

PROJECT PEDESTRIAN



**City of Gaylord
Michigan Department of
Transportation**

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CHAPTER I

INTRODUCTION

PROJECT BACKGROUND AND OBJECTIVES

The Otsego County area has experienced significant growth in the past several years and similar growth is anticipated to continue. This growth has led to increased commercial development and resultant access points along the state trunk lines in the area. The growth has also magnified difficulties for pedestrians crossing the trunk lines in the summer and for snowmobile crossings in the winter.

The City of Gaylord (City), in conjunction with the Michigan Department of Transportation (MDOT), launched an effort to improve pedestrian safety, traffic access management and streetscape aesthetics to two miles of South Otsego Avenue (Old 27/Business Loop I-75) and 0.5 miles of Main Street (M-32). The effort was named “*Project Pedestrian*” because it emphasized these goals and highlights the City’s commitment to enhance the safety of residents, workers and visitors using these major corridors.

The ***South Otsego Avenue*** project area extends from the Wisconsin/Grandview intersection at the north, continuing south to the Johnson Road intersection (refer to Figure 1.1 on the following page). Improvements will focus on traffic access management, extension of the downtown streetscape elements, and the addition of a mixed-use pathway to improve pedestrian accessibility. This area is a new commercial corridor at the beginning stages of development. The time to address access issues is now as opposed to an area that is already developed. The corridor is also the south entrance to the City and extension of the downtown streetscape elements to this area is important from a visitor/tourism standpoint.

The ***Main Street*** project area extends from the Lake State Railway tracks at the west, continuing east to the Maple Street intersection (refer to Figure 1.1 on the following page). Improvements for this area will focus on traffic calming measures and pedestrian safety; the evaluation of access management strategies was not included in the scope of the Main Street evaluation.

The scope of *Project Pedestrian* includes the development of a master plan for proposed improvements to both project areas. This project presents the unique opportunity to plan, and place on paper, what the residents want the community to look like - the opportunity to make the community different from “Any Town, USA.”

The project is funded, in part, by a \$30,000 grant from the MDOT Transportation Enhancement Program (TEP). The City and the MDOT-Grayling Transportation Service Center locally funded the remaining \$20,000 budget.

Project Pedestrian Professional Services Team

The City of Gaylord and MDOT selected the team of Capital Consultants, Inc. (CC), Traffic Engineering Associates, Inc. (TEA) and Holland Engineering to provide professional services for the project. CC provided overall project management and master plan development, civil engineering and, in conjunction with Holland Engineering, landscape architecture services. TEA assisted with the evaluation of access management and pedestrian issues.

The Michigan Department of Transportation's role in the development of this master plan was critical, as MDOT, the stakeholder responsible for the state trunk lines, must ultimately implement the recommendations developed in the master plan.

Community Involvement

Community involvement and consensus building was an integral part to *Project Pedestrian's* success. It was important to get stakeholder buy in to the master plan during the development effort. To meet this objective, the City held three sets of public meetings to solicit input to the process. The team also met privately with several property owners along South Otsego Avenue.

Project Deliverables

The project deliverable is this master plan document. It is not intended to be the "final design" tool to implement improvements in the area. Rather, the document will be used to research and apply for funding to complete the design and construction phases of the project. The master plan should also be used during the site plan review process for projects along both project areas.

The recommendations outlined in this master plan provide the City of Gaylord with an important tool to initiate and implement a planned growth strategy for the South Otsego Avenue corridor and to upgrade pedestrian safety and implement traffic calming methods in the Main Street corridor.

DEVELOPING THE MASTER PLAN GOALS

The *Project Pedestrian* team met on May 8, 2003 for a project kick-off meeting where overall goals for both project areas were considered. It was recognized that MDOT must play an integral part of the project team throughout the development of the plan. Communication was also recognized as an important element in the success of the master planning effort. The communication plan for *Project Pedestrian* would include mailings to all property owners in both project areas and press releases/newspaper articles.

The **South Otsego Avenue improvements** will focus on traffic access management (including the evaluation of a boulevard road section), extending streetscape elements (similar to the existing Downtown area) south to the I-75 Exit 279 area, the addition of a mixed-use bituminous pathway to improve pedestrian accessibility in the summer, and snowmobile accessibility in the winter, and provide safe opportunities for snowmobiles to cross South Otsego Avenue.

The **Main Street improvements** will focus on traffic calming measures and pedestrian safety. The project area encompasses the Downtown area as well as the "Pavilion on Court", both being major pedestrian traffic generators. The issue of pedestrians crossing at mid-block in the Downtown area will be addressed. Also, a safer snowmobile crossing at the railroad tracks will be considered.

The Main Street area also extends to the east entrance to the City. It is a residential area where the speed limit transitions from 50 miles per hour (mph) to 30 mph. The future City offices will be located at the northeast corner of Main/Oak (within this project area) and increased vehicular and pedestrian traffic is expected to be generated in vicinity of this intersection.

Preliminary Investigations and Tools

To evaluate existing conditions, the following data were gathered and evaluated by the project team:

- Topographic surveys from previous projects including utilities (to be overlain on aerial photos).
- Aerial photography showing driveways and intersection geometrics.
- Crash data; one (1) line printout for 9 years and 10 months.
- Pedestrian Crossing Survey at key locations.

- Regional pedestrian/bike master plan for the County by a private source.
- Signal timing permits for existing signal operations.

The analysis of vehicular traffic and traffic signal operations was not part of this study except as it related to pedestrian safety and delineation of a pedestrian pathway plan. Relevant historical data was obtained from the September 2000 Corridor Study for 1-75B.L./Old-27 and M-32, completed by the Northeast Michigan Council of Governments (NEMCOG).

A base map of the existing conditions within each project area was developed, consisting of an aerial photo overlain with available topographic/planimetric features from previous projects.

CHAPTER 2

CRASH ANALYSIS

CRASH DATA ANALYSIS

The crash data used in this analysis was obtained from the Michigan Department of Transportation electronic files of the General Crash Program. The data was presented in a one line listing format created by the Michigan State Police (MSP). MSP receives UD-10 reports from all investigating police agencies that code them into this one line format. This transfer of data provides for easy electronic analysis of large amounts of data; however, errors or important information are sometimes omitted in this coding process.

For *Project Pedestrian*, crash data was analyzed to determine the frequency and type of crashes within the two project areas and identify causation factors in order to develop correction and mitigation measures. The results of the analyses for South Otsego Avenue and Main Street are presented in the following discussions.

Crash History for South Otsego Avenue

The crash data analyzed covers the period from January 1, 1993 through October 2002. The yearly crash experience, containing 356 incidences, is summarized in Table 2.1 below.

Table 2.1
Crash Data- South Otsego Avenue

| Year | No crashes | Year | No Crashes |
|------|------------|-------|------------|
| 1993 | 43 | 1998 | 46 |
| 1994 | 27 | 1999 | 55 |
| 1995 | 29 | 2000 | 20 |
| 1996 | 36 | 2001 | 24 |
| 1997 | 47 | 2002* | 29 |

*through October 2002

Figure 2.1 at the end of this chapter illustrates the distribution of crashes through the study area as well as the percentages of crashes grouped by the code assigned in the General Crash Program.

Crash Analysis for South Otsego Avenue

For purposes of analyzing the crash data for South Otsego Avenue, the corridor was divided into seven separate segments and data was further separated into types of crashes. Arranging the data in this manner allowed for allocation of the reported crashes to signalized and non-signalized intersections, driveway-related and non-signal related origins.

The first segment of South Otsego Avenue analyzed from the I-75 BL interchange ramps to a point northerly $\frac{3}{8}$ of a mile. There were a total of 55 crashes in this segment. The three non-signalized intersections in this segment accounted for 27 of the reported crashes; Northbound I-75 BL freeway on/off ramps had 17 crashes; Johnson Road had six crashes, and Birch Lane/Driftwood Lane had four crashes. Of the remaining 28 crashes, only three were coded to driveways and the remaining 25 were coded to either non-intersection or non-drive related which is designated as the "other" category. Including this "other" grouping of crashes gives a rate of 88 crashes per mile.

The second segment included the area northerly from segment one up to, but not including the McCoy Road intersection. This $\frac{3}{4}$ -mile segment includes five non-signalized minor intersections and many commercial driveways. This segment experienced 31 crashes. Four of the five intersections had one crash each, one crash was coded to a driveway and 22 crashes were coded to the "other" category. This area had a rate of 41 crashes per mile.

The third segment of South Otsego Avenue included the area associated with the signalized intersection of McCoy Road. This segment is approximately 0.02 miles long and experienced 48 crashes.

The fourth segment included the area between McCoy Road and Commerce Boulevard. This 0.68 miles long segment experienced 28 crashes, which yields a rate of 41 crashes per mile.

The fifth segment, including areas adjacent to the Commerce Boulevard intersection, experienced 80 crashes during the data period. All of these occurred before October 2002 when an actuated signal was installed at this intersection. This segment is 0.08 miles long.

The sixth segment included the area between Commerce Boulevard and Grandview Boulevard, which is approximately $\frac{1}{4}$ mile in length. This segment has several commercial driveways, including the drives to the large parking lots for Big K-mart and Carter's Plus on the east side and seven commercial drives on the west side. Two of seven on the west side serve vacant properties or buildings and the others serve small businesses. This segment

experienced 17 crashes during the period analyzed. This experience yields a rate of 68 crashes per mile.

The seventh segment included area adjacent to the signalized intersection of Grandview Boulevard. This 0.13-mile long segment experienced 97 crashes during the period analyzed.

A summary of the crash data for South Otsego Avenue is provided in Table 2.2 on the following page.

Crash History for Main Street

The crash data analyzed in this area covers the period from January 1, 1993 through October 2002. The yearly crash experience is summarized in Table 2.3 below.

Table 2.3
Crash Data-Main Street

| Year | No crashes | Year | No Crashes |
|------|------------|-------|------------|
| 1993 | 29 | 1998 | 38 |
| 1994 | 37 | 1999 | 32 |
| 1995 | 42 | 2000 | 43 |
| 1996 | 36 | 2001 | 34 |
| 1997 | 32 | 2002* | 31 |

*through October 2002

This data contains 354 crashes, of which 14 involved pedestrians or bicyclists. Eight of the incidences occurred at the Otsego Avenue-Main Street intersection, two occurred at the Court Avenue-Main Street intersection and three occurred at the Center Avenue-Main Street intersection. One crash was coded to a mid-block area between Court Avenue and Center Avenue.

Table 2.2
Crash Data Breakdown
South Otsego Avenue

| Segment | Total Crashes | Non-Signal Intersection | Driveway Related | Signal Intersection | Other |
|--|------------------|----------------------------|---------------------|------------------------|-------|
| Segment 1 - I-75 Business Loop to 3/8 mile north | 55 | 27 | 3 | 0 | 25 |
| Segment 2 - 3/8 mile north to McCoy Road | 31 | 4 | 1 | 0 | 22 |
| Segment 3 – McCoy Road Intersection | 48 | 0 | 0 | 48 | 0 |
| Segment 4 – McCoy Road to Commerce Blvd | 28 | No breakdown available | | | |
| Segment 5- Commerce Blvd Intersection | 80 | 0 | 0 | 80 | 0 |
| Segment 6 – Commerce Blvd to Grandview Blvd | 17 | No breakdown available | | | |
| Segment 7 – Grandview Blvd Intersection | 97 | 0 | 0 | 97 | 0 |
| | | | | | |

CONCLUSIONS – CRASH DATA ANALYSIS

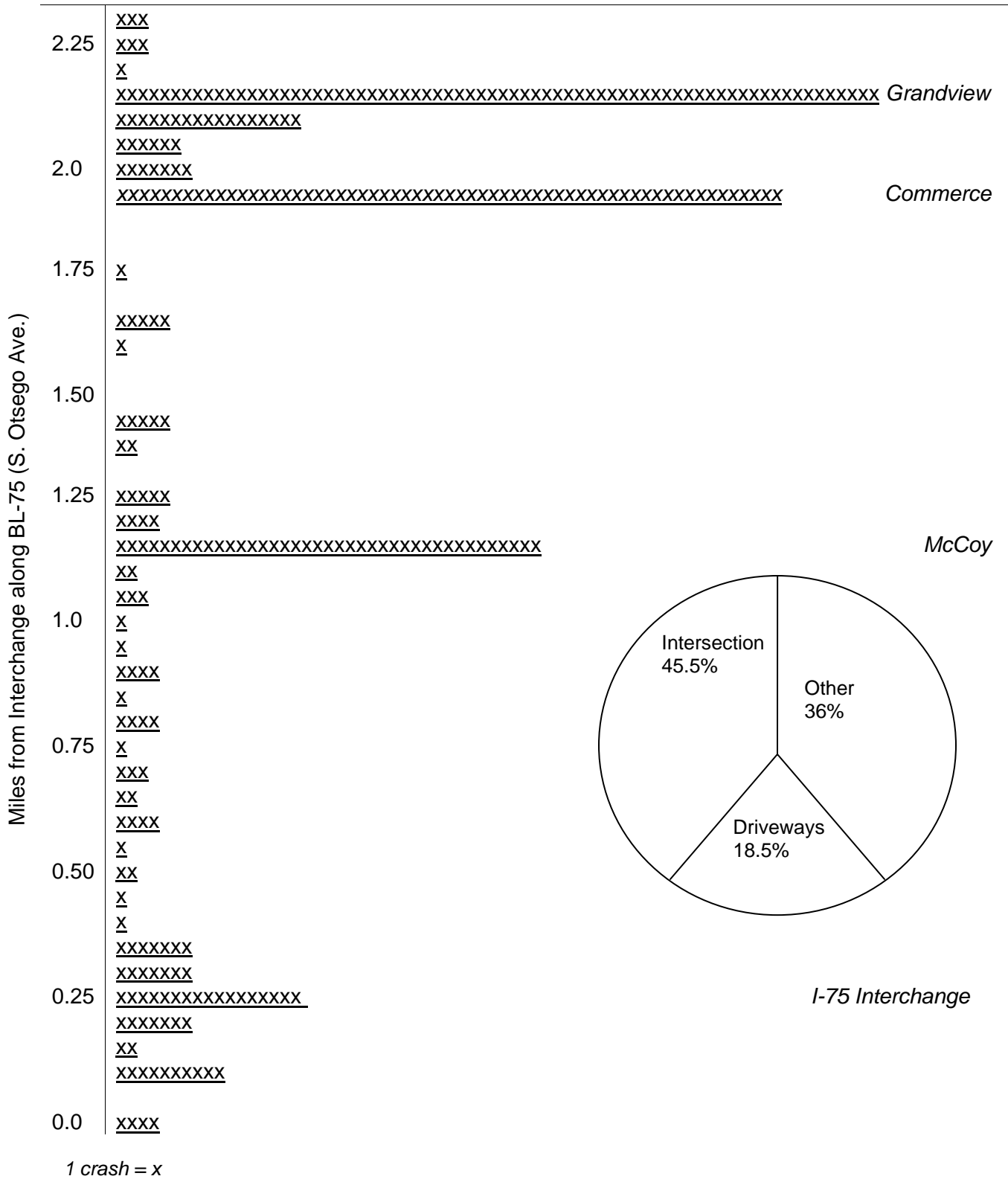
The crash analysis did not find any notable pattern of crashes and/or location where urgent intervention is needed. The intersection crashes at Commerce Boulevard should be drastically reduced now that the traffic signal has been installed.

Percentage distribution of crashes for both project areas, coded to intersections, access driveways and other locations are summarized in Table 2.4 below.

Table 2.4
Crash Data- Type Breakdown

| Type | Percentage |
|---------------|------------|
| Intersections | 45.5% |
| Driveways | 18.5% |
| Other | 36.0% |

Figure 2.1
Distribution of Crashes
in Study Area



CHAPTER 3

PEDESTRIAN CROSSING SAFETY ANALYSIS

PEDESTRIAN CROSSING SAFETY ANALYSIS – SOUTH OTSEGO AVENUE

South Otsego Avenue Corridor – Current Conditions

South Otsego Avenue, from the Grandview/Wisconsin intersection, south to the Johnson Road intersection represents the largest business/commercial corridor within the City of Gaylord yet to be fully developed. The requisite infrastructure necessary for development is in place, including public sewer and water utilities. The roadway is five-lanes wide the entire length with two lanes in each direction and a center lane for left turn movements.

Concrete curb and gutter and storm sewer extends south from the Grandview/Wisconsin intersection approximately 2500 feet. The speed limit is 40 miles per hour (mph) in this area. Bituminous pathways are located behind the curb on both sides of South Otsego Avenue; however, many areas of the existing pathways are in desperate need of repair.

From the end of the curb and gutter road section, the roadway has an 8-foot paved shoulder on each side that runs south to Johnson Road; storm sewer is not provided in this segment of South Otsego Avenue. The speed limit is 50 mph in this area. Bituminous pathways are not found in this area.

Intersections at Grandview Boulevard, Commerce Boulevard and McCoy Road are signalized. The signal locations are spaced sufficiently to maintain progressive traffic flow. The road right-of-way width can accommodate future operation, aesthetic and safety improvements.

Center turn lane road sections with commercial drives and intersecting streets promote the use of the center turn lane as a staging area for vehicles waiting to merge into traffic. This is a concern along the entire South Otsego Avenue corridor.

South Otsego Avenue – Pedestrian Safety Analysis

Pedestrian safety issues were studied at the following signalized intersections: South Otsego Avenue and Grandview Boulevard; South Otsego Avenue and Commerce Boulevard; and South Otsego Avenue and McCoy Road.

The intersection of South Otsego Avenue and Grandview Boulevard is controlled by a three-phase, semi-actuated signal that operates on an 80-second cycle. There are left turn green arrow indications on northbound and southbound South Otsego Avenue to allow the left turn movements to operate permitted-protected.

There are pedestrian “WALK-WAIT” signal indications on all four legs of the intersection. The pedestrian indications operate fixed-time, which precludes the need for push buttons. There is a marked “Zebra” crosswalk on the south leg of the intersection and a marked crosswalk with parallel, 6-inch lines on the east leg of the intersection. There is a substandard left turn lane on the north leg that is only about 45 feet long and provides storage for only two vehicles.

