

PLAN SYMBOLS

STATE LINE.....
COUNTY LINE.....
TOWNSHIP OR RANGE LINE.....
SECTION LINE.....
QUARTER LINE.....
SIXTEENTH LINE.....
RIGHT-OF-WAY LINE.....
PRESENT RIGHT-OF-WAY LINE.....
CONTROL OF ACCESS LINE.....
PROPERTY LINE (Except Land Lines).....
VACATED PLATTED PROPERTY.....
CORPORATE OR CITY LIMITS.....

TRUNK HIGHWAY CENTER LINE.....
RETAINING WALL.....
RAILROAD.....
RAILROAD RIGHT-OF-WAY LINE.....
RIVER OR CREEK.....
DRY RUN.....
DRAINAGE DITCH.....
DRAIN TILE.....
CULVERT.....
DROP INLET.....
GUARD RAIL.....
FENCE.....
WOOD FENCE.....
CHAIN LINK FENCE.....
RAILROAD SNOW FENCE.....
MODULAR BLOCK RETAINING WALL.....
STONE WALL.....
HEDGE.....
RAILROAD CROSSING SIGN.....
RAILROAD CROSSING BELL.....
ELECTRIC WARNING SIGN.....
CROSSING GATE.....
MEANDER CORNER.....

SPRINGS.....
MARSH/SWAMP.....
TIMBER.....
ORCHARD.....
BRUSH.....
NURSERY.....
CATTLE GUARD.....

OVERPASS (Highway Over).....
UNDERPASS (Highway Under).....
BRIDGE.....

BUILDING (One Story Frame).....
F-FRAME C-CONCRETE
S-STONE T-TILE
B-BRICK ST-STUCCO

IRON PIPE OR ROD.....
MONUMENT (STONE, CONCRETE, OR METAL).....
WOODEN HUB.....
GRAVEL PIT.....
SAND PIT.....
BORROW PIT.....
ROCK QUARRY.....

UTILITY SYMBOLS

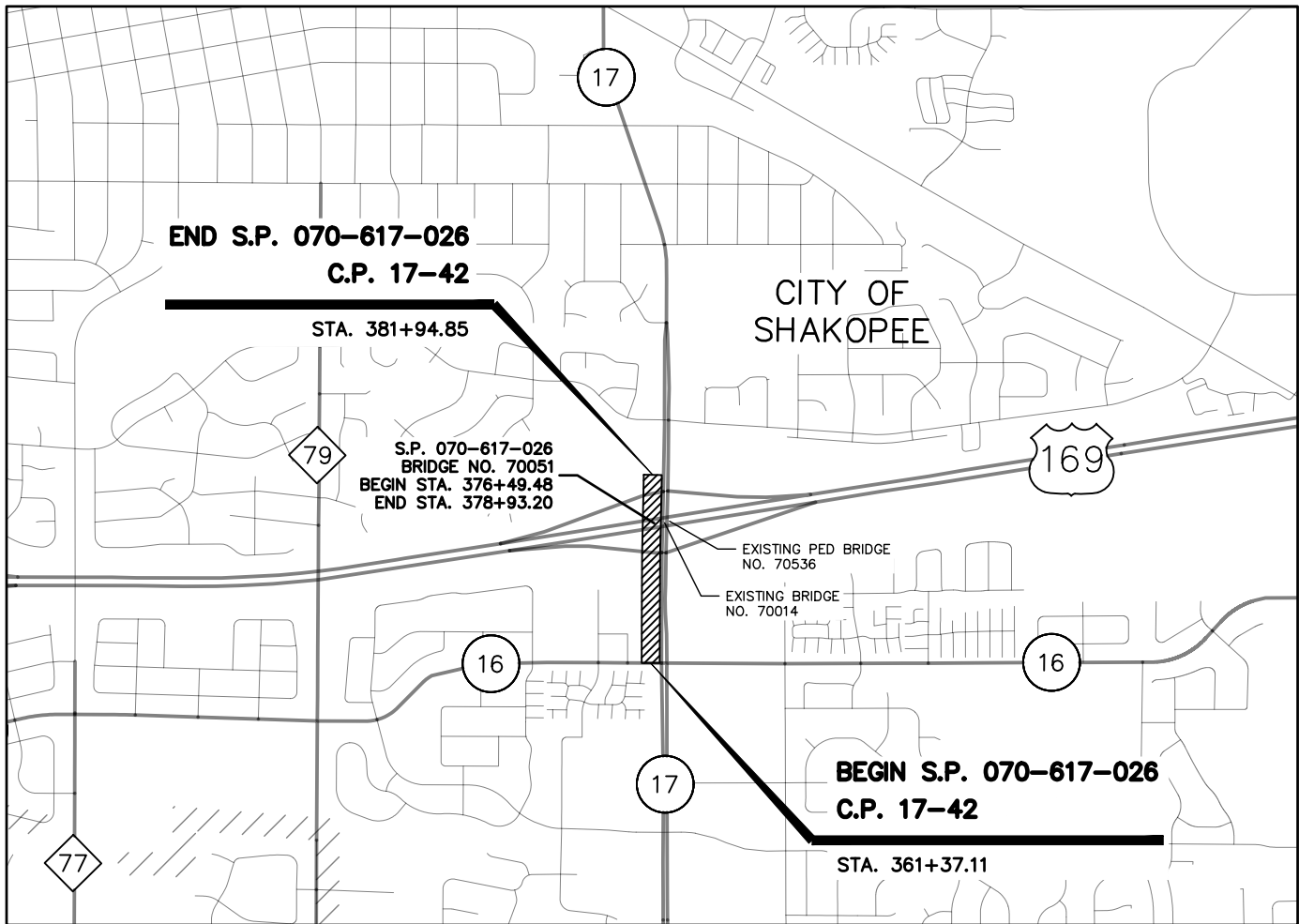
POWER POLE LINE.....
TELEPHONE OR TELEGRAPH POLE LINE.....
JOINT TELEPHONE AND POWER ON POWER POLES.....
ON TELEPHONE POLES.....
ANCHOR.....
STEEL TOWER.....
STREET LIGHT.....
PEDESTAL (TELEPHONE CABLE TERMINAL).....

