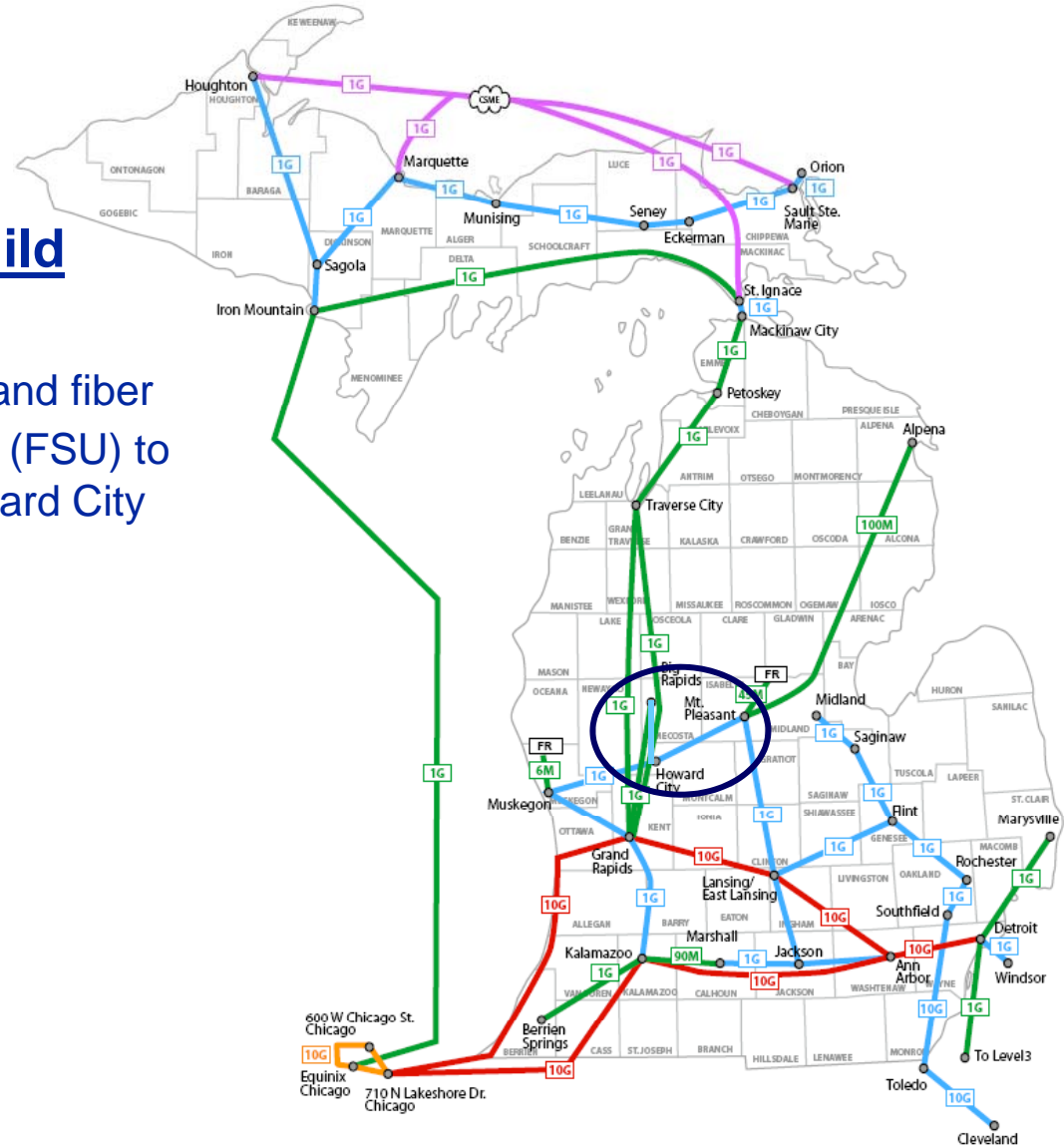


Merit Network Update

Peter J. Miller
Director of Network Operations

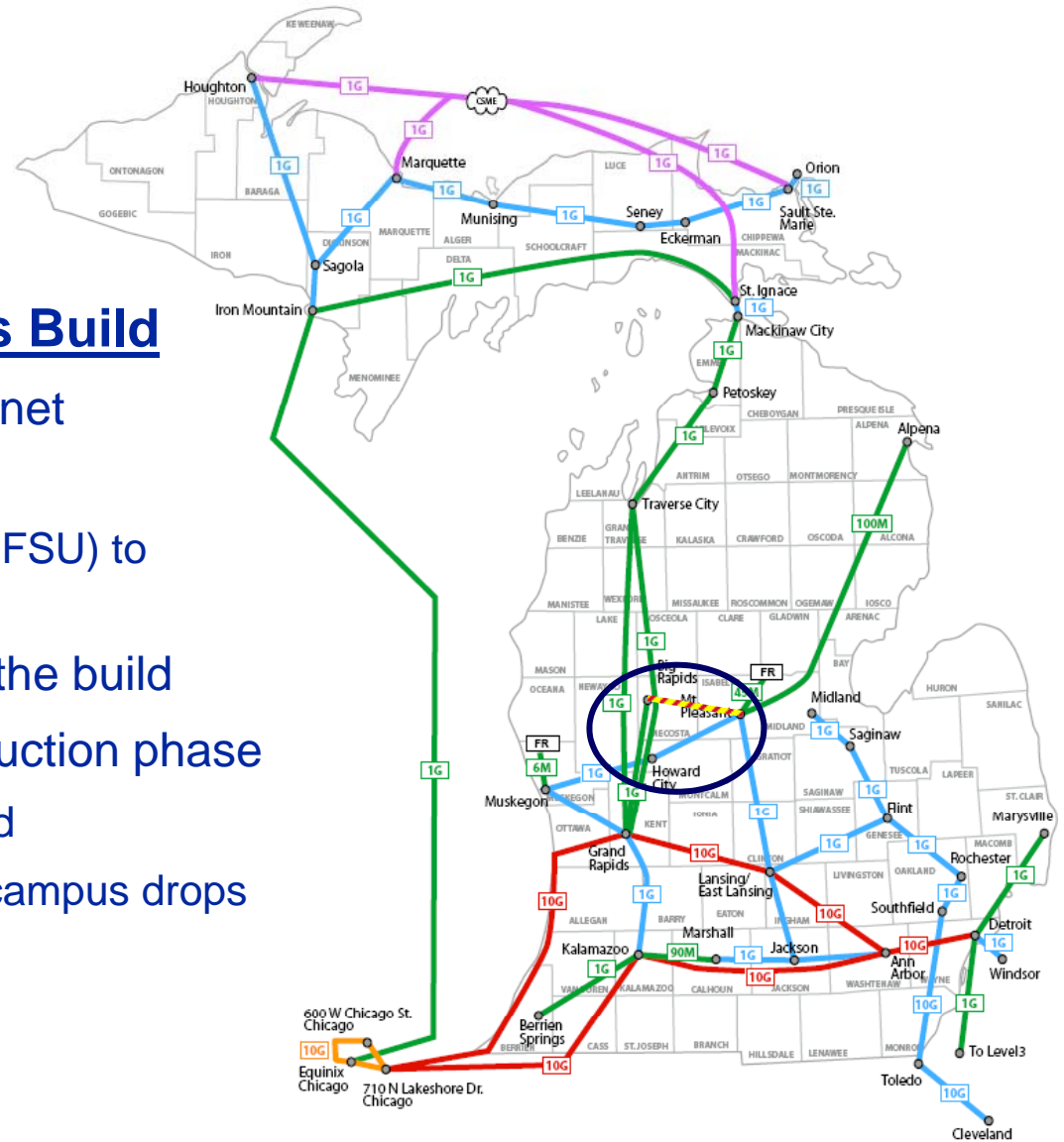
Big Rapids to Howard City Build

- This is a Merit owned fiber run
 - Approximately 23 miles of 12 strand fiber
 - North/South run from Big Rapids (FSU) to existing long haul fiber near Howard City
- Project Completed 3/24/2009