The intersection of South Otsego Avenue and Commerce Boulevard forms a “T” and is controlled by a two-phase, semi-actuated signal that operates on an 80-second cycle to coordinate with the signal at Grandview Boulevard. There are pedestrian “WALK-WAIT” signal indications on all three legs, but no marked crosswalks. Pedestrians crossing South Otsego Avenue must use a push button to receive a “WALK” indication. The “WALK” indication for crossing Commerce Boulevard is on recall and, therefore, does not require pedestrian actuation. The push button in the southeast quadrant is attached to a signal pole located about 18 feet behind the sidewalk; this location does not provide convenient access for pedestrians. There is a commercial driveway on the west side of the intersection that is offset to the north.

The intersection of South Otsego Avenue and McCoy Road is controlled by a two-phase, fixed-time signal that operates on a 60-second cycle. Due to the lack of approaching sidewalks, there are no pedestrian signal indications and no marked crosswalks. There are right-turn pockets in both directions on South Otsego Avenue. Therefore, pedestrians must cross six lanes of traffic on South Otsego Avenue, a distance of 82 feet. The side street phase (during which pedestrians cross South Otsego Avenue) is 22.0 seconds in duration (i.e. Green + Yellow + All-Red). Pedestrian surveys were not conducted on the subject section of Otsego Avenue. However, observations during this study indicated that the level of pedestrian activity was minimal.

South Otsego Avenue - Recommended Pedestrian Safety Improvements

The following improvements should be implemented to improve the safety of pedestrians using the South Otsego Avenue corridor.

- Install marked crosswalks at the intersection of South Otsego Avenue and Commerce Boulevard. Relocate the push button in the southeast quadrant to a point near the sidewalk. Close the commercial driveway on the west side of the intersection. (The

current level of pedestrian activity does not warrant a fixed-time operation for pedestrian signal indications crossing South Otsego Avenue at Commerce Boulevard).

- Increase the duration of the side street phase at the intersection of South Otsego Avenue and McCoy Road to allow pedestrians to cross South Otsego Avenue safely from edge to edge (i.e. as opposed to the mid-point of the furthest lane). It is recommended that the side street phase be extended to at least 24.5 seconds (i.e. 4 seconds reaction time plus 20.5 seconds to cross 82 feet).
- Install pedestrian indications and marked crosswalks at the intersection of South Otsego Avenue and McCoy Road.

Pedestrian Pathway Design Considerations – South Otsego Avenue

A mixed use, pedestrian pathway system along South Otsego Avenue should be designed with the following goals and objectives in mind:

- To accommodate pedestrian and bicycle traffic in the summer as well as snowmobiles during the winter.
- To be hard surfaced with signage and related landscaping features.
- To connect with existing and future signalized intersections for safe crossing of South Otsego Avenue.
- To connect with sidewalks in the downtown area (future).

A recently completed Pathway Plan for the greater Gaylord area suggested that a pedestrian/bicycle path be located within the Lake State Railway right-of-way, located west of and running parallel with South Otsego Avenue. This location would be more appropriate for snowmobile and ORV use as it does not fulfill the intended purpose of a pedestrian/bicycle trail to channel users as close as possible to their intended destination.

The attractions and destinations along the South Otsego Avenue corridor are the shopping and recreational opportunities as well as the seasonal access to offices and employment centers. Therefore, the most desirable location of pedestrian/bicycle paths along this corridor is adjacent to/or near the South Otsego Avenue right-of-way lines and through frontage roads.

Conversely, the best location for snowmobile and ORV trails is in the Lake State Railway right-of-way.

Snowmobile Trail Crossing on South Otsego Avenue – Current Conditions

A snowmobile trail designated by the Michigan Department of Natural Resources crosses South Otsego Avenue at the Consumers Energy right-of-way approximately one-half mile south of McCoy Road. South Otsego Avenue has a five-lane cross-section at this location, with 8-foot wide paved shoulders and a posted speed limit of 50 mph. There are no marked crosswalks or warning signs for the snowmobile trail on South Otsego Avenue.

Recommended Safety Improvements for the Snowmobile Crossing

There are several options for addressing the concerns with this crossing. The installation of standard highway warning signs in advance of the crossing, possibly with flashers and a marked crosswalk would be one option. Another option would be to reduce the crossing distance by constructing curb bulb-outs at the crossing location. A third option, subject to MDOT approval, would be the installation of a traffic signal with push button activation that could be accessed by snowmobile riders from their vehicles.

PEDESTRIAN CROSSING SAFETY ANALYSIS – MAIN STREET

Main Street Corridor - Current Conditions

Main Street, from the Lake City Railway east to Elm Street, traverses Gaylord's Downtown area where most municipal buildings, office buildings, unique businesses and restaurants are located. The "Pavilion on Court" is the focal point of Downtown civic activities, providing a place for outdoor entertainment and gathering occasions.

The intersections of Main Street/Otsego Avenue and Main Street /Center Avenue are signalized. The Otsego Avenue intersection is the junction of two (2) state trunk lines, I-75 B.L./Old 27 (South Otsego Avenue) and M-32 (Main Street). The operations of these roadways, as well as the traffic signals, are under the jurisdiction of the Michigan Department of Transportation.

Main Street is a five-lane roadway consisting of two lanes in each direction and an 11-foot center lane for left turn movements. Parallel, on-street parking is provided on both sides of

Main Street between the Lake State Railway and Oak Avenue. Sidewalks border the street, with adjacent streetscape plantings. The speed limit is 30 mph in the Downtown area and increases to 40 mph at Oak Avenue eastward.

The major pedestrian-vehicular conflict typically occurs at the signalized intersections. Also, there are substantial mid-block pedestrian crossings in the Downtown area, with people using the center left turn lane as a refuge space.

Main Street Pedestrian Survey

Local volunteers (RSVP) conducted a pedestrian survey on June 5, 2003 at several intersections in the downtown area to determine the direction and volume of pedestrian traffic. Results of the pedestrian crossing survey and the previously noted crash analysis indicate the following needs and concerns:

- There is an operational problem at the signalized intersections related to protecting crossing pedestrians and bicyclists from right turn movements.
- There is need for better-protected crossings along Main Street, especially at the Court Avenue intersection.
- There is a need to interconnect (expand) pedestrian bicycle pathways, City wide, specifically pathways with Downtown destinations.
- There is a need to provide a safer snowmobile crossing of Main Street at the Lake State Railway crossing (north-south snowmobile trail).

Main Street – Pedestrian Safety Analysis

Pedestrian safety issues were studied at three key intersections: Main Street and Otsego Avenue (BL-75), Main Street and Court Avenue and Main Street and Center Avenue. The intersection of Main Street and Otsego Avenue is controlled by a two-phase, fixed-time traffic signal that operates on a 90-second cycle. There are pedestrian “WALK-WAIT” signal indications and marked “Zebra” crosswalks on all four legs of the intersection. There are ample opportunities for pedestrians to cross on a WALK indication parallel to traffic moving on a green indication.

The intersection of Main Street and Court Avenue is not signalized. The north leg of Court Avenue is controlled by a STOP sign. The south leg operates as one-way southbound.

There is a marked “Zebra” crosswalk on the north leg of the intersection and a marked crosswalk with parallel 6-inch lines crossing the east leg of Main Street. There are no marked crosswalks on either the west or south legs. Curb extensions are in place on the south leg of the intersection. Typically, pedestrians crossing Main Street pause in the center lane to wait for traffic to clear.

The intersection of Main Street and Center Avenue is controlled by a two-phase, fixed-time traffic signal that operates on a 90-second cycle to coordinate with the signal at Otsego Avenue. There are pedestrian “WALK-WAIT” signal indications and marked “Zebra” crosswalks on all four legs of the intersection. There are ample opportunities for pedestrians to cross on a WALK indication parallel to traffic moving on a green indication. Parking has been removed to provide a right-turn pocket on westbound Main Street. Vehicles in the eastbound, left-turn lane often queue for approximately 250 feet from the stop bar.

As previously stated, a 5-hour pedestrian survey was conducted on June 5, 2003 at several intersections in the downtown area. The objective of the survey was to determine the direction and volume of pedestrian traffic. The number and location of pedestrians crossing Main Street is summarized in Table 3.1 below. As illustrated, the highest number of pedestrian crossings along Main Street occurred at Court Avenue, Center Avenue, and at mid-block between the two intersections.

**Table 3.1
Summary - Pedestrian Crossing Counts**

| Location | Number of Pedestrian Crossings |
|--|--------------------------------|
| West leg at Otsego Ave | 69 |
| East leg at Otsego Ave | 73 |
| Mid-block between Otsego Ave and Court Ave | 23 |
| West Leg at Court Ave | 15 |
| East Leg at Court Ave | 125 |
| Mid-block between Court Ave and Center Ave | 166 |
| West leg at Center Ave | 113 |
| East leg at Center Ave | 126 |
| Mid-block between Center Ave and Elm Ave | 2 |
| West leg at Elm Ave | 13 |
| East leg at Elm Ave | 15 |

Main Street - Recommended Pedestrian Safety Improvements

The following improvements should be implemented in the Main Street project area:

- Conduct a joint speed investigation by the Michigan Department of Transportation (MDOT) and the Michigan State Police to determine if the speed limit on Main Street can be lowered to 25 mph. (This need was identified during the Public Meeting process).
- The City should send a letter requesting MDOT to conduct new traffic signal timing and operation studies looking at reducing cycle lengths and prohibiting right turn on red movements.
- Install “NO TURN ON RED” signs at the two signalized intersections to eliminate conflicts between vehicles turning on a red indication and pedestrians in the crosswalk. The City should first pass a “Resolution of Support” then send a letter of request to MDOT.
- Install a high visibility crosswalk on the east leg of Main Street at Court Avenue. A pedestrian table may be considered if the speed limit can feasibly be reduced to 25 mph. A pedestrian table is a concrete “Hump” with a flat surface on top. The crosswalk should be delineated with “Zebra” type pavement markings.
- Install a pedestrian refuge island in the center lane on the east leg of Main Street at Court Avenue. This will require the prohibition of the westbound Main Street left turn movement. The median island may be up to 150 feet long (to the east) and still allow 300 feet of queue space for left turns at Center Avenue.
- Mid-block pedestrian crossings between Court and Center Avenues should be discouraged to eliminate conflicts between pedestrians and vehicles queuing in the left turn lane. A high visibility crossing described above would encourage pedestrians to cross at the intersection.
- Install a pedestrian refuge island in the center lane on the east leg of Main Street at Oak Avenue. This will require the prohibition of the westbound Main Street left turn movement.

Snowmobile Trail Crossing on Main Street – Current Conditions

A snowmobile trail designated by the Michigan Department of Natural Resources crosses Main Street at the Lake State Railway tracks. Main Street has a five-lane cross-section at this location and a posted speed limit of 30 mph. There are no marked crosswalks or warning signs for the snowmobile trail on Main Street.

Recommended Safety Improvements for the Snowmobile Crossing

There are two options for addressing the concerns with this crossing. One option would be the installation of standard highway warning signs in advance of the crossing, possibly with flashers and a marked crosswalk. However, with the existing conditions along Main Street, sign spacing requirements could not be met. Therefore, the installation of warning signs may or may not be possible. The City should send a letter requesting MDOT to review the existing conditions and to consider installing the warning signs.

The other option would reduce the crossing distance by constructing curb bulb-outs at the crossing location. This option would also include the installation of the standard highway warning signs (if permissible).

At a minimum, the existing back of curb should be removed on both the north and south sides of Main Street at the crossing location. This “curb cut” would provide a smooth transition for snowmobiles crossing Main Street.

CHAPTER 4

ACCESS MANAGEMENT CONSIDERATIONS

GENERAL DISCUSSION - ACCESS MANAGEMENT STRATEGIES

Access management is defined as a process of managing access to land development, while simultaneously preserving the flow of traffic on the surrounding public road system. Property owners have a right to reasonable access to the general system of streets and highways and adjacent roadway users have the right to freedom of movement and safety. The safe operation of the transportation system calls for effectively managing highway access, via properly placed driveways, streets or other access points.

The goal of an access management plan is to maintain efficient traffic flow, preserve the capacity of roads and to reduce the frequency and severity of crashes while maintaining reasonable access to adjacent land uses. This goal can be accomplished by careful placement and design of access drives to reduce conflicting vehicle movement trying to access roadside activities and those traversing the traffic flow and intersections. Elements of a successful access management plan include:

- Providing proper spacing of access points on the same side of the roadway.
- Offsetting spacing of access points on the opposite side of the roadway.
- Placing driveways away from intersections to minimize impact on intersection operation.
- Restricting or limiting certain turning movements (usually left turns).
- Promoting the use of shared access drives and roads.
- Encouraging efficient and safe geometric design of access drives, intersections and other access roads.

Access management can provide substantial benefits to motorists, communities and property owners, including the following:

- Reduce crashes and crash potential.
- Preserve roadway capacity and the useful life of the roads.
- Decrease travel time and congestion.
- Improve access to and from properties.
- Ensure reasonable access to properties and encourage innovative access plan development.
- Coordinate and connect land use and transportation decisions.
- Improve environment for pedestrians and non-motorized modes (fewer driveways to cross).
- Improve air quality through less turning and less acceleration.
- Maintain and enhance travel efficiency.

Generally, access management is controlled by city zoning. The City of Gaylord should consider adding access management considerations to their zoning ordinance. MDOT must provide reasonable access to all property. Therefore, the City of Gaylord and MDOT must work together during the site plan review process to assure reasonable access is provided without an excessive amount of driveways being permitted.

OVERVIEW OF ACCESS MANAGEMENT DESIGN ELEMENTS

Principal features of access management design include limiting access points, providing driveway spacing from intersections and adjacent driveways, separating or limiting conflict points and conflicting movements, providing alternate access and implementing sound geometric designs.

Limiting Access Points

Every effort should be made to limit driveway access to one (1) driveway for each property. This principle is widely accepted by national fast food chains because they realized the increased potential of crashes for every entering and exiting vehicle. A single driveway also provides the inherent right of property owners for reasonable access to adjacent streets and roads. Combining entrance drives with adjacent properties is greatly encouraged.

Driveway Spacing From Other Driveways

This standard is especially important with new developments. However, an effort should be made to achieve some spacing with the revival and the redevelopment of older land uses. Generally, driveways should be spaced apart in relationship with posted speed limits and location of conflicting vehicle movements. Table 4.1 below provides the recommended minimum driveway spacing based upon posted speed limits.

Table 4.1

| Minimum Spacing Between Driveways Located on the Same Side of the Road | |
|---|--|
| Posted Speed MPH | Driveway Spacing (in feet)* |
| 25 | 130 |
| 30 | 185 |
| 35 | 245 |
| 40 | 300 |
| 45 | 350 |
| 50+ | 455 |

*Unless greater spacing is required by MDOT or OCRC or is required to meet other standards herein.

Driveway Spacing on Opposite Side of Roadway

Opposing driveways create the illusion of an "intersection" where vehicles may want to cross the roadway. Offset location of access drives promotes orderly turning movements and sufficient storage for left turning traffic.

Table 4.2

| Minimum Spacing Between Driveways Located on Opposite Side of the Road | |
|---|--|
| Posted Speed MPH | Driveway Spacing (in feet)* |
| 25 | 255 |
| 30 | 325 |
| 35 | 425 |
| 40 | 525 |
| 45 | 630 |
| 50 | 750 |

*Unless greater spacing is required by MDOT or OCRC or is required to meet other standards herein.

Driveway Spacing From Intersections

Driveways should be placed such that their operation does not conflict with the intersection traffic. Recent studies have shown that intersections, ¼ mile apart, can be 25-30% safer if driveways are kept 150-200 feet away from the intersection. This standard is more restrictive in rural areas with higher speed limits.

Table 4.3

| Minimum Driveway Spacing from Intersections | | | |
|--|----------------------------------|---|--|
| Location of Access Point | Type of Intersecting Road | Minimum Spacing for Full Movement Driveway | Minimum Spacing for a Driveway Restricting Left-Turns |
| Along Arterial | Another Arterial | 300 | 125 |
| Along Arterial | Collector/Local Street | 200 | 125 |

Separating or Limiting Conflict Points

Vehicles traversing traffic lanes without adequate weaving distances present serious safety concerns. Removal and relocation of turning movements can improve efficiency of access points and create a safer travel environment.

The existing five-lane (5) roadway section provides for freedom of left turns on South Otsego Avenue. However, the random location of driveways creates conflicting head-on left turn movements.

Construction of a median divider/boulevard road section with controlled left turn points is one alternative that could be implemented to create a safer and aesthetically more desirable roadway environment. The concept of a center median/boulevard section is discussed in greater detail beginning on page 4-7 and in Chapter 5.

Providing Alternate Access

Traditionally, businesses facilitate service and supply trucks as well as rubbish removal via rear access drives and alleys. This provides a needed separation of service vehicle traffic from the customer-based traffic. There are a small number of commercial entities along South Otsego Avenue that are currently served by rear access drives.

The connection of parking lots along South Otsego Avenue should be encouraged. This is desirable since it would reduce turning movements and is also beneficial for adjacent businesses by having the visibility to otherwise indirect traffic.

The use of rear access drives and alternate road connections should be a guiding consideration for the planning and approval of future developments within the corridor.

Sound Geometric Design

Geometric design standards define features and minimum dimensional requirements such as driveway widths, opposing driveway offsets, sign setback requirements, turning radii, etc. State highway design standards are set by MDOT and county road commissions. Municipalities often have their own adopted standards and/or refer to the application of MDOT's standards and regulations. Adoption and enforcement of these standards are critical in implementing successful access management strategies.

EXISTING ACCESS CONDITIONS – SOUTH OTSEGO AVENUE

Existing access conditions vary widely along South Otsego Avenue. Earlier developments were designed to serve the tourist and recreational users (small motels, gas stations, convenience stores, etc.). Later, businesses provided for the increasing auto and truck industry and larger department stores, as well as general service facilities such as banks and insurance offices. More recently, the public utilities were extended to this area, which attracted a few larger developments and more general service facilities.

Current roadside conditions reflect the age and character of the developments. Older buildings are generally served by two or more gravel drives, some are undefined and others nearly un-maintained. The larger retail developments have well designed access drives, reflecting recent interest in improved access management. North of the project area, there are intermittent sidewalks on the east side of South Otsego Avenue and well worn paths in the grass that indicate there is a need for a pedestrian pathway plan along this roadway.

Current deficiencies in vehicular access conditions within the South Otsego Avenue corridor include:

- Poor driveway spacing and/or unnecessary second drives.
- Poor driveway to intersection spacing.
- Substandard driveway designs.
- Lack of internal connections between properties (frontage roads and/or rear access drives).