GAS MAIN.....
WATER MAIN.....
CONDUIT.....
TELEPHONE CABLE IN CONDUIT.....
ELECTRIC CABLE IN CONDUIT.....
TELEPHONE MANHOLE.....
ELECTRIC MANHOLE.....
BURIED TELEPHONE CABLE.....
BURIED ELECTRIC CABLE.....
AERIAL TELEPHONE CABLE.....
SEWER (SANITARY).....
SEWER (STORM).....
SEWER MANHOLE.....
HANDHOLE.....
CATCH BASIN.....
FIRE HYDRANT.....

MINNESOTA DEPARTMENT OF TRANSPORTATION
COUNTY OF SCOTT

CONSTRUCTION PLAN FOR GRADING, AGGREGATE BASE, BITUMINOUS SURFACING, PEDESTRIAN
BRIDGE, TRAIL AND RAMPS, AND STORM SEWER

LOCATED ON C.S.A.H. 17 FROM C.S.A.H. 16 TO T.H. 169 NORTHWEST RAMP



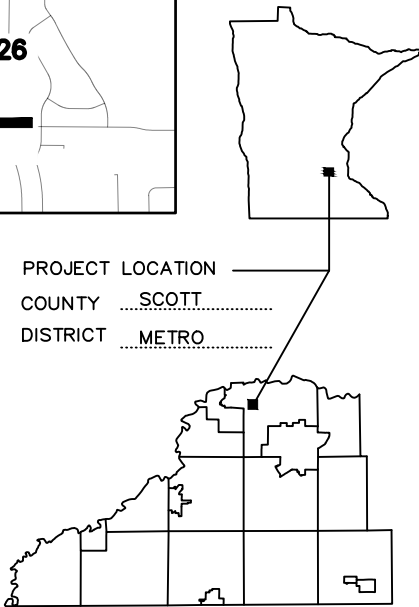
HORIZONTAL DATUM: SCOTT COUNTY COORDINATE SYSTEM, NAD83 (1996 ADJUSTMENT)
VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988)

SCALES
PLAN 40'
PROFILE 10'
INDEX MAP 1000'
X-SECTION 10'

C.S.A.H. NO. 17-TRAIL
STATE PROJECT NO. 070-617-026
GROSS LENGTH 2,057.74 FEET 0.389 MILES
BRIDGES-LENGTH 243.72 FEET 0.046 MILES
EXCEPTIONS-LENGTH 0.00 FEET 0.000 MILES
NET LENGTH 2,057.74 FEET 0.389 MILES

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." SOME UTILITIES WERE MARKED AND FIELD LOCATED BY SURVEY CREWS OR TAKEN FROM AERIAL MAPPING, AND OTHER UTILITIES WERE TAKEN FROM AS-BUILTS, MAPS, AND DRAWINGS FURNISHED BY THE UTILITY COMPANIES TO SCOTT COUNTY.

