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I-75 at North Down River Road Interchange Completion,
 Grayling Township and City of Grayling, Crawford County, Michigan

ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to 42 U.S.C. 4332 (2)(c),
 and 23 CFR 771 by:



U.S. Department of Transportation
 Federal Highway
 Administration

Crawford County Road
 Commission

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1 ENVIRONMENTAL ASSESSMENT

2
3 Interchange Completion at I-75 and North Down River Road, Grayling Township,
4 Crawford County, Michigan
5

6 ABSTRACT

7 The proposed project includes the completion of the I-75/North Down River Rd
8 interchange to handle all movements by adding the NB I-75 exit ramp, a SB I-75
9 entrance ramp and relocating the existing ramps. The bridge over I-75 at North Down
10 River Road will also be replaced by a wider, longer structure to accommodate a three
11 lane cross section and a SB acceleration lane and a NB deceleration lane. Along with
12 the interchange, North Down River Road will be widened to three lanes with bicycle
13 lanes from M-93 to I-75. Traffic signals will be installed at M-93 and Michigan Avenue
14 intersections and a new bridge over the Au Sable River will replace the existing,
15 functionally obsolete existing bridge. The new bridge will allow for an ADA accessible
16 pedestrian walkway on the north side of the road, leading down to the river and under
17 the bridge, ending at the fish hatchery. Local traffic will be maintained during
18 construction.
19

20 Prepared by the
21 Crawford County Road Commission
22 in cooperation with the
23 Michigan Department of Transportation and the
24 Federal Highway Administration
25

26
27 APPROVED:

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31 _____
32 Date

33 _____
34 for the Federal Highway Administration
35

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PREFACE

The National Environmental Policy Act (NEPA) of 1969 requires that social, economic, and natural environmental impacts of any proposed action of the federal government be analyzed for decision-making and public information purposes. There are three classes of action. Class I Actions, which are those that may significantly affect the environment, require the preparation of an Environmental Impact Statement (EIS). Class II Actions (Categorical Exclusions) are those that do not individually or cumulatively have a significant impact on the environment and do not require the preparation of an EIS or an Environmental Assessment (EA). Class III Actions are those in which the significance of impacts is not clearly established. Class III Actions require the preparation of an EA to determine the significance of impacts and the appropriate environmental document to be prepared – either an EIS or a Finding of No Significant Impact (FONSI).

This document is an EA for the proposed improvements at the interchange of North Down River Road with I-75 and road reconstruction and widening from east of the interchange west to M-93 in Crawford County. To accommodate widening of the roadway, the North Down River Road bridge over I-75 requires replacement. Also the bridge on North Down River Road over the East Branch Au Sable River requires replacement and widening to match the new cross section of the widened roadway and a non-motorized path. The EA includes a description and analysis of the no-action, and two alternatives including the Preferred Alternative and supports a determination that the Preferred Alternative will have no significant impacts. If review and comment by the public and interested agencies also support this determination, this EA will be forwarded to the Federal Highway Administration (FHWA) with a recommendation that a FONSI be prepared. If it is determined that the Preferred Alternative may have significant impacts, preparation of an EIS will be required.

This segment of North Down River Road is a County Primary road which is functionally classified as a Major Collector and under the jurisdiction of the Crawford County Road Commission (CCRC). This roadway serves as an east-west route connecting Grayling Township and the City of Grayling. It is also the primary route between the National Guard's Camp Grayling, their MATES (Maneuver Training Equipment Site) facility and the Combined Arms Collective Training Facility (CACTF). This EA was prepared through a consultant for the CCRC, in cooperation with the Michigan Department of Transportation (MDOT). The Preferred Alternative is included in The State Transportation Improvement Program (STIP), which is a list of projects that the state proposes to fund with federal aid in the fiscal years 2011-2014.

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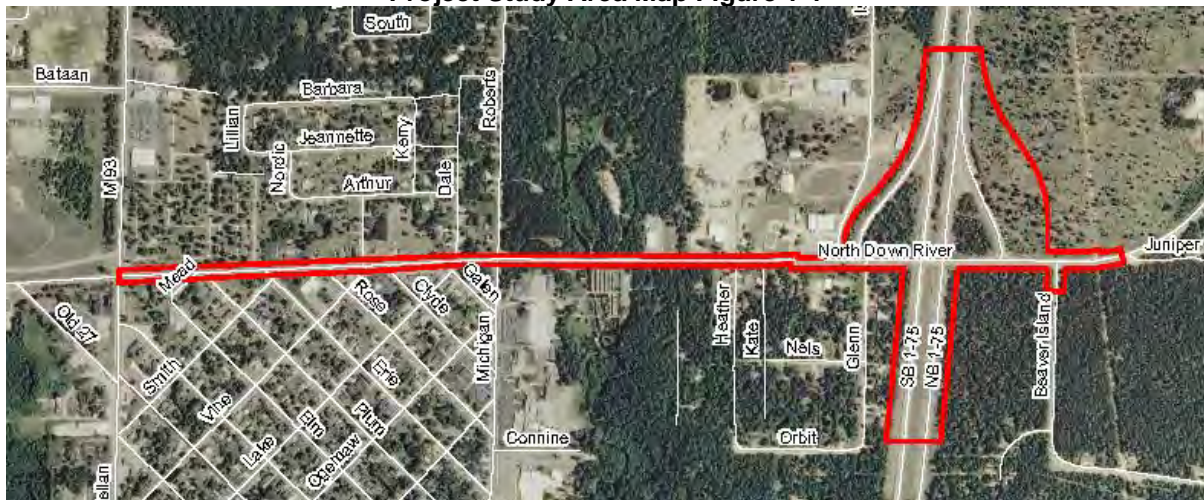
1 PLANNING BASIS AND NEED FOR A PROPOSED PROJECT

2 Description of Study Area

3 Surrounding Area

4 The I-75 at North Down River study area is located within Grayling Township and the City of Grayling
 5 in Crawford County (See **Figure 1-1**) in the center of the northern portion of Michigan's Lower
 6 Peninsula, approximately 85 miles south of the Mackinac Bridge and approximately 140 miles north
 7 of Lansing. The City of Grayling is located just north of the confluence of I-75 and US-127, at the
 8 junction of I-75 and M-72, an east-west state trunkline route, stretching from Harrisville on the east to
 9 Empire on the west, crosses I-75 and through Grayling's city center. Portions of Grayling Township
 10 and the City of Grayling are located in the project study area depicted in **Figure 1-1**.
 11
 12
 13
 14

15 **Project Study Area Map Figure 1-1**



16
 17 Surrounded by large tracts of state and federal land and majestic natural resources, Grayling
 18 residents and visitors enjoy an abundance of recreational lands and waters. Particularly notable are
 19 two pristine rivers, the middle branch of the Au Sable River flowing easterly through Grayling toward
 20 Lake Huron and the Manistee River running to the south and west toward Lake Michigan. The
 21 recreational opportunities that abound in this area are centered on these rivers and the other natural
 22 features that exemplify the area. There are a number of canoe liveries that operate on the local rivers
 23 leading to identifying Grayling as the "Canoe Capital of the World". Every year, the Au Sable River
 24 Canoe Marathon is held in Grayling during the city's Riverfest. The race is considered the world's
 25 longest, toughest non-stop competitive canoeing event. The Grayling area continues to be a year-
 26 around tourist and recreational destination and serves a growing tourism industry in Northern
 27 Michigan known for its fishing, hiking, canoeing, snowmobiling, skiing and hunting.
 28

29 However, a unique and often challenging geographical feature of this area is that much of the
 30 surrounding land is owned by the State of Michigan's Department of Natural Resources (MDNR) and
 31 the United States Federal government. Hartwick Pines State Park, located north of the city, is the
 32 fifth largest state park in the state of Michigan and offers visitors numerous trails for hiking and biking
 33 as well as various historical attractions. And while tourism is a significant contributor to the local
 34 economy, the role of the Federal Government and Camp Grayling relative to local growth and
 35 development also has a significant impact on the economy.
 36

37 Camp Grayling is a State of Michigan National Guard military base located in Grayling Township,
 38 west of the city. It is the second largest National Guard joint training site in the country. Year-round
 39 training is conducted on its 147,000 acre Mobilization and Training Equipment Site (MATES) by the
 40 National Guard, as well as active military troops and reserves from the Army, Navy, Marines, Air
 41 Force and Coast Guard. The MATES is located directly northeast of the base camp approximately

2 eight miles. These activities provide year-
3 round employment and require year-round
4 resources from the surrounding community to
5 support the operation. According to the
6 TIGER Grant application in 2011, the National
7 Guard built the Combined Arms Collective
8 Training Facility (CACTF) also on the North
9 Down River Road training lands, which
10 provides our Military and civilian law
11 enforcement units with the opportunity to train
12 in a simulated urban environment. Not only will
13 US military and law enforcement units train
14 here, but international armed service units, as
15 well. The National Guard also anticipates an



17 increase in traffic on the other ranges located off of North Down River Road as a result of units
18 returning from the drawdown of military operations in Iraq and Afghanistan.

24 Another large employment center and traffic generator for the City of Grayling is Mercy Hospital's
25 medical complex, located in the northeast portion of the city at the intersection of North Down River
26 Road and Michigan Avenue. This healthcare complex employs people from the City of Grayling and
27 surrounding townships. Mercy Hospital – Grayling medical facility is the primary emergency care
28 hospital for the seven-county area. The hospital is actively expanding its services and operations to
29 match the increasing need for health care services.

