

Information for File # 2007-03928-TWP

Applicant **Lake County Highway Department**

Agent **IC Environmental Corporation**

Corps Contact **Timothy W. Peterson**

Address **1554 Highway 2, Suite 2, Two Harbors, MN 55616**

E-Mail **timothy.w.peterson@usace.army.mil**

Phone **(218) 834-6630**

Primary County **Lake**

Section **36**

Township **53N**

Range **11W**

Information Complete On **January 2, 2009**

Posting Expires On **February 9, 2009**

Authorization Type **LOP-05-MN**

This application is being reviewed in accordance with the practices for documenting Corps jurisdiction under Sections 9 & 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act identified in Regulatory Guidance Letter 07-01. We have made a preliminary determination that the aquatic resources that would be impacted by the proposed project are regulated by the Corps of Engineers under Section 404 of the Clean Water Act. Our jurisdictional review and final jurisdictional determination could result in modifications to the scope of the project's regulated waterbody/wetland impacts and compensatory mitigation requirements identified above. An approved jurisdictional determination will be made prior to reaching a permit decision, and will be posted on the St. Paul District web page at <http://www.mvp.usace.army.mil/>.

PROJECT DESCRIPTION AND PURPOSE:

The applicant is proposing to construct a number of multi-use trails within the City of Two Harbors. A total of thirteen trail segments totaling 3.86 miles would be constructed alongside roadways within the city. The trail segments would be located primarily within road right-of-ways, with one segment being constructed beneath (box culvert) an existing railroad track. An underpass is required at this location due to existing grades and safety

concerns. The paved pathways would vary from 8 to 10 feet in width, depending upon the location, with 10 foot wide trails standard.

The proposed trail segments were designed to create an independent bikeway/walkway which would provide interconnectivity within the city. The project is intended to:

- 1) Assist children and community members in accessing schools.
- 2) Connect neighborhoods within the city and provide connections to parks and recreation areas.
- 3) Connect people to the downtown business area and waterfront.
- 4) Provide a seamless connection to the Gitchi-Gami State Trail and the Northshore Scenic Highway.

The applicant states that without the proposed project, pedestrians and bicyclists would be required to use the existing city roadway network, much of which cannot safely accommodate such traffic due to lack of shoulder width and paving. Partial funding for the project has been provided by the State Transportation Improvement Program (STIP). Therefore, the trail must meet State Aid Design Standards. The project was designed in accordance with the Minnesota Bicycle Transportation and Design guidelines, State Aid Minimum Bicycle Path Standards (Minn. Rule 8820.9995), and applicable AASHTO standards. The CN underpass was designed in accordance with AREMA specifications.

NAME, AREA AND TYPES OF WATERS (INCLUDING WETLANDS) SUBJECT TO LOSS:

The project would result in the loss of 1.301 acres of wetlands, in 33 locations, including 0.354 acres of scrub-shrub wetland and 0.872 acres of forested wetland. The wetlands are adjacent to Lake Superior, a navigable water of the U.S.

VEGETATION IN AFFECTED AREA:

The forested wetlands are vegetated primarily with black spruce, black ash, quaking aspen, and typically associated species. The scrub-shrub wetlands are primarily vegetated with speckled alder, willow species, red-osier dogwood, and typically associated species.

ALTERNATIVES CONSIDERED:

The applicant considered the No-build alternative. They state that this alternative was rejected because it would fail to facilitate safe pedestrian and other non-motorized modes of travel. Such traffic would be required to use the existing roadway network, much of which has not been designed to accommodate non-motorized traffic. It would also result in the current division of the city to bicycle and pedestrian traffic by the existing CN rail line. With the No-build alternative, the project goals listed above would not be met.

No major design or construction alternatives were considered. Eight foot wide trails were briefly considered, but determined to be less effective in conveying the variety of

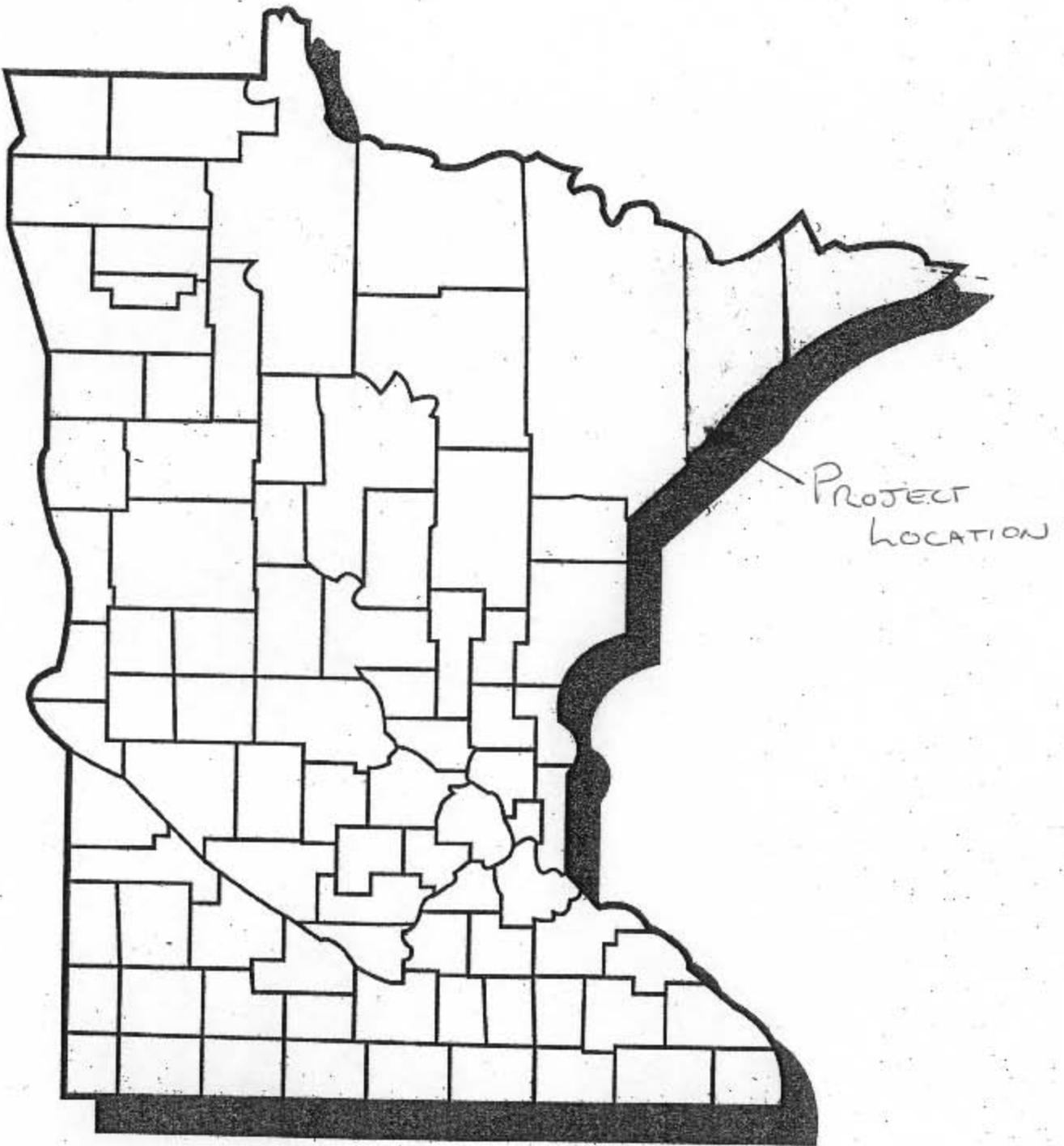
potential traffic (pedestrian, bicycle, in-line skaters, etc.) than 10 foot wide trails. The majority of the proposed trail segments were selected based on their proximity to existing city roadways and other amenities. Existing utility pathways and traveled pathways were followed where feasible to minimize impacts.

The trail system includes an underpass of the CN rail line, which the applicant states is necessary to provide the desired level of community connectivity. At the location where the trail would pass under the CN rail line, a concrete box culvert was considered to be the only viable option due to cost, material acquisition, and constructability.

COMPENSATORY MITIGATION:

Lake County has submitted applications, currently under review by the Corps, for the establishment of two wetland mitigation banks. The applicant is anticipating that the creation of their New Peterson Pit Mitigation Bank would provide 3.67 acres of forested wetland mitigation credit, and that their Kane Lake Pit Mitigation Bank would provide 4.11 acres of forested wetland mitigation credit. Provided that these mitigation sites are approved and that construction is complete prior to initiation of construction of the proposed trail system, the applicant is proposing to debit credits from these two banks for this project. If this is not possible, 1.9515 acres of wetland credit (1.5:1 replacement ratio) would be purchased from a yet undetermined existing wetland mitigation bank within Minnesota.

Drawings See attached.



City of Two Harbors



0.5 0.25 0 0.5 Miles

RIIW
36
25
36

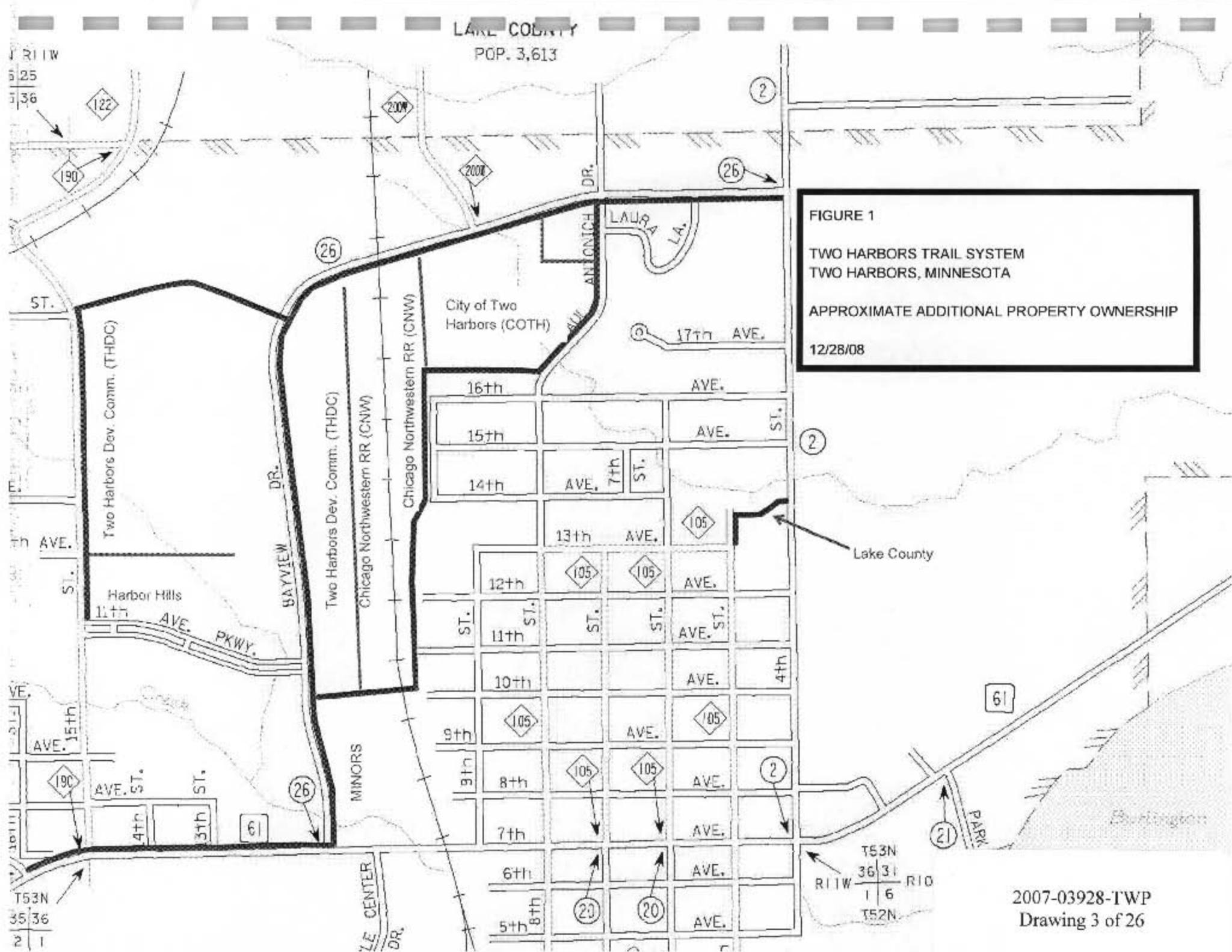


FIGURE 1
TWO HARBORS TRAIL SYSTEM
TWO HARBORS, MINNESOTA
APPROXIMATE ADDITIONAL PROPERTY OWNERSHIP
12/28/08

T53N
35
36
2
1

T53N
36
31
1
6
T52N
RIIW RIO

WETLAND IMPACT SUMMARY TABLE 12/28/08

TWO HARBORS TRAIL SYSTEM

ICECOR PROJECT #101008014

Impact ID #	Proposed Impact Square Feet	Amount Impacted of Wetland Type #		
		6	7	2
1A	912		912	
1B	324		324	
1C	882		882	
1D	1425		1425	
1E	1053		1053	
1F	879		879	
2A	3677		3677	
2B	1961		1961	
2C	3760		3760	
2D	2105		2105	
2E	1236		1236	
2F	705		705	
2G	96		96	
2H	505		505	
2I	19		19	
2J	588		588	
3A	4831		4831	
3B	164		164	
4	9250	2426	4595	2229
5A	107		107	
5B	570	57	513	
5C	756	76	680	
5E	552	276	276	
5F	2537	1903		634
6	935		935	
7A	5259	4312	947	
7A	5271	4053	1218	
7B	136		136	
7C	27		27	
7D/E	4292	1502	2790	
7F	367		367	
7G	251		251	
8	1238	805		433
Totals (ft ²)	56,670	15,410	37,964	3,296
Totals (ac)	1.301	0.354	0.872	0.076
		Sq. Feet	Acres	
	Section Impact 1's	5475	0.126	
	Section Impact 2's	14652	0.336	
	Section Impact 3's	4995	0.115	
	Section Impact 4's	9250	0.212	
	Section Impact 5's	4522	0.104	
	Section Impact 6's	935	0.021	
	Section Impact 7's	15603	0.358	
	Section Impact 8's	1238	0.028	
	TOTALS	56,670	1.301	

