

**SW 1/4 SEC 1 T27S R6W WM
CITY OF ROSEBURG, DOUGLAS COUNTY, OREGON**

FILED
Date: 2-24-2022 By: QJ
This survey consists of:
Map: ST HWY 15-033 A-C
Narrative: _____
Corner Rpt: _____
**DOUGLAS COUNTY
SURVEYOR**

NARRATIVE:

PURPOSE OF THE SURVEY:

THE PURPOSE OF THIS SURVEY IS TO ESTABLISH HORIZONTAL CONTROL, RECOVER AND PERPETUATE EXISTING MONUMENTS AND TO RETRACE THE LOCATION OF THE EXISTING RIGHT OF WAY CENTER LINE OF NW EDENBOWER BOULEVARD, NW BROAD STREET, THE SOUTHBOUND ON RAMP TO INTERSTATE HIGHWAY 5 AND THE NORTHBOUND ON RAMP TO SAID INTERSTATE HIGHWAY 5, FOR THE PROPOSED OREGON DEPARTMENT OF TRANSPORTATION (ODOT) DOUGLAS AND COOS COUNTY ADA CURB RAMP PROJECT, KEY NUMBER 22388. THIS SURVEY MEETS THE REQUIREMENTS OF ORS 209.155. ADJOINING BOUNDARY LINES HAVE NOT BEEN RESOLVED IN THIS SURVEY BUT ARE SHOWN PER EXISTING SURVEYS OR OTHER AVAILABLE INFORMATION. THE FIELD WORK WAS CONDUCTED BETWEEN NOVEMBER 21, 2020 AND JANUARY 25, 2021.

PROJECT CONTROL:

THE BASIS OF BEARINGS AND COORDINATES FOR THIS SURVEY IS THE OREGON COORDINATE REFERENCE SYSTEM (OCRS) - COTTAGE GROVE-CANYONVILLE ZONE. THE OCRS NORTHING AND EASTING PROJECTION PARAMETERS ARE REFERENCED IN O.A.R. 734-005-0015. HORIZONTAL DATUM IS NAD 83 (2011) EPOCH 2010.00. VERTICAL DATUM IS NAVD88. ALL LINEAR VALUES ARE EXPRESSED IN INTERNATIONAL FEET.

PRIMARY CONTROL CONSISTS OF TWO PRIMARY PROJECT CONTROL STATIONS AND THREE SECONDARY CONTROL STATIONS. TWO-HOUR STATIC SESSIONS WERE OBSERVED AT PROJECT CONTROL STATIONS 1 AND 2. ALL PROJECT CONTROL STATION POSITIONS WERE ESTABLISHED USING A COMBINATION OF GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) OBSERVATIONS, TERRESTRIAL TOTAL STATION MEASUREMENTS, AND DIGITAL LEVEL OBSERVATIONS.

GNSS BASELINE VECTORS, TOGETHER WITH TERRESTRIAL OBSERVATIONS, WERE ADJUSTED USING LEAST SQUARES ANALYSIS (STARNET V9.0). THE NETWORK WAS CONSTRAINED USING VALUES FROM ONLINE POSITIONING USER SERVICE (OPUS) STATIC SOLUTIONS FOR PRIMARY CONTROL STATIONS 1 AND 2, HOLDING STATION 1 AND A WEIGHTED OPUS-STATIC POSITION FOR STATION 2. THE RESULTING ERROR SEMI-MAJOR AXIS LENGTHS, AT THE 95% CONFIDENCE LEVEL FOR PRIMARY AND SECONDARY CONTROL POINTS, WERE UNDER 0.03 FEET IN ABSOLUTE ACCURACY. FINAL PROJECT COORDINATES WERE ESTABLISHED BY PROJECTING THE ADJUSTED NETWORK POSITIONS TO THE OCRS - COTTAGE GROVE-CANYONVILLE ZONE, REPRESENTING APPROXIMATE GROUND DISTANCES. ALL OBSERVATIONS WERE MADE IN JANUARY 2021, UTILIZING LEICA TS15 TOTAL STATION AND LEICA GS14 GNSS RECEIVERS WITH CS15 DATA COLLECTOR.

