

MAD  
PROJECT ID: 5640-01-62  
WITH:

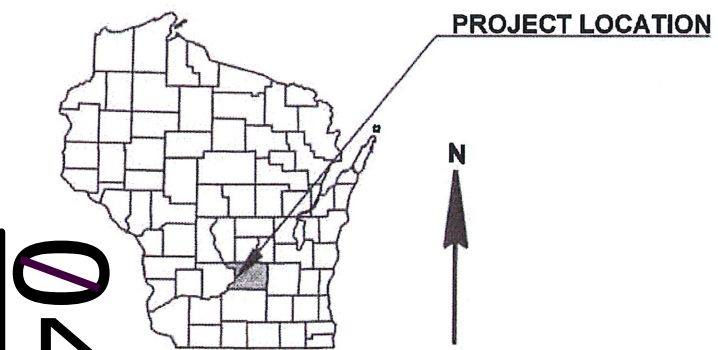
COUNTY: COLUMBIA

AUGUST 2019

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 = 14



DESIGN DESIGNATION		
A.A.D.T.	2011	= 1,200
A.A.D.T.	—	= —
D.H.V.	—	= —
D.D.	—	= —
T.	—	= —
DESIGN SPEED	—	= —
ESALS	—	= —

CONVENTIONAL SYMBOLS

<b>PLAN</b>		<b>PROFILE</b>	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	
EXISTING RIGHT OF WAY		GRADE ELEVATION	
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	
EXISTING CULVERT		FIBER OPTIC	
PROPOSED CULVERT (Box or Pipe)		GAS	
COMBUSTIBLE FLUIDS		SANITARY SEWER	
MARSH AREA		STORM SEWER	
WOODED OR SHRUB AREA		TELEPHONE	
		WATER	
		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

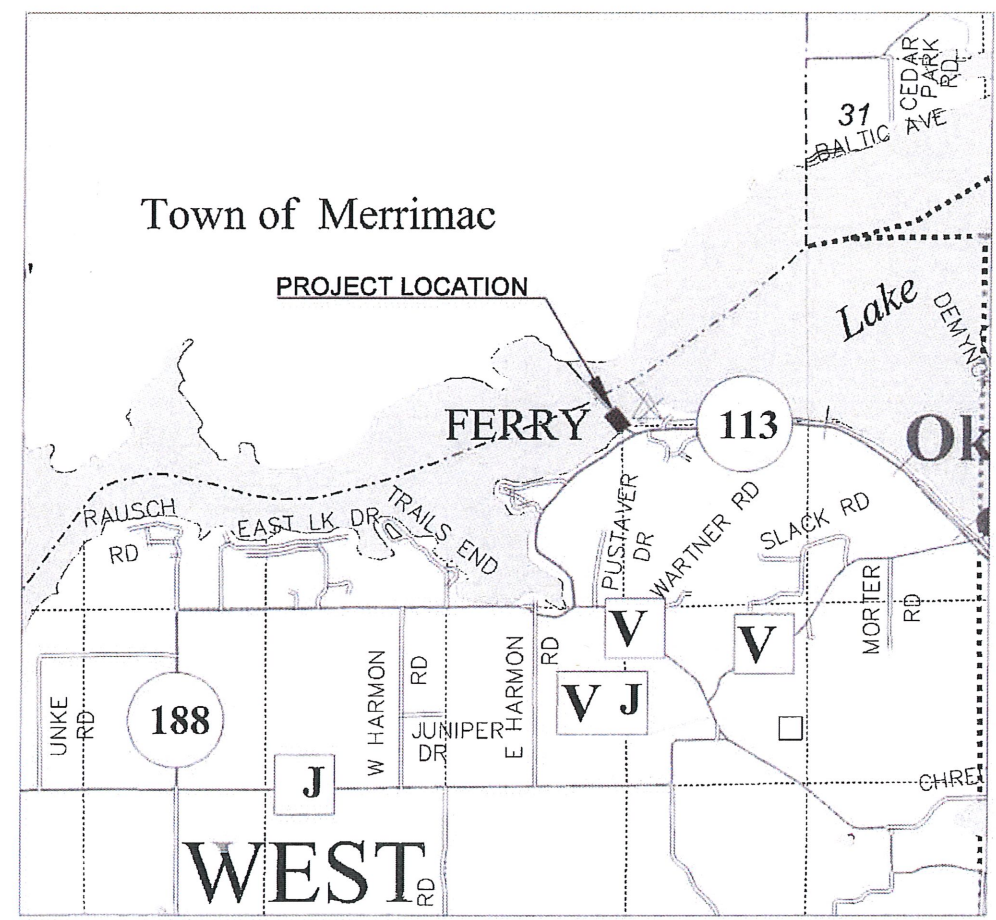
WISCONSIN RIVER CROSSING

FERRY VESSEL

STH 113

COLUMBIA COUNTY

STATE PROJECT NUMBER
5640-01-62



LAYOUT  
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN  
COORDINATE REFERENCE SYSTEM (WISCRS), COLUMBIA COUNTY, NAD83  
(2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES,  
GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME  
AS GROUND DISTANCES.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5640-01-62	WISC 2019577	1

ORIGINAL PLANS PREPARED BY  
**AYRES ASSOCIATES**

**WISCONSIN**  
KEITH R. NIKOLAY  
E-35307  
GREEN BAY  
WI  
PROFESSIONAL ENGINEER  
(Date) 5/30/19

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY  
Surveyor N/A  
Designer AYRES ASSOCIATES  
Project Manager JAMES BUSCHKOPF  
Regional Examiner SW REGION  
Regional Supervisor SCOTT SCHOENMANN

APPROVED FOR THE DEPARTMENT  
DATE 5/30/19 (Signature) [Signature]  
E

GENERAL NOTES

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

ALL ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD 88 (2012).

REMOVABLE OBJECTS (FLAGS, BUOYS, ETC.) WILL BE REMOVED BY COLUMBIA COUNTY PRIOR TO PAINTING OPERATIONS.

