

- NOTES:**
- * UNLESS OTHERWISE SPECIFIED ON CROSS SECTIONS
 - ** OR RATE OF SUPER IF GREATER
 - *** TREATED SHOULDER
 - △ TRANSITION FROM PREVIOUS TYPICAL SECTION TO THE NEXT TYPICAL SECTION OVER 30'

LEGEND

(A)	EXISTING ASPHALT	(B)	EXISTING BITUMINOUS AGGREGATE BASE
(1)	ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	(8)	ITEM 206 - CURING COAT
(2)	ITEM 407 - NON-TRACKING TACK COAT (RATE AS PER CMS 407.06-1)	(9)	ITEM 609 - COMBINATION CURB & GUTTER, TYPE 2
(3)	ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A, (446)	(10)	ITEM 609 - CURB, TYPE 6
(4)	ITEM 206 - 12" CEMENT STABILIZED SUBGRADE	(11)	ITEM 452 - 4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1, AS PER PLAN
(5)	ITEM 301 - 5" ASPHALT CONCRETE BASE, PG64-22 (449)	(12)	ITEM 605 - 6" BASE PIPE UNDERDRAINS
(6)	ITEM 304 - 4" AGGREGATE BASE	(13)	ITEM 659 - SEEDING AND MULCHING, CLASS 2
(7)	ITEM 304 - 6" AGGREGATE BASE	(14)	ITEM 452 - 11" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1, AS PER PLAN
(15)	ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9	(21)	ITEM 606 - GUARDRAIL, TYPE MGS
(16)	ITEM 452 - 12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	(22)	ITEM 203 - EMBANKMENT, AS PER PLAN, NO. 2 AGGREGATE
(17)	ITEM 422 - AGGREGATE, SINGLE CHIP SEAL, TYPE A		
(18)	ITEM 304 - 8" AGGREGATE BASE		
(19)	ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9, AS PER PLAN		
(20)	ITEM 606 - GUARDRAIL, TYPE MGS WITH LONG POSTS		

TYPICAL SECTIONS
ROUNDABOUT C-C

DESIGN AGENCY

2LMN

DESIGNER

KAZ

REVIEWER

DES 01/09/24

PROJECT ID

113662

SHEET

P.006

TOTAL

129

ITEM 203 - EMBANKMENT, AS PER PLAN, NO. 2 AGGREGATE

THIS WORK CONSISTS OF PLACING TAN AND GRAY WASHED GRAVEL SIZE NO. 2 PER C&MS TABLE 703.01-1.

THE CONTRACTOR SHALL PLACE THE MATERIAL TO ENSURE A UNIFORM SURFACE THAT DOES NOT EXCEED THE HEIGHT OF THE CURB AT THE OUTER EDGES. ANY PROTRUSIONS GREATER THAN 4 INCHES ABOVE THE SURFACE SHALL BE ELIMINATED. THE MATERIAL SHALL BE PLACED AT A 6-INCH THICKNESS ON TOP OF TYPE D GEOTEXTILE FABRIC.

ALL LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE WORK ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 - EMBANKMENT, AS PER PLAN, NO. 2 AGGREGATE

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 203 - EMBANKMENT, AS PER PLAN, NO. 2 AGGREGATE 92 CY

ITEM 452 - 11" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING A TRUCK APRON (11") IN THE ROUNDABOUT AT THE LOCATIONS SPECIFIED IN THE PLAN. CONCRETE SHALL BE CLASS C, AS PER ODOT CMS SECTION 499. THE REQUIREMENTS OF ITEM 451 AND 452 SHALL APPLY, EXCEPT AS FOLLOWS: DO NOT COMPLY WITH THE REQUIREMENTS OF 451.07, 451.09 OR 451.14.

A CONCRETE PIGMENT SHALL BE ADDED TO THE CONCRETE TO PRODUCE A DARK BROWN COLOR. THE CONTRACTOR SHALL SUBMIT THE TECHNICAL DATA AND A COLOR SAMPLE OF THE CONCRETE PIGMENT TO THE ENGINEER FOR APPROVAL NO LESS THAN 14 DAYS PRIOR TO USE. AS APPROVED SET RETARDING ADMIXTURE CONFORMING TO 705.12 TYPE B OR D SHALL BE USED WHEN THE NOMINAL TEMPERATURE OF THE CONCRETE EXCEEDS 50° F.