Related deficiencies in pedestrian facilities include:

- Substandard or nonexistent pedestrian pathways connecting intersection crossing opportunities.
- Lack of uniform pedestrian signal indicators and safer crossing opportunities at traffic signals.
- Absence of non-motorized pathways to growing commercial centers (current and future).

The potential for continued commercial development along this corridor is strong. The availability of public utility services and easy accessibility to the area has made South Otsego Avenue a very desirable commercial development corridor in the City of Gaylord.

Therefore, it is important to address access management issues through the planning and permitting processes at the beginning stages of development as opposed to attempting to modify in-place infrastructure in an already developed area.

The recommended long-term approach to access management in the South Otsego Avenue corridor is the construction of a boulevard road section, as outlined in the discussions on the next page. Recognizing that this long-term solution will not likely be implemented in the near future, access management upgrades that can be implemented in the near-term are identified beginning on page 4-8. These initial upgrades, for the most part, are compatible with and would be included in the implementation of the long-term boulevard road strategy.

LONG-TERM ACCESS MANAGEMENT STRATEGY - BOULEVARD ROAD SECTION

The 1.6-mile segment of South Otsego Avenue (I-75 B.L.) has the potential to become a principal, regional commercial district within Otsego County. The area has been properly zoned, has public utilities and is served by a 5-lane, all season state highway that connects the two (2) Gaylord I-75 interchanges. Signalized intersections on South Otsego Avenue are at McCoy Road, Commerce Boulevard and Grandview Boulevard.

A boulevard road section is an excellent solution to the current access management issues within the corridor. And, with much of the infrastructure already in place, implementation of this solution should be relatively straightforward. It appears from general comments from public meetings that a 40-foot median divider/boulevard section would be widely supported.

Conceptual Design Considerations

Key design considerations include the need for additional right-of-way, intersection redesigns to accommodate a boulevard/center median section and the design of median widths to facilitate turning movements of commercial truck traffic.

The I-75 BL right-of-way along South Otsego Avenue is 66 feet wide north of Grandview Boulevard, 150 feet wide south of Grandview Boulevard to Blockbuster Video and 200 feet wide south of Blockbuster Video to the south I-75 interchange. The recommended right-of-way width for a boulevard road section is 200 feet. However, the City of Gaylord has indicated they would like to try to work within the existing right-of-way between Grandview Boulevard and Blockbuster Video.

A 40-foot wide median/boulevard section, with a 24-foot roadside widening (including shoulders) can provide sufficient turning radius for a 48-foot tractor/trailer combination (WB-50 vehicle).

Directional left turn openings north and south of signalized intersections will act as control points for key access drives to adjacent land uses. Depending on the signal timing cycle, MDOT's design standards recommend left turn slots spaced from 500 to 600 feet from signalized intersections. Further detailed analysis of intersection operations is required to

determine signal timing sequence, proper location of left-turn slots and design of related traffic controls.

Specific elements of the proposed boulevard section are outlined in the discussions in Chapter 5 of this master plan.

NEAR-TERM ACCESS UPGRADES – SOUTH OTSEGO AVENUE

The following specific recommendations can be implemented in the near-term and were identified in a field survey of existing access conditions, from comments garnered at public meetings, and comparative experience gained through similar access management projects in Michigan.

Driveway Closures/Consolidation

The driveway closure/consolidation recommendations are presented in segments as follows: I-75 interchange to the signalized intersection at McCoy Road; McCoy Road to Commerce Boulevard; and Commerce Boulevard to Grandview Boulevard.

East Side (I-75 Ramp to McCoy Road)

- a. Mamma Leone's Restaurant, Tina's Fine Imports & Vacant Building – provide curb control
- b. Skin Canvas Tattoo & Piercing Studio – close one drive
- c. Alpine Real Estate – close drive, has access from Schnees-Lochen Drive
- d. Gaylord Floor Covering and Haworth Heating & Cooling - combine driveways

West Side (McCoy Road to I-75 Ramp)

- a. Wagar Motors - close South drive, retain North drive
- b. Chimney Specialist/Pat Murphy's Alpine Auto Sales – combine drives and provide curb control
- c. Koske Realty - close North drive
- d. Becroft Motor Sales - close drive, has access from Charboneau Lane
- e. Musik Haus - close drive, has access from Charboneau Lane
- f. Residence 2322 South Otsego Avenue - close one drive
- g. Value Corral Auto Lot - close one drive
- h. Vacant property – close drive, has access from Poplar Drive
- i. Shell Gas Station - close south drive, has access from Driftwood Lane and another drive.

2. East Side (McCoy Road to Commerce Boulevard)
 - a. Patriot Pizza - close north drive, access from boulevard off South Otsego
 - b. Mossy Bog/Rainbow Trophy – combine drives and provide curb control
 - c. Blockbuster Video - close one drive
 - d. Small Engine Service – curb control
 - e. Avenue of Memories/Computer Connection – close one drive
 - f. Gaylord Family Dentistry – close north drive
 - g. Great Deals Outlet – close south drive for access could potentially be gained from Aspen Commons Drive
 - h. Parkside Mini Mall – close south drive
 - i. Golf USA/Bamboo Palace – close north drive, has access from Parkside Mini Mall and from rear

3. West Side (Commerce Boulevard to McCoy Road)
 - a. Trinity Lutheran Church – close north drive
 - b. Vacant Commercial Building 1392 South Otsego Avenue – close one drive
 - c. Gaylord Mortgage Realty – close one drive
 - d. Fairmont Bob's Modern Homes – close one drive, but retain good access for moving homes in and out
 - e. Spectrum/New Dimensions Salon – curb control
 - f. Joann's Golden Comb/McHugh Architect – curb control
 - g. Fireside Inn Restaurant (vacant) – close south drive and provide curb control
 - h. Winn Telecom/Telephone Support Systems – close north drive
 - i. Keith Dressler Realty – close north drive
 - j. Gaylord Ford/Lincoln/Mercury – combine two drives into one, also has access from McCoy Road

4. East Side (Commerce Boulevard to Grandview Boulevard)
 - a. Big K-mart and Carter's Plus – there are only two drives that serve these stores and several other smaller stores, no changes recommended

5. West Side (Grandview Boulevard to Commerce Boulevard)
 - a. Empty Field - close drive near Gobblers

Recommended Frontage/Rear Access Roads

The construction of a frontage and/or a rear access road is recommended for the following locations along South Otsego Avenue:

1. East Side (McCoy Road to Commerce Boulevard) - Construct a frontage road for the North Star Center, Sturgeon Bay Furniture Company (vacant) and Triple M Tire Company.
2. West Side (Grandview Boulevard to Commerce Boulevard) - Construct a frontage road for Melton Physical Therapy, Flowermania, Sears, Phillips Lifestyles, North Crest Homes, Gaylord Communications & Electronics, RE/MAX Real Estate and TSC Tractor Supply Company (entrance could be at the Commerce Boulevard signalized intersection).

Driveway Closures with Proximity to Intersections

The driveway locations listed below are recommended for closure due to their proximity to the McCoy Road, Commerce Boulevard and Grandview Boulevard intersections.

1. Driveways adjacent to McCoy Road Intersection
 - a. Protection One/Star Publications – close drive, has access off McCoy Road
 - b. Car Wash – close drive, has access off McCoy Road
2. Driveways adjacent to Commerce Boulevard Intersection
 - a. RE/MAX Real Estate & Gaylord Communications & Electronics - Close driveways on west side near “T” intersection, see discussion above regarding recommended frontage road.
 - b. Community Federal Credit Union – close west entrance drive off Commerce, has an additional access off Commerce
 - c. Independent Bank – close exit drive off Commerce, has an additional access off Commerce and access from Big K-mart lot
3. Driveways adjacent to Grandview Boulevard Intersection
 - a. Timberly Motel – close drive off Grandview, close south drive along South Otsego Avenue, expand the north drive off South Otsego

CHAPTER 5

MASTER PLAN DEVELOPMENT

DRAFT MASTER PLAN DEVELOPMENT

The *Project Pedestrian* team held the first set of public meetings on June 30 and July 1, 2003. The sparsely attended meetings were held at the M-TEC Center in Gaylord. The first night focused on the South Otsego Avenue area and the second night on the Main Street area. The attendees were provided an overview of the project goals and objectives and spent the remainder of the meeting time in a large group discussion. The goal of each meeting was to develop a consensus of problem areas and concerns so to begin developing solutions incorporating streetscape elements, access management elements, pedestrian management elements and traffic calming elements. Summaries of the meetings are included in Appendix C.

The project team met August 20, 2003 for a follow up to the initial meetings. The team evaluated and discussed the outcome of the first set of public meetings and made decisions as to the direction of the draft plan.

The City and MDOT indicated that the draft master plan should include four alternatives for South Otsego Avenue and three alternatives for Main Street to address the identified problems. The draft plan was also to include conceptual drawings showing alternatives of proposed streetscape elements, access control features and pedestrian safety enhancements. The development of opinions of probable project costs for the various alternatives was also requested.

IDENTIFICATION/EVALUATION OF ALTERNATIVES - SOUTH OTSEGO AVENUE

In response to the discussions at the August 20th meeting, the *Project Pedestrian* team developed the following alternatives for the South Otsego Avenue corridor:

Alternative No.1: The scope involves total street reconstruction, including a concrete curb and gutter boulevard section and curbed outer lanes, storm sewer and related drainage structures, access management elements, streetscape elements and 10-foot wide bituminous mixed-use pathway on both sides of the roadway (refer to Figure 5.1 on page 5-3). Irrigation would be provided in the boulevard section and the roadside greenbelts.

Alternative No.2: The scope involves total street reconstruction, including the same elements as Alternative No. 1, with the exception that the outer lane curb and gutter would be eliminated in favor of paved shoulders and drainage would be via parallel roadside ditches and culverts (refer to Figure 5.2 on page 5-4). Irrigation would be provided in the boulevard section only.

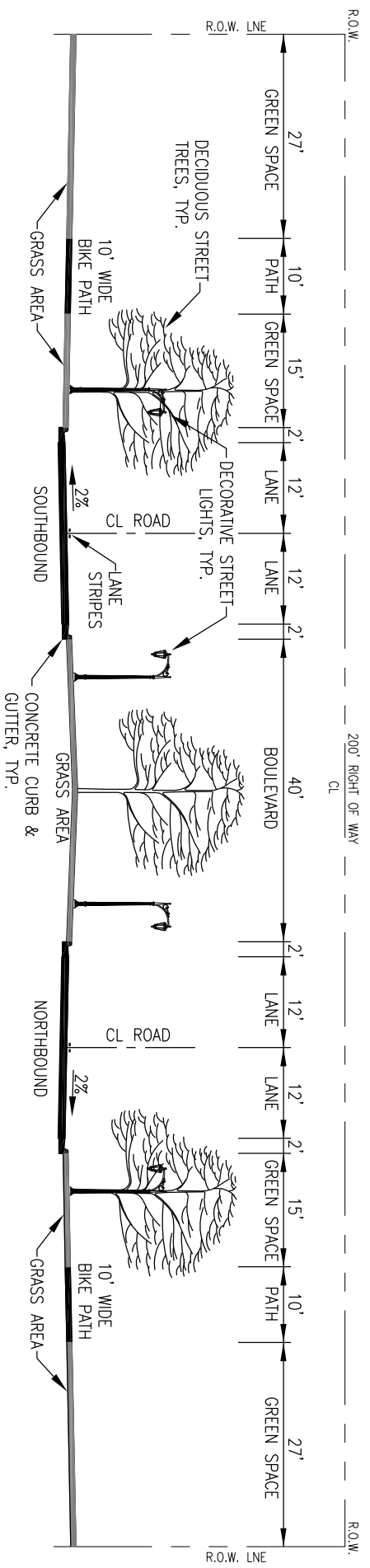
It was noted that this option might raise the proposed roadway section above the existing roadway profile.

Alternative No. 3: Similar in concept to Alternative No. 2, with the added component of storm water storage/detention in depressed median/boulevard areas (refer to Figure 5.3 on page 5-5).

It was noted that this design would require analysis of existing sanitary sewer and water main elevations prior to lowering the median area for storm water storage.

Alternative No. 4: This alternative includes a moderate scope of work, with no major street reconstruction; utilize existing ditches and culverts for storm water conveyance, construct near-term access management elements, streetscape elements, 10'-foot wide bituminous mixed-use pathways on both sides of street, replace all driveway approaches and install irrigation within the roadside greenbelts (refer to Figure 5.4 on page 5-6).

Subsequent consideration of Alternative No. 3 by the project team brought to light concerns relative to the storm water storage/detention in the center median area. It was the consensus that this alternative be eliminated from further consideration.



ALTERNATIVE No. 1 DESCRIPTION

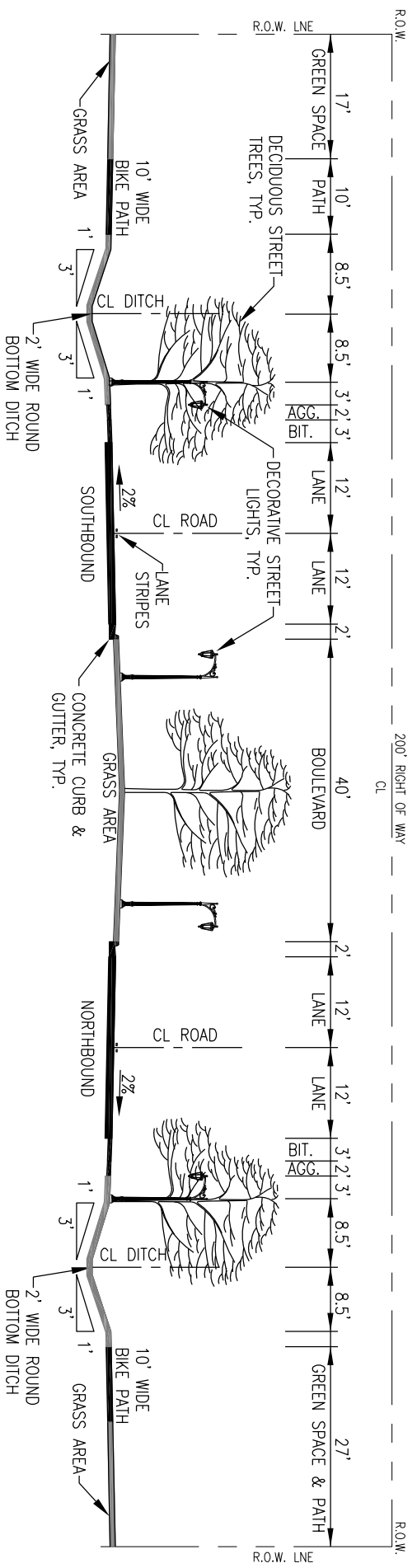
| |
|--|
| TOTAL STREET RECONSTRUCTION |
| GRASS BOULEVARD |
| TREES, LIGHTS, BENCHES & TRASH RECEPTACLES |
| CONCRETE CURB & GUTTER |
| STORM SEWER |
| ACCESS MANAGEMENT ELEMENTS |
| 10' WIDE BIT. BIKE PATH, BOTH SIDES |
| BOULEVARD & OFF-CURB IRRIGATION |
| BURY OVERHEAD UTILITIES |

-PLACEMENT AND SIZE OF PROPOSED TREES SHALL BE REVIEWED DURING THE PROJECT DESIGN PHASE TO MEET CLEAR ZONE REQUIREMENTS.
 -PROPOSED STREETLIGHTS SHALL HAVE BREAKAWAY FOUNDATIONS THAT MEET MDOT REQUIREMENTS.

FIGURE 5.1
 TOTAL RECONSTRUCTION CROSS SECTION
 COMPLETE STREETScape

PROJECT PEDESTRIAN
 SOUTH OTSEGO AVENUE-ALTERNATIVE No.1
 CITY OF GAYLORD
 OTSEGO COUNTY, MICHIGAN





ALTERNATIVE No.2 DESCRIPTION

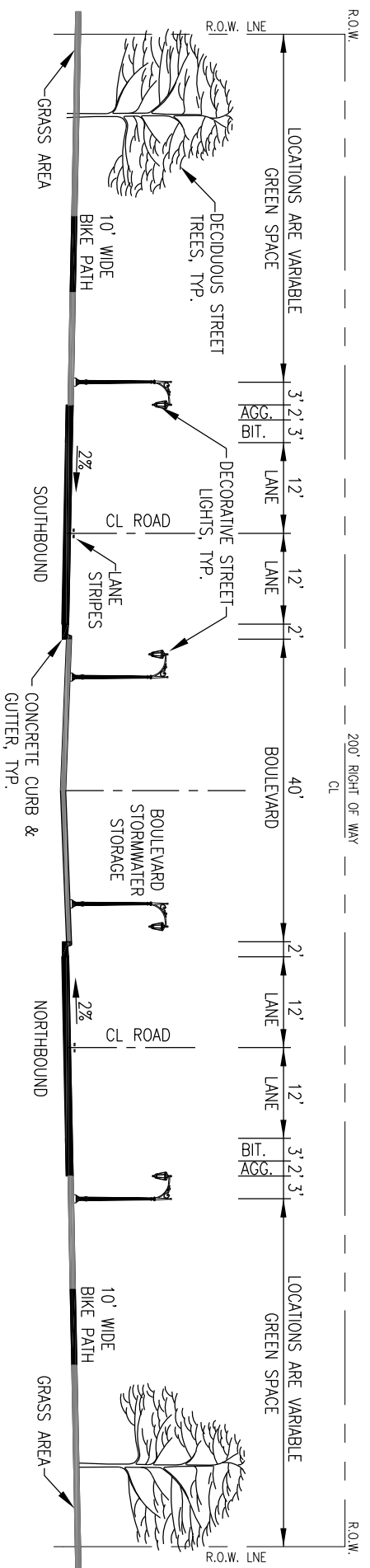
| |
|--|
| TOTAL STREET RECONSTRUCTION |
| GRASS BOULEVARD |
| TREES, LIGHTS, BENCHES & TRASH RECEPTACLES |
| CONCRETE CURB & GUTTER, INSIDE ONLY |
| DITCHING, NO STORM SEWER |
| ACCESS MANAGEMENT ELEMENTS |
| 10' WIDE BIT. BIKE PATH, BOTH SIDES |
| BITUMINOUS & AGGREGATE SHOULDERS |
| BOULEVARD & OFF-CURB IRRIGATION |
| BURY OVERHEAD UTILITIES |

-PLACEMENT AND SIZE OF PROPOSED TREES SHALL BE REVIEWED DURING THE PROJECT DESIGN PHASE TO MEET CLEAR ZONE REQUIREMENTS.
 -PROPOSED STREETLIGHTS SHALL HAVE BREAKAWAY FOUNDATIONS THAT MEET MDOT REQUIREMENTS.

