOT ENTER — R5-1(2S)

82 TO SOUTH INTERSTATE 41 EAST 165 EAST INTERSTATE 94 — J4-2 MOVE

ONE WAY — R6-2R ESTR

DO NOT ENTER — R5-1 ESTR

R4-7 ESTR

Chicago / Milwaukee — D1-2 — 26

25 DO NOT ENTER — R5-1 REMOVE

24 R4-7 REMOVE

RAMP CLOSED USE ALT ROUTE — R11-54F REMOVE — 15

W13-1D REMOVE — 14

13 YIELD — R1-2 REMOVE

DO NOT ENTER — R5-1 REMOVE — 11

93 YIELD — R1-2(2M)

TO WEST INTERSTATE 94 NORTH INTERSTATE 41 — J3-1 REMOVE

10

W12-1D ESTR

55 R4-7 REMOVE

44 STOP R1-1

45 TRAFFIC FROM LEFT DOES NOT STOP — REMOVE

42 REMOVE

TO FRONTAGE ROAD 37 37A — MOVE

91 W3-1 (2S)

92 W12-1D(2M) 2' HEIGHT

28 TO MB4-5 INTERSTATE 94 M1-1 INTERSTATE 41 M1-1 — MB6-1 J3-1(2S) REUSE POST

97 TO SOUTH INTERSTATE 41 TO NORTH INTERSTATE 41 EAST INTERSTATE 94 WEST INTERSTATE 94 — J3-2(2S)

27 RAMP CLOSED USE ALT ROUTE — R11-54F REMOVE

95 NORTH INTERSTATE 41 WEST INTERSTATE 94 — J3-1(2S)

94 NO PARKING ON RAMP (EXCEPT, MAINTENANCE AND POLICE, AUTHORIZED VEHICLES) — R7-64(3)

J3-1 REMOVE

NO PARKING ON RAMP — REMOVE — 8

WEST INTERSTATE 94 NORTH INTERSTATE 41 Milwaukee LEFT LANE — REMOVE — 7

CARS ↗ TRUCKS TRAILERS BUSES RV'S — ESTR

50 51 WRONG WAY — R5-1A(2S)

47 DO NOT ENTER — R5-1(2S)

52 STOP R1-1

53 R3-1

54 TRAFFIC FROM RIGHT DOES NOT STOP — REMOVE

38 39 DO NOT ENTER — R5-1 REMOVE

TO NORTH INTERSTATE 41 TO WEST INTERSTATE 94 — ESTR

TO WEST INTERSTATE 94 NORTH INTERSTATE 41 — REMOVE

29 30 W12-1L 24" X 24"

5 6 W12-1L REMOVE

1 R3-6L(2S)

3 ONLY — R3-5R(2S)

96 W1-6(2S)

W4-1 — 70

Q WEST To West Frontage Rd ONLY

165 EAST To East Frontage Rd ONLY

TO SOUTH INTERSTATE 41 TO EAST INTERSTATE 94 TO 165 — M6-1(2S) MB6-1(2S) MB6-1(2S)

ADD 31 32 33 34 35 36 88 89 90

2 Q WEST To West Frontage Rd

4 165 EAST Lakeview Pkwy REST AREA TOURIST INFO

TYPE I SIGNS S-30-231

165 Q Lakeview Pkwy — REST AREA TOURIST INFORMATION ONLY — REMOVE

165 Q Lakeview Pkwy SHOPPING — REST AREA TOURIST INFORMATION ONLY — REMOVE

SHEET 62

PROJECT NO: 3738-08-70	HWY: IH-94/STH 165	COUNTY: KENOSHA	PERMANENT SIGNING	SHEET E

FILE NAME : J:\projects\d2_37380894\Sign\023201_ps.dgn PLOT DATE : 13-MAR-2018 11:55 PLOT BY : dotshw PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

(XXXX) DENOTES SIGN NUMBER

TRAFFIC FLOW ARROW

N

STH 165/104th ST

E FRONTAGE RD

CANOPY

SIGN

CAPS

FLAG

POST

INL

MH

58 RIGHT TURN ONLY R3-53R(2S)

69 DO NOT ENTER R5-1(2S)

R4-7 ESTR

66 TO MB4-5 INTERSTATE 94 M1-1 INTERSTATE 41 M1-1 MB6-1 J3-2(2S)

TO MB4-5 INTERSTATE 94 M1-1 TO M4-5 165 M1-6 M6-1

74 75 DO NOT ENTER R5-1(2S)

67 R3-2(2S) ON LIGHT POLE

78 W2-2(2S)

86 RIGHT LANE MUST TURN RIGHT R3-7R 36"X36" MOUNT NEXT TO SIGNAL POLE

92 94 96 98 100

TO MB4-5 INTERSTATE 94 M1-1 INTERSTATE 41 M1-1 MB6-1 J3-1(2S)

60

59 ONE WAY R6-2R(2S)

77 W2-2(2S) ON LIGHT POLE

68 R3-1(2S)

73 Milwaukee Chicago D1-2

61 STOP R1-1(2S)

62

63 WRONG WAY R5-1A(2S)

64

65 TO MB4-5 INTERSTATE 94 M1-1 ALTERNATE MB4-1 TO MB4-5 INTERSTATE 94 M1-1 INTERSTATE 41 M1-1 MB6-1 INTERSTATE 41 M1-1 MB6-1 J3-2(2S)

87 TO SOUTH INTERSTATE 41 TO EAST INTERSTATE 94 J3-2 MOVE

TO NORTH INTERSTATE 41 TO WEST INTERSTATE 94 J3-2 ESTR

84 TO MALL M1-95A (MOD) MOVE

104 Chicago Milwaukee D1-2

105 TO SOUTH INTERSTATE 41 EAST INTERSTATE 94 J3-1(2S)

79 85 ACCESS TO BUSINESSES GAS - FOOD - LODGING SECOND RIGHT

81 EAST FRONTAGE ROAD M1-95A (MOD) MOVE

410 408 414 416

22 6 8 10 12

SHEET 2 OF 3

PROJECT NO: 3738-08-70	HWY: IH-94/STH 165	COUNTY: KENOSHA	PERMANENT SIGNING	SHEET 63 E

FILE NAME : J:\projects\d2_37380894\Sign\023202_ps.dgn PLOT DATE : 17-JAN-2018 12:59 PLOT BY : dotshw PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE

XXXX DENOTES SIGN NUMBER

TRAFFIC FLOW ARROW

N

IH 94/USH 41

IH 94/USH 41

STH 165

STH 165/104th ST

STH 165/104th ST

STH 165

RIPRAP

POST

SIGN

FLAG

MH

INL

W

406

404

402

400

398

108

90

NO SIGNS ON THIS SHEET

2

SHEET 3 OF 3

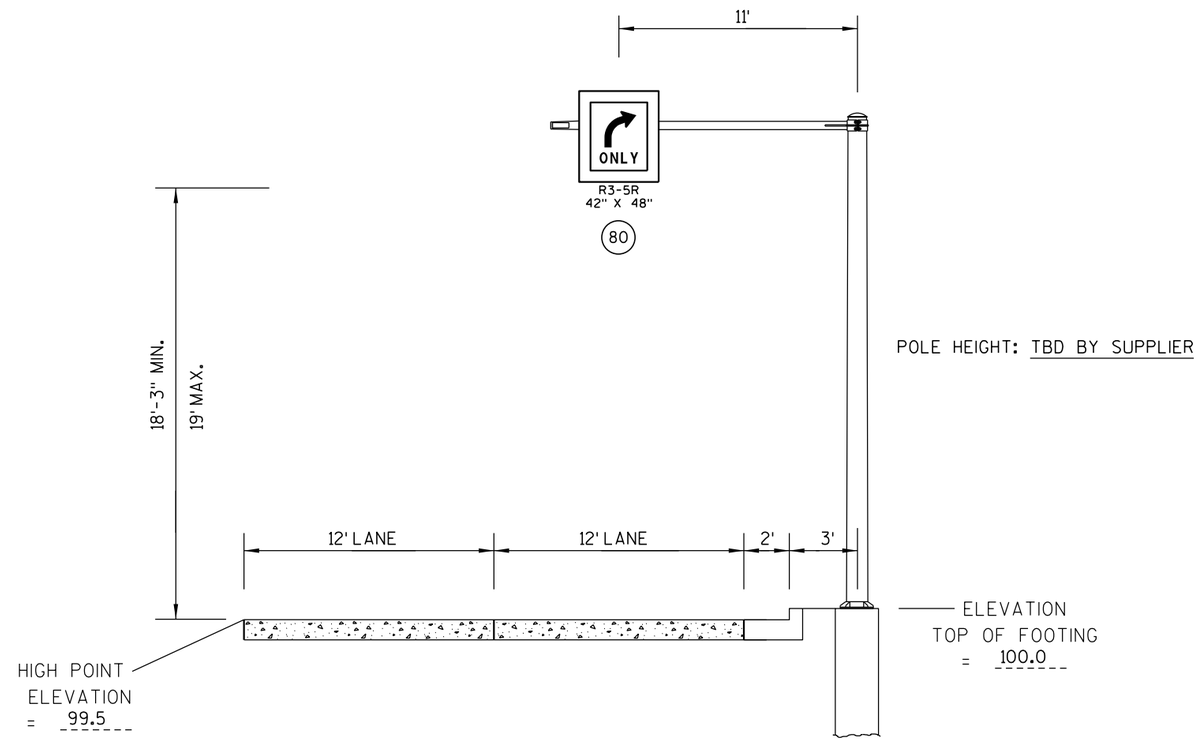
PROJECT NO: 3738-08-70	HWY: IH-94/STH 165	COUNTY: KENOSHA	PERMANENT SIGNING	SHEET E

FILE NAME : J:\projects\d2_37380894\Sign\023203_ps.dgn PLOT DATE : 17-JAN-2018 12:59 PLOT BY : dotshw PLOT NAME : PLOT SCALE : 100:1

LEGEND

(X) DENOTES SIGN NUMBER

(X) INDICATES SIGN SIZE



OVERHEAD SIGN SUPPORTS DETAIL
S-30-256
STH 165 EB EAST @ EAST FRONTAGE RD.
STATION

NOTE, CONTRACTOR SHALL:

1. SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT. FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
2. PROVIDE DESIGN CALCULATIONS.
3. SHOW SIGNS ON SHOP DRAWINGS.
4. I.D. PLAQUE INCIDENTAL TO OVERHEAD SIGN SUPPORT.
5. 6 ANCHOR RODS SHALL BE USED PER SDD, 36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE.

CONTRACTOR TO USE SDD, 36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

MOUNTING BRACKETS FOR SIGNS TO BE APPROVED FROM PRODUCT LIST FOR TYPE II SIGNS.

IBEAMS - W5X3.7 IBEAMS FOR MOUNTING SIGNS ARE INCIDENTAL TO TYPE I SIGNS.

SHEET 1 OF 1

PROJECT NO: 3738-08-70	HWY: IH-94/STH 165	COUNTY: KENOSHA	OVERHEAD SIGN SUPPORT S-30-256	SHEET 65	E

2

GENERAL NOTES:

FREEWAY LIGHTING SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTIONS 652 TO 657 AND 659 EXCEPT:

1. DETAILS OF CONSTRUCTION MATERIALS AND WORKMANSHIP NOT SHOWN ON THESE DRAWINGS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

2. LOCATIONS OF THE PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. HOWEVER, INSTALLATION WILL REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. UNDER THE APPROVAL OF THE ENGINEER, APPROPRIATE ADJUSTMENT OF CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED TO ILLUSTRATE AS BUILT CONDITIONS.

3. THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION ON THE CONDUIT.

4. ALL OPEN AND UN-TERMINATED CONDUITS SHALL BE CAPPED OR PLUGGED WITH ENGINEER APPROVED FITTINGS IMMEDIATELY AFTER INSTALLATION.

5. BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

6. ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS.

7. PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT THAT CAN BE EASILY REMOVED. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

8. CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX-TO-PULL BOX, JUNCTION BOX OR BASE-TO-BASE, ETC.) UNLESS OTHERWISE NOTED ON PLANS.

9. PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUITS.

10. CONTRACTOR SHALL SUPPLY AS-BUILT DRAWINGS (.PDF FORMAT) FOR ALL THE WORK BEING DONE.

11. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION.

12. UNDERGROUND WIRE & CONDUIT SHOWN ON REMOVAL PLANS FOR REMOVAL SHALL BE ABANDONED IN PLACE UNLESS DIRECTED BY THE ENGINEER. CONTRACTOR MAY CHOOSE TO REMOVE CONDUCTOR AT THEIR OWN EXPENSE.

13. PROVIDE MINIMUM CABLE SLACK AS MENTIONED BELOW:

PULL BOXES:	3-FT
EMBEDDED JUNCTION BOXES:	3-FT
DISTRIBUTION CENTER/LOAD CENTER:	10-FT
POLES:	5-FT IN AND 5-FT OUT

2

LEGEND

- DISTRIBUTION CENTER
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- EXISTING LIGHT POLE, ARM MOUNTED LUMINAIRE
- REMOVE LIGHTING UNIT
- REMOVE LUMINAIRE ONLY
- REMOVE POST TOP LUMINAIRE HPS ONLY
- CONDUIT STUBOUT
- PULL BOX
- JUNCTION BOX

N

WB STH 165

EB STH 165

400J 402J 404J 406J 408J 410J 412J 414J

90D 92D 94D

PB107 PB108 PB103 PB109 PB102 PB101 PB110 PB5 PB3 PB1 PB2

HL-30-LV
2WC5
92+71.13, 517.27'RT
2WC1
1WC2/1WC3
1WC5
93+09.55, 1104.64'RT
6WC4
92+33.88, 810.19'RT
5WC4
93+35.53, 887.14'RT
5WC3
18C
20C
2WC2
93+44.70, 468.05'RT
1WC1
22C
2WC3
A23-3
A23-2
1WC4
1WC6
2WC4
A23-1
23C
C21-5
A23-4
3WC1
5WC2

IH-94

120TH AVENUE

CANOPY

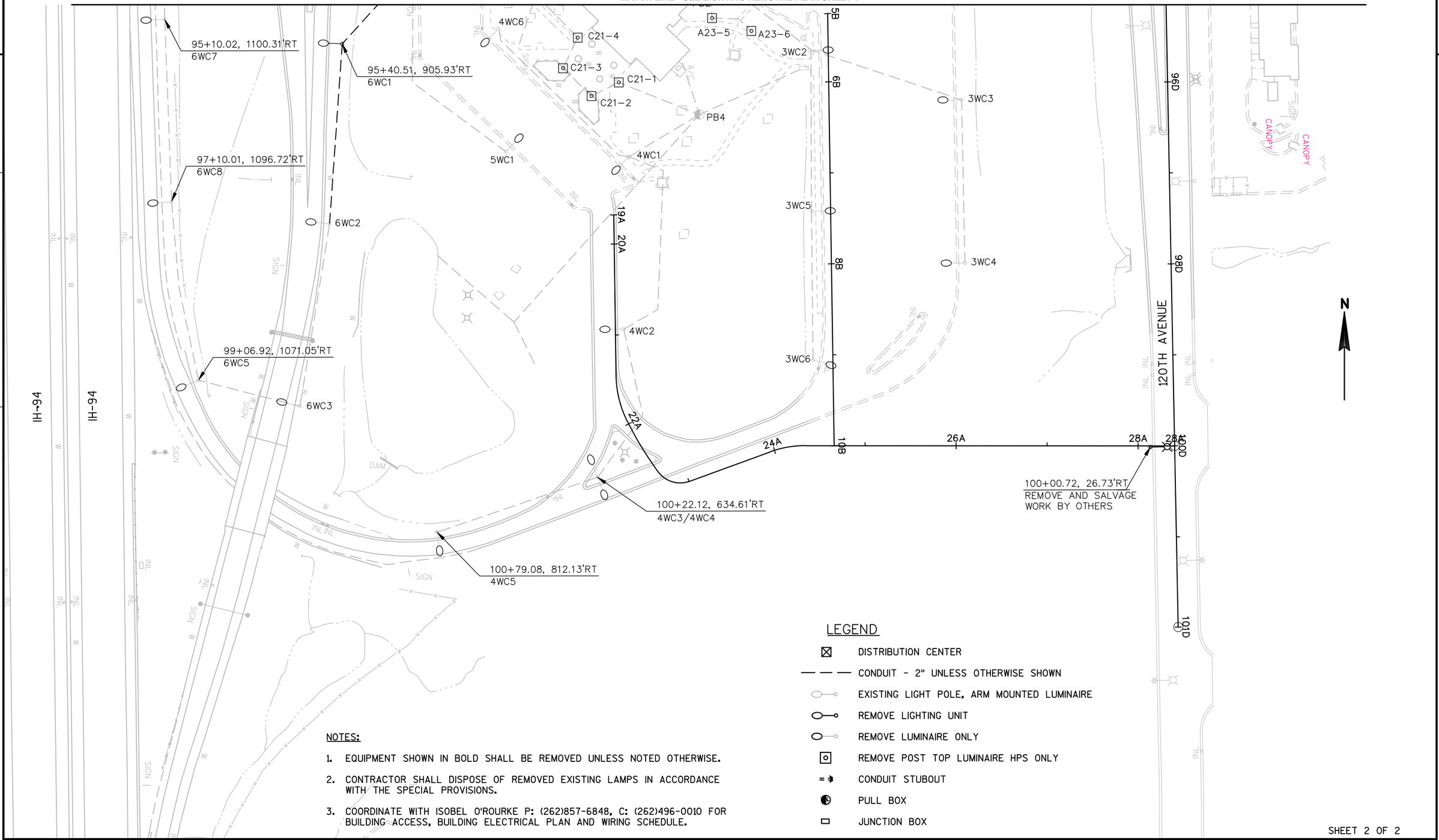
FILLER CAPS

MATCH LINE - SEE LIGHTING REMOVAL PLAN SHEET 2

NOTES:

1. EQUIPMENT SHOWN IN BOLD SHALL BE REMOVED UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL DISPOSE OF REMOVED EXISTING LAMPS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
3. COORDINATE WITH ISOBEL O'ROURKE P: (262)857-6848, C: (262)496-0010 FOR BUILDING ACCESS, BUILDING ELECTRICAL PLAN AND WIRING SCHEDULE.

MATCH LINE - SEE LIGHTING REMOVAL PLAN SHEET 1



LEGEND

- ⊠ DISTRIBUTION CENTER
- — — — CONDUIT - 2" UNLESS OTHERWISE SHOWN
- EXISTING LIGHT POLE, ARM MOUNTED LUMINAIRE
- REMOVE LIGHTING UNIT
- REMOVE LUMINAIRE ONLY
- ⊡ REMOVE POST TOP LUMINAIRE HPS ONLY
- CONDUIT STUBOUT
- PULL BOX
- JUNCTION BOX

NOTES:

1. EQUIPMENT SHOWN IN BOLD SHALL BE REMOVED UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL DISPOSE OF REMOVED EXISTING LAMPS IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
3. COORDINATE WITH ISOBEL O'ROURKE P: (262)857-6848, C: (262)496-0010 FOR BUILDING ACCESS, BUILDING ELECTRICAL PLAN AND WIRING SCHEDULE.

SHEET 2 OF 2

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: LIGHTING PLAN - REMOVAL	SHEET 68	E

2

LEGEND

- DISTRIBUTION CENTER
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- INSTALL LIGHTING UNIT WITH LED-B LUMINAIRE
- INSTALL LED-B LUMINAIRE
- INSTALL POST TOP LUMINAIRE UTILITY LED
- CONDUIT STUBOUT
- PULL BOX 24"x42"
- PULL BOX 24"x36"
- JUNCTION BOX

N

WB STH 165

EB STH 165

IH-94

IH-94

120TH AVENUE

PB107

PB108

PB103

PB109

PB102

PB110

PB101

92+87.01, (613.80'RT)
LED-B-5(T)-15-2WC1

93+24.94, (532.18'RT)
LED-B-5(T)-15-1WC1

HL-30-LV

2WC5

LPB1

3-#8AWG

20C

18C

22C

23C

LPB2

1WC2/1WC3

1WC5

93+41.86, (929.98'RT)
LED-B-5(T)-15-6WC9

6WC4

6-#4AWG

2WC3

A23-3

A23-2

A23-1

A23-4

1WC4

1WC6

2WC4

LPB3

PB5

PB3

C21-5

5WC2

PB1

3WC1

PB2

90D

92D

94D

CANOPY

FILLER CAPS

MATCH LINE - SEE LIGHTING PLAN SHEET 2

NOTES:

1. INTERCEPT EXISTING CONDUIT WHERE PROPOSED (BOLD) IS SHOWN CONNECTING EXISTING (GRAY) ON THE PLAN.
2. COORDINATE WITH ISOBEL O'ROURKE P: (262)857-6848, C: (262)496-0010 FOR BUILDING ACCESS, BUILDING ELECTRICAL PLAN AND WIRING SCHEDULE.

STATION — OFFSET

100+00.00, (100.00'RT)
LED-B-5(T)-15-2WC1

- CIRCUIT, SOURCE, POLE #
- ARM LENGTH
- POLE TYPE ON T-BASE
- LUMINAIRE CATEGORY
- LUMINAIRE SOURCE

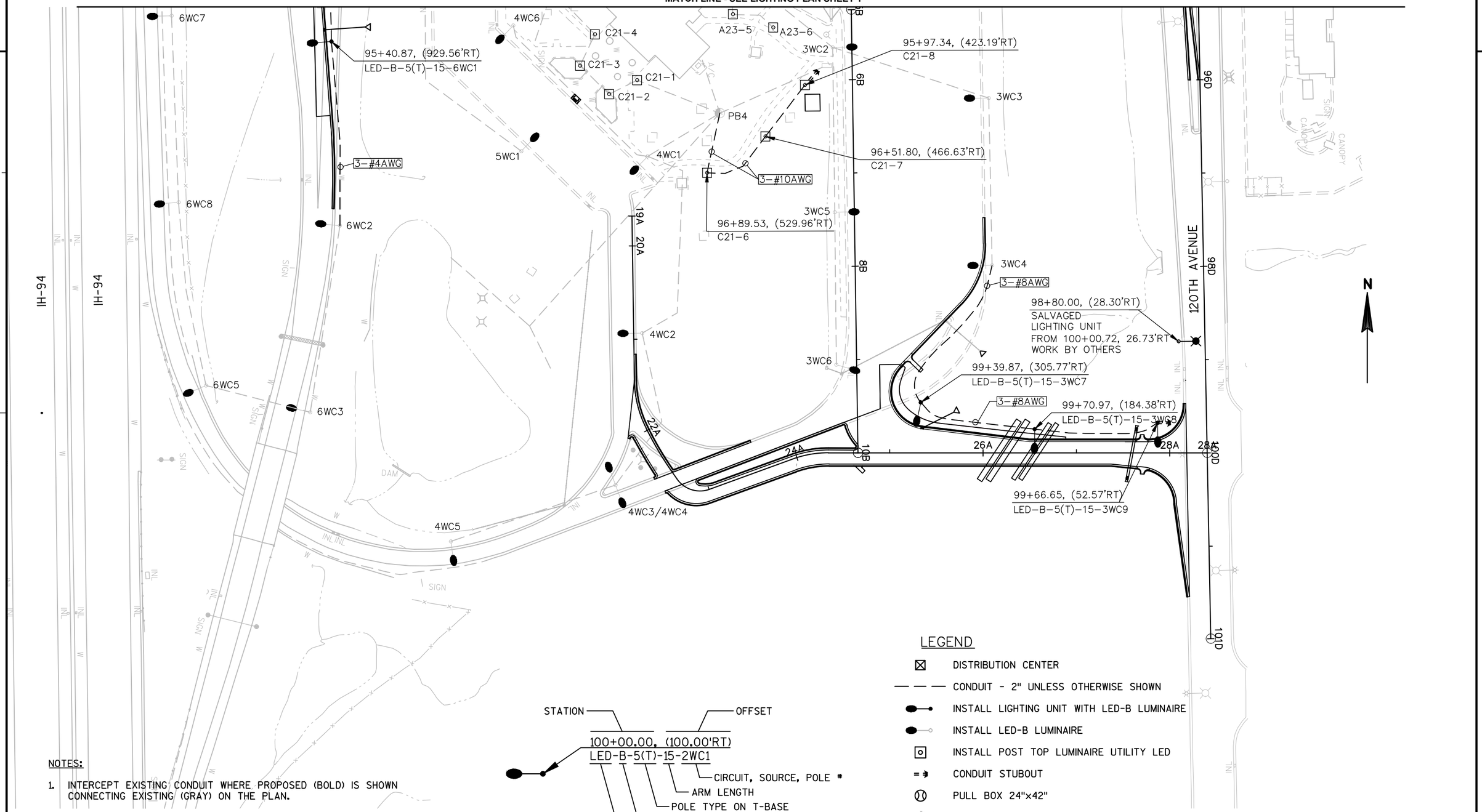
SHEET 1 OF 2

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: LIGHTING PLAN	SHEET 69	E

FILE NAME : N:\PDS\C3D\CAD\37380800\023503_LP.DWG PLOT DATE : 1/2/2018 5:15 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42

MATCH LINE - SEE LIGHTING PLAN SHEET 1



NOTES:

1. INTERCEPT EXISTING CONDUIT WHERE PROPOSED (BOLD) IS SHOWN CONNECTING EXISTING (GRAY) ON THE PLAN.
2. COORDINATE WITH ISOBEL O'ROURKE P: (262)857-6848, C: (262)496-0010 FOR BUILDING ACCESS, BUILDING ELECTRICAL PLAN AND WIRING SCHEDULE.

STATION — OFFSET

100+00.00, (100.00'RT)
LED-B-5(T)-15-2WC1

- CIRCUIT, SOURCE, POLE #
- ARM LENGTH
- POLE TYPE ON T-BASE
- LUMINAIRE CATEGORY
- LUMINAIRE SOURCE

LEGEND

- DISTRIBUTION CENTER
- CONDUIT - 2" UNLESS OTHERWISE SHOWN
- INSTALL LIGHTING UNIT WITH LED-B LUMINAIRE
- INSTALL LED-B LUMINAIRE
- INSTALL POST TOP LUMINAIRE UTILITY LED
- CONDUIT STUBOUT
- PULL BOX 24"x42"
- PULL BOX 24"x36"
- JUNCTION BOX

SHEET 2 OF 2

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: LIGHTING PLAN	SHEET 70	E

2

N

EXISTING LIGHT CONTROLLER
TO REMAIN (NO WORK
UNDER THIS CONTRACT)

HL-30-LV
A,C RED B,D BLACK N WHITE GND GREEN OR BARE
A,B,C,D 30 A
240/480 VAC 3 WIRE ISOLATED NEUTRAL

WB STH 165

EB STH 165

IH-94

IH-94

120TH AVENUE

EXISTING CONTROL PANEL
INSIDE THE BUILDING TO REMAIN

HL-30-WC	
1,3,5 2,4,6 N GND	RED BLACK WHITE GREEN OR BARE
1,3,5 2,4,6	30 A 30 A
120/208 VAC 3 WIRE ISOLATED NEUTRAL	

NOTES:

1. WIRE IN THE PULL BOX IS INCIDENTAL TO THE PULL BOX BID ITEM.
2. THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

SHEET 1 OF 1

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN: LIGHTING PLAN - LIGHTING CONTROLLER OVERVIEW	SHEET 71	E

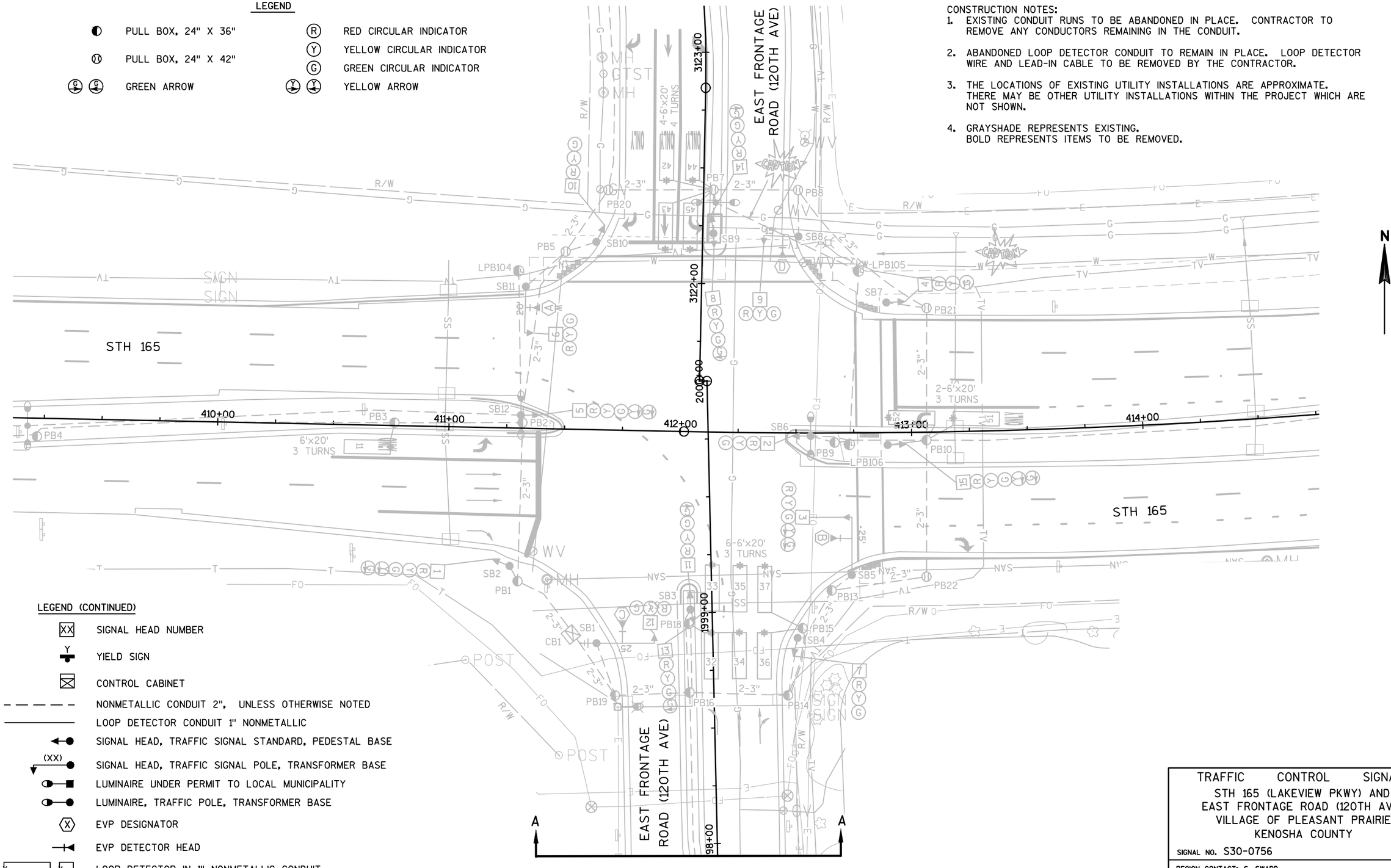
2

LEGEND

◐	PULL BOX, 24" X 36"	(R)	RED CIRCULAR INDICATOR
⊗	PULL BOX, 24" X 42"	(Y)	YELLOW CIRCULAR INDICATOR
(G) (G)	GREEN ARROW	(G)	GREEN CIRCULAR INDICATOR
(Y) (Y)	YELLOW ARROW		

CONSTRUCTION NOTES:

1. EXISTING CONDUIT RUNS TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS REMAINING IN THE CONDUIT.
2. ABANDONED LOOP DETECTOR CONDUIT TO REMAIN IN PLACE. LOOP DETECTOR WIRE AND LEAD-IN CABLE TO BE REMOVED BY THE CONTRACTOR.
3. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. GRAYSHADE REPRESENTS EXISTING. BOLD REPRESENTS ITEMS TO BE REMOVED.



N

LEGEND (CONTINUED)

XX	SIGNAL HEAD NUMBER
Y	YIELD SIGN
	CONTROL CABINET
	NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
	LOOP DETECTOR CONDUIT 1" NONMETALLIC
	SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
(XX)	SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
	LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
	LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
X	EVP DESIGNATOR
	EVP DETECTOR HEAD
	LOOP DETECTOR IN 1" NONMETALLIC CONDUIT

TRAFFIC CONTROL SIGNAL
STH 165 (LAKEVIEW PKWY) AND
EAST FRONTAGE ROAD (120TH AVE)
VILLAGE OF PLEASANT PRAIRIE
KENOSHA COUNTY

SIGNAL NO. S30-0756

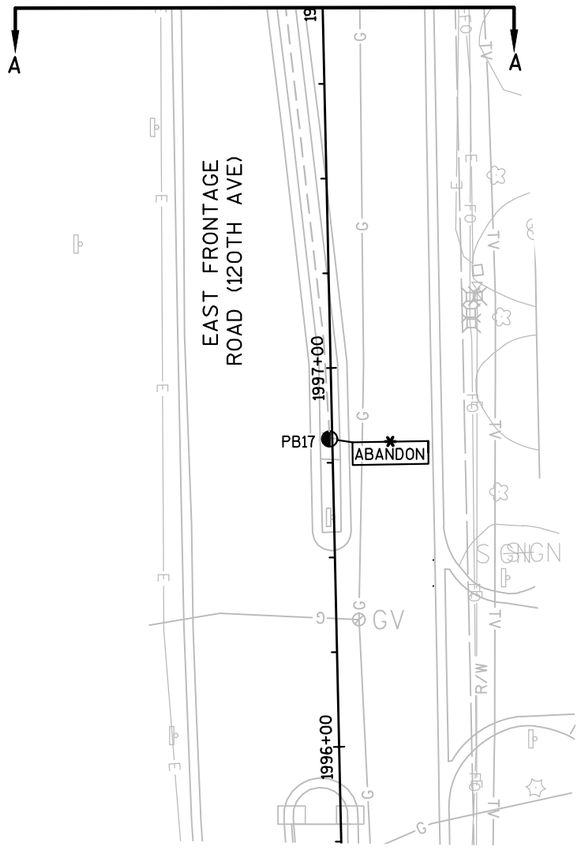
REGION CONTACT: S. SWARD
DESIGNED BY:
REVISED BY: C. VANDE LEEST

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\37380800\SIG\S30-0756\S30-0756_REM.DWG PLOT DATE : 1/19/2018 3:33 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : 1" = 40'_XREF

2

N



TRAFFIC CONTROL SIGNAL
STH 165 (LAKEVIEW PKWY) AND
EAST FRONTAGE ROAD (120TH AVE)
VILLAGE OF PLEASANT PRAIRIE
KENOSHA COUNTY

SIGNAL NO. S30-0756

REGION CONTACT: S. SWARD
DESIGNED BY:
REVISED BY: C. VANDE LEEST

PAGE 2 OF 2

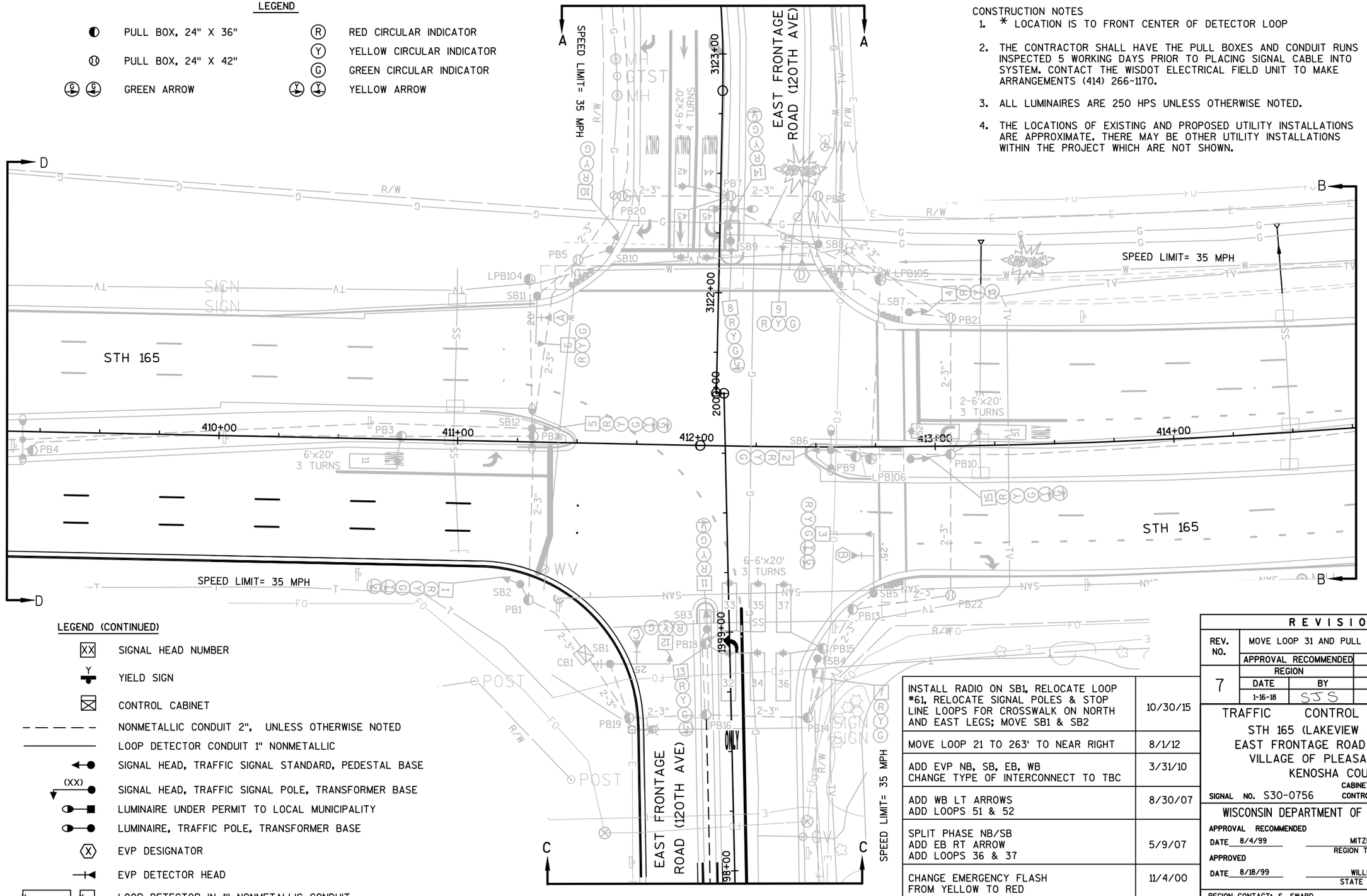
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	TRAFFIC SIGNAL REMOVAL PLAN	SHEET 73	E

LEGEND

- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- GREEN ARROW
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- YELLOW ARROW

CONSTRUCTION NOTES

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS (414) 266-1170.
3. ALL LUMINAIRES ARE 250 HPS UNLESS OTHERWISE NOTED.
4. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.



LEGEND (CONTINUED)

- XX — SIGNAL HEAD NUMBER
- Y — YIELD SIGN
- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- LUMINAIRE, TRAFFIC POLE, TRANSFORMER BASE
- X — EVP DESIGNATOR
- EVP DETECTOR HEAD
- * — LOOP DETECTOR IN 1" NONMETALLIC CONDUIT

INSTALL RADIO ON SB1, RELOCATE LOOP #61, RELOCATE SIGNAL POLES & STOP LINE LOOPS FOR CROSSWALK ON NORTH AND EAST LEGS; MOVE SB1 & SB2	10/30/15
MOVE LOOP 21 TO 263' TO NEAR RIGHT	8/1/12
ADD EVP NB, SB, EB, WB CHANGE TYPE OF INTERCONNECT TO TBC	3/31/10
ADD WB LT ARROWS ADD LOOPS 51 & 52	8/30/07
SPLIT PHASE NB/SB ADD EB RT ARROW ADD LOOPS 36 & 37	5/9/07
CHANGE EMERGENCY FLASH FROM YELLOW TO RED	11/4/00
INITIAL INSTALLATION	8/99

REVISION

REV. NO.	MOVE LOOP 31 AND PULL BOX 17; PLAN UPDATE			
	APPROVAL RECOMMENDED		APPROVED	
	REGION		CENTRAL OFFICE	
	DATE	BY	DATE	BY
7	1-16-18	SJS	1-31-18	DMK

TRAFFIC CONTROL SIGNAL

STH 165 (LAKEVIEW PKWY) AND
EAST FRONTAGE ROAD (120TH AVE)
VILLAGE OF PLEASANT PRAIRIE
KENOSHA COUNTY

SIGNAL NO. S30-0756 CABINET TYPE: TS1 CONTROLLER TYPE: EPAC

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
DATE 8/4/99 MITZI M. DOBERSEK, REGION TRAFFIC ENGINEER

APPROVED
DATE 8/18/99 WILLIAM C. GILDING, STATE TRAFFIC ENGINEER

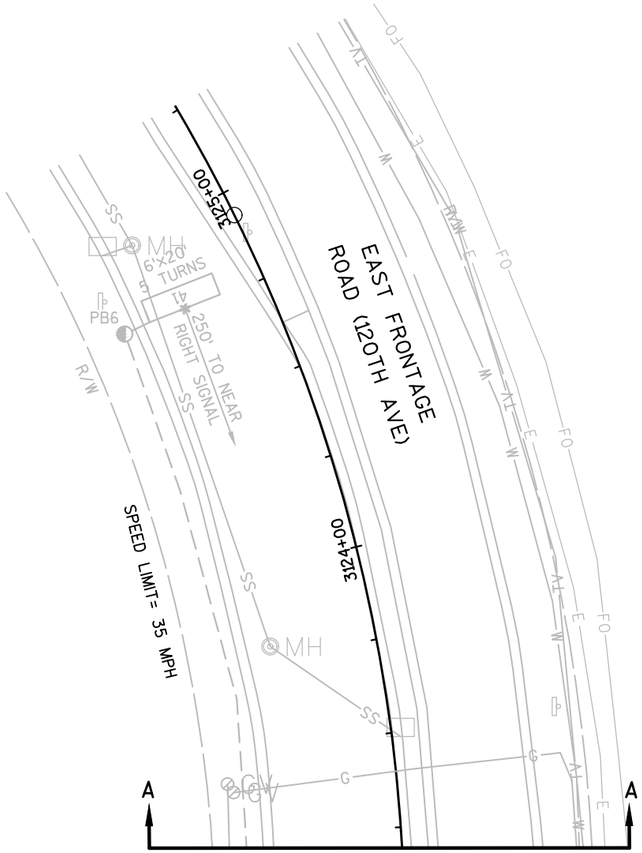
REGION CONTACT: S. SWARD
DESIGNED BY:
REVISED BY: C. VANDE LEEST

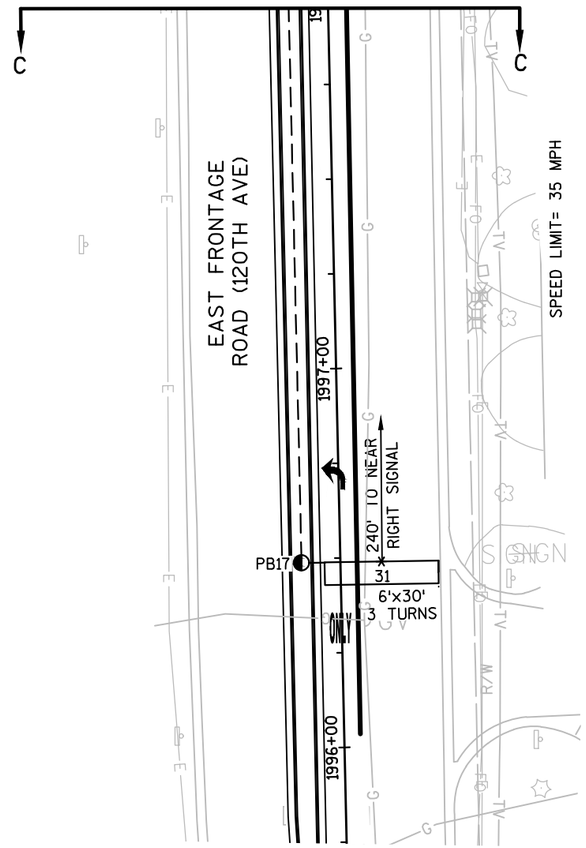
PAGE 1 OF 4

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	TRAFFIC SIGNAL PLAN	SHEET 74	E

2

N





TRAFFIC CONTROL SIGNAL
STH 165 (LAKEVIEW PKWY) AND
EAST FRONTAGE ROAD (120TH AVE)
VILLAGE OF PLEASANT PRAIRIE
KENOSHA COUNTY

SIGNAL NO. S30-0756

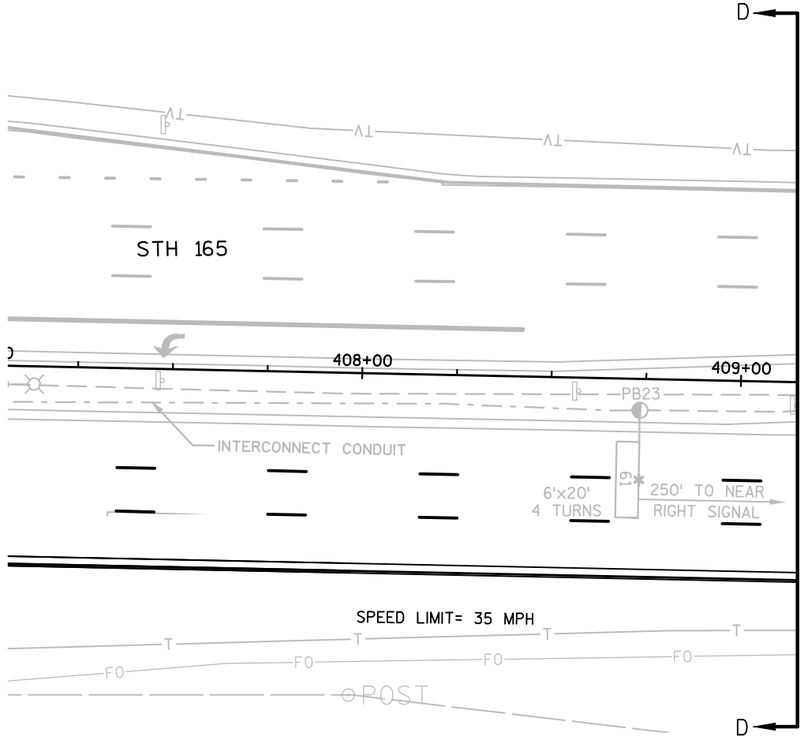
REGION CONTACT: S. SWARD
DESIGNED BY:
REVISED BY: C. VANDE LEEST

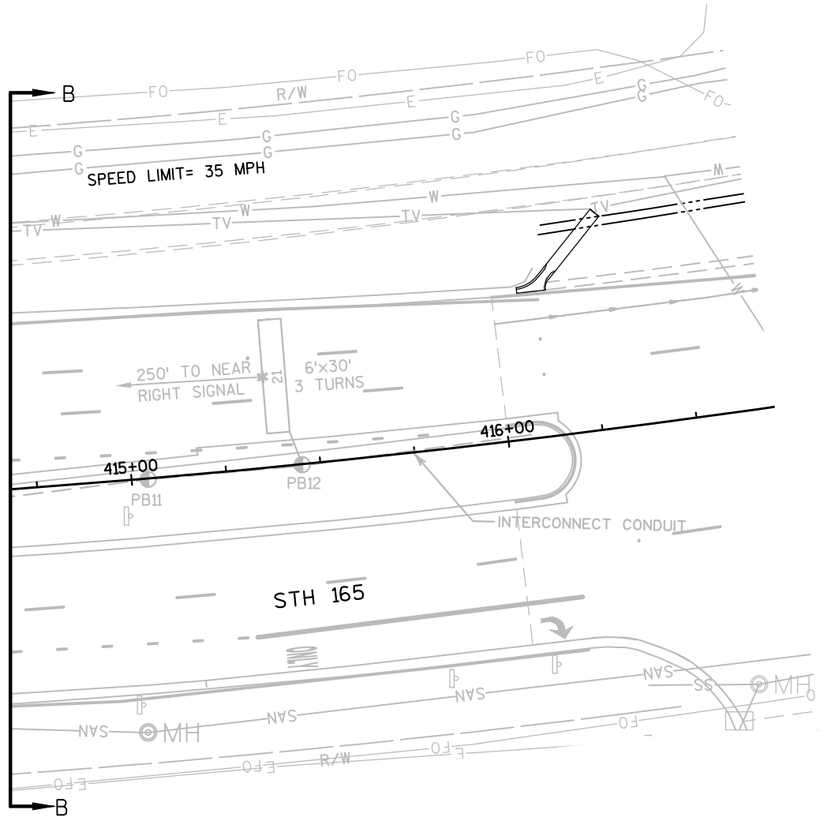
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	TRAFFIC SIGNAL PLAN	SHEET 75	E

FILE NAME : N:\PDS\C3D\CAD\37380800\SIG\S30-0756\S30-0756_G.DWG PLOT DATE : 1/19/2018 3:29 PM PLOT BY : VANDE LEEST, CYNTHIAPLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

2

N





TRAFFIC CONTROL SIGNAL
STH 165 (LAKEVIEW PKWY) AND
EAST FRONTAGE ROAD (120TH AVE)
VILLAGE OF PLEASANT PRAIRIE
KENOSHA COUNTY

SIGNAL NO. S30-0756

REGION CONTACT: S. SWARD
DESIGNED BY:
REVISED BY: C. VANDE LEEST

PAGE 3 OF 4

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	TRAFFIC SIGNAL PLAN	SHEET 76	E

2

	HEAD NUMBERS	FLASH
Ø1		
Ø2	4,5,6,15	R
Ø3	1,3,7,8,9,13	R. -
Ø4	10,11,12,14	R
Ø5	5,15	-
Ø6	1,2,3	R
Ø7		
Ø8		
Ø2P		
Ø4P		
Ø6P		
Ø8P		
OLA		
OLB		
OLC		
OLD		

RING 1

NOT USED			
Ø1	Ø2	Ø3	Ø4

RING 2

		NOT USED	NOT USED
Ø5	Ø6	Ø7	Ø8

BARRIER

DETECTOR LOGIC

DETECTOR NUMBER	AMPLIFIER CHANNEL	DETECTOR OPERATION			PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
		CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY							
11	1	X			6	6				6X20	3
21	2	X			2	2				6X30	3
31	3			X		3			X	6X30	3
32	4	X			3	3				6X20	3
33	4	X			3	3				6X20	3
34	5	X			3	3				6X20	3
35	5	X			3	3				6X20	3
36	6	X			3	3		X		6X20	3
37	6	X			3	3		X		6X20	3
41	7			X		4			X	6X20	5
42	8	X			4	4				6X20	4
43	8	X			4	4				6X20	4
44	9	X			4	4				6X20	4
45	9	X			4	4				6X20	4
51	10	X			5	5				6X20	3
52	10	X			5	5				6X20	3
61	11	X			6	6				6X20	4

2

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN	X
3				X
4				X
5		2		X
6	X	2	MIN	X
7				
8				

N

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	X
CELL MODEM	

TYPE OF COORDINATION	
NONE	
TBC	X
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS- 0170

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	
IN SEPARATE DOT LIGHTING CABINET	X

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+6	6+2	4	3

AFTER PREEMPTION SEQUENCE 2+6 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

AFTER PREEMPTION SEQUENCE 3, CONTROLLER SHALL RETURN TO PHASE 3.

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTION	

STH 165 (LAKEVIEW PKWY) & E. FRONTAGE ROAD (120TH AVE)
VILLAGE OF PLEASANT PRAIRIE
KENOSHA COUNTY
SIGNAL NO: S30-0756 CABINET TYPE: TS1
CONTROLLER TYPE: EPAC
DATE: JULY 2016 PAGE NO. 4 OF 4

PROJECT NO: 3738-06-60	HWY: STH 165	COUNTY: KENOSHA	SEQUENCE OF OPERATIONS	SHEET NO: 77	E

2

LEGEND

(1) MARKING LINE EPOXY 4-INCH (YELLOW)

(2) MARKING LINE EPOXY 4-INCH (WHITE)

(3) MARKING LINE EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE, 37.5 FT SKIP)

(6) MARKING LINE EPOXY 8-INCH (WHITE)

(7) MARKING STOP LINE EPOXY 18-INCH (WHITE)

(10) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)

(14) MARKING WORD EPOXY (WHITE)

(15) MARKING ARROW EPOXY (TYPE 1)

(16) MARKING ARROW EPOXY (TYPE 2)

(17) MARKING ARROW EPOXY (TYPE 3)

(20) MARKING CURB EPOXY (YELLOW)

(30) MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (12.5 FT LINE, 37.5 FT SKIP)

(31) MARKING LINE GROOVED WET REF EPOXY 8-INCH (WHITE)

(141) MARKING SYMBOL EPOXY (WHITE)

(181) MARKING PARKING STALL EPOXY (WHITE)

* PLACE PAVEMENT MARKING OVER EXISTING MARKINGS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

2

CAR PARKING

INL

INL

MH

+71.71A, 27.77' RT
10' R
+03.47A, 5.96' RT

+00.34A, 6.12' LT

12'

20A

6'

(20' C-C SPACING)

R/L A

10

10

20

20

+49.80A, 186.99' RT

1

+33.29A, 5.47' RT

+49.11A, 17.46' RT

R131'

R170'

+97.27A, 0.00'

22A

+90.67A, 35.08' RT

+44.19A, 0.00'

MH

MH

7

INL

+88.06A, -109.02' LT

R/L B

7B

8B

TRUCK PARKING

INL

181 *

26'

100' (TYP)

15' (TYP)

45° (TYP)

+07.43B, 45.69' LT
+28.28B, 25.01' LT

1

10

20

+72.63B, -21.80' LT

+88.10B, 2.55' RT

+16.56A, 46.96' LT
35' R

(10' C-C SPACING)

+50.00A, 11.96' LT

7

+16.57A, 11.96' LT

26A

24A

WELCOME CENTER EXIT

+50

31

N

2

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PAVEMENT MARKING	SHEET 79	E

2

CANOPY

NOPY

N

R/L D

97D

98D

99D

100D

101D

120TH AVE.

7

+08.26A,
0.00' LT

28A

+92

+08.25A,
26.88' LT

16

+99.09A,
30.92' RT

+60

ONLY

ONLY

14

R/L A

31

WELCOME CENTER EXIT

+50

16

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PAVEMENT MARKING	SHEET 80	E

FILE NAME : N:\PDS\C3D\CAD\37380800\024501_PM.DWG
LAYOUT NAME - 024502_PM

PLOT DATE : 1/11/2018 8:59 AM PLOT BY : REIMBOLD, CASANDRA JPLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

IH 94 ENTRANCE RAMP

IH 94 EXIT RAMP

SEE SDD 'PAVEMENT MARKING (LEFT TURN LANE)' FOR LAYOUT INFORMATION.

PLACE PAVEMENT MARKING OVER EXISTING EDGELINES TO GORE OF NB EXIT RAMP.

PLACE PAVEMENT MARKING OVER EXISTING LANE LINE BEGINNING AT SIGN BRIDGE S-30-231

R/L E

RAMP EDGE

+53.63E, -12.71' LT

+80.74E, -27.42' LT

101E 102E 103E 104E 105E 106E

15' 15' 12' 12' 12' 12'

CAR PARKING

26' 60° (TYP) 10' (TYP) 10' (TYP)

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PAVEMENT MARKING	SHEET 81	E

2

2

N

INL

INL

INL

INL

MH

SIGN

409J

408J

407J

406J

STH 165

R/L J

30

12'

12'

12'

R/L B

181

6B

10.09'

10

1

100' (TYP)

220

15' (TYP)

1

10

(5' C-C SPACING) (TYP)

230

14.50'

14.47'

55° (TYP)

+78.26C, 14.50' RT

R/L C

181

181

RV EXPANSION

21C

15

+71.94C, -97.59' LT

+30.39C, 0.53' RT

R106'

20C

1

10

(10' C-C SPACING) (TYP)

+00.00J

+35.33C, -22.97' LT

15

A/C

A/C

A/C

W

W

W

W

W

W

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PAVEMENT MARKING	SHEET 82 E

FILE NAME : N:\PDS\C3D\CAD\37380800\024501_PM.DWG
LAYOUT NAME - 024504_PM

PLOT DATE : 1/11/2018 9:01 AM PLOT BY : REIMBOLD, CASANDRA JPLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

R/L D

120TH AVE.

91D 92D 93D 94D +30 95D 96D

412J

411J

410J

STH 165

STH 165

+50.00 J

16 +42.5 +74.5 14

16 +66.3 +98.3 14

31

30

30*

181*

MH SIGN INL

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PAVEMENT MARKING	SHEET 83	E

FILE NAME : N:\PDS\C3D\CAD\37380800\024501_PM.DWG
LAYOUT NAME - 024505_PM

PLOT DATE : 1/11/2018 9:02 AM PLOT BY : REIMBOLD, CASANDRA JPLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

N

R/L C
+30.39C, 0.53' RT

R106'

+35.33C, -22.97' LT

21C

20C

19C

R/L A

20A

6'

12'

15

181
(2' C-C SPACING)

141

10'

5.66'

15.15'

45°
(TYP)

9.23'

26'

60°
(TYP)

CAR PARKING

181
(TYP)

A/C

W

MH

INL

SIGN

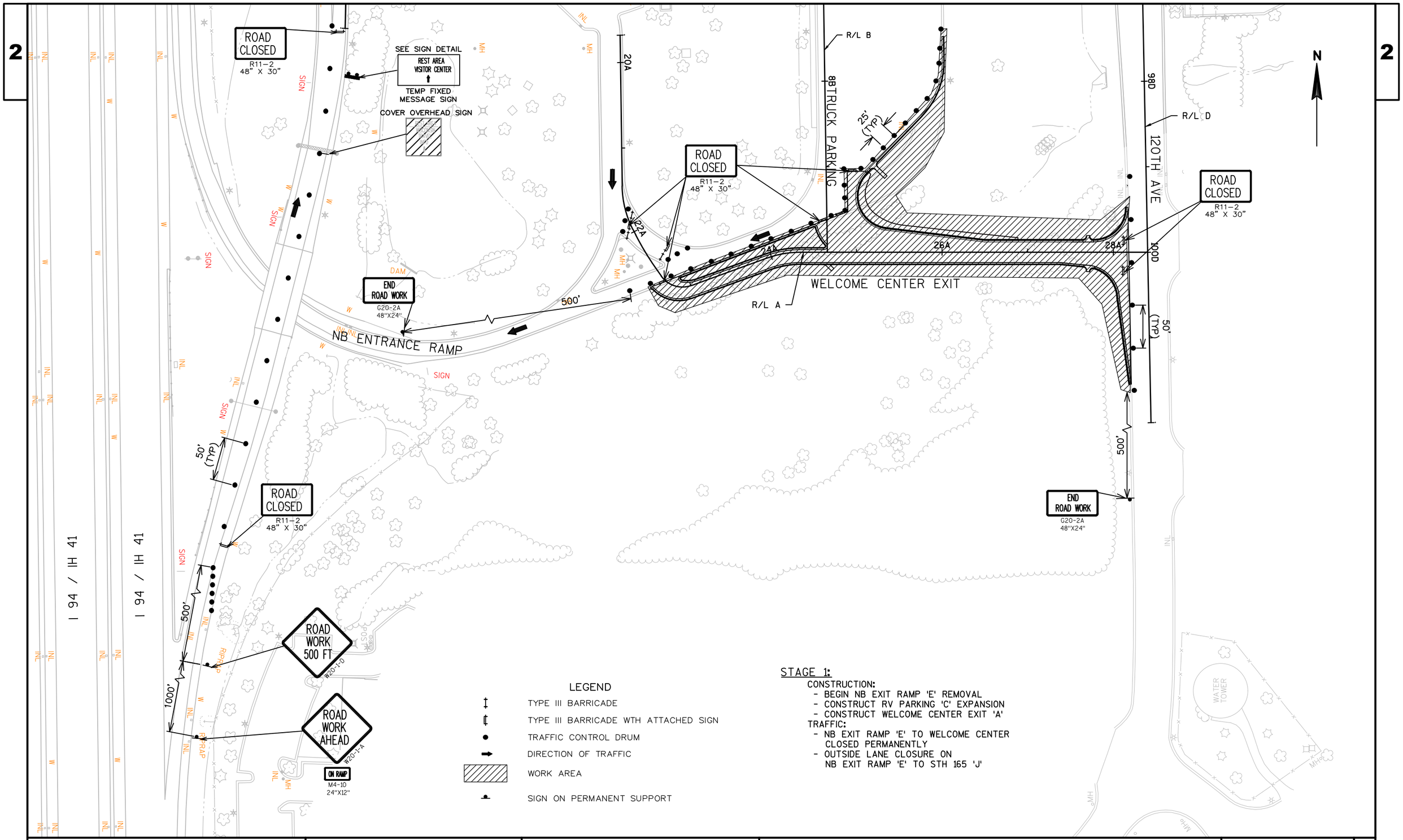
FLAG

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PAVEMENT MARKING	SHEET 84	E

FILE NAME : N:\PDS\C3D\CAD\37380800\024501_PM.DWG
LAYOUT NAME - 024506_PM

PLOT DATE : 1/11/2018 9:02 AM PLOT BY : REIMBOLD, CASANDRA JPLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PERMANENT SUPPORT

STAGE 1:

CONSTRUCTION:
- BEGIN NB EXIT RAMP 'E' REMOVAL
- CONSTRUCT RV PARKING 'C' EXPANSION
- CONSTRUCT WELCOME CENTER EXIT 'A'

TRAFFIC:
- NB EXIT RAMP 'E' TO WELCOME CENTER CLOSED PERMANENTLY
- OUTSIDE LANE CLOSURE ON NB EXIT RAMP 'E' TO STH 165 'J'

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	TRAFFIC CONTROL STAGE 1	SHEET 85	E

FILE NAME : N:\PDS\C3D\CAD\37380800\025001_TC.DWG
LAYOUT NAME - 025001_TC

PLOT DATE : 1/30/2018 12:55 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PERMANENT SUPPORT

N

END ROAD WORK
G20-2A
48"X24"

500'

STH 165

I 94/IH 41

R/L E

108E

105E

ROAD WORK AHEAD
W20-1-A

ROAD CLOSED
R11-2
48" X 30"

104E

RAMP EDGE

CAR PARKING

25' (TYP)

R/L C

RV EXPANSION

R/L B

TRUCK PARKING
6B

50' (TYP)

R/L D

120TH AVE

92D

94D

96D

FILLER CAPS

CANOPY

FLAG

SIGN

MH

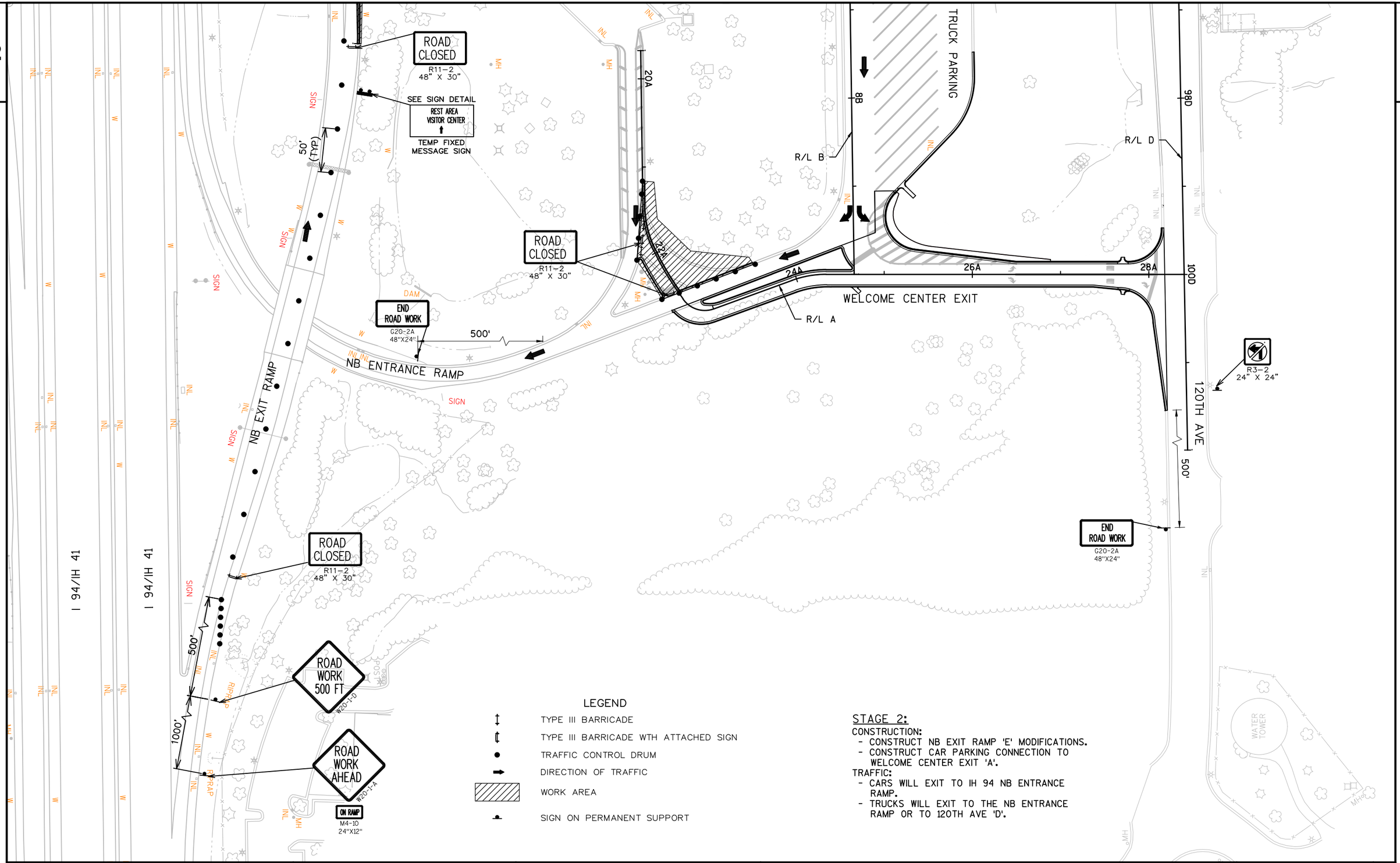
INL

W

A/C

POST

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	TRAFFIC CONTROL STAGE 1	SHEET 86	E



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PERMANENT SUPPORT

STAGE 2:

CONSTRUCTION:
- CONSTRUCT NB EXIT RAMP 'E' MODIFICATIONS.
- CONSTRUCT CAR PARKING CONNECTION TO WELCOME CENTER EXIT 'A'.

TRAFFIC:
- CARS WILL EXIT TO IH 94 NB ENTRANCE RAMP.
- TRUCKS WILL EXIT TO THE NB ENTRANCE RAMP OR TO 120TH AVE 'D'.

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	TRAFFIC CONTROL STAGE 2	SHEET 87	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PERMANENT SUPPORT

N

STH 165

END ROAD WORK
G20-2A
48"X24"

500'

RIPRAP

ROAD WORK AHEAD
W20-1-1-A

R/L E

108E

106E

104E

102E

ROAD CLOSED
R11-2
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

25' (TYP)

RAMP EDGE

CAR PARKING

R/L C

20C

22C

RV EXPANSION

R/L B

6B

TRUCK PARKING

R/L D

92D

94D

96D

120TH AVE

I 94/IH 41

I 94/IH 41

CANOPY

FILLER CAPS

FLAG

SIGN

POST

INL

MH

W

A/C

PROJECT NO:3738-08-70	HWY: STH 165	COUNTY:KENOSHA	TRAFFIC CONTROL STAGE 2	SHEET 88	E

FILE NAME : N:\PDS\C3D\CAD\37380800\025002_TC_REV.DWG
LAYOUT NAME - 025022_TC

PLOT DATE : 1/30/2018 12:58 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

N

I 94/IH 41

I 94/IH 41

RAMP EDGE

BEGIN CONCRETE PAVEMENT CONTINUOUS DIAMOND GRINDING

R/L C

20C

22C

RV EXPANSION

SEE SIGN DETAIL

PARKING CLOSED
USE TRUCK PARKING

W01-6
48" X 24"

R/L E

104E

102E

PCMS

INSTALL PORTABLE CHANGEABLE MESSAGE SIGN 10 DAYS PRIOR TO CLOSURE

CAR PARKING

R/L B

6B

TRUCK PARKING

8B

END CONCRETE PAVEMENT CONTINUOUS DIAMOND GRINDING

20A

22A

24A

26A

28A

WELCOME CENTER EXIT

R/L A

NB ENTRANCE RAMP

DAM

120TH AVE.

94D

96D

98D

100D

R/L D

CANOPY

FILLER CAPS

FLAG

SIGN

A/C

MH

INL

W

LEGEND

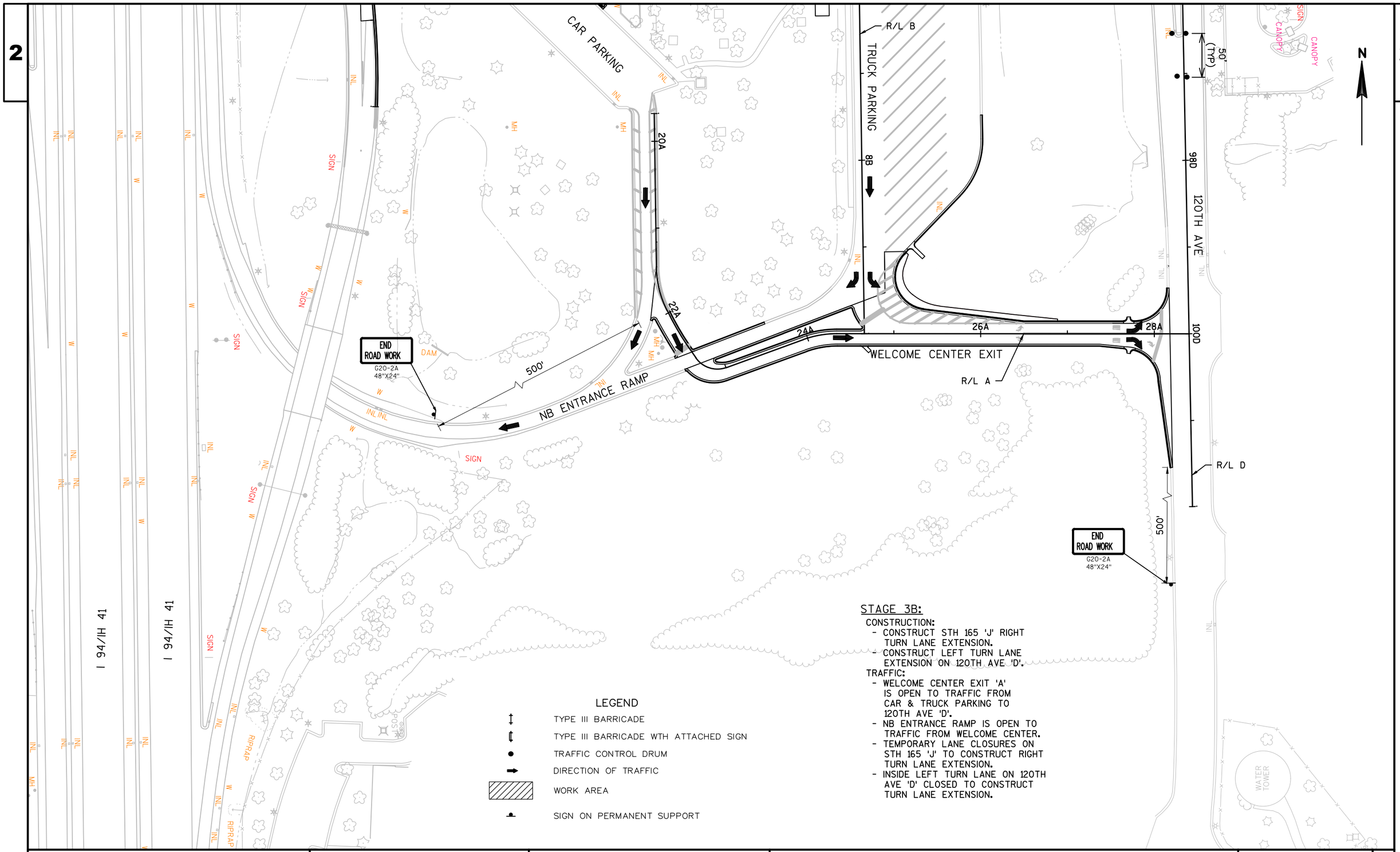
- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PERMANENT SUPPORT

STAGE 3A:

CONSTRUCTION:
- COMPLETE CONCRETE PAVEMENT CONTINUOUS DIAMOND GRINDING IN CAR PARKING

TRAFFIC:
- CAR PARKING CLOSED DURING NIGHTTIME WORK HOURS FOR DIAMOND GRINDING OPERATIONS
- ALL WELCOME CENTER TRAFFIC WILL UTILIZE RV & TRUCK PARKING

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	TRAFFIC CONTROL STAGE 3A	SHEET 89	E



STAGE 3B:

CONSTRUCTION:
- CONSTRUCT STH 165 'J' RIGHT TURN LANE EXTENSION.
- CONSTRUCT LEFT TURN LANE EXTENSION ON 120TH AVE 'D'.

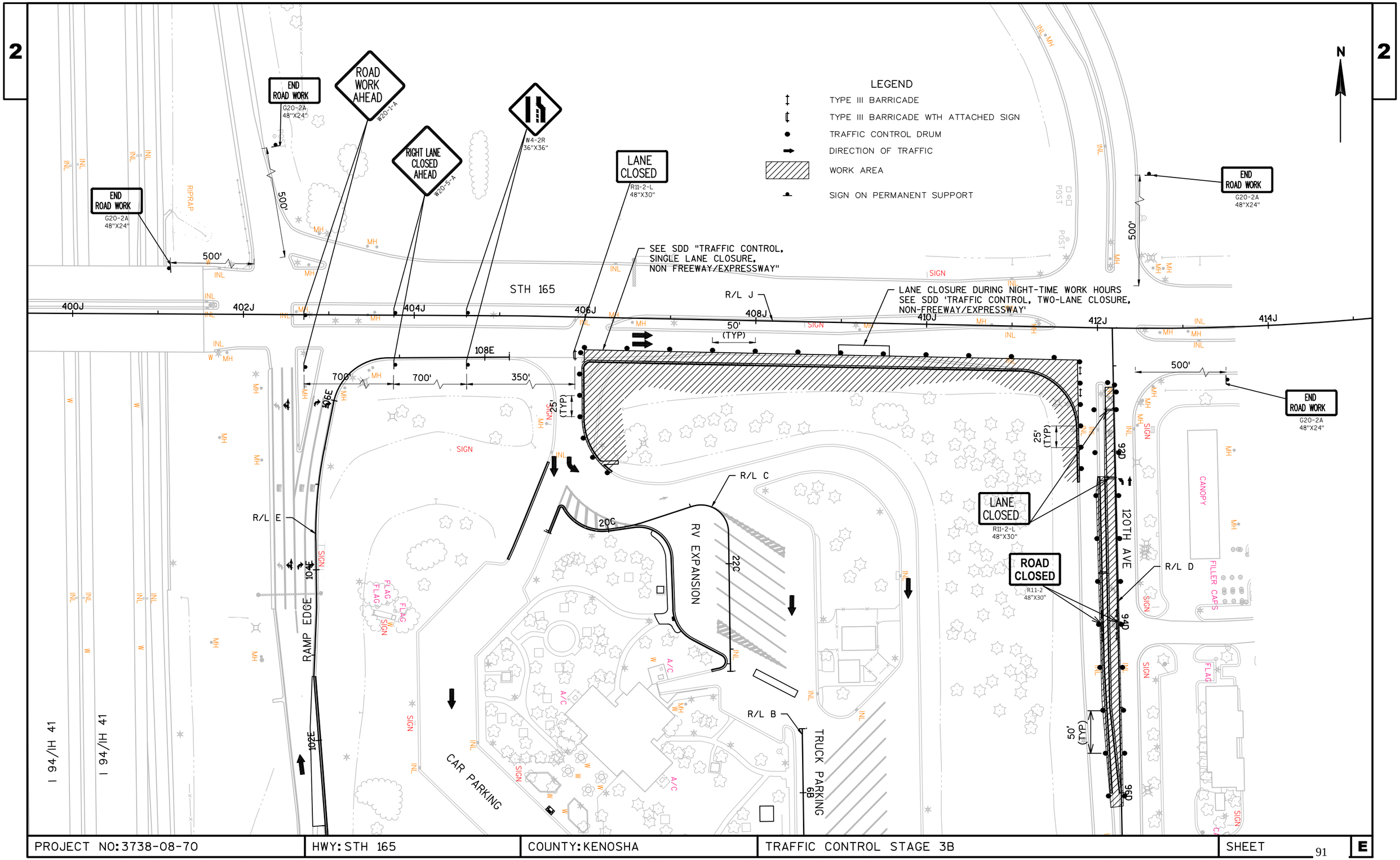
TRAFFIC:
- WELCOME CENTER EXIT 'A' IS OPEN TO TRAFFIC FROM CAR & TRUCK PARKING TO 120TH AVE 'D'.
- NB ENTRANCE RAMP IS OPEN TO TRAFFIC FROM WELCOME CENTER.
- TEMPORARY LANE CLOSURES ON STH 165 'J' TO CONSTRUCT RIGHT TURN LANE EXTENSION.
- INSIDE LEFT TURN LANE ON 120TH AVE 'D' CLOSED TO CONSTRUCT TURN LANE EXTENSION.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PERMANENT SUPPORT

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	TRAFFIC CONTROL STAGE 3B	SHEET 90	E

FILE NAME : N:\PDS\C3D\CAD\37380800\025003_TC_REV.DWG
LAYOUT NAME - 025031_TC
PLOT DATE : 1/30/2018 12:59 PM
PLOT BY : SPAETH, MICHELE L
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

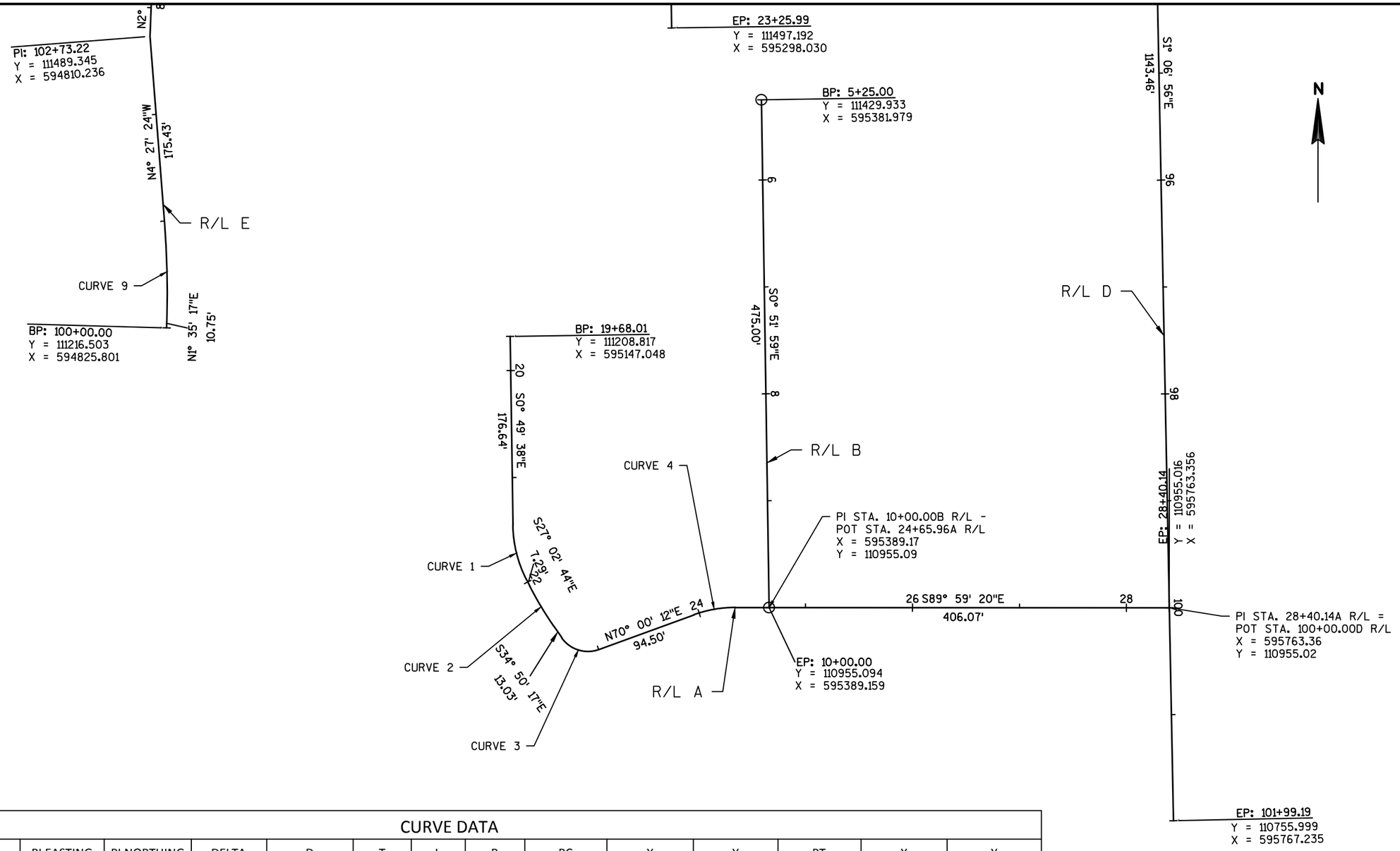


PROJECT NO:3738-08-70	HWY: STH 165	COUNTY:KENOSHA	TRAFFIC CONTROL STAGE 3B	SHEET 91	E

FILE NAME : N:\PDS\C3D\CAD\37380800\025003_TC_REV.DWG
LAYOUT NAME - 025032_TC

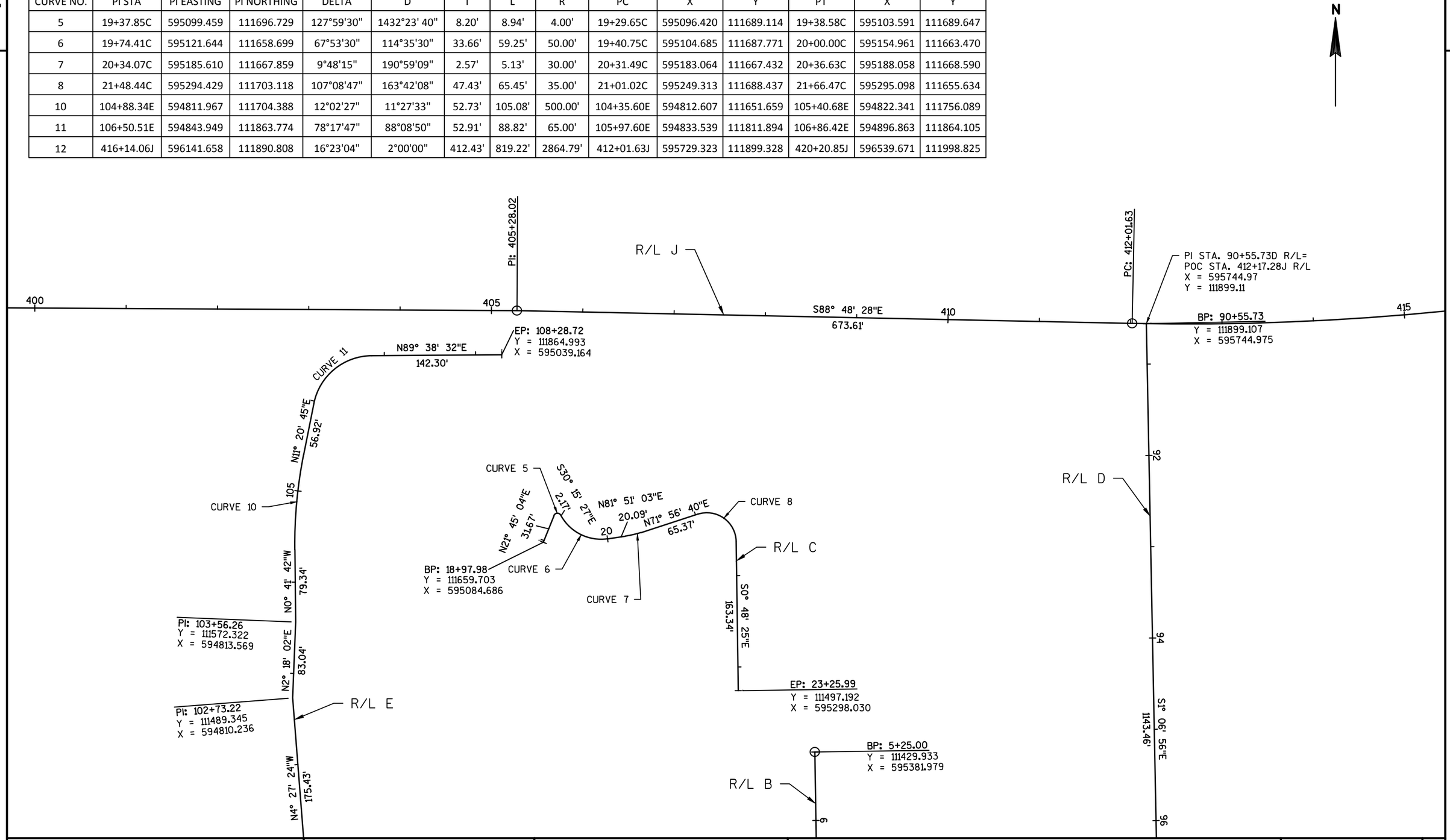
PLOT DATE : 1/30/2018 1:00 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42



CURVE DATA														
CURVE NO.	PI STA	PI EASTING	PI NORTHING	DELTA	D	T	L	R	PC	X	Y	PT	X	Y
1	21+71.42A	595149.985	111005.421	26°13'06"	49°49'21"	26.78'	52.62'	115.00'	21+44.64A	595149.598	111032.198	21+97.27A	595162.162	110981.568
2	22+26.35A	595175.387	110955.663	7°47'33"	17°54'18"	21.79'	43.52'	320.00'	22+04.56A	595165.477	110975.075	22+48.08A	595187.837	110937.775
3	22+84.19A	595208.468	110908.133	75°09'32"	190°59'09"	23.09'	39.35'	30.00'	22+61.11A	595195.280	110927.081	23+00.46A	595230.163	110916.028
4	24+14.72A	595337.528	110955.099	20°00'28"	51°09'25"	19.76'	39.11'	112.00'	23+94.96A	595318.963	110948.343	24+34.07A	595357.285	110955.095
9	100+54.31E	594827.252	111271.019	6°02'40"	6°56'42"	43.56'	87.04'	825.00'	100+10.75E	594826.045	111227.477	100+97.79E	594823.867	111314.445

CURVE DATA														
CURVE NO.	PI STA	PI EASTING	PI NORTHING	DELTA	D	T	L	R	PC	X	Y	PT	X	Y
5	19+37.85C	595099.459	111696.729	127°59'30"	1432°23' 40"	8.20'	8.94'	4.00'	19+29.65C	595096.420	111689.114	19+38.58C	595103.591	111689.647
6	19+74.41C	595121.644	111658.699	67°53'30"	114°35'30"	33.66'	59.25'	50.00'	19+40.75C	595104.685	111687.771	20+00.00C	595154.961	111663.470
7	20+34.07C	595185.610	111667.859	9°48'15"	190°59'09"	2.57'	5.13'	30.00'	20+31.49C	595183.064	111667.432	20+36.63C	595188.058	111668.590
8	21+48.44C	595294.429	111703.118	107°08'47"	163°42'08"	47.43'	65.45'	35.00'	21+01.02C	595249.313	111688.437	21+66.47C	595295.098	111655.634
10	104+88.34E	594811.967	111704.388	12°02'27"	11°27'33"	52.73'	105.08'	500.00'	104+35.60E	594812.607	111651.659	105+40.68E	594822.341	111756.089
11	106+50.51E	594843.949	111863.774	78°17'47"	88°08'50"	52.91'	88.82'	65.00'	105+97.60E	594833.539	111811.894	106+86.42E	594896.863	111864.105
12	416+14.06J	596141.658	111890.808	16°23'04"	2°00'00"	412.43'	819.22'	2864.79'	412+01.63J	595729.323	111899.328	420+20.85J	596539.671	111998.825



PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	ALIGNMENT LAYOUT	SHEET	E

FILE NAME : N:\PDS\C3D\CAD\37380800\027203_AD.DWG
LAYOUT NAME - 027203_AD - 027203_AD (2)

PLOT DATE : 12/5/2017 3:08 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2

BM 10093
N: 111971.38
E: 594688.57
Z: 731.67'
BM4 ALUMINUM DISK

10093
731.670
BM

CP 501
N: 111790.472
E: 595000.699
Z: 720.06'
39" BERNTSEN FENO MONUMENT
W/ ALUMINUM CAP

501
720.060
CP

CP502
N: 112017.662
E: 595631.000
Z: 698.83'
39" BERNTSEN FENO MONUMENT
W/ ALUMINUM CAP

502
698.830
CP

503
684.760
CP

CP503
N: 112035.198
E: 596165.734
Z: 684.76'
39" BERNTSEN FENO MONUMENT
W/ ALUMINUM CAP

24
732.490
CP

CP24
N: 111848.328
E: 593726.116
Z: 732.49'
39" BERNTSEN FENO MONUMENT
W/ ALUMINUM CAP

518
695.890
CP

CP518
N: 111217.052
E: 595718.813
Z: 695.89'
39" BERNTSEN FENO MONUMENT
W/ ALUMINUM CAP

STH 165

IH 94 NB EXIT RAMP

IH 94/ IH 41

RV EXPANSION

PLEASANT PRAIRIE WELCOME CENTER

CAR PARKING

TRUCK PARKING

WELCOME CENTER EXIT

120TH AVE

N

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CONTROL POINTS	SHEET 94	E

FILE NAME : N:\PDS\C3D\CAD\37380800\027204_AD.DWG
LAYOUT NAME - 027204_AD

PLOT DATE : 12/5/2017 3:09 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:200 FT

3738-08-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	8.000	8.000
0004	201.0205	Grubbing	STA	8.000	8.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	204.0100	Removing Pavement	SY	4,579.000	4,579.000
0010	204.0120	Removing Asphaltic Surface Milling	SY	118.000	118.000
0012	204.0150	Removing Curb & Gutter	LF	1,370.000	1,370.000
0014	204.0155	Removing Concrete Sidewalk	SY	224.000	224.000
0016	204.0190	Removing Surface Drains	EACH	1.000	1.000
0018	204.0195	Removing Concrete Bases	EACH	7.000	7.000
0020	204.0220	Removing Inlets	EACH	7.000	7.000
0022	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	83.000	83.000
0024	204.9060.S	Removing (item description) 01. Picnic Shelter	EACH	1.000	1.000
0026	204.9060.S	Removing (item description) 02. Luminaires	EACH	40.000	40.000
0028	204.9060.S	Removing (item description) 03. Lighting Unit	EACH	5.000	5.000
0030	204.9105.S	Removing (item description) 04. Loop Detector Wire & Lead-In Cable STH 165 & E. Front. Rd (120th Ave)	LS	1.000	1.000
0032	205.0100	Excavation Common	CY	3,713.000	3,713.000
0034	205.0400	Excavation Marsh	CY	2,822.000	2,822.000
0036	208.1100	Select Borrow	CY	3,950.000	3,950.000
0038	213.0100	Finishing Roadway (project) 01. 3738-08-70	EACH	1.000	1.000
0040	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,725.000	2,725.000
0042	310.0110	Base Aggregate Open-Graded	TON	217.000	217.000
0044	320.0145	Concrete Base 8-Inch	SY	343.000	343.000
0046	415.0080	Concrete Pavement 8-Inch	SY	3,898.000	3,898.000
0048	415.0100	Concrete Pavement 10-Inch	SY	1,067.000	1,067.000
0050	415.5110.S	Concrete Pavement Joint Layout	LS	1.000	1.000
0052	416.0512	Concrete Truck Apron 12-Inch	SY	158.000	158.000
0054	416.0610	Drilled Tie Bars	EACH	1,170.000	1,170.000
0056	416.0620	Drilled Dowel Bars	EACH	48.000	48.000
0058	416.1010	Concrete Surface Drains	CY	6.000	6.000
0060	416.1725	Concrete Pavement Replacement SHES	SY	79.000	79.000
0062	420.1000	Continuous Diamond Grinding Concrete Pavement	SY	3,539.000	3,539.000
0064	465.0105	Asphaltic Surface	TON	38.000	38.000
0066	504.0900	Concrete Masonry Endwalls	CY	16.000	16.000
0068	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0070	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	2.000	2.000
0072	522.2329	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	LF	144.000	144.000
0074	522.2338	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 38x60-Inch	LF	156.000	156.000

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Line	Item	Item Description	Unit	Total	Qty
0076	522.2414	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 14x23-Inch	LF	50.000	50.000
0078	522.2614	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 14x23-Inch	EACH	2.000	2.000
0080	601.0409	Concrete Curb & Gutter 30-Inch Type A	LF	4,378.000	4,378.000
0082	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	527.000	527.000
0084	602.0410	Concrete Sidewalk 5-Inch	SF	1,050.000	1,050.000
0086	602.0415	Concrete Sidewalk 6-Inch	SF	352.000	352.000
0088	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	16.000	16.000
0090	606.0200	Riprap Medium	CY	10.900	10.900
0092	608.3012	Storm Sewer Pipe Class III-A 12-Inch	LF	13.000	13.000
0094	608.3015	Storm Sewer Pipe Class III-A 15-Inch	LF	24.000	24.000
0096	608.3018	Storm Sewer Pipe Class III-A 18-Inch	LF	82.000	82.000
0098	611.0420	Reconstructing Manholes	EACH	1.000	1.000
0100	611.0612	Inlet Covers Type C	EACH	1.000	1.000
0102	611.0615	Inlet Covers Type F	EACH	1.000	1.000
0104	611.0624	Inlet Covers Type H	EACH	4.000	4.000
0106	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0108	611.3004	Inlets 4-FT Diameter	EACH	3.000	3.000
0110	611.3230	Inlets 2x3-FT	EACH	2.000	2.000
0112	611.8115	Adjusting Inlet Covers	EACH	8.000	8.000
0114	612.0104	Pipe Underdrain 4-Inch	LF	620.000	620.000
0116	618.0100	Maintenance And Repair of Haul Roads (project) 01. 3738-08-70	EACH	1.000	1.000
0118	619.1000	Mobilization	EACH	1.000	1.000
0120	624.0100	Water	MGAL	26.000	26.000
0122	625.0100	Topsoil	SY	791.000	791.000
0124	625.0500	Salvaged Topsoil	SY	11,034.000	11,034.000
0126	627.0200	Mulching	SY	10,818.000	10,818.000
0128	628.1104	Erosion Bales	EACH	580.000	580.000
0130	628.1504	Silt Fence	LF	2,009.000	2,009.000
0132	628.1520	Silt Fence Maintenance	LF	2,009.000	2,009.000
0134	628.1905	Mobilizations Erosion Control	EACH	15.000	15.000
0136	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0138	628.2008	Erosion Mat Urban Class I Type B	SY	12,998.000	12,998.000
0140	628.7015	Inlet Protection Type C	EACH	29.000	29.000
0142	628.7020	Inlet Protection Type D	EACH	9.000	9.000
0144	628.7504	Temporary Ditch Checks	LF	120.000	120.000
0146	628.7555	Culvert Pipe Checks	EACH	8.000	8.000
0148	628.7570	Rock Bags	EACH	135.000	135.000

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Line	Item	Item Description	Unit	Total	Qty
0150	629.0210	Fertilizer Type B	CWT	6.900	6.900
0152	630.0160	Seeding Mixture No. 60	LB	149.000	149.000
0154	630.0200	Seeding Temporary	LB	15.000	15.000
0156	631.0300	Sod Water	MGAL	19.000	19.000
0158	631.1000	Sod Lawn	SY	803.000	803.000
0160	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	61.000	61.000
0162	637.1220	Signs Type I Reflective SH	SF	228.000	228.000
0164	637.2210	Signs Type II Reflective H	SF	537.144	537.144
0166	637.2230	Signs Type II Reflective F	SF	58.500	58.500
0168	638.2102	Moving Signs Type II	EACH	9.000	9.000
0170	638.2601	Removing Signs Type I	EACH	5.000	5.000
0172	638.2602	Removing Signs Type II	EACH	27.000	27.000
0174	638.3000	Removing Small Sign Supports	EACH	35.000	35.000
0176	638.3100	Removing Structural Steel Sign Supports	EACH	2.000	2.000
0178	641.8100	Overhead Sign Support (structure) 01. S-30-0256	LS	1.000	1.000
0180	642.5001	Field Office Type B	EACH	1.000	1.000
0182	643.0300	Traffic Control Drums	DAY	5,647.000	5,647.000
0184	643.0420	Traffic Control Barricades Type III	DAY	1,158.000	1,158.000
0186	643.0705	Traffic Control Warning Lights Type A	DAY	2,268.000	2,268.000
0188	643.0715	Traffic Control Warning Lights Type C	DAY	20.000	20.000
0190	643.0800	Traffic Control Arrow Boards	DAY	4.000	4.000
0192	643.0900	Traffic Control Signs	DAY	1,556.000	1,556.000
0194	643.0910	Traffic Control Covering Signs Type I	EACH	1.000	1.000
0196	643.1050	Traffic Control Signs PCMS	DAY	10.000	10.000
0198	643.5000	Traffic Control	EACH	1.000	1.000
0200	645.0120	Geotextile Type HR	SY	32.000	32.000
0202	646.1020	Marking Line Epoxy 4-Inch	LF	2,712.000	2,712.000
0204	646.1545	Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	LF	275.000	275.000
0206	646.3020	Marking Line Epoxy 8-Inch	LF	932.000	932.000
0208	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	466.000	466.000
0210	646.5020	Marking Arrow Epoxy	EACH	21.000	21.000
0212	646.5120	Marking Word Epoxy	EACH	7.000	7.000
0214	646.5220	Marking Symbol Epoxy	EACH	4.000	4.000
0216	646.6120	Marking Stop Line Epoxy 18-Inch	LF	104.000	104.000
0218	646.7120	Marking Diagonal Epoxy 12-Inch	LF	661.000	661.000
0220	646.8120	Marking Curb Epoxy	LF	689.000	689.000
0222	646.8320	Marking Parking Stall Epoxy	LF	4,643.000	4,643.000
0224	646.9000	Marking Removal Line 4-Inch	LF	1,406.000	1,406.000
0226	646.9100	Marking Removal Line 8-Inch	LF	932.000	932.000
0228	650.4000	Construction Staking Storm Sewer	EACH	9.000	9.000

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Line	Item	Item Description	Unit	Total	Qty
0230	650.4500	Construction Staking Subgrade	LF	2,304.000	2,304.000
0232	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,400.000	1,400.000
0234	650.6000	Construction Staking Pipe Culverts	EACH	5.000	5.000
0236	650.7000	Construction Staking Concrete Pavement	LF	2,154.000	2,154.000
0238	650.8500	Construction Staking Electrical Installations (project) 01. 3738-08-70	LS	1.000	1.000
0240	650.9910	Construction Staking Supplemental Control (project) 01. 3738-08-70	LS	1.000	1.000
0242	650.9920	Construction Staking Slope Stakes	LF	2,493.000	2,493.000
0244	652.0210	Conduit Rigid Nonmetallic Schedule 40 1-Inch	LF	220.000	220.000
0246	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,672.000	1,672.000
0248	652.0615	Conduit Special 3-Inch	LF	100.000	100.000
0250	652.0800	Conduit Loop Detector	LF	84.000	84.000
0252	653.0115	Pull Boxes Steel 12x36-Inch	EACH	1.000	1.000
0254	653.0135	Pull Boxes Steel 24x36-Inch	EACH	1.000	1.000
0256	653.0140	Pull Boxes Steel 24x42-Inch	EACH	5.000	5.000
0258	653.0905	Removing Pull Boxes	EACH	4.000	4.000
0260	654.0105	Concrete Bases Type 5	EACH	8.000	8.000
0262	654.0111	Concrete Bases Type 11	EACH	3.000	3.000
0264	654.0220	Concrete Control Cabinet Bases Type 10	EACH	1.000	1.000
0266	655.0610	Electrical Wire Lighting 12 AWG	LF	999.000	999.000
0268	655.0615	Electrical Wire Lighting 10 AWG	LF	1,000.000	1,000.000
0270	655.0620	Electrical Wire Lighting 8 AWG	LF	3,830.000	3,830.000
0272	655.0630	Electrical Wire Lighting 4 AWG	LF	2,640.000	2,640.000
0274	655.0700	Loop Detector Lead In Cable	LF	296.000	296.000
0276	655.0800	Loop Detector Wire	LF	852.000	852.000
0278	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	6.000	6.000
0280	657.0322	Poles Type 5-Aluminum	EACH	6.000	6.000
0282	657.0715	Luminaire Arms Truss Type 4 1/2-Inch Clamp 15-FT	EACH	6.000	6.000
0284	659.1120	Luminaires Utility LED B	EACH	34.000	34.000
0286	690.0250	Sawing Concrete	LF	3,698.000	3,698.000
0288	715.0415	Incentive Strength Concrete Pavement	DOL	1,296.000	1,296.000
0298	SPV.0060	Special 21. Lighting Units Walkway LED	EACH	3.000	3.000
0300	SPV.0060	Special 22. Post Top Luminaires Utility Led	EACH	11.000	11.000
0302	SPV.0060	Special 25. Repair Picnic Table Type1	EACH	2.000	2.000
0304	SPV.0060	Special 26. Rest Area Picnic Shelters	EACH	1.000	1.000
0306	SPV.0060	Special 27. Grading Shaping Finishing Picnic Shelters	EACH	1.000	1.000
0308	SPV.0060	Special 29.Salvage & Reinstall Ramp Gate Assembly	EACH	1.000	1.000
0310	SPV.0085	Special 01. Concrete Pavement Corner Repair Partial Depth	LB	10,901.000	10,901.000

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Line	Item	Item Description	Unit	Total	Qty
0318	SPV.0105	Special 04. Repair Dam	LS	1.000	1.000
0320	SPV.0105	Special 11. Lighting System Integrator	LS	1.000	1.000
0322	SPV.0105	Special 12. Lighting System Survey	LS	1.000	1.000

CLEARING AND GRUBBING ITEMS

CATEGORY	STATION	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
0010					
	22+00 'A'	28+00 'A'	RT/LT	6	6
	21+00 'C'	23+00 'C'	RT	2	2
	TOTALS:			8	8

REMOVING CULVERT ITEMS

CATEGORY	LOCATION	STATION	OFFSET	DESCRIPTION	203.0100 REMOVING SMALL PIPE CULVERTS EACH
0010	STH 165	404+26 'J'	RT	RAMP REMOVAL	1
	TOTAL:				1

REMOVING PAVEMENT

CATEGORY	ROADWAY	LOCATION	204.0100 REMOVING PAVEMENT SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0155 REMOVING CONCRETE SIDEWALK SY	NOTES
0010	RV EXPANSION	408+09 'J' - 408+54 'J'	--	--	19.0	CONCRETE ISLAND
	TRUCK PARKING	7+80 'B' - 9+56 'B'	700.0	--	--	
	RV EXPANSION	19+00 'C' - 19+75 'C'	46.7			
	RV EXPANSION	21+23 'C' - 22+68 'C'	--	--	188.0	
	RV EXPANSION	23+05 'C' - 23+25 'C'	5.1	--	--	
	RV EXPANSION	22+30 'C', 80' RT	--	--	11.0	CONCRETE PAD
	NB OFF-RAMP	101+00 'E' - 405+52 'J'	2187.8	--	--	
	STAGE 1 TOTALS:		2939.6	0.0	218.0	
	WELCOME CENTER EXIT	21+16 'A' - 23+59 'A'	365.1	--	--	
	CAR PARKING	WELCOME CENTER ENTRANCE	--	--	6.0	
	STAGE 2 TOTALS:		365.1	0.0	6.0	
	120TH AVE	91+25 'D' - 92+30 'D'	--	118.0	--	
	120TH AVE	92+30 'D' - 93+32 'D'	86.9	--	--	
	120TH AVE	92+30 'D' - 94+52 'D'	300.9	--	--	
	STH 165	405+98 'J' - 411+77 'J'	886.8	--	--	
	STAGE 3B TOTALS:		1274.6	118.0	0.0	
	TOTALS :		4,579	118	224	

REMOVING CURB & GUTTER

CATEGORY	LOCATION	STATION		STATION	OFFSET	204.0150 REMOVING CURB & GUTTER LF	NOTES
0010	WELCOME CENTER EXIT	22+53 'A'			LT/RT	24	
	WELCOME CENTER EXIT	22+63 'A'	-	24+90 'A'	RT/LT	247	
	TRUCK PARKING	7+50 'B'	-	9+25 'B'	LT	101	
	RV EXPANSION	19+00 'C'	-	23+22 'C'	RT	365	
	120TH AVE	93+32 'D'	-	93+75 'D'	RT	43	
	120TH AVE	94+51 'D'	-	96+00 'D'	RT	149	
	120TH AVE	94+50 'D'	-	96+00 'D'	RT	150	
	120TH AVE	99+49 'D'	-	101+53 'D'	RT	207	
	STH 165	408+07 'J'	-	408+56 'J'	RT	108	ISLAND
TOTAL:						1,370	

REMOVING INLETS

CATEGORY	ROADWAY	STATION	OFFSET	204.0220 REMOVING INLETS EACH	NOTES
0010	RV EXPANSION	23+02 'C'	0.5' RT	1	REPLACE
	RAMP EDGE	102+29 'E'	21' RT	1	
	RAMP EDGE	102+30 'E'	5' LT	1	
	RAMP EDGE	102+32 'E'	5' RT	1	
	RAMP EDGE	105+19 'E'	135.56' RT	1	
	120TH AVE	94+54 'D'	1' RT	1	REPLACE
	STH 165	411+01 'J'	50.22' RT	1	
TOTAL :				7	

REMOVING SURFACE DRAINS

CATEGORY	LOCATION	STATION	OFFSET	DESCRIPTION	204.0190 REMOVING SURFACE DRAINS EACH
0010	STH 165	406+23.68 'J'	168.30' RT		1
TOTAL:					1

REMOVING STORM SEWER

CATEGORY	ROADWAY	STATION		STATION	OFFSET	204.0245.01 REMOVING STORM SEWER (SIZE) 12-INCH LF
0010	120TH AVE	94+54 'D'	-	94+54 'D'	RT	17
	RAMP EDGE	102+29 'E'	-	102+30 'E'	RT/LT	54
	STH 165	411+01 'J'	-	411+01 'J'	RT	12
TOTAL:						83

FINISHING ROADWAY PROJECT ID 3738-08-70

CATEGORY	STAGE		213.0100 FINISHING ROADWAY (3738-08-70) EACH
0010	ALL	PROJECT	1
TOTAL:			1

Division	From / To Station	Location	Common Excavation (1)	Salvaged / Unusable Pavement Material	Available Material (4)	Marsh Excavation (5)	Expanded Marsh Backfill (6)	Unexpanded Fill	Expanded Fill (7)	Mass Ordinate + / - (8)	Comment:
			Cut (2) (item # 205.0100)	(3)		(item #205.0400)	Factor 1.40		Factor 1.20		
Division 1											
WELCOME CENTER EXIT	21+16.11/28+18.13		373	268	373	2,822	3,950	2,396	2,875	1,448	
TRUCK PARKING	07+50.05/09+50		88	268	88	0	0	156	187	-100	
RV EXPANSION	19+00/23+22		1,157	0	1,157	0	0	0	0	1,157	
120TH AVE	92+30.12/95+99.95		320	0	320	0	0	7	8	311	
RAMP EDGE	100+00/105+50		964	485	964	0	0	791	950	14	
STH 165	406+00/411+79.37		813	0	813	0	0	294	353	460	
Division 1 Subtotal			3,713	1,021	3,713	2,822	3,950	3,644	4,373	3,291	
Grand Total			3,713	1,021	3,713	2,822	3,950	3,644	4,373	3,291	
Total Common Exc			3,713								

1) Common Excavation is the sum of the Cut column. Item number 205.0100
2) Salvaged/Unusable Pavement Material is included in Cut.
3) Salvaged/Unusable Pavement Material
4) Available Material = Cut - Salvaged/Unusable Pavement Material
5) Marsh Excavation - to be backfilled with Select Borrow Material. Item number 205.0400
6) Expanded Marsh Backfill - This is to be filled with Select Borrow material which is shown in the Base Aggregate Items table. Marsh Backfill Factor = 1.4.
7) Expanded Fill. Factor = 1.20

Expanded Fill = (Unexpanded Fill) * Fill Factor

8) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

BASE AGGREGATE ITEMS

CATEGORY	LOCATION	STATION	STATION	305.0120 BASE AGGREGATE DENSE, 1 1/4-INCH TON	310.0110 BASE AGGREGATE OPEN GRADED TON	208.1100 SELECT BORROW CY	624.0100 WATER MGAL	COMMENTS:
0010	WELCOME CENTER EXIT	22+69 'A'	- 28+18 'A'	1,111	--	3950	11	
	TRUCK PARKING	6+15 'B', 35' RT		11	--	--	--	PICNIC SHELTER
	TRUCK PARKING	7+50 'B'	- 9+07 'B'	42	--	--	--	CURB, LEFT
	RV EXPANSION	19+00 'C'	- 23+22 'C'	484	--	--	5	INCL ISLAND REPLACEMENT
	RV EXPANSION	20+52 'C'	- 22+78 'C'	27	--	--	--	SIDEWALK
	RV EXPANSION	22+30 'C', 76' RT		2	--	--	--	PICNIC SHELTER
	STAGE 1 SUBTOTAL:			1,677	--	3,950	16	
	WELCOME CENTER EXIT	21+16 'A'	- 22+53 'A'	108	--	--	1	
	RAMP EDGE	100+00 'E'	- 102+75 'E'	153	--	--	2	
	NEW CURB	104+09 'E'	- 105+78 'E'	27	--	--	--	
	STAGE 2 SUBTOTAL:			288	--	--	3	
	120TH AVE	92+30 'D'	- 96+00 'D'	276	--	--	3	
	STH 165	406+34 'J'	- 92+35 'D'	484	217	--	5	
	STAGE 3BSUBTOTAL:			760	217	--	8	
	TOTAL:			2,725	217	3,950	26	

* - SELECT BORROW WILL BE USED FOR MARSH EXCAVATION BACKFILL.

