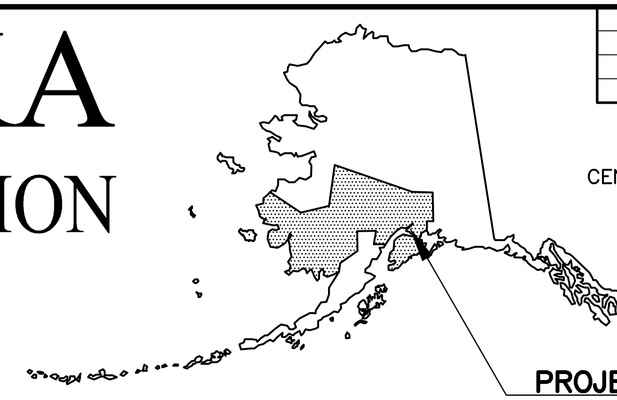
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	A01	152

ROUTE ID	22812161000	MILEPOINT	5.354 - 7.558
ROUTE ID	2281216D000	MILEPOINT	0 - 1.993
ROUTE ID	2281044X000	MILEPOINT	2.619 - 3.066
ROUTE ID	2281215R021	MILEPOINT	0 - 0.310
ROUTE ID	2281123X000	MILEPOINT	0 - 0.059
LATITUDE	61.197378	LONGITUDE	-149.913081

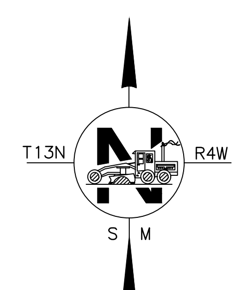


PROPOSED HIGHWAY PROJECT

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION PROJECT NO. 0421099/CFHWY00132

DRAINAGE, PAVING, SIDEWALKS, ILLUMINATION, SIGNALIZATION, SIGNING, AND STRIPING

PRELIMINARY



PROJECT SUMMARY		
ROADWAY	WIDTH (FEET)	LENGTH (MILES)
MINNESOTA DRIVE	32-105	2.204
MINNESOTA DRIVE SB	29-41	1.993
SPENARD ROAD	18-26	0.149
HILLCREST OFF-RAMP	26	0.310
15TH - MINNESOTA SB CONNECTOR	16-19	0.047

BRIDGE SUMMARY			
BRIDGE NAME	BRIDGE #	BRIDGE LENGTH	BRIDGE WIDTH
CHESTER CREEK LAGOON	7082	45 FT	32 FT

DESIGN DESIGNATIONS			
ROADWAY	FUNCTIONAL CLASS	AADT (2019)	DESIGN SPEED (MPH)
MINNESOTA DRIVE	PRINCIPAL ARTERIAL	31,277	45/30
MINNESOTA DRIVE SB	PRINCIPAL ARTERIAL	34,598	45
SPENARD ROAD	MINOR ARTERIAL	2,350	30
HILLCREST OFF-RAMP	OTHER PRINCIPAL ARTERIAL	1,586	45
15TH - MINNESOTA SB CONNECTOR	OTHER PRINCIPAL ARTERIAL	3,902	30/45

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
4111 AVIATION AVENUE, ANCHORAGE, AK 99502
(907)269-0590

APPROVED:

REGIONAL PRECONSTRUCTION ENGINEER DATE

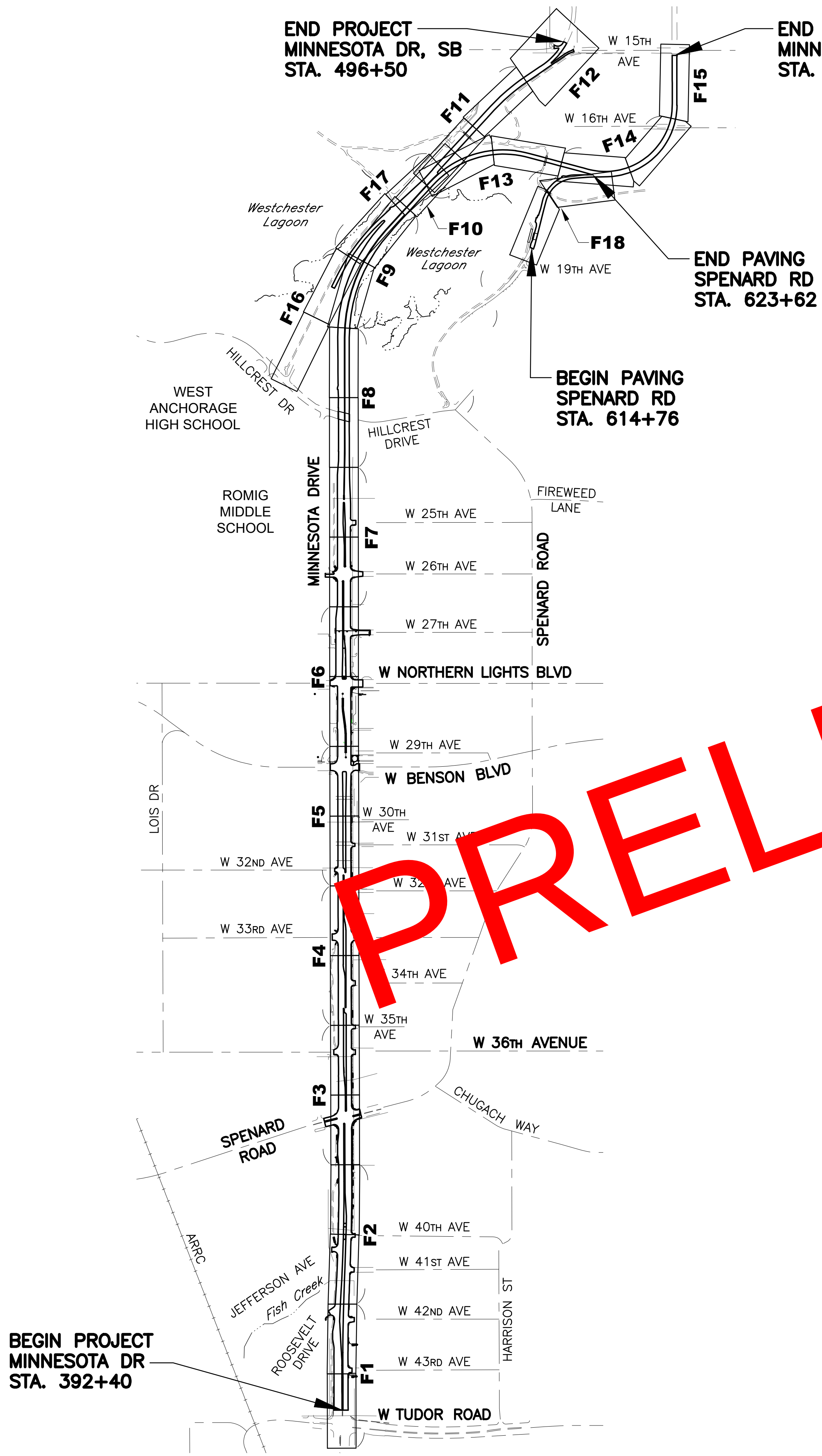
CONCUR:

REGIONAL CONSTRUCTION ENGINEER DATE

DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY SLH
SCALE N/A
DATE 5/16/2022 TIME 9:42 AM
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_A01NA02_TTL.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	A02	A07



GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE RIGHT-OF-WAY, TEMPORARY CONSTRUCTION EASEMENTS, AND TEMPORARY CONSTRUCTION PERMITS. NO EXCESS MATERIAL SHALL BE DISPOSED OF WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY CALLED FOR IN THE PLANS OR DIRECTED BY THE ENGINEER.

2. THE ROW LINES SHOWN WERE CREATED FOR THIS PROJECT BY ALASKA DOT&PF ROW ENGINEERING AND ARE BASED ON RECORDED DOCUMENTS AND/OR PLATTED SUBDIVISIONS, AND SURVEYED MONUMENTS. THE ROW LINES WERE INSERTED USING A COMMON COORDINATE SYSTEM.

3. THE SPENARD ROAD ALIGNMENT IS A PROJECT ALIGNMENT AND IS NOT THE RIGHT OF WAY CENTERLINE.

4. THE MINNESOTA CENTERLINE ALIGNMENT USED IN THE DESIGN OF THIS PROJECT HAS STATION VALUES 1.82 FEET LESS THAN THE RIGHT OF WAY ALIGNMENT. FOR TEMPORARY CONSTRUCTION EASEMENTS AND TEMPORARY CONSTRUCTION PERMITS ONLY, SUBTRACT 1.82 FEET FROM ALL STATIONS SHOWN ON THE TCE/TCP FIGURES TO MATCH PROJECT STATIONING. THERE IS NO OFFSET CORRECTION.

5. MONUMENTS AND MONUMENT CASES LOCATED WITHIN PAVEMENT STRUCTURAL SECTION NO. 1 ARE NOT TO BE DISTURBED OR REMOVED. MONUMENTS AND MONUMENT CASES LOCATED WITHIN PAVEMENT STRUCTURAL SECTIONS NO.S 2 AND 5 ARE TO BE COMPLETELY REMOVED.

6. ALL PAVEMENT CUTS SHALL BE MADE WITH A SAW OR ALTERNATE METHOD APPROVED BY THE ENGINEER.

7. PLACE 4 INCHES OF TOPSOIL AND SEED ANY AREAS DISTURBED BY CONSTRUCTION AND AS DIRECTED BY THE ENGINEER.

8. THE EXISTING INFORMATION SHOWN IN THE PLANS IS FROM AS-BUILTS AND HAS BEEN PARTIALLY FIELD VERIFIED. FIELD CONDITIONS MAY NOT BE ACCURATELY REPRESENTED AND/OR MAY HAVE CHANGED. ADJUST INSTALLATIONS AS DIRECTED BY THE ENGINEER.

9. ADJUST ALL PAVEMENT PENETRATIONS TO FINAL GRADE PRIOR TO TOP LIFT OF PAVING.

   IF ANY PAVEMENT PENETRATION REQUIRES GRADE ADJUSTMENT AFTER FINAL LIFT PAVING, AS DETERMINED BY THE ENGINEER, SAW CUT A NEAT LINE ALONG THE PAVEMENT TO BE REMOVED. USE AN INFRARED HEATER TO HEAT THE EXISTING PAVEMENT; EQUIPMENT AND MAXIMUM TEMPERATURE SHALL BE APPROVED BY THE ENGINEER. REPLACE THE REMOVED ASPHALT WITH NEW HOT MIX ASPHALT AND THOROUGHLY COMPACT. SEAL JOINTS, AT LEAST 12 INCH WIDE CENTERED ON JOINT, USING ASPHALT SYSTEMS GSB-88, OR APPROVED EQUAL, WHILE THE HOT MIX ASPHALT IS CLEAN, FREE OF MOISTURE AND PRIOR TO STRIPING.

   THERE SHALL BE NO PAYMENT FOR ADDITIONAL WORK CAUSED BY FAILURE TO ADJUST PAVEMENT PENETRATIONS TO FINAL GRADE.

10. CONSTRUCT RAMP RUNS, LANDINGS, FLARES, AND SIDEWALK EXTENSIONS SHOWN IN THE PLANS USING 4 INCH CONCRETE REGARDLESS OF WHETHER THE EXISTING SIDEWALK/PATHWAY IS ASPHALT OR CONCRETE.

11. WHEN INSTALLING NEW CURB RAMPS AND BACKING CURBS, ENSURE ACCESS IS RETAINED TO SIGNAL POLE FOUNDATION ANCHOR BOLTS AND NUTS AT THE BASE PLATE. ENSURE ACCESS IS RETAINED TO THE TOP OF THE FOUNDATION AND THE FRANGIBLE COUPLING BOLTS ON BREAKAWAY SIGNAL POLE. IF EXISTING SIGNAL POLE FOUNDATION IS COVERED WITH SOILS, REMOVE AND EXPOSE FOUNDATION AND ANCHOR BOLTS.

12. DETECTABLE WARNING TILES SHALL BE YELLOW.

13. CURB RAMP DIMENSIONS ARE INCLUDED IN THE D-TABLES AND CORRESPOND TO THE CENTRAL REGION CURB RAMP INSPECTION FORM NOTATION. DIMENSIONS INCLUDED IN THE TABLE ARE FOR REFERENCE PURPOSES. ADJUST THEM AS NECESSARY IN THE FIELD TO COMPLY WITH MINIMUM SLOPE REQUIREMENTS.

14. FOR PARALLEL GUARDRAIL TERMINALS, USE AN END OFFSET OF 0-2 FEET, IN CONCURRENCE WITH MANUFACTURER'S RECOMMENDATIONS.

15. ALL TYPE "A" INLET BOXES SHALL HAVE MINIMUM 18 INCH SUMPS.

16. THE PROJECT INCLUDES LINING OF STORM DRAIN PIPES. AT THE DIRECTION OF THE ENGINEER, REPLACE SEGMENTS OF PIPE TO BE LINED IF EXCESSIVE DAMAGE IS FOUND IN THE FIELD. MINIMIZE TRAFFIC IMPACTS FROM LINING AND PIPE REPLACEMENT ACTIVITIES.

INDEX

SHEET NO.	DESCRIPTION
A01	TITLE SHEET
A02	SHEET LAYOUT, INDEX, AND GENERAL NOTES
A03	LEGEND
A04-A07	SURVEY CONTROL SHEETS
B01-B04	TYPICAL SECTIONS
C01-C02	ESTIMATE OF QUANTITIES
D01-D15	SUMMARY TABLES
E01-E23	DETAIL SHEETS
F01-F18	PLAN SHEETS
H01-H62	ILLUMINATION, SIGNALIZATION, SIGNING, AND STRIPING
J01-J03	TRAFFIC DETOUR SHEETS
K01-K15	AUTOMATED TRAFFIC RECORDER SHEETS
N01-N03	BRIDGE SHEETS

THE FOLLOWING CENTRAL REGION STANDARD DETAILS APPLY TO THIS PROJECT:

CR-T-01.20

IN THE EVENT OF CONFLICT, CENTRAL REGION STANDARD DETAILS SUPERSEDE ALASKA STANDARD PLANS, STANDARD MODIFICATIONS, AND STANDARD SPECIFICATIONS. PLANS AND SPECIAL PROVISIONS SUPERSEDE CENTRAL REGION STANDARD DETAILS.

THE FOLLOWING ALASKA STANDARD PLANS APPLY TO THIS PROJECT:

C-04.12, C-05.20
D-01.02, D-04.22, D-20.05, D-22.01, D-23.01, D-24.00, D-26.04
G-00.05, G-05.11W, G-05.11S, G-09.05S, G-10.20, G-14.01
G-16.00,G-20.12, G-26.00, G-32.02, G-47.00
I-21.12, I-22.11, I-81.00
L-30.11
S-00.12, S-05.02, S-23.00, S-30.05, S-31.02, S-32.02
T-20.04, T-21.04, T-22.04, T-23.01, T-30.12, T-52.22, T-56.11

ABBREVIATIONS:

ASP = ALASKA STANDARD PLANS
ATB = ASPHALT TREATED BASE
AVE = AVENUE
BOP = BEGINNING OF PROJECT
DR = DRIVE
EOP = END OF PROJECT
ETW = EDGE OF TRAVELED WAY
HMA = HOT MIX ASPHALT
HR = HILLCREST RAMP ALIGNMENT
RD = ROAD
ROW = RIGHT OF WAY
SB = SOUTHBOUND
SP = SPENARD ROAD ALIGNMENT
STA = STATION
TYP = TYPICAL

SPECIFICATION:

CONSTRUCT THE IMPROVEMENTS COVERED BY THESE PLANS IN ACCORDANCE WITH THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 2020 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE PROJECT SPECIAL PROVISIONS.

STATE OF ALASKA
49TH
RYAN R. HAMMEL
107681
REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SHEET LAYOUT, INDEX, AND GENERAL NOTES

DRAWING LOCATION	DATE	TIME	SCALE	DESIGNED BY	CHECKED BY	DRAFTED BY
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_A01NA02_TTL.DWG	5/12/2022	1:27 PM	1" = 500'	SLH	RRH	SLH

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	A03	A07

ROADWAY

EXISTING PROPOSED

- EDGE OF PAVEMENT
- ASPHALT
- ASPHALT – STRUCTURAL SECTION IMPROVEMENT AREAS
- LIMIT OF CUT SLOPE & FILL SLOPE (CUT, FILL)
- GRAVEL EDGE
- SIDEWALK AND PATH/TRAIL
- CONCRETE CURB & GUTTER
- CONCRETE CURB CUT
- PARALLEL CURB RAMP
- PERPENDICULAR CURB RAMP
- UNIDIRECTIONAL CURB RAMP & MID–BLOCK CURB RAMP
- DETECTABLE WARNING TILE
- BRIDGE
- TUNNEL
- GUARDRAIL
- END & PARALLEL END SECTIONS
- DEMOLITION
- FENCE
- GEOTEXTILE
- NOISE BARRIER
- RETAINING WALL
- HEADWALL & WINGWALL
- BOTTOM OF DITCH
- SPECIAL DITCH
- FLAT BOTTOM DITCH
- CONCRETE BARRIER
- RIPRAP
- BOULDER OR BOULDERS
- PRIVATE SIGN, MAILBOX (MB)
- POST, BOLLARD
- WORK PERFOMED BY HSIP PED LIGHTING PROJECT – 00366
- PATTERNED CONCRETE

UTILITIES

EXISTING PROPOSED

- STORM DRAIN (SD)
- STORM DRAIN MANHOLE, CLEANOUT (SD, CO)
- CURB INLET CATCH BASIN
- FIELD INLET CATCH BASIN (FI)
- PIPE CULVERT WITH END SECTION
- PIPE CULVERT LINING
- SANITARY SEWER (SS)
- SANITARY SEWER MANHOLE, CLEANOUT (SS, CO)
- SEPTIC VENT, SEWER SERVICE CONNECTION
- SUBDRAIN (SUBD)
- WATER (W)
- FIRE HYDRANT, VALVE OR RISER
- WELL, WATER SERVICE CONNECTION
- NATURAL GAS (G)
- OIL OR GASOLINE PIPELINE (O)
- TANKS (ABOVE GROUND, UNDERGROUND) (U)
- ELECTRIC (OVERHEAD) OE, (UNDERGROUND) UE, (OVERHEAD) OE&OT
- UTILITY POLE, POLE WITH LUMINAIRE
- GUY POLE, GUY WIRE ANCHOR (GP)
- TRANSMISSION TOWER (WOOD, STEEL)
- ELECTRIC PEDESTAL, TRANSFORMER
- ELECTRIC MANHOLE, METER (E)
- ELECTRIC OUTLET, LANDSCAPE LIGHT
- TELEPHONE OT (OVERHEAD), UT (UNDERGROUND), UT&TV (UNDERGROUND)
- TELEPHONE MANHOLE, PEDESTAL
- FIBER OPTIC (FO)
- FIBER OPTIC MANHOLE (FO)
- CABLE TV OTV (OVERHEAD), UTV (UNDERGROUND)
- CABLE TV PEDESTAL, SATELLITE DISH
- UNDERGROUND DUCT, UTILIDOR (ELECTRIC, TELEPHONE, FIBER OPTIC)
- VENT
- VENT

TOPOGRAPHY

EXISTING

- LAKE OR POND, WETLANDS (LAKE/POND)
- TREE (CONIFER/DECIDUOUS)
- TREELINE (EDGE OF VEGETATION)
- PLANTER
- BUILDING OR FOUNDATION

EXISTING PROPOSED

- CONTOUR, MAJOR OR MINOR (520)
- DRAINAGE FLOW
- CREEK (CENTERLINE)
- RIVER (EDGE OF WATER)

TRAFFIC

EXISTING PROPOSED

- LOAD CENTER
- STATE TRAFFIC, MOA TRAFFIC, & BEACON CONTROLLER — ARROW INDICATES DOOR LOCATION
- TYPE 1A, II, III, IV JUNCTION BOX
- FIBER OPTIC VAULT (F/O)
- ELECTROLIER
- HIGHTOWER (HT#)
- SIGNAL POLE WITH MASTARM (14)
- PEDESTRIAN PUSH BUTTON & SIGNAL
- VEHICULAR SIGNAL
- VEHICULAR SIGNAL LEFT & RIGHT
- OPTICAL, CAMERA, RADAR, AND GPS DETECTOR (CAM, RAD, GPS)
- LOOP DETECTOR (###)
- COMMUNICATION ANTENNA
- MASTARM BEACON
- RURAL & SCHOOL ZONE BEACON
- LOOP DETECTOR CONDUIT
- SIGNAL CONDUIT (TR)
- LIGHTING CONDUIT (LTG)
- SIGNAL & LIGHTING CONDUIT (T/L)
- CONDUIT BORING
- CONDUIT SIZE IN INCHES (2"–3C4; 2" 1–3C4 CKT BA12 CKT BA13)
- INTERCONNECT (I/C)
- SIGN POST (##)

PAVEMENT MARKINGS

PROPOSED

- TRAFFIC PROJECT CENTERLINE
- 8" & 4" WHITE SOLID STRIPE (8"W, 4"W)
- 4" WHITE SKIP STRIPE — 10' STRIPES AND 30' SPACES (4"W SKIP)
- 8" WHITE LANE GUIDE SKIP — LANE CONTINUATION OR TURN SKIP, 1' STRIPES AND 3' SPACES (8"W GUIDE SKIP)
- 8" & 4" YELLOW SOLID STRIPE (8"Y, 4"Y)
- 4" YELLOW SKIP STRIPE — 10' STRIPES AND 30' SPACES (4"Y SKIP)
- STRIPING CHANGE STATION INTERVAL (+20)
- 2' CROSSWALK OR STOPBAR (24"W (TYP))
- LADDER CROSSWALK LAYOUT — 2' WIDE RUNGS WITH 2' SPACES ALIGNED TO AVOID TIRE PATHS (10', 12', (2)–4"Y 3" APART)
- TYPICAL PAINTED MEDIAN (VARIES, 18"Y @ 45°)

RIGHT–OF–WAY

RECOVERED / SET THIS PROJECT

- FEDERAL GOV'T SURVEY MONUMENT
- GOV'T CONTROL STATION
- PRIMARY MONUMENT (BRASS/AL CAP)
- MISC SECONDARY CORNER
- PRIMARY CENTERLINE MONUMENT
- SECONDARY CENTERLINE MONUMENT
- RANDOM CONTROL MONUMENT (RCM)
- PRIMARY GPS CONTROL POINT (GPS)
- HORIZONTAL CONTROL POINT (CP)
- SECONDARY CONTROL POINT (SCP)
- VERTICAL BENCHMARK (BM)
- TEMPORARY BENCHMARK (TBM)
- TOWNSHIP AND RANGE LINES (T13N, T12N, R2W, R3W)
- SECTION LINE
- 1/4 SECTION LINE
- 1/16 SECTION LINE
- CORPORATE or CITY LIMITS
- EXISTING RIGHT–OF–WAY
- RIGHT–OF–WAY OR EASEMENT REQUIRED
- PROJECT RIGHT–OF–WAY LINE
- EXISTING RIGHT–OF–WAY EASEMENT
- EXISTING PROPERTY LINE
- CONTROLLED ACCESS LINE
- EXISTING UTILITY EASEMENT
- PROPOSED UTILITY EASEMENT
- EXISTING CENTERLINE
- RAILROAD CENTERLINE
- TEMPORARY CONSTRUCTION EASEMENT
- TEMPORARY CONSTRUCTION PERMIT

STATE OF ALASKA — 49TH — RYAN R. HAMMEL 107681 — REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

LEGEND

DESIGNED BY / CHECKED BY / DRAFTED BY

SCALE

TIME 10:28 AM

DATE 5/16/2022

DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR–15 PP CFHWY00132\CIV3D19\PLANSET\00132_A03_LGND.DWG

HORIZONTAL CONTROL (THIS SHEET)					
Point	Alignment Station	Offset	Northing	Easting	Description
34	Minnesota Drive 390+57.63	56.44 LT	326834.0719	343341.0779	Fd Rbr/PC: MINN-4
41	Minnesota Drive 392+57.41	82.60 LT	327033.7883	343314.3964	Set Rbr/PC[DOT]: CP-41
42	Minnesota Drive 405+23.21	58.06 RT	328297.9648	343477.4970	Set Rbr/PC[DOT]: CP-42

VERTICAL CONTROL (THIS SHEET)						
Point	Alignment Station	Offset	Northing	Easting	Elevation	Description
607	Minnesota Drive 391+34.82	407.25 LT	326910	342990	91.24	Fd BC/Wall: GAAB 74
611	Minnesota Drive 404+36.94	56.79 LT	328215	343360	83.43	Scribed "X" on E Light Pole Bolt: TBM 611
619	Minnesota Drive 412+12.07	211.70 RT	328989	343634	93.40	Fd BC/Wall: GAAB 89
618	Minnesota Drive 412+89.82	417.67 LT	329065	343004	93.89	Fd BC/Wall: F 75

VERTICAL CONTROL (OFF PROJECT)						
Point	Alignment Station	Offset	Northing	Easting	Elevation	Description
601			337820	345094	90.85	Fd BC: BM CB 4C
603			336872	347385	82.70	Fd BC: BM CB 4B
616	Minnesota Drive 433+98.42	1268.48 RT	331178	344685	96.60	Fd BC: GAAB 103
617	Minnesota Drive 440+20.58	1205.25 RT	331800	344620	96.09	Fd BC: BM CB TL3A

FOUND MONUMENTATION (THIS SHEET)					
Point	Alignment Station	Offset	Northing	Easting	Description
749	Minnesota Drive		329583.5666	343450.7446	Fd BC/Bx: SI Minne[illegible]ta [illegible]ive and [illegible] Aven[illegible]
701	Minnesota Drive 391+65.39	60.08 RT	326942.1355	343457.3031	Fd BC/[illegible][DOH]: [illegible] S25[illegible]6 xT13[illegible]R4W SM
800	Minnesota Drive 394+95.72	89.83 RT	327272.5351	343486.[illegible]13	F[illegible] Rbr: N[illegible] [illegible]reen
743	Minnesota Drive 400+39.18	0.29 LT	327815.6783	[illegible]403.[illegible]8	[illegible] BC[illegible] SI [illegible]nneso[illegible] Drive and [illegible]oosevelt Drive
742	Minnesota Drive 400+46.36	0.03 LT	327822.8610	[illegible]03.25	Fd [illegible]x[illegible] Cent[illegible]line Minnesota Drive
741	Minnesota Drive 404+09.81	0.01 RT	[illegible]86.0722	43[illegible]6.058	Fd [illegible]/Bx: SI M[illegible]sota Drive and Jefferson Avenue
793	Minnesota Drive 404+68.63	97.6[illegible]T	3[illegible]2[illegible]7821	433[illegible].3799	Fd Rbr: SE L7A B4 Lincoln Park
791	Minnesota Drive 4[illegible]+53.49	99.57[illegible]	32[illegible]30.[illegible]3	4332[illegible]3510	Fd Rbr/PC[6091]: SE L3A B4 Lincoln Park
744	Minneso[illegible]ve 40[illegible]39.29	0.04 R[illegible]	328[illegible]5.467	43423[illegible]719	Fd BC/Bx: Centerline Minnesota Drive
745	M[illegible]esota Drive 408[illegible]4.25		3286[illegible].4311	343423.0151	Fd BC/Bx: Centerline Minnesota Drive
[illegible]	Mi[illegible]esota Dr[illegible] 413+[illegible]70	29.75 RT	[illegible]29122.9487	343451.5790	Fd BC/Bx: SI Minnesota Drive and Spenard Road
78[illegible]	Min[illegible] Drive 413+5[illegible]5	[illegible] LT	329128.9230	343251.5830	Fd AM: SW L1A B5 Conroy Rushton
78[illegible]	Minne[illegible]ta Drive 41[illegible]+58[illegible]	111.90 LT	329134.0252	343309.9073	Fd Rbr/AC: E'ly SW Angle Point L1A B5 Conroy Rushton
[illegible]	Minnes[illegible] 414+00.99	79.31 RT	329177.3543	343501.0069	Fd Rbr: S'ly SW Angle Point L7C Duncklee
785	[illegible]nesota Drive 414+23.15	59.47 RT	329199.4705	343481.1156	Fd Rbr: N'ly SW L7C Angle Point Duncklee
784	Minnesota Drive 415+13.61	59.39 RT	329289.9338	343480.8217	Fd Rbr: NW L7C Dunklee
787	Minnesota Drive 415+97.94	59.63 LT	329373.9804	343361.6057	Fd Rbr: NE L1A B5 Conroy Rushton

PRELIMINARY

NOTES

1) Project control coordinates shown on this sheet were established by using least–squared adjusted static GPS techniques.

2) All dimensions and coordinates shown are in U.S. survey feet unless otherwise noted.

3) Background information is for orientation only and is not a true representation of row.

4) This survey was completed between September 2018 through March 2019 by AK DOT&PF.

5) See Record of Survey/Survey Control Diagram, Plat 2021–34, Anchorage Recording District for more information.

6) It is the contractor's responsibility to work around all centerline monuments without disturbing the monument or case. Neither the monument nor the case is to be removed on this project.

7) If necessary, all monument cases will have a permanent riser and new lid added prior to the start of paving of sufficient height so that the top of the monument lid matches finished grade.

8) The Minnesota centerline alignment used in the design of this project has station values 1.82 feet less than the Right of Way alignment. For temporary construction easements only, subtract 1.82' from all stations shown on the TCE figures to match project stationing. there is no offset correction.

9) Monuments and monument cases located within Pavement Structural Section No. 1 are not to be disturbed or removed. Monuments and monument cases located within Pavement Structural Sections Nos. 2 and 5 are to be completely removed.

LEGEND

- GPS Control Point
- Control Point
- Vertical Benchmark
- Temporary Benchmark
- Primary Centerline Monument
- Primary Property Corner
- Property Corner

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	A04	A07

HORIZONTAL CONTROL STATEMENT

Coordinate System:
This project is located entirely within the Anchorage Bowl 2000 adjustment, a U.S. Survey Foot local surface grid coordinate system developed by the Alaska Department of Transportation.

Basis of Coordinates:
The Basis of Coordinates is NGS Station O'Malley, located near the intersection of the New Seward Highway and O'Malley Road. Said station has Anchorage Bowl 2000 coordinates of 303,939.2310 N, 353,362.5446 E.

Basis of Bearings:
The Basis of Bearings is a local plane bearing between NGS Station O'Malley and NGS Station Loop 2 USE RM 3 1964. NGS Station Loop 2 USE RM 3 1964 bears N 01°43'26.4"E a distance of 49,488.45 U.S. Survey Feet from NGS Station O'Malley. NGS Station Loop 2 USE RM 3 1964 has Anchorage Bowl 2000 coordinates of 353,405.2778 N, 354,851.3982 E.

Translation Parameters:
To convert the local coordinates to NAD83 (92) State Plane Foot coordinates, translate using +2,296,868.6878 N, +1,312,517.4905 E, and scale using 0.9998910192.

VERTICAL CONTROL STATEMENT

MSL 1929 NGVD, MOA 1972 adjustment, as determined by level loops performed by AK DOT between the following benchmarks:

MOA BM CB–4B, a brass cap set vertically and facing west on the fenced in southwest corner of the building at 1405 E Street (Central Middle School), has an elevation of 82.70 feet (elevation on bolt).

MOA BM CB–4C, a brass cap set horizontally set in retaining wall on the southeast corner of the intersection of West 12th Avenue and L Street, has a project elevation of 90.85 feet.

MOA BM CB–TL3A, a brass cap set vertically and facing south on the southeast corner of the building at 1200 Northern Lights Boulevard, has an elevation of 96.09 feet (elevation on bolt).

MOA BM F–75, a brass cap set vertically and facing south on the southeast corner of the building at 3804 Spenard Road (currently Alaska Cremation Center), has an elevation of 93.89 feet.

MOA BM GAAB–65, a brass cap set vertically and facing west on the southwest corner of the building at 2500 Minnesota Drive (Romig Middle School), has an elevation of 97.65 feet (elevation on bolt).

MOA BM GAAB–74, a brass cap set vertically and facing east on the northwest corner of the building at 4430 Lois Drive (currently Spenard Builder's Supply), has a project elevation of 91.24 feet (elevation on bolt).

MOA BM GAAB–89, a brass cap set vertically and facing north near the northeast corner of the building at 3717 Minnesota Drive (currently Center Bowl), has an elevation of 93.40 feet (elevation on bolt).

MOA BM GAAB–103, a brass cap set horizontally in a concrete step on the east side of the building at 3000 Spenard Road (currently ENSTAR Natural Gas), has a project elevation of 96.60 feet.

A Leica LS15 digital level was used for all leveling on this project. Elevations were computed in Leica Infinity software using a length weighted adjustment. All level loops closed within Third–Order tolerances per Federal Geodetic Control Committee Standards and Specifications for Geodetic Control Networks.

All elevations on control points and benchmarks must be field verified before they are used.

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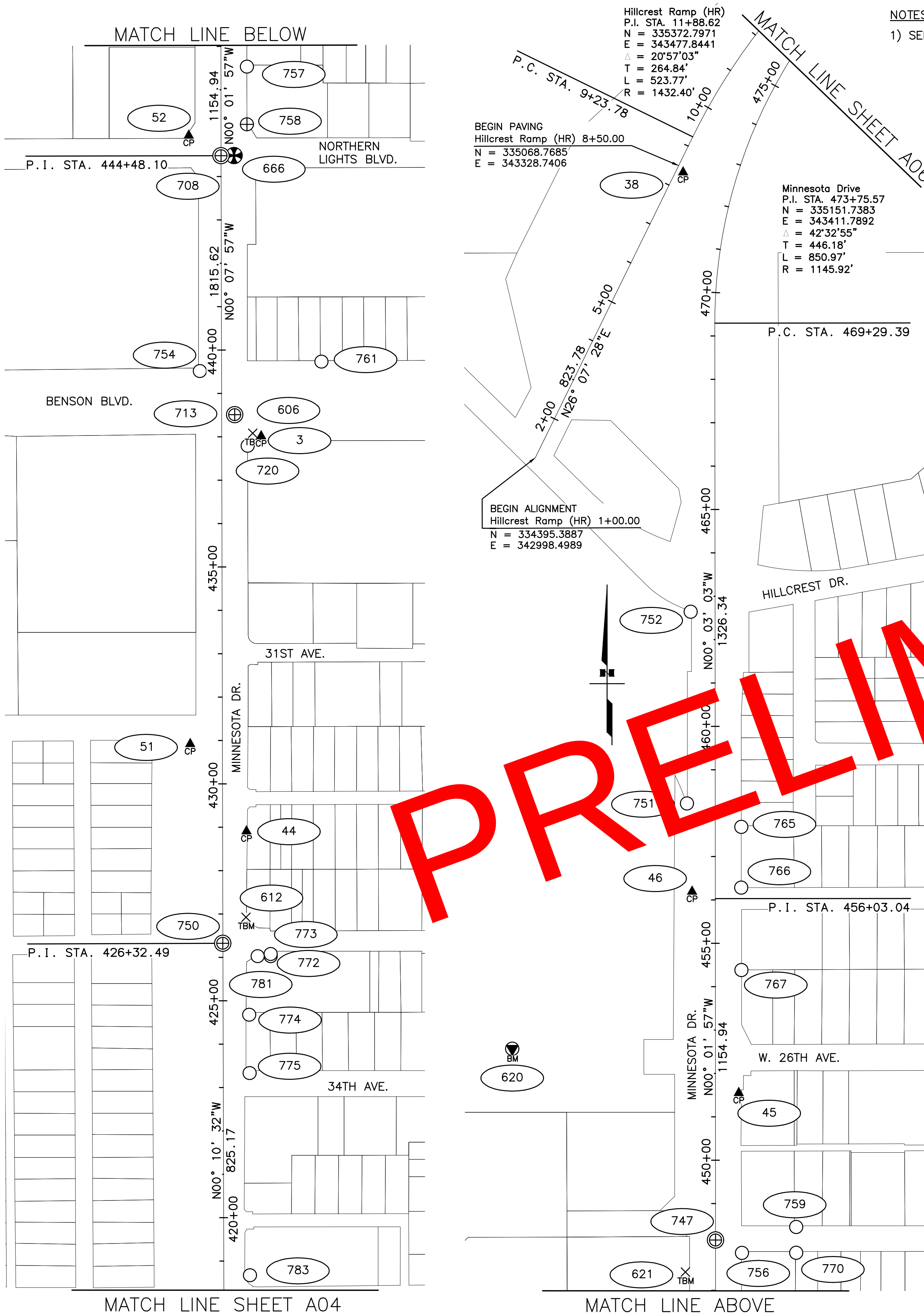
DOT & PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907)269–0700

STATE OF ALASKA 49TH
Travis W. Test
LS–13324
REGISTERED PROFESSIONAL LAND SURVEYOR

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
SURVEY CONTROL SHEET
FEDERAL PROJECT NO. 0421099
CFHWY00132
MINNESOTA DRIVE: TUDOR ROAD TO 15TH AVENUE PAVEMENT PRESERVATION

DRAWN	RVD	DATE	02/03/2022	SCALE	1" = 150'
CHECKED	TWT	DATE	02/03/2022	SHEET	1 OF 4

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	A05	A07



NOTES

1) SEE SHEET A04 FOR HORIZONTAL CONTROL, VERTICAL CONTROL, AND NOTES.

LEGEND

- Control Point
- Vertical Benchmark
- Temporary Benchmark
- Primary Government Monument
- Primary Centerline Monument
- Primary Property Corner
- Property Corner

HORIZONTAL CONTROL (THIS SHEET)

Point	Alignment Station	Offset	Northing	Easting	Description
38	Hillcrest Ramp (HR) 8+40.67	16.14 RT	335053.2894	343339.1220	Fd Rbr/PC(DOT): CP-38
44	Minnesota Drive 428+90.66	55.07 RT	330666.9640	343472.6812	Set Rbr/PC(DOT): CP-44
51	Minnesota Drive 430+92.11	74.16 LT	330868.1072	343342.9929	Set Rbr/PC(DOT): CP-51
3	Minnesota Drive 438+01.37	90.98 RT	331577.7558	343506.4852	Fd Rbr/RPC(USKH): CP-3
52	Minnesota Drive 444+94.55	74.32 LT	332270.6769	343339.6675	Set Rbr/PC(DOT): CP-52
45	Minnesota Drive 451+55.10	53.67 RT	332931.3042	343467.2848	Set Rbr/PC(DOT): CP-45
46	Minnesota Drive 456+19.26	53.60 LT	333395.3795	343359.7496	Set Rbr/PC(DOT): CP-46

VERTICAL CONTROL (THIS SHEET)

Point	Alignment Station	Offset	Northing	Easting	Elevation	Description
612	Minnesota Drive 426+92.46	53.58 RT	330469	343472	93.40	Scribed "X" on W Light Pole Bolt: TBM 612
606	Minnesota Drive 438+08.05	71.61 RT	331584	3[illegible]487	92.35	Fd Scribed "X" on SW Bolt of Signal Pole Base: TBM 606
621	Minnesota Drive 447+42.25	69.39 LT	332518	[illegible]3344	94.23	Scribed "X" on SE Signal Pole Bolt: TBM 621
620	Minnesota Drive 452+57.05	468.[illegible]0 LT	3[illegible]33	[illegible]2945	97.65	Fd BC: GAAB 65

FOUND MONUMENTATION (THIS SHEET)

Point	Alignment Station	Offset	Northing	Easting	Description
783	Minneso[illegible] Drive 4[illegible]+67.[illegible]	60.41 [illegible]T	32964[illegible]525	343480.9649	Fd Rbr: N'ly SW Angle Point L8A Miller
7[illegible]	Minnesot[illegible]Drive 4[illegible]+33.0[illegible]	[illegible].01 [illegible]	330109.4491	343480.1396	Fd IP: SW L1 Ryan
77[illegible]	M[illegible]esota [illegible]ive 4[illegible]+67.62	6[illegible]8 R[illegible]	330243.9761	343479.0011	Fd Rbr/PC(7625): SW L11A Barnett
781	Minne[illegible]a [illegible]ve 4[illegible]6+02.47	80.30 RT	330378.8887	343498.6009	Fd Rbr/PC(7625): E NW'ly NW Angle Point L11A Barnett
772	[illegible]innesota [illegible]e [illegible]26+02.48	110.33 RT	330378.9913	343528.6295	Fd Rbr/PC(7625): S NE'ly NW Angle Point L11A Barnett
[illegible]73	[illegible]nnesota Drive 426+07.49	110.28 RT	330384.0018	343528.5648	Fd Rbr/PC(7625): N NE'ly NW Angle Point L11A Barnett
[illegible]0	Minnesota Drive 426+32.59	0.03 LT	330408.7613	343418.1848	Fd BC/Bx: S1 Minnesota Drive and 33rd Avenue
720	Minnesota Drive 437+79.15	59.92 RT	331555.4602	343475.4777	Fd AC(2297): NW Angle Point Tract A2 Alaska Mutual
713	Minnesota Drive 438+50.90	30.09 RT	331627.1382	343445.4819	Fd BC/Bx(DOH): Benson Blvd at Minnesota Dr, Sta. 48+11.59
754	Minnesota Drive 439+51.56	49.95 LT	331727.6141	343365.2141	Fd Rbr: SE Tract 2 B1 Aurora Village
761	Minnesota Drive 439+72.74	230.61 RT	331749.4408	343645.7247	Fd IP: SE L49 Elsa Weiler
708	Minnesota Drive 444+48.05	0.01 LT	332224.2241	343414.0058	Fd BC/Bx(DOH): PI 154+25.45 Minnesota Drive
666	Minnesota Drive 444+48.18	30.01 RT	332224.3641	343444.0205	Fd BC/Bx(BLM): 1/4 S24/S25 xT13N R4W SM
758	Minnesota Drive 445+20.25	59.91 RT	332296.4545	343473.8834	Fd AM(8535): N'ly SW Angle Point Tract 1 Chevron
757	Minnesota Drive 446+53.19	59.92 RT	332429.3920	343473.8214	Fd Rbr/AC: NW Tract 1 Chevron
756	Minnesota Drive 447+86.23	61.01 RT	332562.4311	343474.8313	Fd Rbr: NW Tract 2 Chevron
770	Minnesota Drive 447+86.37	186.04 RT	332562.6468	343599.8618	Fd Rbr/AC: NE Tract 2 Chevron
747	Minnesota Drive 448+16.10	0.08 LT	332592.2735	343413.7232	Fd BC/Bx: S1 Minnesota Drive and 27th Avenue
759	Minnesota Drive 448+46.04	186.10 RT	332622.3179	343599.8866	Fd Rbr: SE L11 Hansen
767	Minnesota Drive 454+38.12	60.08 RT	333214.3208	343473.5314	Fd Rbr: SW L18B B2 Clayton
766	Minnesota Drive 456+28.10	59.71 RT	333404.3214	343473.0465	Fd Rbr/AC: SW L19A B1 Clayton
765	Minnesota Drive 457+68.09	60.00 RT	333544.3154	343473.2097	Fd Rbr: NW L19A B1 Clayton
751	Minnesota Drive 458+22.36	65.01 LT	333598.4718	343348.1554	Fd Rbr/PC: E Line Angle Point Tract 1A West and Romig School Site
752	Minnesota Drive 462+64.14	56.27 LT	334040.2553	343356.5064	Fd IP: NE Tract 1A West and Romig School Site

PRELIMINARY

150 0 75 150 300 450 600 750

U.S. SURVEY FEET

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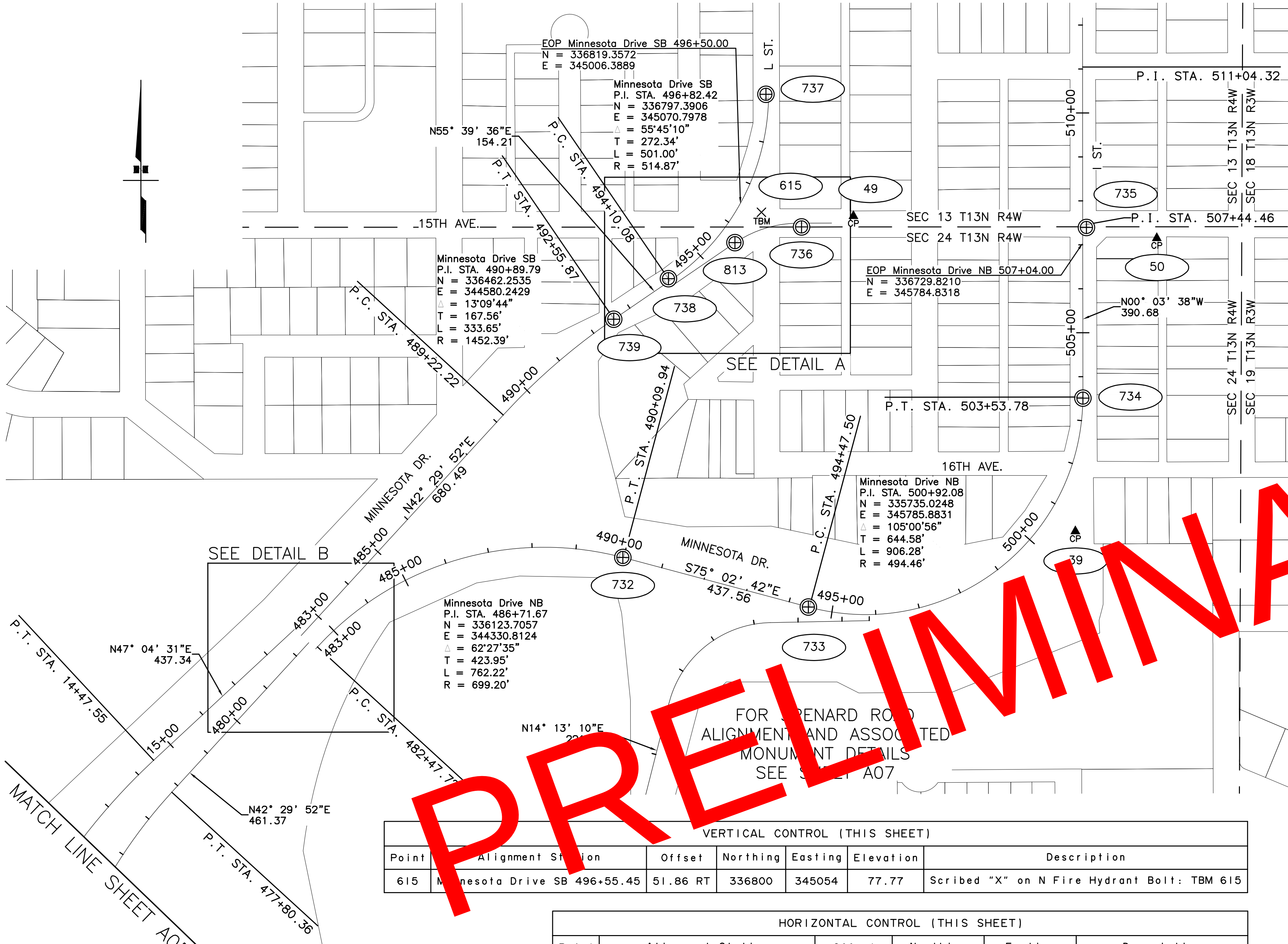
SURVEY CONTROL SHEET
FEDERAL PROJECT NO. 0421099
CFHWY00132
MINNESOTA DRIVE: TUDOR ROAD TO 15TH AVENUE PAVEMENT PRESERVATION

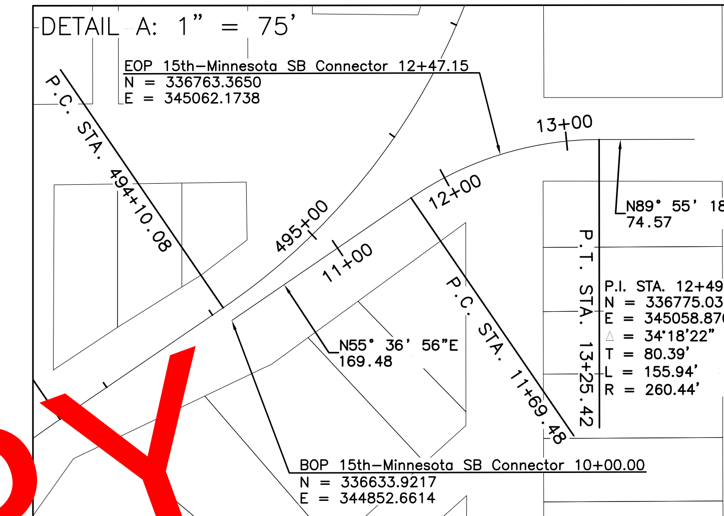
DRAWN	RVD	DATE	02/03/2022	SCALE	1" = 150'
CHECKED	TWT	DATE	02/03/2022	SHEET	2 OF 4

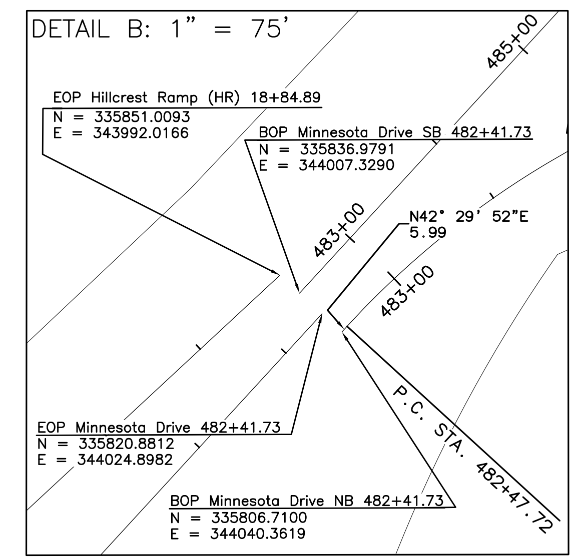
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	A06	A07



NOTES

1) SEE SHEET A04 FOR HORIZONTAL CONTROL, VERTICAL CONTROL, AND NOTES.





VERTICAL CONTROL (THIS SHEET)

Point	Alignment Station	Offset	Northing	Easting	Elevation	Description
615	Minnesota Drive SB 496+55.45	51.86 RT	336800	345054	77.77	Scribed "X" on N Fire Hydrant Bolt: TBM 615

HORIZONTAL CONTROL (THIS SHEET)

Point	Alignment Station	Offset	Northing	Easting	Description
39	Minnesota Drive NB 500+72.23	71.96 RT	336074.2031	345768.1122	Fd Rbr/PC(DOT): CP-39
50	Minnesota Drive NB 507+15.12	168.45 RT	336741.1191	345953.2734	Set Rbr/PC(DOT): CP-50
49	Minnesota Drive SB 497+17.85	245.48 RT	336791.3365	345263.3694	Set Rbr/PC(DOT): CP-49

FOUND MONUMENTATION (THIS SHEET)

Point	Alignment Station	Offset	Northing	Easting	Description
732	Minnesota Drive NB 490+08.53	0.03 RT	336014.6183	344739.0238	Fd BC/Bx: PT Minnesota Drive
733	Minnesota Drive NB 494+45.20	0.03 LT	335901.9887	345160.9209	Fd BC/Bx: PC Minnesota Drive
734	Minnesota Drive NB 503+51.31	0.05 RT	336377.1247	345785.2493	Fd BC/Bx: PT Minnesota Drive
735	Minnesota Drive NB 507+39.44	8.54 RT	336765.2619	345793.3322	Fd Rbr/Bx: SI I Street and 15th Avenue
739	Minnesota Drive SB 492+55.49		336556.5595	344718.2826	Fd AM/Bx(4725): PT Minnesota Drive
738	Minnesota Drive SB 494+10.24	5.97 LT	336648.7848	344842.6884	Fd AM/Bx(4725): PC Minnesota Drive
813	Minnesota Drive SB 495+71.96	38.88 RT	336730.6747	344993.9478	Fd BC/Bx: PT Spenard Ramp
736	Minnesota Drive SB 496+66.42	148.03 RT	336766.5684	345145.4331	Fd AC/Bx(9945): Centerline 15th Avenue
737	Minnesota Drive SB 499+09.65	6.03 LT	337068.3002	345064.3270	Fd BC/Bx: PT Minnesota Drive

LEGEND

- CP Control Point
- TBM Temporary Benchmark
- Primary Centerline Monument

150 0 75 150 300 450 600 750

U.S. SURVEY FEET

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STATE OF ALASKA · 49TH · Travis W. Test · LS-13324 · REGISTERED PROFESSIONAL LAND SURVEYOR

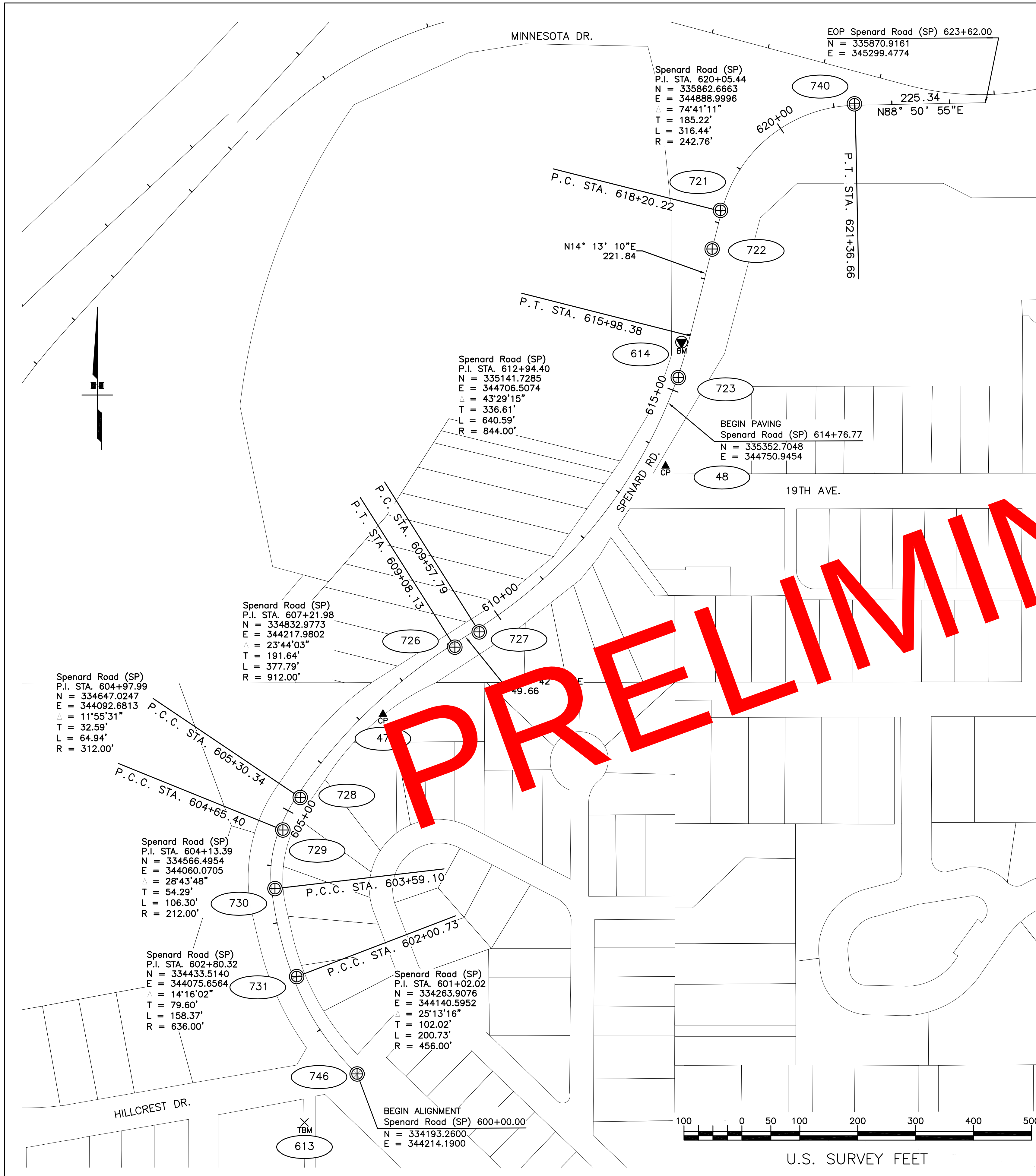
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

SURVEY CONTROL SHEET

FEDERAL PROJECT NO. 0421099
CFHWY00132
MINNESOTA DRIVE: TUDOR ROAD TO 15TH AVENUE PAVEMENT PRESERVATION

DRAWN	RVD	DATE	02/03/2022	SCALE	1" = 150'
CHECKED	TWT	DATE	02/03/2022	SHEET	3 OF 4

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	A07	A07



LEGEND

- Control Point
- Vertical Benchmark
- Temporary Benchmark
- Primary Centerline Monument

NOTES

1) SEE SHEET A04 FOR HORIZONTAL CONTROL, VERTICAL CONTROL, AND NOTES.

2) THE SPENARD ROAD ALIGNMENT IS A PROJECT ALIGNMENT AND IS NOT THE RIGHT OF WAY CENTERLINE.

HORIZONTAL CONTROL (THIS SHEET)

Point	Alignment Station	Offset	Northing	Easting	Description
47	Spenard Road (SP) 607+36.17	21.49 RT	334814.6866	344258.7986	Set Rbr/PC[DOT]: CP-47
48	Spenard Road (SP) 613+78.97	43.95 RT	335243.3097	344746.8080	Set Rbr/PC[DOT]: CP-48

VERTICAL CONTROL (THIS SHEET)

Point	Alignment Station	Offset	Northing	Easting	Elevation	Description
613	Spenard Road (SP) 600+05.9[illegible]	[illegible]3.32 LT	334110	344123	99.28	Set RR Spike in Power Pole: TBM 613
614	Spenard Road (SP) [illegible]4.02	11.[illegible] LT	335457	344774	20.42	Fd BC[DOWL]: BM 614

FOUND MONUMENTATION (THIS SHEET)

Point	Alignment Station	Offset	Northing	Easting	Description
746	Spenard Road ([illegible] 600+00.0[illegible]	[illegible].07 RT	334193.3535	344214.2003	Fd Rbr/Bx: PC Spenard Ramp
731	[illegible] (S[illegible] 602+00.82	6.13 RT	334361.4614	344109.8103	Fd AC/Bx[6091]: PT 70+68.91 Spenard Ramp
730	Spenard Road (SP) 603+59.19	6.09 RT	334513.3704	344072.4230	Fd AC/Bx[6091]: PC 72+27.28 Spenard Ramp
729	Spenard Road (SP) 604+65.46	6.01 RT	334614.6212	344086.0395	Fd AC/Bx[6091]: PT 73+33.59 Spenard Ramp
728	Spenard Road (SP) 605+30.46	6.06 RT	334670.7573	344115.9837	Fd AC/Bx[6091]: PC 73+98.53 Spenard Ramp
726	Spenard Road (SP) 609+08.05	5.90 RT	334930.3341	344383.0681	Fd AC/Bx[6091]: PT 77+76.31 Spenard Ramp
727	Spenard Road (SP) 609+57.68	5.96 RT	334956.7936	344425.0551	Fd AC/Bx[6091]: PC 78+25.97 Spenard Ramp
723	Spenard Road (SP) 615+23.57	1.20 RT	335396.0271	344768.7636	Fd BC/Bx: PT Spenard Ramp
722	Spenard Road (SP) 617+53.17	0.10 RT	335618.0478	344827.3118	Fd AC/Bx[6091]: SI Spenard Ramp
721	Spenard Road (SP) 618+21.45	2.42 LT	335684.8669	344841.6463	Fd BC/Bx: PC Spenard Ramp
740	Spenard Road (SP) 621+35.46	2.44 LT	335868.8032	345072.9234	Fd BC/Bx: PT Spenard Ramp

PRELIMINARY

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SURVEY CONTROL SHEET

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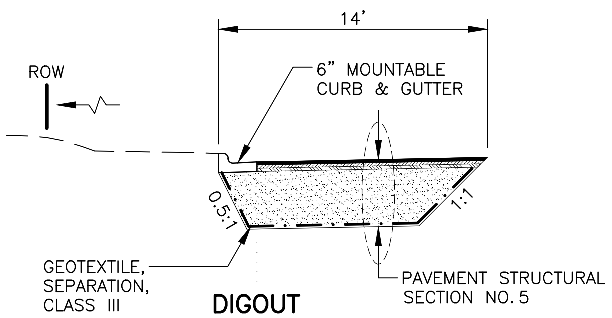
CFHWY00132
MINNESOTA DRIVE: TUDOR ROAD TO 15TH AVENUE PAVEMENT PRESERVATION

DRAWN	RVD	DATE	02/03/2022	SCALE	1" = 100'
CHECKED	TWT	DATE	02/03/2022	SHEET	4 OF 4

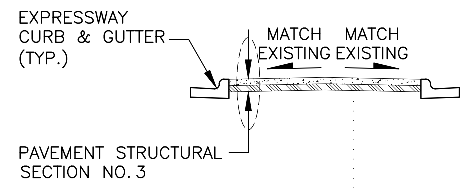
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	B01	B04

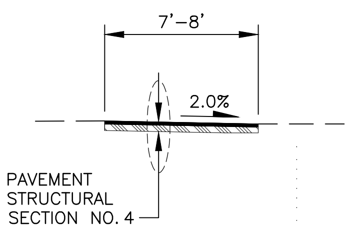


DIGOUT

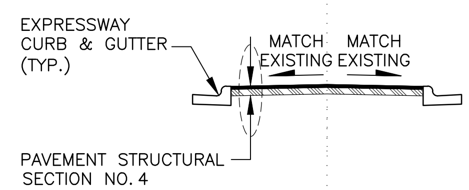
STA. 392+55 TO STA. 392+85



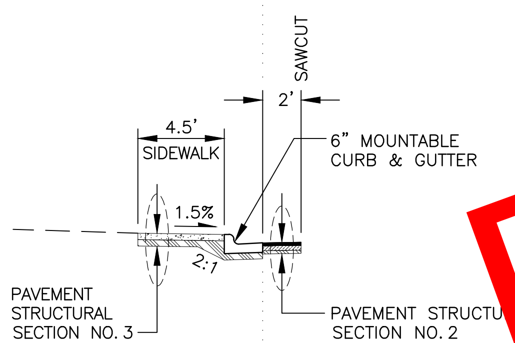
CONCRETE, COLORED AND PATTERNED IMPRINTED MEDIAN



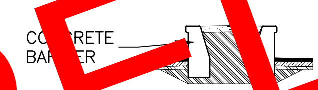
PATHWAY



ASPHALT MEDIAN



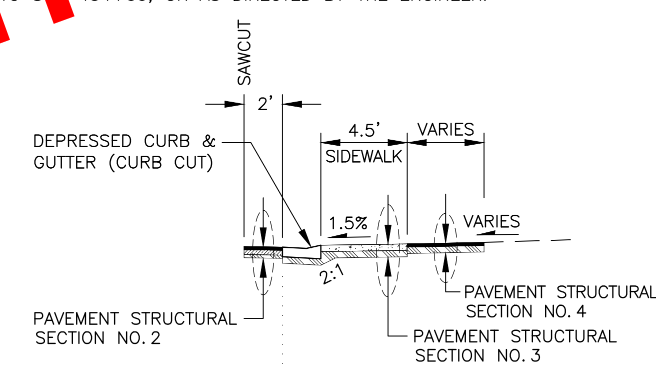
SIDEWALK



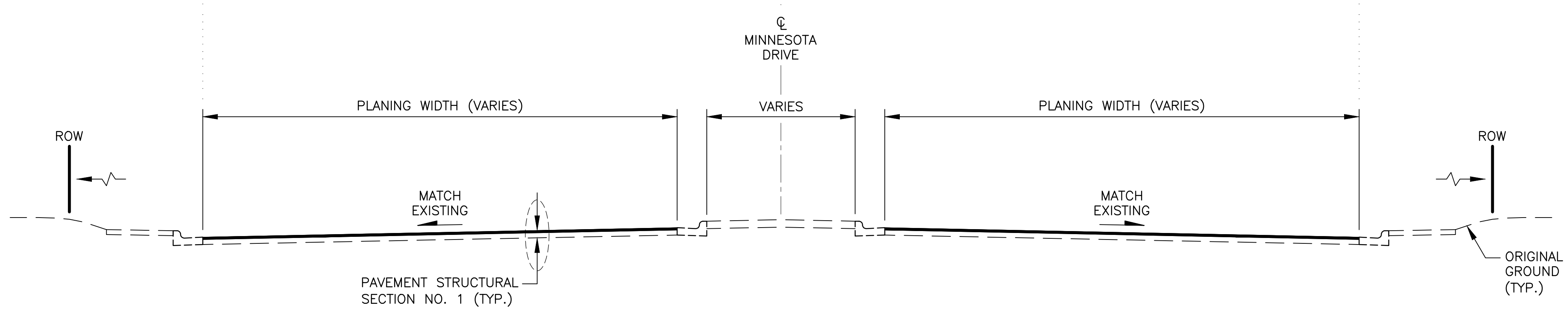
MEDIAN BARRIER

WORK DONE BY HSIP: ANCHORAGE PEDESTRIAN LIGHTING, PH II (CFHWY00366)

STA. 439+45 TO STA. 443+53



SIDEWALK W/DRIVEWAY

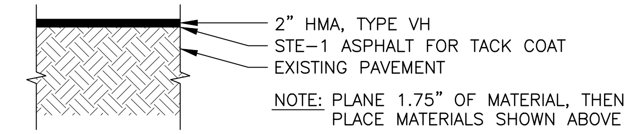


MINNESOTA DRIVE

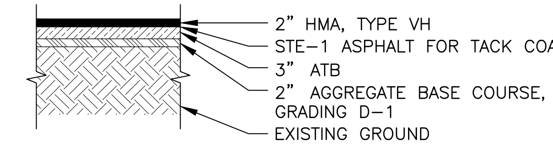
STA. 392+40 TO STA. 443+80
STA. 453+50 TO STA. 457+73
STA. 456+37 TO 457+73**

TYPICAL SECTION NOTES:

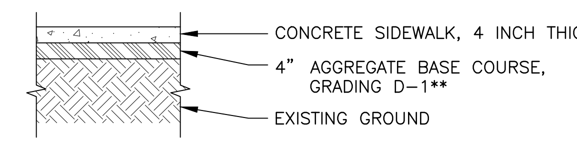
1. WITHIN TWO (2) DAYS AFTER PAVING, PLACE AGGREGATE BASE COURSE, GRADING D-1 AGAINST PAVEMENT EDGE TO ENSURE THERE IS NO VERTICAL DROP AT THE EDGE OF PAVEMENT.
2. MILLING DEPTH MAY VARY. ENSURE RESULTING SURFACE IS FREE OF DEBRIS AND IS OF ADEQUATE SMOOTHNESS FOR PAVING.
3. REPLACE CURB AND GUTTER AND SIDEWALK PRIOR TO FINAL LIFT OF ASPHALT. REPLACE TO NEAREST EXPANSION JOINTS.
4. SEE D SHEET TABLES FOR GUARDRAIL, PIPE, ASPHALT PATHWAY, CONCRETE, COLORED AND PATTERNED IMPRINTED MEDIAN AND SIDEWALK CONSTRUCTION LOCATIONS. REPLACE MEDIAN ONLY AS NEEDED TO ALLOW FOR EXCAVATION AND PLACEMENT OF STORM DRAINS AND CONDUITS.
5. PLANE 2" OF MATERIAL UNDER HILLCREST OVERPASS (STA. 462+35 TO STA. 464+95). USE 100' LONGITUDINAL TRANSITIONS, MEASURED PARALLEL TO THE CENTERLINE. DO NOT RAISE THE PROFILE UNDER THE HILLCREST BRIDGE.
6. PLANE 2" OF MATERIAL WITHIN FLOODPLAIN AND FLOODWAY AT WESTCHESTER LAGOON (STA. 614+76 TO STA. 618+00). USE 100' LONGITUDINAL TRANSITIONS, MEASURED PARALLEL TO THE CENTERLINE. DO NOT RAISE THE PROFILE OF THE CHESTER CREEK BRIDGE.
7. USE A 5:1 LONGITUDINAL TRANSITION BETWEEN STRUCTURAL SECTIONS 1 AND 2 AND 1 AND 5, MEASURED PARALLEL TO THE CENTERLINE.
8. ENSURE DEPTH OF BASE COURSE AT LOOP LOCATIONS IS A MINIMUM OF 4." EXCAVATION AND INSTALLATION OF ADDITIONAL BASE COURSE NECESSARY TO MEET THIS REQUIREMENT IN EXISTING ROADWAY SECTIONS SHALL BE PAID FOR AT CONTRACT UNIT PRICES.
9. IN LOCATIONS WITH EXISTING CURB AND GUTTER OR RAISED CONCRETE BARRIER, MILL OR REMOVE EXISTING PAVEMENT TO THE EDGE OF GUTTER OR CONCRETE BARRIER UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DO NOT PAVE OVER THE TOP OF THE EXISTING GUTTER PAN AND ENSURE POSITIVE DRAINAGE IS MAINTAINED BETWEEN TRANSITIONS.
10. PRE-LEVEL USING HMA, LEVELING COURSE, TYPE IV; CLASS B, FROM THE BOP TO STA. 454+00, OR AS DIRECTED BY THE ENGINEER.



PAVEMENT STRUCTURAL SECTION NO. 1

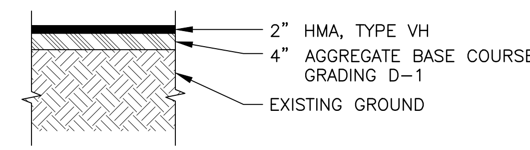


PAVEMENT STRUCTURAL SECTION NO. 2

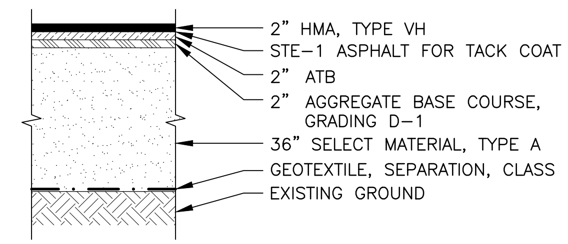


STRUCTURAL SECTION NO. 3 – SIDEWALK

*6 INCH THICK IN CONCRETE, COLORED AND PATTERNED IMPRINTED MEDIAN
** EXTEND 4" D-1 UNDER ALL CURB AND GUTTER



PAVEMENT STRUCTURAL SECTION NO. 4
ASPHALT PATHWAYS, MEDIANS AND DRIVEWAYS



PAVEMENT STRUCTURAL SECTION NO. 5

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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(907) 269-0590

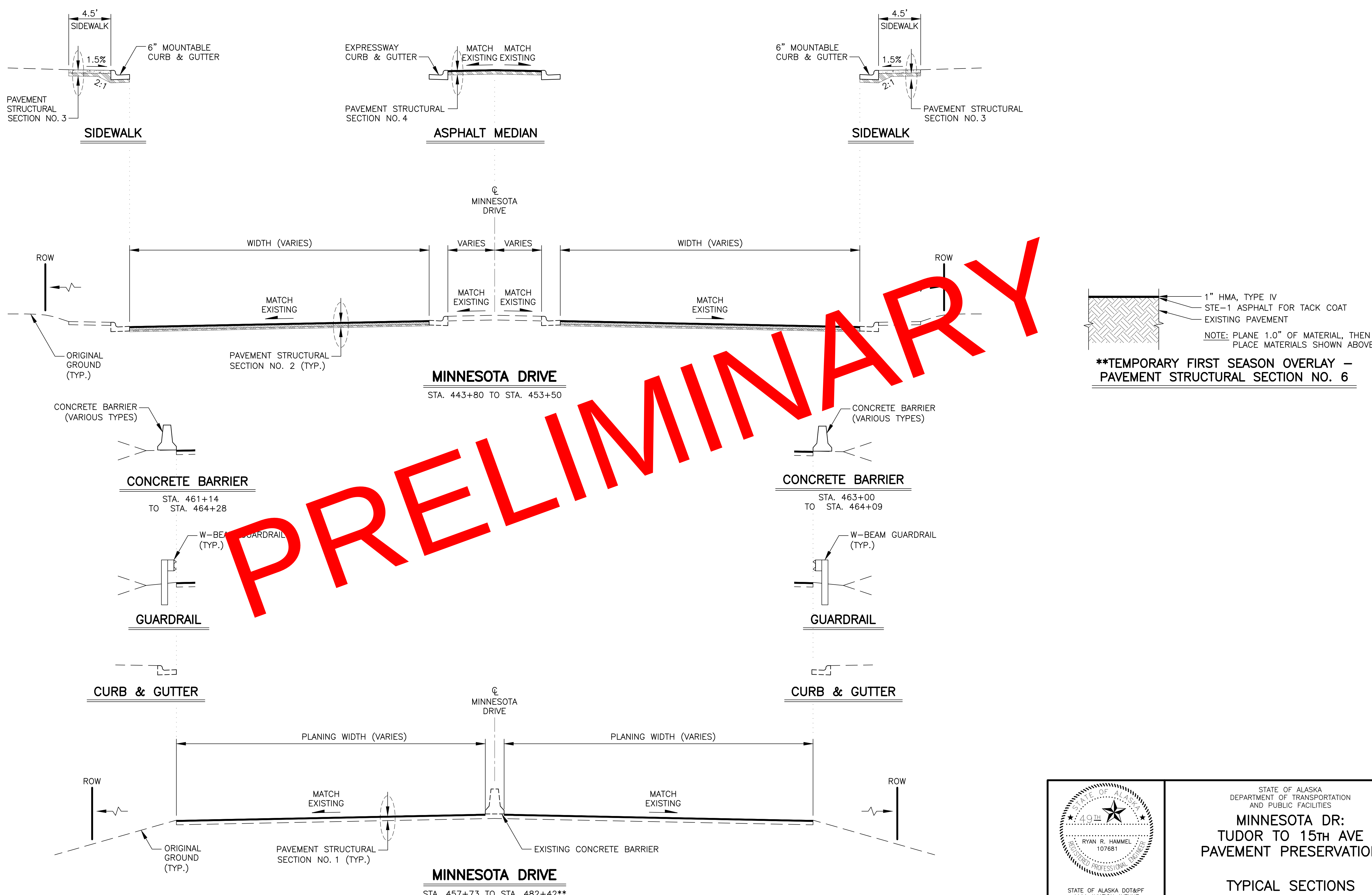
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

TYPICAL SECTIONS

DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY VJS
SCALE 1"=5'
TIME 4:02 PM
DATE 5/16/2022
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_B01_TYP.DWG

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099/CFHWY00132	2022	B02	B04



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MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

TYPICAL SECTIONS

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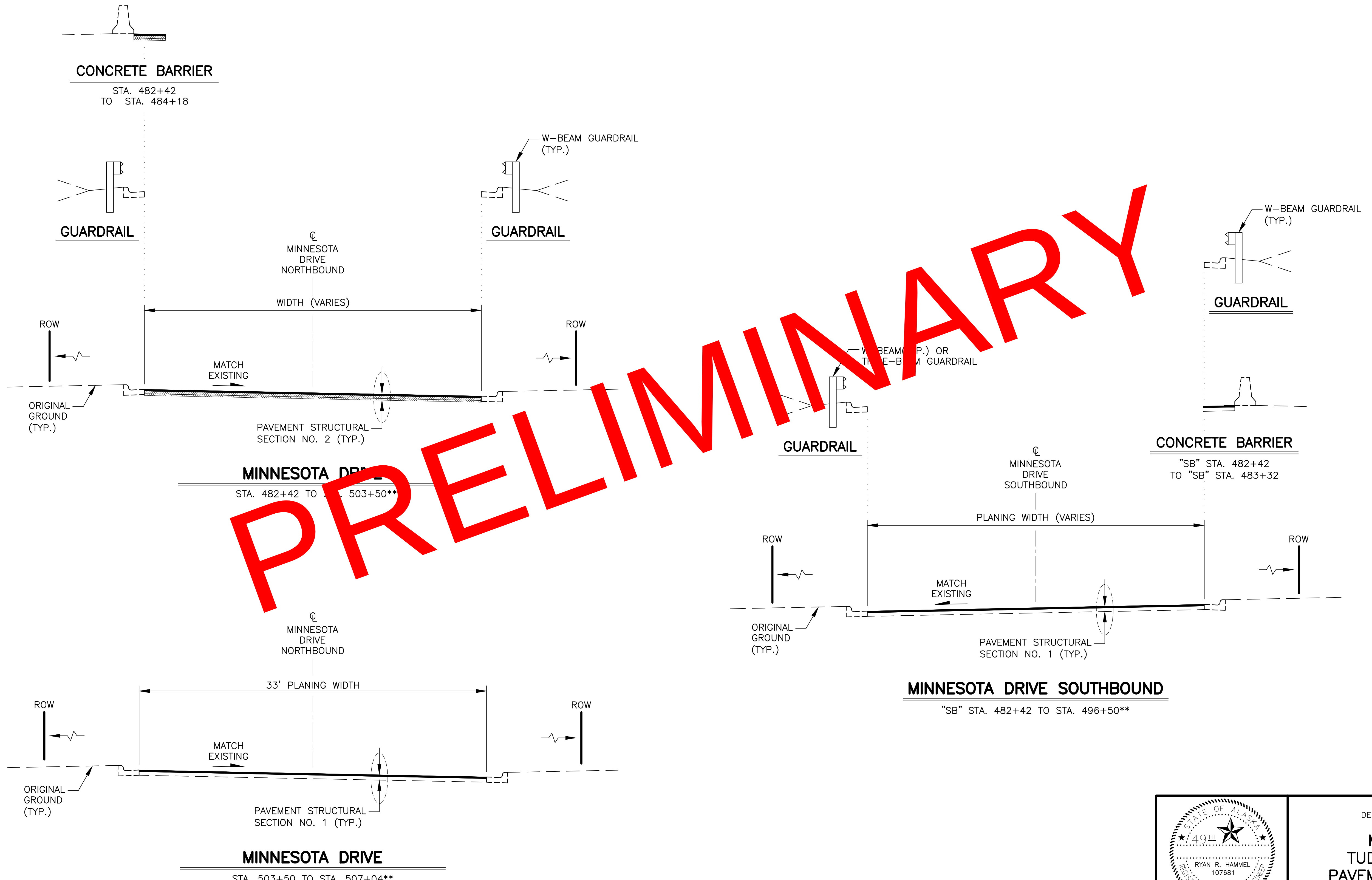
DRAFTED BY VJS
SCALE 1"=5'
TIME 4:02 PM
DATE 5/16/2022
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_B01_TYP.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	B03	B04



PRELIMINARY

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MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

TYPICAL SECTIONS

DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_B01_TYP.DWG

DATE	TIME
5/16/2022	4:02 PM

SCALE
1"=5'

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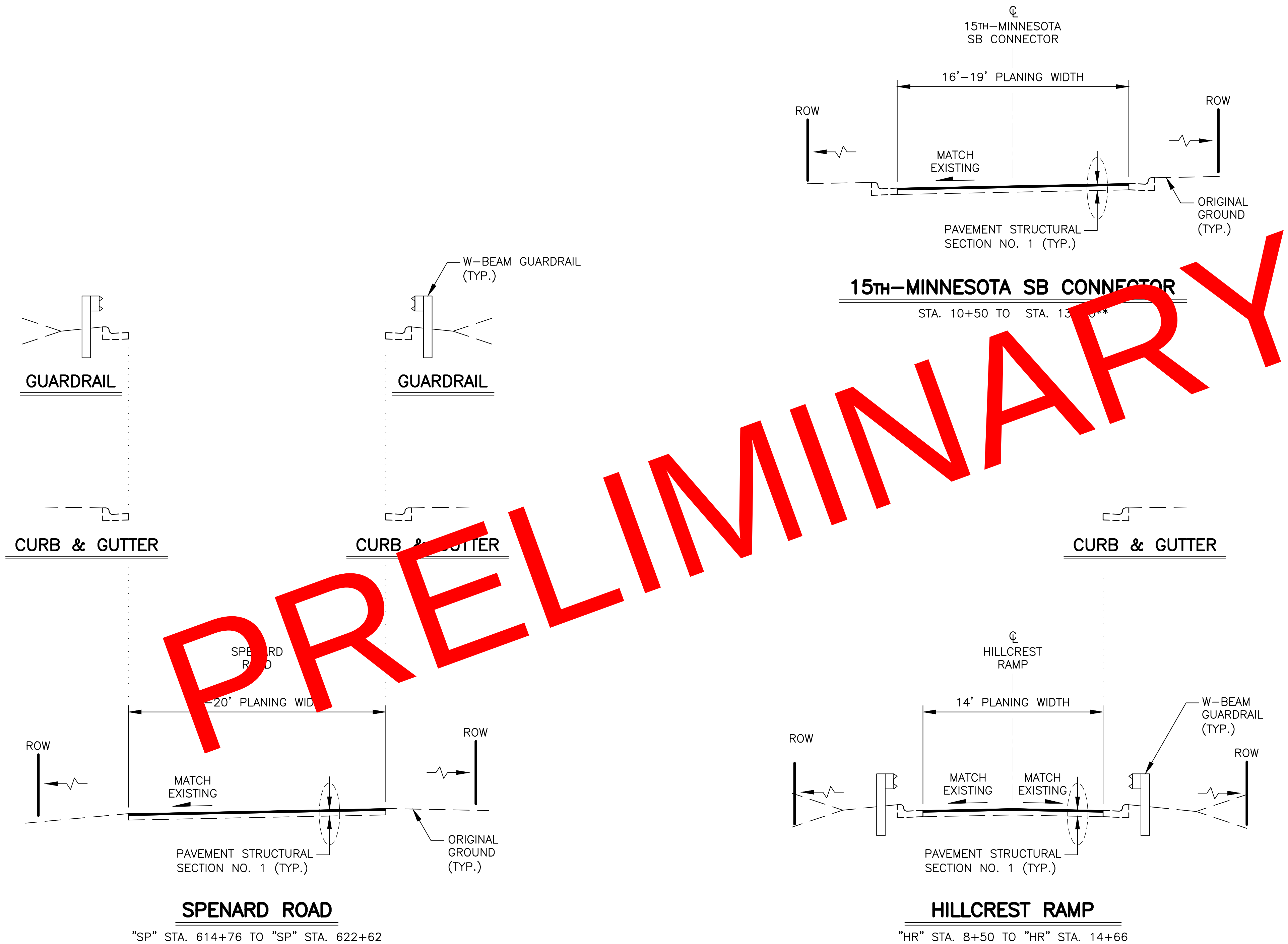
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	B04	B04



PRELIMINARY

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TYPICAL SECTIONS

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DATE 5/16/2022 TIME 4:02 PM
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ESTIMATE OF QUANTITIES

ITEM NO.	PAY ITEM	PAY UNIT	TOTAL QUANTITY
202.0001.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	ALL REQ'D
202.0002.0000	REMOVAL OF PAVEMENT	SQUARE YARD	25,000
202.0003.0000	REMOVAL OF SIDEWALK	SQUARE YARD	2,950
202.0004.0000	REMOVAL OF CULVERT PIPE	LINEAR FOOT	1,745
202.0006.0000	REMOVAL OF MANHOLE	EACH	2
202.0008.0000	REMOVAL OF INLET	EACH	2
202.0009.0000	REMOVAL OF CURB AND GUTTER	LINEAR FOOT	7,650
202.2013.0000	REMOVE FUGITIVE MATERIALS	LINEAR FOOT	9,225
202.2023.0000	PAVEMENT PLANING	SQUARE YARD	85,000
203.0003.0000	UNCLASSIFIED EXCAVATION	CUBIC YARD	4,650
203.0006.000A	BORROW, TYPE A	TON	112
205.0005.0000	CONTROLLED LOW-STRENGTH MATERIAL	CUBIC YARD	13
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	3,700
306.0001.0000	ATB	TON	3,700
306.0002.6440	ASPHALT BINDER, GRADE PG 64-40 E	TON	195
401.0002.004B	HMA, LEVELING COURSE, TYPE IV; CLASS B	LNST	408
401.0005.004B	HMA, TEMPORARY, TYPE IV; CLASS B	TON	2,250
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	TON	40
408.2001.00VH	HMA, TYPE VH	TON	[illegible]
408.2004.6440	ASPHALT BINDER, GRADE PG 64-40 E	TON	[illegible]
408.2015.0000	ASPHALT MATERIAL PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
408.2022.0000	COMBINED PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
603.0017.0012	PIPE 12 INCH	LINEAR FOOT	160
603.0017.0024	PIPE 24 INCH	LINEAR FOOT	685
603.0017.0036	PIPE 36 INCH	LINEAR FOOT	20
603.0017.0048	PIPE 48 INCH	LINEAR FOOT	20
603.2017.0000	CULVERT CLEANING	LINEAR FOOT	5,070
603.2032.0012	CORRUGATED HDPE PIPE 12 INCH	LINEAR FOOT	260
603.2032.0018	CORRUGATED HDPE PIPE 18 INCH	LINEAR FOOT	515
604.0001.0001	STORM SEWER MANHOLE, TYPE I	EACH	3
604.0003.0000	RECONSTRUCT EXISTING MANHOLE	EACH	9
604.0004.0000	ADJUST EXISTING MANHOLE	EACH	54
604.0005.000A	INLET, TYPE A	EACH	1
604.0010.0000	RECONSTRUCT INLET	EACH	3
604.0012.0000	REPLACE INLET FRAME AND GRATE	EACH	5
604.0014.0000	REMOVE AND REPLACE SEWER MANHOLE FRAME AND LID	EACH	10
604.0015.0000	REMOVE AND REPLACE STORM DRAIN MANHOLE FRAME AND LID	EACH	20
604.2014.000B	STORM DRAIN STRUCTURE - CLEANING	EACH	120
606.0001.0000	W-BEAM GUARDRAIL	LINEAR FOOT	8,775
606.0002.0000	THRIE BEAM GUARDRAIL	LINEAR FOOT	512.5
606.0006.0000	REMOVING AND DISPOSING OF GUARDRAIL	LINEAR FOOT	9,215
606.0008.0000	DOUBLE-FACED, W-BEAM GUARDRAIL	LINEAR FOOT	137.5
606.0009.0000	SHORT RADIUS GUARDRAIL	EACH	1

ESTIMATE OF QUANTITIES

ITEM NO.	PAY ITEM	PAY UNIT	TOTAL QUANTITY
606.0013.0000	PARALLEL GUARDRAIL TERMINAL	EACH	16
606.0014.0000	BURIED IN BACKSLOPE GUARDRAIL TERMINAL	EACH	1
606.0016.0000	TRANSITION RAIL	EACH	3
606.0016.0001	TRANSITION RAIL, MODIFICATION	EACH	3
606.2005.0000	ESSENTIAL REPLACEMENT PARTS	LUMP SUM	ALL REQ'D
606.2006.0000	ESSENTIAL REPLACEMENT PARTS - INSTALLATION	CONTINGENT SUM	ALL REQ'D
608.0001.0004	CONCRETE SIDEWALK, 4 INCHES THICK	SQUARE YARD	2,400
608.0006.0000	CURB RAMP	EACH	58
608.2002.0000	ASPHALT PATHWAY	TON	160
608.2013.E006	CONCRETE, TYPE V, 6 INCHES THICK, COLORED AND PATTERN IMPRINTED, MEDIAN	SQUARE YARD	160
609.0002.0ALL	CURB AND GUTTER, ALL [illegible]	LINEAR FOOT	7,700
610.0001.0000	DITCH LINING	CUBIC YARD	2
611.0001.[illegible]001	RIPRAP, CLASS I	CUBIC YARD	6
[illegible].0001.0[illegible]0	CONCRETE BARRIER	LINEAR FOOT	75
[illegible]5.000[illegible]	STANDARD SIGN	SQUARE FOOT	671
6[illegible].0005.00[illegible]	DELINEATOR, FLEXIBLE	EACH	7
618.0002.0000	SEEDING	POUND	15
620.0001.0000	TOPSOIL	SQUARE YARD	900
627.0010.0000	ADJUSTMENT OF VALVE BOX	EACH	51
627.2011.0000	REMOVE AND REPLACE WATER VALVE BOX AND LID	EACH	40
630.0001.0003	GEOTEXTILE, SEPARATION, CLASS 3	SQUARE YARD	60
639.2000.0000	APPROACH	EACH	43
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQ'D
641.0001.0000	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQ'D
641.0002.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	CONTINGENT SUM	ALL REQ'D
641.0006.0000	WITHHOLDING	CONTINGENT SUM	ALL REQ'D
641.0007.0000	SWPPP MANAGER	LUMP SUM	ALL REQ'D
642.0001.0000	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQ'D
642.0003.0000	THREE PERSON SURVEY PARTY	HOUR	45
642.0011.0000	ADJUST EXISTING MONUMENT CASE	EACH	21

PRELIMINARY

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MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

ESTIMATE OF QUANTITIES

DESIGNED BY SLH
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DRAFTED BY JKH
SCALE 1" = 1'
DATE 5/16/2022 TIME 9:18 AM
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_C01_EST.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	C02	C02

ESTIMATE OF QUANTITIES

ITEM NO.	PAY ITEM	PAY UNIT	TOTAL QUANTITY
643.0002.0000	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQ'D
643.0003.0000	PERMANENT CONSTRUCTION SIGNS	LUMP SUM	ALL REQ'D
643.0023.0000	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
643.0025.0000	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQ'D
643.0032.0000	FLAGGING	CONTINGENT SUM	ALL REQ'D
643.0033.0000	DETOUR, SPENARD RD. INTERSECTION	LUMP SUM	ALL REQ'D
644.0001.0000	FIELD OFFICE	LUMP SUM	ALL REQ'D
644.2004.0000	ENGINEERING COMMUNICATIONS	CONTINGENT SUM	ALL REQ'D
645.0001.0000	TRAINING PROGRAM, 2 TRAINEES/APPRENTICES	LABOR HOUR	1,000
646.0001.0000	CPM SCHEDULING	LUMP SUM	ALL REQ'D
647.2002.0000	BACKHOE, 4WD, 1 CY BUCKET, 75-HP MINIMUM, 15 FT DEPTH	CONTINGENT SUM	ALL REQ'D
656.2001.0012	CURED-IN-PLACE PIPE 12 INCH	LINEAR FOOT	2,105
656.2001.0018	CURED-IN-PLACE PIPE 18 INCH	LINEAR FOOT	1,315
656.2001.0024	CURED-IN-PLACE PIPE 24 INCH	LINEAR FOOT	1,580
656.2001.0030	CURED-IN-PLACE PIPE 30 INCH	LINEAR FOOT	115
656.2001.0036	CURED-IN-PLACE PIPE 36 INCH	LINEAR FOOT	825
656.2001.0048	CURED-IN-PLACE PIPE 48 INCH	LINEAR FOOT	1,605
656.2004.0000	CURED-IN-PLACE PIPE - HOST PIPE PREPARATION	LINEAR FOOT	7,545
656.2005.0000	CURED-IN-PLACE PIPE - HOST PIPE SPOT REPAIR	CONTINGENT SUM	ALL REQ'D
660.0003.0000	HIGHWAY LIGHTING SYSTEM COMPLETE, MINNESOTA DR.	LUMP SUM	ALL REQ'D
660.2000.0000	TEMPORARY ELECTROLIER, MINNESOTA DR.	CONTINGENT SUM	ALL REQ'D
660.2003.0000	TRAFFIC SIGNAL SYSTEM MODIFICATIONS MINNESOTA DR. & SPENARD RD.	LUMP SUM	ALL REQ'D
660.2003.0000	TRAFFIC SIGNAL SYSTEM MODIFICATIONS MINNESOTA DR. & NORTHERN LIGHTS BLVD.	LUMP SUM	ALL REQ'D
660.2003.0000	TRAFFIC SIGNAL SYSTEM MODIFICATIONS MINNESOTA DR. & 26TH AVE.	LUMP SUM	ALL REQ'D
660.2004.0000	ADJUST JUNCTION BOX	EACH	1
660.2005.0002	JUNCTION BOX, TYPE 2	EACH	1
660.2008.0000	TRAFFIC LOOP REPLACEMENT	CONTINGENT SUM	ALL REQ'D
661.0002.0000	LOAD CENTER, TYPE 1A	EACH	2
662.2001.0000	SIGNAL INTERCONNECT, COPPER	LUMP SUM	ALL REQ'D
669.2000.0000	TRAFFIC DATA - H1	LUMP SUM	ALL REQ'D
669.2000.0000	TRAFFIC DATA - H2	LUMP SUM	ALL REQ'D
669.2000.0000	TRAFFIC DATA - H3	LUMP SUM	ALL REQ'D
669.2000.0000	TRAFFIC DATA - H4	LUMP SUM	ALL REQ'D
669.2000.0000	TRAFFIC DATA - H5	LUMP SUM	ALL REQ'D
669.2000.0000	TRAFFIC DATA - H6	LUMP SUM	ALL REQ'D
670.2000.0000	MMA PAVEMENT MARKINGS	LUMP SUM	ALL REQ'D
682.2000.0000	VAC-TRUCK POTHOLE	CONTINGENT SUM	ALL REQ'D
683.2008.0000	SAFETY OBSERVER ELECTRICAL LINE WATCH	CONTINGENT SUM	ALL REQ'D
688.2001.0000	UTILITY SUPPORT	CONTINGENT SUM	ALL REQ'D
688.2002.0000	UTILITY SUPPORT PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D

PRELIMINARY

TABLE OF ESTIMATING FACTORS

ITEM NO.	PAY ITEM	ESTIMATING FACTOR
203.0006.000A	BORROW, TYPE A	144 LB/FT^3
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	144 LB/FT^3
306.0001.0000	ATB	151 $LB./FT^3$
306.0002.6440	ASPHALT BINDER, GRADE PG 64-40 E	5.3% OF TOTAL WEIGHT OF 306.0001.0000
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	0.000334 TON/SY.
408.2001.00VH	HMA, TYPE VH	151 LB/FT^3
408.2004.6440	ASPHALT BINDER, GRADE PG 64-40 E	5.3% OF TOTAL WEIGHT OF 408.2001.00VH
610.0001.0001	DITCH LINING	110 LB/FT^3
611.0001.0001	RIPRAP, CLASS I	108 LB/FT^3
618.0002.0000	WATER FOR SEEDING	1 GAL/FT^2

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ESTIMATE OF QUANTITIES

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NO.	DATE	REVISION

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ALASKA	0421099/CFHWY00132	2022	D01	D15

202.0001.0000 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS

SHEET	STATION	OFFSET	STRUCTURE(EA)	REMARKS
F3	414+49	52.8 – RT	1	WOODEN BACK CURB
F6	447+85	43 – RT	1	ELECTRICAL CASING, AS NECESSARY
F7	452+88	6.1 – RT	1	POLE FOUNDATION
F7	453+14	53.4 – RT	1	TRASH CAN
F10	482+03	47.0 – RT	1	LARGE TREE
F10	482+17	44.0 – RT	1	LARGE TREE

202.0004.0000, 603.0017.0012, 603.0017.0024, 603.0017.0036, 603.0017.0048, 603.2032.0012, 603.2032.0018 – REMOVAL OF PIPE, PIPE, AND CORRUGATED HDPE PIPE

SHEET	PIPE NO.	INLET		OUTLET		202.0004.0000	HDPE PIPE		PIPE				REMARKS
		STATION	OFFSET	STATION	OFFSET	REMOVAL OF PIPE(LF)	12 INCH (LF)	18 INCH (LF)	12 INCH (LF)	24 INCH (LF)	36 INCH (LF)	48 INCH (LF)	
F1	P1-1	395+37	58 – LT	395+31	1 – RT	60.0	60.0						
F1	P1-2	395+31	1 – RT	398+92	3 – LT	361.0				361.0			
F1	P1-3	398+53	44 – RT	398+92	3 – LT	61			61.0				
F2	P2-1	398+92	3 – LT	402+13	3 – LT	321.0				321.0			
F2	PL2-8	404+85	1 – LT	409+65	1 – RT							20.0	POTENTIAL SPOT REPAIR
F3	PL3-13	418+17	1 – RT	419+92	1 – LT						20.0		POTENTIAL SPOT REPAIR
F4	P4-1	426+07	80 – RT	426+39	CL	85.0	85.0						
F4		426+39	CL	426+39	90 – RT	90.0							
F5	P5-1	433+41	48 – RT	432+97	1 – LT	65[illegible]	65.0						
F5		436+27	48 – RT	436+54	48 – RT	26.[illegible]							
F5	P5-2	436+29	48 – LT	436+29	[illegible]	48.0	4[illegible]0						
F5	P5-3	436+28	48 – RT	436+29	CL	49.0		49.0					
F5	P5-4	436+25	64 – RT	436+28	48 – RT	16.0		16.0					
F5	P5-5	439+21	48 – LT	[illegible]	50 [illegible]T	98.0			98.0				
F6	P6-1	444+07	85 – RT	444+2[illegible]	[illegible]8 – RT			69.0					
F6		444+07	85[illegible]	444+0[illegible]	18 – RT	69.0							P6-1
F6		444+07	18 – RT	[illegible]	18[illegible]	261.0							P6-2
F6	P6-2	444+21	18 – RT	446+68	[illegible]8 – RT			247.0					
F6	P6-3	446+68	18 [illegible]	447+96	45 –RT	131.0		131.0					
TOTAL QUANTITY (LF):						1,741	258	511	159	682	20	20	
PAY ITEM QUANTITY (LF):						1,745	260	515	160	685	20	20	

PRELIMINARY

205.0005.0000 – CONTROLLED LOW-STRENGTH MATERIAL

SHEET	PIPE NO.	INLET		OUTLET		SIZE (IN)	LENGTH (LF)	LOW-STRENGTH MATERIAL (CY)	REMARKS
		STATION	OFFSET	STATION	OFFSET				
F3	PA3-1	418+17	1 – RT	418+16	75 – LT	18	76	5	ABANDON PIPE
F6	N/A	447+84	59 – LT	447+84	47 – RT	16	120	6.2	ABANDON ELECTRICAL CASING
F7	PA7-1	452+15	45 – RT	452+15	70 – RT	12	25	0.7	ABANDON PIPE
F8	PA8-1	469+24	1 – LT	469+24	35 – RT	12	36	1	ABANDON PIPE
TOTAL QUANTITY:								13.0	
PAY ITEM QUANTITY:								13	

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PAVEMENT PRESERVATION

SUMMARY TABLES

DESIGNED BY SLH | CHECKED BY RRH | DRAFTED BY JKH
SCALE 1"=1'
TIME 1:28 PM
DATE 5/12/2022
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_D01_SUM.DWG

NO.	DATE	REVISION

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ALASKA	0421099/CFHWY00132	2022	D02	D15

603.2017.0000 - CULVERT CLEANING

SHEET	STATION	OFFSET	STATION	OFFSET	12 INCH (LF)	18 INCH (LF)	24 INCH (LF)	30 INCH (LF)	48 INCH (LF)	TOTAL LENGTH (LF)	COMMENT
F01	395+07	65 RT	395+43	65 RT	36					36	
F01	398+95	59 LT	398+92	3 LT		56				56	
F04	426+39	CL	429+70	CL					332	332	
F04	429+70	CL	431+11	CL				140		140	
F05	431+11	CL	432+97	CL				186		186	
F05	432+97	CL	436+29	CL				332		332	
F05	438+56	182 LT	438+58	92 RT			274			274	
F05	438+26	92 RT	438+58	92 RT	33					33	
F05	438+58	92 RT	438+77	92 RT	18					18	
F05	438+25	183 LT	438+56	182 LT	30					30	
F05	438+56	182 LT	438+76	182 LT	20					20	
F06	440+22	2 LT	444+48	5 LT			426			426	
F06	444+48	5 LT	448+53	2 LT			405			405	
F06	448+53	2 LT	452+33	1 LT			380			[illegible]	
F07	452+33	1 LT	456+07	1 RT			374			374	
F07	456+07	1 RT	459+47	1 RT			340			[illegible]	
F08	467+26	96 LT	467+26	36 LT	61					61	
F08	467+51	101 LT	468+62	102 RT			[illegible]			231	
F09	475+14	3 RT	475+14	51 RT	47					47	
F09	476+30	53 LT	476+31	45 RT			[illegible]			98	
F09	479+97	84 LT	479+97	[illegible]	[illegible]					20	
F10	482+42	36 RT	482+42	[illegible]	[illegible]					20	
F10	484+37	35 LT	[illegible]	[illegible]			72			72	
F13	487+14	17 RT	[illegible]	[illegible]	[illegible]					20	
F13	492+06	[illegible]	[illegible]	[illegible]		121				121	
F14	494+08	[illegible]	[illegible]	14 LT	52					52	
F14	501+78	[illegible]	[illegible]	33 RT	53					53	
F14-F15	501+97	[illegible]	[illegible]	6 RT			285			285	
F11	"SB" 483+25	[illegible]	"SB" 483+25	21 LT	21					21	
F11	"SB" 488+74	21 RT	"SB" 488+41	80 RT	66					66	
F12	"SB" 493+29	20 LT	"SB" 492+89	41 RT	73					73	
F12	"SB" 495+75	61 LT	"SB" 495+54	46 LT		24				24	
F12	"SB" 495+54	46 LT	"SB" 496+03	17 RT		79				79	
F12	"SB" 496+39	20 LT	"SB" 496+03	17 RT	51					51	
F12	"SB" 496+03	17 RT	"SB" 496+37	75 RT		68				68	
F12	"SB" 496+37	75 RT	"SB" 496+16	126 RT	58					58	
F12	"SB" 496+37	75 RT	"SB" 496+28	85 RT	15					15	
F12	"SB" 496+27	84 RT	"SB" 495+67	129 RT			86			86	
F18	"SP" 617+12	17 LT	"SP" 617+12	32 RT		50				50	
TOTAL(LF):					694	398	2,971	658	332	5,053	
PAY ITEM QUANTITY(LF):					700	400	2,975	660	335	5,070	

PRELIMINARY

RYAN R. HAMMEL
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STATE OF ALASKA
49TH
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SUMMARY TABLES

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DRAFTED BY JKH
SCALE 1"=1'
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TIME 1:28 PM
DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_D01_SUM.DWG

656.2001.0012, 656.2001.0018, 656.2001.0024, 656.2001.0030, 656.2001.0036, 656.2001.0048 ITEMS - LINER FOR STORM PIPE SUMMARY

SHEET	PIPE NO.	STATION	OFFSET	STATION	OFFSET	SIZE 12(IN)	18(IN)	24(IN)	30(IN)	36(IN)	48(IN)	LENGTH (LF)	HEIGHT OF COVER (LF)	REMARKS
F1	PL1-1	394+91	47.7 - RT	395+31	1.0 - LT	X						62.0	4.7	
F1	PL1-2	398+63	71.5 - RT	399+08	70.7 - RT		X					45.0	0.5	GRADE TO DRAIN
F1	PL1-3	399+08	70.7 - RT	400+51	74.6 -RT		X					140.0	0.5	GRADE TO DRAIN
F2	PL2-1	400+77	71.7 - RT	401+68	69.6 -RT		X					92.0	1.0	GRADE TO DRAIN
F2	PL2-2	402+13	3 - LT	402+11	47 - RT		X					50.0	NO DATA	
F2	PL2-3	402+13	3.4 - LT	404+85	0.7 - LT						X	272.0	3.0	
F2	PL2-4	402+18	69.6 - RT	402+91	64.8 - RT		X					73.0	NO DATA	GRADE TO DRAIN
F2	PL2-7	404+85	0.7 - LT	405+26	47.7 - RT	X						64.0	[illegible].3	
F2	PL2-8	404+85	0.7 - LT	409+65	1.1 - RT						X	480.0	[illegible].7	
F2	PL2-9	409+64	47.9 - LT	409+65	1.1 - RT	X						49.[illegible]	2.7	
F2	PL2-10	409+65	1.1 - RT	409+66	47.8 - RT	X						[illegible]7.0	3.0	
F2	PL2-11	409+65	1.1 - RT	413+40	1.3 - RT							[illegible]5.0	13.4	
F3	PL3-1	412+74	129.1 - LT	413+03	137.3 - LT	X						[illegible]30.0	[illegible] DATA	
F3	PL3-2	413+03	137.3 - LT	413+40	1.3 - RT		X					[illegible]	NO DATA	
F3	PL3-3	413+34	109.6 - RT	413+67	97.7 - RT	X						34.[illegible]	2.3	
F3	PL3-4	413+40	1.3 - RT	413+67	97.7 - RT		X					100.0	12.8	
F3	PL3-5	413+40	1.3 - RT	418+06	1.1 - RT							467.0	NO DATA	
F3	PL3-6	413+67	97.7 - RT	413+94	86.5 - RT	X						30.0	2.6	
F3	PL3-7	417+73	48.7 - LT	418+17	[illegible] - R[illegible]	X						66.0	NO DATA	
F3	PL3-8	417+73	47.3 - RT	418+17	1[illegible] - RT	X						64.0	NO DATA	
F3	PL3-9	417+90	64.3 - RT	418+[illegible]4	65.[illegible] - RT							24.0	2.0	
F3	PL3-10	418+06	1.1 - RT	[illegible]8+17	1.1 - RT						X	11.0	NO DATA	
F3	PL3-11	418+14	65.3 - RT	418+25	64.4 - RT	X						11.0	0.8	
F3	PL3-12	418+17	1.1 - [illegible]	418+[illegible]	65.3 - [illegible]T			X				64.0	NO DATA	
F3	PL3-13	418+17	1[illegible] - RT	419+92	0.9 - LT					X		176.0	NO DATA	
F3	PL3-14	419+73	64[illegible] - RT	419+[illegible]	64.6 - RT	X						18.0	2.5	
F3	PL3-15	419+91	64.[illegible] - RT	[illegible]20+01	64.1 - RT	X						10.0	2.6	
F3	PL3-16	419+92	0.9 [illegible] LT	419+91	64.6 - RT			X				65.0	NO DATA	
F3	PL3-17	419+92	0.9 [illegible]T	420+40	48.0 - LT	X						67.0	3.3	
F3	PL3-18	419+92	0.9 - LT	423+07	0.2 - LT					X		314.0	8.1	
F4	PL4-1	420+39	47.5 - RT	419+92	0.9 - LT	X						67.0	2.9	
F4	PL4-2	422+84	64.5 - RT	423+06	65.0 - RT	X						21.0	4.7	
F4	PL4-3	423+06	65.0 - RT	423+20	64.6 - RT	X						14.0	3.3	
F4	PL4-4	423+06	47.8 - LT	423+07	0.2 - LT	X						48.0	NO DATA	
F4	PL4-5	423+06	CL	423+06	65.0 - RT		X					65.0	5.8	

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SUMMARY TABLES

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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	D04	D15

656.2001.0012, 656.2001.0018, 656.2001.0024, 656.2001.0030, 656.2001.0036, 656.2001.0048 ITEMS - LINER FOR STORM PIPE SUMMARY (CONTINUED)

SHEET	PIPE NO.	STATION	OFFSET	STATION	OFFSET	SIZE 12(IN)	18(IN)	24(IN)	30(IN)	36(IN)	48(IN)	LENGTH (LF)	HEIGHT OF COVER (LF)	REMARKS
F4	PL4-6	423+07	0.2 - RT	426+39	0.4 - LT					X		332.0	6.8	
F4	PL4-7	423+20	64.6 - RT	423+35	47.8 - RT	X						23.0	1.1	
F4	PL4-8	426+07	79.7 - RT	426+55	79.9 - RT	X						47.0	1.9	
F4	PL4-9	426+09	79.3 - LT	426+56	79.4 - LT	X						48.0	1.7	
F4	PL4-10	426+56	79.4 - LT	426+39	0.4 - LT	X						82.0	4.5	
F4	PL4-11	429+30	48.1 - RT	429+51	68.1 - RT	X						29.0	NO DATA	
F4	PL4-12	429+51	68.1 - RT	429+70	64.5 - RT	X						19.0	NO DATA	
F4	PL4-13	429+70	64.5 - RT	429+75	67.5 - RT	X						6.0	NO DATA	
F4	PL4-14	429+70	0.2 - RT	429+70	64.5 - RT		X					64.0	[illegible].0	
F5	PL5-0	430+82	48.0 LT	431+11	CL	X						56.[illegible]	[illegible] DATA	
F5	PL5-1	432+61	47.9 - RT	432+81	71.1 - RT	X						31.0	[illegible] DATA	
F5	PL5-2	432+81	71.1 - RT	432+96	64.5 - RT	X						[illegible].0	5.0	
F5	PL5-3	432+96	64.5 - RT	433+05	69.2 - RT	X						[illegible].0	3.1	
F5	PL5-4	432+96	64.5 - RT	432+97	0.8 - LT		X					65.0	[illegible].3	
F5	PL5-5	433+43	47.8 - LT	432+97	0.8 - LT	X						[illegible]	3.2	
F5	PL5-6	436+29	0.2 - RT	436+54	47.8 - RT	X						54.0	NO DATA	
F5	PL5-7	438+77	92.1 - RT	439+18	49.9 - RT	X						59.0	NO DATA	
F5	PL5-8	439+38	66.5 - RT	439+66	67.0 - RT	X						28.0	1.7	
F5	PL5-9	439+66	67.0 - RT	439+83	49.9 - [illegible]	X						24.0	NO DATA	
F5	PL5-10	439+83	49.9 - RT	440+22	[illegible] - L[illegible]		X					65.0	NO DATA	
F6	PL6-1	440+22	1.5 - LT	440+[illegible]2	47.[illegible] - LT		X					46.0	3.9	
F6	PL6-2	444+23	82.4 - RT	[illegible]+78	82.[illegible] RT	X						55.0	1.5	
F6	PL6-3	444+78	82.1 - RT	444+48	5.4 [illegible]T	X						92.0	NO DATA	
F6	PL6-4	447+76	47.9 [illegible]	447+[illegible]	45.4 [illegible]T	X						20.0	3.5	
F6	PL6-5	447+93	[illegible] - RT	[illegible]7+96	[illegible].4 - RT	X						19.0	3.1	
F6	PL6-6	447+96	45[illegible] RT	450+[illegible]	44.9 - RT		X					212.0	4.7	
F6	PL6-7	448+40	63.[illegible] RT	[illegible]7+93	64.2 - RT	X						48.0	1.5	
F6	PL6-8	448+66	60 [illegible]T	448+53	2 - LT	X						60.0	4.7	
F6	PL6-9	446+75	60 - [illegible]T	446+68	18 RT		X					78.0	2.2	
F7	PL7-1	450+09	44.9 - RT	450+21	43.8 - RT		X					12.0	NO DATA	
F7	PL7-2	450+21	43.8 - RT	452+15	45.2 - RT	X						194.0	5.8	
F7	PL7-3	451+78	47.9 - LT	452+33	1.2 - LT	X						72.0	3.2	
F7	PL7-4	451+78	47.9 - RT	452+15	45.2 - LT	X						37.0	3.0	
F7	PL7-5	452+11	79.1 - RT	452+15	45.2 - RT	X						34.0	3.8	
F7	PL7-6	452+15	45.2 - RT	456+03	45.1 - RT			X				389.0	5.6	
F7	PL7-7	452+59	79.2 - RT	452+11	79.1 - RT	X						48.0	1.6	
F7	PL7-8	455+85	64.2 - RT	456+03	45.1 - RT	X						26.0	2.3	

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STATE OF ALASKA
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AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
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SUMMARY TABLES

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SCALE 1"=1'

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DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_D01_SUM.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	D05	D15

656.2001.0012, 656.2001.0018, 656.2001.0024, 656.2001.0030, 656.2001.0036, 656.2001.0048 ITEMS - LINER FOR STORM PIPE SUMMARY (CONTINUED)

SHEET	PIPE NO.	STATION	OFFSET	STATION	OFFSET	SIZE 12(IN)	18(IN)	24(IN)	30(IN)	36(IN)	48(IN)	LENGTH (LF)	HEIGHT OF COVER (LF)	REMARKS
F7	PL7-9	456+07	0.6 - RT	456+03	45.1 - RT			X				45.0	6.8	
F7	PL7-10	456+21	64.4 - RT	455+85	64.2 - RT	X						36.0	1.7	
F7	PL7-11	456+52	47.7 - LT	456+07	0.6 - RT		X					66.0	3.2	
F7	PL8-1	459+47	1.1 - RT	462+67	0.6 - LT			X				320.0	6.7	
F8	PL8-2	462+67	0.6 - LT	462+63	38.7 - RT			X				40.0	3.7	
F8	PL8-3	462+68	38.3 - LT	462+67	0.6 - LT	X						38.0	4.2	
F8	PL8-4	462+67	0.6 - LT	465+96	0.8 - LT			X				329.0	6.9	
F8	PL8-5	465+96	0.8 - LT	469+24	1.0 - LT			X				328.0	7.1	
F8	PL8-6	469+24	1.0 - LT	470+09	80.0 - RT				X			115.0	NO DATA	OUTLET, GRADE TO DRAIN
TOTAL QUANTITY(LF):						2,103	1,316	1,580	115	822	1,605	7,541		
PAY ITEM QUANTITY (LF):						2,105	1,315	1,580	115	825	1,605	7,54[illegible]		

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202.0006.0000, 604.0001.0001, 604.0003.0000, 604.0004.0000, 604.2014.0000 - MANHOLE SUMMARY

SHEET	STATION	OFFSET	202.0006.0000 REMOVAL OF MANHOLE (EA)	604.0001.0001 MANHOLE (EA)	604.0003.0000 RECONSTRUCT EXISTING MANHOLE(EA)	604.0004.0000 ADJUST EXISTING MANHOLE(EA)	604.2014.0000 STORM DRAIN STRUCTURE CLEANING(EA)	REMARKS
F1	395+31	1 - RT			X			P1-1
F1	398+92	3 - LT			X		X	S1-1
F2	402+13	3 - LT			X		X	P2-1
F2	402+36	54 - RT						SANITARY SEWER
F2	404+85	1 - LT				X	X	
F2	409+65	1 - RT				X	X	
F3	413+03	137 - [illegible]				X	X	
F3	413+39	[illegible] - RT				X	X	
F3	413+67	9[illegible] - RT				X	X	
F3	416+11	42 - RT				X		SANITARY SEWER
F3	417+96	41 - RT				X		SANITARY SEWER
F3	418+06	1 - [illegible]				X	X	
F3	418+14	65 - RT				X	X	
F3	418+17	1 - RT				X	X	
F3	418+19	42 - RT				X		SANITARY SEWER
F3	419+92	1 - LT				X	X	
F3	419+91	65 - RT				X	X	
F4	421+45	43 - RT				X		SANITARY SEWER
F4	423+06	65 - RT				X	X	
F4	423+06	CL				X	X	
F4	424+63	42 - RT				X		SANITARY SEWER
F4	424+73	42 - RT				X		SANITARY SEWER
F4	426+07	80 - RT		TYPE 1				S4-1
F4	426+13	43 - RT				X		SANITARY SEWER
F4	426+38	CL			X		X	P4-1
F4	427+92	42 - RT				X		SANITARY SEWER
F4	429+70	CL				X	X	
F4	429+70	65 - RT				X	X	

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202.0006.0000, 604.0001.0001, 604.0003.0000, 604.0004.0000, 604.2014.0000 - MANHOLE SUMMARY - (CONTINUED)

SHEET	STATION	OFFSET	202.0006.0000 REMOVAL OF MANHOLE(EA)	604.0001.0001 MANHOLE(EA)	604.0003.0000 RECONSTRUCT EXISTING MANHOLE(EA)	604.0004.0000 ADJUST EXISTING MANHOLE(EA)	604.2014.0000 STORM DRAIN STRUCTURE CLEANING(EA)	REMARKS
F5	431+11	CL				X	X	
F5	431+18	8 - LT				X		SANITARY SEWER
F5	431+25	17 - RT				X		SANITARY SEWER
F5	432+96	64 - RT				X	X	
F5	432+97	1 - LT			X		X	P5-1
F5	434+64	18 - RT				X		SANITARY SEWER
F5	436+25	64 - RT			X		X	P5-4
F5	436+27	48 - RT		TYPE I				P5-3, P5-4
F5	436+29	CL			X		X	P5-2, P5-3
F5	437+96	14 - LT				X		SANITARY SEWER
F5	438+58	92 - RT				X	X	
F5	439+42	15 - LT				X		SANITARY SEWER
F6	440+22	1 - LT				X	X	
F6	442+30	16 - LT				X		SANITARY SEWER
F6	444+07	18 - RT	X					
F6	444+07	85 - RT			X		X	P6-1
F6	444+21	18 - RT		TYPE I				S6-1
F6	444+28	15 - LT				X		SANITARY SEWER
F6	444+48	5 LT				X		
F6	446+18	15 - LT				X		SANITARY SEWER
F6	446+68	19 - RT	X	TYPE 1				S6-2
F6	447+96	45 - RT			X		X	P6-3
F6	448+53	2 - LT				X	X	
F7	450+09	45 - RT				X	X	
F7	450+21	43 - RT				X	X	
F7	450+26	15 - [illegible]				X		SANITARY SEWER
F7	450+26	[illegible] - RT				X		SANITARY SEWER
F7	452+15	[illegible] - RT				X	X	
F7	452+23	28 - RT				X		SANITARY SEWER
F7	452+33	1 - [illegible]T				X	X	
F7	455+93	28 - [illegible]T				X		SANITARY SEWER
F7	456+03	45 - RT				X	X	
F7	456+07	1 - RT				X	X	
F7	457+58	28 - RT				X		SANITARY SEWER
F7	459+47	1 - RT				X	X	
F7	459+73	22 - RT				X		SANITARY SEWER
F8	462+67	1 - LT				X	X	
F8	465+96	1 - LT				X	X	
F8	469+24	1 - LT				X	X	
F15	"SP" 504+75	6 - RT				X	X	
PAY ITEM QUANTITY (EA):			2	4	9	54	40	

*NOTE: STORM DRAIN STRUCTURE CLEANING TOTAL PAY ITEM QUANTITY IS THE COMBINED TOTAL FROM THE MANHOLE AND INLET SUMMARIES

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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	D07	D15

202.0008.0000, 604.0005.000A, 604.0010.0000, 604.0012.0000, 604.2014.0000 - INLET SUMMARY

SHEET	STATION	OFFSET	202.0008.0000 REMOVAL OF INLET(EA)	604.0005.000A INLET, TYPE A (EA)	604.0010.0000 RECONSTRUCT INLET(EA)	604.0012.0000 REPLACE INLET FRAME AND GRATE(EA)	604.2014.000B STORM DRAIN STRUCTURE - CLEANING (EA)	REMARKS
F1	394+91	48 RT					X	
F1	395+07	65 RT					X	
F1	395+37	57 LT			X		X	P1-1
F1	395+43	64 RT					X	
F1	398+02	71 LT					X	
F1	398+53	44 RT		X				P1-3
F1	398+85	58 LT					X	
F1	399+11	104 LT					X	
F2	401+86	48 LT					X	
F2	402+11	47 RT					X	
F2	404+45	47 LT					X	
F2	405+26	48 RT					X	
F2	409+64	48 LT					X	
F2	409+66	48 RT					X	
F3	412+75	129 LT					X	
F3	413+34	109 RT					X	
F3	413+36	146 LT					X	
F3	413+94	87 RT					X	
F3	417+72	47 RT				X	X	GUTTER INLET FRAME AND GRATE
F3	417+73	49 LT					X	
F3	417+89	64 RT					X	
F3	418+25	64 RT					X	
F3	419+73	64 RT					X	
F4	420+01	64 RT					X	
F4	420+38	47 RT					X	
F4	420+40	48 LT					X	
F4	422+84	64 RT					X	
F4	423+06	48 LT					X	
F4	423+20	[illegible] RT					X	
F4	423+35	[illegible] RT				X	X	GUTTER INLET FRAME AND GRATE
F4	426+07	[illegible] RT	X					
F4	426+09	79 LT					X	
F4	426+55	80 RT					X	
F4	426+56	79 LT					X	
F4	429+30	48 RT					X	
F4	429+51	67 RT					X	
F4	429+75	67 RT					X	
F5	430+82	48 LT					X	
F5	432+61	48 RT				X	X	GUTTER INLET FRAME AND GRATE
F5	432+81	71 RT					X	
F5	433+06	69 RT					X	
F5	433+41	48 RT			X		X	P5-1
F5	433+43	48 LT					X	
F5	434+60	68 RT					X	
F5	434+89	62 RT					X	
F5	436+27	48 RT	X					
F5	436+29	47 LT			X		X	P5-2

PRELIMINARY

DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY JKH
SCALE 1"=1'
DATE 5/12/2022 TIME 1:28 PM
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_D01_SUM.DWG

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SUMMARY TABLES

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	D08	D15

202.0008.0000, 604.0005.000A, 604.0010.0000, 604.0012.0000, 604.2014.0000 – INLET SUMMARY (CONTINUED)

SHEET	STATION	OFFSET	202.0008.0000 REMOVAL OF INLET(EA)	604.0005.000A INLET, TYPE A (EA)	604.0010.0000 RECONSTRUCT INLET(EA)	604.0012.0000 REPLACE INLET FRAME AND GRATE(EA)	604.2014.000B STORM DRAIN STRUCTURE – CLEANING (EA)	
F5	436+54	48 RT					X	
F5	438+25	92 RT					X	
F5	438+76	92 RT					X	
F5	439+18	50 RT					X	
F5	439+21	48 LT					X	
F5	439+39	66 RT					X	
F5	439+66	67 RT					X	
F5	439+83	50 RT					X	
F6	440+23	48 LT					X	
F6	444+23	82 RT					X	
F6	444+78	82 RT					X	
F6	446+76	59 LT					X	
F6	447+76	48 RT				X	X	[illegible]UTTER [illegible]NLET F[illegible]ME AND GR[illegible]
F6	447+93	64 RT				X	X	
F6	448+40	63 RT					X	
F6	448+66	60 LT					X	
F7	451+78	48 LT					X	
F7	451+78	48 RT					X	
F7	452+11	79 RT					X	
F7	452+59	79 RT					X	
F7	455+85	64 RT					X	
F7	456+21	64 RT					X	
F7	456+52	48 LT					X	
F8	462+63	[illegible]9 RT					X	
F8	462+68	37 LT					X	
F9	475+14	[illegible] RT					X	
F9	479+96	[illegible] LT					X	
F10	482+42	1[illegible] RT					X	
F13	487+14	17 RT					X	
F14	501+78	18 LT					X	
F15	504+76	18 RT					X	
F11	"SB" 483+25	20 LT					X	
F11	"SB" 488+74	20 RT					X	
F12	"SB" 493+29	20 LT					X	
F12	"SB" 496+27	85 RT					X	
F12	"SB" 496+39	19 LT					X	
PAY ITEM QUANTITY:			2	1	3	5	80	

*NOTE: STORM DRAIN STRUCTURE CLEANING TOTAL PAY ITEM QUANTITY IS THE COMBINED TOTAL FROM THE MANHOLE AND INLET SUMMARIES

PRELIMINARY

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MINNESOTA DR:
TUDOR TO 15TH AVE
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	D09	D15

606 ITEMS - GUARDRAIL SUMMARY

SHEET	STATION TO STATION			606.0001.0000	606.0002.0000	606.0006.0000	606.0007.0000	606.0009.0000	606.0013.0000	606.0014.0000	606.0016.0000	606.0016.0001	202.2013.0000	REMARKS
	FROM	TO	OFFSET	W-BEAM GUARDRAIL* (FT)	THRIE BEAM GUARDRAIL* (FT)	REMOVING AND DISPOSING OF GUARDRAIL (FT)	DOUBLE-FACED, W-BEAM GUARDRAIL* (FT)	SHORT RADIUS GUARDRAIL (EA)	PARALLEL GUARDRAIL TERMINAL (EA)	BURIED IN BACKSLOPE GUARDRAIL TERMINAL(EA)	TRANSITION RAIL (EA)	TRANSITION RAIL, MODIFICATION (EA)	REMOVE FUGITIVE MATERIALS (LF)	
F08	462+75	463+27	RT			52							52	
F08	462+03	463+05	RT							1		1		MODIFIED TRANSITION - SEE DETAIL
F08	463+05	464+04	RT		100									NB MN AT HILLCREST DRIVE (OVERPASS). ATTACH TO CONCRETE BARRIER.
F08	463+85	464+23	LT		37.5									SB MN AT HILLCREST DRIVE (OVERPASS). ATTACH TO CONCRETE BARRIER.
F08	463+99	465+02	LT			103							103	
F08	464+23	465+59	LT	62.5					1			1		MODIFIED TRANSITION - SEE DETAIL
F08	463+82	478+09	RT			1,399							1,399	
F08	464+04	481+81	RT	1,675					1			1		MODIFIED TRANSITION - SEE DETAIL
F11-F12	"SB" 485+50	"SB"495+12	RT	862.5		403			2				403	SOUTH BOUND MN
F11	"SB" 485+51	"SB" 491+12	LT	512.5		994			1				994	SOUTH BOUND MN
F11-F12	"SB" 491+12	"SB" 494+89.5	LT		375									SOUTH BOUND MN
F12	"SB" 494+89.5	"SB" 495+52	LT	12.5										SOUTH BOUND MN
F12	"SB" 494+82	"SB" 496+74	RT	25		114	137.5	1					114	SB 15TH AVE
F13-F14	484+18	499+59	LT	1,487.5		1,536			1				1,536	
F13-F14	489+63	492+64	RT	200		291			2				291	
F14-F15	495+85	503+10	RT	712.5		760			1				760	GUARDRAIL CONTINUED FROM SPENARD
F16-F17	"HR" 2+41	"HR" 13+34	RT			1,089			1				1,089	
F16-F17	"HR" 2+93	"HR" 15+53	LT	1,200		[illegible]			1				1,264	
F18	"SP" 614+64	"SP" 615+38	LT			58			1		1		58	WEST CHESTER BRIDGE
F18	"SP" 614+69	"SP" 615+41	RT			58			1		1		58	WEST CHESTER BRIDGE
F18	"SP" 615+72	"SP" 623+62		762.5		754					1		754	WEST CHESTER BRIDGE GUARDRAIL CONTINUES ON MINNESOTA
F18	"SP" 617+14	"SP" 620+42	LT	237.5		340			2				340	
PAY ITEM QUANTITY:				8,775	512.5	9,215	137.5	1	16	1	3	3	9,215	*INSTALL W31 GUARDRAIL

PRELIMINARY

614.0001.0000 - CONCRETE BARRIER

SHEET	STATION FROM	STATION TO	OFFSET	QUANTITY(LF)	REMARKS
F08	463+00	463+25	39 RT	25	MODIFIED F BARRIER - SEE DETAIL
F08	463+83	464+09	39 RT	25	MODIFIED F BARRIER - SEE DETAIL
F08	464+03	464+28	39 LT	25	MODIFIED F BARRIER - SEE DETAIL
TOTAL(LF):				75.0	
PAY ITEM TOTAL(LF):				75.0	

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MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SUMMARY TABLES

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DRAFTED BY	JKH
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TIME	1:28 PM
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	D10	D15

608.0006.0000 - CURB RAMP, PARALLEL, PERPENDICULAR, UNIDIRECTIONAL, AND SPECIAL

SHEET	STATION	OFFSET	ASP ONLY*	DETAIL	ESTIMATED MEASUREMENTS (FT)						DETECTABLE WARNING TILE**		REMARKS
					I	J	K	L	M	N	RADIUS (FT)	LENGTH (FT)	
F1	395+03	53 RT	X		4.5	6	4.5	5.1	4.5	6	14.5	6.9	
F1	395+48	52 RT	X		6.5	10	6.4	5	6.5	6.5	14.5	7	
F1	398+67	51 RT	X		N/A	N/A	4.5	5.1	4.5	8	14.5	7	SINGLE RAMP***
F1	399+05	62 LT	X		9	4	9	6	15.9	N/A	25	18.6	
F1	399+09	51 RT	X		4.5	8	4.5	5.1	N/A	N/A	14.5	7	SINGLE RAMP***
F2	402+27	52 RT	X		4.5	3.3	4.5	5.1	4.5	10	13	7.3	
F2	402+74	52 RT	X		4.5	10	4.5	5	4.5	6	20	6.3	
F2	403+60	52 LT	X		7	4	6.9	4	11.4	N/A	25	13.2	
F2	404+24	51 LT		X	N/A	N/A	VARIES	VARIES	VARIES	VARIES	28	15.9	SEE SPECIAL CURB RAMP DETAILS
F2	404+76	53 RT	X		N/A	N/A	4.5	5	4.5	6	15	6.8	SINGLE RAMP***
F2	405+13	53 RT	X		4.5	6	4.5	5	N/A	N/A	15	6.8	SINGLE RAMP***
F3	412+70	52 LT		X	3	4	3.7	8	N/A	N/A	29.5	5.1	SEE SPECIAL CURB RAMP DETAILS
F3	412+83	67 LT		X	3	4	3.7	8	N/A	N/A	29.5	5.1	SEE SPECIAL CURB RAMP DETAILS
F3	412+88	53 RT		X	4	4.5	4.2	7.5	N/A	N/A	119.5	4.3	SEE SPECIAL CURB RAMP DETAILS
F3	413+15	69 RT		X	4	4.1	4.5	8	N/A	N/A	44.5	5.5	SEE SPECIAL CURB RAMP DETAILS
F3	413+65	68 LT	X		4.3	8	4.2	5	N/A	N/A	44.5	5.3	
F3	413+89	53 LT	X		N/A	N/A	4.4	4.9	N/A	N/A	N/A	5.1	LANDING ONLY
F3	413+94	72 RT		X	8.7	8	8	5	VARIES	9.1	29.5	[illegible]	SEE SPECIAL CURB RAMP DETAILS
F3	414+12	50 RT		X	VARIES	16.2	9.3	5	9.2	8	[illegible]	[illegible]	SEE SPECIAL CURB RAMP DETAILS
F3	417+84	52 RT	X		N/A	N/A	4.5	5	4.5	12	[illegible]	[illegible]	SINGLE RAMP***, USE GUTTER INLET FRAME AND GRATE
F3	417+87	58 LT	X		4.5	6	4.5	5	4.5	6.5	[illegible]	[illegible]	
F3	418+28	55 RT		X	4.5	7	4.5	[illegible]	N/A	N/A	[illegible]	6.9	SINGLE RAMP***, SEE SPECIAL CURB RAMP DETAILS
F3	419+64	49 RT	X		4.5	4	[illegible]	[illegible]	10	N/A	[illegible]	11.2	
F4	420+06	53 RT	X		4.5	10	4.5	5	4.5	[illegible]	14.5	6.9	
F4	422+81	54 RT	X		4.5	[illegible]	[illegible]	5	4.5	6.4	14.5	6.7	
F4	423+22	57 RT	X		4.5	[illegible]	4.5	5	N/A	N/A	14.5	6.9	SINGLE RAMP***, USE GUTTER INLET FRAME AND GRATE
F4	425+93	52 LT	[illegible]		[illegible]	10	[illegible]	16.5	N/A	N/A	29.5	19	SEE SPECIAL CURB RAMP DETAILS
F4	425+97	57 RT	X		N/A	N/A	4.5	5	4.5	8	29.5	5.8	SINGLE RAMP***
F4	426+64	57 RT	[illegible]		[illegible]	12	7.5	5	N/A	N/A	29.5	5.8	SINGLE RAMP***
F4	426+74	51 LT		X	N/A	N/A	VARIES	VARIES	4.5	10.2	29.5	11.3	SEE SPECIAL CURB RAMP DETAILS
F4	429+46	56 RT	X		N/A	N/A	4.5	5	4.5	8.5	20.5	6.2	SINGLE RAMP***
F4	429+80	56 RT	X		4.5	7	4.5	5	N/A	N/A	19.5	6.3	
F5	430+96	55 LT		X	4.5	6	4.5	8	N/A	N/A	14.5	11.1	WARP ASPHALT PATHWAY TO MEET CURB RAMP, SEE SPECIAL CURB RAMP DETAILS
F5	431+29	55 LT	X		N/A	N/A	6.5	5	6.5	5	14.5	6.9	SINGLE RAMP***
F5	432+73	53 RT	X		N/A	N/A	4.5	5	4.5	12	19.5	6.3	SINGLE RAMP***
F5	433+11	52 RT	X		4.5	10	4.5	5.1	N/A	N/A	14.5	7	SINGLE RAMP***
F5	434+46	50 RT	X		4.5	4	4.5	6	12.5	N/A	19.5	13.5	
F5	434+96	50 RT	X		4.5	4	4.5	4	9.5	N/A	12	10.9	
F5	438+04	52 LT	X		VARIES	VARIES	VARIES	VARIES	VARIES	VARIES	29.5	5.8	SEE SPECIAL CURB RAMP DETAILS
F5	438+07	10 LT	X		N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.4	WARNING TILES ONLY
F5	438+08	13 RT	X		N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.1	WARNING TILES ONLY
F5	438+66	68 RT		X	6	4	6	5	0.3	N/A	N/A	6	SEE SPECIAL CURB RAMP DETAILS
F6	441+08	53 RT	X		4.5	15.9	4.5	6.2	5	N/A	N/A	4.5	
F6	441+72	53 RT	X		4.5	16.3	4.5	6.1	8.6	N/A	N/A	4.5	
F6	444+23	59 RT	X		4	4	4	5.4	N/A	N/A	N/A	4	
F6	444+32	70 LT	X		4	4	4	6.5	N/A	N/A	N/A	4	
F6	444+89	56 RT		X	4.5	12	VARIES	VARIES	VARIES	VARIES	29.5	22	SEE SPECIAL CURB RAMP DETAILS.