LIGHTS AND WINDOWS WILL BE COVERED BY COLUMBIA COUNTY PRIOR TO PAINTING OPERATIONS.

VENTS WILL BE PAINTED THE SAME COLOR AS THE SURROUNDING AREA. PROTECT THE VENTS SO THAT NO PAINT ENTERS THE VENTILATION SYSTEM.

PLAN DETAIL DRAWINGS ARE FROM PROJECT ID 5640-01-72 FERRY VESSEL PLANS (2001).



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

STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	NC	NORMAL CROWN
AC	ASPHALT CEMENT	PT	POINT OF TANGENCY
AGG	AGGREGATE	PC	POINT OF CURVATURE
ASPH	ASPHALT	PI	POINT OF INTERSECTION
BM	BENCH MARK	PE	PRIVATE ENTRANCE
C/L	CENTERLINE	R	RADIUS
CONC	CONCRETE	REM	REMOVE
CMP	CORRUGATED METAL PIPE	R/L OR RL	REFERENCE LINE
CR.	CREEK	RCCP	REINFORCED CONCRETE CULVERT PIPE
D	DEGREE OF CURVE	RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
DHV	DESIGN HOUR VOLUME	R.O.	RUNOUT
ESALS	EQUIVALENT SINGLE AXIS LOADS	R/W	RIGHT-OF-WAY
EXIST	EXISTING	STA	STATION
FE	FIELD ENTRANCE	SE	SUPER ELEVATION
HYD	HYDRANT	SS	STORM SEWER
IP	IRON PIPE OR PIN	T	TANGENT
L	LENGTH OF CURVE	TEL	TELEPHONE
LC	LONG CHORD OF CURVE	TLE	TEMPORARY LIMITED EASEMENT
LR	LENGTH OF RUNOFF	T	TRUCKS
MH	MANHOLE	VC	VERTICAL CURVE
		W	WELL

DEPARTMENT OF NATURAL RESOURCES

WDNR

3911 FISH HATCHERY ROAD  
FITCHBURG, WI 53711  
ATTENTION: ERIC HEGGELUND  
E-MAIL: eric.heggelund@wisconsin.gov

TELEPHONE 608-228-7927

PAINT SCHEDULE

AREA	COAT	PAINT PRODUCT	F.S. 595		WET MILS	DRY MILS	OVERCOAT TIME (HOURS)					THINNER	METHOD OF APPLICATION	TIP SIZE
			COLOR	No.			MINIMUM				MAX			
							● 32°F	● 50°F	● 70°F	● 90°F				
INTERIOR VOIDS	1	AMERON AMERCOAT 370 EPOXY	WHITE	27880	6.4	4	2	1 1/2	1/2	1/3	180 DAYS	#101	AIRLESS	.015/.021
	1	AMERON AMERCOAT 370 EPOXY	WHITE	27880	6.4	4	2	1 1/2	1/2	1/3	180 DAYS	#101	AIRLESS	.015/.021
EXTERIOR BOTTOM AND SIDES	1	AMERON AMERCOAT 370 EPOXY	PEARL GREY	-	6.4	4	2	1 1/2	1/2	1/3	180 DAYS	** #927	AIRLESS	.015/.021
	2	AMERON AMERCOAT 370 EPOXY	PEARL GREY	-	6.4	4	2	1 1/2	1/2	1/3	180 DAYS		AIRLESS	.015/.021
	3	AMERON AMERLOCK 4006F EPOXY	BLACK	17038	7.3	6	7	4	2 1/2	1 1/2	90 DAYS	#65	AIRLESS	.035
	4	AMERON AMERLOCK 4006F EPOXY	BLUE ANGEL YELLOW	13655	7.3	6	7	4	2 1/2	1 1/2	90 DAYS	#65	AIRLESS	.035
MAIN DECK AND RAMPS NON-SKID PAINT (EXCLUDING GRATING)	1	AMERON AMERCOAT 370 EPOXY	PEARL GREY	-	6.4	4	2	1 1/2	1/2	1/3	180 DAYS	** #927	AIRLESS	.015/.021
	2	AMERON AMERCOAT 370 EPOXY	PEARL GREY	-	6.4	4	2	1 1/2	1/2	1/3	180 DAYS	** #927	AIRLESS	.015/.021
	3	AMERON AMERLOCK 4006F EPOXY	PEARL GREY	-	7.3	6	7	4	2 1/2	1 1/2	30 DAYS	#65	AIRLESS	.035
	4	AMERON AMERLOCK 4006F EPOXY	PEARL GREY	-	7.3	6	7	4	2 1/2	1 1/2	30 DAYS	#65	AIRLESS	.035
	5	AMERON AMERCOAT 450HS URETHANE	PEARL GREY	-	3	2	4	3	3	2	1-7 DAYS	#923	AIRLESS	.013/.015
	6	AMERON AMERCOAT 450HS URETHANE	PEARL GREY	-	3	2	4	3	3	2	1-7 DAYS	#923	AIRLESS	.013/.015
DECK FITTINGS AND LANE MARKINGS	1	*** AMERON AMERCOAT 370 EPOXY	PEARL GREY	-	6.4	4	2	1 1/2	1/2	1/3	180 DAYS	** #927	AIRLESS	.015/.021
	2	*** AMERON AMERCOAT 370 EPOXY	PEARL GREY	-	6.4	4	2	1 1/2	1/2	1/3	180 DAYS	** #927	AIRLESS	.015/.021
	3	*** AMERON AMERLOCK 4006F EPOXY	DECK RED	10076	7.3	6	7	4	2 1/2	1 1/2	30 DAYS	#65	AIRLESS	.035
	4	*** AMERON AMERLOCK 4006F EPOXY	DECK RED	10076	7.3	6	7	4	2 1/2	1 1/2	30 DAYS	#65	AIRLESS	.035
	5	AMERON AMERCOAT 450HS URETHANE	SAFETY YELLOW	13655	3	2	4	3	3	2	1-7 DAYS	#923	BRUSH / ROLLER	-
	6	AMERON AMERCOAT 450HS URETHANE	SAFETY YELLOW	13655	3	2	4	3	3	2	1-7 DAYS	#923	BRUSH / ROLLER	-
RAILS, PEDESTAL, PILOTHOUSE AND KINGPOSTS	1*	AMERON AMERCOAT 370 EPOXY	PEARL GREY	-	6.4	4	2	1 1/2	1/2	1/3	180 DAYS	** #927	AIRLESS	.015/.021
	2*	AMERON AMERCOAT 370 EPOXY	PEARL GREY	-	6.4	4	2	1 1/2	1/2	1/3	180 DAYS	** #927	AIRLESS	.015/.021
	3*	AMERON AMERLOCK 4006F EPOXY	BLACK	17038	7.3	6	7	4	2 1/2	1 1/2	30 DAYS	#65	AIRLESS	.035
	4*	AMERON AMERLOCK 4006F EPOXY	BLACK	17038	7.3	6	7	4	2 1/2	1 1/2	30 DAYS	#65	AIRLESS	.035
	5	AMERON AMERCOAT 450HS URETHANE	WHITE	27880	3	2	4	3	3	2	1-7 DAYS	#923	BRUSH / ROLLER	-
	6	RAILS ONLY EXCEPT GALVANIZED MESH - AMERON AMERCOAT 450HS URETHANE; OTHER AREAS - AMERON AMERCOAT 450HS URETHANE	INSIGNIA RED	11136	3	2	4	3	3	2	1-7 DAYS	#923	BRUSH / ROLLER	-