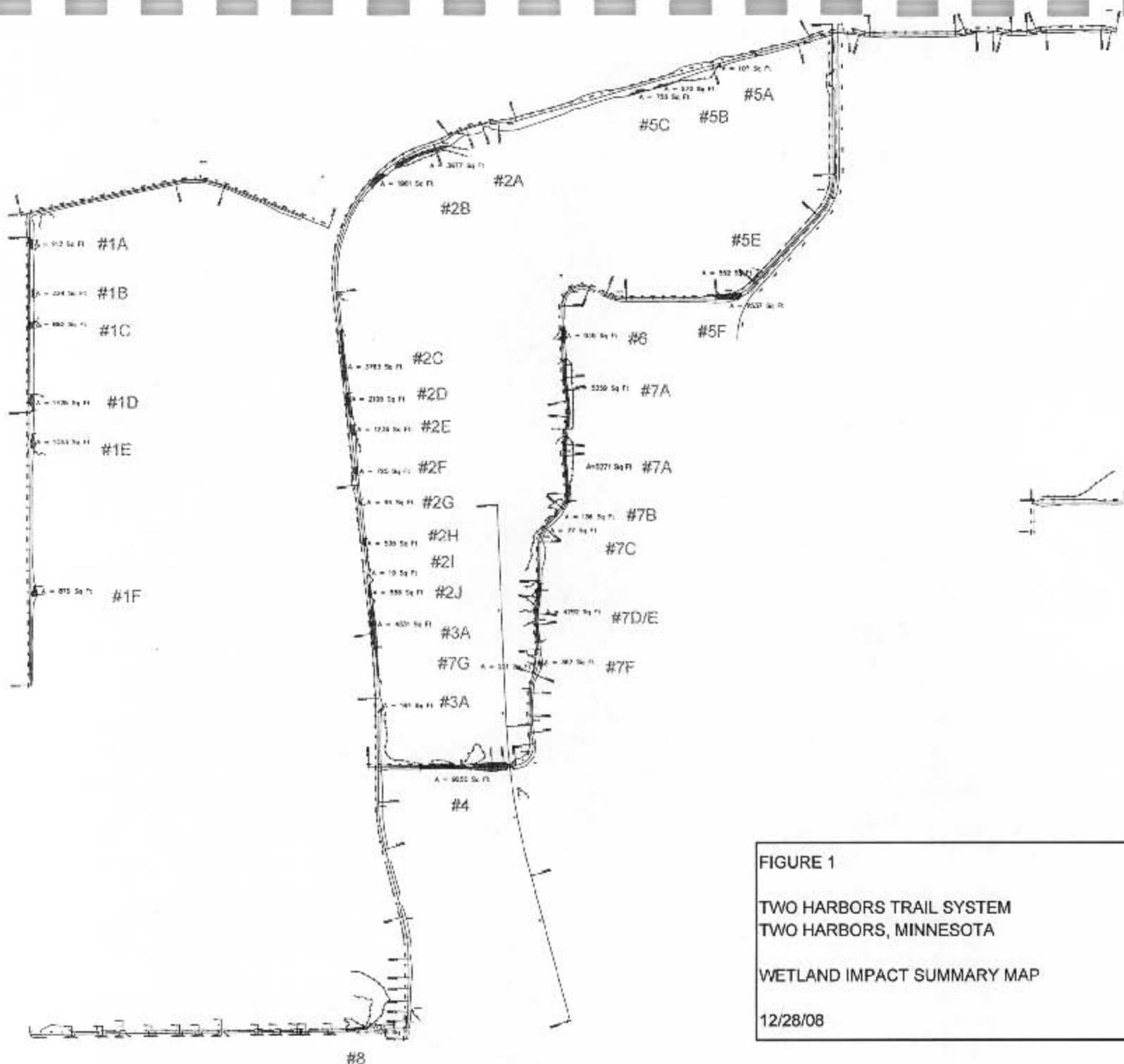
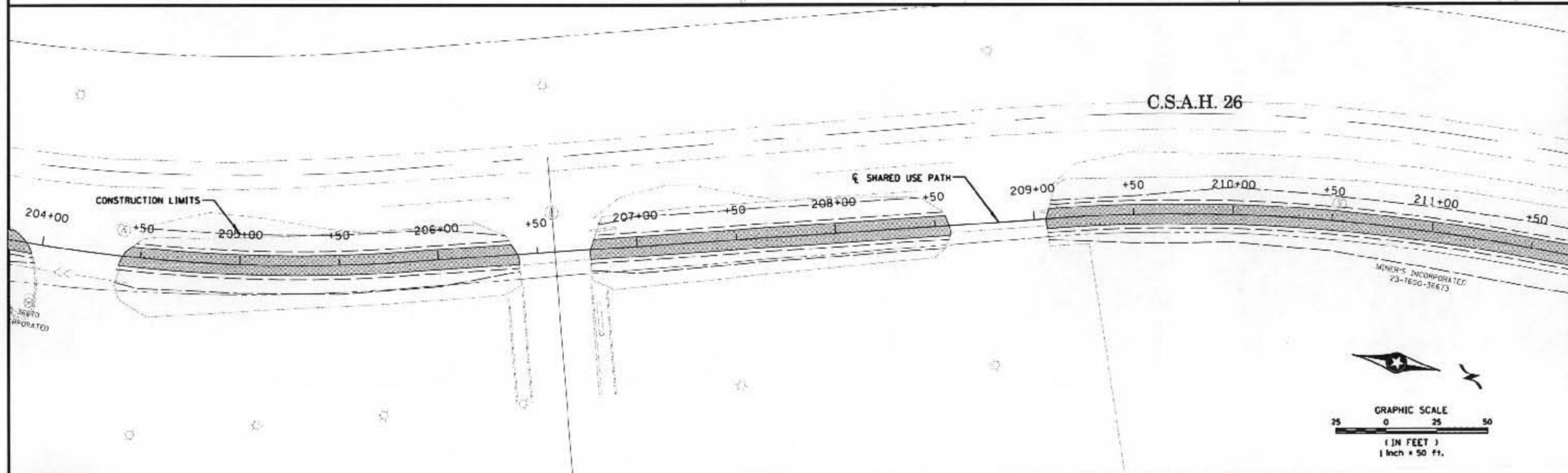
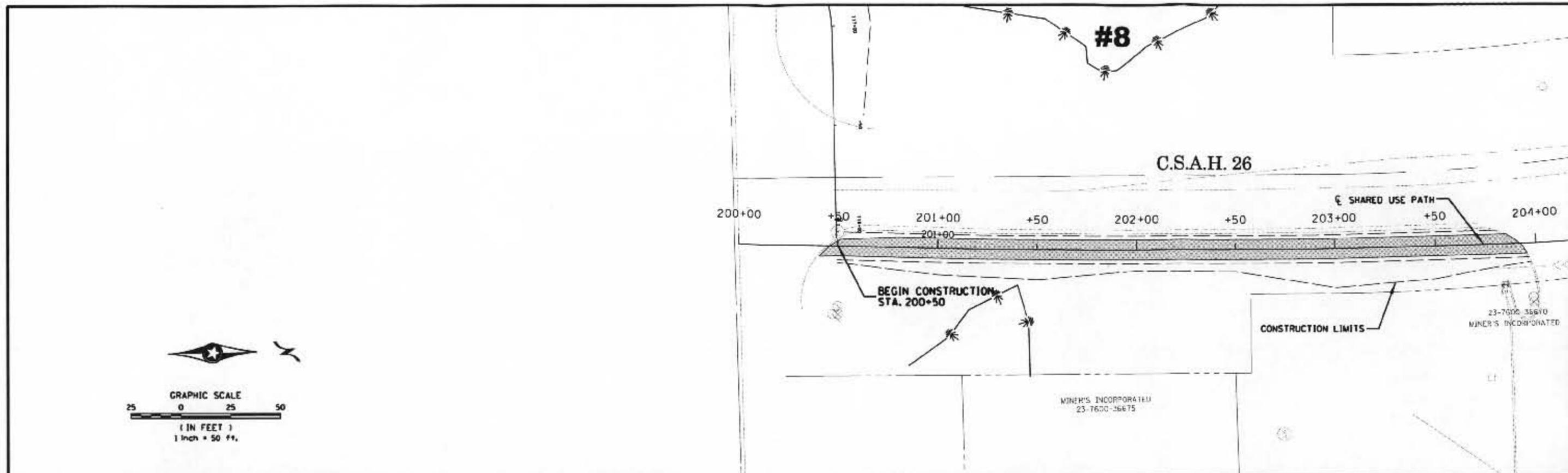


FIGURE 1
 TWO HARBORS TRAIL SYSTEM
 TWO HARBORS, MINNESOTA
 WETLAND IMPACT SUMMARY MAP
 12/28/08



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 Scientists/Surveyors
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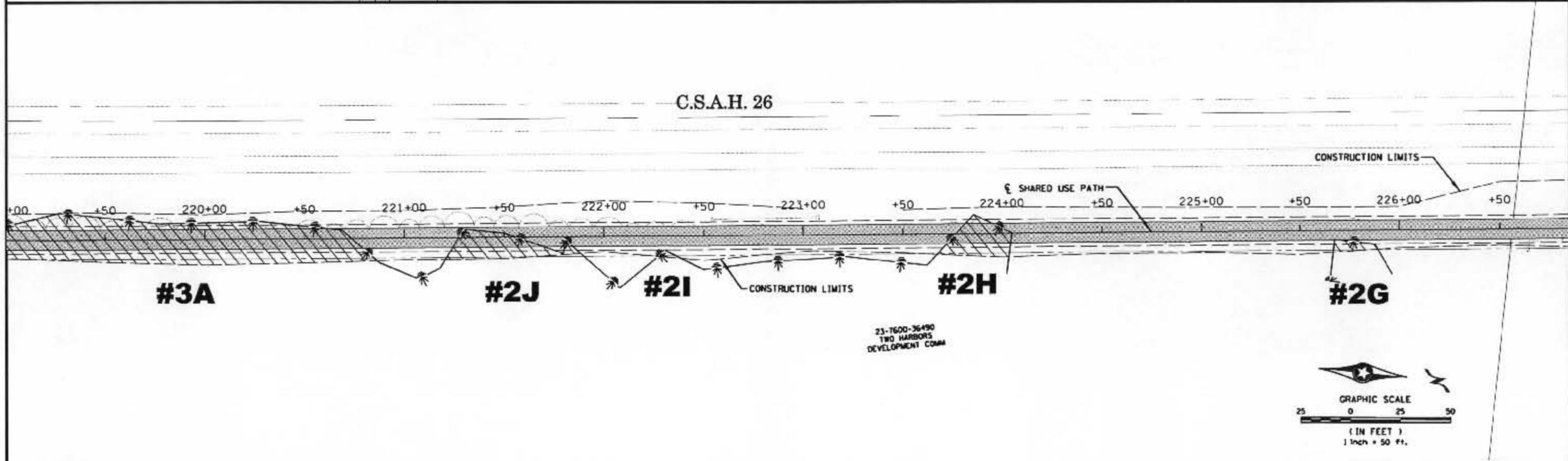
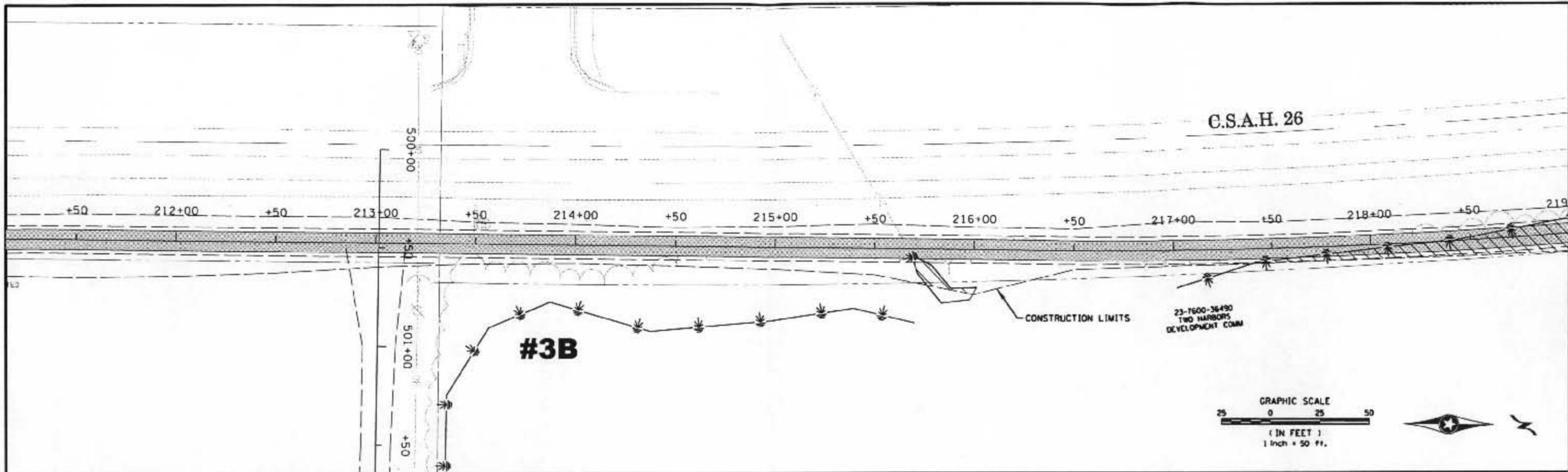
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TWO HARBORS TRAIL
 S.P. 38-090-03 & S.P. 38-090-04