PRELIMINARY

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TUDOR TO 15TH AVE
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SUMMARY TABLES

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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	D11	D15

608.0006.0000 - CURB RAMP, PARALLEL, PERPENDICULAR, UNIDIRECTIONAL, AND SPECIAL - (CONTINUED)

SHEET	STATION	OFFSET	ASP ONLY*	DETAIL	ESTIMATED MEASUREMENTS (FT)						DETECTABLE WARNING TILE**		REMARKS
					I	J	K	L	M	N	RADIUS (FT)	LENGTH (FT)	
F6	444+89	68 LT		X	7.8	6.5	6.5	15	5.7	6.5	39.5	16.7	SEE SPECIAL CURB RAMP DETAILS. ENSURE RAMPS REMAIN WITHIN RIGHT OF WAY
F6	444+93	11 LT	X		4	7.8	4	7.5	N/A	N/A	N/A	4	
F6	444+93	12 RT	X		4	7.8	4	7.5	N/A	N/A	N/A	4	
F6	447+88	53 RT	X		4.5	3	4.5	5	4.5	13	14.5	6.9	ENSURE RAMPS REMAIN WITHIN RIGHT OF WAY
F6	448+46	53 RT	X		4.5	10	4.5	5	4.5	2	14.5	6.9	ENSURE RAMPS REMAIN WITHIN RIGHT OF WAY
F7	451+91	50 LT		X	4	4.5	4	8	N/A	N/A	28	5.7	SEE SPECIAL CURB RAMP DETAILS
F7	451+97	52 RT		X	4.5	7	4.5	15	4.5	7	28	17.5	SEE SPECIAL CURB RAMP DETAILS
F7	452+07	63 LT		X	4	4.5	4	8	N/A	N/A	28	5.7	SEE SPECIAL CURB RAMP DETAILS
F7	452+58	63 LT		X	4	4.1	4	8	N/A	N/A	23	6.2	SEE SPECIAL CURB RAMP DETAILS
F7	452+73	53 RT		X	6	7	6	24	6	7	28	28	SEE SPECIAL CURB RAMP DETAILS
F7	452+79	49 LT		X	4	4	4	8	N/A	N/A	N/A	4	SEE SPECIAL CURB RAMP DETAILS
TOTAL(EA):												58	
PAY ITEM QUANTITY(EA):												58	

*CURB RAMPS WITH DETAIL MUST STILL COMPLY WITH ALL CONDITIONS SHOWN IN ALASKA STANDARD PLANS

**LENGTH AND RADIUS OF DETECTABLE WARNING TILE ARE MEASURED FROM THE CURB LINE

***SEE DETAILS FOR BACKING CURB TRANSITION

PRELIMINARY

60[illegible].200[illegible].0000 - ASPHALT PATHWAY

SHEET	FROM		TO		AREA (SF)	QUANTITY (TON)	REMARKS
	STATION	OFFSET	STATION	OFFSET			
F1-F2	395+26	6 LT	402+25	CL	9926.3	124.9	
F2	404+39	72 LT	404+78	74 LT	301.8	3.8	
F2	404+65	CL	405+00	CL	519.5	6.5	
F2	405+54	CL	405+79	CL	371.1	4.7	
F2	408+68	58 LT	408+98	53 LT	100.8	1.3	
F4	426+56	90 RT	426+83	56 RT	284.2	3.6	
F5	430+78	63 LT	430+94	61 LT	107	1.3	
F5	431+27	63 LT	431+33	62 LT	14.1	0.2	
F6	447+04	CL	447+70	CL	728.8	9.2	
F7	452+80	66 LT	452+93	63 LT	84.5	1.1	
TOTAL QUANTITY (TON)						156.5	
PAY ITEM QUANTITY (TON):						160.0	

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NO.	DATE	REVISION

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ALASKA	0421099/CFHWY00132	2022	D12	D15

608.0001.0004 - CONCRETE SIDEWALK, 4 INCHES THICK

SHEET	STATION		OFFSET	AREA (SY)	REMARKS
	FROM	TO			
F1	394+67	394+92	RT	12.6	
F1	397+10	397+60	RT	30.1	
F1	398+49	398+55	RT	3.0	
F1 - F2	399+57	400+05	RT	24.2	
F2	402+26	402+30	RT	1.8	
F2	402+67	402+72	RT	1.4	
F2	403+31	403+46	LT	11.7	
F2	404+23	404+42	LT	15.0	
F2	404+38	404+42	LT	1.8	
F2	404+59	404+66	RT	3.1	
F2-F3	405+23	413+36	RT	566.7	
F3	409+99	410+17	LT	9.2	
F3	410+19	410+49	LT	15.0	
F3	410+51	410+75	LT	18.6	
F3	411+47	411+80	LT	20.0	
F3	411+82	412+12	LT	15.0	
F3	412+13	412+84	LT	55.1	
F3	412+76	412+86	MEDIAN	3.3	MEDIAN CUT-THROUGH
F3	413+26	413+31	MEDIAN	2.7	MEDIAN CUT-THROUGH
F3	413+49	413+54	MEDIAN	3.3	MEDIAN CUT-THROUGH
F3	413+94	414+04	MEDIAN	3.3	MEDIAN CUT-THROUGH
F3	413+95	414+04	RT	9.8	
F3	413+99	414+09	RT	[illegible]	
F3	414+32	417+68	RT	173.4	
F3	417+74	417+79	[illegible]	2.0	
F3	417+84	417+89	LT	[illegible]	
F3	418+39	419+46	RT	53.7	
F4	420+20	422+71	[illegible]	[illegible]	
F4	422+79	422+84	RT	5.4	
F4	423+37	[illegible]	RT	133.4	
F4	425+70	425+74	LT	2.0	
F4	425+75	425+97	LT	20.7	
F4	426+70	426+85	LT	18.7	
F4	426+79	429+35	RT	158.8	
F4	426+91	426+95	LT	2.0	
F4-F5	429+90	432+57	RT	133.3	
F5	430+81	430+85	LT	2.2	
F5	431+37	431+42	LT	2.6	
F5	433+26	434+29	RT	52.0	
F5	435+09	437+90	RT	140.7	
F5	437+86	437+92	LT	3.4	
F5	438+77	439+38	RT	167.4	
F6	440+15	440+40	RT	12.6	
F6	440+81	440+86	RT	2.3	
F6	440+94	441+00	RT	6.1	
F6	441+94	441+98	RT	2.0	
F6	443+32	443+57	LT	12.6	

PRELIMINARY

608.0001.0004 - CONCRETE SIDEWALK, 4 INCH - (CONTINUED)

SHEET	STATION		OFFSET	AREA (SY)	REMARKS
	FROM	TO			
F6	444+63	444+23	RT	75.4	
F6	444+25	444+32	LT	8.2	
F6	444+73	444+85	LT	15.4	
F6	444+79	444+84	RT	5.7	
F6	444+84	445+05	MEDIAN	32.4	
F6	445+03	445+12	LT	5.3	
F6	447+43	447+70	LT	16.2	
F6	447+87	447+92	RT	3.0	
F6	447+94	447+98	RT	6.0	*SEE NOTE
F6	448+09	448+49	LT	24.9	
F6	448+41	448+46	RT	1.8	
F7	450+37	450+51	RT	6.9	
F7	451+65	451+81	RT	8.0	
F7	451+76	452+11	LT	37.3	
F7	[illegible]	452+11	RT	7.7	
F7	[illegible]	[illegible]	RT	5.1	
[illegible]	[illegible]	452+84	LT	22.7	
[illegible]	[illegible]	453+26	RT	23.1	RELOCATE BENCH
F7	[illegible]	455+58	RT	11.1	
F7	[illegible]	455+91	RT	15.0	
TOTAL(SY):				2397.0	
PAY ITEM QUANTITY(SY):				2400.0	

*SIDEWALK LOCATION OUT OF VIEW, 176' RT TO 188' RT. REQUIRED FOR UTILITY UNDERGROUND LINE.

CONCRETE, TYPE V, 6 INCHES THICK, COLORED AND PATTERNED IMPRINTED, MEDIAN - 608.2013.E006

SHEET	STATION		OFFSET	AREA (SY)	REMARKS
	FROM	TO			
F4	426+27	426+47	CL	34.3	
F5	431+58	431+80	CL	37.4	
F5	432+90	433+14	CL	42.1	
F5	436+20	436+41	CL	41.8	
TOTAL(SY):				155.7	
PAY ITEM QUANTITY(SY):				160.0	

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MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SUMMARY TABLES

DESIGNED BY SLH | CHECKED BY RRH | DRAFTED BY JKH | SCALE 1"=1' | DATE 5/12/2022 | TIME 1:28 PM

DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_D01_SUM.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	D13	D15

609.0002.0000, - CURB AND GUTTER SUMMARY

SHEET	STATION FROM	STATION TO	OFFSET	202.0009.0000 REMOVAL OF CURB AND GUTTER (LF)	609.0002.0ALL CURB AND GUTTER, ALL TYPES (LF)	REMARKS
F1	392+40	393+00	LT	60	60	
F1	394+67	395+07	RT	46	46	
F1	395+43	395+63	RT	29	29	
F1	395+26	395+42	LT	16	16	
F1-F2	395+26	402+25	CL	1399	1399	BOTH SIDES MEDIAN
F1	397+10	397+60	RT	51	51	
F1	398+49	398+70	RT	27	27	
F1	399+05	399+21	RT	31	31	
F1	398+86	399+06	LT	72	---	
F1	398+86	398+86	LT	---	97	
F1-F2	399+57	400+05	RT	48	48	
F2	402+13	402+31	RT	41	41	
F2	402+66	402+88	RT	42	42	
F2	403+31	403+72	LT	67	67	
F2	404+08	404+43	LT	62	62	
F2	404+59	404+78	RT	20	---	
F2	404+59	404+80	RT	---	25	
F2 - F3	405+08	413+37	RT	869	---	
F2 - F3	405+09	413+37	RT	---	879	
F2	404+65	405+00	CL	35	35	
F2	405+54	405+79	CL	50	50	BOTH SIDES MEDIAN
F2 - F3	409+99	410+75	LT	76	76	
F3	410+11	410+17	LT	8	8	
F3	410+17	410+18	LT	11	11	
F3	410+50	410+57	LT	---	8	
F3	410+51	410+54	LT	15	15	
F3	411+47	412+84	LT	[illegible]	[illegible]	
F3	411+73	411+81	LT	[illegible]	---	
F3	411+74	411+81	[illegible]	[illegible]	8	
F3	411+80	411+81	LT	[illegible]	8	
F3	412+13	412+13	[illegible]	12	12	
F3	412+13	412+20	LT	8	8	
F3	412+68	412+95	CL	57	57	BOTH SIDES MEDIAN
F3	413+25	413+31	LT	53	53	BOTH SIDES MEDIAN
F3	413+48	413+54	RT	53	53	BOTH SIDES MEDIAN
F3	413+58	413+66	LT	14	14	
F3	413+85	414+12	CL	57	57	BOTH SIDES MEDIAN
F3	413+99	417+88	RT	453	452	
F3	417+74	417+89	LT	34	34	
F3	418+27	419+73	RT	181	181	
F4	420+02	422+84	RT	313	313	
F4	423+21	426+07	RT	318	319	
F4	425+70	426+08	LT	65	64	
F4	426+27	426+47	CL	40	40	BOTH SIDES MEDIAN
F4	426+56	429+51	RT	330	329	
F4	426+57	426+95	LT	66	64	
F4 - F5	429+76	432+81	RT	325	325	
F5	430+84	430+99	LT	23	31	
F5	431+27	431+42	LT	31	31	
F5	431+58	431+80	CL	44	44	BOTH SIDES MEDIAN
F5	432+90	433+14	CL	48	48	BOTH SIDES MEDIAN

609.0002.0000, - CURB AND GUTTER SUMMARY - (CONTINUED)

SHEET	STATION FROM	STATION TO	OFFSET	202.0009.0000 REMOVAL OF CURB AND GUTTER (LF)	609.0002.0ALL CURB AND GUTTER, ALL TYPES (LF)	REMARKS
F5	433+06	437+90	RT	489	492	
F5	434+39	434+59	RT	30	30	
F5	434+88	435+01	RT	20	20	
F5	436+20	436+41	CL	42	42	BOTH SIDES MEDIAN
F5	437+86	438+15	LT	33	33	
F5	438+77	439+38	RT	124	124	
F6	440+15	440+40	RT	25	25	
F6	440+81	441+13	RT	32	32	
F6	441+63	441+98	RT	35	35	
F6	443+32	443+57	LT	25	25	
F6	443+63	[illegible]	[illegible]	90	90	
F6	444+32	[illegible]	LT	21	21	
F6	[illegible]	[illegible]	LT	63	63	
F6	[illegible]	[illegible]	CL	65	65	BOTH SIDES MEDIAN
F6	[illegible]	[illegible]	RT	53	53	
[illegible]	[illegible]	[illegible]	LT	4	4	
[illegible]	[illegible]	[illegible]	LT	27	27	
[illegible]	[illegible]	447+70	CL	133	133	BOTH SIDES MEDIAN
F6	447+70	447+93	RT	28	28	
F6	447+91	447+95	LT	4	4	
F6	447+94	447+98	RT	12	12	*SEE NOTE
F6	448+09	448+49	LT	40	40	
F6	448+41	448+60	RT	27	27	
F6	450+37	450+51	RT	14	14	
F7	451+65	452+11	RT	60	60	
F7	451+83	451+85	CL	8	8	
F7	451+79	452+11	LT	52	52	
F7	452+55	452+89	LT	55	55	
F7	452+87	452+90	CL	8	8	
F7	452+59	453+26	RT	84	84	
F7	455+38	455+58	RT	20	20	
F7	455+84	455+86	RT	14	14	
F7	456+21	456+21	RT	10	10	
F9	478+70	479+58	RT	87	87	
TOTAL:				7,615	7,673	
PAY ITEM QUANTITY:				7,650	7,700	

*CURB AND GUTTER LOCATION OUT OF VIEW, 176' RT TO 188' RT. REQUIRED FOR UTILITY UNDERGROUND LINE.

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DRAFTED BY JKH
SCALE 1"=1'
DATE 5/12/2022 TIME 1:28 PM
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	D14	D15

627.0010.0000 - ADJUSTMENT OF VALVE BOX

SHEET	STATION	OFFSET	REMARKS
F1	396+17	42.0 - RT	
F1	399+87	63.9 - LT	
F1	399+90	32.3 - RT	
F2	403+98	20.1 - RT	
F2	404+34	8.8 - LT	
F2	404+99	52.9 - RT	
F2	408+19	13.2 - RT	
F2	409+76	59.7 - RT	
F3	410+09	3.7 - LT	
F3	410+23	9.8 - RT	
F3	412+41	59.9 - RT	
F3	412+92	92.8 - LT	
F3	413+13	15.2 - RT	
F3	413+18	0.3 - LT	
F3	413+69	9.7 - RT	
F3	413+74	59.5 - RT	
F3	418+02	14.1 - RT	
F3	418+07	3.1 - LT	
F3	418+26	2.5 - LT	
F3	418+41	9.6 - RT	
F4	420+03	10.8 - RT	
F4	423+09	9.7 - RT	
F4	423+14	14.7 - RT	
F4	426+49	11.3 - RT	
F4	429+48	10.7 - RT	
F4	429+56	11.8 - RT	
F5	430+92	10.8 - RT	
F5	431+06	4.5 - LT	
F5	432+59	40.5 - RT	
F5	432+98	41.7 - RT	
F5	437+79	44.2 - RT	
F5	439+56	46.4 - RT	
F5	439+94	36.5 - RT	
F5	439+96	41.5 - RT	
F6	442+27	42.0 - RT	
F6	444+63	80.1 - LT	
F6	444+68	35.6 - LT	
F6	444+68	60.3 - RT	
F6	444+87	33.6 - RT	
F6	448+39	39.6 - RT	
F6	448+46	38.0 - RT	
F6	449+33	36.4 - RT	

627.0010.0000 - ADJUSTMENT OF VALVE BOX - (CONTINUED)

SHEET	STATION	OFFSET	REMARKS
F7	452+55	40.2 - RT	
F7	452+57	66.6 - RT	
F7	452+62	38.2 - RT	
F7	454+23	36.3 - RT	
F7	455+10	36.2 - RT	
F7	456+11	35.6 - RT	
F8	456+54	32.6 - RT	
F14	502+02	6.7 - LT	
F15	506+31	15.4 - LT	
TOTAL(EA):		51	
PAY ITEM QUANTITY(EA):		51	

642.0011.0000 - ADJUST EXISTING MONUMENT CASE

SHEET	STATION	OFFSET	REMARKS
F2	400+39	CL	
F2	400+46	CL	
F2	[illegible]	CL	
F2	[illegible]	[illegible]	
F2	[illegible]	CL	
[illegible]	[illegible]	30 - RT	
[illegible]	[illegible]	30 - RT	
F4	[illegible]	CL	
F5	438+51	30 - RT	
F6	448+16	CL	
F12	"SB" 492+55	CL	
F12	"SB" 494+10	5 - RT	
F12	"SB" 495+72	39 - RT	
F15	503+51	CL	
F18	"SP" 615+24	1 - RT	
F18	"SP" 617+53	CL	
F18	"SP" 618+21	2 - LT	
F18	"SP" 621+35	2 - LT	
TOTAL(EA):		18	
PAY ITEM QUANTITY(EA):		18	

PRELIMINARY

660.2005.0002 - JUNCTION BOX, TYPE 2

SHEET	STATION	OFFSET	REMARKS
F4	426+04	67 - LT	
PAY ITEM TOTAL(EA):		1	

660.2004.0000 - ADJUST JUNCTION BOX

SHEET	STATION	OFFSET	REMARKS
F6	440+95	52 - RT	
PAY ITEM TOTAL(EA):		1	

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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	D15	D15

639.2000.000 – APPROACH

SHEET	STATION	OFFSET	TYPE	REMARKS
F01	395+25	RT	PUBLIC	43RD
F01	397+35	RT	CURB CUT	
F01	398+90	RT	PUBLIC	42ND
F01	400+00	LT	PUBLIC	ROOSEVELT DR.
F02	402+49	RT	PUBLIC	41ST AVE.
F02	404+02	LT	PUBLIC	JEFFERSON AVE.
F02	404+95	RT	PUBLIC	40TH AVE.
F02	406+27	RT	CURB CUT	
F02	406+95	RT	CURB CUT	
F02	407+78	RT	CURB CUT	
F02	408+70	RT	CURB CUT	
F02	409+31	RT	CURB CUT	
F02	409+81	RT	CURB CUT	
F03	410+43	LT	CURB CUT	
F03	411+98	LT	CURB CUT	
F03	412+33	RT	CURB CUT	
F03	413+39	RT	PUBLIC	SPENARD
F03	413+39	LT	PUBLIC	SPENARD
F03	415+68	RT	CURB CUR	
F03	416+41	RT	CURB CUT	
F03	418+07	LT	PUBLIC	36TH AVE.
F03	418+07	RT	PUBLIC	36T[illegible] AVE.
F03	419+88	RT	PUBLIC	35TH [illegible]VE.
F04	420+82	RT	CURB CUT	
F04	423+03	RT	PU[illegible]	34TH A[illegible].
F04	424+30	RT	[illegible]URB CUT	
F04	426+32	LT	PUBLIC	33RD AV[illegible]
F04	426+32	[illegible]T	[illegible]UBLIC	[illegible]RD AVE.
F04	429+70	[illegible]	[illegible]UBLIC	32ND AVE.
F05	430+78	R[illegible]	C[illegible]B CU[illegible]	
F05	431+13	LT	P[illegible]LIC	32ND AVE.
F05	432+93	RT	PUBLIC	31ST AVE.
F05	434+72	RT		
F05	438+51	LT	PUBLIC	BENSON BLVD.
F05	438+51	RT	PUBLIC	BENSON BLVD.
F06	444+51	RT	PUBLIC	NORTHERN LIGHTS BLVD.
F06	444+52	LT	PUBLIC	NORTHERN LIGHTS BLVD.
F06	448+16	RT	PUBLIC	27TH AVE.
F07	452+33	LT		ROMIG MIDDLE SCHOOL
F07	452+35	RT	PUBLIC	26TH AVE.
F07	455+97	RT	PUBLIC	25TH AVE.
F12	496+19	LT	PUBLIC	15TH AVE.
F18	"SP" 618+80	RT		
PAY ITEM TOTAL(EA):		43		

610.0001.0000 – DITCH LINING

SHEET	STATION	OFFSET	QUANTITY(CY)	REMARKS
E20	469+98	40 RT	1.6	
TOTAL(CY):			1.6	
PAY ITEM TOTAL(CY):			2.0	

611.0001.000[illegible] – RIPRAP, CLASS I

SHEET	S[illegible]ON	[illegible]FSET	QUANTITY(CY)	REMARKS
[illegible]22	470+[illegible]	[illegible] RT	3.1	
E[illegible]	[illegible]5	[illegible] RT	2.9	
TOTA[illegible]CY):			6.0	
PAY [illegible]TAL[illegible]):			6.0	

615.0005.0000 – DELINEATOR, FLEXIBLE

SHEET	STATION	OFFSET	QUANTITY(EA)	REMARKS
F03	412+92	7 LT	1	
F03	413+32	61 LT	1	
F03	413+48	60 RT	1	
F03	413+88	5 RT	1	
F06	444+88	12 RT	1	
F07	451+82	9 LT	1	
F07	452+91	9 RT	1	
PAY ITEM TOTAL(EA):			7	

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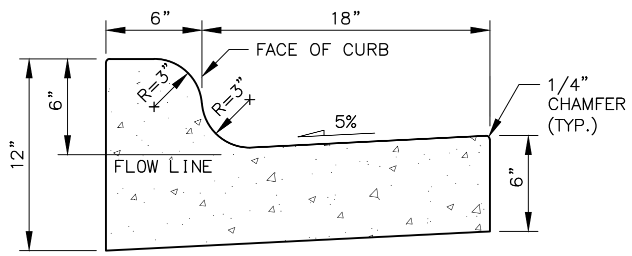
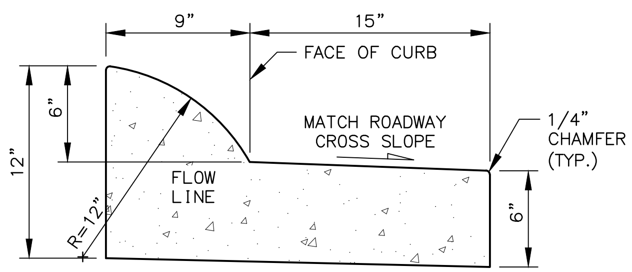
NO.	DATE	REVISION

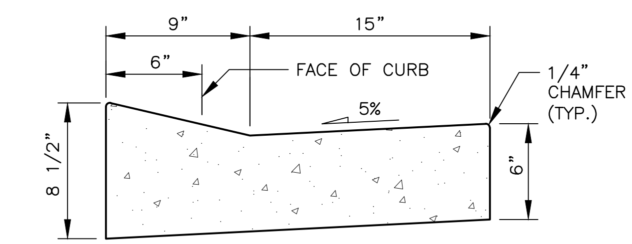
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E01	E23



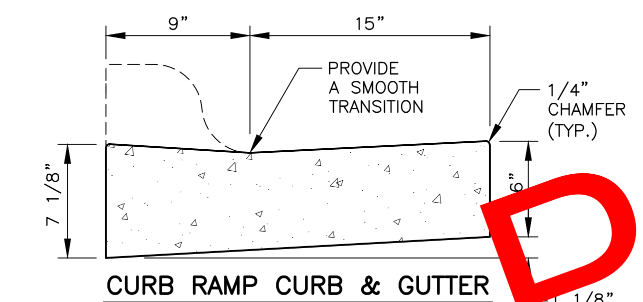
6" MOUNTABLE CURB & GUTTER



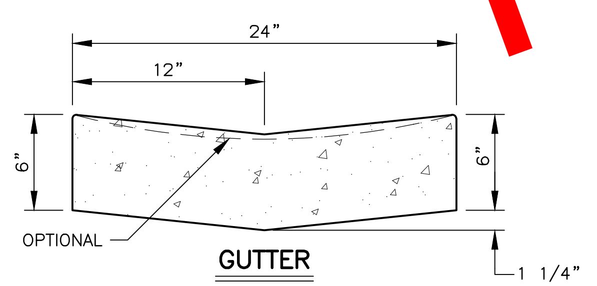
EXPRESSWAY CURB & GUTTER (MEDIAN)



DEPRESSED CURB & GUTTER (CURB CUT)



CURB RAMP CURB & GUTTER

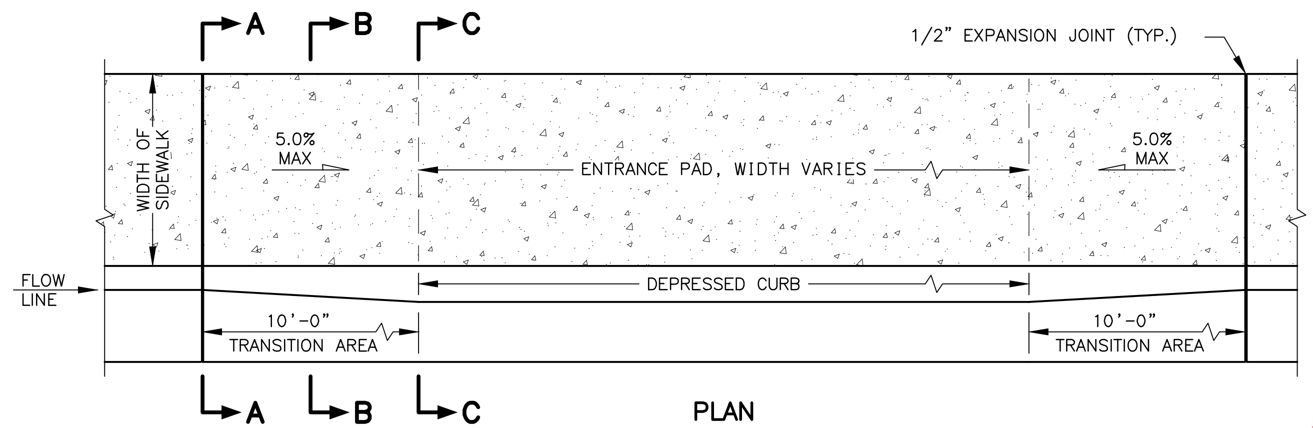


GUTTER

CURBS

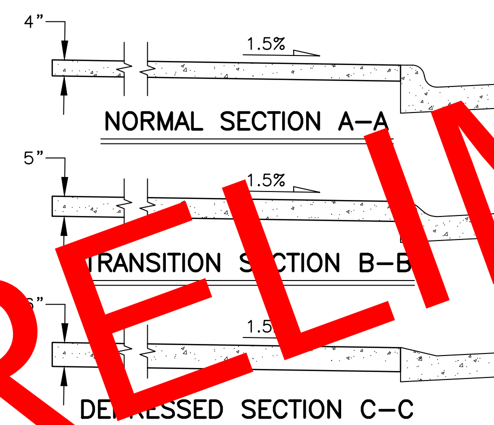
CURB NOTES:

1. MOUNTABLE, DEPRESSED, ROLLED, AND EXPRESSWAY GUTTER PANS SHALL MATCH THE ROADWAY CROSS SLOPE IN THE HIGH SIDE OF SUPER ELEVATED AREAS.
2. USE THE CURB RAMP CURB & GUTTER FOR ALL CURB RAMPS.



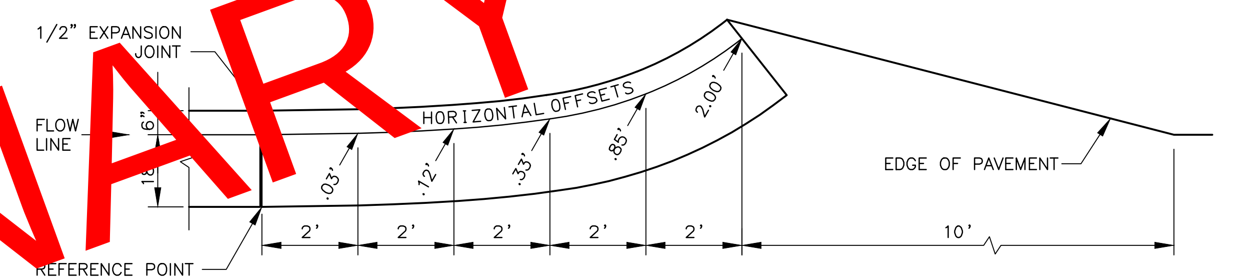
PLAN

VEHICULAR CURB CUT



CURB CUT NOTES:

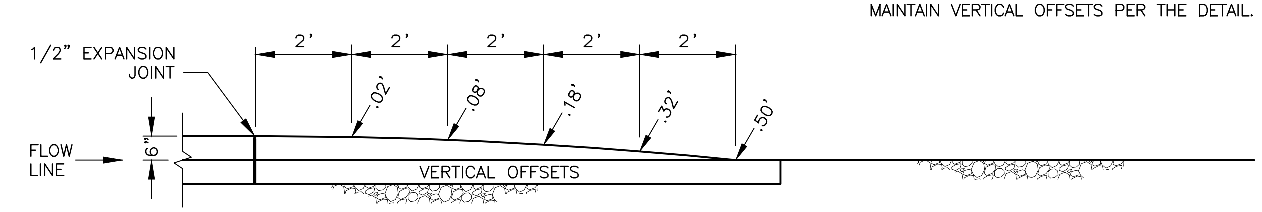
1. TRANSITION WIDTH IS SHOWN FOR 6 INCH HIGH CURB & GUTTER.
2. WHERE THE SIDEWALK SLOPE MAKES IT NECESSARY TO LENGTHEN A RAMP RUN TO AVOID EXCEEDING THE ALLOWABLE RAMP SLOPE, DO NOT EXCEED A RAMP LENGTH OF 15 FEET. THE SLOPE RESULTING FROM THAT RUN LENGTH IS ACCEPTABLE, EVEN IF IT EXCEEDS THE MAXIMUM SLOPE SHOWN.
3. CONSTRUCT RAMP RUNS AND LANDINGS OF CONCRETE WHEN CONCRETE SIDEWALK IS PRESENT.
4. PROVIDE A BROOMED FINISH ON CONCRETE RAMP RUNS, PERPENDICULAR TO THE RAMP SLOPE.
5. HOLD SIDEWALK CROSS SLOPE THROUGH CURB CUT. WARP DRIVEWAY TO MATCH SIDEWALK.
6. MAINTAIN 4" THICK AGGREGATE BASE COURSE, GRADING D-1 THROUGH THE CURB CUT.



PLAN

TERMINATION NOTES:

1. WHERE CURB TERMINATIONS ARE SHOWN ON THE PLANS WITHOUT HORIZONTAL OFFSETS, MAINTAIN VERTICAL OFFSETS PER THE DETAIL.



PROFILE

CURB & GUTTER TERMINATION TRANSITIONS

PRELIMINARY

STATE OF ALASKA
RYAN R. HAMMEL
107681
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

CURB DETAILS

DESIGNED BY ZDK
CHECKED BY RRH
DRAFTED BY ZDK
SCALE VARIES
TIME 1:28 PM
DATE 5/12/2022
DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E01.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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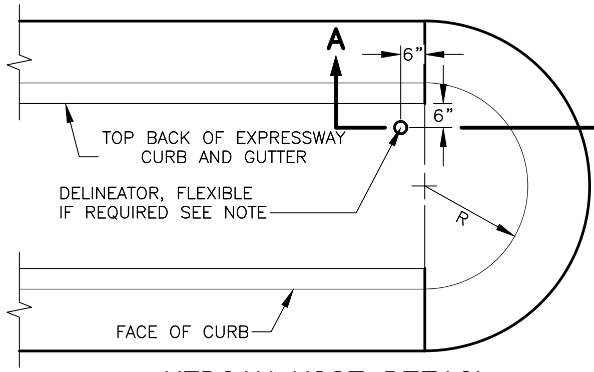
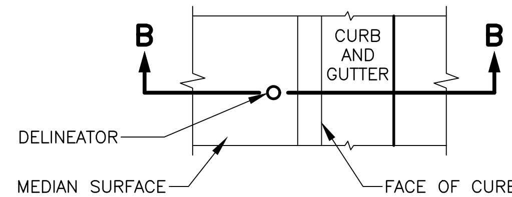
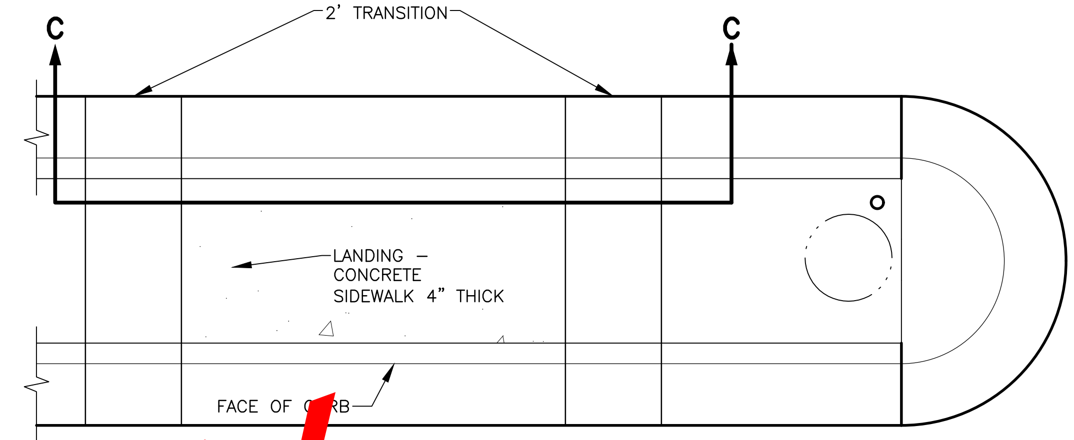


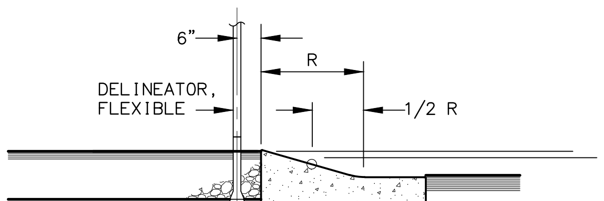
MEDIAN NOSE DETAIL



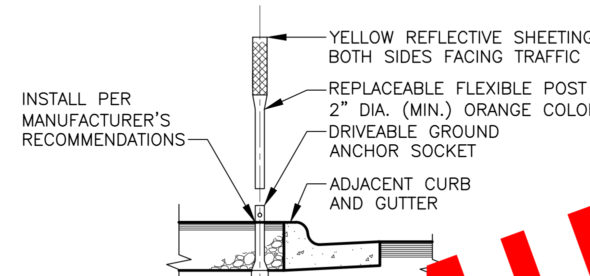
FLEXIBLE DELINEATOR



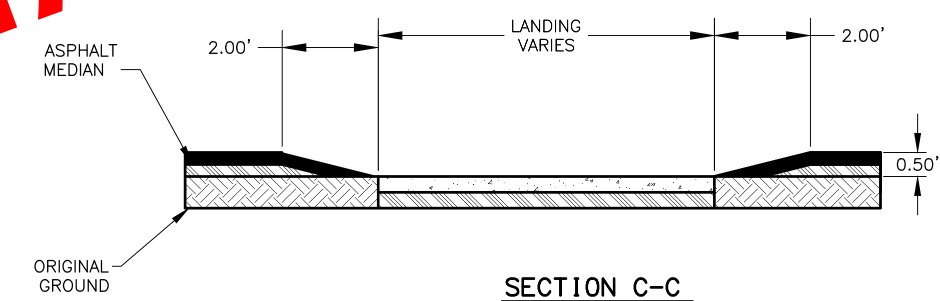
MEDIAN CUT-THROUGH – SPENARD ROAD



SECTION A-A



SECTION B-B



SECTION C-C

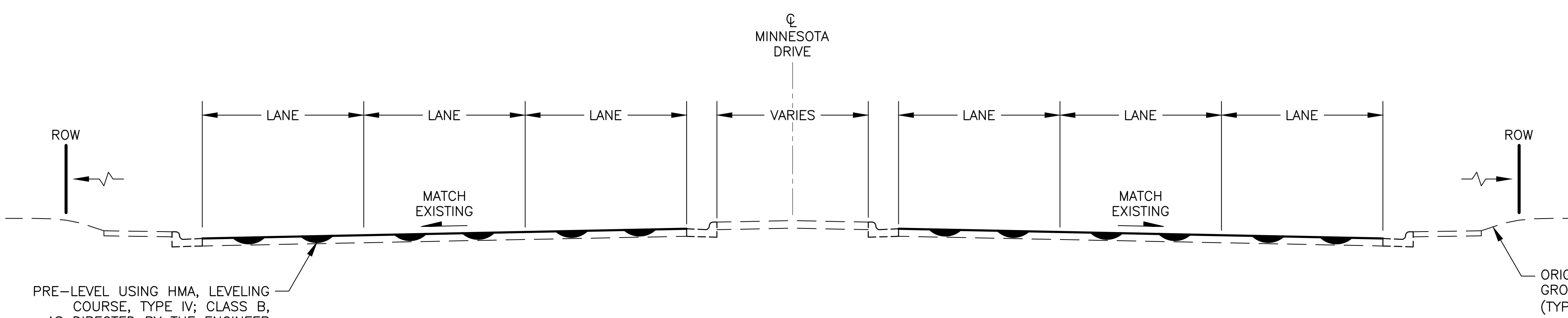
DELINEATOR NOTE:

1. CENTER POINT OF THE DELINEATOR SHALL BE 6 INCHES FROM THE BACK OF CURB.

MEDIAN NOTES:

1. MEDIAN NOSE SHALL BE PAINTED WITH [illegible]LLOW REFLECTORIZED PAINT. SHAPING AND PA[illegible] WILL BE SUBSIDIARY.
2. INSTALL DELINEATOR 6 INCHES FROM TOP B[illegible]K OF CURB FOR ONCOMING TRAFFIC SIDE.

PRELIMINARY



MINNESOTA DRIVE LEVELING COURSE

BOP TO STA. 454+00

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

MEDIAN NOSE AND
FLEXIBLE DELINEATOR
DETAILS

DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY SLH
SCALE 1" = 1'
TIME 1:28 PM
DATE 5/12/2022
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E01.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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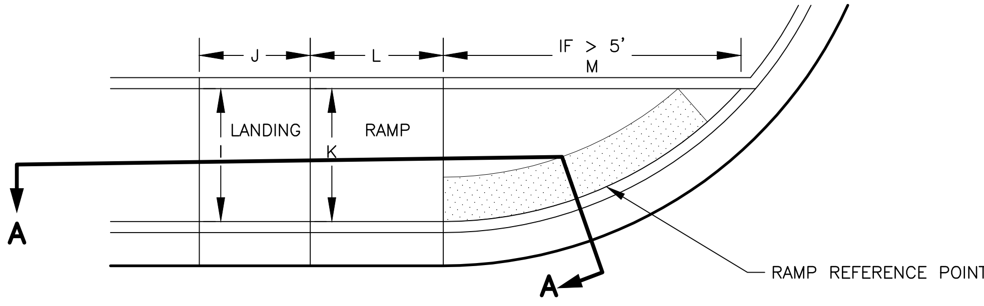
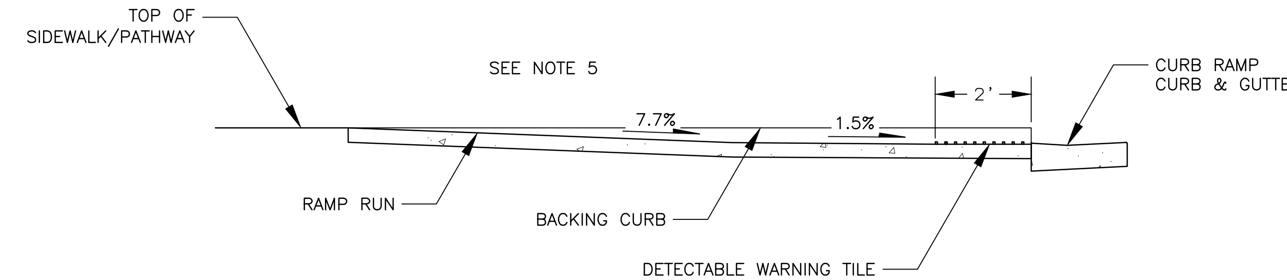


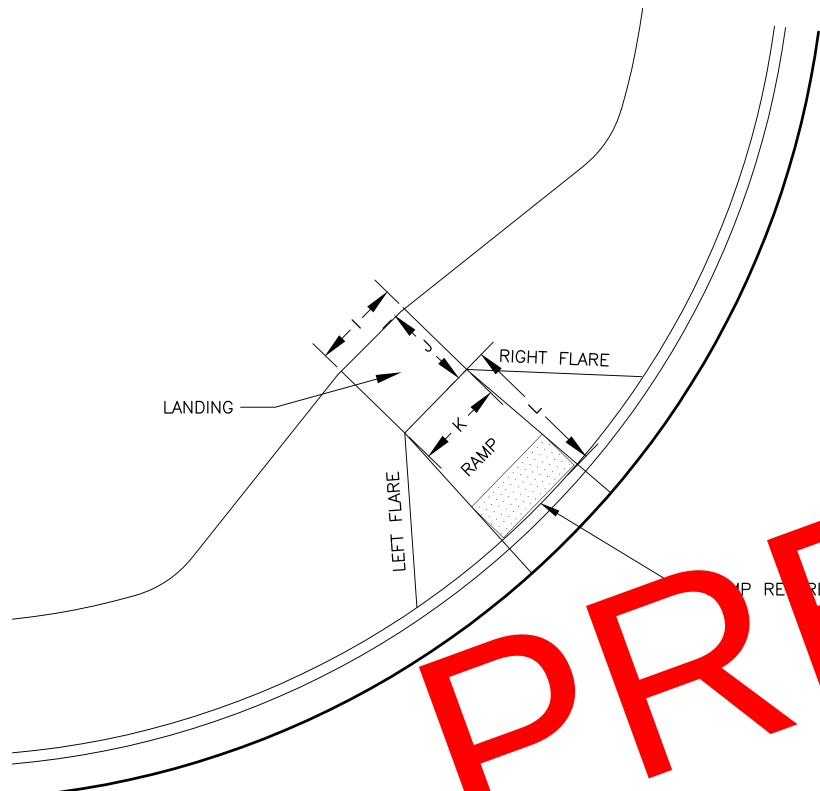
UNIDIRECTIONAL CURB RAMP



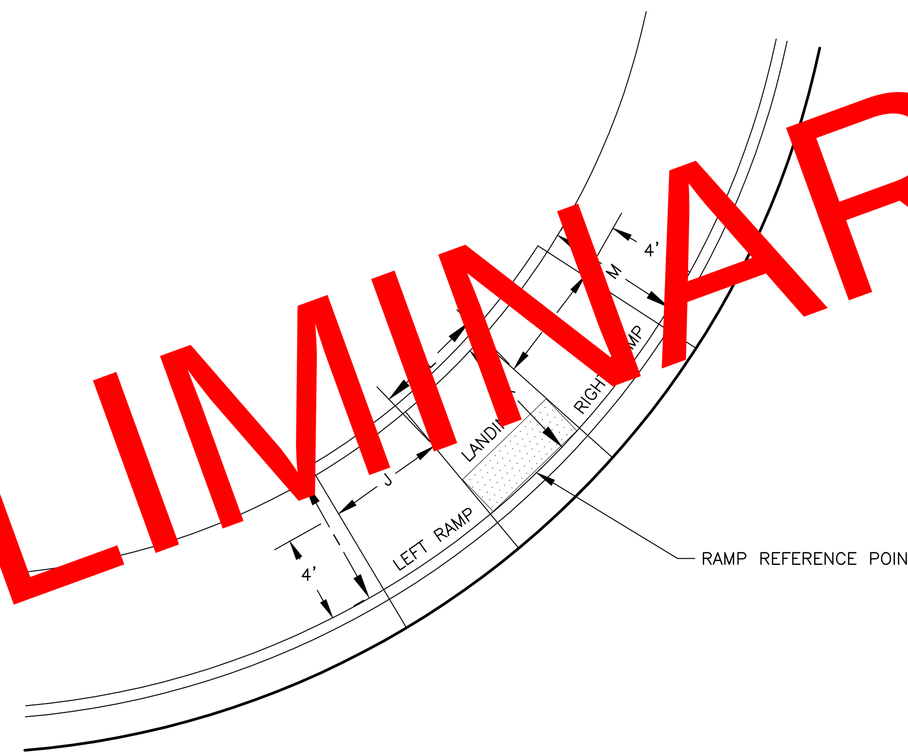
SECTION A–A

CURB RAMP NOTES:

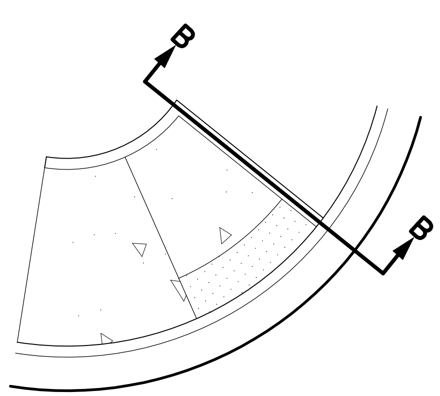
1. INSTALL CURB AND GUTTER TERMINI PER CURB AND GUTTER TERMINATION TRANSITION DETAIL.
2. TRANSITION PATHWAY TO MEET CURB AND GUTTER TERMINATION TRANSITION
3. CURB RAMP DIMENSIONS ARE INCLUDED IN THE D-TABLES AND CORRESPOND TO THE CENTRAL REGION CURB RAMP INSPECTION FORM NOTATION. DIMENSIONS INCLUDED IN THE TABLE ARE FOR REFERENCE PURPOSES. ADJUST THEM AS NECESSARY IN THE FIELD TO COMPLY WITH MINIMUM SLOPE REQUIREMENTS.
4. SEE PLANS FOR RAMP TYPE AT PARTICULAR LOCATIONS.
5. INSTALL UNIDIRECTIONAL AND MODIFIED CURB RAMPS AS SHOWN IN PLANS.
6. INSTALL PERPENDICULAR CURB RAMP PER STD. PLAN I-22.11. INSTALL PARALLEL CURB RAMPS PER STD.PLAN I-21.12.
7. CONSTRUCT RAMP RUNS AND LANDINGS OF CONCRETE, REGARDLESS OF WHETHER THE SIDEWALK IS ASPHALT OR CONCRETE.
8. RAMP RUN LENGTHS ARE SHOWN FOR 6 INCH CURB HEIGHTS AND NO LONGITUDINAL SIDEWALK SLOPE. FOR OTHER HEIGHTS AND SLOPES INCREASE OR DECREASE RUN AND FLARE LENGTHS TO MAINTAIN THE SLOPES SHOWN.
9. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS.
10. CONSTRUCT RAMP SLOPES 7.7% OR FLATTER, AND SIDEWALK CROSS-SLOPES AT 1.5% (1% MIN. AND 2% MAX.). IF CONDITIONS REQUIRE, THE ENGINEER MAY INCREASE RAMP SLOPES IN ACCORDANCE WITH NOTE 11. CONSTRUCT GRADE BREAKS PERPENDICULAR TO RAMP RUNS.
11. DO NOT CONSTRUCT RAMP SLOPES STEEPER THAN 8.3% OR SIDEWALK CROSS SLOPES STEEPER THAN 2%, EXCEPT AS PROVIDED UNDER NOTE 12. THESE ARE THE STEEPEST SLOPES ALLOWED BY LAW.
12. WHERE SIDEWALK SLOPE MAKES IT NECESSARY TO LENGTHEN A RAMP RUN TO AVOID EXCEEDING THE ALLOWABLE RAMP SLOPE, DO NOT EXCEED A RAMP LENGTH OF 15 FEET UNLESS OTHERWISE INDICATED IN THE PLANS. THE SLOPE RESULTING FROM THAT RUN LENGTH IS ACCEPTABLE, EVEN IF IT EXCEEDS THE MAXIMUM SLOPE SHOWN.
13. PROVIDE A COARSE BROOMED FINISH RUNNING PERPENDICULAR TO THE CURB ON RAMP RUNS AND UPPER LANDINGS AND PARALLEL TO THE CURB ON LOWER LANDINGS.
14. INSTALL 24 INCH DETECTABLE WARNING TILES FOR THE FULL WIDTH OF THE RAMP. PROVIDE TILES WITH TRUNCATED DOMES MEETING SECTION 705.1 OF THE 2006 ADA STANDARDS FOR TRANSPORTATION FACILITIES. ALIGN TRUNCATED DOME PATTERN IN THE PREDOMINANT DIRECTION OF WHEELCHAIR TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN THE DOMES.
15. CONSTRUCT CURB RAMPS AND DETECTABLE WARNING TILES IN ACCORDANCE WITH REQUIREMENTS FOR THE AMERICANS WITH DISABILITIES ACT (ADA).
16. DETECTABLE WARNING TILES MAY BE PLACED PERPENDICULAR ACROSS THE BOTTOM OF THE CURB RAMP, BUT ONLY IF THE BOTTOM OF THE CURB RAMP IS NO MORE THAN 5 FEET FROM THE BACK OF CURB.
17. MAINTAIN A MAXIMUM OF 46 INCHES ABOVE GRADE FOR THE PEDESTRIAN SIGNAL PUSH BUTTONS. ADJUST AS NECESSARY, AT THE DIRECTION OF THE ENGINEER AND IN ACCORDANCE WITH SECTION 660 OF THE SPECIFICATIONS.



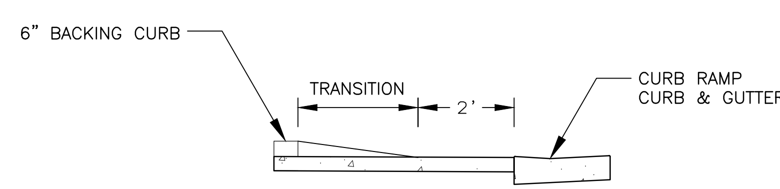
PERPENDICULAR CURB RAMP



PARALLEL CURB RAMP



PARALLEL CURB RAMP – SINGLE RAMP



SECTION B–B

PRELIMINARY

STATE OF ALASKA
49TH
RYAN R. HAMMEL
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REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
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(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

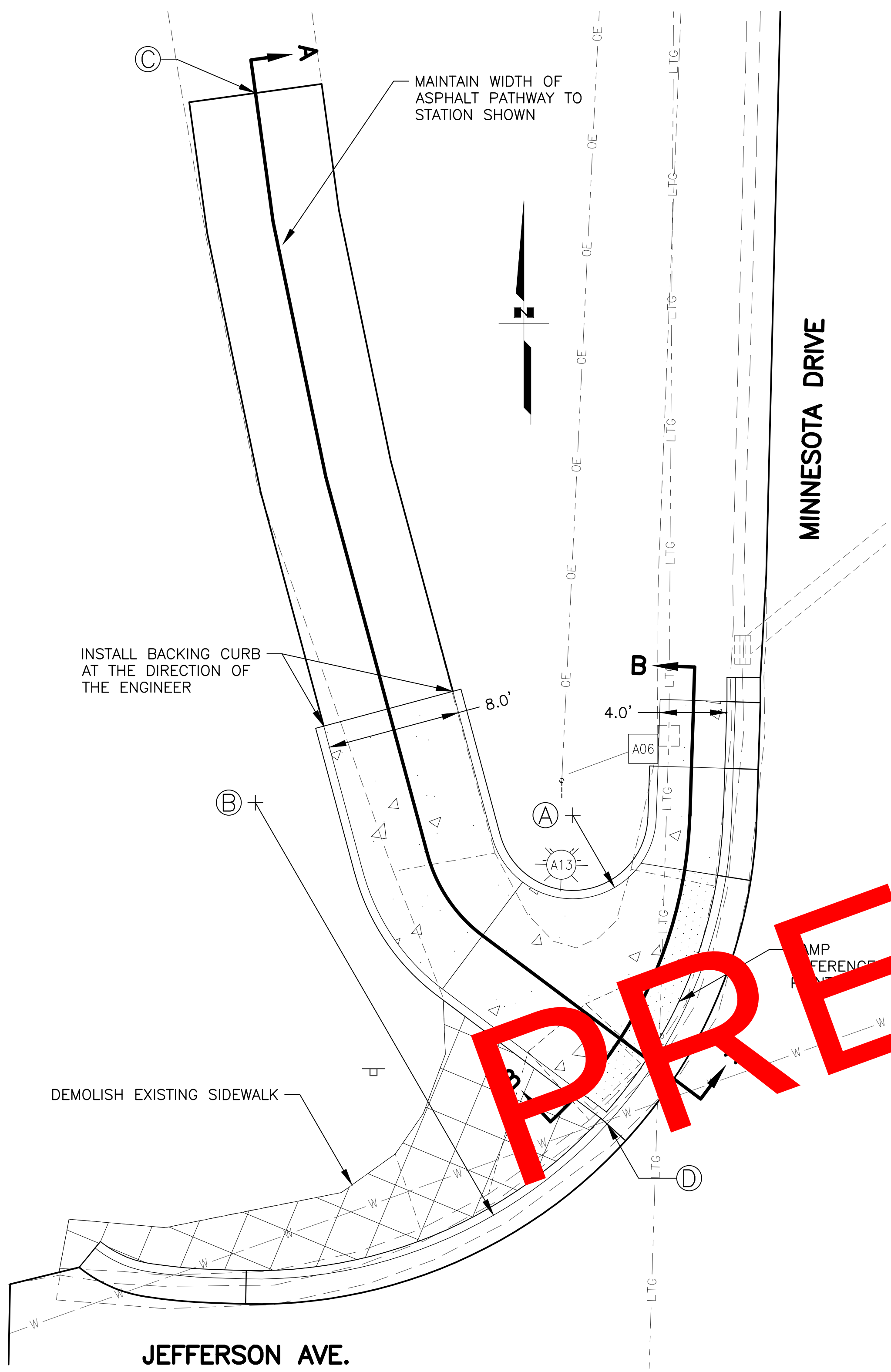
CURB RAMP DETAILS

DESIGNED BY	CHECKED BY	DRAFTED BY	SCALE	DATE	TIME
SLH	RRH	SLH	1" = 1'	5/12/2022	1:28 PM

DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E01.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E04	E23

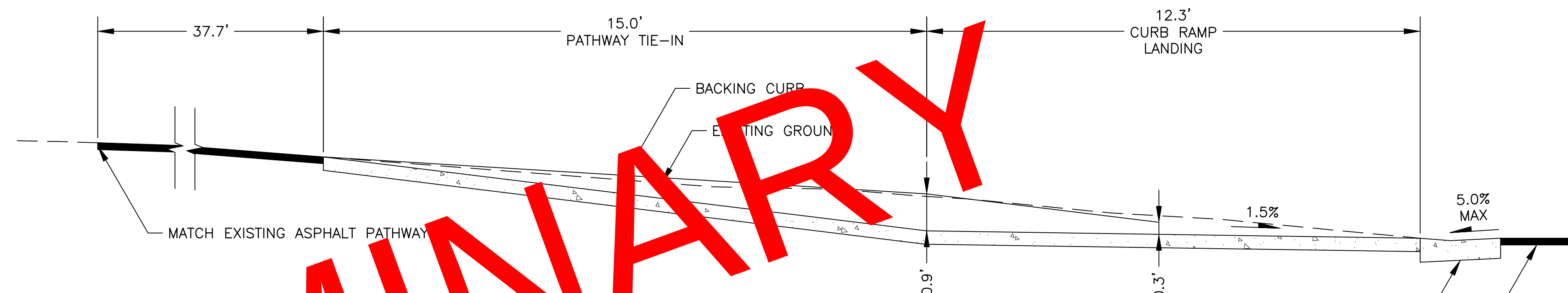


CURB RAMP
STA. 404+24, 51' LT

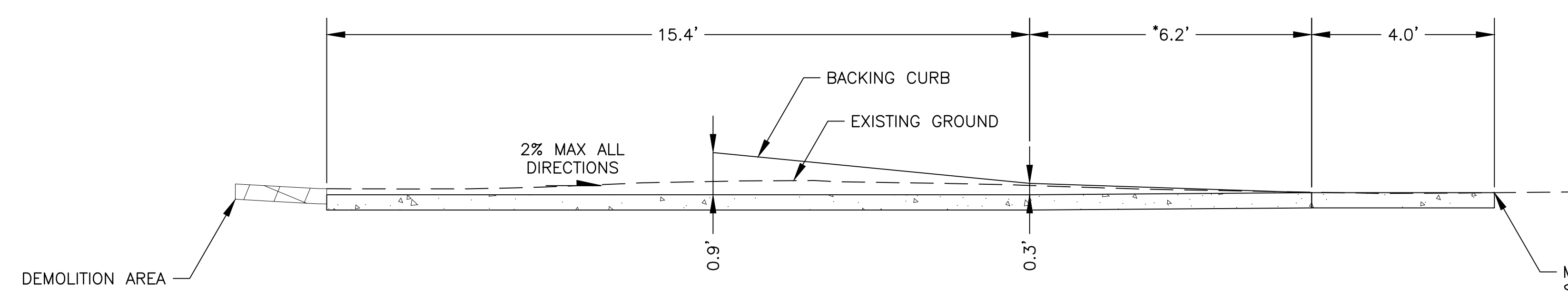
CURB RAMP LAYOUT TABLE			
POINT	STA.	OFFSET	REMARKS
A	404+34.6	57.3' LT	5' RADIUS
B	404+34.7	76.3' LT	28.5' RADIUS
C	404+77.4	77.7' LT	PAVE 37.7' FOLLOWING CENTERLINE OF PATHWAY
D	404+16.1	54.7' LT	

NOTES:

1. BACKING CURB HEIGHTS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE PURPOSES. ADJUST THE HEIGHT AS NECESSARY TO MATCH CONDITIONS IN THE FIELD OR AT THE DIRECTION OF THE ENGINEER.
2. ENSURE PATHWAY TIE-IN FROM BACK OF CURB RAMP IS AT LEAST A MINIMUM OF 15 FT.



SECTION A-A



SECTION B-B

*ADJUST RAMP LENGTHS AS NEEDED BASED ON FIELD CONDITIONS OR AT THE DIRECTION OF THE ENGINEER TO ENSURE RAMP SLOPES ARE 7.7% OR LESS.

PRELIMINARY

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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ANCHORAGE, AK 99502
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SPECIAL CURB RAMP DETAILS

DESIGNED BY ZDK/JKH
CHECKED BY RRH
DRAFTED BY JKH
SCALE 1" = 5'
DATE 5/12/2022
TIME 1:30 PM
DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E04-E13.DWG

NO.	DATE	REVISION

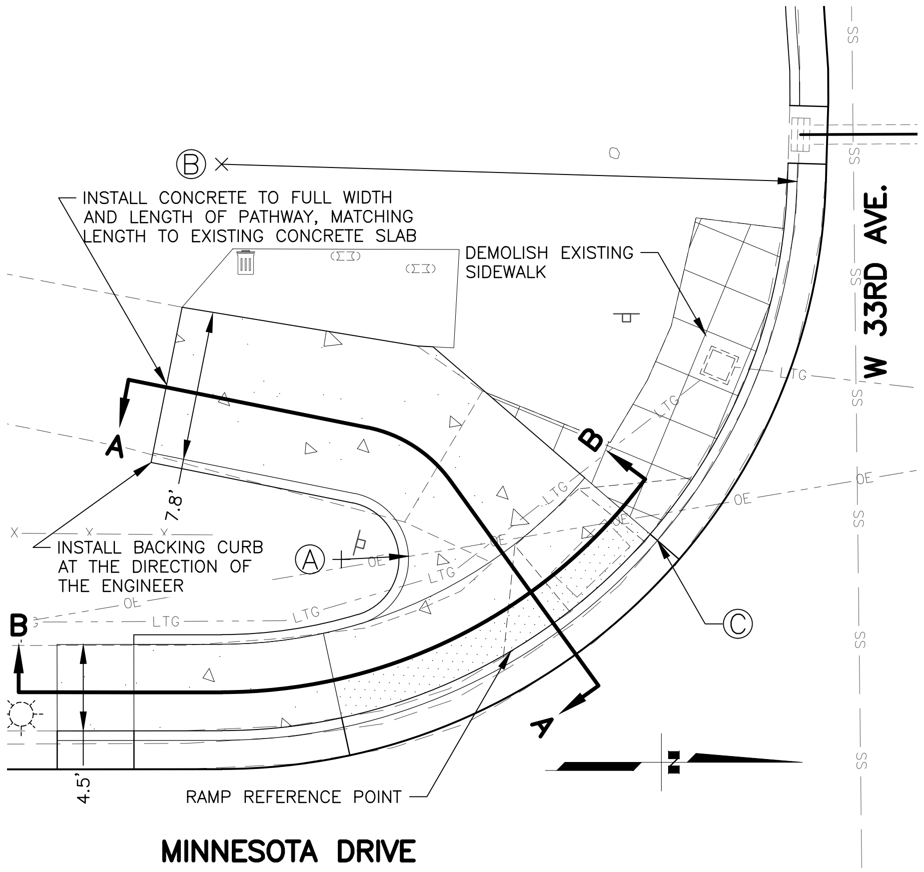
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E05	E23

NOTES:

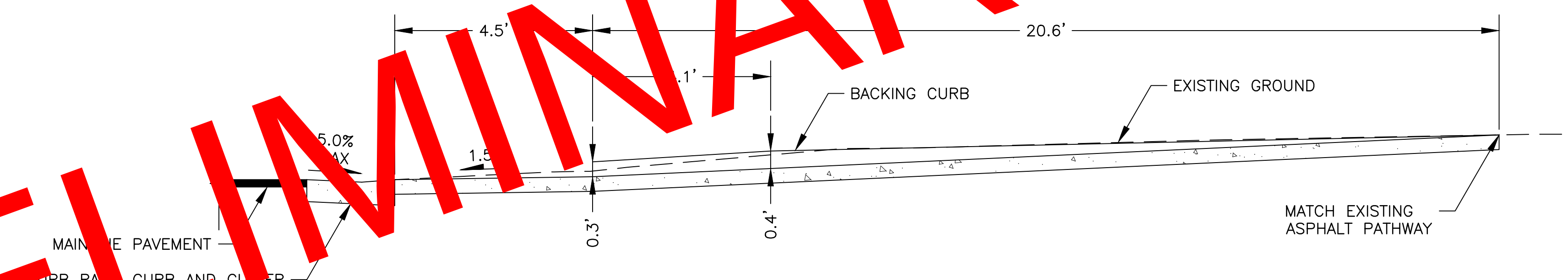
1. BACKING CURB HEIGHTS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE PURPOSES. ADJUST THE HEIGHT AS NECESSARY TO MATCH CONDITIONS IN THE FIELD OR AT THE DIRECTION OF THE ENGINEER.

CURB RAMP LAYOUT TABLE

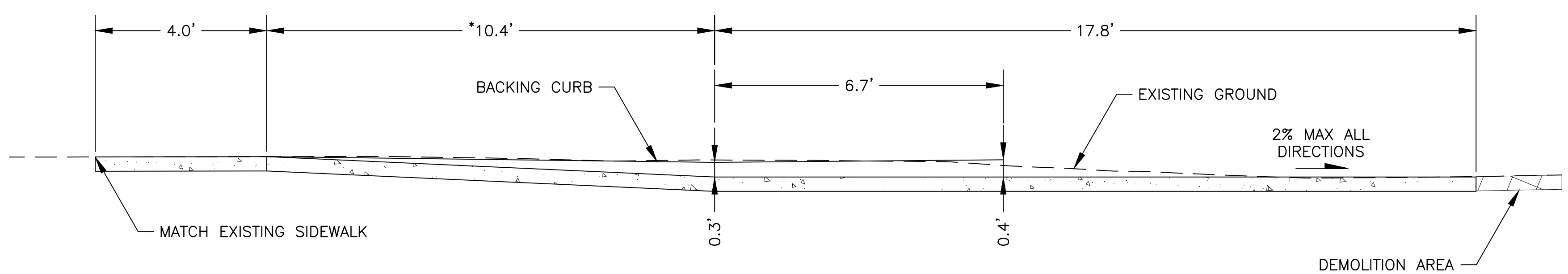
POINT	STA.	OFFSET	REMARKS
A	425+84.6	57.3' LT	3.5' RADIUS
B	425+78.4	77.9' LT	30' RADIUS
C	426+01.0	58.2' LT	



CURB RAMP
STA. 425+93, 52' LT



SECTION A–A



SECTION B–B

*ADJUST RAMP LENGTHS AS NEEDED BASED ON FIELD CONDITIONS OR AT THE DIRECTION OF THE ENGINEER TO ENSURE RAMP SLOPES ARE 7.7% OR LESS.

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
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(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SPECIAL CURB RAMP DETAILS

DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E04-E13.DWG

DATE	TIME	SCALE	DESIGNED BY	CHECKED BY	DRAFTED BY
5/12/2022	1:30 PM	1" = 5'	ZDK/JKH	RRH	JKH

NO.	DATE	REVISION

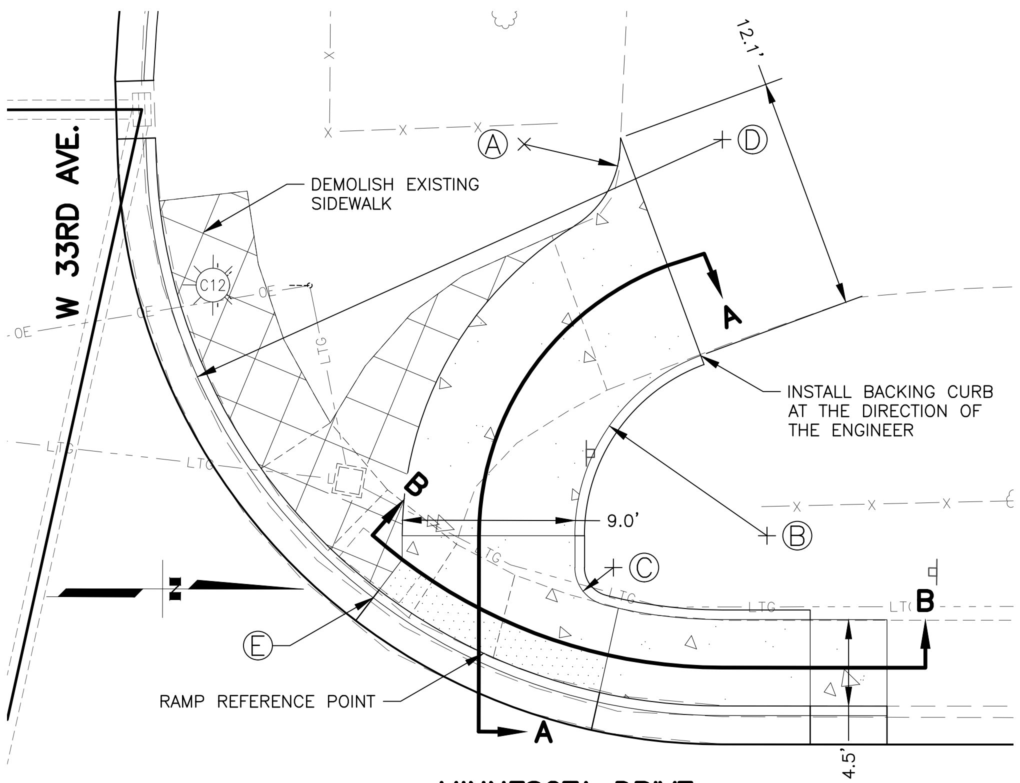
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E06	E23

NOTES:

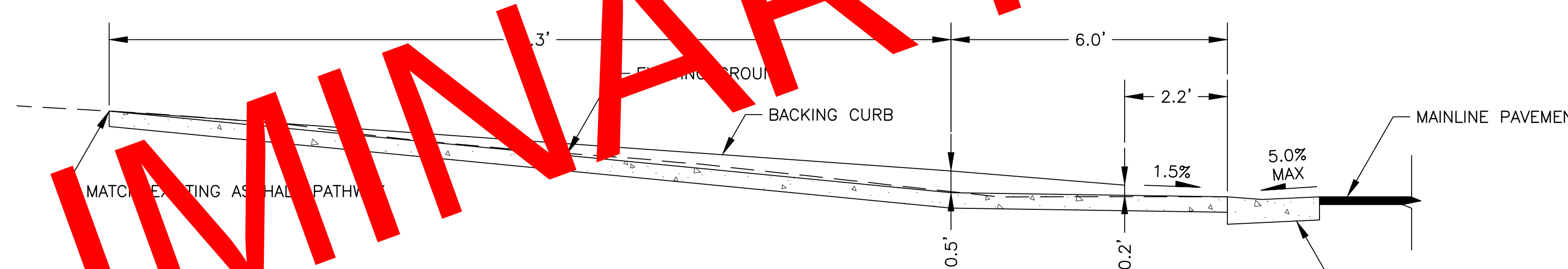
1. BACKING CURB HEIGHTS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE PURPOSES. ADJUST THE HEIGHT AS NECESSARY TO MATCH CONDITIONS IN THE FIELD OR AT THE DIRECTION OF THE ENGINEER.

CURB RAMP LAYOUT TABLE

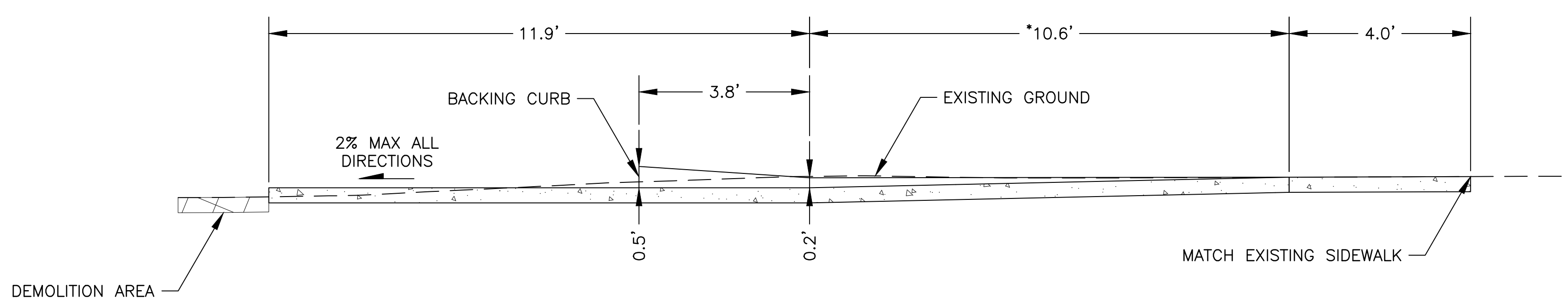
POINT	STA.	OFFSET	REMARKS
A	426+76.1	77.6' LT	5' RADIUS
B	426+88.7	57.2' LT	10' RADIUS
C	426+80.7	55.5' LT	2' RADIUS
D	426+86.4	77.8' LT	30' RADIUS
E	426+68.2	54.0' LT	



CURB RAMP
STA. 426+74, 51' LT



SECTION A–A



SECTION B–B

*ADJUST RAMP LENGTHS AS NEEDED BASED ON FIELD CONDITIONS OR AT THE DIRECTION OF THE ENGINEER TO ENSURE RAMP SLOPES ARE 7.7% OR LESS.

PRELIMINARY

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

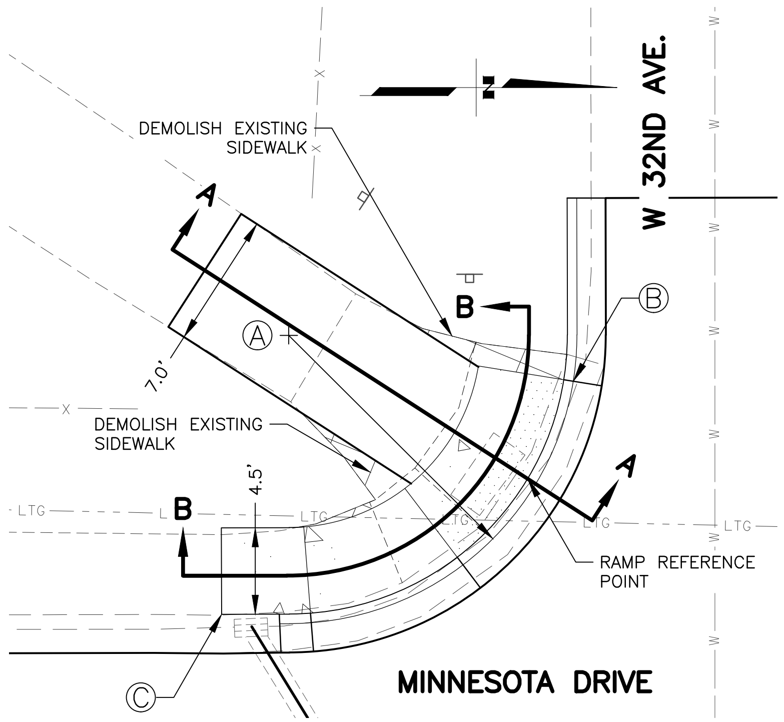
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SPECIAL CURB RAMP DETAILS

DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E04-E13.DWG
DATE 5/12/2022 TIME 1:30 PM SCALE 1" = 5'
DESIGNED BY ZDK/JKH
CHECKED BY RRH
DRAFTED BY JKH

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E07	E23

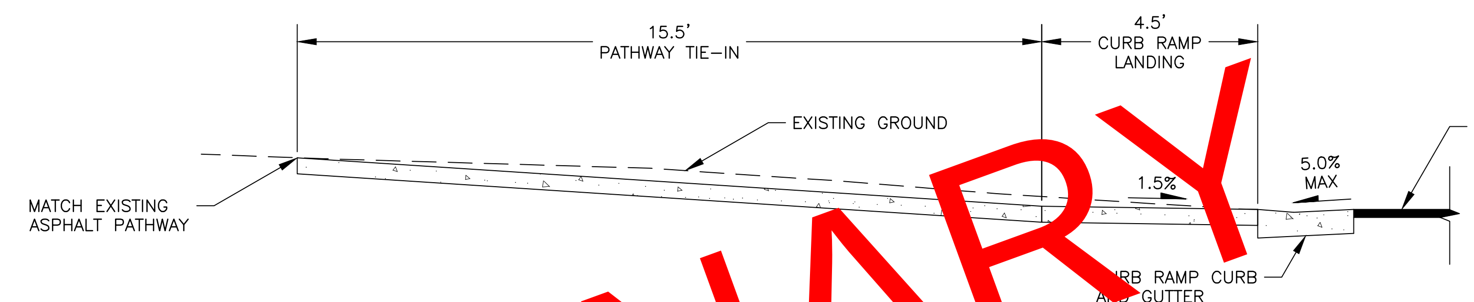


CURB RAMP
STA. 430+96, 55' LT

CURB RAMP LAYOUT TABLE			
POINT	STA.	OFFSET	REMARKS
Ⓐ	430+84.4	62.9' LT	15' RADIUS
Ⓑ	430+98.9	60.5' LT	
Ⓒ	430+80.5	48.4' LT	

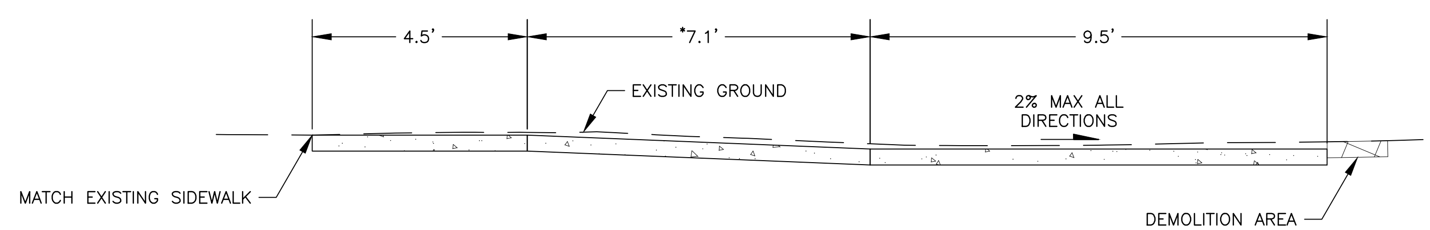
NOTES:

1. ENSURE PATHWAY TIE-IN FROM BACK OF CURB RAMP IS AT LEAST A MINIMUM OF 15 FT.



SECTION A-A

PRELIMINARY



SECTION B-B

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STATE OF ALASKA
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MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SPECIAL CURB
RAMP DETAILS

DESIGNED BY ZDK/JKH
CHECKED BY RRH
DRAFTED BY JKH
SCALE 1" = 5'
TIME 1:31 PM
DATE 5/12/2022
DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E04-E13.DWG

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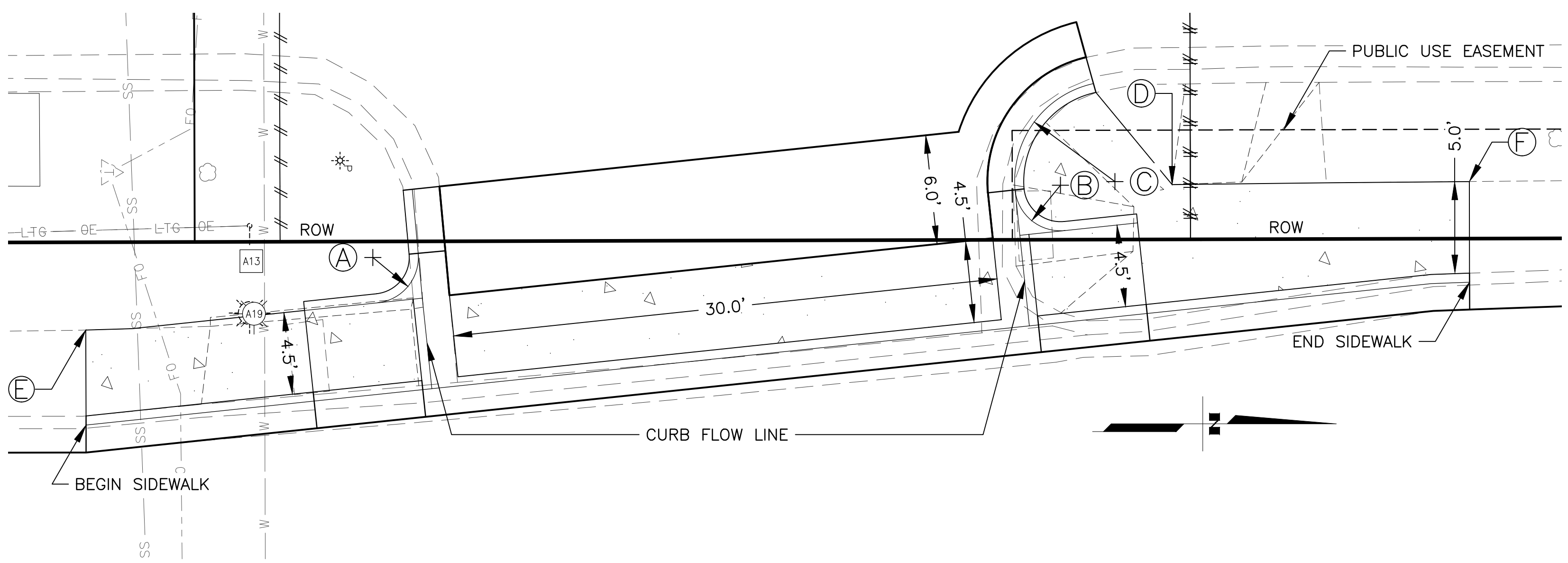
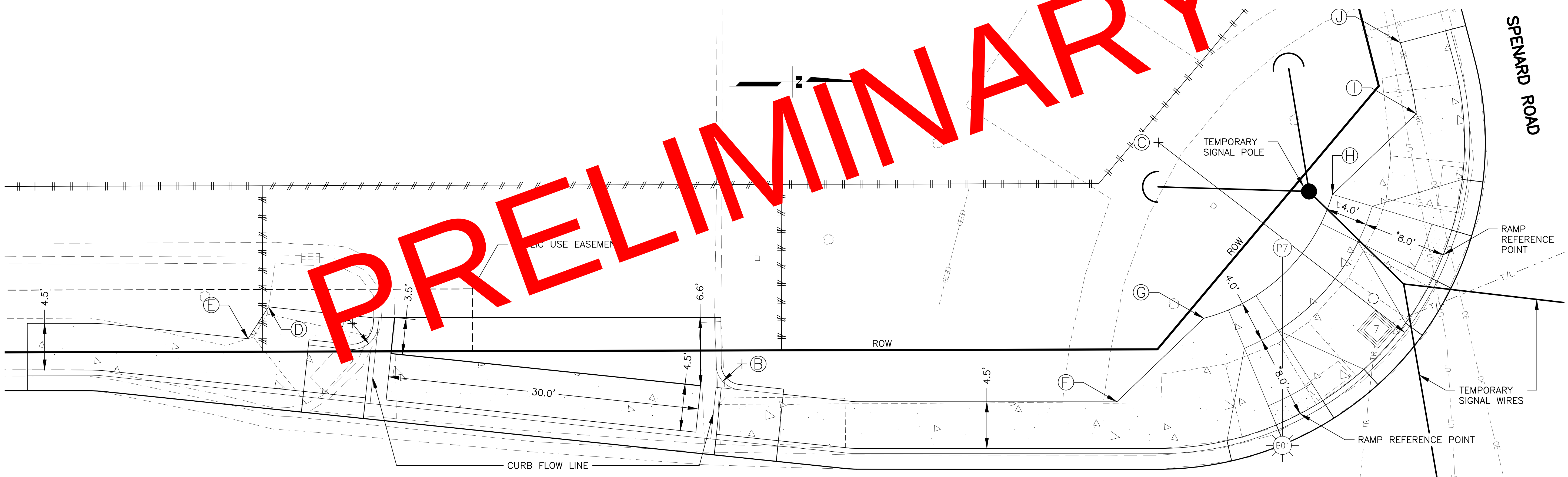
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E08	E23



SIDEWALK LAYOUT TABLE			
POINT	STA.	OFFSET	REMARKS
(A)	410+14.8	57.3' LT	2.5' RADIUS
(B)	410+52.5	61.2' LT	2.5' RADIUS
(C)	410+55.5	61.4' LT	5.5' RADIUS
(D)	410+58.7	61.2' LT	
(E)	409+99.0	53.3' LT	
(F)	410+75.0	61.3' LT	

SIDEWALK
STA. 409+99, 48' LT TO STA. 410+75, 56' LT

PRELIMINARY



SIDEWALK AND CURB RAMP LAYOUT TABLE			
POINT	STA.	OFFSET	REMARKS
(A)	411+78.3	60.9' LT	2.5' RADIUS
(B)	412+15.9	56.9' LT	2.5' RADIUS
(C)	412+56.1	78.2' LT	30' RADIUS
(D)	411+70.3	62.5' LT	
(E)	411+68.3	59.5' LT	
(F)	412+52.0	53.2' LT	
(G)	412+60.4	61.2' LT	
(H)	412+72.8	73.1' LT	
(I)	412+80.9	80.9' LT	
(J)	412+79.4	87.7' LT	

SPECIAL SIDEWALK AND CURB RAMP
STA. 412+70, 52' LT AND STA. 412+83, 67' LT

*ADJUST RAMP LENGTHS AS NEEDED BASED ON FIELD CONDITIONS OR AT THE DIRECTION OF THE ENGINEER TO ENSURE RAMP SLOPES ARE 7.7% OR LESS.

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DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

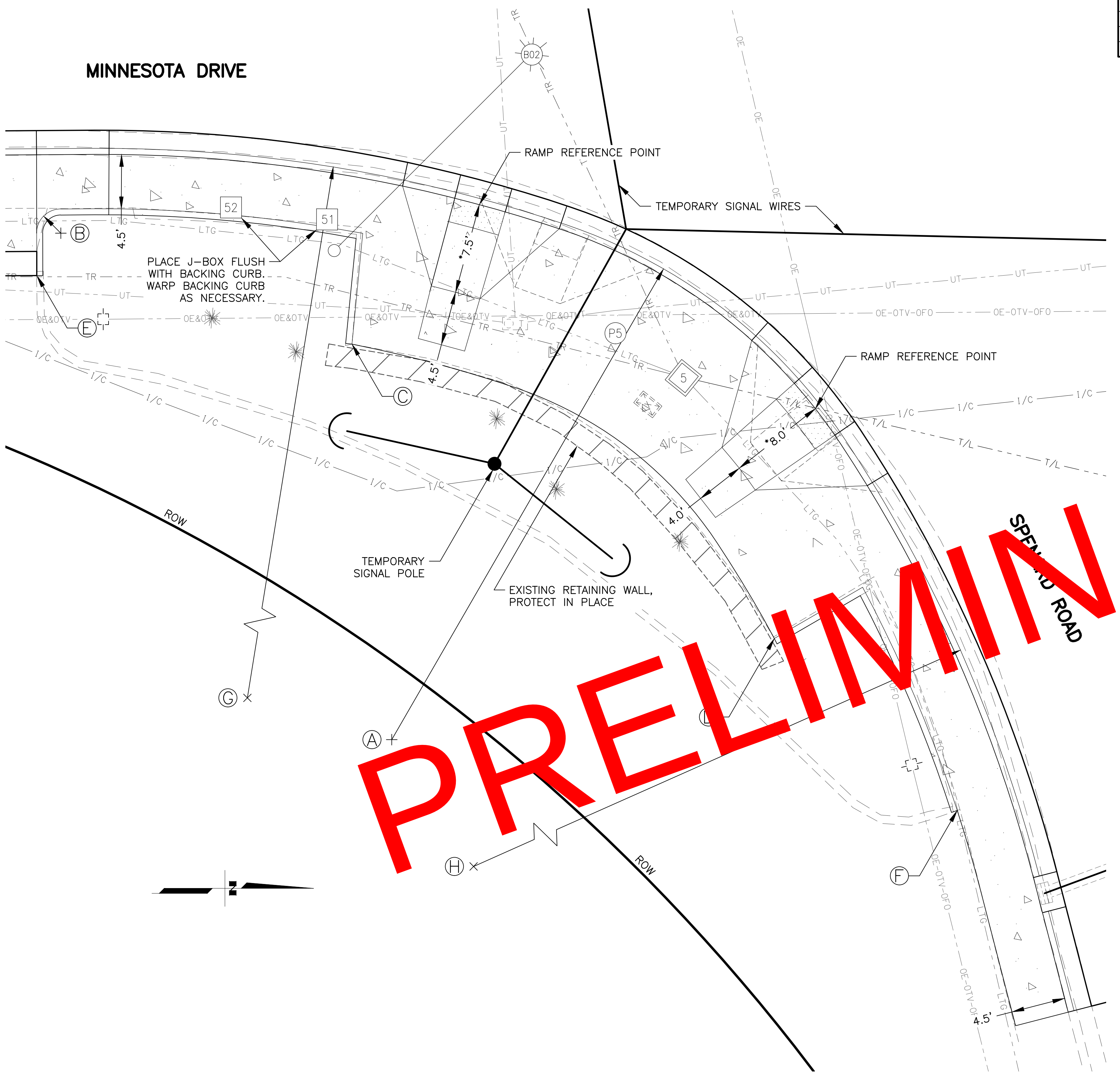
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SPECIAL SIDEWALK AND CURB RAMP DETAILS

DESIGNED BY ZDK/JKH
CHECKED BY RRH
DRAFTED BY JKH
SCALE 1" = 5'
TIME 1:31 PM
DATE 5/12/2022
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E04-E13.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E09	E23



NOTES:

1. MAINTAIN MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS FOR RAMP LANDINGS. TRANSITION TO MATCH THE BOTTOM OF THE EXISTING RETAINING WALL BEHIND RAMP LANDINGS.

CURB RAMP LAYOUT TABLE

POINT	STA.	OFFSET	REMARKS
A	412+80.3	96.8' RT	45' RADIUS
B	412+53.0	54.8' RT	2' RADIUS
C	412+77.1	64.0' RT	
D	413+11.9	88.3' RT	
E	412+51.0	58.3' RT	
F	413.27.1	102.7' RT	
G	412+56.2	167.8' RT	120' RADIUS, CENTER POINT STATIONING IN TABLE NOT VISIBLE ON SHEET
H	412+17.6	137.9' RT	120' RADIUS, CENTER POINT STATIONING IN TABLE NOT VISIBLE ON SHEET

CURB RAMPS
STA. 412+88, 53' RT AND STA. 413+15, 69' RT

*ADJUST RAMP LENGTHS AS NEEDED BASED ON FIELD CONDITIONS OR AT THE DIRECTION OF THE ENGINEER TO ENSURE RAMP SLOPES ARE 7.7% OR LESS.

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

SPECIAL CURB RAMP DETAILS

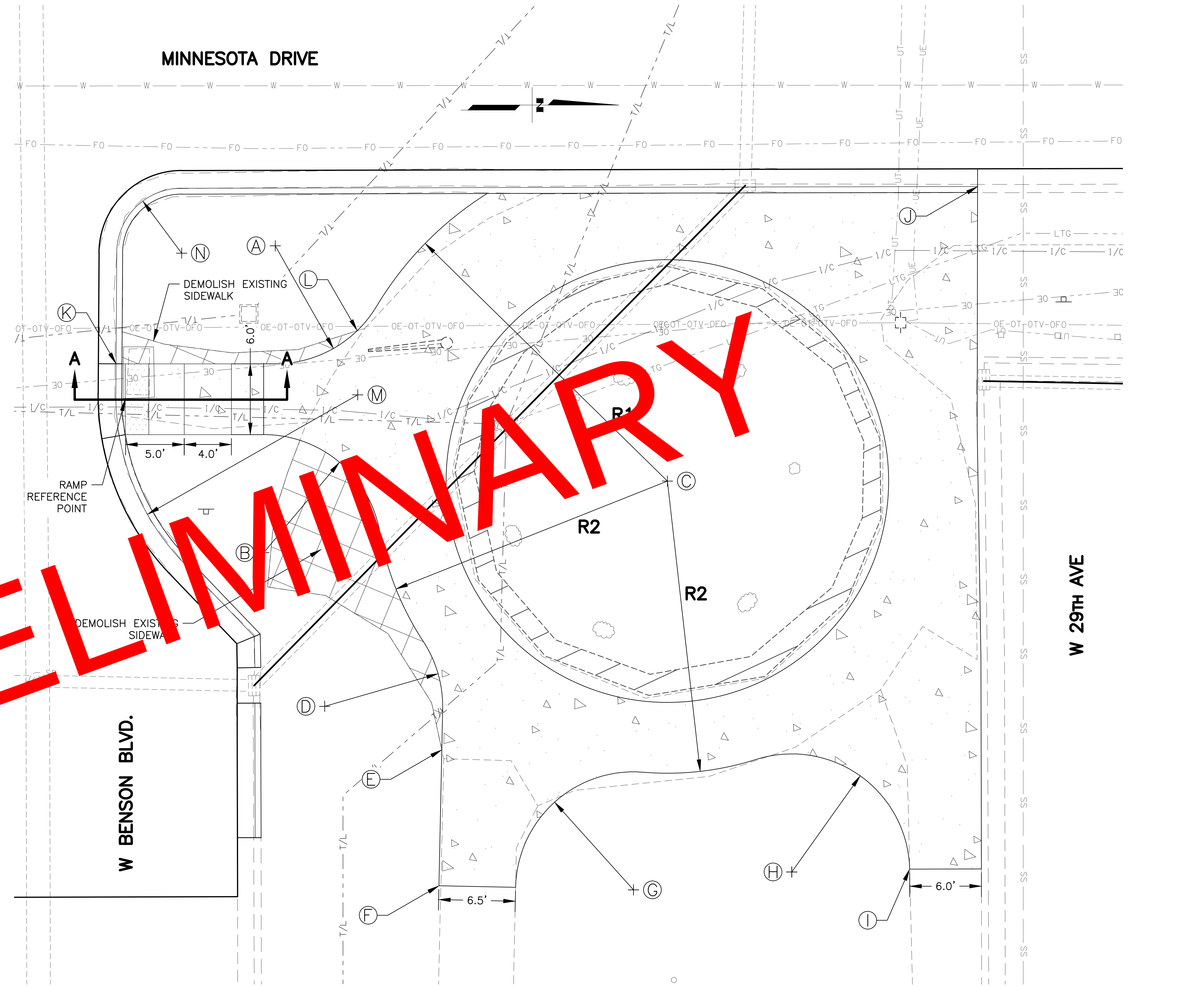
DESIGNED BY ZDK/JKH
CHECKED BY RRH
DRAFTED BY JKH
SCALE 1" = 5'
TIME 1:31 PM
DATE 5/12/2022
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E04-E13.DWG

NO.	DATE	REVISION

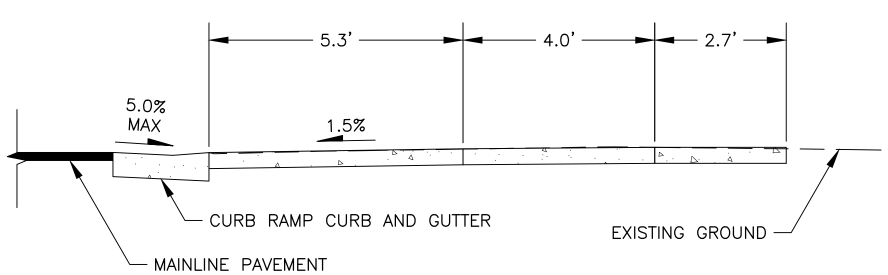
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E10	E23

SIDEWALK AND CURB RAMP LAYOUT TABLE

POINT	STA.	OFFSET	REMARKS
A	438+78.4	54.9' RT	10' RADIUS
B	438+77.4	80.9' RT	10' RADIUS
C	439+11.6	74.9' RT	R1: 28.75' RADIUS R2: 24.75' RADIUS
D	438+82.5	93.9' RT	
E	438+92.5	97.6' RT	
F	438+92.2	109.1' RT	
G	439+08.7	109.5' RT	10' RADIUS
H	439+22.1	108.0' RT	10' RADIUS
I	439+32.1	107.8' RT	
J	439+38.0	50.5' RT	
K	438+64.9	64.8' RT	
L	438+85.4	62.1' RT	
M	438+85.4	67.5' RT	20.5' RADIUS
N	438+70.5	55.5' RT	5.5' RADIUS



SIDEWALK AND CURB RAMP
STA. 438+66, 68' RT



SECTION A–A

STATE OF ALASKA
49TH
RYAN R. HAMMEL
107681
REGISTERED PROFESSIONAL ENGINEER

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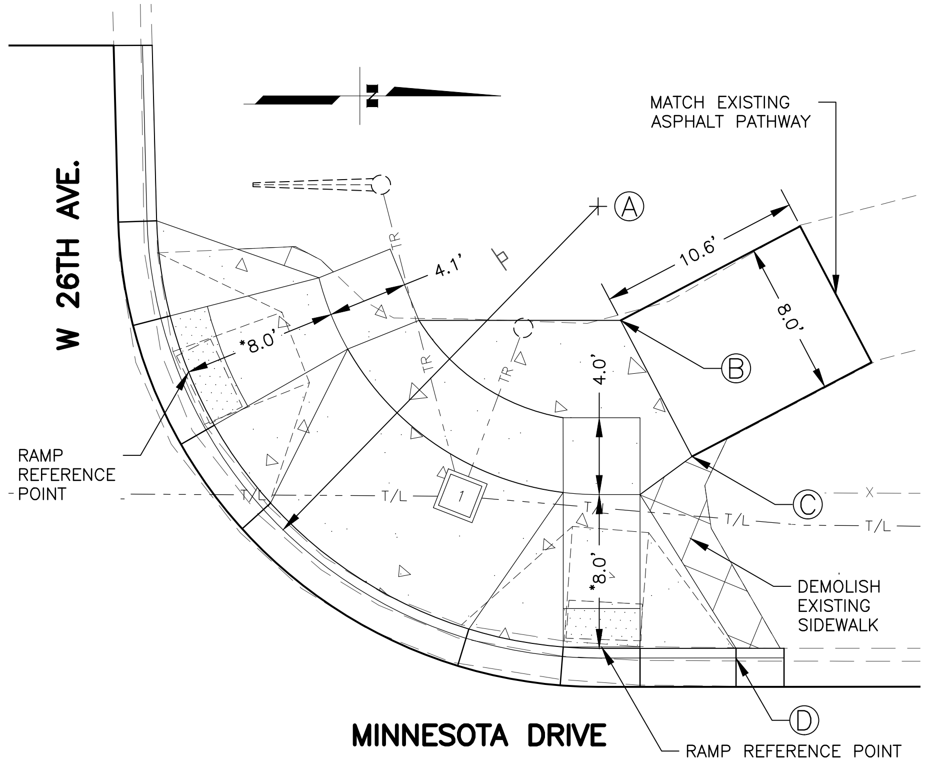
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SPECIAL SIDEWALK AND CURB RAMP DETAILS

DESIGNED BY ZDK/JKH
CHECKED BY RRH
DRAFTED BY JKH
SCALE 1" = 5'
TIME 1:32 PM
DATE 5/12/2022
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E04-E13.DWG



CURB RAMPS
STA. 452+57, 63' LT AND STA. 452+79, 49' LT

CURB RAMP LAYOUT TABLE			
POINT	STA.	OFFSET	REMARKS
A	452+78.8	71.6' LT	23.5' RADIUS
B	452+80.0	65.7' LT	
C	452+83.7	58.6' LT	
D	452+86.0	48.1' LT	

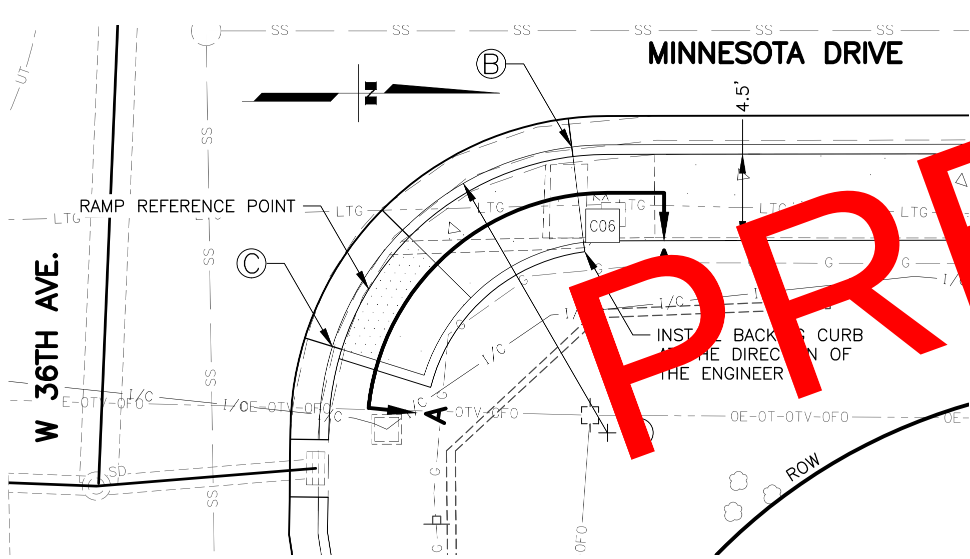
NOTES:

1. BACKING CURB HEIGHTS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE PURPOSES. ADJUST THE HEIGHT AS NECESSARY TO MATCH CONDITIONS IN THE FIELD OR AT THE DIRECTION OF THE ENGINEER.

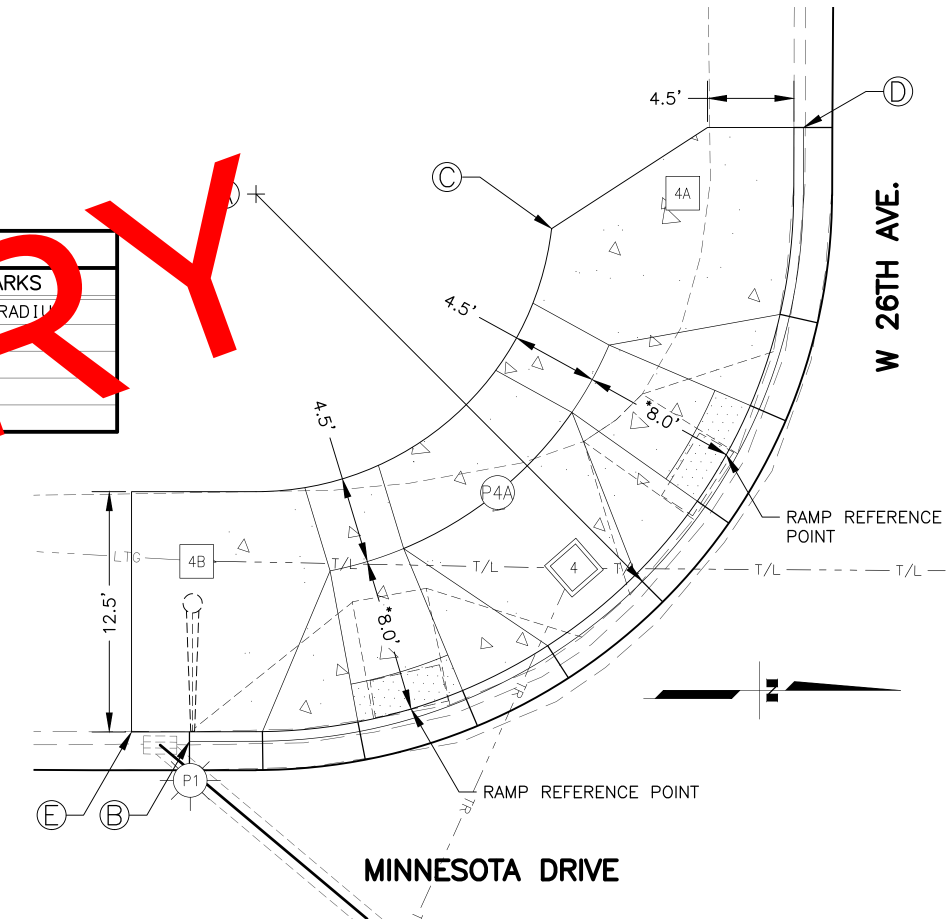
* ADJUST RAMP LENGTHS AS NEEDED BASED ON FIELD CONDITIONS OR AT THE DIRECTION OF THE ENGINEER TO ENSURE RAMP SLOPES ARE 7.7% OR LESS.

CURB RAMP LAYOUT TABLE			
POINT	STA.	OFFSET	REMARKS
A	451+82.8	76.6' LT	[illegible]5' RADIU[illegible]
B	451+79.3	48.1' LT	
C	451+98.2	74.7' LT	
D	452+11.3	[illegible]0.0' LT	
E	451+[illegible]6.3	[illegible].5' LT	

PRELIMINARY

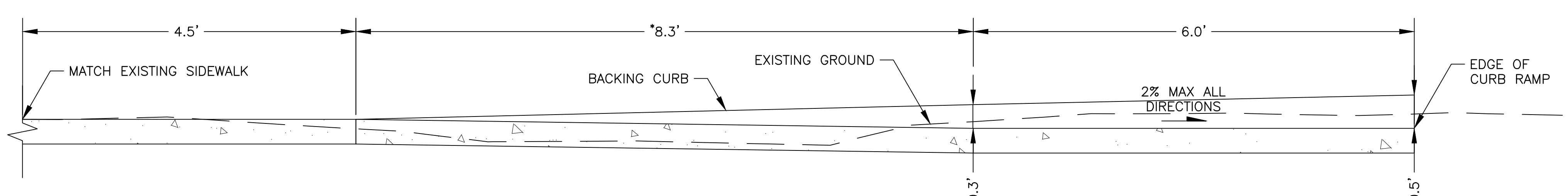


CURB RAMP
STA. 418+28, 55' RT



CURB RAMPS
STA. 451+91, 50' LT AND 452+07, 63' LT

CURB RAMP LAYOUT TABLE			
POINT	STA.	OFFSET	REMARKS
A	418+40.3	62.6' RT	15' RADIUS
B	418+38.5	47.7' RT	
C	418+26.0	58.1' RT	



SECTION A–A

STATE OF ALASKA
49TH
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

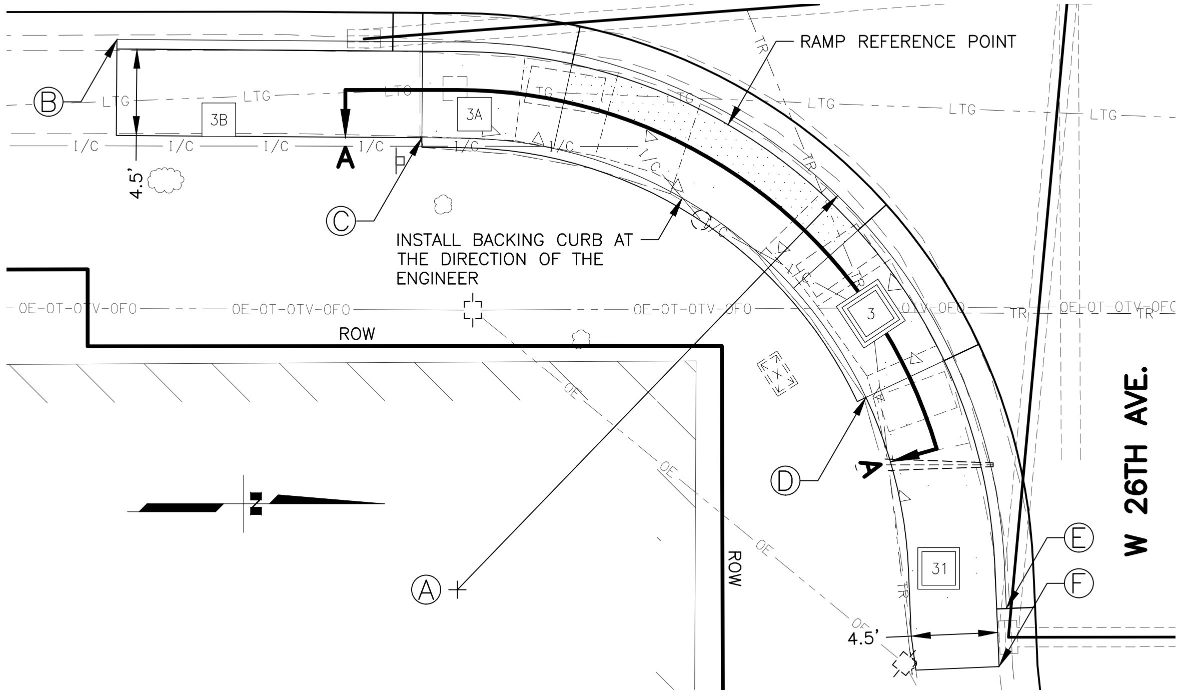
SPECIAL CURB
RAMP DETAILS

DESIGNED BY	ZDK/JKH
CHECKED BY	RRH
DRAFTED BY	JKH
SCALE	1" = 5'
TIME	1:32 PM
DATE	5/12/2022

DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E04-E13.DWG

NOTES:

1. BACKING CURB HEIGHTS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE PURPOSES. ADJUST THE HEIGHT AS NECESSARY TO MATCH CONDITIONS IN THE FIELD OR AT THE DIRECTION OF THE ENGINEER.
2. MAINTAIN A MAXIMUM OF 46 INCHES ABOVE GRADE FOR THE PEDESTRIAN SIGNAL PUSH BUTTONS. ADJUST AS NECESSARY, AT THE DIRECTION OF THE ENGINEER AND IN ACCORDANCE WITH SECTION 660 OF THE SPECIFICATIONS.

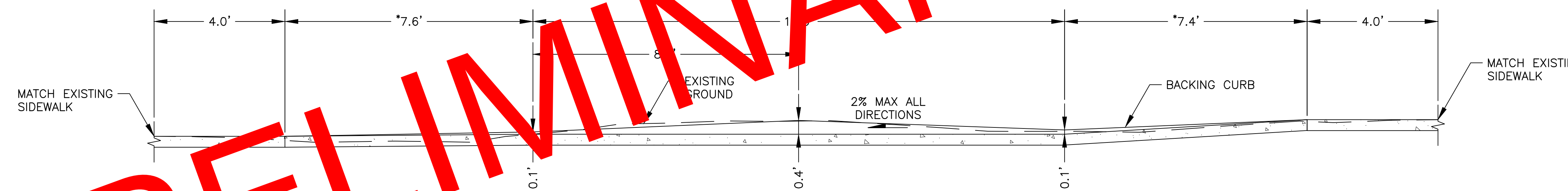


CURB RAMP
STA. 451+97, 52' RT

CURB RAMP LAYOUT TABLE

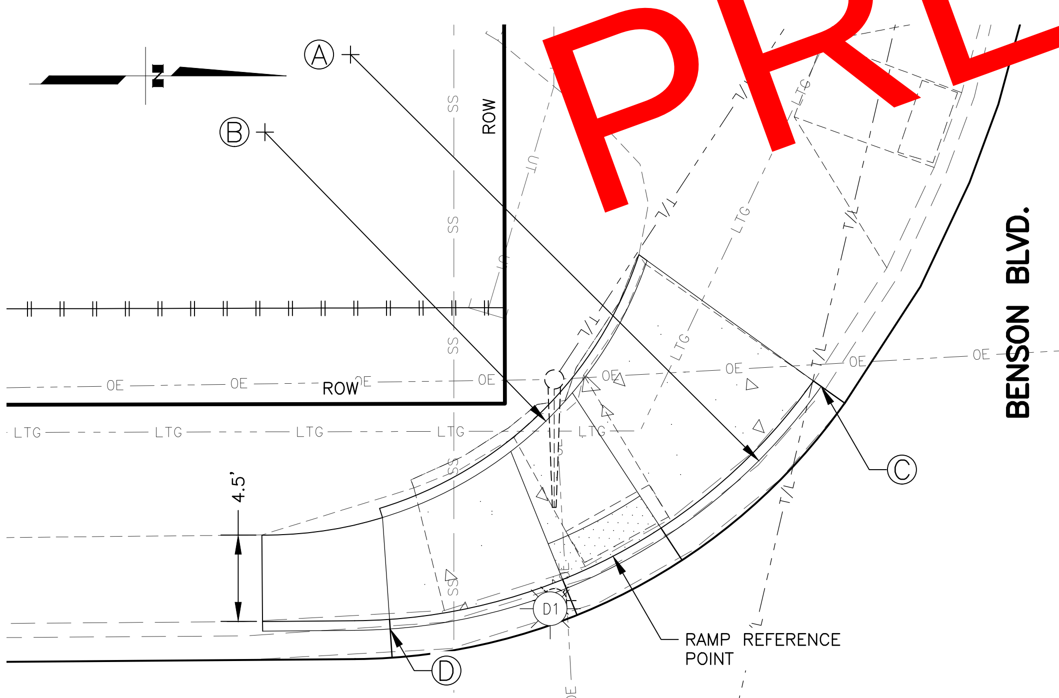
POINT	STA.	OFFSET	REMARKS
A	451+82.7	76.7' RT	28.5' RADIUS
B	451+65.0	48.0' RT	
C	451+80.9	53.1' RT	
D	452+04.0	66.7' RT	
E	452+11.3	77.7' RT	
F	452+10.9	80.7' RT	

PRELIMINARY



SECTION A–A

*ADJUST RAMP LENGTHS AS NEEDED BASED ON FIELD CONDITIONS OR AT THE DIRECTION OF THE ENGINEER TO ENSURE RAMP SLOPES ARE 7.7% OR LESS.



CURB RAMP
STA. 438+04, 52' LT

CURB RAMP LAYOUT TABLE

POINT	STA.	OFFSET	REMARKS
A	437+90.6	78.2' LT	30' RADIUS
B	437+86.2	74.2' LT	21' RADIUS
C	438+15.1	60.8' LT	MATCH EXISTING JOINT
D	437+92.6	48.3' LT	

STATE OF ALASKA
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

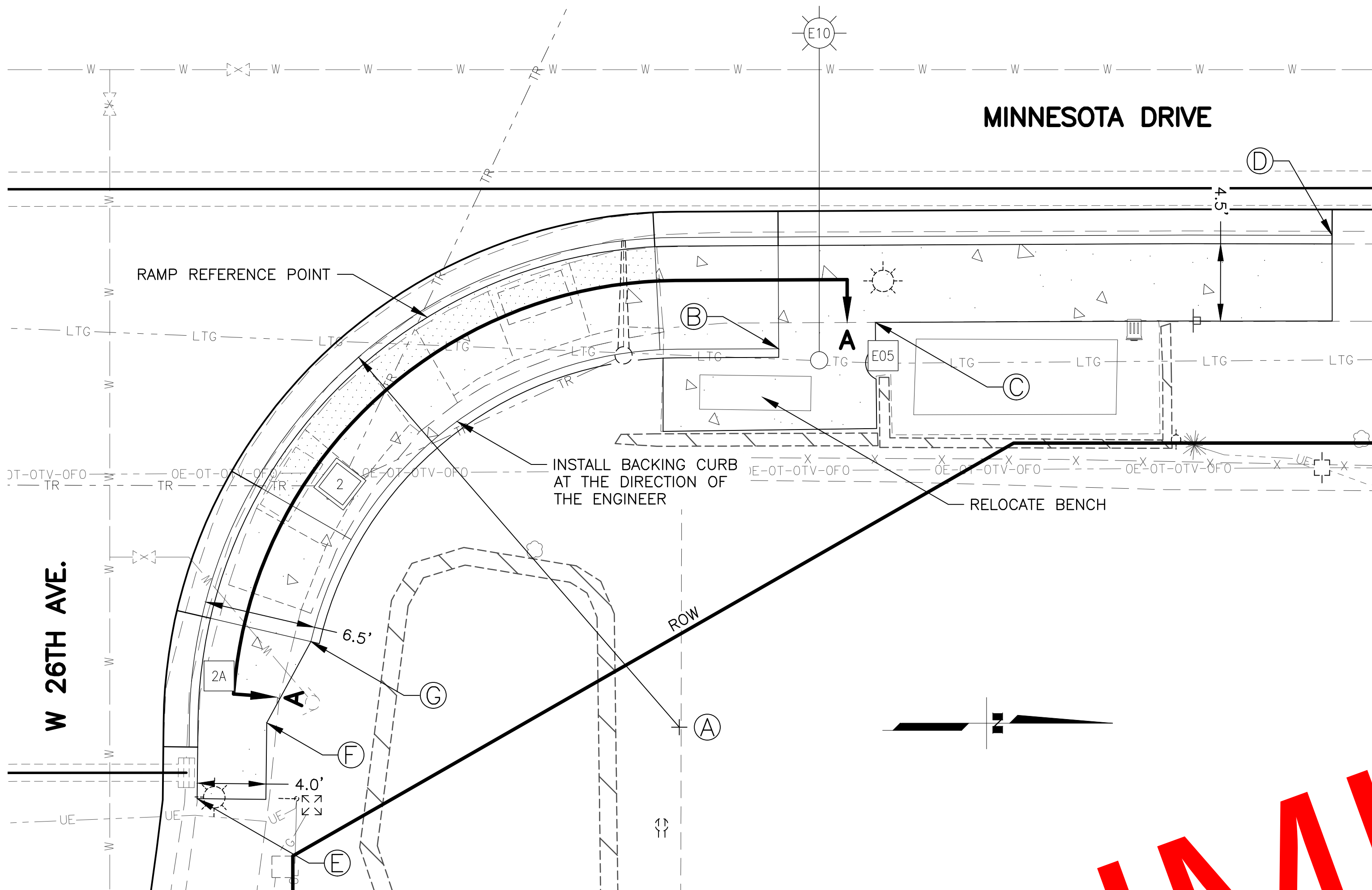
MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

SPECIAL CURB RAMP DETAILS

DESIGNED BY ZDK/JKH
CHECKED BY RRH
DRAFTED BY JKH
SCALE 1" = 5'
DATE 5/12/2022 TIME 1:33 PM
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E04-E13.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E13	E23



CURB RAMP
STA. 452+73, 53' RT

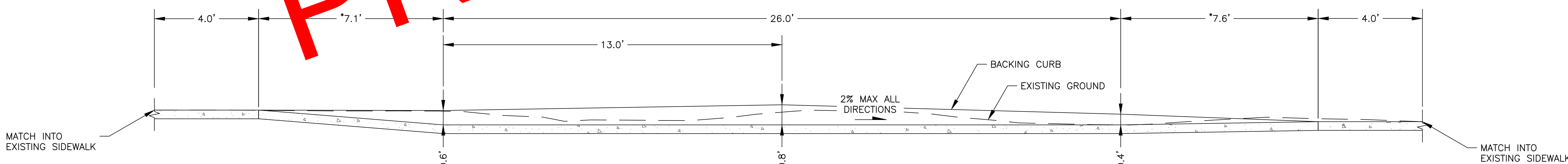
NOTES:

1. BACKING CURB HEIGHTS ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE PURPOSES. ADJUST THE HEIGHT AS NECESSARY TO MATCH CONDITIONS IN THE FIELD OR AT THE DIRECTION OF THE ENGINEER.
2. MAINTAIN A MAXIMUM OF 46 INCHES ABOVE GRADE FOR THE PEDESTRIAN SIGNAL PUSH BUTTONS. ADJUST AS NECESSARY, AT THE DIRECTION OF THE ENGINEER AND IN ACCORDANCE WITH SECTION 660 OF THE SPECIFICATIONS.

CURB RAMP LAYOUT TABLE

POINT	STA.	OFFSET	REMARKS
A	452+88.0	[illegible]6.5' RT	28.5' RADIUS
B	[illegible]	[illegible]4.5' RT	
C	452+99.[illegible]	53.0' RT	
D	453+26.[illegible]	[illegible]7.9' RT	
E	452+[illegible]	[illegible].7' RT	
F	[illegible]2+64.[illegible]	[illegible]6.2' RT	
G	[illegible]52+66.6	71.5' RT	

PRELIMINARY



SECTION A–A

*ADJUST RAMP LENGTHS AS NEEDED BASED ON FIELD CONDITIONS OR AT THE DIRECTION OF THE ENGINEER TO ENSURE RAMP SLOPES ARE 7.7% OR LESS.

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SPECIAL CURB RAMP DETAILS

DESIGNED BY ZDK/JKH
CHECKED BY RRH
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SCALE 1" = 5'
TIME 1:33 PM
DATE 5/12/2022
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E04-E13.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E14	E23

CURB RAMPS STA 413+94, 72 RT
STA 414+12, 50 RT

SPECIAL RAMPS

413+94, [illegible]2 RT AND 414+13, 52 RT

POINT NO.	STA.	OFFSET	RADIUS	COMMENT
10*	414+32.2[illegible]	56.50 RT		
11*	4[illegible]32.19	48.17 RT		
12	414[illegible]7.58	58.30 RT		
13	41[illegible]13.93	59.82 RT		
14*	4[illegible]08.80	[illegible]3.33 RT		
[illegible]5*	414+0[illegible]6	65.56 RT		
[illegible]	414+02.90	71.24 RT		
17	414+01.54	75.27 RT		
18*	413+98.94	83.71 RT		
19	414+14.99	49.37 RT		
20	414+09.63	51.51 RT		
21*	414+02.14	57.04 RT		
22*	413+99.23	60.52 RT		
23	413+95.10	68.75 RT		
24	413+93.89	74.41 RT		
25*	413+94.57	84.80 RT		
26	414+38.35	59.12 RT	5.0'	FACE OF BACKING CURB
27	414+23.21	78.67 RT	30.0'	FACE OF CURB
28	414+02.77	80.46 RT	4.5'	FACE OF BACKING CURB
29	414+03.42	81.97 RT		

*ADJUST LOCATION OF POINTS AS NEEDED BASED ON FIELD CONDITIONS OR AT THE DIRECTION OF THE ENGINEER TO ENSURE RAMP SLOPES ARE 7.7% OR LESS.

STATE OF ALASKA ★ 49TH ★ RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

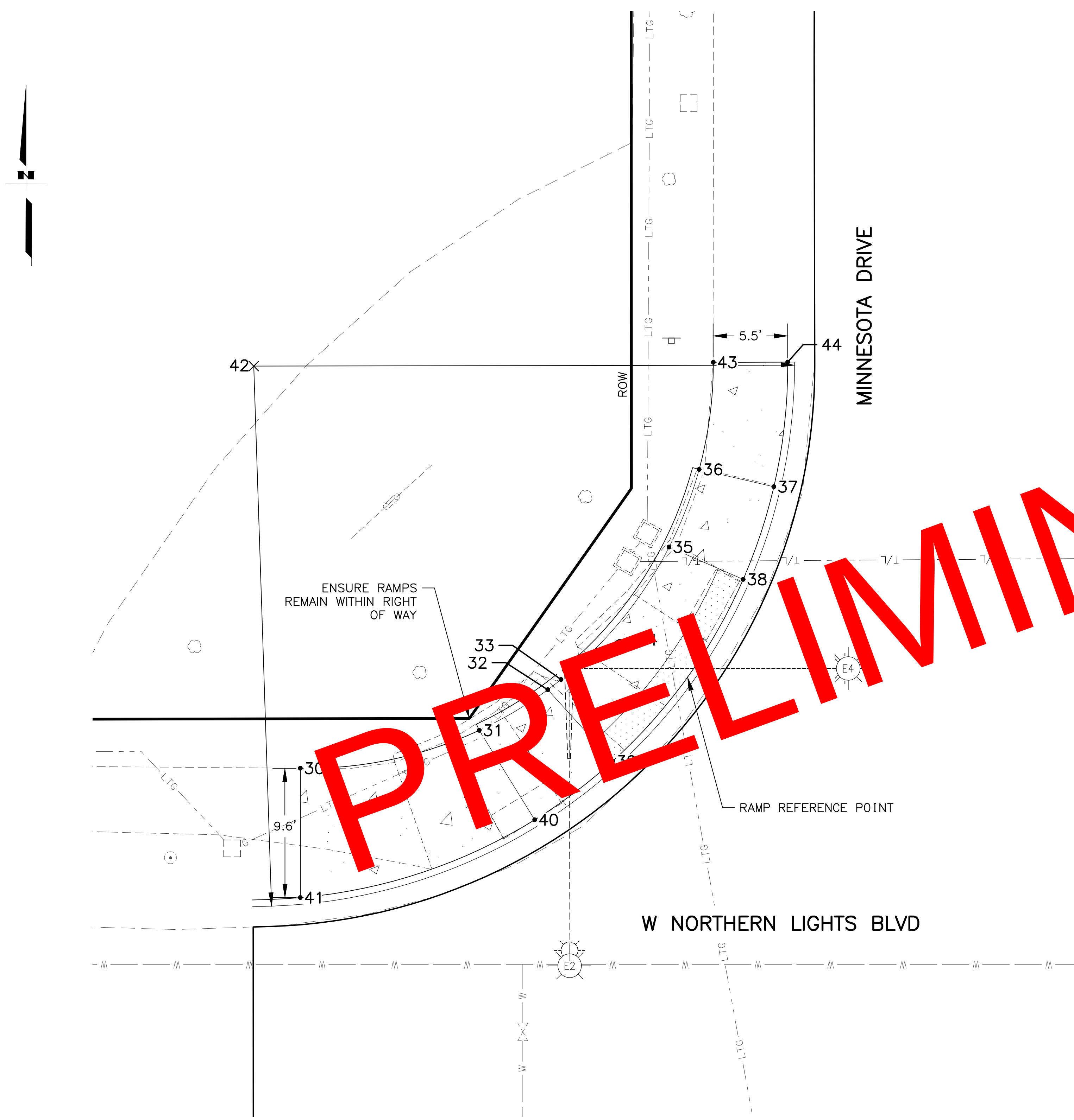
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SPECIAL CURB
RAMP DETAILS

DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY SLH
SCALE 1" =5'
DATE 5/12/2022 TIME 1:34 PM
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E14.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E15	E23



CURB RAMP STA 444+89, 68 LT

NOTES:

1. MAINTAIN A MAXIMUM OF 46 INCHES ABOVE GRADE FOR THE PEDESTRIAN SIGNAL PUSH BUTTONS. ADJUST AS NECESSARY, AT THE DIRECTION OF THE ENGINEER AND IN ACCORDANCE WITH SECTION 660 OF THE SPECIFICATIONS.

SPECIAL CURB RAMP 444+89, 68 LT				
POINT NO.	STA.	OFFSET	RADIUS	COMMENT
30	444+82.30	96.50 LT		
31*	444+85.10	83.26 LT		
32	444+88.10	78.19 LT		
33	444+88.85	77.21 LT		
34	444+90.12	75.73 LT		
35	444+98.66	69.21 LT		
36*	445+04.41	66.99 LT		
37*	445+03.12	61.46 LT		
38	444+96.26	63.73 LT		
39	444+82.81	73.40 LT		
40*	444+78.47	79.17 LT		
41	444+72.72	96.50 LT		
42	445+12.07	99.93 LT	40'	FACE OF CURB
43	445+12.33	65.93 LT		
44	445+12.34	60.43 LT		

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SPECIAL CURB
RAMP DETAILS

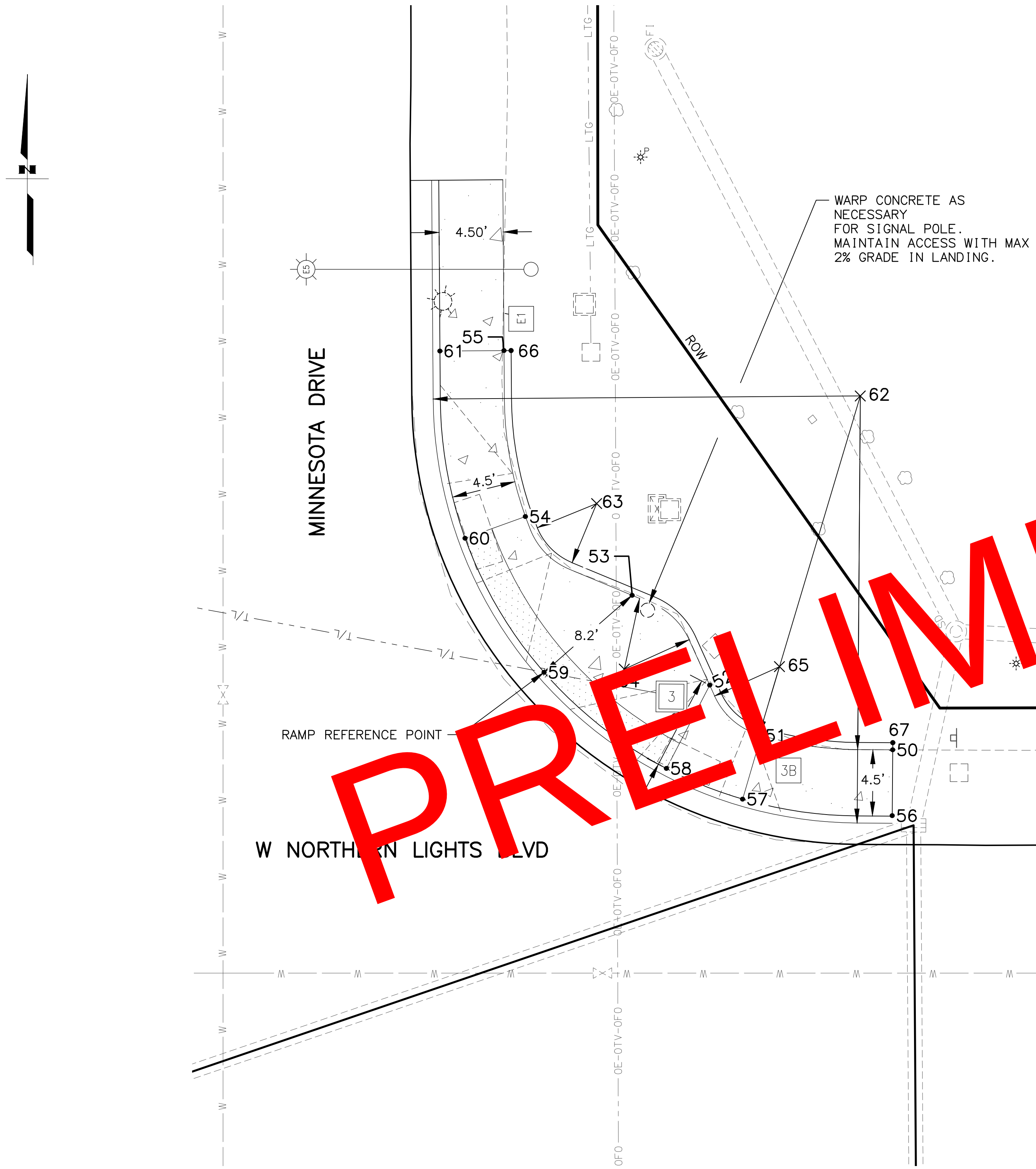
DESIGNED BY SLH | CHECKED BY RRH | DRAFTED BY SLH
SCALE 1" =5'
DATE 5/12/2022 TIME 1:34 PM
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E14.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E16	E23

NOTES:

1. MAINTAIN A MAXIMUM OF 46 INCHES ABOVE GRADE FOR THE PEDESTRIAN SIGNAL PUSH BUTTONS. ADJUST AS NECESSARY, AT THE DIRECTION OF THE ENGINEER AND IN ACCORDANCE WITH SECTION 660 OF THE SPECIFICATIONS.



