Public Notice

U.S. Army Corps of Engineers
Pittsburgh District

In Reply Refer to Notice No. below

US Army Corps of Engineers, Pittsburgh District
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

Application No. 200401923 Date: August 17, 2005

Notice No. 05-55 Closing Date: September 8, 2005

1. TO ALL WHOM IT MAY CONCERN: The following application has been submitted for a Department of the Army Permit under the provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. APPLICANT: Ohio Department of Transportation
Central Office
P.O. Box 899
Columbus, OH 43216-0899

3. LOCATION: over Meander Creek Reservoir, unnamed tributaries to Meander Creek Reservoir and adjacent wetlands, located in Jackson and Austintown Townships, Mahoning County, Ohio.

4. PURPOSE AND DESCRIPTION OF WORK: The project proposes to improve 1.45 miles of Interstate 80 between the Ohio Turnpike Interchange and the State Route 11 Interchange. One new lane in each direction will be added to upgrade the roadway to three lanes in each direction. The existing highway median will be utilized to construct the majority of the additional roadway, however approximately 42 acre of new right-of-way will be required. Two new bridges will be constructed over the Meander Creek Reservoir and a spill containment system will be constructed for the bridge to protect the reservoir. The project will include replacing or rehabilitating several other bridges and upgrading the stormwater management system associated with the roadway. The project will adversely impact 5.0 acres of the Meander Creek Reservoir, 393 feet of six stream channels, and 1.83 acres of adjacent palustrine emergent, shrub/scrub, and forested wetlands. A compensatory mitigation plan is currently being developed but was not submitted with the application. Drawings of the proposed project are attached to this notice.

5. WATER QUALITY CERTIFICATION: A Permit will not be granted until Water Quality Certification is received or waived from:

Ohio Environmental Protection Agency (Ohio EPA)
Section 401 Coordinator
P.O. Box 1049
Columbus, Ohio 43266-0149

Telephone Number: 614-644-2001

6. IMPACT ON NATURAL RESOURCES: The District Engineer has consulted the most recently available information and has determined that the project is not likely to affect the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat of such species which has been determined to be critical. This Public Notice serves as a request to the U. S. Fish and Wildlife Service for any additional information they may have on whether any listed or proposed to be listed endangered or threatened species may be present in the area which would be affected by the activity, pursuant to Section 7(c) of the Endangered Species Act of 1972 (as amended).

7. IMPACT ON CULTURAL RESOURCES: The National Register of Historic Places has been consulted, and it has been determined that there are no properties currently listed on the register which would be directly affected by the proposed work. If we are made aware, as a result of comments received in response to this notice, or by other means, of specific archeological, scientific, prehistorical, or historical sites or structures which might be affected by the proposed work, the District Engineer will immediately take the appropriate action necessary pursuant to the National Historic Preservation Act of 1966 - Public Law 89-665 as amended (including Public Law 96-515).

8. PUBLIC INVOLVEMENT: Any person may request, in writing, within the comment period specified in the paragraph below entitled "RESPONSES," that a public hearing be held to consider this application. The requests for public hearing shall state, with particularity, the reasons for holding a public hearing.

9. EVALUATION: Interested parties are invited to state any objections they may have to the proposed work. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposals must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people. The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider

and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the overall public interest of the proposed activity. The evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under the authority of Section 404(b) of the Clean Water Act (40 CFR Part 230).

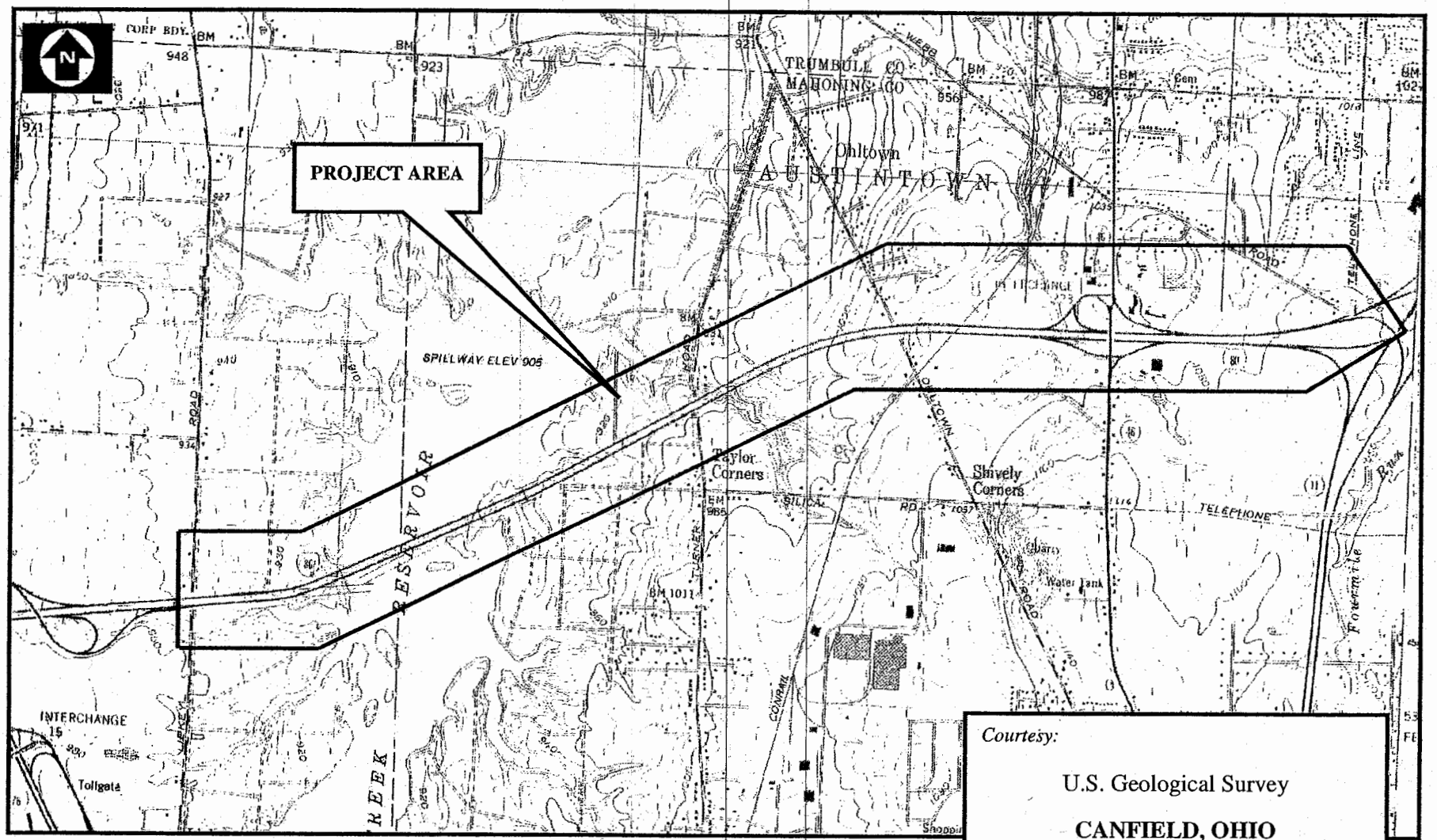
10. RESPONSES: A permit will be granted unless its issuance is found to be contrary to the public interest. Written statements concerning the proposed activity should be received in this office on or before the closing date of this Public Notice in order to become a part of the record and to be considered in the final determination. Any objections which are received during this period may be forwarded to the applicant for possible resolution before the determination is made whether to issue or deny the requested DA Permit. All responses to this notice should be directed to the Regulatory Branch, attn Marcia H. Haberman, at the above address, by telephoning (412) 395-7361, or by e-mail at Marcia.H.Haberman@usace.army.mil. Please refer to CELRP-OP-F 200401923 in all responses.