NETWORK POINTS SET DURING THIS SURVEY DO NOT REPRESENT PROPERTY LINES OR R/W LINES. THEY ARE INTENDED TO PERPETUATE THE ALIGNMENTS AND RIGHT-OF-WAY DEVELOPED FOR THIS PROJECT IN CONFORMANCE WITH ORS CHAPTER 209 SECTION 155.

MONUMENTS:

HORIZONTAL POSITIONS OF THE FOUND MONUMENTS WERE OBTAINED USING TWO METHODS: REAL-TIME KINEMATIC (RTK) GPS MEASUREMENTS AND TERRESTRIAL OBSERVATIONS FROM HORIZONTAL CONTROL WHERE RTK WAS NOT FEASIBLE. MONUMENTS WERE OBSERVED TWICE, WITH A MINIMUM OF FORTY-FIVE MINUTES BETWEEN RTK OBSERVATIONS, AND THEN MEANING THE VALUES. TERRESTRIAL OBSERVATION METHODS FOLLOWED ODOT PROCEDURES WITH TWO OBSERVATIONS.

CENTER LINE AND RIGHT OF WAY LINE RESOLUTION FOR NW EDENBOWER BOULEVARD, NW BROAD STREET, THE SOUTHBOUND ON RAMP TO INTERSTATE HIGHWAY 5 AND THE NORTHBOUND ON RAMP TO SAID INTERSTATE HIGHWAY 5:

A BEST FIT RESOLUTION WAS UTILIZED DUE TO THE FACT THAT MOST OF THE RIGHT OF WAY MONUMENTATION FOUND DID NOT FIT THE RECORD DATA VERY CLOSELY. THE BEST FIT RESOLUTION THAT WAS SELECTED YIELDED RESULTS THAT MINIMIZED THE RESIDUAL DIFFERENCES BETWEEN MEASURED POSITIONS AND RECORD INFORMATION WHILE MAINTAINING ALL RECORD GEOMETRY AND ALIGNMENTS.

THE CENTER LINE ALIGNMENTS OF NW EDENBOWER BOULEVARD ("E" LINE), NW BROAD STREET ("BS" LINE), THE SOUTHBOUND ON RAMP TO INTERSTATE HIGHWAY 5 ("C" LINE) AND THE NORTHBOUND ON RAMP TO SAID INTERSTATE HIGHWAY 5 ("A" LINE) WERE CALCULATED FROM RECORD COORDINATE CONTROL, STATIONING AND CURVE DATA ACCORDING TO ODOT DRAWING NO. 1A-22-9, "LOCATED LINE NORTH ROSEBURG INTERCHANGE SEC. AND STATE HWY. MAP Q8, "NORTH ROSEBURG INTERCHANGE SEC. RIGHT OF WAY MONUMENTATION".

THE RIGHT OF WAY AND ACCESS CONTROL LINES WERE CALCULATED FROM RECORD CENTER LINE ALIGNMENT STATION AND OFFSET DATA ACCORDING TO SAID ODOT AND STATE HWY. MAPS.

THE CALCULATED RECORD CENTER LINE ALIGNMENTS AND RIGHT OF WAY/ACCESS CONTROL LINES WERE ROTATED TO MATCH THE BEARING AS ESTABLISHED BETWEEN POINT 2003, A 5/8" IRON ROD WITH 2" ALUMINUM CAP MARKED "ODOT RIGHT OF WAY", FOUND AT "BS" STATION 19+27.60 PT, 27 FT RIGHT, AND POINT 2065, A 5/8" IRON ROD FOUND AT "E" STATION 47+48.77 PCS, 100 FT LEFT.

