



Wisconsin Department of Transportation

Division of Transportation Systems Development

Bureau of Project Development
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Madison, WI 53707-7916

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February 24, 2020

NOTICE TO ALL CONTRACTORS:

Proposal #4: 3614-00-75
Creek Road, T of Bradford
WSOR Bridge & Approaches B530177
Loc Str
Rock County

Letting of March 10, 2020

This is Addendum No. 01, which provides for the following:

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
94	The dimensions on the "Typical Strand Pattern" detail on the Prestressed Girder Details sheet have been corrected.
100	Note regarding the pay limits of the wall has been modified for clarity.
105	Note regarding the pay limits of the wall has been modified for clarity.

Plan Sheets

The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 94, 100, & 105.

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

END OF ADDENDUM

STATE PROJECT NUMBER
3614-00-75

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. ALL SURFACES TO BE SMOOTH AND FINISHED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

THE GIRDER SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR THE LIFTS. THE LIFTS SHALL BE USED IN DETERMINING THE SPECIFICATION FOR GUIDANCE. GIRDERS ARE TO BE FABRICATED IN STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

STIRRUPS SHALL BE FUSED AT THE END OF GIRDER. END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

TOP FLANGE TO BE FORMED OUT TO MEET CLEARANCE REQUIREMENTS. SEE DETAILS ON SHEET 8 FOR LOCATIONS AND DIMENSIONS.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWW) JUSTIN 1004 MAY BE USED IN PLACE OF THE STRANDS MAINTAINING THE SAME SPACING AND COVER. ALL DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

DATA SHOWN IN DEFLECTION DATA IS THEORETICAL AND MAY VARY WITH LOSS OF STRENGTH, VARIABLE PRESTRESS CONDITIONS AND PRESTRESS LOSSES.

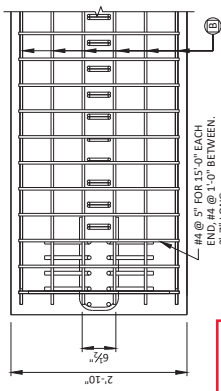
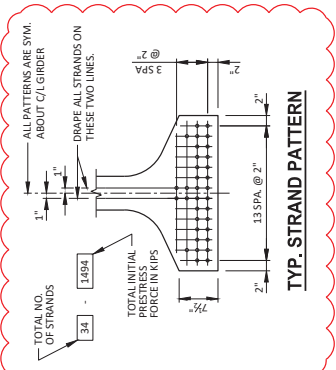
THE THEORETICAL INITIAL CAMBER VALUE AT THE END OF GIRDER AND RELEASE AT MIDSPAN

SPAN	CAMBER (IN)
1	3.7'

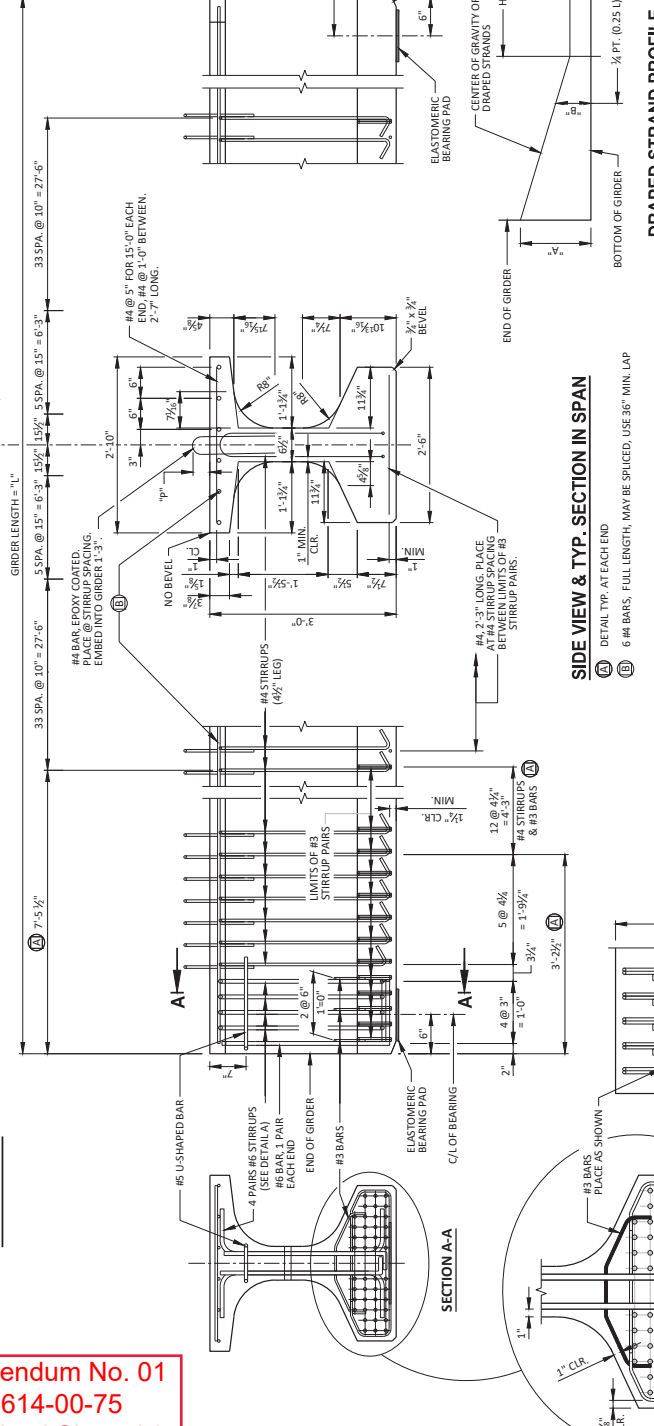
THESE VALUES ARE TO BE USED IN DETERMINING THE USE OF ACTUAL GIRDER SHOTS. THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