FOR THE DISTRICT ENGINEER:

Michael J. Cummings, Jr.
Chief, Regulatory Branch

MAH-80-0.97

Project Area Topographic Map



Courtesy:

U.S. Geological Survey

CANFIELD, OHIO

N4100-W8045/7.5

1963

Gannett Fleming

P.N. 05-55 4/17

404 / 401 TABLE G
Nature of Proposed Activities by Impacted Feature for the Preferred Alternative

A. STREAMS

Site / Feature	Approx. Station Location	Proposed Structure or Action	Existing Channel Disturbed Due To Placement of Proposed Structure, Highway Fill, Channel Change or Channel Protection					Existing Channel Disturbed Due to Temporary Crossing		
			Length of Channel Disturbed (feet)	Excavation Below OHW		Fill Below OHW		Length of Channel Disturbed	Excavation / Fill Below OHW	
				Volume (cy)	Area (acres)	Volume (cy)	Area (acres)		Volume (cy)	Area (acres)
Stream 1	STA 491+00	The existing culvert will be lengthened by 21' plus the addition of scour protection at culvert outlet	64	N/A	N/A	2.4	0.005	N/A	N/A	N/A
Stream 3	STA 504+65	The existing 54", 438 ' culvert that crosses IR 80 on a diagonal will be abandoned and replaced with a new 66" 480' culvert perpendicular to IR 80 plus the addition of scour protection at culvert outlet	67	N/A	N/A	1.9	0.005	N/A	N/A	N/A
Stream 5	STA 566+20	The existing 36", 317' culvert will be removed and replaced with a new 48", 400' culvert. There will be a minor deviation in the location of the new culvert plus the addition of scour protection at the culvert outlet	138	N/A	N/A	2.6	0.009	N/A	N/A	N/A
Stream 6	STA 580+86	The existing 21", 420' culvert will be removed and replaced with a new 48", 454' culvert. Scour protection will be added at the culvert outlet	52	N/A	N/A	1.3	0.003	N/A	N/A	N/A
Stream 8	STA 597+63	The headwalls will be extended at each end of the existing 42" culvert	30	N/A	N/A	0	0	N/A	N/A	N/A
Stream 9	STA 634+20	The existing 48" culvert will be extended by 8' on the north side with scour protection being added at the culvert outlet.	42	N/A	N/A	0.18	0.002	N/A	N/A	N/A

B. WETLANDS

Wetland ID	Approx. Station Location (see Appendix B)	Description	Total Area Impacted (acres)	Proposed Action	Direct Impacts (within construction limits)			Indirect Impact Area (outside of construction limits)
					Volume Excavated	Volume Filled (CY)	Area (acres)	
D	STA 703+50 LT to STA 705+10 LT	On north side of interchange ramp, *Phragmites* monoculture.	0.049	Addition of Standard Road Fill Material and/or Type A Rock	N/A	104.1	0.049	Temporary minor sedimentation due to adjacent earth disturbing activity

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NE-4	STA 556+80 LT to STA 559+40 LT	Shoreline wetland with narrow-leafed cattail, inundated to depths of up to 2 feet.	0.136	Addition of Standard Road Fill Material and/or Type A Rock	N/A	504	0.136	Temporary minor sedimentation due to adjacent earth disturbing activity
NE-6	STA 544+50 RT to STA 545+30 LT	Small shoreline wetland between the bridges.	0.038	Addition of Standard Road Fill Material and/or Type A Rock	N/A	140.8	0.038	Total Take
NE-8	STA 630+30 LT to STA 631+70 LT	On north side of highway just west of the bikepath.	0.030	Addition of Standard Road Fill Material and/or Type A Rock	N/A	63.2	0.030	Temporary minor sedimentation due to adjacent earth disturbing activity
NW-C	STA 517+20 LT to STA 517+50 LT	Small wetland pocket dominated *by Carex scoparia*.	0.019	Addition of Standard Road Fill Material and/or Type A Rock	N/A	40.1	0.019	Total Take
NW-E	STA 500+10 LT to STA 500+40 LT	Small wooded wetland adjacent to Stream 3.	0.008	Addition of Standard Road Fill Material and/or Type A Rock	N/A	16.9	0.008	Total Take
SE-2/3	STA 561+20 RT to STA 561+90 RT	Predominantly narrow-leafed cattail areas, surface inundation.	0.092	Addition of Standard Road Fill Material and/or Type A Rock	N/A	267.4	0.092	Temporary minor sedimentation due to adjacent earth disturbing activity
SW-BB	STA 488+20 RT to STA 489+30 RT	Just south of highway at end of off-ramp, *Phragmites* monoculture.	0.026	Addition of Standard Road Fill Material and/or Type A Rock	N/A	54.8	0.026	Temporary minor sedimentation due to adjacent earth disturbing activity
F	STA 673+70 LT to STA 674+35 LT & STA 676+00 LT to STA 677+05 LT	Large wetland area on north side of highway, *Phragmites* monoculture.	0.032	Addition of Standard Road Fill Material and/or Type A Rock	N/A	67.5	0.032	Temporary minor sedimentation due to adjacent earth disturbing activity
NE-1	STA 579+55 LT to STA 579+70 LT	Small wetland with good vegetation diversity, adjacent to Stream 6, surface inundation.	0.004	Addition of Standard Road Fill Material and/or Type A Rock	N/A	11.6	0.004	Temporary minor sedimentation due to adjacent earth disturbing activity
NE-5	STA 550+95 LT to STA 551+20 LT & STA 552+70 LT to STA 553+10 LT	Shoreline wetland with narrow-leafed cattail, some buttonbush developing, inundation of up to 2 feet.	0.033	Addition of Standard Road Fill Material and/or Type A Rock	N/A	122.3	0.033	Temporary minor sedimentation due to adjacent earth disturbing activity
NE-A	STA 561+00 LT to STA 561+60 LT	Shoreline wetland, inundated to 6" depth.	0.020	Addition of Standard Road Fill Material and/or Type A Rock	N/A	74.1	0.020	Temporary minor sedimentation due to adjacent earth disturbing activity
NE-B	STA 546+40 LT to STA 548+30 LT	Shoreline wetland north of bridge, some buttonbush developing, inundated to up to 2 feet.	0.070	Addition of Standard Road Fill Material and/or Type A Rock	N/A	259.4	0.070	Total Take
NW-A	STA 520+00 LT to STA 521+70 LT	This wetland is along the shore of the reservoir.	0.113	Addition of Standard Road Fill Material and/or Type A Rock	N/A	418.8	0.113	Temporary minor sedimentation due to adjacent earth disturbing activity
NW-F	STA 504+70 LT to STA 505+40 LT	Very small wetland pocket, narrow-leafed cattail present.	0.017	Addition of Standard Road Fill Material and/or Type A Rock	N/A	35.8	0.017	Temporary minor sedimentation due to adjacent earth disturbing activity
SE-1	STA 568+15 RT to STA 568+25 RT	Large wetland area along Stream 5, inundated to 2".	0.005	Addition of Standard Road Fill Material and/or Type A Rock	N/A	10.5	0.005	Temporary minor sedimentation due to adjacent earth disturbing activity