FIGURE 5.2
 DITCH CROSS SECTION, NO STORM SEWER
 COMPLETE STREETSCAPE

PROJECT PEDESTRIAN
 SOUTH OTSEGO AVENUE-ALTERNATIVE No.2
 CITY OF GAYLORD
 OTSEGO COUNTY, MICHIGAN





* ALTERNATIVE No.3 DESCRIPTION

| |
|--|
| TOTAL STREET RECONSTRUCTION |
| GRASS BOULEVARD |
| TREES, LIGHTS, BENCHES & TRASH RECEPTACLES |
| CONCRETE CURB & GUTTER, INSIDE ONLY |
| STORM WATER STORAGE IN BOULEVARD |
| ACCESS MANAGEMENT ELEMENTS |
| 10' WIDE BIT. BIKE PATH, BOTH SIDES |
| BITUMINOUS & AGGREGATE SHOULDERS |

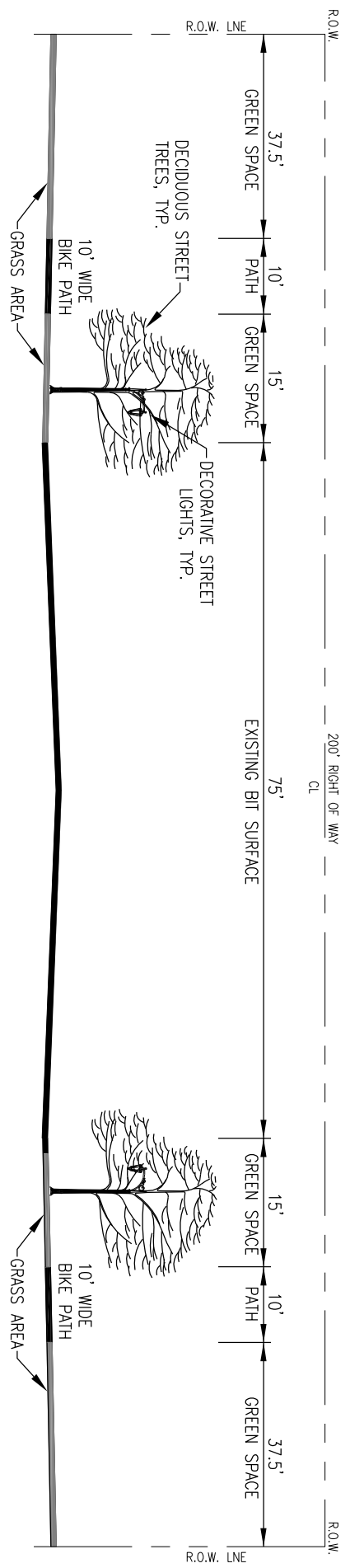
* DESIGN WOULD REQUIRE ANALYSIS OF EXISTING SANITARY SEWER AND WATER MAIN ELEVATIONS PRIOR TO LOWERING THE BOULEVARD AREA FOR STORM WATER STORAGE. HOWEVER, AT THE OCTOBER 6, 2003 PUBLIC MEETING, THIS ALTERNATE WAS REMOVED FROM CONSIDERATION BECAUSE OF STORM WATER STORAGE IN THE CENTER BOULEVARD.

-PLACEMENT AND SIZE OF PROPOSED TREES SHALL BE REVIEWED DURING THE PROJECT DESIGN PHASE TO MEET CLEAR ZONE REQUIREMENTS.
 -PROPOSED STREETLIGHTS SHALL HAVE BREAKAWAY FOUNDATIONS THAT MEET MDOT REQUIREMENTS.

FIGURE 5.3
 CENTER MEDIAN STORM WATER STORAGE
 COMPLETE STREETScape

PROJECT PEDESTRIAN
 SOUTH OTSEGO AVENUE-ALTERNATIVE No.3
 CITY OF GAYLORD
 OTSEGO COUNTY, MICHIGAN





ALTERNATIVE No.4 DESCRIPTION

| |
|--|
| NO STREET RECONSTRUCTION |
| MODERATE APPROACH |
| TREES, LIGHTS, BENCHES & TRASH RECEPTACLES |
| ACCESS MANAGEMENT ELEMENTS |
| REPLACE ALL DRIVEWAYS |
| 10' WIDE BIT, BIKE PATH, BOTH SIDES |
| MAKE USE OF EXISTING DITCHING |
| ROADSIDE IRRIGATION |
| NO WORK TO OVERHEAD UTILITIES |

-PLACEMENT AND SIZE OF PROPOSED TREES SHALL BE REVIEWED DURING THE PROJECT DESIGN PHASE TO MEET CLEAR ZONE REQUIREMENTS.
 -PROPOSED STREETLIGHTS SHALL HAVE BREAKAWAY FOUNDATIONS THAT MEET MDOT REQUIREMENTS.

FIGURE 5.4
 NO STREET WORK, STREETScape & ACCESS MANAGEMENT
 COMPLETE STREETScape

PROJECT PEDESTRIAN
 SOUTH OTSEGO AVENUE-ALTERNATIVE No.4
 CITY OF GAYLORD
 OTSEGO COUNTY, MICHIGAN



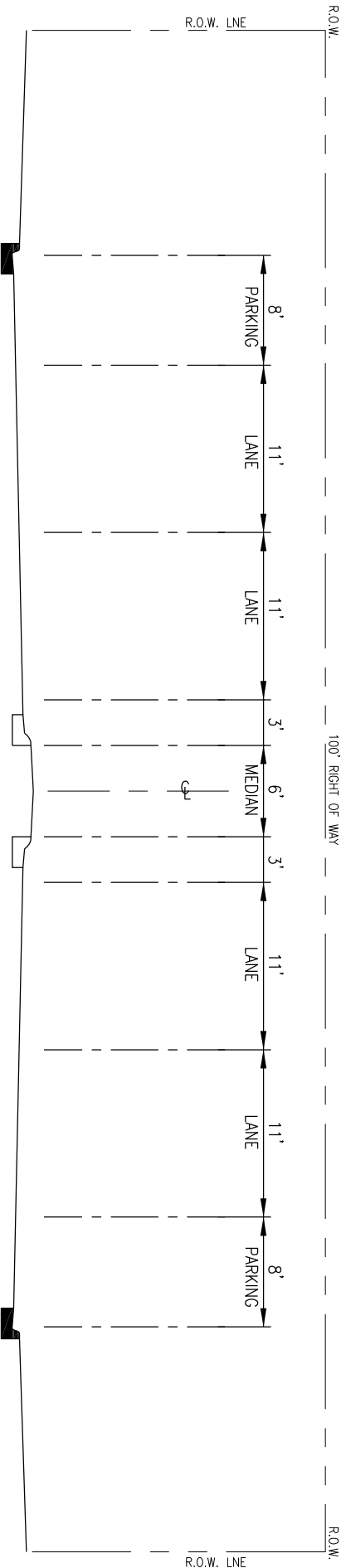


FIGURE 5.5

PROJECT PEDESTRIAN
MAIN STREET ALTERNATIVE-DOWNTOWN
CITY OF GAYLORD
OTSEGO COUNTY, MICHIGAN



Opinions of Probable Project Costs – South Otsego Avenue Alternatives

Opinions of probable project costs for the three remaining South Otsego Avenue alternatives were developed. Cost opinions include construction costs, a construction contingency allowance and design and construction engineering costs. Costs outlined in this master plan are based upon 2005 bidding experience for similar work elements and should be adjusted to reflect future cost escalation factors. Table 5.1 below provides a summary of the project costs; detailed cost estimates are included in Appendix A.

| Alternative No. | Description | Estimated Project Cost |
|------------------------|----------------------------|-------------------------------|
| 1 | Total Reconstruction | \$7,250,000 |
| 2 | Ditch Cross Section | \$6,200,000 |
| 3 | Median Storm Water Storage | Not Considered |
| 4 | Streetscape/Access Mgmt | \$2,950,000 |

Selected Alternative for Implementation

Alternative No.'s 1, 2 and 4 were selected by the project team to be presented for public comment at a second series of public meetings scheduled in October, 2003. The consensus of the project team was that of these three, Alternative No. 1 was the preferred choice.

Figures 5.6 through 5.12, included in Appendix A, were prepared for presentation at the October, 2003 meetings. The Figures illustrate Alternative No. 1 elements applied over the South Otsego Avenue project area.

IDENTIFICATION/EVALUATION OF ALTERNATIVES - MAIN STREET

In response to the discussions at the August 20, 2004 meeting, the *Project Pedestrian* team developed the following alternatives for the Main Street corridor:

Alternative No. 1: Place permanent medians in the center turn lane at Court and Oak Avenues as pedestrian refuge islands. Place curb bump outs (with curb cuts) at the snowmobile crossing to reduce the total crossing distance and improve signage for the crossing. Extend streetscape elements along East Main Street to assist in traffic calming. The streetscape elements shall include streetlights (with outlets) along both sides of Main Street and electrical conduit, decorative trees (no twinkle lights), new concrete driveways & sidewalk and restoration along the south side of Main Street. Irrigation is not included along East Main Street. The cross section depicted in Figure 5.5 on page 5-10 illustrates the refuge island proposed in the Downtown area that is part of this alternative.

Alternative No. 2: Place a movable median in the center turn lane at Court Avenue for a pedestrian refuge island.

Alternative No. 3: Review signalization, existing striping, signage and possibly place a flashing light sign at the Railway snowmobile crossing. No other work tasks or construction would be considered.

Subsequent consideration of Alternative No. 2 by the project team brought to light concerns that a moveable median could be very confusing to motorists and would not be practical. It was the consensus that this alternative be eliminated from further consideration.

Opinions of Probable Project Costs – Main Street Alternatives

An opinion of probable project costs was developed for Alternative No. 1 only. The cost opinion includes construction costs, a construction contingency allowance and design and construction engineering costs. Costs outlined in this master plan are based upon 2005 bidding experience for similar work elements and should be adjusted to reflect future cost escalation factors. Table 5.2 on the following page provides a summary of the project cost for Alternative No.1; a detailed cost estimate is included in Appendix B.

| Table 5.2 Project Cost Summary Main Street Improvements | | |
|--|--|-----------------------------------|
| Alternative No. | Description | Estimated Project Cost |
| 1 | Pedestrian Safety Improvements & extension of Streetscape Elements | \$360,000 |

Selected Alternative for Implementation

The project team elected to present all three alternatives for public comment at a second series of public meetings scheduled in October, 2003. However, the consensus of the project team was that Alternative No. 1 was the preferred choice for the Main Street Corridor.

Figures 5.13 through 5.15, included in Appendix B, were prepared for presentation at the October, 2003 meetings. The Figures illustrate Alternative No. 1 elements applied over the Main Street project area.

DRAFT MASTER PLAN PUBLIC COMMENT

The *Project Pedestrian* team held the second set of public meetings October 6 and October 7, 2003 to review the alternatives, related plans and cost opinions developed in response to the August 20th meeting. The October meetings were held at the M-TEC Center in Gaylord. Attendance improved from the first set of meetings and a similar agenda was followed: the first night dedicated to the South Otsego Avenue area and the second evening focusing on the Main Street area.

South Otsego Avenue Corridor

The three alternatives were reviewed in a large group setting. It was noted that the team elected to eliminate Alternative No.3 from further consideration because of the storm water storage in the center median area.

The group agreed that Alternative No. 1 was the preferred option, even though it would be the most expensive. This alternative fulfills the goals set for the South Otsego Avenue project area.

The proposed access management driveway closures or combinations were also reviewed. There was concern expressed that some proposed driveway closures or combinations might not be appropriate and that the crossovers in the medians may not be located correctly. The team explained that this master plan is a conceptual plan of how Alternative No. 1 may look. Specific design elements would be addressed in the preliminary and final design phases of the project.

The preliminary opinion of probable project cost for Alternative No.1 (\$7,250,000) was discussed. It was noted that Alternative No.'s 2 and 4 may also be options, based on the availability of funding for the improvements. Several property owners expressed concern regarding funding of the proposed improvements for properties along South Otsego Avenue (in the project area) are already part of a special assessment district for water and sewer infrastructure installed in 1996. Many property owners could not afford another special assessment and remain in business. The City assured the property owners that they will be innovative in securing funding of the improvements and would do everything in their power not to create another special assessment district to pay for these improvements.

Main Street Corridor

All three alternatives for Main Street were presented and reviewed in a large group setting. The group agreed that Alternative No.1 was the preferred option. The proposed





pedestrian refuge islands at Court and Oak Avenues would greatly improve pedestrian safety in this area. The proposed curb bulb out at the Lake State Railway and signage improvements would improve snowmobile safety in this area as well.

Traffic calming (reducing the speed limit) along this project route was discussed in detail. The speed limit in this area is transitioning from 50 mph at the Otsego Club which is east of the project area, to 40 mph at the eastern project boundary and finally 30 mph near the eastern 1/3 point of the project area which is also approximately the east end of the Downtown area.

A speed limit can not be arbitrarily set at the specific limit desired. A speed study must be conducted by the MSP and MDOT to set all speed limits. Once completed, the MSP and MDOT are required to set the speed limit at the 85 percentile of the average speed during the speed study. Therefore, when a speed study is conducted, the speed limit could be increased or decreased.

MDOT indicated that the goal of adding the streetscape elements would be to create a “pillar effect” on both sides of the roadway that would naturally slow down motorists and provide traffic calming. Once the streetscape work is completed, the City of Gaylord should send a letter to MDOT requesting a speed evaluation in the project area. After the evaluation is complete, MDOT would then request a MSP speed study with hope of either reducing the current speed limit(s) or pushing out the speed zones from the central business district.

No new driveways onto Main Street should be approved east of the Downtown area as a means to address access management. Access should be available from the rear of the properties.

Additional Follow Up Meetings

After the second set of public meetings, some members of the Project Team met with several property owners along the south end of the South Otsego Avenue project area during October 2003. Minor modifications were made based on input from these owners.

Further evaluation of the Main Street Alternative No. 1 proposed re-striping of the east end of Main Street from four lanes down to three and incorporating a bike lane along each curb line. The three-lane section would have the same, if not more capacity, as the four-lane section does in this area now because of the frequent left turns made in this project area. In addition to the re-striping, the proposed streetlights and trees added in this area would also give motorists a “tight roadway feel” that would naturally slow vehicles down.

The project team met February 6, 2004 for a final follow-up and review of the draft master plan. Minor modifications were made to the north end of South Otsego Avenue,

including the recommendation to realign north of McCoy Road to avoid the need for additional right-of-way. This recommendation will be revisited during the design phase and revised as necessary.

The team reviewed traffic calming measures on East Main Street relative to streetscape elements in detail. There was serious public concern of how the speed limit could be reduced in this area at the last set of public meetings. MDOT reiterated that the goal of the streetscape elements would be to create a “pillar effect” on both sides of the roadway that would naturally slow down motorists. When the streetscape work is completed, the City of Gaylord should send a letter to MDOT requesting a speed evaluation in the project area. Once the evaluation is complete, MDOT would then request a MSP speed study with hope of either reducing the current speed limit(s) or pushing out the speed zones from the central business district.

In spring of 2004, DLZ of Michigan, an engineering consultant engaged by MDOT and NEMCOG, completed the East-West I-75 Crossing Study for the Gaylord area. This study recommended as one option, “Compact Urban Round-A-Bouts” for the Main Street/Otsego and Main Street/Center intersections. The project team discussed this concept and team members generally agreed that the round-a-bouts would be an innovative and unique feature for the downtown Gaylord area. Consequently, these improvements were incorporated into the Main Street Alternative No.1 plan (but later removed).

FINAL MASTER PLAN DEVELOPMENT

The *Project Pedestrian* team held the final public meeting June 7, 2004 to finalize the draft final master plan. This third set of meetings was combined into one public meeting that discussed both project areas.

The proposed South Otsego Avenue Alternative No. 1 was reviewed. Comments were solicited from attendees, including several adjacent property owners in attendance for the first time. The elements outlined for Alternative No. 1 were unchanged as a result of this meeting.

The Main Street Alternative No.1 was also reviewed. The “Compact Urban Round-A-Bouts” concept was discussed in detail with those in attendance. It was explained that the traffic signals at Main Street/Otsego Avenue and Main Street/Center Avenue would be removed in favor of the compact round-a-bouts with yield signs only. The public commented that major changes in the Downtown area such as these would definitely put the City of Gaylord on the map. If the round-a-bouts do become a reality, and function properly, the City should also consider a round-a-bout at the Main Street/Maple Avenue intersection in the future.

There may be limitations to implementing the round-a-bout concept, most significantly the distance from the curb & gutter to the existing building lines. This concern would require additional investigation during the preliminary design work. Also, as with any significant change in traffic patterns, time would be required for motorists to become comfortable with the changes.

The re-striping of East Main Street did not receive much public comment. The consensus seemed to be that the concept would be supported if the addition of the streetscape elements and re-striping would lead to traffic calming.

As a result of the discussions at this final meeting, major changes were incorporated into the final draft plan for Main Street, including the re-striping of East Main Street and the inclusion of the round-a-bouts in the Downtown area.

Gaylord DDA Review

The preferred alternative for Main Street was presented to the Gaylord DDA at their meeting July 13, 2004. The DDA indicated that the existing five-lane highway is not inviting to the Downtown area. Their goal is to make the Downtown area as inviting as possible. Round-a-bouts look very inviting but they must also provide safe crossing for pedestrians. The DDA suggested the project team verify the round-a-bouts are ADA compliant. Another concern was the number of parking spaces lost if the round-a-bouts are constructed (estimated at 24 spaces). Yet another concern is the location of the existing buildings relative to the round-a-bout curbing. There must be sufficient space to provide safety for pedestrians and motorists alike.