WETLAND IMPACTS
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 Drawing 7 of 26



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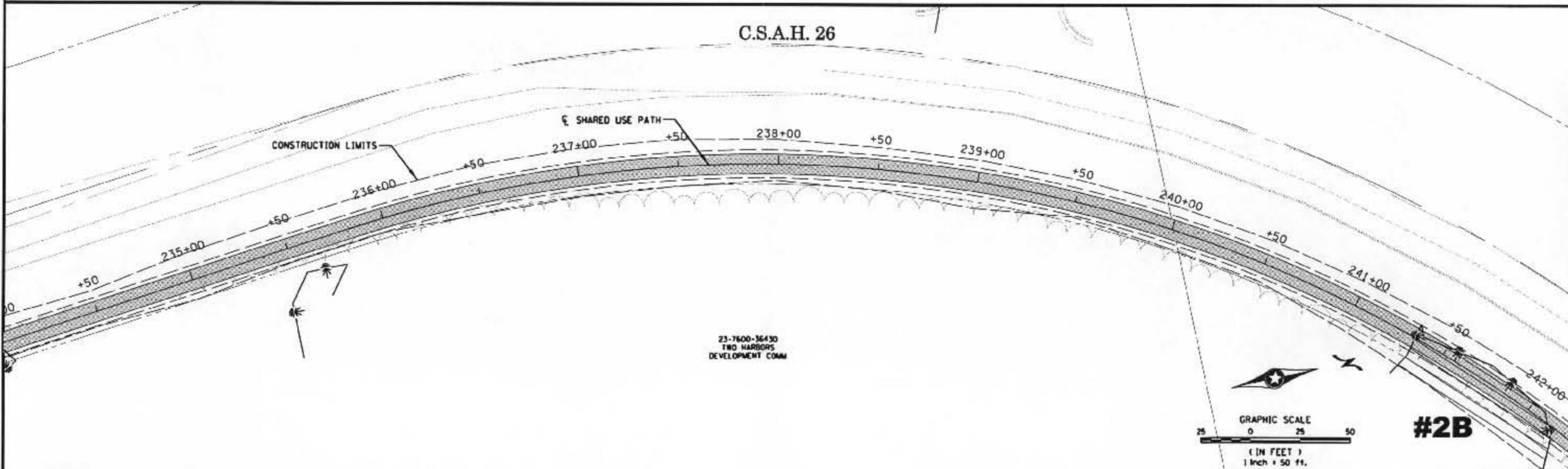
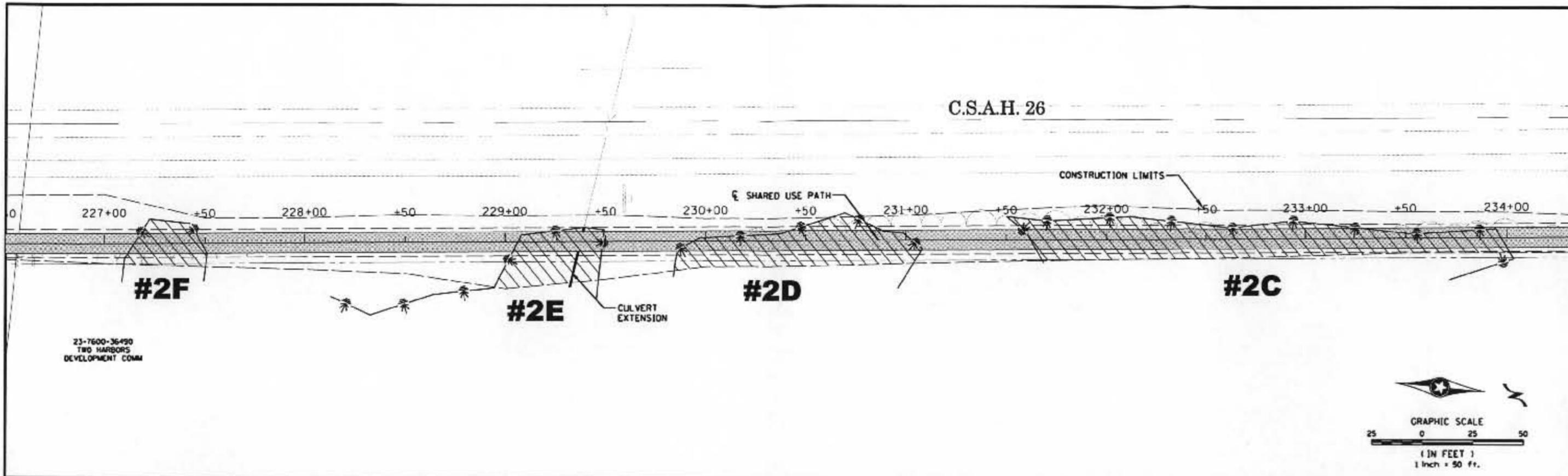
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DATE: 1/11/08
SHEET: 9 OF 26

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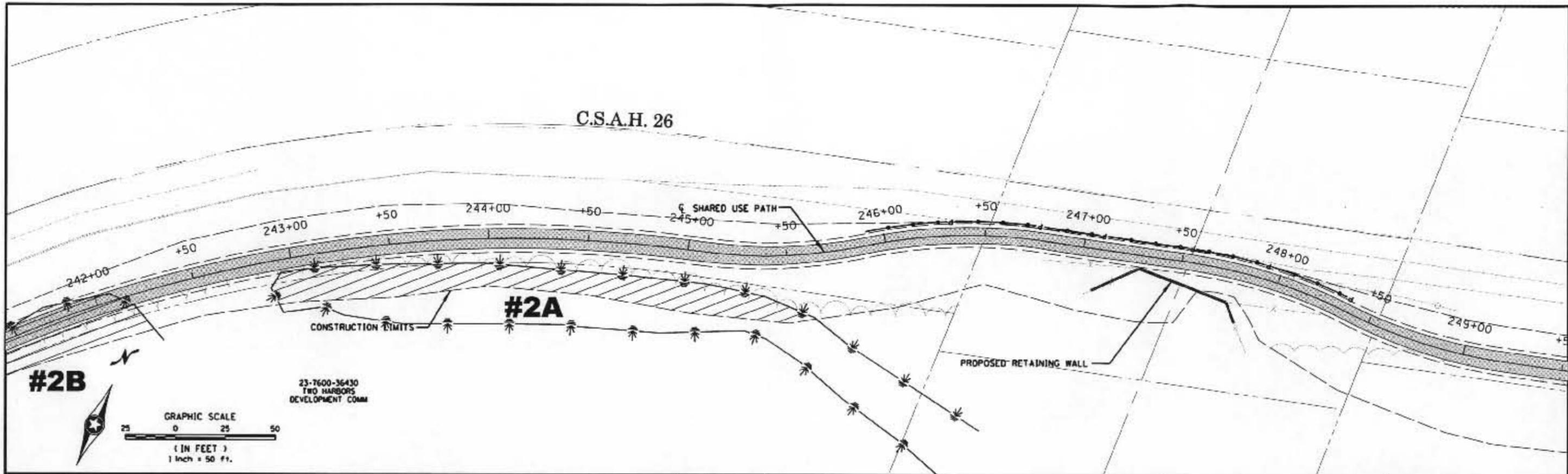
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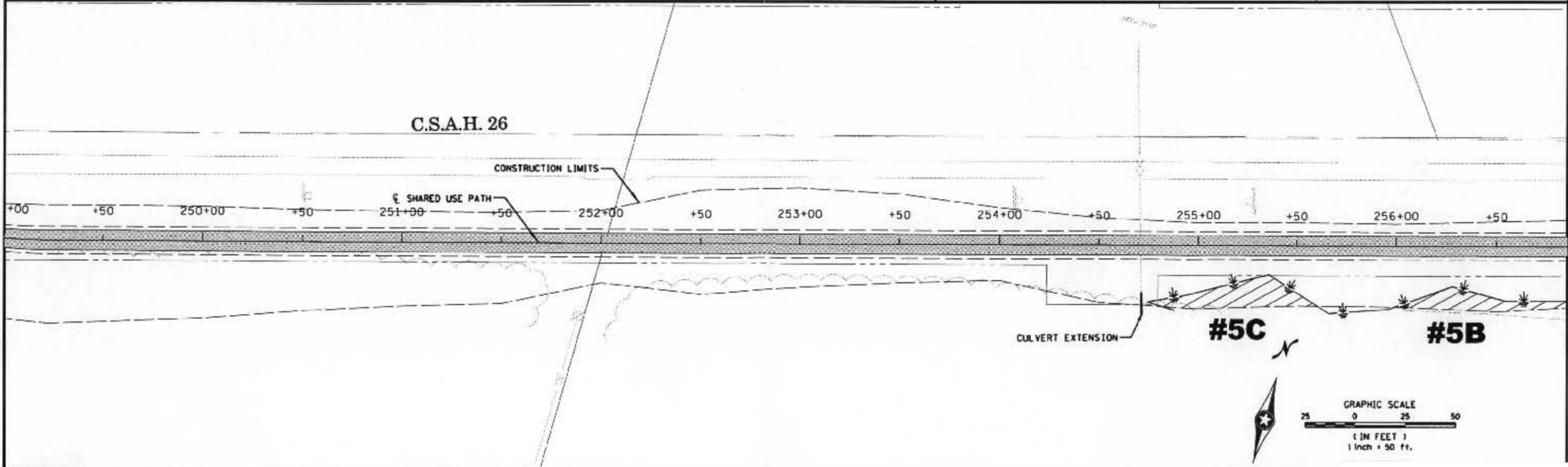
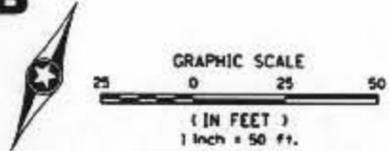
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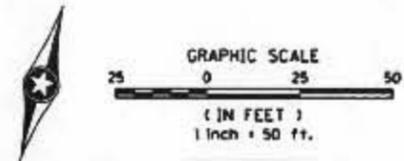
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23-7600-36430
TWO HARBORS
DEVELOPMENT COMM



#5C

#5B



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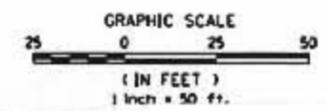
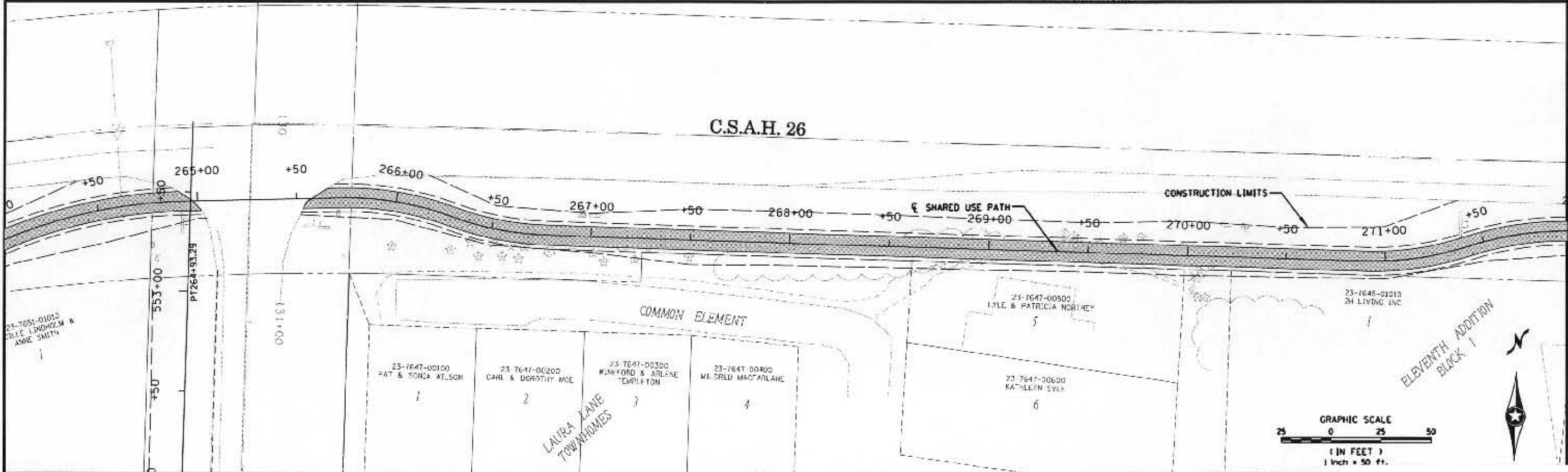
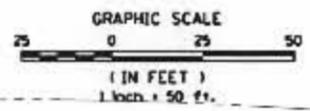
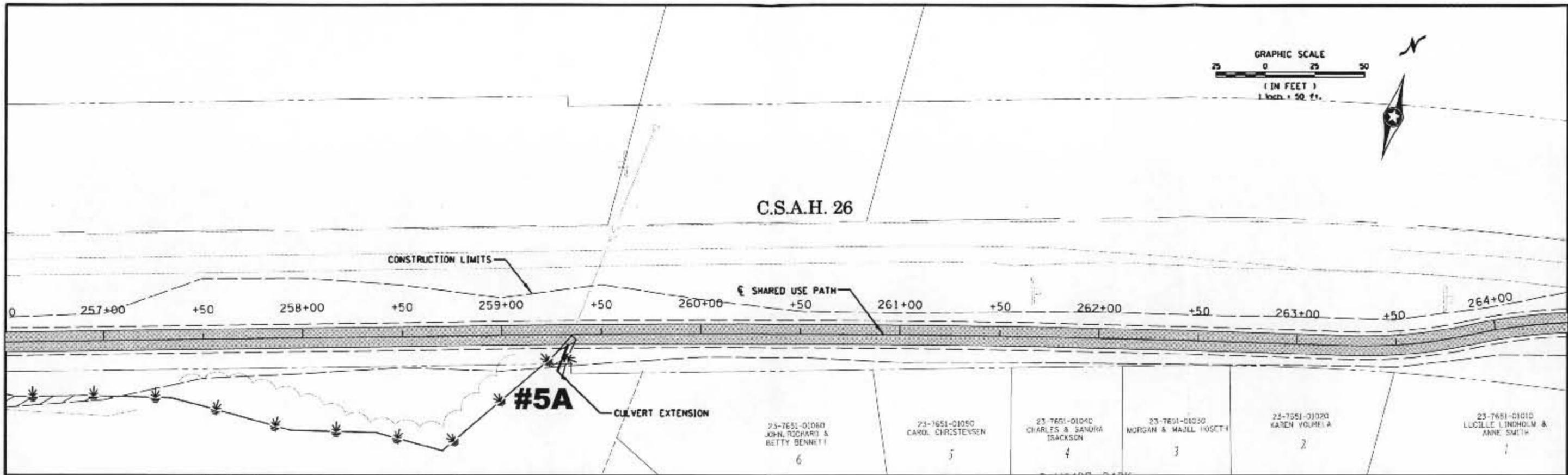
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WETLAND IMPACTS