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SE-10	STA 543+90 RT to STA 545+10 RT	Seasonally exposed shoreline, depths of 2".	0.035	Addition of Standard Road Fill Material and/or Type A Rock	N/A	101.7	0.035	Total Take
SE-5	STA 550+40 RT to STA 552+00 RT	Stagnant marsh/pool dammed by a service road, depth up to 3'. Trees and shrubs developing.	0.360	Addition of Standard Road Fill Material and/or Type A Rock	N/A	1046.5	0.360	Temporary minor sedimentation due to adjacent earth disturbing activity
SE-8	STA 554+60 RT to STA 556+10 RT	Seasonally exposed eastern shoreline, contiguous to inland pond. Some buttonbush development, good diversity.	0.097	Addition of Standard Road Fill Material and/or Type A Rock	N/A	359.5	0.097	Temporary minor sedimentation due to adjacent earth disturbing activity
SW-1	STA 504+20 RT to STA 504+70 RT	Large wetland adjacent to Stream 1, inundated up to 8" depth, some reed canary grass present.	0.026	Addition of Standard Road Fill Material and/or Type A Rock	N/A	96.4	0.026	Temporary minor sedimentation due to adjacent earth disturbing activity
SW-3	STA 511+20 RT to STA 511+80 RT	Predominantly seasonally exposed shoreline mudflat area.	0.046	Addition of Standard Road Fill Material and/or Type A Rock	N/A	133.7	0.046	Total Take
B	STA 626+50 RT to STA 628+30 RT	Large wetland just west of bikepath, surface inundation. Narrow-leafed cattail present.	0.029	Addition of Standard Road Fill Material and/or Type A Rock	N/A	61.1	0.029	Temporary minor sedimentation due to adjacent earth disturbing activity
SW-A	STA 518+70 RT to STA 519+80 RT	Just west of reservoir, scrub-shrub area inundated to 4" depth. Some buttonbush present.	0.114	Addition of Standard Road Fill Material and/or Type A Rock	N/A	331.4	0.114	Total Take
NW-2	STA 513+90 LT to STA 514+80 LT	This larger wetland has some invasive species (reed canary grass) and was inundated to the surface.	0.245	Addition of Standard Road Fill Material and/or Type A Rock	N/A	516.5	0.245	Temporary minor sedimentation due to adjacent earth disturbing activity
SE-9	STA 552+55 RT to STA 553+10 RT	Seasonally exposed western shoreline contiguous to inland pond. Depths of 2", some buttonbush.	0.101	Addition of Standard Road Fill Material and/or Type A Rock	N/A	374.3	0.101	Temporary minor sedimentation due to adjacent earth disturbing activity
SE-A	STA 547+85 RT to STA 549+40 RT	PFO shoreline wetland, Some buttonbush.	0.084	Addition of Standard Road Fill Material and/or Type A Rock	N/A	311.3	0.084	Temporary minor sedimentation due to adjacent earth disturbing activity

C. WHOLE PROJECT SUMMARY OF ACTIVITIES

Total Project Lineal Stream Disturbances			Total Project Excavation			Total Project Fill		
Total Length Disturbed Due to Placement of Proposed Structure (Highway Fill, Culvert, Riprap or Channel Protection) (feet)	Length Disturbed Due to Temporary Crossing (feet)	Net Length Disturbed (feet)	Stream Excavated Volume (cy) / Area (ac)	Wetland Excavated Volume (cy) / Area (ac)	Total Excavation Volume (cy) / Area (ac)	Stream Filled (standard road fill, channel protection, temporary crossing & other material) Volume (cy) / Area (ac)	Wetland Filled Volume (cy) / Area (ac)	Total Filled Volume (cy) / Area (ac)
393	N/A	393	N/A	N/A	N/A	8.36/.023	2,948/1.86	2,956/1.88

P.N. 05-55
1M / 1M

PROJECT DESCRIPTION

RECONSTRUCTION AND WIDENING OF 4.55 MILES OF IR 80. INCLUDING PARTIAL RECONSTRUCTION OF SEVEN INTERCHANGE RAMPS, THE REHABILITATION OF SIX BRIDGES, THE REPLACEMENT OF THE MEANDER CREEK RESERVOIR BRIDGES, AND THE CONSTRUCTION OF A 20' X 14' 3-SIDED CULVER TO REPLACE EXISTING BRIDGES.

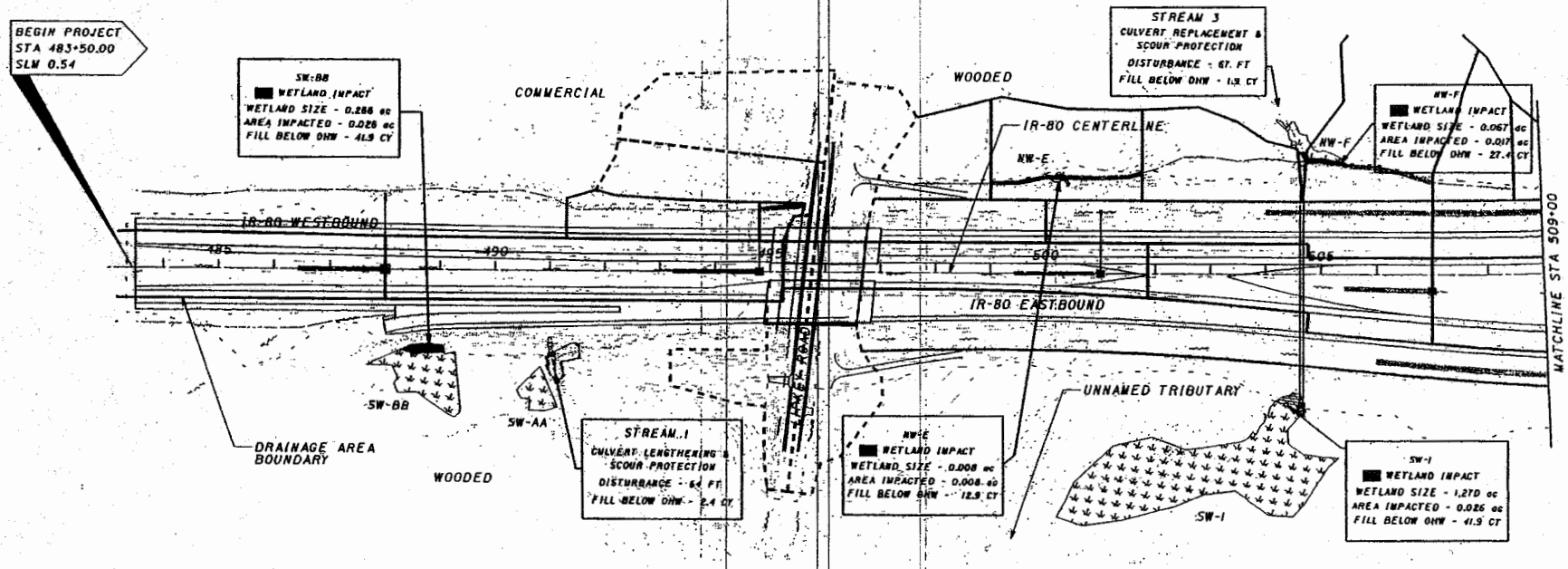
USGS QUADRANT(S)