DIAMOND GRINDING

CATEGORY	STAGE	LOCATION	420.1000 CONCRETE PAVEMENT CONTINUOUS DIAMOND GRINDING SY
0010	3A	CAR PARKING	3539
	TOTAL:		3539

ASPHALTIC PAVEMENT ITEMS

CATEGORY	LOCATION	STATION	STATION	SY	465.0105 ASPHALTIC SURFACE TON
0010	120TH AVE	91+25 'D'	96+00 'D'		38
	TOTAL:				38

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CONCRETE ITEMS

CATEGORY	LOCATION	STATION		STATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.0100 CONCRETE PAVEMENT 10-INCH SY	320.0145 CONCRETE BASE 8-INCH SY	416.0512 CONCRETE TRUCK APRON 12-INCH SY	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES SY	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0551 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A LF	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT DOL
0010	WELCOME CENTER EXIT	22+69 'A'	-	28+18 'A'	1,904	--	--	158	28	--	--	--	--	565
	WELCOME CENTER EXIT, LT	25+13.25 'A'	-	28+17 'A'	--	--	--	--	--	--	--	--	331	--
	WELCOME CENTER EXIT, RT	22+69 ' A'	-	27+65 'A'	--	--	--	--	--	--	--	506	--	--
	WELCOME CENTER EXIT, LT	22+69 'A'	-	24+66 'A'	--	--	--	--	55	--	--	374	--	--
	TRUCK PARKING, LT	7+50 'B'	-	9+07.43 'B'	--	--	--	--	64	--	--	179	--	--
	TRUCK PARKING, LT	9+07.43 'B'	-	9+51.26 'B'	--	--	--	--	24	--	--	--	47	--
	RV EXPANSION	20+25 'C'	-	23+22 'C'	1,176	--	--	--	159	--	--	--	--	353
	RV EXPANSION	19+00 'C'	-	23+24 'C'	--	--	--	--	--	--	--	367	--	--
	STH 165 (RV PARKING)	408+07 'J'	-	408+56 'J'	52	--	--	--	--	--	--	--	--	16
	120TH AVE, RT	100+17 'D'	-	101+54 'D'	--	--	--	--	--	--	--	--	149	--
	120TH AVE, RT	99+47 'D'	-	101+54 'D'	--	--	--	--	68	--	--	--	--	--
	STAGE 1 SUBTOTALS:				3,132	--	--	158	398	--	--	1,426	527	934
	RAMP EDGE	100+00 'E'	-	102+75 'E'	--	186	--	--	104	8	--	275	--	56
	NEW CURB	104+09 'E'	-	105+78 'E'	--	--	--	--	41	--	--	123	--	--
	WELCOME CENTER EXIT	21+45 'A'	-	22+53 'A'	140	--	--	--	29	--	--	--	--	42
	WELCOME CENTER EXIT, LT	21+16 'A'	-	23+59 'A'	--	--	--	--	38	--	--	222	--	--
	WELCOME CENTER EXIT, RT	21+96 'A'	-	22+48 'A'	--	--	--	--	--	--	--	55	--	--
	STAGE 2 SUBTOTALS:				140	186	--	--	212	8	--	675	--	98
	120TH AVE, RT	92+30 'D'	-	96+00 'D'	--	--	--	--	--	--	--	370	--	--
	120TH AVE, RT	92+30 'D'	-	96+00 'D'	--	--	343	--	273	8	--	370	--	--
	STH 165	406+00 'J'	-	411+79 'J'	--	881	--	--	287	32	79	807	--	264
	STAGE 3B SUBTOTALS:				--	881	343	--	560	40	79	1,548	--	264
	UNDISTRIBUTED				626	--	--	--	--	--	--	730	--	--
	TOTALS:				3,898	1,067	343	158	1,170	48	79	4,378	527	1,296

CONCRETE SURFACE DRAIN

CATEGORY	ROADWAY	STATION	LOCATION	416.1010 CONCRETE SURFACE DRAINS CY	REMARKS
0010	WELCOME CENTER EXIT	24+67 'A'	12' RT	1.0	
	WELCOME CENTER EXIT	27+70 'A'	12' LT	1.0	
	WELCOME CENTER EXIT	27+72 'A'	16' RT	1.0	
	TRUCK PARKING	8+98 'B'	55' LT	1.5	
	RV EXPANSION	20+05 'C'	77' LT	1.5	
TOTAL:				6.0	

CONCRETE MASONRY ENDWALLS

CATEGORY	ROADWAY	STATION	504.0900 CONCRETE MASONRY ENDWALLS CY	REMARKS
0010	WELCOME CENTER EXIT	26+00.80 'A'	5	RT
	WELCOME CENTER EXIT	26+42.86 'A'	5	LT
	WELCOME CENTER EXIT	26+36.21 'A'	3	RT
	WELCOME CENTER EXIT	26+75.31 'A'	3	LT
TOTAL:			16	

CONCRETE SIDEWALK

CATEGORY	LOCATION	STATION	STATION	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0415 CONCRETE SIDEWALK 6-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF
0010	RV EXPANSION	20+52 'C'	- 22+78 'C'	996	--	8
	RV EXPANSION	22+30 'C', 76' RT		--	64	
	TRUCK PARKING	6+15' B', 35' RT		--	288	--
	STAGE 1 SUBTOTALS:			996	352	8
	CAR PARKING	WELCOME CTR ENTRANCE		54	--	8
	STAGE 2 SUBTOTALS:			54	0	8
	TOTALS:			1,050	352	16

SAW CUTTING ITEMS

CATEGORY	STAGE	ROADWAY	FROM STATION	TO STATION	OFFSET	690.0250 SAWING CONCRETE LF	REMARKS
0010	1	VC EXIT	22+63 'A'	24+90 'A'	RT/LT	249	
		TRUCK PARKING	7+50 'B'	9+53 'B'	LT	262	
		RV EXPANSION	19+00 'C'	23+22 'C'	0	449	EXISTING CURB FLANGE
		RV EXPANSION	22+56 'C'	22+69 'C'	RT	14	SIDEWALK PATH
		RV EXPANSION				127	ISLAND
	STAGE 1 SUBTOTAL:					1,101	
	2	VC EXIT	21+16 'A'	21+98 'A'	RT	95	
		VC EXIT	22+53 'A'		LT/RT	116	
		RAMP EDGE	100+00 'E'	102+75 'E'	LT	298	
		RAMP EDGE	104+09 'E'	105+78 'E'	RT	128	
		CAR PARKING				21	SW OF WELCOME CENTER BUILDING
	STAGE2 SUBTOTAL:					658	
	3B	120TH AVE	92+30 'D'	96+00 'D'	RT	376	
		120TH AVE	92+30 'D'	96+00 'D'	0	385	
		120TH AVE	99+47 'D'	101+53 'D'	RT	212	EXISTING CURB FLANGE
		STH 165	406+39 'J'	92+35 'D'	RT	966	
	STAGE 3B SUBTOTAL:					1,939	
TOTAL:						3,698	

CROSS CULVERT ITEMS

CATEGORY	ROADWAY	STATION	INLET END STATION	INLET END OFFSET	INLET END ELEV	DISCHARGE END STATION	DISCHARGE END OFFSET	DISCHARGE END ELEV	SLOPE (%)	522.2338 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 38 X 60 INCH LF	522.2329 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 29 X 45 INCH LF	522.2414 ** CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 14 X 23 INCH LF	522.2614 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 14 X 23 INCH EACH	COMMENTS:
0010	'A'	26+15.50	25+96.23	29.30' RT	692.41	26+38.26	34.60' LT	691.83	0.76	78	--	--	--	
	'A'	26+24.98	26+05.62	29.47' RT	692.40	26+47.66	34.53' LT	691.64	1.00	78	--	--	--	
	'A'	26+50.94	26+32.36	28.20' RT	693.01	26+71.49	31.20' LT	691.79	1.71	--	72	--	--	
	'A'	26+58.65	26+40.08	28.30' RT	692.67	26+79.12	31.20' LT	691.79	1.24	--	72	--	--	
	'A'	27+59.40	27+54.08	28.70' RT	691.72	27+64.38	26.90' LT	691.43	0.51	--	--	50	2	6 JOINT TIES REQ'D***
TOTAL:										156	144	50	2	

NOTES
1) STATION OFFSETS AND INVERT ELEVATIONS SHOWN ARE TO THE END OF THE APRON ENDWALLS.
2) JOINT TIES FOR CONCRETE PIPE SHALL BE PROVIDED AT CONCRETE APRON ENDWALLS. PIPE JOINTS SHALL BE TIED FOR THE LAST THREE JOINTS
JOINT TIES ARE NOT REQUIRED FOR CONCRETE PIPES WITH CONCRETE MASONRY ENDWALLS.
AT PIPE ENDS. THE COST OF THE JOINT TIES SHALL BE INCIDENTAL TO THE COST OF THE PIPE.
3) BACKFILL GRANULAR IS INCIDENTAL TO THE COST OF THE INSTALLATION OF THE PIPE

**PIPE LENGTH IS FROM END OF PIPE TO END OF PIPE AND DOES NOT INCLUDE LENGTH OF THE APRON ENDWALL
***TIE THE APRON AND LAST TWO JOINTS AT OUTFALL LOCATIONS, SEE SDD.

DRAINAGE STRUCTURE TABLE

INLET NO.	ROADWAY	STATION	OFFSET	STRUCTURE TYPE MANHOLE	STRUCTURE TYPE INLET	COVER TYPE	GRATE ELEVATION	DEPTH FT	LOCATION FROM	LOCATION TO	SIZE IN	LENGTH FT	TYPE	GRADE %	INVERT ELEVATION INLET	INVERT ELEVATION DISCHARGE	REMARKS	CONCRETE COLLARS FOR PIPE	APRON ENDWALLS
6	'A'	25+35	26.6' LT	--	4-FT	F	698.455	3.48	6	7	18	38**	CL III	0.35%	694.976	694.845	3 JOINT TIES REQ'D***	--	1
10	'C'	23+01	16.3' RT	--	4-FT	H	710.000	3.58	10	11	15	16	CL III	0.74%	706.416	706.300	--	--	--
11	'C'	23+02	0.7' RT	4-FT	--	C	709.748	3.43	--	--	--	--	--	--	--	--	--	--	--
12	'D'	94+55	10.4' RT	--	4-FT	H	698.822	3.19	12	E13	15	8	CL III	1.05%	695.630	695.550	--	--	--
14	'E'	101+92	0.8' RT	--	2X3-FT	H	718.979	2.98	14	15	18	44**	CL III	0.50%	716.000	715.780	3 JOINT TIES REQ'D***	--	1
16	J'	411+01	51.2' RT	--	2X3-FT	H	700.400	5.40	16	EXIST PIPE	12	13	CL III	1.00%	695.000	694.871	CONNECT TO EXIST	1	--

NOTES
1) STATION OFFSETS AND INVERT ELEVATIONS SHOWN ARE TO THE END OF THE APRON ENDWALLS.
2) JOINT TIES FOR CONCRETE PIPE SHALL BE PROVIDED AT ALL CONCRETE APRON ENDWALLS. PIPE JOINTS SHALL BE TIED FOR THE LAST THREE JOINTS
AT PIPE ENDS. THE COST OF THE JOINT TIES SHALL BE INCIDENTAL TO THE COST OF THE PIPE.
3) BACKFILL GRANULAR IS INCIDENTAL TO THE COST OF THE INSTALLATION OF THE PIPE

**PIPE LENGTH IS FROM END OF PIPE TO END OF PIPE AND DOES NOT INCLUDE LENGTH OF THE APRON ENDWALL
***TIE THE APRON AND LAST TWO JOINTS AT OUTFALL LOCATIONS, SEE SDD.

STORM SEWER PIPE QUANTITIES

CATEGORY	ROADWAY	STATION	611.0612 INLET COVERS TYPE C EACH	611.0615 INLET COVERS TYPE F EACH	611.0624 INLET COVERS TYPE H EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	608.3012 STORM SEWER PIPE CLASS III-A 12 INCH LF	608.3015 STORM SEWER PIPE CLASS III-A 15 INCH LF	608.3018 ** STORM SEWER PIPE CLASS III-A 18 INCH LF	520.8000 CONCRETE COLLARS FOR PIPE EACH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	COMMENTS:
0010	'A'	25+35	--	1	--	--	1	--	--	--	38	--	1	3 JOINT TIES REQ'D
	'C'	23+01	--	--	1	--	1	--	--	16	--	--	--	
	'C'	23+02	1	--	--	1	--	--	--	--	--	--	--	
	'D'	94+55	--	--	1	--	1	--	--	8	--	--	--	
	E'	101+92	--	--	1	--	--	1	--	--	44	--	1	3 JOINT TIES REQ'D
	J'	411+01	--	--	1	--	--	1	13	--	--	1	--	
TOTAL:			1	1	4	1	3	2	13	24	82	1	2	

NOTES
1) STATION OFFSETS AND INVERT ELEVATIONS SHOWN ARE TO THE END OF THE APRON ENDWALLS.
2) JOINT TIES FOR CONCRETE PIPE SHALL BE PROVIDED AT CONCRETE APRON ENDWALLS. PIPE JOINTS SHALL BE TIED FOR THE LAST THREE JOINTS
JOINT TIES ARE NOT REQUIRED FOR CONCRETE PIPES WITH CONCRETE MASONRY ENDWALLS.
AT PIPE ENDS. THE COST OF THE JOINT TIES SHALL BE INCIDENTAL TO THE COST OF THE PIPE.
3) BACKFILL GRANULAR IS INCIDENTAL TO THE COST OF THE INSTALLATION OF THE PIPE
4) PIPE LENGTHS ARE CALCULATED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE OR CENTER OF STRUCTURE TO APRON ENDWALLS

**PIPE LENGTH IS FROM CENTER OF STRUCTURE TO END OF PIPE AND DOES NOT INCLUDE LENGTH OF THE APRON ENDWALL
***TIE THE APRON AND LAST TWO JOINTS AT OUTFALL LOCATIONS, SEE SDD.

ADJUSTING/RECONSTRUCTING STORM SEWER STRUCTURES

CATEGORY	ROADWAY	STATION	OFFSET	611.8115 ADJUSTING INLET COVERS EACH	611.0420 RECONSTRUCTING MANHOLES EACH
0010	TRUCK PARKING	8+59 'B'	94.98' LT	1	--
	CAR PARKING	7+25 'B'	RT	2	--
	CAR PARKING	102+25 'E'	RT	2	--
	120TH AVE	91+30 'D'	11.14' RT	1	--
	120TH AVE	91+74 'D'	43.51' RT	1	--
	120TH AVE	93+55 'D'	5.34' RT	--	1
	120TH AVE	94+54 'D'	17.86' RT	1	--
TOTAL :				8	1

PIPE UNDERDRAIN

CATEGORY	LOCATION	STATION		STATION	612.0104 PIPE UNDERDRAIN 4-INCH LF
0010	STH 165	406+00 'J'	-	411+79 'J'	620
TOTALS:					620

RIPRAP

CATEGORY	ROADWAY	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
0010	WELCOME CENTER EXIT	24+67 'A'	12' RT	1.3	4
	WELCOME CENTER EXIT	25+68 'A'	43' LT	2.2	6
	WELCOME CENTER EXIT	27+70 'A'	12' LT	1.3	4
	WELCOME CENTER EXIT	27+72 'A'	16' RT	1.3	4
	TRUCK PARKING	8+98 'B'	55' LT	1.3	4
	RV EXPANSION	20+05 'C'	77' LT	1.3	4
	RAMP EDGE	101+92 'E'	45' RT	2.2	6
TOTALS:				10.9	32

HAUL ROAD MAINTENANCE

CATEGORY	STAGE	LOCATION	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS ID 3738-08-70 EACH
0010	ALL	PROJECT	1
	TOTAL:		1

RESTORATION ITEMS

CATEGORY	ROADWAY	STATION		STATION	OFFSET	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0160 SEEDING MIX NO. 60 LB	630.0200 SEEDING TEMPORARY LB	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
0010	WELCOME CENTER EXIT	21+16 'A'	-	22+53 'A'	LT/RT	583	--	583	0.4	8	--	--	--
	WELCOME CENTER EXIT	22+69 'A'	-	28+18 'A'	RT	--	1100	1100	0.4	15	--	--	--
	WELCOME CENTER EXIT	22+89'A'		24+65'A'	LT	--	204	--	0.1	3	--	--	--
	WELCOME CENTER EXIT	25+10 'A'	-	28+50 'A'	LT	--	1563	1563	0.8	21	--	--	--
	RV EXPANSION	19+00 'C'	-	23+26 'C'	RT/LT	--	595	--	0.4	--	--	14	595
	120TH AVE	91+30 'D'	-	96+52 'D'	RT	208	--	--	0.1	--	--	5	208
	RAMP EDGE	100+00 'E'	-	106+81 'E'	RT	--	5467	5467	3.4	74	--	--	--
	STH 165	406+00 'J'	-	411+80 'J'	RT	--	2105	2105	1.3	28	--	--	--
	UNDISTRIBUTED					--	--	--	--	--	15	--	--
TOTALS:						791	11,034	10,818	6.9	149	15	19	803

3

MOBILIZATION

CATEGORY	STAGE	LOCATION	619.1000 MOBILIZATION EACH
0010	ALL	PROJECT	1
	TOTAL:		1

FIELD OFFICE

CATEGORY	STAGE	LOCATION	642.5001 FIELD OFFICE TYPE B EACH
0010	ALL	PROJECT	1
	TOTAL:		1

EROSION CONTROL ITEMS

CATEGORY	ROADWAY	STATION		STATION	OFFSET	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1104 EROSION BALES EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
0010	WELCOME CENTER EXIT	21+16 'A'	-	22+53 'A'	RT	--	--	--	--	--	--	--	2	--	--	--
	WELCOME CENTER EXIT	22+69 'A'	-	28+18 'A'	RT	678	678	271	--	--	1100	--	--	--	5	--
	WELCOME CENTER EXIT	22+89'A'		24+65'A'	LT	--	--	--	--	--	204	--	--	--	--	--
	WELCOME CENTER EXIT	25+10 'A'	-	28+50 'A'	LT	484	484	193	--	--	1563	2	4	--	--	108
	TRUCK PARKING	7+25 'B'	-	9+95 'B'	RT	--	--	--	--	--	--	2	1	--	--	--
	TRUCK PARKING			5+36 'B' (380' RT)		--	--	--	--	--	--	1	--	--	--	--
	TRUCK PARKING			5+64 'B' (449' RT)		--	--	--	--	--	--	1	--	--	--	--
	TRUCK PARKING			7+03 'B' (216' RT)		--	--	--	--	--	--	1	--	--	--	--
	TRUCK PARKING			7+31 'B' (284' RT)		--	--	--	--	--	--	1	--	--	--	--
	RV EXPANSION	19+00 'C'	-	23+26 'C'	RT/LT	--	--	--	--	--	--	4	--	--	--	--
	120TH AVE	91+30 'D'	-	96+52 'D'	RT	--	--	--	--	--	--	6	--	--	--	--
	RAMP EDGE	100+00 'E'	-	106+81 'E'	RT	445	445	--	--	--	5467	3	--	68	--	--
	STH 165	406+00 'J'	-	411+80 'J'	RT	--	--	--	--	--	2105	2	--	28	1	--
	UNDISTRIBUTED					402	402	116	15	6	2559	6	2	24	2	27
	TOTALS:					2,009	2,009	580	15	6	12,998	29	9	120	8	135

SIGN NO.	SIGN CODE & SIZE	SIGN TYPE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVE SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [IN.] x H [IN.]	637.1220 SIGNS TYPE I [SF]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]
1	R3-6L(2S)	II	--	42 x 48	14.000	--	--	--	--	--	--	INSTALL ON S-30-12 I BEAMS INCIDENTAL	-- x --	--	1	--
2	--	II	[Q] WEST TO WEST FRONTAGE RD [A]	-- x --	--	--	--	--	--	--	--	INSTALL ON S-30-231 I BEAMS INCIDENTAL	10 x 8.5	85.00	1	--
3	R3-5R(2S)	II	--	42 x 48	14.000	--	--	--	--	--	--	INSTALL ON S-30-12 I BEAMS INCIDENTAL	-- x --	--	1	--
4	--	II	[165] EAST LAKEVIEW PKWY REST AREA TOURIST INFO [A]	-- x --	--	--	--	--	--	--	--	INSTALL ON S-30-231 I BEAMS INCIDENTAL	13 x 11	143.00	1	--
5	W12-1L	II	--	-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
6	W12-1L	II	--	-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
7	--	II	WEST NORTH [94] [41] MILWAUKEE [LEFT LANE]	-- x --	--	--	--	--	--	--	--		-- x --	--	1	2
8	--	II	NO PARKING ON RAMP	-- x --	--	--	1	2	--	--	--	--	-- x --	--	--	--
9	--	II	* NOT USED *	-- x --	--	--	--	--	--	--	--	* NOT USED *	-- x --	--	--	--
10	J3-1	II		-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
11	R5-1	II		-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
12	NOT USED	II					--	--	--		--	--	-- x --	--	--	--
13	R1-2	II		-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
14	W12-1D	II		-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
15	R11-54F	II		-- x --	--	--	1	2	--	--	--	--	-- x --	--	--	--
16	J3-1	II	EXISTING ASSEMBLY	-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
17	--	II	TRUCKS [A]	-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
18	R6-2L(2S)	II		24 x 30	5.000	--	--	--	--	1	--	--	-- x --	--	--	--
19	J3-1(2S)	II	--	24 x 105	17.500	--	1	1	--	2	--	--	-- x --	--	--	--
	MB4-5			24 X 12												
	MB3-3			24 x 12									-- x --	--	--	--
	M1-1		IH 41	24 x 24									-- x --	--	--	--
	MB3-2			24 X 12									-- x --	--	--	--
	M1-1		IH 94	24 X 24									-- x --	--	--	--
	MB6-1			21 X 21												
20	R5-1(2S)	II		30 x 30	6.250	--	--	--	--	1	--	--	-- x --	--	--	--
21	R5-1(2S)	II		30 x 30	6.250	--	--	--	--	1	--	--	-- x --	--	--	--
22	R6-2R	II		-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
23	R5-2	II		-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
24	R4-7	II		-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
25	R5-1	II		-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
26	D1-2	II	MILWAUKEE CHICAGO Sign	72 X 30	15.000	--	--	--	--	2	--	--	-- x --	--	--	--
27	R11-54F	II		-- x --	--	--	1	2	--	--	--	--	-- x --	--	--	--
28	J3-1(2S)	II	--	24 x 81	13.500	--	1	--	--	--	--	RE-USE POST	-- x --	--	--	--
	MB4-5			24 x 12									-- x --	--	--	--
	M1-1		IH 94	24 x 24									-- x --	--	--	--

SIGN NO.	SIGN CODE & SIZE	SIGN TYPE	SIGN MESSAGE	SIGN SIZE W [IN.]	x	H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVE SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [IN.]	x	H [IN.]	637.1220 SIGNS TYPE I [SF]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]
	M1-1		IH 41	24	x	24									--	x	--	--	--	--
	MB6-1			21	x	21									--	x	--	--	--	--
29	W12-1L(2S)	II		24	x	24	--	4.000	--	--	--	1	--	2 FOOT HEIGHT	--	x	--	--	--	--
30	W12-1L(2S)	II		24	x	24	--	4.000	--	--	--	1	--	2 FOOT HEIGHT	--	x	--	--	--	--
31	MB6-1(2S)	II		21	x	21	3.063	--	--	--	--	--	--	ADD TO EXISTING ASSEMBLY	--	x	--	--	--	--
32	M6-1(2S)	II		21	x	21	3.063	--	--	--	--	--	--	ADD TO EXISTING ASSEMBLY	--	x	--	--	--	--
33	MB6-1(2S)	II		21	x	21	3.063	--	--	--	--	--	--	ADD TO EXISTING ASSEMBLY	--	x	--	--	--	--
34	M6-1(2S)	II		21	x	21	3.063	--	--	--	--	--	--	ADD TO EXISTING ASSEMBLY	--	x	--	--	--	--
35	MB6-1(2S)	II		21	x	21	3.063	--	--	--	--	--	--	ADD TO EXISTING ASSEMBLY	--	x	--	--	--	--
36	M6-1(2S)	II		21	x	21	3.063	--	--	--	--	--	--	ADD TO EXISTING ASSEMBLY	--	x	--	--	--	--
37	--	II	TO FRONTAGE ROAD	--	x	--	--	--	--	--	1	2	--	--	--	x	--	--	--	--
37A	--	II	[A]	--	x	--	--	--	--	--	1	--	#37	--	--	x	--	--	--	--
38	R5-1	II		--	x	--	--	--	1	1	--	--	--	--	--	x	--	--	--	--
39	R5-1	II		--	x	--	--	--	1	1	--	--	--	--	--	x	--	--	--	--
40	R5-1	II		--	x	--	--	--	--	1	1	1	--	--	--	x	--	--	--	--
41	R3-1	II		--	x	--	--	--	--	1	1	1	--	--	--	x	--	--	--	--
42	W6-3	II		--	x	--	--	--	1	1	--	--	--	--	--	x	--	--	--	--
43	J2-2	II	EXISTING ASSEMBLY	--	x	--	--	--	1	1	--	--	--	--	--	x	--	--	--	--
44	R1-1	II		--	x	--	--	--	1	1	--	--	--	--	--	x	--	--	--	--
45	W4-4AL	II		--	x	--	--	--	--	--	--	--	--	SEE SIGN 44 -CONSIDERED 1 REMOVAL	--	x	--	--	--	--
46	R5-1(2S)	II		30	x	30	6.250	--	--	--	--	1	--	--	--	x	--	--	--	--
47	R5-1(2S)	II		30	x	30	6.250	--	--	--	--	1	--	--	--	x	--	--	--	--
48	R1-1	II		--	x	--	--	--	1	1	--	--	--	--	--	x	--	--	--	--
49	R3-53R	II		--	x	--	--	--	1	1	--	--	--	--	--	x	--	--	--	--
50	R5-1A(2S)	II		36	x	24	6.000	--	--	--	--	1	--	--	--	x	--	--	--	--
51	R5-1A(2S)	II		36	x	24	6.000	--	--	--	--	1	--	--	--	x	--	--	--	--
52	R1-1	II		--	x	--	--	--	1	1	--	--	--	--	--	x	--	--	--	--
53	R3-1	II		--	x	--	--	--	--	--	--	--	--	PART OF #52	--	x	--	--	--	--
54	W4-4AL	II		--	x	--	--	--	--	--	--	--	--	PART OF #52	--	x	--	--	--	--
55	R4-7	II		--	x	--	--	--	1	1	--	--	--	--	--	x	--	--	--	--
56	R1-1(3)	II		30	x	30	5.180	--	--	--	--	1	--	--	--	x	--	--	--	--
57	R3-1(2S)	II		24	x	24	4.000	--	--	--	--	--	18	--	--	x	--	--	--	--
58	R3-53R(2S)	II		24	x	30	5.000	--	--	--	--	1	--	--	--	x	--	--	--	--
59	R6-2R(2S)	II		24	x	30	5.000	--	--	--	--	--	--	--	--	x	--	--	--	--
60	J3-1(2S)	II	--	24	x	81	13.500	--	--	--	--	1	--	--	--	x	--	--	--	--
	MB4-5	II		24	x	12									--	x	--	--	--	--
	M1-1	II	IH 94	24	x	24									--	x	--	--	--	--
	M1-1	II	IH 41	24	x	24									--	x	--	--	--	--
	MB6-1	II		21	x	21									--	x	--	--	--	--
61	R1-1(3)	II		30	x	30	5.180	--	--	--	--	1	--	--	--	x	--	--	--	--
62	R1-1(3)	II		30	x	30	5.180	--	--	--	--	1	--	--	--	x	--	--	--	--
63	R5-1A(2S)	II		36	x	24	6.000	--	--	--	--	1	--	--	--	x	--	--	--	--
64	R5-1A(2S)	II		36	x	24	6.000	--	--	--	--	--	#65	--	--	x	--	--	--	--
65	J3-2(2S)	II	--	48	x	93	31.000	--	--	--	--	1	--	--	--	x	--	--	--	--
	MB4-5	II		24	x	12									--	x	--	--	--	--
	M1-1	II	IH 94	24	x	24									--	x	--	--	--	--
	M1-1	II	IH 41	24	x	24									--	x	--	--	--	--
	MB6-1	II		21	x	21									--	x	--	--	--	--
	MB4-1	II		24	x	12									--	x	--	--	--	--
	MB4-5	II		24	x	12									--	x	--	--	--	--
	M1-1	II	IH 94	24	x	24									--	x	--	--	--	--

SIGN NO.	SIGN CODE & SIZE	SIGN TYPE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVE SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [IN.] x H [IN.]	637.1220 SIGNS TYPE I [SF]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]
	M1-1	II	IH 41	24 x 24									-- x --	--	--	--
	MB6-1	II		21 x 21									-- x --	--	--	--
66	J3-2(2S)	II	--	48 x 81	27.000	--	--	--	--	1	--	--	-- x --	--	--	--
	MB4-5	II		24 x 12									-- x --	--	--	--
	M1-1	II	IH 94	24 x 24									-- x --	--	--	--
	M1-1	II	IH 41	24 x 24									-- x --	--	--	--
	MB6-1	II		21 x 21									-- x --	--	--	--
	M4-5	II		24 x 24									-- x --	--	--	--
	M1-6	II	165	24 x 24									-- x --	--	--	--
	M6-1	II		21 x 21									-- x --	--	--	--
67	R3-2(2S)	II		24 x 24	4.000	--	--	--	--	--	--	MOUNT ON LIGHT POLE	-- x --	--	--	--
68	R3-1(2S)	II		24 x 24	4.000	--	--	--	--	1	--	--	-- x --	--	--	--
69	R5-1(2S)	II		30 x 30	6.250	--	--	--	--	1	--	--	-- x --	--	--	--
70	W4-1(3)	II		36 x 36	--	9.000	--	--	--	1	--		-- x --	--	--	--
71	NOT l USED	II	NOT USED	-- x --	--	--	--	--	--	--	--	* NOT USED *	-- x --	--	--	--
72	NOT USED								--	--	--	--	-- x --	--	--	--
73	D1-2	II	MILWAUKEE CHICAGO sign	78 x 24	13.000	--	--	--	--	2	--	--	-- x --	--	--	--
74	R5-1(2S)	II		30 x 30	6.250	--	--	--	--	--	#73	--	-- x --	--	--	--
75	R5-1(2S)	II		30 x 30	6.250	--	--	--	--	1	--	--	-- x --	--	--	--
76	J3-1	II	EXISTING ASSEMBLY	-- x --	--	--	1	1	--	--	--	--	-- x --	--	--	--
77	W2-2(2S)	II		30 x 30	--	6.250	--	--	--	--	--	MOUNT ON LIGHT POLE	-- x --	--	--	--
78	W2-2(2S)	II		30 x 30	--	6.250	--	--	--	1	--	--	-- x --	--	--	--
79		II	ACCESS TO BUSINESSES	84 x 48	28.000	--	--	--	--	2	--	--	-- x --	--	--	--
80	R3-5R	II		42 x 48	14.000	--	--	--	--	--	--	MOUNT ON S-30-256	-- x --	--	--	--
81	M1-95A(MOD)	II	EAST FRONTAGE ROAD (DOUBLE ARROWS)	-- x --	--	--	--	1	1	1	--	--	-- x --	--	--	--
82	J3-1		ROUTE MARKER	-- x --	--	--	--	1	1	1	--	--	-- x --	--	--	--
83	--	II	ADOPT A HIGHWAY	-- x --	--	--	--	1	1	1	--	--	-- x --	--	--	--
84	--	II	MALL	-- x --	--	--	--	--	1	--	--	REUSE POST - NOT WISDOT SIGN	-- x --	--	--	--
		II	(ARROW RIGHT)													
85		II	ACCESS TO BUSINESSES	84 x 48	28.000	--	--	--	--	2	--	--	-- x --	--	--	--
86	R3-7R	II		36 x 36	9.000	--	--	--	--	1	--	--	-- x --	--	--	--
87	J3-1			-- x --	--	--	--	1	1	1	--	--	-- x --	--	--	--
88	MB6-1(2S)	II		21 x 21	3.063	--	--	--	--	--	--	ADD TO EXISTING ASSEMBLY	-- x --	--	--	--
89	MB6-1(2S)	II		21 x 21	3.063	--	--	--	--	--	--	ADD TO EXISTING ASSEMBLY	-- x --	--	--	--
90	MB6-1(2S)	II		21 x 21	3.063	--	--	--	--	--	--	ADD TO EXISTING ASSEMBLY	-- x --	--	--	--
91	W3-1(2S)	II		36 X 36		9.000				1						

TYPE I & II PERMANENT SIGNING -

SIGN NO.	SIGN CODE & SIZE	SIGN TYPE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	638.2602 REM SIGNS TYPE II (EA)	638.3000 REM SMALL SIGN SUP [EA]	638.2102 MOVE SIGNS TYPE II [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W [IN.] x H [IN.]	637.1220 SIGNS TYPE I [SF]	638.2601 REM SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]
92	W12-1D(2M)	II		24 X 24		4.000				1		2 FOOT HEIGHT				
93	R1-2(2M)	II		48 X 42	7.000					1						
94	R7-64(3)	II		48 X 30	10.000					1						
95	J3-1(2S)	II		24 X 93	15.500					1						
	MB3-1			24 X 12												
	M1-1		IH 41	24 X 24												
	MB3-4			24 X 12												
	M1-1		IH 94	24 X 24												
	MB6-1			21 X 21												
96	W1-6(2S)	II		48 X 24		8.000				1						
97	J3-2(2S)	II		48 X 105	35.000					2						
	MB4-5			24 X 12												
	MB3-3			24 X 12												
	M1-1		IH 41	24 X 24												
	MB3-2			24 X 12												
	M1-1		IH 94	24 X 24												
	MB6-2			21 X 21												
	MB4-5			24 X 12												
	MB3-1			24 X 12												
	M1-1		IH 41	24 X 24												
	MB3-4			24 X 12												
	M1-1		IH 94	24 X 24												
	MB6-2			21 X 21												
98	R4-7(2S)	II		24 X 30	5.000					1						
99	R1-1(2S)	II		30 X 30	5.180					1						
100	R1-1(2S)	II		30 X 30	5.180					1						
101	R5-1(2S)	II		30 X 30	6.250					1						
102	J3-2(2S)	II		48 X 105	35.000					2						
	MB4-5			24 X 12												
	MB3-3			24 X 12												
	M1-1		IH 41	24 X 24												
	MB3-2			24 X 12												
	M1-1		IH 94	24 X 24												
	MB6-1			21 X 21												
	MB4-5			24 X 12												
	MB3-1			24 X 12												
	M1-1		IH 41	24 X 24												
	MB3-4			24 X 12												
	M1-1		IH 94	24 X 24												
	MB6-1			21 X 21												
103	R1-1(2S)			30 X 30	5.180					1						
104	D1-2	II	CHICAGO , MILWAUKEE	72 X 30	15.000					2						
105	J3-1(2S)	II		24 X 105	17.500					2						
	MB4-5			24 X 12												
	MB3-3			24 X 12												
	M1-1		IH 41	24 X 24												
	MB3-2			24 X 12												
	M1-1		IH 94	24 X 24												
	MB6-1			21 X 21												
TOTALS					537.144	50.500	27	35	9	60	--	--		228.000	5	2

PROJECT NO: 3738-08-70	HWY: IH-94/STH 165	COUNTY: KENOSHA	PERMANENT SIGNING QUANTITIES	SHEET:	E

3

3

OVERHEAD SIGN SUPPORTS - MISC QUANTITIES STH 165 at East Frontage Road

LOCATION	641.8100.01 OVERHEAD SIGN SUPPORT (STRUCTURE) S-30-256 L.S.
STH 165 at EAST FRONTAGE ROAD	1
TOTAL	1

SHEET 1 OF 1

PROJECT NO: 3738-08-70	HWY: IH-94/STH 165	COUNTY: KENOSHA	PERMANENT SIGNING QUANTITIES	SHEET:	E

TRAFFIC CONTROL ID 3738-08-70

CATEGORY	STAGE	LOCATION	643.5000 TRAFFIC CONTROL EACH
0010	ALL	PROJECT	1
TOTAL:			1

TRAFFIC CONTROL, COVERING SIGNS

CATEGORY	ROADWAY	STATION	LOCATION	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I NUMBER OF SIGNS	NUMBER OF CYCLES	EACH
0010	NB EXIT RAMP		SIGN BRIDGE	1	1	1
TOTALS:						1

TRAFFIC CONTROL ITEMS

CATEGORY	STAGE	ROADWAY	STAGE* DURATION DAYS	PER* DAY	643.0300 DRUMS DAYS	PER* DAY	643.0420 BARRICADES TYPE III DAYS	PER* DAY	643.0705 WARNING LIGHTS TYPE A DAYS	PER* DAY	643.0715 WARNING LIGHTS TYPE C DAYS	PER* DAY	643.0800 ARROW BOARDS DAYS	PER* DAY	643.0900 SIGNS DAYS	PER* DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS DAYS
0010																	
	STAGE 1	120TH AVE	37	6	222	--	--	--	--	--	--	--	--	1	37	--	--
		RAMP EDGE	37	23	851	7	259	14	518	--	--	--	--	7	259	--	--
		WELCOME CENTER	37	68	2516	11	407	22	814	--	--	--	--	10	370	--	--
		STH 165	37	--	--	--	--	--	--	--	--	--	--	4	148	--	--
	STAGE 1SUBTOTALS			97	3589	18	666	36	1332	0	0	0	0	22	814	0	0
	STAGE 2	RAMP EDGE	18	31	558	7	126	14	252	--	--	--	--	9	162	--	--
		WELCOME CENTER	18	11	198	4	72	8	144	--	--	--	--	3	54	--	--
		120TH AVE	18	--	--	--	--	--	--	--	--	--	--	2	36	--	--
		STH 165	18	--	--	--	--	--	--	--	--	--	--	4	72	--	--
	STAGE 2SUBTOTALS			42	756	11	198	22	396	0	0	0	0	18	324	0	0
	STAGE 3A	WELCOME CENTER	2	--	--	2	4	4	8	--	--	--	--	2	4	--	--
		WELCOME CENTER (PCMS)	10	--	--	--	--	--	--	--	--	--	--	--	--	1	10
	STAGE 3A SUBTOTALS			0	0	2	4	4	8	0	0	0	0	2	4	1	10
	STAGE 3B	WELCOME CENTER	24	--	--	--	--	--	--	--	--	--	--	1	24	--	--
		120TH AVE	24	28	672	9	216	16	384	--	--	--	--	5	120	--	--
		STH 165	24	25	600	3	72	6	144	--	--	--	--	11	264	--	--
		STH 165 (NIGHT-TIME CLOSURE)	2	15	30	1	2	2	4	10	20	2	4	3	6	--	--
	STAGE 3B SUBTOTALS			68	1302	13	290	24	532	10	20	2	4	20	414	0	0
	TOTALS:				5647		1158		2268		20		4		1556		10

3

PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION	STATION	646.1020 MARKING LINE EPOXY 4-INCH 12.5 FT LINE 37.5 FT SKIP (WHITE) LF	646.1020 MARKING LINE EPOXY 4-INCH 12.5 FT LINE 37.5 FT SKIP (YELLOW) LF	646.1020 MARKING LINE EPOXY 4-INCH 12.5 FT LINE 37.5 FT SKIP (WHITE) LF	646.3020 MARKING LINE EPOXY 8-INCH WHITE LF	646.9000 MARKING REMOVAL LINE 4-INCH LF	646.9100 MARKING REMOVAL LINE 8-INCH LF	646.5020 MARKING ARROW EPOXY TYPE 1 EACH	646.5020 MARKING ARROW EPOXY TYPE 2 EACH	646.5020 MARKING ARROW EPOXY TYPE 3 EACH	646.5220 MARKING SYMBOL EPOXY WHITE EACH	646.5120 MARKING WORD EPOXY WHITE EACH	646.8120 MARKING CURB EPOXY YELLOW LF
0010	CAR PARKING			--	--	--	--	--	--	5	--	--	4	--	--
	WELCOME CENTER EXIT	19+72 'A' RT	21+91 'A' RT	--	247	--	--	--	--	--	--	--	--	--	240
		19+69 'A' RT	22+97 'A' LT	--	255	--	--	--	--	--	--	--	--	--	249
		9+07 'B'	26+50 'A'	--	245	--	--	--	--	--	--	--	--	--	200
		22+44 'A'		--	--	--	--	--	--	--		--	--	--	--
		26+50 'A'		--	--	--	--	--	--	--	2	--	--	--	--
		27+60 'A'		--	--	--	--	--	--	--	--	--	--	2	--
		27+92 'A'		--	--	--	--	--	--	--	2	--	--	--	--
		26+50 'A'	28+10 'A'	--	--	--	--	--	--	--	--	--	--	--	--
		28+08 'A'	27+99 'A'	--	--	--	--	--	--	--	--	--	--	--	--
	TRUCK PARKING	5+00 'B'	9+05 'B'	--	--	--	--	--	--	--	--	--	--	--	--
	RV EXPANSION	19+00 'C'	23+16 'C'	--	559	--	--	--	--	1	--	--	--	--	--
	120TH AVE	91+00 'D'	94+30 'D'	--	--	--	--	--	--	--	--	--	--	--	--
		91+43 'D'		--	--	--	--	--	--	--	1	--	--	--	--
		91+75 'D'		--	--	--	--	--	--	--	--	--	--	1	--
		93+66 'D'		--	--	--	--	--	--	--	1	--	--	--	--
		93+98 'D'		--	--	--	--	--	--	--	--	--	--	1	--
	RAMP EDGE	RAMP GORE	106+50 'E'	706	600	--	--	1,306	--	--	--	--	--	--	--
	EXIT RAMP	SIGN S-30-231	103+53 'E'	--	--	100	--	100	--	--	--	--	--	--	--
		103+53 'E'	106+50 'E'	--	--	--	932	--	932	--	--	--	--	--	--
		104+00 'E'		--	--	--	--	--	--	--	3	1	--	--	--
		105+00 'E'		--	--	--	--	--	--	--	--	--	--	3	--
		106+50 'E'		--	--	--	--	--	--	--	3	1	--	--	--
	WELCOME CENTER	ENTRANCE		--	--	--	--	--	--	1	--	--	--	--	--
	STH 165	406+00 'J'	411+50 'J'	--	--	--	--	--	--	--	--	--	--	--	--
	SUBTOTALS:			706	1,906	100	932	1,406	932	7	12	2	4	7	689
	TOTALS:				2,712		932	1,406	932		21		4	7	689

3

PAVEMENT MARKING ITEMS (CONT'D)

CATEGORY	LOCATION	STATION	STATION	646.8320 MARKING PARKING STALL EPOXY WHITE LF	646.7120 MARKING DIAGONAL EPOXY 12-INCH YELLOW LF	646.3040 MARKING LINE GROOVED WET REF EPOXY 8-INCH WHITE LF	646.6120 MARKING STOP LINE EPOXY 18-INCH WHITE LF	646.1545 MARKING LINE GROOVED WET REF CONTRAST EPOXY 4-INCH (12.5 FT LINE 37.5 FT SKIP) LF
0010	CAR PARKING			2,343	--	--	--	--
	WELCOME CENTER EXIT	19+72 'A' RT	21+91 'A' RT	--	61	--	--	--
		19+69 'A' RT	22+97 'A' LT	--	56	--	--	--
		9+07 'B'	26+50 'A'	--	244	--	29	--
		22+44 'A'		--	--	--	15	--
		26+50 'A'		--	--	--	--	--
		27+60 'A'		--	--	--	--	--
		27+92 'A'		--	--	--	--	--
		26+50 'A'	28+10 'A'	--	--	160	--	--
		28+08 'A'	27+99 'A'	--	--	--	60	--
	TRUCK PARKING	5+00 'B'	9+05 'B'	1,700	--	--	--	--
	RV EXPANSION	19+00 'C'	23+16 'C'	600	300	--	--	--
	120TH AVE	91+00 'D'	94+30 'D'	--	--	306	--	--
		91+43 'D'		--	--	--	--	--
		91+75 'D'		--	--	--	--	--
		93+66 'D'		--	--	--	--	--
		93+98 'D'		--	--	--	--	--
	RAMP EDGE	RAMP GORE	106+50 'E'	--	--	--	--	--
	EXIT RAMP	SIGN S-30-231	103+53 'E'	--	--	--	--	--
		103+53 'E'	106+50 'E'	--	--	--	--	--
		104+00 'E'		--	--	--	--	--
		105+00 'E'		--	--	--	--	--
		106+50 'E'		--	--	--	--	--
	WELCOME CENTER	ENTRANCE		--	--	--	--	--
	STH 165	406+00 'J'	411+50 'J'	--	--	--	--	275
	SUBTOTALS:			4,643	661	466	104	275
	TOTALS:			4,643	661	466	104	275

3

CONSTRUCTION STAKING

CATEGORY	STATION	TO STATION	LOCATION	650.4000 STORM SEWER EACH	650.4500 SUBGRADE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6000 PIPE CULVERTS EACH	650.7000 CONCRETE PAVEMENT LF	650.9920 SLOPE STAKES LF
0010	21+16 'A'	22+53 'A'	WELCOME CENTER EXIT	--	109	115	--	109	137
	22+69 'A'	28+18 'A'	WELCOME CENTER EXIT	2	549	165	5	549	549
	7+50 'B'	10+00 'B'	TRUCK PARKING	--	94	190	--	94	250
	18+98 'C'	23+26 'C'	RV EXPANSION	2	428	150	--	278	428
	91+25 'D'	96+00 'D'	120TH AVE	2	370	370	--	370	--
	100+00 'E'	105+50 'E'	RAMP EDGE	2	175	100	--	175	550
	406+00 'J'	411+79 'J'	STH 165	1	579	200	--	579	579
			NB ENTRANCE RAMP	--	--	110	--	--	--
			TOTAL:	9	2304	1400	5	2154	2493

REPAIR DAM

CATEGORY	LOCATION	SPV.0105.04 REPAIR DAM LS
0010	PROJECT	1
		1

PICNIC SHELTERS

CATEGORY	STATION	LOCATION	SPV.0060.25 REPAIR PICNIC TABLE TYPE 1 EACH	SPV.0060.26 REST AREA PICNIC SHELTERS EACH	SPV.0060.27 GRADING, SHAPING AND FINISHING PICNIC SHELTERS EACH	204.9060.S.01 REMOVING PICNIC SHELTER EACH
0010	22+05 'C'	35' RT	1	--	--	1
	22+30 'C'	80' RT	1	--	--	--
	6+15 'B'	35' RT	--	1	1	--
	TOTAL:		2	1	1	1

CATEGORY 0020
LIGHTING REMOVAL ITEMS

204.0195	REMOVING CONCRETE BASES
653.0905	REMOVING PULL BOXES
204.9060.S.02	REMOVING LUMINAIRES
204.9060.S.03	REMOVING LIGHTING UNITS

SYSTEM	LOCATION	OFFSET	ITEM	204.0195 REMOVING CONCRETE BASES EACH	653.0905 REMOVING PULL BOXES EACH	204.9060.S.02 REMOVING LUMINAIRES EACH	204.9060.S.03 REMOVING LIGHTING UNIT EACH	COMMENTS
HL-30-WC	93+45	468' RIGHT	1WC1	1	--	--	1	--
HL-30-WC	92+38	409' RIGHT	1WC2/1WC3	--	--	2	--	--
HL-30-WC	93+90	344' RIGHT	1WC4	--	--	1	--	--
HL-30-WC	92+66	275' RIGHT	1WC5	--	--	1	--	--
HL-30-WC	94+37	260' RIGHT	1WC6	--	--	1	--	--
HL-30-WC	92+71	517' RIGHT	2WC1	1	--	--	1	--
HL-30-WC	92+87	613' RIGHT	2WC2	--	--	1	--	--
HL-30-WC	93+38	678' RIGHT	2WC3	--	--	1	--	--
HL-30-WC	94+36	737' RIGHT	2WC4	--	--	1	--	--
HL-30-WC	91+82	600' RIGHT	2WC5	--	--	1	--	--
HL-30-WC	94+79	475' RIGHT	3WC1	--	--	1	--	--
HL-30-WC	95+57	391' RIGHT	3WC2	--	--	1	--	--
HL-30-WC	96+15	225' RIGHT	3WC3	--	--	1	--	--
HL-30-WC	97+94	228' RIGHT	3WC4	--	--	1	--	--
HL-30-WC	97+34	393' RIGHT	3WC5	--	--	1	--	--
HL-30-WC	98+97	395' RIGHT	3WC6	--	--	1	--	--
HL-30-WC	96+71	592' RIGHT	4WC1	--	--	1	--	--
HL-30-WC	98+59	601' RIGHT	4WC2	--	--	1	--	--
HL-30-WC	100+21	633' RIGHT	4WC3/4WC4	--	--	2	--	--
HL-30-WC	100+79	811' RIGHT	4WC5	--	--	1	--	--
HL-30-WC	95+28	733' RIGHT	4WC6	--	--	1	--	--
HL-30-WC	96+62	727' RIGHT	5WC1	--	--	1	--	--
HL-30-WC	94+79	827' RIGHT	5WC2	--	--	1	--	--
HL-30-WC	93+35	886' RIGHT	5WC3	1	--	--	1	--
HL-30-WC	92+34	809' RIGHT	5WC4	1	--	--	1	--
HL-30-WC	95+41	905' RIGHT	6WC1	1	--	--	1	--
HL-30-WC	97+38	924' RIGHT	6WC2	--	--	1	--	--
HL-30-WC	99+37	959' RIGHT	6WC3	--	--	1	--	--
HL-30-WC	94+60	1,101' RIGHT	6WC4	--	--	1	--	--
HL-30-WC	99+06	1,070' RIGHT	6WC5	--	--	1	--	--
HL-30-WC	96+10	1,101' RIGHT	6WC7	--	--	1	--	--
HL-30-WC	97+59	1,096' RIGHT	6WC8	--	--	1	--	--
HL-30-WC	94+42	559' RIGHT	PB1	--	1	--	--	ONLY IF NEEDED
HL-30-WC	94+57	827' RIGHT	PB5	--	1	--	--	ONLY IF NEEDED
HL-30-WC	VARIOUS	--	--	--	--	11	--	POST TOP LUMINAIRES UTILTY HPS
TOTAL (0020)				5	2	40	5	

3

CATEGORY 0020
LIGHTING WIRE QUANTITIES
120/208 VAC 3-WIRE ISOLATED NEUTRAL SYSTEM

655.0615 ELECTRICAL WIRE LIGHTING 10 AWG
655.0620 ELECTRICAL WIRE LIGHTING 8 AWG
655.0630 ELECTRICAL WIRE LIGHTING 4 AWG

SYSTEM	NETWORK	LOCATION TO LOCATION	DISTANCE	655.0615 10 AWG LF	655.0620 8 AWG LF	655.0630 4 AWG LF
HL-30-WC	1/N/G	EXISTING PB1 TO POLE 1WC1	120	--	390	--
HL-30-WC	1/N/G	POLE 1WC1 TO POLE 1WC2/1WC3	180	--	760	--
HL-30-WC	2/N/G	POLE 2WC2 TO POLE 2WC5	160	--	680	--
HL-30-WC	6/N/G	EXISTING PB5 TO PB TO POLE 6WC9	230	--	--	960
HL-30-WC	6/N/G	POLE 6WC9 TO PB TO POLE 6WC1	200	--	--	840
HL-30-WC	6/N/G	POLE 6WC1 TO POLE 6WC2	200	--	--	840
HL-30-WC	3/N/G	POLE 3WC4 TO POLE 3WC7	180	--	760	--
HL-30-WC	3/N/G	POLE 3WC7 TO POLE 3WC8	150	--	640	--
HL-30-WC	3/N/G	POLE 3WC8 TO POLE 3WC9	140	--	600	--
HL-30-WC	21/N/G	EXISTING PB4 TO POLE C21-6	70	320	--	--
HL-30-WC	21/N/G	POLE C21-6 TO POLE C21-7	80	360	--	--
HL-30-WC	21/N/G	POLE C21-7 TO POLE C21-8	70	320	--	--
TOTAL (0020)				1,000	3,830	2,640

CATEGORY 0020
LIGHTING PULL BOX QUANTITIES

653.0140 PULL BOXES STEEL 24x42-INCH

SYSTEM	STATION	OFFSET	LABEL	653.0140 PULL BOXES STEEL 24x42-INCH EACH	COMMENTS
HL-30-WC	92+15	569' RIGHT	LPB1	1	--
HL-30-WC	92+94	586' RIGHT	LPB2	1	--
HL-30-WC	94+42	559' RIGHT	LPB3 (PB1)	1	ONLY IF NEEDED
HL-30-WC	94+57	827' RIGHT	LPB4 (PB5)	1	ONLY IF NEEDED
HL-30-WC	94+57	935' RIGHT	LPB5	1	--
TOTAL (0020)				5	

CATEGORY 0020
LIGHTING BRANCH CIRCUIT CONDUIT

652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
652.0615 CONDUIT SPECIAL 3-INCH

SYSTEM	LOCATION TO LOCATION	652.0225 CONDUIT 2-INCH SCHEDULE 40 LF	652.0615 CONDUIT SPECIAL 3-INCH LF	COMMENTS
HL-30-WC	EXISTING PB1 TO POLE 1WC1	120	--	--
HL-30-WC	POLE 1WC1 TO POLE 1WC2/1WC3	100	--	INTERCEPT EXISTING CONDUIT
HL-30-WC	LPB1 TO LPB2	--	100	INTERCEPT EXISTING CONDUIT
HL-30-WC	EXISTING PB5 TO PROPOSED LPB5	110	--	--
HL-30-WC	PROPOSED LPB5 TO POLE 6WC4	120	--	--
HL-30-WC	POLE 6WC9 TO STUBOUT NORTH	15	--	--
HL-30-WC	PROPOSED LPB3 TO POLE 6WC1	80	--	--
HL-30-WC	POLE 6WC1 TO POLE 6WC2	200	--	--
HL-30-WC	PB4 TO POLE C21-6	70	--	--
HL-30-WC	POLE C21-6 TO POLE C21-7	50	--	--
HL-30-WC	POLE C21-7 TO POLE C21-8	70	--	--
HL-30-WC	POLE C21-8 TO STUBOUT EAST	15		
HL-30-WC	POLE 3WC4 TO POLE 3WC7	190	--	--
HL-30-WC	POLE 3WC7 TO POLE 3WC8	150	--	--
HL-30-WC	POLE 3WC8 TO POLE 3WC9	140	--	--
HL-30-WC	POLE 3WC9 TO STUBOUT EAST	15	--	--
	TOTAL (0020)	1,445	100	

CATEGORY 0020
LIGHTING SYSTEM ITEMS

650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (3738-08-70)
SPV.0105.11 LIGHTING SYSTEM INTEGRATOR
SPV.0105.12 LIGHTING SYSTEM SURVEY

SYSTEM	LOCATION	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (3738-08-70) LS	SPV.0105.11 LIGHTING SYSTEM INTEGRATOR LS	SPV.0105.12 LIGHTING SYSTEM SURVEY LS
HL-30-WC	PLEASANT PRAIRIE WELCOME CENTER	1	1	1
	TOTAL (0020)	1	1	1

CATEGORY 0020
LIGHT POLE QUANTITIES

654.0105	CONCRETE BASES TYPE 7
654.0111	CONCRETE BASES TYPE 11
655.0610	ELECTRICAL WIRE LIGHTING 12 AWG
657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE
657.0322	POLES TYPE 5-ALUMINUM
657.0715	LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 15-FT
659.1120	LUMINAIRES UTILITY LED B
SPV.0060.21	LIGHTING UNITS WALKWAY LED
SPV.0060.22	POST TOP LUMINAIRES UTILITY LED

SYSTEM	SEQUENCE I. D.	STATION	OFFSET	654.0105 CONCRETE BASES TYPE 5 EACH	654.0111 CONCRETE BASES TYPE 11 EACH	655.0610 AWG 12 L.F.	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0322 POLES TYPE 5 ALUMINUM EACH	657.0715 LUMINAIRES ARMS TRUSS TYPE 4 1/2-INCH CLAMP 15-FT EACH	659.1120 LUMINAIRES UTILITY LED B EACH	SPV.0060.21 LIGHTING UNITS WALKWAY LED EACH	SPV.0060.22 POST TOP LUMINAIRES UTILITY LED EACH
HL-30-WC	1WC1	93+24	532 RIGHT	1	--	144	1	1	1	1	--	--
HL-30-WC	1WC2/1WC3	92+38	409' RIGHT	--	--	--	--	--	--	2	--	--
HL-30-WC	1WC4	93+90	344' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	1WC5	92+66	275' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	1WC6	94+37	260' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	2WC1	92+71	516' RIGHT	1	--	144	1	1	1	1	--	--
HL-30-WC	2WC3	93+38	678' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	2WC4	94+36	737' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	2WC5	91+82	600' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	3WC1	94+79	475' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	3WC2	95+57	391' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	3WC3	96+15	225' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	3WC4	97+94	228' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	3WC5	97+34	393' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	3WC6	98+97	395' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	3WC7	99+50	310' RIGHT	1	--	144	1	1	1	1	--	--
HL-30-WC	3WC8	99+73	179' RIGHT	1	--	144	1	1	1	1	--	--
HL-30-WC	3WC9	99+67	53' RIGHT	1	--	144	1	1	1	1	--	--
HL-30-WC	4WC1	96+71	592' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	4WC2	98+59	601' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	4WC3/4WC4	100+22	634' RIGHT	--	--	--	--	--	--	2	--	--
HL-30-WC	4WC5	100+79	812' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	4WC6	95+28	733' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	5WC1	96+62	727' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	5WC2	94+79	827' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	6WC1	95+41	905' RIGHT	1	--	144	1	1	1	1	--	--
HL-30-WC	6WC2	97+38	924' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	6WC3	99+37	959' RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	6WC4	93+09	1104 RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	6WC5	99+06	1071 RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	6WC7	95+10	1100 RIGHT	--	--	--	--	--	--	1	--	--
HL-30-WC	6WC8	97+10	1096 RIGHT	--	--	--	--	--	--	1	--	-
HL-30-WC	6WC9	93+42	930' RIGHT	1	--	144	1	1	1	1	--	--
HL-30-WC	C21-6	96+90	530' RIGHT	--	1	45	--	--	--	--	1	--
HL-30-WC	C21-7	96+52	467' RIGHT	--	1	45	--	--	--	--	1	--
HL-30-WC	C21-8	95+97	423' RIGHT	--	1	45	--	--	--	--	1	--
HL-30-WC	VARIOUS	VARIOUS	--	--	--	--	--	--	--	--	--	11
TOTAL (0020)				7	3	999	6	6	6	34	3	11

PROJECT NO: 3738-08-70	HWY: IH 94	COUNTY: KENOSHA	MISCELLANEOUS QUANTITIES	SHEET:	E

STH 165 & EAST FRONTAGE ROAD (120th AVE)
KENOSHA COUNTY
CATEGORY 1500
S30-0756

3

REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE

LOCATION	204.9105.S.04 REMOVING LOOP DETECTOR WIRE & LEAD-IN CABLE L.S.
STH 165 & EAST FRONTAGE RD (120TH AVE)	1
TOTAL	1

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.
PB16	PB17	217
	TOTAL	217

TRAFFIC DETECTOR LOOPS

LOOP NO.	HOME RUN PB	LOCATION*	SIZE (FT)x(FT)	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR L.F.	655.0700 LOOP DETECTOR LEAD IN CABLE L.F.	655.0800 LOOP DETECTOR WIRE L.F.
31	PB17	1996+48.8, 10.8'RT	6'x30'	3	9F15-4A - LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	84	296	252
					TOTAL	84	296	252

* LOCATION IS TO FRONT CENTER OF DETECTOR LOOP
* * FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

PULL BOXES

PULL BOX NO.	LOCATION*	653.0135 PULL BOXES STEEL 24x36-INCH EACH
PB17	1996+48.9, 10.2'LT	1
	TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

REMOVE PULL BOXES

PULL BOX NO.	653.0905 REMOVING PULL BOXES EACH
PB17	1
TOTAL	1

3

3

LOOP DETECTOR

CATEGORY	STATION	STATION	LOCATION	652.0210 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-IN LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-IN LF	653.0115 PULL BOXES STEEL 12 X 36-INCH EACH	653.0905 REMOVING PULL BOXES EACH	654.0220 CONCRETE CONTROL CABINET BASES TYPE 10 EACH	655.0800 LOOP DETECTOR WIRE LF
0010	19+14.01C		CAR PARKING ENTRANCE	130	--	--	--	--	320
	20+28.89C		TRUCK PARKING ENTRANCE	90	--	--	--	--	280
	20+20.27C		27' RT	--	--	1	--	--	--
	20+22.48C		31' RT	--	10	--	--	1	--
	22+25.29A		19' RT, ISLAND	--	--	--	1	--	--
	TOTAL:			220	10	1	1	1	600

SALVAGE RAMP GATE

CATEGORY	STATION	LOCATION	204.0195 * REMOVING CONCRETE BASES EACH	SPV.0060.29 SALVAGE & REINSTALL RAMP GATE ASSEMBLY EACH	654.0105 CONCRETE BASE TYPE 5 EACH
0010	22+25 'A'	18.5' RT	1	--	--
	22+39 'A'	13.4' RT	1	1	--
	24+40 'A'	17.2' LT	--	--	1
	TOTAL:		2	1	1

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN THE PLANS.

CONCRETE PAVEMENT JOINT LAYOUT

CATEGORY	STAGE	LOCATION	415.5110.S CONCRETE PAVEMENT JOINT LAYOUT LS
0010	ALL	PROJECT	1
	TOTAL:		1

CONCRETE PAVEMENT CORNER REPAIR

SPV.0085.01
CONCRETE PAVEMENT
CORNER REPAIR
PARTIAL DEPTH

CATEGORY	REPAIR AREA	LOCATION	(LB)	** L (IN)	W (IN)
0010	1	CAR PARKING	120	24	36
	2	CAR PARKING	10	12	6
	3	CAR PARKING	180	36	36
	4	CAR PARKING	80	24	24
	5	CAR PARKING	80	24	24
	6	CAR PARKING	20	12	12
	7	CAR PARKING	100	30	24
	8	CAR PARKING	100	30	24
	9	CAR PARKING	80	24	24
	10	CAR PARKING	40	12	24
	11	CAR PARKING	120	24	36
	12	CAR PARKING	70	12	42
	13	CAR PARKING	30	12	18
	14	CAR PARKING	75	18	30
	15	CAR PARKING	40	12	24
	16	CAR PARKING	20	12	12
	17	CAR PARKING	40	12	24
	18	CAR PARKING	20	12	12
	19	CAR PARKING	20	12	12
	20	CAR PARKING	60	12	36
	21	CAR PARKING	20	24	6
	22	CAR PARKING	30	12	18
	23	CAR PARKING	45	18	18
	24	CAR PARKING	680	204	24
	25	CAR PARKING	240	48	36
	26	CAR PARKING	45	18	18
	27	CAR PARKING	30	12	18
	28	CAR PARKING	50	12	30
	29	CAR PARKING	30	12	18
	30	CAR PARKING	125	30	30
	31	CAR PARKING	100	24	30
	32	CAR PARKING	175	42	30
	33	CAR PARKING	30	18	12
	34	CAR PARKING	125	30	30
	35	CAR PARKING	125	30	30
	36	CAR PARKING	120	24	36
	37	CAR PARKING	20	24	6
	38	CAR PARKING	80	24	24
	39	CAR PARKING	100	24	30
	40	CAR PARKING	120	24	36
	41	CAR PARKING	30	12	18
	42	CAR PARKING	120	36	24
	43	CAR PARKING	120	72	12
	44	CAR PARKING	120	24	36
	45	CAR PARKING	20	12	12
	46	CAR PARKING	20	6	24
	47	CAR PARKING	10	12	6
	48	CAR PARKING	20	12	12
	49	CAR PARKING	20	6	24
	50	CAR PARKING	45	18	18
	51	CAR PARKING	180	36	36
	52	CAR PARKING	330	132	18
	53	CAR PARKING	30	12	18
	54	CAR PARKING	60	18	24
	55	CAR PARKING	80	24	24
	56	CAR PARKING	45	18	18
	57	CAR PARKING	80	24	24
	58	CAR PARKING	340	204	12
	59	CAR PARKING	480	192	18
	60	CAR PARKING	160	96	12
	61	CAR PARKING	60	18	24
	62	CAR PARKING	30	12	18
	63	CAR PARKING	75	30	18
LONG. CRACKS		CAR PARKING	243	291.25	6
CAR PARKING SUBTOTAL:			6313		
	101	RV PARKING	30	12	18
	102	RV PARKING	10	12	6
	103	RV PARKING	30	18	12
	104	RV PARKING	40	24	12
	105	RV PARKING	15	18	6
	106	RV PARKING	100	60	12
	107	RV PARKING	20	12	12
	108	RV PARKING	30	12	18
	109	RV PARKING	140	84	12
	110	RV PARKING	30	12	18
	111	RV PARKING	20	24	6
LONG. CRACKS		RV PARKING	346	415	6
RV PARKING SUBTOTAL:			811		

CONT'D

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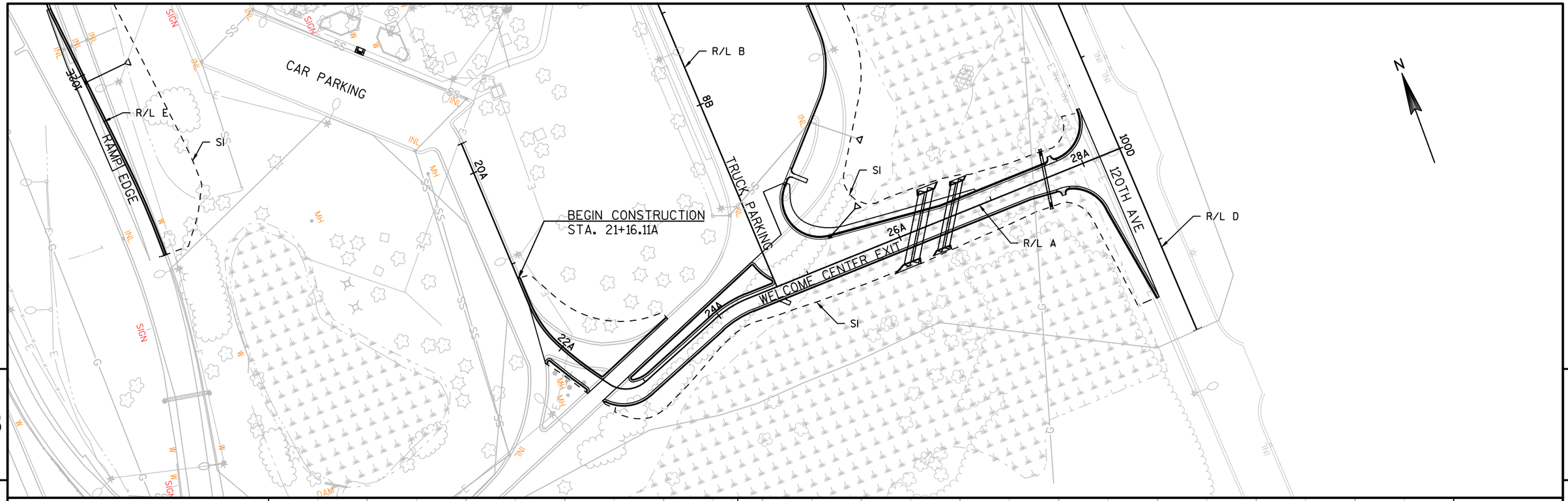
201	TRUCK PARKING	20	12	12
202	TRUCK PARKING	20	12	12
203	TRUCK PARKING	40	48	6
204	TRUCK PARKING	180	216	6
205	TRUCK PARKING	180	216	6
206	TRUCK PARKING	20	12	12
207	TRUCK PARKING	50	30	12
208	TRUCK PARKING	50	12	30
209	TRUCK PARKING	90	54	12
210	TRUCK PARKING	30	12	18
211	TRUCK PARKING	20	12	12
212	TRUCK PARKING	45	18	18
213	TRUCK PARKING	20	12	12
214	TRUCK PARKING	30	18	12
215	TRUCK PARKING	30	18	12
216	TRUCK PARKING	55	66	6
217	TRUCK PARKING	15	18	6
218	TRUCK PARKING	30	18	12
219	TRUCK PARKING	15	18	6
220	TRUCK PARKING	30	18	12
221	TRUCK PARKING	360	216	12
222	TRUCK PARKING	10	12	6
223	TRUCK PARKING	45	18	18
224	TRUCK PARKING	10	12	6
225	TRUCK PARKING	10	12	6
226	TRUCK PARKING	60	36	12
227	TRUCK PARKING	70	42	12
228	TRUCK PARKING	10	6	12
229	TRUCK PARKING	40	12	24
230	TRUCK PARKING	20	12	12
231	TRUCK PARKING	20	12	12
232	TRUCK PARKING	35	42	6
233	TRUCK PARKING	25	30	6
LONG. CRACKS	TRUCK PARKING	660	792	6
TRUCK PARKING SUBTOTAL:		2345		
UNDISTRIBUTED		1432		
TOTAL:		10901		

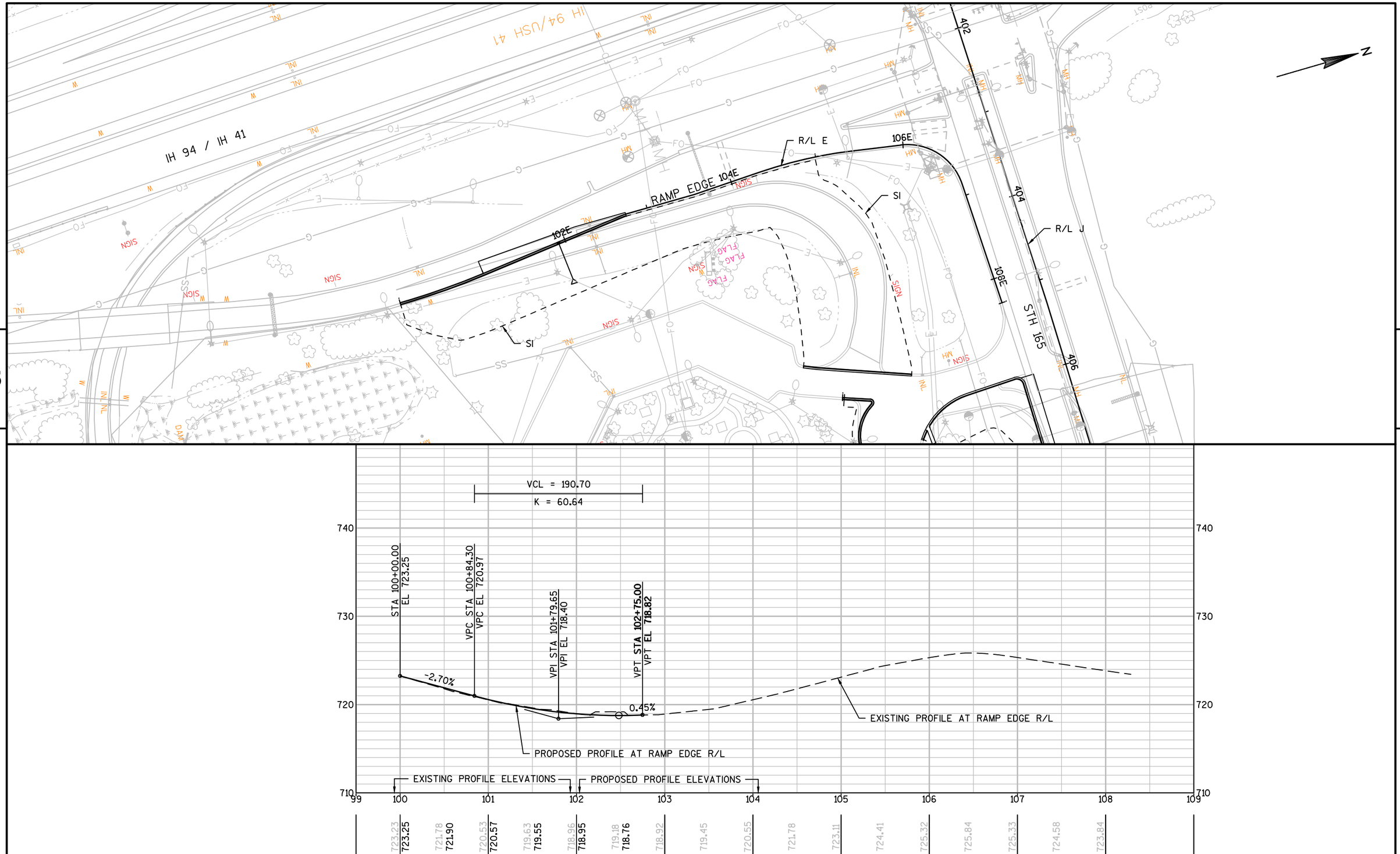
** FOR INFORMATION ONLY.



PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN AND PROFILE: WELCOME CENTER EXIT 'A'	SHEET 127	E

FILE NAME : N:\PDS\C3D\CAD\37380800\050101_PP.DWG
LAYOUT NAME - 050101_PP

PLOT DATE : 3/7/2018 3:59 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:100 FT

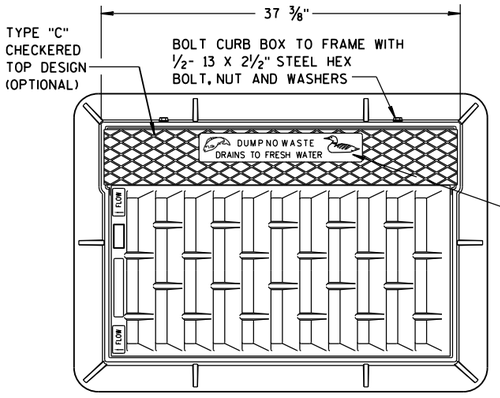


PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	PLAN AND PROFILE: RAMP EDGE 'E'	SHEET 128	E

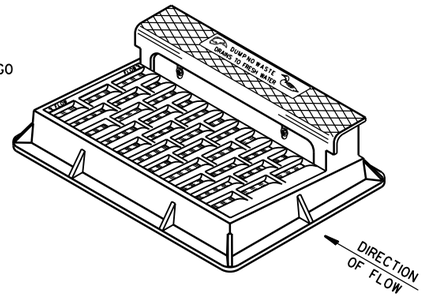
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-19A	CURB RAMPS TYPES 1 AND 1-A
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19C	CURB RAMPS TYPES 4A AND 4A1
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F10-01	CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-13B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C05-10	CONCRETE CONTROL CABINET BASES
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-05	NON-FREEWAY LIGHTING UNIT POLE WIRING
09E04-06	WALKWAY LIGHTING UNIT AND CONCRETE BASE, TYPE 11
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
10A01-03	ELECTRICAL HANDHOLE WIRING
10A02-03	IDENTIFICATION PLAQUES LIGHT POLES
10A05-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES ISOLATED NEUTRAL SYSTEMS
10A07-02	ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES PHASE-TO-PHASE SYSTEMS
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C04-16	URBAN NON-DOWELED CONCRETE PAVEMENT
13C09-14A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-14B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-14C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C15-06A	CONCRETE BASE
13C15-06B	CONCRETE BASE
13C18-05A	CONCRETE PAVEMENT JOINTING
13C18-05B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-05C	CONCRETE PAVEMENT JOINT TYPES
13C18-05D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14C07-03A	PICNIC TABLE, SINGLE PEDESTAL
14C07-03B	PICNIC TABLE, SINGLE PEDESTAL
15C07-14A	PAVEMENT MARKING SYMBOLS
15C07-14B	PAVEMENT MARKING WORDS
15C07-14C	PAVEMENT MARKING ARROWS
15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C08-18B	PAVEMENT MARKING (TURN LANES)
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C24-04	36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D20-04	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

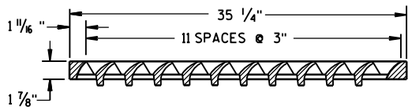
6

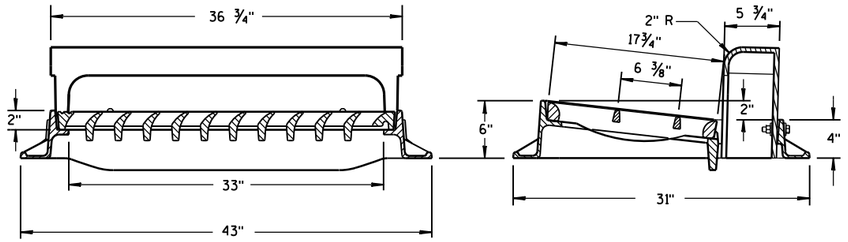


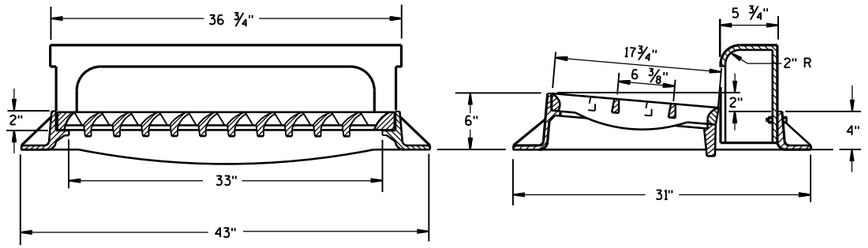
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

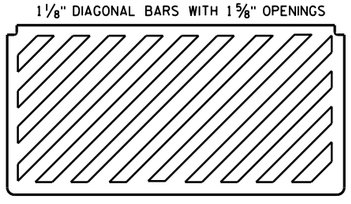






TYPE "H"

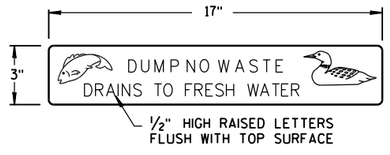
NOTE: EITHER CASTING IS ACCEPTABLE



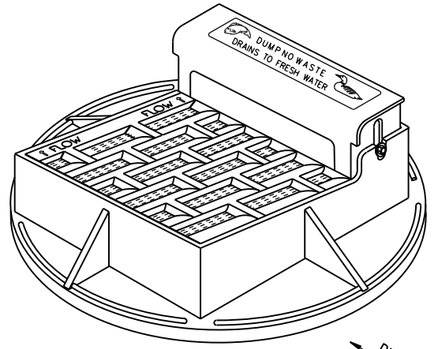
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

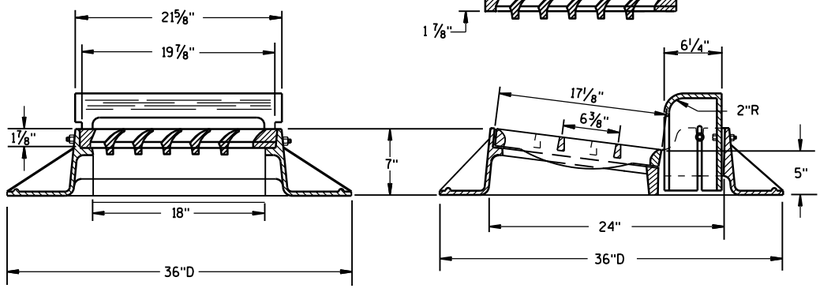


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



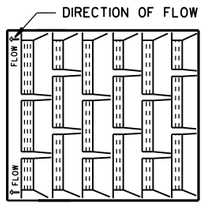
TYPE "A"

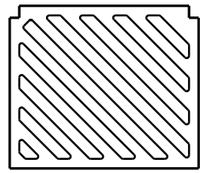
GENERAL NOTES

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.

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.

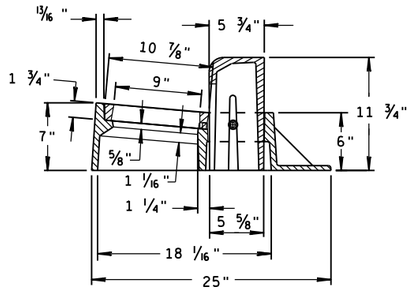


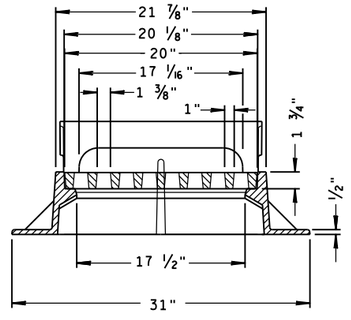


SPECIAL GRATE FOR TYPE "A" COVER

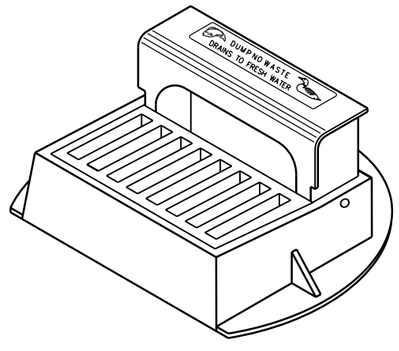
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



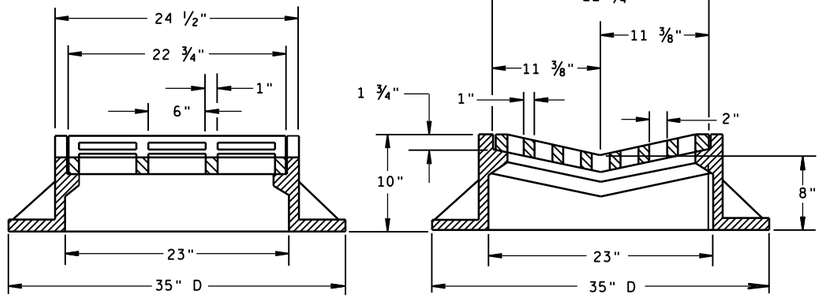
INLET COVERS TYPE A, H, A-S, H-S & Z

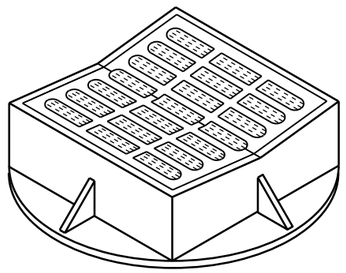
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

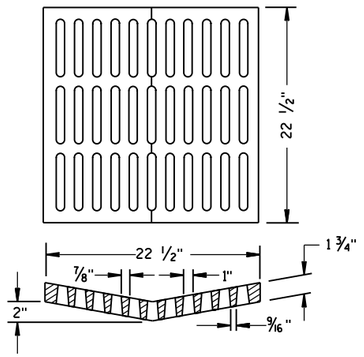
6

S.D.D. 8 A 5-19a



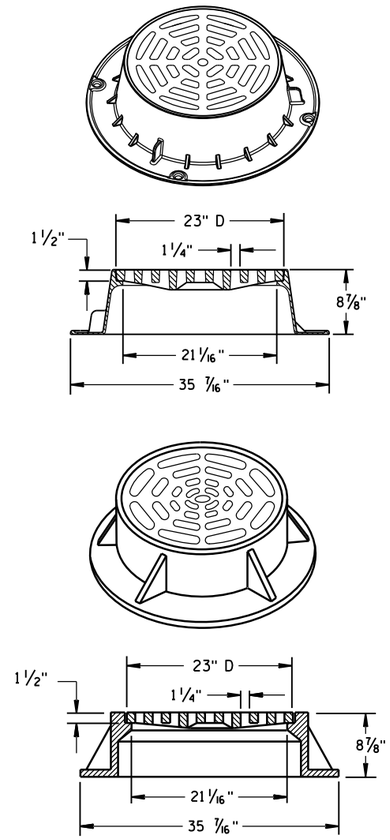


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

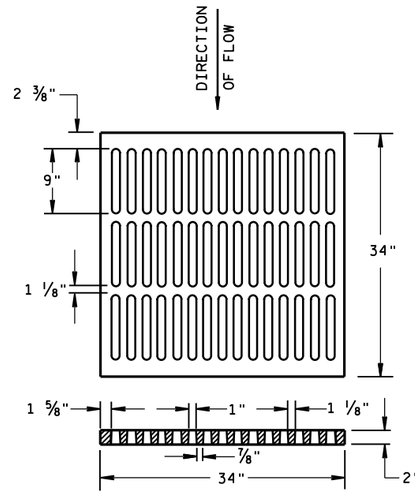
NOTE: EITHER CASTING IS ACCEPTABLE

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.

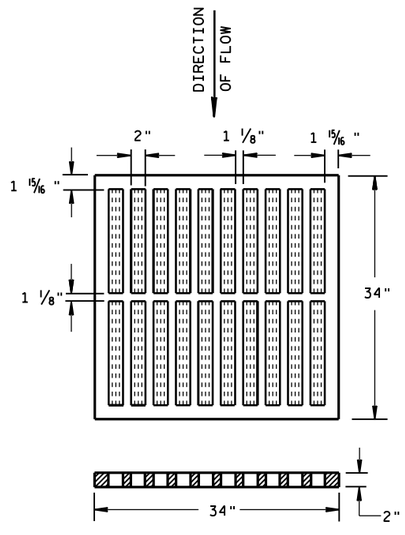
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



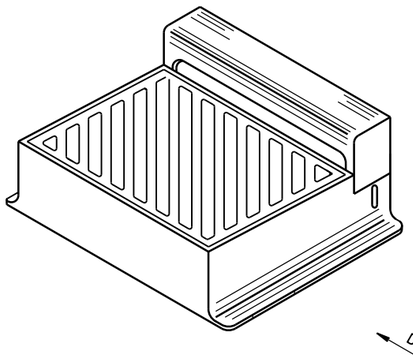
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

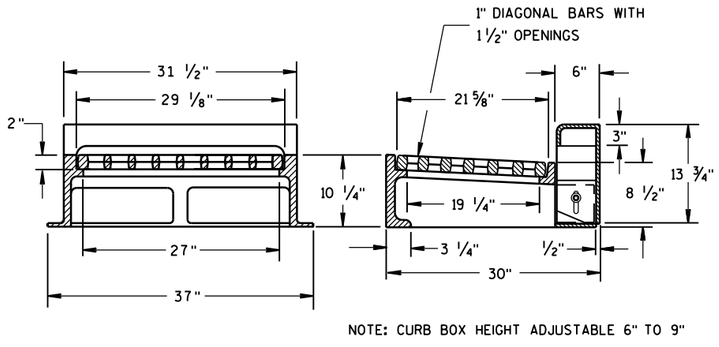


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED 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"

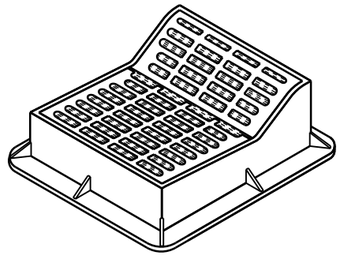
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

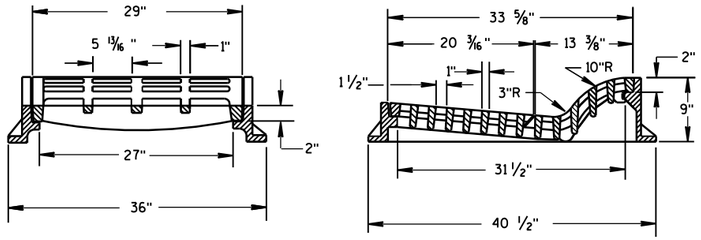
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

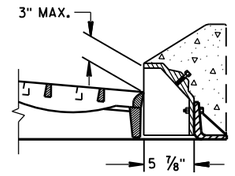
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

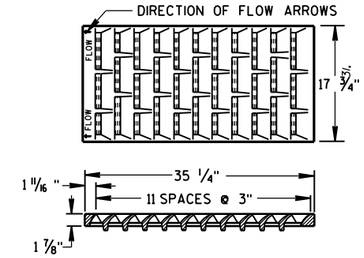
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

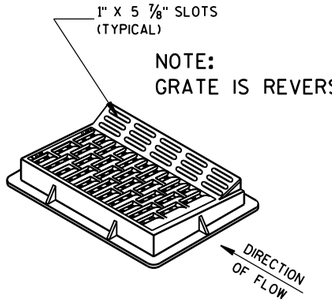
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

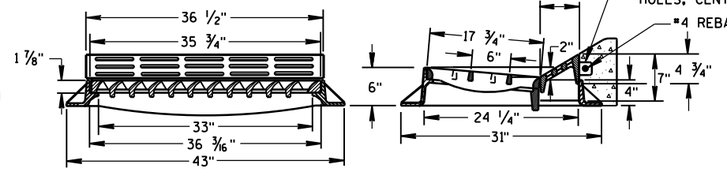
GENERAL NOTES

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.



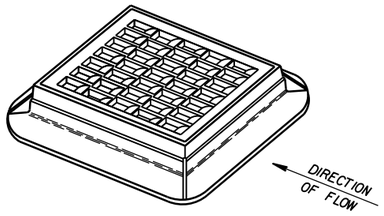


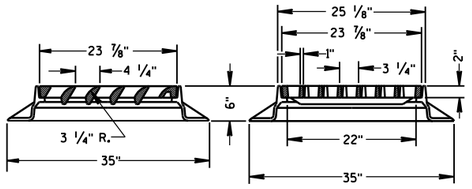


TYPE "HM"

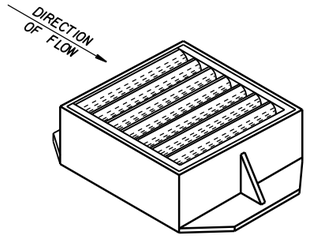
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

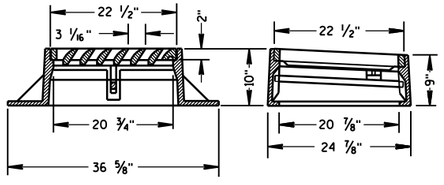
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



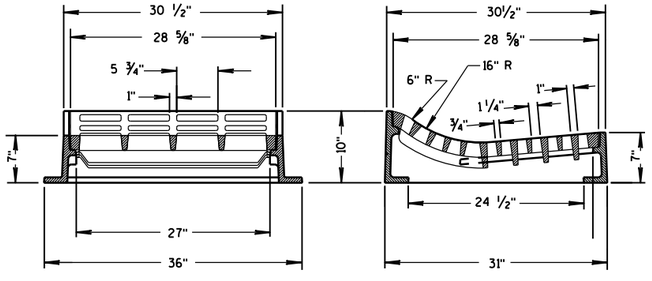


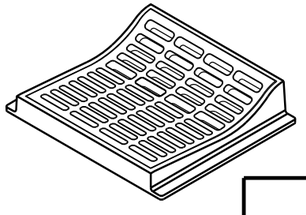
TYPE "S"





TYPE "V"





TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

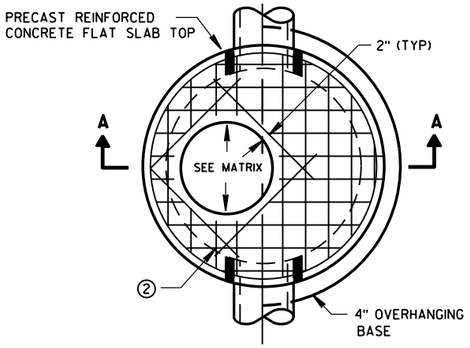
APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

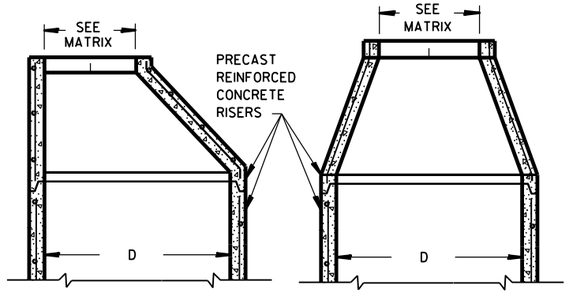
FHWA

6

S.D.D. 8 A 5-19c

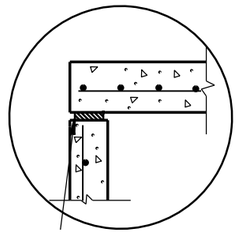


PLAN VIEW CIRCULAR OPENING

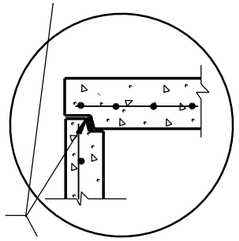


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

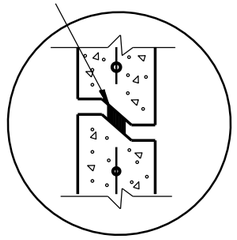


TOP WITH PLAIN END JOINT



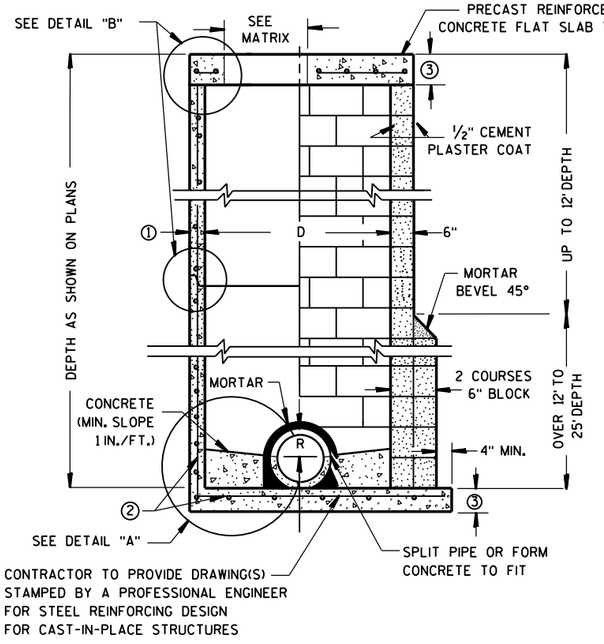
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



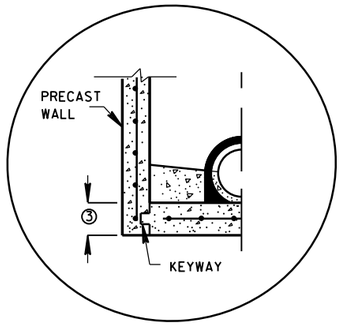
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

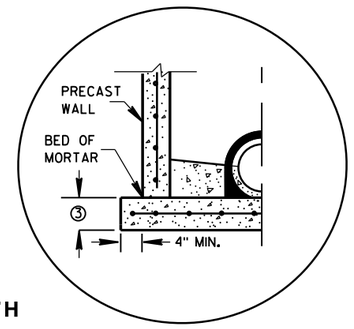


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

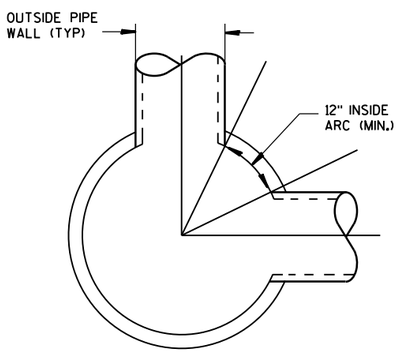


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "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 THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND 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. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

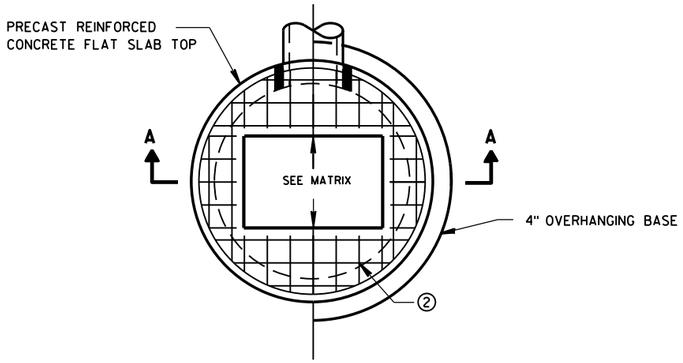
APPROVED

Sept., 2016
DATE

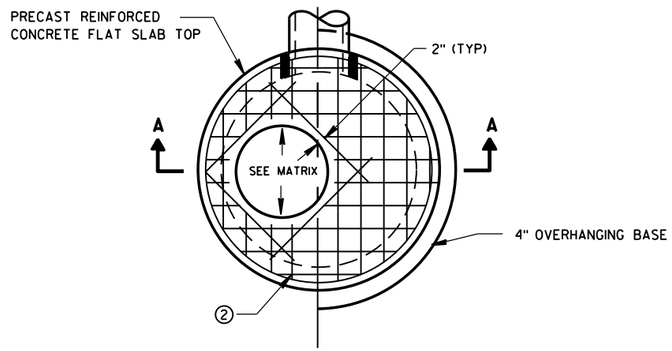
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERV

FHWA

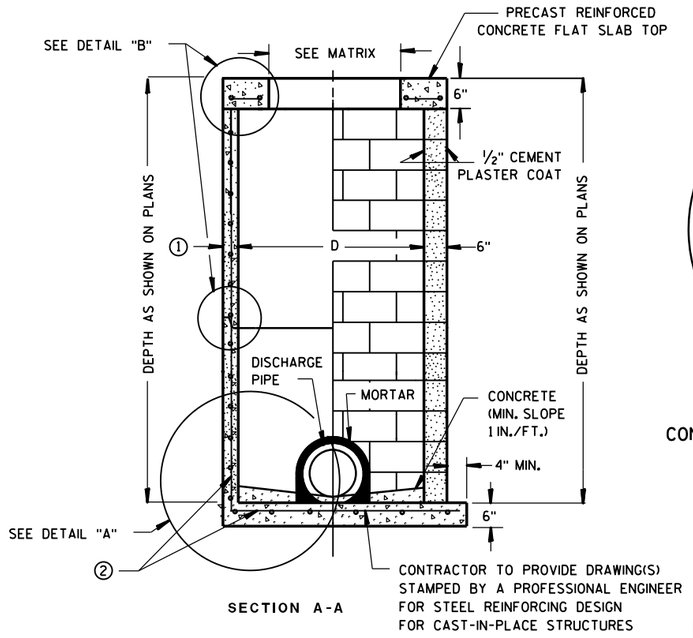
6
S.D.D. 8 B 9-2



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

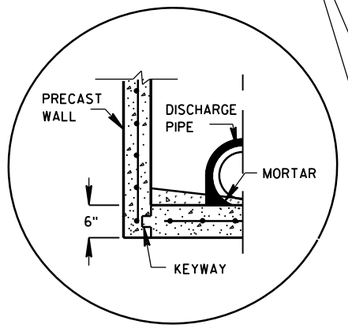


SECTION A-A

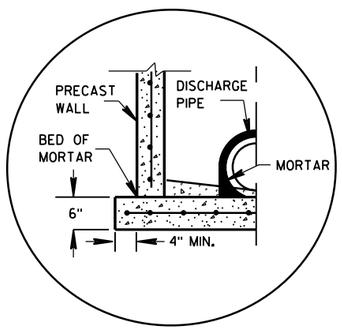
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

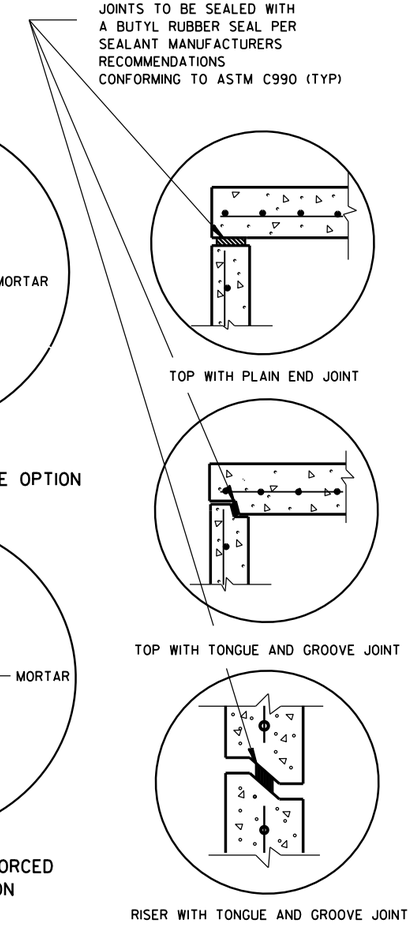


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

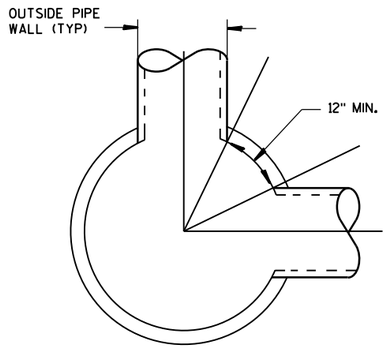
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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Sept.. 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS | UNIT SUPERVI ENT
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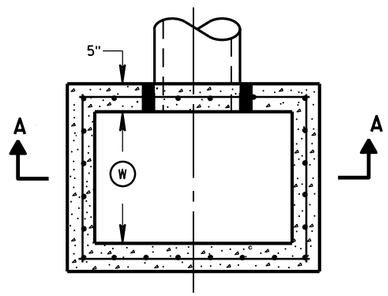
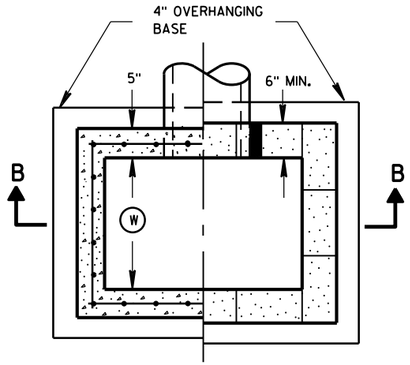
INLETS 3-FT AND 4-FT DIAMETER

6

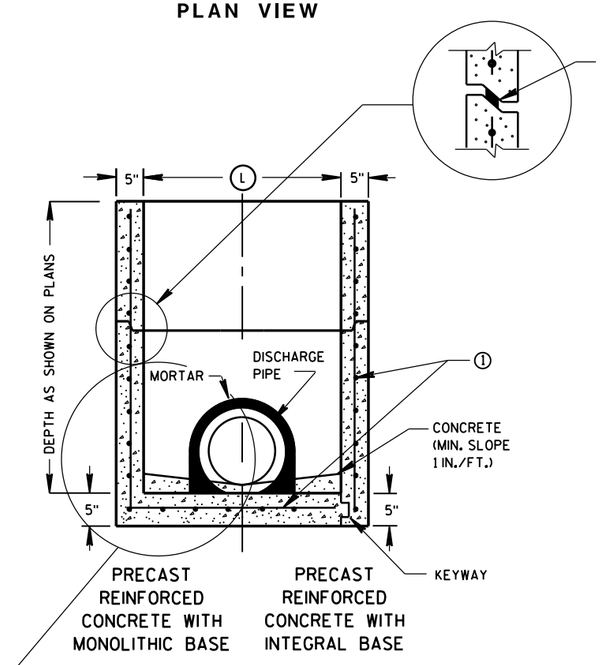
S.D.D. 8 C 6-2



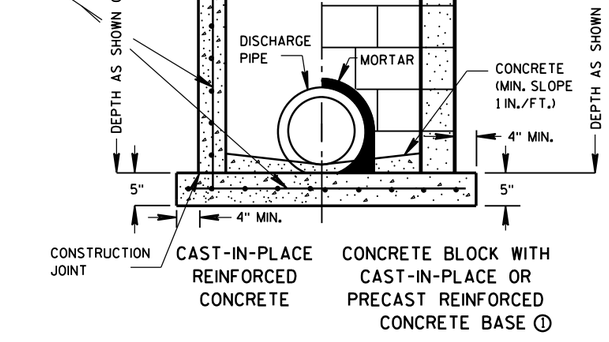
PLAN VIEW



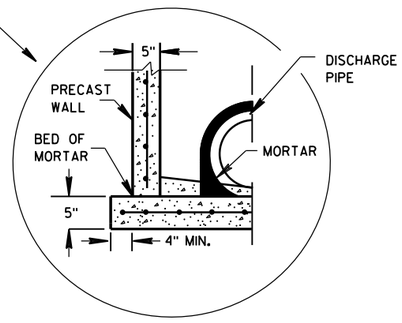
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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 ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

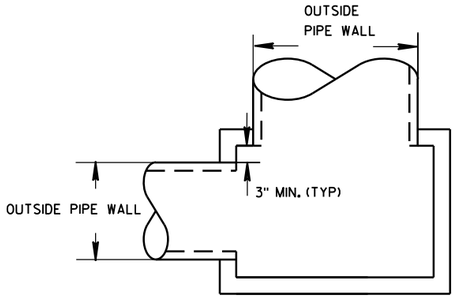
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
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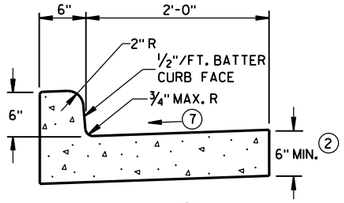
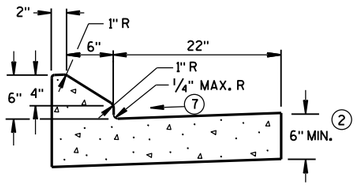
APPROVED
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT
UNIT SUPERVIS
FHWA

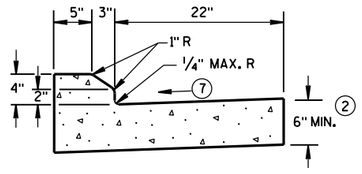
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



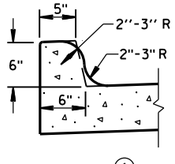
TYPES A (1) & D



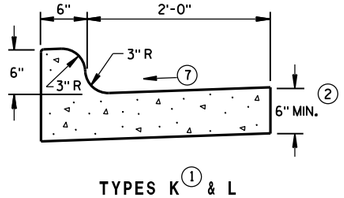
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

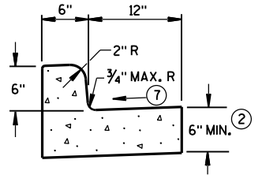


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



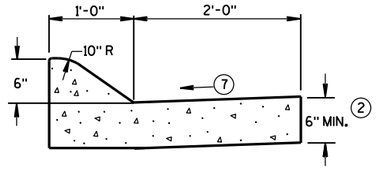
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

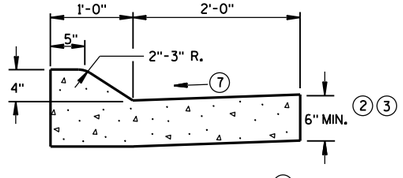


TYPES A (1) & D

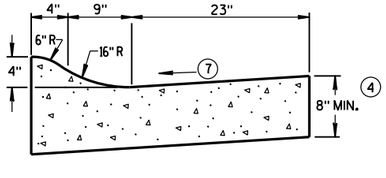
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

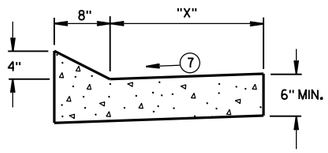


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

GENERAL NOTES

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

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

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

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

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

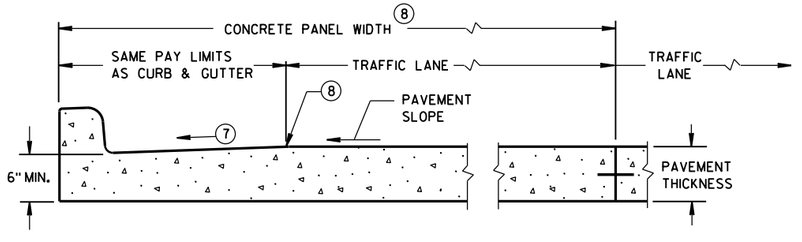
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

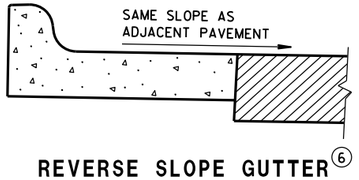
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB & GUTTER

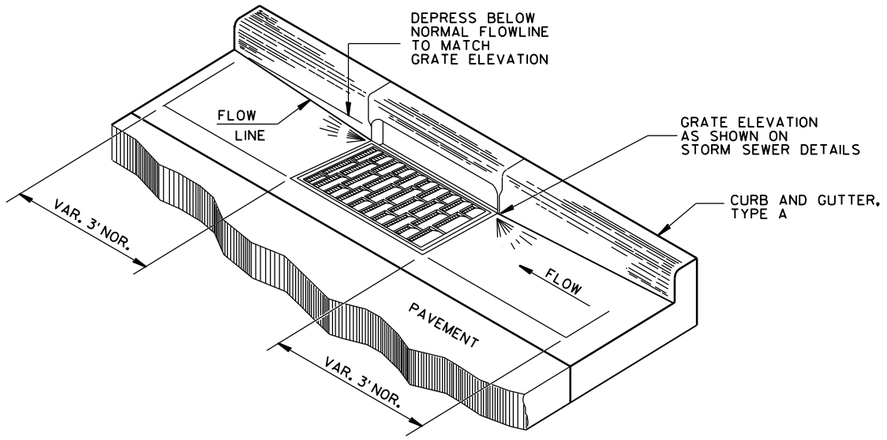
* BIKE LANE IS NOT SHOWN.