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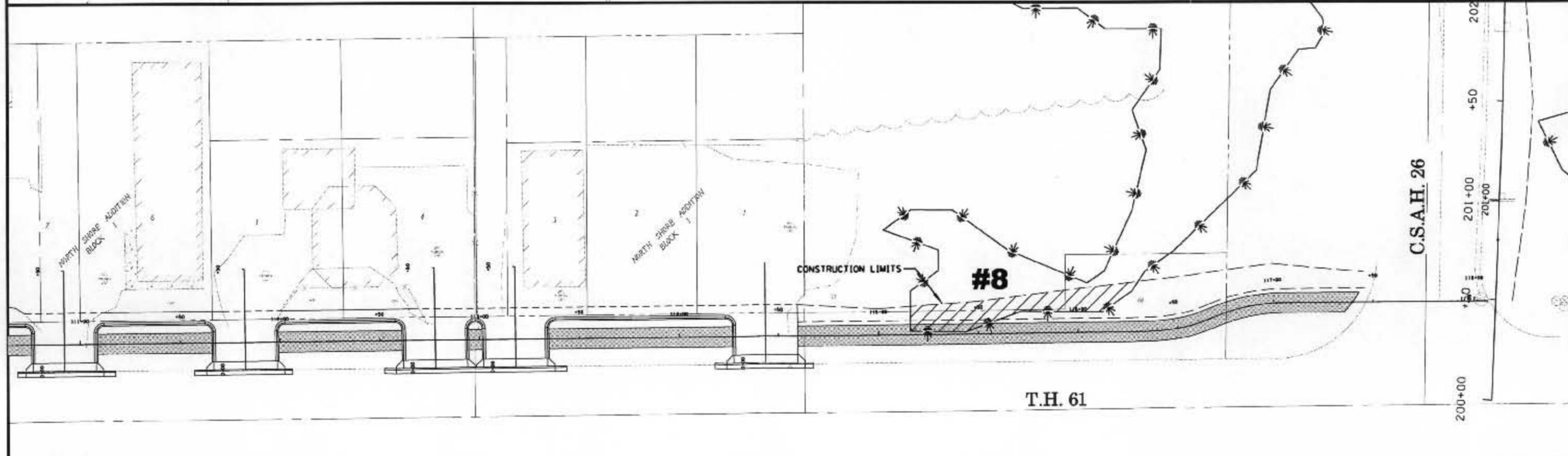
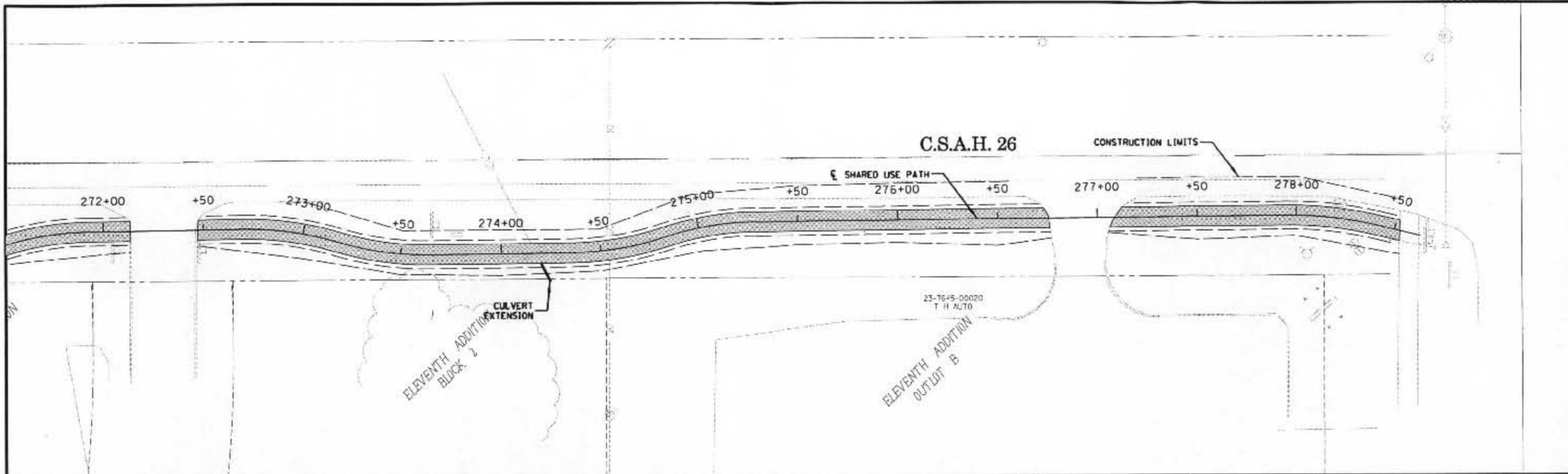
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SPRINTS
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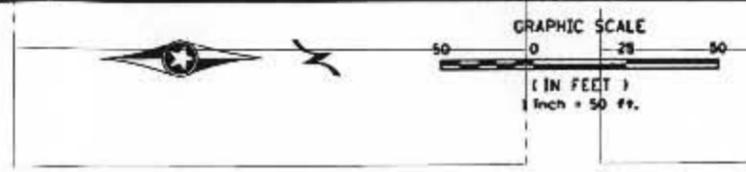
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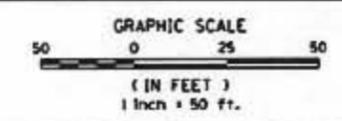
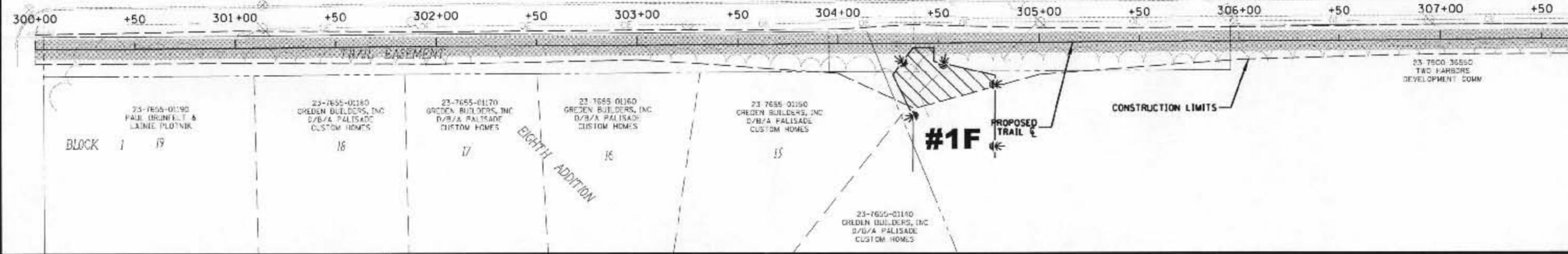
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S.P. 38-090-03 & S.P. 38-090-04

WETLAND IMPACT

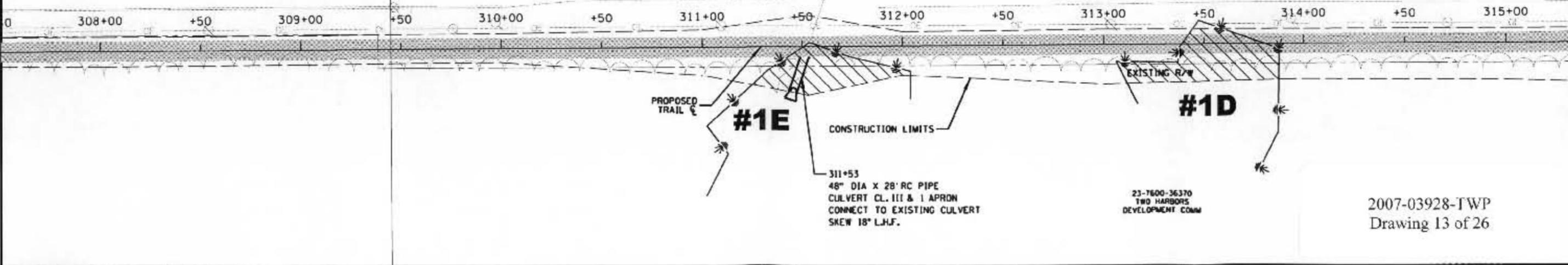
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EXISTING R/W
15TH STREET



EXISTING R/W
15TH STREET



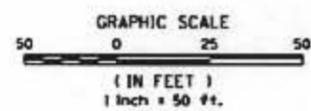
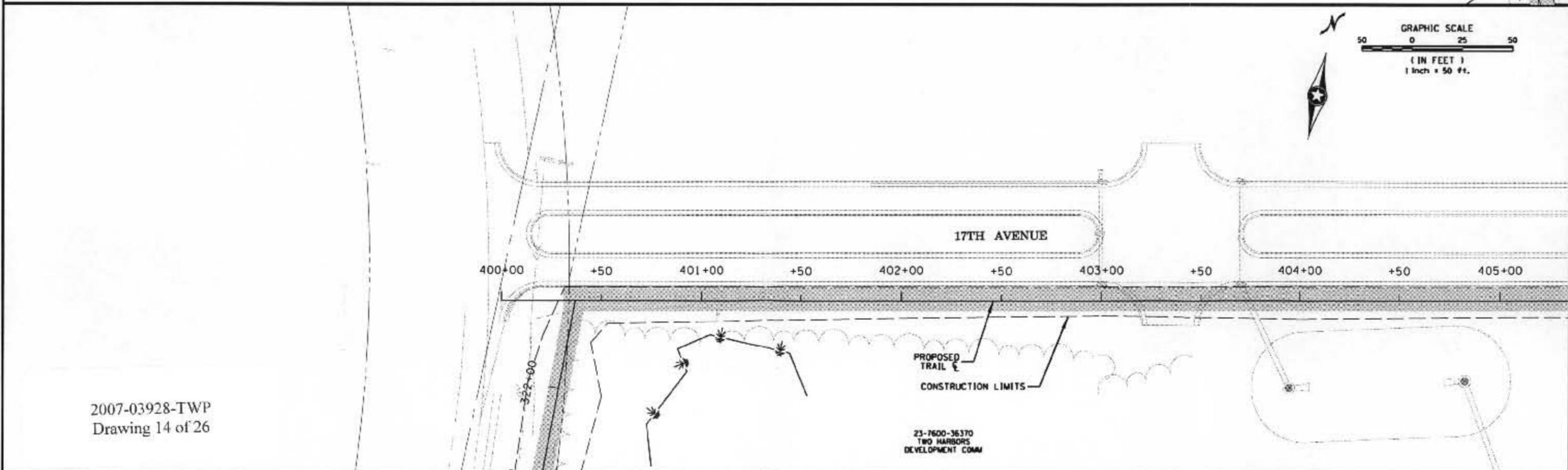
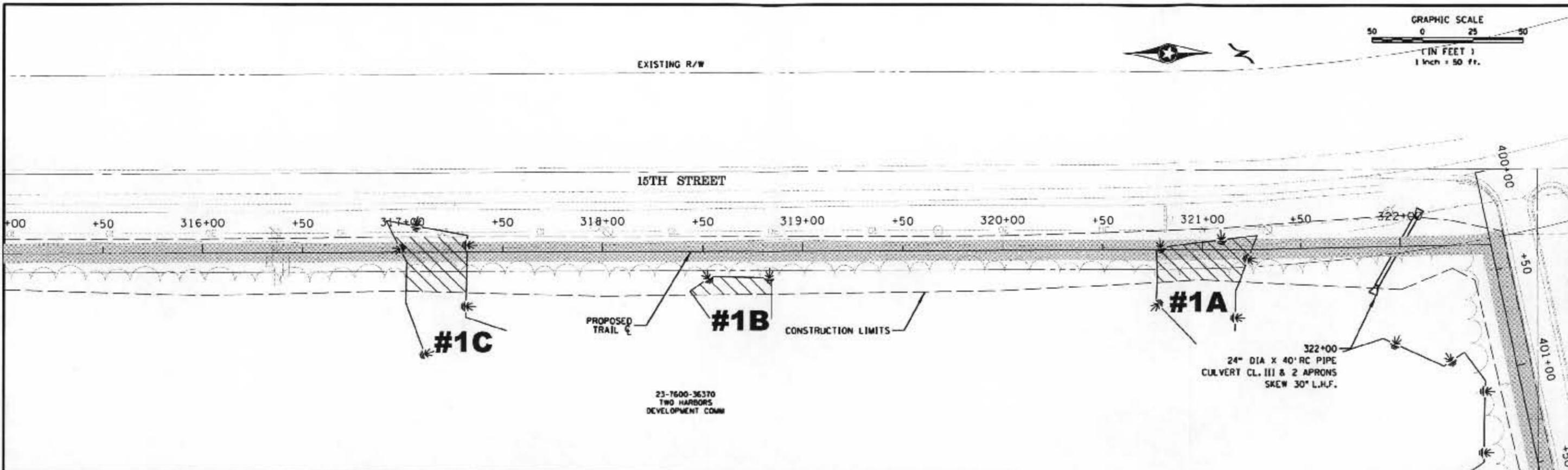
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WETLAND IMPACTS 15TH STREET
SHEET NO. 8