CURB RAMP STA 444+89, 56 RT

SPECIAL CURB RAMP

444+89, 68 RT

POINT	STA.	OFFSET.	RADIUS	COMMENT
50	444+83.36	80.67 RT		
51*	444+84.37	71.43 RT		
52	444+87.91	67.82 RT		
53	444+94.22	62.37 RT		
54	444+99.76	54.87 RT		
55	445+11.42	53.37 RT		
56	444+78.74	80.63 RT		
57*	444+79.90	70.12 RT		
58	444+82.06	64.77 RT		
59	444+88.81	56.18 RT		
60	444+98.23	50.64 RT		
61*	445+11.39	48.88 RT		
62	445+08.22	78.40 RT	30', 24.84'	FACE OF CURB, FACE OF BACKING CURB
63	445+00.67	59.28 RT	5'	FACE OF BACKING CURB
64	444+89.04	62.10 RT	5'	FACE OF BACKING CURB
65	444+89.21	73.55 RT	5'	FACE OF BACKING CURB
66*	445+11.42	53.88 RT		MATCH EXISTING
67	443+83.86	8.67 RT		MATCH EXISTING

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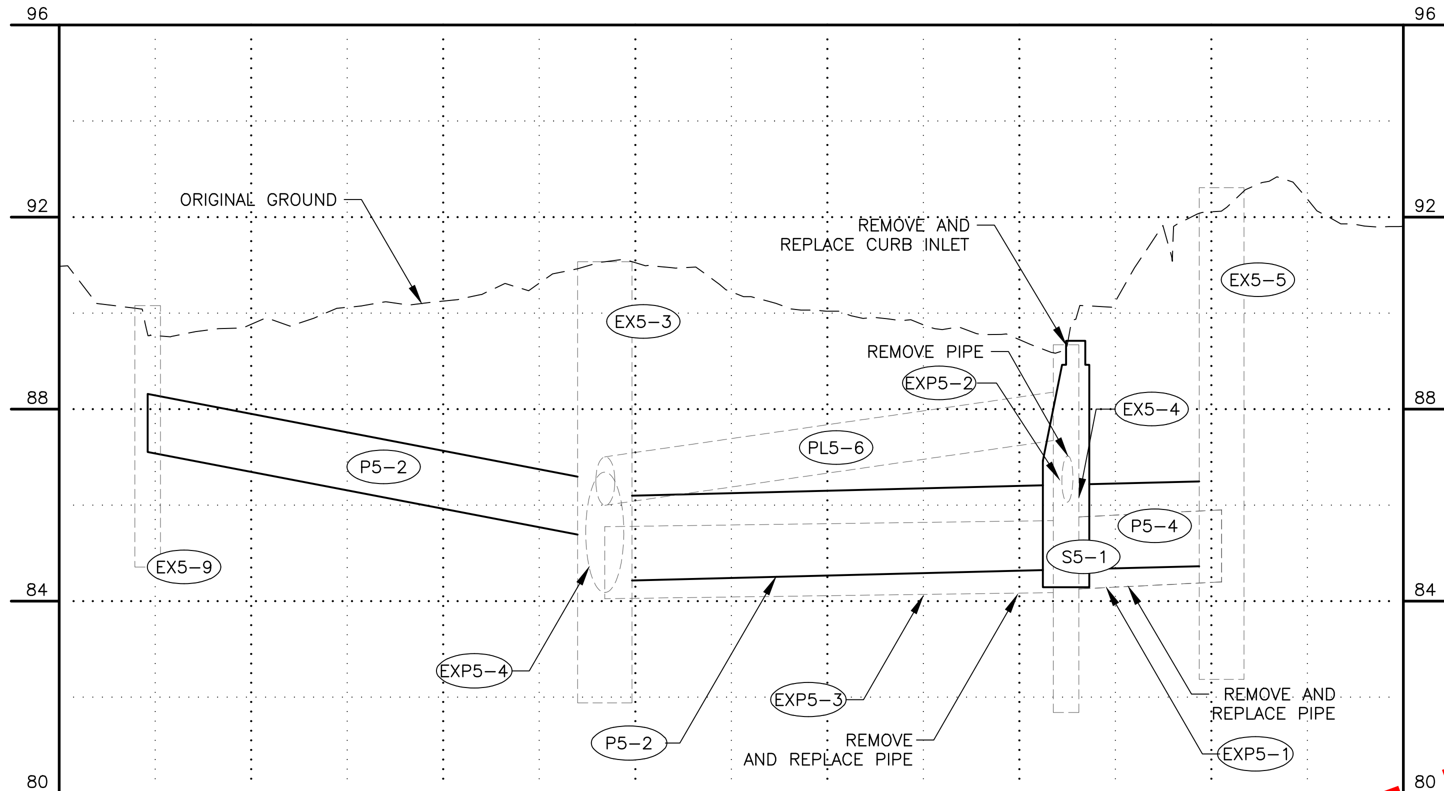
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

SPECIAL CURB RAMP DETAILS

DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E14.DWG

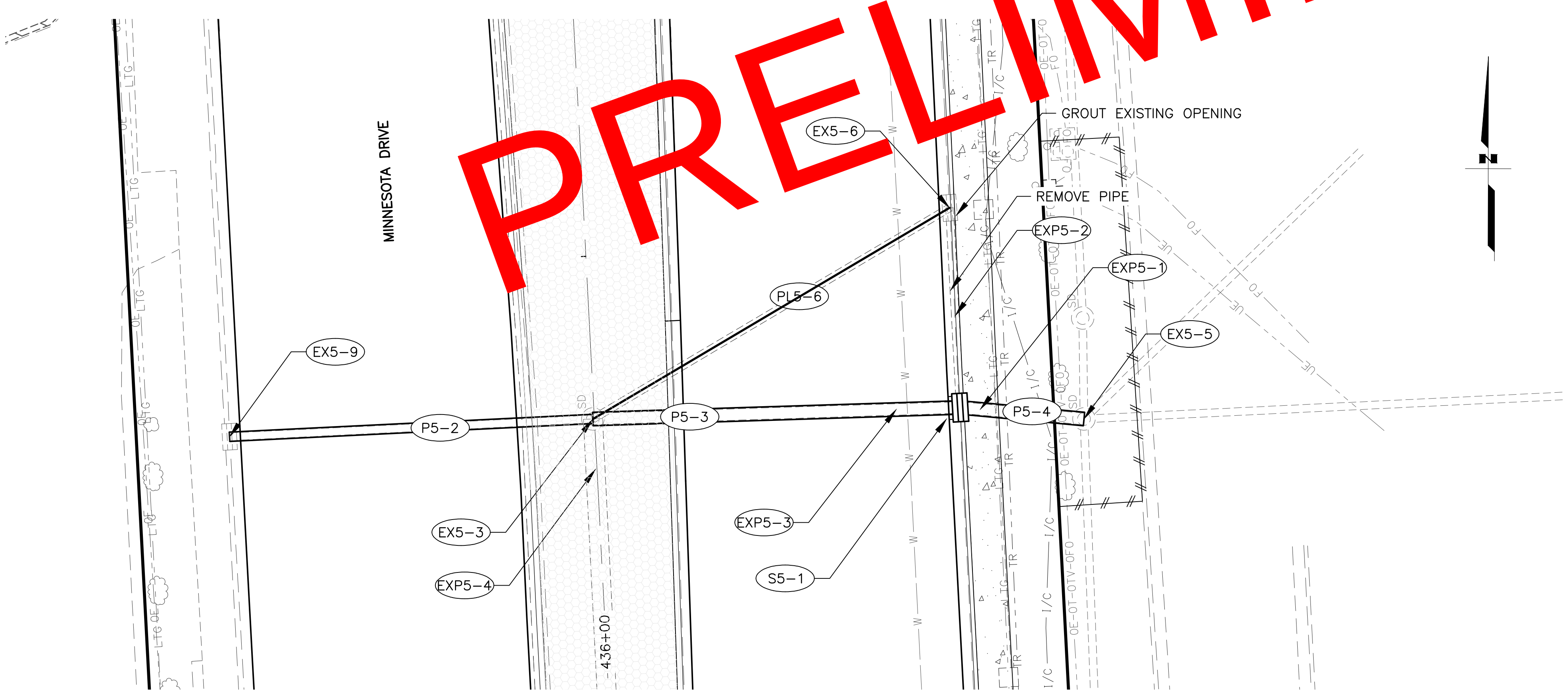
DATE 5/12/2022 | TIME 1:34 PM | SCALE 1" =5'
DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY SLH



PIPE SUMMARY										
PIPE	SIZE (IN)	LENGTH (FT)	START STATION	START OFFSET	START INVERT ELEV. (FT)	END STATION	END OFFSET	END INVERT ELEV. (FT)	% GRADE	REMARKS
P5–2	12	47.61	436+28.84	–47.79' LT	87.2100	436+28.70	0.19' LT	85.3800	3.84%	
P5–3	18	48.07	436+27.70	47.87' RT	84.7904	436+28.70	0.19' LT	84.5500	0.50%	
P5–4	18	16.27	436+25.35	63.97' RT	84.8700	436+27.70	47.87' RT	84.7900	0.49%	

STRUCTURE SUMMARY						
STRUCTURE	TYPE	[illegible]	OFFSET	TOP OF CASTING	TYPE OF CASTING	REMARKS
S5–1	TYPE [illegible] I	436+27[illegible]	47.87' RT	89.42	CI	

PRELIMINARY



STATE OF ALASKA
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

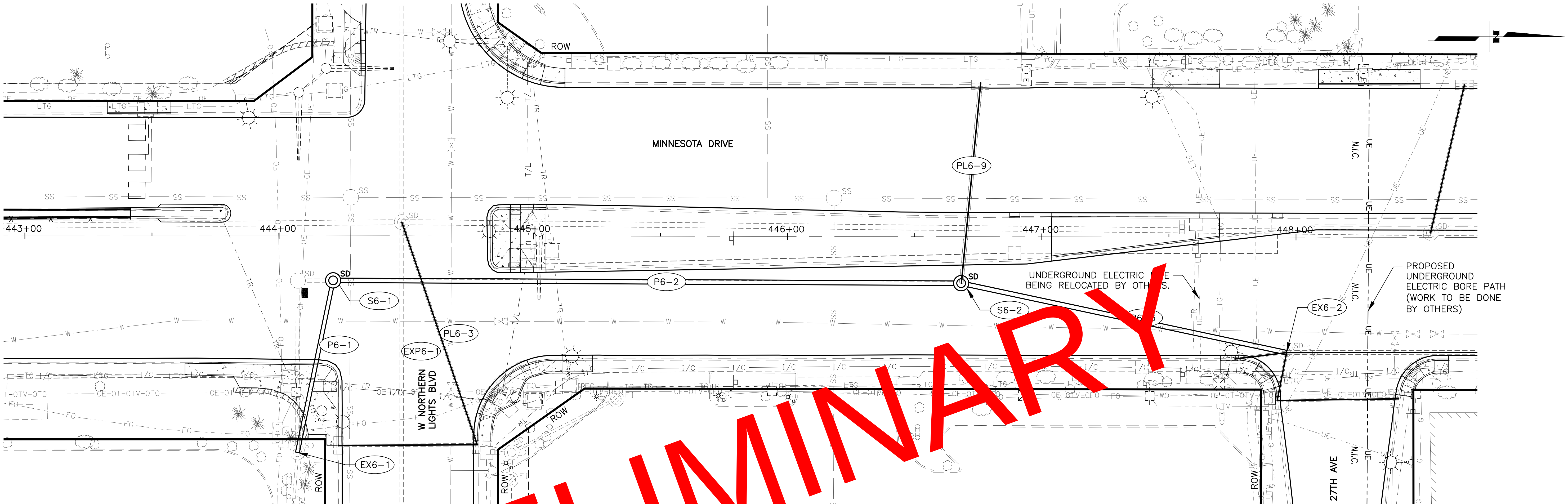
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PIPE DETAILS

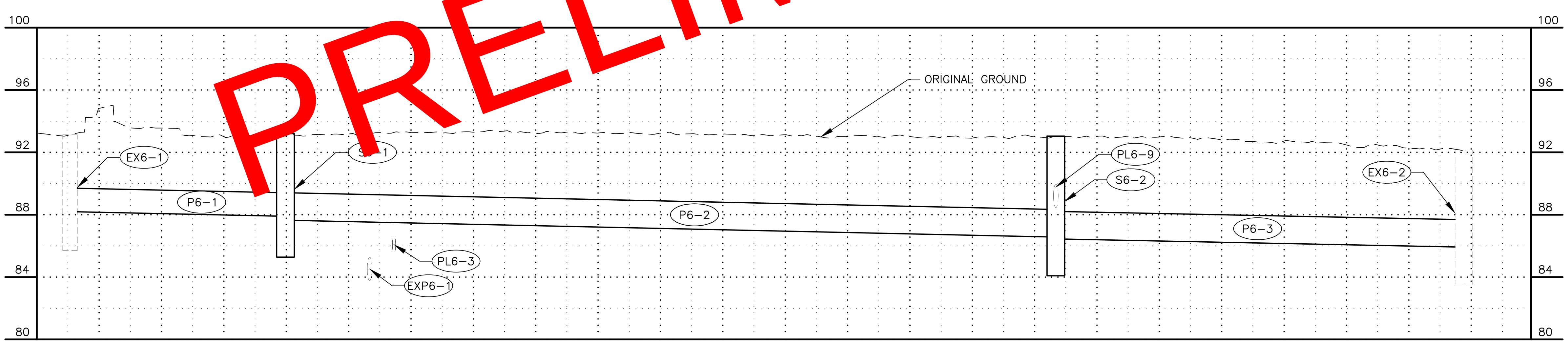
DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY SLH
SCALE 1" = 10'
TIME 1:41 PM
DATE 5/12/2022
DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR–15 PP CFHWY00132\CIV3D19\PLANSET\00132_E17.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E18	E23



PRELIMINARY



PIPE SUMMARY										
PIPE	SIZE (IN)	LENGTH (FT)	START STATION	START OFFSET	START INVERT ELEV. (FT)	END STATION	END OFFSET	END INVERT ELEV. (FT)	% GRADE	REMARKS
P6-1	18	69.09	444+07.20	85.17' RT	88.2000	444+21.25	17.53' RT	87.9000	0.43%	
P6-2	18	247.06	444+21.25	17.53' RT	87.7800	446+68.34	18.31' RT	86.7000	0.44%	
P6-3	18	130.85	446+68.34	18.31' RT	86.5800	447+96.35	45.40' RT	86.0500	0.41%	

STRUCTURE SUMMARY							
STRUCTURE	TYPE	STATION	OFFSET	TOP OF CASTING	TYPE OF CASTING	REMARKS
S6-1	TYPE - I	444+21.25	17.53' RT	93.20	MH	
S6-2	TYPE - I	446+68.34	18.31' RT	93.04	MH	

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

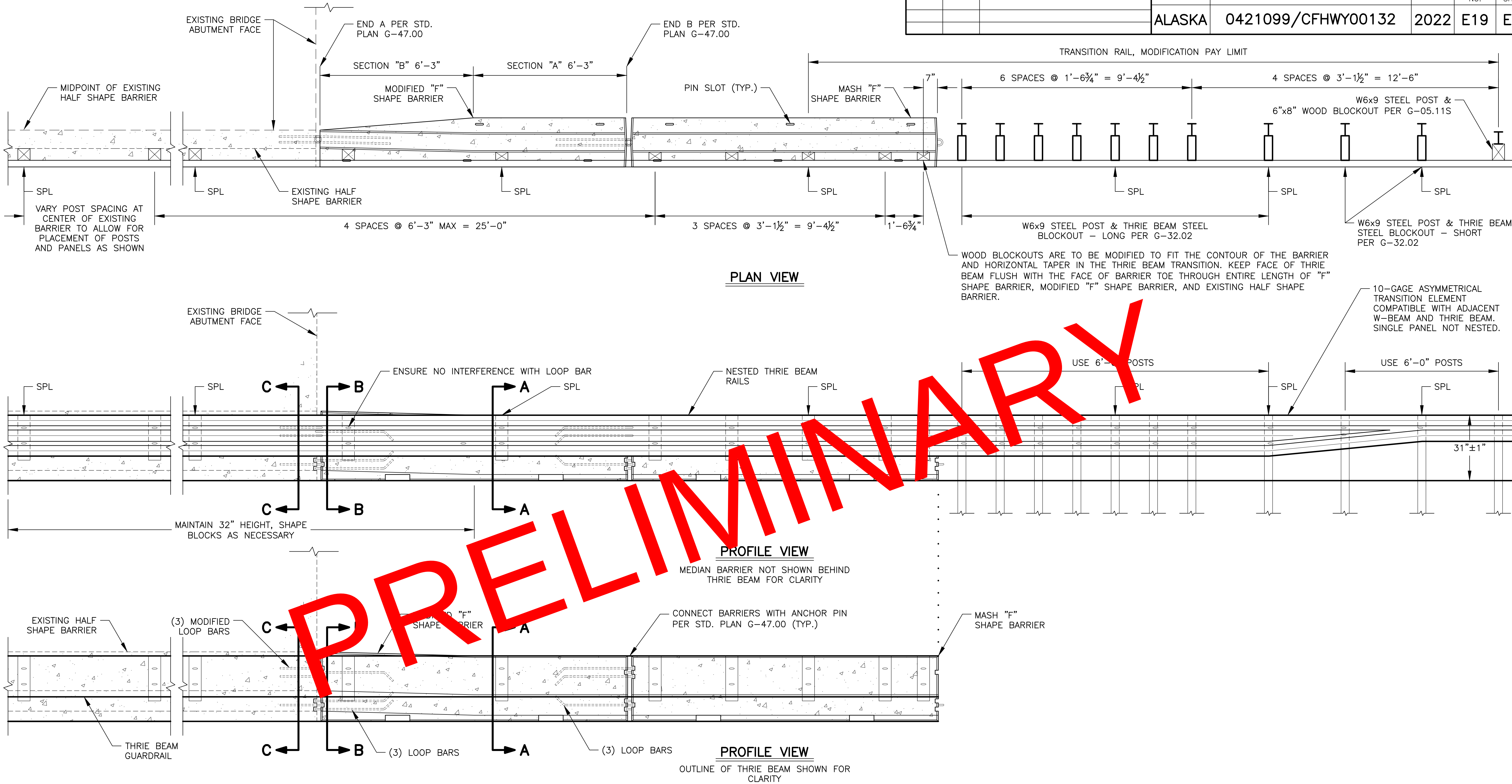
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PIPE DETAILS

DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY SLH
SCALE 1" = 10'
TIME 1:42 PM
DATE 5/12/2022
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E17.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E19	E23



GUARDRAIL TO CONCRETE BARRIER TRANSTION DETAILS

NOTES

1. STANDARD PLAN G-47.00 HAS BEEN MODIFIED TO ALLOW FOR FIT OF EXISTING CONCRETE HALF SHAPE BARRIER
2. MODIFIED "F" SHAPE BARRIER SECTION "A" SHALL BE CONSTRUCTED TO CONFORM TO ALL DETAILS FOR REBAR, PIN LOOPS, PIN SLOTS, ANCHOR PINS, CONNECTING PINS, AND CONCRETE DIMENSIONAL GEOMETRY PER STANDARD PLAN G-47.00.
3. MODIFIED "F" SHAPE BARRIER SECTION "B" SHALL BE CONSTRUCTED TO CONFORM TO STANDARD PLAN G-47.00 DETAILS AS MUCH AS POSSIBLE.
   - 3.1. MODIFIED STIRRUP BARS SHALL MAINTAIN SPACING AS SHOWN IN THE STANDARD PLAN. ADJUST THE DIMENSIONS OF THE MODIFIED STIRRUP AS NEEDED THROUGH THE TRANSITIONAL SECTION "B".
   - 3.2. CAST PIN SLOTS WHERE SHOWN IN SECTION "B". ADJUST PIN SLOT BAR AS NEEDED TO TIE INTO THE MODIFIED TRANSITIONAL REBAR.
   - 3.3. LOOP BARS AND PIN LOOP KNOCK OUTS SHALL BE PLACED AT THE DIMENSIONS SHOWN IN THE STANDARD PLAN FROM THE BOTTOM UP.
   - 3.4. ALL STEEL SHALL MAINTAIN 1½" CLEAR FROM CONCRETE SURFACES.
4. CONNECT AND PIN ALL CONCRETE BARRIERS PER STANDARD. PLAN G-47.00.
5. CONFORM TO G-00.05 AND G-05.11S FOR ALL GUARDRAIL DETAILS NOT SHOWN.
6. PRE-DRILL 1" DIAMETER HOLES IN EXISTING HALF SHAPE BARRIER. EMBED MODIFIED LOOP BARS 18" INTO THE EXISTING HALF SHAPE BARRIER.
7. LAP GUARDRAIL SPLICES WITH THE ADJACENT DIRECTION OF TRAFFIC.
8. POST, PANEL, AND SPLICE LAYOUT IS SYMMETRICAL.
9. PANEL SPLICE LOCATIONS = "SPL"

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(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

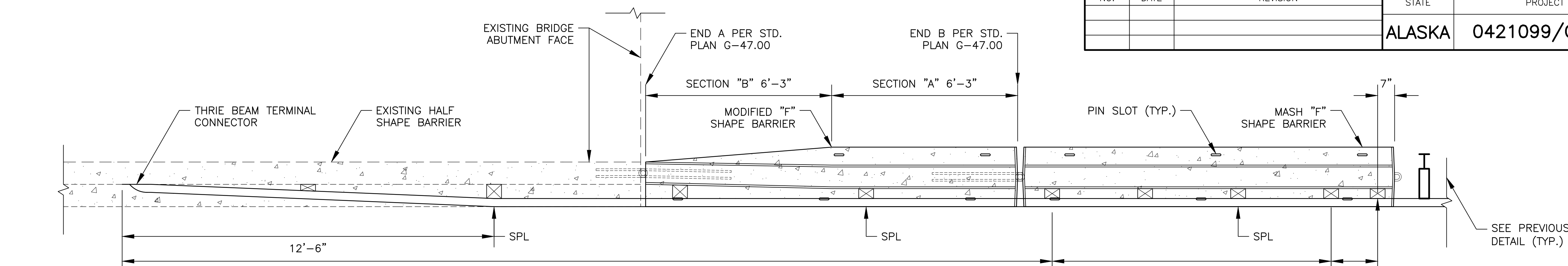
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

GUARDRAIL TO CONCRETE
BARRIER TRANSITION DETAILS:
NORTHBOUND

DESIGNED BY	ZDK
CHECKED BY	RRH
DRAFTED BY	ZDK
SCALE	1"=2'/1'
TIME	1:43 PM
DATE	5/12/2022
DRAWING LOCATION	W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E19_HILCREST BARRIER DETAILS.DWG

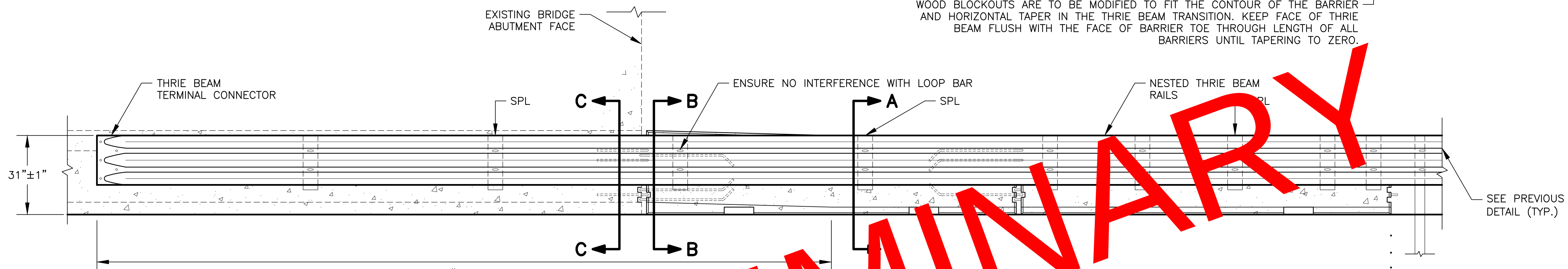
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E20	E23



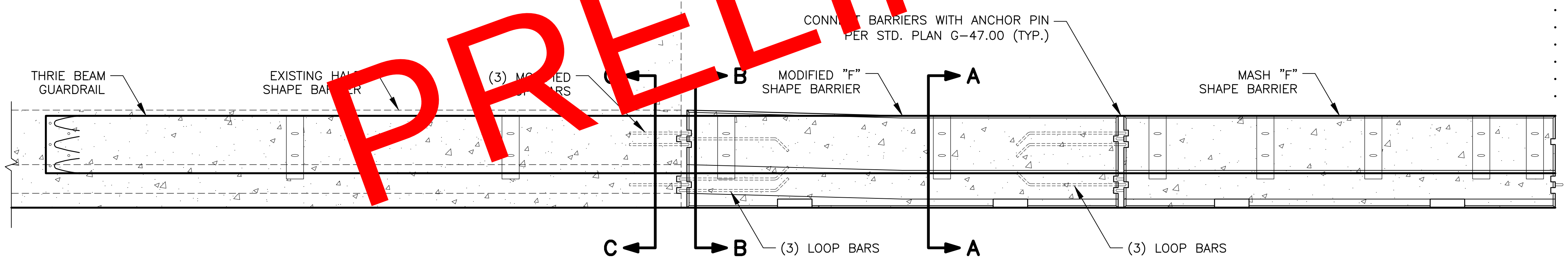
PLAN VIEW

WOOD BLOCKOUTS ARE TO BE MODIFIED TO FIT THE CONTOUR OF THE BARRIER AND HORIZONTAL TAPER IN THE THRIE BEAM TRANSITION. KEEP FACE OF THRIE BEAM FLUSH WITH THE FACE OF BARRIER TOE THROUGH LENGTH OF ALL BARRIERS UNTIL TAPERING TO ZERO.



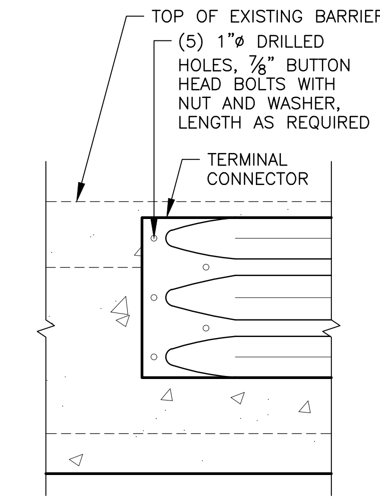
PROFILE VIEW

MEDIAN BARRIER BEHIND THRIE BEAM NOT SHOWN FOR CLARITY



PROFILE VIEW

OUTLINE OF THRIE BEAM SHOWN FOR CLARITY



THRIE BEAM TERMINAL CONNECTOR

GUARDRAIL TO CONCRETE BARRIER TRANSTION DETAILS

PRELIMINARY

NOTES

1. STANDARD PLAN G-47.00 HAS BEEN MODIFIED TO ALLOW FOR FIT OF EXISTING CONCRETE HALF SHAPE BARRIER
2. MODIFIED "F" SHAPE BARRIER SECTION "A" SHALL BE CONSTRUCTED TO CONFORM TO ALL DETAILS FOR REBAR, PIN LOOPS, PIN SLOTS, ANCHOR PINS, CONNECTING PINS, AND CONCRETE DIMENSIONAL GEOMETRY PER STANDARD PLAN G-47.00.
3. MODIFIED "F" SHAPE BARRIER SECTION "B" SHALL BE CONSTRUCTED TO CONFORM TO STANDARD PLAN G-47.00 DETAILS AS MUCH AS POSSIBLE.
   - 3.1. MODIFIED STIRRUP BARS SHALL MAINTAIN SPACING AS SHOWN IN THE STANDARD PLAN. ADJUST THE DIMENSIONS OF THE MODIFIED STIRRUP AS NEEDED THROUGH THE TRANSITIONAL SECTION "B".
   - 3.2. CAST PIN SLOTS WHERE SHOWN IN SECTION "B". ADJUST PIN SLOT BAR AS NEEDED TO TIE INTO THE MODIFIED TRANSITIONAL REBAR.
   - 3.3. LOOP BARS AND PIN LOOP KNOCK OUTS SHALL BE PLACED AT THE DIMENSIONS SHOWN IN THE STANDARD PLAN FROM THE BOTTOM UP.
   - 3.4. ALL STEEL SHALL MAINTAIN 1½" CLEAR FROM CONCRETE SURFACES.
4. CONNECT AND PIN ALL CONCRETE BARRIERS PER STANDARD. PLAN G-47.00.
5. CONFORM TO G-00.05 AND G-05.11S FOR ALL GUARDRAIL DETAILS NOT SHOWN.
6. PRE-DRILL 1" DIAMETER HOLES IN EXISTING HALF SHAPE BARRIER. EMBED MODIFIED LOOP BARS 18" INTO THE EXISTING HALF SHAPE BARRIER.
7. LAP GUARDRAIL SPLICES WITH THE ADJACENT DIRECTION OF TRAFFIC.
8. PANEL SPLICE LOCATIONS = "SPL"
9. SEE NORTHBOUND DETAIL FOR TRANSITION RAIL, MODIFICATION PAY LIMITS.

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STATE OF ALASKA DOT&PF
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

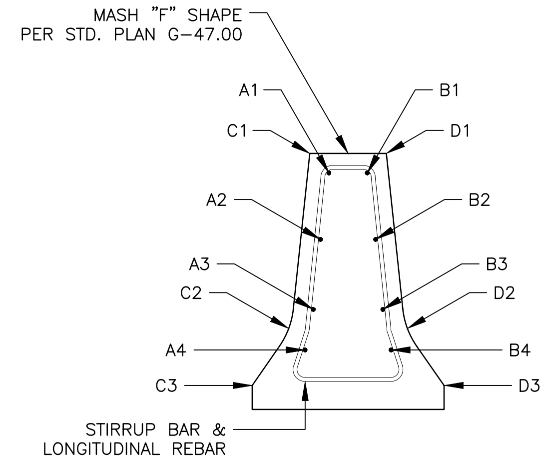
GUARDRAIL TO CONCRETE BARRIER TRANSITION DETAILS: SOUTHBOUND

DESIGNED BY	ZDK
CHECKED BY	RRH
DRAFTED BY	ZDK
SCALE	1"=2'/1'
TIME	1:43 PM
DATE	5/12/2022

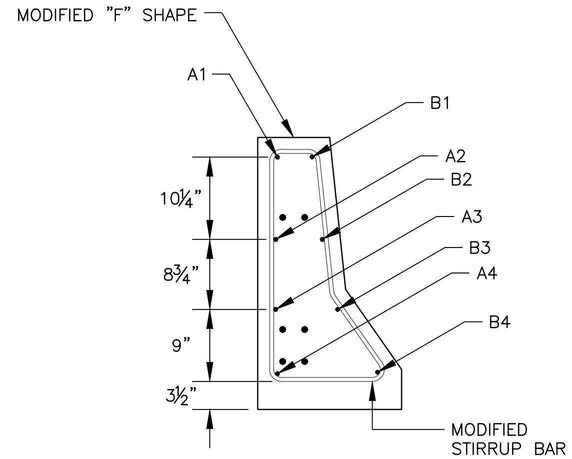
DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E19_HILCREST BARRIER DETAILS.DWG

NO.	DATE	REVISION

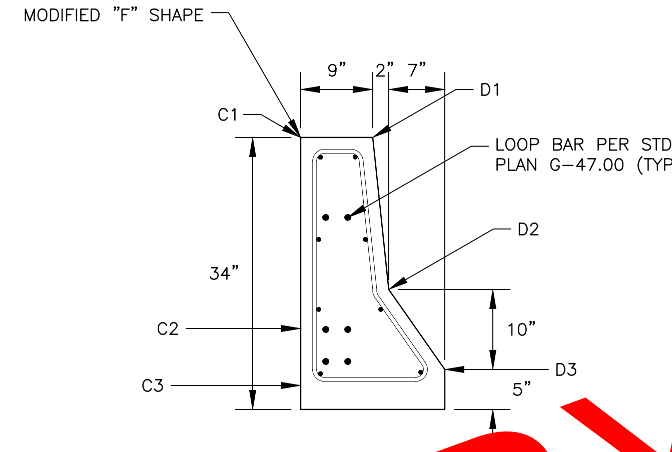
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E21	E23



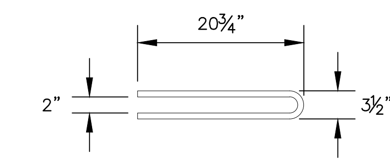
SECTION A–A



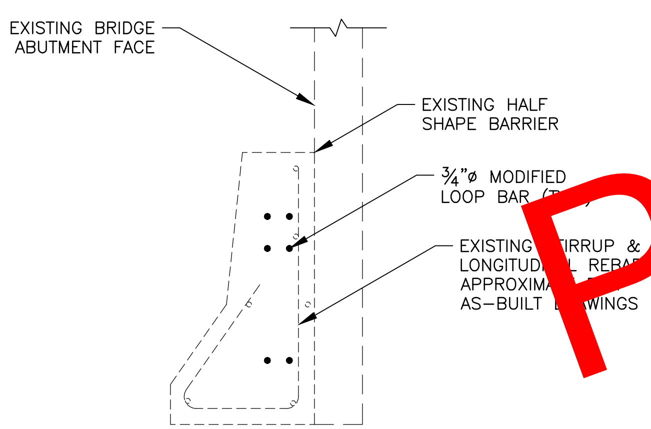
SECTION B–B



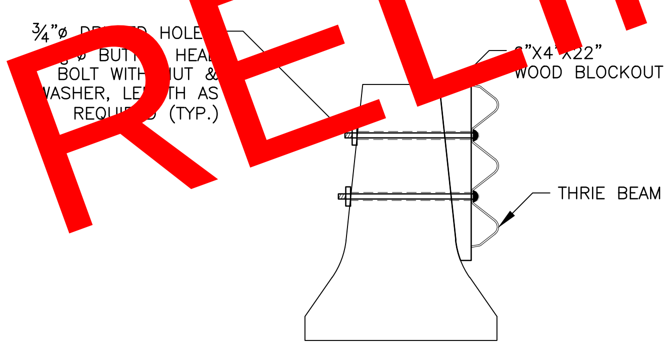
SECTION [illegible]–B



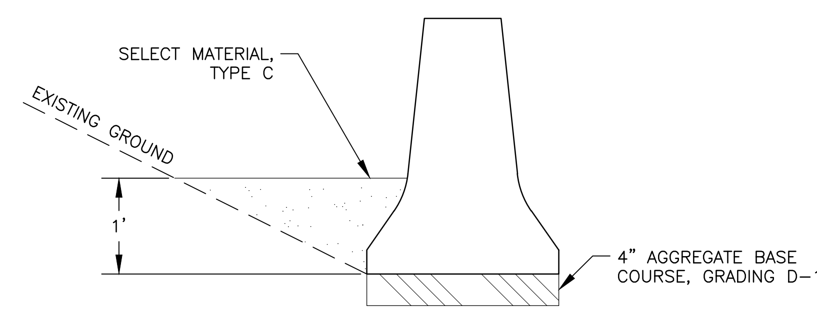
MODIFIED LOOP BAR



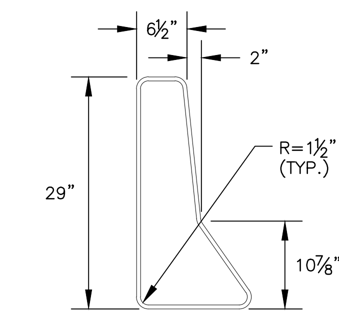
SECTION C–C



WOOD
BLOCKOUT DETAIL



BARRIER
BEDDING/BACKFILL DETAIL



MODIFIED STIRRUP BAR

NOTES

1. GUARDRAIL NOT SHOWN IN CROSS SECTIONS FOR CLARITY.
2. BARRIER BEDDING DETAIL APPLIES TO MASH "F" SHAPE BARRIER AND MODIFIED "F" SHAPE BARRIER ONLY.
3. BACKFILL WITH AND COMPACT SELECT MATERIAL, TYPE C DIRECTLY BEHIND BARRIER AFTER FINAL PLACEMENT OF MASH "F" SHAPE AND MODIFIED "F" SHAPE BARRIERS.
4. TRANSITION CONCRETE AND LONGITUDINAL REBAR AS SHOWN USING THE DESIGNATED CONTROL POINTS IN SECTIONS A–A AND B–B.
5. LONGITUDINAL REBAR IS TO BE CONTINUOUS AND BENT TO PROVIDE THE TRANSITION SHOWN. NO SPLICING WILL BE ALLOWED.

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
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(907) 269–0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

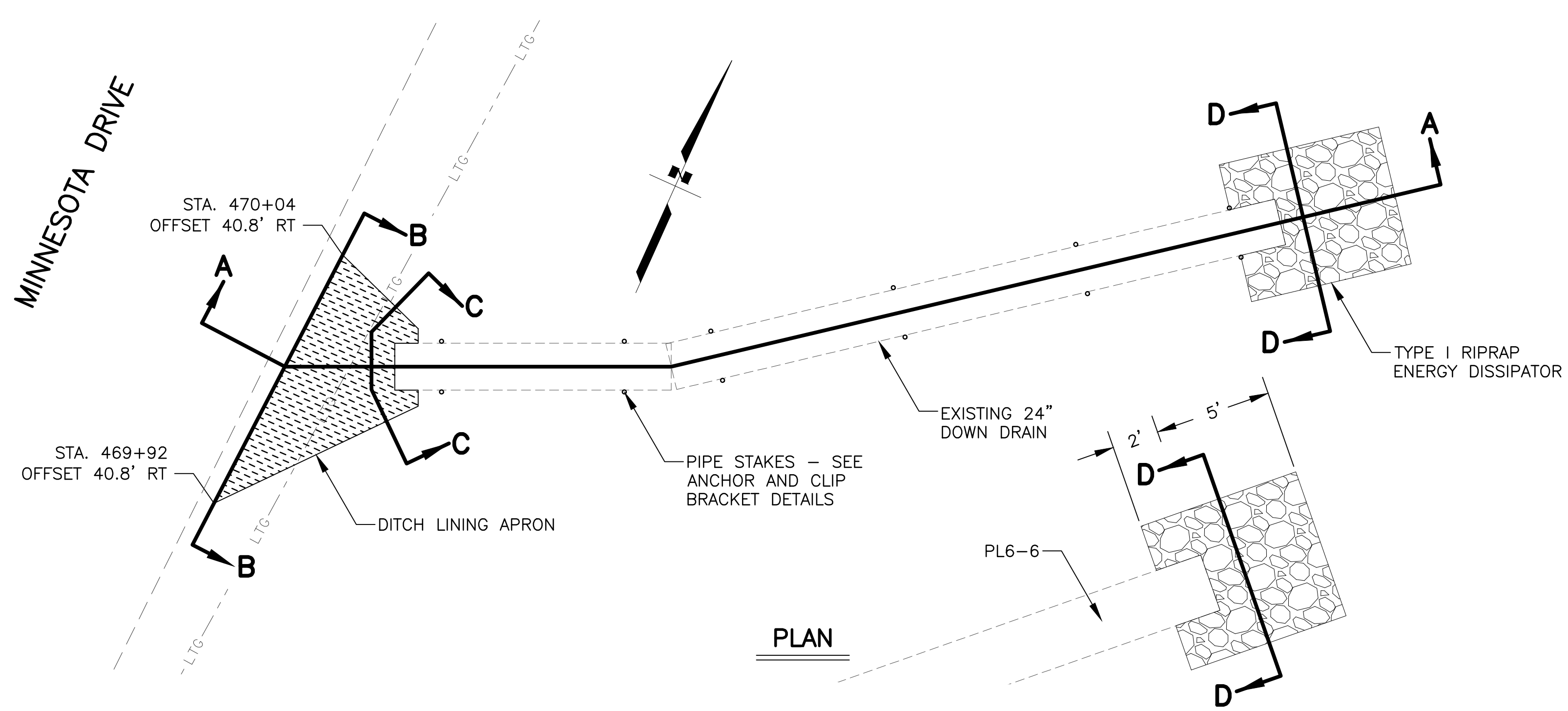
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

GUARDRAIL TO CONCRETE
BARRIER TRANSITION DETAILS

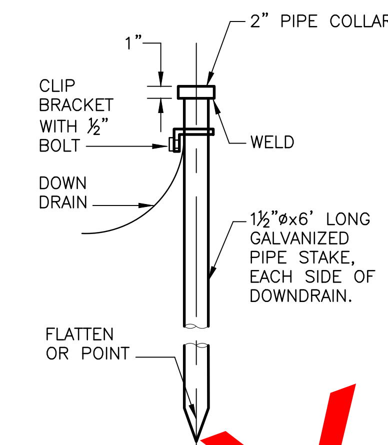
DESIGNED BY ZDK
CHECKED BY RRH
DRAFTED BY ZDK
SCALE 1"=2'/1'
TIME 1:43 PM
DATE 5/12/2022
DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR–15 PP CFHWY00132\CIV3D19\PLANSET\00132_E19_HILCREST BARRIER DETAILS.DWG

NO.	DATE	REVISION

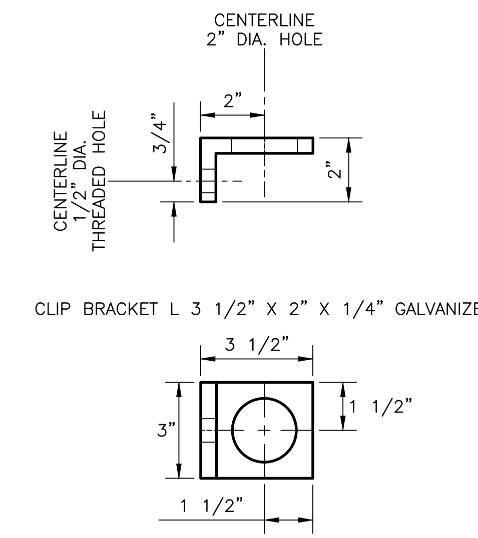
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E22	E23



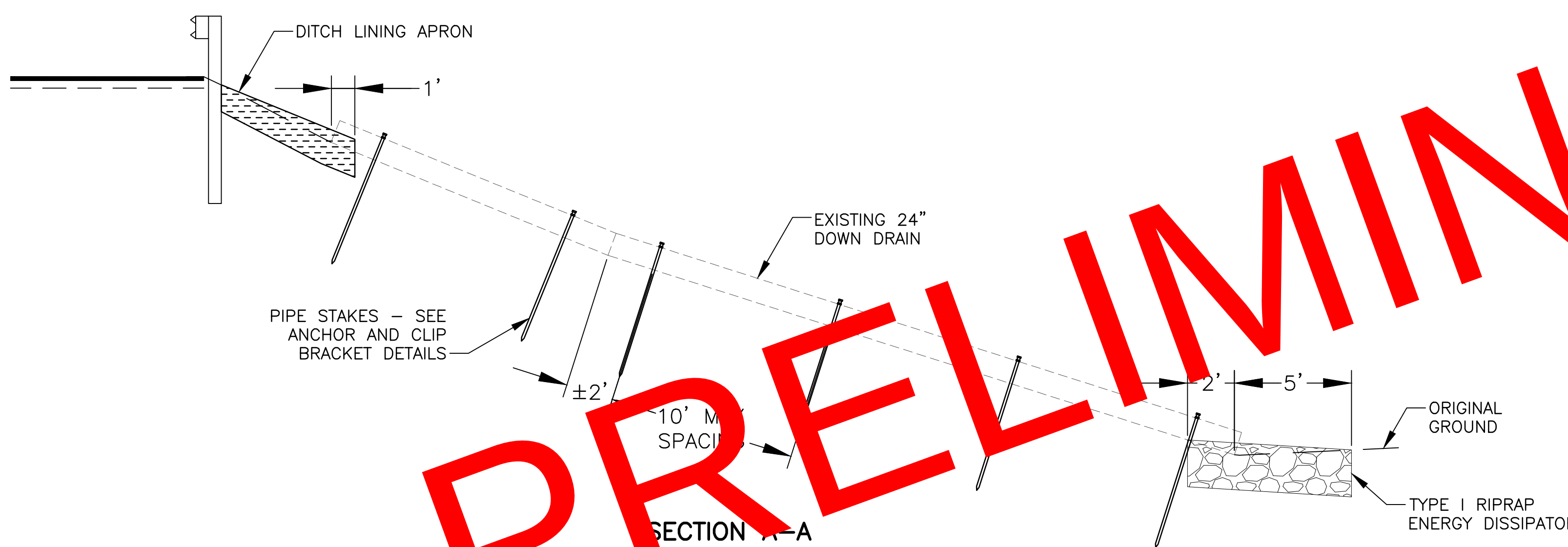
PLAN



ANCHOR DETAIL



CLIP BRACKET DETAIL

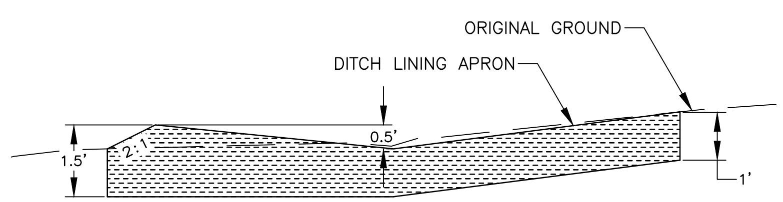


SECTION A–A

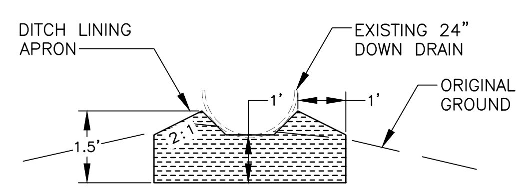
PRELIMINARY

NOTES:

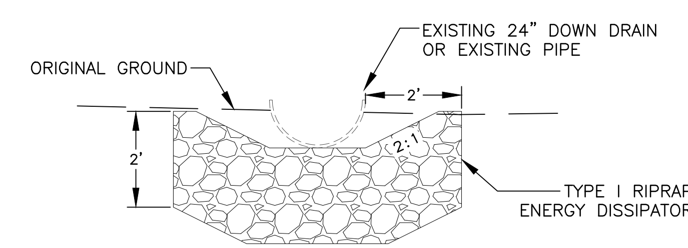
1. INSTALL A MINIMUM 1–FOOT THICK DITCH LINING APRON BETWEEN THE GUARDRAIL AND THE EXISTING FLUME DOWN DRAIN. SHAPE HAUNCHES TO CHANNEL RUNOFF INTO THE INLET.
2. INSTALL A 2–FOOT THICK TYPE I RIPRAP ENERGY DISSIPATOR AT THE DOWN DRAIN AND P6–6 OUTLET.
3. SECURE THE EXISTING FLUME DOWNDRAIN TO THE SLOPE USING PIPE STAKES SECURED WITH CLIP BRACKETS. ANCHOR THE TOP AND BOTTOM OF PIPE SECTIONS WITHIN ±2', WITH A MAXIMUM SPACING OF 10' BETWEEN ADJACENT STAKES.
4. WORK AND MATERIALS FOR INSTALLATION OF PIPE STAKES WILL BE SUBSIDIARY TO RIPRAP ITEM.



SECTION B–B



SECTION C–C



SECTION D–D

APPLIES TO DOWN DRAIN AND PIPE PL6–6

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

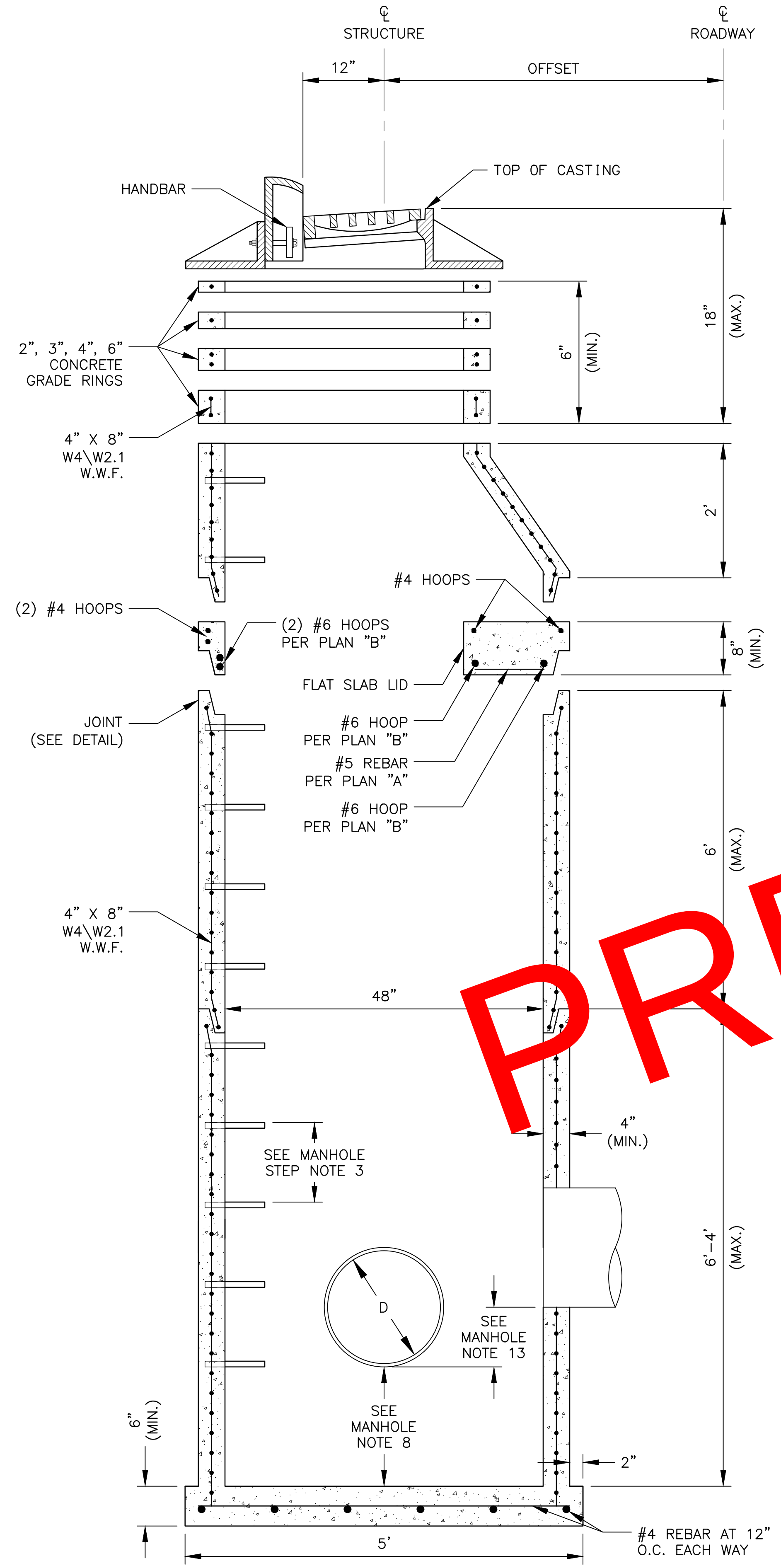
FLUME DOWNDRAIN AND ENERGY DISSIPATOR DETAIL

DESIGNED BY	SLH/RRH
CHECKED BY	RRH
DRAFTED BY	SLH/RRH
SCALE	1" = 2'
TIME	1:45 PM
DATE	5/12/2022

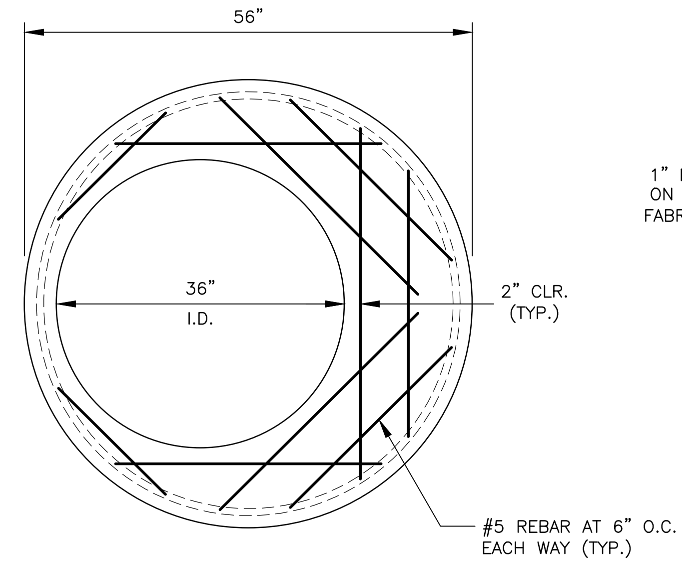
DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR–15 PP CFHWY00132\CIV3D19\PLANSET\00132_E22.DWG

NO.	DATE	REVISION

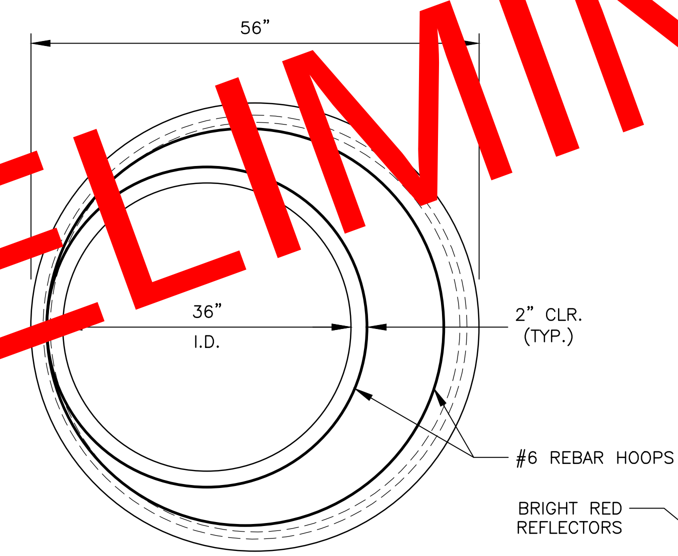
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	E23	E23



ELEVATION VIEW



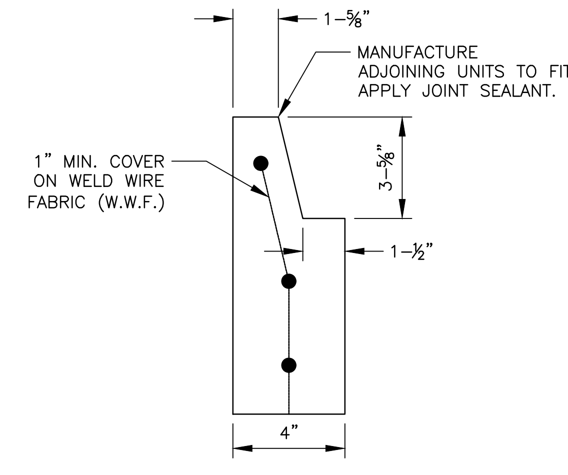
FLAT SLAB LID PLAN "A"



FLAT SLAB LID PLAN "B"

PLAN "B" NOTES:

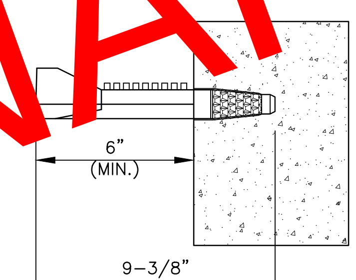
1. SEE ELEVATION VIEW FOR LOCATIONS OF #4 HOOPS.
2. #6 REBAR HOOPS ARE LOCATED ABOVE #5 REBAR AND WITHIN 3" OF BASE.

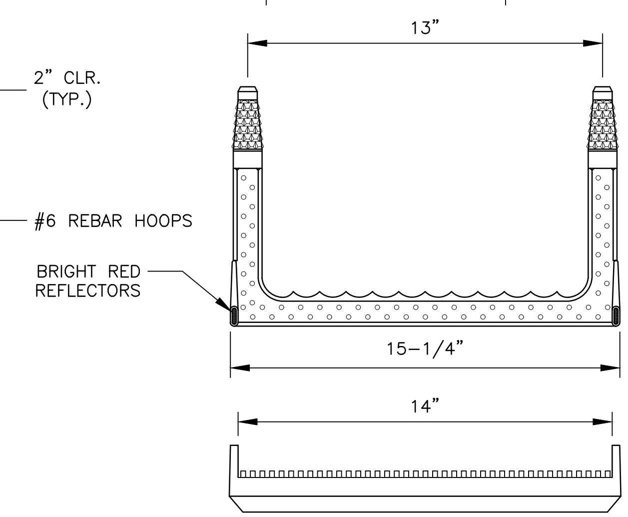


JOINT DETAIL

JOINT DETAIL NOTES:

1. DIMENSIONS A





MANHOLE STEP

MANHOLE STEP NOTES:

1. MANHOLE STEPS SHALL BE INJECTION MOLDED, POLYPROPYLENE COVERED GRADE 60 STEEL, TIGHTLY IMBEDDED AT LEAST 3" INTO CONCRETE.
2. THE INSTALLED STEPS SHALL RESIST A PULLOUT FORCE OF 1500 LB.
3. STEPS SHALL BE PLACED 12" O.C. ON AN UNOBSTRUCTED SIDE OF THE STRUCTURE, 24" MAX. FROM TOP OF CASTING AND 18" FROM MANHOLE BASE.

MANHOLE NOTES:

1. THESE DRAWINGS ARE FOR PRECAST REINFORCED CONCRETE FOR HIGHWAY USE.
2. MAXIMUM KNOCKOUT SIZE FOR PIPES IS 32". MINIMUM DISTANCE BETWEEN KNOCKOUTS IS 4".
3. 24" AND LARGER AND PIPES < 90° APART, NEED 8" VERTICAL CLEARANCE.
4. USE CONCRETE WITH A MINIMUM 4000 PSI 28 DAY COMPRESSIVE STRENGTH AND 6% ± 1.5% AIR ENTRAINMENT. MAXIMUM WATER/CEMENT RATIO IS 0.45.
5. MINIMUM STEEL REQUIRED FOR BARREL AS PER AASHTO M199 SHALL BE EMBEDDED IN BASE SO THAT THE FIRST BARREL SECTION IS CONNECTED TO THE BASE BY CONTINUOUS STEEL.
6. MINIMUM COVER ON REINFORCING STEEL IS 1".
7. FORM ALL BLOCKOUTS.
8. ALL STORM DRAIN MANHOLES AND INLETS SHALL HAVE 18" MINIMUM SUMPS. MANHOLES WITH PETROLEUM SEPARATORS SHALL HAVE 24" MINIMUM SUMPS. UNLESS SHOWN OTHERWISE ON THE PLANS.
9. A FLAT LID WITH A SMALLER OPENING MAY ALSO BE USED IF CALLED FOR. THIS REQUIRES ADDITIONAL #5 REBAR REINFORCEMENT AT THE SAME SPACING AS SHOWN IN PLAN "A". ALSO, ADJUST HOOP DIAMETERS AROUND THE OPENING TO PROVIDE THE SAME COVER.
10. MANHOLES PLACED ALONG CURB LINE SHALL HAVE STEPS ALIGNED UNDER THE CURB INLET.
11. PLACE MANHOLE BASE ON 6" MIN. COMPACTED AGGREGATE BASE COURSE.
12. EXTEND PIPE A MINIMUM OF 2" INTO MANHOLE.
13. MINIMUM DROP BETWEEN PIPES IS 1.5".
14. PIPE LENGTH AND INVERT, AND SLOPE ARE MEASURED FROM CENTER OF MANHOLE.

PRELIMINARY

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

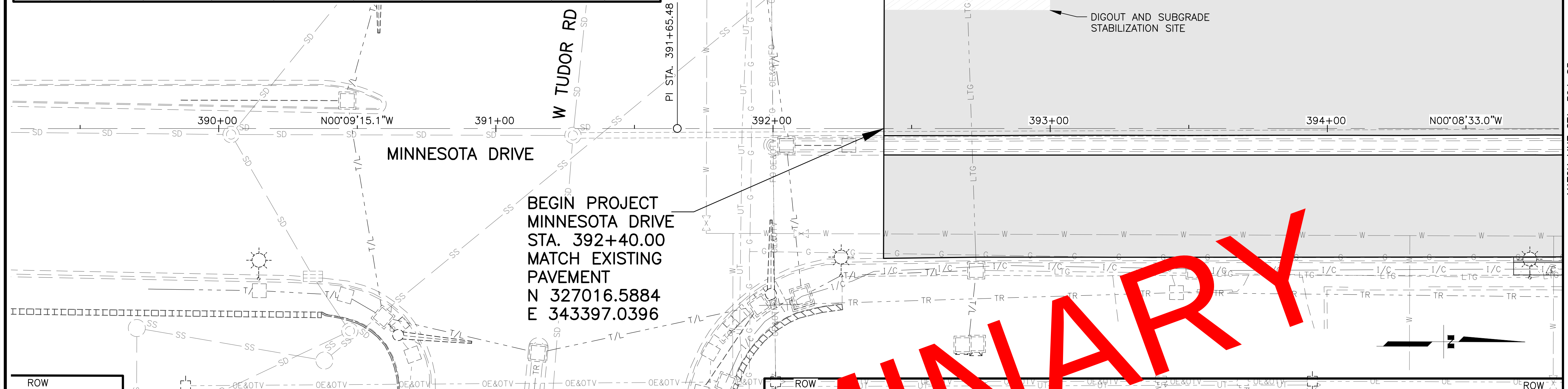
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

STORM SEWER MANHOLE, TYPE I
DETAIL

DESIGNED BY
CHECKED BY
DRAFTED BY
SCALE
DATE 5/12/2022 TIME 1:45 PM
DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_E23.DWG

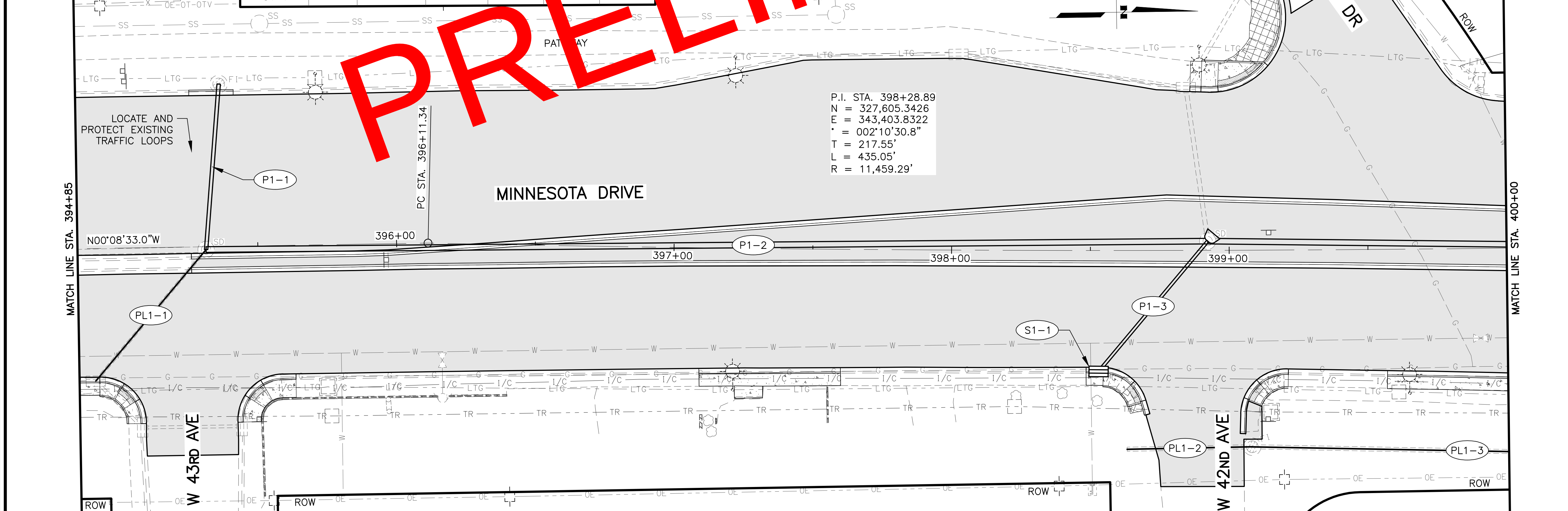
PIPE SUMMARY

PIPE	SIZE (IN)	LENGTH (FT)	START STATION	START OFFSET	START INVERT ELEV. (FT)	END STATION	END OFFSET	END INVERT ELEV. (FT)	% GRADE	REMARKS
P1-1	12	59.73	395+36.84	58.46' LT	84.8300	395+31.35	1.02' RT	83.7300	1.84%	
P1-2	24	360.90	395+31.35	1.02' RT	80.7600	398+92.29	3.32' LT	76.8900	1.07%	
P1-3	12	61.21	398+52.98	43.53' RT	81.4500	398+92.29	3.32' LT	77.3400	6.71%	



STRUCTURE SUMMARY

STRUCTURE	TYPE	STATION	OFFSET	TOP OF CASTING	TYPE OF CASTING	REMARKS
S1-1	TYPE A	398+52.98	43.53' R	84.07		



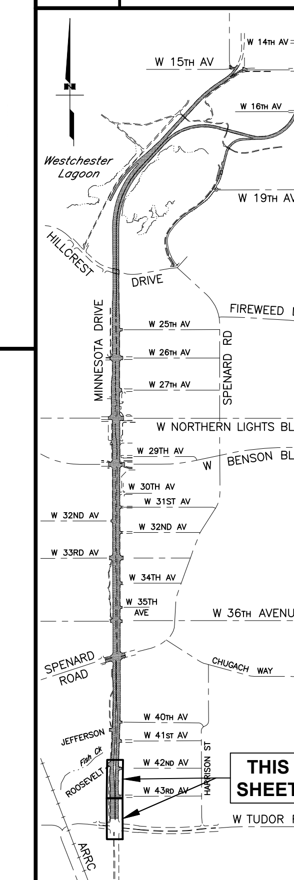
PRELIMINARY

SHEET NO.	TOTAL SHEETS
F01	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/
CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA
49TH
RYAN R. HAMMEL
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ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PLAN
B.O.P. TO STA. 400+00

DESIGNED BY	SLH
CHECKED BY	RRH
DRAFTED BY	SLH
SCALE	1" = 20'
DATE	5/16/2022
TIME	2:23 PM

DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_F01_PLAN.DWG

DESIGNED BY	SLH
CHECKED BY	RRH
DRAFTED BY	SLH
SCALE	1" = 20'
DATE	5/16/2022
TIME	2:26 PM

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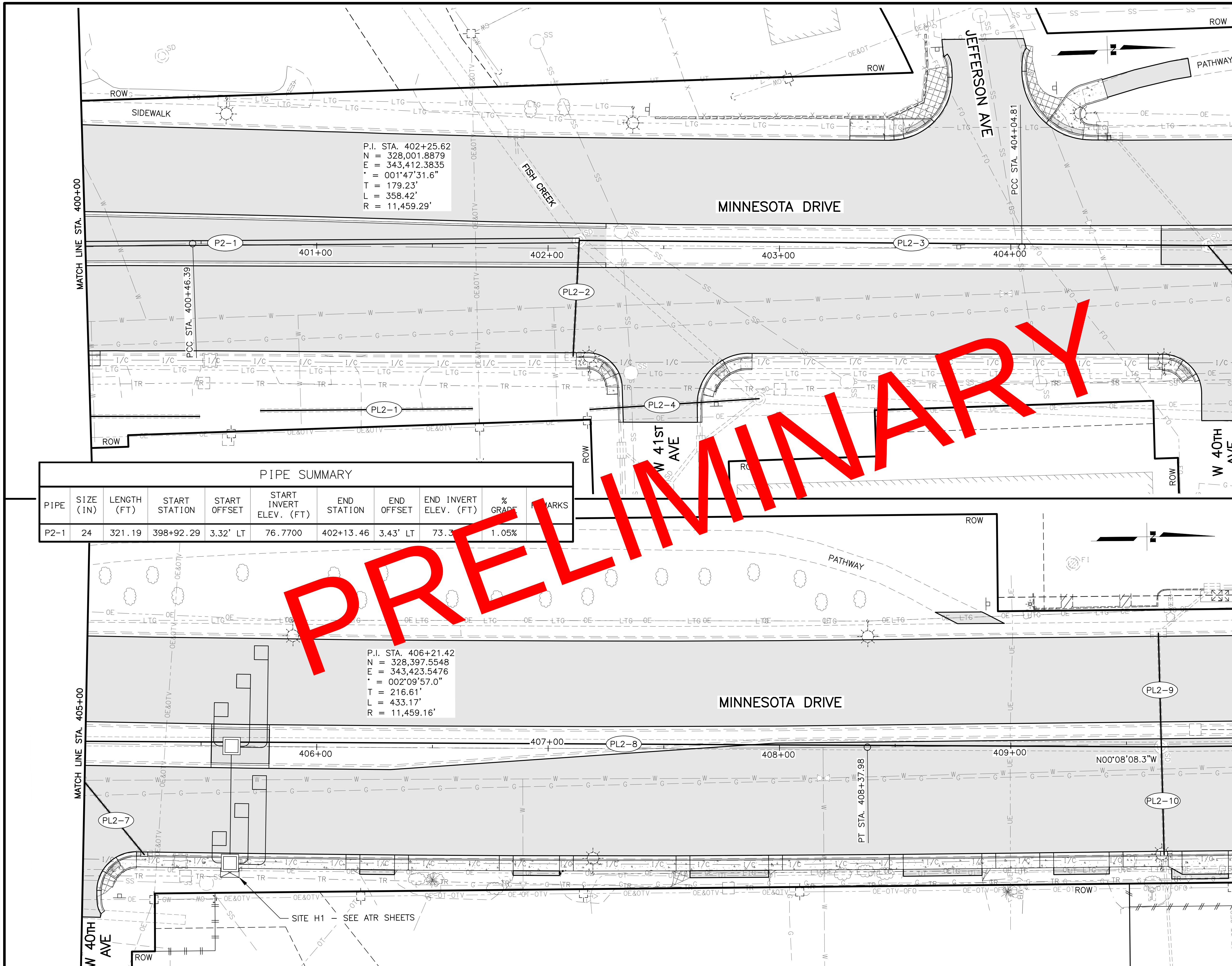


PIPE SUMMARY

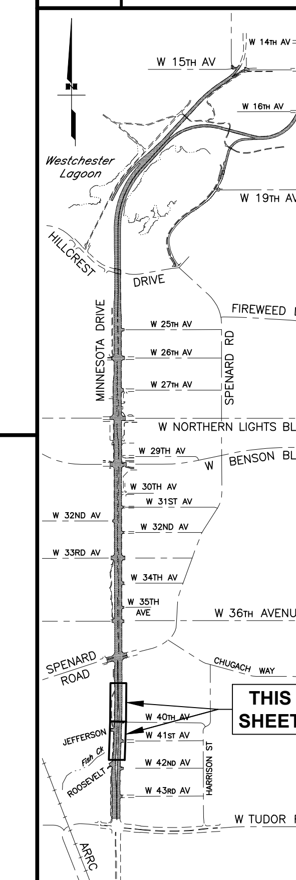
PIPE	SIZE (IN)	LENGTH (FT)	START STATION	START OFFSET	START INVERT ELEV. (FT)	END STATION	END OFFSET	END INVERT ELEV. (FT)	% GRADE	REMARKS
P2-1	24	321.19	398+92.29	3.32' LT	76.7700	402+13.46	3.43' LT	73.3[illegible]	1.05%	

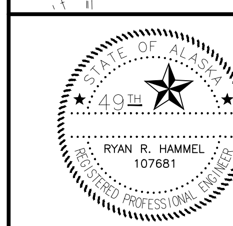
SHEET NO.	TOTAL SHEETS
F02	F18

STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION
0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



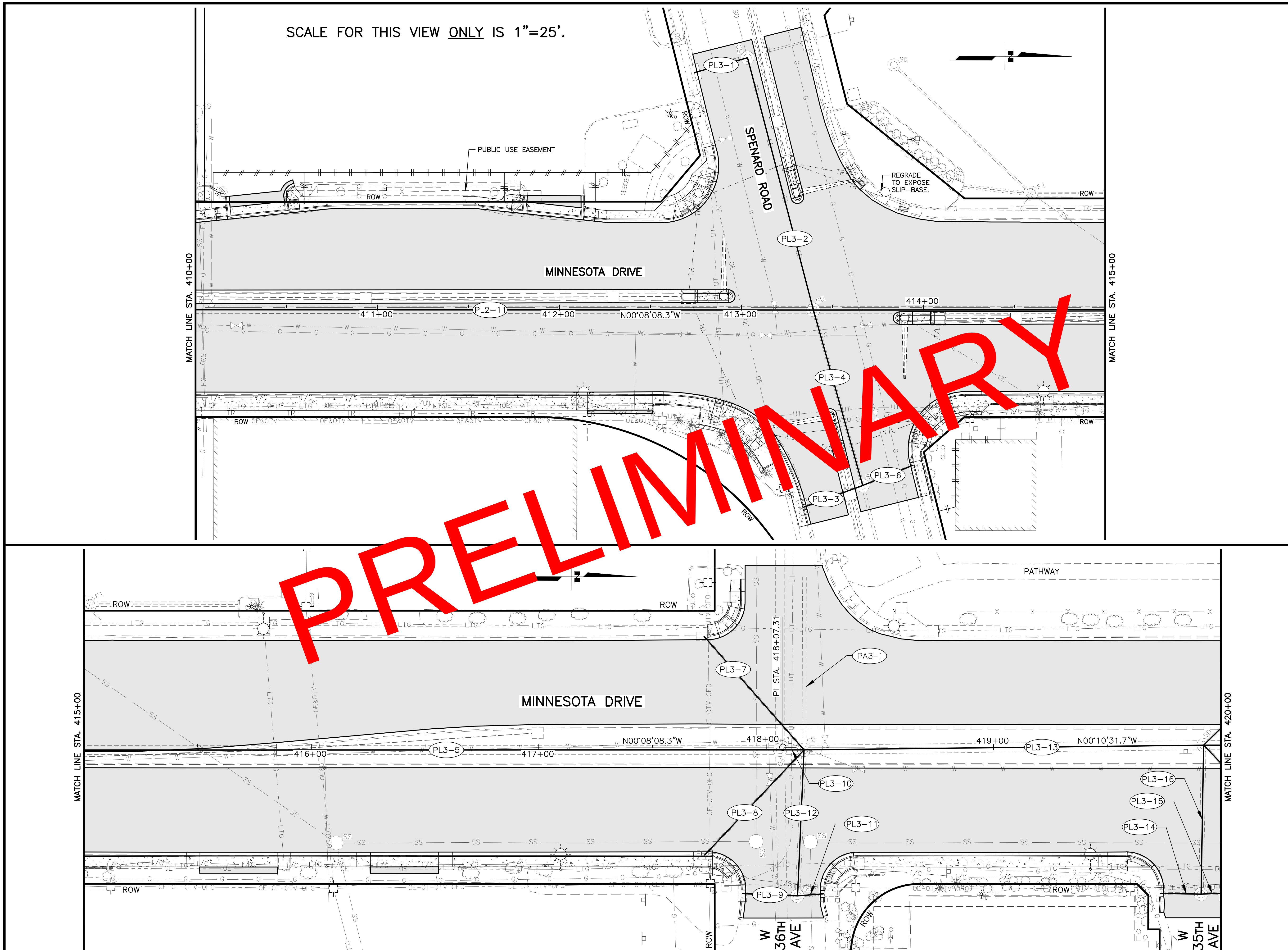


STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PLAN
STA. 400+00 TO 410+00

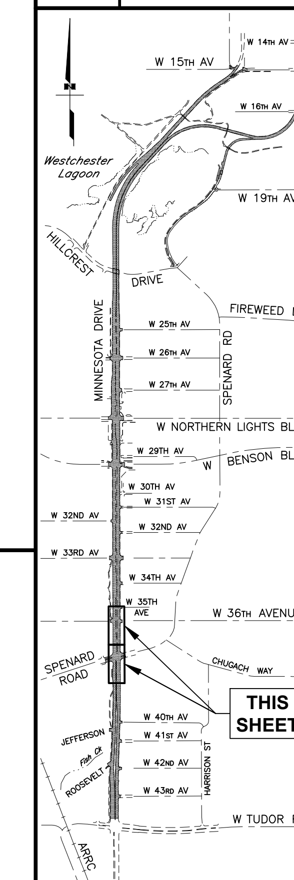


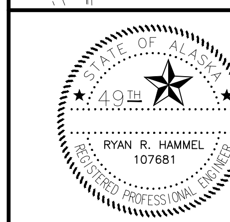
SHEET NO.	TOTAL SHEETS
F03	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	





STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PLAN
STA. 410+00 TO 420+00

DESIGNED BY	SLH
CHECKED BY	RRH
DRAFTED BY	SLH

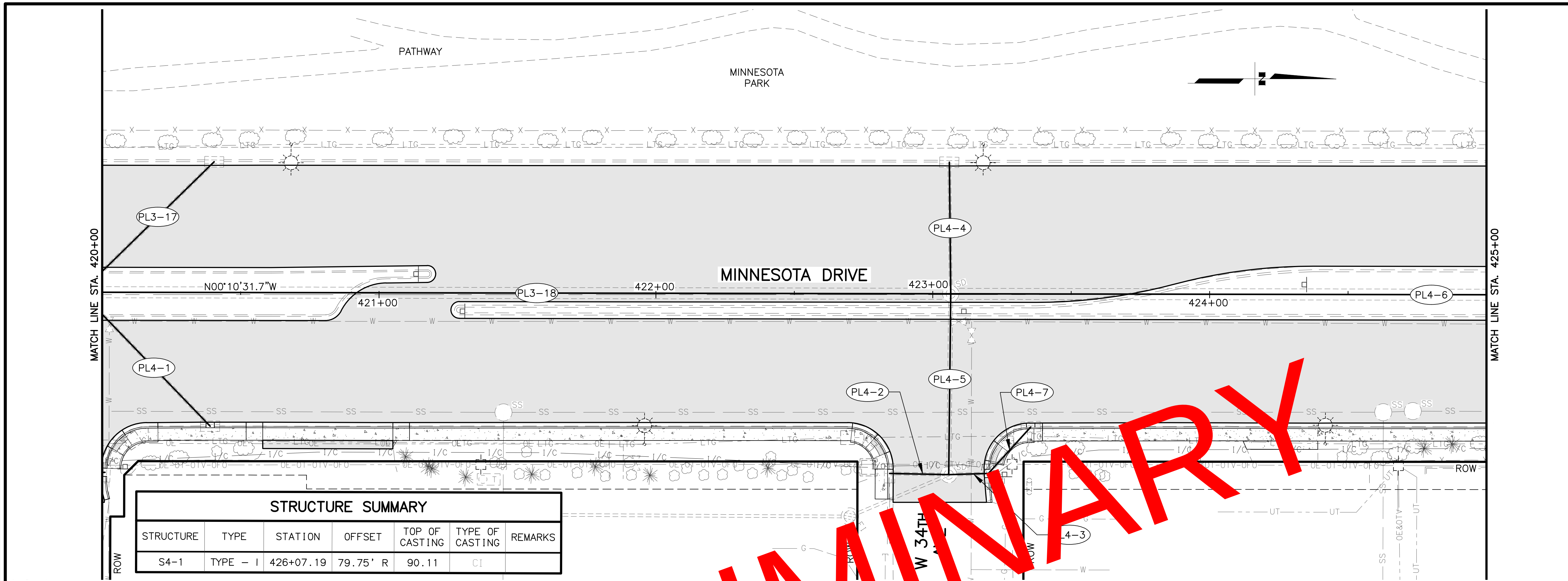
SCALE: VARIES

DATE: 5/16/2022 TIME: 2:28 PM

DRAWING LOCATION: W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_F01_PLAN.DWG

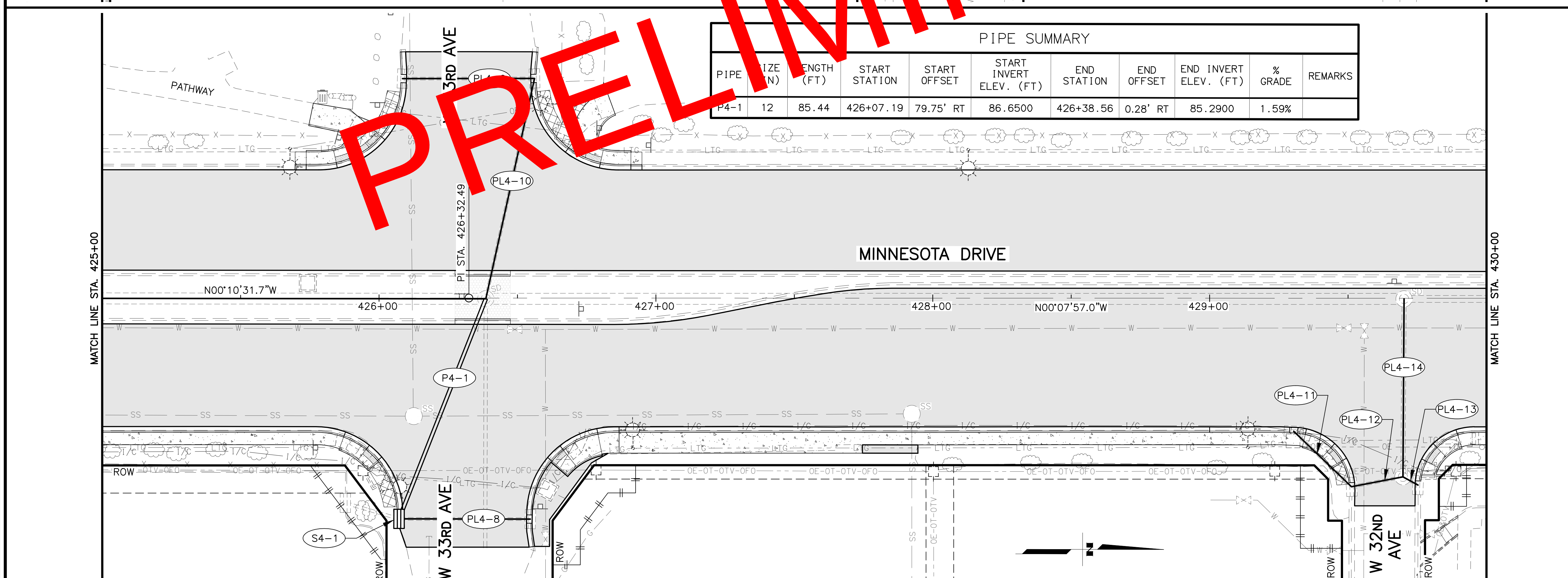
SHEET NO. F04 | TOTAL SHEETS F18
STATE ALASKA | YEAR 2022
PROJECT DESIGNATION 0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STRUCTURE SUMMARY

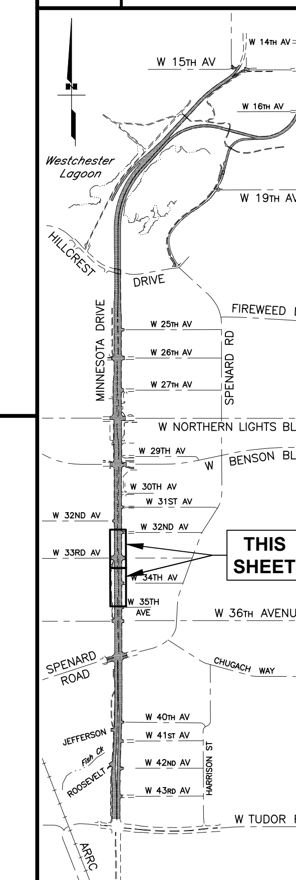
STRUCTURE	TYPE	STATION	OFFSET	TOP OF CASTING	TYPE OF CASTING	REMARKS
S4-1	TYPE – I	426+07.19	79.75' R	90.11	CI	



PIPE SUMMARY

PIPE	SIZE (IN)	LENGTH (FT)	START STATION	START OFFSET	START INVERT ELEV. (FT)	END STATION	END OFFSET	END INVERT ELEV. (FT)	% GRADE	REMARKS
P4-1	12	85.44	426+07.19	79.75' RT	86.6500	426+38.56	0.28' RT	85.2900	1.59%	

PRELIMINARY



STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

PLAN
STA. 420+00 TO 430+00

DESIGNED BY	SLH
CHECKED BY	RRH
DRAFTED BY	SLH
SCALE	1" = 20'
DATE	5/16/2022
TIME	2:30 PM

DRAWING LOCATION
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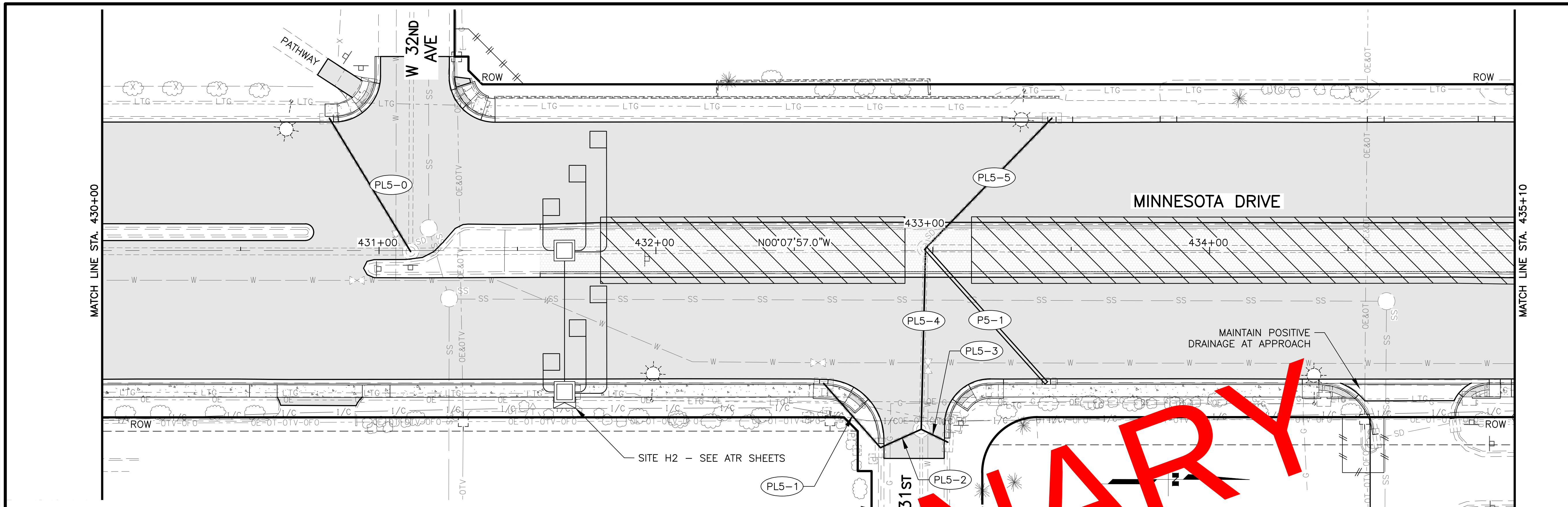
SHEET NO.	TOTAL SHEETS
F05	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

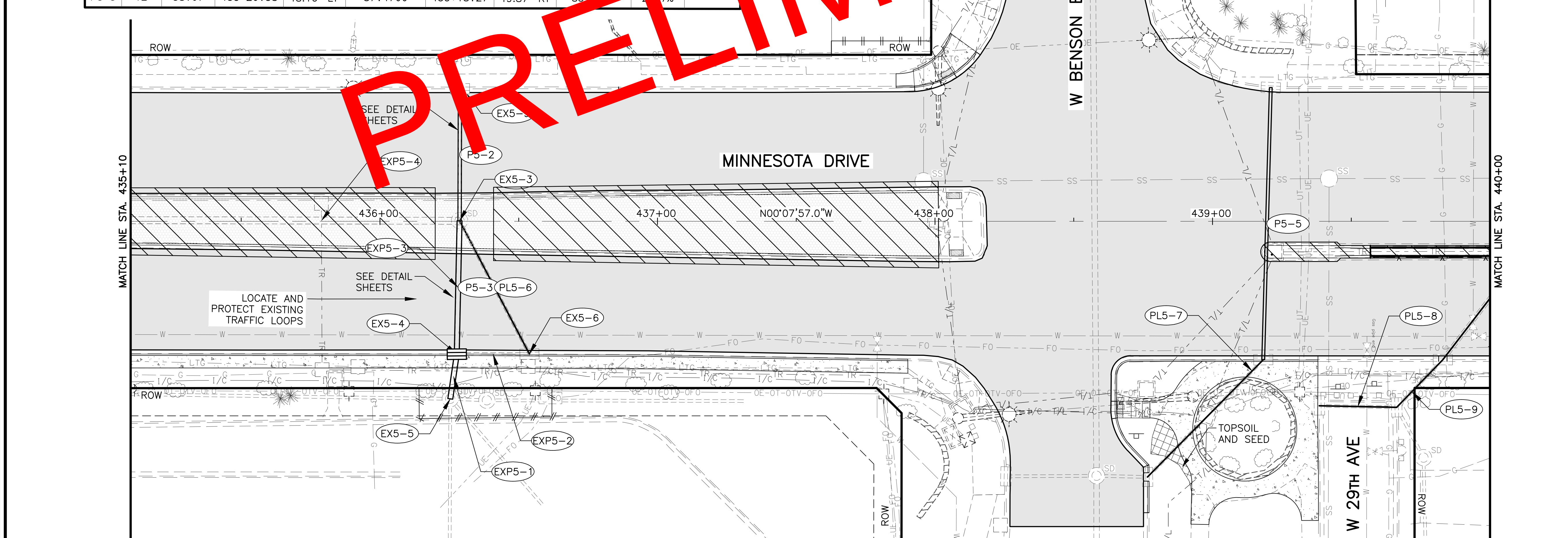
0421099/
CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

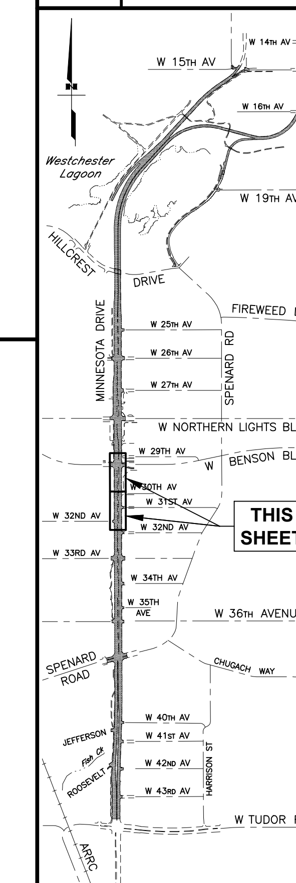


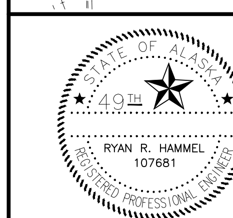
PIPE	SIZE (IN)	LENGTH (FT)	START STATION	START OFFSET	START INVERT ELEV. (FT)	END STATION	END OFFSET	END INVERT ELEV. (FT)	% GRADE	REMARKS
P5-1	12	65.26	433+41.01	47.77' RT	86.3200	432+97.40	0.79' LT	83.8300	3.82%	
P5-5	12	98.07	439+20.98	48.16' LT	87.4700	439+18.27	49.87' RT	85.[illegible]	2.[illegible]7%	

PIPE SUMMARY



PRELIMINARY





STATE OF ALASKA DOT&PF
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ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PLAN
STA. 430+00 TO 440+00

DESIGNED BY	CHECKED BY	DRAFTED BY
SLH	RRH	SLH

SCALE 1" = 20'

DATE 5/16/2022 TIME 2:33 PM

DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_F01_PLAN.DWG

DESIGNED BY	CHECKED BY	DRAFTED BY
SLH	RRH	SLH

SCALE 1" = 20'

DATE 5/16/2022 TIME 2:35 PM

DRAWING LOCATION
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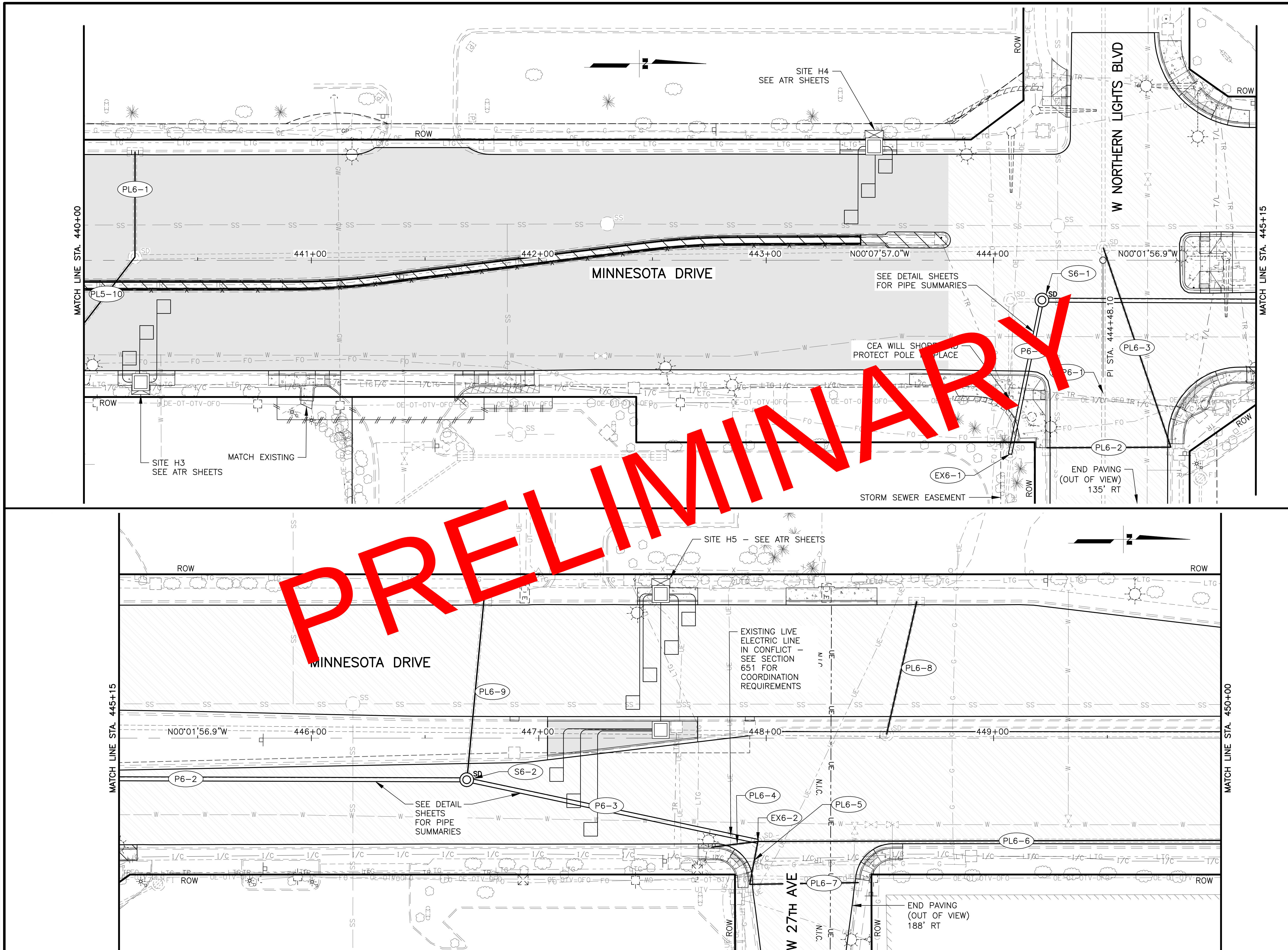
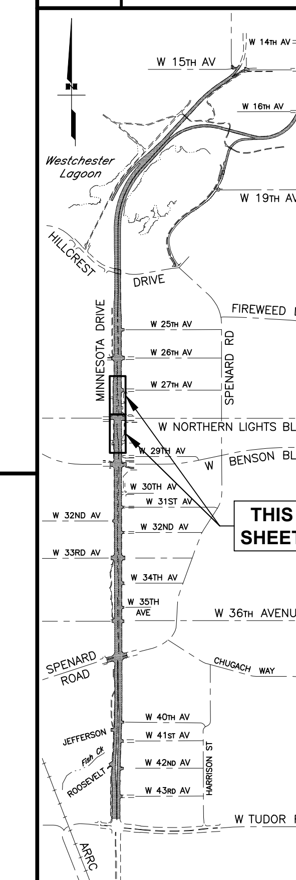


SHEET NO.	TOTAL SHEETS
F06	F18
STATE	**YEAR**
ALASKA	2022

PROJECT DESIGNATION
0421099/
CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

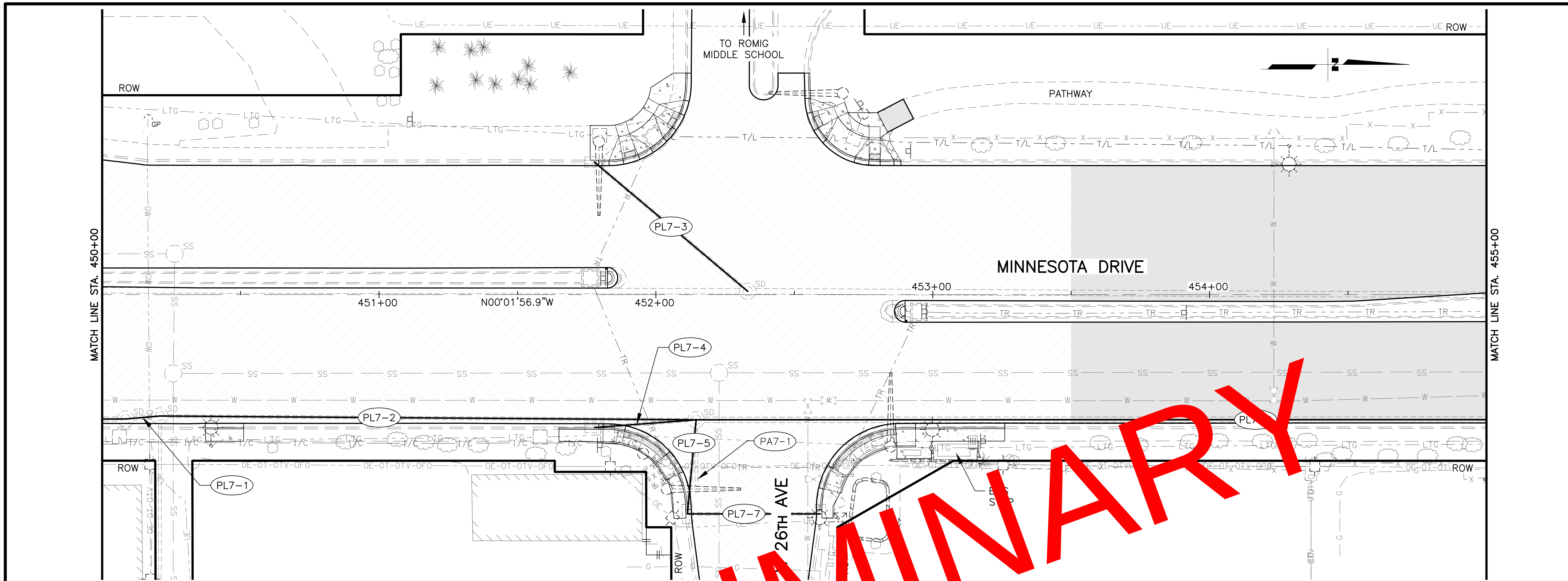
PLAN
STA. 440+00 TO 450+00

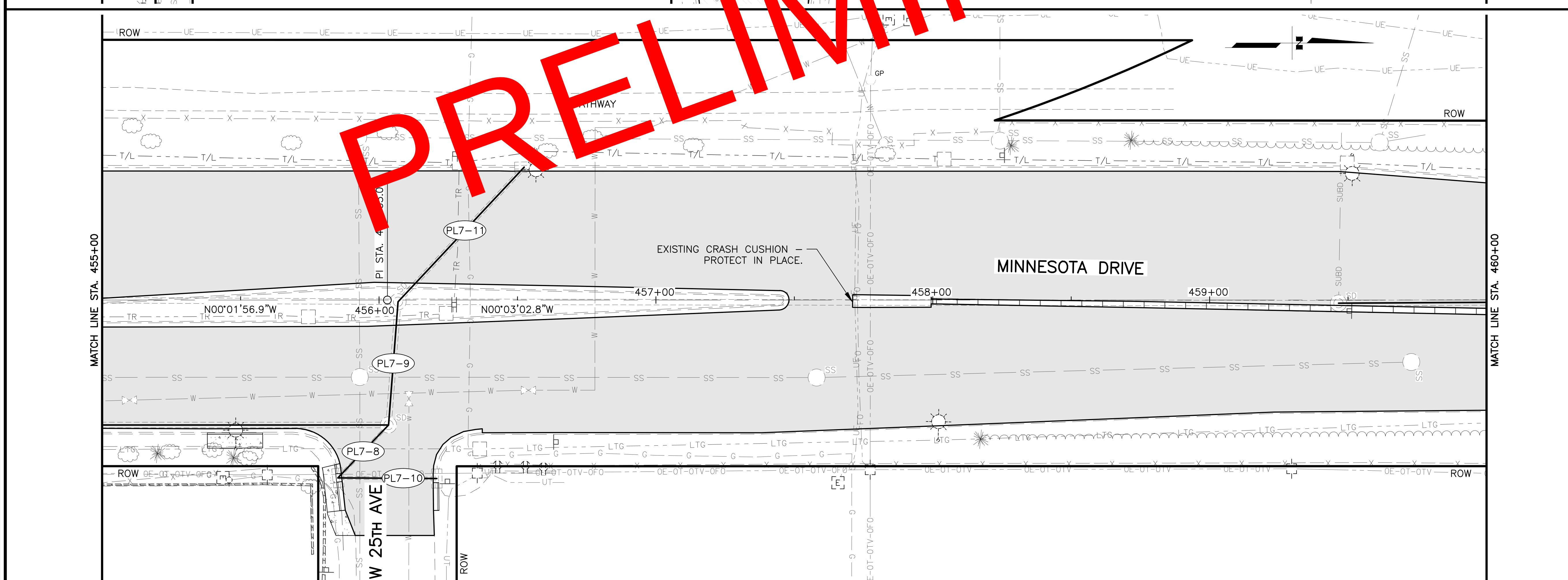
DESIGNED BY	CHECKED BY	DRAFTED BY
SLH	RRH	SLH

SCALE 1" = 20'

DATE 5/16/2022 TIME 2:37 PM

DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_F01_PLAN.DWG



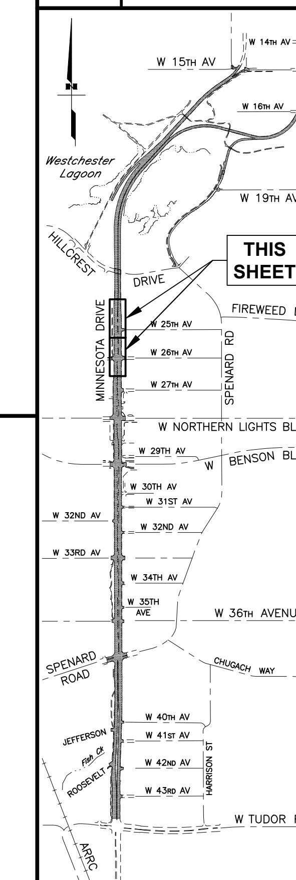


SHEET NO.	TOTAL SHEETS
F07	F18
STATE	**YEAR**
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



RYAN R. HAMMEL 107681

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

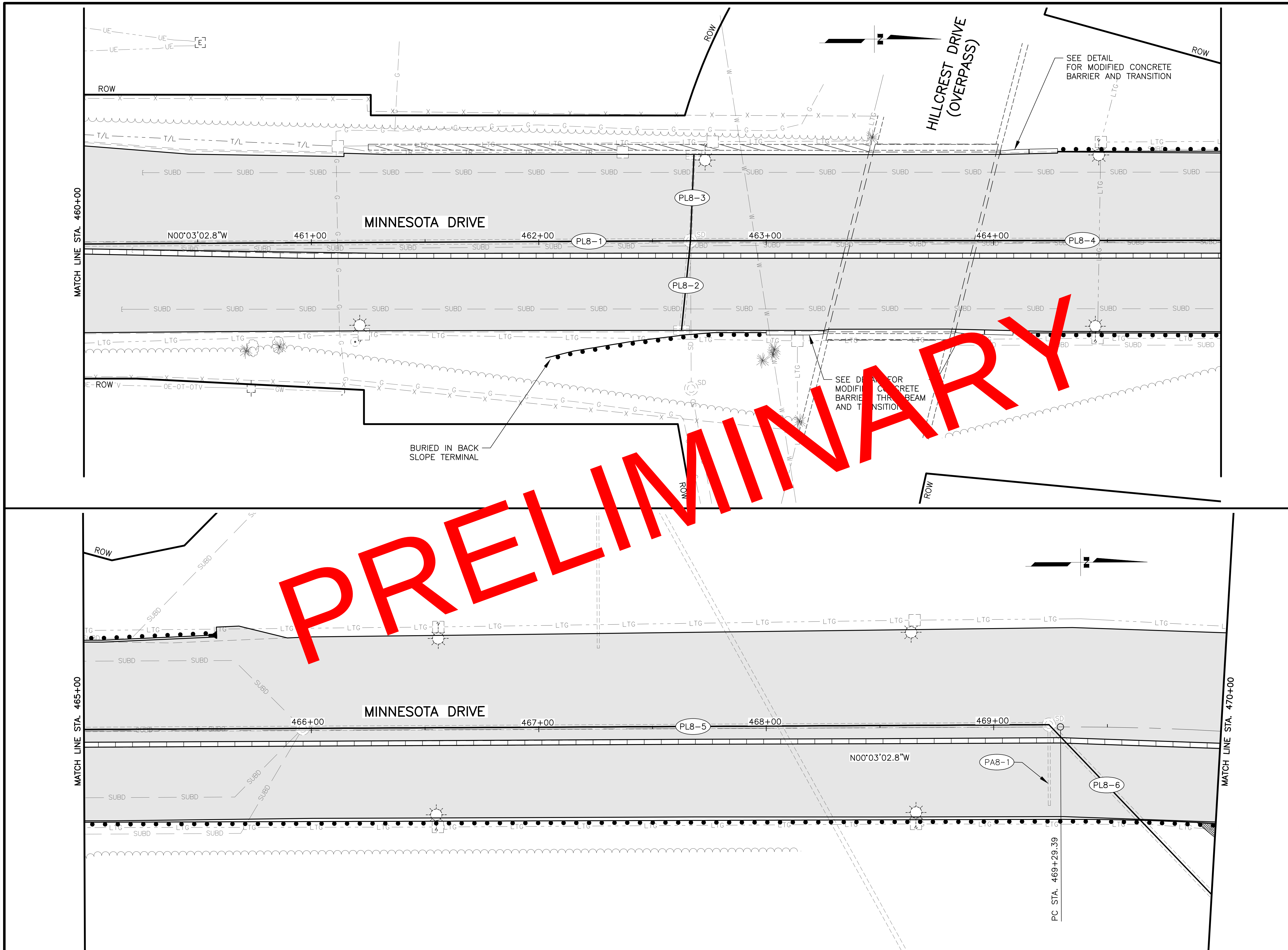
PLAN
STA. 450+00 TO 460+00

DESIGNED BY	SLH
CHECKED BY	RRH
DRAFTED BY	SLH

SCALE 1" = 20'

DATE 5/16/2022 TIME 2:39 PM

DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_F01_PLAN.DWG

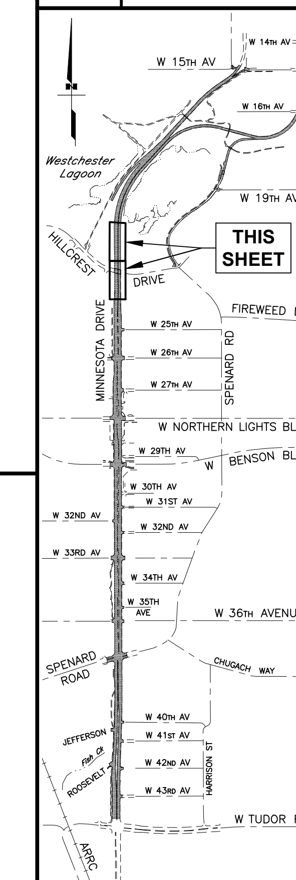


SHEET NO.	TOTAL SHEETS
F08	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



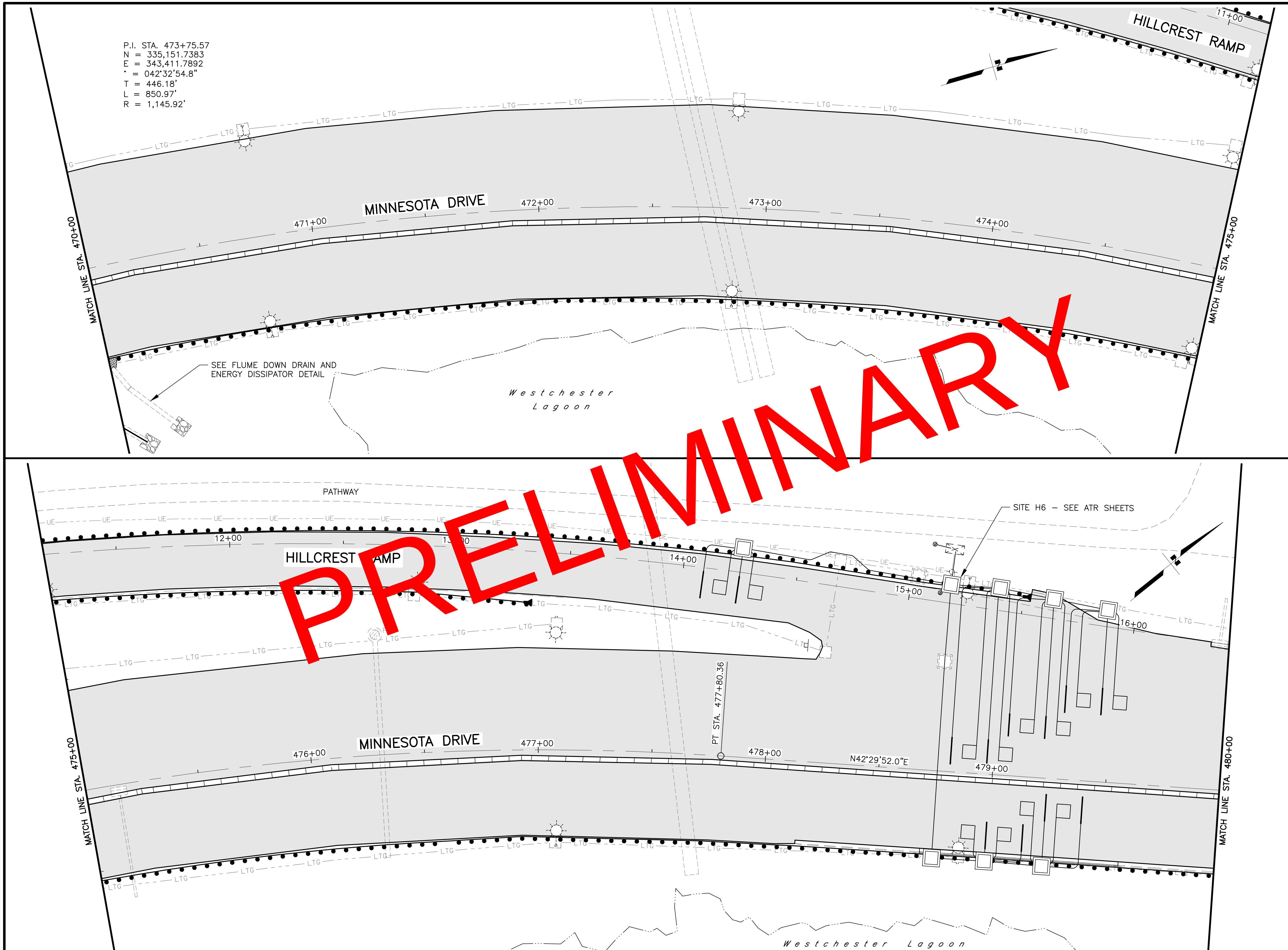
STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

PLAN
STA. 460+00 TO 470+00

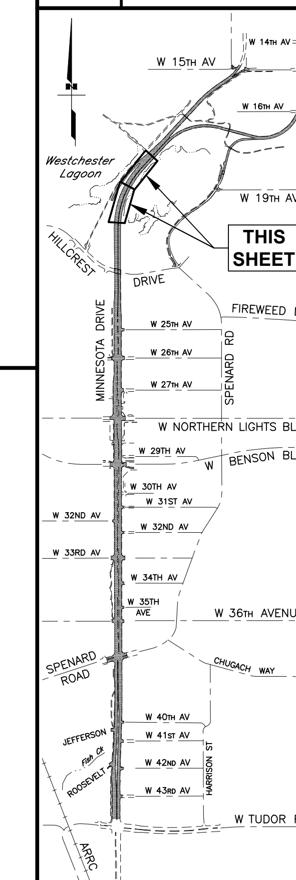


SHEET NO.	TOTAL SHEETS
F09	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/
CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



RYAN R. HAMMEL
107681

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PLAN
STA. 470+00 TO 480.00

DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY SLH

SCALE 1" = 20'

DATE 5/16/2022 TIME 2:41 PM

DRAWING LOCATION
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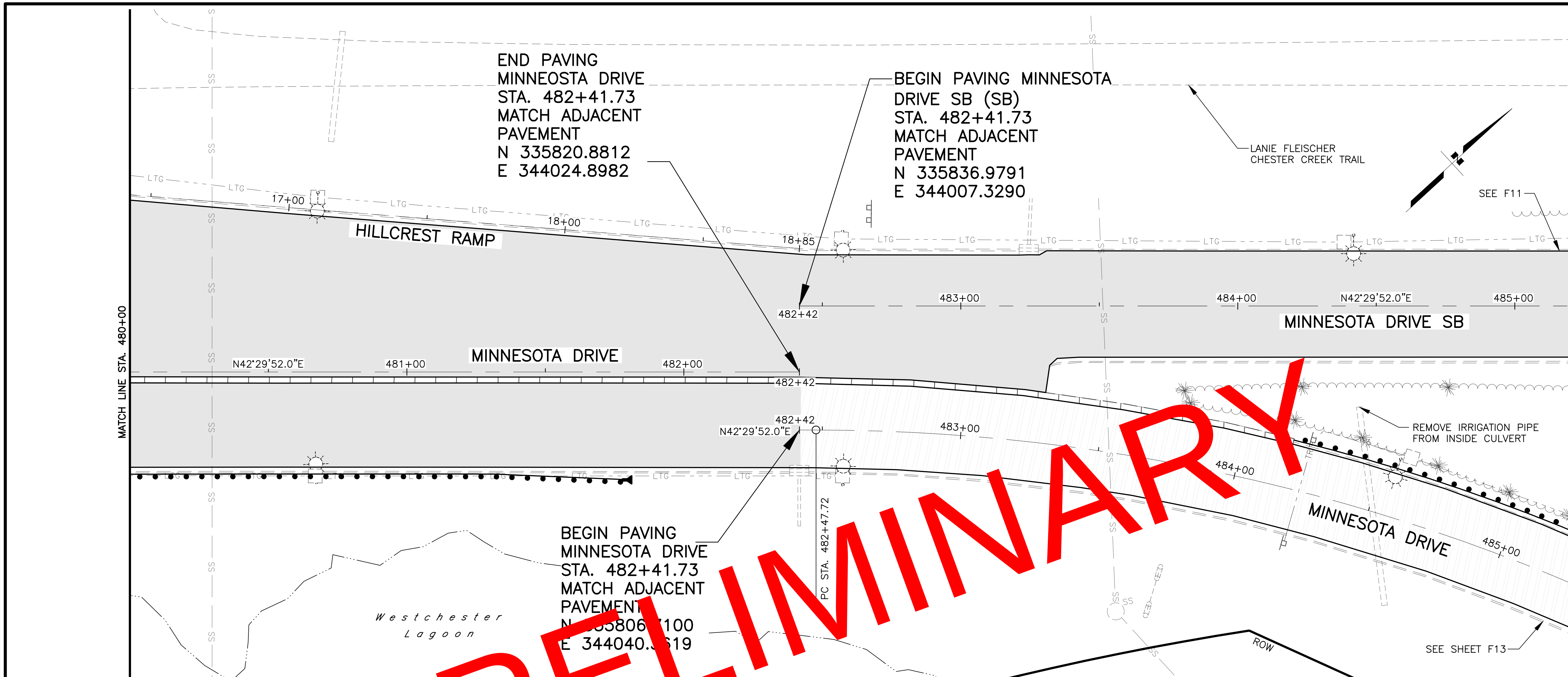
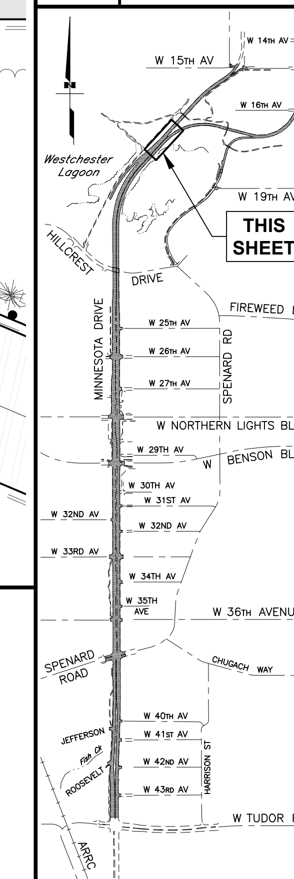


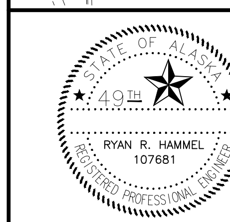
SHEET NO.	TOTAL SHEETS
F10	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/
CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	





STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PLAN
MAINLINE STA. 480+00 TO END
MINNESOTA SB &
MINNESOTA NB
B.O.P. TO STA. 485+30

DESIGNED BY	SLH
CHECKED BY	RRH
DRAFTED BY	SLH
SCALE	1" = 20'
DATE	5/16/2022
TIME	2:43 PM

DRAWING LOCATION
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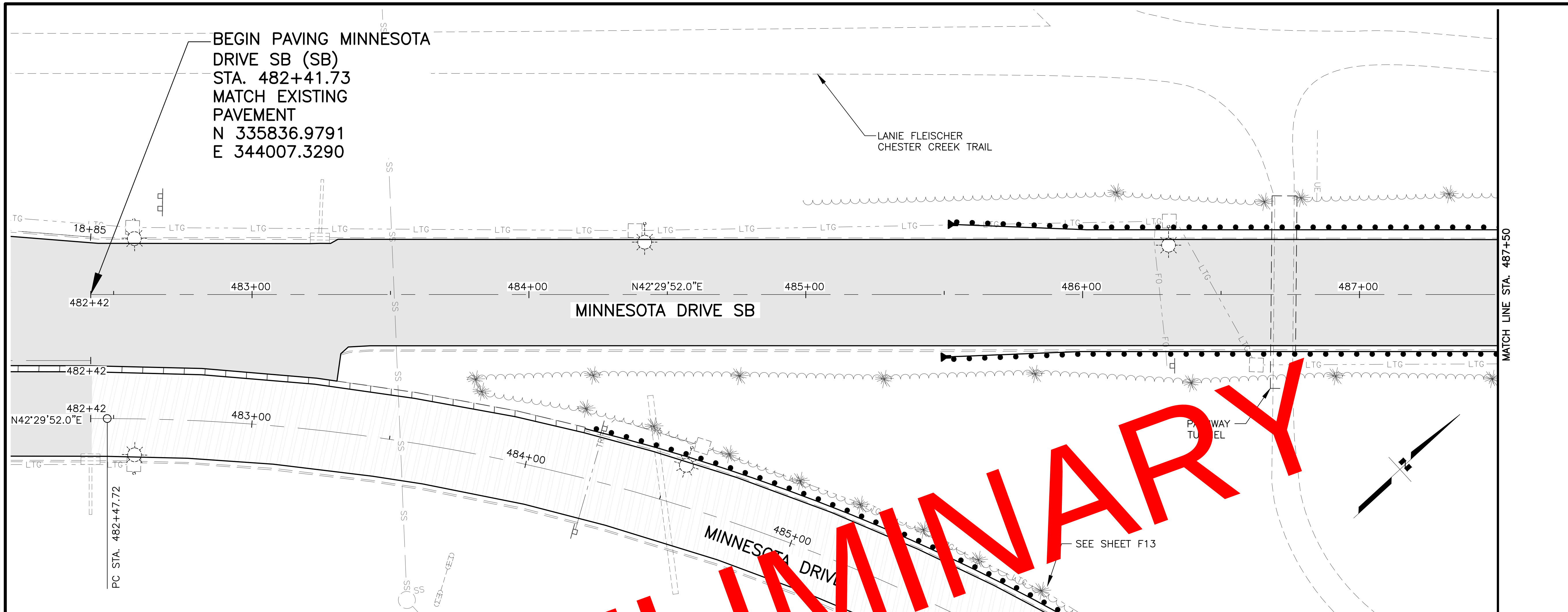
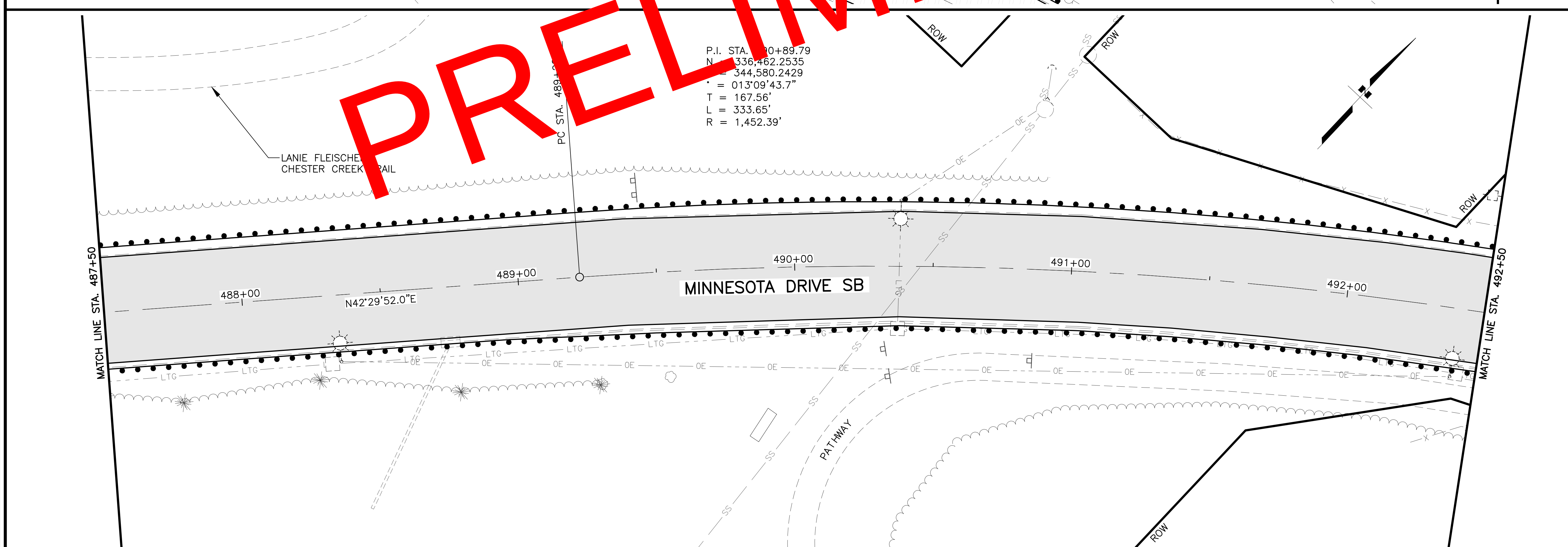
SHEET NO.	TOTAL SHEETS
F11	F18
STATE	YEAR
ALASKA	2022

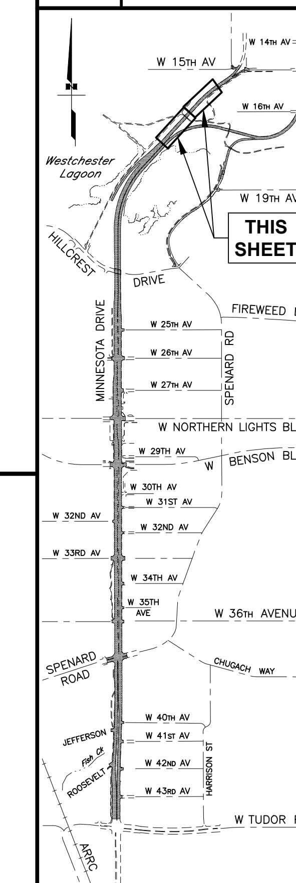
PROJECT DESIGNATION

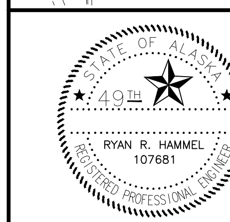
0421099/
CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	









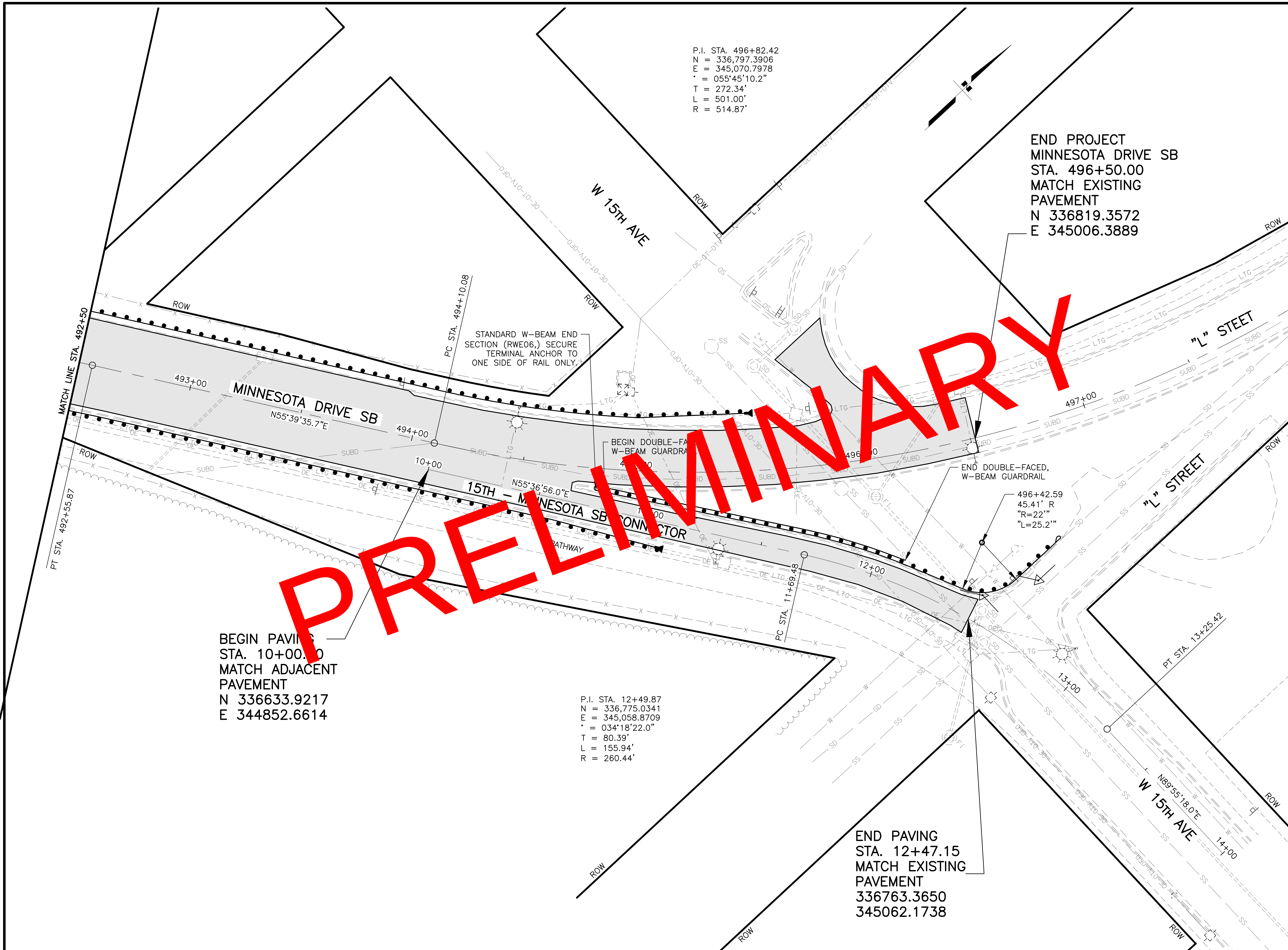
STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PLAN
MINNESOTA SB
STA. 487+50 TO 492+50

DESIGNED BY	SLH
CHECKED BY	RRH
DRAFTED BY	SLH
SCALE	1" = 20'
TIME	2:45 PM
DATE	5/16/2022
DRAWING LOCATION	W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_F01_PLAN.DWG

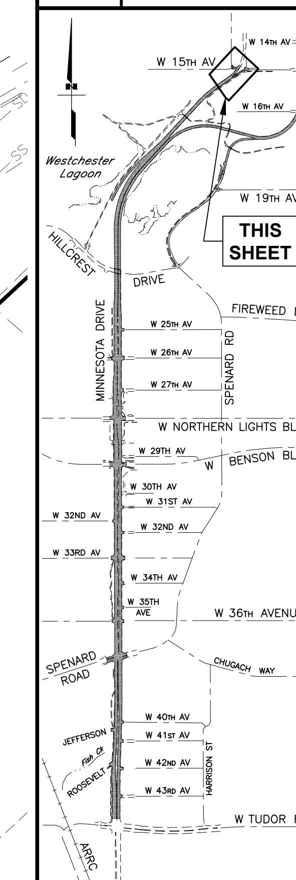


SHEET NO.	TOTAL SHEETS
F12	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/
CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



RYAN R. HAMMEL
107681
STATE OF ALASKA
49TH

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PLAN
MINNESOTA SB
STA. 492+50 TO E.O.P.

DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY SLH
SCALE 1" = 20'
DATE 5/16/2022 TIME 2:46 PM
DRAWING LOCATION
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DESIGNED BY	SLH
CHECKED BY	RRH
DRAFTED BY	SLH
SCALE	1" = 20'
DATE	5/16/2022
TIME	2:48 PM

DRAWING LOCATION
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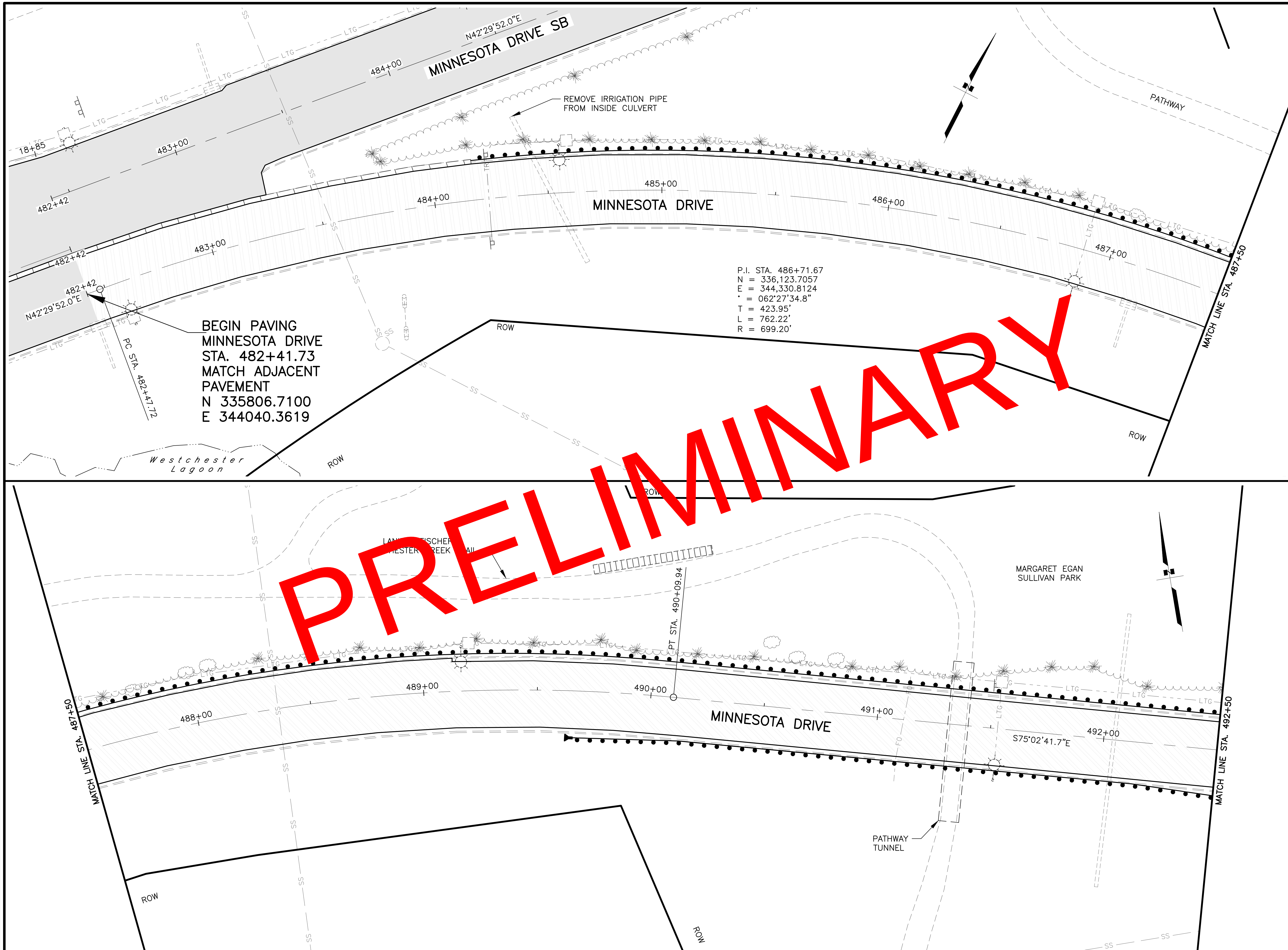
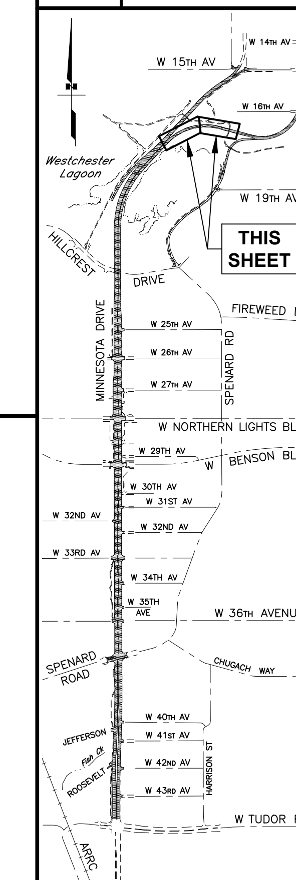
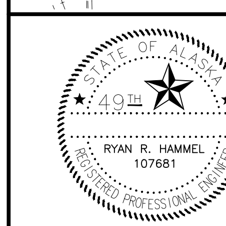


SHEET NO.	TOTAL SHEETS
F13	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION
0421099/
CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	





STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PLAN
MINNESOTA DRIVE
B.O.P. TO STA. 492+50

DESIGNED BY	SLH
CHECKED BY	RRH
DRAFTED BY	SLH
SCALE	1" = 20'
TIME	2:50 PM
DATE	5/16/2022

DRAWING LOCATION
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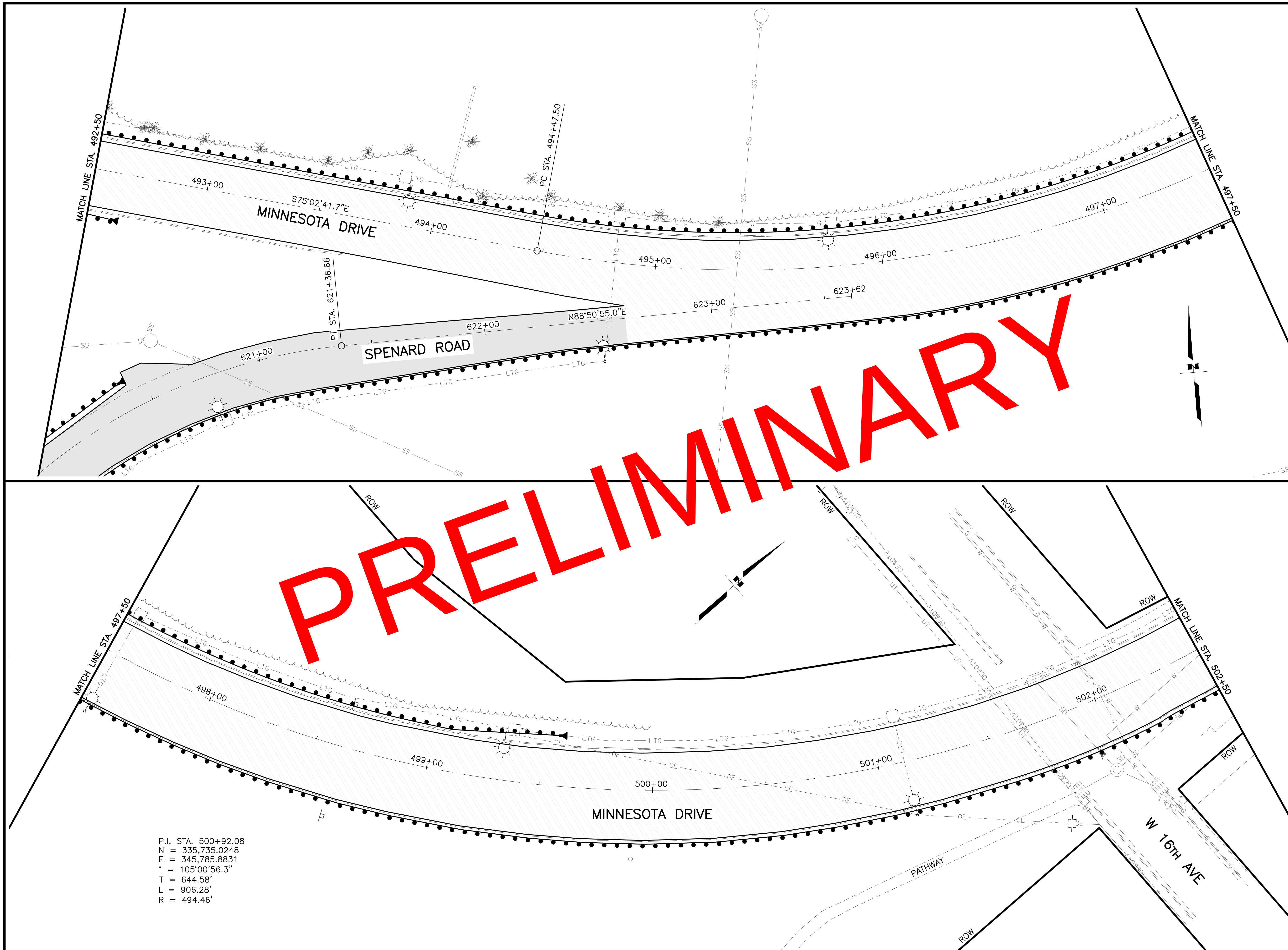
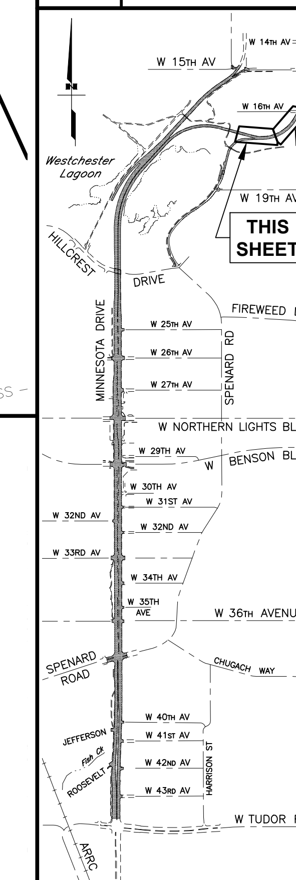


SHEET NO.	TOTAL SHEETS
F14	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION
0421099/
CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA
49TH
RYAN R. HAMMEL
107681
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

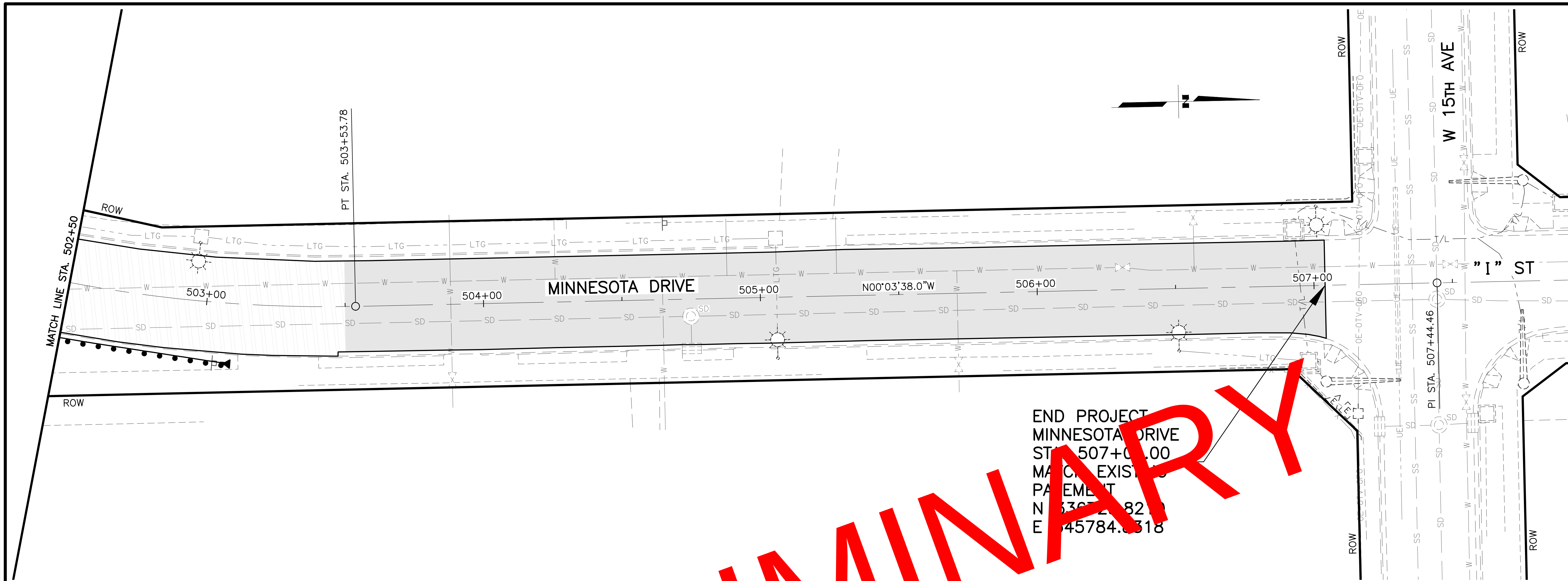
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

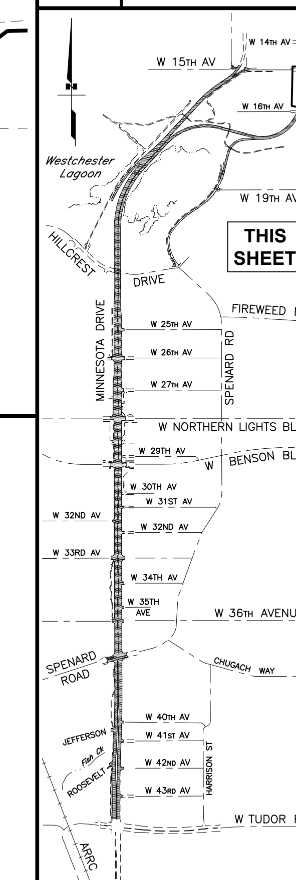
PLAN
MINNESOTA DRIVE
STA. 492+50 TO 502+50

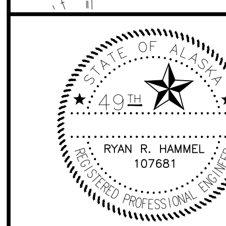
SHEET NO.	TOTAL SHEETS
F15	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION
0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	







STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

PLAN
MINNESOTA NB
STA. 502+50 TO E.O.P.

DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_F01_PLAN.DWG

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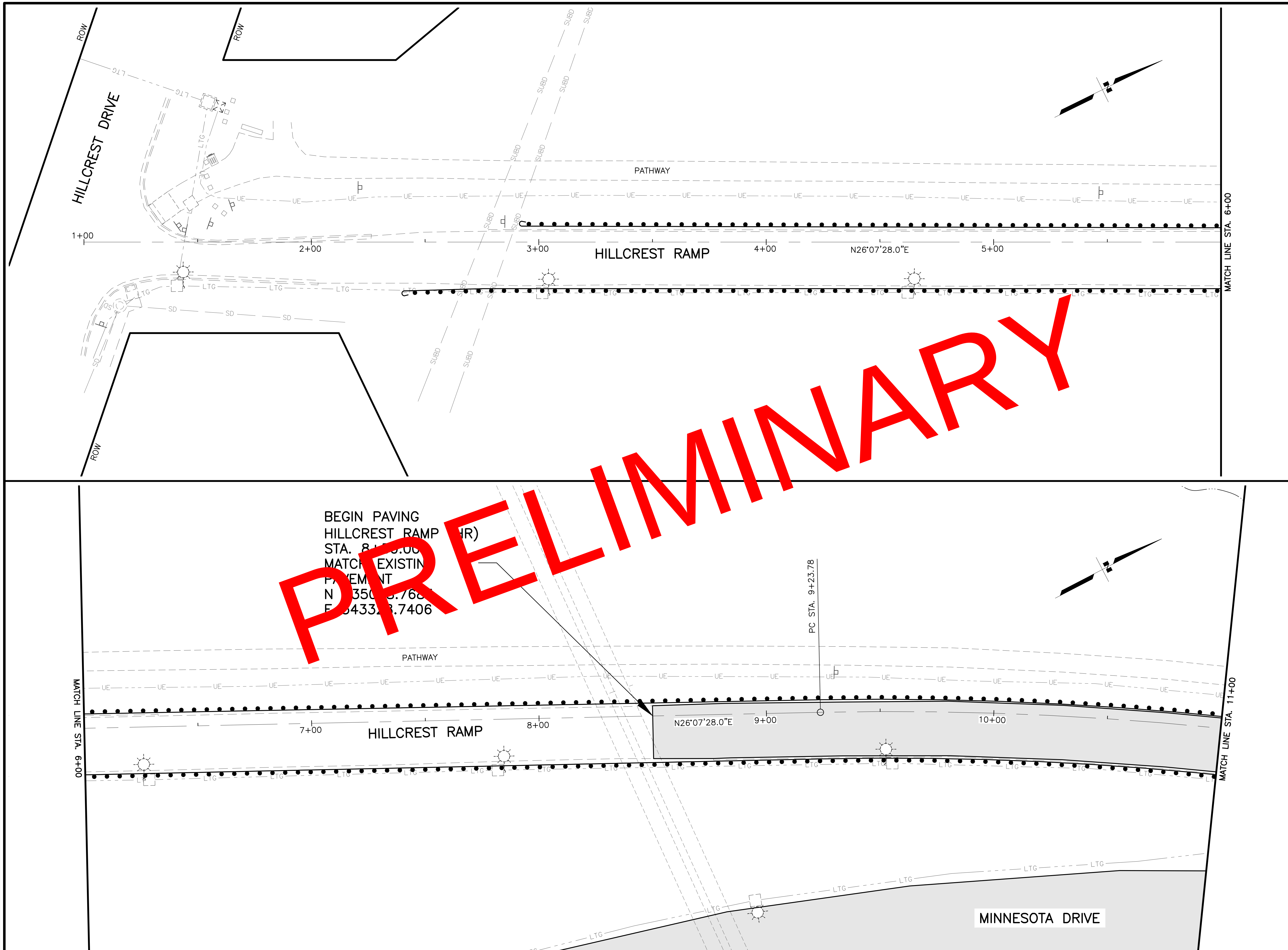
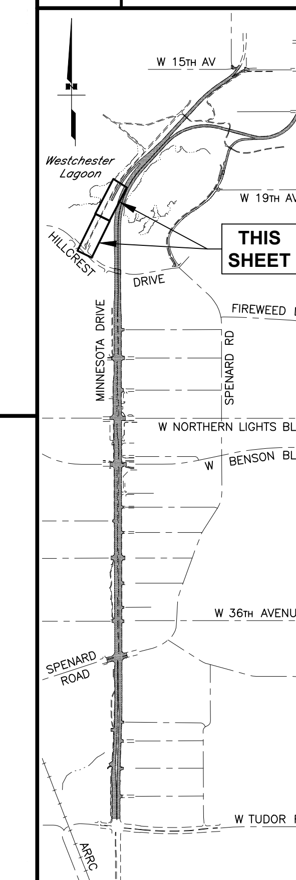


SHEET NO.	TOTAL SHEETS
F16	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/
CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA 49TH
RYAN R. HAMMEL
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REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PLAN
HILLCREST DRIVE
B.O.P. TO STA. 11+00

DRAWING LOCATION	DATE	TIME	SCALE	DESIGNED BY	SLH
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				DRAFTED BY	SLH

DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY SLH
SCALE 1" = 20'
TIME 2:53 PM
DATE 5/16/2022
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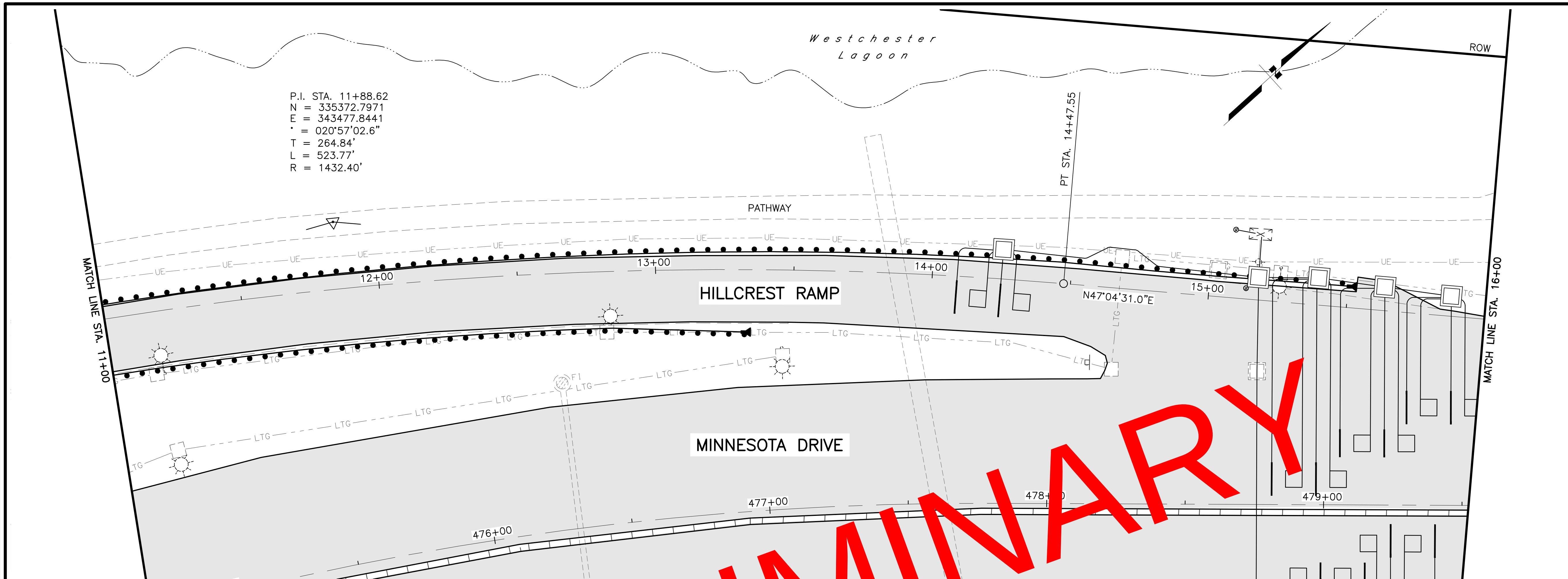
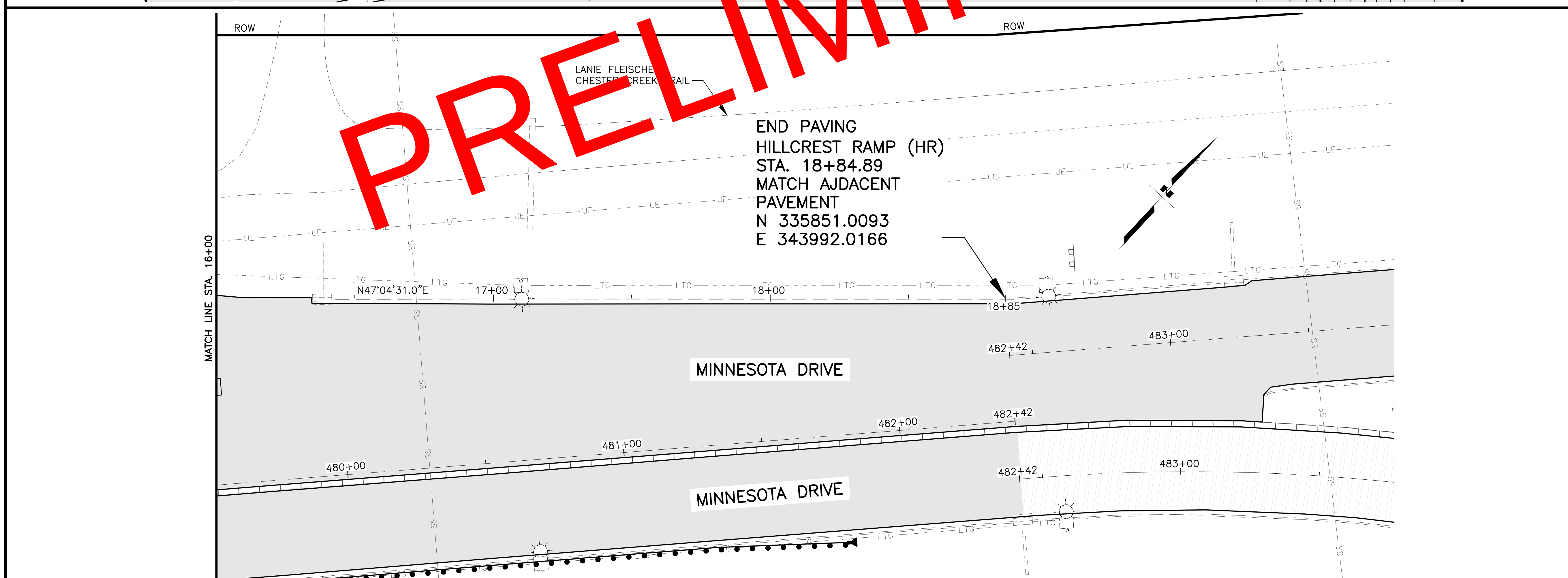
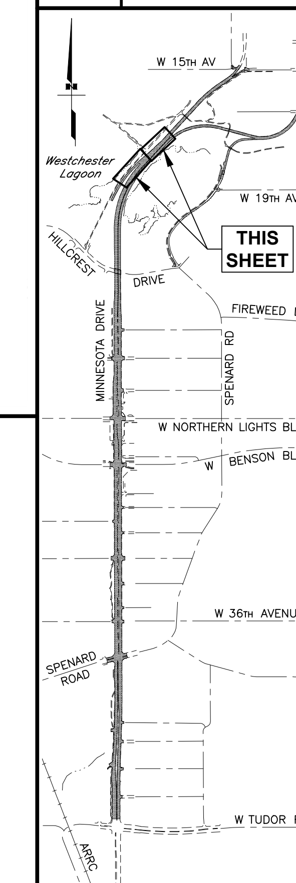




SHEET NO.	TOTAL SHEETS
F17	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION
0421099/
CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA
49TH
RYAN R. HAMMEL
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REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

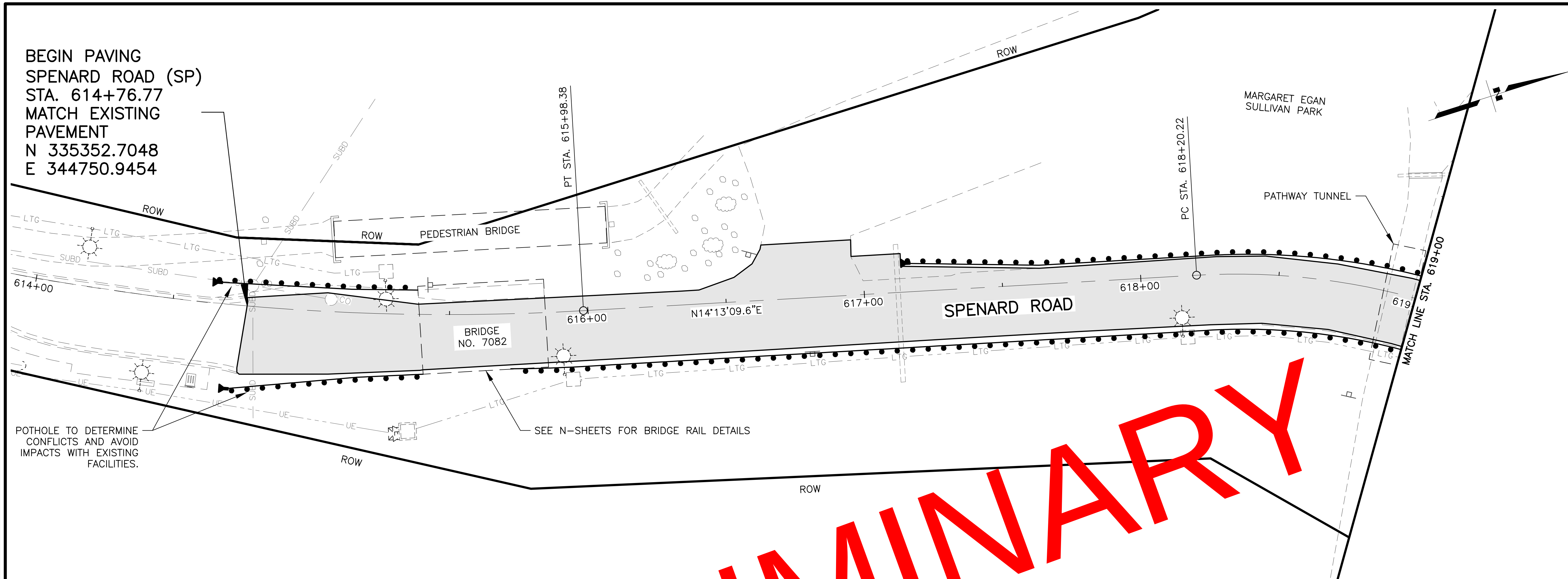
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

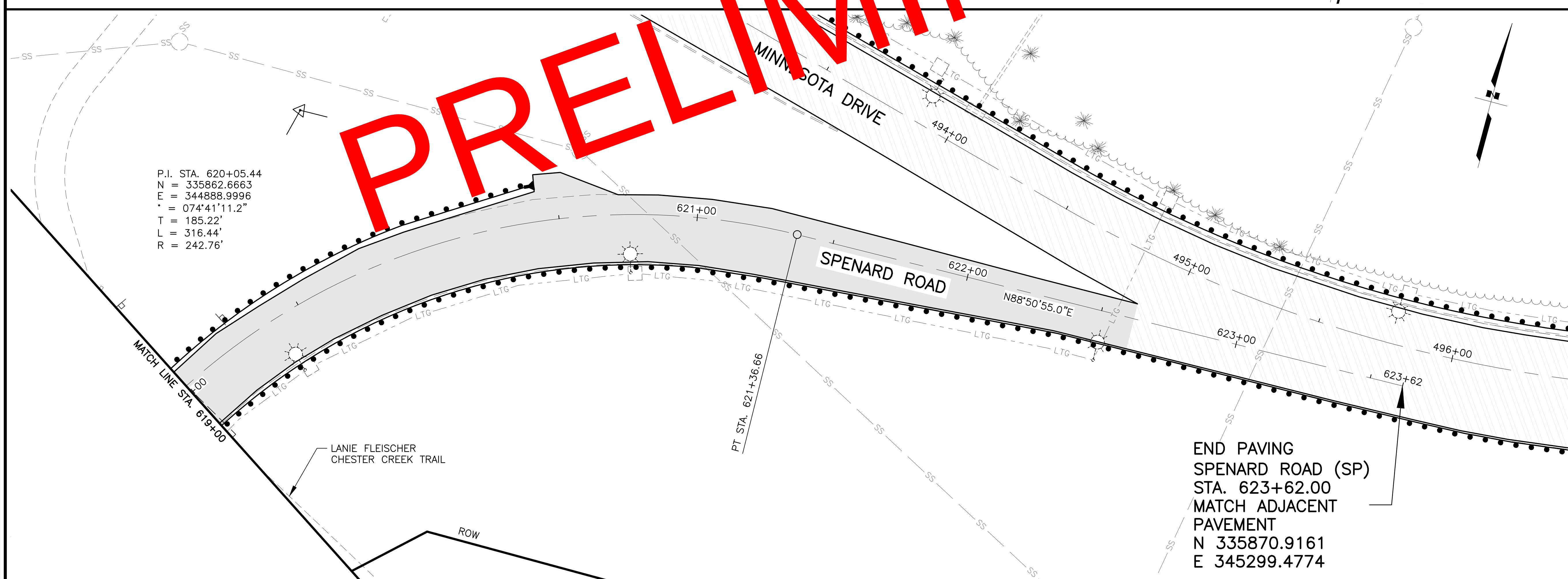
PLAN
HILLCREST RAMP
STA. 11+00 TO END

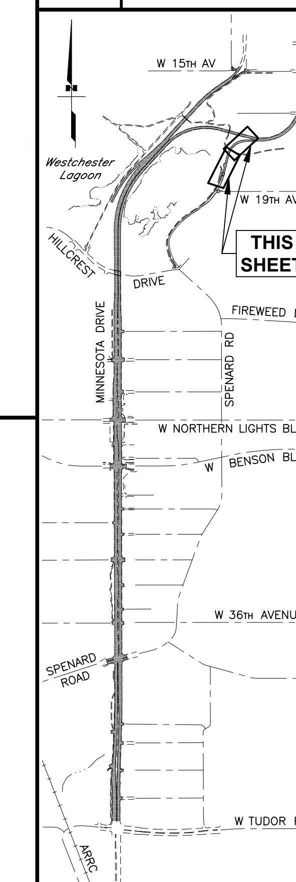
SHEET NO.	TOTAL SHEETS
F18	F18
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION
0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	







STATE OF ALASKA 49TH
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

PLAN
SPENARD ROAD
B.O.P TO END

DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY SLH
SCALE 1" = 20'
DATE 5/16/2022 TIME 2:53 PM
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_F16_RAMPS.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H01	H62

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF
SCALE N/A
TIME 1:35 PM
DATE 4/18/2022
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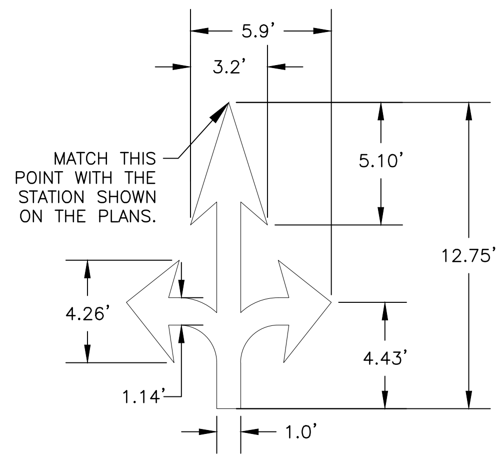
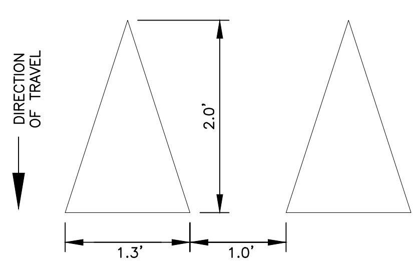
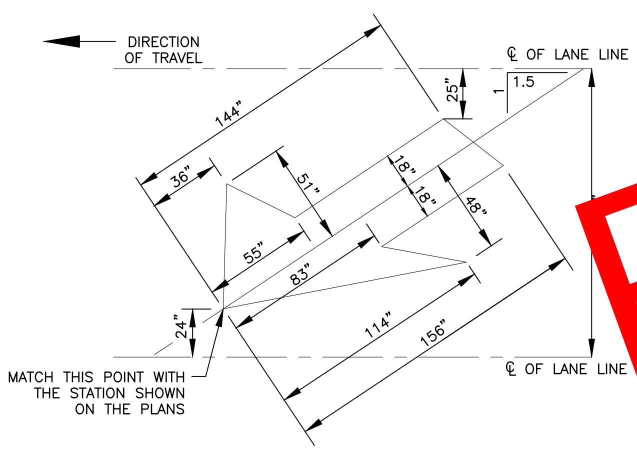


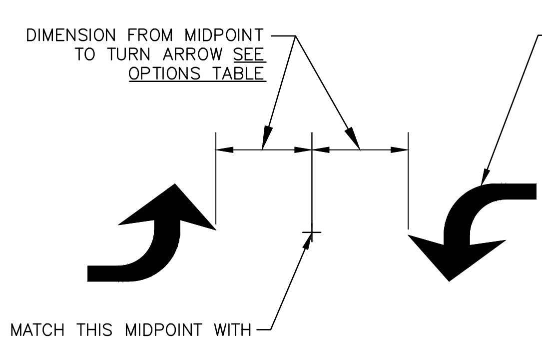
LEFT/THRU/RIGHT ARROW DETAIL



YIELD PAVEMENT MARKINGS DETAIL

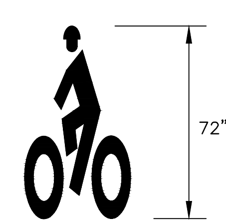


LANE DROP ARROW DETAIL



OPTIONS	
POSTED SPEED	DIMENSION
35 MPH AND LESS	8 FEET
40 MPH–45 MPH	12 FEET
50 MPH AND GREATER	16 FEET

TWO WAY LEFT TURN ARROW DETAIL



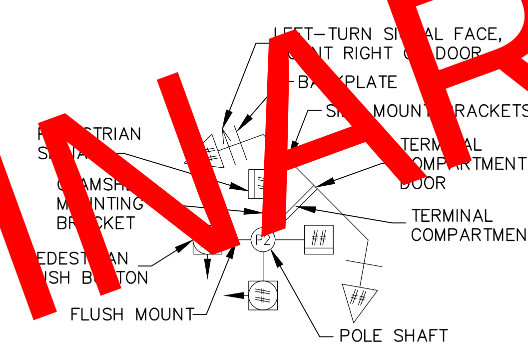
HELMETED MUTCD BIKE SYMBOL
(EXCLUDE ARROW UNLESS SHOWN IN PLANS)

SIGNING & STRIPING NOTES:

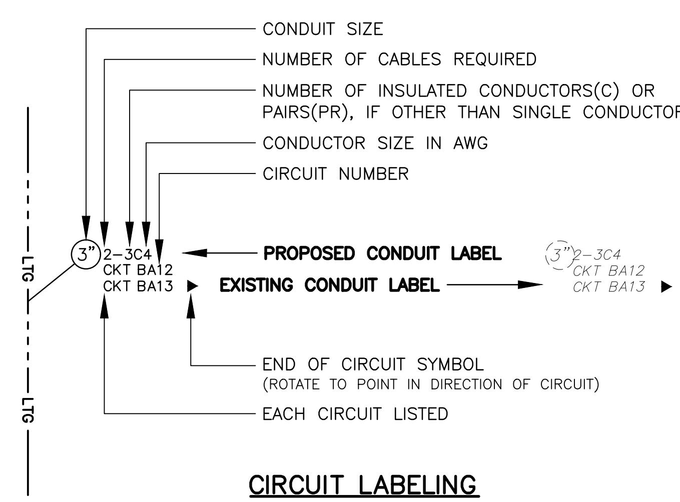
1. ALL STATION LOCATIONS FOR SIGN INSTALLATION ARE APPROXIMATE. INSTALL SIGNS AT LOCATIONS AS DIRECTED BY THE ENGINEER.
2. USE THE FOLLOWING DEFINITIONS TO DECIPHER THE ABBREVIATED SIGN POST TYPES IN THE SIGN SUMMARY SHEETS.
   A. PT MEANS A PERFORATED STEEL TUBE.
   B. T MEANS A SQUARE STEEL TUBE.
   C. P MEANS A ROUND STEEL PIPE.
   D. W MEANS A WIDE FLANGE BEAM.
   E. POPL MEANS A POLE PLATE INSTALLED PER ITS ALASKA STANDARD PLAN S-23.
3. FABRICATE ALL SIGNS FROM 0.125" THICK ALUMINUM SHEETING, UNLESS STATED ELSEWHERE.
4. FOR SIGNS SUPPORTED BY MULTIPLE POSTS, FABRICATE THE POSTS WITH THEIR TOPS LEVEL WITH ONE ANOTHER.
5. FOR PERFORATED STEEL TUBE SIGNPOSTS, INSTALL THE CONCRETE FOUNDATION OPTION SHOWN ON ALASKA STANDARD PLAN S-30. TRIM EACH PT POST TO LIMIT THE LENGTH INSERTED INTO THE FOUNDATION TO 12 INCHES.
6. FABRICATE GUIDE SIGNS ACCORDING TO THE SHOP DRAWINGS INCLUDED IN THE APPENDICES OF PART 4, CONTRACT PROVISIONS AND SPECIAL PROVISIONS. TRIM THE CORNERS OF ALL SIGNS TO THE RADIUS SHOWN ON EACH SHOP DRAWING.
7. ERECT NEW SIGNS BEFORE REMOVAL OF EXISTING SIGNS WITH SIMILAR MESSAGE. NOTIFY THE ENGINEER A MINIMUM OF 14 DAYS PRIOR TO BEGINNING SIGN REMOVAL AND SALVAGE OR DISPOSAL ACTIVITIES.
8. FOR SIGNS SUPPORTED BY MULTIPLE TUBES OR PIPES, LOCATE THE OUTER POSTS ON MAXIMUM SIX FEET CENTERS. INSTALL ADJACENT WIDE FLANGE POSTS ON MINIMUM EIGHT FEET CENTERS.
9. SELECTIVE AND HAND CLEARING SHALL BE PERFORMED AT THE DISCRETION OF THE ENGINEER, IN ACCORDANCE WITH SECTION 201, UPSTREAM OF ALL SIGN INSTALLATION LOCATIONS TO ACHIEVE MINIMUM SIGN VISIBILITY REQUIREMENTS. IF NOT INCLUDED AS A SEPARATE ITEM, THIS WORK SHALL BE SUBSIDIARY TO THE SIGN INSTALLATION ITEMS AND WORK
10. FOR ALL FINAL PAVEMENT MARKINGS USE METHYLMET CRYLAT MA ERIALS. LONGITUDINAL, TRANSVERSE AND SYMBOL MARKINGS SH L BE LAI AND GORE STRIPES SHALL BE SURFACE A LIED AS SPECIF IN S TION 70 OF THE SPECIFICATIONS.
11. DIMENSIONS REFER THE CENTER OF TRIPE AND THE GE O PAVEMENT OR FACE F CURB WHEN PR ENT.
12. E NEW D EXI EMENT MAR IGS ARE T ALIGNED AT ATCH LINE, ANSITI BETWEEN THE TW A 100:1 TAPER ON E NEW PA ENT.
3. W TRIPING IS D BEYOND PAVING LIMITS, REMOVE EX ING STRI IN AC DANCE WITH SUBSECTION 670-3.04 TO THE EX T OF STRI LIMITS.

ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE	NB	NORTH BOUND
CAM	CAMERA	OMNI	OMNI DIRECTIONAL ANTENNA
EB	EAST BOUND	P#	TRAFFIC SIGNAL POLE #
GND	GROUND	PE	PHOTOELECTRIC CELL
HDPE	HIGH DENSITY POLYETHYLENE CONDUIT	PED B ##	PEDESTRIAN PUSH BUTTON #
HEAD	VEHICULAR SIGNAL HEAD	PEDI	PEDESTRIAN SIGNAL HEAD
SIG	SIGNAL	PRE #	PREEMPTION #
I/C	INTERCONNECT	PRE CON #	PREEMPTION CONFIRMATION LIGHT #
INTX	INTERSECTION	RAD	RADAR
INTX L	INTERSECTION LIGHTING	RMC	RIGID METAL CONDUIT
LC	LOAD CENTER	SB	SOUTH BOUND
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT	TC	TRAFFIC CONTROLLER
LTG	LIGHTING	WB	WEST BOUND
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES	YAGI	DIRECTIONAL ANTENNA



POLE SHAFT LEGEND



CIRCUIT LABELING LEGEND

CALL BEFORE YOU DIG!

CONTRACTOR SHALL CALL A MINIMUM OF 3 DAYS IN ADVANCE OF CONSTRUCTION

ALASKA DIGLINE....907-278-3121 OR 800-478-3121

CALL OR GO TO WWW.AKONECALL.COM/STATEWIDE.HTM FOR MEMBER LIST OF WHO WILL BE NOTIFIED

FOUNDATIONS NOTES:

1. STATION & C.L. REFERENCE ARE TO THE CENTER OF THE STRUCTURE, EXCEPT ON LOOPS WHICH ARE TO THE CENTER OF THE TRAILING EDGE OF THE LOOP (EDGE NEAREST INTERSECTION).
2. JUNCTION BOX LOCATIONS APPROXIMATE. LOCATE J-BOXES SO THAT THEY ARE LOCATED OUT OF THE PATHWAY, SIDEWALK, CURB RAMPS, AND DRAINAGE COLLECTION AREAS.
3. INSTALL LOAD CENTER AND TRAFFIC CONTROLLER FOUNDATIONS WITHIN 1-DEGREE OF PLUMB.
4. INSTALL ANCHOR BOLTS IN CAST FOUNDATIONS TO BE WITHIN 1:48 OF PLUMB.

SIGNAL SYSTEM NOTES:

1. FURNISH THE SIGNAL AND LUMINAIRE MASTARM LENGTHS AND DIMENSIONS SPECIFIED ON THE POLE ELEVATIONS.
2. INSTALL DEVICES SUCH THAT THE DIMENSIONS SHOWN TO THE BOTTOM OF THE DEVICES ON THE POLE ELEVATIONS ARE MINIMUMS. VERTICAL DIMENSIONS TO SIGNAL HEADS ARE TO BOTTOM OF THE BACK PLATE.

INSTALL MAST ARMS PERPENDICULAR TO THE ROADWAY CENTERLINE. ACCEPTABLE VARIANCE IS +/- 1-DEGREE.

SALVAGE SIGNAL POLE ASSEMBLIES, SIGNS, SIGNAL FACES, AND LUMINAIRES AND DELIVER TO MAINTENANCE AND OPERATIONS WITHIN 48-HOURS OF DECOMMISSIONING. COMPONENTS DAMAGED WHILE IN THE CONTRACTOR'S CUSTODY MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE. REMOVE AND DISPOSE OF FOUNDATIONS.

5. SALVAGE EXISTING CONTROLLER CABINET AFTER NEW CONTROLLER CABINET IS IN SERVICE AND DELIVER TO MAINTENANCE AND OPERATIONS WITHIN 48-HOURS OF DECOMMISSIONING.
6. REMOVE ABANDONED OR UNUSED TRAFFIC JUNCTION BOXES UNLESS OTHERWISE NOTED.
7. NEW SIGNAL HEADS THAT ARE MOUNTED BUT NOT IN OPERATION SHALL BE COVERED WITH A COMMERCIALLY AVAILABLE SIGNAL-SHIRT. EACH SIGNAL SHIRT SHALL FEATURE ELASTICIZED OPENINGS THAT FIT OVER THE VISORS AND AT LEAST TWO STRAPS TO SECURE IT TO THE SIGNAL. PROVIDE SHIRTS WITH A LEGEND THAT READS "OUT OF SERVICE" AND A CENTER SECTION THAT ALLOWS AN OPERATOR TO SEE THE INDICATIONS DURING SYSTEM TESTS.
8. SIGNAL HEADS ARE TO BE LOCATED PER FIGURE 4D-100, TYPICAL SIGNAL HEAD LOCATIONS, PER THE ALASKA TRAFFIC MANUAL. ACCEPTABLE VARIANCE IS +/- 1-FOOT.
9. AIM SIGNALS PER TABLE 660-2, THROUGH-SIGNAL AIMING POINT, OF THE SPECIAL PROVISIONS. SIGNALS SHALL ALSO BE AIMED SO AS NOT TO BE VISIBLE FROM SIDE STREET TRAFFIC. ACCEPTABLE VARIANCE IS +/- 5 DEGREES.
10. EXISTING CIRCUITS LISTED ON THE LOAD CENTER SUMMARY AND PLAN SHEETS WERE OBTAINED FROM AS-BUILT INFORMATION AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO WORK INVOLVING THOSE CIRCUITS.
11. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL, INCLUDING ARROW BOARD DEVICE(S), FOR OVERHEAD INSPECTION AND LOCATE WORK PERFORMED BY MOA SIGNAL ELECTRONICS. CONTRACTOR SHALL BE ON-SITE AT COMPLETION OF LOCATES TO REVIEW LAYOUT AND MAKE STATIONING MEASUREMENTS FOR CONDUIT LOCATIONS.
12. REMOVE ENDS OF ABANDONED CONDUIT FROM JUNCTION BOXES SCHEDULED TO BE REPLACED AND FROM EXISTING JUNCTION BOXES REMAINING IN SERVICE.

PRELIMINARY

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

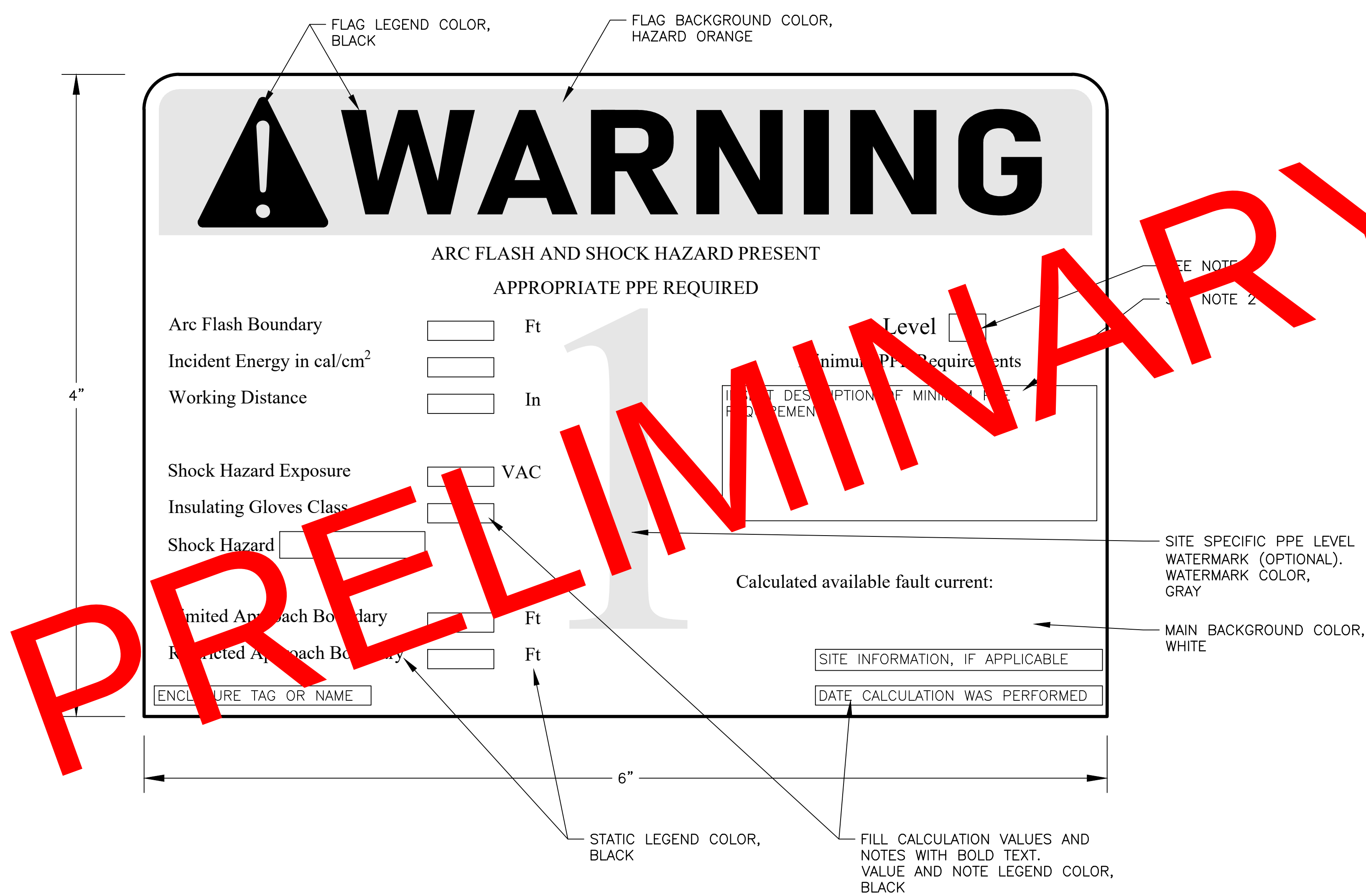
TRAFFIC LEGEND & NOTES

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H02	H62

NOTES:

1. APPLICABLE STATE OF ALASKA DOT&PF ELECTRICAL EQUIPMENT MUST BE LABELED WITH DOT&PF–DEFINED SITE–SPECIFIC PPE LEVELS, AS DEFINED IN NFPA 70E 130.5(H)(3)(c). THE LEVELS ARE: LEVEL 1 (0 TO 4 CAL/CM^2), 2 (4.1 TO 8.0 CAL/CM^2), 3 (8.1 TO 25.0 CAL/CM^2), 4 (25.1 TO 39.9 CAL/CM^2), OR WP (WORK PROHIBITED, FOR EQUIPMENT IN WHICH THE CALCULATED ARC FLASH INCIDENT ENERGY IS ≥ 40 CAL/CM^2).
2. MINIMUM PPE REQUIREMENTS FOR EACH PPE LEVEL DESCRIBED IN NOTE 1 ARE THE SAME REQUIREMENTS AS DESCRIBED IN NFPA 70E TABLE 130.7(C)(15)(c). THESE PPE REQUIREMENTS ARE TO BE USED AS THE SITE–SPECIFIC PPE LEVELS.



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DATE 5/5/2022 TIME 12:34 PM SCALE N/A

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF

STATE OF ALASKA 49TH JEFFREY CARLETON EE 13218 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0590

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
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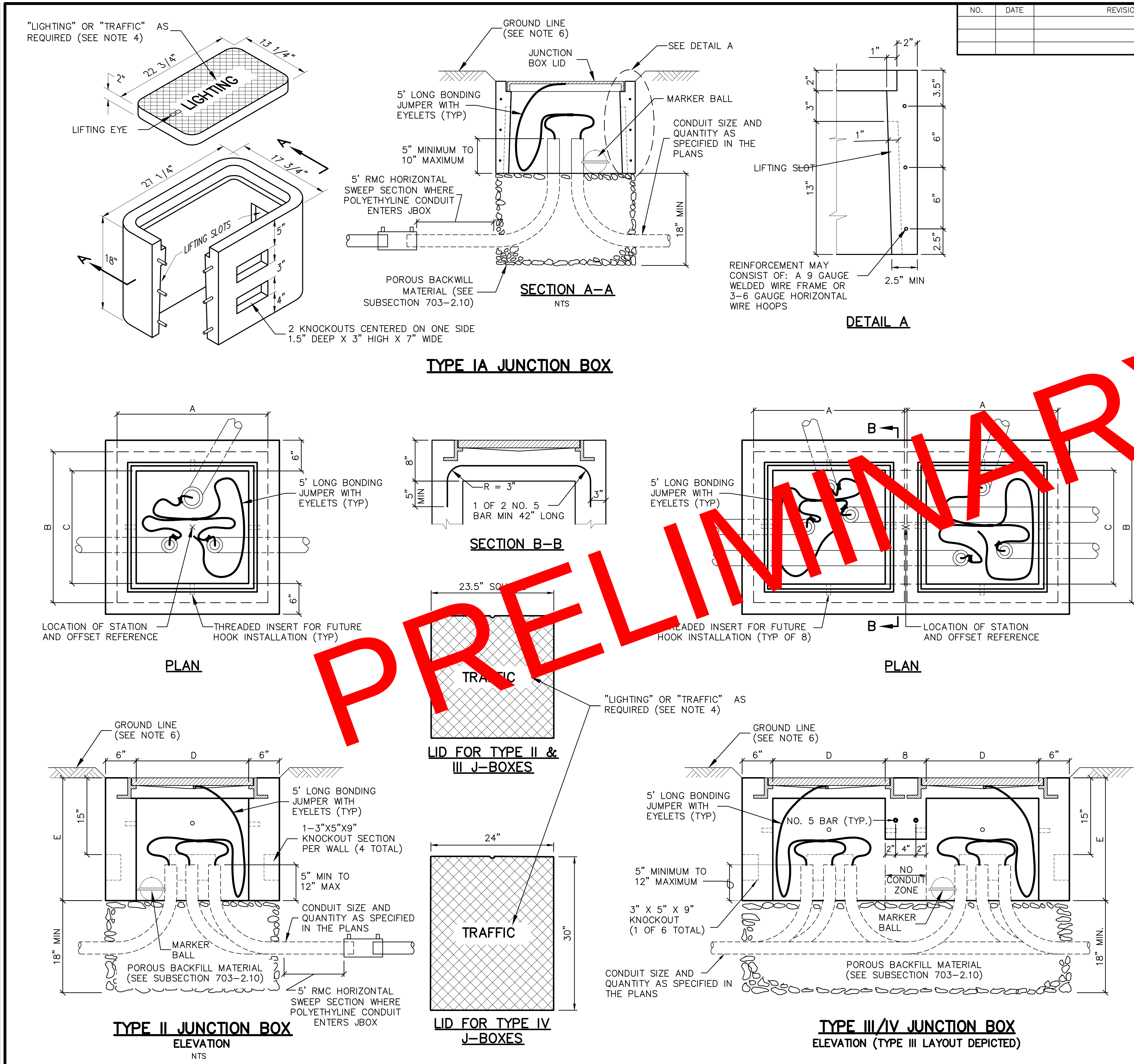
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

ARC FLASH SHOCK HAZARD LABELING

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H03	H62



NOTES:

1. AVOID INSTALLING TYPE IA JUNCTION BOXES IN DRIVEWAYS OR IN LOCATIONS SUBJECT TO USE BY HEAVY TRUCKS. INSTALL JUNCTION BOXES ONLY AT THE LATERAL LOCATIONS ALLOWED IN SUBSECTION 660-3.04.
2. FURNISH TYPE II, III AND IV JUNCTION BOXES WITH CAST IRON FRAMES AND LIDS THAT WEIGH A MINIMUM OF 210 POUNDS AND ARE RATED FOR HEAVY TRAFFIC LOADS IN COMPLIANCE WITH AASHTO M306. FURNISH TYPE IA JUNCTION BOXES WITH CAST IRON LIDS THAT WEIGH A MINIMUM OF 50 POUNDS.
3. CONSTRUCT JUNCTION BOXES ACCORDING TO SECTION 501 USING CLASS A CONCRETE. REINFORCE TYPE IA JUNCTION BOXES AS SHOWN. SYNTHETIC STRUCTURAL FIBER-REINFORCED CONCRETE THAT MEETS ASTM C 1116 AND CONTAINS FIBER IN PROPORTIONS AS RECOMMENDED BY THE FIBER MANUFACTURER MAY BE ADDED FOR STRENGTH.
4. FOR JUNCTION BOXES THAT CONTAIN ILLUMINATION CONDUCTORS EXCLUSIVELY, FURNISH LIDS WITH THE WORD "LIGHTING" INSCRIBED INTO THEM. FOR OTHER JUNCTION BOXES, FURNISH LIDS WITH THE WORD "TRAFFIC" INSCRIBED INTO THEM.
5. UNDER JUNCTION BOXES, INSTALL POROUS BACKFILL MATERIAL CONFORMING TO SUBSECTION 703-2.10.
6. SET THE TOPS OF JUNCTION BOXES WITH THE FOLLOWING DIMENSIONS BELOW THE FINISHED SURROUNDING SURFACE:
   - 1" IN PAVED MEDIANS AND ADJACENT TO PEDESTRIAN FACILITIES
   - 1/4" IN PEDESTRIAN FACILITIES
   - 2" IN ALL OTHER AREAS
7. BOND JUNCTION BOX LIDS TO THE SYSTEM OF EQUIPMENT GROUNDING CONDUCTORS ACCORDING TO SUBSECTION 660-3.06. ATTACH BONDING JUMPERS TO THE JUNCTION BOX LIDS WITH BRASS OR STAINLESS STEEL HARDWARE.
8. INSTALL LOOP DETECTOR TAILS THROUGH ONE OF THE KNOCKOUTS OF TYPE 1A JUNCTION BOXES. AFTER SETTING THE BOXES TO GRADE, INSTALL GROUT IN THE GAPS THAT REMAIN IN THE KNOCKOUT.
9. INSTALL A 1/2" THICK PREFORMED BITUMINOUS JOINT MATERIAL AROUND JUNCTION BOXES INSTALLED IN PORTLAND CEMENT CONCRETE WALKWAYS.
10. INSTALL AN ELECTRONIC MARKER BALL IN ALL JUNCTION BOXES PER SUBSECTION 660-3.04.
11. PRIOR TO INSTALLATION MARK ALL JUNCTION BOX LOCATIONS WITH A WIRE STAFF VINYL FLAG. THE FLAG SHALL BE RED IN COLOR AND MINIMUM 4-INCHES TALL BY 5-INCHES WIDE. THE WIRE STAFF SHALL BE 21-INCHES IN LENGTH AND CONSTRUCTED OF MINIMUM 15.5 GAUGE STEEL.
12. WHERE MODIFIED TYPE II JUNCTION BOXES ARE REQUIRED FOR DETECTOR LOOP TAIL INSTALLATIONS, ADD ONE(1) ADDITIONAL 5" DEEP X 3" HIGH X 18" WIDE KNOCKOUT 8" BELOW TOP OF JUNCTION BOX.

J-BOX DIMENSIONS

J-BOX TYPE	DIMENSIONS A (MAX.)	B (MAX.)	C (MIN.)	D (MIN.)	E (MIN.)
II	29 1/2"	29 1/2"	22"	22"	24"
III	29 1/2"	29 1/2"	22"	22"	24"
IV	30"	36"	30"	24"	30"

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

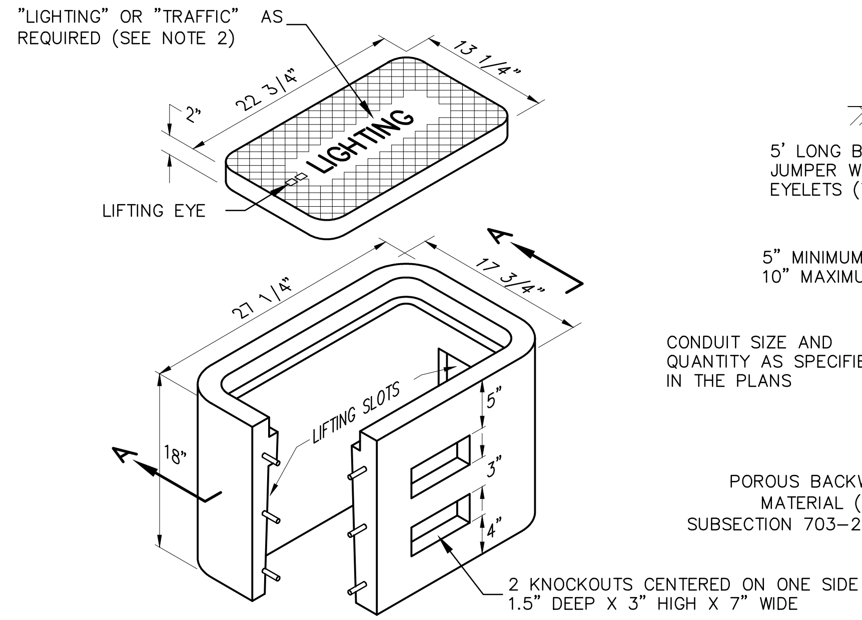
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

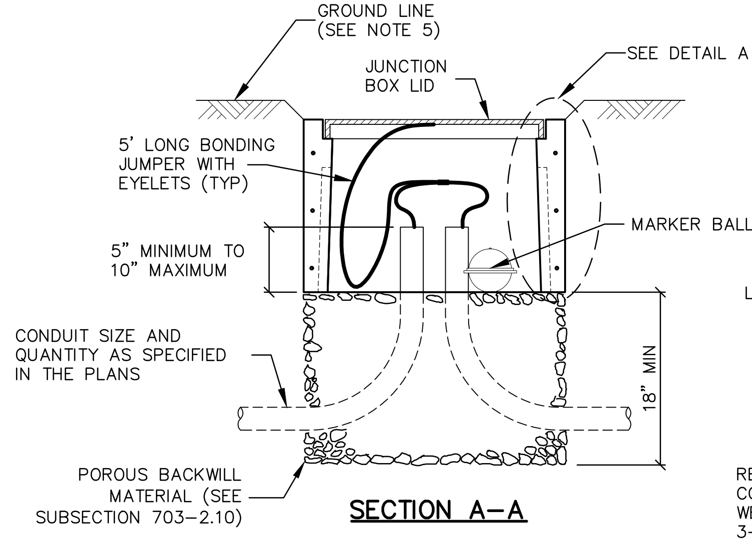
JUNCTION BOX

DESIGNED BY ZJH | CHECKED BY CLP | DRAFTED BY MF | SCALE N/A | DATE 5/4/2022 | TIME 8:15 AM

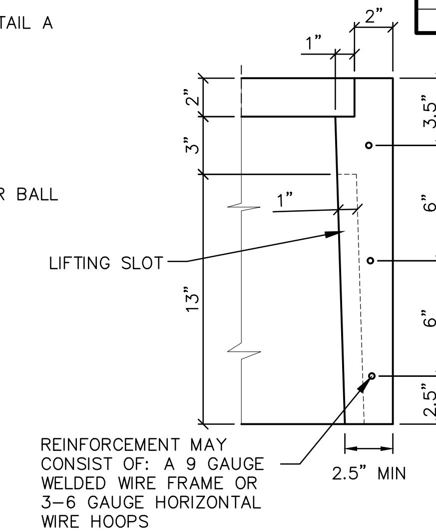
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\08-JUNCTION_BOX.DWG

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099/CFHWY00132	2022	H04	H62





SECTION A-A

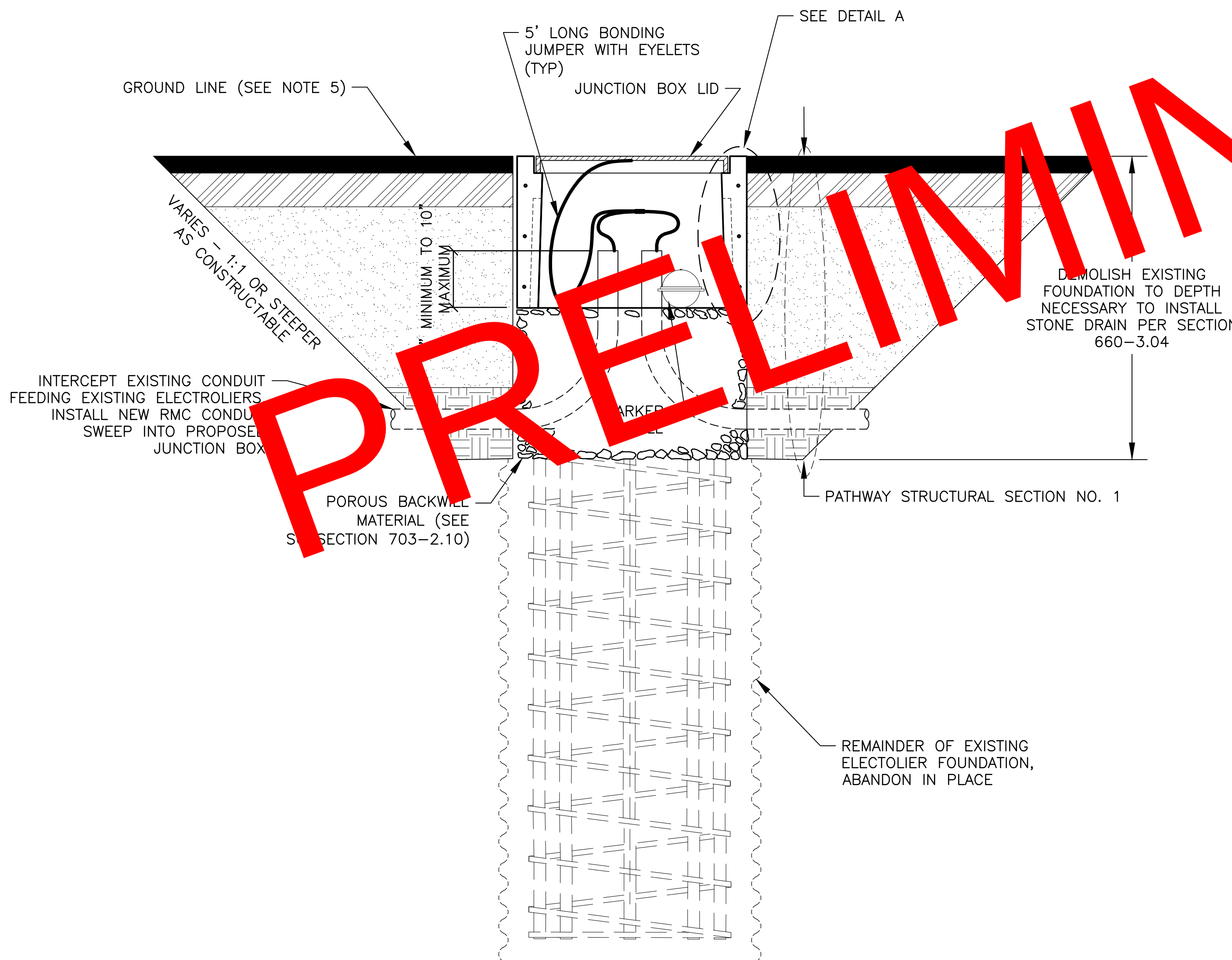


DETAIL A

TYPE 1A JUNCTION BOX

NOTES:

1. CONSTRUCT JUNCTION BOXES ACCORDING TO SECTION 501 USING CLASS A CONCRETE. REINFORCE TYPE IA JUNCTION BOXES AS SHOWN. SYNTHETIC STRUCTURAL FIBER-REINFORCED CONCRETE THAT MEETS ASTM C 1116 AND CONTAINS FIBER IN PROPORTIONS AS RECOMMENDED BY THE FIBER MANUFACTURER MAY BE ADDED FOR STRENGTH.
2. FOR JUNCTION BOXES THAT CONTAIN ILLUMINATION CONDUCTORS EXCLUSIVELY, FURNISH LIDS WITH THE WORD "LIGHTING" INSCRIBED INTO THEM. FOR OTHER JUNCTION BOXES, FURNISH LIDS WITH THE WORD "TRAFFIC" INSCRIBED INTO THEM.
3. DEMOLISH EXISTING ELECTROLIER FOUNDATION TO A DEPTH ALLOWING A MINIMUM OF 18" OF STONE DRAIN.
4. UNDER JUNCTION BOXES, INSTALL STONE DRAINS THAT CONSIST OF POROUS BACKFILL MATERIAL CONFORMING TO SUBSECTION 660-3.04.
5. SET THE TOPS OF JUNCTION BOXES WITH THE FOLLOWING DIMENSIONS BELOW THE FINISHED SURROUNDING SURFACE:
   - 1" IN PAVED MEDIANS AND ADJACENT TO PEDESTRIAN FACILITIES
   - 1/4" IN PEDESTRIAN FACILITIES
   - 2" IN ALL OTHER AREAS
6. BOND JUNCTION BOX LIDS TO THE SYSTEM OF EQUIPMENT GROUNDING CONDUCTORS ACCORDING TO SUBSECTION 660-3.06. ATTACH BONDING JUMPERS TO THE JUNCTION BOX LIDS WITH BRASS OR STAINLESS STEEL HARDWARE.
7. INSTALL LOOP DETECTOR TAILS THROUGH ONE OF THE KNOCKOUTS OF TYPE 1A JUNCTION BOXES. AFTER SETTING THE BOXES TO GRADE, INSTALL GROUT IN THE GAPS THAT REMAIN IN THE KNOCKOUT.
8. INSTALL A 1/2" THICK PREFORMED BITUMINOUS JOINT MATERIAL AROUND JUNCTION BOXES INSTALLED IN PORTLAND CEMENT CONCRETE WALKWAYS.
9. INSTALL AN ELECTRONIC MARKER BALL IN ALL JUNCTION BOXES PER SUBSECTION 660-3.04.
10. PRIOR TO INSTALLATION MARK ALL JUNCTION BOX LOCATIONS WITH A WIRE STAFF VINYL FLAG. THE FLAG SHALL BE RED IN COLOR AND MINIMUM 4-INCHES TALL BY 5-INCHES WIDE. THE WIRE STAFF SHALL BE 21-INCHES IN LENGTH AND CONSTRUCTED OF MINIMUM 15.5 GAUGE STEEL.



ELECTROLIER DEMOLITION – TYPE 1A JUNCTION BOX REPLACEMENT

PRELIMINARY

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

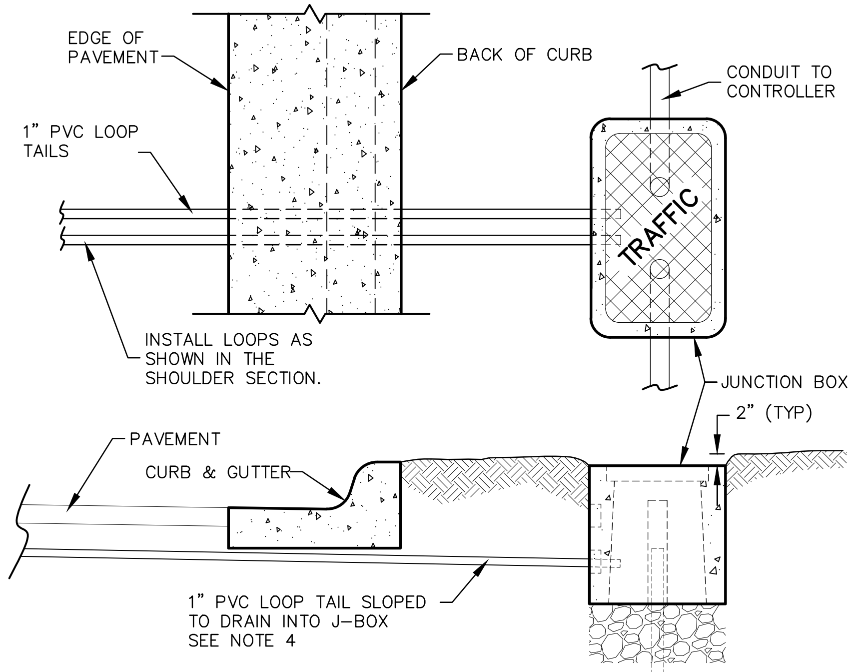
ELECTROLIER DEMO – JBOX

DESIGNED BY ZJH | CHECKED BY CLP | DRAFTED BY MF | SCALE N/A | DATE 5/4/2022 | TIME 8:15 AM

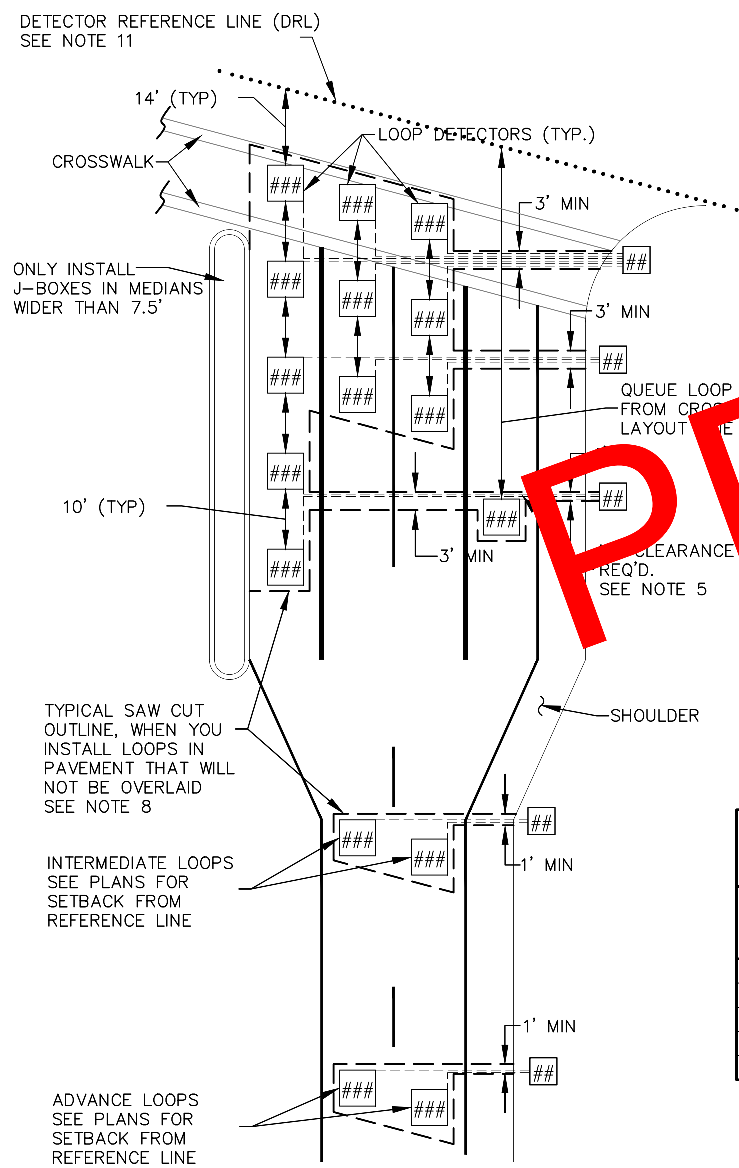
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\09-ELECTROLIER DEMO - JBOX.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H05	H62

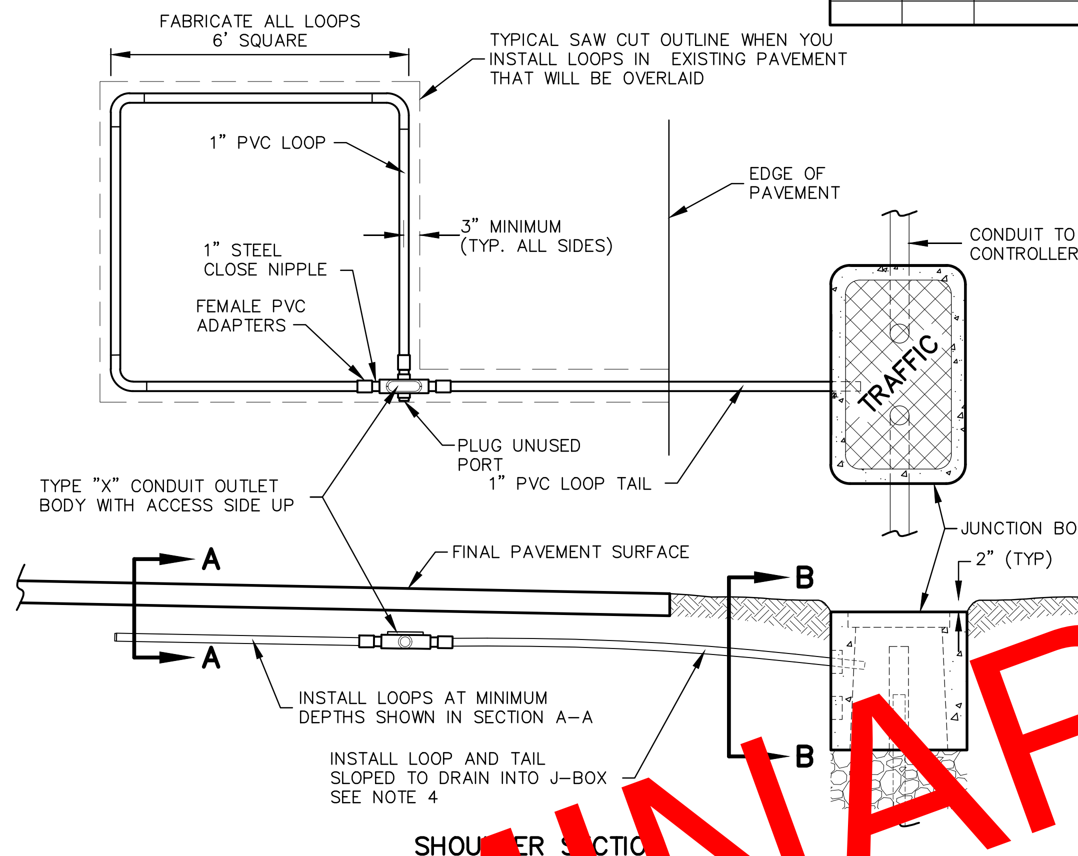


CURB SECTION

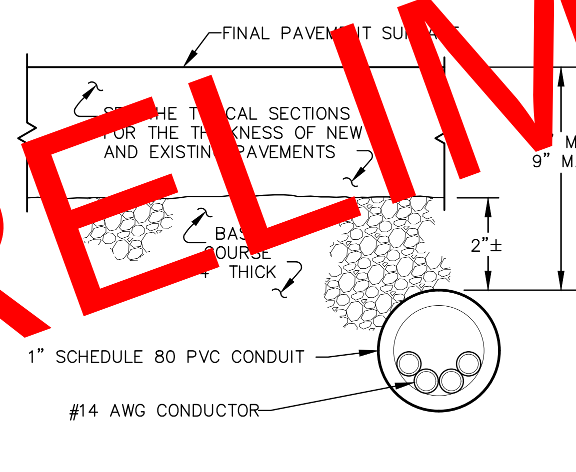


TYPICAL LOOP SETBACKS

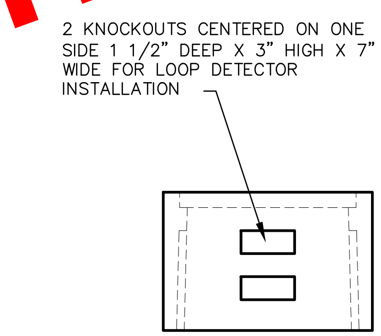
MEASURE THE SETBACKS FROM THE DRL LAYOUT LINE ALONG THE CENTER OF EACH LANE



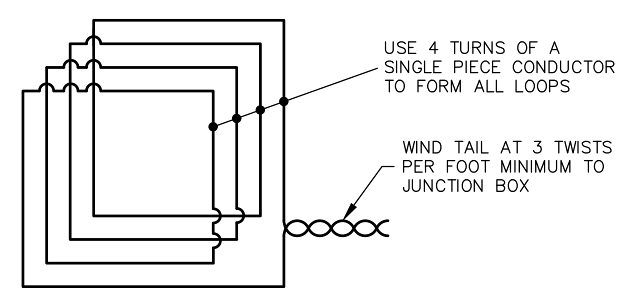
SHOULDER SECTION



SECTION A-A



SECTION B-B



LOOP WIRING DETAIL

TYPICAL PVC CONDUIT ENCASED LOOP DETECTOR INSTALLATION

DETECTOR LOOP SPACING ON HIGH SPEED APPROACHES

POSTED SPEED (MPH)	ADVANCED LOOP *	INTERMEDIATE LOOP *
35	255	170
40	285	190
45	330	210
50	355	235
55	385	255

* SETBACK FROM DETECTOR REFERENCE LINE (FEET)

NOTES:

1. EACH LOOP DETECTOR SHALL CONSIST OF A SINGLE PIECE OF #14 AWG CONDUCTOR INSTALLED IN ONE INCH SCHEDULE 80 PVC CONDUIT. BUILD ALL LOOPS 6.0 FEET SQUARE, SOLVENT WELDING ALL PVC TO PVC JOINTS. USE TYPE X OUTLET BODIES MADE OF HOT DIP GALVANIZED STEEL TO JOIN THE LOOPS AND TAILS.
2. INSTALL 4 TURNS OF CONDUCTOR IN ALL LOOPS AND PROVIDE TAILS THAT EXTEND TO THE JUNCTION BOX SPECIFIED ON THE PLANS. USE #14 AWG CONDUCTOR IN A POLYETHYLENE TUBE CONFORMING TO IMSA SPECIFICATION 51-5. WIND THE TAIL CONDUCTORS TOGETHER AT A RATE OF 3 TWISTS PER FOOT.
3. INSTALL ALL LOOP DETECTORS BEFORE OVERLAYING THE EXISTING PAVEMENT OR PAVING THE NEW ROADWAY.
4. INSTALL ALL LOOP DETECTORS SLOPED TO DRAIN INTO THE JUNCTION BOX THE LOOP TAIL ENTERS. IF YOU CAN NOT INSTALL THE LOOP TO DRAIN INTO THE J-BOX, DRILL FIVE 1/4" WEEP HOLES ON 1 FOOT CENTERS IN THE UNDERSIDE OF THE CONDUIT AT THE LOW SPOT.
5. YOU MAY INSTALL A LOOP TAIL IMMEDIATELY ADJACENT TO A LOOP AND OTHER LOOP TAILS. LOOP TAILS SHALL NOT CROSS LOOP CONDUITS.
6. TEST ALL LOOP DETECTORS FOR CONTINUITY AND INSULATION INTEGRITY BEFORE SEALING THE LOOPS UNDER THE FINAL LIFT OF ASPHALT. PROVIDE THE ENGINEER A WRITTEN RECORD OF FIELD TESTING INCLUDING; CONTINUITY, INSULATION RESISTANCE AND INDUCTANCE TESTS AS REQUIRED IN SECTION 660-3.01(7).
7. WHEN INSTALLING LOOP DETECTORS IN EXISTING PAVEMENT, CUT THE ASPHALT WITH A SAW AND REMOVE ALL ASPHALT WITHIN THE SAW CUT. MATCH EXISTING PAVEMENT THICKNESS WHEN REPAIRING THE CUTOUT.
8. WHERE EXISTING PAVEMENT WILL NOT BE OVERLAID, CUT THE PAVEMENT WITH A SAW AS FOLLOWS:
   - A. REMOVE ALL PAVEMENT FROM THE LENGTH OF THE FIVE LOOP PRESENCE FIELDS.
   - B. ENCLOSE ALL LOOPS THAT ENTER A COMMON JUNCTION BOX WITHIN A TRAPEZOIDAL SAW CUT.
   - C. CUT TO WITHIN 1 FOOT OF THE LANE AND EDGE LINES, PRESERVING THESE PAVEMENT MARKINGS;
   - D. REMOVE THE ASPHALT TO THE LIP OF THE GUTTER WHERE THERE ARE NO EDGE LINES;
   - E. CUT ACROSS LANE LINES WHEN LOOPS IN ADJACENT LANES ARE SIDE BY SIDE;
   - F. CUT TRENCHES CROSSING A LANE A MINIMUM OF 3 FEET WIDE; AND
   - G. CUT TRENCHES CROSSING A SHOULDER A MINIMUM 1 FOOT WIDE.
9. HEAT AND TACK COAT THE EDGES OF EXISTING PAVEMENT BEFORE PAVING THE CUTOUTS. COMPACT THE ASPHALT MIXTURE WITH A SELF-PROPELLED STEEL WHEELED ROLLER. FURNISH ASPHALT MIX THAT CONFORMS TO SECTION 401 OF THE SPECIFICATIONS, AND IS APPROVED BY THE ENGINEER.
10. MAINTAIN THE REPLACEMENT ASPHALT MIX ABOVE A TEMPERATURE OF 225°F UNTIL THE TIME OF APPLICATION; IF NECESSARY, STORE THE MIX IN AN INSULATED BOX TO MAINTAIN THIS MINIMUM TEMPERATURE.
11. TO ESTABLISH DETECTOR REFERENCE LINE, LAYOUT A LINE PARALLEL TO THE CROSS STREET CENTER LINE, STARTING AT THE CURB RETURN TO THE RIGHT OF THE APPROACH.
12. ENSURE DEPTH OF BASE COURSE AT LOOP LOCATIONS IS A MINIMUM OF 4 INCHES. EXCAVATION AND INSTALLATION OF ADDITIONAL BASE COURSE NECESSARY TO MEET THIS REQUIREMENT IN EXISTING ROAD SECTIONS SHALL BE PAID AT CONTRACT UNIT PRICES.

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

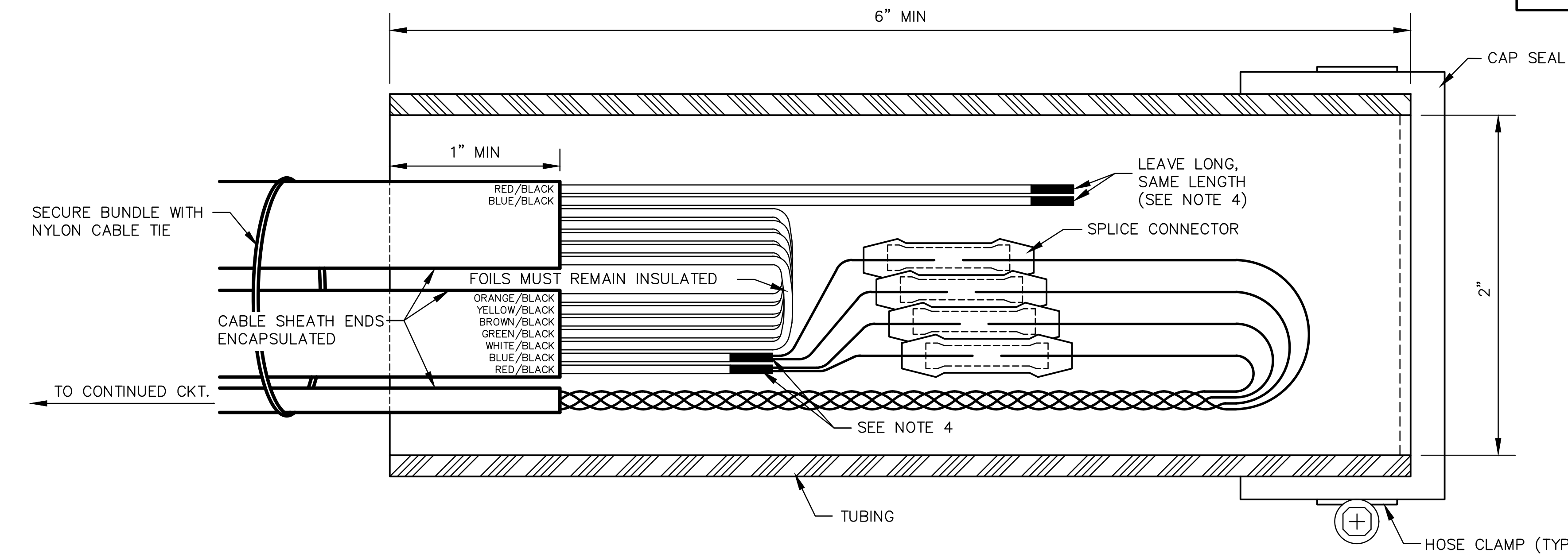
LOOP DETECTORS

DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AW\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\09-LOOP_DETECTOR_MOA.DWG

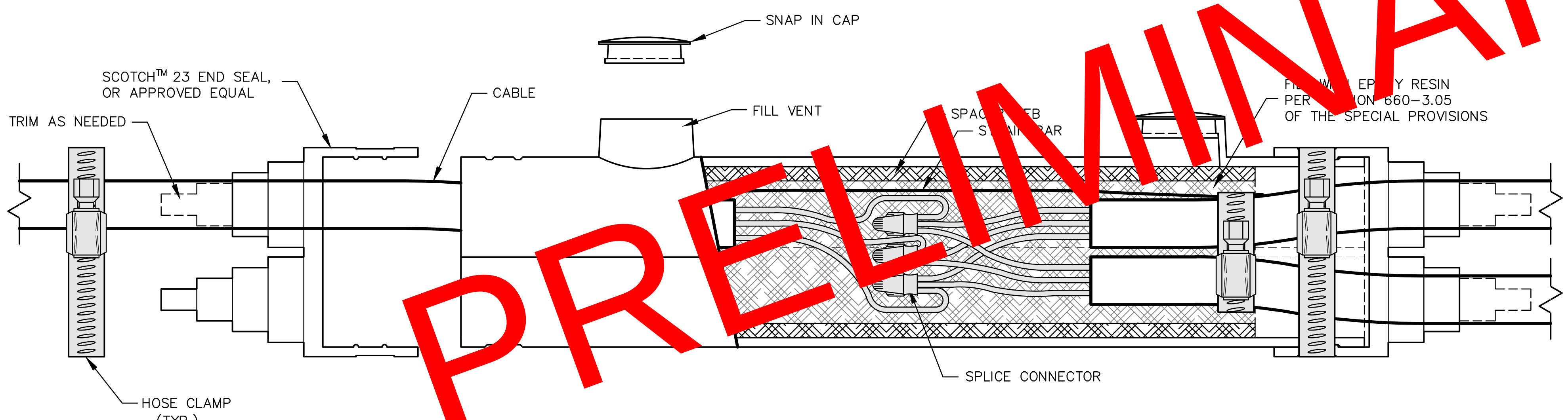
DATE 3/14/2022 | TIME 1:14 PM | SCALE N/A | DESIGNED BY ZJH | CHECKED BY CLP | DRAFTED BY MF

NO.	DATE	REVISION

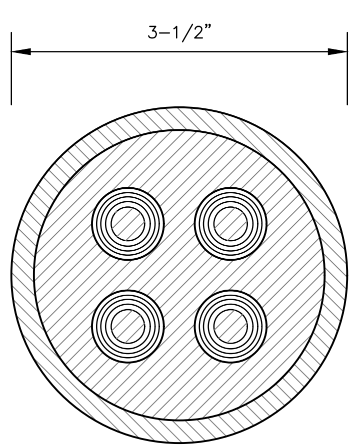
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H06	H62



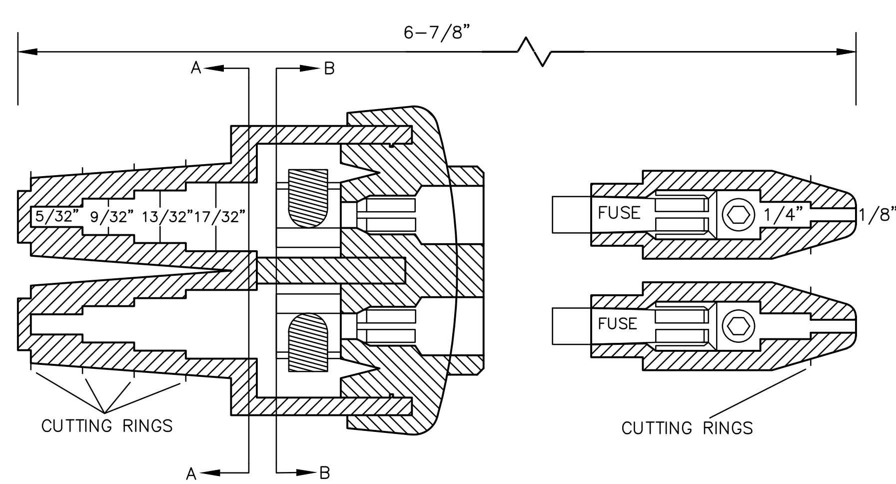
LOOP LEAD-IN SPLICE

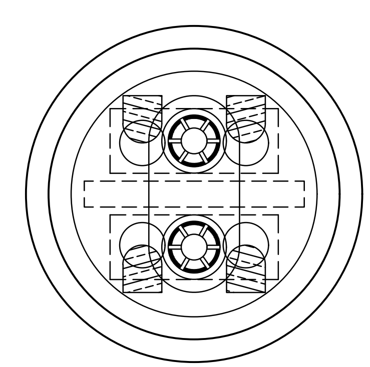


POWER CABLE SPLICE



SECTION A-A





SECTION B-B

DOUBLE FUSED CONNECTOR

NOTES:

LOOP LEAD-IN SPLICE

1. FABRICATE LOOP LEAD-IN SPLICE IN THE FIELD AS SHOWN.
2. CAP SEAL ONE END AND COMPLETELY FILL OPEN END WITH RE-ENTERABLE ENCAPSULATION COMPOUND TO EDGE OF TUBING.
3. LEAVE A MINIMUM OF 1/2" CLEARANCE BETWEEN THE ENCLOSURE AND THE SPLICE AT BOTH ENDS OF THE TUBING.
4. EXPOSE FOIL AND DRAIN WIRES, SEAL WITH HEAT SHRINK TUBING (TYP).
5. INSTALL SPLICE CONNECTORS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

POWER CABLE SPLICE

6. SECURE CABLE/CONNECTOR BUNDLE WITH HOSE CLAMPS AS SHOWN.

MATERIAL PROPERTIES

LOOP LEAD-IN SPLICE	
BING	PER SECTION 660-3.05
CAP SEAL	FERNCO QWIK CAP #QC-102, OR APPROVED EQUAL
HOSE CLAMP	STAINLESS STEEL
SPLICE CONNECTOR	ML56-16, OR APPROVED EQUAL
COMPOUND	RE-ENTERABLE ENCAPSULATION
POWER CABLE SPLICE	
SPLICE KIT	3M MODEL 78R, OR APPROVED EQUAL
SPLICE CONNECTOR	SCOTCHLOCK G, R, OR Y SPRING CONNECTOR, OR APPROVED EQUAL
HOSE CLAMP	(4)- STAINLESS STEEL
EPOXY RESIN	PER SECTION 660-3.05
DOUBLE FUSED CONNECTOR	
DOUBLE FUSED CONNECTOR	SEC-1791-DF-1, OR APPROVED EQUAL
FUSES	(2) - COMPATIBLE 5-AMP TIME DELAY TYPE FOR LED FIXTURE OR 10-AMP FAST ACTING FOR ALL OTHER FIXTURES

PRELIMINARY

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

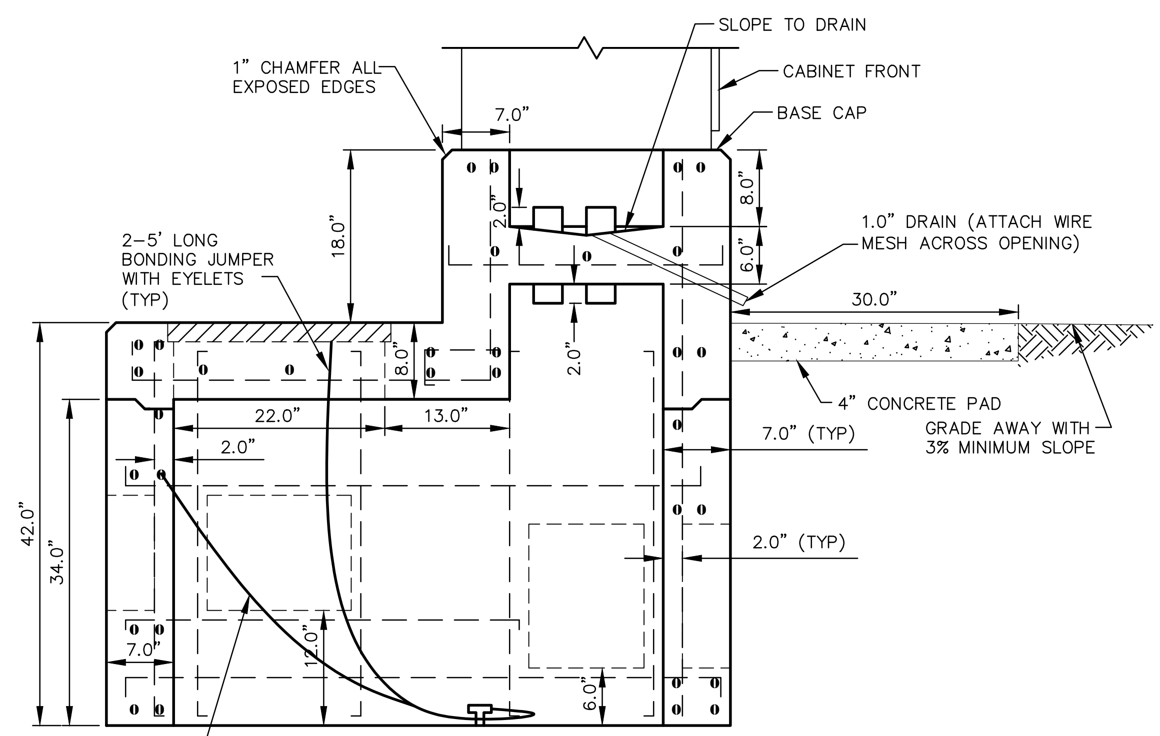
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SPLICE

DESIGNED BY ZJH | CHECKED BY CLP | DRAFTED BY MF | SCALE N/A | TIME 8:16 AM | DATE 5/4/2022

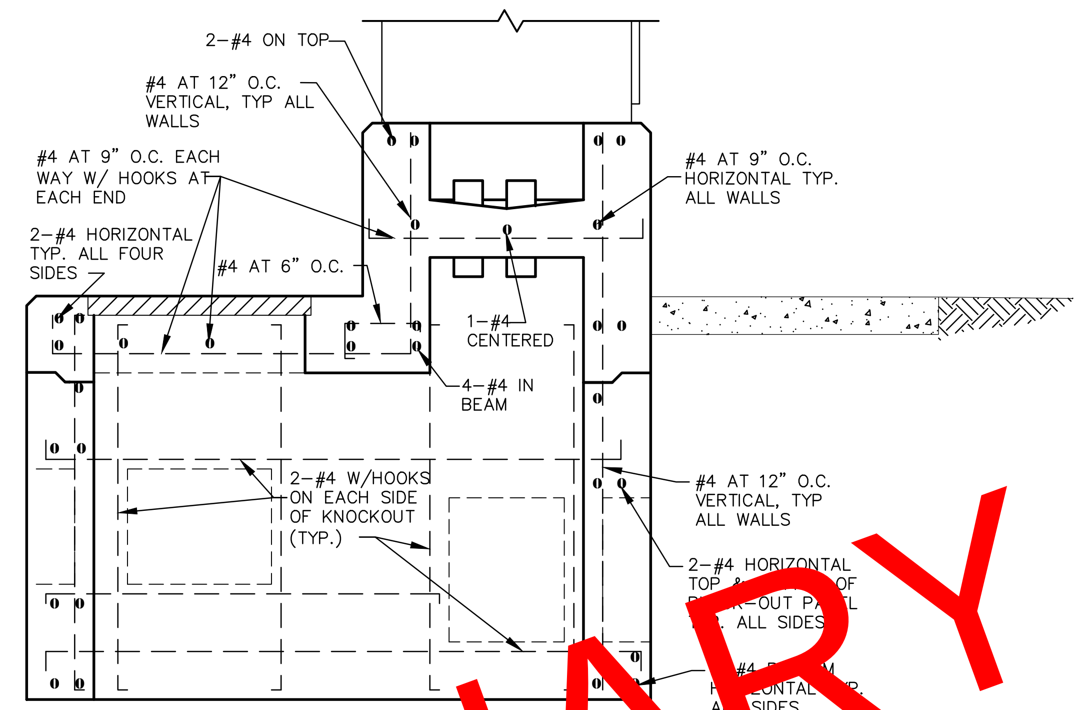
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AW\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\10-SPLICE.DWG

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099/CFHWY00132	2022	H07	H62



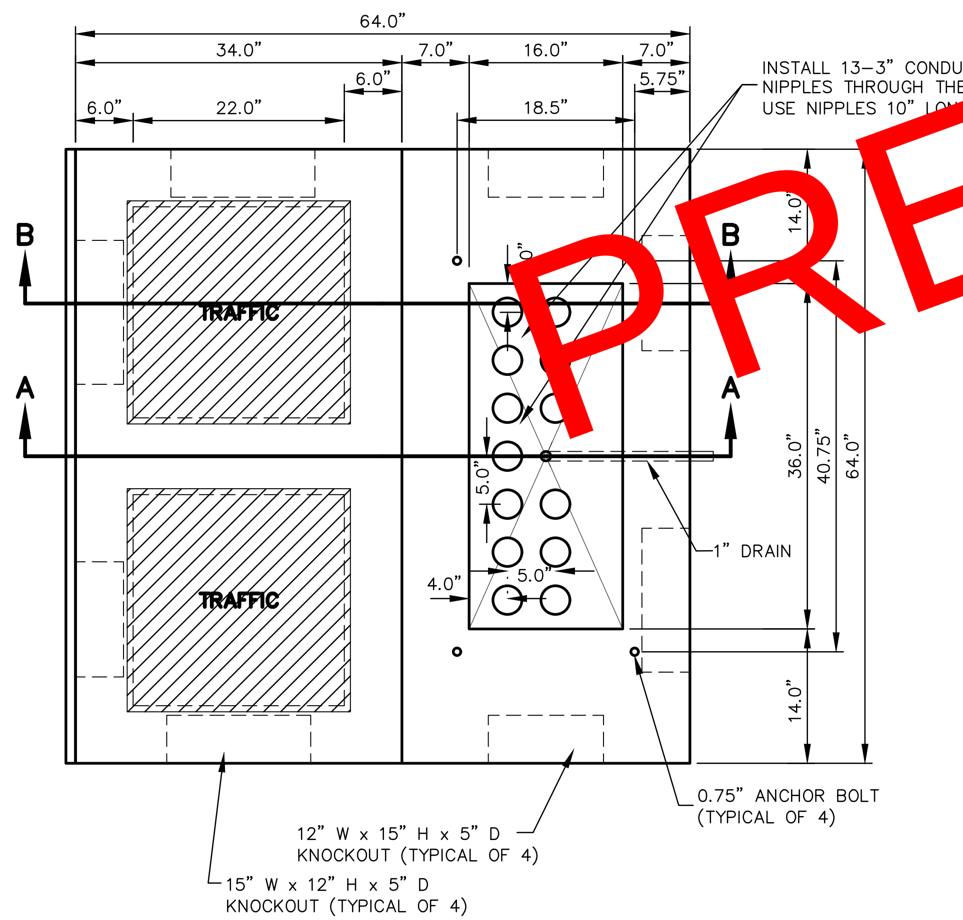
SECTION A–A

NOTE: SEE SECTION B–B FOR REBAR DETAILS



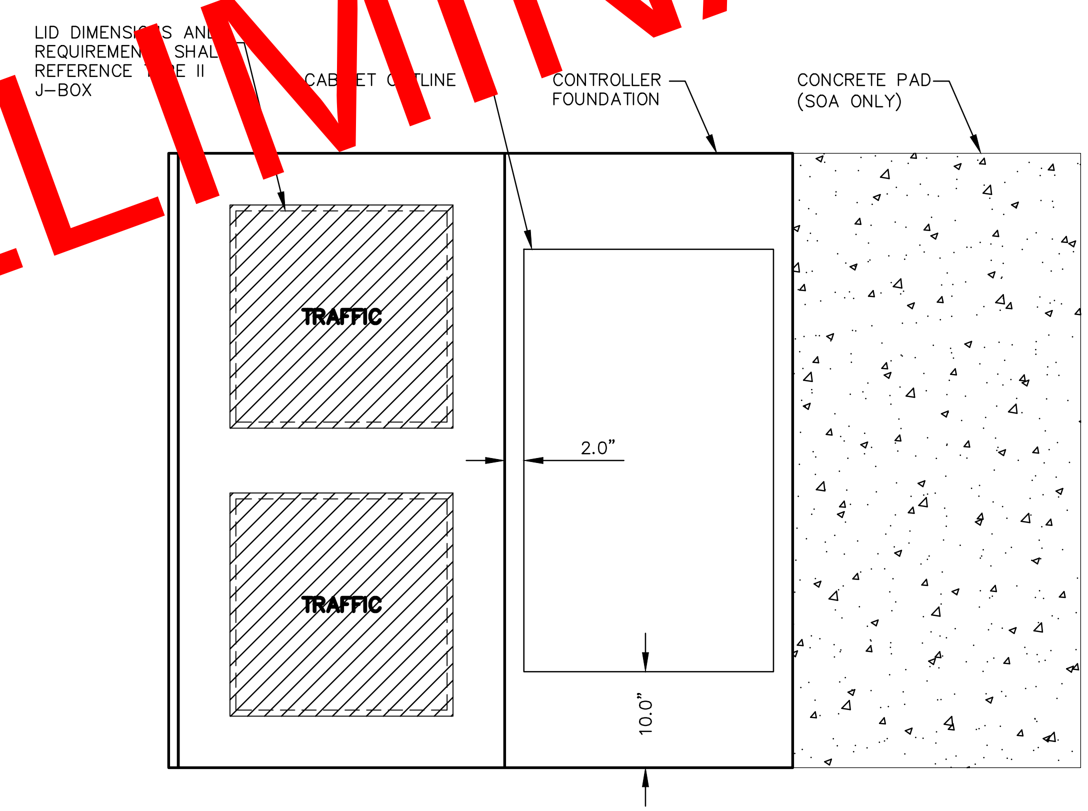
SECTION B–B

NOTE: SEE SECTION A–A FOR DIMENSIONAL DETAILS



SIZE 6 OR 7 CONTROLLER CABINET FOUNDATION

NOTE: BOLT SPACING DIMENSIONS SHOWN FOR TS2 CONTROLLER CABINETS.



PLAN VIEW

NOTES:

1. ANCHOR BOLTS SHALL NOT PROTRUDE MORE THAN 1.5" ABOVE THE TOP OF THE FOUNDATION. ANCHOR BOLT DIMENSIONS SHALL BE AS SPECIFIED BY THE CABINET MANUFACTURER.
2. SEAL UNUSED CONDUIT STUBS WITH WATERTIGHT CAPS. SEAL STUBS CARRYING CONDUCTORS WITH WATERTIGHT SEALING BUSHINGS DESIGNED TO SEAL AROUND CONDUCTORS AND AGAINST THE CONDUIT WALLS.
3. ROUTE THE FIVE FOOT COPPER GROUNDING JUMPER THROUGH THE 2" PIPE NIPPLE AND ATTACH IT TO THE GROUNDING BUSHING ON THE FEEDER CONDUIT.
4. STOP HORIZONTAL & VERTICAL STEEL AT THE BLOCK–OUT PANELS & THE JOINT USING 90 DEGREE HOOKS. USE 2 EXTRA #4 HORIZONTAL & VERTICAL BARS. ALL SIDES AS SHOWN.
5. INSTALL TRAFFIC CONTROLLER CABINET FOUNDATION WITHIN 1–DEGREE OF PLUMB AND ORIENTED AS SHOWN IN PLANS SUCH THAT CABINET DOOR OPENS AWAY FROM INTERSECTION/TRAFFIC.
6. FOR SIGNALS IN THE MUNICIPALITY OF ANCHORAGE (MOA) ORIENT CABINET DOOR TO FACE J–BOX LIDS AND DO NOT PROVIDE CONCRETE PAD.
7. INSTALL #4 AWG COPPER GROUNDING ELECTRODE CONDUCTOR (GEC), OR SIZE PER NEC TABLE 250.66, WHICHEVER IS LARGER.
8. THE REINFORCING BARS WITHIN THE CONCRETE FOUNDATION MUST BE CONNECTED TOGETHER BY EFFECTIVE MEANS AND WILL BECOME PART OF THE GROUNDING ELECTRODE SYSTEM PER NEC 250.50 AND 250.52(A)(3). INSTALL AN IRREVERSIBLE COMPRESSION GROUNDING CONNECTOR, NRTL–LISTED FOR DIRECT BURIAL IN EARTH AND CONCRETE, TO CONNECT THE REINFORCING BARS TO THE GEC. INSTALL A COPPER GEC, SIZED PER NEC 250.66 BUT NOT SMALLER THAN #6 AWG, BETWEEN THE COMPRESSION CONNECTOR AND THE CONTROLLER CABINET GROUND BUS.

MATERIAL PROPERTIES

CONCRETE	CLASS A	F'c = 4000 psi
REINFORCING STEEL	AASHTO M31 GRADE 60	Fy = 60 ksi
CONDUIT	RMC	
BONDING JUMPERS	3M–25T BBE6 OR EQUAL	

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MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

CONTROLLER FOUNDATION

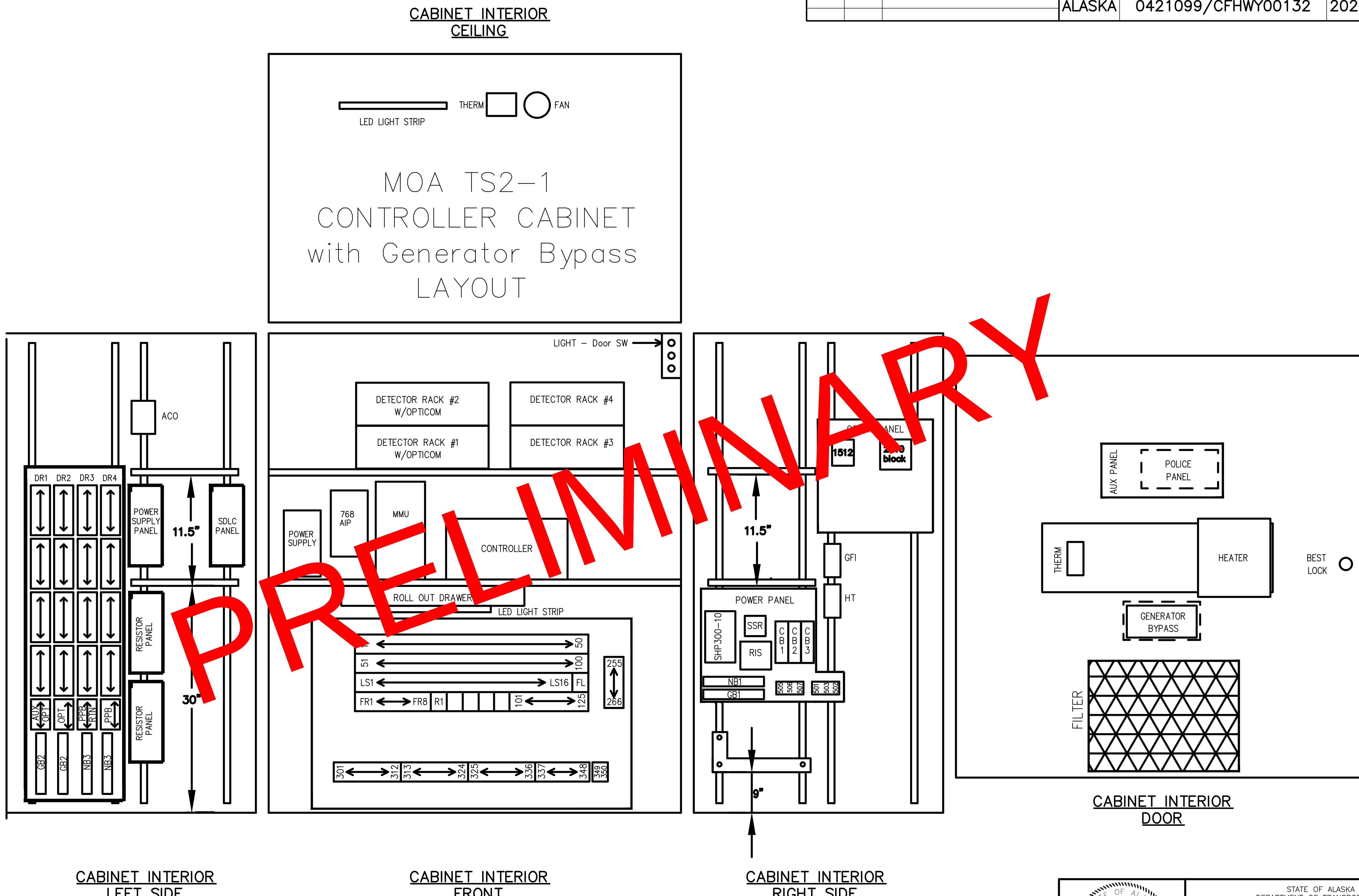
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\11-CONTROLLER_FOUNDATION.DWG

DATE 5/5/2022 TIME 12:48 PM SCALE N/A

DESIGNED BY ZJH CHECKED BY CLP DRAFTED BY MF

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H08	H62



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STATE OF ALASKA
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AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

MOA TS2 – SIZE 6 CONTROLLER ASSEMBLY LAYOUT

DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\12-SIZE_6_CONTROLLER_CABINET.DWG

DATE 4/14/2022 TIME 3:24 PM

SCALE N/A

DESIGNED BY ZJH
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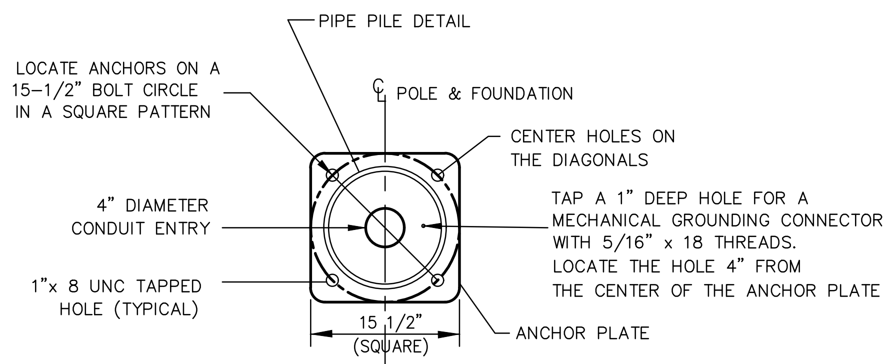
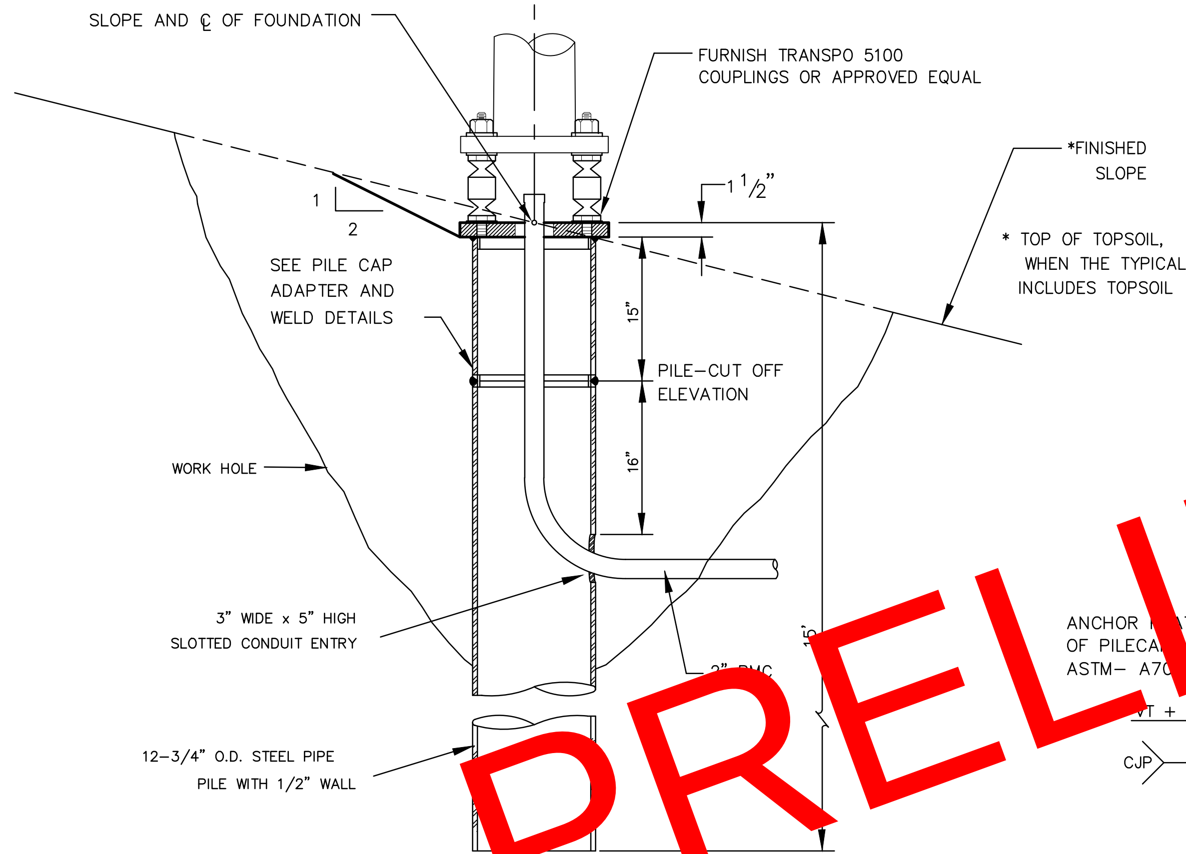
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H09	H62

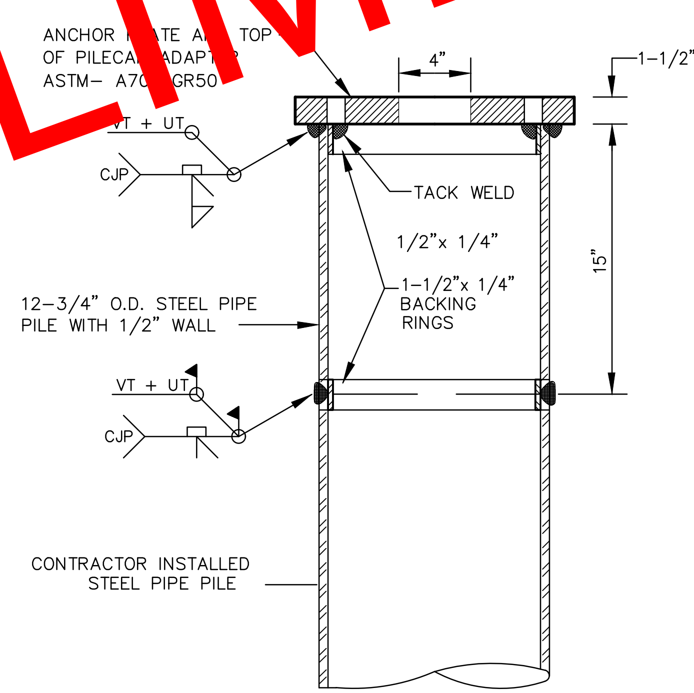


PLAN VIEW



PIPE PILE FOUNDATION

(SHOWN WITH FRANGIBLE COUPLINGS)



PILECAP ADAPTER AND WELD DETAILS

NOT TO SCALE

DESIGN NOTES:

1. DESIGN STANDARD: 2001 STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRE AND TRAFFIC SIGNALS WITH 2006 INTERIM.
2. DESIGN LOADS: 5-KIPS AXIAL, 7.5-KIPS SHEAR, 40-KIP-FT MOMENT.
3. GALVANIZATION OF PILE IS NOT REQUIRED. UNLESS THE GROUND WATER TABLE IS FOUND TO BE, ABOVE 5 FEET, THEN GALVANIZE PILE ACCORDING TO SECTION 505.
4. CHARPY TEST FOR ELECTROLIER POLE PILE FOUNDATIONS ARE NOT REQUIRED.

MATERIAL REQUIREMENTS

STRUCTURAL STEEL PLATE	ASTM A709 GRADE 50	Fy = 50 ksi
STEEL PIPE PILE	ASTM A709, GRADE 50 T3	Fy = 50 ksi
	API 5L GRADE X 42	Fy = 42 ksi

NOTES:

1. FURNISH STEEL PIPE PILES THAT CONFORM TO THE MATERIAL REQUIREMENTS AND SECTIONS 660, 715 AND 740 OF THE SPECIFICATIONS. NO SPLICES ARE ALLOWED BELOW THE PILECAP ADAPTER.
2. DRIVE PILES OPEN ENDED. COMPLETE PILE WORK ACCORDING TO SECTIONS 505, 660 AND 715 OF THE SPECIFICATIONS. REMOVE AND REINSTALL PILES OUT OF PLUMB MORE THAN 1:40.
3. FRESH HEAD THE TOP OF PILES IN A LEVEL PLANE AND CUT THE CONDUIT ENTRANCE HOLE AFTER DRIVING THE PILE. NOTE; ONLY MECHANICAL OR PLASMA CUTTER MEANS ARE PERMITTED. OXY-FUEL CUTTING IS PROHIBITED.
4. FURNISH ONLY SHOP FABRICATED PILECAP ADAPTERS. INCLUDE STAMPED ENGINEERING CALCULATIONS, DRAWINGS, MILL CERTIFICATIONS AND WELDING PLANS FOR PILECAP ADAPTERS AND THE PILECAP ADAPTER TO PILE WELD. WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE AWS D1.1, STRUCTURAL WELDING CODE-STEEL AND THE SPECIFICATIONS.
5. WAIT AT LEAST 3 DAYS AFTER BACKFILLING THE WORK HOLE BEFORE ERECTING THE LUMINAIRE POLE.
6. TERMINATE CONDUIT(S) 3" ABOVE THE TOP OF THE ANCHOR PLATE. INSTALL A GROUNDING BUSHING ON THE END OF THE RIGID METAL CONDUIT AND ESTABLISH A BOND WITH THE ANCHOR PLATE.

PRELIMINARY

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

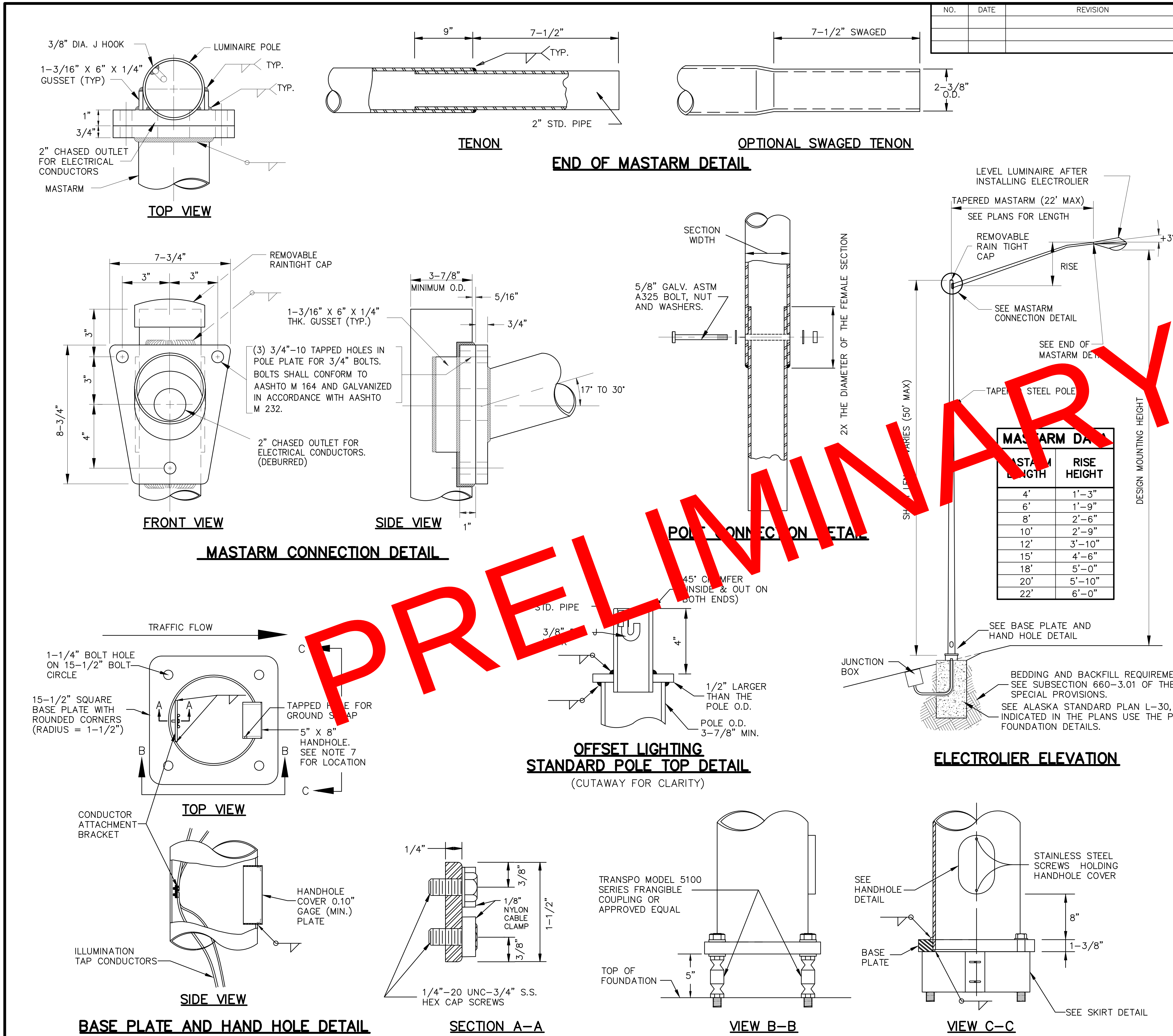
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

ELECTROLIER PIPE PILE FOUNDATION

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF
SCALE N/A
DATE 5/4/2022 TIME 8:23 AM
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AWI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\15-PIPE_PILE_FOUNDATION.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H10	H62

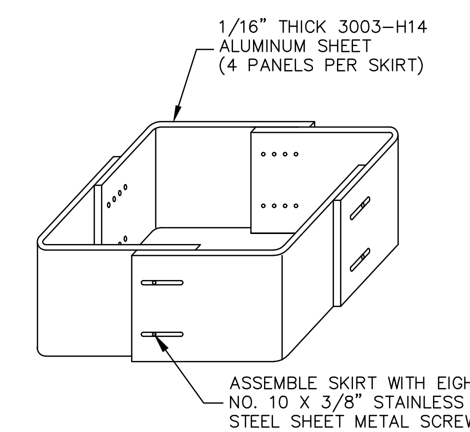


MASTARM DATA	
MASTARM LENGTH	RISE HEIGHT
4'	1'-3"
6'	1'-9"
8'	2'-6"
10'	2'-9"
12'	3'-10"
15'	4'-6"
18'	5'-0"
20'	5'-10"
22'	6'-0"

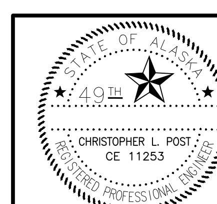
PRELIMINARY

NOTES:

1. DESIGN AND FABRICATE ALL SHAFTS TO SUPPORT A MASTARM 22 FEET LONG WITH LUMINAIRE. ASSUME EACH LUMINAIRE WEIGHS 55 POUNDS AND HAS AN EFFECTIVE PROJECTED AREA OF 1.2 SQUARE FEET. WITH THIS DEAD LOAD, LIMIT THE ANGULAR ROTATION TO THE POLE TOP 1°40'0" MAXIMUM.
2. WELD SIZE TO BE DETERMINED BY THE MANUFACTURER.
3. MOUNTING HEIGHT, IF SPECIFIED IN THE PLANS, REFERS TO THE HEIGHT OF LUMINAIRE ABOVE THE ROADWAY. ADJUST EACH POLE'S SHAFT LENGTH TO MAINTAIN THIS DIFFERENCE IN ELEVATION WHENEVER SLOPE AND/OR OFFSET VARIES.
4. MINIMUM OUTSIDE DIAMETER AT THE TOP OF POLE EQUALS 3-7/8". POLE DIAMETER SHALL TAPER UNIFORMLY FROM THE TOP OF THE POLE TO THE BASE PLATE, WITH A MAXIMUM TAPER RATE OF 0.14" PER FOOT.
5. APPLY AN ANTI-SEIZING COMPOUND TO ALL THREADED SURFACES, INCLUDING THOSE IN THE ANCHOR PLATE AND ON THE COUPLINGS.
6. MASTARM RISE MAY VARY ±0.5' FROM THE VALUES LISTED IN THE TABLE.
7. LOCATE THE HANDHOLE AT 90 DEGREES TO THE MASTARM ON THE SIDE OF POLE DOWNSTREAM FROM TRAFFIC FLOW.
8. FURNISH ALL POLES WITH A J-HOOK TO SUPPORT THE ILLUMINATION TAP CONDUCTORS. FURNISH ALL MASTARM POLES WITH A REMOVABLE RAIN TIGHT CAP.
9. MOUNT LIGHTING STANDARDS UPON TRANSPO MODEL NO. 5100 FRANGIBLE COUPLINGS AND TRANSPO TYPE B FEMALE ANCHORS, OR APPROVED EQUAL.
10. INSTALL ALL COMPONENTS OF THE BREAKAWAY SUPPORT SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
11. FABRICATE THE SKIRT FROM FOUR PIECES OF 1/16" THICK 3003 H-14 ALUMINUM SHEET. BEND EACH PLATE TO PROVIDE CORNERS WITH A 3/4" RADIUS. ASSEMBLE THE SKIRT WITH #10 X 3/8" SELF TAPPING STAINLESS SCREWS OR POP RIVETS. THE ASSEMBLED SKIRT MEASURES ABOUT 12-3/4" SQUARE.
12. A JUNCTION BOX IS REQUIRED AT EACH NEW ELECTROLIER. INSTALL THE JUNCTION BOX IMMEDIATELY BEHIND THE FOUNDATION APPROXIMATELY 7' FROM POLE UNLESS OTHERWISE SPECIFIED IN THE PLANS.



SKIRT DETAIL



STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

LIGHTING STANDARD

DESIGNED BY	CHECKED BY	DRAFTED BY
ZJH	CLP	MF

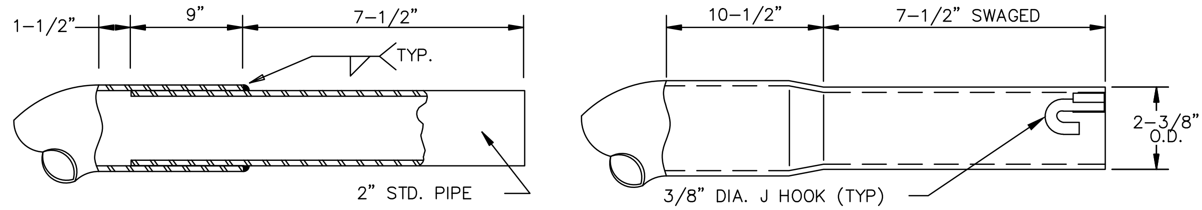
SCALE N/A

DATE 5/4/2022 TIME 8:29 AM

DRAWING LOCATION
\\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\16-LIGHTING_STANDARD-1.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H11	H62

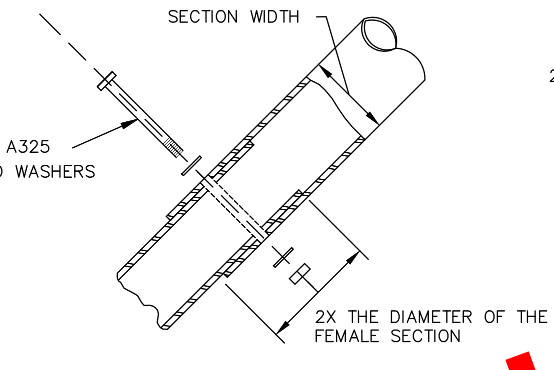


TENON

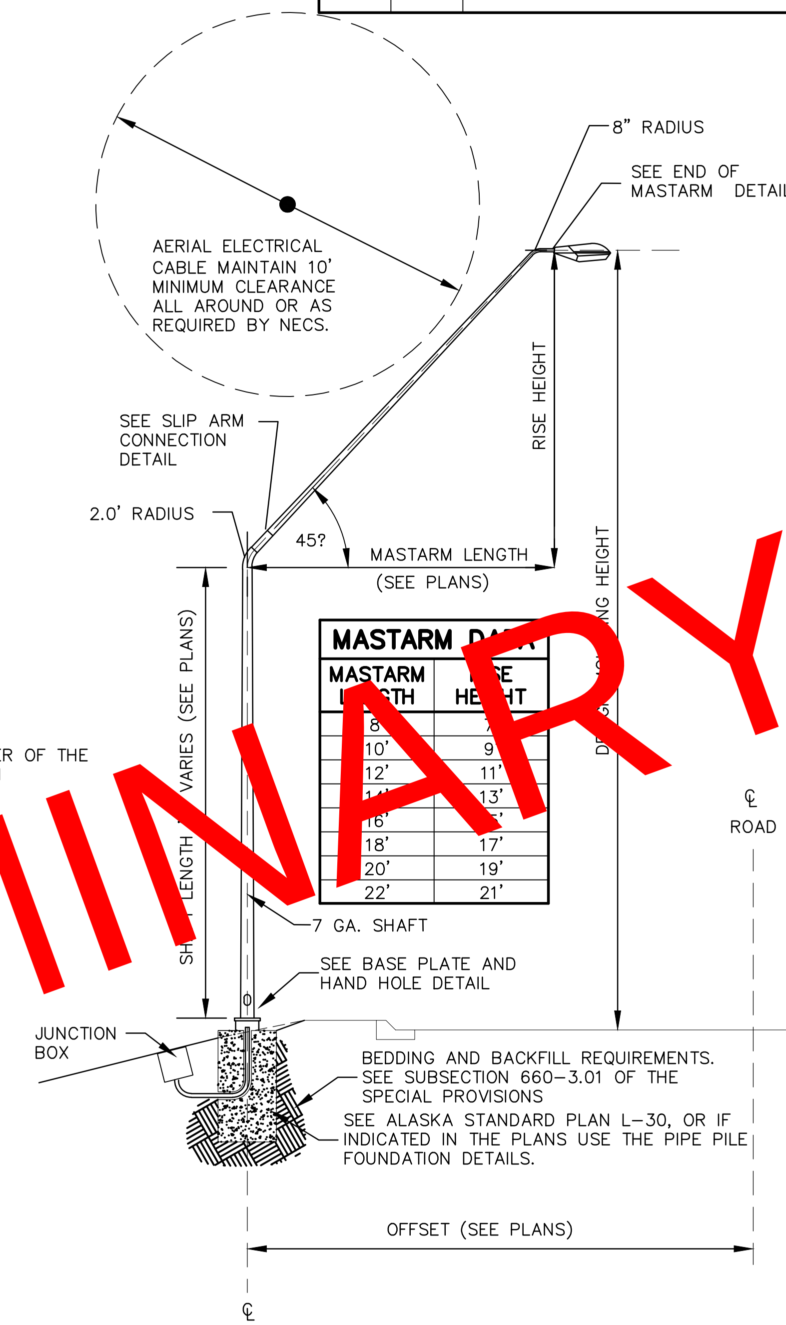
OPTIONAL SWAGED TENON

END OF MASTARM DETAIL

NTS



SLIP CONNECTION DETAIL

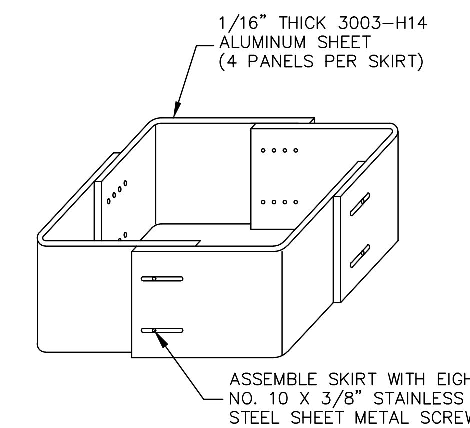


MASTARM DATA	
MASTARM LENGTH	RISE HEIGHT
8'	7'
10'	9'
12'	11'
14'	13'
16'	15'
18'	17'
20'	19'
22'	21'

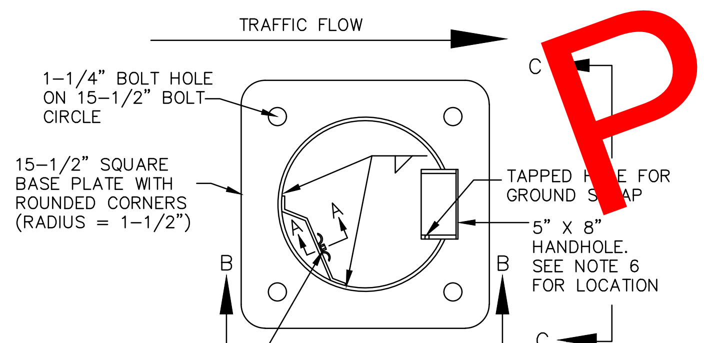
45° ELECTROLIER ELEVATION

NOTES:

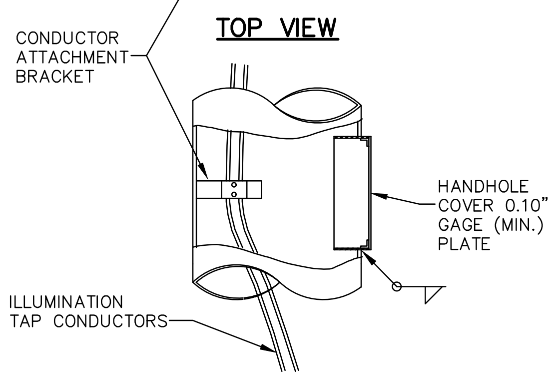
1. DESIGN AND FABRICATE ALL SHAFTS TO SUPPORT A MASTARM 22 FEET LONG WITH LUMINAIRE. ASSUME EACH LUMINAIRE WEIGHS 55 POUNDS AND HAS AN EFFECTIVE PROJECTED AREA OF 1.2 SQUARE FEET. WITH THIS DEAD LOAD, LIMIT THE ANGULAR ROTATION TO THE POLE TOP 1°40'0" MAXIMUM.
2. WELD SIZE TO BE DETERMINED BY THE MANUFACTURER.
3. MOUNTING HEIGHT, IF SPECIFIED IN THE PLANS, REFERS TO THE HEIGHT OF LUMINAIRE ABOVE THE ROADWAY. ADJUST EACH POLE'S SHAFT LENGTH TO MAINTAIN THIS DIFFERENCE IN ELEVATION WHENEVER SLOPE AND/OR OFFSET VARIES.
4. MINIMUM OUTSIDE DIAMETER AT THE TOP OF POLE EQUALS 2-3/8". POLE DIAMETER SHALL TAPER UNIFORMLY FROM THE TOP OF THE POLE TO THE BASE PLATE, WITH A MAXIMUM TAPER RATE OF 0.14" PER FOOT.
5. APPLY AN ANTI-SEIZING COMPOUND TO ALL THREADED SURFACES, INCLUDING THOSE IN THE ANCHOR PLATE AND ON THE COUPLINGS.
6. MASTARM RISE MAY VARY ±6" FROM THE VALUES LISTED IN THE TABLE.
7. LOCATE THE HANDHOLD AT 90 DEGREES TO THE MASTARM ON THE SIDE OF POLE DOWNSTREAM FROM TRAFFIC FLOW.
8. FURNISH ALL POLES WITH A J-HOOK TO SUPPORT THE ILLUMINATION TAP CONDUCTORS. FURNISH ALL MASTARM POLES WITH A REMOVABLE RAIN TIGHT CAP.
9. MOUNT LIGHTING STANDARDS UPON TRANSPO MODEL NO. 5100 FRANGIBLE COUPLINGS AND TRANSPO TYPE B FEMALE ANCHORS, OR APPROVED EQUAL.
10. INSTALL ALL COMPONENTS OF THE BREAKAWAY SUPPORT SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
11. FABRICATE THE SKIRT FROM FOUR PIECES OF 1/16" THICK 3003 H-14 ALUMINUM SHEET. BEND EACH PLATE TO PROVIDE CORNERS WITH A 3/4" RADIUS. ASSEMBLE THE SKIRT WITH #10 X 3/8" SELF TAPPING STAINLESS SCREWS OR POP RIVETS. THE ASSEMBLED SKIRT MEASURES ABOUT 12-3/4" SQUARE.
12. A JUNCTION BOX IS REQUIRED AT EACH NEW ELECTROLIER. INSTALL THE JUNCTION BOX IMMEDIATELY BEHIND THE FOUNDATION APPROXIMATELY 7' FROM POLE UNLESS OTHERWISE SPECIFIED IN THE PLANS.