William C. Decker
02/24/20



Addendum No. 01
ID 3614-00-75
Revised Sheet 94
February 24, 2020



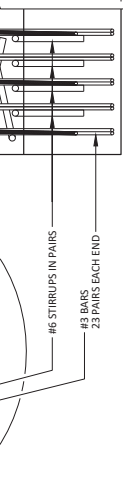
DRAPED STRAND PROFILE



GIRDER DATA

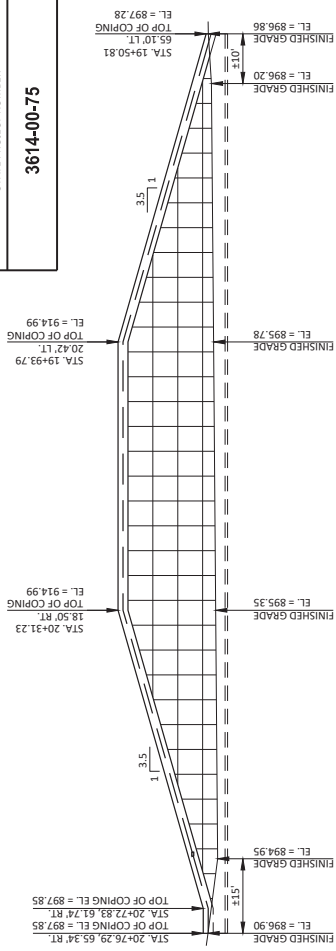
GIRDER LENGTH	QUANT.	DEAD LOAD DEF. (IN.)										CONC. STRENGTH	DIA. OF STRAND	DIA. OF PROJECTION	TOTAL NO. OF STRANDS	UNDRAPED PATTERN TOTAL NO. (KSI)	UNDRAIDED PATTERN TOTAL NO. (KSI)	GIRDER NO.									
		1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"								1 1/2"	1 3/4"	2"	2 1/4"	2 1/2"	2 3/4"	3"	3 1/4"	3 1/2"
85'-0"	4	0.6	1.1	1.5	1.7	1.8	1.7	1.5	1.1	0.6	8.0	7"	7"	7"	7"	0.6	34	6.8	31	113%	149%	5	--	--	--	--	3-4

*MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.
NOTE: SEE SHEET 11 FOR DEAD LOAD DEFLECTION DIAGRAM.