THE STAMP SHALL BE A FLEXIBLE URETHANE TYPE WITH A RANDOM SANDSTONE OR FLAGSTONE PATTERN AND SHALL PRODUCE A SIMULATED STONE TEXTURE. THE STONES SHALL HAVE A MINIMUM NOMINAL DIMENSION OF 8 IN X 8 IN AND A MAXIMUM NOMINAL DIMENSION OF 24 IN X 24 IN.

RADIAL JOINTS HAVING A DEPTH OF 6 INCHES SHALL BE SAWED AT 20 FT SPACING WITHIN 24 HOURS OF CONCRETE PLACEMENT.

AFTER PLACEMENT OF CONCRETE, THE CONTRACTOR SHALL APPLY AN ACRYLIC BASED CONCRETE SEALER AND CURING AGENT. THE SEALER SHALL HAVE A MEDIUM TO HIGH GLOSS AND BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT THE BRAND NAME AND TECHNICAL DATA FOR THE CONCRETE SEALER TO THE ENGINEER FOR APPROVAL NO LESS THAN 14 DAYS PRIOR TO USE.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER SQUARE YARD AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THE WORK NOTED ABOVE.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE J, ASTM D4956 TYPE XI REFLECTIVE SHEETING, PER CMS 730.193.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9, AS PER PLAN

THIS ITEM SHALL FOLLOW ALL SPECIFICATIONS AND REQUIREMENTS IN CMS 609 AND ODOT STANDARD CONSTRUCTION DRAWING BP-5.1 EXCEPT THAT THE GUTTER PAN SHALL BE 24".

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. RW.02.

DRAINAGE DISCHARGE CONTINUANCE

FURNISH A DRAINAGE DISCHARGE CONTINUANCE FOR ANY DRAINAGE DISCHARGE DISTURBED BY THE WORK AND NOT SHOWN IN THE PLANS. THE LOCATION, TYPE (CONDUIT OR SWALE), SIZE AND GRADE OF THE DRAINAGE DISCHARGE CONTINUANCE WILL BE AGREED TO BY THE ENGINEER

FURNISH AN INSPECTION WELL AT THE RIGHT OF WAY LINE IN ACCORDANCE WITH SCD DM-3.1 FOR EACH DRAINAGE DISCHARGE THAT OUTLETS THROUGH A CURB OPENING, OR INTO A STORM SEWER OR DRAINAGE STRUCTURE. THE COST IS INCLUDED IN ITEM 611, INSPECTION WELL.

FURNISH A WELL GRADED TRANSITION BETWEEN THE DITCH AND THE SWALE WHEN OUTLETTING A SWALE TO A DITCH. THE COST FOR THE GRADED TRANSITION IS INCLUDED IN ITEM 203, EMBANKMENT AS PER PLAN.

FURNISH AN EROSION CONTROL PAD AS SHOWN IN SCD DM-1.1 WHEN OUTLETTING A CONDUIT TO A DITCH. THE COST FOR THE EROSION CONTROL PAD IS INCLUDED IN ITEM 611, CONDUIT, MISC.: TYPE _ FOR DRAINAGE DISCHARGE CONTINUANCE.

FURNISH A DRILLED HOLE OR A CURB SECTION WITH A HOLE WHEN OUTLETTING A CONDUIT THROUGH A CURB OPENING. THE COST OF DRILLING, OR FURNISHING THE CURB SECTION WITH HOLE IS INCLUDED IN ITEM 611, CONDUIT, MISC.: TYPE _ FOR DRAINAGE DISCHARGE CONTINUANCE.

