

ACTION TRANSMITTAL No. 2015-37

DATE: August 13, 2015
TO: TAC Funding and Programming Committee
PREPARED BY: Joe Barbeau, Senior Planner (651-602-1705)
SUBJECT: Scope Change Request for Anoka County CSAH 116 Reconstruction Project
REQUESTED ACTION: Anoka County requests a scope change to modify the scope of its STP-funded project (SP # 002-716-015) in 2016 to modify project length, modify access, and add a turn lane.
RECOMMENDED MOTION: Recommend approval of the request to modify the scope for the STP-funded project (SP # 002-716-015) in 2016 to modify project length, modify access, and add a turn lane.

BACKGROUND AND PURPOSE OF ACTION: Anoka County received \$7,000,000 (\$7,840,000, adjusted for inflation) in Surface Transportation Program (STP) funding for reconstruction of CSAH 116 (Bunker Lake Blvd). The County is requesting a scope change that would allow for the following changes:

- Total project construction cost increases from \$11,477,760 to \$11,581,964.
 - Does not include \$926,557 for design engineering.
- Extend the west terminus to Crane Street. Current terminus is “just E of Crane Street.” This change accommodates the addition of a lane on southbound Crane Street (see next bullet).
- Add a second outbound lane on Crane Street (one right turn lane and one through / left turn lane).
- Extend the east terminus to .1 mile east of Van Buren Street. Current terminus is Jefferson Street. Left turn lanes are proposed in both eastbound (left into senior housing complex) and westbound (left to Van Buren Street) directions.
- Add trail on the north side of CSAH 116 between Crane Street and former west terminus to fill in the gap between proposed and existing trails
- Wintergreen Street: change access from right-in / right-out to $\frac{3}{4}$ access.
- Butternut Street: change access from right-in / right-out to $\frac{3}{4}$ access.
- Anoka County Farms (125 Bunker Lake Blvd NE): change access from right-in / right-out to full access.
- Terrace Road: change from a cul-de-sac to right-in / right out.

RELATIONSHIP TO REGIONAL POLICY: Projects that receive funding through the regional solicitation process are subject to the regional scope change policy. The purpose of this policy is to ensure that the project is designed and constructed according to the plans and intent described in the original application. Additionally, federal rules require that any federally-funded project scope change must go through a formal review and TIP amendment process if the project description or total project cost changes substantially. The scope change policy and process allow project sponsors to make adjustments to their projects as needed while still providing substantially the same

benefits described in their original project applications.

A TIP amendment accompanies this request.

STAFF ANALYSIS: Staff reviewed the submitted scope change request. The project originally scored 743 points and was ranked first out of seven projects that applied in the “A” Minor Relievers category. Staff review, which included sharing the proposed update with some of the scorers from the 2011 solicitation, examined whether the updated project would have scored well enough to be funded. Potentially changed scores are shown underlined in the “New” column on the second table below. They include a slight decrease in crash reduction cost effectiveness (due to the increase in cost) and decreases in two access management-related categories (due to the relaxation of access management measures). Staff also assigned additional points for an air quality improvement and the completion of a trail gap. Even without these increases, the adjusted score of 716 is above the score of the project that finished second (708 points). That project was also funded. .

Most of the points reduced are related to access. The original application sold the project in part on safety and limiting the number of full access entrances onto CSAH 116. The original application reduced access for four intersections. The updated project only reduces access at two of these intersections; neither to the level originally proposed:

Intersection	Original Scope	Proposed Scope
Wintergreen St. (T Intersection)*	Full to right-in / right-out	¾ (re-allow left-in)
Butternut St. (T-Intersection)	Full to right-in / right-out	¾ (re-allow left-in)
Anoka County Farms (T-Intersection)	Full to right-in / right-out	Maintain full access
Terrace Rd. (T-Intersection)	Right-in / right-out to no access	Maintain right-in / right-out

*Note that the attached letter indicates this intersection to have a reduction in access from the original application. Staff disagrees. It appears to have originally been proposed as right-in / right-out and is now proposed as a ¾ intersection; an increase in access from the original application.

#	Category	Max	Orig	New	Notes
A	Relative Importance of Route	100	69	69	Not provided to scorer: Not likely to change
B.1	Crash Reduction	100	60	60	Scorer reports that score would not change
B.2	Air Quality	100	100	100	Scorer reports that project would have slight air quality improvement (but already at top score)
B.3	Congestion Reduction	150	100	100	Scorer reports that score not likely to change
C.1	Crash Reduction Cost Effectiveness	125	38	<u>33</u>	Scorer reports that <u>slight reduction</u> in score due to increased project cost.
C.2	Congestion Reduction Cost Effectiveness	75	40	40	Scorer reports that score not likely to change
C.3	Air Quality Cost Effectiveness	75	45	<u>55</u>	Scorer reports 33% improvement in cost per kg reduced. Staff therefore assumes score increase of 33% of gap to top score (10 points)
D.1	Development Framework Planning Area Objectives	100	27	27	Not provided to scorer: Not likely to change
D.2	Progress Toward Affordable Housing Goals	50	15	15	Not provided to scorer: Not likely to change
D.3	Land Use And Access Mgmt Planning	75	65	<u>60</u>	Scorer reports a <u>reduction of 5 points</u>
D.4	Access Management Improvements	75	50	<u>33</u>	Scorer reports a <u>reduction of 17 points</u>
D.5	Integration of Modes	125	103	<u>108</u>	Scorer retired. Staff provides 5 points for filling in of trail gap.
E	Maturity of Project Concept	100	31	31	Scorer reported that score would not change.
TOTAL		1250	743	731	

Based on the above scoring table, staff recommends approval of the requested scope change.

ROUTING

TO	ACTION REQUESTED	DATE COMPLETED
TAC Funding & Programming Committee	Review & Recommend	
Technical Advisory Committee	Review & Recommend	
Transportation Advisory Board	Review & Approve	



Anoka County

TRANSPORTATION DIVISION

Highway

Douglas W. Fischer, PE
County Engineer

July 20, 2015

Mr. Joseph Barbeau
Funding and Programming
390 Robert Street North
St. Paul, MN 55101

Dear Mr. Barbeau,

In 2011 Anoka County applied for and received STP funding for the reconstruction of CSAH 116 (Bunker Lake Blvd. NW) from Crane St. to Jefferson St. in the Cities of Andover and Ham Lake. The funding is in the 2015-2018 STIP in the year 2016 in the amount of \$11,477,760 with \$7,840,000 in federal funds.

As part of the public involvement process and discussions within the project management team meetings and the Cities several changes are being proposed based on safety and mobility of the traveling public. Anoka County is requesting a scope change due to a change in the project length, minor access changes, and turn lane addition on Crane St. in Andover.

Trail has been added along the north side of Bunker Lake Boulevard from the beginning of the reconstruction to the west to Crane St. This additional trail will connect the proposed trail to the east with the existing trail to the west of Crane St. Without this piece of trail there would be a 500' gap in the continuity of the trail.

We are proposing the addition of a second outbound lane on Crane St. in Andover. With the closure of the left out movement at Wintergreen St. it was shown that significant additional left turning vehicles would be making that move from the Crane St. intersection. A left turn lane is proposed to separate that traffic from the right turns.

The original concept indicated that Wintergreen St. would be reduced to a right in/right out access. This design would force eastbound vehicles wishing to turn north on Wintergreen St. to cross the BNSF tracks, do a U-turn at Sycamore St. and then travel back across the tracks increasing train/vehicle exposure. We are proposing a $\frac{3}{4}$ access with an eastbound left in to Wintergreen St. to avoid traffic crossing the tracks and allow for a safe turning movement for residents.

Several access changes are being proposed in the area from Butternut St. in Andover to Terrace Road in Ham Lake. The original design proposed a full access at Butternut St., two right in/right out driveways and a cul-de-sac at Terrace Rd. We are proposing a $\frac{3}{4}$ access at Butternut, a full access at one of the driveways with the other remaining right in/right out and right in/right out access at Terrace Rd. The full access at one of the driveways is proposed to allow access for the

Our passion is your safe way home!

1440 Bunker Lake Blvd. NW ▲ Andover, MN 55304-4005
Office: 763-862-4200 ▲ Fax: 763-862-4201 ▲ www.anokacounty.us/highway

Affirmative Action / Equal Opportunity Employer

two commercial property uses on the north side of Bunker Lake Blvd. This access will allow the traffic to and from TH 65 to the salvage yard and will allow access to Anoka County Farms which is a destination for many school field trips. Without this access buses coming from the east be forced to travel to TH 65 to make a U-turn. Likewise vehicles coming from the salvage yard would be forced to Butternut St. to make a U-turn to head back to TH 65 for an additional 0.8 miles. As a compromise to this additional full intersection we propose to reduce the access at Butternut to ¾ which would reduce that access to conditional secondary (right in/right out/left in).