PROJECT LOCATION
COUNTY SCOTT
DISTRICT METRO



MINN. PROJ. NO. STPM XXXX (XXX)

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3	STATEMENT OF ESTIMATED QUANTITIES
4	STANDARD PLATES, BASIS OF QUANTITIES, INDEX TABS
5	EARTHWORK SUMMARY
6	QUANTITY TABULATIONS
7 - 8	UTILITY TABULATIONS
9	INPLACE TOPO AND UTILITIES
10	TYPICAL SECTIONS
11 - 12	TRAFFIC CONTROL PLANS
13 - 14	ALIGNMENT PLAN AND TABULATION
15	RIGHT OF WAY PLANS
16	REMOVAL PLAN
17 - 18	CONSTRUCTION PLAN AND PROFILE
19 - 22	INTERSECTION DETAILS
23 - 28	PEDESTRIAN RAMP DETAILS
29 - 30	DRAINAGE PLAN, TABULATIONS, AND DETAILS
31 - 43	TURF ESTABLISHMENT AND EROSION CONTROL PLAN
44 - 47	SWPPP NARRATIVE
48 - 52	SIGNING & STRIPING PLAN, TAB & DETAILS
53 - 55	LIGHTING PLANS AND DETAILS
56 - 72	TRAFFIC SIGNAL PLANS
73 - 78	CROSS SECTIONS
B1 - B48	BRIDGE PLANS - BRIDGE NO. 70051 (SEE B1 FOR INDEX)

THIS PLAN CONTAINS 126 SHEETS

DESIGN DESIGNATION - TRAIL

DESIGN SPEED	20 MPH
BASED ON	STOPPING SIGHT DISTANCE
HEIGHT OF EYE	4.5 FT. HEIGHT OF OBJECT 0.0 FT.
DESIGN SPEED NOT ACHIEVED AT	N/A

Approved SCOTT COUNTY HIGHWAY ENGINEER Date

Approved CITY OF SHAKOPEE Date

DISTRICT STATE AID ENGINEER
REVIEWED FOR COMPLIANCE WITH STATE AID & FEDERAL AID RULES/POLICY Date

STATE AID ENGINEER
APPROVED FOR STATE AID & FEDERAL FUNDING Date

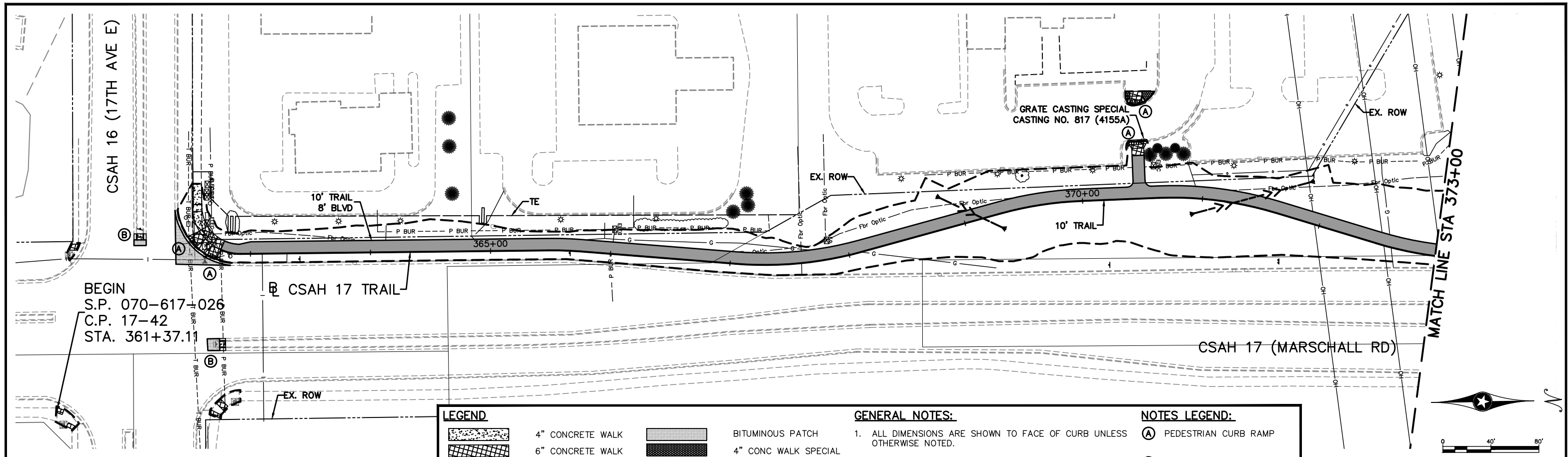
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE
NATHAN R. THOMAS LIC. NO. 54825