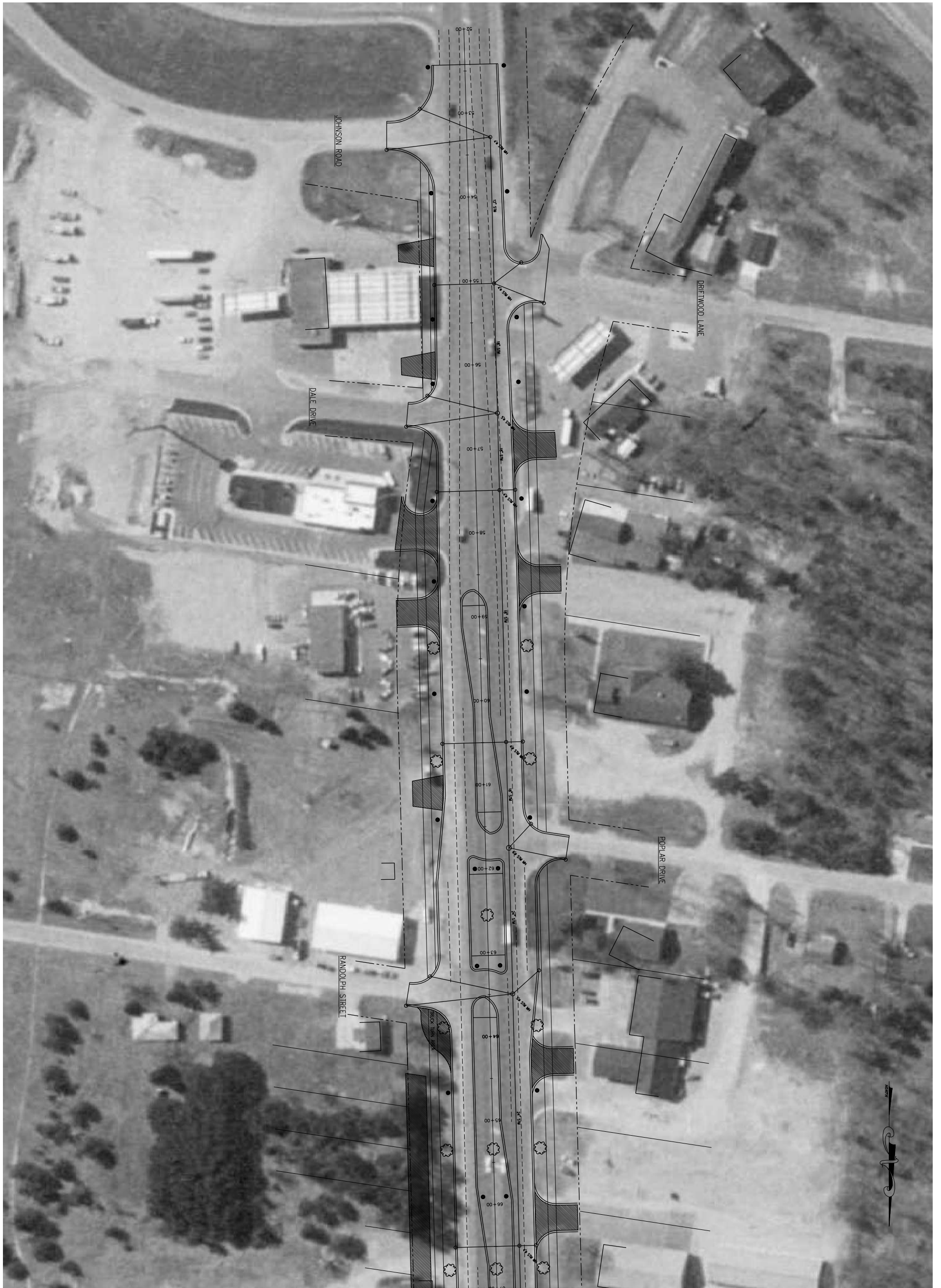
Gaylord City Council Review

The Final Draft of *Project Pedestrian* was presented to the Gaylord City Council at their meeting October 11, 2004. The document was reviewed in some detail with specific mention of the preferred alternatives for both South Otsego Avenue and Main Street. The preferred alternative for Main Street included the round-a-bouts at the Otsego Avenue and Center Avenue intersections, as well as the re-striping of East Main Street. No Council action was taken at this time for they requested time to read and review the document in detail.

Project Pedestrian was once again addressed by the City Council at their meeting December 13, 2004. The Council had the opportunity to review the document in detail since it was first presented. At the meeting, Council agreed that Alternative No. 1 for South Otsego Avenue is the preferred alternative. However, they had serious reservations in constructing the

round-a-bouts along Main Street. The Council requested that the round-a-bouts be removed from further discussion. They were still willing to consider the re-striping of East Main Street.

Then in June 2005, MDOT completed a mill and resurface project that encompassed both areas addressed in *Project Pedestrian*. The MDOT project included re-striping East Main Street to the three-lane section with bike lanes along each curb that was previously discussed. Prior to beginning the project, MDOT attended a City Council meeting to propose the re-striping and discuss it in detail. The City Council approved the re-striping. However, if the re-striping ends up not functioning as intended, MDOT agreed to revert back to the four-lane section.



MATCH LINE - STA 67+00 SEE FIGURE 5.7

| | | | | | | | | |
|-------|----------------------------------|---|--|--|--|--|------------------------------------|--|
| SHEET | FIGURE 5.6 STA 52+00 TO 67+00 | SOUTH OTSEGO AVENUE-ALTERNATIVE No.1 PROJECT PEDESTRIAN CITY OF GAYLORD | CAPITAL CONSULTANTS www.capitalconsultants.us | 725 Prudden Street Lansing, Michigan 48906 (517) 371-1200 | REVISIONS DRAFT PLAN APPROVAL COPY CITY COUNCIL APPROVAL COPY FINAL PLAN APPROVAL | DATE 02.06.04 10.08.04 07.29.05 | SCALE: 1"=50' PROJ. NO.: 03-605 | |
| | | | | 123 West Main Street, Suite 200 Gaylord, Michigan 49734 (889) 332-8157 | | DATE: JULY 2005 | | |
| | | | | 4308 Three Mile Road NW, Suite D Grand Rapids, Michigan 49544 (616) 791-1016 | | | | |
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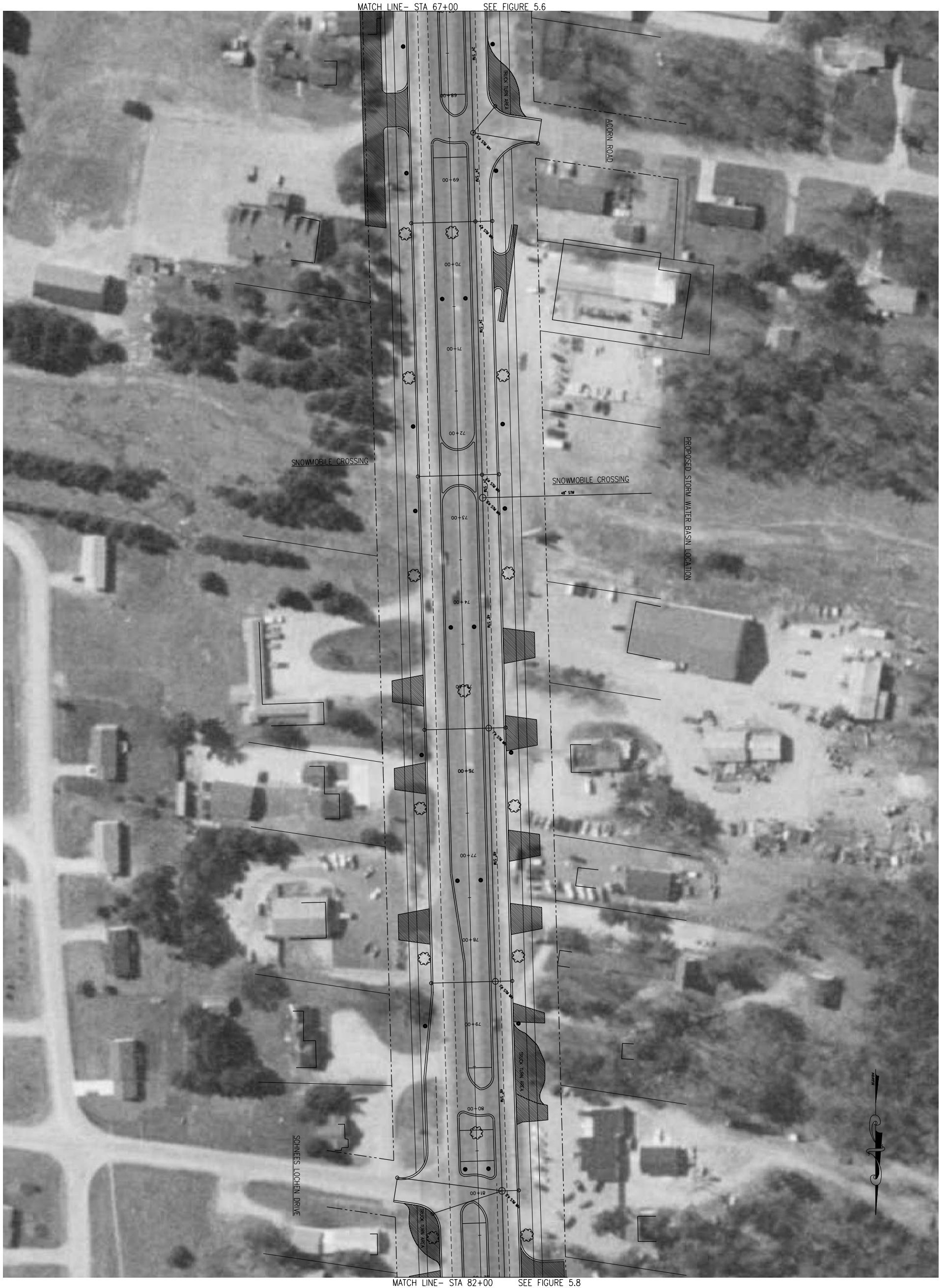