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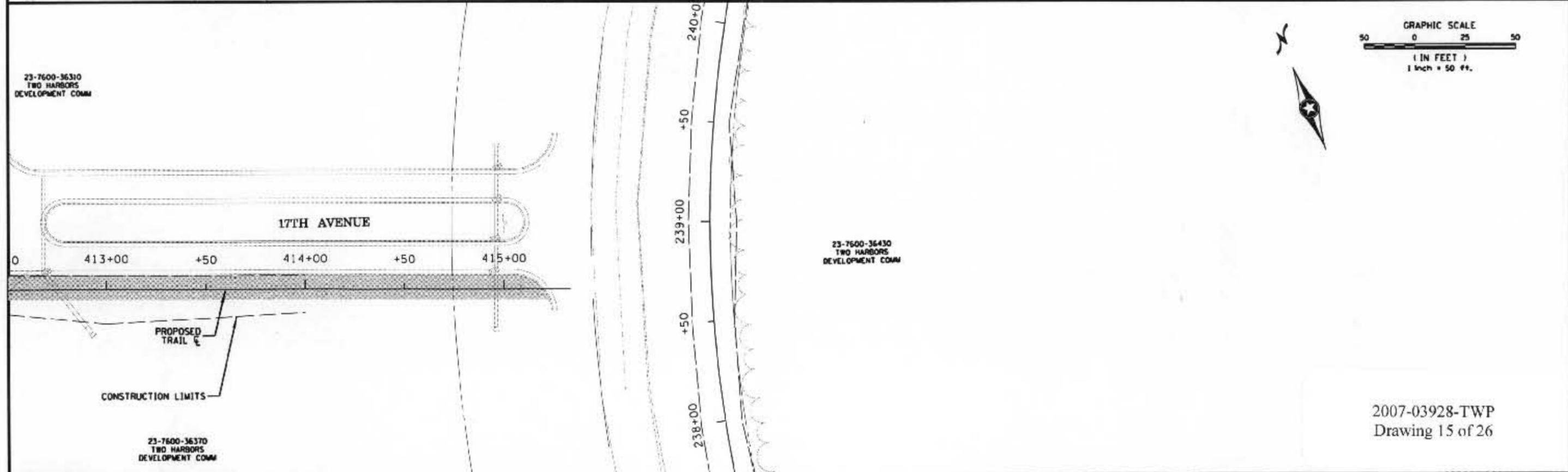
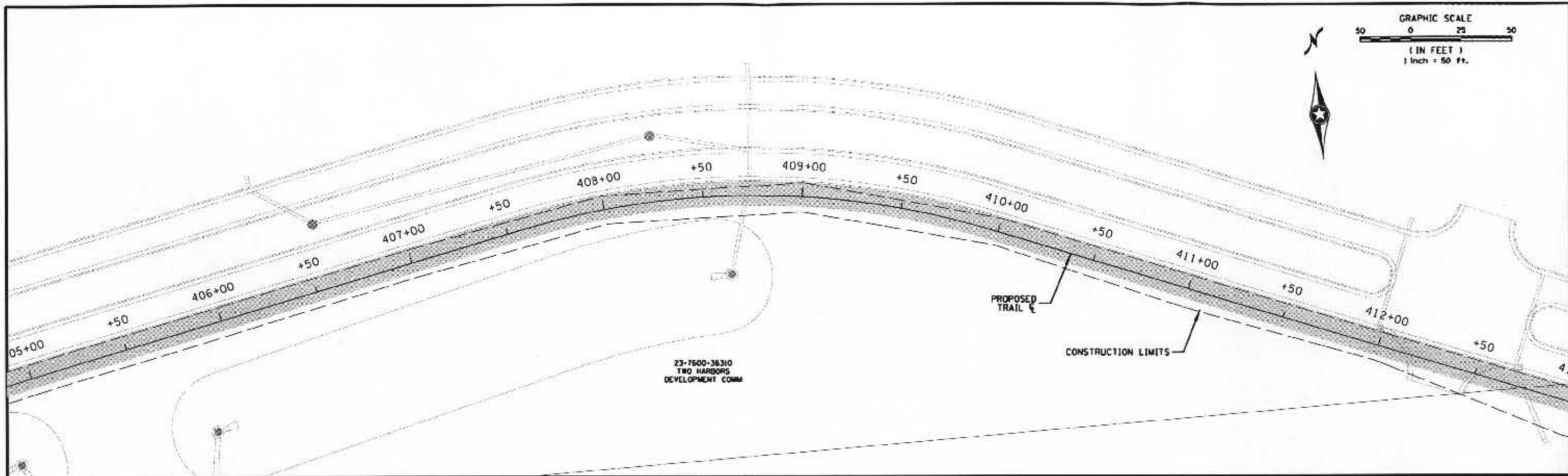
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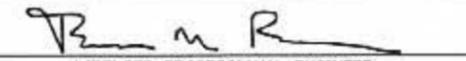
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STATE OF MINNESOTA