C.P. 17-42 | S.P. 070-617-026
CSAH 17 PEDESTRIAN TRAIL
FROM CSAH 16 TO TH 169 SB ON RAMP

TITLE SHEET

Sheet 1 of 126 Sheets



LEGEND

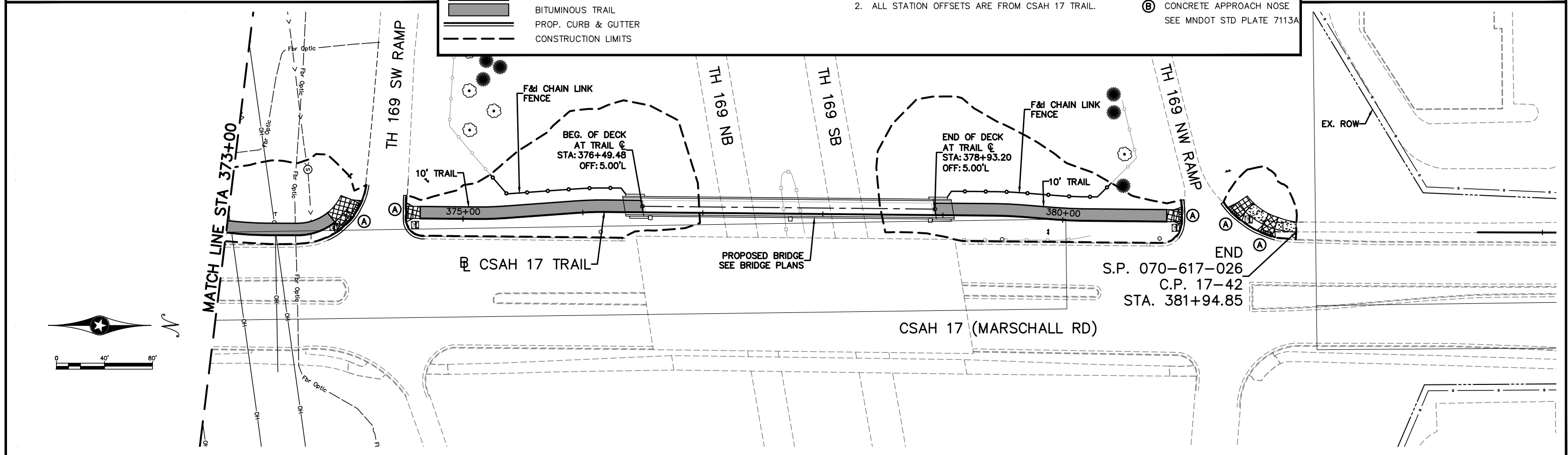
	4" CONCRETE WALK		BITUMINOUS PATCH
	6" CONCRETE WALK		4" CONC WALK SPECIAL
	BITUMINOUS TRAIL		
	PROP. CURB & GUTTER		
	CONSTRUCTION LIMITS		

GENERAL NOTES:

- ALL DIMENSIONS ARE SHOWN TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL STATION OFFSETS ARE FROM CSAH 17 TRAIL.

NOTES LEGEND:

- (A) PEDESTRIAN CURB RAMP
(B) CONCRETE APPROACH NOSE
SEE MNDOT STD PLATE 7113A



DATE	BY	REVISIONS

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

DRAFT

Nathan R. Thomas
Date XX/XX/XXXX
Reg. No. 54825

DRAWN:	NTE
CHECKED:	LHS
APPROVED:	NRT

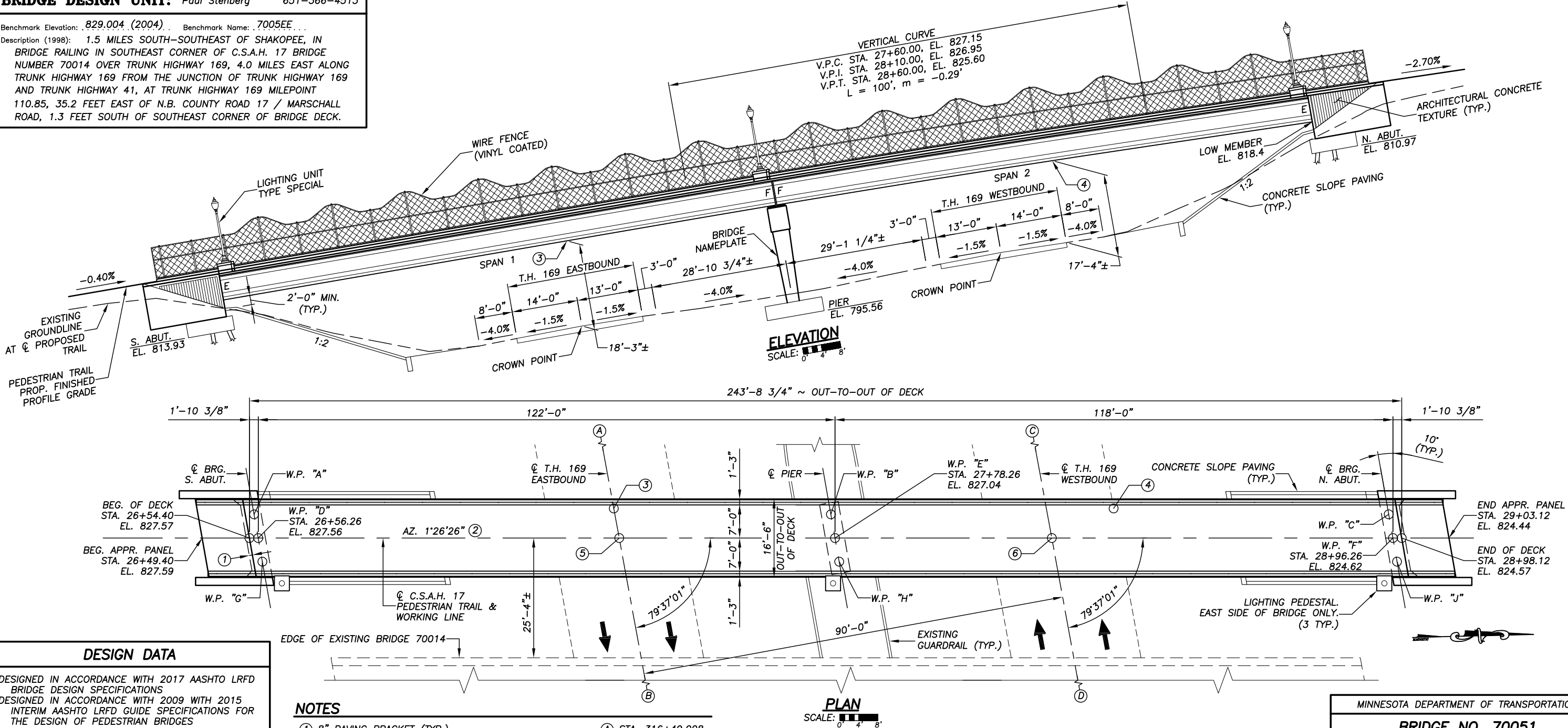


C.P. 17-42 | S.P. 070-617-026
CSAH 17 PEDESTRIAN TRAIL
FROM CSAH 16 TO TH 169 SB ON RAMP

CONSTRUCTION PLAN
Sheet 17 of 126 Sheets

ROAD DESIGN UNIT: Mohamoud Mire 651-234-7724
RESIDENT ENGINEER: Elizabeth Benjamin 651-366-5957
BRIDGE DESIGN UNIT: Paul Stenberg 651-366-4513

Benchmark Elevation: 829.004 (2004) Benchmark Name: 7005EE
Description (1998): 1.5 MILES SOUTH-SOUTHEAST OF SHAKOPEE, IN
BRIDGE RAILING IN SOUTHEAST CORNER OF C.S.A.H. 17 BRIDGE
NUMBER 70014 OVER TRUNK HIGHWAY 169, 4.0 MILES EAST ALONG
TRUNK HIGHWAY 169 FROM THE JUNCTION OF TRUNK HIGHWAY 169
AND TRUNK HIGHWAY 41, AT TRUNK HIGHWAY 169 MILEPOINT
110.85, 35.2 FEET EAST OF N.B. COUNTY ROAD 17 / MARSHALL
ROAD, 1.3 FEET SOUTH OF SOUTHEAST CORNER OF BRIDGE DECK.