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

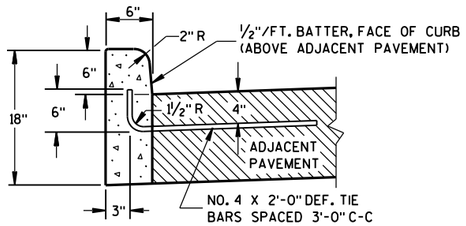
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

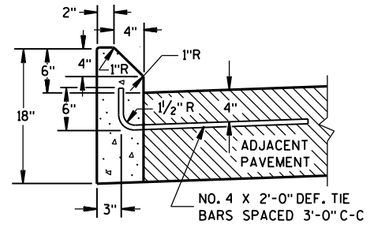
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

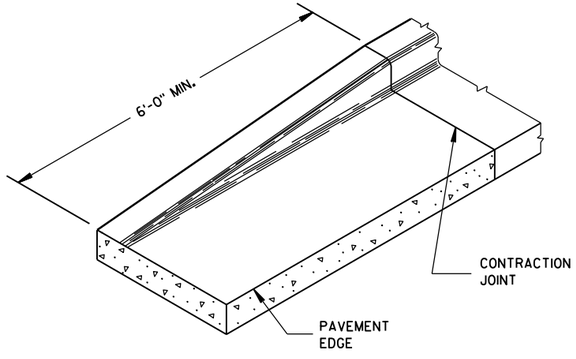


TYPES A (1) & D

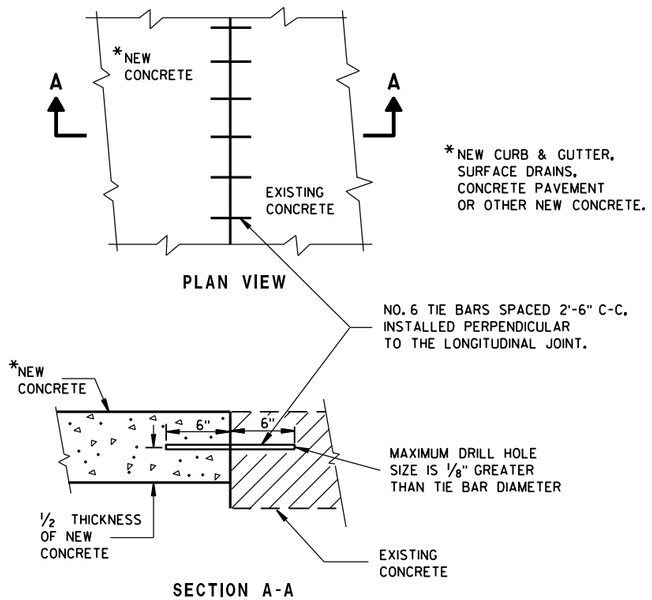


TYPES G (1) & J

CONCRETE CURB



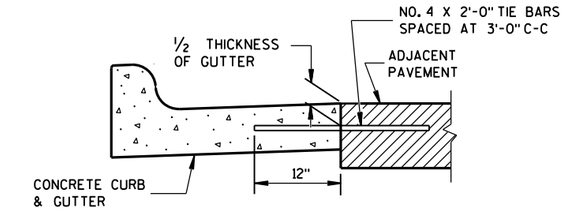
END SECTION CURB & GUTTER



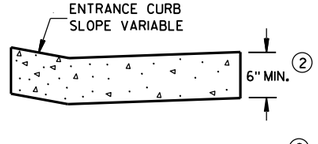
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA
ENT

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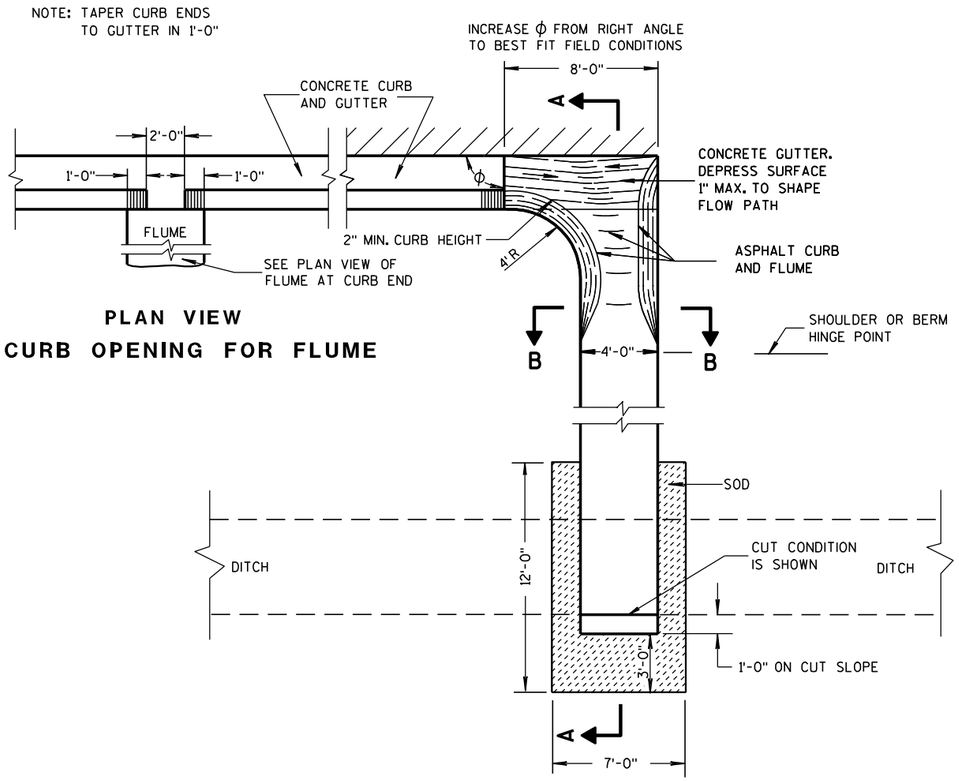
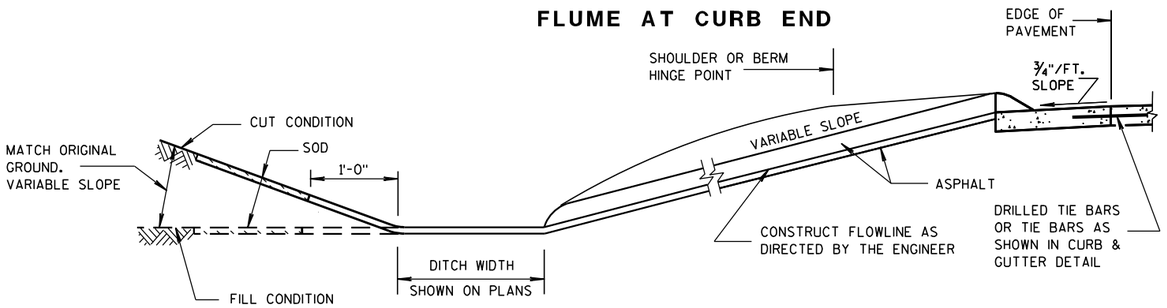
ASPHALTIC FLUME

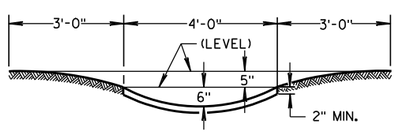


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

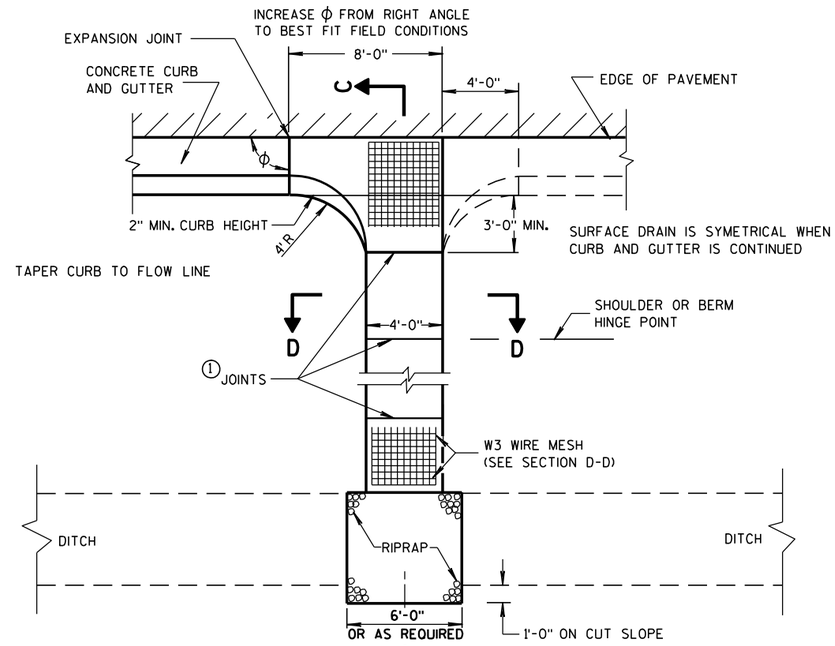
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

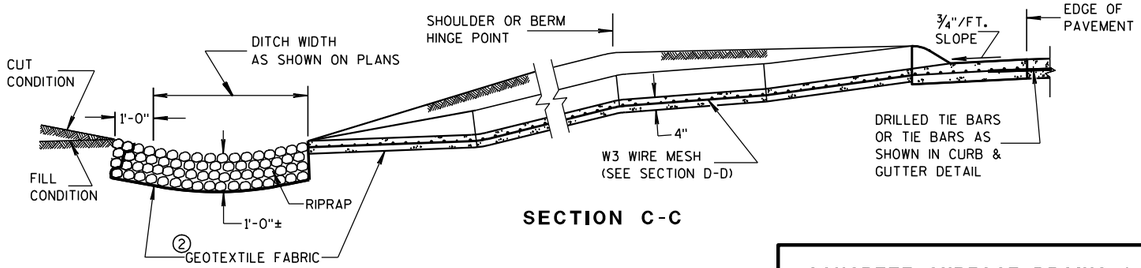
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

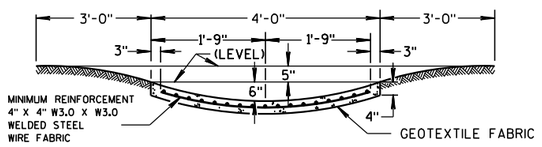
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
MENT
FHWA

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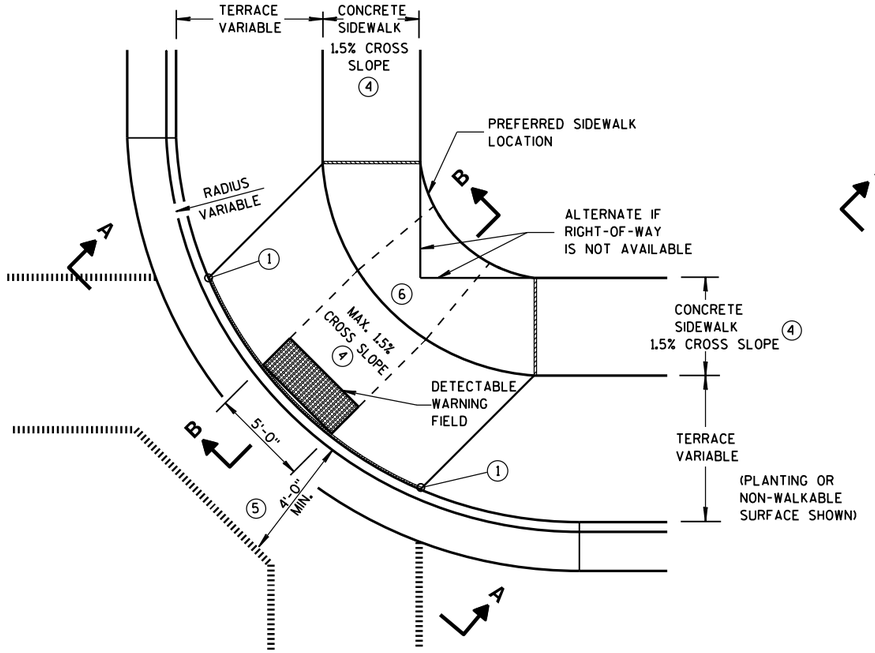
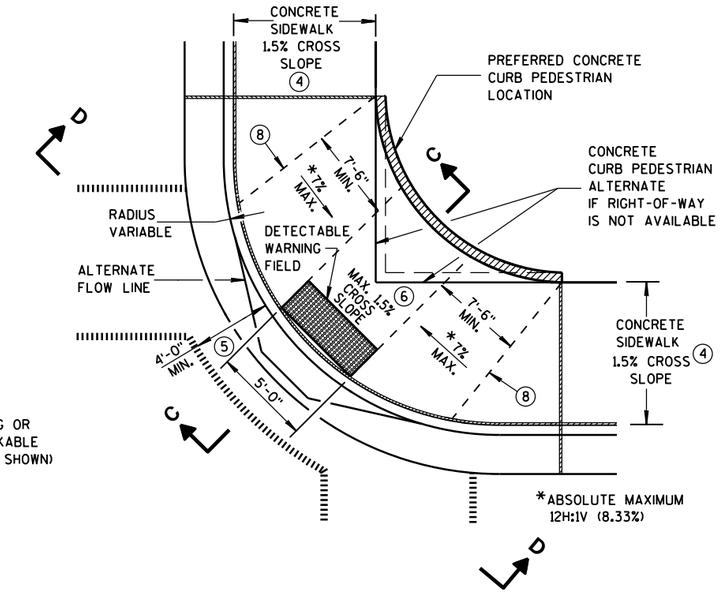
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

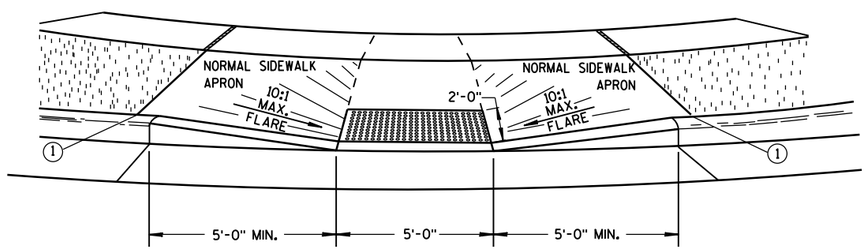
(CENTER OF CORNER RADIUS)



PLAN VIEW

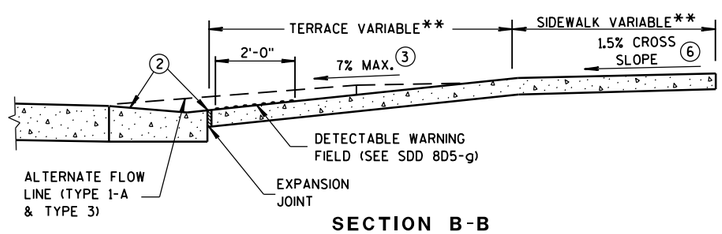
TYPE 1-A RAMP

(NO TERRACE)

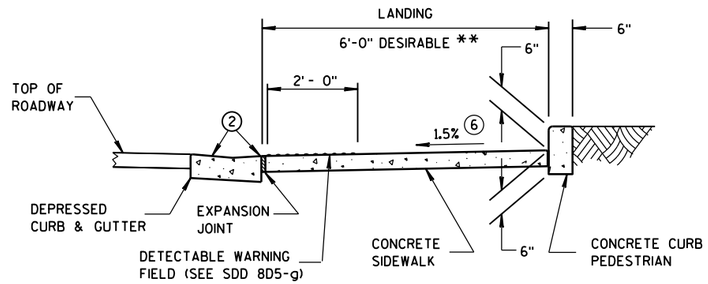


VIEW A-A

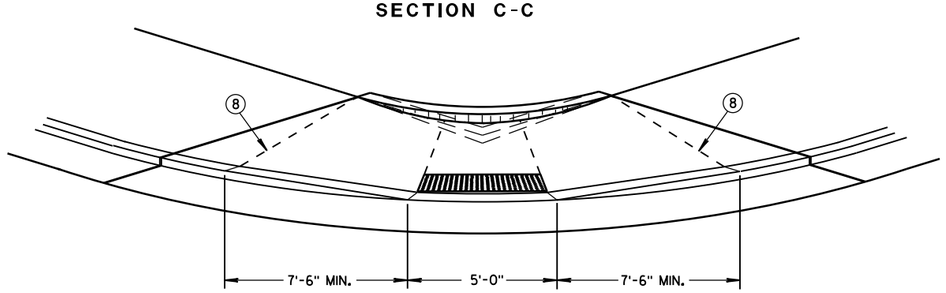
** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



SECTION C-C



VIEW D-D

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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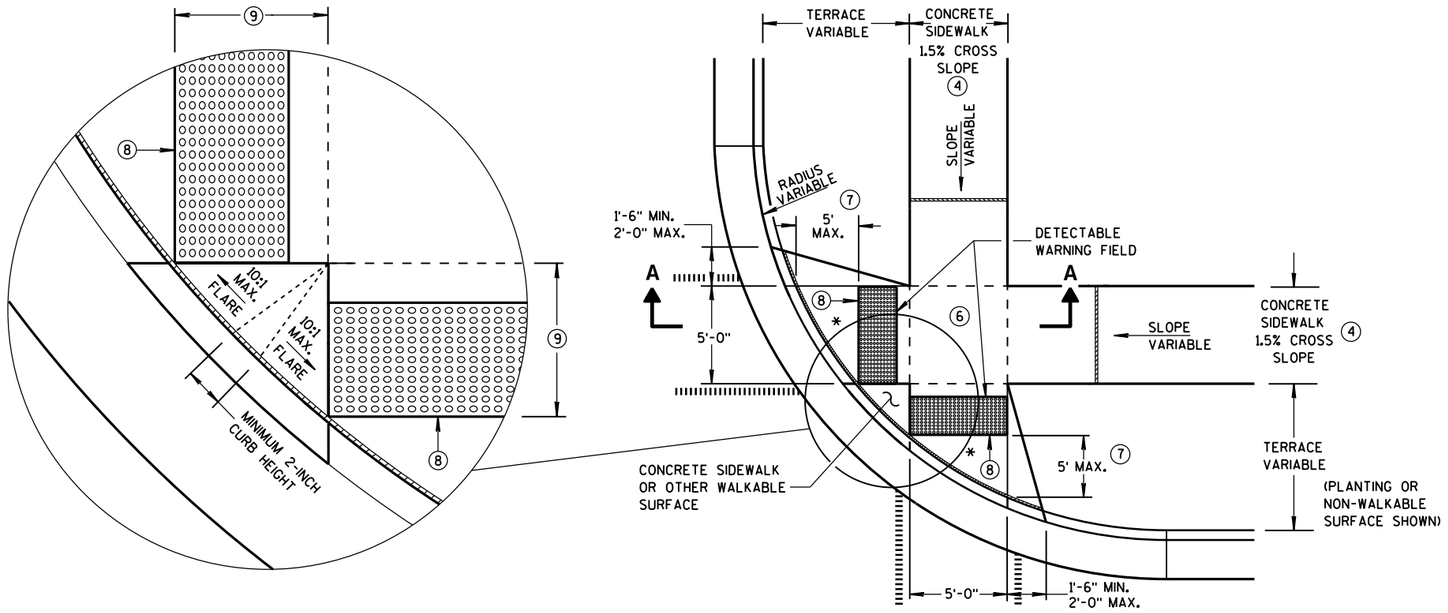
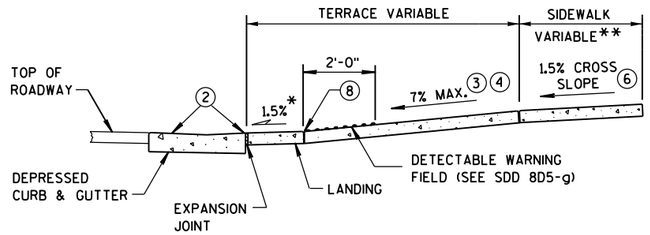


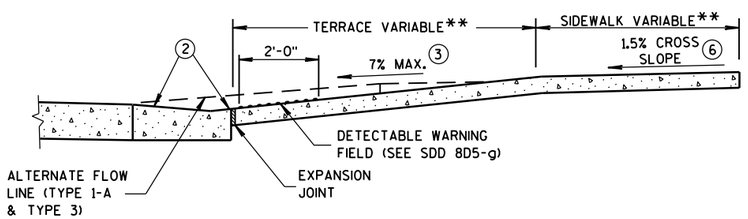
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

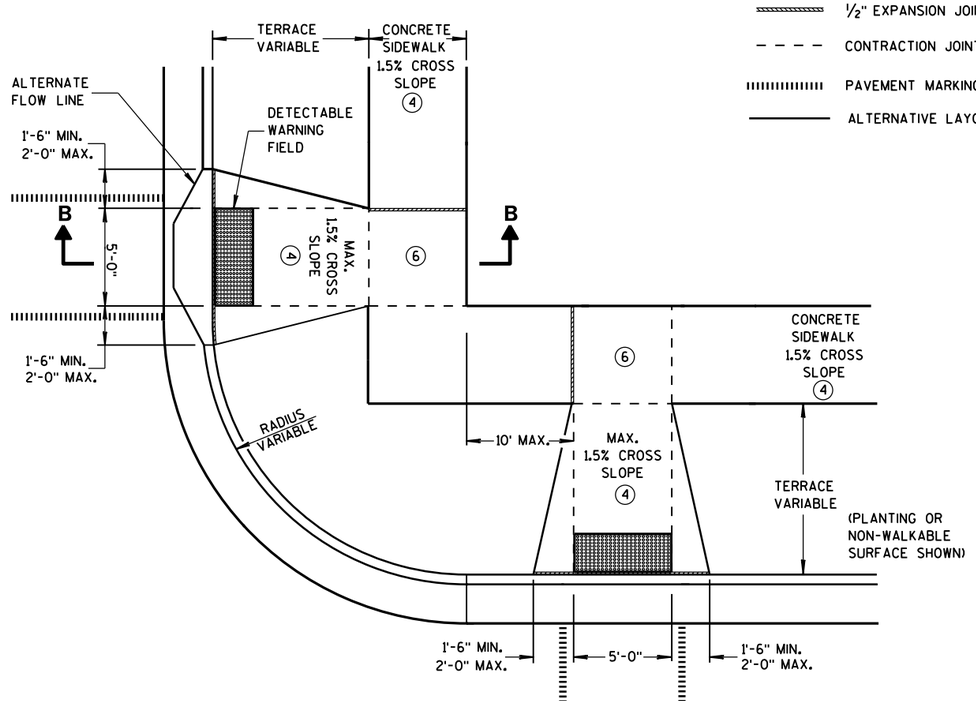


SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B



PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

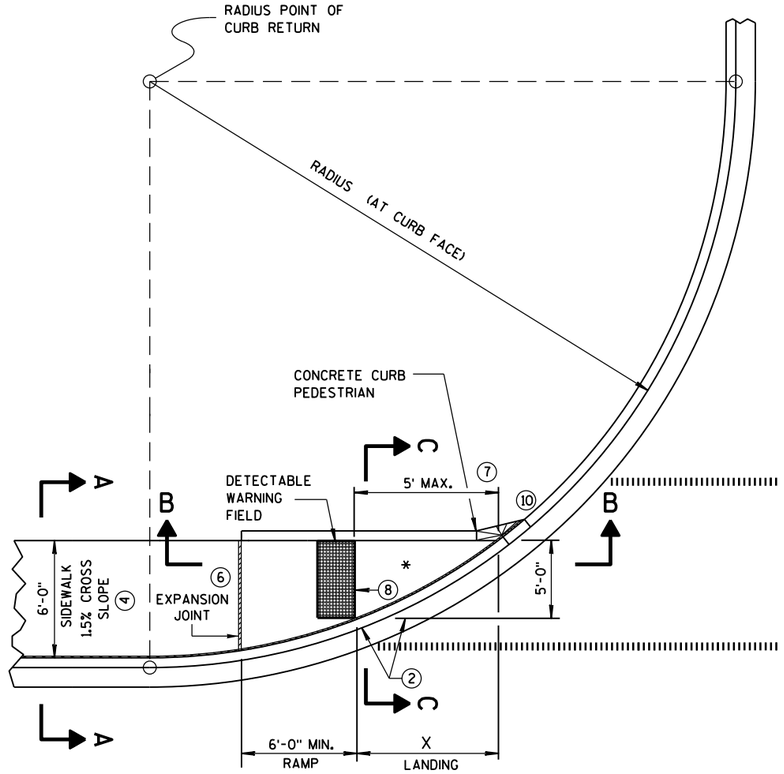
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

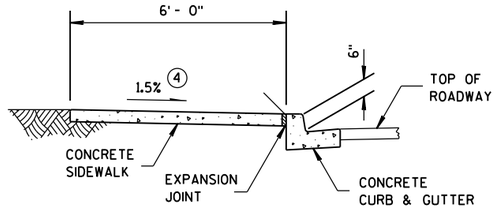
S.D.D. 8 D 5-19b



CURB RAMP TYPE 4A
PLAN VIEW

RADIUS (AT CURB FACE)	X
10 FEET	4'-7"
15 FEET	6'-5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

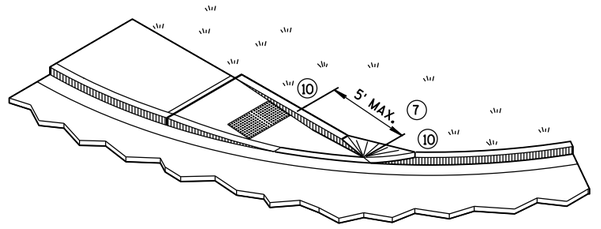
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

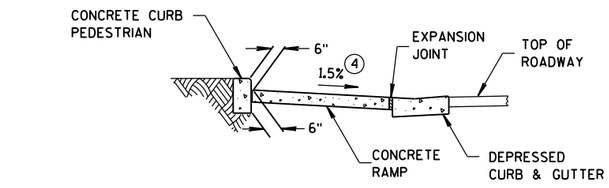
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

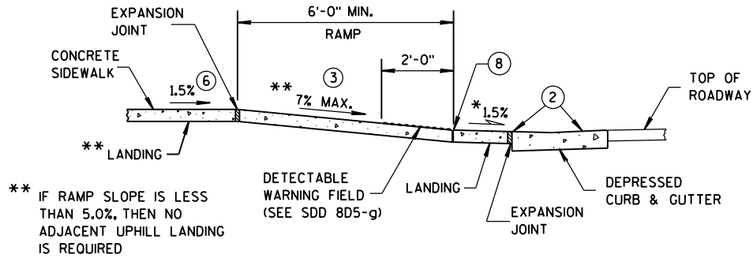
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



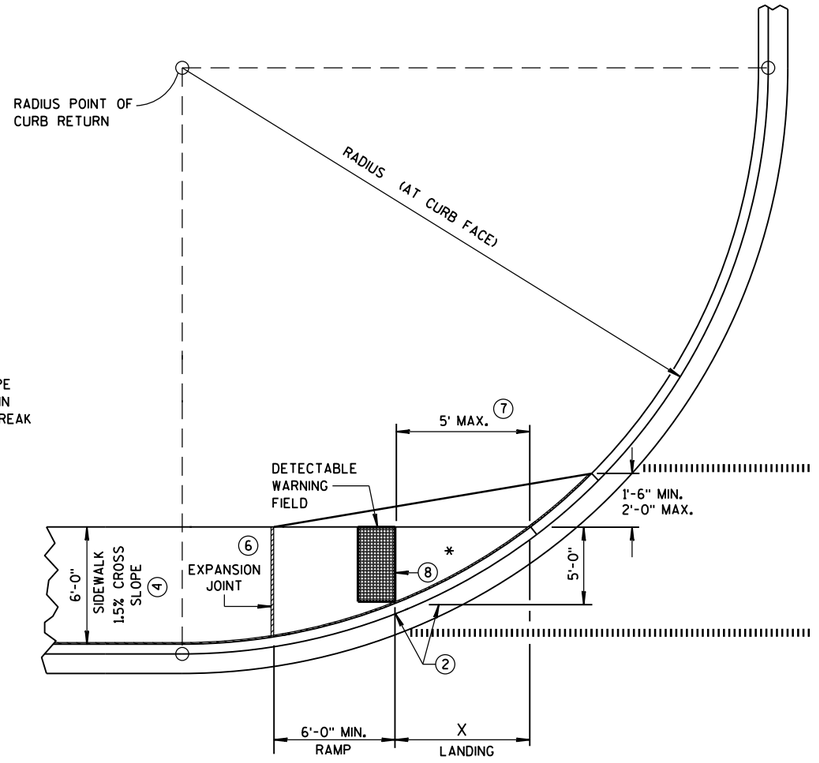
SECTION C-C FOR TYPE 4A



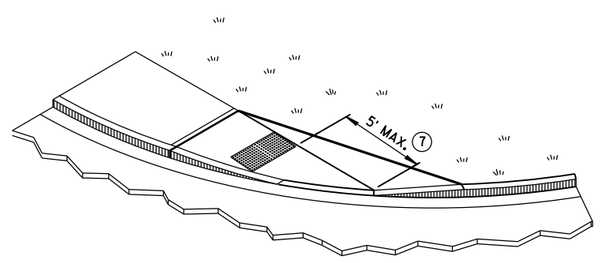
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B-B FOR TYPE 4A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

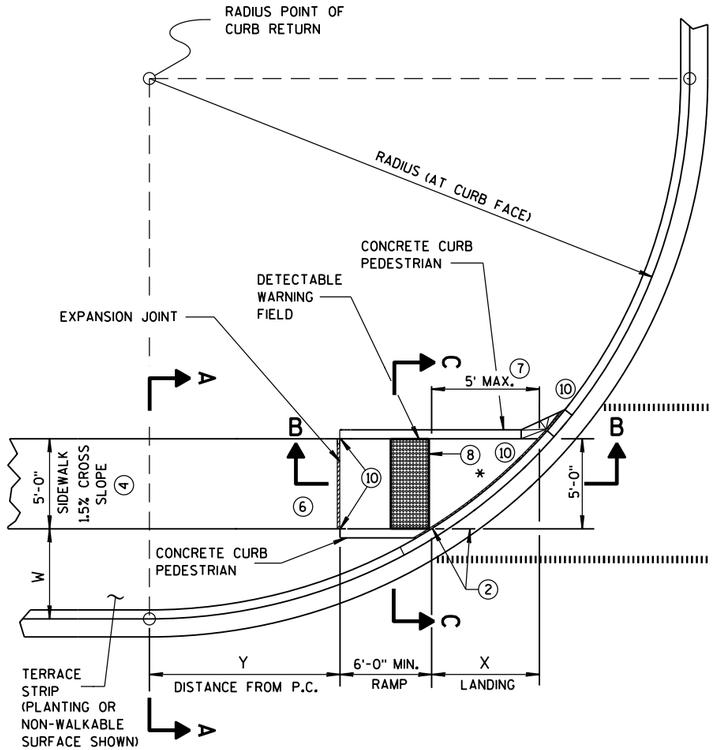
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

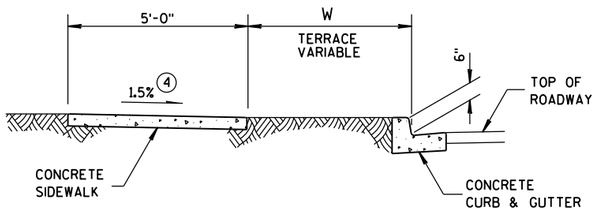
S.D.D. 8 D 5-19c

6

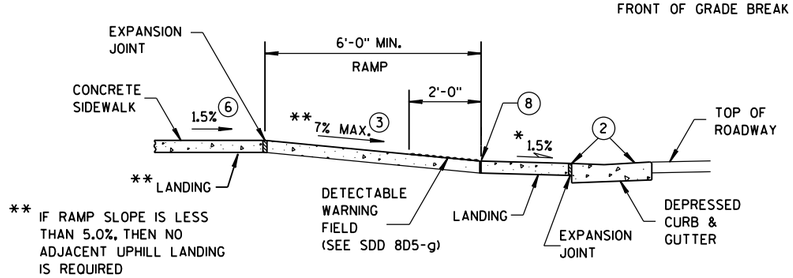
S.D.D. 8 D 5-19c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B

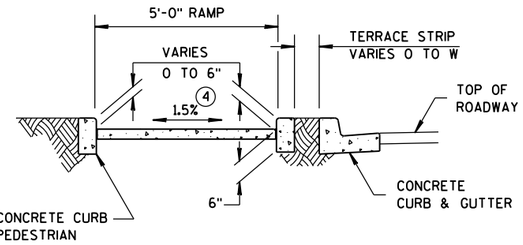


* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

SECTION B-B FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"		W = 8'-0"		W = 9'-0"		W = 10'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10¼"	0'-5"	2'-1"	1'-4½"	1'-5"	2'-1"	0'-10"	2'-7½"	0'-3¼"	3'-0¼"						
15 FEET	4'-6¾"	2'-1¾"	3'-9"	3'-5¼"	3'-1¼"	4'-6"	2'-6¾"	5'-4½"	2'-1"	6'-1"	1'-8"	6'-8½"	1'-3¼"	7'-2½"	0'-10¾"	7'-7¼"
20 FEET	5'-9¾"	3'-6½"	4'-11½"	5'-1¾"	4'-3¼"	6'-5½"	3'-8¾"	7'-7"	3'-3"	8'-6½"	2'-10"	9'-4½"	2'-5½"	10'-1¼"	2'-1¼"	10'-9"
30 FEET			6'-9¼"	7'-11¼"	6'-0¼"	9'-8"	5'-5"	11'-1¾"	4'-10¾"	12'-5¾"	4'-5½"	13'-7¾"	4'-0¾"	14'-8½"	3'-8½"	15'-8¼"
40 FEET									6'-1¾"	15'-8½"	5'-8"	17'-2"	5'-3"	18'-5¾"	4'-10¾"	19'-8¼"
50 FEET															5'-10¼"	23'-2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C-C FOR TYPE 4B

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

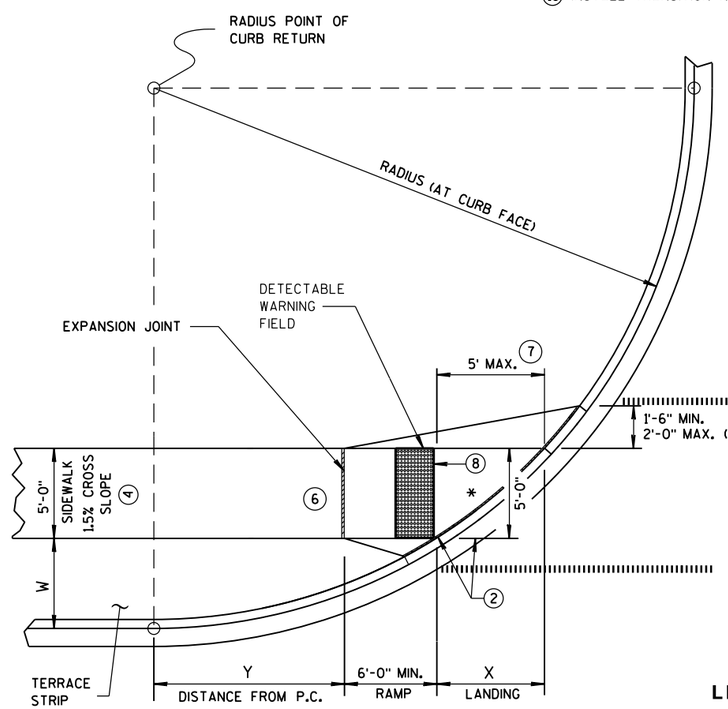
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

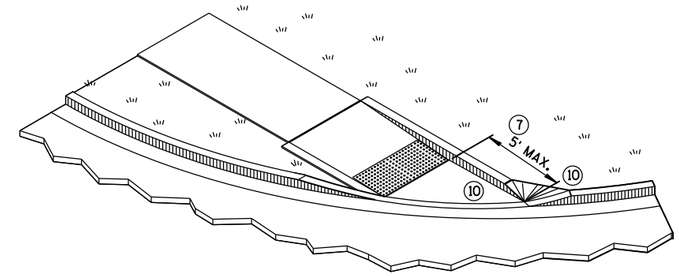
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

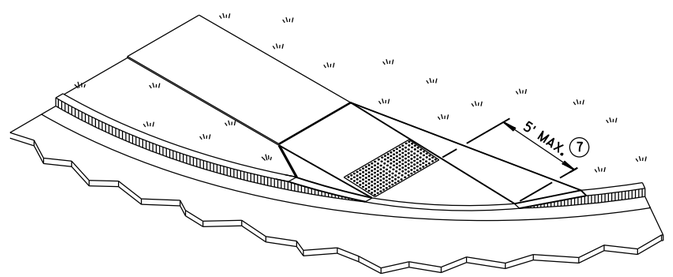
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

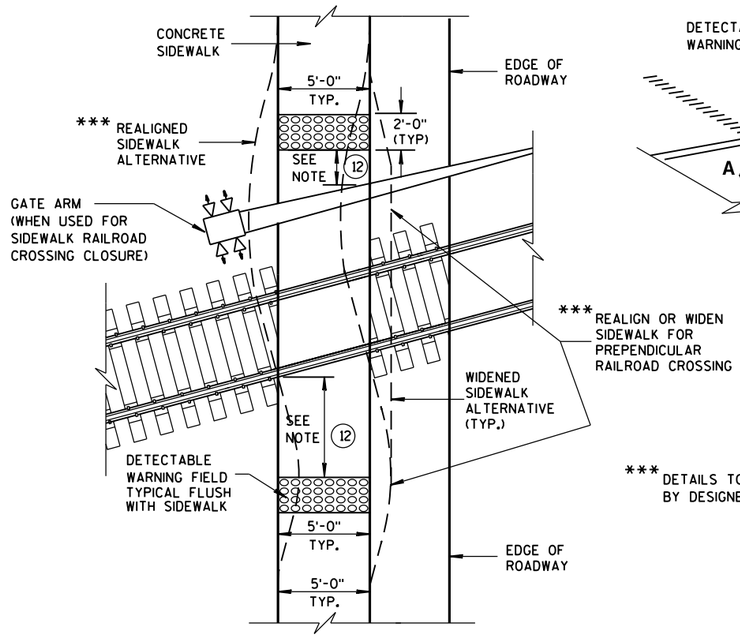
PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

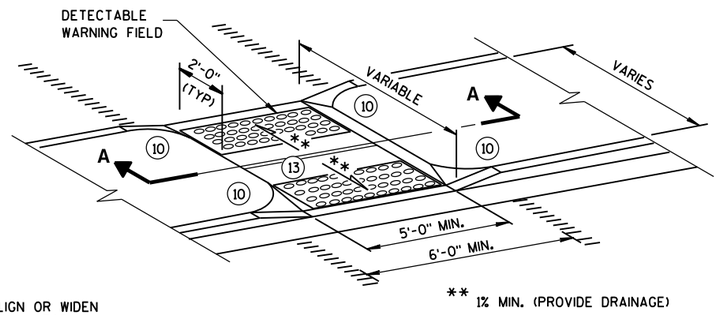
6

S.D.D. 8 D 5-19d



*** DETAILS TO BE DETERMINED BY DESIGNER

TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING
TYPE 5

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

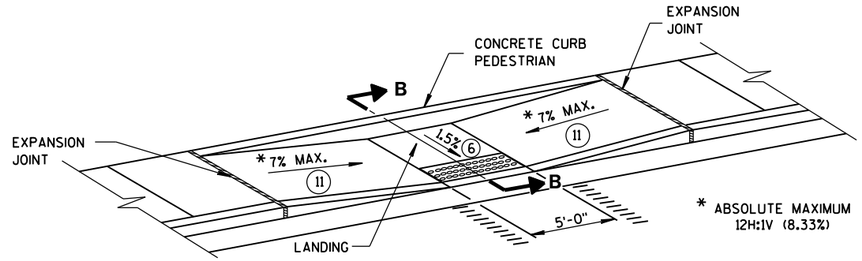
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

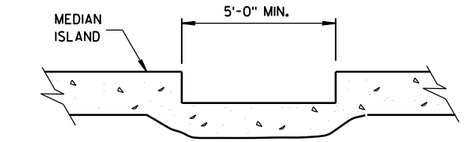
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

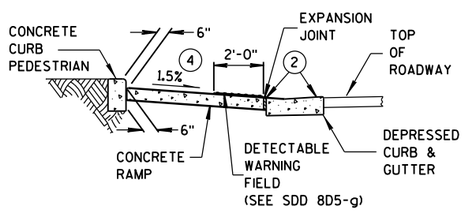
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2-FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.



MID-BLOCK CROSSING
TYPE 7A

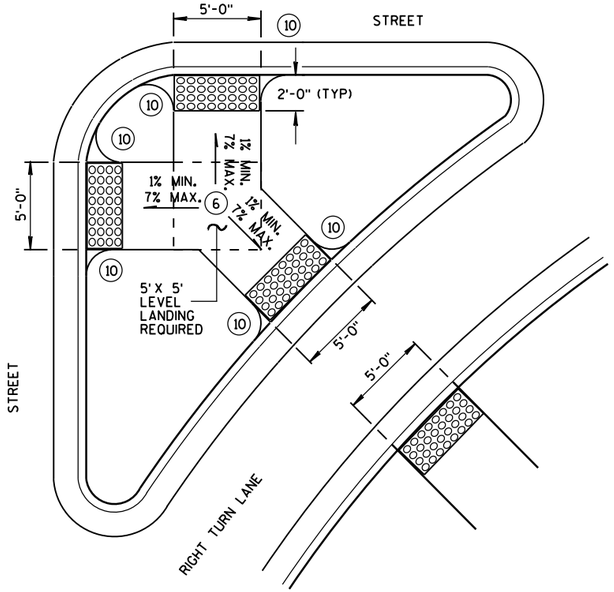


SECTION A-A

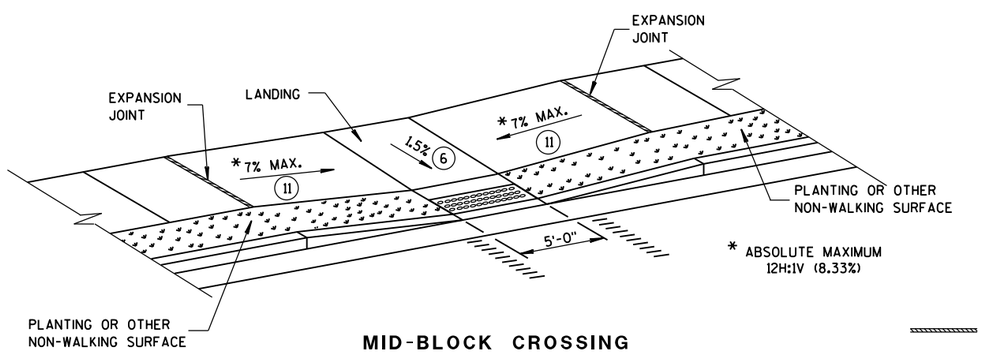


SECTION B-B

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

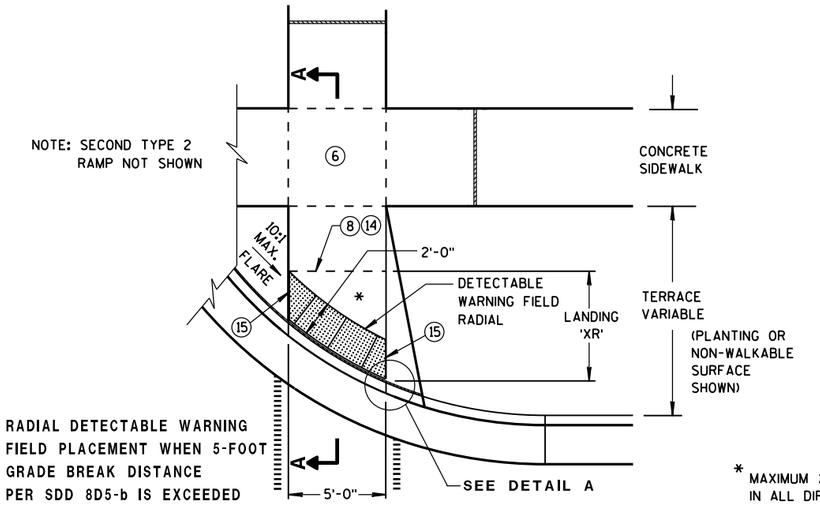
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-19e

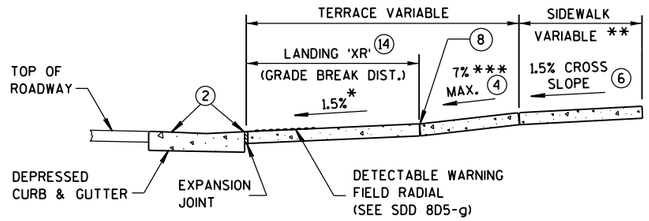


TYPE 2 RAMP
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

LEGEND

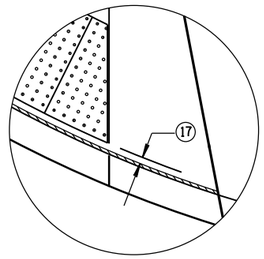
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



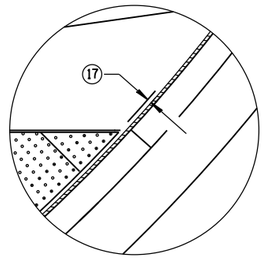
** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

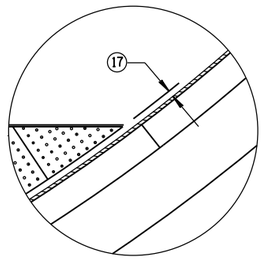
SECTION A-A



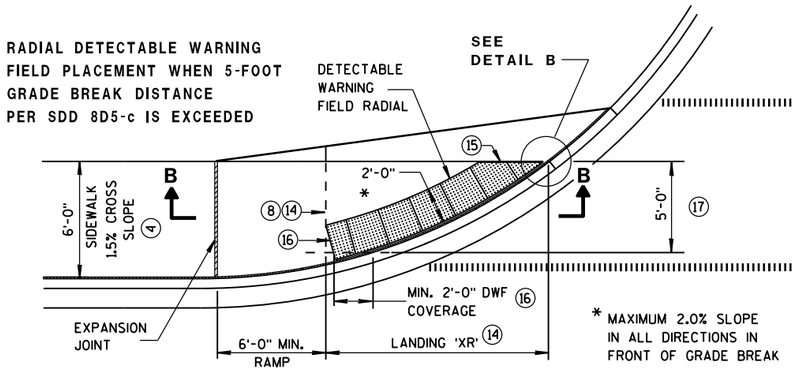
DETAIL A



DETAIL C

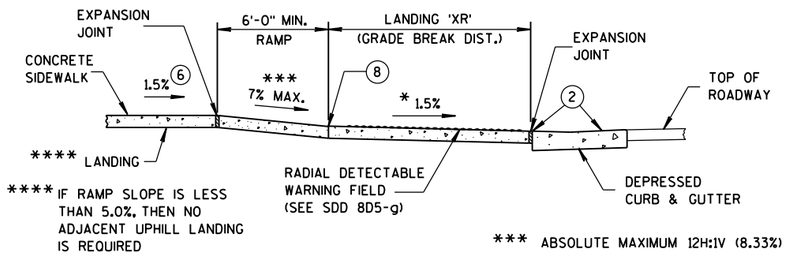


DETAIL B



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

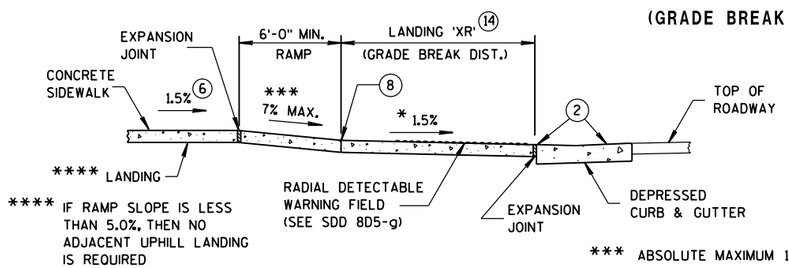
CURB RAMP TYPE 4A1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

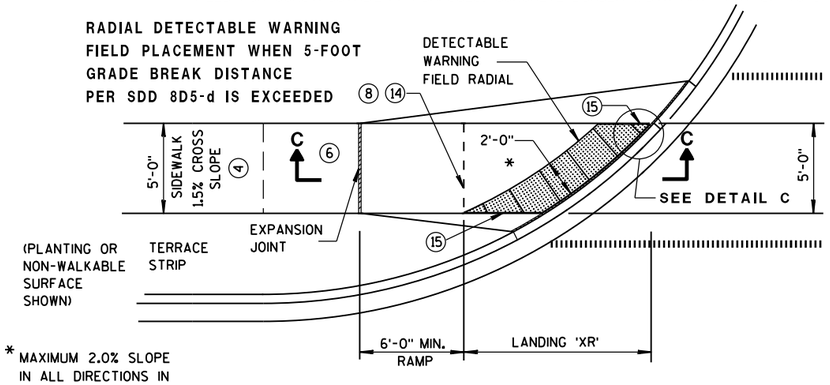
SECTION B-B FOR TYPE 4A1



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** ABSOLUTE MAXIMUM 12H:1V (8.33%)

SECTION C-C FOR TYPE 4B1



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

CURB RAMP TYPE 4B1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS (DWFs) THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION 'XR') REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1'X 2' RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2'-0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

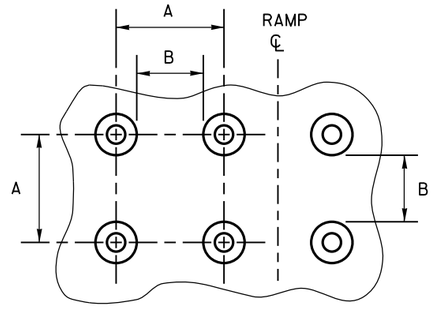
CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

6

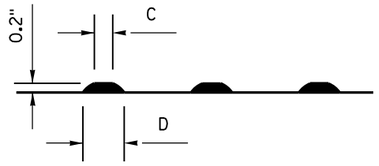
S.D.D. 8 D 5-19f

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES

DETECTABLE WARNING PATTERN DETAIL

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

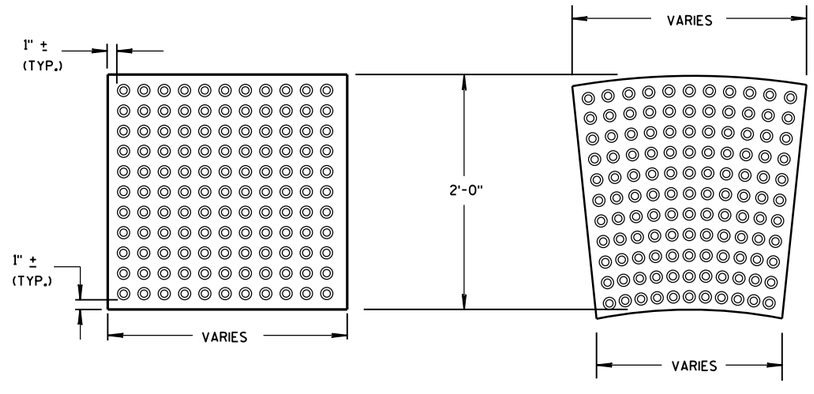
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGES IN COMBINATION WITH SQUARE PANELS ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

⑮ FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

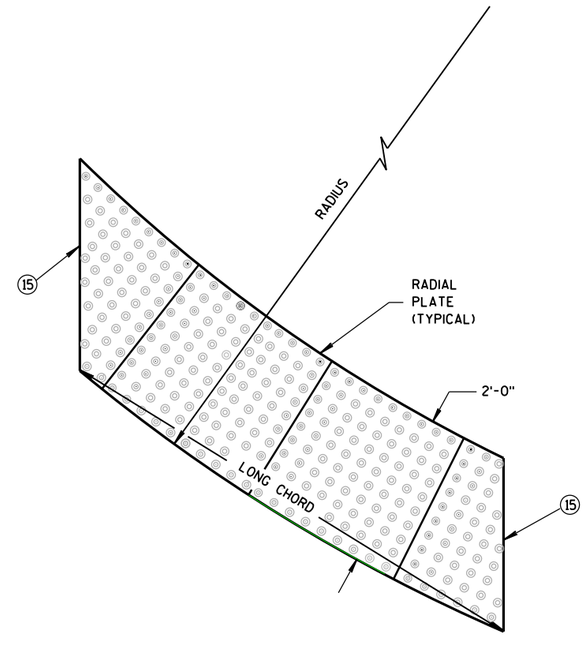


RECTANGULAR PLATES

RADIAL PLATES

DETECTABLE WARNING FIELDS (TYPICAL)

PLAN VIEW



RADIAL DETECTABLE WARNING FIELD ATTRIBUTES

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERV
ENT
FHWA

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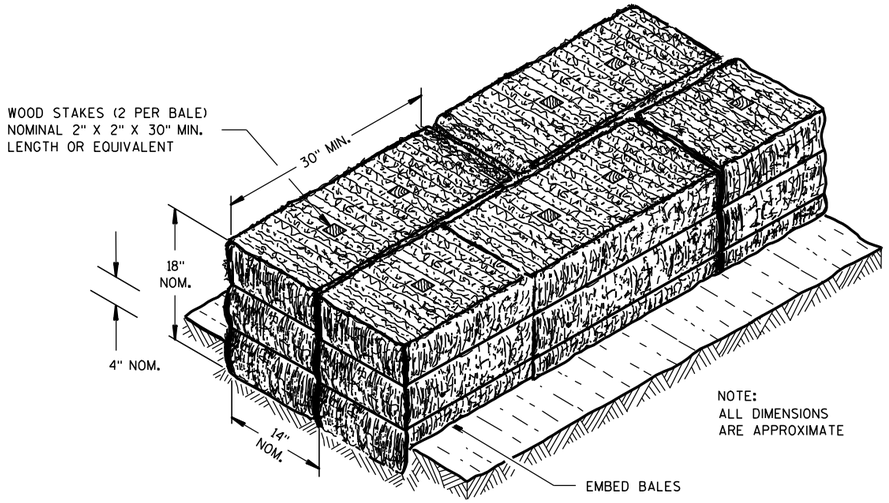
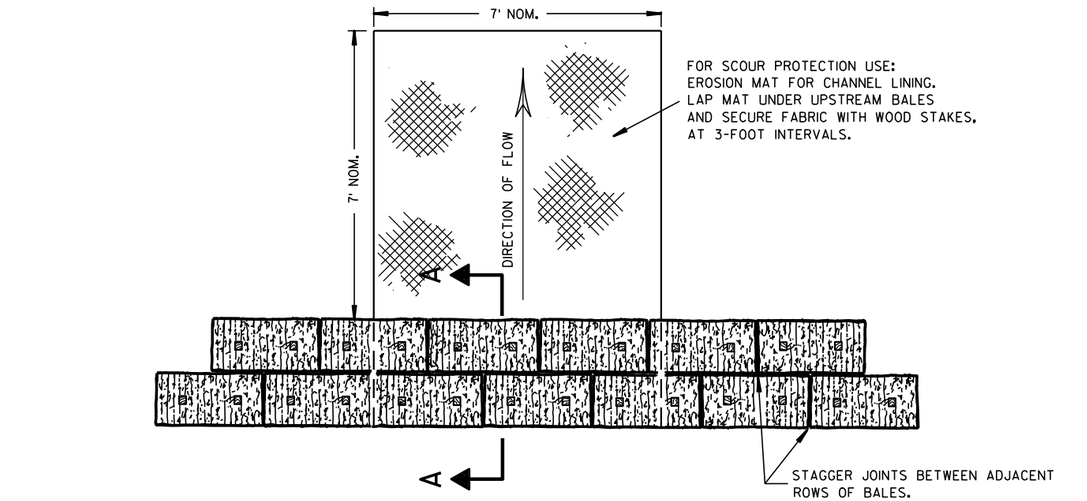
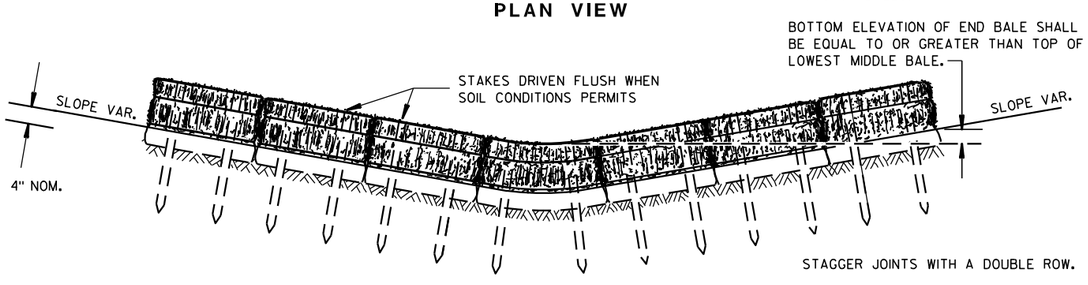
S.D.D. 8 D 5-19g



SECTION A-A



PLAN VIEW



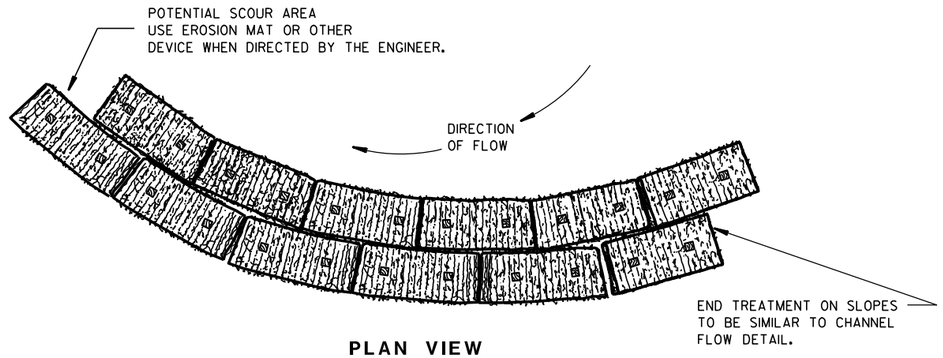
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

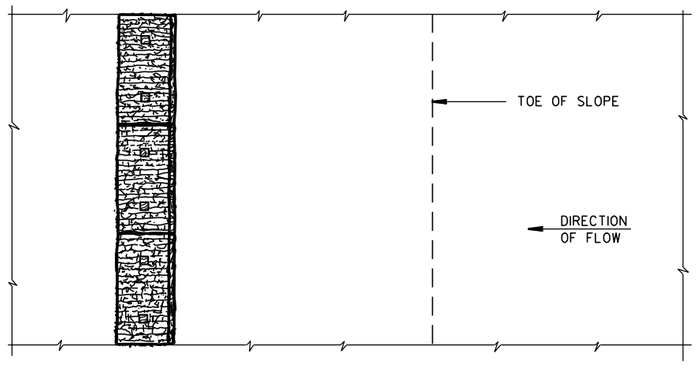
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

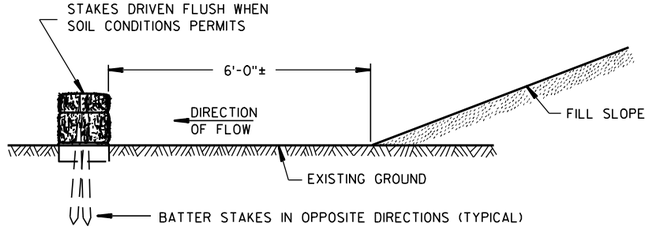


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

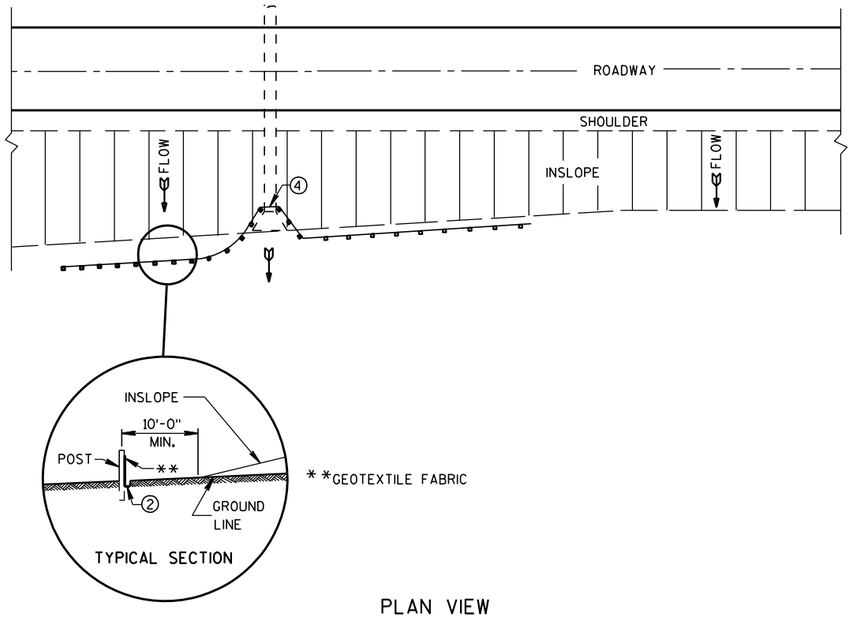
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

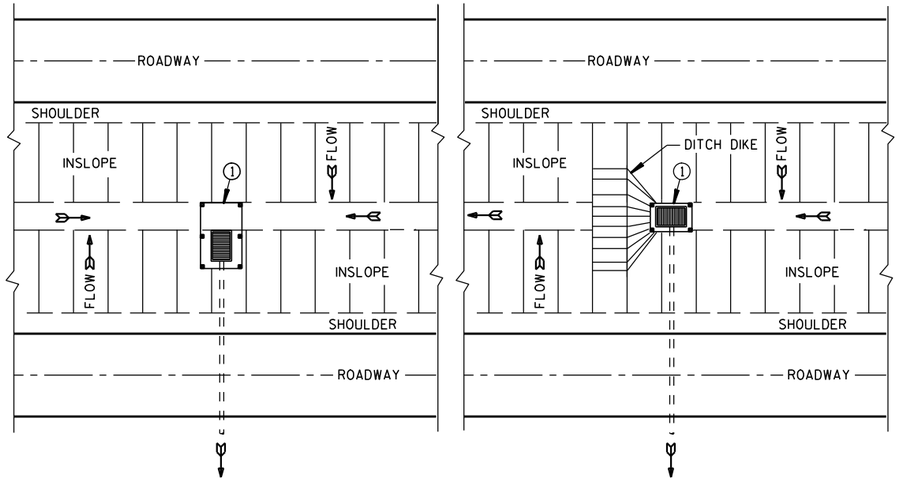
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



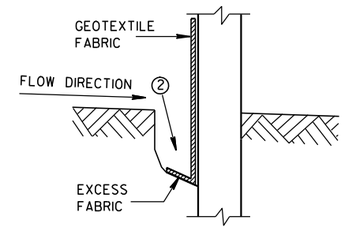
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

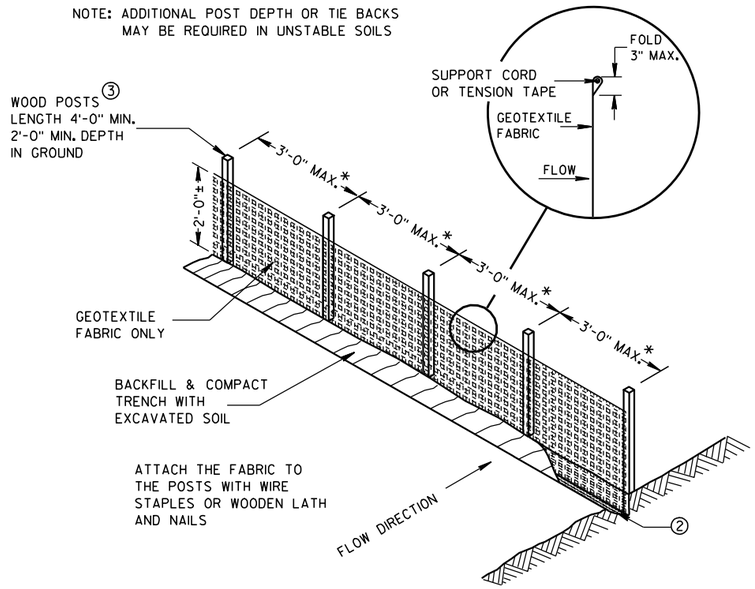
GENERAL NOTES

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

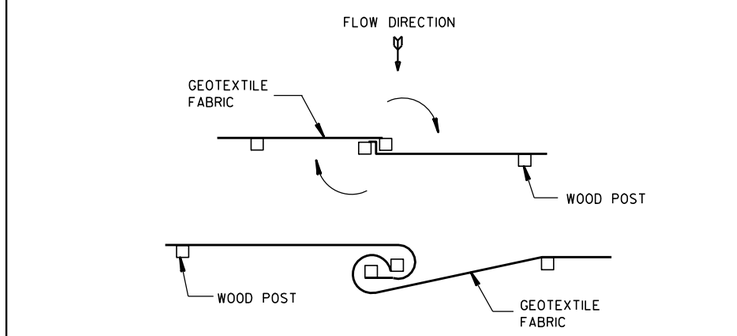
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



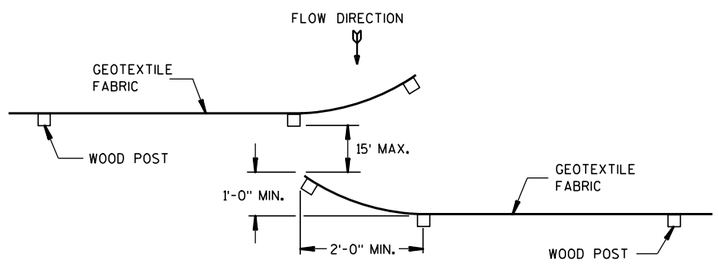
TRENCH DETAIL



SILT FENCE

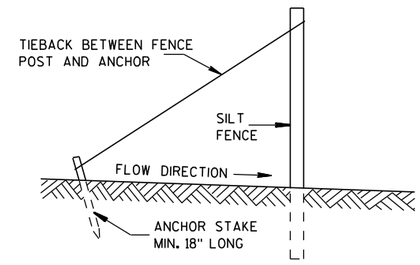


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 E 9-6

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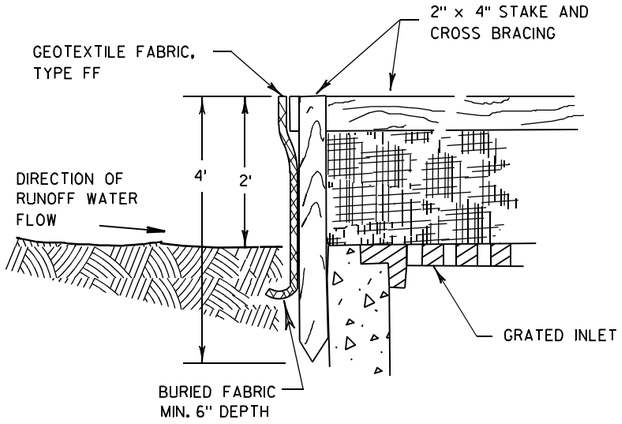
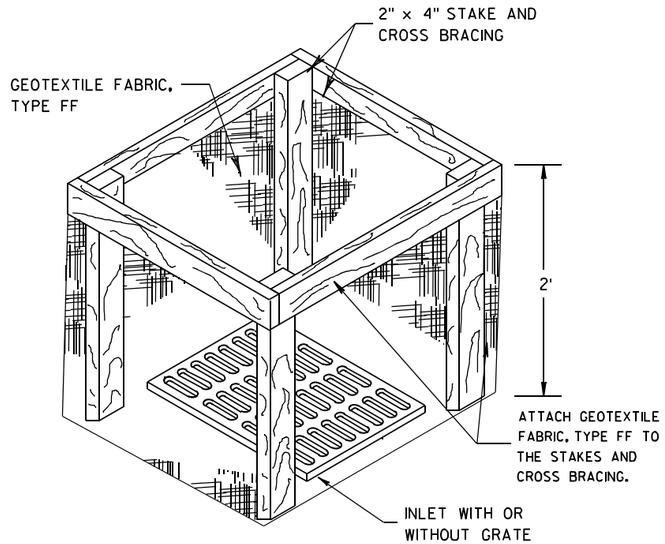
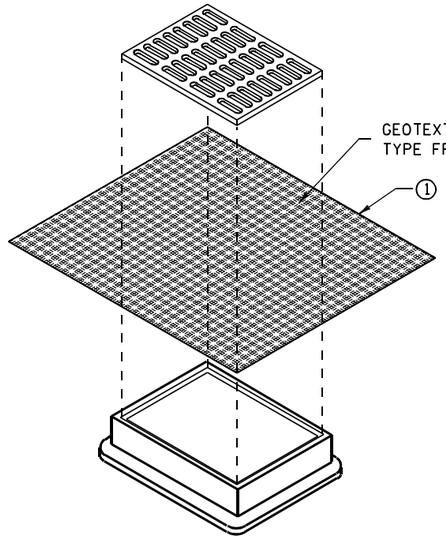
S.D.D. 8 E 9-6



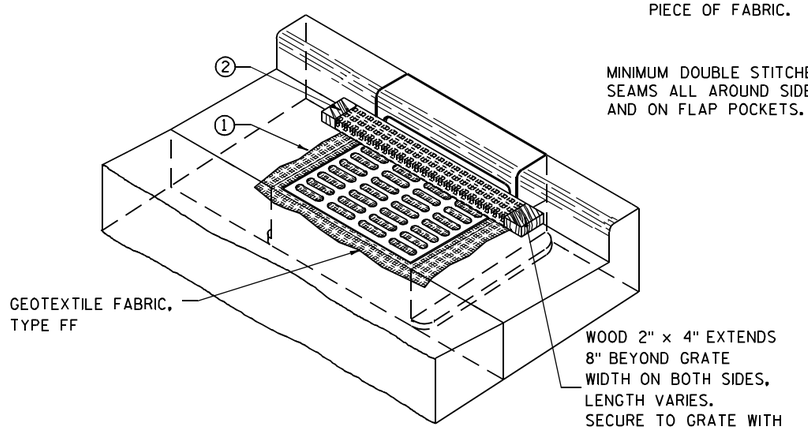


INLET PROTECTION, TYPE A

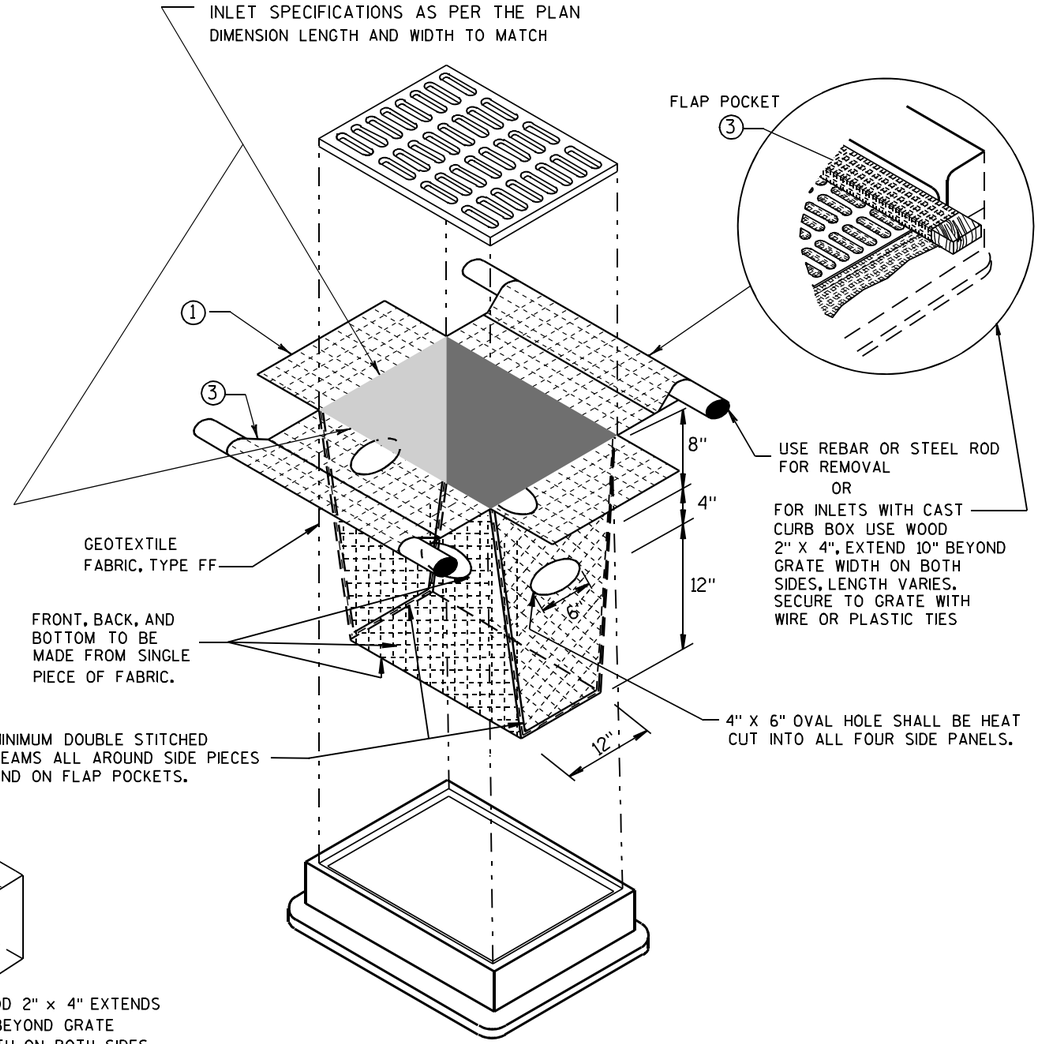


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2

METAL APRON ENDWALLS

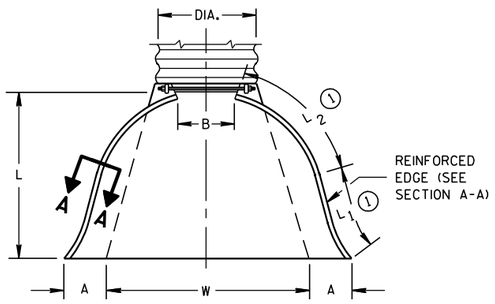
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.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	.079	.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

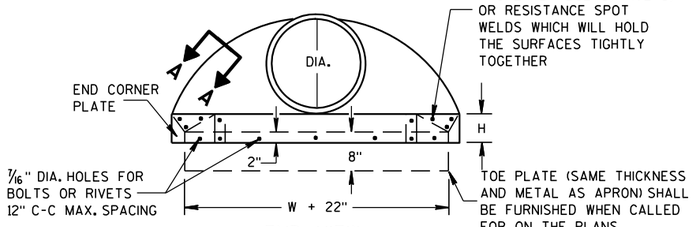
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 7/8	72 1/8	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 2/5 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

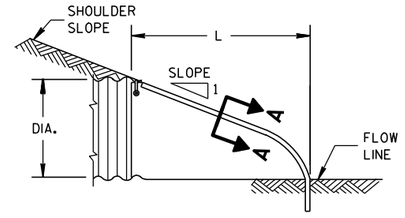
*MINIMUM
**MAXIMUM



PLAN VIEW

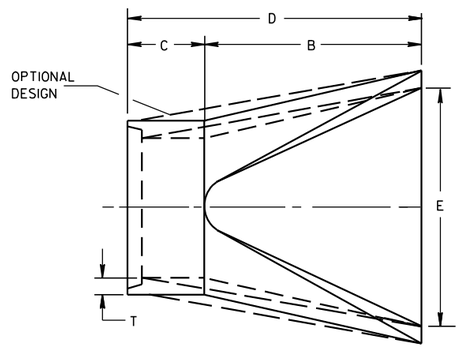


END VIEW

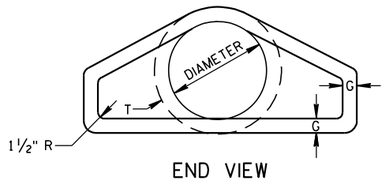


SIDE ELEVATION

METAL ENDWALLS



PLAN



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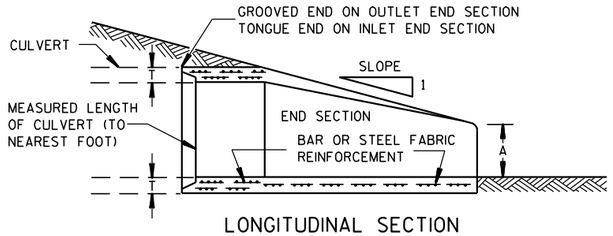
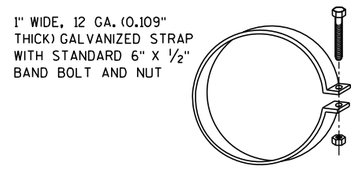


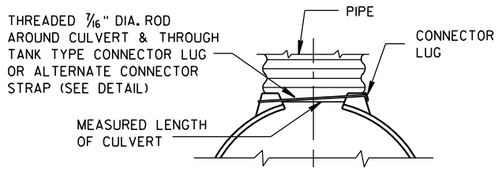
LONGITUDINAL SECTION

CONCRETE ENDWALLS

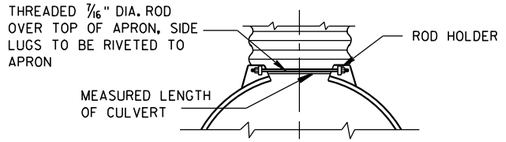


ALTERNATE FOR TYPE 1 CONNECTION

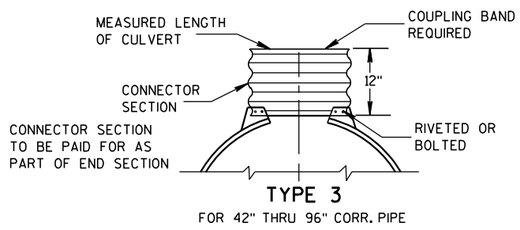
END SECTION CONNECTOR STRAP



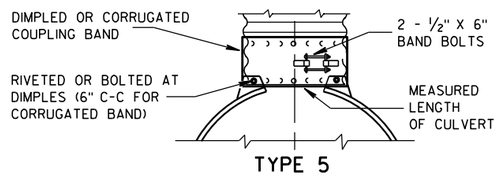
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

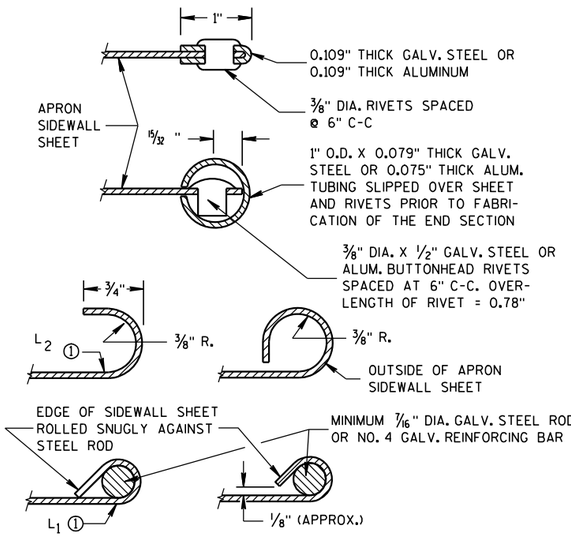
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

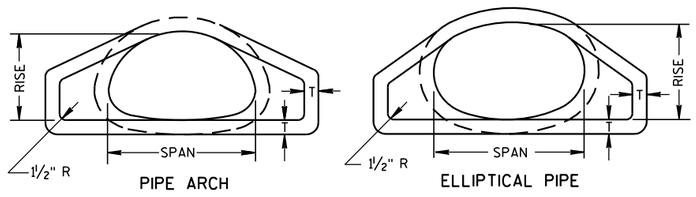
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

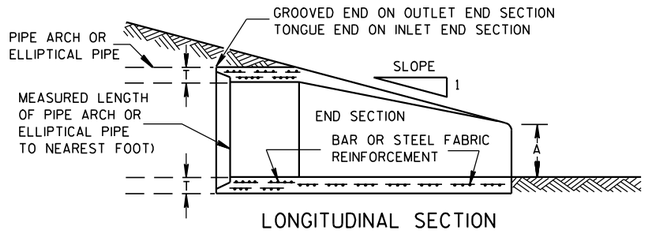
APPROVED
11/30/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

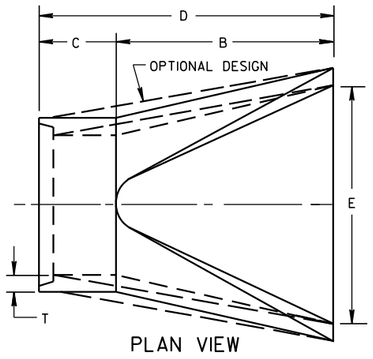
S.D.D. 8 F 1-11



END VIEW

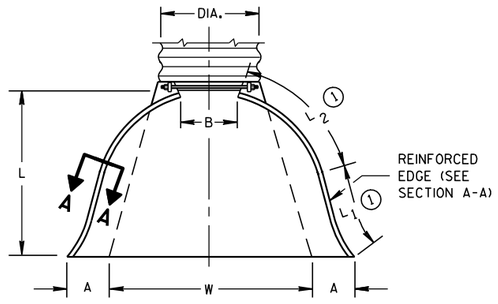


LONGITUDINAL SECTION

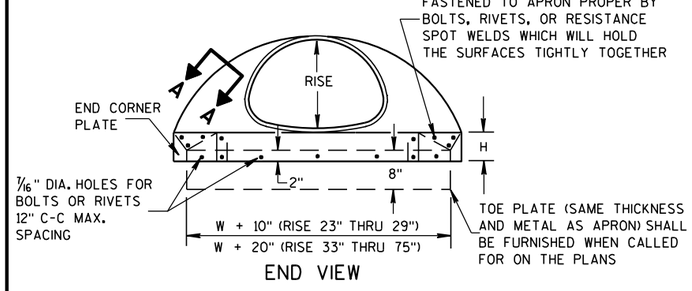


PLAN VIEW

CONCRETE ENDWALLS

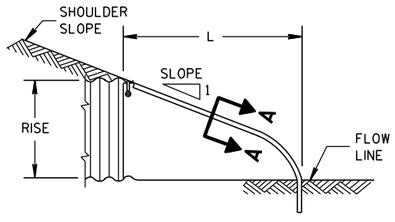


PLAN VIEW



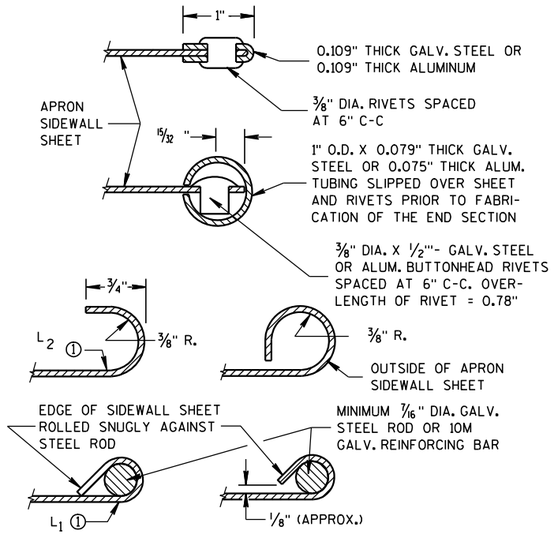
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

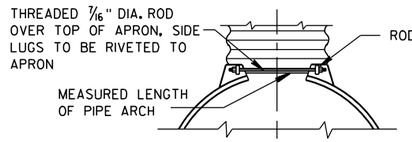
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

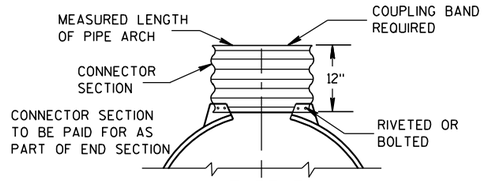
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



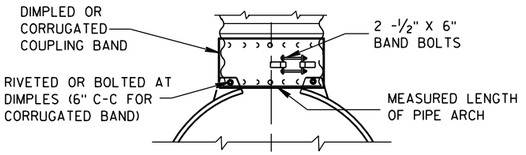
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH 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 77" X 52" THROUGH 112" X 75" 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 F 2-1

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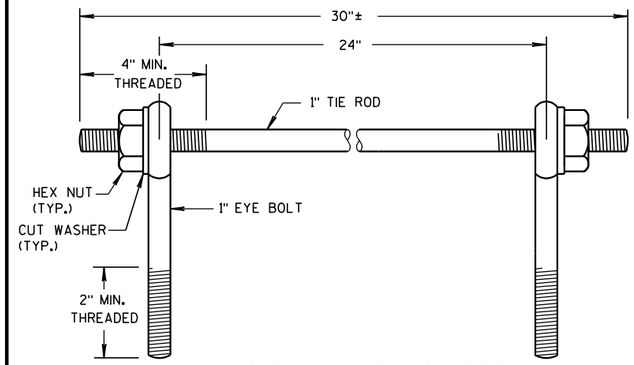
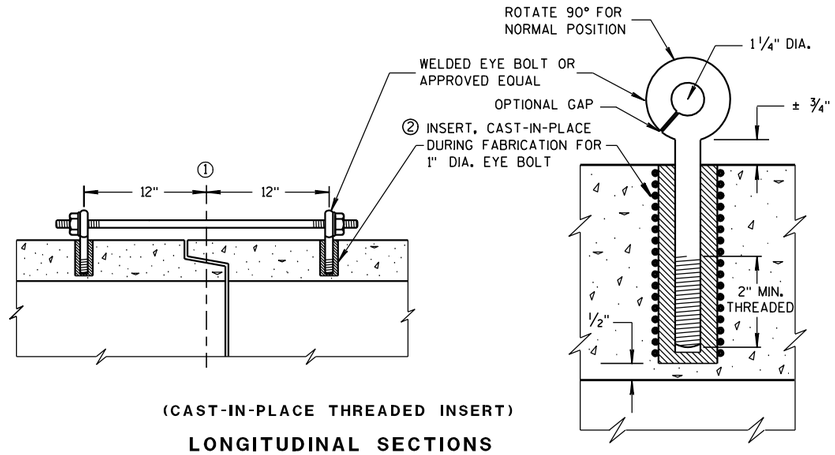
S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 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 APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND 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 THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

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

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

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

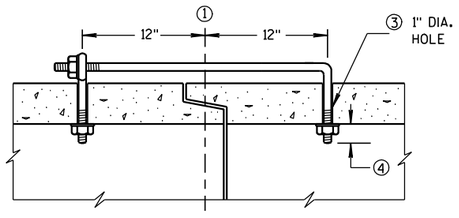
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

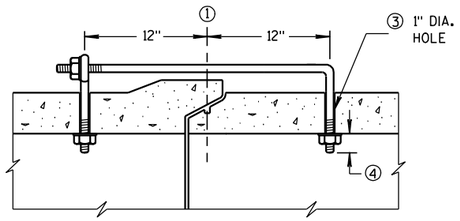
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

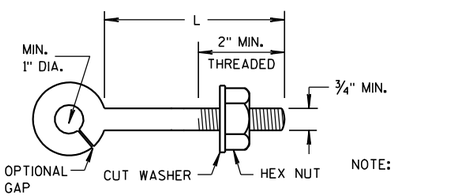


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

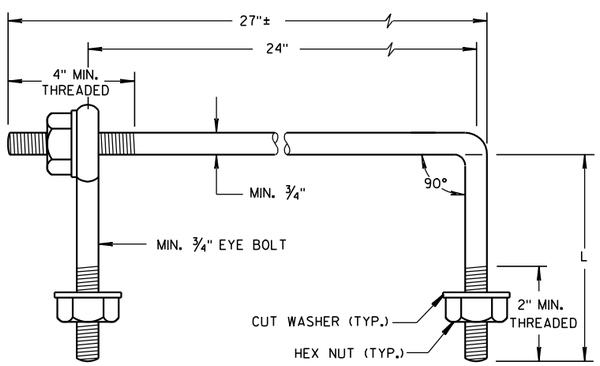
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

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

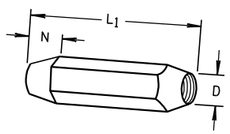
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

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 1/16

DIMENSIONS SHOWN ARE IN INCHES



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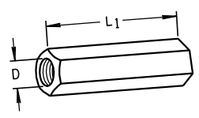
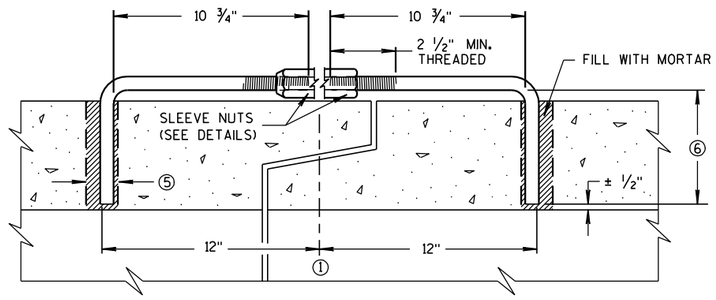


PLAIN

RIGHT AND LEFT THREADS

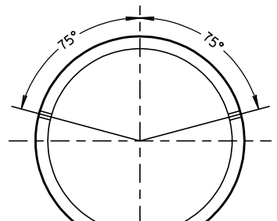
SLEEVE NUTS



LONGITUDINAL SECTION

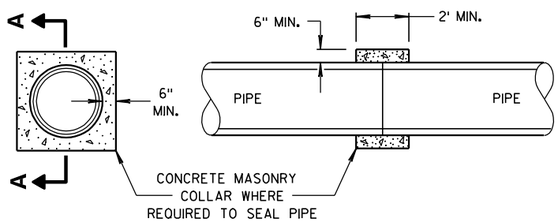
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

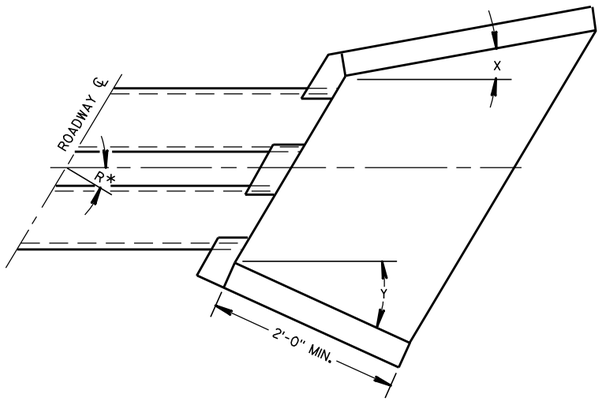
APPROVED
6/5/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7



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.

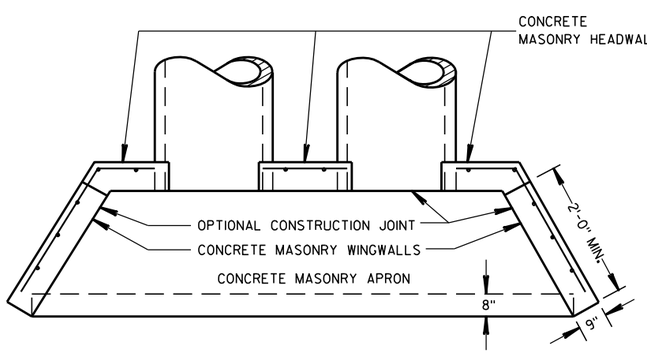
FILL SLOPES FLATTER THAN 2 ½:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

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.

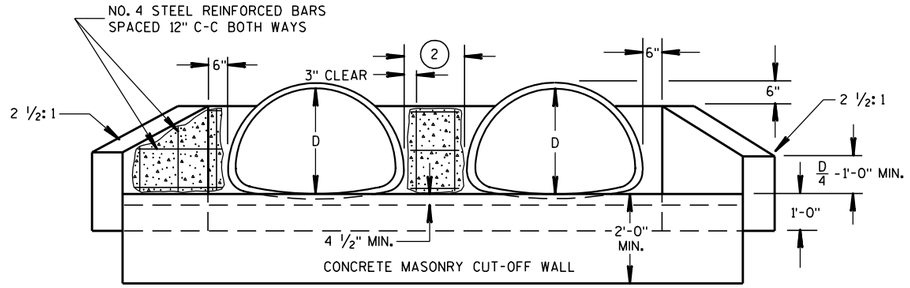
(2) THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

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



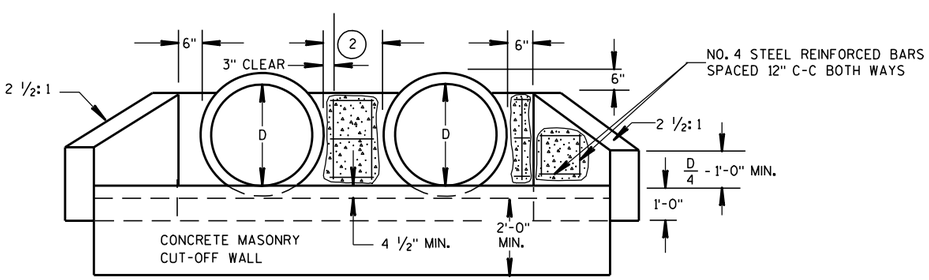
PLAN VIEW

CULVERT PIPE AND PIPE ARCH



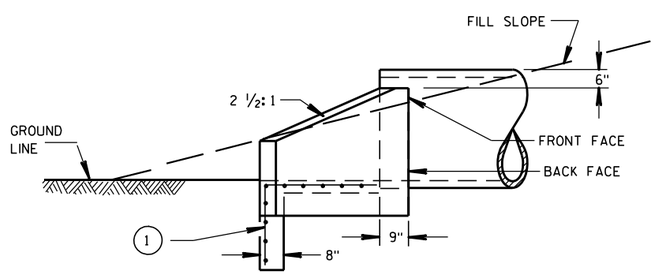
END ELEVATION

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

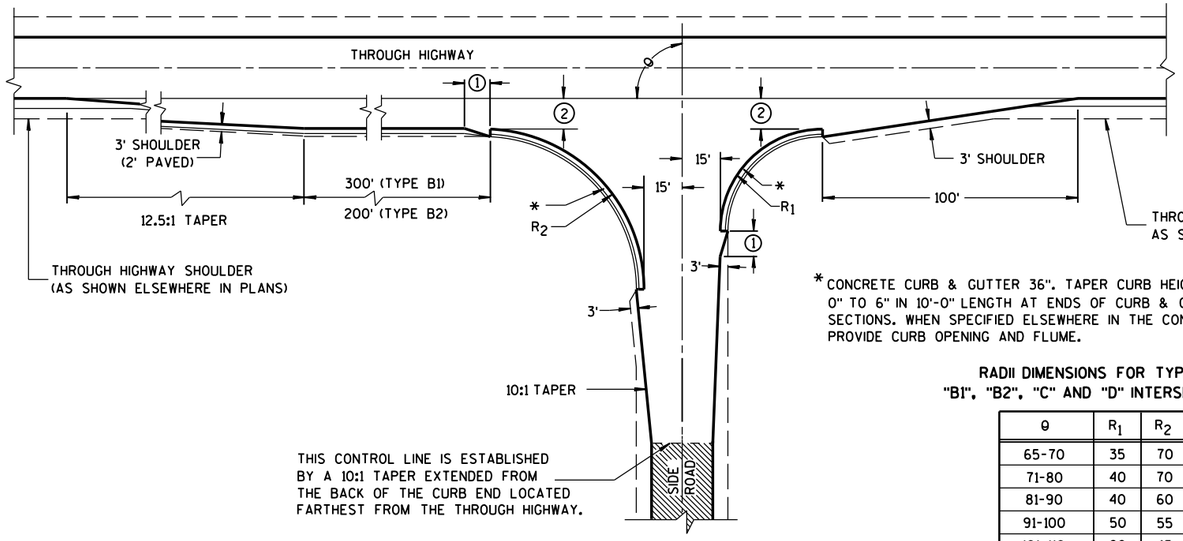
APPROVED
9/14/98 DATE
/S/ Rory L. Rhinehart
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 10-1

6

S.D.D. 8 F 10-1

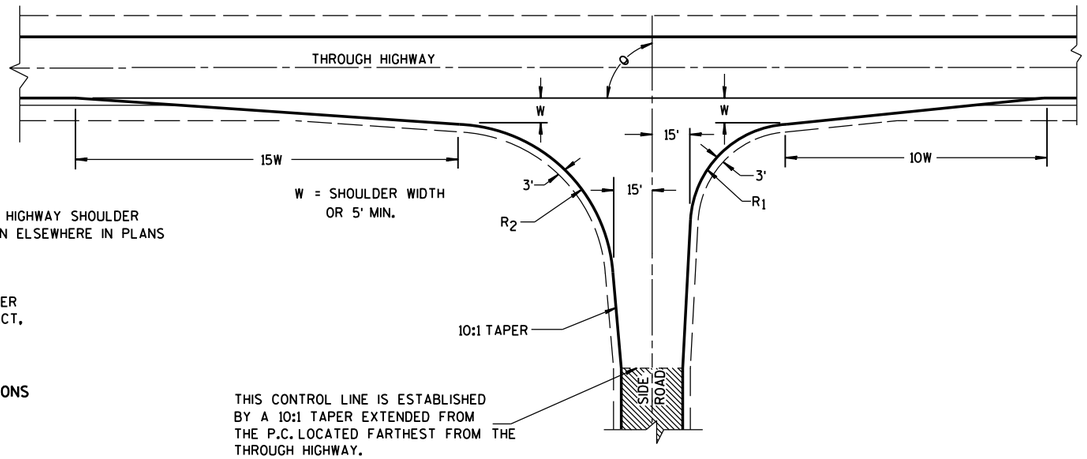


TYPE "B1" AND "B2"

*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.

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45



TYPE "C"

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 PAVED SURFACE

BYPASS LANE

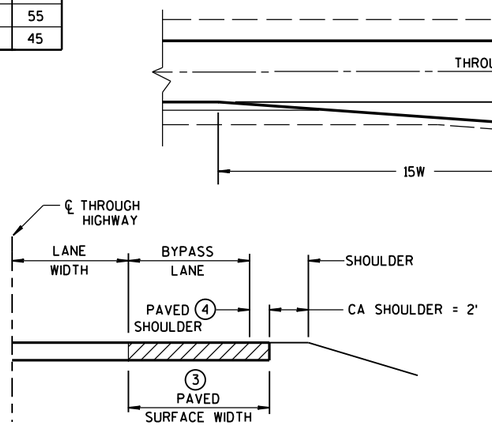
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

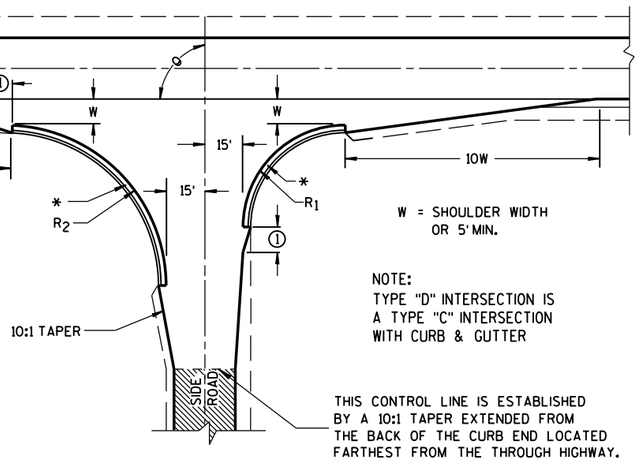
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.