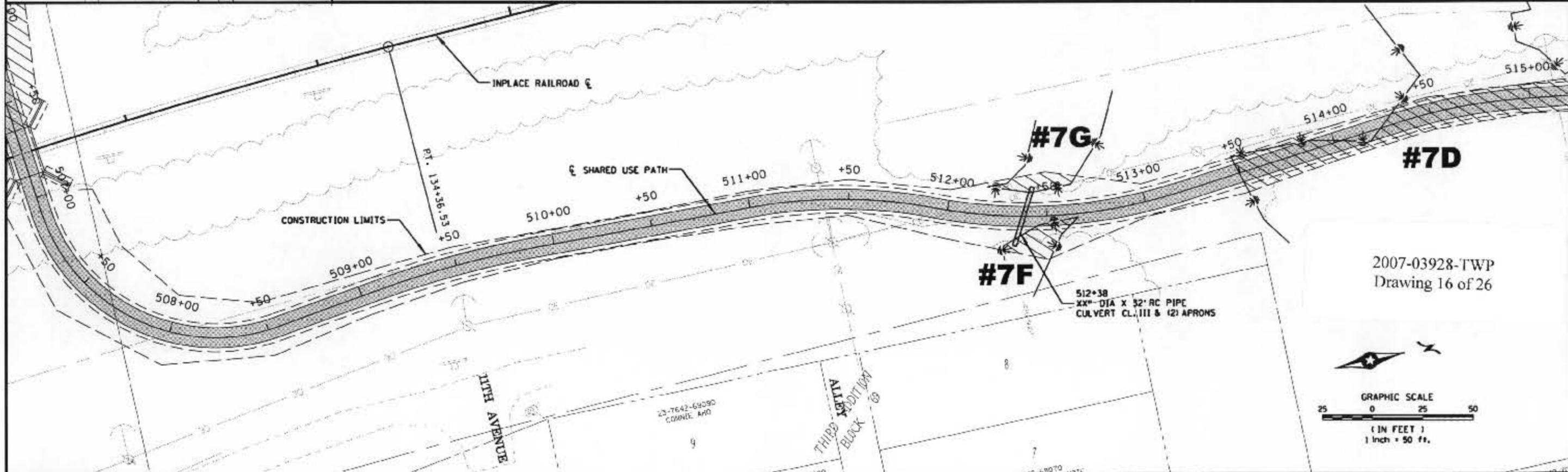
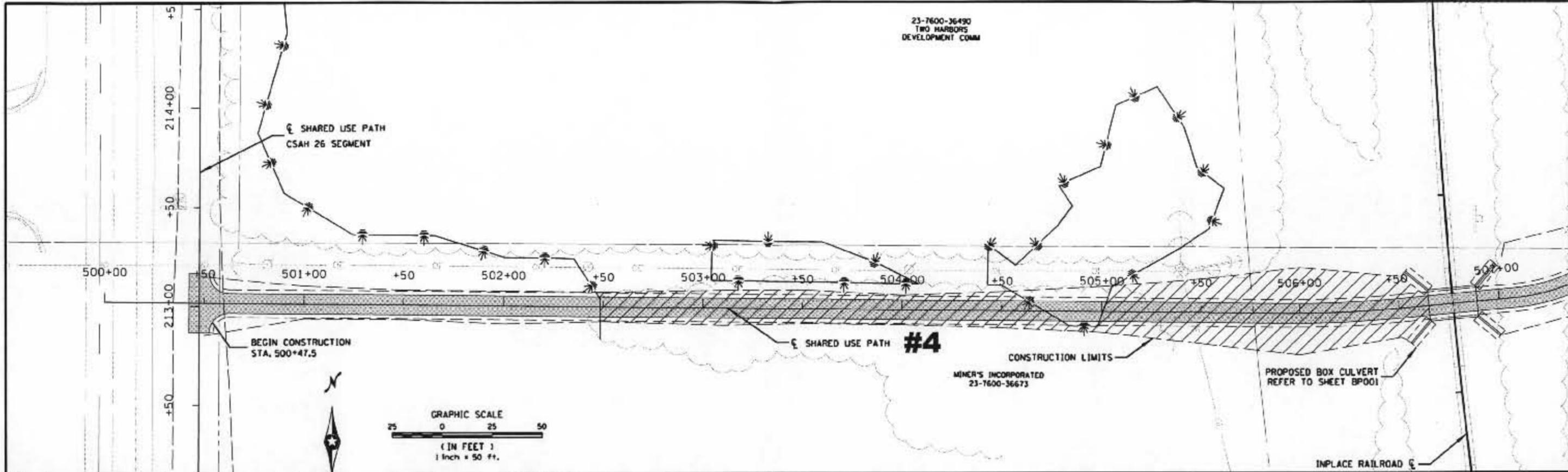
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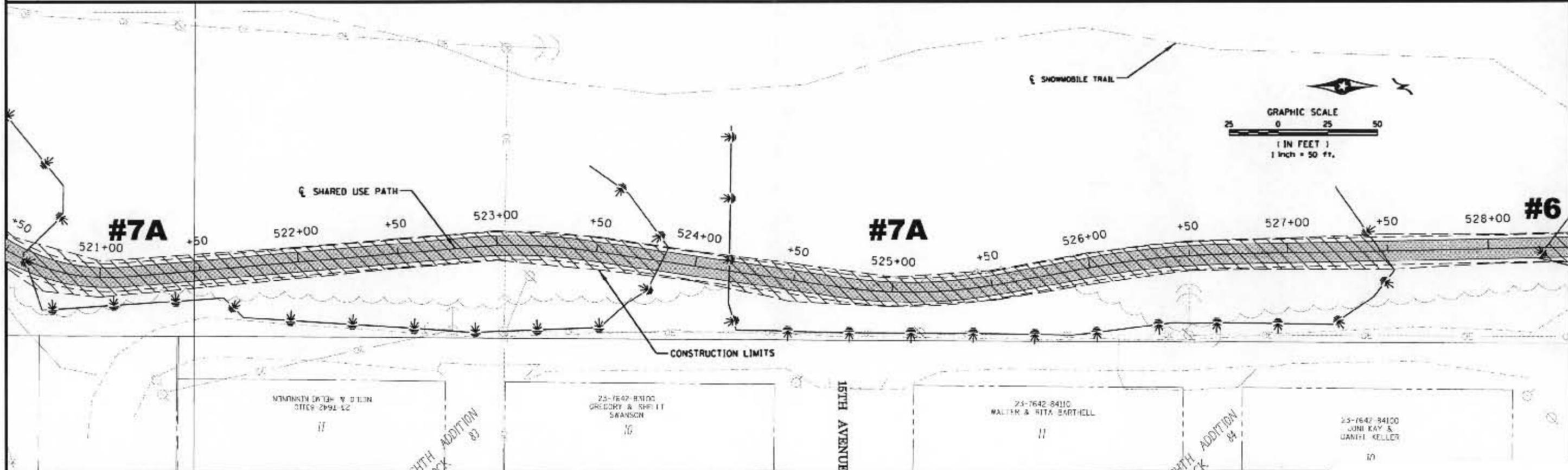
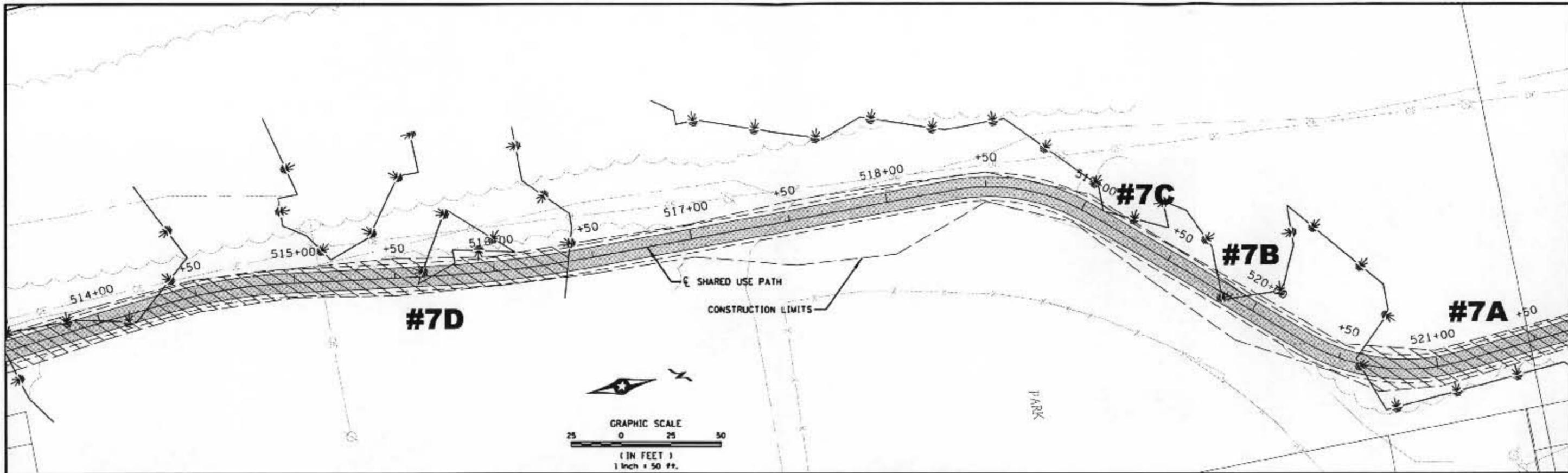
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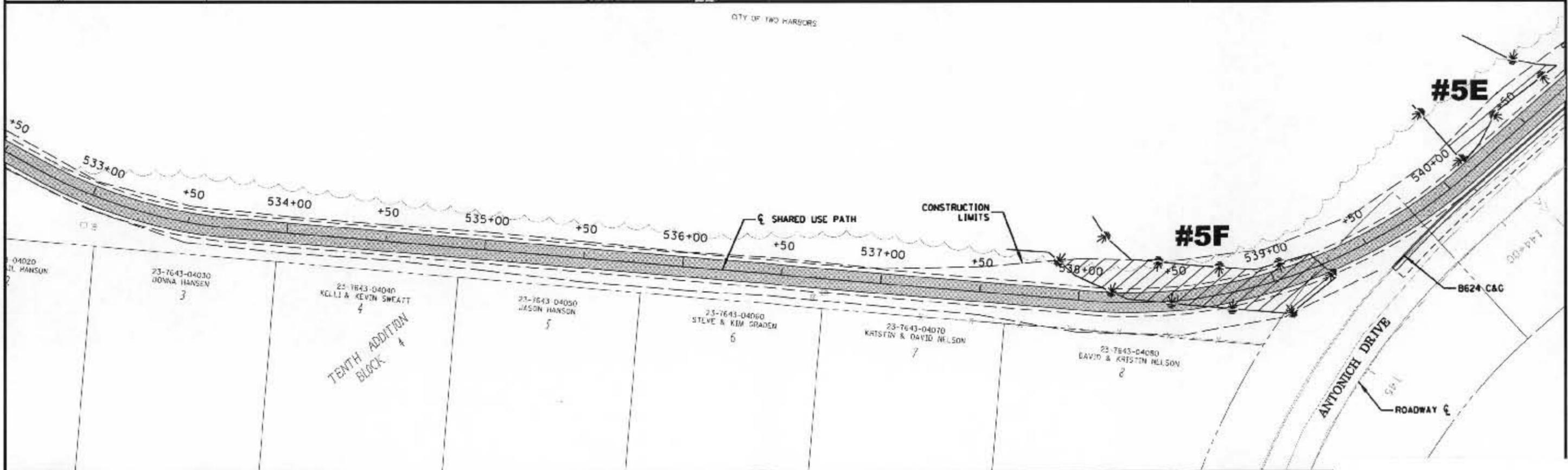
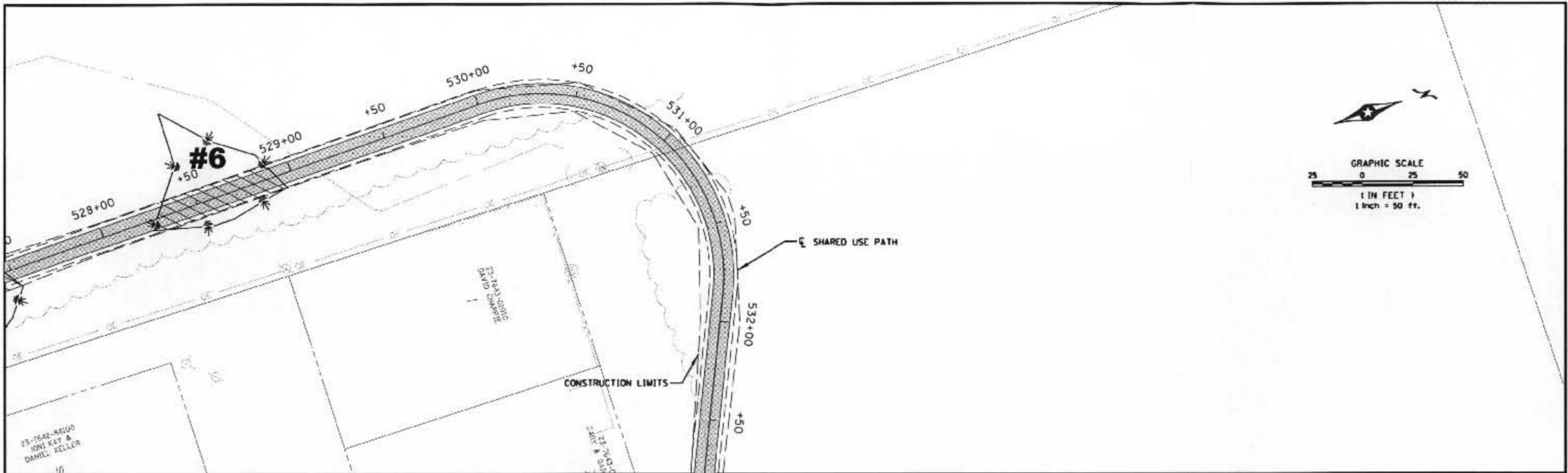
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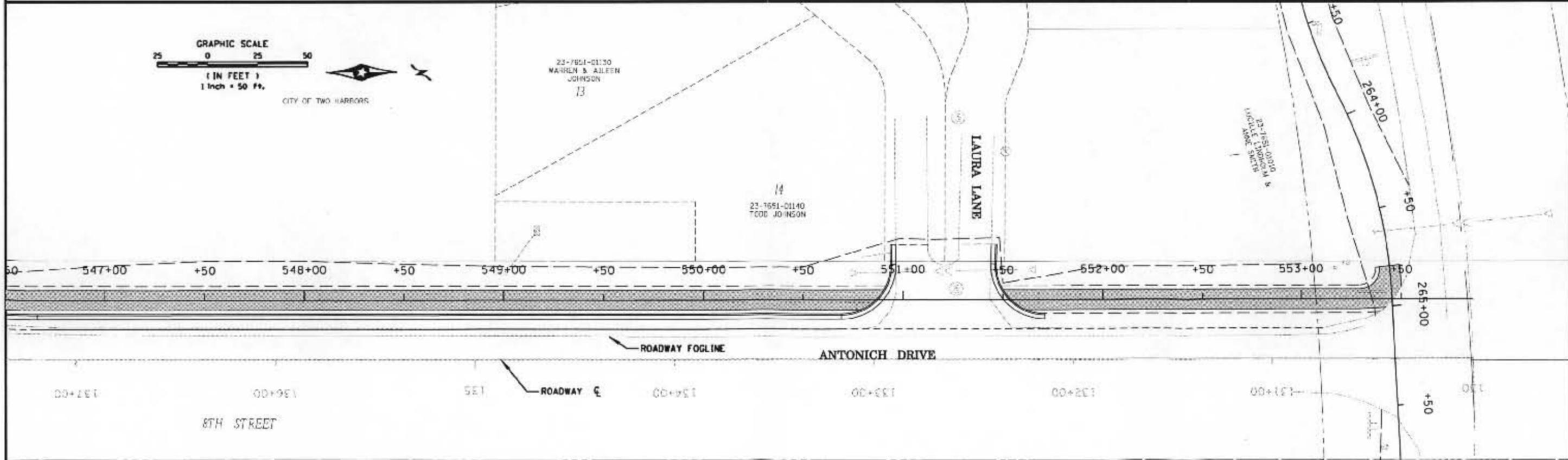
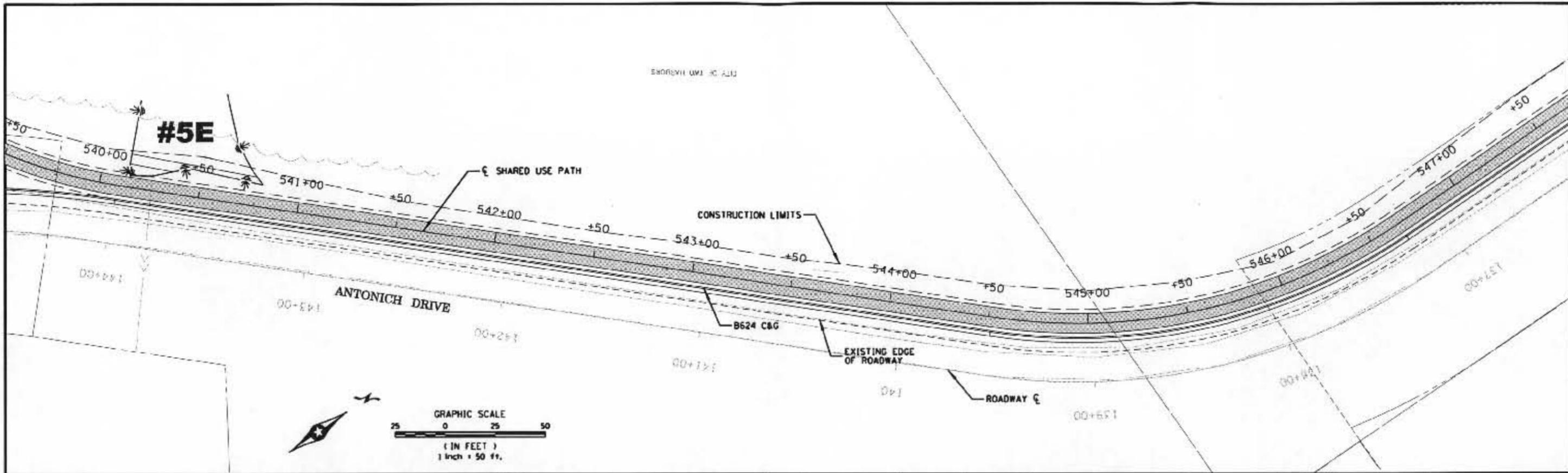
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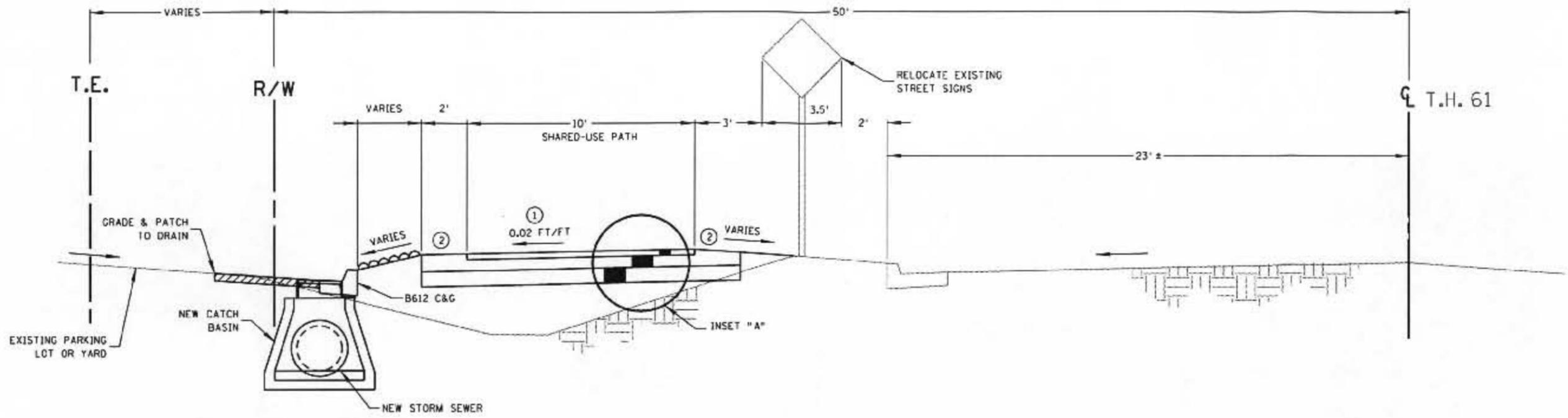
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 S.P. 38-090-03 & S.P. 38-090-04