DESIGN DATA

DESIGNED IN ACCORDANCE WITH 2017 AASHTO LRFD
BRIDGE DESIGN SPECIFICATIONS
DESIGNED IN ACCORDANCE WITH 2009 WITH 2015
INTERIM AASHTO LRFD GUIDE SPECIFICATIONS FOR
THE DESIGN OF PEDESTRIAN BRIDGES
PEDESTRIAN LIVE LOAD = 0.090 KSF
H-10 TRUCK VEHICULAR LIVE LOAD

MATERIAL DESIGN PROPERTIES:
REINFORCED CONCRETE:
 $f'_c = 4$ KSI CONCRETE
 $f_y = 60$ KSI PLAIN AND EPOXY COATED BARS
 $f_y = 75$ KSI STAINLESS STEEL BARS
 $n = 8$ FOR REINFORCEMENT BARS

PRETENSIONED CONCRETE:
 $f'_c = 6.5$ KSI CONCRETE (MAX.)
 $f_{pu} = 270$ KSI LOW RELAXATION STRANDS
 $n = 1$ FOR PRETENSIONING STRANDS
0.75 f_{pu} FOR INITIAL PRESTRESS

STRUCTURAL STEEL:
 $F_y = 36$ KSI STRUCTURAL STEEL SPEC. 3306

DESIGN SPEED = 65 MPH (UNDER)
PEDESTRIAN TRAIL SPEED = 20 MPH (OVER)

DECK AREA = 4,047 SQUARE FEET

HL-93 LRFR
BRIDGE OPERATING RATING FACTOR RF = N/A

NOTES

- 8" PAVING BRACKET (TYP.)
 - AZ. 1'26'26" (2019) = AZ. 1'26'35" (1990)
 - CRITICAL VERTICAL CLEARANCE POINT "V1"
STA. 27+31.47, 6'-3" LEFT
EL. 821.05
 - CRITICAL VERTICAL CLEARANCE POINT "V2"
STA. 28+37.18, 6'-3" LEFT
EL. 819.64
 - CONTROL POINT "X1"
C.S.A.H. 17 PED. TRAIL STA. 27+32.62
T.H. 169 EASTBOUND STA. 349+92.50
 - CONTROL POINT "X2"
C.S.A.H. 17 PED. TRAIL STA. 28+24.11
T.H. 169 WESTBOUND STA. 350+08.99
- (A) STA. 316+49.008
X = 447,616.433
Y = 211,075.808
- (B) STA. 462+82.753
X = 462,072.303
Y = 213,350.519
- (C) STA. 316+49.008
X = 447,602.443
Y = 211,164.714
- (D) STA. 462+82.753
X = 462,058.313
Y = 213,439.425

S.P. 070-617-026
JOB NUMBER T9AC054

C.P. 17-42
SP7005-124

ERICKSON ENGINEERING
9531 WEST 78TH STREET - SUITE 100
EDEN PRAIRIE, MN 55344

APPROVED: _____
DATE: _____
SCOTT COUNTY ENGINEER

I HEREBY CERTIFY THAT THIS PLAN (SHEETS B1-B49)
WAS PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A DULY LICENSED
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE
STATE OF MINNESOTA.

DATE: _____
LIC. NO. 13931
RONALD L. DOKKEN

LIST OF SHEETS

NO.	TITLE
B1	GENERAL PLAN & ELEVATION
B2	BRIDGE TYPICAL SECTION & QUANTITIES
B3	BRIDGE LAYOUT
B4	CORNER DETAILS
B5-B13	SOUTH ABUTMENT
B14-B22	NORTH ABUTMENT
B23-B25	PIER
B26	FRAMING PLAN
B27-B28	PRESTRESSED CONCRETE BEAM
B29-B34	SUPERSTRUCTURE
B35-B37	CONCRETE CURB & WIRE FENCE
B38-B42	MISC. BRIDGE DETAILS
B43	SLOPE PAVING
B44	CONDUIT SYSTEM
B45	BRIDGE APPROACH PANEL
B46	BRIDGE SURVEY
B47	BRIDGE SURVEY ~ PLAN
B48	BORINGS

MINNESOTA DEPARTMENT OF TRANSPORTATION

BRIDGE NO. 70051

PEDESTRIAN BRIDGE OVER T.H. 169
LOCATED 60 FEET WEST OF JCT. S.B. C.S.A.H. 17
(MARSHALL ROAD) & T.H. 169

122'-6 1/2"~118'-6 1/2" PRESTR. CONC. BEAM SPANS
14'-0" CLEAR WALKWAY ~ 10' SKEW
CONCRETE CURB & WIRE FENCE DESIGN S-1
SPAN IDENTIFICATION NO. 501