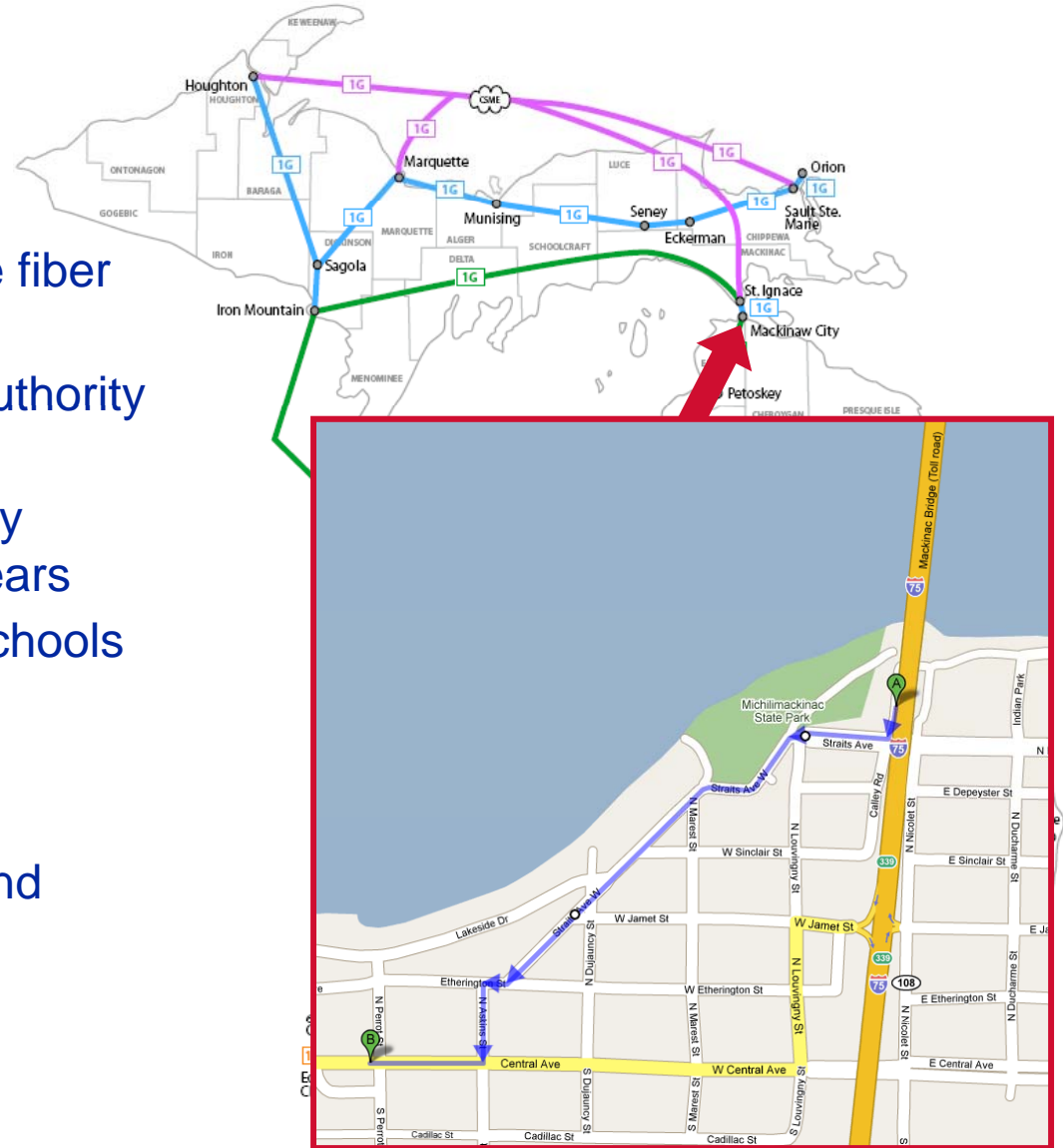
Mount Pleasant to Big Rapids Build

- Co-build with Great Lakes Comnet
 - 48 miles of fiber
 - East/West run from Big Rapids (FSU) to Mount Pleasant (CMU)
- Merit owns two fiber strands in the build
- This path is in advanced construction phase
 - Mid span construction completed
 - Currently completing end point campus drops
- Estimated Completion 5/1/2009