In addition to the access change we are proposing to lengthen the project by 0.4 miles to the east end. During the public involvement process it was identified that the end of the project and the transition back to the existing two lane section was happening in the area of the intersection of Van Buren St. /entrance to a senior housing complex. It was felt that this transition in an area where many seniors would be trying to turn left from a thru lane would create an unsafe situation. We propose to add left turn lanes in both directions with a painted median to provide a safe turning refuge.

Anoka County feels that the proposed changes were warranted and enhance the safety of project while still meeting the intent of the original design.

Attached is the additional information as requested. If you have any questions or need any additional information please contact me at 736-862-4248 or gina.pizzo@co.anoka.mn.us.

Sincerely,



Gina Pizzo

SCOPE CHANGE REQUEST

CSAH 116 (Bunker Lake Blvd. NW) from Crane St. to Jefferson St.
S.P. 002-716-015
Anoka County, Minnesota

REVISED PROJECT DESCRIPTION

CSAH 116 – Crane through Van Buren St. NE Reconstruction

The proposed project reconstructs CSAH 116 to a four lane divided urban roadway with dedicated right and left turn lanes from approximately 600' east of Crane St. in the City of Andover to approximately 600' east of Van Buren St. NE in the City of Ham Lake. The last 1300' in the City of Ham Lake is a transition to the existing 2 lane rural section and will not have a raised center island. This portion will provide painted channelization at the intersection with Van Buren St. and the senior housing development entrance to the north. This project includes the addition of a right turn lane on Crane St. and the realignment of the Prairie Road intersection. The project also includes the addition of bus/truck pull out lanes at the crossing with the Burlington Northern Santa Fe Railroad to be used by vehicles that are required to stop at the crossing.

The project will include the construction of trail along the north side of CSAH 116 from Crane St. to Jefferson St. and along the south side of CSAH 116 from Crane St. and across the BNSF tracks to connect to an existing trail in Bunker Hills Regional Park. There will also be two other trail connections made to Bunker Hills Park trails; one at the Prairie Road intersection and another from the trail along the north side of CSAH 116 thru a pedestrian underpass approximately 1400' east of Prairie Road. This underpass connection will continue east in the Park to the Goldenrod St. NW/New Park entrance intersection. The trail crossings with the BNSF Railroad will include pedestrian gate arms to provide safe pedestrian crossings at the tracks.

This project is approximately 2.7 miles in length.

WORK TO BE COMPLETED

Submit 95% plans to State Aid for review	September 2015
Permits	September 2015
Right of Way Acquisition complete	December, 2015
Plan Approval	November 2015
Advertise for bids	December 2015

PROJECT LOCATION MAP

A map showing the location of the project within the area and the region is attached as Exhibit 1.

PROJECT LAYOUT

The proposed project layout is attached as Exhibit 2.

REVISED PROJECT COST ESTIMATE

The revised project cost estimate is attached as Exhibit 3.

RECALCULATED RESPONSES TO KEY CRITERIA

Below you will find computations for key components of the STP application.

B.1.a

AR-11-01

From Application:

AADT: $17,600 + 19,200/2 = 18,400$ (average of 2007 and 2009 volumes)

No of Years: 3

No of Crashes: 114

Segment Length: 2.3 miles

*Crash Rate: $114 * 1,000,000 / (365) (3) (18,400) (2.3) = 114,000,000/46,340,400 = 2.46$*

The crash rate for CSAH 14 is 2.46.

Recomputed crash rate:

AADT: $17,600 + 19,200/2 = 18,400$ (average of 2007 and 2009 volumes)

No of Years: 3

No of Crashes: 114

Segment Length: 2.7 miles

Crash Rate: $114 * 1,000,000 / (365) (3) (18,400) (2.7) = 114,000,000/46,340,400 = 2.10$

The crash rate for CSAH 14 is 2.10.

B.2 Air Quality. (original)

Segment Length = 2.3 miles

Posted Speed Limit = 55 mph

Existing Conditions

Free-flow travel time = $(2.3 \text{ mile} / 55 \text{ mph}) \times 60 = 2.51 \text{ minutes}$

Signalized intersection delay: (1 location – Prairie Rd) = 75 seconds; (1 location – Jefferson St) = 50 seconds = 125 seconds = 2.1 minutes

Mid-block Delays due to left-turns at minor streets/drives (1 location)

Mid-block delay = $1 \times 10 \text{ seconds} = 10 \text{ seconds} = 0.2 \text{ minutes}$

Arterial Speed = $(2.3 / (2.51 + 2.1 + 0.2 \text{ minutes})) \times 60 = 28.7 \text{ mph}$

Proposed Conditions

Free-flow travel time = $(2.3 \text{ mile} / 55 \text{ mph}) \times 60 = 2.51 \text{ minutes}$

Signalized intersection delay (1 location – Prairie Rd) = 30 seconds; (1 location – Jefferson St) = 30 seconds = 60 seconds = 1 minute

All mid-block delays due to left-turns at minor streets/driveways will be reduced to zero due to the center median and left-turn lanes at full intersections.

Arterial Speed = $(2.3 / (2.51 + 1.0 \text{ minutes})) \times 60 = 39.3 \text{ mph}$

New:

B.2 Air Quality. (original)

Segment Length = 2.7 miles

Posted Speed Limit = 55 mph

Existing Conditions

Free-flow travel time = $(2.7 \text{ mile} / 55 \text{ mph}) \times 60 = 2.95 \text{ minutes}$

Signalized intersection delay: (1 location – Prairie Rd) = 75 seconds; (1 location – Jefferson St) = 50 seconds = 125 seconds = 2.1 minutes

Mid-block Delays due to left-turns at minor streets/drives (1 location)

Mid-block delay = $2 \times 10 \text{ seconds} = 20 \text{ seconds} = 0.33 \text{ minutes}$

Arterial Speed = $(2.7 / (2.95 + 2.1 + 0.33 \text{ minutes})) \times 60 = 30 \text{ mph}$

Proposed Conditions

Free-flow travel time = $(2.7 \text{ mile} / 55 \text{ mph}) \times 60 = 2.95 \text{ minutes}$

Signalized intersection delay (1 location – Prairie Rd) = 30 seconds; (1 location – Jefferson St) = 30 seconds = 60 seconds = 1 minute

All mid-block delays due to left-turns at minor streets/driveways will be reduced to zero due to the center median and left-turn lanes at full intersections.

Arterial Speed = $(2.7 / (2.51 + 1.0 \text{ minutes})) \times 60 = 46.15 \text{ mph increase of 6.9mph}$

VMT Calculations (original)

Annual VMT (commute trips)/250 (number of work days in a year) = miles/day

Annual VMT: $15,900 \text{ (2011 counts)} \times 2.3 \text{ (project length)} \times 365 \text{ (year)} = 13,348,050$
 $= 13,348,050 / 250 = 53,392 \text{ miles/day}$

Based on the analysis, the peak hour average speed will increase by approximately 11 mph on this segment after proposed project improvements. Using the MOBILE5B emission factors and Vehicle Emissions Reduction Worksheet, total emissions for baseline and build conditions were calculated. Total emissions reduction due to the proposed improvements is 293.1 kilograms/day. Please refer to Attachment F for a copy of the worksheet and Attachment G for traffic volume counts.

VMT Calculations (original)

Annual VMT (commute trips)/250 (number of work days in a year) = miles/day

Annual VMT: 15,900 (2011 counts)*2.7 (project length)* 365 (year) = 15,669,450
 = 15,669,450/250 = 62,678 miles/day

Based on the analysis, the peak hour average speed will increase by approximately 11 mph on this segment after proposed project improvements. Using the MOBILE5B emission factors and Vehicle Emissions Reduction Worksheet, total emissions for baseline and build conditions were calculated. Total emissions reduction due to the proposed improvements is 496.4 kilograms/day. Please refer to Attachment F for a copy of the worksheet and Attachment G for traffic volume counts.