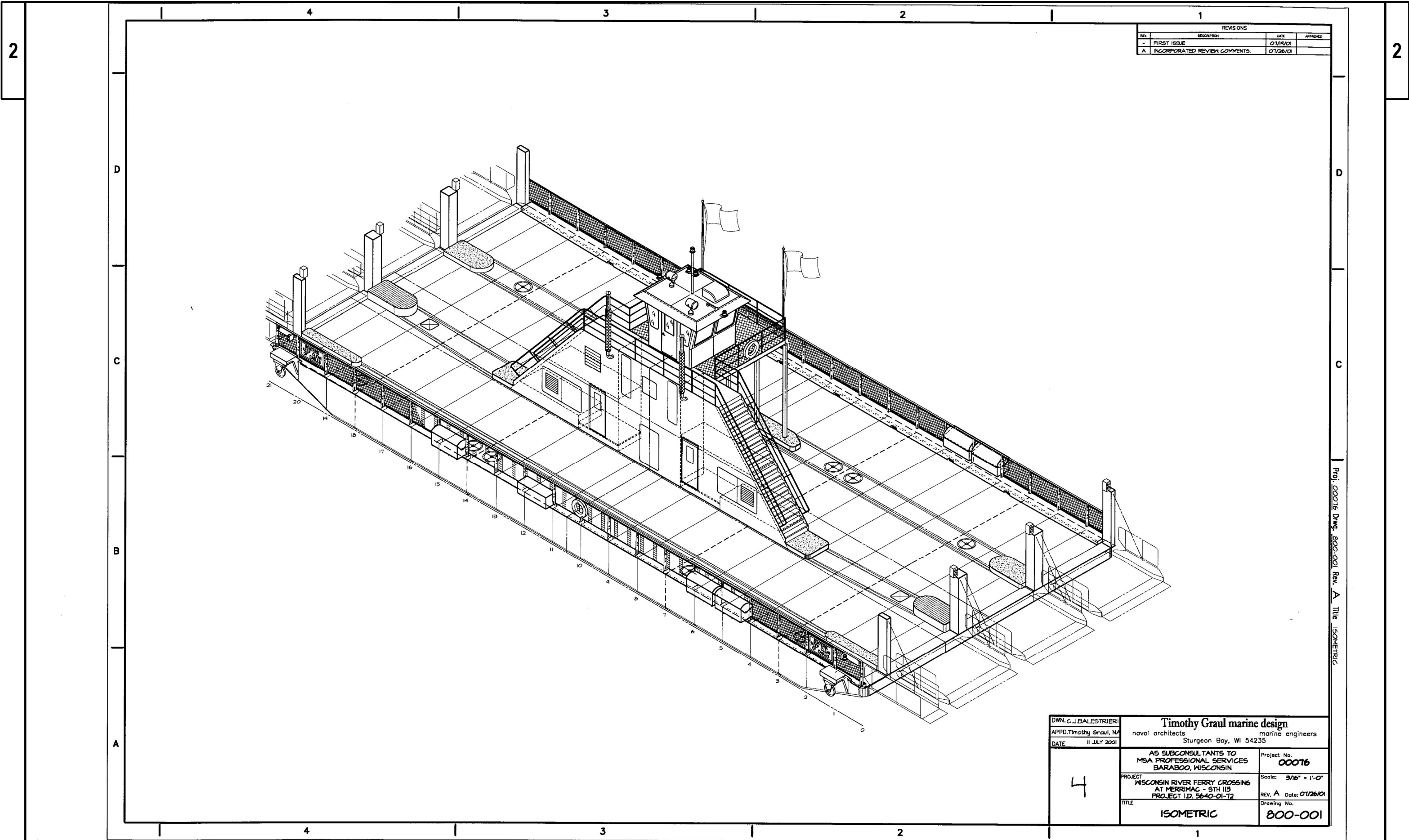
NOTES:

- THIS TABLE IS FOR LOCATION AND FEDERAL STANDARD COLOR ONLY. SELECT PRODUCER FROM WISDOT APPROVED PRODUCTS LIST AND FOLLOW MANUFACTURER RECOMMENDATIONS FOR APPLICATION.
- VERIFY EXISTING COLOR AND LOCATION PRIOR TO PAINTING. CHANGE COLOR AS NEEDED.