FURNISH A DRILLED CORE HOLE WHEN OUTLETTING INTO A STORM SEWER OR DRAINAGE STRUCTURE. THE COST OF THE DRILLED CORE HOLE IS INCLUDED IN ITEM 611, CONDUIT, MISC.: TYPE _ FOR DRAINAGE DISCHARGE CONTINUANCE.

DOCUMENTATION
THE CONTRACTOR SHALL FURNISH WRITTEN DOCUMENTATION TO THE ENGINEER AND TO THE DISTRICT R/W PERMIT OFFICE. THE DOCUMENTATION INCLUDES THE CONSTRUCTION PROJECT NUMBER, PID, COUNTY, ROUTE, SECTION, LATITUDE AND LONGITUDE OF THE DRAINAGE DISCHARGE AT THE R/W, THE NAME OF PROPERTY OWNER WITH ADDRESS, THE DATE THE DRAINAGE DISCHARGE WAS LOCATED, THE DATE THE DRAINAGE DISCHARGE CONTINUANCE WAS FURNISHED, A DETAILED DESCRIPTION OF THE WORK AND PICTURES OF THE DRAINAGE DISCHARGE CONTINUANCE (IN PDF OR JPEG FORMAT). THE DOCUMENTATION IS INCLUDED IN ITEM 611, CONDUIT, MISC.: TYPE _ FOR DRAINAGE DISCHARGE CONTINUANCE OR ITEM 203, EMBANKMENT AS PER PLAN.

DRAINAGE DISCHARGE CONTINUANCE REMOVAL
THE ENGINEER MAY REQUIRE THE NEWLY INSTALLED DRAINAGE DISCHARGE CONTINUANCE TO BE REMOVED.

REMOVE THE NEWLY INSTALLED CONDUIT AND ANY EXISTING CONDUIT TO THE RIGHT OF WAY LINE. FOR CONDUIT THAT OUTLETS THROUGH THE CURB RESTORE THE CURB BY FILLING THE HOLE WITH CLASS QC 1 CONCRETE OR REPLACE THE CURB SECTION. FOR CONDUIT THAT OUTLETS TO A STORM SEWER OR DRAINAGE STRUCTURE LEAVE 6 INCHES PROTRUDING OUTSIDE OF THE CONDUIT. PLUG THE PROTRUDING CONDUIT WITH EITHER A MANUFACTURED CAP OR CLASS QC 1 CONCRETE. FOR CONDUIT THAT OUTLETS TO THE DITCH REMOVE THE EROSION CONTROL PAD. RESTORE ALL AREAS AS REQUIRED. PLUG THE EXISTING CONDUIT REGARDLESS OF SIZE AT THE RIGHT OF WAY LINE WITH CLASS QC 1 CONCRETE AND RESTORE ALL AREAS AS REQUIRED. ALL COSTS ARE INCLUDED IN ITEM 202, REMOVAL MISC. CONDUIT.

DRAINAGE DISCHARGE CONTINUANCE (CONT.)

DAM THE SWALE THAT OUTLETS TO THE DITCH AT THE R/W AS DIRECTED BY THE ENGINEER. ALL COSTS ARE INCLUDED IN ITEM 203, EMBANKMENT AS PER PLAN.

REMOVE THE INSPECTION WELL AND RESTORE ALL AREAS AS REQUIRED. THE COST IS INCLUDED IN ITEM 202, REMOVAL MISC. INSPECTION WELL.

CONDUIT MATERIAL TYPES
THE FOLLOWING CONDUIT MATERIAL TYPES ARE PERMITTED: 707.33, 707.41 NON- PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, AND 707.52 SDR35.