From original application

VEHICLE EMISSIONS REDUCTION WORKSHEET (APPENDIX G) System Management					
BASELINE EMISSIONS WITHOUT PROJECT					
Average Weekday Travel Speed Before Installation:				29	mph
	Emissions Factor (grams/mile)*	Daily VMT (miles)	Emissions (kg/day)		
CO Emissions	15.55	53,392	830.2	kg/day	
NO _x Emissions	1.68	53,392	89.7	kg/day	
VOC Emissions	1.43	53,392	76.4	kg/day	
Total Emissions			996.3	kg/day	
EMISSIONS AFTER PROJECT					
Average Weekday Travel Speed After Installation:				39	mph
	Emissions Factor (grams/mile)*	Daily VMT (miles)	Emissions (kg/day)		
CO Emissions	10.36	53,392	553.143192	kg/day	
NO _x Emissions	1.72	53,392	91.834584	kg/day	
VOC Emissions	1.09	53,392	58.197498	kg/day	
Total Emissions			703.2	kg/day	
Net Emissions Reductions due to Project			293.1	kg/day	
COST EFFECTIVENESS					
Total Cost of the Project:				\$10,300,000	
Cost Effectiveness:				35138.8112	

*Use auto emissions factors in Appendix for speeds in F4 and F5

Original 293.1 kg/day

New computations

<p style="text-align: center;">VEHICLE EMISSIONS REDUCTION WORKSHEET (APPENDIX G) System Management</p>					
BASELINE EMISSIONS WITHOUT PROJECT					
Average Weekday Travel Speed Before Installation:				29	mp h
	Emissions Factor (grams/mile)*	Daily VMT (miles)	Emission s (kg/day)		
CO Emissions	15.55	62,678	974.6	kg/day	
NO _x Emissions	1.68	62,678	105.3	kg/day	
VOC Emissions	1.43	62,678	89.6	kg/day	
Total Emissions			1169.6	kg/day	
EMISSIONS AFTER PROJECT					
Average Weekday Travel Speed After Installation:				46	mp h
	Emissions Factor (grams/mile)*	Daily VMT (miles)	Emission s (kg/day)		
CO Emissions	8.07	62,678	505.81146	kg/day	
NO _x Emissions	1.73	62,678	108.43294	kg/day	
VOC Emissions	0.94	62,678	58.91732	kg/day	
Total Emissions			673.2	kg/day	
Net Emissions Reductions due to Project			496.4	kg/day	
COST EFFECTIVENESS					
Total Cost of the Project:				\$10,300,000	
Cost Effectiveness:				20748.9877	