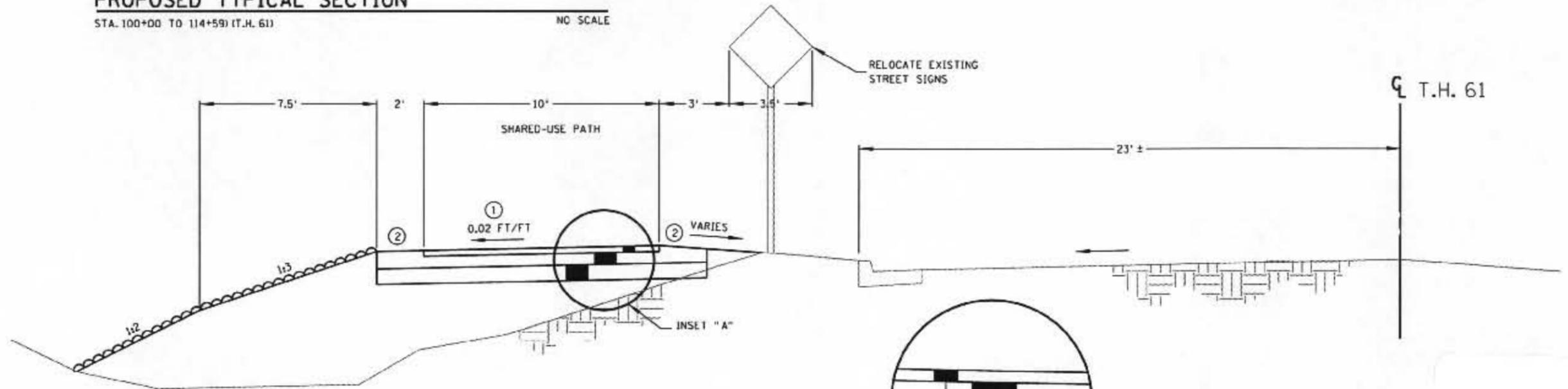
WETLAND IMPACTS
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PROPOSED TYPICAL SECTION

STA. 100+00 TO 114+59 (T.H. 61)

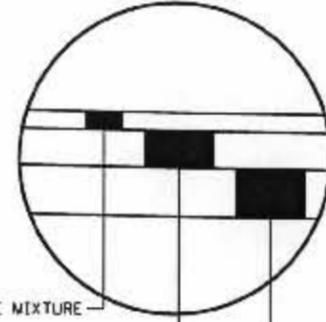
NO SCALE



PROPOSED TYPICAL SECTION

STA. 114+59 TO 117+40 (T.H. 61)

NO SCALE



3.0" WEARING COURSE MIXTURE
 6.0" AGGREGATE BASE CLASS 5, SPEC. 2211
 8.0" SELECT GRANULAR BORROW, SPEC. 2211

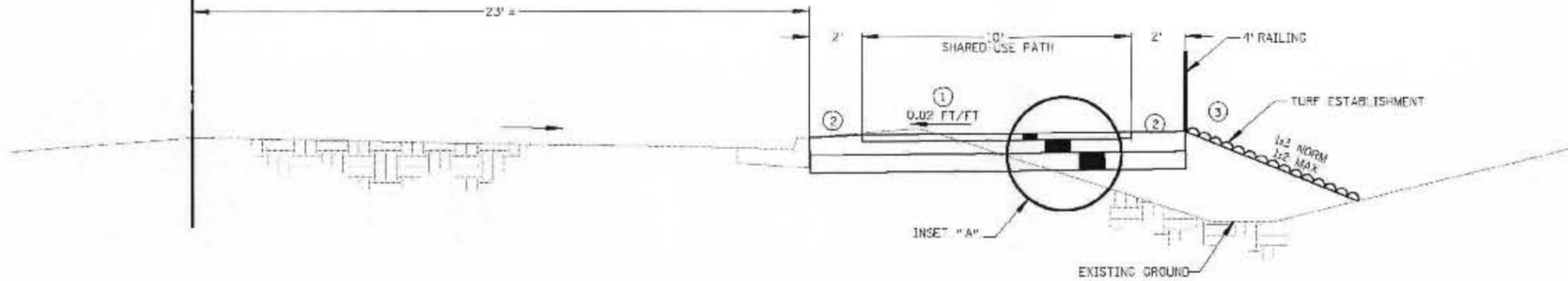
**INSET "A"
 PAVEMENT STRUCTURE** NO SCALE

NOTES:

- ① CROSS SECTION VARIES BETWEEN +2% TO -2%. SUPERELEVATE ALL CURVES TOWARD THE RADIUS POINT, WHEN NOT IN TRANSITION, THE TRAIL SHALL HAVE A 2% CROSS SLOPE TO DRAIN PAVEMENT.
- ② TURF SHOULDER SHALL CONSIST OF A 3" LAYER OF TOPSOIL/SAND MIXTURE PER SPECIFIED PROVISIONS.
- ③ NOT USED.

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C.S.A.H. 26



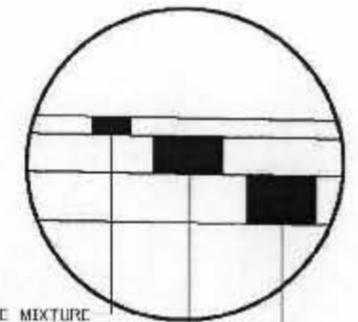
PROPOSED TYPICAL SECTION

STA. 200+50 TO 204+00 (C.S.A.H. 26)

NO SCALE

NOTES:

- ① CROSS SECTION VARIES BETWEEN +2% TO -2%. SUPERELEVATE ALL CURVES TOWARD THE RADIUS POINT. WHEN NOT IN TRANSITION, THE TRAIL SHALL HAVE A 2% CROSS SLOPE TO DRAIN PAVEMENT.
- ② TURF SHOULDER SHALL CONSIST OF A 3" LAYER OF TOPSOIL/SAND MIXTURE PER SPECIFIED PROVISIONS.
- ③ 1' RAILING TO BE USED WHEN VERTICAL DISTANCE FROM EDGE OF SHOULDER IS GREATER THAN 4 FEET.



3.0" WEARING COURSE MIXTURE
 6.0" AGGREGATE BASE CLASS 5, SPEC. 2211
 8" SELECT GRANULAR BORROW, SPEC. 2105

INSET "A"
PAVEMENT STRUCTURE

NO SCALE



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LICENSED PROFESSIONAL ENGINEER

22442

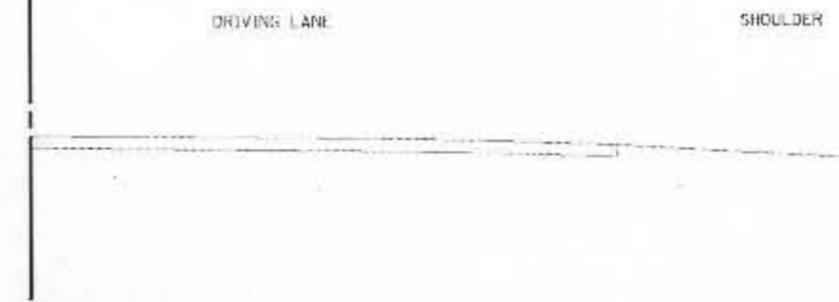
JUNE 29, 2007

TWO HARBORS TRAIL

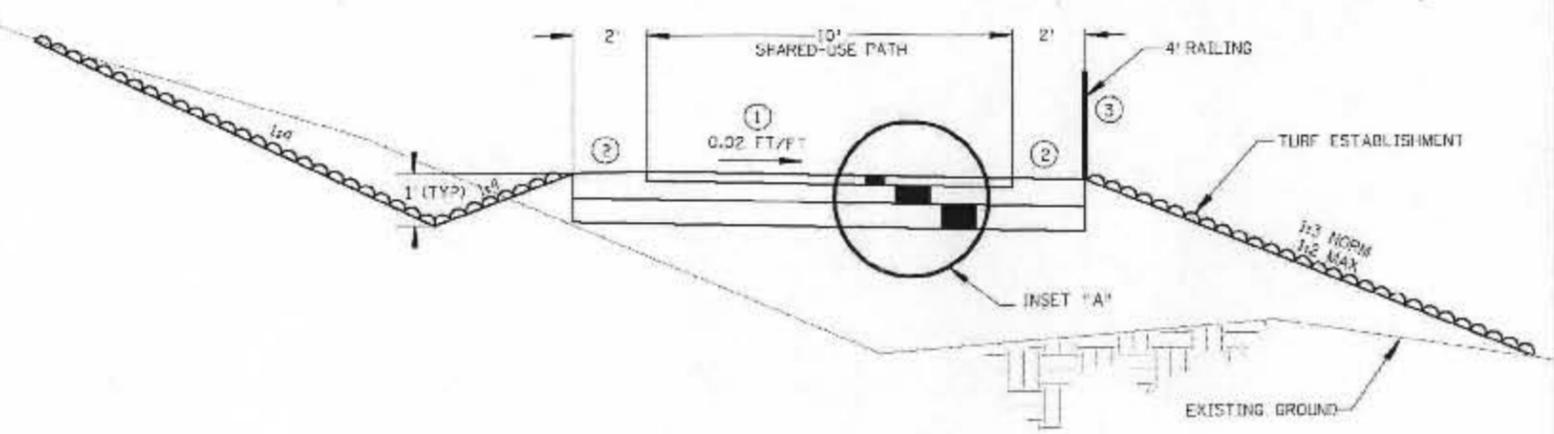
S.P. 38-090-03 & S.P. 38-090-04

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 Drawing 21 of 26

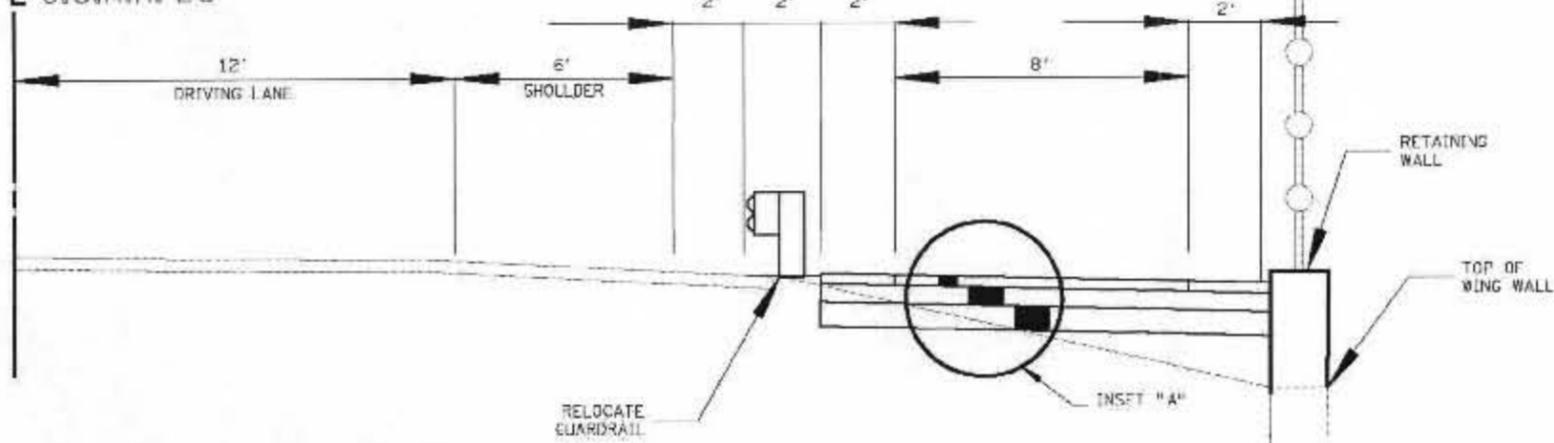
C.S.A.H. 26



PROPOSED TYPICAL SECTION
 STA. 204+00 TO 246+50 (C.S.A.H. 26)
 STA. 248+00 TO 278+50 (C.S.A.H. 26)
 NO SCALE



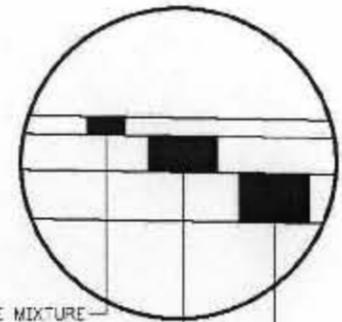
C.S.A.H. 26



PROPOSED TYPICAL SECTION
 STA. 246+50 TO 248+00 (C.S.A.H. 26)
 NO SCALE

NOTES:

- ① CROSS SECTION VARIES BETWEEN +2% TO -2%. SUPERELEVATE ALL CURVES TOWARD THE RADIUS POINT. WHEN NOT IN TRANSITION, THE TRAIL SHALL HAVE A 2% CROSS SLOPE TO DRAIN PAVEMENT.
- ② TURF SHOULDER SHALL CONSIST OF A 3" LAYER OF TOPSOIL/SAND MIXTURE PER SPECIFIED PROVISIONS.
- ③ 4' RAILING TO BE USED WHEN VERTICAL DISTANCE FROM EDGE OF SHOULDER IS GREATER THAN 4 FEET.