NARRATIVE CONTINUED:

THE DISTANCE BETWEEN THESE TWO FOUND RIGHT OF WAY MONUMENTS FIT VERY WELL WITH THE RECORD INFORMATION AND WAS THEREFORE USED AS THE BASIS OF ROTATION TO FIT THE RECORD ALIGNMENT AND BOUNDARY DATA TO THE FOUND MONUMENTATION.

THE REMAINING FOUND RIGHT OF WAY MONUMENTS WERE EVALUATED AND THE FALLING FOR EACH POINT AS COMPARED TO ITS RESPECTIVE RECORD STATION AND OFFSET POSITION IS AS NOTATED BELOW (SEE FOUND MONUMENT TABLE FOR COMPLETE DESCRIPTION):

- POINT 2001 ("A" LINE): FOUND ON STATION AND 0.27 FT LEFT
- POINT 2002 ("A" LINE): FOUND ON STATION AND 0.09 FT LEFT
- POINT 2005 ("C" LINE): FOUND ON STATION AND 0.10 FT LEFT
- POINT 2006 ("E" LINE): FOUND 0.07 FT DOWNSTATION AND 0.05 FT LEFT
- POINT 2060 ("E" LINE): FOUND 0.12 FT DOWNSTATION AND 0.04 FT LEFT
- POINT 2061 ("E" LINE): FOUND ON STATION AND 0.34 FT LEFT

NOTE: ACCORDING TO INFORMATION AS SHOWN ON STATE HWY. MAP Q8, THERE IS A 0.20 FT COORDINATE VALUE DIFFERENCE BETWEEN THE CALCULATED POSITION OF THE ANGLE POINT IN THE ACCESS CONTROL LINE AS DETERMINED BY ALIGNMENT STATION AND OFFSET DATA WHEN COMPARED TO THE POSITION OF WHERE THE R/W MONUMENT WAS ACTUALLY SET ACCORDING TO THE STATION AND COORDINATE DATA AS SPECIFIED IN THE RIGHT OF WAY MONUMENTS TABLE OF SAID MAP.

POINT 2069 ("BS" LINE): FOUND ON STATION AND 0.13 FT LEFT

POINT 2070 ("BS" LINE): FOUND 0.19 FT UPSTATION AND 80.08 FT LEFT OF THE CENTER LINE ALIGNMENT.

NOTE: THE R/W SHEET OF STATE HWY. MAP Q8 DEPICTS A SET R/W MONUMENT SYMBOL OFFSET TO THE LEFT SIDE OF THE CENTER LINE ALIGNMENT AT THIS PARTICULAR PC STATION, BUT THE RIGHT OF WAY MONUMENTS TABLE AS SHOWN ON THE CONTROL SHEET PER SAID MAP LISTS THIS MONUMENT AS BEING SET AT AN OFFSET OF 80 FT RIGHT. THIS IS MOST LIKELY NOT A TYPO DUE TO THE FACT THAT THE COORDINATE VALUES LISTED IN SAID TABLE SUPPORTS THE 80 FT RIGHT OFFSET NOTATION.

RIGHT OF WAY LINE RESOLUTION FOR NW SWEETBRIER AVENUE:

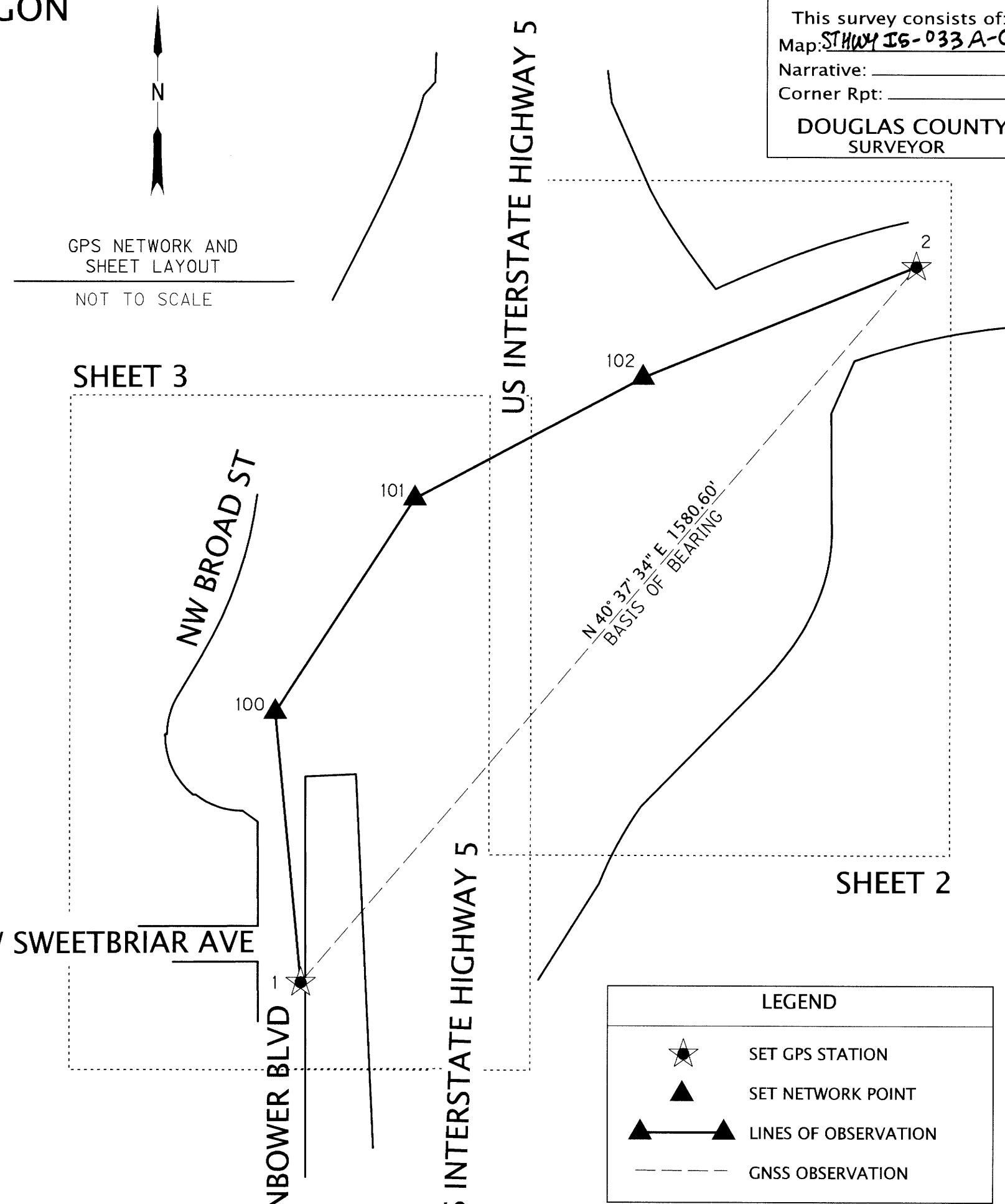
DUE TO THE ABSENCE OF STREET CENTER LINE MONUMENTATION, THE NORTHERLY RIGHT OF WAY LINE OF NW SWEETBRIER AVENUE WAS DETERMINED FROM POINT 2081, A 1-1/4" IRON PIPE FOUND AT THE SOUTHWEST CORNER OF BLOCK 1, "BROADMOOR", TO POINT 2067, A 5/8" IRON ROD FOUND AT THE SOUTHWEST CORNER OF LOT 1, BLOCK 1, "BROADMOOR". THIS LINE WAS THEN EXTENDED EASTERLY 99.97', ACCORDING TO SURVEY M54-64, IN ORDER TO CALCULATE A POSITION FOR THE SOUTHEAST CORNER OF SAID LOT 1, ALSO BEING THE SOUTHEAST CORNER OF SAID BLOCK 1. THE CALCULATED LENGTH OF THE NORTHERLY RIGHT OF WAY LINE OF NW SWEETBRIER AVENUE, ALSO BEING THE SOUTH LINE OF SAID BLOCK 1, "BROADMOOR", FIT THE RECORD PLAT DIMENSION EXACTLY.