- \* EXTERIOR BOTTOM AND SIDES COMPRISE THE FIRST FOUR COATS
- \*\* OVER 60°F, SUBSTITUTE #101 THINNER FOR #927
- \*\*\* MAIN DECK COMPRISE THE FIRST FOUR COATS

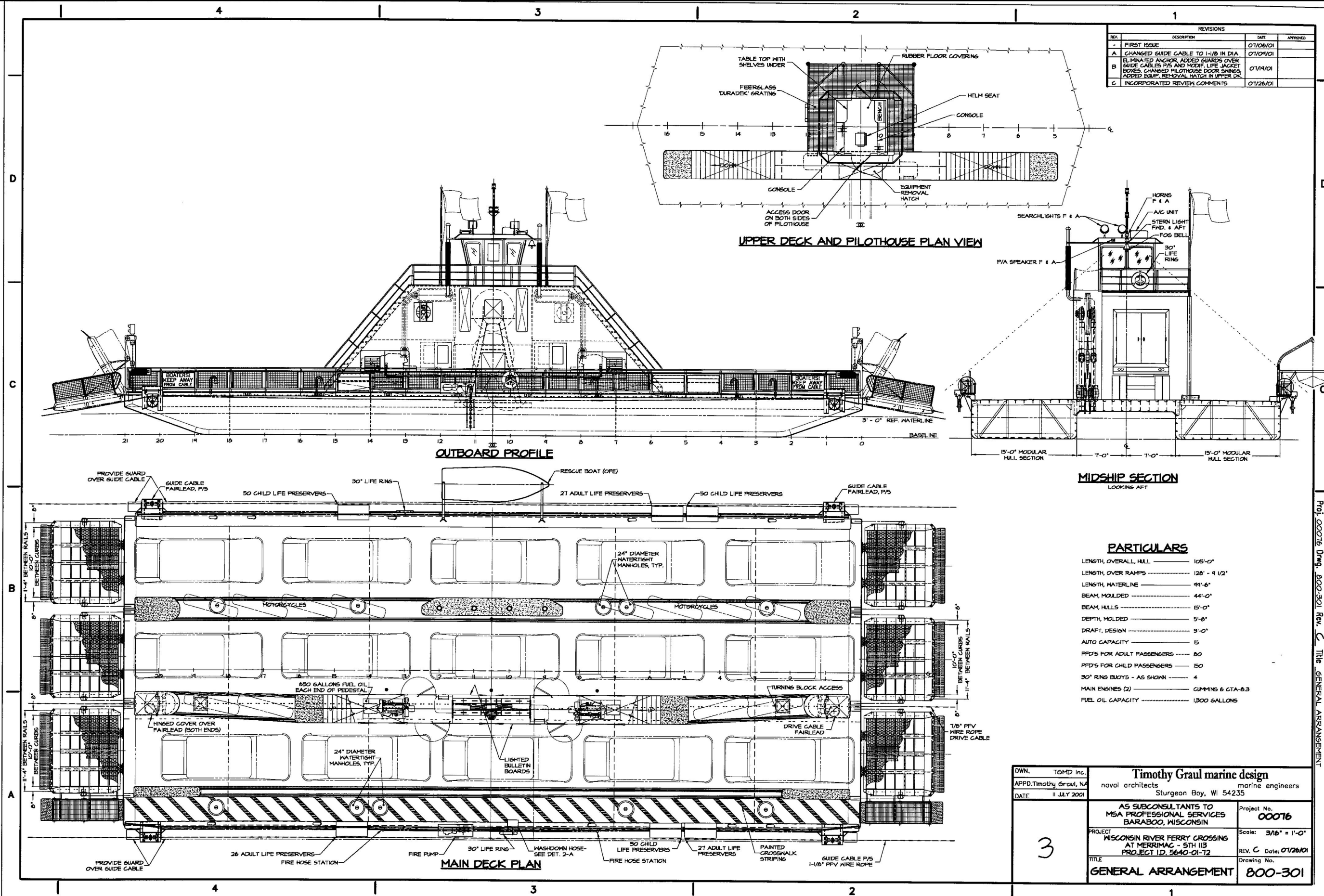
THINNERS - AMERCOAT 927 - 60°F FLASH  
AMERCOAT 101 - 143°F FLASH  
AMERCOAT 65 - 78°F FLASH  
AMERCOAT 923 - 102°F FLASH  
AMERCOAT 12 - 2°F FLASH





REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
-	FIRST ISSUE	07/19/01	
A	INCORPORATED REVIEW COMMENTS.	07/26/01	

4	DWN. C.J. BALESTRIERI APPD. Timothy Graul, NA DATE 11 JULY 2001		<b>Timothy Graul marine design</b> naval architects marine engineers Sturgeon Bay, WI 54235	
	AS SUBCONSULTANTS TO MSA PROFESSIONAL SERVICES BARABOO, WISCONSIN		Project No.	00076
	PROJECT WISCONSIN RIVER FERRY CROSSING AT MERRIMAC - 5TH I13 PROJECT I.D. 5640-01-12		Scale: 3/16" = 1'-0"	REV. A Date: 07/26/01
	TITLE ISOMETRIC		Drawing No.	800-001