FIGURE 5.7
STA 67+00 TO 82+00

SOUTH OTSEGO AVENUE-ALTERNATIVE No.1
PROJECT PEDESTRIAN
CITY OF GAYLORD



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| DATE: | JULY 2005 |

SHEET

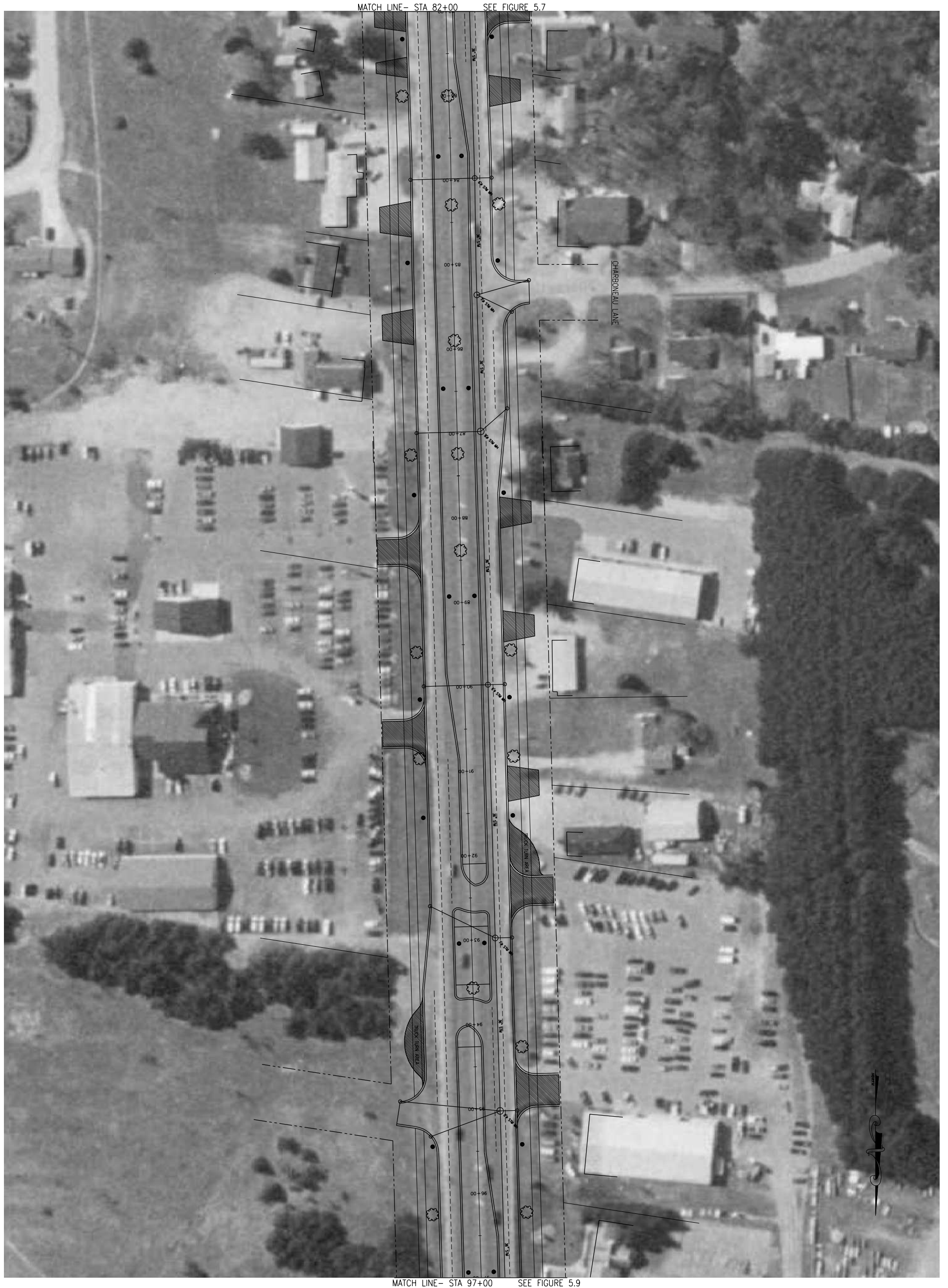


FIGURE 5.8
 STA 82+00 TO 97+00

SOUTH OTSEGO AVENUE-ALTERNATIVE No.1
 PROJECT PEDESTRIAN
 CITY OF GAYLORD

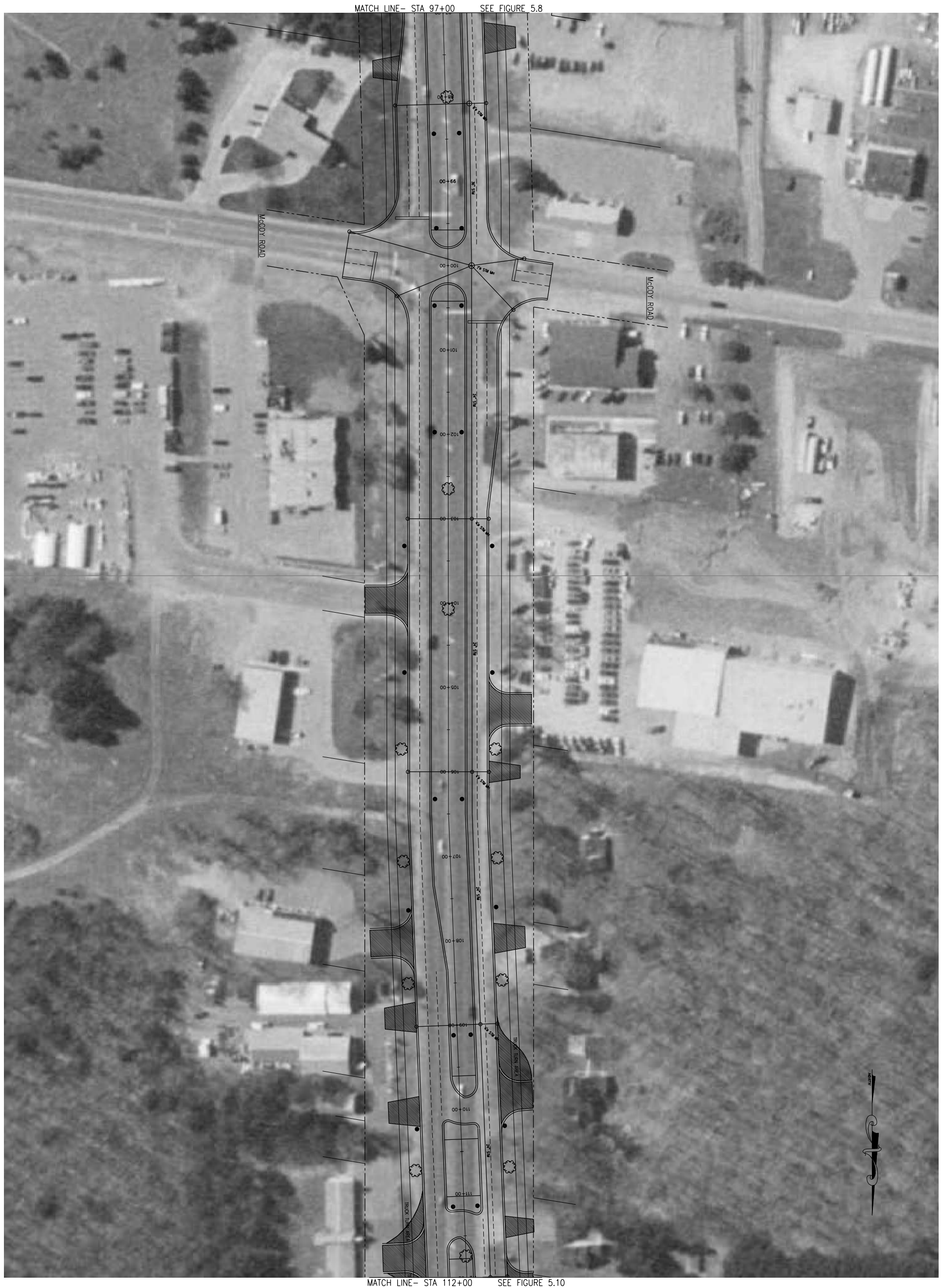


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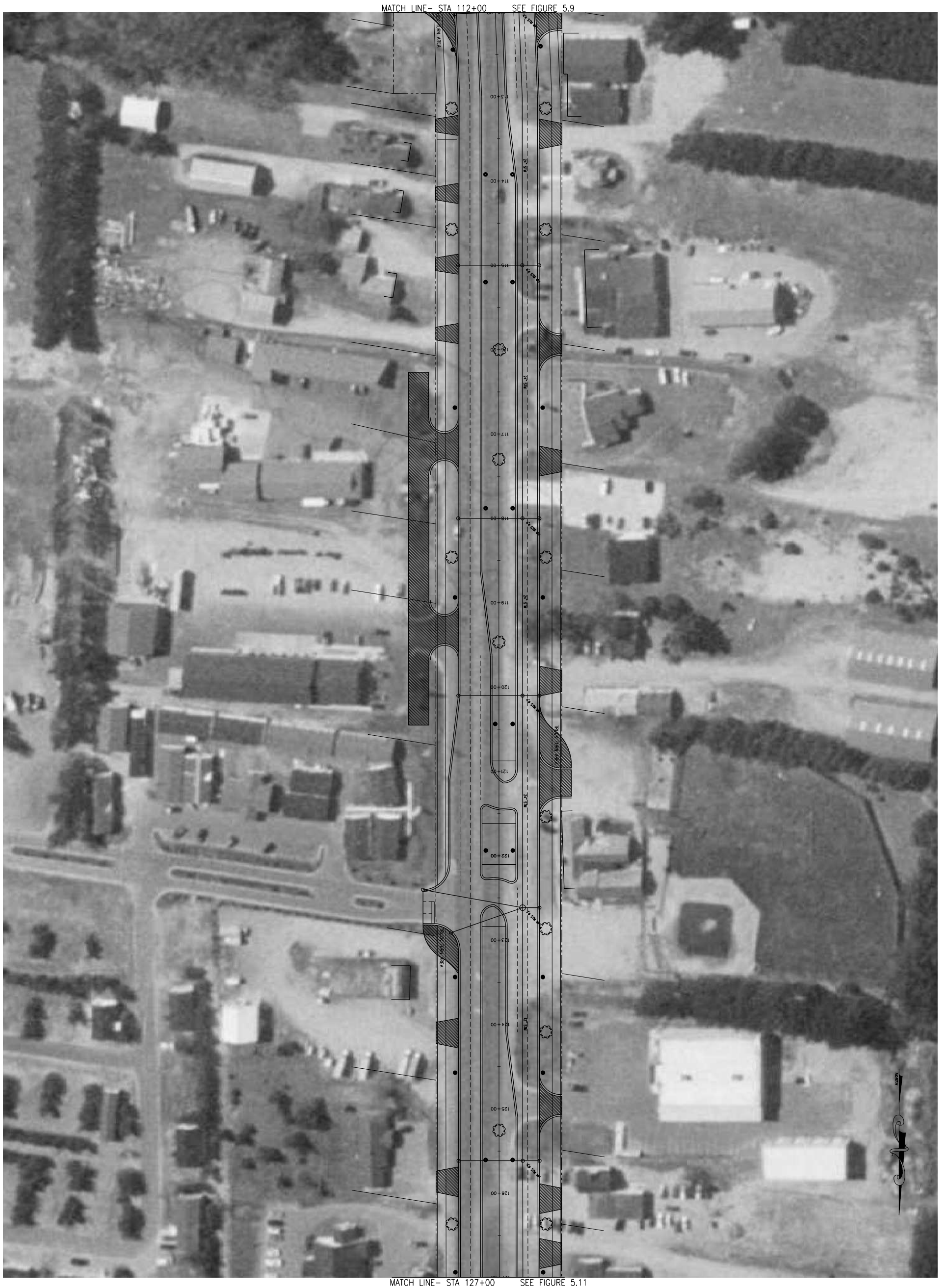
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| SHEET | FIGURE 5.9 STA 97+00 TO 112+00 | SOUTH OTSEGO AVENUE-ALTERNATIVE No.1 PROJECT PEDESTRIAN CITY OF GAYLORD | CAPITAL CONSULTANTS www.capitalconsultants.us | <table border="1"> <tr> <td>725 Prudden Street Lansing, Michigan 48906 (517) 371-1200</td> <td>REVISIONS</td> <td>DATE</td> <td>SCALE: 1"=50'</td> </tr> <tr> <td>123 West Main Street, Suite 200 Gaylord, Michigan 49734 (889) 332-8137</td> <td>DRAFT PLAN APPROVAL COPY</td> <td>02.06.04</td> <td>PROJ. NO.: 03-605</td> </tr> <tr> <td>4368 Three Mile Road NE, Suite B Grand Rapids, Michigan 49544 (616) 791-1016</td> <td>CITY COUNCIL APPROVAL COPY</td> <td>10.08.04</td> <td></td> </tr> <tr> <td></td> <td>FINAL PLAN APPROVAL</td> <td>07.29.05</td> <td>DATE: JULY 2005</td> </tr> </table> | 725 Prudden Street Lansing, Michigan 48906 (517) 371-1200 | REVISIONS | DATE | SCALE: 1"=50' | 123 West Main Street, Suite 200 Gaylord, Michigan 49734 (889) 332-8137 | DRAFT PLAN APPROVAL COPY | 02.06.04 | PROJ. NO.: 03-605 | 4368 Three Mile Road NE, Suite B Grand Rapids, Michigan 49544 (616) 791-1016 | CITY COUNCIL APPROVAL COPY | 10.08.04 | | | FINAL PLAN APPROVAL | 07.29.05 | DATE: JULY 2005 |
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MATCH LINE - STA 127+00 SEE FIGURE 5.11

FIGURE 5.10
STA 112+00 TO 127+00

SOUTH OTSEGO AVENUE-ALTERNATIVE No.1
PROJECT PEDESTRIAN
CITY OF GAYLORD

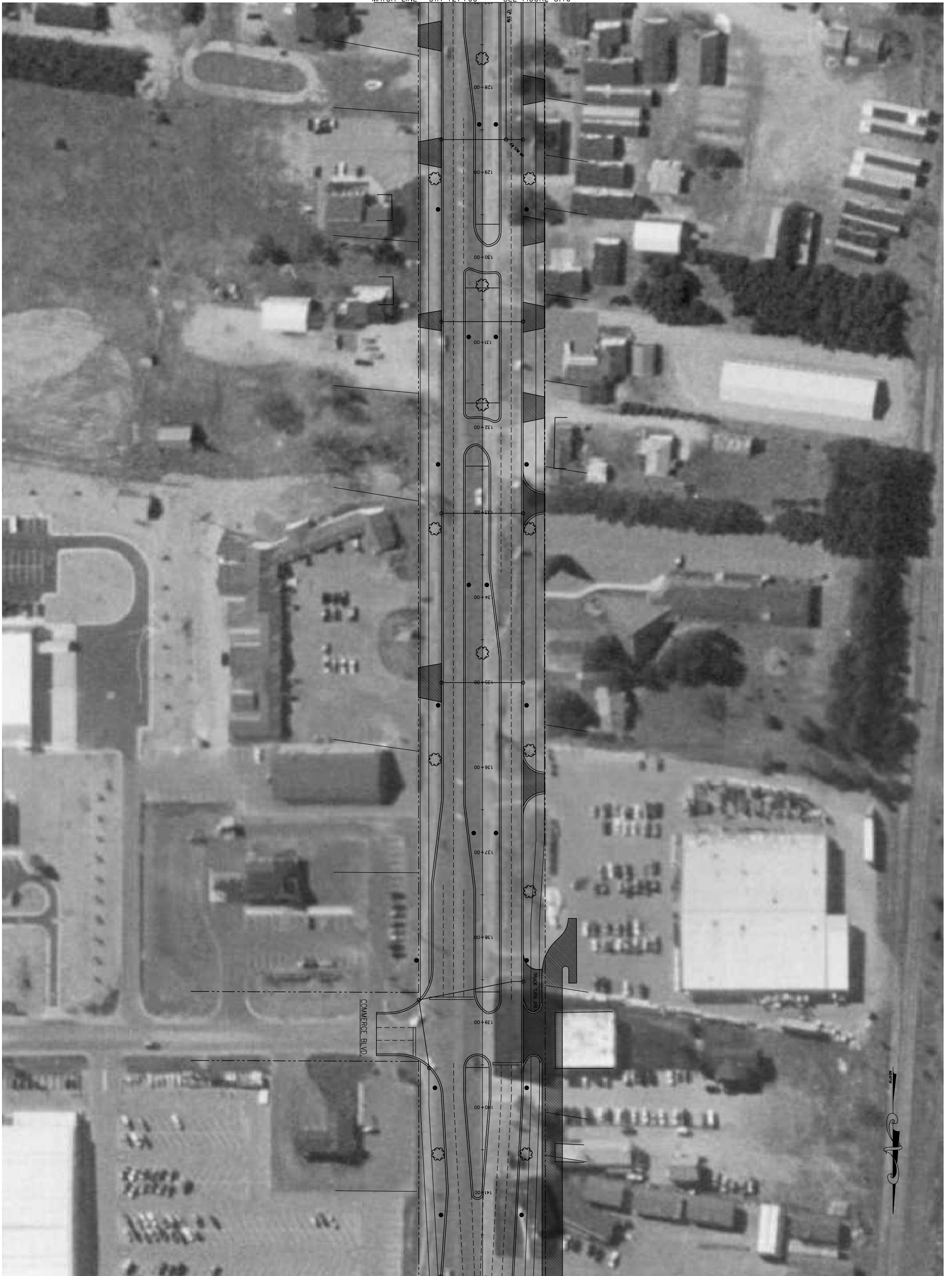


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| DATE: | JULY 2005 |

MATCH LINE - STA 127+00 SEE FIGURE 5.10



MATCH LINE - STA 142+00 SEE FIGURE 5.12

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| SHEET | FIGURE 5.11 STA 127+00 TO 142+00 | SOUTH OTSEGO AVENUE-ALTERNATIVE No.1 PROJECT PEDESTRIAN CITY OF GAYLORD | CAPITAL CONSULTANTS www.capitalconsultants.us | 725 Prudden Street Lansing, Michigan 48906 (517) 371-1200 | REVISIONS DRAFT PLAN APPROVAL COPY | DATE 02.06.04 | SCALE: 1"=50' | |
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MATCH LINE- STA 142+00 SEE FIGURE 5.11



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| SHEET | FIGURE 5.12 STA 142+00 TO 155+50 | SOUTH OTSEGO AVENUE-ALTERNATIVE No.1 PROJECT PEDESTRIAN CITY OF GAYLORD | CAPITAL CONSULTANTS www.capitalconsultants.us | 725 Prudden Street Lansing, Michigan 48906 (517) 371-1200 | REVISIONS DRAFT PLAN APPROVAL COPY | DATE 2.06.04 | SCALE: 1"=50' |
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| | | | | | | | DATE: JULY 2005 |



MATCH LINE - STA 138+00 SEE FIGURE 5.14

FIGURE 5.13
 STA 124+00 TO 138+00

MAIN STREET-ALTERNATIVE No.1
 PROJECT PEDESTRIAN
 CITY OF GAYLORD



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 Grand Rapids, Michigan 49544
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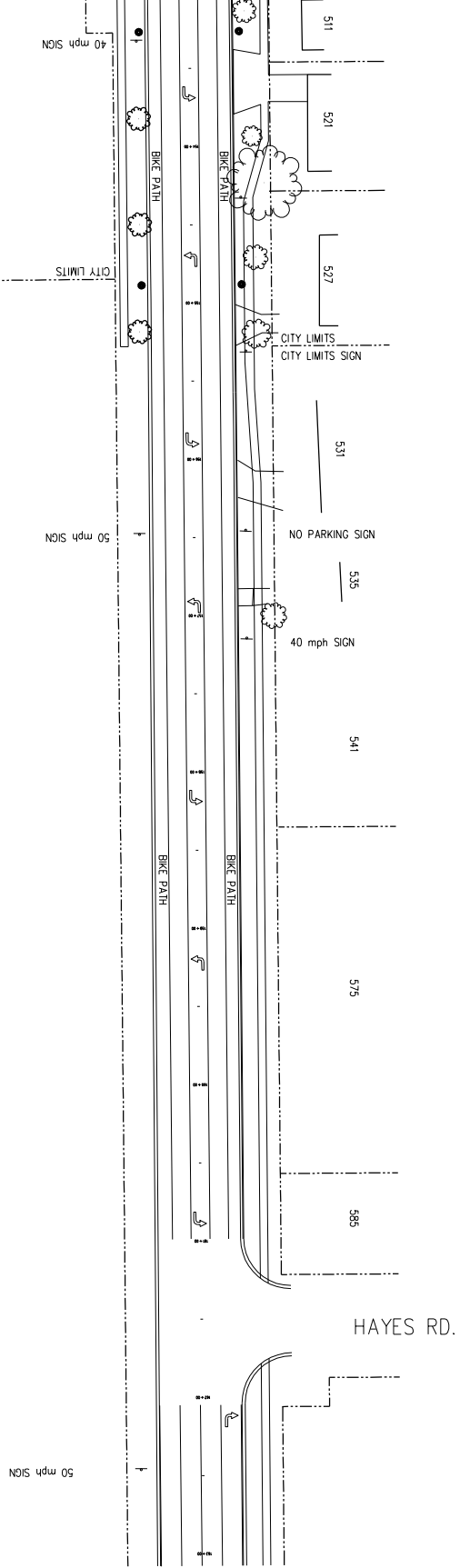
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| SHEET | FIGURE 5.14 STA 138+00 TO 153+00 | MAIN STREET-ALTERNATIVE No.1 PROJECT PEDESTRIAN CITY OF GAYLORD | CAPITAL CONSULTANTS www.capitalconsultants.us | 725 Padden Street Lansing, Michigan 48906 (517) 311-1200 | REVISIONS DRAFT PLAN APPROVAL COPY | DATE 02.06.04 | SCALE: 1"=50' |
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MATCH LINE - STA 153+00 SEE FIGURE 5.14



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| SHEET | FIGURE 5.15 STA 153+00 TO 163+00 | MAIN STREET-ALTERNATIVE No.1 PROJECT PEDESTRIAN CITY OF GAYLORD | CAPITAL CONSULTANTS www.capitalconsultants.us | <table border="1"> <tr> <td>725 Prudden Street Lansing, Michigan 48906 (517) 371-1200</td> <td>REVISIONS</td> <td>DATE</td> <td>SCALE: 1"=50'</td> </tr> <tr> <td>123 West Main Street, Suite 200 Gaylord, Michigan 49734 (889) 332-8137</td> <td>DRAFT PLAN APPROVAL COPY</td> <td>02.06.04</td> <td>PROJ. NO.: 03-605</td> </tr> <tr> <td>1308 Three Mile Road NE, Suite D Grand Rapids, Michigan 49544 (616) 791-1016</td> <td>CITY COUNCIL APPROVAL COPY</td> <td>10.08.04</td> <td></td> </tr> <tr> <td></td> <td>FINAL PLAN APPROVAL</td> <td>07.29.05</td> <td>DATE: JULY 2005</td> </tr> </table> | 725 Prudden Street Lansing, Michigan 48906 (517) 371-1200 | REVISIONS | DATE | SCALE: 1"=50' | 123 West Main Street, Suite 200 Gaylord, Michigan 49734 (889) 332-8137 | DRAFT PLAN APPROVAL COPY | 02.06.04 | PROJ. NO.: 03-605 | 1308 Three Mile Road NE, Suite D Grand Rapids, Michigan 49544 (616) 791-1016 | CITY COUNCIL APPROVAL COPY | 10.08.04 | | | FINAL PLAN APPROVAL | 07.29.05 | DATE: JULY 2005 |
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CHAPTER 6

EXECUTIVE SUMMARY

RECOMMENDATIONS AND IMPLEMENTATION

The City of Gaylord (City), in conjunction with the Michigan Department of Transportation (MDOT), has completed an effort to improve pedestrian safety, traffic access management and streetscape aesthetics to two miles of South Otsego Avenue (Old 27/Business Loop I-75) and 0.5 miles of Main Street (M-32). This effort was named “*Project Pedestrian*” because it emphasized these goals and highlighted the City’s commitment to enhance the safety of residents, workers and visitors using these major corridors.

The ***South Otsego Avenue*** project area extends from the Wisconsin/Grandview intersection at the north, continuing south to the Johnson Road intersection. Proposed improvements focus on traffic access management, extension of the downtown streetscape elements, and the addition of a mixed-use pathway to improve pedestrian accessibility.

The ***Main Street*** project area extends from the Lake State Railway tracks at the west, continuing east to the Maple Street intersection. Proposed improvements for this area focus on traffic calming measures and pedestrian safety; the evaluation of access management strategies was not included in the scope of the Main Street evaluation.

The project deliverable is this master plan document. But the master plan is not intended to be the “final design” tool to implement improvements in the area. Rather, the document will be used to research and apply for funding to complete the design and construction phases of the project. The master plan must also be used during the site plan review process for projects located within both project areas.

The recommendations outlined in this master plan provide the City with an important tool to initiate and implement a planned growth strategy for the South Otsego Avenue corridor and to upgrade pedestrian safety and implement traffic calming methods in the Main Street corridor.

Recommended Alternatives for Implementation

Several project team and public meetings were held as part of this project. The final outcome of which was a consensus that the following alternatives meet the goals of each project area and should be implemented.

South Otsego Avenue Alternative No.1: The scope involves total street reconstruction, including a concrete curb and gutter boulevard section and curbed outer lanes, storm sewer and related drainage structures, access management elements, streetscape elements and 10-foot wide bituminous mixed-use pathway on both sides of the roadway.

Irrigation would be provided in the boulevard section and the roadside greenbelts. The preliminary opinion of probable projects for this alternative is \$7,250,000.

Main Street Alternative No.1: Place permanent medians in the center turn lane at Court and Oak Avenues as pedestrian refuge islands. Place curb bump outs (with curb cuts) at the snowmobile crossing to reduce the total crossing distance and improve signage for the crossing. Extend streetscape elements along East Main Street to assist in traffic calming. The streetscape elements shall include streetlights (with outlets) along both sides of Main Street and electrical conduit, decorative trees (no twinkle lights), new concrete driveways & sidewalk and restoration along the south side of Main Street. Irrigation is not included along East Main Street. The preliminary opinion of probable projects for this alternative is \$360,000.

Recommended Pedestrian Safety Improvements

Pedestrian safety was also analyzed in both project areas. The following improvements should be implemented to improve the safety of pedestrians in both project areas:

South Otsego Avenue:

- Install marked crosswalks at the intersection of South Otsego Avenue and Commerce Boulevard. Relocate the push button in the southeast quadrant to a point near the sidewalk. Close the commercial driveway on the west side of the intersection. (The current level of pedestrian activity does not warrant a fixed-time operation for pedestrian signal indications crossing South Otsego Avenue at Commerce Boulevard).
- Increase the duration of the side street phase at the intersection of South Otsego Avenue and McCoy Road to allow pedestrians to cross South Otsego Avenue safely from edge to edge (i.e. as opposed to the mid-point of the furthest lane). It is recommended that the side street phase be extended to at least 24.5 seconds (i.e. 4 seconds reaction time plus 20.5 seconds to cross 82 feet).
- Install pedestrian indications and marked crosswalks at the intersection of South Otsego Avenue and McCoy Road.