RIGHT OF WAY LINE RESOLUTION FOR BROAD STREET (NOW CALLED NW EDENBOWER BOULEVARD):

DUE TO THE ABSENCE OF STREET CENTER LINE MONUMENTATION, THE WESTERLY RIGHT OF WAY LINE OF BROAD STREET WAS RESOLVED BY USING A DEFLECTION ANGLE OF 90°00'30", BETWEEN SWEETBRIER AVENUE AND BROAD STREET, ACCORDING TO SAID "BROADMOOR", AND WAS DETERMINED FROM THE CALCULATED POSITION OF THE SOUTHEAST CORNER OF BLOCK 1, "BROADMOOR", AS PREVIOUSLY STATED, TO A POINT OF INTERSECTION WITH THE SOUTHWESTERLY RIGHT OF WAY LINE OF NW BROAD STREET, TO THE NORTH, AS ESTABLISHED BETWEEN POINT 2003, A 5/8" IRON ROD WITH 2" ALUMINUM CAP MARKED "ODOT RIGHT OF WAY", FOUND AT "BS" STATION 19+27.60 PT, 27 FT RIGHT, AND THE FALSE CALL TO "BS" STATION 19+60, 50 FT RIGHT ACCORDING TO ODOT DRAWING NO. 1A-22-9 AND STATE HWY. MAP Q8.

SHEET INDEX:

- SHEET 1: NARRATIVE, SHEET INDEX, GPS NETWORK, AND CONTROL MONUMENT LIST
- SHEET 2: OVERALL PLAN AND SHEET LAYOUT, REFERENCES, AND RECOVERED MONUMENT LIST
- SHEET 3: PROJECT RECOVERY DETAIL, RECOVERED MONUMENT LIST, AND LEGEND



CONTROL MONUMENT LIST

PT. NO.	OCRS NORTHING	OCRS EASTING	STATION	OFFSET	DATE	DESCRIPTION
1	150156.19	156585.30	"E" 29+49.77	25.24 LT	12/08/2020	SET 1-1/8" BRASS DISC IN CONCRETE CURB "D.E.A. CONTROL"
2	151355.82	157614.46	"E" 47+41.21	28.53 LT	12/10/2020	SET 1-1/8" BRASS DISC IN CONCRETE CURB "D.E.A. CONTROL"
100	150609.20	156541.80	"E" 34+00.10	25.34 LT	12/10/2020	SET 1-1/8" BRASS DISC IN CONCRETE CURB "D.E.A. CONTROL"
101	150966.44	156774.84	"E" 38+21.98	24.92 LT	12/10/2020	SET 1-1/8" BRASS DISC IN CONCRETE CURB "D.E.A. CONTROL"
102	151169.74	157156.47	"E" 42+52.53	25.27 LT	12/10/2020	SET 1-1/8" BRASS DISC IN CONCRETE CURB "D.E.A. CONTROL"

FILE NAME: S_K22388_CRR_EDENBOWER.DGN

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 OREGON
 JANUARY 10, 2006
 ROBERT R. JACKSON
 47721
 RENEWS: 6/30/2023

OREGON DEPARTMENT OF TRANSPORTATION
 HORIZONTAL CONTROL, RECOVERY AND RETRACEMENT MAP
 REGION 3 DISTRICT 7
 DOUGLAS COUNTY ADA RAMPS
 MILEPOSTS 126.39 TO 126.60
 CITY OF ROSEBURG
 DOUGLAS COUNTY, OREGON

 ODOT REGION 3 HEAD QUARTERS
 3500 NW STEWART PARKWAY
 ROSEBURG, OREGON 97470 KEY NO. 22388
 DECEMBER 15, 2021
 NOT TO SCALE
 SHEET 1 OF 3