PROJECT NO: 5640-01-62

HWY: STH 113

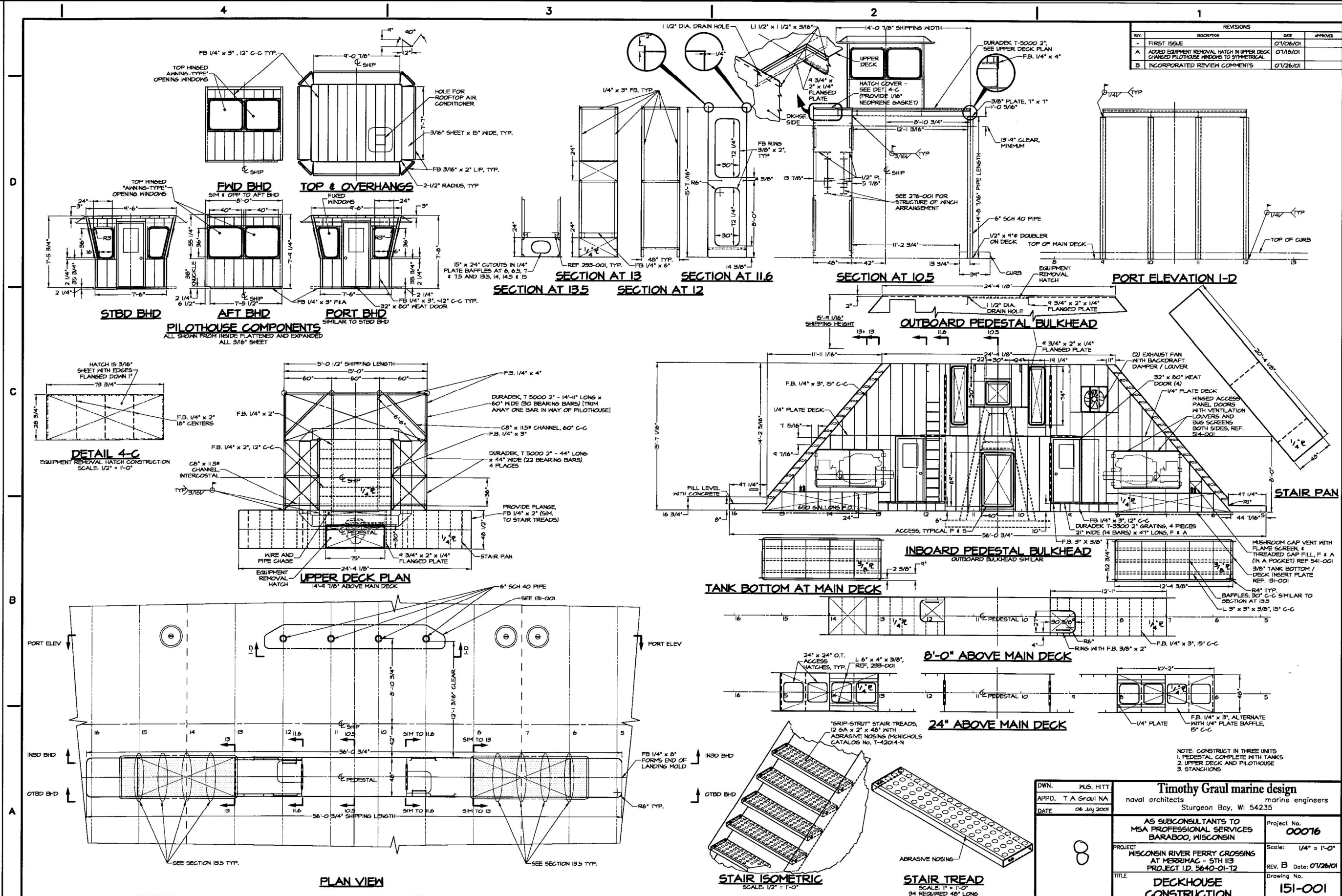
COUNTY: COLUMBIA

PLAN DETAILS - GENERAL ARRANGEMENT

SHEET

E







Estimate Of Quantities

5640-01-62					
Line	Item	Item Description	Unit	Total	Qty
0002	213.0100	Finishing Roadway (project) 01. 5640-01-62	EACH	1.000	1.000
0004	619.1000	Mobilization	EACH	1.000	1.000
0006	642.5001	Field Office Type B	EACH	1.000	1.000
0008	643.0420	Traffic Control Barricades Type III	DAY	480.000	480.000
0010	643.0705	Traffic Control Warning Lights Type A	DAY	660.000	660.000
0012	643.0900	Traffic Control Signs	DAY	180.000	180.000
0014	643.5000	Traffic Control	EACH	1.000	1.000
0016	SPV.0105	Special 01. Containment and Collection of Waste Materials M11-1000 Hull Ext. Modified	LS	1.000	1.000
0018	SPV.0105	Special 02. Containment and Collection of Waste Mat M-11-1000 Deck & Wheelhouse Modified	LS	1.000	1.000
0020	SPV.0105	Special 03. Structure Repainting Recycled Abrasive M-11-1000 Hull Exterior Modified	LS	1.000	1.000
0022	SPV.0105	Special 04. Structure Repainting Recycled Abrasive M-11-1000 Deck & Wheelhouse Modified	LS	1.000	1.000
0024	SPV.0105	Special 05. Structure Repainting Recycled Abrasive M-11-1000 Hull Interior Modified	LS	1.000	1.000



TRAFFIC CONTROL SUMMARY

LOCATION	APPROXIMATE SERVICE DAYS	643.0420 BARRICADES TYPE III		643.0705 WARNING LIGHTS TYPE A		643.0900 SIGNS		DESCRIPTION
		NO. IN	DAYS	NO. IN	DAYS	NO. IN	DAYS	
		SERVICE		SERVICE		SERVICE		
STH 113/STH 188	60	8	480	11	660	3	180	SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL D
TOTALS			480		660		180	