Mackinaw City NAP Move

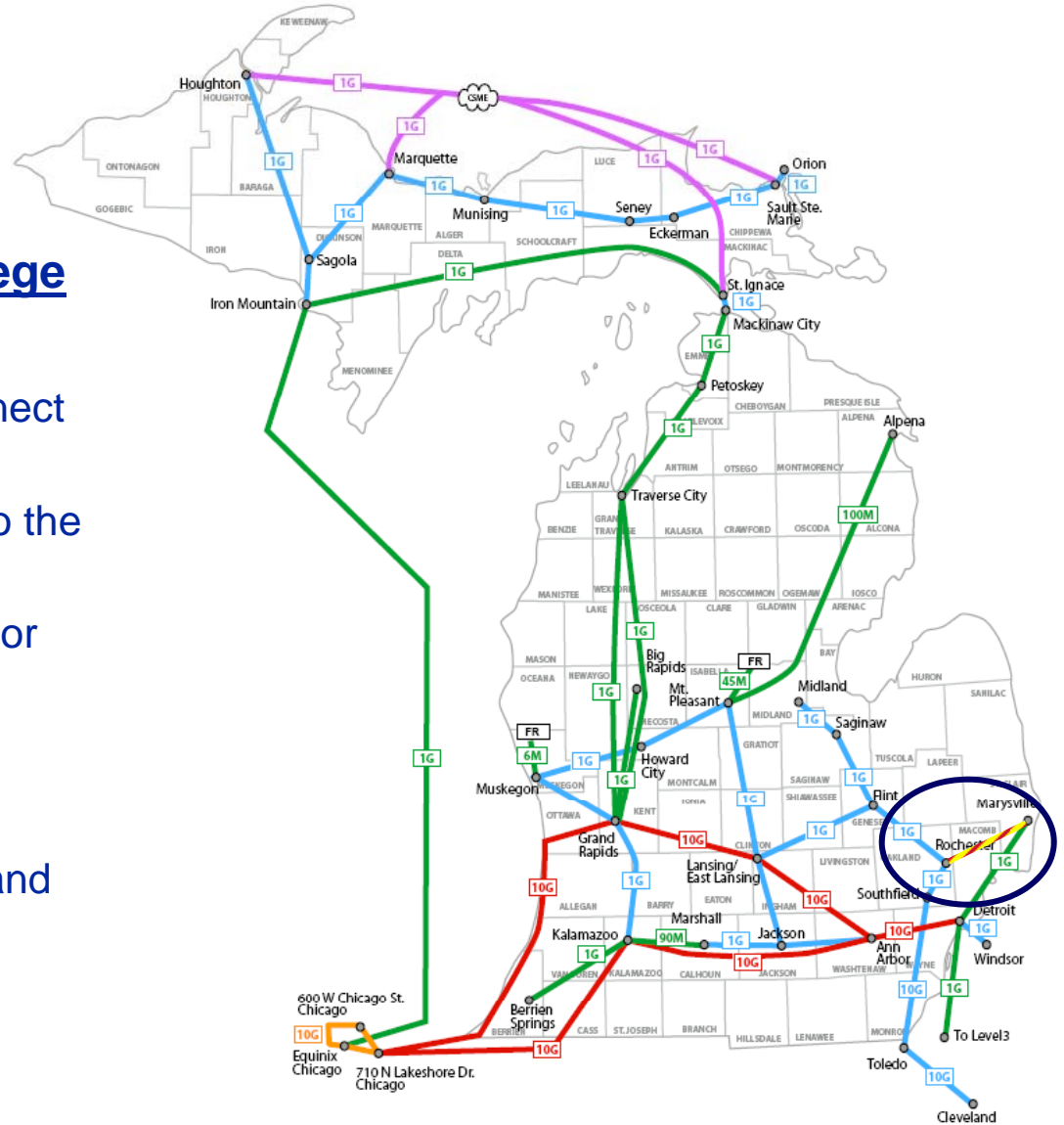
- Project has begun to move bridge fiber southern termination point
- Currently pickup fiber in Bridge Authority hut directly under bridge
- Fiber contract with bridge authority requires Merit to move within 3 years
- Selected Mackinaw City Public Schools as the co-location site
 - Contract terms agreed
 - Allows local builds into site
- Fiber construction bid tendered and accepted
 - Path is about 1 mile
- Expect to complete Sept 2009