3.0" WEARING COURSE MIXTURE
 6.0" AGGREGATE BASE CLASS 5, SPEC. 2211
 8" SELECT GRANULAR BORROW, SPEC. 2105

INSET "A"
PAVEMENT STRUCTURE
 NO SCALE

DATE: 6/29/07

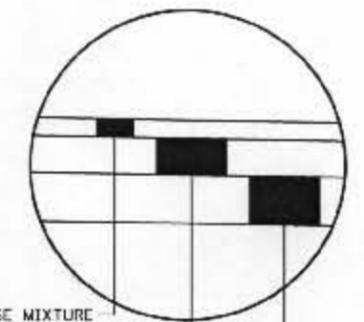
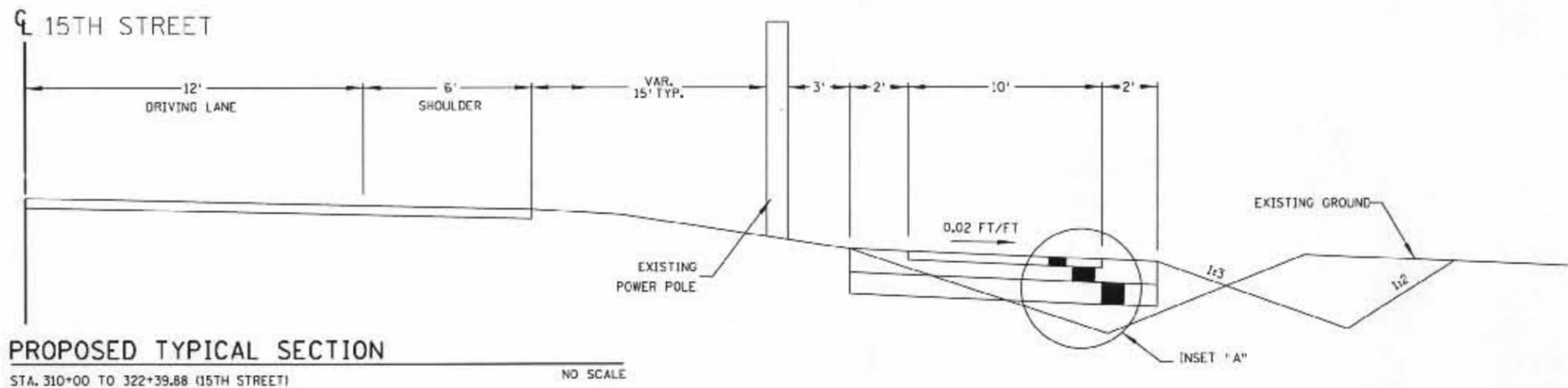
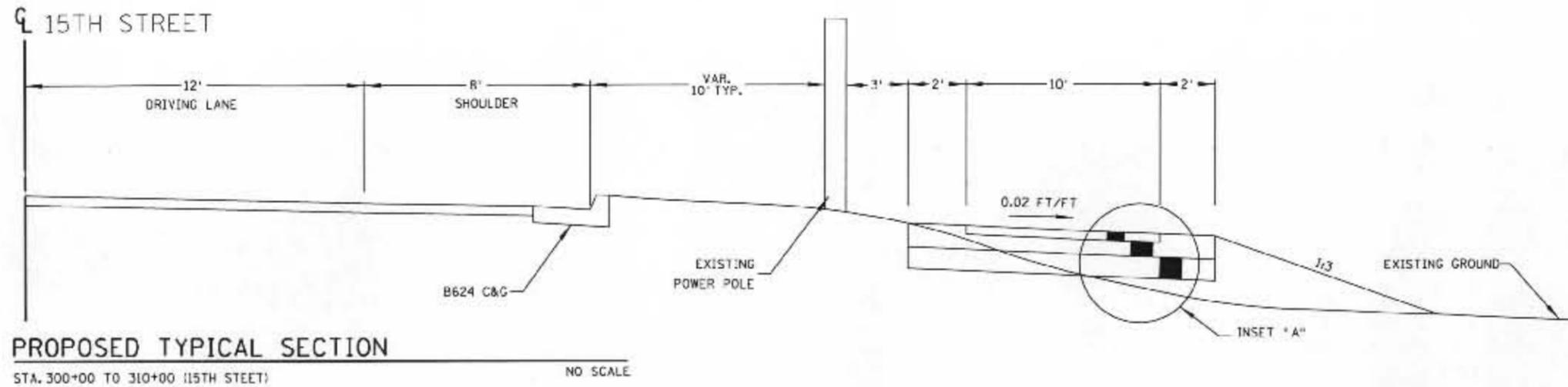
AYRES ASSOCIATES
 Engineers/Architects
 Scientists/Surveyors
 2701 West Superior Street, Suite 110
 Duluth, MN 55806

CERTIFIED BY: _____
 LICENSED PROFESSIONAL ENGINEER

22442
 JUNE 29, 2007

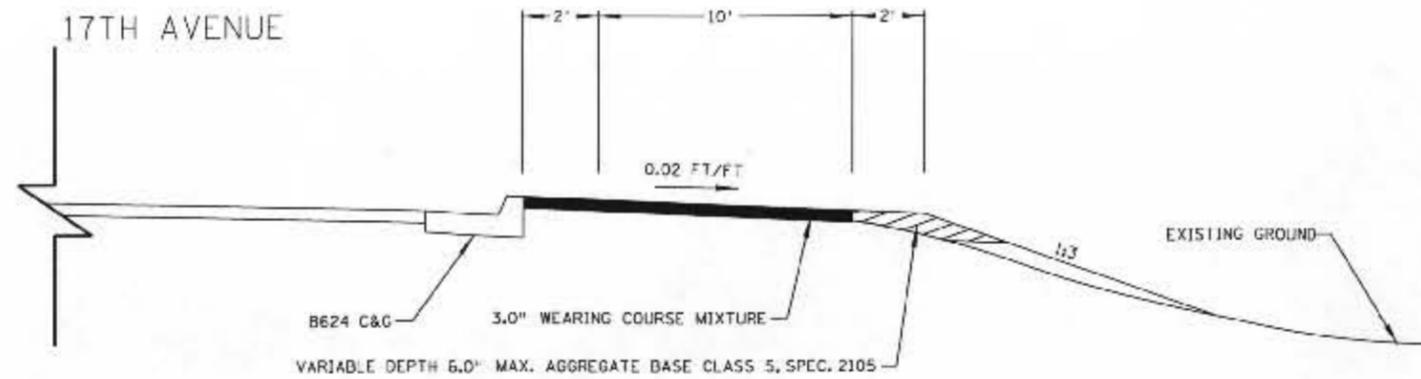
TWO HARBORS TRAIL
 S.P. 38-090-03 & S.P. 38-090-04

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 Drawing 22 of 26



3.0" WEARING COURSE MIXTURE
 6.0" AGGREGATE BASE CLASS 5, SPEC. 2211
 8" SELECT GRANULAR BORROW, SPEC. 2105

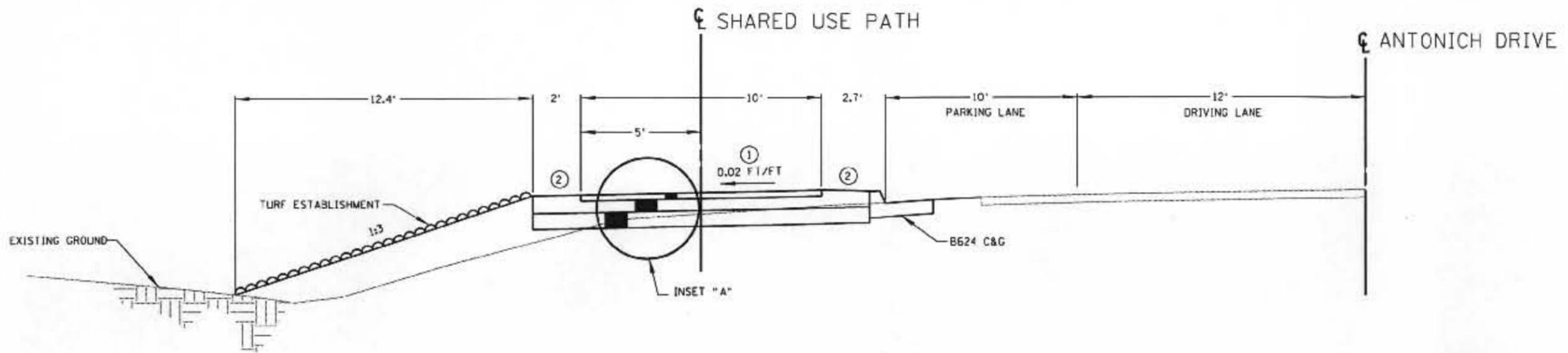
INSET "A"
PAVEMENT STRUCTURE NO SCALE



PROPOSED TYPICAL SECTION

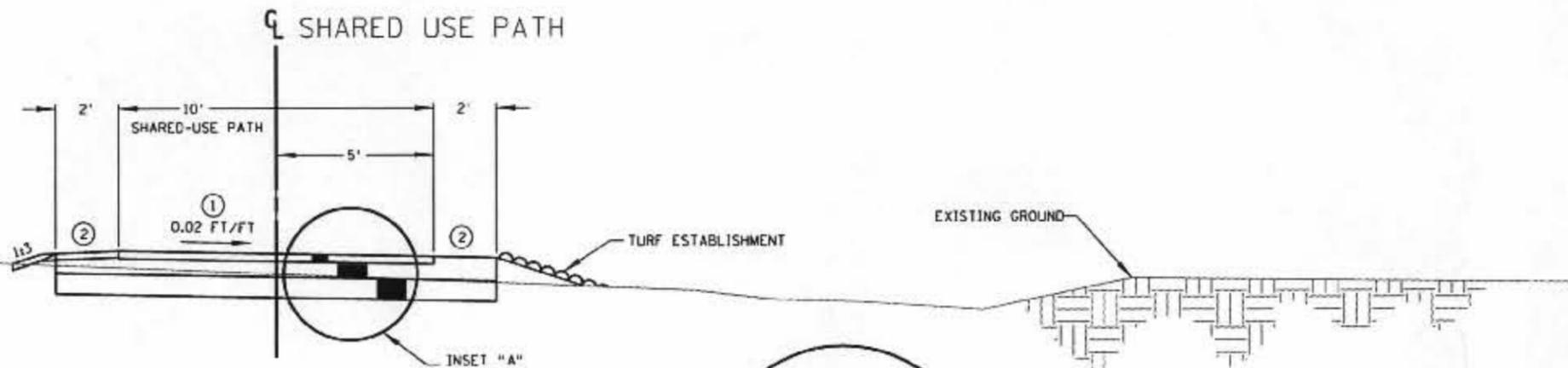
STA. 400+07.50 TO 415+19.50 (15TH STREET) NO SCALE

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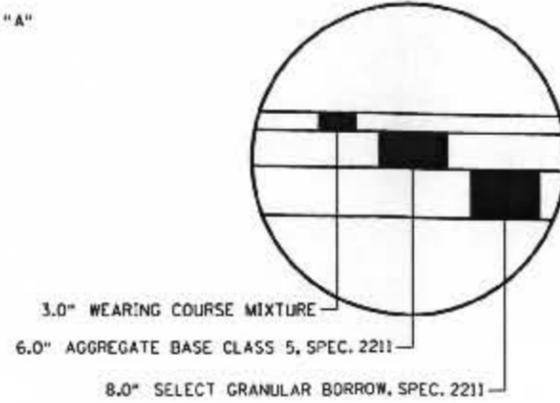
PROPOSED TYPICAL SECTION

STA. 540+00 TO 553+45 (ANTONICH DRIVE) NO SCALE



PROPOSED TYPICAL SECTION

STA. 500+00 TO 540+00 C.S.A.H. 26 TO ANTONICH DR NO SCALE



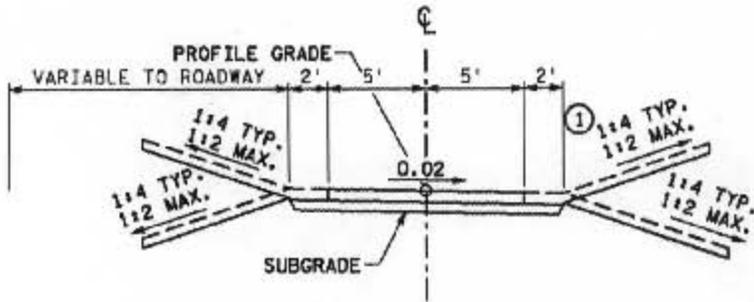
INSET "A"
PAVEMENT STRUCTURE NO SCALE

NOTES:

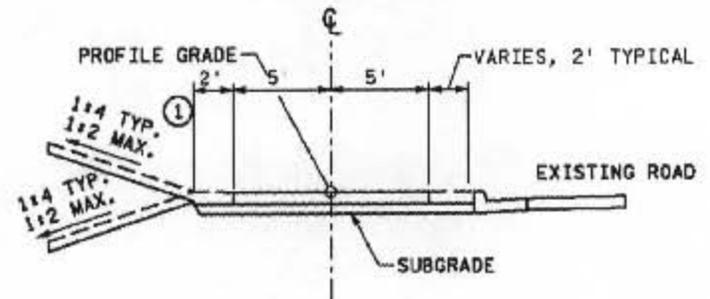
- ① CROSS SECTION VARIES BETWEEN +2% TO -2%. SUPERELEVATE ALL CURVES TOWARD THE RADIUS POINT. WHEN NOT IN TRANSITION, THE TRAIL SHALL HAVE A 2% CROSS SLOPE TO DRAIN PAVEMENT.
- ② TURF SHOULDER SHALL CONSIST OF A 3" LAYER OF TOPSOIL/SAND MIXTURE PER SPECIFIED PROVISIONS.
- ③ NOT USED.

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TRAIL SEPARATED FROM ROADWAY



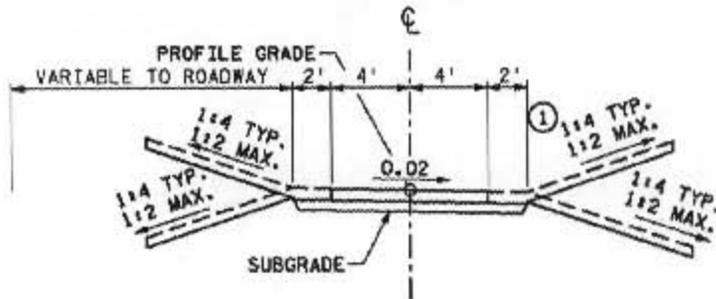
TRAIL ADJACENT TO ROADWAY



NOTES:

- ① INSTALL PROTECTIVE RAILING 2' FROM TRAIL WHERE FILL SLOPES ARE STEEPER THAN 1:4.

TRAIL SEPARATED FROM ROADWAY



TRAIL ADJACENT TO ROADWAY