Main Street:

- Conduct a joint speed investigation by the Michigan Department of Transportation (MDOT) and the Michigan State Police to determine if the speed limit on Main Street can be lowered to 25 mph. (This need was identified during the Public Meeting process).
- The City should send a letter requesting MDOT to conduct new traffic signal timing and operation studies looking at reducing cycle lengths and prohibiting right turn on red movements.
- Install “NO TURN ON RED” signs at the two signalized intersections to eliminate conflicts between vehicles turning on a red indication and pedestrians in the crosswalk. The City should first pass a “Resolution of Support” then send a letter of request to MDOT.
- Install a high visibility crosswalk on the east leg of Main Street at Court Avenue. A pedestrian table may be considered if the speed limit can feasibly be reduced to 25 mph. A pedestrian table is a concrete “Hump” with a flat surface on top. The crosswalk should be delineated with “Zebra” type pavement markings.
- Install a pedestrian refuge island in the center lane on the east leg of Main Street at Court Avenue. This will require the prohibition of the westbound Main Street left turn movement. The median island may be up to 150 feet long (to the east) and still allow 300 feet of queue space for left turns at Center Avenue.
- Mid-block pedestrian crossings between Court and Center Avenues should be discouraged to eliminate conflicts between pedestrians and vehicles queuing in the left turn lane. A high visibility crossing described above would encourage pedestrians to cross at the intersection.
- Install a pedestrian refuge island in the center lane on the east leg of Main Street at Oak Avenue. This will require the prohibition of the westbound Main Street left turn movement.

Recommended Snowmobile Crossing Safety Improvements

There are existing snowmobile crossings in each project area. The following safety improvements should be considered:

South Otsego Avenue:

There are several options for addressing the concerns with this crossing. The installation of standard highway warning signs in advance of the crossing, possibly with flashers and a marked crosswalk would be one option. Another option would be to reduce the crossing distance by constructing curb bulb-outs at the crossing location. A third option, subject to MDOT approval, would be the installation of a traffic signal with push button activation that could be accessed by snowmobile riders from their vehicles. The selected alternative for South Otsego Avenue reduces the crossing distance of the roadway and makes use of the center median as a refuge island for snowmobiles.

Main Street:

There are two options for addressing the concerns with this crossing. One option would be the installation of standard highway warning signs in advance of the crossing, possibly with flashers and a marked crosswalk. However, with the existing conditions along Main Street, it appears that sign spacing requirements can not be met. Therefore, the installation of warning signs may or may not be possible. The City should send a letter requesting MDOT to review the existing conditions and to consider installing the warning signs. The other option would reduce the crossing distance by constructing curb bulb-outs at the crossing location. This option would also include the installation of the standard highway warning signs (if permissible). At a minimum, the existing back of curb should be removed on both the north and south sides of Main Street at the crossing location. This "curb cut" would provide a smooth transition for snowmobiles crossing Main Street. The selected alternative for Main Street includes the curb bulb-outs (with curb cuts) that reduces the crossing distance of the roadway.

Access Management Strategy – South Otsego Avenue

The segment of South Otsego Avenue in the project area has the potential to become a principal, regional commercial district within the City. The long-term strategy would be to construct a boulevard road section because it would be an excellent solution to the current

access management issues within this corridor. The selected alternative for South Otsego Avenue has included the boulevard section. Recognizing that this long-term solution will not likely be implemented in the near future, access management upgrades that can be implemented in the near-term are identified beginning on page 4-8. These initial upgrades, for the most part, are compatible with and would be included in the implementation of the long-term boulevard road strategy.

FINAL MASTER PLAN ADOPTION

As previously indicated, the City of Gaylord, in conjunction with the Michigan Department of Transportation, has completed *Project Pedestrian*, a master plan to improve pedestrian safety, traffic access management and streetscape aesthetics on portions of two state trunk lines within the City of Gaylord. Both entities have shown their support of this effort with the documents on the following pages.

Michigan Department of Transportation

The Michigan Department of Transportation's role in the development of this master plan was critical, as MDOT, the stakeholder responsible for the state trunk lines, must ultimately implement the recommendations developed in the master plan. They were part of the decision making and "buy-in" throughout this project. The letter on the following page indicates that MDOT will refer to this document when designing roadwork projects within the City in order to accommodate the recommendations of the master plan where practical, based on current standards and practices.

Gaylord City Council

The Gaylord City Council has reviewed the contents of this master plan and offers the following "Resolution of Support" for this document.

May 26, 2005

Joe Duff
City Manager
City of Gaylord
225 West Main Street
Gaylord Michigan 49735

Dear Mr. Duff:

The Michigan Department of Transportation (MDOT) commends the City of Gaylord for developing a master plan for pedestrian facilities. MDOT recognizes the importance of creating a transportation system that is accessible, inviting, and safe for pedestrians.

This master plan, developed with input from local officials and the general public, will be an excellent resource for future projects in the Gaylord area. We will refer to this document when designing roadwork projects in the Gaylord area in order to accommodate the recommendations of the study where practicable, based on current standards and practices.

Recently our organizations worked together on converting M-32 on the east side of the city from four lanes to three lanes in an effort to reduce vehicular crashes and improve pedestrian safety. Also, on-street parking along M-32 downtown was modified in order to improve sight distance for vehicles and pedestrians at intersections.

We look forward to maintaining this level of cooperation in regards to making the City of Gaylord safe and efficient for all modes of transportation.

Sincerely,

Hilary L. Owen
Development Engineer
GRAYLING TRANSPORTATION SERVICE CENTER
989-344-1802

HLO:fb

APPENDIX A

SOUTH OTSEGO AVENUE DATA

PROJECT PEDESTRIAN

Engineer's Opinion of Costs

Project Number: 03605.1-20
Estimate Number: 1
Project Type: Miscellaneous
Location: City of Gaylord

Project Engineer: Kevin Makarewicz
Date Created: 1/26/2004
Fed/State #:
Fed Item:
Control Section:

Description: Project Pedestrian
 South Otsego Avenue - Alternative No. 1

| Line | Pay Item | Description | Quantity | Units | Unit Price | Total | |
|------|----------|---------------------------------|--------------|-------|------------|--------------|--------------|
| 0001 | 1000001 | Mobilization, Max. _____ | \$162,500.00 | 1.00 | LS | \$162,500.00 | \$162,500.00 |
| 0002 | 2030011 | Dr Structure, Rem | 12.00 | Ea | \$400.00 | \$4,800.00 | |
| 0003 | 2030015 | Sewer, Rem, Less than 24 inch | 357.00 | Ft | \$6.00 | \$2,142.00 | |
| 0004 | 2040006 | Curb and Gutter, Rem | 9,710.00 | Ft | \$3.25 | \$31,557.50 | |
| 0005 | 2057002 | _ Grading, Bicycle Path | 196.00 | Sta | \$1,000.00 | \$196,000.00 | |
| 0006 | 2057002 | _ Machine Grading, Modified | 104.00 | Sta | \$3,500.00 | \$364,000.00 | |
| 0007 | 3020016 | Aggregate Base, 6 inch | 35,175.00 | Syd | \$3.50 | \$123,112.50 | |
| 0008 | 3020020 | Aggregate Base, 8 inch | 76,420.00 | Syd | \$4.00 | \$305,680.00 | |
| 0009 | 4027001 | _ Sewer, Storm, 12 inch | 6,335.00 | Ft | \$20.00 | \$126,700.00 | |
| 0010 | 4027001 | _ Sewer, Storm, 18 inch | 675.00 | Ft | \$25.00 | \$16,875.00 | |
| 0011 | 4027001 | _ Sewer, Storm, 24 inch | 3,370.00 | Ft | \$35.00 | \$117,950.00 | |
| 0012 | 4027001 | _ Sewer, Storm, 36 inch | 1,905.00 | Ft | \$50.00 | \$95,250.00 | |
| 0013 | 4027001 | _ Sewer, Storm, 48 inch | 1,020.00 | Ft | \$65.00 | \$66,300.00 | |
| 0014 | 4030000 | Dr Structure, 24 inch dia | 88.00 | Ea | \$800.00 | \$70,400.00 | |
| 0015 | 4030005 | Dr Structure, 48 inch dia | 16.00 | Ea | \$1,500.00 | \$24,000.00 | |
| 0016 | 4030010 | Dr Structure, 60 inch dia | 4.00 | Ea | \$2,300.00 | \$9,200.00 | |
| 0017 | 4030015 | Dr Structure, 72 inch dia | 5.00 | Ea | \$2,800.00 | \$14,000.00 | |
| 0018 | 4030051 | Dr Structure Cover | 57,150.00 | Lb | \$1.50 | \$85,725.00 | |
| 0019 | 4030052 | Dr Structure Cover, Adj, Case 1 | 58.00 | Ea | \$300.00 | \$17,400.00 | |
| 0020 | 4030053 | Dr Structure Cover, Adj, Case 2 | 20.00 | Ea | \$350.00 | \$7,000.00 | |
| 0021 | 4030064 | Dr Structure, Tap, 12 inch | 15.00 | Ea | \$500.00 | \$7,500.00 | |
| 0022 | 4037050 | _ Dr Structure, 84 inch | 6.00 | Ea | \$3,800.00 | \$22,800.00 | |
| 0023 | 4037050 | _ Dr Structure, 96 inch | 4.00 | Ea | \$4,800.00 | \$19,200.00 | |

| Line | Pay Item | Description | Quantity | Units | Unit Price | Total |
|------|----------|--|------------|-------|--------------|--------------|
| 0024 | 5020031 | HMA, 3C | 12,610.00 | Ton | \$35.00 | \$441,350.00 |
| 0025 | 5020032 | HMA, 4C | 8,410.00 | Ton | \$35.00 | \$294,350.00 |
| 0026 | 5020035 | HMA, 36A | 1,955.00 | Ton | \$30.00 | \$58,650.00 |
| 0027 | 5020061 | HMA Approach | 2,870.00 | Ton | \$55.00 | \$157,850.00 |
| 0028 | 8020038 | Curb and Gutter, Conc, Det F4 | 41,060.00 | Ft | \$14.00 | \$574,840.00 |
| 0029 | 8110110 | Pavt Mrkg, Waterborne, 4 inch, White | 9,640.00 | Ft | \$0.15 | \$1,446.00 |
| 0030 | 8110111 | Pavt Mrkg, Waterborne, 4 inch, Yellow | 5,905.00 | Ft | \$0.15 | \$885.75 |
| 0031 | 8117001 | _ Pavt Mrkg, Polyurea, 24 inch, Stop Bar | 440.00 | Ft | \$8.00 | \$3,520.00 |
| 0032 | 8117001 | _ Pavt Mrkg, Polyurea, 6 inch, Crosswalk | 3,445.00 | Ft | \$3.00 | \$10,335.00 |
| 0033 | 8117050 | _ Pavt Mrkg, Polyurea, Lt Turn Arrow Symbol | 21.00 | Ea | \$60.00 | \$1,260.00 |
| 0034 | 8117050 | _ Pavt Mrkg, Polyurea, Rt Turn Arrow Symbol | 14.00 | Ea | \$60.00 | \$840.00 |
| 0035 | 8117050 | _ Pavt Mrkg, Polyurea, Thru and Rt Turn Arrow Symbol | 9.00 | Ea | \$80.00 | \$720.00 |
| 0036 | 8117050 | _ Pavt Mrkg, Polyurea, Thru Arrow Symbol | 12.00 | Ea | \$60.00 | \$720.00 |
| 0037 | 8127051 | _ Traffic Control | 1.00 | LS | \$100,000.00 | \$100,000.00 |
| 0038 | 8157050 | _ Decorative Tree | 92.00 | Ea | \$600.00 | \$55,200.00 |
| 0039 | 8157051 | _ Landscape Beds | 1.00 | LS | \$10,000.00 | \$10,000.00 |
| 0040 | 8167011 | _ Irrigation of Green Space | 55,340.00 | Syd | \$8.25 | \$456,555.00 |
| 0041 | 8167011 | _ Slope Restoration, Modified | 77,600.00 | Syd | \$2.75 | \$213,400.00 |
| 0042 | 8190250 | Hh, Polymer Conc | 145.00 | Ea | \$600.00 | \$87,000.00 |
| 0043 | 8197001 | _ Conductor | 108,000.00 | Ft | \$1.25 | \$135,000.00 |
| 0044 | 8197001 | _ Conduit | 27,000.00 | Ft | \$8.00 | \$216,000.00 |
| 0045 | 8197001 | _ Equipment Grounding Conductor | 27,000.00 | Ft | \$1.00 | \$27,000.00 |
| 0046 | 8197050 | _ Electrical Service | 3.00 | Ea | \$2,000.00 | \$6,000.00 |
| 0047 | 8197050 | _ Service Cabinet | 3.00 | Ea | \$6,000.00 | \$18,000.00 |
| 0048 | 8197051 | _ Bury Above Ground Utilities | 1.00 | LS | \$250,000.00 | \$250,000.00 |
| 0049 | 8210010 | Monument Preservation | 3.00 | Ea | \$500.00 | \$1,500.00 |
| 0050 | 8250045 | Gate Box, Adj | 30.00 | Ea | \$150.00 | \$4,500.00 |
| 0051 | 8250095 | Hydrant, Relocate, Case 1 | 6.00 | Ea | \$1,600.00 | \$9,600.00 |
| 0052 | 8507050 | _ Decorative Bench | 16.00 | Ea | \$750.00 | \$12,000.00 |

| Line | Pay Item | Description | Quantity | Units | Unit Price | Total |
|------|----------|--------------------------------|----------|-------|-------------|--------------|
| 0053 | 8507050 | _ Decorative Trash Receptacle | 16.00 | Ea | \$550.00 | \$8,800.00 |
| 0054 | 8507050 | _ Street Light | 148.00 | Ea | \$2,000.00 | \$296,000.00 |
| 0055 | 8507050 | _ Street Light Concrete Base | 148.00 | Ea | \$425.00 | \$62,900.00 |
| 0056 | 8507050 | _ Street Light Installation | 148.00 | Ea | \$750.00 | \$111,000.00 |
| 0057 | 8507050 | _ Tree Receptacle, 3' high | 92.00 | Ea | \$275.00 | \$25,300.00 |
| 0058 | 8507051 | _ Retention Basin Construction | 1.00 | LS | \$25,000.00 | \$25,000.00 |

Estimate Total: \$5,567,613.75

30% Engineering & Contingency \$1,670,284.12

TOTAL \$7,237,897.87

PROJECT PEDESTRIAN

Engineer's Opinion of Costs

Project Number: 03605.1-20
Estimate Number: 2
Project Type: Miscellaneous
Location: City of Gaylord

Project Engineer: Kevin Makarewicz
Date Created: 1/28/2004
Fed/State #:
Fed Item:
Control Section:

Description: Project Pedestrian
 South Otsego Avenue - Alternative No. 2

| Line | Pay Item | Description | Quantity | Units | Unit Price | Total |
|------|----------|---------------------------------------|-----------|-------|--------------|--------------|
| 0001 | 1000001 | Mobilization, Max. _____ \$138,500.00 | 1.00 | LS | \$138,500.00 | \$138,500.00 |
| 0002 | 2030011 | Dr Structure, Rem | 14.00 | Ea | \$400.00 | \$5,600.00 |
| 0003 | 2030015 | Sewer, Rem, Less than 24 inch | 357.00 | Ft | \$6.00 | \$2,142.00 |
| 0004 | 2040006 | Curb and Gutter, Rem | 9,710.00 | Ft | \$3.25 | \$31,557.50 |
| 0005 | 2050005 | Ditch, Intercepting | 177.00 | Sta | \$500.00 | \$88,500.00 |
| 0006 | 2057002 | _ Grading, Bicycle Path | 196.00 | Sta | \$1,000.00 | \$196,000.00 |
| 0007 | 2057002 | _ Machine Grading, Modified | 104.00 | Sta | \$3,000.00 | \$312,000.00 |
| 0008 | 3020016 | Aggregate Base, 6 inch | 35,175.00 | Syd | \$3.50 | \$123,112.50 |
| 0009 | 3020020 | Aggregate Base, 8 inch | 82,490.00 | Syd | \$4.00 | \$329,960.00 |
| 0010 | 3070108 | Shoulder, C I I, 6 inch | 3,950.00 | Syd | \$4.50 | \$17,775.00 |
| 0011 | 4027001 | _ Sewer, Storm, 12 inch | 645.00 | Ft | \$20.00 | \$12,900.00 |
| 0012 | 4030000 | Dr Structure, 24 inch dia | 6.00 | Ea | \$800.00 | \$4,800.00 |
| 0013 | 4030005 | Dr Structure, 48 inch dia | 4.00 | Ea | \$1,500.00 | \$6,000.00 |
| 0014 | 4030051 | Dr Structure Cover | 5,000.00 | Lb | \$1.50 | \$7,500.00 |
| 0015 | 4030052 | Dr Structure Cover, Adj, Case 1 | 54.00 | Ea | \$300.00 | \$16,200.00 |
| 0016 | 4030053 | Dr Structure Cover, Adj, Case 2 | 20.00 | Ea | \$350.00 | \$7,000.00 |
| 0017 | 4030064 | Dr Structure, Tap, 12 inch | 4.00 | Ea | \$500.00 | \$2,000.00 |
| 0018 | 5020031 | HMA, 3C | 13,610.00 | Ton | \$35.00 | \$476,350.00 |
| 0019 | 5020032 | HMA, 4C | 9,080.00 | Ton | \$35.00 | \$317,800.00 |
| 0020 | 5020035 | HMA, 36A | 1,955.00 | Ton | \$30.00 | \$58,650.00 |
| 0021 | 5020061 | HMA Approach | 2,870.00 | Ton | \$55.00 | \$157,850.00 |
| 0022 | 8020038 | Curb and Gutter, Conc, Det F4 | 24,420.00 | Ft | \$14.00 | \$341,880.00 |
| 0023 | 8110110 | Pavt Mrkg, Waterborne, 4 inch, White | 9,640.00 | Ft | \$0.15 | \$1,446.00 |