NO.	DATE	REVISION	BY
1	2/21/20	DIMENSION CORRECTIONS	PFB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURE B-53-177
DRAWN BY: PFB
CHECKED BY: RBH
36W-INCH
PRESTRESSED
GIRDER DETAILS
SHEET 94 OF 13
LAYOUT



ELEVATION R-53-84
(LOOKING SOUTHWEST AT FRONT FACE OF WALL)

SAFETY FACTORS FOR MSE WALLS

STRUCTURE	WALL HEIGHT (FT)	EXPOSED WALL HEIGHT (FT)	OVERTURN (CDR ≥ 1.0)	GLOBAL STABILITY (CDR ≥ 1.0)	BEARING CAPACITY (CDR ≥ 1.0)	MIN. BEARING RESISTANCE (PSF)	MIN. LENGTH OF REIN. (FT)
R-53-84	22.5	21	1.0	1.7	2.6	17,200	17
	16.5	15	1.0	2.1	3.0	14,900	14
	11.5	10	1.0	2.6	3.7	13,200	12

ALL SAFETY FACTORS ARE CALCULATED FOR THE WALL HEIGHTS AND REINFORCEMENT LENGTHS SHOWN IN THE TABLE. SEE GEOTECHNICAL REPORT FOR FURTHER INFORMATION. FINAL DESIGN FOR INTERNAL AND EXTERNAL STABILITY IS THE RESPONSIBILITY OF THE WALL DESIGNER AND MAY BE DIFFERENT FROM THE VALUES IN THE TABLE. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0' BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

ALL SAFETY FACTORS ARE BASED ON ANALYSIS OF BORING B-2 AS SHOWN ON THE SUBSURFACE EXPLORATION SHEET.

LEGEND

- 1" EXPANDED POLYSTYRENE
- WALL COPING CONCRETE, REINFORCEMENT BARS AND LEVELING PAD ARE TO BE INCLUDED IN THE BID ITEM
- "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-53-84"
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS. TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-53-84"
- 3/4" PREFORMED FILLER. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" FROM SURFACE OF CONCRETE)

TO ALLOW FOR MINIMUM EMBEDMENT OF WALL DURING FUTURE EXPANSION, THE TOP OF THE LEVELING PAD SHALL BE 1.6' MIN. BELOW FINISHED GRADE. THE WALL SHALL WORK DOWN TO THIS ELEVATION. ANY WALL PLACED BELOW THIS ELEVATION WILL NOT BE INCLUDED IN THE PAY LIMITS.

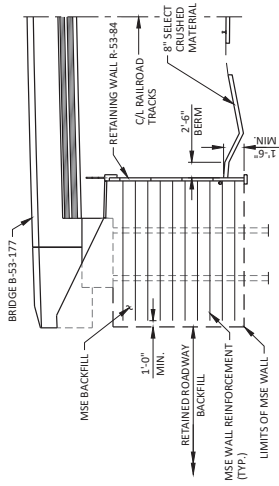
ASSUMED SOIL PARAMETERS OF FILL MATERIALS

SOIL DESCRIPTION	SOIL UNIT WEIGHT (PCF)	SOIL UNIT COHESION (PSF)	FRICTION ANGLE (DEGREES)
SANDY GRAVEL, COMPACTED (ON-SITE)	135	0	36
CLAY, COMPACTED (ON-SITE)	115	> 1,000	26
SAND, FREE DRAINING, COMPACTED (IMPORTED)	110	0	30

SOIL PARAMETERS

SOIL DESCRIPTION	BOTTOM ELEVATION (FT)	SOIL UNIT WEIGHT (PCF)	COHESION (PSF)	FRICTION ANGLE (DEGREES)
EX. FILL, VERY STIFF SANDY CLAY	903.8	120	2,000	0
DENSE SAND AND GRAVEL	898.3	130	0	36
VERY DENSE SAND AND GRAVEL	870.3	140	500	39
HIGHLY WEATHERED DOLOMITE BEDROCK	866.3	150	0	43
LESS WEATHERED DOLOMITE BEDROCK	865.8	160	HIGH	0

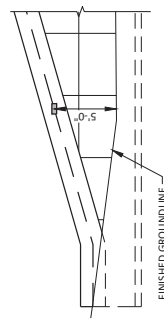
Addendum No. 01
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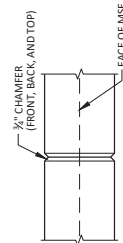
TYPICAL SECTION THROUGH MSE RETAINING WALL



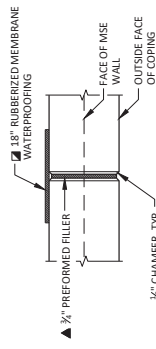
William C. Decker
02/24/20



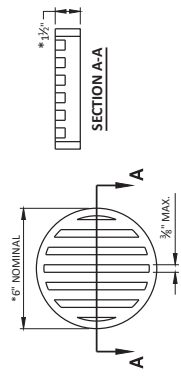
NAME PLATE DETAIL
PLACE IN CENTER OF COPING