CANFIELD, OHIO
GIRARD, OHIO
WARREN, OHIO
YOUNGSTOWN, OHIO

LATITUDE: N 41° 07' 05"
LONGITUDE: W 80° 47' 35"
LATITUDE AND LONGITUDE TO APPROXIMATE MIDDLE OF PROJECT

PROJECT DATA	
TOTAL AREA (RIGHT-OF-WAY)	190 ACRES
PROJECT EARTH DISTURBED AREA	162 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	188 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA	197.4 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.58
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.63
IMPERVIOUS AREA FOR PRE-CONSTRUCTION	38 ACRES
IMPERVIOUS AREA FOR POST-CONSTRUCTION	63 ACRES
SOIL DATA	SOIL SURVEY OF MAHONING COUNTY, SHEETS 4 - 6
IMMEDIATE RECEIVING WATERS	MEANDER CR. RESERVOIR & UNNAMED TRIBS.
SUBSEQUENT RECEIVING WATERS (WITHIN 200' OF ROW)	NONE
RECEIVING WATERS UNDER TOTAL MAXIMUM DAILY LOAD (TMDL) REGULATIONS	NONE

WETLANDS
ROCK CHANNEL PROTECTION
DITCH EROSION PROTECTION
TURF REINFORCING MAT, TYPE I



NOTE: FOR DRAINAGE VALUES SEE ROADWAY DRAINAGE REPORT

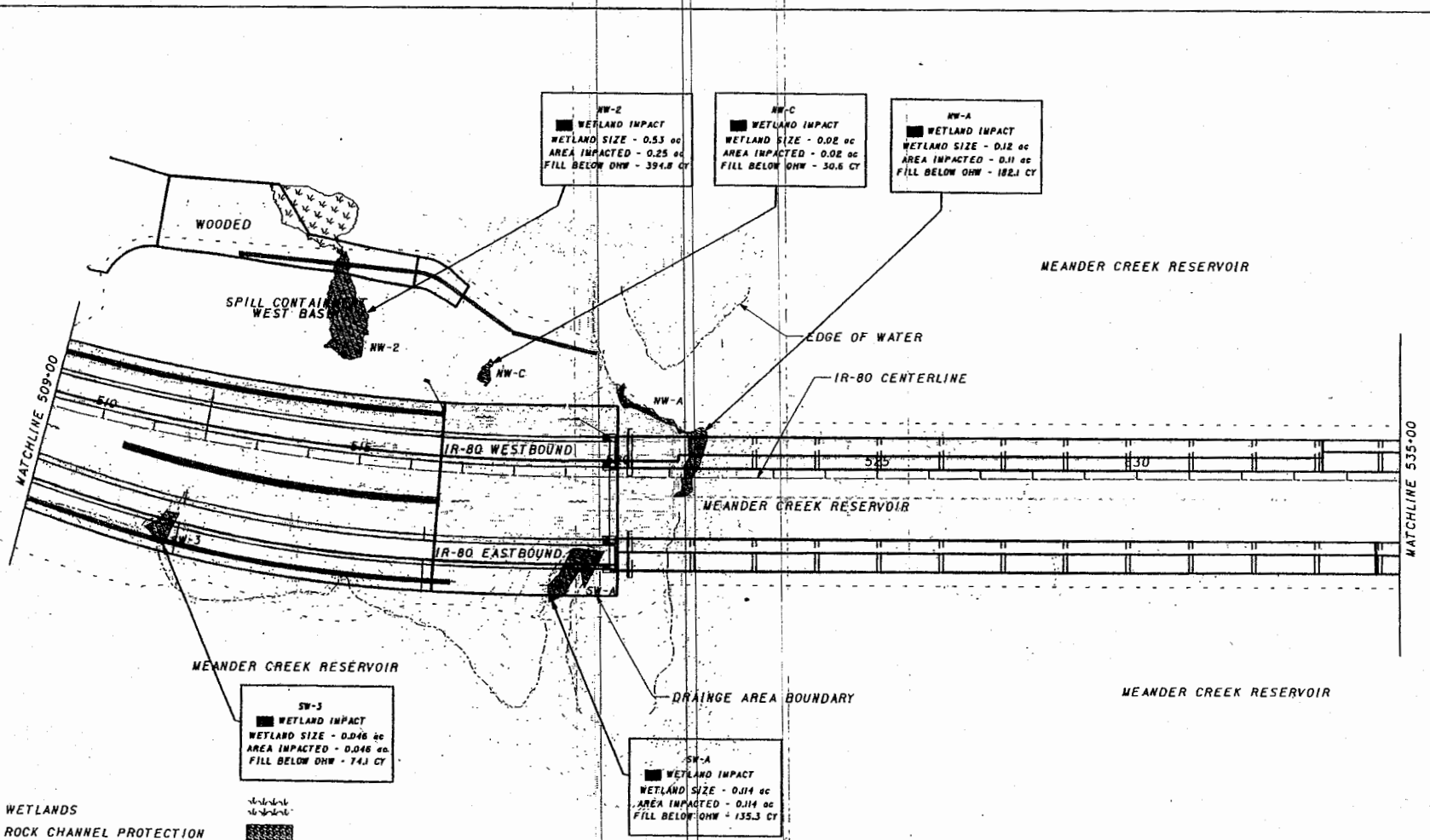
PROJECT SITE PLAN
STA. 483+50.00 TO STA 509+00.00