31 The interchange at I-75 and North Down River Road, constructed as a partial diamond interchange,
32 does not adequately provide the level of access required for the city and surrounding areas. The
33 existing local roads, highways and freeway access have not been improved or expanded to meet the
34 new demands associated with the growing vehicular, non-motorized, and especially military traffic
35 needs in the area. Any increase in capacity and access will need to balance the needs of the local
36 community and the need to efficiently address regional transportation demand.

38 A collaboration between government and businesses, led by the Crawford County Road Commission,
39 and including the Michigan Department of Transportation, Crawford County Board of Commissioners,
40 City of Grayling, Grayling Township, Michigan Department of Natural Resources, Michigan National
41 Guard, Mercy Hospital – Grayling, Crawford County Transportation Authority, and Crawford County
42 Multi-Purpose Trails Committee came together to support this project. All project parties have been
43 involved since the comprehensive study in 2008.

47 A comprehensive study conducted in 2008 and sponsored by the Northeast Michigan Council of
48 Governments (NEMCOG) and local stakeholders included an inventory and assessment of the traffic
49 conditions in the area. The recommendations of the study supported the need to complete the
50 interchange and associated road improvements. The public took an active role in development of the
51 study and attended four public meetings. Gallery walks, audience participation technology, and
52 individual interviews were used to gather public input for the Grayling Area Transportation Study. The
53 gallery walk allowed individuals from the public to share their opinions about the interchange and by-
54 pass alternatives displayed in an informal setting.

49 Study Area

56 The surrounding area of this study consists of portions of Grayling Charter Township and the City of
57 Grayling, both are located within Crawford County. According to the U.S. Census Bureau, in 2010 the
58 population of Grayling Charter Township was estimated to be 5,827 people, and the City of Grayling
59 was estimated to be 1,884 people, for a total estimated population of 7,711 people within the
60 surrounding area of this study. Of these 7,711 people, 2,832 people were considered part of the
61 civilian employed population 16 years in age or over (2,228 people in Grayling Charter Township, and
62 604 people in the City of Grayling).

57

1 According to the Crawford County Master Plan (2009), *“Crawford County’s population is slowly*
2 *growing and is predicted to continue to over the next several decades. Although the growth rate has*
3 *not been as high as some neighboring counties, it is higher than the State’s rate. Plans to*
4 *accommodate this projected growth need to be undertaken in advance in order to provide adequate*
5 *services and infrastructure to the area’s future residents. A further examination of the county’s*
6 *statistics shows that, similar to most of the nation, Crawford County’s population is aging. Over the*
7 *past three decades, the county’s age distribution continued to increase in percentage of those over*
8 *25 years of age, while shrinking in those under 25 years. Shifting population bases create new*
9 *demands on community services”*. By the year 2020, Crawford County is expected to increase in
10 population by over 46% (to 20,900) from 2000. These residential increases will likely lead to general
11 economic growth as local and regional businesses develop to serve the additional population.
12 Alongside this growth will be additional employment opportunities, and in general, as the Crawford
13 County regional population grows, so will the area economy.

14 Project Characteristics

15 The approximately 1.4 mile stretch of North Down River Road between the city limits of Grayling and
16 Grayling Charter Township is a two-lane roadway (one lane in each direction). This segment of North
17 Down River Road is a County Primary road which is functionally classified as a Major Collector. The
18 recommended improvements are included in the 2011-2014 State Transportation Improvement Plan
19 (STIP). This project is described as the completion of the interchange at I-75 at North Down River
20 Road from a partial interchange to a full interchange and associated roadway and bridge
21 improvements. Full access would be provided by implementing the Preferred Alternative for this EA,
22 which consists of the addition of two new ramps along with relocation of the existing ramps to I-75 at
23 North Down River Road interchange. The North Down River Road bridge which goes over I-75 will
24 also need to be replaced and widened. In addition to the interchange, North Down River Road would
25 be reconstructed to a three lane cross section from just east of I-75 westward to M-93. The bridge
26 over the East Branch Au Sable River along North Down River Road will also be replaced to
27 accommodate the road widening and to match the proposed road cross section. This roadway
28 serves as a major east-west route between Camp Grayling, and their training facilities.

29 **Description of Purpose and Need**

30 Purpose of the Proposed Project

31 The purpose of the proposed project is to increase access to the Grayling area from I-75, reduce
32 travel time between I-75 and the Grayling area destinations, reduce congestion on I-75BL, improve
33 safety, provide non-motorized connections, and promote economic vitality.

34 Need for the Proposed Project

35 The need for this project comes from the following conditions:

36
37
38 1. *Direct Access/Travel Time* – A fully operational interchange is needed to remove heavy military
39 equipment and emergency traffic from traveling through downtown Grayling. In order to access the
40 MATES facility or Mercy Hospital from northbound I-75, military and emergency vehicles must exit at
41 the I-75BL (before North Down River Road) and proceed through the city or continue north on I-75 to
42 the next interchange, which is M-93 Road, then exit I-75 only to turn around to southbound I-75 to
43 access the southbound exit at North Down River Road. A full interchange at North Down River Road
44 will provide direct access for all vehicles, reduce travel time and conflicts between the large military
45 vehicles and local traffic, and improve access to and from the Mercy Hospital – Grayling for
46 emergency services.

47
48 2. *Safety* – Improvements at the interchange include reconstructing the existing interchange ramps to
49 meet current design standards. The M-93/M-72/I-75 business loop supports a sizeable volume of
50 military traffic year round. The business loop through downtown Grayling provides the shortest,
51 fastest, and most convenient access for military vehicles coming from the south to all the training
52 facilities located east of the city. Removing heavy military vehicles from the city streets reduces
53 potential conflicts between smaller vehicles and pedestrians.

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1 3. *Non-motorized Connectivity* – Trails located east of the interchange area are disconnected from
2 trails leading into Grayling and deter bicycle and pedestrian connectivity to recreation areas located
3 west of the interchange. Both Alternative 1 and Alternative 1a (the Preferred Alternative) would
4 connect the trails by a separate path located adjacent to North Down River Road.

5
6 4. *Economic Development* – According to the Tiger Grant application, Crawford County has qualified
7 as an Economic Distressed Area (EDA) as defined by 42 U.S.C. 3161. Access to Crawford County's
8 top employers, Mercy Hospital – Grayling, Camp Grayling and the natural resources (timber, oil, and
9 gas industries) will improve economic competitiveness for Crawford County. A full interchange at
10 North Down River Road is a key route to these facilities, therefore the proposed alternative will have a
11 direct impact on job retention in the area.

12
13 A full interchange will also attract businesses that serve travelers along the I-75 corridor and provide
14 employment opportunities for the area residents. Northern Michigan is a major tourist destination,
15 and many tourists pass this interchange. By completing the interchange, commercial businesses
16 such as gas stations, restaurants and retail stores, can be built and will create more employment
17 opportunities.

18 19 Existing Conditions

20 Existing Average Daily Traffic (ADT) volumes on I-75 obtained from MDOT range from approximately
21 19,000 vehicles per day between Four Mile Road and the South Junction of I-75 BL in Grayling.
22 Moving north, traffic then drops off to approximately 9,900 vehicles per day between the south
23 junction of I-75BL and North Down River Road. From North Down River Road to M-93 the number of
24 vehicles per day on I-75 increases to approximately 14,000 vehicles per day. Commercial traffic
25 volumes on I-75 are approximately 9%.

26
27 North Down River Road is classified by the CCRC as a County Primary road and it is a designated
28 truck route, according to the CCRC Truck Operator's Map. The existing roadway is two lanes with a
29 posted speed limit of 35 miles per hour (mph). North Down River Road has approximately 5,100
30 vehicles per day and a Level of Service (LOS) of "B" or better throughout the study area (*Highway
31 Capacity Manual*, 2010 Edition, and Transportation Research Board). On-street parking is prohibited
32 along North Down River Road.

33
34 Northbound travelers wanting to access areas to the east of Grayling, or Mercy Hospital – Grayling,
35 such as military personnel or hospital employees have to exit I-75 at the I-75BL south of Grayling,
36 travel approximately three miles through busy, congested city streets to reach destinations along
37 North Down River Road.

38
39 Military equipment is regularly cycled in and out of inventory on a regular basis, and the exchange of
40 inventory is done by tractor/trailer heavy vehicles coming from locations in the south. By not having a
41 complete interchange at I-75 and North Down River Road, detours for military vehicles are created.
42 Seasonal weight restrictions (72 tons) placed on the North Down River Road Bridge over the East
43 Branch Au Sable River require heavy commercial traffic traveling east and west along North Down
44 River Road to detour a distance of four and half miles. For example, there are approximately 18
45 tractor/trailer daily transfers of heavy equipment at the MATES facility and with the absence of a
46 north-bound off ramp at I-75 at North Down River Road vehicles exit I-75 at the M-93 interchange
47 located approximately three miles north, then re-enter I-75 on the south-bound on ramp at M-93 and
48 finally exit I-75 again using the North Down River Road and proceed east to the MATES facility in
49 order to bypass the bridge over the East Branch Au Sable River.