CONTAINMENT AND COLLECTION OF WASTE MATERIALS M-11-1000

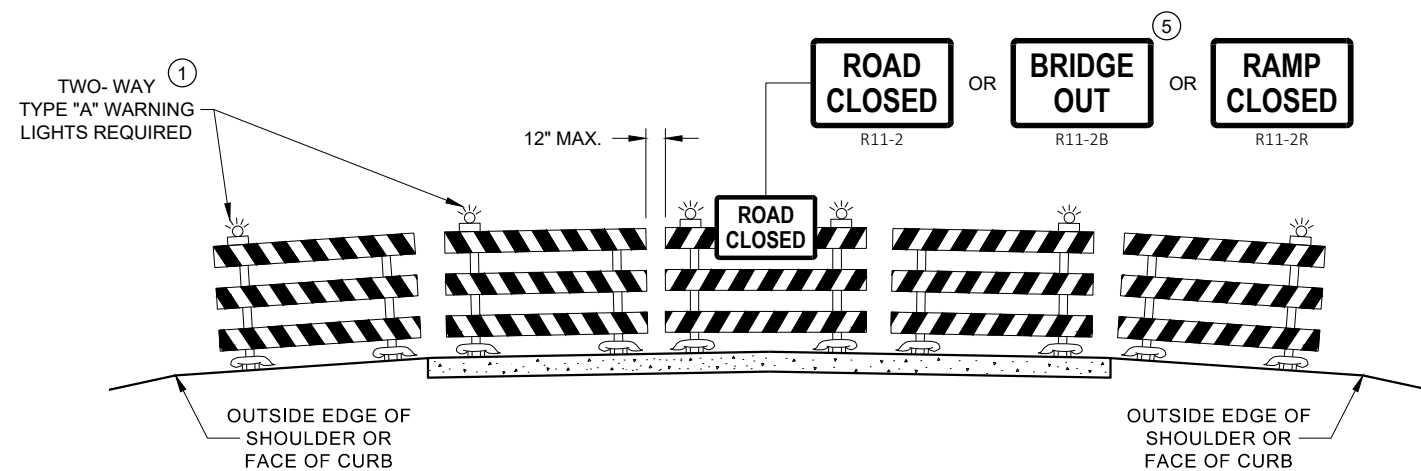
LOCATION	SPV.0105.01	SPV.0105.02
	HULL EXTERIOR	DECK AND
	MODIFIED	WHEELHOUSE
	LS	MODIFIED
	LS	LS
MERRIMAC FERRY (M-11-1000)	--	1
MERRIMAC FERRY (M-11-1000)	1	--
TOTALS	1	1

STRUCTURE REPAINTING RECYCLED ABRASIVE M-11-1000

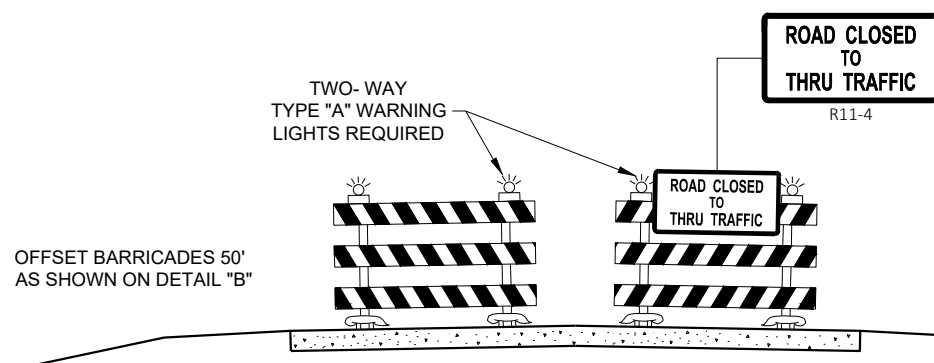
LOCATION	SPV.0105.03	SPV.0105.04	SPV.0105.05
	HULL EXTERIOR MODIFIED	DECK AND WHEELHOUSE MODIFIED	HULL INTERIOR MODIFIED
	LS	LS	LS
MERRIMAC FERRY (M-11-1000)	1	--	--
MERRIMAC FERRY (M-11-1000)	--	1	--
MERRIMAC FERRY (M-11-1000)	--	--	1
TOTALS	1	1	1

Standard Detail Drawing List

15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



DETAIL D  
ROAD CLOSURE BARRICADE DETAIL  
APPROACH VIEW



DETAIL E  
LANE CLOSURE BARRICADE DETAIL  
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

## GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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.

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.

BARRICADES 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.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

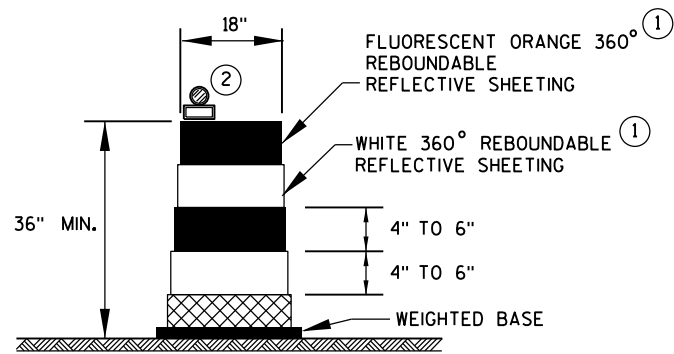
## BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

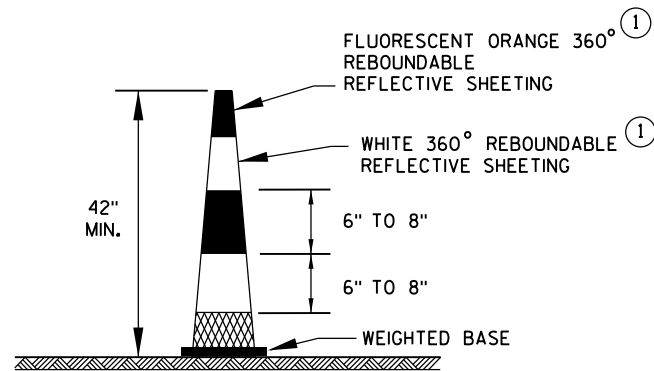
APPROVED  
November 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA





**DRUM**

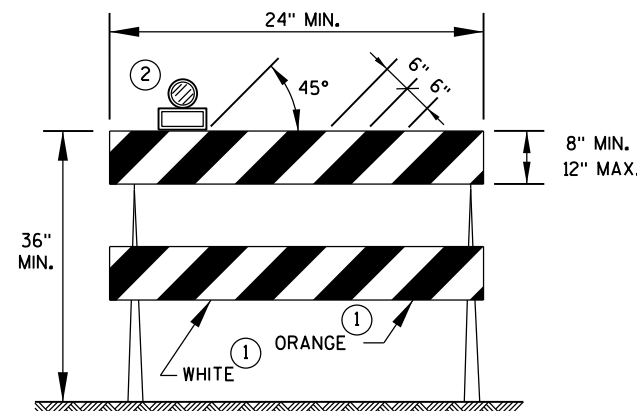


**42" CONE**

DO NOT USE IN TAPERS  
1/2 SPACING OF DRUMS

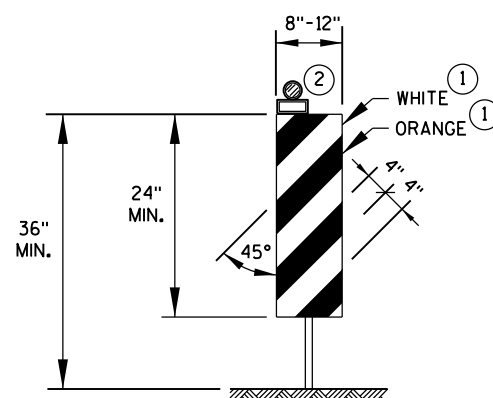
**GENERAL NOTES**

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



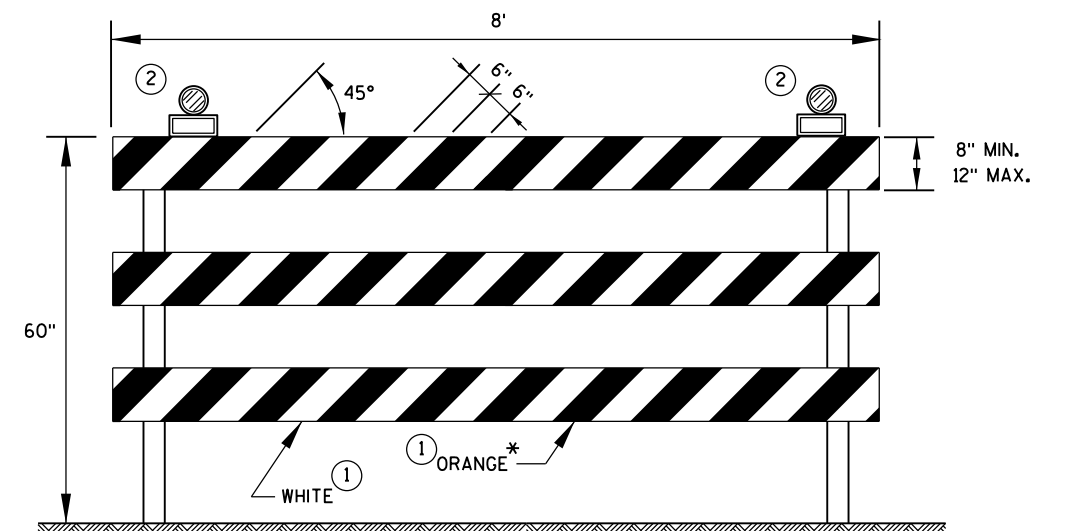
**TYPE 2 BARRICADE**

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES MAY BE USED.  
ALL STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



**VERTICAL PANEL**

THE STRIPES SHALL SLOPE DOWNWARD TO THE TRAFFIC SIDE FOR CHANNELIZATION.



**TYPE 3 BARRICADE**

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

\* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES  
DRUMS, CONES, BARRICADES  
AND VERTICAL PANELS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017  
DATE

FHWA

/S/ Andrew Heidtke  
WORK ZONE ENGINEER

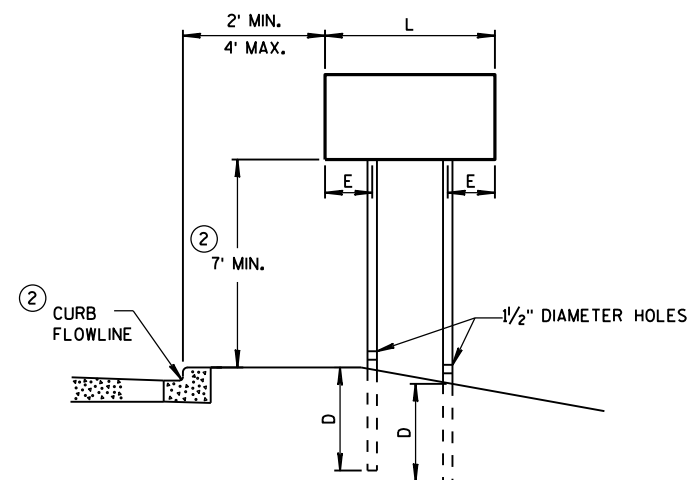
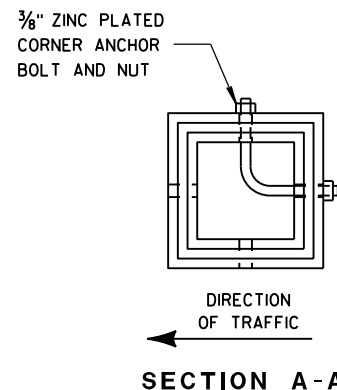


DETAIL OF TUBULAR STEEL SIGN POST

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.