GENERAL PLAN & ELEVATION

SEC. 7 TWP. 115 N R 22 W

CITY: SHAKOPEE
COUNTY: SCOTT

APPROVED: _____
STATE BRIDGE ENGINEER

DATE: _____

DES.: JCK	DRN.: NBB
CHK.: MWG	CHK.: JCK

BRIDGE NO.
70051

SHEET B1 OF B48 SHEETS

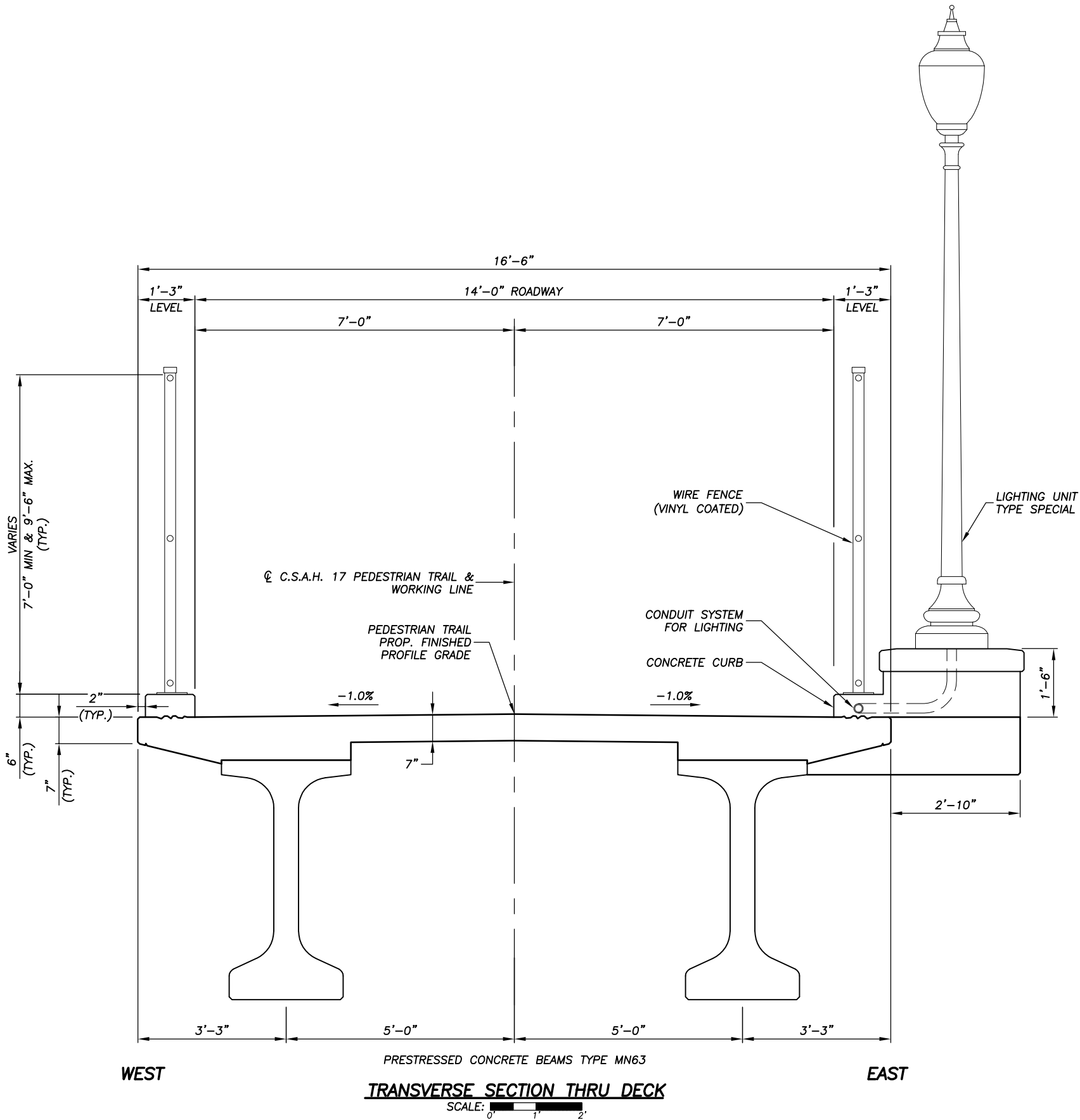
STATEMENT OF ESTIMATED QUANTITIES FOR ENTIRE BRIDGE			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY (A)
2021.501	MOBILIZATION	LUMP SUM	1
2401.503	TYPE CURB BARRIER CONCRETE (3S52)	LIN. FT.	488 (P)
2401.507	STRUCTURAL CONCRETE (1G52)	CU. YD.	61 (P)
2401.507	STRUCTURAL CONCRETE (3B52)	CU. YD.	93 (P)
2401.508	REINFORCEMENT BARS	POUND	3870 (P)
2401.508	REINFORCEMENT BARS (EPOXY COATED)	POUND	46170 (P)
2401.508	REINFORCEMENT BARS (STAINLESS-75KSI)	POUND	240 (P)
2401.601	SLOPE PREPARATION	LUMP SUM	1
2401.601	STRUCTURE EXCAVATION	LUMP SUM	1
2401.601	FOUNDATION PREPARATION PIER	LUMP SUM	1
2401.618	BRIDGE SLAB CONCRETE (3YHPC-M)	SQ. FT.	4047 (P)
2402.502	BEARING ASSEMBLY	EACH	8
2405.503	PRESTRESSED CONCRETE BEAMS MN63	LIN. FT.	482 (P)
2405.503	DIAPHRAGMS FOR TYPE MN63 PRESTRESSED BEAMS	LIN. FT.	58 (P)
2406.503	EXPANSION JOINTS DESIGN E8H	LIN. FT.	34 (P)
2406.504	BRIDGE APPROACH PANELS	SQ. YD.	37
2411.604	ARCHITECTURAL CONCRETE TEXTURE	SQ. YD.	40 (P)
2452.502	STEEL H-TEST PILE 60 FT. LONG 10"	EACH	2
2452.502	PILE TIP PROTECTION 10"	EACH	12
2452.603	STEEL H-PIILING 10"	LIN. FT.	500
2502.501	DRAINAGE SYSTEM TYPE (B910)	LUMP SUM	1
2514.504	CONCRETE SLOPE PAVING	SQ. YD.	160
2545.501	CONDUIT SYSTEM	LUMP SUM	1
2545.502	LIGHTING UNIT TYPE SPECIAL	EACH	3
2557.503	WIRE FENCE DESIGN SPECIAL VINYL COATED	LIN. FT.	528