SKIRT DETAIL

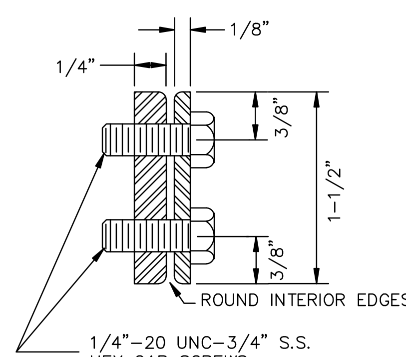


TOP VIEW

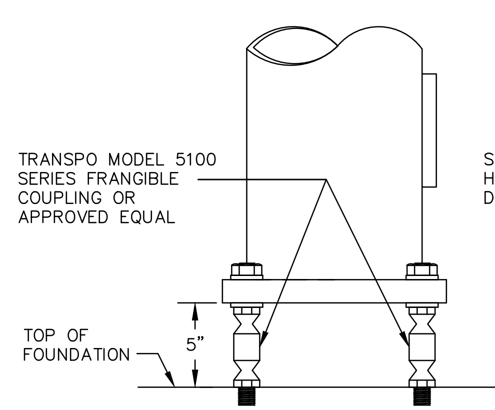


SIDE VIEW

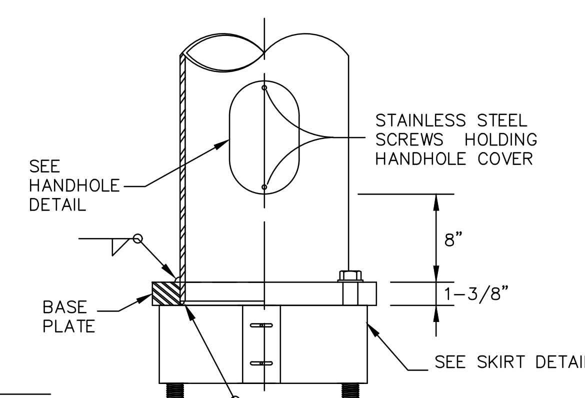
BASE PLATE AND HAND HOLE DETAIL



SECTION A-A

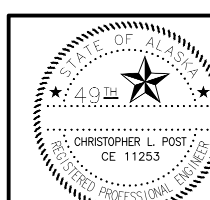


VIEW B-B



VIEW C-C

PRELIMINARY



STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

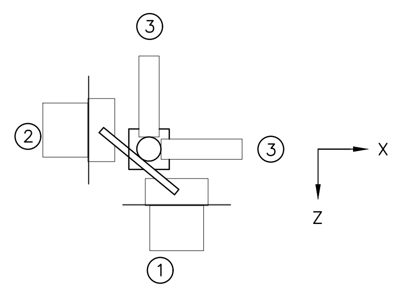
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

45° DAVIT LIGHTING STANDARD

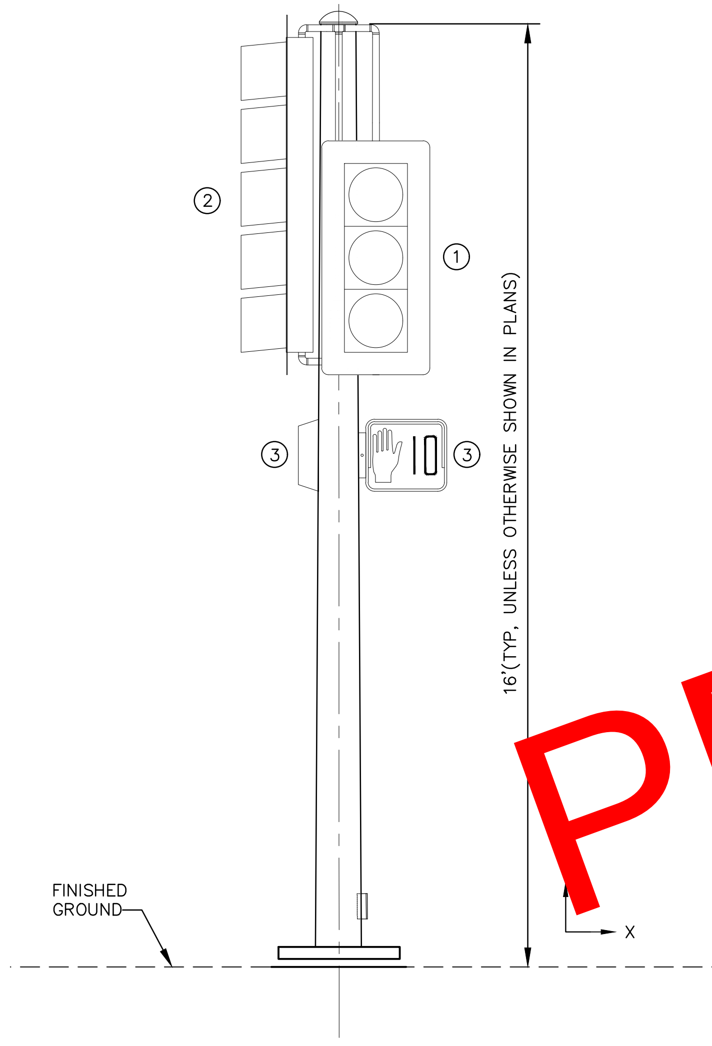
DRAWING LOCATION	DATE TIME	SCALE	DESIGNED BY / CHECKED BY / DRAFTED BY
\\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\18-LIGHTING_STANDARD-3-45_DEGREE (1).DWG	3/14/2022 1:14 PM	N/A	ZJH / CLP / MF

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H12	H62



PLAN VIEW
NTS



ELEVATION VIEW
NTS

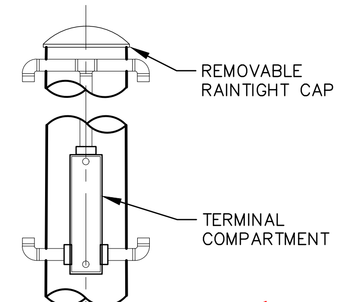
FIXED DESIGN ELEMENTS

ALL ASSEMBLIES	
LENGTH	16'(TYP, MAY VARY IN PLANS)
FIXED END DIAMETER O.D.	10.0"
TAPER	0.14" /FT
TUBE THICKNESS	7 GA.
HAND-HOLE O.D.	5.63" X 7.31"
BASE PLATE	15.5" X 15.5" X 1.375"
BOLT CIRCLE	15.5"
FRANGIBLE BASE	MODEL 5100 POLE SAFE OR APPROVED EQUAL

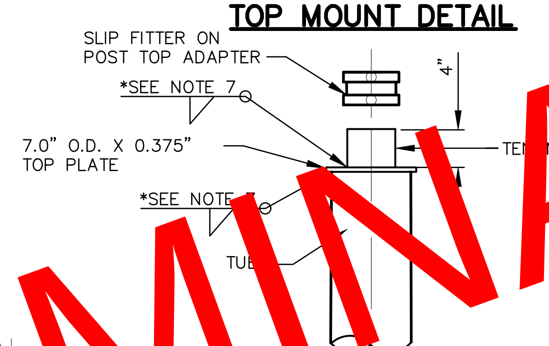
MATERIAL PROPERTIES	
TUBE	ASTM A572 GR. 55
BASEPLATE	AASHTO M270 F3, GR 50
TOP PLATE	ASTM A36
HANDHOLE REINFORCEMENT	ASTM A53, GR. B
FINISH	AASHTO M111 & M232

POLE DESIGN LOADING

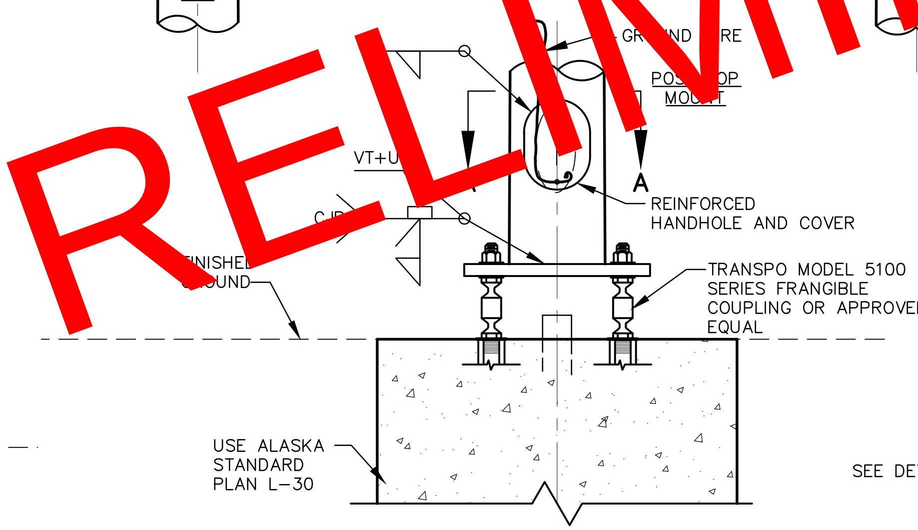
	HEIGHT (FT)	WEIGHT (LBS)	ICE AREA (SQ. FT)	WIND AREA (FACE) (SQ. FT)	WIND AREA (SIDE) (SQ. FT)	FATIGUE AREA (BOTTOM) (SQ. FT)
1 = SIGNAL	4.5	54	2.9	8.7	4.8	1.4
2 = SIGNAL	5.6	70	37.5	11	6.4	1.4
3 = PED HEAD	1.4	22	7.8	2.2	0.8	0.9



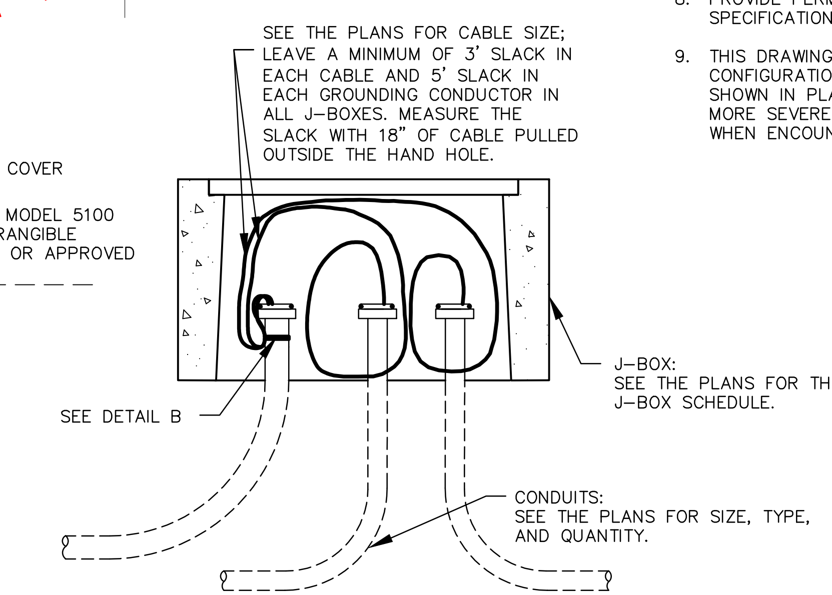
SIDE MOUNT DETAIL



TOP MOUNT DETAIL

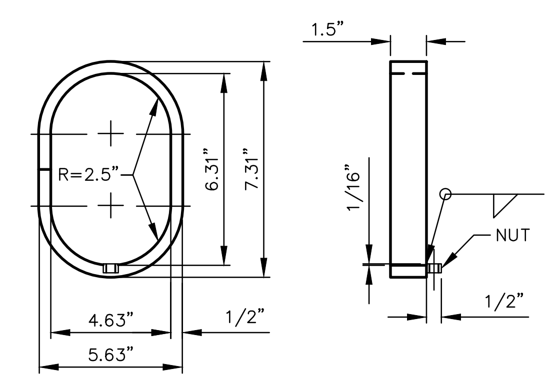


SIGNAL POST AND BASE
NTS

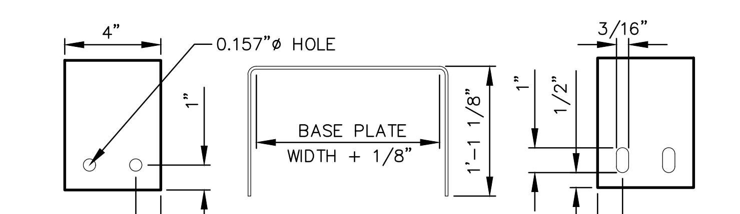


NOTES:

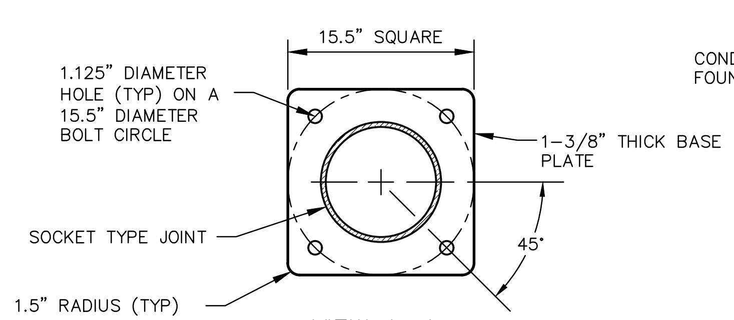
1. DESIGN POLE ASSEMBLIES TO THE 2001 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIREs AND TRAFFIC SIGNALS, THE ALASKA STANDARD SPECIFICATIONS, STANDARD MODIFICATIONS, SPECIAL PROVISIONS AND THESE PLANS. DESIGN FOR A BASIC WIND SPEED OF 100 MPH, FATIGUE CATEGORY II.
2. POLES SHALL BE DESIGNED AND FABRICATED TO INCORPORATE ALL FIXED DESIGN ELEMENTS.
3. DESIGN AND FABRICATE TUBES FROM ONE PIECE OF TAPERED STEEL.
4. STEEL GREATER THAN 1/2" THICK SHALL CONFORM TO AASHTO M270 AND SHALL MEET THE FRACTURE CRITICAL CHARPY V-NOTCH IMPACT TEST REQUIREMENTS FOR ZONE 3.
5. INSTALL A 0.625" THICK 3003-H14 ALUMINUM SHEET SKIRT AROUND THE FRANGIBLE COUPLINGS FASTENED WITH STAINLESS SHEET METAL SCREWS.
6. THE DEPARTMENT WILL REJECT DAMAGED OR DEFECTIVE POLES FOR ANY OF THE FOLLOWING, INCLUDING BUT NOT LIMITED TO;
   A. VARIANCES FROM APPROVED SHOP DRAWINGS.
   B. VARIANCES FROM FIXED DESIGN ELEMENTS.
   C. OUT OF ROUND. SECTIONS ARE OUT OF ROUND WHEN THE DIAMETERS OF ROUND MEMBERS EXCEED 2 PERCENT OF THE DIMENSION SPECIFIED ON THE SHOP DRAWINGS.
   D. BOWED WITH SWEEPS EXCEEDING 0.75" INCH THROUGHOUT THE LENGTH OF THE POLE, MASTARM, OR SEGMENT.
   E. DAMAGED OR DENTED FINISHES.
7. WELD SIZE TO BE DETERMINED BY MANUFACTURER.
8. PROVIDE PERMANENT TAGS PER SECTION 740 TABLE 740-1 OF THE SPECIFICATIONS.
9. THIS DRAWING IS INTENDED FOR POLE DESIGN PURPOSES ONLY. ASSEMBLY CONFIGURATIONS ARE FOR LOADING PURPOSES AND MAY DIFFER FROM THOSE SHOWN IN PLANS. POLES HAVE NOT BEEN EVALUATED FOR LOADING CONDITIONS MORE SEVERE THAN THOSE SHOWN AND WILL REQUIRE INDIVIDUAL ANALYSIS WHEN ENCOUNTERED.



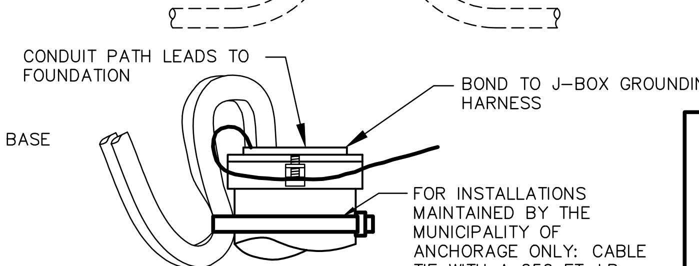
HANDHOLE DETAIL
NTS



SKIRT DETAIL
NTS
(TWO REQUIRED PER POLE)



VIEW A-A
PLAN VIEW OF BASE PLATE
NTS



DETAIL B

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

BREAKAWAY TRAFFIC SIGNAL POLE

DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\21-BREAKAWAY_TRAFFIC_SIGNAL_POLE.DWG

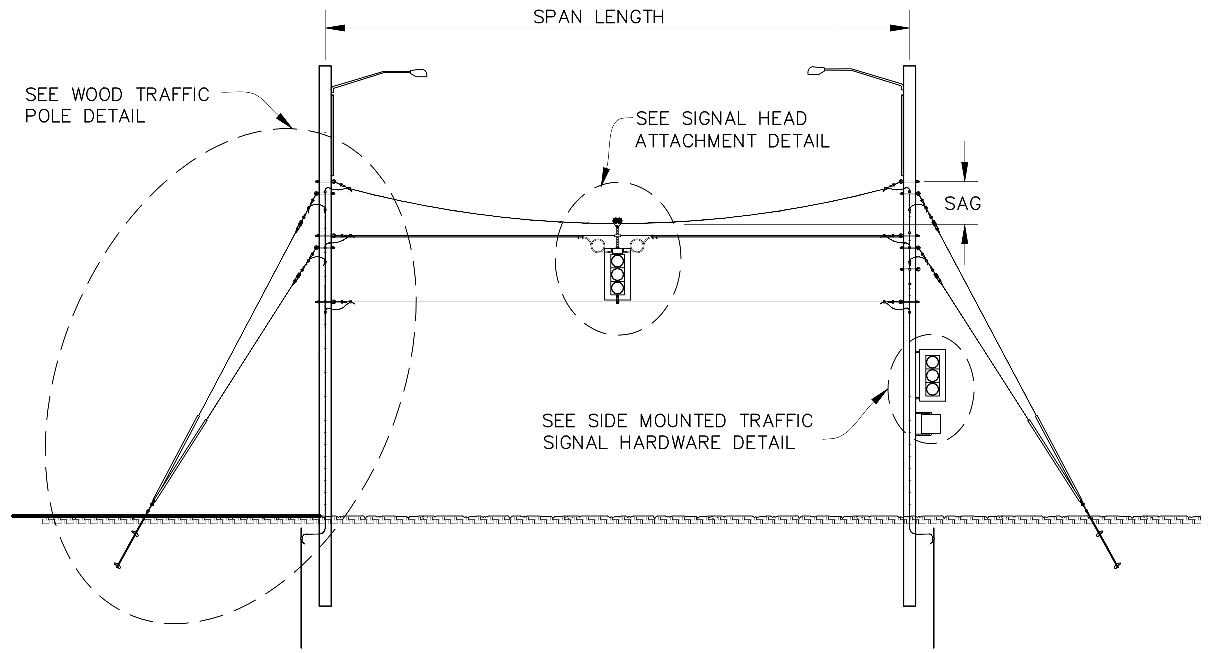
DATE 5/4/2022 TIME 8:34 AM SCALE N/A

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF

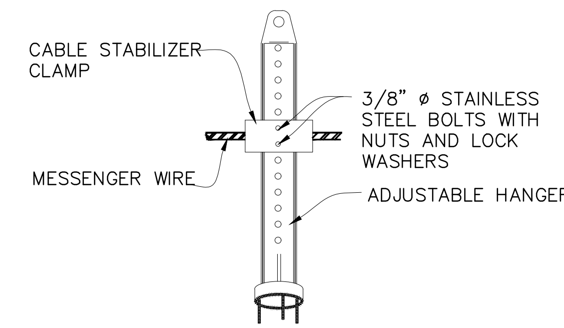
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H13	H62

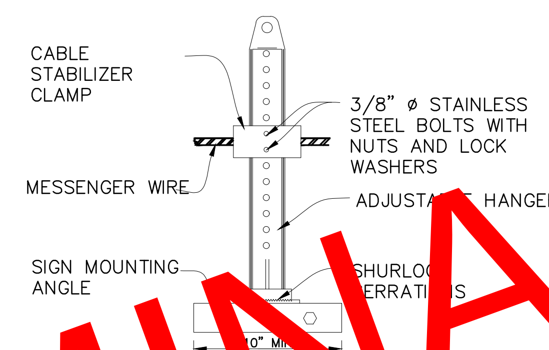
DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF
SCALE N/A
DATE 12/20/2021 TIME 4:12 PM
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\26-SPAN_WIRE.DWG



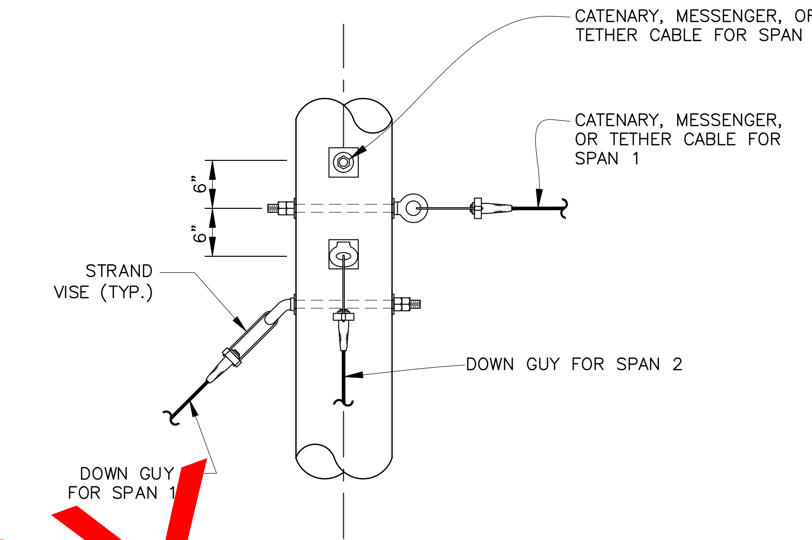
SPAN ELEVATION
NTS



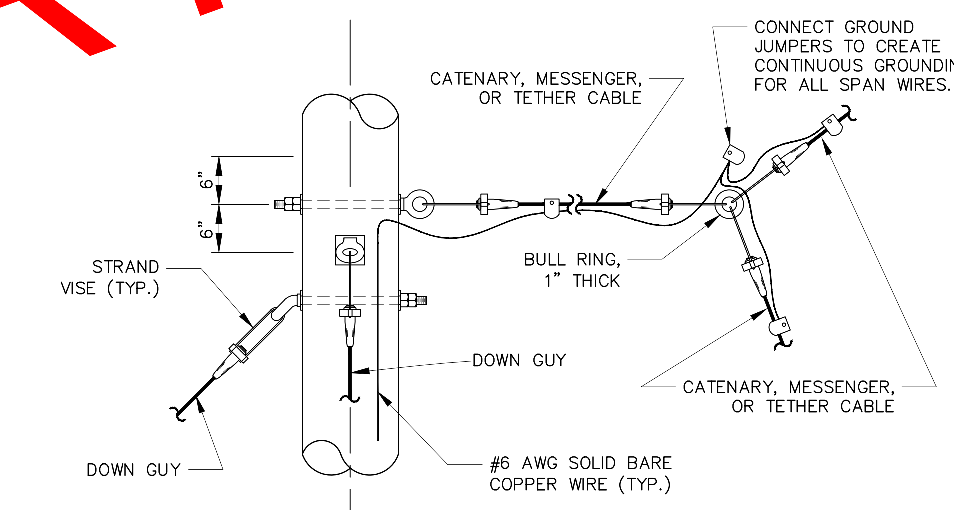
TRI-STUD ADJUSTABLE HANGER
NTS



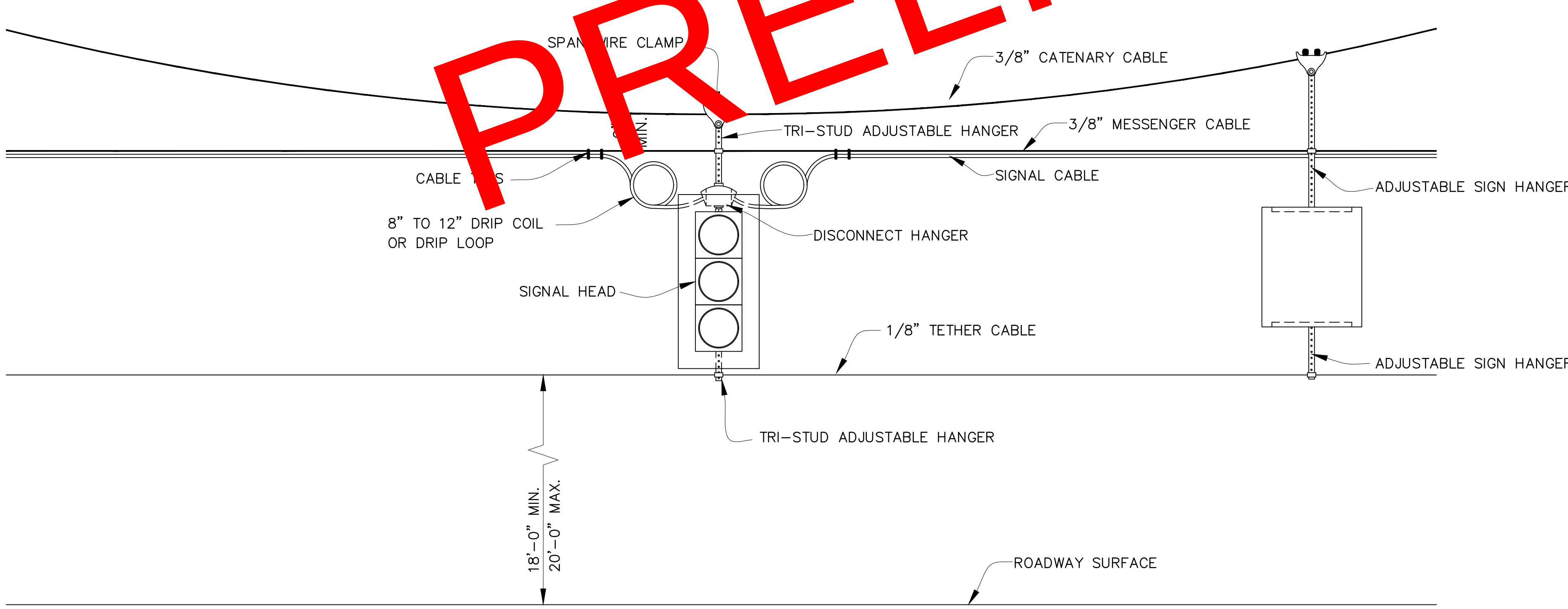
ADJUSTABLE HANGER FOR SIGN MOUNTING
NTS



MULTIPLE SPAN ATTACHMENT DETAIL
NTS



MULTIPLE SPAN – BULL RING ATTACHMENT DETAIL
NTS



SIGNAL HEAD AND SIGN ATTACHMENT DETAIL
NTS

PRELIMINARY

NOTES:

1. ATTACH ADJUSTABLE HANGERS TO THE MESSENGER AND TETHER CABLES WITH CABLE STABILIZER CLAMPS.
2. ATTACH SIGNAL CABLES TO MESSENGER CABLE EVERY 1' USING 3M HEAVY DUTY BLACK CABLE TIES OR APPROVED EQUAL. CABLE TIES SHALL BE WEATHER RESISTANT BLACK NYLON GREATER THAN 0.065" THICK, HAVE A TENSILE STRENGTH GREATER THAN 110LBS, AND HAVE A TEMPERATURE RANGE BETTER THAN -35°F TO 180°F. USE TWO TIES BEFORE/AFTER DRIP LOOPS. CABLE TIES SHALL BE ATTACHED "SNUG TIGHT", DO NOT OVER TIGHTEN.
3. INSTALL SIGNS SO THAT THE BOTTOM EDGES ARE AT APPROXIMATELY THE SAME ELEVATION.
4. SAG=4% TO 5% OF SPAN LENGTH.

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

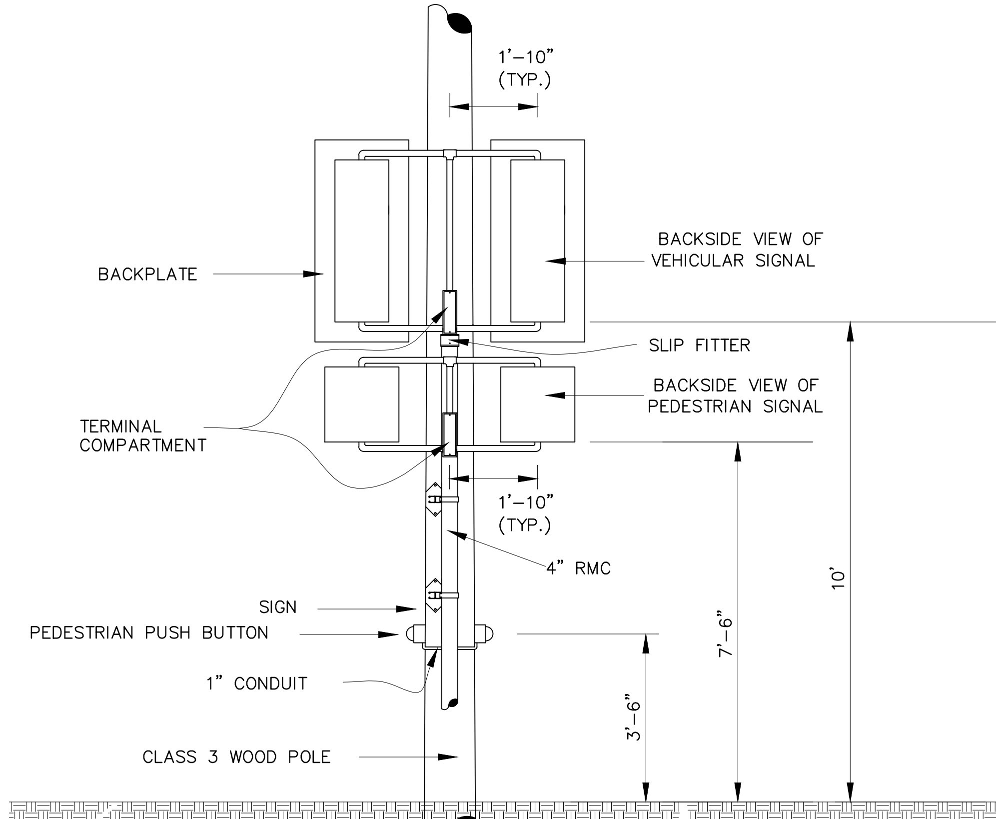
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SPAN WIRE

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H14	H62



SIDE MOUNTED TRAFFIC SIGNAL HARDWARE
NTS

WOOD TRAFFIC POLE DETAIL
NTS
(SINGLE SPAN ATTACHMENT SHOWN)

PRELIMINARY

NOTES:

1. ATTACH A 4 INCH RIGID METAL CONDUIT TO THE WOOD POLE, USING UNISTRUT P9014 WITH P4101 CHANNEL, AND P1121 PIPE CLAMPS, OR APPROVED EQUAL.
2. INSTALL THE 4 INCH CONDUIT ON THE SIDE OF THE POLE AT A LOCATION WHERE A LINE PARALLEL TO THE LONG CORD (P.C. TO P.T.) OF THE RADIUS IS TANGENT TO THE POLE, AS SHOWN IN ALASKA STANDARD PLAN T–30 OR THE SIGNAL HARDWARE DETAIL SHEET IN PLANS FOR TERMINAL COMPARTMENT LOCATIONS.
3. USE POST TOP SIGNAL FRAMES WITH TERMINAL COMPARTMENTS TO INSTALL THE VEHICULAR SIGNAL HEADS ON TOP OF THE 4 INCH CONDUIT.
4. USE SIDE MOUNTED SIGNAL FRAMES WITH TERMINAL COMPARTMENTS TO INSTALL THE PEDESTRIAN SIGNAL HEADS ON THE 4 INCH CONDUIT.
5. THE VERTICAL CLEARANCES SHOWN ARE FROM THE WALKING SURFACE FOR THE PEDESTRIAN GEAR AND THE TRAVELED WAY FOR THE VEHICULAR SIGNALS.
6. TERMINATE POLES WITH NO LUMINAIRE A MINIMUM OF 2 FEET ABOVE THE CATENARY CABLE CONNECTION.
7. SEE ALASKA STANDARD PLAN T–30 OR THE SIGNAL HARDWARE DETAIL SHEET IN PLANS FOR ADDITIONAL TRAFFIC SIGNAL HARDWARE DETAILS.
8. ALL 3/8 INCH SPAN AND GUY CABLE SHALL BE HEAVY DUTY (HD) STEEL WITH MINIMUM 9,700 LB BREAKING STRENGTH. ALL OTHER CABLES SHALL ALSO BE HD RATED.
9. GUY ANCHOR SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS. SOIL CLASSIFICATION SHALL BE USED TO DETERMINE ANCHOR SIZE, FOLLOW MANUFACTURE GUIDELINES AND CONFIRM SOIL CLASSIFICATION WITH ENGINEER PRIOR TO ANCHOR SELECTION.

STATE OF ALASKA · 49TH · CHRISTOPHER L. POST · CE 11253 · REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

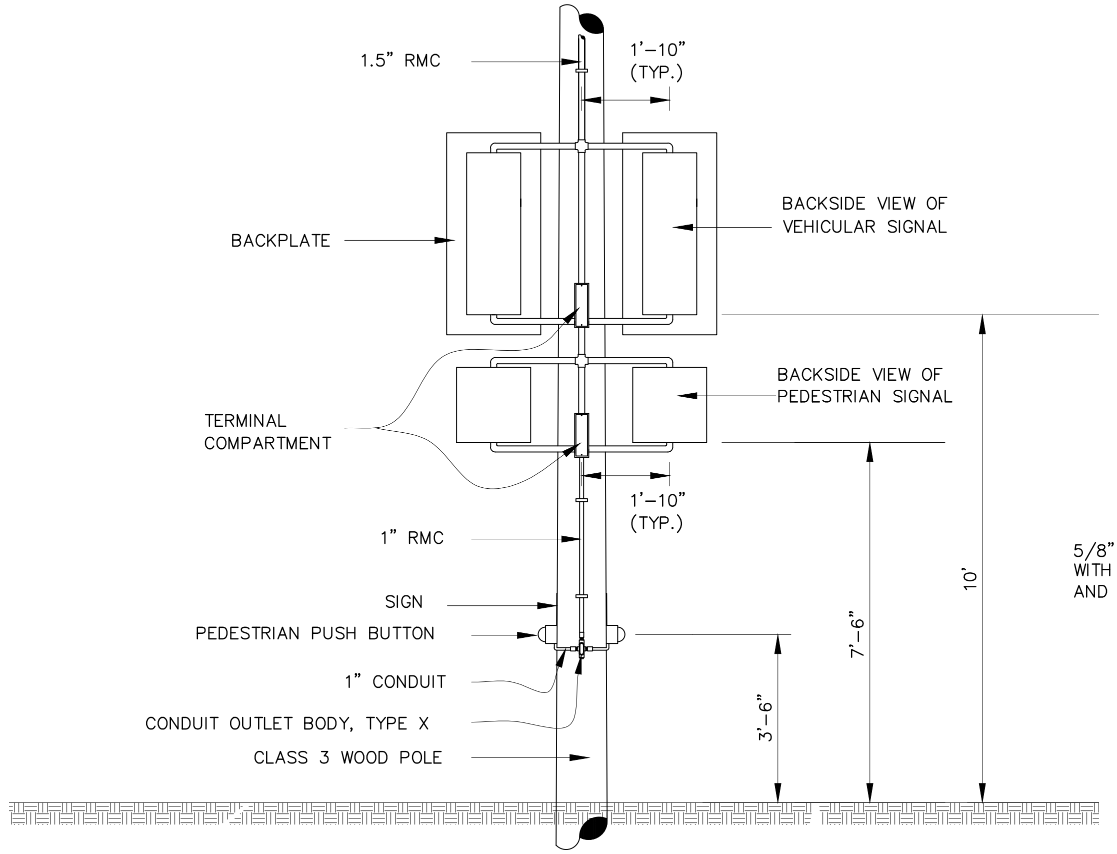
MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

WOOD POLE SIGNAL –
UNDERGROUND SERVICE

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF
SCALE N/A
TIME 8:38 AM
DATE 5/4/2022
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\25-WOOD_POLE_SIGNAL.DWG

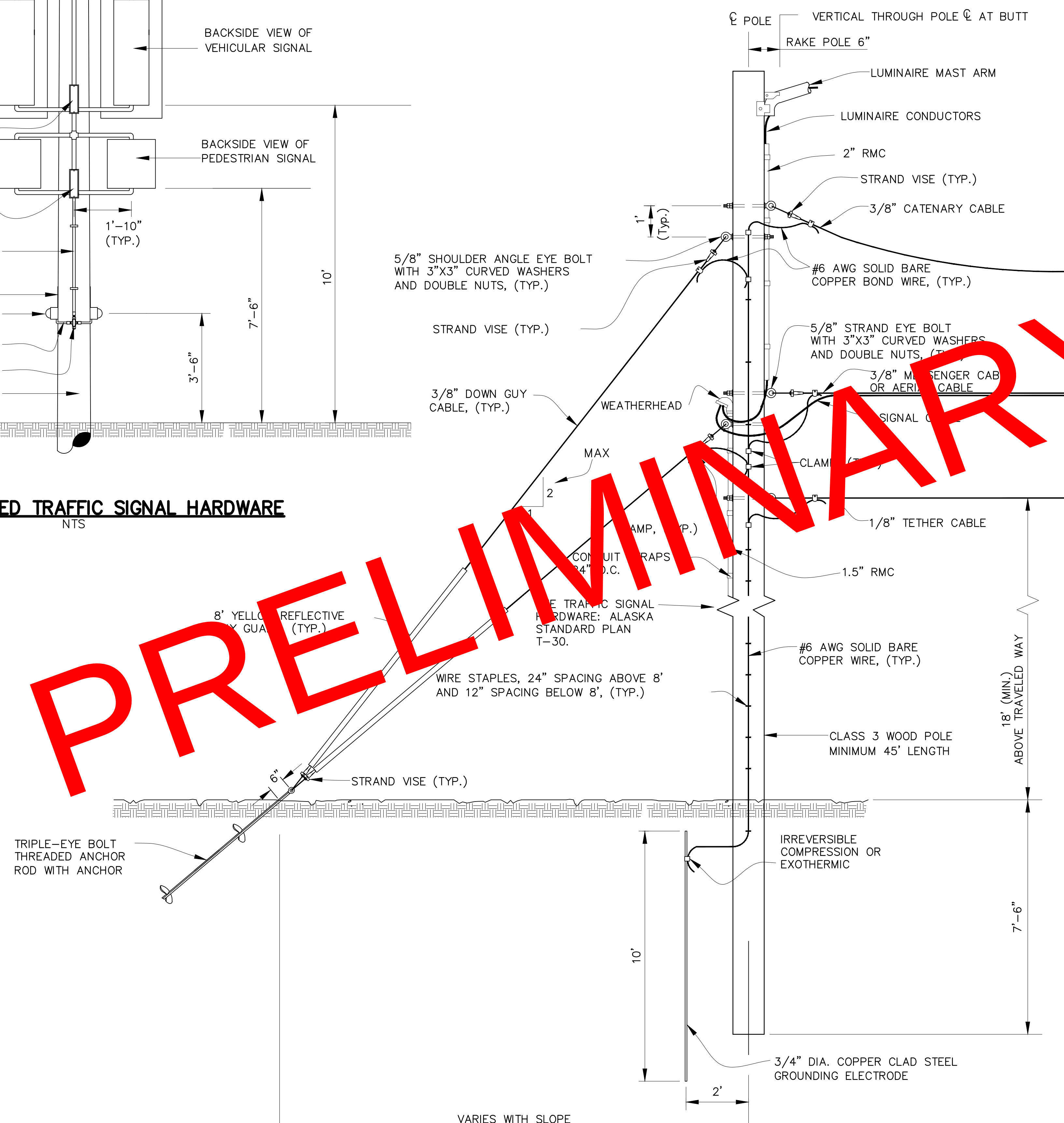
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H15	H62



SIDE MOUNTED TRAFFIC SIGNAL HARDWARE

NTS



WOOD TRAFFIC POLE DETAIL

NTS

(SINGLE SPAN ATTACHMENT SHOWN)

NOTES:

1. USE SIGNAL FRAMES WITH TERMINAL COMPARTMENTS TO INSTALL THE VEHICULAR AND PEDESTRIAN SIGNAL HEADS ON THE SIDES OF THE WOOD POLES.
2. SECURELY ATTACH THE TERMINAL COMPARTMENTS TO THE WOOD POLES AT THE LOCATIONS SHOWN ON ALASKA STANDARD PLAN T-30 OR THE SIGNAL HARDWARE DETAIL SHEET IN PLANS.
3. THE VERTICAL CLEARANCES SHOWN ARE FROM THE WALKING SURFACE FOR THE PEDESTRIAN GEAR AND THE TRAVELED WAY FOR THE VEHICULAR SIGNALS.
4. TERMINATE POLES WITH NO LUMINAIRE A MINIMUM OF 2 FEET ABOVE THE CATENARY CABLE CONNECTION.
5. SEE ALASKA STANDARD PLAN T-30 OR THE SIGNAL HARDWARE DETAIL SHEET IN PLANS FOR ADDITIONAL TRAFFIC SIGNAL HARDWARE DETAILS.
6. ALL 3/8 INCH SPAN AND GUY CABLE SHALL BE HEAVY DUTY (HD) STEEL WITH MINIMUM 9,700 LB BREAKING STRENGTH. ALL OTHER CABLES SHALL ALSO BE HD RATED.
7. GUY ANCHOR SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS. SOIL CLASSIFICATION SHALL BE USED TO DETERMINE ANCHOR SIZE, FOLLOW MANUFACTURE GUIDELINES AND CONFIRM SOIL CLASSIFICATION WITH ENGINEER PRIOR TO ANCHOR SELECTION.

PRELIMINARY

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

WOOD POLE SIGNAL – OVERHEAD SERVICE

DESIGNED BY	ZJH
CHECKED BY	CLP
DRAFTED BY	MF
SCALE	N/A
TIME	8:38 AM
DATE	5/4/2022

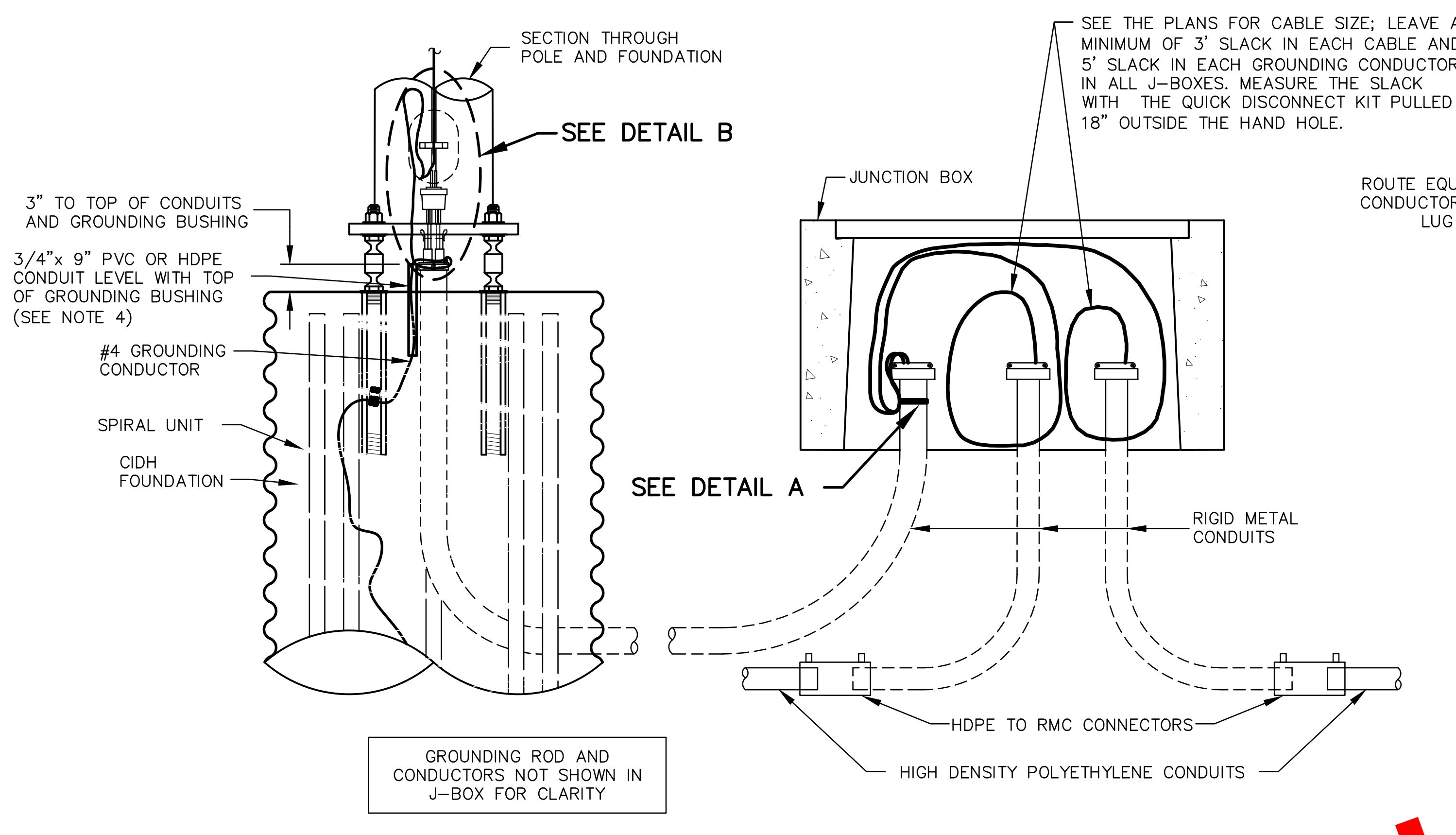
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\25-WOOD_POLE_SIGNAL.DWG

NO.	DATE	REVISION

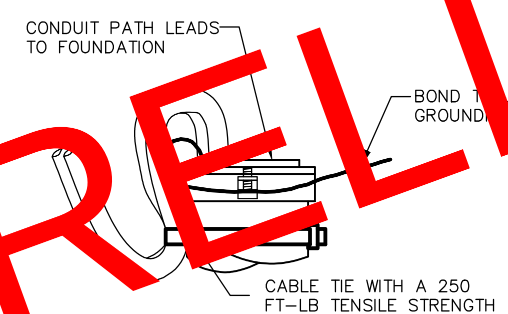
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H16	H62

NOTES:

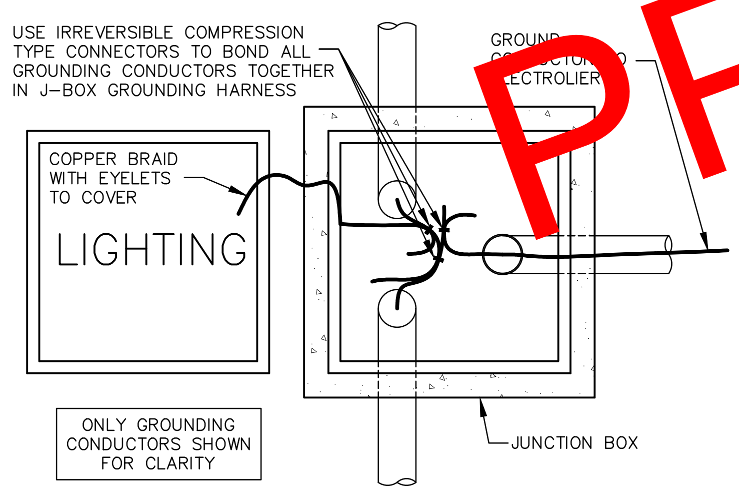
1. APPLICATION FOR SLIP BASE IS THE SAME EXCEPT FOR BONDING. SEE SUBSECTION 660-3.06 FOR BONDING.
2. LABEL ALL CABLES AND CONDUCTORS IN POLE BASE AND J-BOX. SEE SUBSECTION 660-3.05.
3. MAKE ALL GROUNDING AND BONDING WIRE #8 AWG, EXCEPT IN THOSE CONDUITS THAT CONTAIN CIRCUIT CONDUCTORS LARGER THAN #8 AWG. IN THIS CASE USE WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR. THE GROUNDING ELECTRODE CONDUCTOR TO THE CONCRETE-ENCASED ELECTRODE IN THE FOUNDATION SHALL BE #4 AWG.
4. USE LISTED IRREVERSIBLE COMPRESSION TYPE CONNECTORS SIZED FOR EACH APPLICATION AND INSTALLED PER MANUFACTURERS SPECIFICATIONS.
5. PROTECT GROUND WIRE WITH 3/4" PVC OR HDPE CONDUIT TO 6" BELOW TOP OF FOUNDATION FILLED WITH SILICONE SEALANT.



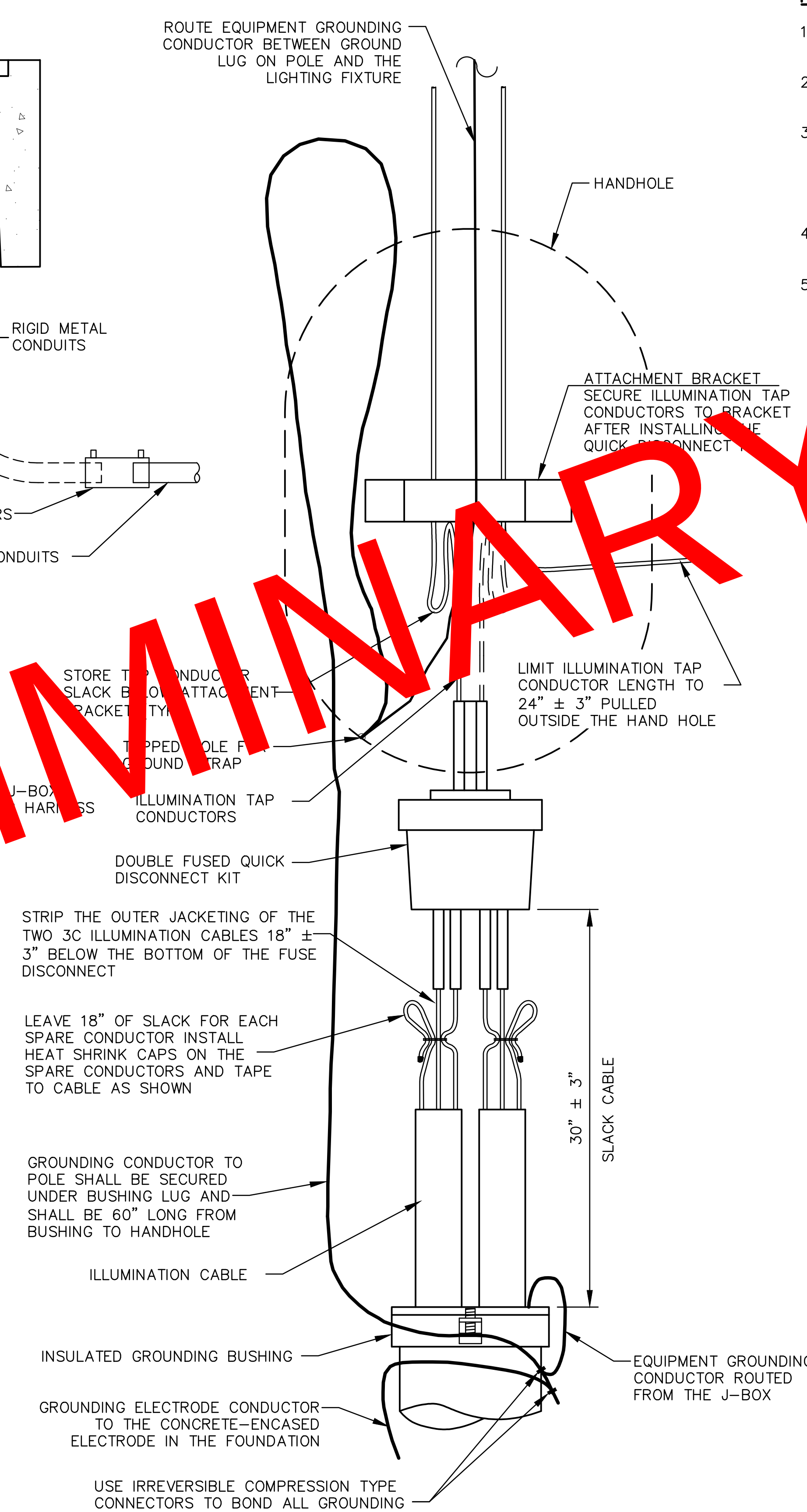
LIGHTING SYSTEM POLE AND J-BOX WIRING DETAILS



DETAIL A



GROUNDING CONDUCTOR BONDING CONNECTIONS



DETAIL B

STATE OF ALASKA 49TH
CHRISTOPHER L. POST
CE 11253
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

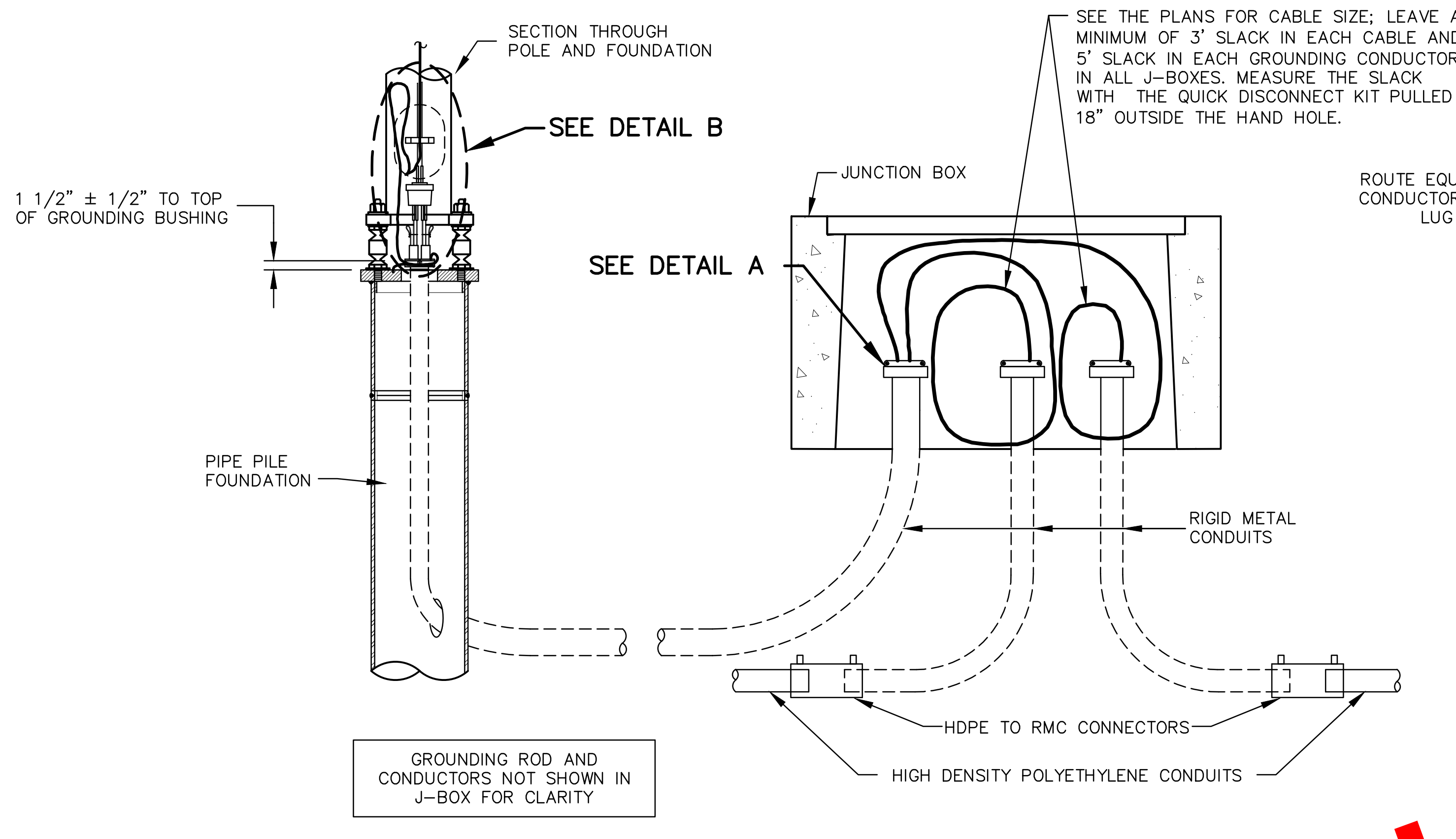
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

CIDH FOUNDATION – POLE WIRING AND GROUNDING

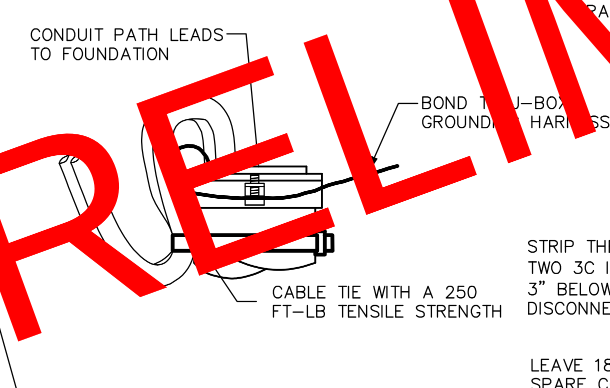
DESIGNED BY ZJH | CHECKED BY CLP | DRAFTED BY MF
SCALE N/A
DATE 3/14/2022 TIME 1:14 PM
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\27-CIDH_POLE_WIRING_AND_GROUNDING.DWG

NO.	DATE	REVISION

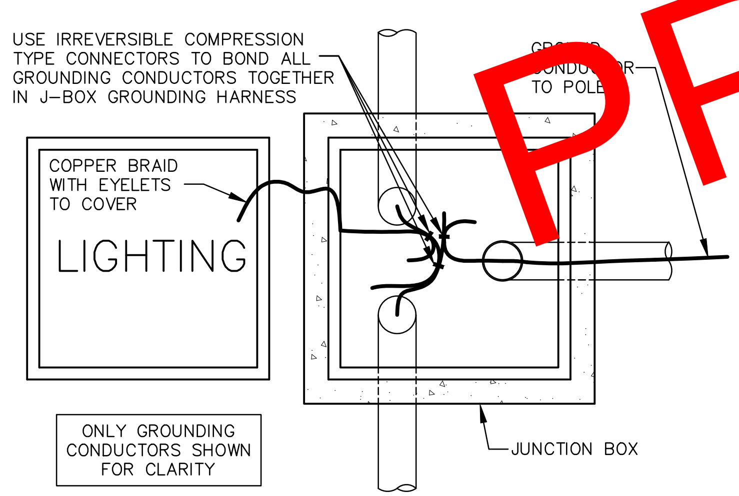
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H17	H62



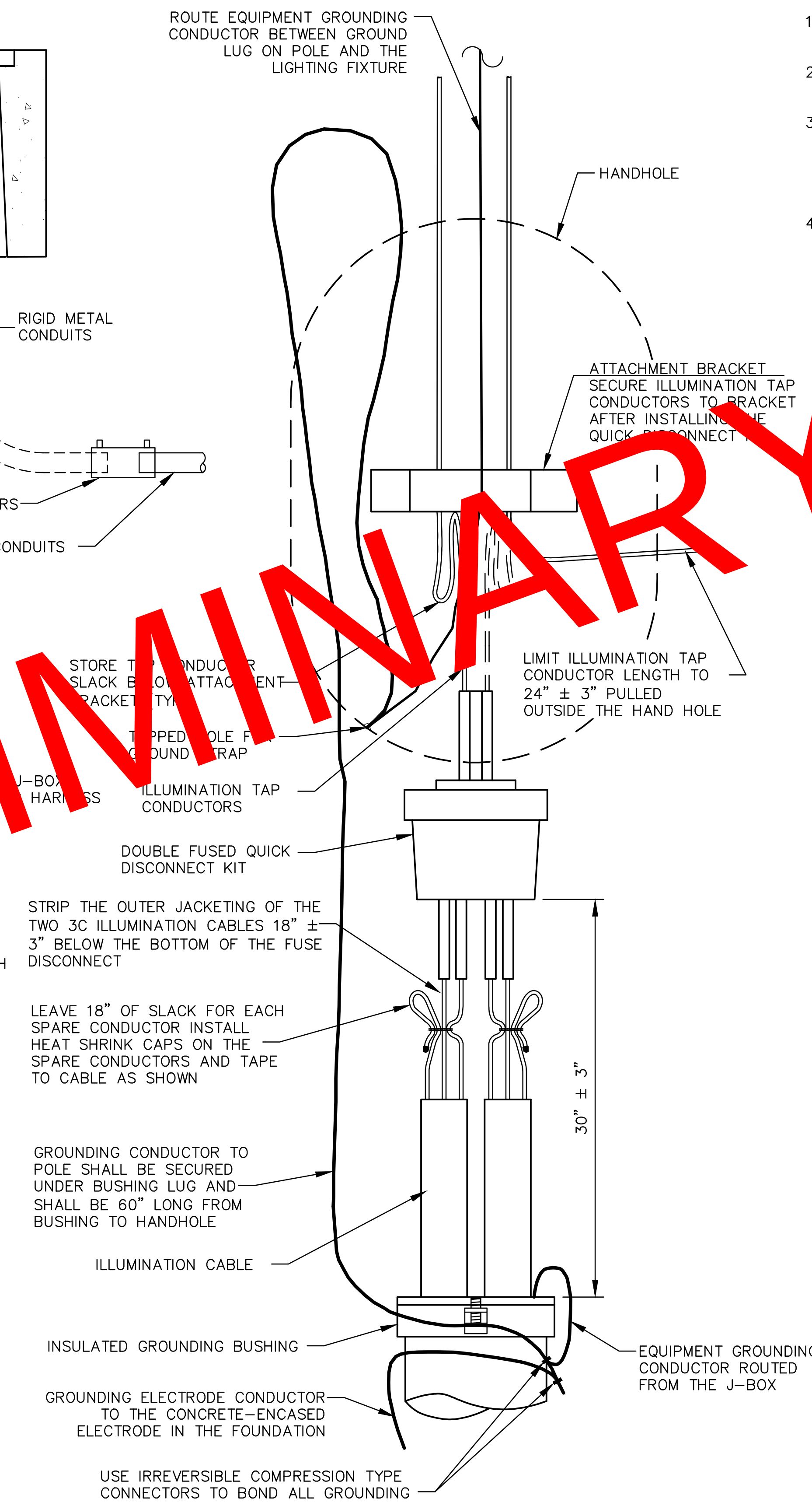
LIGHTING SYSTEM POLE AND J-BOX WIRING DETAILS



DETAIL A



GROUNDING CONDUCTOR BONDING CONNECTIONS



DETAIL B

PRELIMINARY

NOTES:

1. APPLICATION FOR SLIP BASE IS THE SAME EXCEPT FOR BONDING. SEE SUBSECTION 660-3.06 FOR BONDING.
2. LABEL ALL CABLES AND CONDUCTORS IN POLE BASE AND J-BOX. SEE SUBSECTION 660-3.05.
3. MAKE ALL GROUNDING AND BONDING WIRE #8 AWG, EXCEPT IN THOSE CONDUITS THAT CONTAIN CIRCUIT CONDUCTORS LARGER THAN #8 AWG. IN THIS CASE USE WIRE EQUAL IN SIZE TO THE LARGEST CONDUCTOR. THE GROUNDING ELECTRODE CONDUCTOR TO THE CONCRETE-ENCASED ELECTRODE IN THE FOUNDATION SHALL BE #4 AWG.
4. USE LISTED IRREVERSIBLE COMPRESSION TYPE CONNECTORS SIZED FOR EACH APPLICATION AND INSTALLED PER MANUFACTURERS SPECIFICATIONS.

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

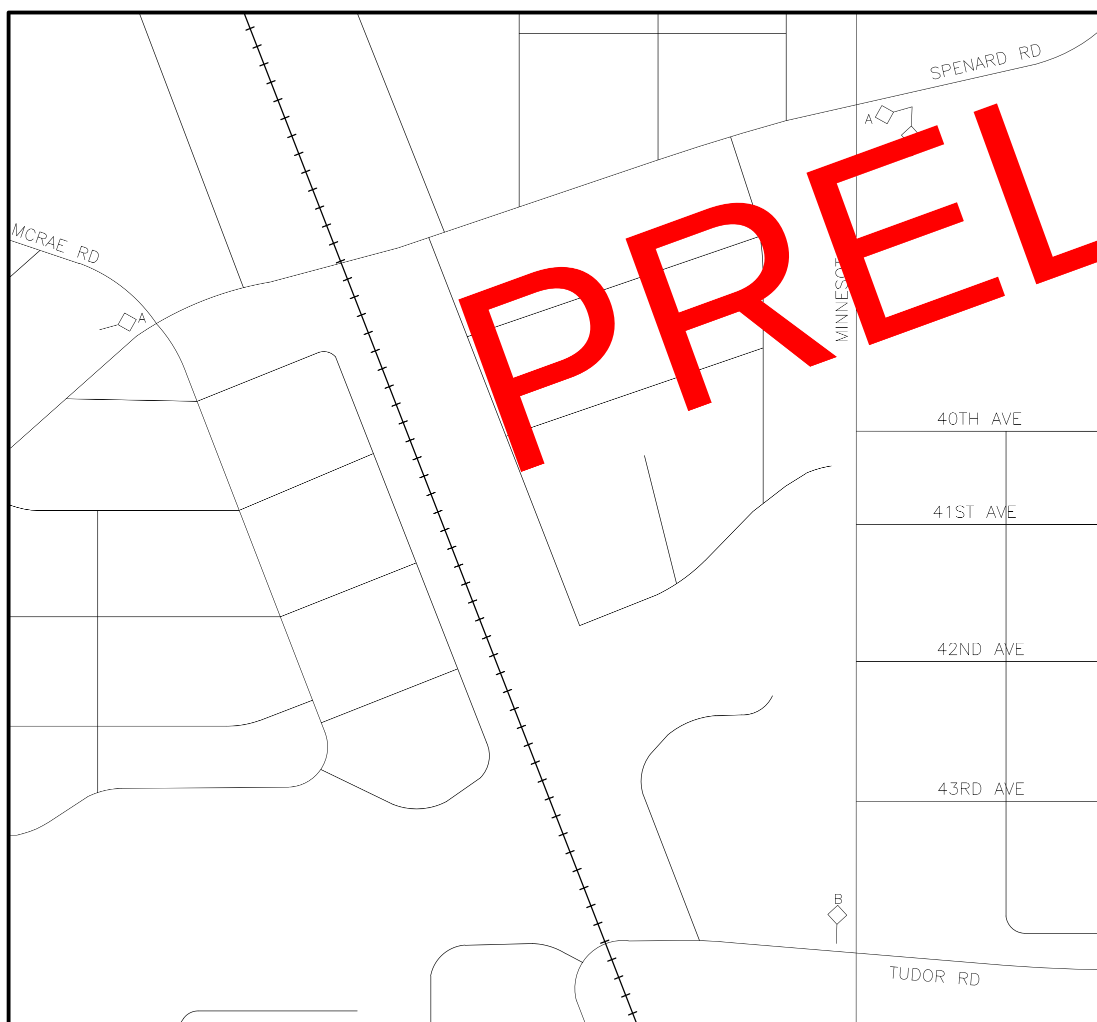
PIPE PILE FOUNDATION – POLE WIRING AND GROUNDING

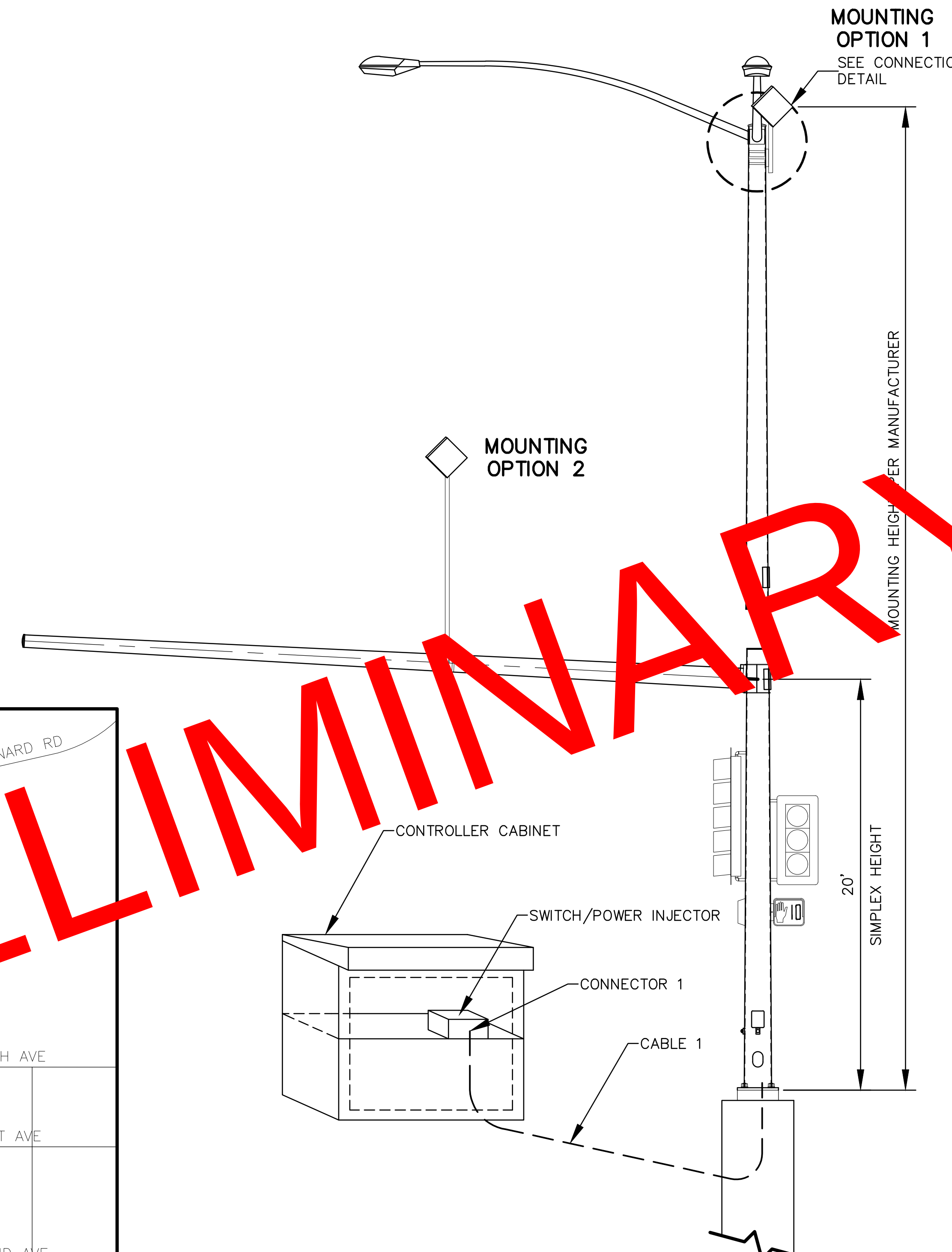
DESIGNED BY ZJH | CHECKED BY CLP | DRAFTED BY MF
SCALE N/A
DATE 3/14/2022 TIME 1:14 PM
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\28-PIPE_PILE_POLE_WIRING_AND_GROUNDING.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H18	H62

MATERIAL REQUIREMENTS	
ALL ASSEMBLIES	
MOUNTING BRACKET	PER MANUFACTURER
STEEL PIPE	2" GALVANIZED RMC
CABLE 1	PER MANUFACTURER
CONNECTOR 1, 2	PER MANUFACTURER
HEAT SHRINK	PER MANUFACTURER
STRAIN RELIEF	REMKE 2201-013 OR APPROVED EQUAL
5.8 GHz ANTENNA	
ANTENNA	INTUICOM 5.8GHz INTEGRATED OR APPROVED EQUAL

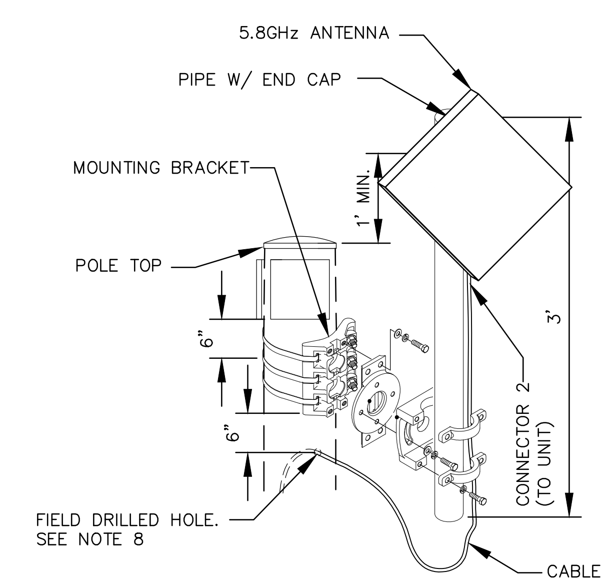




SYSTEM LAYOUT
NTS

NOTES:

1. PROTECT CABLE ENDS FROM MOISTURE AT ALL TIMES.
2. PULL CABLE IN ACCORDANCE WITH SECTION 660 OF THE SPECIAL PROVISIONS. PULL CABLE SO THAT THERE IS SUFFICIENT LENGTH TO REACH THE TOP OF THE CONTROLLER CABINET. CABLES ARE TO BE PULLED WITHOUT CONNECTORS ATTACHED. WHEN CABLE HAS BEEN PULLED TO FINAL LOCATIONS INSTALL AND MAKE FINAL CONNECTIONS.
3. CABLE RUNS ARE TO BE MADE CONTINUOUS WITHOUT SPLICES EXCEPT FOR LOCATIONS APPROVED BY THE ENGINEER.
4. CABLE WITH DAMAGED INSULATION, OR THAT HAS BEEN CRIMPED OR BENT BEYOND THE MINIMUM BEND RADIUS MUST BE REPLACED AT NO ADDITIONAL COST.
5. THE CABLE BEND RADIUS SHALL NOT EXCEED MANUFACTURERS RECOMMENDATIONS.
6. ENSURE ADEQUATE LENGTH OF EACH CABLE TO ALLOW WORK ON THE ENDS OF THE CABLE IN THE CONTROLLER CABINET, AT THE MASTARM HANDHOLE AND ANTENNA MOUNTING LOCATION.
7. MOUNT ANTENNA AT REQUIRED HEIGHT. HEIGHT MAY BE ADJUSTED BY THE ENGINEER TO AVOID THE SLIP FIT CONNECTION OR OTHER HAZARDS.
8. INSTALL WATERTIGHT RUBBER GROMMITS WHERE CABLE PASSES THROUGH THE POLE. AFTER DECOMMISIONING TEMPORARY INTERCONNECT SYSTEM REPAIR HOLES IN POLE ACCORDING TO SPECIAL PROVISION SECTION 660-3.01-4.



5.8 GHz ANTENNA
(LUMINAIRE ARMS NOT SHOWN FOR CLARITY)

CONNECTION DETAIL
NTS

NOTES:

A. EAST-WEST COMMUNICATION: TWO RADIOS
B. NORTH-SOUTH COMMUNICATION: TWO RADIOS

PRELIMINARY

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

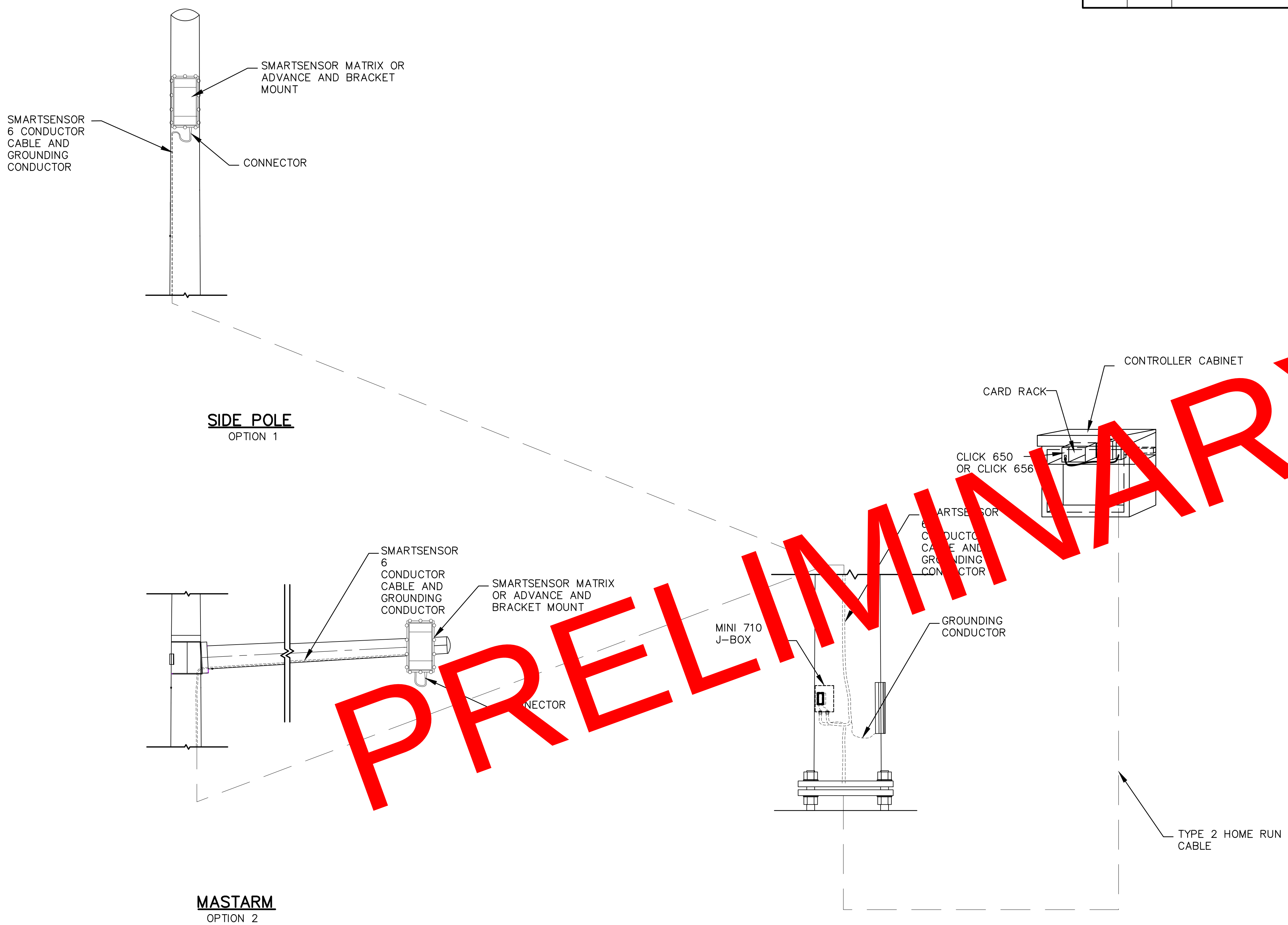
TEMPORARY INTERCONNECT MOUNTING DETAIL

DESIGNED BY	ZJH
CHECKED BY	CLP
DRAFTED BY	MF
SCALE	N/A
DATE	5/5/2022
TIME	12:49 PM

DRAWING LOCATION
\\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\30-ANTENNA_MOUNTING_BRACKET.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H19	H62



RADAR DETECTION DETAIL

(NTS)

NOTES:

1. PROTECT CABLE ENDS FROM MOISTURE AT ALL TIMES.
2. PULL CABLE IN ACCORDANCE WITH SECTION 660 OF THE SPECIAL PROVISIONS. PULL CABLE SO THAT THERE IS SUFFICIENT LENGTH TO REACH THE TOP OF THE CONTROLLER CABINET. WHEN CABLE HAS BEEN PULLED TO FINAL LOCATIONS INSTALL AND MAKE FINAL CONNECTIONS.
3. CABLE RUNS ARE TO BE MADE CONTINUOUS WITHOUT SPLICES.
4. CABLE WITH DAMAGED INSULATION, OR THAT HAS BEEN CRIMPED OR BENT BEYOND THE MINIMUM BEND RADIUS MUST BE REPLACED AT CONTRACTORS EXPENSE.
5. THE MINIMUM BEND RADIUS SHALL NOT EXCEED MANUFACTURERS RECOMMENDATIONS.
6. ENSURE ADEQUATE LENGTH OF EACH CABLE TO ALLOW WORK ON THE ENDS OF THE CABLE IN THE CONTROLLER CABINET, AT THE POLE MOUNT ENCLOSURE AND RADAR MOUNTING LOCATION.
7. MOUNT THE RADAR AT THE LOCATION STATED IN THE PLANS. PLACEMENT MAY BE ADJUSTED BY THE ENGINEER TO ALLOW FOR BETTER AIMING OF THE RADAR OR TO AVOID OTHER HAZARDS.
8. INSTALL WATERTIGHT THREADED RIGID COMPRESSION CONNECTOR WHERE CABLE PASSES THROUGH THE POLE.
9. FURNISH ONLY NEW EQUIPMENT OF THE BRAND AND TYPE LISTED OR ITS APPROVED EQUAL. PROVIDE AT NO ADDITIONAL COST ALL NECESSARY DEVICES, WIRES, BRACKETS/HARDWARE ETC. TO PROVIDE A FULLY FUNCTIONING RADAR DETECTION SYSTEM.
10. INSTALL #10 AWG GROUNDING CONDUCTOR WITH GREEN COLORED INSULATION BETWEEN THE EXTERNAL GROUNDING LUG ON THE SMARTSENSOR UNIT AND THE HAND HOLE AT THE POLE BASE. CONNECT THE GROUNDING CONDUCTOR TO A POLE GROUNDING CONDUCTOR USING AN IRREVERSIBLE COMPRESSION CONNECTOR. IDENTIFY THE CONDUCTOR WITH TAG AS "RADAR GND".

MATRIX RADAR DETECTION EQUIPMENT
ITEMS TO BE PROVIDED FOR INSTALLATION
SENSOR MOUNT – 6" 3 AXIS ALUM. BRACKET. (SS–611)
MINI 710– SENSOR CABLE J–BOX WITH TERMINAL BLOCKS (102–0453)
MATRIX TYPE 2 HOME RUN CABLE (MTX2 HMRN)
SMARTSENSOR 6 CONDUCTOR CABLE (SS–704–080) WITH SINGLE END CONNECTOR (SS–709) FACTORY INSTALLED
SMARTSENSOR MATRIX (SS–225)
KNUCKLE BRACKET (360–0129)

ADVANCE RADAR DETECTION EQUIPMENT
ITEMS TO BE PROVIDED FOR INSTALLATION
SENSOR MOUNT – 6" 3 AXIS ALUM. BRACKET. (SS–611)
MINI 710– SENSOR CABLE J–BOX WITH TERMINAL BLOCKS (102–0453)
MATRIX TYPE 2 HOME RUN CABLE (MTX2 HMRN)
SMARTSENSOR 6 CONDUCTOR CABLE (SS–704–080) WITH SINGLE END CONNECTOR (SS–709) FACTORY INSTALLED
SMARTSENSOR ADVANCE EXTENDED RANGE (SS–200E)
SMARTSENSOR ADVANCE VIEW FINDER (360–0283)
KNUCKLE BRACKET (360–0129)

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

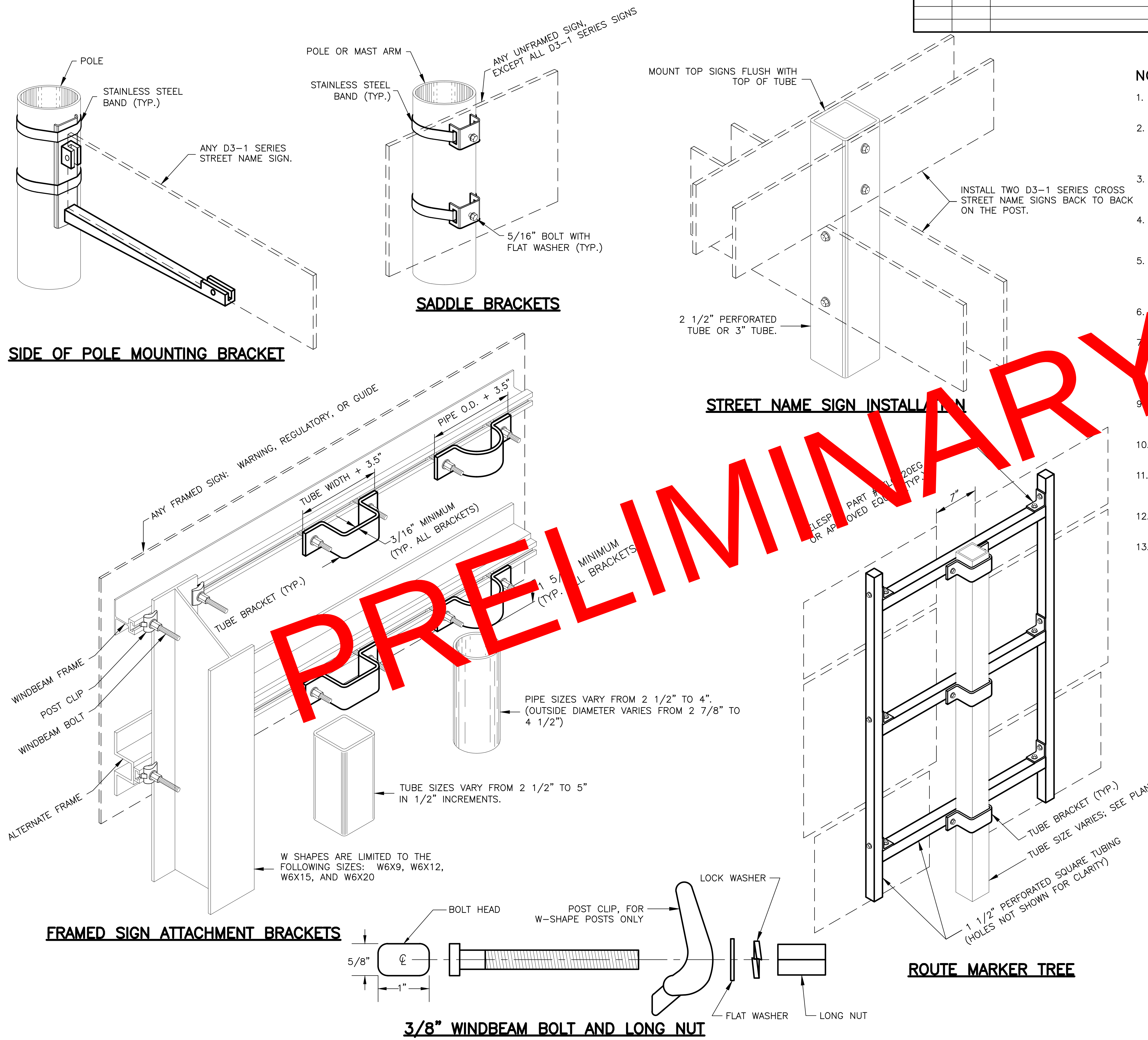
RADAR DETECTION

DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\33-RADAR_DETECTION.DWG

DATE 1/4/2022 TIME 2:22 PM SCALE N/A DESIGNED BY ZJH CHECKED BY CLP DRAFTED BY MF

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H20	H62



PRELIMINARY

NOTES:

1. EXCEPT FOR POLES AND MAST ARMS, ONLY USE TUBES TO SUPPORT SIGNS MOUNTED ON ONE POST.

2. ATTACH SIGNS, FRAMED AND UNFRAMED TO THEIR SUPPORTS WITH ZINC PLATED 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO PERFORATED TUBES WITH ACCESSORY DRIVE RIVETS AND TO SADDLES WITH 5/16" BOLTS.

3. BOLT UNFRAMED SIGNS DIRECTLY TO TUBES IN TWO LOCATIONS, NEAR TOP AND NEAR BOTTOM OF MATING SURFACE. ATTACH THEM TO POLES AND MAST ARMS WITH TWO SADDLES.

4. ATTACH BRACKETS TO POLES AND MAST ARMS WITH DOUBLE WRAPS OF 3/4" WIDE BY 0.020" THICK STAINLESS STEEL BANDING MATERIAL. TIGHTEN EACH BAND UNTIL IT STOPS MOVING THROUGH THE BUCKLE.

5. ATTACH FRAMED SIGNS TO POSTS WHEREVER THE FRAMES CROSS THE POSTS. AT EACH CROSSING, ATTACH THE SIGN USING TWO POST CLIPS ON W-SHAPE POSTS, A U-SHAPED BRACKET ON PIPES, AND A BRACKET WITH SQUARE CORNERS ON TUBES.

6. THE TUBE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.

7. ONLY USE THE SPECIAL WINDBEAM BOLTS TO ATTACH SIGNS FRAMED WITH THE WINDBEAM FRAMING MATERIAL.

ATTACH FRAMED SIGNS TO POLES AND MAST ARMS USING POLE PLATES INSTALLED ACCORDING TO ALASKA STANDARD PLAN S-23.

9. FOR ROUTE MARKER TREES, CUT PERFORATED TUBES TO ENSURE TIGHT FITTING JOINTS. ASSEMBLE THE PIECES WITH ACCESSORY ELL-SHAPED ANGLE BRACKETS.

10. INSTALL THE TOP EDGE OF SIGNS 1" ABOVE THE TOPS OF POSTS, EXCEPT FOR THE D3-1 STREET NAME SIGNS.

11. INSTALL THE TOP EDGE OF SIGNS 3" BELOW THE TOP OF POST, WHENEVER THEY ARE MOUNTED BELOW SIGNS SECURED BY POST TOP MOUNTING BRACKETS.

12. THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.

13. INSTALL WEATHER TIGHT CAPS ON ALL PIPE AND TUBE POSTS, EXCEPT PERFORATED TUBING.

FASTENER SPECIFICATION TABLE

FASTENERS	ALUMINUM	STEEL	STAINLESS STEEL
BOLTS	ASTM F468 2024-T4	ASTM A307	ASTM F593
NUTS	ASTM F467 2024-T4	ASTM A563	ASTM F594
WASHERS	ANSI B18.22.1	ASTM F844	ANSI B18.22.1
POST CLIPS	ASTM B179 356-T6	N/A	N/A

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

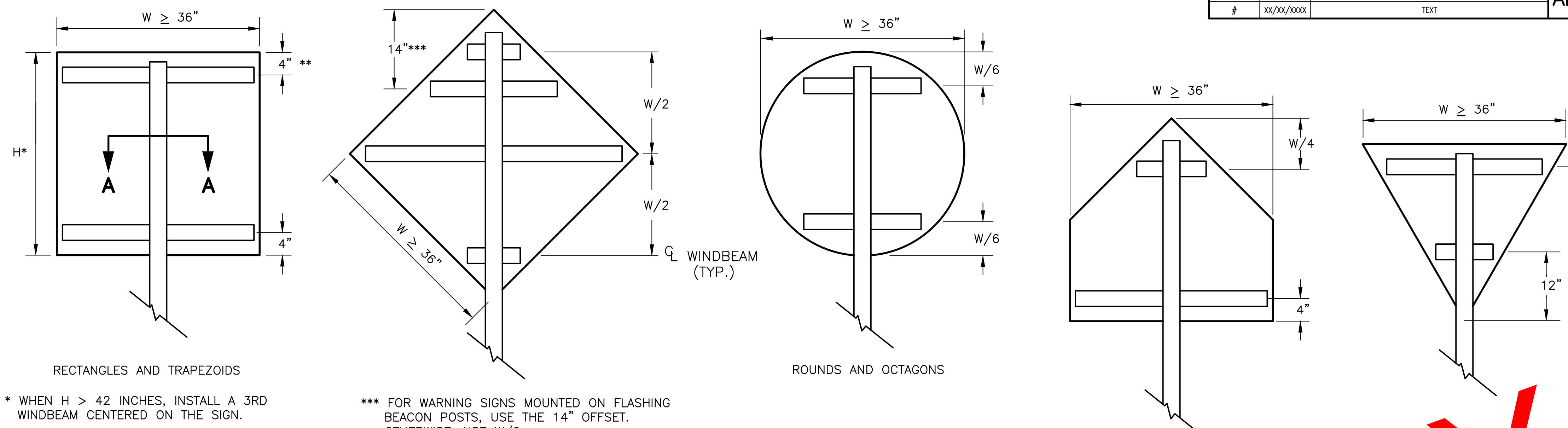
SIGN ATTACHMENT

DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\34-SIGN_ATTACHMENT.DWG

DATE 1/10/2022 | TIME 8:05 AM | SCALE N/A | DESIGNED BY ZJH | CHECKED BY CLP | DRAFTED BY MF

NO.	DATE	REVISION
#	xx/xx/xxxx	TEXT
#	xx/xx/xxxx	TEXT
#	xx/xx/xxxx	TEXT

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H21	H62



RECTANGLES AND TRAPEZOIDS

* WHEN H > 42 INCHES, INSTALL A 3RD WINDBEAM CENTERED ON THE SIGN.

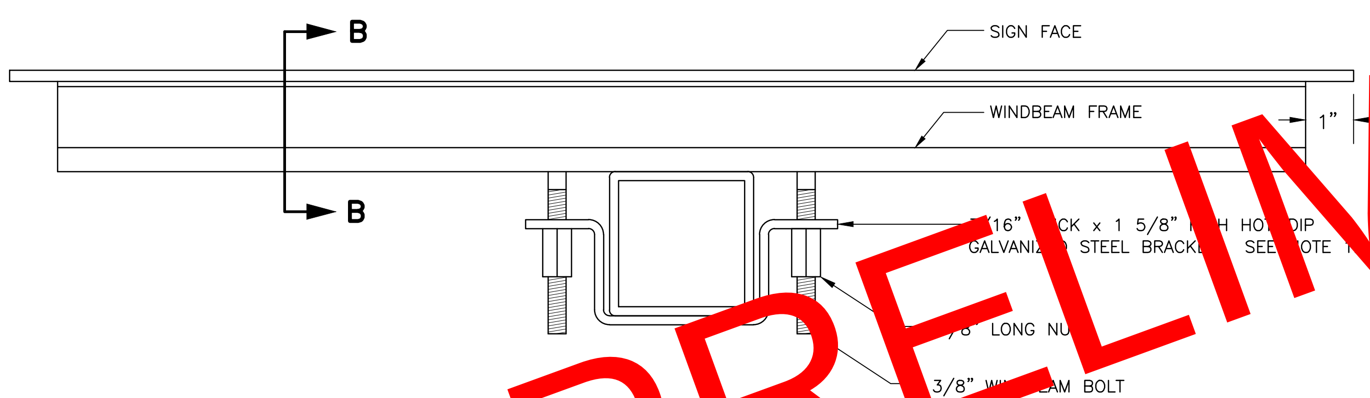
** FOR S5-1 SIGNS MOUNTED ON FLASHING BEACON POSTS, USE A 10" OFFSET. OTHERWISE, USE 4".

*** FOR WARNING SIGNS MOUNTED ON FLASHING BEACON POSTS, USE THE 14" OFFSET. OTHERWISE, USE W/2.

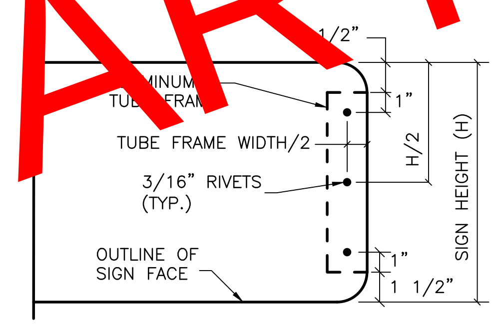
ROUNDS AND OCTAGONS

WINDBEAM LOCATIONS FOR EACH SIGN SHAPE

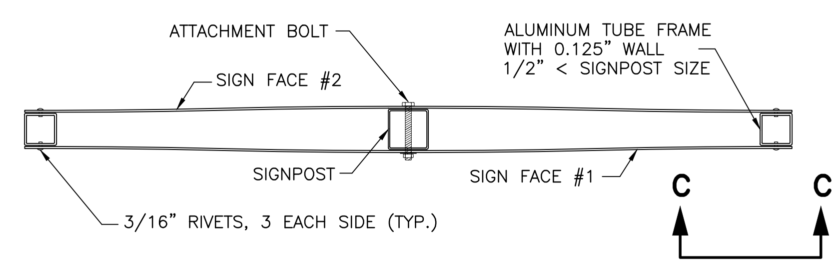
ELEVATION VIEW



SECTION A – A TYPICAL SIGN ATTACHMENT DETAILS AT EACH WINDBEAM

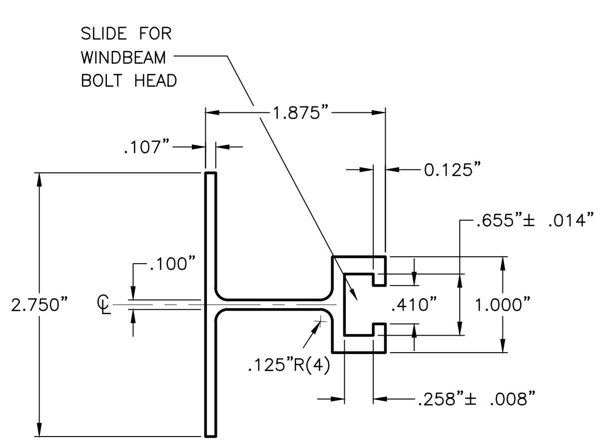


VIEW C – C

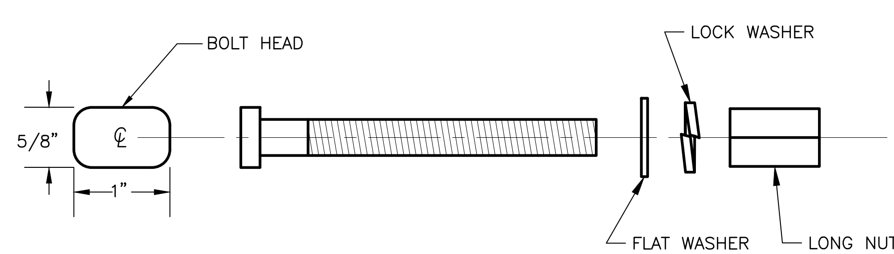


D3–1 STREET NAME SIGN FRAMING DETAIL

PLAN VIEW



SECTION B – B WINDBEAM CROSS SECTION



3/8" WINDBEAM BOLT AND LONG NUT

NOTES:

1. EXCEPT FOR POLES AND MAST ARMS, ONLY USE SQUARE STEEL TUBES TO SUPPORT SIGNS MOUNTED ON SINGLE POSTS.
2. INSTALL WINDBEAM OR ZEE SHAPED FRAMING MEMBERS ON DIAMOND SHAPED SIGNS 36 INCHES AND LONGER ON A SIDE AND ON OTHER SIGNS 36 INCHES WIDE AND WIDER.
3. IN HIGH WIND AREAS, THE PLANS MAY REQUIRE SIGNS SMALLER THAN THOSE LISTED IN NOTE 2 BE FRAMED AS SHOWN HERE IN.
4. THIS DRAWING DEPICTS THE WINDBEAM FRAMING AND ATTACHMENT SYSTEM. ATTACH SIGNS FRAMED WITH ZEE SHAPED FRAMING ACCORDING TO REGIONAL DRAWING "SIGN ATTACHMENT DETAILS", USING "U" SHAPED BRACKETS AND TWO BOLTS WITH NUTS.
5. THE ENGINEER MAY APPROVE OTHER FRAMING MEMBERS. SUBMIT DOCUMENTS THAT DETAIL THE FRAME'S CROSS SECTION AND STRENGTH, AND METHOD OF ATTACHING THE FRAME TO A POST.
6. USE FRAMING MEMBERS MADE FROM ALUMINUM ALLOY 6061–T6.
7. EACH FRAMING MEMBER SHALL BE ONE CONTINUOUS PIECE.
8. ATTACH FRAMING MEMBERS TO THE SIGN PANELS WITH RIVETS OR AN ENGINEER APPROVED, DOUBLE SIDED, HIGH STRENGTH, ADHESIVE TAPE.
9. WITH THE ADHESIVE TAPE, INSTALL TWO RIVETS IN BOTH ENDS OF EACH FRAMING MEMBER, AND ATTACH THE FRAMING MEMBERS TO THE SIGN PANELS ACCORDING TO THE TAPE MANUFACTURER'S WRITTEN INSTRUCTIONS, INCLUDING:
   A. THE CLEANING AND HANDLING OF THE SIGN PANELS AND FRAMING MEMBERS.
   B. THE APPLICATION OF THE ADHESIVE TAPE.
10. WHEN RIVETS ARE USED TO ATTACH FRAMING MEMBERS, INSTALL 2 RIVETS IN EACH END AND THE BALANCE ON 8" MAXIMUM CENTERS.
11. USE 3/16" DIAMETER RIVETS CONFORMING TO ALUMINUM ALLOY 6061–T6 FOR COLD DRIVEN RIVETS, OR ALUMINUM ALLOY 6061–T43 FOR HOT DRIVEN RIVETS.
12. THE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.

PRELIMINARY

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

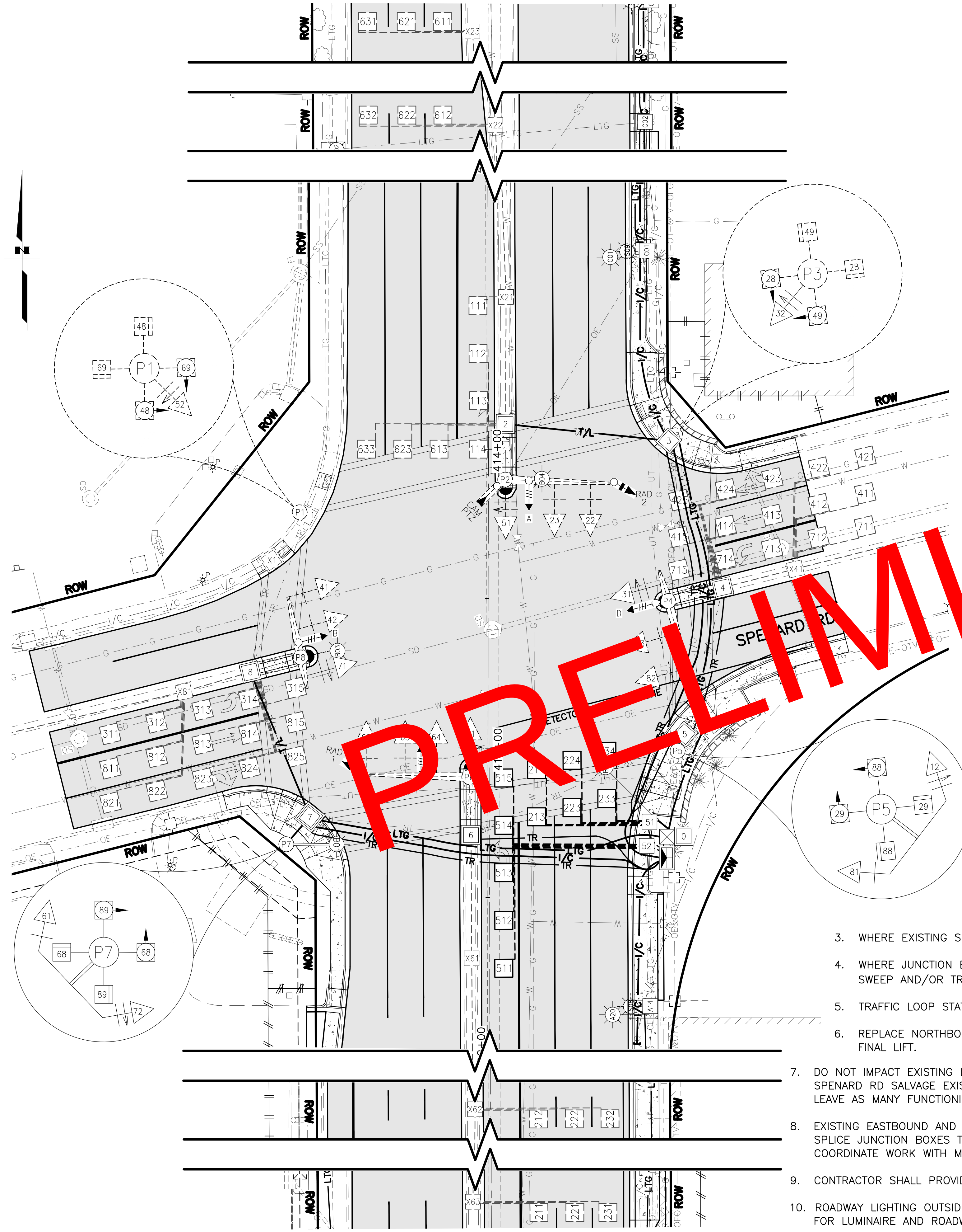
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

LIGHT SIGN FRAMING

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF
SCALE N/A
TIME 8:05 AM
DATE 1/10/2022
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\DETAILS\35-LIGHT_SIGN_FRAMING.DWG

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H22	H62



FOUNDATION SCHEDULE (660.2003.000)

ITEM	STATION ALIGNMENT	OFFSET	STRUCTURE	REMARKS
TC	412+64.2	58.3' RT	TRAFFIC CONTROLLER	SALVAGE EXISTING CONTROLLER AND FOUNDATION
P5	412+98.9	63.2' RT	BREAKAWAY TRAFFIC SIGNAL POLE	
P7	412+68.0	68.0' LT	SIGNAL POLE	

JUNCTION BOX SCHEDULE (660.2003.0000)

J–BOX	STATION ALIGNMENT	OFFSET	EXISTING	SALVAGE	NEW	TYPE
0	412+71.4	60.9' RT			X	II
2	414+08.4	5.8' RT	X	X	X	MODIFIED–II
3	414+02.7	60.3' RT	X	X	X	MODIFIED–II
4	413+53.5	78.5' RT	X	X	X	MODIFIED–II
5	413+04.6	66.8' RT	X	X	X	II
51	412+75.0	53.7' RT			X	1A
52	412+67.1	52.7' RT			X	1A
6	412+70.9	6.2' LT	X	X	X	II
7	412+77.0	60.0' LT	X	X	X	III
8	413+25.6	79.9' LT	X	X	X	MODIFIED–II

LOOP SCHEDULE (660.2003.0000)

LOOP	STATION ALIGNMENT	OFFSET
213	412+80.0	15.8' RT
214	412+96.0	15.8' RT
223	412+82.3	27.7' RT
224	412+98.3	27.7' RT
233	412+86.0	39.4' RT
234	413+02.0	39.4' RT
511	412+29.0	4.8' RT
512	412+45.0	4.8' RT
513	412+61.0	4.8' RT
514	412+77.0	4.8' RT
515	412+93.0	4.8' RT

RADAR DETECTION SCHEDULE (660.2003.0000)

DET.	LOCATION	PHASE DET.	FACING DIRECTION	REMARKS
[illegible]	END OF POLE 5 MASTARM	3, 8	NW	SMARTSENSOR MATRIX
[illegible]	END OF POLE 2 MASTARM	4, 7	SE	SMARTSENSOR MATRIX

ELECTROLIER SCHEDULE (660.2003.0000)

POLE NO.	STATION ALIGNMENT	OFFSET	LUMINAIRE	POLE TYPE	MOUNTING HEIGHT (FT)	SHAFT LENGTH (FT)	MASTARM LENGTH (FT)	MAINTAINING AGENCY	REMARKS
B02	412+75.6	56.3' RT	INTERSECTION	MASTARM	40	33	22	MOA	ORIENT MASTARM WITH 315° AZIMUTH.

SIGNAL EQUIPMENT SALVAGE SCHEDULE (660.2003.000)

STATION ALIGNMENT	OFFSET	STRUCTURE	REMARKS
412+63.1	59.5' RT	TRAFFIC CONTROLLER	
412+98.9	63.2' RT	BREAKAWAY TRAFFIC SIGNAL POLE	
412+76.7	63.1' LT	BREAKAWAY TRAFFIC SIGNAL POLE	

REPLACE FIXTURE ON EXISTING POLE (660.2003.0000)

POLE NO.	STATION ALIGNMENT	OFFSET	LUMINAIRE
B03	413+30.3	63.1' LT	INTERSECTION
B04	413+89.8	5.5' RT	INTERSECTION

NOTES:

1. REMOVAL OF EXISTING POLES, JUNCTION BOXES, CONDUITS, CABLES, INTERCONNECT EQUIPMENT, AND OTHER SIGNAL SYSTEM RELATED ITEMS, NOT SPECIFIED TO BE REUSED, IS SUBSIDIARY TO ITEM 660.2003.000.
2. SAWCUT THROUGH EXISTING STRUCTURAL SECTION AND TRENCH AS NECESSARY TO INSTALL PROPOSED CONDUIT.
3. WHERE EXISTING SIGNAL POLES WILL REMAIN, PRESERVE EXISTING CONDUIT SWEEP INTO POLE FOUNDATION.
4. WHERE JUNCTION BOX SCHEDULE CALLS FOR MODIFIED TYPE II JBOX, PROVIDE JUNCTION BOX ACCORDING TO H03 – NOTE 12 TO ACCOMMODATE HORIZONTAL POLE SWEEP AND/OR TRAFFIC LOOP CONDUIT.
5. TRAFFIC LOOP STATIONING IS TO THE MID-POINT OF THE LOOP EDGE NEAREST THE DETECTOR REFERENCE LINE.
6. REPLACE NORTHBOUND MINNESOTA TRAFFIC LOOPS ACCORDING TO SCHEDULE. TRAFFIC LOOP LAYOUT MODIFIES STANDARD LOOP LAYOUT DETAIL. REPLACE LOOPS PRIOR TO FINAL LIFT.
7. DO NOT IMPACT EXISTING LOOPS ON MINNESOTA DRIVE NOT SCHEDULED FOR REPLACEMENT. ON SPENARD RD SALVAGE EXISTING LOOPS ONLY AS NECESSARY TO INSTALL CONDUIT AS SHOWN, LEAVE AS MANY FUNCTIONING LOOPS IN PLACE AS REASONABLY POSSIBLE.
8. EXISTING EASTBOUND AND WESTBOUND LOOP DETECTOR CONDUCTORS SHALL BE RETAGGED AT THE SPLICE JUNCTION BOXES TO REFLECT THE NEW LOOP NUMBERING SHOWN ON THE PLANS. COORDINATE WORK WITH MOA SIGNAL MAINTENANCE PRIOR TO REMOVING EXISTING TAGS.
9. CONTRACTOR SHALL PROVIDE AS–BUILT REDLINES OF THIS DRAWING TO THE PROJECT ENGINEER.
10. ROADWAY LIGHTING OUTSIDE OF THE INTERSECTION AREA SHOWN FOR REFERENCE ONLY. SEE H35 FOR LUMINAIRE AND ROADWAY LIGHTING INFORMATION.

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
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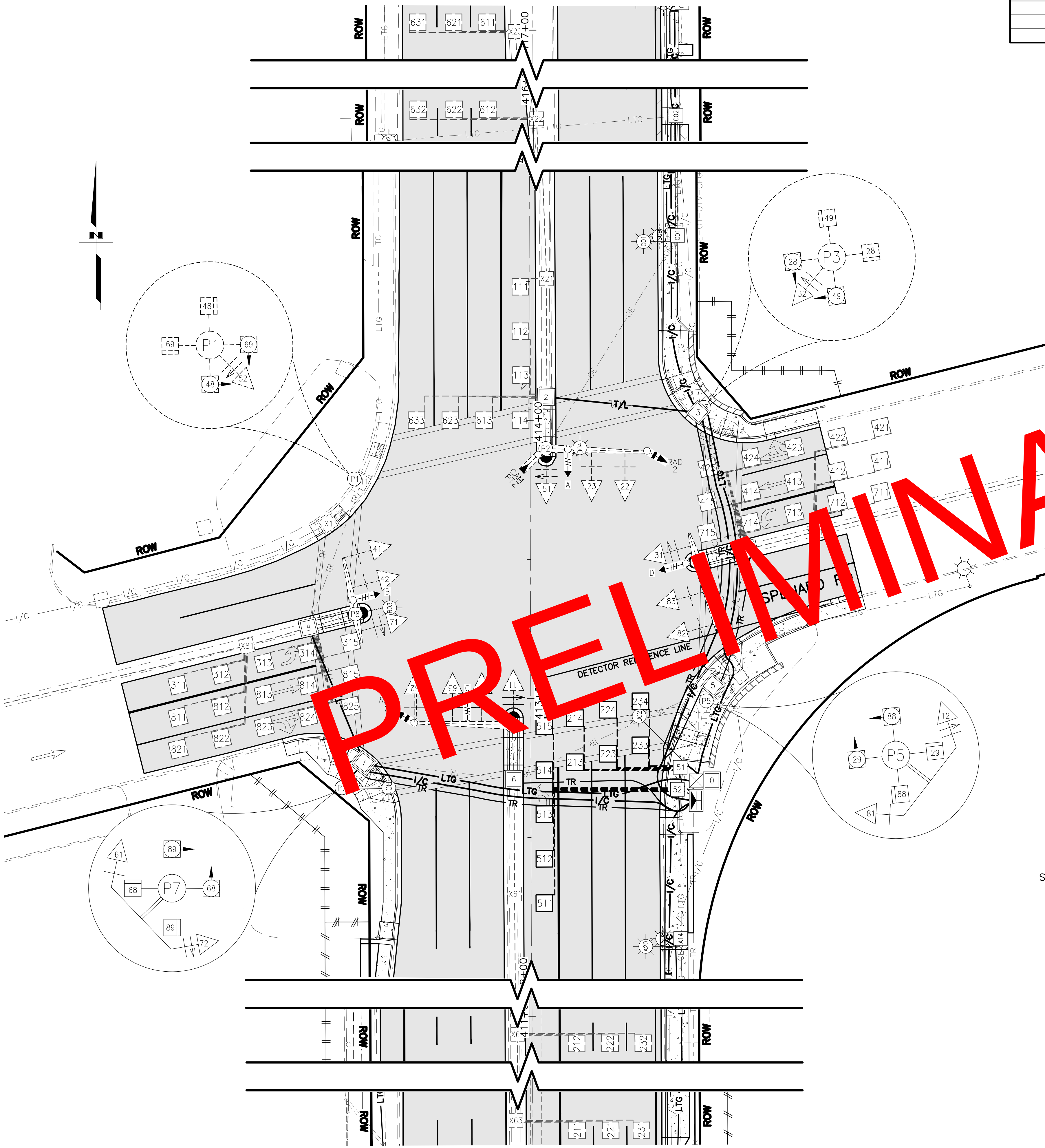
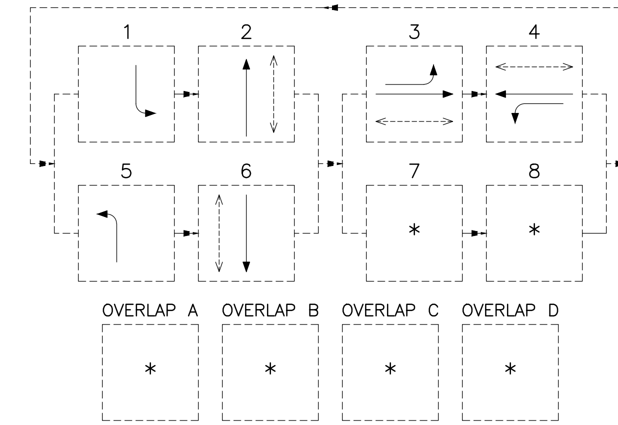
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

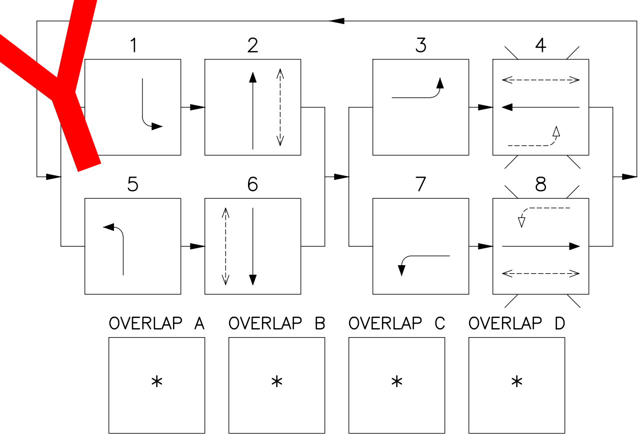
SPENARD SIGNAL SYSTEM PLAN

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H23	H62





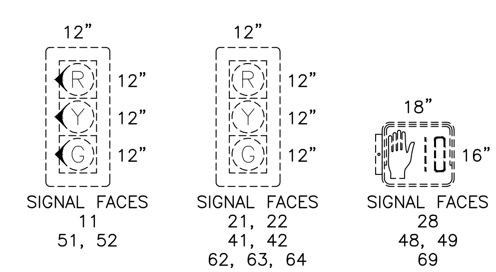
EXISTING PHASE DIAGRAM



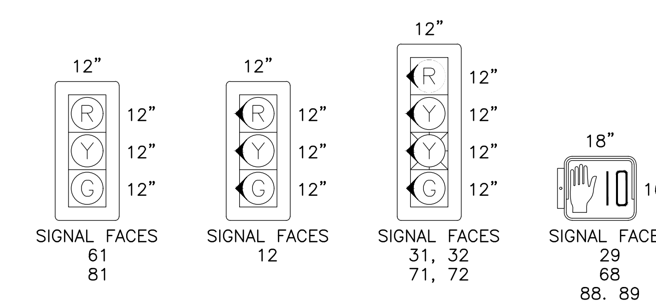
PROPOSED PHASE DIAGRAM

LEGEND

- PEDESTRIAN MOVEMENT
- PROTECTED VEHICLE MOVEMENT
- UNPROTECTED VEHICLE MOVEMENT
- * FUTURE USE/NOT USED



EXISTING SIGNAL HEAD CONFIGURATIONS – TO REMAIN



PROPOSED SIGNAL HEAD CONFIGURATIONS

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SPENARD SIGNAL OPERATIONS PLAN

DESIGNED ZJH | CHECKED CLP | DRAFTED MF | DATE/TIME 5/9/2022 3:56 PM

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CW3D19\PLANSET\H_SHEETS\00132_SIGNAL_SPENARD.DWG

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H24	H62

CONDUIT SCHEDULE

RUN #	CONDUIT	TYPE	CABLES	DESTINATION
LC–0	2"	RMC	0,1	INTXL
	2"	RMC	SPARE	TC POWER
0–TC	2"	RMC	0	TC POWER
0–B02	2"	RMC	1 (IN/OUT)	INTXL
0–3	2"	RMC	1	INTXL
	2"	RMC	SPARE	SPARE
0–7	2"	RMC	1 (IN/OUT)	INTXL
	2"	RMC	SPARE	SPARE
TC–3	3"	RMC	4, 21, 22, 28, 32, 49, 51	POLE 2, 3 H
	2"	RMC	2, 3, 26, 47, 102	POLE 2, 3 L
	2"	RMC	111, 611, 613	SB LOOPS
	2"	RMC	I/C(N)	I/C(N)
	3"	RMC	SPARE	SPARE
TC–5	3"	RMC	10, 12, 29, 31, 81, 82, 83, 88	POLE 2, 3, 4, 5 H
	2"	RMC	9, 27, 86	POLE 2, 3, 4, 5 L
	3"	RMC	411, 413, 713	WB LOOPS
	3"	RMC	SPARE	SPARE
TC–6	3"	RMC	8, 11, 62, 63, 64	POLE 6 H
	2"	RMC	7, 101	POLE 6 L
	2"	RMC	211	NB LOOPS
	3"	RMC	SPARE	SPARE
TC–7	3"	RMC	6, 41, 42, 48, 52, 61, 68, 69, 71, 72, 89	POLE 1, 7, 8 H
	2"	RMC	5, 46, 66, 67, 87	POLE 1, 7, 8 L
	2"	RMC	311, 313, 813	EB LOOPS
	2"	RMC	I/C(W)	I/C(W)
	3"	RMC	SPARE	SPARE
6–X61	*2"*	*RMC*	211	NB LOOPS
X61–X62	*2"*	*RMC*	211/	NB LOOPS
X62–X63	*2"*	*RMC*	211	NB LOOPS
6–P6	*2"*	*RMC*	7, 8, 11, 62, 63, 64, 101	POLE 6
7–X1	*2"*	*RMC*	I/C(W)	I/C(W)
	3"	*RMC*	SPARE	SPARE
7–8	2"	RMC	6, 41, 42, 48, 52, 69, 71	POLE 1, 8 [illegible]
	2"	RMC	5, 46, 67	[illegible]LE 1, 8 L
	2"	RMC	311, 313, 813	EB LOOPS
	2"	RMC	1 (IN/OUT)	INT[illegible]
	3"	RMC	SPARE	[illegible]PARE
7–P7	3"	RMC	61, 66, 68, 72, 87, 89	POLE 7
	2"	RMC	1 (IN/OUT)	INTX[illegible]
	2"	RMC	SPARE	[illegible]ARE
8–X81	*2"*	*RMC*	311	EB LOOPS
8–X11	*1.5"*	*RMC*	48, 52, 69	POLE 1 H
	2"	*RMC*	46, 67	POLE 1 L
8–P8	*1.5"*	*RMC*	5, 6, 41, 42, 71	P8
	2"	*RMC*	1 (IN/OUT)	INTXL
X11–P1	*1.5"*	*RMC*	46, 48, 52, 67, 69	POLE 1
5–4	2"	RMC	9, 10, 31, 82, 83	POLE 4
	2"	RMC	411, 413, 713	WB LOOPS
	3"	RMC	SPARE	SPARE
5–P5	2"	RMC	12, 27, 29, 81, 86, 88	POLE 5
	2"	RMC	SPARE	SPARE
TC–51	2"	RMC	213	NB LOOPS
TC–52	2"	RMC	511	NBLT LOOPS
4–P4	*1.5"*	*RMC*	9, 10, 31, 82, 83	POLE 4
4–X41	*2"*	*RMC*	411	WB LOOPS
3–P3	*1.5"*	*RMC*	26, 28, 32, 47, 49	POLE 3
3–2	2"	RMC	2, 3, 4, 21, 22, 51, 102	POLE 2
	2"	RMC	111, 611/, 613	SB LOOPS
	2"	RMC	1	INTXL
	2"	RMC	SPARE	SPARE
2–P2	*2"*	*RMC*	2, 3, 4, 21, 22, 51, 102	POLE 2
	2"	*RMC*	1	INTXL
2–X21	*2"*	*RMC*	111, 611	SB LOOPS
X21–X22	*2"*	*RMC*	611/	SB LOOPS
X22–X23	*2"*	*RMC*	611	SB LOOPS

BOLD = NEW CONDUCTOR

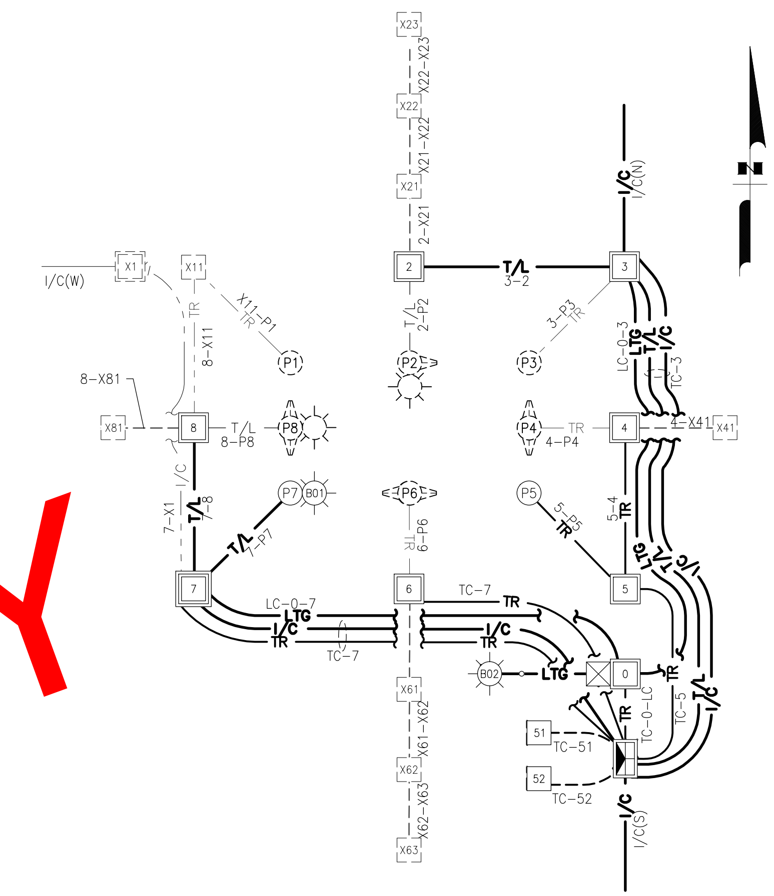
BOLD = NEW CONDUIT

CABLE SCHEDULE

CABLE	CONDUCTOR	J–BOX PATH	LOAD
I/C(N)	25PR19	TC–3	I/C TO BENSON BLVD
I/C(S)	*25PR19*	*TC–XIC2*	*I/C TO TUDOR RD*
I/C(W)	25PR19	TC–7–X1	I/C TO MCRAE RD
0	3C6	LC–0–TC	TC POWER (CKT BA–5)
1	3C8	LC–0–B02–0–7–P7–7–8–P8–8–7–0–3–2–P2	INTXL (CKT BA–2/4)
2	CAT5E	TC–3–2–P2	PTZ
3	3C20	TC–3–2–P2	PRE 2 (A)
4	3C14	TC–3–2–P2	PRECON 2 (A)
5	3C20	TC–7–8–P8	PRE 4(B)
6	3C14	TC–7–8–P8	PRECON 4 (B)
7	3C20	TC–6–P6	PRE 6 (C)
8	3C14	TC–6–P6	PRECON 6 (C)
9	3C20	TC–5–4–P4	PRE 8 (D)
10	3C14	TC–5–4–P4	PRECON 8 (D)
11	7C14	TC–6–P6	HEAD 11
12	7C14	TC–5–P5	HEAD 12
21	7C14	TC–3–2–P2	HEAD 21
22	7C14	TC–3–2–P2	HEAD 22
26	3C14	TC–3–P3	PEDB 28
27	3C14	TC–5–P5	PEDB 29
28	5C14	TC–3–P3	PEDI 28
29	5C14	TC–5–P5	PEDI 29
31	7C14	TC–5–4–P4	HEAD 31
32	7C14	TC–3–P3	[illegible]AD 32
41	7C14	TC–7–8–P8	H[illegible] 41
42	7C14	TC–7–8–P[illegible]	[illegible]
46	3C14	TC[illegible]–8–X1[illegible]1	PEDB 4[illegible]
47	3C14	TC–[illegible]P3	PEDB 49
48	5C14	TC–7[illegible]–X11–[illegible]	PEDI 48
49	5C14	TC–3–[illegible]	PEDI 49
51	[illegible]C14	TC–3–[illegible]2	HEAD 51
52	7[illegible]	[illegible]C–7–8[illegible]1–P1	HEAD 52
[illegible]1	7C1[illegible]	[illegible]–7–P7	HEAD 61
[illegible]	7C14	T[illegible]–6–P6	HEAD 62
[illegible]	[illegible]C14	TC–6–P6	HEAD 63
6[illegible]	[illegible]C14	TC–6–P6	HEAD 64
66	3C14	TC–7–P7	PEDB 68
67	3C14	TC–7–8–X11–P1	PEDB 69
68	5C14	TC–7–P7	PEDI 68
69	5C14	TC–7–8–X11–P1	PEDI 69
71	7C14	TC–7–8–P8	HEAD 71
72	7C14	TC–7–P7	HEAD 72
81	7C14	TC–5–P5	HEAD 81
82	7C14	TC–5–4–P4	HEAD 82
83	7C14	TC–5–4–P4	HEAD 83
86	3C14	TC–5–P5	PEDB 88
87	3C14	TC–7–P7	PEDB 89
88	5C14	TC–5–P5	PEDI 88
89	5C14	TC–7–P7	PEDI 89
101	MTX2 HMRN	TC–6–P6	RAD 1
102	MTX2 HMRN	TC–3–2–P2	RAD 2
111	7PR18	TC–3–2–X21	LOOPS 111–114
211	7PR18	TC–6–X61–X62–X63	LOOPS 211, 212, 221, 222, 231, 232
213	7PR18	TC–51	LOOPS 213, 214, 223, 224, 233, 234
311	7PR18	TC–7–8–X81	LOOPS 311, 312, 811, 812, 821, 822
313	7PR18	TC–7–8	LOOPS 313–315
411	7PR18	TC–5–4–X41	LOOPS 411, 412, 421, 422, 711, 712
413	7PR18	TC–5–4	LOOPS 413–415, 423–425
511	7PR18	TC–52	LOOPS 511–515
611	7PR18	TC–3–2–X21–X22–X23	LOOPS 611, 612, 621, 622, 631, 632
613	7PR18	TC–3–2	LOOPS 613, 623, 633
713	7PR18	TC–5–4	LOOPS 713–715
813	7PR18	TC–7–8	LOOPS 813–815, 823–825

ITALIC = EXISTING CONDUCTOR TO BE REUSED.

BOLD = NEW CONDUCTOR



NOTES:

1. REMOVE EXISTING CABLES AND RE–WIRE WITH NEW CONDUCTORS AS SHOWN.
2. WHERE EXISTING LOOPS ARE TO REMAIN SPLICE EXISTING LOOPS WITH NEW LOOP LEAD–IN CONDUCTOR.
3. CONTRACTOR SHALL PROVIDE AS–BUILT REDLINES OF THE WIRING DIAGRAM, CONDUIT SCHEDULE, AND CABLE SCHEDULE TO THE PROJECT ENGINEER.
4. REFER TO H39 AND H40 FOR ADDITIONAL INTERCONNECT INFORMATION.

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER L. POST CE 11253

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SPENARD WIRING DIAGRAM

PRELIMINARY

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AM\HYD\PROJECTS\MINNESOTADR TUDOR–15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGNAL_SPENARD.DWG | DATE/TIME 5/9/2022 3:57 PM | LAYOUT --- | DESIGNED ZJH | CHECKED CLP | DRAFTED MF

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H25	H62

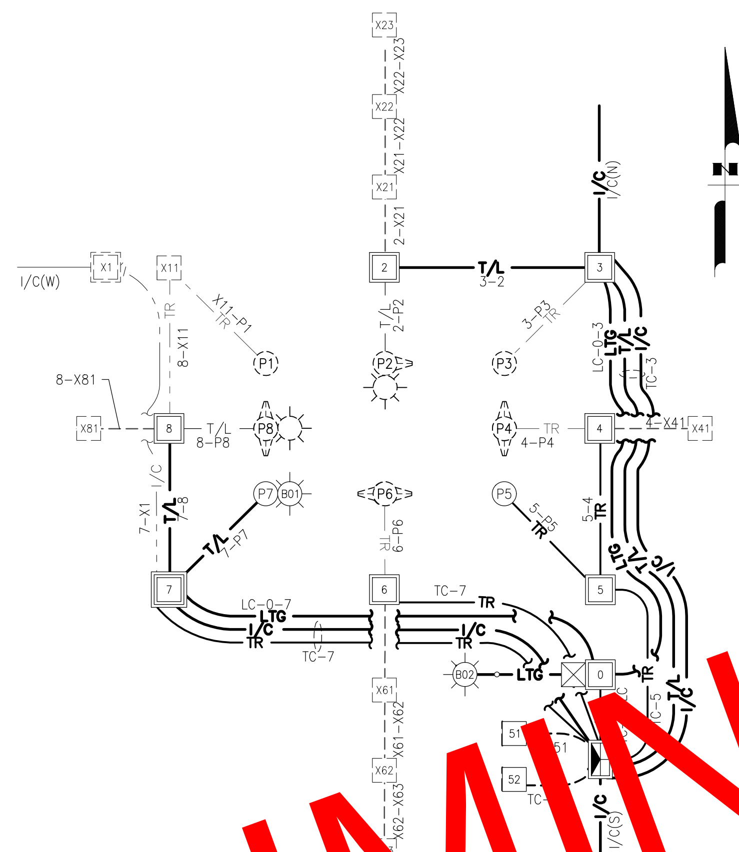
SHORT CIRCUIT CALCULATION – LC "B"

480V, POWER FACTOR=0.90, SERVICE LATERAL CONSISTS OF ONE ALUMINUM CONDUCTOR PER PHASE IN RMC & PVC.