MAH-80-0.97

178
1100

P.N. 05-55

5/17



PROJECT SITE PLAN
STA. 509+00.00 TO STA. 535+00.00

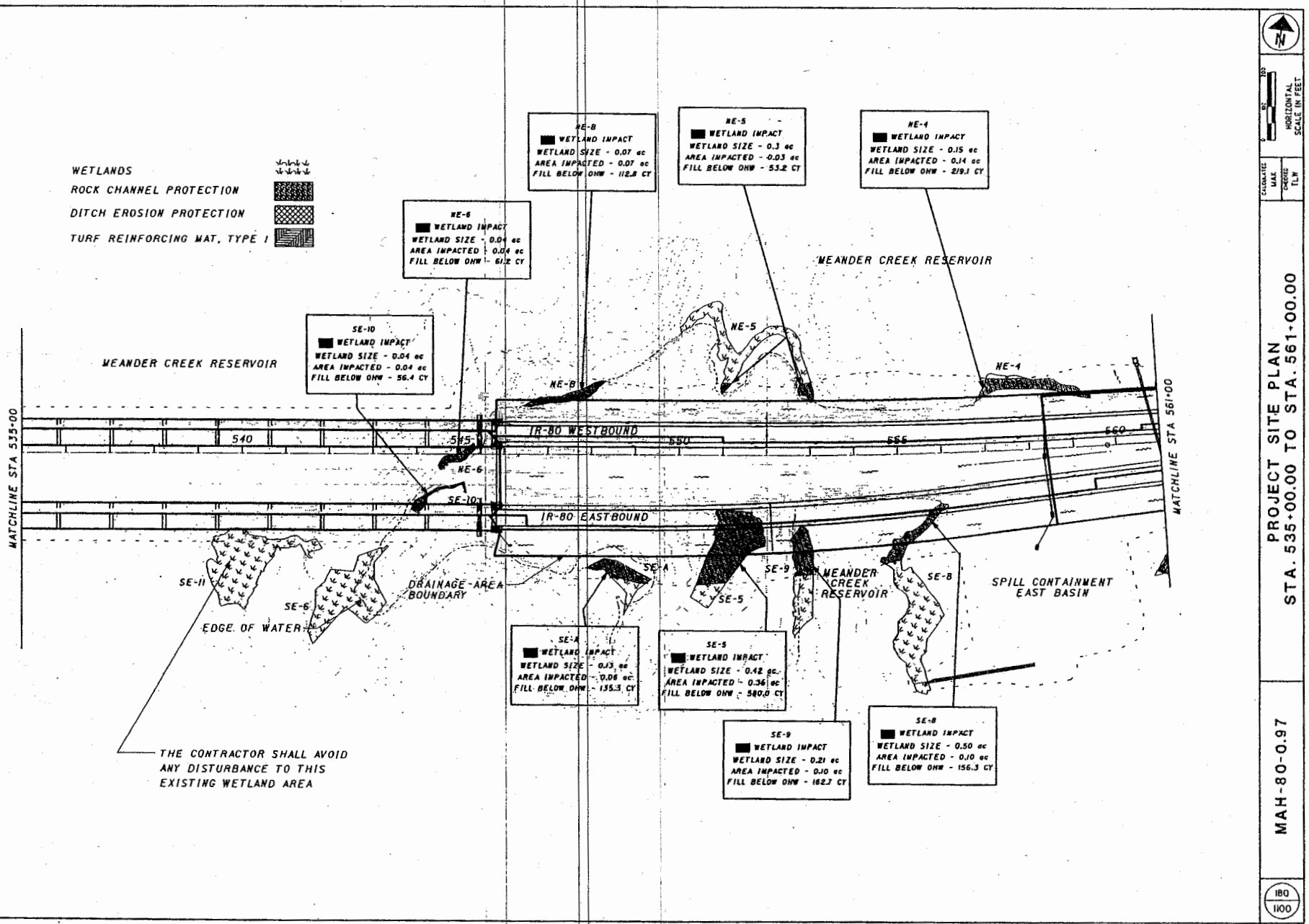
MAH-80-0.97

HORIZONTAL SCALE IN FEET

CALCULATED MAK
CHECKED TLW

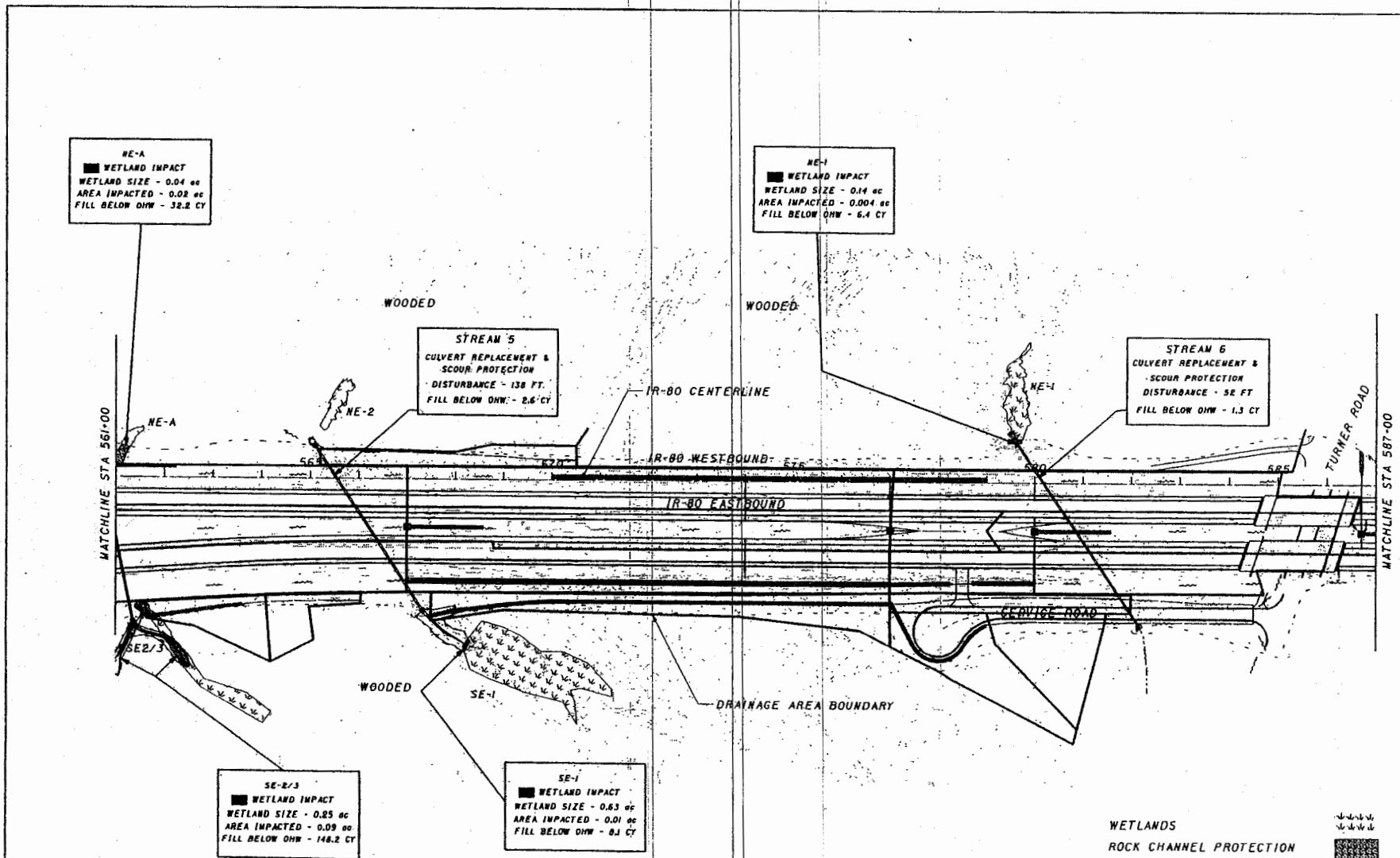
179
1100

P.N. 05-55


WETLANDS
ROCK CHANNEL PROTECTION
DITCH EROSION PROTECTION
TURF REINFORCING MAT, TYPE I
NE-8
WETLAND IMPACT
WETLAND SIZE - 0.07 ac
AREA IMPACTED - 0.07 ac
FILL BELOW OHW - 112.8 CY
NE-5
WETLAND IMPACT
WETLAND SIZE - 0.3 ac
AREA IMPACTED - 0.03 ac
FILL BELOW OHW - 53.2 CY
NE-4
WETLAND IMPACT
WETLAND SIZE - 0.15 ac
AREA IMPACTED - 0.14 ac
FILL BELOW OHW - 219.1 CY
NE-6
WETLAND IMPACT
WETLAND SIZE - 0.04 ac
AREA IMPACTED - 0.04 ac
FILL BELOW OHW - 61.2 CY
MEANDER CREEK RESERVOIR
SE-10
WETLAND IMPACT
WETLAND SIZE - 0.04 ac
AREA IMPACTED - 0.04 ac
FILL BELOW OHW - 56.4 CY
MEANDER CREEK RESERVOIR
NE-5
NE-8
NE-4
MATCHLINE STA 535+00
540
545
IR-80 WESTBOUND
550
555
560
MATCHLINE STA 561+00
NE-6
SE-10
IR-80 EASTBOUND
SE-11
SE-6
DRAINAGE AREA BOUNDARY
EDGE OF WATER
SE-4
SE-9
MEANDER CREEK RESERVOIR
SE-8
SPILL CONTAINMENT EAST BASIN
SE-5
SE-4
WETLAND IMPACT
WETLAND SIZE - 0.13 ac
AREA IMPACTED - 0.06 ac
FILL BELOW OHW - 135.3 CY
SE-5
WETLAND IMPACT
WETLAND SIZE - 0.42 ac
AREA IMPACTED - 0.36 ac
FILL BELOW OHW - 580.8 CY
SE-9
WETLAND IMPACT
WETLAND SIZE - 0.21 ac