Macomb County Community College

- Phase I Complete
 - Using SCCRESA fiber IRU to connect MCCC to Marysville NAP
 - 1gig circuit to connect Marysville to the backbone
 - 250meg circuit to connect MCCC for backup

- Phase II
 - Second build from MCCC to Oakland University in planning phase
 - Estimated Completion 5/1/2009

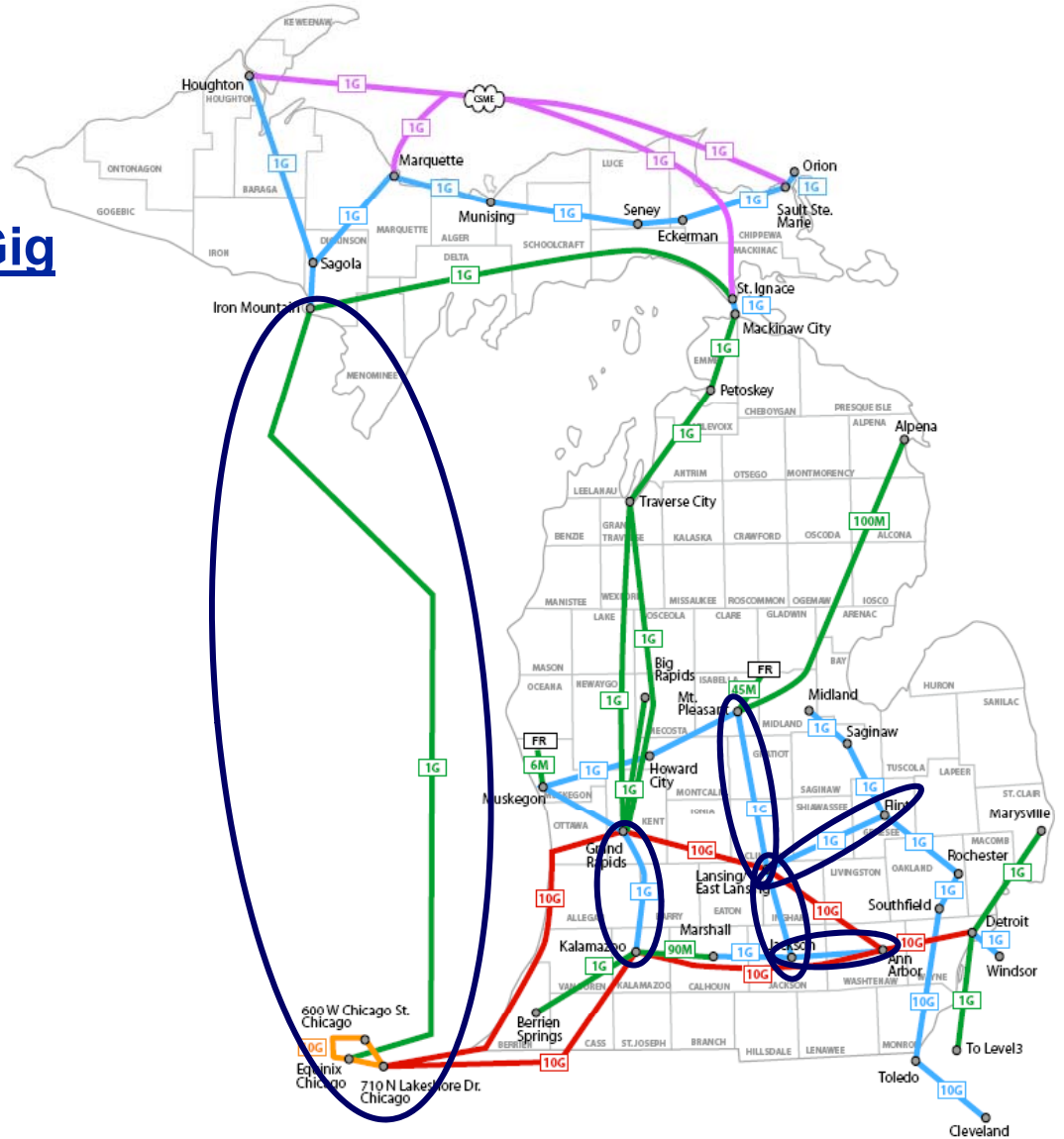


Blueline Fiber Upgrade to 10 Gig

- Lansing-Jackson-Ann Arbor
- Lansing to Mt. Pleasant
- Lansing to Flint
- Grand Rapids to Kalamazoo