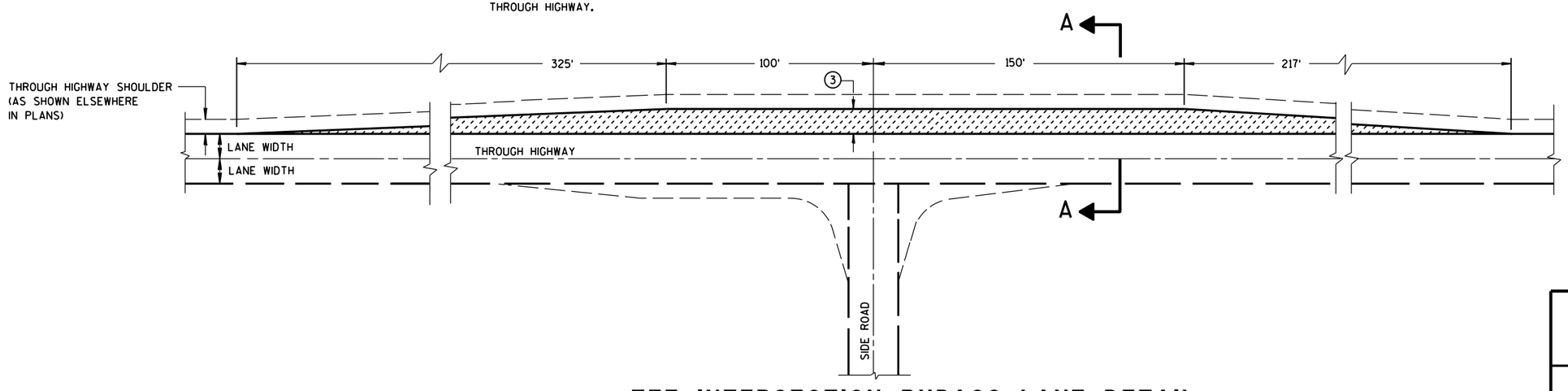
(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



TYPE "D"



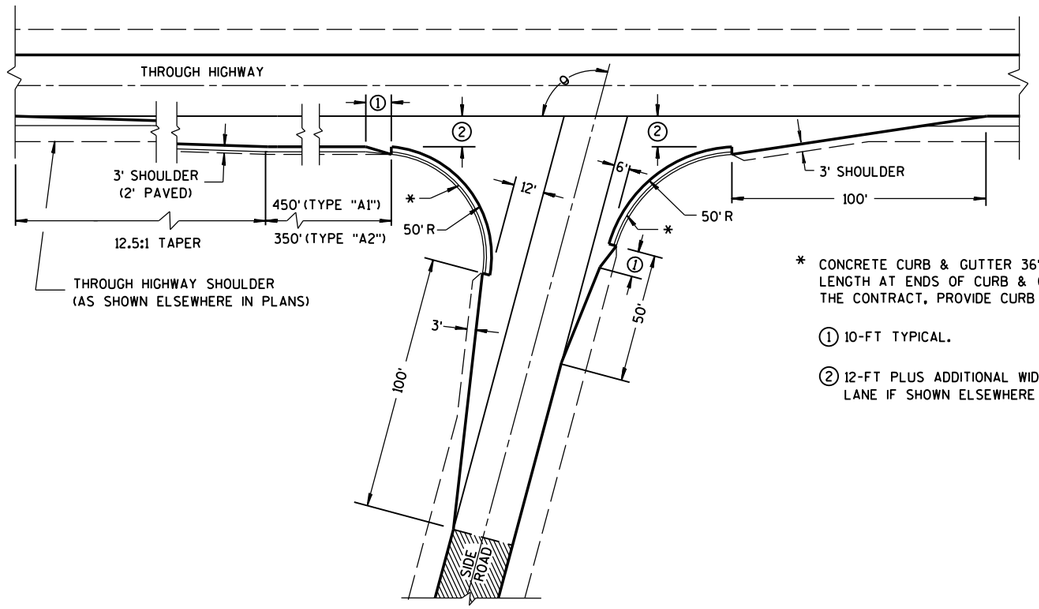
TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 9 A 1-13a



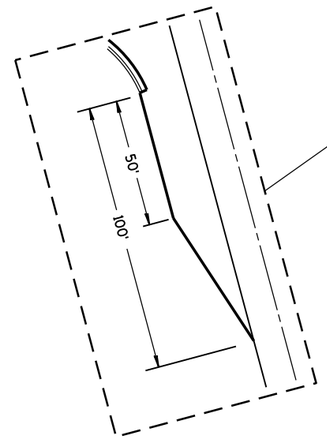
θ = MORE THAN 80°

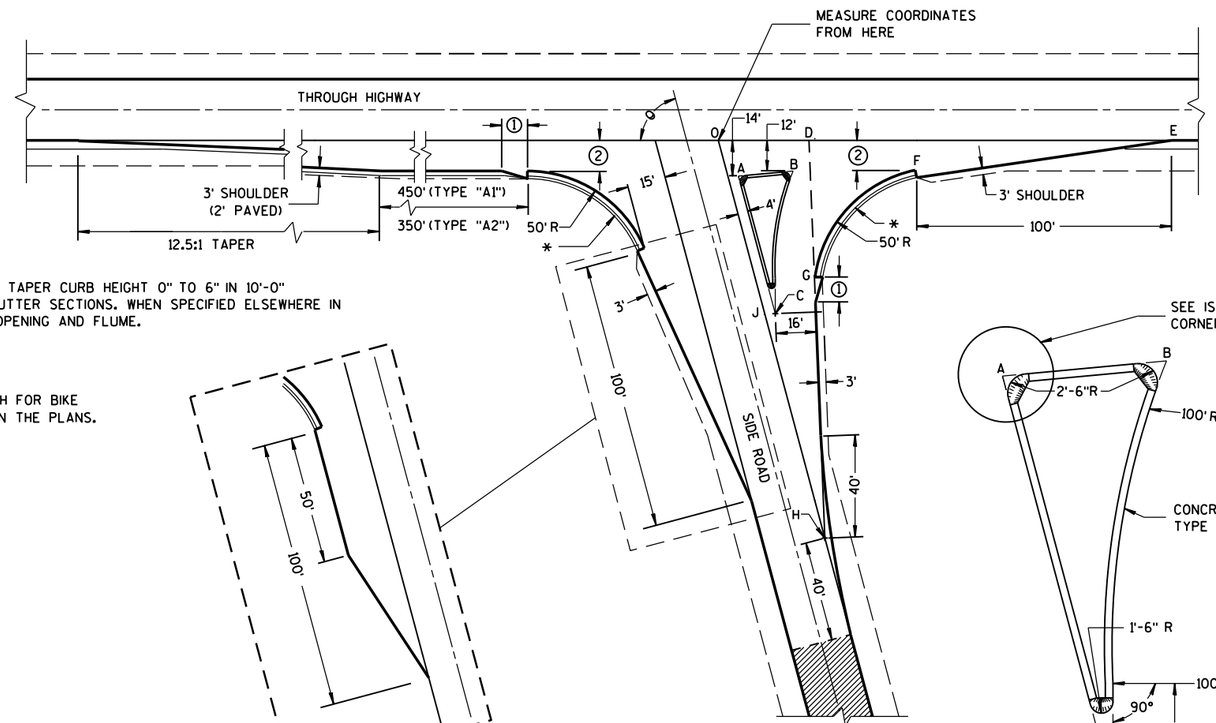
* CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

① 10-FT TYPICAL.

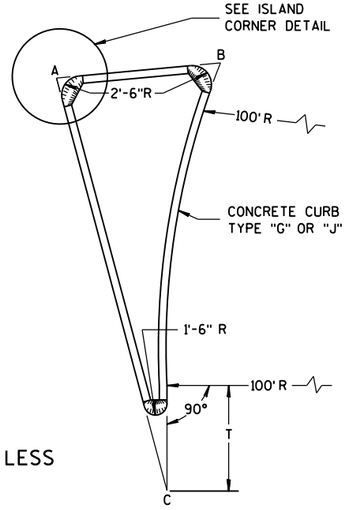
② 12-FT PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLANS.

EXISTING PAVED SURFACE

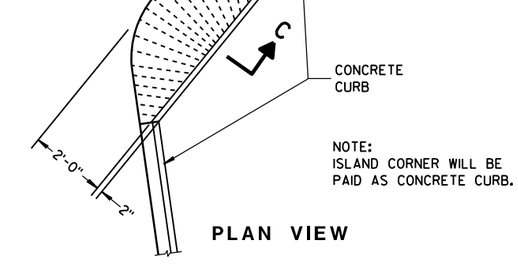




θ = ACUTE ANGLES 80° OR LESS

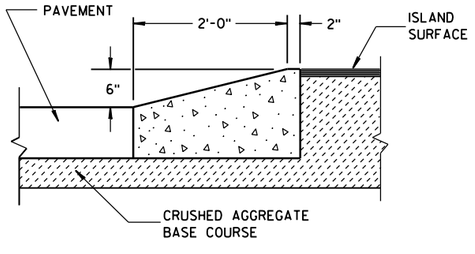


SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
θ = ACUTE ANGLES 70° OR LESS



NOTE:
ISLAND CORNER WILL BE PAID AS CONCRETE CURB.

PLAN VIEW



SECTION C-C

ISLAND CORNER DETAIL

(TO BE CONSTRUCTED AT ALL ISLAND CORNERS)

TABLE OF DIMENSIONS FOR
VARIABLE SIDE ROAD INTERSECTION ANGLES
(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT "O") X / Y								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7 / -14.0	44.9 / -12.0	46.4 / -72.4	41.9 / 0.0	205.0 / 0.0	104.6 / -12.0	64.0 / -75.5	85.0 / -147.1	32.3	67.4	4.9	85.9	169.9
65	10.9 / -14.0	39.0 / -12.0	37.8 / -71.6	39.4 / 0.0	196.1 / 0.0	95.7 / -12.0	54.1 / -71.5	70.5 / -151.3	28.2	63.6	8.5	80.9	166.9
70	9.4 / -14.0	33.9 / -12.0	29.8 / -70.1	37.4 / 0.0	188.3 / 0.0	87.8 / -12.0	45.6 / -67.5	56.1 / -154.2	24.6	59.7	11.5	76.1	164.1
75	7.9 / -14.0	29.3 / -12.0	22.3 / -67.9	35.7 / 0.0	181.2 / 0.0	80.7 / -12.0	38.2 / -63.4	41.8 / -155.9	21.5	55.8	13.8	71.4	161.4
80	6.5 / -14.0	25.4 / -12.0	15.6 / -65.2	34.4 / 0.0	174.8 / 0.0	74.4 / -12.0	31.8 / -59.3	27.6 / -156.5	18.9	52.0	15.6	66.9	158.9

TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS

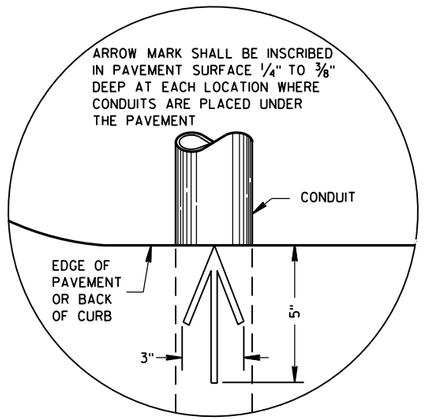
AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/18/12 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

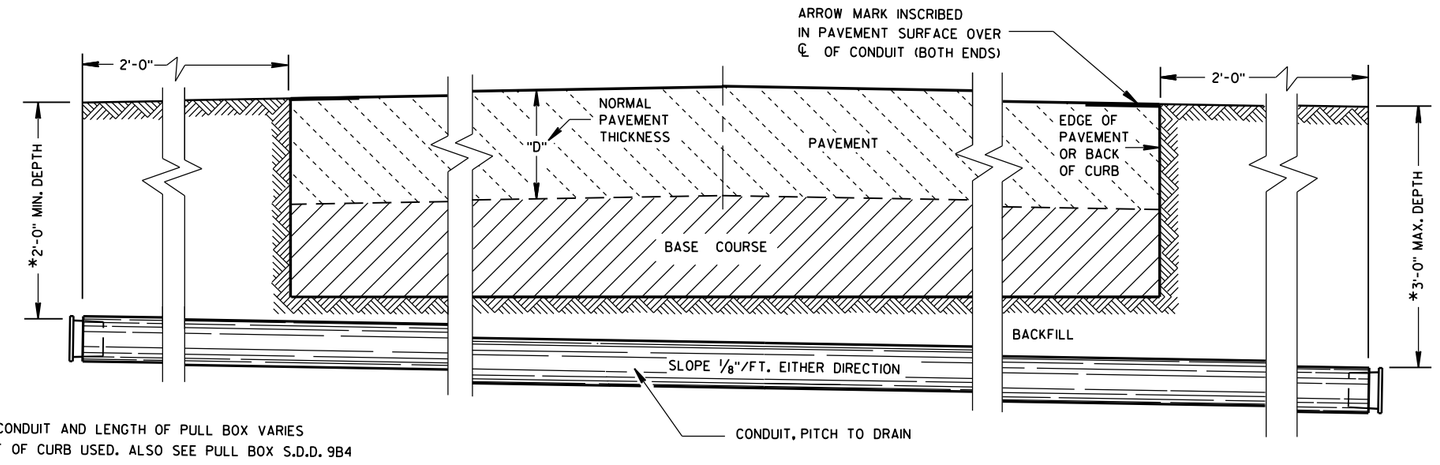
S.D.D. 9 A 1-13b

S.D.D. 9 A 1-13b



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

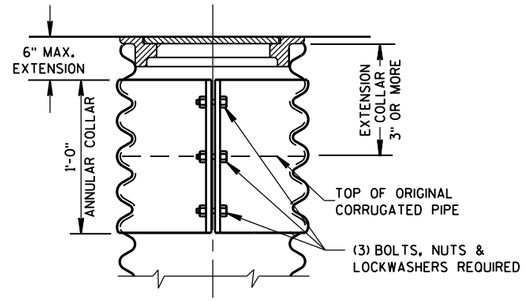
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

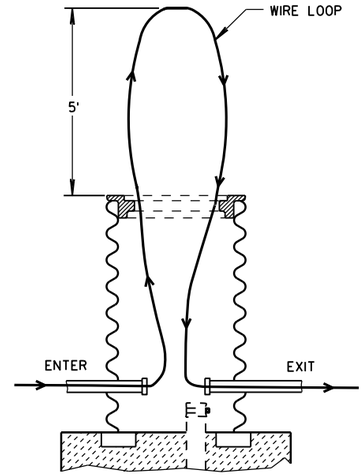
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

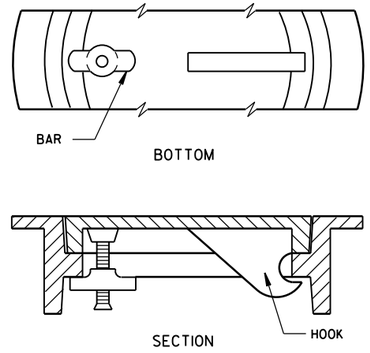
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

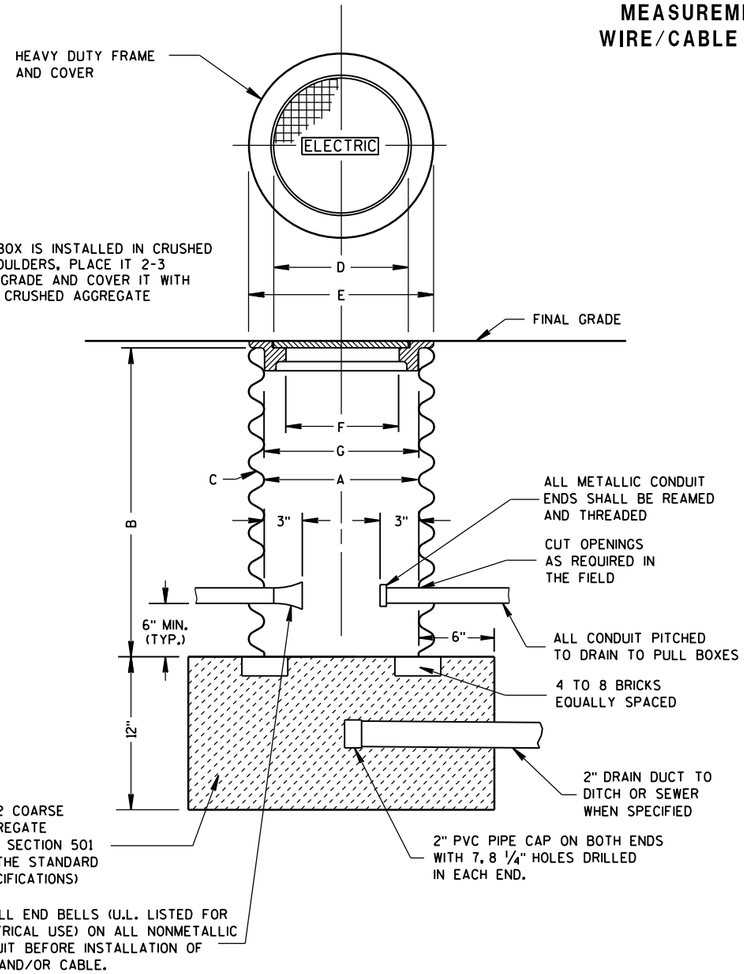


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



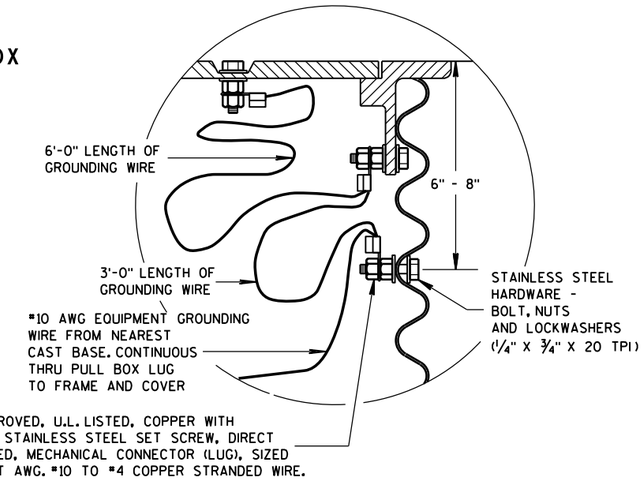
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

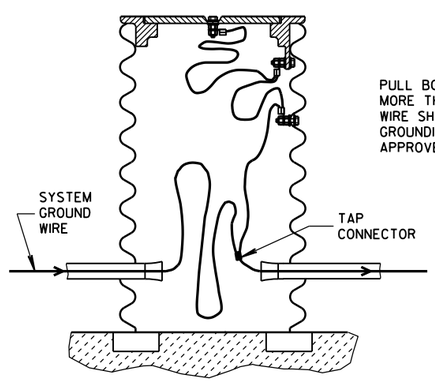


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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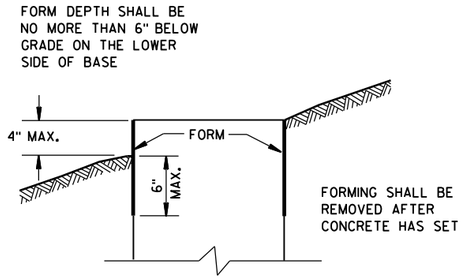


FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

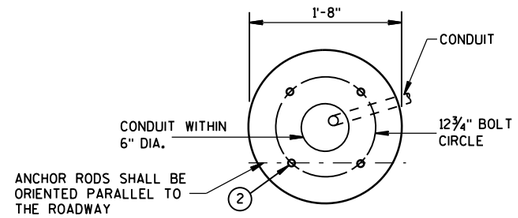
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

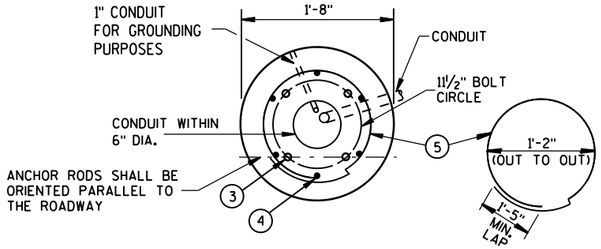
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

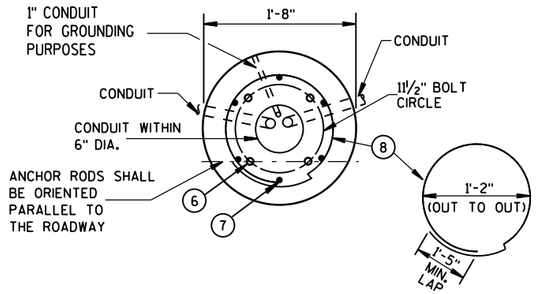
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

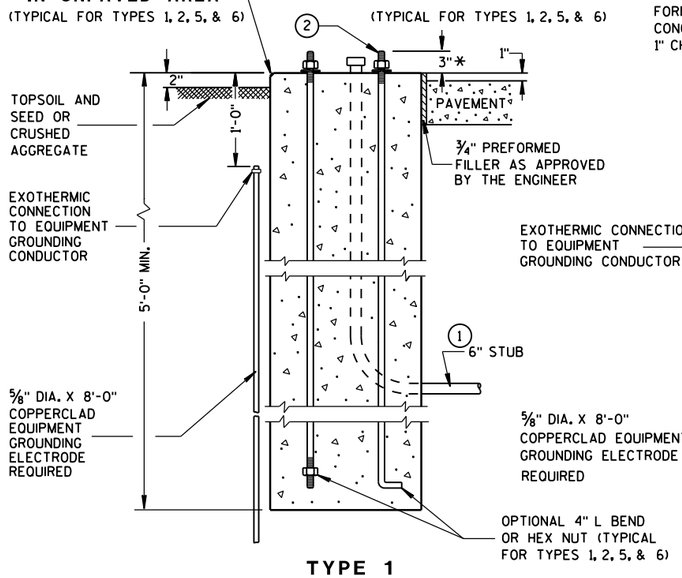




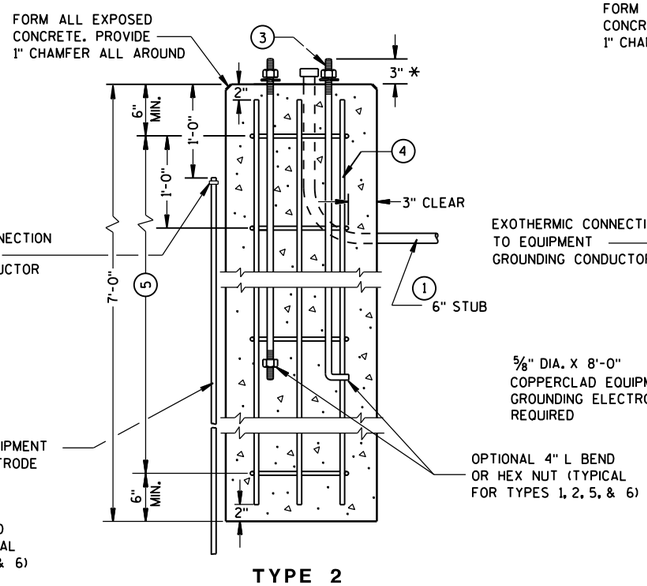


HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)

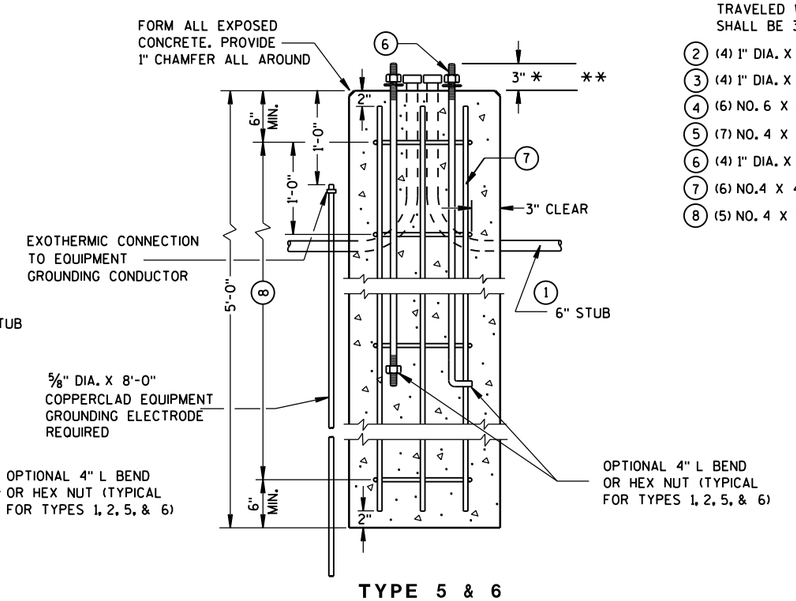
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
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GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

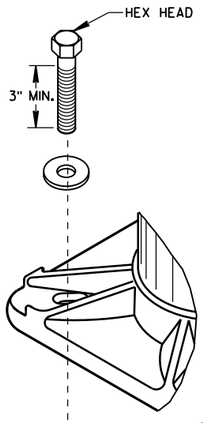
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

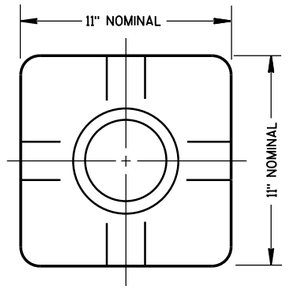
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

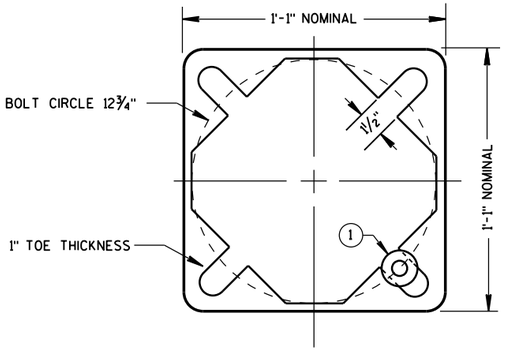
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

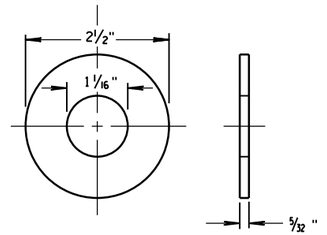




TOP VIEW
(PEDESTAL BASE)

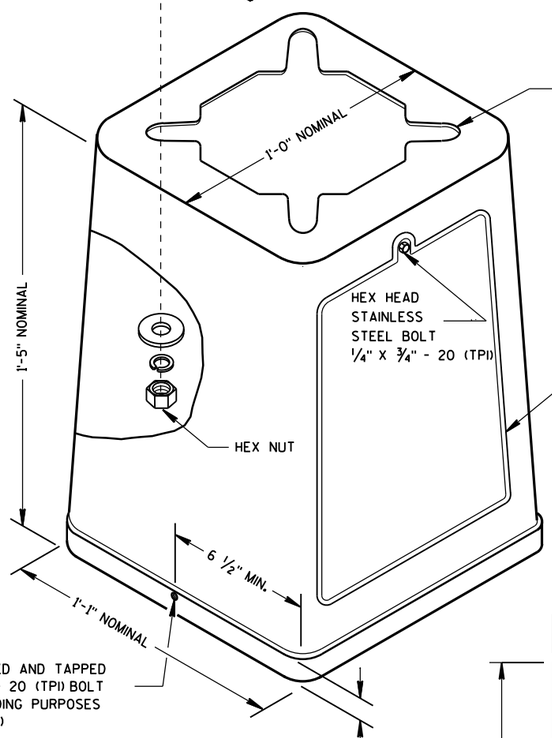


BOTTOM VIEW
(PEDESTAL BASE)

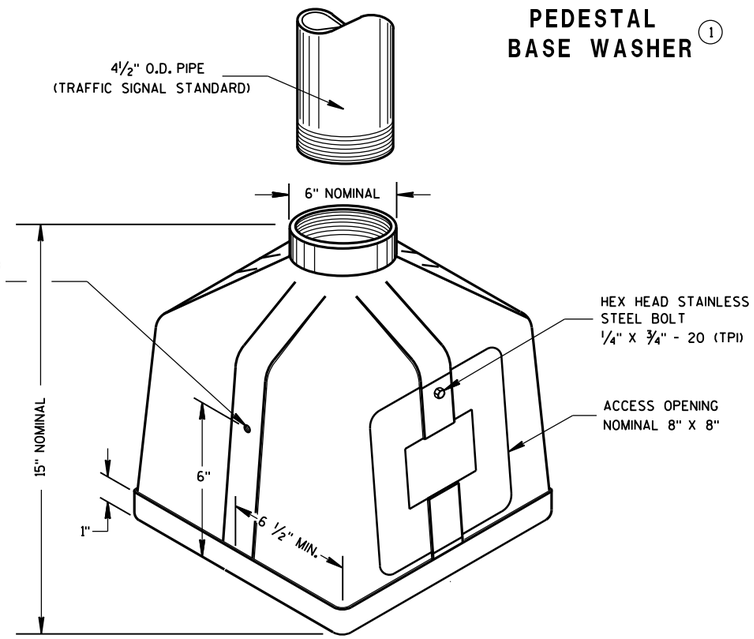


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

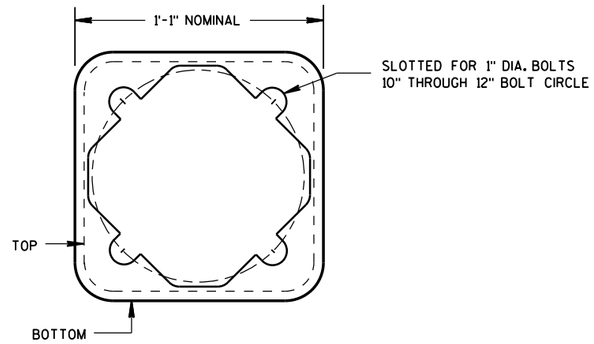


ISOMETRIC VIEW

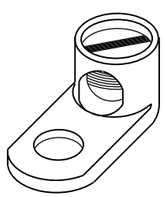


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

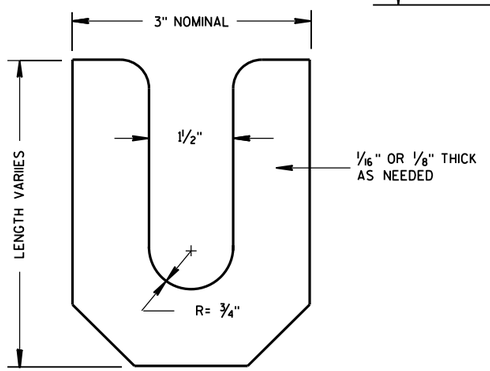


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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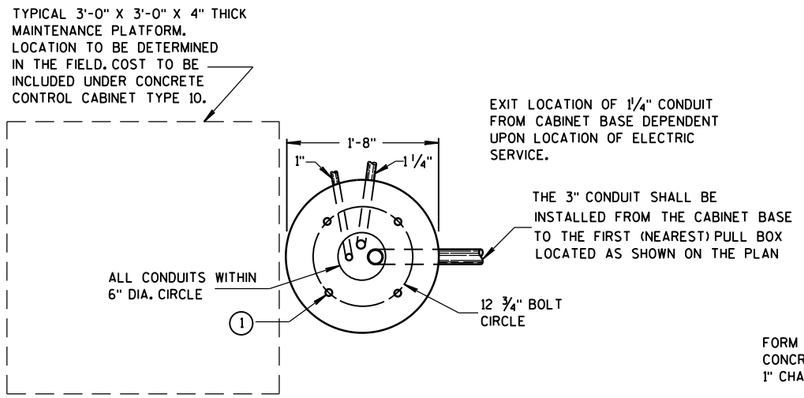
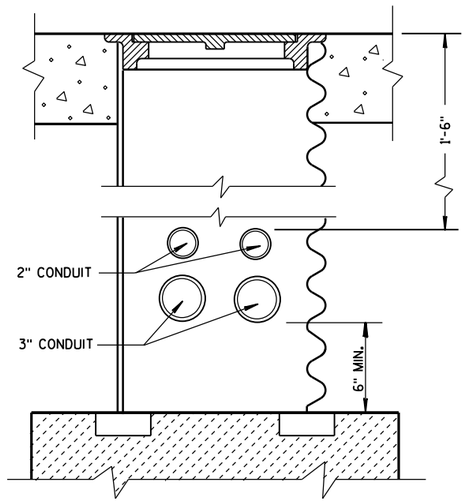
CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65 *

* INCLUDES MAINTENANCE PLATFORM.





CONDUIT LOCATIONS IN 24" X 36" PULL BOX

(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST PULL BOX LOCATED AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

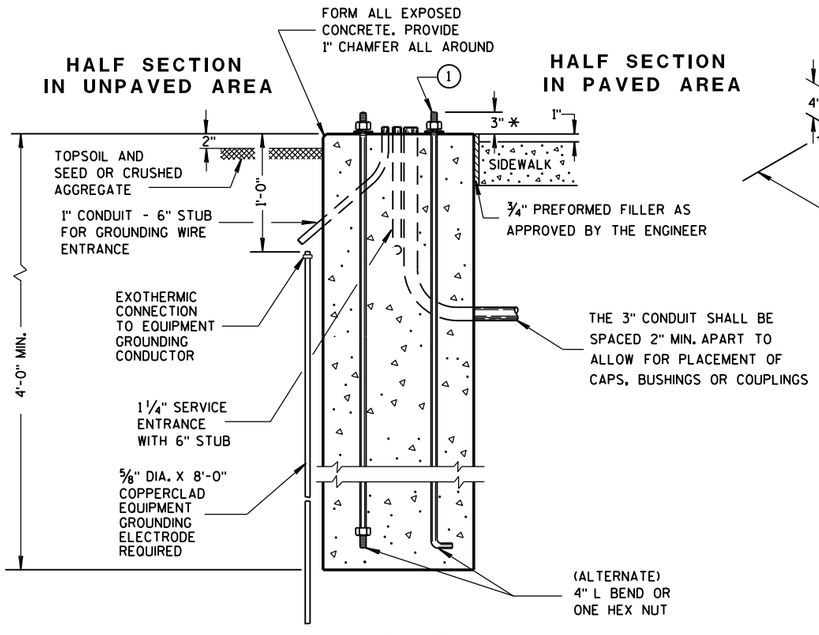
STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

(1) FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

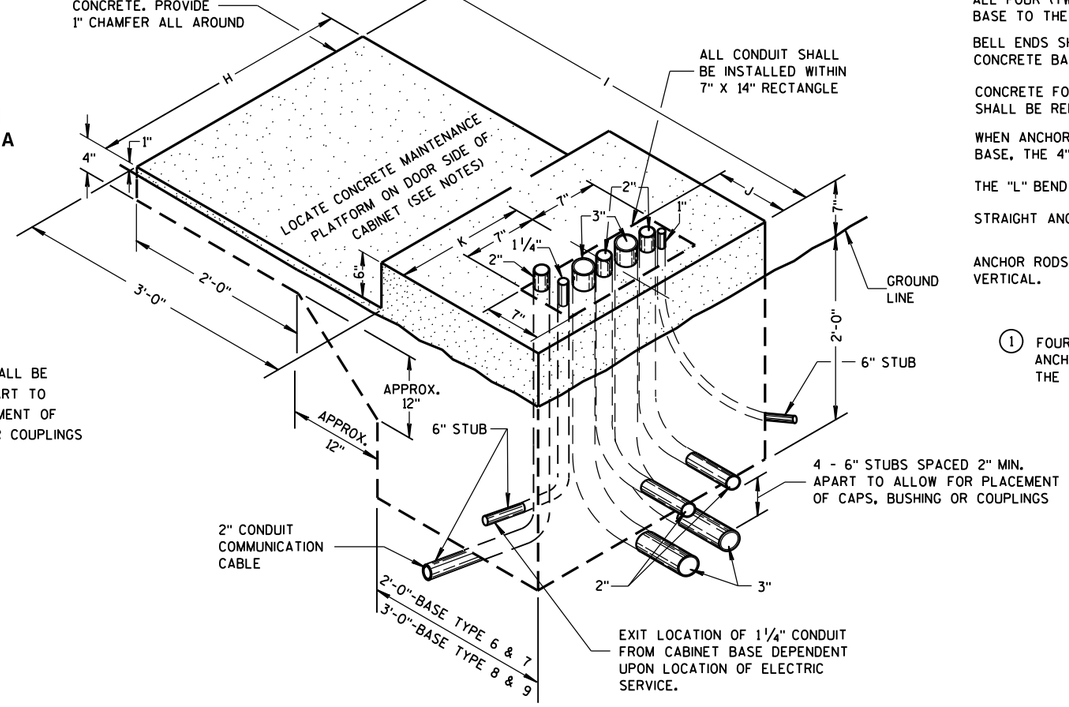
HALF SECTION IN UNPAVED AREA

HALF SECTION IN PAVED AREA



TYPE 10

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.



TYPE 6,7,8 AND 9
(ISOMETRIC VIEW)

CONCRETE CONTROL CABINET BASES

CONCRETE CONTROL CABINET BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
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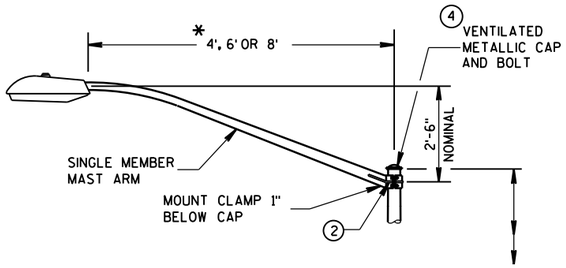
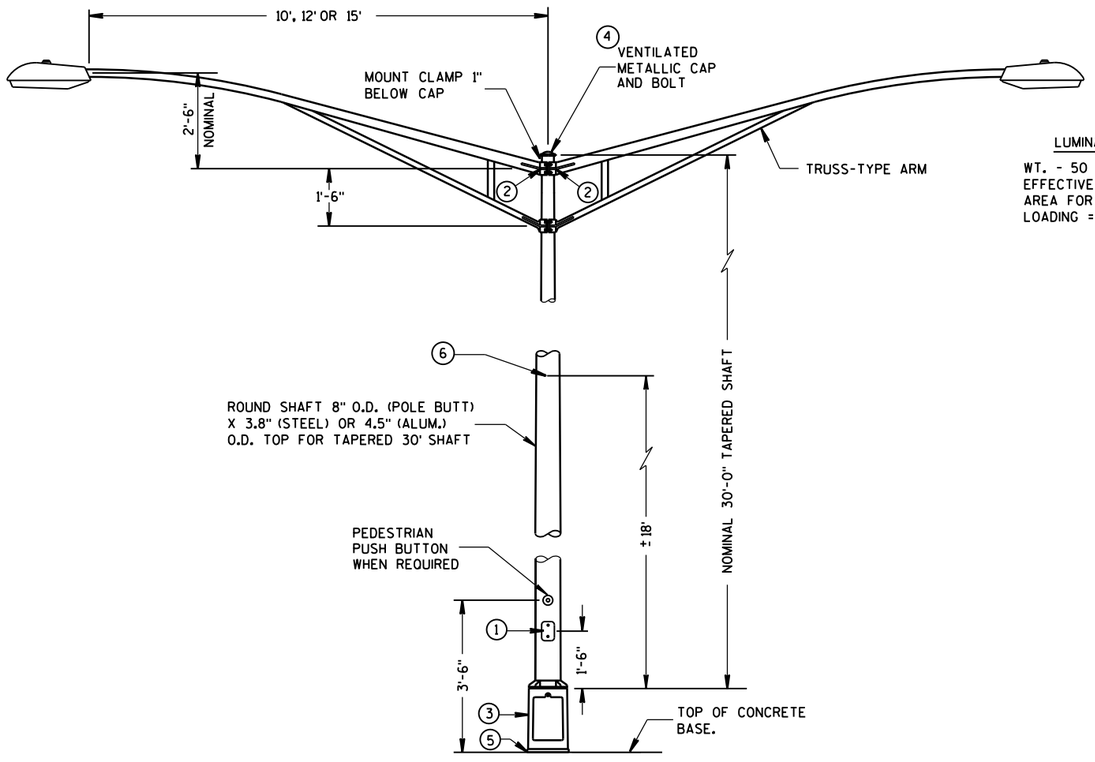
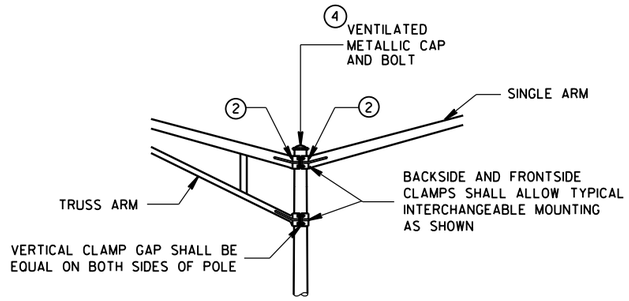
*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

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POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

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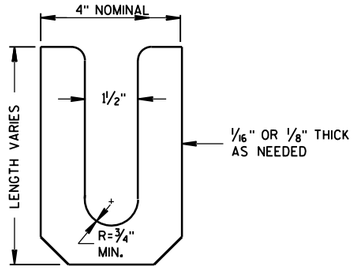
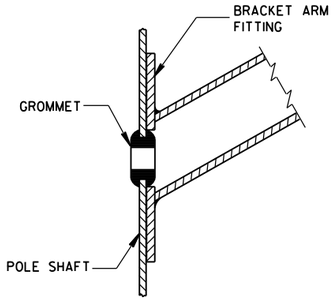
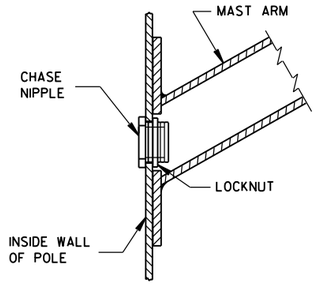


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

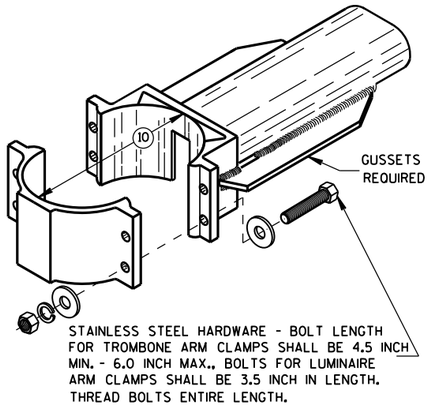
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

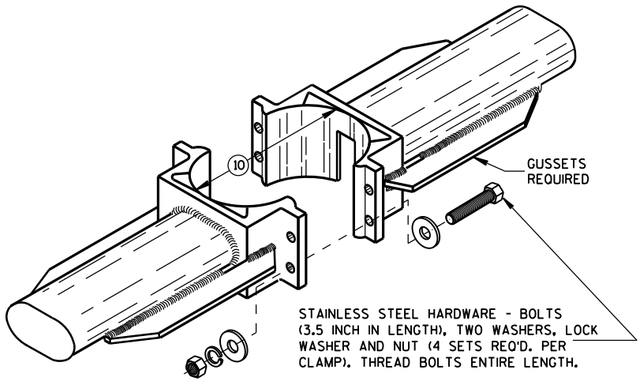
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

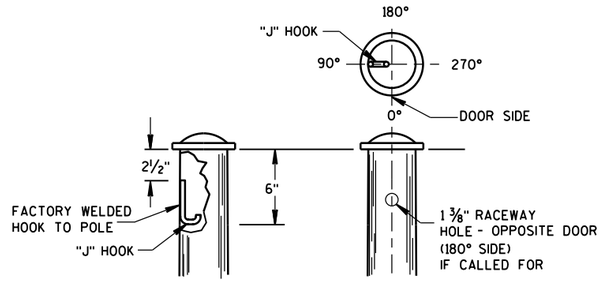
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



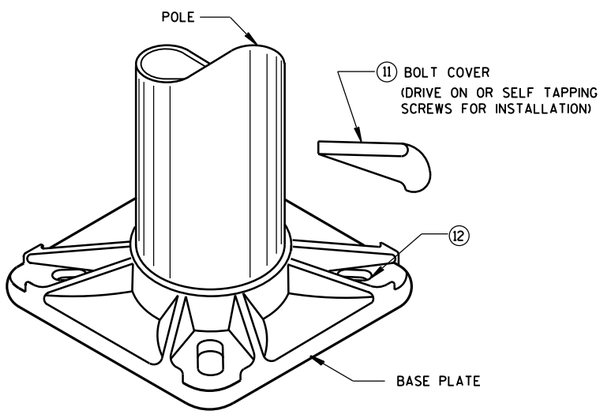
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



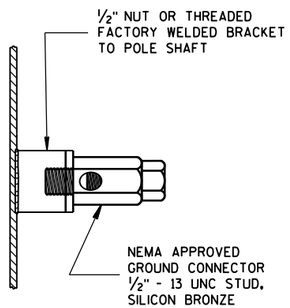
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

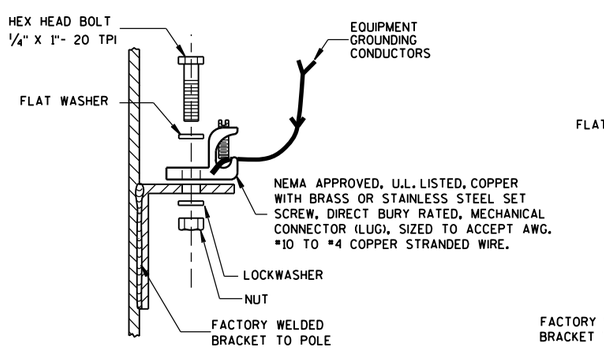


TYPICAL "J" HOOK LOCATION



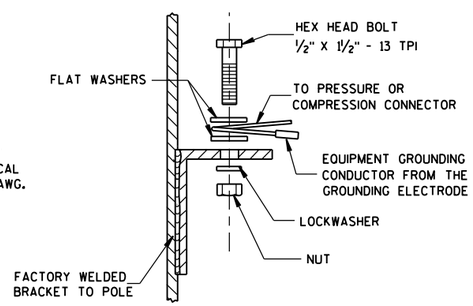
BASE PLATE





TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

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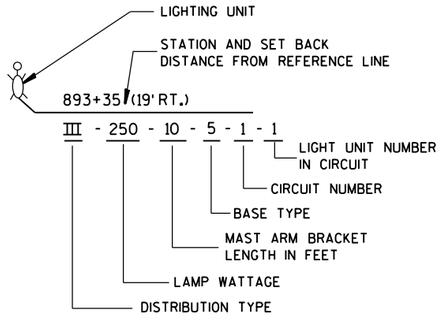
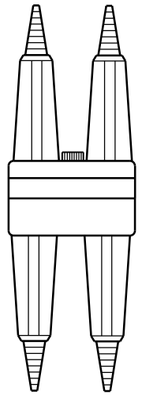
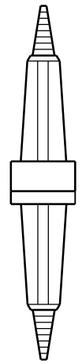


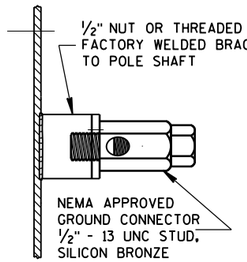
LIGHTING UNIT CODE
(TYPICAL)

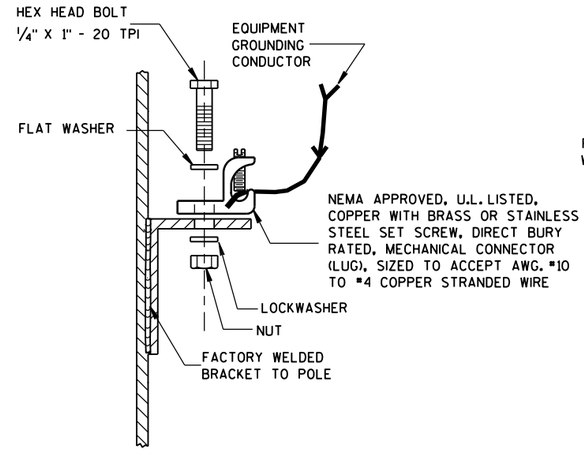


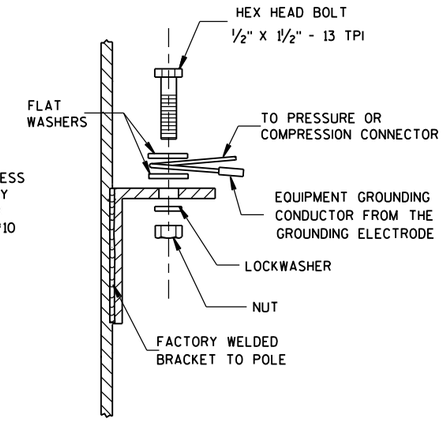
DETAIL "A"
BREAKAWY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



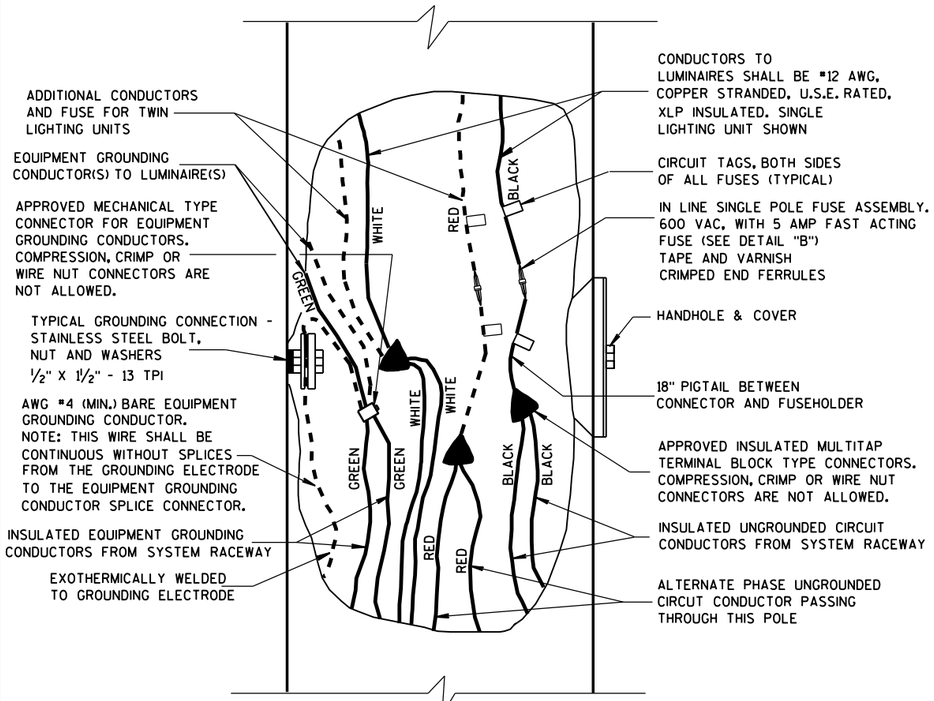
DETAIL "B"
BREAKAWY SINGLE POLE WITH WATERPROOF INSULATING BOOT



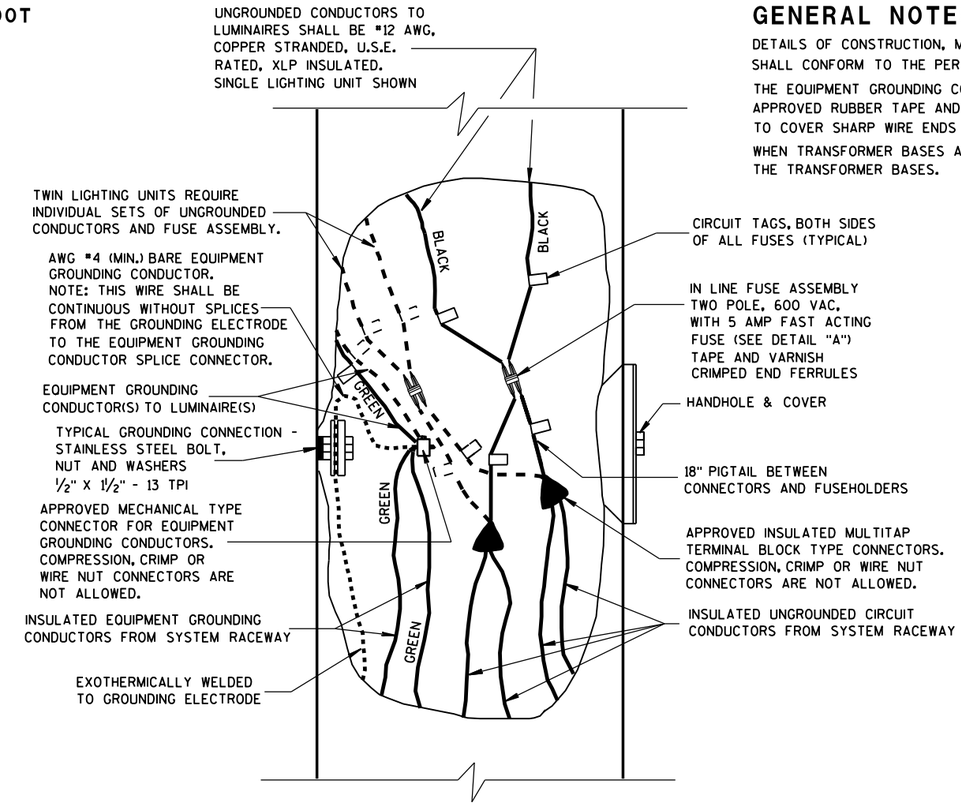




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

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

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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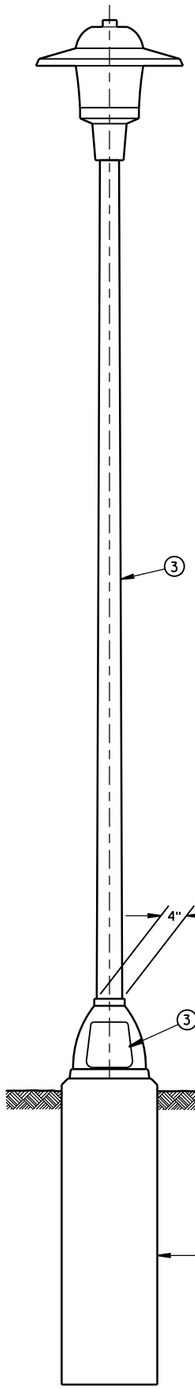
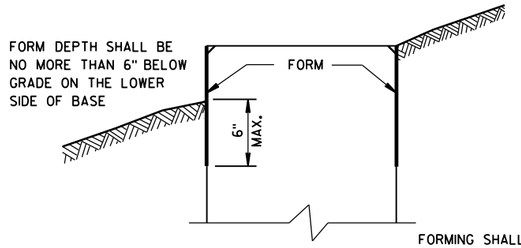


LUMINAIRE

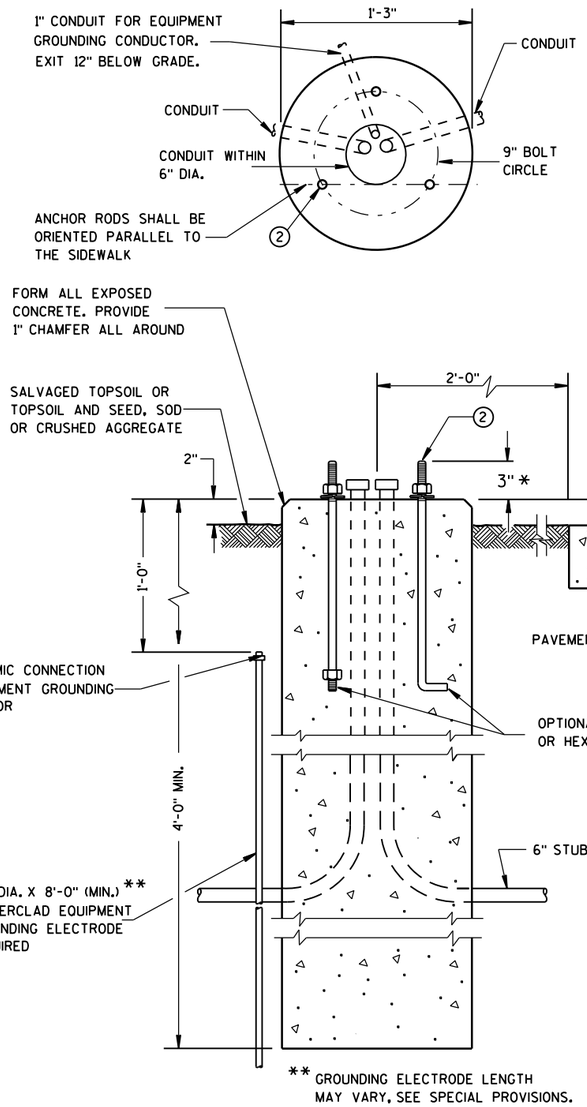
WT. = 50 LBS.
EFFECTIVE PROJECTED AREA
FOR WIND LOADING = 1.5 SQ. FT.

USE LUMINAIRE FROM DEPARTMENT APPROVED PRODUCTS LIST OR ENGINEER APPROVED EQUAL.

WALKWAY LIGHTING UNIT DETAIL



FORMING DETAIL



** GROUNDING ELECTRODE LENGTH MAY VARY, SEE SPECIAL PROVISIONS.

CONCRETE BASE, TYPE 11

GENERAL NOTES

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

CONCRETE BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT RUNS, NUMBER OF CONDUITS IN EACH CONCRETE BASE AND CONDUIT SIZE IS AS SHOWN ON THE PLANS. THE 1-INCH CONDUIT IS USED IN ALL BASES.

MINIMUM BENDING RADIUS OF CONDUIT SHALL BE SIX TIMES THE DIAMETER OF THE CONDUIT.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1-INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE AND BEFORE INSTALLATION OF CABLE OR WIRE.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A CONCRETE BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE CONCRETE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1-FOOT OR LESS.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NO. 4 AWG, BARE, STRANDED COPPER. IT SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED LEAVING A 2-FOOT LENGTH OF WIRE ABOVE THE CONCRETE BASE. THE 2-FOOT LENGTH OF EQUIPMENT GROUNDING CONDUCTOR ABOVE THE BASE SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL PER SECTION 5.17.6.3, AASHTO 2001 4TH EDITION STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS.

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

GENERAL NOTES (CONTINUED)

(1) DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24-INCHES MIN. DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES MIN. DEPTH OF ALL CONDUITS SHALL NOT EXCEED 36-INCHES.

(2) THREE - ¾-INCH DIA. X 15-INCH ANCHOR RODS OR ¾-INCH DIA. X 19-INCH ANCHOR RODS INCLUDING THE 4-INCH "L" BEND. THE "L" BEND SHALL NOT BE THREADED. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS.

(3) PEDESTAL BASE-STANDARD:

THE PEDESTAL BASE-STANDARD SHALL BE A ONE PIECE WELDED UNIT, WITH AN OVERALL HEIGHT OF TEN FEET.

THE POLE SHALL BE ROUND, TAPERED, ALUMINUM WITH A 3-INCH OUTSIDE DIAMETER TOP AND 0.125 INCH WALL THICKNESS.

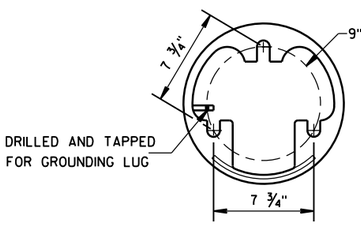
THE BELL SHAPED BASE SHALL BE 12 ½ INCHES IN DIAMETER AND HAVE A 9-INCH BOLT CIRCLE. ANCHOR RODS SHALL BE INCLUDED WITH THE BASE.

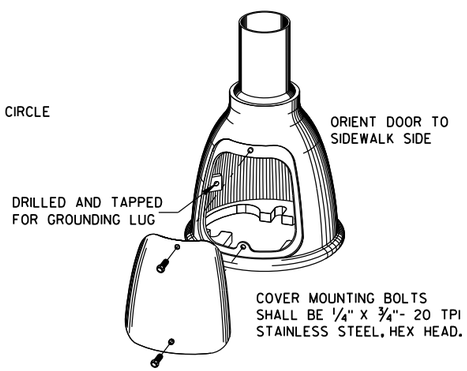
THE ACCESS DOOR OPENING SHALL BE APPROXIMATELY 7½ X 5¼ X 7½-INCHES.

THE FIXTURE AND PEDESTAL BASE-STANDARD SHALL BE PAINTED WITH AN EARTH COLORED THERMOSET POWDER COAT, ACRYLIC ENAMEL. THE ENAMEL SHALL BE FORMULATED TO SHOW NO APPRECIABLE FADING WITHIN FIVE YEARS.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED BRASS OR COPPER TYPE. CONNECTION HARDWARE SHALL BE STAINLESS STEEL (BOLT, NUT, LOCKWASHER - ¼" X ¾" - 20 TPI).

ALL NONMETALLIC CONDUIT CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES. (SEE NEC 347.5)





WALKWAY PEDESTAL BASE STANDARD DETAIL

WALKWAY LIGHTING UNIT AND CONCRETE BASE, TYPE 11

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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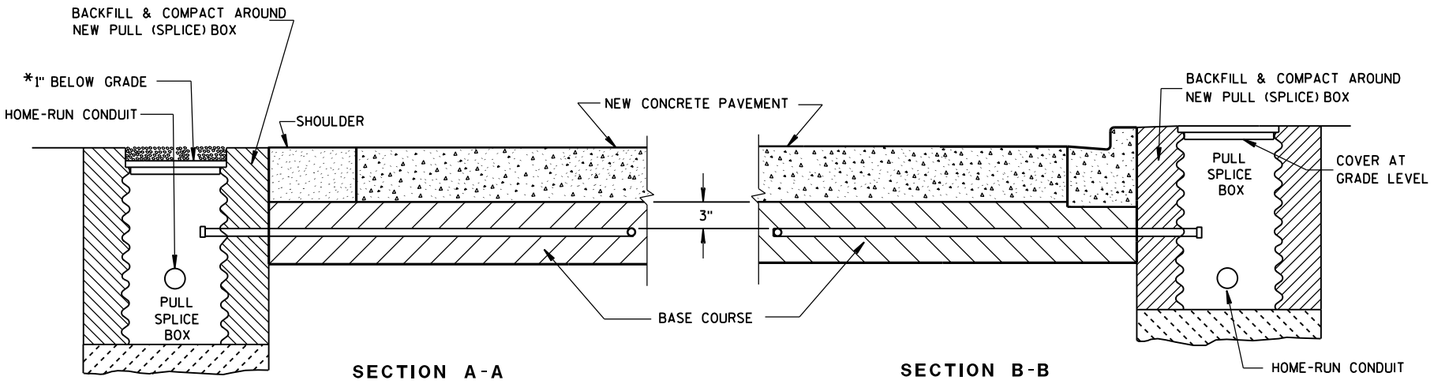


SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

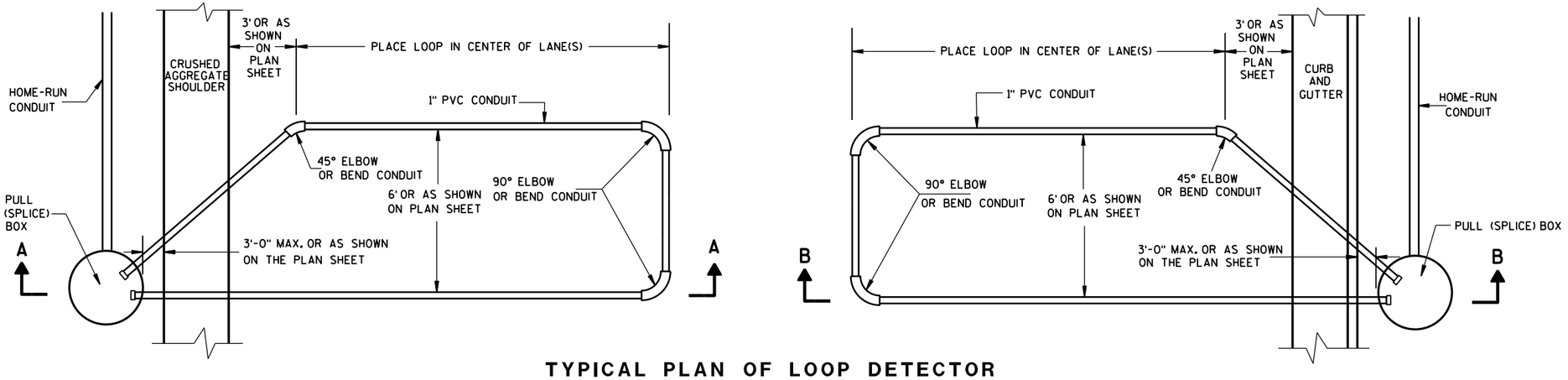
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL (SPLICE) BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICE CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT IN THE BASE COURSE, SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW PAVEMENT IS INSTALLED.

SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE DONE UNDER THE DIRECTION OF THE PROJECT ENGINEER.



TYPICAL PLAN OF LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
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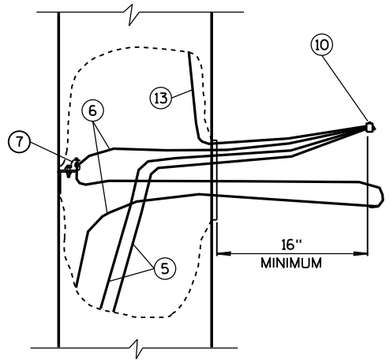
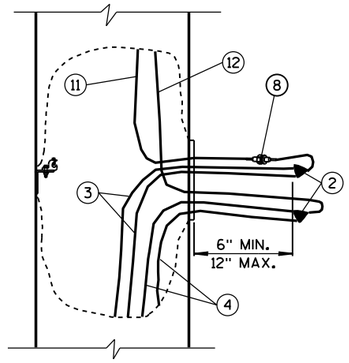
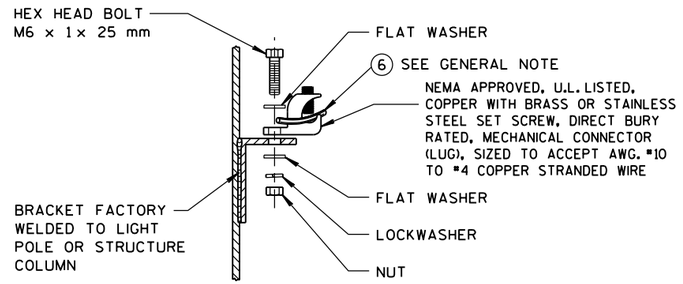


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



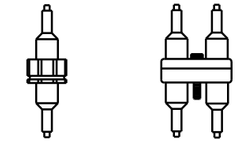
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



1 POLE (1P) 2 POLE (2P)

FUSE ASSEMBLIES

GENERAL NOTES

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

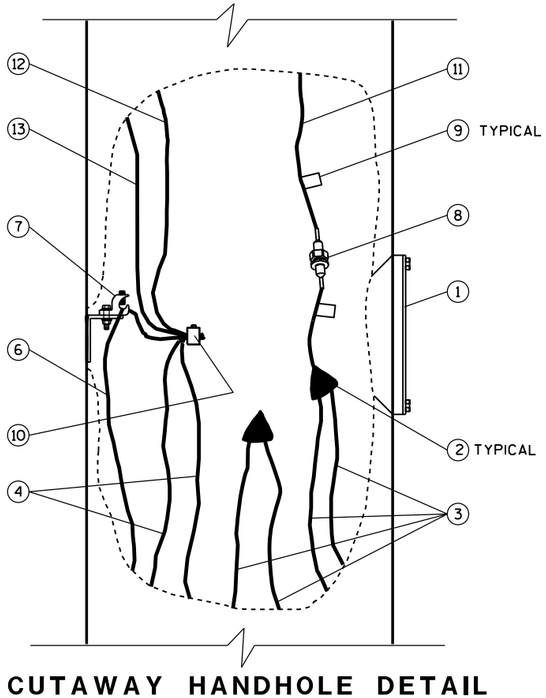
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

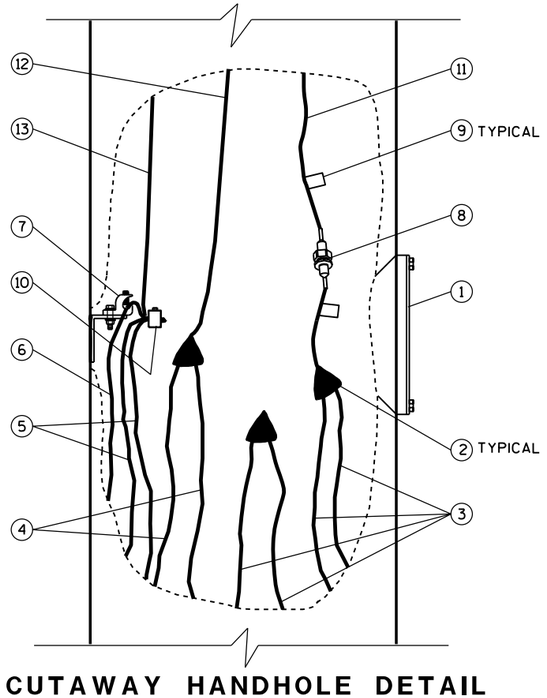
IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



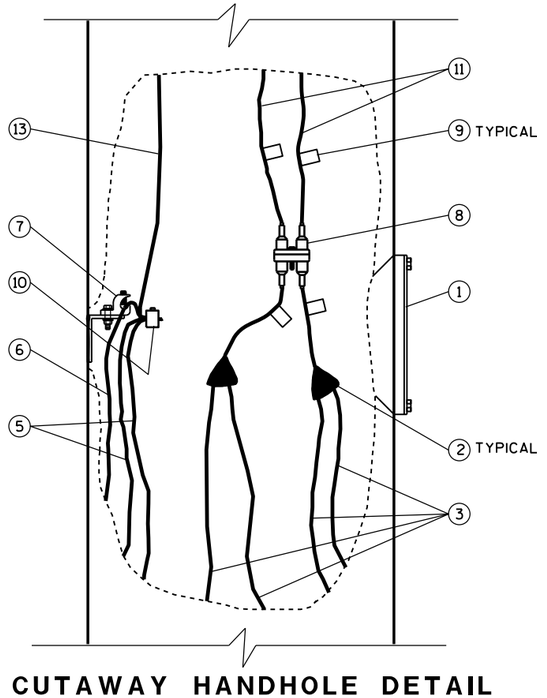
CUTAWAY HANDHOLE DETAIL

GROUNDED NEUTRAL SYSTEMS
1-Φ



CUTAWAY HANDHOLE DETAIL

ISOLATED NEUTRAL SYSTEMS
1-Φ SHOWN; 3-Φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL

PHASE-TO-PHASE SYSTEMS
1-Φ SHOWN; 3-Φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

1. HANDHOLE AND COVER
2. INSULATED SPLICE
3. UNGROUNDED LINE WIRE
4. GROUNDED LINE WIRE
5. SYSTEM GROUNDING LINE WIRE
6. GROUNDING ELECTRODE CONDUCTOR
7. HANDHOLE GROUNDING LUG
8. FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
9. CIRCUIT TAG (SEE GENERAL NOTE)
10. REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
11. UNGROUNDED POLE WIRE
12. GROUNDED POLE WIRE
13. EQUIPMENT GROUNDING POLE WIRE

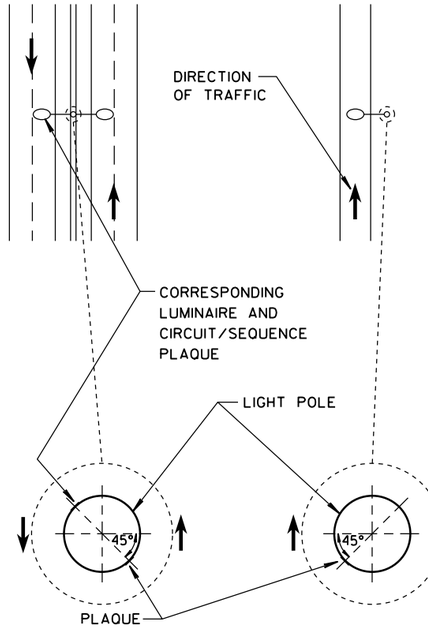
ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 10 A 1-3



MEDIAN POLE SINGLE ARM POLE

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

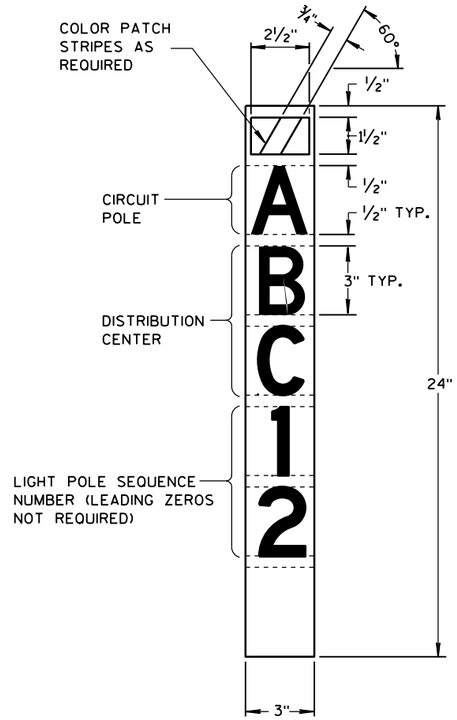
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS AND LED LUMINAIRES

HPS	LED	COLOR PATCH CODE
1000 WATT		NO PATCH
400 WATT	CATEGORY D	ORANGE
310 WATT		BLUE
250 WATT	CATEGORY C	ORANGE WITH WHITE STRIPE
200 WATT		RED
150 WATT	CATEGORY B	GREEN
100 WATT	CATEGORY A	BROWN
70 WATT	CATEGORY UDL	BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

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IDENTIFICATION PLAQUES LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 DATE
/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA

S.D.D. 10 A 2-3

GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

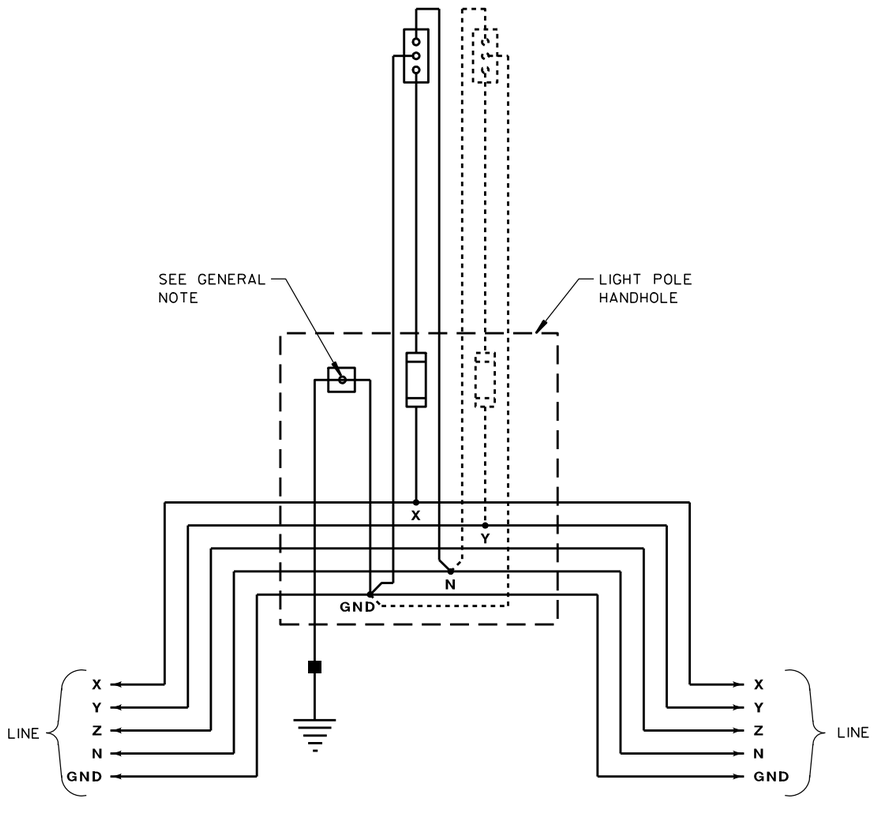
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

HANDHOLE FUSE SCHEDULES

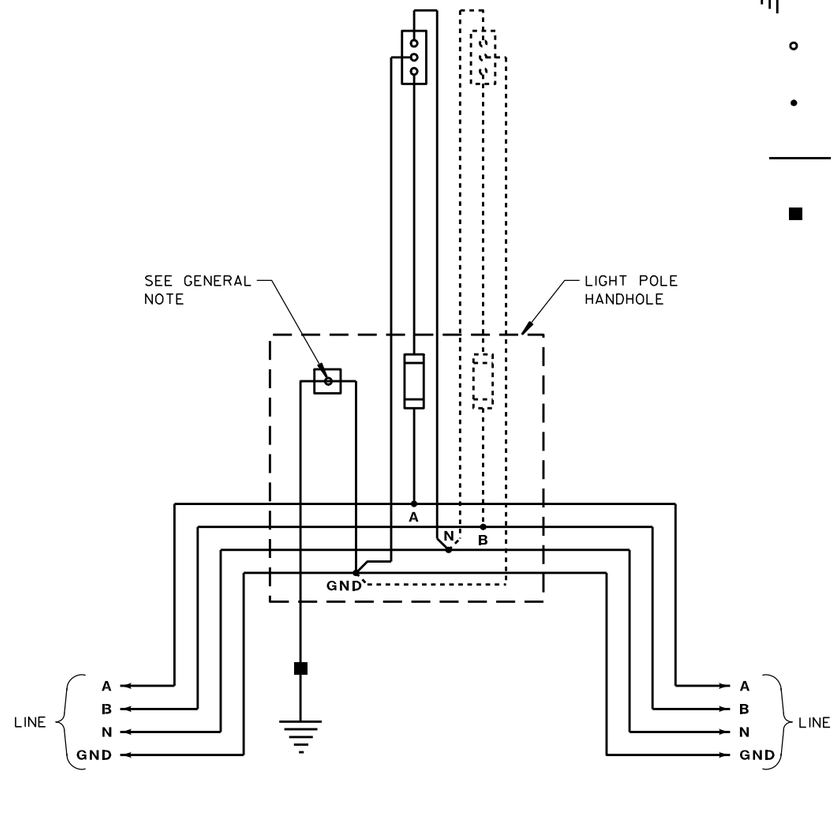
LINE VOLTAGE	BALLAST WATTAGE	
φ-GROUND	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
3-φ 208Y/120VAC OR 480Y/277VAC 4 WIRE



TYPICAL WIRING DIAGRAM
ISOLATED NEUTRAL SYSTEM
1-φ 120/240VAC OR 240/480VAC 3 WIRE

ELECTRICAL DETAILS
GROUND MOUNT LIGHT POLES
ISOLATED NEUTRAL SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 DATE
/S/ John Corbin STATE ELECTRICAL ENGI
FHWA

HWYS

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S.D.D. 10 A 5-2

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S.D.D. 10 A 5-2

GENERAL NOTES

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

USE THIS DETAIL IN CONJUNCTION WITH THE DETAIL FOR ELECTRICAL HANDHOLE WIRING.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

WIRING FOR SINGLE LUMINAIRE POLES IS SHOWN WITH SOLID LINES. WIRING FOR THE SECOND LUMINAIRE OF TWIN LUMINAIRE POLES IS SHOWN WITH DOTTED LINES.

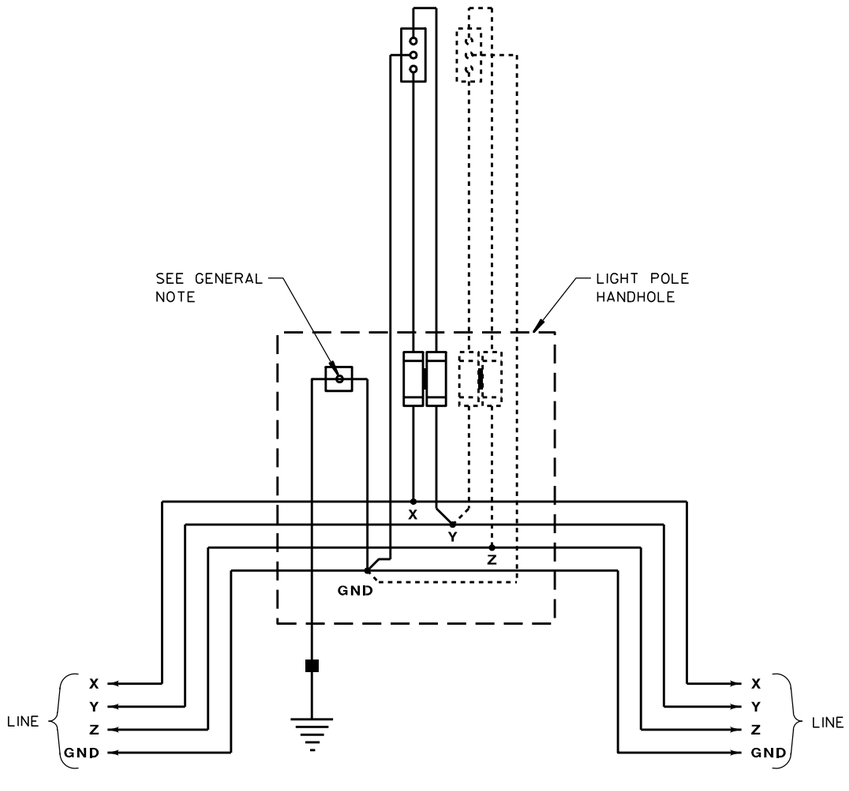
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

HANDHOLE FUSE SCHEDULES

LINE VOLTAGE ϕ-ϕ	BALLAST WATTAGE 70-200 W	BALLAST WATTAGE 250-400 W
240 VAC	2P-5 A	2P-5 A
480 VAC	2P-5 A	2P-5 A

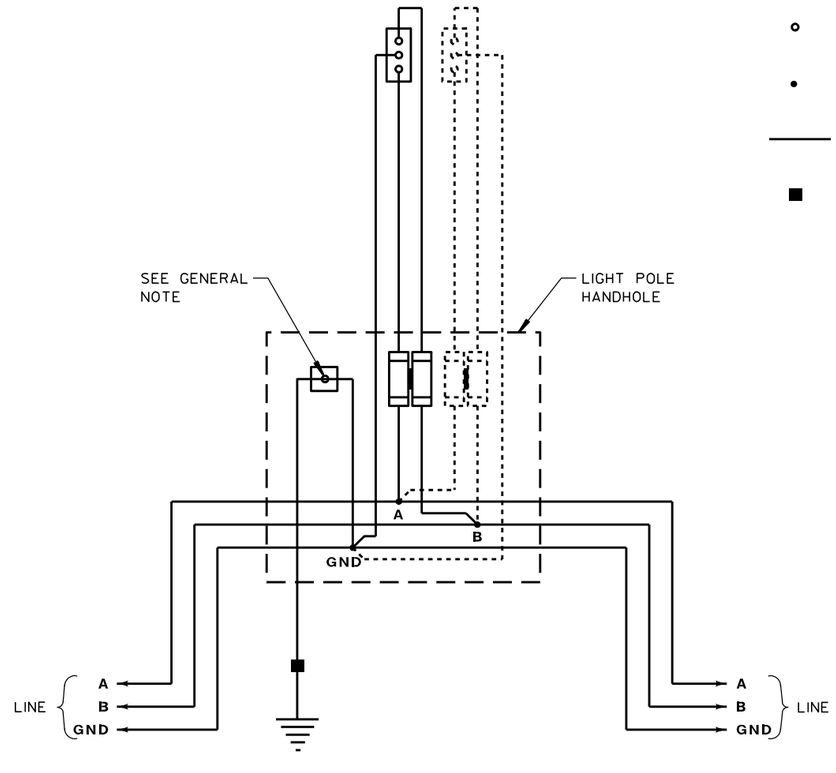
LEGEND

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
ϕ	PHASE (ELECTRICAL CURRENT)
	HANDHOLE GROUND LUG
	SINGLE-POLE (1P) FUSE ASSEMBLY
	TWO-POLE (2P) FUSE ASSEMBLY
	UNFUSED LUMINAIRE
	EQUIPMENT GROUNDING ELECTRODE
	TERMINAL
	SPLICE
	CONDUCTOR
	EXOTHERMIC WELD



TYPICAL WIRING DIAGRAM

PHASE-TO-PHASE DELTA SYSTEM
3-ϕ 480VAC 3 WIRE



TYPICAL WIRING DIAGRAM

UNGROUNDED SYSTEM
1-ϕ 120-120VAC 2 WIRE

ELECTRICAL DETAILS GROUND MOUNT LIGHT POLES PHASE-TO-PHASE SYSTEMS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/25/2010
DATE

/S/ John Corbin
STATE ELECTRICAL ENGI

FHWA

HWYS

6

S.D.D. 10 A 7-2

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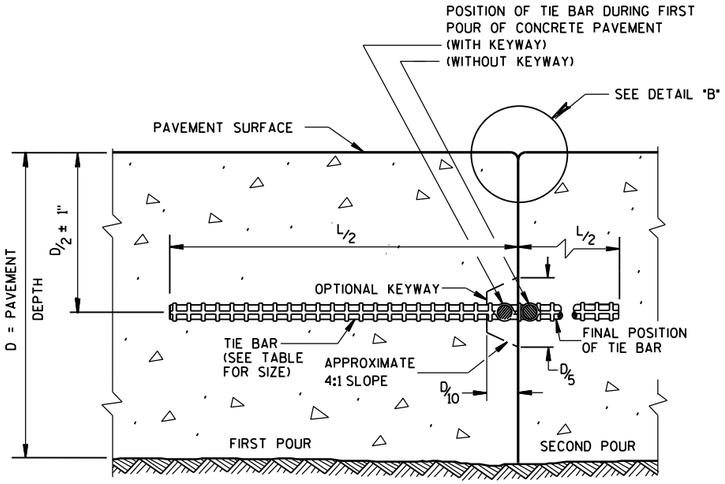
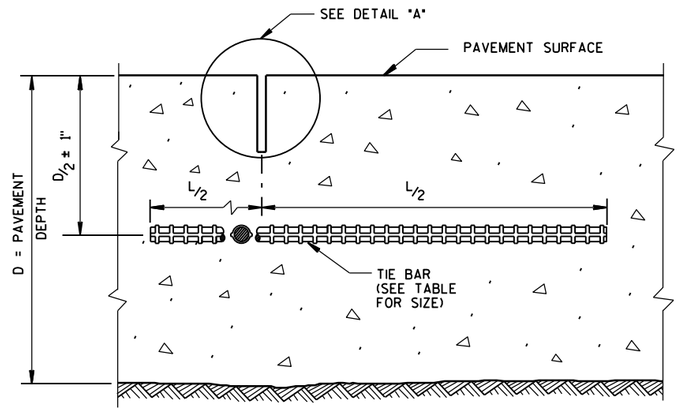
S.D.D. 10 A 7-2



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

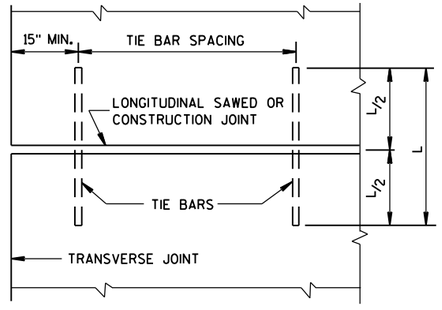
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

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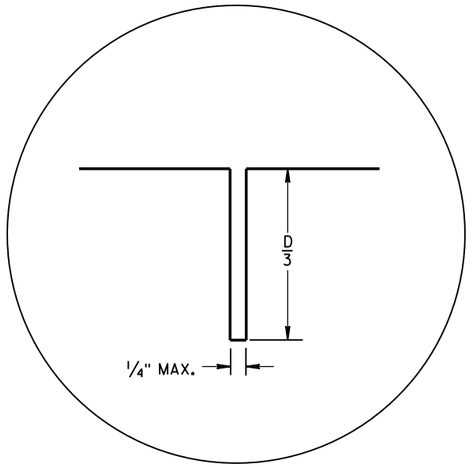
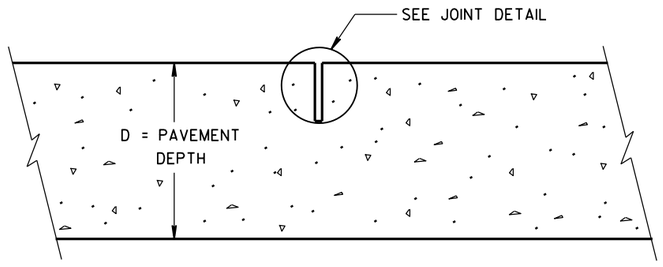
S.D.D. 13 C 1-18



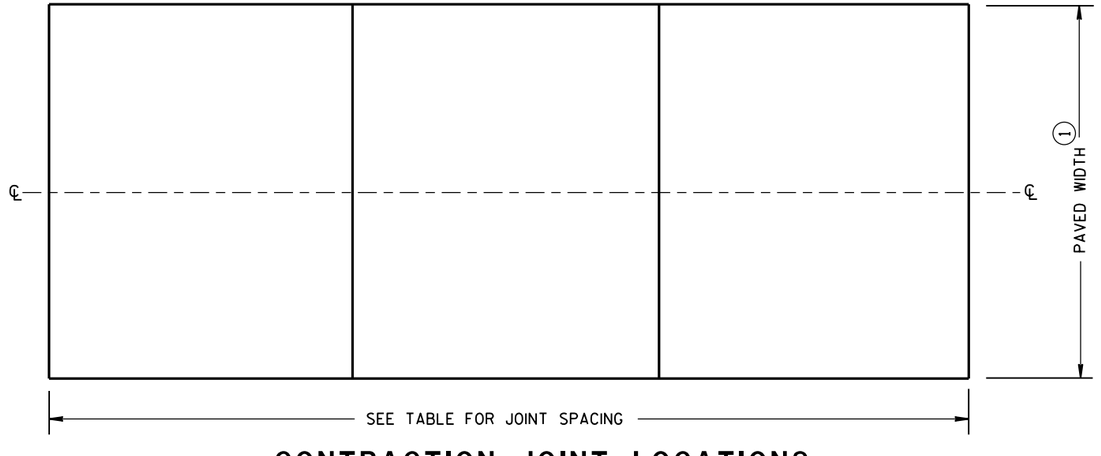
JOINT DETAIL



CONTRACTION JOINT

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE.

LOCATE AND ORIENT CONTRACTION JOINTS THROUGH INTERSECTIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

CONSTRUCTION JOINTS

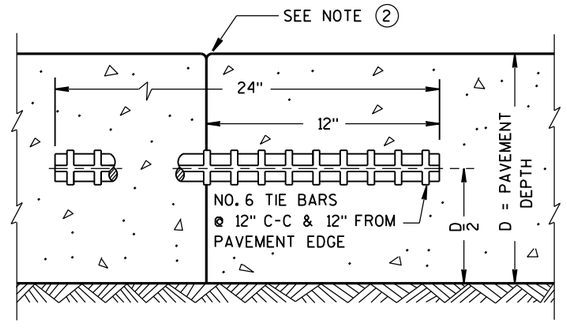
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

FORM OR SAW CONSTRUCTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

(1) REFER TO TYPICAL CROSS SECTIONS FOR PAVED WIDTH AND LOCATION OF LONGITUDINAL JOINTS.

(2) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.



TIED TRANSVERSE CONSTRUCTION JOINT

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S.D.D. 13 C 4-16

URBAN
NON-DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-3-2013 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DE
IEER
FHWA

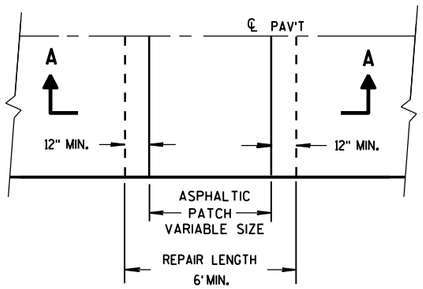
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

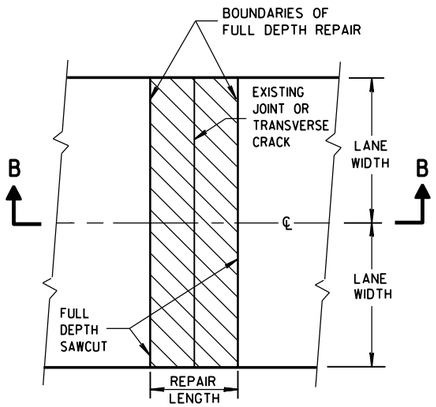
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

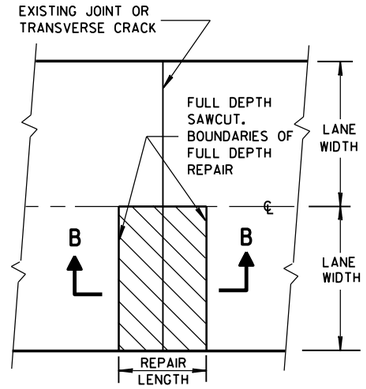
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

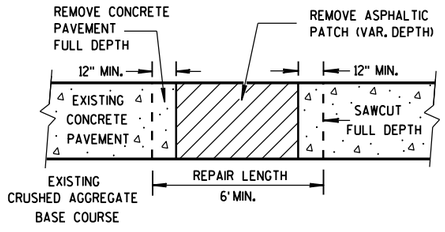


PLAN VIEW
(DOUBLE LANE REPAIR)



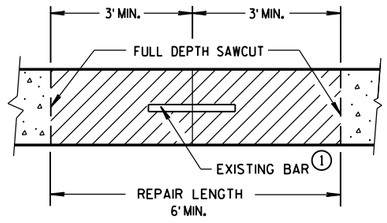
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

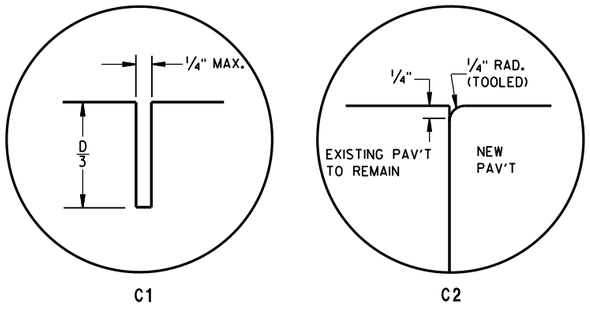
CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 C 9-14a



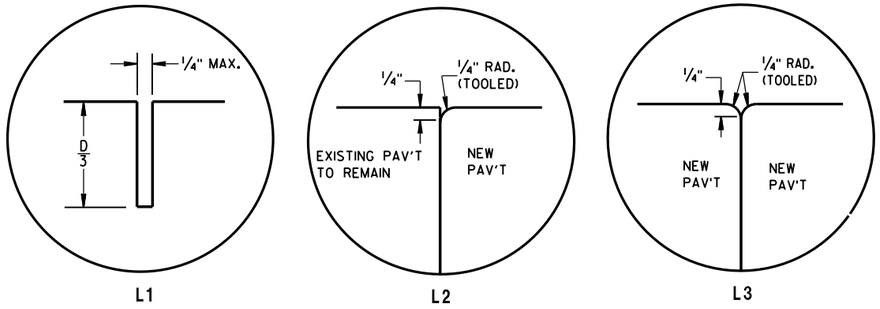
TRANSVERSE JOINTS

TIE BAR TABLE

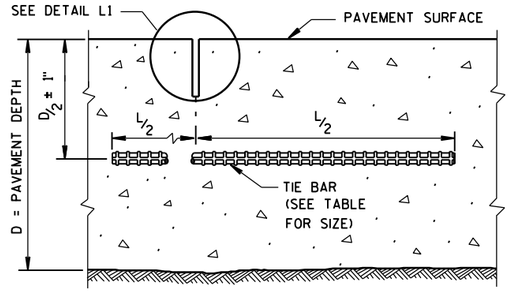
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

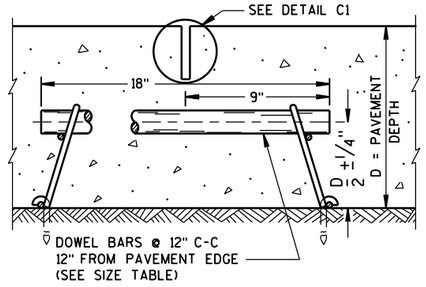
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

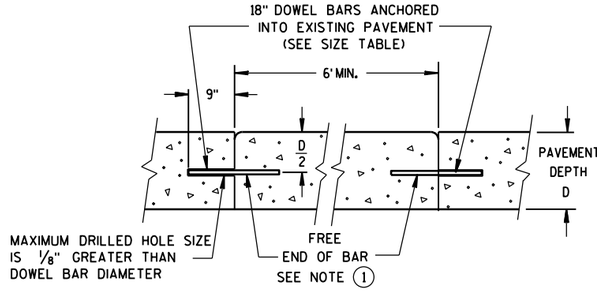
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

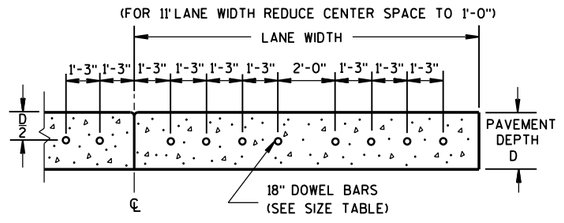


SECTION F-F

CONTRACTION JOINT



SECTION D-D

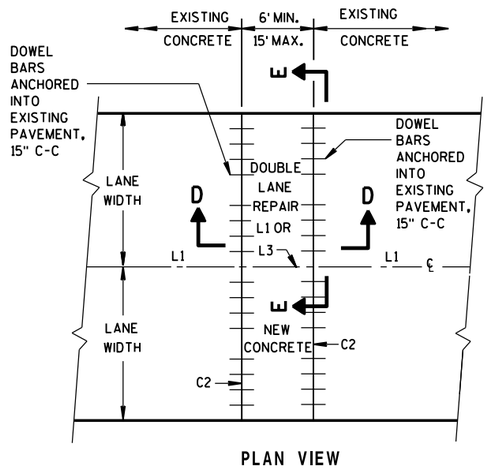


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

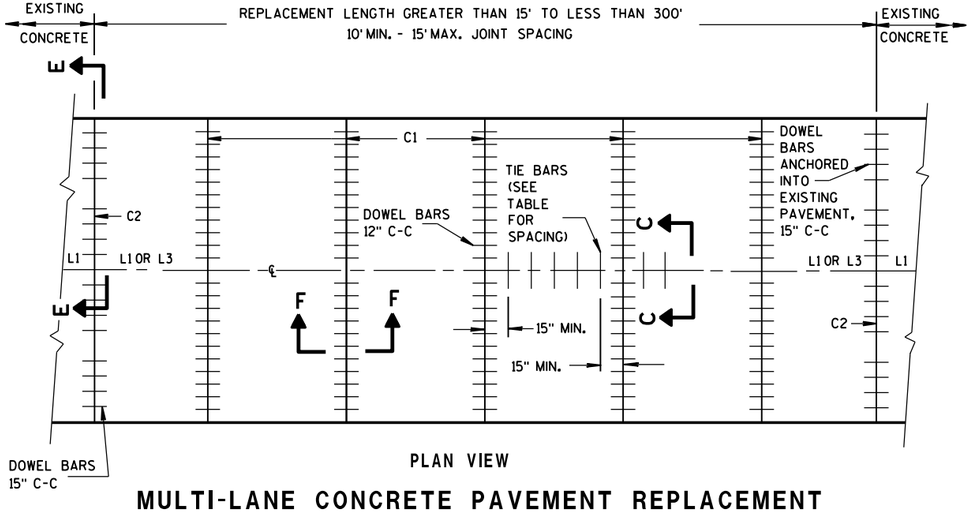
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6",6 ½"	NONE	NONE	12'
7",7 ½"	1"	1"	14'
8",8 ½"	1 ¼"	1 ¼"	15'
9",9 ½"	1 ¼"	1 ¼"	15'
10" & ABOVE	1 ½"	1 ¼"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



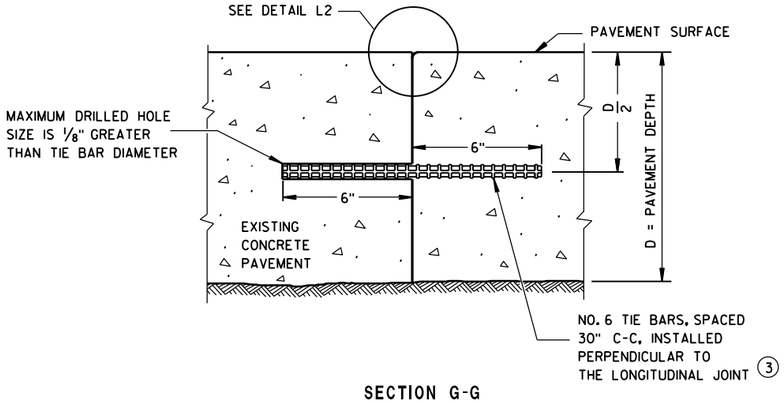
PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 13 C 9-14b



SECTION G-G

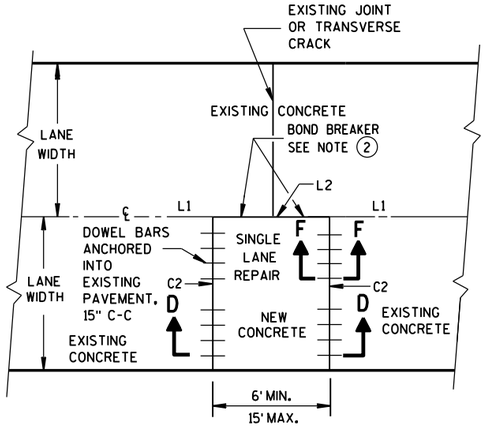
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

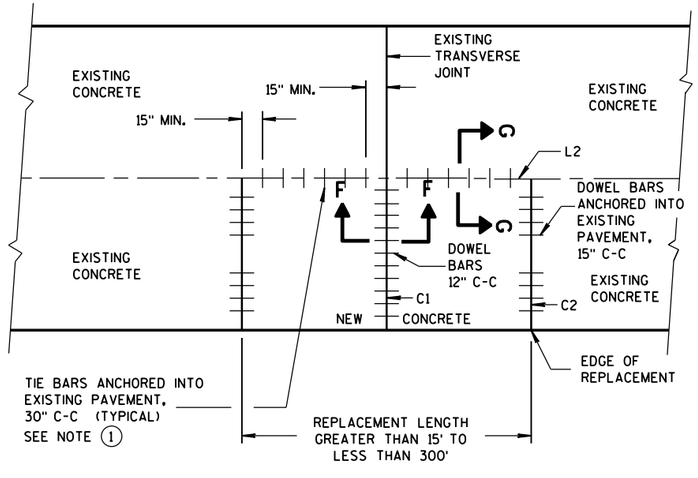
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

(3) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

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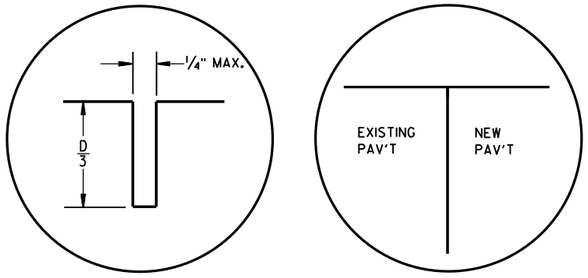
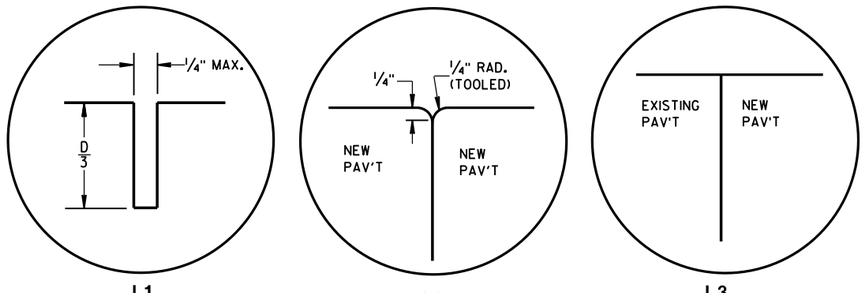
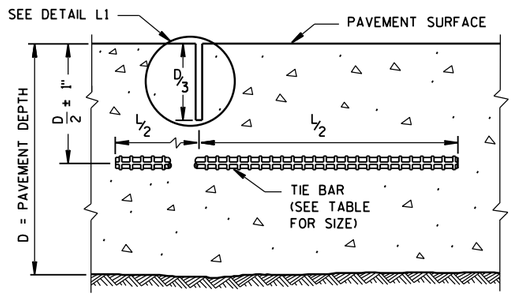
S.D.D. 13 C 9-14c



TRANSVERSE JOINTS

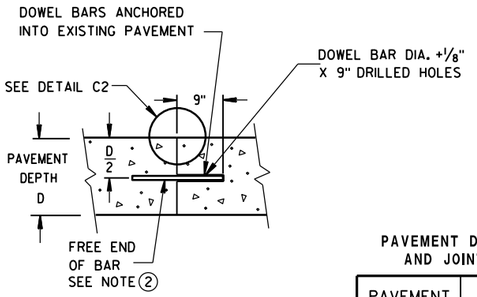


LONGITUDINAL JOINTS



SECTION C-C

SAWED JOINT



SECTION D-D

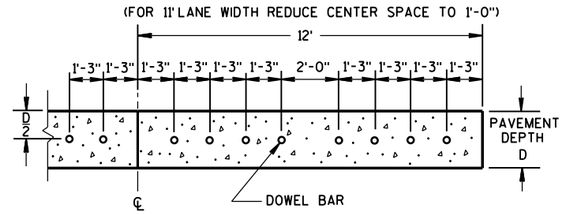
GENERAL NOTES

ANCHOR TIE BARS AND DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

(2) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

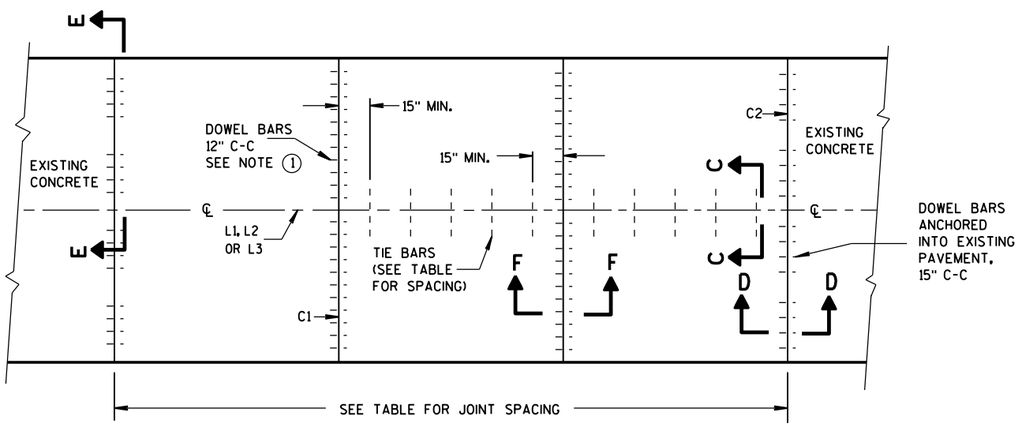
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5½", 6, 6 ½"	NONE	12'
7, 7 ½"	1"	14'
8, 8 ½"	1 ¼"	15'
9, 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

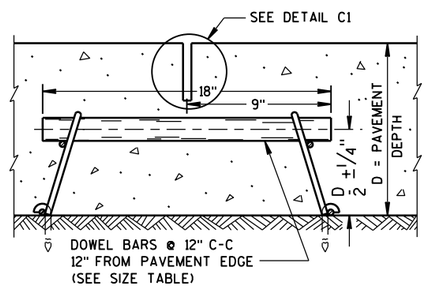
* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW

CONCRETE BASE CONTRACTION JOINT LOCATIONS



SECTION F-F

CONTRACTION JOINT

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

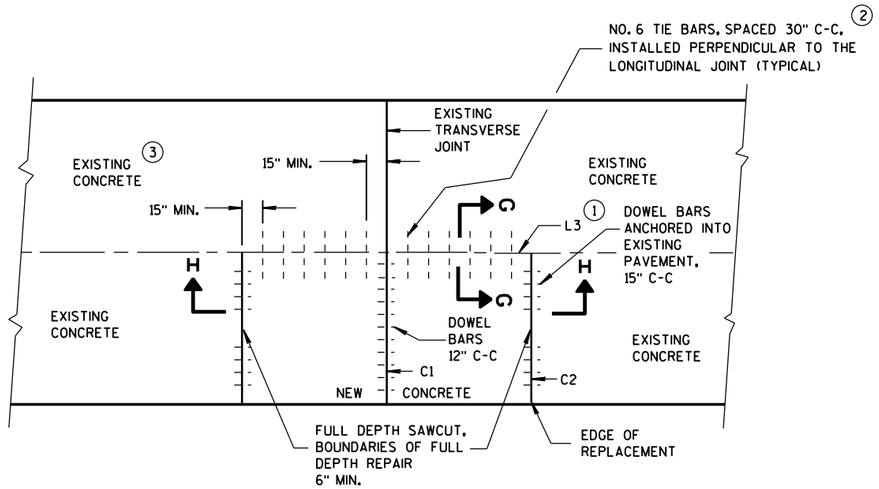
6
S.D.D. 13 C 15-6a

GENERAL NOTES

(1) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) AT THE LONGITUDINAL JOINT IN LIEU OF TIE BARS FOR SINGLE LANE CONCRETE BASE REPAIRS UP TO 15 FEET IN LENGTH.