50
51 Emergency responders attempting to provide aid in the event of an accident, fire or other emergency
52 also have to use detours. According to the TIGER Grant, because of the current configuration of the
53 interchanges, an emergency on I-75 between the I-75 BL interchange and the North Down River
54 Road ramps is very difficult for responders to reach, requiring driving out of their way and potentially
55 entering busy freeway traffic in a hazardous manner. City of Grayling emergency personnel indicate
56 that it can conservatively take an additional 5 to 10 minutes to respond to an emergency. This does
57 not include the additional time required to transport an injured person to the hospital. Because time

can be so important when responding to emergencies, it is conceivable that the severity of many injuries can be reduced by this significant reduction in response time. Access to emergency facilities at Mercy Hospital – Grayling will be greatly improved. Currently, EMS and others attempting to access the emergency room from the south must exit at BL-75 and navigate through busy city streets. The full-access interchange will allow these patients to access the ER from North Down River Road, saving valuable time.

Future (2035) No-Build Conditions

In order to estimate future (2035) traffic conditions, traffic volumes on I-75 and North Down River Road were increased by an annual rate of 1.1%. These rates are based on the MDOT statewide long range transportation model and anticipated retail and population growth in the area. According to the traffic forecasts, 6,400 vehicles per day are expected in 2035 along North Down River Road. If no improvements are made, North Down River Road is expected to operate at a LOS “C” or better throughout the study area.

Crash Analysis

Traffic crash data for the three year period from January 1, 2009 to December 31, 2011 was obtained from the Traffic Crash Analysis Tool 2.0 (TCAT 2.0) database maintained by the Traffic Improvement Association (TIA) for the I-75 mainline and North Down River Road ramps. A total of 13 mainline crashes were reported during the three-year period along I-75 between MP 11.85 (south of the North Down River Road ramps) and MP 12.42 (north of the North Down River Road ramps). No ramp crashes were reported during the three-year period at either of the North Down River Road ramps. North Down River Road from east of the I-75BL to Juniper Way included 16 crashes over a 1.27 mile segment, which represents a below average crash rate for a two-lane urban roadway segment. For mainline I-75 and North Down River Road, a breakdown by crash type is depicted in **Table 1-1**.

Crashes were studied at the North Down River Road intersections in the study area. As shown in **Table 1-1**, crash frequency was low at each intersection with one crash per year at two of the intersections and 0.33 crashes per year at the third intersection.

**TABLE 1-1
TRAFFIC CRASH HISTORY (2009-2011) I-75 AND NORTH DOWN RIVER ROAD**

| LOCATION | TOTAL CRASHES | ANIMAL | MISC SINGLE VEHICLE | FIXED OBJECT | REAR-END | SIDESWIPE | ANGLE- STRAIGHT | HEAD-ON | INJURIES | FATAL |
|--|------------------|--------|---------------------------|-----------------|----------|-----------|--------------------|---------|----------|-------|
| SEGMENTS | | | | | | | | | | |
| <i>I-75 Mainline Near North Down River Road</i> | | | | | | | | | | |
| 1. NB I-75 | 6 | 2 | 1 | 2 | 1 | 0 | 0 | 0 | 4 | 0 |
| 2. SB I-75 | 7 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 13 | 7 | 3 | 2 | 1 | 0 | 0 | 0 | 4 | 0 |
| <i>I-75 North Down River Road Ramps</i> | | | | | | | | | | |
| No ramp crashes were reported at either North Down River Road ramp over the 3-year study period | | | | | | | | | | |
| <i>From East of Business I-75 to West of Juniper Way (not including ramp terminal crashes below)</i> | | | | | | | | | | |
| Total | 16 | 4 | 1 | 0 | 3 | 1 | 7 | 0 | 5 | 0 |
| NORTH DOWN RIVER ROAD INTERSECTIONS | | | | | | | | | | |
| <i>At Southbound I-75 Off-Ramp</i> | | | | | | | | | | |
| Total | 3 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| <i>At Northbound I-75 On-Ramp</i> | | | | | | | | | | |
| Total | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| <i>At Business I-75/M-93</i> | | | | | | | | | | |
| Total | 3 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 |

Source: URS Corporation, April 2012

As shown in Table 1-1, the number of crashes along I-75 are low with an average of approximately two (2) mainline crashes per year over the three-year period. For the I-75 mainline in the study area,

1 the crash analysis revealed that 12 of the 13 total crashes over the three-year period were single
2 vehicle crashes. Slightly more than one-half of the single vehicle crashes involved striking an animal.

3 4 **Alternatives Considered and Dismissed**

5 6 **Alternatives Considered Prior to the Environmental Assessment**

7 The 2008 Grayling Area Transportation Study recommended Alternative 1 for providing a full access
8 interchange at North Down River Road and I-75. However, due to greater environmental and social
9 impacts, and the additional ROW and construction costs for adding another lane on the I-75 bridge
10 over the Au Sable River, Alternative 1 was dismissed and other alternatives were examined during
11 the Environmental Assessment analysis.

12 13 Alternative 1 - Complete Interchange and Widen Road

14 Alternative 1 was considered for the interchange project. This alternative completes the
15 interchange by adding two movements: a NB I-75 exit ramp and a SB I-75 entrance ramp. (See
16 **Figure 1-3**) The proposed NB exit ramp will be located in the southeast quadrant and designed
17 as a standard diamond ramp. The additional limited access ROW required is classified as vacant
18 and forested land. In order to provide access to SB I-75 and avoid impacts to residential
19 properties in the southwest quadrant of the interchange, a 182 foot radius loop ramp is proposed
20 in the northwest quadrant between SB I-75 and the SB exit ramp. Placement of the ramp in this
21 quadrant avoids any impacts to residential properties. Additionally, no ROW is required for the
22 proposed loop ramp. The ramps would then tie into North Down River Road with stop controlled
23 ramp terminals. The North Down River Road Bridge over I-75 would need to be replaced and
24 widened to provide a three lane cross section as well as additional length across I-75 for the new
25 SB I-75 acceleration lane.

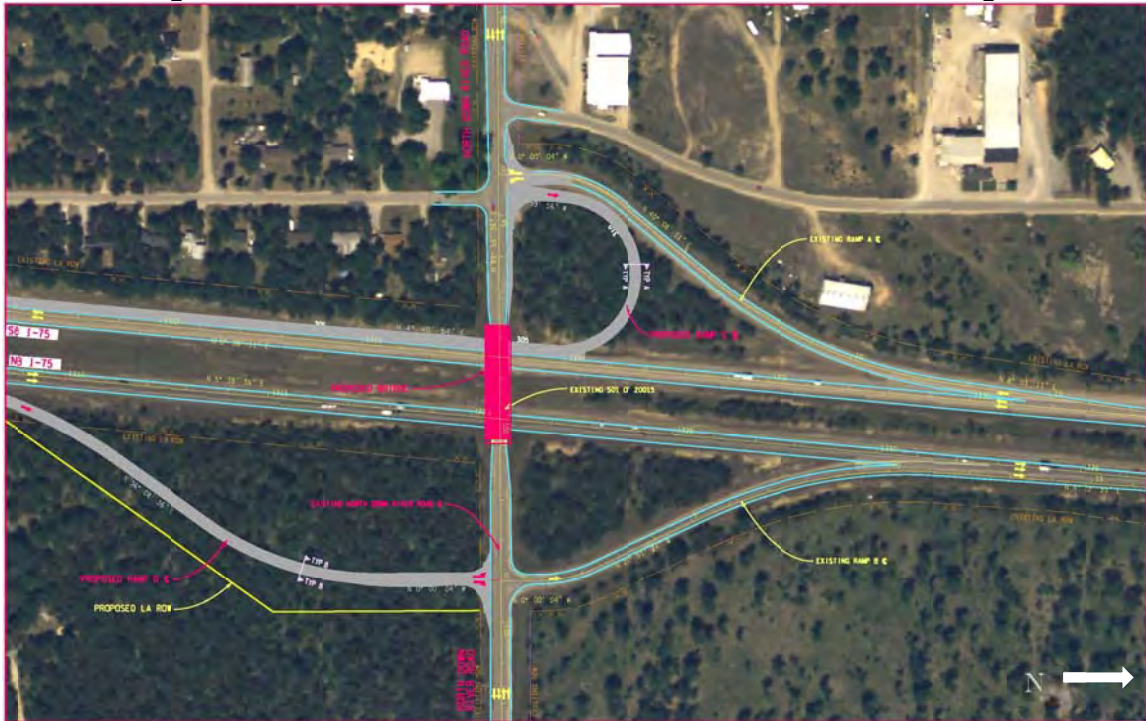
26
27 With the upgraded ramp configurations at the interchange, the bridge along I-75 over the Au
28 Sable River would need to be widened for the northbound deceleration lane and southbound
29 acceleration taper. Widening this structure would cost approximately \$500,000 and will present
30 additional environmental concerns.

31
32 In addition to the full access interchange, the North Down River Road corridor would be widened
33 to a three lane cross section from M-93 to just east of the I-75 interchange at Wilcox Bridge Road.
34 The cross-section would consist of three 12' lanes, two 6' non-motorized paths, and a 6' sidewalk
35 on the south side of North Down River Road. The bridge over the East Branch Au Sable River
36 along North Down River Road would also be replaced for the road widening and to match the
37 proposed road cross section. This three-lane cross section will provide a left turn lane for
38 vehicles to access businesses, parks, and residences along North Down River Road.

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Figure 1-2: Alternative 1: I-75 & North Down River Road Interchange



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The future year (2035) service volume (peak hour volume) along North Down River Road is projected to be 600 vehicles per hour, which is a service volume of Level of Service "C".