PAY ITEMS
EACH OF THE PAY ITEMS LISTED BELOW FOR CONDUIT MISCELLANEOUS TYPES B, C, E AND F FOR DRAINAGE DISCHARGE CONTINUANCE INCLUDE CONDUIT SIZES 2 INCH TO 10 INCH. THERE IS NO COST DIFFERENTIATION FOR SIZE IN THESE PAY ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IN MAKING THE ABOVE DRAINAGE DISCHARGE CONTINUANCE:

ITEM 611, 1 EACH INSPECTION WELL
ITEM 611, 5 FT. CONDUIT, MISC TYPE B FOR DRAINAGE DISCHARGE CONTINUANCE
ITEM 611, 5 FT. CONDUIT, MISC TYPE C FOR DRAINAGE DISCHARGE CONTINUANCE
ITEM 611, 5 FT. CONDUIT, MISC TYPE E FOR DRAINAGE DISCHARGE CONTINUANCE
ITEM 611, 5 FT. CONDUIT, MISC TYPE F FOR DRAINAGE DISCHARGE CONTINUANCE
ITEM 202, 5 FT. REMOVAL MISC CONDUIT
ITEM 202, 1 EACH REMOVAL MISC INSPECTION WELL
ITEM 203, 50 CUBIC YARD EMBANKMENT AS PER PLAN