COPING CONTRACTION JOINT
DO NOT RUN BAR STEEL THROUGH JOINT.
MAX. SPACING OF JOINT = 7'-2"



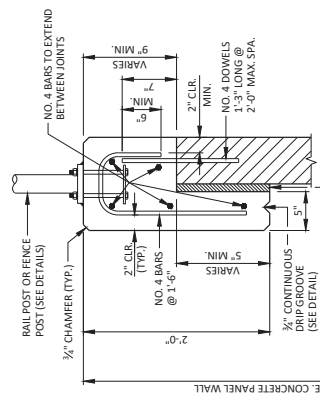
COPING EXPANSION JOINT
DO NOT RUN BAR STEEL THROUGH JOINT.
MAX. SPACING OF JOINT = 5'-0"



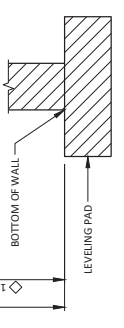
RODENT SCREEN
DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.
ORIENT SHIELD SO SLOTS ARE VERTICAL

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE IDENTICAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

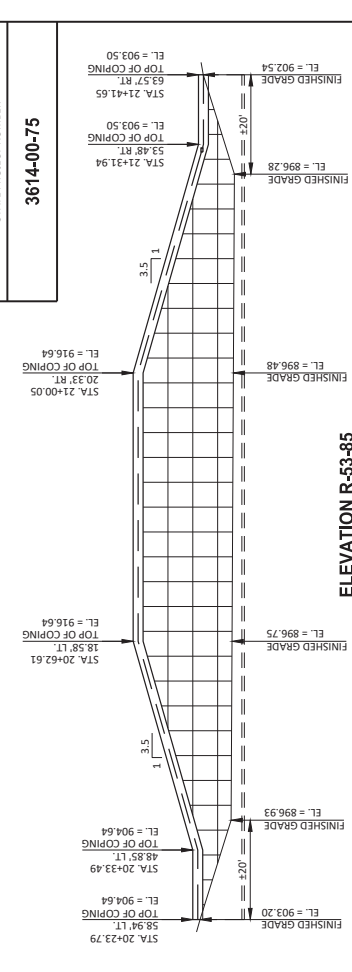
THIS SCREEN SHALL BE FASTENED TO THE PIPE UNDERDRAIN WITH TWO OR MORE NO. 10X 1/2 INCH STAINLESS STEEL SHEET METAL SCREWS.



"PIPE UNDERDRAIN WRAPPED 6-INCH" SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH TO END OF PIPE UNDERDRAIN. SEE DETAIL ON THIS SHEET.



CAST-IN-PLACE CONCRETE COPING DETAIL

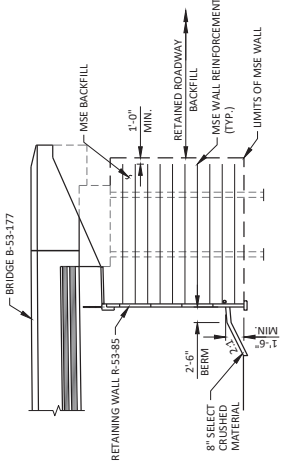


SAFETY FACTORS FOR MSE WALLS

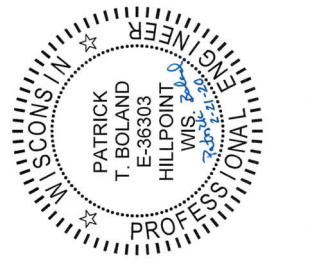
STRUCTURE	WALL HEIGHT (FT)	EXPOSED WALL HEIGHT (FT)	OVERTURN (CDR ≥ 1.0)	GLOBAL STABILITY (CDR ≥ 1.0)	BEARING CAPACITY (CDR ≥ 1.0)	MIN. BEARING RESISTANCE (PSF)	MIN. LENGTH OF REIN. (FT)
R-53-85	22.5	21	1.0	1.7	1.0	2.6	17,200
	16.5	15	1.0	2.1	1.0	3.0	14,900
	11.5	10	1.0	2.6	1.0	3.7	13,200

ALL SAFETY FACTORS ARE CALCULATED FOR THE WALL HEIGHTS AND REINFORCEMENT LENGTHS SHOWN IN THE TABLE. SEE GEOTECHNICAL REPORT FOR FURTHER INFORMATION. FINAL DESIGN FOR INTERNAL AND EXTERNAL STABILITY IS THE RESPONSIBILITY OF THE WALL DESIGNER AND MAY BE DIFFERENT FROM THE VALUES IN THE TABLE. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0' BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.