AREA IMPACTED - 0.10 ac
FILL BELOW OHW - 162.7 CY
SE-8
WETLAND IMPACT
WETLAND SIZE - 0.50 ac
AREA IMPACTED - 0.10 ac
FILL BELOW OHW - 156.3 CY
THE CONTRACTOR SHALL AVOID ANY DISTURBANCE TO THIS EXISTING WETLAND AREA
N
HORIZONTAL SCALE IN FEET
CALCULATED MAK
CHECKED TLW
PROJECT SITE PLAN
STA. 535+00.00 TO STA. 561+00.00
MAH-80-0.97
180
1100

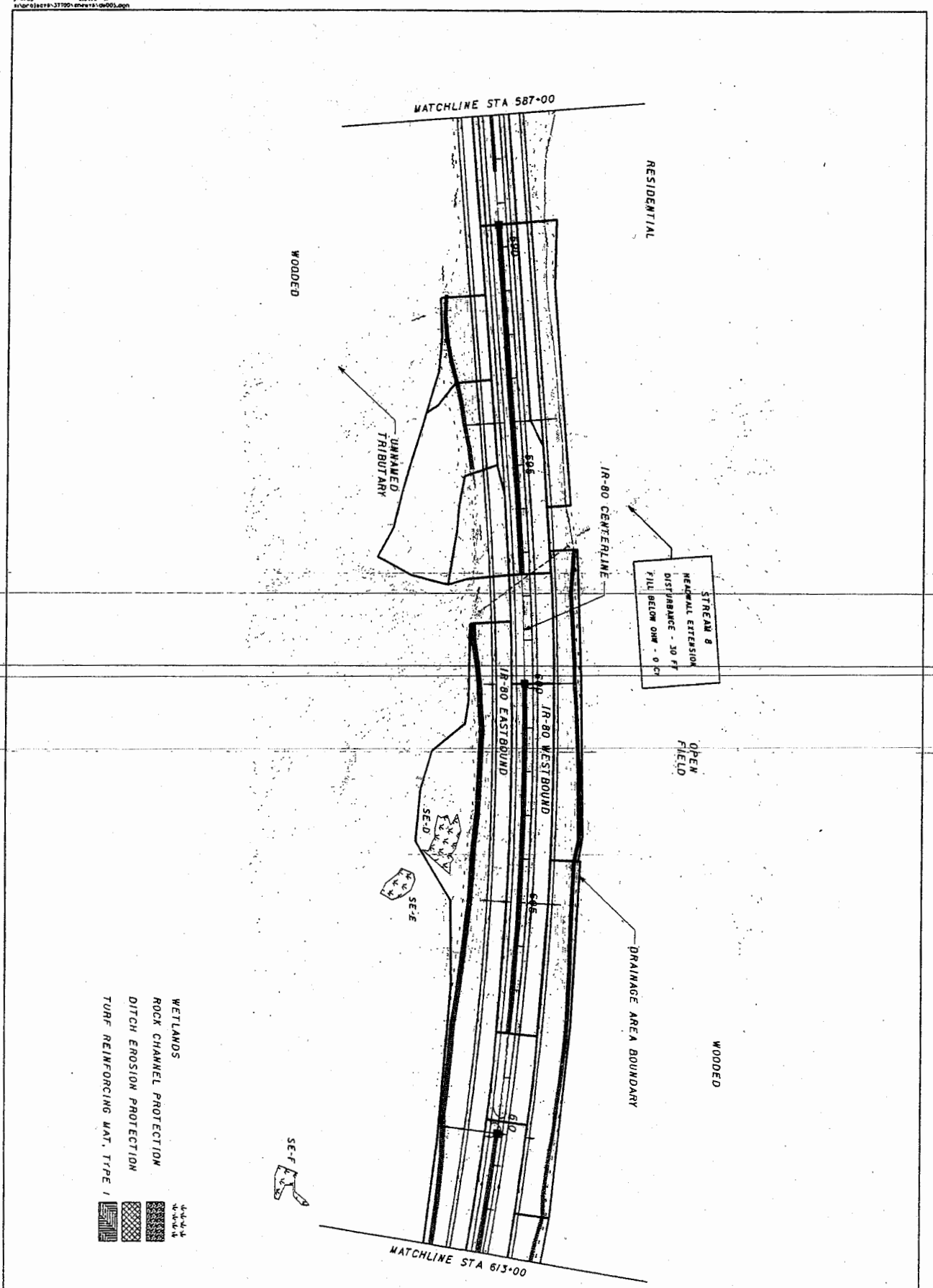
P.N. 05-55

M/17


NE-A
WETLAND IMPACT
WETLAND SIZE - 0.04 ac
AREA IMPACTED - 0.02 ac
FILL BELOW OHW - 32.2 CY
NE-1
WETLAND IMPACT
WETLAND SIZE - 0.14 ac
AREA IMPACTED - 0.004 ac
FILL BELOW OHW - 6.4 CY
WOODED
WOODED
STREAM 5
CULVERT REPLACEMENT & SCOUR PROTECTION
DISTURBANCE - 138 FT.
FILL BELOW OHW - 2.6 CY
STREAM 6
CULVERT REPLACEMENT & SCOUR PROTECTION
DISTURBANCE - 52 FT
FILL BELOW OHW - 1.3 CY
I-80 CENTERLINE
NE-2
NE-A
NE-1
I-80 WESTBOUND
I-80 EASTBOUND
TURNER ROAD
MATCHLINE STA 561+00
MATCHLINE STA 587+00
CLOVIS ROAD
SE2/3
WOODED
SE-1
DRAINAGE AREA BOUNDARY
SE-2/3
WETLAND IMPACT
WETLAND SIZE - 0.25 ac
AREA IMPACTED - 0.09 ac
FILL BELOW OHW - 148.2 CY
SE-1
WETLAND IMPACT
WETLAND SIZE - 0.63 ac
AREA IMPACTED - 0.01 ac
FILL BELOW OHW - 8.1 CY
WETLANDS
ROCK CHANNEL PROTECTION
DITCH EROSION PROTECTION
TURF REINFORCING MAT, TYPE I
HORIZONTAL SCALE IN FEET
CALCULATED MAK
CHECKED TLW
PROJECT SITE PLAN
STA. 561+00.00 TO STA. 587+00.00
MAH-80-0.97
181
1100