DESIGN AGENCY

2LMN

DESIGNER

KAZ

REVIEWER

DES 01/09/24

PROJECT ID

113662

SHEET

P.022

TOTAL

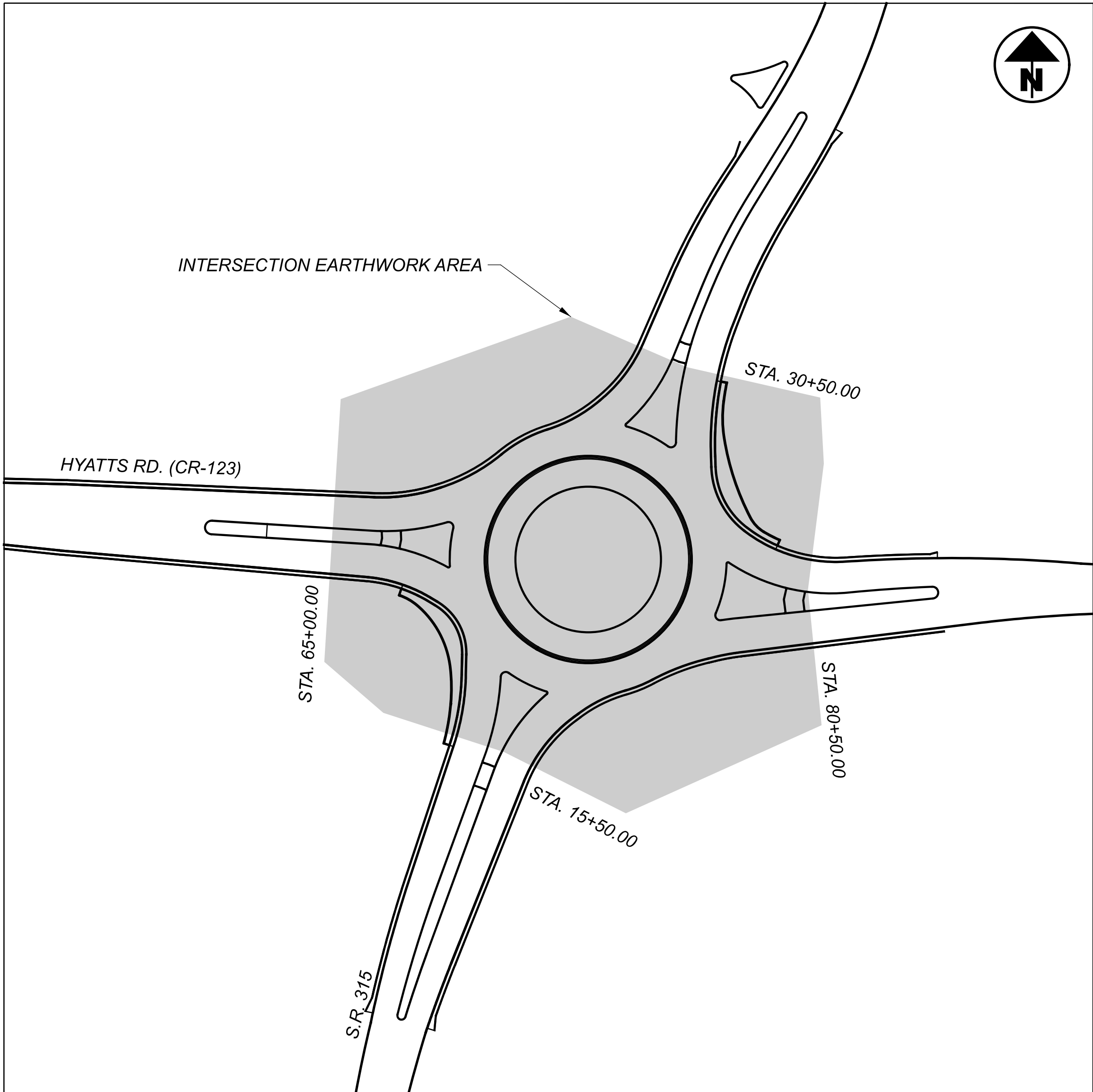
129

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<div><div></div><div>GENERAL SUMMARY</div></div>	
DESIGN AGENCY	
2LMN	
DESIGNER	
KAZ	
REVIEWER	
DES 12/17/24	
PROJECT ID	
113662	
SHEET	TOTAL
P.029	129

BASELINE STATION		CUT VOLUME (CY)	FILL VOLUME (CY)	SEED AREA (SY)
STA. TO STA.				
09+00.00	09+50.00	0	0	0
09+50.00	10+00.00	61	0	24
10+00.00	10+50.00	66	1	34
10+50.00	11+00.00	67	5	79
11+00.00	11+50.00	70	41	148
11+50.00	12+00.00	70	110	179
12+00.00	12+50.00	75	73	91
12+50.00	13+00.00	109	20	104
13+00.00	13+50.00	149	54	258
13+50.00	14+00.00	193	70	320
14+00.00	14+50.00	250	63	319
14+50.00	15+00.00	308	40	293
15+00.00	15+50.00	366	12	269
30+50.00	31+00.00	176	36	147
31+00.00	31+50.00	102	106	203
31+50.00	32+00.00	83	84	157
32+00.00	32+50.00	69	63	86
32+50.00	33+00.00	58	106	150
33+00.00	33+50.00	53	83	198
33+50.00	34+00.00	51	57	206
34+00.00	34+50.00	50	69	207
34+50.00	35+00.00	51	67	196
35+00.00	35+50.00	58	29	106
35+50.00	36+00.00	0	0	0
36+00.00	36+50.00	0	0	0
36+50.00	37+00.00	0	0	0
TOTAL FROM S.R. 315		2535	1189	3774

BASELINE STATION		CUT VOLUME (CY)	FILL VOLUME (CY)	SEED AREA (SY)
STA. TO STA.				
59+50.00	60+00.00	0	0	0
60+00.00	60+50.00	95	0	65
60+50.00	61+00.00	181	0	119
61+00.00	61+50.00	244	0	155
61+50.00	62+00.00	213	10	129
62+00.00	62+50.00	185	10	89
62+50.00	63+00.00	359	0	167
63+00.00	63+50.00	411	0	168
63+50.00	64+00.00	349	0	50
64+00.00	64+50.00	432	2	84
64+50.00	65+00.00	517	3	203
80+50.00	81+00.00	93	59	154
81+00.00	81+50.00	98	36	85
81+50.00	82+00.00	87	14	58
82+00.00	82+50.00	87	19	133
82+50.00	82+72.00	41	2	33
82+72.00	83+00.00	0	0	0
TOTAL FROM HYATTS RD. (CR-123)				
		3392	155	1692
		CUT VOLUME (CY)	FILL VOLUME (CY)	SEED AREA (SY)
INTERSECTION EARTHWORK AREA (CAD MEASURED)		2718	345	1079
		(CY)	(CY)	
PAVEMENT REMOVED		1448	102	
		CUT VOLUME (CY)	FILL VOLUME (CY)	SEED AREA (SY)
TOTALS CARRIED TO GENERAL SUMMARY		7198	1792	6545



INTERSECTION EARTHWORK AREA

VOLUME CALCULATED FROM 3D MODEL