The construction cost estimate for the Alternative 1 is as follows:

- North Down River Road Widening \$2.5 Million
- North Down River Road Bridge replacement over East Branch Au Sable River \$1.0 Million
- I-75 Ramps \$2.0 Million
- I-75 Bridge \$3.6 Million
- I-75 Bridge Widening of I-75 over Au Sable River \$500 Thousand
- ROW \$58 Thousand
- Contingency \$1.4 Million

Total Project Cost Estimate \$11.0 Million

Alternatives Considered during the Environmental Assessment

No Build

The North Down River Road interchange is a partial interchange with I-75, **Figure 1-2**, providing an entrance ramp for northbound (NB) I-75 traffic and an exit ramp for southbound (SB) I-75 traffic. These two ramps are diamond ramps located in the northeast and northwest quadrants of the interchange. North Down River Road is a two-lane, two-way roadway with narrow shoulders and runs east and west between I-75 and M-93. North Down River Road serves the adjacent residential areas, access to downtown Grayling, as well, as commercial areas of Grayling, including Mercy Hospital – Grayling.

Figure 1-3: No Action (Existing) I-75 & North Down River Road Interchange



The future year (2035) service volume (peak hour volume) along North Down River Road is projected to be 600 vehicles per hour, which results in the service volume at Level of Service “C”, according to the 2010 Highway Capacity Manual. However, the lack of a center turn lane for left-turn movements, coupled with a single lane of through capacity in each direction, may result in an increase in rear-end and angle crashes if no improvements are made and traffic volumes continue to grow.

Preferred Alternative

The Preferred Alternative provides full freeway access, with the addition of the two loop ramps.

The Preferred Alternative includes a new 260 foot radius loop off-ramp from NB I-75 to North Down River Road located in the northeast quadrant of the interchange, and a new 222 foot radius loop on-ramp from North Down River Road to SB I-75 in the northwest quadrant of the interchange. In addition to constructing the above mentioned ramps, it will be necessary to reconstruct the existing SB I-75 exit and the NB I-75 entrance diamond ramps due to geometric conflicts with the proposed ramp layouts and traffic operations at the ramp terminals. The resultant design is a Partial Cloverleaf Interchange, consisting of two loop ramps and two diamond ramps. (See **Figure 1-4**)

The northbound ramps, located in the northeast quadrant of the interchange, require the purchase of some additional ROW. However, the property owner reached an agreement with the CCRC to donate the needed ROW (see **Appendix D** for Letter of Intent). The southbound ramps are located in the northwest quadrant and also require additional ROW. Grayling Township owns the property and agreed to transfer jurisdiction of the property to CCRC for the new ramps. All four ramps would tie into North Down River Road with stop controlled ramp terminals.

In consideration of the impacts to residential properties, the alternative recommended as part of the 2008 Grayling Area Transportation Study was re-examined. By relocating the additional ramp to the northeast and northwest quadrants, impacts to residential properties is eliminated, plus there is no longer a need to widen the bridge along I-75 over the Au Sable River, south of the project limits.

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Figure 1-4: Preferred Alternative - I-75 & North Down River Road Interchange



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With the potential of a full access interchange located at North Down River Road and I-75, the North Down River corridor would become a main arterial into the City of Grayling. With the additional traffic generated from a full access interchange, it is recommended that North Down River Road be upgraded to a three lane cross section from M-93 to just east of the I-75 Interchange at Wilcox Bridge Road. As a result, the North Down River Road bridge over I-75 would need to be replaced with a wider structure to accommodate a cross-section consisting of three 12' lanes, two 8' shoulders, bridge railings and a 6' sidewalk on the south side of North Down River Road. In addition to widening, the proposed structure needs to be lengthened to provide adequate room for the proposed acceleration and deceleration tapers for the ramps that tie into I-75.

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17

The conceptual design geometrics for the new ramp lanes and shoulders meet current MDOT standards (GEO-100, GEO-101, GEO-131, and GEO-370).

18

The construction cost estimate for the Alternative 1a is as follows:

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- North Down River Road Widening \$2.5 Million
- North Down River Road Bridge replacement over East Branch Au Sable..... \$1.0 Million
- I-75 Ramps \$2.7 Million
- I-75 Bridge \$3.6 Million
- ROW (purchased)..... \$0
- Contingency..... \$1.0 Million

26

27

Total Project Cost Estimate \$10.8 Million

28

28

1 **Public Involvement and Agency Coordination**

2 Public involvement activities and opportunities occurred throughout the planning process, beginning
3 with the 2008 Grayling Area Transportation Study (see **Appendix F**), which provided several
4 opportunities for public involvement throughout the study process. Opportunities included gallery
5 walks; audience participation technology; visual preference survey; and individual interviews. In total
6 four meetings occurred with public comments being overwhelmingly positive.

7
8 An additional public meeting on January 12, 2012 re-introduced the public to the project and provided
9 an additional opportunity to review the alternatives under consideration. The project was positively
10 received with many attendees commenting on the need to move forward with the project. A summary
11 of the meeting is included in **Appendix E**.

12
13 After MDOT and the FHWA approves the EA for public and agency review, CCRC will place a public
14 notice in the local newspaper, the Crawford County Avalanche, to notify the public that copies of the
15 EA are available for review at easily accessible and public locations, such as libraries in the area.
16 The public will have the opportunity to comment on the EA for 30 days. If there is a request for a
17 public hearing during the comment period, a public hearing will be scheduled and held. If no
18 comments are received, FHWA will issue a FONSI and the project may enter the design phase if
19 funding is available. If the public has questions the answers to the questions will be included in the
20 EA.

21
22 Agency coordination and consultation included the following (see **Appendix A** for coordination
23 letters):

- 24 • State Historic Preservation Office (SHPO) regarding historic properties along the proposed
25 project corridor. (in progress)
- 26 • Michigan Department of Environmental Quality (MDEQ) regarding wetland and other natural
27 resource impacts.
- 28 • U.S. Fish and Wildlife Service (USFWS) and the Michigan Department of Natural Resources
29 (MDNR) concerning threatened and endangered species and critical habitats.
- 30 • Indian Tribes in accordance with the Advisory Council on Historic preservation's (ACHP's)
31 regulations, "Protection of Historic Properties" (36 CFR Part 800).
- 32 • Regional and local officials to verify that there are no foreseeable conflicts with the proposed
33 project.
- 34 • Crawford County Drain Commissioner to verify that there are no foreseeable concerns with in the
35 proposed study area.

1 **AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

2
3 City, county, consultant, and agency staff conducted a review of potential impacts. Those that had a
4 reasonable possibility for individual or cumulative significant impacts were analyzed further. The
5 results of this analysis are discussed below.

6
7 Note that the following categories had no involvement: Coastal Barrier Resources, Coastal Zone
8 Management, Forest, and Wild and Scenic Rivers.

9 **Effects on Air Quality**

10 Under the authority of the Clean Air Act (CAA), the US Environmental Protection Agency (USEPA)
11 has established nationwide air quality standards to protect public health and welfare, with an
12 adequate margin of safety. These federal standards, known as National Ambient Air Quality
13 Standards (NAAQS), represent the maximum allowable atmospheric concentrations and were
14 developed for six criteria pollutants: ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, lead,
15 and particulate matter which includes respirable particulate matter. The USEPA also identifies
16 primary and secondary standards for NAAQS. Primary standards protect against adverse health
17 effects, while secondary standards protect against welfare effects such as damage to crops,
18 vegetation, and buildings.

19
20 The criteria provided under the CAA classify the country into attainment and nonattainment areas,
21 usually by county or metropolitan statistical area. Areas not meeting NAAQS are designated as
22 nonattainment for the specific pollutant. Section 107(d) of the CAA defines a nonattainment area as
23 “any area that does not meet (or that contributes to ambient air quality in a nearby area that does not
24 meet) the national primary or secondary ambient air quality standards for the pollutant.” The
25 nonattainment status for ozone is further classified as marginal, moderate, serious, severe, or
26 extreme, with extreme having the highest level of NAAQS exceedances. Each state is required to
27 demonstrate how nonattainment areas will be brought into compliance with NAAQS and other
28 components of the CAA through a State Implementation Plan. Ambient air quality in Crawford County,
29 Michigan is in attainment for all applicable air quality criteria pollutants (MDEQ, 2012.)

30
31 **Effects on air quality associated with this project would arise from emissions of construction**
32 **equipment. All equipment would be required to meet emission standards and emissions are**
33 **expected to be minor. Construction of the proposed project would be short term. Thus, the**
34 **proposed project would be exempted as de minimis and meet the Conformity Requirements**
35 **under Section 176(c) of the CAA, as amended and 40 C.F.R. 93.153.**

36 **Effect on Threatened and Endangered Species**

37 The Endangered Species Act (ESA) of 1973 (16 U.S.C. §§ 1531–1544) requires the federal
38 government to protect federally threatened and endangered (T&E) plants and animals (listed species)
39 and the critical habitats upon which they depend. Federal candidate species are not specifically
40 afforded the same protection under the ESA as T&E species; however, they should be considered
41 during planning and decision-making processes. Similarly, state-listed T&E species are protected by
42 laws and regulations contained in Part 365, Endangered Species Protection of the Natural Resources
43 and Environmental Protection Act (Act) (Act 451 of the Michigan Public Acts of 1994). While state
44 special concern species are not afforded legal protection under the act, many of these species are of
45 concern because of declining or relict populations in the state.