Original 293.1 kg/day

New reduction of 496.4 kg/day

Increase in reduction of 203.3kg/day

PROJECT LOCATION MAP

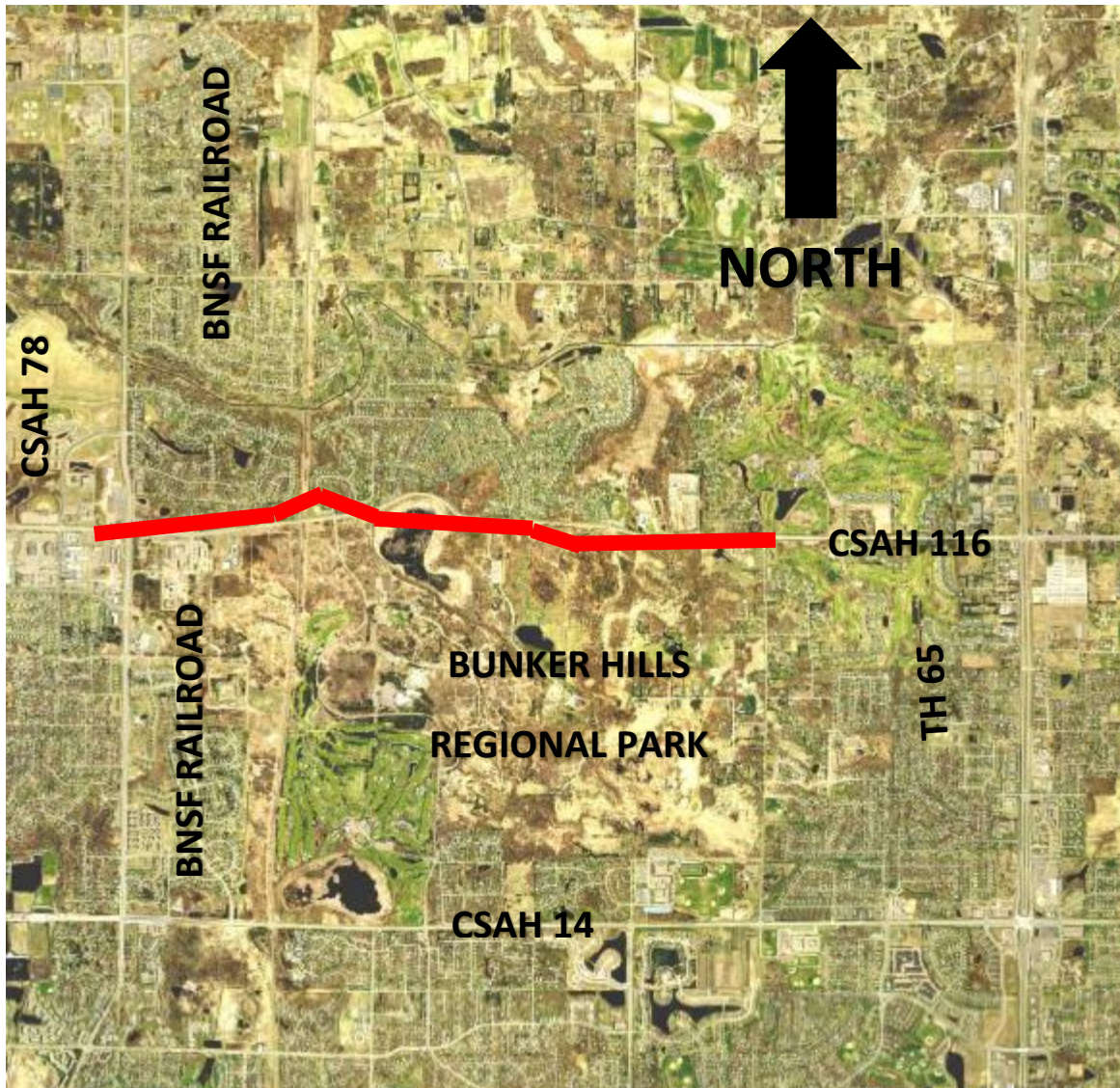


EXHIBIT 1

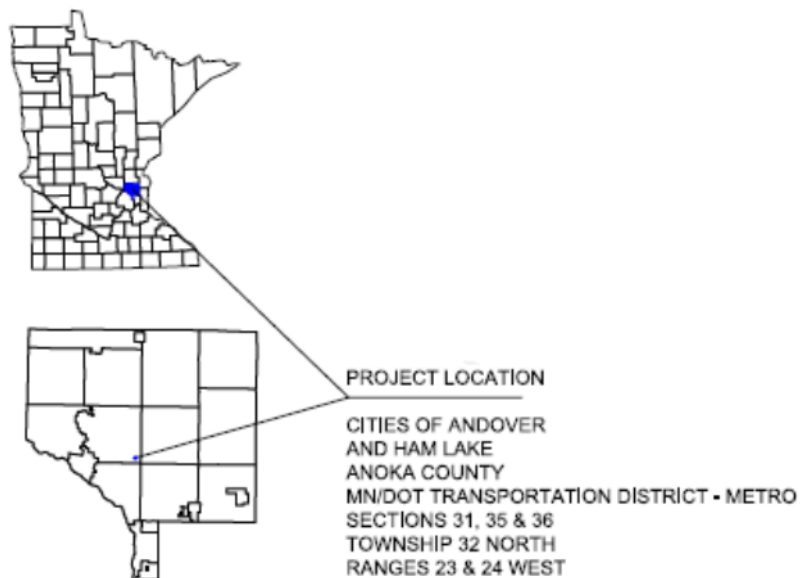


EXHIBIT "A" = Project Layout EXHIBIT "B" = 60% Estimated Cost Share EXHIBIT "C" = Cost Shering Agreement by MARIO 03-16-2015		EXHIBIT 3 07-15-2015 MN.		ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS CSAH 116 (BUNKER LAKE BLVD) FROM CRANE STREET TO EAST OF JEFFERSON STREET																							
ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	TOTAL PROJECT QUANTITY		FEDERAL PARTICIPATING										FEDERAL NON-PARTICIPATING											
						COUNTY OF ANOKA SP 002-716-015 (A)		CITY OF ANDOVER SP 198-020-000 (B)		CITY OF HAM LAKE SP 197-020-000, (C)		STORM SEWER (D) COUNTY=69.2% SP 002-716-015 CITY ANDOVER=23.9% SP 198-020-000 HAM LAKE= 6.9% SP 197-020-000 CITY		STATE AID PARTICIPATING				LOCAL									
						QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT
2021.501	MOBILIZATION	LUMP SUM	\$550,000.00	1	\$550,000.00	0.783	\$430,650.00	0.119	\$65,450.00	0.025	\$13,750.00	0.073	\$40,150.00														
2031.501	FIELD OFFICE TYPE D	EACH	\$20,000.00	1	\$20,000.00	0.783	\$15,660.00	0.119	\$2,380.00	0.025	\$500.00	0.073	\$1,460.00														
2041.610	TRAINEES	hour	\$1.00	1,800	\$1,800.00	1,800	\$1,800.00																				
2101.501	CLEARING	ACRE	\$3,000.00	10.15	\$30,450.00	10.15	\$30,450.00																				
2101.502	CLEARING	TREE	\$150.00	515	\$77,250.00	515	\$77,250.00																				
2101.506	GRUBBING	ACRE	\$3,000.00	10.15	\$30,450.00	10	\$30,450.00																				
2101.507	GRUBBING	TREE	\$100.00	433	\$43,300.00	433	\$43,300.00																				
2104.501	REMOVE PIPE CULVERTS	LIN FT	\$9.00	1	\$9.00	1	\$9.00																				
2104.501	REMOVE WATER MAIN	LIN FT	\$10.00	300	\$3,000.00			300	\$3,000.00																		
2104.501	REMOVE PIPE SEWERS	LIN FT	\$12.00	940	\$11,280.00	940	\$11,280.00																				
2104.501	REMOVE CURB AND GUTTER	LIN FT	\$2.75	9,964	\$27,401.00	9,964	\$27,401.00																				
2104.501	REMOVE BITUMINOUS CURB	LIN FT	\$3.00	237	\$711.00	237	\$711.00																				
2104.501	REMOVE RETAINING WALL	LIN FT	\$20.00	526	\$10,520.00	526	\$10,520.00																				
2104.501	REMOVE FENCE	LIN FT	\$2.50	50	\$125.00	50	\$125.00																				
2104.503	REMOVE BITUMINOUS WALK	SQ FT	\$0.50	59,726	\$29,863.00	59,726	\$29,863.00																				
2104.503	REMOVE CONCRETE WALK	SQ FT	\$0.90	849	\$764.10	849	\$764.10																				
2104.503	REMOVE CONCRETE MEDIAN	SQ FT	\$1.00	16,603	\$16,603.00	16,603	\$16,603.00																				
2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	\$8.00	15	\$120.00	15	\$120.00																				
2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	\$2.80	75,893	\$212,500.40	75,893	\$212,500.40																				
2104.509	REMOVE PIPE APRON	EACH	\$350.00	8	\$2,800.00	8	\$2,800.00																				
2104.509	REMOVE MANHOLE OR CATCH BASIN	EACH	\$350.00	10	\$3,500.00	10	\$3,500.00																				
2104.509	REMOVE BITUMINOUS FLUME	EACH	\$300.00	3	\$900.00	3	\$900.00																				
2104.509	REMOVE CONCRETE FLUME	EACH	\$500.00	2	\$1,000.00	2	\$1,000.00																				
2104.509	REMOVE SIGNAL SYSTEM	EACH	\$6,500.00	2	\$13,000.00	2	\$13,000.00																				
2104.511	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	\$6.00	153	\$918.00	153	\$918.00																				
2104.513	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	\$3.00	1,048	\$3,144.00	1,048	\$3,144.00																				
2104.523	SALVAGE GATE VALVE & BOX	EACH	\$280.00	1	\$280.00			1	\$280.00																		
2104.523	SALVAGE HYDRANT & VALVE	EACH	\$750.00	4	\$3,000.00			4	\$3,000.00																		
2104.523	SALVAGE SIGN TYPE C	EACH	\$50.00	1	\$50.00	1	\$50.00																				
2104.523	SALVAGE SIGN TYPE SPECIAL	EACH	\$75.00	1	\$75.00	1	\$75.00																				
2104.523	SALVAGE MAIL BOX SUPPORT	EACH	\$40.00	3	\$120.00	3	\$120.00																				
2104.601	HAUL SALVAGED MATERIAL	LUMP SUM	\$1,000.00	1	\$1,000.00	1	\$1,000.00																				
2104.603	ABANDON WATER MAIN	LIN FT	\$2.00	22	\$44.00	22	\$44.00																				
2105.501	COMMON EXCAVATION (EV)	CU YD	\$6.50	78,266	\$508,729.00	78,266	\$508,729.00																				
2105.501	COMMON EXCAVATION (EV) (PONDS)	CU YD	\$7.00	26,120	\$182,840.00	26,120	\$182,840.00																				
2105.505	MUCK EXCAVATION	CU YD	\$8.00	65,309	\$522,472.00	62,397	\$499,176.00			2,912	\$23,296.00																
2105.507	SUBGRADE EXCAVATION (EV)	CU YD	\$6.50	32,593	\$211,854.50	32,593	\$211,854.50																				
2105.522	SELECT GRANULAR BORROW (LV)	CU YD	\$11.00	36,283	\$399,113.00	29,938	\$329,314.35			6,345	\$69,798.65																
2105.607	COMMON BORROW SPECIAL (CV)	CU YD	\$30.00	78	\$2,340.00	78	\$2,340.00																				
2106.607	SELECT GRANULAR EMBANKMENT (CV) (TEMPORARY)	CU YD	\$20.00	859	\$17,180.00	859	\$17,180.00																				
2123.509	DOZER	hour	\$45.00	10	\$450.00	10	\$450.00																				
2130.501	WATER	M GALLON	\$25.00	180	\$4,500.00	180	\$4,500.00																				
2211.501	AGGREGATE BASE CLASS 5	TON	\$17.00	95	\$1,615.00	95	\$1,615.00																				
2211.503	AGGREGATE BASE (CV) CLASS 5	CU YD	\$23.00	24,815	\$570,745.00	24,815	\$570,745.00																				
2221.503	SHOULDER BASE AGGREGATE (CV) CLASS 5	CU YD	\$17.00	444	\$7,548.00	444	\$7,548.00																				
2232.501	MILL BITUMINOUS SURFACE	SQ YD	\$2.00	679	\$1,358.00	679	\$1,358.00																				
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	\$3.00	10,798	\$32,394.00	10,798	\$32,394.00																				
2360.501	TYPE SP 9.5 WEARING COURSE MIX (2B)	TON	\$71.00	2,576	\$182,896.00	1,648	\$117,008.00			521	\$36,991.00			407	\$28,897.00												
2360.501	TYPE SP 12.5 WEARING COURSE MIX (2,B)	TON	\$80.00	59	\$4,720.00	59	\$4,720.00																				
2360.501	TYPE SP 12.5 WEARING COURSE MIX (3,F)	TON	\$70.00	25,599	\$1,791,930.00	25,599	\$1,791,930.00																				
2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (3,B)	TON	\$60.00	14,228	\$853,680.00	14,228	\$853,680.00																				
2360.505	TYPE SP 12.5 BITUMINOUS MIXTURE FOR PATCHING	TON	\$85.00	29	\$2,465.00	29	\$2,465.00																				
2401.513	TYPE P-1 (TL-2) RAILING CONCRETE (3Y46)	LIN FT	\$80.00	440	\$35,200.00			440	\$35,200.00																		
2411.618	MODULAR BLOCK RETAINING WALL	SQ FT	\$28.00	4,117	\$115,276.00	2,559	\$71,652.00			1,558	\$43,624.00																
2411.618	ARCH CONC TEXTURE (SPLIT STONE)	SQ FT	\$140.00	6,270.0	\$877,800.00	1,491.0	\$208,740.00			4,779	\$669,060.00																
2412.511	14 x10 PRECAST CONCRETE BOX CULVERT	LIN FT	\$1,050.00	105	\$110,250.00			105	\$110,250.00																		
2412.512	14 x10 PRECAST CONCRETE BOX CULVERT END SECTION	EACH	\$19,000.00	1	\$19,000.00			1	\$19,000.00																		
2422.618	WOOD NOISE BARRIER	SQ FT	\$24.00	36,013	\$864,300.00	36,013	\$864,300.00																				