TRANSFORMER RATING	25kVA
VOLTAGE	120/240 VAC SECONDARY
TRANSFORMER IMPEDANCE	1.2% MINIMUM
TRANSFORMER LET–THRU SHORT CIRCUIT CURRENT (INFINITE BUS)	14,468 A
LENGTH TO FAULT	50FT
SERVICE CONDUCTOR SIZE	1/0 AWG
SERVICE CONDUIT	RMC & PVC
CALCULATED FAULT CURRENT AT LC "B"	5.7 kA
DATE CALCULATED	05/05/2022

ARC FLASH AND SHOCK HAZARD RESULTS LOAD CENTER "B" – PANEL A ENCLOSURE

ARC FLASH BOUNDARY	3.4 FT
INCIDENT ENERGY IN CAL/CM^2	4.6
WORKING DISTANCE	18 INCHES
SHOCK HAZARD EXPOSURE	240 VAC
INSULATING GLOVES CLASS	00
SHOCK HAZARD	WHEN COVER REMOVED
LIMITED APPROACH BOUNDARY	3.5 FT
RESTRICTED APPROACH BOUNDARY	1.0 FT
CALCULATED DATE	05/05/2022



PROPOSED LOAD CENTER "B"

LOAD CENTER TYPE:	TYPE 1A (STATE OF ALASKA OWNED)
MAINTAINED BY:	MUNICIPALITY OF ANCHORAGE (MOA)
SERVING UTILITY:	CHUGACH ELECTRIC ASSOCIATION (CEA)
SERVICE CONDUIT TYPE:	RMC & PVC
LOCATION DATA (412+71.3 – 58.4' RT)	
LOAD CENTER:	MINNESOTA DR & SPENARD RD, SE
POWER SOURCE:	EXISTING CEA SERVICE TRANSFORMER (25kVA)
PHOTOELECTRIC CONTROL:	AT LOAD CENTER
SERVICE VOLTAGE:	120/240, 1–PHASE, 3–WIRE WITH GROUNDED NEUTRAL
PROVIDE METER SOCKET	YES
MAIN BREAKER, PANEL A	240V, 100A
CONTACTOR, PANEL A:	600V, 60A, 10–POLE
AIC RATING, PANEL A:	10 kAIC @ 240V

PANEL A – 120/240 VAC

POLE	AMP TRIP	DESCRIPTION	POLE KVA	Aϕ	Bϕ	POLE KVA	DESCRIPTION	AMP TRIP	POLE
1	20/2	SPARE *	0.0	0.62		0.62	INTXL * (B01–B04)	15/2	2
3			0.0		0.62	0.62			4
5	30/[illegible]	TRAFFIC SIGNAL CABINET	1.80	1.80		0.0	SPARE *	20/2	6
7	15/1	CONTROL	0.10		0.10	0.0			8
9	20/[illegible]	SPARE	0.0	0.0		–	SPACE	–	10
11			0.0		0.0	–	SPACE	–	12
13	–	SPACE	–			–	SPACE	–	14
15	–	SPACE	–			–	SPACE	–	16
17	–	SPACE	–			–	SPACE	–	18
* CIRCUIT THROUGH CONTACTOR A				2.4	0.7		TOTAL kVA		3.1
							TOTAL AMPS @ 240V		13.1

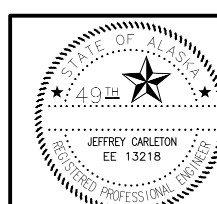
LOAD CENTER NOTES:

CONTRACTOR SHALL VERIFY CHARACTERISTICS OF ALL EXISTING COMPONENTS THAT ARE TO REMAIN IN SERVICE PRIOR TO BEGINNING ANY WORK AT THE LOAD CENTER. CONTRACTOR SHALL PROVIDE AS–BUILT REDLINES OF THIS PANEL TO THE PROJECT ENGINEER.

SALVAGE LOAD CENTER EQUIPMENT SCHEDULE (661.0002.0000)

ITEM	STATION ALIGNMENT	OFFSET	STRUCTURE	REMARKS
LC	412+99.8	67.6' RT	EXISTING LC	MOUNTED TO WEST SIDE OF TC

PRELIMINARY



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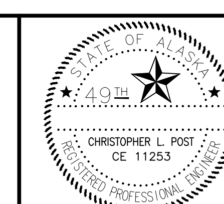

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

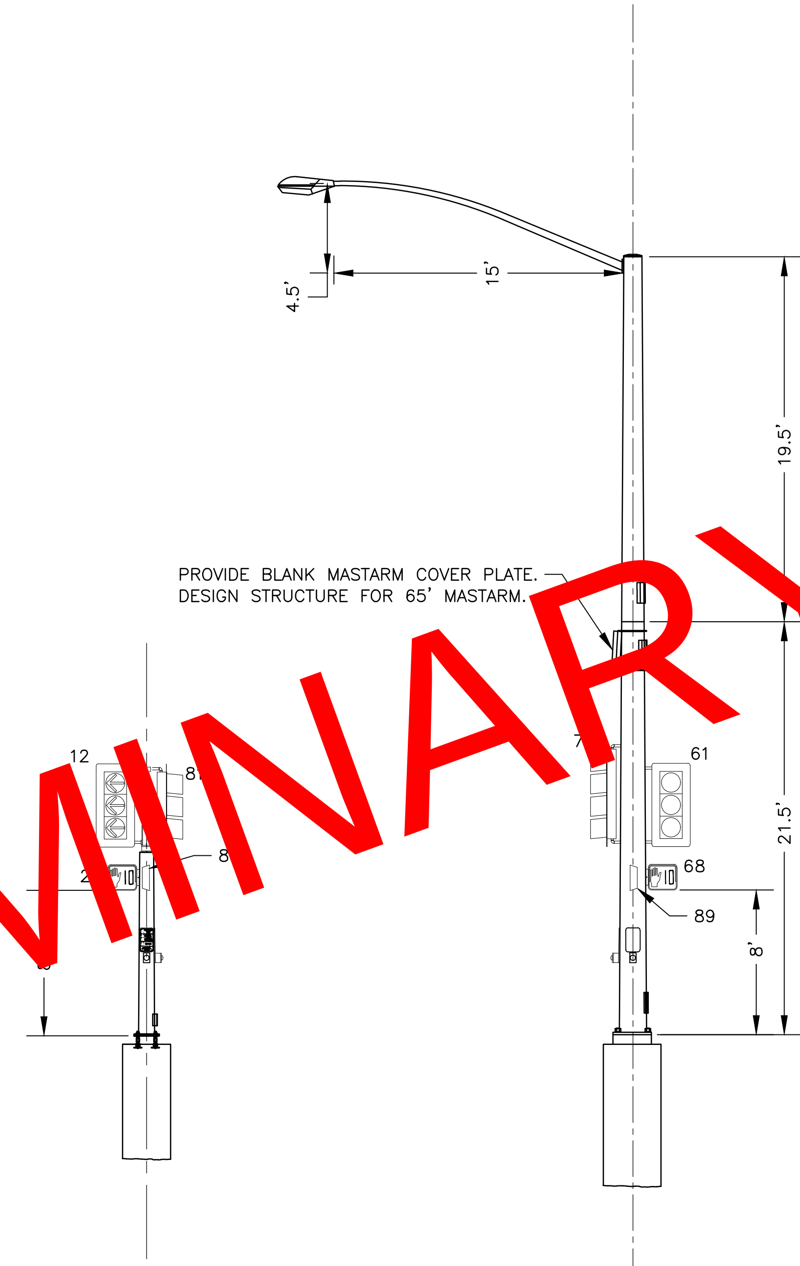
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SPENARD LOAD CENTER

DESIGNED ZJH | CHECKED CLP | DRAFTED MF | DATE/TIME 5/9/2022 3:57 PM

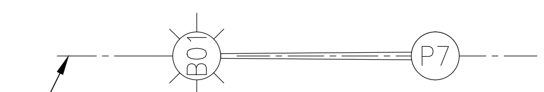
CONTROLLER CABINET FEATURES

GENERAL OPTIONS	
TYPE	TS2–1
SIZE	NEMA SIZE 6
MATERIALS	0.125" NATURAL ALUMINUM
MODEL	WESTERN SYSTEMS NEMA TS2–1P
EXTENDER BASE	NONE
MOUNTING HARDWARE	INCLUDED
PAINT	SEE SPECIAL PROVISIONS
SPECIAL OPTIONS	
LIFTING TABS	INCLUDED
EQUIPMENT SHELF	(2) FULL WIDTH, (1) LAPTOP DRAWER
AIR FILTER	FIBER MESH
MAIN DOOR LOCK	BEST
REAR DOOR	NONE
LED LIGHT FIXTURES	SEE SPECIAL PROVISIONS FOR OTHER REQUIREMENT
MAIN PANEL	
MAIN PANEL POSITION	16–POSITION HORIZONTAL
FLASH TRANSFER RELAYS SOCKETS	(8) INCLUDED
FLASHER SOCKET	(1) INCLUDED
R1 RELAY SOCKET	INCLUDED
POWER PANEL	
SURGE SUPPRESSION	SHP300–10
LINE FILTER (RADIO INTERFERENCE)	50A
SOLID STATE CONTACTOR	NORMALLY OPEN, 50A
MAIN CIRCUIT BREAKER	40A
AUXILIARY CIRCUIT BREAKER	20A
3 POSITION TERMINAL BLOCK FOR INCOMING POWER, #2–#8 U.S.G.	INCLUDED
16 POSITION NEUTRAL BUS BAR	INCLUDED
16 POSITION CHASSIS GROUND BUS BAR	INCLUDED
POLICE PANEL	
POLICE PANEL SWITCHES	SIGNALS ON/OFF, AUTO/FLASH
POLICE PANEL PUSHBUTTON ALARM	NONE
POLICE DOOR LOCK	CONVENTIONAL (SKELETON KEY)
POLICE PANEL MANUAL CORD	NONE
AUXILIARY PANEL	
AUXILIARY PANEL SWITCHES	AUTO/FLASH, STOP TIME, CONTROLLER POWER, CORD, CABINET LIGHT, HEATER BYPASS
DETECTOR TEST SWITCHES	TACTILE PUSHBUTTON
FORCE OFF SWITCHES	TACTILE PUSHBUTTON
RACK DETECTION	
DETECTOR RACKS	FOUR (4) 16–CHANNEL DETECTOR RACKS. TWO THE THE RACKS SHALL BE CONFIGURED WITH 2 SLOTS EACH FOR OPTICOM.
DETECTOR RACK POWER SUPPLY	BIU FOR EACH RACK
EVP REQUIREMENTS	WIRING FOR GREEN SENSE MONITORING
ADDITIONAL OPTIONS	
RAILROAD PREEMPTION	INCLUDED
RAILROAD PREEMPTION/STAND ALONE PANEL	NO
RED JUMPERS FOR ALL UNUSED PHASES	INCLUDED
LOAD RESISTORS	(8) INCLUDED – LEFT SIDE OF CABINET
HEATER RECEPTACLE (SINGLE)	INCLUDED – RIGHT SIDE OF CABINET
DUPLEX GFI OUTLET (NON–FILTERED)	INCLUDED – RIGHT SIDE OF CABINET
QUAD CONVENIENCE OUTLET – FILTERED	INCLUDED – LEFT SIDE OF CABINET
ADDITIONAL NEUTRAL BUS BARS	(1) 32 POSITION BUS BAR LEFT SIDE OF CABINET
ADDITIONAL CHASSIS GROUND BUS BARS	(1) 32 POSITION BUS BAR LEFT SIDE OF CABINET
STANDARD WIRING DIAGRAM (AUTOCAD FORMAT)	PROVIDE: (3) PAPER SETS FOR CABINET, SIGNAL TECH AND TRAFFIC, (1) ACAD ON DISC, (1) PDF.
GTT OPTICOM 757 HARNESS	INCLUDED – WIRED INTO CABINET
GTT OPTICOM 768 AUXILIARY INTERFACE PANEL	INCLUDED – WIRED INTO CABINET
GENERATOR BYPASS COMPARTMENT	INCLUDED – MOUNT COMPARTMENT FLUSH AND ON INSIDE OF CONTROLLER CABINET DOOR. SEE SPECIAL PROVISIONS FOR OTHER REQUIREMENTS.



SIGNAL POLE 5
LOOKING SOUTH

SIGNAL POLE 7
LOOKING SOUTH



COMMUNICATION EQUIPMENT SCHEDULE

QTY	COPPER INTERCONNECT SYSTEM
1	ACTELIS ML688 WITH FOUR 10/100X PORTS AND ONE OPTIONAL 1000BASE SFP PORT OR APPROVED EQUAL
1	AC POWER ADAPTER 506R00006 OR APPROVED EQUAL
4	3 FOOT CAT6 PATCH CABLE
1	SFP OPTICS 100BASE FX SM 1310NM 15KM LC MODULE 506R00032 OR APPROVED EQUAL
1	CARRIER–CLASS ELEMENT MANAGMENT SYSTEM
2	QUAD DSL CABLES 504R20110 OR APPROVED EQUAL
1	WALL MOUNTING KIT 510R21080 OR APPROVED EQUAL
QTY	**EVP EQUIPMENT**
1	OPTICOM MODEL 764 PHASE SELECTOR
QTY	**RADAR DETECTION EQUIPMENT**
1	CLICK! 650 (102–0416)
1	INSTALLER KIT

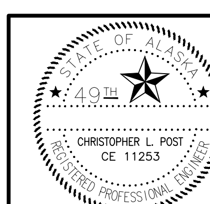
CONTROLLER ASSEMBLY EQUIPMENT

SUPPLY ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE A FULLY FUNCTIONING TRAFFIC SIGNAL CONTROLLER ASSEMBLY COMPLIANT WITH THE NEMA STANDARD PUBLICATION NO. TS2–2003 V02.06 AND SPECIAL "SPECIALS" PROVISIONS OF THIS CONTRACT INCLUDING BUT NOT LIMITED TO;

QTY	CONTROLLER/MMU EQUIPMENT
1	ECON COBALT ATC TOUCH 2100 CONTROLLER (TS2 TYP 2)
1	CONTROLLER TELEMETRY MODULE TCM–FSK–9 OR APPROVED EQUAL
1	CONTROLLER ETHERNET PORT
1	CONTROLLER DATA KEY
1	EDI MMU2–16LEIP
1	MMU2 CARD
QTY	**CABINET EQUIPMENT**
16	PDC SSS–87–I/O LOAD SWITCHES OR APPROVED EQUAL
16	EDI ORACLE4E DETECTOR AMPLIFIERS OR APPROVED EQUAL
8	DETROL CONTROLS 295 FLASH TRANSFER RELAYS OR APPROVED EQUAL
2	EDI BIU700 TERMINAL AND FACILITIES BIU'S OR APPROVED EQUAL
4	EDI BIU700 DETECTION BIU'S OR APPROVED EQUAL
1	EDI PS250 TS2 CABINET POWER SUPPLY OR APPROVED EQUAL
1	PDC SSF–87 FLASHER OR APPROVED EQUAL
1	R1 RELAY
1	600/900/1500W SELECTABLE THERMOSTATICALLY CONTROLLED CABINET HEATER, MOUNT ON DOOR
1	RE–SEALABLE PRINT POUCH OF SUFFICIENT SIZE TO ACCOMMODATE CABINET PRINTS
1	COMPLETE SET OF MANUALS FOR CONTROLLER, MMU2, AND VEHICLE DETECTOR AMPLIFIERS

NOTES:

1. POLE 7 FOUNDATION AND SIGNAL POLE ASSEMBLY TO BE DESIGNED FOR A 65' MASTARM. SEE ALASKA STANDARD PLAN T–52 & T–56



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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

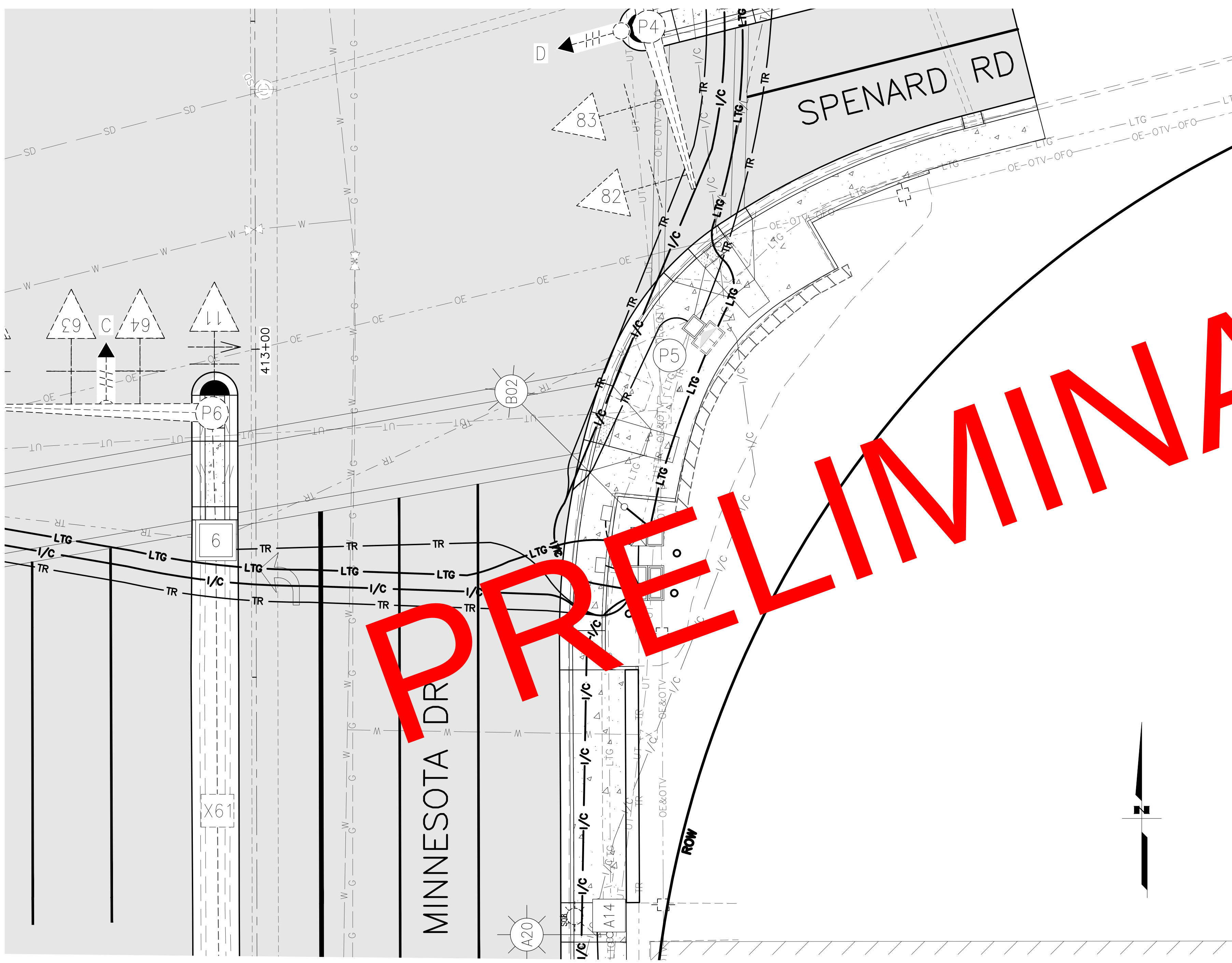
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

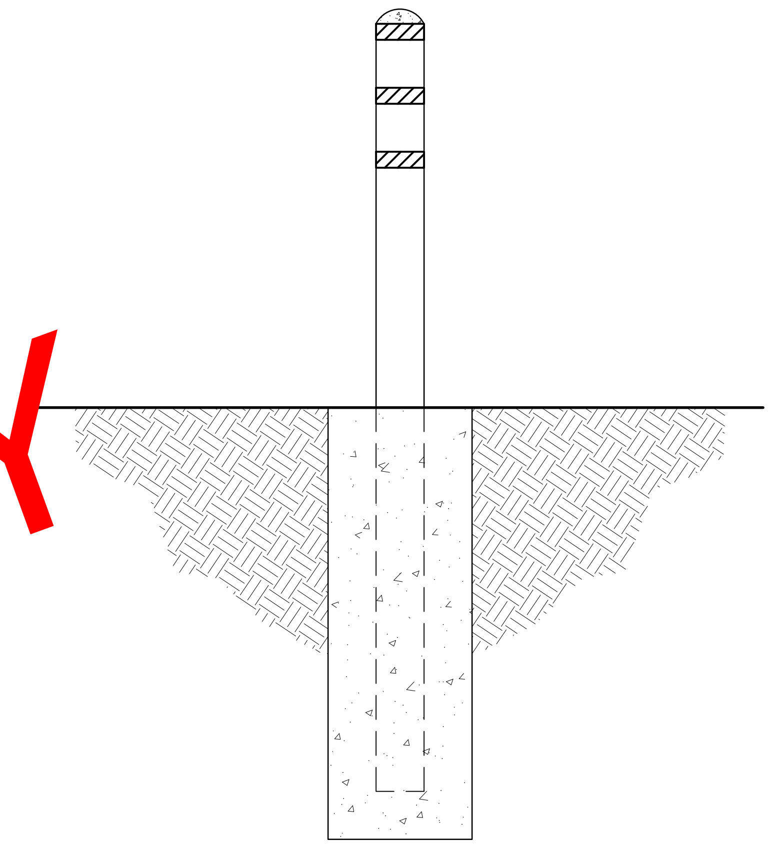
SPENARD CONTROLLER EQUIPMENT & POLE ELEVATION

MF DRAFTED | CLP CHECKED | ZJH DESIGNED | --- LAYOUT | 5/9/2022 3:57 PM DATE/TIME
FILE \\DOT.SOA.ALASKA.GOV\SHARED\AM\HYD\PROJECTS\MINNESOTA TUDOR-15 PP CFHWY00132\CN3D19\PLANSET\H_SHEETS\00132_SIGNAL_SPENARD.DWG

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AM\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CW3019\PLANSET\H_SHEETS\00132_SIGNAL_SPENARD.DWG | DATE/TIME 5/9/2022 3:57 PM | LAYOUT --- | DESIGNED ZJH | CHECKED CLP | DRAFTED MF

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H27	H62





PRELIMINARY

NOTES:

1. PROVIDE 6" DIAM. STEEL PIPE, FILLED WITH CLASS B CONCRETE.
2. ROUND CONCRETE AT TOP OF POST. PAINT YELLOW TO MATCH POST.
3. INSTALL 3–2" BANDS OF YELLOW REFLECTIVE TAPE AS SHOWN.
4. BOLLARDS ARE SUBSIDIARY TO TRAFFIC SIGNAL SYSTEM MODIFICATIONS

BOLLARD SCHEDULE (660.2003.0000)

STATION ALIGNMENT	OFFSET	REMARKS
412+59.5	56.9' RT	
412+62.7	63.8' RT	ENSURE BOLLARD WILL NOT INTERFERE WITH TC DOOR SWEPT PATH
412+71.3	58.4' RT	

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
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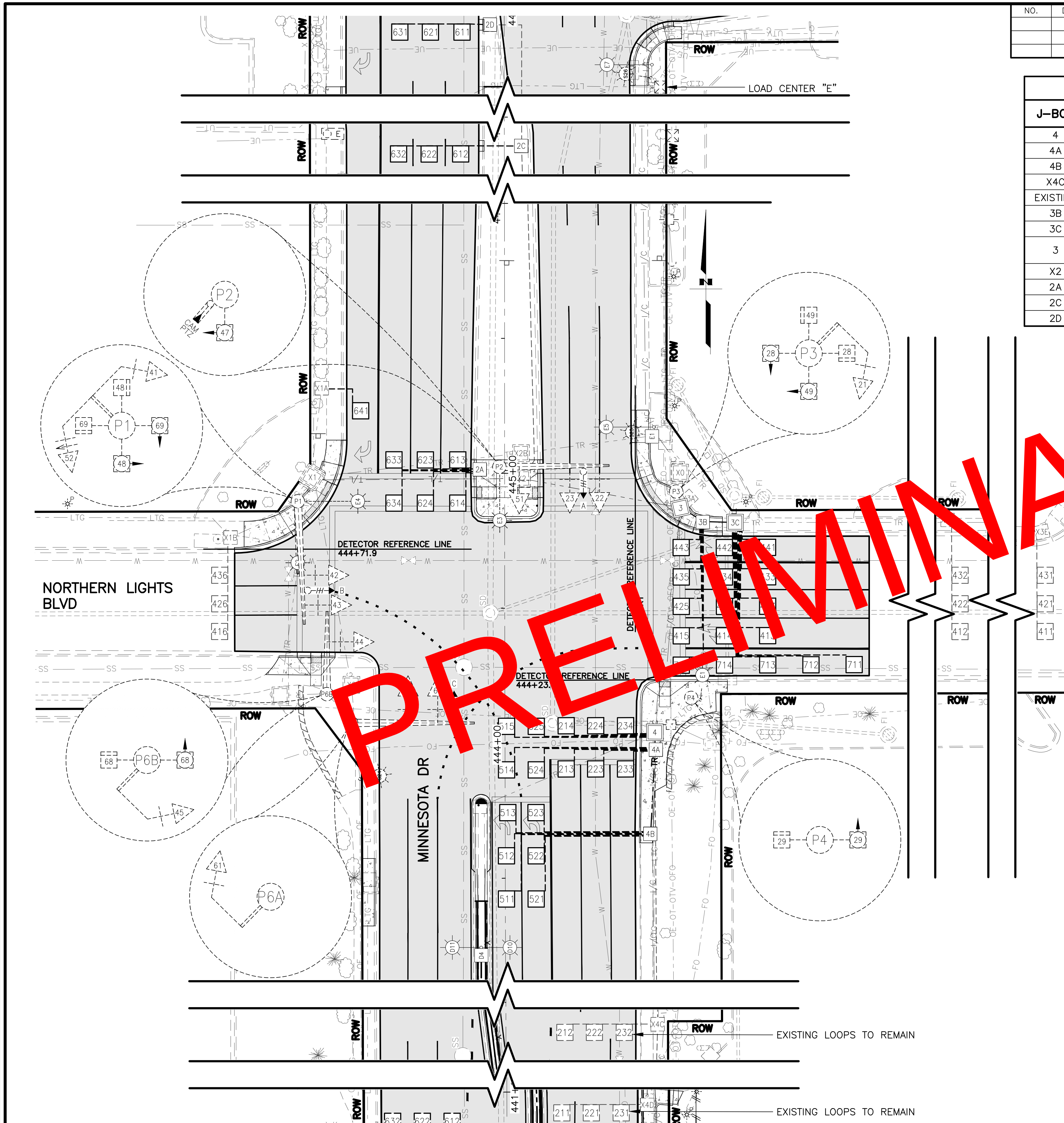
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SPENARD CONTROLLER & LOAD CENTER BOLLARDS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H28	H62



JUNCTION BOX SCHEDULE (660.2003.0000)

J-BOX	STATION ALIGNMENT	OFFSET	EXISTING	ADJUST	SALVAGE	NEW	TYPE
4	444+03.9	55.5' RT	X		X	X	MODIFIED II WITH 6" EXTENSION
4A	443+97.7	55.8' RT				X	1A
4B	443+66.4	53.8' RT				X	1A
X4C	440+95.2	51.3' RT	X	X			1A
EXISTING	444+17.9	83.1' LT	X		X		II
3B	444+81.8	73.4' RT				X	1A
3C	444+81.7	85.4' RT	X		X	X	MODIFIED TYPE-II
3	444+87.1	65.1' RT	X		X	X	MODIFIED TYPE-II W/ TWO TOTAL KNOCKOUTS, ONE EACH ON OPPOSITE WALLS.
X2	444+98.1	6.4' RT	X	X			II
2A	445+01.4	9.2' LT				X	1A
2C	446+89.3	6.4' RT	X		X	X	1A
2D	447+92.8	5.3' LT	X		X	X	1A

TRAFFIC LOOPS (660.2003.0000)

LOOP	STATION ALIGNMENT	OFFSET	LOOP	STATION ALIGNMENT	OFFSET	LOOP	STATION ALIGNMENT	OFFSET
213	443+93.3	22.5' RT	442	444+72.5	78.4' RT	621	447+87.1	27.3' LT
214	444+09.3	22.5' RT	443	444+72.5	62.4' RT	622	446+83.4	27.9' LT
223	443+93.3	33.5' RT	511	443+45.3	0.4' RT	623	445+00.0	29.4' LT
224	444+09.3	33.5' RT	512	443+61.3	0.4' RT	624	444+86.0	29.4' LT
233	443+93.3	44.4' RT	513	443+77.3	0.4' RT	631	447+87.1	38.6' LT
234	444+09.3	44.4' RT	514	443+93.3	0.4' RT	632	446+83.4	39.2' LT
413	444+39.7	94.4' RT	515	444+09.3	0.4' RT	633	445+00.0	41.0' LT
414	444+39.7	78.4' RT	521	443+45.3	11.4' RT	634	444+86.0	41.0' LT
415	444+39.7	62.4' RT	522	443+61.3	11.4' RT	641	445+31.9	53.3' LT
423	444+50.7	94.4' RT	523	443+77.3	11.4' RT	711	444+28.8	126.4' RT
424	444+50.7	78.4' RT	524	443+93.3	11.4' RT	712	444+28.8	110.4' RT
425	444+50.7	62.4' RT	525	444+09.3	11.4' RT	713	444+28.8	94.4' RT
433	444+61.6	94.4' RT	611	447+87.1	15.6' LT	714	444+28.8	78.4' RT
434	444+61.6	78.4' RT	612	446+83.4	16.2' LT	715	444+28.8	62.4' RT
435	444+61.6	62.4' RT	613	445+00.0	17.3' LT			
441	444+72.5	94.4' RT	614	444+86.0	17.3' LT			

NOTES:

1. TRAFFIC LOOP STATIONING IS TO THE MID-POINT OF THE LOOP EDGE NEAREST THE DETECTOR REFERENCE LINE.
2. REMOVE ENDS OF ABANDONED CONDUIT FROM JUNCTION BOXES SCHEDULED TO BE REPLACED OR JUNCTION BOXES REMAINING IN SERVICE.
3. ROADWAY LIGHTING OUTSIDE OF THE INTERSECTION AREA SHOWN FOR REFERENCE ONLY. SEE H35 FOR LUMINAIRE AND ROADWAY LIGHTING INFORMATION.

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
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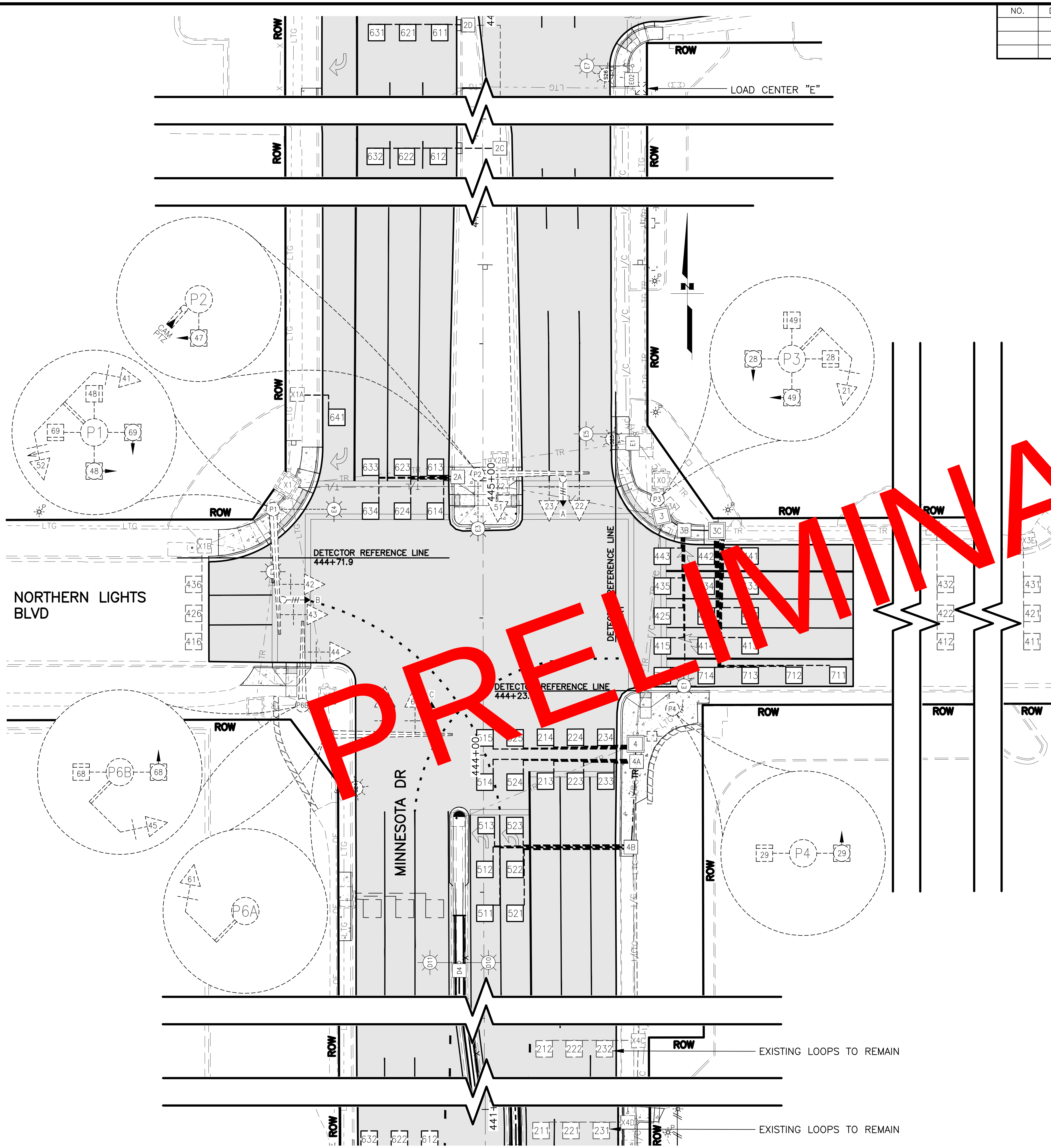
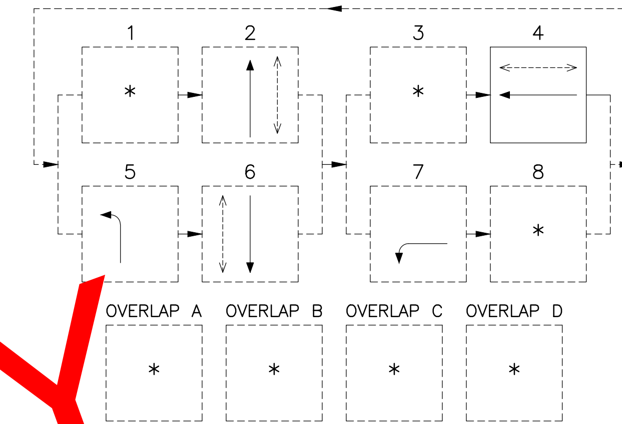
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

NORTHERN LIGHTS SIGNAL SYSTEM PLAN

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGNAL_NOR LIGHTS.DWG | DATE/TIME 5/9/2022 3:58 PM | LAYOUT --- | DESIGNED | ZJH CHECKED | CLP DRAFTED | MF

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H29	H62

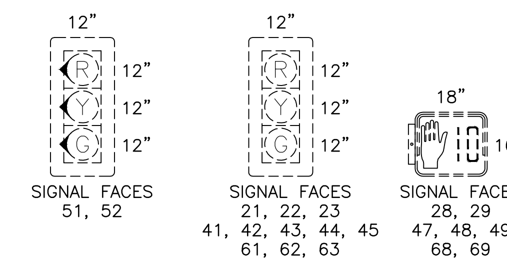




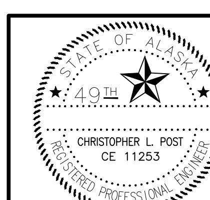
EXISTING PHASE DIAGRAM

LEGEND

- PEDESTRIAN MOVEMENT
- PROTECTED VEHICLE MOVEMENT
- UNPROTECTED VEHICLE MOVEMENT
- * FUTURE USE/NOT USED



EXISTING SIGNAL HEAD CONFIGURATIONS ALL TO REMAIN



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MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

NORTHERN LIGHTS SIGNAL OPERATIONS PLAN

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGNAL_NOR LIGHTS.DWG
DATE/TIME 5/9/2022 3:59 PM | LAYOUT --- | DESIGNED ZJH | CHECKED CLP | DRAFTED MF

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099 CFHWY00132	2022	H30	H62

PRELIMINARY

CABLE SCHEDULE

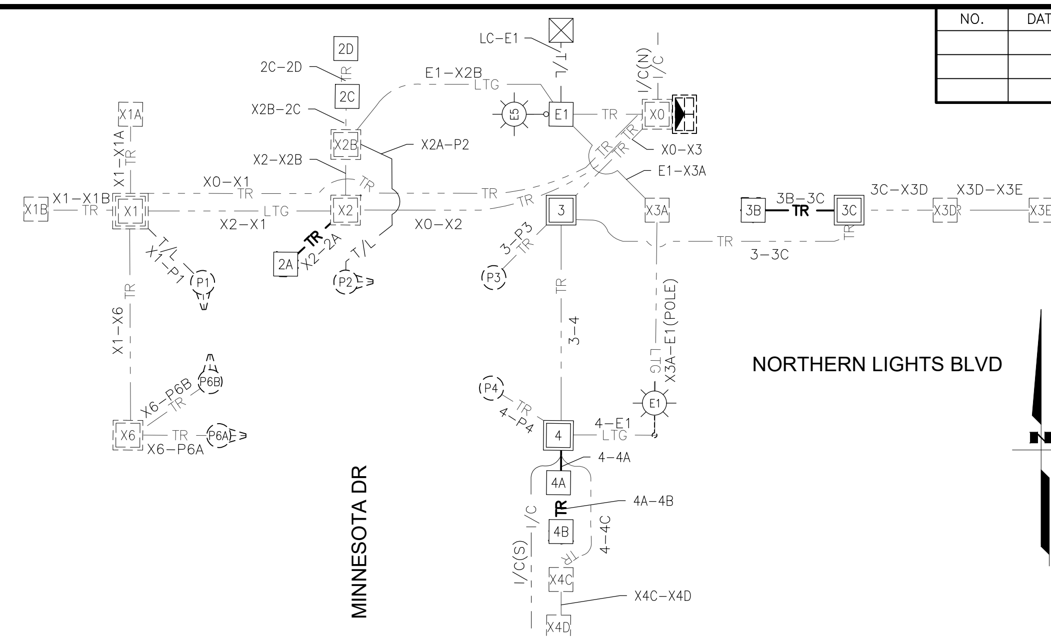
CABLE	CONDUCTOR	J-BOX PATH	LOAD
I/C(N)	*12PR19*	*X0-NORTH*	*I/C TO 26TH AVE*
I/C(S)	*12PR19*	*X0-3-4-SOUTH*	*I/C TO BENSON BLVD*
1	*3C2*	*LC-E1-X0*	*TC POWER (CKT EA-10)*
2	*CAT5E*	*X0-X2-X2B-P2*	*PTZ*
3	*3C8*	*LC-E1-3A-E1(POLE)-3A-E1-X2B-P2-X2B-X2-X1-P1*	*INTXL (CKT EA-12/14)*
5	*3C20*	*X0-X2-X2B-P2*	*PRE 2 (A)*
6	*3C14*	*X0-X2-X2B-P2*	*PRECON 2 (A)*
7	*3C20*	*X0-X1-P1*	*PRE 4 (B)*
8	*3C14*	*X0-X1-P1*	*PRECON 4 (B)*
9	*3C20*	*X0-X1-X6-P6A*	*PRE 6 (C)*
10	*3C14*	*X0-X1-X6-P6A*	*PRECON 6 (C)*
21	*7C14*	*X0-3-P3*	*HEAD 21*
22	*7C14*	*X0-X2-X2B-P2*	*HEAD 22*
23	*7C14*	*X0-X2-X2B-P2*	*HEAD 23*
26	*3C14*	*X0-3-P3*	*PEDB 28*
27	*3C14*	*X0-3-4-P4*	*PEDB 29*
28	*5C14*	*X0-3-P3*	*PEDI 28*
29	*5C14*	*X0-3-4-P4*	*PEDI 29*
41	*7C14*	*X0-X1-P1*	*HEAD 41*
42	*7C14*	*X0-X1-P1*	*HEAD 42*
43	*7C14*	*X0-X1-P1*	*HEAD 43*
44	*7C14*	*X0-X1-X6-P6B*	*HEAD 44*
45	*7C14*	*X0-X1-X6-P6B*	*HEAD 45*
46	*3C14*	*X0-X1-P1*	*PEDB 48*
47	*3C14*	*X0-3-P3*	*PEDB 49*
47A	*3C14*	*X0-X2-X2B-P2*	*PEDB 47*
48	*5C14*	*X0-X1-P1*	*PEDI 48*
49	*5C14*	*X0-3-P3*	*PEDI 49*
51	*7C14*	*X0-X2-X2B-P2*	*HEAD 51*
52	*7C14*	*X0-X1-P1*	*HEAD 52*
61	*7C14*	*X0-X1-X6-P6A*	*HEAD 61*
62	*7C14*	*X0-X1-X6-P6A*	*HEAD 62*
63	*7C14*	*X0-X1-X6-P6A*	*HEAD 63*
66	*3C14*	*X0-X1-X6-P6B*	*PEDB 68*
67	*3C14*	*X0-X1-P1*	*PEDB 69*
68	*5C14*	*X0-X1-X6-P6B*	*PEDI 68*
69	*5C14*	*X0-X1-P1*	*PEDI 69*
211	*7PR18*	*X0-3-4-4C-4D*	*LOOPS 211, 212, 221, 222, 2[illegible] 232*
213	**7PR18**	**X0-3-4-4A**	**LOOPS 213, 223 [illegible] 514, 52[illegible]**
214	**7PR18**	**X0-3-4**	**LOOPS 21[illegible]24, 234, [illegible] 525**
411	**7PR18**	**X0-3-3C-X3D-X3E**	**LOOPS 41[illegible] 412, 421, 42[illegible] 431, [illegible]**
413	**7PR18**	**X0-3-3C**	**LOOPS 413, [illegible]23, 433 [illegible], 711, [illegible]**
414	**7PR18**	**X0-3-3C**	**LOOPS 414, [illegible], 442, 713, 714**
415	**7PR18**	**X0-3-3C-3B**	**LOOPS 415, 4[illegible] 435, 443, 715**
416	**7PR18**	**X0-X1-X1B**	**LOOPS 416, 42[illegible] 436**
511	**7PR18**	**X0-3-4-4A-4B**	**LOOPS 511, 512, 513, 521, 512, 523**
611	**7PR18**	**X0-X2-X2B-2C-2D**	**LOOPS 611, 612, 621, 622, 631, 632**
613	**7PR18**	**X0-X2-2A**	**LOOPS 613, 614, 623, 624, 633, 634**
641	**7PR18**	**X0-X1-X1A**	**LOOP 641**

ITALIC = EXISTING CONDUCTOR TO REMAIN

BOLD = NEW CONDUCTOR

NOTES:

1. REMOVE EXISTING CABLES NOT SCHEDULED FOR RE-USE.
2. SPLICE NEW CONDUCTOR WITH EXISTING LOOPS WHEN NEW CONDUCTOR IS TO BE USED WITH LOOPS NOT SCHEDULED FOR REPLACEMENT.
3. CONTRACTOR SHALL PROVIDE AS-BUILT REDLINES OF THE WIRING DIAGRAM, CONDUIT SCHEDULE, AND CABLE SCHEDULE TO THE PROJECT ENGINEER.
4. LOAD CENTER "E" SUMMARY TABLE PRESENTED FOR REFERENCE ONLY. SEE CFHWY00366: HSIP ANCHORAGE PEDESTRIAN LIGHTING, PH II FOR LOAD CENTER MODIFICATIONS.



CONDUIT SCHEDULE

RUN #	CONDUIT	CONDUIT TYPE	CABLES	DESTINATION
X0-X1	*3"*	*RMC*	*9, 10, 44, 45, 61, 62, 63, 66, 68*	*P6A, P6B*
	3"	*RMC*	*7, 8, 41, 42, 43, 46, 48, 52, 67, 69,* ***416***	*P1, WB LOOPS*
	3"	*RMC*	*641*	*SB LOOPS*
X0-3	*3"*	*RMC*	*21, 26, 28, 47, 49,* ***411, 413, 414, 415***	*P3, W[illegible] LOOPS*
	3"	*RMC*	*I/C(S), 27, 29, 211,* ***213, 214, 511***	*P4, NB [illegible]OOPS, I/C*
X0-E1	*2"*	*RMC*	*1*	*TC POWE[illegible]*
X0-X2	*3"*	*RMC*	*2, 5, 6, 22, 23, 47A, [illegible]1,* ***611, [illegible]13***	*[illegible] SB L[illegible]PS*
3-P3	*2"*	*RMC*	*21, 26, 28, 47, 49,*	*P3*
3-3C	*2"*	*RMC*	**411, [illegible] 414, 415**	*WB LOO[illegible]*
3B-3C	**2"**	**RMC**	**415**	**WB LOOPS**
3C-X3D	*1.25"*	*RMC*	**411/**	*[illegible]B LOOPS*
X3D-X3E	*1.25"*	*RMC*	**[illegible]1**	*WB LOOPS*
E1-X3A	[illegible]	*RMC*	*[illegible] (IN/OU[illegible]*	*INXTL*
E1-X[illegible]	*2"*	*RMC*	*3*	*INXTL*
	3"	*RMC*	*SP[illegible]E*	*SPARE*
X[illegible] E1(P[illegible])	[illegible]	*RMC*	*3 (IN/OUT),*	*INXTL*
[illegible]3-4	*3"*	[illegible]	*I/C(S), 27, 29, 211,* ***213, 214, 511***	*P4, NB LOOPS, I/C*
4-P4	*1.5"*	*RMC*	*27, 29*	*P4*
[illegible] (POLE)	[illegible]	*RMC*	*SPARE*	*SPARE*
4[illegible]	*2"*	*RMC*	**213, 511**	*NB LOOPS*
4A-4B	*2"*	*RMC*	**511**	*NB LOOPS*
4-X4C	*2"*	*RMC*	*211/*	*NB LOOPS*
X4C-X4D	*2"*	*RMC*	*211*	*NB LOOPS*
X2-X2B	*3"*	*RMC*	*2, 5, 6, 22, 23, 47A, 51*	*P2*
	2"	*RMC*	*3*	*INXTL*
	2"	*RMC*	**611**	*SB LOOPS*
X2-2A	**2"**	**RMC**	**613**	**SB LOOPS**
X2B-P2	*3"*	*RMC*	*2, 5, 6, 22, 23, 47A, 51,*	*P2*
	2"	*RMC*	*3 (IN/OUT),*	*INXTL*
X2B-2C	*2"*	*RMC*	**611/**	*SB LOOPS*
2C-2D	*2"*	*RMC*	**611**	*SB LOOPS*
X2-X1	*2"*	*RMC*	*3*	*INXTL*
X1-X1A	*2"*	*RMC*	**641**	*SB LOOPS*
X1-X1B	*2"*	*RMC*	**416**	*WB LOOPS*
X1-P1	*3"*	*RMC*	*7, 8, 41, 42, 43, 46, 48, 52, 67, 69,*	*P1, LOOPS*
	2"	*RMC*	*3*	*INXTL*
X1-X6	*3"*	*RMC*	*9, 10, 44, 45, 61, 62, 63, 66, 68,*	*P6A, P6B*
	3"	*RMC*	*SPARE*	*SPARE*
X6-P6A	*3"*	*RMC*	*9, 10, 61, 62, 63,*	*P6A*
	2"	*RMC*	*SPARE*	*SPARE*
	2"	*RMC*	*SPARE*	*SPARE*
X6-P6B	*3"*	*RMC*	*44, 45, 66, 68,*	*P6B*
	2"	*RMC*	*SPARE*	*SPARE*

BOLD = NEW CONDUIT **BOLD = NEW CONDUCTOR**

SUMMARY OF EXISTING LOAD CENTER "E"

LOAD CENTER TYPE:	TYPE 1 (STATE OF ALASKA OWNED)
MAINTAINED BY:	MUNICIPALITY OF ANCHORAGE (MOA)
SERVING UTILITY:	CHUGACH ELECTRIC ASSOCIATION (CEA)
SERVICE CONDUIT TYPE:	RMC & PVC
LOCATION DATA (61,196166°,-149.912778°)	
LOAD CENTER:	MINNESOTA DR & 27TH AVE SE
POWER SOURCE:	EXISTING CEA SERVICE TRANSFORMER (15kVA)
PHOTOELECTRIC CONTROL:	EXISTING AT LOAD CENTER
SERVICE VOLTAGE:	240/480V, 1-PHASE, 3-WIRE WITH GROUNDED NEUTRAL
PROVIDE METER SOCKET	EXISTING AT LOAD CENTER
SUB-PANEL A XFMR MAIN SERVICE DISCONNECT	EXISTING 480V, 40A
PANEL B MAIN SERVICE DISCONNECT	EXISTING 480V, 100A
CONTACTOR 1, PANEL A:	480V, 30A, 6-POLE CONTACTOR
CONTACTOR 2, PANEL A:	480V, 30A, 6-POLE CONTACTOR
CONTACTOR 3, PANEL A:	480V, 30A, 6-POLE CONTACTOR
AIC RATING, PANEL A:	14 kAIC @ 480V
AIC RATING, PANEL B:	10 kAIC @ 240V

PANEL A – 120/240 VAC
(S[illegible]IED [illegible]Y INTERNAL STEP-DOWN TRANSFORMER INTEGRAL TO LOAD CENTER)

POLE	A[illegible] T[illegible]	[illegible]SCRIPTION	POLE KVA	Aφ	Bφ	POLE KVA	DESCRIPTION	AMP TRIP	POLE
1	[illegible]0/2	*SUB-P[illegible]EL A SERVICE DI[illegible]ONNECT*	–	0.1		0.1	*CONTROL*	*15/2*	2
[illegible]			–		0.1	0.1			4
[illegible]5	–	*SPACE*	–	0		0	*SPARE**	*20/2*	6
[illegible]	–	*SPACE*	–		0	0			8
[illegible]	–	*SPACE*	–	1.2		1.2	*MINN & NLB TC*	*70/1*	10
11	–	*SPACE*	–		0.6	0.6	***MINN & NLB INXL* (E1-E4)***	*20/2*	12
13	–	*SPACE*	–	0.6		0.6			14
15	–	*SPACE*	–		–	–	*SPACE*	–	16
17	–	*SPACE*	–	–		–	*SPACE*	–	18
* CIRCUIT THROUGH CONTACTOR 1 ITALIC = EXISTING BREAKER, CIRCUIT TO REMAIN				1.9	0.7	PANEL A TOTAL kVA			2.6
				PANEL A AMPS AT 240V					10.8

PANEL B – 240/480 VAC (225A BUS)

	AMP TRIP	DESCRIPTION	POLE KVA	Aφ	Bφ	POLE KVA	DESCRIPTION	AMP TRIP	POLE
1	–	*SPACE*	–	–		–	*SPACE*	–	2
3	–	*SPACE*	–		–	–	*SPACE*	–	4
5	*20/2*	***LUMINAIRES EAST ** (E7, E9, E10-E12)***	0.7	0.7		0	*SPARE ****	*20/2*	6
7			0.7		0.7	0			8
9	–	*SPACE*	–	–		–	*SPACE*	–	10
11	*20/2*	***LUMINAIRES WEST ** (E6, E8)***	0.3		0.3	0	*SPARE ****	*20/2*	12
13			0.3	0.3		0			14
15	–	*SPACE*	–		–	–	*SPACE*	–	16
17	–	*SPACE*	–	–		–	*SPACE*	–	18
19	–	*SPACE*	–		–	–	*SPACE*	–	20
21	*20/2*	***NE LUMINAIRE – MINNESOTA & NOR. LIGHTS ** (E5)***	0.2	0.2		–	*SPACE*	–	22
23			0.2		0.2	–	*SPACE*	–	24
25	–	*SPACE*	–	–		–	*SPACE*	–	26
27	*20/2*	*SPARE ****	0		–	–	*SPACE*	–	28
29			0	–		–	*SPACE*	–	30
** CIRCUIT THROUGH CONTACTOR 2 *** CIRCUIT THROUGH CONTACTOR 3 *ITALIC = EXISTING BREAKER* ***BOLD = EXISTING BREAKER, MODIFIED LOAD***				1.2	1.2	PANEL B TOTAL kVA			2.4
				PANEL B AMPS AT 480V					5.0
				TOTAL kVA					5.0
				TOTAL AMPS AT 480V					10.4

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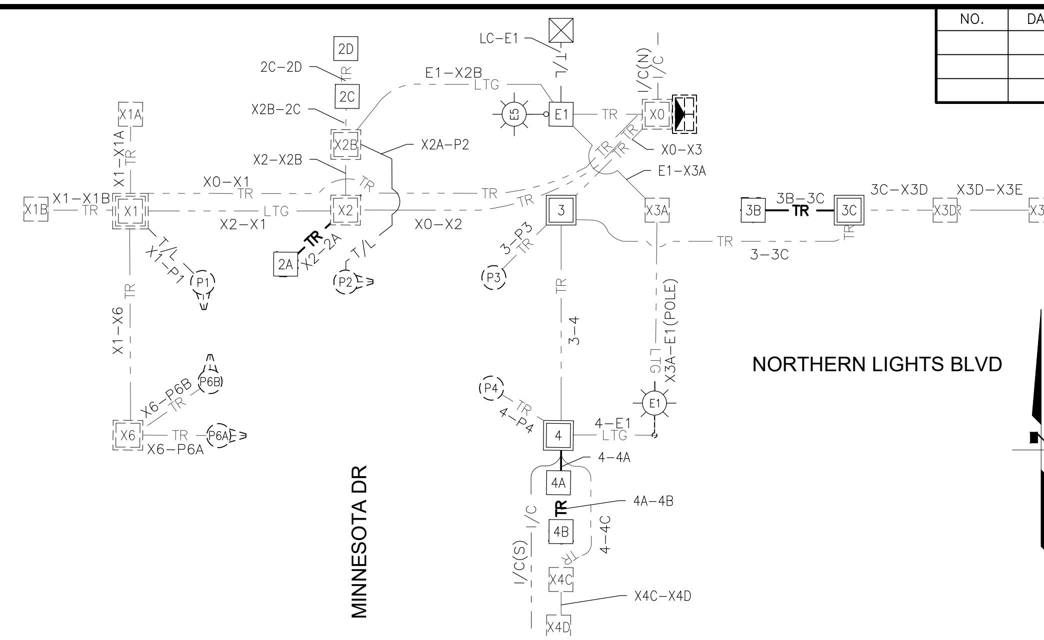
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

NORTHERN LIGHTS WIRING DIAGRAM

FILE: \\DOT.SOA.ALASKA.GOV\SHARED\ANC\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGNAL_NOR LIGHTS.DWG
DATE/TIME 5/9/2022 4:00 PM
LAYOUT ---
DESIGNED ZJH
CHECKED CLP
DRAFTED MF

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H31	H62



SUMMARY OF EXISTING LOAD CENTER "E"

LOAD CENTER TYPE:	TYPE 1 (STATE OF ALASKA OWNED)
MAINTAINED BY:	MUNICIPALITY OF ANCHORAGE (MOA)
SERVING UTILITY:	CHUGACH ELECTRIC ASSOCIATION (CEA)
SERVICE CONDUIT TYPE:	RMC & PVC
LOCATION DATA (61,196166°,-149.912778°)	
LOAD CENTER:	MINNESOTA DR & 27TH AVE SE
POWER SOURCE:	EXISTING CEA SERVICE TRANSFORMER (15kVA)
PHOTOELECTRIC CONTROL:	EXISTING AT LOAD CENTER
SERVICE VOLTAGE:	240/480V, 1-PHASE, 3-WIRE WITH GROUNDED NEUTRAL
PROVIDE METER SOCKET	EXISTING AT LOAD CENTER
SUB-PANEL A XFMR MAIN SERVICE DISCONNECT	EXISTING 480V, 40A
PANEL B MAIN SERVICE DISCONNECT	EXISTING 480V, 100A
CONTACTOR 1, PANEL A:	480V, 30A, 6-POLE CONTACTOR
CONTACTOR 2, PANEL A:	480V, 30A, 6-POLE CONTACTOR
CONTACTOR 3, PANEL A:	480V, 30A, 6-POLE CONTACTOR
AIC RATING, PANEL A:	14 kAIC @ 480V
AIC RATING, PANEL B:	10 kAIC @ 240V

PANEL A – 120/2[illegible] VAC ([illegible]PPLIED BY INTERNAL STEP-DOWN TRANSFORMER INTEGRAL TO LOAD CENTER)

POLE	AMP TRIP	DESCRIPTION	POLE KVA	Aϕ	Bϕ	POLE KVA	DESCRIPTION	AMP TRIP	POLE
1	*80/2*	*SUB-PANEL A SERVICE DISCONNECT*	–	0.1		0.1	*CONTROL*	*15/2*	2
3			–		0.1	0.1			4
5	–	*SPACE*	–	0		0	*SPARE**	*20/2*	6
7	–	*SPACE*	–		0	0			8
9	–	*SPACE*	–	1.2		1.2	*MINN & NLB TC*	*70/1*	10
11	–	*SPACE*	–		0.6	0.6	***MINN & NLB INXL* (E1-E4)***	*20/2*	12
13	–	*SPACE*	–	0.6		0.6			14
15	–	*SPACE*	–		–	–	*SPACE*	–	16
17	–	*SPACE*	–	–		–	*SPACE*	–	18
* CIRCUIT THROUGH CONTACTOR 1 ITALIC = EXISTING BREAKER, CIRCUIT TO REMAIN ***BOLD = EXISTING BREAKER, MODIFIED LOAD***				1.9	0.7		PANEL A TOTAL kVA		2.6
							PANEL A AMPS AT 240V		10.8

PANEL B – 240/480 VAC (225A BUS)

	AMP TRIP	DESCRIPTION	POLE KVA	Aϕ	Bϕ	POLE KVA	DESCRIPTION	AMP TRIP	POLE
1	–	*SPACE*	–	–		–	*SPACE*	–	2
3	–	*SPACE*	–		–	–	*SPACE*	–	4
5	*20/2*	***LUMINAIRES EAST ** (E7, E9, E10-E12)***	0.7	0.7		0	*SPARE ****	*20/2*	6
7			0.7		0.7	0			8
9	–	*SPACE*	–	–		–	*SPACE*	–	10
11	*20/2*	***LUMINAIRES WEST ** (E6, E8)***	0.3		0.3	0	*SPARE ****	*20/2*	12
13			0.3	0.3		0			14
15	–	*SPACE*	–		–	–	*SPACE*	–	16
17	–	*SPACE*	–	–		–	*SPACE*	–	18
19	–	*SPACE*	–		–	–	*SPACE*	–	20
21	*20/2*	***NE LUMINAIRE – MINNESOTA & NOR. LIGHTS ** (E5)***	0.2	0.2		–	*SPACE*	–	22
23			0.2		0.2	–	*SPACE*	–	24
25	–	*SPACE*	–	–		–	*SPACE*	–	26
27	*20/2*	*SPARE ****	0		–	–	*SPACE*	–	28
29			0	–		–	*SPACE*	–	30
*** CIRCUIT THROUGH CONTACTOR 2 *** CIRCUIT THROUGH CONTACTOR 3 ITALIC = EXISTING BREAKER* ***BOLD = EXISTING BREAKER, MODIFIED LOAD***				1.2	1.2		PANEL B TOTAL kVA		2.4
							PANEL B AMPS AT 480V		5.0
							TOTAL kVA		5.0
							TOTAL AMPS AT 480V		10.4

ARC FLASH AND SHOCK HAZARD RESULTS – LC "E" PANEL A ENCLOSURE

ARC FLASH BOUNDARY	5.0 FT
INCIDENT ENERGY IN CAL/CM^2	8.5
WORKING DISTANCE	18 INCHES
SHOCK HAZARD EXPOSURE	480 AC
INSULATING GLOVES CLASS	00
SHOCK HAZARD	WHEN COVER REMOVED
LIMITED APPROACH BOUNDARY	3.5 FT
RESTRICTED APPROACH BOUNDARY	1.0 FT
CALCULATED DATE	1/31/2022

SHORT CIRCUIT CALCULATION – LC "E"

480V POWER FACTOR = 0.90, SERVICE LATERAL CONSISTS OF ONE ALUMINUM CONDUCTOR PER PHASE IN RMC & PVC.

TRANSFORMER RATING	15 kVA
VOLTAGE	240/480 VAC SECONDARY
TRANSFORMER IMPEDANCE	1.2% MINIM[illegible]
TRANSFORMER LET-THRU SHORT CIRCUIT CURRENT (INFINITE BUS)	4[illegible]40 A
LENGTH TO FAUL[illegible]	25[illegible]T
SERVICE CONDUC[illegible] SIZE	[illegible]/0 AW[illegible] (AL)
SERVICE C[illegible]DUIT	[illegible]MC & [illegible]C
CALC[illegible]D FA[illegible] CURRENT AT [illegible] "E"	[illegible].75 kA
DATE CALCUL[illegible]ED	1/31/2022

ARC FLASH AND SHOCK HAZARD RE[illegible] – [illegible]C "E" PANEL B ENCLOS[illegible]RE

ARC FLASH BOUNDARY	5.[illegible]T
INCIDENT ENERGY IN CAL/CM^2	8.5
WORKING DISTANCE	18 INCHES
SHOCK HAZARD EXPOSURE	480 VAC
INSULATING GLOVES CLASS	00
SHOCK HAZARD	WHEN COVER REMOVED
LIMITED APPROACH BOUNDARY	3.5 FT
RESTRICTED APPROACH BOUNDARY	1.0 FT
CALCULATED DATE	1/31/2022

PRELIMINARY

LOAD CENTER "E" NOTES

1. CONTRACTOR SHALL VERIFY CHARACTERISTICS OF ALL EXISTING COMPONENTS THAT ARE TO REMAIN IN SERVICE PRIOR TO BEGINNING ANY WORKAT THE LOAD CENTER. CONTRACTOR SHALL PROVIDE AS-BUILT REDLINES OF THIS PANEL TO THE PROJECT ENGINEER.
2. INTERNAL STEP-DOWN TRANSFORMER INTEGRAL TO LOAD CENTER IS AN EATON CUTLER-HAMMER DRY-TYPE 15 kVA CAT. NO. S20N11S15NWITH 1.9% IMPEDANCE.
3. SEE CFHWY00366 – HSIP: ANCHORAGE PEDESTRIAN LIGHTING PH II FOR INFORMATION ON INTERSECTION LIGHTING AT NORTHERN LIGHTS BLVD.

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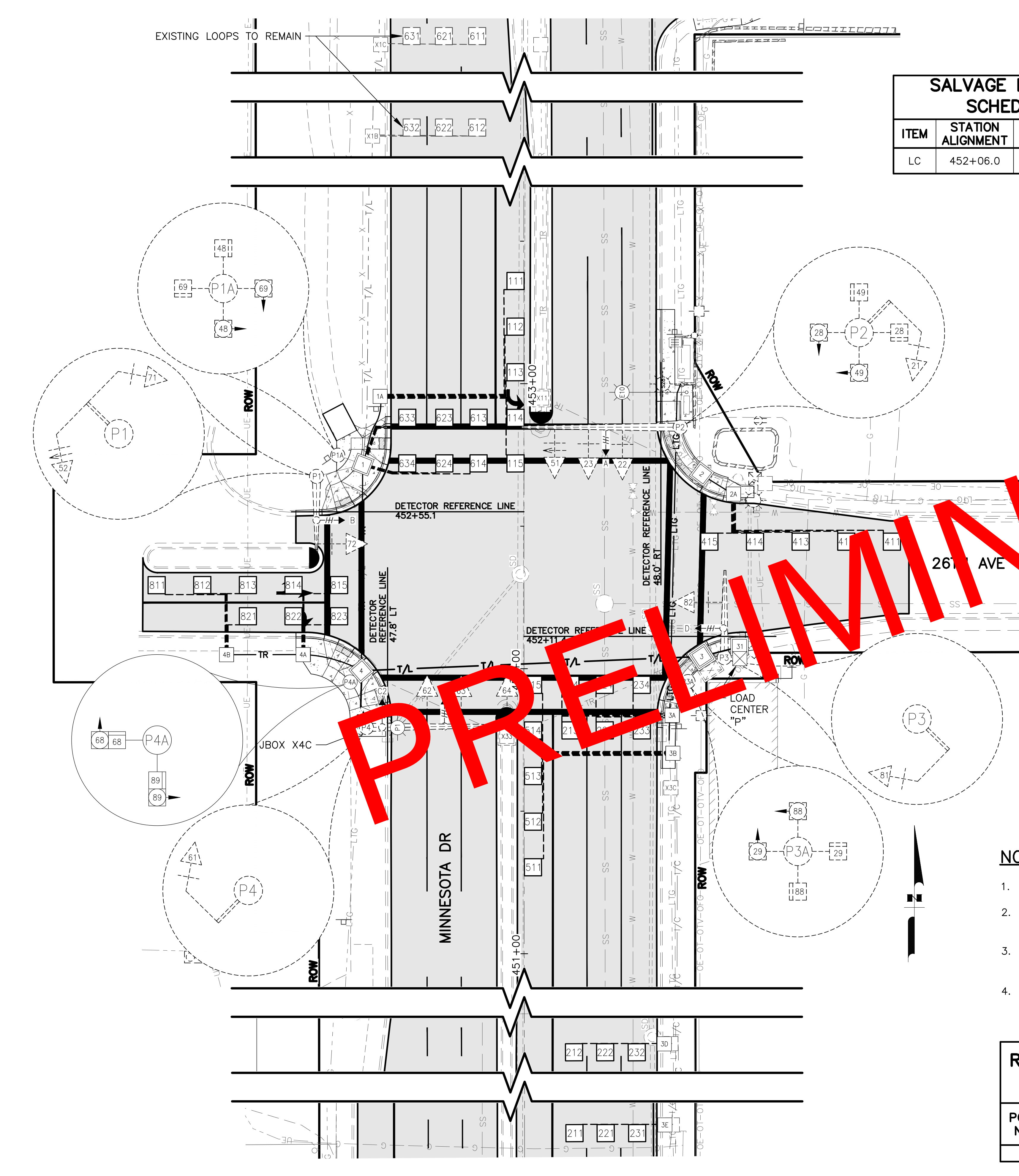
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

NORTHERN LIGHTS LOAD CENTER

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AWI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGNAL_NOR LIGHTS.DWG
DATE/TIME 5/9/2022 4:00 PM
LAYOUT ---
DESIGNED ZJH
CHECKED CLP
DRAFTED MF

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H32	H62



SALVAGE LOAD CENTER EQUIPMENT SCHEDULE (661.0002.0000)

ITEM	STATION ALIGNMENT	OFFSET	STRUCTURE	REMARKS
LC	452+06.0	80.5' RT	EXISTING LC	UTILITY POLE MOUNTED

FOUNDATION SCHEDULE (660.2003.000)

ITEM	STATION ALIGNMENT	OFFSET	STRUCTURE	REMARKS
P4A	451+95.4	61.0' LT	PEDESTRIAN POLE	

JUNCTION BOX SCHEDULE (660.2003.0000)

J-BOX	STATION ALIGNMENT	OFFSET	EXISTING	ADJUST	SALVAGE	NEW	TYPE
3	452+04.2	62.2' RT	X		X	X	MODIFIED TYPE III W/ FOUR TOTAL KNOCKOUTS. ONE ON EACH WALL.
31	452+03.5	75.7' RT				X	II
3A	451+83.7	52.0' RT	X		X	X	1A
3B	451+70.4	52.2' RT				X	1A
3D	450+06.3	51.4' RT	X		X	X	1A
3E	448+90.3	51.8' RT	X		X	X	1A
4	451+99.3	57.1' LT	X		X	X	MODIFIED TYPE II W/ TWO TOTAL KNOCKOUTS. ONE EACH ON ADJACENT WALLS
4A	452+05.0	77.3' [illegible]				X	1A
4B	452+05[illegible]	[illegible]4.3' LT				X	1A
X4C	4[illegible]79.8	[illegible]5' LT			X		II
[illegible]	45[illegible]68.2	[illegible].4' RT			X	X	MODIFIED TYPE II W/ TWO TOTAL KNOCKOUTS. ONE EACH ON ADJACENT WALLS
[illegible]A	452[illegible]	[illegible]5' RT				X	1A
[illegible]1	452+[illegible]6	56.[illegible]	X		X	X	MODIFIED-TYPE II
[illegible]A	[illegible]52+9[illegible]	50.6' LT				X	1A

TRAFFIC LOOPS (660.2003.0000)

LOOP	STATION ALIGNMENT	OFFSET	LOOP	STATION ALIGNMENT	OFFSET	LOOP	STATION ALIGNMENT	OFFSET
111	453+33.0	2.9' LT	232	450+06.2	39.4' RT	614	452+69.0	15.9' LT
112	453+17.0	2.9' LT	233	451+81.3	41.2' RT	623	452+85.0	27.9' LT
113	453+01.0	2.9' LT	234	451+97.3	41.2' RT	624	452+69.0	27.9' LT
114	452+85.0	2.9' LT	411	452+44.6	126.0' RT	633	452+85.0	40.9' LT
115	452+69.0	2.9' LT	412	452+44.6	110.0' RT	634	452+69.0	40.9' LT
211	448+90.2	17.5' RT	413	452+44.6	94.0' RT	811	452+29.4	125.8' LT
212	450+06.2	17.4' RT	414	452+44.6	78.0' RT	812	452+29.4	109.8' LT
213	451+81.3	16.2' RT	415	452+44.6	62.0' RT	813	452+29.4	93.8' LT
214	451+97.3	16.2' RT	511	451+33.4	3.1' RT	814	452+29.4	77.8' LT
221	448+90.2	28.4' RT	512	451+49.4	3.1' RT	815	452+29.4	61.8' LT
222	450+06.2	28.3' RT	513	451+65.4	3.1' RT	821	452+18.5	93.8' LT
223	451+81.3	28.2' RT	514	451+81.4	3.1' RT	822	452+18.5	77.8' LT
224	451+97.3	28.2' RT	515	451+97.4	3.1' RT	823	452+18.5	61.8' LT
231	448+90.2	39.5' RT	613	452+85.0	15.9' LT			

NOTES:

1. TRAFFIC LOOP STATIONING IS TO THE MID-POINT OF THE LOOP EDGE NEAREST THE DETECTOR REFERENCE LINE.
2. REMOVE ENDS OF ABANDONED CONDUIT FROM JUNCTION BOXES SCHEDULED TO BE REPLACED OR JUNCTION BOXES REMAINING IN SERVICE.
3. WHERE JUNCTION BOX SCHEDULE CALLS FOR MODIFIED TYPE II JBOX, PROVIDE JUNCTION BOX ACCORDING TO H03 – NOTE 12 TO ACCOMMODATE HORIZONTAL POLE SWEEP AND/OR TRAFFIC LOOP CONDUIT.
4. ROADWAY LIGHTING OUTSIDE OF THE INTERSECTION AREA SHOWN FOR REFERENCE ONLY. SEE H35 FOR LUMINAIRE AND ROADWAY LIGHTING INFORMATION.

REPLACE FIXTURE ON EXISTING POLE (660.2003.0000)

POLE NO.	STATION ALIGNMENT	OFFSET	LUMINAIRE
P1	451+79.4	55.3' LT	INTERSECTION

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

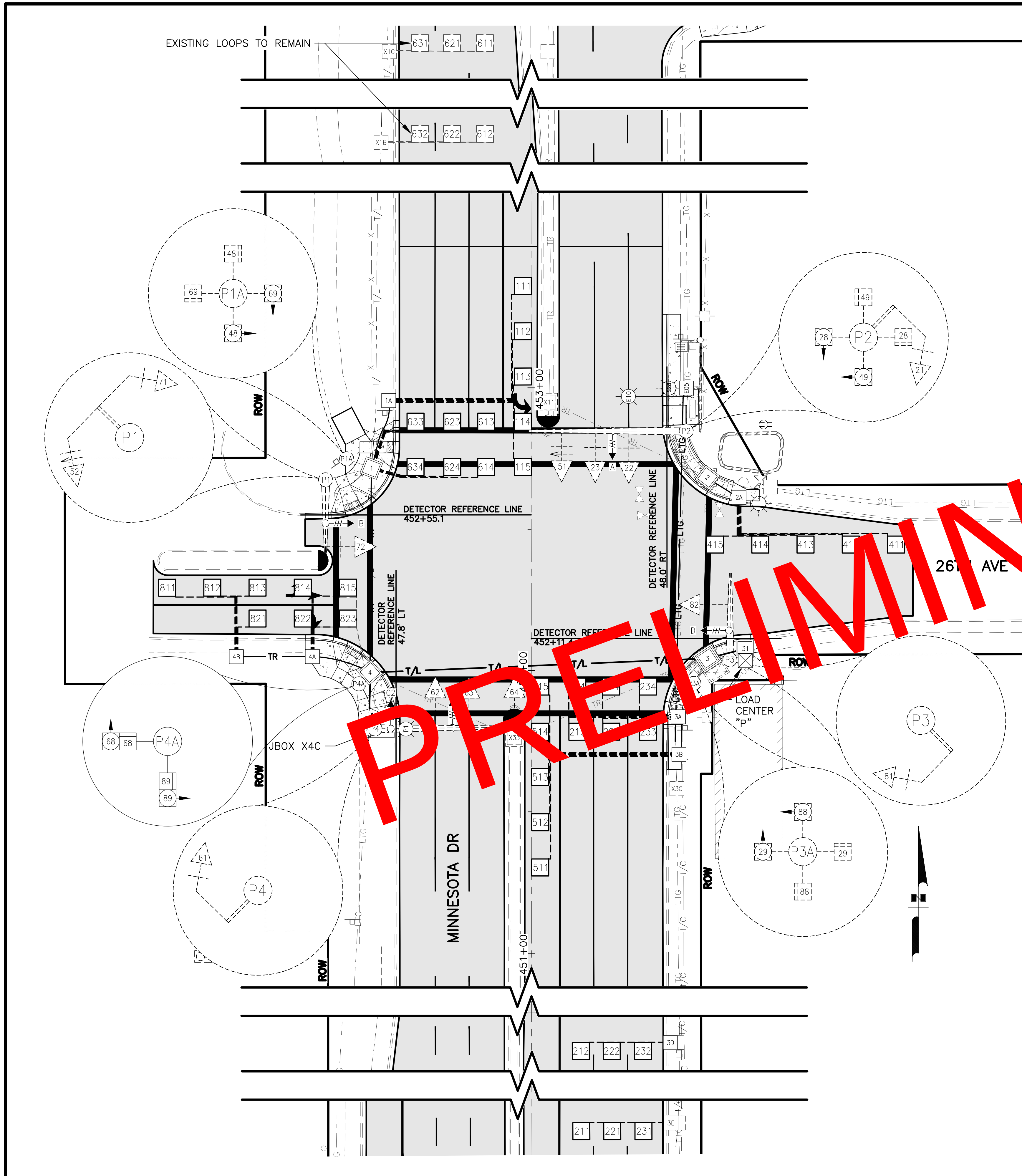
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

26TH AVE SIGNAL SYSTEM PLAN

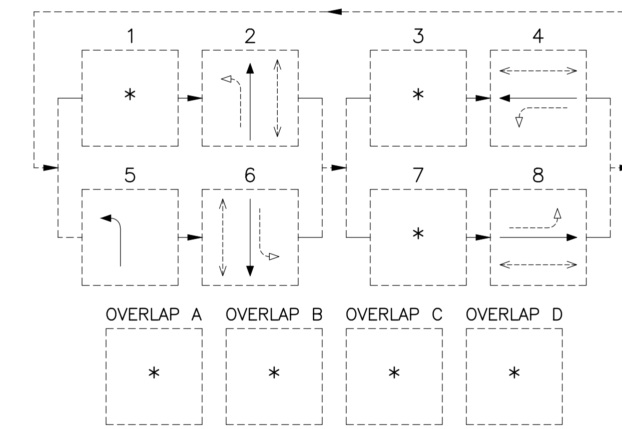
PRELIMINARY

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIVIL3D19\PLANSET\H_SHEETS\00132_SIGNAL_26TH.DWG | DATE/TIME 5/9/2022 4:03 PM | LAYOUT --- | DESIGNED XLMX | CHECKED XLXR | DRAFTED XLMX

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H33	H62



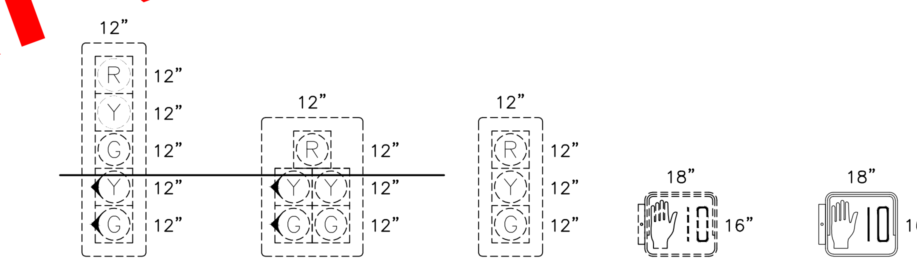
PRELIMINARY



EXISTING PHASE DIAGRAM

LEGEND

- PEDESTRIAN MOVEMENT
- PROTECTED VEHICLE MOVEMENT
- UNPROTECTED VEHICLE MOVEMENT
- * FUTURE USE/NOT USED



SIGNAL FACES 52

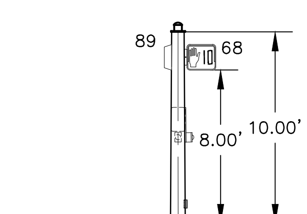
SIGNAL FACES 51

SIGNAL FACES 21, 22, 23 61, 62, 63, 64 71, 72 81, 82

SIGNAL FACES 28, 29 48, 49 69 88, 89

SIGNAL FACES 68 89

SIGNAL HEAD CONFIGURATIONS



P4A ELEVATION VIEW
LOOKING SOUTH
NTS

NOTES:

1. REMOVE EXISTING PEDESTRIAN HEADS AND PEDESTRIAN BUTTONS FROM P4. REPAIR HOLES IN THE POLE ACCORDING TO SPECIAL PROVISION SECTION 660–3.01–4.

STATE OF ALASKA
49TH
CHRISTOPHER L. POST
CE 11253
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
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ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

26TH AVE SIGNAL OPERATIONS PLAN

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CW3D19\PLANSET\H_SHEETS\00132_SIGNAL_26TH.DWG | DATE/TIME 5/9/2022 4:07 PM | LAYOUT | --- | DESIGNED XXX | CHECKED XXX | DRAFTED XXX

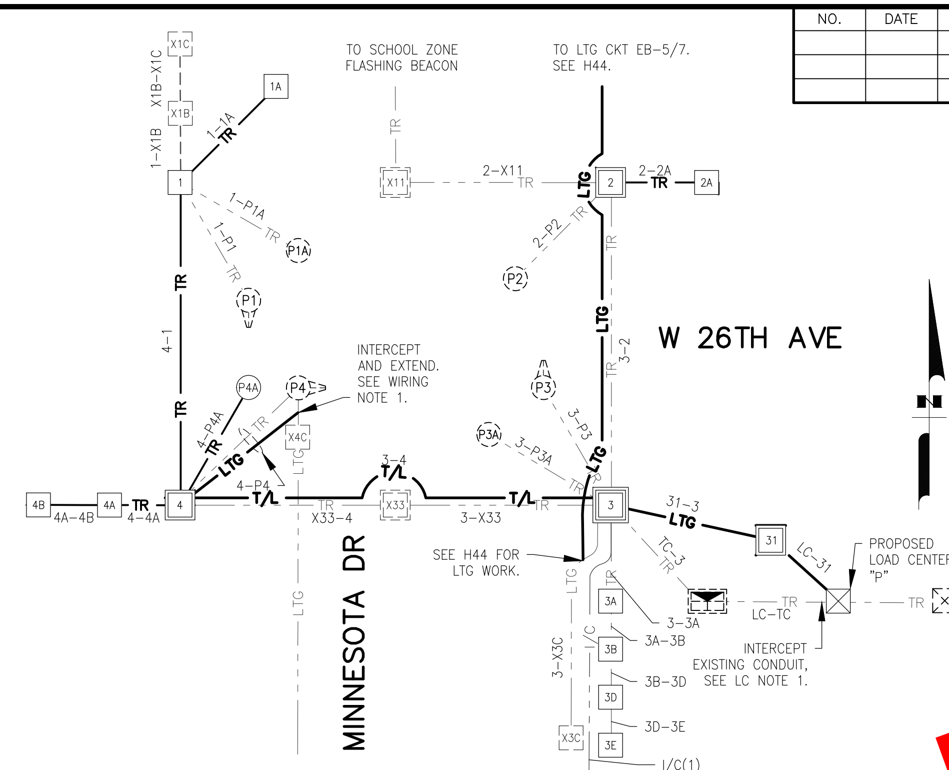
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H34	H62

CABLE SCHEDULE

CABLE	CONDUCTOR	J-BOX PATH	LOAD
I/C(1)	*12PR19*	*TC-3*	*I/C SOUTH*
0	**3C6**	**LC-TC**	**TC POWER (CKT PA-5)**
1	*3C20*	*TC-3-2-P2*	*PRE 2 (A)*
2	*3C14*	*TC-3-2-P2*	*PRECON 2 (A)*
3	*3C20*	*TC-3-X33-4-1-P1*	*PRE 7 (B)*
4	*3C14*	*TC-3-X33-4-1-P1*	*PRECON 7 (B)*
5	*3C20*	*TC-3-X33-4-P4*	*PRE 6 (C1)*
6	*3C14*	*TC-3-X33-4-P4*	*PRECON 6 (C1)*
7	*3C20*	*TC-3-X33-4-P4*	*PRE 6 (C2)*
9	*3C20*	*TC-3-P3*	*PRE 8 (D)*
10	*3C14*	*TC-3-P3*	*PRECON 8 (D)*
21	*7C14*	*TC-3-2-P2*	*HEAD 21*
22	*7C14*	*TC-3-2-P2*	*HEAD 22*
23	*7C14*	*TC-3-2-P2*	*HEAD 23*
26	*3C14*	*TC-3-2-P2*	*PEDB28*
27	*3C14*	*TC-3-P3A*	*PEDB29*
28	*5C14*	*TC-3-2-P2*	*PEDI28*
29	*5C14*	*TC-3-P3A*	*PEDI29*
51	*7C14*	*TC-3-2-P2*	*HEAD 51*
52	*7C14*	*TC-3-X33-4-1-P1*	*HEAD 52*
61	*7C14*	*TC-3-X33-4-P4*	*HEAD 61*
62	*7C14*	*TC-3-X33-4-P4*	*HEAD 62*
63	*7C14*	*TC-3-X33-4-P4*	*HEAD 63*
64	*7C14*	*TC-3-X33-4-P4*	*HEAD 64*
66	**3C14**	**TC-3-4-P4A**	**PEDB 68**
67	3C14	TC-3-X33-4-1-P1A	PEDB 69
68	**5C14**	**TC-3-4-P4A**	**PEDI 68**
69	5C14	TC-3-X33-4-1-P1A	PEDI 69
71	*7C14*	*TC-3-X33-4-1-P1*	*HEAD 71*
72	*7C14*	*TC-3-X33-4-1-P1*	*HEAD 72*
76	*3C14*	*TC-3-X33-4-1-P1A*	*PEDB 78*
77	*3C14*	*TC-3-2-P2*	*PEDB 79*
78	*5C14*	*TC-3-X33-4-1-P1A*	*PEDI 78*
79	*5C14*	*TC-3-2-P2*	*PEDI 79*
81	*7C14*	*TC-3-P3*	*HEAD 81*
82	*7C14*	*TC-3-P3*	*HEAD 82*
86	*3C14*	*TC-3-P3A*	*PEDB 88*
87	***3C14***	***TC-3-4-P4A***	**PEDB 89**
88	5C14	TC-3-P3A	PEDI 88
89	**5C14**	**TC-3-4-P4A**	**PEDI 89**
100	**3C8**	**LC-31-3-4-P4**	**INTXL ([illegible]A-1/3[illegible]**
111	**7PR18**	**TC-3-4-1-1A**	**[illegible]PS 111-1[illegible]**
211	**7PR18**	**TC-3-3A-3B-3D-3E**	**[illegible]OPS 211-2[illegible] 221-[illegible], 231-2[illegible]**
213	**7PR18**	**TC-3-3A**	**[illegible]PS 213[illegible], 223, [illegible], 233, 234**
411	**7PR18**	**TC-3-2-2A**	**L[illegible]-415**
511	**7PR18**	**TC-3-3A-3B**	**LO[illegible] 511-515**
611	*7PR18*	*TC-3-X33-4-1-X1B-X1C*	*LOO[illegible] 611, 612, 621, 622, 631, 632*
613	**7PR18**	**TC-3-4-1**	**LOOP[illegible] 613, 614, 623, 624, 633, 634**
811	**7PR18**	**TC-3-4-4A-4B**	**LOOPS 811-813, 821**
814	**7PR18**	**TC-3-4-4A**	**LOOPS 814, 815, 822, 823**
998	*5C14*	*TC-3-2-X11*	*SB SCHOOL FLASHER*
999	*5C14*	*TC-3*	*NB SCHOOL FLASHER*

ITALIC = EXISTING CONDUCTOR TO REMAIN

BOLD = NEW CONDUCTOR



PROPOSED LOAD CENTER "P"

LOAD CENTER TYPE:	TYPE 1A (STATE OF ALASKA [illegible]OWNED)
MAINTAINED BY:	MUNICIPALITY [illegible] ANCHORAG[illegible] (MOA)
SERVING UTILITY:	CHUGAC[illegible] ELECT[illegible] [illegible]SOCIATI[illegible] (CEA)
SERVICE CONDUIT TYPE:	RM[illegible] & PV[illegible]
LOCATION DAT[illegible] 52+0[illegible]5 – [illegible]5.7' RT[illegible]	
LOAD CENTER:	[illegible]NNES[illegible] DR & 26TH AVE,
POWER SOURCE:	EX[illegible]TIN[illegible] CEA S[illegible]VICE T[illegible]NSFORMER (25kVA)
PHOTOEL[illegible]TRIC CONTROL:	AT [illegible]AD CENTER
SERVI[illegible] VOLTAGE:	120/2[illegible], 1-PHASE, 3-WIRE WITH GROUNDED NEUTRAL
PROVIDE M[illegible]ER SOCKET	YES
PAN[illegible] A M[illegible] SERVICE DISCO[illegible]ECT	240V, 100A
CONTACTOR, [illegible]	600V, 40A, 12-POLE
AIC RA[illegible]G, [illegible]ANEL A:	10 kAIC @ 240V

PANEL A – 120/240 VAC

POLE	AMP TRIP	DESCRIPTION	POLE KVA	Aφ	Bφ	POLE KVA	DESCRIPTION	AMP TRIP	POLE
1	20/2	INTXL – SW CORNER * (P1)	0.25	0.25		0	SPARE *	20/2	2
3			0.25		0.25	0			4
5	50/1	TRAFFIC SIGNAL CABINET	1.8	1.8		0.1	CONTROL	15/2	6
7	20/1	SPARE	0		0.1	0.1			8
9	20/1	SPARE	0	0		0	SPARE	15/2	10
11	15/1	SPARE	0		0	0			12
* CIRCUIT THROUGH CONTACTOR				2.1	0.4	PANEL A KVA			2.4
				TOTAL AMPS @ 240 VAC					10.0

CONDUIT SCHEDULE

RUN #	CONDUIT	CONDUIT TYPE	CABLES	DESTINATION
LC-TC	*1.25"*	*RMC*	**0**	*TC POWER*
LC-31	**2"**	**RMC**	**100**	**INTXL**
31-3	**2"**	**RMC**	**100**	**INTXL**
TC-3	*4"*	*RMC*	*1, 2, 9, 10, 21, 22, 23, 26, 27, 28, 29, 51, 77, 79, 81, 82, 86, 88,* ***211, 213, 511, 411,*** *998, 999*	*P2, P3, LOOPS*
	4"	*RMC*	*3, 4, 5, 6, 7, 52, 61, 62, 63, 64,* ***66,*** *67,* ***68,*** *69, 71, 72, 76, 78,* ***87, 89, 111,*** *611,* ***613, 811, 814***	*P1, P4, LOOPS*
	2"	*RMC*	*I/C(1)*	*INTXL*
3-P3	*1.5"*	*RMC*	*9, 10, 81, 82*	*P3*
3-P3A	*1.5"*	*RMC*	*27, 29, 86, 88*	*P3A*
3-3A	*2"*	*RMC*	**211, 213, 511**	*NB LOOPS*
3A-3B	*2"*	*RMC*	**211, 511**	*NB LOOPS*
3B-3D	*2"*	*RMC*	**211/**	*NB LOOPS*
3D-3E	*2"*	*RMC*	**211**	*NB LOOPS*
3-X33	*4"*	*RMC*	*3, 4, 5, 6, 7, 52, 61, 62, 63, 64,* ***66,*** *67,* ***68,*** *69, 71, 72, 76, 78,* ***87, 89, 111,*** *611,* ***613, 811, 814***	*P1, P4, LOOPS*
3-4	**2"**	**RMC**	**100**	**INTXL**
	3"	**RMC**	**66, 68, 87, 89, 111, 613, 811, 814**	**P4, SB LOOPS**
	3"	**RMC**	**SPARE**	**SPARE**
[illegible]3-4	*[illegible]"*	*RMC*	*3, 4, 5, 6, 7, 52, 61, 62, 63, 64,* ***66,*** *67,* ***68,*** *69, 71, 72, 76, 78,* ***87, 89, 111,*** *611,* ***613, 811, 814***	*P1, P4, LOOPS*
4[illegible]A	**2"**	**RMC**	**811, 814**	**EB LOOPS**
4[illegible]4B	**2"**	**RMC**	**811**	**EB LOOPS**
[illegible]P4	*3"*	*RMC*	*5, 6, 7, 61, 62, 63, 64*	*P4*
	2"	**RMC**	**100**	**INTXL**
4-P4A	**2"**	**RMC**	**SPARE**	**SPARE**
	2"	**RMC**	**66, 68, 87, 89**	**P4A**
4-1	*2.5"*	*RMC*	*3, 4, 52, 67, 69, 71, 72, 76, 78, 611*	*P1, SB LOOPS*
	2"	**RMC**	**111, 613**	**SB LOOPS**
1-X1B	*2"*	*RMC*	*611/*	*SB LOOPS*
X1B-X1C	*2"*	*RMC*	*611*	*SB LOOPS*
1-P1	*1.25"*	*RMC*	*3, 4, 52, 71, 72*	*P1*
1-P1A	*1.5"*	*RMC*	*67, 69, 76, 78*	*P1A*
1-1A	**2"**	**RMC**	**111**	**SBLT LOOPS**
3-2	*3.5"*	*RMC*	*1, 2, 21, 22, 23, 26, 28, 51, 77, 79,* ***411,*** *998*	*P2, WB LOOPS, BEACON*
2-P2	*3"*	*RMC*	*1, 2, 21, 22, 23, 26, 28, 51, 77, 79*	*P2*
	2"	*RMC*	*SPARE*	*SPARE*
2-2A	**2"**	**RMC**	**411**	**WB LOOPS**
2-X11	*2.5"*	*RMC*	*998*	*SB LOOPS*

BOLD = NEW CONDUCTOR

BOLD = NEW CONDUIT

LOAD CENTER NOTES:

1. ADJUST LOCATION OF PROPOSED LOAD CENTER SUCH THAT NEW FOUNDATION INTERCEPTS EXISTING 1-1/4" CONDUIT RUNNING FROM TC TO EXISTING, POLE-MOUNTED, LOAD CENTER. CUT AND ADD SWEEP TO EXISTING CONDUIT TO ENTER PROPOSED LOAD CENTER FOUNDATION.

2. CONTRACTOR SHALL VERIFY CHARACTERISTICS OF ALL EXISTING LOAD CENTER COMPONENTS TO REMAIN IN SERVICE PRIOR TO BEGINNING ANY WORK AT THE LOAD CENTER. CONTRACTOR SHALL PROVIDE AS-BUILT REDLINES OF THIS PANEL TO THE PROJECT ENGINEER.

WIRING NOTES:

1. INTERCEPT EXISTING LIGHTING CONDUIT LEAVING POLE 4 FOUNDATION AND EXTEND TO J-BOX 4. SALVAGE J-BOX X4C AND REMAINING CONDUIT FROM EXISTING POLE SWEEP. ABANDON EXISTING LIGHTING CONDUIT LEAVING J-BOX X4C TO THE SOUTH.

ARC FLASH AND SHOCK HAZARD RESULTS – LC "P"

ARC FLASH BOUNDARY	1.8 FT
INCIDENT ENERGY IN CAL/CM^2	1.7
WORKING DISTANCE	18 INCHES
SHOCK HAZARD EXPOSURE	240 VAC
INSULATING GLOVES CLASS	00
SHOCK HAZARD	WHEN COVER REMOVED
LIMITED APPROACH BOUNDARY	3.5 FT
RESTRICTED APPROACH BOUNDARY	1.0 FT
CALCULATED DATE	1/31/2022

SHORT CIRCUIT CALCULATION – LC "P"

240V, POWER FACTOR=0.90, SERVICE LATERAL CONSISTS OF ONE ALUMINUM CONDUCTOR PER PHASE IN PVC.

TRANSFORMER RATING	25kVA
VOLTAGE	120/240 VAC SECONDARY
TRANSFORMER IMPEDANCE	1.2% MINIMUM
TRANSFORMER LET-THRU SHORT CIRCUIT CURRENT (INFINITE BUS)	14.5 kA
LENGTH TO FAULT	380 FT
SERVICE CONDUCTOR SIZE	1/0 AWG (AL)
SERVICE CONDUIT	PVC
CALCULATED FAULT CURRENT AT LC "P"	1.53 kA
DATE CALCULATED	1/31/2022

STATE OF ALASKA 49TH JEFFREY CARLETON EE 13218 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
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STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

26TH AVE WIRING DIAGRAM

PRELIMINARY

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099 CFHWY00132	2022	H35	H62

ELECTROLIER SCHEDULE (660.0003.0000)

POLE NO.	STATION ALIGNMENT	OFFSET	LUMINAIRE	POLE TYPE	MOUNTING HEIGHT (FT)	SHAFT LENGTH (FT)	MASTARM LENGTH (FT)	MAINTAINING AGENCY	REMARKS
A02	392+70.7	61.2' LT	ROADWAY	MASTARM	40	36	8	DOT&PF	
A03	394+22.0	61.9' LT	ROADWAY	MASTARM	40	37	8	DOT&PF	
A05	395+71.7	61.7' LT	ROADWAY	MASTARM	40	36	8	DOT&PF	
A06	397+21.3	69.0' LT	ROADWAY	MASTARM	40	38	6	DOT&PF	
A14	404+63.3	53.3' RT	ROADWAY	DAVIT	40	25	16	DOT&PF	PILE
A16	407+15.3	54.2' RT	ROADWAY	DAVIT	40	30	10	DOT&PF	PILE
A18	409+60.5	53.4' RT	ROADWAY	DAVIT	40	30	10	DOT&PF	PILE
A20	412+10.5	53.8' RT	ROADWAY	DAVIT	40	30	10	DOT&PF	PILE
C01	414+64.0	53.6' RT	ROADWAY	DAVIT	40	30	10	DOT&PF	PILE
C03	417+12.0	53.8' RT	ROADWAY	DAVIT	40	27	14	DOT&PF	PILE
C05	419+40.1	53.4' RT	ROADWAY	DAVIT	40	23	18	DOT&PF	PILE
C07	421+93.8	53.9' RT	ROADWAY	DAVIT	40	26	14	DOT&PF	PILE
C09	424+45.6	54.1' RT	ROADWAY	DAVIT	40	26	14	DOT&PF	PILE
C11	426+05.7	86.3' RT	INTERSECTION II	MASTARM	40	36	6	DOT&PF	PILE
C13	426+95.1	54.2' RT	ROADWAY	DAVIT	40	26	14	DOT&PF	PILE
C15	429+17.7	54.3' RT	ROADWAY	DAVIT	40	31	10	DOT&PF	PILE
PROPOSED ELECTROLIERS C17–C26, D1–D8, & E1–E5 TO BE INSTALLED AS PART OF CFHWY00366. SHOWN IN PLANS FOR REFERENCE ONLY.									
E7	447+78.0	54.7' RT	ROADWAY	DAVIT	40	26	14	MOA	PILE
E9	450+43.1	54.2' RT	ROADWAY	DAVIT	40	21	18	MOA	PILE
E10	452+96.9	57.1' RT	INTERSECTION II	DAVIT	40	19	20	MOA	PILE
E11	455+45.1	54.9' RT	ROADWAY	DAVIT	40	24	18	MOA	PILE
E12	458+06.4	50.5' RT	ROADWAY	DAVIT	40	24	16	MOA	PILE

REPLACE FIXTURE ON EXISTING POLE (660.0003.0000)

POLE NO.	STATION ALIGNMENT	OFFSET	LUMINAIRE
A01	392+24.5	53.0' RT	ROADWAY
A04	394+73.0	53.7' RT	ROADWAY
A07	397+21.7	51.0' RT	ROADWAY
A08	398+89.4	73.5' LT	ROADWAY
A09	399+64.7	51.7' RT	ROADWAY
A10	400+60.0	63.1' LT	ROADWAY
A11	402+18.3	53.4' RT	ROADWAY
A12	402+36.6	61.0' LT	ROADWAY
A13	404+36.7	58.1' LT	ROADWAY
A15	405+89.1	54.7' LT	ROADWAY
A17	408+38.6	54.5' LT	ROADWAY
A19	410+08.0	57.1' LT	ROADWAY
C02	415+78.5	58.4' LT	ROADWAY
C04	418+56.2	60.1' LT	ROADWAY
C06	420+68.3	54.3' LT	ROADWAY
C08	423+18.2	54.3' LT	ROADWAY
C10	425+67.9	54.[illegible] LT	ROADWAY
C12	426+64.9	70.[illegible] LT	INTERSECTION II
C14	428+1[illegible]	53.[illegible] LT	ROADWAY
C1[illegible]	430+68.[illegible]	53.[illegible] LT	ROADWAY
E6	[illegible]7+42.2	69.[illegible]	ROADWAY
E8	44[illegible]62.1	70.[illegible] LT	ROADWAY

LUMINAIRE PERFORMANCE CRITERIA

LUMINAIRE LIGHT LOSS FACTOR	0.85	
LIGHTING CALCULATION METHOD	RP–8–2014	
INTERSECTION ILLUMINANCE CRITERIA		
	26TH AVE	SPENARD RD
AVERAGE MAINTAINED ILLUMINATION (fc)	1.2	3.3
AVERAGE UNIFORMITY RATIO (AVG/MIN)	5.0	3.5
ROADWAY		
LUMINANCE CRITERIA		
AVERAGE LUMINANCE (cd/m²)	1.0	
MINIMUM ROADWAY LUMINANCE (cd/m²)	0.3	
AVERAGE UNIFORMITY RATIO (AVG/MIN)	3.1	
MAX UNIFORMITY RATIO (MAX/MIN)	7.3	
MAX VEILING LUMINANCE RATIO (LV–MAX/AVG)	0.3	
SIDEWALK ILLUMINANCE CRITERIA		
AVERAGE MAINTAINED ILLUMINATION (fc)	1.2	
MINIMUM ILLUMINATION (fc)	0.1	

LUMINAIRE STANDARDS

	ROADWAY	INTERSECTION	INTERSECTION II
MANUFACTURER (OR APPROVED EQUAL)	GE CURRENT		
MODEL (OR APPROVED EQUAL)	ERL2–30–C3–30	ERL2–30–D3–30	ERL2–30–D3–30
WATTAGE (MAXIMUM)	278	278	278
VOLTAGE	480	240	480
PE CONTROL	ANSI C136.41 7 PIN		
PE SENSOR	SHORTING CAP ONLY		
MOUNTING	HORIZONTAL		
HOUSING ENTRY TYPE	TOOLLESS		
FIXTURE COLOR	GRAY		
IES DISTRIBUTION TYPE	TYPE III	TYPE IV	TYPE IV
POWER FACTOR	>0.90		
UL LISTED	YES		
CCI	3000K		
CRI	MINIMUM 70		

SALVAGE ELECTROLIER SCHEDULE (660.0003.0000)

POLE NO.	STATION ALIGNMENT	OFFSET	POLE TYPE	BASE TYPE	SHAFT LENGTH (FT)	MASTARM LENGTH (FT)	REMARKS
S01	392+70.7	61.2' LT	MASTARM	SLIP	37	6	
S02	394+22.0	61.9' LT	MASTARM	SLIP	37	6	
S03	395+71.7	61.7' LT	MASTARM	SLIP	37	6	
S04	397+21.3	69.0' LT	MASTARM	SLIP	37	6	
S05	404+66.5	54.8' RT	MASTARM	FRANGIBLE	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S06	407+19.5	54.0' RT	MASTARM	FRANGIBLE	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S07	409+64.6	54.1' RT	MASTARM	TRANSFORMER	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S08	412+13.4	53.9' RT	MASTARM	FRANGIBLE	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S09	414+66.1	53.3' RT	MASTARM	TRANSFORMER	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S10	417+09.6	53.7' RT	MASTARM	FRANGIBLE	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S11	419+42.5	53.7' RT	MASTARM	FRANGIBLE	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S12	421+95.9	54.0' RT	MASTARM	FRANGIBLE	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S13	424+41.8	53.8' RT	MASTARM	FRANGIBLE	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S14	426+01.0	69.5' RT	MASTARM	FRANGIBLE	37	6	
S15	426+91.8	54.2' RT	MASTARM	TRANSFORMER	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S16	429+13.8	54.0' RT	MASTARM	FRANGIBLE	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S17–S25 TO BE SALVAGED AS PART OF CFHWY00366. SHOWN FOR REFERENCE ONLY							
S26	447+73.1	54.2' RT	MASTARM	TRANSFORMER	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S27	450+39.3	54.6' RT	MASTARM	TRANSFORMER	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S28	452+99.8	54.9' RT	MASTARM	TRANSFORMER	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S29	455+48.2	52.1' RT	MASTARM	TRANSFORMER	37	6	DEMOLISH FOUNDATION PER DETAIL H04
S30	458+01.9	50.7' RT	MASTARM	TRANSFORMER	37	6	DEMOLISH FOUNDATION PER DETAIL H04

PRELIMINARY

NOTES:

1. UNLESS OTHERWISE NOTED, ABANDON THE FOUNDATIONS OF ALL SALVAGED ELECTROLIERS.

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

LIGHTING SCHEDULES

DESIGNED --- | CHECKED ZJH | DRAFTED CLP | MF | LAYOUT | DATE/TIME 5/9/2022 4:09 PM

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AN\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132-SCHEDULE.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099 CFHWY00132	2022	H36	H62

HIGHWAY LIGHTING – JUNCTION BOX SCHEDULE (660.0003.0000)

J-BOX	STATION ALIGNMENT	OFFSET	SALVAGE	NEW	TYPE
A01/SA01	392+69.6	59.0' LT	X	X	1A
A02/SA02	394+22.1	65.2' LT	X	X	1A
A03/SA03	395+71.7	64.9' LT	X	X	1A
A04	397+20.9	70.9' LT		X	1A
A05/SA05	398+62.8	49.0' RT	X	X	1A
A06/SA06	404+38.7	53.2' LT	X	X	1A
A07/SA07	404+66.5	54.8' RT	X	X	1A
A08	405+24.3	53.8' RT		X	1A
A09	405+88.9	56.7' LT		X	1A
A10	407+19.5	54.0' RT		X	1A
A11	408+38.6	54.5' LT		X	1A
A12	409+64.6	54.1' RT		X	1A
A13	410+08.0	57.4' LT		X	1A
A14	412+13.4	53.9' RT		X	1A
C01	414+66.1	53.3' RT		X	1A
C02/SC02	415+88.3	52.4' RT	X	X	1A
C03	417+09.6	53.7' RT		X	1A
C04	417+66.6	51.7' RT		X	1A
C05/SC05	417+76.7	52.6' LT	X	X	1A
C06/SC06	418+40.1	51.9' RT	X	X	1A
C07/SC07	419+42.5	53.7' RT	X	X	1A
C08/SC08	420+21.4	51.9' RT	X	X	1A
C09	421+95.9	54.0' RT		X	1A
C10/SC10	422+69.2	52.0' RT	X	X	1A
C11/SC11	423+41.0	51.9' RT	X	X	1A
C12	424+41.8	53.8' RT		X	1A
C13	426+04.8	83.8' RT		X	1A
C14	426+91.8	54.2' RT		X	1A
C15/SC15	429+13.8	54.0' RT	X	X	1A
C16/SC16	429+98.1	52.1' RT	X	X	1A
SC17	431+37.2	52.2' LT	X		1A
PROPOSED J-BOXES C17–C22, D1–D5, E1 TO BE INSTALLED AS PART OF CFHWY00366. SHOWN FOR REFERENCE ONLY.					
E02	447+73.1	54.2' RT		X	1A
E03/SE03	448+49.8	53.2' RT	X	X	1A
E04	450+39.3	54.6' RT		X	1A
E05	452+99.8	54.9' RT		X	1A
E06	455+48.2	52.1' RT		X	1A
E07	458+01.9	50.7' RT		X	[illegible]

PROPOSED INTERCONNECT – JUNCTION BOX SCHEDULE (662.2001.0000)

J-BOX	STATION ALIGNMENT	OFFSET	EXISTING	ADJUST	SALVAGE	NEW	TYPE
IC1	417+78.2	56.3' RT	X	X			II
SIC1	418+28.4	62.2' RT	X		X		II
IC2	421+80.9	54.0' RT				X	II
SIC2	422+76.8	62.4' RT	X		X		II
SIC3	423+22.8	67.3' RT	X		X		II
IC3	425+99.0	64.1' RT	X	X			III
IC4	426+61.1	69.5' RT	X	X			II
SIC4	429+78.8	62.3' RT	X		X		II
IC5	430+49.4	54.7' RT				X	II
SIC5	433+07.8	62.3' RT	X		X		II
IC6	434+40.1	54.9' RT				X	II
SIC6	435+83.7	56.5' RT	X		X		II

EXISTING INTERCONNECT – ADJUST JUNCTION BOX (662.2001.0000)

J-BOX	STATION ALIGNMENT	OFFSET	TYPE
XIC1	405+41.6	50.1' RT	II
XIC2	409+50.5	50.6' RT	II

PRELIMINARY

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

JUNCTION BOX SCHEDULES

FILE: \\DOT.SOA.ALASKA.GOV\SHARED\AWI\HYD\PROJECTS\MINNESOTA DR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132-SCHEDULE.DWG | DATE/TIME 5/9/2022 4:09 PM | LAYOUT --- | DESIGNED ZJH | CHECKED CLP | DRAFTED MF

SUMMARY OF EXISTING LOAD CENTER "C"

LOAD CENTER TYPE:	TYPE 1A (STATE OF ALASKA OWNED)
MAINTAINED BY:	STATE OF ALASKA (SOA)
SERVING UTILITY:	CHUGACH ELECTRIC ASSOCIATION (CEA)
SERVICE CONDUIT TYPE:	RMC & PVC
LOCATION DATA (392+73.3 – 79.6' RT)	
LOAD CENTER:	MINNESOTA & SPENARD N/NW
POWER SOURCE:	EXISTING 50 KVA POLE MOUNT TRANSFORMER
PHOTOELECTRIC CONTROL:	EXISTING AT LOAD CENTER
SERVICE VOLTAGE:	240/480VAC, 1 PHASE, 3 WIRE WITH GROUND
PROVIDE METER SOCKET	LEAVE EXISTING
MAIN BREAKER A	480 VOLT, 2 POLE, 100 AMP (NOTE 2)
CONTACTOR:	EXISTING – 480 VOLT, 8 POLE, 30 AMP
AIC RATING:	10kAIC @ 480V

PANEL A (240/480 VAC)

POLE	AMP TRIP	DESCRIPTION	POLE KVA	Aϕ	Bϕ	POLE KVA	DESCRIPTION	AMP TRIP	POLE
1	30/2	~~LOAD CENTER LTG~~ *SPARE (NOTES 3 & 4) **	0.0	0.9		0.9	***W MINN LTG: SPENARD – 31ST* (C2, C4, C6, C8, C10, C12, C14, C16)***	30/2	2
3			0.0		0.9	0.9			4
5	30/2	***E MINN LTG: SPENARD – 31ST* (C1, C3, C5, C7, C9, C11, C13, C15, C17–25)***	2.3	2.3		0.0	*SPARE*	15/2	6
7			2.3		2.3	0.0			8
9	30/2	*SPARE*	0.0	0.10		0.10	*PHOTOCELL*	15/1	10
11			0.0		0	0.0	*SPARE*	30/2	12
13		SPACE	–			0.0			14
15		SPACE	–			–	*SPACE*		16
17		SPACE	–			–	*SPACE*		18
* CIRCUIT THROUGH CONTACTOR				3.2	3.2	PANEL A TOTAL kVA			6.4
ITALIC = EXISTING BREAKER, CIRCUIT TO REMAIN **BOLD = EXISTING BREAKER. MODIFIED LOAD**				AMPS @ 480 VAC					13.2

SUMMARY OF EXISTING LOAD CENTER "A"

LOAD CENTER TYPE:	TYPE 1 (STATE OF ALASKA OWNED)
MAINTAINED BY:	STATE OF ALASKA (SOA)
SERVING UTILITY:	CHUGACH ELECTRIC ASSOCIATION (CEA)
SERVICE CONDUIT TYPE:	RMC & PVC
LOCATION DATA (392+73 – 80'RT)	
LOAD CENTER:	MINNESOTA DR & T[illegible] RD, NE
POWER SOURCE:	EXISTING (50kVA TRA[illegible]ORMER 152[illegible])
PHOTOELECTRIC CONTROL:	[illegible]STING [illegible] LOA[illegible] CENTER
SERVICE VOLTAGE:	240/4[illegible]VAC, 1 PHA[illegible], 3 W[illegible] WITH [illegible]UND
PROVIDE METER SOCKET	[illegible]STING (M[illegible]ER 136[illegible]6 735)
MAIN BREAKER, PANEL A	[illegible]LT, 2 POLE, 4[illegible] AMP
MAIN BREAKER, PANEL B	4[illegible] VOLT, 2 POLE, 60 AMP
CONTACTOR, PANEL B:	EXISTING (600 VOLT, 2 [illegible]LES, 60 AMP – CONTROLS ENTIRE PANEL B)
AIC RATING, PANEL A:	14 kAIC @ 480V
AIC RATING, PANEL B:	14 kAIC @ 480V

PANEL A – 240/480 VAC

POLE	AMP TRIP	DESCRIPTION	POLE KVA	Aϕ	Bϕ	POLE KVA	DESCRIPTION	AMP TRIP	POLE
1	20/2	*UNLABELED*	0	0		0	SPACE	–	2
3			0		0.2	0.2	*CONTROL*	15/1	4
* CIRCUIT THROUGH CONTACTOR ITALIC = EXISTING				0	0.2	PANEL A TOTAL KVA			0.2
				PANEL A AMPS @ 480 VAC					0.4

PANEL B –240/480 VAC *

POLE	AMP TRIP	DESCRIPTION	POLE KVA	Aϕ	Bϕ	POLE KVA	DESCRIPTION	AMP TRIP	POLE
1	15/2	*W MINN LTG, S OF TUDOR * (PLUS ONE NW OF TUDOR)*	2.4	2.4		0.0	~~E MINN LTG, S OF TUDOR *~~ *SPARE * (NOTE 2)*	15/2	2
3			2.4		2.4	0.0			4
5	20/2	*S TUDOR LTG, E OF MINN * E MINN LTG, S OF TUDOR **	2.9	4.1		1.2	*N TUDOR LTG, E OF MINN **	15/2	6
7			2.9		4.1	1.2			8
9	15/2	**E MINN LTG, N OF TUDOR * (A1, A4, A7, A9, A11, A14, A16, A18, A20)**	1.2	2.9		1.7	**W MINN LTG, N OF TUDOR * (A2, A3, A5, A6, A8, A10, A12, A13, A15, A17, A19)**	15/2	10
11			1.2		2.9	1.7			12
* CIRCUIT THROUGH CONTACTOR				9.4	9.4	PANEL B TOTAL KVA			18.8
ITALIC = EXISTING BREAKER, CIRCUIT TO REMAIN				PANEL B AMPS @ 480 VAC					39.2
BOLD = EXISTING BREAKER. MODIFIED LOAD				TOTAL kVA					19.0
				AMPS @ 480 VAC					39.6

LOAD CENTER "C" NOTES:

1. CONTRACTOR SHALL VERIFY EACH CIRCUIT PRIOR TO BEGINNING ANY WORK AT THE LOAD CENTER. CONTRACTOR SHALL PROVIDE AS–BUILT REDLINES OF THIS PANEL TO THE PROJECT ENGINEER. THIS PANEL SCHEDULE IS BASED UPON VISUAL OBSERVATION OF THE LOAD CENTER EXTERIOR ONLY.
2. CONTRACTOR SHALL VERIFY THE EXISTING BREAKER IS 100A, AND SHALL REPLACE WITH 100A IF EXISTING BREAKER IS ANY OTHER TRIP RATING.
3. LOAD CENTER "C" CKT 1/3 CURRENTLY POWERS SPENARD INTERSECTION LIGHTING. THIS LOAD SHALL BE REMOVED FROM THIS LOAD CENTER. NEW LOAD CENTER "B" WILL POWER SPENARD INTERSECTION LIGHTING. SEE H25.
4. THE ELECTROLIER NEAREST LOAD CENTER "C" IS CURRENTLY POWERED BY CIRCUIT 1/3. THIS LOAD SHALL BE REMOVED FROM THIS CIRCUIT AND RECIRCUITED WITH NEW CABLE FROM CIRCUIT 2/4. THE LEGACY LOAD CENTER MOUNTED ON THE LUMINAIRE POLE SHALL BE DISCONNECTED AND REMOVED FROM SERVICE. REPAIR HOLES IN POLE ACCORDING TO SPECIAL PROVISION 660–3.01–4.
5. ALL EXISTING OVERHEAD CONDUCTORS PRESENTLY POWERING INTERSECITON LIGHTING AND STREET LIGHTING LUMINAIRES AFFECTED BY THIS PROJECT SHALL BE DISCONNECTED AND REMOVED FROM SERVICE. ALL NEW CIRCUITNG SHALL BE INSTALLED UNDERGROUND IN CONDUIT. REFERENCE THIS PLAN DRAWINGS.

ARC FLASH AND SHOCK HAZARD RESULTS – LC "C"

ARC FLASH BOUNDARY	4.8 FT
INCIDENT ENERGY IN CAL/CM^2	8.0
WORKING DISTANCE	18 INCHES
SHOCK HAZARD EXPOSURE	480 VAC
INSULATING GLOVES CLASS	00
SHOCK HAZARD	WHEN COVER REM[illegible]ED
LIMITED APPROACH BOUNDARY	[illegible].5 FT
RESTRICTED APPROACH BOUNDARY	1[illegible] FT
[illegible]ALCU[illegible] DATE	1[illegible]/202[illegible]

SHORT CIRCUIT CALCULATION – LC "C"

480V, POWER FACTOR = 0.90, SERVICE LATERAL CONSISTS OF ONE ALUMINUM CONDUCTOR PER PHASE IN RMC & PVC.

TRANSFORMER RATING	50 kVA
VOLTAGE	240/480 VAC SECONDARY
[illegible]TRANSFORMER IMPEDANCE	1.2% MINIMUM
TRA[illegible]FORMER LET–THRU SHORT CIR[illegible]T CURRENT (INFINITE BUS)	14,468 A
LENGTH TO FAULT	250 FT
[illegible]SERVICE CONDUCTOR SIZE	1/0 AWG (AL)
SERVICE CONDUIT	RMC & PVC
CALCULATED FAULT CURRENT LC "C"	3.52 kA
DATE CALCULATED	1/31/2022

A[illegible]C FL[illegible]SH [illegible]ND [illegible]HOCK HAZARD RESULTS – [illegible]LC [illegible]A" MAIN BREAKERS ENCLOSURE

ARC FLASH BOUNDARY	6.4 FT
INCIDENT ENERGY IN CAL/CM^2	13.0
WORKING DISTANCE	18 INCHES
SHOCK HAZARD EXPOSURE	480 VAC
INSULATING GLOVES CLASS	00
SHOCK HAZARD	WHEN COVER REMOVED
LIMITED APPROACH BOUNDARY	3.5 FT
RESTRICTED APPROACH BOUNDARY	1.0 FT
CALCULATED DATE	1/31/2022

ARC FLASH AND SHOCK HAZARD RESULTS – LC "A" PANEL A & PANEL B ENCLOSURE

ARC FLASH BOUNDARY	6.4 FT
INCIDENT ENERGY IN CAL/CM^2	13.0
WORKING DISTANCE	18 INCHES
SHOCK HAZARD EXPOSURE	480 VAC
INSULATING GLOVES CLASS	00
SHOCK HAZARD	WHEN COVER REMOVED
LIMITED APPROACH BOUNDARY	3.5 FT
RESTRICTED APPROACH BOUNDARY	1.0 FT
CALCULATED DATE	1/31/2022

SHORT CIRCUIT CALCULATION – LC "A"

480V, POWER FACTOR = 0.90, SERVICE LATERAL CONSISTS OF ONE ALUMINUM CONDUCTOR PER PHASE IN RMC & PVC.

TRANSFORMER RATING	50kVA
VOLTAGE	240/480 VAC SECONDARY
TRANSFORMER IMPEDANCE	1.2% MINIMUM
TRANSFORMER LET–THRU SHORT CIRCUIT CURRENT (INFINITE BUS)	14,468 A
LENGTH TO FAULT	90 FT
SERVICE CONDUCTOR SIZE	1/0 AWG (AL)
SERVICE CONDUIT	RMC & PVC
CALCULATED FAULT CURRENT AT LC "A"	5.93 kA
DATE CALCULATED	1/31/2022

LOAD CENTER "A" NOTES:

1. CONTRACTOR SHALL VERIFY EACH CIRCUIT PRIOR TO BEGINNING ANY WORK AT THE LOAD CENTER. CONTRACTOR SHALL PROVIDE AS–BUILT REDLINES OF THIS PANEL TO THE PROJECT ENGINEER. THIS PANEL SCHEDULE IS BASED UPON VISUAL OBSERVATION OF THE LOAD CENTER EXTERIOR ONLY.
2. THE LOAD CONDUCTORS HAVE BEEN REMOVED FROM CKT 2/4 BREAKER. THE LUMINAIRES ON THE EAST SIDE OF MINNESOTA AND SOUTH OF TUDOR (TO THE BRIDGE) ARE NOW POWERED FROM CKT 5/7.

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER
JEFFREY CARLETON
EE 13218

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STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER
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CE 11253

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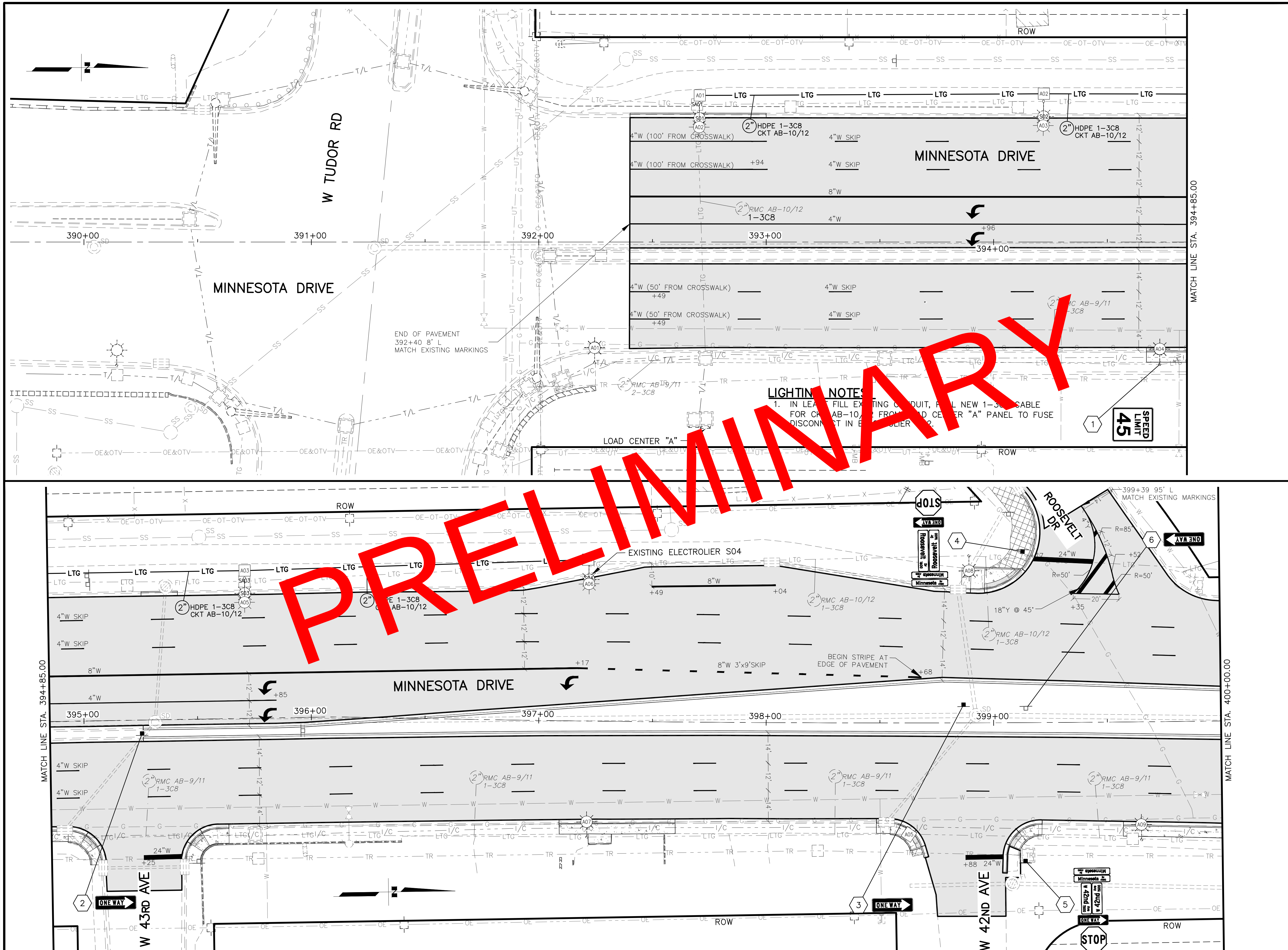
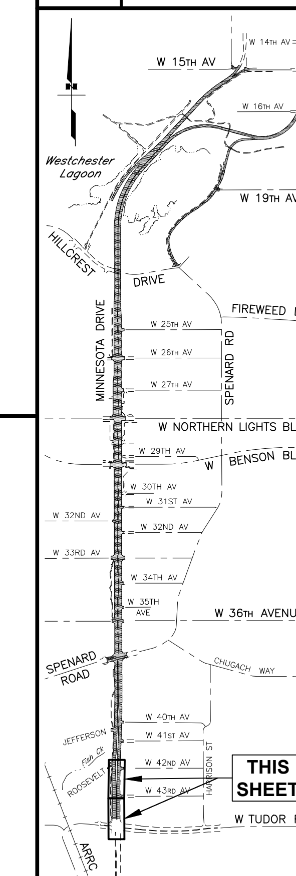
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

LOAD CENTERS

PRELIMINARY

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR–15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132–SCHEDULE.DWG
DATE/TIME 5/9/2022 4:09 PM
LAYOUT ---
DESIGNED ZJH
CHECKED CLP
DRAFTED MF





SHEET NO.	TOTAL SHEETS
H38	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

STATE OF ALASKA 49TH
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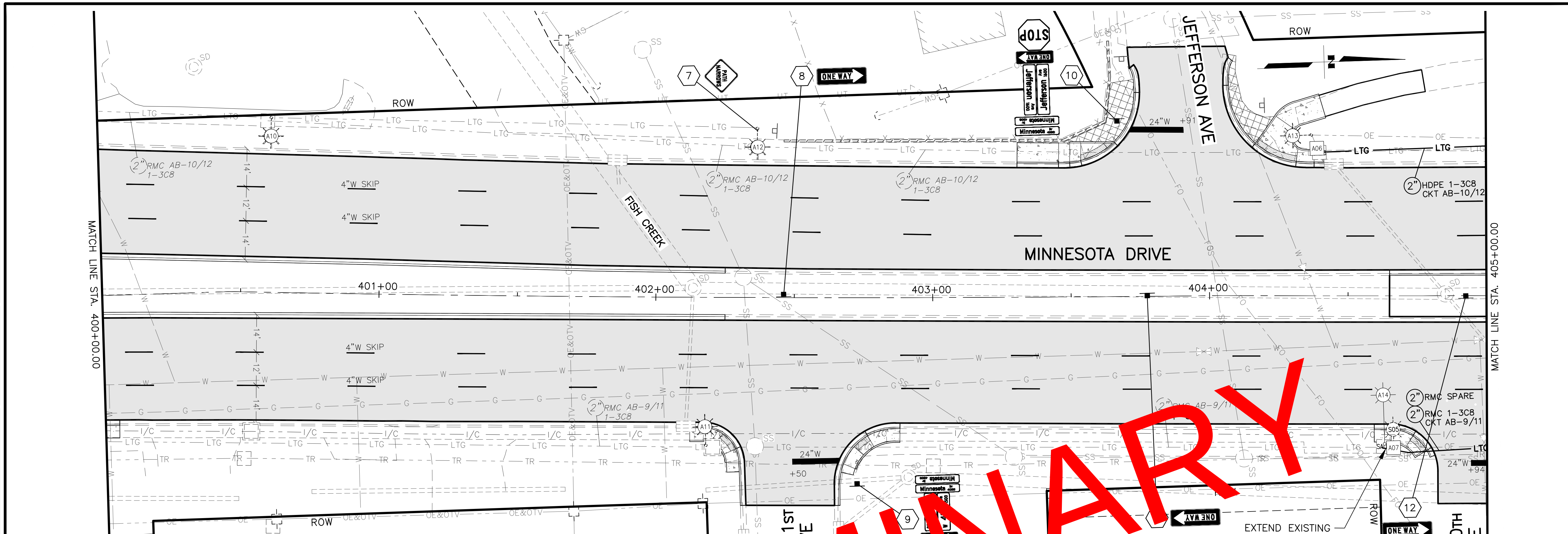
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA

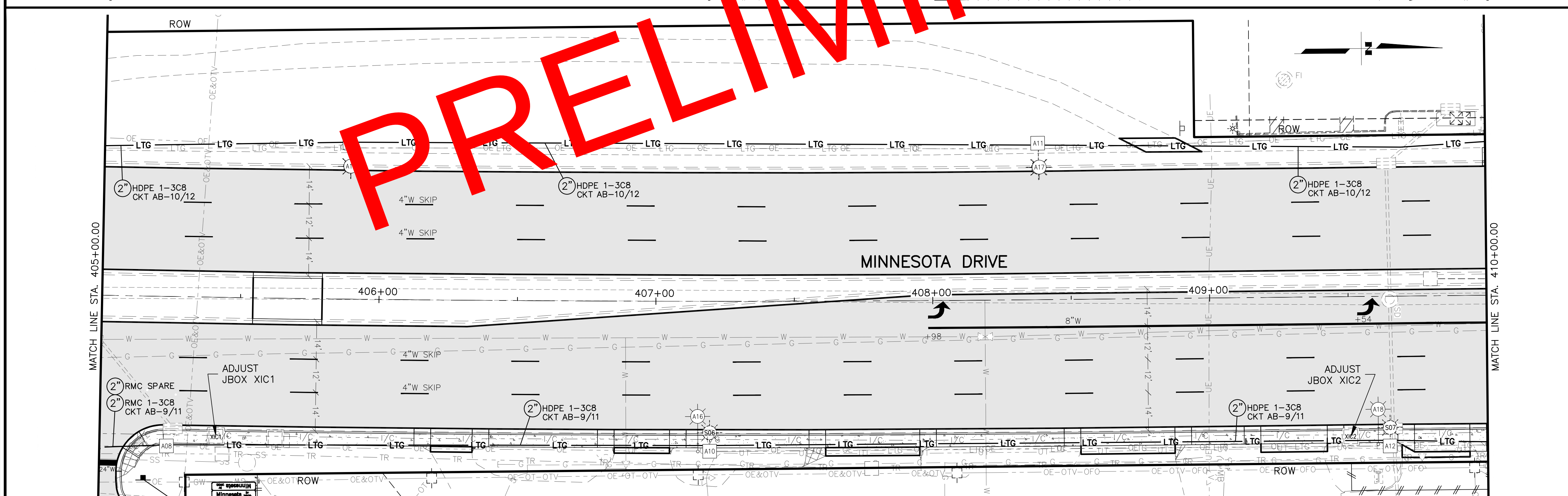
B.O.P. TO STA 400+00

DESIGNED ZJH | CHECKED CLP | DRAFTED MF | DATE/TIME 5/12/2022 4:00 PM



LIGHTING NOTES:

1. PULL NEW 1-3C8 CABLE FOR CKT AB-9/11 IN EXISTING CONDUIT BETWEEN FUSE DISCONNECTS IN ELECTROLIER A11 AND A14.



INTERCONNECT NOTES:

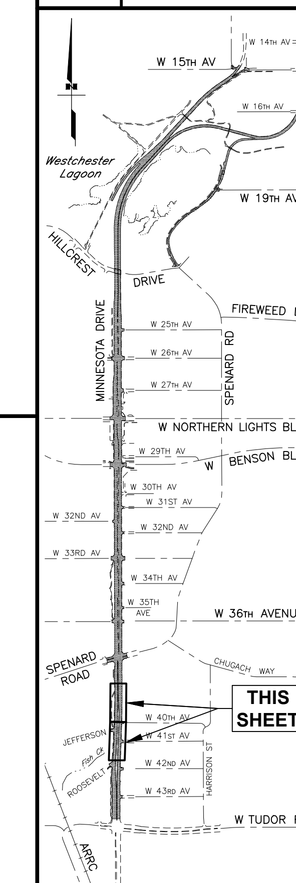
1. PULL EXISTING INTERCONNECT CABLE BACK FROM EXISTING TRAFFIC CONTROLLER TO TYPE II JUNCTION BOX "XIC2" AT 409+50 RT. PULL EXISTING CABLE BACK TO PROPOSED TRAFFIC CONTROLLER IN ITS FINAL LOCATION. SEE H22 FOR INTERCONNECT ROUTING THROUGH THE SPENARD RD. INTERSECTION.
2. MOA SIGNALS ELECTRONICS STAFF TO PERFORM INTERCONNECT TERMINATIONS AT TRAFFIC CONTROLLER CABINETS.

SHEET NO.	TOTAL SHEETS
H39	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



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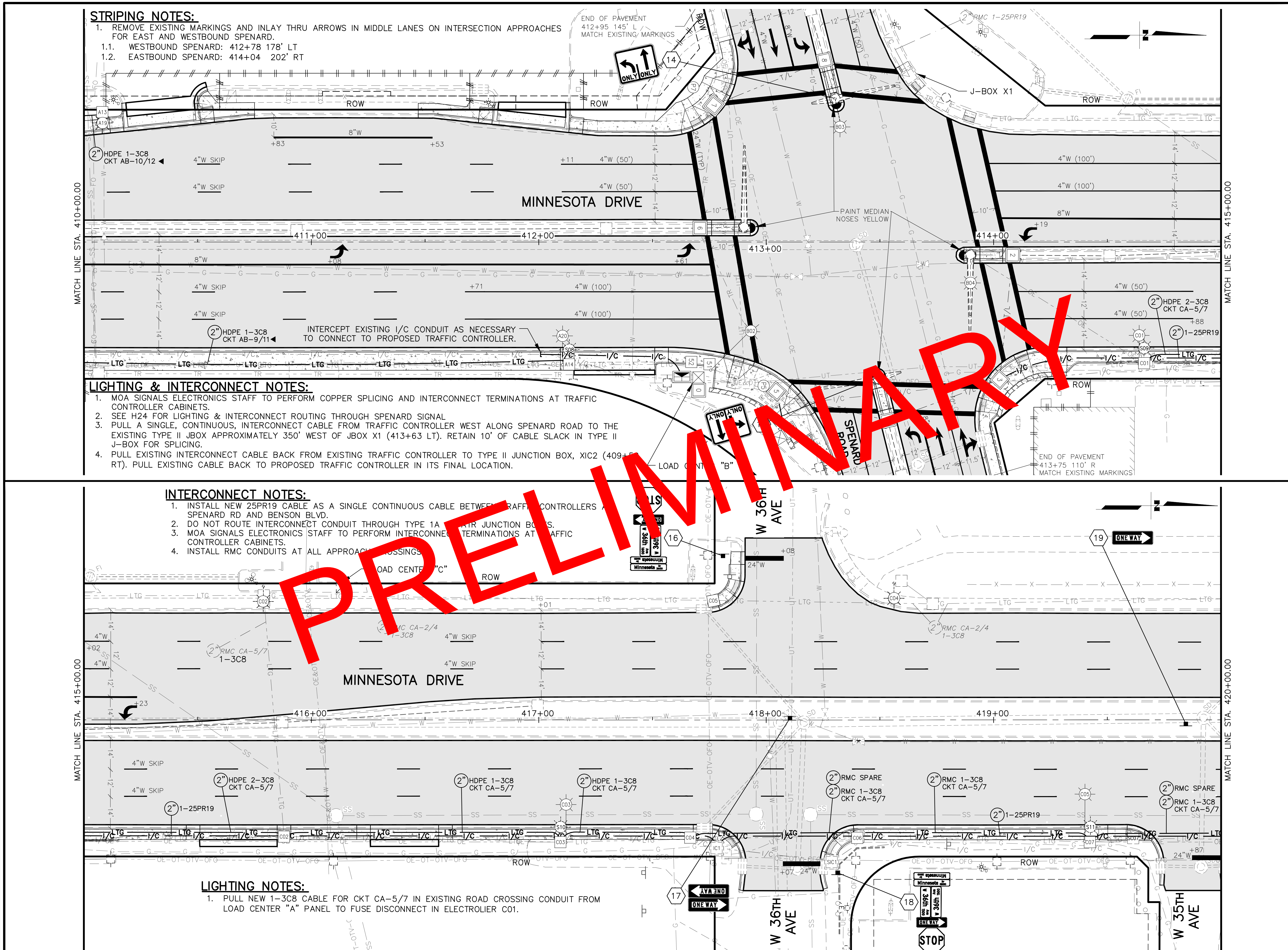
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA

STA 400+00 TO STA 410+00

MF | DRAFTED | CLP | CHECKED | ZJH | DESIGNED | #### | LAYOUT | 5/12/2022 4:01 PM | DATE/TIME



STRIPING NOTES:

1. REMOVE EXISTING MARKINGS AND INLAY THRU ARROWS IN MIDDLE LANES ON INTERSECTION APPROACHES FOR EAST AND WESTBOUND SPENARD.
   1.1. WESTBOUND SPENARD: 412+78 178' LT
   1.2. EASTBOUND SPENARD: 414+04 202' RT

LIGHTING & INTERCONNECT NOTES:

1. MOA SIGNALS ELECTRONICS STAFF TO PERFORM COPPER SPLICING AND INTERCONNECT TERMINATIONS AT TRAFFIC CONTROLLER CABINETS.
2. SEE H24 FOR LIGHTING & INTERCONNECT ROUTING THROUGH SPENARD SIGNAL
3. PULL A SINGLE, CONTINUOUS, INTERCONNECT CABLE FROM TRAFFIC CONTROLLER WEST ALONG SPENARD ROAD TO THE EXISTING TYPE II JBOX APPROXIMATELY 350' WEST OF JBOX X1 (413+63 LT). RETAIN 10' OF CABLE SLACK IN TYPE II J-BOX FOR SPLICING.
4. PULL EXISTING INTERCONNECT CABLE BACK FROM EXISTING TRAFFIC CONTROLLER TO TYPE II JUNCTION BOX, XIC2 (409+[illegible] RT). PULL EXISTING CABLE BACK TO PROPOSED TRAFFIC CONTROLLER IN ITS FINAL LOCATION.