46
47 The Migratory Bird Treaty Act (MBTA) of 1918 implements various international treaties and
48 conventions for the protection of migratory birds. Under the MBTA, taking, killing, or possessing
49 migratory birds is unlawful, unless permitted by regulation. Additionally, the Bald and Golden Eagle
50 Act of 1940 provides for the protection of the Bald Eagle (*Haliaeetus leucocephalus*), the national

1 emblem, and the Golden Eagle (*Aquila chrysaetos*) by prohibiting, except under certain specified
2 conditions, the taking, possession and commerce of such birds.

3
4 State and federal T&E species information was requested from the Michigan Natural Features
5 Inventory (MNFI) for the proposed study area. MNFI information is a list of known Element
6 Occurrences, meaning the species was at one time observed in a survey section. The MNFI report
7 listed five animal species and three plant species that have a rare and/or protected designation within
8 the study area (Township 26 North, Range 03W, Sections 5, 6, 7, and 8). They are found in **Table 2-1**.
9

10 **Table 2-1**
11 **T&E SPECIES MNFI ELEMENT OCCURENCES WITHIN THE INVESTIGATIVE AREA**

| Scientific Name | Common Name | Federal Status | State Status | Potential Impact | Reasoning |
|--|--------------------------|----------------|--------------|------------------|----------------------------|
| <i>Alasmidonta viridis</i> | Slippershell | - | T | Low | Historic occurrence (1934) |
| <i>Appalachia arcana</i> | Secretive locust | - | SC | Low | Historic occurrence (1951) |
| <i>Calypso bulbosa</i> | Calypso or fairy-slipper | - | T | Low | Historic occurrence (1887) |
| <i>Cirsium hillii</i> | Hill's thistle | - | SC | Moderate | Some suitable habitat |
| <i>Incisalia henrici</i> | Henry's elfin | - | T | Low | Historic occurrence (1932) |
| <i>Pandion haliaetus</i> | Osprey | - | SC | Low | Limited suitable habitat |
| <i>Prunus alleghaniensis</i> var. <i>davisii</i> | Alleghany or Sloe plum | - | SC | Moderate | Some suitable habitat |
| <i>Sistrurus catenatus catenatus</i> | Eastern massasauga | C | SC | Low | Limited suitable habitat |

12 * T = Threatened, C = Candidate, SC = Special Concern

13
14 URS performed a review using the MNFI report (See **Appendix B**), aerial photography, GIS data,
15 National Wetland Inventory (NWI) maps, and the proposed road alignment to assess the potential for
16 protected species to exist within the study area. URS also emailed and had extensive phone
17 conversations with the Jeff Silagy, Transportation Review, from the MDEQ Gaylord office (see
18 **Appendix A**), who is familiar with the area in and around the study area. Information that was critical
19 in the decision-making process included Element Occurrences dates and locations, study area
20 habitat, species designations, and species descriptions and habitat.

21
22 The Preferred Alternative is not expected to have any impact on federal and state T&E species. The
23 listed protected species are unlikely to exist within the study area due to multiple factors including
24 having a historical low Element Occurrences, and a lack of suitable habitat. A conversation with the
25 Jeff Silagy from the MDEQ-Gaylord, who also inspected the area in February 2012, confirmed that
26 the study area is unlikely to have suitable habitat for these species. The only species that appear to
27 have any suitable habitat within the study area are Hill's thistle (*Cirsium hillii*) and Alleghany plum
28 (*Prunus alleghaniensis* var. *davisii*). However, being only state special concern species, these plant
29 species do not require any legal protection. Additionally, these species occur in northern forest/jack
30 pine barren habitat, which is not substantially present within the study area, according to MDEQ
31 personnel. If the Kirtland's warbler (*Dendroica kirtlandii*) nest was found, construction would be
32 restricted during May-June. Clearance from the MDNR is needed to begin construction.

1 Hazardous Waste

2 A review of the MDEQ Part 201 list and Part 213 Leaking Underground Storage Tank (LUST) list
3 (MDEQ website, February 22, 2012) did not identify any sites located in the proximity of the study
4 area. A review of the National Priorities List (NPL) accessed on the USEPA website on February 28,
5 2012, indicated that there are not any NPL sites located in the vicinity of the study area. A
6 preliminary review of Resource Conservation and Recovery Act (RCRA) sites listed on the USEPA's
7 Enforcement and Compliance History Online (ECHO) website (February 28, 2012) indicates that
8 there are no RCRA sites located in the vicinity of the study area.

9

10 Any hazardous materials, including petroleum products, discovered, generated, or used during
11 implementation of the proposed project would be disposed of and handled in accordance with
12 applicable local, state, and federal regulations.

13 Noise Impacts

14 A noise scoping analysis was prepared for the study area (See **Appendix C**). Noise sensitive
15 receivers included Activity Categories B and C in the vicinity of the project. Along North Down River
16 Road, seven noise sensitive receivers were identified. During the scoping analysis modeled
17 receivers were representative and were placed to represent a similar noise environment for nearby
18 noise sensitive receivers. The existing noise levels were predicted by using FHWA's Traffic Noise
19 Model 2.5 (TNM). Based on this limited screening analysis no noise impacts were identified, but
20 predicted traffic noise levels may approach (within 1 to 2 dBA) the noise impact threshold (66 dBA) at
21 several representative receiver locations. These results suggest that a full noise analysis should be
22 conducted in compliance with MDOT noise policy.

23 Wetland Impacts

24 MDEQ's Final Wetland Inventory (FWI) maps and NWI maps were reviewed for indications of surface
25 water, wetlands, and physical features within the study area. According to the NWI maps, only one
26 wetland complex is located within the study area. A forested wetland is located north of North Down
27 River Road along the East Branch Au Sable River. The FWI map for Crawford County indicates there
28 are wetlands both north and south of North Down Road associated with the river. A map depicting
29 the FWI and NWI wetlands is included as **Figure 2-1**.

30

31 According to the Hydraulic Analysis Summary (See **Appendix A**) completed by Northwest Design
32 Group, the proposed replacement bridge at North Down River Road's crossing over the East Branch
33 Au Sable River will improve the river's hydraulic capacity, flow regime and aquatic organism passage.
34 Groundwater driven, cold water streams such as the Au Sable (and its branches) are globally rare, so
35 protecting this valuable resource is a great priority. Northwest Design Group has made an effort to
36 involve the MDEQ in the design process and has invested their input into the design resulting in the
37 new bridge crossing returning the stream conditions to a more natural state.

38

39 The East Branch Au Sable is a legally protected State Natural River. MDNR's Natural Rivers
40 Program staff reviewed the design and found it to be a positive environmental improvement (See
41 **Appendix A**). The stream improvements at the bridge will be coordinated with another stream
42 restoration project immediately downstream at the fish hatchery. River hydraulics will be modeled in
43 detail as part of the final design to assure performance not only for flood flows, but for normal and low
44 flow periods, important to fish and other aquatic organisms.

45

46 Wetland impacts have been inspected by Jeff Silagy of the MDEQ-Gaylord office and the impacts
47 have been considered as part of the MDEQ's Preliminary Environmental Review process which was
48 completed February, 2012. Wetland impact area is estimated at less than 0.1 acre. According to the
49 MDEQ mitigation is not expected to be required for the bridge replacement. MDEQ's Preliminary
50 Environmental Review findings are in **Appendix A**.

6 A permit is required for any dredging, draining, filling or maintained use for development activities with
7 regulated wetlands as defined by Part 303. A wetland delineation by a knowledgeable biologist may
8 need to be completed using guidance manuals and procedures set forth by the MDEQ and the United
9 States Army Corps of Engineers (USACE). Methods and procedures used for the delineation should
10 be in accordance with Act 451, Part 303, Wetlands Protection, of NREPA, as amended (1994).

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Figure 2-1: FWI and NWI Wetland Map



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Floodplain Impacts

3 The Preferred Alternative is not expected to impact floodplain habitat. The current alignment includes
4 a bridge spanning all floodplain habitat with no infrastructure located within a floodplain. In
5 concurrence with Part 31, Floodplain, the bridge structure will have equal or greater capacity than the
6 existing bridge for all flows up to the 100 year flow. According to CCRC best knowledge, there is no
7 history of flooding in the area. A permit is required for the above project if any of the work is in the
8 floodplain of the East Branch Au Sable River.

Effects on Historic (Above Ground) Resources

10 URS completed online research on the State of Michigan State Historic Preservation Website, and
11 one registered site was found along the corridor.

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The Grayling Fish Hatchery located at 4893 North Down River Road, Grayling is registered as an
historic site by the Michigan State Historic Preservation Office (SHPO). The Preferred Alternative will
not negatively impact the hatchery. In fact, it includes improvements to the hatchery's storm water
system, which will preserve its function as a hatchery.

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Design of the replacement bridge on North Down River Road over the East Branch Au Sable River is
sensitive to the historic nature of the hatchery building and raceways. Retaining walls are planned
along the south side of the new bridge to retain the widened roadway and avoid disturbance to the
hatchery's raceways. The design incorporates aesthetic features that are compatible with the
surround area. The retaining walls feature inset arch shapes rendering a structural form common for
bridge structures built in the era of the fish hatchery (created originally in 1916). Tapered stone
columns break the walls into a more appealing scale and introduce the type of stone common to
historic lodges found along the Au Sable. The bridge railings are open, presenting a view of the
hatchery from the roadway and the bridge approach railings on the hatchery side are heavy timber,
spanning between the stone columns. New concrete surfaces will be coated with a natural earth-tone
textured finish to soften and subdue the new bridge's fresh concrete to appear aged.