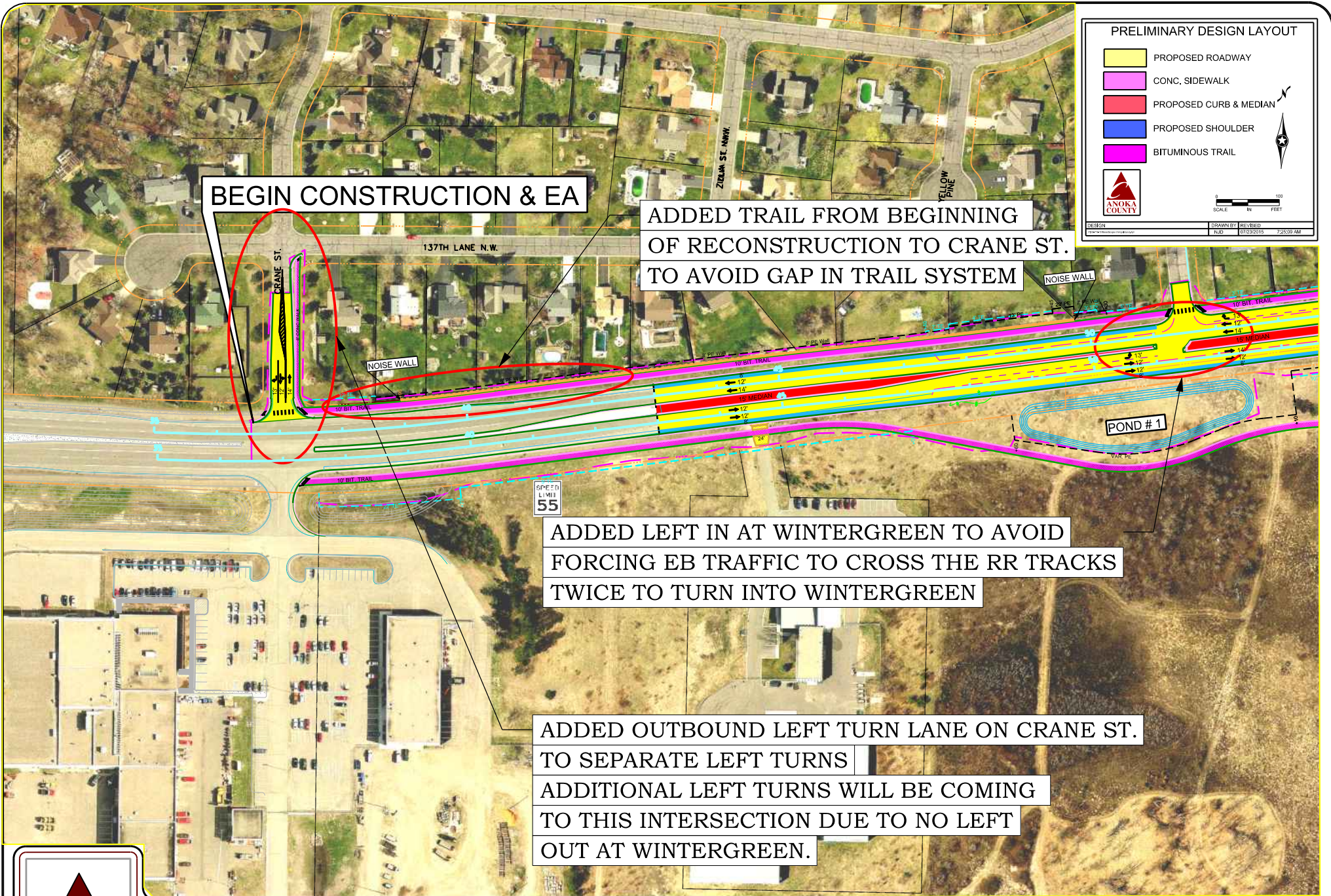
EXHIBIT "A" = Project Layout EXHIBIT "B" = 60% Estimated Cost Share EXHIBIT "C" = Cost Shering Agreement by MARIO 03-16-2015		EXHIBIT 3 07-15-2015 MN.				ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COSTS CSAH 116 (BUNKER LAKE BLVD) FROM CRANE STREET TO EAST OF JEFFERSON STREET																					
ITEM NO.	ITEM DESCRIPTION	UNIT	UNIT PRICE	TOTAL PROJECT QUANTITY		FEDERAL PARTICIPATING						STORM SEWER (D)		FEDERAL NON-PARTICIPATING						CP							
						COUNTY OF ANOKA SP 002-716-015 (A)		CITY OF ANDOVER SP 198-020-000 (B)		CITY OF HAM LAKE SP 197-020-000, (C)		COUNTY OF ANOKA SP 002-716-015 (E)		CITY OF ANDOVER SP 198-020-000 (F)		CITY OF HAM LAKE SP 197-020-000 (G)		COUNTY OF ANOKA CP 00-00 (H)		CITY OF ANDOVER CP 00-00 (I)		CITY OF HAM LAKE CP 00-00 (J)		CITY OF 00-00 (K)			
				QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT
2582.502	4" SOLID LINE WHITE - EPOXY	LIN FT	\$0.30	32,510	\$9,753.00	32,510	\$9,753.00																				
2582.502	4" BROKEN LINE WHITE - EPOXY	LIN FT	\$0.40	5,021	\$2,008.40	5,021	\$2,008.40																				
2582.502	8" BROKEN LINE WHITE - EPOXY	LIN FT	\$4.20	160	\$672.00	160	\$672.00																				
2582.502	4" SOLID LINE YELLOW - EPOXY	LIN FT	\$0.60	25,215	\$15,129.00	25,215	\$15,129.00																				
2582.502	4" DOUBLE SOLID LINE YELLOW - EPOXY	LIN FT	\$0.65	3,455	\$2,245.75	3,455	\$2,245.75																				
2582.503	CROSSWALK MARKING - WHITE PREFORMED THERMOPLASTIC	SQ FT	11.00	792	\$8,712.00	792	\$8,712.00																				
SUBTOTAL					\$11,581,964.34		\$9,009,789.35		\$1,381,479.00		\$289,926.65		\$850,769.34		\$25,000.00		\$12,500.00		\$12,500.00								
					11,581,964.34		A		B		C		D		E		F		G		H		I		J		K

Federal Funds Available SP 002-716-012	\$7,840,000.00
Match Amount (Anoka County)	
Total Federal Funds Available	\$7,840,000.00
% Federal Funding	68.06%

Funding Group:	Group A	Group B	Group C	Group D	Group E	Group F	Group G	Group H	Group I	Group J	Group K
Totals:	\$11,581,964.34	\$9,009,789.35	\$1,381,479.00	\$289,926.65	\$850,769.34	\$12,500.00	\$12,500.00				
Total Federal Eligible Items:	\$11,531,964.34	\$9,009,789.35	\$1,381,479.00	\$289,926.65	\$850,769.34						
Federal Funds Available	\$7,840,000.00	\$6,123,439.98	\$940,216.93	\$197,320.36	\$579,022.73						

SP 002-716-015, CSAH 116 (From Crane St. to East of Jefferson St.) Improvement Project - FUNDING SPLITS

PROJECT TOTALS	ANOKA COUNTY				CITY OF ANDOVER					CITY OF HAM LAKE				
	TOTALS	FEDERAL FUNDS	STATE AID FUNDS	LOCAL FUNDS (H)	TOTALS	FEDERAL FUNDS	STATE AID FUNDS	LOCAL FUNDS (I)	LOCAL FUNDS (J)	TOTALS	FEDERAL FUNDS	STATE AID FUNDS	LOCAL FUNDS (G)	LOCAL FUNDS (K)
ROADWAY	10,731,195.00	9,034,789.35	6,123,439.98	2,886,349.37	25,000.00	1,393,979.00	940,216.93	441,262.07	12,500.00		302,426.65	197,320.36	92,606.29	12,500.00
DRAINAGE (69.2% County, 23.9% Andover, 6.9% Ham Lake)	850,769.34	588,401.39	400,458.46	187,942.93		203,472.76	138,480.96	64,991.80			58,895.18	40,083.31	18,811.87	
CONSTRUCTION TOTAL	11,581,964.34	9,623,190.74	6,523,898.44	3,074,292.31	25,000.00	1,597,451.76	1,078,697.89	506,253.87	12,500.00		361,321.83	237,403.67	111,418.16	12,500.00
8% CONSTRUCTION ENGINEERING	926,557.15	769,855.26		767,855.26	2,000.00	127,796.14		126,796.14	1,000.00		28,905.75		27,905.75	1,000.00
DESIGN ENGINEERING														
RIGHT OF WAY														
UTILITY RELOCATION														
PROJECT TOTAL	12,508,521.49	10,393,046.00	6,523,898.44	3,842,147.57	27,000.00	1,725,247.90	1,078,697.89	633,050.01	13,500.00		390,227.57	237,403.67	139,323.91	13,500.00