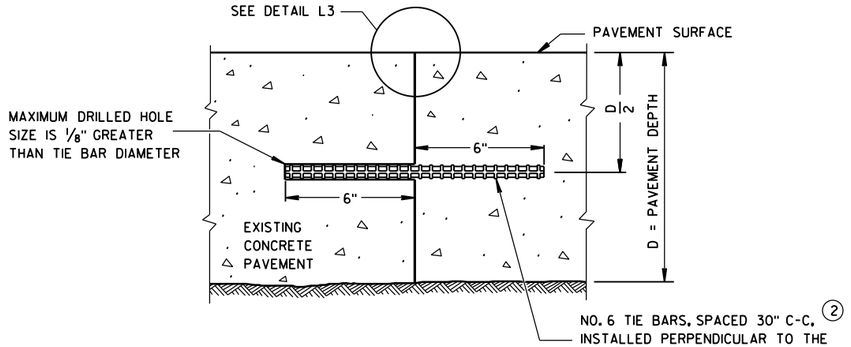
(2) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(3) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.



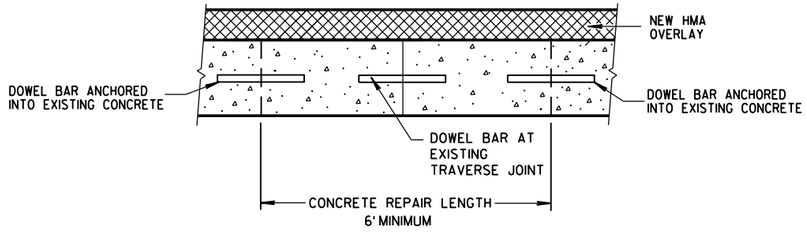
PLAN VIEW

SINGLE LANE CONCRETE BASE REPAIR



SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT



SECTION H-H

CONCRETE BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPEI
FHWA

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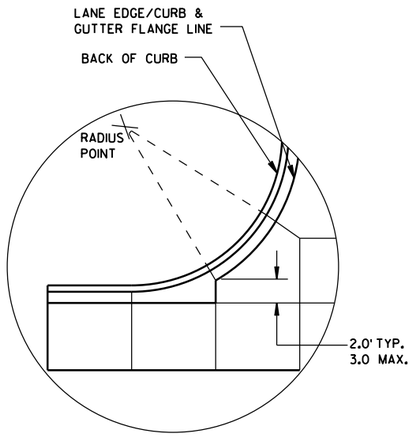
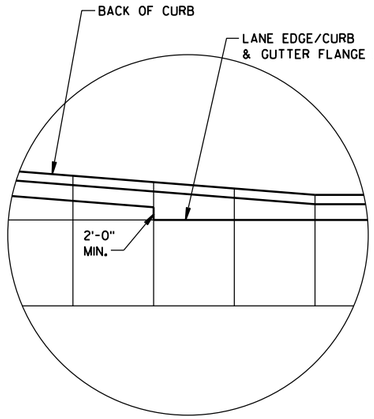
S.D.D. 13 C 15-6b



DETAIL "A"



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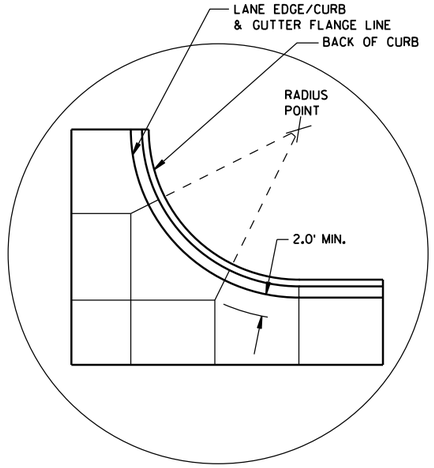
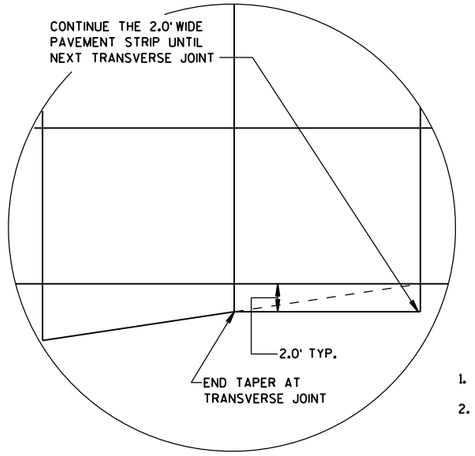


DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

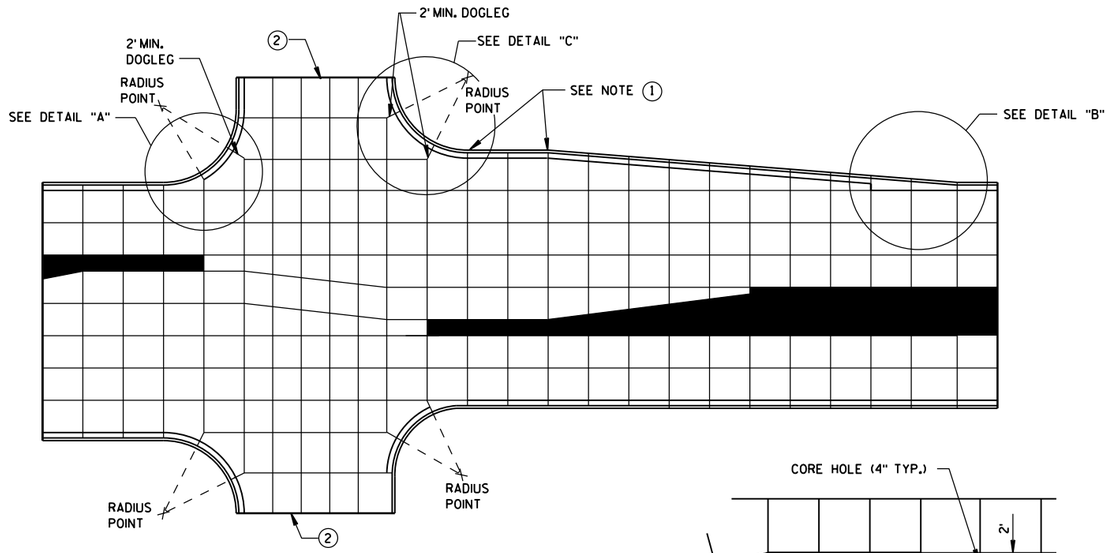
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

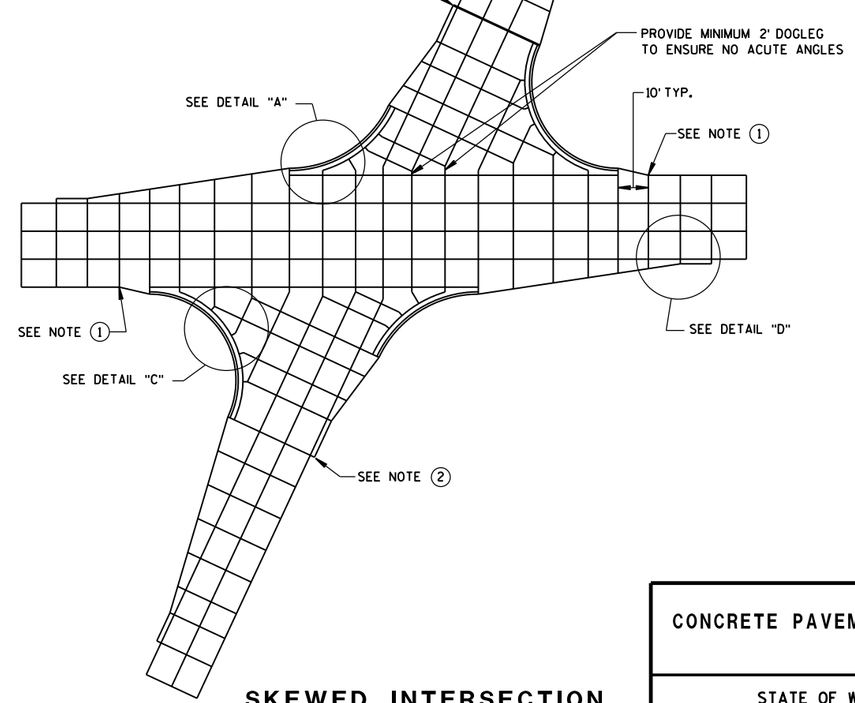
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



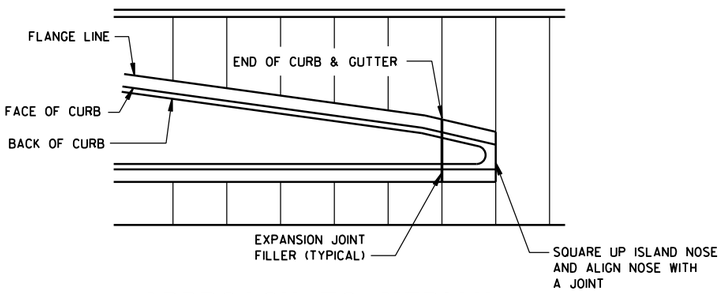
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

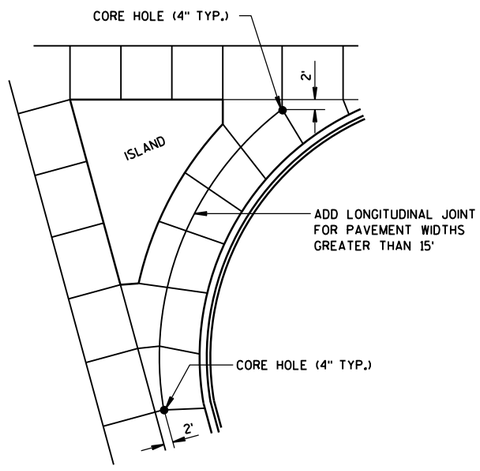
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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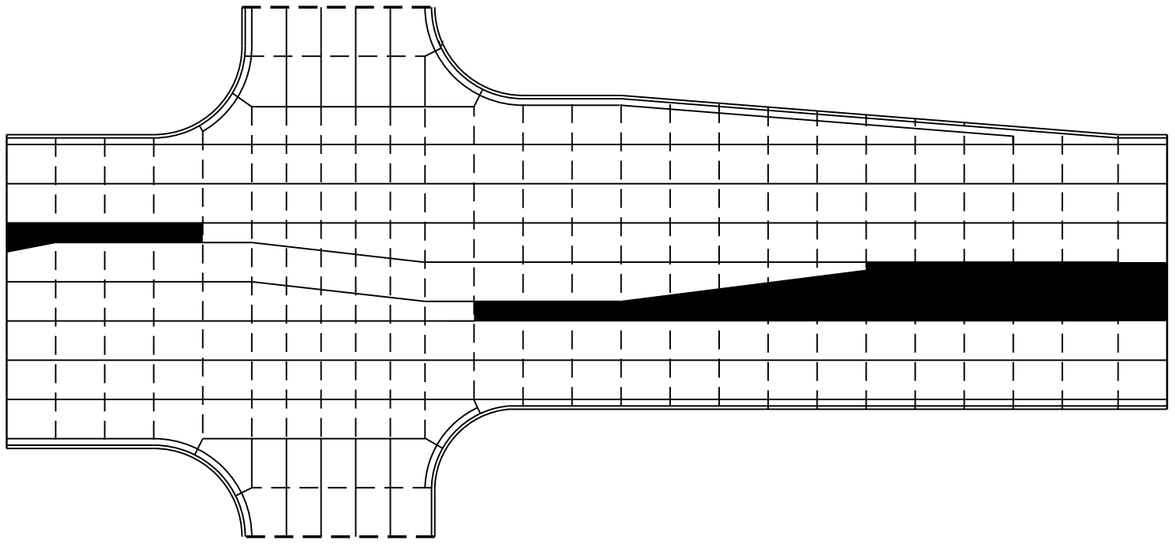
S.D.D. 13 C 18-5a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

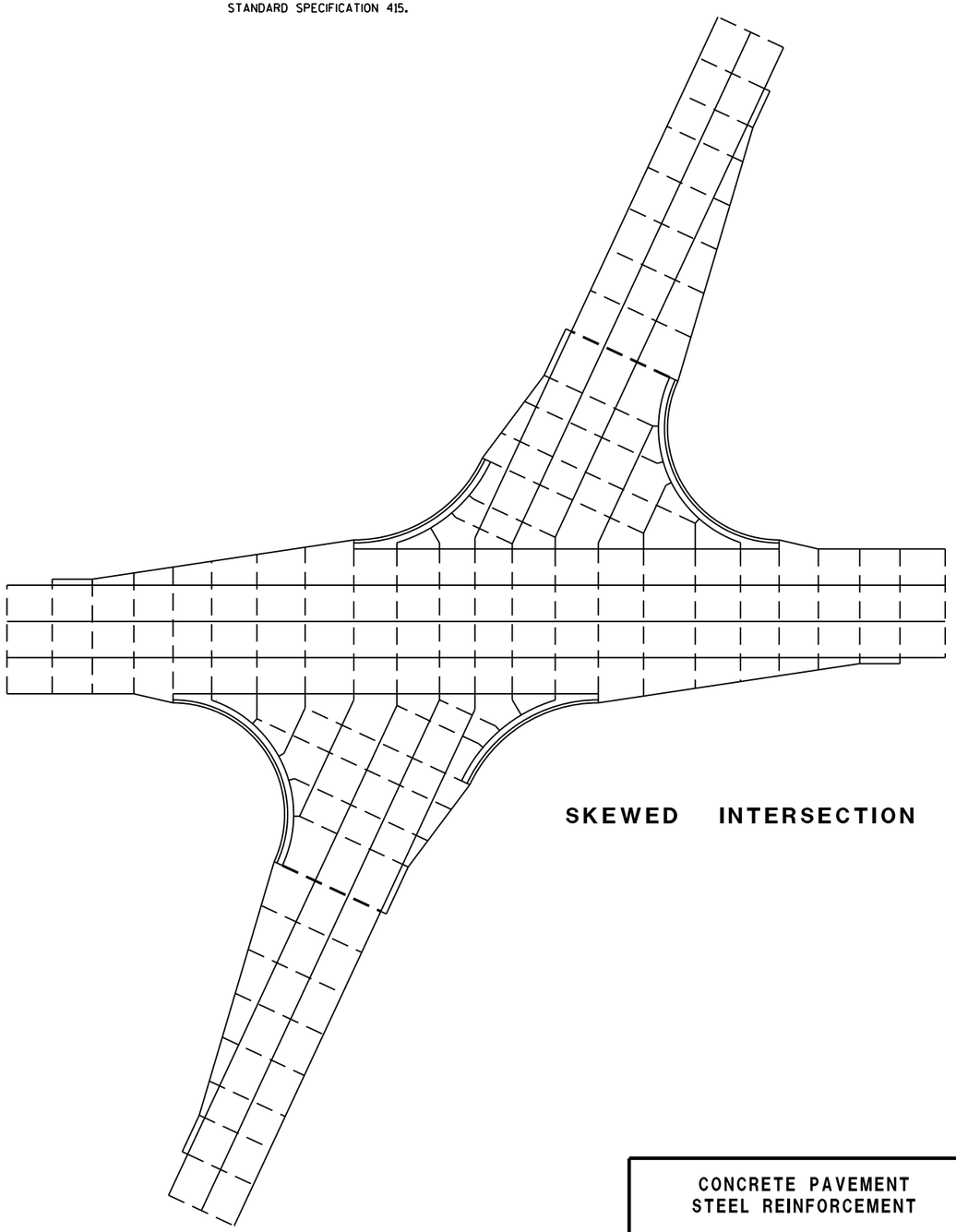
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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S.D.D. 13 C 18-5b

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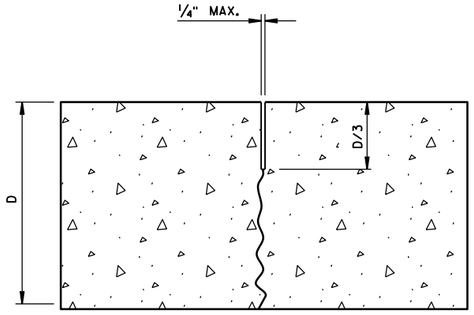
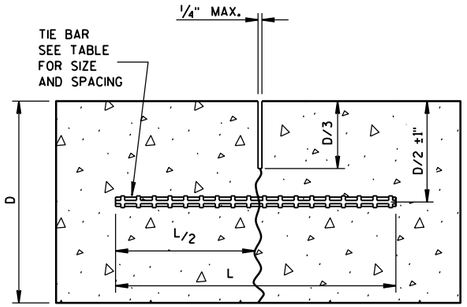


UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

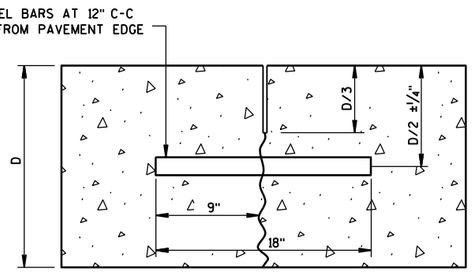
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

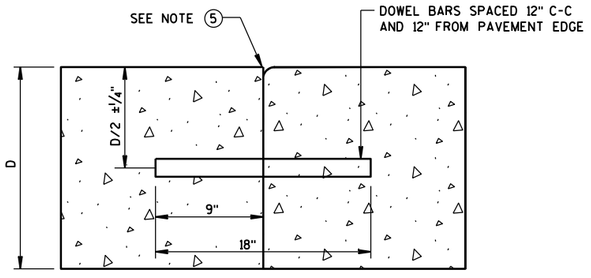
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



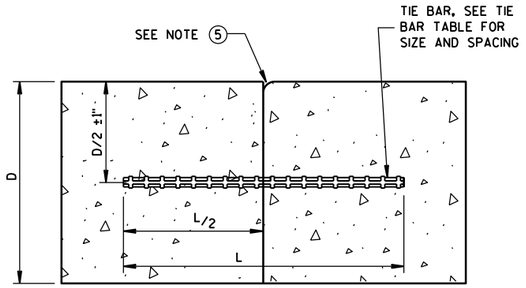
DOWELED-TRANSVERSE

CONTRACTION JOINTS

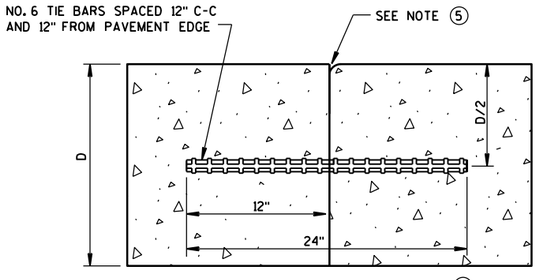
SEE NOTE (2)



DOWELED TRANSVERSE (3)

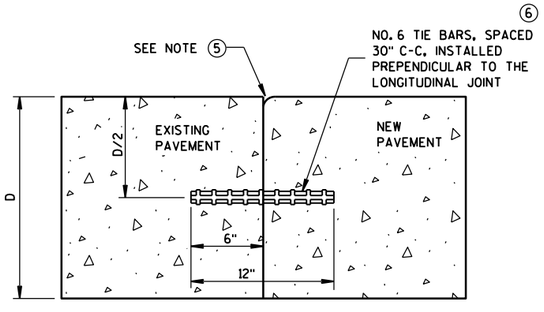


TIED LONGITUDINAL



TIED TRANSVERSE (3)

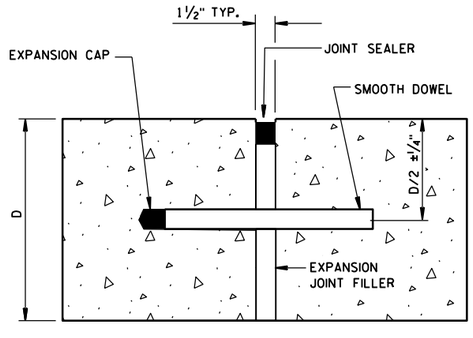
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

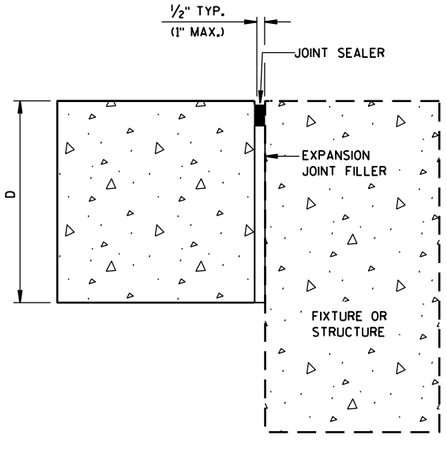
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

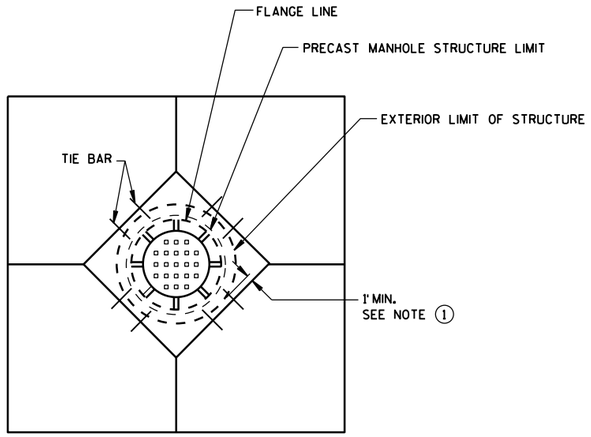
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

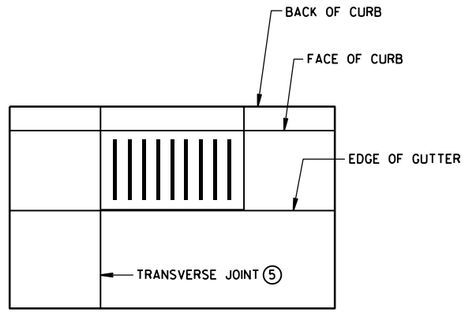
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

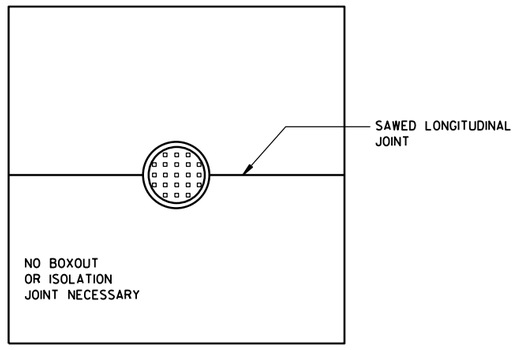
S.D.D. 13 C 18-5c



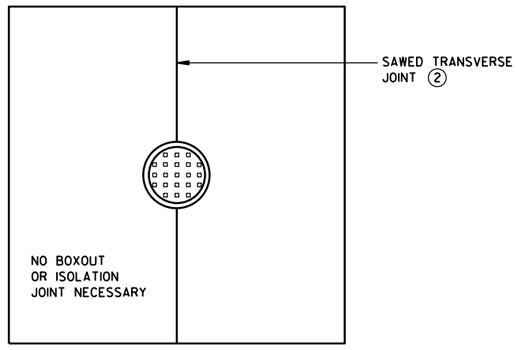
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



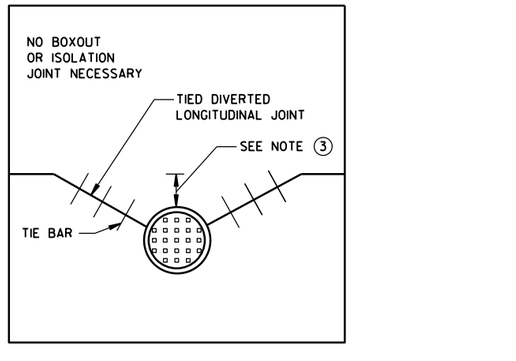
INLET WITH TRANSVERSE JOINT



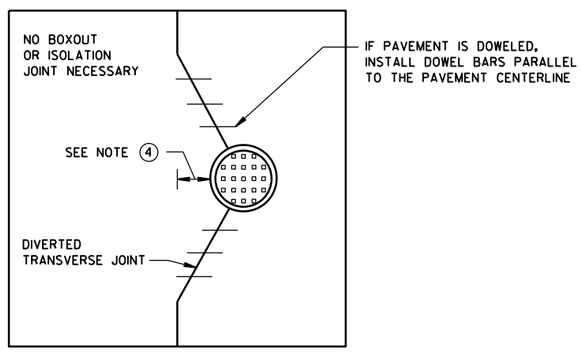
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

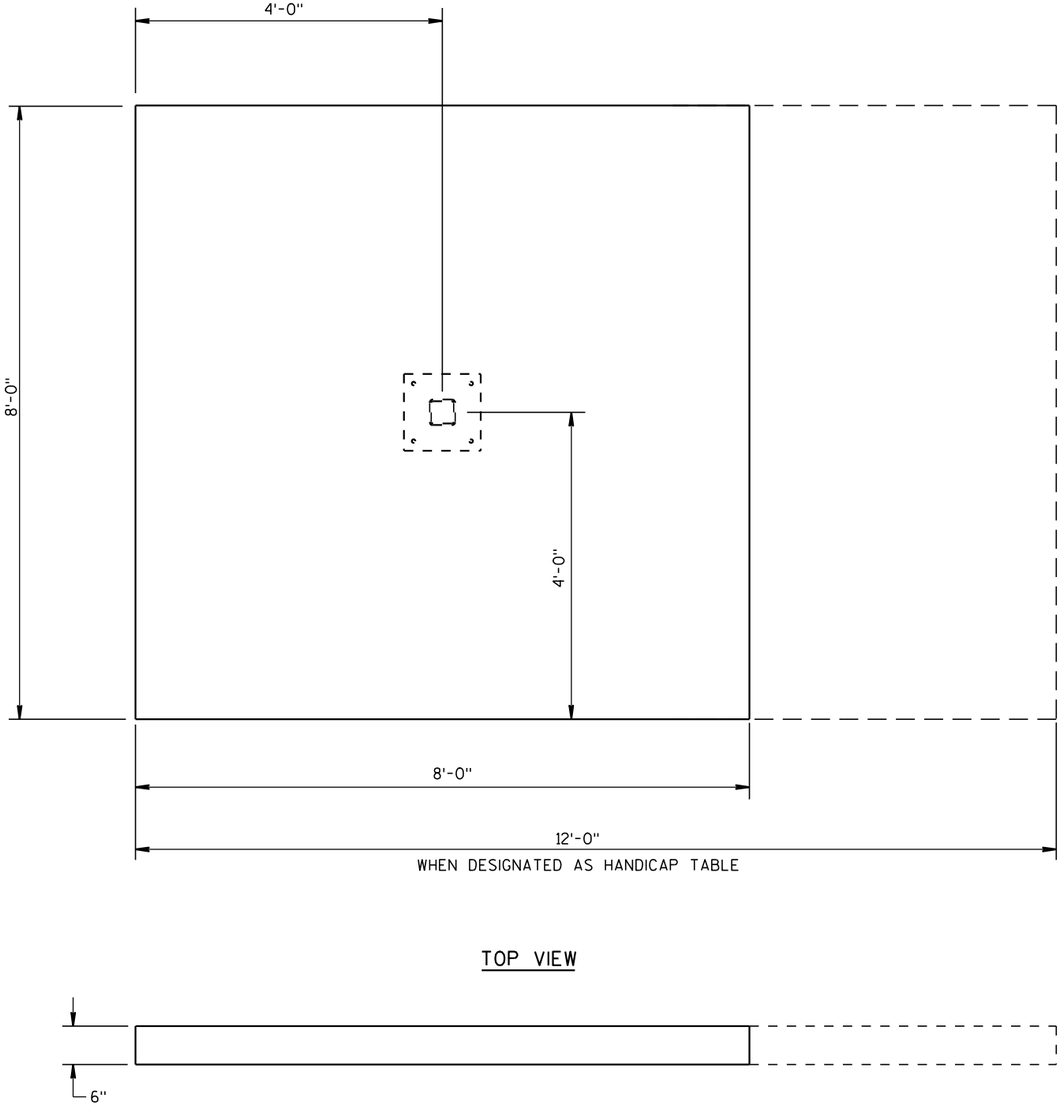
CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 — /S/ Peter Kemp, P.E.
DATE — PAVEMENT SUPEF
FHWA

6

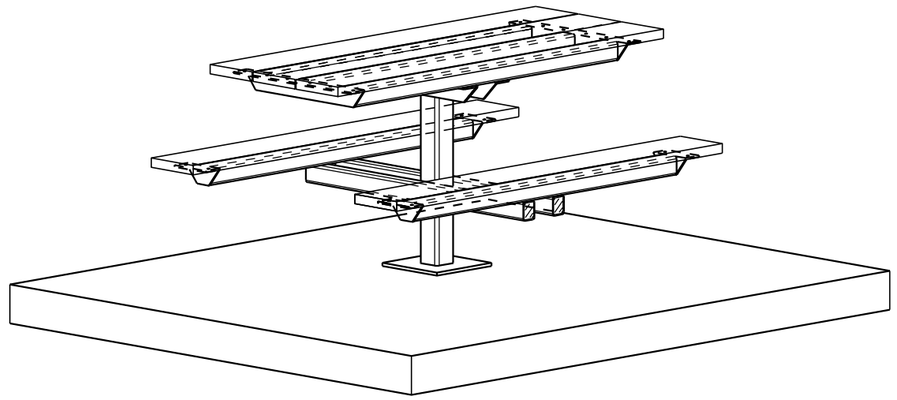
S.D.D. 13 C 18-5d



TOP VIEW

SLAB ELEVATION

CONCRETE PAD FOR PICNIC TABLE



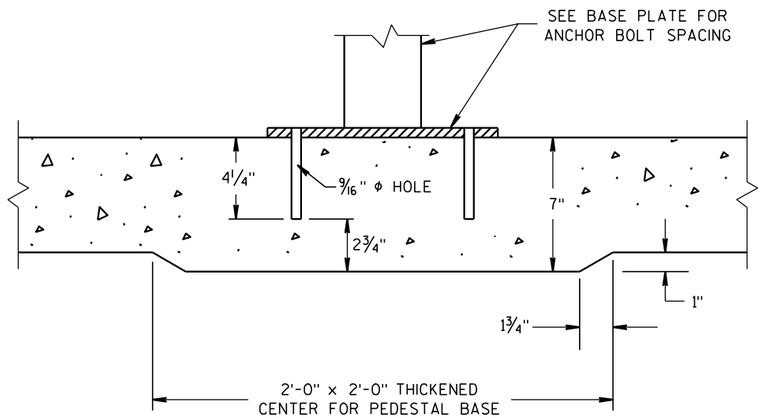
PERSPECTIVE VIEW

NOTES:

PICNIC TABLE PAD SHALL BE PAID FOR AS CONCRETE SIDEWALK 6-INCH.

PICNIC TABLE PAD SHALL BE LEVEL.

HANDICAP TABLES MUST HAVE SIDEWALK EXTENSION FOR ACCESSABILITY.



ANCHOR BOLT HOLE DETAIL

PICNIC TABLE
SINGLE PEDESTAL

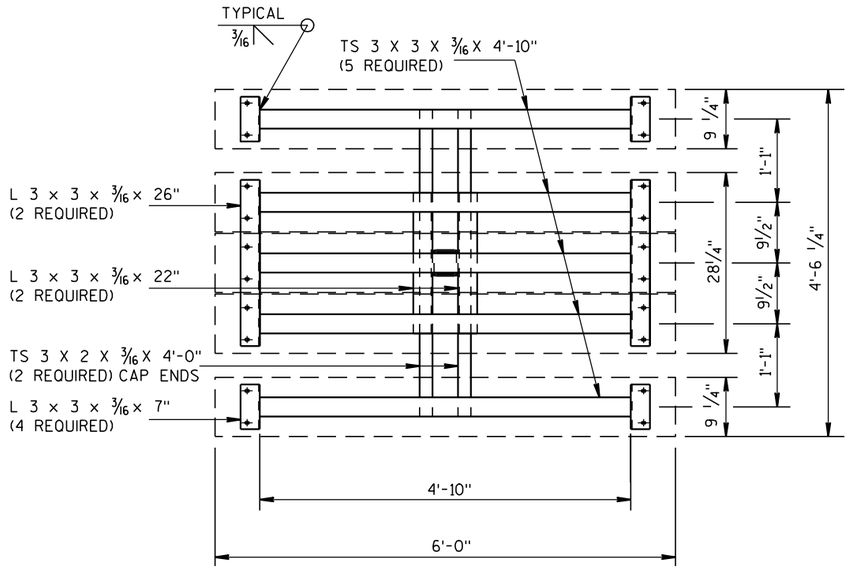
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

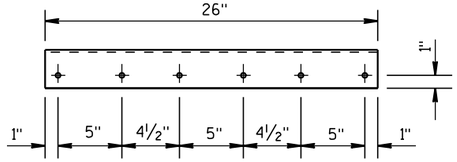
S.D.D. 14 C 7-3a

6

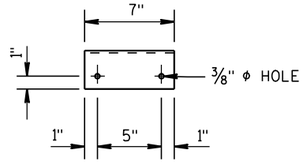
S.D.D. 14 C 7-3a



TOP VIEW

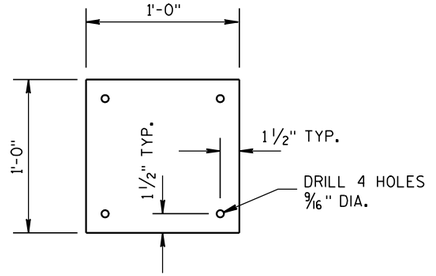


TOP ANGLE
L 3 X 3 X 3/16
(2 REQUIRED)



SEAT ANGLE
L 3 X 3 X 3/16
(4 REQUIRED)

PUNCHED HOLE LAYOUT



BASE PLATE LAYOUT

NOTES:

ALL EDGES AND CORNERS OF CUT ANGLES TO BE ROUNDED TO PREVENT SHARP EDGES.

ALL STRUCTURAL TUBES TO BE 46 KSI YIELD, ALL OTHER STEEL TO BE 36 KSI YIELD MIN.

PLANKS TO BE MADE OF RECYCLED PLASTIC.

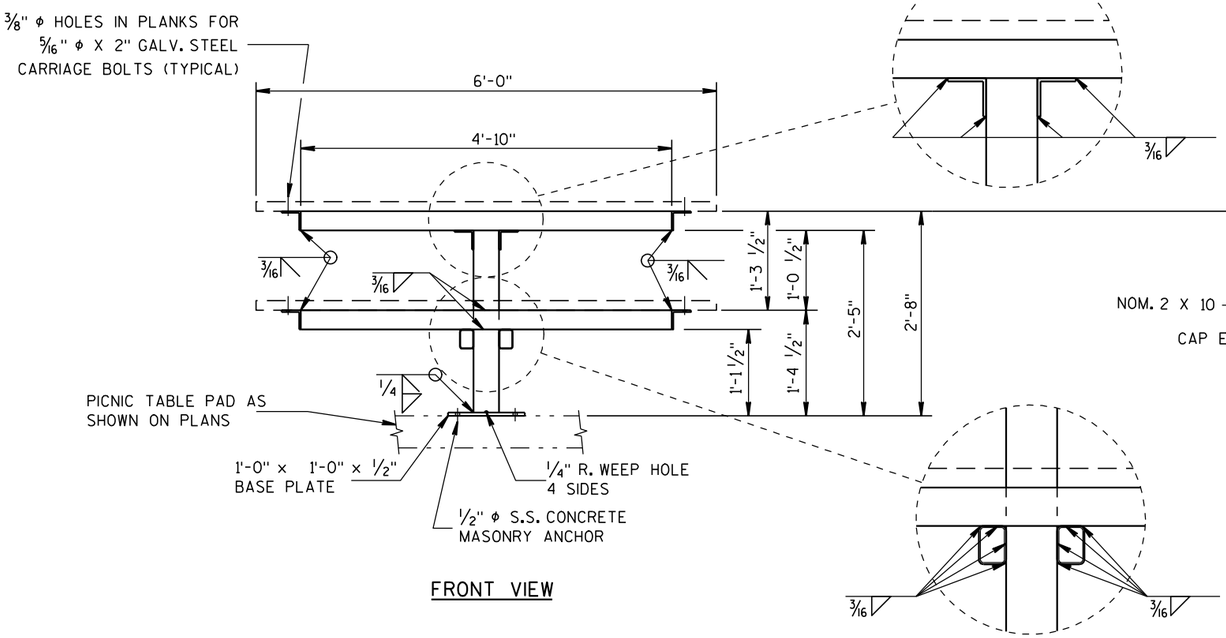
ACTUAL SIZE OF NOMINAL 2 X 10 PLANKS SHALL BE 1 1/2" X 9 1/4".

ALL NUTS, BOLTS, AND WASHERS SHALL BE ASTM A36.

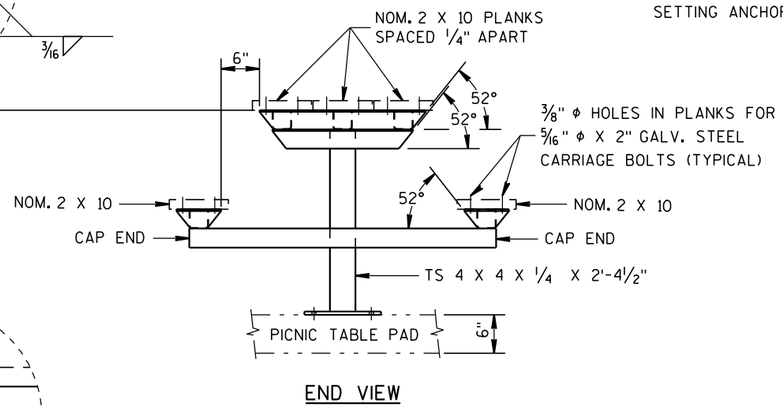
THE 1/2" ϕ STAINLESS STEEL CONCRETE MASONRY ANCHOR SHALL BE TYPE S IN ACCORDANCE WITH SECTION 502.5.2.2 OF THE STANDARD SPECIFICATION.

THE TYPE S MASONRY ANCHOR SHALL DEVELOP A MIN. OF 2400 LBS. TENSION.

CONCRETE SHALL BE CURED MIN. OF 7 DAYS PRIOR TO SETTING ANCHOR BOLTS.



FRONT VIEW



END VIEW

PICNIC TABLE
SINGLE PEDESTAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/6/00 — DATE

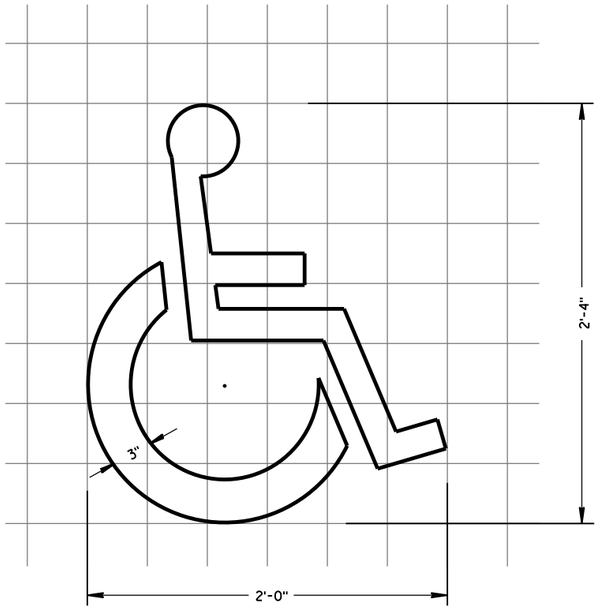
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

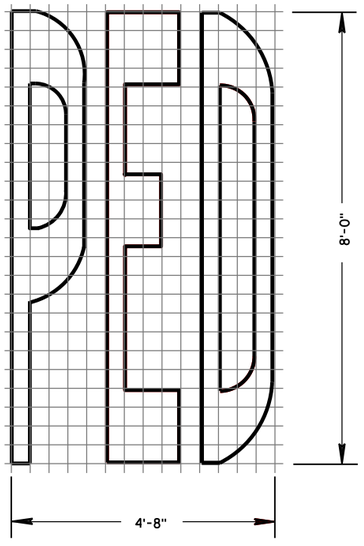
6
S.D.D. 14 C 7-3b

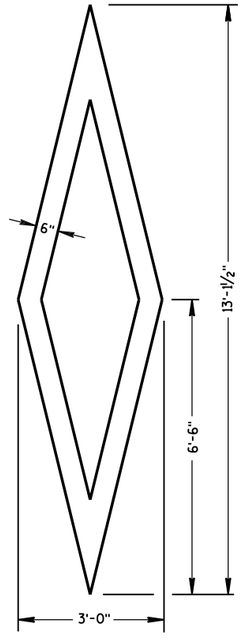
GENERAL NOTES

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.



HANDICAP SYMBOL





PREFERENTIAL LANE SYMBOL

6

6

S.D.D. 15 C 7-14a

S.D.D. 15 C 7-14a

PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

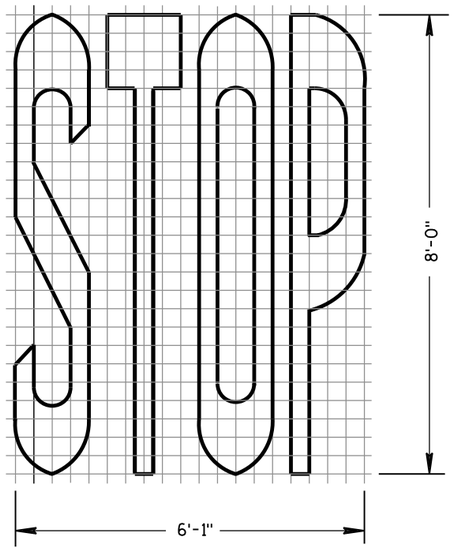
June 2017 — DATE

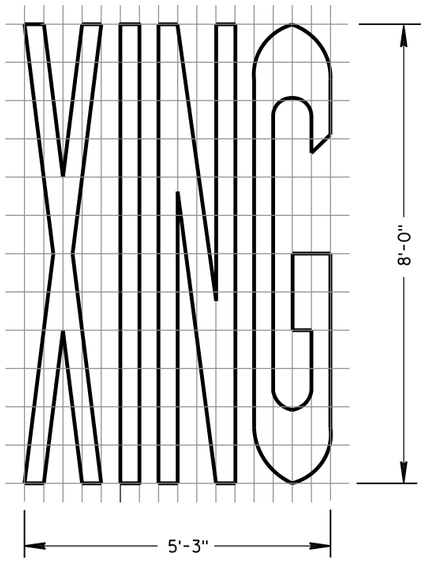
/S/ Matthew R. Rauch — STATE SIGNING AND MARK EER

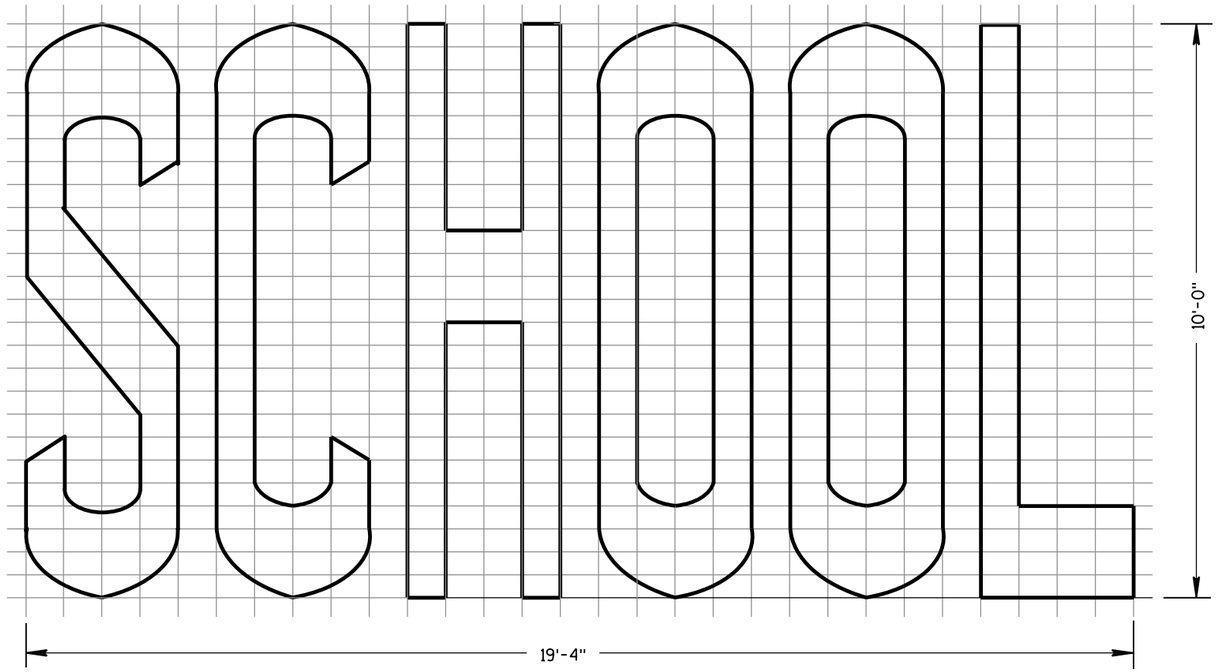
FHWA

GENERAL NOTES

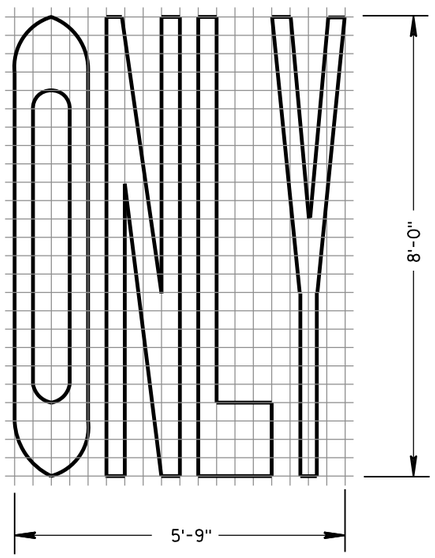
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

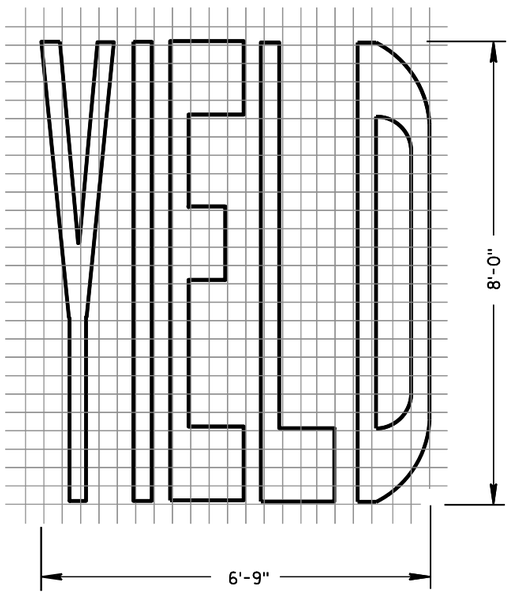


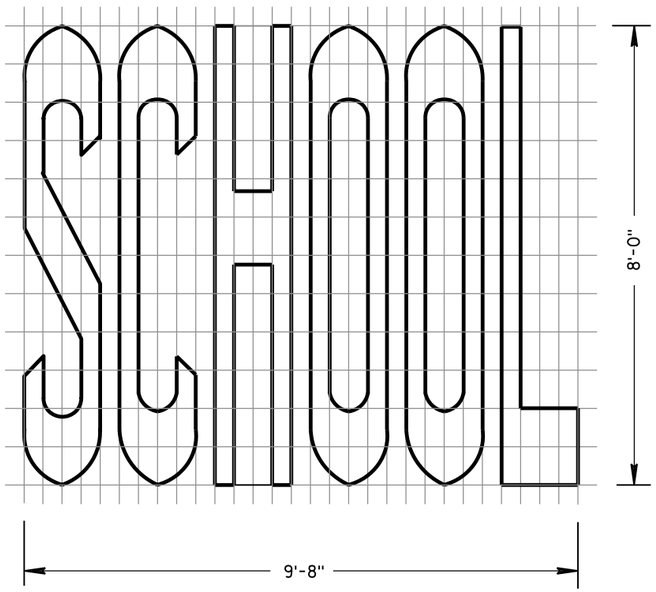




TWO-LANE







SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017	/S/ Matthew R. Rauch	
DATE	STATE SIGNING AND MARK	EER

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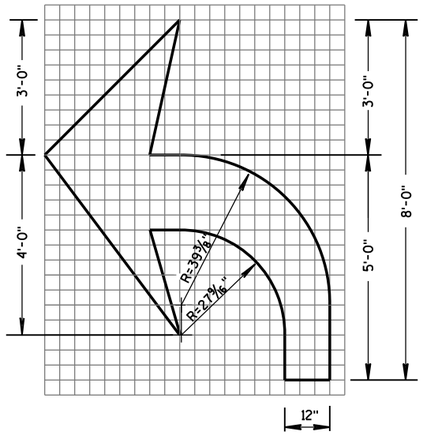
S.D.D. 15 C 7-14b

6

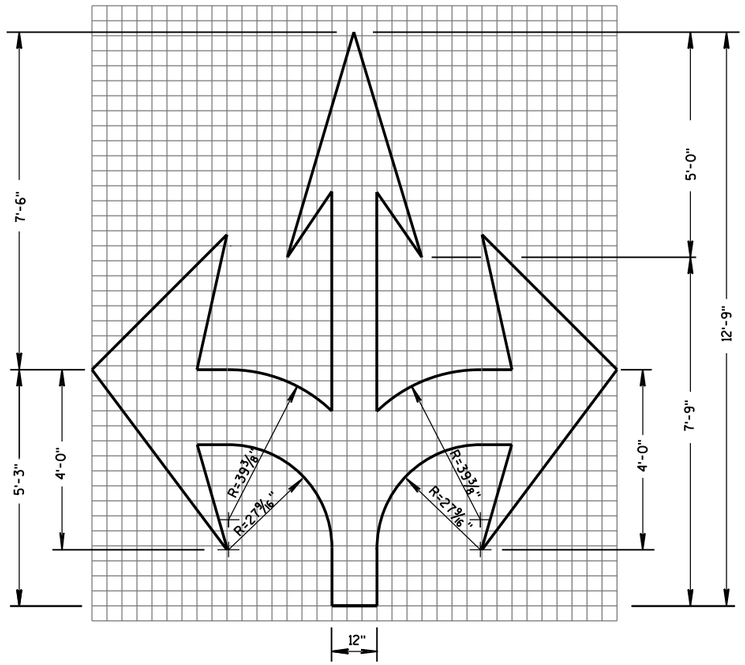
S.D.D. 15 C 7-14b

GENERAL NOTES

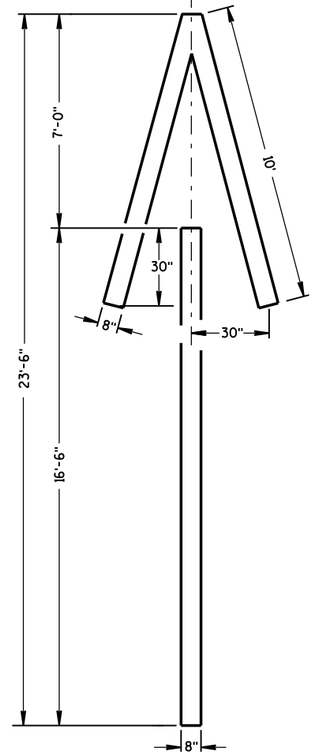
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



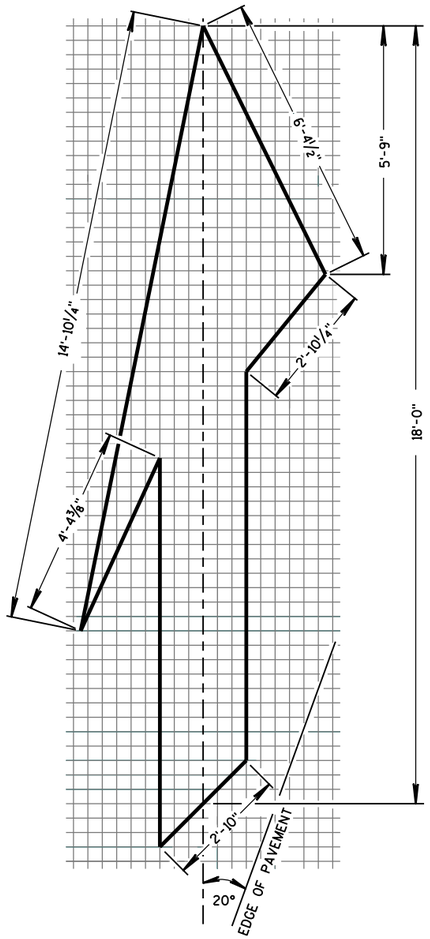
TYPE 2



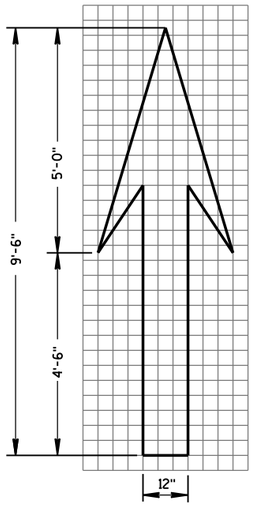
TYPE 6



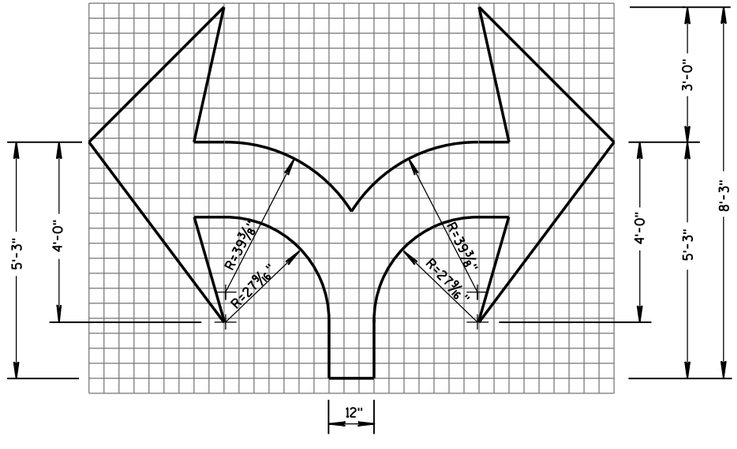
TYPE 4



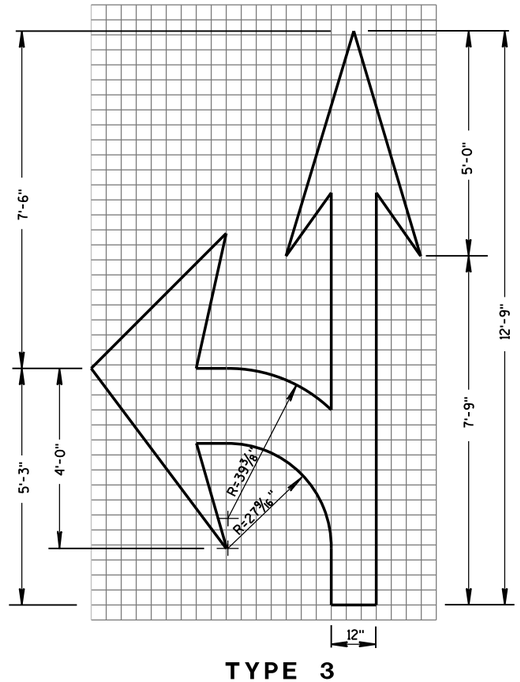
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]NEER
FHWA

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S.D.D. 15 C 7-14c

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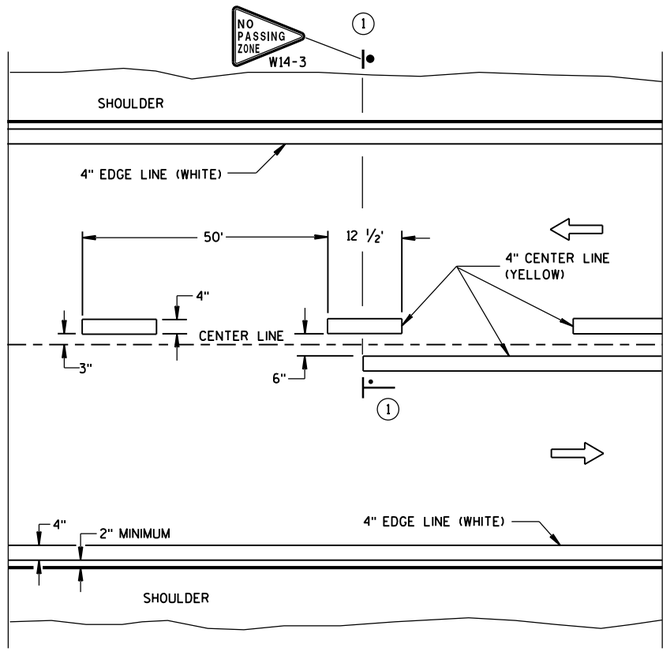
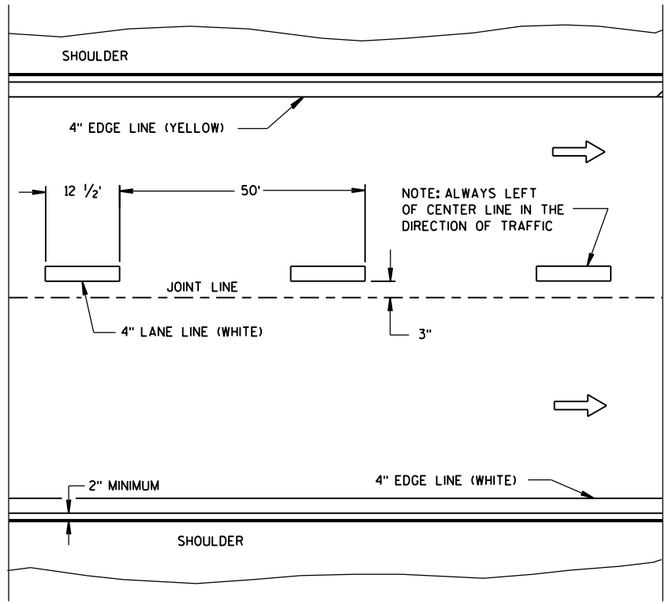
S.D.D. 15 C 7-14c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

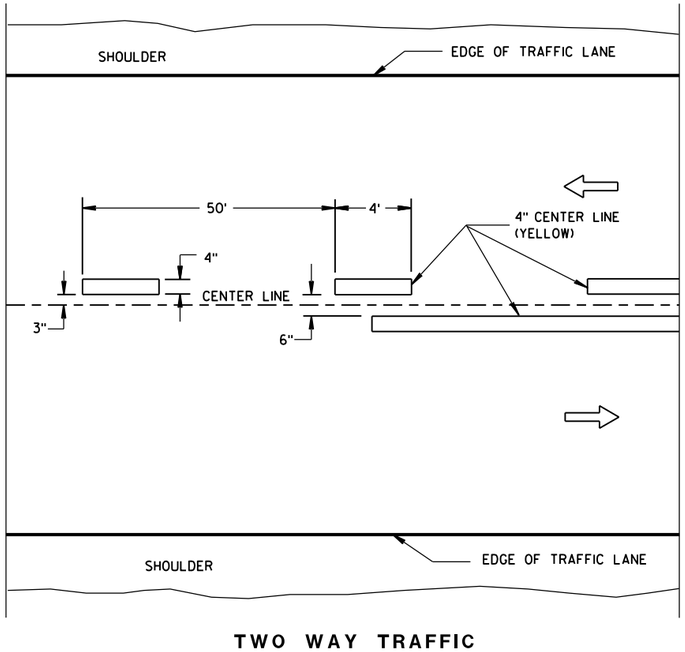
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

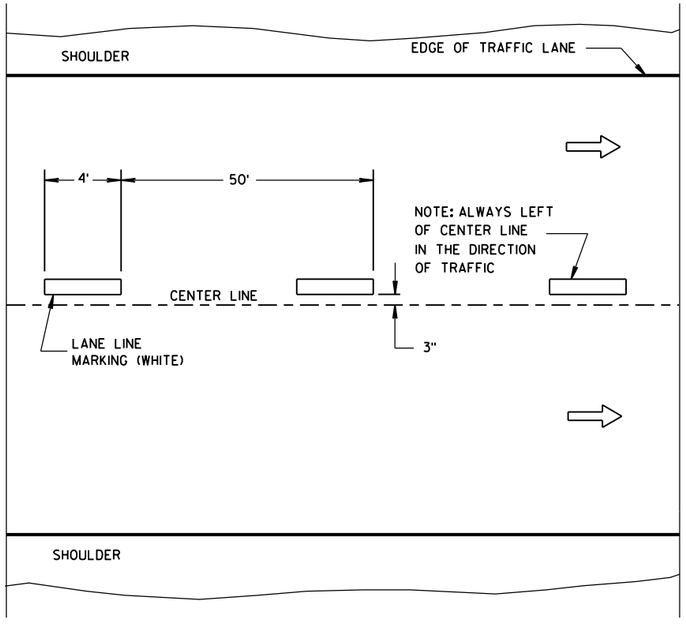
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]INEER
FHWA

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S.D.D. 15 C 8-18a

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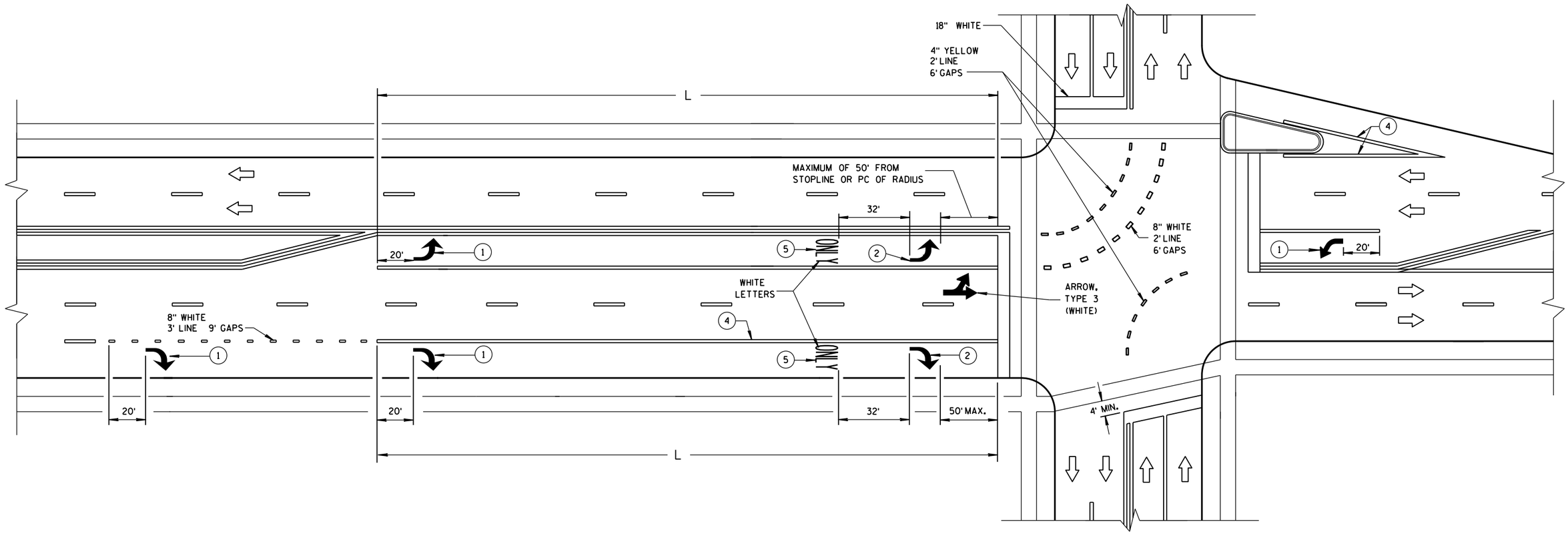
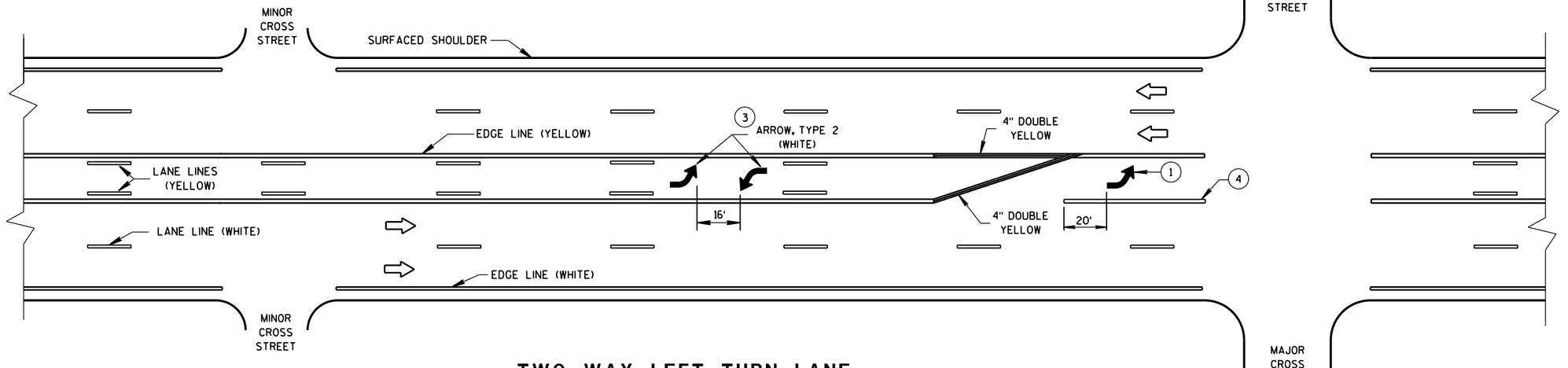
S.D.D. 15 C 8-18a





TWO WAY LEFT TURN LANE

GENERAL NOTES

(1) REQUIRED ARROW, TYPE 2 (WHITE).

(2) REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.

(3) A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

(4) 8" WHITE

(5) REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

S.D.D. 15 C 8-18b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

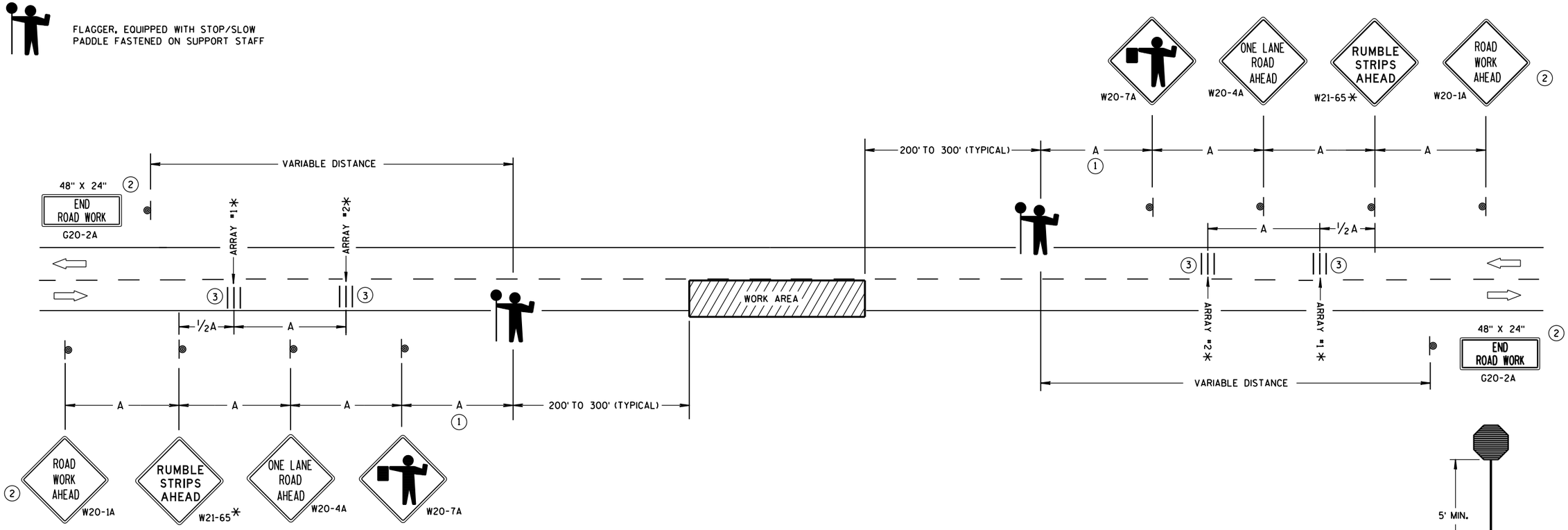
WORK AREA

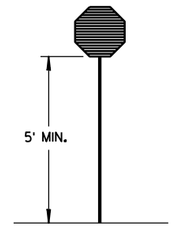
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING A
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING A.





STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

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 APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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 APPROVED BY THE ENGINEER.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

(1) FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(3) EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

6

S.D.D. 15 C 12-6

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S.D.D. 15 C 12-6

GENERAL NOTES

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR ROD STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER FABRICATION DRAWING.

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

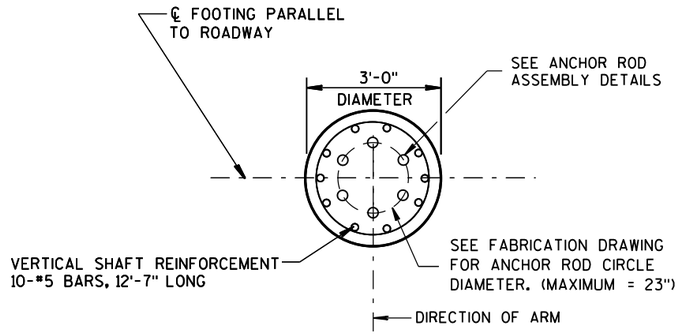
THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

FORM ALL EXPOSED CONCRETE CORNERS WITH ¾" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

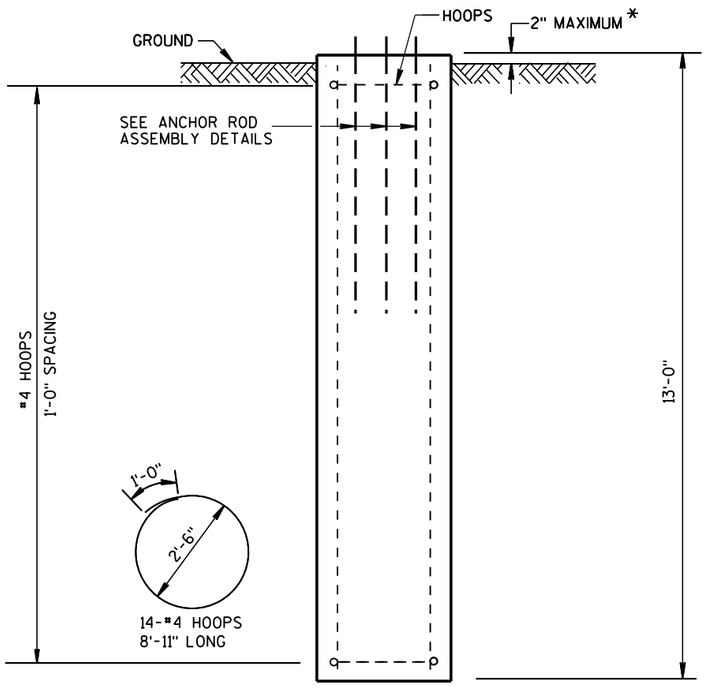
ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554, GRADE 55	fy=55,000 p.s.i.
ASTM A563A HEAVY HEX NUTS, AND ASTM F436 WASHERS.	
PLATES, ASTM A709, GRADE 36	fy=36,000 p.s.i.

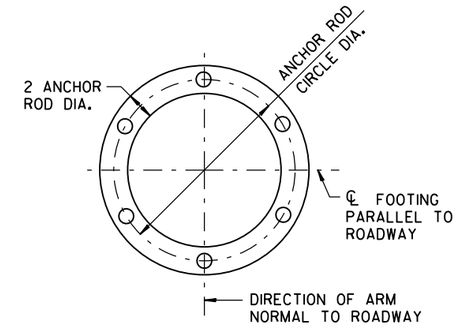
THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



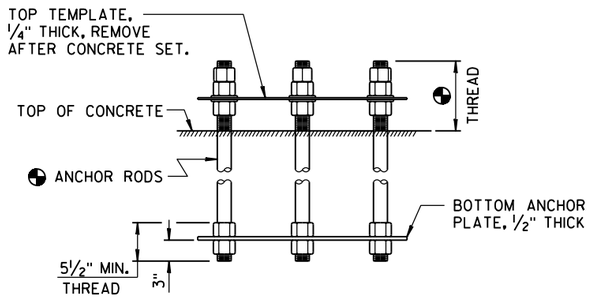
PLAN VIEW



ELEVATION VIEW



TOP TEMPLATE AND BOTTOM ANCHOR PLATE



ANCHOR ROD ASSEMBLY DETAILS

⊕ MINIMUM OF 6 ANCHOR RODS, EXACT NUMBER, SIZE, DIMENSION AND ORIENTATION AS SHOWN ON FABRICATION DRAWING.

* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.

CONCRETE - 3.4 C.Y. PER FOOTING
H.S. REINFORCEMENT - 215 LBS. PER FOOTING

36" DIAMETER CANTILEVER OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Vu Thao — WIND LOADED STRU PROGRAM LEAD
FHWA

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S.D.D. 15 C 24-4

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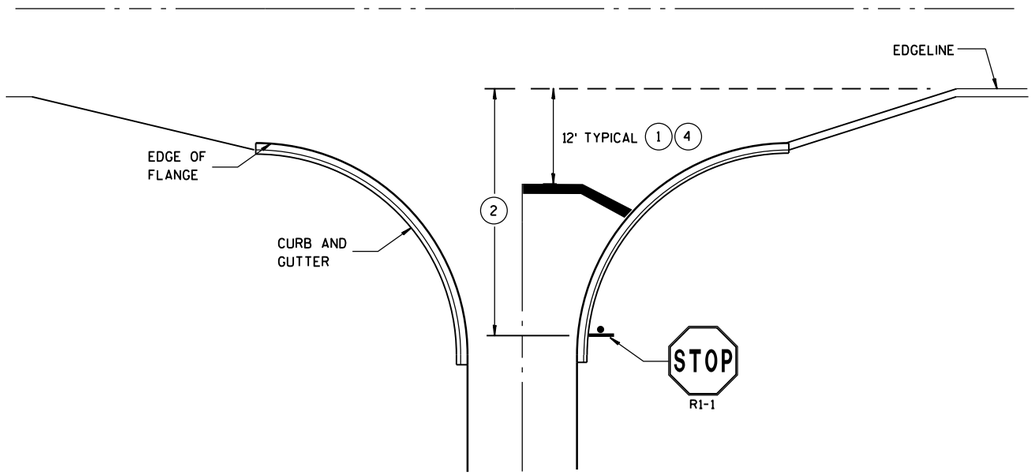
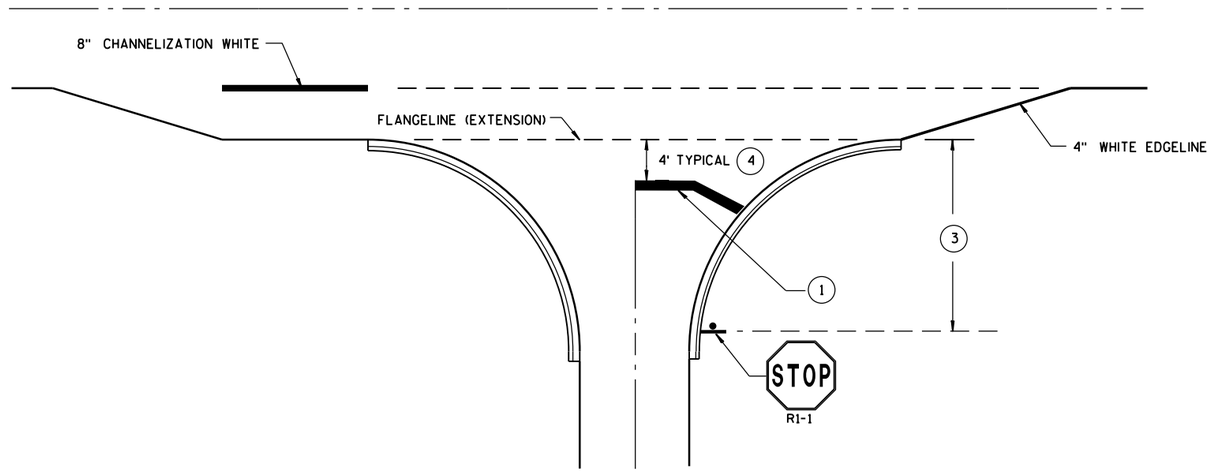
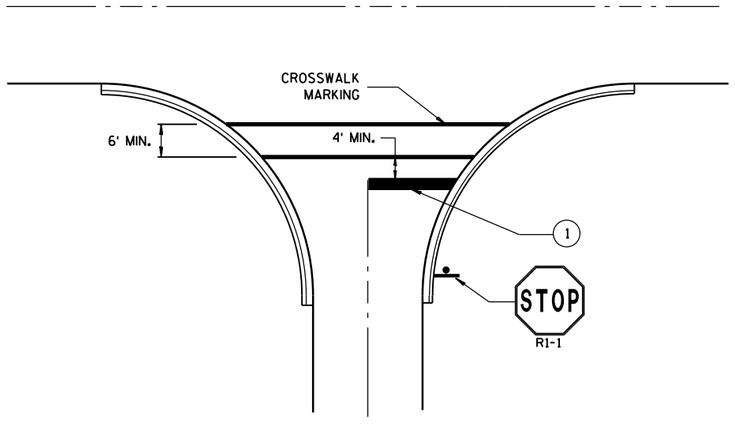


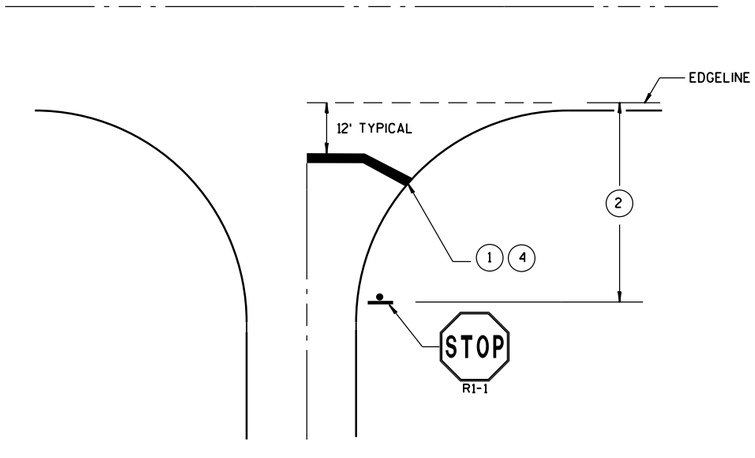
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

(1) 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.

(2) IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.

(3) IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.

(4) MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]NEER

FHWA

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S.D.D. 15 C 33-3

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

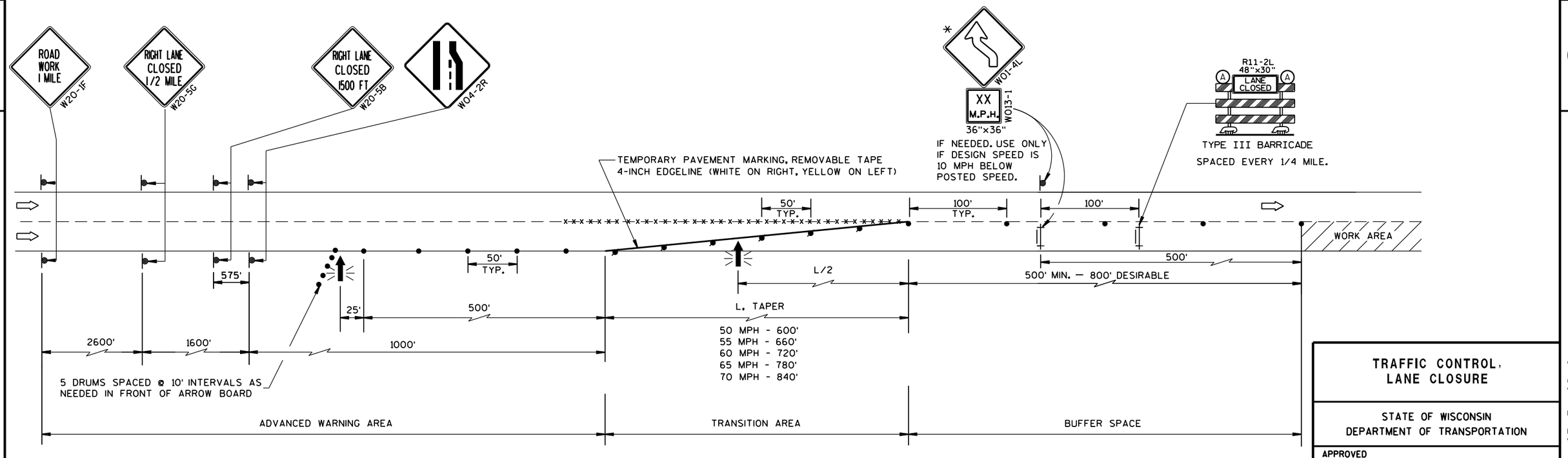
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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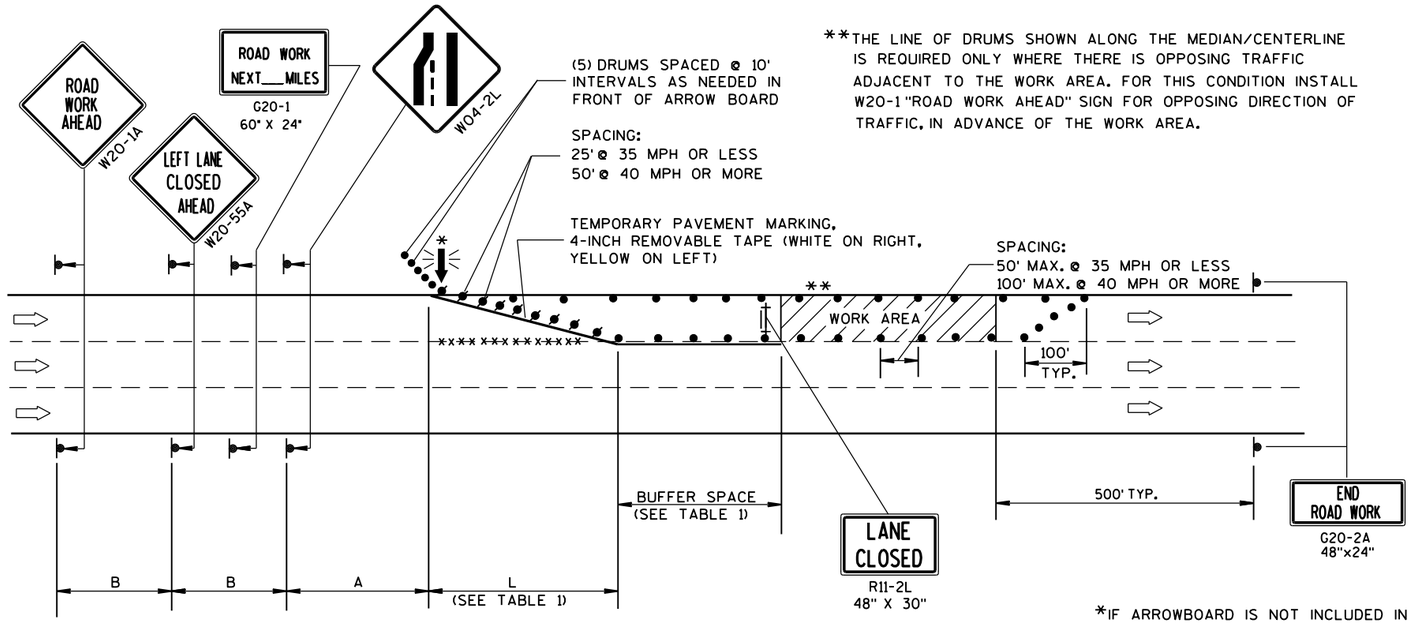
S.D.D. 15 D 12-6a



**THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF TRAFFIC, IN ADVANCE OF THE WORK AREA.

B=400' AT 25-30 MPH
700' AT 35-40 MPH
1000' AT 45-55 MPH

A=200' AT 25-30 MPH
350' AT 35-40 MPH
500' AT 45-55 MPH

(PLACE BARRICADE AND SIGN APPROX. EVERY 1000' ACROSS THE CLOSED LANE)

*IF ARROWBOARD IS NOT INCLUDED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE A TYPE III BARRICADE WITH W01-6 SIGN IN THE LANE CLOSURE TAPER.

W01-6
48"x24"

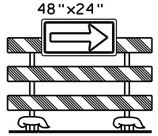


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

S	L	BUFFER SPACE
25	125'	55'
30	180'	85'
35	245'	120'
40	320'	170'
45	540'	220'
50	600'	280'
55	660'	335'

FOR LANE WIDTH OTHER THAN 12':

L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

L = TAPER LENGTH IN FEET

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

W = WIDTH OF LANE CLOSURE

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

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S.D.D. 15 D 20-4

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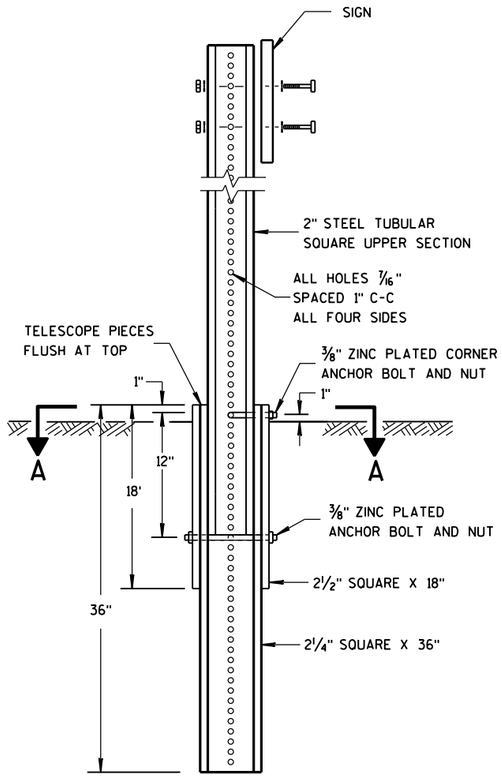
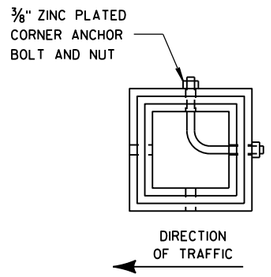
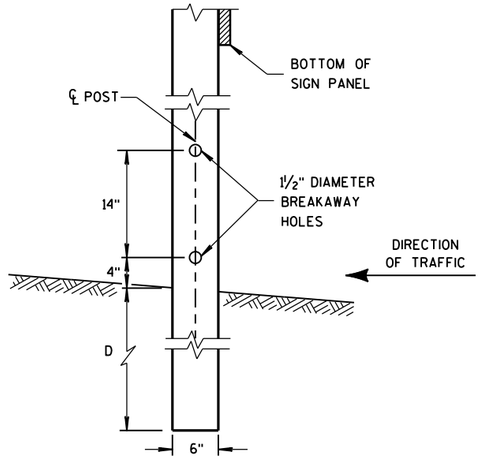
S.D.D. 15 D 20-4



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



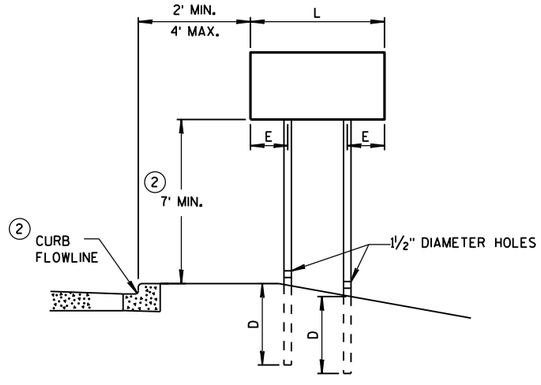
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

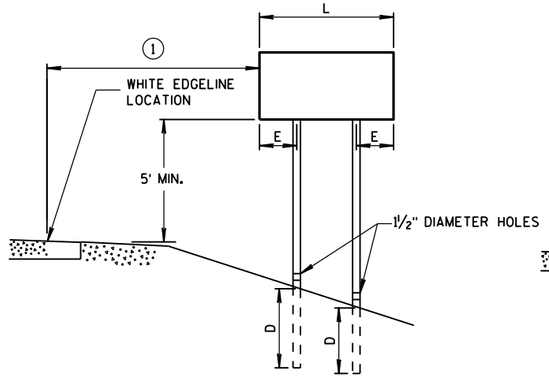
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

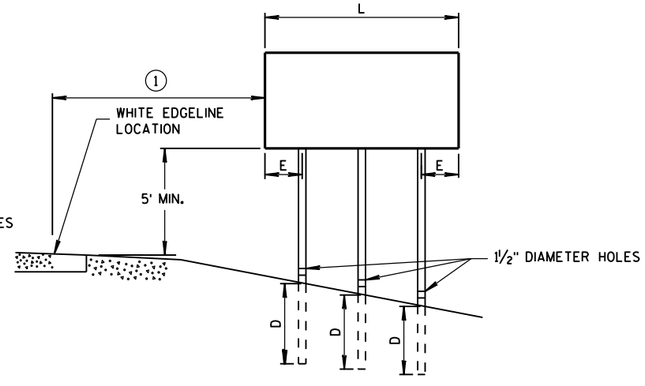
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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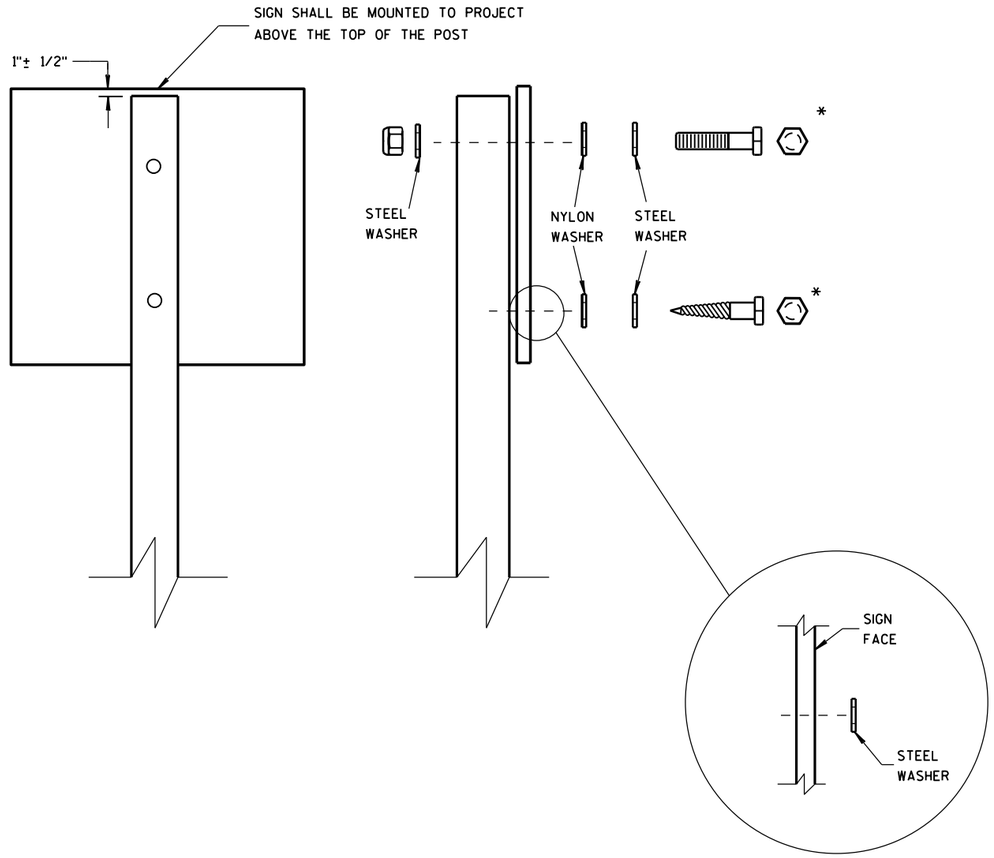
S.D.D. 15 D 38-2a
S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3

B. 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.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

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S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

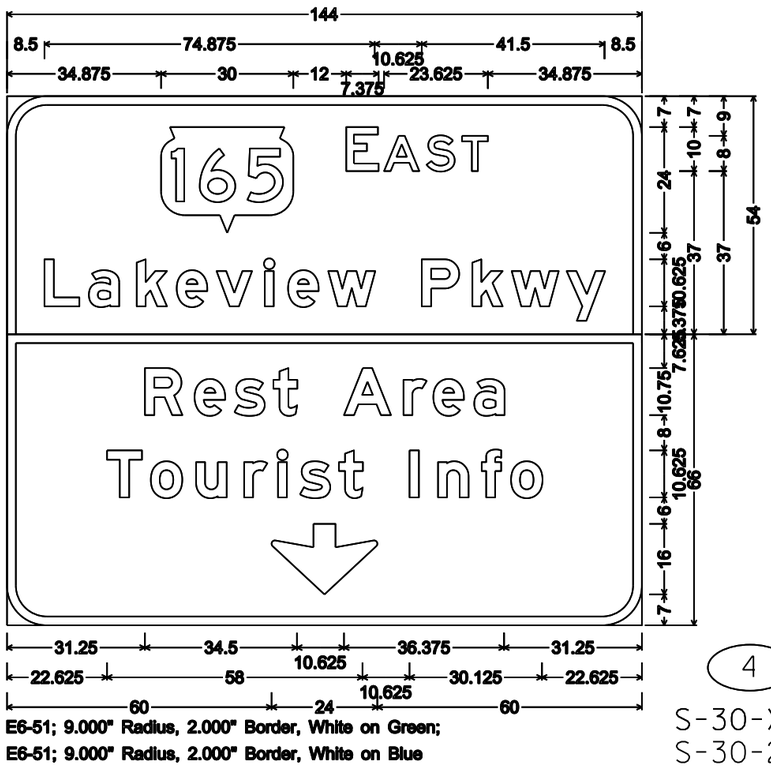
June 2017
DATE

/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

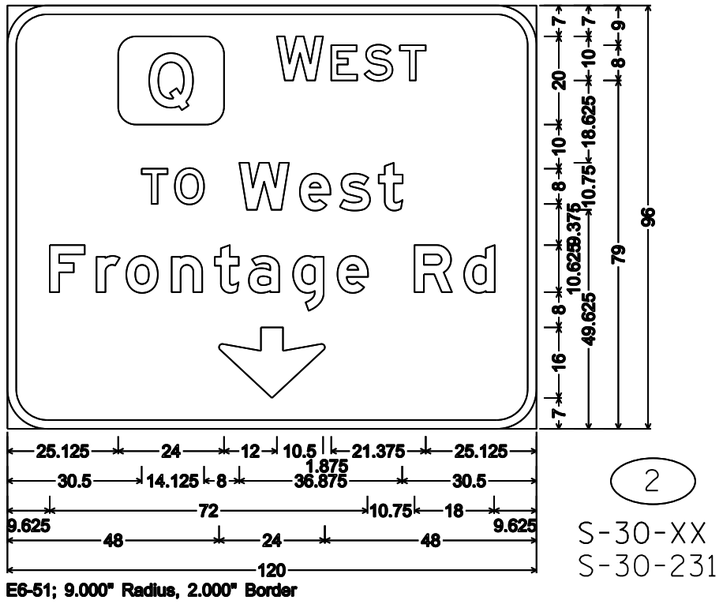
NOTES

1. All Signs Type I - Type SH Reflective
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E Modified except all CAP words Series E



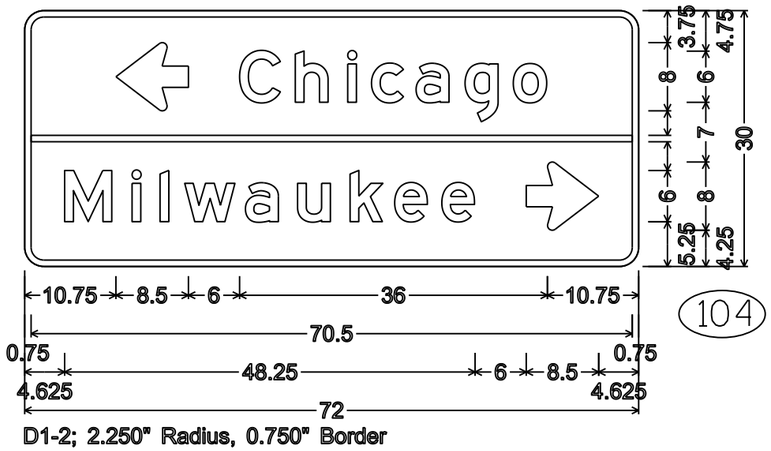
E6-51; 9.000" Radius, 2.000" Border, White on Green;
E6-51; 9.000" Radius, 2.000" Border, White on Blue

4
S-30-XX
S-30-231



E6-51; 9.000" Radius, 2.000" Border

2
S-30-XX
S-30-231



D1-2; 2.250" Radius, 0.750" Border

D1-2; 2.250" Radius, 0.750" Border

NOTES

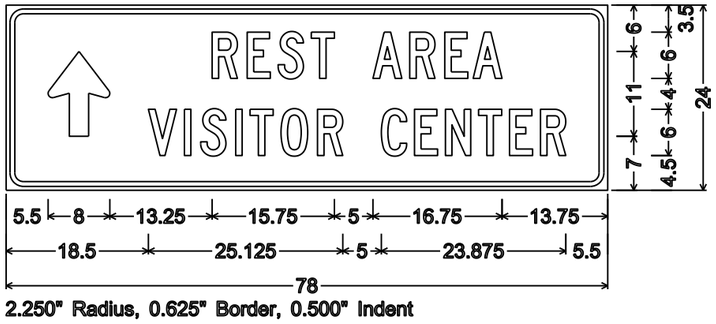
1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E

7

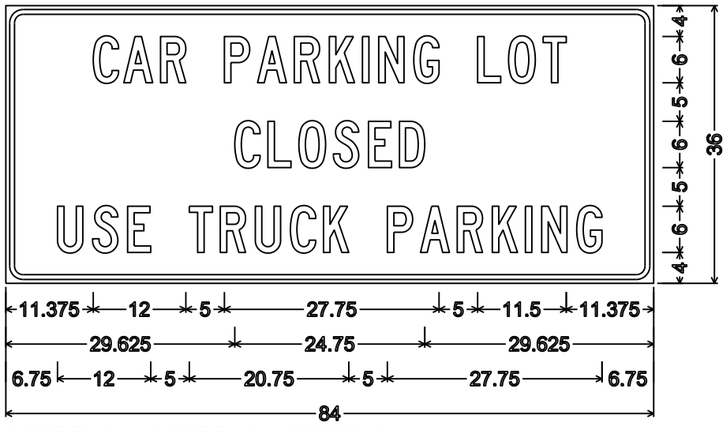
7

NOTES

1. Fixed Message Type II Signs - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C



2.250" Radius, 0.625" Border, 0.500" Indent



2.250" Radius, 0.625" Border, 0.500" Indent

7

7

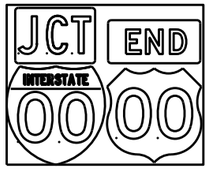
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	TEMPORARY SIGNING	SHEET NO: 196	E

FILE NAME : C:\CAEfiles\Projects\tr_d2\RestAreaFMS.DGN PLOT DATE : 30-NOV-2017 18:01 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : 19.640483:1.000000

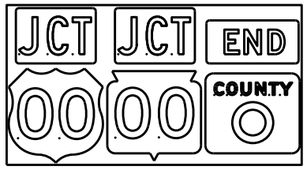
WISDOT/CADDS SHEET 42

TYPICAL ASSEMBLIES

J1-1

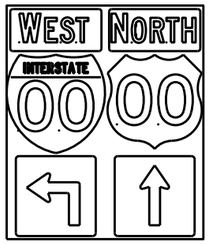


J1-2

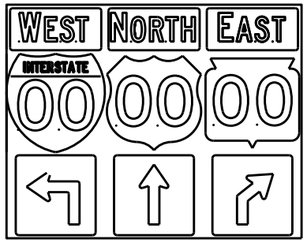


J1-3

J2-1



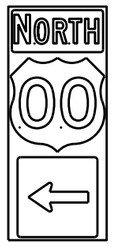
J2-2



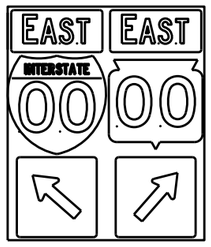
J2-3

JV

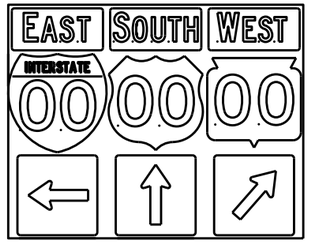
(Typical Vertical J-Assembly
See Note 10 and 11)