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SHPO was contacted to perform a Section 106 of the National Environmental Policy Act of 1969
Environmental Review of the proposed Area of Potential Effect (APE). SHPO advised that no historic
properties are affected within the APE for this project. Michigan's Native American Tribes were also
contacted under Section 106 of the National Historic Preservation Act. A letter from the Sault Ste.
Marie Tribe of Chippewa Indians and the Keweenaw Bay Indian Community both stated that there are
no known presence of any Native American Traditional Cultural Properties or Native American
Scared Sites in the proposed project area, but if an inadvertent discovery of Native American Human
remains or objects are found, to please contact them immediately. Documentation of the contacts
and responses are included in **Appendix A**.

Effects on Section 4(f)/6(F) Properties

40 The Preferred Alternative's impacts on Section 4(f)/6(f) properties are considered De Minimis
41 Impacts, due to the Preferred Alternative not adversely affecting any activities, features, or quality of
42 the 4(f)/6(f) properties, Crawford County not having any objections with the Preferred Alternative, and
43 the public being informed and having the opportunity to comment on the Preferred Alternatives
44 impacts to the 4(f)/6(f) properties.

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There are two publicly owned recreation areas along the corridor for Section 4(f) of the Department of
Transportation Act of 1966 to apply. In addition to its classification as an historic site, the fish
hatchery also functions as a recreational site, although not as a true fish hatchery. Each year a
supply of fish is provided in the fish hatchery ponds for tourists to observe and for sport fishing
opportunities during the summer months. The fish hatchery on the south side of the road will be

1 impacted by the need to purchase 0.21 acres on the east side of the bridge, and 0.18 acres on the
2 west side of the bridge. Both parcels are owned by the county. Please see the section Effects on
3 Historic (Above Ground) Resources, for more details. As mentioned above, although the proposed
4 project will impact the hatchery, however the proposed improvements will minimize disruptions. In
5 fact, planned improvements to the storm water system will be beneficial for long term operations of
6 the fish hatchery.

7
8 The Grayling Township Park, owned by Grayling Township, is located on the northern side of North
9 Down River Road and will be impacted by the need to purchase a narrow strip of land (0.34 acre) to
10 accommodate the roadway widening. The proposed alignment reflects the need to minimize impacts
11 to the park property. It should be noted that the Grayling Township is willing to donate the necessary
12 ROW, and there will be no impacts to areas where the public has to park or structures within the park.
13 Part of the improvements includes paving the parking lot at the Township Park, with no spaces being
14 lost. The proposed widening improves pedestrian/non-motorized connectivity to and from the park by
15 adding an ADA accessible walkway under the bridge. This will enhance recreational opportunities for
16 residents by linking the trails to Grayling Township Park and Grayling Fish Hatchery.

17
18 The East Branch Au Sable River is also protected under Section 4(f) of the Department of
19 Transportation Act. MDNR Natural Rivers Program staff reviewed the North Down River Road over
20 East Branch Au Sable River replacement bridge preliminary design as part of the Voluntary
21 Environmental Review (See **Appendix A**) process completed in February, 2012. This project is
22 within the City of Grayling limits and MDNR noted that state Natural Rivers Program has no
23 jurisdiction within city limits. They indicated that it is questionable as to whether MDNR has
24 jurisdiction on this project. Their review was sought and considered in the design process, to be
25 certain of compliance with the program and law, regardless of whether compliance is legally required
26 or not. The MDNR Natural Rivers review response indicates, "...aesthetics were well considered in
27 the design process, so no additional requirements from our program are needed in that regard." and
28 they "...see no problem..." permitting the project under this program. The proposed bridge design is
29 therefore, deemed to be consistent with the Natural Rivers Program, according to MDNR Natural
30 Rivers Program staff.

31
32 The public was offered opportunities over the years to review and comment on the impacts to any
33 Section 4(f)/6(f) properties. At the most recent Public Meeting on January 12, 2012, the public did not
34 indicate any concerns about the acquisitions on the north side of the road, or any impacts to the East
35 Branch Au Sable River. Please see the **Public Involvement and Agency Coordination Section** for
36 more details on the public meetings throughout the years.

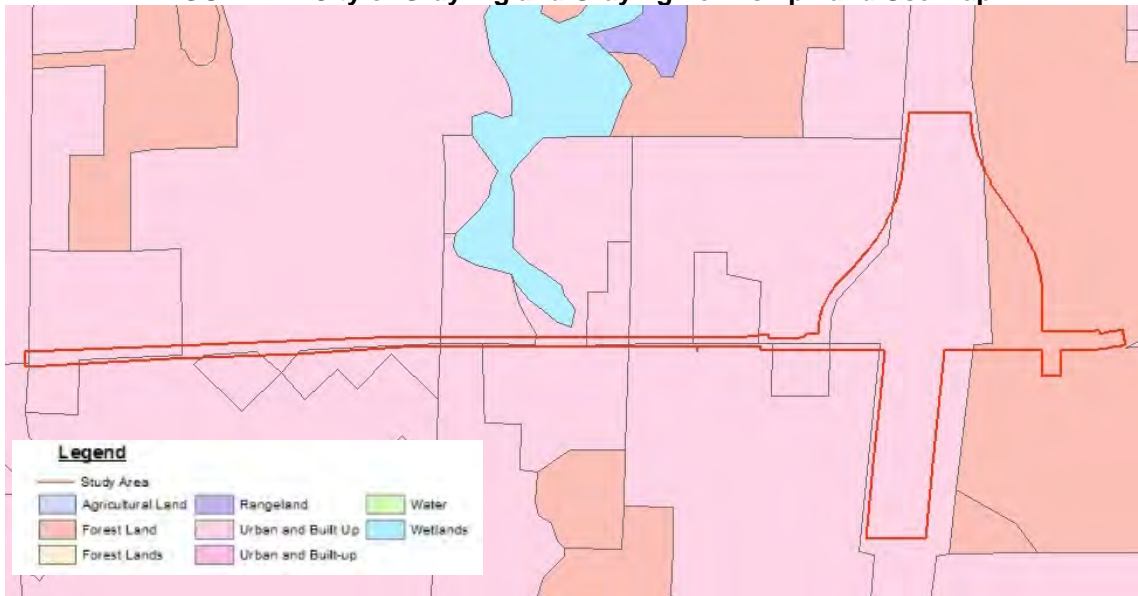
37 **Socio-Economic Impact**

38 Land Use

39 According to the Crawford County Master Plan, a variety of land uses exist within the study area (See
40 **Figure 2-2**). No change in land use patterns are anticipated to occur as a result of this project.
41 There will be no negative impact on future development patterns. The proposed transportation
42 project is intended to meet the existing and/or projected traffic demands based on local land use
43 plans.

44

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FIGURE 2-2 City of Grayling and Grayling Township Land Use Map

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Impacts on Community Facilities and Services

4 There is one cemetery within the study area. No burial plots will need to be disturbed or relocated
 5 and access to the cemetery will be maintained during construction. No community facilities such as
 6 schools, libraries, hospitals, or community centers are impacted by the proposed improvements.

7

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9 Water, sanitary sewer, gas, telephone, and electrical transmission lines adjacent to or crossed by the
 10 project may require relocation or adjustment. If this should be the case, coordination between the
 11 CCRC and the affected utility company will take place during design. Relocation of the utility will take
 12 place prior to construction of the road, if possible. The contractor will coordinate construction
 13 activities with the affected utility companies.

14

15 Service to the study area may be temporarily interrupted during construction. Short (less than ½ day)
 16 electric, telephone, or cable television interruptions are possible but not expected. They will be
 17 planned as is typical with any road construction or bridge replacement. However, the effects of this
 18 work will be minimized.

19

Social Impact

20 The Preferred Alternative will not cause any negative impacts on any minority, ethnic, low-income,
 21 elderly, or handicapped groups. No neighborhoods will be separated from facilities or services.
 22 There will be no long-term negative impacts on area schools, churches, recreational areas, or police
 23 and fire protection facilities. Although there may be some temporary disruptions during construction,
 24 access for emergency vehicles will be provided for during the construction of the roadway and bridge
 25 replacement. Information with regard to the best route for emergency vehicles to utilize during
 26 construction activities will be coordinated by the CCRC with the City of Grayling and Grayling
 27 Township.

28

29

Maintaining Traffic During Construction

30 One lane in each direction will be maintained for local traffic on North Down River Road and access
 31 will be maintained to all properties throughout construction. Through traffic traveling east-west will be
 32 maintained at all times.

33

34

35 There is one school district: Crawford AuSable School District. According to the school district's
 36 transportation website, for the 2012-2013 school year the routes that have stops along North Down
 37 River Road are Lion, Panda, and Penguin. It is expected that the majority of construction for this
 38 project will be performed during the summer months; therefore it is not expected to significantly
 39 impact bus routes for the Crawford AuSable School District.

1
2 Unlike other sections of the Au Sable River and its branches, canoe traffic along the East Branch Au
3 Sable River at the North Down River Road bridge crossing is very infrequent owing to existing
4 impediments to navigation immediately downstream at the fish hatchery. In any case, canoe or kayak
5 traffic can be maintained by a short portage around the construction site. Construction documents
6 will include installation of necessary signs on the river and along the portage route. This short term
7 inconvenience, at this site, is an insignificant environmental impact, particularly given the large
8 quantity, high quality and highly diverse river recreational opportunities available in the immediate
9 area, on other sections of this river and the many other branches of the Au Sable and nearby
10 Manistee Rivers.