PRELIMINARY DESIGN LAYOUT

- PROPOSED ROADWAY
- CONC. SIDEWALK
- PROPOSED CURB & MEDIAN
- PROPOSED SHOULDER
- BITUMINOUS TRAIL



DESIGN: [Name] DRAWN BY: [Name] REVISED: [Date] PUD: 07/23/2015 7:25:39 AM

BEGIN CONSTRUCTION & EA

ADDED TRAIL FROM BEGINNING OF RECONSTRUCTION TO CRANE ST. TO AVOID GAP IN TRAIL SYSTEM

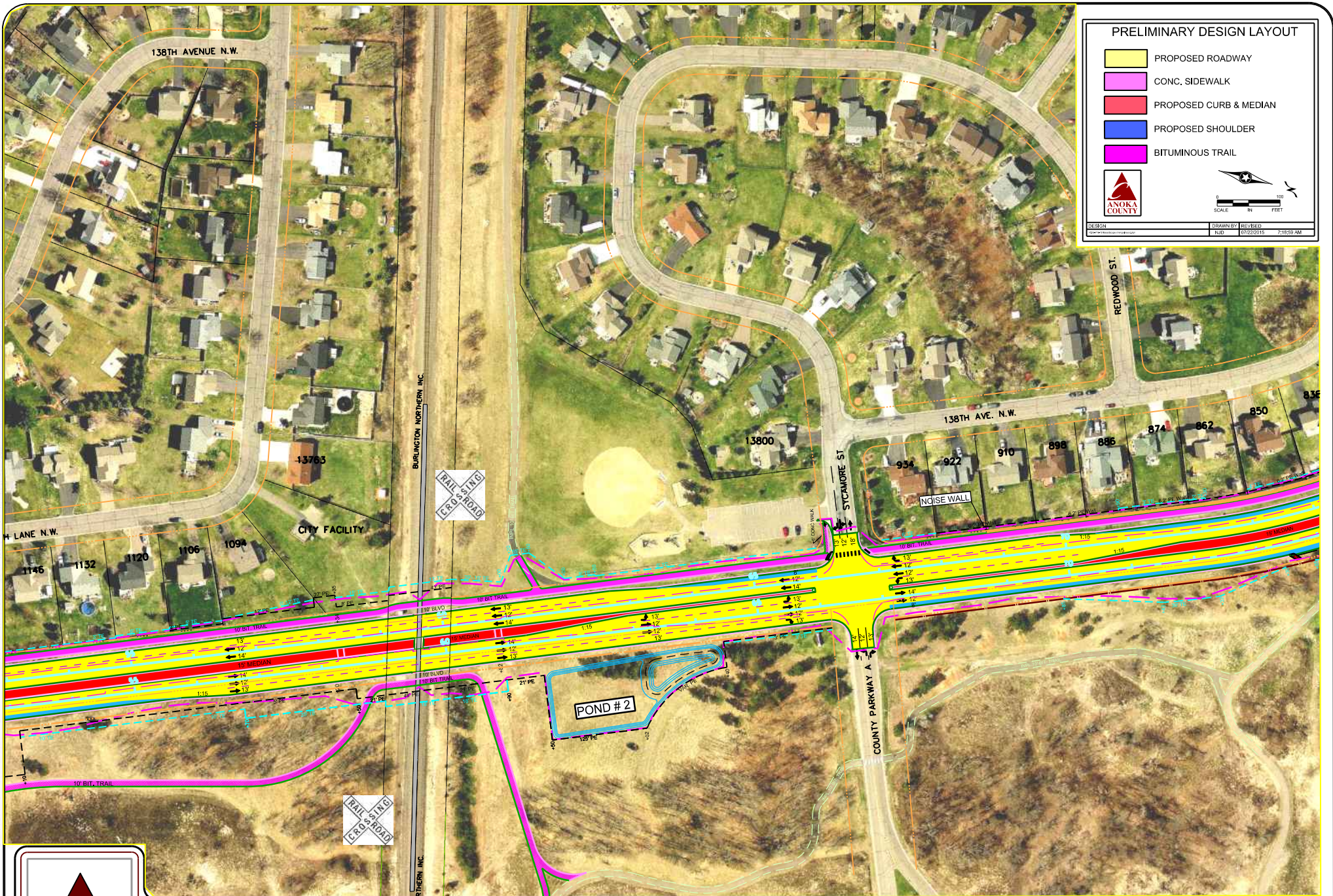
ADDED LEFT IN AT WINTERGREEN TO AVOID FORCING EB TRAFFIC TO CROSS THE RR TRACKS TWICE TO TURN INTO WINTERGREEN

**ADDED OUTBOUND LEFT TURN LANE ON CRANE ST. TO SEPARATE LEFT TURNS
ADDITIONAL LEFT TURNS WILL BE COMING TO THIS INTERSECTION DUE TO NO LEFT OUT AT WINTERGREEN.**



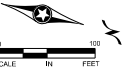
REVISED LAYOUT

CSAH 116 - Reconstruction Project
Crane St. to 2230' east of Jefferson St.



PRELIMINARY DESIGN LAYOUT

- PROPOSED ROADWAY
- CONC. SIDEWALK
- PROPOSED CURB & MEDIAN
- PROPOSED SHOULDER
- BITUMINOUS TRAIL

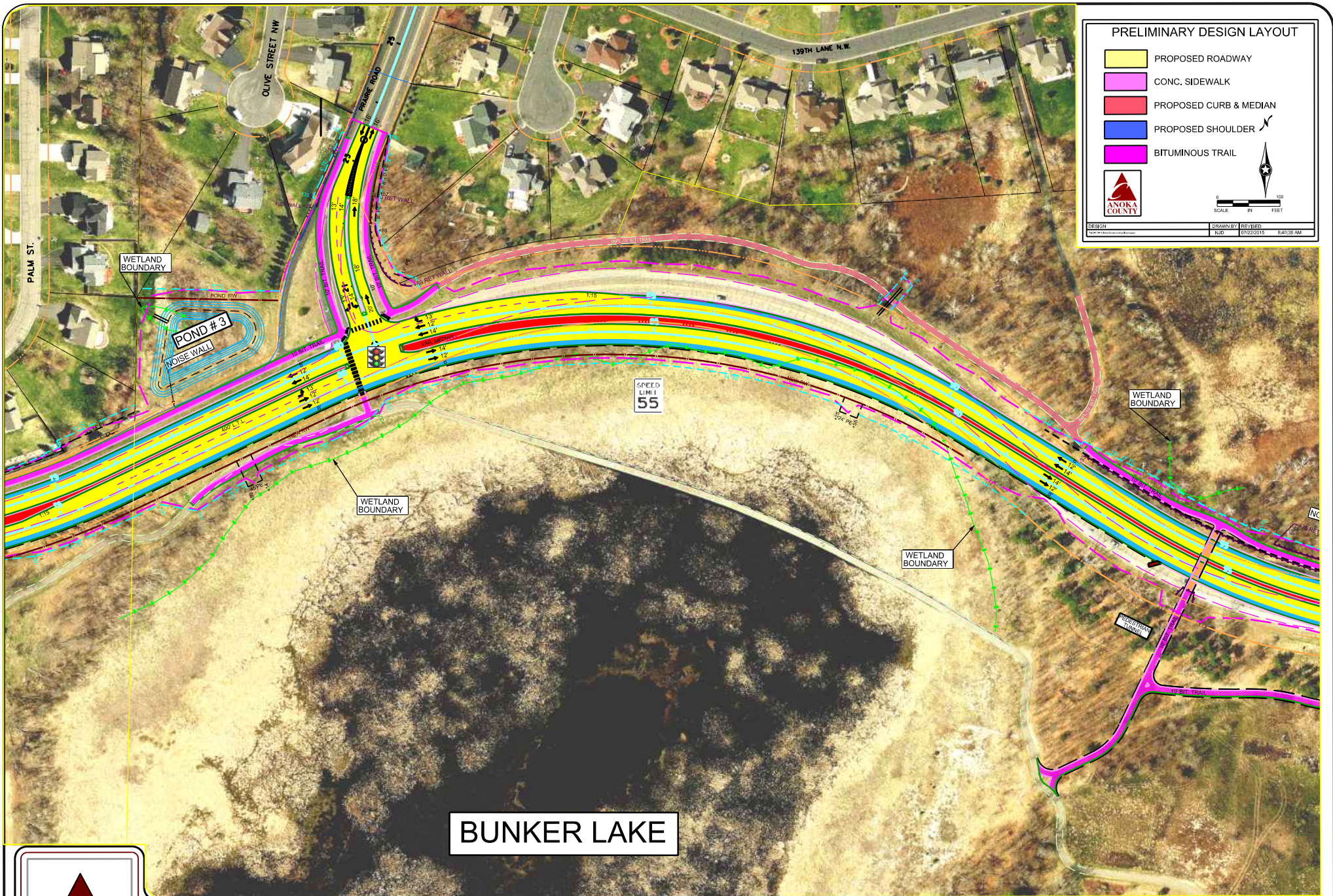


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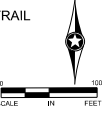
REVISED LAYOUT

CSAH 116 - Reconstruction Project
Crane St. to 2230' east of Jefferson St.