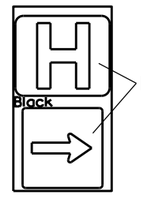
J3-1



J3-2



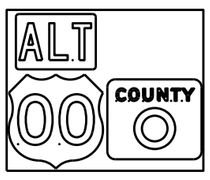
J3-3



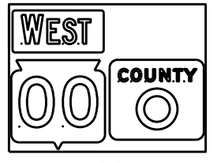
Blue Background

JH-1

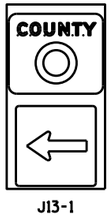
J4-1



J4-2



J4-2



J13-1

J12-1

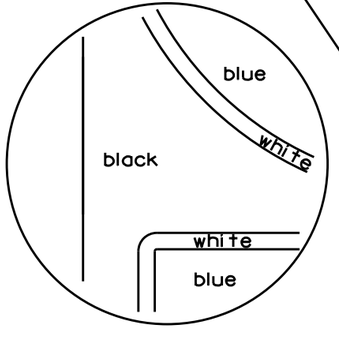
J32-1

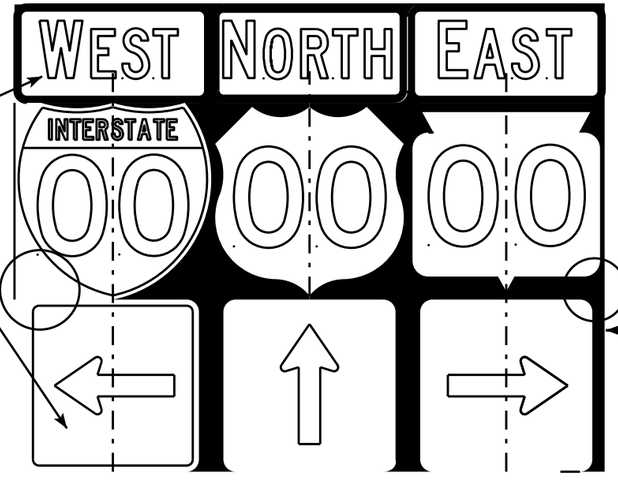
J33-1

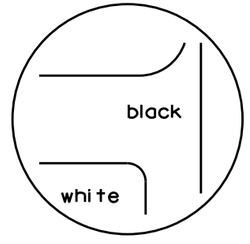
J23-1

J22-1

blue background
with interstate







black background

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

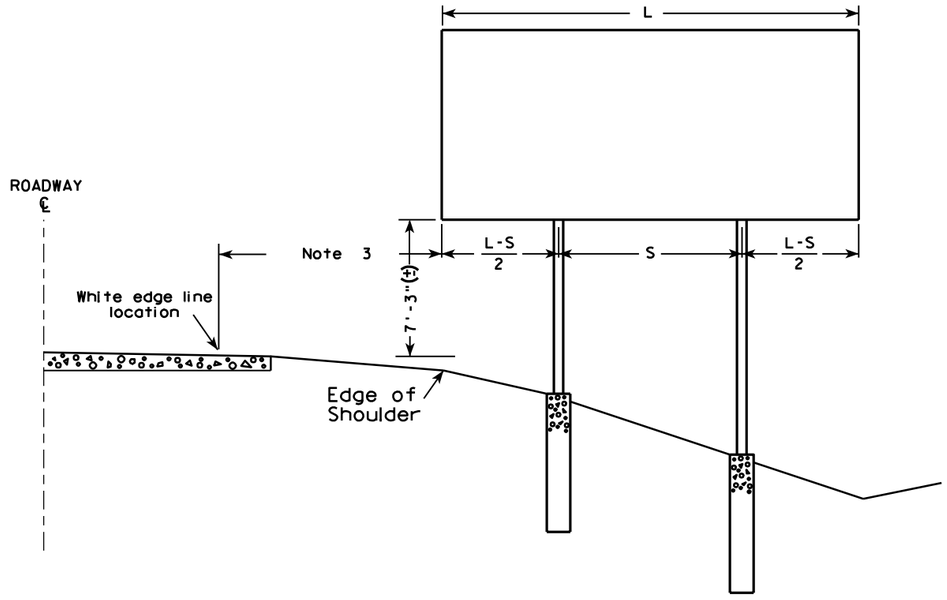
WISCONSIN DEPT OF TRANSPORTATION

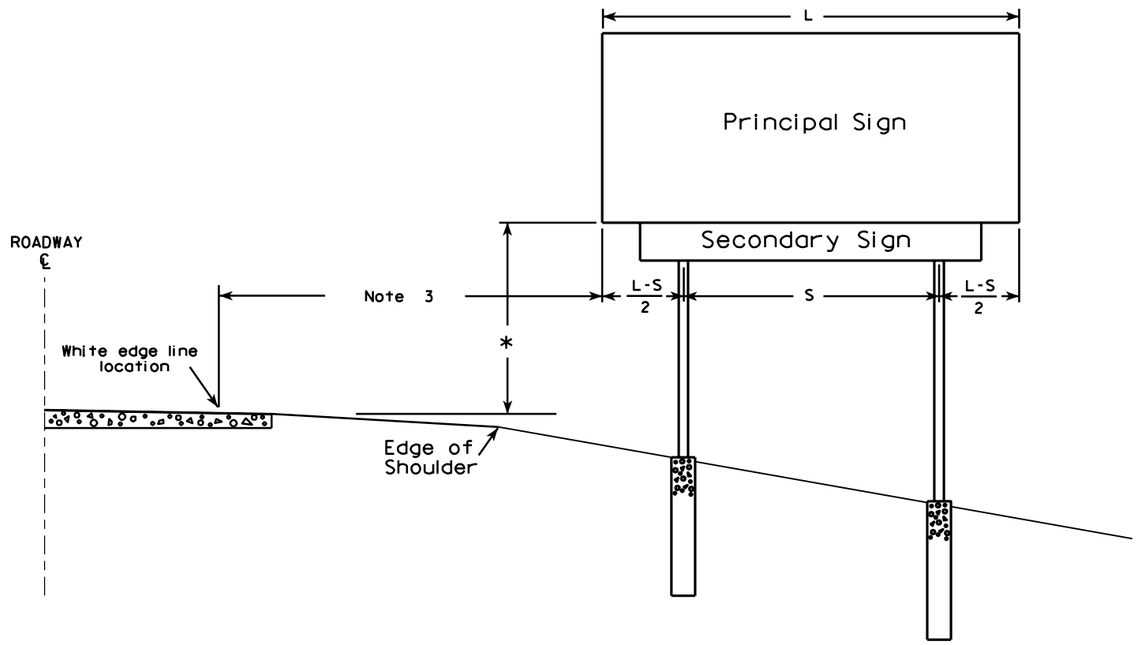
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

7

7

TYPICAL INSTALLATION
OF TYPE I SIGNS

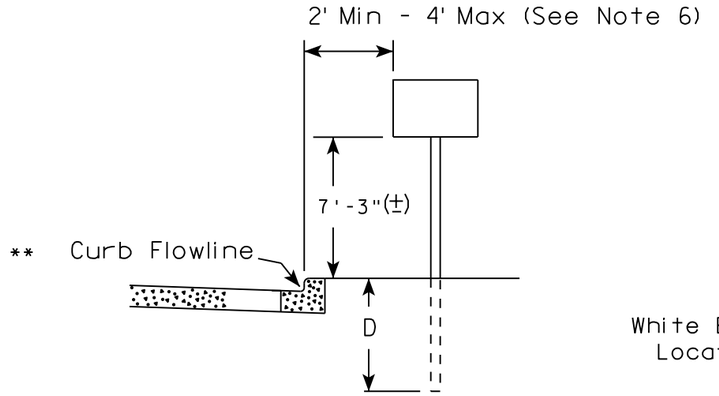
WISCONSIN DEPT OF TRANSPORTATION

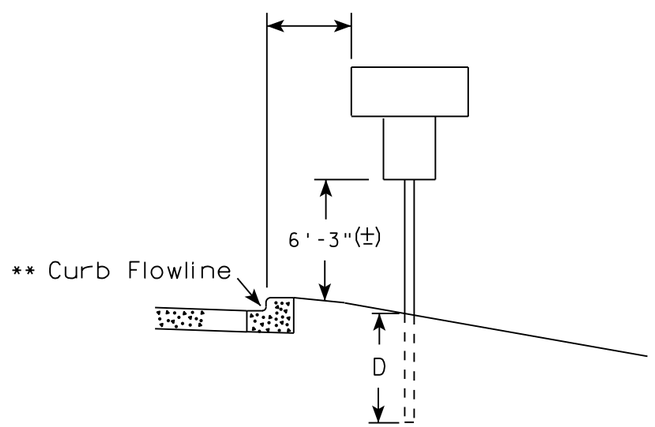
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

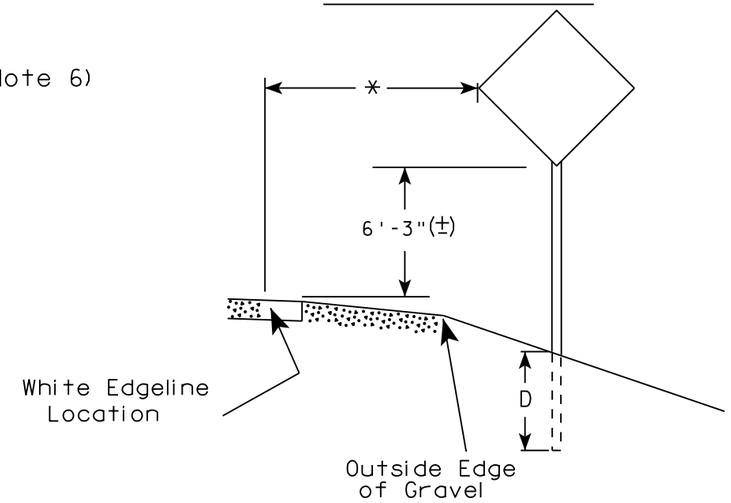
PROJECT NO:				SHEET NO: 198	E

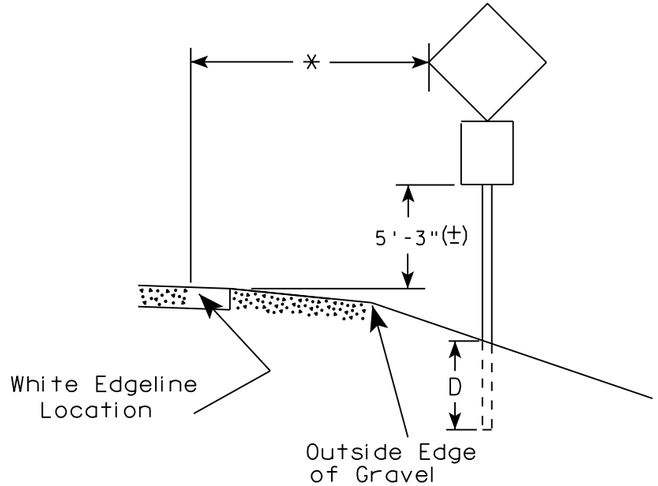
URBAN AREA





RURAL AREA (See Note 2)





GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

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

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

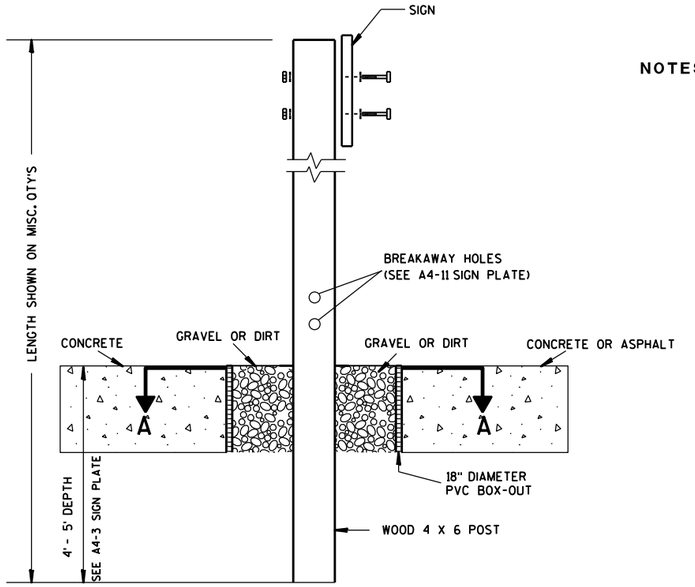
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

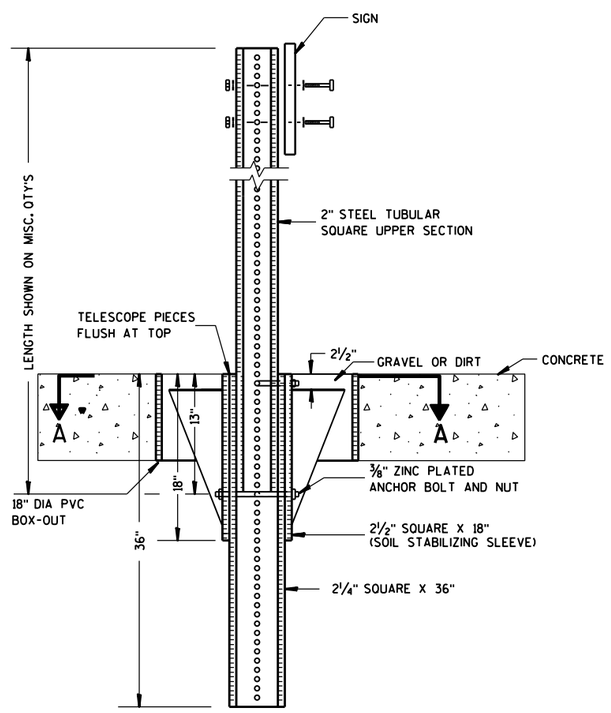
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 199	E



ELEVATION VIEW

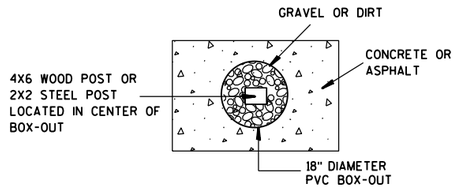
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

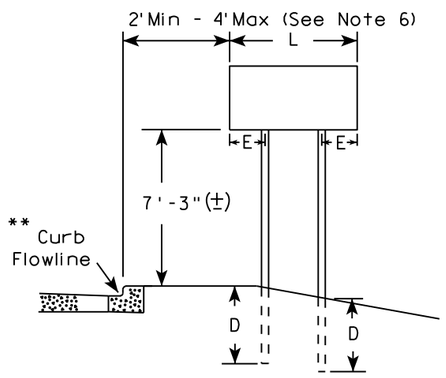
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

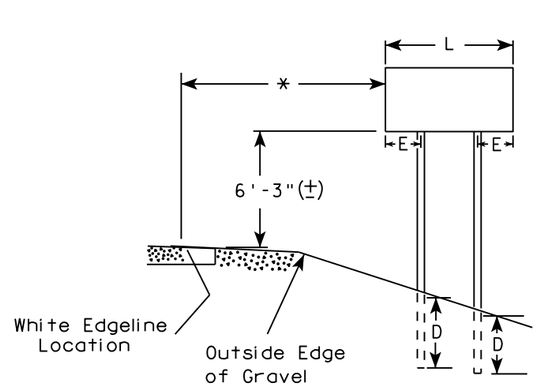
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

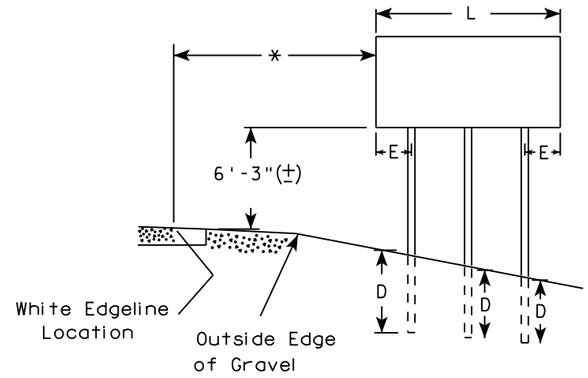
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

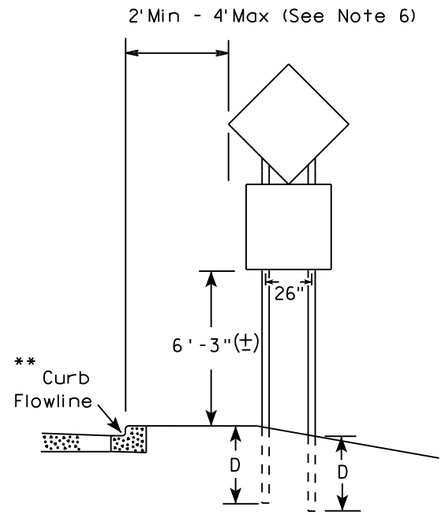
URBAN AREA



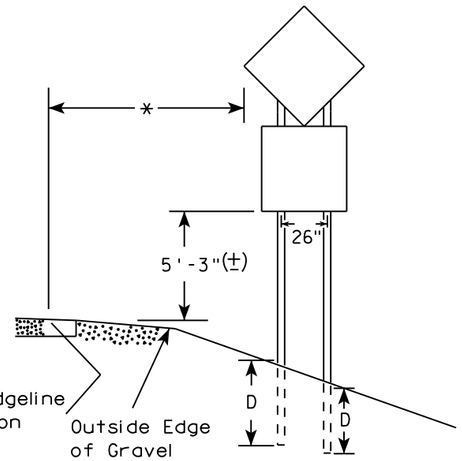
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

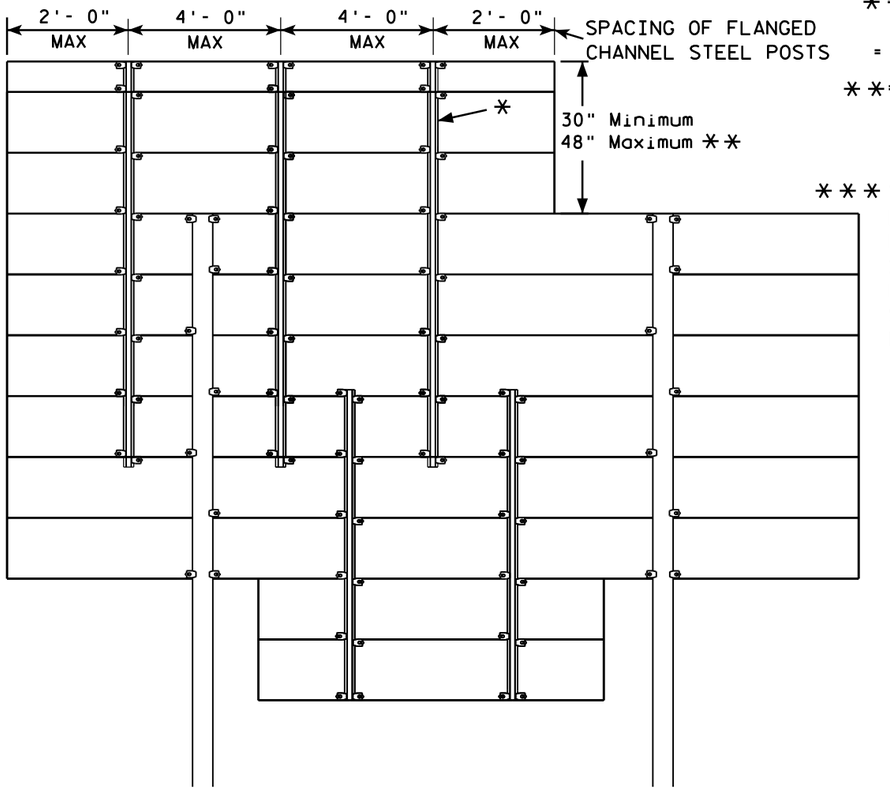
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 201	E

GROUND MOUNTED SIGN

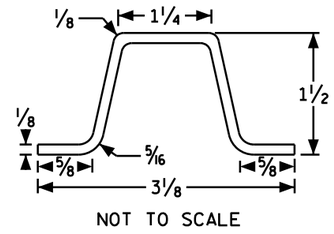


*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

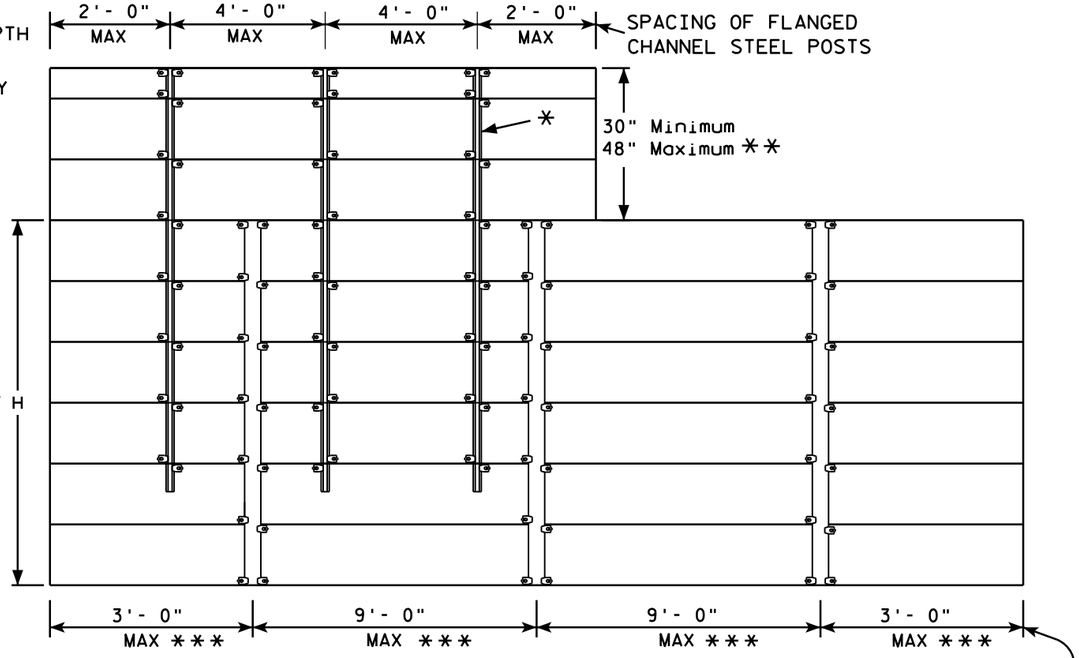
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

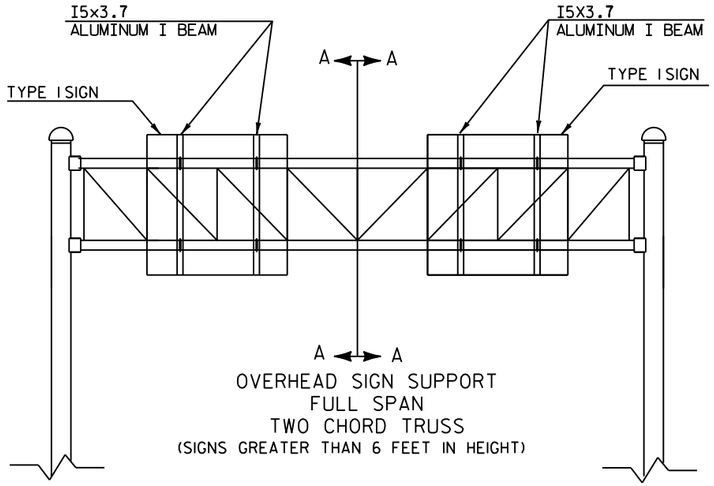
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

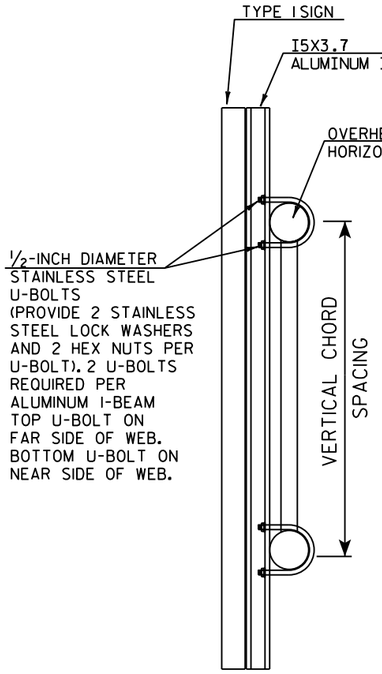
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 202 A4-6.12

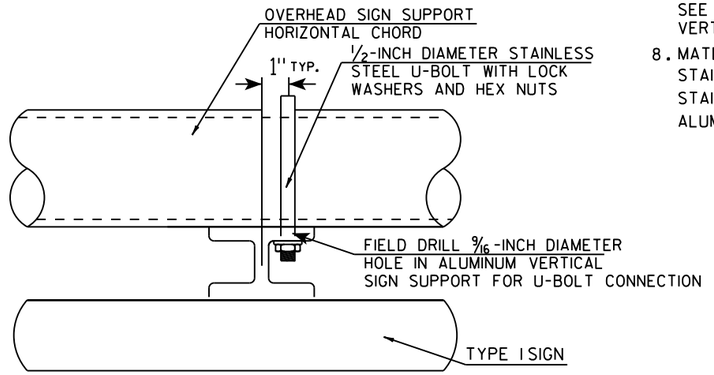
PROJECT NO:				SHEET NO:	E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



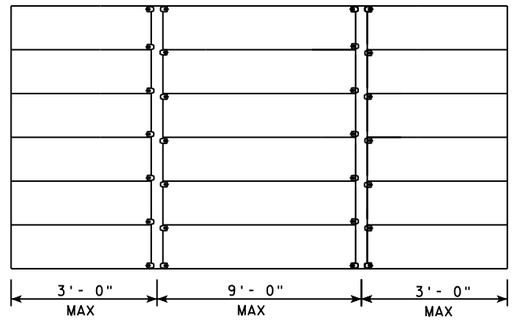
CUT SECTION A-A



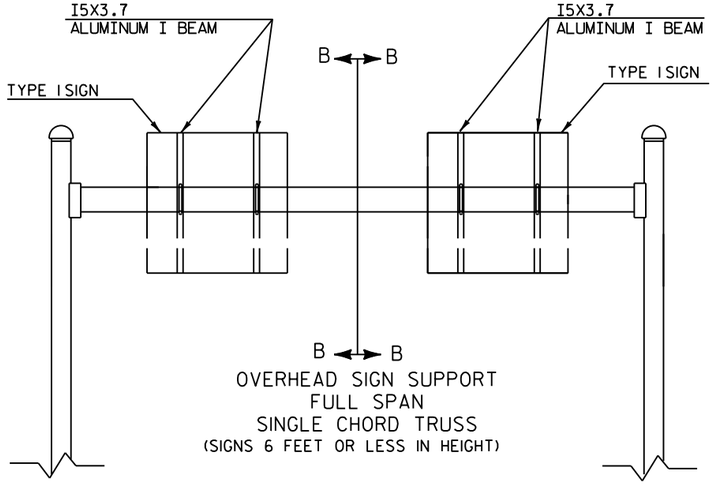
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

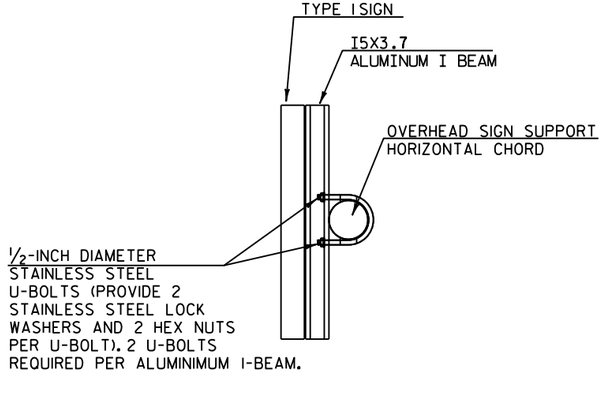
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. MINIMUM NUMBER OF BRACKETS PER SIGN IS TWO. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
   STAINLESS STEEL U-BOLTS AND LOCKWASHERS ASTM 304.
   STAINLESS STEEL HEX NUTS ASTM A276.
   ALUMINUM I-BEAMS ARE 6061-T6.



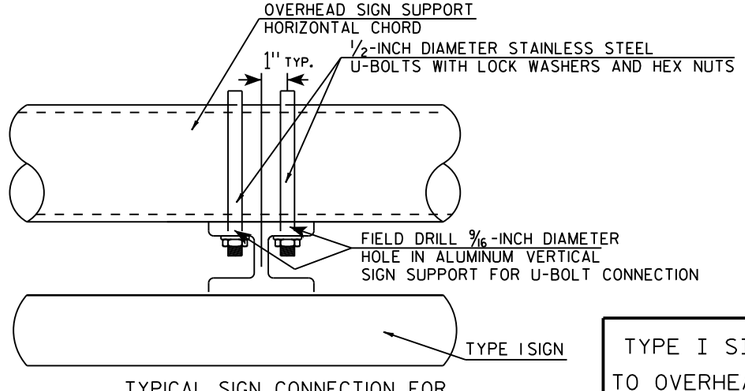
SPACING OF I5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



OVERHEAD SIGN SUPPORT
FULL SPAN
SINGLE CHORD TRUSS
(SIGNS 6 FEET OR LESS IN HEIGHT)



CUT SECTION B-B



TYPICAL SIGN CONNECTION FOR
SINGLE CHORD TRUSS
PLAN VIEW

TYPE I SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

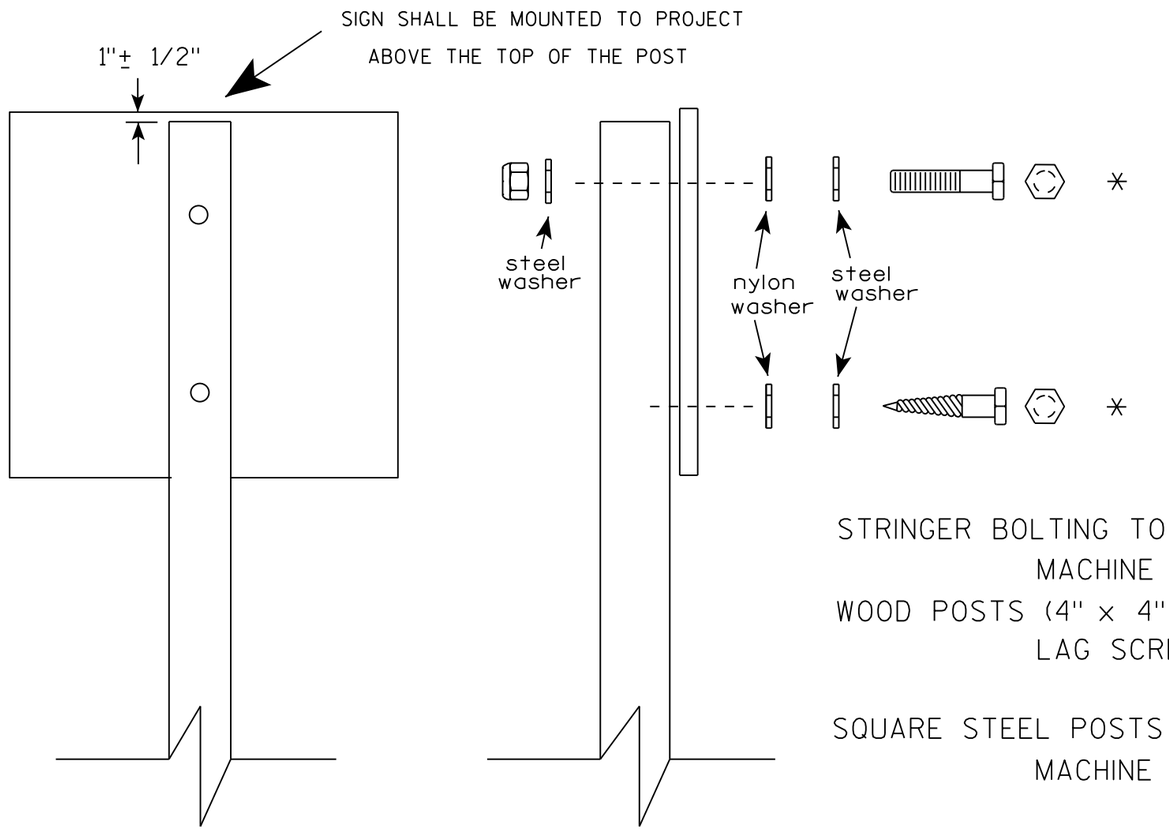
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/15 PLATE NO. A4-7.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A47.DGN PLOT DATE : 01-DEC-2015 17:42 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 38.916838:1.000000



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. 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.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)
SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

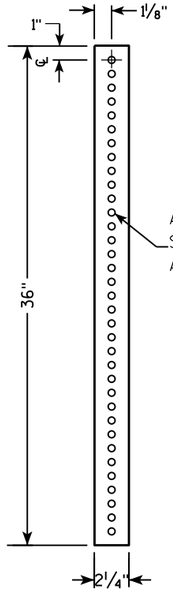
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

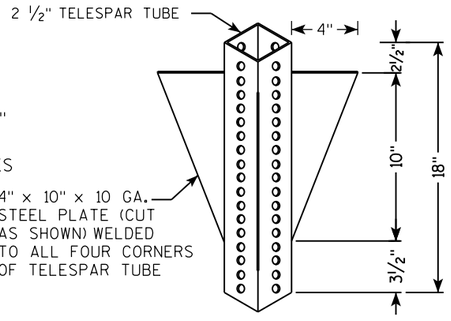
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

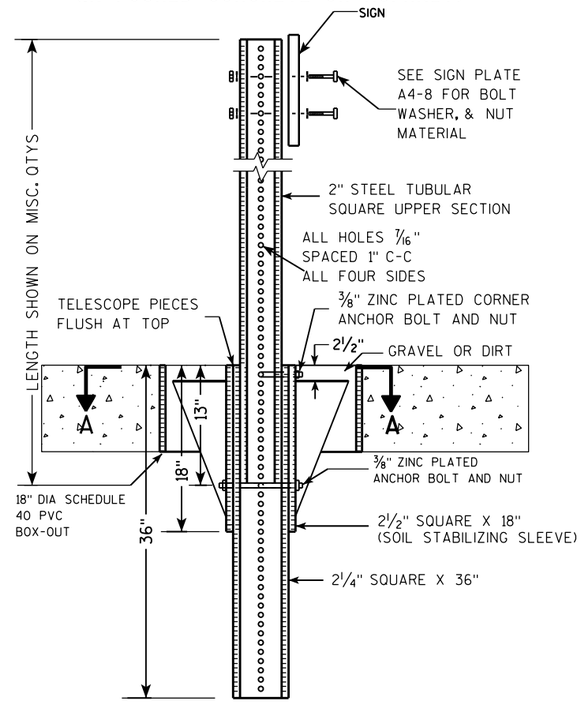
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



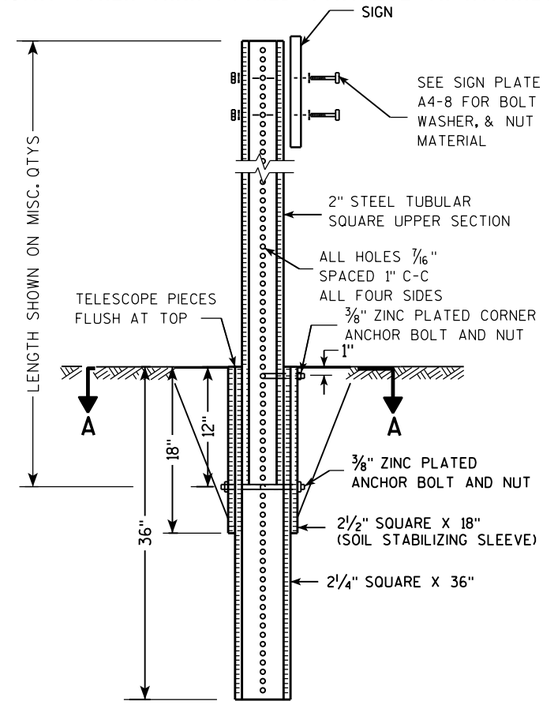
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

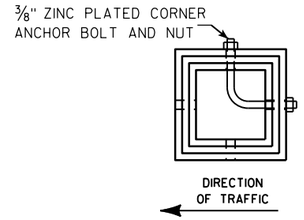


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

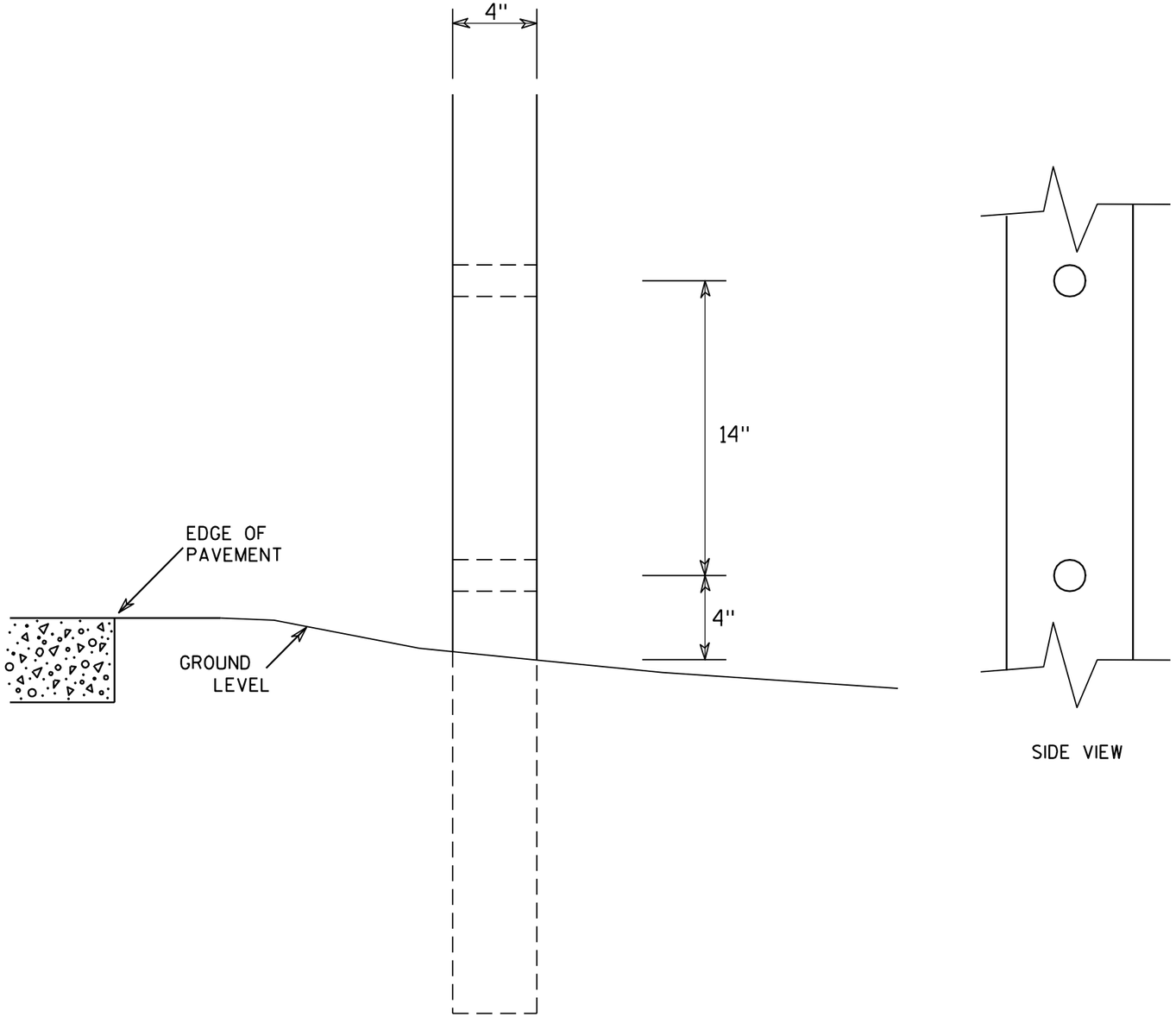
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 205 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

7

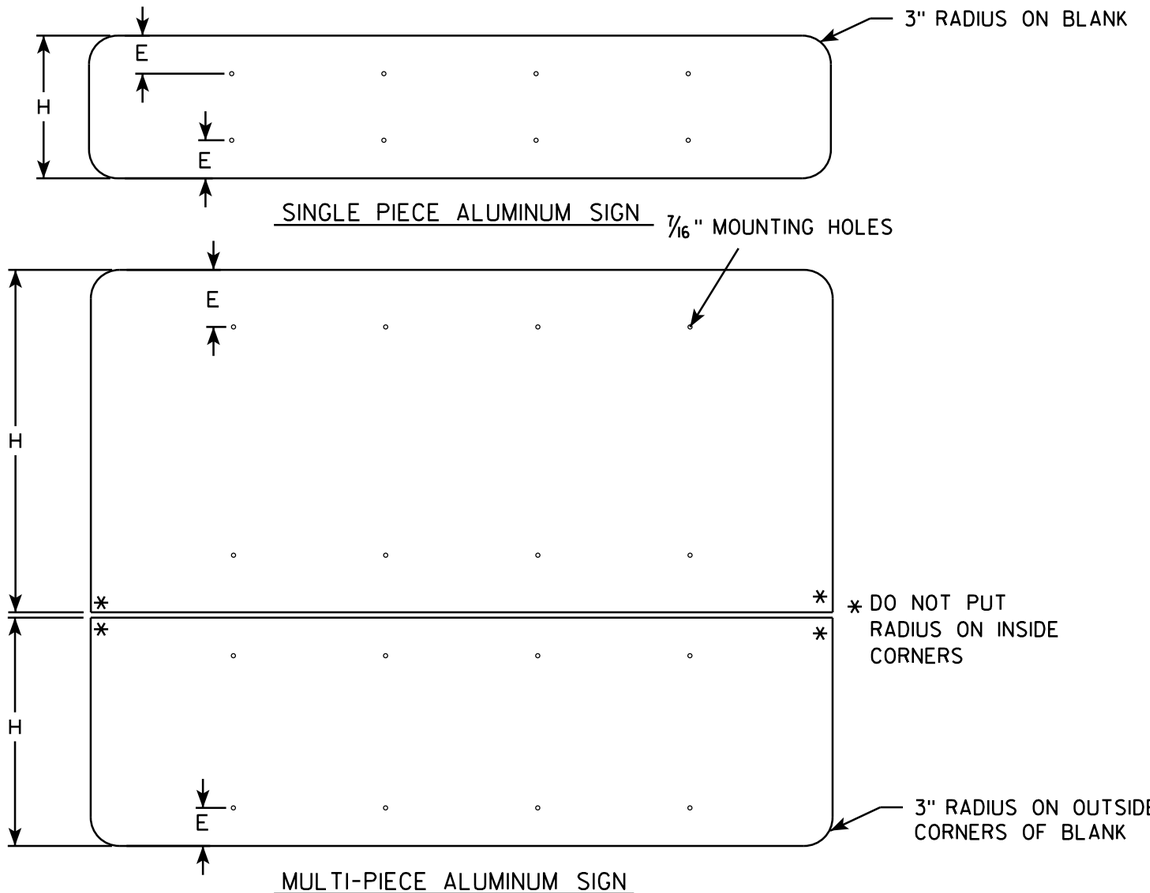
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

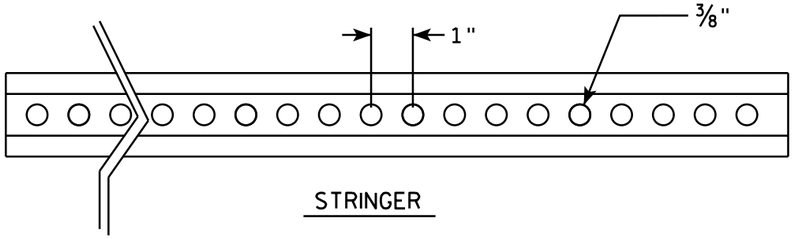
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 206	E



GENERAL NOTES

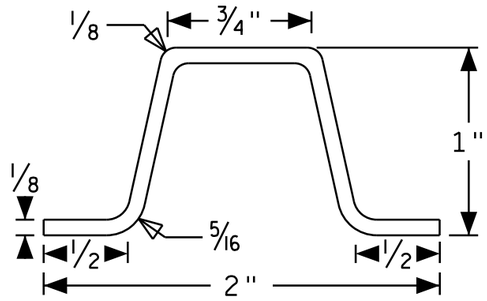
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

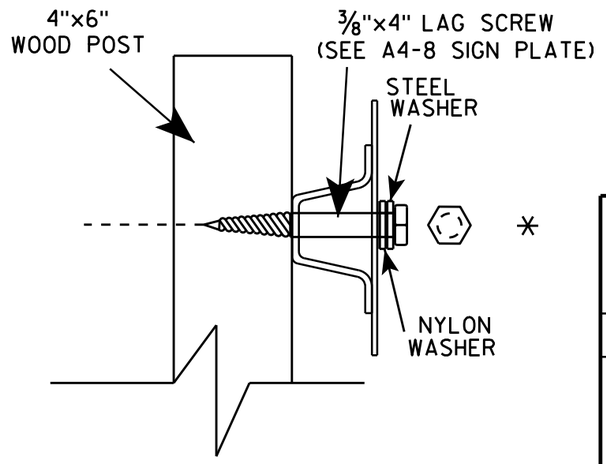


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

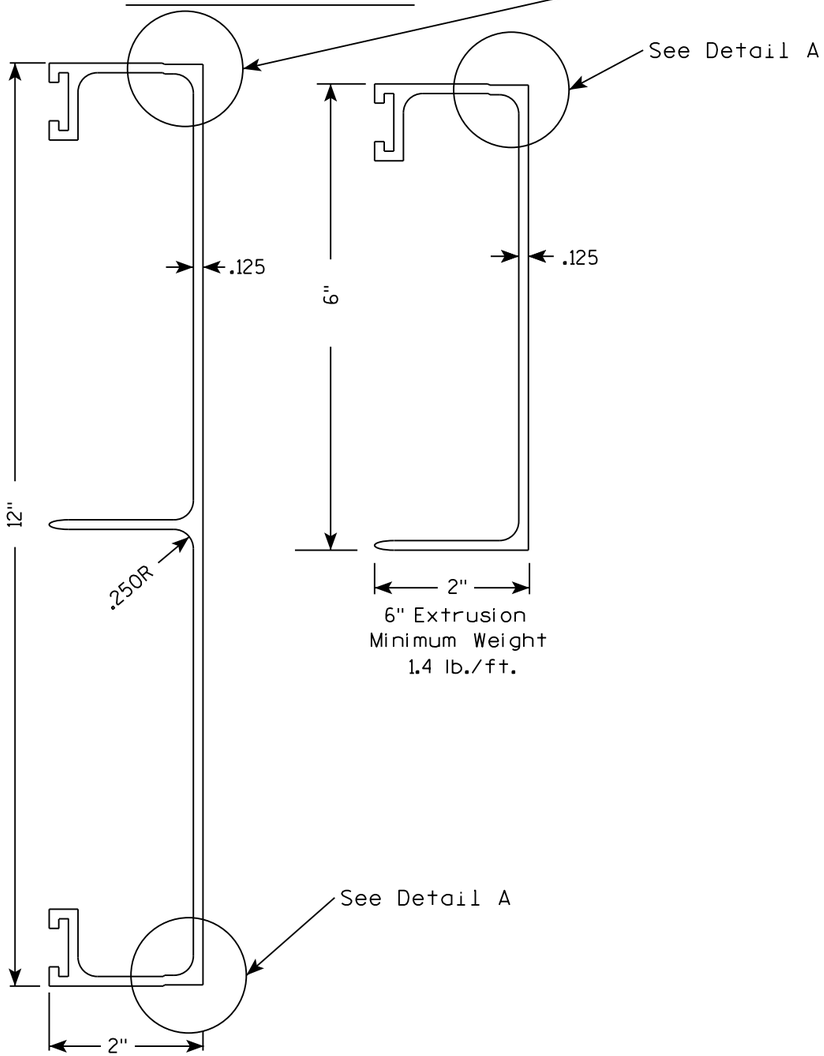
for State Traffic Engineer

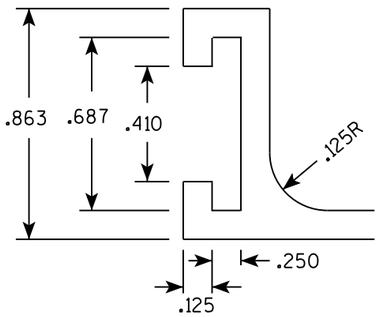
DATE 4/26/16 PLATE NO A4-18.1

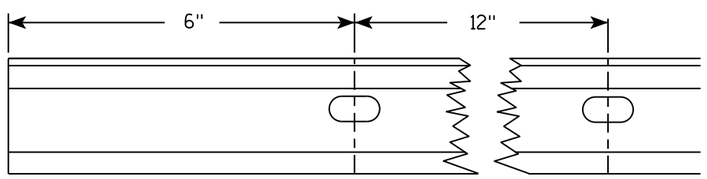
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000 WISDOT/CADDS SHEET 42

Extruded Shape







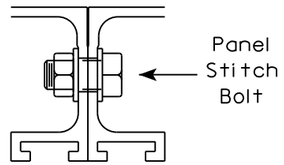
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

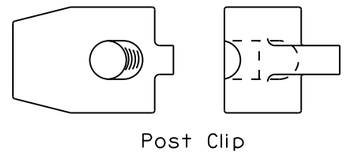
The hardware includes:

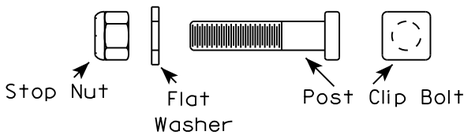
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

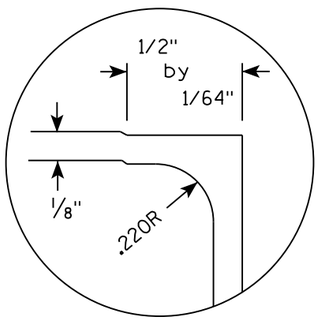
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.



DETAIL A (EDGE WRAP JOINT)

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

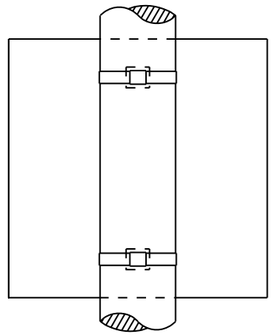
APPROVED Matthew R Rauch
for State Traffic Engineer

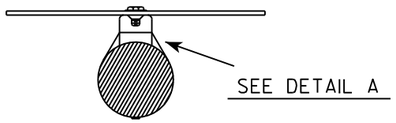
DATE 11/30/16 PLATE NO. A5-2.10

PROJECT NO:				SHEET NO: 208	E

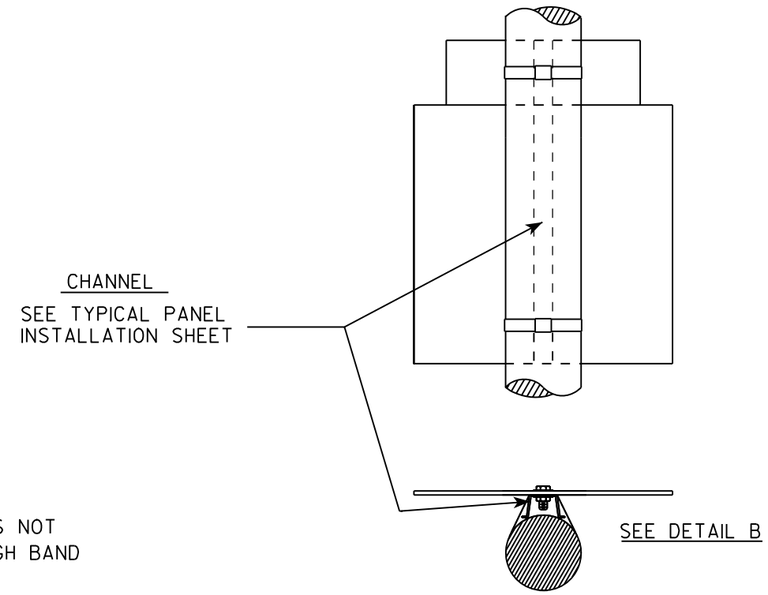
BANDING

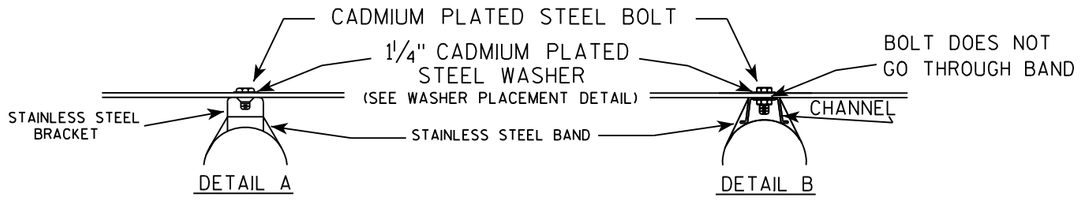
SINGLE SIGN



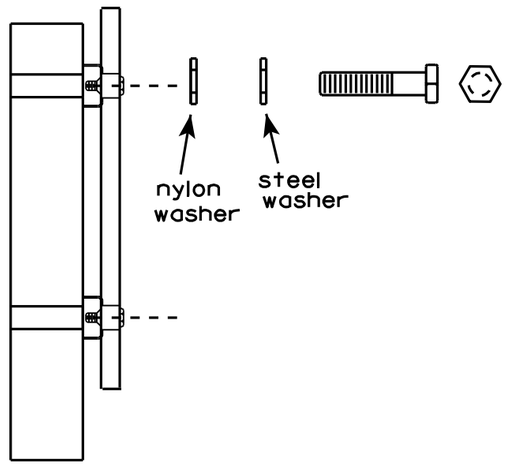


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

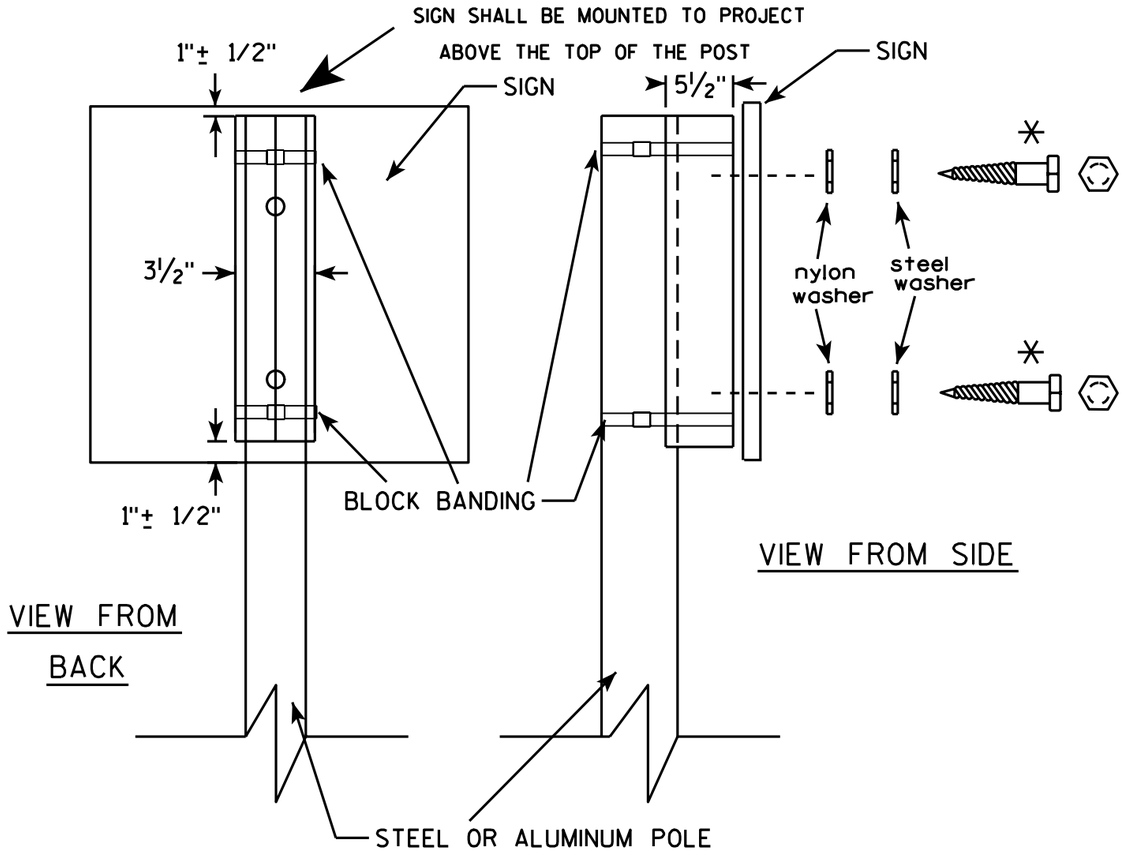
STANDARD SIGN
SIGN BANDING DETAILS

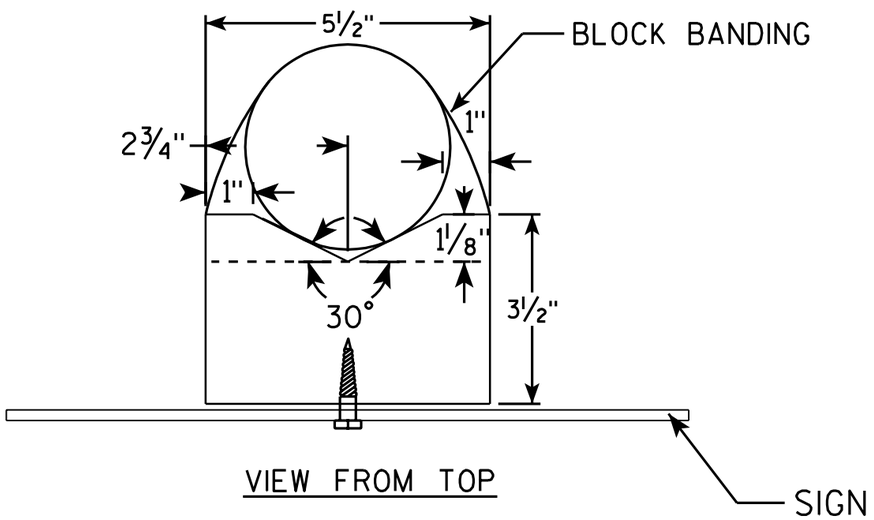
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 209	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS 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.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

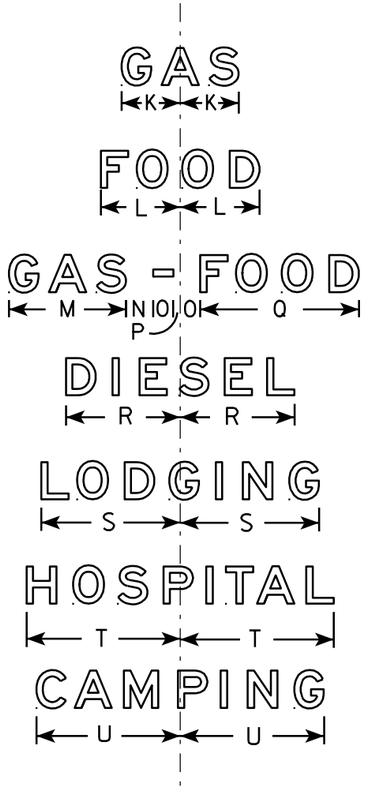
WISCONSIN DEPT OF TRANSPORTATION

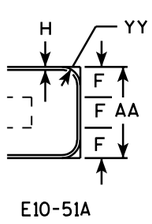
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

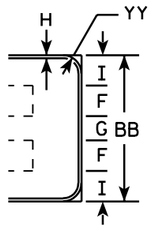
PROJECT NO:

SHEET NO: 210 E

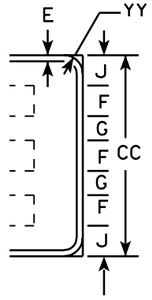




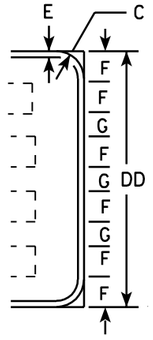
E10-51A



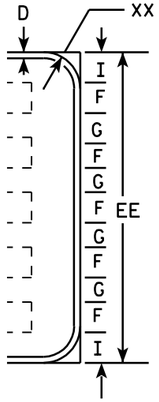
E10-51B



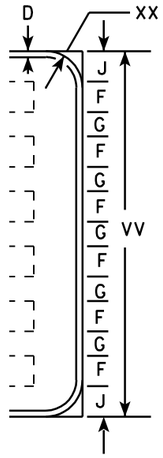
E10-51C



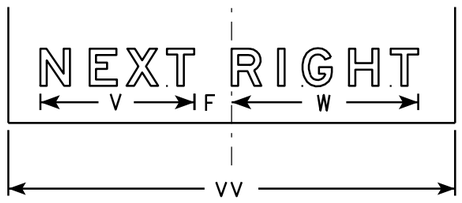
E10-51D

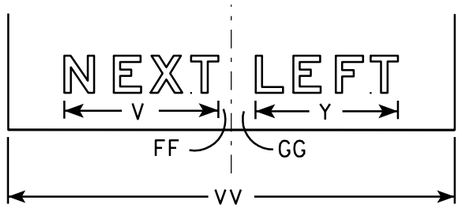


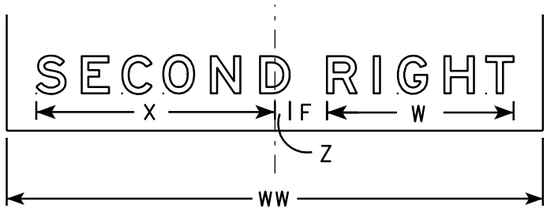
E10-51E



E10-51F







NOTES

1. All Signs Type I or Type III - Type SH - Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
3. Message Series - E
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. The E10-51A is designed for use as a supplementary message sign to be used under any other E10-51 sign.
6. For multiline signs, the order of displaying approved services is as shown, top to bottom.

English	Metric	Area sq.ft.	Area m2
96 X 24	2400 X 600	16.0	1.44
96 X 36	2400 X 900	24.0	2.16
96 X 54	2400 X 1350	36.0	3.24
96 X 66	2400 X 1650	44.0	3.96
96 X 70	2400 X 1950	52.0	4.68
96 X 96	2400 X 2400	64.0	5.76
120 X 24	3000 X 600	20.0	1.80
120 X 30	3000 X 750	25.0	2.25
120 X 36	3000 X 900	30.0	2.70
120 X 48	3000 X 1200	40.0	3.60
120 X 54	3000 X 1350	45.0	4.05
120 X 66	3000 X 1650	55.0	4.95
120 X 70	3000 X 1950	65.0	5.85
120 X 84	3000 X 2100	70.0	6.30
120 X 96	3000 X 2400	80.0	7.20
120 X 102	3000 X 2550	85.0	7.65
120 X 120	3000 X 3000	100.0	9.00
144 X 30	3600 X 750	30.0	2.70
144 X 48	3600 X 1200	48.0	4.32
144 X 66	3600 X 1650	66.0	5.94
144 X 84	3600 X 2100	84.0	7.56
144 X 102	3600 X 2550	102.0	9.18
144 X 120	3600 X 3000	120.0	10.80

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
1																										
2																										
3																										
4			6	2	1	8	6	1	7	9	12 5/8	17 1/8	25 1/4	6	4 1/2	1 1/2	34 1/8	24 5/8	30	33	30 7/8	33 1/4	40 1/8	51 3/8	30 5/8	3 1/4
5			9	2	2	10	8	1	10	10	15 3/4	21 3/8	31 1/2	7 1/4	5 3/8	1 7/8	42 5/8	30 3/4	37 3/8	41 1/4	38 5/8	41 3/8	50 1/8	64 1/8	38 1/4	4

SIZE	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
1																										
2																										
3																										
4	24	36	54	66	70	2 5/8	5 3/8															96	120	9	6	
5	30	48	66	84	102	3 1/2	6 1/2															120	144	12	6	

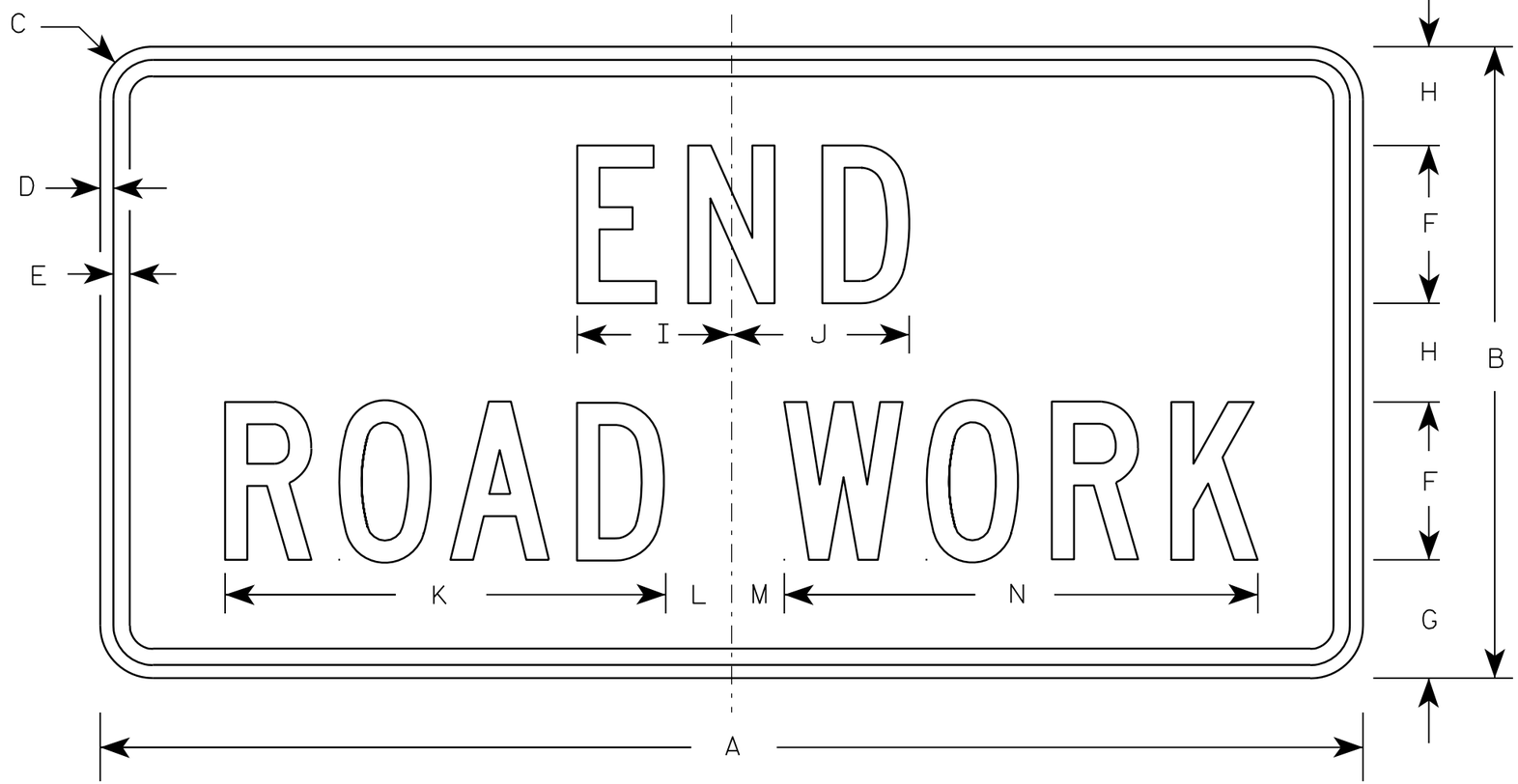
STANDARD SIGN
E10-51A THRU E10-51F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/8/08 PLATE NO. E10-51.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 211 | E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
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.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

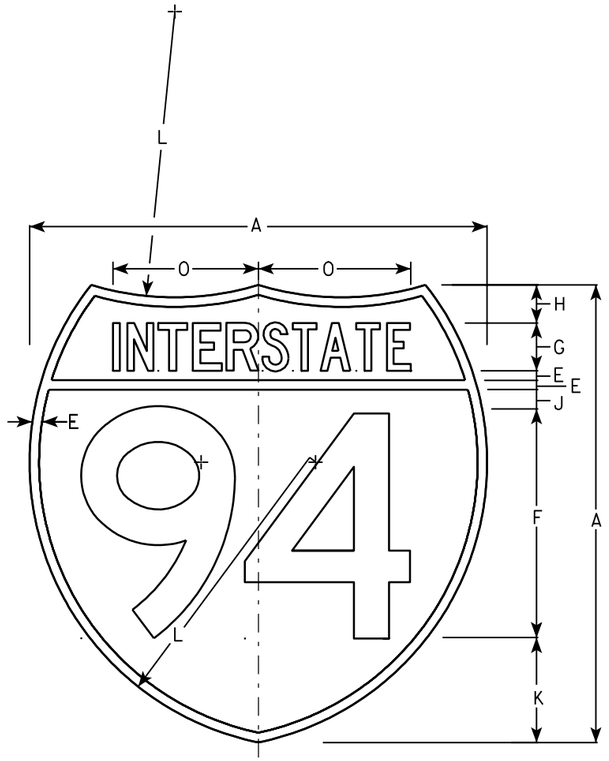
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

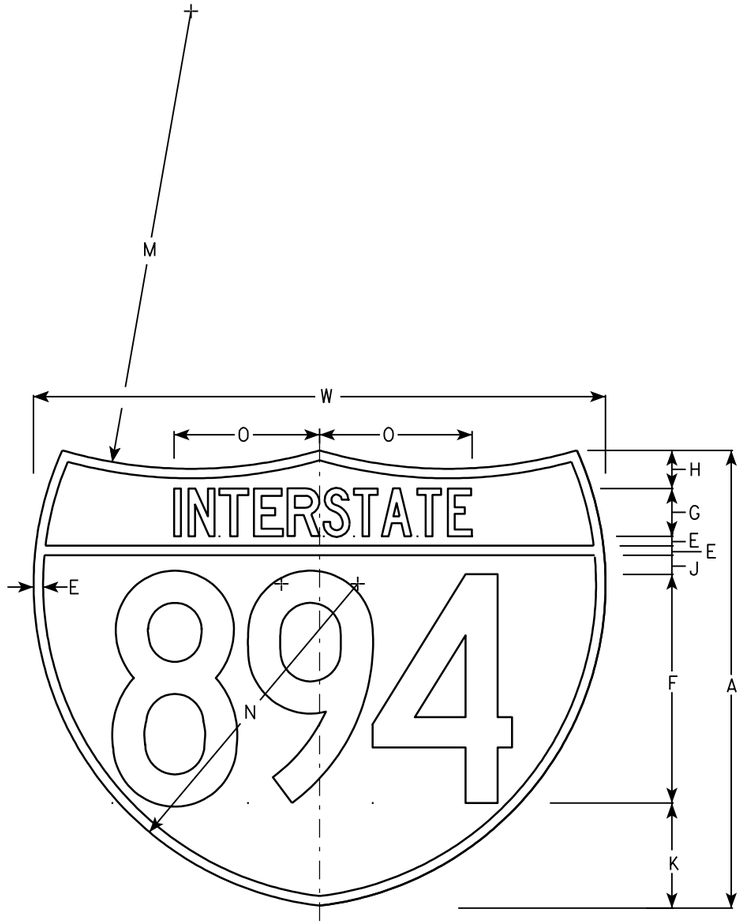
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 212	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

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	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

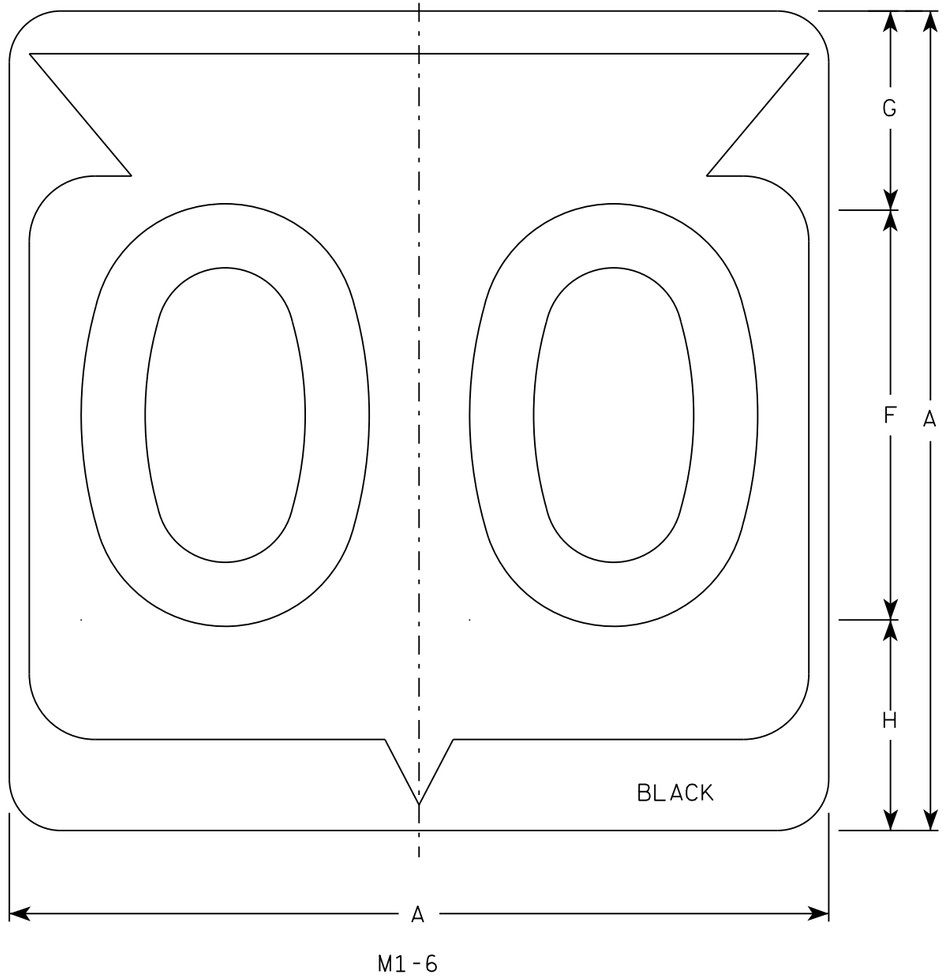
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

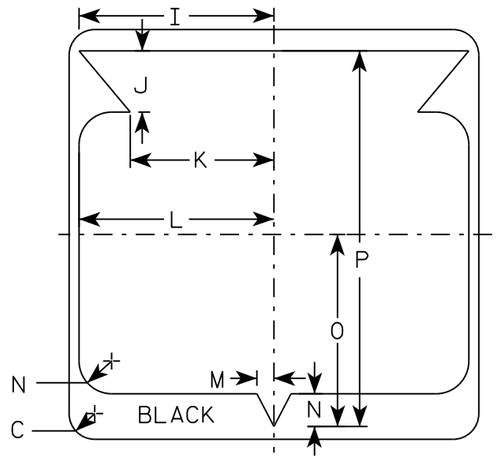
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 213	E



M1-6

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D except 3 number signs 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.



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.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

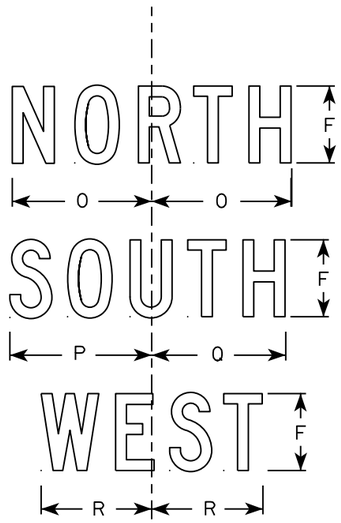
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

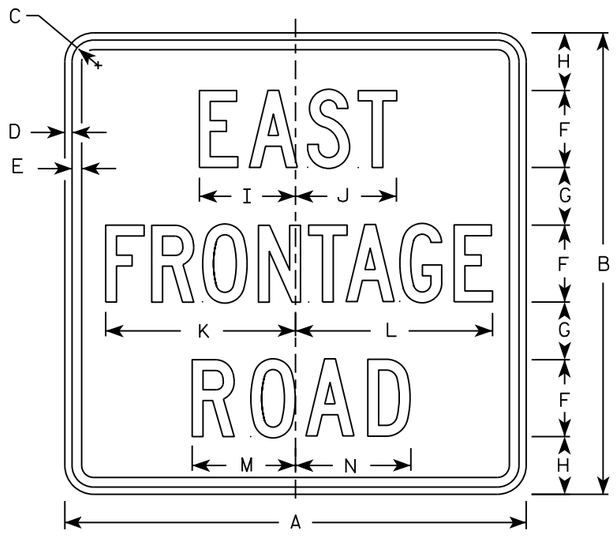
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 214 | E





NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Substitute appropriate message as required.

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.
1																											
2	24	24	1 1/8	3/8	1/2	4	3	3	5	5 1/4	9 7/8	10 1/4	5 3/8	6	7 1/4	7 3/8	7	5 3/4									4.0
3																											
4	36	36	1 3/8	5/8	5/8	6	4 1/2	4 1/2	7 1/2	7 7/8	14 3/4	15 3/8	8	9	10 7/8	11	10 1/2	8 5/8									9.0
5																											

STANDARD SIGN
M1-95A

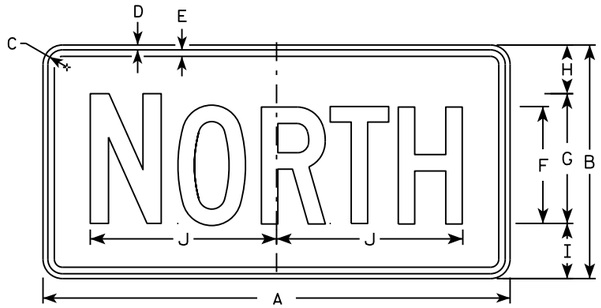
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

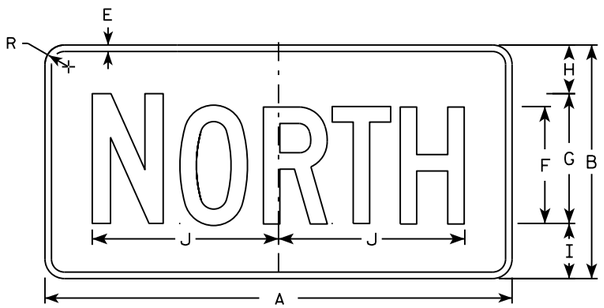
DATE 3/15/18 PLATE NO. M1-95A.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 215 | E

7



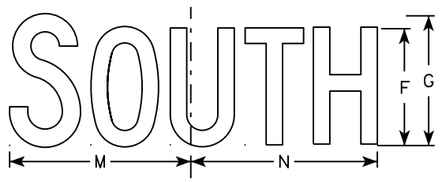
M3-1
MM3-1
MP3-1



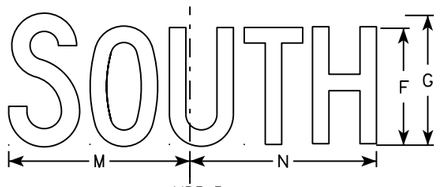
MB3-1
MK3-1
MN3-1

M3-2
MM3-2
MP3-2

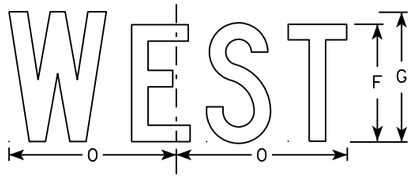
MB3-2
MK3-2
MN3-2



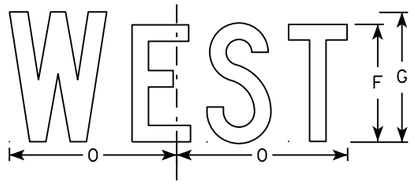
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
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. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

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.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thur M3-4
SERIES

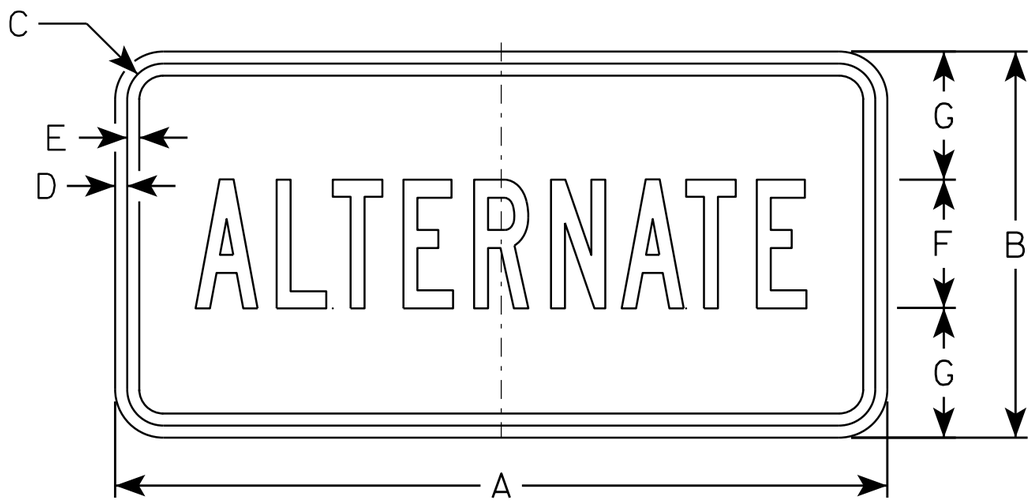
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

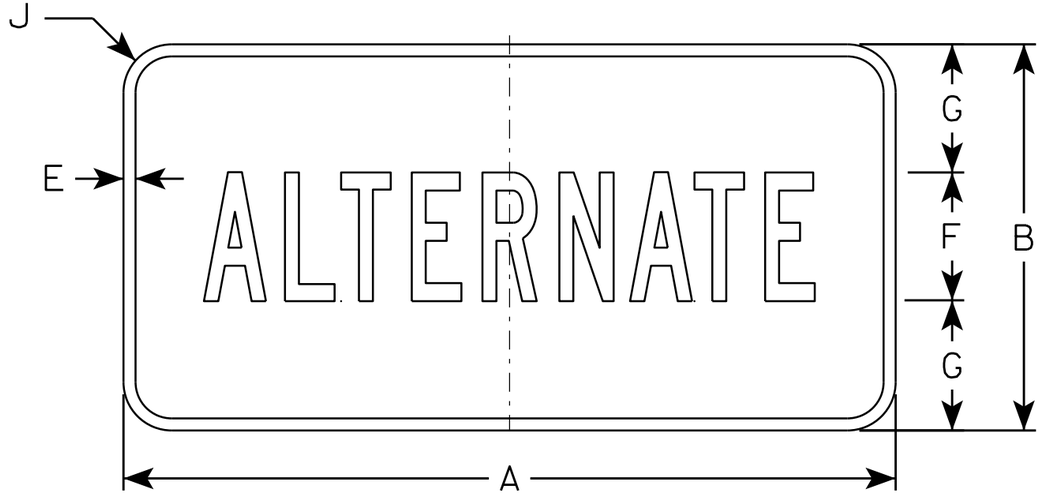
DATE 10/15/15 PLATE NO M3-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



M4-1
MO4-1



MB4-1

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See Note 5
   Message - See note 5
3. Message Series - B
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. M4-1 Background - White
   Message - Black

   MB4-1 Background - Blue
   Message - White

   MO4-1 Background - Orange - Type F
   Message - Black

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.
1																											
2	24	12	1 1/8	3/8	3/8	4	4	9 3/4	9 1/2	1 1/2																	2.00
3	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
4	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5
5	36	18	1 1/8	3/8	1/2	7	5 1/2	16 3/8	16 1/2	1 1/2																	4.5

STANDARD SIGN
M4-1

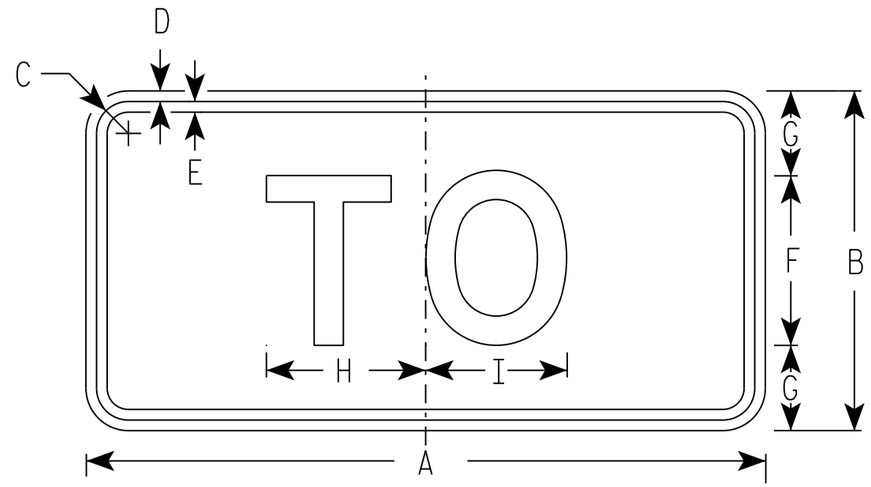
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

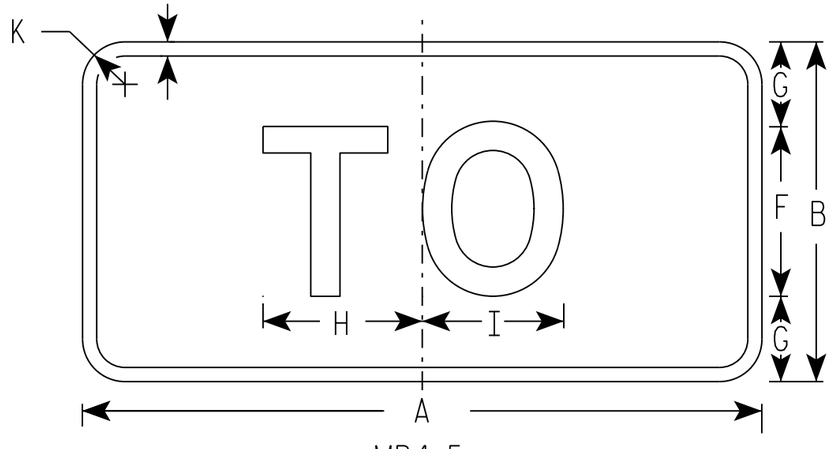
DATE 6/30/14 PLATE 14-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M41.DGN PLOT DATE : 30-JUN-2014 15:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 4.708937:1.000000 WISDOT/CADDS SHEET 42



M4-5
MM4-5
MP4-5



MB4-5
MK4-5
MN4-5

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - E
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. M4-5 Background - White
   Message - Black

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

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.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	5 3/8	5 1/4	1/2	1 1/2																2.00
3	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
4	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5
5	36	18	1 3/8	3/8	1/2	9	4 1/2	8 1/4	8 3/8	1/2	1 1/2																4.5

STANDARD SIGN
M4-5

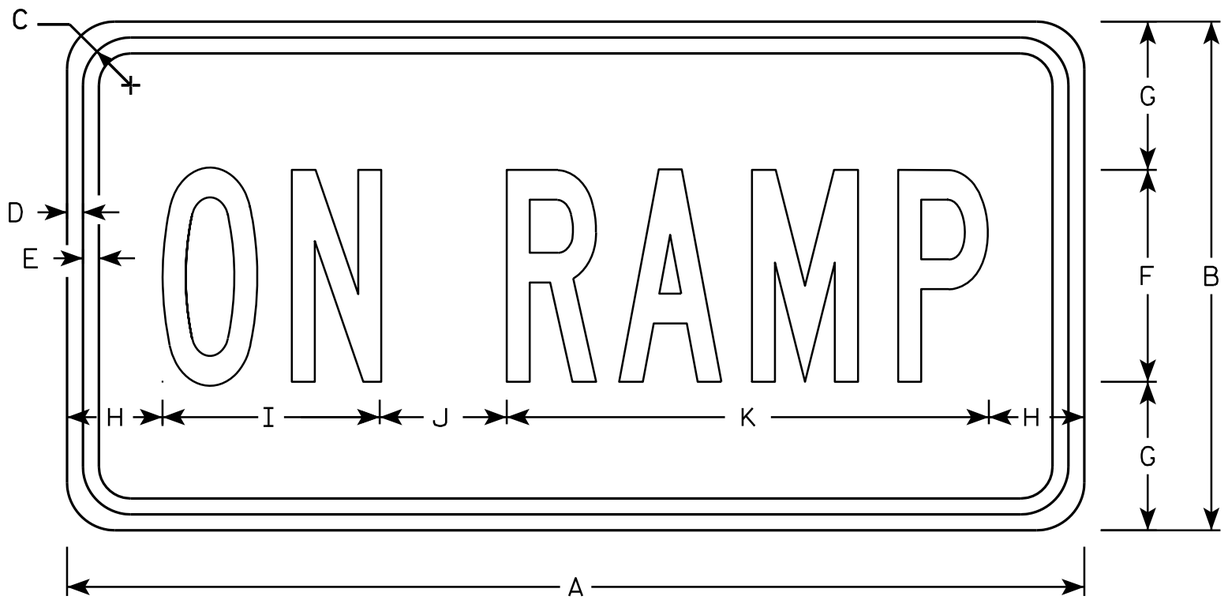
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 218 M4-5.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M45.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



M4-10

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
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	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.
1																											
2	24	12	1 1/8	3/8	3/8	5	3 1/2	2 1/4	5 1/8	3	11 3/8																2.0
3	36	18	1 1/8	3/8	1/2	8	5	2 1/4	8 1/4	5	18 1/4																4.5
4																											
5																											

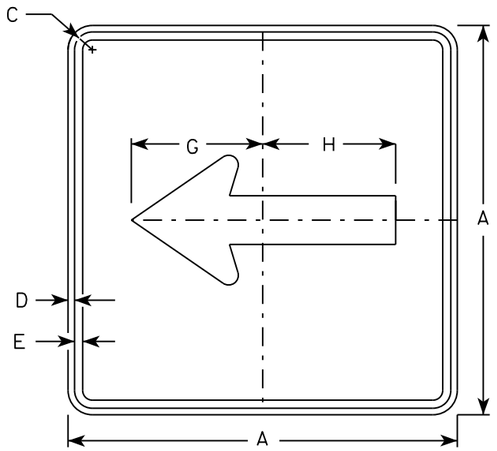
STANDARD SIGN
M4-10

WISCONSIN DEPT OF TRANSPORTATION

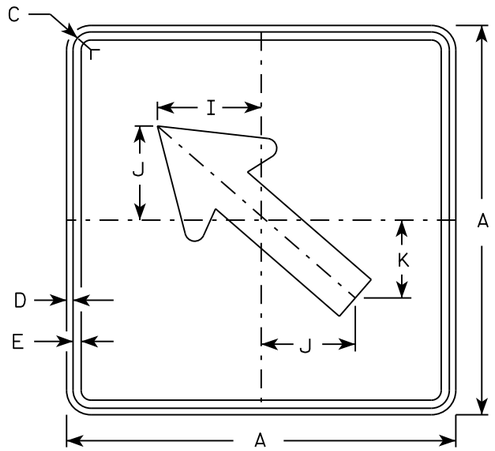
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-10.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 219	E



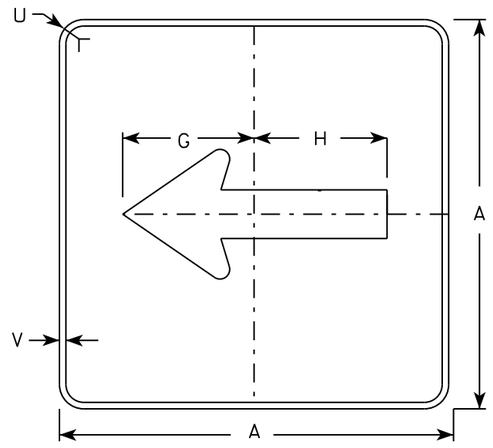
M6-1
MM6-1
MO6-1
MP6-1



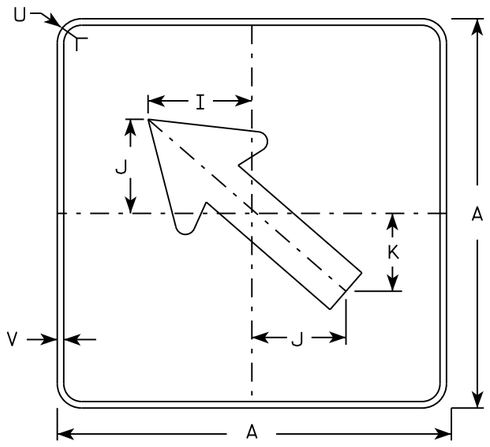
M6-2
MM6-2
MO6-2
MP6-2

NOTES

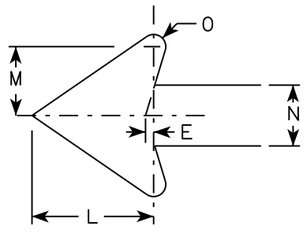
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



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.
1																											
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	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
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

STANDARD SIGN
M6-1 & M6-2
SERIES

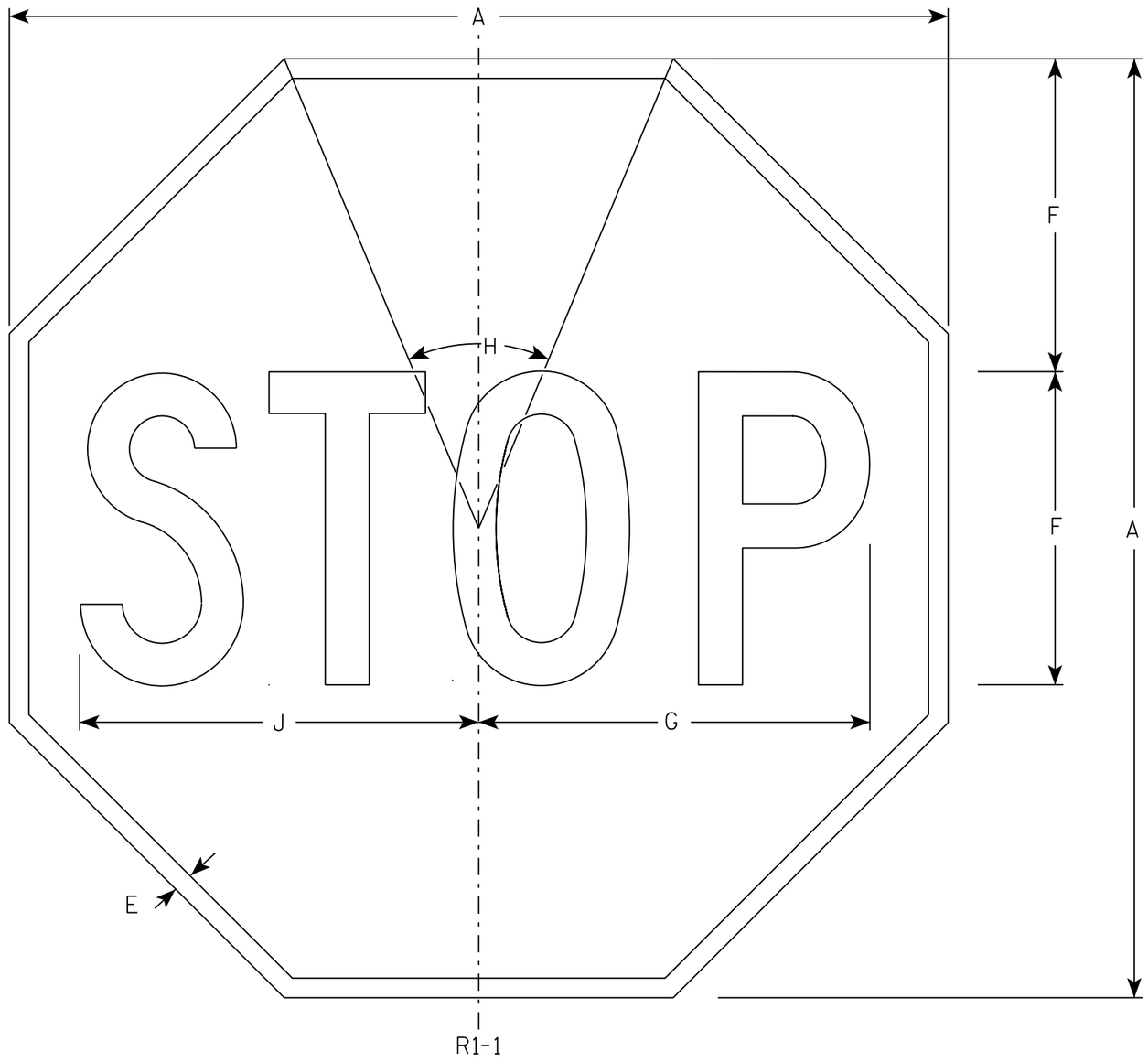
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATI 220 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 01-DEC-2015 17:57 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message 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.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

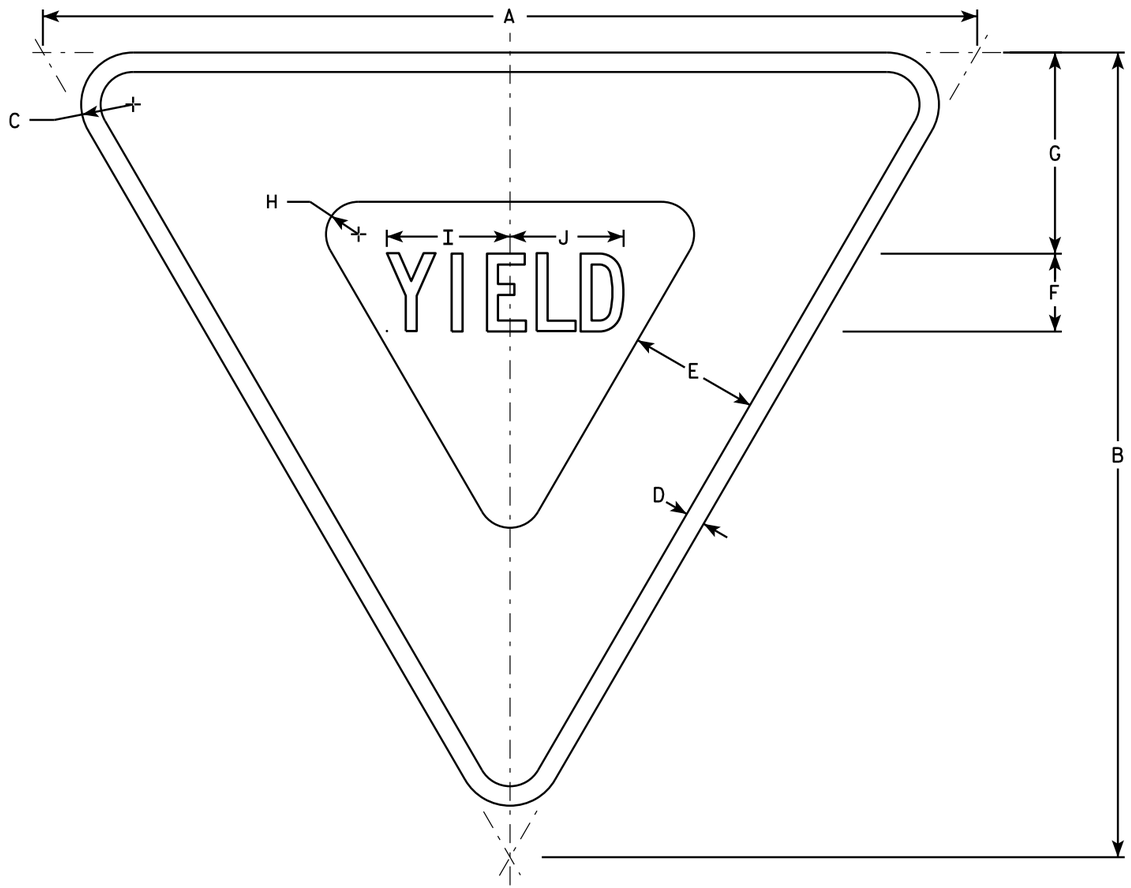
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 221	E



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
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. The border strip and word message are reflectorized red.

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.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

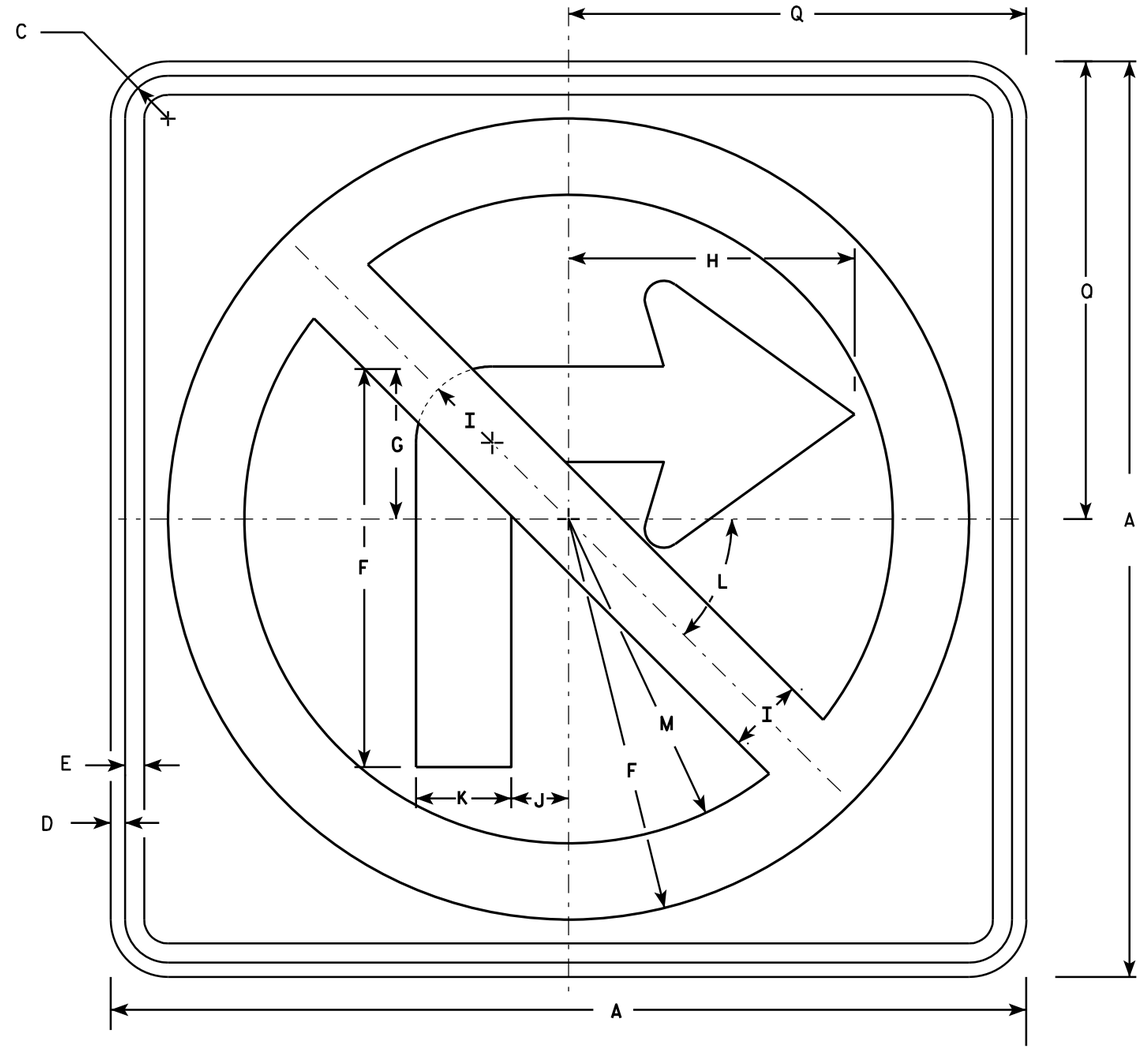
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

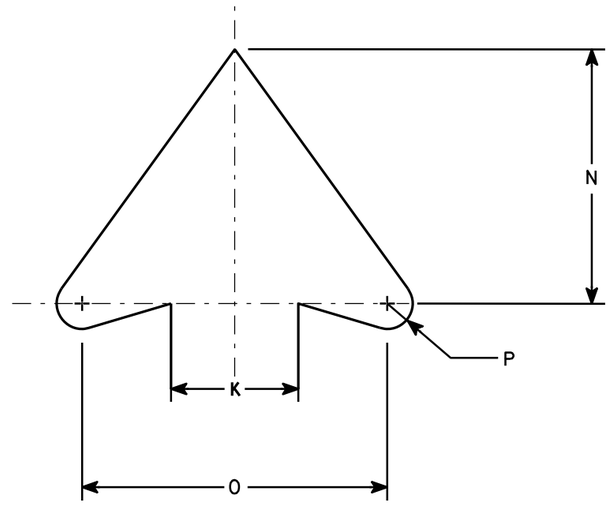
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



R3-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

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.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

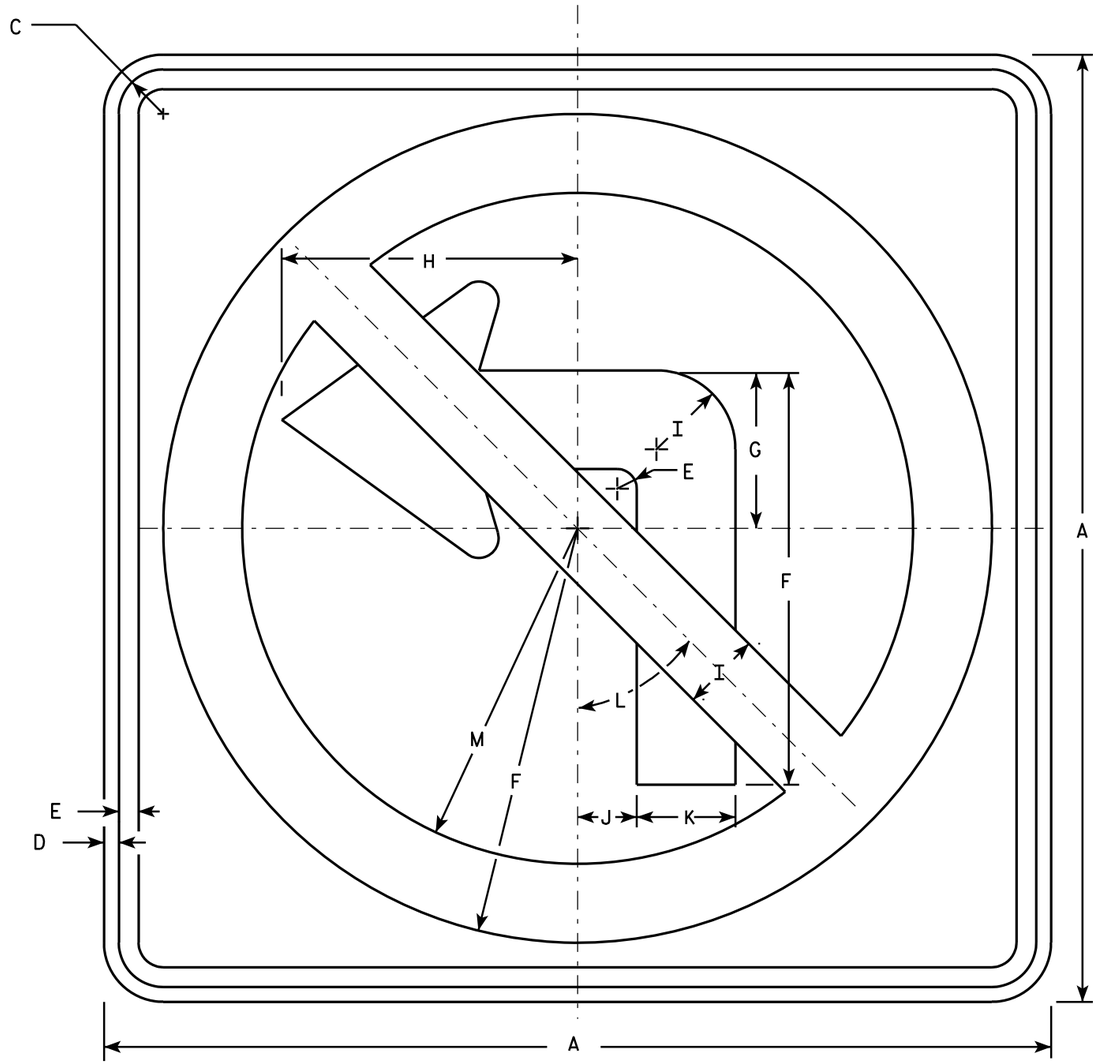
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

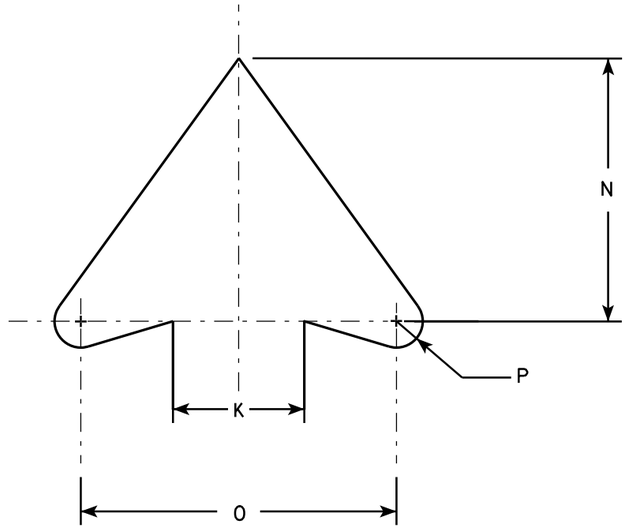
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 223	E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

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.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

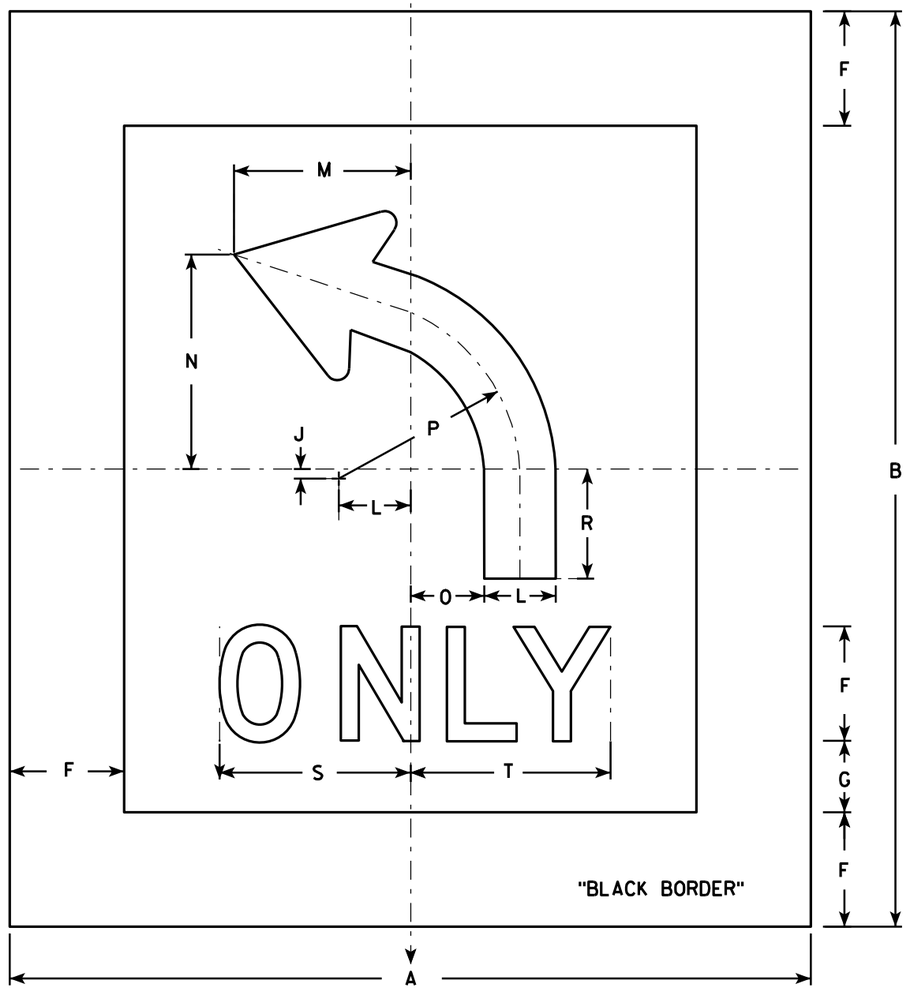
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

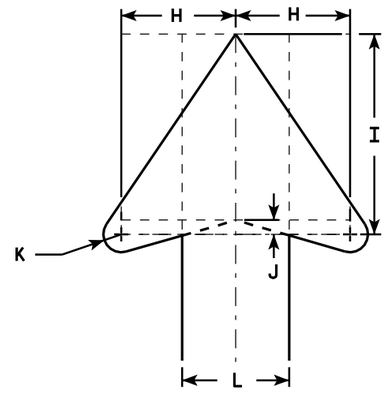
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 224	E



R3-5L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE 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. When base material is metal, the corners shall be rounded.
5. R3-5R is the same as R3-5L except curved portion of arrow points right.
6. The 6" border is non-reflective black.