P.N. 05-55

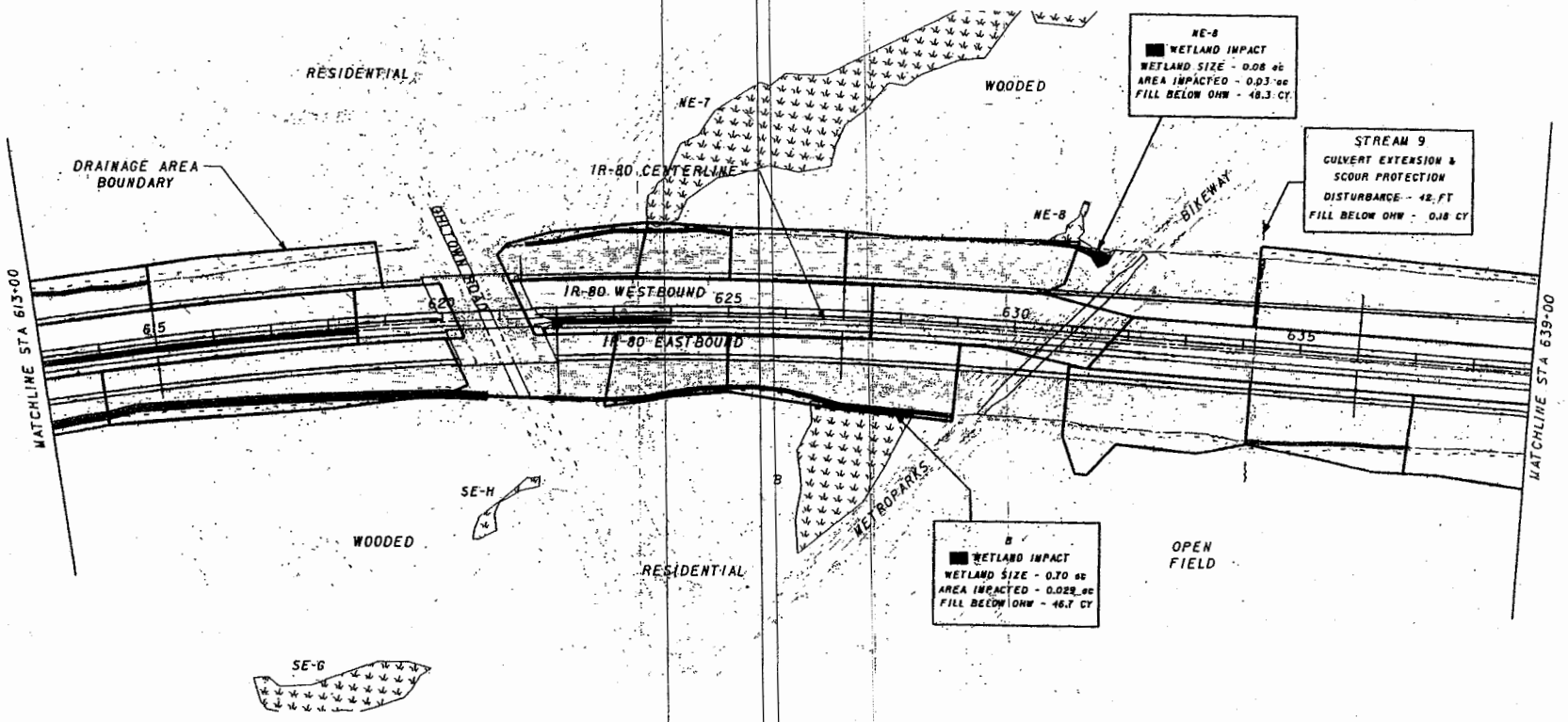
0/1M



182 / 1001	MAH-80-0.97	PROJECT SITE PLAN STA. 587+00.00 TO STA. 613+00.00	CALCULATED MAK CHECKED TLW 0 100 200 HORIZONTAL SCALE IN FEET

P.N. 05-55

9/17



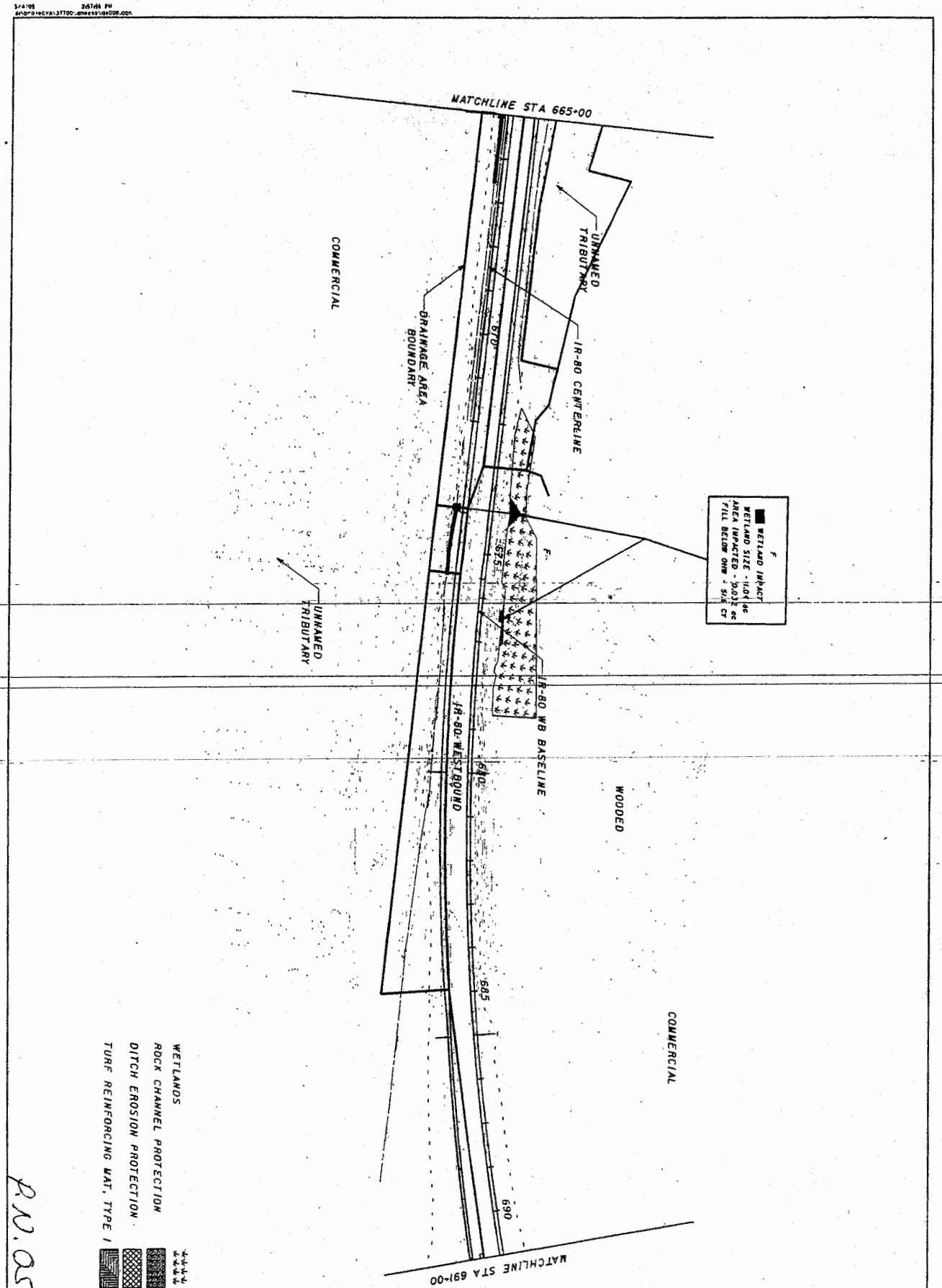
PROJECT SITE PLAN
STA. 613+00.00 TO STA. 639+00.00