11 Environmental Justice

12 The purpose of Executive Order 12898 on Federal Actions to address Environmental Justice impact
13 to Minority and Low-Income Populations is to identify, address, and avoid disproportionately high and
14 adverse human health or environmental effects on minority and low-income populations. The
15 proposed new ramp additions to I-75, and the widening of North Down River Road, will not cause a
16 disproportionately high and adverse human health or environmental effects on minority and low-
17 income populations.
18

19
20 An analysis of the 2010 U.S. Census Data along with field reviews of the project area determined that
21 there are minority and low-income population groups as well as non-minority population groups who
22 reside in the project area. There will be no acquisitions of any residential properties within the study
23 area.
24

25 Temporary effects from the proposed project include traffic delays, having to travel further distances,
26 and construction noise which affect minority and low-income populations as well as non-minority
27 population groups. The Preferred Alternative will also cause a slightly elevated increase in noise
28 levels for all residents adjacent to the I-75 Freeway and North Down River Road.
29

30 According to the 2010 U.S. Census, the total population for Grayling Charter Township is 5,827, while
31 the total population for the City of Grayling is 1,884. The total population for Crawford County and the
32 State of Michigan is 14,074 and 9,883,640, respectively. The minority population for Grayling Charter
33 Township is 3 percent; the minority population of the City of Grayling is 3 percent. The minority
34 population in Crawford County and in the State of Michigan is 3 percent and 20 percent, respectively.
35

36 The U.S. Census American Community Survey 2007-2011 Estimated Data indicated that the
37 percentage of individuals who are below the poverty level over a 12 month period for Grayling Charter
38 Township and the City of Grayling is 15 percent and 33 percent, respectively; while the percentage of
39 individuals who are below the poverty level for the county is 17 percent. Most of these percentages
40 are higher than the state level which is estimated to be 16 percent.
41

42 The U.S. Census American Community Survey 2007-2011 Estimated Data also indicated that there
43 are individuals who reside in the City of Grayling who may be Limited in English Proficiency (LEP). In
44 the township and city, 0 percent and 1.1 percent respectively of individuals speak a language other
45 than English at home. In Crawford County the percentage of individuals who speak a language other
46 than English is 0.4 percent; while the percentage of individuals who speak a language other than
47 English in the state is 3.3 percent.
48

49 As part of the public outreach, CCRC held a public information meeting inviting residents and local
50 officials to learn more about the proposed project and the proposed detour route. Twenty people
51 attended the meeting held on January 12, 2012. Nearly everyone who attended the meeting
52 supported the project. CCRC did not receive any request to have translation services at the public
53 information meeting or to have brochures or other materials translated into another language. If
54 CCRC does receive any request for translation services during subsequent phases of this project,
55 CCRC will make translation services available.
56

1 Although the proposed project will not cause disproportionate effects on minority and low-income
2 population within the project area, a continuing effort will be made to identify any additional impacts
3 that may have a disproportionately high and adverse effect on minority and low-income population
4 groups during subsequent phases of this project. If additional impacts are identified, every effort will
5 be made to actively involve the impacted groups in the project development phase.

6 7 Property Acquisitions and Displacements

8 The reconstruction and widening of the I-75 ramps will require partial acquisition of two properties,
9 one property in the northeast quadrant and one property in the northwest quadrant. The CCRC has
10 proceeded with preliminary negotiations with affected landowners. The most significant right-of-way
11 need is the 7.84 acres needed for the interchange northeast quadrant. This right-of-way parcel is a
12 portion of a larger 39(+/-) acre parcel that was listed for sale by the current landowner, prior to this
13 study. The property owner reached an agreement with CCRC to donate the needed ROW and wrote
14 a letter of intent (See **Appendix D**).

15
16 The right-of-way acquisitions needed for the North Down River Road over East Branch Au Sable
17 River Bridge are owned by Crawford County and Grayling Township. These properties will be
18 donated to the CCRC. Commitment letters documenting their support for the project and intent to
19 transfer ownership of the applicable property have been procured. (See **Appendix D**)

20
21 The majority of the land needed is vacant land. There are no displacements of public buildings or
22 residential buildings under the Preferred Alternative.

23 24 Pedestrian Traffic

25 Sidewalks will be reconstructed or constructed throughout the project length to connect with other trail
26 segments to the north and south. The pedestrian movements at intersections will include protected
27 pedestrian sidewalk ramps that will be reconstructed in compliance with the Americans with
28 Disabilities Act (ADA). An ADA-accessible pedestrian walkway will be on the north side of North
29 Down River Road, leading down to the river, and then under the bridge, ending at the fish hatchery on
30 the south side of the bridge.

31
32 The Grayling area is well-known for recreational bicycling, as non-motorized paths and bicycling
33 opportunities exist in the area. However, the existing trails lack the connectivity required to create a
34 true network or allow widespread use as an alternate mode of day-to-day transportation. The
35 Preferred Alternative is included in Phase I of the TIGER Grant as part of a comprehensive non-
36 motorized trail system plan. Phase 2 includes connecting several trail segments from the outlying
37 areas to downtown Grayling. The overall project will create a cohesive system, as well as connect
38 the primary and elementary schools, community parks, and Mercy Hospital – Grayling, which is a
39 major employer in the area.

40
41 The non-motorized trails located east of the interchange area are disconnected from the trails leading
42 into the City of Grayling and deter bicycle and pedestrian connectivity to recreation areas located
43 west of the interchange. The project will provide continuity and pedestrian access with trail segments
44 to the north and south.

45
46 The non-motorized trails proposed will provide environmental benefits. Bicycle traffic on North Down
47 River Road today is not desirable to families and active cyclist. Phase I of the TIGER Grant will link
48 non-motorized trails with North Down River Road, provide a safe crossing over I-75, a route to the
49 east past the residential neighborhoods off Wilcox Bridge Road, and to M-93 where an existing path
50 connects to Hartwick Pines State Park and the high school. The environmental benefit is the realistic,
51 safe opportunity for non-motorized traffic from town to businesses, the ball field, or places east of I-
52 75, along North Down River Road. Phase 2 of the planned projects in the area, will provide similar
53 environmental benefit in the form of opportunity along M-72 east, out to the popular Rayburn Tract
54 and north to North Down River Road, plus the connectors between the hospital, school, library, fish
55 hatchery and Grayling Township Park.

56
57

1 Transit

2 There are no public transit routes along North Down River Road that will be impacted by construction.

3 **Agricultural Impacts**

4 The study area does not include any land that is zoned or used for farming or forestry. No zoned
5 areas classified as agriculture will be impacted by the Preferred Alternative.

6

7 The land along the East Branch Au Sable River on the north side of North Down River Road is zoned
8 Natural River District. The description of the Natural River District does not include any type of
9 forestry associated with the river. However, when reconstructing the bridge the design will ensure the
10 ecological, aesthetic, historical values of the river and adjacent lands to enhance the river
11 environment in a natural state for the use and enjoyment of the public.

12 **Visual Impacts**

13 The widening of North Down River Road will moderately affect its visual appearance. The widened
14 roadway will exhibit a more dominate visual role for motorists, and business owners due to the wider
15 cross-section. The visual quality of the roadway is compatible with adjacent land uses. The design
16 purposely balances early 1900's architectural elements with a natural northern Michigan riverine
17 setting. The new bridge's design is sensitive to the historic nature of the hatchery building and
18 raceways. Retaining walls are planned along the south side of the new bridge to retain the widened
19 roadway and avoid disturbance to the hatchery's raceways. The retaining walls feature inset arch
20 shapes rendering a structural form common for bridge structures built in the era of the fish hatchery.
21 Tapered stone columns break the walls into a more appealing scale and introduce the type of stone
22 common to historic lodges found along the various branches of the famed Au Sable. The bridge
23 railings are open, presenting a view of the hatchery from the roadway and the bridge approach
24 railings on the hatchery side are heavy timber, spanning between the stone columns. New concrete
25 surfaces will be coated with a natural earth-tone textured finish to soften and subdue the new bridge's
26 fresh concrete to appear aged. An ADA accessible walkway is planned along the river, under the
27 new bridge, connecting the Grayling Fish Hatchery on the south side of the river to the township's
28 park on the north side of the river. A simple steel pipe railing with thin cables will protect pedestrians
29 from a fall into the river, while leaving an unobstructed view. Its design will comply with the new US
30 Department of Justice's 2010 ADA Standards for accessible fishing piers. The design incorporates
31 historic flavor consistent with the old hatchery and natural elements consistent with the Natural Rivers
32 Program and the Grayling "Mill Town" history and theme.

33

34 The MDNR provided input as to the bridge aesthetics. They indicate in their written review
35 documentation that "...aesthetics were well considered in the design process, so no additional
36 requirements are needed from our program in that regard." and they "...see no problem..." permitting
37 the project under this program. The bridge design is therefore deemed to be consistent with the
38 Natural Rivers Program, according to MDNR Natural Rivers Program staff. See **Appendix A** for
39 correspondence letters.

40 **Water Quality Impacts**

41 Surface water in the study area includes the East Branch Au Sable River, shown on Figure 2-1. The
42 East Branch Au Sable River is 17 miles long and flows into the main branch of the Au Sable River
43 approximately 2,000 feet south of the study area. The East Branch Au Sable River is a designated
44 Natural River according to the Natural River Act, Part 305 of PA 451 of 1994. The current North
45 Down River Road bridge is the southern boundary of the Natural Rivers program jurisdictional
46 authority on the East Branch. Lands within Grayling Township, north of the bridge, are subject to the
47 Au Sable River Natural River Rules. Lands within the incorporated city boundary of Grayling, south of
48 the bridge, are not subject to these rules. Consequently, a Natural River Program Utility/Public

1 Agency permit will be required for construction of the Preferred Alternative for the portion located in
2 Grayling Township. According to the MDEQ, clear spanning the bankfull width, and using natural
3 materials when possible, are the main goals of the Natural Rivers Program, therefore the plans for the
4 Preferred Alternative are consistent with the goals of the Natural Rivers Program.