INTERCONNECT NOTES:

1. INSTALL NEW 25PR19 CABLE AS A SINGLE CONTINUOUS CABLE BETWE[illegible]RAFF[illegible] CONTROLLERS A[illegible] SPENARD RD AND BENSON BLVD.
2. DO NOT ROUTE INTERCONNECT CONDUIT THROUGH TYPE 1A [illegible]TR JUNCTION BO[illegible]S.
3. MOA SIGNALS ELECTRONICS STAFF TO PERFORM INTERCONNEC[illegible] TERMINATIONS AT [illegible]AFFIC CONTROLLER CABINETS.
4. INSTALL RMC CONDUITS AT ALL APPROAC[illegible]SSINGS.

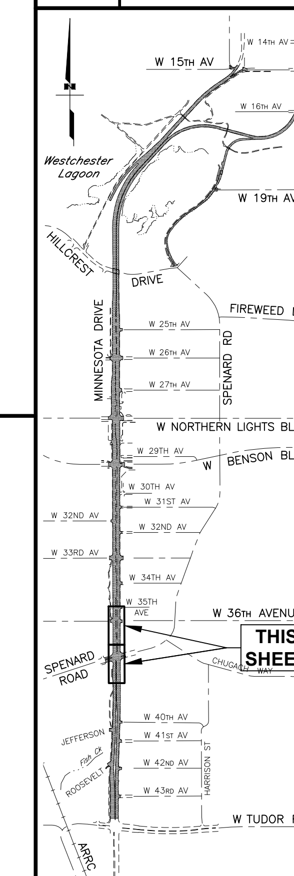
LIGHTING NOTES:

1. PULL NEW 1-3C8 CABLE FOR CKT CA-5/7 IN EXISTING ROAD CROSSING CONDUIT FROM LOAD CENTER "A" PANEL TO FUSE DISCONNECT IN ELECTROLIER C01.

SHEET NO.	TOTAL SHEETS
H40	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION
0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA 49TH
CHRISTOPHER L. POST
CE 11253
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

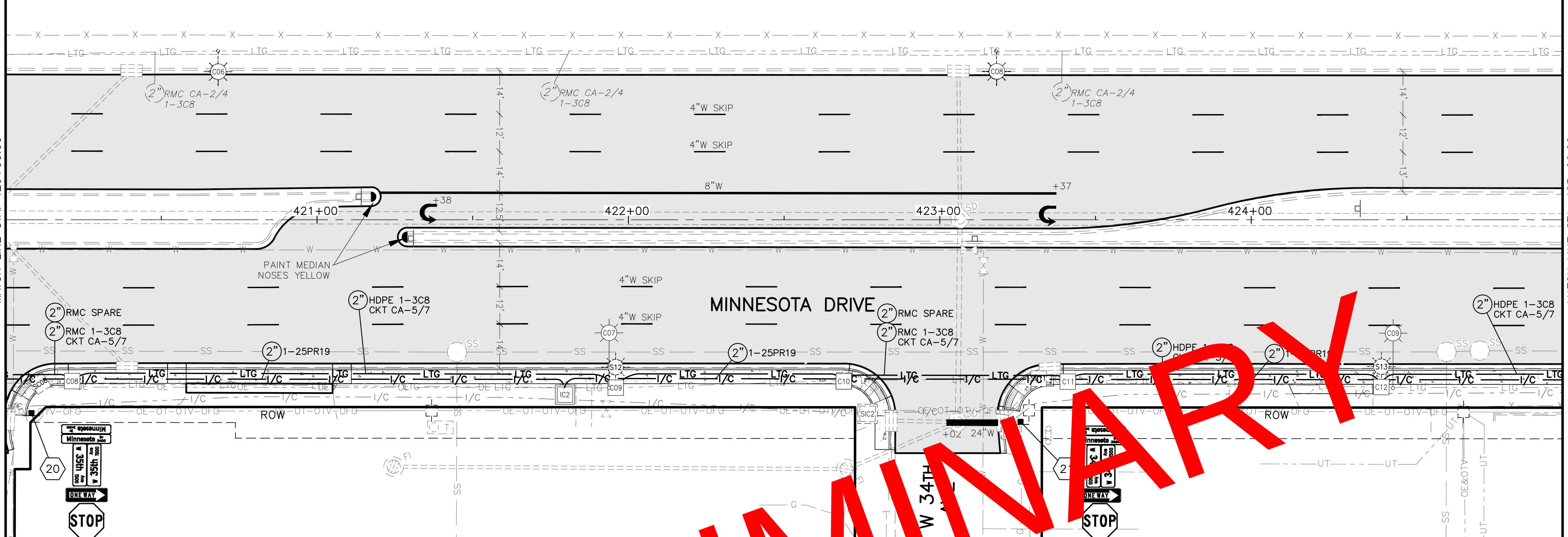
SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA

STA 410+00 TO STA 420+00

FILE: \\DOT.SOA.ALASKA.GOV\SHARED\ANC\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG
DATE/TIME 5/12/2022 4:02 PM | LAYOUT #### | DESIGNED | ZJH | CHECKED | CLP | DRAFTED | MF

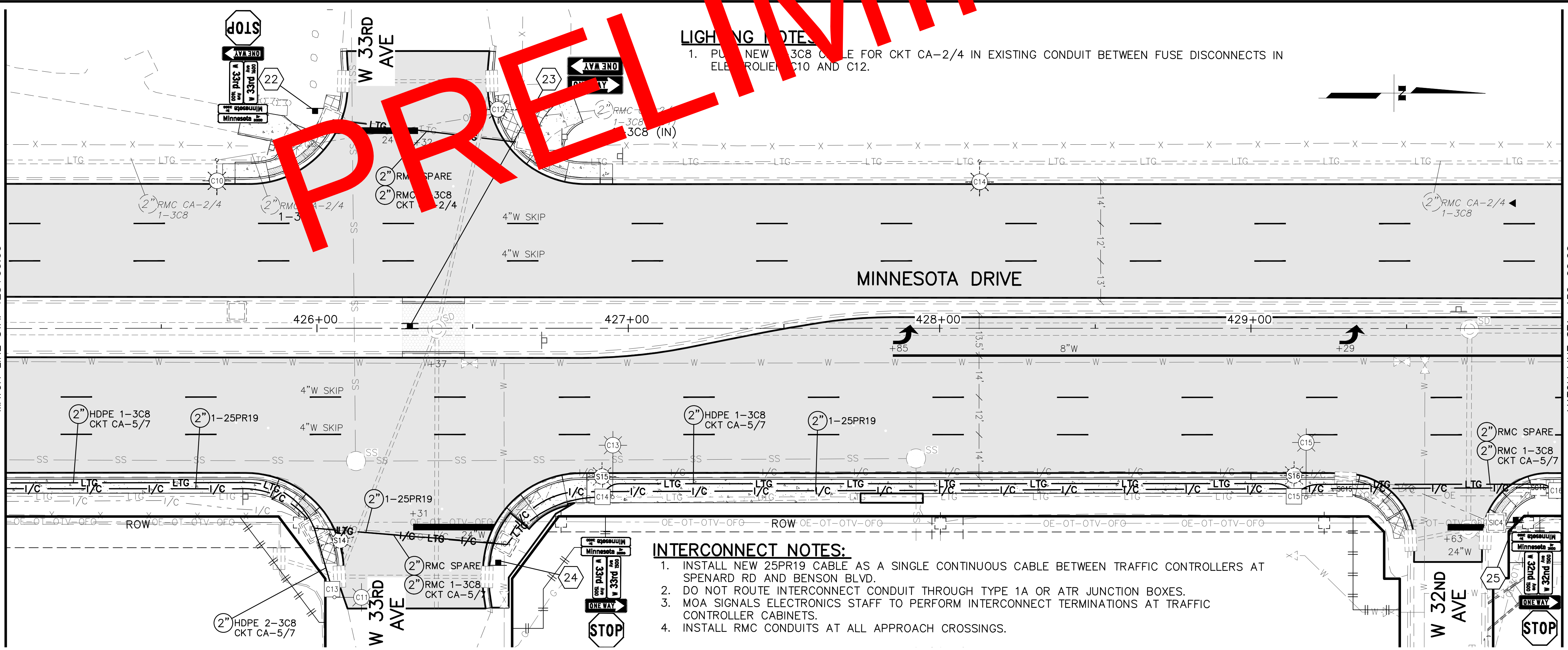
INTERCONNECT NOTES:

1. INSTALL NEW 25PR19 CABLE AS A SINGLE CONTINUOUS CABLE BETWEEN TRAFFIC CONTROLLERS AT SPENARD RD AND BENSON BLVD.
2. DO NOT ROUTE INTERCONNECT CONDUIT THROUGH TYPE 1A OR ATR JUNCTION BOXES.
3. MOA SIGNALS ELECTRONICS STAFF TO PERFORM INTERCONNECT TERMINATIONS AT TRAFFIC CONTROLLER CABINETS.
4. INSTALL RMC CONDUITS AT ALL APPROACH CROSSINGS.



LIGHTING NOTES:

1. PULL NEW 1-3C8 CABLE FOR CKT CA-2/4 IN EXISTING CONDUIT BETWEEN FUSE DISCONNECTS IN ELECTROLIERS C10 AND C12.



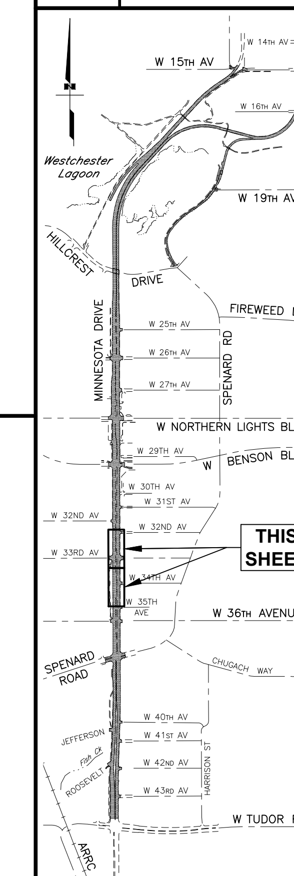
INTERCONNECT NOTES:

1. INSTALL NEW 25PR19 CABLE AS A SINGLE CONTINUOUS CABLE BETWEEN TRAFFIC CONTROLLERS AT SPENARD RD AND BENSON BLVD.
2. DO NOT ROUTE INTERCONNECT CONDUIT THROUGH TYPE 1A OR ATR JUNCTION BOXES.
3. MOA SIGNALS ELECTRONICS STAFF TO PERFORM INTERCONNECT TERMINATIONS AT TRAFFIC CONTROLLER CABINETS.
4. INSTALL RMC CONDUITS AT ALL APPROACH CROSSINGS.

SHEET NO.	TOTAL SHEETS
H41	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION: 0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

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(907) 269-0590

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA

STA 420+00 TO STA 430+00

DESIGNED ZJH | CHECKED CLP | DRAFTED MF | DATE/TIME 5/12/2022 4:02 PM | LAYOUT ####

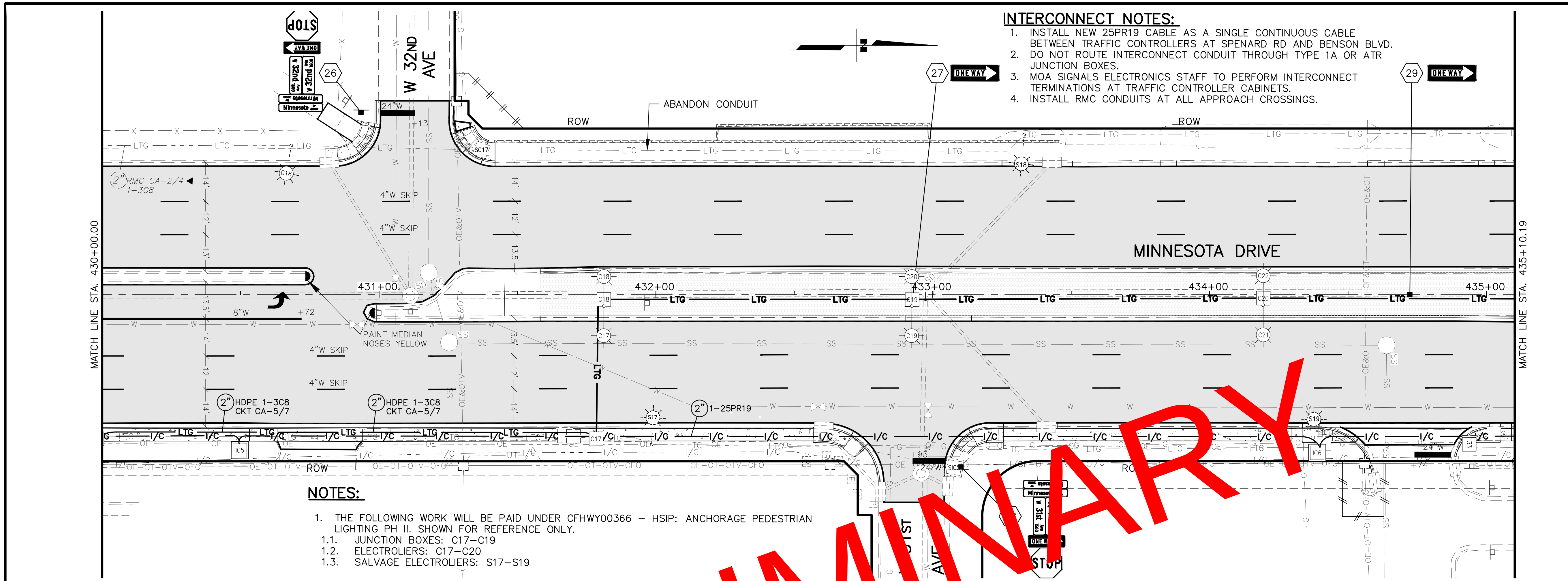
FILE: \\DOT.SOA.ALASKA.GOV\SHARED\AM\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIVIL3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG

SHEET NO.	TOTAL SHEETS
H42	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

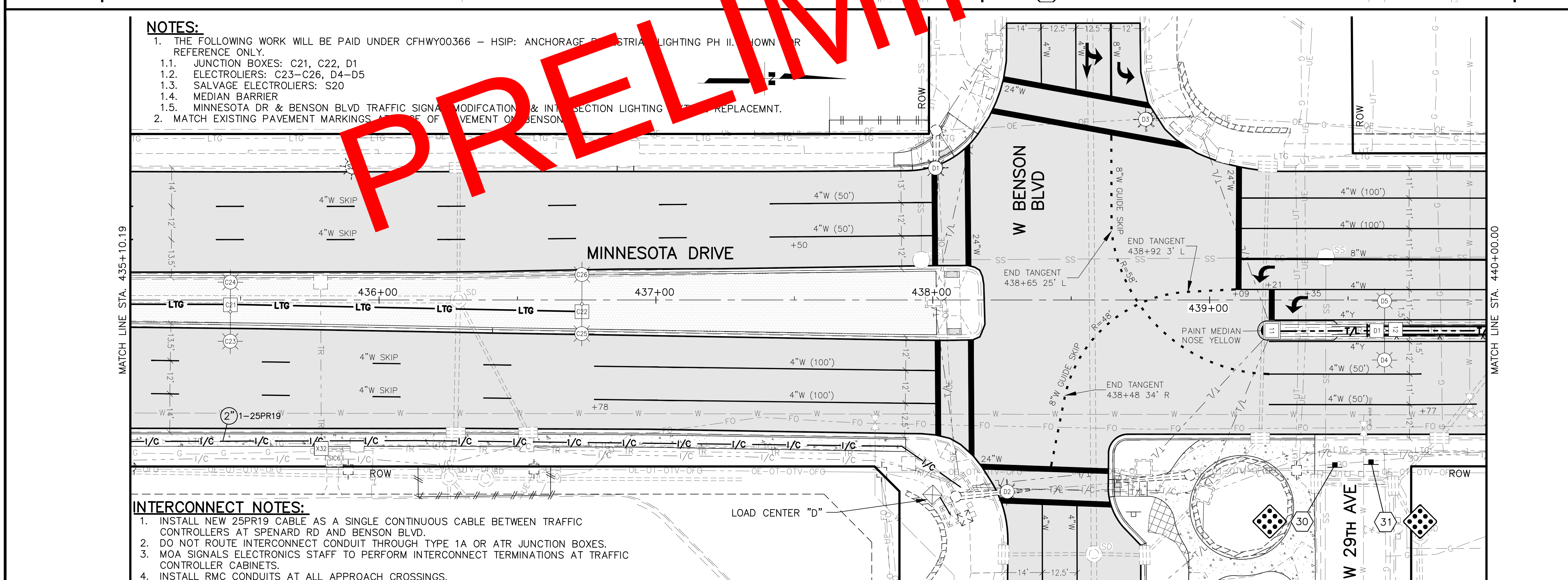


INTERCONNECT NOTES:

1. INSTALL NEW 25PR19 CABLE AS A SINGLE CONTINUOUS CABLE BETWEEN TRAFFIC CONTROLLERS AT SPENARD RD AND BENSON BLVD.
2. DO NOT ROUTE INTERCONNECT CONDUIT THROUGH TYPE 1A OR ATR JUNCTION BOXES.
3. MOA SIGNALS ELECTRONICS STAFF TO PERFORM INTERCONNECT TERMINATIONS AT TRAFFIC CONTROLLER CABINETS.
4. INSTALL RMC CONDUITS AT ALL APPROACH CROSSINGS.

NOTES:

1. THE FOLLOWING WORK WILL BE PAID UNDER CFHWY00366 – HSIP: ANCHORAGE PEDESTRIAN LIGHTING PH II. SHOWN FOR REFERENCE ONLY.
   1.1. JUNCTION BOXES: C17–C19
   1.2. ELECTROLIERS: C17–C20
   1.3. SALVAGE ELECTROLIERS: S17–S19

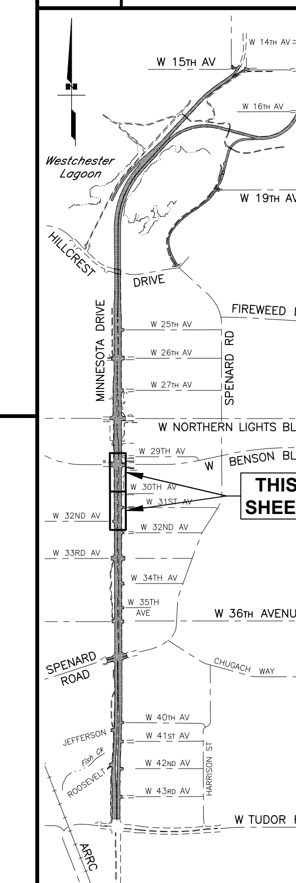


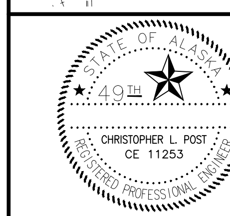
NOTES:

1. THE FOLLOWING WORK WILL BE PAID UNDER CFHWY00366 – HSIP: ANCHORAGE PEDESTRIAN LIGHTING PH II. SHOWN FOR REFERENCE ONLY.
   1.1. JUNCTION BOXES: C21, C22, D1
   1.2. ELECTROLIERS: C23–C26, D4–D5
   1.3. SALVAGE ELECTROLIERS: S20
   1.4. MEDIAN BARRIER
   1.5. MINNESOTA DR & BENSON BLVD TRAFFIC SIGNAL MODIFCATION & INTERSECTION LIGHTING SYSTEM REPLACEMNT.
2. MATCH EXISTING PAVEMENT MARKINGS AT EDGE OF PAVEMENT ON BENSON.

INTERCONNECT NOTES:

1. INSTALL NEW 25PR19 CABLE AS A SINGLE CONTINUOUS CABLE BETWEEN TRAFFIC CONTROLLERS AT SPENARD RD AND BENSON BLVD.
2. DO NOT ROUTE INTERCONNECT CONDUIT THROUGH TYPE 1A OR ATR JUNCTION BOXES.
3. MOA SIGNALS ELECTRONICS STAFF TO PERFORM INTERCONNECT TERMINATIONS AT TRAFFIC CONTROLLER CABINETS.
4. INSTALL RMC CONDUITS AT ALL APPROACH CROSSINGS.





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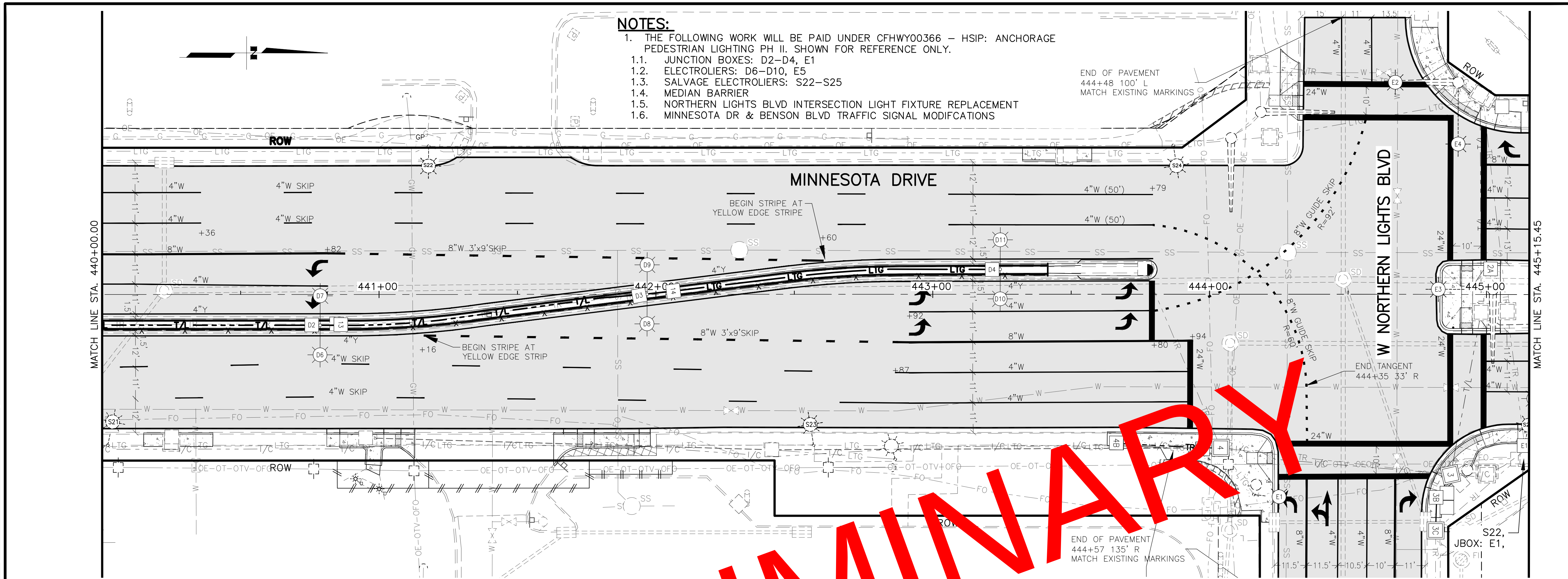
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA

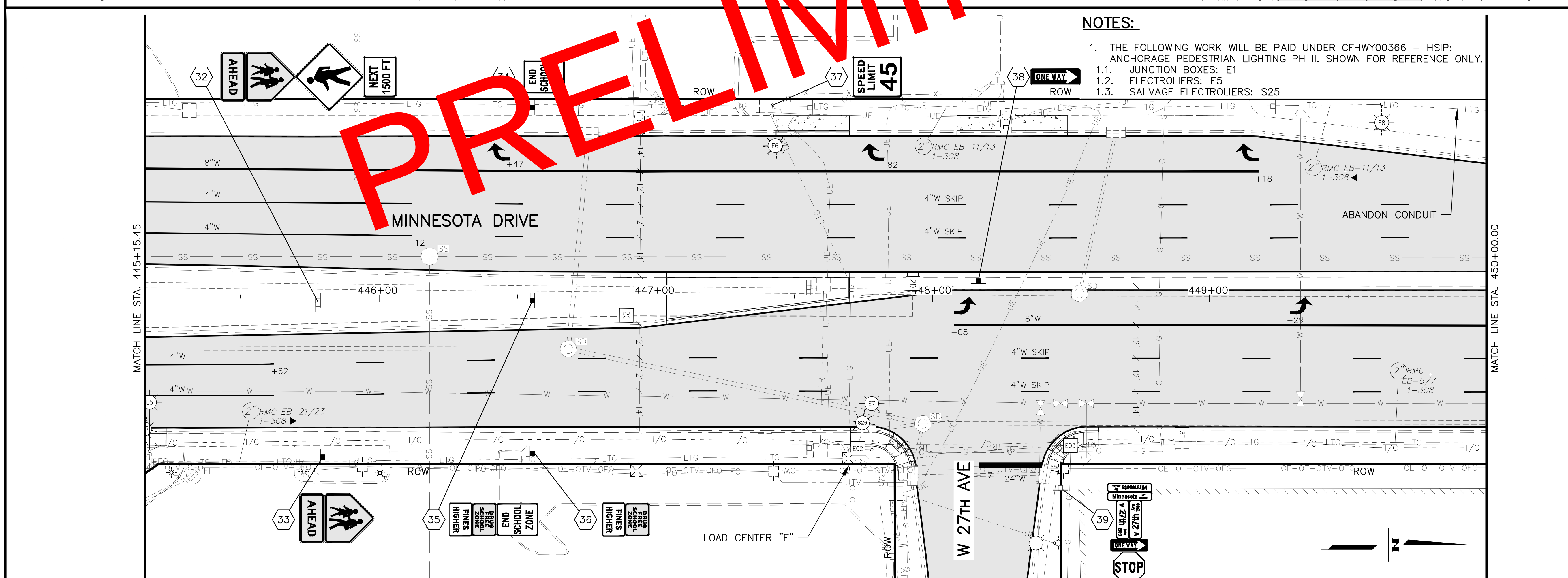
STA 430+00 TO STA 440+00

FILE: \\DOT.SOA.ALASKA.GOV\SHARED\ANC\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSETS\H_SHEETS\00132_H PLANS.DWG | DATE/TIME 5/12/2022 4:03 PM | LAYOUT #### | DESIGNED ZJH | CHECKED CLP | DRAFTED MF



NOTES:

1. THE FOLLOWING WORK WILL BE PAID UNDER CFHWY00366 – HSIP: ANCHORAGE PEDESTRIAN LIGHTING PH II. SHOWN FOR REFERENCE ONLY.
   1.1. JUNCTION BOXES: D2–D4, E1
   1.2. ELECTROLIERS: D6–D10, E5
   1.3. SALVAGE ELECTROLIERS: S22–S25
   1.4. MEDIAN BARRIER
   1.5. NORTHERN LIGHTS BLVD INTERSECTION LIGHT FIXTURE REPLACEMENT
   1.6. MINNESOTA DR & BENSON BLVD TRAFFIC SIGNAL MODIFCATIONS



NOTES:

1. THE FOLLOWING WORK WILL BE PAID UNDER CFHWY00366 – HSIP: ANCHORAGE PEDESTRIAN LIGHTING PH II. SHOWN FOR REFERENCE ONLY.
   1.1. JUNCTION BOXES: E1
   1.2. ELECTROLIERS: E5
   1.3. SALVAGE ELECTROLIERS: S25

SHEET NO.	TOTAL SHEETS
H43	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
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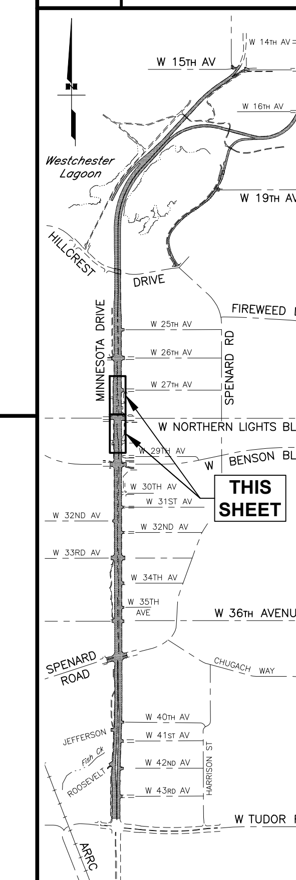
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
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ANCHORAGE, AK 99502
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

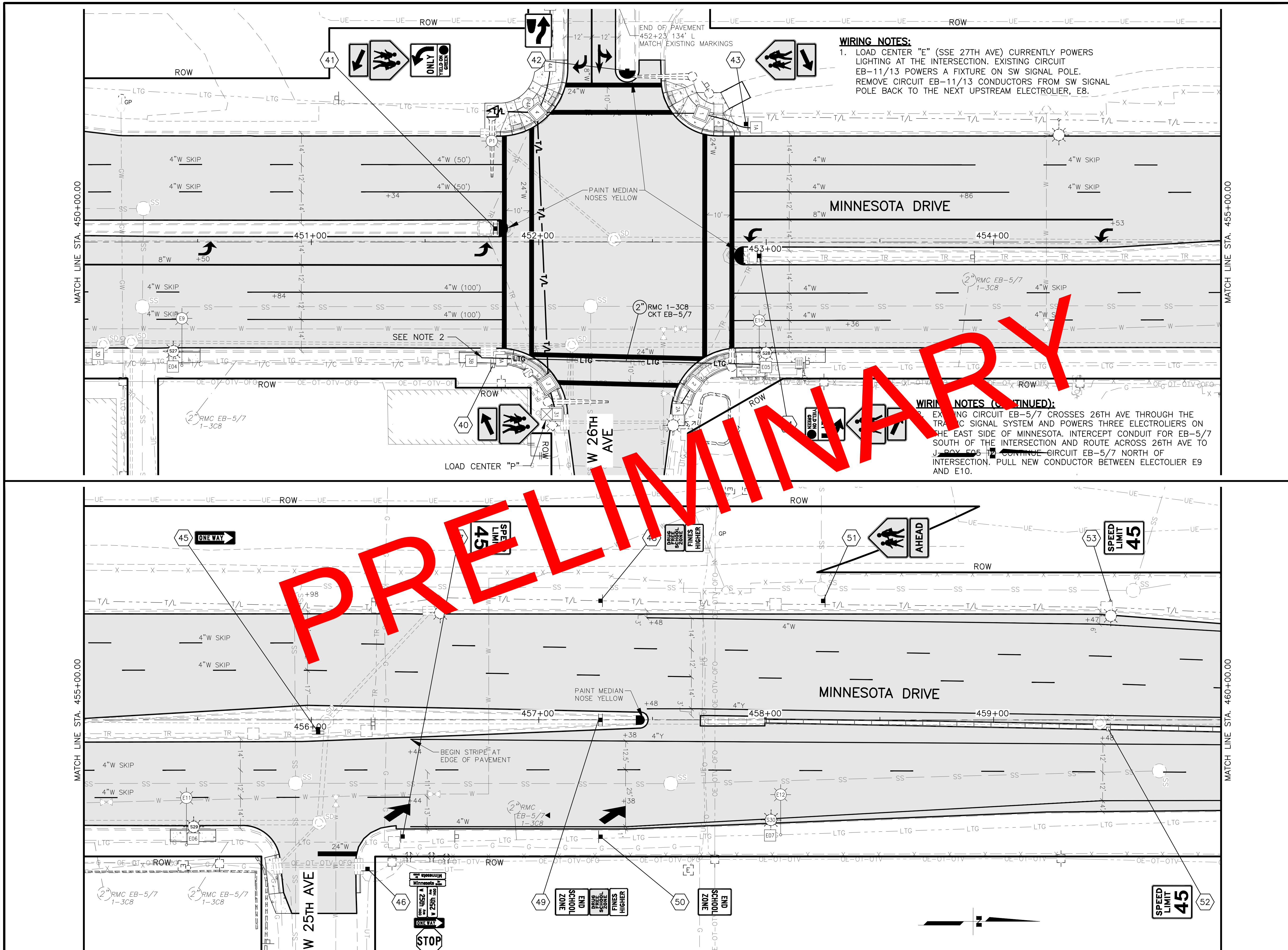
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA

STA 440+00 TO STA 450+00

DESIGNED ZJH | CHECKED CLP | DRAFTED MF | LAYOUT #### | DATE/TIME 5/12/2022 4:03 PM

FILE: \\DOT.SOA.ALASKA.GOV\SHARED\AM\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG



WIRING NOTES:

1. LOAD CENTER "E" (SSE 27TH AVE) CURRENTLY POWERS LIGHTING AT THE INTERSECTION. EXISTING CIRCUIT EB-11/13 POWERS A FIXTURE ON SW SIGNAL POLE. REMOVE CIRCUIT EB-11/13 CONDUCTORS FROM SW SIGNAL POLE BACK TO THE NEXT UPSTREAM ELECTROLIER, E8.

WIRING NOTES (CONTINUED):

2. EXISTING CIRCUIT EB-5/7 CROSSES 26TH AVE THROUGH THE TRAFFIC SIGNAL SYSTEM AND POWERS THREE ELECTROLIERS ON THE EAST SIDE OF MINNESOTA. INTERCEPT CONDUIT FOR EB-5/7 SOUTH OF THE INTERSECTION AND ROUTE ACROSS 26TH AVE TO J-BOX E05 TO CONTINUE CIRCUIT EB-5/7 NORTH OF INTERSECTION. PULL NEW CONDUCTOR BETWEEN ELECTOLIER E9 AND E10.

SHEET NO.	TOTAL SHEETS
H44	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
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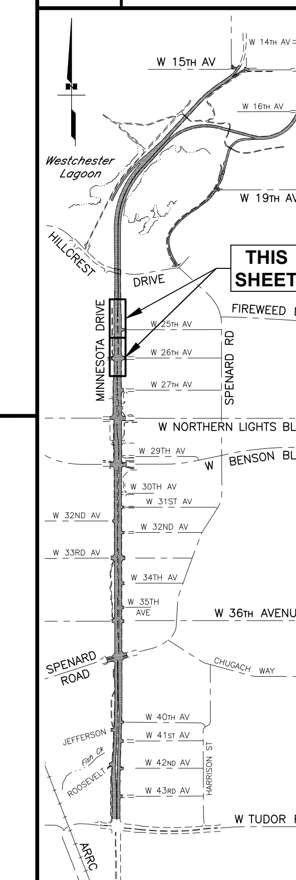
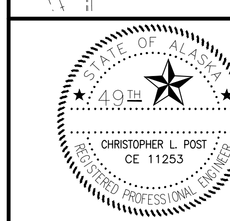
NO.	REVISION
DATE	
NO.	REVISION
DATE	





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DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

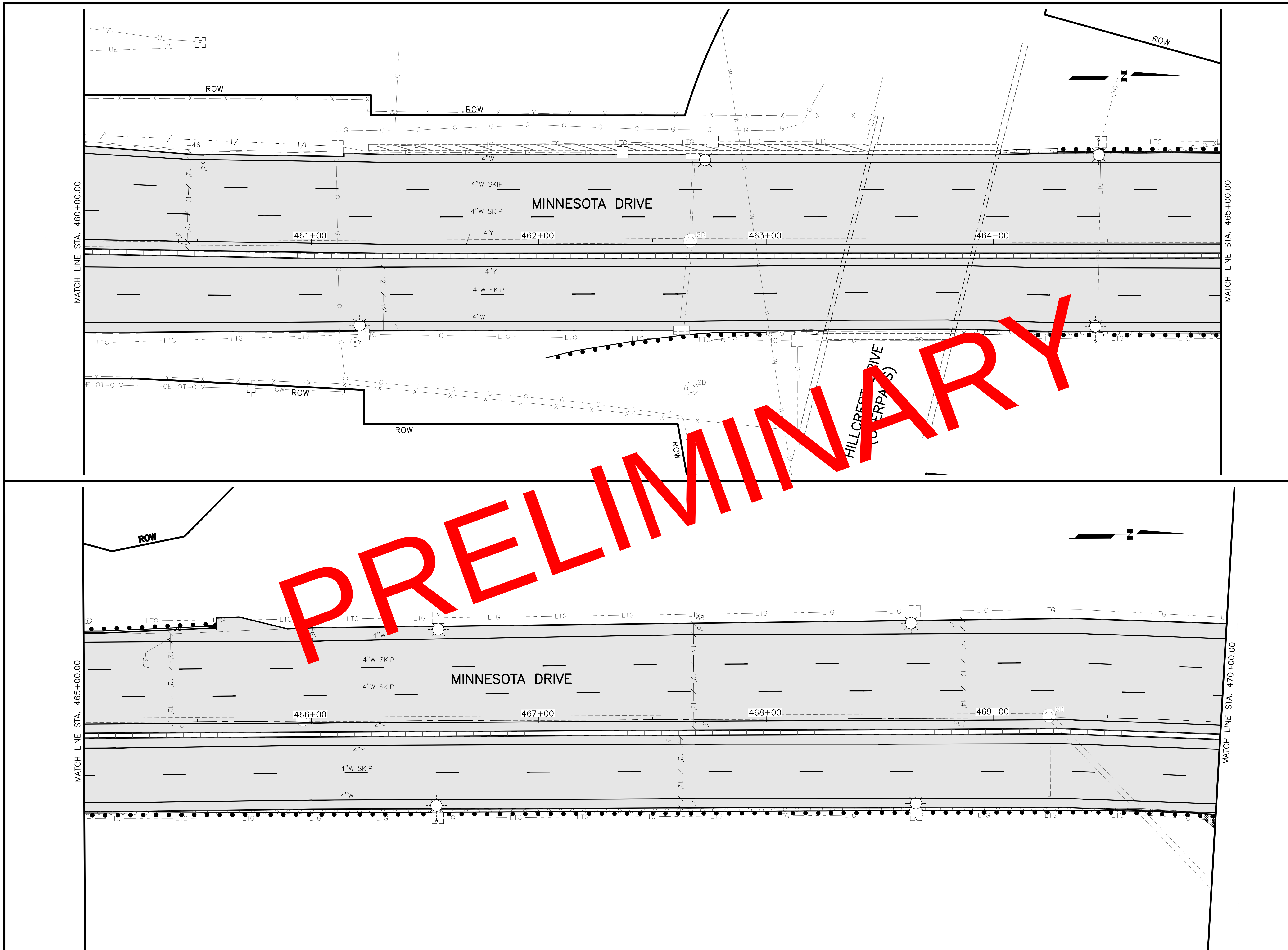
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA

STA 450+00 TO STA 460+00

DESIGNED CLP | DRAFTED MF | CHECKED ZJH | LAYOUT #### | DATE/TIME 5/12/2022 4:04 PM

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG

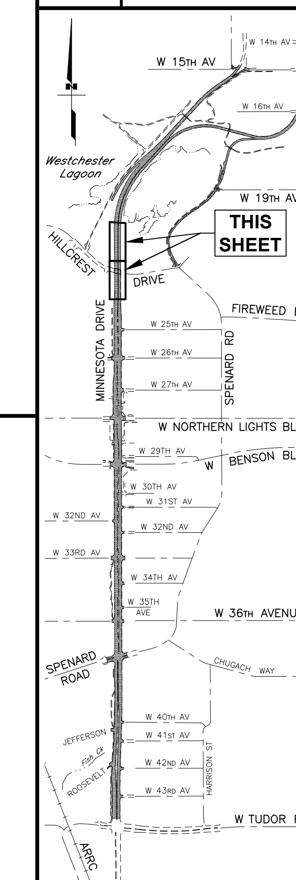


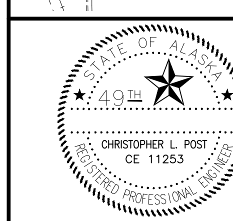
SHEET NO.	TOTAL SHEETS
H45	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	





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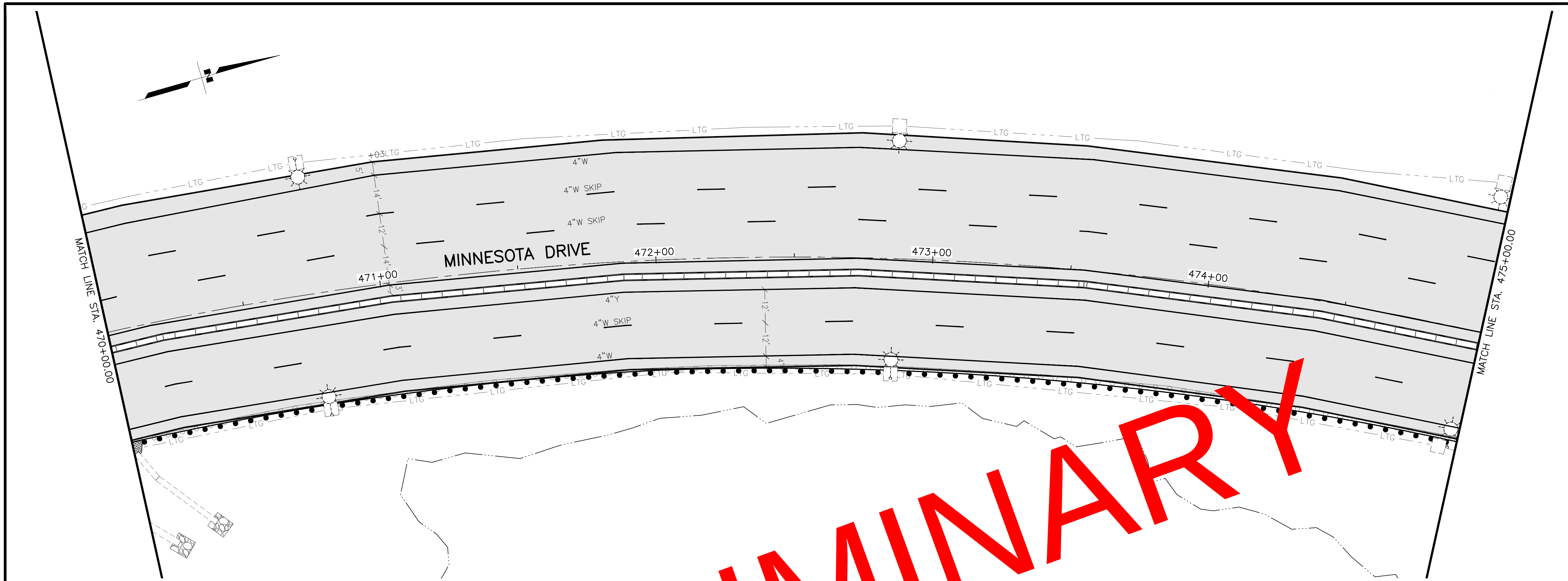
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

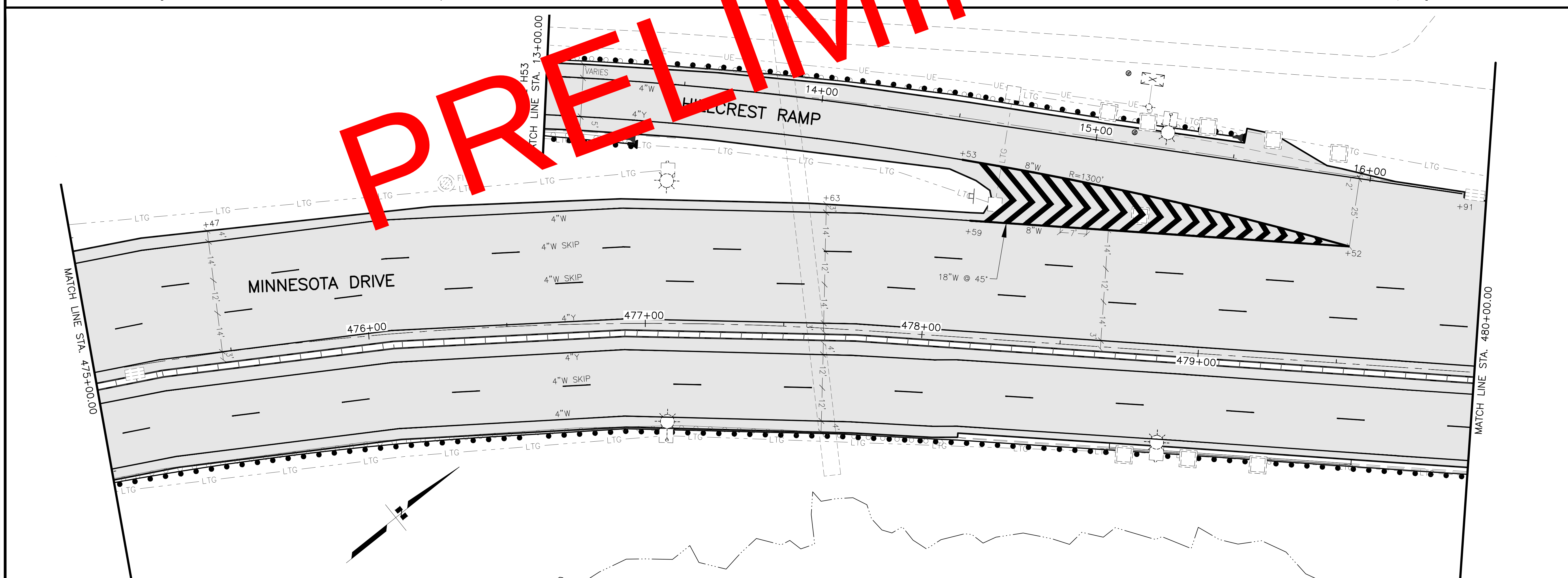
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA

STA 460+00 TO STA 470+00

FILE: \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG | DATE/TIME 5/12/2022 4:04 PM | LAYOUT #### | DESIGNED ZJH | CHECKED CLP | DRAFTED MF



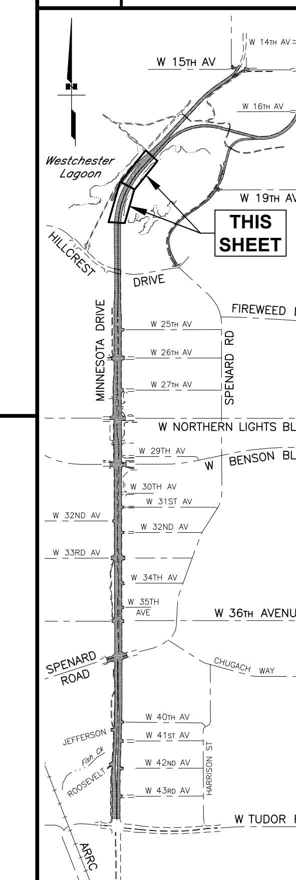


SHEET NO.	TOTAL SHEETS
H46	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA 49TH
CHRISTOPHER L. POST
CE 11253
REGISTERED PROFESSIONAL ENGINEER

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4111 AVIATION AVENUE
ANCHORAGE, AK 99502
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA

STA 470+00 TO STA 480+00

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG | DATE/TIME 5/12/2022 4:05 PM | LAYOUT #### | DESIGNED ZJH | CHECKED CLP | DRAFTED MF

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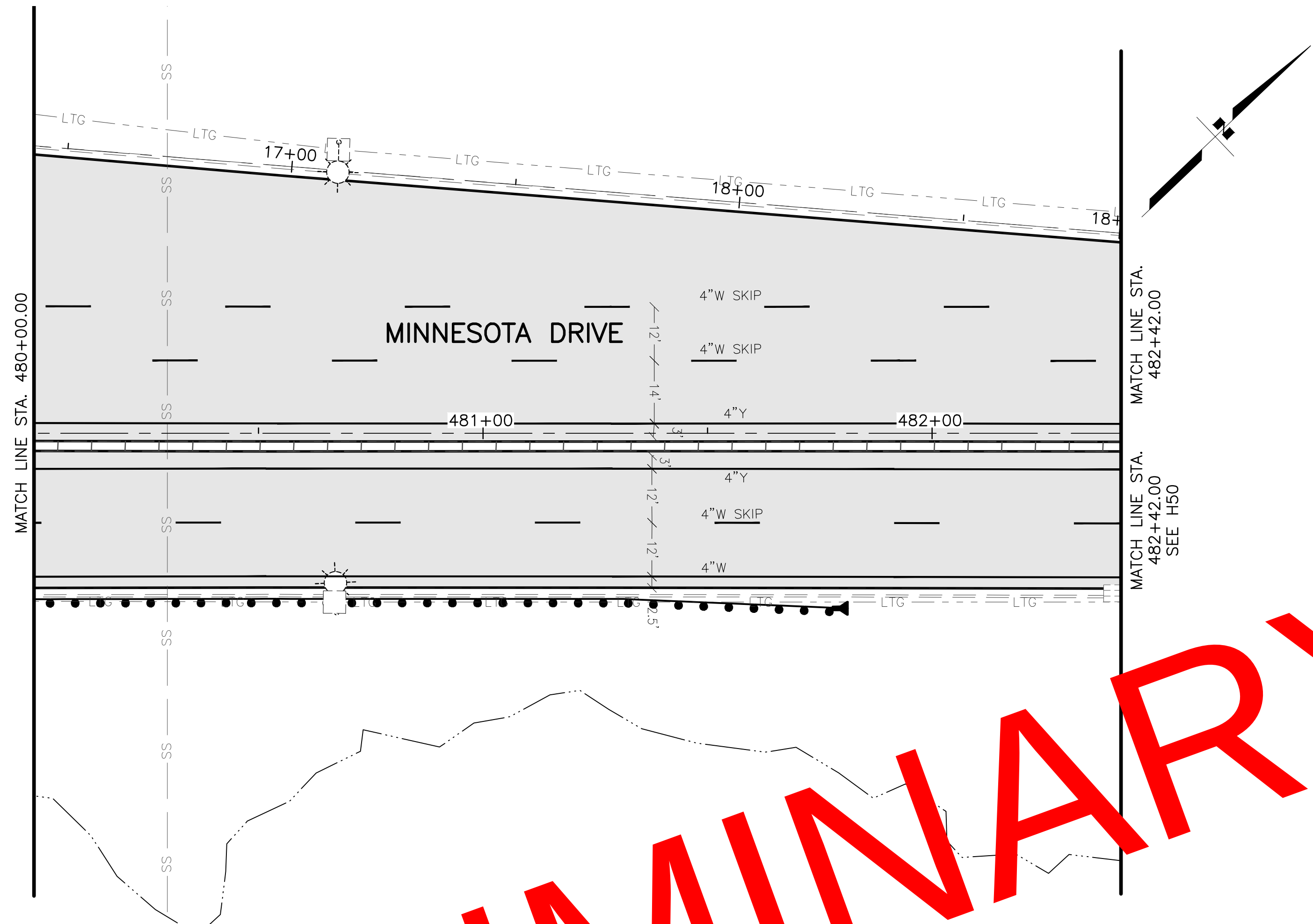
DATE/TIME 5/12/2022 4:05 PM | LAYOUT #### | DESIGNED ZJH | CHECKED CLP | DRAFTED MF



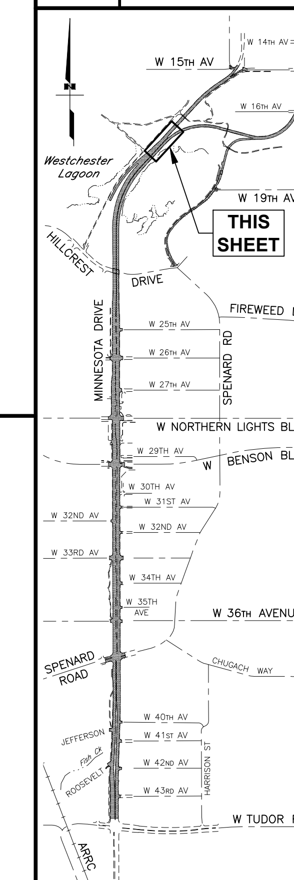
PRELIMINARY

SHEET NO.	TOTAL SHEETS
H47	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
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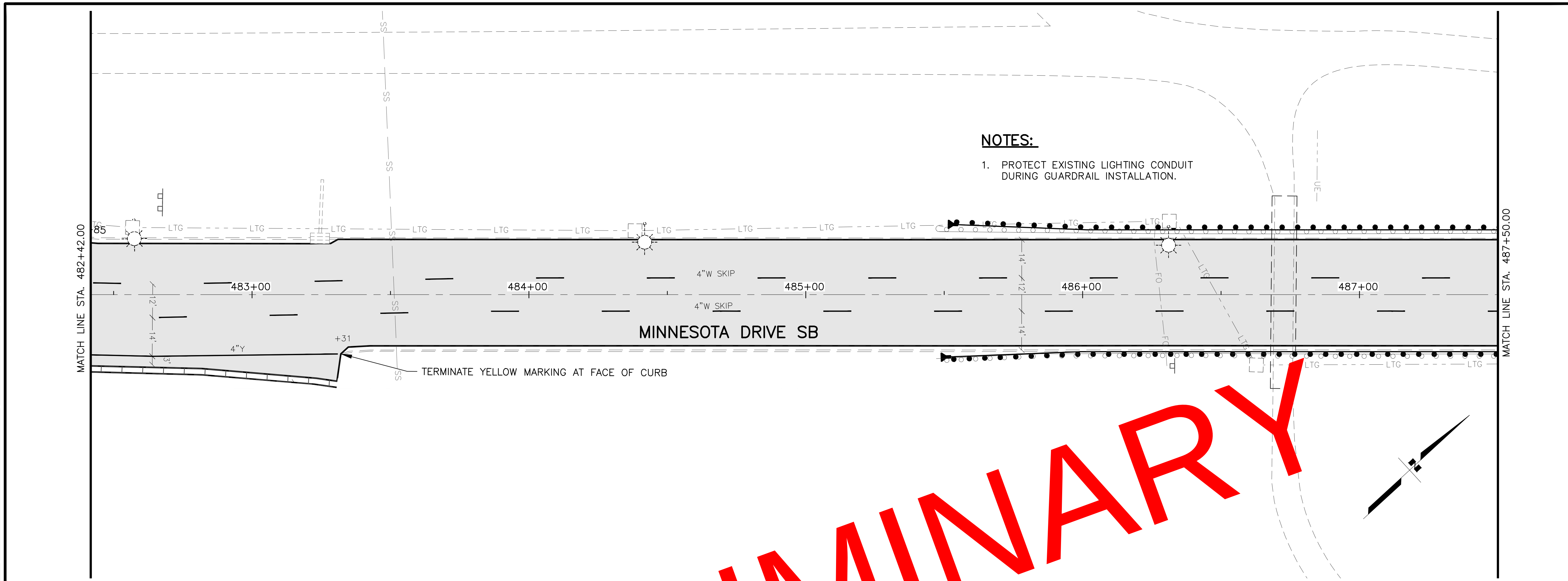
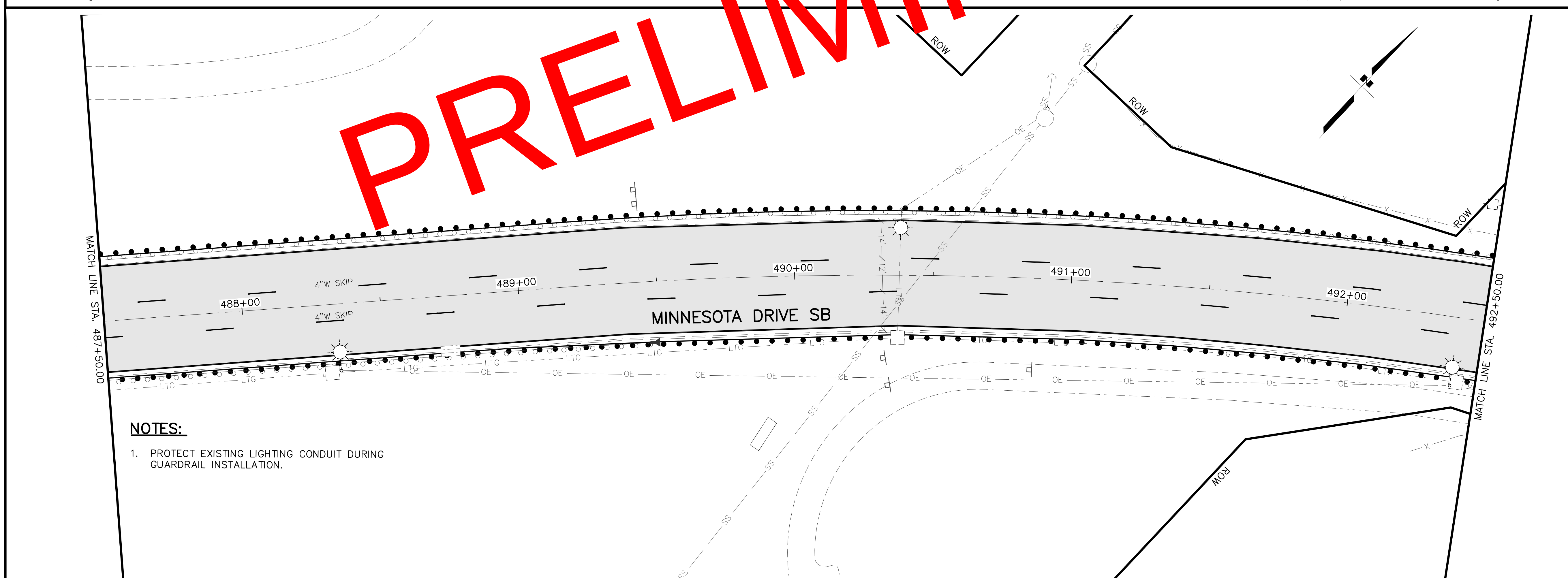
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA

STA 480+00 TO STA 482+42



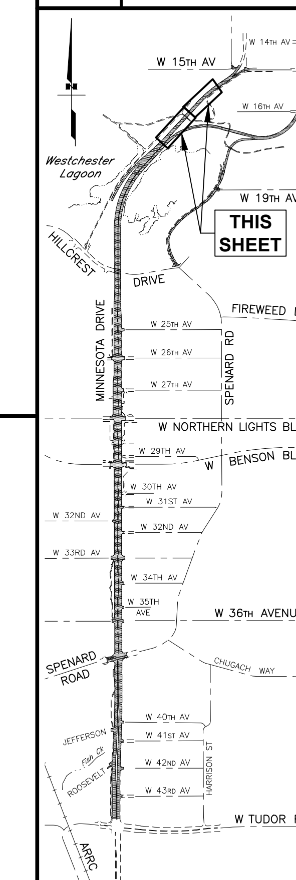


PRELIMINARY

SHEET NO.	TOTAL SHEETS
H48	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION
0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA 49TH
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REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

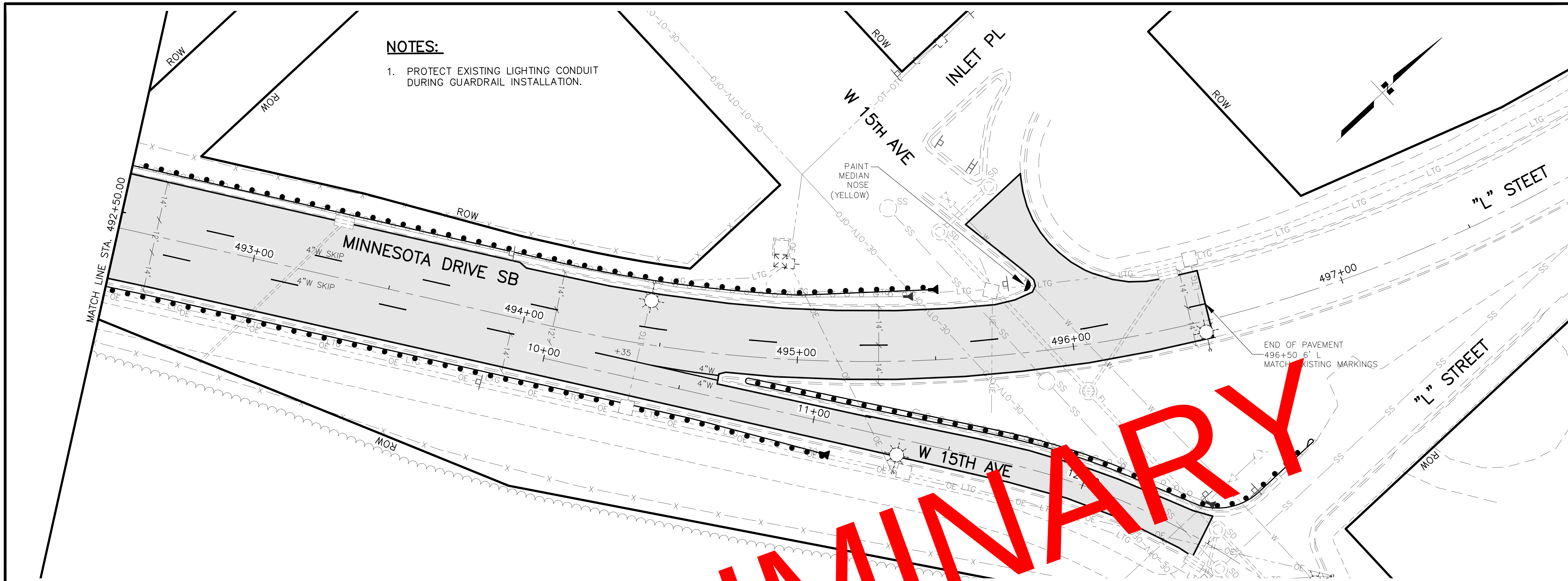
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA SB

STA 482+42 TO STA 492+50

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG

DATE/TIME	LAYOUT	DESIGNED	CHECKED	DRAFTED
5/12/2022 4:06 PM	####	ZJH	CLP	MF



NOTES:

1. PROTECT EXISTING LIGHTING CONDUIT DURING GUARDRAIL INSTALLATION.

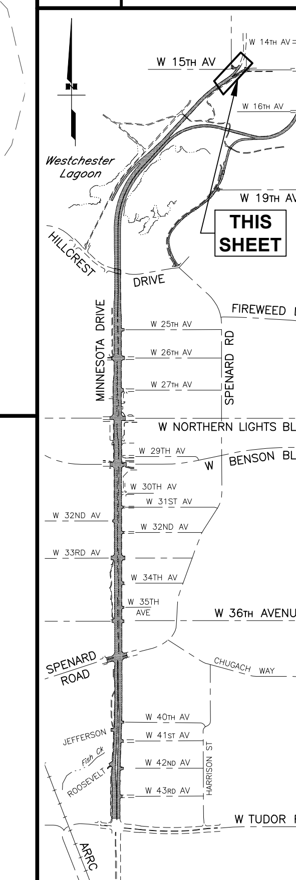
PRELIMINARY

SHEET NO.	TOTAL SHEETS
H49	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

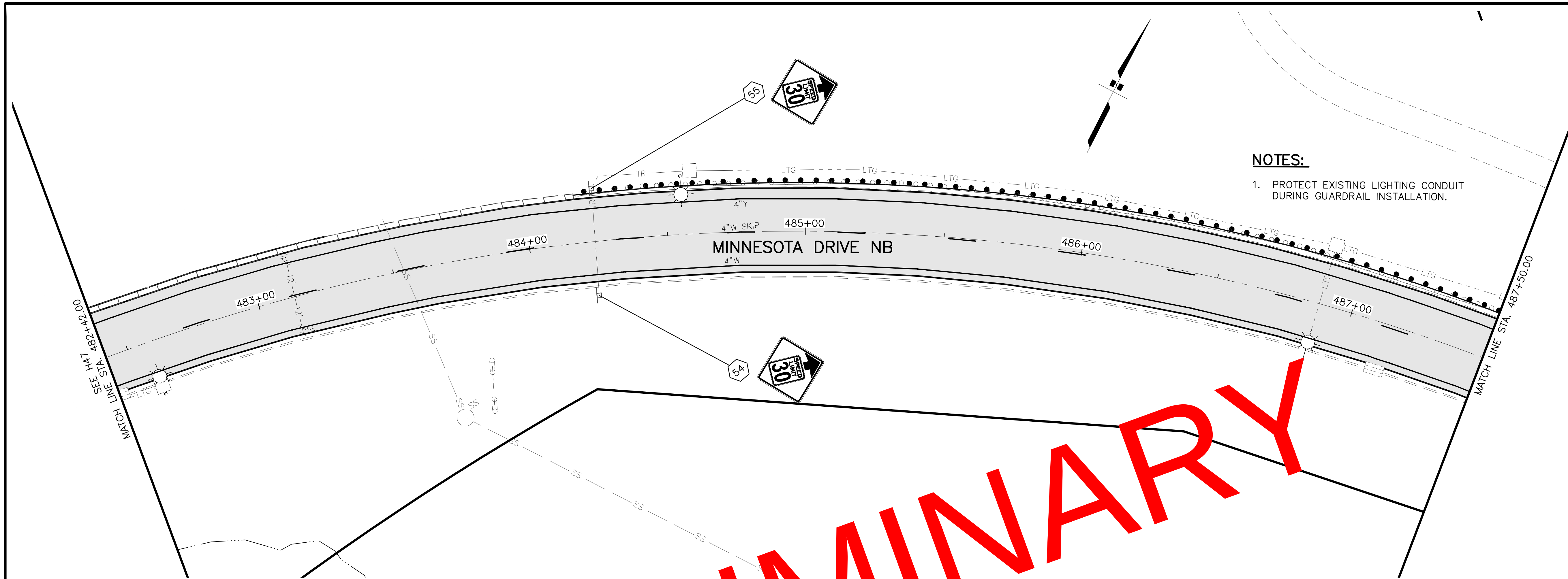
SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA SB

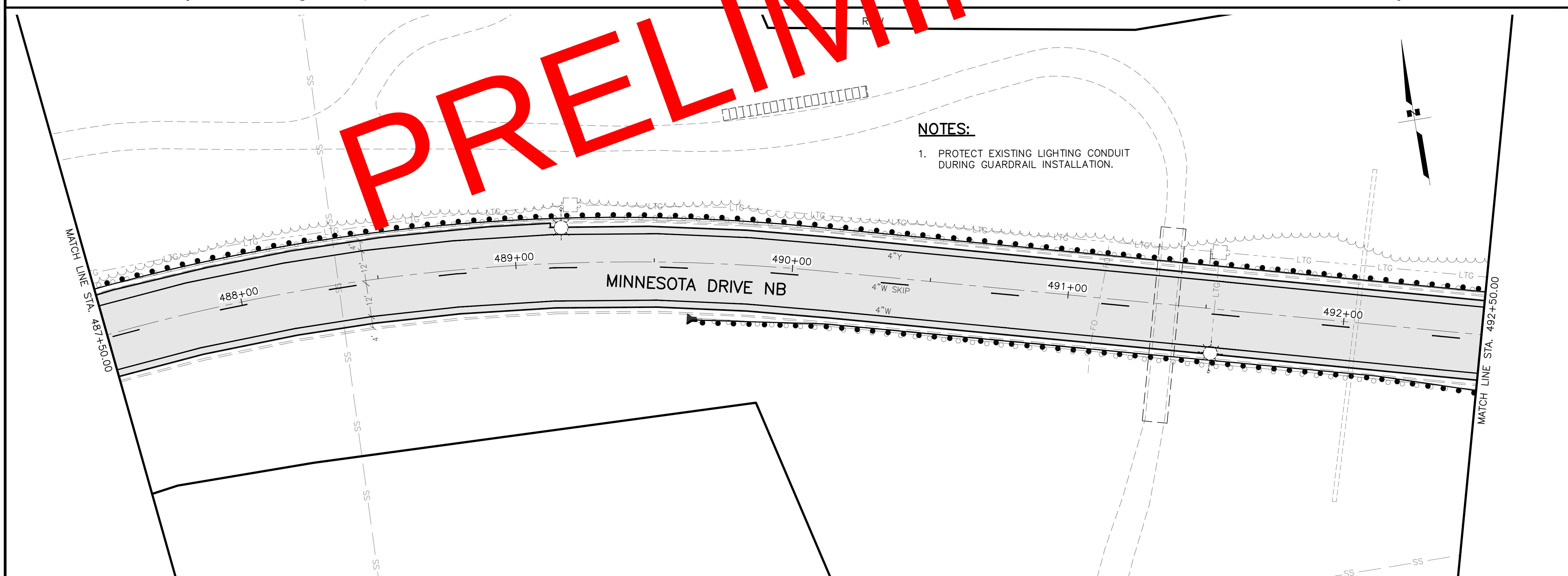
STA 492+50 TO E.O.P.

FILE: \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG

DATE/TIME	LAYOUT	DESIGNED	CHECKED	DRAFTED
5/12/2022 4:06 PM	####	ZJH	CLP	MF

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AV\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG | DATE/TIME 5/12/2022 4:07 PM | LAYOUT #### | DESIGNED ZJH | CHECKED CLP | DRAFTED MF



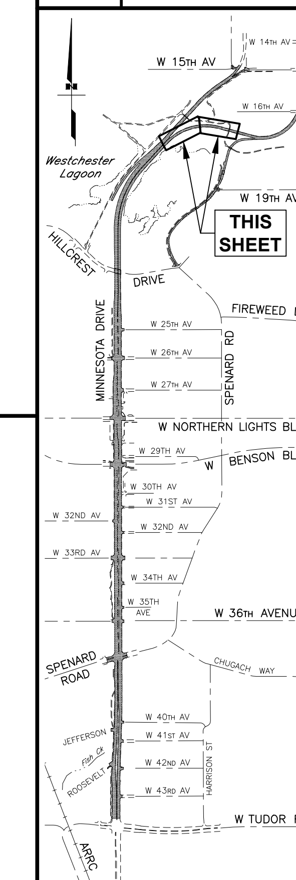


SHEET NO.	TOTAL SHEETS
H50	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

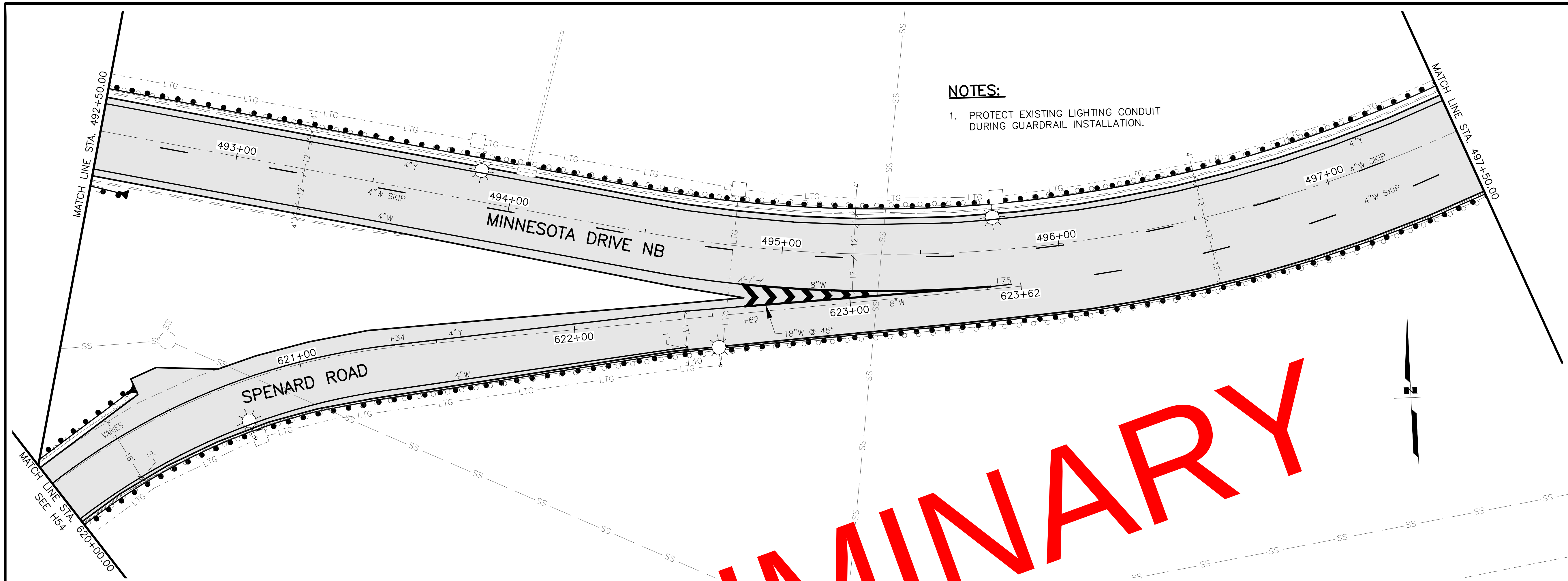
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA NB

STA 482+42 TO STA 492+50

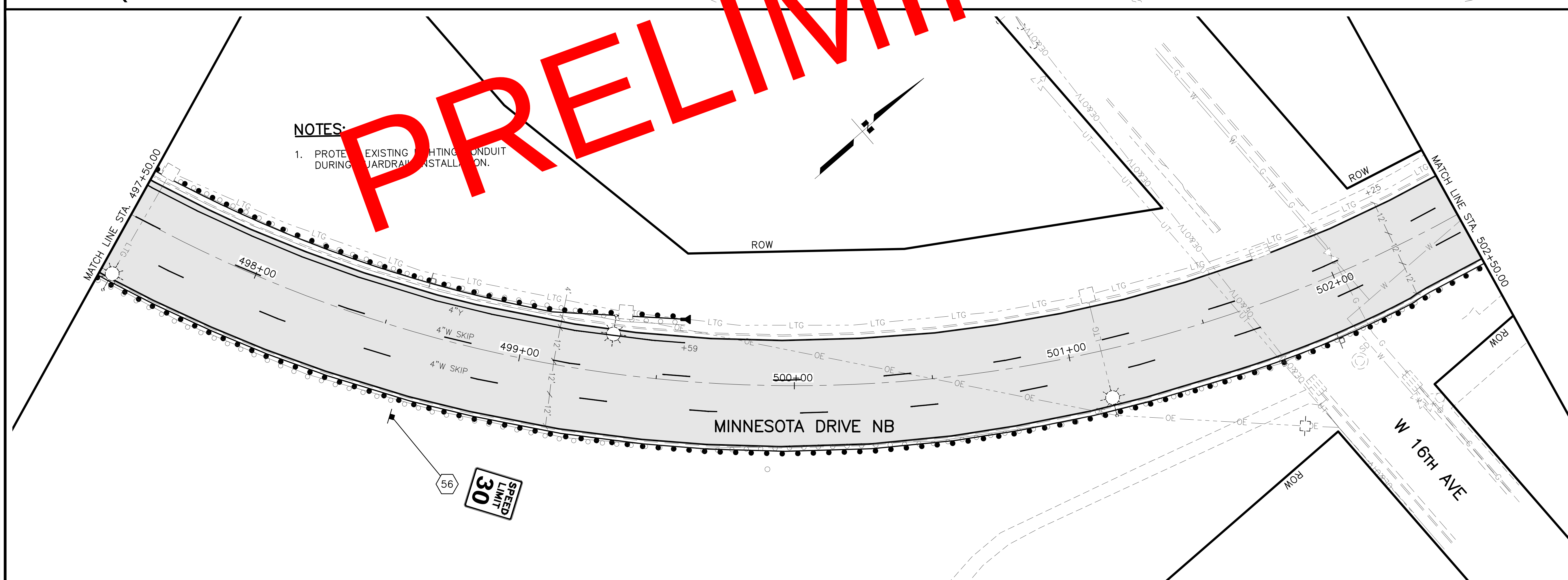
NOTES:

1. PROTECT EXISTING LIGHTING CONDUIT DURING GUARDRAIL INSTALLATION.



NOTES:

1. PROTECT EXISTING LIGHTING CONDUIT DURING GUARDRAIL INSTALLATION.



SHEET NO.	TOTAL SHEETS
H51	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

THIS SHEET

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER L. POST CE 11253

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

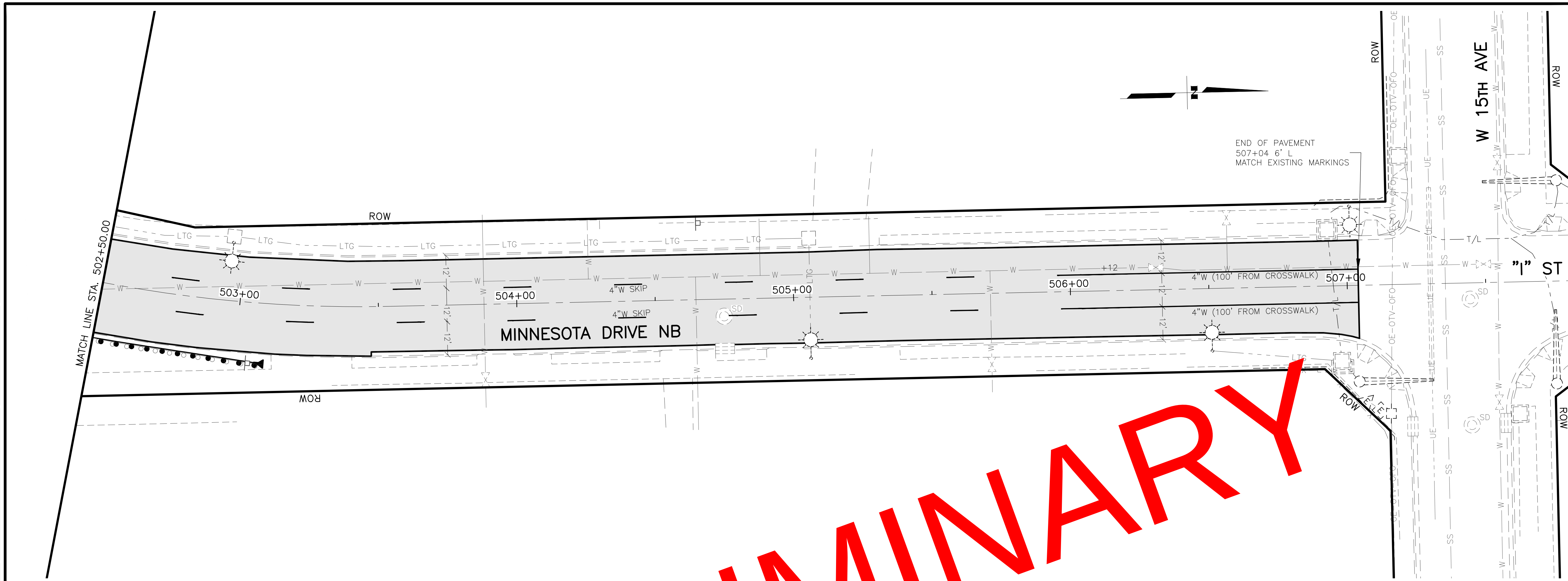
MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA NB

STA 492+50 TO STA 502+50

PRELIMINARY

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AM\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG | DATE/TIME 5/12/2022 4:07 PM | LAYOUT #### | DESIGNED ZJH | CHECKED CLP | DRAFTED MF

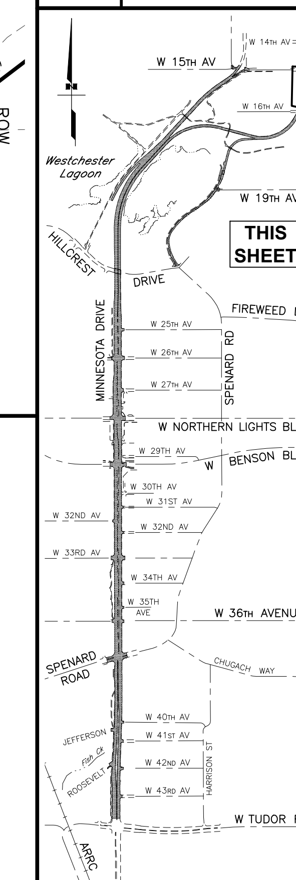


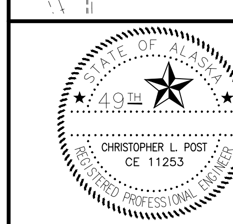
SHEET NO.	TOTAL SHEETS
H52	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	





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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – MINNESOTA NB

STA 502+50 TO E.O.P.

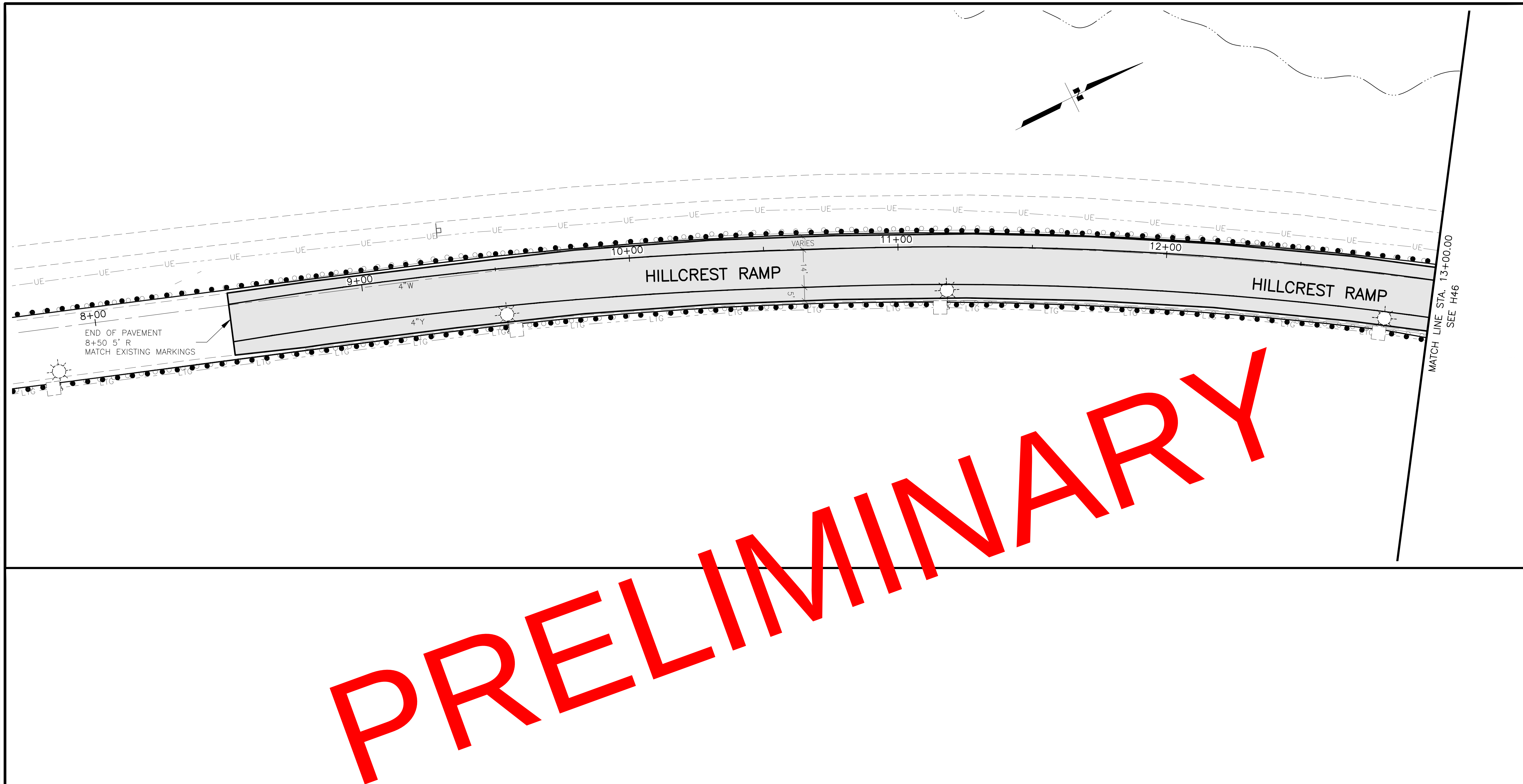
FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG | DATE/TIME 5/12/2022 4:08 PM | LAYOUT #### | DESIGNED ZJH | CHECKED CLP | DRAFTED MF

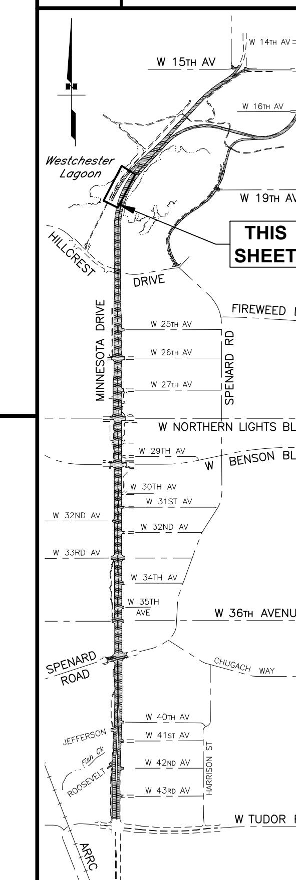
SHEET NO.	TOTAL SHEETS
H53	H62
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	





STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – HILLCREST RAMP

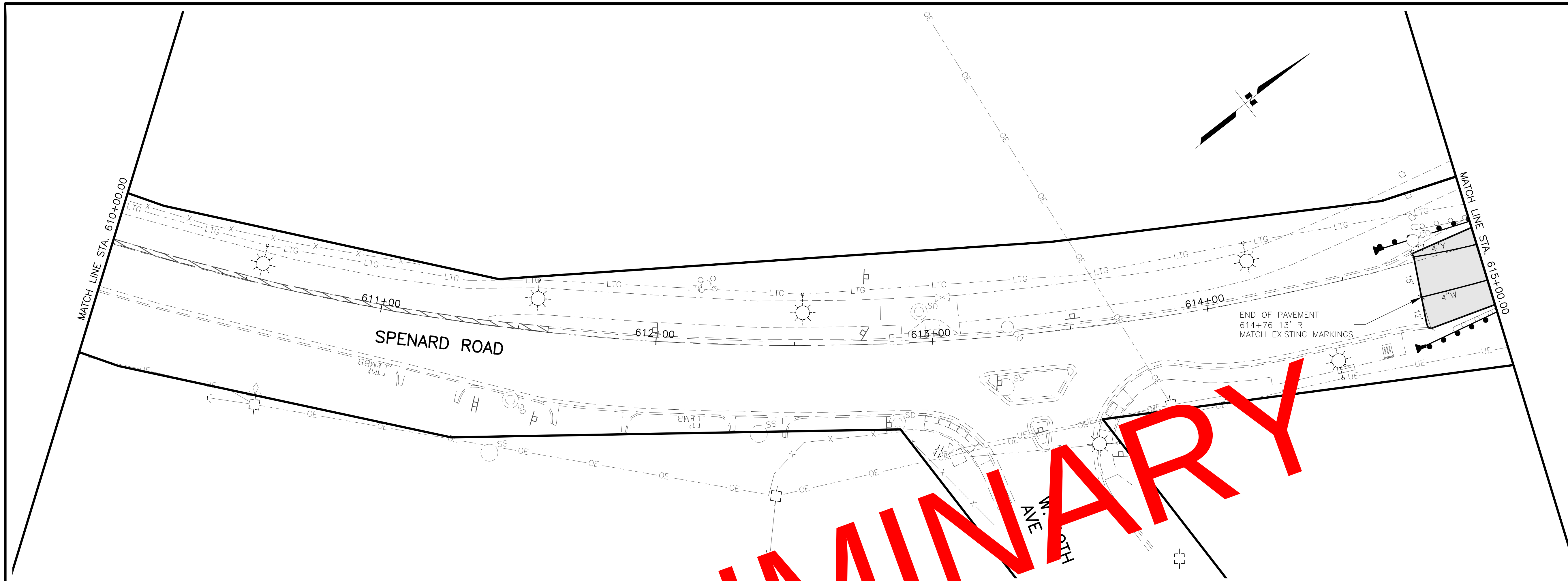
B.O.P. TO STA 13+00

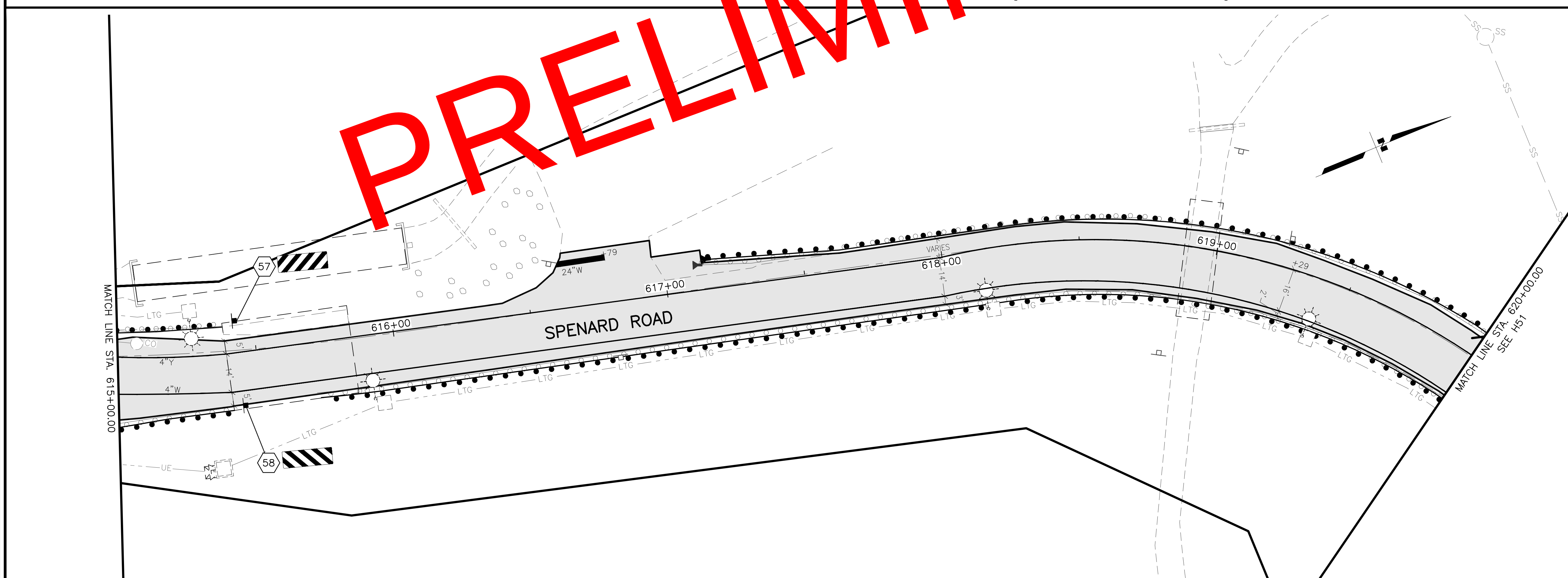
FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG

DATE/TIME 5/12/2022 4:08 PM | LAYOUT #### | DESIGNED ZJH | CHECKED CLP | DRAFTED MF

FILE \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_H PLANS.DWG

DATE/TIME	LAYOUT	DESIGNED	CHECKED	DRAFTED
5/12/2022 4:09 PM	####	ZJH	CLP	MF





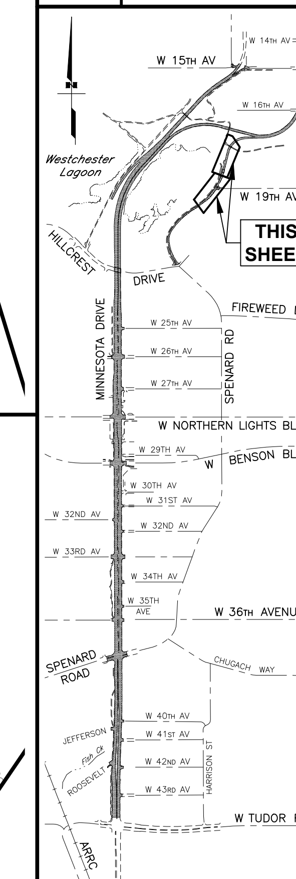
PRELIMINARY

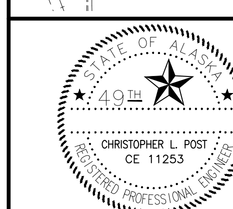
SHEET NO.	TOTAL SHEETS
H54	H62
STATE	**YEAR**
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	





STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SIGNING, STRIPING, INTERCONNECT & ILLUMINATION – SPENARD

STA 610+00 TO STA 620+00

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H55	H62

SIGN SUMMARY

PAGE NO.	SIGN NO.	STATION ALIGNMENT	CL REF	TYPE	LEGEND	SIZE (IN) WIDTH	SIZE (IN) HEIGHT	AREA (SQ FT)	SIGN FACES	POST NO., SIZE, & TYPE	FRAMED? YES	FRAMED? NO	REMARKS
H38	1	394+73.0	RT	R2–1	SPEED LIMIT 45	30	36	7.50	S	N/A		X	MOUNT ON ELECTROLIER
	2	395+25.5	RT	R6–1R	ONE WAY	36	12	3.00	E	1–2.5"PT	X		MOUNT IN MEDIAN
	3	398+86.8	LT	R6–1R	ONE WAY	36	12	3.00	E	1–3"T	X		MOUNT IN MEDIAN
	4	399+13.1	LT	D3–101	Minnesota Dr 4100	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	Roosevelt Dr 1600	48	12	8.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	W		X		
				R1–1	STOP	36	36	9.00	W		X		
	5	399+13.8	RT	D3–101	Minnesota Dr 4100	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 42nd Ave 1500	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	E		X		
				R1–1	STOP	36	36	9.00	E		X		
	6	399+14.2	LT	R6–1R	ONE WAY	36	12	3.00	W	1–2.5"PT	X		REUSE EXISTING FOUNDATION
H39	7	402+36.5	LT	W5–4A	PATH NARROWS	18	18	2.25	S	N/A		X	MOUNT ON ELECTROLIER
	8	402+46.2	LT	R6–1R	ONE WAY	36	12	3.00	E	1–3"T	X		MOUNT IN MEDIAN
	9	402+72.6	RT	D3–101	Minnesota Dr 4000	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 41st Ave 1500	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	E		X		
				R1–1	STOP	36	36	9.00	E		X		

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

SIGN SUMMARY

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF

SCALE N/A

DATE 5/9/2022 TIME 8:49 AM

DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGN SUMMARY.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H56	H62

SIGN SUMMARY

PAGE NO.	SIGN NO.	STATION ALIGNMENT	CL REF	TYPE	LEGEND	SIZE (IN) WIDTH	SIZE (IN) HEIGHT	AREA (SQ FT)	SIGN FACES	POST NO., SIZE, & TYPE	FRAMED? YES	FRAMED? NO	REMARKS
H39	10	403+67.0	LT	D3–101	Minnesota Dr 4000	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	Jefferson Ave 1600	48	12	8.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	W		X		
				R1–1	STOP	36	36	9.00	W		X		
	11	403+77.5	CL	R6–1R	ONE WAY	36	12	3.00	W	1–3"T	X		MOUNT IN MEDIAN
	12	404+92.5	CL	R6–1R	ONE WAY	36	12	3.00	E	1–3"T	X		MOUNT IN MEDIAN
	13	405+16.0	RT	D3–101	Minnesota Dr 3900	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 40th Ave 1500	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	E		X		
				R1–1	STOP	36	36	9.00	E		X		
H40	14	413+30.5	LT	R3–108B	ONLY ONLY	30	30	6.25	E	N/A		X	MOUNT ON MAST ARM. SIZE SHALL MATCH SALVAGED SIGN
	15	413+49.0	RT	R3–108B	ONLY ONLY	30	[illegible]	6.25	W	N/A		X	MOUNT ON MAST ARM. SIZE SHALL MATCH SALVAGED SIGN
	16	417+81.0	LT	D3–101	Minnesota Dr 3600	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 36th Ave 1600	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	W		X		
				R1–1	STOP	36	36	9.00	W		X		
	17	418+10.5	CL	R6–1R	ONE WAY	36	12	3.00	W	1–3"T	X		MOUNT IN MEDIAN
				R6–1R	ONE WAY	36	12	3.00	E		X		

PRELIMINARY

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

SIGN SUMMARY

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF
SCALE N/A
DATE 5/9/2022 TIME 8:49 AM
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGN SUMMARY.DWG

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099/CFHWY00132	2022	H57	H62

SIGN SUMMARY

PAGE NO.	SIGN NO.	STATION ALIGNMENT	CL REF	TYPE	LEGEND	SIZE (IN) WIDTH	SIZE (IN) HEIGHT	AREA (SQ FT)	SIGN FACES	POST NO., SIZE, & TYPE	FRAMED? YES	FRAMED? NO	REMARKS
H40	18	418+31.4	RT	D3–101	Minnesota Dr 3500	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 36th Ave 1500	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	E		X		
				R1–1	STOP	36	36	9.00	E		X		
	19	419+84.5	CL	R6–1R	ONE WAY	36	12	3.00	E	1–3"T	X		MOUNT IN MEDIAN
H41	20	420+08.3	RT	D3–101	Minnesota Dr 3400	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 35th Ave 1500	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	E		X		
				R1–1	STOP	36	36	[illegible]	E		X		
	21	423+26.0	RT	D3–101	Minnesota Dr 3300	[illegible]	8	[illegible]	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 34th Ave 1500	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	E		X		
				R1–1	STOP	36	36	9.00	E		X		
	22	425+99.3	LT	D3–101	Minnesota Dr 3300	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 33rd Ave 1600	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	W		X		
				R1–1	STOP	36	36	9.00	W		X		
	23	426+29.9	LT	R6–1R	ONE WAY	36	12	3.00	W	1–3"T	X		MOUNT IN MEDIAN
				R6–1R	ONE WAY	36	12	3.00	E		X		

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

SIGN SUMMARY

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF
SCALE N/A
DATE 5/9/2022 TIME 8:49 AM
DRAWING LOCATION
\\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGN SUMMARY.DWG

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF
SCALE N/A
DATE 5/9/2022 TIME 8:49 AM
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGN SUMMARY.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H58	H62

SIGN SUMMARY

PAGE NO.	SIGN NO.	STATION ALIGNMENT	CL REF	TYPE	LEGEND	SIZE (IN) WIDTH	SIZE (IN) HEIGHT	AREA (SQ FT)	SIGN FACES	POST NO., SIZE, & TYPE	FRAMED? YES	FRAMED? NO	REMARKS
H41	24	426+58.1	RT	D3–101	Minnesota Dr 3200	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 33rd Ave 1500	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	E		X		
				R1–1	STOP	36	36	9.00	E		X		
	25	429+85.0	RT	D3–101	Minnesota Dr 3100	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 32nd Ave 1500	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	E		X		
				R1–1	STOP	36	36	9.00	E		X		
H42	26	430+93.5	LT	D3–101	Minnesota Dr 3200	42	8	[illegible]67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 32nd Ave 1600	[illegible]	12	6.[illegible]	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	W		X		
				R1–1	STOP	36	36	9.00	W		X		
	27	432+92.2	RT	R6–1R	ONE WAY	36	12	3.00	E	POPL	X		MOUNT ON ELECTROLIER
	28	433+10.2	RT	D3–101	Minnesota Dr 3000	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 31st Ave 1500	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	E		X		
				R1–1	STOP	36	36	9.00	E		X		
	29	434+72.3	CL	R6–1R	ONE WAY	36	12	3.00	E	1–3"T	X		MOUNT IN MEDIAN
	30	439+45.2	RT	OM4–1		18	18	2.25	E	1–2.5"PT		X	
	31	439+58.2	RT	OM4–1		18	18	2.25	E	1–2.5"PT		X	

PRELIMINARY

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

SIGN SUMMARY

SIGN SUMMARY

PAGE NO.	SIGN NO.	STATION ALIGNMENT	CL REF	TYPE	LEGEND	SIZE (IN) WIDTH	SIZE (IN) HEIGHT	AREA (SQ FT)	SIGN FACES	POST NO., SIZE, & TYPE	FRAMED? YES	FRAMED? NO	REMARKS
H43	32	445+78.0	CL	S1–1		36	36	9.00	S	1–2.5"PT	X		SIGN COLOR SHALL BE FLUORESCENT YELLOW GREEN. INCLUDE REFLECTIVE SHEETING FOR SIGN POST. REUSE EXISTING FOUNDATION
				W16–9P	AHEAD	24	12	2.00	S			X	
				W11–2		36	36	9.00	N		X		REUSE EXISTING FOUNDAITON
				W16–4P	NEXT 1500 FT	30	24	5.00	N			X	
	33	445+79.6	RT	S1–1		36	36	9.00	S	1–2.5"PT	X		SIGN COLOR SHALL BE FLUORESCENT YELLOW GREEN. INCLUDE REFLECTIVE SHEETING FOR SIGN POST.
				W16–9P	AHEAD	24	12	2.00	S			X	
	34	446+55.4	LT	S5–2	END SCHOOL ZONE	24	30	5.00	N	1–2.5"PT		X	
	35	446+55.4	CL	S6–200	DRUG FREE SCHOOL ZONE	30	24	5.00	S	1–2.5"PT	[illegible]	[illegible]	SIGN COLOR SHALL BE FLUORESCENT YELLOW GREEN. INCLUDE REFLECTIVE SHEETING FOR SIGN POST.
				R2–6P	FINES HIGHER	30	24	5.00	S		[illegible]	[illegible]	
				S5–2	END SCHOOL ZONE	24	30	5.00	N			X	
	36	446+55.4	RT	S6–200	DRUG FREE SCHOOL ZONE	30	24	5.00	[illegible]	1–2.5"PT		X	SIGN COLOR SHALL BE FLUORESCENT YELLOW GREEN. INCLUDE REFLECTIVE SHEETING FOR SIGN POST.
				R2–6P	FINES HIGHER	[illegible]	[illegible]	5.00	S			X	
	37	447+42.2	LT	R2–1	SPEED LIMIT 45	30	36	7.50	N	N/A		X	MOUNT ON ELECTROLIER
	38	448+16.5	LT	R6–1R	ONE WAY	36	12	3.00	E	1–2.5"PT	X		MOUNT IN MEDIAN
	39	448+46.1	RT	D3–101	Minnesota Dr 2600	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 27th Ave 1500	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	E		X		REUSE EXISTING FOUNDATION
				R1–1	STOP	36	36	9.00	E		X		

PRELIMINARY

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

SIGN SUMMARY

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF
SCALE N/A
DATE 5/9/2022 TIME 8:49 AM
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGN SUMMARY.DWG

SIGN SUMMARY

PAGE NO.	SIGN NO.	STATION ALIGNMENT	CL REF	TYPE	LEGEND	SIZE (IN) WIDTH	SIZE (IN) HEIGHT	AREA (SQ FT)	SIGN FACES	POST NO., SIZE, & TYPE	FRAMED? YES	FRAMED? NO	REMARKS
H44	40	451+79.7	RT	S1–1		36	36	9.00	S	1–2.5"PT	X		REUSE EXISTING FOUNDATION. SIGN COLOR SHALL BE FLUORESCENT YELLOW GREEN. INCLUDE REFLECTIVE SHEETING FOR SIGN POST.
				W16–7PL		24	12	2.00	S			X	
	41	451+80.9	LT	R10–100	ONLY YIELD ON GREEN	30	36	7.50	N	1–2.5"PT		X	
				S1–1		36	36	9.00	S		X		SIGN COLOR SHALL BE FLUORESCENT YELLOW GREEN. INCLUDE REFLECTIVE SHEETING FOR SIGN POST.
				W16–7PR		24	12	2.00	S			X	
	42	452+38.9	LT	R4–7		24	30	5.00	E	1–2.5"PT		X	MOUNT IN MEDIAN
	43	452+91.1	LT	S1–1		36	36	9.00	N	1–2.5"PT	X		SIGN COLOR SHALL BE FLUORESCENT YELLOW GREEN. INCLUDE REFLECTIVE SHEETING FOR SIGN POST.
				W16–7PL		24	12	2.00	N			X	
	44	452+95.9	RT	R10–100	ONLY YIELD ON GREEN	30	36	7.50	S	1–2.5"PT			
				S1–1		36	36	9.[illegible]	N		X		SIGN COLOR SHALL BE FLUORESCENT YELLOW GREEN. INCLUDE REFLECTIVE SHEETING FOR SIGN POST.
				W16–7PR		24	12	2.00	N			X	
	45	456+02.9	RT	R6–1R	ONE WAY	3[illegible]	12	3.00	E	1–3"T	X		MOUNT IN MEDIAN
	46	456+24.6	RT	D3–101	Minnesota Dr 2400	42	8	4.67	E/W	1–2.5"PT	X		INSTALL TWO SIGNS BACK TO BACK
				D3–101	W 25th Ave 1400	36	12	6.00	N/S		X		INSTALL TWO SIGNS BACK TO BACK
				R6–1R	ONE WAY	36	12	3.00	E		X		
				R1–1	STOP	36	36	9.00	E		X		
	47	456+40.1	RT	R2–1	SPEED LIMIT 45	30	36	7.50	S	1–3"T		X	

PRELIMINARY

STATE OF ALASKA
49TH
CHRISTOPHER L. POST
CE 11253
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

SIGN SUMMARY

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF

SCALE N/A

DATE 5/9/2022 TIME 8:49 AM

DRAWING LOCATION
\\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGN SUMMARY.DWG

PRELIMINARY

SIGN SUMMARY

PAGE NO.	SIGN NO.	STATION ALIGNMENT	CL REF	TYPE	LEGEND	SIZE (IN) WIDTH	SIZE (IN) HEIGHT	AREA (SQ FT)	SIGN FACES	POST NO., SIZE, & TYPE	FRAMED? YES	FRAMED? NO	REMARKS
H44	48	457+27.2	LT	S6–200	DRUG FREE SCHOOL ZONE	30	24	5.00	N	1–2.5"PT		X	SIGN COLOR SHALL BE FLUORESCENT YELLOW GREEN. INCLUDE REFLECTIVE SHEETING FOR SIGN POST.
				R2–6P	FINES HIGHER	30	24	5.00	N			X	
	49	457+27.2	CL	S5–2	END SCHOOL ZONE	24	30	5.00	S	1–2.5"PT		X	
				S6–200	DRUG FREE SCHOOL ZONE	30	24	5.00	N			X	SIGN COLOR SHALL BE FLUORESCENT YELLOW GREEN. INCLUDE REFLECTIVE SHEETING FOR SIGN POST.
				R2–6P	FINES HIGHER	30	24	5.00	N			X	
	50	457+27.2	RT	S5–2	END SCHOOL ZONE	24	30	5.00	S	1–2.5"PT		X	
	51	458+25.0	LT	S1–1		36	36	9.00	N	1–2.5"PT	X		SIGN COLOR SHALL BE FLUORESCENT YELLOW GREEN. INCLUDE REFLECTIVE SHEETING FOR SIGN POST.
				W16–9P	AHEAD	24	12	2.00	N			X	
	52	459+50.4	RT	R2–1	SPEED LIMIT 45	30	36	7.50	N	1–2.5"PT		X	REUSE EXISTING FOUNDATION
	53	459+51.5	LT	R2–1	SPEED LIMIT 45	30	36	7.50	N	N/A		X	MOUNT ON ELECTROLIER
H50	54	484+23.3	RT	W3–5	30	36	36	9.00	SW	POPL	X		MOUNT ON EXISTING BEACON
	55	484+24.4	LT	W3–5	30	36	36	9.00	SW	POPL	X		MOUNT ON EXISTING BEACON
H51	56	498+61.5	RT	R2–1	SPEED LIMIT 30	30	36	7.50	SW	1–3"T		X	BEHIND GUARDRAIL
H54	57	615+42.9	LT	OM–3L		12	36	3.00	S	1–2.5"PT		X	BEHIND GUARDRAIL
	58	615+44.8	RT	OM–3R		12	36	3.00	S	1–2.5"PT		X	BEHIND GUARDRAIL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

SIGN SUMMARY

STATE OF ALASKA · 49TH · CHRISTOPHER L. POST · CE 11253 · REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF
SCALE N/A
DATE 5/9/2022
TIME 8:49 AM
DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGN SUMMARY.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	H62	H62

SIGN SALVAGE SUMMARY

STATION ALIGNMENT	CL REF	TYPE	LEGEND	REMARKS
394+73.0	RT	R2-1	SPEED LIMIT 45	ON ELECTROLIER
399+07.0	LT	D3-1	ROOSEVELT DR	
		D3-1	MINNESOTA DR	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
399+13.8	RT	D3-1	MINNESOTA DR	
		D3-1	W 42ND AV	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
399+14.2	LT	R6-1R	ONE WAY	
402+42.8	LT	W5-4A	BIKEWAY NARROWS	
402+72.6	RT	D3-1	MINNESOTA DR	
		D3-1	W 41ST AV	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
403+69.0	LT	D3-1	MINNESOTA DR	
		D3-1	JEFFERSON AVE	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
403+77.5	CL	R6-1R	ONE WAY	
405+16.0	RT	D3-1	W 40TH AV	
		D3-1	MINNESOTA DR	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
413+30.5	LT	R3-8	LANE CONTROL	
413+49.0	RT	R3-8	LANE CONTROL	
417+83.9	LT	D3-1	36TH AV	
		D3-1	MINNESOTA DR	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
418+10.5	CL	R6-1R	ONE WAY	
418+31.4	RT	D3-1	MINNESOTA DR	
		D3-1	W 36TH AV	
		R6-1R	ONE WAY	
		R1-1	STOP SI[illegible]	
419+84.5	RT	R6-1R	ONE WA[illegible]	
		R3-2	NO LEFT TU[illegible]	
420+08.3	RT	D3-1	MINNESOTA D[illegible]	
		D3-1	W 35TH AV	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
423+26.0	RT	D3-1	34TH AV	
		D3-1	MINNESOTA DR	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
425+85.5	LT	R1-1	STOP SIGN	
425+99.3	LT	D3-1	MINNESOTA DR	
		D3-1	W 33RD AVE	
		R1-1	STOP SIGN	
426+29.9	LT	R6-1R	ONE WAY	
426+58.1	RT	D3-1	MINNESOTA DR	
		D3-1	W 33RD AVE	
		R1-1	STOP SIGN	
426+64.8	LT	R1-1	STOP SIGN	ON ELECTROLIER
429+86.0	RT	D3-1	32ND AV	
		D3-1	MINNESOTA DR	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	

SIGN SALVAGE SUMMARY

STATION ALIGNMENT	CL REF	TYPE	LEGEND	REMARKS
430+88.0	LT	D3-1	MINNESOTA DR	
		D3-1	W 32ND AV	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
433+10.2	RT	D3-1	MINNESOTA DR	
		D3-1	W 31ST AVE	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
439+45.2	RT	OM4-1	OBJECT MARKER	
439+58.2	RT	OM4-1	OBJECT MARKER	
445+78.0	CL	S1-1	SCHOOL	
		S6-200	DRUG FREE SCHOOL ZONE	
		W11-2	PEDESTRIAN CROSSING	
		W16-4P	NEXT 1500 FT	
445+79.6	RT	S1-1	SCHOOL	
		S6-200	DRUG FREE SCHOOL ZONE	
447+55.6	LT	R2-1	SPEED LIMIT 45	
		S5-2	END SCHOOL ZONE	
448+46.1	RT	D3-1	27TH AVE	
		D3-1	MINNESOTA DR	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
451+79.7	RT	S1-1	SCH[illegible]L	
			[illegible]CHOOL [illegible]NG	
		W16-[illegible]7PL	A[illegible]NAL [illegible]ROW	
451+80.9	LT	S[illegible]	[illegible]CHOOL	
			SC[illegible]OL XI[illegible]	
		W16-[illegible]L	[illegible]AGO[illegible]L ARR[illegible]	
		R10-1[illegible]	[illegible]FT T[illegible]N ONLY	
45[illegible]91.1	LT	S1-1	SCHOOL	
			SCHOOL XING	
		W[illegible]-7PL	DIAGONAL ARROW	
[illegible]2+95.9	RT	R10-100	LEFT TURN ONLY	
		S1-1	SCHOOL	
			SCHOOL XING	
		W16-6PR	DIAGONAL ARROW	
455+48.2	RT	R2-1	SPEED LIMIT 45	ON ELECTROLIER
		S5-2	END SCHOOL ZONE	
456+24.6	RT	D3-1	MINNESOTA DR	
		D3-1	W 25TH AV	
		R6-1R	ONE WAY	
		R1-1	STOP SIGN	
458+25.0	LT	S6-200	DRUG FREE SCHOOL ZONE	
		R2-1	SPEED LIMIT 45	
459+50.4	RT	R2-1	SPEED LIMIT 45	
466+56.0	LT	S5-1	SCHOOL ZONE SPEED LIMIT	ON ELECTROLIER
		W16-9P	AHEAD	
466+56.6	RT	S5-1	SCHOOL ZONE SPEED LIMIT	
		W16-9P	AHEAD	
474+96.5	LT	S1-1	SCHOOL	ON ELECTROLIER
		W16-9P	AHEAD	
475+06.8	RT	R2-1	SPEED LIMIT 45	
		S1-1	SCHOOL	
		W16-9P	AHEAD	
484+23.3	RT		REDUCE SPEED AHEAD	ON BEACON
484+24.4	LT		REDUCE SPEED AHEAD	ON BEACON
615+42.9	LT	OM-3L	OBJECT MARKER	
615+44.8	RT	OM-3R	OBJECT MARKER	

STATE OF ALASKA 49TH ★ CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH
PAVEMENT PRESERVATION

SIGN SALVAGE

PRELIMINARY

DESIGNED BY ZJH
CHECKED BY CLP
DRAFTED BY MF

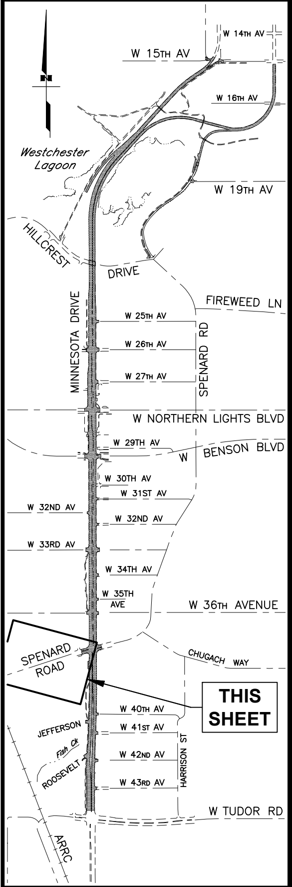
SCALE N/A

DATE 5/9/2022 TIME 8:47 AM

DRAWING LOCATION \\DOT.SOA.ALASKA.GOV\SHARED\AVI\HYD\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGN SALVAGE SUMMARY.DWG

DETOUR LEGEND

	AREA CLOSED TO TRAFFIC
	DRUMS
	FLEXIBLE DELINEATOR POST
	SEQUENTIAL ARROW BOARD
	TYPE 3 BARRICADE



SHEET NO.	TOTAL SHEETS
J01	J03
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION

0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

DETOUR, SPENARD RD.
INTERSECTION

DRAWING LOCATION	DATE	TIME	SCALE	DESIGNED BY	SLH
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_J01_DETOUR.DWG	5/16/2022	12:56 PM	1" = 40'	CHECKED BY	RRH
				DRAFTED BY	SLH/VJS

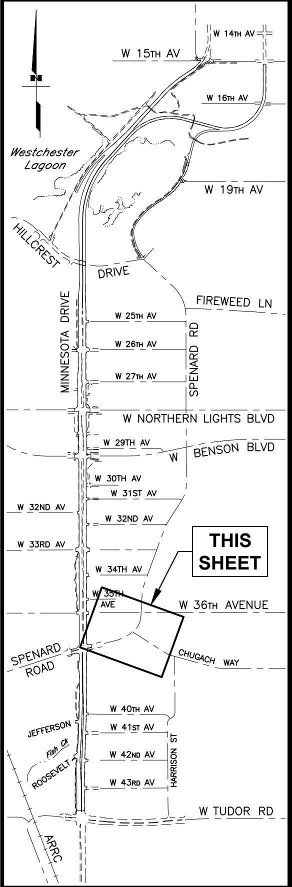
DETOUR LEGEND

	AREA CLOSED TO TRAFFIC
	DRUMS
	TRAFFIC CONE OR TUBULAR MARKER
	SEQUENTIAL ARROW BOARD
	TYPE 3 BARRICADE

SHEET NO.	TOTAL SHEETS
J02	J03
STATE	YEAR
ALASKA	2022

PROJECT DESIGNATION
0421099/ CFHWY00132

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



ANCHORAGE, AK 99502
STATE OF ALASKA 49TH
RYAN R. HAMMEL
107681
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

DETOUR, SPENARD RD. INTERSECTION

DESIGNED BY SLH
CHECKED BY RRH
DRAFTED BY SLH/VJS
SCALE 1" = 40'
DATE 5/16/2022 TIME 12:58 PM
DRAWING LOCATION
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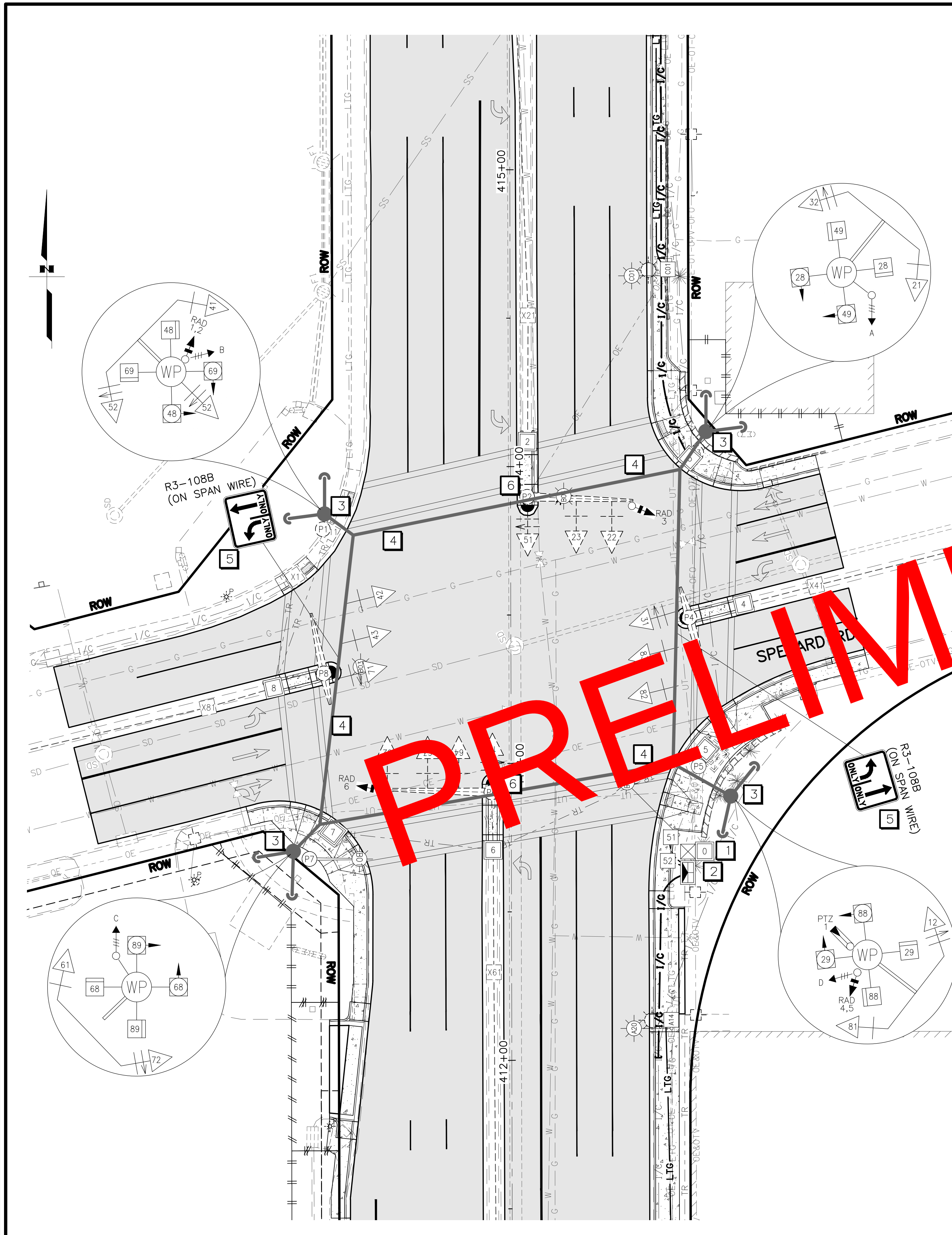
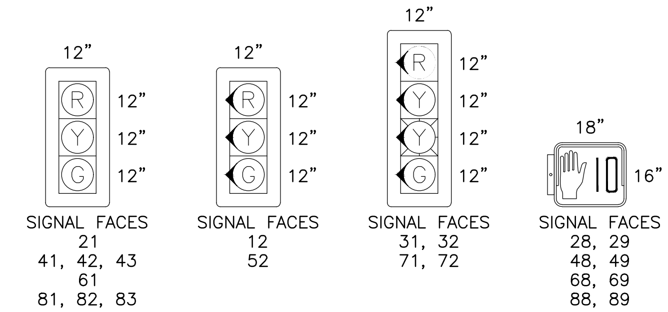
NO.	DATE	REVISION

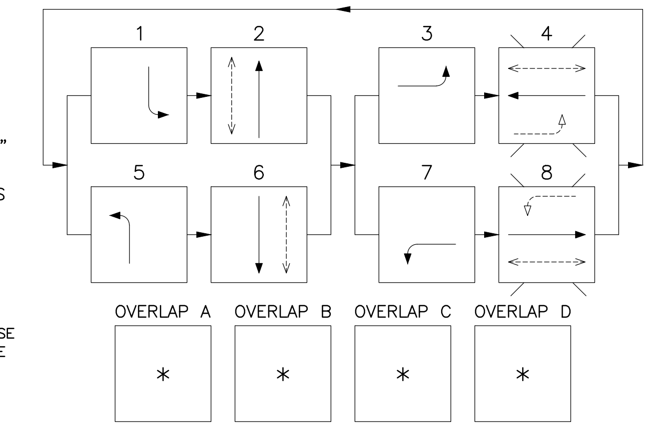
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099 CFHWY00132	2022	J03	J03





PROPOSED SIGNAL HEAD CONFIGURATIONS

EXISTING PHASE 2 SIGNAL HEADS ARE HEADS 21 AND 22 ON POLE 2 MASTARM. THOSE SIGNAL HEAD ARE NUMBERED AS 22 AND 23 FOR THE TEMPORARY SIGNAL ONLY. SEE H23 FOR PERMANENT SIGNAL HEAD NUMBERING.



TEMPORARY PHASE DIAGRAM

LEGEND

- PEDESTRIAN MOVEMENT
- PROTECTED VEHICLE MOVEMENT
- UNPROTECTED VEHICLE MOVEMENT
- * FUTURE USE/NOT USED

NOTES:

1. THE TEMPORARY SIGNAL SYSTEM SHOWN IS IN THE FINAL LANE CONFIGURATION. SUBMIT A TEMPORARY TRAFFIC PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO IMPLEMENTING ALTERATIONS TO THE TEMPORARY TRAFFIC SIGNAL.
2. CABLES FOR NORTHBOUND AND SOUTHBOUND TRAFFIC SHOULD BE ROUTED ALONG THE MESSENGER WIRE AND DROPPED TO THE EXISTING SIGNAL POLE AND THE MASTARM SIMPLEX. CABLES SHOULD BE SECURED TO THE MASTARM SIMPLEX WITH NYLON CABLE TIES. ROUTE CABLES ALONG EXTERIOR OF MASTARM AND WIRE TO EXISTING SIGNAL HEADS THROUGH BOTTOM OF SIGNAL HEAD ASSEMBLY.
3. REMOVE EXISTING LANE USE CONFIGURATION SIGN FROM MASTARMS ON POLES 4 AND 8 PRIOR TO ACTIVATING TEMPORARY SIGNAL. IF PROPOSED LANE USE CONFIGURATION SIGNS ARE INSTALLED PRIOR TO DECOMMISSIONING OF TEMPORARY SIGNAL, COMPLETELY COVER INSTALLED SIGNS WITH A DURABLE MATERIAL. SEE H40, H57, & H62 FOR PERMANENT SIGNAGE INFORMATION.
4. MAINTAIN EXISTING PEDESTRIAN ACCESS THROUGH THE WORK ZONE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) ACCESSIBILITY GUIDELINES, PLANS, AND SPECIFICATIONS.
5. AS APPROVED BY THE ENGINEER, CONTRACTOR MAY UTILIZE EXISTING SIGNAL EQUIPMENT & SIGNAL EQUIPMENT BEING SALVAGED TO FACILITATE THE TEMPORARY SIGNALIZATION
6. CONTRACTOR SHALL PROVIDE AND MAINTAIN A TEMPORARY RADAR DETECTION SYSTEM, SIGNAL INTERCONNECT SYSTEM, EMERGENCY VEHICLE PRE-EMPTION, PTZ CAMERA, AND INTERSECTION ILLUMINATION SYSTEM FOR THE DURATION THE TEMPORARY SIGNAL IS ACTIVE.
7. WHEN REQUIRED, PROVIDE TEMPORARY TS-2 TRAFFIC SIGNAL CONTROLLER CABINET, CONTROLLER, AND EQUIPMENT NECESSARY TO OPERATE THE TEMPORARY SIGNAL, INCLUDING THE RADAR DETECTION SYSTEM AND INTERCONNECT SYSTEM. SIGNAL CONTROL CABLES SHOULD BE BROUGHT OVERHEAD TO THE CABINET.
8. WHEN REQUIRED, PROVIDE TEMPORARY LOAD CENTER TO POWER TEMPORARY SIGNAL EQUIPMENT.
9. OBTAIN THE ENGINEER'S APPROVAL TO DECOMISSION AND SALVAGE THE TEMPORARY TRAFFIC SIGNAL SYSTEM ONCE THE PERMANENT TRAFFIC SIGNAL SYSTEM IS FUNCTIONAL AND ACCEPTED.
10. INSTALL TEMPORARY WOOD TRAFFIC POLES AND POLE GUYS WITHIN EXISTING ROW OR TCE. VERIFY TEN FOOT AERIAL CLEARANCE FROM ALL OVERHEAD POWER LINES.

SHEET NOTES:

1. PROPOSED PERMANENT LOAD CENTER
2. PROPOSED PERMANENT TRAFFIC CONTROLLER
3. TEMPORARY WOOD TRAFFIC POLE (WP)
4. CATERNARY, MESSENGER, TETHER, AND TRAFFIC SIGNAL CABLE
5. TEMPORARY SIGNING
6. CABLE DROP TO EXISTING POLE

STATE OF ALASKA 49TH CHRISTOPHER L. POST CE 11253 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH PAVEMENT PRESERVATION

SPENARD TEMPORARY SIGNAL

FILE W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\H_SHEETS\00132_SIGNAL_SPENARD.DWG | DATE/TIME 5/16/2022 12:58 PM | LAYOUT --- | DESIGNED ZJH | CHECKED CLP | DRAFTED MF

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K01	K15

DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

DATE	TIME	SCALE	DESIGNED BY	CHECKED BY	DRAFTED BY
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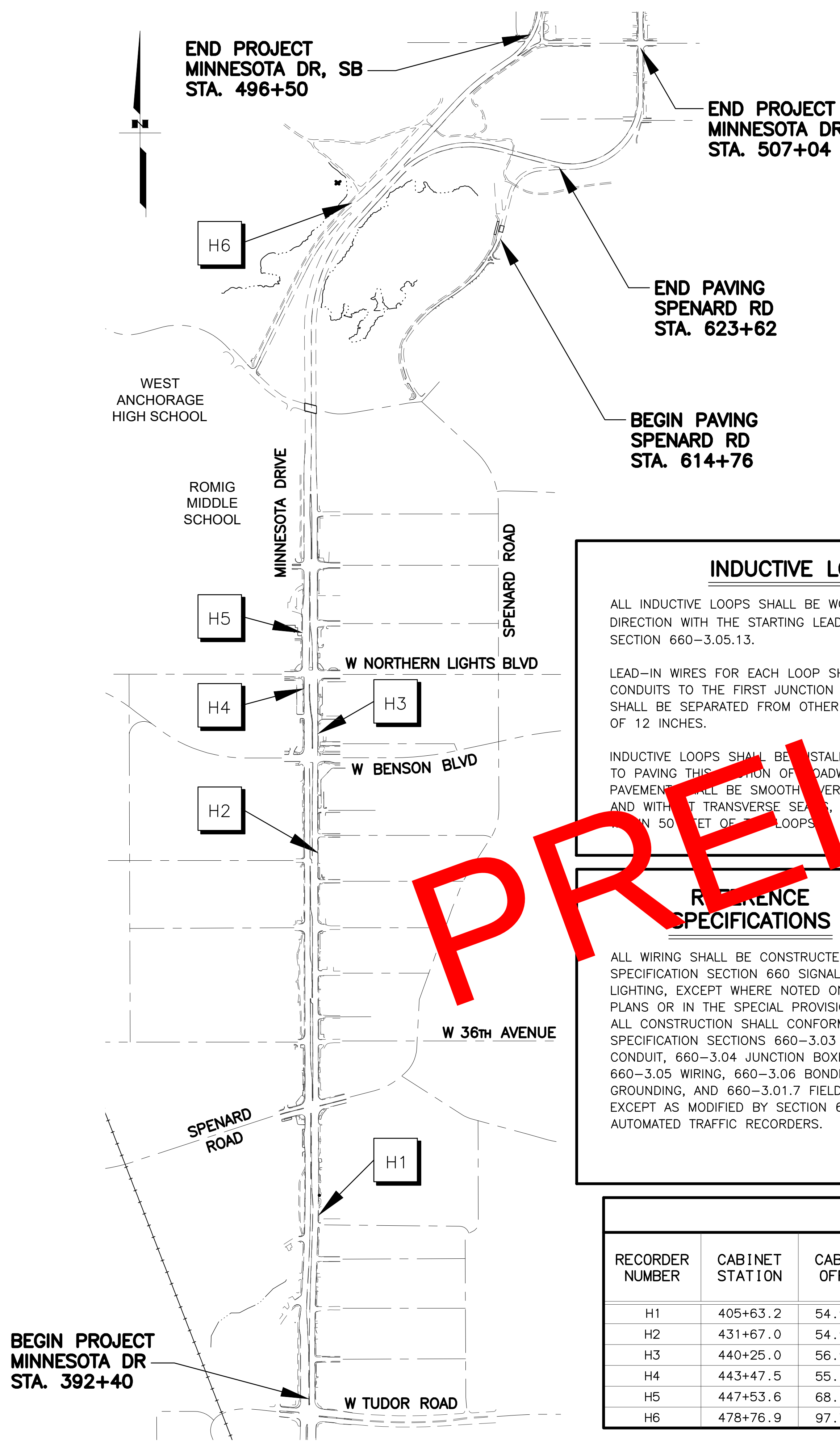


PRELIMINARY

INDUCTIVE LOOPS

ALL INDUCTIVE LOOPS SHALL BE WOUND IN THE SAME DIRECTION WITH THE STARTING LEAD MARKED "S" PER SECTION 660–3.05.13.

LEAD–IN WIRES FOR EACH LOOP SHALL BE IN SEPARATE CONDUITS TO THE FIRST JUNCTION BOX. THESE CONDUITS SHALL BE SEPARATED FROM OTHER LOOPS BY A MINIMUM OF 12 INCHES.

INDUCTIVE LOOPS SHALL BE INSTALLED IMMEDIATELY PRIOR TO PAVING THIS SECTION OF ROADWAY. FINAL LIFT ASPHALT PAVEMENT SHALL BE SMOOTH OVER ALL INDUCTIVE LOOPS AND WITHOUT TRANSVERSE SEAMS, JOINTS, OR ROUGHNESS WITHIN 50 FEET OF THE LOOPS.