Boarderland 2Gbps Upgrade

- Equinix to Iron Mountain

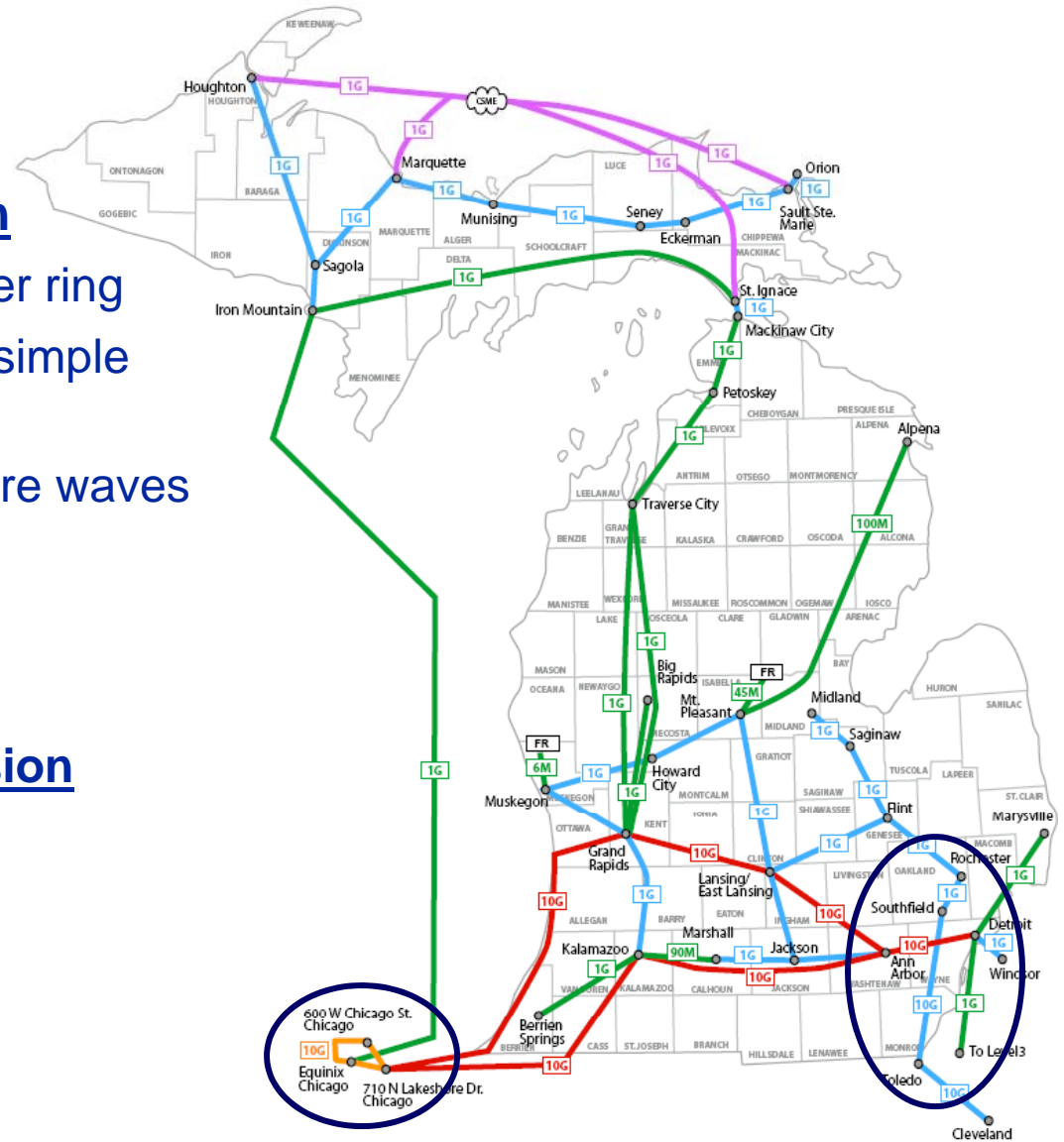


Chicago Ring Capacity Expansion

- Wave Multiplexing on existing fiber ring
- Currently driving two waves with simple splitters
- Have requirements for four or more waves
 - New 10g Internet service
 - Backup routes for Internet service
 - OARnet sharing commitments

Toledo Segment Capacity Expansion

- Internet2 path to Cleveland
- Internet service alternate vendor
- OARnet sharing commitments



- Merit Upgraded Internet Service In Jan 2009
- Upgrade was from four 1g connections to one 10g connection
 - Backup path will be a mutual backup agreement with OARnet
- Single larger path will accommodate all traffic with a single route
 - Reduced complexity
 - Faster recovery and convergence
- Reduced cost over existing vendors
- Contracting for a premium service, not willing to risk using low cost vendor

- Planned infrastructure upgrades to replace legacy hardware
- Criteria based on announced last day of manufacture support
- Guidelines for classifying equipment are:
 - Hardware that has reached end of support date is designated:
“Do Not Redeploy” – consider disposing
 - Hardware supportable for > 24 months is designated as:
“Redeployable” – can be used in new project
 - Hardware supportable for < 24 months is designated as:
“Spare Use Only” – kept on shelf for support of outages