PRELIMINARY DESIGN LAYOUT

- PROPOSED ROADWAY
- CONC. SIDEWALK
- PROPOSED CURB & MEDIAN
- PROPOSED SHOULDER
- BITUMINOUS TRAIL



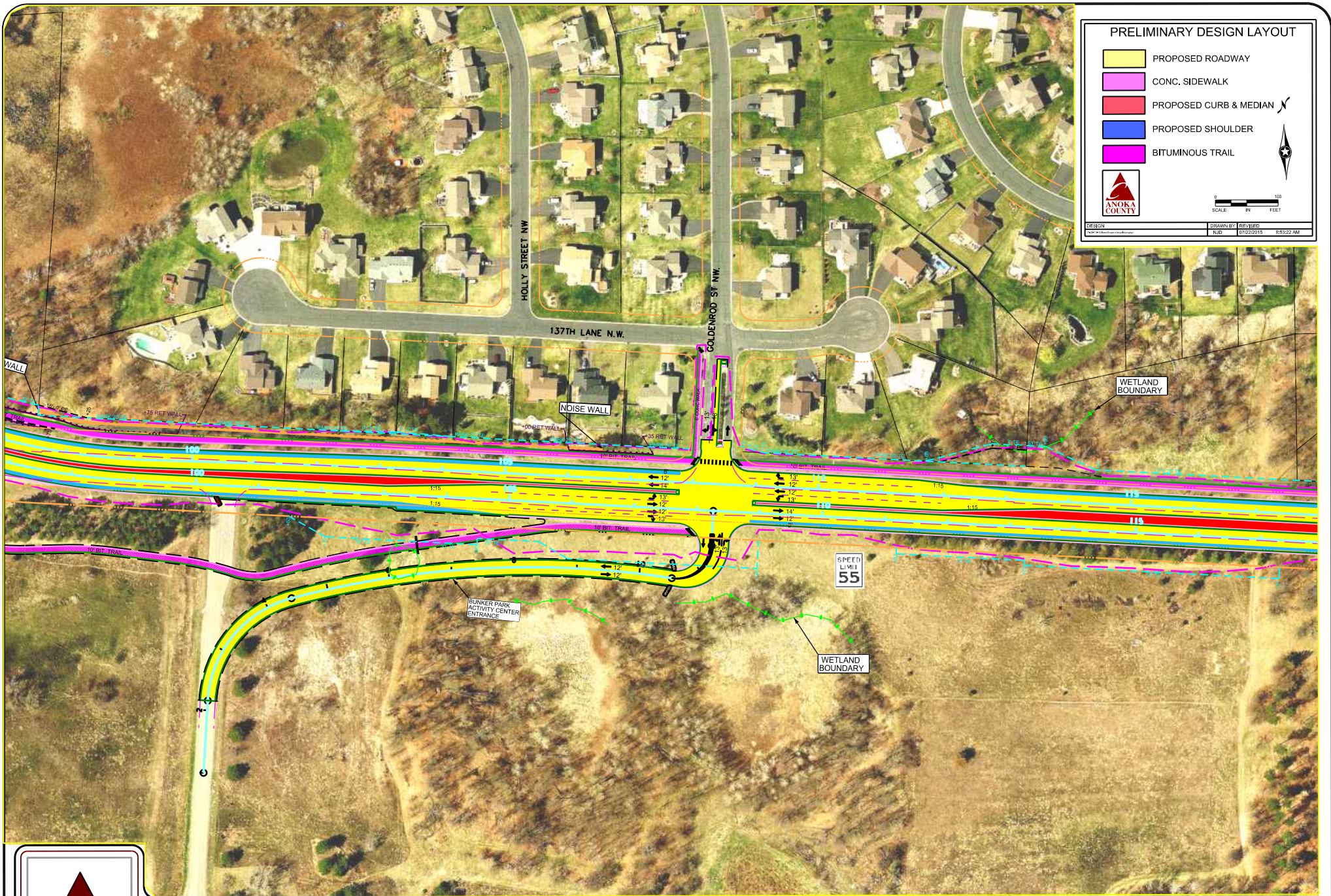
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BUNKER LAKE

REVISED LAYOUT

CSAH 116 - Reconstruction Project
Crane St. to 2230' east of Jefferson St.





PRELIMINARY DESIGN LAYOUT

- PROPOSED ROADWAY
- CONC. SIDEWALK
- PROPOSED CURB & MEDIAN
- PROPOSED SHOULDER
- BITUMINOUS TRAIL



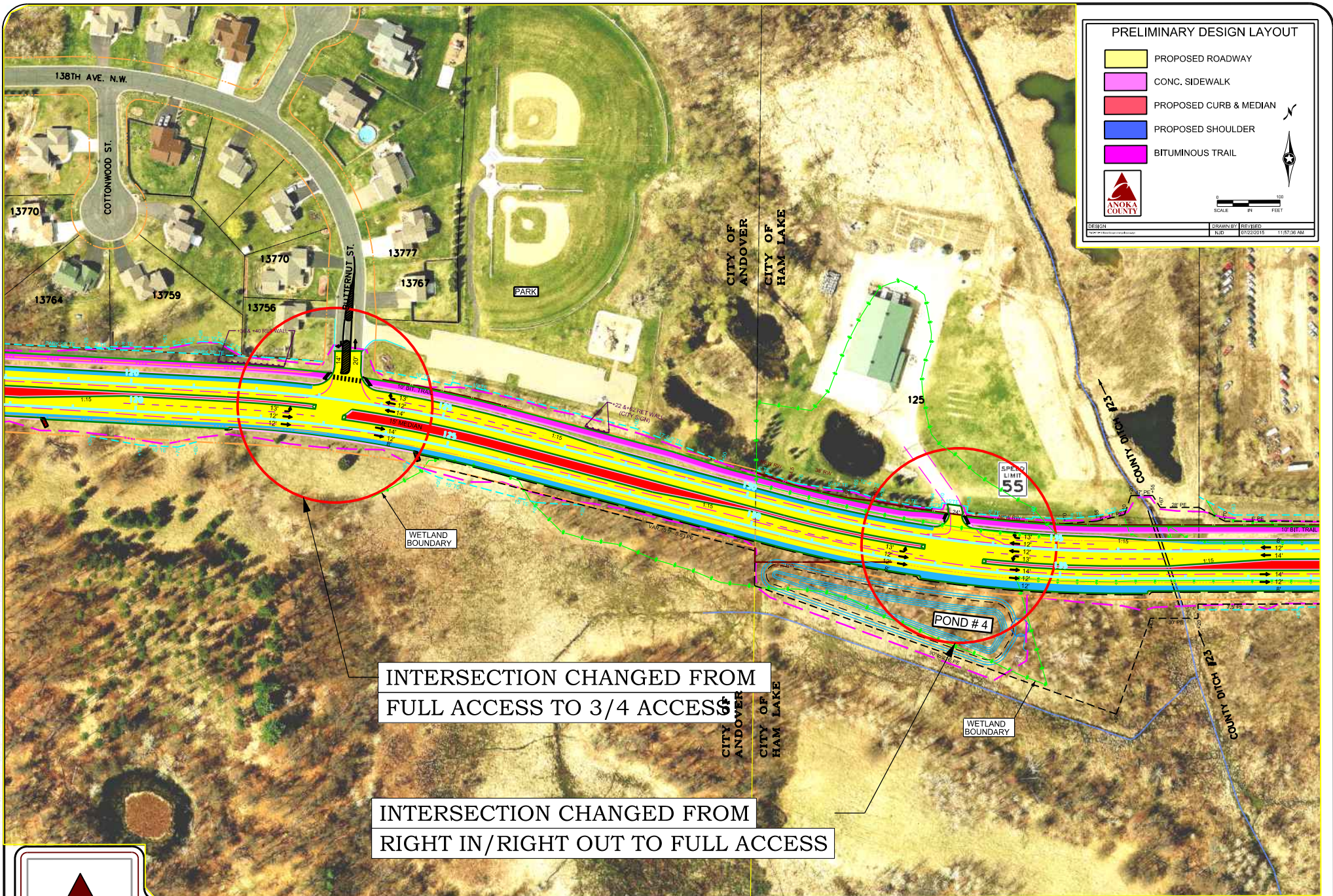
SCALE 1" = 100 FEET

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REVISED LAYOUT

CSAH 116 - Reconstruction Project
 Crane St. to 2230' east of Jefferson St.