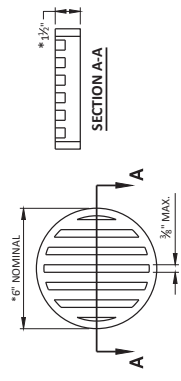
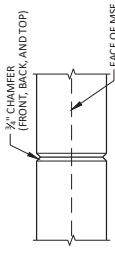
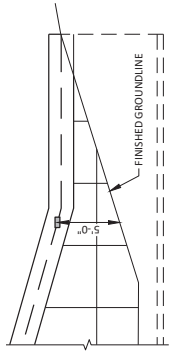
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TYPICAL SECTION THROUGH MSE RETAINING WALL

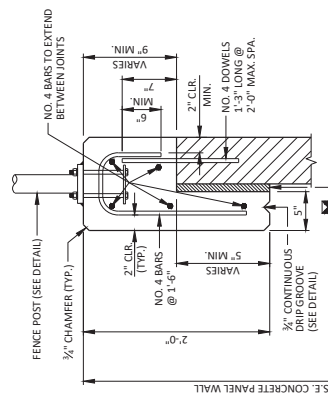


William C. Decker
02/24/20



THE RODENT SCREEN SHALL BE A PVC GRATE SIMILAR TO THIS TYPE. THE GRATE SHALL BE ATTACHED TO THE UNDERDRAIN STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED ENDS OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10X 1/2" STAINLESS STEEL SHEET METAL SCREWS.

NOTES:
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.
ORIENT SHIELD SO SLOTS ARE VERTICAL.



"PIPE UNDERDRAIN WRAPPED 6-INCH SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH TO UNDERDRAIN WITH 1/2" END OF PIPE UNDERDRAIN. SEE DETAIL ON THIS SHEET."

CAST-IN-PLACE CONCRETE COPING DETAIL

ASSUMED SOIL PARAMETERS OF FILL MATERIALS

SOIL DESCRIPTION	SOIL UNIT WEIGHT (PCF)	COHESION (PSF)	FRICTION ANGLE (DEGREES)
SAND/GRAVEL, COMPACTED (ON-SITE)	135	0	36
CLAY, COMPACTED (ON-SITE)	115	> 1,000	26
SAND, FREE DRAINING, COMPACTED (IMPORTED)	110	0	30

SOIL PARAMETERS

SOIL DESCRIPTION	BOTTOM ELEVATION (FT)	SOIL UNIT WEIGHT (PCF)	COHESION (PSF)	FRICTION ANGLE (DEGREES)
EX. FILL: VERY STIFF SANDY CLAY	903.2	120	2,000	0
DENSE SAND AND GRAVEL	892.7	130	0	39
VERY DENSE SAND AND GRAVEL	868.2	140	0	41
HIGHLY WEATHERED DOLOMITE BEDROCK	863.7	150	0	43
LESS WEATHERED DOLOMITE BEDROCK	863.7	160	HIGH	0

- LEGEND**
- 1" EXPANDED POLYSTYRENE
 - WALL COING CONCRETE. REINFORCEMENT BARS AND LEVELING PAD ARE TO BE INCLUDED IN THE BID ITEM
 - "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-53-85"
 - VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM TOP OF COPING TO 6" BELOW TOP OF PANELS. TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-53-85"
 - 3/4" PREFORMED FILLER. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-POLYMERIC JOINT SEALER. (1" DEEP & HOLD 1/8" FROM JOINT SURFACE OF CONCRETE)

TO ALLOW FOR MINIMUM EMBEDMENT OF WALL DURING FUTURE EXPANSION, THE TOP OF THE LEVELING PAD SHALL BE 1/2" BELOW FINISHED GROUND LINE. THE WALL SHALL BE PLACED DOWN TO THIS ELEVATION. THIS ELEVATION WILL NOT BE INCLUDED IN THE PAY LIMITS.

REVISIONS

NO.	DATE	REVISION	BY
1	2/21/20	UPDATED NOTE	PFB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-53-85

DRAWN BY: PFB
CHECKED BY: RBH

WALL DETAILS

SHEET 2 OF 5