- FY 2008/2009 Upgrades 75% Complete
- Currently Planning FY 2009/2010

- Reduced risk of network outage
- Increased network availability
- Ensures all devices are supportable
- Enable future technology growth

Proactive Approach To Infrastructure Upgrades

Equipment Refresh

2008 - 2009 Network End of Life Upgrade Project				
Router				
Node	Circuit Type	Current HW	Proposed HW	Upgrade Date
WSU	7 T3's	7507	7206	Apr-09
JACKSON	5 T1's	7507	7204	Apr-09
TCITY4	T1	7505	3725	Apr-09
WMU	6 T1	7505	7204	Apr-09
Completed				
GISD2	T3's	7505	N/A	N/A
TNWW-GR	CH.T3	new	7204	Jan-09
UMD	T1	7505	3725	Jan-09
OAKLAND	T1's	7505	3725	Jan-09
BSPOP	T1	7505	2691	Sep-08
MICHNET7		7505	N/A	N/A
MICHNET10		7505	N/A	N/A
CMU2	T3/T1's	7505	7204	Nov-08
MSU	2 T1's	7507	7204	Mar-09
FLPOP	3 T3/T1's	7505	7204	Mar-09
GV SU6	4 T3/T1's	7507	7204	Apr-09
NMU	T1's	7505	7206	Aug-08
Node	Circuit Type	Current HW	Proposed HW	Upgrade Date
AL3		3804	EX-4200	TBD
AL3		3804		TBD
EQ		Extreme 450	EX-4200	TBD
HANDS ON		2924	EX-4200	TBD
JACKSON		2924	3550	Apr-09
TRVERSE CITY		2924	3550	May-09
MITC		2924	3750G	May-09
WMU4		3550	3750G	Apr-09
Completed				
UMD		2950	3750G	Dec-08
GISD		2924	3550	Nov-08
Marshall		2924	2950G	Aug-08
CMU		3550	3750G	Nov-08
UM FLINT		2924	3750G	Apr-08

- Fiber Builds & Enhancements Progressing
- Continually Upgrading Network Capability
- Proactively Upgrading Legacy Infrastructure
- Enabling future technology growth