PRELIMINARY DESIGN LAYOUT

- PROPOSED ROADWAY
- CONC. SIDEWALK
- PROPOSED CURB & MEDIAN
- PROPOSED SHOULDER
- BITUMINOUS TRAIL

DESIGN: [Name] DRAWN BY: [Name] REVISED: [Date]
PLN: [Number] R/JD 07/22/2015 11:57:36 AM

INTERSECTION CHANGED FROM FULL ACCESS TO 3/4 ACCESS

INTERSECTION CHANGED FROM RIGHT IN/RIGHT OUT TO FULL ACCESS

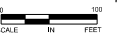


REVISED LAYOUT

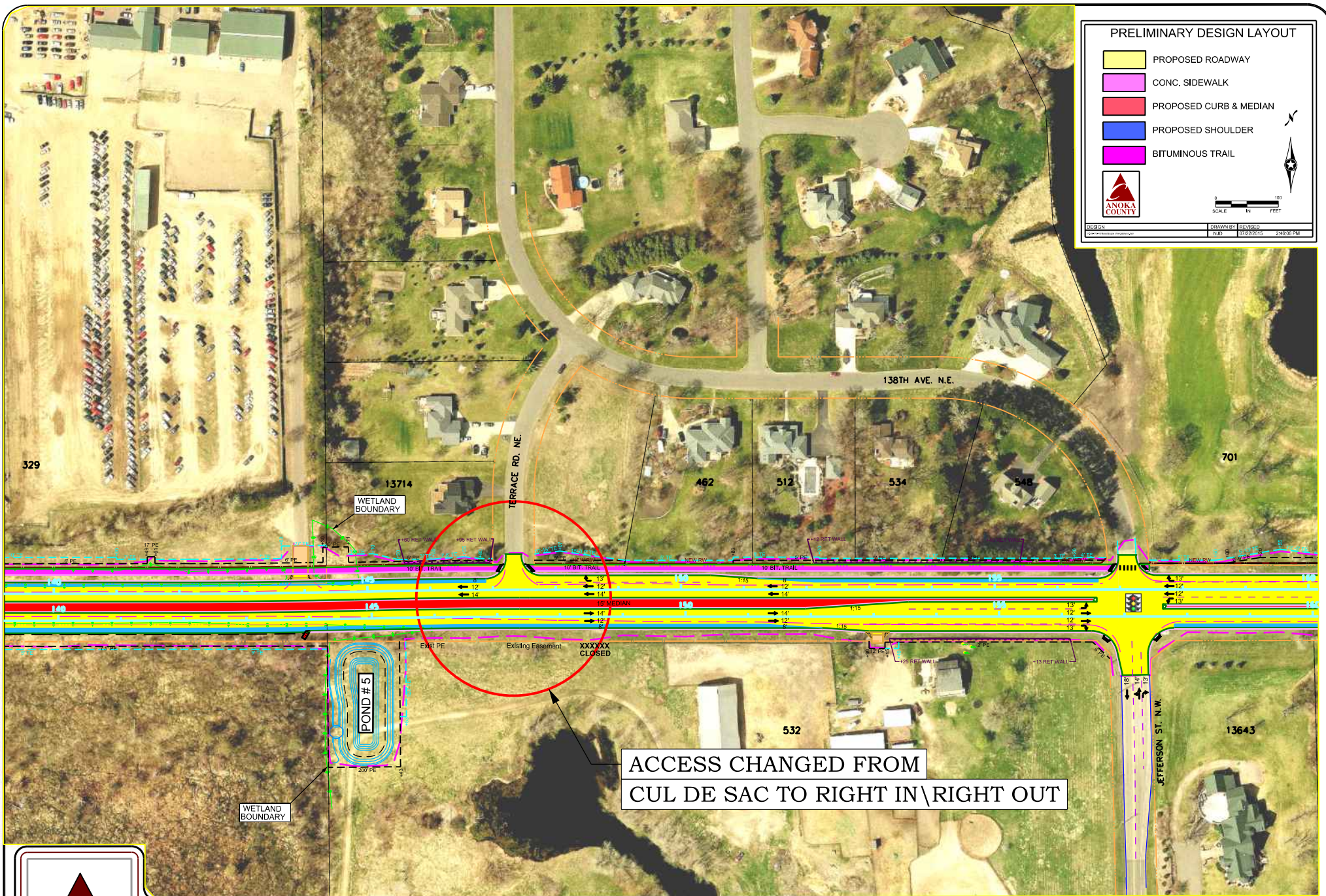
CSAH 116 - Reconstruction Project
Crane St. to 2230' east of Jefferson St.

PRELIMINARY DESIGN LAYOUT

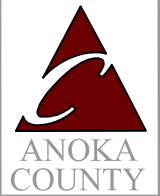
- PROPOSED ROADWAY
- CONC. SIDEWALK
- PROPOSED CURB & MEDIAN
- PROPOSED SHOULDER
- BITUMINOUS TRAIL



DESIGN: [Redacted] DRAWN BY: [Redacted] REVISED: [Redacted]
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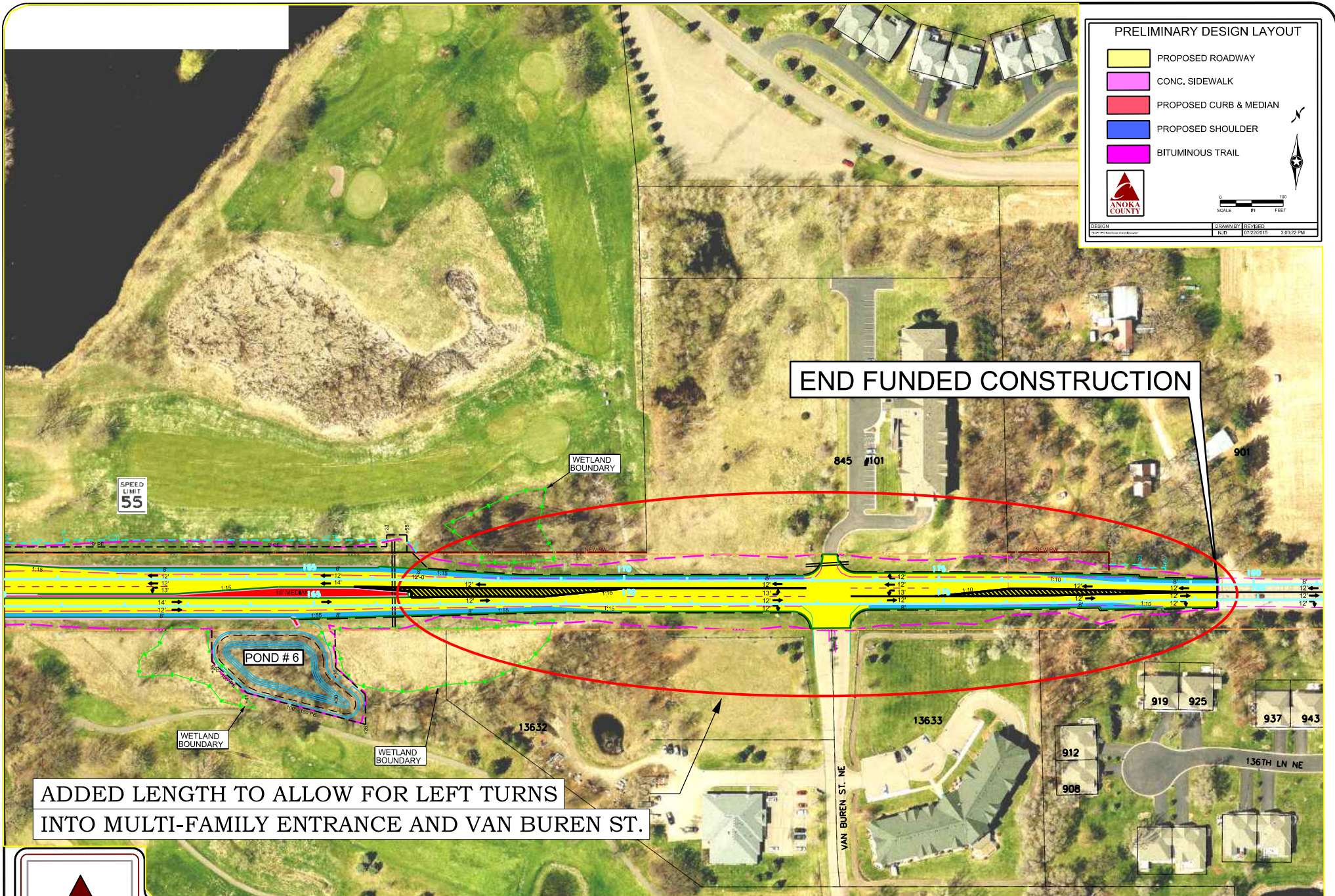


ACCESS CHANGED FROM
CUL DE SAC TO RIGHT IN \ RIGHT OUT



REVISED LAYOUT

CSAH 116 - Reconstruction Project
Crane St. to 2230' east of Jefferson St.



REVISED LAYOUT

CSAH 116 - Reconstruction Project
 Crane St. to 2230' east of Jefferson St.