STATEMENT OF QUANTITIES KEYNOTES:

A. (P) DENOTES "PLAN QUANTITY"

CONSTRUCTION NOTES

- THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. SEE SPECIAL PROVISIONS FOR ALL XXXX.6XX SERIES PAY ITEMS FOR ADDITIONAL REQUIREMENTS.
- THE BAR SIZES SHOWN IN THIS PLAN ARE IN U.S. CUSTOMARY DESIGNATIONS. BARS MARKED WITH THE SUFFIX "E" SHALL BE EPOXY COATED IN ACCORDANCE WITH SPEC. 3301. BARS MARKED WITH THE SUFFIX "S" SHALL BE STAINLESS STEEL IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- THE PILE LOADS SHOWN IN THE PLANS AND CORRESPONDING NOMINAL PILE BEARING RESISTANCE (Rn) WERE COMPUTED USING LRFD METHODOLOGY. PILE BEARING RESISTANCE DETERMINED IN THE FIELD SHALL INCORPORATE THE METHODS AND/OR FORMULAS DESCRIBED IN THE STANDARD SPECIFICATION.
- BRIDGE SEAT REINFORCEMENT SHALL BE CAREFULLY PLACED TO AVOID INTERFERENCE WITH DRILLING HOLES FOR THE ANCHOR RODS. THE BEAMS SHALL BE ERECTED IN THEIR FINAL POSITION PRIOR TO DRILLING HOLES FOR ANCHOR RODS.
- BRIDGE CONCRETE CURB REINFORCEMENT SHALL BE CAREFULLY PLACED TO AVOID INTERFERENCE WITH DRILLING HOLES FOR WIRE FENCE ADHESIVE ANCHORS.
- THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."



CERTIFIED BY: PROFESSIONAL ENGINEER/ RONALD L. DOKKEN LIC. NO. 13931	DES.: JCK	 ERICKSON ENGINEERING WWW.ERICKSONENGINEERING.COM 952-929-6791	BRIDGE TYPICAL SECTION & QUANTITIES	S.P. 070-617-026 & C.P. 17-42 SHEET NO. B2 OF B48 SHEETS	BRIDGE NO. 70051
	CHK.: MWG				
	DRN.: NBB				
	CHK.: JCK				