| Line | Pay Item | Description | Quantity | Units | Unit Price | Total |
|------|----------|--|------------|-------|--------------|--------------|
| 0024 | 8110111 | Pavt Mrkg, Waterborne, 4 inch, Yellow | 5,905.00 | Ft | \$0.15 | \$885.75 |
| 0025 | 8117001 | _ Pavt Mrkg, Polyurea, 24 inch, Stop Bar | 440.00 | Ft | \$8.00 | \$3,520.00 |
| 0026 | 8117001 | _ Pavt Mrkg, Polyurea, 6 inch, Crosswalk | 3,445.00 | Ft | \$3.00 | \$10,335.00 |
| 0027 | 8117050 | _ Pavt Mrkg, Polyurea, Lt Turn Arrow Symbol | 21.00 | Ea | \$60.00 | \$1,260.00 |
| 0028 | 8117050 | _ Pavt Mrkg, Polyurea, Rt Turn Arrow Symbol | 14.00 | Ea | \$60.00 | \$840.00 |
| 0029 | 8117050 | _ Pavt Mrkg, Polyurea, Thru and Rt Turn Arrow Symbol | 9.00 | Ea | \$80.00 | \$720.00 |
| 0030 | 8117050 | _ Pavt Mrkg, Polyurea, Thru Arrow Symbol | 12.00 | Ea | \$60.00 | \$720.00 |
| 0031 | 8127051 | _ Traffic Control | 1.00 | LS | \$100,000.00 | \$100,000.00 |
| 0032 | 8157050 | _ Decorative Tree | 92.00 | Ea | \$600.00 | \$55,200.00 |
| 0033 | 8157051 | _ Landscape Beds | 1.00 | LS | \$10,000.00 | \$10,000.00 |
| 0034 | 8167011 | _ Irrigation of Green Space | 50,780.00 | Syd | \$8.25 | \$418,935.00 |
| 0035 | 8167011 | _ Slope Restoration, Modified | 73,045.00 | Syd | \$2.75 | \$200,873.75 |
| 0036 | 8190250 | Hh, Polymer Conc | 145.00 | Ea | \$600.00 | \$87,000.00 |
| 0037 | 8197001 | _ Conductor | 108,000.00 | Ft | \$1.25 | \$135,000.00 |
| 0038 | 8197001 | _ Conduit | 27,000.00 | Ft | \$8.00 | \$216,000.00 |
| 0039 | 8197001 | _ Equipment Grounding Conductor | 27,000.00 | Ft | \$1.00 | \$27,000.00 |
| 0040 | 8197050 | _ Electrical Service | 3.00 | Ea | \$2,000.00 | \$6,000.00 |
| 0041 | 8197050 | _ Service Cabinet | 3.00 | Ea | \$6,000.00 | \$18,000.00 |
| 0042 | 8197051 | _ Bury Above Ground Utilities | 1.00 | LS | \$250,000.00 | \$250,000.00 |
| 0043 | 8210010 | Monument Preservation | 3.00 | Ea | \$500.00 | \$1,500.00 |
| 0044 | 8250045 | Gate Box, Adj | 30.00 | Ea | \$150.00 | \$4,500.00 |
| 0045 | 8250095 | Hydrant, Relocate, Case 1 | 6.00 | Ea | \$1,600.00 | \$9,600.00 |
| 0046 | 8507050 | _ Decorative Bench | 16.00 | Ea | \$750.00 | \$12,000.00 |
| 0047 | 8507050 | _ Decorative Trash Receptacle | 16.00 | Ea | \$550.00 | \$8,800.00 |
| 0048 | 8507050 | _ Street Light | 148.00 | Ea | \$2,000.00 | \$296,000.00 |
| 0049 | 8507050 | _ Street Light Concrete Base | 148.00 | Ea | \$425.00 | \$62,900.00 |
| 0050 | 8507050 | _ Street Light Installation | 148.00 | Ea | \$750.00 | \$111,000.00 |
| 0051 | 8507050 | _ Tree Receptacle, 3' high | 92.00 | Ea | \$275.00 | \$25,300.00 |
| 0052 | 8507051 | _ Retention Basin Construction | 1.00 | LS | \$25,000.00 | \$25,000.00 |

Estimate Total: \$4,754,412.50

PROJECT PEDESTRIAN

Engineer's Opinion of Costs

Project Number: 03605.1-20
Estimate Number: 3
Project Type: Miscellaneous
Location: City of Gaylord

Project Engineer: Kevin Makarewicz
Date Created: 1/29/2004
Fed/State #:
Fed Item:
Control Section:

Description: Project Pedestrian
 South Otsego Avenue - Alternative No. 4

| Line | Pay Item | Description | Quantity | Units | Unit Price | Total | |
|------|----------|---------------------------------|-------------|-------|-------------|--------------|-------------|
| 0001 | 1000001 | Mobilization, Max. _____ | \$66,000.00 | 1.00 | LS | \$66,000.00 | \$66,000.00 |
| 0002 | 2040006 | Curb and Gutter, Rem | 4,850.00 | Ft | \$3.25 | \$15,762.50 | |
| 0003 | 2057002 | _ Grading, Bicycle Path | 196.00 | Sta | \$1,000.00 | \$196,000.00 | |
| 0004 | 3020016 | Aggregate Base, 6 inch | 35,175.00 | Syd | \$3.50 | \$123,112.50 | |
| 0005 | 4030052 | Dr Structure Cover, Adj, Case 1 | 58.00 | Ea | \$300.00 | \$17,400.00 | |
| 0006 | 4030053 | Dr Structure Cover, Adj, Case 2 | 20.00 | Ea | \$350.00 | \$7,000.00 | |
| 0007 | 5020035 | HMA, 36A | 1,955.00 | Ton | \$30.00 | \$58,650.00 | |
| 0008 | 5020061 | HMA Approach | 2,870.00 | Ton | \$55.00 | \$157,850.00 | |
| 0009 | 8020038 | Curb and Gutter, Conc, Det F4 | 3,420.00 | Ft | \$14.00 | \$47,880.00 | |
| 0010 | 8127051 | _ Traffic Control | 1.00 | LS | \$50,000.00 | \$50,000.00 | |
| 0011 | 8157050 | _ Decorative Tree | 92.00 | Ea | \$600.00 | \$55,200.00 | |
| 0012 | 8157051 | _ Landscape Beds | 1.00 | LS | \$10,000.00 | \$10,000.00 | |
| 0013 | 8167011 | _ Irrigation of Green Space | 45,250.00 | Syd | \$8.25 | \$373,312.50 | |
| 0014 | 8167011 | _ Slope Restoration, Modified | 67,450.00 | Syd | \$2.75 | \$185,487.50 | |
| 0015 | 8190250 | Hh, Polymer Conc | 145.00 | Ea | \$600.00 | \$87,000.00 | |
| 0016 | 8197001 | _ Conductor | 72,000.00 | Ft | \$1.25 | \$90,000.00 | |
| 0017 | 8197001 | _ Conduit | 18,000.00 | Ft | \$8.00 | \$144,000.00 | |
| 0018 | 8197001 | _ Equipment Grounding Conductor | 18,000.00 | Ft | \$1.00 | \$18,000.00 | |
| 0019 | 8197050 | _ Electrical Service | 3.00 | Ea | \$2,000.00 | \$6,000.00 | |
| 0020 | 8197050 | _ Service Cabinet | 3.00 | Ea | \$6,000.00 | \$18,000.00 | |
| 0021 | 8250045 | Gate Box, Adj | 30.00 | Ea | \$150.00 | \$4,500.00 | |
| 0022 | 8250095 | Hydrant, Relocate, Case 1 | 6.00 | Ea | \$1,600.00 | \$9,600.00 | |
| 0023 | 8507050 | _ Decorative Bench | 16.00 | Ea | \$750.00 | \$12,000.00 | |

| Line | Pay Item | Description | Quantity | Units | Unit Price | Total |
|------|----------|-------------------------------|----------|-------|------------|--------------|
| 0024 | 8507050 | _ Decorative Trash Receptacle | 16.00 | Ea | \$550.00 | \$8,800.00 |
| 0025 | 8507050 | _ Street Light | 148.00 | Ea | \$2,000.00 | \$296,000.00 |
| 0026 | 8507050 | _ Street Light Concrete Base | 148.00 | Ea | \$425.00 | \$62,900.00 |
| 0027 | 8507050 | _ Street Light Installation | 148.00 | Ea | \$750.00 | \$111,000.00 |
| 0028 | 8507050 | _ Tree Receptacle, 3' high | 92.00 | Ea | \$275.00 | \$25,300.00 |

Estimate Total: \$2,256,755.00

30% Engineering & Contingency \$677,026.50

TOTAL \$2,933,781.50

APPENDIX B

MAIN STREET DATA

PROJECT PEDESTRIAN

Engineer's Opinion of Costs

Project Number: 03605.1-20
Estimate Number: 3
Project Type: Miscellaneous
Location: City of Gaylord

Project Engineer: Kevin Makarewicz
Date Created: 10/8/2004
Fed/State #:
Fed Item:
Control Section:

Description: Project Pedestrian
 Main Street

| Line | Pay Item | Description | Quantity | Units | Unit Price | Total |
|------|----------|--|-----------|-------|-------------|-------------|
| 0001 | 1000001 | Mobilization, Max. _____ \$8,000.00 | 1.00 | LS | \$8,000.00 | \$8,000.00 |
| 0002 | 2040006 | Curb and Gutter, Rem | 335.00 | Ft | \$3.25 | \$1,088.75 |
| 0003 | 2040011 | Pavt, Rem | 450.00 | Syd | \$6.50 | \$2,925.00 |
| 0004 | 3020016 | Aggregate Base, 6 inch | 75.00 | Syd | \$3.50 | \$262.50 |
| 0005 | 4030052 | Dr Structure Cover, Adj, Case 1 | 1.00 | Ea | \$300.00 | \$300.00 |
| 0006 | 4037050 | _ Dr Structure, Relocate | 1.00 | Ea | \$600.00 | \$600.00 |
| 0007 | 5020061 | HMA Approach | 20.00 | Ton | \$100.00 | \$2,000.00 |
| 0008 | 6020050 | Conc Pavt, Misc, Nonreinf, 6 inch | 615.00 | Syd | \$35.00 | \$21,525.00 |
| 0009 | 8020038 | Curb and Gutter, Conc, Det F4 | 700.00 | Ft | \$14.00 | \$9,800.00 |
| 0010 | 8030002 | Sidewalk, Conc, 4 inch | 10,000.00 | Sft | \$4.00 | \$40,000.00 |
| 0011 | 8100156 | Post, Steel, 3 lb | 250.00 | Ft | \$5.00 | \$1,250.00 |
| 0012 | 8100181 | Sign, Type III B | 150.00 | Sft | \$20.00 | \$3,000.00 |
| 0013 | 8117001 | _ Pavt Mrkg, Polyurea, 6 inch, Crosswalk | 350.00 | Ft | \$3.00 | \$1,050.00 |
| 0014 | 8127051 | _ Traffic Control | 1.00 | LS | \$15,000.00 | \$15,000.00 |
| 0015 | 8157050 | _ Decorative Tree | 18.00 | Ea | \$600.00 | \$10,800.00 |
| 0016 | 8157051 | _ Landscape Beds | 1.00 | LS | \$5,000.00 | \$5,000.00 |
| 0017 | 8167011 | _ Slope Restoration, Modified | 1,895.00 | Syd | \$2.75 | \$5,211.25 |
| 0018 | 8190250 | Hh, Polymer Conc | 30.00 | Ea | \$600.00 | \$18,000.00 |
| 0019 | 8197001 | _ Bore & Jack, 4 inch, under Main St. for Elec. Connection | 75.00 | Ft | \$100.00 | \$7,500.00 |
| 0020 | 8197001 | _ Conductor | 12,000.00 | Ft | \$1.25 | \$15,000.00 |
| 0021 | 8197001 | _ Conduit | 1,700.00 | Ft | \$8.00 | \$13,600.00 |
| 0022 | 8197001 | _ Equipment Grounding Conductor | 3,000.00 | Ft | \$1.00 | \$3,000.00 |
| 0023 | 8197050 | _ Electrical Service | 1.00 | Ea | \$5,000.00 | \$5,000.00 |

| Line | Pay Item | Description | Quantity | Units | Unit Price | Total |
|------|----------|------------------------------|----------|-------|------------|-------------|
| 0024 | 8197050 | _ Service Cabinet | 1.00 | Ea | \$6,000.00 | \$6,000.00 |
| 0025 | 8250045 | Gate Box, Adj | 1.00 | Ea | \$150.00 | \$150.00 |
| 0026 | 8507050 | _ Street Light | 25.00 | Ea | \$2,000.00 | \$50,000.00 |
| 0027 | 8507050 | _ Street Light Concrete Base | 25.00 | Ea | \$425.00 | \$10,625.00 |
| 0028 | 8507050 | _ Street Light Installation | 25.00 | Ea | \$750.00 | \$18,750.00 |

Estimate Total: \$275,437.50

30% Engineering & Contingency \$82,631.25

TOTAL \$358,068.75

APPENDIX C

PUBLIC MEETING SET #1

**“Project Pedestrian”
South Otsego Avenue
City of Gaylord/MDOT
June 30, 2003**

PROBLEM AREAS

- Light on Wisconsin/Otsego
 Right turn Wisconsin to Otsego
- Main/Wisconsin Light
- Improper Drainage (Old 27 to high)
- ReMax Drive, TSC, Radio Shack
- South End Gas Station Area
 Signal? Johnson Road, Dale Drive, Ramps
- 5/3 Bank left turn onto South Otsego
- How to handle transition from I-75 to Corridor

CONCERNS

- Proposed Mall-entrance aligned with Acorn Drive
- Left turn conflicts (within existing middle lane)
- Using left turn lane as a merge lane
- Snowmobile X-ing
- Loss of Parking (within ROW)
- Loss of Signage (within ROW)
- \$\$

SOLUTIONS

- MDOT Study (currently looking at turning movements & signal timing)
 Signal timing of Main Street
- Medians? (must have enough 180 degree turns, must handle truck turning radii)
- Access Management
- Review on a parcel by parcel basis; regarding parking, etc
- Want easier access to all businesses
- Signal Timing of Commerce/Wisconsin
- Pedestrian Signals?
- Snowmobile Signal (mid-block)

STREETSCAPE ELEMENTS

- Landscape that would adapt to future land uses
- Look as commercial growth area
- “Alpine Village” & “Up North”
- More Landscape features
- Sufficient width of medians

Snow storage – irrigation
Would City maintain area?

Joint maintenance agreement w/Road Commission?

- Design standards may require construction 2X
- Correct scheduling of Streetscape & Major Road Improvements
- Location of Commercial signs
- How Much?
- Better lighting, bit path with paver accents, trees, irrigation, taller lights, double fixtures
- Tie-in theme from Downtown

ACCESS MANAGEMENT ELEMENTS

- Medians
- Service Roads
- Combine Driveways
- Space Driveways-omit left turn lock up
- “Understanding” & “Buy In”
- MDOT Program-may not be possible until 2009
- With Master Plan in place, site plan review much easier
- Don’t lose parking (but it is within MDOT ROW)
- Use the paved shoulders for additional roadway (add curb & gutter)
- Rear access to properties
- More traffic between Businesses on interior of property

OTHER

- Develop Master Plan including costs
- Look at Funding Opportunities
- 10-15 years before I-75 Crossing. What could be done in the interim?
- No signals between Grandview & Main Street
5th/4th Intersections busy, 7th too
Left at 4th on Otsego (Quick Lube) difficult
- Lighting Downtown (orange) is hard to see
- South Otsego will be the next City Commercial growth area, what do you want to see?
- Grayling example (M-72 West)
- Access Management component in City Ordinance

MODULES

- Pedestrian Paths
- Medians
- X-Sections of ROW

**“Project Pedestrian”
Main Street
City of Gaylord/MDOT
July 1, 2003**

PROBLEM AREAS

- Snowmobile X-ing @ RR
- Court intersection Pedestrian X-ings (no signal)

CONCERNS

- Mid-Block Pedestrian X-ings
- Large left turn stacking (South Otsego)
- Bump outs – Refuge Islands
- “Green” Refuge Islands
 - Removable Tree Boxes
 - Bollard Lighting
 - Irrigated
- Permanent Refuse Island east of Court and maybe west of Court (place under Solutions)

SOLUTIONS

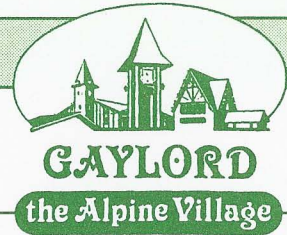
- Refuge Islands?
- Left turn arrows @ Otsego & Center
- Delete “Right Turn on Red” at both signals
- Colored/Stamped Concrete
- “Alpine Village” & “Up North”, retain atmosphere, identity

PEDESTRIAN MANAGEMENT ELEMENTS

- If Court Street blocked with refuge island, only have dedicated X-ings @ Court
- Refuge island between RR & Otsego
- “Sound Detection” part of Pedestrian Signals

TRAFFIC CALMING ELEMENTS

- “Natural Calming” coming into town from the east
- Place Trees & Streetlights farther east (for calming)



**A RESOLUTION OF SUPPORT
PROJECT PEDESTRIAN
CITY OF GAYLORD**

This resolution was offered by Council Member Johnson and supported by Council Member Nelson:

WHEREAS, the City of Gaylord, in conjunction with the Michigan Department of Transportation, launched an effort to improve pedestrian safety, traffic access management and streetscape aesthetics to 2.0 miles of South Otsego Avenue and 0.5 miles of Main Street; and,

WHEREAS, the effort was named "Project Pedestrian" because it emphasized these goals and highlights the City's commitment to enhance the safety of residents, workers and visitors using these corridors; and,

WHEREAS, the recommendations outlined in Project Pedestrian will provide the City of Gaylord with an important tool to initiate and implement a planned growth strategy for the South Otsego Avenue corridor and to upgrade pedestrian safety and implement traffic calming methods for the Main Street corridor.

NOW THEREFORE BE IT RESOLVED, that the City of Gaylord supports the selected alternatives for both project areas and would like the document to be used to research and apply for funding to complete the design and construction phases of the project. The document should also be used during the site plan review process for projects located within both project areas.


The resolution was adopted by the following vote:

Yeas: Council Member Campbell, Johnson, Mankowski, Nelson, Sharrard, Solokis and Wambold.

Nays: None.

I certify that the above resolution was adopted by the City Council of the City of Gaylord on August 22, 2005.

By: Rebecca Curtis, City Clerk



Signature

August 22, 2005
Date