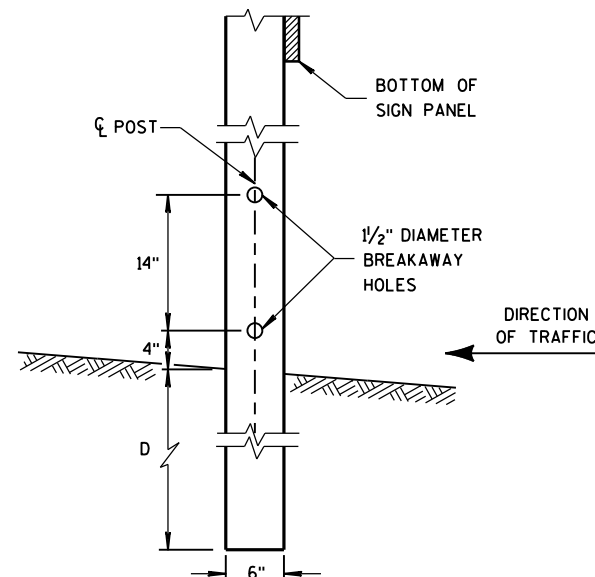


URBAN AREA

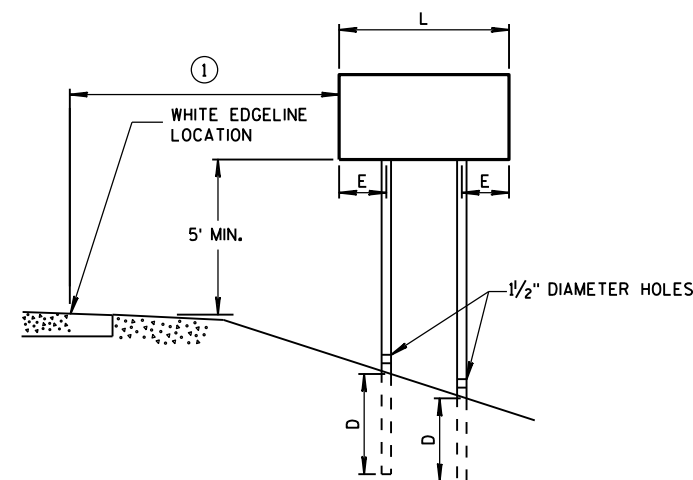
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4"x6" WOOD POST MODIFICATION



RURAL AREA

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

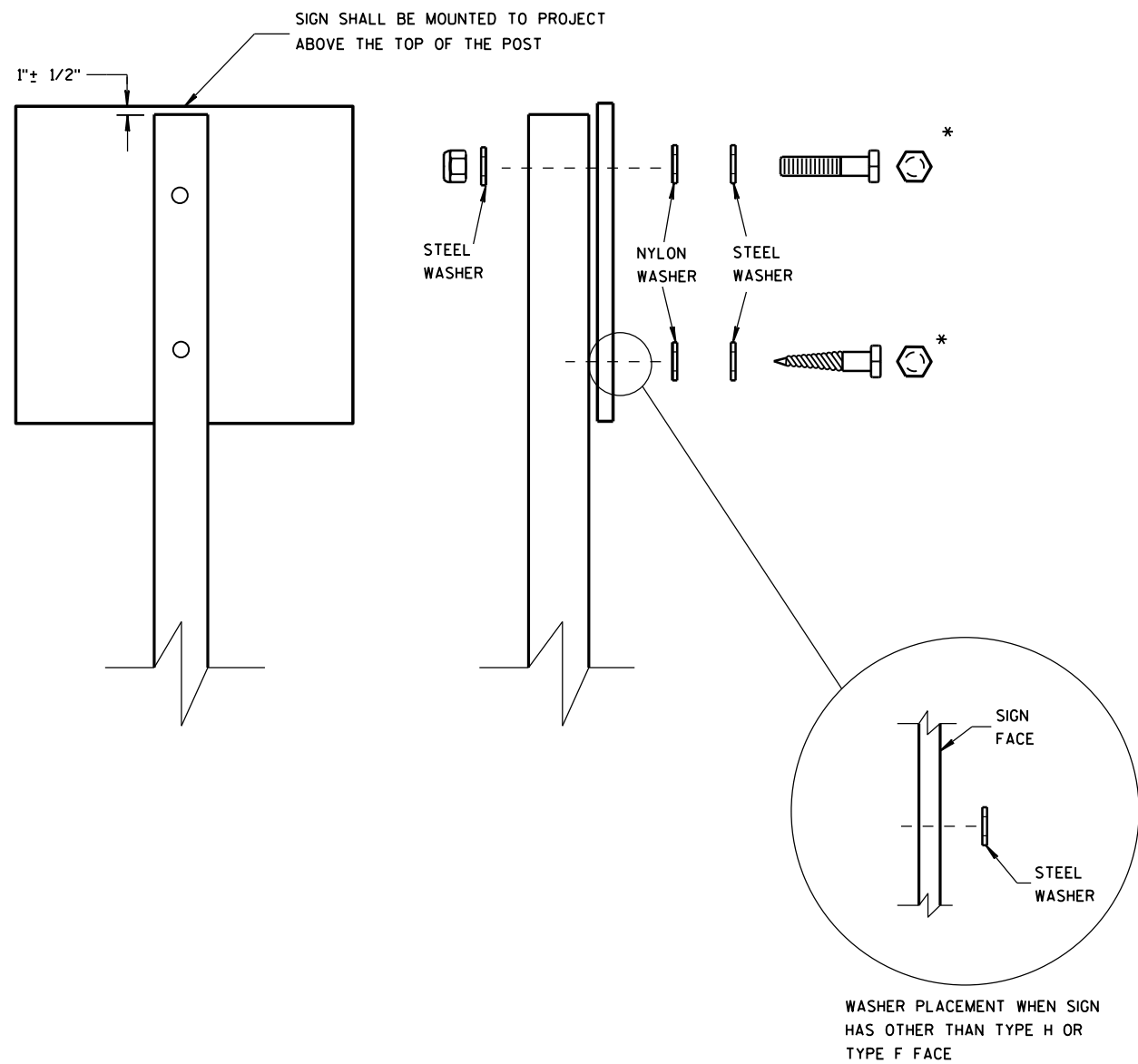
SEE NOTE ③

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.

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



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.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGINEER
FHWA	





## ***Wisconsin Department of Transportation***

Dedicated people creating transportation solutions  
through innovation and exceptional service.

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