5
6 The greatest potential for water quality impacts resulting from the construction of the Preferred
7 Alternative will be in the East Branch Au Sable River and associated wetlands. The water quality
8 impacts can include increased salinity due to snow removal operations, increased turbidity due to
9 construction runoff, increased levels of motor vehicle pollutants (such as motor oil) from increased
10 impervious surface runoff, and/or increased local water temperatures.

11
12 Storm water from the part of North Down River Road west of M-93 is now delivered to the East
13 Branch Au Sable River via a sediment basin with oil/water separating capabilities, at the southwest
14 quadrant of the bridge. Runoff from the rest of the road and the existing bridge now flows to ditches,
15 then to the river. The proposed project will add curb and gutter, storm sewers, and will collect all
16 roadway runoff. The discharge to the river will be improved to more current standards. The existing
17 basin's size will be reduced, while its efficiency will be improved with more current technology. The
18 sealing of water wells and sewer lines for the protection of groundwater quality is ensured by the
19 Healthy Department and/or MDEQ specifications.

20
21 Adequate, soil erosion and sedimentation control measures will be employed during project
22 construction activities under Part 91 of NREPA and an NPDES Notice of Coverage will be submitted
23 prior to construction. MDEQ may require permits under Part 301 (Inland Lakes and Streams) and
24 Part 31 (Water Resources Protection) of NREPA. The permits shall include the predicted affect of the
25 modifications on the upstream flood elevation, and show that the modified bridge crossing will not
26 cause minimal interference on upstream properties. Wetlands and floodplains affected by this project
27 are discussed in earlier sections.

28

1 **MITIGATION OF IMPACTS**

2

3 There are no negative impacts expected and, thus, no mitigation required in the following categories:
4 Coastal Barrier Resources, Coastal Zone Management, Farmland Protection, Fish and Wildlife,
5 Floodplains, Wild and Scenic Rivers, Air Quality, Threatened and Endangered Species, Noise,
6 Historic Preservation, or Section 4(f).

7 **Mitigation of Construction-Related Impacts**

8 The goal of mitigative measures is to preserve, to the greatest extent possible, existing
9 neighborhoods, land use, and resources, while improving transportation. Although some adverse
10 impacts are unavoidable, especially during construction, The City of Grayling, Grayling Township, and
11 the CCRC will take precautions during design and construction activities to protect as many social
12 and environmental systems as possible. Construction activities that include mitigation measures
13 being considered at this time are listed below. Further agency coordination will continue throughout
14 the design stage. Construction sites will be reviewed to ensure that the mitigation measures proposed
15 are carried out, and to determine if additional protection is required. The appropriate construction
16 related permits will be obtained by CCRC.

17

18 Natural Rivers Program

19 According to the Natural River Act, Part 305 of PA 451 of 1994, a Natural Rivers permit will be
20 necessary for construction of the Preferred Alternative. These state regulations will require specific
21 mitigation measures to protect the East Branch Au Sable River. Fieldstone will be required by the
22 Natural Rivers Program during construction activities. The only exception allowed for the use of
23 angular rock is when it is absolutely necessary for scour protection. In such a case, the use of
24 angular rock will need to be limited to below the average low water elevation and top dressed with
25 fieldstone. Additionally, vegetation within 50 feet of the river (the width of the protected vegetation
26 buffer on the East Branch) should be protected to the greatest extent practical.

27

28 Soil Erosion and Sedimentation Control

29 Soil erosion and sedimentation caused by construction activities can potentially impact water quality.
30 Sedimentation will be controlled by protecting the side slopes, ditches and other areas draining
31 directly into the waterway. Soil erosion and sediment control features will be required to provide
32 adequate vegetative or temporary stabilization of disturbed areas during construction. These
33 measures may include items such as silt fence, mulch, seeding, sod, and silt fabric on inlets and
34 other measures as needed. New catch basins will have sumps to collect sediment. New catch basin
35 inlets will be protected during construction to prevent sediment from entering the enclosed system.

36

37 The bridge is designed to open the river channel to its natural base flow channel width, adding 10 to
38 15 feet in width to the existing condition. Natural field stone will be used for the riprap bank
39 protection.

40

41 Existing Vegetation

42 Where the existing ground cover must be removed, replacement vegetation will be established in a
43 timely manner using seed and mulch or sod.

44

45 Disposal of Surplus or Unsuitable Material

46 Disposal of surplus or unsuitable material will be done as to control the possible detrimental impacts
47 of such actions. The material, per construction specifications, cannot be disposed in any public or
48 private wetland area, watercourse, or designated floodplain without prior approval and necessary
49 permits from appropriate resource agencies. Regulations governing disposal of solid wastes must be
50 complied with.

51

52 Maintaining Traffic During Construction

53 Disruption of traffic in the construction area will be minimized to the extent possible. Although control
54 of all construction-related inconveniences is not possible, signing all construction areas will ensure

1 motorist and pedestrian safety. Access will be maintained to properties adjacent to North Down River
2 Road.

3 4 Continuance of Public Utility Service

5 Water, sanitary sewer, gas, telephone, and electrical transmission lines adjacent to or crossed by the
6 project may require relocation or adjustment. If this should be the case, coordination will take place
7 during the design phase and relocation will take place prior to construction of the road if possible.

8 9 Construction Noise Levels and Vibration Impacts

10 Construction noise will be minimized by measures such as requiring that construction equipment
11 have mufflers, that portable compressors meet federal noise-level standards for that equipment, and
12 that all portable equipment be placed away from or shielded from sensitive noise receptors if at all
13 possible and in compliance with all local ordinances. Care will be taken to prevent vibration damage
14 to adjacent structures.

15 16 Control of Air Pollution During Construction

17 The construction phase of the proposed project has the potential to impact local ambient air quality by
18 generating fugitive dust through activities such as demolition and materials handling. Construction
19 contractors should comply with all federal, state, and local laws, regulations and rules governing the
20 control of air pollution during construction of the proposed project. Dust can be controlled during
21 construction to avoid detrimental impacts to the safety, health, welfare, or comfort of any person, or
22 damage to any property or business by such methods as ground watering and careful control of
23 stockpiles of raw materials. No open burning of waste materials will be allowed.

24
25 Specifically, applying water or appropriate liquids during demolition, land clearing, grading, and
26 construction operations can minimize fugitive dust. Water may be applied on dirt roads, material
27 stockpiles and other surfaces capable of producing airborne dust. At all times when in motion, open-
28 body trucks used for transporting materials should be covered, and all excavated material should be
29 removed promptly.

30
31 Mobile source emissions can be minimized during construction by not permitting idling delivery trucks
32 or other equipment to idle during periods of unloading or other non-active use. The existing number
33 of traffic lanes should be maintained, to the maximum extent possible, and construction schedules
34 should be planned in a manner that will not create traffic disruption and increase air pollutants.
35 Application of these measures will ensure that construction impact of the project is insignificant.

36 37 Control of Hazardous Materials

38 All hazardous waste, toxic materials, and/or polluting materials shall be used, stored, and/or disposed
39 of in accordance with applicable federal, state, and local laws and regulations.

40 41 **Measures to Mitigate Right-Of-Way Acquisition Impacts**

42 Compliance with State and Federal laws

43 Acquisition assistance and advisory services will be provided by the CCRC in accordance with the
44 Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as
45 amended; and Act 87, Michigan P.A. 1980, as amended.

46 47 Purchasing Property

48 The CCRC will pay just compensation for fee purchase or easement use of property required for
49 transportation purposes. "Just compensation" as defined by the courts is the payment of "fair market
50 value" for the property rights acquired plus allowable damages to any remaining property. "Fair
51 market value" is defined as the highest price estimated, in terms of money, the property would bring if
52 offered for sale on the open market by a willing seller, with a reasonable time allowed to find a
53 purchaser, buying with the knowledge of all the uses to which it is adapted and for which it is capable
54 of being used.

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Property Acquisition Information

A booklet entitled “Public Roads & Private Property” detailing the purchase of private property can be obtained from the Michigan Department of Transportation, Real Estate Area, P.O. Box 30050, Lansing, Michigan 48909 or phone (517) 373-2200.

Mitigation of Storm Water

Permits may be required from the MDEQ and the Drain Commissioner’s office for construction activities:

State of Michigan (MDEQ):

Act 451 Natural Resources and Environmental Protection, as amended

Part 31, Water Resource Protection, requires a permit to place fill materials in an identified floodplain.

Part 301, Inland Lakes and Streams, requires a permit for activities below the ordinary high-water mark of any stream, river, pond, or lake and for temporary crossings of rivers and streams.

Part 303, Wetlands Protection, requires a permit to fill, dredge or remove sediment from; construct, operate or maintain use in; or drain surface water from a wetland.

Part 305, Natural Rivers Act, requires a permit for work impacting a designated Natural River.

Part 91, Soil Erosion and Sedimentation Control, specifies that sedimentation caused by highway construction will be controlled before it leaves the highway ROW or enters the waters of the State.

Coordination with the above-mentioned cooperating and coordinating agencies is ongoing, and applications for these permits will be submitted during the design phase of the Project.