DRAWING SHEET INDEX

SHEET NO.	DESCRIPTION
K01	ATR SITE PLAN
K02	H1 AND H2 ATR SITE PLAN
K03	H1 AND H2 WIRING DIAGRAM AND CONDUIT AND CONDUCTOR SCHEDULE
K04	H3 ATR SITE PLAN, WIRING DIAGRAM, CONDUIT AND CONDUCTOR SCHEDULE
K05	H4 ATR SITE PLAN, WIRING DIAGRAM AND CONDUIT AND CONDUCTOR SCHEDULE
K06	H5 ATR SITE PLAN
K07	H5 WIRING DIAGRAM AND CONDUIT AND CONDUCTOR SCHEDULE
K08	H6 ATR SITE PLAN
K09	H6 CONDUIT AND CONDUCTOR SCHEDULE
K10	H6 WIRING DIAGRAM
K11	ATR CABINET TYPE CBA1 DETAIL
K12	PIEZOELECTRIC SENSOR DETAIL
K13	LOOP DETECTOR DETAIL AND TYPE "X" CONDUIT OUTLET BODY DETAIL
K14	ATR TYPE II JUNCTION BOX DETAILS
K15	TYPICAL SPLICE/TEMPERATURE SENSOR DETAILS

REFERENCE SPECIFICATIONS

ALL WIRING SHALL BE CONSTRUCTED PER SPECIFICATION SECTION 660 SIGNALS AND LIGHTING, EXCEPT WHERE NOTED ON THE PLANS OR IN THE SPECIAL PROVISIONS. ALL CONSTRUCTION SHALL CONFORM TO SPECIFICATION SECTIONS 660–3.03 CONDUIT, 660–3.04 JUNCTION BOXES, 660–3.05 WIRING, 660–3.06 BONDING AND GROUNDING, AND 660–3.01.7 FIELD TESTS, EXCEPT AS MODIFIED BY SECTION 669 AUTOMATED TRAFFIC RECORDERS.

GENERAL NOTES

1. INSTALLATION OF EQUIPMENT AND MATERIALS SHALL CONFORM TO APPLICABLE REQUIREMENTS OF THE CURRENT NATIONAL ELECTRICAL CODE, ALASKA DOT&PF STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND LOCAL AMENDMENTS.
2. EVERY EFFORT HAS BEEN MADE TO MAKE THE INFORMATION CONTAINED IN THESE DOCUMENTS COMPLETE AND ACCURATE. HOWEVER, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE CONDITIONS AND DIMENSIONS.
3. PVC FROM JUNCTION BOXES TO TRAFFIC LOOPS IS NOT ALLOWED. USE ONLY RMC OR IMC.
4. ALL PVC CONDUIT AND FITTINGS SHALL BE 1 INCH SCHEDULE 80.
5. DATALOGGER WILL BE INSTALLED BY STATE OF ALASKA – HIGHWAY DATA SECTION – CONTACT MATT MURPHY, MANAGER (907) 269–0876.

LABELS

ALL CABLES SHALL BE LABELED AT BOTH ENDS AND AT EVERY JUNCTION BOX THROUGH WHICH THE CABLES PASS, PER SPECIFICATION SECTION 660–3.05.13.

ALL WIRE PAIRS SHALL BE LABELED AT THE TERMINAL BLOCK AND AT ANY LOOSE ENDS.

THE FOLLOWING CONVENTIONS SHALL APPLY TO DESIGNATING AND LABELING CABLES AND WIRE PAIRS:

LANES: TRAFFIC LANES AND THEIR RESPECTIVE LOOPS AND SENSORS SHALL BE LABELED FROM THE OUTSIDE EDGE OF THE ROAD TOWARD THE CENTER AS FOLLOWS:

| A | B | C | D | D | C | B | A |

TERMINAL BLOCKS: WIRES FROM SENSORS PLACED IN LANES WHICH ARE CLOSEST TO THE CONTROL BOX SHALL BE PLACED AT THE LEFT OR AT THE TOP OF THE TERMINAL BLOCK, DEPENDING ON ORIENTATION OF THE ROAD.

WIRES FOR INDUCTIVE LOOPS, SENSORS AND RESERVES ARE LABELED AS FOLLOWS:

PnDLc

WHERE:

P IS THE PREFIX:
- V TRAFFIC VOLUME LOOP
- H VEHICLE CLASSIFICATION / SPEED LOOP
- GL AUTOMATIC VEHICLE CLASSIFICATION (AVC) SENSOR
- Ga AUTOMATIC VEHICLE CLASSIFICATION PIEZO

n NUMBER SUFFIX FOR MULTIPLE LOOPS IN THE SAME LANE

D DIRECTION (N, S, E, W, NE, SE, SW, NW)

L IS THE PREFIX FOR ROAD DESIGNATION
- L LANE*
- R RAMP**
- SR SPUR RAMP**
- LP LOOP**
- LR LOOP RAMP**
- * ROADS AND HIGHWAYS
- ** INTERCHANGES

c IS THE SUFFIX FOR LANE DESIGNATION (A, B, C, D)

RMC RIGID METAL CONDUIT, GALVANIZED

IMC INTERMEDIATE METAL CONDUIT

TG GROUND TEMPERATURE PROBE

TA AMBIENT AIR TEMPERATURE SENSOR

DATALOGGER – SEE NOTE 5. ADOT WILL INSTALL.

CONDUIT REFERENCE NUMBER

NOTE REFERENCE NUMBER

ATR ASSEMBLIES SCHEDULE

RECORDER NUMBER	CABINET STATION	CABINET OFFSET	NUMBER OF LANES	SITE NUMBER	CABINET ASSEMBLY	LOAD CENTER	TYPE II JUNCTION BOXES	INDUCTIVE LOOPS (QTY.)	PIEZO SENSORS (QTY.)
H1	405+63.2	54.9' RT	6	54047000	CBA1	NO	NEW	6(1 PER LANE)	NONE
H2	431+67.0	54.9' RT	6	54052000	CBA1	NO	NEW	6(1 PER LANE)	NONE
H3	440+25.0	56.9' RT	3	54060000	CBA1	NO	NEW	3(1 PER LANE)	NONE
H4	443+47.5	55.1' LT	3	54060000	CBA1	NO	NEW	3(1 PER LANE)	NONE
H5	447+53.6	68.1' LT	7	54063000	CBA1	NO	NEW	7(1 PER LANE)	NONE
H6	478+76.9	97.7' LT	6	1160042U	CBA2	NO	NEW	12(2 PER LANE)	12(2 PER LANE)

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0590

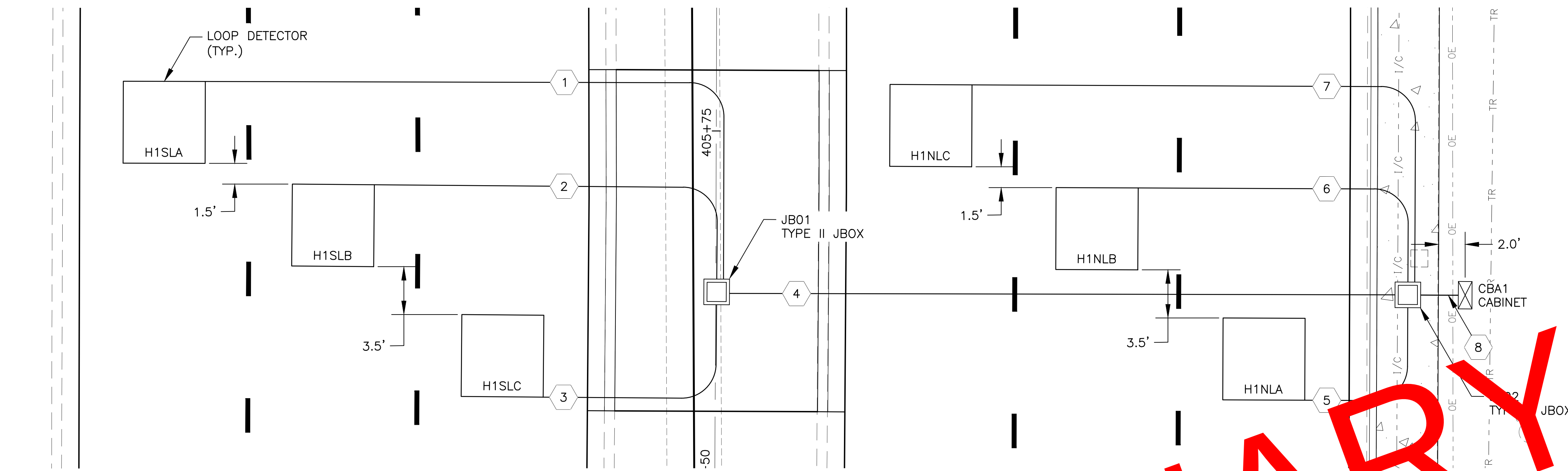
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

ATR SITE PLAN

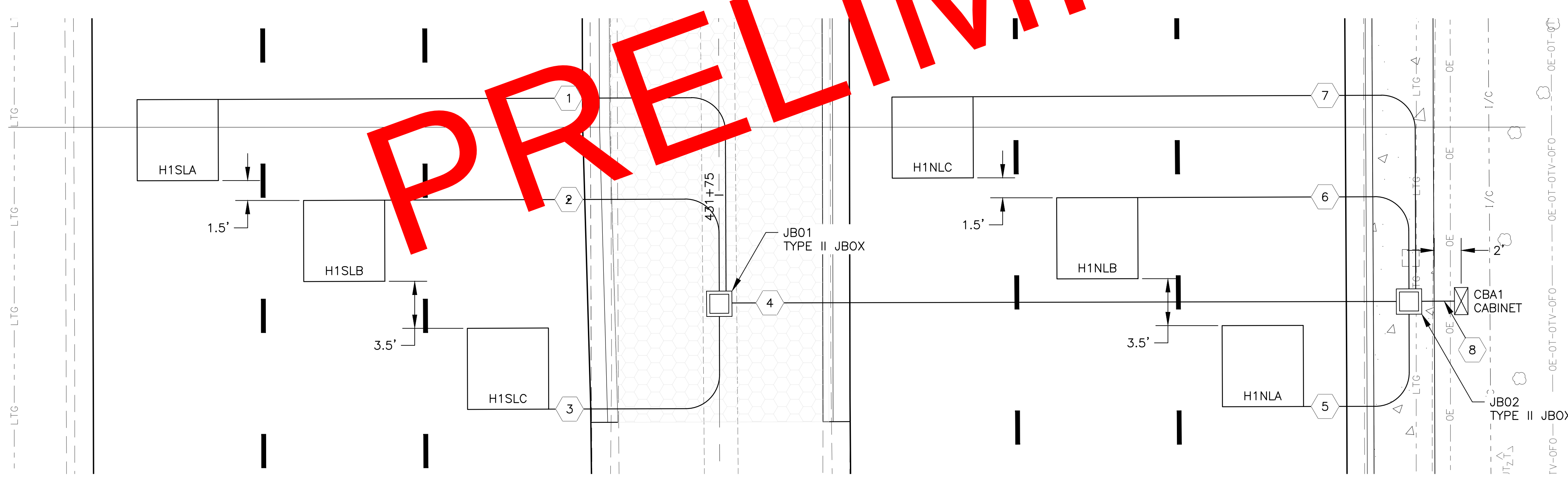
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K02	K15



ATR SITE PLAN H1

STA. 405+63.2 54.9' RT



ATR SITE PLAN H2

STA. 431+67.0 54.9' RT

NOTES:

1. ATR SITES H1 AND H2 ARE THE SAME LAYOUT.
2. CONDUIT FOR LOOPS SHALL BE 1 INCH SCHEDULE 80 PVC.
3. PROVIDE GROUNDING BUSHINGS ON METAL CONDUITS. GROUND WITH A MINIMUM #6 BARE CU.
4. INSTALL ALL LOOP DETECTORS BEFORE OVERLAYING PAVEMENT.
5. LOOPS TO BE CENTERED IN LANE.
6. TEST ALL LOOP DETECTORS PER SPECIFICATION 660-3.01.7. FIELD TEST ALL CONDUCTORS AND REPLACE THOSE THAT FAIL. INSTALL REPLACEMENT LOOP DETECTORS BEFORE OVERLAYING PAVEMENT.
7. MINIMUM SPACING BETWEEN TAIL AND LOOP OR PIEZO IS 1 FOOT. DO NOT CROSS SENSOR TAILS.
8. SPLICE LOOP WIRING TO MULTI-PAIR CABLE USING NON-REENTERABLE, WET LOCATION SPLICE. SEE TYPICAL SPLICE DETAIL.
9. CABINET DOOR TO OPEN AWAY FROM ROADWAY. SEE CABINET TYPE CBA1 DETAIL.
10. ALL WORK TO BE COMPLETED WITHIN THE RIGHT-OF-WAY.

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

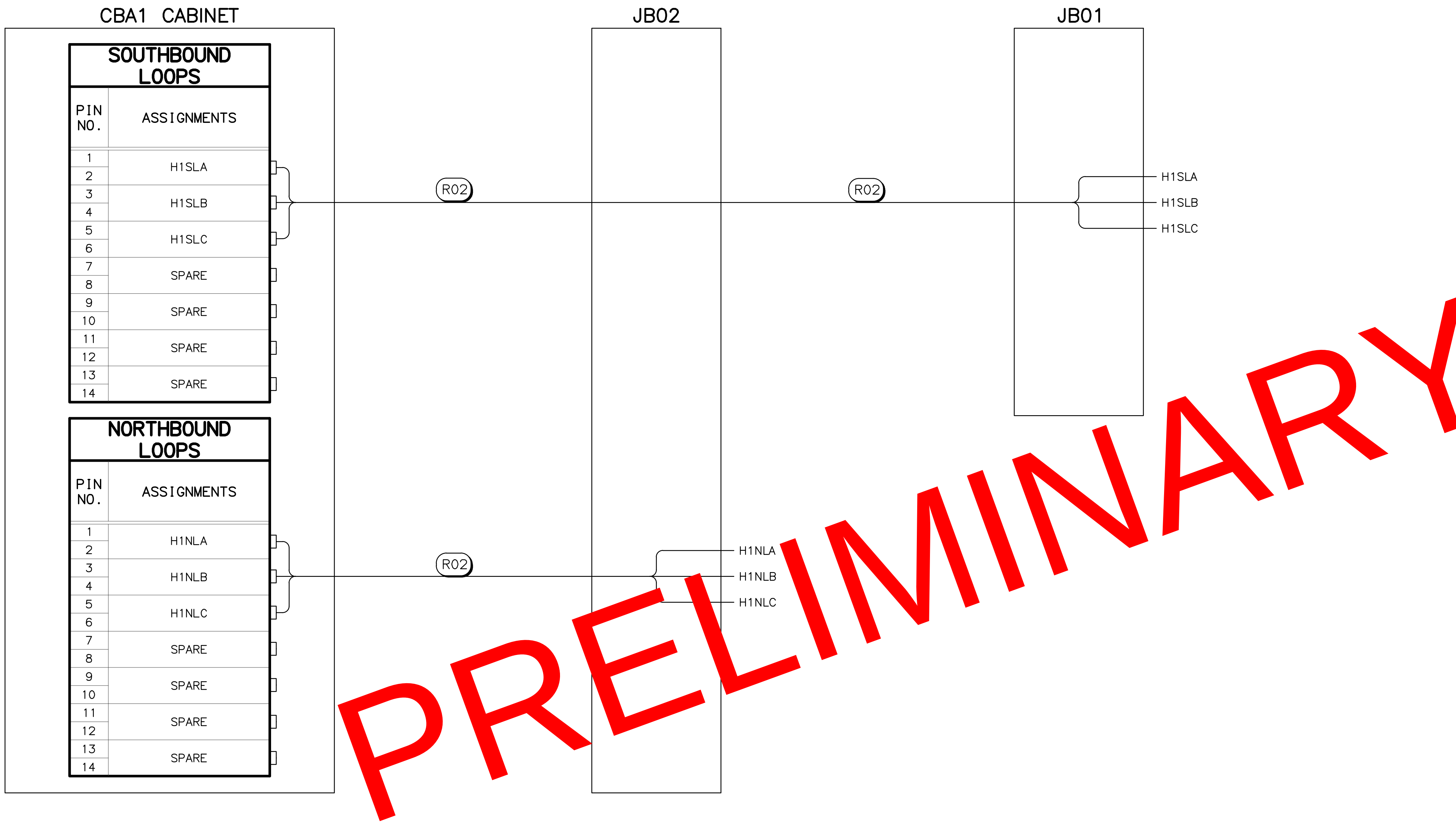
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

H1 AND H2 ATR SITE PLAN

DESIGNED BY JKH | CHECKED BY RRH | DRAFTED BY JKH
SCALE 1" = 5'
DATE 5/16/2022 TIME 1:52 PM
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K03	K15



NOTES:

1. SPLICE LOOP WIRING TO MULTI-PAIR CABLE USING NON-REENTERABLE, WET LOCATION SPLICE. SEE TYPICAL SPLICE DETAIL.

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT		FROM	TO	CABLE		
NO.	SIZE			QTY.	TYPE	NUMBER
1	1"	JB01	H1SLA	1	2C #14	R01
2	1"	JB01	H1SLB	1	2C #14	R01
3	1"	JB01	H1SLC	1	2C #14	R01
4	2"	JB02	JB01	1	7 PR. #18	R02
5	1"	JB02	H1NLA	1	2C #14	R01
6	1"	JB02	H1NLB	1	2C #14	R01
7	1"	JB02	H1NLC	1	2C #14	R01
8	2"	CBA1	JB02	2	7 PR. #18	R02

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

H1 AND H2 WIRING DIAGRAM/
CONDUIT AND CONDUCTOR SCHEDULE

DESIGNED BY JKH
CHECKED BY RRH
DRAFTED BY JKH
SCALE 1" = 1'
DATE 5/16/2022 TIME 1:52 PM
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K04	K15

DESIGNED BY	JKH
CHECKED BY	RRH
DRAFTED BY	JKH
SCALE	VARIES
TIME	1:54 PM
DATE	5/16/2022
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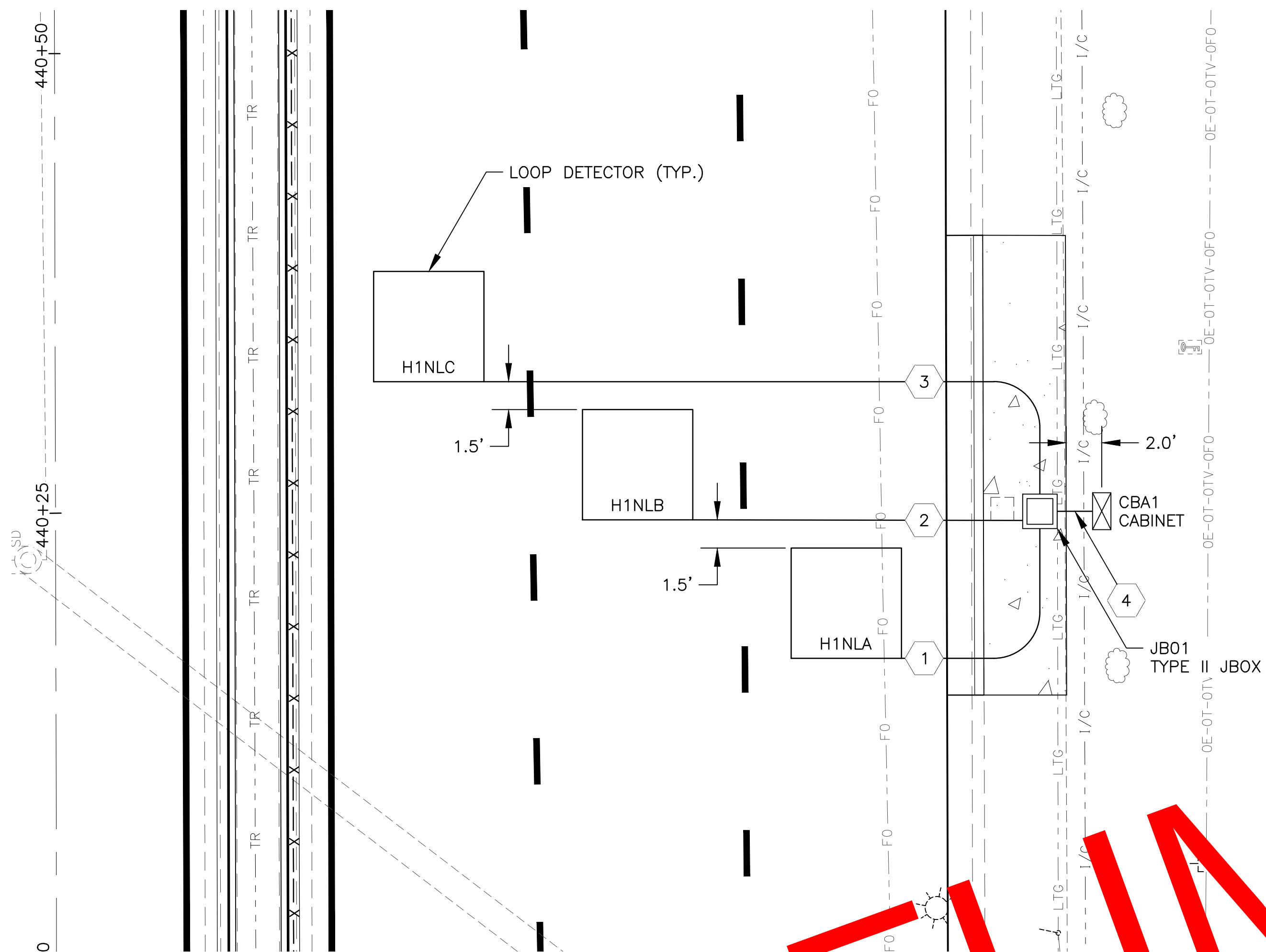
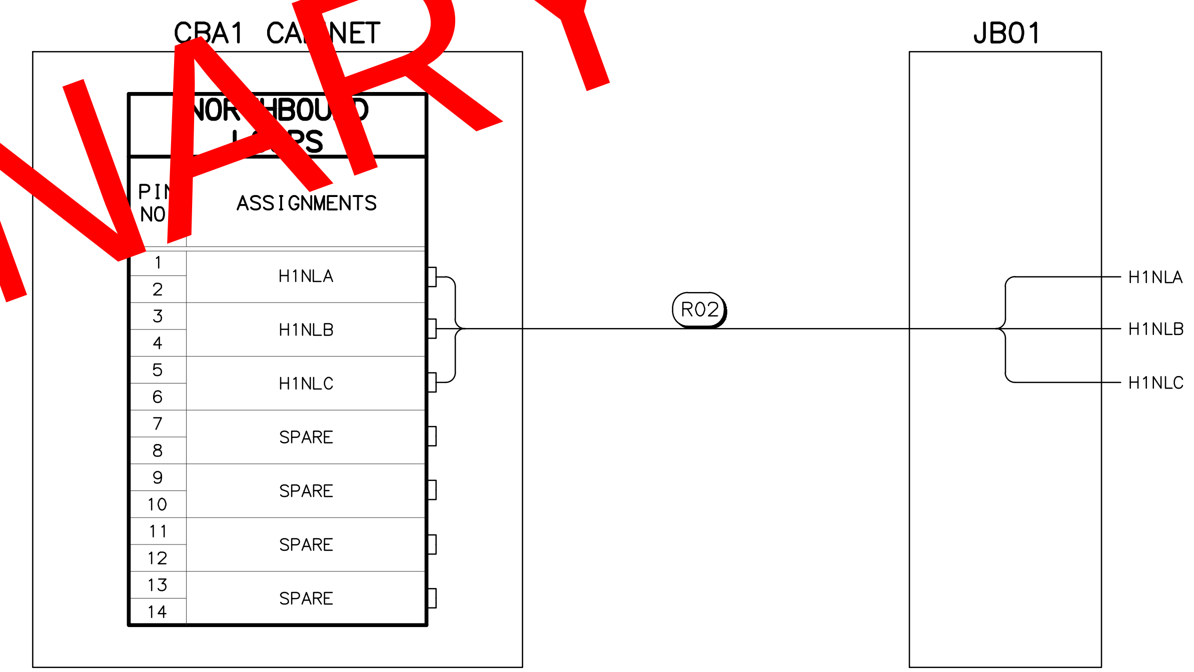


ATR SITE PLAN H3

STA. 440+20 50' RT

NOTES:

1. CONDUIT FOR LOOPS SHALL BE 1 INCH SCHEDULE 80 PVC.
2. PROVIDE GROUNDING BUSHINGS ON METAL CONDUITS. GROUND WITH A MINIMUM #6 BARE CU.
3. INSTALL ALL LOOP DETECTORS BEFORE OVERLAYING PAVEMENT.
4. LOOPS TO BE CENTERED IN LANE.
5. TEST ALL LOOP DETECTORS PER SPECIFICATION 660-3.01.7. FIELD TEST ALL CONDUCTORS AND REPLACE THOSE THAT FAIL. INSTALL REPLACEMENT LOOP DETECTORS BEFORE OVERLAYING PAVEMENT.
6. MINIMUM SPACING BETWEEN TAIL AND LOOP OR PIEZO IS 1 FOOT. DO NOT CROSS SENSOR TAILS.
7. SPLICE LOOP WIRING TO MULTI-PAIR CABLE USING NON-REENTERABLE, WET LOCATION SPLICE. SEE TYPICAL SPLICE DETAIL.
8. CABINET DOOR TO OPEN AWAY FROM ROADWAY. SEE CABINET TYPE CBA1 DETAIL.
9. ALL WORK TO BE COMPLETED WITHIN THE RIGHT-OF-WAY.



PRELIMINARY

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT		FROM	TO	CABLE		
NO.	SIZE			QTY.	TYPE	NUMBER
1	1"	JB01	H1NLA	1	2C #14	R01
2	1"	JB01	H1NLB	1	2C #14	R01
3	1"	JB01	H1NLC	1	2C #14	R01
4	2"	CBA1	JB01	1	7 PR. #18	R02

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION
H3 ATR SITE PLAN/WIRING DIAGRAM/CONDUIT AND CONDUCTOR SCHEDULE

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K05	K15

NOTES:

1. CONDUIT FOR LOOPS SHALL BE 1 INCH SCHEDULE 80 PVC.
2. PROVIDE GROUNDING BUSHINGS ON METAL CONDUITS. GROUND WITH A MINIMUM #6 BARE CU.
3. INSTALL ALL LOOP DETECTORS BEFORE OVERLAYING PAVEMENT.
4. LOOPS TO BE CENTERED IN LANE.
5. TEST ALL LOOP DETECTORS PER SPECIFICATION 660-3.01.7. FIELD TEST ALL CONDUCTORS AND REPLACE THOSE THAT FAIL. INSTALL REPLACEMENT LOOP DETECTORS BEFORE OVERLAYING PAVEMENT.
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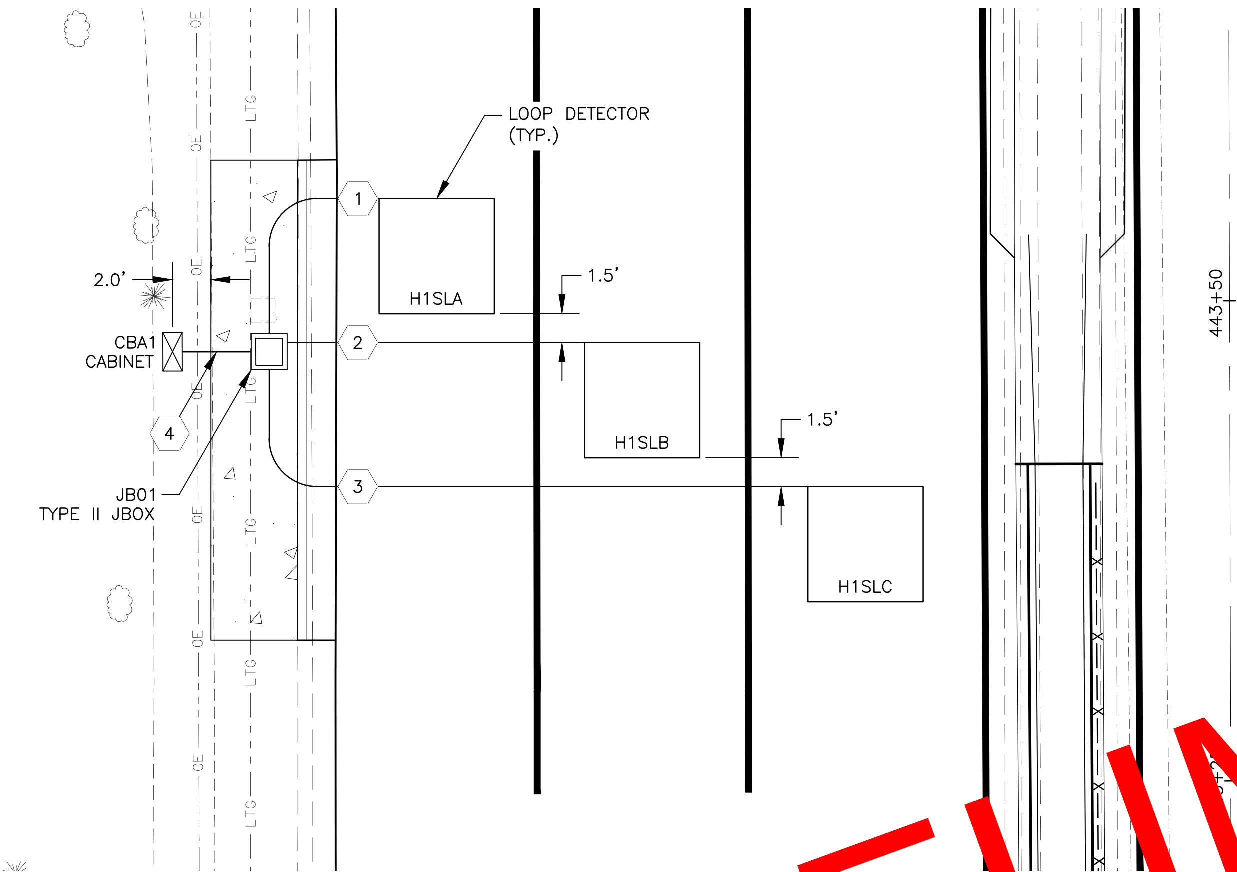
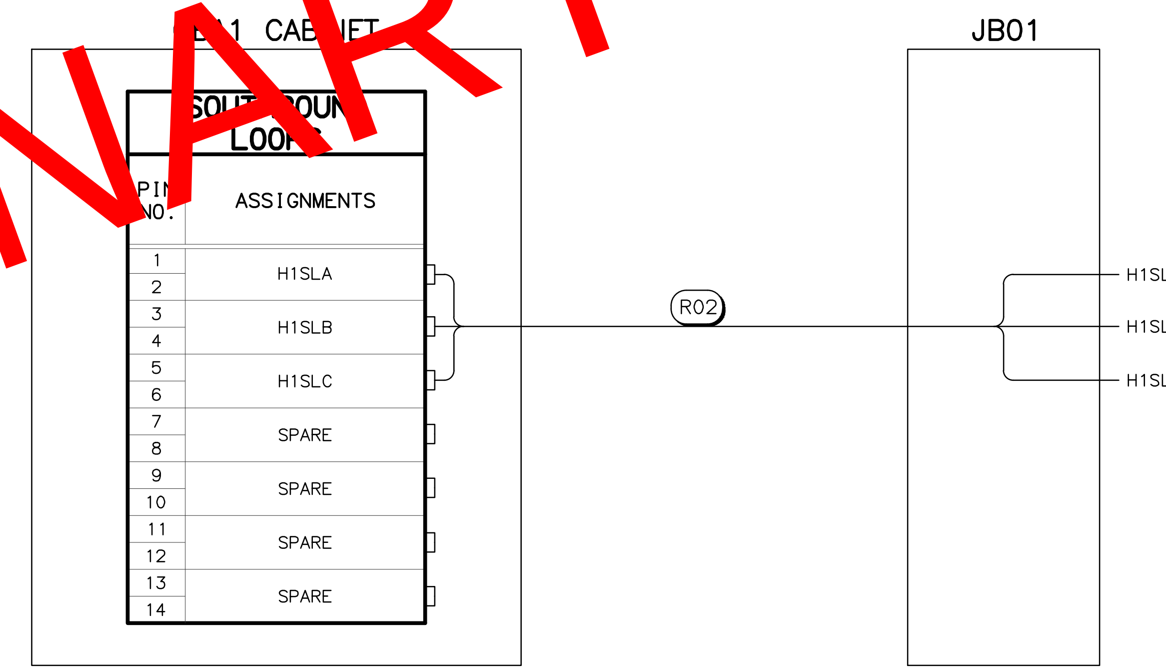
7. SPLICE LOOP WIRING TO MULTI-PAIR CABLE USING NON-REENTERABLE, WET LOCATION SPLICE. SEE TYPICAL SPLICE DETAIL.
8. CABINET DOOR TO OPEN AWAY FROM ROADWAY. SEE CABINET TYPE CBA1 DETAIL.
9. ALL WORK TO BE COMPLETED WITHIN THE RIGHT-OF-WAY.



ATR SITE PLAN H4
STA. 443+47.5 ... LT



PRELIMINARY

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT		FROM	TO	CABLE		
NO.	SIZE			QTY.	TYPE	NUMBER
1	1"	JB01	H1SLA	1	2C #14	R01
2	1"	JB01	H1SLB	1	2C #14	R01
3	1"	JB01	H1SLC	1	2C #14	R01
4	2"	CBA1	JB01	1	7 PR. #18	R02

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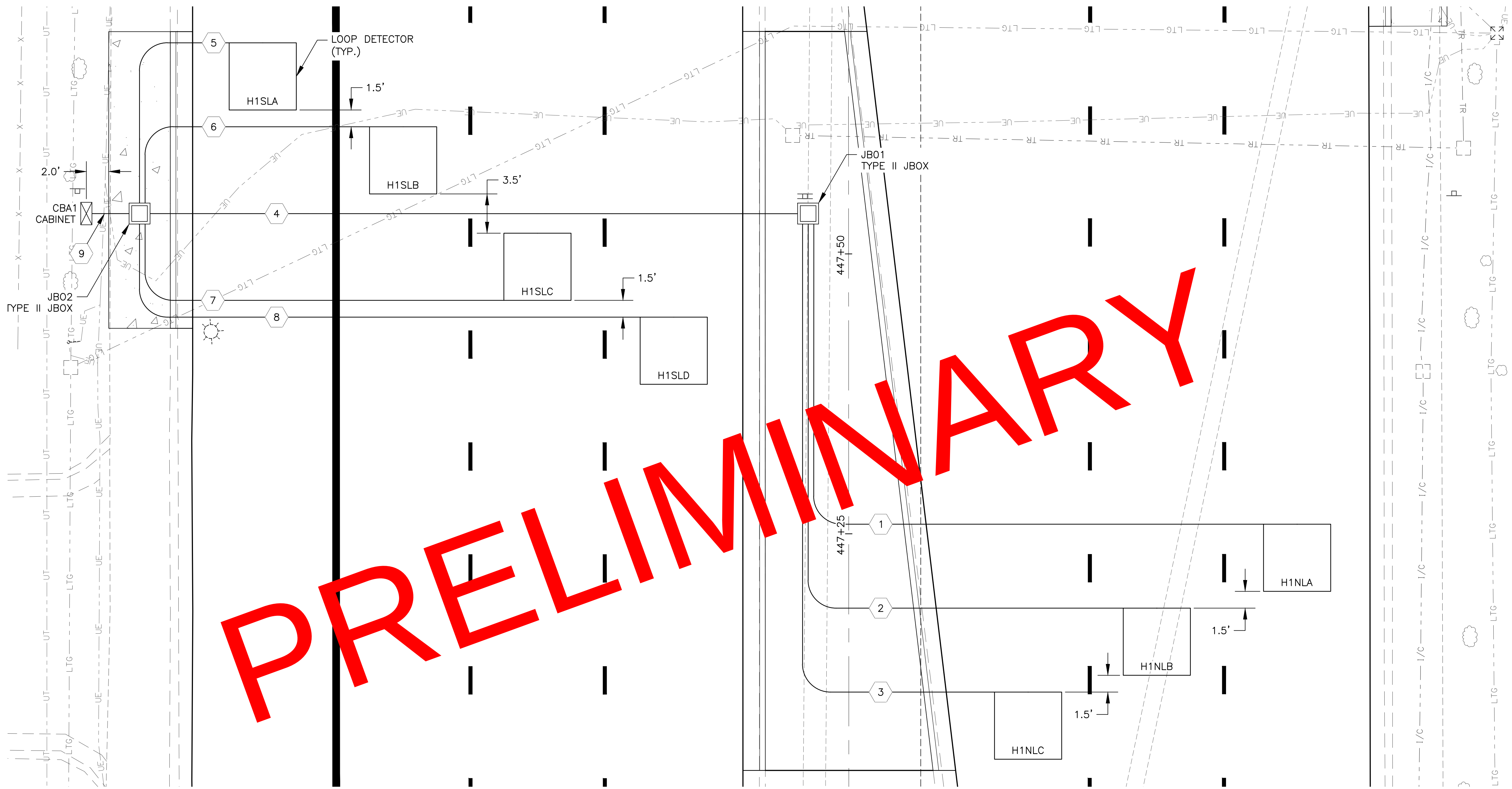
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION
H4 ATR SITE PLAN/WIRING DIAGRAM/CONDUIT AND CONDUCTOR SCHEDULE

DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG
DATE 5/16/2022 TIME 1:56 PM
SCALE VARIES
DESIGNED BY JKH
CHECKED BY RRH
DRAFTED BY JKH

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K06	K15



NOTES:

1. CONDUIT FOR LOOPS SHALL BE 1 INCH SCHEDULE 80 PVC.
2. PROVIDE GROUNDING BUSHINGS ON METAL CONDUITS. GROUND WITH A MINIMUM #6 BARE CU.
3. INSTALL ALL LOOP DETECTORS BEFORE OVERLAYING PAVEMENT.
4. LOOPS TO BE CENTERED IN LANE.
5. TEST ALL LOOP DETECTORS PER SPECIFICATION 660-3.01.7. FIELD TEST ALL CONDUCTORS AND REPLACE THOSE THAT FAIL. INSTALL REPLACEMENT LOOP DETECTORS BEFORE OVERLAYING PAVEMENT.
6. MINIMUM SPACING BETWEEN TAIL AND LOOP OR PIEZO IS 1 FOOT. DO NOT CROSS SENSOR TAILS.
7. SPLICE LOOP WIRING TO MULTI-PAIR CABLE USING NON-REENTERABLE, WET LOCATION SPLICE. SEE TYPICAL SPLICE DETAIL.
8. CABINET DOOR TO OPEN AWAY FROM ROADWAY. SEE CABINET TYPE CBA1 DETAIL.
9. ALL WORK TO BE COMPLETED WITHIN THE RIGHT-OF-WAY.

ATR SITE PLAN H5

STA. 447+53.6 68.1' LT

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

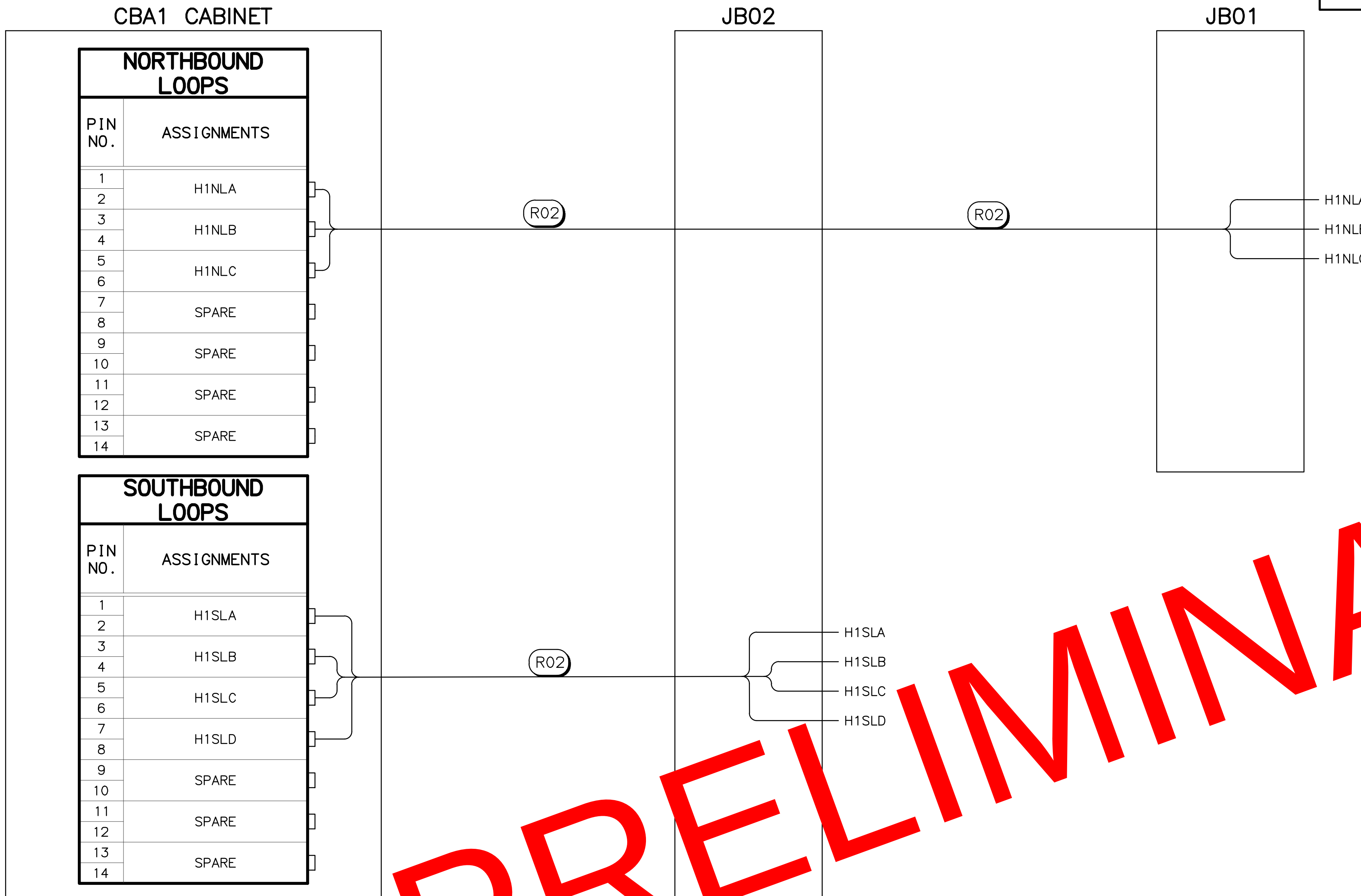
H5 ATR SITE PLAN

DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

DATE	TIME	SCALE	DESIGNED BY	CHECKED BY	DRAFTED BY
5/16/2022	1:57 PM	1" = 5'	JKH	RRH	JKH

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K07	K15



PRELIMINARY

NOTES:

1. SPLICE LOOP WIRING TO MULTI–PAIR CABLE USING NON–REENTERABLE, WET LOCATION SPLICE. SEE DETAIL.

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT		FROM	TO	CABLE		
NO.	SIZE			QTY.	TYPE	NUMBER
1	1"	JB01	H1NLA	1	2C #14	R01
2	1"	JB01	H1NLB	1	2C #14	R01
3	1"	JB01	H1NLC	1	2C #14	R01
4	2"	JB02	JB01	1	7 PR. #18	R02
5	1"	JB02	H1SLA	1	2C #14	R01
6	1"	JB02	H1SLB	1	2C #14	R01
7	1"	JB02	H1SLC	1	2C #14	R01
8	1"	JB02	H1SLD	1	2C #14	R01
9	2"	CBA1	JB02	2	7 PR. #18	R02

STATE OF ALASKA
49TH
RYAN R. HAMMEL
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

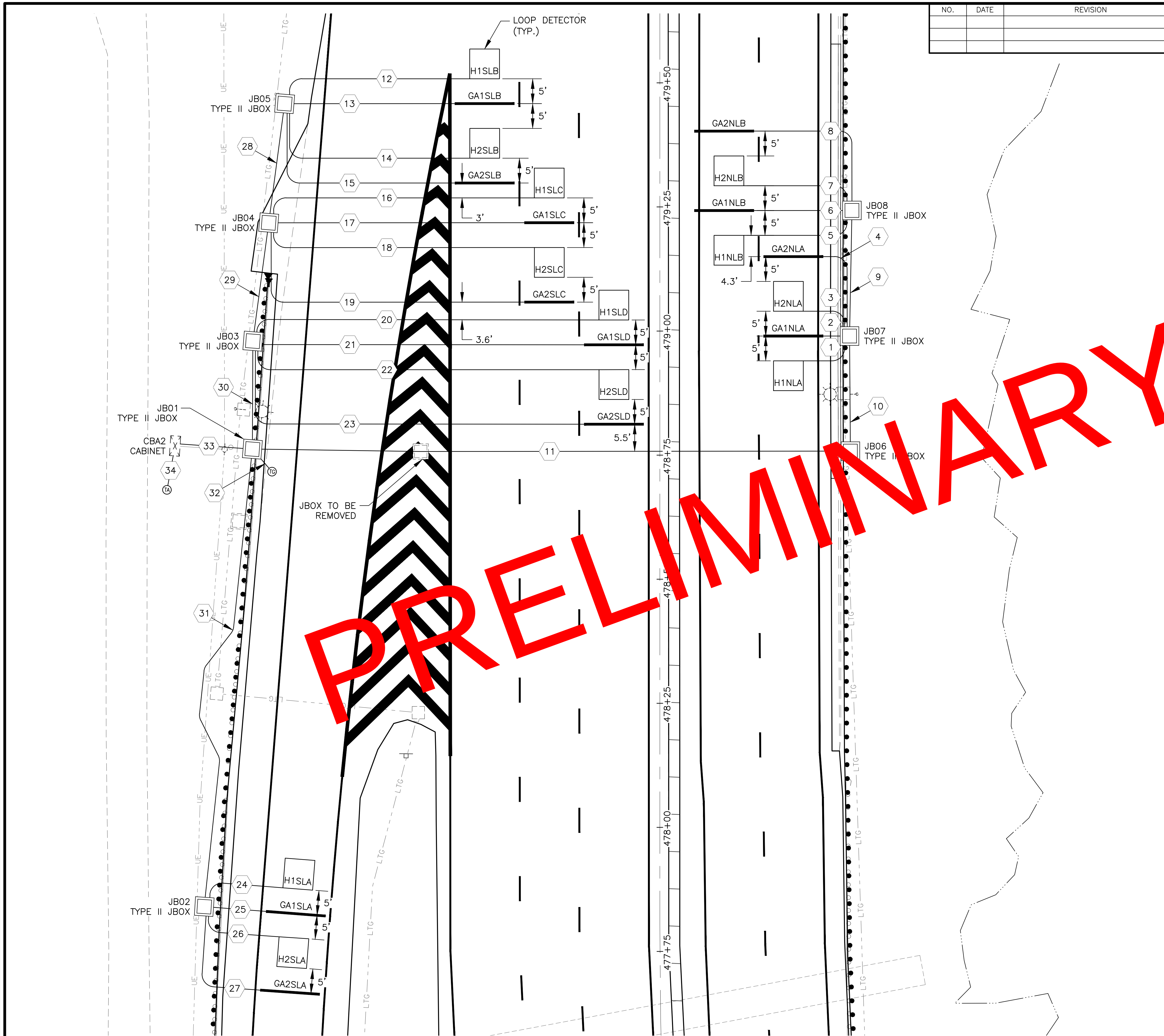
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION
H5 ATR WIRING
DIAGRAM/CONDUIT AND
CONDUCTOR SCHEDULE

DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

DATE 5/16/2022 TIME 1:58 PM
SCALE 1" = 1'
DESIGNED BY JKH
CHECKED BY RRH
DRAFTED BY JKH

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K08	K15



NOTES:

1. CONDUIT FOR LOOPS SHALL BE 1 INCH SCHEDULE 80 PVC.
2. PROVIDE GROUNDING BUSHINGS ON METAL CONDUITS. GROUND WITH A MINIMUM #6 BARE CU.
3. INSTALL LOOP DETECTORS BEFORE OVERLAYING PAVEMENT.
4. LOOPS TO BE CENTERED IN LANE.
5. TEST ALL LOOP DETECTORS PER SPECIFICATION 660-3.01.7. FIELD TEST ALL CONDUCTORS AND REPLACE THOSE THAT FAIL. INSTALL REPLACEMENT LOOP DETECTORS BEFORE OVERLAYING PAVEMENT.
6. MINIMUM SPACING BETWEEN TAIL AND LOOP OR PIEZO IS 1 FOOT. DO NOT CROSS SENSOR TAILS.
7. SPLICE LOOP WIRING TO MULTI-PAIR CABLE USING NON-REENTERABLE, WET LOCATION SPLICE. SEE TYPICAL SPLICE DETAIL.
8. CONTRACTOR SHALL PROVIDE AND INSTALL THE FOLLOWING PIEZO LENGTHS:
   - 8.1. GA1NLA AND GA2NLA – 12' PIEZOS INSTALLED WITH 1' EXTENDING OVER THE FOG LINE INTO THE SHOULDER.
   - 8.2. GA1NLB AND GA2NLB – 12' PIEZOS INSTALLED WITH 1' EXTENDING OVER THE FOG LINE TOWARD THE MEDIAN BARRIER.
   - 8.3. GA1SLA AND GA2SLA – 12' PIEZOS INSTALLED CENTERED IN THE LANE.
   - 8.4. GA1SLB AND GA2SLB – 12' PIEZOS INSTALLED CENTERED IN THE LANE.
   - 8.5. GA1SLC AND GA2SLC – 10' PIEZOS INSTALLED CENTERED IN THE LANE.
   - 8.6. GA1SLD AND GA2SLD – 12' PIEZOS INSTALLED CENTERED IN THE LANE.
9. RUN COAX CABLE FOR PIEZO SENSORS WITHOUT SPLICES TO "F" CONNECTOR AT THE TERMINAL BLOCK IN THE CABINET. TAIL LENGTH SHALL INCLUDE 6 FEET OF COAX IN THE CABINET.
10. PLACE GROUND TEMPERATURE PROBE IN PAVEMENT SHOULDER. SEE TEMPERATURE SENSOR DETAIL. PROBE TAIL SHALL INCLUDE 6 FEET OF CABLE IN CABINET FOR CONNECTION TO THE CR100X DATA LOGGER.
11. ALL WORK TO BE COMPLETED WITHIN THE RIGHT-OF-WAY.
12. LOOPS AND PIEZOS FOR HILLCREST EXIT RAMP ARE BEING RELOCATED APPROXIMATELY 78' UP THE RAMP. REMOVE EXISTING LOOPS AND PIEZOS.

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

H6 ATR SITE PLAN

DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

DATE 5/16/2022 | TIME 1:58 PM | SCALE 1" = 10' | DESIGNED BY JKH | CHECKED BY RRH | DRAFTED BY JKH

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K09	K15

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT		FROM	TO	CABLE		
NO.	SIZE			QTY.	TYPE	NUMBER
1	1"	JB07	H1NLA	1	2C #14	
2	1"	JB07	GA1NLA	1	RG58 COAX	C01
3	1"	JB07	H2NLA	1	2C #14	
4	1"	JB07	GA2NLA	1	RG58 COAX	C02
5	1"	JB08	H1NLB	1	2C #14	
6	1"	JB08	GA1NLB	1	RG58 COAX	C03
7	1"	JB08	H2NLB	1	2C #14	
8	1"	JB08	GA2NLB	1	RG58 COAX	C04
9	2"	JB07	JB08	2	RG58 COAX	C03, C04
				1	3 PR #18	R01
10	2"	JB06	JB07	4	RG58 COAX	C01-C04
				1	7 PR #18	R02
11*	2"	JB01	JB06	4	RG58 COAX	C01-C04
				1	7 PR #18	R02
12	1"	JB05	H1SLB	1	2C #14	
13	1"	JB05	GA1SLB	1	RG58 COAX	C05
14	1"	JB05	H2SLB	1	2C #14	
15	1"	JB05	GA2SLB	1	RG58 COAX	C06
16	1"	JB04	H1SLC	1	2C #14	
17	1"	JB04	GA1SLC	1	RG58 CO[illegible]	C07
18	1"	JB04	H2SLC	1	2C #14	
19	1"	JB04	GA2SLC	1	[illegible]58 CO[illegible]	[illegible]8
20	1"	JB03	H1SLD	1	2C [illegible]14	
21	1"	JB03	GA1SLD	1	[illegible]G58 C[illegible]	C09
22	1"	JB03	H2S[illegible]	1	[illegible]2C #14	
23	1"	JB03	GA2S[illegible]	1	RG58 COAX	C10
24	1"	[illegible]B02	H1SLA	[illegible]	2C #14	
25	1"	JB0[illegible]	GA1SLA	1	RG58 COAX	C11
26	1"	JB02	H2SLA	1	2C #14	
27	1"	JB0[illegible]	G[illegible]LA	1	RG58 COAX	C12
28	2"	JB04	JB05	2	RG58 COAX	C05, C06
				1	3 PR #18	R01
29	2"	JB03	JB04	4	RG58 COAX	C05-C08
				1	7 PR #18	R02
30	2"	JB01	JB03	6	RG58 COAX	C05-C10
				1	7 PR #18	R02
31	2"	JB01	JB02	2	RG58 COAX	C11, C12
				1	7 PR #18	R02
32	1"	JB01	TG, TS	2	2C #18	T01, T02
33	3"	CBA2	JB01	12	RG58 COAX	C01-C12
				3	7 PR #18	R02
				2	2C #18	T01, T02
34	1"	CBA2	TA	1	2C #18	T03

*INCLUDE SPARE CONDUIT CROSSING FOR CONDUIT RUN #11

NOTES:

1. SPLICE LOOP WIRING TO MULTI-PAIR CABLE USING NON-REENTERABLE, WET LOCATION SPLICE. SEE DETAIL.
2. COAX CABLE FOR PIEZO SENSORS TO BE RUN WITHOUT SPLICES TO "F" CONNECTOR AT TERMINAL BLOCK IN CABINET.
3. MOUNT AIR TEMPERATURE SENSOR TO CABINET.

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

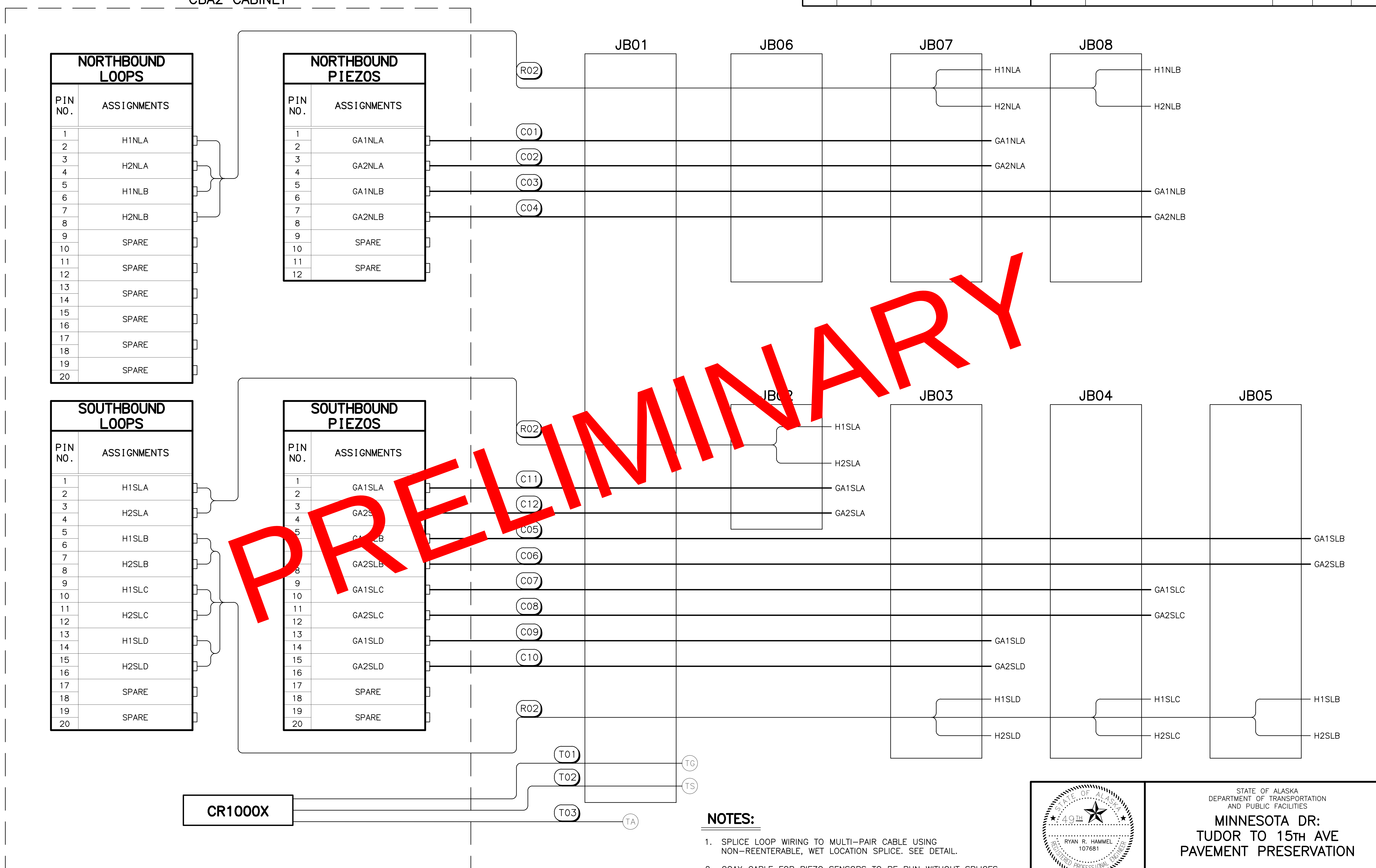
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

H6 CONDUIT AND CONDUCTOR SCHEDULE

DESIGNED BY JKH
CHECKED BY RRH
DRAFTED BY JKH
SCALE 1" = 1'
TIME 1:59 PM
DATE 5/16/2022
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K10	K15



NORTHBOUND LOOPS

PIN NO.	ASSIGNMENTS
1, 2	H1NLA
3, 4	H2NLA
5, 6	H1NLB
7, 8	H2NLB
9, 10	SPARE
11, 12	SPARE
13, 14	SPARE
15, 16	SPARE
17, 18	SPARE
19, 20	SPARE

NORTHBOUND PIEZOS

PIN NO.	ASSIGNMENTS
1, 2	GA1NLA
3, 4	GA2NLA
5, 6	GA1NLB
7, 8	GA2NLB
9, 10	SPARE
11, 12	SPARE

SOUTHBOUND LOOPS

PIN NO.	ASSIGNMENTS
1, 2	H1SLA
3, 4	H2SLA
5, 6	H1SLB
7, 8	H2SLB
9, 10	H1SLC
11, 12	H2SLC
13, 14	H1SLD
15, 16	H2SLD
17, 18	SPARE
19, 20	SPARE

SOUTHBOUND PIEZOS

PIN NO.	ASSIGNMENTS
1, 2	GA1SLA
3, 4	GA2SLA
5, 6	GA1SLB
7, 8	GA2SLB
9, 10	GA1SLC
11, 12	GA2SLC
13, 14	GA1SLD
15, 16	GA2SLD
17, 18	SPARE
19, 20	SPARE

NOTES:

1. SPLICE LOOP WIRING TO MULTI–PAIR CABLE USING NON–REENTERABLE, WET LOCATION SPLICE. SEE DETAIL.
2. COAX CABLE FOR PIEZO SENSORS TO BE RUN WITHOUT SPLICES TO "F" CONNECTOR AT TERMINAL BLOCK IN CABINET.
3. MOUNT AIR TEMPERATURE SENSOR TO CABINET.

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

H6 WIRING DIAGRAM

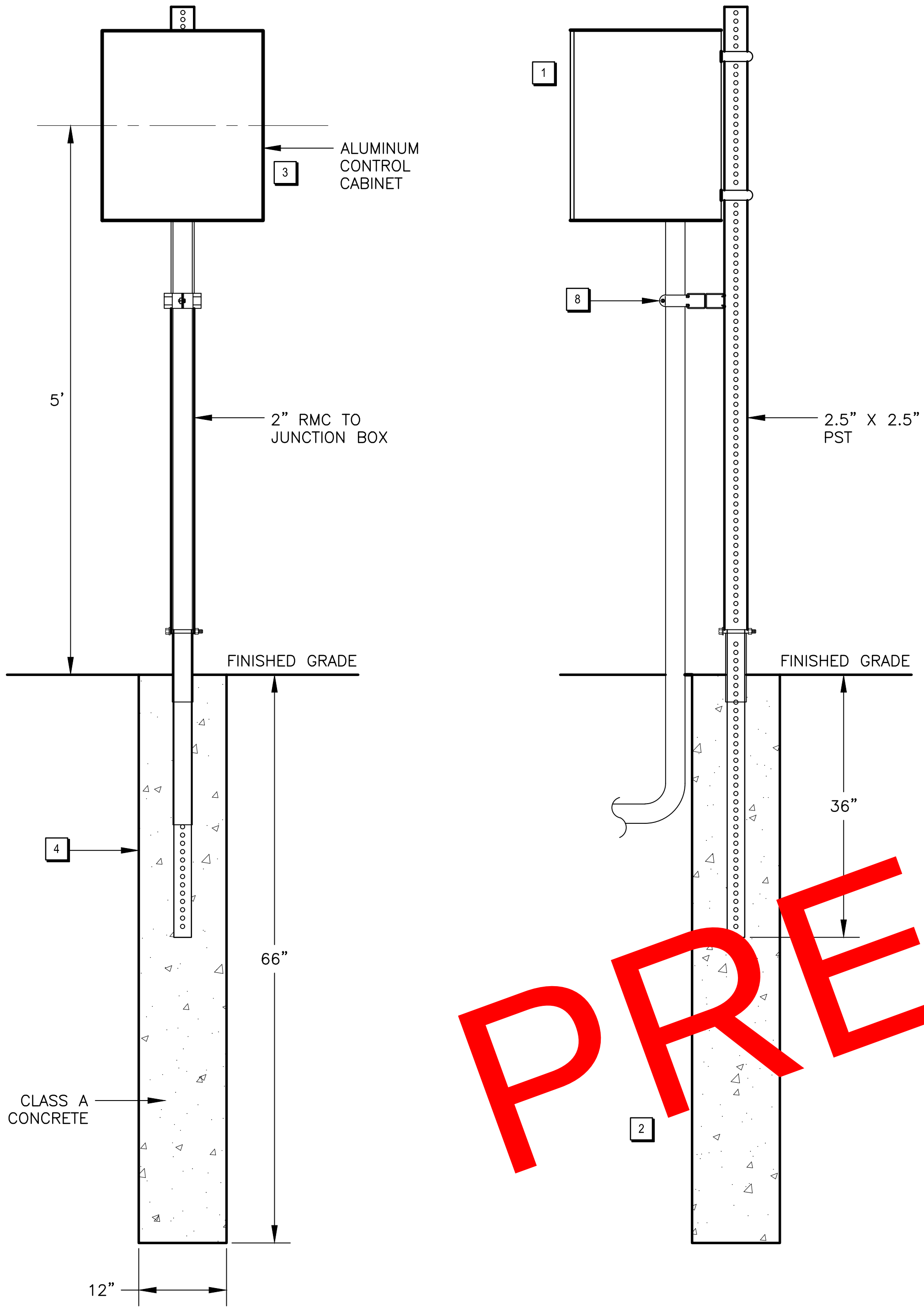
DESIGNED BY JKH | CHECKED BY RRH | DRAFTED BY JKH
SCALE 1" = 1'
TIME 1:59 PM
DATE 5/16/2022
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

DESIGNED BY	JKH
CHECKED BY	RRH
DRAFTED BY	JKH
SCALE	N/A
TIME	2:00 PM
DATE	5/16/2022

DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

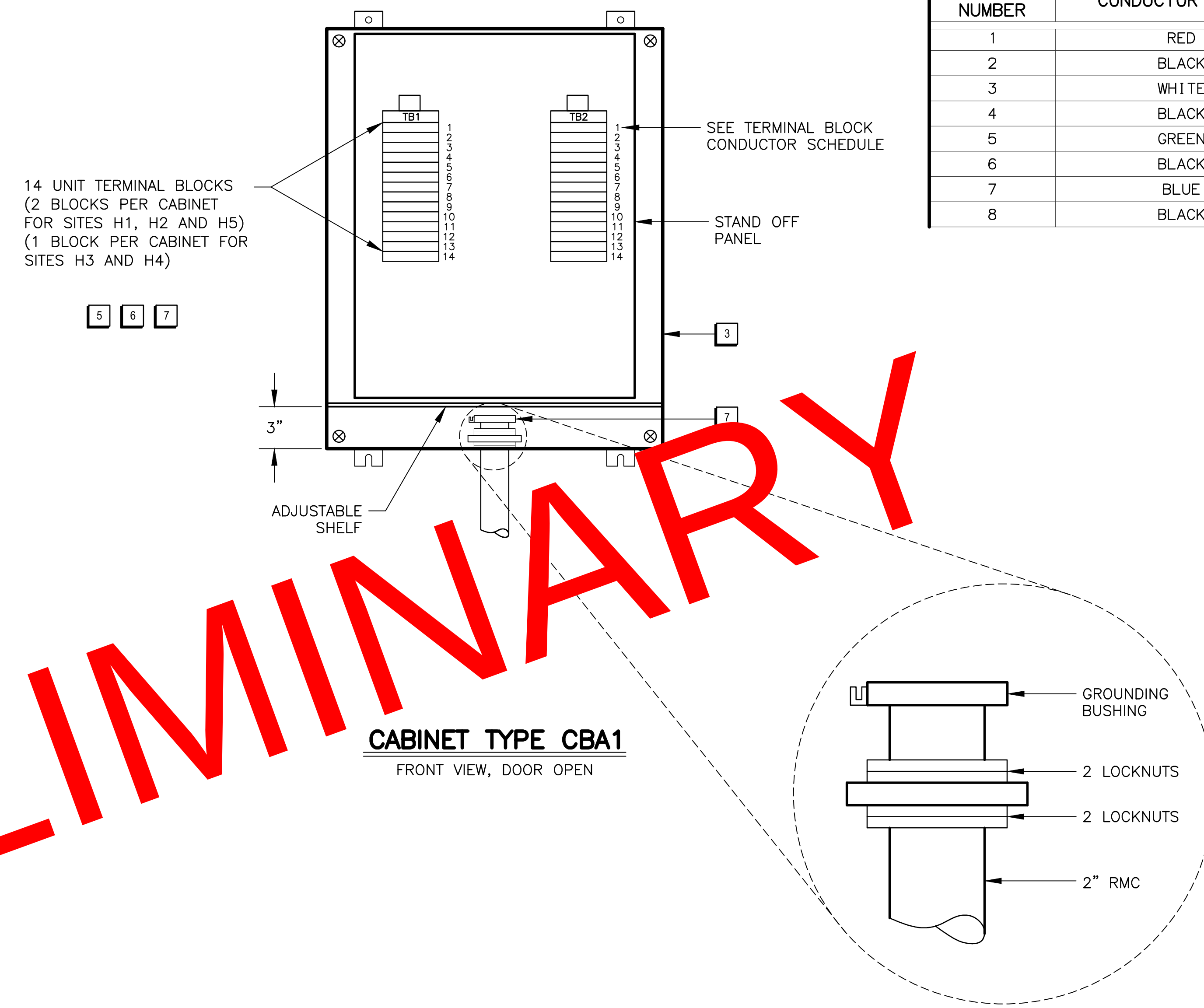
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K11	K15



CABINET TYPE CBA1

NOT TO SCALE



CABINET TYPE CBA1

FRONT VIEW, DOOR OPEN

TERMINAL BLOCK CONDUCTOR SCHEDULE

PIN NUMBER	CONDUCTOR COLOR	LOOP DESIGNATION
1	RED	LOOP 1 OR A
2	BLACK	
3	WHITE	LOOP 2 OR B
4	BLACK	
5	GREEN	LOOP 3 OR C
6	BLACK	
7	BLUE	LOOP 4 OR D
8	BLACK	

NOTES:

1. CONTROLLER CABINET DOOR TO OPEN AWAY FROM THE ROADWAY.
2. INSTALL FOUNDATION IN SELECT MATERIAL, TYPE A. EXCAVATE 2 FEET BELOW AND SURROUNDING THE FOUNDATION AND BACKFILL WITH AGGREGATE BASE COURSE, GRADING D–1.
3. CABINET TO BE SINGLE–DOOR, LOCKABLE, CONTINUOUS HINGE ENCLOSURE (WITH CLAMPS), WITH TYPE 3R OR 4X ENVIRONMENTAL RATING, NVENT–HOFFMAN CATALOG NUMBER A30H2408ALLP (30" X 24" X 8"), OR APPROVED EQUAL, COMPLETE WITH MOUNTING PANEL, DIN RAILS, AND TERMINAL BLOCKS AS REQUIRED.
4. USE SLEEVE TYPE CONCRETE FOUNDATION. SEE ALASKA STANDARD PLAN S–30, PERFORATED STEEL TUBE (PST) POST.
5. TERMINATE ALL CONDUCTORS TO TERMINAL BLOCKS. TERMINATE ALL CONDUCTORS WITH CRIMPED AND SOLDERED SPADE TYPE TERMINALS.
6. TY–RAPS TO PROVIDE STRAIN RELIEF FOR INCOMING CONDUCTORS.
7. LABEL SENSOR LEADS:
   USE THE INDUCTIVE LOOP DESIGNATION FOR IDENTIFICATION, SUCH AS "H1SLA"
8. SECURE AND SUPPORT RMC PER NEC 344.30.

STATE OF ALASKA 49TH
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
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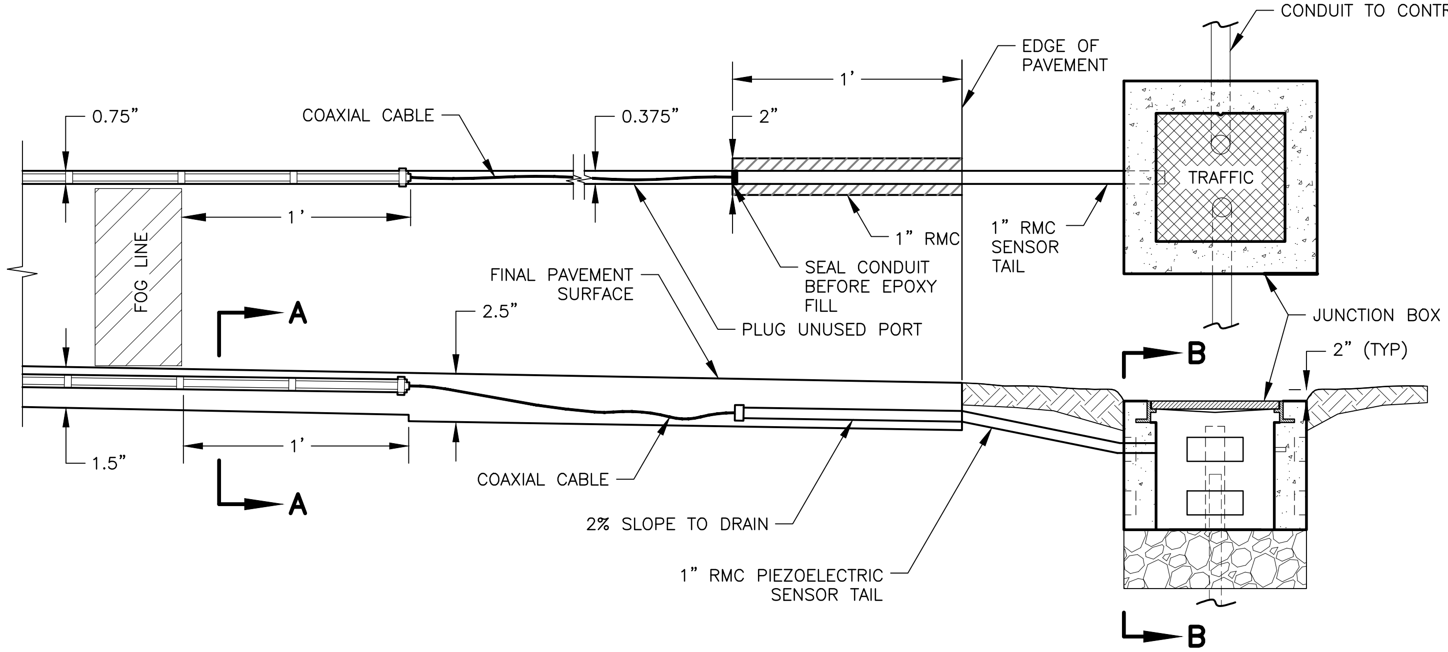
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

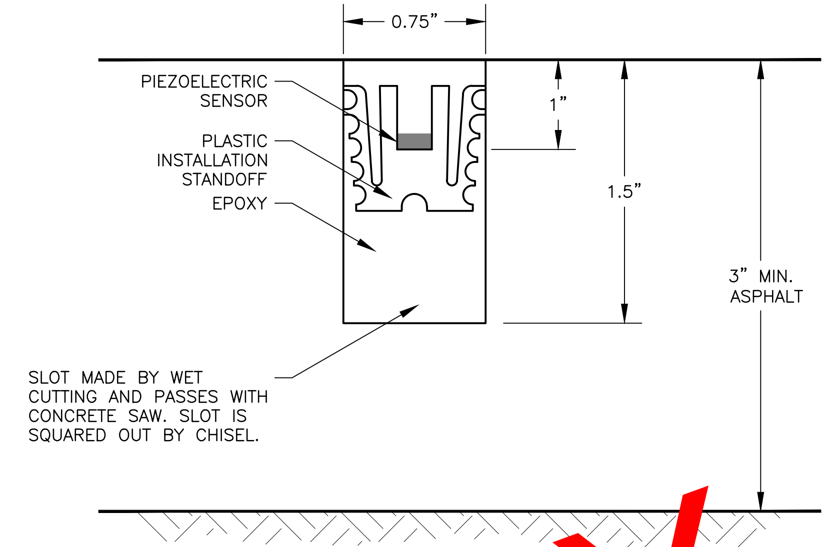
ATR CABINET TYPE CBA1 DETAIL

NO.	DATE	REVISION

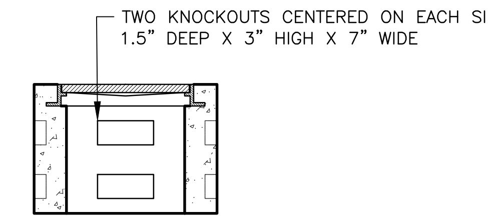
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K12	K15



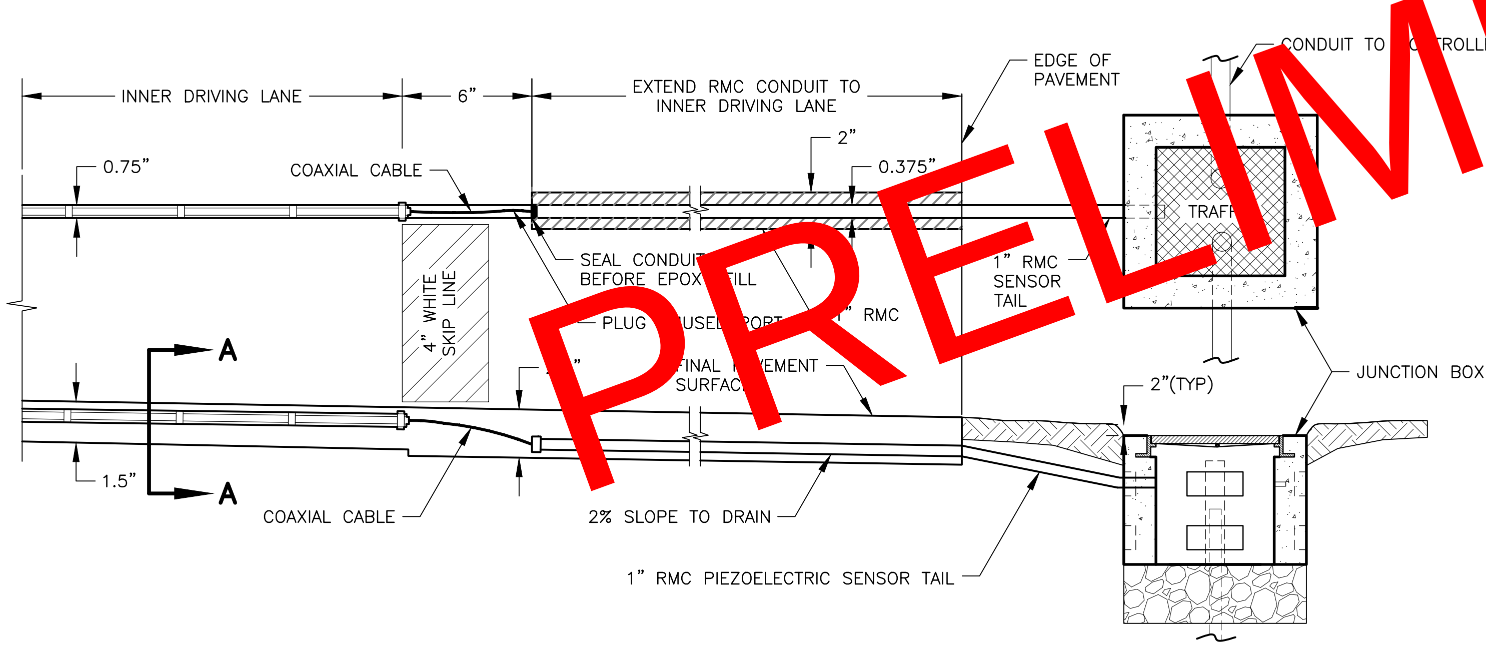
SHOULDER SECTION



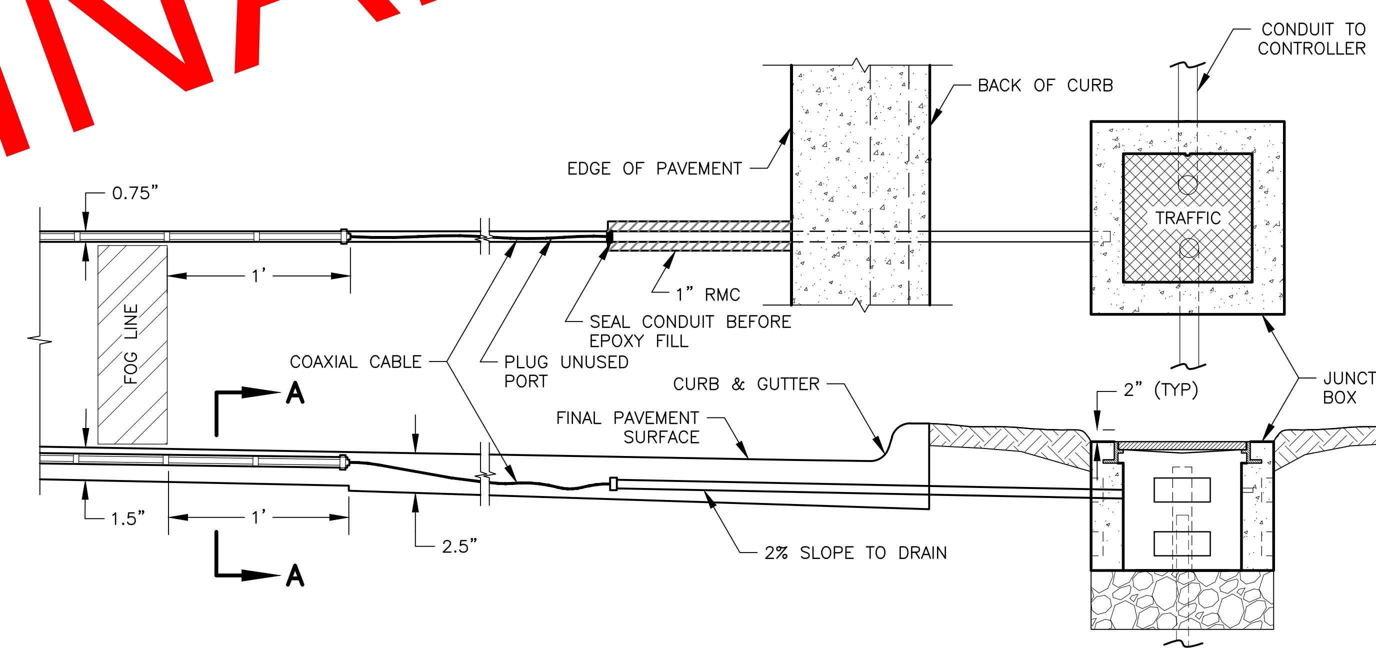
SECTION A–A



SECTION B–B



SHOULDER SECTION
FOR INNER LANES



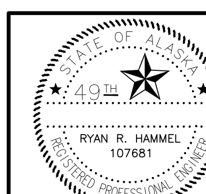
CURB SECTION

TYPICAL PIEZOELECTRIC SENSOR DETAILS

NOT TO SCALE

NOTES:

1. INSTALL CONDUIT FOR ALL PIEZO SENSORS IN SHOULDER SECTIONS SLOPED TO DRAIN WHERE THE PIEZO TAIL ENTERS THE J-BOX.



STATE OF ALASKA DOT&PF
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AND PUBLIC FACILITIES

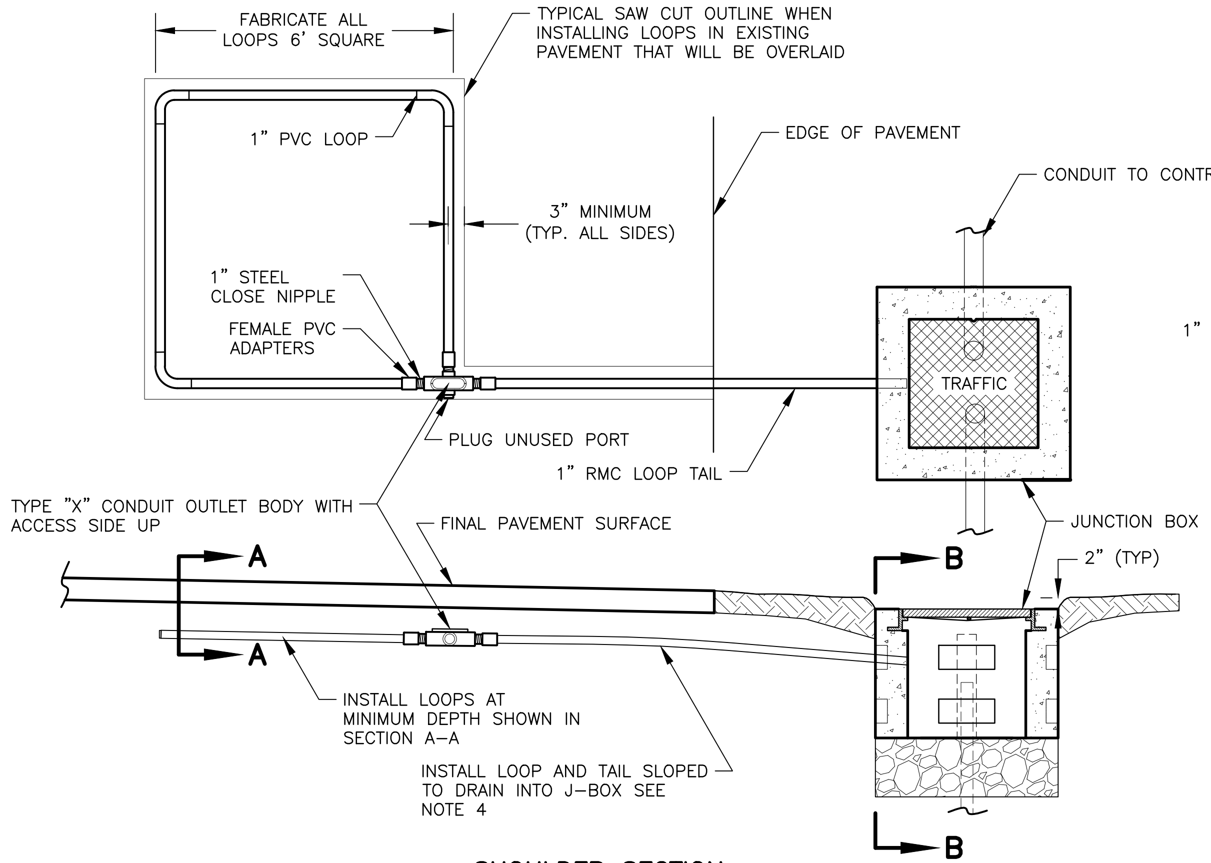
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

PIEZOELECTRIC SENSOR DETAILS

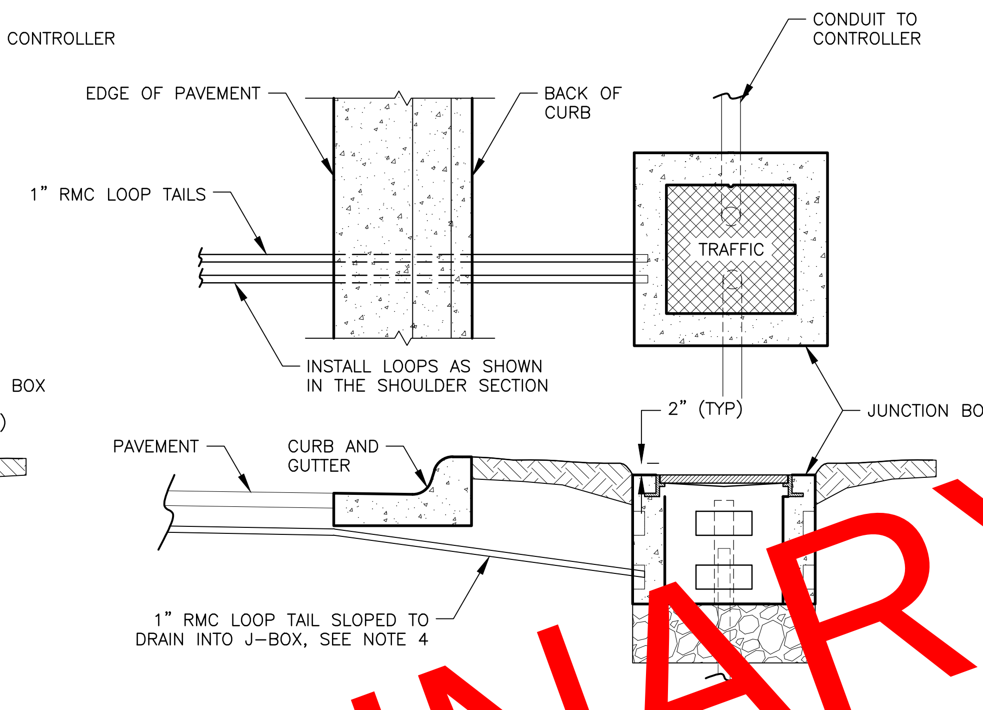
DESIGNED BY	JKH
CHECKED BY	RRH
DRAFTED BY	JKH
SCALE	N/A
TIME	2:00 PM
DATE	5/16/2022
DRAWING LOCATION	W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K13	K15



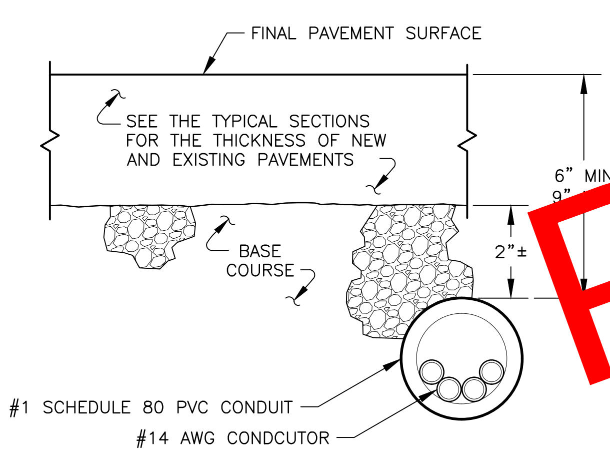
SHOULDER SECTION



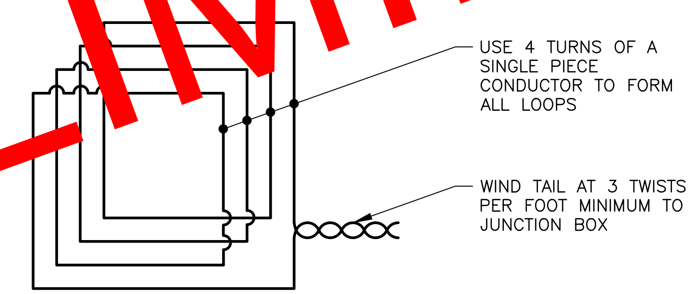
CURB SECTION

NOTES:

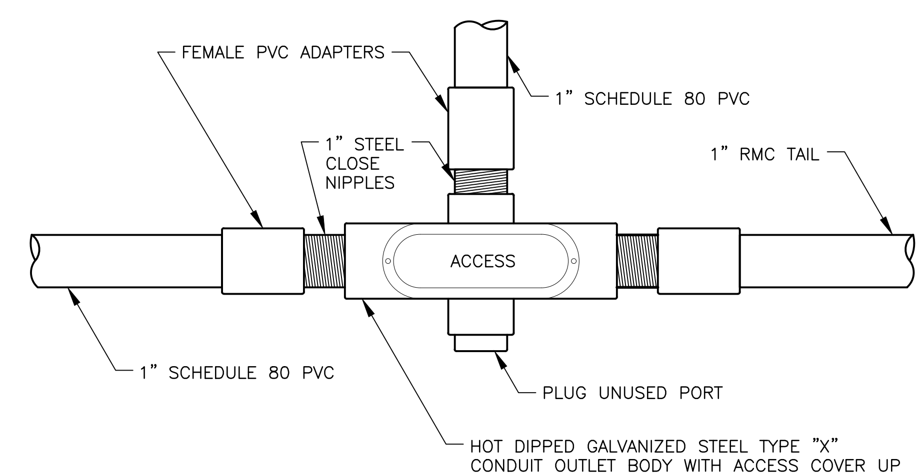
1. EACH LOOP DETECTOR SHALL CONSIST OF A SINGLE PIECE OF #14 AWG CONDUCTOR INSTALLED IN ONE INCH SCHEDULE 80 PVC CONDUIT. BUILD ALL LOOPS 6.0 FEET SQUARE, UNLESS OTHERWISE NOTED, BY SOLVENT WELDING ALL PVC TO PVC JOINTS. USE TYPE X OUTLET BODIES MADE OF HOT DIP GALVANIZED STEEL TO JOIN THE LOOPS AND TAILS.
2. INSTALL 4 TURNS OF CONDUCTOR IN ALL LOOPS AND PROVIDE TAILS THAT EXTEND TO THE JUNCTION BOX SPECIFIED ON THE PLANS. USE #14 AWG CONDUCTOR IN A POLYETHYLENE TUBE CONFORMING TO IMSA SPECIFICATION 51–5. WIND THE TAIL CONDUCTORS TOGETHER AT A RATE OF 3 TWISTS PER FOOT.
3. INSTALL ALL LOOP DETECTORS BEFORE OVERLAYING THE EXISTING PAVEMENT OR PAVING THE NEW ROADWAY.
4. INSTALL ALL LOOP DETECTORS SLOPED TO DRAIN INTO THE JUNCTION BOX THE LOOP TAIL ENTERS. IF CONTRACTOR CANNOT INSTALL THE LOOP TO DRAIN INTO THE J–BOX, DRILL FIVE 1/4" WEEP HOLES ON 1 FOOT CENTERS IN THE UNDERSIDE OF THE CONDUIT AT THE LOW SPOT.
5. CONTRACTOR MAY INSTALL A LOOP TAIL IMMEDIATELY ADJACENT TO A LOOP AND OTHER LOOP TAILS. LOOP TAILS SHALL NOT CROSS LOOP CONDUITS.
6. TEST ALL LOOP DETECTORS FOR CONTINUITY AND INSULATION INTEGRITY BEFORE SEALING THE LOOPS UNDER THE FINAL LIFT OF ASPHALT. PROVIDE THE ENGINEER A WRITTEN RECORD OF FIELD TESTING TO INCLUDE; CONTINUITY, INSULATION RESISTANCE AND INDUCTANCE TESTS AS REQUIRED IN SECTION 660–3.01(7) OF THE STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION.



SECTION A–A

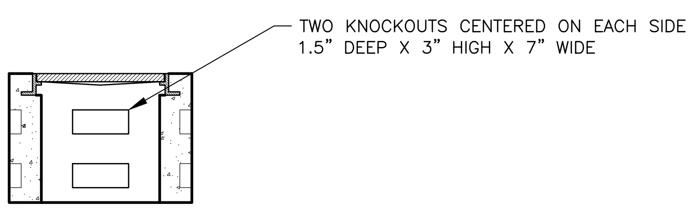


6'X6' LOOP WIRING DETAIL

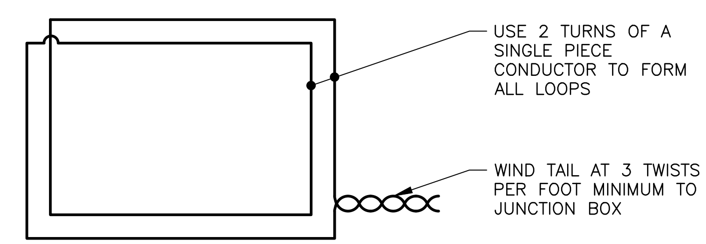


"X" BODY DETAIL

NOT TO SCALE



SECTION B–B



6'X12' LOOP WIRING DETAIL

TYPICAL PVC CONDUIT ENCASED LOOP DETECTOR INSTALLATION

NOT TO SCALE

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

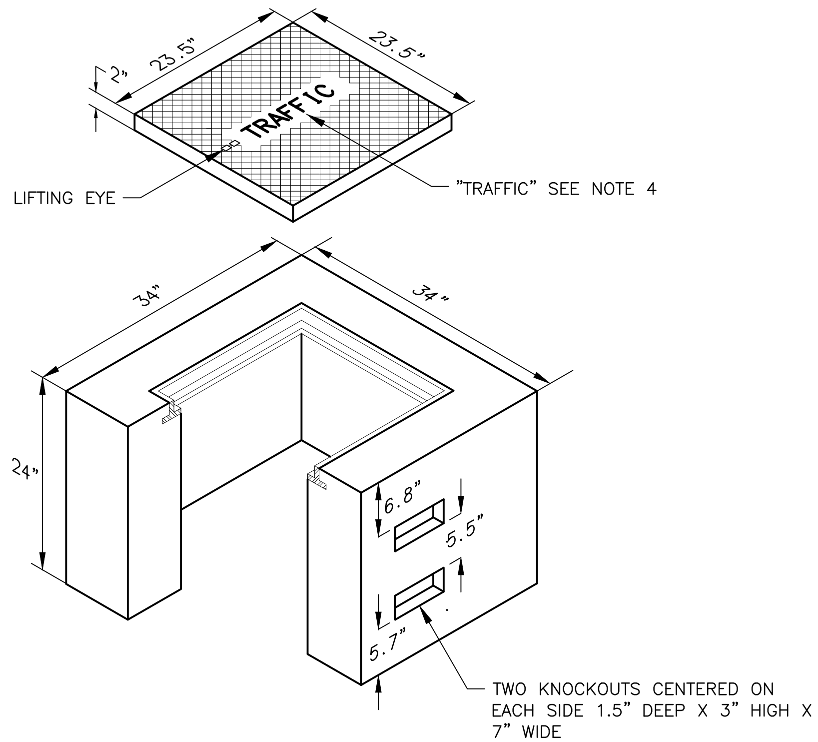
MINNESOTA DR: TUDOR TO 15TH AVE PAVEMENT PRESERVATION

LOOP DETECTOR DETAILS/"X" BODY DETAIL

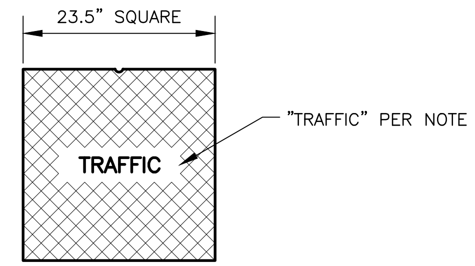
DRAWING LOCATION W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

DATE	TIME	SCALE	DESIGNED BY	CHECKED BY	DRAFTED BY
5/16/2022	2:00 PM	N/A	JKH	RRH	JKH

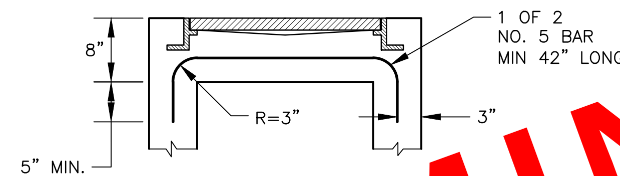
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0421099/CFHWY00132	2022	K14	K15



ISOMETRIC



LID FOR TYPE II J-BOXES



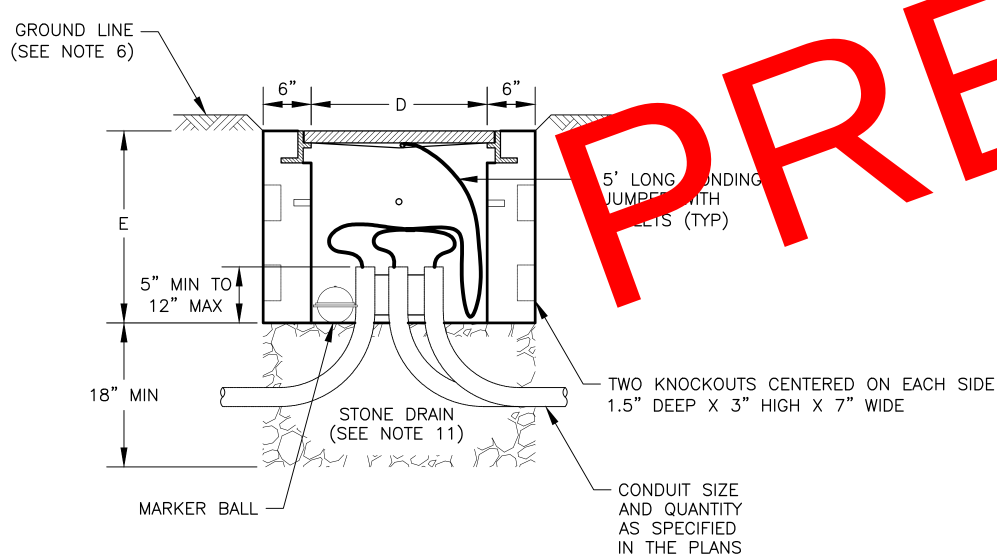
SECTION B-B

NOTES:

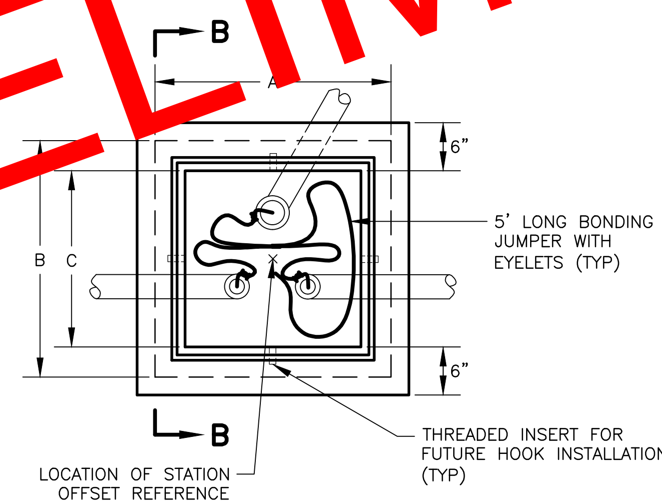
1. FURNISH TYPE II, III AND IV JUNCTION BOXES WITH CAST IRON FRAMES AND LIDS THAT WEIGH A MINIMUM OF 210 POUNDS AND ARE RATED FOR HEAVY TRAFFIC LOADS IN COMPLIANCE WITH AASHTO M306.
2. CONSTRUCT JUNCTION BOXES ACCORDING TO SECTION 501 USING CLASS A CONCRETE. REINFORCE TYPE IA JUNCTION BOXES AS SHOWN. SYNTHETIC STRUCTURAL FIBER-REINFORCED CONCRETE THAT MEETS ASTM C 1116 AND CONTAINS FIBER IN PROPORTIONS AS RECOMMENDED BY THE FIBER MANUFACTURER MAY BE ADDED FOR STRENGTH.
3. FURNISH LIDS WITH THE WORD "TRAFFIC" INSCRIBED INTO THEM.
4. UNDER JUNCTION BOXES, INSTALL STONE DRAINS THAT CONSIST OF POROUS BACKFILL MATERIAL CONFORMING TO SUBSECTION 703-2.10.
5. SET THE TOPS OF JUNCTION BOXES WITH THE FOLLOWING DIMENSIONS BELOW THE FINISHED SURROUNDING SURFACE:
   - 1" IN PAVED MEDIANS AND ADJACENT TO PEDESTRIAN FACILITIES
   - 1/4" IN PEDESTRIAN FACILITIES
   - 2" IN ALL OTHER AREAS
6. BOND JUNCTION BOX LIDS TO THE SYSTEM OF EQUIPMENT GROUNDING CONDUCTORS ACCORDING TO SUBSECTION 660-3.06. ATTACH BONDING JUMPERS TO THE JUNCTION BOX LIDS WITH BRASS OR STAINLESS STEEL HARDWARE.
7. INSTALL LOOP DETECTOR TAILS THROUGH THE TOP KNOCKOUT OF TYPE II JUNCTION BOXES. AFTER SETTING THE BOXES TO GRADE, INSTALL GROUT IN THE GAPS THAT REMAIN IN THE KNOCKOUT.
8. INSTALL A 1/2" THICK PREFORMED BITUMINOUS JOINT MATERIAL AROUND JUNCTION BOXES INSTALLED IN PORTLAND CEMENT CONCRETE WALKWAYS.
9. INSTALL AN ELECTRONIC MARKER BALL IN ALL JUNCTION BOXES PER SUBSECTION 660-[illegible].
10. PRIOR TO INSTALLATION MARK ALL JUNCTION BOX LOCATIONS WITH A WIRE STAFF VINYL FLAG. THE FLAG SHALL BE RED IN COLOR AND MINIMUM 4-INCHES TALL BY 5-INCHES WIDE. THE WIRE STAFF SHALL BE 21-INCHES IN LENGTH AND CONSTRUCTED OF MINIMUM 15.5 GAUGE STEEL.
11. UNDER JUNCTION BOXES, INSTALL STONE DRAINS THAT CONSIST OF POROUS BACKFILL MATERIAL CONFORMING TO SUBSECTION 703-2.10

PRELIMINARY

J-BOX DIMENSIONS					
J-BOX TYPE	A(MAX.)	B(MAX.)	C(MIN.)	D(MIN.)	E(MIN.)
II	29.5"	29.5"	22"	22"	24"



TYPE II JUNCTION BOX



PLAN

TYPE II JUNCTION BOX

STATE OF ALASKA
49TH
RYAN R. HAMMEL
107681
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

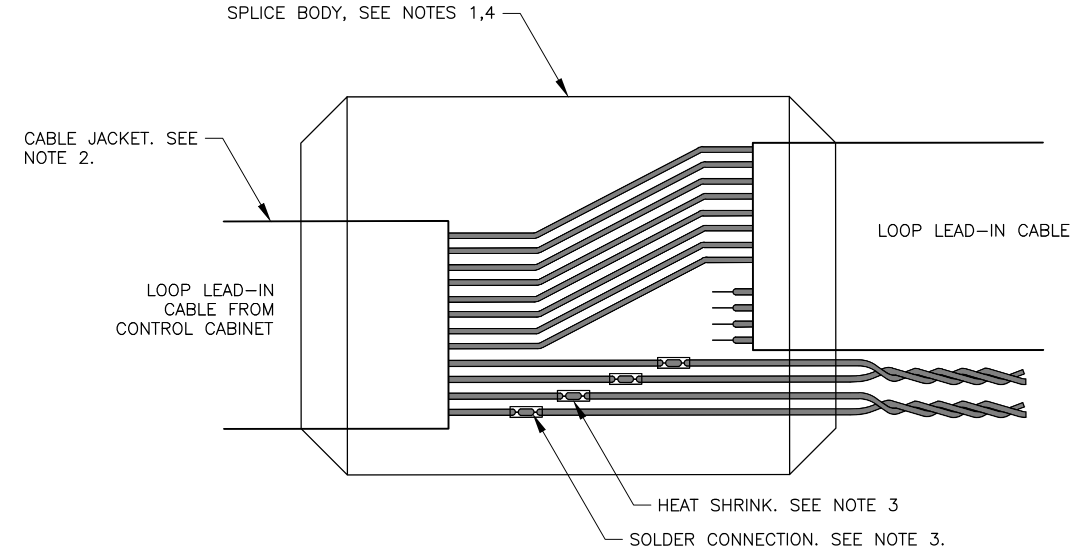
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

ATR TYPE II JUNCTION BOX DETAILS

DESIGNED BY JKH
CHECKED BY RRH
DRAFTED BY JKH
SCALE 1" = 1'
DATE 5/16/2022 TIME 2:00 PM
DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

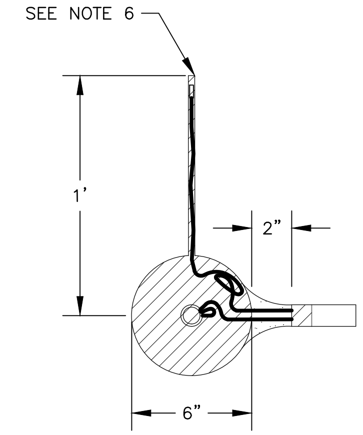
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	K15	K15



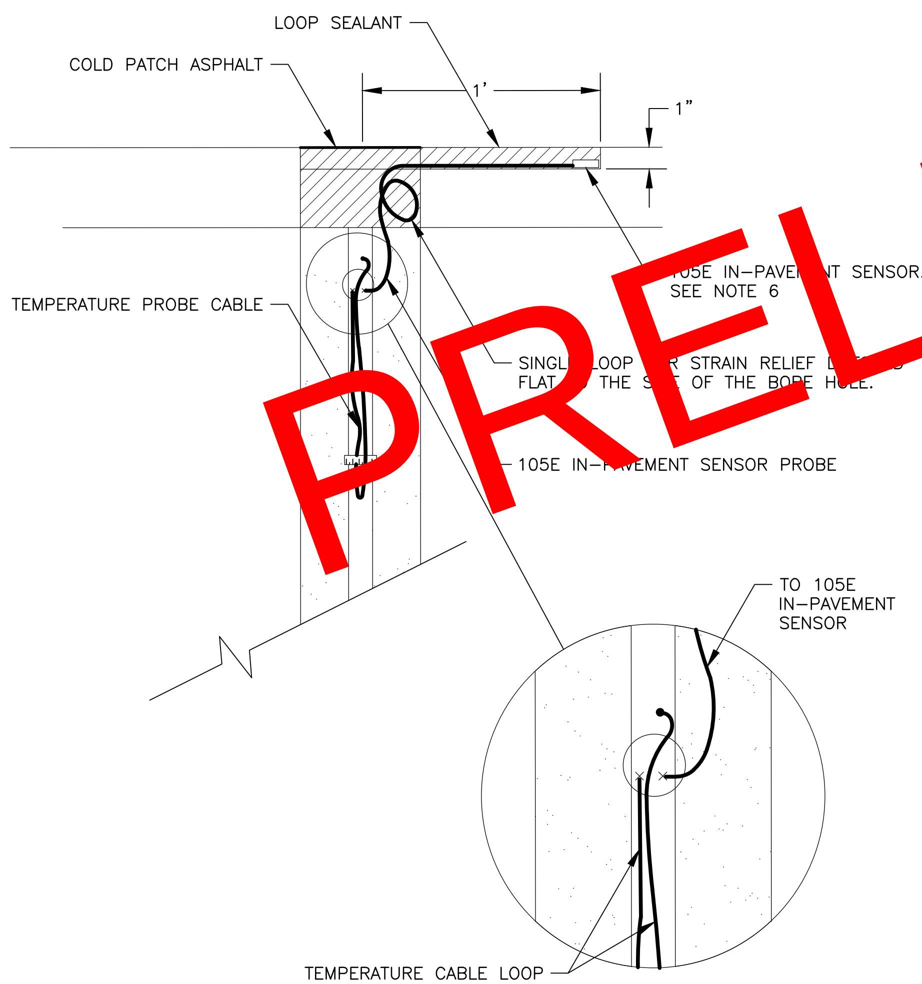
TYPICAL SPLICE DETAIL

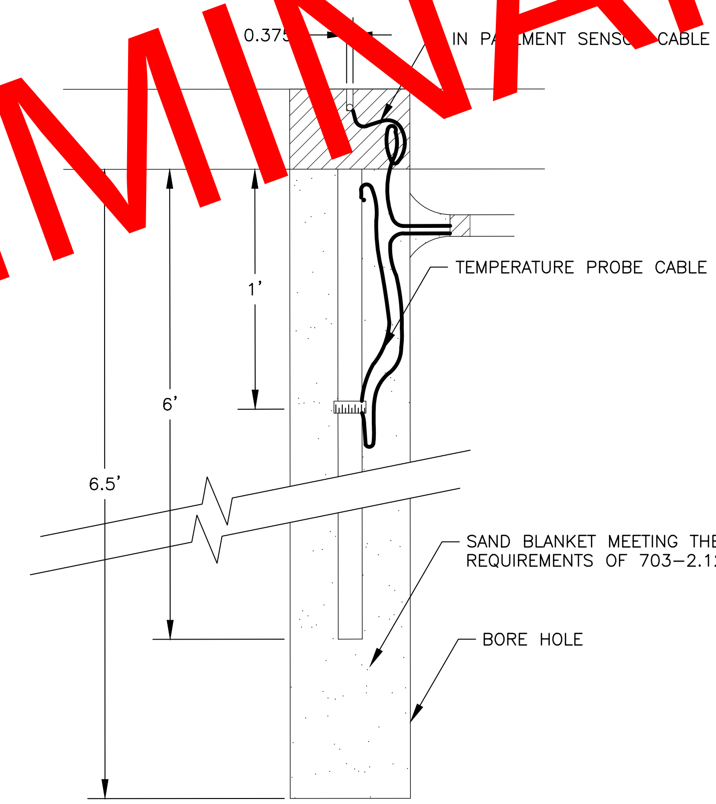
NOT TO SCALE



NOTES:

1. TERMINATE ALL SPARES WITHIN THE SPLICE BODY.
2. SPLICE BODY TO ENCLOSE ALL CABLE JACKETS.
3. STAGGER SPLICE POINTS. SOLDER CONNECTIONS, ENCLOSE EXPOSED CONDUCTORS IN ADHESIVE WALL HEAT SHRINK TUBING.
4. USE A NON-REENTERABLE, WET LOCATION, COMMERCIAL SPLICE KIT 3M TYPE 82-F1 OR EQUIVALENT AS APPROVED BY THE ENGINEER.
5. SOLDER CONNECTIONS. DO NOT USE COMPRESSION CONNECTIONS. WARP CONDUCTORS OVER EACH OTHER BEFORE SOLDERING.
6. SLOT FOR IN-PAVEMENT SENSORS SHALL BE PARALLEL TO THE DIRECTION OF TRAVELED WAY.
7. INSTALL NEW AMBIENT TEMPERATURE PROBE AND ASSOCIATED HARDWARE AS SHOWN.
8. DO NOT HEAT COLD PATCH ASPHALT WITH FLAME DIRECTLY ABOVE TEMPERATURE SENSORS. HEAT COLD PATCH OFF TO THE SIDE OF BOREHOLE THEN GENTLY SHOVEL IT INTO PLACE. DIRECT FLAMES WILL DAMAGE THE SENSORS.
9. RUN GROUND TEMPERATURE SENSOR CABLE UN-SPLICED TO CBA2 CABINET FOR CONNECTION TO DATA LOGGER.





TEMPERATURE SENSOR DETAILS

NOT TO SCALE

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0590

STATE OF ALASKA 49TH RYAN R. HAMMEL 107681 REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

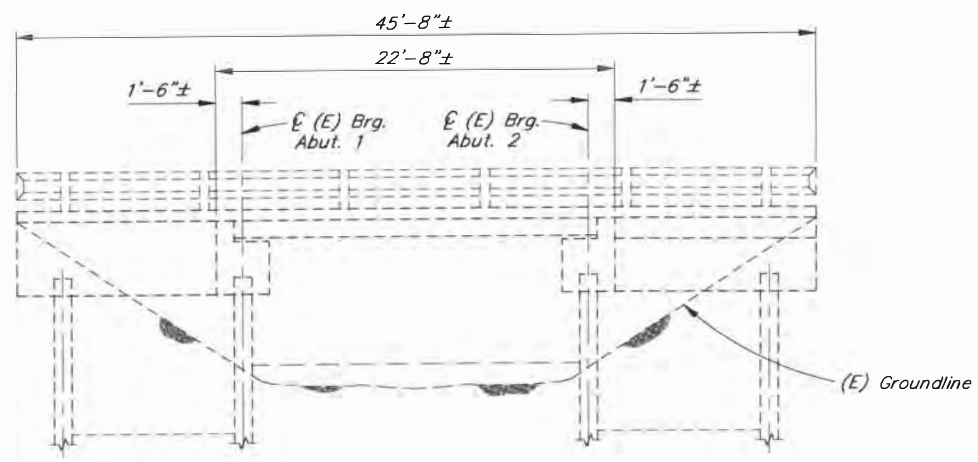
MINNESOTA DR:
TUDOR TO 15TH AVE
PAVEMENT PRESERVATION

TYPICAL SPLICE/TEMPERATURE SENSOR DETAILS

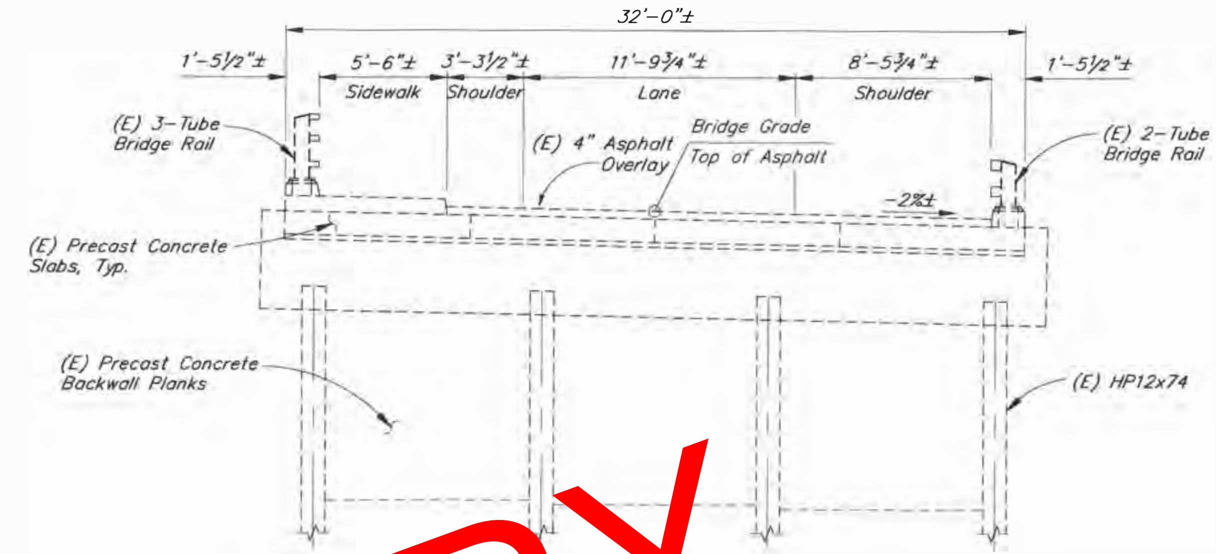
DESIGNED BY	JKH
CHECKED BY	RRH
DRAFTED BY	JKH
SCALE	N/A
DATE	5/16/2022
TIME	2:00 PM

DRAWING LOCATION
W:\PROJECTS\MINNESOTADR TUDOR-15 PP CFHWY00132\CIV3D19\PLANSET\00132_K01-K15_ATR.DWG

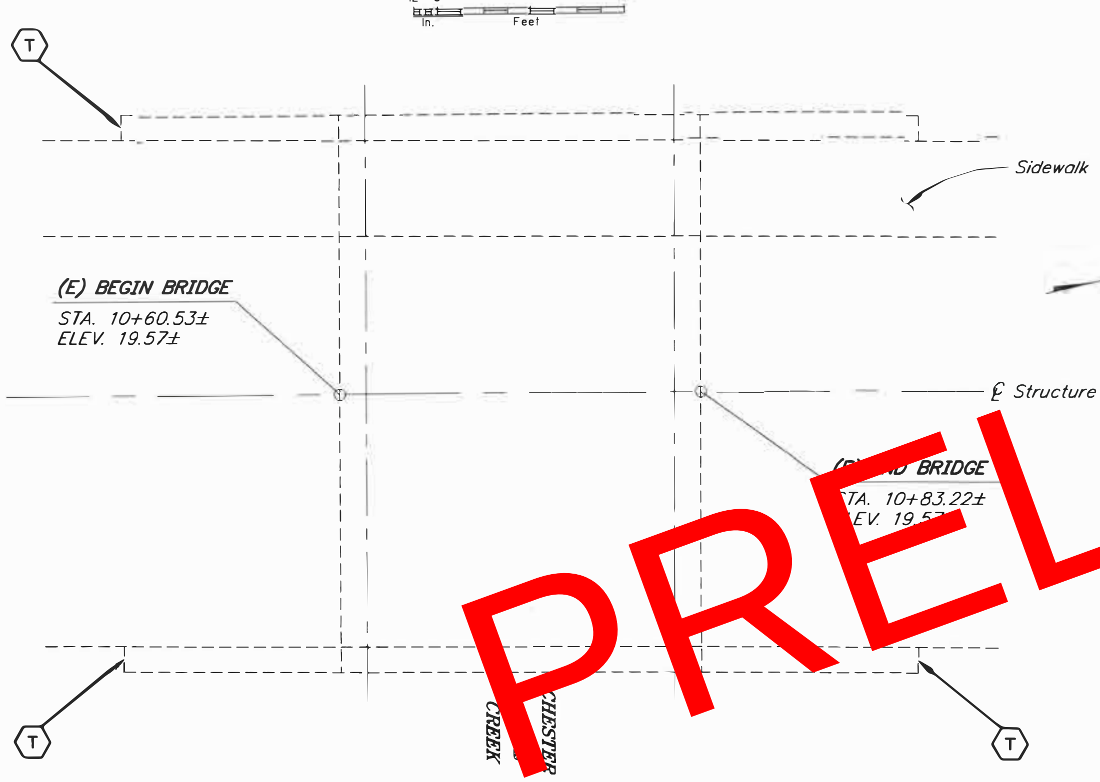
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	N1	N3



ELEVATION



TYPICAL SECTION



PLAN

PRELIMINARY

GENERAL NOTES

DESIGN: .... AASHTO LRFD Bridge Design Specifications, 2020 Edition, with latest interim specifications.

LIVE LOAD: HL-93

DEAD LOAD: .... Includes 50 psf for all wearing surfaces.

STRUCTURAL STEEL: .... ASTM A709, Grade 36T3, Fy = 36,000 psi
Galvanize structural steel in accordance with AASHTO M111 unless noted otherwise.

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	PAY UNIT	ESTIMATING UNIT	SUBST.	SUPERST.	TOTAL QUANTITY
606.0016.0001	Transition Rail, Modification	EA	EA	–	3	3

Item numbers are for reference only. Quantities shown are not necessarily the pay quantities nor the total quantity of the particular item.

LEGEND
(T) – Transition Rail Modification

REHABILITATION

BRIDGE DRAWING INDEX

TITLE	DWG. NO.
GENERAL LAYOUT	1
RAIL DETAILS	2
THRIE BEAM DETAILS	3

DESIGNED BY: Jesse Escamilla III	CHECKED: Hannah Bailey	LAYOUT BY: Jesse Escamilla III	CHECKED BY: Hannah Bailey
DRAWN BY: Javier De Leon	CHECKED: Jesse Escamilla III	SPECIFICATIONS BY: Jesse Escamilla III	P S & E COMPARED: Hannah Bailey
QUANTITIES BY: Jesse Escamilla III	CHECKED: Hannah Bailey	APPROVAL RECOMMENDED BY:	Richard Pratt

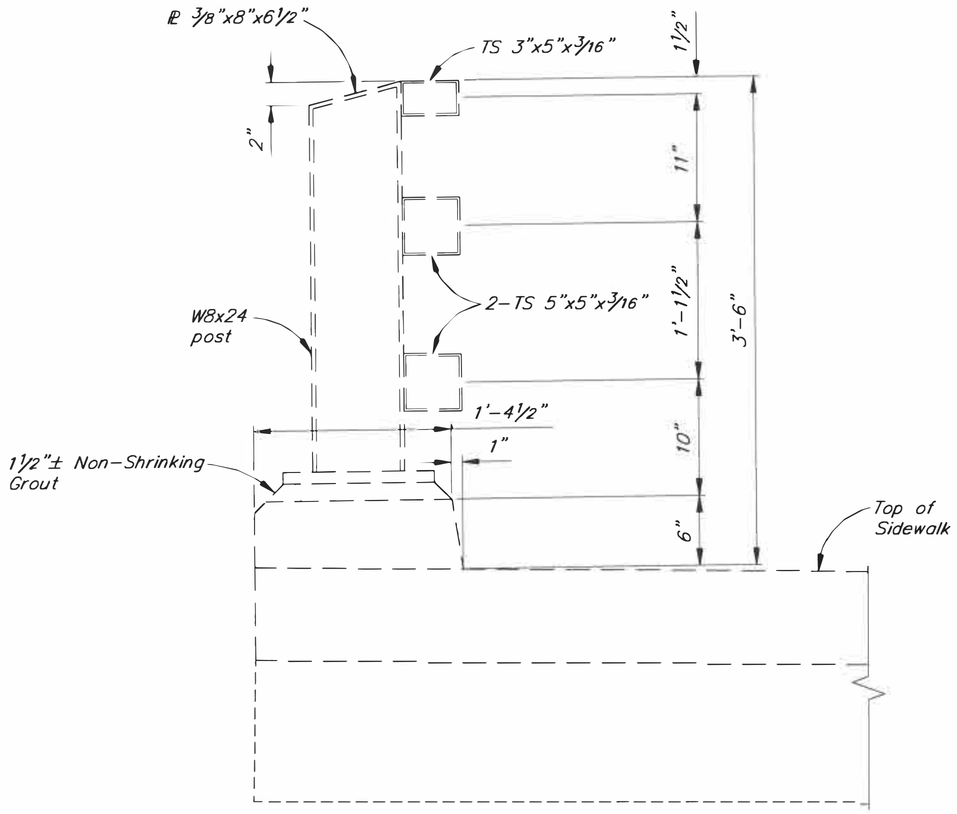
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

MINNESOTA DRIVE.: TUDOR TO 15TH AVE PAVEMENT PRESERVATION
SPENARD ROAD
GENERAL LAYOUT

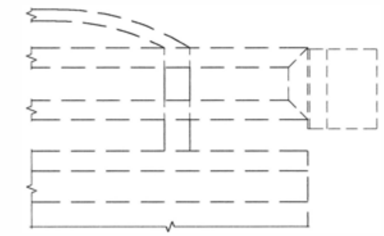
BRIDGE NO. 7082
DWG. NO. 1

R:\cad\7082\7082-GEN Tue, Jun/15/21 8:30am

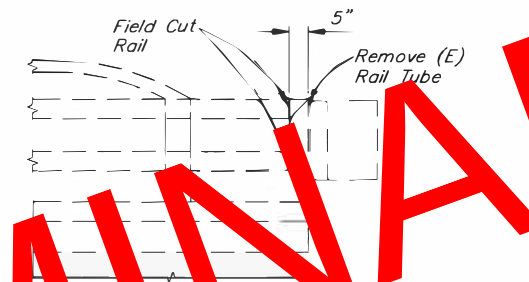
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	N2	N3



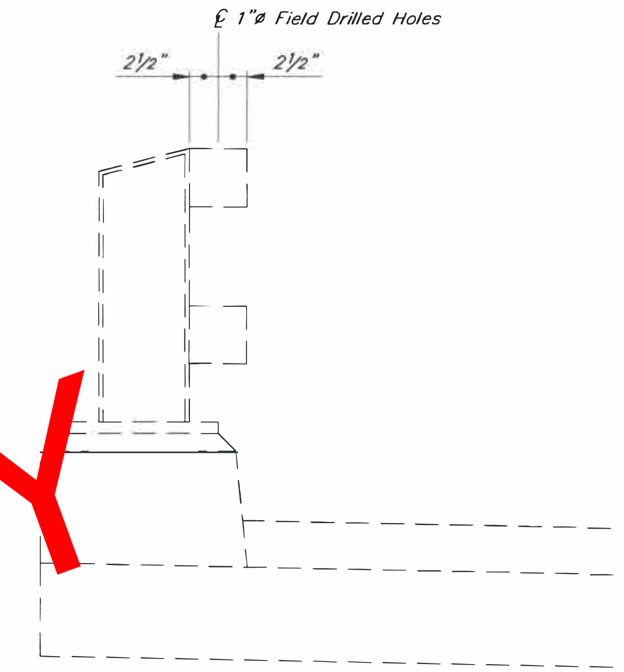
EXISTING TYPICAL SECTION



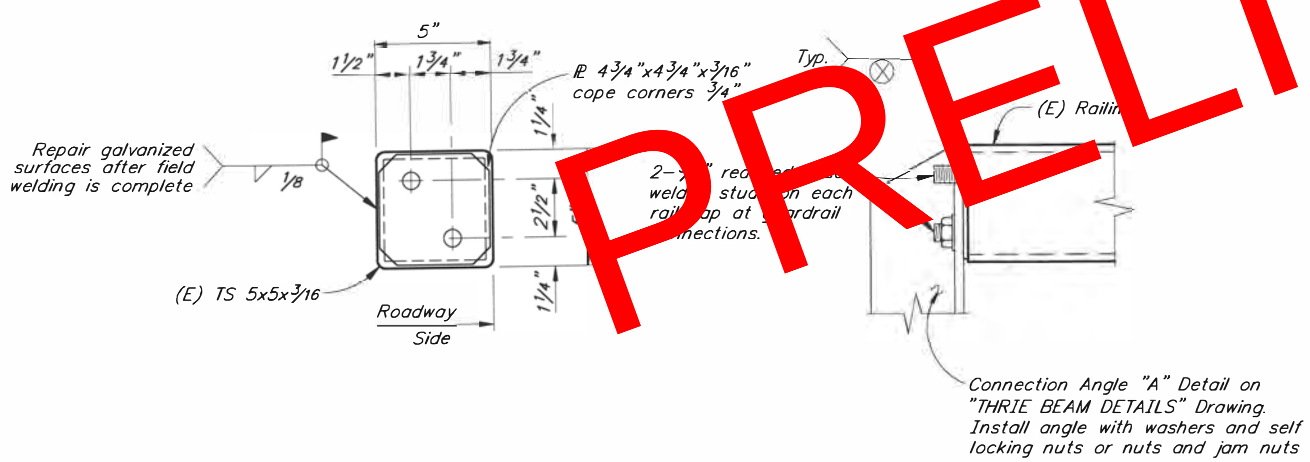
EXISTING RAIL END TERMINUS



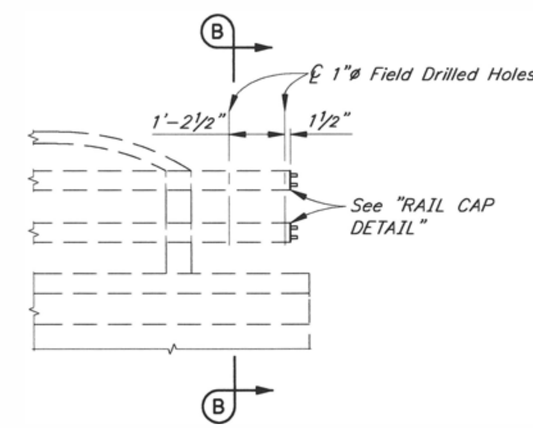
MODIFICATIONS TO RAIL END TERMINUS



SECTION B-B



RAIL CAP DETAIL

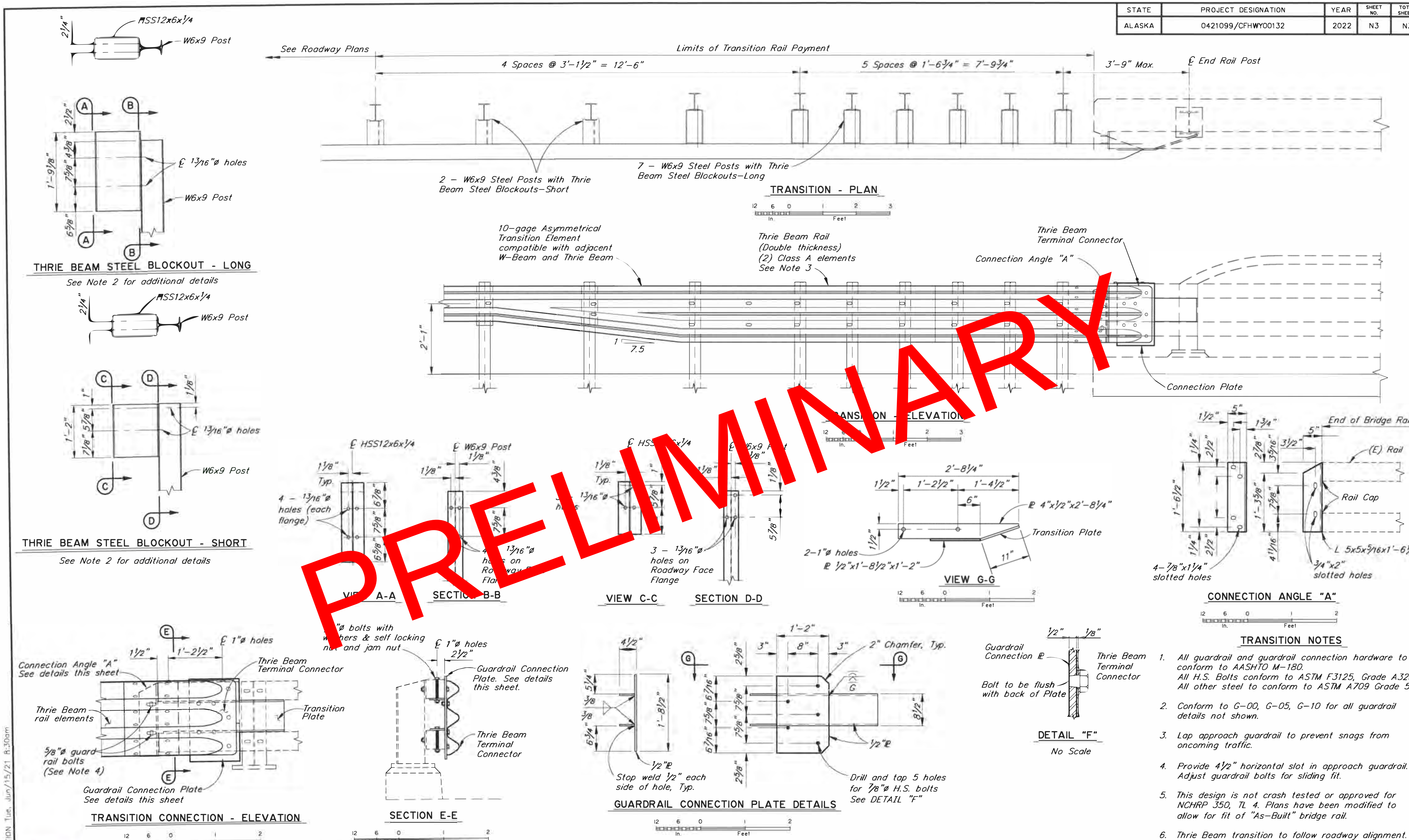


PROPOSED RAIL END TERMINUS

R:\cad\7082\7082-2-TUBE Tue, Jun/15/21 8:30am

DESIGNED BY: Jesse Escamilla III	CHECKED: Hannah Bailey	REHABILITATION	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES BRIDGE SECTION 3132 Channel Drive Juneau, Alaska 99801 907-465-2975	CHESTER CREEK BRIDGE SPENARD ROAD RAIL DETAILS	BRIDGE NO. 7082 DWG. NO. 2
DRAWN BY: Javier De Leon	CHECKED: Jesse Escamilla III				
QUANTITIES BY: Jesse Escamilla III	CHECKED: Hannah Bailey				

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0421099/CFHWY00132	2022	N3	N3



TRANSITION NOTES

1. All guardrail and guardrail connection hardware to conform to AASHTO M-180. All H.S. Bolts conform to ASTM F3125, Grade A325. All other steel to conform to ASTM A709 Grade 50.
2. Conform to G-00, G-05, G-10 for all guardrail details not shown.
3. Lap approach guardrail to prevent snags from oncoming traffic.
4. Provide 4 1/2" horizontal slot in approach guardrail. Adjust guardrail bolts for sliding fit.
5. This design is not crash tested or approved for NCHRP 350, TL 4. Plans have been modified to allow for fit of "As-Built" bridge rail.
6. Thrie Beam transition to follow roadway alignment.

R:\cad\7082\7082-TRANSITION Tue, Jun/15/21 8:30am

DESIGNED BY: Jesse Escamilla III	CHECKED: Hannah Bailey
DRAWN BY: Javier De Leon	CHECKED: Jesse Escamilla III
QUANTITIES BY: Jesse Escamilla III	CHECKED: Hannah Bailey

REHABILITATION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

CHESTER CREEK BRIDGE
SPENARD ROAD
THRIE BEAM DETAILS

BRIDGE NO. 7082
DWG. NO. 3