MAH-80-0.97

183
1100

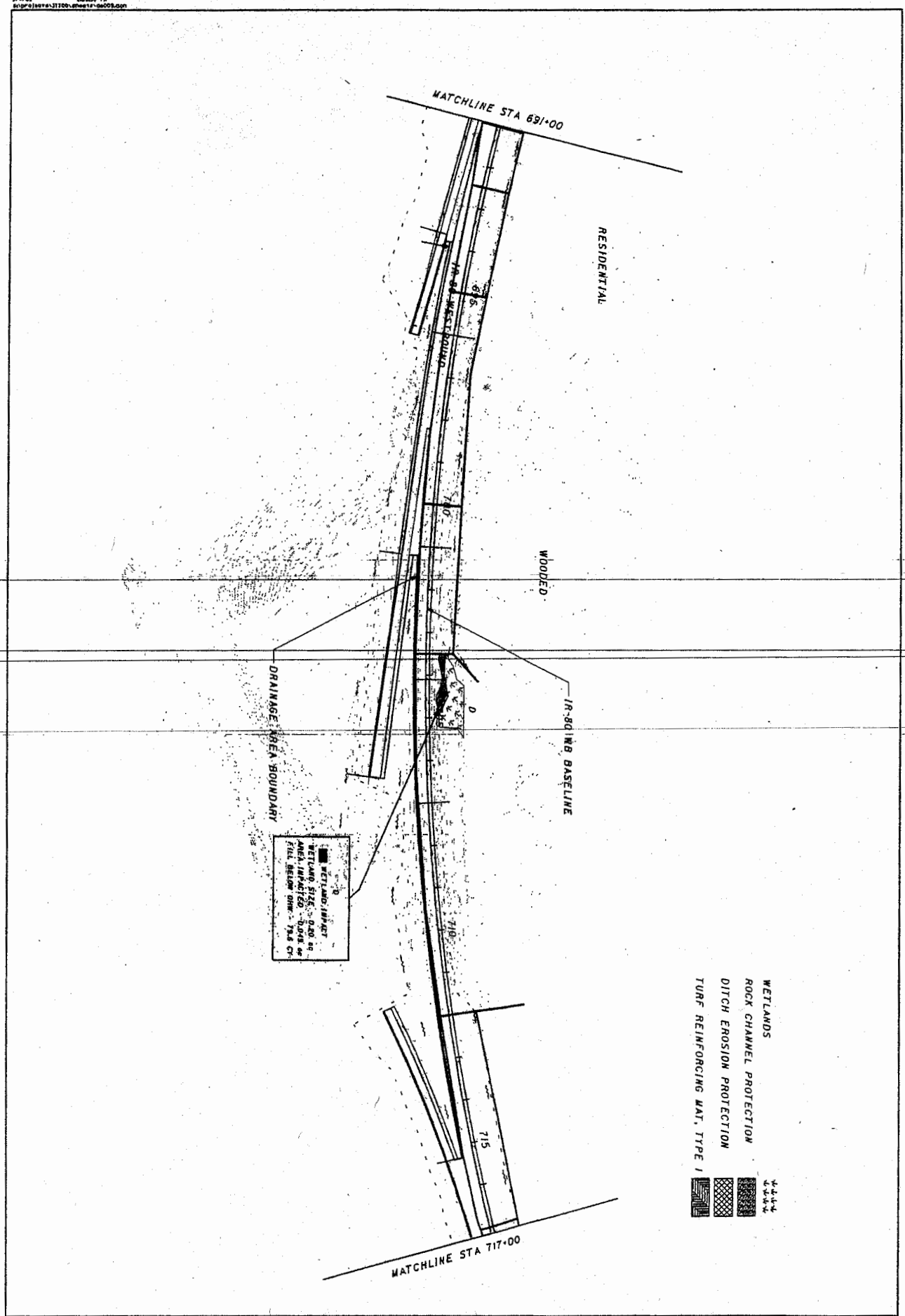
HORIZONTAL SCALE IN FEET

P.N. 05-55

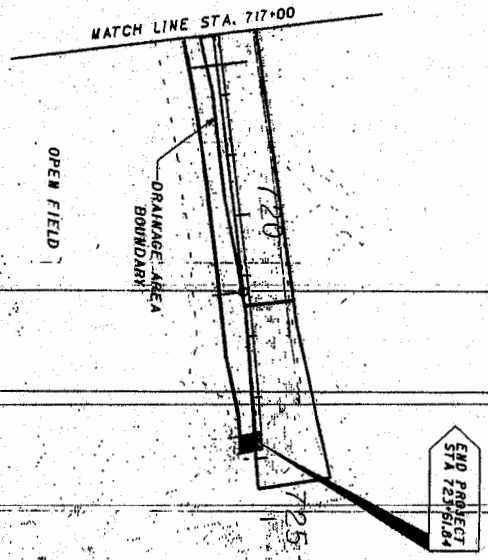


P.N. 05-55

1 of 14


MATCHLINE STA 691+00
RESIDENTIAL
WOODED
IR-80 WB BASELINE
DRAINAGE AREA BOUNDARY
WETLAND IMPACT
WETLAND SIZE: 0.80 ac.
AREA IMPACTED: 0.01E ac.
FILL BELOW OHW: 134 CY
710
715
MATCHLINE STA 717+00
WETLANDS
ROCK CHANNEL PROTECTION
DITCH EROSION PROTECTION
TURF REINFORCING MAT, TYPE I
MAH-80-0.97
PROJECT SITE PLAN
STA. 691+00.00 TO STA. 717+00.00
CALCULATED MAK
CHECKED TLW
HORIZONTAL SCALE IN FEET

P.N. 05-55



WETLANDS

ROCK CHANNEL PROTECTION

DITCH EROSION PROTECTION

TURF REINFORCING MAT, TYPE I

P.N. 05-55

1/4/19

187/100	MAH-80-0.97	PROJECT SITE PLAN STA. 717+00.00 TO STA. 723.87.12	CALCULATED MAK CHECKED TLW HORIZONTAL SCALE IN FEET