ARROW DETAIL

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.
1																											
2S	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
2M	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
3																											
4																											
5																											

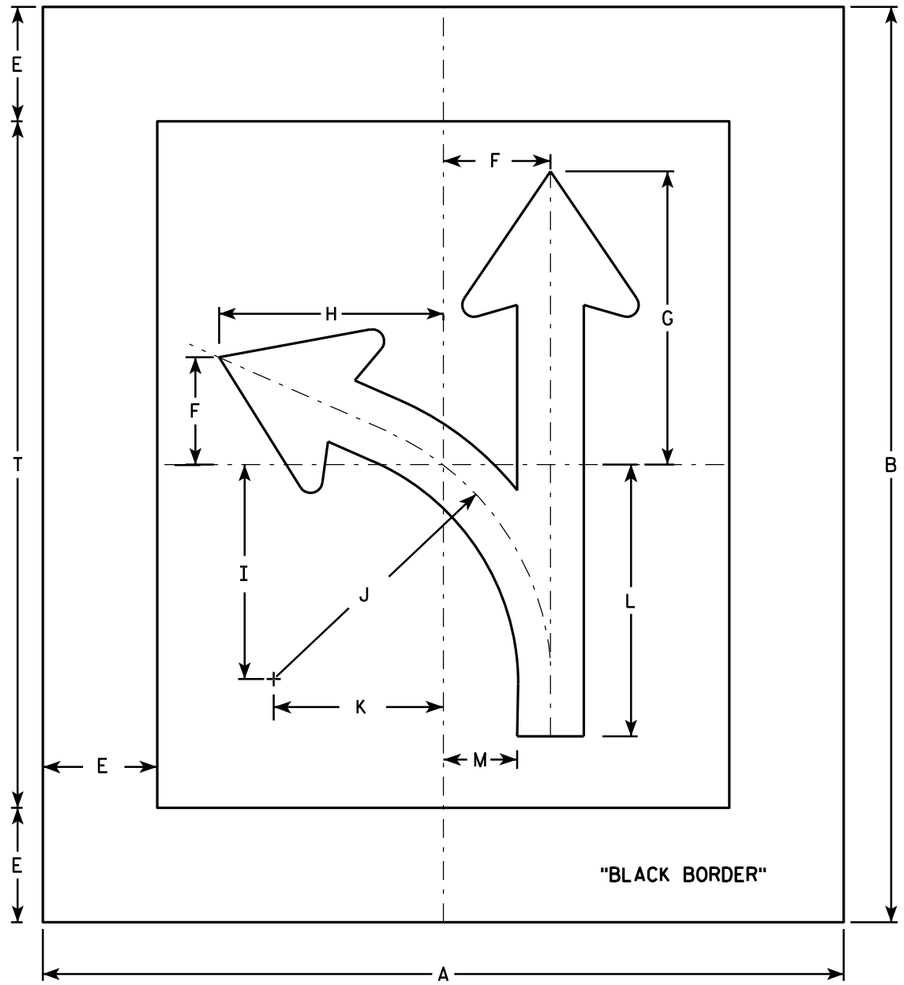
STANDARD SIGN
R3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/24/11 PLATE NO. R3-5.6

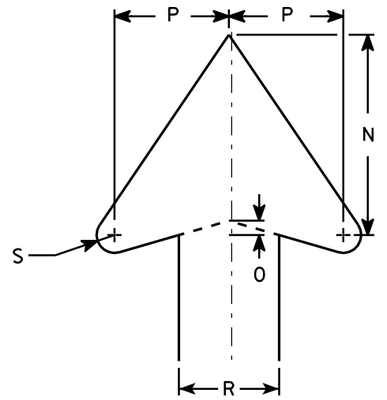
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 225	E



R3-6L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
4. R3-6R is the same as R3-6L except curved portion of arrow points right.
5. The 6" border is non-reflective black.



ARROW DETAIL

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.
1																											
2S	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
2M	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
3																											
4																											
5																											

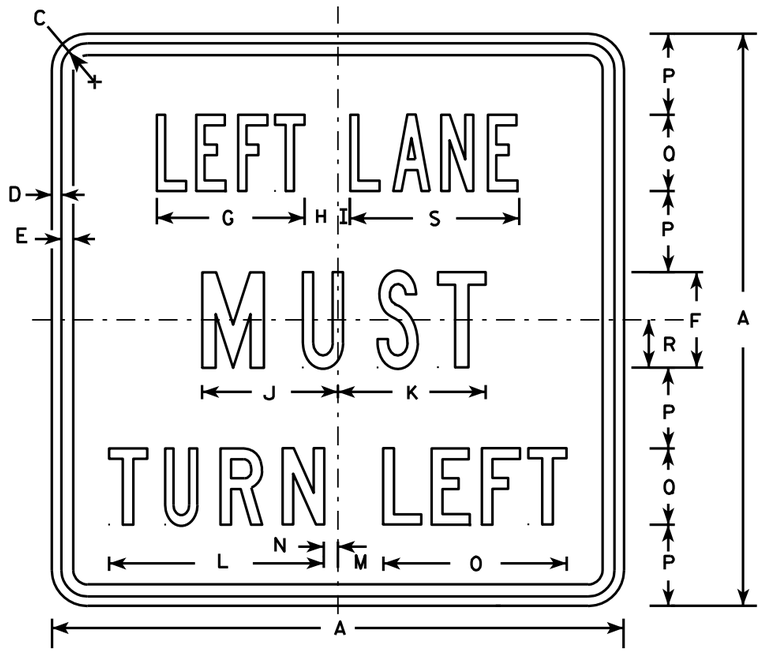
STANDARD SIGN
R3-6

WISCONSIN DEPT OF TRANSPORTATION

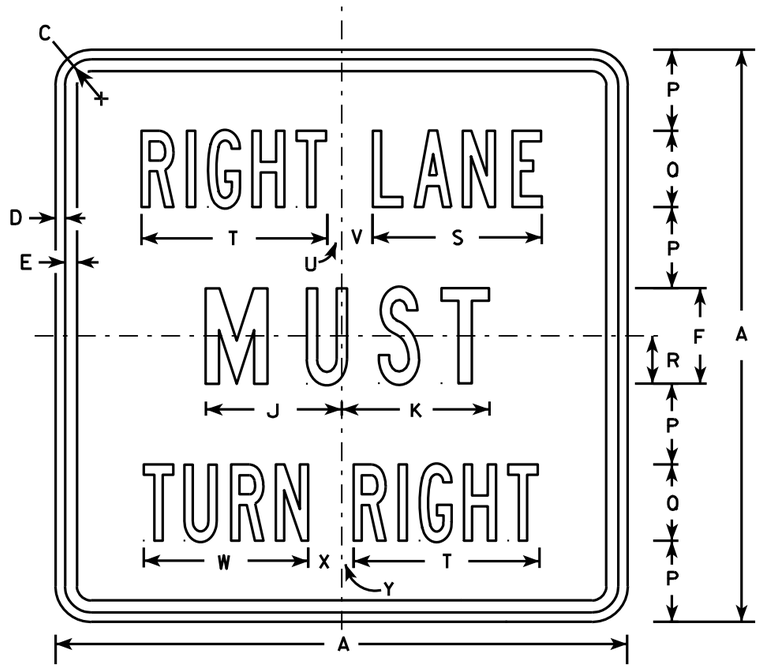
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-6.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 226 | E



R3-7L



R3-7R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Line 1 is Series B.
   Line 2 is Series C.
   Line 3 on plate R3-7R is Series B and Series C on plate R3-7L.
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	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.
1	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2S	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
2M	30		1 3/8	1/2	5/8	5	7 3/4	1 3/4	5/8	7 1/8	7 3/4	11 1/4	2 3/8	3/4	9 5/8	4 1/4	4	2 1/2	8 7/8	9 3/4	3/4	1 5/8	8 5/8	1 5/8	5/8		6.25
3	36		1 5/8	5/8	3/4	6	9 5/8	2	1 1/8	8 3/4	9	13 1/2	3 7/8	1 1/2	12 1/2	5	5	3	10 5/8	12	7/8	2 1/4	10 5/8	2 1/8	1		9.00
4	48		2 1/4	3/4	1	8	13 1/2	2 3/8	1 1/2	11 1/2	11 7/8	17 3/4	3 5/8	2 1/2	16 3/8	6 1/2	7	4	14 3/8	16 7/8	5/8	3 1/4	15 1/8	2 3/4	1 1/8		16.00
5																											

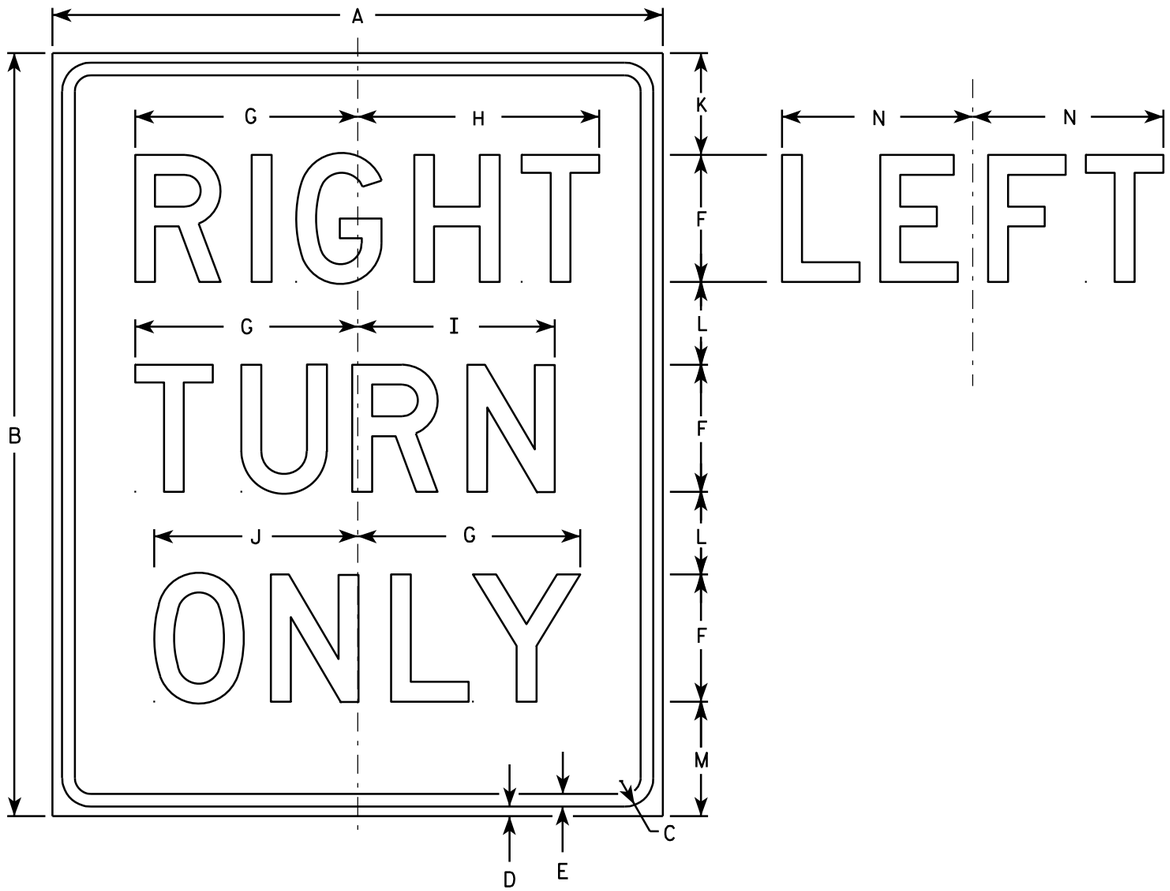
STANDARD SIGN
R3-7L & R3-7R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 227 | E



R3-53R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE 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.
5. R3-53L same as R3-53R except LEFT is substituted for RIGHT.

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.
1																											
2S	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
2M	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
3	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
4																											
5																											

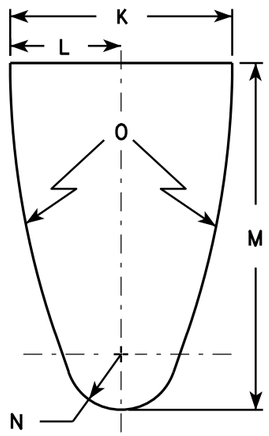
STANDARD SIGN
R3-53

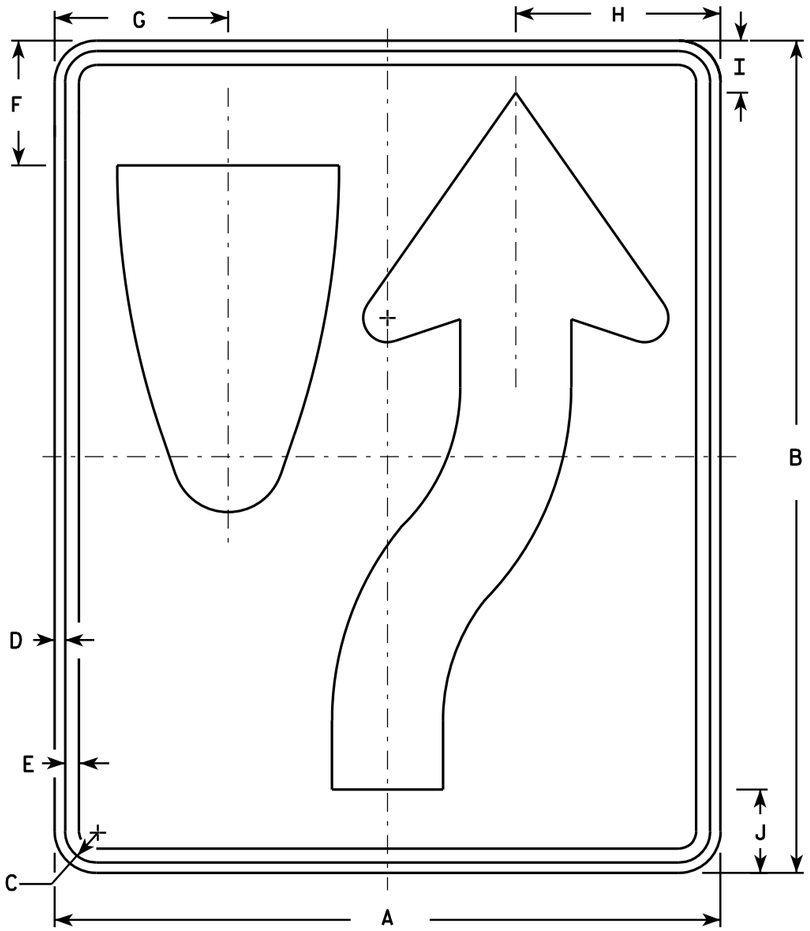
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-53.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 228	E

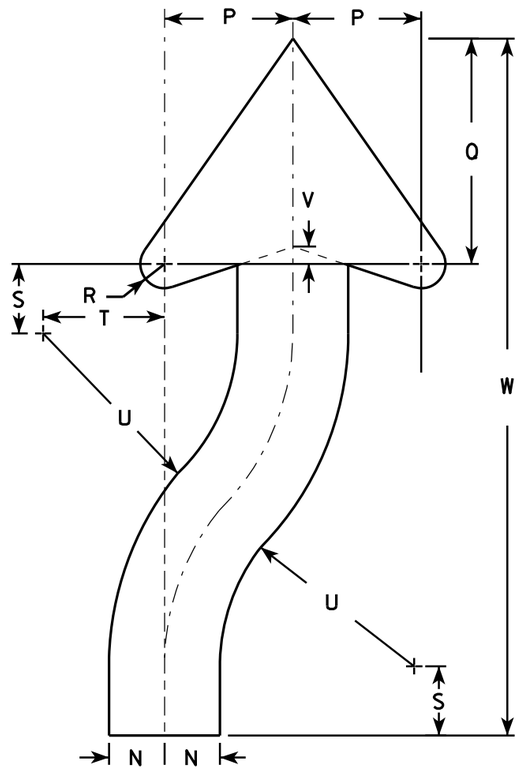




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

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.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

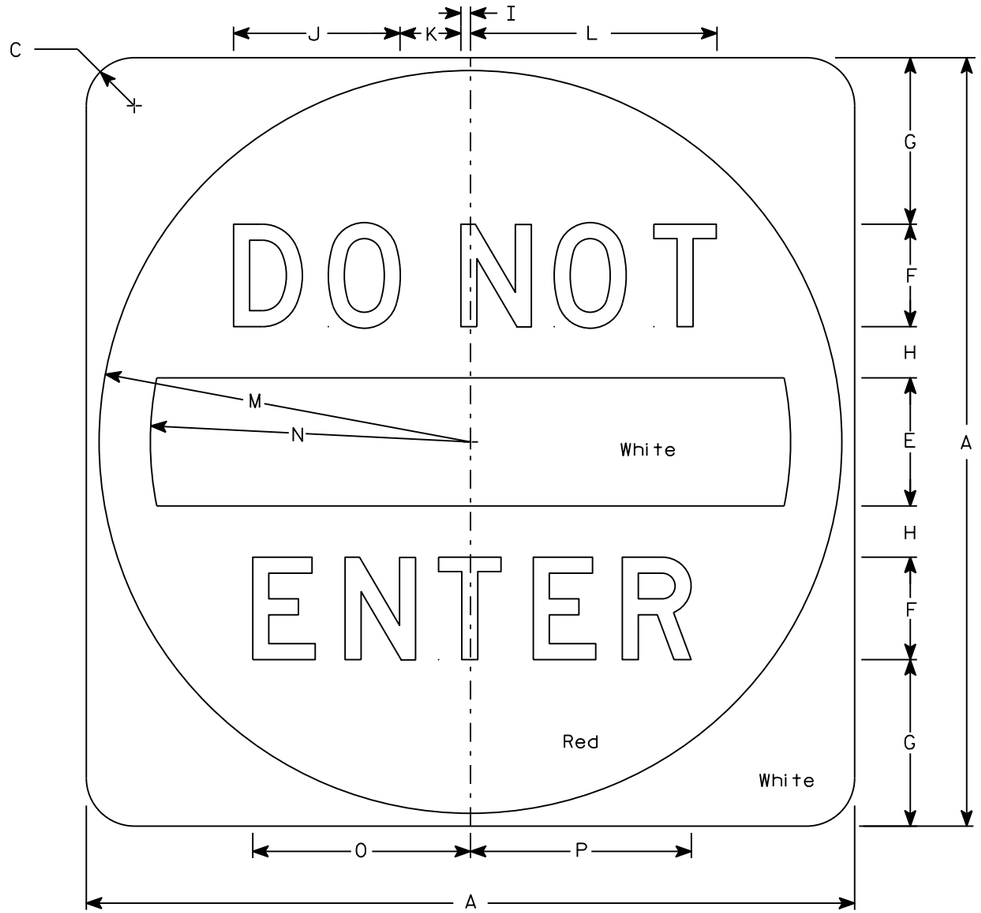
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 229	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

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.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

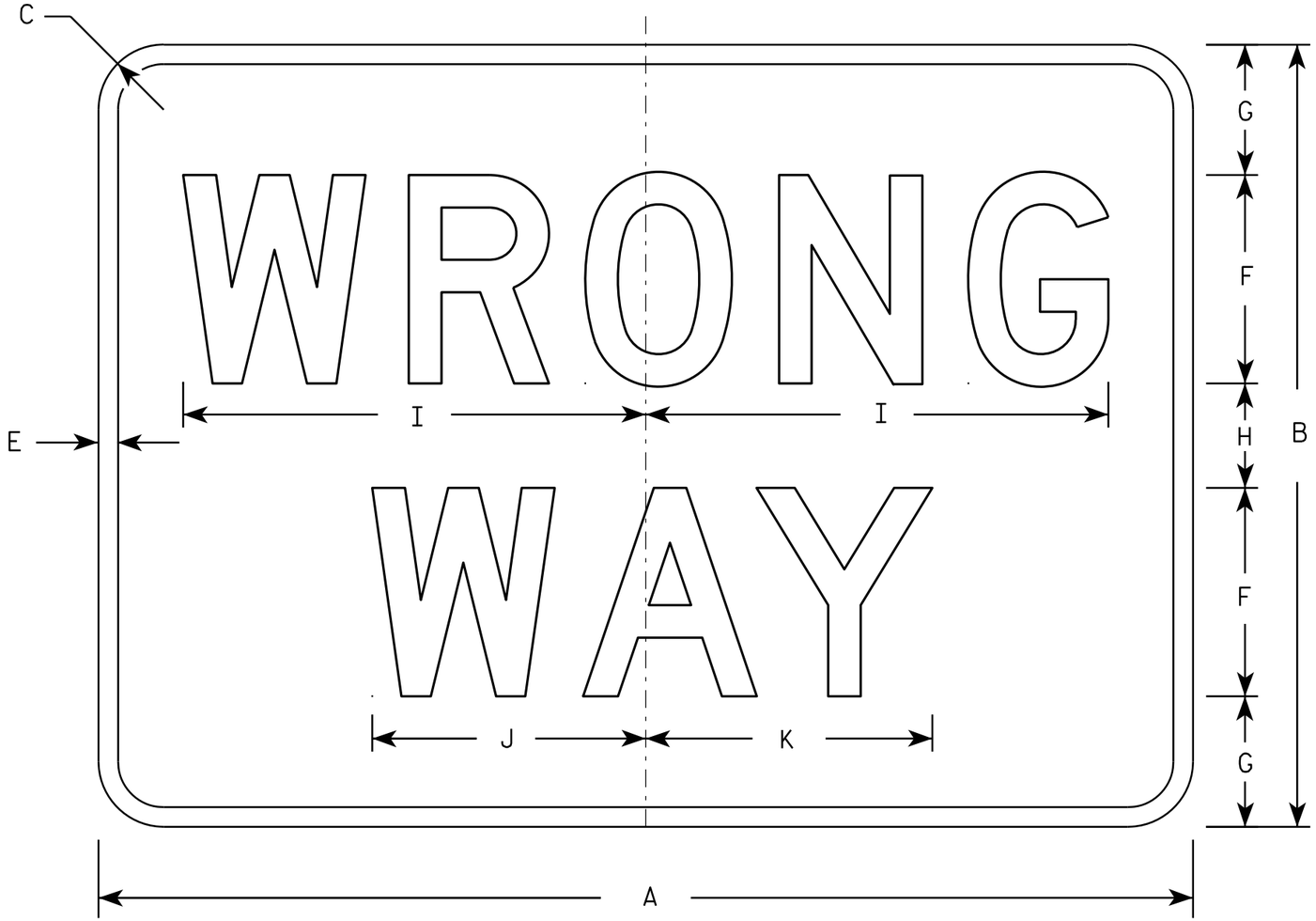
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 230 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
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	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.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

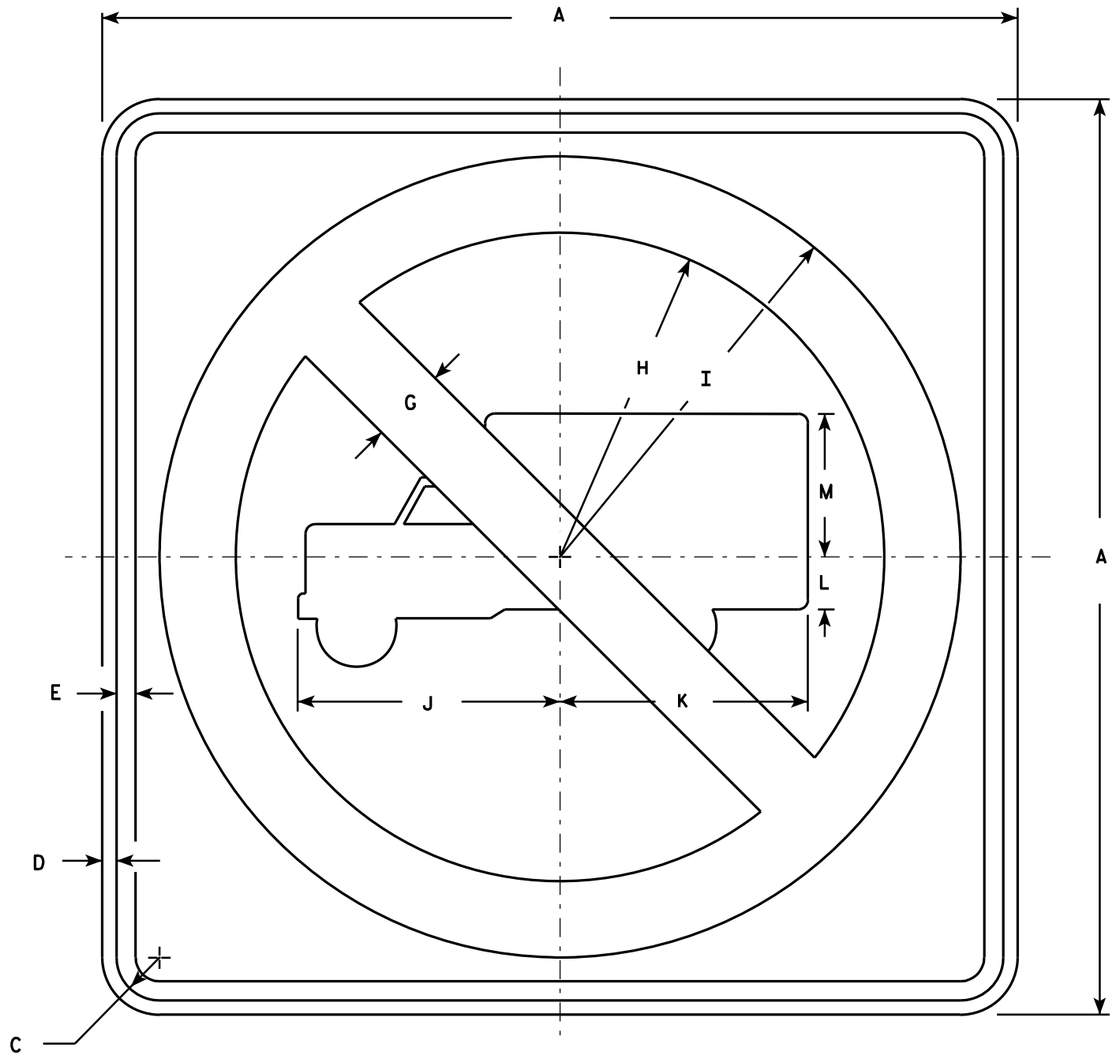
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 231 | E



R5-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   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. Circle & Diagonal - Reflective red.
   Truck Symbol & Border - Non-reflective black.

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.
1																											
2S	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

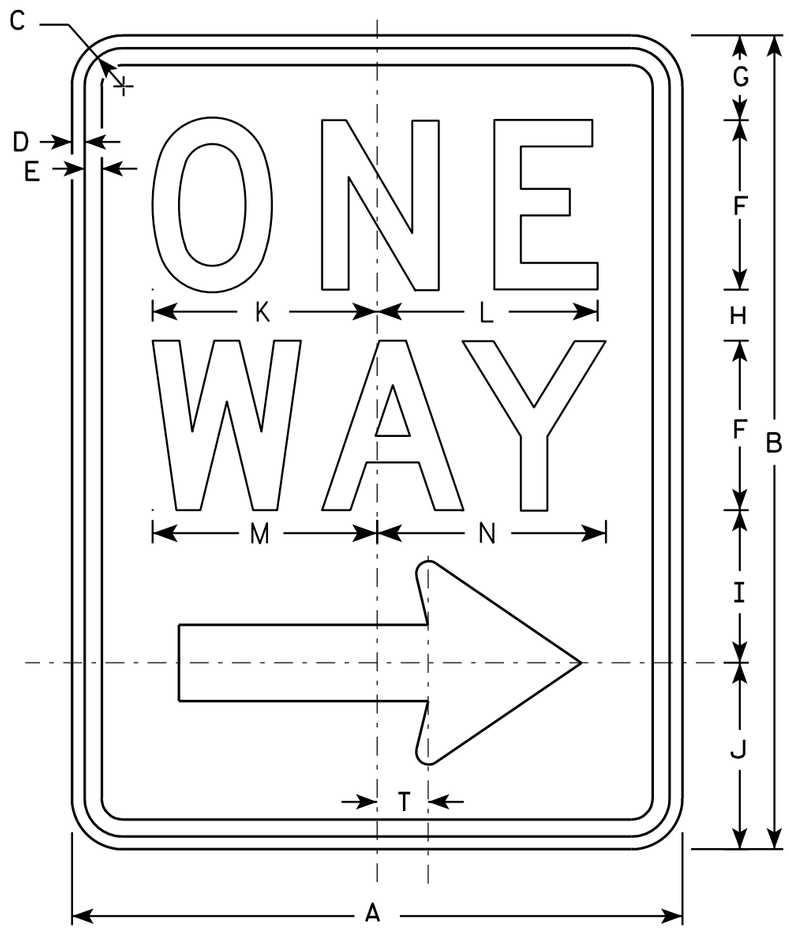
STANDARD SIGN
R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2.6

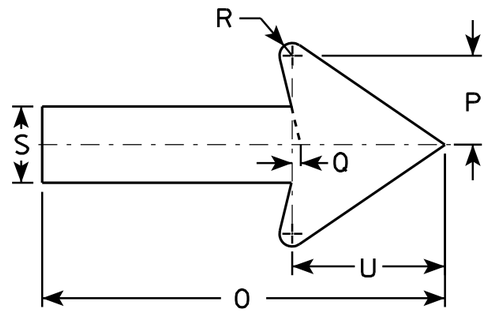
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 232	E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE 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.
5. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

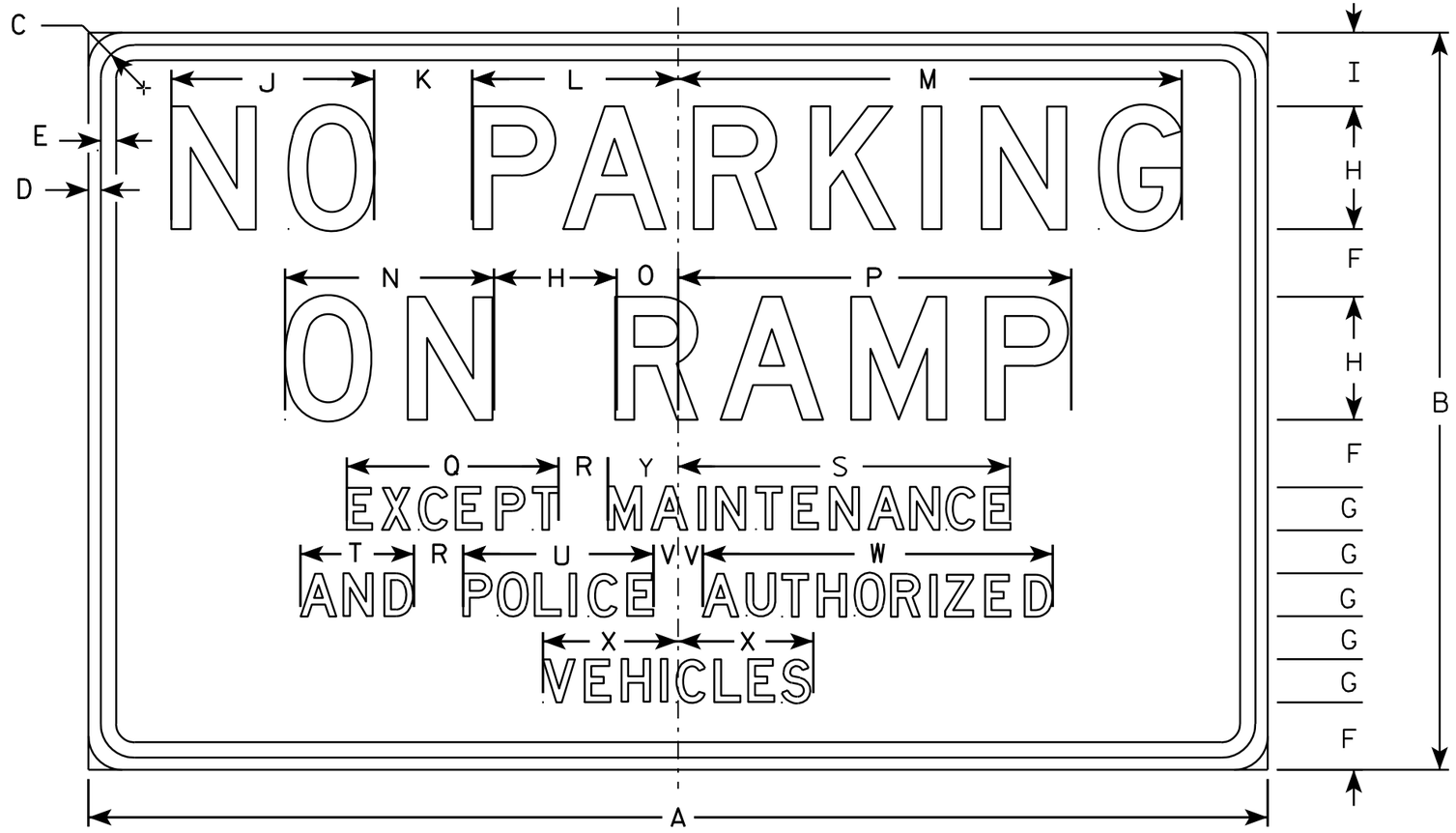
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 233	E



R7-64

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - Lines 1& 2 and Border are RED
   Lines 3, 4, & 5 are 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	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.
1																											
2S																											
2M																											
3	48	30	1 3/8	1/2	5/8	2 3/4	1 3/4	5	3	8 1/4	4	8 3/8	20 1/2	8 1/2	2 1/2	16	8 5/8	2	13 5/8	4 5/8	7 3/4	1	14 1/4	5 1/2			10.0
4																											
5																											

STANDARD SIGN
R7-64

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-64.3

PROJECT NO:

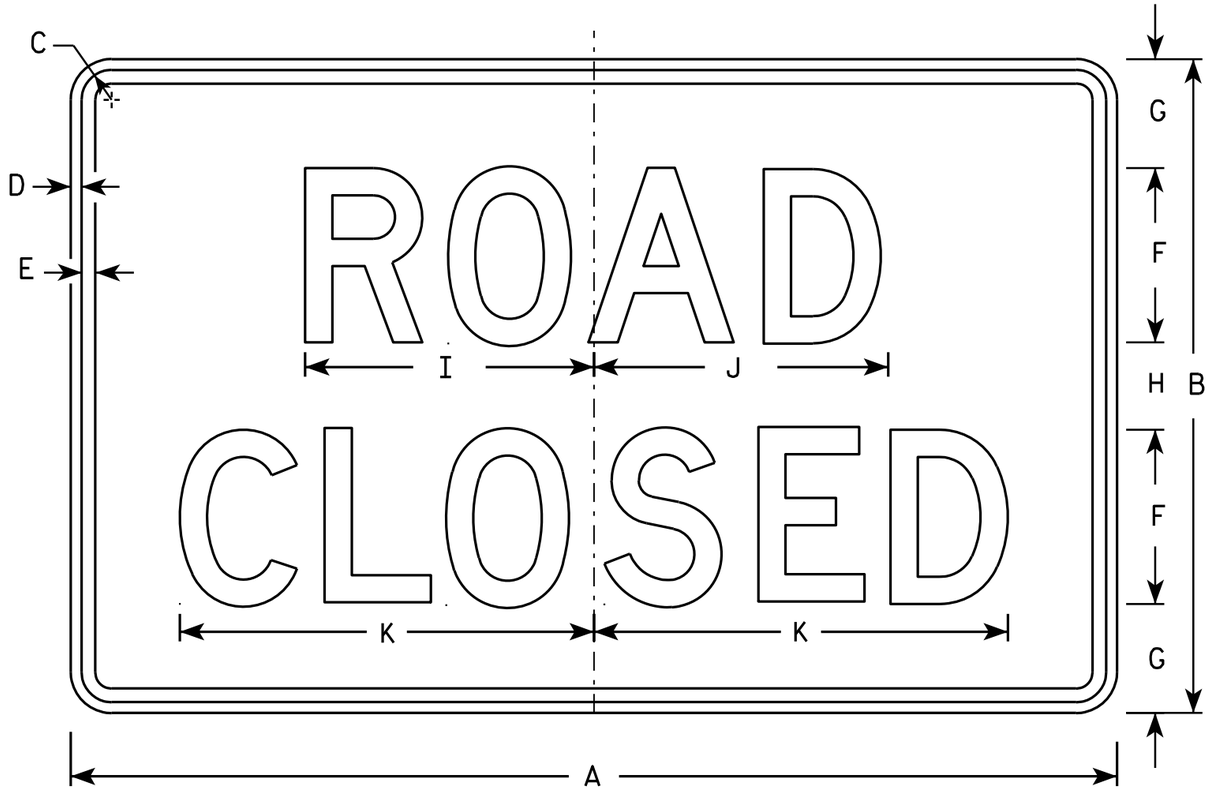
SHEET NO: 234 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R764.DGN PLOT DATE : 31-MAR-2011 13:47 PLOT BY : mscsja PLOT SCALE :

WISDOT/CADDS SHEET 42

7

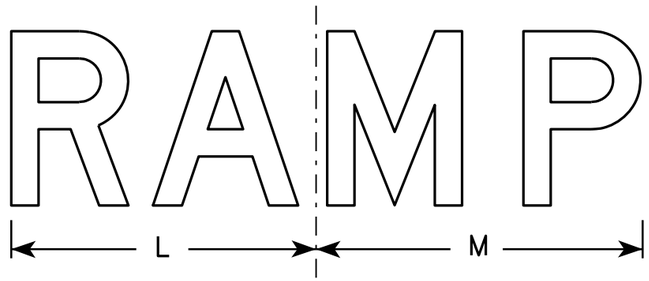
7



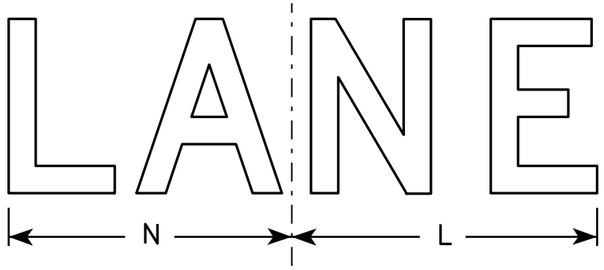
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE 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.
5. Modify the message as required.



R11-2R



R11-2L

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.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

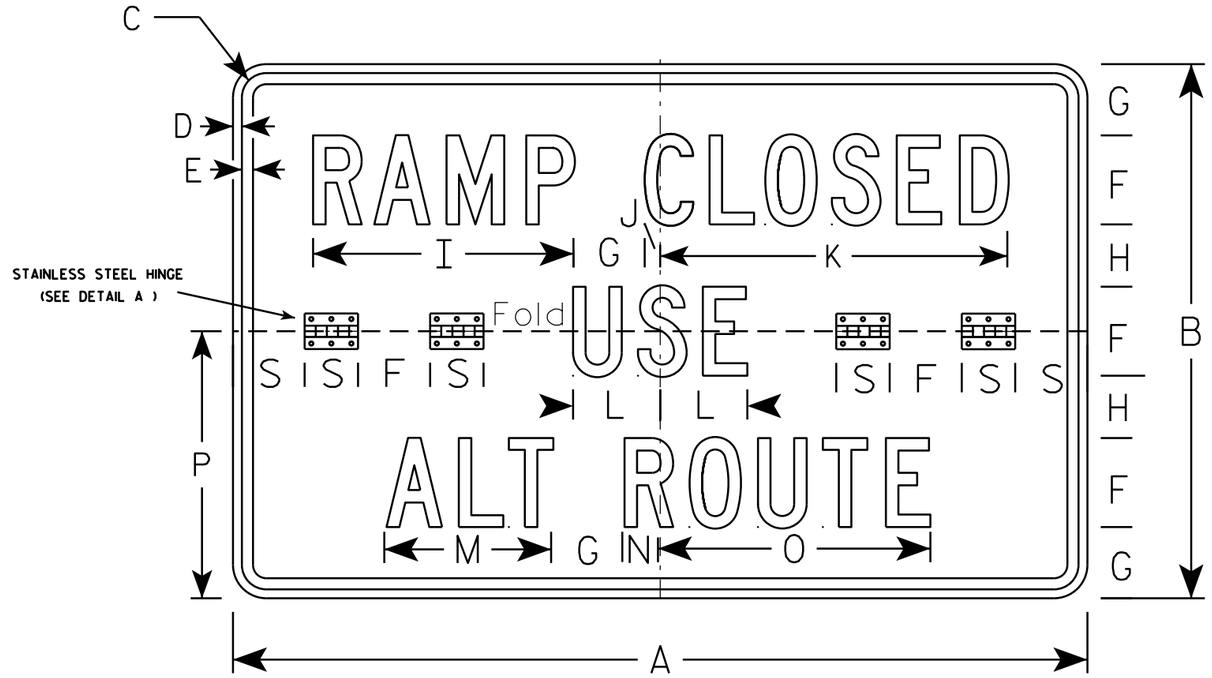
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

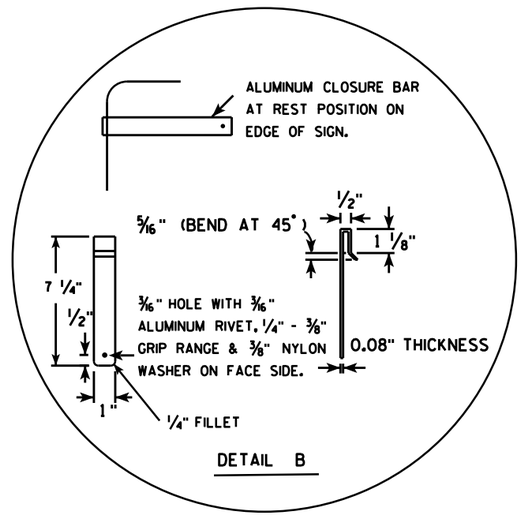
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 235	E



R11-54F

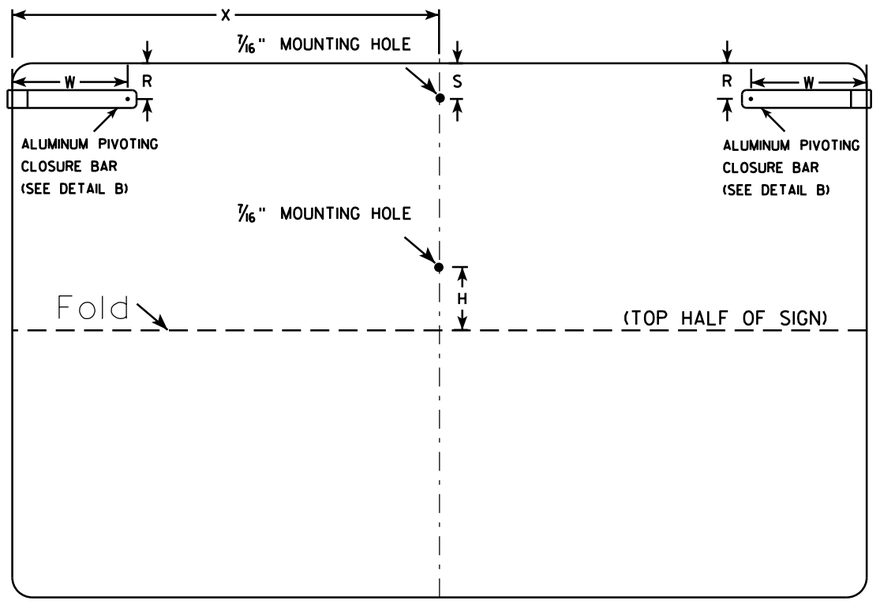
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum, corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
6. Refer to plate A5-3A for sign blank layout.



(BACK VIEW)

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.
1																											
2S	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

STANDARD SIGN
R11-54F

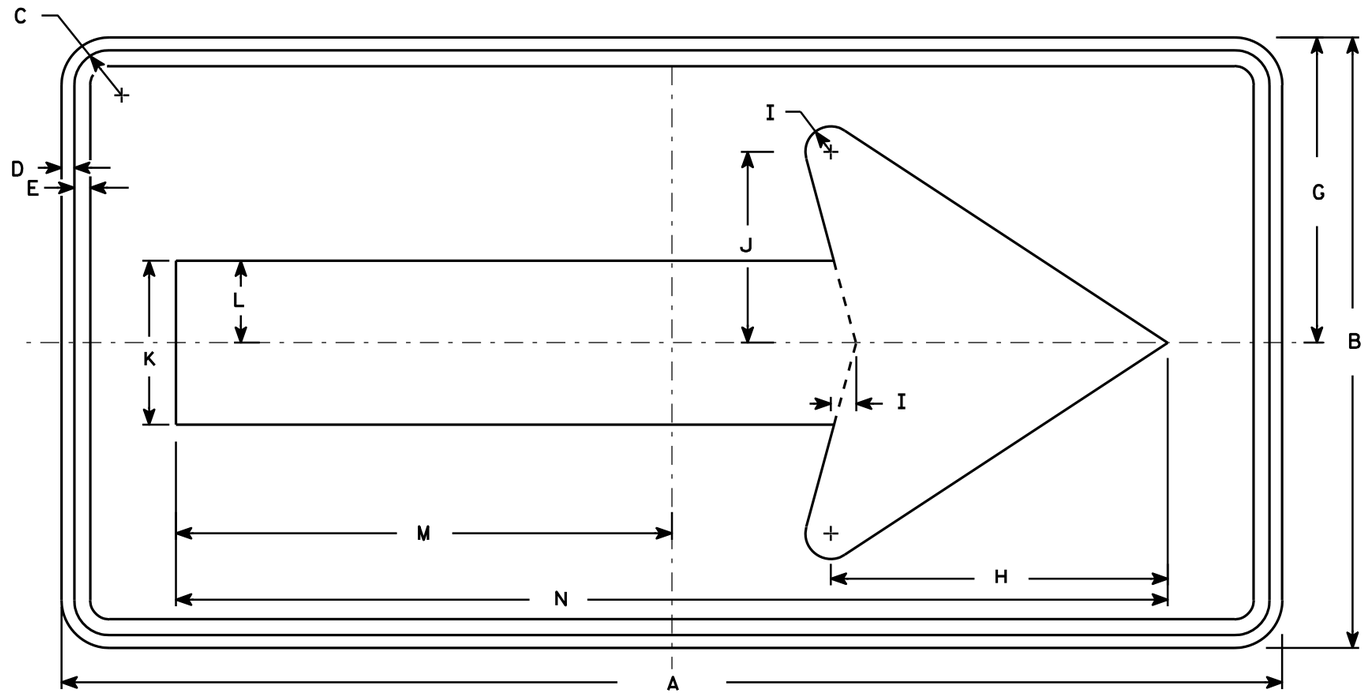
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/28/14 PLATE NO. R11-54F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R1154F.DGN PLOT DATE : 28-MAY-2014 14:15 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 8.511110:1.000000
WISDOT/CADDS SHEET 42



W1-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE 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	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.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

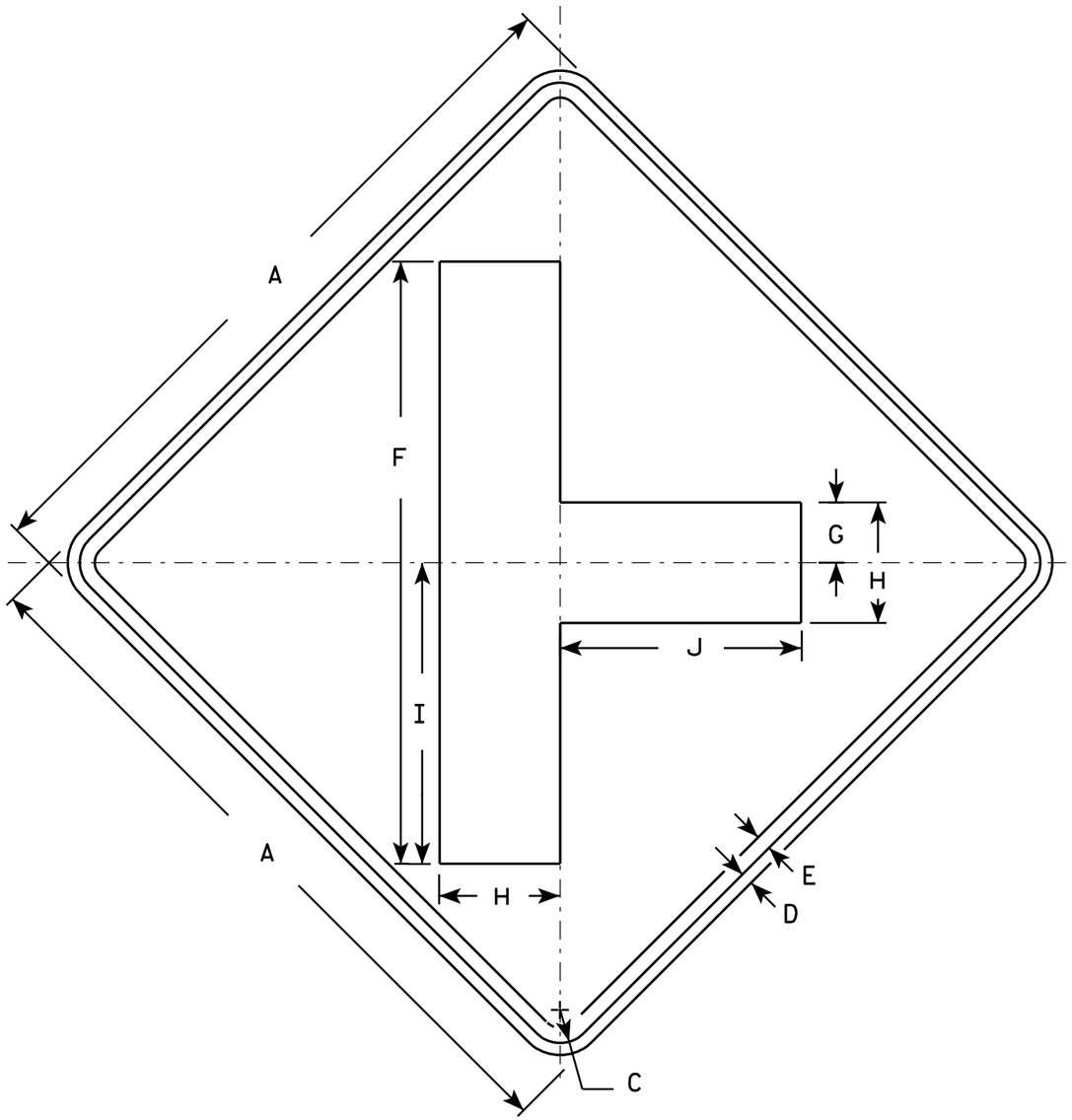
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 237



W2-2

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE 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	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.
1	24		1 1/8	3/8	1/2	20	2	4	10	8																	4.0
2S	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
2M	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
3	36		1 5/8	5/8	3/4	30	3	6	15	12																	9.0
4	48		2 1/4	3/4	1	40	4	8	20	16																	16.0
5																											

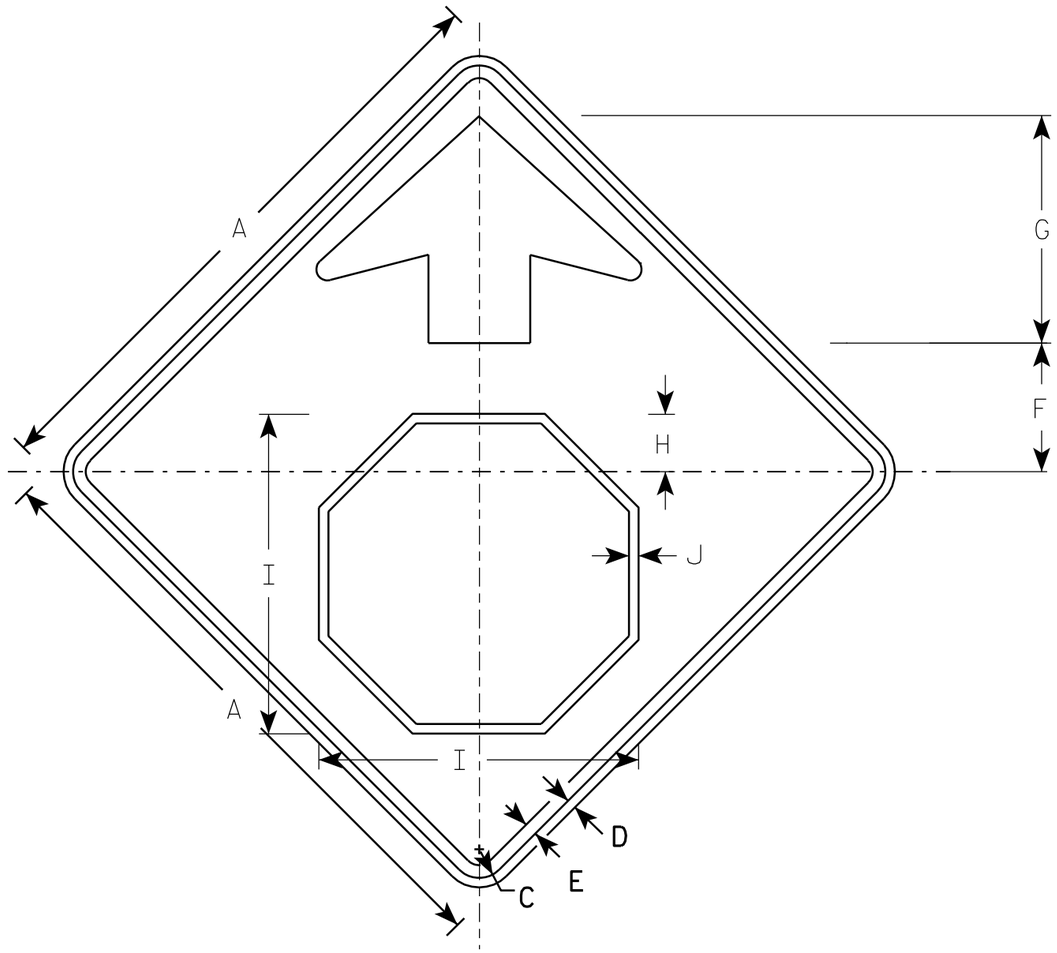
STANDARD SIGN
W2-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-2.6

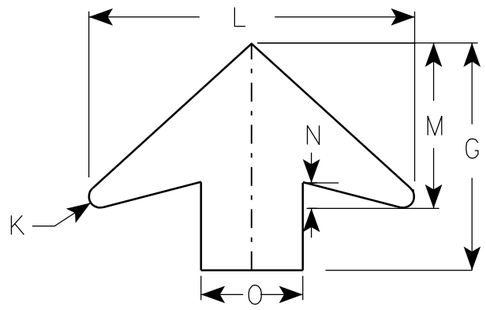
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 238	E



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

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.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

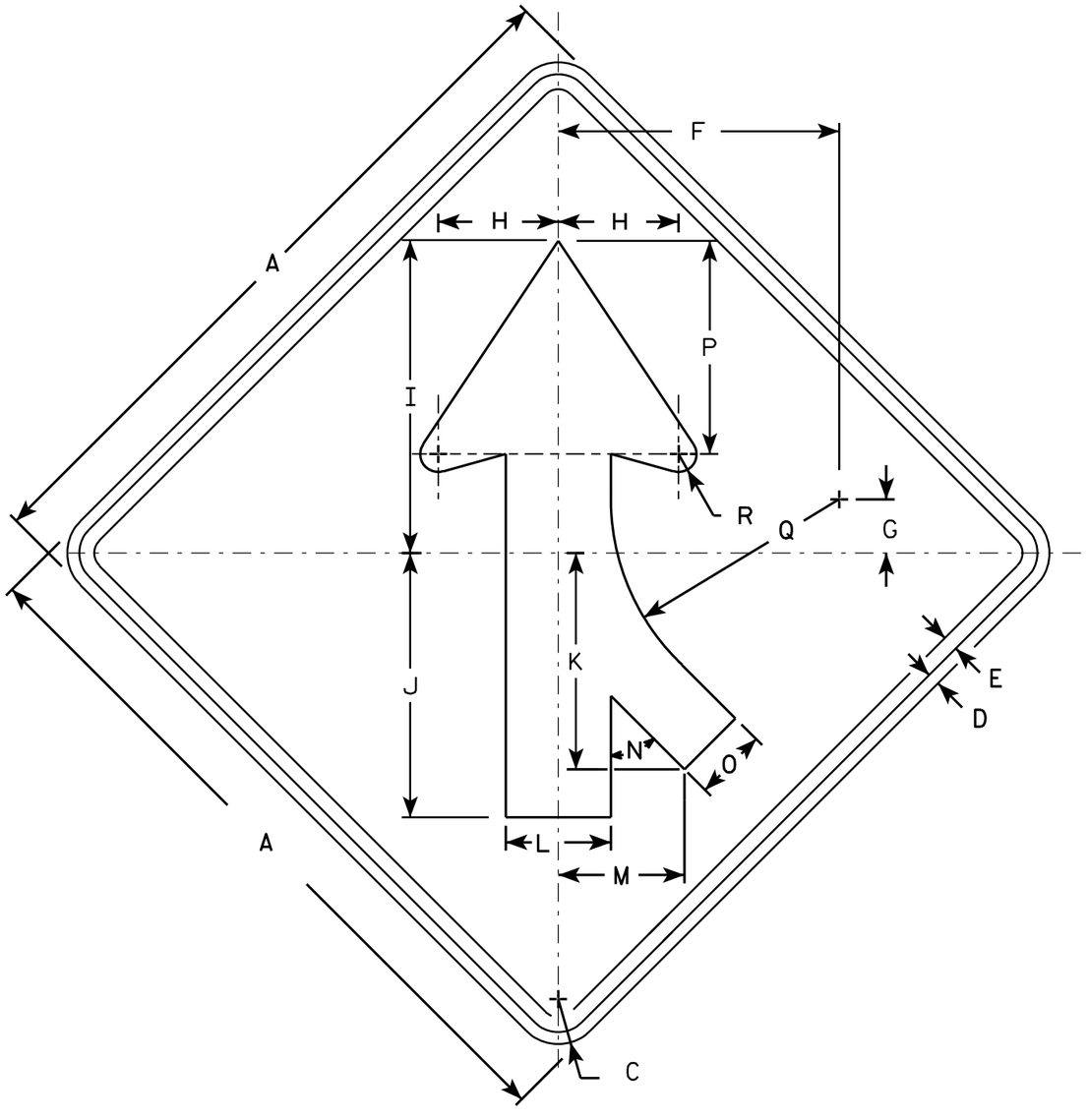
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 239 E



W4-1 R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE 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. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

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.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

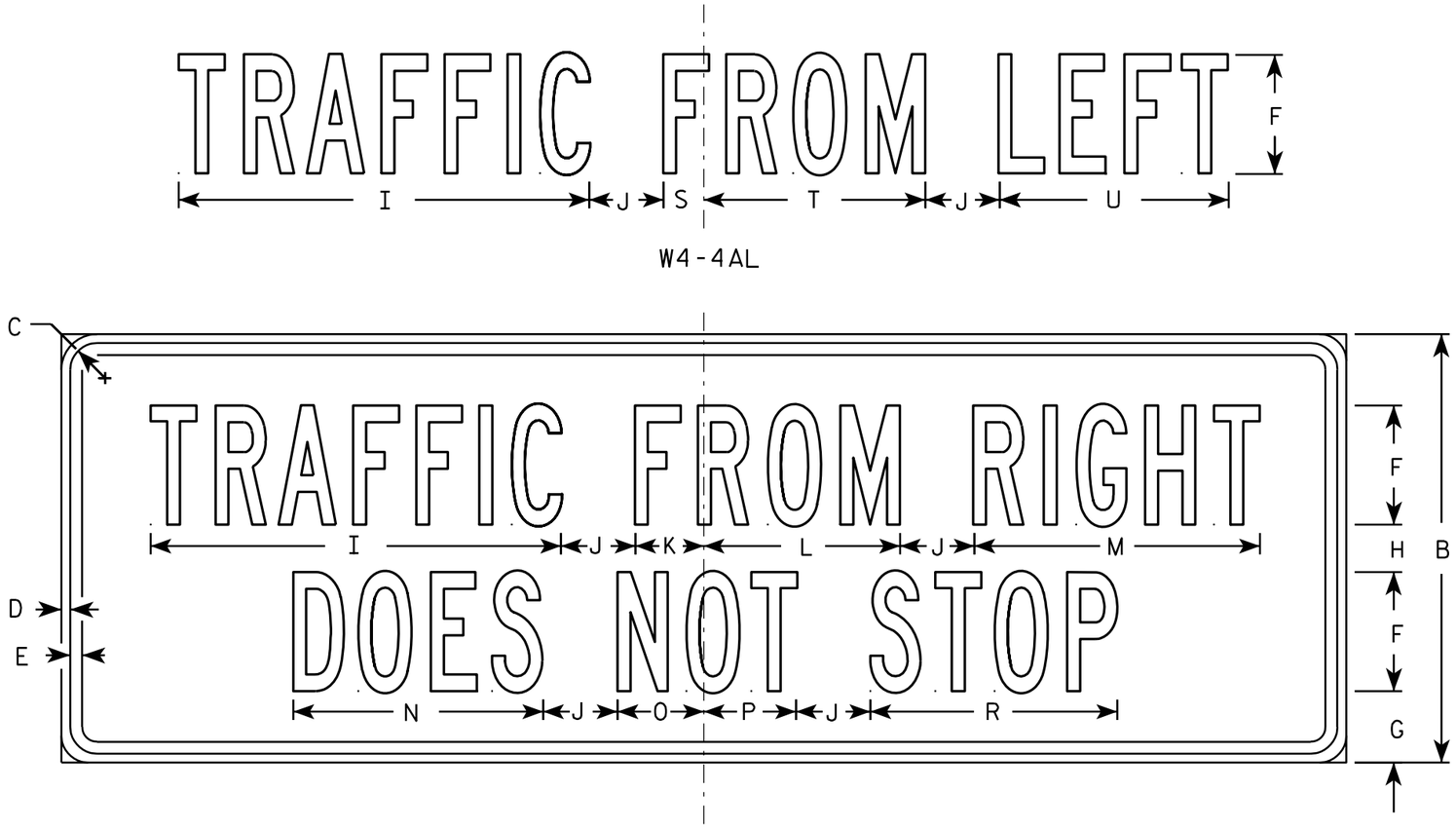
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 240	E



W4-4AL

W4-4AR

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - B
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	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.
1																											
2S	30	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	10 3/8	1 1/2	1 3/4	4 7/8	7 1/4	6 1/4	2 1/4	2 1/4		6 1/4	1	5 5/8	5 3/4						2.5
2M	30	12	1 1/8	3/8	3/8	3	2 1/4	1 1/2	10 3/8	1 1/2	1 3/4	4 7/8	7 1/4	6 1/4	2 1/4	2 1/4		6 1/4	1	5 5/8	5 3/4						2.5
3	42	15	1 1/8	3/8	1/2	4	2 5/8	1 3/4	13 7/8	2 3/8	2 1/8	6 3/4	9 3/4	8 3/8	2 3/4	3 3/8		8 3/8	1 1/8	7 3/4	7 3/4						4.4
4	54	18	1 1/8	3/8	1/2	5	3	2	17 1/4	3 1/8	2 7/8	8 1/4	12	10 1/2	3 5/8	3 7/8		10 3/8	1 3/4	9 3/8	9 5/8						6.8
5																											

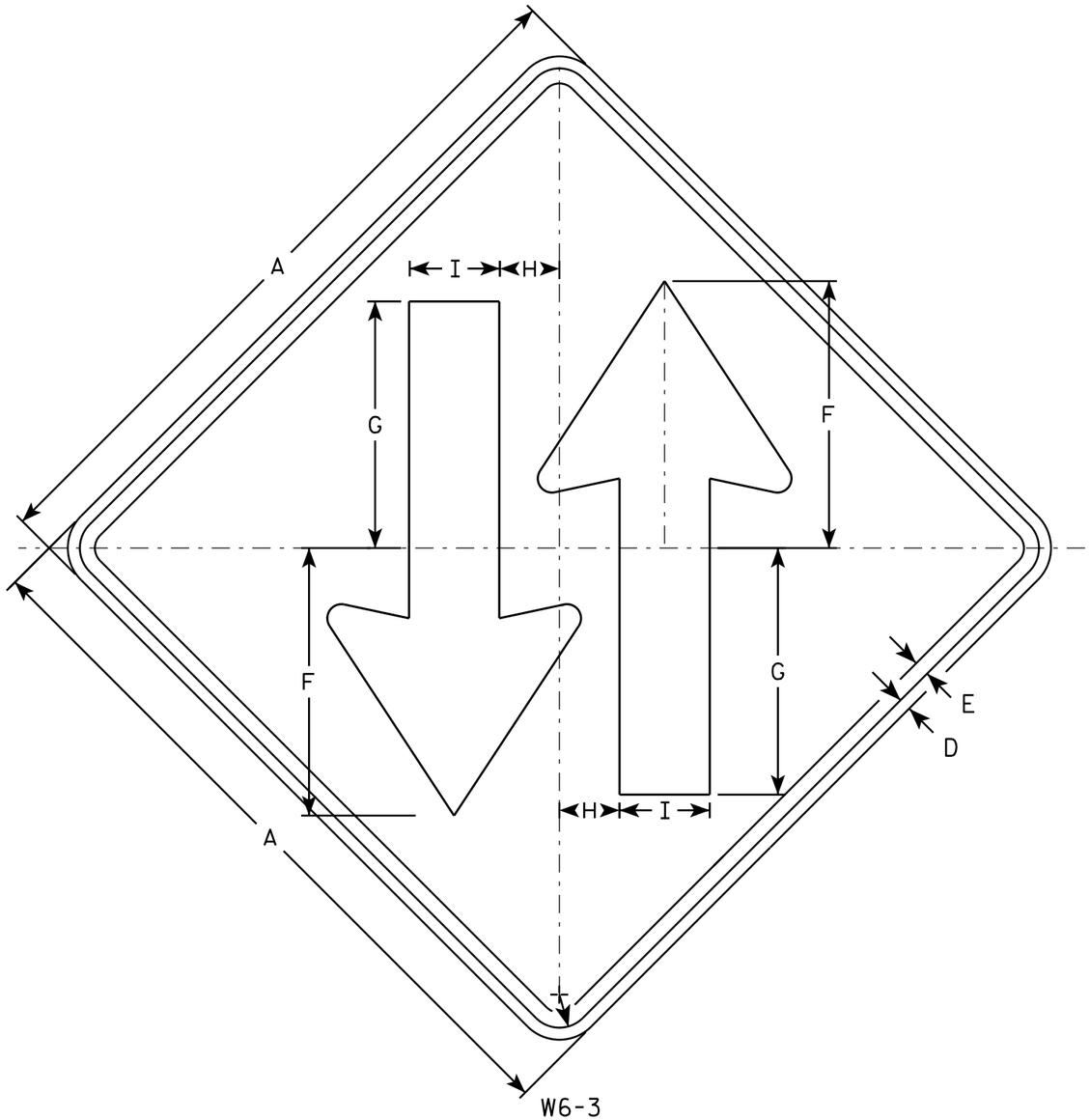
STANDARD SIGN
W4-4AL & W4-4AR

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-4A.2

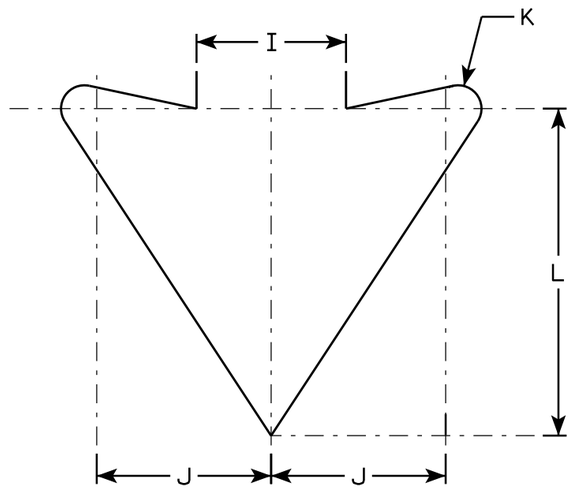
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 241 | E



W6-3

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE 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.



ARROW DETAIL

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.
1	30		1 3/8	1/2	5/8	11 1/8	10 1/4	2 1/2	3 3/4	4 3/8	5/8	8 1/4															6.25
2S	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
2M	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
3																											
4	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0
5	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0

STANDARD SIGN
W6-3

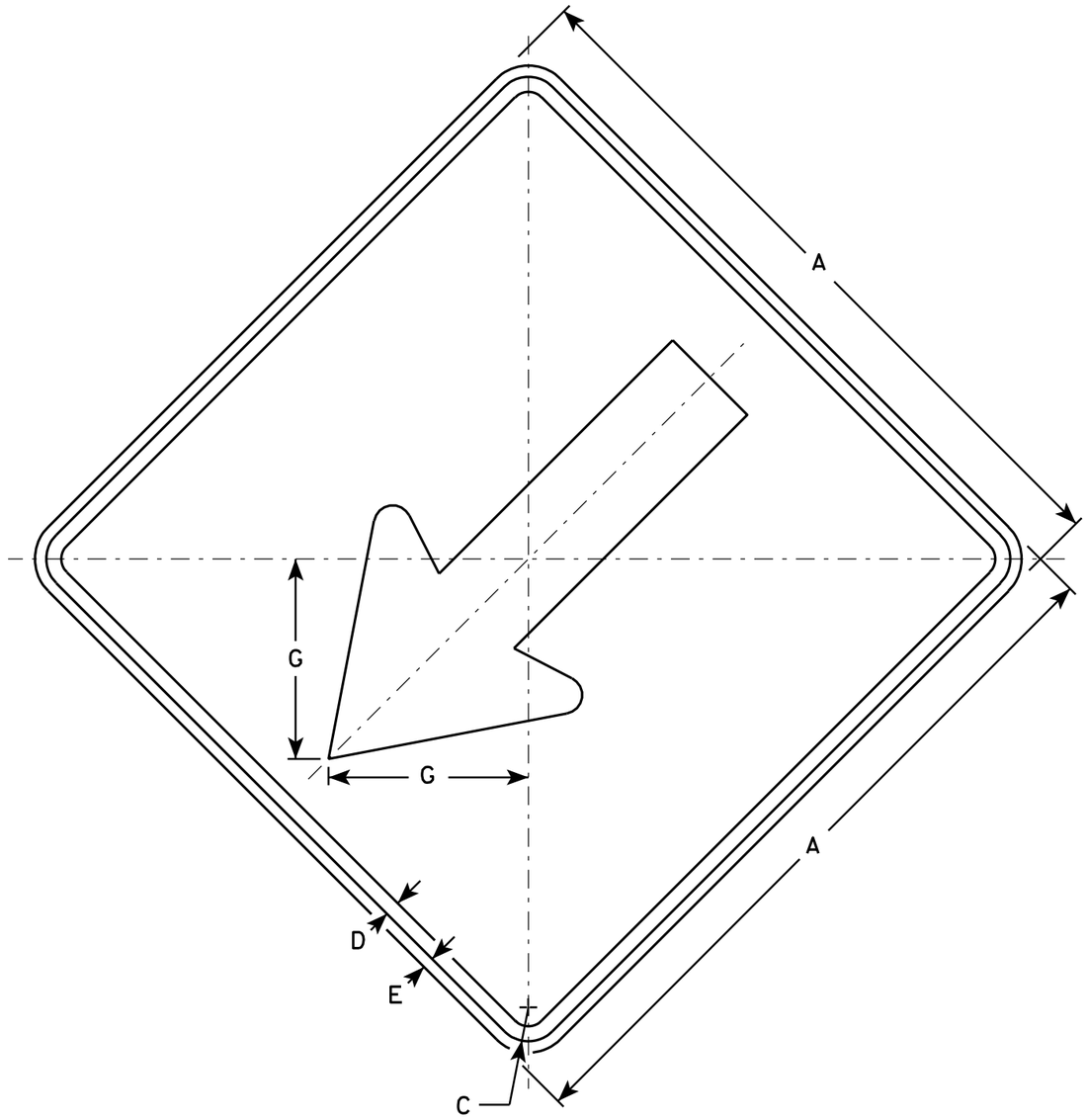
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/10/16 PLATE W6-3.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

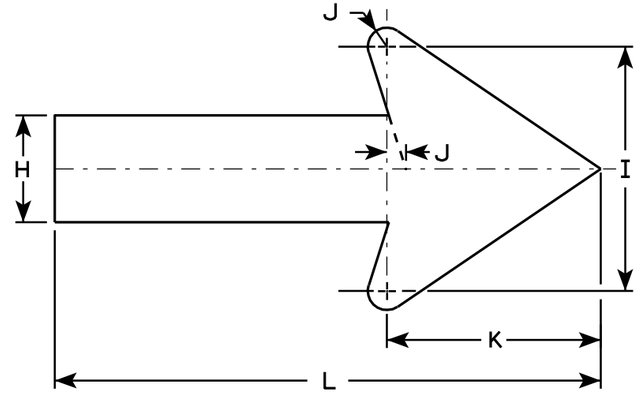
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W63.DGN PLOT DATE : 10-MAR-2016 14:01 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.080757:1.000000
WISDOT/CADDS SHEET 42



W12-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE 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.



ARROW DETAIL

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.
1																											
2S	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
2M	24		1 1/8	1/2	3/8		6 5/8	3 1/2	8	5/8	7	18															4
3	30		1 3/8	5/8	1/2		8 1/4	4 3/8	10	3/4	8 3/4	22 3/8															6.25
4	36		1 3/4	3/4	5/8		10 3/8	5 1/2	12 1/2	1	11	27 7/8															9.0
5	48		2 1/4	3/4	1		12 1/2	6 5/8	15	1 1/4	13 1/4	33 1/2															16

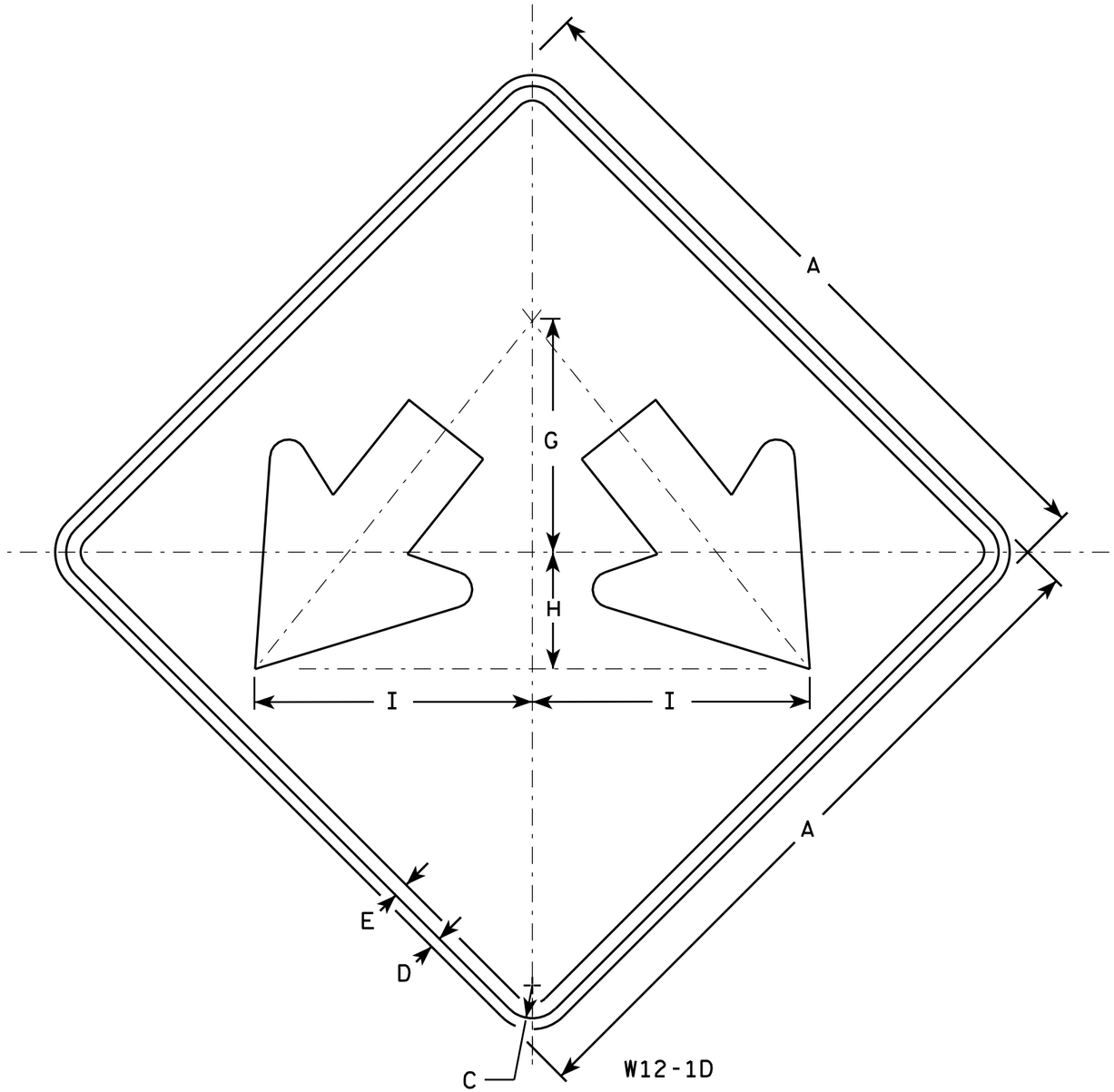
STANDARD SIGN
W12-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

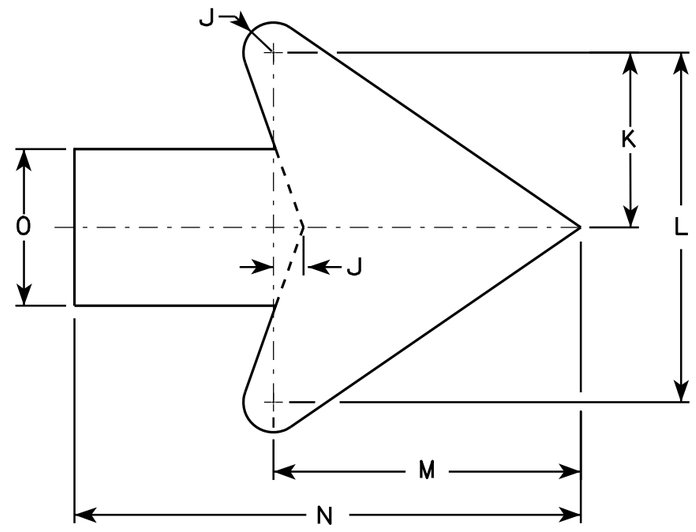
DATE 3/13/13 PLATE NO. W12-1.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 243 | E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE 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.



Arrow Detail

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.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

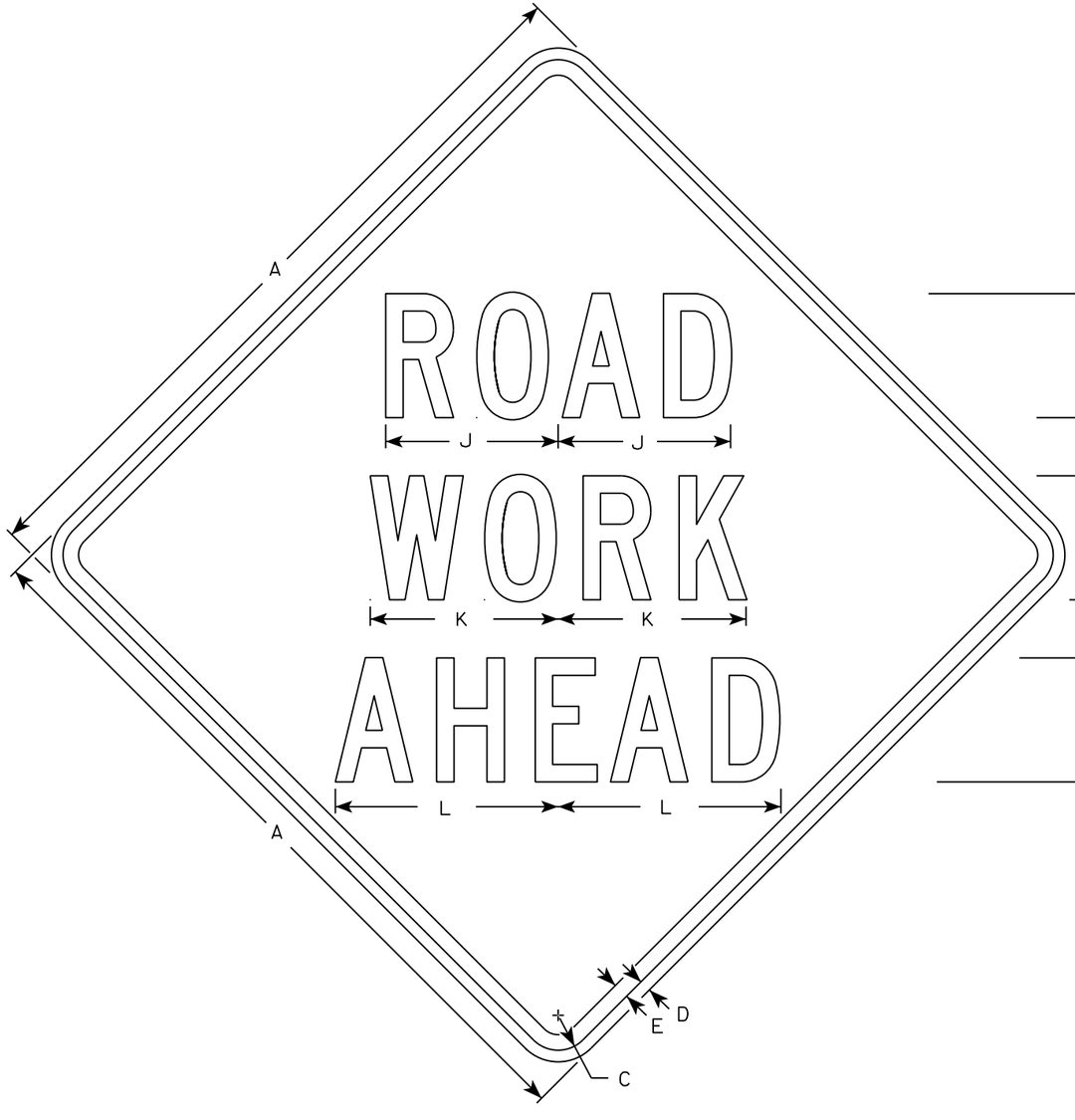
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 244	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W121D.DGN PLOT DATE : 13-MAR-2013 13:26 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 4.713802:1.000000

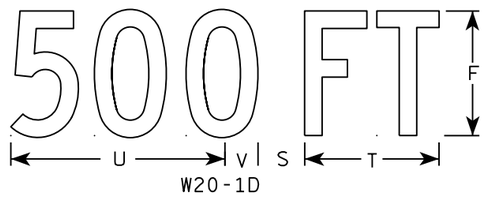
WISDOT/CADDS SHEET 42

7

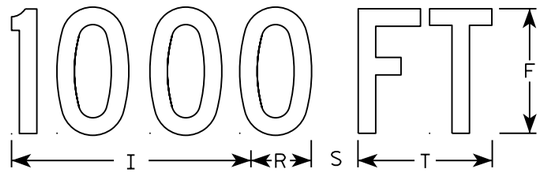
7



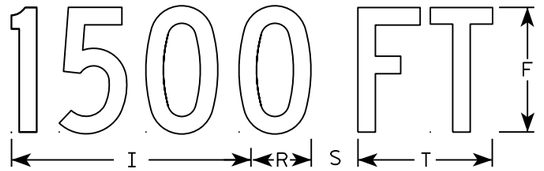
W20-1A



W20-1D

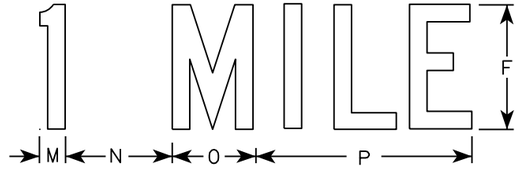


W20-1C

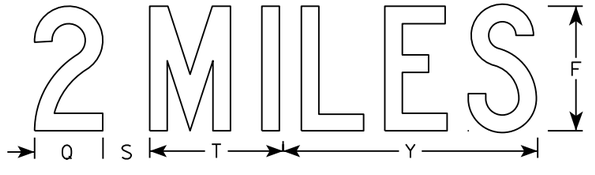


W20-1B

W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
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.

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.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

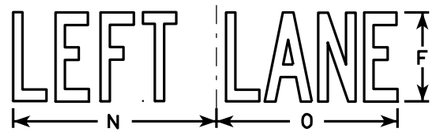
DATE 5/07/15 PLATE NO. W20-1.10

PROJECT NO:

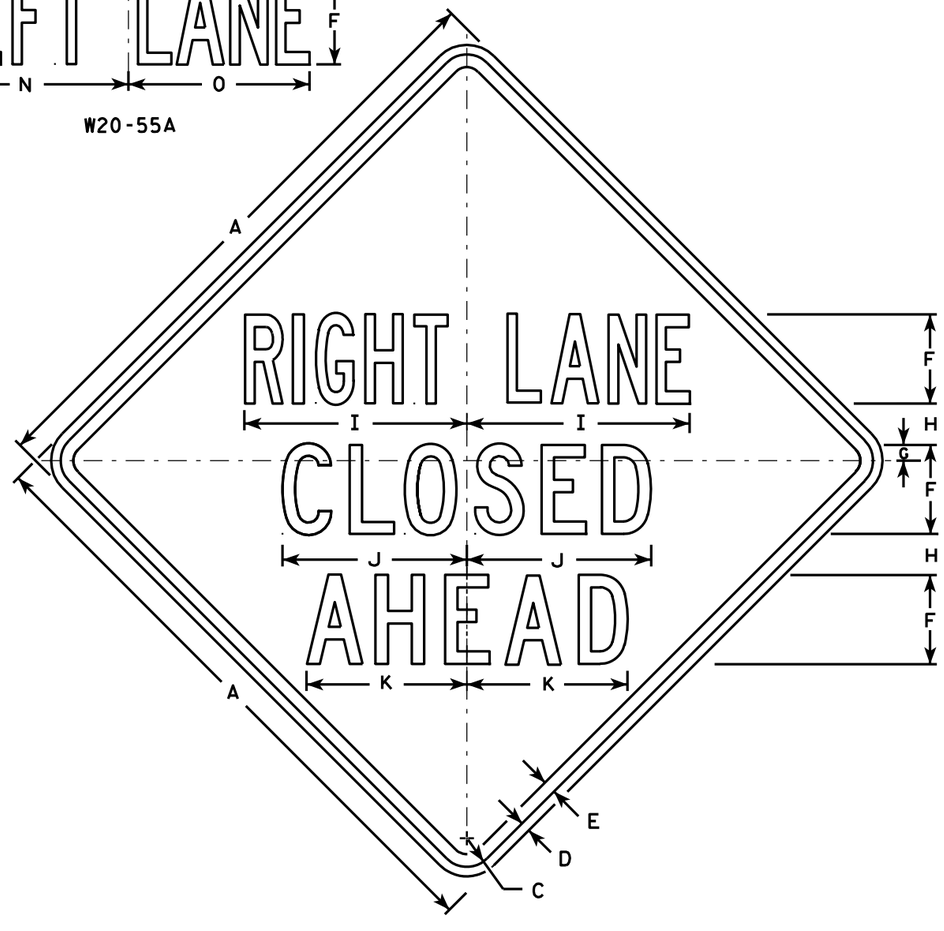
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$

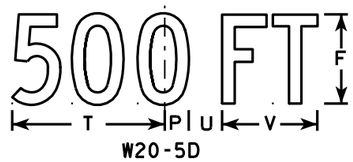
W20-56A



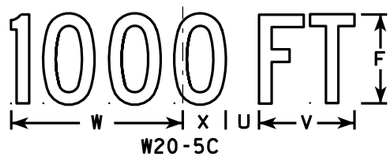
W20-55A



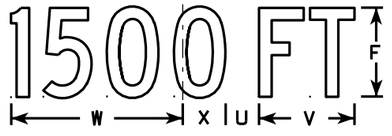
W20-5A



W20-5D



W20-5C



W20-5B

W20-5G

W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   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. " _____ LANE" is Series B.
   All other copy 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.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

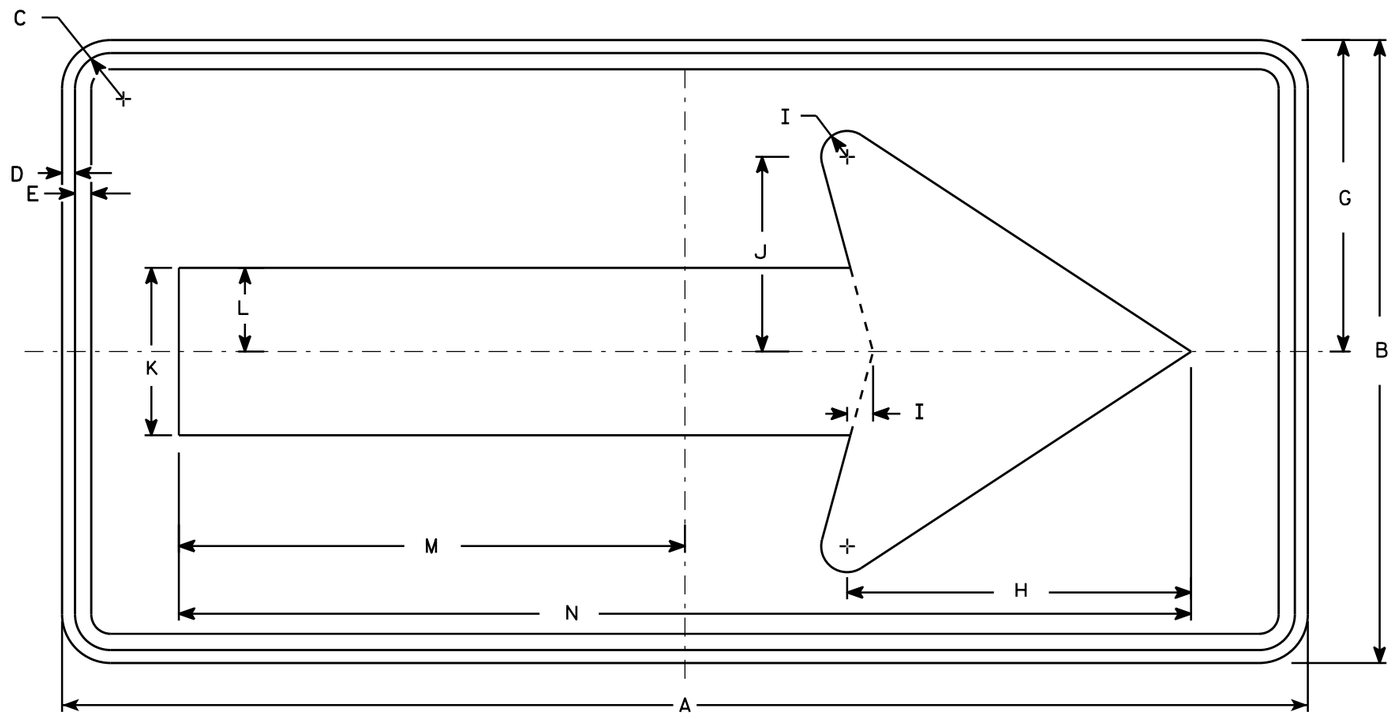
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 246 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   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	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.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

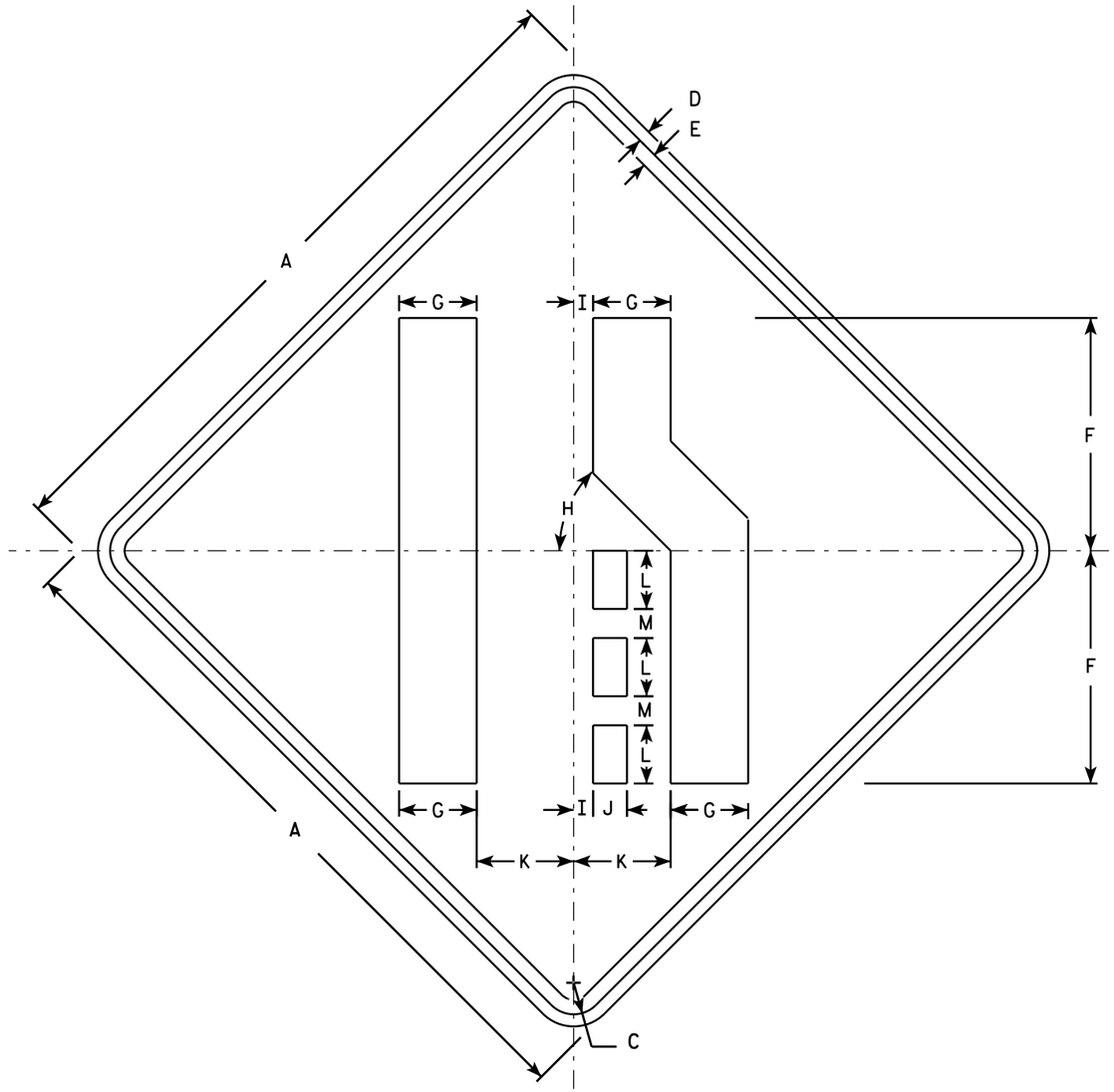
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   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. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

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.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 248 W04-2.1

PROJECT NO:

SHEET NO: E

WELCOME CENTER EXIT - 'A'

STATION	Real Station	Distance	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			Mass Ordinate
			Cut	Fill	Marsh Exc	Cut	Fill	Marsh Exc	Cut 1.00	Expanded Fill 1.20	Expanded Marsh Backfill 1.40	
21+16.11	2116.11	0.00	6.14	0.69	0.00	0	0	0	0	0	0	0.00
21+50	2150.00	33.89	7.62	1.22	0.00	9	1	0	9	1	0	7.20
21+75	2175.00	25.00	20.17	1.52	0.00	13	1	0	22	3	0	18.55
22+00	2200.00	25.00	43.92	2.27	0.00	30	2	0	51	5	0	46.12
22+45	2245.00	45.00	39.79	12.68	0.00	70	12	0	121	20	0	100.93
22+50	2250.00	5.00	25.82	13.89	0.00	6	2	0	127	23	0	104.05
22+63.61	2263.61	13.61	22.13	4.94	0.00	12	5	0	139	29	0	110.44
22+69.11	2269.11	5.50	24.38	0.00	0.00	5	1	0	144	29	0	114.57
22+75	2275.00	5.89	31.18	9.28	0.00	6	1	0	150	30	0	119.41
22+85	2285.00	10.00	23.09	33.97	0.00	10	8	0	160	40	0	119.85
23+00	2300.00	15.00	17.61	48.28	0.00	11	23	0	171	68	0	103.74
23+25	2325.00	25.00	17.23	39.18	0.00	16	40	0	187	116	0	71.28
23+50	2350.00	25.00	17.75	28.39	0.00	16	31	0	204	154	0	49.94
23+75	2375.00	25.00	18.51	12.18	0.00	17	19	0	220	176	0	44.19
24+00	2400.00	25.00	20.04	9.29	0.00	18	10	0	238	188	0	50.11
24+25	2425.00	25.00	16.64	12.39	0.00	17	10	0	255	200	0	55.05
24+50	2450.00	25.00	7.83	35.60	0.00	11	22	0	267	227	0	39.71
24+75	2475.00	25.00	22.61	51.25	8.31	14	40	4	281	275	5	1.71
25+00	2500.00	25.00	20.30	95.74	60.87	20	68	32	300	357	50	-92.11
25+50	2550.00	50.00	0.00	203.16	266.40	19	277	303	319	689	474	-708.45
26+00	2600.00	50.00	0.00	199.54	279.64	0	373	506	319	1,136	1,182	-1,661.49
26+15.5	2615.50	15.50	0.00	240.82	280.49	0	126	161	319	1,288	1,407	-1,973.87
26+24.62	2624.62	9.13	0.00	242.91	276.33	0	82	94	319	1,386	1,539	-2,166.08
26+50	2650.00	25.38	0.00	247.33	264.02	0	230	254	319	1,662	1,895	-2,696.49
26+50.98	2650.98	0.98	0.00	246.89	262.51	0	9	10	319	1,673	1,908	-2,716.70
26+58.61	2658.61	7.63	0.00	236.29	265.60	0	68	75	319	1,755	2,012	-2,873.26
27+00	2700.00	41.39	0.00	159.72	238.59	0	304	386	319	2,119	2,553	-3,624.04
27+50	2750.00	50.00	0.00	121.01	199.29	0	260	405	319	2,431	3,121	-4,341.40
27+59.4	2759.40	9.40	0.00	117.99	198.41	0	42	69	319	2,481	3,218	-4,460.50
27+90.55	2790.55	31.15	0.00	144.78	368.41	0	152	327	319	2,663	3,676	-4,969.37
28+00	2800.00	9.45	0.00	295.69	257.58	0	77	110	319	2,756	3,829	-5,171.52
28+18.13	2818.13	18.13	159.39	0.00	0.00	54	99	86	373	2,875	3,950	-5,323.63
						373	2,396	2,822				

TRUCK PARKING - 'B'

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) Marsh Exc	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) Marsh Exc	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded Marsh Backfill 1.40	Mass Ordinate
07+50.05	750.05	0.00	6.12	14.67	0.00	0	0	0	0	0	0	0.00
08+00	800.00	49.95	5.22	15.74	0.00	10	28	0	10	34	0	-23.28
08+50	850.00	50.00	8.61	18.04	0.00	13	31	0	23	71	0	-48.01
09+00	900.00	50.00	12.81	24.87	0.00	20	40	0	43	119	0	-75.85
09+50	950.00	50.00	35.37	36.63	0.00	45	57	0	88	187	0	-99.58
						88	156	0				

RV EXPANSION - 'C'

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) Marsh Exc	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) Marsh Exc	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded Marsh Backfill 1.40	Mass Ordinate
19+00	1900.00	0.00	6.52	0.00	0.00	0	0	0	0	0	0	0.00
19+14.99	1914.99	14.99	5.55	0.00	0.00	3	0	0	3	0	0	3.35
19+25	1925.00	10.01	5.45	0.00	0.00	2	0	0	5	0	0	5.39
19+50	1950.00	25.00	5.66	0.00	0.00	5	0	0	11	0	0	10.53
19+75	1975.00	25.00	6.29	0.00	0.00	6	0	0	16	0	0	16.06
20+00.05	2000.05	25.05	6.28	0.00	0.00	6	0	0	22	0	0	21.89
20+25	2025.00	24.95	5.94	0.00	0.00	6	0	0	28	0	0	27.54
20+50	2050.00	25.00	38.49	0.00	0.00	21	0	0	48	0	0	48.11
20+75	2075.00	25.00	64.60	0.00	0.00	48	0	0	96	0	0	95.83
21+00	2100.00	25.00	62.17	0.00	0.00	59	0	0	155	0	0	154.52
21+25	2125.00	25.00	60.22	0.00	0.00	57	0	0	211	0	0	211.18
21+50	2150.00	25.00	150.34	0.00	0.00	97	0	0	309	0	0	308.66
21+75	2175.00	25.00	108.55	0.00	0.00	120	0	0	429	0	0	428.52
22+00	2200.00	25.00	148.53	0.00	0.00	119	0	0	548	0	0	547.54
22+25	2225.00	25.00	171.72	0.00	0.00	148	0	0	696	0	0	695.80
22+50	2250.00	25.00	135.42	0.00	0.00	142	0	0	838	0	0	838.00
22+75	2275.00	25.00	203.03	0.00	0.00	157	0	0	995	0	0	994.68
23+00	2300.00	25.00	69.10	0.00	0.00	126	0	0	1,121	0	0	1,120.67
23+22	2322.00	22.00	19.07	0.00	0.00	36	0	0	1,157	0	0	1,156.59
						1,157	0	0				

120TH AVE - 'D'

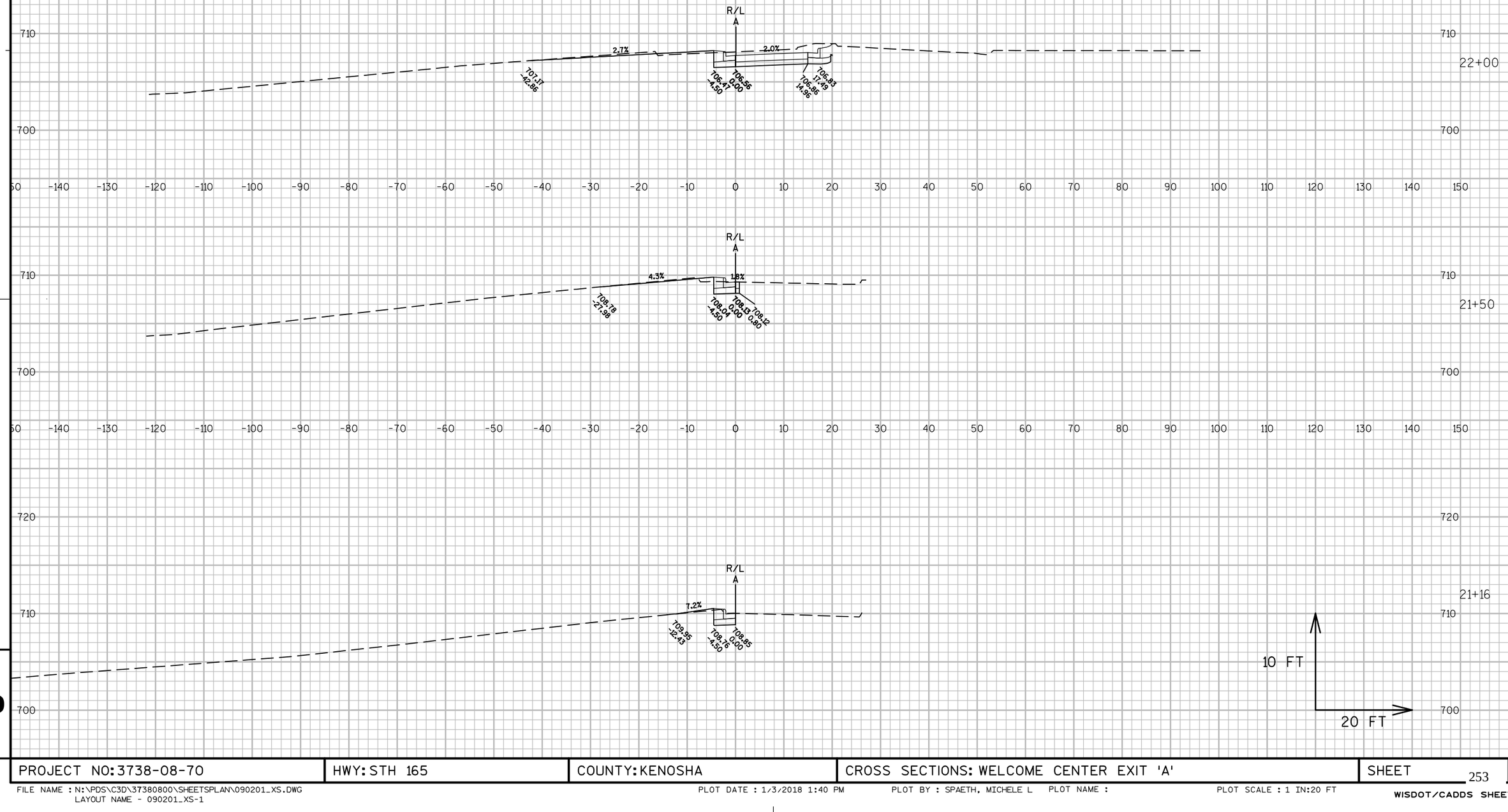
STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) Marsh Exc	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) Marsh Exc	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded Marsh Backfill 1.40	Mass Ordinate
92+30.12	9230.12	0.00	23.61	0.00	0.00	0	0	0	0	0	0	0.00
92+50	9250.00	19.88	24.20	0.34	0.00	18	0	0	18	0	0	17.45
93+00	9300.00	50.00	24.94	1.34	0.00	45	2	0	63	2	0	61.09
93+50	9350.00	50.00	23.55	1.65	0.00	45	3	0	108	5	0	102.66
94+00	9400.00	50.00	25.74	0.36	0.00	46	2	0	154	8	0	146.05
94+50	9450.00	50.00	26.92	0.02	0.00	49	0	0	202	8	0	194.38
95+00	9500.00	50.00	26.67	0.01	0.00	50	0	0	252	8	0	243.97
95+50	9550.00	50.00	18.12	0.04	0.00	41	0	0	293	8	0	285.39
95+99.95	9599.95	49.95	10.04	0.10	0.00	26	0	0	320	8	0	311.28
						320	7	0				

RAMP EDGE - 'E'

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) Marsh Exc	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) Marsh Exc	Cumulative Vol (CY) Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded Marsh Backfill 1.40	Mass Ordinate
100+00	10000.00	0.00	4.76	10.74	0.00	0	0	0	0	0	0	0.00
100+50	10050.00	50.00	4.49	131.28	0.00	9	131	0	9	158	0	-149.23
101+00	10100.00	50.00	20.46	76.32	0.00	23	192	0	32	388	0	-356.80
101+50	10150.00	50.00	29.23	46.50	0.00	46	114	0	78	525	0	-447.26
102+00	10200.00	50.00	29.59	23.92	0.00	54	65	0	132	603	0	-471.05
102+50	10250.00	50.00	33.54	6.26	0.00	58	28	0	191	637	0	-446.13
103+00	10300.00	50.00	34.21	0.16	0.00	63	6	0	253	644	0	-390.54
103+50	10350.00	50.00	37.64	0.03	0.00	67	0	0	320	644	0	-324.22
104+00	10400.00	50.00	43.00	0.11	0.00	75	0	0	394	644	0	-249.71
104+50	10450.00	50.00	53.33	98.92	0.00	89	92	0	484	754	0	-270.54
105+00	10500.00	50.00	133.62	38.49	0.00	173	127	0	657	907	0	-250.11
105+50	10550.00	50.00	197.76	0.00	0.00	307	36	0	964	950	0	13.96
						964	791	0				

STH 165 - 'J'

STATION	Real Station	Distance	AREA (SF) Cut	AREA (SF) Fill	AREA (SF) Marsh Exc	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Incremental Vol (CY) (Unadjusted) Marsh Exc	Cumulative Vol (CY) Cut **1.00**	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Expanded Marsh Backfill 1.40	Mass Ordinate
406+00.03	40600.03	0.00	157.49	0.00	0.00	0	0	0	0	0	0	0.00
406+50	40650.00	49.97	38.00	1.51	0.00	181	1	0	181	2	0	179.23
407+00	40700.00	50.00	26.19	27.03	0.00	59	26	0	240	33	0	206.95
407+50	40750.00	50.00	25.10	27.20	0.00	47	50	0	288	94	0	194.18
408+00	40800.00	50.00	24.34	27.78	0.00	46	51	0	334	155	0	178.87
408+50	40850.00	50.00	24.93	23.47	0.00	46	47	0	379	212	0	167.56
409+00	40900.00	50.00	25.68	21.71	0.00	47	42	0	426	262	0	164.22
409+50	40950.00	50.00	27.17	18.56	0.00	49	37	0	475	307	0	168.41
410+00	41000.00	50.00	28.84	7.89	0.00	52	24	0	527	336	0	190.88
410+50	41050.00	50.00	27.02	1.58	0.00	52	9	0	579	347	0	232.08
411+00	41100.00	50.00	23.73	2.14	0.00	47	3	0	626	351	0	274.94
411+50	41150.00	50.00	60.44	0.00	0.00	78	2	0	704	353	0	350.50
411+79.37	41179.37	29.37	141.11	0.00	0.00	110	0	0	813	353	0	460.13
						813	294	0				

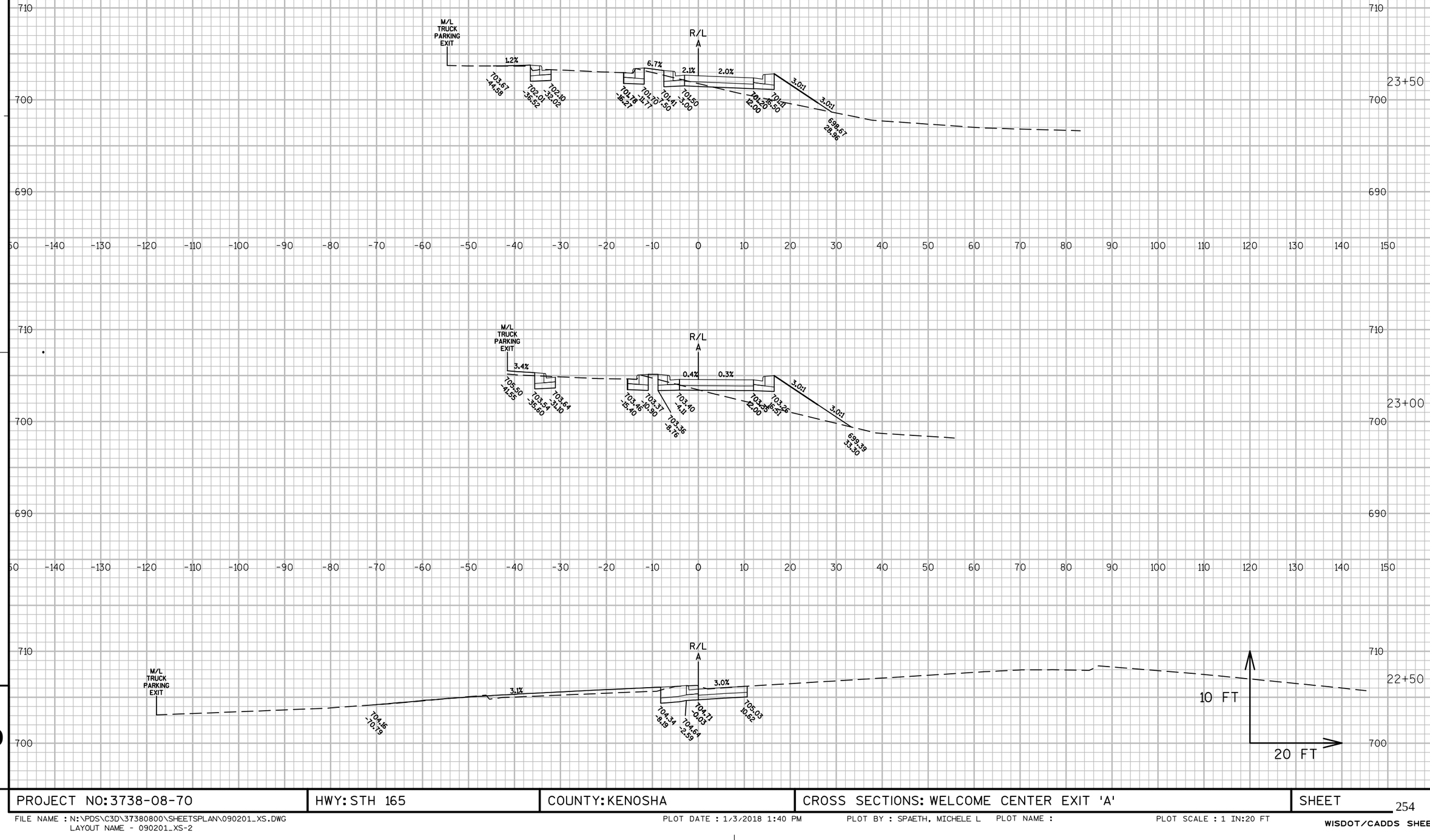


9

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: WELCOME CENTER EXIT 'A'	SHEET 253	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS-1
PLOT DATE : 1/3/2018 1:40 PM
PLOT BY : SPAETH, MICHELE L
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: WELCOME CENTER EXIT 'A'	SHEET 254	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS-2

PLOT DATE : 1/3/2018 1:40 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

LEGEND

MARSH EXCAVATION

25+00

M/L TRUCK PARKING EXIT

R/L A

0.0% 1.2% 0.3% 2.0% 3.0:1

697.90 -50.54 | 697.89 -23.70 | 698.33 0.00 | 698.07 0.00 | 697.82 12.00 | 697.74 15.58 | 695.21 9.92 | 695.48 26.33 | 691.40 14.29 | 691.19 25.33

24+50

M/L TRUCK PARKING EXIT

R/L A

1.7% 1.1% 2.0% 3.0:1

698.90 -32.30 | 698.84 -27.46 | 698.50 -7.52 | 698.59 -3.02 | 698.56 0.00 | 698.35 11.99 | 698.23 15.49 | 696.61 26.50

24+00

M/L TRUCK PARKING EXIT

R/L A

9.4% 3.4% 3.0:1

700.24 -17.27 | 700.16 -15.76 | 698.66 -7.50 | 698.75 -3.00 | 698.24 12.04 | 698.15 15.54 | 698.25 24.36

10 FT

20 FT

9

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: WELCOME CENTER EXIT 'A'	SHEET 255	E

LEGEND

MARSH EXCAVATION

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: WELCOME CENTER EXIT 'A'	SHEET 256	E

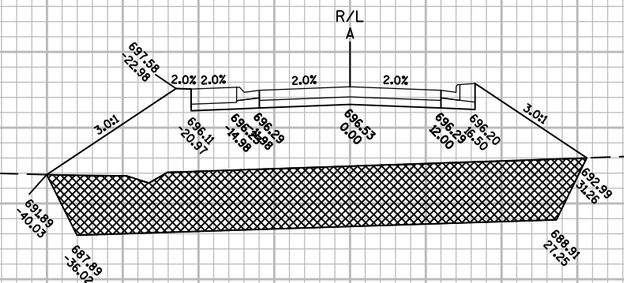
FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS-4

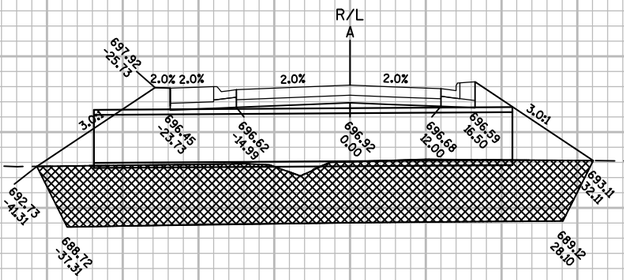
PLOT DATE : 1/3/2018 1:40 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

LEGEND

MARSH EXCAVATION





700 690 680

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

26+50

26+25

10 FT

20 FT

9

9

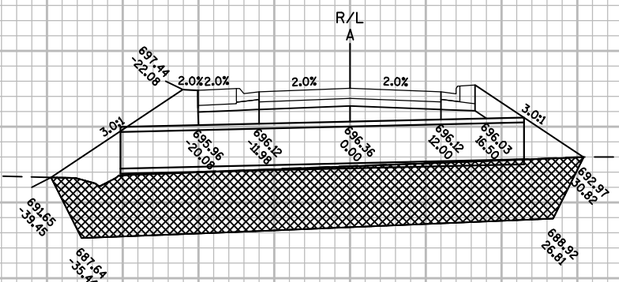
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: WELCOME CENTER EXIT 'A'	SHEET 257	E

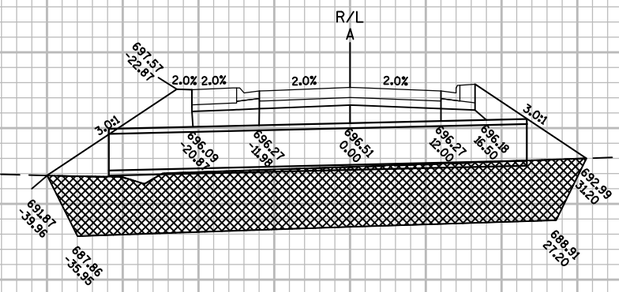
FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS-5

PLOT DATE : 1/3/2018 1:40 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

LEGEND

MARSH EXCAVATION





700 690 680

-150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

26+59

26+51

10 FT

20 FT

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: WELCOME CENTER EXIT 'A'	SHEET 258	E

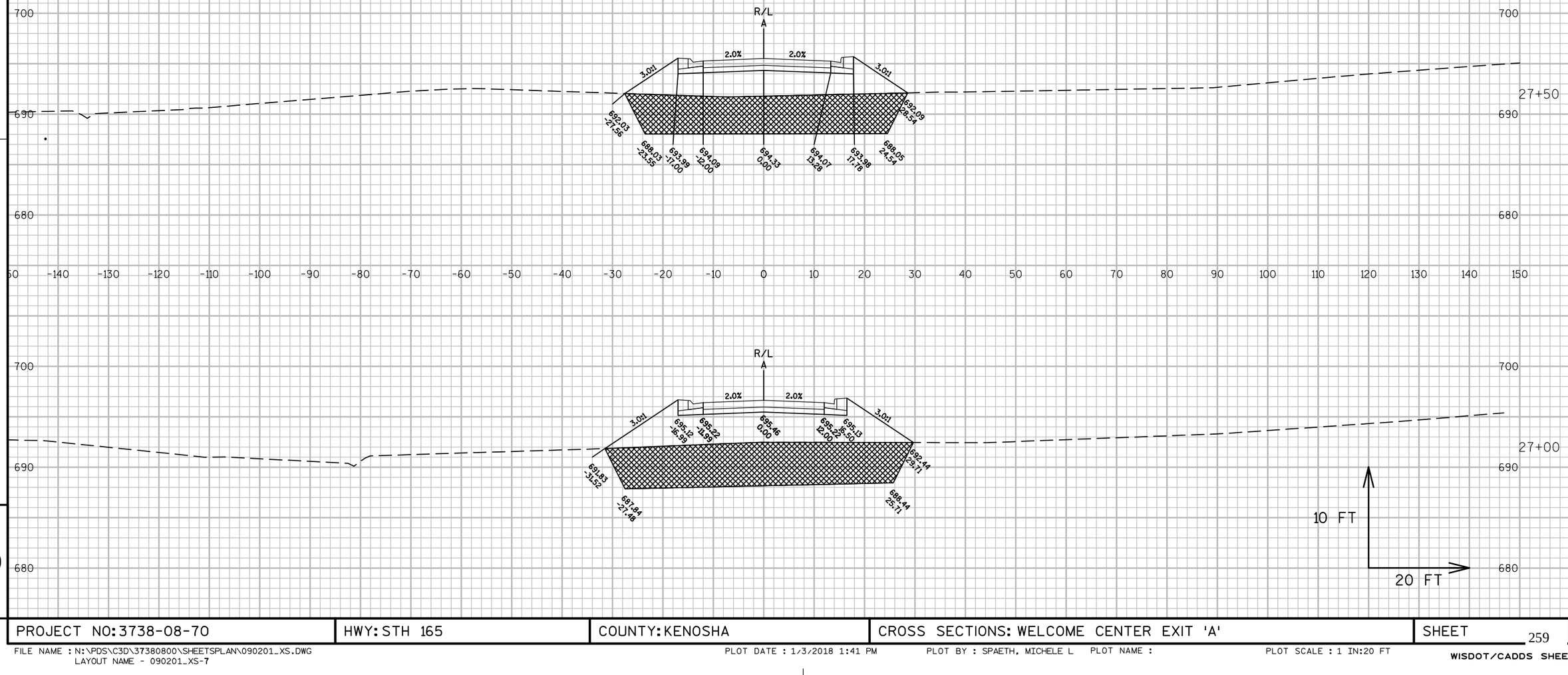
FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS-6

PLOT DATE : 1/3/2018 1:40 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

LEGEND

MARSH EXCAVATION



PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: WELCOME CENTER EXIT 'A'	SHEET 259	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS-7

PLOT DATE : 1/3/2018 1:41 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

LEGEND

MARSH EXCAVATION

28+18

R/L
A

2.1%
3.3%
692.82
0.79
695.73
44.69
696.61
132.96

28+00

R/L
A

3.0%
10.9%
3.1%
1.8%
2.1%
2.4%
0.3%
692.03
-51.50
692.34
-41.45
692.42
-25.92
692.62
-19.21
693.21
0.00
692.26
8.42
693.78
32.28
693.91
43.06
695.59
60.53
690.61
98.48
695.05
145.35
690.98
140.66

27+59

R/L
A

2.0%
2.0%
3.0:1
3.0:1
691.92
-21.28
692.03
19.00
687.91
-23.25
693.78
-11.00
693.88
-12.00
694.12
0.00
693.84
14.22
693.75
18.72
687.97
24.99

10 FT
20 FT

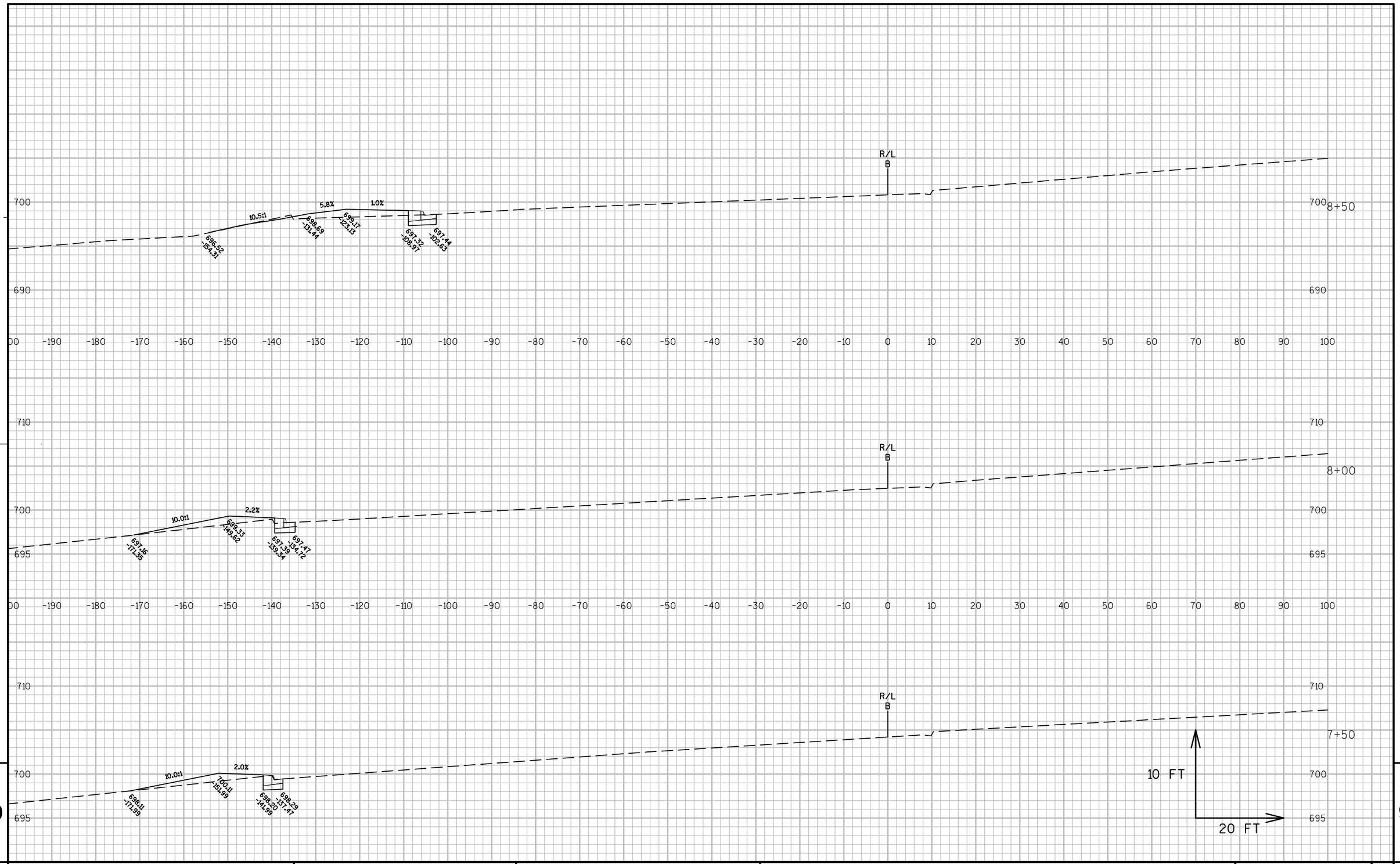
9

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: WELCOME CENTER EXIT 'A'	SHEET 260	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090201_XS-8

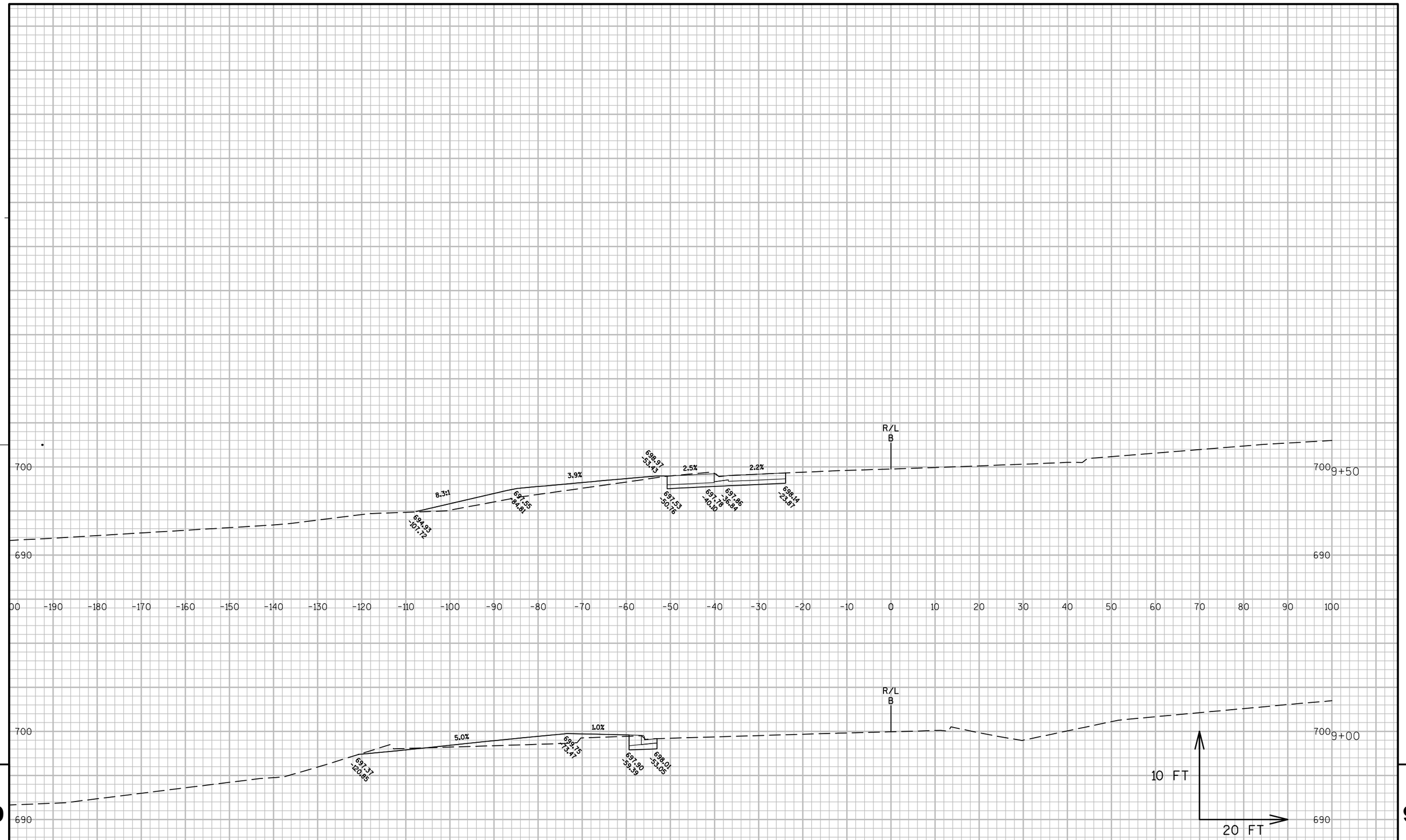
PLOT DATE : 1/3/2018 1:41 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT



PROJECT NO: 3838-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: TRUCK PARKING 'B'	SHEET 261	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090202_XS.DWG PLOT DATE : 1/3/2018 1:42 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1:20_XREF

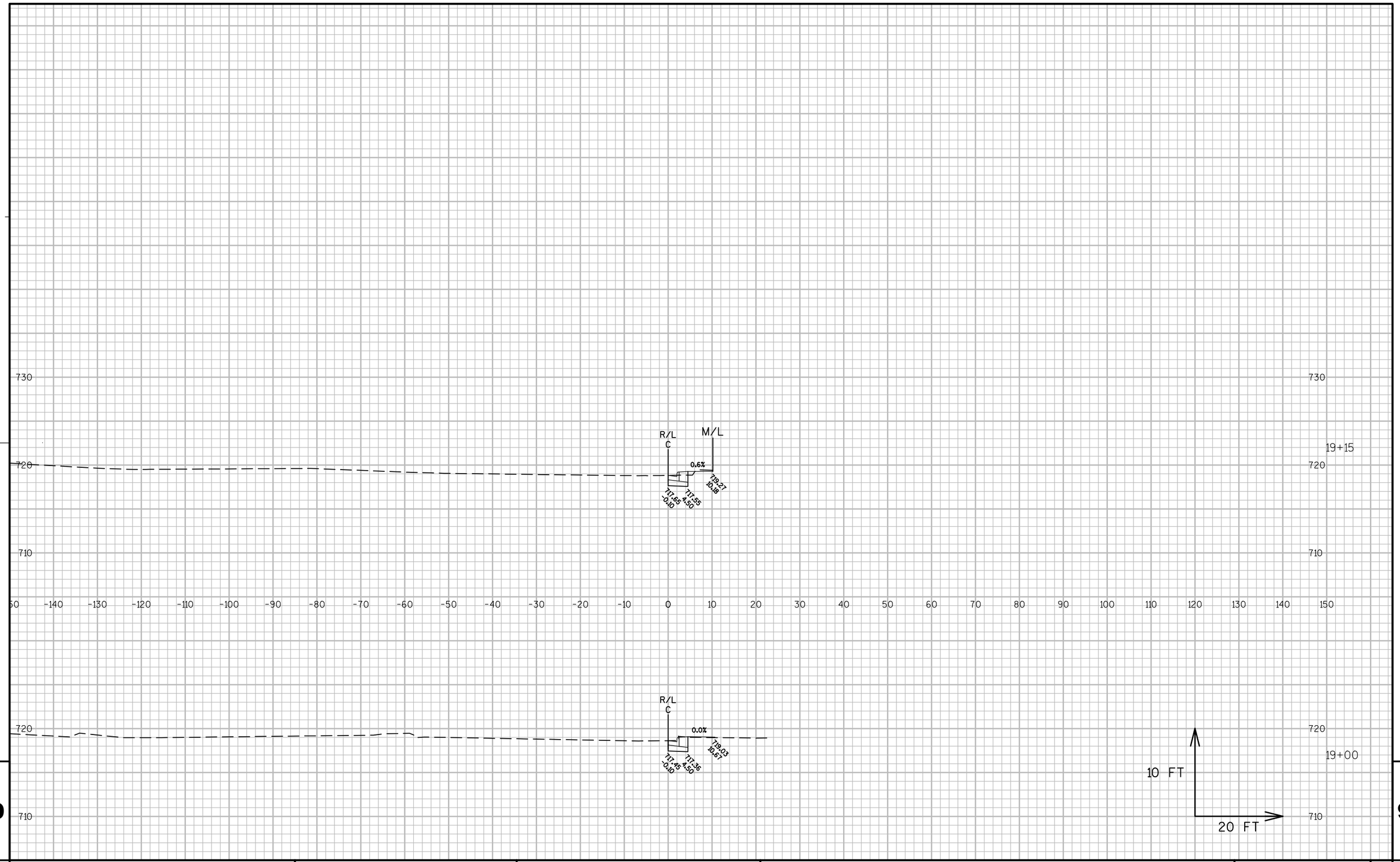
WISDOT/CADDS SHEET 49



PROJECT NO: 3838-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: TRUCK PARKING 'B'	SHEET 262	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090202_XS.DWG PLOT DATE : 1/3/2018 1:42 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



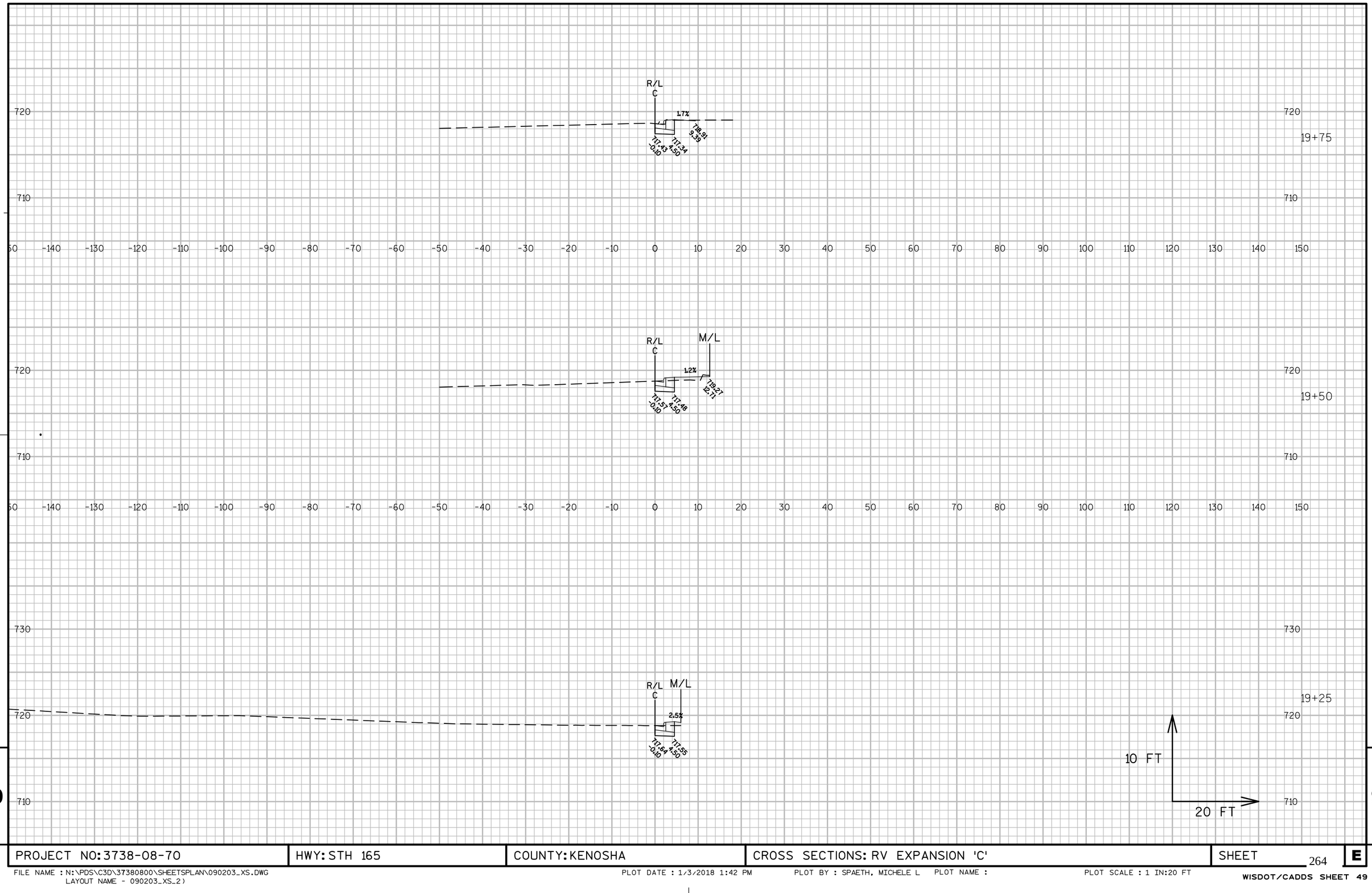
9

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RV EXPANSION 'C'	SHEET 263	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_XS_1)

PLOT DATE : 1/3/2018 1:42 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

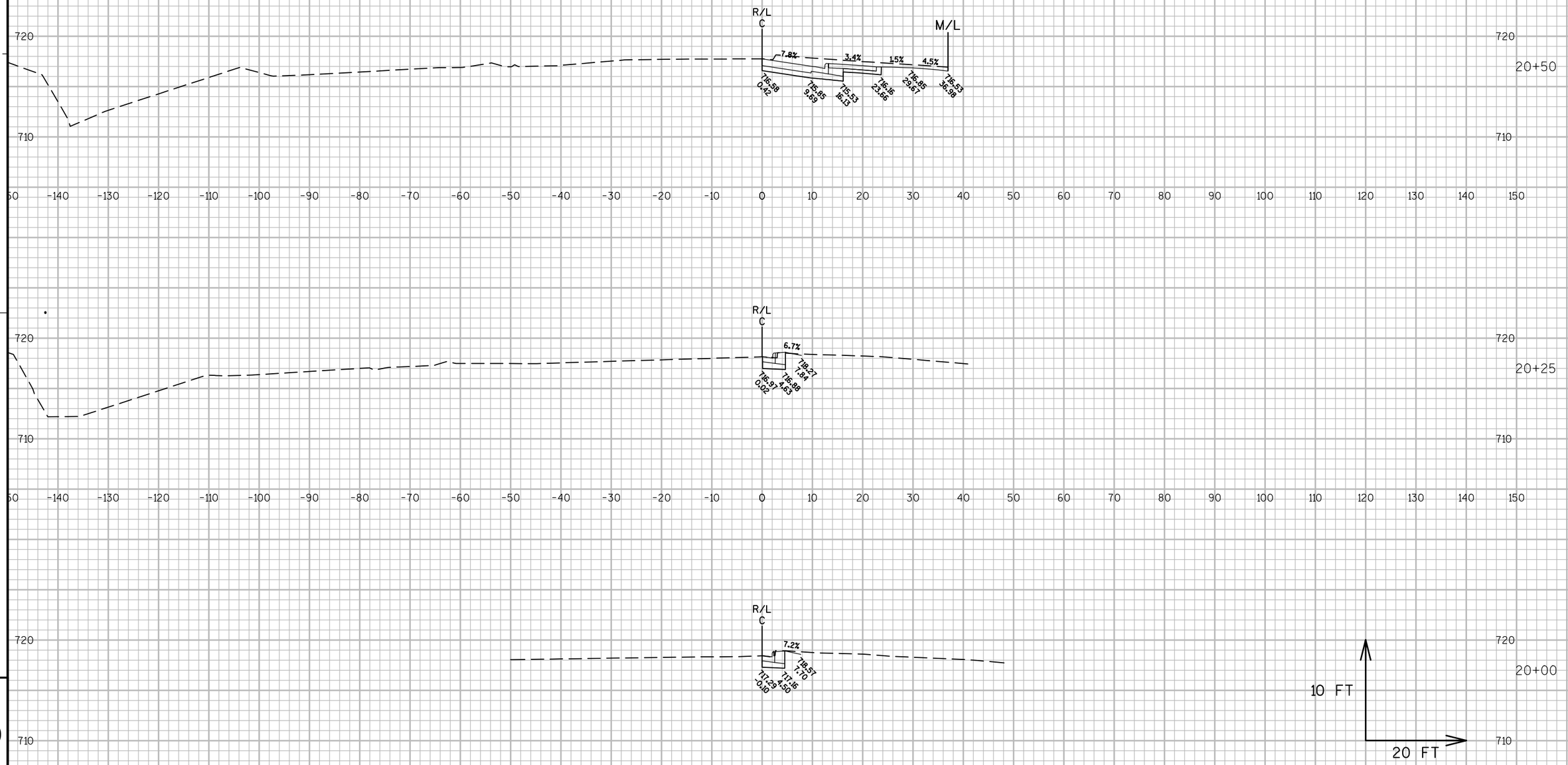


9

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RV EXPANSION 'C'	SHEET 264	E

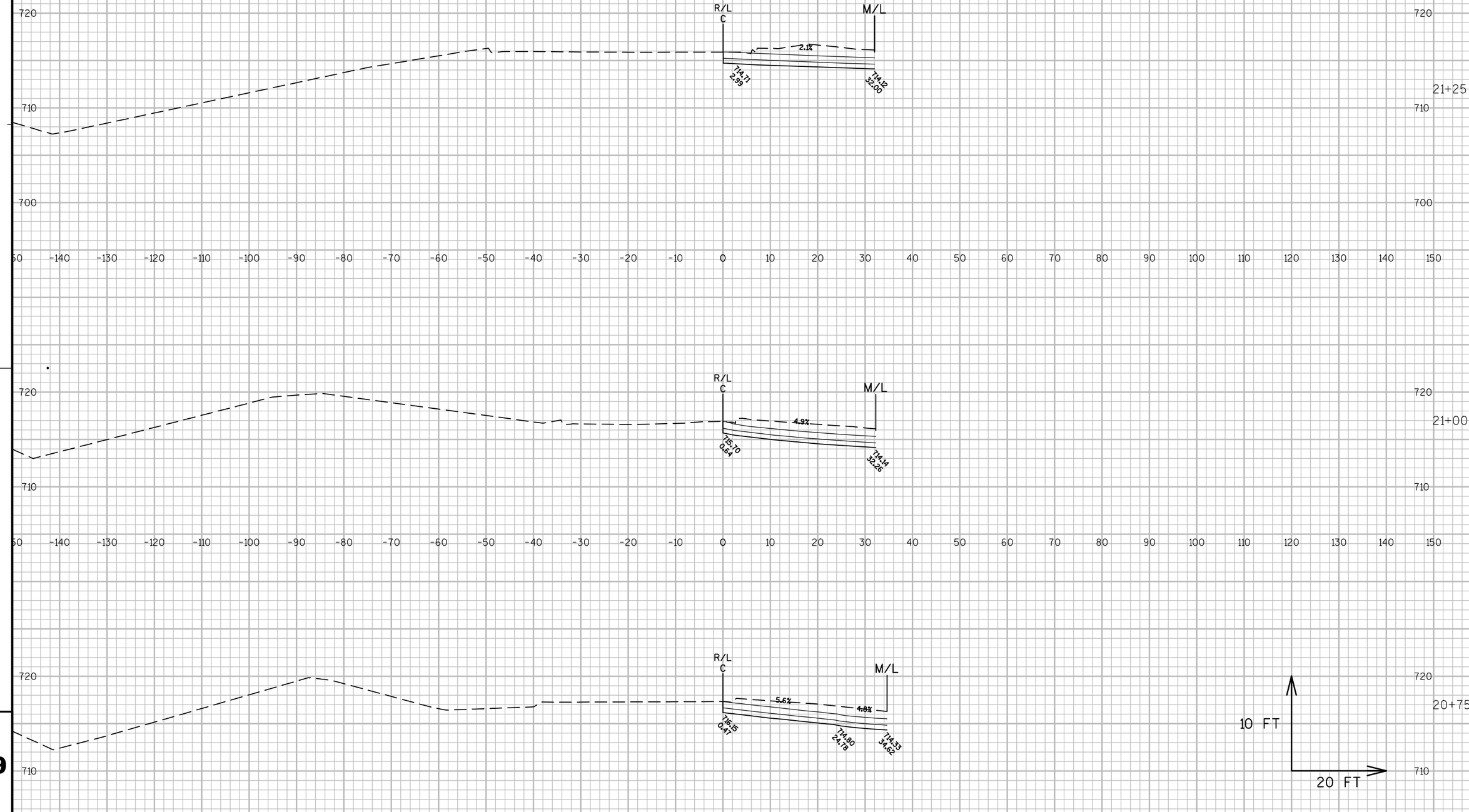
FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_XS_2)
PLOT DATE : 1/3/2018 1:42 PM
PLOT BY : SPAETH, MICHELE L PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RV EXPANSION 'C'	SHEET 265	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_XS_3)

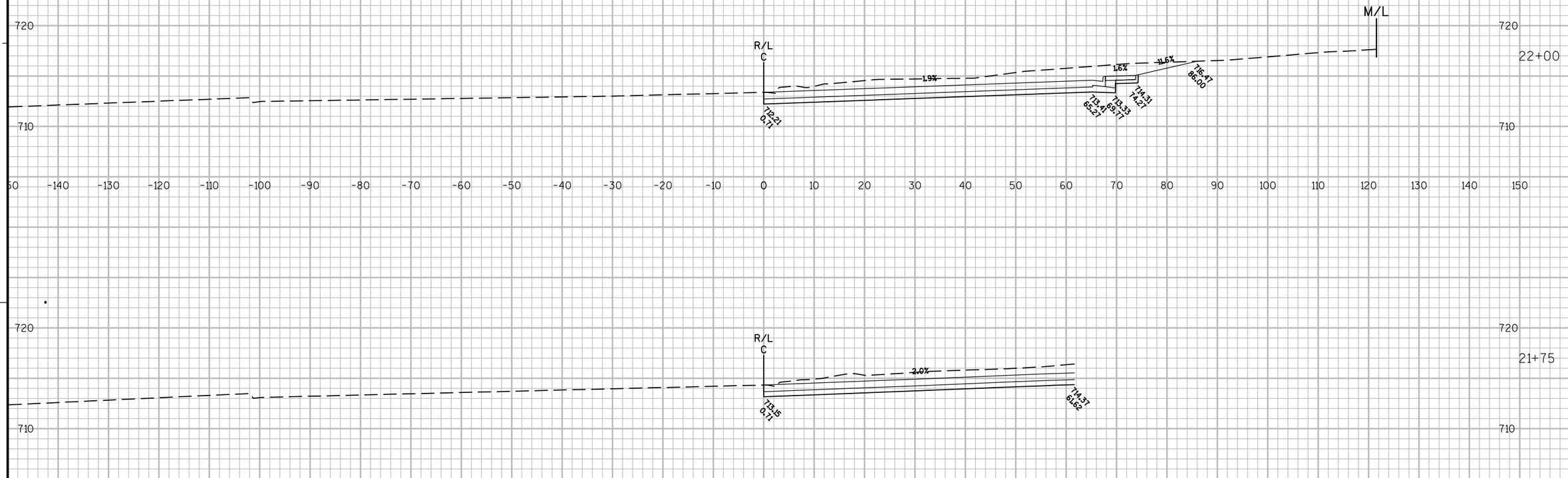
PLOT DATE : 1/3/2018 1:42 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

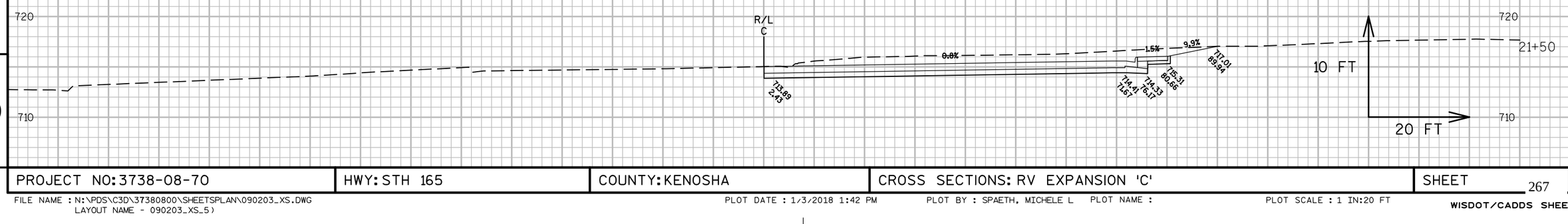


PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RV EXPANSION 'C'	SHEET 266	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_XS_4)

PLOT DATE : 1/3/2018 1:42 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

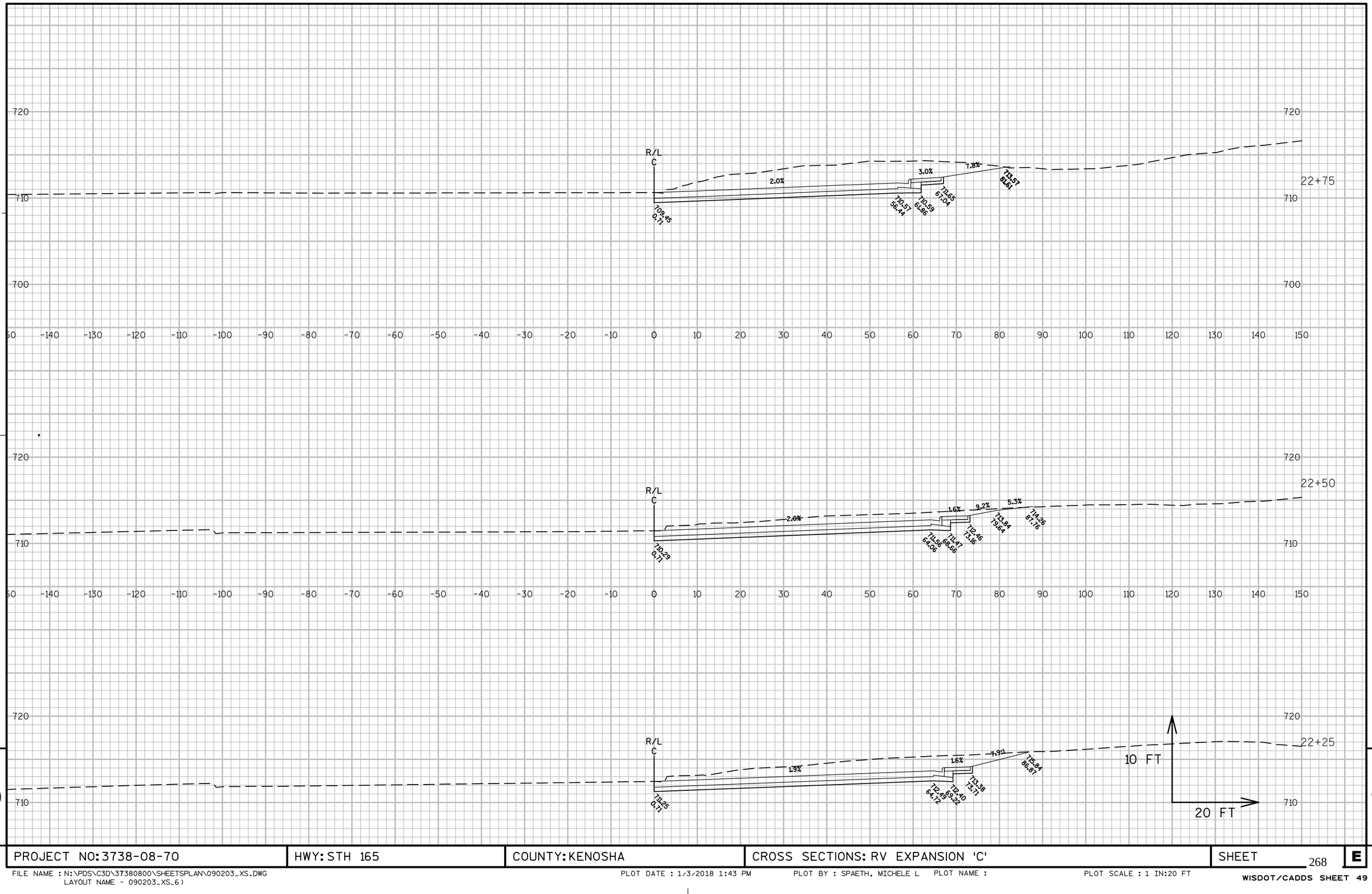




9

9

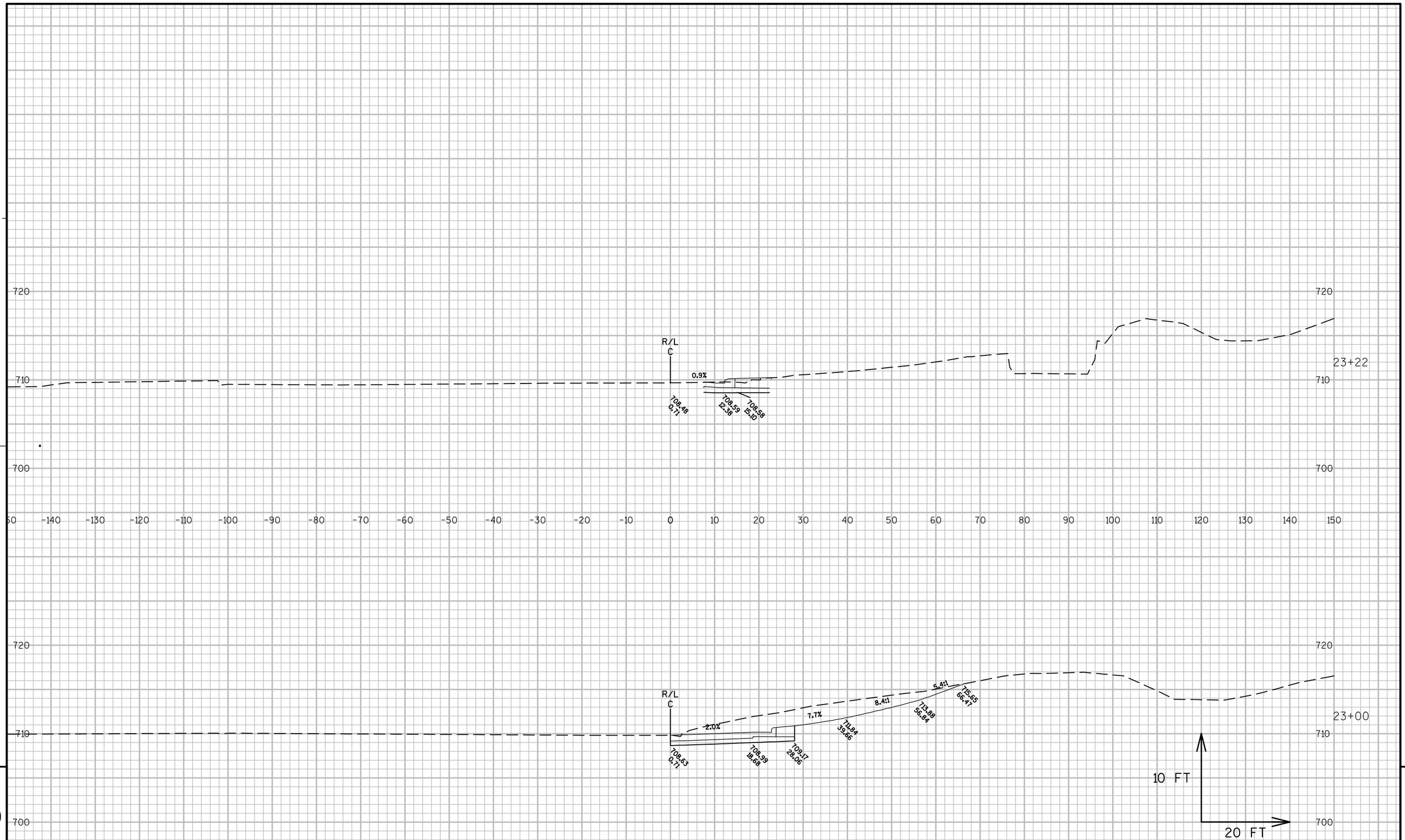
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RV EXPANSION 'C'	SHEET 267	E



9

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RV EXPANSION 'C'	SHEET 268	E



9

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RV EXPANSION 'C'	SHEET 269	E

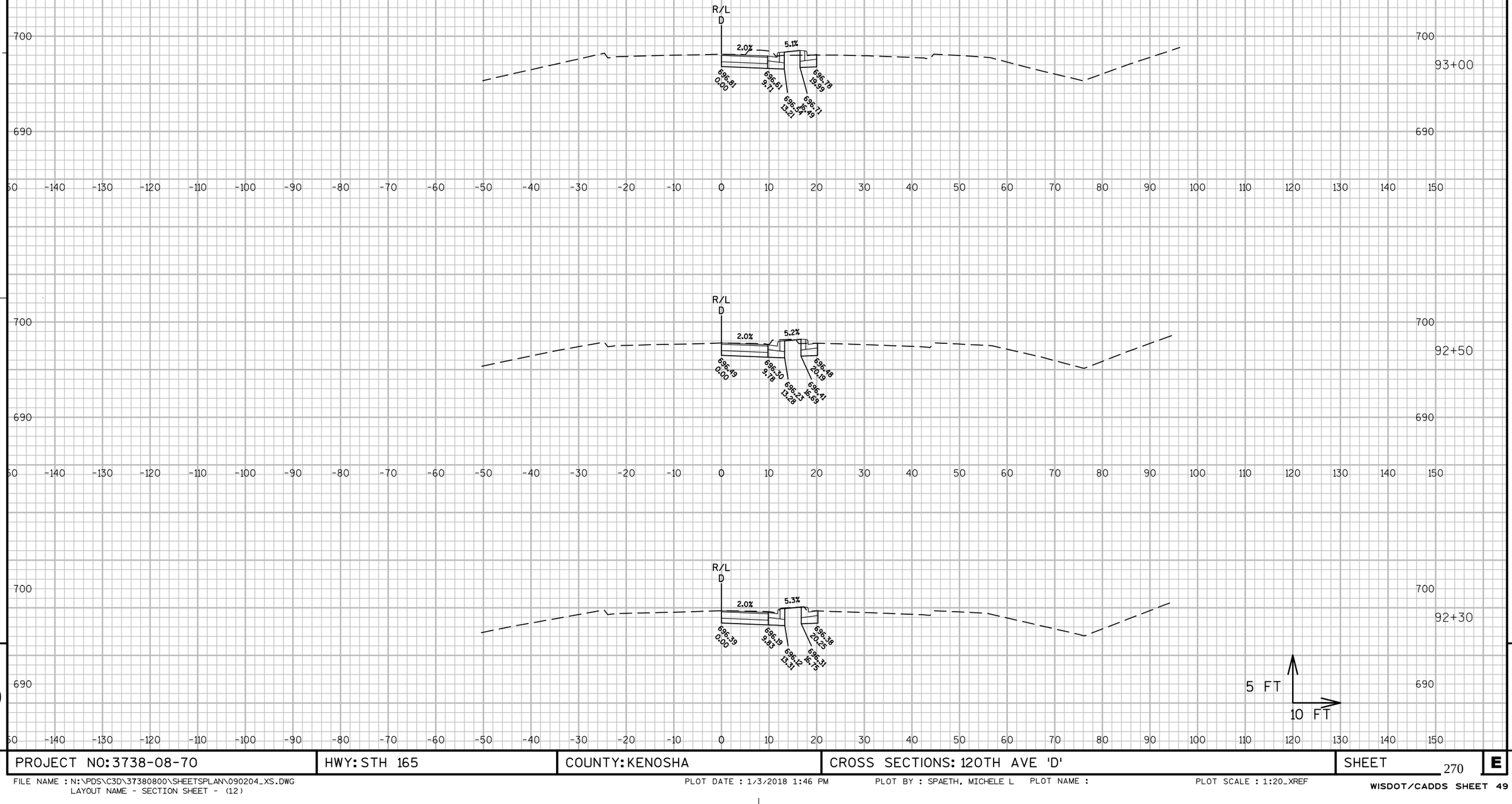
FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090203_XS.DWG
LAYOUT NAME - 090203_XS_7)

PLOT DATE : 1/3/2018 1:43 PM

PLOT BY : SPAETH, MICHELE L PLOT NAME :

PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

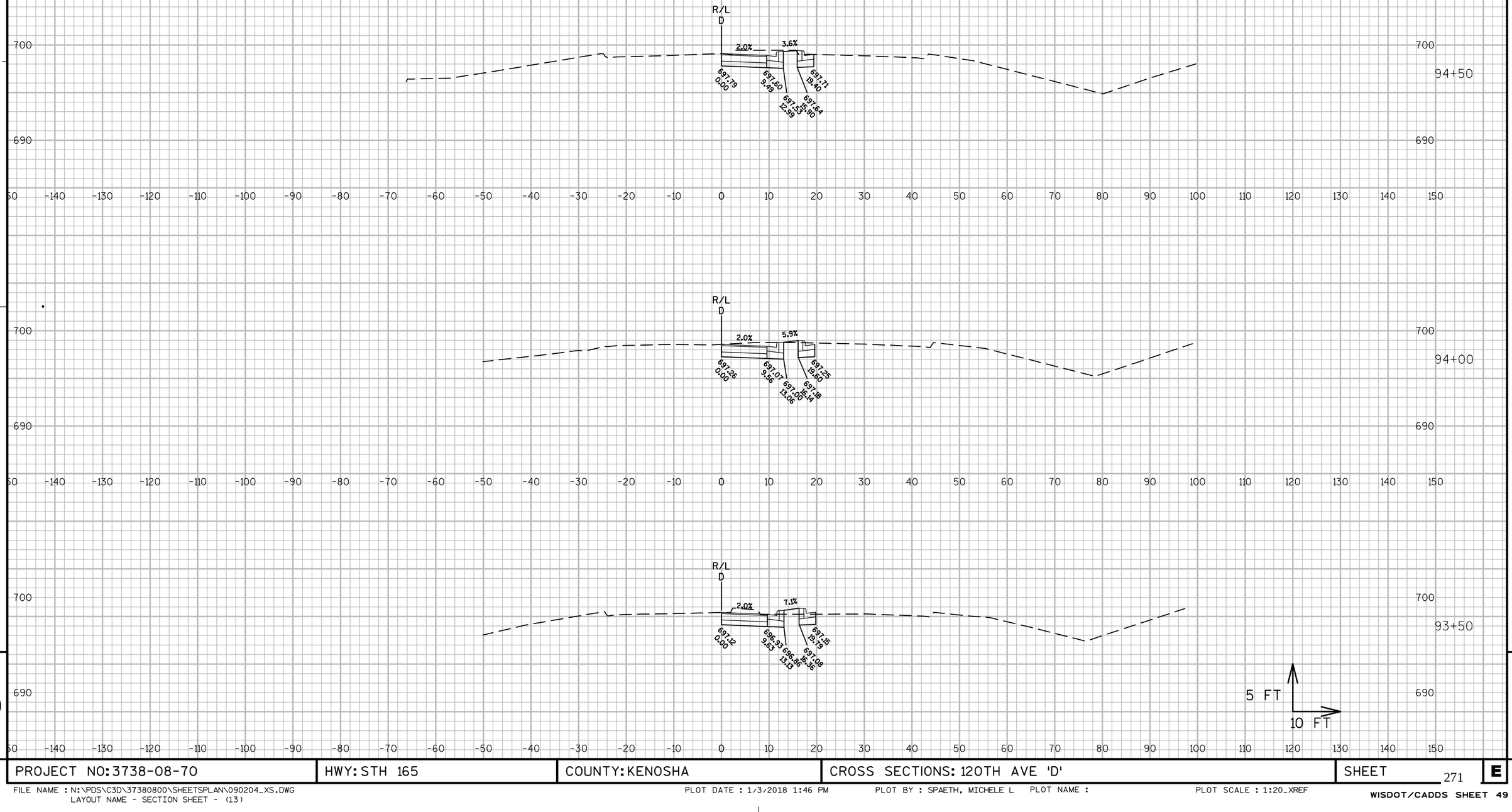


9

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: 120TH AVE 'D'	SHEET 270 E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - SECTION SHEET - (12)
PLOT DATE : 1/3/2018 1:46 PM
PLOT BY : SPAETH, MICHELE L PLOT NAME :
PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49



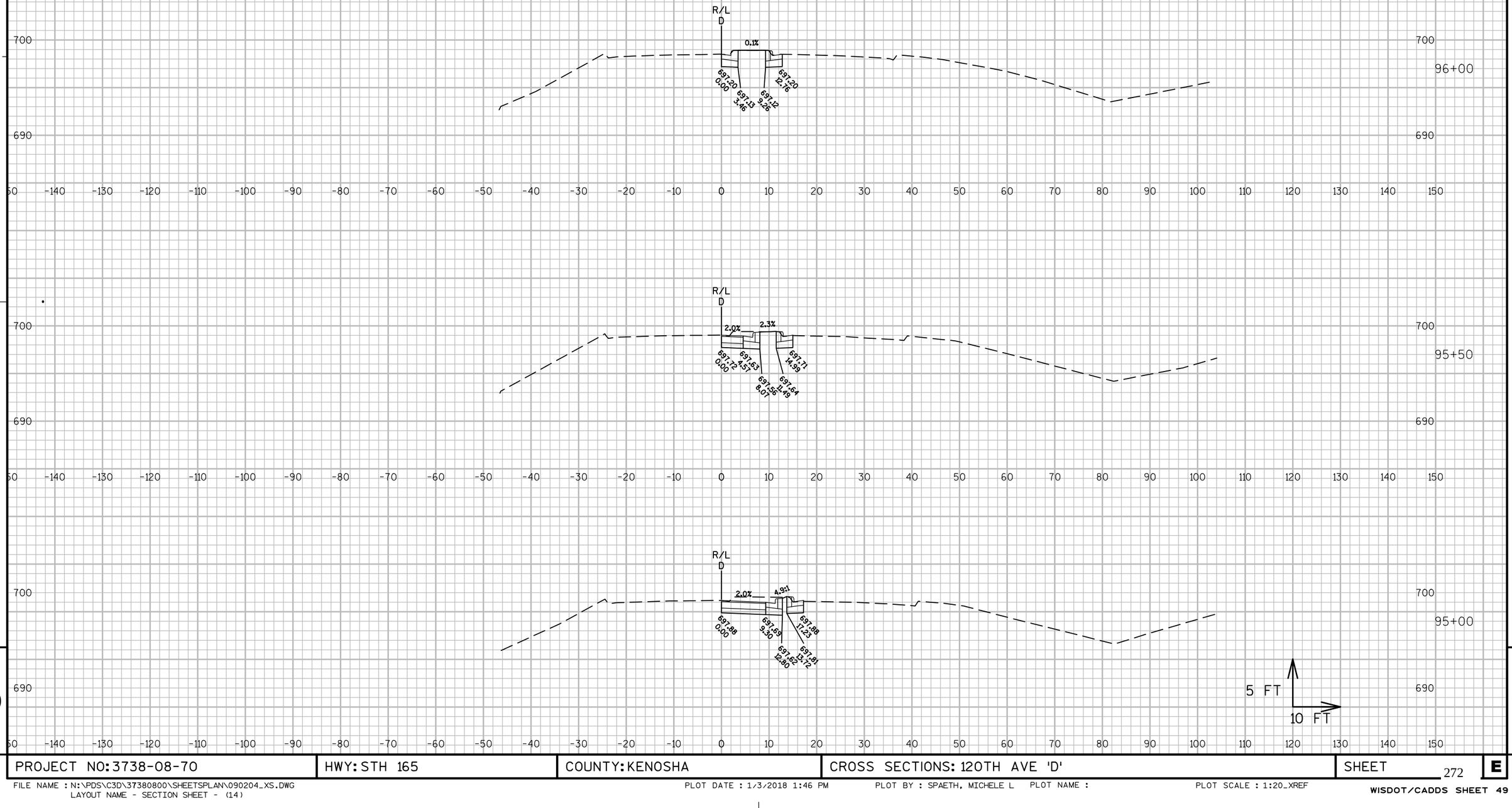
9

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: 120TH AVE 'D'	SHEET 271	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - SECTION SHEET - (13)

PLOT DATE : 1/3/2018 1:46 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1:20_XREF



9

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: 120TH AVE 'D'	SHEET 272	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090204_XS.DWG
LAYOUT NAME - SECTION SHEET - (14)
PLOT DATE : 1/3/2018 1:46 PM
PLOT BY : SPAETH, MICHELE L PLOT NAME :
PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49

730
720
710
-20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270
100+50
100+00
R/L
E
4.0%
5.9%
7.4:1
722.51
8.50
724.28
29.40
720.56
0.00
720.49
3.50
718.99
61.24
9.3%
722.86
8.50
722.31
25.21
721.91
0.00
721.84
3.50
5 FT
10 FT

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RAMP EDGE 'E'	SHEET 273	E

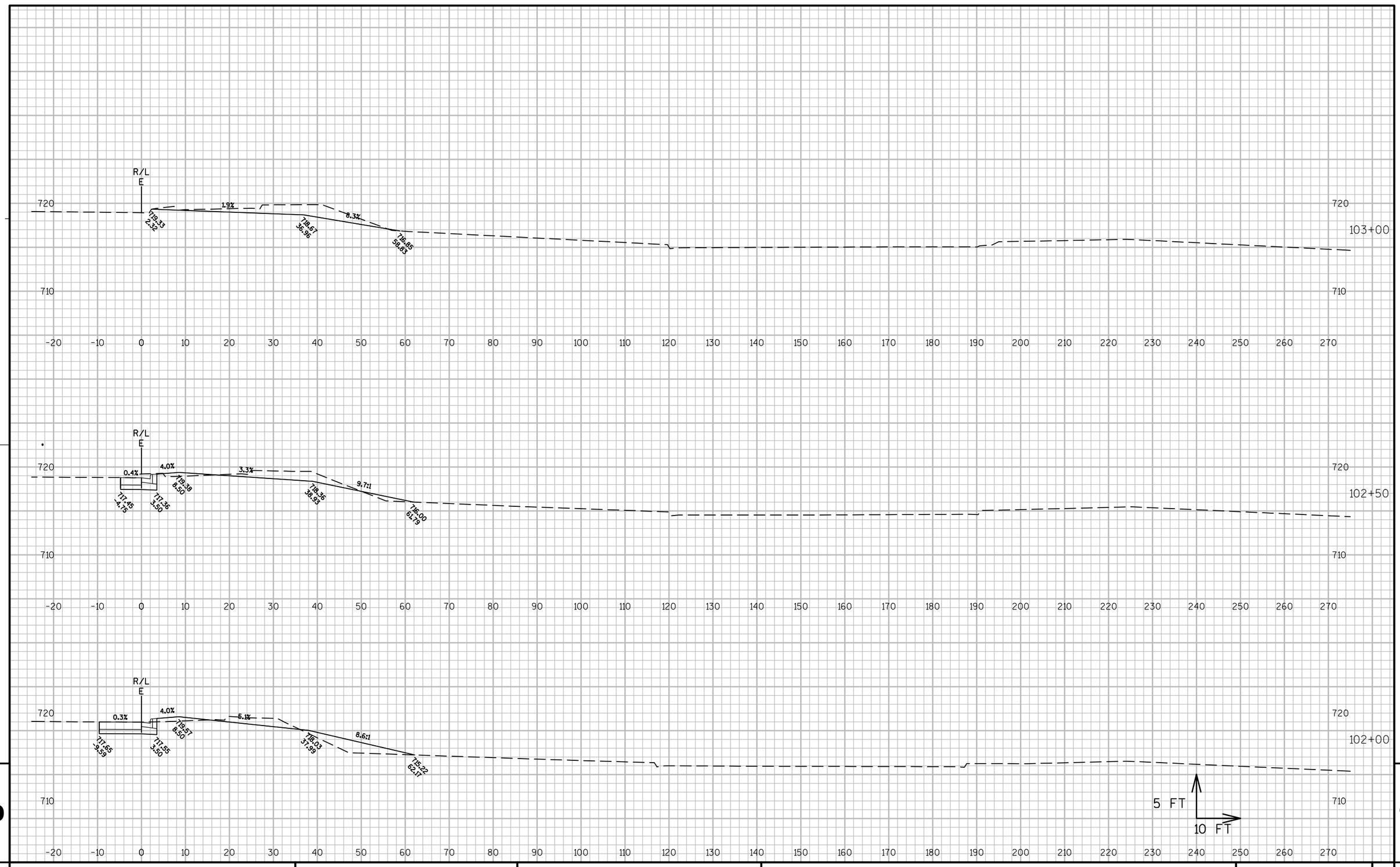
FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090205_XS.DWG
LAYOUT NAME - 090205_XS - SECTION SHEET - (1)

PLOT DATE : 1/3/2018 1:56 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49

R/L
E
0.2%
4.0%
720.17
8.50
718.20
-12.46
718.45
-3.50
8.5:1
717.70
31.34
8.7:1
714.80
62.69

R/L
E
2.4%
4.0%
721.18
8.50
719.24
0.00
719.00
-3.50
7.9:1
717.27
38.52
8.9:1
714.59
63.21

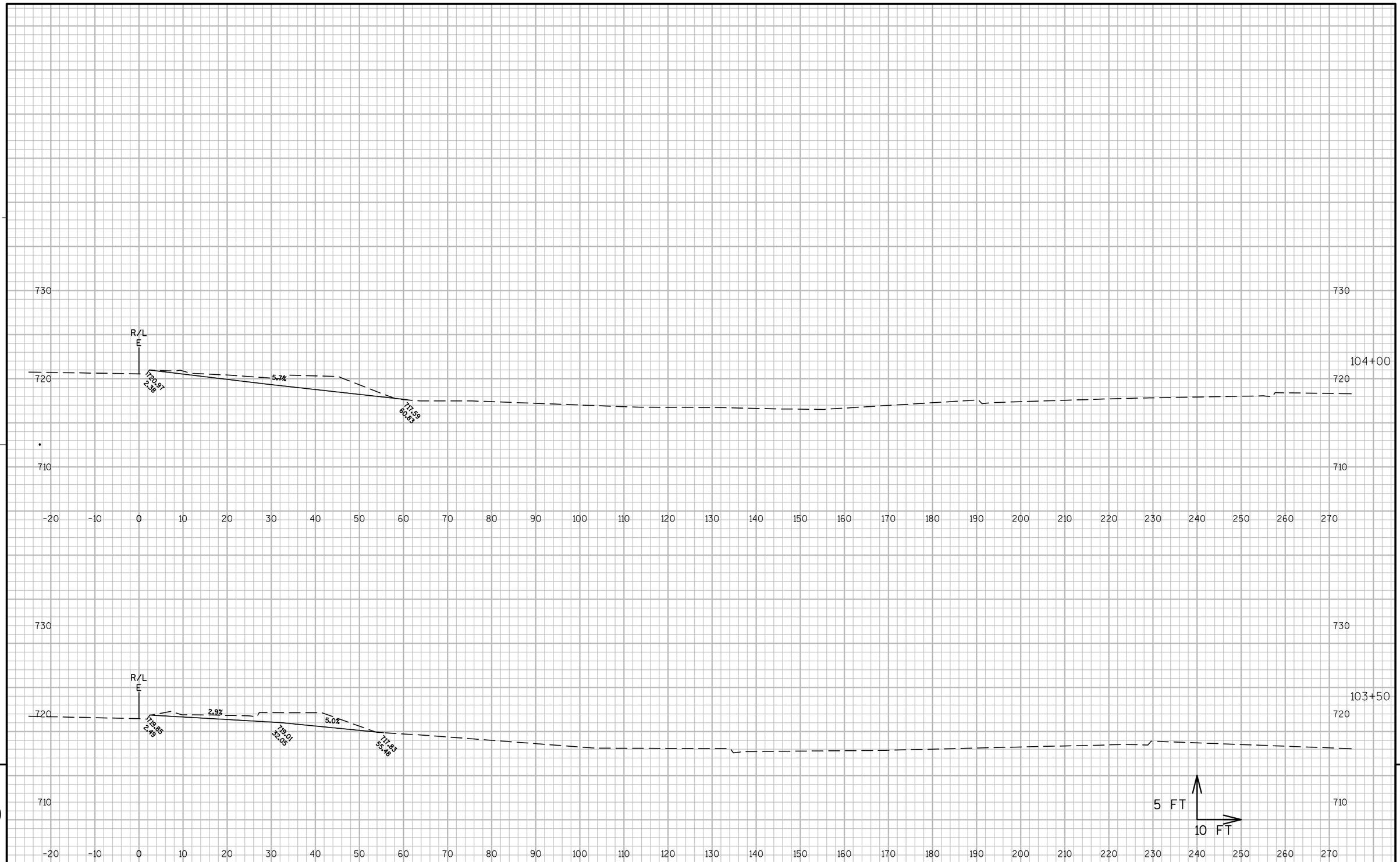


9

9

PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RAMP EDGE 'E'	SHEET 275	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090205_XS.DWG
LAYOUT NAME - 090205_XS - SECTION SHEET - (3)
PLOT DATE : 1/3/2018 1:56 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1:20_XREF
WISDOT/CADDS SHEET 49



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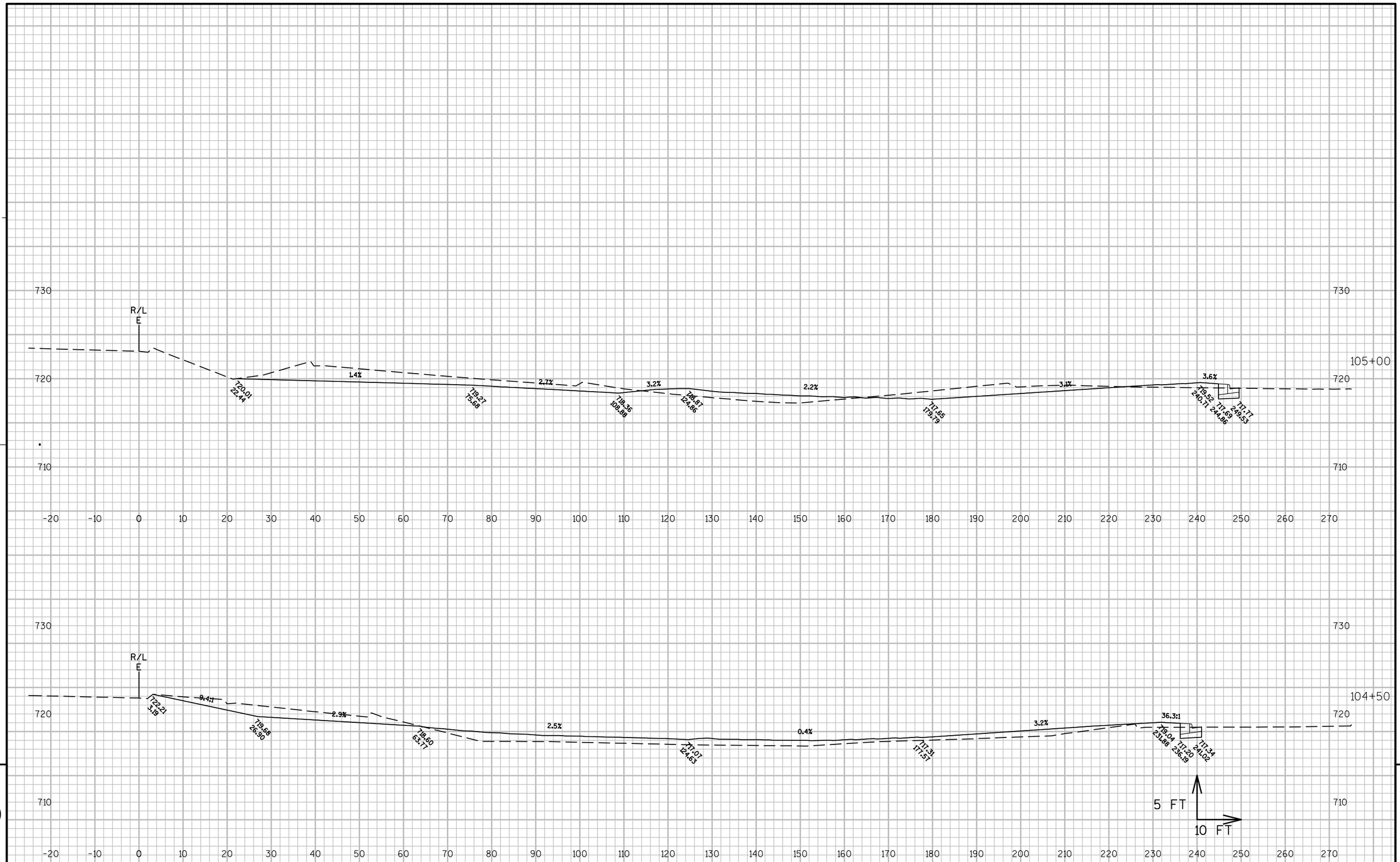
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RAMP EDGE 'E'	SHEET 276	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090205_XS.DWG
LAYOUT NAME - 090205_XS - SECTION SHEET - (4)

PLOT DATE : 1/3/2018 1:56 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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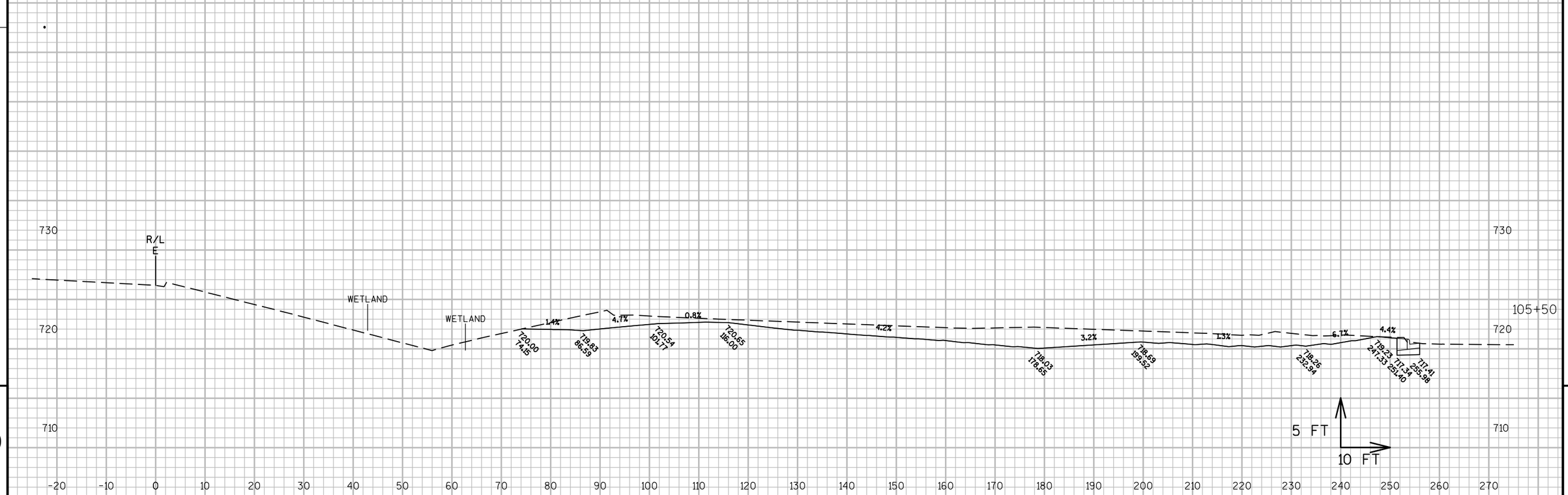
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RAMP EDGE 'E'	SHEET 277	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090205_XS.DWG
LAYOUT NAME - 090205_XS - SECTION SHEET - (5)

PLOT DATE : 1/3/2018 1:56 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1:20_XREF

WISDOT/CADDS SHEET 49



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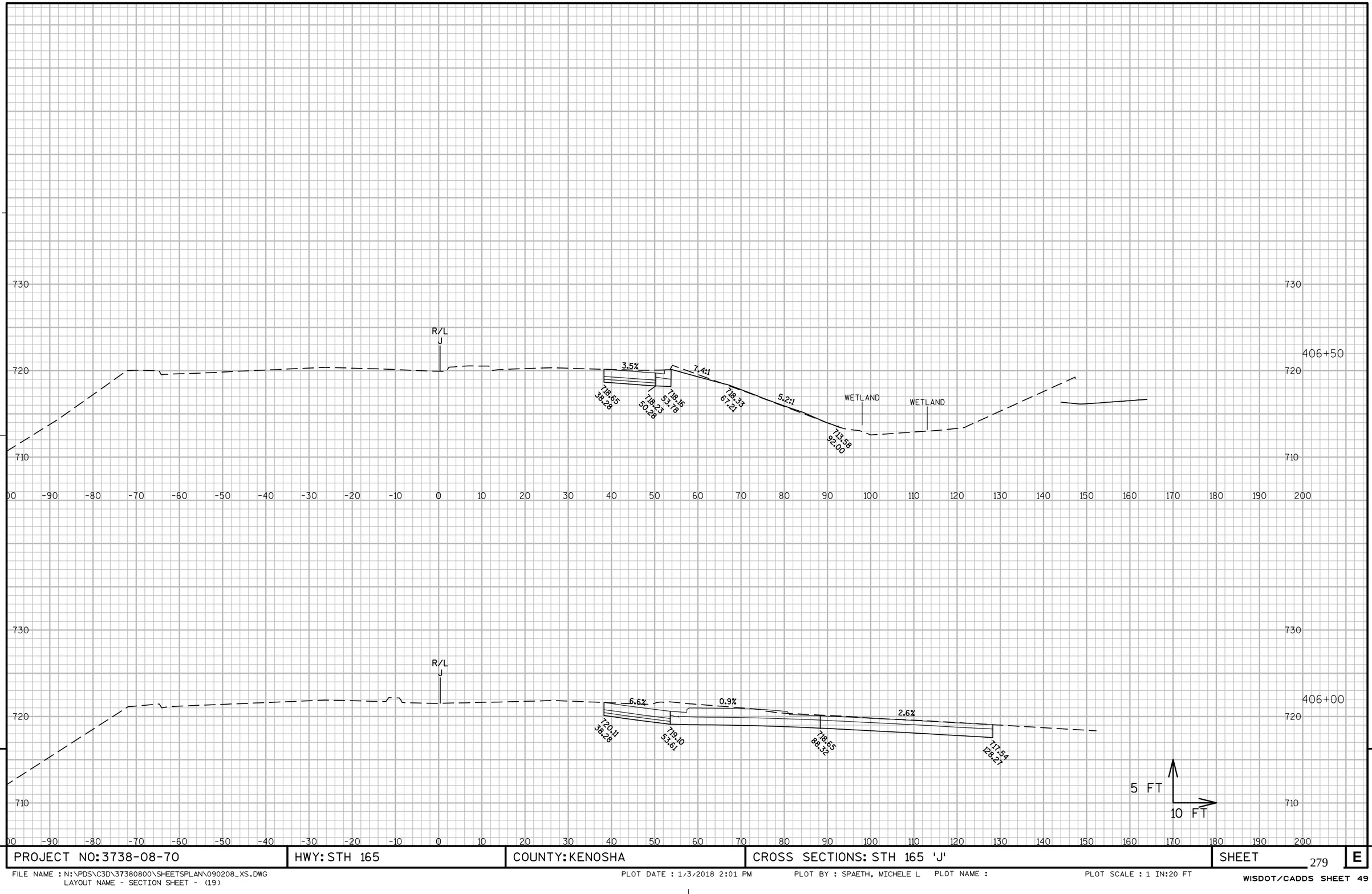
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: RAMP EDGE 'E'	SHEET 278	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090205_XS.DWG
LAYOUT NAME - 090205_XS - SECTION SHEET - (6)

PLOT DATE : 1/3/2018 1:56 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1:20_XREF



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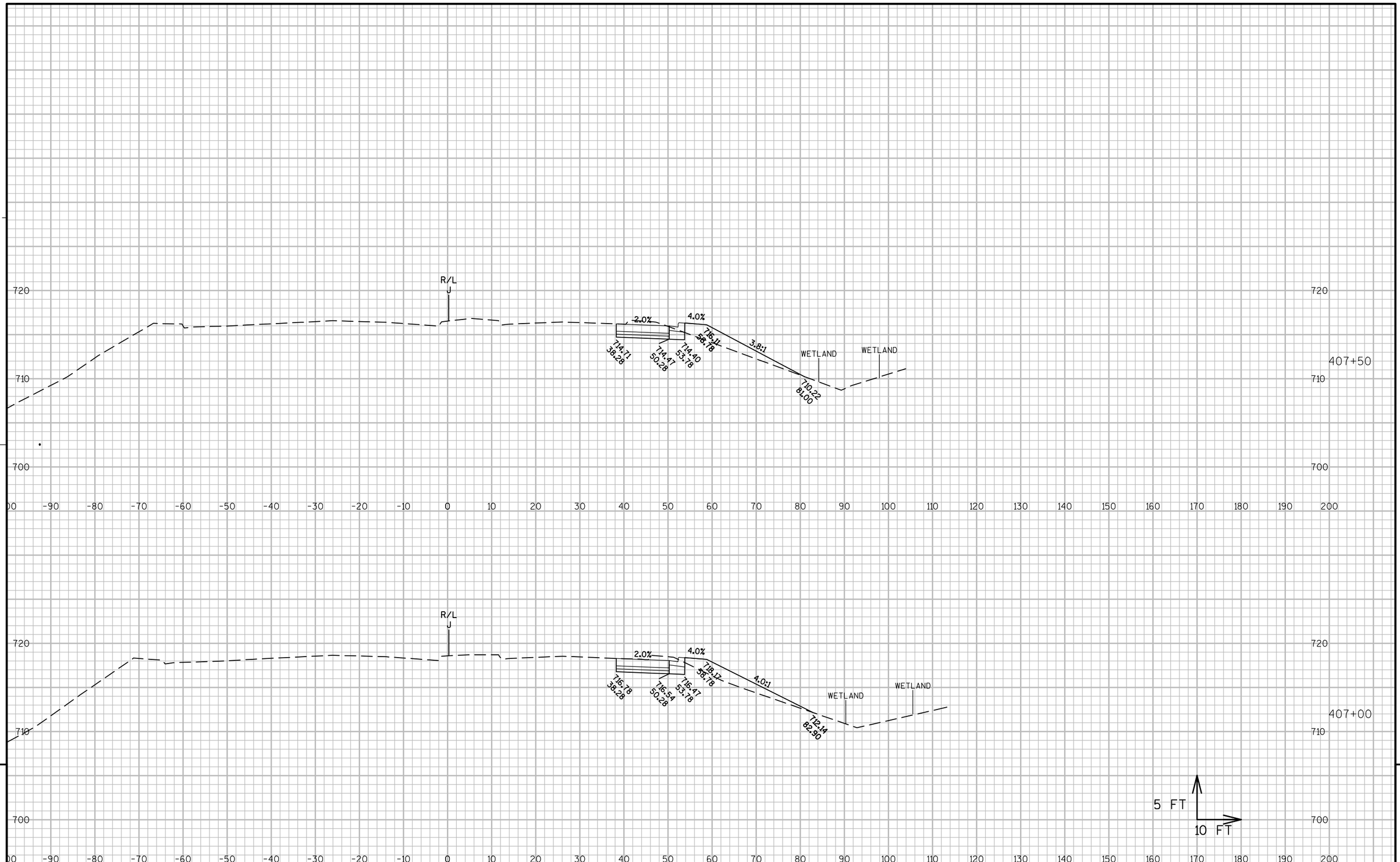
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: STH 165 'J'	SHEET 279	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090208_XS.DWG
LAYOUT NAME - SECTION SHEET - (19)

PLOT DATE : 1/3/2018 2:01 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

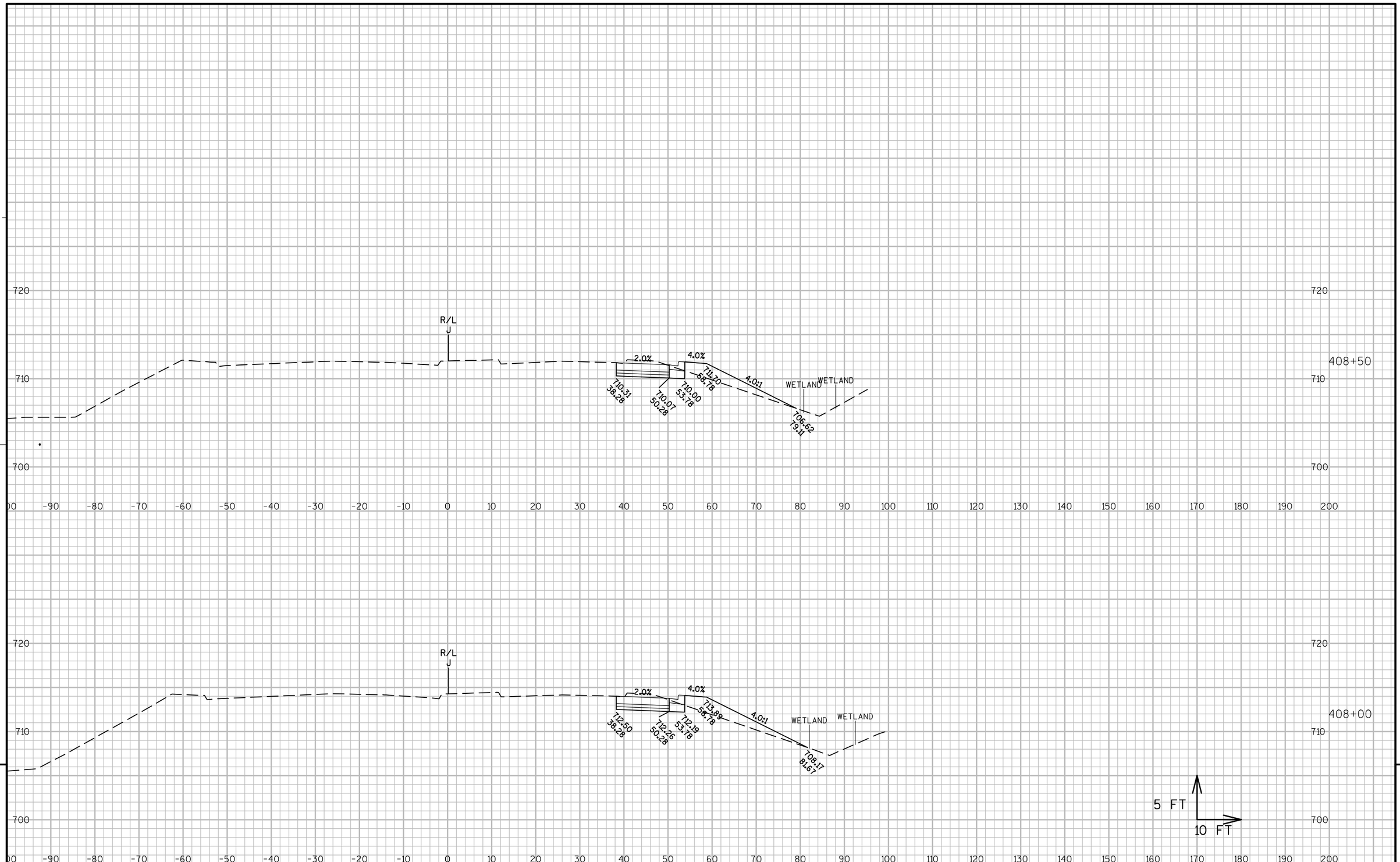


PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: STH 165 'J'	SHEET 280 E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090208_XS.DWG
LAYOUT NAME - SECTION SHEET - (20)

PLOT DATE : 1/3/2018 2:01 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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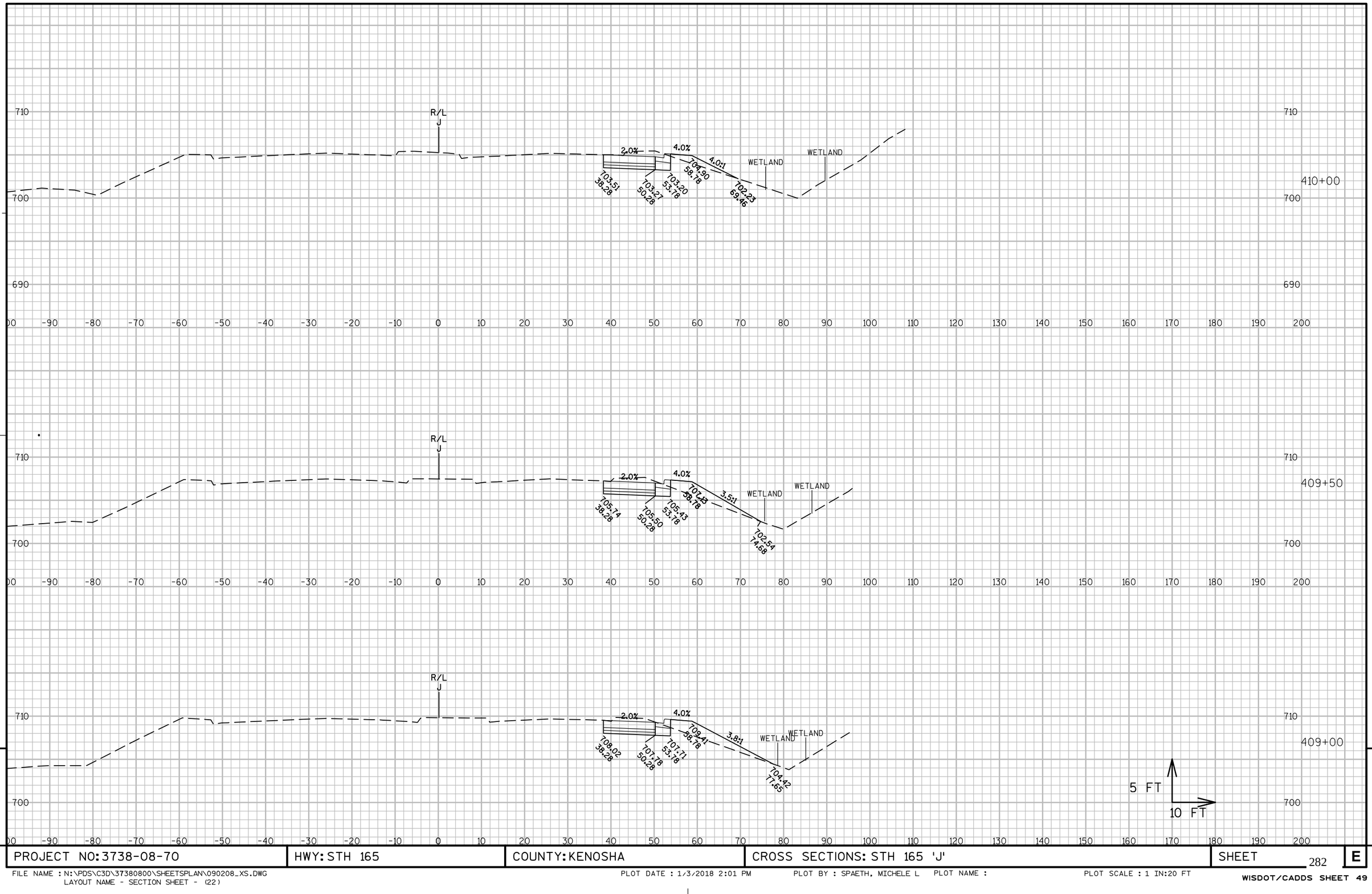
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: STH 165 'J'	SHEET 281	E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090208_XS.DWG
LAYOUT NAME - SECTION SHEET - (21)

PLOT DATE : 1/3/2018 2:01 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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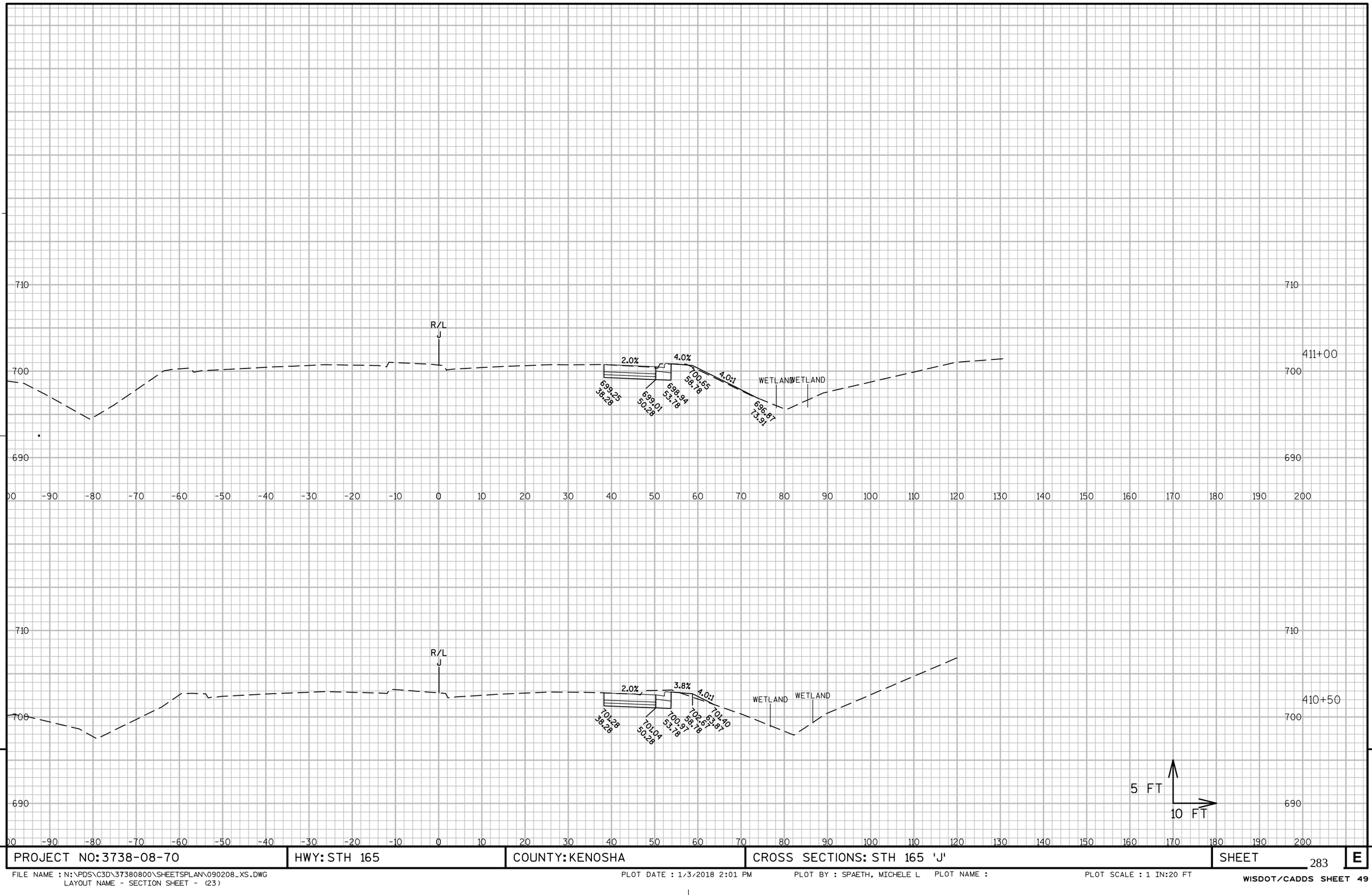
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: STH 165 'J'	SHEET 282 E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090208_XS.DWG
LAYOUT NAME - SECTION SHEET - (22)

PLOT DATE : 1/3/2018 2:01 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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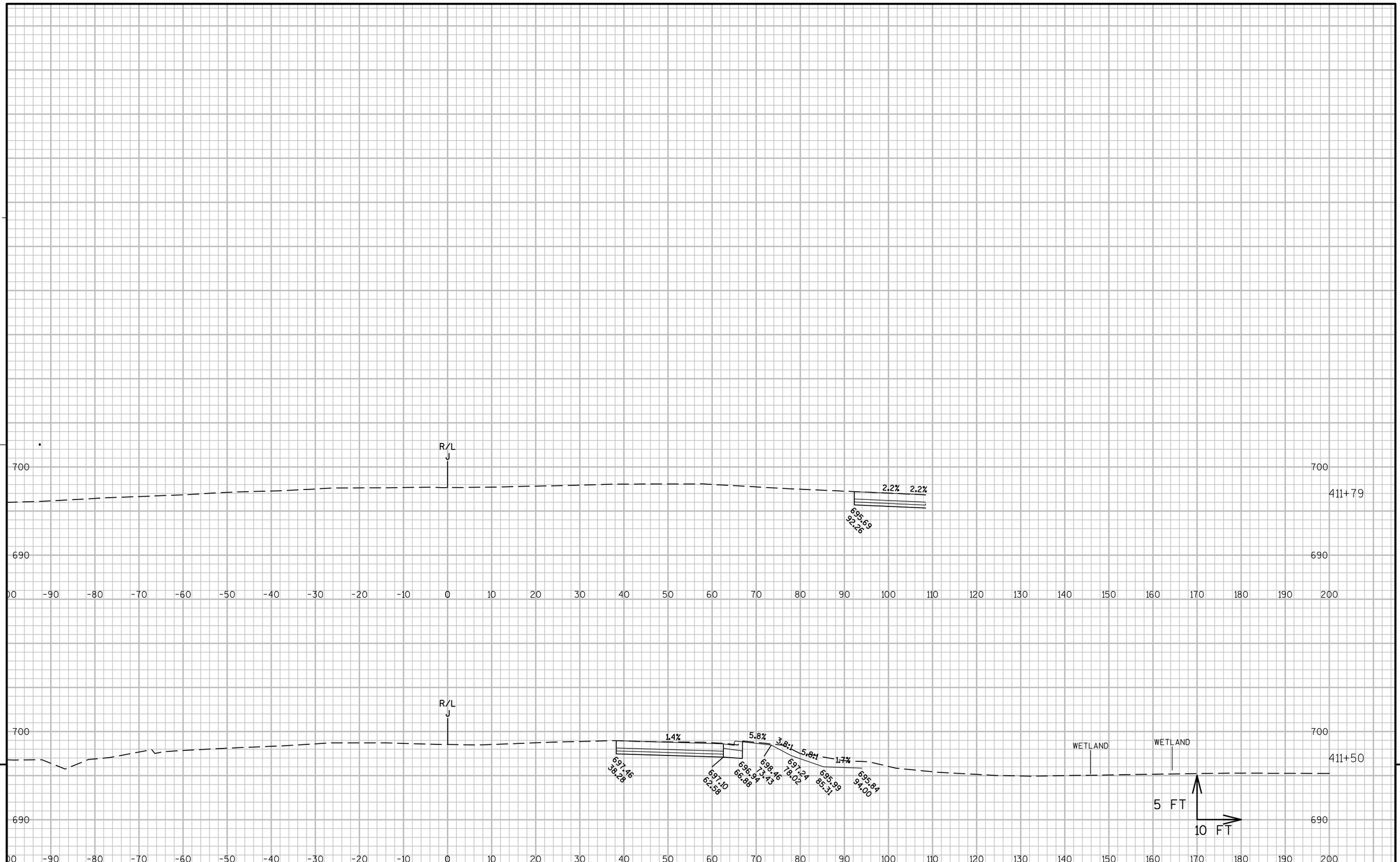
PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: STH 165 'J'	SHEET 283 E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090208_XS.DWG
LAYOUT NAME - SECTION SHEET - (23)

PLOT DATE : 1/3/2018 2:01 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



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PROJECT NO: 3738-08-70	HWY: STH 165	COUNTY: KENOSHA	CROSS SECTIONS: STH 165 'J'	SHEET 284 E

FILE NAME : N:\PDS\C3D\37380800\SHEETSPLAN\090208_XS.DWG
LAYOUT NAME - SECTION SHEET - (24)

PLOT DATE : 1/3/2018 2:01 PM PLOT BY : SPAETH, MICHELE L PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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